DFW DALLAS FORT WORTH INTERNATIONAL AIRPORT

Final Environmental Assessment

Electric Central Utility Plant and Associated Utility Delivery Systems Project

SUBMITTED BY:

Dallas Fort Worth International Airport

April 29, 2022

U.S. Department of Transportation
Federal Aviation Administration
Southwest Region

Finding of No Significant Impact (FONSI)

Electric Central Utility Plant and Associated Utility Delivery Systems Project
Dallas/Fort Worth International Airport
Tarrant County, Texas

May 2022

1. INTRODUCTION

This document serves as a Finding of No Significant Impact (FONSI) for the proposed Federal Aviation Administration (FAA) actions necessary for the implementation of the Electric Central Utility Plant (eCUP) and Associated Utility Delivery Systems Project at Dallas/Fort Worth International Airport (DFW), in DFW, Texas. The Cities of Dallas and Fort Worth, as owners of the airport, are the airport sponsors and proponent of the proposed airport improvements. The Proposed Action is construction of a new eCUP; construction of a boiler house, South Pump Room to supply hot and chilled water; North Pump Room, and new utility service connections at the terminals for the renewable fuels and electricity.

The Federal Aviation Administration (FAA) is the federal agency responsible for the approval of the Proposed Action analyzed in the Environmental Assessment (EA). The FAA has determined that the Proposed Action will have no significant impact to the human environment.

2. PROPOSED FEDERAL ACTION

The federal actions necessary for implementation of the Proposed Action include:

1. Determination under 49 U.S. Code (USC) §§40103(b) and 47107(a)(16), relating to the eligibility of the Proposed Action for federal funding under the Airport Improvement Program (AIP),

2. Determination under 49 USC §40117, as implemented by 14 CFR §158.25, to impose and use passenger facility charges (PFC) collected at the airport to assist with construction of potentially eligible items shown on the Airport Layout Plan (ALP),

3. Unconditional approval of the ALP portion depicting the Proposed Action as described in the EA within Section 3.3 and Figure 1-3, and

3. PURPOSE AND NEED

Pursuant to the National Environmental Policy Act (NEPA) and FAA Orders 1050.1F,

Environmental Impacts: Policies and Procedures and 5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions, an EA must include a description of the purpose of a proposed action and the reasons it is needed. The purpose of and the need for the Proposed Action are discussed below.

The Proposed Action's purpose is to replace outdated and dilapidated facilities and utility equipment with new buildings and support facilities that are sized to meet the current and future needs, while also restoring redundancy of heating and cooling systems, which improves the overall system resiliency.

The specific purposes of the Proposed Action are to:

- Provide "plug and play" infrastructure to improve the overall operations at the airport and provide flexibility especially during different airport construction projects,
- Replace or improve aging utility infrastructure associated with the terminal areas,
- Move thermal hydronics to landside for improved access, maintenance, and operations,
- Provide reliable, resilient, and maintainable infrastructure to extend terminal life and support natural growth,
- Increase utility efficiency and decrease loss due to leaks, and
- Relieve stress on the grid during peak demand and inclement weather.

The Proposed Action is needed to continue to support DFW Terminal Operations. The specific needs associated with the project are:

- To meet added terminal heating demand, domestic water, and pre-conditioned air (PCA) load requirements. Current infrastructure does not have redundancy or resiliency built into the system, and weather disruptions negatively impact utility operations,
- To replace the aging, outdated existing boiler house that has exceeded its useful life, and
- The current CUP boilers do not provide system resiliency, nor does it allow for effective use of renewable energy sources.

4. ALTERNATIVES

The FAA orders require a thorough objective assessment of the Proposed Action, No Action alternative, and all "reasonable" alternatives that would achieve the stated purpose and need of the Proposed Action. The Alternatives analysis is consistent with the requirements of FAA Orders 1050.1F and 5050.4B. Alternatives that were not carried forward through the analysis are identified and reasons for their elimination are presented in Section 3 of the attached EA.

4.1 No Action Alternative (NAA)

Under the NAA, DFW would keep its existing utility infrastructure and would not implement the Proposed Action. DFW would incur significant maintenance and repair costs. Furthermore, current utility infrastructure would not be able to Proposed Action Alternative meet the demand or provide redundancy for providing heating, domestic water, and PCA, nor would it provide resiliency or effective use of renewable energy sources. The NAA does not meet the stated

purpose and need for this project but is carried forward in the analysis of environmental consequences.

4.2 Proposed Action Alternative

The Proposed Action Alternative, which is the Sponsor's Preferred Alternative, would include the construction of a new eCUP; construction of a boiler house, South Pump Room to supply hot and chilled water; North Pump Room, and new utility service connections at the terminals for the renewable fuels and electricity. The project is divided into three phases (demolition, construction, and operation) over 24 months (December 2022 through November 2024.). The existing CUP and associated boilers, chillers, and other essential equipment will be left in situ to provide emergency backup terminal heating and air conditioning. For a detailed list of project components, see Section 3.3 in the attached EA.

5. ENVIRONMENTAL CONSEQUENCES

The environmental impacts, if any, of the proposed alternatives were examined in the EA according to the FAA Orders 5050.4B and 1050.1F. The environmental impacts of the No Action and the Proposed Action alternatives are presented in this section.

A number of resources will not be impacted by implementation of the Proposed Action and will not be further discussed in detail in this FONSI.

5.1 Air Quality

No Action Alternative: The NAA would not involve any construction activities; therefore, no construction emissions would be associated with the NAA. Since there would be no construction related emissions, there would be no additional air quality effects, other than those currently produced through existing operational emissions. Under the NAA, substantial emissions would continue to be generated through the existing CUP and associated utility system. This is a continued adverse effect given the AQCR 215 O_3 non-attainment status and DFW commitment to overall locational and regional sustainability.

Proposed Action Alternative:

Construction Emissions
The Proposed Action construction emissions were analyzed for anticipated construction years 2022 through 2024. The Proposed Action would result in temporary air quality effects during the demolition and construction activities. Table 5-2 of the attached EA shows the estimated construction emissions of NO_X, CO, VOC, SO_2, PM_{10}, and $PM_{2.5}$. Proposed Action construction of the eCUP is anticipated from November 2022 through October 2024. Construction of the new Boiler House and Pumps Rooms and associated utility infrastructure rehabilitation and extension is anticipated to occur August 2022 through August 2023. The Proposed Action-related construction emissions are well below the *de minimis* levels of 50 tpy for NO_X or VOC.

Operational Emissions

Additional operational emissions are expected from temporary, rented, and permanent boilers (when operated on jet fuel only). The Proposed Action is expected to result in low additional operational emissions from temporary boilers from 2022 through 2024 and permanent stationary boilers from 2025 to end of project life. Specifically, the Proposed Action will include the use of three temporary, natural gas-fired boilers for hot water heating. The temporary boilers are estimated to have a heating output of 26,780 MBH each. The Proposed Action also includes the installation of five, permanent 10,000 MBH boilers at the new boiler house. These permanent boilers will operate primarily on natural gas during which they will have lower or equivalent emissions compared to the existing boilers that they will replace. Therefore, quantitative evaluation of operational emissions for the permanent boiler natural gas operations was not estimated. The Proposed Action also includes installation of three, permanent, fire tube boilers and one, permanent, condensing boiler at the eCUP. These permanent boilers will utilize electricity and natural gas fuel, operating more efficiently than the existing CUP boilers being replaced; thereby, resulting in a net decrease to emissions relative to the NAA. Therefore, quantitative evaluation of operational emissions for the permanent boilers at the eCUP was not estimated.

Emission increases from Proposed Action permanent boilers will occur only when jet fuel is used To power boilers during times when natural gas is unavailable, and these emissions are analyzed. Operation of permanent boilers with jet fuel is expected to be minimal. It was assumed that annual operation on jet fuel would be limited to a single multi-day event. Combined jet fuel consumption across all boilers is estimated to be 6.17 gallons per minute (gpm; or 8.88 thousand gallons per day [gpd]).

Temporary boiler annual energy consumption was combined with applicable emission factors from USEPA AP-42 guidance and manufacturer specifications to estimate rental boiler emissions. Permanent boilers annual jet fuel consumption was combined with applicable emission factors from USEPA AP-42 guidance to estimate permanent boiler annual additional emissions. The additional operational emissions for 2024 and 2029 are shown in Table 5-3 of the attached EA and are expected to be extremely small. Except for temporary boilers and permanent boilers jet-fueled operations, operation of the Proposed Action would result in no net increase in emissions.

5.2 Hazardous Materials, Solid Waste, and Pollution Prevention

No Action Alternative: Under the NAA, there would be no associated demolition or construction activities; thereby, resulting in no impacts from hazardous materials or solid wastes. The existing conditions, which fully comply with DFW policies on hazardous materials and solid wastes generated from the existing CUP and associated utilities systems would remain in place.

Proposed Action Alternative: Based on the presence of known asbestos containing materials (ACM) within the existing utility piping and other infrastructure components that will be demolished or renovated, a comprehensive asbestos assessment will inform the process of abating any ACMs. Abatement actions would be handled in compliance with all applicable federal and state regulations. In areas where ACMs are uncovered, no work would be permitted until the materials in question have been abated or are found to be non-asbestos containing.

If deemed necessary, asbestos abatement activities will be monitored by an Asbestos Inspector licensed by the Texas Department of State Health Services (DSHS) to aid identification methods and procedures. The construction contractor would take appropriate measures to prevent, minimize, and control spills and release of hazardous materials in the construction staging yards and throughout the project area. Special provisions and contingency language would be included in the project's construction plans and specifications to manage hazardous materials and/or petroleum contaminated media according to applicable federal, state, and local regulations.

6. AGENCY COORDINATION AND PUBLIC INVOLVEMENT

DFW consulted with FAA, Texas Historical Commission (THC), Texas Commission on Environmental Quality (TCEQ), and Environmental Protection Agency (EPA) during the development of the EA. Agency coordination with TCEQ and EPA, consisted of scoping letters submitted to various divisions within the EPA and TCEQ on February 14, 2022. TCEQ provided comments on March 1, 2022, indicating that there would be no significant long-term effects so long as BMP were in place for construction and waste disposal activities. TCEQ requested an analysis of potential air quality effects, which were performed for this EA and found to be below the *de minimis* thresholds. No comments were received from EPA.

The THC was provided information through a desktop cultural resources assessment associated with the eCUP project site in March 2021. THC provided concurrence on April 19, 2021 that no adverse effects to historic resources would result from the proposed project activities. Additionally, the THC was provided additional information associated with the Utility Delivery Systems components in February 2022. THC provided concurrence of no historic properties affected on March 10, 2022.

Because the Proposed Action is not controversial, no significant adverse impacts were identified, and no special purpose laws were triggered that require public participation, it was determined that public participation was not necessary.

7. CONDITIONS AND MITIGATION

As prescribed by 40 CFR §1505.3, the FAA shall take steps as appropriate to the action, such as through special conditions in grant agreements, property conveyance deeds, releases, airport layout plan approvals, and contract plans and specifications and shall monitor these as necessary to assure that representations made in the EA and FONSI will be carried out. Specific conditions of approval associated with this project are listed below:

- Mitigation measures shall be incorporated into the project to include use of best management practices (BMPs) during construction to minimize erosion and sedimentation; controlling runoff; and controlling waste and spoils disposal to prevent ground contamination.
- Mitigation measures shall be incorporated into the project to include use of BMPs during construction to minimize fugitive dust and to minimize mobile and stationary emissions sources.

8. FINDINGS

Throughout the development of the airport, including the proposed improvements described above, the FAA has made every effort to adhere to the policies and purposes of NEPA, as stated in the NEPA implementing regulations. The FAA has concentrated on the truly significant issues related to the action in question. The FAA determined that the Proposed Action is in compliance with FAA Order 1050.1F 6-3.b(2). In its determination on whether to prepare an Environmental Impact Statement (EIS) or process the EA as a FONSI, the FAA weighed its decision based on an examination of the EA, and comments from Federal and state agencies, as well as all other information available to the FAA.

As required by 40 CFR 1506.5, the FAA has independently and objectively evaluated this proposed project. As described in the Final EA, the Proposed Action and the No Action Alternative were studied to determine the potential impacts and appropriate mitigation for those impacts. The FAA provided input, advice, and expertise throughout the analysis, along with administrative and legal review of the project.

The following determinations are prescribed by the statutory provisions set forth in the Airport and Airway Improvement Act of 1982, as codified in 49 U.S.C. §§ 47106 and 47107. They are preconditions of FAA's approval of airport funding applications for AIP eligible airport development.

a. 49 U.S.C. § 47106(a)(1). The Proposed Action is reasonably consistent with existing plans of public agencies for the development of the area surrounding the airport.

b. 49 U.S.C. § 47106(b)(2). The interests of the communities in or near which the project may be located have been given fair consideration.

c. 49 U.S.C. § 47107(a)(10). Appropriate action, including the adoption of zoning laws, has been or will be taken to the extent reasonable to restrict the use of land next to or near the airport to uses that are compatible with normal airport operations.

After careful and thorough consideration of the facts contained herein, the undersigned finds that the proposed Federal action is consistent with existing national environmental policies and objectives of Section 101 of NEPA and other applicable environmental requirements and, with the required mitigation referenced above, will not significantly affect the quality of the human environment or otherwise include any condition requiring any consultation pursuant to section 102(2)(C) of NEPA. As a result, FAA has determined that preparation of an EIS is not necessary for this proposed action and is therefore issuing this FONSI.

RECOMMENDED FOR APPROVAL: JOHN J MACFARLANE Digitally signed by JOHN J MACFARLANE Date: 2022.05.06 10:43:18 -05'00' Date: _____

John MacFarlane
Environmental Protection Specialist
Texas Airports District Office

APPROVED: KIMBERLY M BROCKMAN Digitally signed by KIMBERLY M BROCKMAN Date: 2022.05.06 11:23:16 -05'00' Date: _____

Kim Brockman
Acting Manager
Texas Airports District Office

FINAL ENVIRONMENTAL ASSESSMENT

Electric Central Utility Plant and Associated Utility Delivery Systems Project

Dallas Fort Worth International Airport

Tarrant County, Texas

Prepared for:

Texas Airport Development Office [ASW-650]
Federal Aviation Administration
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Fort Worth, TX 76177

Prepared by:

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This Environmental Assessment becomes a federal document when evaluated, signed, and dated by the Responsible FAA official.

JOHN J MACFARLANE Digitally signed by JOHN J MACFARLANE
Date: 2022.04.29 12:44:10 -05'00'

Responsible FAA Official

Date

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ACRONYMS AND ABBREVIATIONS

µg/m^3	micrograms per cubic meter
AC	Advisory Circular
ACA	Airport Carbon Accreditation
ACI	Airport Council International
ACM	asbestos-containing materials
AIP	Airport Improvement Program
ALP	Airport Layout Plan
AQCR	Air Quality Control Region
BMP	best management practices
Btu	British thermal units
CAA	Clean Air Act
CAP	Criteria Air Pollutants
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CGP	Construction General Permit
CH_4	methane
CMMP	Contaminated Media Management Plan
CNG	Compressed Natural Gas
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_{2e}	Carbon Dioxide equivalent
COMP HIST	Compliance History
CUP	Central Utility Plant
CWA	Clean Water Act
CZM	Coastal Zone Management
dB	decibels
DFW	Dallas Fort Worth International Airport
DNL	Day Night Level
DSHS	Texas Department of State Health Services
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
FAA	Federal Aviation Administration
FINDS	Facility Index System/Facility Registry System
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
FR	Federal Register
GCS	Glycol Collection System
GHG	Greenhouse Gases
GI/LID	Green Infrastructure/Low Impact Development
gpd	gallons per day
gpm	gallons per minute
gpy	gallons per year
GWP	Global Warming Potential
H_20	Water
HFC	Hydrofluorocarbons
IHW	Industrial Hazardous Wastes
IPCC	International Panel on Climate Change
ITS	Information Technology Systems
LED	light emitting diode
LPST	Leaking Petroleum Storage Tanks
MBH	British thermal units per hour
MOVES3	USEPA Motor Vehicles Emissions Simulator, version 3
MSW	Municipal Solid Waste
N_2O	Nitrous Oxide
NAA	No Action Alternative
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NO_2	Nitrogen Dioxide
NOx	Nitrogen Oxides
NPDES	National Pollution Discharge Elimination System

NPL	National Priorities List
NRCS	Natural Resources Conservation Service
NRI	National River Inventory
O_3	Ozone
PA/VE	Public Address/Video Equipment
Pb	Lead
PCA	pre-conditioned air
PCL	Protective Concentration Level
PFC	Passenger Facility Charges
PFC1	Perfluorinated Compounds
PM	Particulate Matter
PM_{10}	Particulate matter with a diameter less than 10 micrometers
$PM_{2.5}$	Particulate matter with a diameter less than 2.5 micrometers
POTW	Publicly Owned Treatment Works
PPA	Pollution Prevention Act
ppb	parts per billion
ppm	parts per million
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
RNG	Renewable Natural Gas
SADF	Spent Aircraft Deicing Fluid
SAF	Sustainable Aviation Fuel
SF	square feet/foot
SF_6	Sulfur Hexafluoride
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SMP	Sustainability Management Plan
SO_2	Sulphur Dioxide
SPCC	Spill Prevention, Control, and Countermeasures
SW3P	Stormwater Pollution Prevention Plan
SWF/LF	Permitted Solid Waste Facility/Landfill
TCEQ	Texas Commission on Environmental Quality
THC	Texas Historical Commission
TNW	Traditional Navigable Water
TPDES	Texas Pollution Discharge Elimination System
tpy	tons per year
TRA	Trinity River Authority
TSCA	Toxic Substances Control Act
USC	U.S Code
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Services
VCP	Voluntary Clean-up Program
VOC	Volatile Organic Compounds
WOUS	Waters of the United States

SECTION 1.0 INTRODUCTION

1.1 National Environmental Policy Act Authority

This Environmental Assessment (EA) has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, and the President's Council on Environmental Quality (CEQ) regulations to implement NEPA (40 Code of Federal Regulations [CFR] §1500 to 1508). NEPA requires federal agencies to analyze and consider alternatives to the environmental impacts of their proposed actions, to disclose and consider mitigation for those impacts, and to provide interested parties with an opportunity to participate in the environmental review process.

All airport improvement projects that are major federal actions, including through the receipt of federal funding, must be examined from an environmental standpoint, to comply with NEPA, the Airport and Airway Improvement Act of 1982, as amended, and other pertinent laws, and regulations. Guidance in the Federal Aviation Administration (FAA) consideration of environmental impacts is provided in FAA Order 1050.1F, Environmental Impacts: Policies and Procedures (FAA, 2015), FAA Order 1050.1F Desk Reference (FAA, 2020), and FAA Order 5050.4B, NEPA Implementing Instructions for Airport Actions (FAA, 2006).

The purpose of this EA is to analyze the potential environmental impacts of the Proposed Action. This EA also includes public and agency coordination documents used to communicate the Proposed Action and results of the environmental analyses of the project, as well as to gather input from the public and regulatory agencies consulted. FAA will use the findings in the EA to determine whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

1.2 Project Sponsor

The Project Sponsor is Dallas Fort Worth International Airport (DFW), Dallas and Tarrant Counties, Texas.

1.3 Background

DFW is a commercial service airport that currently encompasses 17,207 acres (approximately 27 square miles) in Dallas and Tarrant Counties, Texas (**Figure 1-1**). DFW has five passenger terminals (A, B, C, D, and E) and its airfield system consists of seven runways separated by a spine road, International Parkway, into the east and west airfield complexes. DFW also consists of approximately 1,300 lane miles of roadway and 133 landside bridges.

The existing boiler houses at the Central Utility Plant (CUP) do not currently provide the heating capacity, redundancy, and resilience needed to support the airport's terminal buildings. Furthermore, the existing CUP was originally constructed in the 1970s and was renovated in the 2000s. The existing CUP is approaching the end of its useful life. Furthermore, the existing CUP uses natural gas and jet fuel as the main heating sources, which account for a significant portion of DFW's emissions. The proposed Electric CUP and Associated Utility Delivery Systems (Proposed Action) would include the construction and operation of an Electric CUP along with the rehabilitation, expansion, and upgrade of the main utility services distribution network. This would include new chilled water and new dedicated heating and hot water distribution network from the existing CUP and the construction and operation of a new boiler plant and pump buildings. The Electric CUP operation would significantly decrease DFW's dependency on fossil fuels for heating, reduce emissions related to building heating and cooling, and align with DFW's ambitious goal to be Net Zero Carbon by 2030. The Proposed Action would replace aging utility infrastructure and improve energy delivery to the terminal buildings. The Proposed Action would

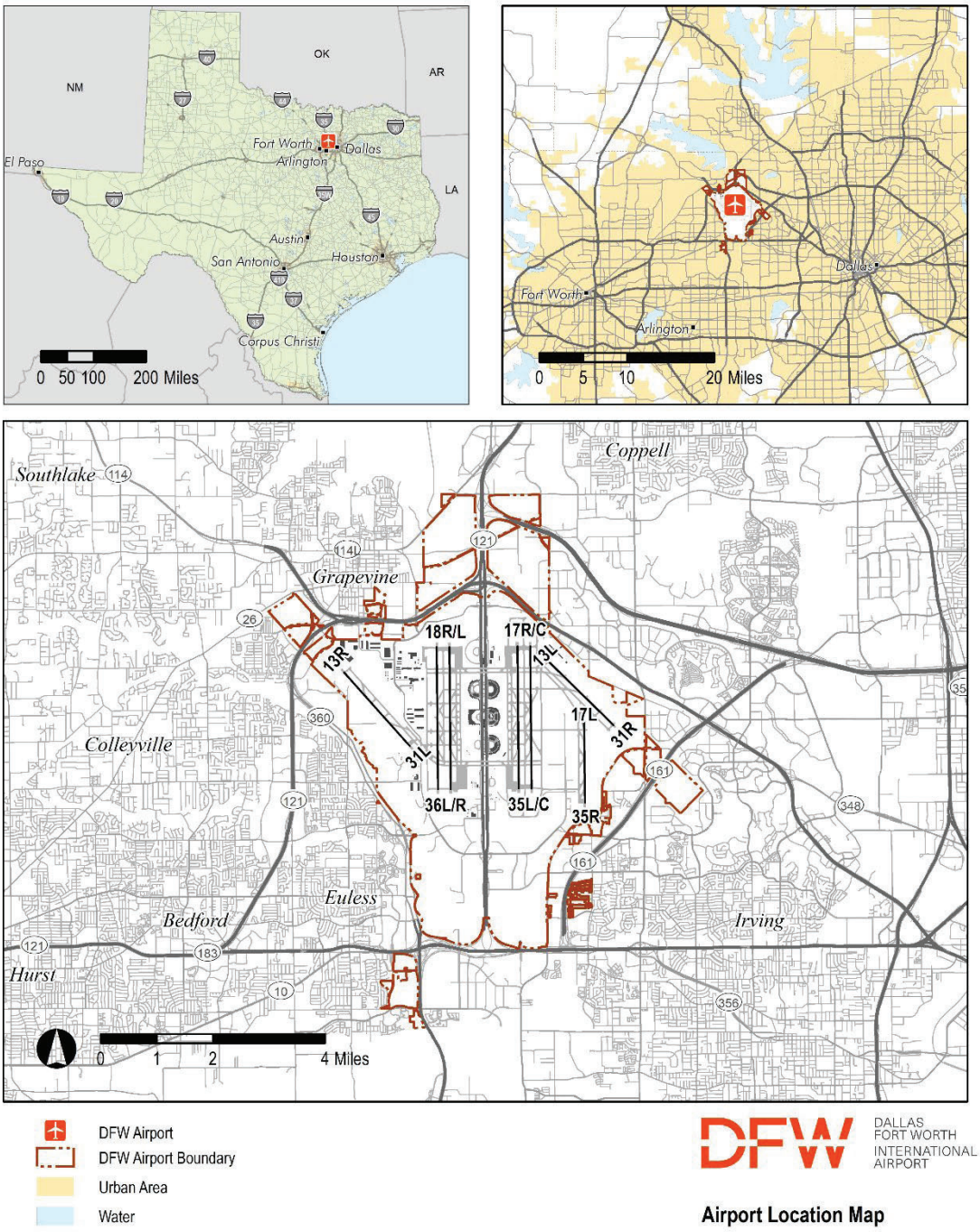

Figure 1-1. DFW General Location and Study Area

be strategically designed and implemented to support natural growth and provide adequate utility service to accommodate DFW's future needs (**Figure 1-2**).

1.4 FAA Requested Federal Action

The federal actions necessary for implementation of the Proposed Action are,

1. Determination under 49 U.S. Code (USC) §§ 40103(b) and 47107(a)(16), relating to the eligibility of the Proposed Action for federal funding under the Airport Improvement Program (AIP),
2. Determination under 49 USC §40117, as implemented by 14 CFR 158.25, to impose and use passenger facility charges (PFC) collected at the airport to assist with the construction of potentially eligible items shown on the Airport Layout Plan (ALP),
3. Unconditional approval of the ALP portion depicting the Proposed Action as described in **Section 3.3** of this document (*see* **Figure 1-2**).

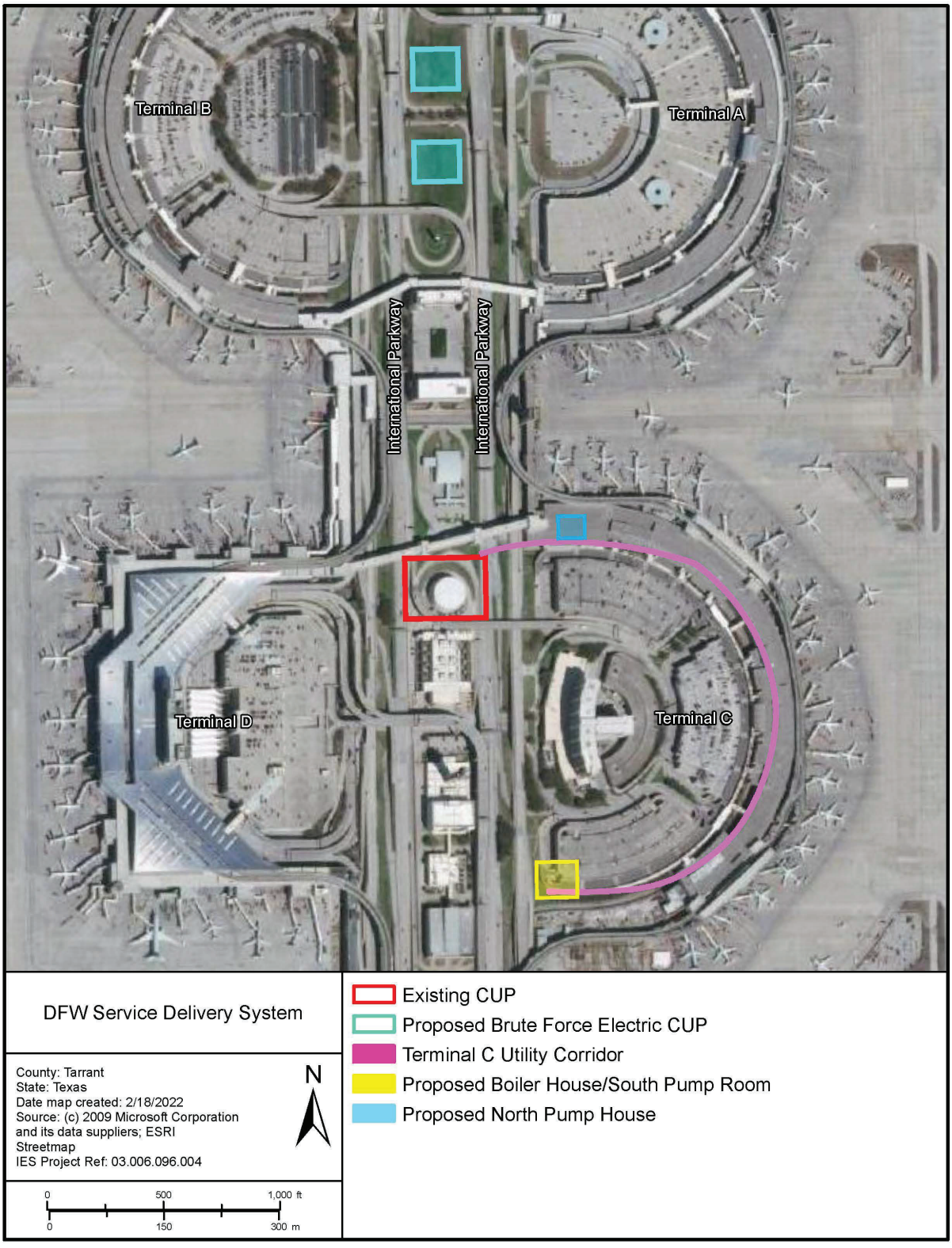

Figure 1-2. Proposed Action Components in Relation to Other DFW Infrastructure

SECTION 2.0 PURPOSE AND NEED

2.1 Purpose

The Proposed Action's purpose is to replace old, outdated, and dilapidated facilities and utility equipment with new buildings and support facilities that are sized to meet the current and future needs, while also restoring redundancy of heating and cooling systems, which improves the overall system resiliency. Currently, natural gas used in the existing CUP for terminal heating represents the largest segment of DFW's carbon footprint and a significant contributor to ozone (O_3) precursor emissions. In alignment with DFW's Net Zero Carbon by 2030 target and regional air quality improvement goals, the Electric CUP will transition DFW's primary heating fuel source from natural gas to 100 percent renewable electricity. Cooling will be provided by the two electric heat pump chillers and one high-efficiency variable-speed chiller. Two electric heat pump chillers will provide most of the annual heating; highly efficient natural gas boilers (one condensing and three fire tube boilers) will provide peaking heating capacity in the winter extremes. The specific purposes of the Proposed Action are to

- Provide "plug and play" infrastructure to improve the overall operations at the airport and provide flexibility especially during different airport construction projects,
- Replace or improve aging utility infrastructure associated with the terminal areas,
- Move thermal hydronics to landside for improved access, maintenance, and operations,
- Provide reliable, resilient, and maintainable infrastructure to extend terminal life and support natural growth,
- Increase utility efficiency and decrease loss due to leaks, and
- Relieve stress on the grid during peak demand and inclement weather.

DFW is one of the world's busiest all-weather airports; therefore, improved infrastructure to deliver utility services is imperative to maintaining safe and efficient operations.

2.2 Need

The Proposed Action is needed to continue to support DFW Terminal Operations. The specific needs associated with the project are,

1. To meet added terminal heating demand, domestic water, and pre-conditioned air (PCA) load requirements. Current infrastructure does not have redundancy or resiliency built into the system, and weather disruptions negatively impact utility operations,
2. To replace the aging, outdated existing boiler house that has exceeded its useful life, and
3. The current CUP boilers do not provide system resiliency, nor does it allow for effective use of renewable energy sources.

Additionally, the project is needed to reduce demand and thus operating costs, for energy and water; these cost savings are needed to support DFW's financial self-sufficiency.

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SECTION 3.0 ALTERNATIVES

FAA Orders 1050.1F: *Environmental Impacts Policies and Procedures* and 5050.4B: *Implementing Instructions for Airport Actions* set forth policies and procedures to be followed when assessing the environmental impacts of aviation-related projects, in compliance with NEPA. The FAA orders require a thorough objective assessment of the Proposed Action, No Action Alternative (NAA), and all "reasonable" alternatives that would achieve the stated purpose and need of the Proposed Action. The Alternatives analysis presented in this EA section is consistent with the requirements of FAA Orders 1050.1F and 5050.4B.

3.1 Alternatives Evaluation Process

As indicated previously in **Section 2**, the purpose and need for the proposed action has been carefully examined and documented. This analysis of alternatives was prepared to determine which alternatives might feasibly meet the purpose and need statement.

Utility improvements for existing building and structures generally not subject to a traditional alternatives analysis and review. The location and configuration of elements such as the electrical feeds, water piping loops for terminals, and sanitary sewer, stormwater, and technology systems are driven by the terminal design. Individual components may have minor available shifts in location but must remain in proximity to the structure being serviced.

For the Proposed Action, new boiler house and pump room locations were explored to either remain at the existing CUP to be replaced and upgraded or to be newly constructed at specific terminal locations providing additional N+1 resiliency[1] to the overall DFW utility system, which was a driving factor. The existing boiler house at the CUP does not meet and provide redundancy for the heating, domestic water, and PCA load requirements. The existing boilers do not provide system resiliency, nor do they allow for effective use of renewable energy sources. In addition to location, boiler configurations and fuels were also explored. It was determined that the construction of a new boiler house and pump room more closely associated with the terminals would provide system resiliency, would be able to provide a renewable energy source more effective than the existing one, and would increase overall energy efficiency for DFW when combined with the other Proposed Action components, such as the Electric CUP. The utility corridor upgrades and retrofits are directly associated with the construction of the new components and do not have a physical alternative location.

The location of the Electric CUP was limited to the only available undeveloped space centrally located near the terminals with close access to the exiting terminal utility distribution corridors. The main DFW CUP will still be in use through its life expectancy to continue to provide utility services to the terminals and other DFW structures. The complimentary Electric CUP, once constructed, will immediately provide redundancy in the utility system and will greatly reduce utility-generated emissions through the use of renewable energy sources, new technologies, and an upgraded, more energy efficient distribution system.

3.2 No Action Alternative

Inclusion of a NAA in the environmental analysis and documentation is required under NEPA The NAA is used to evaluate the effects of not constructing the project, thus, providing a benchmark against which action alternatives may be evaluated. Under the NAA, DFW would keep its existing utility infrastructure and would not implement the Proposed Action. DFW would incur significant maintenance and repair costs. Furthermore, current utility infrastructure would not be able to

[1] Generally, N+1, indicates that there is a power back-up in place should any of the system components fail. N is the number of components required to run the overall system. The addition of the +1, indicates that a back-up is in place that provides redundancy should the primary component fail.

meet the demand or provide redundancy for providing heating, domestic water, and PCA, nor would it provide resiliency or effective use of renewable energy sources. The NAA does not meet the stated purpose and need for this project but is carried forward in the analysis of environmental consequences.

3.3 Proposed Action Alternative

The Proposed Action Alternative, which is the Sponsor's Preferred Alternative, would include the construction of a new Electric CUP; construction of a boiler house, South Pump Room to supply hot and chilled water; North Pump Room, and new utility service connections at the terminals for the renewable fuels and electricity. The project is divided into three phases (demolition, construction, and operation) over 24 months (December 2022 through November 2024.)

Specific components that make up the scope of the Proposed Action are summarized below:

- A new Electric CUP that would primarily generate heating from electric heat pump chillers. During peak periods, there will also be four permanent boilers consisting of three fire tube boilers with a 39,500 British thermal units per hour (MBH) heating output and a condensing boiler at 10,000 MBH
- Three temporary fire tube boilers with 26,780 MBH heating output for each will be used during construction phasing,
- New heating hot and chilled water piping loop (Service Delivery System),
- Construction of a new boiler house and South Pump Room (5,830 square feet [SF]) and North Pump Room (3,490 SF) with
    - Five, 10,000 MBH condensing boilers,
    - Heating hot and chilled water pumping capacity, and
    - PCA glycol pumping capacity,
- Connection to the gas service yard,
- 1,999 Gallon Jet Fuel A storage tank for boiler backup,
- New natural gas service and electrical service for terminals and associated structures,
- Coordination of connection points for the following utilities with other on-going projects,
    - Domestic and fire water, sanitary sewer, grease waste, and stormwater, and
- Coordination of connection points for the following information technology systems,
    - Fiber for Information Technology Systems (ITS), telephones, fire alarm, communications, and public address/video equipment (PA/VE).

3.4 Alternatives Comparison

The NAA does not meet the purpose and need; however, it has been carried forward as the baseline by which potential impacts of the action alternative can be measured. Under the NAA, DFW would not complete the Proposed Action. DFW would not be able to replace the old, inadequate infrastructure, and would incur significant operating, maintenance, and repair costs. Furthermore, the existing boiler house has exceeded its useful life expectancy, current utility infrastructure would not be able to meet the forecasted demand for providing heating, domestic water, and PCA load to the supported terminals, nor would it provide resiliency or effective use of renewable energy sources. The NAA would not meet the purpose and need; therefore, only the action alternative is being carried forward for detailed analysis in this EA.

The Proposed Action Alternative meets the purpose and need described in **Section 2** and best meets the needs of DFW. Impacts to environmental resources would be minimal; however, hazardous materials remediation (i.e., asbestos) would be required during the partial demolition within the existing utility tunnels; the demolition is required to establish connectivity to the new service lines. Detailed discussions of the hazardous materials and remediation are in **Sections 4.4** and **5.4** of this EA. No loss of land, habitat, waters of the United States (WOUS), or other

natural resources would occur, as the proposed action would be conducted within DFW previously developed areas. Additionally, since all demolition and construction activities would be contained in DFW interior infrastructure, there would be no temporary or permanent noise effects to sensitive receivers outside the DFW boundaries. Likewise, demolition, construction, and operation of the new infrastructure would not trigger adverse air quality impacts, as it was determined that all emissions would be well below *de minimis* levels.

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SECTION 4.0 AFFECTED ENVIRONMENT

This section describes the environmental conditions potentially affected within the project area (*see* **Figure 1-2**) and related regulations. Where potential impacts exist, conditions or mitigation measures to offset these impacts are detailed in **Section 5**.

4.1 Resource Categories Not Carried Forward for Detailed Analyses

The CEQ regulations (§1501.7) state that the lead agency shall identify and eliminate from detailed study the issues which are not important, or which have been covered by prior environmental review, narrowing the discussion of these issues in the document to a brief presentation of why they would not have a substantial effect on the human environment. **Table 4.1** illustrates the rationale behind the elimination of the resources/impact areas that were not included in the detailed study, in accordance with CEQ §1501.7.

Table 4-1. Resources/Impact Areas Not Carried Forward for Detailed Analysis

Area	Significance Threshold	Rationale for Elimination
Biological Resources	• The U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) determines that the action would likely jeopardize the continued existence of a federally listed threatened or endangered species or would result in the destruction or adverse modification of federally designated critical habitat.	No impact. The project area is currently within a fully developed urban setting with only small pockets of urban herbaceous landscaping. There is no potential habitat for any state or federally listed protected species and there are no state listed unique vegetation communities present. (Reports are included in **Appendix A**)
Coastal Resources	• A determination by a State having an approved Coastal Zone Management (CZM) program that the proposed action would not be consistent with the applicable CZM plan, which cannot be avoided, minimized, or mitigated.	No Impact. There are no coastal resources located within or adjacent to the proposed project area.
Department of Transportation Act, Section 4(f)	• Potential for more than a minimal physical use or deemed "constructive use" substantially impairing the use of an existing Section 4(f) property.	No Impact. There are no Section 4(f) properties within or adjacent to the proposed project area.
Prime or Unique Farmland	• Alteration of a property with a total combined score between 200 to 260 on Form AD 1006.	No Impact. According to the Part 523 – Farmland Protection Policy Act (FPPA) Manual, construction within an existing right-of-way purchased on or before 04 August 1984 is not subject to provisions of FPPA (Natural Resources Conservation Services [NRCS] 2012).
Historical, Architectural, Archeological, and Cultural Resources	• The action would result in a finding of Adverse Effect through the Section 106 process.	No Impact. Texas Historical Commission (THC)/ State Historic Preservation Officer (SHPO) determined that there were no adverse effects to historic resources within the proposed project area (**Appendix B** SHPO Concurrence Letter and Cultural Resources Evaluation Report).
Land Use	• Existence of noise sensitive receptors adjacent to the project area. • Potential for impacts that have land use ramifications, for example, disruption of communities or induced socioeconomic impacts.	No Impact. All surrounding land uses adjacent to the proposed site are currently compatible with the proposed activities and are planned to be compatible with all reasonably foreseeable future developments in the area. The project would be developed entirely on airport property and is compatible with DFW's on-airport land use plans.

Area	Significance Threshold	Rationale for Elimination
Noise and Noise-Compatible Land Uses	• The action would cause noise sensitive areas to experience an increase in noise of Day-Night sound Level (DNL) 1.5 decibels (dB) or more at or above DNL 65 dB noise exposure when compared to the no action alternative for the same timeframe.	No Impact. The activities associated with the proposed project would not change the number of aircraft operations or aircraft operational patterns; thus, there would be no change to aircraft noise exposure. There may be temporary, short term noise impacts associated with construction activities. The temporary noise impact would be on-airport near the terminals and would not exceed any noise exposure thresholds.
Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks	• Extensive relocation of residents is required, but sufficient replacement housing is unavailable. • Extensive relocation of community businesses that would create severe economic hardship for the affected communities. • A substantial loss in the community tax base. • Disproportionately high and adverse human health or environmental effects on minority and low-income populations. • Disproportionate health and safety risks to children.	No Impact. Implementation of the proposed action would be unlikely to substantially change the prevailing socioeconomic conditions. There would not be any relocation of residents, or businesses located within or adjacent to the project area due to the proposed action, or a substantial loss in the tax base of any community. The Proposed Action would not create a disproportionately high and adverse human health or environmental effect on minority or low-income populations. Due to these reasons, both an analysis of the socioeconomic conditions and environmental justice are excluded from further detailed analysis. Additionally, implementation of the proposed action would not substantially increase outdoor or indoor air pollutants above ambient levels, would not pollute drinking water sources adjacent to the proposed site, would not increase the level of pesticides in food crops or animals, and would not increase the level of lead contamination adjacent to areas where children are likely to be located. Also, due to restricted access, the proposed action would not pose an attractive nuisance hazard that could endanger the health and safety of local children. As a result, this issue is being excluded from detailed study.
Visual Effects (Including Light Emissions)	• The degree that the proposed action would create an annoyance or interfere with normal activities from light emissions. • Affect the visual character of the area due to light emissions, including the importance, uniqueness, and aesthetic value of the affected visual resources. • Contrast with the visual resources and/or visual character in the project areas. • Block or obstruct the views of visual resources, including whether those resources would still be viewable.	No Impact. The features being replaced will be similarly situated and not create any viewshed obstructions. Additionally, any new lighting would be light-emitting diode (LED) and generally, brighter, and more efficient.
Waters of the United States and Wetlands	• Adversely affect a wetland's function to protect the quality or quantity of municipal water supplies, including surface waters and sole source and other aquifers. • Substantially alter the hydrology needed to sustain the affected wetland system's values and functions or those of a wetland to which it is connected. • Substantially reduce the affected wetland's ability to retain	No impact. There are no WOUS or wetlands located within the project area (Report is included in **Appendix C**).

Area	Significance Threshold	Rationale for Elimination
	floodwaters or storm runoff, thereby threatening public health, safety, or welfare (the term welfare includes cultural, recreational, and scientific resources or property important to the public). • Adversely affect the maintenance of natural systems supporting wildlife and fish habitat or economically important timber, food, or fiber resources of the affected or surrounding wetlands. • Promote development of secondary activities or services that would cause the circumstances listed above to occur. • Be inconsistent with applicable state wetland strategies.	
Sole Source Aquifer	• Exceed groundwater quality standards established by federal, state, local, and tribal regulatory agencies. • Contaminate an aquifer used for public water supply such that public health may be adversely affected.	No Impact. According to the Interactive U.S. Environmental Protection Agency (USEPA) Sole Source Aquifer Map, the closest sole source aquifer, the Edward's Aquifer, is located over 100 miles south of the proposed project area.
Wild and Scenic Rivers	• A determination that the effects on a National River Inventory (NRI) river segment are significant or would preclude inclusion in the Wild and Scenic River System or downgrade its classification.	No Impact. According to the National Wild and Scenic Rivers System (2016), there are no wild or scenic rivers or eligible rivers located within or adjacent to the proposed project area.

4.2 Air Quality

4.2.1 Regulatory Background

The FAA 1050.1F Desk Reference defines the study area for air quality as the entire geographic area that could be either directly or indirectly affected by the Proposed Action. It requires the document to discuss the current National Ambient Air Quality Standards (NAAQS), state ambient air quality standards, the attainment status of the study area, a summary of recent measured air pollutant concentrations, a description of the meteorological and topographical conditions of the study area, other conditions relevant to the study area, and any permits required (FAA, 2020).

The Clean Air Act (CAA) requires that states adopt Ambient Air Quality Standards. The standards have been established to protect the public from potentially harmful amounts of pollutants. Under the CAA, the United States Environmental Protection Agency (USEPA) established the NAAQS, which include standards for several criteria pollutants. NAAQS have been set for the following six pollutants, carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM), and sulfur dioxide (SO_2) (**Table 4-2**). Based on air monitoring data and in accordance with the CAA, areas within the United States are designated with respect to their attainment status with the NAAQS. Areas that meet the NAAQS are designated as attainment, those that do not meet the standards are designated as nonattainment, and those that are in transition from nonattainment to attainment are designated as maintenance. Ozone nonattainment areas are further classified as extreme, severe, serious, moderate, and marginal by the degree of non-compliance with the NAAQS.

Table 4-2. National Ambient Air Quality Standards

Pollutant	Averaging Time	Standard	Type of Standard	Form
CO	1-hour	35 ppm	Primary	Not to be exceeded more than once annually
	8-hour	9 ppm	Primary	
Pb	Rolling quarter	0.15 µg/m^3	Primary Secondary	Not to be exceeded
NO_2	1-hour	100 ppb	Primary	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	1 year	53 ppb	Primary Secondary	Annual Mean
O_3	8-hour	0.070 ppm	Primary Secondary	Annual 4th highest daily maximum 8-hour concentration, averaged over 3 years
PM_{10}	24-hour	150 µg/m^3	Primary Secondary	Not to be exceeded more than once annually on average over 3 years
$PM_{2.5}$	1 year	12.0 µg/m^3	Primary	Annual mean, averaged over 3 years
	1 year	15.0 µg/m^3	Secondary	Annual mean, averaged over 3 years
	24-hour	35 µg/m^3	Primary Secondary	98th percentile, averaged over 3 years
SO_2	1-hour	75 ppb	Primary	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	3-hour	0.5 ppm	Secondary	Not to be exceeded more than once annually

Notes:
ppm = parts per million; ppb = parts per billion; µg/m^3 = micrograms per cubic meter; $PM_{2.5}$ = particulate matter with a diameter less than 2.5 micrometers (µm); PM_{10} = particulate matter with a diameter less than 10 micrometers (µm)
Primary standards provide public health and safety protection, including protecting the health of sensitive populations such as asthmatics, children, and the elderly.
Secondary standards provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.
Source: USEPA, 2021c

4.2.2 Existing Conditions

The Dallas-Fort Worth metropolitan area has been designated as an attainment area for all USEPA criteria pollutants except for O_3 based on air quality monitoring data collected by the Texas Commission on Environmental Quality (TCEQ) (TCEQ, 2021a). The Proposed Action is in Tarrant County, which is part of the Dallas-Fort Worth metropolitan O_3 nonattainment area (**Figure 4-1**). This metropolitan area, known as Air Quality Control Region (AQCR) 215 is treated as the air quality study area. The Dallas-Fort Worth metropolitan area is designated as a "serious" non-attainment area for the 2008 8-hour, 0.075 parts per million (ppm) O_3 standard, as of 23 August 2019, effective 23 September 2019. It is also designated as a "marginal" nonattainment area under the 2015 8-hour, 0.070 ppm O_3 standard as of 05 May 2021 (USEPA, 2015b) (**Table 4-3**).

The State Implementation Plan (SIP) is the cumulative record of all air pollution control strategies, emission budgets, and timetables implemented or adopted by government agencies within Texas to bring nonattainment areas into compliance with the NAAQS by a designated deadline. The SIP focuses on reducing the two primary pollutants that lead to O_3 formation, volatile organic compounds (VOC) and nitrogen oxides (NO_x).

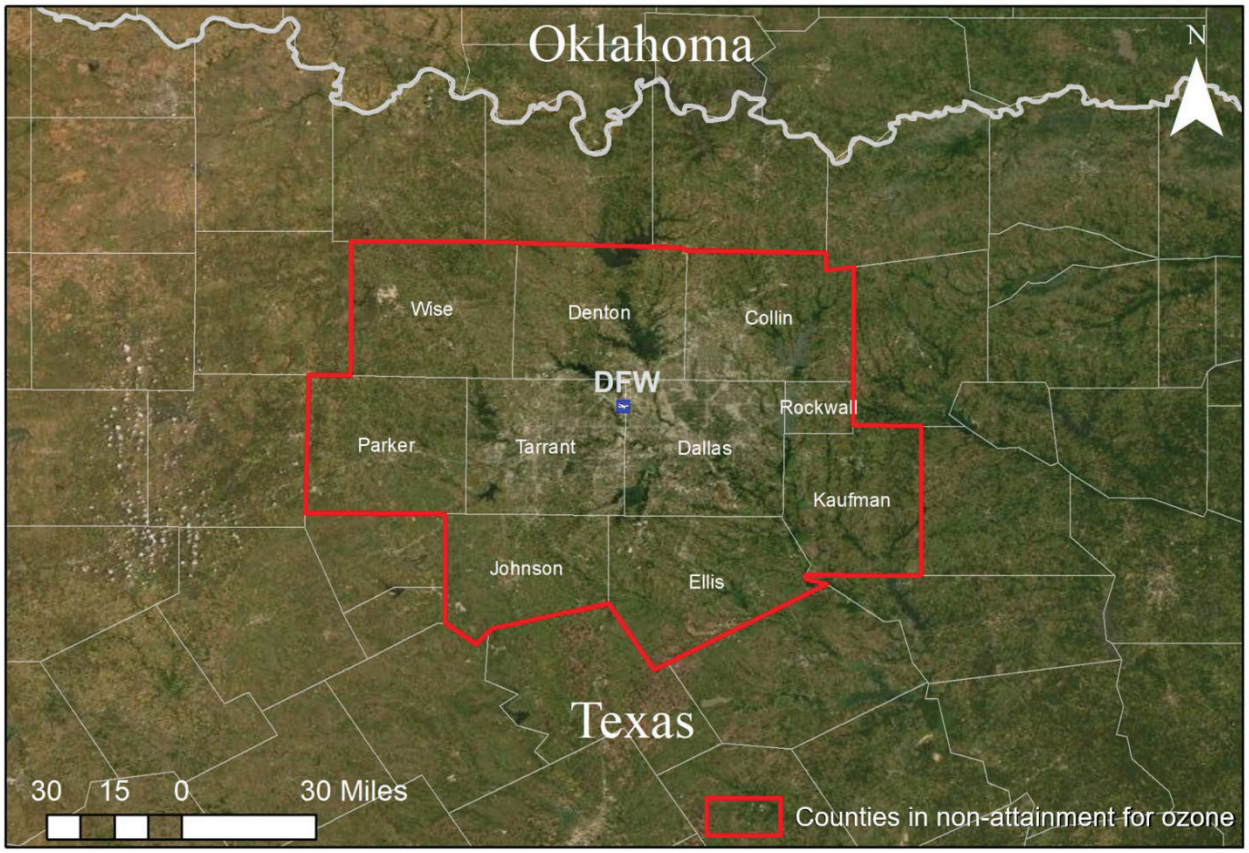

Figure 4-1. DFW and AQCR 215 Ozone Non-Attainment Area

Table 4-3. Recent Air Quality at Dallas-Fort Worth-Arlington, Texas

Pollutant	Federal Standard	Design Value[2]	Monitoring Years	Current Status
CO	9 ppm (1-hour)	1.3 ppm	2019-2020	Attainment[3]
	30 ppm (8-hour)	1.8 ppm	2019-2020	Attainment
Pb	0.15 µg/m³ (3-month)	0.02 µg/m³	2018-2020	Attainment
NO_2	53 ppb (annual)	11 ppb	2018-2020	Attainment
	100 ppb (1-hour)	40 ppb	2018-2020	Attainment
O_3	0.070 ppm (8-hour)	0.08 ppm	2014-2016	Nonattainment[4]
PM_{10}	150 µg/m³ (24-hour)	N.A.[5]	N.A.	Attainment
$PM_{2.5}$	12 µg/m³ (annual)	9.2 µg/m³	2017-2019	Attainment
	35 µg/m³ (24h primary)	20 µg/m³	2017-2019	Attainment
SO_2	75 ppb (1-hour)	7 ppb	2018-2020	Attainment
	0.5 ppm (3-hour)	N.A.	N.A.	Attainment

Notes:
ppm = parts per million; ppb = parts per billion; µg/m³ = micrograms per cubic meter
$PM_{2.5}$ = particulate matter with a diameter less than 2.5 micrometers (µm); PM_{10} = particulate matter with a diameter less than 10 micrometers (µm)
[1] Design values shown in the table are from available Air Quality System (AQS) sites closest to the DFW. Design values for CO and $PM_{2.5}$ are based on AQS site 481130069 in Dallas County; design value for Pb is based on AQS site 482570020 in Kaufman County; design value for NO_2 is based on AQS site 481131067 in Dallas County; design value for O_3 is based on AQS site 481130075 in Dallas County; design value for SO_2 is based on AQS site 482570005 in Kaufman County.
[2] Design values are commonly used to classify nonattainment areas and are defined as statistics that describe the air quality status of a given location relative to the level of the NAAQS.
[3] An attainment area is a geographic area that meets or does better than the primary standard defined in the NAAQS.
[4] A nonattainment area is a homogeneous geographical area (usually referred to as an air quality control region) that is in violation of one or more NAAQS and has been designated as nonattainment by the EPA.
[5] N.A.= Not available; no design value is available for the monitoring location. An area with no design value available is automatically in attainment since design values are used to classify non-attainment areas.
Source: USEPA, 2015a; USEPA, 2015b; USEPA, 2021a; USEPA, 2021b

4.2.3 General Conformity

The General Conformity Rule established a process based on emissions analysis to determine whether a federal action conforms to the SIP. General Conformity refers to the requirements under Section 176(c) of the CAA for federal agencies to show that their actions conform to the purpose of the applicable SIP. As described in 40 CFR 51 and 93, issued by the USEPA, the General Conformity analysis evaluates both direct emissions and indirect emissions, as defined by 40 CFR 93.152. "Direct emissions" are those that occur at the same time and place as the federal action. As stated in 40 CFR 93.152, "indirect emissions" are defined as emissions or precursors that are caused or initiated by the federal action and originate in the same nonattainment or maintenance area but occur at a different time or place from the action, are reasonably foreseeable, that the agency can practically control, and for which the agency has continuing program responsibility.

When developing the General Conformity Rule, the USEPA recognized that many actions conducted by federal agencies do not result in substantial increases in air pollutant emissions in nonattainment and maintenance areas. Therefore, the USEPA established threshold levels (also referred to as *de minimis* levels) for emissions of each of the criteria pollutants. If the sum of the increases in direct and indirect emissions caused by a project is calculated to be below the *de minimis* levels, no further air quality analysis is needed, and the project would not require a General Conformity Determination. As noted previously, the Dallas-Fort Worth area is currently classified as a "serious" nonattainment area under the 2008 O_3 standard, and the resulting *de minimis* level is 50 tons per year (tpy) for NO_x or VOC.

4.2.4 Sources of Airport Air Emissions

Emissions from the Proposed Action are expected to include construction emissions, including emissions from construction equipment, motor vehicles (employee commute and material delivery), and nonpoint source emissions (e.g., fugitive dust and asphalt drying), as well as operational emissions from stationary source boilers and emergency generators. Temporary construction emissions and operational emissions are subject to the CAA General Conformity requirements.

4.3 Climate

4.3.1 Regulatory Background

The Intergovernmental Panel on Climate Change (IPCC, 2021) has concluded that it is unequivocal that human influence has warmed the atmosphere, ocean and land and that human activities have caused concentrations of greenhouse gases (GHG) to increase since mid-18th century. The increase in well-mixed GHG concentrations has caused widespread changes in the earth's climate systems, which include, but not limited to, successively warmer global surface temperature and increasing global averaged precipitation. Research has shown that there is a direct link between fuel combustion and GHG emissions; sources that require fuel or power at an airport are key sources of GHGs. Aircraft jet engines, like many other vehicle engines, produce carbon dioxide (CO_2), water (H_2O) vapor, nitrous oxide (N_2O), CO, oxides of sulfur, unburned or partially combusted hydrocarbons or VOC, particulates, and other trace compounds.

There are currently no ambient air standards for GHGs as well as no significance thresholds for aviation GHG emissions (FAA, 2020). Exhibit 3-1 of the FAA 1050.1F Desk Reference (FAA, 2020) lists the general statutes and regulations related to climate. President Biden's 27 January 2021, Executive Order (EO) on Tackling the Climate Crisis at Home and Abroad notes that it will be a United States priority to press for integration of climate considerations across a wide range of international fora that address aviation, clean energy, and related topics. On 09 September 2021, the Biden administration announced a series of sustainability initiatives in the aviation

industry including scaling sustainable aviation fuel (SAF) production to 3 billion gallons per year (gpy) by 2030 by supporting producers and research to improve air traffic and airport efficiency.

4.3.2 Existing Conditions

Airport development has the potential to both affect climate change and to be affected by it. Changes in resource categories such as air quality, natural resources, and energy supply can potentially contribute to climate change by increasing the amount of GHGs emitted. The USEPA indicates that transportation activities accounted for the largest portion of total U.S. GHG emissions in 2019 at 28.6 percent. Commercial aviation contributed 7.2 percent of total GHG emissions in 2019, compared to 23.6 percent from freight trucks, 17.2 percent from light-duty trucks, 2.4 percent from other aircraft, and 2.2 percent from rail (USEPA, 2021d).

The characteristics of GHGs and their rapid dispersion into the global atmosphere makes GHGs different from other air pollutants evaluated in federal environmental reviews because the impacts are not localized or regional. It is difficult to isolate the GHG emissions impacts for a particular aviation project. Uncertainties are too large to accurately predict the timing, magnitude, and location of aviation's climate impacts; however, it is clear that minimizing GHG emissions and identifying potential future impacts of climate change are important for a sustainable national airspace system (FAA, 2020).

Recognizing the imperative to measure and reduce GHG emissions generated through airport operations, DFW became the first airport in North America to be carbon neutral in 2016 and achieved 4+ level in Airports Council International's (ACI) Airport Carbon Accreditation (ACA) program in 2020. The new level 4+ recognizes DFW's commitment to decarbonization across operations. In 2017, DFW Airport implemented the Renewable Natural Gas Initiative, with the goal of transitioning 100 percent of DFW's compressed natural gas (CNG) vehicle fleet to renewable natural gas (RNG), waste energy recovered from a local landfill. As of December 2021, over 70 percent of the natural gas used in the DFW's vehicle fleet came from RNG. DFW's Net Zero Roadmap details strategies to eliminate the use of fossil fuels for heating, cooling, electricity, and vehicle use by continuing to improve energy efficiency while transitioning most of the heating, refrigerants, and fuel to carbon-free sources. DFW completed design of a "*Electric Brute Force Central Utility Plant*" in December 2020. This project is the cornerstone of DFW's Net Zero Roadmap. By transitioning terminal heating from natural gas to renewable electricity (electric heat pumps and chillers), DFW's largest sources of emissions will be reduced significantly.

Sources of GHG emissions for the Proposed Action include emissions of GHG from construction operations including construction equipment, motor vehicles, and nonpoint sources, as well as operational emissions from stationary source boilers and emergency generators. These sources contribute to GHGs such as CO_2, methane (CH_4), and N_2O, primarily due to fuel combustion. While emissions of hydrofluorocarbons (HFC), perflorinated compounds (PFC1), and Sulfur Hexafluoride (SF_6) linked with refrigeration, air conditioning, and other coolants also occur at airports, these are at far lesser amounts (FAA 2015) and are expected to be relatively negligible for this Project.

4.4 Hazardous Materials, Solid Waste, and Pollution Prevention

4.4.1 Regulatory Background

The handling and disposal of hazardous materials, chemicals, and wastes is primarily governed by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (more commonly known as "Superfund"), Pollution Prevention Act (PPA), Toxic Substances Control Act (TSCA), and Resource Conservation and Recovery Act (RCRA), as amended. RCRA governs the generation, treatment, storage, and disposal of solid and hazardous wastes. CERCLA provides for consultation with natural resources trustees and cleanup of any release of

a hazardous substance (excluding petroleum) into the environment. In addition to these laws, three EO have been designated to ensure federal compliance with pollution control standards, Federal right-to-know laws, and Superfund implementation. FAA Orders 1050.1F and 5050.4B do not provide a specific threshold of significance for hazardous material and solid waste impacts. However, they offer that actions involving property listed (or potentially listed) on the National Priorities List (NPL) would be considered significant.

Solid waste is generally defined in RCRA as any discarded material that is abandoned, recycled, considered inherently waste-like, or a military munition (refer to 40 CFR 261.2 for further details). The definition of a hazardous material, hazardous substance, and a hazardous waste follow:

- *Hazardous Material* – any substance or material that has been determined to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce (49 CFR 172, Table 172.101). This includes hazardous substances and hazardous wastes.
- *Hazardous Substance* – any element, compound mixture, solution, or substance defined as a hazardous substance under the CERCLA and listed in 40 CFR 302. If released into the environment, hazardous substances may pose substantial harm to human health or the environment.
- *Hazardous Waste* – a waste is considered hazardous if it is listed in RCRA regulations, or meets the characteristics described in 40 CFR 261, including ignitability, corrosivity, reactivity, or toxicity.

4.4.2 Existing Conditions

Since the disruption of sites and facilities containing hazardous materials (including hazardous wastes, hazardous substances, environmental contamination, and other regulated substances such as asbestos, fuel and waste oil) can potentially impact soils, surface/groundwater, and air quality, this section provides an overview of what is known about these areas located in the vicinity of the proposed project area. This information is presented to help determine what effect, if any, the Proposed Action will have on these sites and vice versa.

For the purpose of this analysis, the identification of sites known, suspected, or with the potential, to contain hazardous materials and/or environmental contamination was conducted by accomplishing the following: visual observations of existing conditions; consultation and discussions with DFW Airport staff; review of current aerial photos; and an electronic database search of available regulatory agency records. The sampling and testing of environmental media (e.g., soils, surface/groundwater, building materials, etc.) was not conducted.

4.4.2.1 Hazardous Materials, Substances, and Waste

Per the USEPA's NPL database, there are no properties listed (or proposed) on the NPL in the direct Project Study Area. However, 34 properties are listed nearby within the vicinity of Terminal C as listed in **Table 4-4**. This includes asbestos within the existing CUP, existing utility tunnel, nearby flyover bridges, and portions of the Terminal C building.

The potential for asbestos containing materials (ACM) has been confirmed in the existing CUP and utility tunnel, which is one component of the overall Proposed Action. The ACMs may potentially be found to be in different parts of the building, including the mastic and caulking. Other ACM has been identified in piping.

Table 4-4. Federal and States Database Sites Located on DFW Property Near the Project Area

Site Name	Address	Database Type
DFWEAD2017036 - Terminal C (FID#33054)	2333 N International Parkway	Asbestos
DFW Terminal C	2330 N International Parkway	Asbestos
Terminals A, B, C, E Central Utilities	Unmapped, in proximity	Asbestos
Delta Airlines Incineration Facility	Unmapped, in proximity	Permitted Solid Waste Facility/Landfill (SWF/LF), Central Registry
Central Utilities Plant Upgrade	Unmapped, in proximity	Central Registry
Transportation Security Administration (TSA)	Terminal C Lower Level	Notice of Violation Listing (ENF)
TSA	Terminal C Lower Level	Compliance History Listing (COMP HIST)
DFW Terminal C 0-5	2330 N. International Parkway	Asbestos
DFWEAD2019089 – Terminal C (FID#33054)	2330 N International Parkway	Asbestos
Terminal C High Gates Demolition and Rebuild	Terminal C Gates 33-39	Central Registry
Terminal C (HP#7080)	2330 N International Parkway	Asbestos
Terminal C – High Bay Building (FID#33043)	2500 N International Parkway	Asbestos
TSA	Terminal C Lower Level	Facility Index System/Facility Registry System (FINDS)
DFW Terminal C High Gates	2400 N International Parkway	Enforcement and Compliance History (ECHO)
Terminal C FID NO.	2330 N International Parkway	Asbestos
DFW Terminal C High Gates	2400 N International Parkway	FINDS
TSA	Terminal C Lower Level	Industrial Hazardous Wastes (IHW)
Terminal C High Gates Demolition and Rebuild	Terminal C Gates 35-39	FINDS, ECHO
DFWEAD2019026 - Terminal C (FID#33054)	2330 N International Parkway	Asbestos
TSA	Terminal C Lower Level	Central Registry
TSA	Terminal C Lower Level	FINDS, ECHO
DFW	American Airlines Incineration, Terminal 3E Near Gate No. 1	SWF/LF
American Airlines	2E 3E Connector Building	Underground Storage Tank (UST), Financial Assurance
American Airlines	2W AUTOMOTIVE	Leaking Petroleum Storage Tank (LPST)
D10 Terminal Radar Approach Control	2401 N International Parkway	UST
DFW	5E Support Area	IHW
DFW	3122 E 30th Street	LPST, IHW, IHW Corrective Actions
DFW FLQ LOC 17L	DFW Airport	UST
DFW JHZ LOC 17R	DFW Airport	UST
DFW FLQ GS 17L	DFW Airport	UST
Runway 35R ALSF 2	DFW Airport	UST
DFW	DFW Airport	UST
National Car Rental	DFW Airport North	UST, Financial Assurance
DFW VORTAC	DFW Airport	UST
DFW CIX SSALR 18L	DFW Airport	UST
DFW JHZ SSALR 17R	DFW Airport	UST
American Airlines	HANGAR II	LPST, UST, Financial Assurance
American Airlines Old Air Freight	Unmapped, in proximity	LPST
General Telephone Southwest	Unmapped, in proximity	LPST
National Car Rental Facility	Unmapped, in proximity	LPST
National Car Rental System Inc.	Unmapped, in proximity	LPST
Texaco Service Station	Unmapped, in proximity	LPST, UST, Financial Assurance

Source: EDR 2021a, b

In addition to the ACM hazardous materials, the Proposed Action is located immediately adjacent to an area where jet fuel has been released into the environment and has resulted in subsurface contamination. The historic jet fuel releases were managed under an Agreed Order with the TCEQ's Voluntary Cleanup Program (VCP). The Agreed Order required identification of areas of concern, active monitoring and remediation of any jet fuel plumes within the areas of concern on the airport. In August 2020, DFW received TCEQ's regulatory closure of the Agreed Order; this closure means that there is still subsurface hydrocarbon contamination however, there is no need for continued physical extraction and pumping in efforts to remove contaminated media. Additionally, the closure concurs that the contamination is contained, and the hydrocarbon plume is not migrating or causing further environmental degradation. As such, the closure allows DFW to continue to monitor the area of concern and leverage natural degradation and decomposition processes as the remediation. DFW has approximately 28 active monitoring wells near the High-C gates project area; these wells will be maintained and monitored in compliance with the Agreed Order Closure requirements.

If any contaminated soil or water is unearthed during the construction of the Proposed Action, the contaminated materials would be handled in accordance with the DFW Contaminated Media Management Plan (CMMP) as well as in compliance with any applicable local, state, and federal regulations.

According to DFW, there were no known hazardous substance investigation and cleanup sites and there are no known on-going corrective actions being conducted within the project area.

4.4.2.2 Solid Waste

Solid waste in the project area is generated by various activities associated with the demolition and construction projects. DFW collects this solid waste and evaluates it to determine where it is to be disposed. DFW also has a consolidated materials recycling and reuse program that provides recycling containers and a materials management site for construction projects. DFW recycles a variety of materials including but not limited to construction and demolition waste, paper, cardboard, wood, metal, concrete, soil, and tires. Through the Sustainability Management Plan (SMP) DFW is committed to decreasing the generation of municipal solid waste (MSW) and hazardous materials and increasing campus-wide recycling.

4.5 Natural Resources and Energy Supply

4.5.1 Regulatory Background

CEQ regulations (§1502.16) require that federal agencies consider energy requirements, natural or depletable resource requirements, and the conservation potential of alternatives and mitigation measures. Consumption of natural resources (such as water, asphalt, aggregate, wood, etc.) and use of energy supplies (such as coal for electricity, natural gas for heating, and fuel for aircraft, vehicles, or other ground vehicles) may result from construction, operation, and/or maintenance of the proposed action. Under FAA policy, facility development should exemplify the highest standards of design including principles of sustainability. All elements of the transportation system should be designed with a view to their aesthetic impact, and conservation of resources, such as energy, pollution prevention, harmonization with the community environment, and sensitivity to the concerns of the traveling public.

4.5.2 Existing Conditions

DFW has implemented a sustainability program to reduce energy and water consumption, reduce pollution, minimize waste, and seek alternative energy sources such as wind and solar. DFW's Design Criteria Manual governs building design and development and requires green building standards; Green Infrastructure/Low Impact Development (GI/LID), a USEPA initiative to reduce and mitigate stormwater runoff.

4.6 Waters Resources

4.6.1 Surface Water and Stormwater Treatment

4.6.1.1 Regulatory Background

The Federal Water Pollution Control Act, commonly known as the Clean Water Act (CWA), passed in 1972 and last amended in 2002 was enacted to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. The CWA established a federal permitting system to regulate discharges into WOUS, certify the protection of water quality, implement, and enforce the National Pollutant Discharge Elimination System (NPDES) program, and identify and characterize impaired water bodies that do not meet, or are not expected to meet, water quality standards. The TCEQ's 2014 Integrated Report for CWA Sections 303(d) and 305(b) characterizes the quality of Texas surface waters and identifies those waters that do not meet water quality standards on the Section 303(d) list, an inventory of impaired waters.

4.6.1.2 Existing Conditions

Surface water runoff on DFW flows into one of six sub-watersheds (Hackberry Creek, South Hackberry Creek, Estelle Creek, Grapevine Creek, Bear Creek, or Cottonwood Creek) or directly into two larger watersheds (West Fork Trinity River or Elm Fork Trinity River). Field surveys of WOUS have been conducted on a large portion of DFW property. These field surveys have identified jurisdictional waters, tributaries, man-made drainage channels, ponds, and potential wetlands on various portions of DFW's property. A drainage ditch associated with DFW's current underground stormwater management system was identified within the proposed footprint of the new boiler house to support the Electric CUP. The ditch was man-made as part of a stormwater control system that did not replace or connect two WOUS and has no more than a speculative connection to a Traditional Navigable Water (TNW); therefore, it would not be regulated under the CWA Section 404. No additional tributaries or water bodies were in or adjacent to the proposed project area; furthermore, no tributaries or water bodies located on DFW were listed on the TCEQ Section 303(d) list (TCEQ 2020).

Currently, drainage is managed for the Landside and the Airport Operations Area (AOA) through separate systems. Landside drainage is directed to stormwater collection pipes, inlets, and storm drains, which are discharged to the airport's first flush stormwater treatment system. On the AOA side, water is collected in a series of storm drains, inlets and diverter boxes which function like oil/water separators, prior to discharging the stormwater to the first flush stormwater management system.

DFW operates a stormwater pretreatment collection system/plant for stormwater associated with industrial activity and to assist with the management of industrial wastewater. The stormwater associated with industrial activities include first-flush stormwater discharge from the aircraft parking aprons, gates, hangars, maintenance areas, fuel farm, and parking lots. The first-flush stormwater is directed to the on-site pretreatment facility via diverter boxes and Type-D inlets. After pretreatment, stormwater is conveyed to the Trinity River Authority (TRA) Central Plant in Irving, Texas, although there is an option to discharge to Bear Creek. As an all-weather airport, DFW utilizes deicing and anti-icing chemicals such as glycol to support safe and efficient winter

operations. As such, DFW invested in a Glycol Collection System (GCS), which includes a complex pipe network, underground storage tanks, and four, 3-million-gallon glycol detention basins that are used to treat and manage Spent Aircraft Deicing Fluid (SADF) and allow for a gradual treatment through different strategies including aeration, the reverse osmosis plant, and the publicly owned treatment works (POTW) facility.

SECTION 5.0 ENVIRONMENTAL CONSEQUENCES

The potential environmental impacts resulting from the construction and operation of the reasonable alternatives and measures taken for mitigation of these effects are presented in this section. The following alternative scenarios are examined:

Alternative	Description
No Action	The NAA assumes the Proposed Action would not be implemented at the DFW Airport.
Proposed Action	The Proposed Action Alternative, the Sponsor's Preferred Alternative, includes the project as identified in **Section 2.0, Purpose and Need**. This project would include the construction of an Electric CUP (45,406 SF), a new boiler house and South Pump Room (5,830 SF) to supply hot and chilled water; a new North Pump Room (3,490 SF), as well as new gas and electric services for the supported terminals and associated structures.

The Proposed Action is not expected to result in a change in the number of aircraft operations or passengers when compared to the NAA. For the Proposed Action, new boiler house and pump room locations were explored to either remain at the existing CUP to be replaced and upgraded or to be newly constructed at specific terminal locations providing additional N+1 resiliency to the overall DFW utility system, which was a driving factor. The existing boiler house at the CUP does not meet and provide redundancy for the heating, domestic water, and PCA load requirements. The existing boilers do not provide system resiliency, nor do they allow for effective use of renewable energy sources. It was determined that the construction of a new boiler house and pump room more closely associated with the terminals would provide system resiliency, would be able to a renewable energy source for effectively than the existing system, and would increase overall energy efficiency for DFW when combined with the other Proposed Action components, such as the Electric CUP. The Electric CUP, once constructed, will immediately provide redundancy in the utility system and will greatly reduce utility-generated emissions through the use of renewable energy sources, new technologies, and an upgraded, more energy efficient distribution system.

The Proposed Action would allow for the replacement of the outdated CUP with a new Electric CUP, improve the overall utility efficiency, reduce natural resource energy demands, reduce overall operational emissions at DFW, replace/improve aging utility infrastructure associated with the terminals to extend the life and to support on-going growth.

5.1 Summary of Environmental Consequences

Potential environmental effect resulting from the construction and operation of the Proposed Action and measures taken for mitigation of these effects are presented and evaluated in this EA. A summary of evaluated environmental effects on each applicable resource category are summarized in the following table.

Table 5-1. Summary of Environmental Consequences

Impact Area	Significance Threshold	No Action Alternative	Proposed Action Alternative
Air Quality	• Pollutant concentrations to exceed one or more of the National Ambient Air Quality Standards for any of the time periods analyzed • Increase the frequency or severity of any such existing violations.	No Impact. Total airport-related operational emissions of CO_2, CO, VOC, and NO_x would be higher due to the current, less efficient CUP when compared to the Proposed Action. No construction emissions would be associated with this alternative.	No Impact. Overall airport operational emissions, excluding aircraft operations, would be expected to decrease based on an overall projected decrease in consumption of fossil fuel use and the more efficient technology associated with the Electric CUP. Construction-related activities and equipment would cause a short-term increase in air emissions, which would be well below the current de minimis threshold of 50 tpy.
Climate	• There are no significance thresholds for aviation GHG emissions.	No Impact. There would be no further impacts to climate change, as no construction or other activities resulting in air emissions would occur.	No Impact. Emissions of GHGs from the Proposed Action are projected to decrease by a general reduction in carbon consumption based on the more efficient Electric CUP and modernized equipment, which will reduce the use of fossil fuels. The Proposed Action would assist DFW in reaching the Net Zero Carbon goal by 2030.
Hazardous Materials	• There are no significance thresholds for hazardous materials, solid waste, or pollution prevention.	No Impact. There are no impacts from hazardous materials are expected as no construction or other activities would occur.	No Impact. Due to the utility infrastructure age, ACM is known to be located within utility piping. All appropriate federal, state, and local regulations will be followed through the ACM abatement process, which will eliminate any potential effects associated with friable ACM inhalation. All material will be disposed of in accordance with all federal, state, and local regulations. A database review revealed there are known hazardous materials sites or sites of potential releases of hazardous substance, pollutants, or contaminants into to the environment near the project area. All sites were determined not to pose a recognized environmental condition (REC) to the Proposed Action. There are no reported landfills or related facilities at the airport.
Solid Waste	• There are no significance thresholds for solid waste.	No Impact. The NAA would not generate solid waste impacts or increase the amount of waste generated beyond that expected from airport activity levels.	No Impact. Since the project is the modernization and extension of an existing DFW system it is not expected to generation additional MSW or be materially different from the NAA. No impacts from construction and demolition wastes are expected as they would not create an adverse effect on local landfills.

Impact Area	Significance Threshold	No Action Alternative	Proposed Action Alternative
Natural Resources and Energy Supply	• There are no significance thresholds for natural resources and energy supply.	No Impact. Under the NAA, the existing CUP would continue to be utilized, which would continue to be powered by non-renewable fossil fuels.	No Impact. Under the Proposed Action, the new Electric CUP would utilize a renewable energy source, along with increased efficiency from equipment modernization and upgraded associated utility infrastructure. The Proposed Action would assist DFW in reaching the Net Zero Carbon goal by 2030.
Surface Water and Stormwater Treatment	• Exceed water quality standards established by federal, state, local, and tribal regulatory agencies • Contaminate public drinking water supply such that public health may be adversely affected	No Impact. There would be no impacts on water quality, as no construction or other activities would occur.	No Impact. Potential impacts to surface water quality are associated with soil erosion during the construction phase. These effects would be minimized through appropriate BMP and compliance with associated water quality permits. The current stormwater system has the capacity to include the new project components associated with the Electric CUP, Boiler House/Pump Rooms, and all associated utility infrastructure.

5.2 Air Quality

5.2.1 Significance Thresholds

As identified in FAA Order 1050.1F, the threshold for significance for air quality impacts is defined as when "the action would cause pollutant concentrations to exceed one or more of the NAAQS, as established by the USEPA under the CAA, for any of the time periods analyzed, or to increase the frequency or severity of any such existing violations."

If the air quality assessment for the Proposed Action were to show that any of the Federal de minimis thresholds established under the CAA were equaled or exceeded, more detailed analyses to demonstrate conformity with the SIP would be required. This more detailed analysis process is known as a General Conformity Determination. Conversely, if the analysis were to show that none of the relevant thresholds were equaled or exceeded, the Proposed Action at DFW would be presumed to conform to the applicable SIP and no further analysis would be required under NEPA and the CAA.

5.2.2 No Action Alternative

The NAA would not involve any construction activities; therefore, no construction emissions would be associated with the NAA. Since there would be no construction related emissions, there would be no additional air quality effects, other than those currently produced through existing operational emissions. Under the NAA, substantial emissions would continue to be generated through the existing CUP and associated utility system. This is a continued adverse effect given the AQCR 215 O_3 non-attainment status and DFW commitment to overall locational and regional sustainability.

5.2.3 Proposed Action Alternative

5.2.3.1 Construction-Related Emissions

The Proposed Action construction emissions were analyzed for anticipated construction years 2022 through 2024 (**Appendix D**). The Proposed Action would result in temporary air quality

effects during the demolition and construction activities. An air quality analysis was completed to determine the Proposed Action's potential emissions-related impacts. The methodology used to prepare the DFW emissions inventories is consistent with the requirements outlined in the latest FAA *Air Quality Handbook and Guidance Document*, which provides both regulatory context and technical direction for completing airport-related air quality impact assessments.

The Proposed Action would generate criteria air pollutant (CAP) emissions from heavy-duty construction equipment activity, truck haul trips, and construction worker and vendor truck trips to and from the project areas. Construction emissions include both on-road mobile and off-road source categories.

Mobile source exhaust and fugitive dust emissions would be generated from on-road vehicles and construction equipment, including but not limited to dump trucks, mixers, passenger vehicles, flatbed trucks, and tractor trailers. Fugitive VOC emissions would be generated by asphalt drying. CAP emissions and O_3 precursors include emissions of NO_X, CO, SO_2, VOC, PM_{10}, and $PM_{2.5}$. Of these, NO_X and VOC are the two primary precursors to O_3 formation.

Construction equipment usage would cause a short-term increase in air emissions. The estimated construction emissions from diesel-powered on-road vehicles and off-road construction equipment were modeled using the USEPA Motor Vehicles Emissions Simulator, version 3 (MOVES3). Emissions were calculated using the activity estimates for each project component combined with the most recent emission factors from the USEPA MOVES3 and USEPA AP-42 guidance.

Table 5-2 shows the estimated construction emissions of NO_X, CO, VOC, SO_2, PM_{10}, and $PM_{2.5}$. Proposed Action construction of the Electric CUP is anticipated from November 2022 through October 2024. Construction of the new Boiler House and Pumps Rooms and associated utility infrastructure rehabilitation and extension is anticipated to occur between August 2022 through August 2023. The Proposed Action-related construction emissions are well below the *de minimis* levels of 50 tpy for NO_X or VOC.

Table 5-2. Proposed Action Construction Emissions

Year	Project Type	Emissions (short tpy)					
		NOx	CO	VOC	SO_2	PM_{10}	$PM_{2.5}$
2022	Boiler House/Pump Rooms	2.68	3.12	0.25	0.007	0.32	0.19
	Electric CUP	0.21	1.57	0.09	0.001	0.08	0.02
	Total	2.88	4.70	0.34	0.009	0.39	0.22
2023	Boiler House/Pump Rooms	4.35	5.39	0.42	0.014	0.53	0.30
	Electric CUP	2.63	19.90	0.94	0.021	1.29	0.32
	Total	6.98	25.29	1.36	0.034	1.82	0.62
2024	Electric CUP	1.37	12.03	0.55	0.012	0.62	0.16
	Total	1.37	12.03	0.55	0.012	0.62	0.16

5.2.3.2 Operational-Related Emissions

Additional operational emissions are expected from temporary, rented, and permanent boilers (when operated on jet fuel only). The Proposed Action is expected to result in low additional operational emissions from temporary boilers from 2022 through 2024 and permanent stationary boilers from 2025 to end of project life. Specifically, the Proposed Action will include the use of three temporary, natural gas-fired boilers for hot water heating. The temporary boilers are estimated to have a heating output of 26,780 MBH each. The Proposed Action also includes the installation of five, permanent 10,000 MBH boilers at the new boiler house. These permanent boilers will operate primarily on natural gas during which they will have lower or equivalent emissions compared to the existing boilers that they will replace. Therefore, quantitative evaluation of operational emissions for the permanent boiler natural gas operations was not estimated. The Proposed Action also includes installation of three, permanent, fire tube boilers

and one, permanent, condensing boiler at the Electric CUP. These permanent boilers will utilize electricity and natural gas fuel, operating more efficiently than the existing CUP boilers being replaced; thereby, resulting in a net decrease to emissions relative to the NAA. Therefore, quantitative evaluation of operational emissions for the permanent boilers at the Electric CUP was not estimated.

Emission increases from Proposed Action permanent boilers will occur only when jet fuel is used to power boilers during times when natural gas is unavailable, and these emissions are analyzed. Operation of permanent boilers with jet fuel is expected to be minimal. It was assumed that annual operation on jet fuel would be limited to a single multi-day event. Combined jet fuel consumption across all boilers is estimated to be 6.17 gallons per minute (gpm; or 8.88 thousand gallons per day [gpd]).

Temporary boiler annual energy consumption was combined with applicable emission factors from USEPA AP-42 guidance and manufacturer specifications to estimate rental boiler emissions. Permanent boilers annual jet fuel consumption was combined with applicable emission factors from USEPA AP-42 guidance to estimate permanent boiler annual additional emissions. The additional operational emissions for 2024 and 2029 are shown in **Table 5-3** and are expected to be extremely small. Except for temporary boilers and permanent boilers jet-fueled operations, operation of the Proposed Action would result in no net increase in emissions.

Table 5-3. Proposed Action Additional Operational Emissions

Year	Project Type	Emissions (short tpy)					
		NOx	CO	VOC	SO_2	PM_{10}	$PM_{2.5}$
2024	Temporary Boilers	0.0026	0.0026	0.00039	0.00007	0.00054	0.00054
2029	Permanent Boilers	0.32	0.067	0.0045	0.57	0.044	0.044

5.2.4 Mitigation

Construction and additional operational emissions from the Proposed Action do not exceed the General Conformity Rule applicability *de minimis* levels of 50 tpy for either NO_X or VOC. Thus, the Proposed Action does not exceed the significance threshold for air quality and mitigation measures for the pollutants VOC and NO_X (as precursors to O_3 formation) would not be necessary.

The Proposed Action will include construction activities that will result in temporary air quality effects due to tailpipe emissions and fugitive dust. Standard applicable engineering controls and best management practices (BMP) would be implemented to reduce air quality effects. All construction activities would be conducted consistent with all pertinent federal, state, and local laws, regulations, and standards as appropriate and/or adopted by DFW. On-airport construction activities should adhere to the FAA AC 150/5370-10H *Standards for Specifying Construction of Airports*. Mitigation and control measures are available and would be implemented, as needed, to mitigate construction air quality impacts.

5.3 Climate

5.3.1 Significance Thresholds

According to the 1050.1F Desk Reference (February 2020), the FAA has not determined a specific set of thresholds associated with aviation or commercial space launch GHG emissions and has not determined specific factors in making the significance determination for GHG emissions.

Climate change is a global phenomenon that can have local impacts. As discussed in **Section 4.3**, scientific measurements show that Earth's climate is warming, with concurrent impacts including warmer air temperatures, increased sea level rise, increased storm activity, and an increased intensity in precipitation events. Research has shown there is a direct correlation between fuel combustion and GHG emissions.

5.3.2 No Action Alternative

Under the NAA, the existing conditions would remain in place and there would not be any additional construction activities and operational activities would remain consistent. Therefore, there would be no additional climate-related effects.

5.3.3 Proposed Action Alternative

5.3.3.1 Construction-Related GHG Emissions

GHG emissions associated with construction activities were analyzed for anticipated construction years 2022 through 2024. A GHG emission inventory was prepared including CH_4, N_2O, CO_2, and carbon dioxide equivalent (CO_{2e}). The USEPA MOVES3 model was used to estimate GHG emissions from construction equipment and on-road vehicles required to support the Proposed Action. **Table 5-4** provides a summary of the annual GHG construction-related emissions.

Table 5-4. Proposed Action Estimated GHG (CO_2) Emissions

Year	Project Type	Emissions (metric tpy)			
		CH_4	N_2O	CO_2	CO_2e[1]
2022	Boiler House/Pump Rooms	0.02	0.10	2,322	2,352
	Electric CUP	0.01	0.01	256	258
	Total	0.03	0.11	2,578	2,611
2023	Boiler House/Pump Rooms	0.03	0.19	4,294	4,350
	Electric CUP	0.08	0.14	4,339	4,383
	Total	**0.11**	**0.33**	**8,633**	**8,733**
2024	Electric CUP	0.04	0.06	2,214	2,235
	Total	0.04	0.06	2,214	2,235

[1] CO_2e emissions were estimated based on 20-year global warming potential (GWP) estimates for CH_4 (82.5) and N_2O (273), conservatively, as 20-year GWPs will result in higher CO_2e estimates compared to 100-year GWP estimates.

5.3.3.2 Operations-Related GHG Emissions

Additional operational emissions are expected from temporary and permanent boilers. A GHG emission inventory was prepared, including CH_4, N_2O, CO_2, and CO_{2e}. The Proposed Action is expected to result in low additional operational emissions from temporary boilers from 2022 to 2024 and permanent stationary boilers, only during jet-fueled operations, from 2025 to end of project life. Temporary boiler annual energy consumption was combined with applicable emission factors from USEPA AP-42 guidance and the Inventory of *U.S. Greenhouse Gas Emissions and Sinks: 1990-2019* to estimate temporary boiler emissions. Permanent boilers annual jet fuel consumption was combined with applicable emission factors from USEPA AP-42 guidance to

estimate permanent boiler annual additional emissions. **Table 5-5** shows the annual GHG emissions summary in metric tpy for 2029.

Table 5-5. Proposed Action Estimated Additional Operational GHG (CO_2) Emissions

Year	Project Type	Emissions (metric tpy)			
		CH_4	N_2O	CO_2	CO_2e[1]
2024	Temporary Boilers	<0.001	<0.001	7.6	7.6
2029	Permanent Boilers	0.003	0.003	259.9	261.0

[1] CO_2e emissions were estimated based on 20-year global warming potential (GWP) estimates for CH_4 (82.5) and N_2O (273), conservatively, as 20-year GWPs will result in higher CO_2e estimates compared to 100-year GWP estimates.

5.3.4 Mitigation

This estimate is provided for informational purposes only; FAA has not identified specific factors to consider in making a significance determination for GHG emissions. There are currently no accepted methods for determining significance applicable to aviation or commercial space launch projects given the small amount of emissions they contribute. Therefore, no mitigation measures are required to mitigate the GHGs attributed to the Proposed Action. DFW has on-going commitments to reduce its air emissions. Under the DFW Airport Clean Air policy (effective 01 August 2020), several measures have already been implemented or will be implemented. In addition, the Proposed Action would integrate DFW's Net Zero Carbon building strategy, which supports DFW's carbon neutrality accreditation and commitment to achieve net zero carbon by 2030 on an enterprise-wide scale.

5.4 Hazardous Materials, Solid Waste, and Pollution Prevention

5.4.1 Significance Thresholds

According to the FAA Order 1050.1F (July 2015), the FAA has not established a significance threshold for hazardous materials, solid waste, or pollution prevention. Order 1050.1F provides additional factors to consider, such does the action violate applicable federal, state, tribal, or local laws or regulations regarding hazardous materials or solid waste management. Does the proposed action involve a contaminated site upon which mitigating activities cannot bring the contamination levels below the applicable Protective Concentration Level (PCL)? Does the proposed action produce a substantially different quantity or type of hazardous wastes? Will the proposed action produce a substantially different quantity or type of solid waste, use different collection or disposal methods that would exceed locally available capacity? Would the Proposed Action adversely affect human health and the environment?

5.4.2 No Action Alternative

Under the NAA, there would be no associated demolition or construction activities; thereby, resulting in no impacts from hazardous materials or solid wastes. The existing conditions, which fully comply with DFW policies on hazardous materials and solid wastes generated from the existing CUP and associated utilities systems would remain in place.

5.4.3 Proposed Action Alternative

5.4.3.1 Hazardous Materials:

Construction activities associated with the Proposed Action are expected to include the short-term use of hazardous and non-hazardous materials and generate wastes common to construction including reclaimed concrete, concrete wash-out liquids, petroleum hydrocarbon-based fuels, lubricants, oils, paints, and cleaning solvents. These materials would be handled and stored in accordance with all applicable federal, state, or local regulations. DFW will comply with all federal, state, and local requirements with regard to generation, handling, and disposing of any

waste produced during construction. As part of the DFW construction permitting process, DFW will require all contractors to submit detailed waste management reports and abide by those plans along with all applicable regulatory requirements. DFW maintains a CMMP that provides information and guidance on potential environmental concerns that may be encountered during the disturbance, excavation, and relocation of soils. All activities that involve disturbing or excavating soils will be performed in accordance with the CMMP and other applicable requirements.

Based on the presence of known ACM within the existing utility piping and other infrastructure components that will be demolished or renovated, a comprehensive asbestos assessment will inform the process of abating of any ACMs. Abatement actions would be handled in compliance with all applicable federal and state regulations. In areas where ACMs are uncovered, no work would be permitted until the materials in question have been abated or are found to be non-asbestos containing.

5.4.3.2 Solid Waste:

Solid waste would be generated from construction and demolition debris associated with the Proposed Action. The Proposed Action would neither generate an unmanageable volume of solid waste nor affect DFW's existing solid waste management program. This solid waste would be disposed of in compliance with all applicable regulations. Waste management and disposal facilities are available in the Dallas Fort Worth area to accommodate the proper disposal of solid waste. There are several active, permitted landfills near DFW. Recycling of materials from demolition activities would be utilized to the extent possible.

5.4.3.3 Pollution Prevention:

A Spill Prevention, Control, and Countermeasures (SPCC) Plan would be developed to document the measures that will be taken to prevent accidental release of any hazardous or regulated substances to the environment. In the event of a release, the SPCC would also include the corrective actions that would be deployed to minimize the environmental impact. Furthermore, appropriate materials management measures would be followed to prevent pollution and to minimize the use and manage disposal of hazardous and non-hazardous substances. With these measures, no significant impacts related to hazardous materials would occur as a result of the Proposed Action.

5.4.4 Mitigation

No significant impacts related to hazardous materials or solid waste would occur as a result of the Proposed Action because the Proposed Action would not have the potential to 1) violate applicable laws and regulations; (2) the Proposed Action does not involve a site listed on the NPL; (3) the Proposed Action does not produce an appreciably different quantity or type of hazardous waste; (4) generate an appreciably different quantity or type of solid waste or use a different method of collection or disposal and/or would not exceed local capacity; or (5) adversely affect human health and the environment.

DFW will comply with all federal, state, and local requirements with regard to generation, handling, and disposing of any waste produced during the construction of the proposed project. As part DFW's construction permitting process, DFW will require all contractors to submit detailed soil management and waste management plans and abide by those plans along with all applicable regulatory requirements. The contractor will develop a waste management plan and any contaminated media encountered during the construction of Proposed Action will be handled in accordance with the CMMP. All activities that involve disturbing or excavating soils will be performed in accordance with all federal, state, and local regulations.

If deemed necessary, asbestos abatement activities will be monitored by an Asbestos Inspector licensed by the Texas Department of State Health Services (DSHS) to aid identification methods and procedures. The construction contractor would take appropriate measures to prevent, minimize, and control spills and release of hazardous materials in the construction staging yards and throughout the project area. Special provisions and contingency language would be included in the project's construction plans and specifications to manage hazardous materials and/or petroleum contaminated media according to applicable federal, state, and local regulations.

The Proposed Action would not have a significant impact on solid waste collection, landfill capacity, and waste disposal operations; therefore, mitigation is not required.

5.5 Natural Resources and Energy Supply

5.5.1 Significance Thresholds

In accordance with FAA *Order 1050.1F Desktop Reference* (February 2020), the proposed action alternatives and connected actions were examined to identify any resulting measurable effects on local supplies of natural resources or energy. FAA Order 1050.1F (July 2015) does not establish any significance thresholds for natural resources or energy supply. The Order requires that the Proposed Action and any connected actions be evaluated to identify any major changes that would have measurable effect on local supplies of natural resources or energy. However, the Order states that the use of natural resources other than for fuel, be examined, only if the action involves the need for unusual materials or those that are in short supply. The Order further states that for most actions, changes in energy demands or other natural resource consumption, will not result in significant impacts.

5.5.2 No Action Alternative

Under the NAA, the existing CUP and utility infrastructure will remain in place. Currently, the primary CUP fuel sources are natural gas and jet fuel, which contributes a significant source of DFW's emissions. Without a change in fuel sources and increase in overall energy efficiency from upgraded systems, DFW will not meet the Net Zero Carbon 2030 goal. Existing CUP fuel sources are not a renewable resource and contribute to the overall resource depletion and associated combustive emissions. The NAA will continue the existing adverse effects from these fuel sources and will not generate overall resiliency in the DFW utility system.

5.5.3 Proposed Action Alternative

The Proposed Action will change the primary fuel sources to renewably generated electricity, which will (1) substantially reduce combustible emissions and (2) will reduce the usage of an energy-related non-renewable resource (e.g., fossil fuel hydrocarbons). The Proposed Action will increase overall system efficiency through new technologies in electricity generation, modern materials for distribution, and more energy-efficient components. By switching to a renewable energy source, DFW will likely reach their desired Net Zero Carbon goal by 2030, which will substantially reduce DFW consumption of non-renewable energy source for utility generation.

5.5.4 Mitigation

DFW is committed to improved sustainability and the reduction in natural resources and energy supply. DFW is the only airport in North America to have achieved Level 4+ Transition certification through the ACA. This accreditation level indicates that DFW has offset all residual carbon emissions over which it has control using internationally recognized offsets (ACA 2022). DFW has reduced absolute carbon emissions by 79 percent since 2010 and continues to move toward Net Zero Carbon. DFW has identified 12 primary opportunity areas to continue carbon reduction, which include (1) on-site renewables, (2) DFW fleet electrification, (3) GSE electrification, (4) anaerobic digester, (5) renewable propane, (6) tree conservation, (7) deep energy retrofits, (8)

RNG, (9) carbon removal, (10) Electric CUP, (11) 100 percent renewable electricity, and (12) gate electrification (DFW FY2020 ESG Report). As indicated by this list, the Electric CUP and the other Proposed Action components are essential elements that mitigate natural resources and energy supplies utilized by DFW.

5.6 Waters Resources – Surface and Stormwater Treatment

Consistent with FAA guidelines from the FAA Order 1050.1F (July 20) and FAA *Order 1050.1F Desk Reference* (February 2020), this assessment was conducted with the primary aim of identifying the principal sources of water pollution and/or consumption connected with the construction and operation of the Proposed Action.

5.6.1 Significance Thresholds

The FAA's significance threshold for surface water is presented in the following statement:

A significant impact exists if the action would: exceed water quality standards established by Federal, state, local, and tribal regulatory agencies; or contaminate public drinking water supply such that public health may be adversely affected. In addition to the threshold above, Exhibit 4-1 of FAA Order 1050.1F provides additional factors to consider when evaluating the context and intensity of potential environmental impacts for surface waters, including where there is a potential to adversely affect natural and beneficial water resource values to a degree that substantially diminishes or destroys such values; adversely affect surface waters such that the beneficial uses and values of such waters are appreciably diminished or can no longer be maintained and such impairment cannot be avoided or satisfactorily mitigated; or present difficulties based on water quality impacts when obtaining a permit or authorization.

5.6.2 No Action Alternative

Under the NAA, there would be no impacts on water quality, as no construction activities would occur. As a result, the quantity and quality of stormwater runoff, impacts to groundwater, and production of wastewater would remain largely unaffected. Therefore, there would be no impacts to stormwater treatment, as no construction or other activities would occur.

5.6.3 Proposed Action Alternative

The greatest potential impacts to surface water quality connected to the Proposed Action are associated with soil erosion, materials staging, and batch plant operations during the construction phase. Short-term impacts to surface waters can result from construction activities creating increases in sedimentation and turbidity levels downstream. These construction activities may include pavement demolition, grading, and excavation of subsurface utilities.

The proposed project areas are primarily located within existing impervious area associated with the terminals and an urbanized, maintained median area for the Electric CUP. Since most of the project areas are adjacent to existing buildings, impervious surface, and highly maintained mixed herbaceous cover, the construction of the Proposed Action would not be expected to result in a material change in the stormwater runoff rates, discharge volumes, and pollutant characteristics of the stormwater runoff. DFW's existing stormwater treatment facilities (the first flush stormwater pre-treatment system) would be able to accommodate the stormwater runoff quantities.

The DFW Floodplain Manager reviewed all design plans and determined that effects from the Proposed Action would result in only minimal increases in stormwater discharge, which would not adversely affect the existing velocities contributed to Tributary TA of Big Bear Creek at Outfalls 23 and 73, nor create adverse conditions within the existing conveyance piping system, nor increase the 100-year floodplain inundation.

5.6.3.1 Anticipated Construction Effects

Temporary impacts to surface water quality, though unlikely, could result from erosion and siltation generated from site disturbance activities. Water quality impacts would be minimized to the fullest extent possible through the development and implementation of a Storm Water Pollution Prevention Plan (SW3P), BMP, and structural controls, in compliance with the CWA Texas Pollutant Discharge Elimination System (TPDES) Construction General Permit (CGP) requirements as well as any other federal, state, and local requirements. Therefore, no significant adverse impacts would occur relative to surface waters.

5.6.3.2 Anticipated Operational Effects

The drainage system for the Proposed Action would be connected to the existing first-flush stormwater treatment system prior to discharging to the stormwater sewer system. The Proposed Action will comply with the guidelines and recommendations contained in the FAA AC 150/5320-5D *Surface Drainage Design*. Maintenance activities would include controls to clean pavement surface from any leaked fluids to reduce contamination of stormwater. The Proposed Action would have no impacts to water quality, wetlands and/or WOUS because the Proposed Action would take place on existing DFW interior imperious surfaces and developed areas and will use the existing stormwater management system that was designed to accommodate these activities.

5.6.4 Mitigation

At DFW, construction-related surface water quality impacts from stormwater runoff are minimized by BMPs as required by DFW's Design Criteria Manual Revision 2 with Updates through 2022 (DFW 2022). These BMPs are designed to minimize soil erosion and the transport of debris and sediment in stormwater runoff. Implemented BMPs include silts fences, rock check dams, settling ponds, and good general housekeeping practices. In addition, all stormwater discharges from construction activities at DFW that result in the disturbance of 1 or more acres must comply with the TPDES permit conditions already established for DFW. A CGP SW3P, and all associated requirements would be implemented for the Proposed Action. Because of these water resource management policies and programs that are already in place at DFW, impacts to surface waters associated with the Proposed Action would not be expected to be significant; therefore, no mitigation would be required.

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SECTION 6.0 AGENCY COORDINATION

The development of this EA included coordination with affected federal and state agencies. This coordination process informs the public and agencies and allows an opportunity to identify any possible environmental concerns during the EA process.

6.1 Agency Coordination

DFW consulted with FAA, TCEQ, USEPA, and the Texas Historical Commission (THC) during the development of the EA.

Agency coordination with TCEQ and USEPA, consisted of scoping letters submitted to various divisions within the USEPA and TCEQ on 14 February 2022. TCEQ provided comments on 01 March 2022, indicating that there would be no significant long-term effects so long as BMP were in place for construction and waste disposal activities. TCEQ requested an analysis of potential air quality effects, which were performed for this EA and found to be below the de minimis thresholds. No comments were received from USEPA.

The THC was provided information through a desktop cultural resources assessment associated with the Electric CUP project site in March 2021. THC provided concurrence on 19 April 2021 that no adverse effects to historic resources would result from the proposed project activities. Additionally, the THC was provided additional information associated with the Utility Delivery Systems components in February 2022. THC provided concurrence of no historic properties affected on 10 March 2022.

6.2 Public Involvement

Because the Proposed Action is not controversial, no significant adverse impacts were identified, and no special purpose laws were triggered that require public participation, it was determined that public participation was not necessary.

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SECTION 7.0 PREPARERS

As required by FAA Order 5050.4A, paragraph 77, the names and qualifications of the principal persons contributing information to this EA are identified. It should be noted, in accordance with CEQ regulations (Section 1502.06), the efforts of an interdisciplinary team, consisting of technicians and experts in various fields were required to accomplish this study. Specialists involved in this EA included those in such fields as airport planning; noise assessment and abatement; land use planning; air quality; biology; historic, architectural, and archaeological resources; and other disciplines. It should also be noted, while an interdisciplinary approach has been used, all decisions made regarding the content and scope of this EA are those of DFW.

DFW INTERNATIONAL AIRPORT – AIRPORT SPONSOR

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SECTION 8.0 REFERENCES

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APPENDICES

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APPENDIX A – PROTECTED SPECIES HABITAT ASSESSMENTS

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integrated environmental solutions

30 September 2021

Ms. Sandy Lancaster
Dallas Fort Worth International Airport
3003 South Service Road, Annex Building A
DFW Airport, Texas 75261-9428

Re: CTA Development Project Tarrant County - Protected Species Habitat Assessment
Sites 1 through 6 and 11 through 13 of the 13 total locations for the CTA Terminals A and C Development Project located within the Dallas Fort Worth International Airport, Tarrant County

Dear Ms. Lancaster,

Integrated Environmental Solutions, LLC (IES) performed a protected species habitat assessment on the CTA Terminals A and C Development Project associated with Sites 1 through 6 and 11 through 13 of the 13 total locations within the Dallas Fort Worth International Airport, Tarrant County (**Attachment A, Figure 1**). This habitat assessment was performed to satisfy the requirements regarding the Endangered Species Act (ESA). The following report is a list of the federal and state-listed protected species for Tarrant County and their preferred vegetation assemblages, a summary of the vegetation communities identified on the site, an evaluation of whether the communities present on the site could support a protected species, and whether or not future proposed actions would affect listed species.

INTRODUCTION

Protected Species

Federal

The ESA of 1973 (Public Law [P.L.] 93-205) and the amendments of 1988 (P.L. 100-578) were enacted to provide a program of preservation for endangered and threatened species and to provide protection for ecosystems upon which these species depend for their survival. The ESA requires all federal agencies to implement protection programs for designated species and to use their authorities to further the purposes of the Act. Responsibility for the listing of an endangered or threatened species and for the development of recovery plans lies with the Secretary of Interior and Secretary of Commerce. The U.S. Fish and Wildlife Service (USFWS) is responsible for implementing the ESA within the United States.

An endangered species is a species, which is in danger of extinction throughout all or a significant portion of its range. A threatened species is a species likely to become endangered within the near future throughout all or a significant portion of its range. Proposed species are those, which have been formally submitted to Congress for official listing as endangered or threatened.

In addition, the USFWS has identified species, which are candidates for possible addition to the list of Endangered and Threatened Wildlife and Plants (50 Code of Federal Regulations [CFR] 17.11 and 17.12) under the ESA. The USFWS maintains a candidate list to: (1) provide advance knowledge of potential listings that could affect land planning decisions, (2) solicit input to identify candidates not requiring protection or additional species that may require protection under the ESA, and (3) solicit information needed to prioritize the order in which species will be proposed for listing. Candidate species have no legal protection under the ESA.

The Migratory Bird Treaty Act of 1918 states that it is unlawful to kill, capture, collect, possess, buy, sell, trade, or transport any migratory bird, nest, young, feather, or egg in part or in whole, without a federal permit issued in accordance with the Act's policies and regulations. However, in a recent decision the U.S. Court of Appeals for the Fifth Circuit found that for an unlawful "taking" to occur, a "deliberate act done directly and intentionally to migratory birds" would need to occur. (United States v. CITGO Petroleum Corp., No. 14-40128 [5th Cir. Sept. 4, 2015]).

State

The Texas Parks and Wildlife Department (TPWD) Wildlife Diversity Program (WDP) maintains computerized records of state-listed threatened and endangered species by county. The State of Texas does not list threatened and endangered species using the same criteria as the federal government. When the USFWS lists a plant species, the State of Texas then lists that plant. Thus, the list of threatened and endangered plants in Texas is the same as the Federal list. The state has separate laws governing the listing of animal species as threatened or endangered. Threatened and endangered animal species in Texas are those species so designated according to Chapters 67 and 68 of the Texas Parks and Wildlife Code and Section 65.171 - 65.184 of Title 31 of the Texas Administrative Code. Species that are not currently listed by the Federal government may be listed as threatened or endangered by the TPWD.

METHODOLOGY

Prior to conducting fieldwork, the list of Endangered and Threatened Wildlife and Plants under the ESA was obtained through the USFWS Information, Planning, and Conservation System (IPaC) and from the TPWD WDP and the Texas Natural Diversity Database (TXNDD). The vegetation communities used by each species was obtained and is detailed below. During the field survey, vegetation composition within and adjacent to the project site were noted to determine whether there was any potential for protected species habitat. This survey was not designed to identify the presence of protected species; however, if any species were observed, they were recorded. Photographs were taken at representative points, illustrating common vegetation communities within the survey area (**Attachment B**).

RESULTS

Literature Review

According to the USFWS, three species, Piping Plover (*Charadrius melodus*), Red Knot (*Calidris canutus rufa*), and Whooping Crane (*Grus americana*) are listed as federally protected (i.e., threatened or endangered) with the potential to occur within Tarrant County. Two of these species are conditionally listed as threatened within Tarrant County on the basis that the proposed project is for wind energy production, Red Knot, and Piping Plover. No federally listed critical habitat for these species is located within the vicinity of the survey area. The TPWD lists 12 state protected species that could occur within Tarrant County. Four are also federally listed avian species; however, the Black Rail (*Laterallus jamaicensis*) is only listed by TPWD for Tarrant County. The review of the TXNDD files did not indicate any unique vegetation communities, parks or natural/managed areas within the survey area.

Attachment C identifies the state and federally protected species that could potentially occur within Tarrant County from the IPAC and Rare and Threatened Endangered Species of Texas (RTEST) lists.

Site Survey

Ms. Karisa Fenton and Ms. Clair Unruh of IES evaluated the survey area on 22 September 2021. This survey was designed to provide a habitat evaluation of the overall survey area with the primary focus on the plant community.

Sites 1 through 6 and 11 through 13 consisted of four distinct vegetation communities, **urban matrix, frequently maintained grassland**, **infrequently maintained grassland**, and **shrub-scrub upland**. The **urban matrix** was found throughout a majority of Sites 1 through 6, and on the eastern side of Site 12. The urban matrix was comprised of concrete lots, roads, buildings, and active construction areas. The entirety of Site 11, and the western portion of Site 5 contained the **frequently maintained grassland** vegetation community, dominated by mowed Bermudagrass (*Cynodon dactylon*). The **infrequently maintained grassland** was observed in the central region of Site 12 and was comprised of Maximilian sunflower (*Helianthus maximiliani*), meadow dropseed (*Sporobolus compositus*),

Johnsongrass (*Sorghum halepense*), white heath aster (*Symphyotrichum ericoides*), King Ranch bluestem (*Bothriochloa ischaemum*), sumpweed (*Iva annua*), Canada goldenrod (*Solidago canadensis*), prairie broomweed (*Amphiachyris dracunculoides*), Bermudagrass, and annual sunflower (*Helianthus annuus*). The **shrub-scrub upland** vegetation community was observed on the western side of Site 12 and throughout Site 13, dominated by honey mesquite (*Prosopis glandulosa*), sugarberry (*Celtis laevigata*), giant ragweed (*Ambrosia trifida*), Johnsongrass, Bermudagrass, and annual sunflower.

CONCLUSIONS

Preferred Habitat for Federally Protected Species

Table 1 provides a summary of the federally and state-listed species that could potentially occur within Tarrant County, as well as a brief description of their habitat, whether this habitat is present within the survey area, and whether the proposed project would potentially affect the listed species.

Regarding federally listed threatened and endangered species, Red Knot, Piping Plover, and Whooping Crane were listed for Tarrant County. As these projects will not be related to wind energy, the Red Knot and Piping Plover will not be affected.

- Whooping Cranes utilize estuaries, prairie marshes, moist grasslands, croplands, and will use large shallow wetland areas associated with lakes for roosting and feeding. The survey area did not contain this type of vegetation communities within.

As such, the habitats present within the survey area were not suitable for any of the federally listed threatened or endangered species. Nor were the habitats suitable for nesting, feeding, or stopover migration habitat for these species.

Preferred Habitat for State Protected Species

There were 12 state-listed threatened and endangered species for Tarrant County, which includes all the federally listed avian species. Any occurrence of the Least Tern (*Sterna antillarum athalassos*), Piping Plover, and White-faced Ibis (*Plegadis chihi*) would be in relation to stopover during migration; however, no suitable stopover or nesting habitat was observed within the survey area. Whooping Crane and Black Rail would be unlikely to utilize the survey area, as their preferred habitat type were not present.

Vegetation Communities

None of the vegetation observed within the survey areas would be considered unique or compose a unique vegetation type for the region. The vegetation communities described were composed of species that are not only common to grassland and forested areas, but to the Cross-Timbers and Blackland Prairie eco-regions of North Central Texas. It is IES' professional opinion that the proposed project will not have any effect on any unique vegetation, vegetation communities, or habitat types.

Table 1. Federally- and State- listed Threatened and Endangered Species Occurring or Potentially Occurring in Tarrant County, Texas

Species	State Status	Federal Status	Description of Habitat	Habitat Present[1]	Species Effect[2]
BIRDS					
Black Rail (*Laterallus jamaicensis*)	T	LT	Salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy swamps; nests in or along edge of marsh, sometimes on damp ground, but usually on mat of previous years dead grasses; nest usually hidden in marsh grass or at base of Salicornia.	**No**	**No**
Least Tern (*Sterna antillarum athalassos*)	E	DL	Sand beaches, flats, bays, inlets, lagoons, islands. Subspecies is listed only when inland (more than 50 miles from a coastline); nests along sand and gravel bars within braided streams, rivers; also know to nest on man-made structures (inland beaches, wastewater treatment plants, gravel mines, etc); eats small fish and crustaceans, when breeding forages within a few hundred feet of colony.	**No**	**No**
Piping Plover (*Charadrius melodus*)	T	LT	Beaches, sandflats, and dunes along Gulf Coast beaches and adjacent offshore islands. Also spoil islands in the Intracoastal Waterway. Based on the November 30, 1992 Section 6 Job No. 9.1, Piping Plover and Snowy Plover Winter Habitat Status Survey, algal flats appear to be the highest quality habitat. Some of the most important aspects of algal flats are their relative inaccessibility and their continuous availability throughout all tidal conditions. Sand flats often appear to be preferred over algal flats when both are available, but large portions of sand flats along the Texas coast are available only during low-very low tides and are often completely unavailable during extreme high tides or strong north winds. Beaches appear to serve as a secondary habitat to the flats associated with the primary bays, lagoons, and inter-island passes. Beaches are rarely used on the southern Texas coast, where bayside habitat is always available, and are abandoned as bayside habitats become available on the central and northern coast. However, beaches are probably a vital habitat along the central and northern coast (i.e., north of Padre Island) during periods of extreme high tides that cover the flats. Optimal site characteristics appear to be large in area, sparsely vegetated, continuously available or in close proximity to secondary habitat, and with limited human disturbance.	**No**	**No**
Rufa Red Knot (*Calidris canutus rufa*)	T	LT	The Red Knot prefers the shoreline of coast and bays and also uses mudflats during rare inland encounters. Primary prey items include coquina clam (*Donax* spp.) on beaches and dwarf surf clam (*Mulinia lateralis*) in bays, at least in the Laguna Madre. Wintering Range includes- Aransas, Brazoria, Calhoun, Cameron, Chambers, Galveston, Jefferson, Kennedy, Kleberg, Matagorda, Nueces, San Patricio, and Willacy. Habitat: Primarily seacoasts on tidal flats and beaches, herbaceous wetland, and Tidal flat/shore.	**No**	**No**
White-faced ibis (*Plegadis chihi*)	T	---	Prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; currently confined to near-coastal rookeries in so-called hog-wallow prairies. Nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats.	**No**	**No**
Whooping Crane (*Grus americana*)	E	LE	Small ponds, marshes, and flooded grain fields for both roosting and foraging. Potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties.	**No**	**No**
MAMMALS					
Black Bear (*Ursus americanus*)	T	---	Historically prefers higher elevations where pinyon-oaks predominate; also occasionally sighted in desert scrub of Trans-Pecos (Black Gap Wildlife Management Area) and Edwards Plateau in juniper-oak habitat.	**No**	**No**
MOLLUSKS					
Louisiana pigtoe (*Pleurobema riddellii*)	T	---	Occurs in small streams to large rivers in slow to moderate currents in substrates of clay, mud, sand, and gravel. Not known from impoundments (Howells 2010f; Randklev et al. 2013b; Troia et al. 2015). [Mussels of Texas 2019].	**No**	**No**
Sandbank pocketbook (*Lamsilis satura*)	T	---	Occurs in small streams to large rivers in slow to moderate current in sandy mud to sand and gravel substrate. Can occur in a variety of habitats but most common in littoral habitats such as banks or backwaters or in protected areas along point bars (Randklev et al. 2013b; Randklev et al. 2014a; Troia et al. 2015). [Mussels of Texas 2019].	**No**	**No**
Texas heelsplitter (*Potamilus amphichaenus*)	T	---	Occurs in small streams to large rivers in standing to slow-flowing water; most common in banks, backwaters and quiet pools; adapts to some reservoirs. Often found in soft substrates such as mud, silt or sand (Howells et al. 1996; Randklev et al. 2017a). [Mussels of Texas 2019].	**No**	**No**

Species	State Status	Federal Status	Description of Habitat	Habitat Present[1]	Species Effect[2]
INSECTS					
Monarch Butterfly (Danaus plexippus)	---	C	Adult monarch butterflies are large and conspicuous, with bright orange wings surrounded by a black border and covered with black veins. During the breeding season, monarchs lay their eggs on their obligate milkweed host plant (primarily Asclepias spp.), and larvae emerge after 2 to 5 days. Larvae develop through five larval instars (intervals between molts) over a period of 9 to 18 days, feeding on milkweed and sequestering toxic chemicals (cardenolides) as a defense against predators. The larva then pupates into a chrysalis before emerging 6 to 14 days later as an adult butterfly. There are multiple generations of monarchs produced during the breeding season, with most adult butterflies living approximately 2 to 5 weeks; overwintering adults enter into reproductive diapause (suspended reproduction) and live 6 to 9 months. Individual monarchs in temperate climates, such as eastern and western North America, undergo long-distance migration, and live for an extended period of time. In the fall, in both eastern and western North America, monarchs begin migrating to their respective overwintering sites.	**No**	**No**
REPTILES					
Alligator snapping turtle (*Macrochelys temminckii*)	T	---	Aquatic: Perennial water bodies; rivers, canals, lakes, and oxbows; also swamps, bayous, and ponds near running water; sometimes enters brackish coastal waters. Females emerge to lay eggs close to the water's edge.	**No**	**No**
Texas horned lizard (*Phrynosoma cornutum*)	T	---	Terrestrial: Open habitats with sparse vegetation, including grass, prairie, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive. Occurs to 6000 feet, but largely limited below the pinyon-juniper zone on mountains in the Big Bend area.	**No**	**No**

LE – Federally Listed Endangered, LT – Federally Listed Threatened, DL – Federally Delisted, PT – Federally Proposed Threatened, E – State Listed Endangered, T - State Listed Threatened
C - Candidate

[1]*Habitat Present? – Do the vegetation communities located within the survey area match the requirements for that particular protected species?*

[2]*Species Effect? – Will the proposed project potentially affect a protected species?*

Data Sources: USFWS IPaC (Published and accessed 28 September 2021), TPWD (Published 22 June 2021, accessed 28 September 2021), and field survey of the survey area

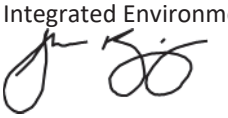
Potential to Affect Protected Species

As previously noted, habitat for any of the federally listed species and state listed species was not present within the survey area. As such, the proposed project is not expected to have any impacts on the federally or state-listed threatened or endangered species.

IES appreciates the opportunity to work with you and the Dallas Fort Worth International Airport Environmental Affairs Department on this project and hope we may be of assistance to you in the future. If you have any comments, questions, or concerns, please do not hesitate to contact me at 972-562-7672 or by email at skipp@intenvsol.com or rreinecke@intenvsol.com.

Sincerely,

Integrated Environmental Solutions, LLC.



Mr. Shae Kipp
Ecologist

Attachments

File ref: 03.006.094

ATTACHMENT A

Figures

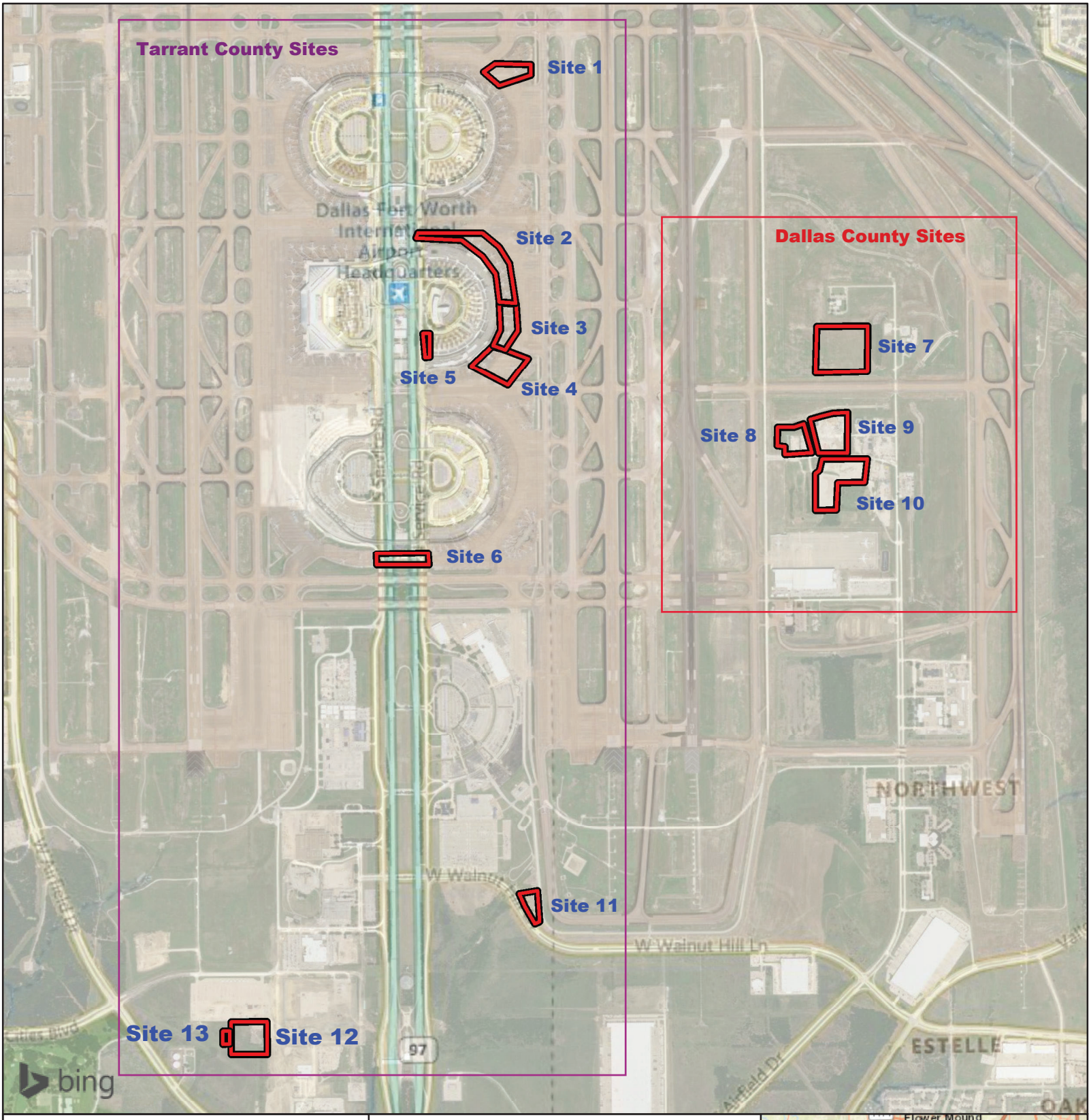


Figure 1.
General Location Map

CTA Development Project
Dallas Fort Worth International Airport
Dallas and Tarrant Counties, Texas

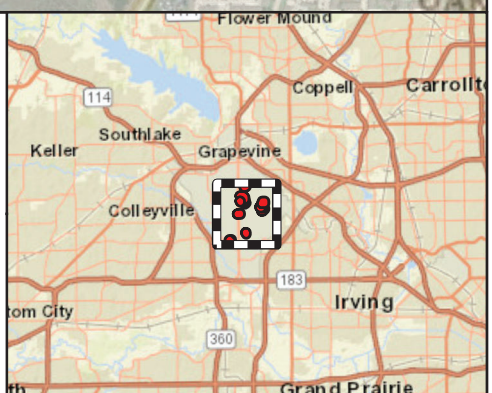
Survey Area

1 in = 2,000 feet

Feet
0 2,000

N
W E
S

File Ref. 03.006.094
Date: 9/28/2021



Area of Detail

Scale: 1 inch equals 10 miles

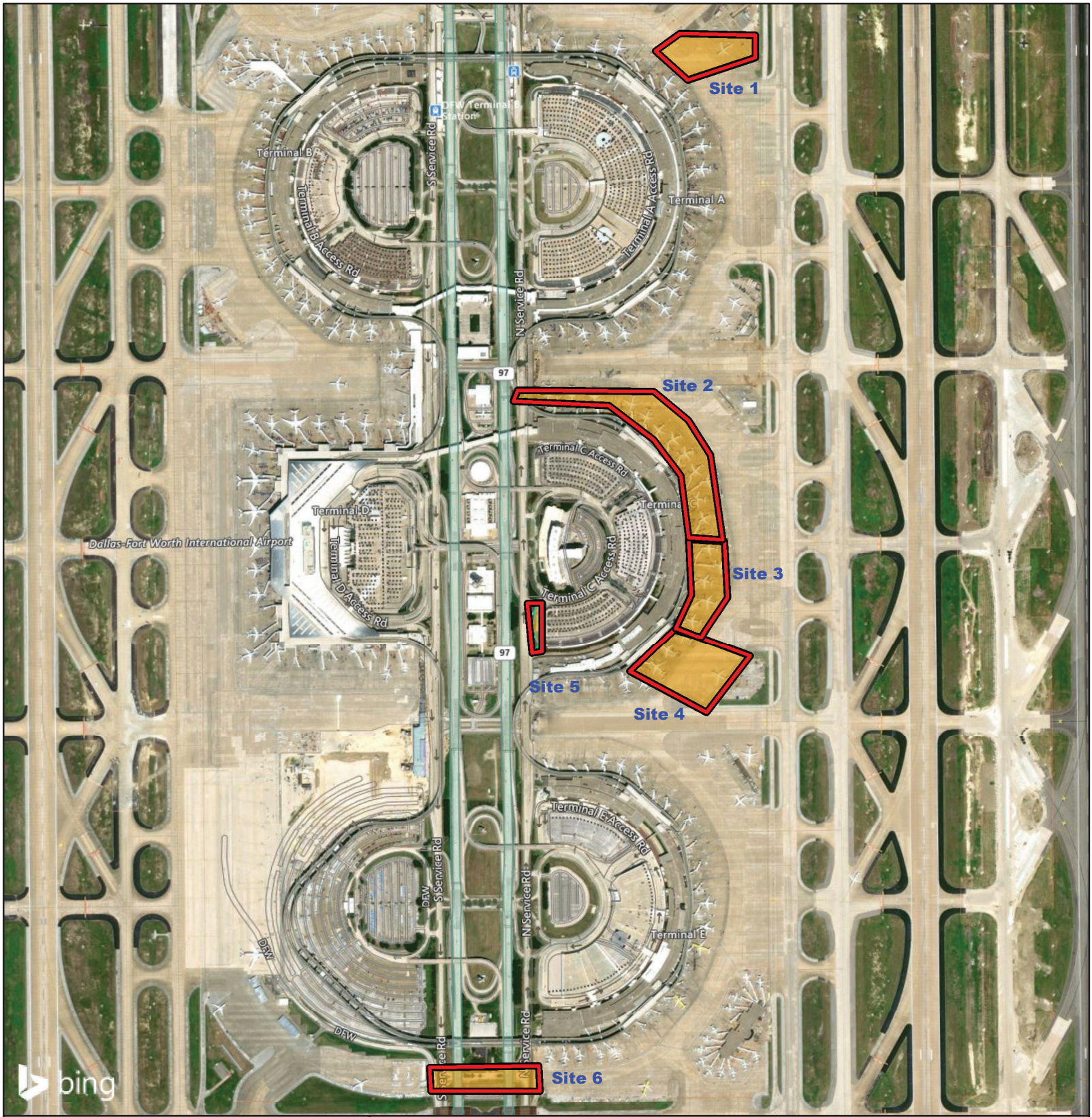


Figure 2A.
Vegetation Communities Identified within the Survey Area

CTA Development Project
Dallas Fort Worth International Airport
Tarrant County, Texas

1 in = 950 feet

Feet
0 950

N
W E
S

File Ref. 03.006.094
Date: 9/29/2021

Survey Area

Vegetation Communities

Frequently Maintained Grassland

Urban Matrix

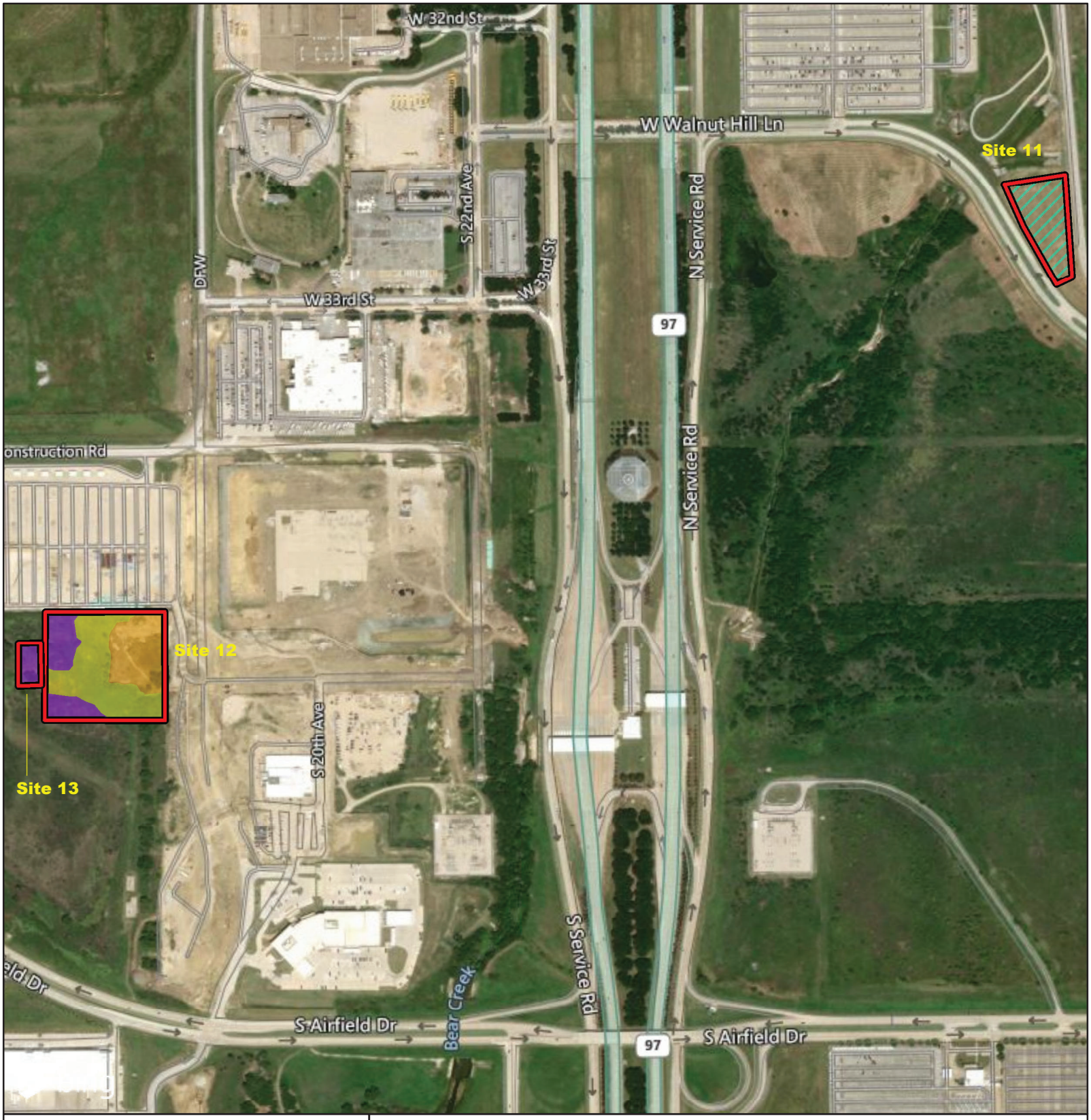


Figure 2B.
Vegetation Communities Identified within the Survey Area

CTA Development Project
Dallas Fort Worth International Airport
Tarrant County, Texas

1 in = 600 feet

Feet
0 600

N
W E
S

File Ref. 03.006.094
Date: 9/29/2021

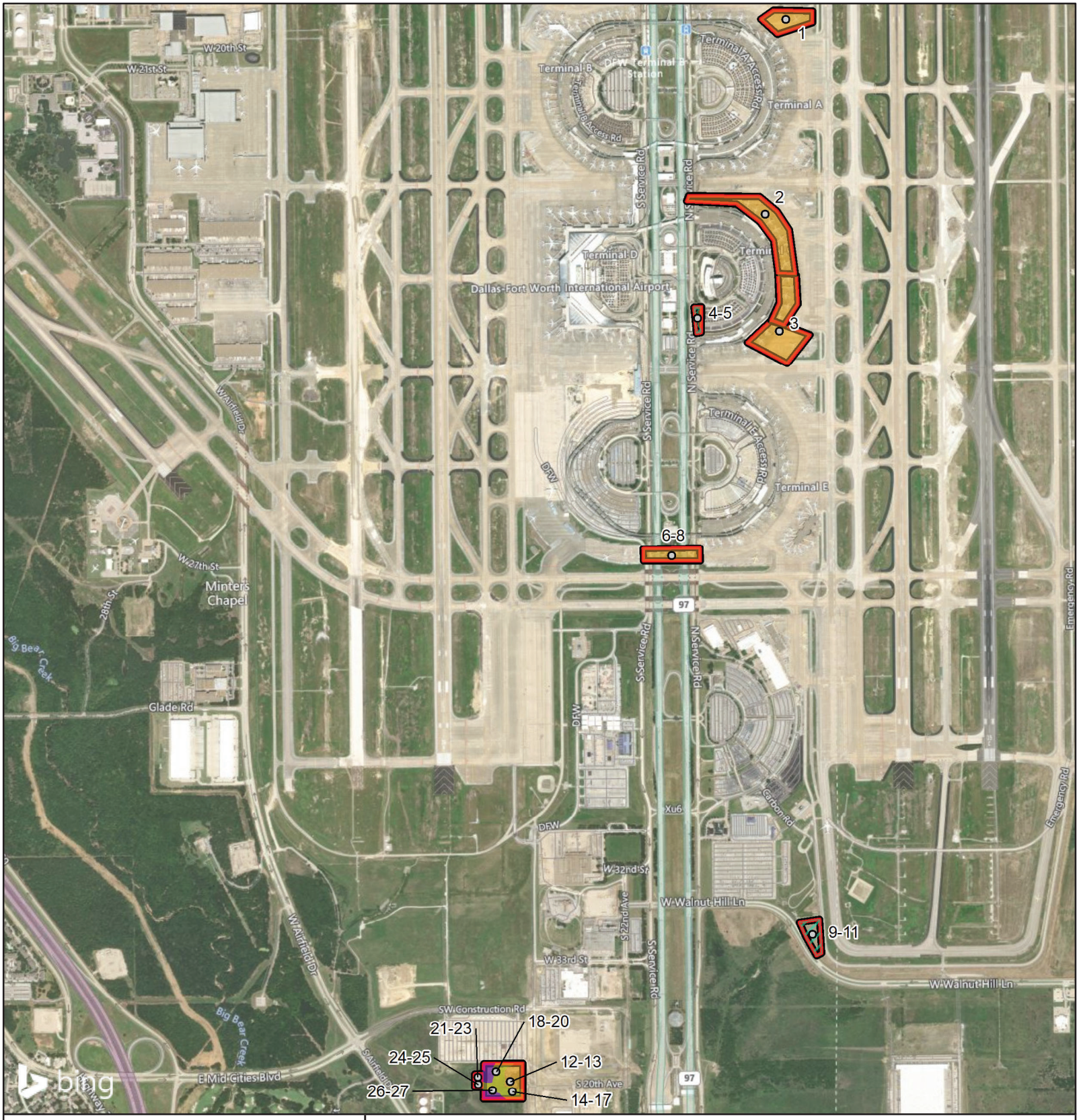
Survey Area

Vegetation Communities

- Frequently Maintained Grassland
- Infrequently Maintained Grassland
- Urban Matrix
- Scrub Shrub

ATTACHMENT B

Site Photographs



Photograph Location Map

CTA Development Project
Dallas Fort Worth International Airport
Tarrant County, Texas

1 in = 1,800 feet

Feet
0
1,800

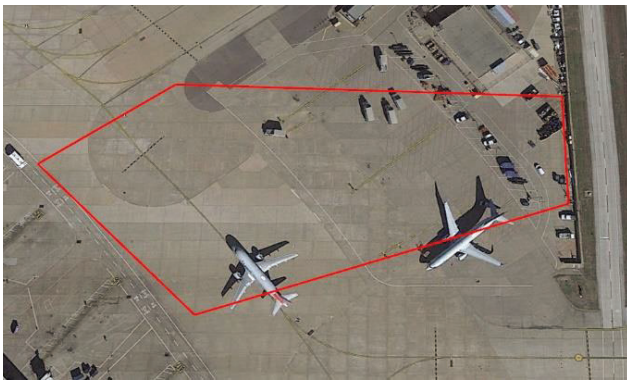
File Ref. 03.006.094
Date: 9/29/2021

N
W E
S

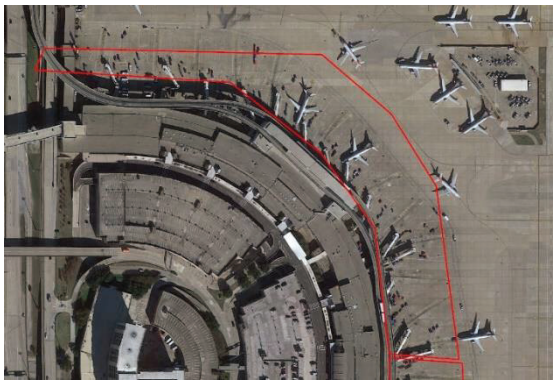
Survey Area
Photograph Location

Vegetation Communities

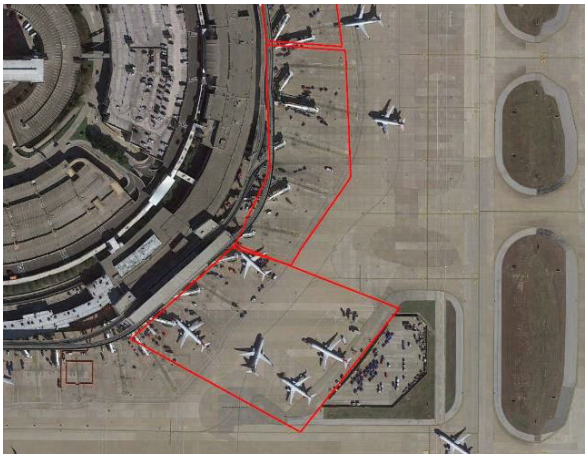
Frequently Maintained Grassland
Infrequently Maintained Grassland
Urban Matrix
Scrub Shrub



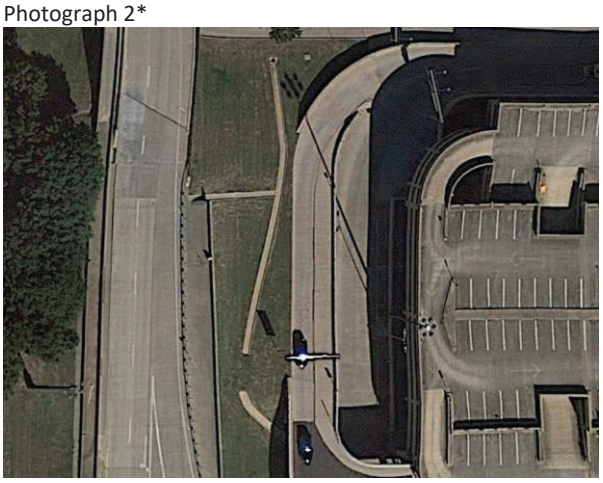
Photograph 1*



Photograph 2*



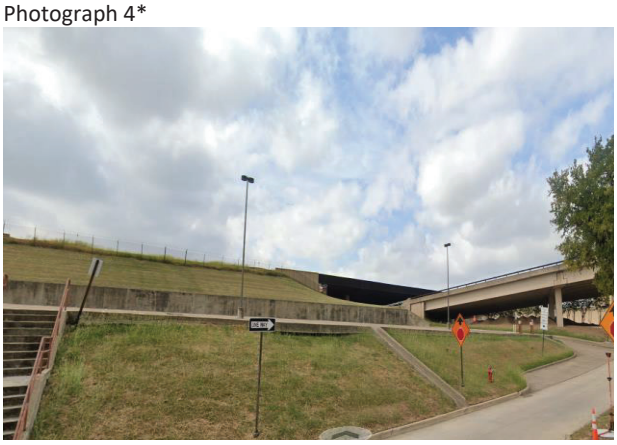
Photograph 3*



Photograph 4*



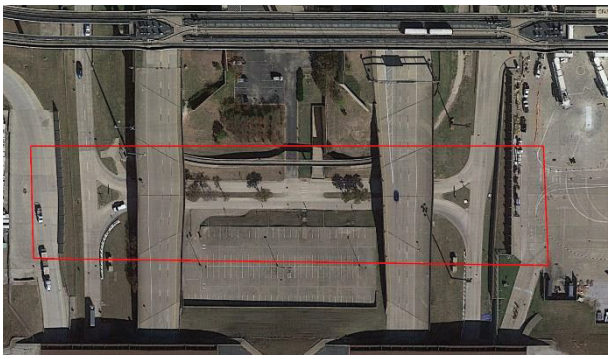
Photograph 5*



Photograph 6*



Photograph 7*



Photograph 8*



Photograph 9



Photograph 10



Photograph 11



Photograph 12



Photograph 13



Photograph 14



Photograph 15



Photograph 16



Photograph 17



Photograph 18



Photograph 19



Photograph 20



Photograph 21



Photograph 22



Photograph 23



Photograph 24



Photograph 25



Photograph 26



Photograph 27

*Aerial Images and Street View Images from Google Earth

ATTACHMENT C

Protected Species Lists

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Arlington Ecological Services Field Office
2005 Ne Green Oaks Blvd
Suite 140
Arlington, TX 76006-6247
Phone: (817) 277-1100 Fax: (817) 277-1129
http://www.fws.gov/southwest/es/arlingtontexas/
http://www.fws.gov/southwest/es/EndangeredSpecies/lists/

In Reply Refer To: September 28, 2021
Consultation Code: 02ETAR00-2021-SLI-3184
Event Code: 02ETAR00-2021-E-07140
Project Name: CTA Development Tarrant

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, which may occur within the boundary of your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under section 7(a)(1) of the Act, Federal agencies are directed to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Under and 7(a)(2) and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether their actions may affect threatened and endangered species and/or designated critical habitat. A Federal action is an activity or program authorized, funded, or carried out, in whole or in part, by a Federal agency (50 CFR 402.02).

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For Federal actions other than major construction activities, the Service suggests that a biological evaluation (similar to a Biological Assessment) be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

After evaluating the potential effects of a proposed action on federally listed species, one of the following determinations should be made by the Federal agency:

1. *No effect* - the appropriate determination when a project, as proposed, is anticipated to have no effects to listed species or critical habitat. A "no effect" determination does not require section 7 consultation and no coordination or contact with the Service is necessary. However, the action agency should maintain a complete record of their evaluation, including the steps leading to the determination of affect, the qualified personnel conducting the evaluation, habitat conditions, site photographs, and any other related information.
2. *May affect, but is not likely to adversely affect* - the appropriate determination when a proposed action's anticipated effects to listed species or critical habitat are insignificant, discountable, or completely beneficial. Insignificant effects relate to the size of the impact and should never reach the scale where "take" of a listed species occurs. Discountable effects are those extremely unlikely to occur. Based on best judgment, a person would not be able to meaningfully measure, detect, or evaluate insignificant effects, or expect discountable effects to occur. This determination requires written concurrence from the Service. A biological evaluation or other supporting information justifying this determination should be submitted with a request for written concurrence.
3. *May affect, is likely to adversely affect* - the appropriate determination if any adverse effect to listed species or critical habitat may occur as a consequence of the proposed action, and the effect is not discountable or insignificant. This determination requires formal section 7 consultation.

The Service has performed up-front analysis for certain project types and species in your project area. These analyses have been compiled into *determination keys*, which allows an action agency, or its designated non-federal representative, to initiate a streamlined process for determining a proposed project's potential effects on federally listed species. The determination keys can be accessed through IPaC.

The Service recommends that candidate species, proposed species, and proposed critical habitat be addressed should consultation be necessary. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (https://www.fws.gov/birds/management/managed-species/eagle-management.php). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds/collisions/communication-towers.php.

For additional information concerning migratory birds and eagle conservation plans, please contact the Service's Migratory Bird Office at 505-248-7882.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Arlington Ecological Services Field Office
2005 Ne Green Oaks Blvd
Suite 140
Arlington, TX 76006-6247
(817) 277-1100

Project Summary

Consultation Code: 02ETAR00-2021-SLI-3184
Event Code: Some(02ETAR00-2021-E-07140)
Project Name: CTA Development Tarrant
Project Type: DEVELOPMENT
Project Description: 03.006.094
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@32.8869225,-97.04044863280589,14z



Counties: Tarrant County, Texas

Endangered Species Act Species

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 2 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
Piping Plover *Charadrius melodus* Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is **final** critical habitat for this species. The location of the critical habitat is not available. This species only needs to be considered under the following conditions: ▪ Wind Energy Projects Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Red Knot *Calidris canutus rufa* There is **proposed** critical habitat for this species. The location of the critical habitat is not available. This species only needs to be considered under the following conditions: ▪ Wind Energy Projects Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Whooping Crane *Grus americana* Population: Wherever found, except where listed as an experimental population There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/758	Endangered

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Last Update: 6/22/2021

TARRANT COUNTY

BIRDS

black rail *Laterallus jamaicensis*

Salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy swamps; nests in or along edge of marsh, sometimes on damp ground, but usually on mat of previous years dead grasses; nest usually hidden in marsh grass or at base of Salicornia

Federal Status: LT | State Status: T | SGCN: Y
Endemic: N | Global Rank: G3 | State Rank: S2

interior least tern *Sternula antillarum athalassos*

Sand beaches, flats, bays, inlets, lagoons, islands. Subspecies is listed only when inland (more than 50 miles from a coastline); nests along sand and gravel bars within braided streams, rivers; also know to nest on man-made structures (inland beaches, wastewater treatment plants, gravel mines, etc); eats small fish and crustaceans, when breeding forages within a few hundred feet of colony

Federal Status: DL: Delisted | State Status: E | SGCN: N
Endemic: N | Global Rank: G4T3Q | State Rank: S1B

piping plover *Charadrius melodus*

Beaches, sandflats, and dunes along Gulf Coast beaches and adjacent offshore islands. Also spoil islands in the Intracoastal Waterway. Based on the November 30, 1992 Section 6 Job No. 9.1, Piping Plover and Snowy Plover Winter Habitat Status Survey, algal flats appear to be the highest quality habitat. Some of the most important aspects of algal flats are their relative inaccessibility and their continuous availability throughout all tidal conditions. Sand flats often appear to be preferred over algal flats when both are available, but large portions of sand flats along the Texas coast are available only during low-very low tides and are often completely unavailable during extreme high tides or strong north winds. Beaches appear to serve as a secondary habitat to the flats associated with the primary bays, lagoons, and inter-island passes. Beaches are rarely used on the southern Texas coast, where bayside habitat is always available, and are abandoned as bayside habitats become available on the central and northern coast. However, beaches are probably a vital habitat along the central and northern coast (i.e. north of Padre Island) during periods of extreme high tides that cover the flats. Optimal site characteristics appear to be large in area, sparsely vegetated, continuously available or in close proximity to secondary habitat, and with limited human disturbance.

Federal Status: LT | State Status: T | SGCN: Y
Endemic: N | Global Rank: G3 | State Rank: S2N

rufa red knot *Calidris canutus rufa*

Red knots migrate long distances in flocks northward through the contiguous United States mainly April-June, southward July-October. A small plump-bodied, short-necked shorebird that in breeding plumage, typically held from May through August, is a distinctive and unique pottery orange color. Its bill is dark, straight and, relative to other shorebirds, short-to-medium in length. After molting in late summer, this species is in a drab gray-and-white non-breeding plumage, typically held from September through April. In the non-breeding plumage, the knot might be confused with the omnipresent Sanderling. During this plumage, look for the knot's prominent pale eyebrow and whitish flanks with dark barring. The Red Knot prefers the shoreline of coast and bays and also uses mudflats during rare inland encounters. Primary prey items include coquina clam (Donax spp.) on beaches and dwarf surf clam (Mulinia lateralis) in bays, at least in the Laguna Madre. Wintering Range includes- Aransas, Brazoria, Calhoun, Cameron, Chambers, Galveston, Jefferson, Kennedy, Kleberg, Matagorda, Nueces, San Patricio, and Willacy. Habitat: Primarily seacoasts on tidal flats and beaches, herbaceous wetland, and Tidal flat/shore.

Federal Status: LT | State Status: T | SGCN: Y
Endemic: N | Global Rank: G4T2 | State Rank: S2N

white-faced ibis *Plegadis chihi*

Prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; currently confined to near-coastal rookeries in so-called hog-wallow prairies. Nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats.

Federal Status: | State Status: T | SGCN: Y
Endemic: N | Global Rank: G5 | State Rank: S4B

DISCLAIMER
The information on this web application is provided "as is" without warranty as to the currentness, completeness, or accuracy of any specific data. The data provided are for planning, assessment, and informational purposes. Refer to the Frequently Asked Questions (FAQs) on the application website for further information.

whooping crane *Grus americana*

Small ponds, marshes, and flooded grain fields for both roosting and foraging. Potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties.

Federal Status: LE | State Status: E | SGCN: Y
Endemic: N | Global Rank: G1 | State Rank: S1N

MAMMALS

black bear *Ursus americanus*

Generalist. Historically found throughout Texas. In Chisos, prefers higher elevations where pinyon-oaks predominate; also occasionally sighted in desert scrub of Trans-Pecos (Black Gap Wildlife Management Area) and Edwards Plateau in juniper-oak habitat. For ssp. luteolus, bottomland hardwoods, floodplain forests, upland hardwoods with mixed pine; marsh. Bottomland hardwoods and large tracts of inaccessible forested areas.

Federal Status: | State Status: T | SGCN: Y
Endemic: N | Global Rank: G5 | State Rank: S3

MOLLUSKS

Louisiana Pigtoe *Pleurobema riddellii*

Occurs in small streams to large rivers in slow to moderate currents in substrates of clay, mud, sand, and gravel. Not known from impoundments (Howells 2010f; Randklev et al. 2013b; Troia et al. 2015). [Mussels of Texas 2019]

Federal Status: | State Status: T | SGCN: Y
Endemic: N | Global Rank: G1G2 | State Rank: S1

Sandbank Pocketbook *Lampsilis satura*

Occurs in small streams to large rivers in slow to moderate current in sandy mud to sand and gravel substrate. Can occur in a variety of habitats but most common in littoral habitats such as banks or backwaters or in protected areas along point bars (Randklev et al. 2013b; Randklev et al. 2014a; Troia et al. 2015). [Mussels of Texas 2019]

Federal Status: | State Status: T | SGCN: Y
Endemic: | Global Rank: G2? | State Rank: S1

Texas Heelsplitter *Potamilus amphichaenus*

Occurs in small streams to large rivers in standing to slow-flowing water; most common in banks, backwaters and quiet pools; adapts to some reservoirs. Often found in soft substrates such as mud, silt or sand (Howells et al. 1996; Randklev et al. 2017a). [Mussels of Texas 2019]

Federal Status: | State Status: T | SGCN: Y
Endemic: N | Global Rank: G1G3 | State Rank: S1

REPTILES

alligator snapping turtle *Macrochelys temminckii*

Aquatic: Perennial water bodies; rivers, canals, lakes, and oxbows; also swamps, bayous, and ponds near running water; sometimes enters brackish coastal waters. Females emerge to lay eggs close to the waters edge.

Federal Status: | State Status: T | SGCN: Y
Endemic: N | Global Rank: G3 | State Rank: S2

Texas horned lizard *Phrynosoma cornutum*

Terrestrial: Open habitats with sparse vegetation, including grass, prairie, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive. Occurs to 6000 feet, but largely limited below the pinyon-juniper zone on mountains in the Big Bend area.

Federal Status: | State Status: T | SGCN: Y
Endemic: N | Global Rank: G4G5 | State Rank: S3

DISCLAIMER
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integrated environmental solutions

30 September 2021

Ms. Sandy Lancaster
Dallas Fort Worth International Airport
3003 South Service Road, Annex Building A
DFW Airport, Texas 75261-9428

Re: CTA Development Project Dallas County - Protected Species Habitat Assessment
Sites 7 through 10 of the 13 total locations for the CTA Terminals A and C Development Project located within the Dallas Fort Worth International Airport, Dallas County

Dear Ms. Lancaster,

Integrated Environmental Solutions, LLC (IES) performed a protected species habitat assessment on the CTA Terminals A and C Development Project associated with Sites 7 through 10 of the 13 total locations within the Dallas Fort Worth International Airport, Dallas County (**Attachment A, Figure 1**). This habitat assessment was performed to satisfy the requirements regarding the Endangered Species Act (ESA). The following report is a list of the federal and state-listed protected species for Dallas County and their preferred vegetation assemblages, a summary of the vegetation communities identified on the site, an evaluation of whether the communities present on the site could support a protected species, and whether or not future proposed actions would affect listed species.

INTRODUCTION

Protected Species

Federal

The ESA of 1973 (Public Law [P.L.] 93-205) and the amendments of 1988 (P.L. 100-578) were enacted to provide a program of preservation for endangered and threatened species and to provide protection for ecosystems upon which these species depend for their survival. The ESA requires all federal agencies to implement protection programs for designated species and to use their authorities to further the purposes of the Act. Responsibility for the listing of an endangered or threatened species and for the development of recovery plans lies with the Secretary of Interior and Secretary of Commerce. The U.S. Fish and Wildlife Service (USFWS) is responsible for implementing the ESA within the United States.

An endangered species is a species, which is in danger of extinction throughout all or a significant portion of its range. A threatened species is a species likely to become endangered within the near future throughout all or a significant portion of its range. Proposed species are those, which have been formally submitted to Congress for official listing as endangered or threatened.

In addition, the USFWS has identified species, which are candidates for possible addition to the list of Endangered and Threatened Wildlife and Plants (50 Code of Federal Regulations [CFR] 17.11 and 17.12) under the ESA. The USFWS maintains a candidate list to: (1) provide advance knowledge of potential listings that could affect land planning decisions, (2) solicit input to identify candidates not requiring protection or additional species that may require protection under the ESA, and (3) solicit information needed to prioritize the order in which species will be proposed for listing. Candidate species have no legal protection under the ESA.

The Migratory Bird Treaty Act of 1918 states that it is unlawful to kill, capture, collect, possess, buy, sell, trade, or transport any migratory bird, nest, young, feather, or egg in part or in whole, without a federal permit issued in accordance with the Act's policies and regulations. However, in a recent decision the U.S. Court of Appeals for the Fifth Circuit found that for an unlawful "taking" to occur, a "deliberate act done directly and intentionally to migratory birds" would need to occur. (United States v. CITGO Petroleum Corp., No. 14-40128 [5th Cir. Sept. 4, 2015]).

State

The Texas Parks and Wildlife Department (TPWD) Wildlife Diversity Program (WDP) maintains computerized records of state-listed threatened and endangered species by county. The State of Texas does not list threatened and endangered species using the same criteria as the federal government. When the USFWS lists a plant species, the State of Texas then lists that plant. Thus, the list of threatened and endangered plants in Texas is the same as the Federal list. The state has separate laws governing the listing of animal species as threatened or endangered. Threatened and endangered animal species in Texas are those species so designated according to Chapters 67 and 68 of the Texas Parks and Wildlife Code and Section 65.171 - 65.184 of Title 31 of the Texas Administrative Code. Species that are not currently listed by the Federal government may be listed as threatened or endangered by the TPWD.

METHODOLOGY

Prior to conducting fieldwork, the list of Endangered and Threatened Wildlife and Plants under the ESA was obtained through the USFWS Information, Planning, and Conservation System (IPaC) and from the TPWD WDP and the Texas Natural Diversity Database (TXNDD). The vegetation communities used by each species was obtained and is detailed below. During the field survey, vegetation composition within and adjacent to the project site were noted to determine whether there was any potential for protected species habitat. This survey was not designed to identify the presence of protected species; however, if any species were observed, they were recorded. Photographs were taken at representative points, illustrating common vegetation communities within the survey area (**Attachment B**).

RESULTS

Literature Review

According to the USFWS, four species, Golden-cheeked Warbler (*Dendroica chrysoparia*), Piping Plover (*Charadrius melodus*), Red Knot (*Calidris canutus rufa*), and Whooping Crane (*Grus americana*) are listed as federally protected (i.e., threatened or endangered) with the potential to occur within Dallas County. Two of these species are conditionally listed as threatened within Dallas County on the basis that the proposed project is for wind energy production, Red Knot and Piping Plover. No federally listed critical habitat for these species is located within the vicinity of the survey area. The TPWD lists 14 state protected species that could occur within Dallas County. Five are also federally listed avian species; however, the Black Rail (*Laterallus jamaicensis*) is only listed by TPWD for Dallas County. The review of the TXNDD files did not indicate any unique vegetation communities, parks or natural/managed areas within the survey area.

Attachment C identifies the state and federally protected species that could potentially occur within Dallas County from the IPAC and Rare and Threatened Endangered Species of Texas (RTEST) lists.

Site Survey

Ms. Karisa Fenton and Ms. Clair Unruh of IES evaluated the survey area on 22 September 2021. This survey was designed to provide a habitat evaluation of the overall survey area with the primary focus on the plant community.

The four sites within the survey area consisted of two distinct vegetation communities, **frequently maintained grassland** and **urban matrix**. The entirety of Site 7 and the western portion of Site 8 contained the **frequently maintained grassland** vegetation community, dominated by mowed Bermudagrass (*Cynodon dactylon*). The **urban matrix** was found in the southeastern region of Site 8, and the entirety of Sites 9 and 10, and was comprised of gravel lots, buildings, and active construction areas. A small emergent wetland and associated pond were located on the

western boundary of Site 10. The wetland was dominated by saltmarsh aster (*Symphyotrichum subulatum*) and sumpweed (*Iva annua*), both common, early successional disturbance species that occupy mesic areas.

CONCLUSIONS

Preferred Habitat for Federally Protected Species

Table 1 provides a summary of the federally and state-listed species that could potentially occur within Dallas County, as well as a brief description of their habitat, whether this habitat is present within the survey area, and whether the proposed project would potentially affect the listed species.

Regarding federally listed threatened and endangered species, Golden-cheeked Warbler, Red Knot, Piping Plover, and Whooping Crane were listed for Dallas County. As these projects will not be related to wind energy, the Red Knot and Piping Plover will not be affected.

- The Golden-cheeked Warbler requires a habitat that includes forested areas dominated by Ashe juniper (*Juniperus ashei*) in mixed stands with various oaks (*Quercus* spp.). This unique vegetation community is not present within the survey area.
- Whooping Cranes utilize estuaries, prairie marshes, moist grasslands, croplands, and will use large shallow wetland areas associated with lakes for roosting and feeding. The survey area did not contain these types of vegetation communities.

As such, the habitats present within the survey area were not suitable for any of the federally listed threatened or endangered species. Nor were the habitats suitable for nesting, feeding, or stopover migration habitat for these species.

Preferred Habitat for State Protected Species

There were 14 state-listed threatened and endangered species for Dallas County, which includes all the federally listed avian species. Any occurrence of the Least Tern (*Sternula antillarum athalassos)*, Piping Plover, and White-faced Ibis (*Plegadis chihi*) would be in relation to stopover during migration; however, no suitable stopover or nesting habitat was observed within the survey area. Whooping Crane, Black Rail, and Wood Stork (*Mycteria americana*) would be unlikely to utilize the survey area, as their preferred habitat type were not present.

Black Rails utilize freshwater marshes and grassy swamps with dense emergent vegetation. While emergent vegetation was observed within the wetland, the size and location would indicate the survey area would not be suitable habitat. While this site contained a freshwater wetland, this community did not meet the parameters of the Wood Stork for roosting with no tall snags, red mangrove (*Rhizophora mangle*) dominated areas, or bald cypress (*Taxodium distichum*) dominated areas. Wood Storks utilize flooded fields and marsh habitats with shallow standing water for feeding areas, but none were observed. As such, foraging habitat potentially suitable for the Wood Stork was not present within the survey area.

Vegetation Communities

None of the vegetation observed within the survey areas would be considered unique or compose a unique vegetation type for the region. The vegetation communities described were composed of species that are not only common to grassland and forested areas, but to the Cross-Timbers and Blackland Prairie eco-regions of North Central Texas. It is IES' professional opinion that the proposed project will not have any effect on any unique vegetation, vegetation communities, or habitat types.

Table 1. Federally- and State- listed Threatened and Endangered Species Occurring or Potentially Occurring in Dallas County, Texas

Species	State Status	Federal Status	Description of Habitat	Habitat Present[1]	Species Effect[2]
BIRDS					
Black Rail (*Laterallus jamaicensis*)	T	LT	Salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy swamps; nests in or along edge of marsh, sometimes on damp ground, but usually on mat of previous years dead grasses; nest usually hidden in marsh grass or at base of Salicornia.	**No**	**No**
Golden-cheeked Warbler (*Setophaga chrysoparia)*	E	LE	Ashe juniper in mixed stands with various oaks (*Quercus* spp.). Edges of cedar brakes. Dependent on Ashe juniper (also known as cedar) for long fine bark strips, only available from mature trees, used in nest construction; nests are placed in various trees other than Ashe juniper; only a few mature junipers or nearby cedar brakes can provide the necessary nest material; forage for insects in broad-leaved trees and shrubs; nesting late March-early summer.	**No**	**No**
Least Tern (*Sterna antillarum athalassos*)	E	DL	Sand beaches, flats, bays, inlets, lagoons, islands. Subspecies is listed only when inland (more than 50 miles from a coastline); nests along sand and gravel bars within braided streams, rivers; also know to nest on man-made structures (inland beaches, wastewater treatment plants, gravel mines, etc); eats small fish and crustaceans, when breeding forages within a few hundred feet of colony.	**No**	**No**
Piping Plover (*Charadrius melodus*)	T	LT	Beaches, sandflats, and dunes along Gulf Coast beaches and adjacent offshore islands. Also spoil islands in the Intracoastal Waterway. Based on the November 30, 1992 Section 6 Job No. 9.1, Piping Plover and Snowy Plover Winter Habitat Status Survey, algal flats appear to be the highest quality habitat. Some of the most important aspects of algal flats are their relative inaccessibility and their continuous availability throughout all tidal conditions. Sand flats often appear to be preferred over algal flats when both are available, but large portions of sand flats along the Texas coast are available only during low-very low tides and are often completely unavailable during extreme high tides or strong north winds. Beaches appear to serve as a secondary habitat to the flats associated with the primary bays, lagoons, and inter-island passes. Beaches are rarely used on the southern Texas coast, where bayside habitat is always available, and are abandoned as bayside habitats become available on the central and northern coast. However, beaches are probably a vital habitat along the central and northern coast (i.e., north of Padre Island) during periods of extreme high tides that cover the flats. Optimal site characteristics appear to be large in area, sparsely vegetated, continuously available or in close proximity to secondary habitat, and with limited human disturbance.	**No**	**No**
Rufa Red Knot (*Calidris canutus rufa*)	T	LT	The Red Knot prefers the shoreline of coast and bays and also uses mudflats during rare inland encounters. Primary prey items include coquina clam (*Donax* spp.) on beaches and dwarf surf clam (*Mulinia lateralis*) in bays, at least in the Laguna Madre. Wintering Range includes- Aransas, Brazoria, Calhoun, Cameron, Chambers, Galveston, Jefferson, Kennedy, Kleberg, Matagorda, Nueces, San Patricio, and Willacy. Habitat: Primarily seacoasts on tidal flats and beaches, herbaceous wetland, and Tidal flat/shore.	**No**	**No**
White-faced ibis (*Plegadis chihi*)	T	---	Prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; currently confined to near-coastal rookeries in so-called hog-wallow prairies. Nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats.	**No**	**No**
Whooping Crane (*Grus americana*)	E	LE	Small ponds, marshes, and flooded grain fields for both roosting and foraging. Potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties.	**No**	**No**
Wood stork (*Mycteria americana)*	T	---	Prefers to nest in large tracts of baldcypress (*Taxodium distichum*) or red mangrove (*Rhizophora mangle*); forages in prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including salt-water; usually roosts communally in tall snags, sometimes in association with other wading birds (i.e., active heronries); breeds in Mexico and birds move into Gulf States in search of mud flats and other wetlands, even those associated with forested areas; formerly nested in Texas, but no breeding records since 1960.	**No**	**No**

Species	State Status	Federal Status	Description of Habitat	Habitat Present[1]	Species Effect[2]
MOLLUSK					
Louisiana pigtoe (*Pleurobema riddellii*)	T	---	Occurs in small streams to large rivers in slow to moderate currents in substrates of clay, mud, sand, and gravel. Not known from impoundments (Howells 2010f; Randklev et al. 2013b; Troia et al. 2015). [Mussels of Texas 2019].	**No**	**No**
Sandbank pocketbook (*Lamsilis satura*)	T	---	Occurs in small streams to large rivers in slow to moderate current in sandy mud to sand and gravel substrate. Can occur in a variety of habitats but most common in littoral habitats such as banks or backwaters or in protected areas along point bars (Randklev et al. 2013b; Randklev et al. 2014a; Troia et al. 2015). [Mussels of Texas 2019].	**No**	**No**
Texas heelsplitter (*Potamilus amphichaenus*)	T	---	Occurs in small streams to large rivers in standing to slow-flowing water; most common in banks, backwaters and quiet pools; adapts to some reservoirs. Often found in soft substrates such as mud, silt or sand (Howells et al. 1996; Randklev et al. 2017a). [Mussels of Texas 2019].	**No**	**No**
Trinity pigtoe (*Fusconaia chunii)*	T	---	Found in a variety of habitats but most common in riffles. Inhabits various substrates though most often sand, gravel, and cobble (species was recently split from Texas Pigtoe and occurs in similar habitats; Howells 2010a; Randklev et al. 2013b; Randklev et al. 2014a; Troia et al 2015). [Mussels of Texas 2019].	**No**	**No**
INSECTS					
Monarch Butterfly (*Danaus plexippus*)	---	C	Adult monarch butterflies are large and conspicuous, with bright orange wings surrounded by a black border and covered with black veins. During the breeding season, monarchs lay their eggs on their obligate milkweed host plant (primarily *Asclepias* spp.), and larvae emerge after 2 to 5 days. Larvae develop through five larval instars (intervals between molts) over a period of 9 to 18 days, feeding on milkweed and sequestering toxic chemicals (cardenolides) as a defense against predators. The larva then pupates into a chrysalis before emerging 6 to 14 days later as an adult butterfly. There are multiple generations of monarchs produced during the breeding season, with most adult butterflies living approximately 2 to 5 weeks; overwintering adults enter into reproductive diapause (suspended reproduction) and live 6 to 9 months. Individual monarchs in temperate climates, such as eastern and western North America, undergo long-distance migration, and live for an extended period of time. In the fall, in both eastern and western North America, monarchs begin migrating to their respective overwintering sites.	**No**	**No**
REPTILES					
Alligator snapping turtle (*Macrochelys temminckii*)	T	---	Aquatic: Perennial water bodies; rivers, canals, lakes, and oxbows; also swamps, bayous, and ponds near running water; sometimes enters brackish coastal waters. Females emerge to lay eggs close to the water's edge.	**No**	**No**
Texas horned lizard (*Phrynosoma cornutum*)	T	---	Terrestrial: Open habitats with sparse vegetation, including grass, prairie, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive. Occurs to 6000 feet, but largely limited below the pinyon-juniper zone on mountains in the Big Bend area.	**No**	**No**

LE – Federally Listed Endangered, LT – Federally Listed Threatened, DL – Federally Delisted, PT – Federally Proposed Threatened, E – State Listed Endangered, T - State Listed Threatened

[1]*Habitat Present? – Do the vegetation communities located within the survey area match the requirements for that particular protected species?*

[2]*Species Effect? – Will the proposed project potentially affect a protected species?*

Data Sources: USFWS IPaC (Published and accessed 28 September 2021), TPWD (Published 22 June 2021, accessed 28 September 2021), and field survey of the survey area

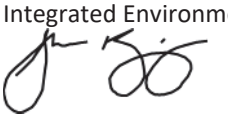
Potential to Affect Protected Species

As previously noted, habitat for any of the federally listed species and state listed species was not present within the survey area. As such, the proposed project is not expected to have any impacts on the federally or state-listed threatened or endangered species.

IES appreciates the opportunity to work with you and the Dallas Fort Worth International Airport Environmental Affairs Department on this project and hope we may be of assistance to you in the future. If you have any comments, questions, or concerns, please do not hesitate to contact me at 972-562-7672 or by email at skipp@intenvsol.com or rreinecke@intenvsol.com.

Sincerely,

Integrated Environmental Solutions, LLC.



Mr. Shae Kipp
Ecologist

Attachments

File ref: 03.006.094

ATTACHMENT A

Figures

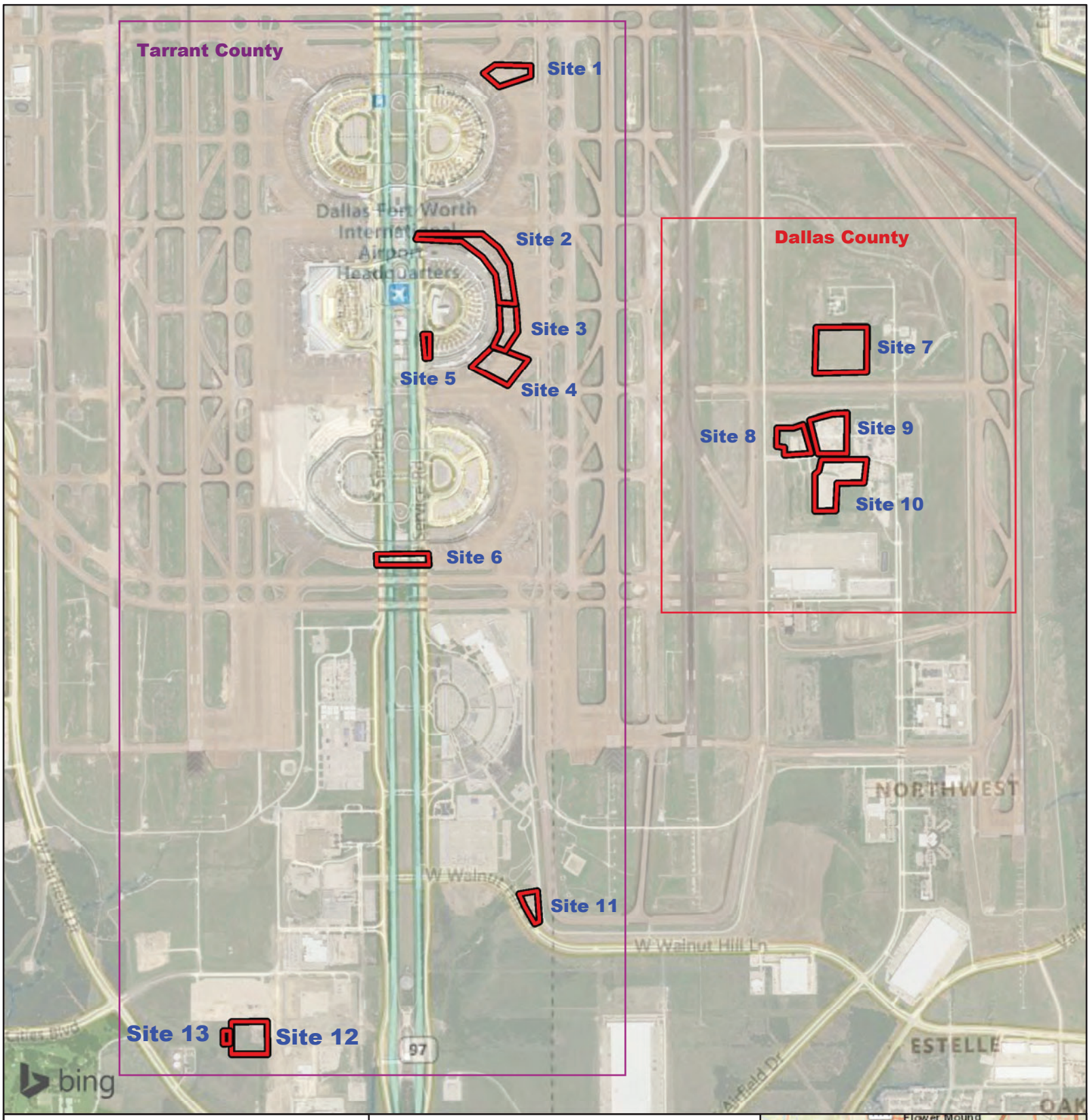


Figure 1.
General Location Map

CTA Development Project
Dallas Fort Worth International Airport
Dallas and Tarrant Counties, Texas

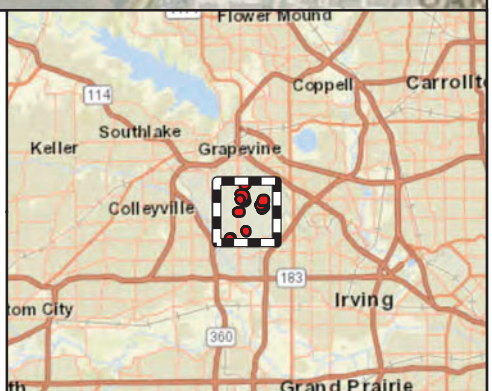
1 in = 2,000 feet

Feet
0 2,000

N
W E
S

File Ref. 03.006.094
Date: 9/28/2021

Survey Area



Area of Detail

Scale: 1 inch equals 10 miles

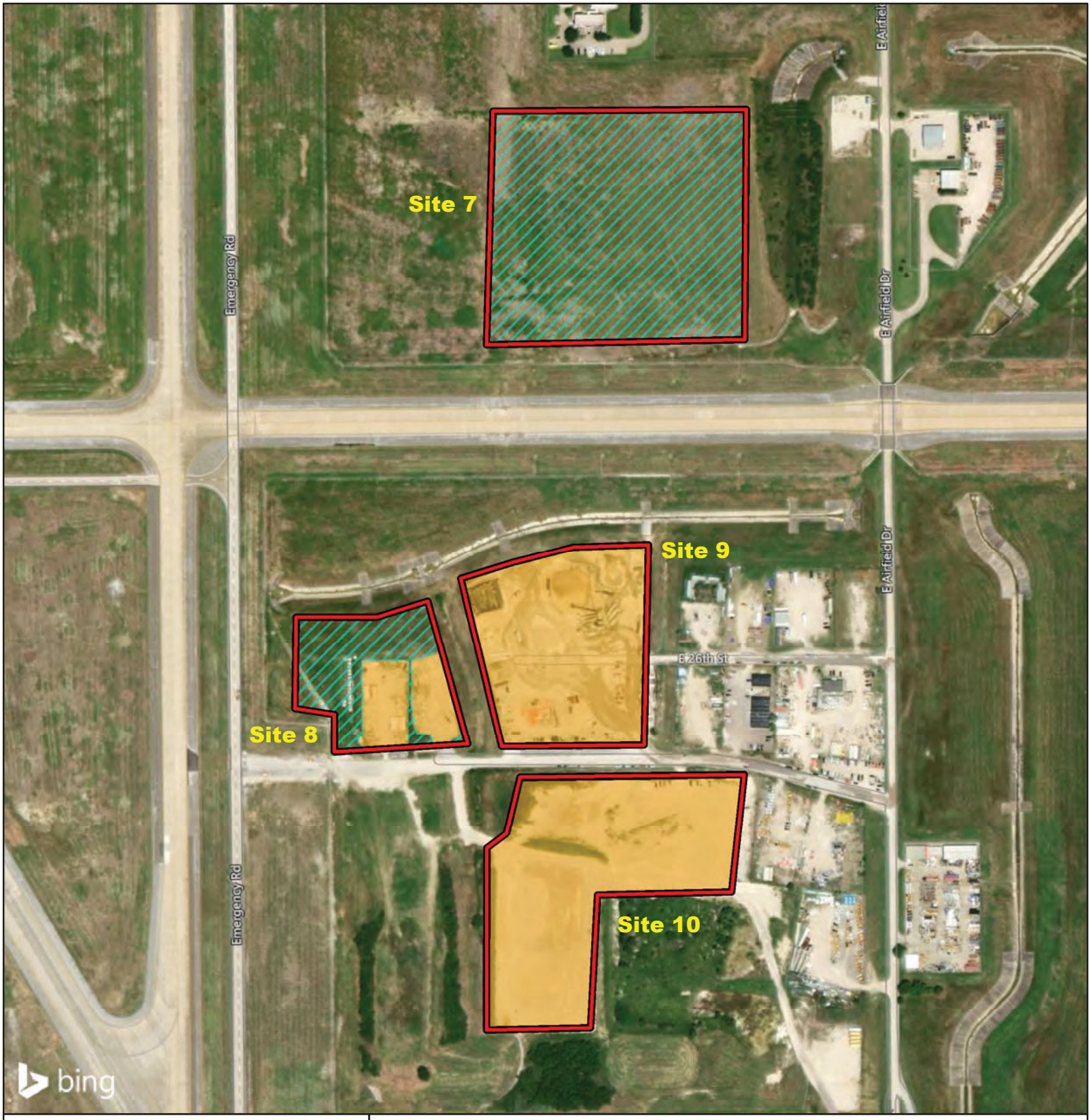


Figure 2.
Vegetation Communities Identified within the Survey Areas

CTA Development Project
Dallas Fort Worth International Airport
Dallas County, Texas

1 in = 400 feet

Feet
0 400

N
W E
S

File Ref. 03.006.094
Date: 9/29/2021

Survey Area

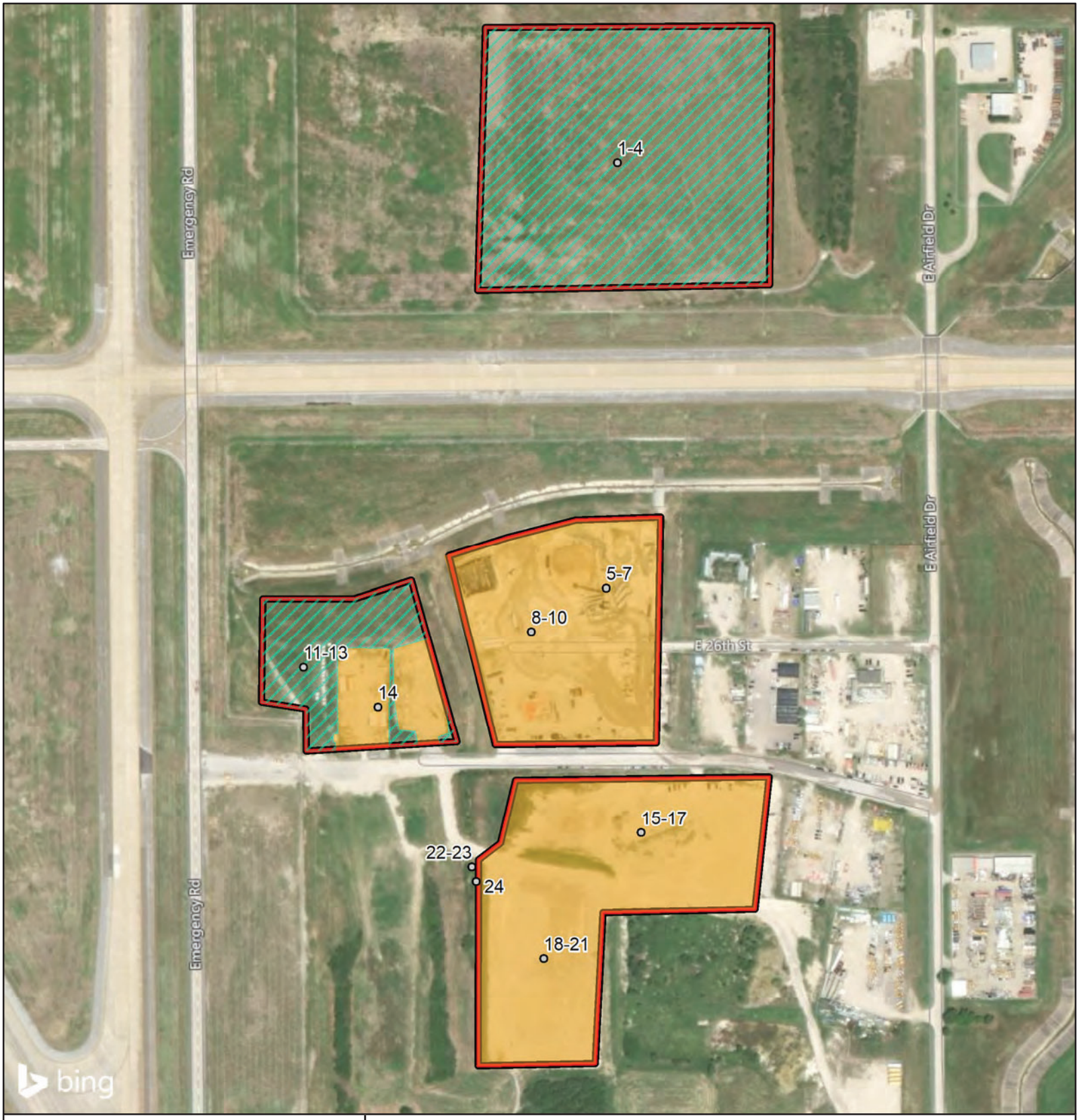
Vegetation Communities

Frequently Maintained Grassland

Urban Matrix

ATTACHMENT B

Site Photographs



Photograph Location Map

CTA Development Project
Dallas Fort Worth International Airport
Dallas County, Texas

1 in = 350 feet

Feet
0 350

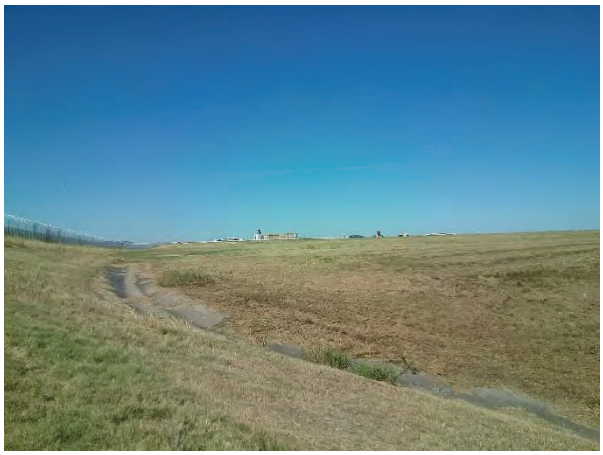
N
W E
S

File Ref. 03.006.094
Date: 9/29/2021

Survey Area
Photograph Location

Vegetation Communities

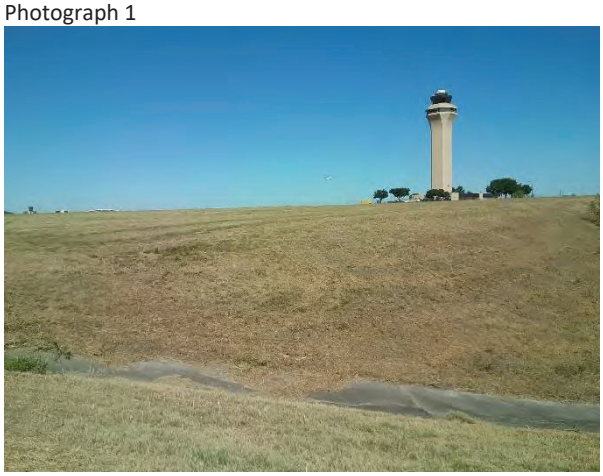
Frequently Maintained Grassland
Urban Matrix



Photograph 1



Photograph 2



Photograph 3



Photograph 4



Photograph 5



Photograph 6



Photograph 7



Photograph 8



Photograph 9



Photograph 10



Photograph 11



Photograph 12



Photograph 13



Photograph 14



Photograph 15



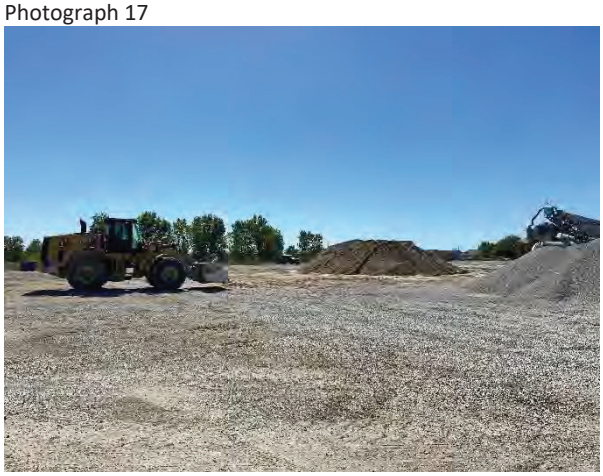
Photograph 16



Photograph 17



Photograph 18



Photograph 19



Photograph 20



Photograph 21



Photograph 22



Photograph 23



Photograph 24

ATTACHMENT C

Protected Species Lists

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Arlington Ecological Services Field Office
2005 Ne Green Oaks Blvd
Suite 140
Arlington, TX 76006-6247
Phone: (817) 277-1100 Fax: (817) 277-1129
http://www.fws.gov/southwest/es/arlingtontexas/
http://www.fws.gov/southwest/es/EndangeredSpecies/lists/

In Reply Refer To: September 28, 2021
Consultation Code: 02ETAR00-2021-SLI-3183
Event Code: 02ETAR00-2021-E-07138
Project Name: CTA Development Dallas

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, which may occur within the boundary of your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under section 7(a)(1) of the Act, Federal agencies are directed to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Under and 7(a)(2) and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether their actions may affect threatened and endangered species and/or designated critical habitat. A Federal action is an activity or program authorized, funded, or carried out, in whole or in part, by a Federal agency (50 CFR 402.02).

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For Federal actions other than major construction activities, the Service suggests that a biological evaluation (similar to a Biological Assessment) be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

After evaluating the potential effects of a proposed action on federally listed species, one of the following determinations should be made by the Federal agency:

1. *No effect* - the appropriate determination when a project, as proposed, is anticipated to have no effects to listed species or critical habitat. A "no effect" determination does not require section 7 consultation and no coordination or contact with the Service is necessary. However, the action agency should maintain a complete record of their evaluation, including the steps leading to the determination of affect, the qualified personnel conducting the evaluation, habitat conditions, site photographs, and any other related information.
2. *May affect, but is not likely to adversely affect* - the appropriate determination when a proposed action's anticipated effects to listed species or critical habitat are insignificant, discountable, or completely beneficial. Insignificant effects relate to the size of the impact and should never reach the scale where "take" of a listed species occurs. Discountable effects are those extremely unlikely to occur. Based on best judgment, a person would not be able to meaningfully measure, detect, or evaluate insignificant effects, or expect discountable effects to occur. This determination requires written concurrence from the Service. A biological evaluation or other supporting information justifying this determination should be submitted with a request for written concurrence.
3. *May affect, is likely to adversely affect* - the appropriate determination if any adverse effect to listed species or critical habitat may occur as a consequence of the proposed action, and the effect is not discountable or insignificant. This determination requires formal section 7 consultation.

The Service has performed up-front analysis for certain project types and species in your project area. These analyses have been compiled into *determination keys*, which allows an action agency, or its designated non-federal representative, to initiate a streamlined process for determining a proposed project's potential effects on federally listed species. The determination keys can be accessed through IPaC.

The Service recommends that candidate species, proposed species, and proposed critical habitat be addressed should consultation be necessary. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (https://www.fws.gov/birds/management/managed-species/eagle-management.php). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds/collisions/communication-towers.php.

For additional information concerning migratory birds and eagle conservation plans, please contact the Service's Migratory Bird Office at 505-248-7882.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

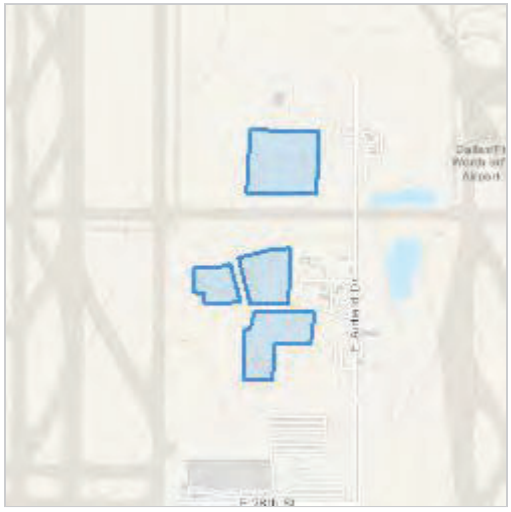
This species list is provided by:

Arlington Ecological Services Field Office
2005 Ne Green Oaks Blvd
Suite 140
Arlington, TX 76006-6247
(817) 277-1100

Project Summary

Consultation Code: 02ETAR00-2021-SLI-3183
Event Code: Some(02ETAR00-2021-E-07138)
Project Name: CTA Development Dallas
Project Type: DEVELOPMENT
Project Description: 03.006.094
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@32.8955043,-97.01841020541451,14z



Counties: Dallas County, Texas

Endangered Species Act Species

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 2 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
Golden-cheeked Warbler (=wood) *Dendroica chrysoparia* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/33	Endangered
Piping Plover *Charadrius melodus* Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is **final** critical habitat for this species. The location of the critical habitat is not available. This species only needs to be considered under the following conditions: ▪ Wind Energy Projects Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Red Knot *Calidris canutus rufa* There is **proposed** critical habitat for this species. The location of the critical habitat is not available. This species only needs to be considered under the following conditions: ▪ Wind Energy Projects Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Whooping Crane *Grus americana* Population: Wherever found, except where listed as an experimental population There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/758	Endangered

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Last Update: 6/22/2021

DALLAS COUNTY

BIRDS

black rail *Laterallus jamaicensis*

Salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy swamps; nests in or along edge of marsh, sometimes on damp ground, but usually on mat of previous years dead grasses; nest usually hidden in marsh grass or at base of Salicornia

Federal Status: LT | State Status: T | SGCN: Y
Endemic: N | Global Rank: G3 | State Rank: S2

golden-cheeked warbler *Setophaga chrysoparia*

Ashe juniper in mixed stands with various oaks (Quercus spp.). Edges of cedar brakes. Dependent on Ashe juniper (also known as cedar) for long fine bark strips, only available from mature trees, used in nest construction; nests are placed in various trees other than Ashe juniper; only a few mature junipers or nearby cedar brakes can provide the necessary nest material; forage for insects in broad-leaved trees and shrubs; nesting late March-early summer.

Federal Status: LE | State Status: E | SGCN: Y
Endemic: N | Global Rank: G2 | State Rank: S2S3B

interior least tern *Sternula antillarum athalassos*

Sand beaches, flats, bays, inlets, lagoons, islands. Subspecies is listed only when inland (more than 50 miles from a coastline); nests along sand and gravel bars within braided streams, rivers; also know to nest on man-made structures (inland beaches, wastewater treatment plants, gravel mines, etc); eats small fish and crustaceans, when breeding forages within a few hundred feet of colony

Federal Status: DL: Delisted | State Status: E | SGCN: N
Endemic: N | Global Rank: G4T3Q | State Rank: S1B

piping plover *Charadrius melodus*

Beaches, sandflats, and dunes along Gulf Coast beaches and adjacent offshore islands. Also spoil islands in the Intracoastal Waterway. Based on the November 30, 1992 Section 6 Job No. 9.1, Piping Plover and Snowy Plover Winter Habitat Status Survey, algal flats appear to be the highest quality habitat. Some of the most important aspects of algal flats are their relative inaccessibility and their continuous availability throughout all tidal conditions. Sand flats often appear to be preferred over algal flats when both are available, but large portions of sand flats along the Texas coast are available only during low-very low tides and are often completely unavailable during extreme high tides or strong north winds. Beaches appear to serve as a secondary habitat to the flats associated with the primary bays, lagoons, and inter-island passes. Beaches are rarely used on the southern Texas coast, where bayside habitat is always available, and are abandoned as bayside habitats become available on the central and northern coast. However, beaches are probably a vital habitat along the central and northern coast (i.e. north of Padre Island) during periods of extreme high tides that cover the flats. Optimal site characteristics appear to be large in area, sparsely vegetated, continuously available or in close proximity to secondary habitat, and with limited human disturbance.

Federal Status: LT | State Status: T | SGCN: Y
Endemic: N | Global Rank: G3 | State Rank: S2N

rufa red knot *Calidris canutus rufa*

Red knots migrate long distances in flocks northward through the contiguous United States mainly April-June, southward July-October. A small plump-bodied, short-necked shorebird that in breeding plumage, typically held from May through August, is a distinctive and unique pottery orange color. Its bill is dark, straight and, relative to other shorebirds, short-to-medium in length. After molting in late summer, this species is in a drab gray-and-white non-breeding plumage, typically held from September through April. In the non-breeding plumage, the knot might be confused with the omnipresent Sanderling. During this plumage, look for the knot's prominent pale eyebrow and whitish flanks with dark barring. The Red Knot prefers the shoreline of coast and bays and also uses mudflats during rare inland encounters. Primary prey items include coquina clam (Donax spp.) on beaches and dwarf surf clam (Mulinia lateralis) in bays, at least in the Laguna Madre. Wintering Range includes- Aransas, Brazoria, Calhoun, Cameron, Chambers, Galveston, Jefferson, Kennedy, Kleberg, Matagorda, Nueces, San Patricio, and Willacy. Habitat: Primarily seacoasts on tidal flats and beaches, herbaceous wetland, and Tidal flat/shore.

Federal Status: LT | State Status: T | SGCN: Y
Endemic: N | Global Rank: G4T2 | State Rank: S2N

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white-faced ibis *Plegadis chihi*

Prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; currently confined to near-coastal rookeries in so-called hog-wallow prairies. Nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4B

whooping crane *Grus americana*

Small ponds, marshes, and flooded grain fields for both roosting and foraging. Potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties.

Federal Status: LE	State Status: E	SGCN: Y
Endemic: N	Global Rank: G1	State Rank: S1N

wood stork *Mycteria americana*

Prefers to nest in large tracts of baldcypress (Taxodium distichum) or red mangrove (Rhizophora mangle); forages in prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including salt-water; usually roosts communally in tall snags, sometimes in association with other wading birds (i.e. active heronries); breeds in Mexico and birds move into Gulf States in search of mud flats and other wetlands, even those associated with forested areas; formerly nested in Texas, but no breeding records since 1960

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: SHB,S2N

MOLLUSKS

Louisiana Pigtoe *Pleurobema riddellii*

Occurs in small streams to large rivers in slow to moderate currents in substrates of clay, mud, sand, and gravel. Not known from impoundments (Howells 2010f; Randklev et al. 2013b; Troia et al. 2015). [Mussels of Texas 2019]

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G1G2	State Rank: S1

Sandbank Pocketbook *Lampsilis satura*

Occurs in small streams to large rivers in slow to moderate current in sandy mud to sand and gravel substrate. Can occur in a variety of habitats but most common in littoral habitats such as banks or backwaters or in protected areas along point bars (Randklev et al. 2013b; Randklev et al. 2014a; Troia et al. 2015). [Mussels of Texas 2019]

Federal Status:	State Status: T	SGCN: Y
Endemic:	Global Rank: G2?	State Rank: S1

Texas Heelsplitter *Potamilus amphichaenus*

Occurs in small streams to large rivers in standing to slow-flowing water; most common in banks, backwaters and quiet pools; adapts to some reservoirs. Often found in soft substrates such as mud, silt or sand (Howells et al. 1996; Randklev et al. 2017a). [Mussels of Texas 2019]

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G1G3	State Rank: S1

Trinity Pigtoe *Fusconaia chunii*

Found in a variety of habitats but most common in riffles. Inhabits various substrates though most often sand, gravel, and cobble (species was recently split from Texas Pigtoe and occurs in similar habitats; Howells 2010a; Randklev et al. 2013b; Randklev et al. 2014a; Troia et al 2015). [Mussels of Texas 2020]

Federal Status:	State Status: T	SGCN: Y
Endemic: Y	Global Rank: GNR	State Rank: S1

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REPTILES

alligator snapping turtle *Macrochelys temminckii*

Aquatic: Perennial water bodies; rivers, canals, lakes, and oxbows; also swamps, bayous, and ponds near running water; sometimes enters brackish coastal waters. Females emerge to lay eggs close to the waters edge.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2

Texas horned lizard *Phrynosoma cornutum*

Terrestrial: Open habitats with sparse vegetation, including grass, prairie, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive. Occurs to 6000 feet, but largely limited below the pinyon-juniper zone on mountains in the Big Bend area.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S3

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APPENDIX B: CULTURAL RESOURCES REPORT AND THC/SHPO COORDINATION

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integrated environmental solutions

31 March 2021

Mr. Mark Wolfe
Texas Historical Commission
1511 Colorado Street
Austin, Texas 78701

RE: Cultural Resources Desktop Analysis for the Supplemental Central Utility Plan on the DFW International Airport, Tarrant County, Texas

INTRODUCTION

Integrated Environmental Solutions, LLC (IES), has been contracted by Dallas Fort Worth International Airport (DFW) to provide coordination with the Texas Historical Commission (THC) on behalf of the DFW and Federal Aviation Administration (FAA) for the proposed Supplemental Central Utility Plant (CUP) on DFW property. The proposed project area or Area of Potential Effects (APE) is located within the wide median of International Parkway between Terminals A and B (**Attachment A, Figure 1**). Approval from the FAA will be required to modify the Airport Layout Plan (ALP) to reflect the permanent alterations on the DFW property. Since the ALP is considered a federal action, the project will require compliance with the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA). Additionally, as the DFW is a political subdivision of the State of Texas, the project will be subjected to the provisions of the Antiquities Code of Texas (ACT).

PERTINENT REGULATIONS

ACT

As the DFW is considered a political subdivision of the State of Texas under Section 52, Article III, or Section 59, Article XVI, of the Texas Constitution, the DFW is required to comply with the Antiquities Code of Texas (ACT). The ACT, as outlined in the Texas Administrative Code (TAC) Title 13 Part II and the Texas Natural Resource Code (TNRC) Title 9 Chapter 191, requires that political subdivisions notify the THC at least 30 days in advance prior to any project that may affect potential or designated archeological sites. While advance project review by the THC is required for undertakings with more than 5 acres (ac) or 5,000 cubic yards of ground disturbance, the THC can still request project information and/or an archeological survey in advance of more minor ground disturbances since all publicly sponsored projects must comply with the ACT. If the activity occurs inside a designated historic district, affects a recorded archeological site, or requires on-site investigations, the project will need to be reviewed by the THC, regardless of project size.

Section 106 of the NHPA

The NHPA (54 U.S. Code [USC] 306101), specifically Section 106 of the NHPA (54 USC 306108), requires the State Historic Preservation Officer (SHPO), represented by the THC, to administer and coordinate historic preservation activities, and to review and comment on all actions licensed by the federal government that will have an effect on properties listed in the National Register of Historic Places (NRHP), or eligibility for such listing. Per 36 Code of Federal Regulations Part 800 (36 CFR 800), the federal agency responsible for overseeing the action must make a reasonable and good faith effort to identify cultural resources. Federal actions include, but are not limited to, construction, rehabilitation, repair projects, demolition, licenses, permits, loans, loan guarantees, grants, and federal property transfers. Approval will be required from the FAA to modify the ALP that will reflect the permanent alterations to the DFW property. Since this is considered a federal action, the project will consequently require compliance with the NEPA and Section 106 of the NHPA.

AREA OF POTENTIAL EFFECTS

Direct APE

The direct APE for the project encompasses approximately 5.4 ac. Current project plans call for the construction of a two-story supplemental central utility building, a transformer yard, cooling towers area, a thermal storage tank/reservoir, and a construction staging area (**Attachment B**). The project will include a parking lot, interior roads, and associated infrastructure and utilities. Ground disturbances associated with the proposed project will include general land clearing, grading, and erosion control. Depths of impacts associated with the proposed project will generally be within a few feet (ft) of the current ground surface, with the exception of a subsurface utility vault, which will extend to a depth of over 43 ft.

Indirect APE

As the project will require approval from the FAA, an assessment of indirect effects is required to comply with the NHPA. For this project, it is anticipated that the sole indirect effect of the undertaking will be related to the visual effects of above-ground project elements on historic-age (i.e., 50 years old or greater) buildings and structures in the vicinity. To account for these above-ground elements, an indirect effects assessment area encompassing a 450-ft buffer surrounding the APE was assessed.

METHODOLOGY

Background Research

During the background review, a variety of literature and online sources were referenced to determine if potential cultural resources were located within the APE. These sources included U.S. Geological Survey (USGS) topographic maps, the *Soil Survey of Tarrant County, Texas*, the Geologic Atlas of Texas (Dallas Sheet), the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) digital soil databases for Tarrant County, the 1936 State Highway Maps of Tarrant County, the Texas Historic Overlay georeferenced map database, the Texas Department of Transportation (TxDOT) Potential Archeological Liability Map (PALM), and both past and current aerial photographs of the proposed APE. Additionally, a file search of the Texas Archeological Site Atlas (TASA) and Texas Historical Sites Atlas (THSA) was performed for the proposed location and surrounding areas. This review was performed by Project Archeologist Anne Gibson on 07 January 2021

The TxDOT PALM examines "the character and classification of the soils and assesses the shallow and deep geoarcheological potential or the likelihood that soil could contain buried cultural materials in reasonable context (i.e., historic/recent disturbances, landscape setting, and soils data) for each soil series" (Abbott 2011:161). The TxDOT PALM model identifies where sites are likely to be preserved in a reasonable context versus indicating where sites are likely to exist (Abbott 2001:154, 2011:179). "The resolution of the PALM is appropriate to the scale of landform mapping (1:24,000)" (Abbott 2011:175). Any analysis of the data beyond the scale of mapping can result in a misunderstanding of the detail of mapping (Abbott 2011). Due to the more detailed evaluation required to accurately evaluate cultural resources potential for field methodology development (typically 1:7,000 or less), the cultural resources potential evaluation, presented in this scope, includes an assessment of the PALM results at a more detailed level to determine if the APE has retained a reasonable degree of contextual integrity, as assumed by the PALM model. A reasonable context is evaluated through a review of historical and modern aerial photographs to evaluate the level of previous ground disturbance that has transpired within a given area.

BACKGROUND REVIEW

Topography, Geology, and Soils

The Grapevine 7.5-minute USGS topographic quadrangle map illustrates that the APE is located within a very broad, gently rolling upland ridge that encompasses the majority of the DFW property and separates the Bear Creek and Hackberry Creek watersheds. However, due to land improvements associated with the construction of DFW, the natural rolling topography was graded with minimal slope (**Attachment A, Figure 2**). Elevations within the APE range from 530 to 590 ft (161 to 180 meters [m]) above modern sea level (amsl).

The APE is located within the Northern Blackland Prairie of the Texas Blackland Prairie ecoregion. The Northern Blackland Prairie is distinguished from surrounding regions by gently rolling hills and dark, fine-textured soils that primarily support prairie vegetation (Griffith et al. 2007). Historical vegetation included little bluestem, big bluestem, yellow Indiangrass, and tall dropseed. Most of the native prairie has been converted to cropland, non-native pasture, and expanding urban uses around Dallas, Waco, Austin, and San Antonio. Vertisols dominate the Blackland Prairie ecoregion and consist of high clay content soils with significant shrink and swell potential (Ressel 1981). The APE is underlain by the Cretaceous-age Eagle Ford Formation (Kef), which is comprised of shale, sandstone, and limestone (McGowen et al. 1987; USGS 2021; **Attachment A, Figure 3**).

As shown by the *Soil Survey of Tarrant County, Texas*, there is only one soil unit within the APE (Ressel 1981; **Table** 1; **Attachment A, Figure 4**). The entire APE contains soils typically found in areas significantly altered by urban land development. Soil data was viewed from the USDA NRCS Web Soil Survey (USDA 2021).

Table 1: Soil Map Units Located Within the APE

Soil Map Unit Description	Percentage of the APE
81 – Urban land, 0 to 16 percent slopes - This component is described as built-up areas where 75 percent or more of the surface is covered by urban land development.	100.0

Texas Archeological Sites Atlas Review

A file search within the TASA and the THSA electronic databases, maintained by the THC and the Texas Archeological Research Laboratory (TARL), identified that there are no previously recorded archeological sites, National Register properties, historical markers, or cemeteries located within the proposed APE (TASA 2021; THSA 2021). The TASA database indicates that three previously conducted archeological surveys are located within 1 mile (mi) of the APE (**Table 2**). No archeological sites have been recorded within 1 mi of the APE.

Table 2: Previously Conducted Archeological Surveys within 1 Mile of the APE

Agency	ACT Permit No.	Firm/Institution	Date	Survey Type	Location (Approximate)
FTA; Tarrant County	4775	URS Corporation	2013	Area	Overlap northern half of APE
FAA, DFW	7373	IES	2015	Area	Overlaps multiple sections of APE
DART	7996	AmaTerra Environmental, Inc.	2017	Area	Overlaps northern section of APE

Disturbance Analysis

During the background review, it was determined that ground-disturbing activities have transpired within the APE related to past land use. Prior to the construction of DFW in the early 1970s, the APE was primarily used for agricultural and ranching purposes as early as 1942 and presumably since the late 19th and early 20th centuries. Since 1972, significant ground disturbances have transpired throughout the APE related to broad-scale surface grading and transportation development. Once airport construction began, ground disturbances associated with large-scale grading for International Parkway occurred as depicted within 1972 aerial photographs.

Cultural Resource Potential

Prehistoric Resources

Data presented within the PALM for Tarrant County indicates the entire APE features a negligible potential for shallow or deeply-buried cultural materials. Similar conclusions were reported by AR Consultants, Inc. (ARC) in 2007 and 2008. ARC conducted intensive pedestrian surveys of 1,210 ac on the DFW property under Texas Antiquities Permit Number 4491 and published their results in the report *An Archaeological Survey for Chesapeake Energy Corporation at DFW International Airport, Dallas and Tarrant Counties, Texas* (Shelton et al. 2008). Through this study, three environmental zones were identified within the DFW that outline varying probabilities of encountering cultural resources. The current APE will have ground disturbances within Zone 1 (**Attachment A, Figure 6**).

Zone 1 is comprised of the Blackland Prairie Uplands ecoregion, which consists of mostly level clay or clay loam soils over limestone bedrock. Water permeates very slowly to the water table causing surface run-off and high shrink and swell potential. This setting has low biotic diversity and is dominated by short grasses as a result. Furthermore, it was determined that Zone 1 has a low probability for containing prehistoric sites due to the limited resources available within the area (Shelton et al. 2008). In summary, it was determined that the APE contains a low potential to contain prehistoric resources based on past research, previous THC coordination, and prolonged urban development since 1972.

Historic-Period Resources

Historic-period resources within North-Central Texas are primarily related to farmsteads, houses, and associated outbuildings and structures that date from the mid-19th to the mid-20th centuries. Typically, these types of resources are located along old roadways, but also can be located along railroads, streams, and open pastures. Although determining the presence of the earliest buildings and structures are problematic, maps depicting these features are available post-1895.

Historical aerial photographs indicate that the APE was used for agricultural and ranching activities until groundbreaking for the construction of DFW in 1970. Historical topographic maps and aerial photographs depict no buildings or structures within the APE prior to DFW construction. Based on this background research, there is a low to negligible potential for encountering historic-age cultural resources within the APE.

Indirect APE

The 450-ft indirect APE contains multiple buildings and structures associated with the airport including the parking garages for Terminals A and B, the International Parkway roadway system, and the DFW Business Center. These resources were constructed during the initial DFW construction phase completed in 1973. In 2020, IES evaluated International Parkway and all associated components of the roadway system for NRHP eligibility (Gibson et al. 2020; **Table 3**). Due to the modern age of the roadway system, IES recommended all 116 resources as not eligible for NRHP listing. The THC concurred that no historic properties were present or affected by the proposed International Parkway improvements project. Based on the age of original DFW infrastructure and previous evaluations of DFW buildings and structures, it was determined no historic-age above-ground resources are present within the current indirect APE.

Table 3: Previously Evaluated Above-Ground Resources

Architectural Resource	Year Constructed	NRHP Eligibility Determination
International Parkway System: North International Parkway (NIP), South International Parkway (SIP), NIP Entrance Ramp 2 and 3, NIP Exit Ramp 2 and 3, SIP Entrance Ramp 3 and 4, SIP Exit Ramp 2, Access Road 1, Turnarounds 2 and 3, NIP Overpass Bridge 4; SIP Overpass Bridge 4, and Flyover Bridges 1 and 2	1973-1974	Not Eligible
Service Road System: North Service Road (NSR), South Service Road (SSR), NSR Overpass Bridge 1 and 2; SSR Overpass Bridge 3 and 4, East Airtrans Opening 1 and 2, and West AirTrans Opening 1 and 2	1973-1974	Not Eligible
Remnants of AirTrans track	1974	Not Eligible

CONCLUSIONS

Therefore, it is the recommendation of IES that the THC concur with the findings of this study and recommendation that no historic properties will be affected under 36 CFR Part 800.4(d)(1) within the current APE. In addition, IES recommends that the undertaking be permitted to continue without the need for further cultural resources investigations. However, in the unlikely event that any prehistoric or historic archeological features or deposits, or human remains are encountered during construction, work should immediately cease in the area of the inadvertent discovery and the THC should be contacted for further consultation.

If you have questions, please contact me by telephone at (972) 562-7672 or via email at kstone@intenvsol.com.

Sincerely,

Integrated Environmental Solutions, LLC



Kevin Stone, MA, RPA
Vice President – Cultural Resources Director

IES Reference Number: 03.006.089

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2021 Texas Historic Sites Atlas. s.v. "Tarrant County" http://nueces.thc.state.tx.us/ (accessed January 2021).

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ATTACHMENT A

Figures

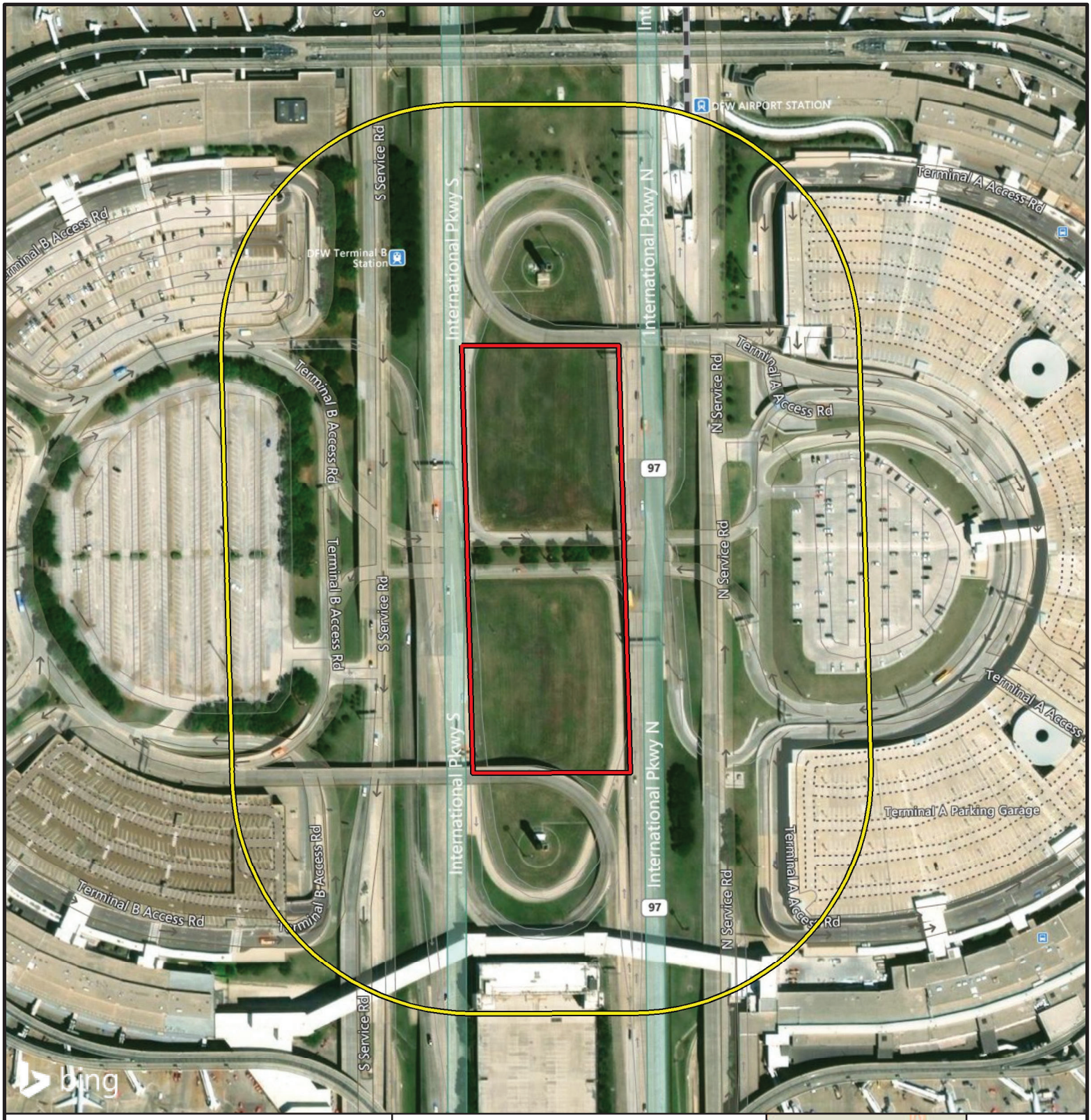


Figure 1
General Location Map

Area of Potential Effects - Direct

Area of Potential Effects - Indirect



N

1 in = 250 ft

0 250 500 ft

County: Tarrant
State: Texas
Date map created: 1/7/2021
Source: (c) 2020 Microsoft Corporation and its data suppliers; ESRI 10.6 Streetmap
IES Project Ref: 03.006.089

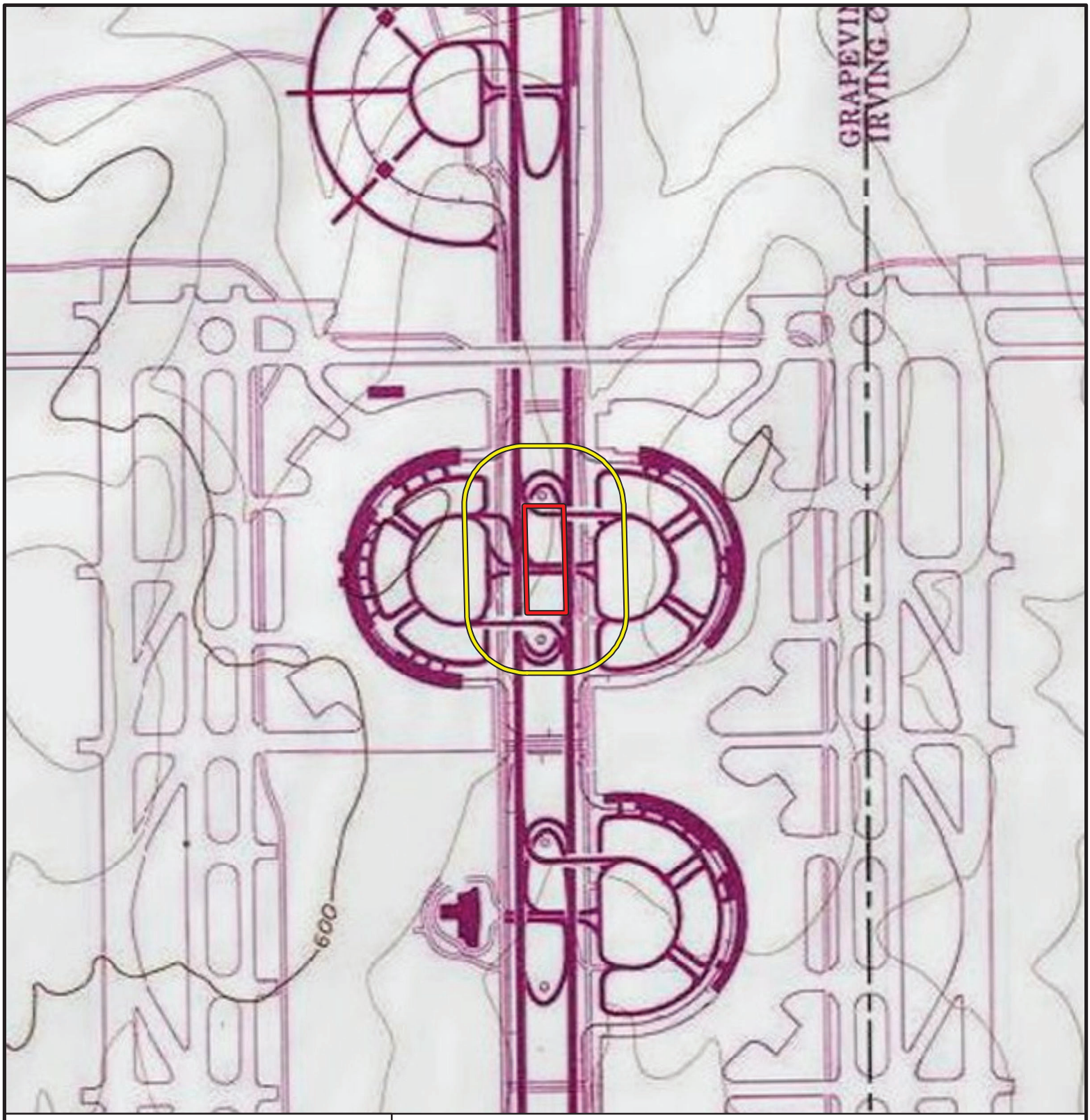


Figure 2
Topographic Setting

Area of Potential Effects - Direct

Area of Potential Effects - Indirect

N

County:Tarrant
State: Texas
Date map created: 1/7/2021
Source: USGS Topographic Map
7.5-minute quadrangle:
Grapevine 1982
IES Project Ref: 03.006.089

1 inch = 1,000 feet

0 1,000 2,000 ft

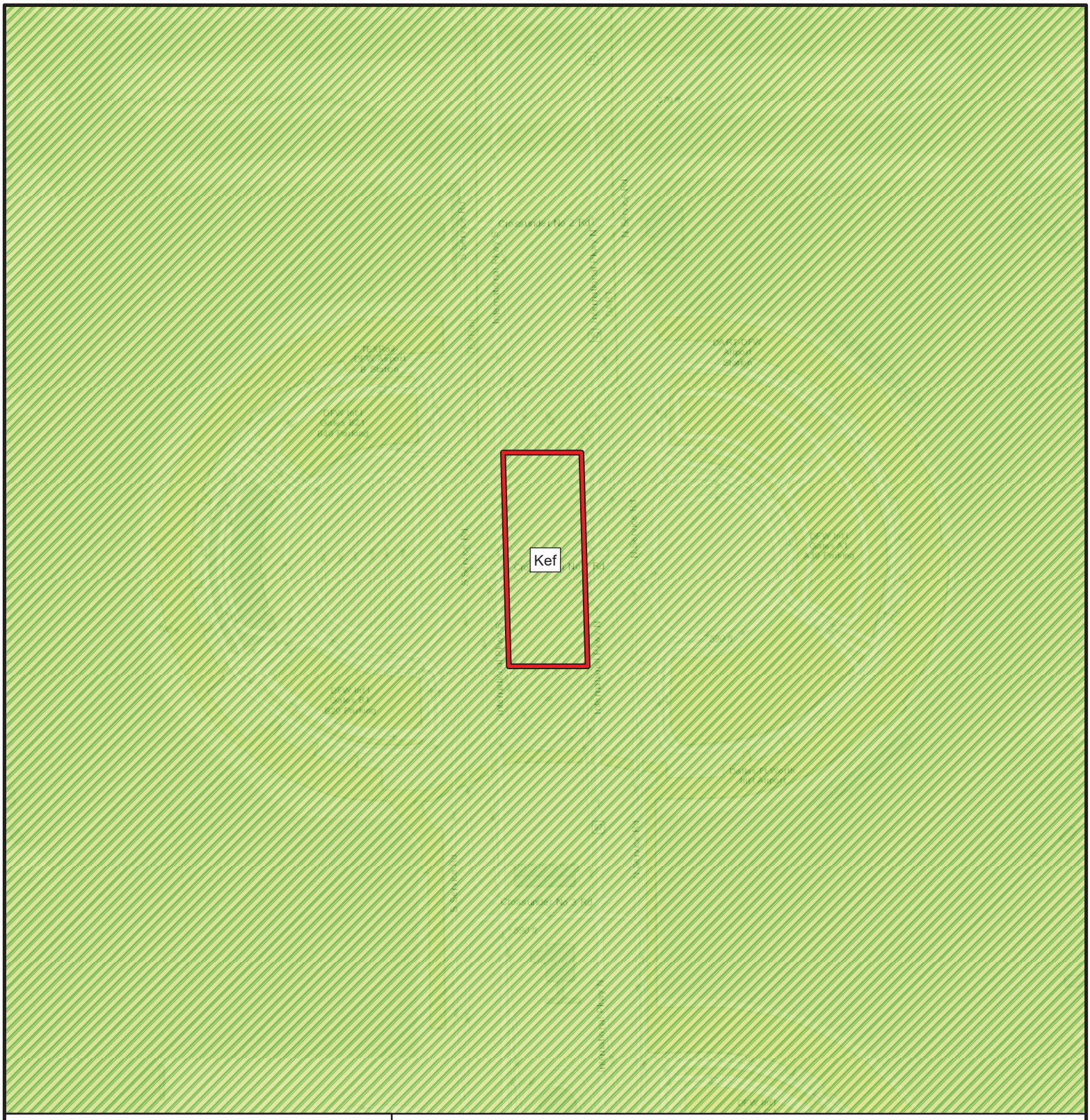


Figure 3
Geologic Setting

Area of Potential Effects - Direct

Geologic Formation

Kef - Eagle Ford Formation

N

1 inch = 500 ft

0 500 1,000 ft

County: Tarrant
State: Texas
Date map created: 1/7/2021
Source: TNRIS Geologic Atlas of Texas; Dallas Sheet
IES Project Ref: 03.006.089

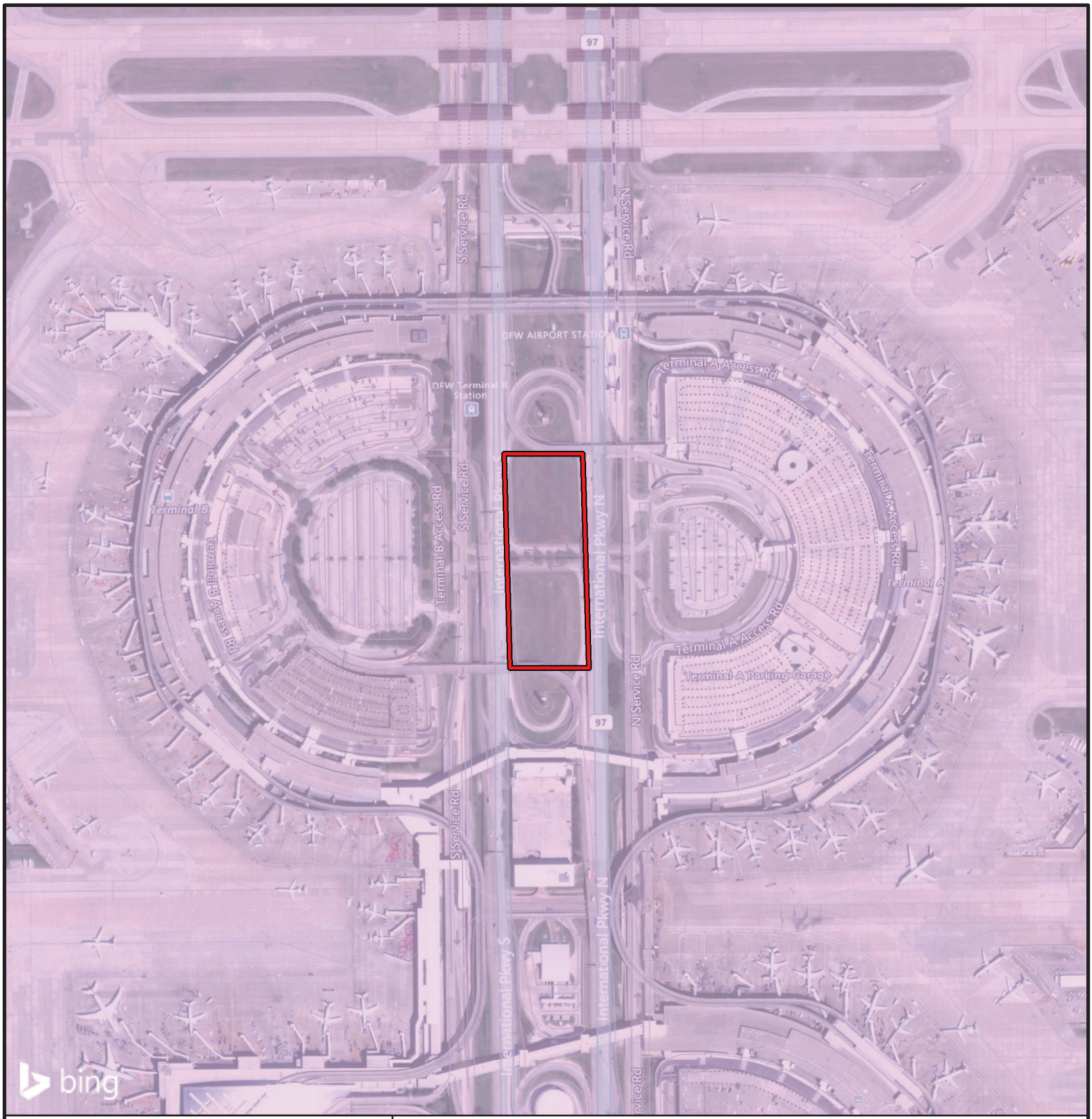


Figure 4
Soil Map Units Located Within and Adjacent to the APE

Area of Potential Effects - Direct

Soil Description

81 - Urban land

N

0 500 1,000 ft

County: Tarrant
State: Texas
Date map created: 1/7/2021
Source: 2007 USDA
NRCS Digital Soils Database
IES Project Ref: 03.006.089

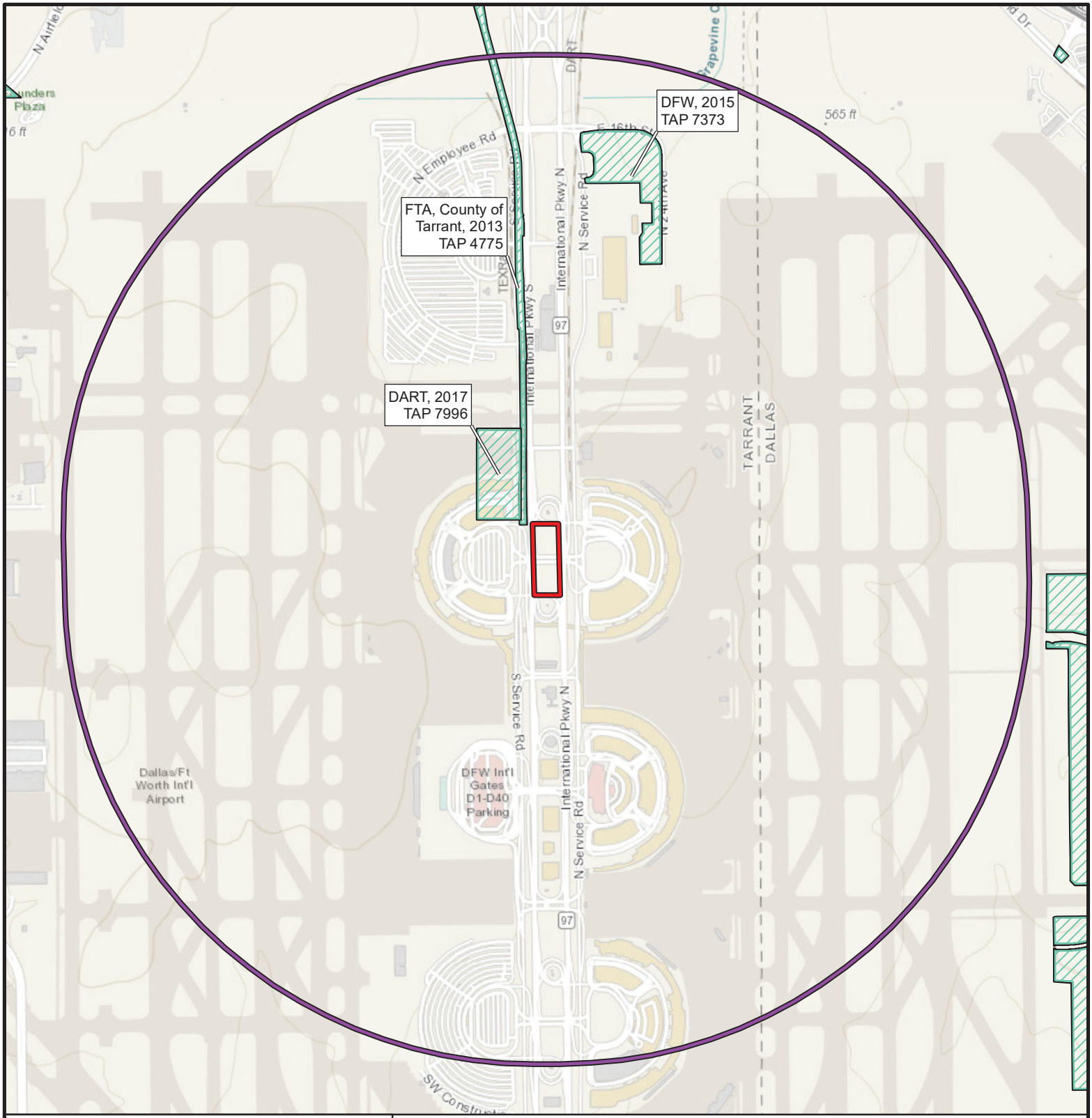


Figure 5
Previous Investigations Within
1 Mile of the APE

Area of Potential Effects - Direct
Area of Potential Effects - 1 Mile Buffer
Previous Archeological Survey - Area
Previous Archeological Survey - Linear

N

0 2,000 4,000 ft

County:Tarrant
State: Texas
Date map created: 1/8/2021
Source: (c) 2020 Microsoft Corporation
and its data suppliers; ESRI 10.6
IES Project Ref: 03.006.089

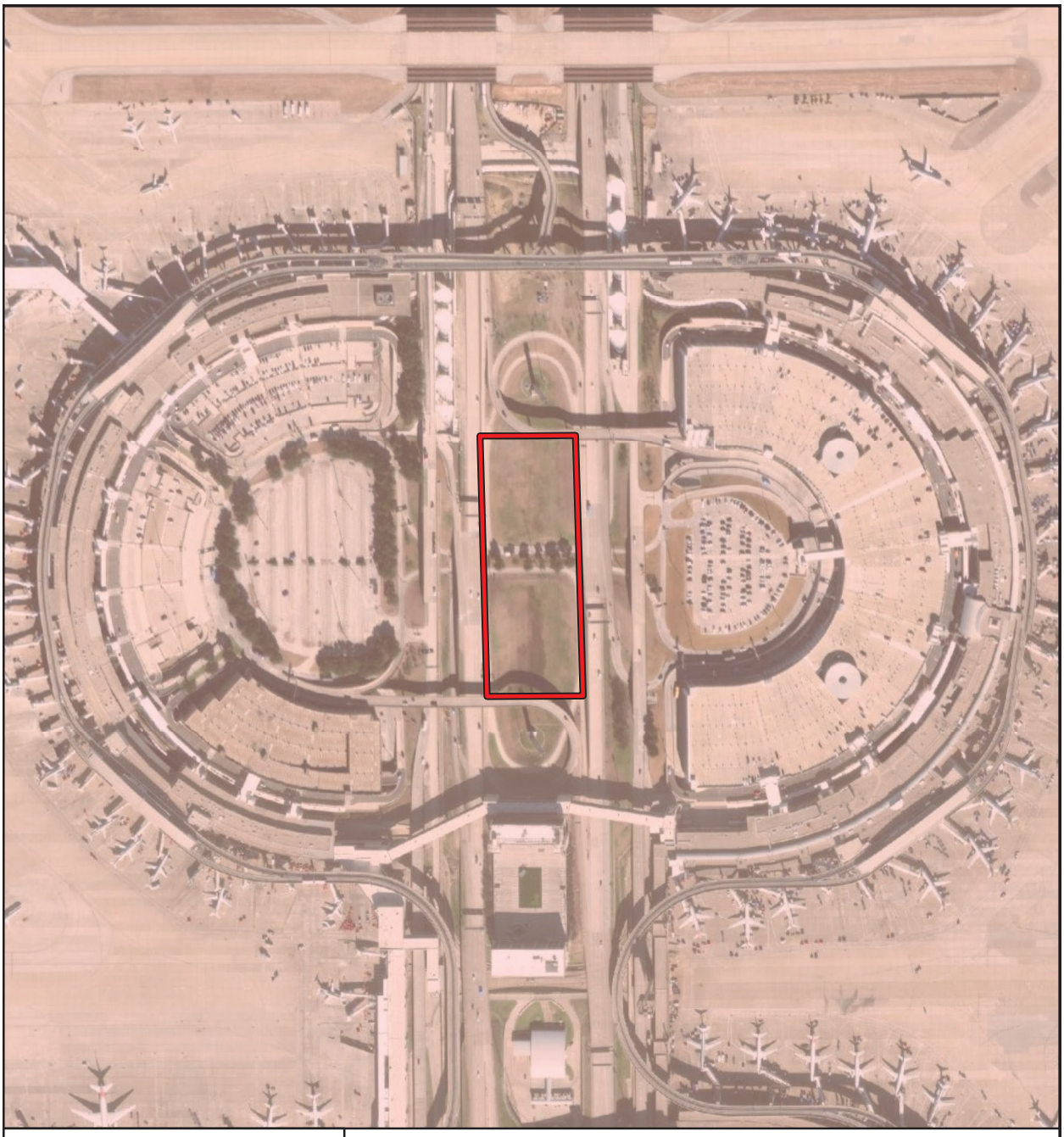


Figure 6
Archeological-Environmental Zone Map

County: Tarrant
State: Texas
Date map created: 1/7/2021
Source: (c) 2009 Microsoft Corporation and its data suppliers; ESRI 10.6
IES Project Ref: 03.006.089

Area of Potential Effects - Direct

Archeological-Environmental Zone

Zone 1 - Blackland Prairies Uplands

Zone 2 - Eastern Cross Timbers

Zone 3 - Bear Creek Floodplain

N

1 inch = 500 ft

0 500 1,000 ft

ATTACHMENT B

35% Design Plans

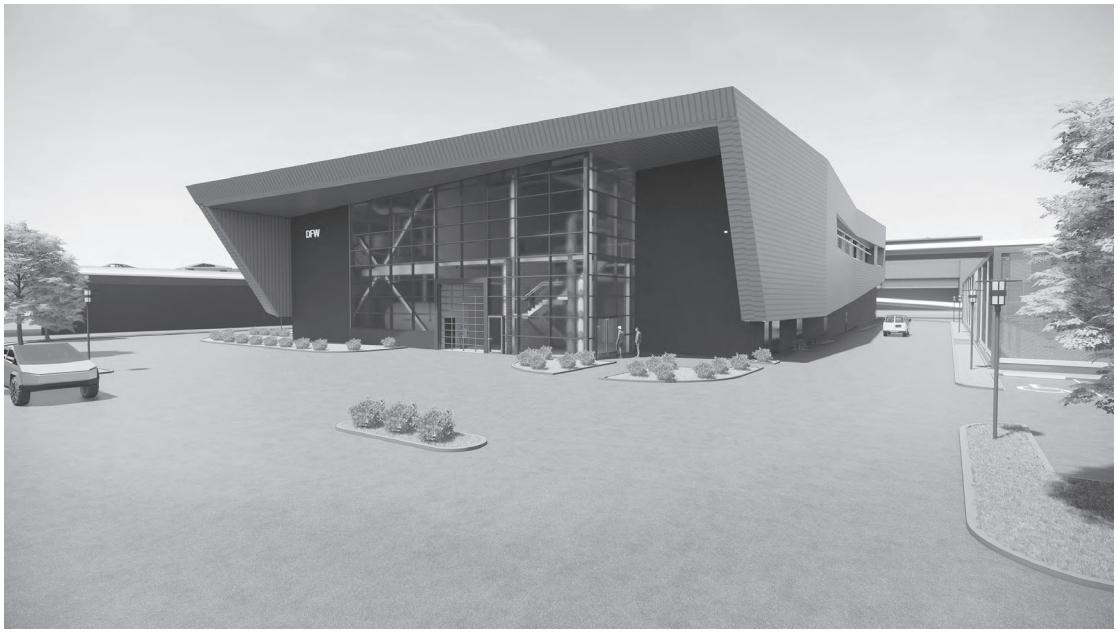
DALLAS FORT WORTH INTERNATIONAL AIRPORT

0000 N. INTERNATIONAL PKWY
DFW AIRPORT, TX 75261

DFW SUPPLEMENTAL CUP

CONTRACT NUMBER: 8500367
PERMIT NUMBER: A20-129B

35% SCHEMATIC DESIGN
07/30/2020



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Suite 200
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Tel 214.638.0500

ABBREVIATIONS

A
- ACCESS — ACCESSORY
- ACOUS — ACOUSTIC(AL)
- AFF — ABOVE FINISHED FLOOR
- AL — ALUMINUM
- ALT — ALTERNATE
- ANNUNC — ANNUNCIATOR
- ANOD — ANODIZED
- APPL — APPLIANCE
- ARCH — ARCHITECT(URAL)
- AUTO — AUTOMATIC
- AVG — AVERAGE
- & — AND

B
- BLDG — BUILDING
- BOLLD — BOLLARD
- BD — BOARD
- BLKG — BLOCKING
- BRDLM — BROADLOOM
- BU — BUILT UP

C
- CAB — CABINET
- CPT — CARPET
- CEM — CEMENT(ITIOUS)
- CER — CERAMIC
- CLG — CEILING
- COATG — COATING
- COILG — COILING
- CONC — CONCRETE
- CONSTR — CONSTRUCTION
- CONT — CONTINUOUS(ATION)
- CONTR — CONTRACT(OR)
- COV — COVER
- CMU — CONCRETE MASONRY UNIT
- CIP — CAST-IN-PLACE

D
- DBL — DOUBLE
- DEPT — DEPARTMENT
- DES — DESIGN(ED)
- DET — DETAIL
- DF — DRINKING FOUNTAIN
- DIA — DIAMETER
- DIFF — DIFFUSER
- DIM — DIMENSION
- DISP — DISPENSER
- DIV — DIVISION
- DN — DOWN
- $ — DOLLAR (US CURRENCY)
- DR — DOOR
- DSCON — DISCONNECT
- DWG — DRAWER

E
- ELAST — ELASTOMERIC
- ELEC — ELECTRICAL
- EMBED — EMBEDD(ED)(ING)
- ENGR — ENGINEER(ED)
- ENTR — ENTRANCE
- EQ — EQUAL
- EQUIP — EQUIPMENT
- EXIST — EXISTING
- EXP JT — EXPANSION JOINT
- EXPS — EXPOSED(D)
- EXT — EXTERIOR

F
- FAB — FABRICATION
- FD — FLOOR DRAIN
- FE — FIRE EXTINGUISHER
- FE&C — FIRE EXTINGUISHER AND CABINET
- FHC — FIRE HOSE AND CABINET
- FIN — FINISH
- FLDG — FOLDING
- FPLC — FIREPLACE
- FR — FIRE RAT(ING)(ED)
- FRMG — FRAMING
- FXD — FIXED
- FXTR — FIXTURE
- FLR — FLOOR(ING)
- FURN — FURNITURE
- FWC — FABRIC WALL COVERING

G
- GA — GAUGE
- GFRC — GLASS FIBER REINFORCED CONCRETE
- GFRG — GLASS FIBER REINFORCED GYPSUM
- GFRP — GLAS FIBER REINFORCED PLASTER
- GL — GLASS
- GR — GRAD(E)(ING)
- GYP — GYPSUM

H
- HD — HEAD
- HDWD — HARDWOOD
- HDWE — HARDWARE
- HM — HOLLOW METAL
- HORIZ — HORIZONTAL
- HVAC — HEATING, VENTILATING, AND AIR CONDITIONING
- HP — HIGH POINT

I
- INFO — INFORMATION
- INSTRUM — INSTRUMENT(ATION)
- INSUL — INSULATION
- INTLK — INTERLOCK(ING)
- INT — INTERIOR
- INFILTR — INFILTRATION

J
- JAN — JANITOR

K
- KIT — KITCHEN

L
- LAV — LAVATORY
- LB — POUND
- £ — BRITISH POUND (CURRENCY)
- LT — LIGHT
- LVLG — LEVELING
- LVT — LOUVER
- LP — LOW POINT

M
- MAX — MAXIMUM
- MFD — MANUFACTURED
- MFR — MANUFACTURER
- MECH — MECHANICAL
- MET — METAL
- MEMB — MEMBRANE
- MEZZ — MEZZANINE
- MIN — MINIMUM
- MISC — MISCELLANEOUS
- MLWK — MILLWORK
- MOIST — MOISTURE
- MOT — MOTOR(IZED)
- MTD — MOUNTED

N
- NIC — NOT IN CONTRCT
- NO — NUMBER
- NTS — NOT TO SCALE

O
- ORNA — ORNAMENTAL
- OVFL — OVERVFLOW
- OVHD — OVERHEAD
- OPNG — OPENING(S)
- OPR — OPERABLE
- ORD — OVERFLOW ROOF DRAIN

P
- PTN — PARTITION
- PEDR — PEDESTRIAN
- PBD — PARTICLE BOARD
- PNL — PANEL
- POLYST — POLYSTYRENE
- PORT — PORTABLE
- PREFIN — PREFINISHED
- PREFAB — PREFABRICATED
- PLAM — PLASTIC LAMINATE
- PLAS — PLASTER
- PLSTC — PLASTIC
- PLYWD — PLYWOOD
- PRTECN — PROTECTION

R
- RDR — READER
- RECES — RECESSED
- RECPT — RECEPTACLE
- REF — REFER(ENCE)
- REFL — REFLECTED
- REFR — REFRIGERATOR
- REQD — REQUIRED
- RESIS — RESIST(ANT)(IVE)
- REINF — REINFORCED(D)(ING)(MENT)
- RESIL — RESILIENT
- RFG — ROOFING
- RM — ROOM
- RO — ROUGH OPENING
- RD — ROOF DRAIN
- RDL — ROOF DRAIN LEADER

S
- SCR — SCRIBE
- SECUR — SECURITY
- SF — SQUARE FEET
- SG — SINGLE
- SHORG — SHORING
- SIM — SIMILAR
- SST — STAINLESS STEEL
- STD — STANDARD
- STL — STEEL
- STRFR — STOREFRONT
- STRUCT — STRUCTURAL
- SURF — SURFACE
- SUSP — SUSPENDED
- SYS — SYSTEM(S)
- SCH — SCHEDULE

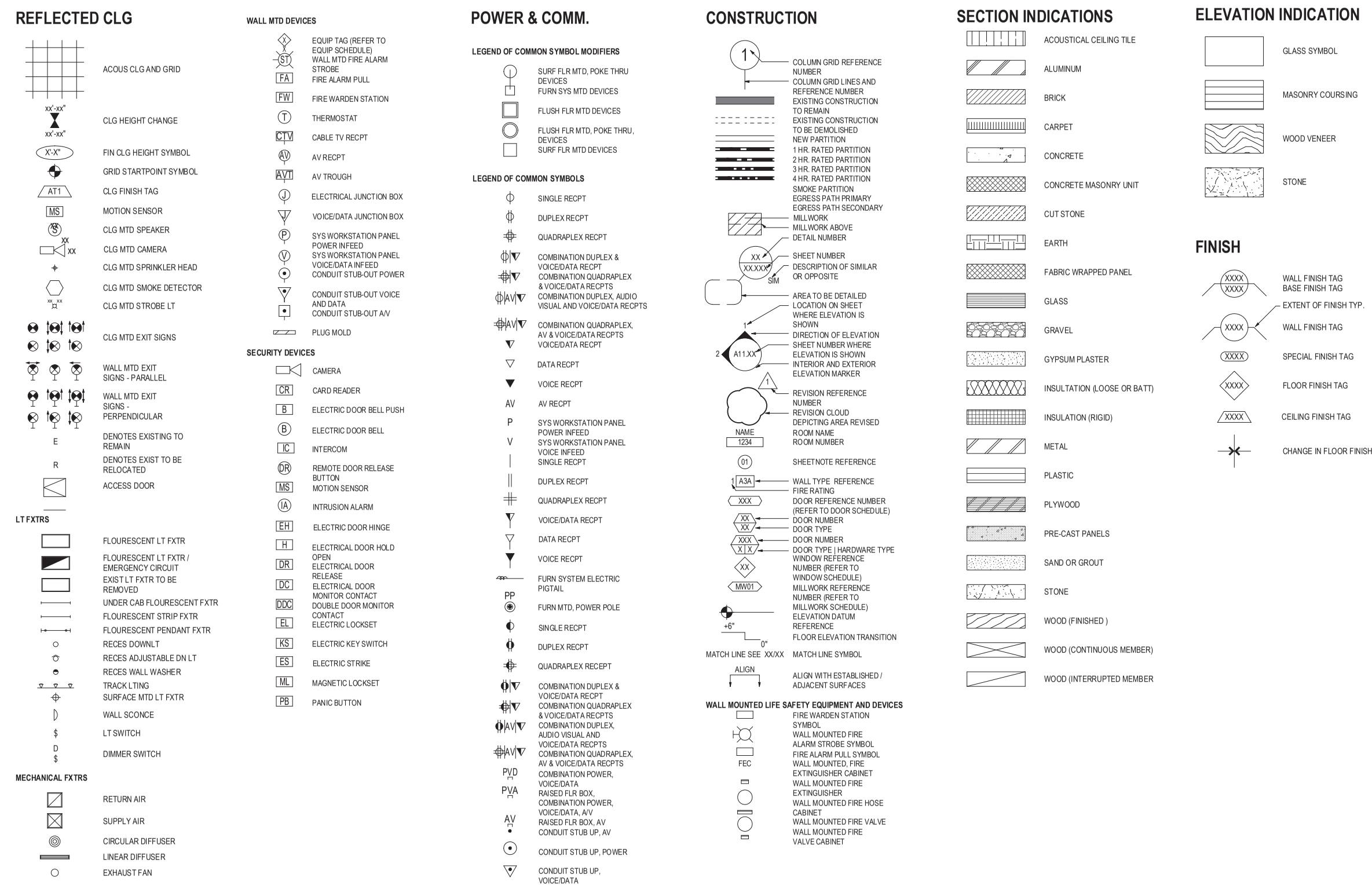
T
- THK — THICK
- TLT — TOILET
- TRAF — TRAFFIC
- TRANS — TRANSPARENT
- TRTD — TREATED
- T&G — TONGUE AND GROOVE
- TYP — TYPICAL

U
- UNDRLAY — UNDERLAYMENT
- UTIL — UTILITY
- UNO — UNLESS NOTED OTHERWISE

V
- VEH — VEHICLE
- VERT — VERTICAL
- VIF — VERIFY IN FIELD

W
- W/ — WITH
- WC — WATER CLOSET
- WD — WOOD
- WDW — WINDOW
- W/O — WITHOUT
- WT — WEIGHT
- WTRPRF — WATERPROOFING

GRAPHIC SYMBOLS



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G. MAINTAIN EXITS, EXIT LIGHTING, FIRE PROTECTIVE DEVICES, AND ALARMS IN CONFORMANCE WITH APPLICABLE CODES AND ORDINANCES.

H. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN. IN CASE OF CONFLICT, CONSULT THE ARCHITECT.

DFW DALLAS FORT WORTH INTERNATIONAL AIRPORT

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DFW AIRPORT, TX 75261

PRELIMINARY
THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF 35% DESIGN REVIEW UNDER THE AUTHORITY OF MATT SEVERANCE, LIC #XXXX. IT IS NOT INTENDED FOR BIDDING, PERMITTING, OR CONSTRUCTION PHASES.
07/30/2020

Gensler
27.7644.071

DRAWN BY: KL
APPROVED BY: BA
ISSUE DATE: 07/30/2020

NO:	DATE:	DESCRIPTION:
A	07/30/2020	35% SCHEMATIC DESIGN

DFW SUPPLEMENTAL CUP

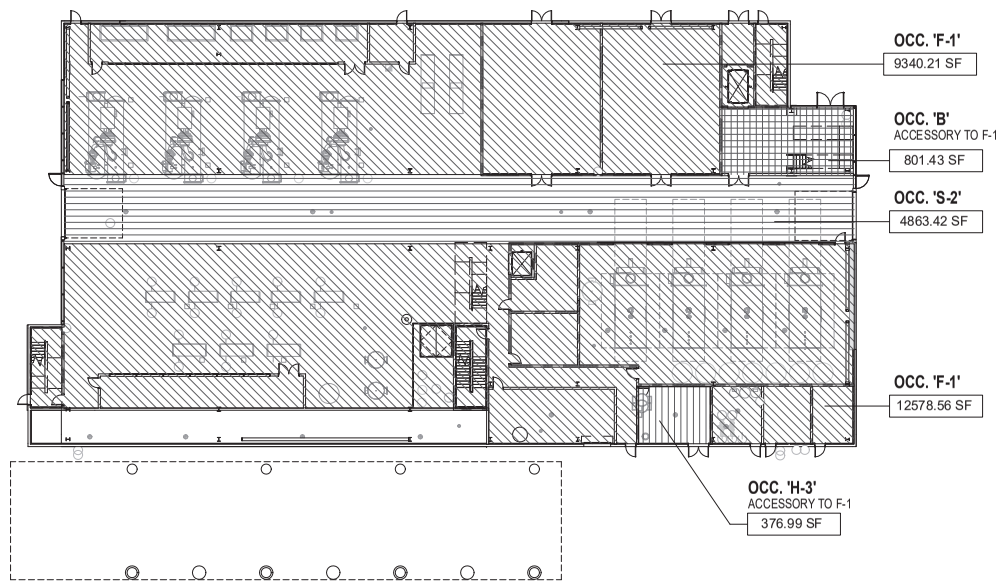
ABBREVIATIONS, GRAPHIC SYMBOLS

CONTRACT NUMBER: 8500367
PERMIT NUMBER: A20-129B

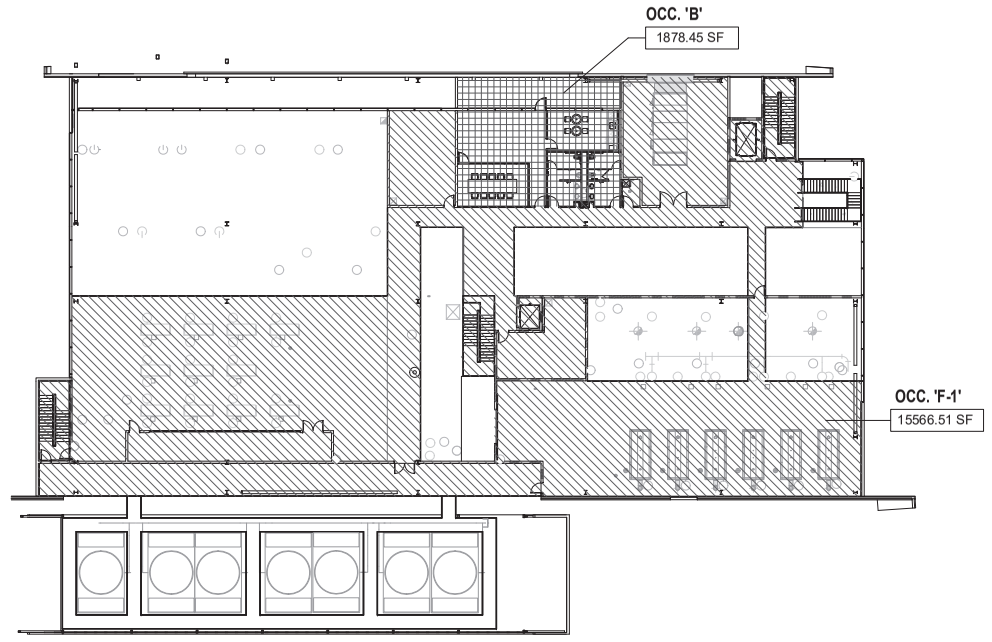
SHEET NUMBER
GI0-0-102

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.

OCCUPANCY CLASSIFICATION FLOOR PLAN



1ST FLOOR OCCUPANCY CLASSIFICATION



2ND FLOOR OCCUPANCY CLASSIFICATION

INTERIOR FINISHES

IBC CHAPTER 8

INTERIOR FINISHES (IBC CHAPTER 8)

WALL AND CEILING FINISHES
CLASS A: FLAME SPREAD 0-25; SMOKE-DEVELOPED 0-450
CLASS B: FLAME SPREAD 26-75; SMOKE-DEVELOPED 0-450
CLASS C: FLAME SPREAD 76-200; SMOKE-DEVELOPED 0-450

GROUP	GROUP B CLASS	GROUP S CLASS
EXIT ENCL/EXIT PASSAGEWAYS	B	C
CORRIDORS	C	C
ROOMS AND ENCL SPACES	C	C

FIRE-RESISTANCE RATING REQUIRMENT

IBC TABLE 601/602

BULDING ELEMENT		
PRIMARY STRUCTURAL FRAME	COLUMNS, GIRDERS, BEAMS, TRUSSES AND SPANDREL, FLOOR AND ROOF CONSTRUCTION DIRECT CONNECTION TO COLUMN	
BEARING WALLS	EXTERIOR INTERIOR	0 HR
NON-BEARING WALLS AND PARTITIONS :	EXTERIOR INTERIOR	0 HR 0 HR
FLOOR CONSTRUCTION :		0 HR 0 HR
ROOF CONSTRUCTION :		0 HR
		0 HR

PARKING REQUIREMENT

FLOOR AREA FOR PARKING CALCULATION	
PARKING REQUIRED * PER DFW DESIGN CRITERIA 2.3.1.2 MANUFACTURING : 1 PER 1000 SQ.FT. : 37863 / 1000 = 38 WAREHOUSE : 1 PER 2000 SQ.FT. : 4863 / 2000 = 3 OFFICE : 1 PER 300 SQ.FT. : 2680 / 300 = 9 TOTAL : 50	**PARKING PROVIDED :** 11
ACCESSIBLE SPACE REQUIRED * PER TAS TABLE 208.2 1 MIN FOR 1 TO 25 TOTAL PARKING 2 MIN FOR 26 TO 50 TOTAL PARKING — 2 REQUIRED	**ACCESSIBLE SPACE PROVIDED :** 1
EVCS REQUIRED	

PLUMBING FIXTURE CALCULATIONS

REQUIREMENT BY CODE from TABLE 2902.1				
TYPE OF OCCUPANCY	WATER CLOSETS (URINAL NO MORE THAN 50 % OF THE REQUIRED WATE CLOSET(419.2)	LAVATORIES	DRINKING FOUNTAINS	OTHER
"B" OCCUPANCY	1 PER 25 FOR THE FIRST 50 AND 1 PER 50 FOR THE REMAINDER EXCEEDING 50	1 PER 40 FOR THE FIRST 80 AND 1 PER 80 FOR THE REMAINDER EXCEEDING 80	1 PER 100	1 SERVICE SINK
"F" OCCUPANCY	1 PER 100	1 PER 100	1 PER 400	1 SERVICE SINK
"S" OCCUPANCY	1 PER 100	1 PER 100	1 PER 1000	1 SERVICE SINK

LEVEL 01 CALCULATIONS

	WATER CLOSETS		LAVATORIES		DRINKING FOUNTAINS	OTHER
	MALE	FEMALE	MALE	FEMALE		
"B" REQUIRED	4 OCC. = .0.16	4 OCC. = 0.16	4 OCC. = 0.1	4 OCC. = 0.1	8 OCC. = 0.08	-
"F" REQUIRED	39 OCC.= 0.39	39 OCC= 0.39	39 OCC.= 0.39	39 OCC.= 0.39	78 OCC. = 0.195	-
"S" REQUIRED	8 OCC. = 0.08	8 OCC. = 0.08	8 OCC. = 0.08	8 OCC. = 0.08	16 OCC. = 0.016	-
FIXTURES REQUIRED	0.63	0.63	0.57	0.57	0.291	1 SVR. SINK
FIXTURES PROVIDED	0	0	0	0	0	0 SVR. SINK

LEVEL 02 CALCULATIONS

	MALE	FEMALE	MALE	FEMALE		
"B" REQUIRED	10 OCC. = 0.4	10 OCC. = 0.4	10 OCC. = 0.25	10 OCC. = 0.25	20 OCC. = 0.2	-
"F" REQUIRED	26 OCC. = 0.26	26 OCC. = 0.26	26 OCC. = 0.26	26 OCC. = 0.26	52 OCC. = 0.13	-
FIXTURES REQUIRED	0.66	0.66	0.51	0.51	0.33	1 SVR. SINK
FIXTURES PROVIDED	2	2	2	2	2	1 SVR. SINK

TOTAL FIXTURES REQUIRED	0.63 + 0.66 = 1.29	0.625 + 0.66 = 1.29	0.57 + 0.51 = 1.08	0.566 + 0.51 = 1.08	0.291 + 0.33 = 0.621	1 SVR. SINK
TOTAL FIXTURES PROVIDED	2 : 1 WC & 1 UR	2 WC	2 LAV	2 LAV	2 : 1 HI + 1 LO	1 SVR. SINK

CONSTRUCTION TYPE

IBC TABLE 503

BUILDING HEIGHT: 45'
NUMBER OF STORIES: 2
CONSTRUCTION TYPE: ☐ I-A ☐ I-B ☐ II-A ☒ II-B ☐ III-A ☐ III-B ☐ IV ☐ V-A ☐ V-B
PROTECTED, NON COMBUSTIBLE

OCCUPANCY CLASSIFICATION

IBC CHAPTER 3

OCCUPANCY
ASSEMBLY ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
BUSINESS ☒
EDUCATIONAL ☐
FACTORY ☒ F-1 MODERATE ☐ F-2 LOW
HAZARDOUS ☐ H-1 DETONATE ☐ H-2 DEFLAGRATE ☒ H-3 COMBUST ☐ H-4 HEALTH ☐ H-5 HPM
INSTITUTIONAL ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
I-3 CONDITION ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
MERCANTILE ☐
RESIDENTIAL ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
STORAGE ☐ S-1 MODERATE ☒ S-2 LOW ☐ HIGH-PILED ☐ PARKING GARAGE ☐ OPEN ☐ ENCLOSED ☐ REPAIR GARAGE
UTILITY AND MISC. ☐

B & H-3 IS ACCESSORY OCCUPANCY GROUP TO EACH FLOOR.

INCIDENTAL USES (TABLE 508.2.5)
- ☒ FURNACE ROOM WHERE AND PIECE OF EQUIPMENT IS OVER 400,00 BTU PER HOUR INPUT
- ☐ ROOMS WITH BOILERS WHERE THE LARGEST PIECE OF EQUIPMENT IS OVER 15 PSI AND 10 HORSEPOWER
- ☒ REFRIGERANT MACHINE ROOM *(T508.2.5 SEPARATION: 1 HR OR PROVIDE AUTOMATIC SPRINKLER SYSTEM)*
- ☒ HYDROGEN CUTOFF ROOMS, NOT CLASSIFIED AS GROUP H
- ☐ INCINERATOR ROOMS
- ☐ PAINT SHOPS, NOT CLASSIFIED AS GROUP H, LOCATED IN OCCUPANCIES OTHER THAN GROUP F
- ☐ LABORATORIES AND VOCATIONAL SHOPS, NOT CLASSIFIED AS GROUP H, LOCATED IN A GROUP E OR I-2 OCC.
- ☐ LAUNDRY ROOMS OVER 100 SQUARE FEET
- ☐ GROUP I-3 CELLS EQUIPPED WITH PADDED SURFACES
- ☐ GROUP I-2 WASTE AND LINEN COLLECTION ROOMS
- ☐ WASTE AND LINEN COLLECTION ROOMS OVER 100 SQUARE FEET
- ☒ STATIONARY STORAGE BATTERY SYSTEMS HAVING A LIQUID ELECTROLYTE CAPACITY OF MORE THAN 50 GALLONS, OR A LITHIUM-ION CAPACITY OF 1,00 POUNDS USED FOR FACILITY STANDBY POWER, EMERGENCY POWER OR UNINTERRUPTED POWER SUPPLIES (T508.2.5 SEPARATION: 1 HR)
- ☐ ROOMS CONTAINING FIRE PUMPS (T508.2.5 SEPARATION: 1 HR AND PROVIDE AUTOMATIC SPRINKLER SYSTEM THROUGHOUT BUILDING)
- ☐ GROUP I-2 STORAGE ROOMS OVER 100 SQUARE FEET
- ☐ GROUP I-2 COMMERCIAL KITCHENS
- ☐ GROUP I-2 LAUNDRIES EQUAL TO OR LESS THAN 100 SQUARE FEET
- ☐ GROUP I-2 ROOMS OR SPACES THAT CONTAIN FUEL-FIRED HEATING EQUIPMENT

SPECIAL USES ☐ 402 ☐ 403 ☐ 404 ☐ 405 ☐ 406 ☐ 407 ☐ 408 ☐ 409 ☐ 410 ☐ 411 ☐ 412 ☐ 413 ☐ 414 ☐ 415 ☐ 416 ☐ 417 ☐ 418 ☐ 419 ☐ 420 ☐ 421 ☐ 422 ☐ 423 ☐ 424 ☐ 425 ☐ 426 ☐ 427
SPECIAL PROVISIONS: ☐ 509.2 ☐ 509.3 ☐ 509.4 ☐ 509.5 ☐ 509.6 ☐ 509.7 ☐ 509.8 ☐ 509.9

MIXED OCCUPANCY: ☐ NO ☒ YES SEPARATION: ___ HR EXCEPTION: ________
- ☐ INCIDENTAL USES SEPARATION (508.2.5)
- ☒ ACCESSORY OCCUPANCY (508.2) - B OFFICE/REFERENCE/BREAK ROOM @ 2ND FLOOR
H-3 CHEMICAL STORAGE ROOM @ 1ST FLOOR

THIS SEPARATION IS NOT EXEMPT AS A NON-SEPARATED USE (SEE EXCEPTIONS)
- ☒ NON-SEPARATED USE (508.3) - F-1 AND S-2
THE REQUIRED TYPE OF CONSTRUCTION FOR THE BUILDING SHALL BE DETERMINED BY APPLIYING THE HEIGHT AND AREA LIMITATIONS FOR EACH OF THE APPLICABLE OCCUPANCIES TO THE ENTIRE BUILDING. THE MOST RESTRICTIVE TYPE OF CONSTRUCTION, SO DETERMINED, SHALL APPLY TO THE ENTIRE BUILDING.
- ☐ SEPARATED USE (508.4) - SEE BELOW FOR AREA CALCULATIONS
FOR EACH STORY, THE AREA OF THE OCCUPANCY SHALL BE SUCH THAT THE SUM OF THE RATIOS OF THE ACTUAL FLOOR AREA OF EACH USE DIVIDED BY THE ALLOWABLE FLOOR AREA FOR EACH USE SHALL NOT EXCEED 1. (508.4.2)

ALLOWABLE BUILDING HEIGHT & STORY & AREA

* TYPE IIB CONSTRUCTION * NON - SEPARATED F-1 AND S-2 OCCUPANCY GROUP W/ ACCESSORY GROUP B & H-3	
ALLOWABLE BUILDING HEIGHT	75 ' FOR F-1 OCCUPANCY GROUP
ACTUAL BUILDING HEIGHT	45 '
ALLOWABLE BUILDING STORIES	3 STORIES FOR F-1
ACTUAL BUILDING STORIES	2 STORIES
ALLOWABLE BUILDING AREA	46,500 SF FOR F-1
ACTUAL BUILDING AREA	45,406 SF

PROJECT DESCRIPTION

PROJECT CONSISTS OF A NEW CONSTRUCTION SUPPLEMENTAL CENTRAL UTILITY PLANT (CUP) FOR THE DFW AIRPORT. THE NEW FACILITY WILL CONNECT TO THE EXISTING INFRASTRUCTURE AND WILL PROVIDE ADDITIONAL HEATING AND COOLING FOR THE DFW AIRPORT COMPLEX. MECHANICAL SPACES WILL OCCUPY THE VAST MAJORITY OF THE 2 STORY BUILDING WITH A SERVICE DRIVE AS A CENTER SPINE. AN OFFICE SPACE ALONG WITH ITS AMENITIES WILL OCCUPY A SMALL AREA OF THE SECOND LEVEL.

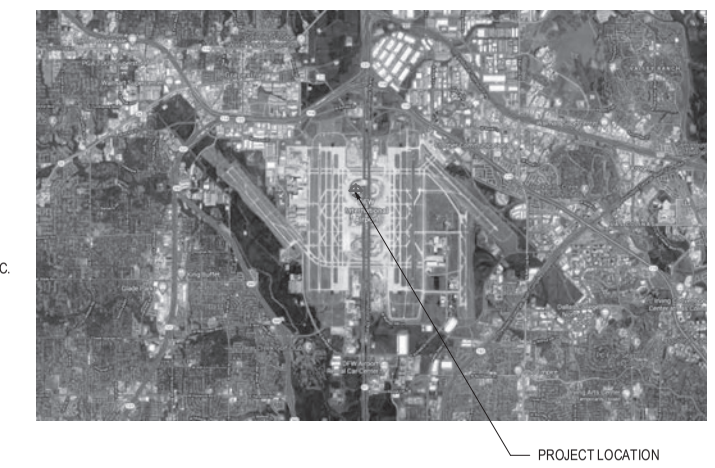
GROSS BUILDING AREA	
LEVEL	NEW (SQ FT)
LEVEL 01	27,961 SQ.FT.
LEVEL 02	17,445 SQ.FT.
TOTAL	45,406 SQ.FT.

SPRINKLERS: ☐ NO ☒ YES ☐ PARTIAL
STANDPIPES: ☐ NO ☒ YES CLASS: ☒ I ☐ II ☐ III ☐ WET ☐ DRY

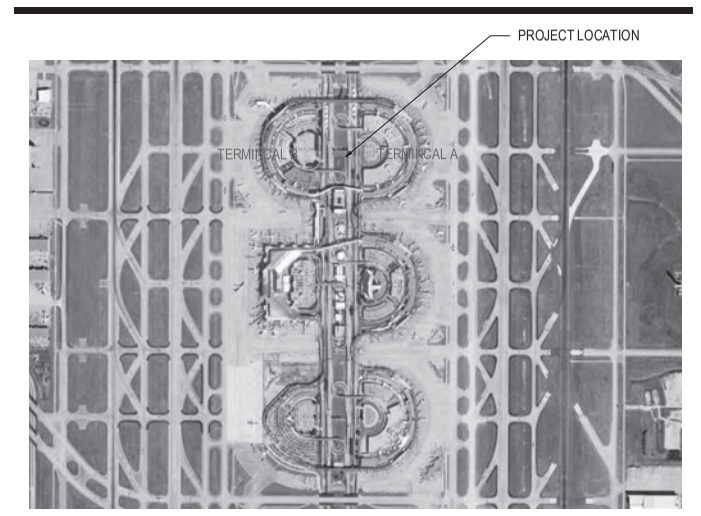
FIRE PROTECTION: APPROVED AUTOMATIC SPRINKLER SYSTEM PER NFPA 13 WITH MULTIPURPOSE DRY-CHEMICAL PORTABLE FIRE EXTINGUISHERS TYPE 2A 10BC, 5 LB. CAPACITY, SPACED AT 75'-0" TRAVEL DISTANCE AROUND THE FLOOR.

NO SPRINKER SYSTEM IN ELECTRICAL AND IT ROOM. PROVIDE 2 HR RATED AREA IN LIEU OF SPRINKLER SYSTEM.

VICINITY MAP



LOCATION MAP



APPLICABLE CODES

BUILDING CODE:	2015 INTERNATIONAL BUILDING CODE W/ DFW AIRPORT AMENDMENTS
PLUMBING CODE:	2015 INTERNATIONAL PLUMBING CODE W/ DFW AIRPORT AMENDMENTS
MECHANICAL CODE:	2015 INTERNATIONAL MECHANICAL CODE W/ DFW AIRPORT AMENDMENTS
ELECTRICAL CODE:	2017 NATIONAL ELECTRICAL CODE W/ DFW AIRPORT AMENDMENTS
FIRE/LIFE SAFETY CODE:	2015 INTERNATIONAL FIRE CODE W/ DFW AIRPORT AMENDMENTS
ACCESSIBILITY CODE:	2012 STATE OF TEXAS ACCESSIBILITY STANDARDS
ENERGY CODE:	2015 INTERNATIONAL ENERGY CONSERVATION CODE W/ DFW AIRPORT AMENDMENTS
OTHER:	2015 INTERNATIONAL FUEL GAS CODE DFW GREEN BUILDING STANDARDS, LATEST EDITION DFW CONSTRUCTION AND FIRE PREVENTION STANDARDS RESOLUTION

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DFW AIRPORT, TX 75261

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07/30/2020

Gensler
27.7644.071

DRAWN BY: KL
APPROVED BY: Approver
ISSUE DATE: 07/30/2020

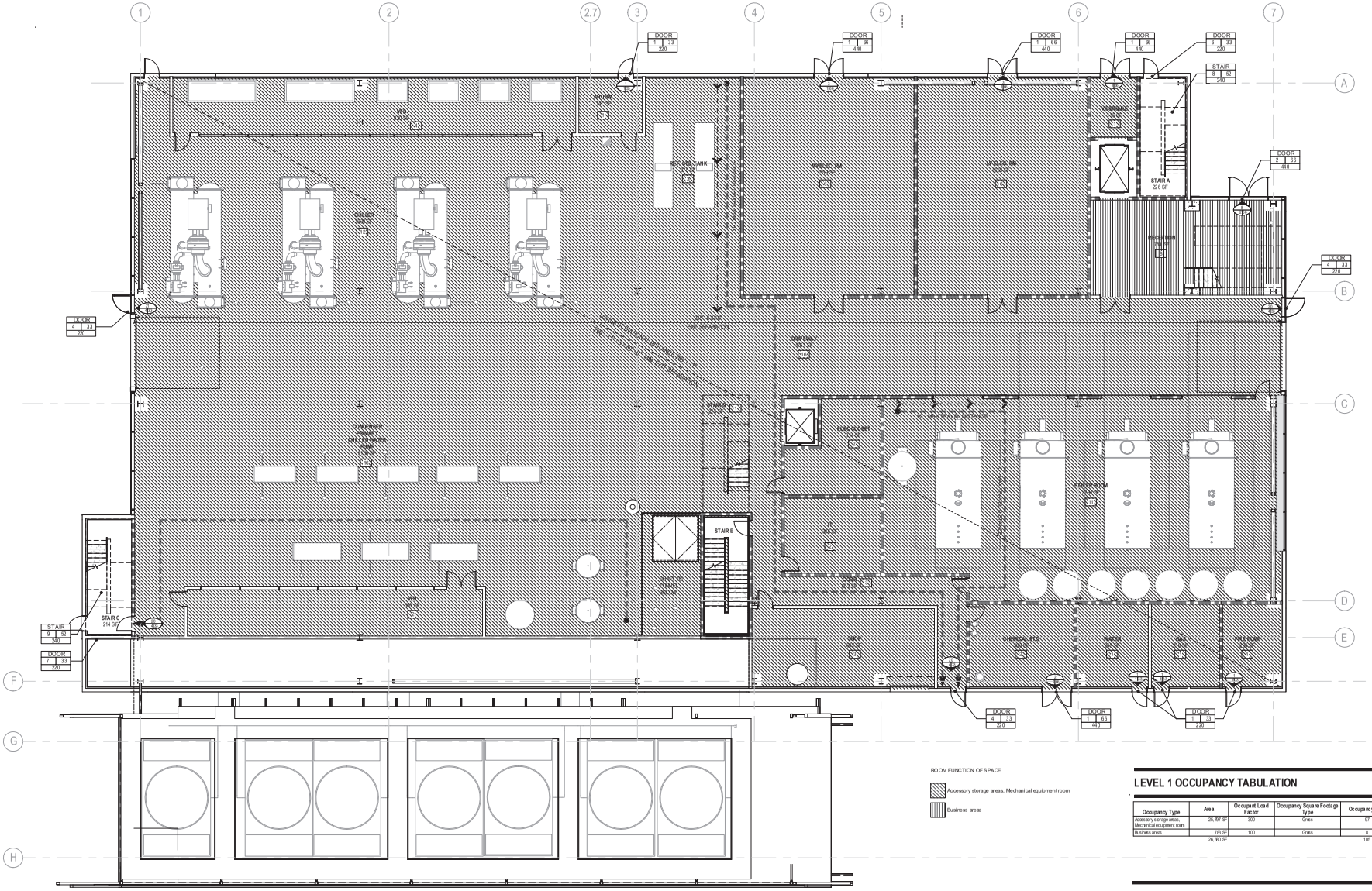
NO:	DATE:	DESCRIPTION:
A	07/30/2020	35% SCHEMATIC DESIGN

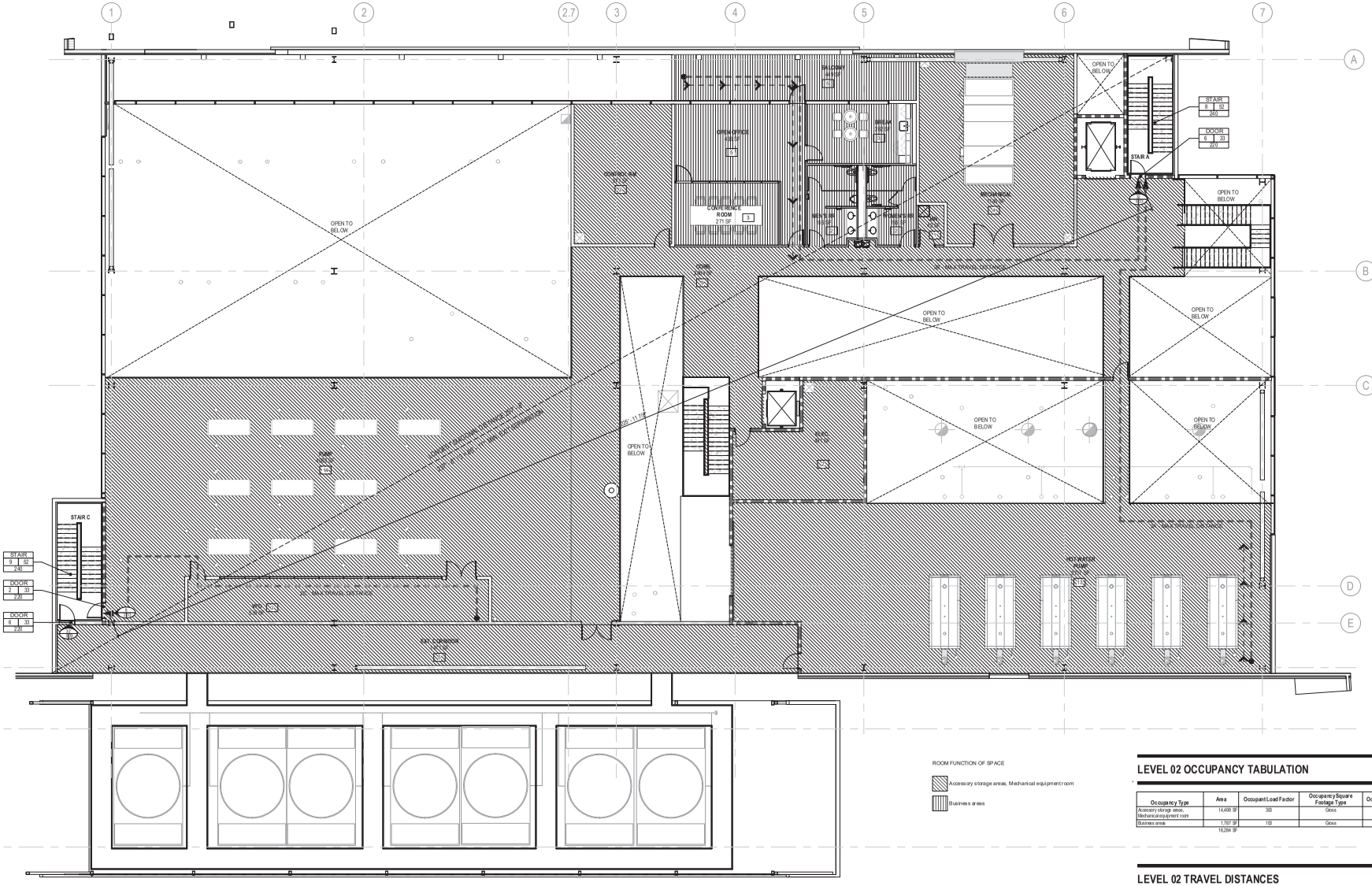
DFW SUPPLEMENTAL CUP
CODE SUMMARY

CONTRACT NUMBER: 8500367
PERMIT NUMBER: A20-129B

SHEET NUMBER
GI0-0-200

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.


1
2
2.7
3
4
5
6
7
A
B
C
D
E
F
G
H
DOOR 1 | 33 220
DOOR 1 | 66 440
DOOR 2 | 66 440
DOOR 4 | 33 220
DOOR 7 | 70 220
STAIR 9 | 52 240
STAIR A 226 SF
STAIR B
STAIR C 214 SF
RECEPTION 480 SF
CONCOURSE PHASE 1 DFW-2-20-GN-SS CARPET
RESTROOM 1,004 SF
RESTROOM 1,004 SF
RESTROOM 1,004 SF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C
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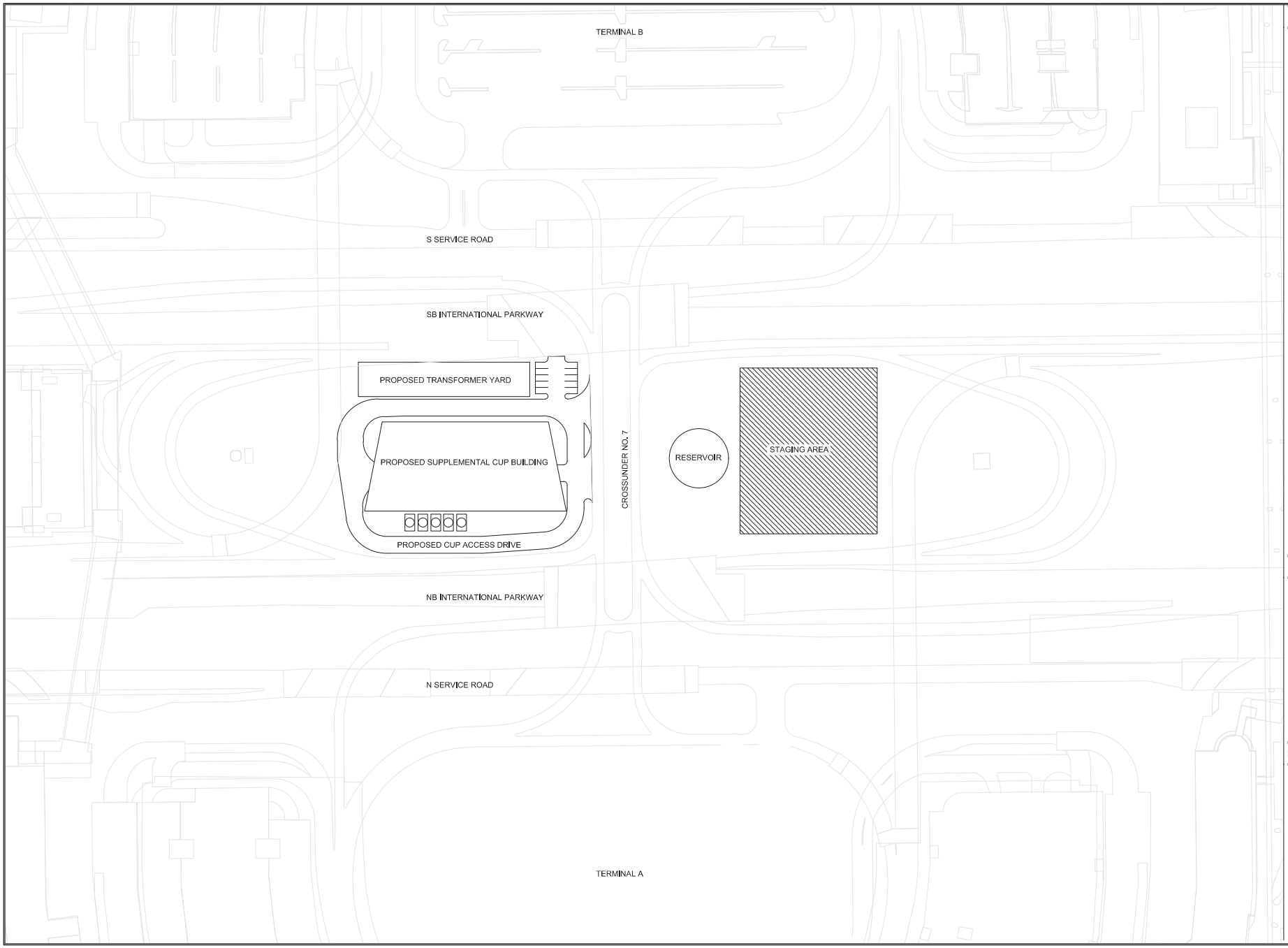
G
H
OPEN TO BELOW
STAIR A
STAIR C
STAIR
9 52
260
DOOR
6 33
220
DOOR
4 33
220
DOOR
6 33
220
CONFERENCE ROOM
271 SF
3
MEN'S RR
WOMEN'S RR
JANITOR
MECHANICAL EQUIP.
ELEC.
DATA
ELEV. MACH.
ELEV. PIT
SUMP PIT
FIRE PUMP
ELEV. HYD.
EXIT CORRIDOR
BALCONY ABOVE
BALCONY BELOW
ROOF BELOW
ROOF ABOVE
ROOF BELOW
ROOF BELOW
ROOF BELOW



GENERAL NOTES

NORTH

0 50' 100'
SCALE: 1" = 50'-0"

1. PLACEHOLDER FOR NOTES.

SHEET NOTES

LEGEND

DFW DALLAS FORT WORTH INTERNATIONAL AIRPORT

0000 N. INTERNATIONAL PKWY
DFW AIRPORT, TX 75261

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Gensler

27-7644-071

DRAWN BY: JCB
APPROVED BY: JHD
ISSUE DATE: 07/30/20

NO:	DATE:	REVISION:
A	07/30/20	35% SCHEMATIC DESIGN

DFW SUPPLEMENTAL CUP

CONTRACT LAYOUT PLAN

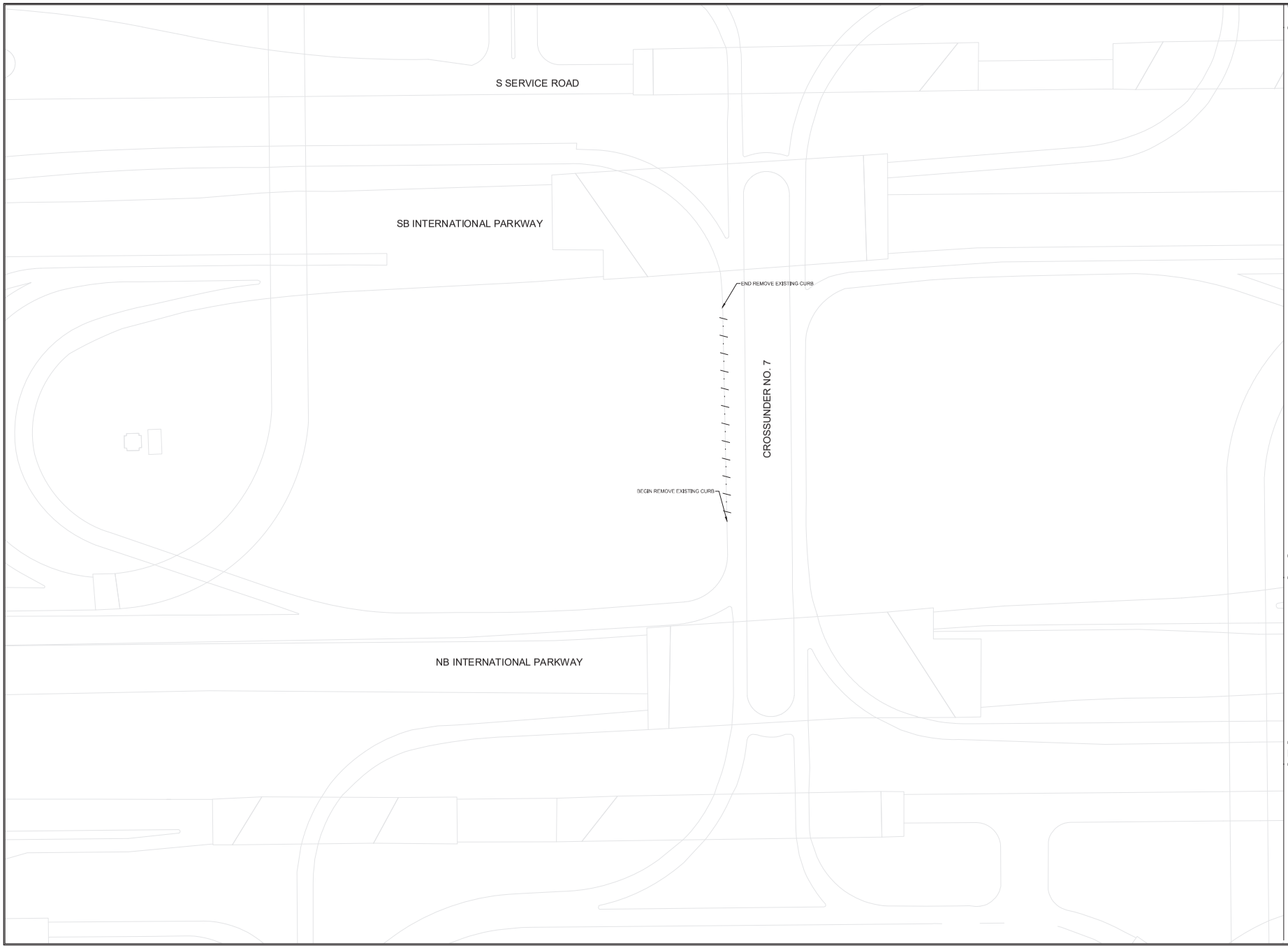
CONTRACT NUMBER: 8500367

PERMIT NUMBER: A20-1398

SHEET NUMBER

GC0-0-101

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.



GENERAL NOTES

North

0 30' 60'
SCALE: 1" = 30'-0"

1. PLACEHOLDER FOR NOTES.

SHEET NOTES

LEGEND

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ISSUE DATE: 07/30/20

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DFW SUPPLEMENTAL CUP

SITE DEMOLITION PLAN

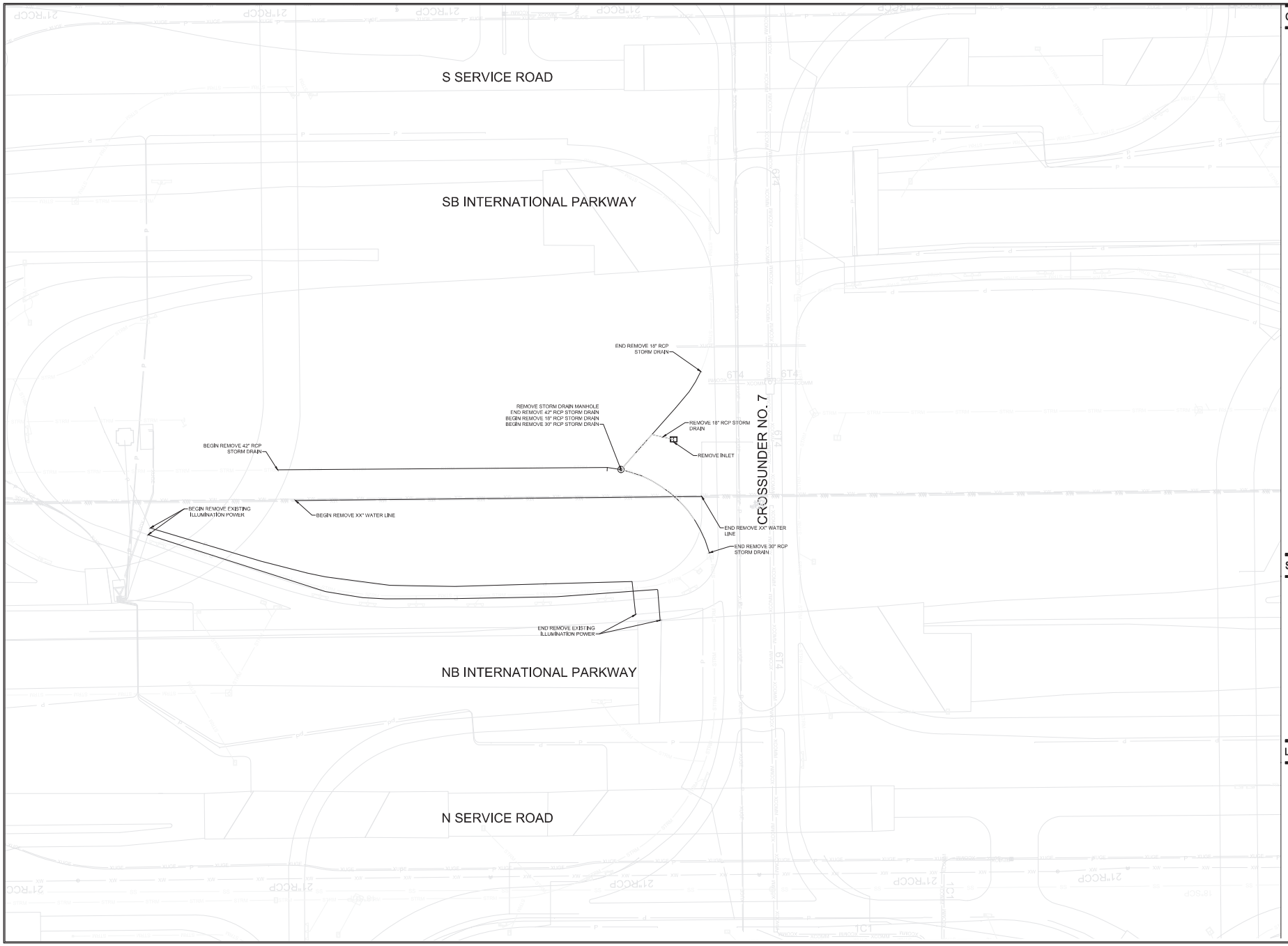
CONTRACT NUMBER: 8500367

PERMIT NUMBER: A20-1398

SHEET NUMBER

CD1-0-101

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.



GENERAL NOTES

North

0 30' 60'
SCALE: 1" = 30'-0"

1. ALL ELECTRICAL INFRASTRUCTURE WORK WILL CONFORM TO ONCOR ELECTRICAL DELIVERY SPECIFICATIONS.

SHEET NOTES

LEGEND

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DFW AIRPORT, TX 75261

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ISSUE DATE: 07/30/20

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DFW SUPPLEMENTAL CUP

UTILITY DEMOLITION PLAN

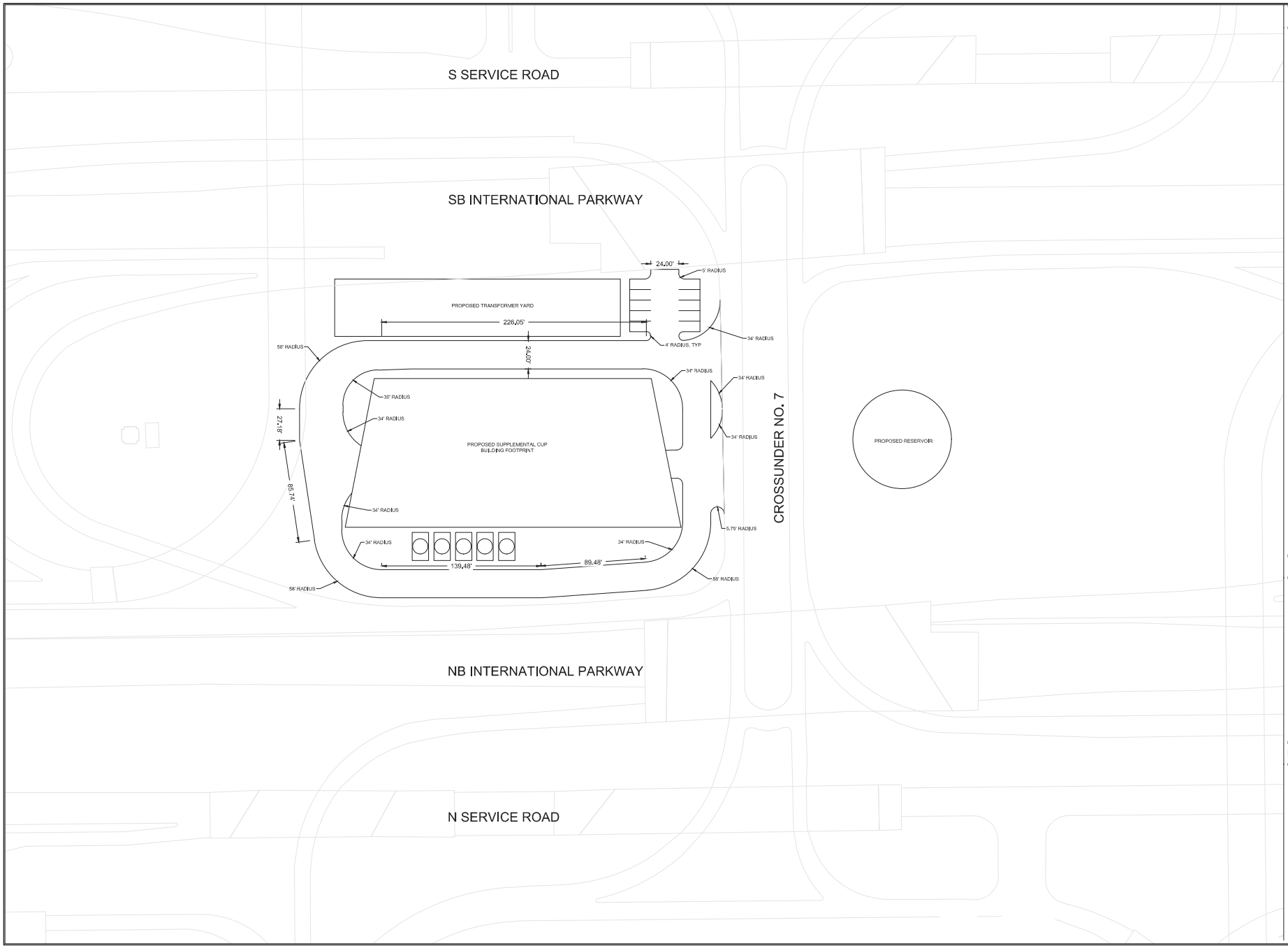
CONTRACT NUMBER: 8500367

PERMIT NUMBER: A20-1398

SHEET NUMBER

CD1-0-102

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.



GENERAL NOTES

North

0 30' 60'
SCALE: 1" = 30'-0"

1. PLACEHOLDER FOR NOTES.

SHEET NOTES

LEGEND

DFW DALLAS FORT WORTH INTERNATIONAL AIRPORT

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ISSUE DATE: 07/30/20

NO:	DATE:	REVISION:
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DFW SUPPLEMENTAL CUP

GEOMETRY PLAN

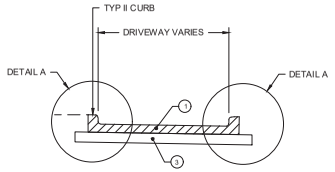
CONTRACT NUMBER: 8500367

PERMIT NUMBER: A20-1398

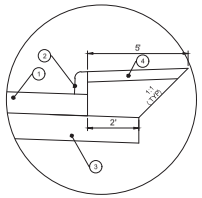
SHEET NUMBER

CS1-10-101

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.



1 TYPICAL PAVEMENT SECTION
SCALE: N.T.S.



DETAIL A

GENERAL NOTES

LEGEND

1. 13.5" CONTINUOUSLY REINFORCED CONCRETE PAVEMENT (CRCP)
2. TY II MONOLITHIC CURB (5 3/4" HEIGHT)
3. 8" LIME TREATED SUBGRADE (9% LIME) OR 8" CEMENT TREATED SUBGRADE (8% CEMENT)
4. 4" COMPOST MANUFACTURED TOP SOIL (CMT) WITH COMMON BERMUDA SOD

NOTES

1. ALL DIMENSIONS ARE MEASURED TO FACE OF CURB UNLESS OTHERWISE NOTED.
2. SULFATE TESTING SHALL BE PERFORMED DURING CONSTRUCTION TO CONFIRM THE SOLUBLE SULFATE IS LESS THAN 2,000 PPM. IF THE RESULT IS MORE THAN 2,000 PPM, CONTRACTOR SHALL USE 7 INCHES OF CRUSHED STONE FLEX BASE. THE BASE MATERIAL SHALL COMPLY WITH TxDOT ITEM 247, TY A, GRADE 1.
3. PROOF ROLL IN ALL AREAS WHERE SUBGRADE WILL SUPPORT NEW PAVEMENT. THE UPPER 8 INCHES OF SUBGRADE SHOULD BE SCARIFIED AND RE-COMPACTED AT -1% TO +2% OF OPTIMUM MOISTURE CONTENT TO 98% STANDARD PROCTOR DENSITY (ASTM D 698) PRIOR TO PLACING FLEX BASE. PROOF ROLLING WILL NOT BE PAID DIRECTLY BUT WILL BE SUBSIDIARY TO VARIOUS BID ITEMS.

SHEET NOTES

LEGEND

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27-7644-071

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APPROVED BY: JHD
ISSUE DATE: 07/30/20

NO:	DATE:	REVISION:
A	07/30/20	35% SCHEMATIC DESIGN

DFW SUPPLEMENTAL CUP

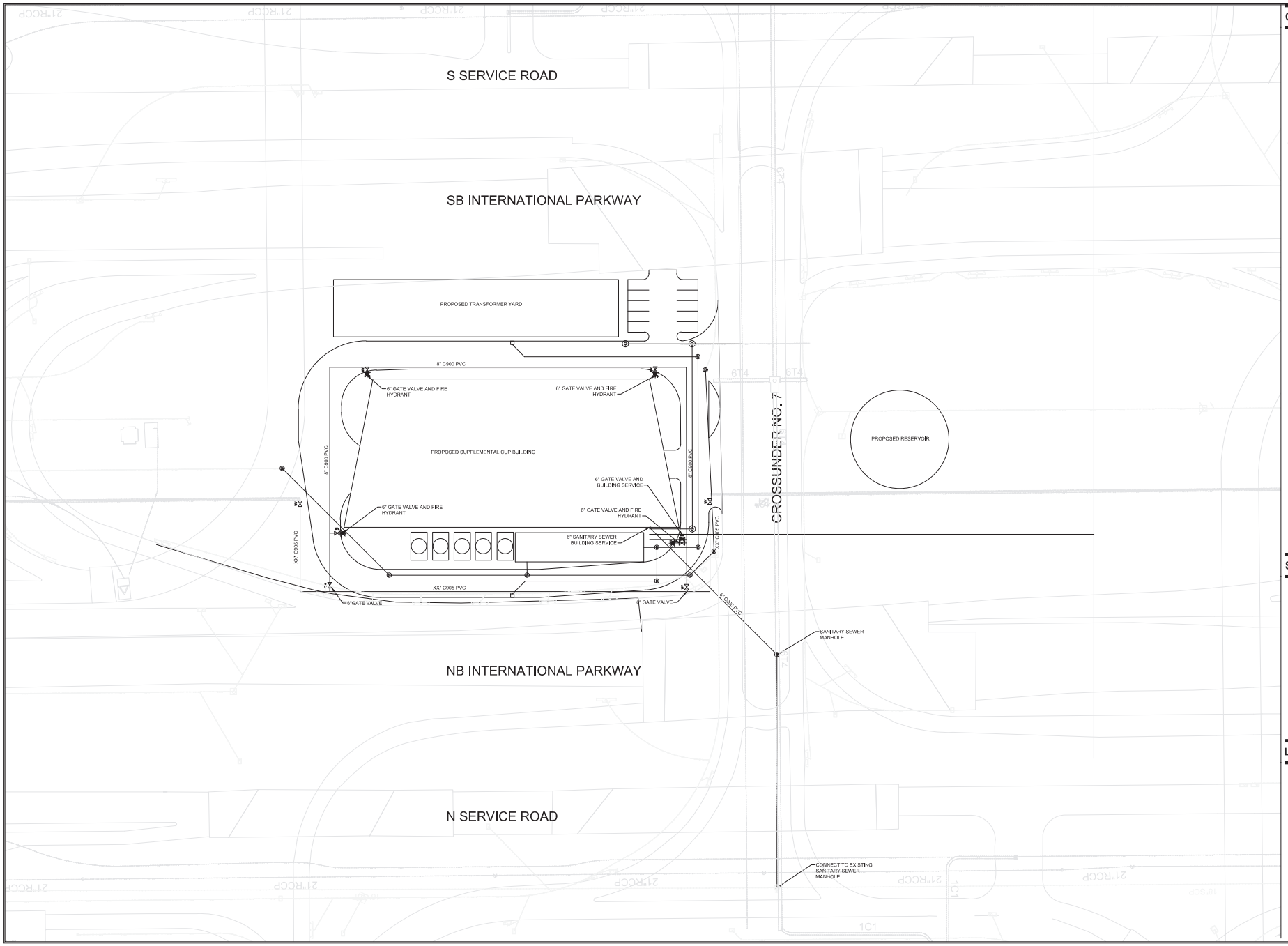
TYPICAL PAVEMENT SECTIONS

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A20-129B

SHEET NUMBER
CS5-1-101

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.



GENERAL NOTES

North

0 30' 60'
SCALE: 1" = 30'-0"

1. PLACEHOLDER FOR NOTES.

SHEET NOTES

LEGEND

DFW DALLAS FORT WORTH INTERNATIONAL AIRPORT

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ISSUE DATE: 07/30/20

NO:	DATE:	REVISION:
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DFW SUPPLEMENTAL CUP

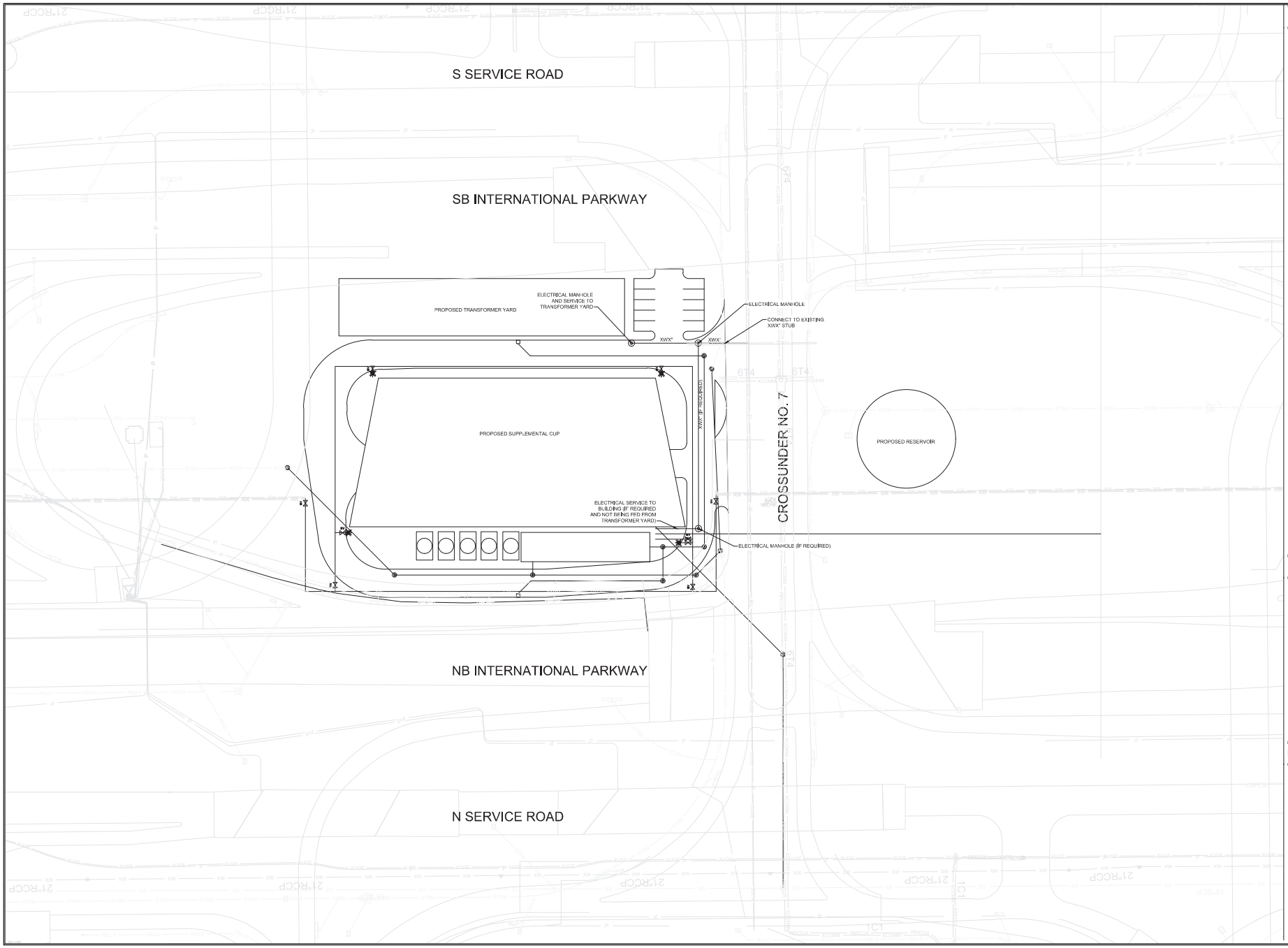
WATER AND WASTEWATER PLAN

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A20-129B

SHEET NUMBER
CU2-1-101

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30X 42 SHEET.



GENERAL NOTES

North

0 30' 60'
SCALE: 1" = 30'-0"

1. ALL ELECTRICAL INFRASTRUCTURE WORK WILL CONFORM TO ONCOR ELECTRIC DELIVERY SPECIFICATIONS

SHEET NOTES

LEGEND

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27-7644-071

DRAWN BY: JCB
APPROVED BY: JHD
ISSUE DATE: 07/30/20

NO:	DATE:	REVISION:
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DFW SUPPLEMENTAL CUP

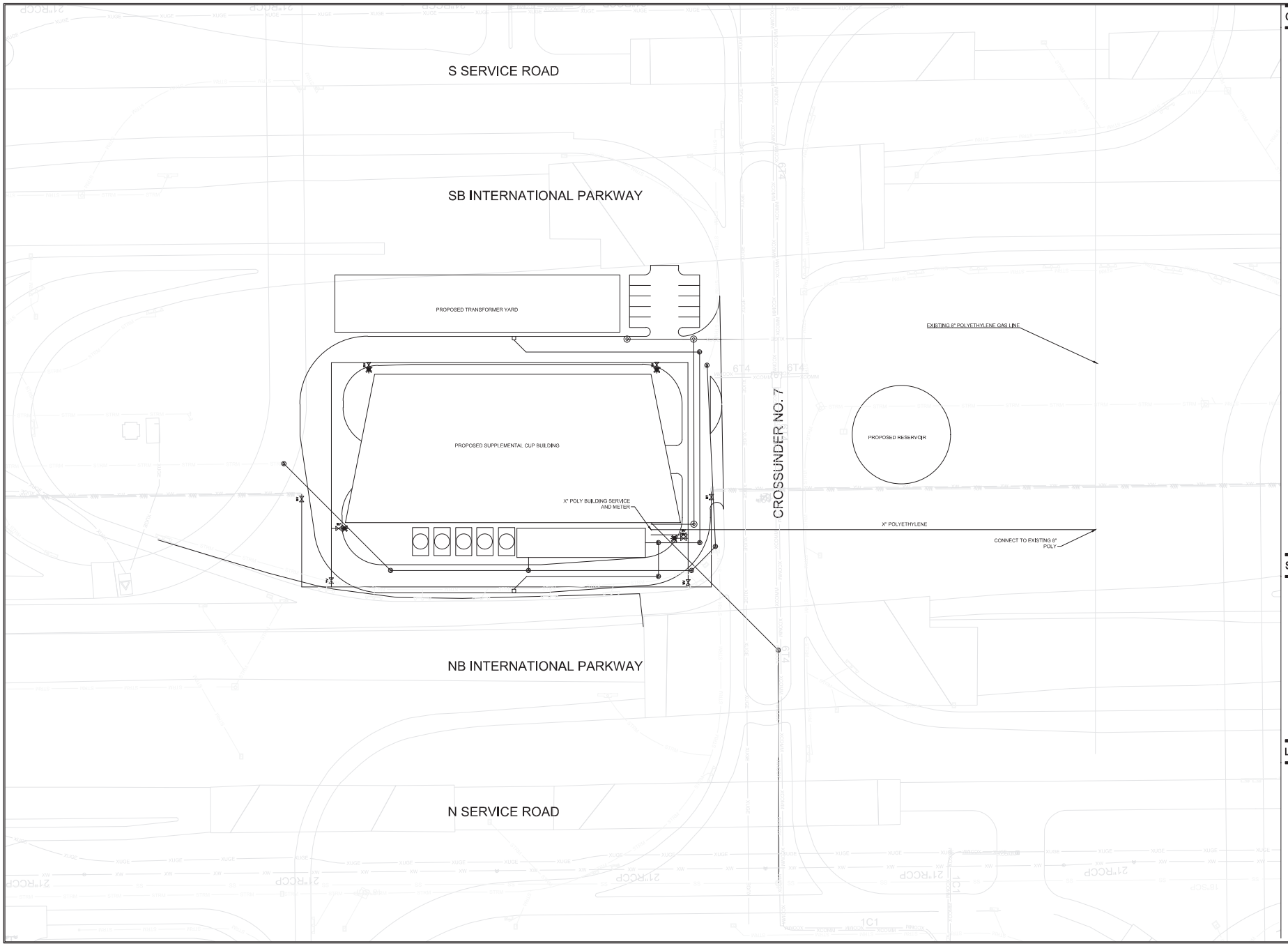
ELECTRICAL INFRASTRUCTURE PLAN

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A20-129B

SHEET NUMBER
CU2-1-102

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30X 42 SHEET.



GENERAL NOTES

North

0 30' 60'
SCALE: 1" = 30'-0"

1. ALL NATURAL GAS WORK WILL CONFORM TO ATMOS ENERGY SPECIFICATIONS

SHEET NOTES

LEGEND

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APPROVED BY: JHD
ISSUE DATE: 07/30/20

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DFW SUPPLEMENTAL CUP

NATURAL GAS PLAN

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A20-129B

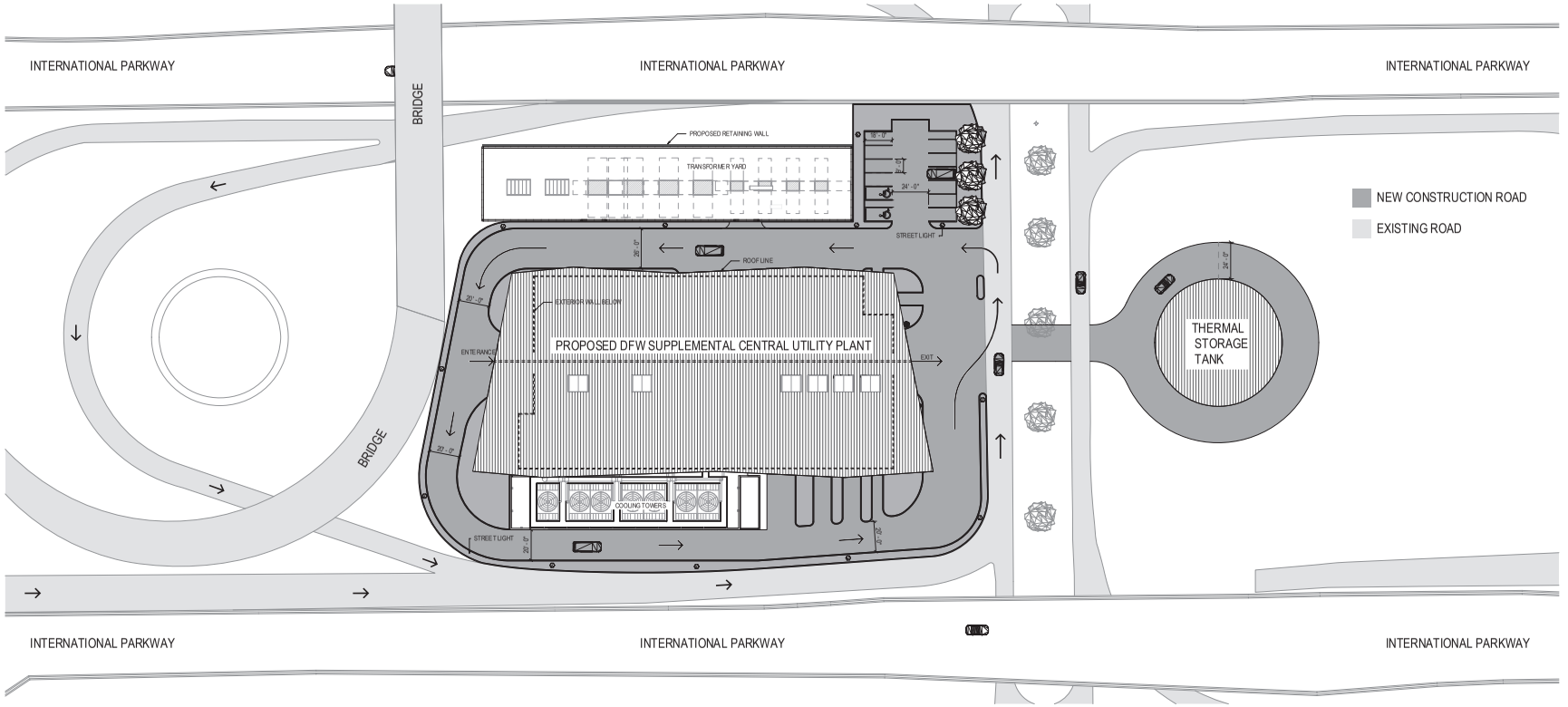
SHEET NUMBER
CU2-1-103

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.

GENERAL NOTES

A RE: A00 DRAWING SERIES FOR LEGENDS, SYMBOLS AND ABBREVIATIONS.
B RE: G01 SHEET SERIES FOR CODE INFORMATION RELATED TO PROJECT.
C RE: CIVIL DRAWINGS FOR GRADING INFORMATION AND SPOT ELEVATIONS.
D.

SHEET NOTES



01 SITE PLAN

1" = 30'-0" 0 8 15 30 60 FEET

DFW DALLAS FORT WORTH INTERNATIONAL AIRPORT

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DFW AIRPORT, TX 75261

PRELIMINARY
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01.30.2020

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ISSUE DATE: 07/30/2020

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A	07/30/2020	30% SCHEMATIC DESIGN

DFW SUPPLEMENTAL CUP

SITE PLAN

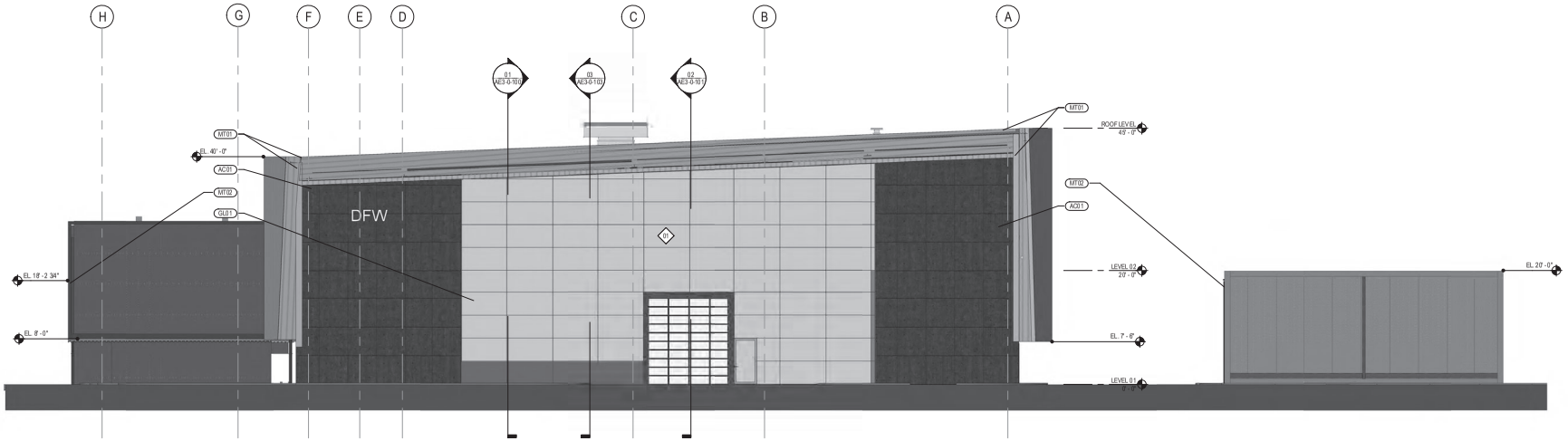
CONTRACT NUMBER: 8500367

PERMIT NUMBER: A20-1298

SHEET NUMBER

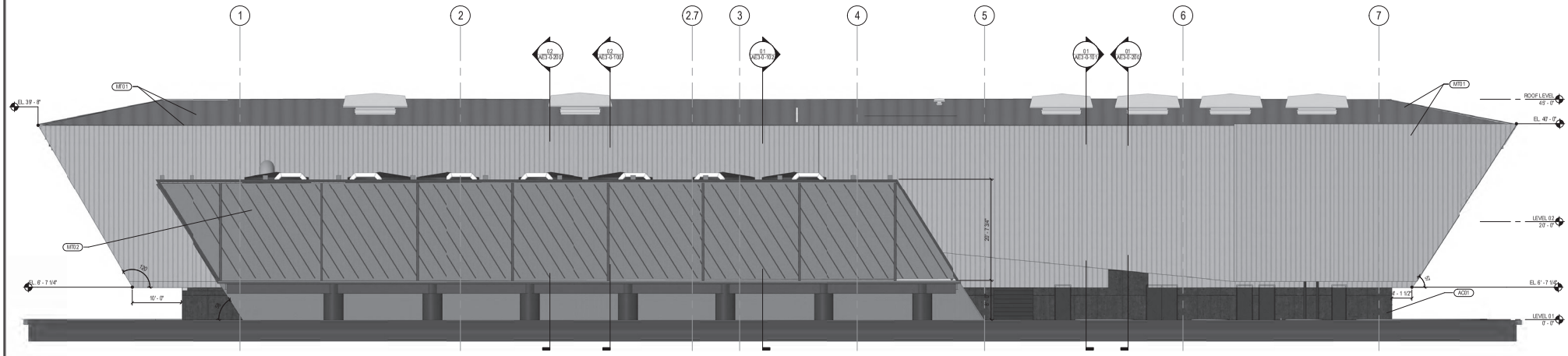
AS1-R-001

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.



02 BUILDING ELEVATION - NORTH

1/8" = 1'-0" 0 2 4 8 16 FEET



01 BUILDING ELEVATION - EAST

1/8" = 1'-0" 0 2 4 8 16 FEET

GENERAL NOTES

A. RE: A00 DRAWING SERIES FOR LEGENDS, SYMBOLS AND ABBREVIATIONS.
B. RE: G0.1 SHEET SERIES FOR CODE INFORMATION RELATED TO PROJECT.
C. ALL PARTITIONS TO BE TYPE "MBA", UNO. ALL FURRED-OUT PARTITIONS TO BE TYPE "D1A", UNO. RE: AE1-0-100 FOR PARTITION TYPES.
D. DOOR NUMBERS ARE THE SAME AS THE ROOM INTO WHICH THEY SWING. MULTIPLE DOORS INTO A SINGLE ROOM HAVE AN ALPHABETICAL DESIGNATION. RE: AE6-0-100 FOR DOOR SCHEDULE AND TYPES.
E. NOT USED
F. ALL PARTITIONS AT THE WINDOW WALL ARE CENTERED ON EITHER COLUMNS OR WINDOW MULLIONS, UNO.
G. COORDINATE AND PROVIDE BLOCKING FOR MILLWORK AND ITEMS ATTACHED OR MOUNTED TO PARTITIONS OR CEILINGS.
H. PARTITIONS ARE DIMENSIONED FROM FINISH FACE TO FINISH FACE, UNO. MAINTAIN DIMENSIONS MARKED "CLEAR". ALLOW FOR THICKNESSES AND MOUNTING OF FINISHES.

SHEET NOTES

LEGEND

DFW DALLAS FORT WORTH INTERNATIONAL AIRPORT

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ISSUE DATE: 07/30/2020

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DFW SUPPLEMENTAL CUP

BUILDING ELEVATION

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A20-1298

SHEET NUMBER
AE2-0-100

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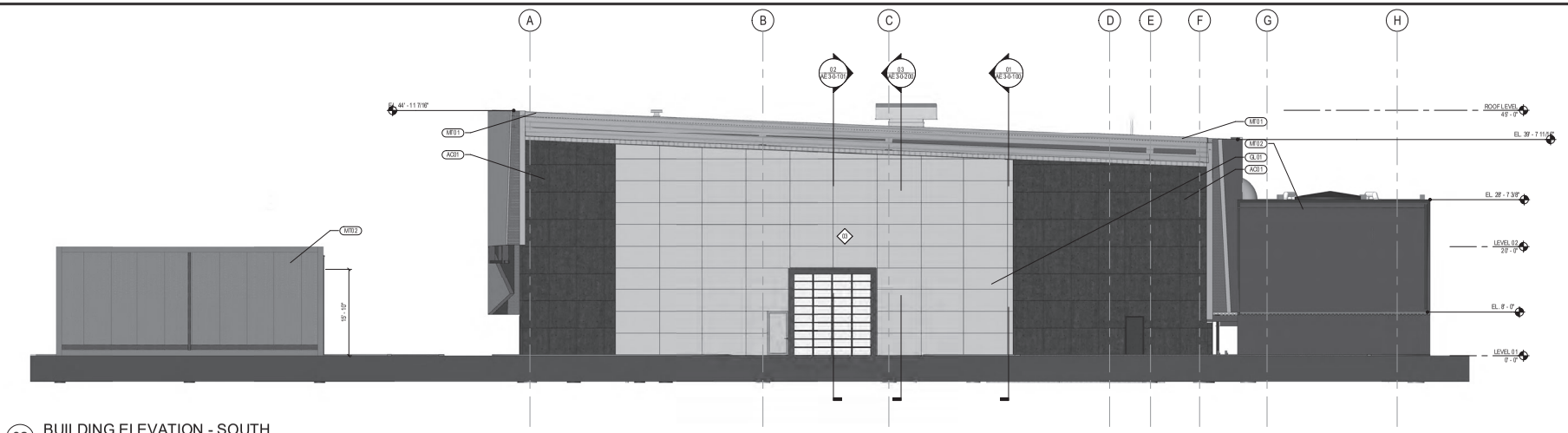
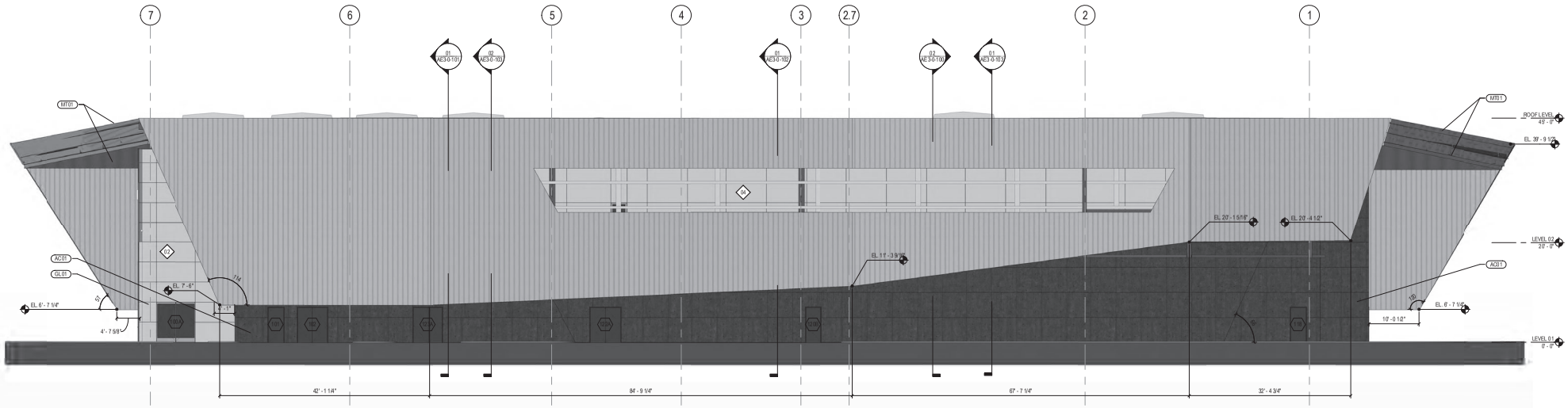


02 BUILDING ELEVATION - SOUTH

1/8" = 1'-0" 0 2 4 8 16 FEET



01 BUILDING ELEVATION - WEST

1/8" = 1'-0" 0 2 4 8 16 FEET

GENERAL NOTES

A. RE: A00 DRAWING SERIES FOR LEGENDS, SYMBOLS AND ABBREVIATIONS.
B. RE: G0.1 SHEET SERIES FOR CODE INFORMATION RELATED TO PROJECT.
C. ALL PARTITIONS TO BE TYPE "MBA", UNO. ALL FURRED-OUT PARTITIONS TO BE TYPE "D3A", UNO. RE: AE1-0-100 FOR PARTITION TYPES.
D. DOOR NUMBERS ARE THE SAME AS THE ROOM INTO WHICH THEY SWING. MULTIPLE DOORS INTO A SINGLE ROOM HAVE AN ALPHABETICAL DESIGNATION. RE: AE6-0-100 FOR DOOR SCHEDULE AND TYPES.
E. NOT USED
F. ALL PARTITIONS AT THE WINDOW WALL ARE CENTERED ON EITHER COLUMNS OR WINDOW MULLIONS, UNO.
G. COORDINATE AND PROVIDE BLOCKING FOR MILLWORK AND ITEMS ATTACHED OR MOUNTED TO PARTITIONS OR CEILINGS.
H. PARTITIONS ARE DIMENSIONED FROM FINISH FACE TO FINISH FACE, UNO. MAINTAIN DIMENSIONS MARKED "CLEAR". ALLOW FOR THICKNESSES AND MOUNTING OF FINISHES.

SHEET NOTES

LEGEND

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DFW SUPPLEMENTAL CUP

BUILDING ELEVATION

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A20-1298

SHEET NUMBER
AE2-0-101

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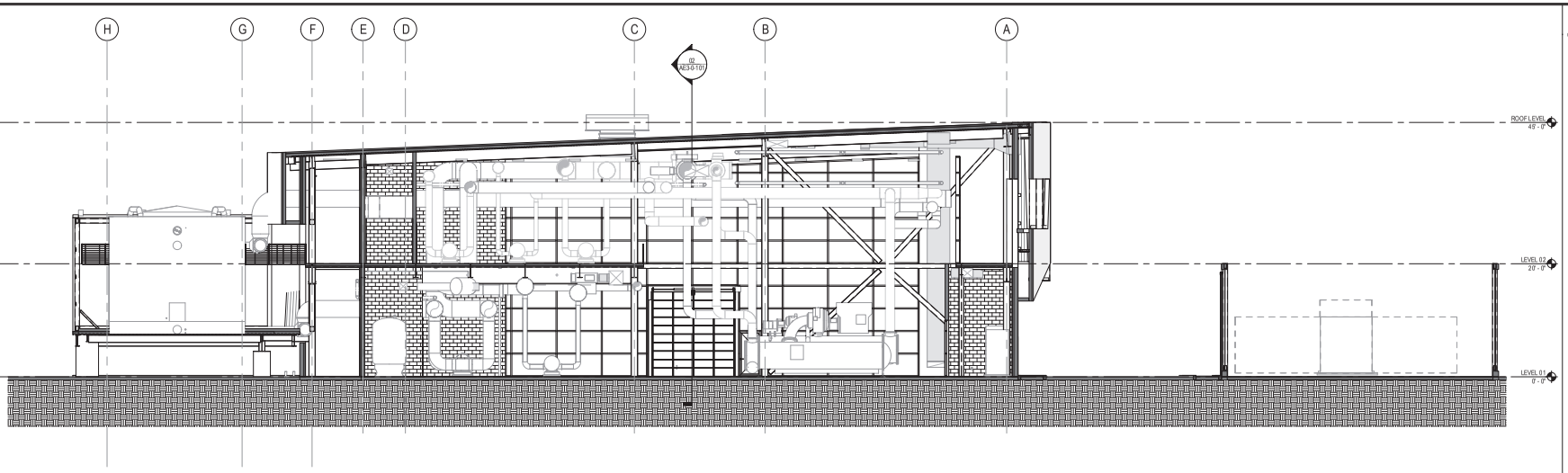
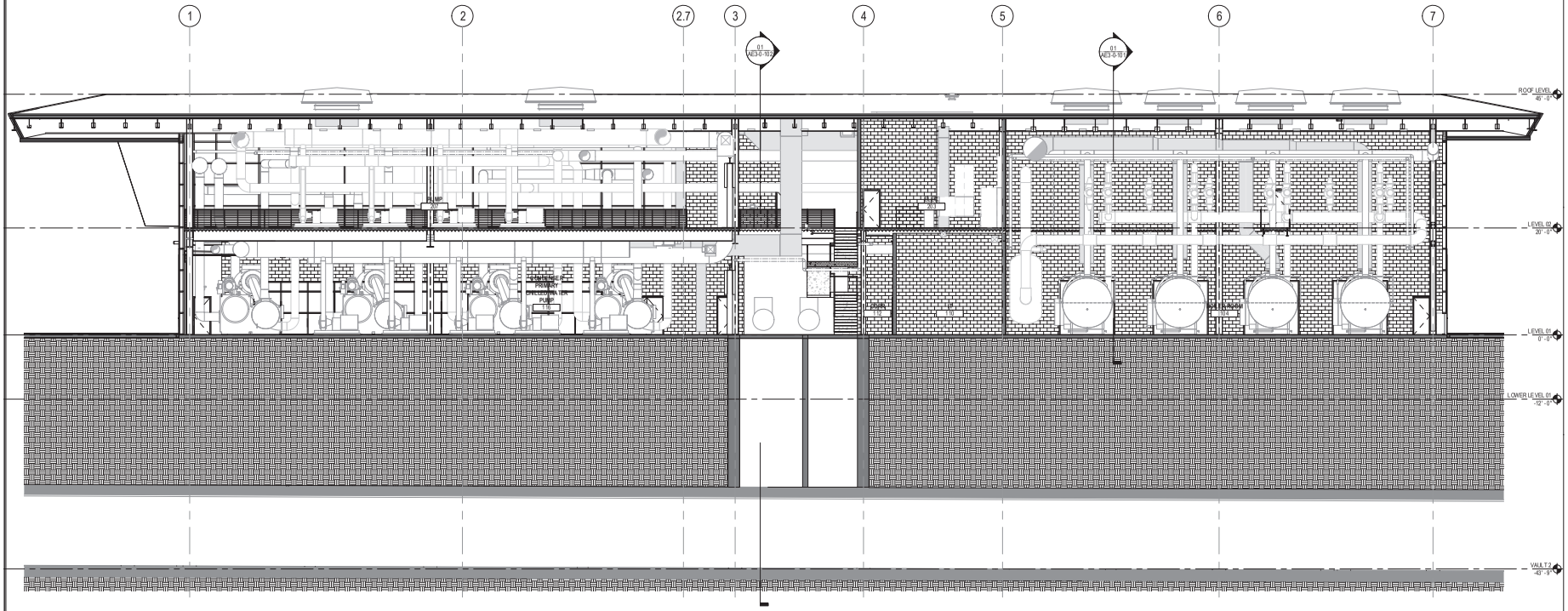
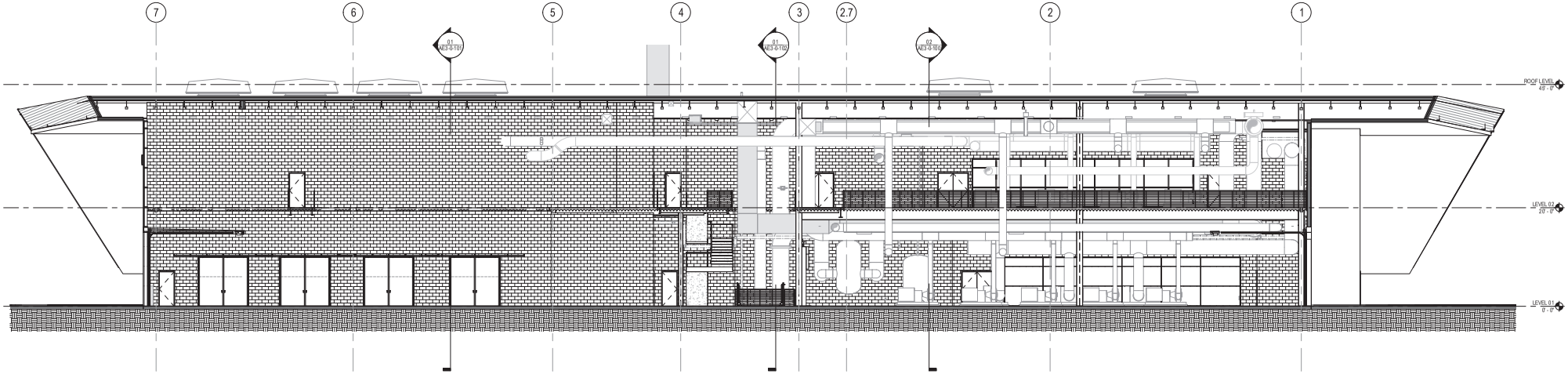


02 BUILDING SECTION - EAST / WEST

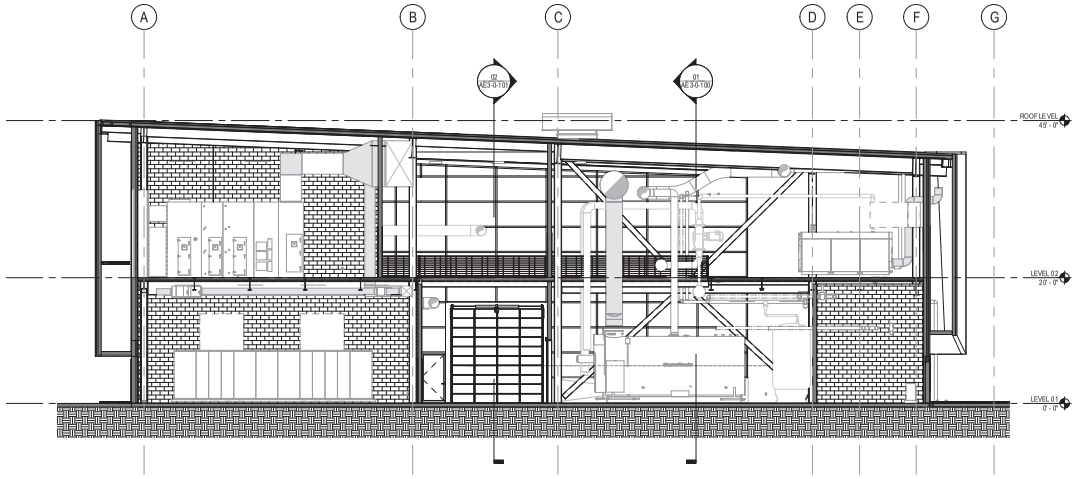
1/8" = 1'-0" 0 2 4 8 16 FEET


1
2
2.7
3
4
5
6
7
01
AE3-0-100
01
AE3-0-101
ROOF LEVEL
49' - 0"
LEVEL 02
20' - 0"
LEVEL 01
0' - 0"
LOWER LEVEL 01
-12' - 0"
VAULT 2
-43' - 9"
PUMP
SUMP
SUMP
S



02 BUILDING SECTION - NORTH / SOUTH

1/8" = 1'-0" 0 2 4 8 16 FEET



01 BUILDING SECTION - EAST / WEST

1/8" = 1'-0" 0 2 4 8 16 FEET

GENERAL NOTES

A. RE: A00 DRAWING SERIES FOR LEGENDS, SYMBOLS AND ABBREVIATIONS.
B. RE: G01 SHEET SERIES FOR CODE INFORMATION RELATED TO PROJECT.
C. ALL PARTITIONS TO BE TYPE "MIA", UNO. ALL FURRED-OUT PARTITIONS TO BE TYPE "D3A", UNO. RE: AE7-0-100 FOR PARTITION TYPES.
D. DOOR NUMBERS ARE THE SAME AS THE ROOM INTO WHICH THEY SWING. MULTIPLE DOORS INTO A SINGLE ROOM HAVE AN ALPHABETICAL DESIGNATION. RE: AE6-0-100 FOR DOOR SCHEDULE AND TYPES.
E. NOT USED
F. ALL PARTITIONS AT THE WINDOW WALL ARE CENTERED ON EITHER COLUMNS OR WINDOW MULLIONS, UNO.
G. COORDINATE AND PROVIDE BLOCKING FOR MILLWORK AND ITEMS ATTACHED OR MOUNTED TO PARTITIONS OR CEILINGS.
H. PARTITIONS ARE DIMENSIONED FROM FINISH FACE TO FINISH FACE, UNO. MAINTAIN DIMENSIONS MARKED "CLEAR". ALLOW FOR THICKNESSES AND MOUNTING OF FINISHES.

SHEET NOTES

LEGEND

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DFW AIRPORT, TX 75261

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01.30.2020

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APPROVED BY: Approver
ISSUE DATE: 07/30/2020

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A	07/30/2020	95% SCHEMATIC DESIGN

DFW SUPPLEMENTAL CUP

BUILDING SECTIONS

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A20-1298

SHEET NUMBER
AE3-0-101

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.

GENERAL NOTES

A. RE: A00 DRAWING SERIES FOR LEGENDS, SYMBOLS AND ABBREVIATIONS.
B. RE: G01 SHEET SERIES FOR CODE INFORMATION RELATED TO PROJECT.
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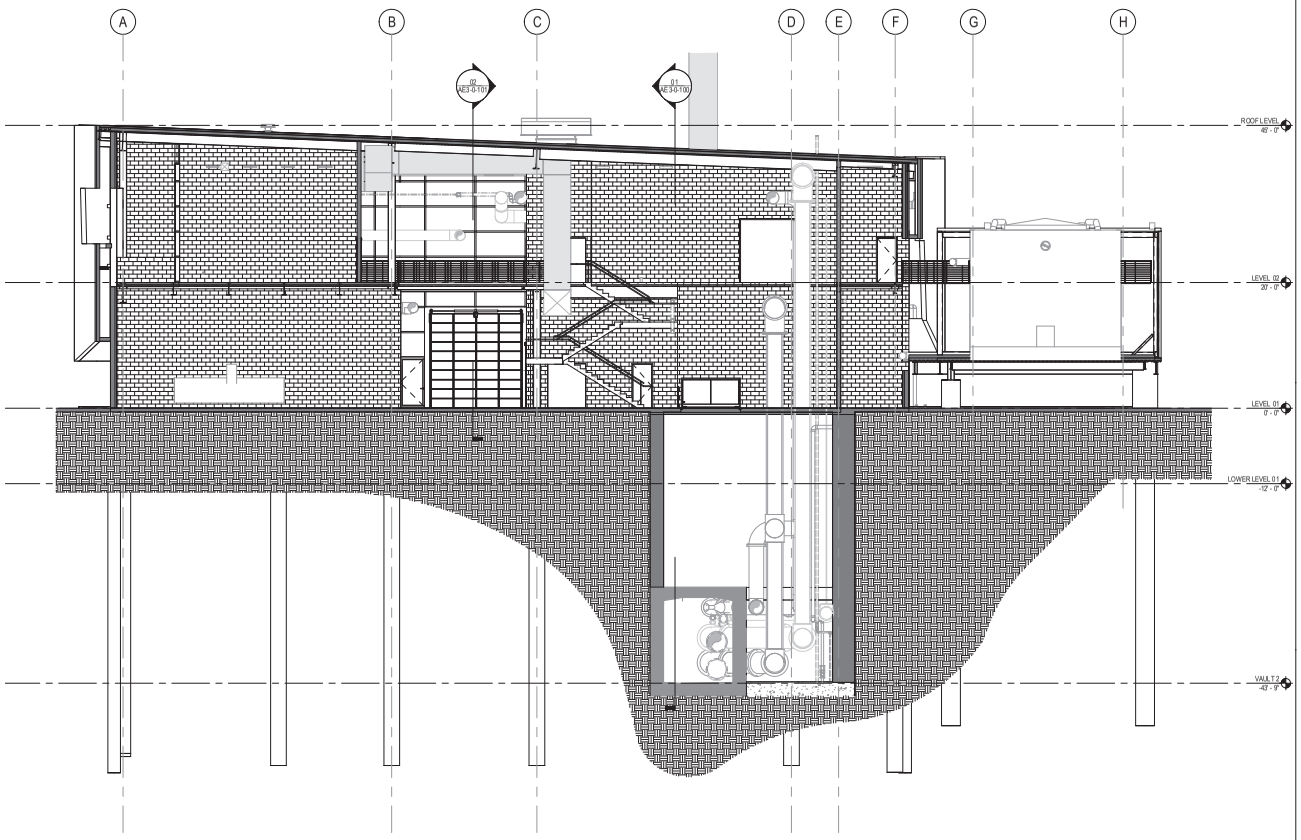

01 BUILDING SECTION - EAST / WEST

1/8" = 1'-0" 0 2 4 8 16 FEET

SHEET NOTES

LEGEND

DFW DALLAS FORT WORTH INTERNATIONAL AIRPORT

0000 N. INTERNATIONAL PKWY
DFW AIRPORT, TX 75261

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THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF: 90% DESIGN REVIEW
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01.30.2020

Gensler
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APPROVED BY: Approver
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DFW SUPPLEMENTAL CUP

BUILDING SECTIONS

CONTRACT NUMBER: 8500367

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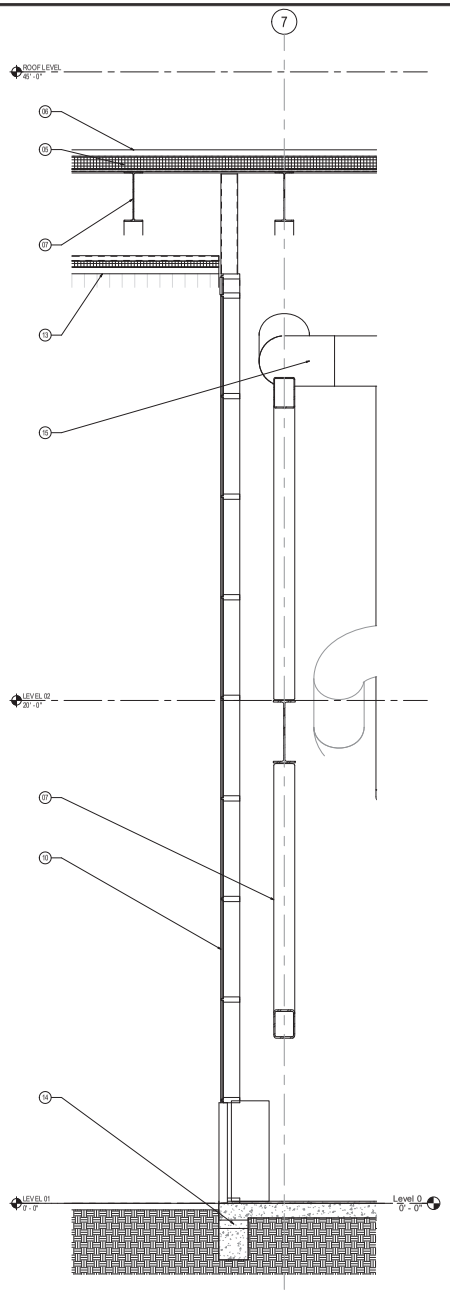

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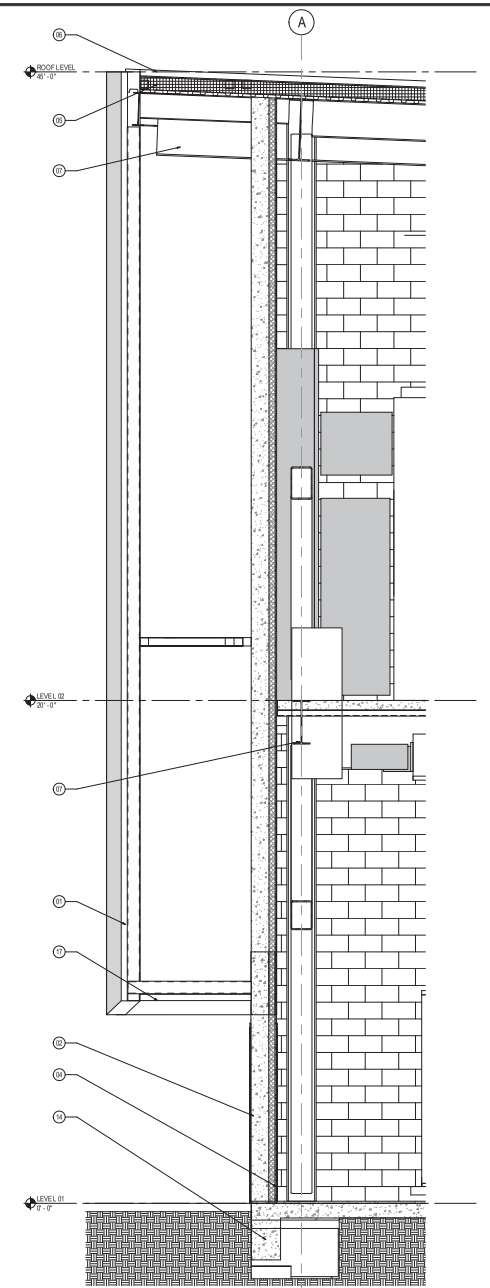
1/2" = 1'-0"



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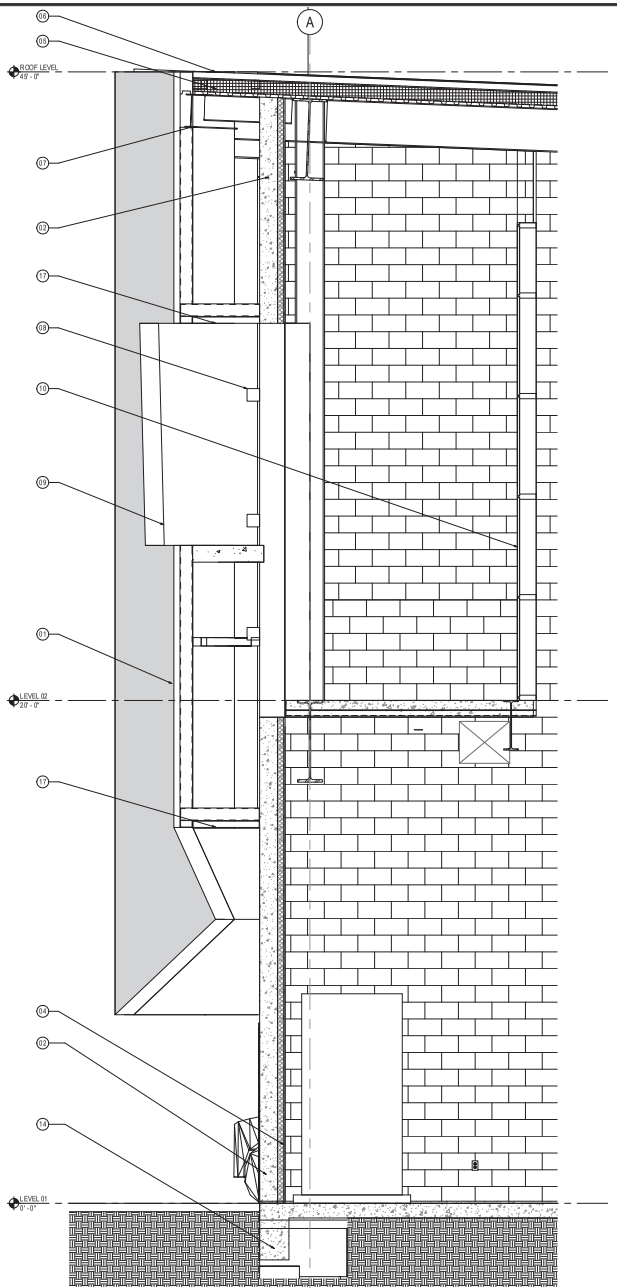

01 WALL SECTION

1/2" = 1'-0"

GENERAL NOTES

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SHEET NOTES

01 METAL PANEL SYSTEM ATTACHED TO 6" METAL STUDS. REF STRUCTURAL FOR ADDITIONAL STRUCTURAL SUPPORT.
02 ARCHITECTURAL CONCRETE PANELS.
04 COLD FORMED METAL STUDS WITH 3" SPRAY FOAM INSULATION BEHIND CONCRETE PANELS
05 RIGID ROOF INSULATION OVER METAL ROOF DECK.
06 METAL PANEL ROOF TO MATCH METAL WALL PANELS.
07 STRUCTURAL FRAMING, REF STRUCTURAL DRWGS
08 DECORATIVE LOUVERS IN FRONT OF RIBBON WINDOW.
09 RIBBON WINDOW, REF ELEVATIONS
10 CURTAIN WALL SYSTEM WITH VISION GLASS
13 METAL PANEL SOFFIT, REF RCP.
14 STRUCTURAL FOUNDATION, REF STRUCTURAL DRAWINGS
15 MECHANICAL COMPONENTS, REF MECHANICAL DRAWINGS
17 METAL PANEL SOFFIT, MATCH ADJACENT METAL WALL PANELS

LEGEND

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DFW AIRPORT, TX 75261

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DFW SUPPLEMENTAL CUP

WALL SECTIONS

CONTRACT NUMBER: 8500367

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SHEET NUMBER

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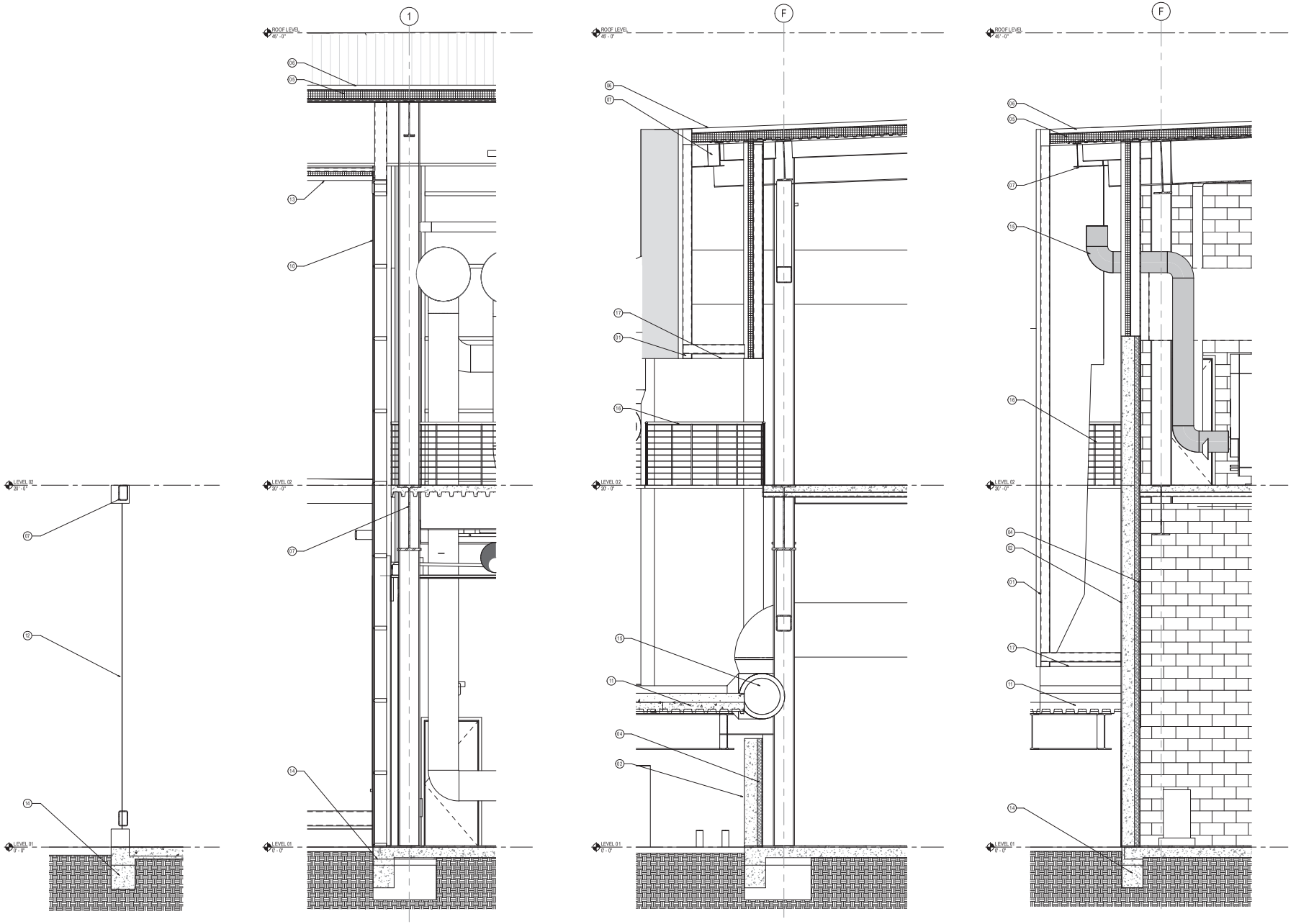

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1/2" = 1'-0"

03 WALL SECTION
1/2" = 1'-0"

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1/2" = 1'-0"

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10 CURTAIN WALL SYSTEM WITH VISION GLASS
11 COOLING TOWER PLATFORM, CONCRETE OVER COMPOSITE METAL DECK
12 PERFORATED METAL PANEL TO MATCH COOLING TOWER SCREEN
13 METAL PANEL SOFFIT, REF RCP
14 STRUCTURAL FOUNDATION, REF STRUCTURAL DRAWINGS
15 MECHANICAL COMPONENTS, REF MECHANICAL DRAWINGS
16 GUARDRAIL, REF PLANS
17 METAL PANELS

LEGEND

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DFW AIRPORT, TX 75261

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01.30.2020

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DFW SUPPLEMENTAL CUP

WALL SECTIONS

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A20-1298

SHEET NUMBER
AE3-0-200

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TEXAS HISTORICAL COMMISSION
real places telling real stories

Re: Project Review under Section 106 of the National Historic Preservation Act and/or the Antiquities Code of Texas
THC Tracking #202107586
Date: 04/19/2021
Supplemental Central Utility Plan on the DFW International Airport
DFW International Airport
Other City,TX 75261

Description: DFW plans to construct a new supplemental CUP building in the median of International Parkway between Terminals A and B.

Dear Integrated Environmental Solutions, LLC:
Thank you for your submittal regarding the above-referenced project. This response represents the comments of the State Historic Preservation Officer, the Executive Director of the Texas Historical Commission (THC), pursuant to review under Section 106 of the National Historic Preservation Act.

The review staff, led by Justin Kockritz, Arlo McKee, has completed its review and has made the following determinations based on the information submitted for review:

Above-Ground Resources

- THC/SHPO concurs with information provided.
- No historic properties are present or affected by the project as proposed. However, if historic properties are discovered or unanticipated effects on historic properties are found, work should cease in the immediate area; work can continue where no historic properties are present. Please contact the THC's History Programs Division at 512-463-5853 to consult on further actions that may be necessary to protect historic properties.

Archeology Comments

- No identified historic properties, archeological sites, or other cultural resources are present or affected. However, if cultural materials are encountered during project activities, work should cease in the immediate area; work can continue where no cultural materials are present. Please contact the THCâ€™s Archeology Division at 512-463-6096 to consult on further actions that may be necessary to protect the cultural remains.

We look forward to further consultation with your office and hope to maintain a partnership that will foster effective historic preservation. Thank you for your cooperation in this review process, and for your efforts to preserve the irreplaceable heritage of Texas. If the project changes, or if new historic properties are found, please contact the review staff. If you have any questions concerning our review or if we can be of further assistance, please email the following reviewers: justin.kockritz@thc.texas.gov, Arlo.McKee@thc.texas.gov.

This response has been sent through the electronic THC review and compliance system (eTRAC). Submitting your project via eTRAC eliminates mailing delays and allows you to check the status of the review, receive an electronic response, and generate reports on your submissions. For more information, visit http://thc.texas.gov/etrac-system.

Sincerely,

for Mark Wolfe, State Historic Preservation Officer
Executive Director, Texas Historical Commission

Please do not respond to this email.

25 February 2022

Mr. Mark Wolfe
Texas Historical Commission
1511 Colorado Street
Austin, Texas 78701

RE: Cultural Resources Desktop Analysis for the Brute Force Electric Central Utility Plant (CUP) and Terminal C Utility Corridor (collectively, Service Delivery System) on the Dallas Fort Worth (DFW) International Airport, Tarrant County, Texas

INTRODUCTION

Integrated Environmental Solutions, LLC (IES), has been contracted by Dallas Fort Worth International Airport (DFW) to provide coordination with the Texas Historical Commission (THC) on behalf of the DFW and Federal Aviation Administration (FAA) for the proposed Brute Force Electric Central Utility Plant (CUP) and Terminal C Utility Corridor (collectively, Service Delivery System) project on DFW property. The proposed project area or Area of Potential Effects (APE) is located within Terminal C and the wide median of International Parkway between Terminals A and B (**Attachment A, Figure 1**). Approval from the FAA will be required to modify the Airport Layout Plan (ALP) to reflect the permanent alterations on the DFW property. Since the ALP is considered a federal action, the project will require compliance with the National Environmental Policy Act (NEPA) and the National Historic Preservation Act (NHPA) Section 106. Additionally, as the DFW is a political subdivision of the State of Texas, the project will be subjected to the provisions of the Antiquities Code of Texas (ACT).

In 2021, the APE portion within the median between Terminals A and B was reviewed by the THC. Through background review, IES identified a low to negligible potential for prehistoric and historic-age cultural resources within the 5.4-acre (ac) area. As a result, IES recommended no historic properties would be affected by the project. The THC concurred with this conclusion on 19 April 2021 (THC Tracking #202107586).

PERTINENT REGULATIONS

Antiquities Code of Texas

As the DFW is considered a political subdivision of the State of Texas under Section 52, Article III, or Section 59, Article XVI, of the Texas Constitution, the DFW is required to comply with the ACT. The ACT, as outlined in the Texas Administrative Code (TAC) Title 13 Part II and the Texas Natural Resource Code (TNRC) Title 9 Chapter 191, requires that political subdivisions notify the THC at least 30 days in advance prior to any project that may affect potential or designated archeological sites. While advance project review by the THC is required for undertakings with more than 5 ac or 5,000 cubic yards of ground disturbance, the THC can still request project information and/or an archeological survey in advance of more minor ground disturbances since all publicly sponsored projects must comply with the ACT. If the activity occurs inside a designated historic district, affects a recorded archeological site, or requires on-site investigations, the project will need to be reviewed by the THC, regardless of project size.

National Historical Preservation Act Section 106

The NHPA (54 U.S. Code [USC] 306101), specifically Section 106 (54 USC 306108), requires the State Historic Preservation Officer (SHPO), represented by the THC, to administer and coordinate historic preservation activities, and to review and comment on all actions licensed by the federal government that will have an effect on properties listed in the National Register of Historic Places (NRHP), or eligibility for such listing. Per 36 Code of Federal Regulations Part 800 (36 CFR 800), the federal agency responsible for overseeing the action must make a reasonable and good faith effort to identify cultural resources. Federal actions include, but are not limited to, construction, rehabilitation, repair projects, demolition, licenses, permits, loans, loan guarantees, grants, and federal property transfers. Approval will be required from the FAA to modify the ALP that will reflect the permanent alterations to the DFW property. Since this is considered a federal action, the project will consequently require compliance with the NEPA and Section 106 of the NHPA.

AREA OF POTENTIAL EFFECTS

Direct APE

The direct APE for the project encompasses approximately 17.7 ac. Current project plans call for the construction of a two-story Brute Force Electric CUP building to be located within the median between Terminals A and B. The Brute Force Electric CUP will also include a transformer yard, cooling towers area, a thermal storage tank/reservoir, a construction staging area, a parking lot, interior roads, and associated infrastructure and utilities. The remainder of the project will transpire at Terminal C, which will include the construction of a boiler house/south pump room, north pump room, and utility corridor within Terminal C (*see* **Attachment A, Figure 1**; **Attachment B**). Ground disturbances associated with the proposed project will include general land clearing, grading, and erosion control. Depths of impacts associated with the proposed project will generally be within a few feet (ft) of the current ground surface, with the exception of a subsurface utility vault, which will extend to a depth of over 43 ft.

Indirect APE

As the project will require approval from the FAA, an assessment of indirect effects is required to comply with the NHPA. For this project, it is anticipated that the sole indirect effect of the undertaking will be related to the visual effects of above-ground project elements on historic-age (i.e., 50 years old or greater) buildings and structures in the vicinity. To account for these above-ground elements, indirect effects assessment areas encompassing a 450-ft buffer surrounding the Brute Force Electric CUP and 200-ft buffers surrounding the boiler house and pump rooms were assessed.

METHODOLOGY

Background Research

During the background review, a variety of literature and online sources were referenced to determine if potential cultural resources were located within the APE. These sources included U.S. Geological Survey (USGS) topographic maps, the *Soil Survey of Tarrant County, Texas*, the Geologic Atlas of Texas (Dallas Sheet), the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) digital soil databases for Tarrant County, the 1936 State Highway Maps of Tarrant County, the Texas Historic Overlay georeferenced map database, the Texas Department of Transportation (TxDOT) Potential Archeological Liability Map (PALM), and both past and current aerial photographs of the proposed APE. Additionally, a file search of the Texas Archeological Site Atlas (TASA) and Texas Historical Sites Atlas (THSA) was performed for the proposed location and surrounding areas. This review was performed by Project Archeologist Anne Gibson on 18 February 2022.

The TxDOT Fort Worth District PALM examines "the character and classification of the soils and assesses the shallow and deep geoarcheological potential or the likelihood that soil could contain buried cultural materials in reasonable context (i.e., historic/recent disturbances, landscape setting, and soils data) for each soil series" (Abbott 2011:161). The TxDOT PALM model identifies where sites are likely to be preserved in a reasonable context versus indicating where sites are likely to exist (Abbott 2001:154, 2011:179). "The resolution of the PALM is appropriate to the scale of landform mapping (1:24,000)" (Abbott 2011:175). Any analysis of the data beyond the scale of mapping can result in a misunderstanding of the detail of mapping (Abbott 2011). Due to the more detailed evaluation required to accurately evaluate cultural resources potential for field methodology development (typically 1:7,000 or less), the cultural resources potential evaluation, presented in this scope, includes an assessment of the PALM results at a more detailed level to determine if the APE has retained a reasonable degree of contextual integrity, as assumed by the PALM model. A reasonable context is evaluated through a review of historical and modern aerial photographs to evaluate the level of previous ground disturbance that has transpired within a given area.

BACKGROUND REVIEW

Topography, Geology, and Soils

The Grapevine 7.5-minute USGS topographic quadrangle map illustrates that the APE is located within a very broad, gently rolling upland ridge that encompasses the majority of the DFW property and separates the Bear Creek and Hackberry Creek watersheds. However, due to land improvements associated with DFW construction, the natural rolling topography was graded with minimal slope (**Attachment A, Figure 3**). Elevations within the APE range from 530 to 610 ft (161 to 186 meters [m]) above modern sea level (amsl).

The APE is located within the Northern Blackland Prairie of the Texas Blackland Prairie ecoregion. The Northern Blackland Prairie is distinguished from surrounding regions by gently rolling hills and dark, fine-textured soils that primarily support prairie vegetation (Griffith et al. 2007). Historical vegetation included little bluestem, big bluestem, yellow Indiangrass, and tall dropseed. Most of the native prairie has been converted to cropland, non-native pasture, and expanding urban uses around Dallas, Waco, Austin, and San Antonio. Vertisols dominate the Blackland Prairie ecoregion and consist of high clay content soils with significant shrink

and swell potential (Ressel 1981). The APE is underlain by the Cretaceous-age Eagle Ford Formation (Kef), which is comprised of shale, sandstone, and limestone (McGowen et al. 1987; USGS 2022; **Attachment A, Figure 4**).

As shown by the *Soil Survey of Tarrant County, Texas*, there is only one soil unit within the APE (Ressel 1981; **Table** 1; **Attachment A, Figure 5**). The entire APE contains soils typically found in areas significantly altered by urban land development. Soil data was viewed from the USDA NRCS Web Soil Survey (USDA 2022).

Table 1: Soil Map Units Located Within the APE

Soil Map Unit Description	Percentage of the APE
81 – Urban land, 0 to 16 percent slopes - This component is described as built-up areas where 75 percent or more of the surface is covered by urban land development.	100.0

Texas Archeological Sites Atlas Review

A file search within the TASA and the THSA electronic databases, maintained by the THC and the Texas Archeological Research Laboratory (TARL), identified that there are no previously recorded archeological sites, National Register properties, historical markers, or cemeteries located within the proposed APE (TASA 2021; THSA 2021). The TASA database indicates that three previously conducted archeological surveys are located within 1 mile (mi) of the APE (**Table 2; Attachment A, Figure 6**). No archeological sites have been recorded within 1 mi of the APE.

Table 2: Previously Conducted Archeological Surveys within 1 Mile of the APE

Agency	ACT Permit No.	Firm/Institution	Date	Survey Type	Location (Approximate)
FTA; Tarrant County	4775	URS Corporation	2013	Area	Adjacent to northwest corner
FAA, DFW	7373	IES	2015	Area	0.6 mi north
DART	7996	AmaTerra Environmental, Inc.	2017	Area	0.05 mi northwest

Disturbance Analysis

During the background review, it was determined that ground-disturbing activities have transpired within the APE related to past land use. Prior to DFW construction in the early 1970s, the APE was primarily used for agricultural and ranching purposes as early as 1942 and presumably since the late 19th and early 20th centuries. Since 1972, significant ground disturbances have transpired throughout the APE related to broad-scale surface grading and transportation development. Once airport construction began, ground disturbances associated with large-scale grading for the terminals and International Parkway occurred as depicted within 1972 aerial photographs.

Cultural Resource Potential

Prehistoric Resources

Data presented within the PALM for Tarrant County indicates the entire APE features a low to negligible potential for shallow or deeply-buried cultural materials. Similar conclusions were reported by AR Consultants, Inc. (ARC) in 2007 and 2008. ARC conducted intensive pedestrian surveys of 1,210 ac on the DFW property under Texas Antiquities Permit Number 4491 and published their results in the report *An Archaeological Survey for Chesapeake Energy Corporation at DFW International Airport, Dallas and Tarrant Counties, Texas* (Shelton et al. 2008). Through this study, three environmental zones were identified within the DFW that outline varying probabilities of encountering cultural resources. The current APE will have ground disturbances within Zone 1 (**Attachment A, Figure 7**).

Zone 1 is comprised of the Blackland Prairie Uplands ecoregion, which consists of mostly level clay or clay loam soils over limestone bedrock. Water permeates very slowly to the water table causing surface run-off and high shrink and swell potential. This setting has low biotic diversity and is dominated by short grasses as a result. Furthermore, it was determined that Zone 1 has a low probability for containing prehistoric sites due to the limited resources available within the area (Shelton et al. 2008). In summary, it was determined that the APE contains a low potential to contain prehistoric resources based on past research, previous THC coordination, and prolonged urban development since 1972.

Historic-Period Resources

Historic-period resources within North-Central Texas are primarily related to farmsteads, houses, and associated outbuildings and structures that date from the mid-19th to the mid-20th centuries. Typically, these types of resources are located along old roadways, but also can be located along railroads, streams, and open pastures. Although determining the presence of the earliest buildings and structures are problematic, maps depicting these features are available post-1895.

Historical aerial photographs indicate that the APE was used for agricultural and ranching activities until groundbreaking for the construction of DFW in 1970. Historical topographic maps and aerial photographs depict no buildings or structures within the APE prior to DFW construction. Based on this background research, there is a low to negligible potential for encountering historic-age cultural resources within the APE.

Indirect APE

The indirect APE contains multiple buildings and structures associated with the airport including Terminal C, the parking garages for Terminals A and B, the International Parkway roadway system, and the DFW Business Center. These resources were constructed during the initial DFW construction phase completed in 1973. In 2020, IES evaluated International Parkway and all associated components of the roadway system for NRHP eligibility (Gibson et al. 2020; **Table 3**). Due to the modern age of the roadway system, IES recommended all 116 resources as not eligible for NRHP listing. The THC concurred that no historic properties were present or affected by the proposed International Parkway improvements project (THC Tracking #202016919). In addition, a portion of Terminal C was evaluated in 2020 for the demolition and reconstruction of the High C Gates project. The THC agreed with the determination that no historic properties were affected by the project (THC Tracking #202017632). Based on the age of original DFW construction and previous evaluations of DFW buildings and structures, it was determined no historic-age above-ground resources are present within the current indirect APE.

Table 3: Previously Evaluated Above-Ground Resources

Architectural Resource	Year Constructed	NRHP Eligibility Determination
Select portions of Terminal C	1973	Not Eligible
International Parkway System: North International Parkway (NIP), South International Parkway (SIP), NIP Entrance Ramp 2 and 3, NIP Exit Ramp 2 and 3, SIP Entrance Ramp 3 and 4, SIP Exit Ramp 2, Access Road 1, Turnarounds 2 and 3, NIP Overpass Bridge 4; SIP Overpass Bridge 4, and Flyover Bridges 1 and 2	1973-1974	Not Eligible
Service Road System: North Service Road (NSR), South Service Road (SSR), NSR Overpass Bridge 1 and 2; SSR Overpass Bridge 3 and 4, East Airtrans Opening 1 and 2, and West AirTrans Opening 1 and 2	1973-1974	Not Eligible
Remnants of AirTrans track	1974	Not Eligible

CONCLUSIONS

Therefore, it is the recommendation of IES that the THC concur with the findings of this study and recommendation that no historic properties will be affected under 36 CFR Part 800.4(d)(1) within the current APE. In addition, IES recommends that the undertaking be permitted to continue without the need for further cultural resources investigations. However, in the unlikely event that any prehistoric or historic archeological features or deposits, or human remains are encountered during construction, work should immediately cease in the area of the inadvertent discovery and the THC should be contacted for further consultation.

If you have questions, please contact me by telephone at (972) 562-7672 or via email at kstone@intenvsol.com.

Sincerely,

Integrated Environmental Solutions, LLC



Kevin Stone, MA, RPA
Vice President – Cultural Resources Director

IES Reference Number: 03.006.089

REFERENCES

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Shelton, R., C. S. Davis, and S. A. Skinner

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Texas Archeological Sites Atlas (TASA)

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Texas Historic Sites Atlas (THSA)

2022 Texas Historic Sites Atlas. s.v. "Tarrant County" http://nueces.thc.state.tx.us/ (accessed February 2022).

U.S. Department of Agriculture (USDA)

2022 "Web Soil Survey." National Resources Conservation Service. http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm (accessed February 2022).

U.S. Geological Survey (USGS)

2022 U.S. Department of the Interior Mineral Resources On-Line Spatial Data Website. http://mrdata.usgs.gov/sgmc/tx.html (accessed February 2022).

ATTACHMENT A

Figures

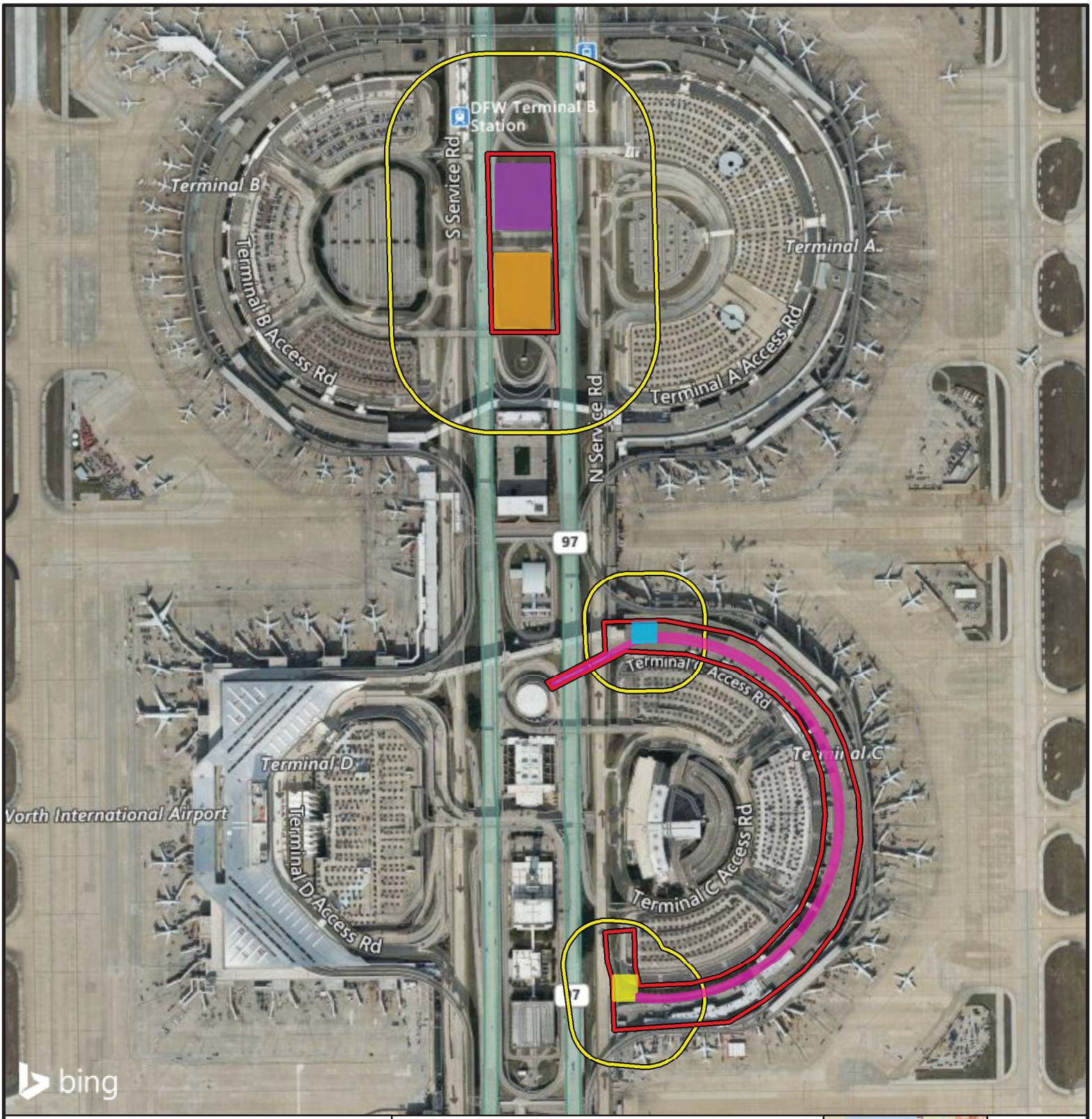


Figure 1
General Location Map

County: Tarrant
State: Texas
Date map created: 2/23/2022
Source: (c) 2009 Microsoft Corporation and its data suppliers; ESRI Streetmap
IES Project Ref: 03.006.089

N

0 600 1,200 ft
0 180 360 m

Area of Potential Effects - Direct
Area of Potential Effects - Indirect

Project Components

Proposed Boiler House/South Pump Room
Proposed North Pump House
Proposed Supplemental Cup Building
Reservoir and Staging Area
Terminal C Utility Corridor



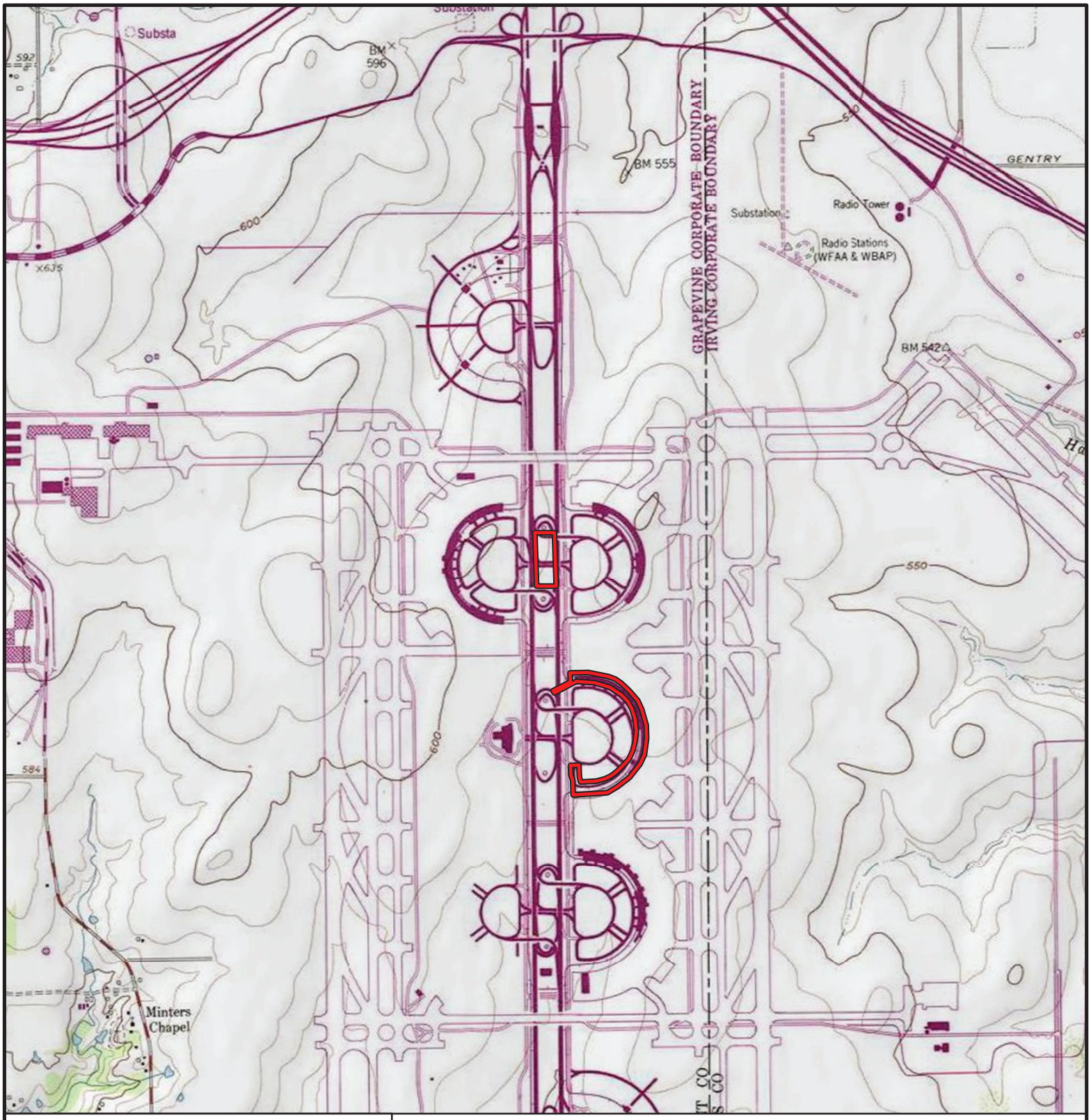


Figure 2
Topographic Setting

Area of Potential Effects - Direct

County:Tarrant
State: Texas
Date map created: 2/23/2022
Source: USGS Topographic Map
7.5-minute quadrangle:
Grapevine 1982
IES Project Ref: 03.006.089

N

0 2,000 4,000 ft
0 600 1,200 m

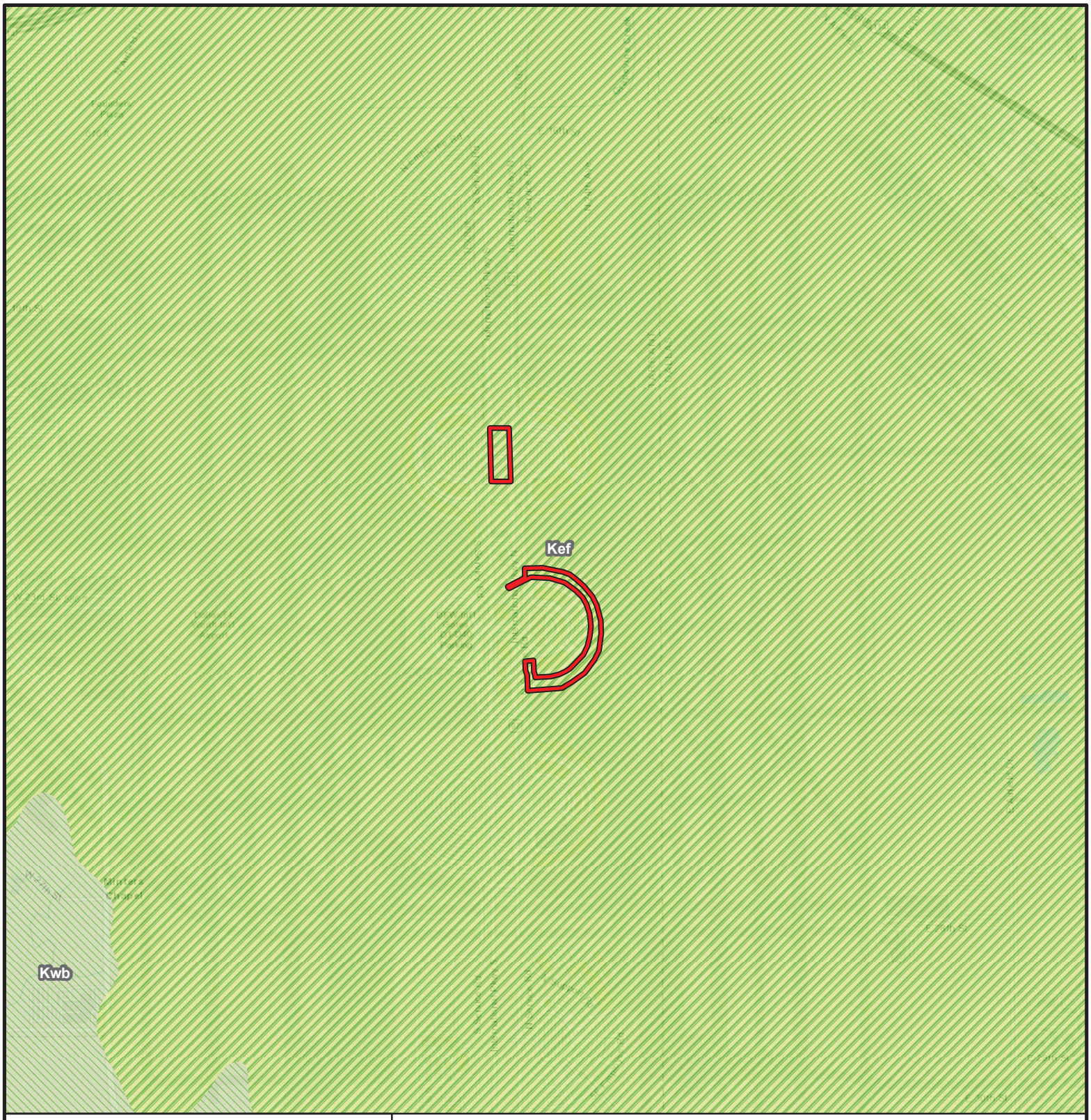


Figure 3
Geologic Setting

County: Tarrant
State: Texas
Date map created: 2/23/2022
Source: TNRIS Geologic Atlas of Texas; Dallas Sheet
IES Project Ref: 03.006.089

N

0 2,000 4,000 ft
0 600 1,200 m

Area of Potential Effects

Geologic Formation

Kef - Eagle Ford Formation

Kwb - Woodbine Formation

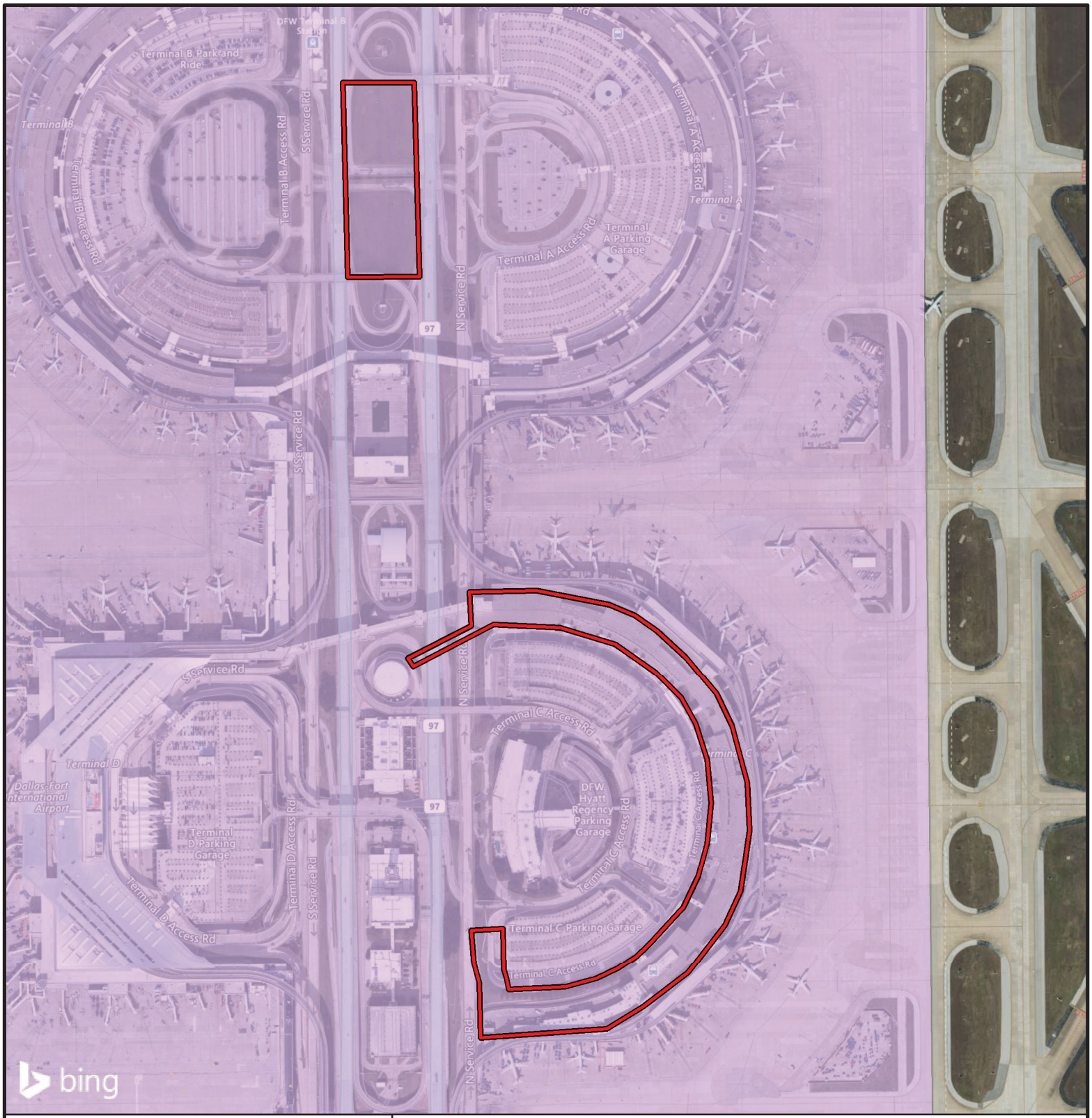


Figure 4
Soil Map Units Located Within and Adjacent to the APE

County: Tarrant
State: Texas
Date map created: 2/23/2022
Source: 2007 USDA
NRCS Digital Soils Database
IES Project Ref: 03.006.089

N

0 550 1,100 ft
0 170 340 m

Area of Potential Effects - Direct

Soil Description

81 - Urban land

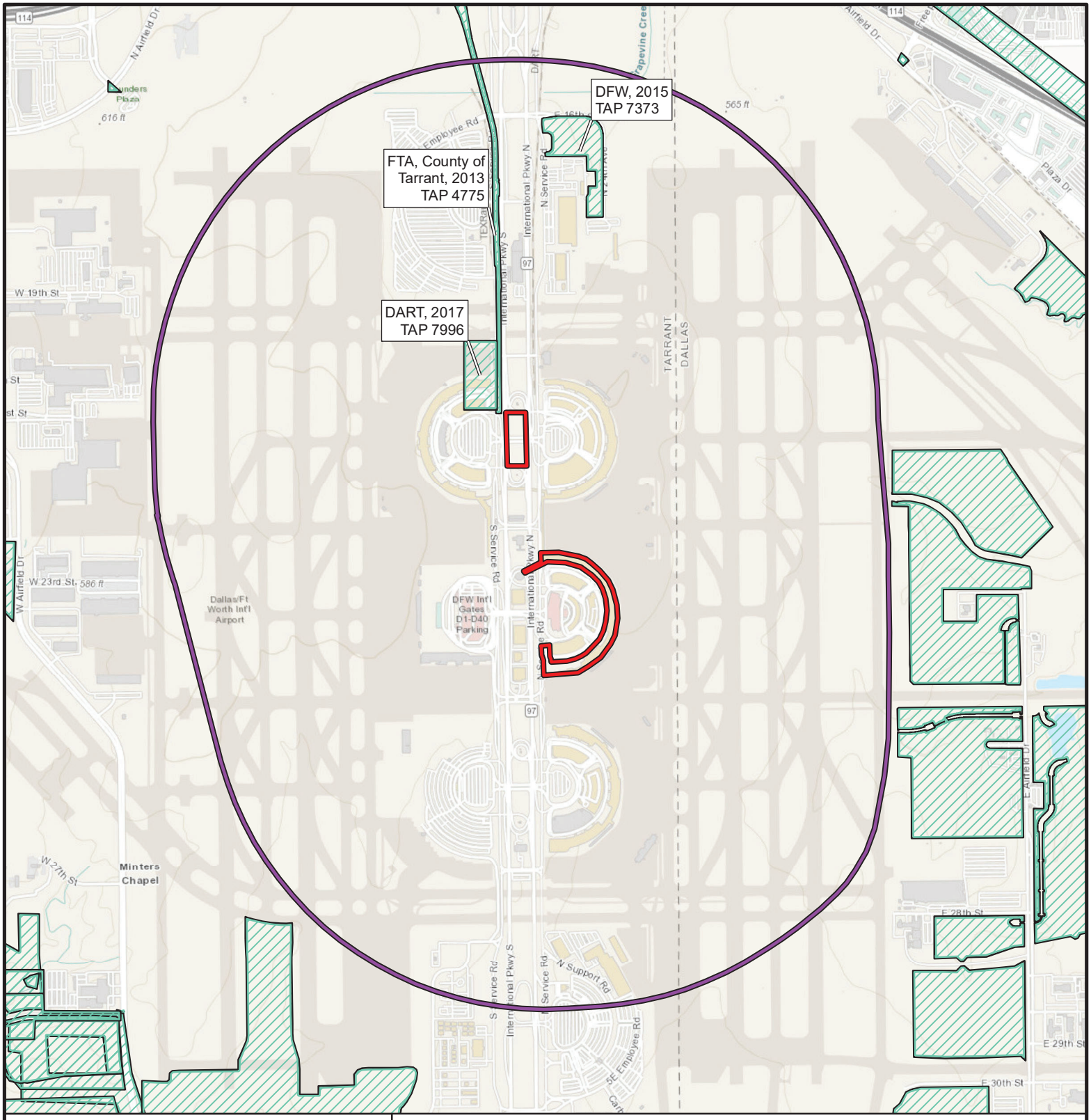


Figure 5
Previous Investigations Within
1 Mile of the APE

County:Tarrant
State: Texas
Date map created: 2/23/2022
Source: (c) 2020 Microsoft Corporation
and its data suppliers; ESRI 10.6
IES Project Ref: 03.006.089

N

0 2,000 4,000 ft
0 600 1,200 m

- Area of Potential Effects
- Area of Potential Effects - 1 Mile Buffer
- Previous Archeological Survey - Area
- Previous Archeological Survey - Line
- Archeological Site

NOT FOR PUBLIC DISTRIBUTION
Map contains archeological site
locational information

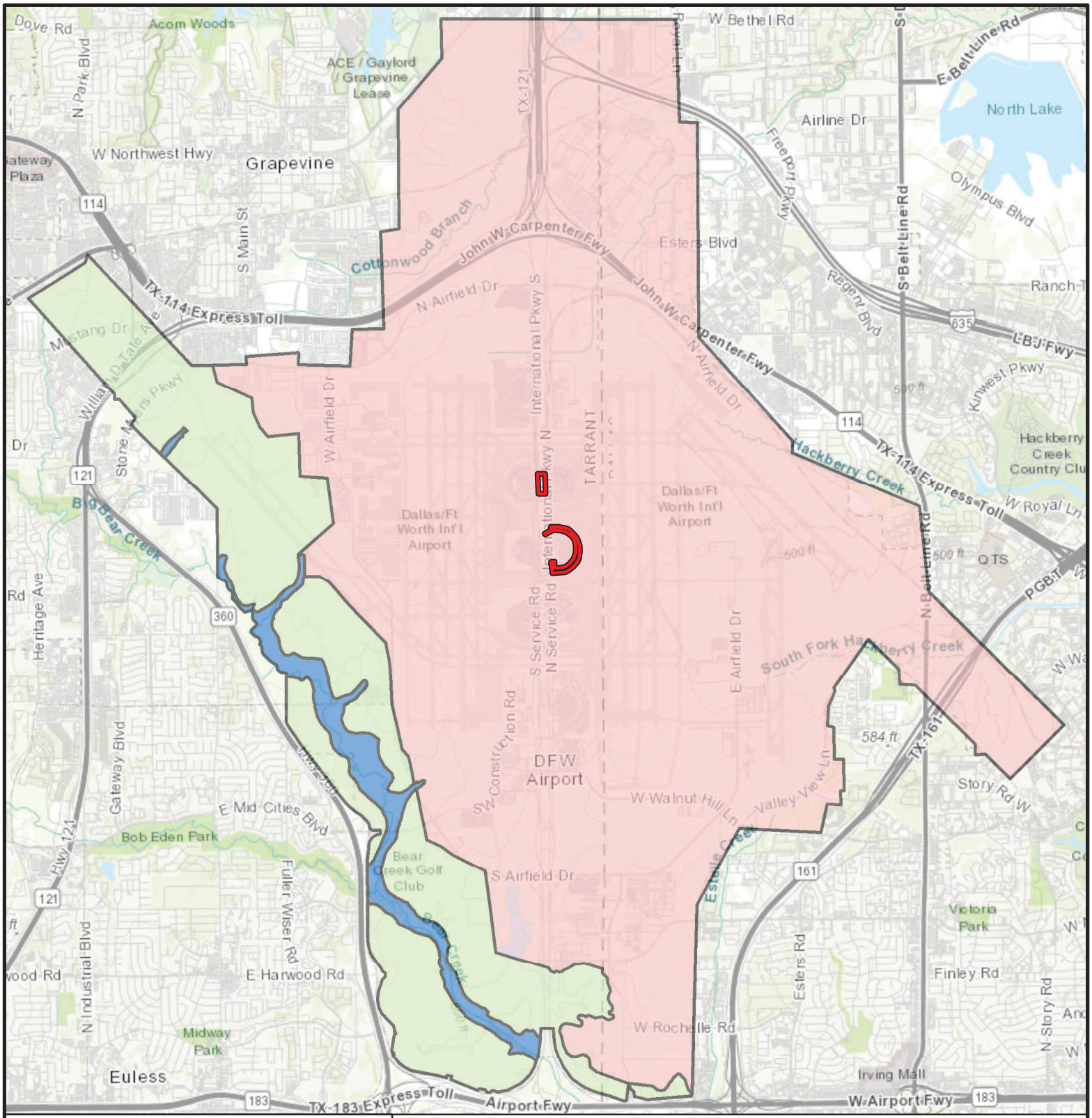


Figure 6
Archeological-Environmental Zone Map

County: Tarrant
State: Texas
Date map created: 2/23/2022
Source: (c) 2009 Microsoft Corporation and its data suppliers; ESRI 10.6
IES Project Ref: 03.006.089

N

0 1 2 mi
0 1.6 3.2 km

Area of Potential Effects - Direct

ZONE

Zone 1 - Blackland Prairies Uplands

Zone 2 - Eastern Cross Timbers

Zone 3 - Bear Creek Floodplain

ATTACHMENT B

Design Plans

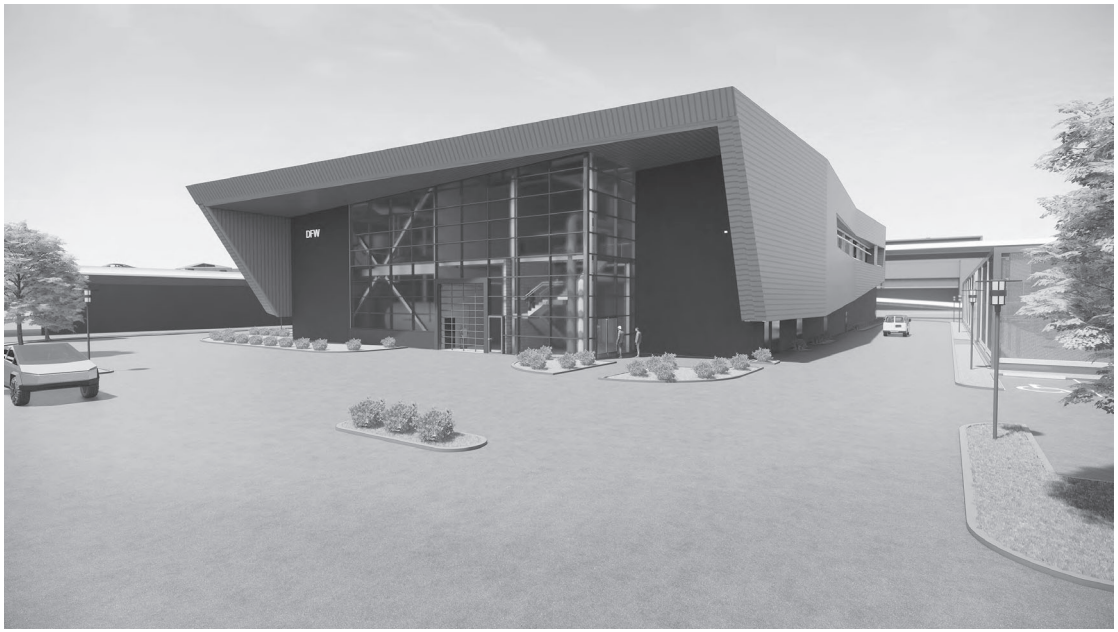
DALLAS FORT WORTH INTERNATIONAL AIRPORT

0000 N. INTERNATIONAL PKWY
DFW AIRPORT, TX 75261

DFW SUPPLEMENTAL CUP

CONTRACT NUMBER: 8500367
PERMIT NUMBER: A20-129B

35% SCHEMATIC DESIGN
07/30/2020



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ABBREVIATIONS

A	
ACCESS	ACCESSORY
ACOUS	ACOUSTIC(AL)
AFF	ABOVE FINISHED FLOOR
AL	ALUMINUM
ALT	ALTERNATE
ANNUNC	ANNUNCIATOR
ANOD	ANODIZED
APPL	APPLIANCE
ARCH	ARCHITECT(URAL)
AUTO	AUTOMATIC
AVG	AVERAGE
&	AND
B	
BLDG	BUILDING
BOLLD	BOLLARD
BD	BOARD
BLKG	BLOCKING
BRDLM	BROADLOOM
BU	BUILT UP
C	
CAB	CABINET
CPT	CARPET
CEM	CEMENT(ITIOUS)
CER	CERAMIC
CLG	CEILING
COATG	COATING
COILG	COILING
CONC	CONCRETE
CONSTR	CONSTRUCTION
CONT	CONTINUOUS(ATION)
CONTR	CONTRACT(OR)
COV	COVER
CMU	CONCRETE MASONRY UNIT
CIP	CAST-IN-PLACE
D	
DBL	DOUBLE
DEPT	DEPARTMENT
DES	DESIGN(ED)
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIFF	DIFFUSER
DIM	DIMENSION
DISP	DISPENSER
DIV	DIVISION
DN	DOWN
$	DOLLAR (US CURRENCY)
DR	DOOR
DSCON	DISCONNECT
DWG	DRAWER
E	
ELAST	ELASTOMERIC
ELEC	ELECTRICAL
EMBED	EMBEDD(ED)(ING)
ENGR	ENGINEER(ED)
ENTR	ENTRANCE
EQ	EQUAL
EQUIP	EQUIPMENT
EXIST	EXISTING
EXP JT	EXPANSION JOINT
EXPS	EXPOSED(D)
EXT	EXTERIOR
F	
FAB	FABRICATION
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FE&C	FIRE EXTINGUISHER AND CABINET
FHC	FIRE HOSE AND CABINET
FIN	FINISH
FLDG	FOLDING
FPLC	FIREPLACE
FR	FIRE RAT(ING)(ED)
FRMG	FRAMING
FXD	FIXED
FXTR	FIXTURE
FLR	FLOOR(ING)
FURN	FURNITURE
FWC	FABRIC WALL COVERING
G	
GA	GAUGE
GFRC	GLASS FIBER REINFORCED CONCRETE
GFRG	GLASS FIBER REINFORCED GYPSUM
GFRP	GLAS FIBER REINFORCED PLASTER
GL	GLASS
GR	GRAD(E)(ING)
GYP	GYPSUM
H	
HD	HEAD
HDWD	HARDWOOD
HDWE	HARDWARE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
HP	HIGH POINT
I	
INFO	INFORMATION
INSTRUM	INSTRUMENT(ATION)
INSUL	INSULATION
INTLK	INTERLOCK(ING)
INT	INTERIOR
INFILTR	INFILTRATION
J	
JAN	JANITOR
K	
KIT	KITCHEN
L	
LAV	LAVATORY
LB	POUND
£	BRITISH POUND (CURRENCY)
LT	LIGHT
LVLG	LEVELING
LVT	LOUVER
LP	LOW POINT
M	
MAX	MAXIMUM
MFD	MANUFACTURED
MFR	MANUFACTURER
MECH	MECHANICAL
MET	METAL
MEMB	MEMBRANE
MEZZ	MEZZANINE
MIN	MINIMUM
MISC	MISCELLANEOUS
MLWK	MILLWORK
MOIST	MOISTURE
MOT	MOTOR(IZED)
MTD	MOUNTED
N	
NIC	NOT IN CONTRCT
NO	NUMBER
NTS	NOT TO SCALE
O	
ORNA	ORNAMENTAL
OVFL	OVERVFLOW
OVHD	OVERHEAD
OPNG	OPENING(S)
OPR	OPERABLE
ORD	OVERFLOW ROOF DRAIN
P	
PTN	PARTITION
PEDR	PEDESTRIAN
PBD	PARTICLE BOARD
PNL	PANEL
POLYST	POLYSTYRENE
PORT	PORTABLE
PREFIN	PREFINISHED
PREFAB	PREFABRICATED
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLSTC	PLASTIC
PLYWD	PLYWOOD
PRTECN	PROTECTION
R	
RDR	READER
RECES	RECESSED
RECPT	RECEPTACLE
REF	REFER(ENCE)
REFL	REFLECTED
REFR	REFRIGERATOR
REQD	REQUIRED
RESIS	RESIST(ANT)(IVE)
REINF	REINFORCED(D)(ING)(MENT)
RESIL	RESILIENT
RFG	ROOFING
RM	ROOM
RO	ROUGH OPENING
RD	ROOF DRAIN
RDL	ROOF DRAIN LEADER
S	
SCR	SCRIBE
SECUR	SECURITY
SF	SQUARE FEET
SG	SINGLE
SHORG	SHORING
SIM	SIMILAR
SST	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STRFR	STOREFRONT
STRUCT	STRUCTURAL
SURF	SURFACE
SUSP	SUSPENDED
SYS	SYSTEM(S)
SCH	SCHEDULE
T	
THK	THICK
TLT	TOILET
TRAF	TRAFFIC
TRANS	TRANSPARENT
TRTD	TREATED
T&G	TONGUE AND GROOVE
TYP	TYPICAL
U	
UNDRLAY	UNDERLAYMENT
UTIL	UTILITY
UNO	UNLESS NOTED OTHERWISE
V	
VEH	VEHICLE
VERT	VERTICAL
VIF	VERIFY IN FIELD
W	
W/	WITH
WC	WATER CLOSET
WD	WOOD
WDW	WINDOW
W/O	WITHOUT
WT	WEIGHT
WTRPRF	WATERPROOFING

GRAPHIC SYMBOLS

REFLECTED CLG

- ACOUS CLG AND GRID
- xx'-xx" / xx'-xx" — CLG HEIGHT CHANGE
- X'-X" — FIN CLG HEIGHT SYMBOL
- GRID STARTPOINT SYMBOL
- AT1 — CLG FINISH TAG
- MS — MOTION SENSOR
- CLG MTD SPEAKER
- XX — CLG MTD CAMERA
- CLG MTD SPRINKLER HEAD
- CLG MTD SMOKE DETECTOR
- CLG MTD STROBE LT
- CLG MTD EXIT SIGNS
- WALL MTD EXIT SIGNS - PARALLEL
- WALL MTD EXIT SIGNS - PERPENDICULAR
- E — DENOTES EXISTING TO REMAIN
- R — DENOTES EXIST TO BE RELOCATED
- ACCESS DOOR

LT FXTRS

- FLOURESCENT LT FXTR
- FLOURESCENT LT FXTR / EMERGENCY CIRCUIT
- EXIST LT FXTR TO BE REMOVED
- UNDER CAB FLOURESCENT FXTR
- FLOURESCENT STRIP FXTR
- FLOURESCENT PENDANT FXTR
- RECES DOWNLT
- RECES ADJUSTABLE DN LT
- RECES WALL WASHER
- TRACK LTING
- SURFACE MTD LT FXTR
- WALL SCONCE
- $ — LT SWITCH
- D $ — DIMMER SWITCH

MECHANICAL FXTRS

- RETURN AIR
- SUPPLY AIR
- CIRCULAR DIFFUSER
- LINEAR DIFFUSER
- EXHAUST FAN

WALL MTD DEVICES

- EQUIP TAG (REFER TO EQUIP SCHEDULE)
- ST — WALL MTD FIRE ALARM STROBE
- FA — FIRE ALARM PULL
- FW — FIRE WARDEN STATION
- T — THERMOSTAT
- CTV — CABLE TV RECPT
- AV — AV RECPT
- AVT — AV TROUGH
- J — ELECTRICAL JUNCTION BOX
- V — VOICE/DATA JUNCTION BOX
- P — SYS WORKSTATION PANEL POWER INFEED
- V — SYS WORKSTATION PANEL VOICE/DATA INFEED
- CONDUIT STUB-OUT POWER
- CONDUIT STUB-OUT VOICE AND DATA
- CONDUIT STUB-OUT A/V
- PLUG MOLD

SECURITY DEVICES

- CAMERA
- CR — CARD READER
- B — ELECTRIC DOOR BELL PUSH
- B — ELECTRIC DOOR BELL
- IC — INTERCOM
- DR — REMOTE DOOR RELEASE BUTTON
- MS — MOTION SENSOR
- IA — INTRUSION ALARM
- EH — ELECTRIC DOOR HINGE
- H — ELECTRICAL DOOR HOLD OPEN
- DR — ELECTRICAL DOOR RELEASE
- DC — ELECTRICAL DOOR MONITOR CONTACT
- DDC — DOUBLE DOOR MONITOR CONTACT
- EL — ELECTRIC LOCKSET
- KS — ELECTRIC KEY SWITCH
- ES — ELECTRIC STRIKE
- ML — MAGNETIC LOCKSET
- PB — PANIC BUTTON

POWER & COMM.

LEGEND OF COMMON SYMBOL MODIFIERS

- SURF FLR MTD, POKE THRU DEVICES
- FURN SYS MTD DEVICES
- FLUSH FLR MTD DEVICES
- FLUSH FLR MTD, POKE THRU, DEVICES
- SURF FLR MTD DEVICES

LEGEND OF COMMON SYMBOLS

- SINGLE RECPT
- DUPLEX RECPT
- QUADRAPLEX RECPT
- COMBINATION DUPLEX & VOICE/DATA RECPT
- COMBINATION QUADRAPLEX & VOICE/DATA RECPTS
- COMBINATION DUPLEX, AUDIO VISUAL AND VOICE/DATA RECPTS
- COMBINATION QUADRAPLEX, AV & VOICE/DATA RECPTS
- VOICE/DATA RECPT
- DATA RECPT
- VOICE RECPT
- AV — AV RECPT
- P — SYS WORKSTATION PANEL POWER INFEED
- V — SYS WORKSTATION PANEL VOICE INFEED
- SINGLE RECPT
- DUPLEX RECPT
- QUADRAPLEX RECPT
- VOICE/DATA RECPT
- DATA RECPT
- VOICE RECPT
- FURN SYSTEM ELECTRIC PIGTAIL
- PP — FURN MTD, POWER POLE
- SINGLE RECPT
- DUPLEX RECPT
- QUADRAPLEX RECEPT
- COMBINATION DUPLEX & VOICE/DATA RECPT
- COMBINATION QUADRAPLEX & VOICE/DATA RECPTS
- COMBINATION DUPLEX, AUDIO VISUAL AND VOICE/DATA RECPTS
- COMBINATION QUADRAPLEX, AV & VOICE/DATA RECPTS
- PVD — COMBINATION POWER, VOICE/DATA RAISED FLR BOX,
- PVA — COMBINATION POWER, VOICE/DATA, A/V
- AV — RAISED FLR BOX, AV
- CONDUIT STUB UP, AV
- CONDUIT STUB UP, POWER
- CONDUIT STUB UP, VOICE/DATA

CONSTRUCTION

- COLUMN GRID REFERENCE NUMBER
- COLUMN GRID LINES AND REFERENCE NUMBER
- EXISTING CONSTRUCTION TO REMAIN
- EXISTING CONSTRUCTION TO BE DEMOLISHED
- NEW PARTITION
- 1 HR. RATED PARTITION
- 2 HR. RATED PARTITION
- 3 HR. RATED PARTITION
- 4 HR. RATED PARTITION
- SMOKE PARTITION
- EGRESS PATH PRIMARY
- EGRESS PATH SECONDARY
- MILLWORK
- MILLWORK ABOVE
- DETAIL NUMBER
- SHEET NUMBER
- DESCRIPTION OF SIMILAR OR OPPOSITE (SIM)
- AREA TO BE DETAILED
- LOCATION ON SHEET WHERE ELEVATION IS SHOWN
- DIRECTION OF ELEVATION
- SHEET NUMBER WHERE ELEVATION IS SHOWN
- INTERIOR AND EXTERIOR ELEVATION MARKER
- REVISION REFERENCE NUMBER
- REVISION CLOUD DEPICTING AREA REVISED
- NAME 1234 — ROOM NAME / ROOM NUMBER
- 01 — SHEETNOTE REFERENCE
- A3A — WALL TYPE REFERENCE / FIRE RATING
- XXX — DOOR REFERENCE NUMBER (REFER TO DOOR SCHEDULE)
- DOOR NUMBER / DOOR TYPE
- DOOR NUMBER / DOOR TYPE | HARDWARE TYPE
- XX — WINDOW REFERENCE NUMBER (REFER TO WINDOW SCHEDULE)
- MW01 — MILLWORK REFERENCE NUMBER (REFER TO MILLWORK SCHEDULE)
- ELEVATION DATUM REFERENCE
- +6" / 0" — FLOOR ELEVATION TRANSITION
- MATCH LINE SEE XX/XX — MATCH LINE SYMBOL
- ALIGN — ALIGN WITH ESTABLISHED / ADJACENT SURFACES

WALL MOUNTED LIFE SAFETY EQUIPMENT AND DEVICES

- FIRE WARDEN STATION SYMBOL
- WALL MOUNTED FIRE ALARM STROBE SYMBOL
- FIRE ALARM PULL SYMBOL
- FEC — WALL MOUNTED, FIRE EXTINGUISHER CABINET
- WALL MOUNTED FIRE EXTINGUISHER
- WALL MOUNTED FIRE HOSE CABINET
- WALL MOUNTED FIRE VALVE
- WALL MOUNTED FIRE VALVE CABINET

SECTION INDICATIONS

- ACOUSTICAL CEILING TILE
- ALUMINUM
- BRICK
- CARPET
- CONCRETE
- CONCRETE MASONRY UNIT
- CUT STONE
- EARTH
- FABRIC WRAPPED PANEL
- GLASS
- GRAVEL
- GYPSUM PLASTER
- INSULTATION (LOOSE OR BATT)
- INSULATION (RIGID)
- METAL
- PLASTIC
- PLYWOOD
- PRE-CAST PANELS
- SAND OR GROUT
- STONE
- WOOD (FINISHED)
- WOOD (CONTINUOUS MEMBER)
- WOOD (INTERRUPTED MEMBER

ELEVATION INDICATION

- GLASS SYMBOL
- MASONRY COURSING
- WOOD VENEER
- STONE

FINISH

- XXXX / XXXX — WALL FINISH TAG / BASE FINISH TAG
- EXTENT OF FINISH TYP.
- XXXX — WALL FINISH TAG
- XXXX — SPECIAL FINISH TAG
- XXXX — FLOOR FINISH TAG
- XXXX — CEILING FINISH TAG
- CHANGE IN FLOOR FINISH

GENERAL NOTES

A COMPLY WITH ALL APPLICABLE CODES, LAWS, ORDINANCES, ORDERS, RULES, AND REGULATIONS OF AUTHORITIES HAVING JURISDICTION.

B OBTAIN AND PAY FOR PERMITS AND INSPECTIONS REQUIRED BY PUBLIC AUTHORITIES GOVERNING THE WORK EXCEPT AS PROVIDED OTHERWISE IN THE SPECIFICATIONS OR OWNER CONTRACTOR AGREEMENT.

C REVIEW DOCUMENTS, VERIFY DIMENSIONS AND FIELD CONDITIONS AND CONFIRM THAT WORK IS BUILDABLE AS SHOWN. REPORT ANY CONFLICTS OR OMISSIONS TO THE ARCHITECT FOR CLARIFICATION PRIOR TO PERFORMING ANY WORK IN QUESTION.

D COORDINATE WORK WITH THE OWNER, INCLUDING SCHEDULING TIME AND LOCATIONS FOR DELIVERIES, BUILDING ACCESS, USE OF BUILDING SERVICES AND FACILITIES, AND USE OF ELEVATORS. MINIMIZE DISTURBANCE OF BUILDING FUNCTIONS AND OCCUPANTS.

E OWNER WILL PROVIDE WORK NOTED "BY OTHERS" OR "NIC" UNDER SEPARATE CONTRACT. INCLUDE SCHEDULE REQUIREMENTS IN CONSTRUCTION PROGRESS SCHEDULE AND COORDINATE TO ASSURE ORDERLY SEQUENCE OF INSTALLATION.

F MAINTAIN WORK AREAS SECURE AND LOCKABLE DURING CONSTRUCTION. COORDINATE WITH OWNER AND/OR PROPERTY MANAGER TO ENSURE SECURITY.

G MAINTAIN EXITS, EXIT LIGHTING, FIRE PROTECTIVE DEVICES, AND ALARMS IN CONFORMANCE WITH APPLICABLE CODES AND ORDINANCES.

H DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN. IN CASE OF CONFLICT, CONSULT THE ARCHITECT.

DFW DALLAS FORT WORTH INTERNATIONAL AIRPORT

0000 N. INTERNATIONAL PKWY
DFW AIRPORT, TX 75261

PRELIMINARY
THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF 35% DESIGN REVIEW UNDER THE AUTHORITY OF MATT SEVERANCE, LIC #XXXX. IT IS NOT INTENDED FOR BIDDING, PERMITTING, OR CONSTRUCTION PHASES.
07/30/2020

Gensler
27.7644.071

DRAWN BY: KL
APPROVED BY: BA
ISSUE DATE: 07/30/2020

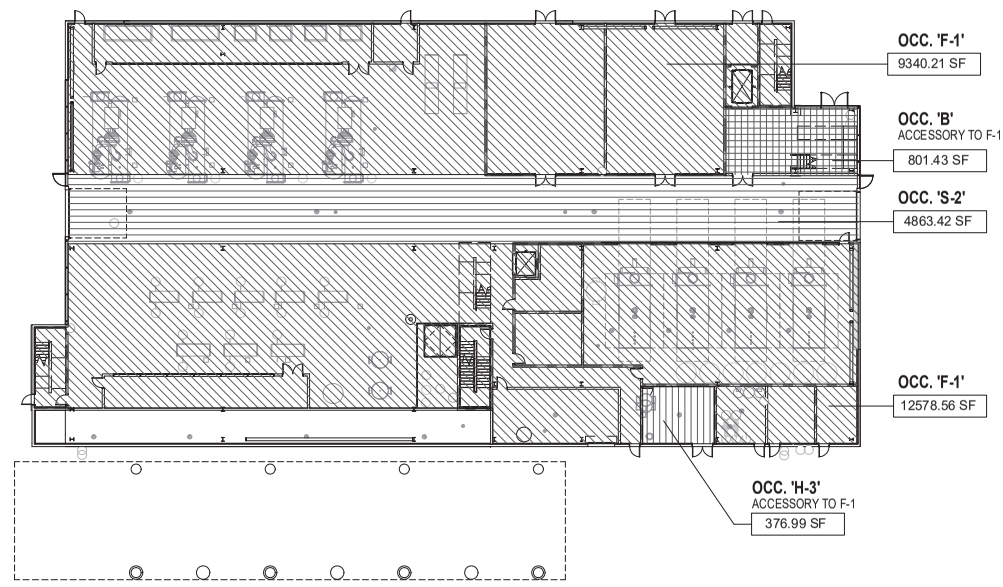
NO:	DATE:	DESCRIPTION:
A	07/30/2020	35% SCHEMATIC DESIGN

DFW SUPPLEMENTAL CUP
ABBREVIATIONS, GRAPHIC SYMBOLS
CONTRACT NUMBER: 8500367
PERMIT NUMBER: A20-129B

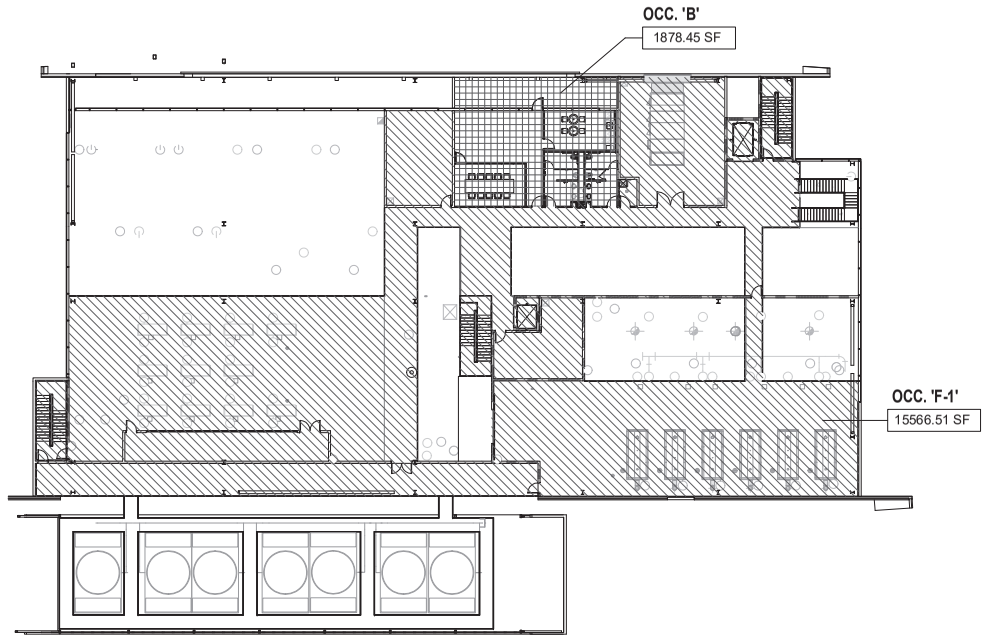
SHEET NUMBER
GI0-0-102

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.

OCCUPANCY CLASSIFICATION FLOOR PLAN



1ST FLOOR OCCUPANCY CLASSIFICATION



2ND FLOOR OCCUPANCY CLASSIFICATION

INTERIOR FINISHES

IBC CHAPTER 8

INTERIOR FINISHES (IBC CHAPTER 8)

WALL AND CEILING FINISHES
CLASS A: FLAME SPREAD 0-25; SMOKE-DEVELOPED 0-450
CLASS B: FLAME SPREAD 26-75; SMOKE-DEVELOPED 0-450
CLASS C: FLAME SPREAD 76-200; SMOKE-DEVELOPED 0-450

GROUP	GROUP B CLASS	GROUP S CLASS
EXIT ENCL/EXIT PASSAGEWAYS	B	C
CORRIDORS	C	C
ROOMS AND ENCL SPACES	C	C

FIRE-RESISTANCE RATING REQUIRMENT

IBC TABLE 601/602

BULDING ELEMENT		
PRIMARY STRUCTURAL FRAME	COLUMNS, GIRDERS, BEAMS, TRUSSES AND SPANDREL, FLOOR AND ROOF CONSTRUCTION DIRECT CONNECTION TO COLUMN	0 HR
BEARING WALLS	EXTERIOR INTERIOR	0 HR 0 HR
NON-BEARING WALLS AND PARTITIONS :	EXTERIOR INTERIOR	0 HR 0 HR
FLOOR CONSTRUCTION :		0 HR
ROOF CONSTRUCTION :		0 HR

PARKING REQUIREMENT

FLOOR AREA FOR PARKING CALCULATION	
PARKING REQUIRED * PER DFW DESIGN CRITERIA 2.3.1.2 MANUFACTURING : 1 PER 1000 SQ.FT. : 37863 / 1000 = 38 WAREHOUSE : 1 PER 2000 SQ.FT. : 4863 / 2000 = 3 OFFICE : 1 PER 300 SQ.FT. : 2680 / 300 = 9 TOTAL : 50	**PARKING PROVIDED :** 11
ACCESSIBLE SPACE REQUIRED * PER TAS TABLE 208.2 1 MIN. FOR 1 TO 25 TOTAL PARKING 2 MIN. FOR 26 TO 50 TOTAL PARKING — 2 REQUIRED	**ACCESSIBLE SPACE PROVIDED :** 1
EVCS REQUIRED	

PLUMBING FIXTURE CALCULATIONS

REQUIREMENT BY CODE from TABLE 2902.1

TYPE OF OCCUPANCY	WATER CLOSETS (URINAL NO MORE THAN 50 % OF THE REQUIRED WATE CLOSET(419.2)	LAVATORIES	DRINKING FOUNTAINS	OTHER
"B" OCCUPANCY	1 PER 25 FOR THE FIRST 50 AND 1 PER 50 FOR THE REMAINDER EXCEEDING 50	1 PER 40 FOR THE FIRST 80 AND 1 PER 80 FOR THE REMAINDER EXCEEDING 80	1 PER 100	1 SERVICE SINK
"F" OCCUPANCY	1 PER 100	1 PER 100	1 PER 400	1 SERVICE SINK
"S" OCCUPANCY	1 PER 100	1 PER 100	1 PER 1000	1 SERVICE SINK

LEVEL 01 CALCULATIONS

	WATER CLOSETS MALE	WATER CLOSETS FEMALE	LAVATORIES MALE	LAVATORIES FEMALE	DRINKING FOUNTAINS	OTHER
"B" REQUIRED	4 OCC. = .0.16	4 OCC. = 0.16	4 OCC. = 0.1	4 OCC. = 0.1	8 OCC. = 0.08	-
"F" REQUIRED	39 OCC. = 0.39	39 OCC= 0.39	39 OCC. = 0.39	39 OCC. = 0.39	78 OCC. = 0.195	-
"S" REQUIRED	8 OCC. = 0.08	8 OCC. = 0.08	8 OCC. = 0.08	8 OCC. = 0.08	16 OCC. = 0.016	-
FIXTURES REQUIRED	0.63	0.63	0.57	0.57	0.291	1 SVR. SINK
FIXTURES PROVIDED	0	0	0	0	0	0 SVR. SINK

LEVEL 02 CALCULATIONS

	WATER CLOSETS MALE	WATER CLOSETS FEMALE	LAVATORIES MALE	LAVATORIES FEMALE	DRINKING FOUNTAINS	OTHER
"B" REQUIRED	10 OCC. = 0.4	10 OCC. = 0.4	10 OCC. = 0.25	10 OCC. = 0.25	20 OCC. = 0.2	-
"F" REQUIRED	26 OCC. = 0.26	26 OCC. = 0.26	26 OCC. = 0.26	26 OCC. = 0.26	52 OCC. = 0.13	-
FIXTURES REQUIRED	0.66	0.66	0.51	0.51	0.33	1 SVR. SINK
FIXTURES PROVIDED	2	2	2	2	2	1 SVR. SINK
TOTAL FIXTURES REQUIRED	0.63 + 0.66 = 1.29	0.625 + 0.66 = 1.29	0.57 + 0.51 = 1.08	0.565 + 0.51 = 1.08	0.291 + 0.33 = 0.621	1 SVR. SINK
TOTAL FIXTURES PROVIDED	2 : 1 WC & 1 UR	2 WC	2 LAV	2 LAV	2 : 1 HI + 1 LO	1 SVR. SINK

CONSTRUCTION TYPE

IBC TABLE 503

BUILDING HEIGHT: 45'
NUMBER OF STORIES: 2
CONSTRUCTION TYPE: ☐ I-A ☐ I-B ☐ II-A ☒ II-B ☐ III-A ☐ III-B ☐ IV ☐ V-A ☐ V-B
PROTECTED, NON COMBUSTIBLE

OCCUPANCY CLASSIFICATION

IBC CHAPTER 3

OCCUPANCY
ASSEMBLY ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
BUSINESS ☒
EDUCATIONAL ☐
FACTORY ☒ F-1 MODERATE ☐ F-2 LOW
HAZARDOUS ☐ H-1 DETONATE ☐ H-2 DEFLAGRATE ☒ H-3 COMBUST ☐ H-4 HEALTH ☐ H-5 HPM
INSTITUTIONAL ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
I-3 CONDITION ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
MERCANTILE ☐
RESIDENTIAL ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
STORAGE ☐ S-1 MODERATE ☒ S-2 LOW ☐ HIGH-PILED ☐ PARKING GARAGE ☐ OPEN ☐ ENCLOSED ☐ REPAIR GARAGE
UTILITY AND MISC. ☐

B & H-3 IS ACCESSORY OCCUPANCY GROUP TO EACH FLOOR.

INCIDENTAL USES (TABLE 508.2.5)

- ☒ FURNACE ROOM WHERE AND PIECE OF EQUIPMENT IS OVER 400,00 BTU PER HOUR INPUT
- ☐ ROOMS WITH BOILERS WHERE THE LARGEST PIECE OF EQUIPMENT IS OVER 15 PSI AND 10 HORSEPOWER
- ☒ REFRIGERANT MACHINE ROOM *(T508.2.5 SEPARATION: 1 HR OR PROVIDE AUTOMATIC SPRINKLER SYSTEM)*
- ☒ HYDROGEN CUTOFF ROOMS, NOT CLASSIFIED AS GROUP H
- ☐ INCINERATOR ROOMS
- ☐ PAINT SHOPS, NOT CLASSIFIED AS GROUP H, LOCATED IN OCCUPANCIES OTHER THAN GROUP F
- ☐ LABORATORIES AND VOCATIONAL SHOPS, NOT CLASSIFIED AS GROUP H, LOCATED IN A GROUP E OR I-2 OCC.
- ☐ LAUNDRY ROOMS OVER 100 SQUARE FEET
- ☐ GROUP I-3 CELLS EQUIPPED WITH PADDED SURFACES
- ☐ GROUP I-2 WASTE AND LINEN COLLECTION ROOMS
- ☐ WASTE AND LINEN COLLECTION ROOMS OVER 100 SQUARE FEET
- ☒ STATIONARY STORAGE BATTERY SYSTEMS HAVING A LIQUID ELECTROLYTE CAPACITY OF MORE THAN 50 GALLONS, OR A LITHIUM-ION CAPACITY OF 1,00 POUNDS USED FOR FACILITY STANDBY POWER, EMERGENCY POWER OR UNINTERRUPTED POWER SUPPLIES (T508.2.5 SEPARATION: 1 HR)
- ☐ ROOMS CONTAINING FIRE PUMPS (T508.2.5 SEPARATION: 1 HR AND PROVIDE AUTOMATIC SPRINKLER SYSTEM THROUGHOUT BUILDING)
- ☐ GROUP I-2 STORAGE ROOMS OVER 100 SQUARE FEET
- ☐ GROUP I-2 COMMERCIAL KITCHENS
- ☐ GROUP I-2 LAUNDRIES EQUAL TO OR LESS THAN 100 SQUARE FEET
- ☐ GROUP I-2 ROOMS OR SPACES THAT CONTAIN FUEL-FIRED HEATING EQUIPMENT

SPECIAL USES ☐ 402 ☐ 403 ☐ 404 ☐ 405 ☐ 406 ☐ 407 ☐ 408 ☐ 409 ☐ 410 ☐ 411 ☐ 412 ☐ 413 ☐ 414 ☐ 415 ☐ 416 ☐ 417 ☐ 418 ☐ 419 ☐ 420 ☐ 421 ☐ 422 ☐ 423 ☐ 424 ☐ 425 ☐ 426 ☐ 427
SPECIAL PROVISIONS: ☐ 509.2 ☐ 509.3 ☐ 509.4 ☐ 509.5 ☐ 509.6 ☐ 509.7 ☐ 509.8 ☐ 509.9

MIXED OCCUPANCY: ☐ NO ☒ YES SEPARATION: ___ HR EXCEPTION: ________

- ☐ INCIDENTAL USES SEPARATION (508.2.5)
- ☒ ACCESSORY OCCUPANCY (508.2) - B OFFICE/REFERENCE/BREAK ROOM @ 2ND FLOOR
  H-3 CHEMICAL STORAGE ROOM @ 1ST FLOOR

  THIS SEPARATION IS NOT EXEMPT AS A NON-SEPARATED USE (SEE EXCEPTIONS)
- ☒ NON-SEPARATED USE (508.3) - F-1 AND S-2
  THE REQUIRED TYPE OF CONSTRUCTION FOR THE BUILDING SHALL BE DETERMINED BY APPLYING THE HEIGHT AND AREA LIMITATIONS FOR EACH OF THE APPLICABLE OCCUPANCIES TO THE ENTIRE BUILDING. THE MOST RESTRICTIVE TYPE OF CONSTRUCTION, SO DETERMINED, SHALL APPLY TO THE ENTIRE BUILDING.
- ☐ SEPARATED USE (508.4) - SEE BELOW FOR AREA CALCULATIONS
  FOR EACH STORY, THE AREA OF THE OCCUPANCY SHALL BE SUCH THAT THE SUM OF THE RATIOS OF THE ACTUAL FLOOR AREA OF EACH USE DIVIDED BY THE ALLOWABLE FLOOR AREA FOR EACH USE SHALL NOT EXCEED 1. (508.4.2)

ALLOWABLE BUILDING HEIGHT & STORY & AREA

* TYPE IIB CONSTRUCTION
* NON - SEPARATED F-1 AND S-2 OCCUPANCY GROUP W/ ACCESSORY GROUP B & H-3

ALLOWABLE BUILDING HEIGHT	75 ' FOR F-1 OCCUPANCY GROUP
ACTUAL BUILDING HEIGHT	45 '
ALLOWABLE BUILDING STORIES	3 STORIES FOR F-1
ACTUAL BUILDING STORIES	2 STORIES
ALLOWABLE BUILDING AREA	46,500 SF FOR F-1
ACTUAL BUILDING AREA	45,406 SF

PROJECT DESCRIPTION

PROJECT CONSISTS OF A NEW CONSTRUCTION SUPPLEMENTAL CENTRAL UTILITY PLANT (CUP) FOR THE DFW AIRPORT. THE NEW FACILITY WILL CONNECT TO THE EXISTING INFRASTRUCTURE AND WILL PROVIDE ADDITIONAL HEATING AND COOLING FOR THE DFW AIRPORT COMPLEX. MECHANICAL SPACES WILL OCCUPY THE VAST MAJORITY OF THE 2 STORY BUILDING WITH A SERVICE DRIVE AS A CENTER SPINE. AN OFFICE SPACE ALONG WITH ITS AMENITIES WILL OCCUPY A SMALL AREA OF THE SECOND LEVEL.

GROSS BUILDING AREA	
LEVEL	NEW (SQ FT)
LEVEL 01	27,961 SQ.FT.
LEVEL 02	17,445 SQ.FT.
TOTAL	45,406 SQ.FT.

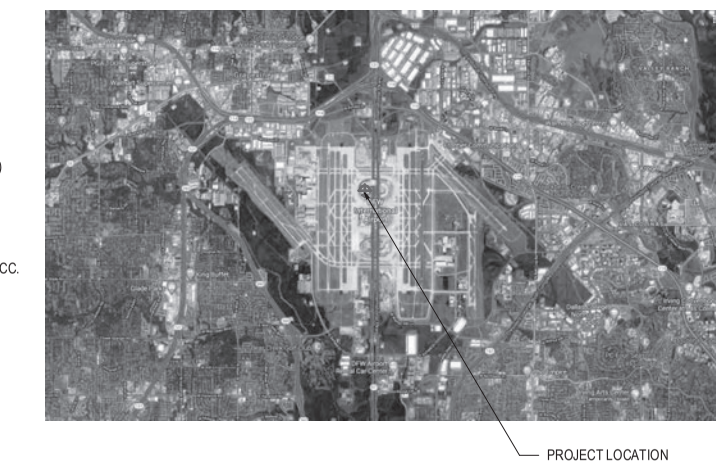
SPRINKLERS: ☐ NO ☒ YES ☐ PARTIAL

STANDPIPES: ☐ NO ☒ YES CLASS: ☒ I ☐ II ☐ III ☐ WET ☐ DRY

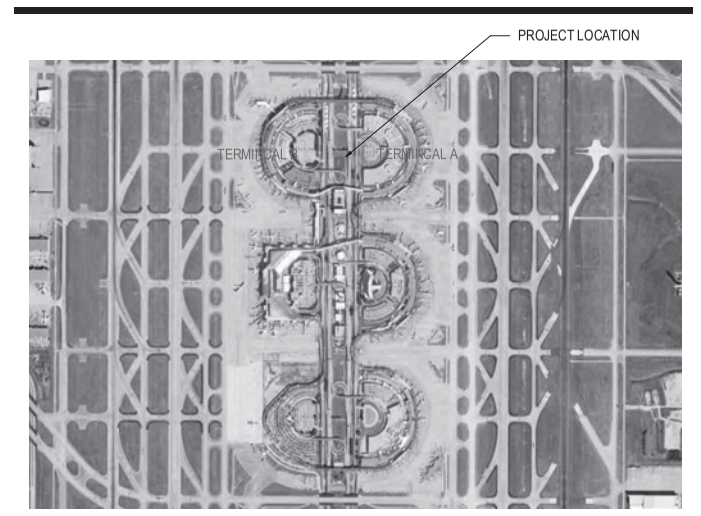
FIRE PROTECTION: APPROVED AUTOMATIC SPRINKLER SYSTEM PER NFPA 13 WITH MULTIPURPOSE DRY-CHEMICAL PORTABLE FIRE EXTINGUISHERS TYPE 2A 10BC, 5 LB. CAPACITY, SPACED AT 75'-0" TRAVEL DISTANCE AROUND THE FLOOR.

NO SPRINKER SYSTEM IN ELECTRICAL AND IT ROOM. PROVIDE 2 HR RATED AREA IN LIEU OF SPRINKLER SYSTEM.

VICINITY MAP



LOCATION MAP



APPLICABLE CODES

BUILDING CODE:	2015 INTERNATIONAL BUILDING CODE W/ DFW AIRPORT AMENDMENTS
PLUMBING CODE:	2015 INTERNATIONAL PLUMBING CODE W/ DFW AIRPORT AMENDMENTS
MECHANICAL CODE:	2015 INTERNATIONAL MECHANICAL CODE W/ DFW AIRPORT AMENDMENTS
ELECTRICAL CODE:	2017 NATIONAL ELECTRICAL CODE W/ DFW AIRPORT AMENDMENTS
FIRE/LIFE SAFETY CODE:	2015 INTERNATIONAL FIRE CODE W/ DFW AIRPORT AMENDMENTS
ACCESSIBILITY CODE:	2012 STATE OF TEXAS ACCESSIBILITY STANDARDS
ENERGY CODE:	2015 INTERNATIONAL ENERGY CONSERVATION CODE W/ DFW AIRPORT AMENDMENTS
OTHER:	2015 INTERNATIONAL FUEL GAS CODE DFW GREEN BUILDING STANDARDS, LATEST EDITION DFW CONSTRUCTION AND FIRE PREVENTION STANDARDS RESOLUTION

GENERAL NOTES

- A COMPLY WITH ALL APPLICABLE CODES, LAWS, ORDINANCES, ORDERS, RULES, AND REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
- B OBTAIN AND PAY FOR PERMITS AND INSPECTIONS REQUIRED BY PUBLIC AUTHORITIES GOVERNING THE WORK EXCEPT AS PROVIDED OTHERWISE IN THE SPECIFICATIONS OR OWNER CONTRACTOR AGREEMENT.
- C REVIEW DOCUMENTS, VERIFY DIMENSIONS AND FIELD CONDITIONS AND CONFIRM THAT WORK IS BUILDABLE AS SHOWN. REPORT ANY CONFLICTS OR OMISSIONS TO THE ARCHITECT FOR CLARIFICATION PRIOR TO PERFORMING ANY WORK IN QUESTION.
- D COORDINATE WORK WITH THE OWNER, INCLUDING SCHEDULING TIME AND LOCATIONS FOR DELIVERIES, BUILDING ACCESS, USE OF BUILDING SERVICES AND FACILITIES, AND USE OF ELEVATORS. MINIMIZE DISTURBANCE OF BUILDING FUNCTIONS AND OCCUPANTS.
- E OWNER WILL PROVIDE WORK NOTED "BY OTHERS" OR "NIC" UNDER SEPARATE CONTRACT. INCLUDE SCHEDULE REQUIREMENTS IN CONSTRUCTION PROGRESS SCHEDULE AND COORDINATE TO ASSURE ORDERLY SEQUENCE OF INSTALLATION.
- F MAINTAIN WORK AREAS SECURE AND LOCKABLE DURING CONSTRUCTION. COORDINATE WITH OWNER AND/OR PROPERTY MANAGER TO ENSURE SECURITY.
- G MAINTAIN EXITS, EXIT LIGHTING, FIRE PROTECTIVE DEVICES, AND ALARMS IN CONFORMANCE WITH APPLICABLE CODES AND ORDINANCES.
- H DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN. IN CASE OF CONFLICT, CONSULT THE ARCHITECT.

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07/30/2020

Gensler
27.7644.071

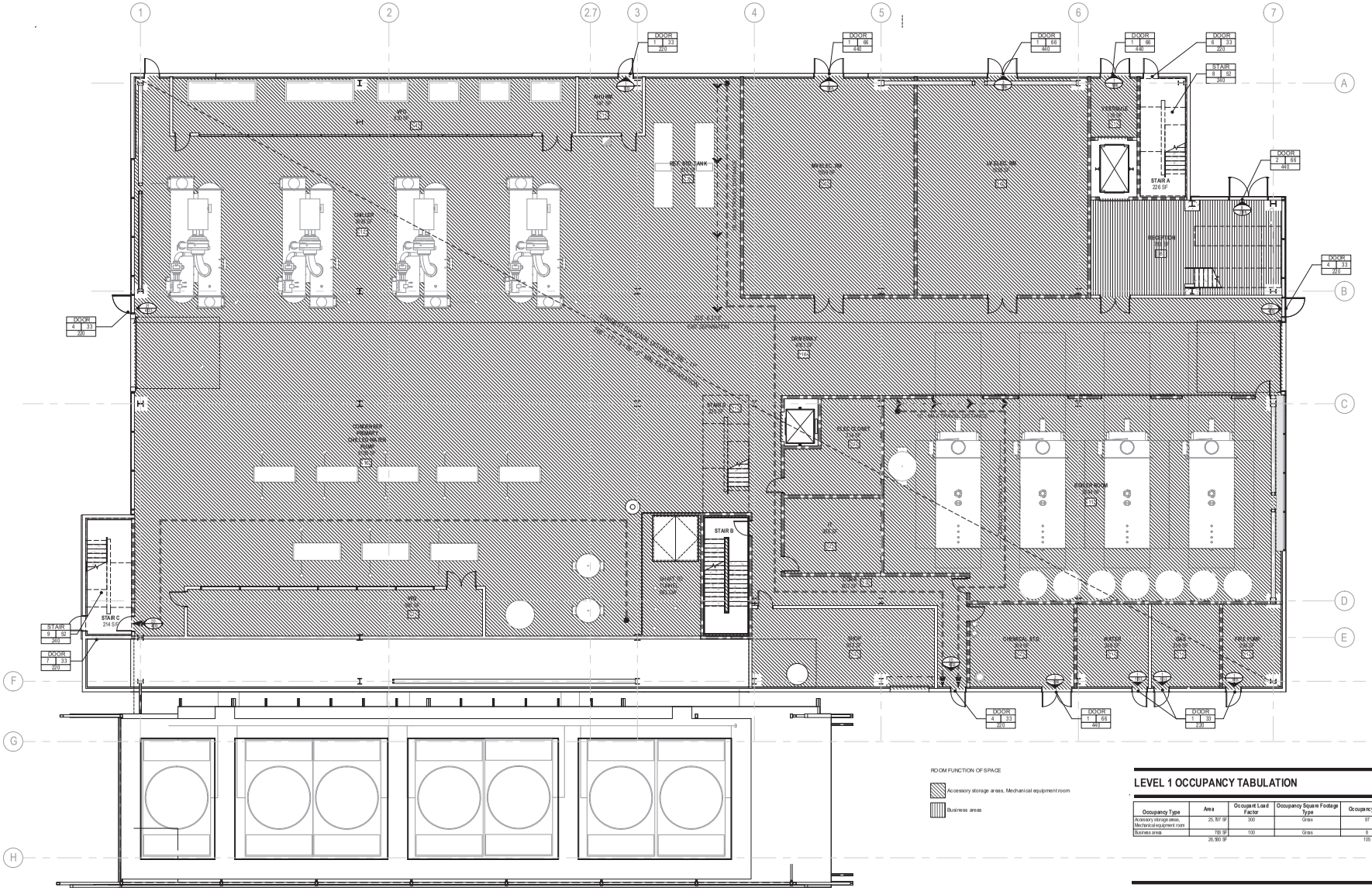
DRAWN BY: KL
APPROVED BY: Approver
ISSUE DATE: 07/30/2020

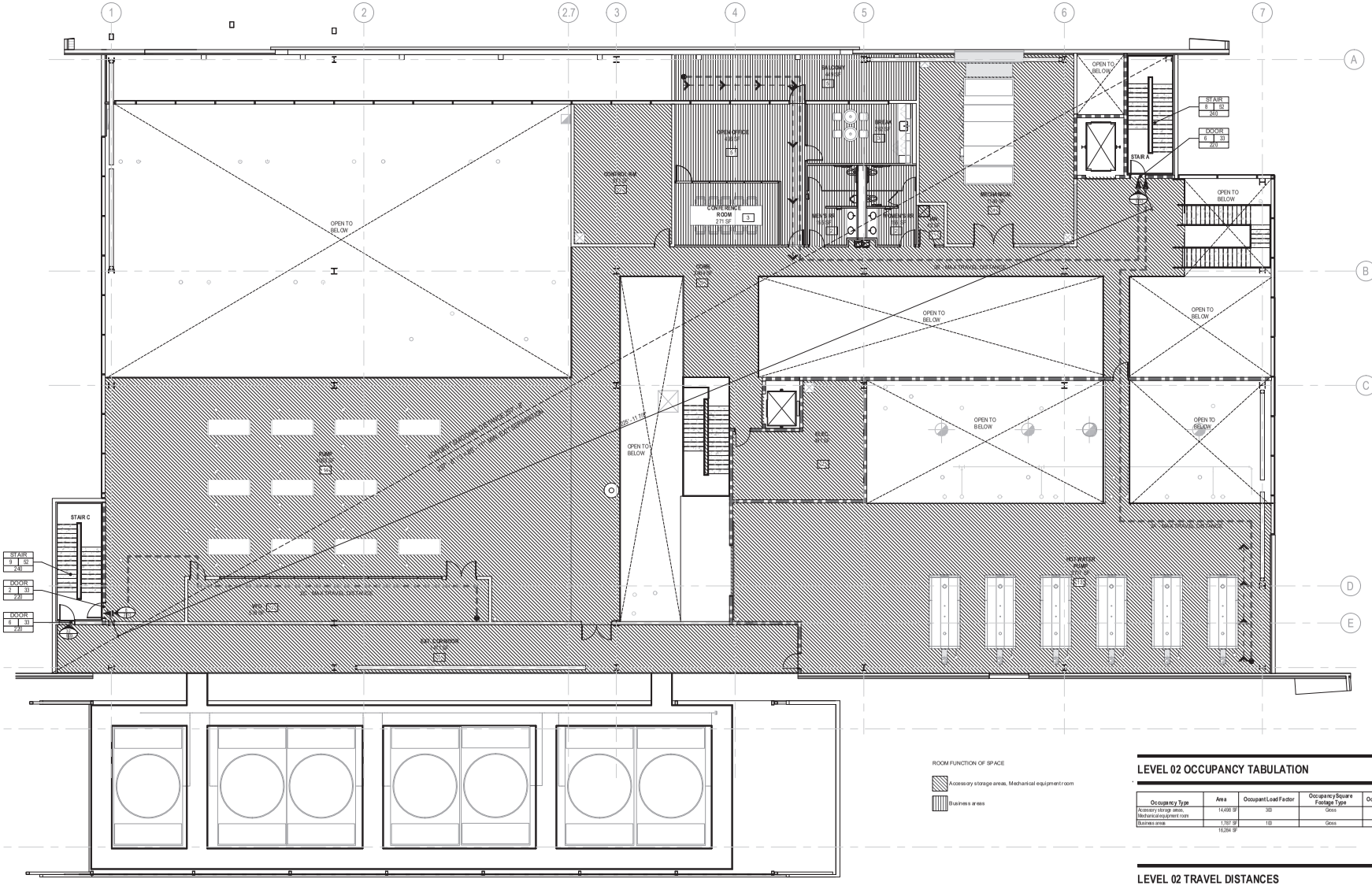
NO:	DATE:	DESCRIPTION:
A	07/30/2020	35% SCHEMATIC DESIGN

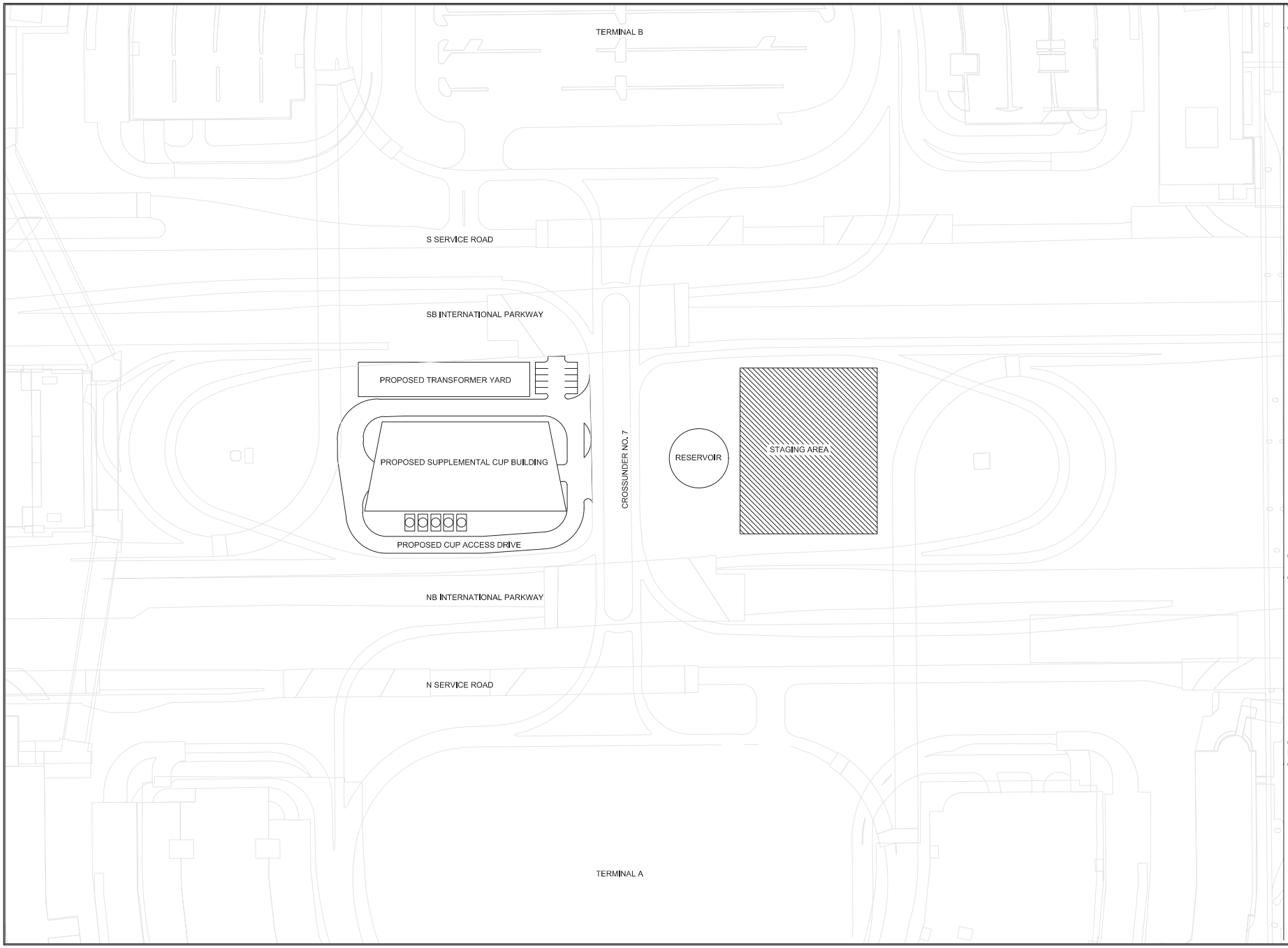
DFW SUPPLEMENTAL CUP
CODE SUMMARY
CONTRACT NUMBER: 8500367
PERMIT NUMBER: A20-129B

SHEET NUMBER
GI0-0-200

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.


1
2
2.7
3
4
5
6
7
A
B
C
D
E
F
G
H
DOOR 1 | 33 220
DOOR 1 | 66 440
DOOR 2 | 66 440
DOOR 4 | 33 220
DOOR 7 | 70 220
STAIR 9 | 52 240
STAIR A 226 SF
STAIR B
STAIR C 214 SF
RECEPTION 480 SF
CONCOURSE PHASE 1 DFW-2-20-GN-SS CARPET
RESTROOM 1,004 SF
RESTROOM 1,004 SF
RESTROOM 1,004 SF


1
2
2.7
3
4
5
6
7
A
B
C
D
E
F
G
H
OPEN TO BELOW
STAIR A
STAIR C
STAIR
9 52
260
DOOR
6 33
220
DOOR
4 33
220
DOOR
6 33
220
CONFERENCE ROOM
271 SF
3
MEN'S RR
WOMEN'S RR
JANITOR
MECHANICAL EQUIP.
ELEC.
DATA
ELEV. MACH.
ELEV. PIT
SUMP PIT
FIRE PUMP
ELEV. HYD.
EXIT CORRIDOR
BALCONY ABOVE
BALCONY BELOW
ROOF BELOW
ROOF ABOVE
ROOF BELOW
ROOF BELOW
ROOF BELOW



GENERAL NOTES

NORTH

0 50' 100'
SCALE: 1" = 50'-0"

1. PLACEHOLDER FOR NOTES.

SHEET NOTES

LEGEND

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DFW SUPPLEMENTAL CUP

CONTRACT LAYOUT PLAN

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A20-1398

SHEET NUMBER

GC0-0-101

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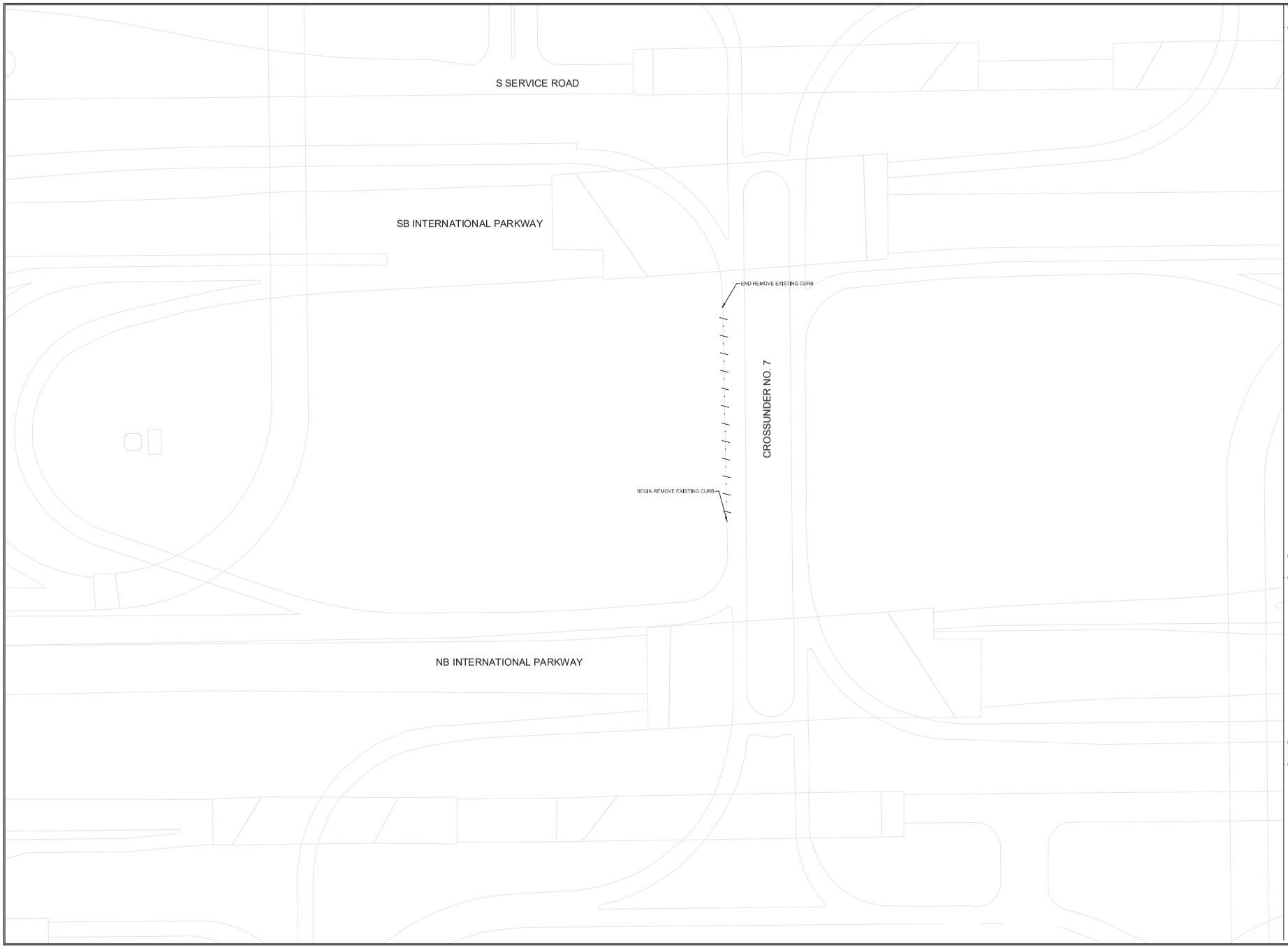

GENERAL NOTES

North

0 30' 60'
SCALE: 1" = 30'-0"

1. PLACEHOLDER FOR NOTES.

SHEET NOTES

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DFW SUPPLEMENTAL CUP

SITE DEMOLITION PLAN

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A20-1398

SHEET NUMBER

CD1-0-101

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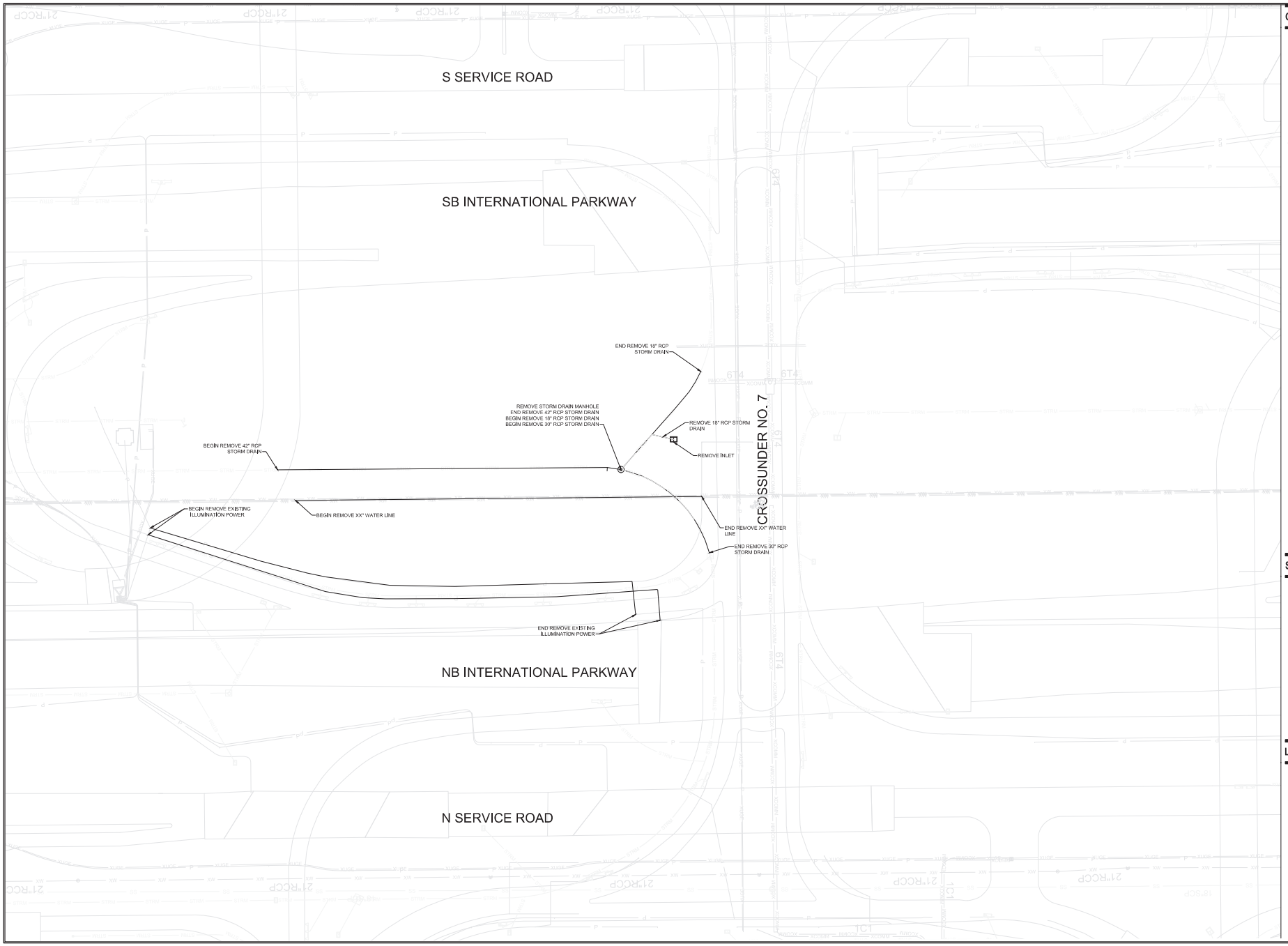

GENERAL NOTES

North

0 30' 60'
SCALE: 1" = 30'-0"

1. ALL ELECTRICAL INFRASTRUCTURE WORK WILL CONFORM TO ONCOR ELECTRICAL DELIVERY SPECIFICATIONS.

SHEET NOTES

LEGEND

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DFW SUPPLEMENTAL CUP

UTILITY DEMOLITION PLAN

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A20-1398

SHEET NUMBER

CD1-0-102

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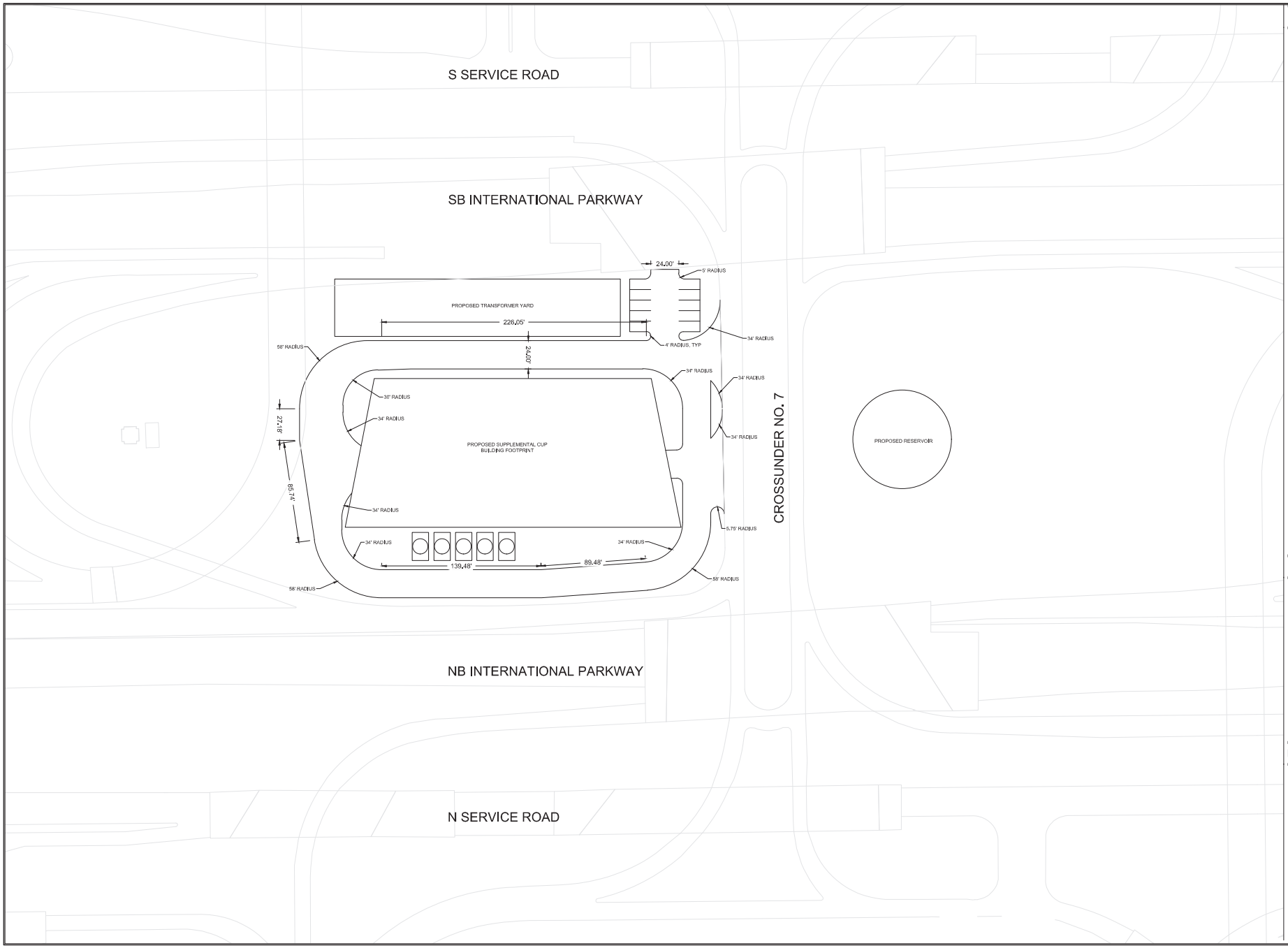

GENERAL NOTES

North

0 30' 60'
SCALE: 1" = 30'-0"

1. PLACEHOLDER FOR NOTES.

SHEET NOTES

LEGEND

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DFW SUPPLEMENTAL CUP

GEOMETRY PLAN

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A20-1398

SHEET NUMBER

CS1-10-101

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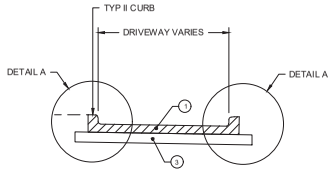
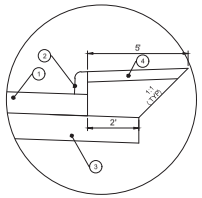


1 TYPICAL PAVEMENT SECTION
SCALE: N.T.S.



DETAIL A

GENERAL NOTES

LEGEND

1. 13.5" CONTINUOUSLY REINFORCED CONCRETE PAVEMENT (CRCP)
2. TY II MONOLITHIC CURB (5 3/4" HEIGHT)
3. 8" LIME TREATED SUBGRADE (9% LIME) OR 8" CEMENT TREATED SUBGRADE (8% CEMENT)
4. 4" COMPOST MANUFACTURED TOP SOIL (CMT) WITH COMMON BERMUDA SOD

NOTES

1. ALL DIMENSIONS ARE MEASURED TO FACE OF CURB UNLESS OTHERWISE NOTED.
2. SULFATE TESTING SHALL BE PERFORMED DURING CONSTRUCTION TO CONFIRM THE SOLUBLE SULFATE IS LESS THAN 2,000 PPM. IF THE RESULT IS MORE THAN 2,000 PPM, CONTRACTOR SHALL USE 7 INCHES OF CRUSHED STONE FLEX BASE. THE BASE MATERIAL SHALL COMPLY WITH TxDOT ITEM 247, TY A, GRADE 1.
3. PROOF ROLL IN ALL AREAS WHERE SUBGRADE WILL SUPPORT NEW PAVEMENT. THE UPPER 8 INCHES OF SUBGRADE SHOULD BE SCARIFIED AND RE-COMPACTED AT -1% TO +2% OF OPTIMUM MOISTURE CONTENT TO 98% STANDARD PROCTOR DENSITY (ASTM D 698) PRIOR TO PLACING FLEX BASE. PROOF ROLLING WILL NOT BE PAID DIRECTLY BUT WILL BE SUBSIDIARY TO VARIOUS BID ITEMS.

SHEET NOTES

LEGEND

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DFW SUPPLEMENTAL CUP

TYPICAL PAVEMENT SECTIONS

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A20-129B

SHEET NUMBER
CS5-1-101

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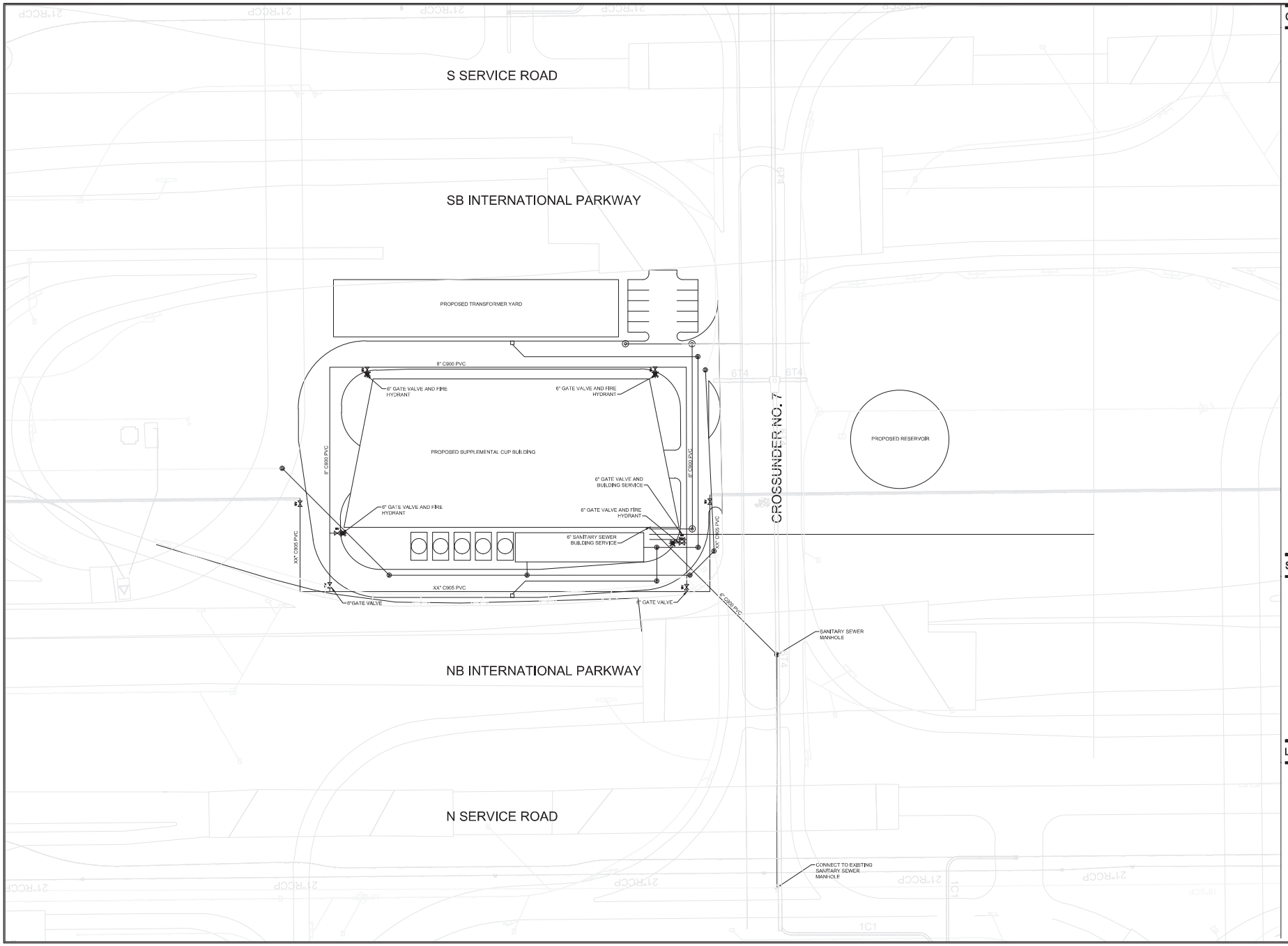

GENERAL NOTES

North

0 30' 60'
SCALE: 1" = 30'-0"

1. PLACEHOLDER FOR NOTES.

SHEET NOTES

LEGEND

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DFW SUPPLEMENTAL CUP

WATER AND WASTEWATER PLAN

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A20-129B

SHEET NUMBER
CU2-1-101

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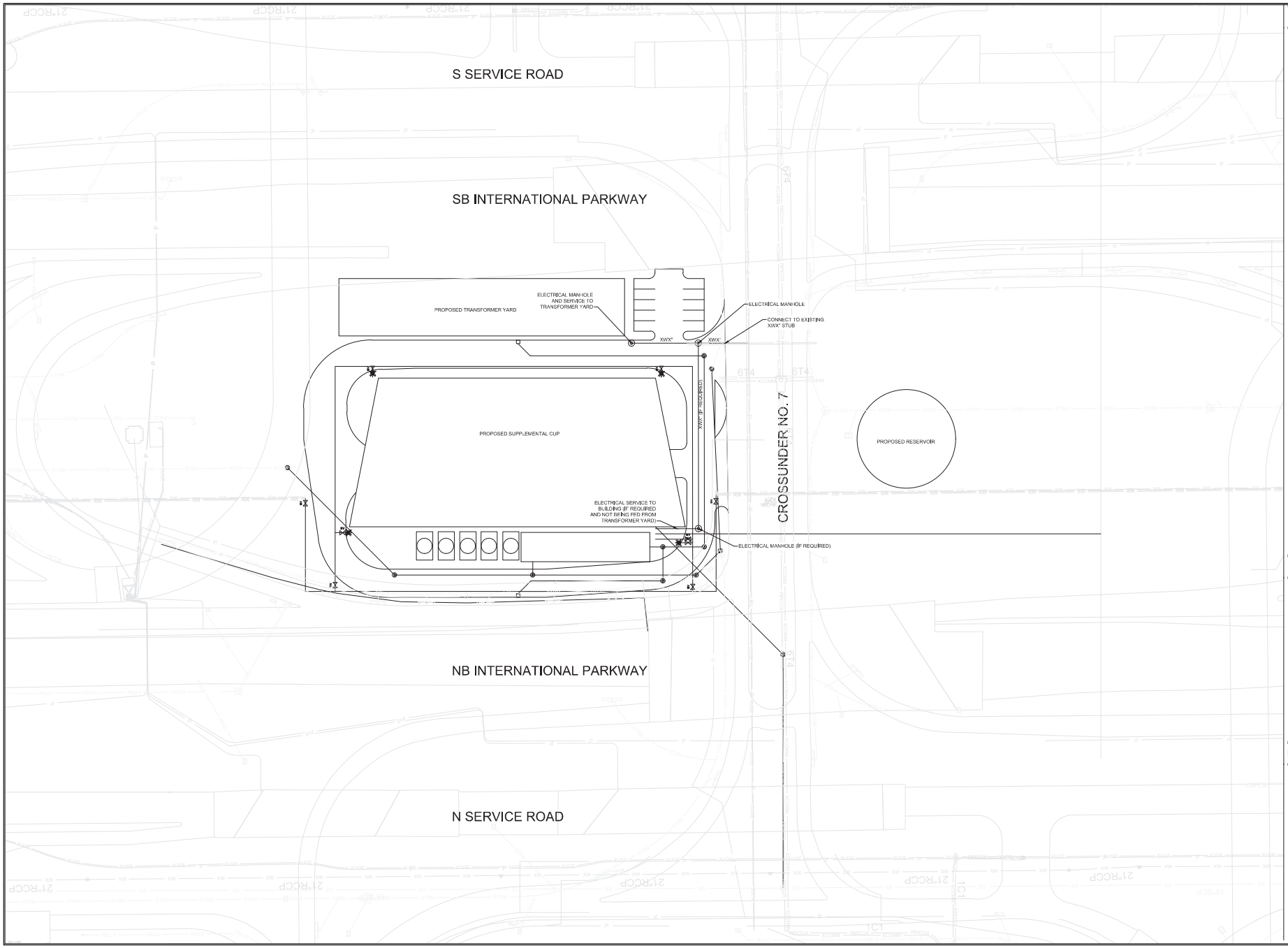

GENERAL NOTES

North

0 30' 60'
SCALE: 1" = 30'-0"

1. ALL ELECTRICAL INFRASTRUCTURE WORK WILL CONFORM TO ONCOR ELECTRIC DELIVERY SPECIFICATIONS

SHEET NOTES

LEGEND

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ISSUE DATE: 07/30/20

NO:	DATE:	REVISION:
A	07/30/20	35% SCHEMATIC DESIGN

DFW SUPPLEMENTAL CUP

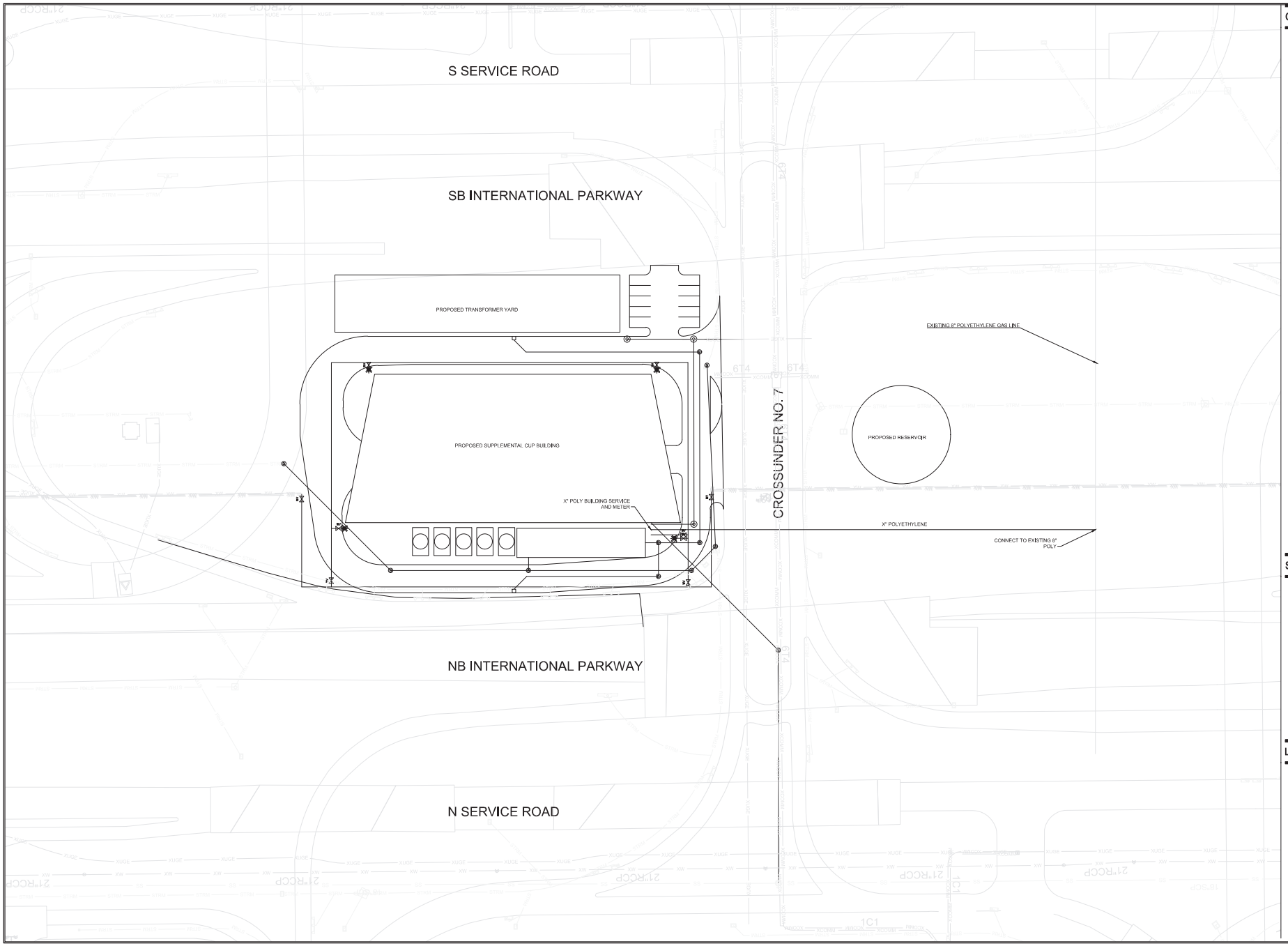
ELECTRICAL INFRASTRUCTURE PLAN

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A20-129B

SHEET NUMBER
CU2-1-102

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30X 42 SHEET.



GENERAL NOTES

North

0 30' 60'
SCALE: 1" = 30'-0"

1. ALL NATURAL GAS WORK WILL CONFORM TO ATMOS ENERGY SPECIFICATIONS

SHEET NOTES

LEGEND

DFW DALLAS FORT WORTH INTERNATIONAL AIRPORT

0000 N. INTERNATIONAL PKWY
DFW AIRPORT, TX 75261

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27-7644-071

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ISSUE DATE: 07/30/20

NO:	DATE:	REVISION:
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DFW SUPPLEMENTAL CUP

NATURAL GAS PLAN

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A20-129B

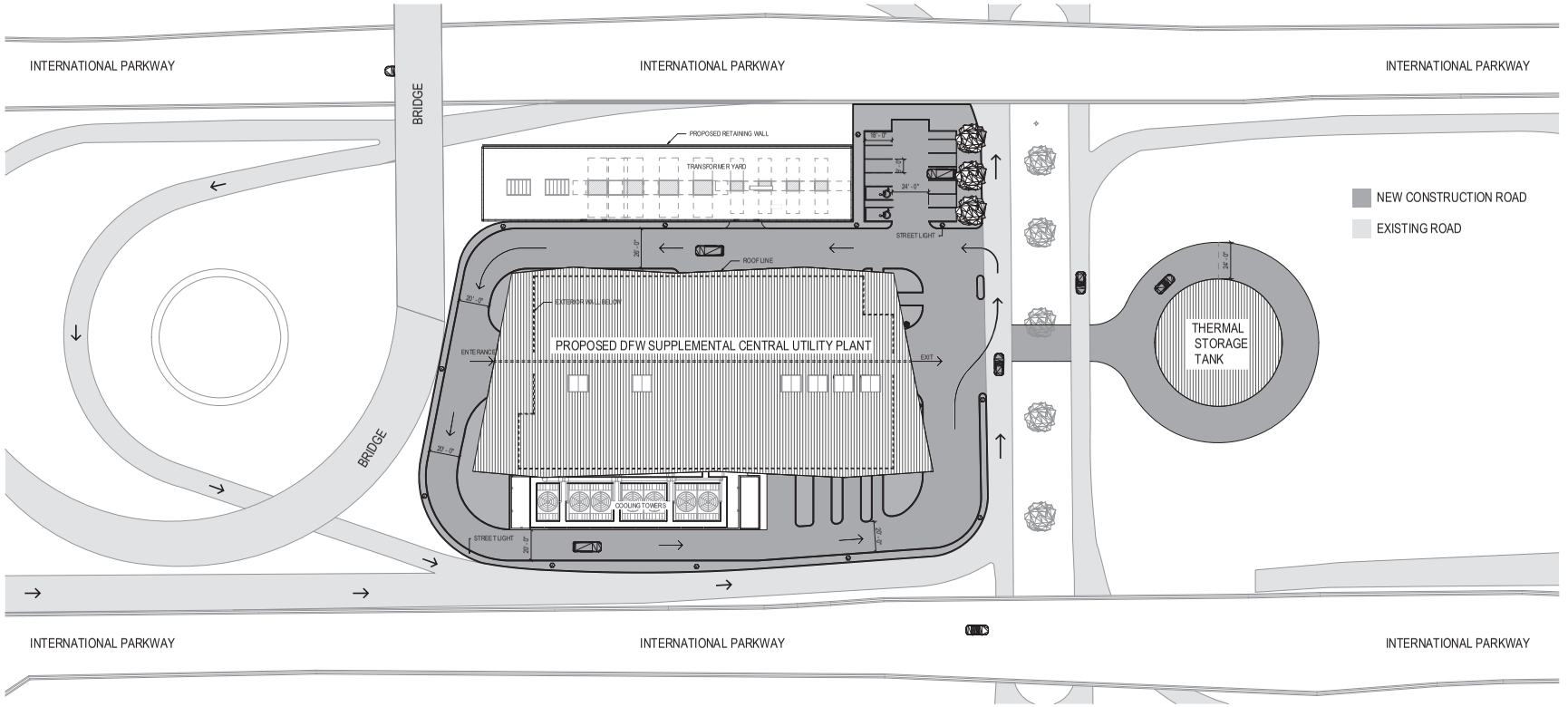
SHEET NUMBER
CU2-1-103

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.

GENERAL NOTES

A RE: A00 DRAWING SERIES FOR LEGENDS, SYMBOLS AND ABBREVIATIONS.
B RE: G01 SHEET SERIES FOR CODE INFORMATION RELATED TO PROJECT.
C RE: CIVIL DRAWINGS FOR GRADING INFORMATION AND SPOT ELEVATIONS.
D.

SHEET NOTES



01 SITE PLAN

1" = 30'-0" 0 8 15 30 60 FEET

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DFW AIRPORT, TX 75261

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ISSUE DATE: 07/30/2020

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A	07/30/2020	30% SCHEMATIC DESIGN

DFW SUPPLEMENTAL CUP

SITE PLAN

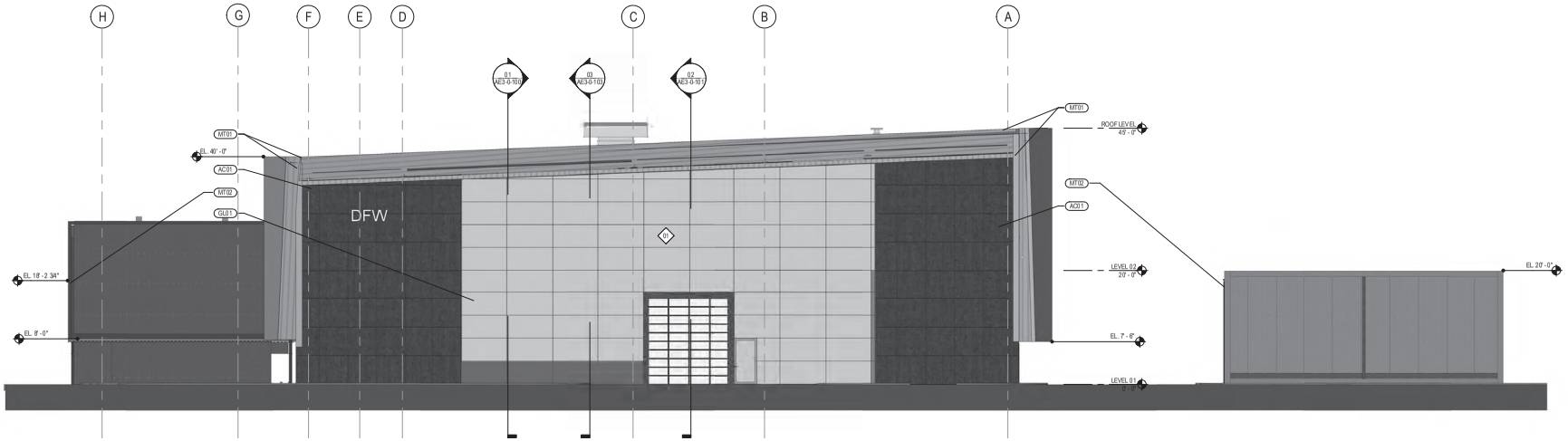
CONTRACT NUMBER: 8500367

PERMIT NUMBER: A20-1298

SHEET NUMBER

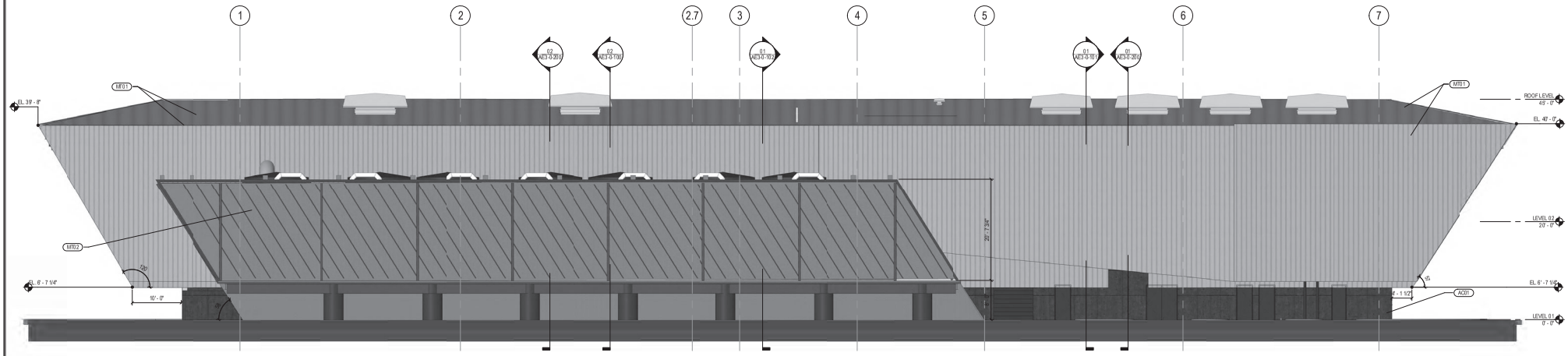
AS1-R-001

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.



02 BUILDING ELEVATION - NORTH

1/8" = 1'-0" 0 2 4 8 16 FEET



01 BUILDING ELEVATION - EAST

1/8" = 1'-0" 0 2 4 8 16 FEET

GENERAL NOTES

A. RE: A00 DRAWING SERIES FOR LEGENDS, SYMBOLS AND ABBREVIATIONS.
B. RE: G0.1 SHEET SERIES FOR CODE INFORMATION RELATED TO PROJECT.
C. ALL PARTITIONS TO BE TYPE "MBA", UNO. ALL FURRED-OUT PARTITIONS TO BE TYPE "D1A", UNO. RE: AE1-0-100 FOR PARTITION TYPES.
D. DOOR NUMBERS ARE THE SAME AS THE ROOM INTO WHICH THEY SWING. MULTIPLE DOORS INTO A SINGLE ROOM HAVE AN ALPHABETICAL DESIGNATION. RE: AE6-0-100 FOR DOOR SCHEDULE AND TYPES.
E. NOT USED
F. ALL PARTITIONS AT THE WINDOW WALL ARE CENTERED ON EITHER COLUMNS OR WINDOW MULLIONS, UNO.
G. COORDINATE AND PROVIDE BLOCKING FOR MILLWORK AND ITEMS ATTACHED OR MOUNTED TO PARTITIONS OR CEILINGS.
H. PARTITIONS ARE DIMENSIONED FROM FINISH FACE TO FINISH FACE, UNO. MAINTAIN DIMENSIONS MARKED "CLEAR". ALLOW FOR THICKNESSES AND MOUNTING OF FINISHES.

SHEET NOTES

LEGEND

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DFW AIRPORT, TX 75261

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DFW SUPPLEMENTAL CUP

BUILDING ELEVATION

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A20-1298

SHEET NUMBER
AE2-0-100

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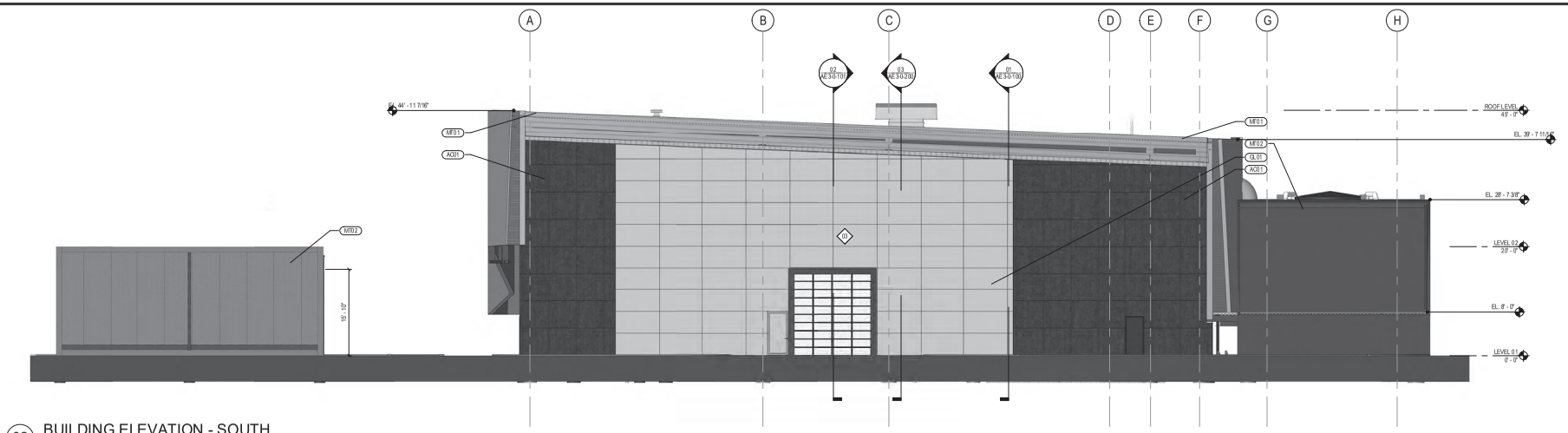
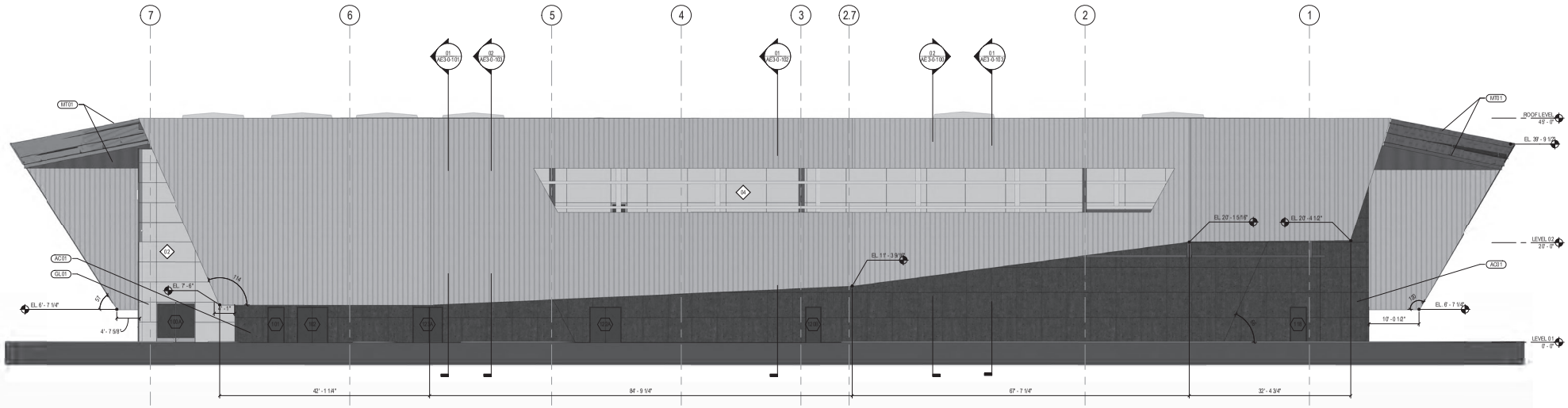


02 BUILDING ELEVATION - SOUTH

1/8" = 1'-0" 0 2 4 8 16 FEET



01 BUILDING ELEVATION - WEST

1/8" = 1'-0" 0 2 4 8 16 FEET

GENERAL NOTES

A. RE: A00 DRAWING SERIES FOR LEGENDS, SYMBOLS AND ABBREVIATIONS.
B. RE: G0.1 SHEET SERIES FOR CODE INFORMATION RELATED TO PROJECT.
C. ALL PARTITIONS TO BE TYPE "MBA", UNO. ALL FURRED-OUT PARTITIONS TO BE TYPE "D3A", UNO. RE: AE1-0-100 FOR PARTITION TYPES.
D. DOOR NUMBERS ARE THE SAME AS THE ROOM INTO WHICH THEY SWING. MULTIPLE DOORS INTO A SINGLE ROOM HAVE AN ALPHABETICAL DESIGNATION. RE: AE6-0-100 FOR DOOR SCHEDULE AND TYPES.
E. NOT USED
F. ALL PARTITIONS AT THE WINDOW WALL ARE CENTERED ON EITHER COLUMNS OR WINDOW MULLIONS, UNO.
G. COORDINATE AND PROVIDE BLOCKING FOR MILLWORK AND ITEMS ATTACHED OR MOUNTED TO PARTITIONS OR CEILINGS.
H. PARTITIONS ARE DIMENSIONED FROM FINISH FACE TO FINISH FACE, UNO. MAINTAIN DIMENSIONS MARKED "CLEAR". ALLOW FOR THICKNESSES AND MOUNTING OF FINISHES.

SHEET NOTES

LEGEND

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DFW AIRPORT, TX 75261

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DFW SUPPLEMENTAL CUP

BUILDING ELEVATION

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A20-1298

SHEET NUMBER
AE2-0-101

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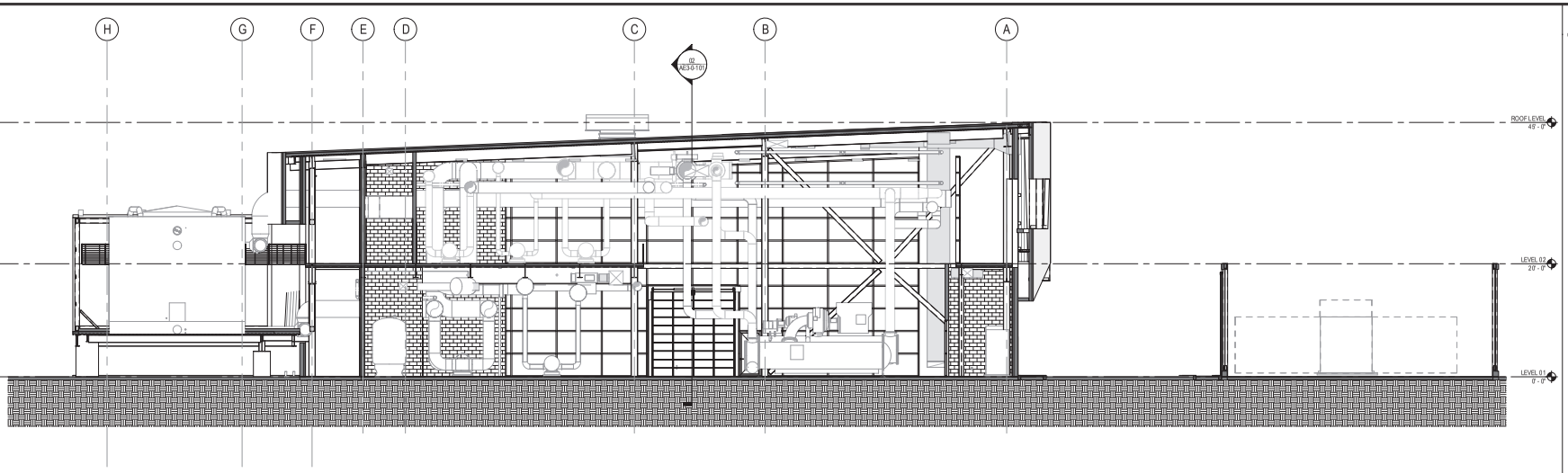
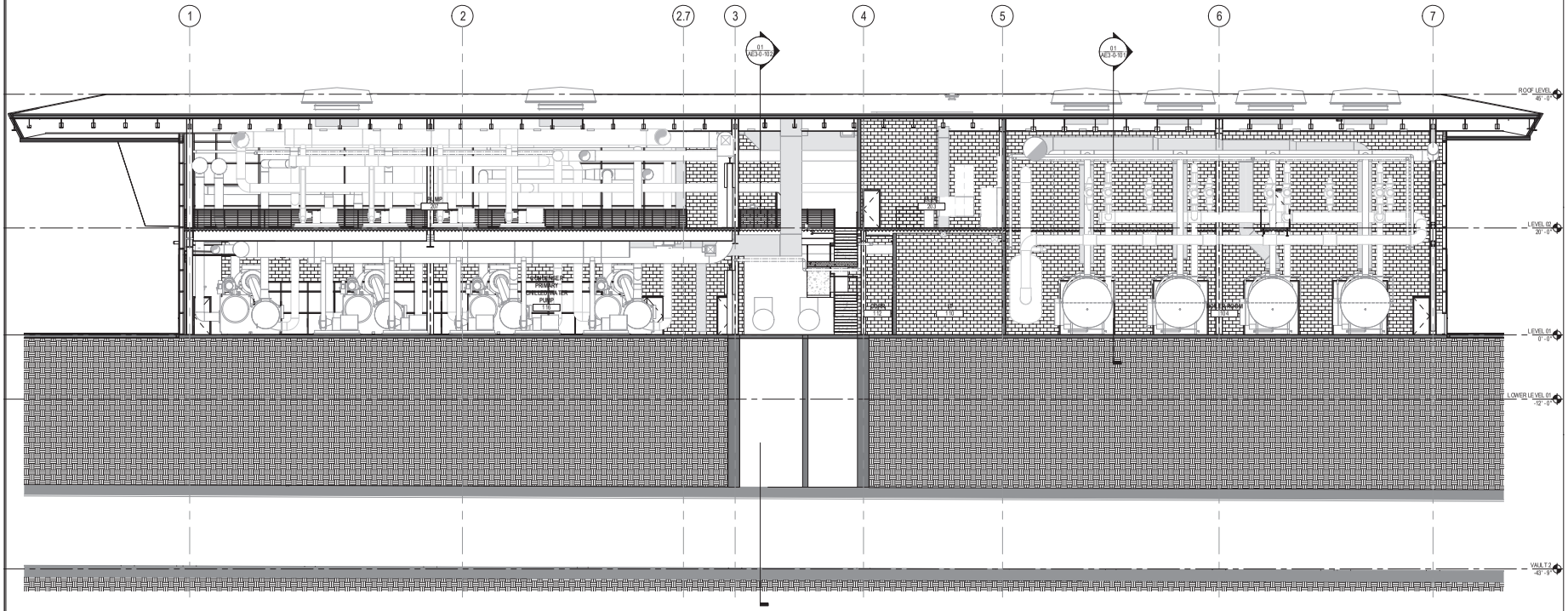
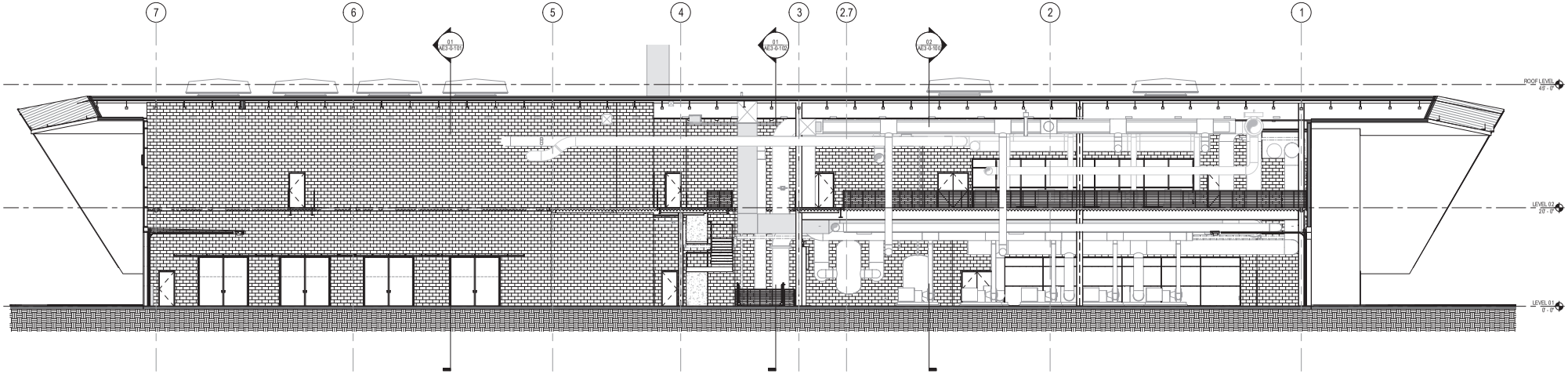


02 BUILDING SECTION - EAST / WEST

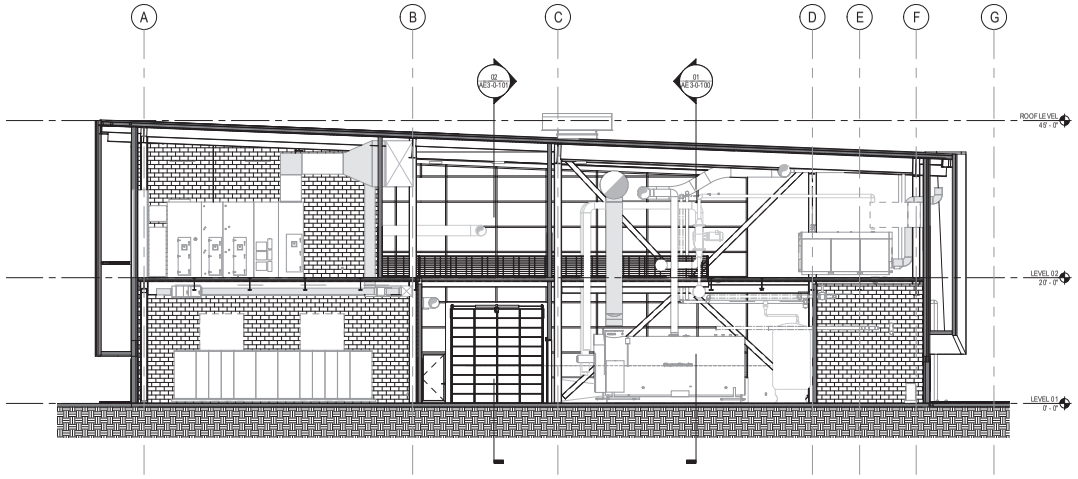
1/8" = 1'-0" 0 2 4 8 16 FEET


1
2
2.7
3
4
5
6
7
01
AE3-0-100
01
AE3-0-101
ROOF LEVEL
49' - 0"
LEVEL 02
20' - 0"
LEVEL 01
0' - 0"
LOWER LEVEL 01
-12' - 0"
VAULT 2
-43' - 9"
PUMP
SUMP
SUMP
S



02 BUILDING SECTION - NORTH / SOUTH

1/8" = 1'-0" 0 2 4 8 16 FEET



01 BUILDING SECTION - EAST / WEST

1/8" = 1'-0" 0 2 4 8 16 FEET

GENERAL NOTES

A. RE: A00 DRAWING SERIES FOR LEGENDS, SYMBOLS AND ABBREVIATIONS.
B. RE: G01 SHEET SERIES FOR CODE INFORMATION RELATED TO PROJECT.
C. ALL PARTITIONS TO BE TYPE "MIA", UNO. ALL FURRED-OUT PARTITIONS TO BE TYPE "D3A", UNO. RE: AE7-0-100 FOR PARTITION TYPES.
D. DOOR NUMBERS ARE THE SAME AS THE ROOM INTO WHICH THEY SWING. MULTIPLE DOORS INTO A SINGLE ROOM HAVE AN ALPHABETICAL DESIGNATION. RE: AE6-0-100 FOR DOOR SCHEDULE AND TYPES.
E. NOT USED
F. ALL PARTITIONS AT THE WINDOW WALL ARE CENTERED ON EITHER COLUMNS OR WINDOW MULLIONS, UNO.
G. COORDINATE AND PROVIDE BLOCKING FOR MILLWORK AND ITEMS ATTACHED OR MOUNTED TO PARTITIONS OR CEILINGS.
H. PARTITIONS ARE DIMENSIONED FROM FINISH FACE TO FINISH FACE, UNO. MAINTAIN DIMENSIONS MARKED "CLEAR". ALLOW FOR THICKNESSES AND MOUNTING OF FINISHES.

SHEET NOTES

LEGEND

DFW DALLAS FORT WORTH INTERNATIONAL AIRPORT

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DFW AIRPORT, TX 75261

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ISSUE DATE: 07/30/2020

NO.	DATE:	DESCRIPTION:
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DFW SUPPLEMENTAL CUP

BUILDING SECTIONS

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A20-1298

SHEET NUMBER
AE3-0-101

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D. DOOR NUMBERS ARE THE SAME AS THE ROOM INTO WHICH THEY SWING. MULTIPLE DOORS INTO A SINGLE ROOM HAVE AN ALPHABETICAL DESIGNATION. RE: A65-0-100 FOR DOOR SCHEDULE AND TYPES.
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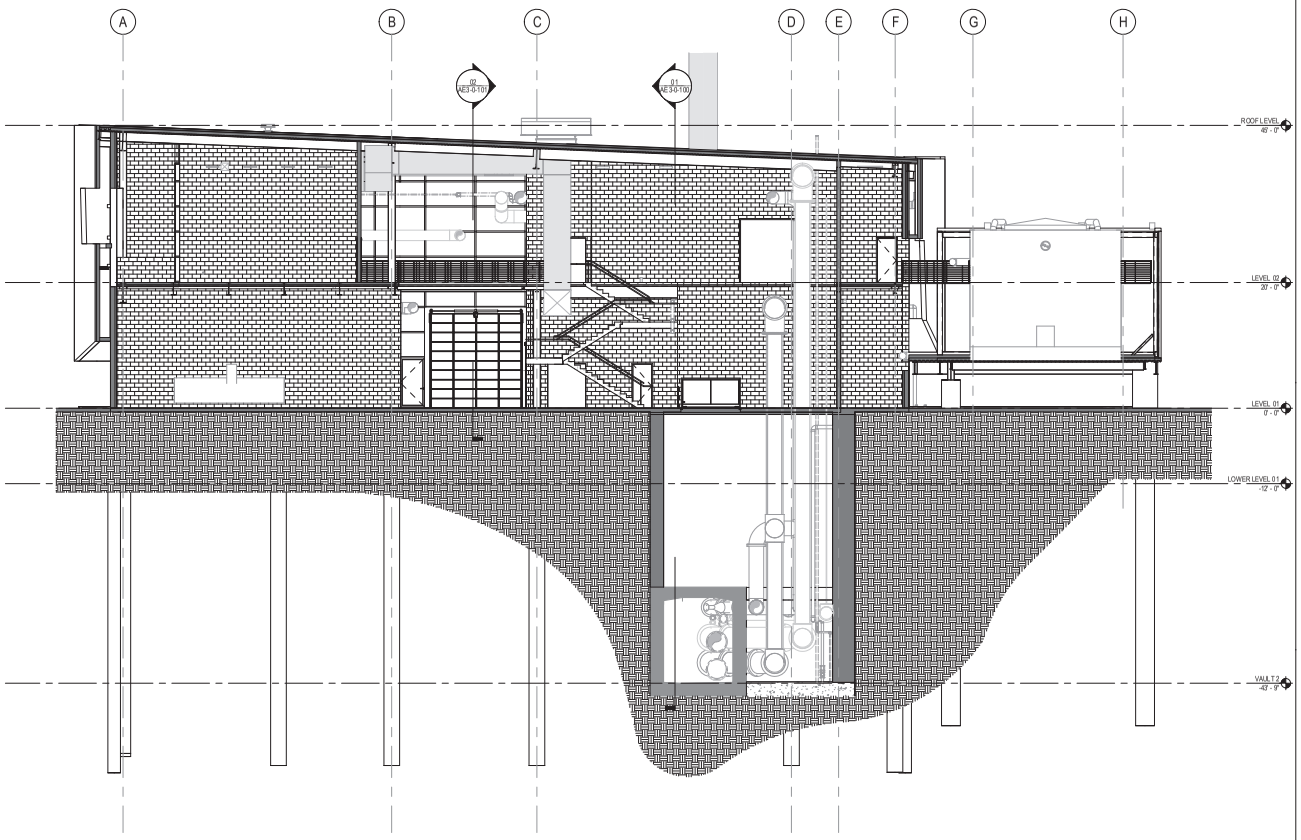

01 BUILDING SECTION - EAST / WEST

1/8" = 1'-0" 0 2 4 8 16 FEET

SHEET NOTES

LEGEND

DFW DALLAS FORT WORTH INTERNATIONAL AIRPORT

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A	07/30/2020	90% SCHEMATIC DESIGN

DFW SUPPLEMENTAL CUP

BUILDING SECTIONS

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A20-1298

SHEET NUMBER
AE3-0-102

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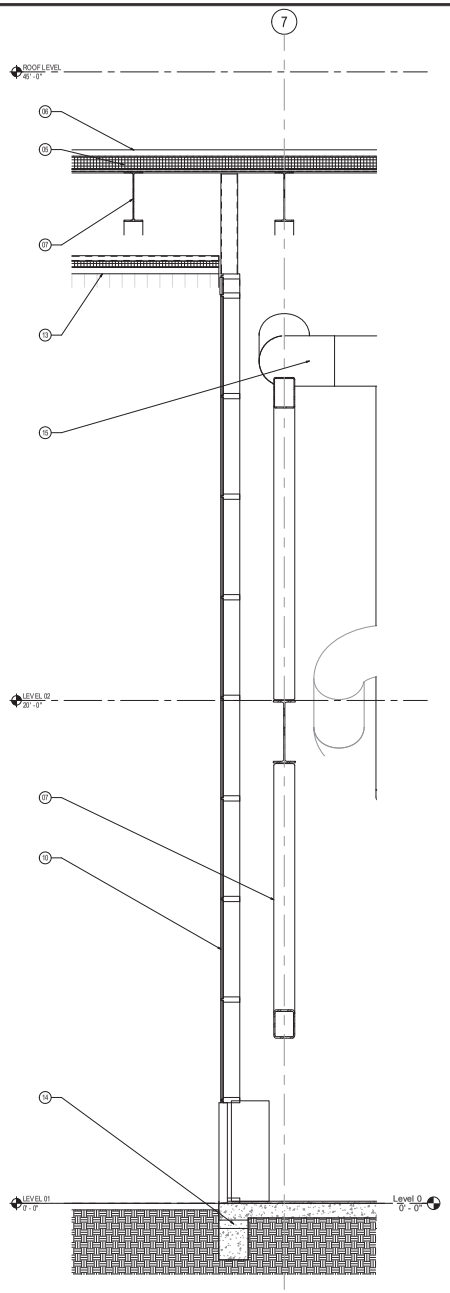
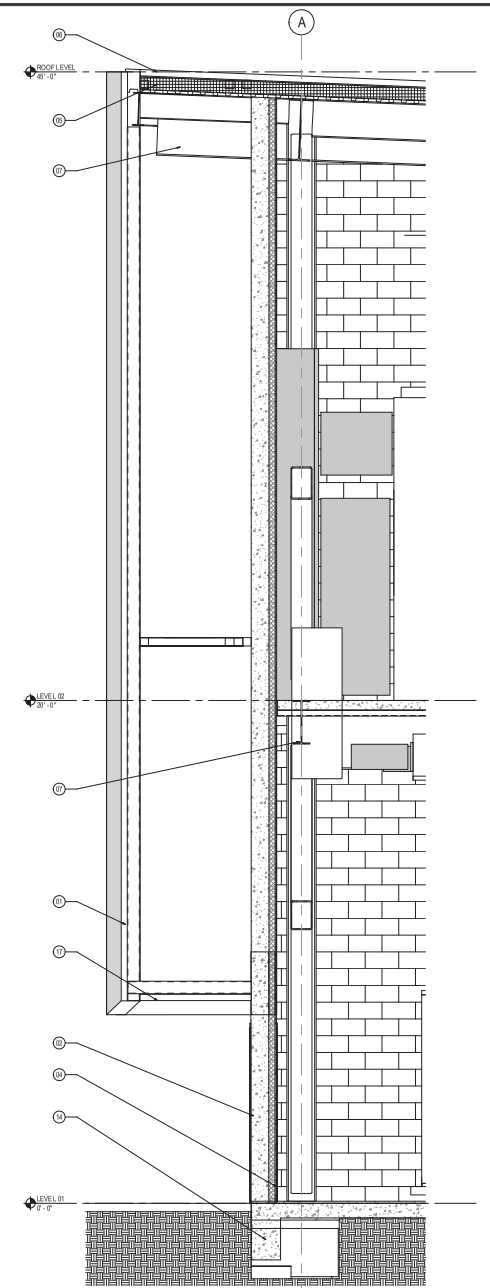


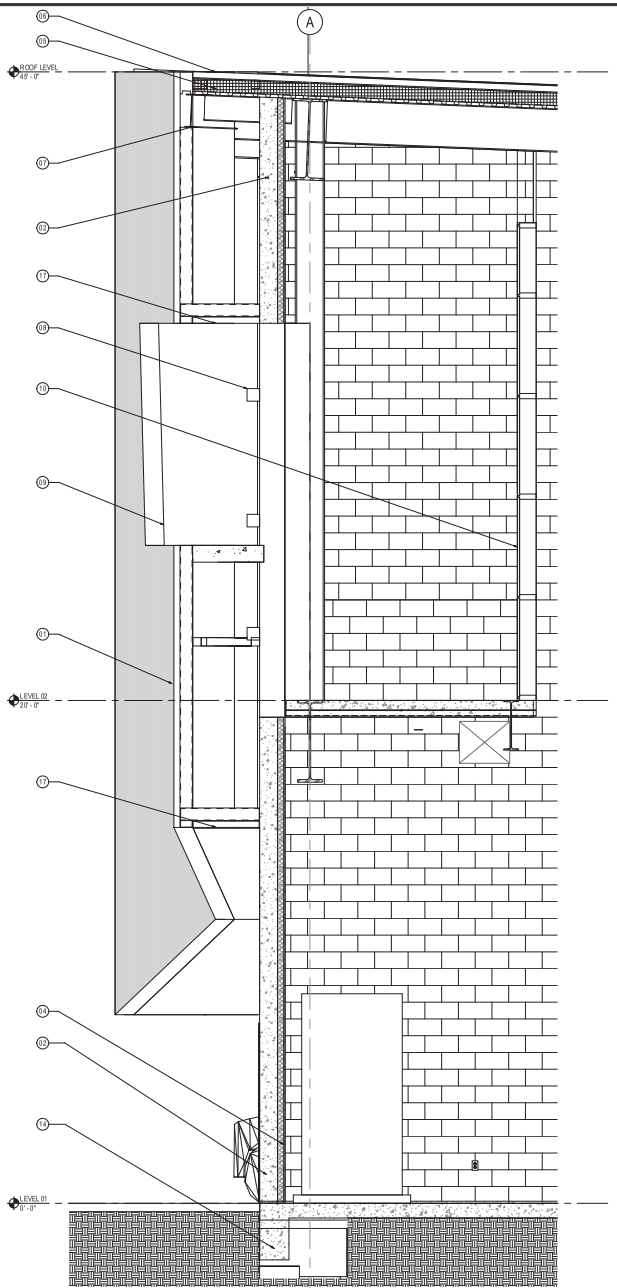
03 WALL SECTION

1/2" = 1'-0"



02 WALL SECTION

1/2" = 1'-0"



01 WALL SECTION

1/2" = 1'-0"

GENERAL NOTES

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B. RE: G0 1 SHEET SERIES FOR CODE INFORMATION RELATED TO PROJECT.
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D. DOOR NUMBERS ARE THE SAME AS THE ROOM INTO WHICH THEY SWING. MULTIPLE DOORS INTO A SINGLE ROOM HAVE AN ALPHABETICAL DESIGNATION. RE: A65-0-100 FOR DOOR SCHEDULE AND TYPES.
E. NOT USED
F. ALL PARTITIONS AT THE WINDOW WALL ARE CENTERED ON EITHER COLUMNS OR WINDOW MULLIONS, UNO.
G. COORDINATE AND PROVIDE BLOCKING FOR MILLWORK AND ITEMS ATTACHED OR MOUNTED TO PARTITIONS OR CEILINGS.
H. PARTITIONS ARE DIMENSIONED FROM FINISH FACE TO FINISH FACE, UNO. MAINTAIN DIMENSIONS MARKED "CLEAR". ALLOW FOR THICKNESSES AND MOUNTING OF FINISHES.

SHEET NOTES

01 METAL PANEL SYSTEM ATTACHED TO 6" METAL STUDS. REF STRUCTURAL FOR ADDITIONAL STRUCTURAL SUPPORT.
02 ARCHITECTURAL CONCRETE PANELS.
04 COLD FORMED METAL STUDS WITH 3" SPRAY FOAM INSULATION BEHIND CONCRETE PANELS
05 RIGID ROOF INSULATION OVER METAL ROOF DECK.
06 METAL PANEL ROOF TO MATCH METAL WALL PANELS.
07 STRUCTURAL FRAMING, REF STRUCTURAL DRWGS
08 DECORATIVE LOUVERS IN FRONT OF RIBBON WINDOW.
09 RIBBON WINDOW, REF ELEVATIONS
10 CURTAIN WALL SYSTEM WITH VISION GLASS
13 METAL PANEL SOFFIT, REF RCP.
14 STRUCTURAL FOUNDATION, REF STRUCTURAL DRAWINGS
15 MECHANICAL COMPONENTS, REF MECHANICAL DRAWINGS
17 METAL PANEL SOFFIT, MATCH ADJACENT METAL WALL PANELS

LEGEND

DFW DALLAS FORT WORTH INTERNATIONAL AIRPORT

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DFW AIRPORT, TX 75261

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07/30/2020

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DFW SUPPLEMENTAL CUP

WALL SECTIONS

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A20-1298

SHEET NUMBER

AE3-0-103

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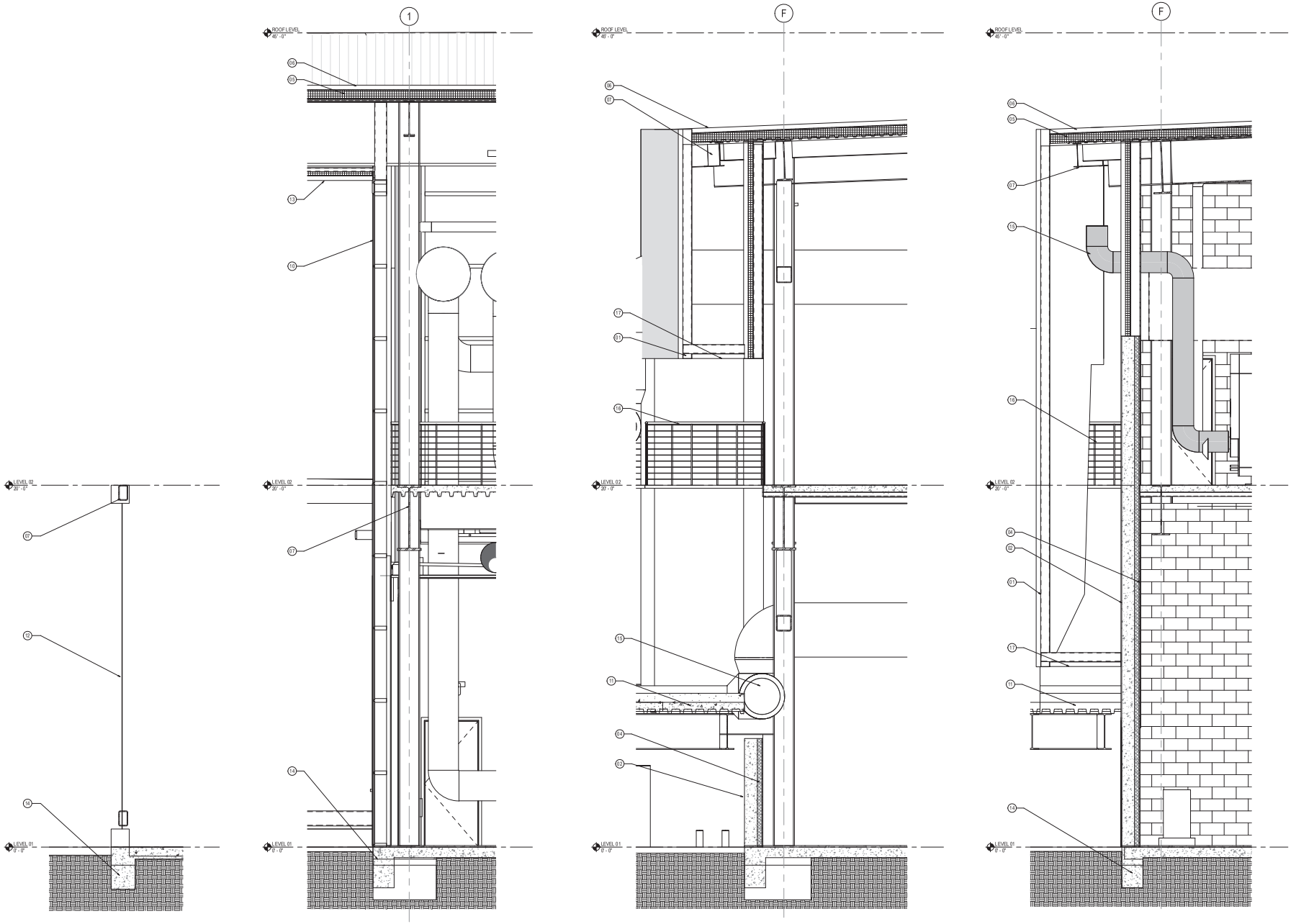

04 WALL SECTION
1/2" = 1'-0"

03 WALL SECTION
1/2" = 1'-0"

02 WALL SECTION
1/2" = 1'-0"

01 WALL SECTION
1/2" = 1'-0"

GENERAL NOTES

A. RE: A00 DRAWING SERIES FOR LEGENDS, SYMBOLS AND ABBREVIATIONS.
B. RE: G0 1 SHEET SERIES FOR CODE INFORMATION RELATED TO PROJECT
C. ALL PARTITIONS TO BE TYPE "MBA", UNO. ALL FURRED-OUT PARTITIONS TO BE TYPE "D3A", UNO. RE: A7-0-100 FOR PARTITION TYPES.
D. DOOR NUMBERS ARE THE SAME AS THE ROOM INTO WHICH THEY SWING. MULTIPLE DOORS INTO A SINGLE ROOM HAVE AN ALPHABETICAL DESIGNATION. RE: A8-0-100 FOR DOOR SCHEDULE AND TYPES.
E. NOT USED
F. ALL PARTITIONS AT THE WINDOW WALL ARE CENTERED ON EITHER COLUMNS OR WINDOW MULLIONS, UNO.
G. COORDINATE AND PROVIDE BLOCKING FOR MILLWORK AND ITEMS ATTACHED OR MOUNTED TO PARTITIONS OR CEILINGS.
H. PARTITIONS ARE DIMENSIONED FROM FINISH FACE TO FINISH FACE, UNO. MAINTAIN DIMENSIONS MARKED "CLEAR". ALLOW FOR THICKNESSES AND MOUNTING OF FINISHES.

SHEET NOTES

01 METAL PANEL SYSTEM ATTACHED TO 6" METAL STUDS. REF STRUCTURAL FOR ADDITIONAL STRUCTURAL SUPPORT.
02 ARCHITECTURAL CONCRETE PANELS.
04 COLD FORMED METAL STUDS WITH 3" SPRAY FOAM INSULATION BEHIND CONCRETE PANELS
05 RIGID ROOF INSULATION OVER METAL ROOF DECK
06 METAL PANEL ROOF TO MATCH METAL WALL PANELS
07 STRUCTURAL FRAMING, REF STRUCTURAL DRWGS
10 CURTAIN WALL SYSTEM WITH VISION GLASS
11 COOLING TOWER PLATFORM, CONCRETE OVER COMPOSITE METAL DECK
12 PERFORATED METAL PANEL TO MATCH COOLING TOWER SCREEN
13 METAL PANEL SOFFIT, REF RCP
14 STRUCTURAL FOUNDATION, REF STRUCTURAL DRAWINGS
15 MECHANICAL COMPONENTS, REF MECHANICAL DRAWINGS
16 GUARDRAIL, REF PLANS
17 METAL PANELS

LEGEND

DFW DALLAS FORT WORTH INTERNATIONAL AIRPORT

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DFW AIRPORT, TX 75261

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UNDER THE AUTHORITY OF:
ANDREW MCCLAIN, TX 30005
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DFW SUPPLEMENTAL CUP

WALL SECTIONS

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A20-1298

SHEET NUMBER
AE3-0-200

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.

DALLAS FORT WORTH INTERNATIONAL AIRPORT

0000 N INTERNATIONAL PKWY
DFW AIRPORT, TX 75261

DFW CTA EXPANSION - Terminal C Utility Corridor

CONTRACT NUMBER: 8500367 Delivery Order 13
PERMIT NUMBER: A21-189B

100 % DESIGN DOCUMENT
02/06/2022



ARCHITECT/INTERIOR DESIGN

Gensler

5005 Greenville Avenue
Dallas, TX 75206
United States

Tel 214.273.1500
Fax 214.273.1505

ENGINEER OF RECORD: MECHANICAL, ELECTRICAL, PLUMBING

ARUP

10370 Richmond Avenue
Suite 475
Houston, TX, 77042

Tel 713.783.2787
TX REG. F-1990

ENGINEER OF RECORD: MECHANICAL, ELECTRICAL, PLUMBING

DFW Consulting Group, Inc.
Mechanical Electrical Plumbing • Engineering

1616 Corporate Ct.
Suite 100
Irving, Texas 75038

Tel 972.929.1199

STRUCTURAL ENGINEER

Thornton Tomasetti

8750 North Central Expressway
Suite 700
Dallas, TX 75231

Tel 972.387.8393
Fax 972.387.8406

FIRE ALARM, FIRE PROTECTION ENGINEER, IT/AV/SECURITY CONSULTANT

ARORA

5605 North MacArthur Blvd
10th Floor
Irving, TX 75038

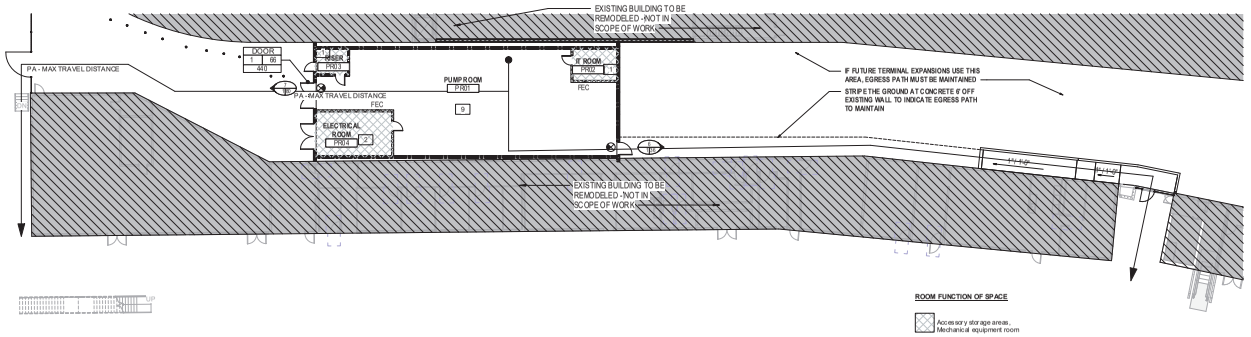
Tel 912.402.5470
Fax 610.459.7950

CIVIL ENGINEER

CP&Y an STV Company

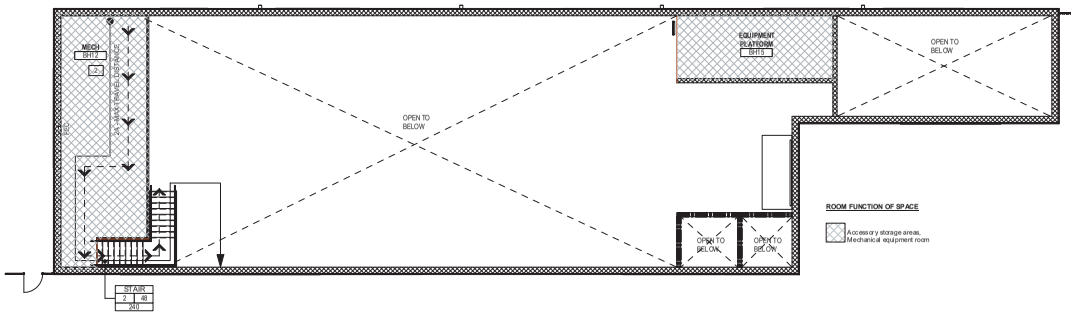
1820 Regal Row
Suite 200
Dallas, TX , 75235

Tel 214.638.0500



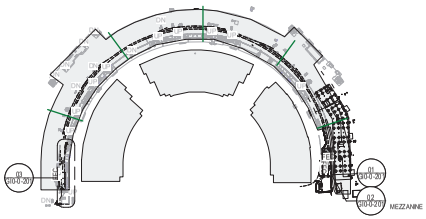
03 LIFE SAFETY PLAN - NORTH PUMP ROOM - EXTENSION TO EXISTING BUILDING

1/16" = 1'-0" 0 48 96 192 384 INCHES



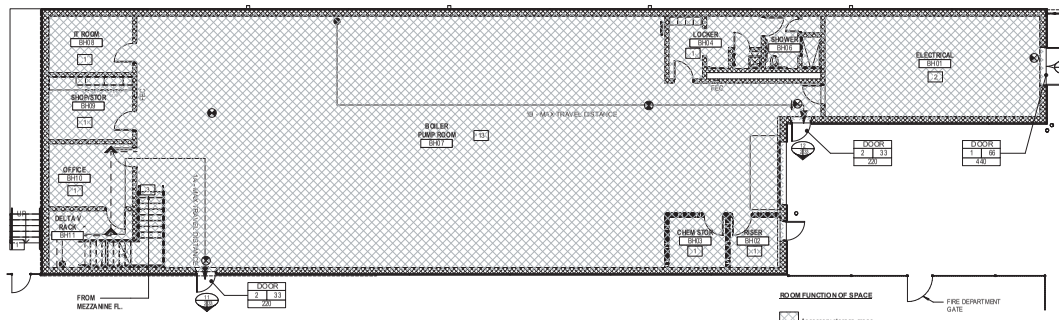
02 LIFE SAFETY PLAN - SOUTH BOILER HOUSE MEZZANINE LEVEL

1/8" = 1'-0" 0 48 96 192 INCHES



04 LIFE SAFETY PLAN - KEY PLAN

1" = 300'-0" 0 300 600 FEET



01 LIFE SAFETY PLAN - SOUTH BOILER HOUSE LEVEL 01

1/8" = 1'-0" 0 48 96 192 INCHES

PUMP ROOM OCCUPANCY TABULATION

Occupancy Type	Area	Occupant Load Factor	Occupancy Square Footage Type	Occupancy Load
Accessory storage areas, Mechanical equipment room	476 SF	300	Gross	3
	476 SF			3

MEZZANINE TRAVEL DISTANCES

PATH SEGMENT NAME	PROVIDED	COMMON PATH OF EGRESS TRAVEL
P A - MAX TRAVEL DISTANCE	2'23" - 1 5/32"	REQUIRED 100' ACTUAL 0'
P B - MAX TRAVEL DISTANCE	2'58" - 7 1/2"	REQUIRED 100' ACTUAL 0'

MEZZANINE OCCUPANCY TABULATION

Occupancy Type	Area	Occupant Load Factor	Occupancy Square Footage Type	Occupancy Load
Accessory storage areas, Mechanical equipment room	823 SF	300	Gross	2
	823 SF			2

MEZZANINE TRAVEL DISTANCES

PATH SEGMENT NAME	PROVIDED	COMMON PATH OF EGRESS TRAVEL
2A - MAX TRAVEL DISTANCE	92' - 4 3/32"	72'-0"

LEVEL 1 OCCUPANCY TABULATION

Occupancy Type	Area	Occupant Load Factor	Occupancy Square Footage Type	Occupancy Load
Accessory storage areas, Mechanical equipment room	1,070 SF	300	Gross	5
	1,070 SF			5

LEVEL 1 TRAVEL DISTANCES

PATH SEGMENT NAME	PROVIDED	COMMON PATH OF EGRESS TRAVEL
1A - MAX TRAVEL DISTANCE	78' - 0 1/16"	38' - 3"
1B - MAX TRAVEL DISTANCE	141' - 7 13/32"	0' - 0"

GENERAL NOTE

A. PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A WITHIN 75-FOOT TRAVEL DISTANCE TO ALL PORTIONS OF THE BUILDING ON EACH FLOOR, AND ADDITIONAL EXTINGUISHERS AS REQUIRED BY AUTHORITY HAVING JURISDICTION.

B. PROVIDE EXIT SIGN WITH 6" LETTERS OVER REQUIRED EXITS, WHERE SHOWN ON DRAWINGS AND AS REQUIRED BY APPLICABLE CODES, AND ADDITIONAL SIGNS AS REQUIRED BY AUTHORITY HAVING JURISDICTION. CONNECT EXIT SIGNS TO EMERGENCY POWER CIRCUITS AS REQUIRED. COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS.

C. DOORS OPENING INTO REQUIRED 2-HOUR, FIRE-RESISTIVE SPACES SHALL BE PROTECTED WITH A SMOKE OR DRAFT STOP ASSEMBLY HAVING A 90-MINUTE RATING AND SHALL BE SELF-CLOSING.

D. FIRE RATED DOOR JAMBS TO BE TIGHT-FITTING, SMOKE AND DRAFT CONTROLLED.

E. STORAGE, DISPENSING OR USE OF ANY FLAMMABLE OR COMBUSTIBLE LIQUIDS, FLAMMABLE GAS AND HAZARDOUS SUBSTANCES SHALL COMPLY WITH ALL APPLICABLE LAWS AND REGULATIONS.

F. WOOD BLOCKING WHERE PERMITTED SHALL BE FIRE TREATED IN ACCORDANCE WITH APPLICABLE CODE REQUIREMENTS.

G. EXTEND OR MODIFY EXISTING FIRE/LIFE SAFETY SYSTEM AS REQUIRED TO PROVIDE AN APPROVED FIRE/ LIFE SAFETY SYSTEM. SUBMIT PLANS TO AUTHORITY HAVING JURISDICTION WITH COMPLETE DESCRIPTION OF SEQUENCE OF OPERATION, AND OBTAIN APPROVAL PRIOR TO INSTALLATION.

H. EXTEND OR MODIFY EXISTING AUTOMATIC FIRE EXTINGUISHING SYSTEM AS REQUIRED TO PROVIDE AN APPROVED AUTOMATIC FIRE EXTINGUISHING SYSTEM. SUBMIT PLANS TO AUTHORITY HAVING JURISDICTION AND OBTAIN APPROVAL PRIOR TO INSTALLATION.

I. AUTOMATIC SPRINKLER SYSTEMS SHALL BE SUPERVISED BY AN APPROVED CENTRAL, PROPRIETARY OR REMOTE STATION SERVICE OR A LOCAL ALARM WHICH WILL GIVE AN AUDIBLE SIGNAL AT A CONSTANTLY ATTENDED LOCATION.

LEGEND

- AED — AUTOMATED EXTERNAL DEFIBRILLATOR
- 1 HR RATED PARTITION
- 2 HR RATED PARTITION
- P2E1 — EGRESS TRAVEL PATH W/ LABEL
- COMMON PATH OF EGRESS TRAVEL
- CEILING MOUNTED EXIT SIGN (SEE RCP FOR EXACT LOCATIONS)
- WALL MOUNTED EXIT SIGN (SEE RCP FOR EXACT LOCATIONS)
- STAIR OR DOOR CAPACITY
- STAIR DOOR REQUIRED WIDTH
- STAIR DOOR PROVIDED WIDTH
- OCCUPANT CAPACITY
- NUMBER OF OCCUPANTS
- EXIT WIDTH PROVIDED
- EXIT WIDTH REQUIRED
- NUMBER OF OCCUPANTS
- FEC — RECESSED FIRE EXT. CABINET WITH ABC FIRE EXTINGUISHER
- WATER BASED EXTINGUISHER WITH ORDER AT CHEMICAL STO. ONLY

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03.09.2022

Gensler
27.7644.012

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4	03/04/2022	100 % BIDDING DOCUMENT

CTA EXPANSION - TERM C UTILITY CORRIDOR

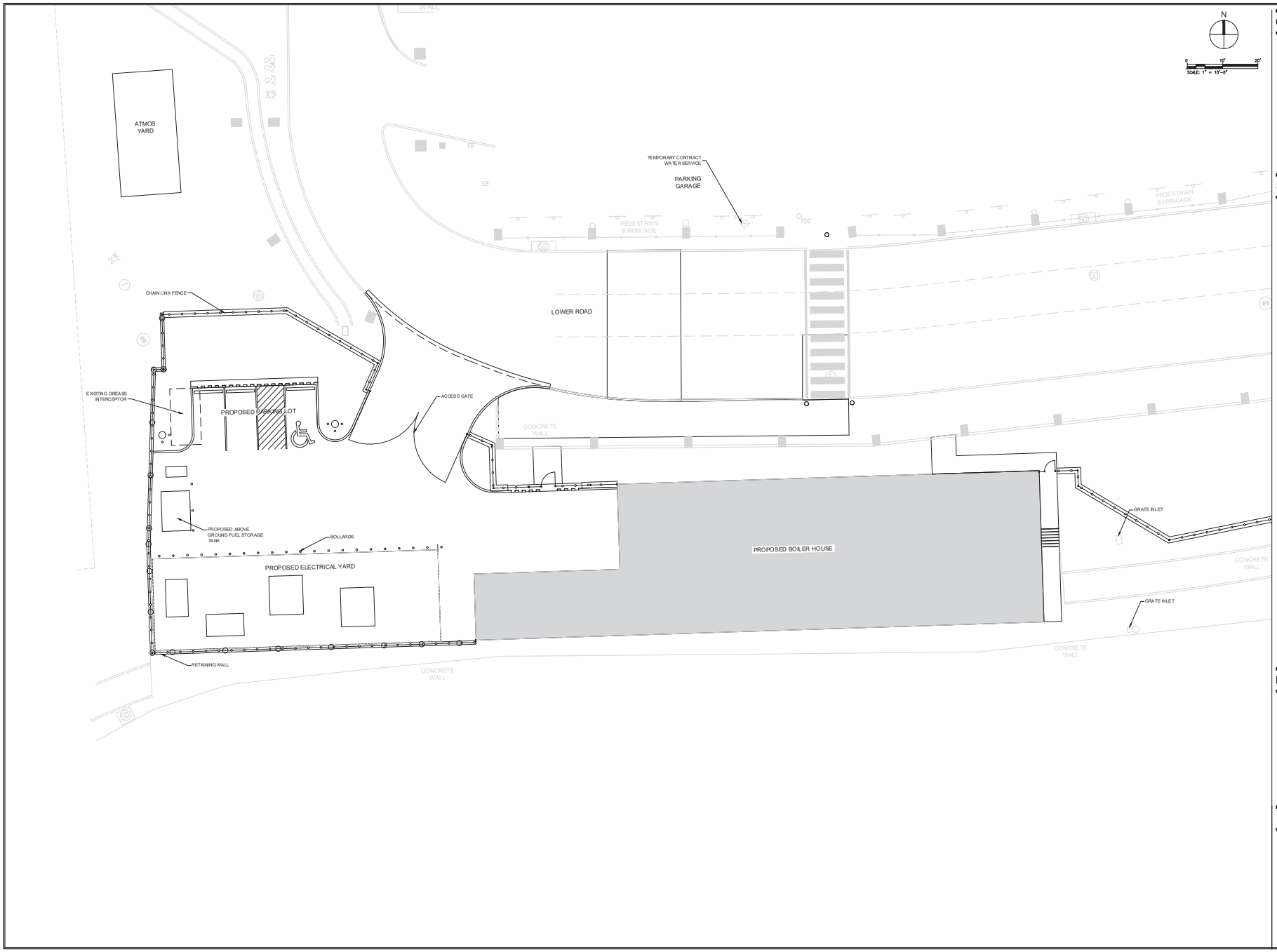
LIFE SAFETY PLAN - PUMP RM & BOILER HOUSE

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A21-189B

SHEET NUMBER
GI0-0-201

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.



GENERAL NOTE

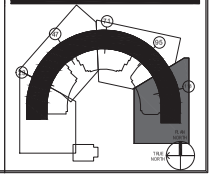
1. CONSTRUCTION WILL GENERALLY FOLLOW THE SEQUENCE BELOW:
   a. CONTRACTOR SHALL PREPARE AND SUBMIT FOR REVIEW A TRAFFIC CONTROL PLAN THAT MEETS THE STANDARDS OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
   b. INSTALL MAINTENANCE OF TRAFFIC DEVICES, EROSION CONTROL MEASURES, REMOVE TOPSOIL, CLEARING & GRUBBING, AND PERFORM EXCAVATION.
   c. INSTALL STORM DRAIN, WATER, SANITARY SEWER, CONDUIT FOR LIGHTING AND COMMUNICATIONS.
   d. PAVE THE DRIVEWAY AND PARKING LOT SECTION.
   e. INSTALL LIGHTING.
   f. STRIPE THE DRIVEWAY AND PARKING LOT.
   g. INSTALL APPLICABLE ROADSIDE SIGNAGE.
   h. REMOVE EROSION CONTROL MEASURES AFTER VEGETATION IS ESTABLISHED IN AREAS DISTURBED BY CONSTRUCTION, OR AS PERMITTED BY THE OAR.

SHEET NOTE

1. STAGING YARD LOCATIONS ARE SHOWN AT TENTATIVE LOCATIONS PENDING DFW APPROVAL.
2. FUELING OF VEHICLES, FUEL STORAGE, AND CHEMICAL STORAGE SHALL NOT TAKE PLACE IN STAGING YARD.
3. SPILL RESPONSE PLAN SHALL BE FOLLOWED FOR SPILLS. MAINTAIN COPY OF SPILL RESPONSE PLAN AND SOLID WASTE MANAGEMENT PLAN AT STAGING YARD FOR INSPECTION BY DFW STAFF.
4. MATERIAL SHALL NOT BE STORED OUTSIDE OF CHAIN LINK FENCE.
8. CHAIN LINK FENCE SHALL HAVE SCREENING MATERIAL INSTALLED THROUGHOUT THE DURATION OF THE PROJECT. ACCESS GATE WILL NOT BE PAID SEPARATELY BUT WILL BE CONSIDERED SUBSIDIARY TO CHAIN LINK FENCE BID ITEM.
9. CONTRACTOR'S EMPLOYEES' PERSONAL PROPERTY SHALL NOT BE STORED IN STAGING YARD.
10. UPON SUBSTANTIAL COMPLETION OF CONSTRUCTION, REMOVE FLEXIBLE BASE ENTRANCE AND CHAIN LINK FENCE.
11. CONTRACTOR SHALL CLEAN THE STAGING YARD TO REMOVE ALL TRASH AND OTHER CONSTRUCTION MATERIALS AS WELL AS ANY EQUIPMENT AND RESTORE TO PRECONSTRUCTION CONDITIONS WITH NEW SEEDING AND SOD BEFORE VACATING THE STAGING YARD.
12. SEE EROSION CONTROL DETAIL SHEET GC5-0-101 FOR ADDITIONAL INFORMATION.
13. ESTABLISHING A BATCH PLANT IS NOT ALLOWED FOR THIS PROJECT.
14. MAX STOCKPILE HEIGHT 20'.
15. STANDARD STREET SWEEPER (WET VAC) REQUIRED ON SITE AT ALL TIMES.
16. SEE SHEETS GC0-0-104 AND GC0-0-105 FOR TRAFFIC CONTROL PLANS.

LEGEND

KEY PLAN



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TBPE REG. NO. F-1749

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CTA EXPANSION - TERM C UTILITY CORRIDOR

CONTRACT LAYOUT PLAN

CONTRACT NUMBER: 8500367

PERMIT NUMBER:

SHEET NUMBER
GC0-0-101

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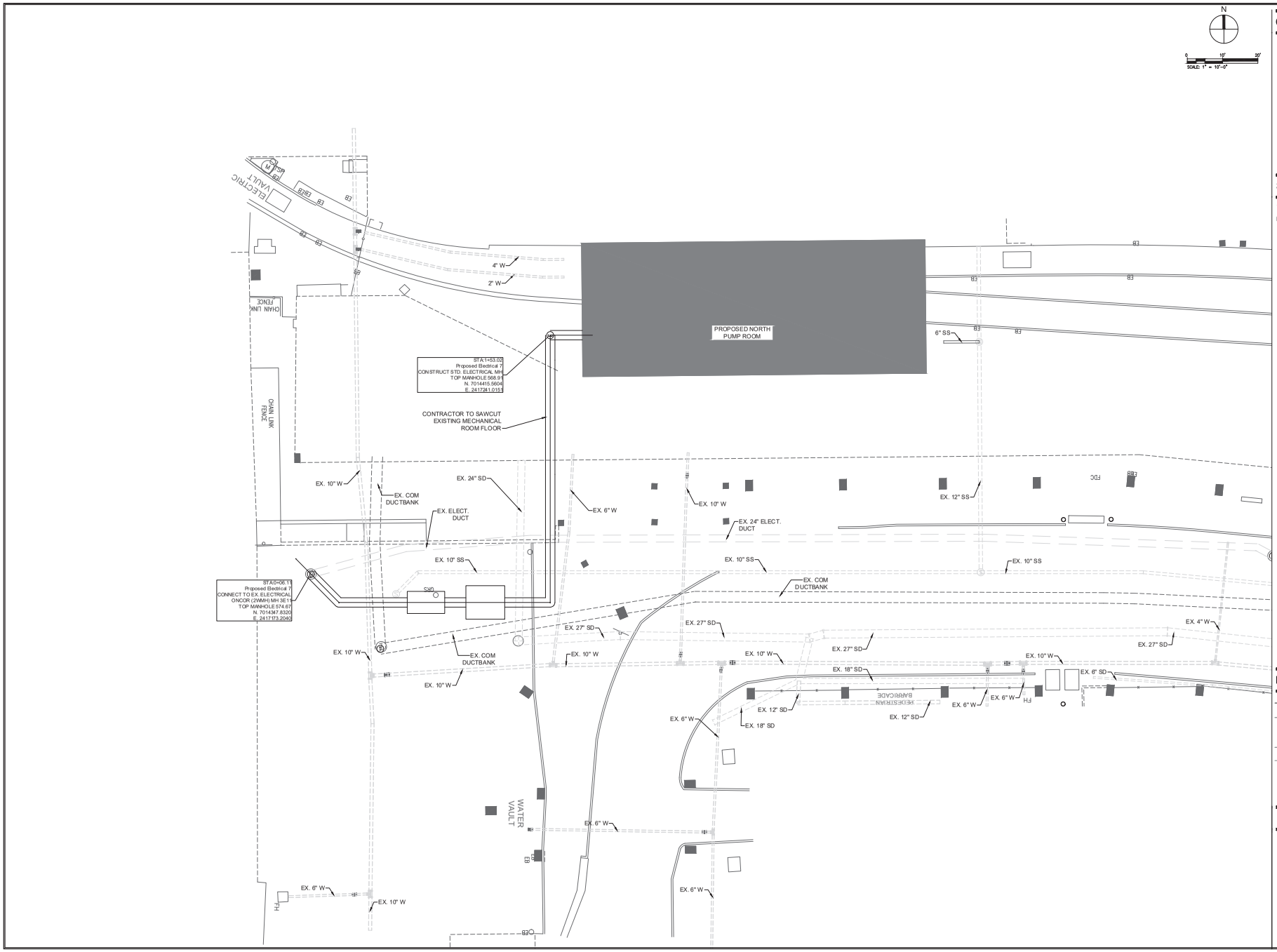


GENERAL NOTE

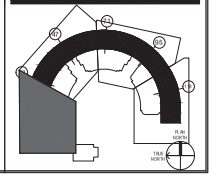
SHEET NOTE

1. ALL ELECTRICAL INFRASTRUCTURE WORK WILL CONFORM TO ONCOR ELECTRIC DELIVERY SPECIFICATIONS.
2. SEE SHEET CU2-1-102 FOR DUCT BANK PROFILES.

LEGEND

- PROP. SANITARY SEWER MANHOLE
- PROP SANITARY SEWER
- PROP. STORM MANHOLE
- PROP. WATER
- EXIST UTILITIES
- WATER VALVE
- FIRE HYDRANT

KEY PLAN



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CTA EXPANSION - TERM C UTILITY CORRIDOR
ELECTRICAL INFRASTRUCTURE PLAN
NORTH PUMP STATION

CONTRACT NUMBER: 8500367
PERMIT NUMBER:

SHEET NUMBER
CU1-1-106

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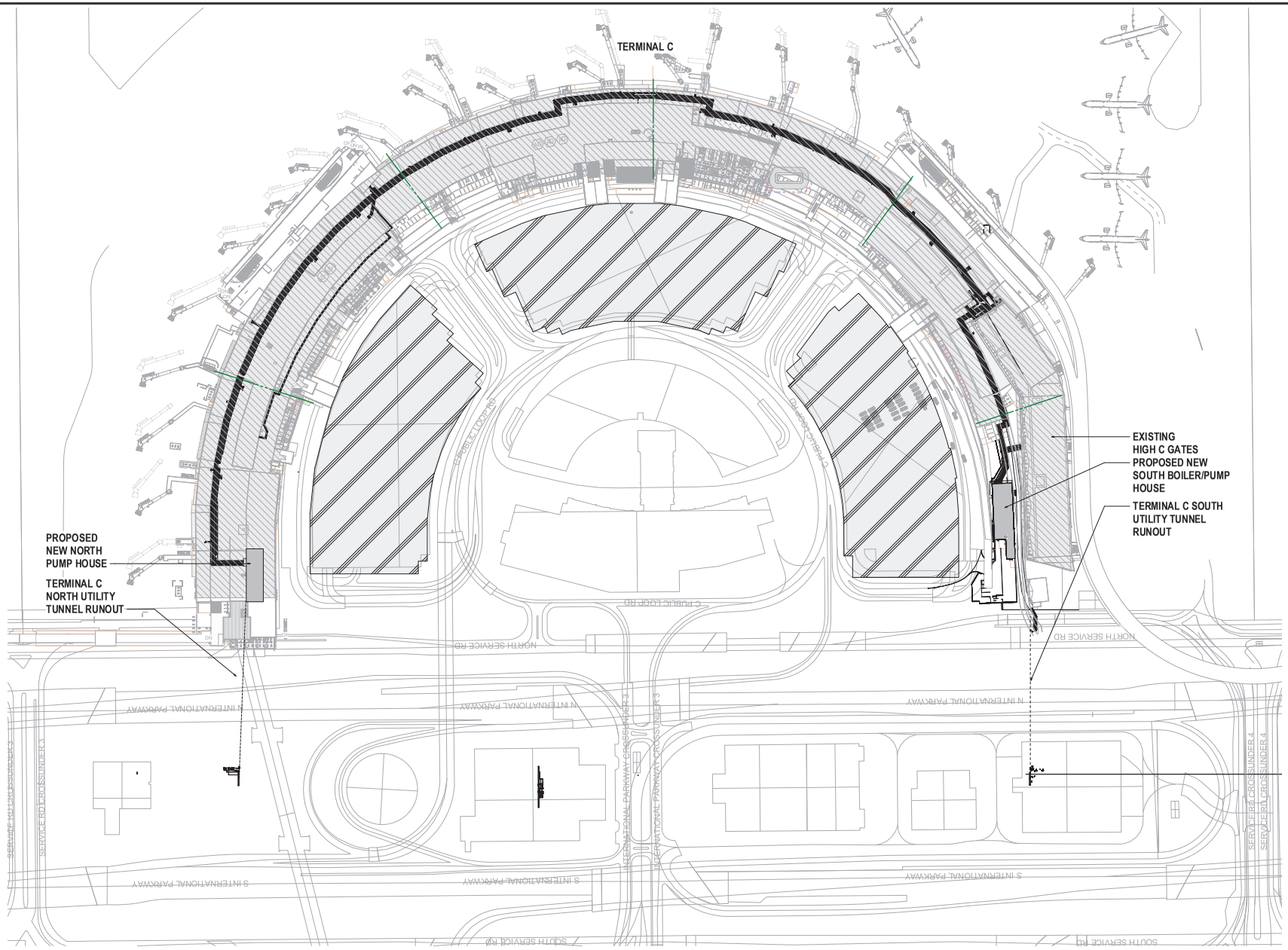


01 SITE PLAN - ENLARGED

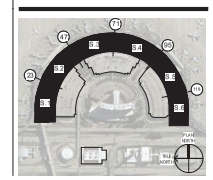
1" = 80'-0" 0 80 160 FEET

GENERAL NOTE

SHEET NOTE

LEGEND

KEY PLAN



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CTA EXPANSION - TERM C UTILITY CORRIDOR

SITE PLAN - ENLARGED

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A21-189B

SHEET NUMBER
AS1-0-200

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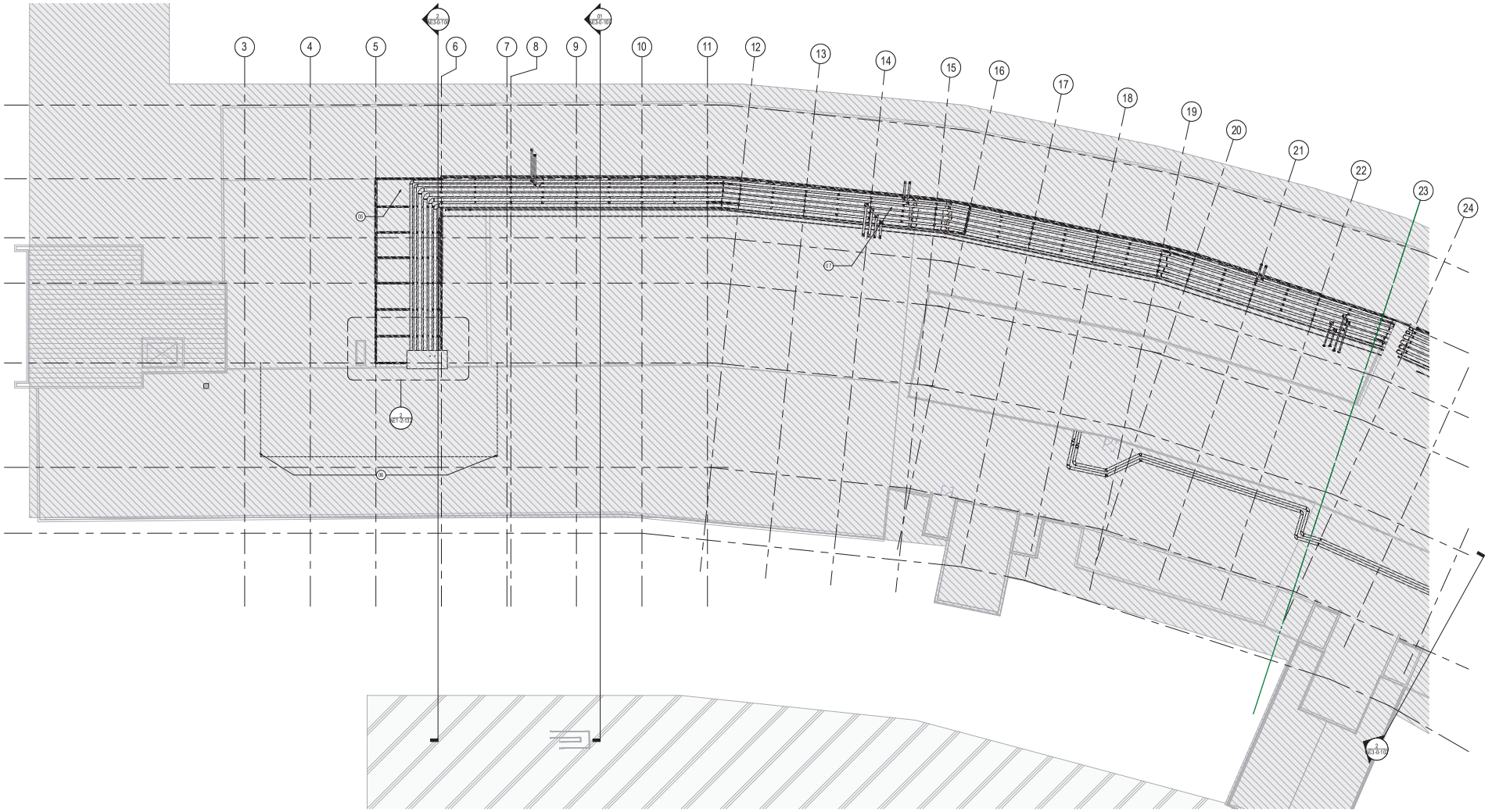


1 ROOF PLAN - ROOF LEVEL SEGMENT 1

1/16" = 1'-0"

GENERAL NOTES

SHEET NOTES

01 CRICKET
02 2 PLY MODIFIED BITUMEN ROOF
03 PREFINISHED METAL SCUPPER AND DOWNSPOUT
04 PREFINISHED METAL COPING CAP.
05 UTILITY LINES, REFER TO MEP
06 PUMP ROOM BELOW
07 ROOF PENETRATIONS AT EVERY PIPE SUPPORT TO BE FULLY FLASHED INTO EXISTING ROOF CONDITION. SEE ARCHITECTURAL DETAILS. EVERY PENETRATION AT EXISTING ROOF REQUIRES ASBESTOS ABATEMENT.
09 NEW CONSTRUCTION AND ROOFING BY TERMINAL C TEAM
11 OVERFLOW THROUGH WALL. SEE PLUMBING.
12 BOILER STACKS AND DUCTS. SEE MEP AND DETAIL 06/AE5-0-101 AND 07/AE5-0-101 FOR ROOF PENETRATION.
13 EPDM ROOFING TO MATCH EXISTING TERMINAL C ROOF
14 MEP PIPINGS. REFER MEP.
15 SECURITY FENCING ABOVE EXISTING CONC. RAIL TO EXTEND 10' BEYOND BOILER BUILDING EACH SIDES. COORDINATE FINAL LOCATION, HEIGHT AND FINISHES WITH DFW PUBLIC SAFETY AND TERMINAL C CUSTOMER EXPERIENCE TEAM
16 DEMOLISH EXISTING STEEL PLATFORM AND STAIR
17 NEW GALVANIZED AND PAINTED STEEL PLATFORM WITH STAIRS ON BOTH SIDE. COORDINATE WITH PIPE HEIGHT. SEE STRUCTURAL.
18 LOAD FOR PIPES AND STEEL SUPPORTS TO BE DESIGNED INTO NEW TERMINAL C EXPANSION PROJECT

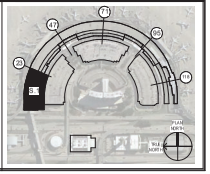
LEGEND

EXISTING TERMINAL (NOT IN SCOPE)

PARKING (NOT IN SCOPE)

DEMO

KEY PLAN



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CTA EXPANSION - TERM C UTILITY CORRIDOR

ROOF PLAN - ROOF LEVEL SEGMENT 1

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A21-1898

SHEET NUMBER
AE1-2-121A

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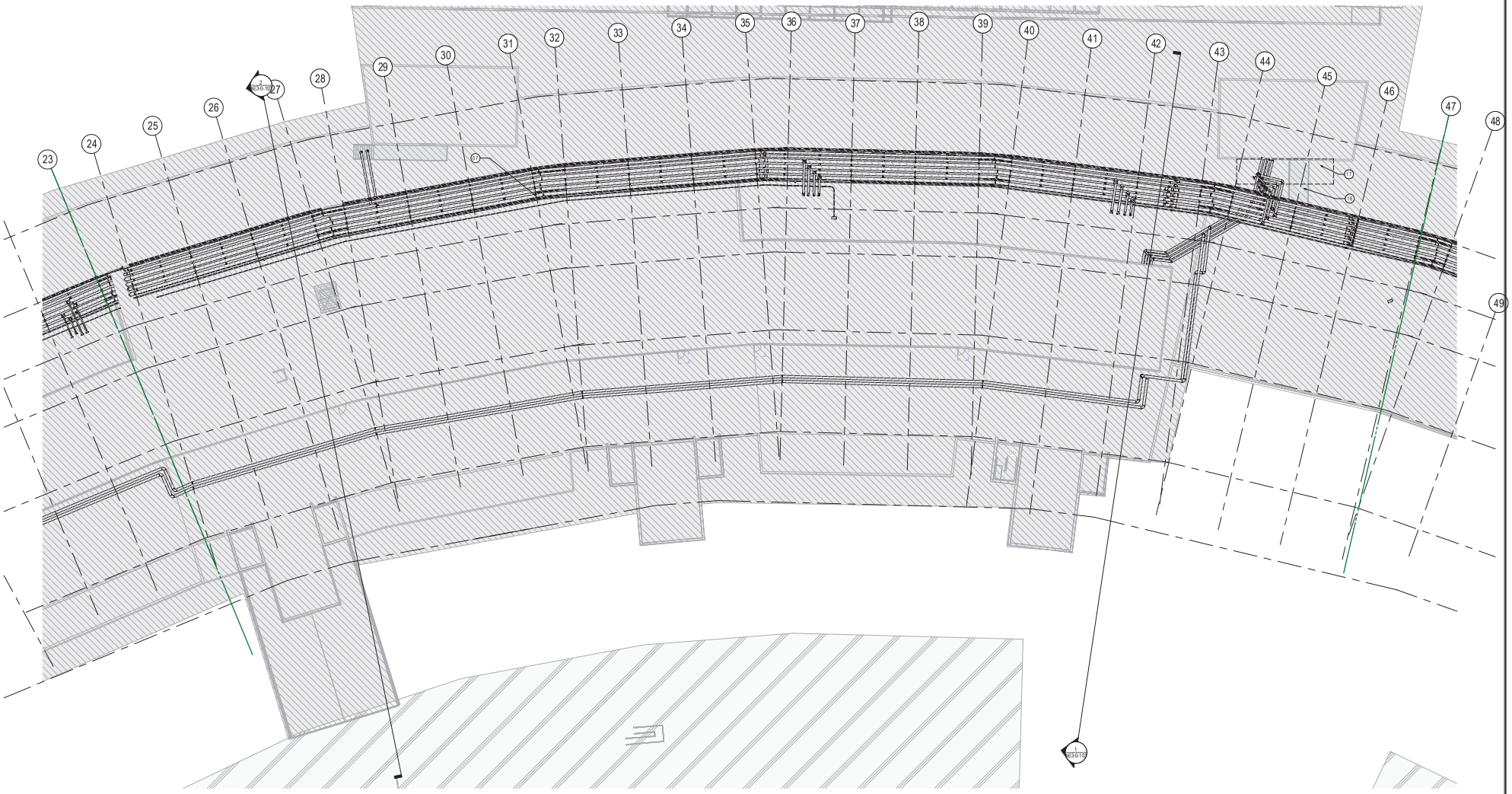

1 ROOF PLAN - ROOF LEVEL SEGMENT 2

1/95" = 1'-0" 0 48 96 192 384 INCHES

GENERAL NOTES

SHEET NOTES

01 CRICKET
02 2 PLY MODIFIED BITUMEN ROOF
03 PREFINISHED METAL SCUPPER AND DOWNSPOUT
04 PREFINISHED METAL COPING CAP
05 UTILITY LINES, REFER TO MEP
06 PUMP ROOM BELOW
07 ROOF PENETRATIONS AT EVERY PIPE SUPPORT TO BE FULLY FLASHED IN TO EXISTING ROOF CONDITION. SEE ARCHITECTURAL DETAILS. EVERY PENETRATION AT EXISTING ROOF REQUIRES ASBESTOS ABATEMENT.
09 NEW CONSTRUCTION AND ROOFING BY TERMINAL C TEAM
11 OVERFLOW THROUGH WALL. SEE PLUMBING.
12 BOILER STACKS AND DUCTS. SEE MEP AND DETAIL 06AE5-0-101 AND 07AE5-0-101 FOR ROOF PENETRATION.
13 EPDM ROOFING TO MATCH EXISTING TERMINAL C ROOF
14 MEP PIPINGS. REFER MEP.
15 SECURITY REMOVING ABOVE EXISTING CONC. RAIL TO EXTEND 10' BEYOND BOILER BUILDING EACH SIDES. COORDINATE FINAL LOCATION, HEIGHT AND FINISHES WITH DFW PUBLIC SAFETY AND TERMINAL C CUSTOMER EXPERIENCE TEAM
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18 LOAD FOR PIPES AND STEEL SUPPORTS TO BE DESIGNED INTO NEW TERMINAL C EXPANSION PROJECT

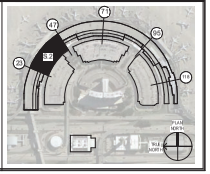
LEGEND

EXISTING TERMINAL (NOT IN SCOPE)

PARKING (NOT IN SCOPE)

DEMO

KEY PLAN



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CTA EXPANSION - TERM C UTILITY CORRIDOR

ROOF PLAN - ROOF LEVEL SEGMENT 2

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A21-1898

SHEET NUMBER
AE1-2-121B

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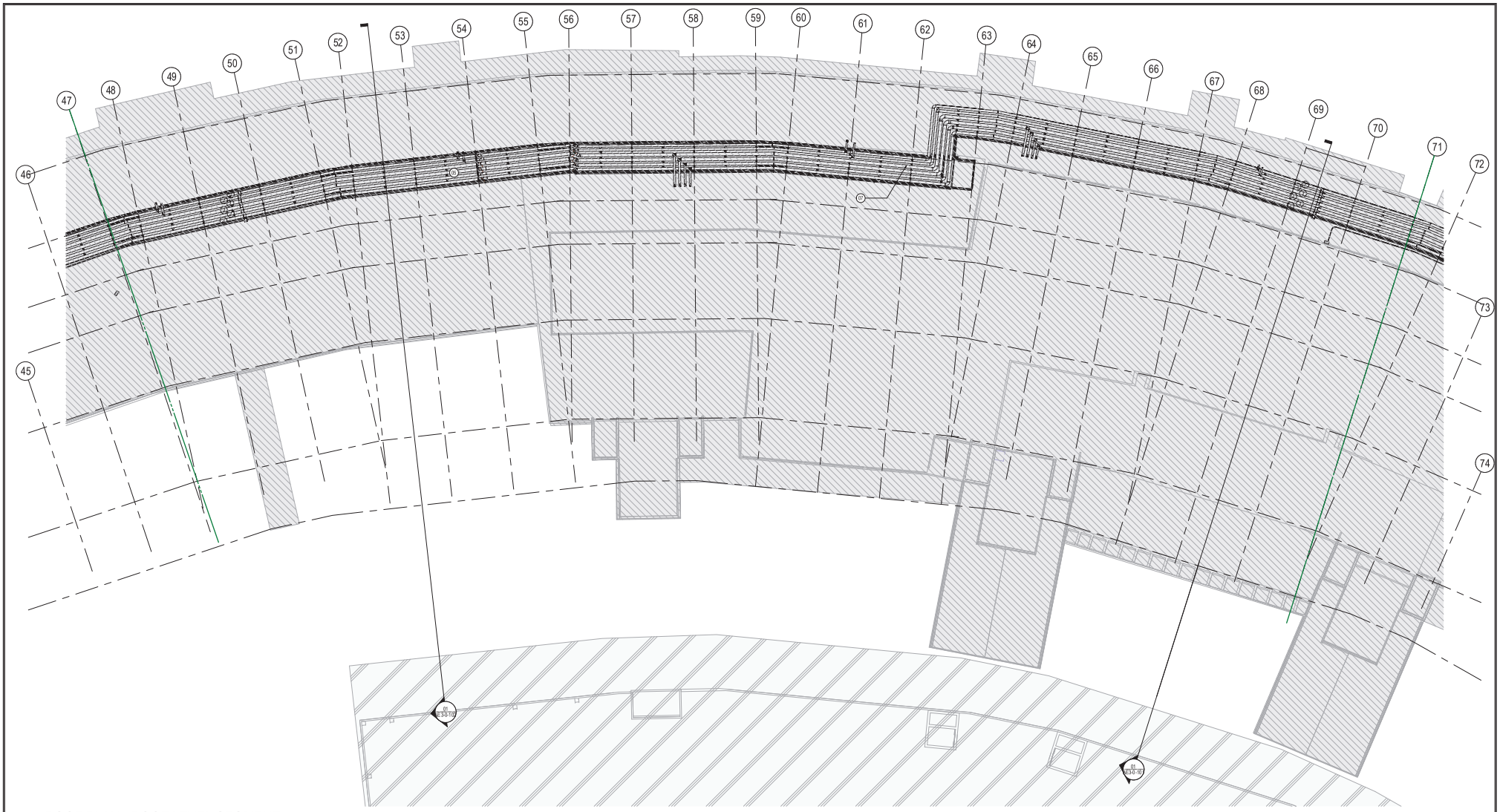

1 ROOF PLAN - ROOF LEVEL SEGMENT 3

1/16" = 1'-0" 0 48 96 192 384 IN CHES

GENERAL NOTES

SHEET NOTES

01 CRICKET
02 2 PLY MODIFIED BITUMEN ROOF
03 PREFINISHED METAL SCUPPER AND DOWNSPOUT
04 PREFINISHED METAL COPING CAP
05 UTILITY LINES, REFER TO MEP
06 PUMP ROOM BELOW
07 ROOF PENETRATIONS AT EVERY PIPE SUPPORT TO BE FULLY FLASHED INTO EXISTING ROOF CONDITION. SEE ARCHITECTURAL DETAILS. EVERY PENETRATION AT EXISTING ROOF REQUIRES ASBESTOS ABATEMENT.
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18 LOAD FOR PIPES AND STEEL SUPPORTS TO BE DESIGNED INTO NEW TERMINAL C EXPANSION PROJECT

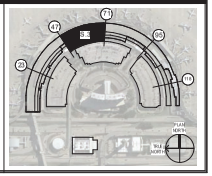
LEGEND

EXISTING TERMINAL (NOT IN SCOPE)

PARKING (NOT IN SCOPE)

DEMO

KEY PLAN



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Gensler

27.7644.0'12

DRAWN BY: Author
APPROVED BY: Approver
ISSUE DATE: 02/06/2022

NO.	DATE	DESCRIPTION
1	02/26/2021	50% CONCEPT DESIGN
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CTA EXPANSION - TERM C UTILITY CORRIDOR

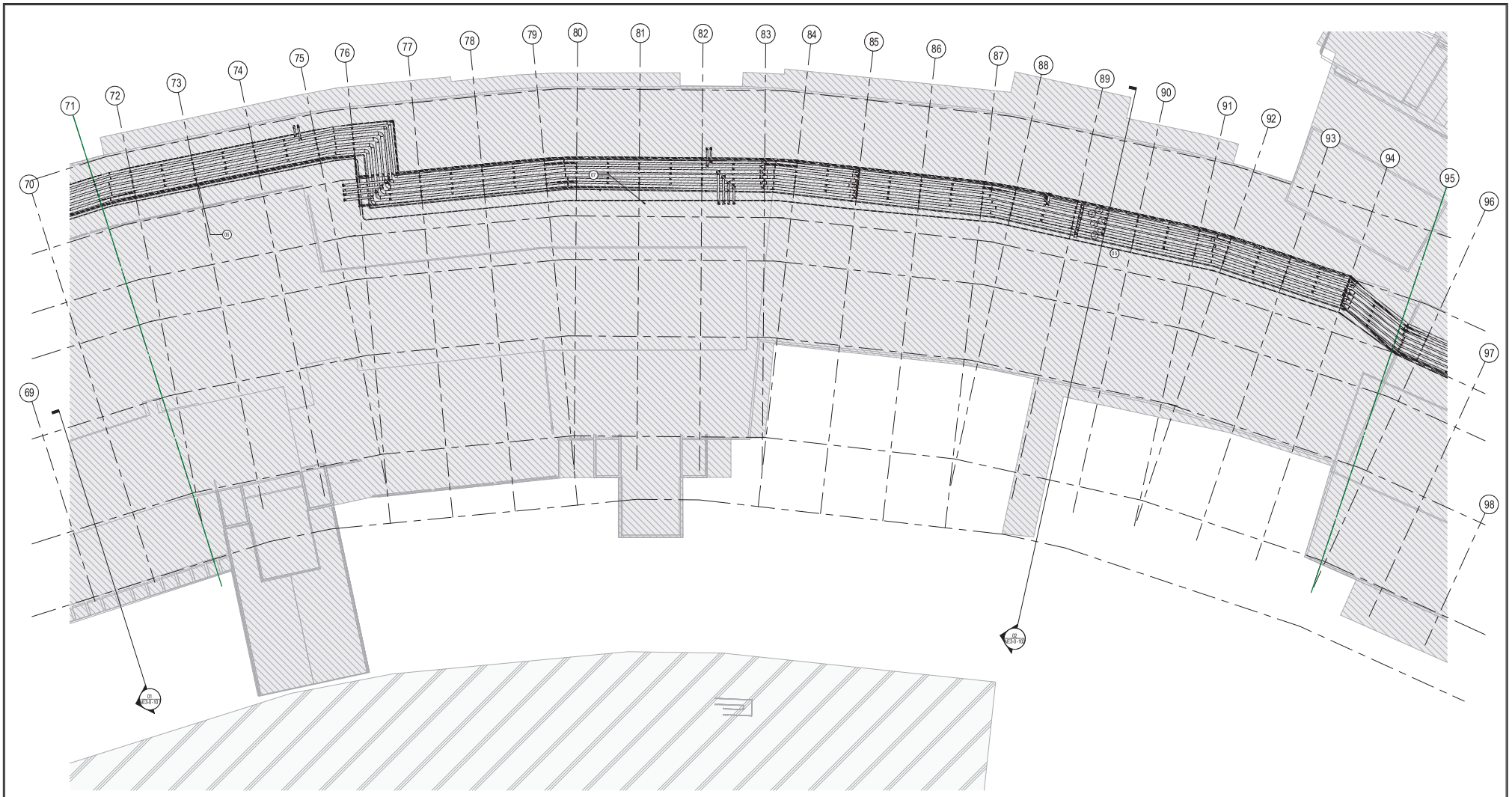
ROOF PLAN - ROOF LEVEL SEGMENT 3

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A21-1898

SHEET NUMBER
AE1-2-121C

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.



1 ROOF PLAN - ROOF LEVEL SEGMENT 4

1/16" = 1'-0" 0 48 96 192 384 INCHES

GENERAL NOTES

SHEET NOTES

01 CRICKET
02 2 PLY MODIFIED BITUMEN ROOF
03 PREFINISHED METAL SCUPPER AND DOWNSPOUT
04 PREFINISHED METAL COPING CAP
05 UTILITY LINES, REFER TO MEP
06 PUMP ROOM BELOW
07 ROOF PENETRATIONS AT EVERY PIPE SUPPORT TO BE FULLY FLASHED INTO EXISTING ROOF CONDITION. SEE ARCHITECTURAL DETAILS. EVERY PENETRATION AT EXISTING ROOF REQUIRES ASBESTOS ABATEMENT.
09 NEW CONSTRUCTION AND ROOFING BY TERMINAL C TEAM
11 OVERFLOW THROUGH WALL. SEE PLUMBING.
12 BOILER STACKS AND DUCTS. SEE MEP AND DETAIL 06/AE5-0-101 AND 07/AE5-0-101 FOR ROOF PENETRATION.
13 EPDM ROORING TO MATCH EXISTING TERMINAL C ROOF
14 MEP PIPINGS, REFER MEP.
15 SECURITY FENCING ABOVE EXISTING CONC. RAIL TO EXTEND 10' BEYOND BOILER BUILDING EACH SIDES. COORDINATE FINAL LOCATION, HEIGHT AND FINISHES WITH DFW PUBLIC SAFETY AND TERMINAL C CUSTOMER EXPERIENCE TEAM
16 DEMOLISH EXISTING STEEL PLATFORM AND STAIR
17 NEW GALVANIZED AND PAINTED STEEL PLATFORM WITH STAIRS ON BOTH SIDE. COORDINATE WITH PIPE HEIGHT. SEE STRUCTURAL.
18 LOAD FOR PIPES AND STEEL SUPPORTS TO BE DESIGNED INTO NEW TERMINAL C EXPANSION PROJECT

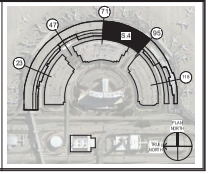
LEGEND

EXISTING TERMINAL (NOT IN SCOPE)

PARKING (NOT IN SCOPE)

DEMO

KEY PLAN



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DFW AIRPORT, TX 75261

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3	12/15/2021	15% DESIGN DOCUMENT
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CTA EXPANSION - TERM C UTILITY CORRIDOR

ROOF PLAN - ROOF LEVEL SEGMENT 4

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A21-189B

SHEET NUMBER

AE1-2-121D

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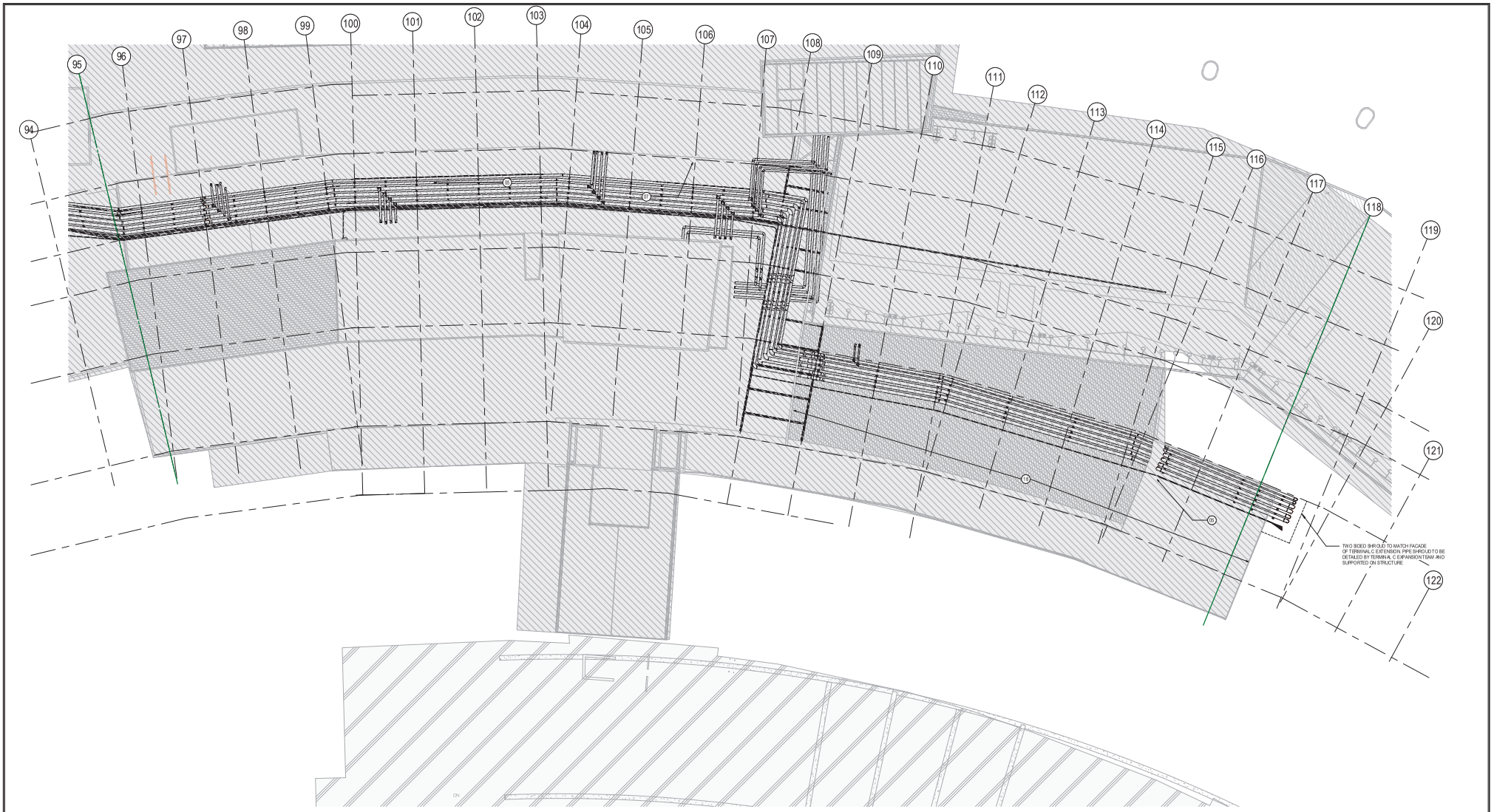


1 ROOF PLAN - ROOF LEVEL SEGMENT 5

1/16" = 1'-0" 0 48 96 192 384 INCHES

GENERAL NOTES

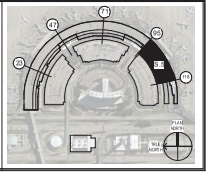
SHEET NOTES

01 CRICKET
02 2 PLY MODIFIED BITUMEN ROOF
03 PREFINISHED METAL SCUPPER AND DOWNSPOUT
04 PREFINISHED METAL COPING CAP
05 UTILITY LINES, REFER TO MEP
06 PUMP ROOM BELOW
07 ROOF PENETRATIONS AT EVERY PIPE SUPPORT TO BE FULLY FLASHED INTO EXISTING ROOF CONDITION. SEE ARCHITECTURAL DETAILS. EVERY PENETRATION AT EXISTING ROOF REQUIRES ASBESTOS ABATEMENT.
09 NEW CONSTRUCTION AND ROOFING BY TERMINAL C TEAM
11 OVERFLOW THROUGH WALL. SEE PLUMBING.
12 BOILER STACKS AND DUCTS. SEE MEP AND DETAIL 06/AE5-0.101 AND 07/AE5-0.101 FOR ROOF PENETRATION.
13 EPDM ROOFING TO MATCH EXISTING TERMINAL C ROOF
14 MEP PIPINGS. REFER MEP.
15 SECURITY FENCING ABOVE EXISTING CONC. RAIL TO EXTEND 10' BEYOND BOILER BUILDING EACH SIDES. COORDINATE FINAL LOCATION, HEIGHT AND RINISHES WITH DFW PUBLIC SAFETY AND TERMINAL C CUSTOMER EXPERIENCE TEAM
16 DEMOLISH EXISTING STEEL PLATFORM AND STAIR
17 NEW GALVANIZED AND PAINTED STEEL PLATFORM WITH STAIRS ON BOTH SIDE. COORDINATE WITH PIPE HEIGHT. SEE STRUCTURAL
18 LOAD FOR PIPES AND STEEL SUPPORTS TO BE DESIGNED INTO NEW TERMINAL C EXPANSION PROJECT

LEGEND

EXISTING TERMINAL (NOT IN SCOPE)
PARKING (NOT IN SCOPE)
DEMO

KEY PLAN



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27.7644.0'12

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APPROVED BY: Approver
ISSUE DATE: 02/06/2022

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1	10/29/2021	50% CONCEPT DESIGN
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CTA EXPANSION - TERM C UTILITY CORRIDOR

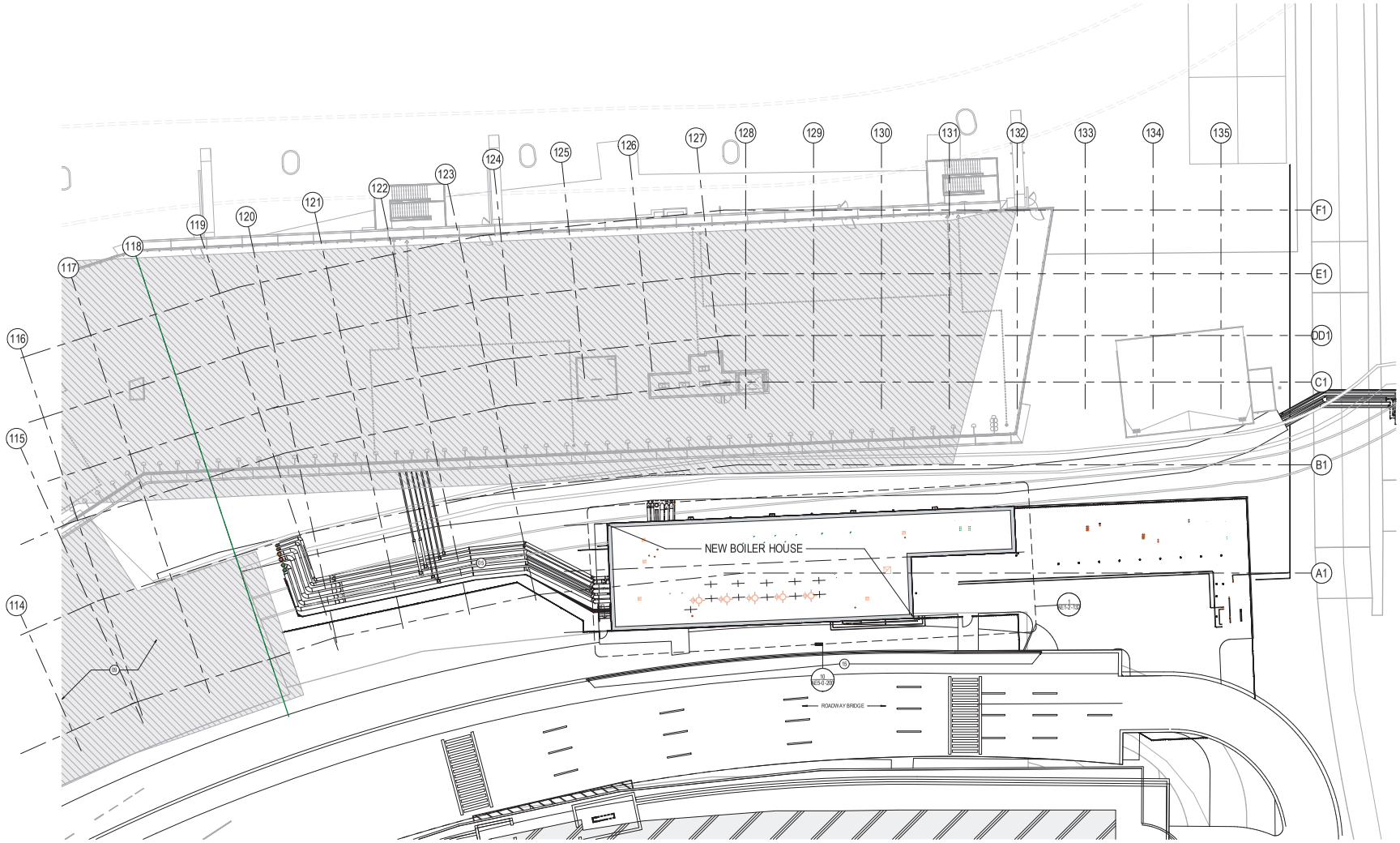
ROOF PLAN - ROOF LEVEL SEGMENT 5

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A21-1898

SHEET NUMBER
AE1-2-121E

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.



1 ROOF PLAN - ROOF LEVEL SEGMENT 6

1/16" = 1'-0" 0 48 96 192 384 INCHES

GENERAL NOTES

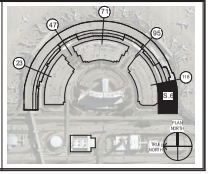
SHEET NOTES

01 CRICKET
02 2 PLY MODIFIED BITUMEN ROOF
03 PREFINISHED METAL SCUPPER AND DOWNSPOUT
04 PREFINISHED METAL COPING CAP
05 UTILITY LINES, REFER TO MEP
06 PUMP ROOM BELOW
07 ROOF PENETRATIONS AT EVERY PIPE SUPPORT TO BE FULLY FLASHED INTO EXISTING ROOF CONDITION. SEE ARCHITECTURAL DETAILS. EVERY PENETRATION AT EXISTING ROOF REQUIRES ASBESTOS ABATEMENT.
09 NEW CONSTRUCTION AND ROOFING BY TERMINAL C TEAM
11 OVERFLOW THROUGH WALL. SEE PLUMBING.
12 BOILER STACKS AND DUCTS, SEE MEP AND DETAIL 06/AE5-0-101 AND 07/AE5-0-101 FOR ROOF PENETRATION.
13 EPDM ROOFING TO MATCH EXISTING TERMINAL C ROOF
14 MEP PIPINGS. REFER MEP.
15 SECURITY FENCING ABOVE EXISTING CONC. RAIL TO EXTEND 10' BEYOND BOILER BUILDING EACH SIDES. COORDINATE FINAL LOCATION, HEIGHT AND FINISHES WITH DFW PUBLIC SAFETY AND TERMINAL C CUSTOMER EXPERIENCE TEAM
16 DEMOLISH EXISTING STEEL PLATFORM AND STAIR
17 NEW GALVANIZED AND PAINTED STEEL PLATFORM WITH STAIRS ON BOTH SIDE. COORDINATE WITH PIPE HEIGHT. SEE STRUCTURAL.
18 LOAD FOR PIPES AND STEEL SUPPORTS TO BE DESIGNED INTO NEW TERMINAL C EXPANSION PROJECT

LEGEND

EXISTING TERMINAL (NOT IN SCOPE)
PARKING (NOT IN SCOPE)
DEMO

KEY PLAN



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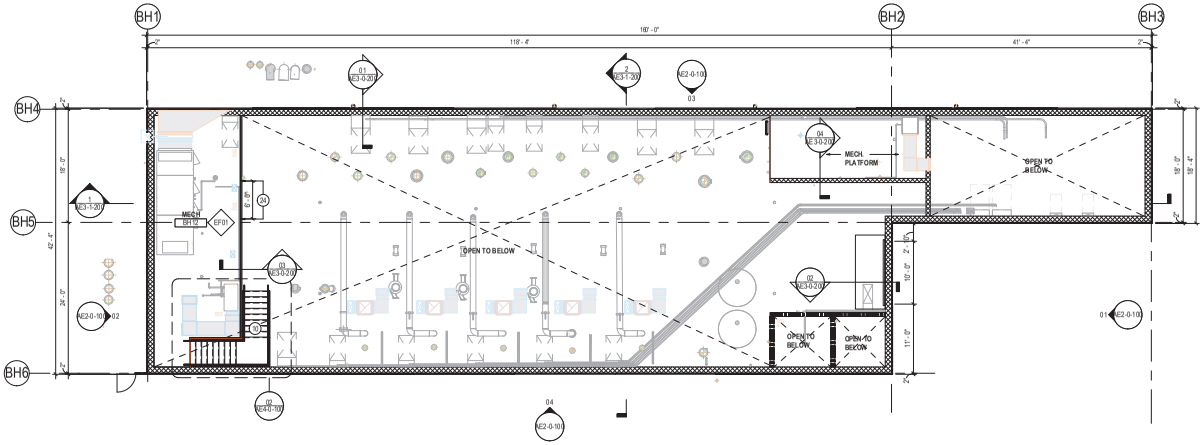
CTA EXPANSION - TERM C UTILITY CORRIDOR

ROOF PLAN - ROOF LEVEL SEGMENT 6

CONTRACT NUMBER: 8500367
PERMIT NUMBER: A21-1898

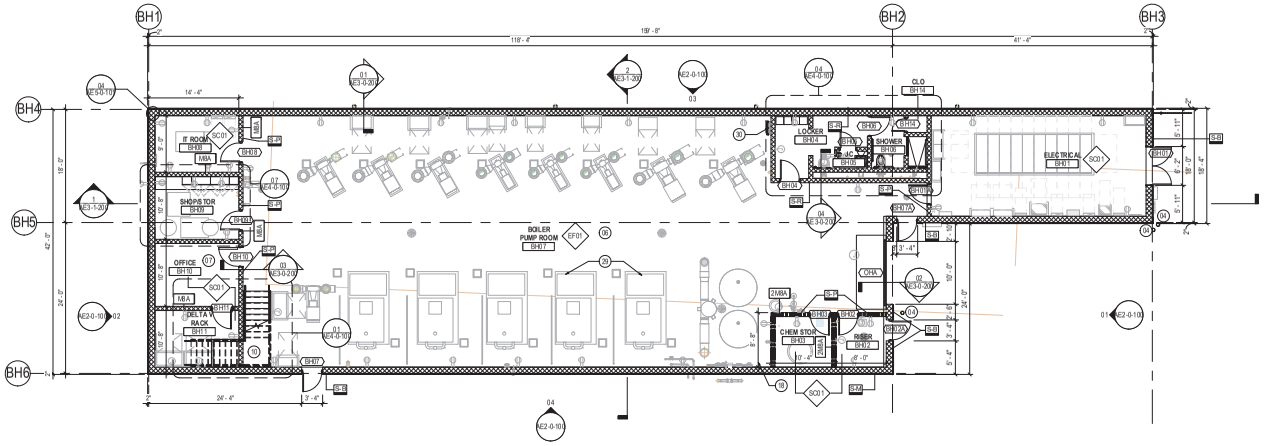
SHEET NUMBER
AE1-2-121F

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.



02 ENLARGED PLAN - BOILER MEZZ

1/8" = 1'-0"



01 ENLARGED PLAN - BOILER PUMP HOUSE

1/8" = 1'-0"

GENERAL NOTES

A. RE: G SERIES DRAWINGS FOR CONCRETE BENDS, SYMBOLS AND ABBREVIATIONS
B. RE: G10-0-200 CONCRETE FLOOR DOWNLOADS EXPOSED RELATED TO PROJECT
C. ALL PARTITIONS PAINTED BLOCK WALLS WITH EXPOSED CONCRETE FLOOR AND CONCRETE STRUCTURE
D. DOOR NUMBERS ARE SHOWN ON THE DOOR SCHEDULE WHICH THEY SWING OUT, MULTIPLE DOORS INTO A SINGLE ROOM PAINTED BLOCK WALLS DESIGNATED RE: AE6-0-100 FOR DOOR SCHEDULE INCLUDES
E. SEE DEMOLITION PLAN FOR DETAILED DESCRIPTION OF PAINTED BLOCK WALL, TYPICAL
10 PAINTED STEEL STAIR WITH CONCRETE PANS
12 EPOXY PAINTED BLOCK WALLS, EXPOSED CONCRETE FLOORING WITH FLOOR DRAIN, EPOXY PAINTED GYP BOARD CEILING
13 MT01 SECURITY FENCING
14 SECURITY VEHICLE GATE
15 CAST IN PLACE CONCRETE STOOP AND RAMP WITH PAINTED STEEL GUARD RAILS
16 RATED CONCRETE LID ABOVE
18 EYE WASH STATION, REFER TO MEP
19 PIPE PENETRATIONS OUT OF BUILDING TO BE DETAILED TO ENSURE BUILDING ENVELOPE INTEGRITY IS MAINTAINED
21 LOCKERS
22 PROVIDE SHOP MILLWORK
23 EXISTING TERMINAL, NOT IN SCOPE

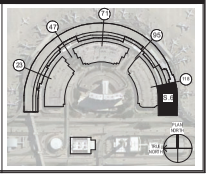
SHEET NOTES

24 PROVIDE REMOVABLE GUARDRAILS FOR MECHANICAL MAINTENANCE ACCESS - MIN. 6' WIDTH
25 NEW FENCE AND GATE WITH PANIC HARDWARE AND CARD READER. REFER SECURITY.
26 CURB EDGE PROTECTION - 4"H, 8" W.
27 CONCRETE RAMP AND LANDING
28 PAINTED GUARDRAIL
29 RAISED SLAB, TYP. SEE STRUCTURAL.
30 METAL LADDER
31 STRIPE THE GROUND AT CONCRETE 6' OFF EXISTING WALL TO INDICATE EGRESS PATH TO MAINTAIN
33 SEAL WALL COMPLETE AT EXISTING CONSTRUCTION
34 EXTERIOR FINISH OF NEW WALL CONSTRUCTION TO BE PLASTER TO MATCH NEW WALL AT PUMP ROOM
35 ENCLOSED CONCEALED SPACE

LEGEND

SIGN TYPE	DESCRIPTION
S-M	MAIN BUILDING IDENTIFICATION
S-B	BUILDING IDENTIFICATION
S-P	PRIMARY ROOM IDENTIFICATION
S-R	RESTROOM IDENTIFICATION
S-E	EXIT IDENTIFICATION

KEY PLAN



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02/06/2022

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27.7644.012

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CTA EXPANSION - TERM C UTILITY CORRIDOR

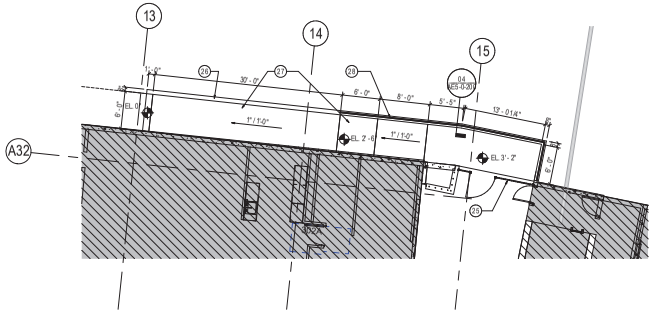
ENLARGED PLANS - BOILER HOUSE

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A21-189B

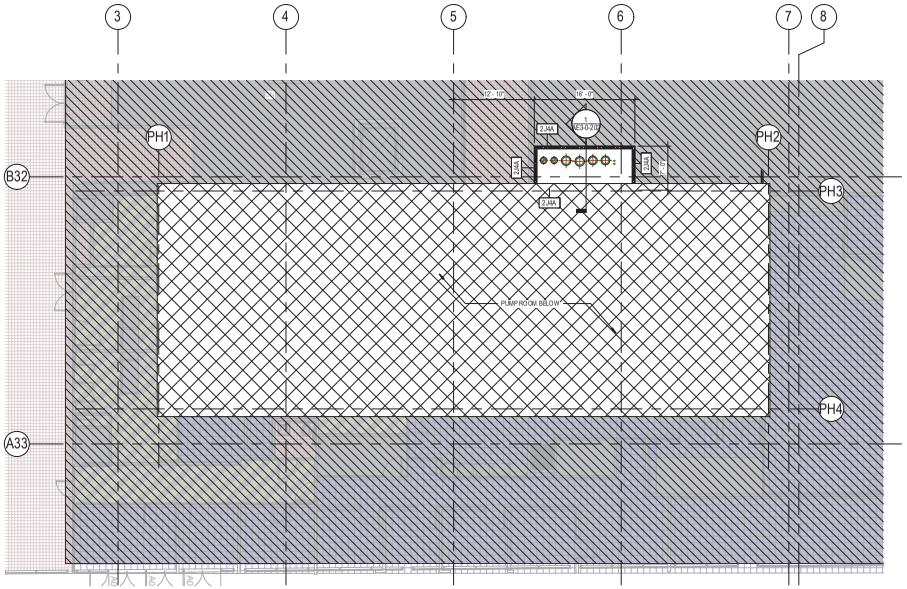
SHEET NUMBER
AE1-2-130

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.



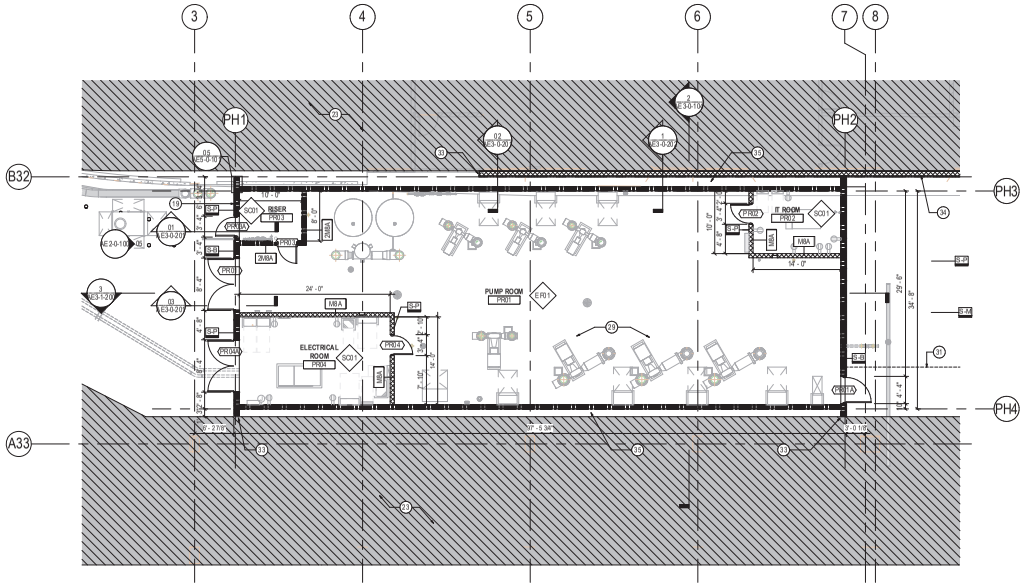
3 ENLARGED PLAN - PUMP RAMP

1/8" = 1'-0"



2 ENLARGED PLAN - PUMP ROOM SHAFT

1/8" = 1'-0"



1 ENLARGED PLAN - PUMP ROOM

1/8" = 1'-0"

GENERAL NOTES

A. SEE NOTES AE1-2-121 ENLARGED PLANS

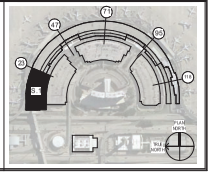
SHEET NOTES

04 PAINTED STEEL BOLLARDS
05 EPOXY PAINTED BLOCK WALLS WITH EXPOSED CONCRETE FLOORING AND PAINTED EXPOSED STRUCTURE ABOVE
06 UNPAINTED BLOCK WALLS WITH EXPOSED CONCRETE FLOORING AND EXPOSED STRUCTURE ABOVE
07 PAINTED BLOCK WALL (PT-01) WITH SUSPENDED ACOUSTIC TILE CEILING (CU02)
08 FURR DOWN AT STAIRS
09 8" INTERIOR BLOCK WALL, TYPICAL
10 PAINTED STEEL STAIR WITH CONCRETE PANS
12 EPOXY PAINTED BLOCK WALLS, EXPOSED CONCRETE FLOORING WITH FLOOR DRAIN, EPOXY PAINTED GYP. BOARD CEILING
13 MT01 SECURITY FENCING
14 SECURITY VEHICLE GATE
15 CAST IN PLACE CONCRETE STOOP AND RAMP WITH PAINTED STEEL GUARD RAILS
16 RATED CONCRETE LID ABOVE
18 EYE WASH STATION, REFER TO MEP
19 PIPE PENETRATIONS OUT OF BUILDING TO BE DETAILED TO ENSURE BUILDING ENVELOPE INTEGRITY IS MAINTAINED
21 LOCKERS
22 PROVIDE SHOP MILLWORK
23 EXISTING TERMINAL, NOT IN SCOPE
24 PROVIDE REMOVABLE GUARDRAILS FOR MECHANICAL MAINTENANCE ACCESS - MIN. 6' WIDTH
25 NEW FENCE AND GATE WITH PANIC HARDWARE AND CARD READER. REFER SECURITY.
26 CURB EDGE PROTECTION - 4"H. 8" W.
27 CONCRETE RAMP AND LANDING
28 PAINTED GUARDRAIL
29 RAISED SLAB, TYP. SEE STRUCTURAL.
30 METAL LADDER
31 STRIPE THE GROUND AT CONCRETE 6' OFF EXISTING WALL TO INDICATE EGRESS PATH TO MAINTAIN
33 SEAL WALL COMPLETE AT EXISTING CONSTRUCTION
34 EXTERIOR FINISH OF NEW WALL CONSTRUCTION TO BE PLASTER TO MATCH NEW WALL AT PUMP ROOM
35 ENCLOSED CONCEALED SPACE

LEGEND

SIGN TYPE	DESCRIPTION
B-ID	MAIN BUILDING IDENTIFICATION
B-ID	BULDING IDENTIFICATION
S-ID	PRIMARY ROOM IDENTIFICATION
S-ID	RESTROOM IDENTIFICATION
S-E	EXIT IDENTIFICATION

KEY PLAN



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CTA EXPANSION - TERM C UTILITY CORRIDOR

ENLARGED PLANS - PUMP ROOM

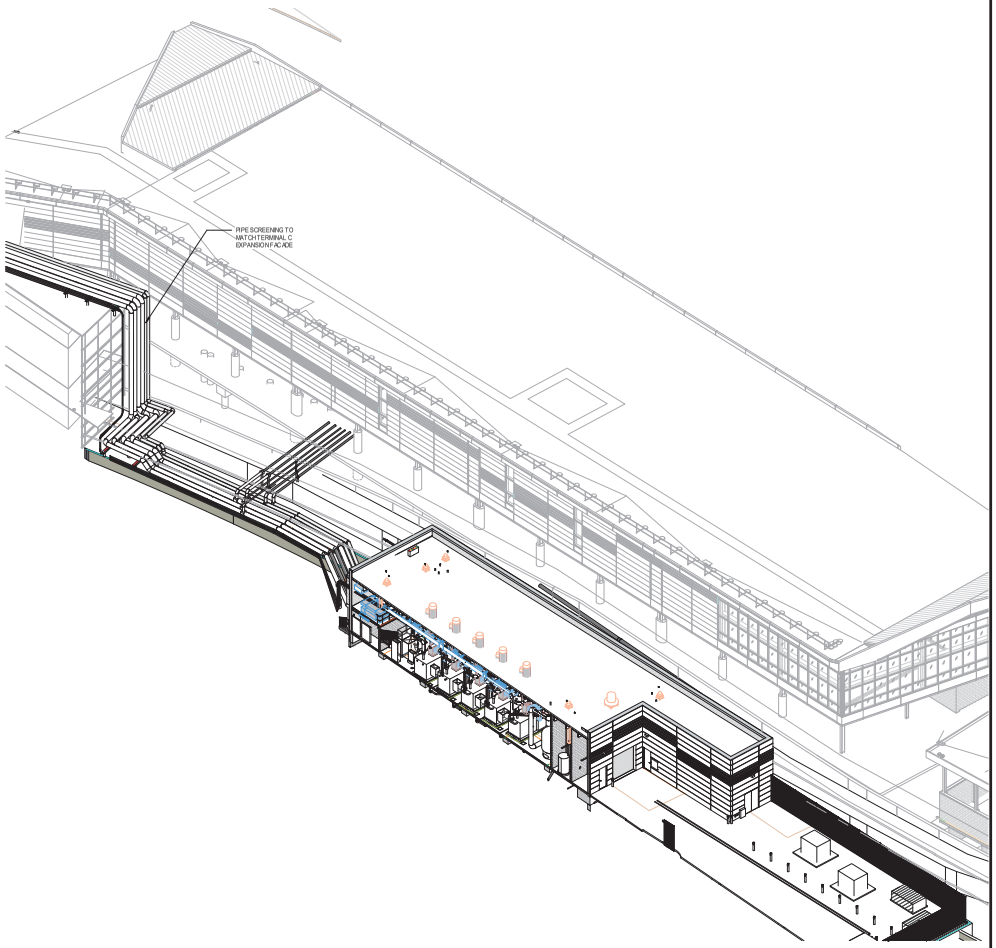
CONTRACT NUMBER: 8500367

PERMIT NUMBER: A21-1898

SHEET NUMBER

AE1-2-131

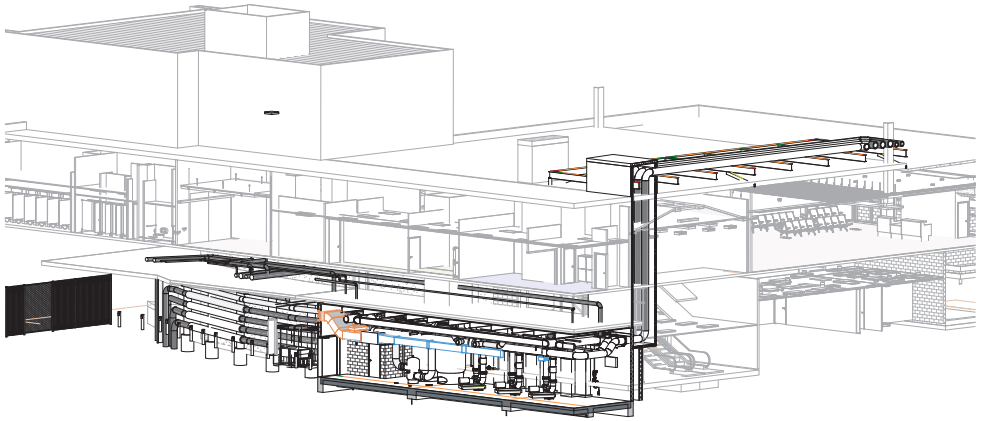
SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.



1 AXON - BOILER HOUSE

0 48 96 192 384
INCHES

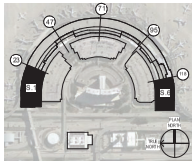
FOR REFERENCE ONLY



2 AXON - PUMP ROOM

0 48 96 192
INCHES

FOR REFERENCE ONLY

GENERAL NOTES	SHEET NOTES	LEGEND	KEY PLAN
			

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Gensler
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3	12/15/2021	100% DESIGN DOCUMENT
4	02/06/2022	100 % DESIGN DOCUMENT

CTA EXPANSION - TERM C UTILITY CORRIDOR

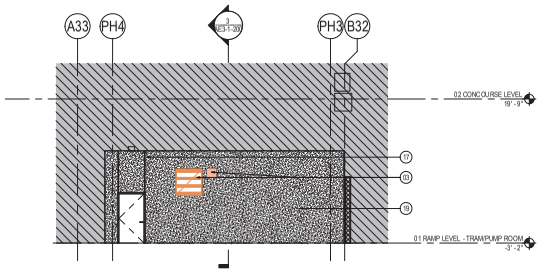
AXONS

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A21-1898

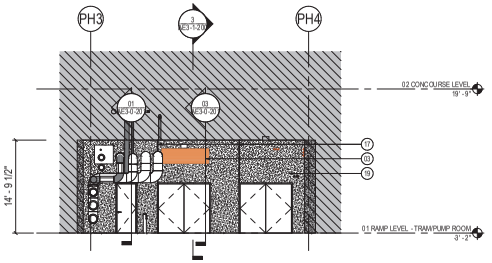
SHEET NUMBER
AE1-1-101

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.



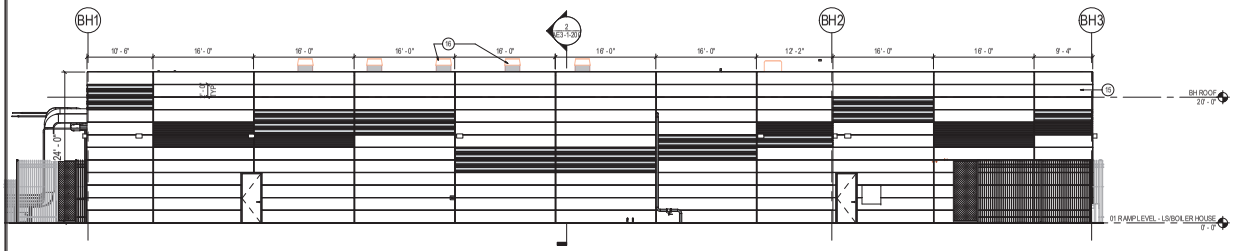
06 ELEVATION AT PUMP ROOM

1/8" = 1'-0"



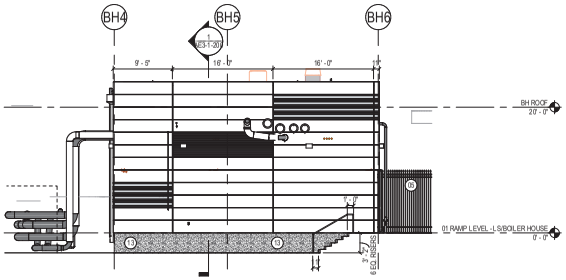
05 ELEVATION AT PUMP ROOM

1/8" = 1'-0"



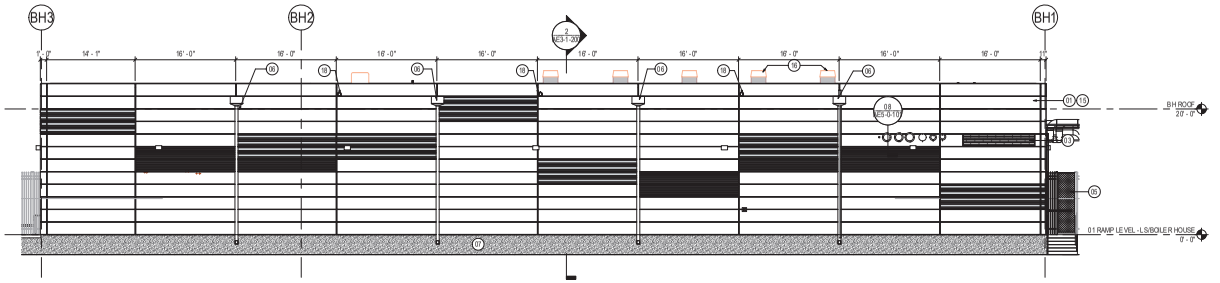
04 BOILER NORTH ELEVATION

1/8" = 1'-0"



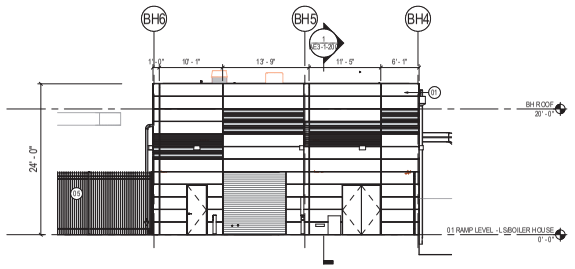
02 BOILER EAST ELEVATION

1/8" = 1'-0"



03 BOILER SOUTH ELEVATION

1/8" = 1'-0"



01 BOILER WEST ELEVATION

1/8" = 1'-0"

GENERAL NOTE

SHEET NOTE

01 FACADE BASIS OF DESIGN TO MATCH HIGH C GATE ADDITION
03 MECH. LOUVER. REFER MEP
05 MT01 METAL FENCING
06 PREFINISHED METAL SCUPPER AND DOWNSPOUT
07 CONCRETE FOUNDATION WALL
13 CONCRETE RETAINING WALL BELOW FINISH FLOOR ELEVATION. REFER TO STRUCTURAL.
15 2 - 0" TALL MP01
16 BOILER STACKS. REFER MEP
17 TWO PIECE CONTROL JOINT
18 OVERFLOW NOZZLE
19 PL01 PLASTER FINISH

LEGEND

MP01 - FLAT
INSULATED METAL WALL PANEL FLAT FINISH

MP01 - LARGE RIB
INSULATED METAL WALL PANEL - LARGE RIB

MP01 - SMALL RIB
INSULATED METAL WALL PANEL - SMALL RIB

PLASTER FINISH WITH CONTROL JOINT SPACING TO MATCH PL01

MP01 PATTERNS AND FINISH TO MATCH HIGH C GATE ADDITION. SEE EXTERIOR FINISH SCHEDULE

KEY PLAN

DFW DALLAS FORT WORTH INTERNATIONAL AIRPORT

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DFW AIRPORT, TX 75261

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Gensler

27.7644.012

DRAWN BY: Author
APPROVED BY: Approver
ISSUE DATE: 02/08/2022

NO.	DATE:	DESCRIPTION:
1	05/20/2021	10 % CONCEPT DESIGN
2	10/21/2021	35 % DESIGN DOCUMENT
3	12/13/2021	70 % DESIGN DOCUMENT
4	02/08/2022	100 % BIDDING DOCUMENT

CTA EXPANSION - TERM C UTILITY CORRIDOR

BUILDING ELEVATIONS

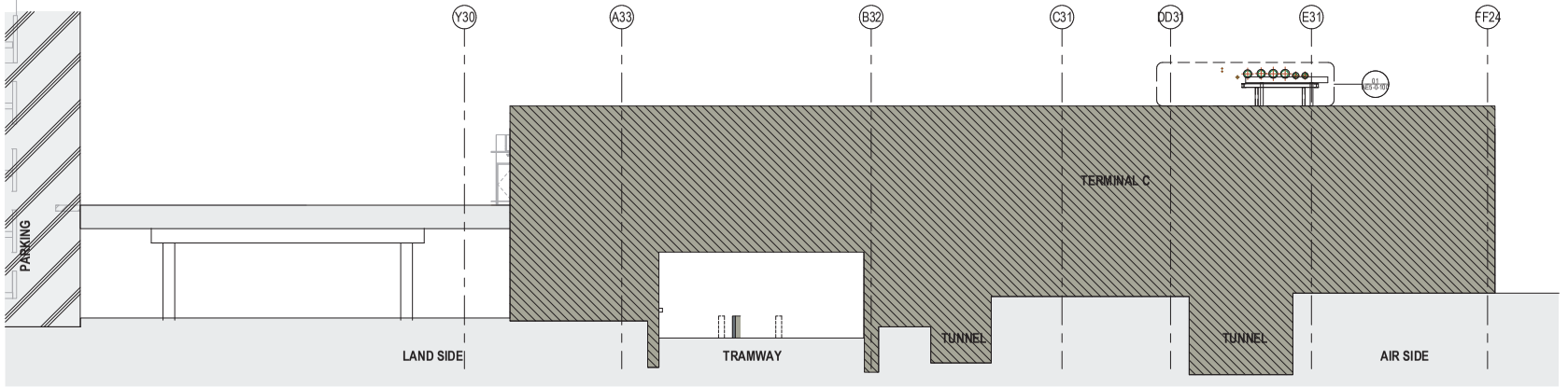
CONTRACT NUMBER: 8500367

PERMIT NUMBER: A21-189B

SHEET NUMBER

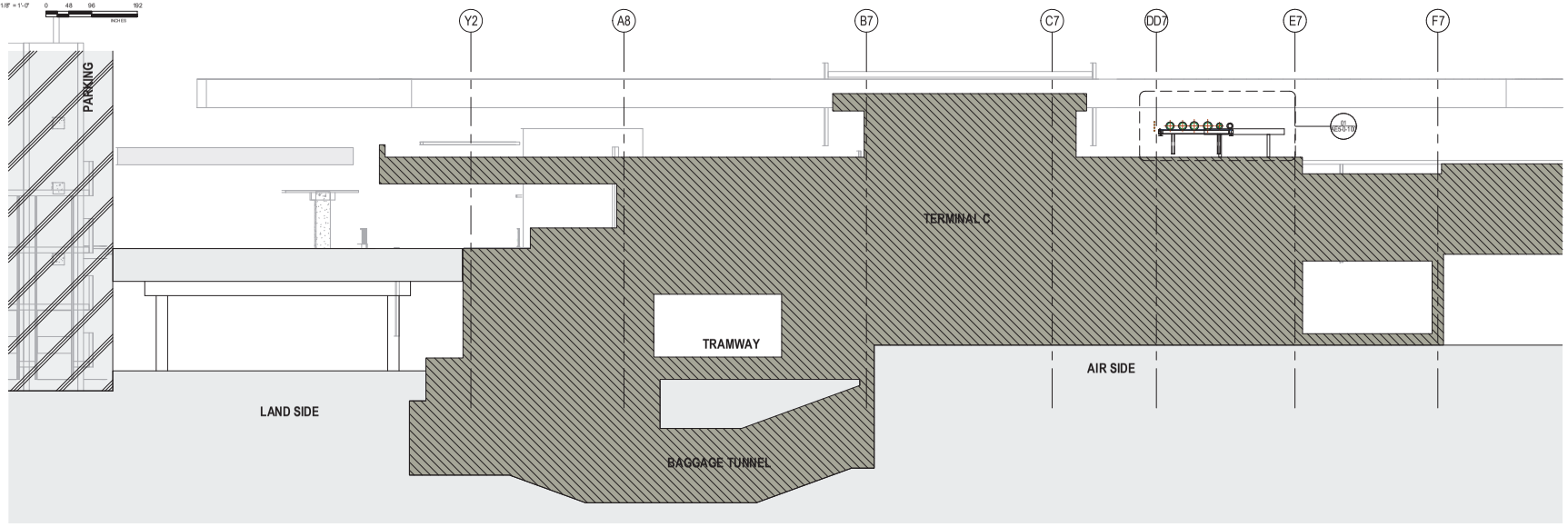
AE2-0-100

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.



01 SITE SECTION

1/8" = 1'-0" 0 48 96 192 INCHES



02 SITE SECTION

1/8" = 1'-0" 0 48 96 192 INCHES

GENERAL NOTES

A THESE SECTIONS WERE CREATED WITH REFERENCE MODLS CREATED BY DFW TEAMS AND ARE FOR REFERENCE ONLY.

SHEET NOTES

03 BOILER HOUSE
04 METAL ENCLOSED EXISTING UTILITY LINES TO REMAIN. NEW SYSTEM TO TIE IN. SEE MEP.
05 PUMP ROOM
06 AIR SIDE SECURITY FENCING
07 SHAFT PENETRATION THROUGH TERMINAL C. LOCATION HAS BEEN SCHEMATICALLY LOCATED WITH INPUT FROM TERMINAL C TEAM. FULL COORDINATION WITH TERMINAL C NEW CONSTRUCTION TEAM IN COMING PHASES
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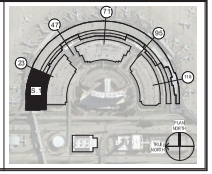
14 ENCLOSED CONCEALED SPACE

LEGEND

EXISTING TERMINAL (NOT IN SCOPE)
PARKING (NOT IN SCOPE)
DEMO

KEY PLAN



DFW DALLAS FORT WORTH INTERNATIONAL AIRPORT

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DFW AIRPORT, TX 75261

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02/08/2022

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APPROVED BY: Approver
ISSUE DATE: 02/06/2022

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4	02/06/2022	100 % DESIGN DOCUMENT

CTA EXPANSION - TERM C UTILITY CORRIDOR

SITE SECTIONS

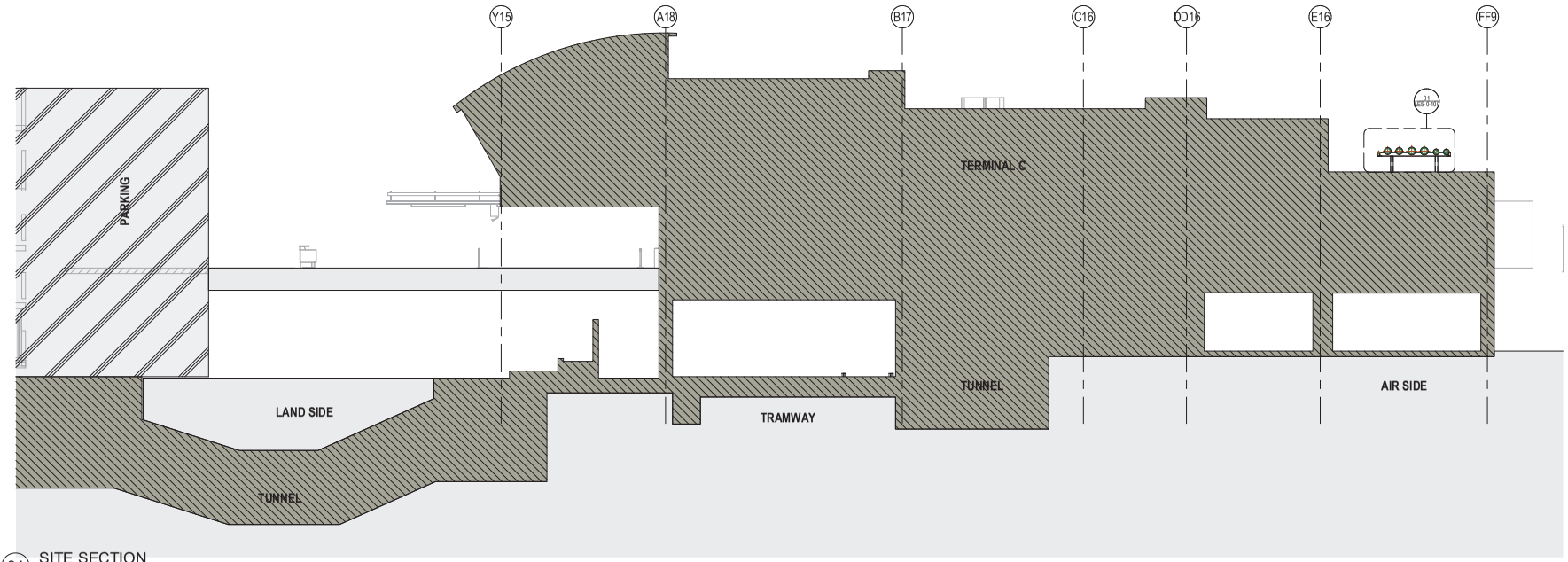
CONTRACT NUMBER: 8500367

PERMIT NUMBER: A21-1898

SHEET NUMBER

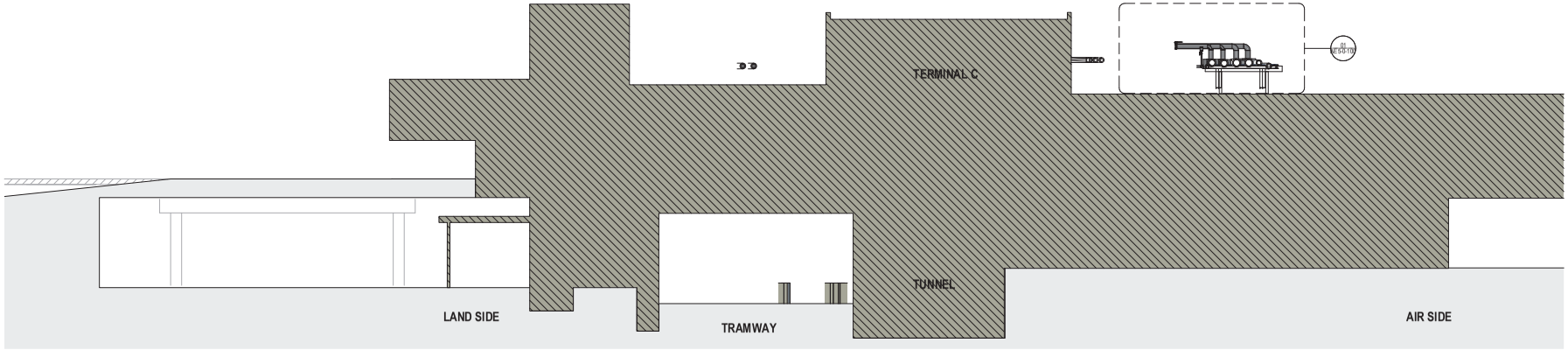
AE3-0-100

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.



01 SITE SECTION

1/8" = 1'-0" 0 48 96 192 INCHES



02 SITE SECTION

1/8" = 1'-0" 0 48 96 192 INCHES

GENERAL NOTES

A THESE SECTIONS WERE CREATED WITH REFERENCE MODLS CREATED BY DFW TEAMS AND ARE FOR REFERENCE ONLY.

SHEET NOTES

03 BOILER HOUSE
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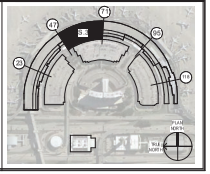
14 ENCLOSED CONCEALED SPACE

LEGEND

EXISTING TERMINAL (NOT IN SCOPE)
PARKING (NOT IN SCOPE)
DEMO

KEY PLAN



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02/06/2022

Gensler

27.7644.0'12

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APPROVED BY: Approver
ISSUE DATE: 02/06/2022

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3	12/15/2021	70% DESIGN DOCUMENT
4	02/06/2022	100 % DESIGN DOCUMENT

CTA EXPANSION - TERM C UTILITY CORRIDOR

SITE SECTIONS

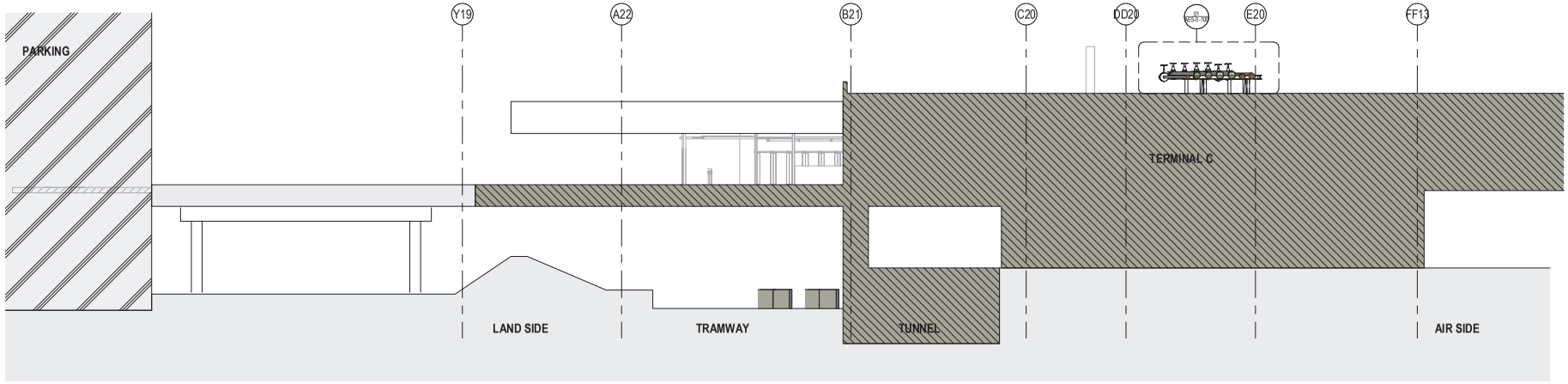
CONTRACT NUMBER: 8500367

PERMIT NUMBER: A21-1898

SHEET NUMBER

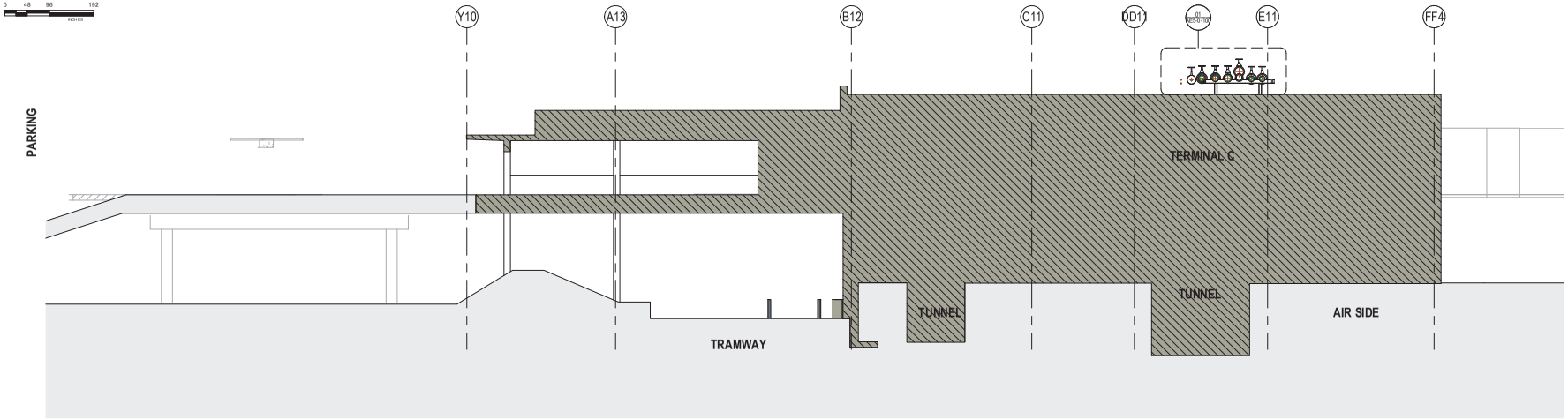
AE3-0-101

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.



01 SITE SECTION

1/8" = 1'-0" 0 48 96 192 INCHES



02 SITE SECTION

1/8" = 1'-0" 0 48 96 192 INCHES

GENERAL NOTES

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SHEET NOTES

03 BOILER HOUSE
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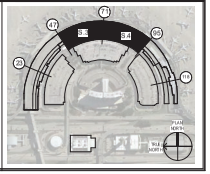
14 ENCLOSED CONCEALED SPACE

LEGEND

EXISTING TERMINAL (NOT IN SCOPE)
PARKING (NOT IN SCOPE)
DEMO

KEY PLAN



DFW DALLAS FORT WORTH INTERNATIONAL AIRPORT

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02/06/2022

Gensler
27.7644.0'12

DRAWN BY: Author
APPROVED BY: Approver
ISSUE DATE: 02/06/2022

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3	12/15/2021	70% DESIGN DOCUMENT
4	02/06/2022	100 % DESIGN DOCUMENT

CTA EXPANSION - TERM C UTILITY CORRIDOR

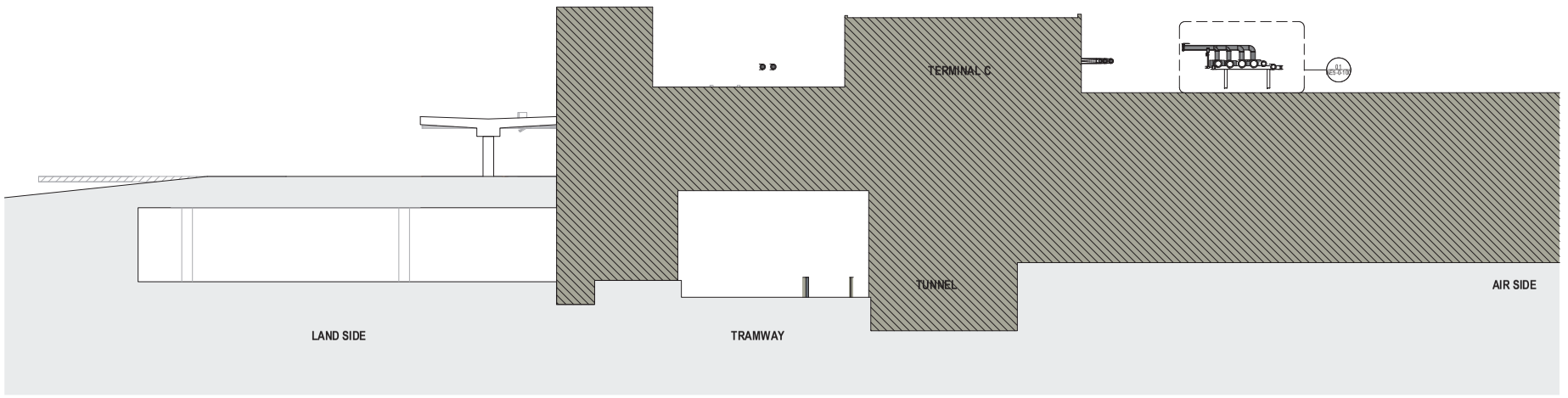
SITE SECTIONS

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A21-1898

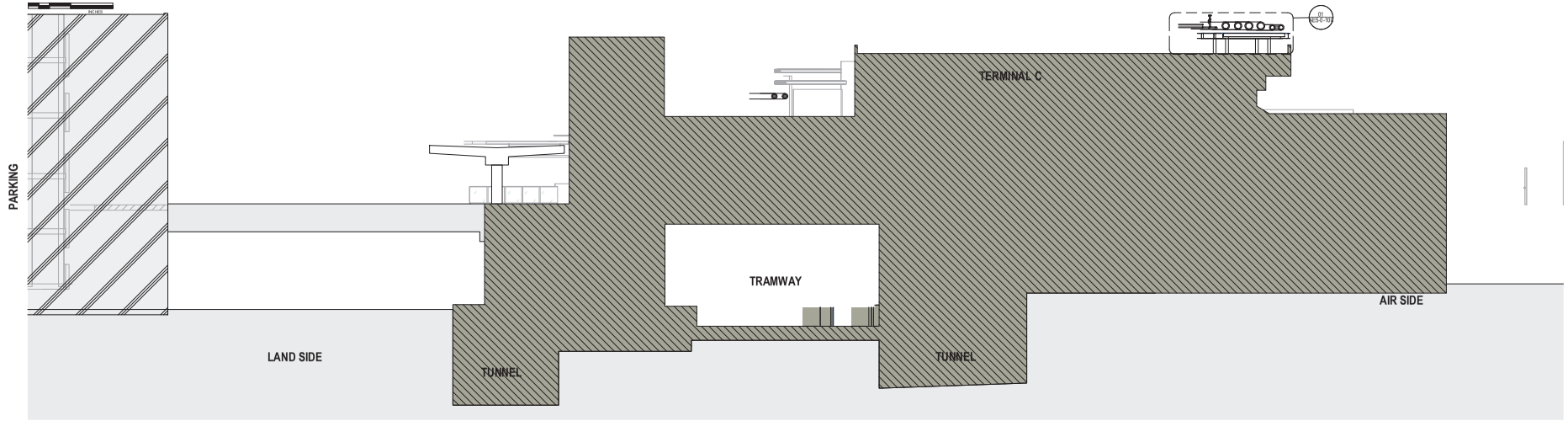
SHEET NUMBER
AE3-0-102

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.



1 SITE SECTION

1/8" = 1'-0" 0 48 96 192 INCHES



2 SITE SECTION

1/8" = 1'-0" 0 48 96 192 INCHES

GENERAL NOTES

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SHEET NOTES

03 BOILER HOUSE
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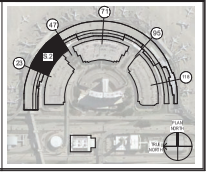
LEGEND

EXISTING TERMINAL (NOT IN SCOPE)
PARKING (NOT IN SCOPE)
DEMO

KEY PLAN



DFW DALLAS FORT WORTH INTERNATIONAL AIRPORT

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Gensler

27.7644.0'12

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CTA EXPANSION - TERM C UTILITY CORRIDOR

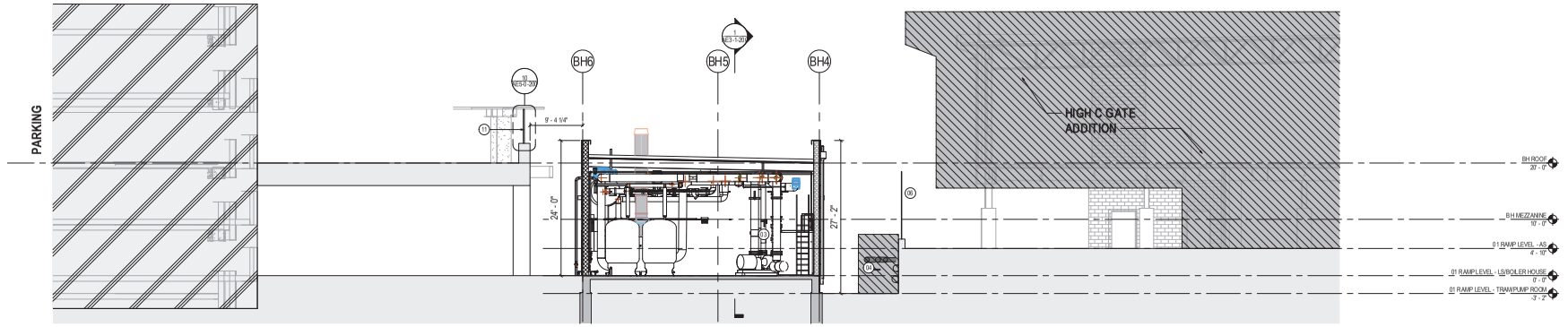
SITE SECTIONS

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A21-1898

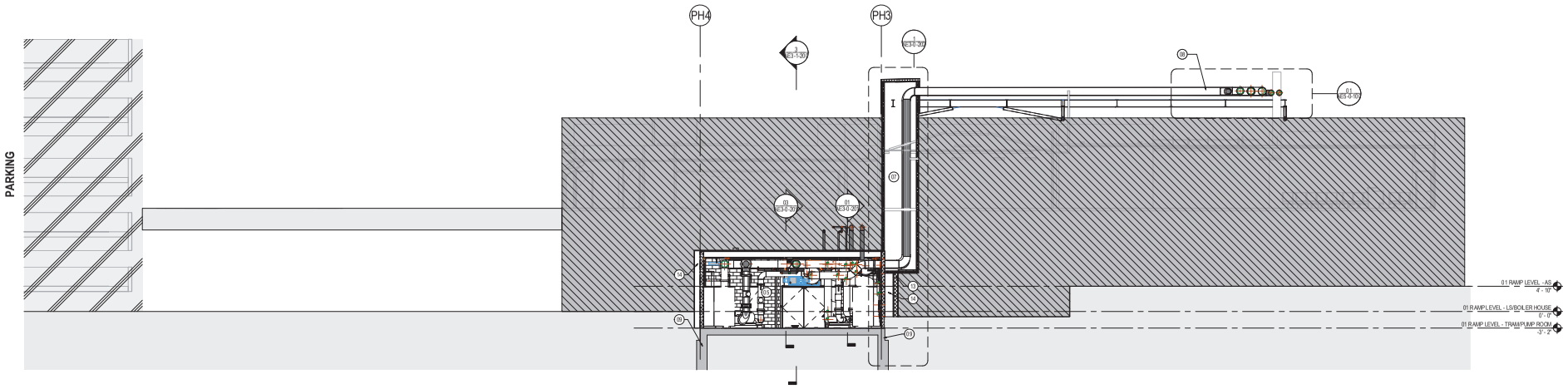
SHEET NUMBER
AE3-0-103

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.



1 SITE SECTION - BOILER HOUSE

1/8" = 1'-0"



2 SITE SECTION - PUMP ROOM

1/8" = 1'-0"

GENERAL NOTES

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SHEET NOTES

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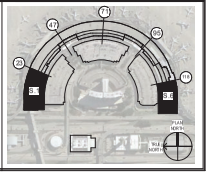
LEGEND

EXISTING TERMINAL (NOT IN SCOPE)
PARKING (NOT IN SCOPE)
DEMO

KEY PLAN



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27.7644.0'12

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3	12/15/2021	70% DESIGN DOCUMENT
4	02/06/2022	100 % DESIGN DOCUMENT

CTA EXPANSION - TERM C UTILITY CORRIDOR

SITE SECTIONS

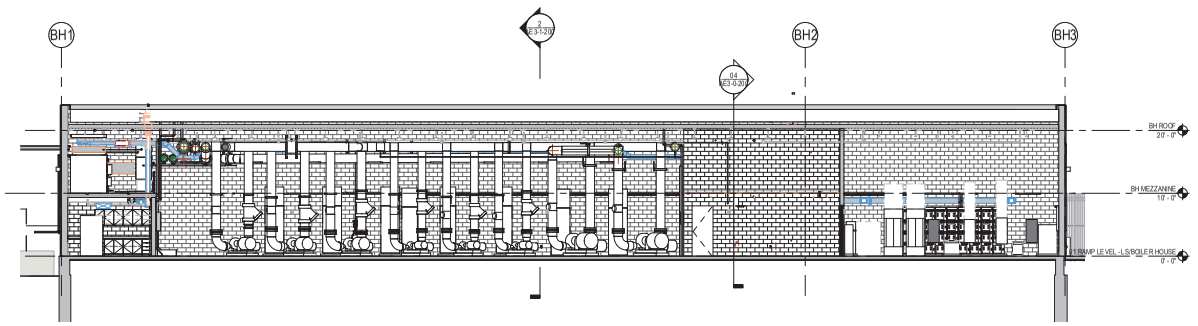
CONTRACT NUMBER: 8500367

PERMIT NUMBER: A21-1898

SHEET NUMBER

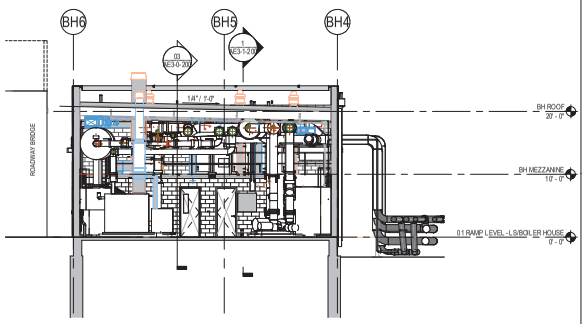
AE3-0-104

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.



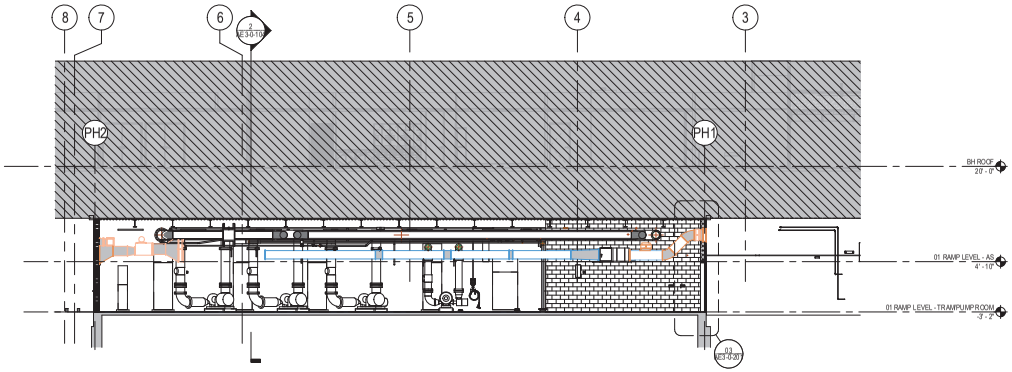
1 BOILER SECTION A

1/8" = 1'-0" 0 48 96 192 INCHES



2 BOILER SECTION B

1/8" = 1'-0" 0 48 96 192 INCHES



3 PUMP ROOM SECTION A

1/8" = 1'-0" 0 48 96 192 INCHES

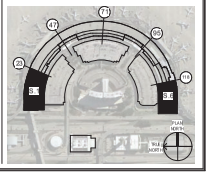
GENERAL NOTE

SHEET NOTE

LEGEND

- EXISTING TERMINAL (NOT IN SCOPE)
- PARKING (NOT IN SCOPE)
- DEMO

KEY PLAN



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DFW AIRPORT, TX 75261

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02/06/2022

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27.7644.012

DRAWN BY: Author
APPROVED BY: Approver
ISSUE DATE: 02/06/2022

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1	08/30/2021	10% CONCEPT DESIGN
2	10/18/2021	50% DESIGN DOCUMENT
3	12/15/2021	70% DESIGN DOCUMENT
4	02/06/2022	100 % DESIGN DOCUMENT

CTA EXPANSION - TERM C UTILITY CORRIDOR

BUILDING SECTIONS

CONTRACT NUMBER: 8500367

PERMIT NUMBER: A21-1898

SHEET NUMBER

AE3-1-200

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.

This Correspondence sent to CRM@intenvsol.com on 03-10-2022

TEXAS HISTORICAL COMMISSION
real places telling real stories

Re: Project Review under Section 106 of the National Historic Preservation Act and/or the Antiquities Code of Texas
THC Tracking #202207241
Date: 03/10/2022
Service Delivery System
N/A
Grapevine,TX

Description: Cultural resources desktop analysis. No survey recommended. No historic properties affected.

Dear CRM@intenvsol.com:
Thank you for your submittal regarding the above-referenced project. This response represents the comments of the State Historic Preservation Officer, the Executive Director of the Texas Historical Commission (THC), pursuant to review under Section 106 of the National Historic Preservation Act and the Antiquities Code of Texas.

The review staff, led by Justin Kockritz and Arlo McKee, has completed its review and has made the following determinations based on the information submitted for review:

Above-Ground Resources

- THC/SHPO concurs with information provided.
- No historic properties are present or affected by the project as proposed. However, if historic properties are discovered or unanticipated effects on historic properties are found, work should cease in the immediate area; work can continue where no historic properties are present. Please contact the THC's History Programs Division at 512-463-5853 to consult on further actions that may be necessary to protect historic properties.

Archeology Comments

- No historic properties affected. However, if cultural materials are encountered during construction or disturbance activities, work should cease in the immediate area; work can continue where no cultural materials are present. Please contact the THCâ€™s Archeology Division at 512-463-6096 to consult on further actions that may be necessary to protect the cultural remains.
- THC/SHPO concurs with information provided.

We look forward to further consultation with your office and hope to maintain a partnership that will foster effective historic preservation. Thank you for your cooperation in this review process, and for your efforts to preserve the irreplaceable heritage of Texas. If the project changes, or if new historic properties are found, please contact the review staff. If you have any questions concerning our review or if we can be of further assistance, please email the following reviewers: justin.kockritz@thc.texas.gov, Arlo.McKee@thc.texas.gov.

This response has been sent through the electronic THC review and compliance system (eTRAC). Submitting your project via eTRAC eliminates mailing delays and allows you to check the status of the review, receive an electronic response, and generate reports on your submissions. For more information, visit http://thc.texas.gov/etrac-system.

Sincerely,



for Mark Wolfe, State Historic Preservation Officer
Executive Director, Texas Historical Commission

Please do not respond to this email.

APPENDIX C: WATERS OF THE UNITED STATES DELINEATION REPORT

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integrated environmental solutions

30 September 2021

Ms. Sandy Lancaster
Dallas/Fort Worth International Airport
Environmental Affairs Department
3003 South Service Road, Annex Building A
DFW Airport, Texas 75261-9428

Re: CTA Development Project - Waters of the United States Delineation & Desktop Assessment
Approximately 69 acres across 13 different sites within the DFW International Airport CTA Terminals A and C Development Project located on the DFW International Airport complex, Dallas and Tarrant Counties, Texas

Dear Ms. Lancaster,

Integrated Environmental Solutions, LLC (IES) performed a site survey and desktop review to identify any aquatic features that meet a definition of a water of the United States on approximately 69 acres across 13 different sites within the DFW Airport CTA Terminals A and C Development Project located on the DFW International Airport complex, Dallas and Tarrant Counties, Texas. A desktop evaluation was conducted on Sites 1 through 7 as they were not able to be accessed due to airport regulations. A site survey was conducted on Sites 8 through 13 as they were able to be accessed via public roadways (**Attachment A, Figure 1**). This report will ultimately assess and delineate potentially jurisdictional aquatic features to ensure compliance with Sections 401 and 404 of the Clean Water Act (CWA).

INTRODUCTION

Waters of the United States are protected under guidelines outlined in Sections 401 and 404 of the CWA, in Executive Order (EO) 11990 (Protection of Wetlands), and by the review process of the Texas Commission on Environmental Quality (TCEQ). Agencies that regulate impacts to the nation's water resources within Texas include the U.S. Army Corps of Engineers (USACE), the U.S. Environmental Protection Agency (USEPA), the U.S. Fish and Wildlife Service (USFWS), and the TCEQ. The USACE has the primary regulatory authority for enforcing Section 404 requirements for waters of the United States.

The decision for whether a Section 404 of the CWA permit is required on a property is determined if there are waters of the United States present and the extent of losses of those features. The USACE and EPA have gone through rulemaking to define what is a water of the United States, independently and jointly, several times since the initial CWA. The longest standing definitions of waters of the United States were those published in 1986; however, these definitions were challenged in 2001 and 2007 U.S. Supreme Court decisions. Since then, both the Obama and Trump administration completed rulemaking to modify the definitions of waters of the United States in the Clean Water Rule in 2016 and the Navigable Water Protection Rule (NWPR) in 2020. A recent federal district court decision in Arizona struck down the NWPR but was silent on which definitions of waters of the United States would replace it. As of the date of this letter report, the USACE Fort Worth District has provided verbal guidance that the USACE will be utilizing the pre-2015 definitions (i.e., 1986 definitions combined with the *Rapanos* and *Carabell* U.S. Supreme Court decisions) to define waters of the United States. Please note, at this time there is no written guidance from USACE on this decision and whether the federal district court ruling actually applies nationwide. Furthermore, it is uncertain as to whether there will be any appeal to the federal appellate court. Therefore, this report will analyze all aquatic features within the project site to determine their applicability under both NWPR and the 1986 Rule.

Navigable Waters Protection Rule (Effective 22 June 2020)

The streamlined regulations have redefined waters of the United States as the following at 33 Code of Federal Regulations (CFR) 328.3 (a) as:

1. *The territorial seas, and waters which are currently used or were used in the past, or may be susceptible to use in interstate or foreign commerce, including waters which are subject to the ebb and flow of the tide;*
2. *Tributaries;*
3. *Lakes and ponds, and impoundments of jurisdictional waters; and*
4. *Adjacent wetlands*

The following features are excluded from jurisdiction at 33 CFR 328.3 (b) as:

1. *Lake/pond/impoundment or wetland that does not contribute surface water flow directly or indirectly to an (a)(1) water and is not inundated by flooding from an (a)(1)-(a)(3) water in a typical year, surface water channel that does not contribute surface water flow directly or indirectly to an (a)(1) water in a typical year, or Water or water feature that is not identified in (a)(1)-(a)(4) and does not meet the other (b)(1) sub-categories;*
2. *Groundwater, including groundwater drained through subsurface drainage systems;*
3. *Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool;*
4. *Diffuse stormwater run-off over upland or directional sheet flow over upland;*
5. *Ditch that is not an (a)(1) or (a)(2) water;*
6. *Prior converted cropland;*
7. *Artificially irrigated area, including fields flooded for agricultural production, that would revert to upland should application of irrigation water to that area cease;*
8. *Artificial lake/pond constructed or excavated in upland or a non-jurisdictional water, so long as the artificial lake or pond is not an impoundment of a jurisdictional water;*
9. *Water-filled depression constructed/excavated in upland/non-jurisdictional water incidental to mining/construction or pit excavated in upland/non-jurisdictional water to obtain fill/sand/gravel;*
10. *Stormwater control feature constructed or excavated in upland or in a non-jurisdictional water to convey, treat, infiltrate, or store stormwater runoff;*
11. *Groundwater recharge, water reuse, or a wastewater recycling structure constructed or excavated in upland or in a non-jurisdictional water; and*
12. *Waste treatment system.*

Further definitions located at 33 CFR 328.3 (c) include:

(1) *Adjacent wetlands*. The term adjacent wetland means wetlands that:

i. Abut, meaning to touch at least one point or side of, a water identified in paragraph (a)(1), (2), or (3) of this section;

ii. Are inundated by flooding from a water identified in paragraph (a)(1), (2), or (3) of this section in a typical year;

iii. Are physically separated from a water identified in paragraph (a)(1), (2), or (3) of this section only by an artificial dike, barrier, or similar artificial structure so long as that structure allows for a direct hydrologic surface connection between the wetlands and the water identified in paragraph (a)(1), (2), or (3) of the section in atypical year, such as through a culvert, flood or tide gate, pump, or similar artificial feature. An adjacent wetland is jurisdictional in its entirety when a road or similar

artificial structure divides the wetland, as long as the structure allows for direct hydrologic connection through or over that structure in a typical year.

(6) *Lakes and ponds, and impoundments of jurisdictional waters*. The term lakes and ponds, and impoundments of jurisdictional waters means standing bodies of open water that contribute surface water flow to a water identified in paragraph (a)(1) of this section in a typical year either directly or through one or more waters identified in paragraph (a)(2), (3), or (4) of this section. A lake, pond, or impoundment of a jurisdictional water does not lose its jurisdictional status if it contributes surface water flow to a downstream jurisdictional water in a typical year through a channelized nonjurisdictional surface water feature, through a culvert, dike, spillway, or similar artificial feature, or through a debris pile, boulder field, or similar natural feature. A lake or pond, or impoundment of a jurisdictional water is also jurisdictional if it is inundated by flooding from a water identified in paragraph (a)(1), (2), or (3) of this section in a typical year.

(12) *Tributary*. The term tributary means a river, stream, or similar naturally occurring surface water channel that contributes surface water flow to a water identified in paragraph (a)(1) of this section in a typical year either directly or through one or more waters identified in paragraph (a)(2), (3), or (4) of this section. A tributary must be perennial or intermittent in a typical year. The alteration or relocation of a tributary does not modify its jurisdictional status as long as it continues to satisfy the flow conditions of this definition. A tributary does not lose its jurisdictional status if it contributes surface water flow to a downstream jurisdictional water in a typical year through a channelized nonjurisdictional surface water feature, through a subterranean river, through a culvert, dam, tunnel, or similar artificial feature, or through a debris pile, boulder field, or similar natural feature. The term tributary includes a ditch that either relocates a tributary, is constructed in a tributary, or is constructed in an adjacent wetland as long as the ditch satisfies the flow conditions of this definition.

1986 Waters of the United States Definitions and Rapanos Decision

The definition of waters of the United States, in 33 CFR 328.3, includes waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, wetlands, sloughs, wet meadows, or natural ponds and all impoundments of waters otherwise defined as waters of the United States. Also included are wetlands adjacent to waters (other than waters that are themselves wetlands). The term *adjacent* is defined as bordering, contiguous, or neighboring. Jurisdictional wetlands are a category of waters of the United States and have been defined by the USACE as areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Waters of the United States are defined in 33 CFR 328.3 (a), 13 November 1986, as:

1. *All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;*
2. *All interstate waters including interstate wetlands;*
3. *All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters:*
    i. *Which are or could be used by interstate or foreign travelers for recreational or other purposes; or*
    ii. *From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or*
    iii. *Which are used or could be used for industrial purposes by industries in interstate commerce;*
4. *All impoundments of waters otherwise defined as waters of the United States under the definition;*
5. *Tributaries of waters identified in paragraphs (a)(1)-(4) of this section;*
6. *The territorial seas;*

7. *Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a)(1)-(6) of this section.*

On 05 June 2007, the USACE and the USEPA issued joint guidance on delineation of waters on the United States based on the U.S. Supreme Court decisions in *Rapanos* and *Carabell*. Under this guidance, potential waters of the United States have been classified as traditional navigable waters (TNW), relatively permanent waters (RPW) (i.e., having flow most of the year or at least seasonally), or non-RPWs. This guidance states that TNWs and RPWs and contiguous or adjacent wetlands to these aquatic features are waters of the United States. Wetlands that are bordering, contiguous, or neighboring another water of the United States is considered adjacent. Additionally, wetlands that are within the 100-year floodplain of another water of the United States are also considered adjacent. Non-RPWs, wetlands contiguous or adjacent to non-RPWs, and isolated wetlands must undergo a "significant nexus" test on a case-by-case basis to determine the jurisdictional nature of these aquatic features. Under the "significant nexus" test a water feature must have substantial connection to a TNW by direct flow, or by indirect biological, hydrologic, or chemical connection. Under the "significant nexus" test the USACE District Engineer must submit the jurisdictional determination (JD) to the regional USEPA office, which makes the decision whether to move the JD to Headquarters USACE to make the final determination.

This guidance does not void the January 2001 decision of the U.S. Supreme Court in Solid Waste Agency of Northern Cook County (SWANCC) v. USACE which disallowed regulation of isolated wetlands under the CWA through the "Migratory Bird Rule." Previously, the USACE assumed jurisdiction over isolated waters of the United States based on its 1986 preamble stating that migratory birds used these habitats. The "Migratory Bird Rule" provided the nexus to interstate commerce and thus protection under the CWA. However, the new guidance does require that the "significant nexus" test be performed in addition to an analysis of other potential interstate commerce uses for isolated waters.

METHODOLOGY

Prior to conducting the desktop evaluation and fieldwork, the U.S. Geological Survey (USGS) topographic map (**Attachment A, Figures 2A** and **2B**), the *Soil Survey of Dallas County* and *the Soil Survey of Tarrant County, Texas*, and the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) digital soil databases for Dallas and Tarrant Counties (**Attachment A, Figure 3**), the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) (**Attachment A, Figure 4**), and recent and historic aerial photographs of the proposed survey area were studied to identify possible aquatic features that could meet the definition of waters of the United States and areas prone to wetland development. Ms. Karisa Fenton and Ms. Claire Unruh of IES conducted the delineation in the field in accordance with the USACE procedures on 22 September 2021.

Wetland determinations and delineations were performed on location using the methodology outlined in the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineer Wetland Delineation Manual: Great Plains Region (Version 2.0). The presence of a wetland is determined by the positive indication of three criteria (i.e., hydrophytic vegetation, hydrology, and hydric soils). Potential jurisdictional boundaries for other water features (i.e., non-wetland) were delineated in the field at the ordinary high-water mark (OHWM). The 33 CFR 328.3 (c)(7) defines OHWM as the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Water feature boundaries were recorded on a Trimble GeoExplorer XT Global Positioning System (GPS) unit capable of sub-meter accuracy. Photographs were also taken at representative points within the survey area (**Attachment B**). Routine wetland determination data forms are provided in **Attachment C**. Historic aerial photographs, from Environmental Data Resources, Inc. (EDR), were used in the jurisdictional determination of some aquatic features, are included in **Attachment D.**

RESULTS

Background Review

Topographic Setting

The USGS topographic maps (Grapevine 7.5' Quadrangle 1959, revised 1982; Euless 7.5' Quadrangle 1959; revised 1992) illustrate one blue line feature within the survey area. The blue line feature is depicted meandering through the southern region of Site 8 and continuing into the northwestern region of Site 9, oriented southwest-to-northeast (*see* **Attachment A, Figure 2A**). The 2019 version of the Grapevine and Euless 7.5' Quadrangle maps illustrates the blue line feature in similar alignment (*see* **Attachment A, Figure 2B**). The overall topography was illustrated with slopes oriented west-to-east in Sites 1 through 11 and north-to-south in Sites 12 and 13. The maximum elevation of the property was approximately 580 feet above mean sea level (amsl) and a minimum elevation of approximately 520 feet amsl.

Soils

The *Soil Survey of Dallas County, Texas* identified four soil map units within the survey area, Ferris-Heiden complex, 5 to 12 percent slopes; Heiden clay, 1 to 3 percent slopes; Heiden clay, 2 to 5 percent slopes, eroded; and Houston Black-Urban land complex, 0 to 4 percent slopes. The *Soil Survey of Tarrant County, Texas* identified four soil map units within the survey area, Heiden clay, 1 to 3 percent slopes; Houston Black clay, 1 to 3 percent slopes; Houston Black-Urban land complex, 1 to 4 percent slopes; and Urban land. None of these soil map units were listed as a hydric soil on the Hydric Soils of Texas list prepared by the National Technical Committee for Hydric Soils (accessed 29 September 2021, Dallas and Tarrant Counties, Texas) (*see* **Attachment A, Figure 3**). Hydric soils are described as those soils that are sufficiently wet in the upper part to develop anaerobic conditions during the growing season.

FEMA FIRM

The FEMA FIRM (Dallas and Tarrant Counties; Map Panel 4439C0120K; effective 25 September 2009; 48113C0145K; effective 07 July 2014 and Map Panels 48439C0235L, and 48113C0285L; effective 03 March 2019) shows the entire survey area to be within Zone X (Areas determined to be outside the 0.2 percent annual chance floodplain) (*see* **Attachment A, Figure 4**).

Historic Aerial Photographs

Historic aerial photographs from an aerial photograph decade package from EDR were also reviewed to understand the sequence of events that have occurred in Site 10 of the survey area (*see* **Attachment D**). Site 10 was evaluated due to the presence of a pond and wetland. The following paragraphs provide a description of the aerial photographs based on site conditions:

1942-1968 – Site 10 is characterized as an active agricultural property comprised of pastureland. A drainage is depicted outside of the western boundary. The surrounding area is comprised of pastureland, drainages, and scattered homesteads.

1972 – Dirt roads are visible across Site 10. The drainage to the west has been channelized and an impoundment has been excavated to the north.

1979 – The roads are no longer visible and the impoundment to the north has been filled. A commercial complex has been constructed south of Site 10.

1984 – Site 10 has been entirely cleared.

1990 – Dark color signatures are visible in the channel to the west, indicating potential inundation.

1995 – Airport runways and buildings have been constructed surrounding Site 10 and a road has been cleared along the northern boundary. The drainage to the north that was previously impounded has been channelized and routed through a concrete channel.

2005-2012 – The eastern region of Site 10 has been cleared. Canopy cover has increased along the drainage to the west, and the area to the south.

2016 – A lot has been partially cleared in the southern region.

Weather History

The weather history for Wunderground.com Edwards weather station (KTXEULES47) recorded no rainfall in the 7-day period prior to and during the evaluation, and a total of 0.20 inch during the 30-day period prior to the site visit. The Antecedent Precipitation Tool (APT) indicated that the conditions on-site at the time of the evaluation were considered hydrologically "normal" based on the 30-year climactic average (32.885619 °N, -97.040544 °W).

Field Investigation

The 13 sites within the survey area consisted of four distinct vegetation communities: **urban matrix**, **frequently maintained grassland**, **infrequently maintained grassland**, and **shrub-scrub upland**. The **urban matrix** was found throughout a majority of Sites 1 through 6, 8 through 10, and the eastern side of Site 12. The urban matrix was comprised of concrete lots, roads, buildings, and active construction areas. The entirety of Sites 7 and 11, and the western portions of Sites 5 and 8 contained the **frequently maintained grassland** vegetation community, dominated by mowed Bermudagrass (*Cynodon dactylon*). The **infrequently maintained grassland** was observed in the central region of Site 12 and was comprised of Maximilian sunflower (*Helianthus maximiliani*), meadow dropseed (*Sporobolus compositus*), Johnsongrass (*Sorghum halepense*), white heath aster (Symphyotrichum ericoides), King Ranch bluestem (*Bothriochloa ischaemum*), sumpweed (*Iva annua*), Canada goldenrod (*Solidago canadensis*), prairie broomweed (*Amphiachyris dracunculoides*), Bermudagrass, and annual sunflower (*Helianthus annuus*). The **shrub-scrub** upland vegetation community was observed on the western side of Site 12 and throughout Site 13, dominated by honey mesquite (*Prosopis glandulosa*), sugarberry (*Celtis laevigata*), giant ragweed (*Ambrosia trifida*), Johnsongrass, Bermudagrass, and annual sunflower.

Water from Sites 1 through 10 flows east into Hackberry Creek, then into the Elm Fork Trinity River, and ultimately into the Trinity River, a TNW. Water from Sites 11 through 13 flows south into Big Bear Creek, then into the West Fork Trinity River, and ultimately into the Trinity River, a TNW.

Desktop Evaluation

Aquatic features within Sites 1 through 7 were identified and delineated using both the National Hydrography Dataset (NHD) and historic and recent aerial photography. Sites 8 through 13 were field verified after a review of the available secondary data. **Table 1** and the following paragraphs detail the aquatic features identified within the survey sites at the time of evaluation (**Attachment A, Figure 5** and **6**).

Table 1. Aquatic Features Identified within the Survey Area

Water Identification	Hydrology Characteristics	Area (Acre)	Length (Linear Feet)
Wetland 1	Seasonally Saturated	0.01	---
Ditch 1	Ephemeral	0.03	267
Pond 1	Seasonally Inundated	0.03	---

**Actual acreage less than 0.01 acre*

Wetland 1 was an emergent wetland observed along the western boundary of Site 10, adjacent to Pond 1. The wetland appeared to form when the construction site to the east was cleared, and construction activities resulted in the formation of a berm outside of the construction fenceline allowing water to pool in the space between the fence and berm after rainfall. Hydrologic vegetation was dominated by saltmarsh aster (*Symphyotrichum subulatum*), and sumpweed (*Iva annua*). Hydric soils were indicated by a Depleted Matrix with a matrix color of 10YR 4/2 with redoximorphic concentrations of 5YR 4/6 in the pore linings and matrix. Hydrologic indicators consisted of drainage patterns, surface soil cracks, and a positive FAC-Neutral test.

Ditch 1 was a shallow, concrete-lined, stormwater drainage ditch within Site 5. Based on historic and recent aerial photography, Ditch 1 appears to have been constructed prior to 1995 to convey excess stormwater from the surrounding roads, lots, and fields. The USGS topographic map does not illustrate a blue line feature in the location of Ditch 1 and the shallow nature of the concrete channel suggests that the man-made feature replaced a swale.

Ditch 1 appeared dry in all aerial photographs. As such, it is IES' professional opinion that Ditch 1 would be considered an ephemeral feature.

Pond 1 was a small, artificial pond located along the western boundary of Site 10 with no OHWMs entering or exiting the pond. A review of aerial photography indicates Pond 1 was excavated in 2020, along the edge of a construction site with a small berm constructed across the gradient to capture sheet flow. Pond 1 was inundated at the time of the evaluation. Given the relatively small size of the pond and its location high in the watershed, it is IES' professional opinion that Pond 1 be considered seasonally inundated.

POTENTIAL JURISDICTIONAL ASSESSMENT

Due to the uncertainty associated with the definitions of waters of the United States and thereby the jurisdiction of features, IES is providing an analysis of jurisdiction based on the current NWPR and the former definitions using the *Rapanos* and *Carabell* decisions.

Navigable Waters Protection Rule (Effective 22 June 2020)

Table 2 provides an overview of the jurisdictional assessment of the aquatic features located within the survey area under the NWPR. Under this rule, none of the aquatic features located within the survey area would be considered a water of the United States (*see* **Attachment A, Figure 5**). **Wetland 1** was adjacent to an isolated pond and **Ditch 1** was a man-made ephemeral ditch; therefore, these features do not meet the definition of an adjacent wetland, or a replacement of a jurisdictional water and would not be subject to regulation. **Pond 1** does not contribute water flow through a surface connection to any intermittent or perennial water; therefore, it would not meet a definition of a jurisdictional pond or impoundment under the NWPR.

Table 2. Jurisdictional Assessment of Aquatic Features under the NWPR

Water Identification	Hydrology Characteristics	NWPR Classification
Wetland (b)(1)		
Wetland 1	Seasonally Saturated	Wetland
Ditch (b)(5)		
Ditch 1	Ephemeral	Ditch
Artificial Pond (b)(8)		
Pond 1	Seasonally Inundated	Artificial Pond

[1](a)(1-4) definitions are regulated under Section 404 of the CWA, while (b)(1-12) are excluded from regulation

1986 Waters of the United States Definitions and Rapanos Decision

The 05 June 2007 USACE and USEPA jointly published instructional guidebook is intended to provide the USACE field staff a national standard operating procedure for conducting jurisdictional determinations. The guidebook was prepared by combining all prior applicable provisions, regulations, statutes, and case laws pertaining to the CWA. All terms, definitions, and conclusions regarding the jurisdictional nature of the aquatic features used within this report are derived directly, as they are practiced, from the guidance. The following outlines the applicable interpretations of the guidance appropriate for this situation. **Table 3** provides an overview of the jurisdictional assessment of the aquatic features under the 1986 Waters of the United States definitions and the *Rapanos* decision (**Attachment A, Figure 6**).

Table 3. Jurisdictional Assessment of Aquatic Features Under the 1986 Definitions

Water Identification	Post-*Rapanos* Water Classification	33 CFR 328.3 Definition
Non-Jurisdictional Features		
Wetland 1	Seasonally Saturated	---
Ditch 1	Ephemeral	---
Pond 1	Artificial Pond	---

Non-Jurisdictional Features

Wetland 1

Wetland 1 was identified along a short swale, upstream of a pond that ran along a construction fence. Wetland 1 was neither adjacent to or abutting any non-RPWs or RPWs and lacked a significant nexus to a TNW. As such, Wetland 1 does not meet a definition of a water of the United States and would not be regulated under Section 404 of the CWA.

Ditch 1

Based on the historic aerial photography, Ditch 1 was excavated in an upland area prior to 1995 to convey surface hydrology off the surrounding roads, concrete lots, and fields. The entire ditch was dry in all aerial photographs. The USGS topographic map does not illustrate a blue line feature in the location of Ditch 1 and the shallow, concrete-lined channel suggests that the stormwater ditch replaced a swale. Current site conditions indicate that the ditch is ephemeral and does not carry relatively permanent flow. Under the 2007 guidance:

Drainage ditches would not be subject to jurisdiction under Section 404 of the CWA by definition, as such features;

- are not tributaries of waters, impoundment of waters, or are waters as defined in paragraphs (a)(1) through (7) of the CWA 33 CFR 328.3;
- are not TNW's or wetlands adjacent to a TNW, nor are they non-navigable tributaries of a TNW with relatively permanent flow or wetlands that abut such tributaries; and
- in accordance with the Rapanos guidance, ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water, are generally not considered to be waters of the United States.

Generally, under the guidance, features that do not have the physical characteristics of a tributary or a wetland and only convey sporadic flow with a speculative connection to a TNW are not considered waters of the United States.

Pond 1

Based on evidence provided by recent aerial photographs, Pond 1 was an artificial pond constructed in 2020. Pond 1 was constructed along a fence line on the edge of a construction site by excavating and placing earthen fill across the natural gradient of the landscape in such a manner to collect and redirect upslope sheet flow. Under the 2007 guidance:

Pond 1 would not be subject to jurisdiction under Section 404 of the CWA, by definition, as it;

- is not a natural pond, impoundment of waters, or a water as defined in paragraphs (a)(1)-(7) of the CWA 33 CFR 328.3;
- is not a TNW or wetland adjacent to a TNW, nor is it a non-navigable tributary of a TNW with relatively permanent flow or wetlands that abut such tributaries; and
- as clarified under 33 CFR 323.2 (b), The term *lake* … As used in this regulation, the term does not include artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water for such purposes as stock watering, irrigation, settling basins, cooling, and rice growing.

CONCLUSIONS

To summarize the delineation, a wetland, a ditch, and a pond were identified and delineated within the survey area. A summary of these features' characteristics is presented in **Table 1** and a summary of the jurisdictional assessment is presented in **Table 2** under the NWPR and in **Table 3** for the 1986 waters of the United States definitions and the *Rapanos* decision.

Under the ***NWPR,*** and the ***1986 waters of the United States definitions*** and the *Rapanos* decision, none of the identified aquatic features would be waters of the United States.

This delineation is based on professional experience in the approved methodology, photograph interpretation and assessing the desktop resources, and from experience with the USACE Fort Worth District regulators; however, this delineation does not constitute a jurisdictional determination of waters of the United States. This delineation has been based on the professional experience of IES staff and our interpretation of USACE regulations at 33 CFR 328.3, the joint USACE/USEPA guidance regarding the *Rapanos* and *Carabell* decisions, IES' interpretation of the NWPR, current judicial reviews, and the Regulatory Guidance Letter (RGL) 08-02. While, IES believes our delineation to be accurate, final authority to interpret the regulations lies solely with the USACE and USEPA. The USACE Headquarters in association with the USEPA often issue guidance that changes the interpretation of published regulations. USACE/USEPA guidance issued after the date of this report has the potential to invalidate the report conclusions and/or recommendations, which may create the need to reevaluate the report conclusions. IES has no regulatory authority, as such, proceeding based solely upon this report does not protect the Client from potential sanction or fines from the USACE/USEPA. The Client acknowledges that they have the opportunity to submit this report to the USACE for a preliminary jurisdictional determination for concurrence prior to proceeding with any work within aquatic features located on the survey area. If the Client elects not to do so, then the Client proceeds at their sole risk.

IES appreciates the opportunity to work with you and the Dallas Fort Worth International Airport Environmental Affairs Department on this project, and we hope we may be of assistance to you in the future. If you have any comments, questions, or concerns, please do not hesitate to contact us. We can be reached at 972-562-7672 or by email at skipp@intenvsol.com or rreinecke@intenvsol.com.

Sincerely,

Integrated Environmental Solutions, LLC.



Mr. Shae Kipp
Ecologist

Attachments

File ref: 03.006.094

ATTACHMENT A
Figures



Figure 1.
General Location Map

CTA Development
Cities of Irving, Euless, Grapevine, and Coppell
Dallas and Tarrant Counties, Texas

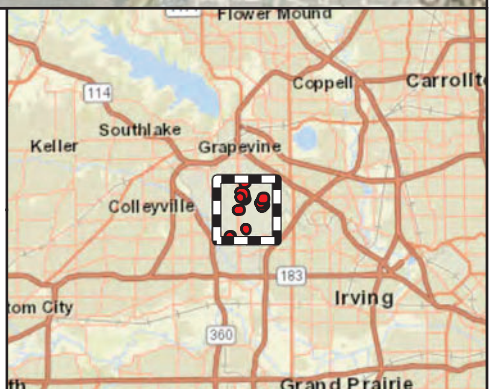
1 in = 2,000 feet

Feet
0 2,000

N
W E
S

File Ref. 03.006.094
Date: 9/28/2021

Survey Area



Area of Detail

Scale: 1 inch equals 10 miles

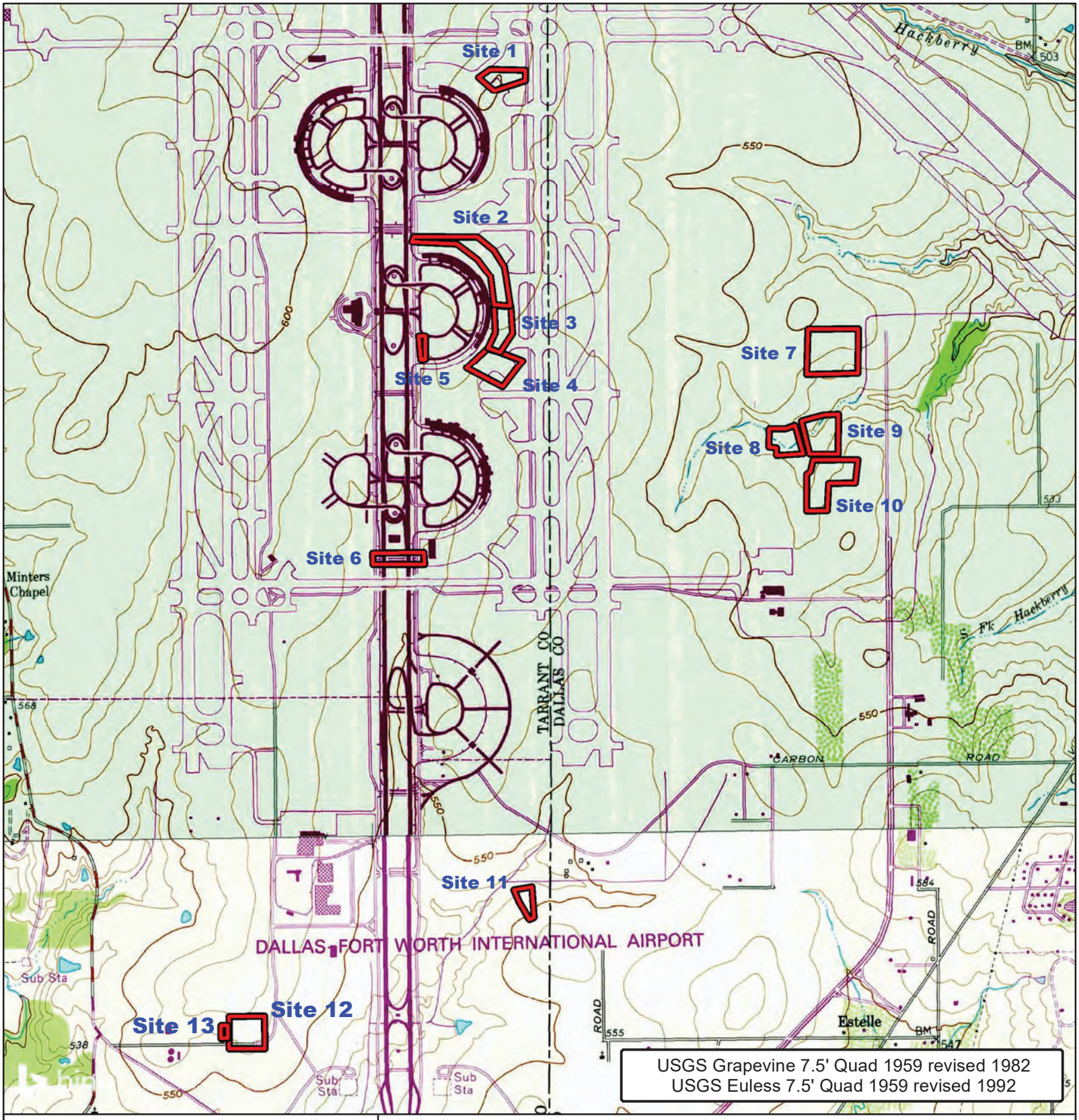


Figure 2A.
Topographic Setting

CTA Development
Cities of Irving, Euless, Grapevine, and Coppell
Dallas and Tarrant Counties, Texas

1 in = 2,000 feet

Feet
0 2,000

N
W E
S

File Ref. 03.006.094
Date: 9/28/2021

Survey Area

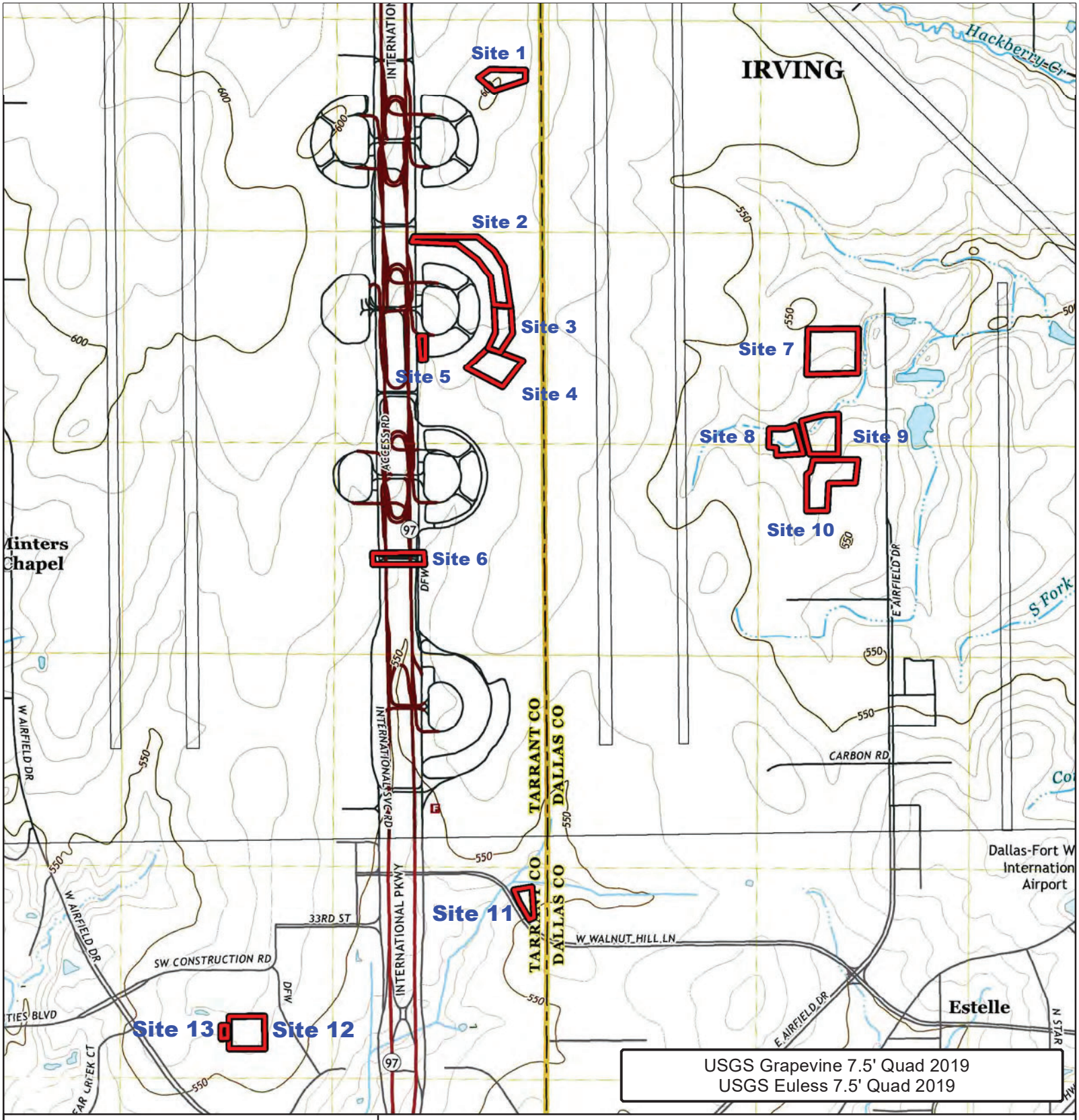


Figure 2B.
Topographic Setting

CTA Development
Cities of Irving, Euless, Grapevine, and Coppell
Dallas and Tarrant Counties, Texas

1 in = 2,000 feet

Feet
0 2,000

N
W E
S

File Ref. 03.006.094
Date: 9/28/2021

Survey Area

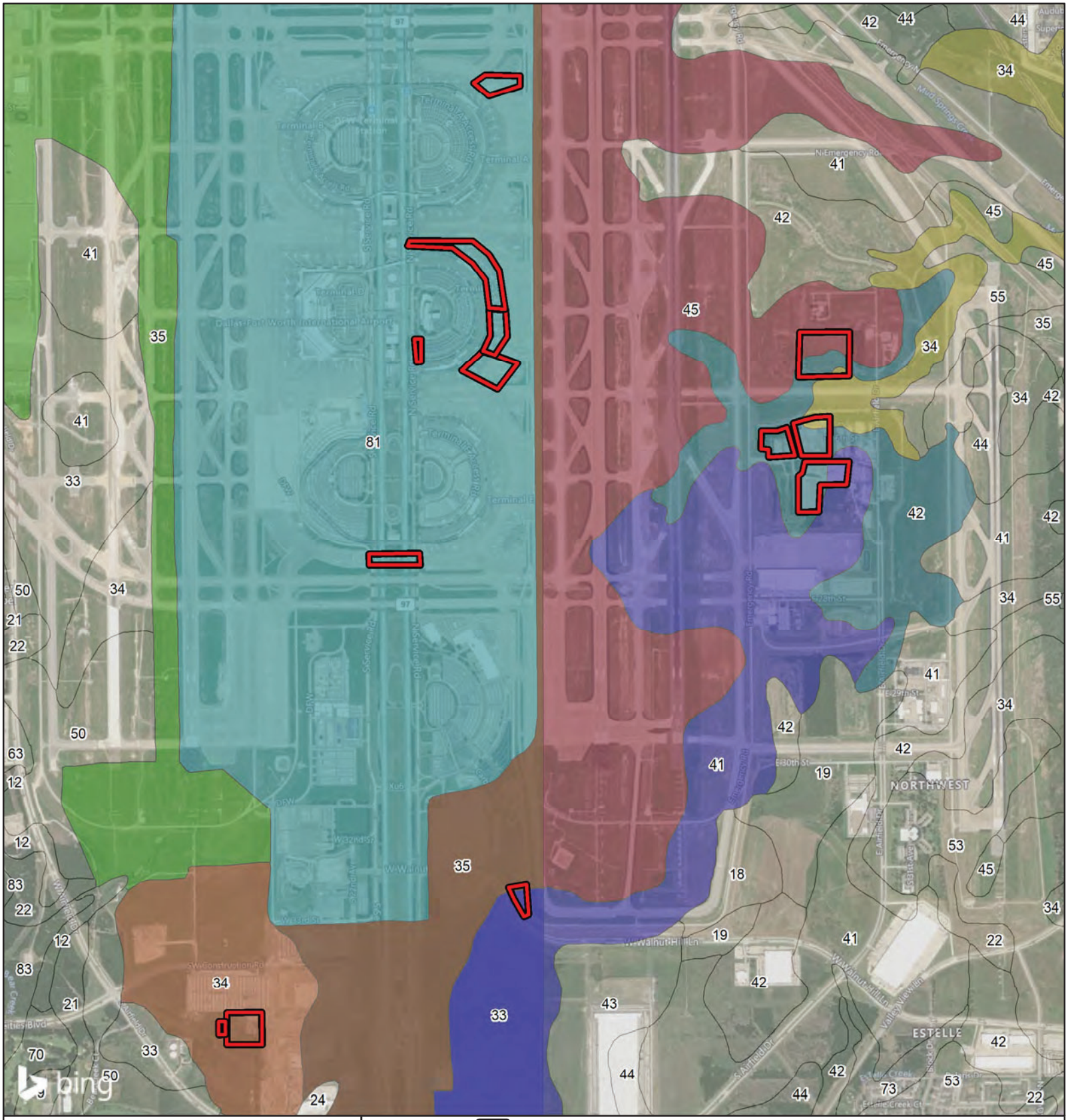


Figure 3.
Soils Map

CTA Development
Cities of Irving, Euless, Grapevine, and Coppell
Dallas and Tarrant Counties, Texas

1 in = 2,000 feet

Feet
0 2,000

N
W E
S

File Ref. 03.006.094
Date: 9/29/2021

Survey Area
Soil map units outside survey area

Soil Map Units - Dallas County

- 34- Ferris-Heiden complex, 5 to 12 percent slopes
- 41- Heiden clay, 1 to 3 percent slopes
- 42- Heiden clay, 2 to 5 percent slopes, eroded
- 45- Houston Black-Urban land complex, 0 to 4 percent slopes

Soil Map Units - Tarrant County

- 33 - Heiden clay, 1 to 3 percent slopes
- 34 - Houston Black clay, 1 to 3 percent slopes
- 35 - Houston Black-Urban land complex, 1 to 4 percent slopes
- 81 - Urban land

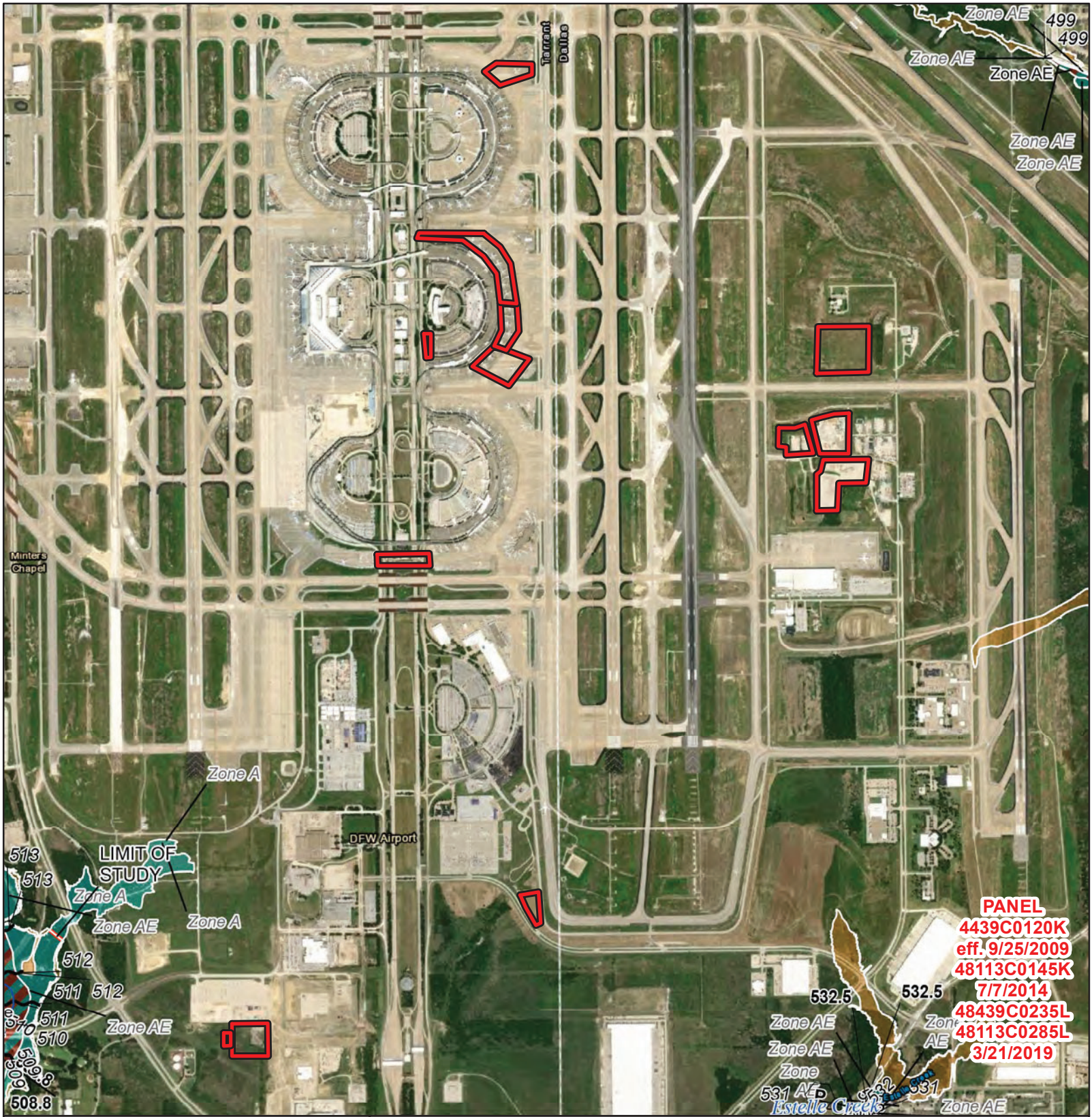


Figure 4.
Federal Emergency Management Agency Flood Insurance Rate Map

CTA Development
Cities of Irving, Euless, Grapevine, and Coppell
Dallas and Tarrant Counties, Texas

1 in = 2,000 feet

Feet
0 2,000

N
W E
S

File Ref. 03.006.094
Date: 9/29/2021

Survey Area

FEMA FIRM Zone Descriptions

- Zone X - Areas determined to be outside the 0.2% annual chance floodplain
- Zone X - Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood
- Zone A - Special Flood Hazard Areas subject to inundation by the 1% annual chance flood; No base flood elevations determined
- Zone AE - Special Flood Hazard Areas subject to inundation by the 1% annual chance flood; Base flood elevations determined
- Zone AE - Floodway areas in Zone AE

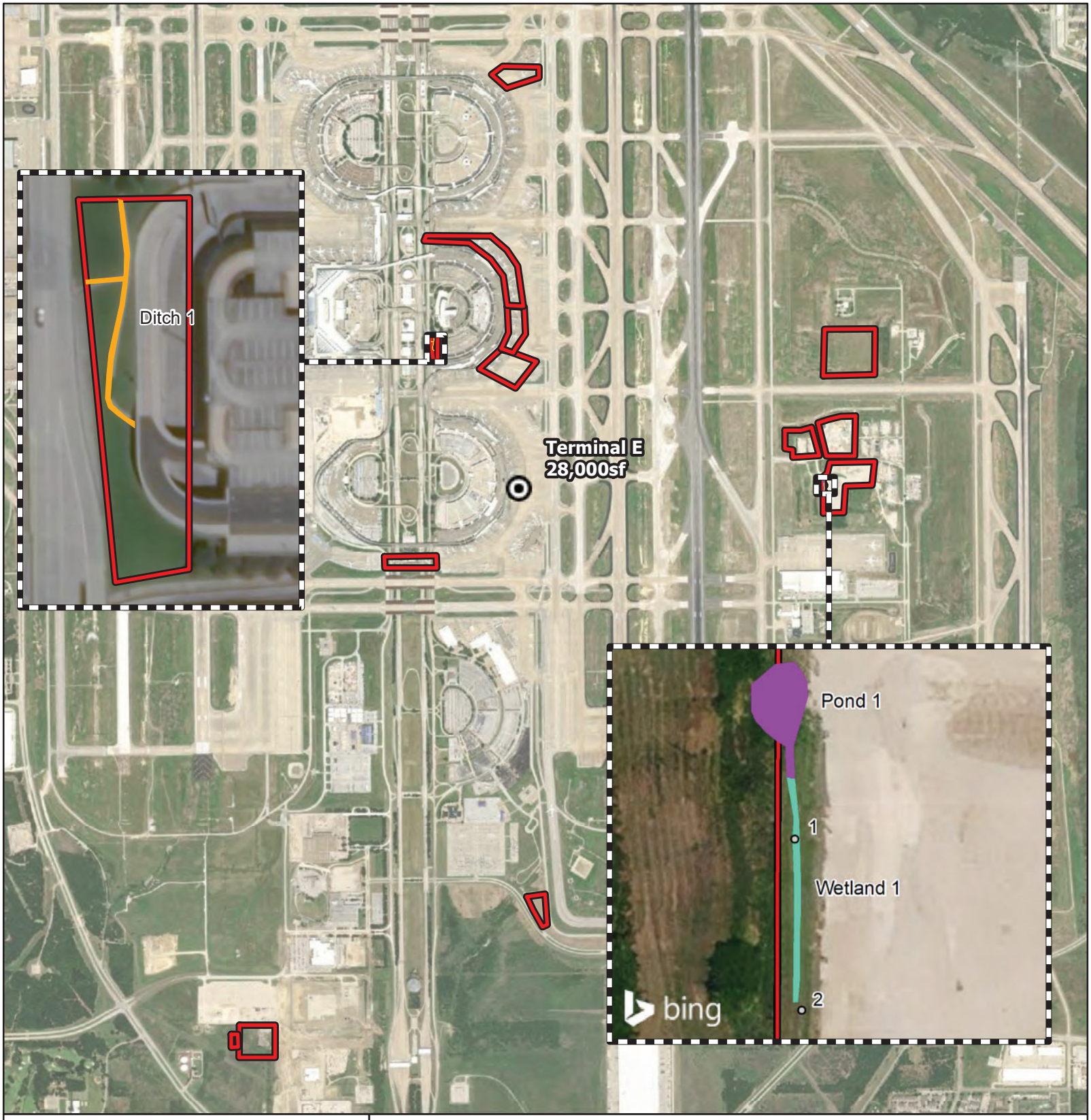


Figure 5.
NWPR Aquatic Features Identified within the Survey Area

CTA Development
Cities of Irving, Euless, Grapevine, and Coppell
Dallas and Tarrant Counties, Texas

1 in = 2,000 feet

Feet
0 2,000

N
W E
S

File Ref. 03.006.094
Date: 9/29/2021

Survey Area
Wetland Determination Data Form

Aquatic Features Excluded From Jurisdiction

Wetland (b)(1)
Ditch (b)(5)
Artificial Pond (b)(8)

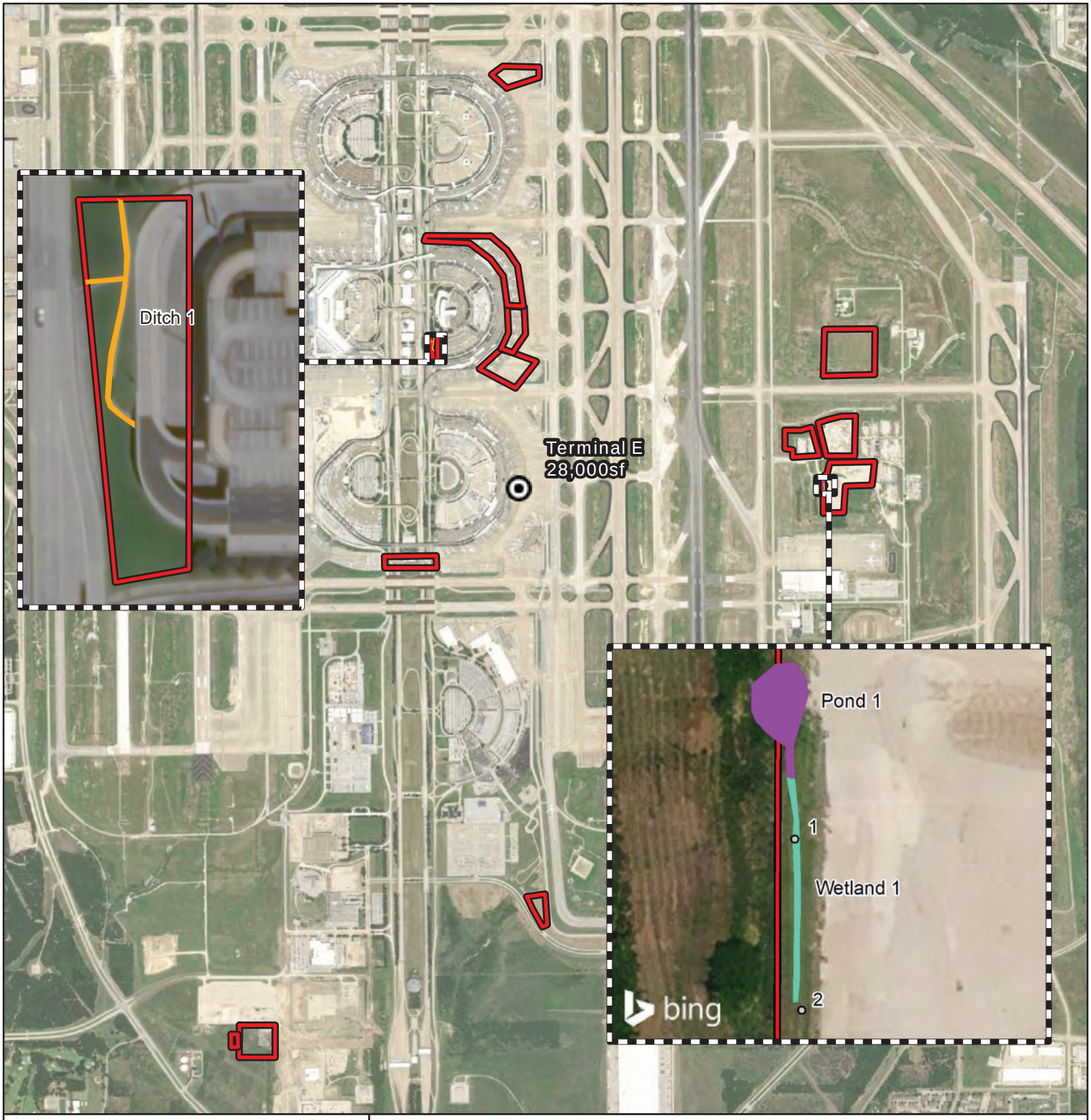


Figure 6.
Pre-2015 Aquatic Features Identified within the Survey Area

CTA Development
Cities of Irving, Euless, Grapevine, and Coppell
Dallas and Tarrant Counties, Texas

1 in = 2,000 feet

Feet
0 2,000

N
W E
S

File Ref. 03.006.094
Date: 9/29/2021

Survey Area
Wetland Determination Data Form

Aquatic Features Excluded From Jurisdiction

Wetland, Isolated
Ditch, Ephemeral
Artificial Pond

ATTACHMENT B
Site Photographs



Photograph Location Map

CTA Development
DFW International Airport
Dallas and Tarrant Counties, Texas

1 in = 1,800 feet

Feet
0
1,800

N
W
E
S

File Ref. 03.006.094
Date: 9/29/2021

Survey Area
Photograph Location

Aquatic Features Excluded From Jurisdiction

Wetland, Isolated
Ditch, Ephemeral
Artificial Pond



Photograph 1



Photograph 2



Photograph 3



Photograph 4



Photograph 5



Photograph 6



Photograph 7



Photograph 8



Photograph 9



Photograph 10



Photograph 11



Photograph 12



Photograph 13



Photograph 14



Photograph 15



Photograph 16



Photograph 17



Photograph 18



Photograph 19



Photograph 20



Photograph 21



Photograph 22



Photograph 23



Photograph 24



Photograph 25



Photograph 26



Photograph 27



Photograph 28



Photograph 29



Photograph 30



Photograph 31



Photograph 32



Photograph 33



Photograph 34



Photograph 35



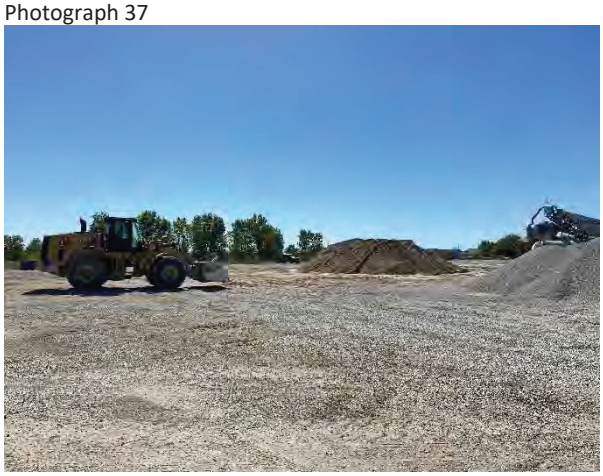
Photograph 36



Photograph 37



Photograph 38



Photograph 39



Photograph 40



Photograph 41



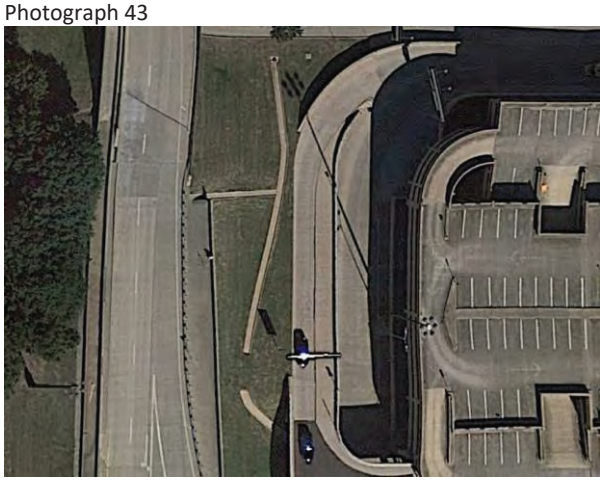
Photograph 42



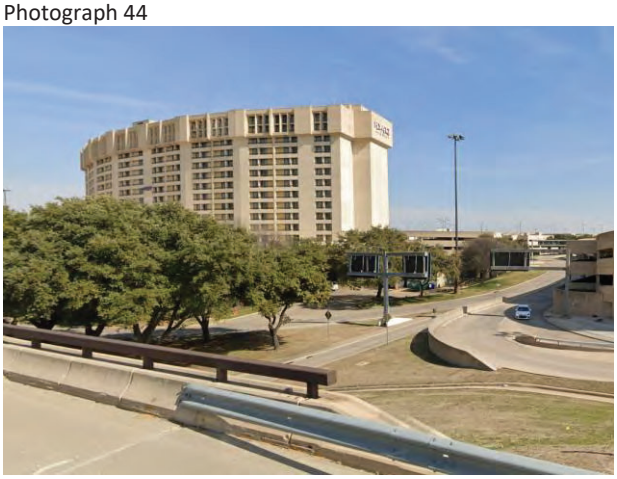
Photograph 43



Photograph 44



Photograph 45*



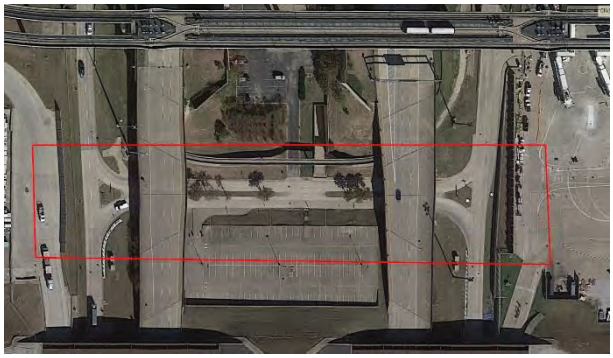
Photograph 46*



Photograph 47*



Photograph 48*



Photograph 49*



Photograph 50*



Photograph 51*



Photograph 52*

*Aerial Images and Street View Images from Google Earth

ATTACHMENT C
Routine Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: CTA Development Project | City/County: DFW Airport/Tarrant | Sampling Date: 9/22/2021

Applicant/Owner: Dallas/Fort Worth International Airport, Environmental Affairs Department | State: TX | Sampling Point: 1

Investigator(s): Karisa Fenton; Claire Unruh | Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Swale | Local relief (concave, convex, none): Concave | Slope %: 0-1

Subregion (LRR): J | Lat: 32.889606 N | Long: -97.019763 W | Datum: NAD 1983

Soil Map Unit Name: Heiden clay, 2 to 5 percent slopes, eroded | NWI Classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are vegetation, ☐ Soil, ☐ Or hydrology ☐ Significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are vegetation, ☐ Soil, ☐ Or hydrology ☐ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	Is the Sampled Area within a wetland?	**Yes** ☒ **No** ☐
Hydric Soil Present?	Yes ☒	No ☐		
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: Swale adjacent to pond along construction fenceline.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot Size: 30' Radius)	Absolute % Coverage	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
	0 = Total Cover		

Sapling/Shrub Stratum (Plot Size: 15' Radius)			
1. *N/A*			
2.			
3.			
4.			
5.			
	0 = Total Cover		

Herb Stratum (Plot Size: 5' Radius)			
1. *Iva annua*	40	Yes	FAC
2. *Symphyotrichum subulatum*	35	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	75 = Total Cover		

Woody Vine Stratum (Plot Size: 15' Radius)			
1. *N/A*			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 25

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A=

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- Yes 2 - Dominance Test is > 50%
- ____ 3 - Prevalence Index is ≤ 3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks:

SOILS

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Loc[2]	Texture	Remarks
0-16	10 YR 4/2	97	5 YR 4/6	3	C	PL/M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) **(LRR F)**
- ☐ 1 cm Muck (A9) (**LRR F, G, H)**
- ☐ Depleted below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ☐ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ High Plains Depressions (F16 **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 CM Muck (A9) **(LRR I, J)**
- ☐ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ☐ Dark Surface (S7) **(LRR G)**
- ☐ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless distributed or problematic.

Restrictive Layer (if present):

Type: N/A

Depth (inches): N/A

Hydric Soil Present? **Yes** ☒ **No** ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Dry-Season Water Table (C2)
- ☐ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ☐ Presence of Reduced Iron (C4)
- ☐ Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☒ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☒ Drainage patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☒ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes? ☐ No? ☒ Depth (inches): N/A

Water Table Present? Yes? ☐ No? ☒ Depth (inches): N/A

Saturation Present? (includes capillary fringe) Yes? ☐ No? ☒ Depth (inches): N/A

Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: CTA Development Project | City/County: DFW Airport/Tarrant | Sampling Date: 9/22/2021

Applicant/Owner: Dallas/Fort Worth International Airport, Environmental Affairs Department | State: TX | Sampling Point: 2

Investigator(s): Karisa Fenton; Claire Unruh | Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): None | Slope %: 0-1

Subregion (LRR): J | Lat: 32.889606 N | Long: -97.019763 W | Datum: NAD 1983

Soil Map Unit Name: Heiden clay, 2 to 5 percent slopes, eroded | NWI Classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are vegetation, ☐ Soil, ☐ Or hydrology ☐ Significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are vegetation, ☐ Soil, ☐ Or hydrology ☐ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	Is the Sampled Area within a wetland?	Yes ☐ No ☒
Hydric Soil Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks: Hillslope upslope of wetland swale, along construction fenceline. Upland berm evident between wetland and downslope area.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot Size: 30' Radius)	Absolute % Coverage	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
	0 = Total Cover		

Sapling/Shrub Stratum (Plot Size: 15' Radius)			
1. *N/A*			
2.			
3.			
4.			
5.			
	0 = Total Cover		

Herb Stratum (Plot Size: 5' Radius)			
1. *Helianthus annuus*	40	Yes	FACU
2. *Sorghum halepense*	40	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	80 = Total Cover		

Woody Vine Stratum (Plot Size: 15' Radius)			
1. *N/A*			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 20

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A=

Hydrophytic Vegetation Indicators:

_____ 1 - Rapid Test for Hydrophytic Vegetation

_____ 2 - Dominance Test is > 50%

_____ 3 - Prevalence Index is ≤ 3.0[1]

_____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

_____ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks:

SOILS

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-16	10 YR 4/2	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) **(LRR F)**
- ☐ 1 cm Muck (A9) (**LRR F, G, H)**
- ☐ Depleted below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ☐ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ High Plains Depressions (F16 **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 CM Muck (A9) **(LRR I, J)**
- ☐ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ☐ Dark Surface (S7) **(LRR G)**
- ☐ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless distributed or problematic.

Restrictive Layer (if present):

Type: N/A

Depth (inches): N/A

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Dry-Season Water Table (C2)
- ☐ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ☐ Presence of Reduced Iron (C4)
- ☐ Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present?	Yes? ☐	No? ☒	Depth (inches): N/A
Water Table Present?	Yes? ☐	No? ☒	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes? ☐	No? ☒	Depth (inches): N/A

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

ATTACHMENT D
Historic Aerial Photographs

CTA Development Project

2682 E Airfield Dr

Dallas, TX 75261

Inquiry Number: 6681807.1

September 28, 2021

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

09/28/21

Site Name:

CTA Development Project
2682 E Airfield Dr
Dallas, TX 75261
EDR Inquiry # 6681807.1

Client Name:

Integrated Env. Solutions, Inc.
610 Elm St Suite 300
McKinney, TX 75069
Contact: Claire Unruh

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Search Results:

Year	Scale	Details	Source
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2008	1"=500'	Flight Year: 2008	USDA/NAIP
2005	1"=500'	Flight Year: 2005	USDA/NAIP
1995	1"=500'	Acquisition Date: January 31, 1995	USGS/DOQQ
1990	1"=500'	Flight Date: January 29, 1990	NAPP
1984	1"=500'	Flight Date: May 10, 1984	TXDOT
1979	1"=500'	Flight Date: November 11, 1979	USDA
1972	1"=500'	Flight Date: February 13, 1972	USDA
1968	1"=500'	Flight Date: September 18, 1968	USGS
1958	1"=500'	Flight Date: January 07, 1958	ASCS
1950	1"=500'	Flight Date: December 17, 1950	USDA
1942	1"=500'	Flight Date: January 27, 1942	USDA

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YEAR: 2012

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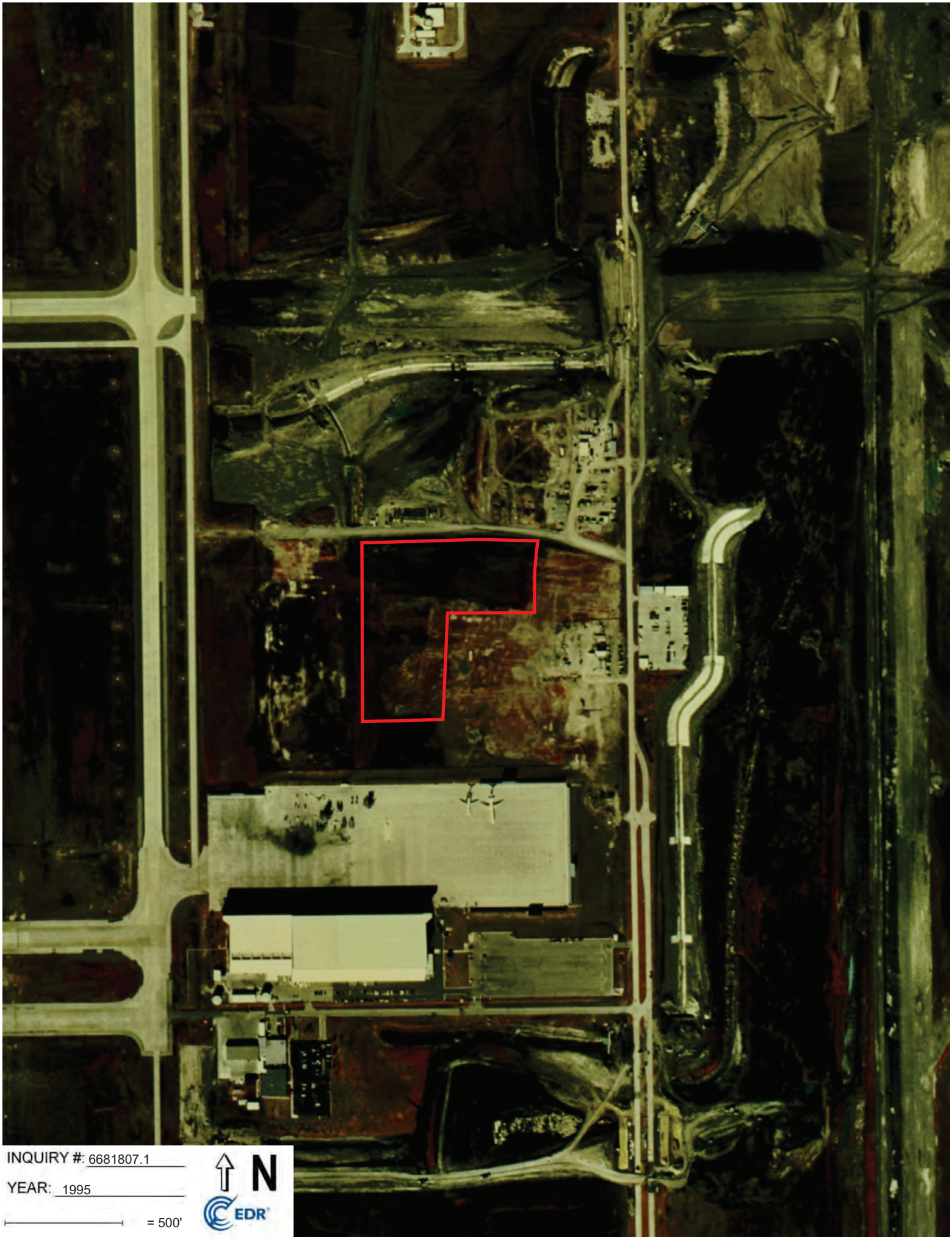

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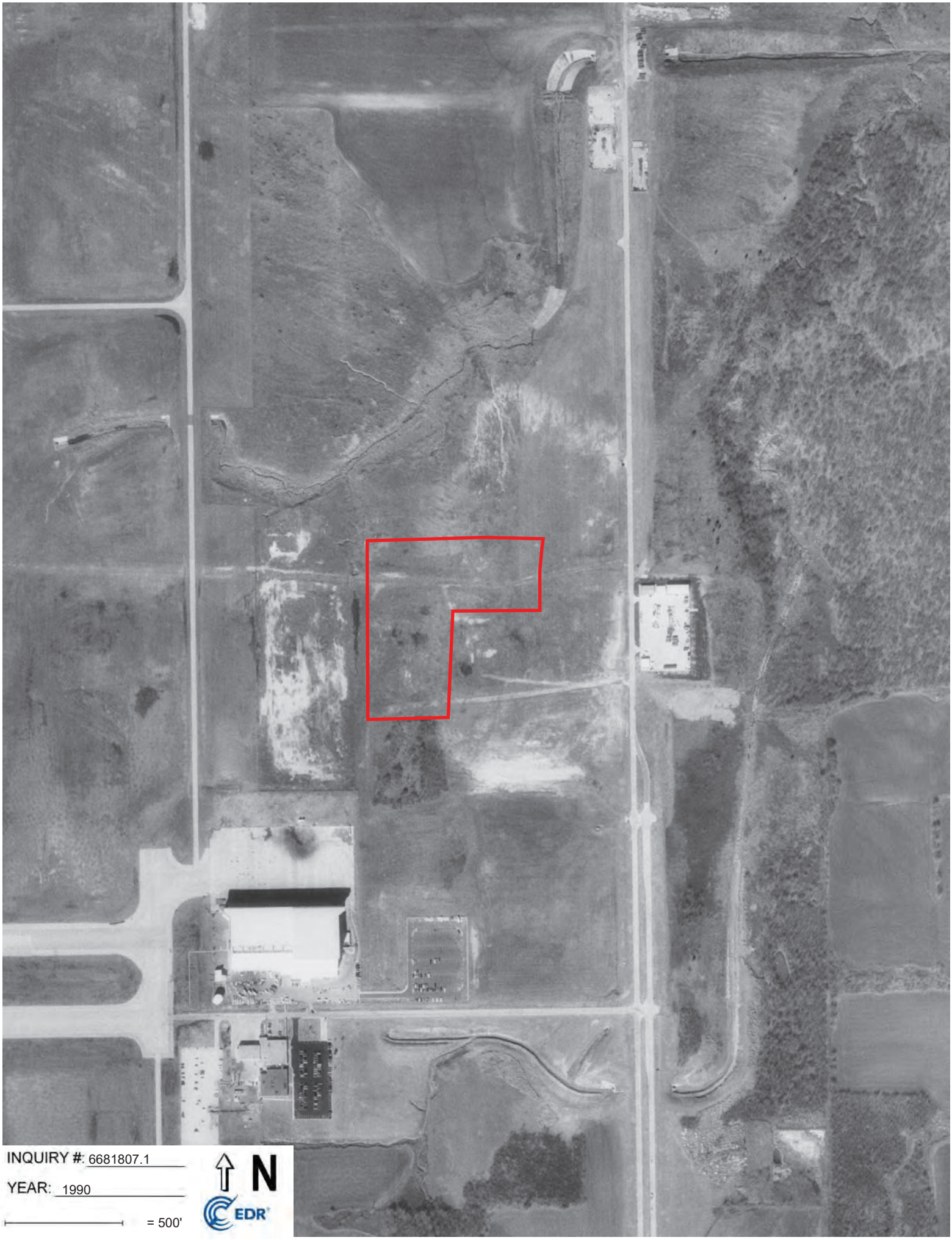

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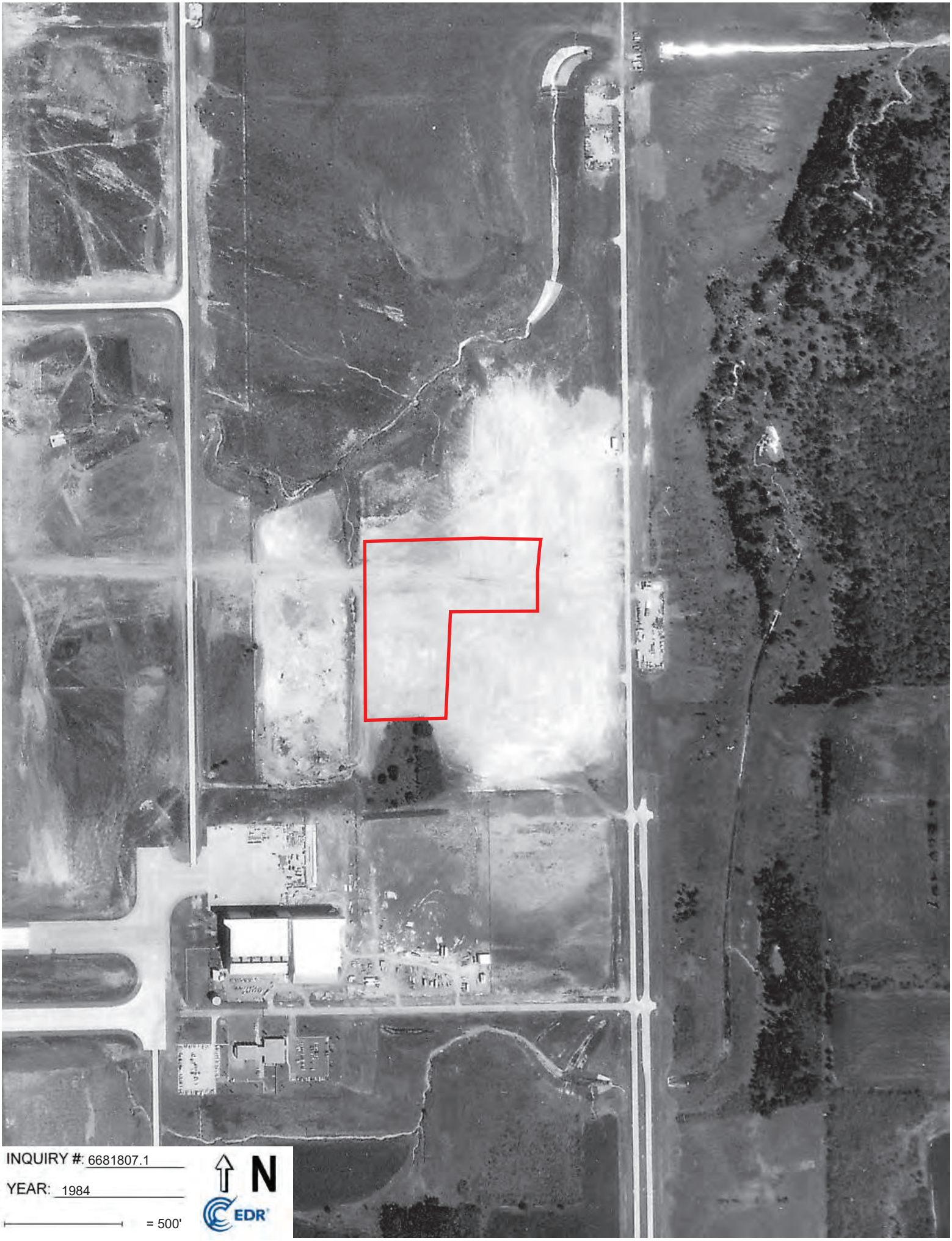

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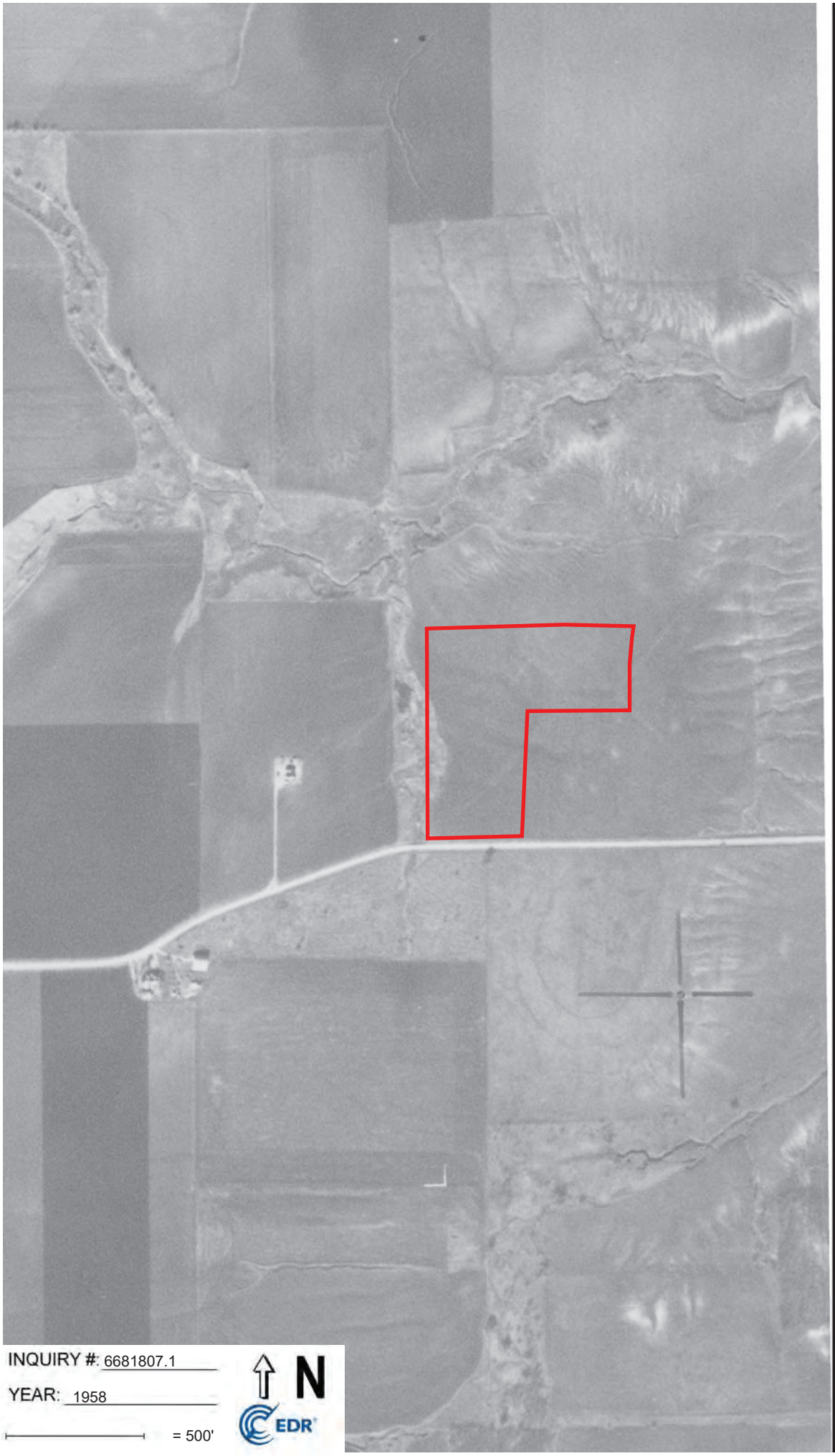

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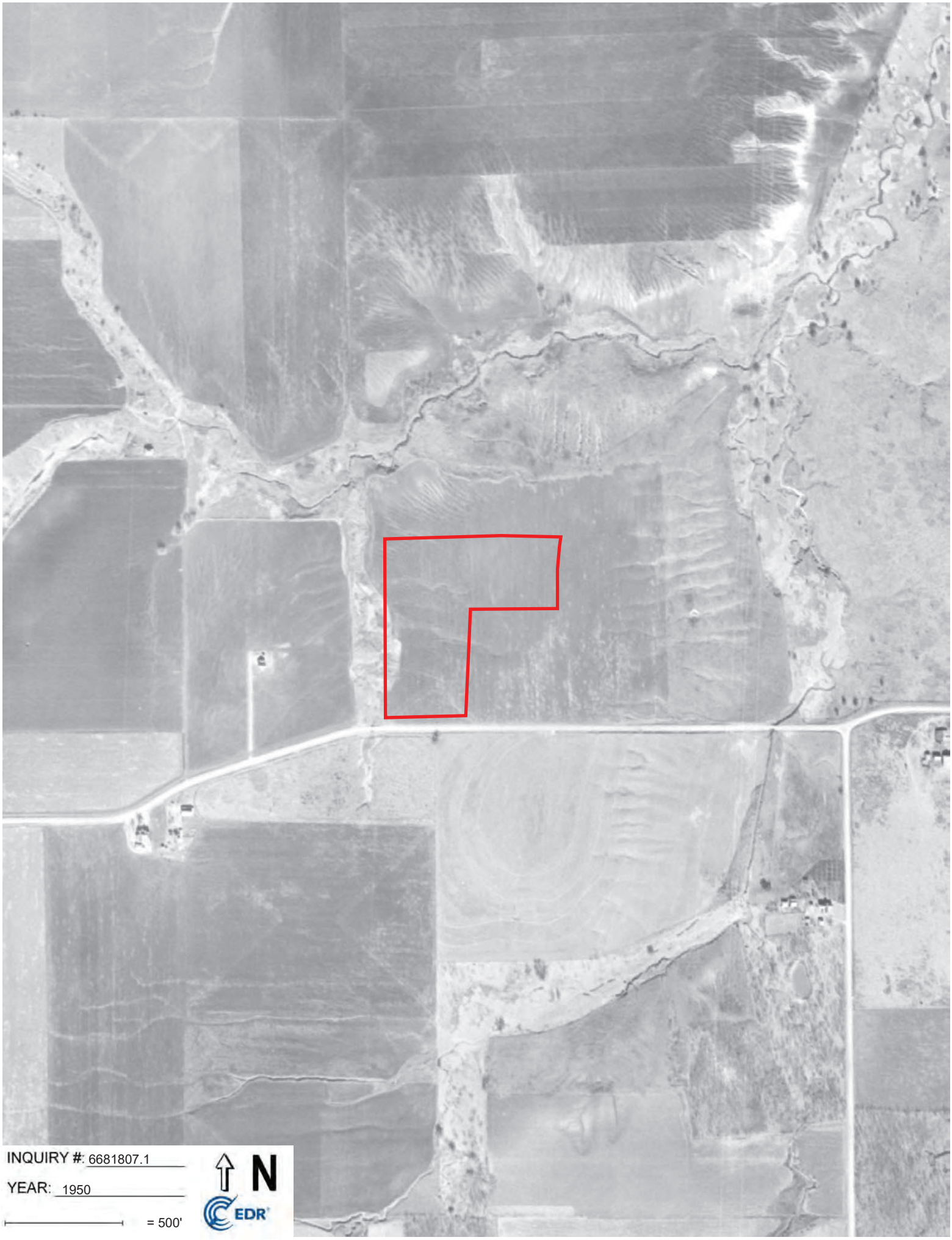
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APPENDIX D: AIR QUALITY TECHNICAL REPORT

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AIR QUALITY AND CLIMATE CHANGE ASSESSMENT FINAL TECHNICAL REPORT: ELECTRIC CENTRAL UTILITY PLANT AND ASSOCIATED UTILITY DELIVERY SYSTEMS PROJECT

Project no.	**1690015627-014**
Recipient	**Sandra Lancaster**
Date	**April 27, 2022**
Prepared by	**John Grant, Ramboll**
Checked by	**Krish Vijayaraghavan, Ramboll**
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APPENDICES

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Acronyms and Abbreviations

ACEIT	Airport Construction Emissions Inventory Tool
ACRP	Airport Cooperative Research Program
APU	Auxiliary Power Unit
CAA	Federal Clean Air Act
CAP	Criteria Air Pollutant
CATEX	Categorical Exclusion
CH_4	Methane
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_{2e}	Carbon Dioxide Equivalents
CUP	Central Utility Plant
DFW	Dallas Fort Worth International Airport
EIS	Environmental Impact Statement
EV	Electric Vehicles
FAA	Federal Aviation Administration
GHG	Greenhouse Gases
GSE	Ground Support Equipment
GWP	Global Warming Potential
HAP	Hazardous Air Pollutants
MOVES	MOtor Vehicle Emission Simulator
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NO_2	Nitrogen Dioxide
NOx	Nitrogen Oxides
O_3	Ozone
Pb	Lead
PM_{10}	Particulate Matter Less Than 10 Microns in Diameter
$PM_{2.5}$	Particulate Matter Less Than 2.5 Microns
RTC	Regional Transportation Council
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
SOP	Standard Operating Procedure

TCEQ	Texas Commission on Environmental Quality
tpy	Tons Per Year
TRB	Transportation Research Board
USEPA	United States Environmental Protection Agency
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds

Executive Summary

This technical report provides an assessment of the air quality impacts associated with construction and operations of the Electric Central Utility Plant and Associated Utility Delivery Systems Project at Dallas Fort Worth International Airport (the Airport or DFW) (the "Proposed Project"). The Proposed Project would include the construction of a new Electric CUP; construction of a boiler house, South Pump Room to supply hot and chilled water; North Pump Room, and new utility service connections at the terminals for the renewable fuels and electricity.

Ramboll evaluated impacts to air quality due to the Proposed Project under National Environmental Policy Act (NEPA) in accordance with the guidelines provided in the Federal Aviation Administration (FAA) Aviation Emissions and Air Quality Handbook Version 3 Update 1 (FAA Handbook); FAA Order 5050.4B, NEPA Implementing Instructions for Airport Actions; and FAA Order 1050.1F, Environmental Impacts: Policies and Procedures.

Ramboll estimated criteria air pollutant (CAP) and GHG emissions associated with construction of the Proposed Project. Proposed Project construction emission estimates were developed based on 1) activity estimates for vehicles, non-road equipment, and fugitive dust provided by DFW and based on the Airport Construction Emissions Inventory Tool (ACEIT) and 2) emission factors from the United States Environmental Protection Agency (USEPA) MOtor Vehicle Emission Simulator, version 3 (MOVES3) and USEPA AP-42 guidance.

Ramboll evaluated the Proposed Project's significance with respect to air quality impacts under NEPA by comparing project emissions to applicable USEPA de minimis levels. Dallas-Fort Worth is in a Serious Ozone Non-Attainment Area;[1] therefore, the project is subject to 50 tons per year (tpy) volatile organic compounds (VOC) and nitrogen oxides (NOx) *de minimis* thresholds under the General Conformity Rule, to determine compliance with the Clean Air Act (CAA) and the Texas Commission on Environmental Quality's (TCEQ) Dallas-Fort Worth Eight-Hour Ozone State Implementation Plan (SIP).

Table ES-1 shows that maximum projected annual construction emissions are well below applicable *de minimis* thresholds under the current serious designation for the Dallas-Fort Worth Ozone Non-Attainment Area. In the case that the Dallas-Fort Worth Ozone Non-Attainment Area designation changes to severe, Proposed Project annual emissions will remain under severe designation general conformity *de minimis* thresholds (25 tons/yr for NOx and VOC).

Table ES-1. Proposed Project construction emissions compared to applicable general conformity *de minimis* thresholds.

Project Year	Project Emissions (tons/yr)		General Conformity *De Minimis* Threshold[1] (tons/yr)		Exceeds General Conformity *De Minimis* Threshold?
	NOx	VOC	NOx	VOC	
Current DFW De Minimis Threshold under Serious Ozone Classification					
2022	2.89	0.34	50	50	No
2023	6.98	1.36	50	50	No
2024	1.37	0.55	50	50	No
2029	0.32	0.01	50	50	No

[1] Source: 40 CFR 93 § 153 *de minimis* thresholds applied to Dallas-Fort Worth Non-attainment Area "serious" classification

[2] "Severe" ozone classification threshold shown in case of future reclassification of DFW area.

[1] USEPA. Greenbook. 2020. Texas Nonattainment/Maintenance Status for Each County By Year for All Criteria Pollutants. Dallas-Fort Worth . Available Online: https://www3.epa.gov/airquality/greenbook/anayo_tx.html

1. Introduction

This technical report has been prepared to address the potential environmental impacts associated with the construction and operations of the Electric Central Utility Plant and Associated Utility Delivery Systems Project at DFW (the "Proposed Project"). In conformance with the NEPA, this analysis identifies and assesses the impacts that would result from the Proposed Project's emission of CAPs. It also discloses emissions of GHGs and describes potential hazardous air pollutant (HAP) emissions.

This analysis evaluates the potential air quality-related impacts of the Proposed Project, which would construct and operate the Electric Central Utility Plant and Associated Utility Delivery Systems Project. This technical report describes the scope and methodology for evaluation of air quality impacts from construction and operational sources, where relevant. The results of these evaluations are compared to the standards of significance identified by the Federal CAA.

1.1 Overall Approach and Regulatory Setting

NEPA provides for an environmental review process to disclose the potential impacts, including air quality, from a proposed federal action on the human environment. Per the USEPA, NEPA's basic policy is to assure that all branches of government give proper consideration to the environment prior to undertaking any major federal action that significantly affects the environment.

The impacts to air quality due to the Proposed Project for NEPA are determined in accordance with the guidelines provided in the FAA Aviation Emissions and Air Quality Handbook Version 3 Update 1 (FAA Handbook); FAA Order 5050.4B, NEPA Implementing Instructions for Airport Actions; and FAA Order 1050.1F, Environmental Impacts: Policies and Procedures. Potential air quality and climate impacts are categories that are required to be analyzed per these orders and guidance.

FAA 1050.1F, Exhibit 4-1 defines the significance threshold for air quality as when "[t]he action would cause pollutant concentrations to exceed one or more of the National Ambient Air Quality Standards (NAAQS), as established by the USEPA under the CAA, for any of the time period analyzed, or to increase the frequency or severity of any such existing violations." FAA guidance requests that air quality analysis focus on NAAQS criteria air pollutants and that a separate section should address Climate.

The CAA requires adoption of NAAQS, which are periodically updated, to protect public health and welfare from the effects of air pollution. Current federal standards are set for sulfur dioxide (SO_2), carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter less than 10 microns in diameter (PM_{10}), particulate matter less than 2.5 microns ($PM_{2.5}$), and Lead (Pb).[2] Specific geographic areas are classified as either "attainment" or "non-attainment" areas for each pollutant based upon comparison of measured data with NAAQS. Those areas designated as "non-attainment" for purposes of NAAQS compliance are required to prepare regional air quality plans, which set forth a strategy for bringing an area into compliance with the standards. These regional air quality plans developed to

[2] USEPA. NAAQS Table. Available at: https://www.epa.gov/criteria-air-pollutants/naaqs-table. Accessed: January 2022.

meet federal requirements are included in an overall program referred to as the State Implementation Plan (SIP).

Dallas and Tarrant counties, where the Project site is located, have been designated by the USEPA as being in attainment and non-attainment with the following NAAQS, respectively[3]:

- *Attainment or Unclassified:* CO (1-hr, 8-hr), NO_2 (1-hr, Annual), SO_2 (1-hr, 3-hr), PM_{10} (24-hr), $PM_{2.5}$ (24-hr, Annual), and Pb (Rolling 3-month average);
- *Non-Attainment:* O_3 (2008 8-hr, Serious), O_3 (2015 8-hr, Marginal).

Per above, EPA NAAQS non-attainment designations are limited to ozone. O_3 is not directly emitted but is formed in the atmosphere when nitrogen oxides (NO_x) and volatile organic compounds (VOC) react in sunlight. O_3 is considered a regional pollutant because NO_x and VOC emissions throughout the air basin are involved in ozone formation. A regional photochemical model that considers emissions throughout the air basin would be required to explicitly model ozone concentrations. Instead, the potential impacts to ozone concentrations are typically based on annual or daily estimates of NO_x and VOC emissions. Air pollutant emissions from construction and any net increases in emissions associated with operation of the Proposed Project and Alternatives would be calculated as relevant to ozone formation and concentration.

1.2 Existing Conditions

DFW is located between owner cities Dallas and Fort Worth, Texas, with portions included in both Dallas and Tarrant counties. In 2019, it serviced over 73 million passengers to 258 nonstop destinations. DFW covers over 17,000 acres of land area and currently contains five terminals and 182 gates.

DFW is currently served by an existing CUP ("CUP #1") that was constructed in the 1970s and renovated in the 2000s. This system includes a chilled water system, hot water system, cooling tower equipment, and a thermal energy storage tank. Existing boilers are natural gas fired, with jet fuel type A as a backup fuel source. CUP #1 has no redundancy for heating and chilled water pumping capacities and is challenged to meet the current and forecast demands for heating and cooling.

DFW growth and targets are described in its 2016 through 2020 Strategic Plan. Construction and operations are also governed by DFW's Green Building Standards, Sustainability Management Plan, and Clean Air policy.

1.3 Proposed Project

The Proposed Action Alternative, which is the Sponsor's Preferred Alternative, would include the construction of a new Electric CUP; construction of a boiler house, South Pump Room to supply hot and chilled water; North Pump Room, and new utility service connections at the terminals for the

[3] USEPA. Greenbook. 2020. Texas Nonattainment/Maintenance Status for Each County By Year for All Criteria Pollutants. Dallas-Fort Worth . Available Online: https://www3.epa.gov/airquality/greenbook/anayo_tx.html

renewable fuels and electricity. The project is divided into three phases (demolition, construction, and operation) over 24 months (December 2022 through November 2024)[4].
Specific components that make up the scope of the Proposed Action are summarized below:

- A new Electric CUP that would primarily generate heating from electric heat pump chillers. During peak periods, there will also be four permanent boilers consisting of three fire tube boilers with a 39,500 British thermal units per hour (MBH) heating output and a condensing boiler at 10,000 MBH
- Three temporary fire tube boilers with 26,780 MBH heating output for each will be used during construction phasing,
- New heating hot and chilled water piping loop (Service Delivery System),
- Construction of a new boiler house and South Pump Room (5,830 square feet [SF]) and North Pump Room (3,490 SF) with
    - Five, 10,000 MBH condensing boilers,
    - Heating hot and chilled water pumping capacity, and
    - PCA glycol pumping capacity,
- Connection to the gas service yard,
- 1,999 Gallon Jet Fuel A storage tank for boiler backup,
- New natural gas service and electrical service for terminals and associated structures,
- Coordination of connection points for the following utilities with other on-going projects,
    - Domestic and fire water, sanitary sewer, grease waste, and stormwater, and
- Coordination of connection points for the following information technology systems,
    - Fiber for Information Technology Systems (ITS), telephones, fire alarm, communications, and public address/video equipment (PA/VE).

These components, making up the Proposed Project, would allow for the replacement of the outdated existing boiler house at the CUP. The Proposed Project would replace/improve aging utility infrastructure associated with the terminal area to extend the life of Terminal C, support growth, and provide adequate utility service to accommodate Terminal A growth.

Air quality and greenhouse gas emissions from construction of the Proposed Project are analyzed for anticipated construction years - 2022, 2023, and 2024. Air quality and greenhouse gas emissions from operation of the Proposed Project are analyzed for 2029. Proposed Project construction and operational emissions are described in **Section 2.4.1** and **Section 2.4.2** and evaluated for significance in **Section 4.1.1** of this technical report.

1.4 Project Design Features

The DFW Airport has on-going commitments to reduce its air emissions. The following are measures that are already implemented or will be implemented at the Airport:

Clean Air policy[5] (effective 8/1/2020), which includes the following required measures:

[4] The emission inventory estimates documented in this report are based on a project construction schedule of August 2022 to October 2024 provided by DFW Airport as of December 2021. Based on information received on April 27, 2022, the project construction schedule is expected to be December 2022 to November 2024.

[5] DFW. 2020. Clean Air policy.

- 3.2.1 Ensure compliance by meeting or exceeding all applicable air quality laws, regulations, and Texas SIP requirements.
- 3.2.2 Achieve and maintain carbon neutrality certification on a pathway to net zero carbon emissions by 2030 in accordance with Level 4+ Airport Carbon Accreditation Program requirements.
- 3.2.3 Identify future air quality requirements and initiate procedures to meet or exceed them.
- 3.2.4 Incorporate energy efficiency and carbon emissions reduction priorities into the strategic plan.
- 3.2.5 Require use of 100 percent renewable energy in electricity supplied to the Board.
- 3.2.6 Develop and utilize innovative strategies in expanding the Board's current commitments to improve air quality.
- 3.2.7 Establish, track and analyze metrics to monitor air quality performance, and to set goals for continuous improvement.
- 3.2.8 Actively engage with tenants and other business partners to improve energy performance, optimize operational efficiency, and reduce emissions through their own reduction plans or through measures initiated by the airport.
- 3.2.9 Maintain a Clean Fleet Standard Operating Procedure (SOP) that prioritizes zero emission vehicle and equipment purchases for fleet operations in accordance with the Regional Transportation Council's (RTC) Clean Fleet Policy.
- 3.2.10 Actively promote the transition to electric vehicles (EVs) through the provision of required infrastructure, incentives, and partnerships.
- 3.2.11 Discourage vehicle idling in order to support regional efforts to improve air quality.
- 3.2.12 Continue to integrate energy efficiency into its facilities, systems, processes, and operations and ensure the best available technologies are utilized.
- 3.2.13 Partner with agencies, academia, nongovernmental organizations, business associations, and other interested stakeholders to develop effective and sustainable solutions to local air quality challenges

In addition, the Proposed Project would integrate DFW's Net Zero Energy building strategy, which supports the Airport's carbon neutrality accreditation and commitment to achieve net zero carbon by 2030 on an enterprise-wide scale.

2. Methodology and Inventory

The steps conducted in performing this air quality analysis are consistent with the FAA Handbook as follows: (1) Determine the need for the assessment; (2) Select the assessment methodology; and (3) Conduct the assessment and assess the Proposed Project's impact relative to the numeric thresholds.

2.1 Need for Assessment

The FAA Handbook lays out the following steps to determine when an air quality assessment is required and the type of assessment that may be needed.

1. Determine the Project definition, described in **Section 1.3**.
2. Determine whether FAA involvement is associated with the Project; DFW has already been in discussions with the FAA regarding this Project. In this step, the Proposed Project has been confirmed not to fall under a categorical exclusion (CATEX), so an environmental assessment or environmental impact statement (EIS) will be developed.
3. Determine if the Project will cause or create a reasonably foreseeable increase in air emissions; as described further below, construction and operations of this Project may cause an increase in air emissions.
4. Establish the attainment/nonattainment status for the Project area and identify pollutants for which the area is designated nonattainment/maintenance, described in **Section 1.1**.
5. Evaluate agency/public scoping comments concerning air quality; this is only a requirement when preparing an EIS and is not addressed explicitly in this report.

Based on the results of Steps 1 through 4 above, an air quality assessment has been conducted as described below.

2.2 Assessment Methodology

The FAA Handbook describes several different potential assessment methodologies that could be pursued when an air quality assessment is needed. Figure 4-5 of the FAA Handbook provides examples that show which methodologies are appropriate, potentially appropriate, or unnecessary for various project action categories.

The potential methodologies are summarized here for the Project air quality assessment are described below. The category "new or expanded utility plant" lists the construction emissions inventory as "appropriate" and all other methodologies as "potentially appropriate". The decision to evaluate the "potentially appropriate" methodologies was assessed using Project-specific information. Selected analysis methods and analysis methods that were evaluated but not selected are summarized below.

Selected Analysis Methods

- Qualitative Assessment: When it has been determined that the Project will not cause or create a reasonably foreseeable increase in air emissions, a qualitative assessment of air quality impacts is likely all that is necessary. This assessment should contain an explanation of the conditions and rationale upon which this finding is based. This is the methodology used to evaluate certain Project operations in **Section 2.4.2** below.
- Construction Emissions Inventory: A construction emissions inventory is designed to quantify the mass of CAP emissions and precursors associated with construction activity in a proposed action. This is described in **Sections 2.3.1** and **2.4.1** below.
- Operational Emissions Inventory: An operational emissions inventory is designed to quantify the mass of CAP emissions and precursors associated with operational activity in a proposed action. This is described in **Sections Section 2.3.2** and **2.4.2** below.
- Greenhouse Gas Emissions Inventory: A GHG emissions inventory is designed to quantify the mass of GHG emissions associated with operational activity in a proposed action. Project GHG emissions are quantified for construction and operations.

Analysis Methods that were not Selected

- Atmospheric Dispersion Modeling: Dispersion modeling is used to further refine the results of the operational and construction emissions inventory by distributing the emissions across a project area both spatially and temporally based on the operational and physical characteristics of the emission source(s) combined with meteorological and local terrain data. This is not necessary for this Project given the nonattainment pollutant of interest (O_3) and the results of the construction assessment below.
- Roadway "Hot-Spot" Analysis: Hot-spot modeling is designed to assess the effects of motor vehicle traffic emissions on local air quality conditions. This is not applicable to the Proposed Project given that it will not result in significant increases in vehicle traffic.
- Hazardous Air Pollutants Emissions Inventory: A HAPs inventory is designed to quantify the mass of HAP emissions associated with operational activity in a proposed action. This is not performed as part of this Project because operational emissions increases are expected to be very small.

2.3 Scenarios Evaluated

2.3.1 Construction Scenarios Evaluated

Ramboll evaluated CAP and GHG emissions associated with construction of the Proposed Project. The Proposed Project would construct the Proposed Project, including an electric CUP, utility lines[6], pump house, and boiler house and includes several enabling projects or phases. A list of project types included is provided in Table 2. Construction activities would take place from 2022 through 2024. Construction emissions depend on the activity levels of heavy-duty construction equipment, haul truck trips, and vehicle trips made by construction workers and vendors traveling to and from the Proposed Project site.

A list of associated project types, schedule, and the proportion of activity in each year by project type is provided in Table 2.

[6] Construction activities and emissions associated with utility lines are included implicitly in the emission inventory under (i) Pump House and Boiler House and (ii) Electric CUP

Table 2. Proposed Project schedule by project type.

Project Type	Start Date	End Date	Percentage of Project Type in 2022	Percentage of Project Type in 2023	Percentage of Project Type in 2024
Pump House and Boiler House					
Building - 10000 sqft- 1 story	8/26/2022	8/26/2023	35%	65%	0%
Drainage System	8/26/2022	8/26/2023	35%	65%	0%
Fencing	8/26/2022	8/26/2023	35%	65%	0%
Fuel Tanks	8/26/2022	8/26/2023	35%	65%	0%
Parking Lot	8/26/2022	8/26/2023	35%	65%	0%
Site Work - 10000 sqft	8/26/2022	8/26/2023	35%	65%	0%
Fugitive Dust Control	8/26/2022	8/26/2023	35%	65%	0%
Electric CUP					
Drainage System	3/29/2023	10/31/2024	0%	48%	52%
Fencing	2/1/2023	6/28/2023	0%	100%	0%
Fuel Tanks	7/1/2023	8/19/2023	0%	100%	0%
Asphalt Option - Fuel Tanks	7/1/2023	8/19/2023	0%	100%	0%
Landscaping	8/1/2024	9/19/2024	0%	0%	100%
Parking Lot	2/1/2023	3/22/2023	0%	100%	0%
Asphalt Option - Parking Lot	2/1/2023	3/22/2023	0%	100%	0%
Service Road	2/1/2023	3/22/2023	0%	100%	0%
Asphalt Option - Service Road	2/1/2023	3/22/2023	0%	100%	0%
Building - 100000 sqft- up to 10 stories	3/29/2023	10/31/2024	0%	48%	52%
Open Parking Lot @Grade - 10000 sqft	2/1/2023	3/22/2023	0%	100%	0%
Site Work - 10000 sqft	11/1/2022	10/30/2024	8%	50%	42%
Fugitive Dust Control	11/1/2022	10/30/2024	8%	50%	42%

2.3.2 Operational Scenarios Evaluated

Ramboll evaluated incremental emissions from the Proposed Project. The Project is expected to result in incremental operational emissions from rental boilers from 2022 to 2024 and permanent stationary boilers from 2025 to end of project life. The Project will include the use of three rental, natural gas-fired for hot water heating. The rental boilers are estimated to have a rating of 26,780 thousand British thermal units per hour (MBH) heating output each and a combined consumption of 1427 therms per year[7]. The project also includes the installation of five permanent 10,000 MBH boilers at the boiler house. The permanent natural gas boilers at the boiler house are expected to have lower or equivalent emissions compared to the existing boilers that they will replace. Therefore, Ramboll did not perform a quantitative evaluation of operational emissions for the natural gas-fueled boilers. It is expected that emission increases from Proposed Action permanent boilers at the boiler house will occur only when jet fuel is used to power the boilers during times when natural gas is unavailable. Therefore, Ramboll

[7] ARUP, 2021, "Memorandum: Rental Boiler Environmental Summary". From: Michael Sweeney (ARUP), To: John Spours (DFW). 15 December 2020.

estimated boiler house permanent boiler emissions only for operations when the boilers will be powered by jet fuel. Operation of permanent boilers at the boiler house with jet fuel is expected to be minimal. It was assumed that annual operation on jet fuel would be limited to a single multi-day event. The Proposed Action also includes installation of three, permanent, fire tube boilers and one, permanent, condensing boiler at the Electric CUP. These permanent boilers will utilize electricity and natural gas fuel, operating more efficiently than the existing CUP boilers being replaced; thereby, resulting in a net decrease to emissions relative to the NAA. Therefore, quantitative evaluation of operational emissions for the permanent boilers at the Electric CUP was not estimated. **Section 2.4.2** below provides a qualitative discussion of the aspects of the Project that would result in no net increase in emissions and describes the methodology by which incremental emissions from the Project were estimated.

2.4 Emission Inventory Development

This section describes the methodology that Ramboll used to develop construction and operational emissions inventories for the Proposed Project. This analysis evaluates CAPs and GHGs. Disclosure of HAPs is recommended for operational emissions but not for construction. Operational emissions are expected to be very small; therefore, HAPs are not considered. For this analysis, the following pollutants were considered:

- O_3 precursors: VOCs and NOx
- CAPs: CO, SO_2, PM_{10}, and $PM_{2.5}$
- GHGs: CO_2 (carbon dioxide),CH_4 (methane), N_2O (nitrous oxide); total GHG emissions are reported as CO_2e (carbon dioxide equivalents)

Because O_3 is a secondary pollutant (i.e., it is not directly emitted but is formed in the atmosphere), emissions of VOCs and NO_x, which react in the presence of sunlight to form ozone, were used to assess impacts on ozone levels.

CO_2e emissions were estimated based on 20-year global warming potential (GWP) estimates for CH_4 (82.5) and N_2O (273)[8], conservatively, as 20-year GWPs will result in higher CO_2e estimates compared to 100-year GWP estimates.

To estimate CAP and GHG emissions from the Proposed Project, Ramboll directly or indirectly relied primarily on emissions estimation guidance from government-sponsored organizations, Project specific studies (e.g., design documents), and emission estimation software.

2.4.1 Construction Emissions Inventory

Proposed Project construction would generate CAP and GHG emissions from heavy-duty construction equipment activity, truck haul trips, and construction worker and vendor truck trips to and from the Proposed Project site. Construction emissions include both mobile and off-road source categories.

[8] Intergovernmental Panel on Climate Change (IPCC), 2014. AR5 Synthesis Report: Climate Change 2014. Available at: https://www.ipcc.ch/report/ar5/syr/. Accessed: October 2020.

Mobile source emissions would be generated from on-road vehicles and construction equipment, including but not limited to dump trucks, mixers, passenger vehicles, flatbed trucks, and tractor trailers. CAP and ozone precursor emissions include emissions of NO_x, CO, SO_2, VOC, PM_{10}, and $PM_{2.5}$. Diesel-powered off-road construction equipment and traffic to and from the construction site would also generate GHGs. The assessment of construction air quality impacts considers each of the above sources. As DFW purchases 100% renewable electricity (per DFW Clean Air Policy[5]), there would be no indirect GHG emissions associated with electricity generation for construction of the Proposed Project.

To calculate emissions from Proposed Project construction pump house and boiler house, Ramboll utilized project total equipment activity estimates provided by DFW. Equipment activity was allocated to project types based on ACEIT estimates of activity for each project type. Project type activity was allocated across years based on the project schedule. For the Electric CUP, Ramboll utilized activity estimates from the Airport Construction Emissions Inventory Tool (ACEIT) developed by the Airport Cooperative Research Program (ACRP) of the Transportation Research Board (TRB)[9]. Emissions were calculated using the activity estimates for each project component combined with the most recent emission factors from the USEPA MOVES3[10] and USEPA AP-42 guidance[11]. Inventory activity and emission factors are described below.

2.4.1.1 Emissions Inventory Activities

2.4.1.1.1 Project Schedule by Phase

The Project consists of several supporting project types, including site work, parking lots, service roads, drainage systems, and the CUP building. Construction of each project type is further broken down into relevant activities or subphases. Overall Project construction for the Electric CUP is anticipated to take place between November 2022 and October 2024 and anticipated to take place between August 2022 and August 2023 for the pump house and boiler house. The anticipated construction project types and phasing are shown in **Table 2.** The proportion of construction activities anticipated to take place in each calendar year is shown in **Appendix A.**

[9] Transportation Research Board. Transportation Research Board. Guidance for Estimating Airport Construction Emissions. Available at: http://www.trb.org/main/blurbs/170234.aspx. Accessed: May 2019.

[10] US Environmental Protection Agency. MOtor Vehicle Emission Simulator (MOVES3). Available at https://www.epa.gov/moves/latest-version-motor-vehicle-emission-simulator-moves. Accessed: December 2021.

[11] US Environmental Protection Agency. AP-42, Fifth Edition Compilation of Air Pollutant Emissions Factors, Volume 1: Stationary Point and Area Sources. Available at https://www.epa.gov/air-emissions-factors-and-quantification/ap-42-compilation-air-emissions-factors#5thed. Accessed: October 2020.

Table 3. Project types and construction activities for the Proposed Project.

Project Type	Construction Activities
Building	Concrete Foundations, Concrete Mixing/Batching, Construction Mob & Layout, Employee Commute, Exterior Wall Framing, Interior Build-Out/ Finishes, Material Delivery, Material Movement (Paved Roads), Material Movement (Unpaved Roads), Roofing, Security & Safety Systems, Structural Steel Erection & Decks
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe, Drainage - 24 inch SICPP, Drainage Structures, Employee Commute, Hydroseeding, Material Movement (Paved Roads), Material Movement (Unpaved Roads), Soil Erosion/Sediment Control, Soil Handling, Topsoil Placement, Unstabilized Land and Wind Erosion
Fencing	Clearing and Grubbing, Employee Commute, Excavation (Cut to Fill), Fencing, Grading, Hydroseeding, Material Delivery, Material Movement (Paved Roads), Material Movement (Unpaved Roads), Soil Erosion/Sediment Control, Soil Handling, Topsoil Placement, Unstabilized Land and Wind Erosion
Fuel Tanks[1]	Asphalt Drying, Asphalt Storage and Batching, Clearing and Grubbing, Concrete Mixing/Batching, Concrete Placement, Construction/Erect Tanks, Drainage, Drainage - 24 inch SICPP, Dust Control, Employee Commute, Excavation (Borrow), Excavation (Cut to Fill), Excavation (Topsoil Stripping), Fencing, Grading, Hydroseeding, Markings, Material Delivery, Material Movement (Paved Roads), Material Movement (Unpaved Roads), Soil Erosion/Sediment Control, Soil Handling, Street Lighting, Subbase Placement, Topsoil Placement, Unstabilized Land and Wind Erosion
Landscaping	Employee Commute, Hydroseeding, Material Delivery, Material Movement (Paved Roads), Material Movement (Unpaved Roads), Mulching, Sodding, Soil Handling, Topsoil Placement, Tree Planting, Tree Pruning
Open Parking Lot at Grade[2]	Curbing, Employee Commute, Grub the site down 2ft, Lighting Pre-Cast Concrete Piers (10), Material Delivery, Material Movement (Paved Roads), Material Movement (Unpaved Roads), Remove Trees and shrubs, Rough Grading, Set in-place Light Poles, Soil handling, Stripping, Subgrade Materials Installed, Underground Conduits, Unstabilized Land and Wind Erosion
Parking Lot[1]	Asphalt Drying, Asphalt Storage and Batching, Clearing and Grubbing, Concrete Mixing/Batching, Concrete Placement, Curbing, Drainage - 24 inch SICPP, Drainage - 6 inch Perforated Underdrain, Employee Commute, Excavation (Borrow), Excavation (Cut to Fill), Excavation (Topsoil Stripping), Fencing, Grading, Hydroseeding, Markings, Material Delivery, Material Movement (Paved Roads), Material Movement (Unpaved Roads), Sidewalks, Soil Erosion/Sediment Control, Soil Handling, Street Lighting, Subbase Placement, Topsoil Placement, Tree Planting, Unstabilized Land and Wind Erosion
Service Road[1]	Asphalt Drying, Asphalt Storage and Batching, Clearing and Grubbing, Concrete Mixing/Batching, Concrete Placement, Drainage - 24 inch SICPP, Drainage - 6 inch Perforated Underdrain, Dust Control, Employee Commute, Excavation (Borrow), Excavation (Cut to Fill), Excavation (Topsoil Stripping), Fencing, Grading, Hydroseeding, Markings, Material Delivery, Material Movement (Paved Roads), Material Movement (Unpaved Roads), Sidewalks, Soil Handling, Soil Erosion/Sediment Control, Street Lighting, Subbase Placement, Topsoil Placement, Tree Planting, Unstabilized Land and Wind Erosion
Site Work	Construction Mob & Layout, Employee Commute, Material Delivery, Material Movement (Paved Roads), Material Movement (Unpaved Roads), Site Clearing- Remove Trees & Shrubs, Site Restoration- Landscaping (Curbing), Site Restoration- Landscaping (Rough Grading), Site Restoration- Landscaping (Top Soil Seed and Plantings), Soil Handling, Underground Services to 5 ft. of Building, Unstabilized Land and Wind Erosion

[1] While DFW anticipates using concrete for paving, this analysis conservatively adds fugitive emissions from the potential use of asphalt for a portion of paving activity.

[2] Represents construction activity associated with the temporary facility for the rental boiler, which will be a gravel lot.

2.4.1.1.2 Airport Construction Emissions Inventory Tool (ACEIT)

The TRB developed ACEIT to provide a consistent approach and default values for construction emissions for airport projects. It includes default construction information based on surveys of airports. While ACEIT generates both construction activity and emission estimates, for this project, ACEIT was used exclusively to generate activity estimates (e.g., vehicle miles traveled) and ancillary information (e.g., vehicle types) for on-road vehicles, construction equipment, and fugitive emission sources. ACEIT was not used to estimate emissions because emission factors included in ACEIT for on-road

vehicles and construction equipment are not based on the most recent version of MOVES released by USEPA (MOVES3), which is required for this analysis.

ACEIT provides activity assumptions from demolition, site preparation, building, material delivery, construction employee work commute, painting/striping, and other construction activities. Activity data for off-road construction equipment and on-road vehicles (i.e., equipment type, equipment counts, average rated horsepower, load factor, hours of activity, vehicle trips and Vehicle miles traveled [VMT]) were obtained from ACEIT and scaled where appropriate based on project specific activity (i.e., buildings and site work). For the Electric CUP, ACEIT was run to estimate Project construction activity for representative calendar year 2022 using project size inputs. ACEIT output activity was split between 2022, 2023, and 2024 based on schedule by project type (see Table 2). For the pump house and boiler house, ACEIT was run to estimate Project construction activity for each project type. DFW provided construction activity was then allocated to project types based on ACEIT estimates of the percentage of construction activity per project type using project size and cost inputs. DFW provided activity was then split between 2022, 2023, and 2024 based on schedule by project type (see Table 2).

Project-specific activity ACEIT inputs are provided for reference in **Appendix A**.

2.4.1.1.3 Project-Specific Applications

The Project also includes additional emission sources that are not part of ACEIT. These emission sources include daily water truck activity for fugitive dust control. Daily water truck operation is conservatively assumed for the duration of the project for eight hours, forty miles, and eight starts per day. Per DFW, four water trucks will be in operation during the Proposed Project. Data for water trucks are included in detailed activity, emission factor, and emissions tables in **Appendix B**.

2.4.1.2 Emission Factors

ACEIT default on-road vehicle emission factors for non-road (off-road) equipment and on-road vehicles are from dated versions of the NONROAD and MOVES models, respectively.[12] Thus, Ramboll has not relied upon ACEIT emission factors for on-road vehicles or non-road equipment in this analysis. Ramboll developed emission factors for on-road vehicles and non-road equipment for Dallas County using the latest MOVES model available at the time this work was conducted, MOVES3. Ramboll also calculated refined AP-42 fugitive dust emission inventory input factors which are more relevant to the project than those output by ACEIT, as described in **Section 2.4.1.2.3**.

2.4.1.2.1 On-road Emission Factors

Ramboll used MOVES3 to estimate off-road equipment emission factors for calendar years 2022, 2023, and 2024. MOVES3 was run at a national scale for Dallas County, Texas. The DFW airport is located in both Tarrant and Dallas County. We have followed ACRP Report 102 guidance on county choice: “If the project spans multiple counties, the county with the greatest populace should be used, as the county is used to select the appropriate emission factors (based on fuel characteristics that are representative of each county).”[8] Emissions and activity were output from MOVES by vehicle type, fuel type, road type, and process type for each calendar year. Emissions were aggregated over six

[12] Transportation Research Board. ACRP Report 102: Guidance for Estimating Airport Construction Emissions. Available at: http://www.trb.org/main/blurbs/170234.aspx. Accessed: October 2020.

emission process types to facilitate application to activity for development of Proposed Project emissions.

Table 4 lists MOVES emission process types, aggregate groupings, road type and activity surrogates. Emission factors were estimated by aggregate grouping by dividing MOVES output emissions by MOVES output activity.

Table 4. MOVES process grouping and activity surrogates.

MOVES Emission Process	Aggregate Grouping	Road Type	Activity Surrogate	
			Description	Metric
Crankcase Running Exhaust	RPD [2]	Urban Unrestricted Access	Distance	Miles
Running Exhaust	RPD [2]	Urban Unrestricted Access	Distance	Miles
Brake Wear	RPD_WEAR [3]	Urban Unrestricted Access	Distance	Miles
Tire Wear	RPD_WEAR [3]	Urban Unrestricted Access	Distance	Miles
Evaporation Fuel Leaks	RPD_EVAP [4]	Urban Unrestricted Access	Distance	Miles
Evaporation Fuel Vapor Venting	RPD_EVAP [4]	Urban Unrestricted Access	Distance	Miles
Evaporation Permeation	RPD_EVAP [4]	Urban Unrestricted Access	Distance	Miles
Crankcase Start Exhaust	RPV_START [5]	Off-Network	Starts	One-Way Trips [1]
Start Exhaust	RPV_START [5]	Off-Network	Starts	One-Way Trips [1]
Evaporation Fuel Vapor Venting	DIURNAL [6]	Off-Network	Vehicle Population	Vehicle-days
Evaporation Fuel Leaks	RPV_EVAP [7]	Off-Network	Vehicle Population	Vehicle-days
Evaporation Permeation	RPV_EVAP [7]	Off-Network	Vehicle Population	Vehicle-days

[1] Number of starts is assumed to be equivalent to number of one-way trips

[2] RPD: rate per distance for exhaust processes

[3] RPD_WEAR: rate per distance for brake wear and tire wear processes

[4] RPD_EVAP: rate per distance for evaporative processes

[5] RPV_START: rate per vehicle for start processes

[6] DIURNAL: (rate per vehicle for) diurnal processes

[7] RPV_EVAP: rate per vehicle for evaporative processes

Detailed tables describing Proposed Project on-road vehicle data used (i.e., vehicle activity, vehicle emission factors, and vehicle emissions) to estimate emissions are provided in **Appendix B**.

2.4.1.2.2 Non-road Emission Factors

Ramboll used MOVES3 to estimate emission factors for calendar years 2022, 2023, and 2024. MOVES3 was run at a national scale for Dallas County, Texas. The DFW airport is located in both Tarrant and Dallas County. We have followed ACRP Report 102 guidance on county choice: “If the project spans multiple counties, the county with the greatest populace should be used, as the county is used to select the appropriate emission factors (based on fuel characteristics that are representative of each county).”[8] Emission and activity data were output from MOVES by equipment type, fuel type, and horsepower bin for construction, industrial, recreational, and lawn/garden sectors for each calendar year. ACEIT equipment activity was cross-referenced to MOVES equipment types based on the

Guidance for Estimating Airport Construction Emissions Final Report (MOVES and ACEIT equipment types are shown in **Appendix C)**. Emission factors were estimated for each equipment type and fuel type by dividing output emissions by output energy consumption. MOVES3 does not estimate N_2O emissions; therefore, the non-road N_2O emission factor was taken from the USEPA Inventory of U.S. Greenhouse Gas Emissions and Sinks[13]. A complete list of project non-road emission factors can be found in **Appendix C.**

2.4.1.2.3 Fugitive Emission Factors

Fugitive emission inputs from all fugitive source types are obtained from ACEIT. Calculational methodologies applied in ACEIT are based on the most recent applicable USEPA AP-42 guidance documents. Ramboll reviewed ACEIT emission estimation methodology, emission factors and ancillary factors and made project-specific adjustments for the development of fugitive emissions as described in Table 5 below**.**

Table 5. Fugitives emission estimation methodology and project-specific adjustments.

Fugitive Source	Methodology	Project-specific Input Adjustments
Concrete Mixing/Batching	AP-42 11.12	Emission inputs unchanged from ACEIT output.
Soil Handling	AP-42 13.2.4	Applied average annual wind speed of 10.5 mph at DFW [1]
Unstabilized Land and Wind Erosion	AP-42 11.9	Emission inputs unchanged from ACEIT output
Asphalt Drying	FAA Aviation Emissions and Air Quality Handbook Version 3 Update 1	Emission inputs unchanged from ACEIT output
Asphalt Storage and Batching	-	Not estimated (assumed to occur offsite)
Material Movement (Paved Roads)	AP-42 13.2.1	ACEIT default VMT scaled to Proposed Project square footage for building and site work project types.
Material Movement (Unpaved Roads)	AP-42 13.2.2	ACEIT default VMT scaled to Proposed Project square footage for building and site work project types.

[1] Dallas/Fort Worth - Normals (1981-2010), Means, and Extremes, NWS) https://www.weather.gov/fwd/dfwann, Accessed October 2020.

The ratio of $PM_{2.5}$ to PM_{10} emissions for fugitives is provided in Table 6 by construction activity.

Table 6. Fugitives $PM_{2.5}$ to PM_{10} emission ratios.

Construction Activity	$PM_{2.5}/PM_{10}$	Source
Asphalt Drying	-	No PM Emissions
Asphalt Storage and Batching	0.06	AP-42 11.1-2
Concrete Mixing/Batching	0.15	AP-42 11.12
Material Movement (Paved Roads)	0.25	AP-42 13.2.1-1
Material Movement (Unpaved Roads)	0.1	AP-42 13.2.2-2
Soil Handling	0.15	AP-42 13.2.4
Unstabilized Land and Wind Erosion	0.15	AP-42 13.2.5

A complete list of fugitive inputs and emissions by project type and construction activity is provided in **Appendix D**.

[13] US Environmental Protection Agency. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2018, Annex A. Available at https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2018. Accessed: October 2020.

2.4.2 Operational Emissions

Additional operational emissions are expected from rental boilers and permanent boilers (when operating on jet fuel only); activity inputs and emission factors for each are presented below. The basis for no net emission increases from other operational source emissions is also described below.

2.4.2.1 Rental Boilers

The Project is expected to result in incremental operational emissions from rental boilers from 2022 to 2024. The Project will include the use of three rental, natural gas-fired for hot water heating. The rental boilers are estimated to have a combined heating output of 80,340 thousand British thermal units per hour (MBH) and energy consumption of 1427 therms per year (142.7 million British thermal units per year (MMBTU/yr))[7]. Rental boiler emission factors are shown in Table 7. Rental boiler annual energy consumption was combined with emission factors to estimate rental boiler emissions.

Table 7. Rental boiler emission factors.

Pollutant	Emission Factor (lb/MMBTU)	Source
CO	0.0370	ARUP, 2021, "Memorandum: Rental Boiler Environmental Summary"[7]
NOx	0.0364	
SO2	0.0010	
VOC	0.0055	
PM	0.0076	
CO2	117.6	AP-42 Section 1.4 (Table 1.4-2)
CH4	0.0023	AP-42 Section 1.4 (Table 1.4-2)
N2O	0.0002	Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2019, Annex 3, Table A-74

2.4.2.2 Permanent Boilers Operating on Jet Fuel

The Project is expected to result in incremental operational emissions from permanent stationary boilers from 2025 to end of project life. Five 10,000 MBH permanent boilers will be installed. These permanent boilers will operate primarily on natural gas during which they will have lower or equivalent emissions compared to the existing boilers that they will replace. Therefore, Ramboll did not perform a quantitative evaluation of operational emissions for the permanent boiler natural gas operations. Emission increases from Proposed Action permanent boilers will occur only when jet fuel is used to power boilers during times when natural gas is unavailable. It was assumed that operation on jet fuel would be limited to three days of operation annually. Combined jet fuel consumption across all boilers is estimated to be 6.17 gallons per minute (or 8.88 thousand gallons per day). Emission factors for permanent boilers operating on jet fuel are shown in Table 8. Permanent boilers annual jet fuel consumption was combined with emission factors to estimate permanent boiler annual additional emissions.

Table 8. Emission factors for permanent boilers operating on jet fuel.

Pollutant	Emission Factor (lb/MMBTU)	Source
CO	5.0	AP-42 Section 1.3 (Table 1.3-1)
NOx	24.0	AP-42 Section 1.3 (Table 1.3-1)
SO2	43.0	AP-42 Section 1.3 (Table 1.3-1)
VOC	0.34	AP-42 Section 1.3 (Tables 1.3-3)
PM	3.3	AP-42 Section 1.3 (Tables 1.3-1, 1.3-2)
CO2	21500	AP-42 Section 1.3 (Tables 1.3-12)
CH4	0.216	AP-42 Section 1.3 (Tables 1.3-3)
N2O	0.26	AP-42 Section 1.3 (Tables 1.3-8)

2.4.2.3 Other Sources, With No Net Increase in Emissions

Excepting rental boilers and permanent boilers jet-fueled operations, operation of the Proposed Project would result in no net increase in emissions. For informational purposes, this section describes each potential emissions source and the reasoning for which the Project would not result in an increase in emissions above the *de minimis* thresholds.

- Aircraft: The Proposed Project would not increase aircraft operations at DFW. Therefore, the Proposed Project would not increase operational emissions from this source category.
- Auxiliary Power Units (APU): The Proposed Project would not increase aircraft operations at DFW and thus would not increase the use of APUs. Therefore, the Proposed Project would not increase operational emissions from this source category.
- Ground Support Equipment (GSE): GSE includes air conditioners, air starts, aircraft tractors, baggage tractors, belt loaders, cabin service trucks, cargo loaders, catering trucks, forklifts, fuel trucks, hydrant trucks, lavatory trucks, service trucks and water service equipment. The Proposed Project would not increase aircraft operations at DFW and thus would not increase the use of GSE. Therefore, the Proposed Project would not increase operational emissions from this source category.
- Mobile Sources: Mobile sources associated with the Airport's day-to-day operations include landside and airside vehicles owned and operated by the Airport and by third parties, such as on-site maintenance trucks, shuttle services, employee and passenger transportation, and other off-road equipment not included in GSE above. The Proposed Project would not increase passenger throughput or the number of workers at DFW and thus would not increase mobile source emissions, although there may be some redistribution or temporary small increase in worker travel. Therefore, the Proposed Project would not increase operational emissions from this source category.
- DFW-Owned Airside Equipment: The Proposed Project would not increase aircraft operations or landscaping needs at DFW and thus would not increase the use of non-GSE off-road equipment. Therefore, the Proposed Project would not increase operational emissions from this source category.
- Stationary and Area Sources: Stationary and area sources may include heaters/boilers, emergency generators, gasoline and diesel dispensing facilities, fuel storage tanks, cooling

towers, coating and painting operations, incinerators, live-fire training facilities, solvent degreasers, and sand/salt piles. The Proposed Project would allow for an increase in total heating and cooling to support DFW. However, the Proposed Project will have modern technology, highly efficient equipment and therefore lower emissions. The existing CUP is expected to be used only to maintain the pre-cool/heating requirements of the pre-conditioned air system or to meet peak demand. Therefore, the Proposed Project is expected to result in a substantial decrease in total stationary source emissions.

- Indirect Electricity Emissions: Purchased electricity generates indirect GHG emissions. The Proposed Project and supporting projects would result in an increase in total electricity consumption. However, DFW has committed to purchasing 100 percent renewable electricity, and therefore this change would not increase GHG emissions.

3. Significance Thresholds

This section discusses the criteria and general methods used to evaluate the Proposed Project's significance with respect to air quality impacts under NEPA.

The emissions inventories are used to determine the projected net annual increase in emissions, and the potential impact to air quality in the vicinity of DFW due to the Proposed Project. The General Conformity Rule ensures that federal activities do not cause or contribute to a violation of NAAQS. The General Conformity process begins with an Applicability Analysis. If General Conformity applies, the Agency must prepare a General Conformity Determination. Then federal, state and local air quality governance are engaged in a public review process of the agency's determination.

When performing a General Conformity applicability analysis, the FAA considers a range of factors, including:

- If action will occur in a Non-attainment or Maintenance Area
- If specific exemptions in the General Conformity Rule apply
- If the action is on the federal agency's list of "presumed to conform" activities
- If total emissions exceed General Conformity *de minimis* thresholds, and
- If an EPA-approved SIP has an emissions budget for which emissions with the action could be compared

If an action is not exempt or presumed to conform or found to cause emissions above applicable *de minimis* thresholds in any nonattainment or maintenance area, the agency must prepare a General Conformity Determination prior to taking the action.

DFW is in a Serious Ozone Non-Attainment Area[14] (2008 standards)[15]; therefore, the 50 tons per year (tpy) VOC and NO_x *de minimis* thresholds apply to this Project[16]. The maximum annual Project emissions are compared to applicable *de minimis* thresholds below to determine compliance under the General Conformity Rule and compliance with the CAA and the Texas SIP. Severe Ozone Non-Attainment Standards were also considered in case of future redesignation, therefore, a 25 tons per year (tpy) VOC and NO_x *de minimis* threshold was also compared to maximum annual Project emissions.

[14] DFW Airport sits in both Dallas and Tarrant Counties. Both Counties in their entirety are within 2008 Serious Ozone Non-Attainment Areas.

[15] EPA. 2020. Greenbook Non-Attainment Areas by County. Available online: https://www3.epa.gov/airquality/greenbook/anayo_tx.html

[16] FAA. 2015. Aviation Emissions & Air Quality Handbook, Version 3, Update 1. Section 8.1.1.4. January.

4. Results

4.1 Emission Inventories Results

The following analysis addresses whether the Project would exceed the *de minimis* thresholds described above. If so *de minimis* thresholds are exceeded a General Conformity Determination would be needed. If a project's emissions do not exceed the *de minimis* thresholds, then the project is presumed to conform.

Criteria air pollutant and ozone precursor mass emissions were calculated based on methodology described in **Section 2.4** above.

4.1.1 Construction Emissions Inventory

Table 9 presents unmitigated CAP emissions associated with construction of the Proposed Project.

Table 9. Proposed Project Annual Construction criteria air pollutant emissions[1].

Project Type	Emissions (tons/yr)					
	NOx	CO	VOC	SO_2	PM_{10}	$PM_{2.5}$
2022						
Pump House and Boiler House						
Building - 10000 sqft- 1 story	0.756	1.079	0.0763	0.0023	0.073	0.052
Drainage System	0.032	0.076	0.0039	0.0001	0.019	0.005
Fencing	0.040	0.079	0.0044	0.0001	0.015	0.004
Fuel Tanks	1.537	1.411	0.1391	0.0041	0.133	0.107
Parking Lot	0.018	0.153	0.0048	0.0001	0.029	0.005
Site Work - 10000 sqft	0.268	0.309	0.0247	0.0007	0.044	0.020
Fugitive Dust Control	0.025	0.016	0.0017	0.00004	0.003	0.001
Electric CUP						
Building - 100000 sqft- 10 stories	-	-	-	-	-	-
Drainage System	-	-	-	-	-	-
Fencing	-	-	-	-	-	-
Fuel Tanks	-	-	-	-	-	-
Asphalt Option - Parking Lot	-	-	-	-	-	-
Landscaping	-	-	-	-	-	-
Open Parking Lot @Grade - 10000 sqft	-	-	-	-	-	-
Parking Lot	-	-	-	-	-	-
Asphalt Option - Fuel Tanks	-	-	-	-	-	-
Service Road	-	-	-	-	-	-
Asphalt Option - Service Road	-	-	-	-	-	-
Site Work - 10000 sqft	0.183	1.557	0.085	0.0013	0.076	0.023
General Use	0.024	0.015	0.002	0.00004	0.002	0.001
2022 Emission Totals	**2.885**	**4.697**	**0.342**	**0.009**	**0.394**	**0.216**
2023						
Pump House and Boiler House						
Building - 10000 sqft- 1 story	1.228	1.872	0.126	0.0041	0.120	0.081
Drainage System	0.053	0.133	0.007	0.0002	0.034	0.008
Fencing	0.066	0.139	0.007	0.0002	0.027	0.007
Fuel Tanks	2.489	2.407	0.228	0.0075	0.213	0.165
Parking Lot	0.029	0.272	0.008	0.0003	0.053	0.008
Site Work - 10000 sqft	0.440	0.536	0.041	0.0013	0.077	0.032
Fugitive Dust Control	0.044	0.029	0.003	0.0001	0.005	0.001

Project Type	Emissions (tons/yr)					
	NOx	CO	VOC	SO_2	PM_{10}	$PM_{2.5}$
Electric CUP						
Building - 100000 sqft- 10 stories	0.531	3.767	0.132	0.0039	0.123	0.039
Drainage System	0.012	0.336	0.009	0.0002	0.006	0.001
Fencing	0.046	0.692	0.022	0.0006	0.074	0.012
Fuel Tanks	0.316	1.751	0.065	0.0028	0.340	0.063
Asphalt Option - Fuel Tanks	-	-	0.004	-	-	-
Landscaping	-	-	-	-	-	-
Open Parking Lot @Grade - 10000 sqft	0.055	0.150	0.021	0.0002	0.035	0.009
Parking Lot	0.085	2.041	0.059	0.0015	0.088	0.014
Asphalt Option - Parking Lot	-	-	0.0002	-	-	-
Service Road	0.478	2.129	0.091	0.0036	0.163	0.045
Asphalt Option - Service Road	-	-	0.035	-	-	-
Site Work - 10000 sqft	0.971	8.943	0.489	0.0077	0.447	0.129
Site Work - 10000 sqft	0.136	0.089	0.008	0.0002	0.014	0.004
2023 Emission Totals	**6.980**	**25.287**	**1.356**	**0.035**	**1.819**	**0.619**
2024						
Electric CUP						
Building - 100000 sqft- 10 stories	0.509	3.927	0.129	0.0042	0.131	0.038
Drainage System	0.011	0.352	0.009	0.0003	0.007	0.001
Fencing	-	-	-	-	-	-
Fuel Tanks	-	-	-	-	-	-
Asphalt Option - Parking Lot	-	-	-	-	-	-
Landscaping	0.045	0.584	0.018	0.0006	0.105	0.017
Open Parking Lot @Grade - 10000 sqft	-	-	-	-	-	-
Parking Lot	-	-	-	-	-	-
Asphalt Option - Fuel Tanks	-	-	-	-	-	-
Service Road	-	-	-	-	-	-
Asphalt Option - Service Road	-	-	-	-	-	-
Site Work - 10000 sqft	0.700	7.095	0.383	0.0063	0.365	0.101
General Use	0.106	0.071	0.006	0.0002	0.012	0.003
2024 Emission Totals	**1.371**	**12.029**	**0.545**	**0.011**	**0.618**	**0.161**

[1] Construction emissions for the pump house and boiler house occur in 2022 and 2023. The construction emissions for the Electric CUP occur in 2022, 2023, and 2024.

Table 10 presents unmitigated GHG emissions associated with construction of the Proposed Project by construction project type and year.

Table 10. Proposed Project greenhouse gas construction emissions.

Project Type	Emissions (tons/yr)			
	CH_4	N_2O	CO_2	CO_2e
2022				
Pump House and Boiler House				
Building - 10000 sqft- 1 story	0.007	0.033	743	752
Drainage System	0.0004	0.001	35	35
Fencing	0.0005	0.001	38	39
Fuel Tanks	0.010	0.069	1,464	1,484
Parking Lot	0.001	0.001	28	28
Site Work - 10000 sqft	0.002	0.010	239	242
Fugitive Dust Control	0.0003	0.00005	12	12
Electric CUP				
Building - 100000 sqft- 10 stories	-	-	-	-

Project Type	Emissions (tons/yr)			
	CH_4	N_2O	CO_2	CO_2e
Drainage System	-	-	-	-
Fencing	-	-	-	-
Fuel Tanks	-	-	-	-
Asphalt Option - Parking Lot	-	-	-	-
Landscaping	-	-	-	-
Open Parking Lot @Grade - 10000 sqft	-	-	-	-
Parking Lot	-	-	-	-
Asphalt Option - Fuel Tanks	-	-	-	-
Service Road	-	-	-	-
Asphalt Option - Service Road	-	-	-	-
Site Work - 10000 sqft	0.007	0.007	271	273
General Use	0.0003	0.00005	12	12
2022 Emission Totals	**0.028**	**0.123**	**2,842**	**2,878**
2023				
Pump House and Boiler House				
Building - 10000 sqft- 1 story	0.011	0.061	1,373	1,390
Drainage System	0.001	0.003	64	65
Fencing	0.001	0.003	70	71
Fuel Tanks	0.017	0.128	2,711	2,747
Parking Lot	0.001	0.001	51	51
Site Work - 10000 sqft	0.004	0.019	442	447
Fugitive Dust Control	0.0006	0.0001	22	22
Electric CUP				
Building - 100000 sqft- 10 stories	0.016	0.026	851	859
Drainage System	0.001	0.0005	38	38
Fencing	0.003	0.002	101	102
Fuel Tanks	0.008	0.031	791	800
Asphalt Option - Fuel Tanks	-	-	-	-
Landscaping	-	-	-	-
Open Parking Lot @Grade - 10000 sqft	0.001	0.003	65	66
Parking Lot	0.008	0.003	240	242
Asphalt Option - Parking Lot	-	-	-	-
Service Road	0.010	0.041	1,034	1,046
Asphalt Option - Service Road	-	-	-	-
Site Work - 10000 sqft	0.038	0.044	1,596	1,611
Site Work - 10000 sqft	0.002	0.000	68	68
2023 Emission Totals	**0.121**	**0.364**	**9,517**	**9,626**
2024				
Electric CUP				
Building - 100000 sqft- 10 stories	0.016	0.028	921	929
Drainage System	0.001	0.0005	40	40
Fencing	-	-	-	-
Fuel Tanks	-	-	-	-
Asphalt Option - Parking Lot	-	-	-	-
Landscaping	0.002	0.003	119	120
Open Parking Lot @Grade - 10000 sqft	-	-	-	-
Parking Lot	-	-	-	-
Asphalt Option - Fuel Tanks	-	-	-	-
Service Road	-	-	-	-
Asphalt Option - Service Road	-	-	-	-
Site Work - 10000 sqft	0.028	0.036	1,306	1,318
General Use	0.001	0.0002	55	56
2024 Emission Totals	**0.048**	**0.068**	**2,441**	**2,464**

4.1.2 Operational Emissions

As described in **Section 2.4.2**, operational emissions are assumed to occur from 2022 to 2024 for rental boilers and 2025+ for permanent boilers. Operational emissions are shown below for 2024 and 2029 in **Table 11.**

Table 11. Proposed Project operational emissions.

Year	Boiler Type	Emissions (tons/yr)									
		NOx	CO	VOC	SO_2	PM_{10}	$PM_{2.5}$	CO_2	CH_4	N_2O	CO_2e
Stationary Boilers											
2024	Rental Boilers	0.003	0.003	0.0004	0.0001	0.001	0.001	8.4	0.0002	0.00002	8.4
2029	Permanent Boilers	0.32	0.07	0.005	0.57	0.04	0.04	286.5	0.003	0.003	287.7

4.1.3 General Conformity *De Minimis* Thresholds

As shown in Table 12, Proposed Project total emissions, which represent maximum annual Project emissions, are below *de minimis* thresholds for all years.

Table 12. Proposed Project total emissions compared to applicable general conformity *de minimis* thresholds.

Project Year	Project Emissions (tons/yr)		General Conformity *De Minimis* Threshold[1] (tons/yr)		Exceeds General Conformity *De Minimis* Threshold?
	NOx	VOC	NOx	VOC	
Current DFW De Minimis Threshold under Serious Ozone Classification					
2022	2.89	0.34	50	50	No
2023	6.98	1.36	50	50	No
2024	1.37	0.55	50	50	No
2029	0.32	0.01	50	50	No
De Minimis DFW Threshold under Potential Severe Ozone Classification[2]					
2022	2.89	0.34	25	25	No
2023	6.98	1.36	25	25	No
2024	1.37	0.55	25	25	No
2029	0.32	0.01	25	25	No

[1] Source: 40 CFR 93 § 153 *de minimis* thresholds applied to Dallas-Fort Worth Non-attainment Area "serious" classification

[2] "Severe" ozone classification threshold shown in case of future reclassification of DFW area.

4.2 Compliance with Other Requirements

The existing CUP is governed by Texas Commission on Environmental Quality (TCEQ) Permit Number 18257. This permit contains limitations on emission rates, fuel use, firing rates for boilers, opacity limits, emissions from natural gas, applicable requirements of the USEPA 40 CFR Part 60 on Standards of Performance for New Stationary Sources, testing, and recordkeeping requirements. The new CUP will be required to demonstrate compliance with other applicable requirements including permit conditions.

4.3 Project Alternatives

Alternatives for the Project include alternative configurations of the CUP that would potentially result in higher operational emissions than those for the Proposed Project. However, construction related emissions, which represent worst-case emissions years, are expected to be similar among all scenarios.

4.4 Proposed Project Schedule Effects

The emission inventory estimates above are based on a project construction schedule of August 2022 to October 2024 provided by DFW Airport as of December 2021. Based on information received on April 27, 2022, the project construction schedule is expected to be December 2022 to November 2024. The construction start is postponed by about 4 months and construction end is postponed by about one month compared to construction schedule assumptions used to develop the emission inventory. However, the effect of this change on conclusions herein is expected to be minimal because project emission estimates are well below General Conformity de minimis thresholds.

APPENDIX A: PROPOSED PROJECT ACEIT INPUTS

Table A1. **ACEIT Inputs: DFW Electric Central Utility Plant Construction.**
Table A2. **ACEIT Inputs: DFW Boilers and Pump House Construction.**

Table A1. ACEIT Inputs: DFW Electric Central Utility Plant Construction.

Project Type	Parameter	Project Estimate	Units
Building - 100000 sqft- up to 10 stories	Estimated cost of the 'Building - 100000 sqft- up to 10 stories'	$53.0	million
Drainage System	Maximum length of the drainage system in feet	18	ft
Drainage System	Maximum width of the drainage system	18	ft
Drainage System	Maximum depth of the drainage system	34	ft
Drainage System	Estimated cost of the 'Drainage System'	$0.0	million
Fencing	Maximum length of the fence	850	ft
Fencing	Estimated cost of the 'Fencing'	$0	million
Fuel Tanks	Maximum length of the fuel tank	19.75	ft
Fuel Tanks	Maximum width of the fuel tank	8.5	ft
Fuel Tanks	Maximum depth of excavation for the fuel tank	0	ft
Fuel Tanks	Number of tanks to be installed	1	installed
Fuel Tanks	Estimated cost of the 'Fuel Tanks'	$0.2	million
Landscaping	Maximum length of the 'Landscaping' project area	500	ft
Landscaping	Maximum width of 'Landscaping' project area	250	ft
Landscaping	Number of trees planted	0	trees
Landscaping	Number of trees pruned	0	trees
Landscaping	Estimated cost of the 'Landscaping'	$0.1	million
Open Parking Lot @Grade - 10000 sqft	Estimated cost of the 'Open Parking Lot @Grade - 10000 sqft'	$0.3	million
Parking Lot	Maximum length of the parking lot	61	ft
Parking Lot	Maximum width of the parking lot	50	ft
Parking Lot	Estimated cost of the 'Parking Lot'	$0.25	million
Service Road	Maximum length of the service road	1200	ft
Service Road	Maximum width of the service road	24	ft
Service Road	Estimated cost of the 'Service Road'	$0.8	million
Site Work - 10000 sqft	Estimated cost of the 'Site Work - 10000 sqft'	$47.22	million

Table A1. ACEIT Inputs: DFW Boilers and Pump House Construction.

Project Type	Parameter	Project Estimate	Units
Drainage System	What is the maximum length of the drainage system (L) in feet?	95	ft
Drainage System	What is the maximum width of the drainage system (W) in feet?	250	ft
Drainage System	What is the maximum depth of the drainage system (D) in feet?	12	ft
Drainage System	What is the estimated cost of the 'Drainage System project type' in $ million(s)?	0.2	million
Fencing	What is the maximum length of the fence (L) in feet?	400	ft
Fencing	What is the estimated cost of the 'Fencing project type' in $ million(s)?	0.3	million
Fuel Tanks	What is the maximum length of the fuel tank area (L) in feet?	12	ft
Fuel Tanks	What is the maximum width of the fuel tank area (W) in feet?	8	ft
Fuel Tanks	What is the maximum depth (D) of excavation for the fuel tanks in feet?	0	ft
Fuel Tanks	What is the number of tanks (T) to be installed?	1	tanks
Fuel Tanks	What is the estimated cost of the 'Fuel Tanks project type' in $ million(s)?	0.05	million
Parking Lot	What is the maximum length of the parking lot (L) in feet?	18	ft
Parking Lot	What is the maximum width of the parking lot (W) in feet?	41	ft
Parking Lot	What is the estimated cost of the 'Parking Lot project type' in $ million(s)?	0.1	million

Project Type	Parameter	Project Estimate	Units
Building - 10000 sqft- 1 story*	What is the estimated cost of the 'Building - 10000 sqft- 1 story*project type' in $ million(s)?	33.2	million
Building - 10000 sqft- 1 story*	What is the estimated square footage of the 'Building - 10000 sqft- 1 story*project type' in square feet?	6,775	sqft
Site Work - 10000 sqft	What is the estimated cost of the 'Site Work - 10000 sqft project type' in $ million(s)?	4.7	million

APPENDIX B: DETAILED ON-ROAD EMISSION INVENTORY DATA FOR PROPOSED PROJECT

Table B1. Electric CUP construction-phase on-road vehicle activity.
Table B2. 2022 Electric CUP, construction-phase on-road vehicle criteria air pollutant emission factors.
Table B3. 2022 Electric CUP, construction-phase on-road vehicle greenhouse gas emission factors.
Table B4. 2023 Electric CUP, construction-phase on-road vehicle criteria air pollutant emission factors.
Table B5. 2023 Electric CUP, construction-phase on-road vehicle greenhouse gas emission factors.
Table B6. 2024 Electric CUP, construction-phase on-road vehicle criteria air pollutant emission factors.
Table B7. 2024 Electric CUP, construction-phase on-road vehicle greenhouse gas emission factors
Table B8. 2022 Electric CUP, construction-phase on-road vehicle criteria air pollutant emissions.
Table B9. 2022 Electric CUP, construction-phase on-road vehicle greenhouse gas emissions.
Table B10. 2023 Electric CUP, construction-phase on-road vehicle criteria air pollutant emissions.
Table B11. 2023 Electric CUP, construction-phase on-road vehicle greenhouse gas emissions.
Table B12. 2024 Electric CUP, construction-phase on-road vehicle criteria air pollutant emissions.
Table B13. 2024 Electric CUP, construction-phase on-road vehicle greenhouse gas emissions.
Table B14. Pump house and boiler house construction-phase on-road vehicle activity.
Table B15. 2022 Pump house and boiler house, construction-phase on-road vehicle criteria air pollutant emission factors.
Table B16. 2022 Pump house and boiler house, construction-phase on-road vehicle greenhouse gas emission factors.

Table B17. **2023 Pump house and boiler house, construction-phase on-road vehicle criteria air pollutant emission factors.**
Table B18. **2023 Pump house and boiler house, construction-phase on-road vehicle greenhouse gas emission factors.**
Table B19. **2022 Pump house and boiler house, construction-phase on-road vehicle criteria air pollutant emissions.**
Table B20. **2022 Pump house and boiler house, construction-phase on-road vehicle greenhouse gas emissions.**
Table B21. **2023 Pump house and boiler house, construction-phase on-road vehicle criteria air pollutant emissions.**
Table B22. **2023 Pump house and boiler house, construction-phase on-road vehicle greenhouse gas emissions.**

Table B1. Electric CUP construction-phase on-road vehicle activity.

Project Type	Construction Activity	Vehicle	MOVES Source Type	Fuel	Emission Process	Activity Surrogate	Total Activity	Activity - 2022	Activity - 2023	Activity - 2024
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPD	Miles	11482	0	5481	6001
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD	Miles	6124	0	2923	3201
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD	Miles	2240552	0	1069494	1171058
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	RPD	Miles	1192	0	569	623
Drainage System	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD	Miles	208980	0	99754	109226
Fencing	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPD	Miles	1966	0	1966	0
Fencing	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD	Miles	201240	0	201240	0
Fuel Tanks	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPD	Miles	39	0	39	0
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD	Miles	21	0	21	0
Fuel Tanks	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD	Miles	495360	0	495360	0
Landscaping	Material Delivery	Flatbed Truck	Combination Short-haul Truck	Diesel	RPD	Miles	0	0	0	0
Landscaping	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD	Miles	178020	0	0	178020
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD	Miles	1233	0	1233	0
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD	Miles	21285	0	21285	0
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	RPD	Miles	120	0	120	0
Parking Lot	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPD	Miles	705	0	705	0
Parking Lot	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD	Miles	376	0	376	0
Parking Lot	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD	Miles	603720	0	603720	0
Service Road	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPD	Miles	6660	0	6660	0

Project Type	Construction Activity	Vehicle	MOVES Source Type	Fuel	Emission Process	Activity Surrogate	Total Activity	Activity - 2022	Activity - 2023	Activity - 2024
Service Road	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD	Miles	3552	0	3552	0
Service Road	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD	Miles	580500	0	580500	0
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD	Miles	21082	1765	10561	8756
Site Work - 10000 sqft	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD	Miles	4644000	388806	2326462	1928732
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	RPD	Miles	13679	1145	6852	5681
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPD_WEAR	Miles	11482	0	5481	6001
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD_WEAR	Miles	6124	0	2923	3201
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_WEAR	Miles	2240552	0	1069494	1171058
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	RPD_WEAR	Miles	1192	0	569	623
Drainage System	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_WEAR	Miles	208980	0	99754	109226
Fencing	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPD_WEAR	Miles	1966	0	1966	0
Fencing	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_WEAR	Miles	201240	0	201240	0
Fuel Tanks	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPD_WEAR	Miles	39	0	39	0
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD_WEAR	Miles	21	0	21	0
Fuel Tanks	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_WEAR	Miles	495360	0	495360	0
Landscaping	Material Delivery	Flatbed Truck	Combination Short-haul Truck	Diesel	RPD_WEAR	Miles	0	0	0	0
Landscaping	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_WEAR	Miles	178020	0	0	178020
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD_WEAR	Miles	1233	0	1233	0
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_WEAR	Miles	21285	0	21285	0
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	RPD_WEAR	Miles	120	0	120	0

Project Type	Construction Activity	Vehicle	MOVES Source Type	Fuel	Emission Process	Activity Surrogate	Total Activity	Activity - 2022	Activity - 2023	Activity - 2024
Parking Lot	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPD_WEAR	Miles	705	0	705	0
Parking Lot	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD_WEAR	Miles	376	0	376	0
Parking Lot	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_WEAR	Miles	603720	0	603720	0
Service Road	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPD_WEAR	Miles	6660	0	6660	0
Service Road	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD_WEAR	Miles	3552	0	3552	0
Service Road	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_WEAR	Miles	580500	0	580500	0
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD_WEAR	Miles	21082	1765	10561	8756
Site Work - 10000 sqft	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_WEAR	Miles	4644000	388806	2326462	1928732
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	RPD_WEAR	Miles	13679	1145	6852	5681
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPD_EVAP	Miles	11482	0	5481	6001
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD_EVAP	Miles	6124	0	2923	3201
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_EVAP	Miles	2240552	0	1069494	1171058
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	RPD_EVAP	Miles	1192	0	569	623
Drainage System	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_EVAP	Miles	208980	0	99754	109226
Fencing	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPD_EVAP	Miles	1966	0	1966	0
Fencing	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_EVAP	Miles	201240	0	201240	0
Fuel Tanks	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPD_EVAP	Miles	39	0	39	0
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD_EVAP	Miles	21	0	21	0
Fuel Tanks	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_EVAP	Miles	495360	0	495360	0
Landscaping	Material Delivery	Flatbed Truck	Combination Short-haul Truck	Diesel	RPD_EVAP	Miles	0	0	0	0
Landscaping	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_EVAP	Miles	178020	0	0	178020

Project Type	Construction Activity	Vehicle	MOVES Source Type	Fuel	Emission Process	Activity Surrogate	Total Activity	Activity - 2022	Activity - 2023	Activity - 2024
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD_EVAP	Miles	1233	0	1233	0
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_EVAP	Miles	21285	0	21285	0
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	RPD_EVAP	Miles	120	0	120	0
Parking Lot	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPD_EVAP	Miles	705	0	705	0
Parking Lot	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD_EVAP	Miles	376	0	376	0
Parking Lot	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_EVAP	Miles	603720	0	603720	0
Service Road	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPD_EVAP	Miles	6660	0	6660	0
Service Road	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD_EVAP	Miles	3552	0	3552	0
Service Road	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_EVAP	Miles	580500	0	580500	0
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD_EVAP	Miles	21082	1765	10561	8756
Site Work - 10000 sqft	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_EVAP	Miles	4644000	388806	2326462	1928732
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	RPD_EVAP	Miles	13679	1145	6852	5681
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPV_START	One-Way Trips	574	0	274	300
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPV_START	One-Way Trips	306	0	146	160
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_START	One-Way Trips	149370	0	71300	78071
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	RPV_START	One-Way Trips	60	0	28	31
Drainage System	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_START	One-Way Trips	13932	0	6650	7282
Fencing	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPV_START	One-Way Trips	98	0	98	0

Project Type	Construction Activity	Vehicle	MOVES Source Type	Fuel	Emission Process	Activity Surrogate	Total Activity	Activity - 2022	Activity - 2023	Activity - 2024
Fencing	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_START	One-Way Trips	13416	0	13416	0
Fuel Tanks	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPV_START	One-Way Trips	2	0	2	0
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPV_START	One-Way Trips	1	0	1	0
Fuel Tanks	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_START	One-Way Trips	33024	0	33024	0
Landscaping	Material Delivery	Flatbed Truck	Combination Short-haul Truck	Diesel	RPV_START	One-Way Trips	0	0	0	0
Landscaping	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_START	One-Way Trips	11868	0	0	11868
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPV_START	One-Way Trips	62	0	62	0
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_START	One-Way Trips	1419	0	1419	0
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	RPV_START	One-Way Trips	6	0	6	0
Parking Lot	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPV_START	One-Way Trips	35	0	35	0
Parking Lot	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPV_START	One-Way Trips	19	0	19	0
Parking Lot	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_START	One-Way Trips	40248	0	40248	0
Service Road	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPV_START	One-Way Trips	333	0	333	0
Service Road	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPV_START	One-Way Trips	178	0	178	0
Service Road	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_START	One-Way Trips	38700	0	38700	0
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPV_START	One-Way Trips	1054	88	528	438
Site Work - 10000 sqft	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_START	One-Way Trips	309600	25920	155097	128582
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	RPV_START	One-Way Trips	684	57	343	284

Project Type	Construction Activity	Vehicle	MOVES Source Type	Fuel	Emission Process	Activity Surrogate	Total Activity	Activity - 2022	Activity - 2023	Activity - 2024
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	DIURNAL	Vehicle-days	276	0	132	144
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	DIURNAL	Vehicle-days	138	0	66	72
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	Passenger Car	Gasoline	DIURNAL	Vehicle-days	80475	0	38413	42061
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	DIURNAL	Vehicle-days	138	0	66	72
Drainage System	Employee Commute	Passenger Car	Passenger Car	Gasoline	DIURNAL	Vehicle-days	7506	0	3583	3923
Fencing	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	DIURNAL	Vehicle-days	148	0	148	0
Fencing	Employee Commute	Passenger Car	Passenger Car	Gasoline	DIURNAL	Vehicle-days	3853	0	3853	0
Fuel Tanks	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	DIURNAL	Vehicle-days	51	0	51	0
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	DIURNAL	Vehicle-days	51	0	51	0
Fuel Tanks	Employee Commute	Passenger Car	Passenger Car	Gasoline	DIURNAL	Vehicle-days	3238	0	3238	0
Landscaping	Material Delivery	Flatbed Truck	Combination Short-haul Truck	Diesel	DIURNAL	Vehicle-days	0	0	0	0
Landscaping	Employee Commute	Passenger Car	Passenger Car	Gasoline	DIURNAL	Vehicle-days	0	0	0	0
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	DIURNAL	Vehicle-days	51	0	51	0
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	Passenger Car	Gasoline	DIURNAL	Vehicle-days	139	0	139	0
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	DIURNAL	Vehicle-days	51	0	51	0
Parking Lot	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	DIURNAL	Vehicle-days	51	0	51	0
Parking Lot	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	DIURNAL	Vehicle-days	51	0	51	0
Parking Lot	Employee Commute	Passenger Car	Passenger Car	Gasoline	DIURNAL	Vehicle-days	3947	0	3947	0
Service Road	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	DIURNAL	Vehicle-days	51	0	51	0

Project Type	Construction Activity	Vehicle	MOVES Source Type	Fuel	Emission Process	Activity Surrogate	Total Activity	Activity - 2022	Activity - 2023	Activity - 2024
Service Road	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	DIURNAL	Vehicle-days	51	0	51	0
Service Road	Employee Commute	Passenger Car	Passenger Car	Gasoline	DIURNAL	Vehicle-days	3795	0	3795	0
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	DIURNAL	Vehicle-days	7284	610	3649	3025
Site Work - 10000 sqft	Employee Commute	Passenger Car	Passenger Car	Gasoline	DIURNAL	Vehicle-days	255600	21399	128046	106155
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	DIURNAL	Vehicle-days	7284	610	3649	3025
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	276	0	132	144
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	138	0	66	72
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_EVAP	Vehicle-days	80475	0	38413	42061
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	138	0	66	72
Drainage System	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_EVAP	Vehicle-days	7506	0	3583	3923
Fencing	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	148	0	148	0
Fencing	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_EVAP	Vehicle-days	3853	0	3853	0
Fuel Tanks	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	51	0	51	0
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	51	0	51	0
Fuel Tanks	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_EVAP	Vehicle-days	3238	0	3238	0
Landscaping	Material Delivery	Flatbed Truck	Combination Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	0	0	0	0
Landscaping	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_EVAP	Vehicle-days	0	0	0	0
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	51	0	51	0
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_EVAP	Vehicle-days	139	0	139	0

Project Type	Construction Activity	Vehicle	MOVES Source Type	Fuel	Emission Process	Activity Surrogate	Total Activity	Activity - 2022	Activity - 2023	Activity - 2024
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	51	0	51	0
Parking Lot	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	51	0	51	0
Parking Lot	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	51	0	51	0
Parking Lot	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_EVAP	Vehicle-days	3947	0	3947	0
Service Road	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	51	0	51	0
Service Road	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	51	0	51	0
Service Road	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_EVAP	Vehicle-days	3795	0	3795	0
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	7284	610	3649	3025
Site Work - 10000 sqft	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_EVAP	Vehicle-days	255600	21399	128046	106155
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	7284	610	3649	3025
General Use	Fugitive Dust Control	Water Truck	Single Unit Short-haul Truck	Diesel	DIURNAL	Vehicle-days	2914	244	1460	1210
General Use	Fugitive Dust Control	Water Truck	Single Unit Short-haul Truck	Diesel	RPD	Miles	116576	9760	58400	48416
General Use	Fugitive Dust Control	Water Truck	Single Unit Short-haul Truck	Diesel	RPD_EVAP	Miles	116576	9760	58400	48416
General Use	Fugitive Dust Control	Water Truck	Single Unit Short-haul Truck	Diesel	RPD_WEAR	Miles	116576	9760	58400	48416
General Use	Fugitive Dust Control	Water Truck	Single Unit Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	2914	244	1460	1210
General Use	Fugitive Dust Control	Water Truck	Single Unit Short-haul Truck	Diesel	RPV_START	One-Way Trips	23315	1952	11680	9683

Table B2. 2022 Electric CUP, construction-phase on-road vehicle criteria air pollutant emission factors.

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD	g/mi	2.20E+00	1.38E+00	1.31E-01	3.60E-03	5.69E-02	5.23E-02
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	2.20E+00	1.38E+00	1.31E-01	3.60E-03	5.69E-02	5.23E-02
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD	g/mi	1.06E-01	2.87E+00	3.21E-02	2.25E-03	2.18E-03	1.93E-03
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD	g/mi	4.53E+00	2.34E+00	1.58E-01	5.81E-03	9.44E-02	8.68E-02
Drainage System	Employee Commute	Passenger Car	RPD	g/mi	1.06E-01	2.87E+00	3.21E-02	2.25E-03	2.18E-03	1.93E-03
Fencing	Material Delivery	Cement Mixer	RPD	g/mi	2.20E+00	1.38E+00	1.31E-01	3.60E-03	5.69E-02	5.23E-02
Fencing	Employee Commute	Passenger Car	RPD	g/mi	1.06E-01	2.87E+00	3.21E-02	2.25E-03	2.18E-03	1.93E-03
Fuel Tanks	Material Delivery	Cement Mixer	RPD	g/mi	2.20E+00	1.38E+00	1.31E-01	3.60E-03	5.69E-02	5.23E-02
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	2.20E+00	1.38E+00	1.31E-01	3.60E-03	5.69E-02	5.23E-02
Fuel Tanks	Employee Commute	Passenger Car	RPD	g/mi	1.06E-01	2.87E+00	3.21E-02	2.25E-03	2.18E-03	1.93E-03
Landscaping	Material Delivery	Flatbed Truck	RPD	g/mi	4.53E+00	2.34E+00	1.58E-01	5.81E-03	9.44E-02	8.68E-02
Landscaping	Employee Commute	Passenger Car	RPD	g/mi	1.06E-01	2.87E+00	3.21E-02	2.25E-03	2.18E-03	1.93E-03
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	2.20E+00	1.38E+00	1.31E-01	3.60E-03	5.69E-02	5.23E-02
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD	g/mi	1.06E-01	2.87E+00	3.21E-02	2.25E-03	2.18E-03	1.93E-03
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD	g/mi	4.53E+00	2.34E+00	1.58E-01	5.81E-03	9.44E-02	8.68E-02
Parking Lot	Material Delivery	Cement Mixer	RPD	g/mi	2.20E+00	1.38E+00	1.31E-01	3.60E-03	5.69E-02	5.23E-02
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	2.20E+00	1.38E+00	1.31E-01	3.60E-03	5.69E-02	5.23E-02
Parking Lot	Employee Commute	Passenger Car	RPD	g/mi	1.06E-01	2.87E+00	3.21E-02	2.25E-03	2.18E-03	1.93E-03

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Material Delivery	Cement Mixer	RPD	g/mi	2.20E+00	1.38E+00	1.31E-01	3.60E-03	5.69E-02	5.23E-02
Service Road	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	2.20E+00	1.38E+00	1.31E-01	3.60E-03	5.69E-02	5.23E-02
Service Road	Employee Commute	Passenger Car	RPD	g/mi	1.06E-01	2.87E+00	3.21E-02	2.25E-03	2.18E-03	1.93E-03
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	2.20E+00	1.38E+00	1.31E-01	3.60E-03	5.69E-02	5.23E-02
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD	g/mi	1.06E-01	2.87E+00	3.21E-02	2.25E-03	2.18E-03	1.93E-03
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD	g/mi	4.53E+00	2.34E+00	1.58E-01	5.81E-03	9.44E-02	8.68E-02
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-01	2.21E-02
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-01	2.21E-02
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E-01	2.82E-02
Drainage System	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Fencing	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-01	2.21E-02
Fencing	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Fuel Tanks	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-01	2.21E-02
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-01	2.21E-02
Fuel Tanks	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Landscaping	Material Delivery	Flatbed Truck	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E-01	2.82E-02
Landscaping	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-01	2.21E-02

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E-01	2.82E-02
Parking Lot	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-01	2.21E-02
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-01	2.21E-02
Parking Lot	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Service Road	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-01	2.21E-02
Service Road	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-01	2.21E-02
Service Road	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-01	2.21E-02
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E-01	2.82E-02
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.57E-02	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.57E-02	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.57E-02	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.57E-02	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.57E-02	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.57E-02	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.57E-02	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.57E-02	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.57E-02	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	3.11E-01	2.01E-01	8.70E-02	6.19E-05	6.46E-04	5.94E-04

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPV_STA RT	g/one-way trip	3.11E-01	2.01E-01	8.70E-02	6.19E-05	6.46E-04	5.94E-04
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPV_STA RT	g/one-way trip	2.31E-01	4.62E+00	3.38E-01	5.86E-04	1.04E-02	9.24E-03
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPV_STA RT	g/one-way trip	5.77E-01	8.87E-01	1.25E-01	1.18E-04	1.67E-03	1.53E-03
Drainage System	Employee Commute	Passenger Car	RPV_STA RT	g/one-way trip	2.31E-01	4.62E+00	3.38E-01	5.86E-04	1.04E-02	9.24E-03
Fencing	Material Delivery	Cement Mixer	RPV_STA RT	g/one-way trip	3.11E-01	2.01E-01	8.70E-02	6.19E-05	6.46E-04	5.94E-04
Fencing	Employee Commute	Passenger Car	RPV_STA RT	g/one-way trip	2.31E-01	4.62E+00	3.38E-01	5.86E-04	1.04E-02	9.24E-03
Fuel Tanks	Material Delivery	Cement Mixer	RPV_STA RT	g/one-way trip	3.11E-01	2.01E-01	8.70E-02	6.19E-05	6.46E-04	5.94E-04
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_STA RT	g/one-way trip	3.11E-01	2.01E-01	8.70E-02	6.19E-05	6.46E-04	5.94E-04
Fuel Tanks	Employee Commute	Passenger Car	RPV_STA RT	g/one-way trip	2.31E-01	4.62E+00	3.38E-01	5.86E-04	1.04E-02	9.24E-03
Landscaping	Material Delivery	Flatbed Truck	RPV_STA RT	g/one-way trip	5.77E-01	8.87E-01	1.25E-01	1.18E-04	1.67E-03	1.53E-03
Landscaping	Employee Commute	Passenger Car	RPV_STA RT	g/one-way trip	2.31E-01	4.62E+00	3.38E-01	5.86E-04	1.04E-02	9.24E-03
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_STA RT	g/one-way trip	3.11E-01	2.01E-01	8.70E-02	6.19E-05	6.46E-04	5.94E-04
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPV_STA RT	g/one-way trip	2.31E-01	4.62E+00	3.38E-01	5.86E-04	1.04E-02	9.24E-03
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPV_STA RT	g/one-way trip	5.77E-01	8.87E-01	1.25E-01	1.18E-04	1.67E-03	1.53E-03
Parking Lot	Material Delivery	Cement Mixer	RPV_STA RT	g/one-way trip	3.11E-01	2.01E-01	8.70E-02	6.19E-05	6.46E-04	5.94E-04
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_STA RT	g/one-way trip	3.11E-01	2.01E-01	8.70E-02	6.19E-05	6.46E-04	5.94E-04
Parking Lot	Employee Commute	Passenger Car	RPV_STA RT	g/one-way trip	2.31E-01	4.62E+00	3.38E-01	5.86E-04	1.04E-02	9.24E-03

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Material Delivery	Cement Mixer	RPV_STA RT	g/one-way trip	3.11E-01	2.01E-01	8.70E-02	6.19E-05	6.46E-04	5.94E-04
Service Road	Material Delivery	Dump Truck Subbase Material	RPV_STA RT	g/one-way trip	3.11E-01	2.01E-01	8.70E-02	6.19E-05	6.46E-04	5.94E-04
Service Road	Employee Commute	Passenger Car	RPV_STA RT	g/one-way trip	2.31E-01	4.62E+00	3.38E-01	5.86E-04	1.04E-02	9.24E-03
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_STA RT	g/one-way trip	3.11E-01	2.01E-01	8.70E-02	6.19E-05	6.46E-04	5.94E-04
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_STA RT	g/one-way trip	2.31E-01	4.62E+00	3.38E-01	5.86E-04	1.04E-02	9.24E-03
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_STA RT	g/one-way trip	5.77E-01	8.87E-01	1.25E-01	1.18E-04	1.67E-03	1.53E-03
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	1.04E-04	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	1.04E-04	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	1.04E-04	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	1.04E-04	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	1.04E-04	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	1.04E-04	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	1.04E-04	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	1.04E-04	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	1.04E-04	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.84E-04	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.84E-04	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Fencing	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.84E-04	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.84E-04	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.84E-04	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.84E-04	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.84E-04	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.84E-04	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.84E-04	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
General Use	Fugitive Dust Control	Water Truck	RPD	g/mi	2.20E+00	1.38E+00	1.31E-01	3.60E-03	5.69E-02	5.23E-02
General Use	Fugitive Dust Control	Water Truck	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-01	2.21E-02
General Use	Fugitive Dust Control	Water Truck	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPV_START	g/one-way trip	3.11E-01	2.01E-01	8.70E-02	6.19E-05	6.46E-04	5.94E-04

Table B3. 2022 Electric CUP, construction-phase on-road vehicle greenhouse gas emission factors.

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD	g/mi	1.86E-02	3.29E-03	1.07E+03	1.08E+03
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	1.86E-02	3.29E-03	1.07E+03	1.08E+03
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD	g/mi	9.78E-03	2.03E-03	3.39E+02	3.41E+02
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD	g/mi	2.37E-02	2.80E-03	1.74E+03	1.74E+03
Drainage System	Employee Commute	Passenger Car	RPD	g/mi	9.78E-03	2.03E-03	3.39E+02	3.41E+02
Fencing	Material Delivery	Cement Mixer	RPD	g/mi	1.86E-02	3.29E-03	1.07E+03	1.08E+03
Fencing	Employee Commute	Passenger Car	RPD	g/mi	9.78E-03	2.03E-03	3.39E+02	3.41E+02
Fuel Tanks	Material Delivery	Cement Mixer	RPD	g/mi	1.86E-02	3.29E-03	1.07E+03	1.08E+03
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	1.86E-02	3.29E-03	1.07E+03	1.08E+03
Fuel Tanks	Employee Commute	Passenger Car	RPD	g/mi	9.78E-03	2.03E-03	3.39E+02	3.41E+02
Landscaping	Material Delivery	Flatbed Truck	RPD	g/mi	2.37E-02	2.80E-03	1.74E+03	1.74E+03
Landscaping	Employee Commute	Passenger Car	RPD	g/mi	9.78E-03	2.03E-03	3.39E+02	3.41E+02
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	1.86E-02	3.29E-03	1.07E+03	1.08E+03
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD	g/mi	9.78E-03	2.03E-03	3.39E+02	3.41E+02
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD	g/mi	2.37E-02	2.80E-03	1.74E+03	1.74E+03
Parking Lot	Material Delivery	Cement Mixer	RPD	g/mi	1.86E-02	3.29E-03	1.07E+03	1.08E+03
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	1.86E-02	3.29E-03	1.07E+03	1.08E+03
Parking Lot	Employee Commute	Passenger Car	RPD	g/mi	9.78E-03	2.03E-03	3.39E+02	3.41E+02
Service Road	Material Delivery	Cement Mixer	RPD	g/mi	1.86E-02	3.29E-03	1.07E+03	1.08E+03

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Service Road	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	1.86E-02	3.29E-03	1.07E+03	1.08E+03
Service Road	Employee Commute	Passenger Car	RPD	g/mi	9.78E-03	2.03E-03	3.39E+02	3.41E+02
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	1.86E-02	3.29E-03	1.07E+03	1.08E+03
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD	g/mi	9.78E-03	2.03E-03	3.39E+02	3.41E+02
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD	g/mi	2.37E-02	2.80E-03	1.74E+03	1.74E+03
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Parking Lot	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Landscaping	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	4.94E-02	5.06E-03	1.84E+01	2.39E+01
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	4.94E-02	5.06E-03	1.84E+01	2.39E+01
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPV_START	g/one-way trip	4.18E-02	2.99E-02	8.82E+01	9.99E+01
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPV_START	g/one-way trip	6.89E-02	5.06E-03	3.54E+01	4.24E+01
Drainage System	Employee Commute	Passenger Car	RPV_START	g/one-way trip	4.18E-02	2.99E-02	8.82E+01	9.99E+01
Fencing	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	4.94E-02	5.06E-03	1.84E+01	2.39E+01

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Fencing	Employee Commute	Passenger Car	RPV_START	g/one-way trip	4.18E-02	2.99E-02	8.82E+01	9.99E+01
Fuel Tanks	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	4.94E-02	5.06E-03	1.84E+01	2.39E+01
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	4.94E-02	5.06E-03	1.84E+01	2.39E+01
Fuel Tanks	Employee Commute	Passenger Car	RPV_START	g/one-way trip	4.18E-02	2.99E-02	8.82E+01	9.99E+01
Landscaping	Material Delivery	Flatbed Truck	RPV_START	g/one-way trip	6.89E-02	5.06E-03	3.54E+01	4.24E+01
Landscaping	Employee Commute	Passenger Car	RPV_START	g/one-way trip	4.18E-02	2.99E-02	8.82E+01	9.99E+01
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	4.94E-02	5.06E-03	1.84E+01	2.39E+01
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPV_START	g/one-way trip	4.18E-02	2.99E-02	8.82E+01	9.99E+01
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPV_START	g/one-way trip	6.89E-02	5.06E-03	3.54E+01	4.24E+01
Parking Lot	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	4.94E-02	5.06E-03	1.84E+01	2.39E+01
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	4.94E-02	5.06E-03	1.84E+01	2.39E+01
Parking Lot	Employee Commute	Passenger Car	RPV_START	g/one-way trip	4.18E-02	2.99E-02	8.82E+01	9.99E+01
Service Road	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	4.94E-02	5.06E-03	1.84E+01	2.39E+01
Service Road	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	4.94E-02	5.06E-03	1.84E+01	2.39E+01
Service Road	Employee Commute	Passenger Car	RPV_START	g/one-way trip	4.18E-02	2.99E-02	8.82E+01	9.99E+01
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	4.94E-02	5.06E-03	1.84E+01	2.39E+01
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_START	g/one-way trip	4.18E-02	2.99E-02	8.82E+01	9.99E+01

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_START	g/one-way trip	6.89E-02	5.06E-03	3.54E+01	4.24E+01
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Service Road	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Parking Lot	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPD	g/mi	1.86E-02	3.29E-03	1.07E+03	1.08E+03
General Use	Fugitive Dust Control	Water Truck	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPV_START	g/one-way trip	4.94E-02	5.06E-03	1.84E+01	2.39E+01

Table B4. 2023 Electric CUP, construction-phase on-road vehicle criteria air pollutant emission factors.

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD	g/mi	9.52E-02	2.76E+00	2.98E-02	2.20E-03	2.11E-03	1.86E-03
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD	g/mi	4.29E+00	2.29E+00	1.43E-01	5.71E-03	8.34E-02	7.68E-02
Drainage System	Employee Commute	Passenger Car	RPD	g/mi	9.52E-02	2.76E+00	2.98E-02	2.20E-03	2.11E-03	1.86E-03
Fencing	Material Delivery	Cement Mixer	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Fencing	Employee Commute	Passenger Car	RPD	g/mi	9.52E-02	2.76E+00	2.98E-02	2.20E-03	2.11E-03	1.86E-03
Fuel Tanks	Material Delivery	Cement Mixer	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Fuel Tanks	Employee Commute	Passenger Car	RPD	g/mi	9.52E-02	2.76E+00	2.98E-02	2.20E-03	2.11E-03	1.86E-03
Landscaping	Material Delivery	Flatbed Truck	RPD	g/mi	4.29E+00	2.29E+00	1.43E-01	5.71E-03	8.34E-02	7.68E-02
Landscaping	Employee Commute	Passenger Car	RPD	g/mi	9.52E-02	2.76E+00	2.98E-02	2.20E-03	2.11E-03	1.86E-03
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD	g/mi	9.52E-02	2.76E+00	2.98E-02	2.20E-03	2.11E-03	1.86E-03
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD	g/mi	4.29E+00	2.29E+00	1.43E-01	5.71E-03	8.34E-02	7.68E-02
Parking Lot	Material Delivery	Cement Mixer	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Parking Lot	Employee Commute	Passenger Car	RPD	g/mi	9.52E-02	2.76E+00	2.98E-02	2.20E-03	2.11E-03	1.86E-03
Service Road	Material Delivery	Cement Mixer	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Service Road	Employee Commute	Passenger Car	RPD	g/mi	9.52E-02	2.76E+00	2.98E-02	2.20E-03	2.11E-03	1.86E-03
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD	g/mi	9.52E-02	2.76E+00	2.98E-02	2.20E-03	2.11E-03	1.86E-03
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD	g/mi	4.29E+00	2.29E+00	1.43E-01	5.71E-03	8.34E-02	7.68E-02
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E-01	2.83E-02
Drainage System	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Fencing	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Fencing	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Fuel Tanks	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Fuel Tanks	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Landscaping	Material Delivery	Flatbed Truck	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E-01	2.83E-02
Landscaping	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E-01	2.83E-02

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Parking Lot	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Service Road	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Service Road	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Service Road	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E-01	2.83E-02
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.48E-02	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.48E-02	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.48E-02	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.48E-02	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Landscaping	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.48E-02	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.48E-02	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.48E-02	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.48E-02	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.48E-02	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.18E-01	4.41E+00	3.21E-01	5.81E-04	1.07E-02	9.50E-03
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPV_START	g/one-way trip	5.93E-01	8.40E-01	1.24E-01	1.18E-04	1.61E-03	1.48E-03
Drainage System	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.18E-01	4.41E+00	3.21E-01	5.81E-04	1.07E-02	9.50E-03
Fencing	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Fencing	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.18E-01	4.41E+00	3.21E-01	5.81E-04	1.07E-02	9.50E-03
Fuel Tanks	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Fuel Tanks	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.18E-01	4.41E+00	3.21E-01	5.81E-04	1.07E-02	9.50E-03
Landscaping	Material Delivery	Flatbed Truck	RPV_START	g/one-way trip	5.93E-01	8.40E-01	1.24E-01	1.18E-04	1.61E-03	1.48E-03
Landscaping	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.18E-01	4.41E+00	3.21E-01	5.81E-04	1.07E-02	9.50E-03
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.18E-01	4.41E+00	3.21E-01	5.81E-04	1.07E-02	9.50E-03
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPV_START	g/one-way trip	5.93E-01	8.40E-01	1.24E-01	1.18E-04	1.61E-03	1.48E-03
Parking Lot	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Parking Lot	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.18E-01	4.41E+00	3.21E-01	5.81E-04	1.07E-02	9.50E-03
Service Road	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Service Road	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Service Road	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.18E-01	4.41E+00	3.21E-01	5.81E-04	1.07E-02	9.50E-03
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.18E-01	4.41E+00	3.21E-01	5.81E-04	1.07E-02	9.50E-03

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_START	g/one-way trip	5.93E-01	8.40E-01	1.24E-01	1.18E-04	1.61E-03	1.48E-03
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	9.97E-05	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	9.97E-05	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	9.97E-05	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	9.97E-05	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	9.97E-05	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	9.97E-05	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	9.97E-05	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	9.97E-05	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	9.97E-05	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
General Use	Fugitive Dust Control	Water Truck	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
General Use	Fugitive Dust Control	Water Truck	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04

Table B5. 2023 Electric CUP, construction-phase on-road vehicle greenhouse gas emission factors.

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD	g/mi	1.73E-02	3.29E-03	1.06E+03	1.06E+03
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	1.73E-02	3.29E-03	1.06E+03	1.06E+03
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD	g/mi	9.28E-03	1.98E-03	3.31E+02	3.32E+02
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD	g/mi	2.17E-02	2.80E-03	1.71E+03	1.71E+03
Drainage System	Employee Commute	Passenger Car	RPD	g/mi	9.28E-03	1.98E-03	3.31E+02	3.32E+02
Fencing	Material Delivery	Cement Mixer	RPD	g/mi	1.73E-02	3.29E-03	1.06E+03	1.06E+03
Fencing	Employee Commute	Passenger Car	RPD	g/mi	9.28E-03	1.98E-03	3.31E+02	3.32E+02
Fuel Tanks	Material Delivery	Cement Mixer	RPD	g/mi	1.73E-02	3.29E-03	1.06E+03	1.06E+03
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	1.73E-02	3.29E-03	1.06E+03	1.06E+03
Fuel Tanks	Employee Commute	Passenger Car	RPD	g/mi	9.28E-03	1.98E-03	3.31E+02	3.32E+02
Landscaping	Material Delivery	Flatbed Truck	RPD	g/mi	2.17E-02	2.80E-03	1.71E+03	1.71E+03
Landscaping	Employee Commute	Passenger Car	RPD	g/mi	9.28E-03	1.98E-03	3.31E+02	3.32E+02
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	1.73E-02	3.29E-03	1.06E+03	1.06E+03
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD	g/mi	9.28E-03	1.98E-03	3.31E+02	3.32E+02
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD	g/mi	2.17E-02	2.80E-03	1.71E+03	1.71E+03
Parking Lot	Material Delivery	Cement Mixer	RPD	g/mi	1.73E-02	3.29E-03	1.06E+03	1.06E+03
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	1.73E-02	3.29E-03	1.06E+03	1.06E+03
Parking Lot	Employee Commute	Passenger Car	RPD	g/mi	9.28E-03	1.98E-03	3.31E+02	3.32E+02

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Service Road	Material Delivery	Cement Mixer	RPD	g/mi	1.73E-02	3.29E-03	1.06E+03	1.06E+03
Service Road	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	1.73E-02	3.29E-03	1.06E+03	1.06E+03
Service Road	Employee Commute	Passenger Car	RPD	g/mi	9.28E-03	1.98E-03	3.31E+02	3.32E+02
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	1.73E-02	3.29E-03	1.06E+03	1.06E+03
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD	g/mi	9.28E-03	1.98E-03	3.31E+02	3.32E+02
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD	g/mi	2.17E-02	2.80E-03	1.71E+03	1.71E+03
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Fuel Tanks	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	4.97E-02	5.06E-03	1.83E+01	2.38E+01

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPV_STAR T	g/one-way trip	4.97E-02	5.06E-03	1.83E+01	2.38E+01
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPV_STAR T	g/one-way trip	3.95E-02	2.88E-02	8.75E+01	9.86E+01
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPV_STAR T	g/one-way trip	6.91E-02	5.06E-03	3.52E+01	4.23E+01
Drainage System	Employee Commute	Passenger Car	RPV_STAR T	g/one-way trip	3.95E-02	2.88E-02	8.75E+01	9.86E+01
Fencing	Material Delivery	Cement Mixer	RPV_STAR T	g/one-way trip	4.97E-02	5.06E-03	1.83E+01	2.38E+01
Fencing	Employee Commute	Passenger Car	RPV_STAR T	g/one-way trip	3.95E-02	2.88E-02	8.75E+01	9.86E+01
Fuel Tanks	Material Delivery	Cement Mixer	RPV_STAR T	g/one-way trip	4.97E-02	5.06E-03	1.83E+01	2.38E+01
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_STAR T	g/one-way trip	4.97E-02	5.06E-03	1.83E+01	2.38E+01
Fuel Tanks	Employee Commute	Passenger Car	RPV_STAR T	g/one-way trip	3.95E-02	2.88E-02	8.75E+01	9.86E+01
Landscaping	Material Delivery	Flatbed Truck	RPV_STAR T	g/one-way trip	6.91E-02	5.06E-03	3.52E+01	4.23E+01
Landscaping	Employee Commute	Passenger Car	RPV_STAR T	g/one-way trip	3.95E-02	2.88E-02	8.75E+01	9.86E+01
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_STAR T	g/one-way trip	4.97E-02	5.06E-03	1.83E+01	2.38E+01
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPV_STAR T	g/one-way trip	3.95E-02	2.88E-02	8.75E+01	9.86E+01
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPV_STAR T	g/one-way trip	6.91E-02	5.06E-03	3.52E+01	4.23E+01
Parking Lot	Material Delivery	Cement Mixer	RPV_STAR T	g/one-way trip	4.97E-02	5.06E-03	1.83E+01	2.38E+01
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_STAR T	g/one-way trip	4.97E-02	5.06E-03	1.83E+01	2.38E+01
Parking Lot	Employee Commute	Passenger Car	RPV_STAR T	g/one-way trip	3.95E-02	2.88E-02	8.75E+01	9.86E+01

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Service Road	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	4.97E-02	5.06E-03	1.83E+01	2.38E+01
Service Road	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	4.97E-02	5.06E-03	1.83E+01	2.38E+01
Service Road	Employee Commute	Passenger Car	RPV_START	g/one-way trip	3.95E-02	2.88E-02	8.75E+01	9.86E+01
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	4.97E-02	5.06E-03	1.83E+01	2.38E+01
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_START	g/one-way trip	3.95E-02	2.88E-02	8.75E+01	9.86E+01
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_START	g/one-way trip	6.91E-02	5.06E-03	3.52E+01	4.23E+01
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Fencing	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
General Use	Fugitive Dust Control	Water Truck	RPD	g/mi	1.73E-02	3.29E-03	1.06E+03	1.06E+03
General Use	Fugitive Dust Control	Water Truck	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPV_START	g/one-way trip	4.97E-02	5.06E-03	1.83E+01	2.38E+01

Table B6. 2024 Electric CUP, construction-phase on-road vehicle criteria air pollutant emission factors.

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD	g/mi	9.52E-02	2.76E+00	2.98E-02	2.20E-03	2.11E-03	1.86E-03
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD	g/mi	4.29E+00	2.29E+00	1.43E-01	5.71E-03	8.34E-02	7.68E-02
Drainage System	Employee Commute	Passenger Car	RPD	g/mi	9.52E-02	2.76E+00	2.98E-02	2.20E-03	2.11E-03	1.86E-03
Fencing	Material Delivery	Cement Mixer	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Fencing	Employee Commute	Passenger Car	RPD	g/mi	9.52E-02	2.76E+00	2.98E-02	2.20E-03	2.11E-03	1.86E-03
Fuel Tanks	Material Delivery	Cement Mixer	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Fuel Tanks	Employee Commute	Passenger Car	RPD	g/mi	9.52E-02	2.76E+00	2.98E-02	2.20E-03	2.11E-03	1.86E-03
Landscaping	Material Delivery	Flatbed Truck	RPD	g/mi	4.29E+00	2.29E+00	1.43E-01	5.71E-03	8.34E-02	7.68E-02

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Landscaping	Employee Commute	Passenger Car	RPD	g/mi	9.52E-02	2.76E+00	2.98E-02	2.20E-03	2.11E-03	1.86E-03
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD	g/mi	9.52E-02	2.76E+00	2.98E-02	2.20E-03	2.11E-03	1.86E-03
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD	g/mi	4.29E+00	2.29E+00	1.43E-01	5.71E-03	8.34E-02	7.68E-02
Parking Lot	Material Delivery	Cement Mixer	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Parking Lot	Employee Commute	Passenger Car	RPD	g/mi	9.52E-02	2.76E+00	2.98E-02	2.20E-03	2.11E-03	1.86E-03
Service Road	Material Delivery	Cement Mixer	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Service Road	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Service Road	Employee Commute	Passenger Car	RPD	g/mi	9.52E-02	2.76E+00	2.98E-02	2.20E-03	2.11E-03	1.86E-03
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD	g/mi	9.52E-02	2.76E+00	2.98E-02	2.20E-03	2.11E-03	1.86E-03
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD	g/mi	4.29E+00	2.29E+00	1.43E-01	5.71E-03	8.34E-02	7.68E-02
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E-01	2.83E-02
Drainage System	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Fencing	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Fencing	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Fuel Tanks	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Landscaping	Material Delivery	Flatbed Truck	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E-01	2.83E-02
Landscaping	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E-01	2.83E-02
Parking Lot	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Parking Lot	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Service Road	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Service Road	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Service Road	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E-01	2.83E-02
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.48E-02	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.48E-02	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.48E-02	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.48E-02	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.48E-02	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.48E-02	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.48E-02	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.48E-02	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.48E-02	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.18E-01	4.41E+00	3.21E-01	5.81E-04	1.07E-02	9.50E-03
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPV_START	g/one-way trip	5.93E-01	8.40E-01	1.24E-01	1.18E-04	1.61E-03	1.48E-03
Drainage System	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.18E-01	4.41E+00	3.21E-01	5.81E-04	1.07E-02	9.50E-03
Fencing	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Fencing	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.18E-01	4.41E+00	3.21E-01	5.81E-04	1.07E-02	9.50E-03
Fuel Tanks	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Fuel Tanks	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.18E-01	4.41E+00	3.21E-01	5.81E-04	1.07E-02	9.50E-03
Landscaping	Material Delivery	Flatbed Truck	RPV_START	g/one-way trip	5.93E-01	8.40E-01	1.24E-01	1.18E-04	1.61E-03	1.48E-03
Landscaping	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.18E-01	4.41E+00	3.21E-01	5.81E-04	1.07E-02	9.50E-03
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.18E-01	4.41E+00	3.21E-01	5.81E-04	1.07E-02	9.50E-03
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPV_START	g/one-way trip	5.93E-01	8.40E-01	1.24E-01	1.18E-04	1.61E-03	1.48E-03

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Parking Lot	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.18E-01	4.41E+00	3.21E-01	5.81E-04	1.07E-02	9.50E-03
Service Road	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Service Road	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Service Road	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.18E-01	4.41E+00	3.21E-01	5.81E-04	1.07E-02	9.50E-03
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.18E-01	4.41E+00	3.21E-01	5.81E-04	1.07E-02	9.50E-03
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_START	g/one-way trip	5.93E-01	8.40E-01	1.24E-01	1.18E-04	1.61E-03	1.48E-03
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	9.97E-05	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	9.97E-05	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	9.97E-05	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	9.97E-05	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	9.97E-05	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	9.97E-05	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	9.97E-05	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	9.97E-05	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	9.97E-05	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
General Use	Fugitive Dust Control	Water Truck	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
General Use	Fugitive Dust Control	Water Truck	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04

Table B7. 2024 Electric CUP, construction-phase on-road vehicle greenhouse gas emission factors

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD	g/mi	1.64E-02	3.29E-03	1.04E+03	1.04E+03
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	1.64E-02	3.29E-03	1.04E+03	1.04E+03
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD	g/mi	8.12E-03	1.85E-03	3.23E+02	3.24E+02
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD	g/mi	2.06E-02	2.80E-03	1.67E+03	1.68E+03
Drainage System	Employee Commute	Passenger Car	RPD	g/mi	8.12E-03	1.85E-03	3.23E+02	3.24E+02
Fencing	Material Delivery	Cement Mixer	RPD	g/mi	1.64E-02	3.29E-03	1.04E+03	1.04E+03
Fencing	Employee Commute	Passenger Car	RPD	g/mi	8.12E-03	1.85E-03	3.23E+02	3.24E+02

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Fuel Tanks	Material Delivery	Cement Mixer	RPD	g/mi	1.64E-02	3.29E-03	1.04E+03	1.04E+03
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	1.64E-02	3.29E-03	1.04E+03	1.04E+03
Fuel Tanks	Employee Commute	Passenger Car	RPD	g/mi	8.12E-03	1.85E-03	3.23E+02	3.24E+02
Landscaping	Material Delivery	Flatbed Truck	RPD	g/mi	2.06E-02	2.80E-03	1.67E+03	1.68E+03
Landscaping	Employee Commute	Passenger Car	RPD	g/mi	8.12E-03	1.85E-03	3.23E+02	3.24E+02
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	1.64E-02	3.29E-03	1.04E+03	1.04E+03
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD	g/mi	8.12E-03	1.85E-03	3.23E+02	3.24E+02
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD	g/mi	2.06E-02	2.80E-03	1.67E+03	1.68E+03
Parking Lot	Material Delivery	Cement Mixer	RPD	g/mi	1.64E-02	3.29E-03	1.04E+03	1.04E+03
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	1.64E-02	3.29E-03	1.04E+03	1.04E+03
Parking Lot	Employee Commute	Passenger Car	RPD	g/mi	8.12E-03	1.85E-03	3.23E+02	3.24E+02
Service Road	Material Delivery	Cement Mixer	RPD	g/mi	1.64E-02	3.29E-03	1.04E+03	1.04E+03
Service Road	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	1.64E-02	3.29E-03	1.04E+03	1.04E+03
Service Road	Employee Commute	Passenger Car	RPD	g/mi	8.12E-03	1.85E-03	3.23E+02	3.24E+02
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	1.64E-02	3.29E-03	1.04E+03	1.04E+03
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD	g/mi	8.12E-03	1.85E-03	3.23E+02	3.24E+02
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD	g/mi	2.06E-02	2.80E-03	1.67E+03	1.68E+03
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Service Road	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Parking Lot	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	5.00E-02	5.06E-03	1.82E+01	2.38E+01
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	5.00E-02	5.06E-03	1.82E+01	2.38E+01
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPV_START	g/one-way trip	3.72E-02	2.77E-02	8.69E+01	9.75E+01
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPV_START	g/one-way trip	6.95E-02	5.06E-03	3.51E+01	4.22E+01
Drainage System	Employee Commute	Passenger Car	RPV_START	g/one-way trip	3.72E-02	2.77E-02	8.69E+01	9.75E+01
Fencing	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	5.00E-02	5.06E-03	1.82E+01	2.38E+01
Fencing	Employee Commute	Passenger Car	RPV_START	g/one-way trip	3.72E-02	2.77E-02	8.69E+01	9.75E+01
Fuel Tanks	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	5.00E-02	5.06E-03	1.82E+01	2.38E+01
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	5.00E-02	5.06E-03	1.82E+01	2.38E+01

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Fuel Tanks	Employee Commute	Passenger Car	RPV_START	g/one-way trip	3.72E-02	2.77E-02	8.69E+01	9.75E+01
Landscaping	Material Delivery	Flatbed Truck	RPV_START	g/one-way trip	6.95E-02	5.06E-03	3.51E+01	4.22E+01
Landscaping	Employee Commute	Passenger Car	RPV_START	g/one-way trip	3.72E-02	2.77E-02	8.69E+01	9.75E+01
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	5.00E-02	5.06E-03	1.82E+01	2.38E+01
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPV_START	g/one-way trip	3.72E-02	2.77E-02	8.69E+01	9.75E+01
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPV_START	g/one-way trip	6.95E-02	5.06E-03	3.51E+01	4.22E+01
Parking Lot	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	5.00E-02	5.06E-03	1.82E+01	2.38E+01
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	5.00E-02	5.06E-03	1.82E+01	2.38E+01
Parking Lot	Employee Commute	Passenger Car	RPV_START	g/one-way trip	3.72E-02	2.77E-02	8.69E+01	9.75E+01
Service Road	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	5.00E-02	5.06E-03	1.82E+01	2.38E+01
Service Road	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	5.00E-02	5.06E-03	1.82E+01	2.38E+01
Service Road	Employee Commute	Passenger Car	RPV_START	g/one-way trip	3.72E-02	2.77E-02	8.69E+01	9.75E+01
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	5.00E-02	5.06E-03	1.82E+01	2.38E+01
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_START	g/one-way trip	3.72E-02	2.77E-02	8.69E+01	9.75E+01
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_START	g/one-way trip	6.95E-02	5.06E-03	3.51E+01	4.22E+01
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Parking Lot	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPD	g/mi	1.64E-02	3.29E-03	1.04E+03	1.04E+03
General Use	Fugitive Dust Control	Water Truck	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPV_START	g/one-way trip	5.00E-02	5.06E-03	1.82E+01	2.38E+01

Table B8. 2022 Electric CUP, construction-phase on-road vehicle criteria air pollutant emissions.

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Material Delivery	Cement Mixer	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	4.27E-03	2.69E-03	2.55E-04	7.01E-06	1.11E-04	1.02E-04
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD	4.53E-02	1.23E+00	1.38E-02	9.66E-04	9.35E-04	8.27E-04
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD	5.72E-03	2.95E-03	2.00E-04	7.34E-06	1.19E-04	1.10E-04
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.37E-04	4.30E-05
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.09E-02	2.72E-03
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E-04	3.56E-05
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	1.53E-02	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPV_STAR T	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPV_STAR T	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPV_STAR T	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPV_STAR T	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPV_STAR T	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPV_STAR T	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPV_STAR T	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPV_STAR T	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_STAR T	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPV_STAR T	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPV_STAR T	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPV_STAR T	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_STAR T	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPV_STAR T	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPV_STAR T	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPV_STAR T	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_STAR T	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPV_STAR T	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Material Delivery	Cement Mixer	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_START	3.03E-05	1.96E-05	8.46E-06	6.02E-09	6.28E-08	5.78E-08
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_START	6.61E-03	1.32E-01	9.65E-03	1.67E-05	2.98E-04	2.64E-04
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_START	3.64E-05	5.60E-05	7.88E-06	7.48E-09	1.05E-07	9.67E-08
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	2.46E-06	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Fencing	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	4.34E-06	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
General Use	Fugitive Dust Control	Water Truck	RPD	2.36E-02	1.49E-02	1.41E-03	3.87E-05	6.12E-04	5.63E-04
General Use	Fugitive Dust Control	Water Truck	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-03	2.38E-04
General Use	Fugitive Dust Control	Water Truck	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPV_START	6.70E-04	4.33E-04	1.87E-04	1.33E-07	1.39E-06	1.28E-06

Table B9. 2022 Electric CUP, construction-phase on-road vehicle greenhouse gas emissions.

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Service Road	Material Delivery	Cement Mixer	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	3.63E-05	6.39E-06	2.09E+00	2.09E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD	4.19E-03	8.68E-04	1.45E+02	1.46E+02
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD	2.99E-05	3.54E-06	2.19E+00	2.19E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Fuel Tanks	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Service Road	Material Delivery	Cement Mixer	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_START	4.81E-06	4.92E-07	1.79E-03	2.33E-03
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_START	1.19E-03	8.55E-04	2.52E+00	2.85E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_START	4.35E-06	3.19E-07	2.23E-03	2.68E-03
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Fencing	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
General Use	Fugitive Dust Control	Water Truck	RPD	2.01E-04	3.53E-05	1.15E+01	1.16E+01
General Use	Fugitive Dust Control	Water Truck	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPV_START	1.06E-04	1.09E-05	3.97E-02	5.14E-02

Table B10. 2023 Electric CUP, construction-phase on-road vehicle criteria air pollutant emissions.

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD	1.24E-02	8.10E-03	6.75E-04	2.14E-05	2.87E-04	2.64E-04
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD	6.61E-03	4.32E-03	3.60E-04	1.14E-05	1.53E-04	1.41E-04
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD	1.12E-01	3.26E+00	3.51E-02	2.59E-03	2.48E-03	2.20E-03
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD	2.69E-03	1.44E-03	9.00E-05	3.58E-06	5.23E-05	4.81E-05
Drainage System	Employee Commute	Passenger Car	RPD	1.05E-02	3.04E-01	3.28E-03	2.42E-04	2.32E-04	2.05E-04
Fencing	Material Delivery	Cement Mixer	RPD	4.44E-03	2.90E-03	2.42E-04	7.67E-06	1.03E-04	9.48E-05
Fencing	Employee Commute	Passenger Car	RPD	2.11E-02	6.13E-01	6.61E-03	4.87E-04	4.67E-04	4.13E-04
Fuel Tanks	Material Delivery	Cement Mixer	RPD	8.82E-05	5.76E-05	4.80E-06	1.52E-07	2.04E-06	1.88E-06
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD	4.75E-05	3.10E-05	2.59E-06	8.19E-08	1.10E-06	1.01E-06
Fuel Tanks	Employee Commute	Passenger Car	RPD	5.20E-02	1.51E+00	1.63E-02	1.20E-03	1.15E-03	1.02E-03
Landscaping	Material Delivery	Flatbed Truck	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Landscaping	Employee Commute	Passenger Car	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	2.79E-03	1.82E-03	1.52E-04	4.81E-06	6.46E-05	5.95E-05
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD	2.23E-03	6.48E-02	6.99E-04	5.15E-05	4.94E-05	4.37E-05
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD	5.67E-04	3.03E-04	1.90E-05	7.56E-07	1.10E-05	1.02E-05
Parking Lot	Material Delivery	Cement Mixer	RPD	1.59E-03	1.04E-03	8.68E-05	2.75E-06	3.70E-05	3.40E-05
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD	8.50E-04	5.55E-04	4.63E-05	1.47E-06	1.97E-05	1.81E-05
Parking Lot	Employee Commute	Passenger Car	RPD	6.34E-02	1.84E+00	1.98E-02	1.46E-03	1.40E-03	1.24E-03
Service Road	Material Delivery	Cement Mixer	RPD	1.51E-02	9.84E-03	8.20E-04	2.60E-05	3.49E-04	3.21E-04
Service Road	Material Delivery	Dump Truck Subbase Material	RPD	8.03E-03	5.25E-03	4.37E-04	1.39E-05	1.86E-04	1.71E-04
Service Road	Employee Commute	Passenger Car	RPD	6.09E-02	1.77E+00	1.91E-02	1.41E-03	1.35E-03	1.19E-03
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	2.39E-02	1.56E-02	1.30E-03	4.12E-05	5.54E-04	5.09E-04
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD	2.44E-01	7.08E+00	7.65E-02	5.63E-03	5.40E-03	4.78E-03
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD	3.24E-02	1.73E-02	1.08E-03	4.32E-05	6.30E-04	5.80E-04
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-03	1.34E-04
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.61E-04	7.17E-05
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.74E-02	7.48E-03
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-04	1.77E-05
Drainage System	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.35E-03	6.97E-04

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Fencing	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.77E-04	4.82E-05
Fencing	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-02	1.41E-03
Fuel Tanks	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.48E-06	9.56E-07
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.03E-06	5.15E-07
Fuel Tanks	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.66E-02	3.46E-03
Landscaping	Material Delivery	Flatbed Truck	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.36E-04	3.02E-05
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-03	1.49E-04
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.91E-05	3.74E-06
Parking Lot	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-04	1.73E-05
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.21E-05	9.22E-06
Parking Lot	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.24E-02	4.22E-03
Service Road	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-03	1.63E-04
Service Road	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.81E-04	8.71E-05
Service Road	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.11E-02	4.06E-03
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E-03	2.59E-04
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-01	1.63E-02
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-03	2.14E-04

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	4.11E-02	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	3.83E-03	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	7.73E-03	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	1.90E-02	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	8.17E-04	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	2.32E-02	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	2.23E-02	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	8.93E-02	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPV_START	9.36E-05	5.63E-05	2.60E-05	1.86E-08	1.84E-07	1.69E-07
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPV_START	4.99E-05	3.00E-05	1.39E-05	9.90E-09	9.80E-08	9.02E-08
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPV_START	1.71E-02	3.46E-01	2.52E-02	4.57E-05	8.44E-04	7.46E-04
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPV_START	1.86E-05	2.63E-05	3.89E-06	3.70E-09	5.03E-08	4.63E-08
Drainage System	Employee Commute	Passenger Car	RPV_START	1.60E-03	3.23E-02	2.35E-03	4.26E-06	7.87E-05	6.96E-05
Fencing	Material Delivery	Cement Mixer	RPV_START	3.36E-05	2.02E-05	9.32E-06	6.66E-09	6.59E-08	6.07E-08
Fencing	Employee Commute	Passenger Car	RPV_START	3.22E-03	6.52E-02	4.74E-03	8.59E-06	1.59E-04	1.40E-04
Fuel Tanks	Material Delivery	Cement Mixer	RPV_START	6.66E-07	4.01E-07	1.85E-07	1.32E-10	1.31E-09	1.20E-09
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_START	3.59E-07	2.16E-07	9.96E-08	7.11E-11	7.04E-10	6.48E-10
Fuel Tanks	Employee Commute	Passenger Car	RPV_START	7.93E-03	1.60E-01	1.17E-02	2.12E-05	3.91E-04	3.46E-04
Landscaping	Material Delivery	Flatbed Truck	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_START	2.11E-05	1.27E-05	5.85E-06	4.18E-09	4.13E-08	3.80E-08

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPV_START	3.41E-04	6.89E-03	5.02E-04	9.09E-07	1.68E-05	1.49E-05
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPV_START	3.92E-06	5.55E-06	8.20E-07	7.80E-10	1.06E-08	9.77E-09
Parking Lot	Material Delivery	Cement Mixer	RPV_START	1.20E-05	7.25E-06	3.34E-06	2.39E-09	2.36E-08	2.18E-08
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_START	6.42E-06	3.86E-06	1.78E-06	1.27E-09	1.26E-08	1.16E-08
Parking Lot	Employee Commute	Passenger Car	RPV_START	9.67E-03	1.96E-01	1.42E-02	2.58E-05	4.76E-04	4.21E-04
Service Road	Material Delivery	Cement Mixer	RPV_START	1.14E-04	6.85E-05	3.16E-05	2.26E-08	2.23E-07	2.05E-07
Service Road	Material Delivery	Dump Truck Subbase Material	RPV_START	6.07E-05	3.65E-05	1.68E-05	1.20E-08	1.19E-07	1.10E-07
Service Road	Employee Commute	Passenger Car	RPV_START	9.30E-03	1.88E-01	1.37E-02	2.48E-05	4.58E-04	4.05E-04
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_START	1.80E-04	1.09E-04	5.01E-05	3.58E-08	3.54E-07	3.26E-07
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_START	3.73E-02	7.54E-01	5.48E-02	9.94E-05	1.84E-03	1.62E-03
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_START	2.24E-04	3.17E-04	4.68E-05	4.45E-08	6.06E-07	5.58E-07
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	4.22E-06	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	3.94E-07	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	4.23E-07	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	3.56E-07	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	1.53E-08	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	4.34E-07	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	4.17E-07	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	1.41E-05	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	7.59E-06	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	7.08E-07	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	7.61E-07	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	6.40E-07	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	2.75E-08	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	7.80E-07	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	7.50E-07	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	2.53E-05	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPD	1.32E-01	8.63E-02	7.19E-03	2.28E-04	3.06E-03	2.82E-03
General Use	Fugitive Dust Control	Water Truck	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-02	1.43E-03
General Use	Fugitive Dust Control	Water Truck	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPV_START	3.99E-03	2.40E-03	1.11E-03	7.91E-07	7.83E-06	7.21E-06

Table B11. 2023 Electric CUP, construction-phase on-road vehicle greenhouse gas emissions.

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD	1.04E-04	1.99E-05	6.37E+00	6.39E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD	5.57E-05	1.06E-05	3.40E+00	3.41E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD	1.09E-02	2.34E-03	3.90E+02	3.91E+02
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD	1.36E-05	1.76E-06	1.07E+00	1.07E+00
Drainage System	Employee Commute	Passenger Car	RPD	1.02E-03	2.18E-04	3.64E+01	3.65E+01
Fencing	Material Delivery	Cement Mixer	RPD	3.75E-05	7.12E-06	2.29E+00	2.29E+00
Fencing	Employee Commute	Passenger Car	RPD	2.06E-03	4.40E-04	7.33E+01	7.36E+01
Fuel Tanks	Material Delivery	Cement Mixer	RPD	7.44E-07	1.41E-07	4.54E-02	4.55E-02
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD	4.00E-07	7.61E-08	2.44E-02	2.45E-02
Fuel Tanks	Employee Commute	Passenger Car	RPD	5.07E-03	1.08E-03	1.81E+02	1.81E+02
Landscaping	Material Delivery	Flatbed Truck	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	2.35E-05	4.47E-06	1.43E+00	1.44E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD	2.18E-04	4.65E-05	7.76E+00	7.79E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD	2.87E-06	3.71E-07	2.26E-01	2.26E-01
Parking Lot	Material Delivery	Cement Mixer	RPD	1.34E-05	2.55E-06	8.20E-01	8.22E-01
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD	7.17E-06	1.36E-06	4.37E-01	4.38E-01
Parking Lot	Employee Commute	Passenger Car	RPD	6.18E-03	1.32E-03	2.20E+02	2.21E+02

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Service Road	Material Delivery	Cement Mixer	RPD	1.27E-04	2.41E-05	7.75E+00	7.76E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPD	6.77E-05	1.29E-05	4.13E+00	4.14E+00
Service Road	Employee Commute	Passenger Car	RPD	5.94E-03	1.27E-03	2.12E+02	2.12E+02
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	2.01E-04	3.82E-05	1.23E+01	1.23E+01
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD	2.38E-02	5.08E-03	8.48E+02	8.51E+02
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD	1.64E-04	2.12E-05	1.29E+01	1.29E+01
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Fuel Tanks	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPV_START	1.50E-05	1.53E-06	5.54E-03	7.20E-03

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPV_START	8.01E-06	8.15E-07	2.95E-03	3.84E-03
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPV_START	3.10E-03	2.26E-03	6.88E+00	7.75E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPV_START	2.17E-06	1.59E-07	1.10E-03	1.33E-03
Drainage System	Employee Commute	Passenger Car	RPV_START	2.89E-04	2.11E-04	6.41E-01	7.23E-01
Fencing	Material Delivery	Cement Mixer	RPV_START	5.39E-06	5.48E-07	1.99E-03	2.58E-03
Fencing	Employee Commute	Passenger Car	RPV_START	5.84E-04	4.26E-04	1.29E+00	1.46E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPV_START	1.07E-07	1.09E-08	3.94E-05	5.12E-05
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_START	5.75E-08	5.86E-09	2.12E-05	2.76E-05
Fuel Tanks	Employee Commute	Passenger Car	RPV_START	1.44E-03	1.05E-03	3.18E+00	3.59E+00
Landscaping	Material Delivery	Flatbed Truck	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_START	3.38E-06	3.44E-07	1.25E-03	1.62E-03
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPV_START	6.18E-05	4.50E-05	1.37E-01	1.54E-01
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPV_START	4.57E-07	3.35E-08	2.33E-04	2.80E-04
Parking Lot	Material Delivery	Cement Mixer	RPV_START	1.93E-06	1.97E-07	7.13E-04	9.26E-04
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_START	1.03E-06	1.05E-07	3.80E-04	4.94E-04
Parking Lot	Employee Commute	Passenger Car	RPV_START	1.75E-03	1.28E-03	3.88E+00	4.37E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Service Road	Material Delivery	Cement Mixer	RPV_START	1.82E-05	1.86E-06	6.73E-03	8.74E-03
Service Road	Material Delivery	Dump Truck Subbase Material	RPV_START	9.73E-06	9.91E-07	3.59E-03	4.66E-03
Service Road	Employee Commute	Passenger Car	RPV_START	1.68E-03	1.23E-03	3.73E+00	4.21E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_START	2.89E-05	2.95E-06	1.07E-02	1.39E-02
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_START	6.75E-03	4.92E-03	1.50E+01	1.69E+01
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_START	2.61E-05	1.91E-06	1.33E-02	1.60E-02
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Fencing	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
General Use	Fugitive Dust Control	Water Truck	RPD	1.11E-03	2.12E-04	6.79E+01	6.81E+01
General Use	Fugitive Dust Control	Water Truck	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPV_START	6.40E-04	6.52E-05	2.36E-01	3.07E-01

Table B12. 2024 Electric CUP, construction-phase on-road vehicle criteria air pollutant emissions.

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD	1.28E-02	8.62E-03	6.32E-04	2.30E-05	2.69E-04	2.48E-04
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD	6.80E-03	4.60E-03	3.37E-04	1.22E-05	1.44E-04	1.32E-04
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD	9.62E-02	3.41E+00	3.06E-02	2.77E-03	2.55E-03	2.26E-03
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD	2.81E-03	1.54E-03	8.99E-05	3.84E-06	5.09E-05	4.68E-05
Drainage System	Employee Commute	Passenger Car	RPD	8.97E-03	3.18E-01	2.85E-03	2.58E-04	2.38E-04	2.10E-04
Fencing	Material Delivery	Cement Mixer	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Landscaping	Material Delivery	Flatbed Truck	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPD	1.46E-02	5.19E-01	4.65E-03	4.20E-04	3.88E-04	3.43E-04
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	1.86E-02	1.26E-02	9.22E-04	3.35E-05	3.93E-04	3.61E-04
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD	1.58E-01	5.62E+00	5.03E-02	4.56E-03	4.20E-03	3.72E-03
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD	2.57E-02	1.41E-02	8.20E-04	3.51E-05	4.64E-04	4.27E-04
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E-03	1.48E-04
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.17E-04	7.88E-05
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.28E-02	8.19E-03
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-04	1.95E-05

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Drainage System	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.86E-03	7.64E-04
Fencing	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.55E-03	1.24E-03
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-03	2.16E-04
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E-01	1.35E-02

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-03	1.78E-04
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	4.36E-02	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	4.07E-03	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	6.63E-03	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	7.18E-02	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPV_START	1.02E-04	5.79E-05	2.82E-05	2.02E-08	1.91E-07	1.75E-07
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPV_START	5.44E-05	3.09E-05	1.50E-05	1.08E-08	1.02E-07	9.35E-08
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPV_START	1.76E-02	3.61E-01	2.61E-02	4.97E-05	9.35E-04	8.27E-04
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPV_START	2.07E-05	2.78E-05	4.23E-06	4.03E-09	5.32E-08	4.89E-08
Drainage System	Employee Commute	Passenger Car	RPV_START	1.64E-03	3.36E-02	2.44E-03	4.63E-06	8.72E-05	7.71E-05
Fencing	Material Delivery	Cement Mixer	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPV_START	2.68E-03	5.48E-02	3.97E-03	7.55E-06	1.42E-04	1.26E-04

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_START	1.49E-04	8.45E-05	4.11E-05	2.95E-08	2.78E-07	2.56E-07
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_START	2.90E-02	5.94E-01	4.31E-02	8.18E-05	1.54E-03	1.36E-03
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_START	1.89E-04	2.53E-04	3.86E-05	3.68E-08	4.85E-07	4.46E-07
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	4.40E-06	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	4.10E-07	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Fencing	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	1.11E-05	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	8.06E-06	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	7.52E-07	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	2.03E-05	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPD	1.03E-01	6.95E-02	5.10E-03	1.85E-04	2.17E-03	2.00E-03
General Use	Fugitive Dust Control	Water Truck	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.33E-03	1.19E-03
General Use	Fugitive Dust Control	Water Truck	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPV_START	3.29E-03	1.87E-03	9.09E-04	6.52E-07	6.15E-06	5.66E-06

Table B13. 2024 Electric CUP, construction-phase on-road vehicle greenhouse gas emissions.

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD	1.08E-04	2.17E-05	6.85E+00	6.87E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD	5.77E-05	1.16E-05	3.65E+00	3.66E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD	1.05E-02	2.39E-03	4.16E+02	4.18E+02
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD	1.41E-05	1.92E-06	1.15E+00	1.15E+00
Drainage System	Employee Commute	Passenger Car	RPD	9.78E-04	2.23E-04	3.88E+01	3.90E+01

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Fencing	Material Delivery	Cement Mixer	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPD	1.59E-03	3.63E-04	6.33E+01	6.35E+01
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPD	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	1.58E-04	3.17E-05	1.00E+01	1.00E+01
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD	1.73E-02	3.94E-03	6.86E+02	6.88E+02
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD	1.29E-04	1.75E-05	1.05E+01	1.05E+01

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Service Road	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPV_START	1.65E-05	1.67E-06	6.03E-03	7.86E-03
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPV_START	8.82E-06	8.93E-07	3.22E-03	4.19E-03
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPV_START	3.20E-03	2.38E-03	7.48E+00	8.39E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPV_START	2.39E-06	1.74E-07	1.21E-03	1.45E-03
Drainage System	Employee Commute	Passenger Car	RPV_START	2.98E-04	2.22E-04	6.98E-01	7.83E-01
Fencing	Material Delivery	Cement Mixer	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPV_START	4.86E-04	3.62E-04	1.14E+00	1.28E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPV_START	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_START	2.41E-05	2.44E-06	8.80E-03	1.15E-02
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_START	5.27E-03	3.92E-03	1.23E+01	1.38E+01
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_START	2.18E-05	1.58E-06	1.10E-02	1.32E-02
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Service Road	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Delivery	Tractor Trailer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Delivery	Flatbed Truck	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Parking Lot	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPD	8.73E-04	1.75E-04	5.53E+01	5.54E+01
General Use	Fugitive Dust Control	Water Truck	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPV_START	5.34E-04	5.40E-05	1.95E-01	2.54E-01

Table B14. Pump house and boiler house construction-phase on-road vehicle activity.

Project Type	Construction Activity	Vehicle	MOVES Source Type	Fuel	Emission Process	Activity Surrogate	Total Activity	Activity - 2022	Activity – 2023
Building – 10000 sqft-1 story	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPD	Miles	14930	5236	9695
Building – 10000 sqft-1 story	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD	Miles	7959	2791	5168
Building – 10000 sqft-1 story	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD	Miles	411766	144400	267366
Building – 10000 sqft-1 story	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	RPD	Miles	1033	362	671
Drainage System	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD	Miles	44934	15758	29176
Fencing	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPD	Miles	8813	3091	5722
Fencing	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD	Miles	43270	15174	28096
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	Combination Short-haul Truck	Diesel	RPD	Miles	10	3	6
Fuel Tanks	Material Delivery	Dump Truck – Asphalt	Single Unit Short-haul Truck	Diesel	RPD	Miles	19	7	12
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD	Miles	114	40	74
Fuel Tanks	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD	Miles	104846	36768	68078
Parking Lot	Material Delivery	Asphalt 18 Wheeler	Combination Short-haul Truck	Diesel	RPD	Miles	105	37	68
Parking Lot	Material Delivery	Dump Truck – Asphalt	Single Unit Short-haul Truck	Diesel	RPD	Miles	143	50	93
Parking Lot	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD	Miles	867	304	563
Parking Lot	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD	Miles	128145	44938	83206
Site Work – 10000 sqft	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPD	Miles	22037	7728	14309
Site Work – 10000 sqft	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD	Miles	11748	4120	7628
Site Work – 10000 sqft	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD	Miles	86040	30173	55867
Site Work – 10000 sqft	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	RPD	Miles	7622	2673	4949

Project Type	Construction Activity	Vehicle	MOVES Source Type	Fuel	Emission Process	Activity Surrogate	Total Activity	Activity - 2022	Activity – 2023
Building – 10000 sqft-1 story	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPD_WEAR	Miles	14930	5236	9695
Building – 10000 sqft-1 story	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD_WEAR	Miles	7959	2791	5168
Building – 10000 sqft-1 story	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_WEAR	Miles	411766	144400	267366
Building – 10000 sqft-1 story	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	RPD_WEAR	Miles	1033	362	671
Drainage System	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_WEAR	Miles	44934	15758	29176
Fencing	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPD_WEAR	Miles	8813	3091	5722
Fencing	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_WEAR	Miles	43270	15174	28096
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	Combination Short-haul Truck	Diesel	RPD_WEAR	Miles	10	3	6
Fuel Tanks	Material Delivery	Dump Truck – Asphalt	Single Unit Short-haul Truck	Diesel	RPD_WEAR	Miles	19	7	12
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD_WEAR	Miles	114	40	74
Fuel Tanks	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_WEAR	Miles	104846	36768	68078
Parking Lot	Material Delivery	Asphalt 18 Wheeler	Combination Short-haul Truck	Diesel	RPD_WEAR	Miles	105	37	68
Parking Lot	Material Delivery	Dump Truck – Asphalt	Single Unit Short-haul Truck	Diesel	RPD_WEAR	Miles	143	50	93
Parking Lot	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD_WEAR	Miles	867	304	563
Parking Lot	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_WEAR	Miles	128145	44938	83206
Site Work – 10000 sqft	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPD_WEAR	Miles	22037	7728	14309
Site Work – 10000 sqft	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD_WEAR	Miles	11748	4120	7628
Site Work – 10000 sqft	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_WEAR	Miles	86040	30173	55867
Site Work – 10000 sqft	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	RPD_WEAR	Miles	7622	2673	4949

Project Type	Construction Activity	Vehicle	MOVES Source Type	Fuel	Emission Process	Activity Surrogate	Total Activity	Activity - 2022	Activity – 2023
Building – 10000 sqft-1 story	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPD_EVAP	Miles	14930	5236	9695
Building – 10000 sqft-1 story	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD_EVAP	Miles	7959	2791	5168
Building – 10000 sqft-1 story	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_EVAP	Miles	411766	144400	267366
Building – 10000 sqft-1 story	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	RPD_EVAP	Miles	1033	362	671
Drainage System	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_EVAP	Miles	44934	15758	29176
Fencing	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPD_EVAP	Miles	8813	3091	5722
Fencing	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_EVAP	Miles	43270	15174	28096
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	Combination Short-haul Truck	Diesel	RPD_EVAP	Miles	10	3	6
Fuel Tanks	Material Delivery	Dump Truck – Asphalt	Single Unit Short-haul Truck	Diesel	RPD_EVAP	Miles	19	7	12
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD_EVAP	Miles	114	40	74
Fuel Tanks	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_EVAP	Miles	104846	36768	68078
Parking Lot	Material Delivery	Asphalt 18 Wheeler	Combination Short-haul Truck	Diesel	RPD_EVAP	Miles	105	37	68
Parking Lot	Material Delivery	Dump Truck – Asphalt	Single Unit Short-haul Truck	Diesel	RPD_EVAP	Miles	143	50	93
Parking Lot	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD_EVAP	Miles	867	304	563
Parking Lot	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_EVAP	Miles	128145	44938	83206
Site Work – 10000 sqft	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPD_EVAP	Miles	22037	7728	14309
Site Work – 10000 sqft	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPD_EVAP	Miles	11748	4120	7628
Site Work – 10000 sqft	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPD_EVAP	Miles	86040	30173	55867
Site Work – 10000 sqft	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	RPD_EVAP	Miles	7622	2673	4949

Project Type	Construction Activity	Vehicle	MOVES Source Type	Fuel	Emission Process	Activity Surrogate	Total Activity	Activity - 2022	Activity – 2023
Building – 10000 sqft-1 story	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPV_START	One-Way Trips	6237	2187	4050
Building – 10000 sqft-1 story	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPV_START	One-Way Trips	3325	1166	2159
Building – 10000 sqft-1 story	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_START	One-Way Trips	1458	511	947
Building – 10000 sqft-1 story	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	RPV_START	One-Way Trips	431	151	280
Drainage System	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_START	One-Way Trips	159	56	103
Fencing	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPV_START	One-Way Trips	3682	1291	2391
Fencing	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_START	One-Way Trips	153	54	99
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	Combination Short-haul Truck	Diesel	RPV_START	One-Way Trips	4	1	3
Fuel Tanks	Material Delivery	Dump Truck – Asphalt	Single Unit Short-haul Truck	Diesel	RPV_START	One-Way Trips	8	3	5
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPV_START	One-Way Trips	48	17	31
Fuel Tanks	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_START	One-Way Trips	371	130	241
Parking Lot	Material Delivery	Asphalt 18 Wheeler	Combination Short-haul Truck	Diesel	RPV_START	One-Way Trips	44	15	28
Parking Lot	Material Delivery	Dump Truck – Asphalt	Single Unit Short-haul Truck	Diesel	RPV_START	One-Way Trips	60	21	39
Parking Lot	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPV_START	One-Way Trips	362	127	235
Parking Lot	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_START	One-Way Trips	454	159	295
Site Work – 10000 sqft	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPV_START	One-Way Trips	9207	3229	5978
Site Work – 10000 sqft	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPV_START	One-Way Trips	4908	1721	3187
Site Work – 10000 sqft	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_START	One-Way Trips	305	107	198

Project Type	Construction Activity	Vehicle	MOVES Source Type	Fuel	Emission Process	Activity Surrogate	Total Activity	Activity - 2022	Activity – 2023
Site Work – 10000 sqft	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	RPV_START	One-Way Trips	3184	1117	2068
Building – 10000 sqft-1 story	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	DIURNAL	Vehicle-days	365	128	237
Building – 10000 sqft-1 story	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	DIURNAL	Vehicle-days	365	128	237
Building – 10000 sqft-1 story	Employee Commute	Passenger Car	Passenger Car	Gasoline	DIURNAL	Vehicle-days	133298	46746	86552
Building – 10000 sqft-1 story	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	DIURNAL	Vehicle-days	365	128	237
Drainage System	Employee Commute	Passenger Car	Passenger Car	Gasoline	DIURNAL	Vehicle-days	9855	3456	6399
Fencing	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	DIURNAL	Vehicle-days	365	128	237
Fencing	Employee Commute	Passenger Car	Passenger Car	Gasoline	DIURNAL	Vehicle-days	9490	3328	6162
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	Combination Short-haul Truck	Diesel	DIURNAL	Vehicle-days	365	128	237
Fuel Tanks	Material Delivery	Dump Truck – Asphalt	Single Unit Short-haul Truck	Diesel	DIURNAL	Vehicle-days	365	128	237
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	DIURNAL	Vehicle-days	365	128	237
Fuel Tanks	Employee Commute	Passenger Car	Passenger Car	Gasoline	DIURNAL	Vehicle-days	22995	8064	14931
Parking Lot	Material Delivery	Asphalt 18 Wheeler	Combination Short-haul Truck	Diesel	DIURNAL	Vehicle-days	365	128	237
Parking Lot	Material Delivery	Dump Truck – Asphalt	Single Unit Short-haul Truck	Diesel	DIURNAL	Vehicle-days	365	128	237
Parking Lot	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	DIURNAL	Vehicle-days	365	128	237
Parking Lot	Employee Commute	Passenger Car	Passenger Car	Gasoline	DIURNAL	Vehicle-days	28105	9856	18249
Site Work – 10000 sqft	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	DIURNAL	Vehicle-days	365	128	237

Project Type	Construction Activity	Vehicle	MOVES Source Type	Fuel	Emission Process	Activity Surrogate	Total Activity	Activity - 2022	Activity – 2023
Site Work – 10000 sqft	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	DIURNAL	Vehicle-days	365	128	237
Site Work – 10000 sqft	Employee Commute	Passenger Car	Passenger Car	Gasoline	DIURNAL	Vehicle-days	18871	6618	12253
Site Work – 10000 sqft	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	DIURNAL	Vehicle-days	365	128	237
Building – 10000 sqft-1 story	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	365	128	237
Building – 10000 sqft-1 story	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	365	128	237
Building – 10000 sqft-1 story	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_EVAP	Vehicle-days	133298	46746	86552
Building – 10000 sqft-1 story	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	365	128	237
Drainage System	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_EVAP	Vehicle-days	9855	3456	6399
Fencing	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	365	128	237
Fencing	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_EVAP	Vehicle-days	9490	3328	6162
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	Combination Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	365	128	237
Fuel Tanks	Material Delivery	Dump Truck – Asphalt	Single Unit Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	365	128	237
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	365	128	237
Fuel Tanks	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_EVAP	Vehicle-days	22995	8064	14931
Parking Lot	Material Delivery	Asphalt 18 Wheeler	Combination Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	365	128	237
Parking Lot	Material Delivery	Dump Truck – Asphalt	Single Unit Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	365	128	237
Parking Lot	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	365	128	237
Parking Lot	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_EVAP	Vehicle-days	28105	9856	18249
Site Work – 10000 sqft	Material Delivery	Cement Mixer	Single Unit Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	365	128	237

Project Type	Construction Activity	Vehicle	MOVES Source Type	Fuel	Emission Process	Activity Surrogate	Total Activity	Activity - 2022	Activity – 2023
Site Work – 10000 sqft	Material Delivery	Dump Truck Subbase Material	Single Unit Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	365	128	237
Site Work – 10000 sqft	Employee Commute	Passenger Car	Passenger Car	Gasoline	RPV_EVAP	Vehicle-days	18871	6618	12253
Site Work – 10000 sqft	Material Delivery	Tractor Trailer	Combination Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	365	128	237
Fugitive Dust Control	Fugitive Dust Control	Water Truck	Single Unit Short-haul Truck	Diesel	DIURNAL	Vehicle-days	5840	2048	3792
Fugitive Dust Control	Fugitive Dust Control	Water Truck	Single Unit Short-haul Truck	Diesel	RPD	Miles	29200	10240	18960
Fugitive Dust Control	Fugitive Dust Control	Water Truck	Single Unit Short-haul Truck	Diesel	RPD_EVAP	Miles	29200	10240	18960
Fugitive Dust Control	Fugitive Dust Control	Water Truck	Single Unit Short-haul Truck	Diesel	RPD_WEAR	Miles	29200	10240	18960
Fugitive Dust Control	Fugitive Dust Control	Water Truck	Single Unit Short-haul Truck	Diesel	RPV_EVAP	Vehicle-days	5840	2048	3792
Fugitive Dust Control	Fugitive Dust Control	Water Truck	Single Unit Short-haul Truck	Diesel	RPV_START	One-Way Trips	5840	2048	3792

Table B15. 2022 Pump house and boiler house, construction-phase on-road vehicle criteria air pollutant emission factors.

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPD	g/mi	2.20E+00	1.38E+00	1.31E-01	3.60E-03	5.69E-02	5.23E-02
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	2.20E+00	1.38E+00	1.31E-01	3.60E-03	5.69E-02	5.23E-02
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPD	g/mi	1.06E-01	2.87E+00	3.21E-02	2.25E-03	2.18E-03	1.93E-03
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPD	g/mi	4.53E+00	2.34E+00	1.58E-01	5.81E-03	9.44E-02	8.68E-02
Drainage System	Employee Commute	Passenger Car	RPD	g/mi	1.06E-01	2.87E+00	3.21E-02	2.25E-03	2.18E-03	1.93E-03
Fencing	Material Delivery	Cement Mixer	RPD	g/mi	2.20E+00	1.38E+00	1.31E-01	3.60E-03	5.69E-02	5.23E-02
Fencing	Employee Commute	Passenger Car	RPD	g/mi	1.06E-01	2.87E+00	3.21E-02	2.25E-03	2.18E-03	1.93E-03

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPD	g/mi	4.53E+00	2.34E+00	1.58E-01	5.81E-03	9.44E-02	8.68E-02
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPD	g/mi	2.20E+00	1.38E+00	1.31E-01	3.60E-03	5.69E-02	5.23E-02
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	2.20E+00	1.38E+00	1.31E-01	3.60E-03	5.69E-02	5.23E-02
Fuel Tanks	Employee Commute	Passenger Car	RPD	g/mi	1.06E-01	2.87E+00	3.21E-02	2.25E-03	2.18E-03	1.93E-03
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPD	g/mi	4.53E+00	2.34E+00	1.58E-01	5.81E-03	9.44E-02	8.68E-02
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPD	g/mi	2.20E+00	1.38E+00	1.31E-01	3.60E-03	5.69E-02	5.23E-02
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	2.20E+00	1.38E+00	1.31E-01	3.60E-03	5.69E-02	5.23E-02
Parking Lot	Employee Commute	Passenger Car	RPD	g/mi	1.06E-01	2.87E+00	3.21E-02	2.25E-03	2.18E-03	1.93E-03
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPD	g/mi	2.20E+00	1.38E+00	1.31E-01	3.60E-03	5.69E-02	5.23E-02
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	2.20E+00	1.38E+00	1.31E-01	3.60E-03	5.69E-02	5.23E-02
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD	g/mi	1.06E-01	2.87E+00	3.21E-02	2.25E-03	2.18E-03	1.93E-03
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD	g/mi	4.53E+00	2.34E+00	1.58E-01	5.81E-03	9.44E-02	8.68E-02
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-01	2.21E-02
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-01	2.21E-02
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E-01	2.82E-02
Drainage System	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Fencing	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-01	2.21E-02
Fencing	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E-01	2.82E-02
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-01	2.21E-02
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-01	2.21E-02
Fuel Tanks	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E-01	2.82E-02
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-01	2.21E-02
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-01	2.21E-02
Parking Lot	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-01	2.21E-02
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-01	2.21E-02
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E-01	2.82E-02
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.57E-02	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.57E-02	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.57E-02	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.57E-02	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.57E-02	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.57E-02	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	3.11E-01	2.01E-01	8.70E-02	6.19E-05	6.46E-04	5.94E-04
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	3.11E-01	2.01E-01	8.70E-02	6.19E-05	6.46E-04	5.94E-04
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.31E-01	4.62E+00	3.38E-01	5.86E-04	1.04E-02	9.24E-03
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPV_START	g/one-way trip	5.77E-01	8.87E-01	1.25E-01	1.18E-04	1.67E-03	1.53E-03
Drainage System	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.31E-01	4.62E+00	3.38E-01	5.86E-04	1.04E-02	9.24E-03
Fencing	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	3.11E-01	2.01E-01	8.70E-02	6.19E-05	6.46E-04	5.94E-04
Fencing	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.31E-01	4.62E+00	3.38E-01	5.86E-04	1.04E-02	9.24E-03
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPV_START	g/one-way trip	5.77E-01	8.87E-01	1.25E-01	1.18E-04	1.67E-03	1.53E-03

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPV_START	g/one-way trip	3.11E-01	2.01E-01	8.70E-02	6.19E-05	6.46E-04	5.94E-04
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	3.11E-01	2.01E-01	8.70E-02	6.19E-05	6.46E-04	5.94E-04
Fuel Tanks	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.31E-01	4.62E+00	3.38E-01	5.86E-04	1.04E-02	9.24E-03
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPV_START	g/one-way trip	5.77E-01	8.87E-01	1.25E-01	1.18E-04	1.67E-03	1.53E-03
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPV_START	g/one-way trip	3.11E-01	2.01E-01	8.70E-02	6.19E-05	6.46E-04	5.94E-04
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	3.11E-01	2.01E-01	8.70E-02	6.19E-05	6.46E-04	5.94E-04
Parking Lot	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.31E-01	4.62E+00	3.38E-01	5.86E-04	1.04E-02	9.24E-03
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	3.11E-01	2.01E-01	8.70E-02	6.19E-05	6.46E-04	5.94E-04
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	3.11E-01	2.01E-01	8.70E-02	6.19E-05	6.46E-04	5.94E-04
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.31E-01	4.62E+00	3.38E-01	5.86E-04	1.04E-02	9.24E-03
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_START	g/one-way trip	5.77E-01	8.87E-01	1.25E-01	1.18E-04	1.67E-03	1.53E-03
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	1.04E-04	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	1.04E-04	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	1.04E-04	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	1.04E-04	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Asphalt 18 Wheeler	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck - Asphalt	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	1.04E-04	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	1.04E-04	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.84E-04	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.84E-04	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Fencing	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.84E-04	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.84E-04	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.84E-04	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.84E-04	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPD	g/mi	2.20E+00	1.38E+00	1.31E-01	3.60E-03	5.69E-02	5.23E-02
General Use	Fugitive Dust Control	Water Truck	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-01	2.21E-02
General Use	Fugitive Dust Control	Water Truck	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPV_START	g/one-way trip	3.11E-01	2.01E-01	8.70E-02	6.19E-05	6.46E-04	5.94E-04

Table B16. 2022 Pump house and boiler house, construction-phase on-road vehicle greenhouse gas emission factors

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPD	g/mi	1.86E-02	3.29E-03	1.07E+03	1.08E+03
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	1.86E-02	3.29E-03	1.07E+03	1.08E+03
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPD	g/mi	9.78E-03	2.03E-03	3.39E+02	3.41E+02
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPD	g/mi	2.37E-02	2.80E-03	1.74E+03	1.74E+03
Drainage System	Employee Commute	Passenger Car	RPD	g/mi	9.78E-03	2.03E-03	3.39E+02	3.41E+02
Fencing	Material Delivery	Cement Mixer	RPD	g/mi	1.86E-02	3.29E-03	1.07E+03	1.08E+03
Fencing	Employee Commute	Passenger Car	RPD	g/mi	9.78E-03	2.03E-03	3.39E+02	3.41E+02
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPD	g/mi	2.37E-02	2.80E-03	1.74E+03	1.74E+03
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPD	g/mi	1.86E-02	3.29E-03	1.07E+03	1.08E+03
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	1.86E-02	3.29E-03	1.07E+03	1.08E+03
Fuel Tanks	Employee Commute	Passenger Car	RPD	g/mi	9.78E-03	2.03E-03	3.39E+02	3.41E+02
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPD	g/mi	2.37E-02	2.80E-03	1.74E+03	1.74E+03
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPD	g/mi	1.86E-02	3.29E-03	1.07E+03	1.08E+03
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	1.86E-02	3.29E-03	1.07E+03	1.08E+03
Parking Lot	Employee Commute	Passenger Car	RPD	g/mi	9.78E-03	2.03E-03	3.39E+02	3.41E+02
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPD	g/mi	1.86E-02	3.29E-03	1.07E+03	1.08E+03
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	1.86E-02	3.29E-03	1.07E+03	1.08E+03
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD	g/mi	9.78E-03	2.03E-03	3.39E+02	3.41E+02
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD	g/mi	2.37E-02	2.80E-03	1.74E+03	1.74E+03

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	4.94E-02	5.06E-03	1.84E+01	2.39E+01

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPV_STAR T	g/one-way trip	4.94E-02	5.06E-03	1.84E+01	2.39E+01
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPV_STAR T	g/one-way trip	4.18E-02	2.99E-02	8.82E+01	9.99E+01
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPV_STAR T	g/one-way trip	6.89E-02	5.06E-03	3.54E+01	4.24E+01
Drainage System	Employee Commute	Passenger Car	RPV_STAR T	g/one-way trip	4.18E-02	2.99E-02	8.82E+01	9.99E+01
Fencing	Material Delivery	Cement Mixer	RPV_STAR T	g/one-way trip	4.94E-02	5.06E-03	1.84E+01	2.39E+01
Fencing	Employee Commute	Passenger Car	RPV_STAR T	g/one-way trip	4.18E-02	2.99E-02	8.82E+01	9.99E+01
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPV_STAR T	g/one-way trip	6.89E-02	5.06E-03	3.54E+01	4.24E+01
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPV_STAR T	g/one-way trip	4.94E-02	5.06E-03	1.84E+01	2.39E+01
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_STAR T	g/one-way trip	4.94E-02	5.06E-03	1.84E+01	2.39E+01
Fuel Tanks	Employee Commute	Passenger Car	RPV_STAR T	g/one-way trip	4.18E-02	2.99E-02	8.82E+01	9.99E+01
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPV_STAR T	g/one-way trip	6.89E-02	5.06E-03	3.54E+01	4.24E+01
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPV_STAR T	g/one-way trip	4.94E-02	5.06E-03	1.84E+01	2.39E+01
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_STAR T	g/one-way trip	4.94E-02	5.06E-03	1.84E+01	2.39E+01
Parking Lot	Employee Commute	Passenger Car	RPV_STAR T	g/one-way trip	4.18E-02	2.99E-02	8.82E+01	9.99E+01
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPV_STAR T	g/one-way trip	4.94E-02	5.06E-03	1.84E+01	2.39E+01
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_STAR T	g/one-way trip	4.94E-02	5.06E-03	1.84E+01	2.39E+01
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_STAR T	g/one-way trip	4.18E-02	2.99E-02	8.82E+01	9.99E+01
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_STAR T	g/one-way trip	6.89E-02	5.06E-03	3.54E+01	4.24E+01

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Asphalt 18 Wheeler	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck - Asphalt	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Site Work - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPD	g/mi	1.86E-02	3.29E-03	1.07E+03	1.08E+03
General Use	Fugitive Dust Control	Water Truck	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPV_START	g/one-way trip	4.94E-02	5.06E-03	1.84E+01	2.39E+01

Table B17. 2023 Pump house and boiler house, construction-phase on-road vehicle criteria air pollutant emission factors.

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPD	g/mi	9.52E-02	2.76E+00	2.98E-02	2.20E-03	2.11E-03	1.86E-03
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPD	g/mi	4.29E+00	2.29E+00	1.43E-01	5.71E-03	8.34E-02	7.68E-02
Drainage System	Employee Commute	Passenger Car	RPD	g/mi	9.52E-02	2.76E+00	2.98E-02	2.20E-03	2.11E-03	1.86E-03
Fencing	Material Delivery	Cement Mixer	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Fencing	Employee Commute	Passenger Car	RPD	g/mi	9.52E-02	2.76E+00	2.98E-02	2.20E-03	2.11E-03	1.86E-03

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPD	g/mi	4.29E+00	2.29E+00	1.43E-01	5.71E-03	8.34E-02	7.68E-02
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Fuel Tanks	Employee Commute	Passenger Car	RPD	g/mi	9.52E-02	2.76E+00	2.98E-02	2.20E-03	2.11E-03	1.86E-03
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPD	g/mi	4.29E+00	2.29E+00	1.43E-01	5.71E-03	8.34E-02	7.68E-02
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Parking Lot	Employee Commute	Passenger Car	RPD	g/mi	9.52E-02	2.76E+00	2.98E-02	2.20E-03	2.11E-03	1.86E-03
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD	g/mi	9.52E-02	2.76E+00	2.98E-02	2.20E-03	2.11E-03	1.86E-03
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD	g/mi	4.29E+00	2.29E+00	1.43E-01	5.71E-03	8.34E-02	7.68E-02
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E-01	2.83E-02
Drainage System	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Fencing	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Fencing	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E-01	2.83E-02
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Fuel Tanks	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E-01	2.83E-02
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Parking Lot	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.87E-02	6.34E-03
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E-01	2.83E-02
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.48E-02	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.48E-02	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.48E-02	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.48E-02	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.48E-02	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	3.48E-02	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.18E-01	4.41E+00	3.21E-01	5.81E-04	1.07E-02	9.50E-03
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPV_START	g/one-way trip	5.93E-01	8.40E-01	1.24E-01	1.18E-04	1.61E-03	1.48E-03
Drainage System	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.18E-01	4.41E+00	3.21E-01	5.81E-04	1.07E-02	9.50E-03
Fencing	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Fencing	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.18E-01	4.41E+00	3.21E-01	5.81E-04	1.07E-02	9.50E-03
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPV_START	g/one-way trip	5.93E-01	8.40E-01	1.24E-01	1.18E-04	1.61E-03	1.48E-03

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Fuel Tanks	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.18E-01	4.41E+00	3.21E-01	5.81E-04	1.07E-02	9.50E-03
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPV_START	g/one-way trip	5.93E-01	8.40E-01	1.24E-01	1.18E-04	1.61E-03	1.48E-03
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Parking Lot	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.18E-01	4.41E+00	3.21E-01	5.81E-04	1.07E-02	9.50E-03
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_START	g/one-way trip	2.18E-01	4.41E+00	3.21E-01	5.81E-04	1.07E-02	9.50E-03
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_START	g/one-way trip	5.93E-01	8.40E-01	1.24E-01	1.18E-04	1.61E-03	1.48E-03
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	9.97E-05	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	9.97E-05	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	9.97E-05	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	9.97E-05	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Asphalt 18 Wheeler	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck - Asphalt	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	9.97E-05	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	9.97E-05	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors					
					NOx	CO	VOC	SO2	PM10	PM2.5
Fencing	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPD	g/mi	2.05E+00	1.34E+00	1.12E-01	3.54E-03	4.76E-02	4.38E-02
General Use	Fugitive Dust Control	Water Truck	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-01	2.22E-02
General Use	Fugitive Dust Control	Water Truck	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPV_START	g/one-way trip	3.10E-01	1.86E-01	8.60E-02	6.15E-05	6.08E-04	5.60E-04

Table B18. 2023 Pump house and boiler house, construction-phase on-road vehicle greenhouse gas emission factors

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPD	g/mi	1.73E-02	3.29E-03	1.06E+03	1.06E+03
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	1.73E-02	3.29E-03	1.06E+03	1.06E+03
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPD	g/mi	9.28E-03	1.98E-03	3.31E+02	3.32E+02
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPD	g/mi	2.17E-02	2.80E-03	1.71E+03	1.71E+03
Drainage System	Employee Commute	Passenger Car	RPD	g/mi	9.28E-03	1.98E-03	3.31E+02	3.32E+02
Fencing	Material Delivery	Cement Mixer	RPD	g/mi	1.73E-02	3.29E-03	1.06E+03	1.06E+03
Fencing	Employee Commute	Passenger Car	RPD	g/mi	9.28E-03	1.98E-03	3.31E+02	3.32E+02
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPD	g/mi	2.17E-02	2.80E-03	1.71E+03	1.71E+03
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPD	g/mi	1.73E-02	3.29E-03	1.06E+03	1.06E+03
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	1.73E-02	3.29E-03	1.06E+03	1.06E+03
Fuel Tanks	Employee Commute	Passenger Car	RPD	g/mi	9.28E-03	1.98E-03	3.31E+02	3.32E+02
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPD	g/mi	2.17E-02	2.80E-03	1.71E+03	1.71E+03
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPD	g/mi	1.73E-02	3.29E-03	1.06E+03	1.06E+03
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	1.73E-02	3.29E-03	1.06E+03	1.06E+03
Parking Lot	Employee Commute	Passenger Car	RPD	g/mi	9.28E-03	1.98E-03	3.31E+02	3.32E+02
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPD	g/mi	1.73E-02	3.29E-03	1.06E+03	1.06E+03
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	g/mi	1.73E-02	3.29E-03	1.06E+03	1.06E+03
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD	g/mi	9.28E-03	1.98E-03	3.31E+02	3.32E+02
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD	g/mi	2.17E-02	2.80E-03	1.71E+03	1.71E+03

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPV_START	g/one-way trip	4.97E-02	5.06E-03	1.83E+01	2.38E+01

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPV_STAR T	g/one-way trip	4.97E-02	5.06E-03	1.83E+01	2.38E+01
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPV_STAR T	g/one-way trip	3.95E-02	2.88E-02	8.75E+01	9.86E+01
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPV_STAR T	g/one-way trip	6.91E-02	5.06E-03	3.52E+01	4.23E+01
Drainage System	Employee Commute	Passenger Car	RPV_STAR T	g/one-way trip	3.95E-02	2.88E-02	8.75E+01	9.86E+01
Fencing	Material Delivery	Cement Mixer	RPV_STAR T	g/one-way trip	4.97E-02	5.06E-03	1.83E+01	2.38E+01
Fencing	Employee Commute	Passenger Car	RPV_STAR T	g/one-way trip	3.95E-02	2.88E-02	8.75E+01	9.86E+01
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPV_STAR T	g/one-way trip	6.91E-02	5.06E-03	3.52E+01	4.23E+01
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPV_STAR T	g/one-way trip	4.97E-02	5.06E-03	1.83E+01	2.38E+01
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_STAR T	g/one-way trip	4.97E-02	5.06E-03	1.83E+01	2.38E+01
Fuel Tanks	Employee Commute	Passenger Car	RPV_STAR T	g/one-way trip	3.95E-02	2.88E-02	8.75E+01	9.86E+01
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPV_STAR T	g/one-way trip	6.91E-02	5.06E-03	3.52E+01	4.23E+01
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPV_STAR T	g/one-way trip	4.97E-02	5.06E-03	1.83E+01	2.38E+01
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_STAR T	g/one-way trip	4.97E-02	5.06E-03	1.83E+01	2.38E+01
Parking Lot	Employee Commute	Passenger Car	RPV_STAR T	g/one-way trip	3.95E-02	2.88E-02	8.75E+01	9.86E+01
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPV_STAR T	g/one-way trip	4.97E-02	5.06E-03	1.83E+01	2.38E+01
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_STAR T	g/one-way trip	4.97E-02	5.06E-03	1.83E+01	2.38E+01
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_STAR T	g/one-way trip	3.95E-02	2.88E-02	8.75E+01	9.86E+01
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_STAR T	g/one-way trip	6.91E-02	5.06E-03	3.52E+01	4.23E+01

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Asphalt 18 Wheeler	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck - Asphalt	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Cement Mixer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Site Work - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emission Factor Units	Emission Factors			
					CH4	N2O	CO2	CO2e
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	DIURNAL	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPD	g/mi	1.73E-02	3.29E-03	1.06E+03	1.06E+03
General Use	Fugitive Dust Control	Water Truck	RPD_EVAP	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPD_WEAR	g/mi	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPV_EVAP	g/vehicle-day	0.00E+00	0.00E+00	0.00E+00	0.00E+00
General Use	Fugitive Dust Control	Water Truck	RPV_START	g/one-way trip	4.97E-02	5.06E-03	1.83E+01	2.38E+01

Table B19. 2022 Pump house and boiler house, construction-phase on-road vehicle criteria air pollutant emissions.

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPD	1.27E-02	7.99E-03	7.57E-04	2.08E-05	3.28E-04	3.02E-04
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPD	6.76E-03	4.26E-03	4.03E-04	1.11E-05	1.75E-04	1.61E-04
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPD	1.68E-02	4.57E-01	5.11E-03	3.59E-04	3.47E-04	3.07E-04
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPD	1.81E-03	9.33E-04	6.33E-05	2.32E-06	3.77E-05	3.47E-05
Drainage System	Employee Commute	Passenger Car	RPD	1.84E-03	4.99E-02	5.58E-04	3.91E-05	3.79E-05	3.35E-05
Fencing	Material Delivery	Cement Mixer	RPD	7.48E-03	4.71E-03	4.47E-04	1.23E-05	1.94E-04	1.78E-04

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Fencing	Employee Commute	Passenger Car	RPD	1.77E-03	4.81E-02	5.37E-04	3.77E-05	3.65E-05	3.23E-05
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPD	1.67E-05	8.61E-06	5.84E-07	2.14E-08	3.48E-07	3.20E-07
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPD	1.62E-05	1.02E-05	9.66E-07	2.65E-08	4.19E-07	3.85E-07
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD	9.71E-05	6.12E-05	5.79E-06	1.59E-07	2.51E-06	2.31E-06
Fuel Tanks	Employee Commute	Passenger Car	RPD	4.29E-03	1.16E-01	1.30E-03	9.13E-05	8.84E-05	7.82E-05
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPD	1.83E-04	9.47E-05	6.42E-06	2.36E-07	3.82E-06	3.52E-06
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPD	1.21E-04	7.64E-05	7.24E-06	1.99E-07	3.14E-06	2.89E-06
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD	7.36E-04	4.64E-04	4.39E-05	1.21E-06	1.91E-05	1.75E-05
Parking Lot	Employee Commute	Passenger Car	RPD	5.24E-03	1.42E-01	1.59E-03	1.12E-04	1.08E-04	9.56E-05
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPD	1.87E-02	1.18E-02	1.12E-03	3.07E-05	4.84E-04	4.46E-04
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	9.97E-03	6.28E-03	5.95E-04	1.64E-05	2.58E-04	2.38E-04
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD	3.52E-03	9.56E-02	1.07E-03	7.49E-05	7.26E-05	6.42E-05
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD	1.33E-02	6.89E-03	4.67E-04	1.71E-05	2.78E-04	2.56E-04
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.99E-04	1.28E-04
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.32E-04	6.81E-05
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.75E-03	1.01E-03
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.77E-05	1.13E-05
Drainage System	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.45E-04	1.10E-04
Fencing	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.90E-04	7.54E-05

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Fencing	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.14E-04	1.06E-04
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.09E-07	1.04E-07
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-06	1.63E-07
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.65E-06	9.78E-07
Fuel Tanks	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.97E-03	2.57E-04
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.90E-06	1.14E-06
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.56E-06	1.22E-06
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.80E-05	7.42E-06
Parking Lot	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.41E-03	3.14E-04
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-03	1.88E-04
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.86E-04	1.00E-04
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-03	2.11E-04
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.47E-04	8.32E-05
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	5.68E-03	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	6.20E-04	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	5.97E-04	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	1.45E-03	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	1.77E-03	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	1.19E-03	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPV_START	7.51E-04	4.86E-04	2.10E-04	1.49E-07	1.56E-06	1.43E-06
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPV_START	4.00E-04	2.59E-04	1.12E-04	7.96E-08	8.30E-07	7.63E-07
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPV_START	1.30E-04	2.60E-03	1.90E-04	3.30E-07	5.88E-06	5.21E-06
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPV_START	9.62E-05	1.48E-04	2.08E-05	1.98E-08	2.78E-07	2.56E-07
Drainage System	Employee Commute	Passenger Car	RPV_START	1.42E-05	2.84E-04	2.08E-05	3.61E-08	6.42E-07	5.68E-07
Fencing	Material Delivery	Cement Mixer	RPV_START	4.43E-04	2.87E-04	1.24E-04	8.81E-08	9.19E-07	8.45E-07
Fencing	Employee Commute	Passenger Car	RPV_START	1.37E-05	2.73E-04	2.00E-05	3.47E-08	6.18E-07	5.47E-07

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPV_START	8.88E-07	1.37E-06	1.92E-07	1.82E-10	2.56E-09	2.36E-09
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPV_START	9.58E-07	6.20E-07	2.68E-07	1.90E-10	1.99E-09	1.83E-09
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_START	5.75E-06	3.72E-06	1.61E-06	1.14E-09	1.19E-08	1.10E-08
Fuel Tanks	Employee Commute	Passenger Car	RPV_START	3.32E-05	6.63E-04	4.85E-05	8.41E-08	1.50E-06	1.33E-06
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPV_START	9.77E-06	1.50E-05	2.11E-06	2.00E-09	2.82E-08	2.59E-08
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPV_START	7.19E-06	4.65E-06	2.01E-06	1.43E-09	1.49E-08	1.37E-08
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_START	4.36E-05	2.82E-05	1.22E-05	8.67E-09	9.04E-08	8.32E-08
Parking Lot	Employee Commute	Passenger Car	RPV_START	4.06E-05	8.10E-04	5.92E-05	1.03E-07	1.83E-06	1.62E-06
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPV_START	1.11E-03	7.17E-04	3.10E-04	2.20E-07	2.30E-06	2.11E-06
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_START	5.91E-04	3.82E-04	1.65E-04	1.17E-07	1.22E-06	1.13E-06
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_START	2.72E-05	5.44E-04	3.98E-05	6.90E-08	1.23E-06	1.09E-06
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_START	7.10E-04	1.09E-03	1.54E-04	1.46E-07	2.05E-06	1.89E-06
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	5.37E-06	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	3.97E-07	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Fencing	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	3.82E-07	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	9.26E-07	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Asphalt 18 Wheeler	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck - Asphalt	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	1.13E-06	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	7.60E-07	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	9.47E-06	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Drainage System	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	7.00E-07	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	6.74E-07	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	1.63E-06	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	2.00E-06	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	1.34E-06	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fugitive Dust Control	Fugitive Dust Control	Water Truck	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fugitive Dust Control	Fugitive Dust Control	Water Truck	RPD	2.48E-02	1.56E-02	1.48E-03	4.07E-05	6.42E-04	5.91E-04
Fugitive Dust Control	Fugitive Dust Control	Water Truck	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fugitive Dust Control	Fugitive Dust Control	Water Truck	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-03	2.50E-04
Fugitive Dust Control	Fugitive Dust Control	Water Truck	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Fugitive Dust Control	Fugitive Dust Control	Water Truck	RPV_START	7.03E-04	4.55E-04	1.96E-04	1.40E-07	1.46E-06	1.34E-06

Table B20. 2022 Pump house and boiler house, construction-phase on-road vehicle greenhouse gas emissions.

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPD	1.08E-04	1.90E-05	6.19E+00	6.21E+00
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPD	5.74E-05	1.01E-05	3.30E+00	3.31E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPD	1.56E-03	3.22E-04	5.40E+01	5.42E+01
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPD	9.45E-06	1.12E-06	6.93E-01	6.94E-01
Drainage System	Employee Commute	Passenger Car	RPD	1.70E-04	3.52E-05	5.89E+00	5.91E+00
Fencing	Material Delivery	Cement Mixer	RPD	6.35E-05	1.12E-05	3.65E+00	3.66E+00
Fencing	Employee Commute	Passenger Car	RPD	1.64E-04	3.39E-05	5.67E+00	5.70E+00
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPD	8.71E-08	1.03E-08	6.39E-03	6.40E-03
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPD	1.37E-07	2.42E-08	7.90E-03	7.92E-03
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD	8.24E-07	1.45E-07	4.74E-02	4.75E-02
Fuel Tanks	Employee Commute	Passenger Car	RPD	3.96E-04	8.21E-05	1.37E+01	1.38E+01
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPD	9.59E-07	1.14E-07	7.03E-02	7.04E-02
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPD	1.03E-06	1.82E-07	5.93E-02	5.94E-02
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD	6.25E-06	1.10E-06	3.60E-01	3.60E-01
Parking Lot	Employee Commute	Passenger Car	RPD	4.84E-04	1.00E-04	1.68E+01	1.69E+01

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPD	1.59E-04	2.80E-05	9.14E+00	9.16E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	8.47E-05	1.49E-05	4.87E+00	4.88E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD	3.25E-04	6.74E-05	1.13E+01	1.13E+01
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD	6.97E-05	8.26E-06	5.11E+00	5.12E+00
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPV_START	1.19E-04	1.22E-05	4.45E-02	5.76E-02
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPV_START	6.35E-05	6.50E-06	2.37E-02	3.07E-02
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPV_START	2.36E-05	1.69E-05	4.97E-02	5.63E-02
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPV_START	1.15E-05	8.44E-07	5.90E-03	7.08E-03
Drainage System	Employee Commute	Passenger Car	RPV_START	2.57E-06	1.84E-06	5.43E-03	6.14E-03
Fencing	Material Delivery	Cement Mixer	RPV_START	7.03E-05	7.20E-06	2.63E-02	3.40E-02
Fencing	Employee Commute	Passenger Car	RPV_START	2.48E-06	1.77E-06	5.23E-03	5.91E-03
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPV_START	1.06E-07	7.79E-09	5.44E-05	6.53E-05
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPV_START	1.52E-07	1.56E-08	5.68E-05	7.36E-05
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_START	9.13E-07	9.34E-08	3.41E-04	4.41E-04
Fuel Tanks	Employee Commute	Passenger Car	RPV_START	6.00E-06	4.29E-06	1.27E-02	1.43E-02
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPV_START	1.17E-06	8.56E-08	5.99E-04	7.18E-04
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPV_START	1.14E-06	1.17E-07	4.26E-04	5.52E-04
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_START	6.92E-06	7.09E-07	2.58E-03	3.35E-03
Parking Lot	Employee Commute	Passenger Car	RPV_START	7.33E-06	5.25E-06	1.55E-02	1.75E-02
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPV_START	1.76E-04	1.80E-05	6.57E-02	8.51E-02

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_START	9.38E-05	9.60E-06	3.50E-02	4.54E-02
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_START	4.92E-06	3.52E-06	1.04E-02	1.18E-02
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_START	8.48E-05	6.23E-06	4.35E-02	5.22E-02
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Asphalt 18 Wheeler	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck - Asphalt	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Parking Lot	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Parking Lot	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fugitive Dust Control	Fugitive Dust Control	Water Truck	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fugitive Dust Control	Fugitive Dust Control	Water Truck	RPD	2.10E-04	3.71E-05	1.21E+01	1.21E+01
Fugitive Dust Control	Fugitive Dust Control	Water Truck	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fugitive Dust Control	Fugitive Dust Control	Water Truck	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fugitive Dust Control	Fugitive Dust Control	Water Truck	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fugitive Dust Control	Fugitive Dust Control	Water Truck	RPV_START	1.12E-04	1.14E-05	4.17E-02	5.40E-02

Table B21. 2023 Pump house and boiler house, construction-phase on-road vehicle criteria air pollutant emissions.

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPD	2.19E-02	1.43E-02	1.19E-03	3.78E-05	5.08E-04	4.68E-04
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPD	1.17E-02	7.63E-03	6.37E-04	2.02E-05	2.71E-04	2.49E-04
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPD	2.81E-02	8.14E-01	8.79E-03	6.47E-04	6.21E-04	5.49E-04
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPD	3.17E-03	1.70E-03	1.06E-04	4.22E-06	6.17E-05	5.67E-05

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Drainage System	Employee Commute	Passenger Car	RPD	3.06E-03	8.88E-02	9.59E-04	7.06E-05	6.77E-05	5.99E-05
Fencing	Material Delivery	Cement Mixer	RPD	1.29E-02	8.45E-03	7.05E-04	2.23E-05	3.00E-04	2.76E-04
Fencing	Employee Commute	Passenger Car	RPD	2.95E-03	8.55E-02	9.23E-04	6.80E-05	6.52E-05	5.77E-05
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPD	2.93E-05	1.56E-05	9.78E-07	3.90E-08	5.69E-07	5.24E-07
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPD	2.80E-05	1.83E-05	1.52E-06	4.83E-08	6.49E-07	5.97E-07
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD	1.68E-04	1.10E-04	9.14E-06	2.90E-07	3.89E-06	3.58E-06
Fuel Tanks	Employee Commute	Passenger Car	RPD	7.14E-03	2.07E-01	2.24E-03	1.65E-04	1.58E-04	1.40E-04
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPD	3.22E-04	1.72E-04	1.08E-05	4.29E-07	6.26E-06	5.76E-06
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPD	2.10E-04	1.37E-04	1.14E-05	3.62E-07	4.86E-06	4.48E-06
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD	1.27E-03	8.32E-04	6.93E-05	2.20E-06	2.95E-05	2.72E-05
Parking Lot	Employee Commute	Passenger Car	RPD	8.73E-03	2.53E-01	2.73E-03	2.01E-04	1.93E-04	1.71E-04
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPD	3.24E-02	2.11E-02	1.76E-03	5.58E-05	7.50E-04	6.90E-04
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	1.72E-02	1.13E-02	9.39E-04	2.98E-05	4.00E-04	3.68E-04
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD	5.86E-03	1.70E-01	1.84E-03	1.35E-04	1.30E-04	1.15E-04
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD	2.34E-02	1.25E-02	7.83E-04	3.12E-05	4.55E-04	4.19E-04
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-03	2.38E-04
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.91E-04	1.27E-04
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-02	1.87E-03
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E-04	2.09E-05
Drainage System	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-03	2.04E-04

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Fencing	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-03	1.40E-04
Fencing	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-03	1.96E-04
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-06	1.93E-07
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.37E-06	3.03E-07
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-05	1.82E-06
Fuel Tanks	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.65E-03	4.76E-04
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E-05	2.12E-06
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.78E-05	2.28E-06
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-04	1.38E-05
Parking Lot	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.46E-03	5.82E-04
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.74E-03	3.51E-04
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-03	1.87E-04
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-03	3.91E-04
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-03	1.54E-04
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	1.03E-02	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	1.12E-03	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Fencing	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	1.08E-03	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	2.61E-03	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	3.19E-03	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	2.14E-03	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPV_START	1.38E-03	8.33E-04	3.84E-04	2.74E-07	2.72E-06	2.50E-06
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPV_START	7.38E-04	4.44E-04	2.05E-04	1.46E-07	1.45E-06	1.33E-06
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPV_START	2.27E-04	4.60E-03	3.35E-04	6.07E-07	1.12E-05	9.91E-06
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPV_START	1.83E-04	2.59E-04	3.83E-05	3.64E-08	4.96E-07	4.56E-07
Drainage System	Employee Commute	Passenger Car	RPV_START	2.48E-05	5.02E-04	3.65E-05	6.62E-08	1.22E-06	1.08E-06
Fencing	Material Delivery	Cement Mixer	RPV_START	8.17E-04	4.91E-04	2.27E-04	1.62E-07	1.60E-06	1.48E-06

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Fencing	Employee Commute	Passenger Car	RPV_START	2.39E-05	4.83E-04	3.52E-05	6.37E-08	1.18E-06	1.04E-06
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPV_START	1.69E-06	2.39E-06	3.53E-07	3.36E-10	4.57E-09	4.21E-09
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPV_START	1.77E-06	1.06E-06	4.90E-07	3.50E-10	3.47E-09	3.19E-09
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_START	1.06E-05	6.38E-06	2.94E-06	2.10E-09	2.08E-08	1.91E-08
Fuel Tanks	Employee Commute	Passenger Car	RPV_START	5.79E-05	1.17E-03	8.52E-05	1.54E-07	2.85E-06	2.52E-06
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPV_START	1.86E-05	2.63E-05	3.89E-06	3.70E-09	5.03E-08	4.63E-08
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPV_START	1.32E-05	7.97E-06	3.68E-06	2.63E-09	2.60E-08	2.39E-08
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_START	8.03E-05	4.83E-05	2.23E-05	1.59E-08	1.58E-07	1.45E-07
Parking Lot	Employee Commute	Passenger Car	RPV_START	7.08E-05	1.43E-03	1.04E-04	1.89E-07	3.49E-06	3.08E-06
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPV_START	2.04E-03	1.23E-03	5.67E-04	4.05E-07	4.01E-06	3.69E-06
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_START	1.09E-03	6.55E-04	3.02E-04	2.16E-07	2.14E-06	1.97E-06
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_START	4.75E-05	9.61E-04	6.99E-05	1.27E-07	2.34E-06	2.07E-06
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_START	1.35E-03	1.91E-03	2.83E-04	2.69E-07	3.66E-06	3.37E-06
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	9.51E-06	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	7.03E-07	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Fencing	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	6.77E-07	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	1.64E-06	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Asphalt 18 Wheeler	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck - Asphalt	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	2.01E-06	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	1.35E-06	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	1.71E-05	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	1.26E-06	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	1.22E-06	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	2.95E-06	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	3.61E-06	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	2.42E-06	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fugitive Dust Control	Fugitive Dust Control	Water Truck	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fugitive Dust Control	Fugitive Dust Control	Water Truck	RPD	4.29E-02	2.80E-02	2.34E-03	7.40E-05	9.94E-04	9.14E-04
Fugitive Dust Control	Fugitive Dust Control	Water Truck	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fugitive Dust Control	Fugitive Dust Control	Water Truck	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.64E-03	4.65E-04

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)					
				NOx	CO	VOC	SO2	PM10	PM2.5
Fugitive Dust Control	Fugitive Dust Control	Water Truck	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fugitive Dust Control	Fugitive Dust Control	Water Truck	RPV_START	1.30E-03	7.80E-04	3.60E-04	2.57E-07	2.54E-06	2.34E-06

Table B22. 2023 Pump house and boiler house, construction-phase on-road vehicle greenhouse gas emissions.

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPD	1.85E-04	3.51E-05	1.13E+01	1.13E+01
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPD	9.85E-05	1.87E-05	6.01E+00	6.02E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPD	2.74E-03	5.84E-04	9.74E+01	9.78E+01
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPD	1.61E-05	2.07E-06	1.26E+00	1.26E+00
Drainage System	Employee Commute	Passenger Car	RPD	2.98E-04	6.37E-05	1.06E+01	1.07E+01
Fencing	Material Delivery	Cement Mixer	RPD	1.09E-04	2.07E-05	6.66E+00	6.67E+00
Fencing	Employee Commute	Passenger Car	RPD	2.87E-04	6.14E-05	1.02E+01	1.03E+01
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPD	1.48E-07	1.91E-08	1.16E-02	1.17E-02
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPD	2.36E-07	4.48E-08	1.44E-02	1.44E-02
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD	1.42E-06	2.69E-07	8.63E-02	8.65E-02
Fuel Tanks	Employee Commute	Passenger Car	RPD	6.96E-04	1.49E-04	2.48E+01	2.49E+01
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPD	1.63E-06	2.10E-07	1.28E-01	1.28E-01
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPD	1.77E-06	3.36E-07	1.08E-01	1.08E-01
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD	1.07E-05	2.04E-06	6.55E-01	6.56E-01

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Parking Lot	Employee Commute	Passenger Car	RPD	8.51E-04	1.82E-04	3.03E+01	3.04E+01
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPD	2.73E-04	5.18E-05	1.66E+01	1.67E+01
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD	1.45E-04	2.76E-05	8.87E+00	8.89E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD	5.72E-04	1.22E-04	2.04E+01	2.04E+01
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD	1.19E-04	1.53E-05	9.31E+00	9.33E+00
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Parking Lot	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Parking Lot	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPV_START	2.22E-04	2.26E-05	8.19E-02	1.06E-01
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPV_START	1.18E-04	1.20E-05	4.36E-02	5.67E-02
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPV_START	4.12E-05	3.00E-05	9.13E-02	1.03E-01
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPV_START	2.13E-05	1.56E-06	1.09E-02	1.31E-02
Drainage System	Employee Commute	Passenger Car	RPV_START	4.50E-06	3.28E-06	9.96E-03	1.12E-02
Fencing	Material Delivery	Cement Mixer	RPV_START	1.31E-04	1.33E-05	4.83E-02	6.28E-02
Fencing	Employee Commute	Passenger Car	RPV_START	4.33E-06	3.16E-06	9.59E-03	1.08E-02
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPV_START	1.97E-07	1.44E-08	1.00E-04	1.21E-04
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPV_START	2.83E-07	2.88E-08	1.04E-04	1.36E-04
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_START	1.70E-06	1.73E-07	6.27E-04	8.14E-04
Fuel Tanks	Employee Commute	Passenger Car	RPV_START	1.05E-05	7.65E-06	2.32E-02	2.62E-02
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPV_START	2.17E-06	1.59E-07	1.10E-03	1.33E-03
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPV_START	2.12E-06	2.16E-07	7.84E-04	1.02E-03
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_START	1.29E-05	1.31E-06	4.75E-03	6.18E-03
Parking Lot	Employee Commute	Passenger Car	RPV_START	1.28E-05	9.35E-06	2.84E-02	3.20E-02

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPV_START	3.28E-04	3.33E-05	1.21E-01	1.57E-01
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_START	1.75E-04	1.78E-05	6.44E-02	8.37E-02
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_START	8.61E-06	6.28E-06	1.91E-02	2.15E-02
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_START	1.58E-04	1.15E-05	8.03E-02	9.65E-02
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Asphalt 18 Wheeler	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck - Asphalt	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Parking Lot	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Cement Mixer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Delivery	Tractor Trailer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Asphalt 18 Wheeler	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck - Asphalt	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Asphalt 18 Wheeler	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Delivery	Dump Truck - Asphalt	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Vehicle	Emission Process	Emissions (tons/yr)			
				CH4	N2O	CO2	CO2e
Parking Lot	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Cement Mixer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Dump Truck Subbase Material	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Employee Commute	Passenger Car	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Delivery	Tractor Trailer	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fugitive Dust Control	Fugitive Dust Control	Water Truck	DIURNAL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fugitive Dust Control	Fugitive Dust Control	Water Truck	RPD	3.61E-04	6.87E-05	2.21E+01	2.21E+01
Fugitive Dust Control	Fugitive Dust Control	Water Truck	RPD_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fugitive Dust Control	Fugitive Dust Control	Water Truck	RPD_WEAR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fugitive Dust Control	Fugitive Dust Control	Water Truck	RPV_EVAP	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fugitive Dust Control	Fugitive Dust Control	Water Truck	RPV_START	2.08E-04	2.12E-05	7.67E-02	9.96E-02

APPENDIX C: DETAILED NON-ROAD EMISSION INVENTORY DATA FOR PROPOSED PROJECT

Table C1. Electric CUP, construction-phase non-road equipment activity.
Table C2. 2022 Electric CUP, construction-phase non-road equipment criteria air pollutant emission factors.
Table C3. 2022 Electric CUP, construction-phase non-road equipment greenhouse gas emission factors.
Table C4. 2023 Electric CUP, construction-phase non-road equipment criteria air pollutant emission factors.
Table C5. 2023 Electric CUP, construction-phase non-road equipment greenhouse gas emission factors.
Table C6. 2024 Electric CUP, construction-phase non-road equipment criteria air pollutant emission factors.
Table C7. 2024 Electric CUP, construction-phase non-road equipment greenhouse gas emission factors.
Table C8. 2022 Electric CUP, construction-phase non-road equipment criteria air pollutant emissions.
Table C9. 2022 Electric CUP, construction-phase non-road equipment greenhouse gas emissions.
Table C10. 2023 Electric CUP, construction-phase non-road equipment criteria air pollutant emissions.
Table C11. 2023 Electric CUP, construction-phase non-road equipment greenhouse gas emissions.
Table C12. 2024 Electric CUP, construction-phase non-road equipment criteria air pollutant emissions.
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Table C14. Pump house and boiler house, construction-phase non-road equipment activity.
Table C15. 2022 Pump house and boiler house, construction-phase non-road equipment criteria air pollutant emission factors.
Table C16. 2022 Pump house and boiler house, construction-phase non-road equipment greenhouse gas emission factors.

Table C17. 2023 Pump house and boiler house, construction-phase non-road equipment criteria air pollutant emission factors.
Table C18. 2023 Pump house and boiler house, construction-phase non-road equipment greenhouse gas emission factors.
Table C19. 2022 Pump house and boiler house, construction-phase non-road equipment criteria air pollutant emissions.
Table C20. 2022 Pump house and boiler house, construction-phase non-road equipment greenhouse gas emissions.
Table C21. 2023 Pump house and boiler house, construction-phase non-road equipment criteria air pollutant emissions.
Table C22. 2023 Pump house and boiler house, construction-phase non-road equipment greenhouse gas emissions.

Table C1. Electric CUP, construction-phase non-road equipment activity.

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023	Hours of Activity - 2024
Building - 100000 sqft- 10 stories	Concrete Foundations	Backhoe	Diesel	100	0.21	238	0	114	125
Building - 100000 sqft- 10 stories	Concrete Foundations	Concrete Pump	Diesel	11	0.43	89	0	43	47
Building - 100000 sqft- 10 stories	Concrete Foundations	Concrete Ready Mix Trucks	Diesel	600	0.59	179	0	85	93
Building - 100000 sqft- 10 stories	Concrete Foundations	Excavator	Diesel	175	0.59	79	0	38	42
Building - 100000 sqft- 10 stories	Concrete Foundations	Fork Truck	Diesel	100	0.59	238	0	114	125
Building - 100000 sqft- 10 stories	Concrete Foundations	Tool Truck	Diesel	600	0.59	60	0	28	31
Building - 100000 sqft- 10 stories	Concrete Foundations	Tractor Trailer- Material Delivery	Diesel	600	0.59	119	0	57	62
Building - 100000 sqft- 10 stories	Construction Mob & Layout	Survey Crew Trucks	Diesel	600	0.59	5	0	2	3
Building - 100000 sqft- 10 stories	Construction Mob & Layout	Tractor Trailers Temp Fac.	Diesel	600	0.59	2	0	1	1
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Fork Truck	Diesel	100	0.59	417	0	199	218
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Generator	Diesel	40	0.43	40	0	19	21
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Grout Mixer	Diesel	600	0.59	209	0	100	109
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Grout Wheel Truck	Diesel	600	0.59	79	0	38	42
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Man Lift	Diesel	75	0.21	834	0	398	436
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Tool Truck	Diesel	600	0.59	209	0	100	109
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Tractor Trailer- Material Delivery	Diesel	600	0.59	417	0	199	218

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023	Hours of Activity - 2024
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Truck Tower (Mantiwoc type)	Diesel	300	0.43	40	0	19	21
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Fork Truck	Diesel	100	0.59	794	0	379	415
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Man Lift	Diesel	75	0.21	1589	0	758	830
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Tool Truck	Diesel	600	0.59	794	0	379	415
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Tractor Trailer- Material Delivery	Diesel	600	0.59	794	0	379	415
Building - 100000 sqft- 10 stories	Roofing	High Lift	Diesel	100	0.59	79	0	38	42
Building - 100000 sqft- 10 stories	Roofing	Man Lift	Diesel	75	0.21	20	0	9	10
Building - 100000 sqft- 10 stories	Roofing	Material Deliveries	Diesel	600	0.59	30	0	14	16
Building - 100000 sqft- 10 stories	Roofing	Tractor Trailer- Material Delivery	Diesel	600	0.59	20	0	9	10
Building - 100000 sqft- 10 stories	Roofing	Truck Tower (Mantiwoc type)	Diesel	300	0.43	60	0	28	31
Building - 100000 sqft- 10 stories	Security & Safety Systems	High Lift	Diesel	100	0.59	397	0	190	208
Building - 100000 sqft- 10 stories	Security & Safety Systems	Tool Truck	Diesel	600	0.59	397	0	190	208
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	90 Ton Crane	Diesel	300	0.43	119	0	57	62
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Concrete Pump	Diesel	11	0.43	30	0	14	16
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Concrete Truck	Diesel	600	0.59	30	0	14	16
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Fork Truck	Diesel	100	0.59	318	0	152	166
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Tool Truck	Diesel	600	0.59	79	0	38	42

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023	Hours of Activity - 2024
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Tractor Trailer- Steel Deliveries	Diesel	600	0.59	179	0	85	93
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Trowel Machine	Diesel	600	0.59	20	0	9	10
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Truck Tower (Mantiwoc type)	Diesel	300	0.43	358	0	171	187
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Dozer	Diesel	175	0.59	1	0	1	1
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Dump Truck	Diesel	600	0.59	1	0	1	1
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Excavator	Diesel	175	0.59	1	0	1	1
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Loader	Diesel	175	0.59	1	0	1	1
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Other General Equipment	Diesel	175	0.43	1	0	1	1
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Pickup Truck	Diesel	600	0.59	1	0	1	1
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Roller	Diesel	100	0.59	1	0	1	1
Drainage System	Drainage - 24 inch SICPP	Dozer	Diesel	175	0.59	1	0	0	0
Drainage System	Drainage - 24 inch SICPP	Dump Truck	Diesel	600	0.59	1	0	0	0
Drainage System	Drainage - 24 inch SICPP	Excavator	Diesel	175	0.59	1	0	0	0
Drainage System	Drainage - 24 inch SICPP	Loader	Diesel	175	0.59	1	0	0	0

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023	Hours of Activity - 2024
Drainage System	Drainage - 24 inch SICPP	Other General Equipment	Diesel	175	0.43	1	0	0	0
Drainage System	Drainage - 24 inch SICPP	Pickup Truck	Diesel	600	0.59	1	0	0	0
Drainage System	Drainage - 24 inch SICPP	Roller	Diesel	100	0.59	1	0	0	0
Drainage System	Drainage Structures	Dump Truck	Diesel	600	0.59	0	0	0	0
Drainage System	Drainage Structures	Excavator	Diesel	175	0.59	0	0	0	0
Drainage System	Drainage Structures	Other General Equipment	Diesel	175	0.43	0	0	0	0
Drainage System	Drainage Structures	Pickup Truck	Diesel	600	0.59	0	0	0	0
Drainage System	Hydroseeding	Hydroseeder	Diesel	600	0.59	0	0	0	0
Drainage System	Hydroseeding	Off-Road Truck	Diesel	600	0.59	0	0	0	0
Drainage System	Soil Erosion/Sediment Control	Other General Equipment	Diesel	175	0.43	0	0	0	0
Drainage System	Soil Erosion/Sediment Control	Pickup Truck	Diesel	600	0.59	0	0	0	0
Drainage System	Soil Erosion/Sediment Control	Pumps	Diesel	11	0.43	0	0	0	0
Drainage System	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	Diesel	100	0.21	0	0	0	0
Drainage System	Topsoil Placement	Dozer	Diesel	175	0.59	0	0	0	0
Drainage System	Topsoil Placement	Dump Truck	Diesel	600	0.59	0	0	0	0
Drainage System	Topsoil Placement	Pickup Truck	Diesel	600	0.59	0	0	0	0
Fencing	Clearing and Grubbing	Chain Saw	Diesel	11	0.7	1	0	1	0

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023	Hours of Activity - 2024
Fencing	Clearing and Grubbing	Chipper/Stump Grinder	Diesel	100	0.43	1	0	1	0
Fencing	Clearing and Grubbing	Pickup Truck	Diesel	600	0.59	2	0	2	0
Fencing	Excavation (Cut to Fill)	Dozer	Diesel	175	0.59	2	0	2	0
Fencing	Excavation (Cut to Fill)	Dump Truck (12 cy)	Diesel	600	0.59	5	0	5	0
Fencing	Excavation (Cut to Fill)	Excavator	Diesel	175	0.59	2	0	2	0
Fencing	Excavation (Cut to Fill)	Pickup Truck	Diesel	600	0.59	2	0	2	0
Fencing	Excavation (Cut to Fill)	Roller	Diesel	100	0.59	2	0	2	0
Fencing	Fencing	Concrete Truck	Diesel	600	0.59	9	0	9	0
Fencing	Fencing	Dump Truck	Diesel	600	0.59	38	0	38	0
Fencing	Fencing	Other General Equipment	Diesel	175	0.43	38	0	38	0
Fencing	Fencing	Pickup Truck	Diesel	600	0.59	38	0	38	0
Fencing	Fencing	Skid Steer Loader	Diesel	75	0.21	38	0	38	0
Fencing	Fencing	Tractors/Loader/Backhoe	Diesel	100	0.21	38	0	38	0
Fencing	Grading	Dozer	Diesel	175	0.59	0	0	0	0
Fencing	Grading	Grader	Diesel	300	0.59	0	0	0	0
Fencing	Grading	Roller	Diesel	100	0.59	0	0	0	0
Fencing	Hydroseeding	Hydroseeder	Diesel	600	0.59	0	0	0	0
Fencing	Hydroseeding	Off-Road Truck	Diesel	600	0.59	0	0	0	0
Fencing	Soil Erosion/Sediment Control	Other General Equipment	Diesel	175	0.43	0	0	0	0

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023	Hours of Activity - 2024
Fencing	Soil Erosion/Sediment Control	Pickup Truck	Diesel	600	0.59	1	0	1	0
Fencing	Soil Erosion/Sediment Control	Pumps	Diesel	11	0.43	0	0	0	0
Fencing	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	Diesel	100	0.21	0	0	0	0
Fencing	Topsoil Placement	Dozer	Diesel	175	0.59	3	0	3	0
Fencing	Topsoil Placement	Dump Truck	Diesel	600	0.59	3	0	3	0
Fencing	Topsoil Placement	Pickup Truck	Diesel	600	0.59	3	0	3	0
Fuel Tanks	Clearing and Grubbing	Chain Saw	Diesel	11	0.7	0	0	0	0
Fuel Tanks	Clearing and Grubbing	Chipper/Stump Grinder	Diesel	100	0.43	0	0	0	0
Fuel Tanks	Clearing and Grubbing	Pickup Truck	Diesel	600	0.59	0	0	0	0
Fuel Tanks	Concrete Placement	Air Compressor	Diesel	100	0.43	0	0	0	0
Fuel Tanks	Concrete Placement	Concrete Saws	Diesel	40	0.59	0	0	0	0
Fuel Tanks	Concrete Placement	Concrete Truck	Diesel	600	0.59	0	0	0	0
Fuel Tanks	Concrete Placement	Other General Equipment	Diesel	175	0.43	0	0	0	0
Fuel Tanks	Concrete Placement	Pickup Truck	Diesel	600	0.59	0	0	0	0
Fuel Tanks	Concrete Placement	Rubber Tired Loader	Diesel	175	0.59	0	0	0	0
Fuel Tanks	Concrete Placement	Slip Form Paver	Diesel	175	0.59	0	0	0	0
Fuel Tanks	Concrete Placement	Surfacing Equipment (Grooving)	Diesel	25	0.59	0	0	0	0

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023	Hours of Activity - 2024
Fuel Tanks	Construction/Erect Tanks	Crane	Diesel	300	0.43	3	0	3	0
Fuel Tanks	Construction/Erect Tanks	Other General Equipment	Diesel	175	0.43	8	0	8	0
Fuel Tanks	Construction/Erect Tanks	Pickup Truck	Diesel	600	0.59	8	0	8	0
Fuel Tanks	Drainage - 24 inch SICPP	Excavator	Diesel	175	0.59	1	0	1	0
Fuel Tanks	Drainage	Dozer	Diesel	175	0.59	1	0	1	0
Fuel Tanks	Drainage	Dump Truck	Diesel	600	0.59	1	0	1	0
Fuel Tanks	Drainage	Loader	Diesel	175	0.59	1	0	1	0
Fuel Tanks	Drainage	Other General Equipment	Diesel	175	0.43	1	0	1	0
Fuel Tanks	Drainage	Pickup Truck	Diesel	600	0.59	1	0	1	0
Fuel Tanks	Drainage	Roller	Diesel	100	0.59	1	0	1	0
Fuel Tanks	Dust Control	Water Truck	Diesel	600	0.59	2880	0	2880	0
Fuel Tanks	Excavation (Borrow)	Dozer	Diesel	175	0.59	0	0	0	0
Fuel Tanks	Excavation (Borrow)	Dump Truck (12 cy)	Diesel	600	0.59	0	0	0	0
Fuel Tanks	Excavation (Borrow)	Pickup Truck	Diesel	600	0.59	0	0	0	0
Fuel Tanks	Excavation (Borrow)	Roller	Diesel	100	0.59	0	0	0	0
Fuel Tanks	Excavation (Cut to Fill)	Dozer	Diesel	175	0.59	0	0	0	0
Fuel Tanks	Excavation (Cut to Fill)	Dump Truck (12 cy)	Diesel	600	0.59	0	0	0	0
Fuel Tanks	Excavation (Cut to Fill)	Excavator	Diesel	175	0.59	0	0	0	0
Fuel Tanks	Excavation (Cut to Fill)	Pickup Truck	Diesel	600	0.59	0	0	0	0

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023	Hours of Activity - 2024
Fuel Tanks	Excavation (Cut to Fill)	Roller	Diesel	100	0.59	0	0	0	0
Fuel Tanks	Excavation (Cut to Fill)	Scraper	Diesel	600	0.59	0	0	0	0
Fuel Tanks	Excavation (Topsoil Stripping)	Dozer	Diesel	175	0.59	0	0	0	0
Fuel Tanks	Fencing	Concrete Truck	Diesel	600	0.59	0	0	0	0
Fuel Tanks	Fencing	Dump Truck	Diesel	600	0.59	1	0	1	0
Fuel Tanks	Fencing	Other General Equipment	Diesel	175	0.43	1	0	1	0
Fuel Tanks	Fencing	Pickup Truck	Diesel	600	0.59	1	0	1	0
Fuel Tanks	Fencing	Skid Steer Loader	Diesel	75	0.21	1	0	1	0
Fuel Tanks	Fencing	Tractors/Loader/Backhoe	Diesel	100	0.21	1	0	1	0
Fuel Tanks	Grading	Dozer	Diesel	175	0.59	0	0	0	0
Fuel Tanks	Grading	Grader	Diesel	300	0.59	0	0	0	0
Fuel Tanks	Grading	Roller	Diesel	100	0.59	0	0	0	0
Fuel Tanks	Hydroseeding	Hydroseeder	Diesel	600	0.59	0	0	0	0
Fuel Tanks	Hydroseeding	Off-Road Truck	Diesel	600	0.59	0	0	0	0
Fuel Tanks	Markings	Flatbed Truck	Diesel	600	0.59	0	0	0	0
Fuel Tanks	Markings	Other General Equipment	Diesel	175	0.43	0	0	0	0
Fuel Tanks	Markings	Pickup Truck	Diesel	600	0.59	0	0	0	0
Fuel Tanks	Soil Erosion/Sediment Control	Other General Equipment	Diesel	175	0.43	0	0	0	0
Fuel Tanks	Soil Erosion/Sediment Control	Pickup Truck	Diesel	600	0.59	0	0	0	0

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023	Hours of Activity - 2024
Fuel Tanks	Soil Erosion/Sediment Control	Pumps	Diesel	11	0.43	0	0	0	0
Fuel Tanks	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	Diesel	100	0.21	0	0	0	0
Fuel Tanks	Street Lighting	Dump Truck	Diesel	600	0.59	0	0	0	0
Fuel Tanks	Street Lighting	Loader	Diesel	175	0.59	0	0	0	0
Fuel Tanks	Street Lighting	Other General Equipment	Diesel	175	0.43	0	0	0	0
Fuel Tanks	Street Lighting	Pickup Truck	Diesel	600	0.59	0	0	0	0
Fuel Tanks	Street Lighting	Skid Steer Loader	Diesel	75	0.21	0	0	0	0
Fuel Tanks	Street Lighting	Tractors/Loader/Backhoe	Diesel	100	0.21	0	0	0	0
Fuel Tanks	Subbase Placement	Dozer	Diesel	175	0.59	0	0	0	0
Fuel Tanks	Subbase Placement	Dump Truck (12 cy)	Diesel	600	0.59	0	0	0	0
Fuel Tanks	Subbase Placement	Pickup Truck	Diesel	600	0.59	0	0	0	0
Fuel Tanks	Subbase Placement	Roller	Diesel	100	0.59	0	0	0	0
Fuel Tanks	Topsoil Placement	Dozer	Diesel	175	0.59	0	0	0	0
Fuel Tanks	Topsoil Placement	Dump Truck	Diesel	600	0.59	0	0	0	0
Fuel Tanks	Topsoil Placement	Pickup Truck	Diesel	600	0.59	0	0	0	0
Landscaping	Hydroseeding	Hydroseeder	Diesel	600	0.59	13	0	0	13
Landscaping	Hydroseeding	Off-Road Truck	Diesel	600	0.59	13	0	0	13
Landscaping	Mulching	Dump Truck	Diesel	600	0.59	12	0	0	12
Landscaping	Mulching	Other General Equipment	Diesel	175	0.43	12	0	0	12
Landscaping	Mulching	Pickup Truck	Diesel	600	0.59	12	0	0	12
Landscaping	Mulching	Tractors/Loader/Backhoe	Diesel	100	0.21	12	0	0	12

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023	Hours of Activity - 2024
Landscaping	Sodding	Flatbed Truck	Diesel	600	0.59	59	0	0	59
Landscaping	Sodding	Other General Equipment	Diesel	175	0.43	59	0	0	59
Landscaping	Sodding	Pickup Truck	Diesel	600	0.59	59	0	0	59
Landscaping	Sodding	Skid Steer Loader	Diesel	75	0.21	59	0	0	59
Landscaping	Topsoil Placement	Dozer	Diesel	175	0.59	33	0	0	33
Landscaping	Topsoil Placement	Dump Truck	Diesel	600	0.59	33	0	0	33
Landscaping	Topsoil Placement	Pickup Truck	Diesel	600	0.59	33	0	0	33
Landscaping	Tree Planting	Flatbed Truck	Diesel	600	0.59	0	0	0	0
Landscaping	Tree Planting	Other General Equipment	Diesel	175	0.43	0	0	0	0
Landscaping	Tree Planting	Pickup Truck	Diesel	600	0.59	0	0	0	0
Landscaping	Tree Planting	Tractors/Loader/Backhoe	Diesel	100	0.21	0	0	0	0
Landscaping	Tree Pruning	Aerial Lift	Diesel	75	0.21	0	0	0	0
Landscaping	Tree Pruning	Chipper/Stump Grinder	Diesel	100	0.43	0	0	0	0
Landscaping	Tree Pruning	Dump Truck	Diesel	600	0.59	0	0	0	0
Landscaping	Tree Pruning	Other General Equipment	Diesel	175	0.43	0	0	0	0
Landscaping	Tree Pruning	Pickup Truck	Diesel	600	0.59	0	0	0	0
Landscaping	Tree Pruning	Pruning Saw/Chain Saw	Diesel	11	0.7	0	0	0	0
Open Parking Lot @Grade - 10000 sqft	Binder Coat of Pavement	Paving Machine	Diesel	175	0.59	0	0	0	0
Open Parking Lot @Grade - 10000 sqft	Binder Coat of Pavement	Ten Wheelers- Material Delivery	Diesel	600	0.59	0	0	0	0
Open Parking Lot @Grade - 10000 sqft	Construction Mob & Layout	Survey Crew Trucks	Diesel	600	0.59	4	0	4	0
Open Parking Lot @Grade - 10000 sqft	Construction Mob & Layout	Tractor Trailers Temp Fac.	Diesel	600	0.59	4	0	4	0

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023	Hours of Activity - 2024
Open Parking Lot @Grade - 10000 sqft	Curbing	Bob Cat	Diesel	75	0.21	24	0	24	0
Open Parking Lot @Grade - 10000 sqft	Curbing	Concrete Ready Mix Trucks	Diesel	600	0.59	24	0	24	0
Open Parking Lot @Grade - 10000 sqft	Curbing	Material Deliveries	Diesel	600	0.59	24	0	24	0
Open Parking Lot @Grade - 10000 sqft	Curbing	Tractor Trailer with Boom Hoist- Delivery	Diesel	600	0.59	24	0	24	0
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Bulldozer	Diesel	175	0.59	16	0	16	0
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Front Loader	Diesel	100	0.21	16	0	16	0
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Ten Wheelers	Diesel	600	0.59	16	0	16	0
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Auger Drill	Diesel	175	0.43	24	0	24	0
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Fork Truck	Diesel	100	0.59	24	0	24	0
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Front Loader	Diesel	100	0.21	24	0	24	0
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Tractor Trailer- Material Delivery	Diesel	600	0.59	12	0	12	0
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Bulldozer	Diesel	175	0.59	40	0	40	0
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Chain Saws	Diesel	11	0.7	24	0	24	0
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Flat Bed or Dump Trucks	Diesel	600	0.59	40	0	40	0
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Log Chipper	Diesel	100	0.43	24	0	24	0
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Mulcher	Diesel	100	0.43	24	0	24	0
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Tractor	Diesel	100	0.21	40	0	40	0

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023	Hours of Activity - 2024
Open Parking Lot @Grade - 10000 sqft	Rough Grading	Compacting Equipment	Diesel	6	0.43	16	0	16	0
Open Parking Lot @Grade - 10000 sqft	Rough Grading	Small Dozer	Diesel	175	0.59	16	0	16	0
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	40 Ton Rough Terrain Crane	Diesel	300	0.43	16	0	16	0
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	High Lift	Diesel	100	0.59	16	0	16	0
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	Tractor Trailer- Material Delivery	Diesel	600	0.59	16	0	16	0
Open Parking Lot @Grade - 10000 sqft	Stripping	Line Painting Truck and Sprayer	Diesel	600	0.59	8	0	8	0
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Backhoe	Diesel	100	0.21	16	0	16	0
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Roller	Diesel	100	0.59	16	0	16	0
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Tractor Trailer- Material Delivery	Diesel	600	0.59	16	0	16	0
Open Parking Lot @Grade - 10000 sqft	Top Coat of Asphalt	Paving Machine	Diesel	175	0.59	0	0	0	0
Open Parking Lot @Grade - 10000 sqft	Top Coat of Asphalt	Ten Wheelers- Material Delivery	Diesel	600	0.59	0	0	0	0
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Backhoe	Diesel	100	0.21	24	0	24	0
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Fork Truck	Diesel	100	0.59	24	0	24	0
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Tractor Trailer- Material Delivery	Diesel	600	0.59	12	0	12	0
Parking Lot	Clearing and Grubbing	Chain Saw	Diesel	11	0.7	1	0	1	0
Parking Lot	Clearing and Grubbing	Chipper/Stump Grinder	Diesel	100	0.43	1	0	1	0
Parking Lot	Clearing and Grubbing	Pickup Truck	Diesel	600	0.59	2	0	2	0

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023	Hours of Activity - 2024
Parking Lot	Concrete Placement	Air Compressor	Diesel	100	0.43	1	0	1	0
Parking Lot	Concrete Placement	Concrete Saws	Diesel	40	0.59	1	0	1	0
Parking Lot	Concrete Placement	Concrete Truck	Diesel	600	0.59	5	0	5	0
Parking Lot	Concrete Placement	Other General Equipment	Diesel	175	0.43	2	0	2	0
Parking Lot	Concrete Placement	Pickup Truck	Diesel	600	0.59	3	0	3	0
Parking Lot	Concrete Placement	Rubber Tired Loader	Diesel	175	0.59	1	0	1	0
Parking Lot	Concrete Placement	Slip Form Paver	Diesel	175	0.59	1	0	1	0
Parking Lot	Concrete Placement	Surfacing Equipment (Grooving)	Diesel	25	0.59	1	0	1	0
Parking Lot	Curbing	Concrete Truck	Diesel	600	0.59	1	0	1	0
Parking Lot	Curbing	Curb/Gutter Paver	Diesel	175	0.59	1	0	1	0
Parking Lot	Curbing	Other General Equipment	Diesel	175	0.43	1	0	1	0
Parking Lot	Curbing	Pickup Truck	Diesel	600	0.59	1	0	1	0
Parking Lot	Drainage - 24 inch SICPP	Dozer	Diesel	175	0.59	2	0	2	0
Parking Lot	Drainage - 24 inch SICPP	Dump Truck	Diesel	600	0.59	2	0	2	0
Parking Lot	Drainage - 24 inch SICPP	Excavator	Diesel	175	0.59	2	0	2	0
Parking Lot	Drainage - 24 inch SICPP	Loader	Diesel	175	0.59	2	0	2	0
Parking Lot	Drainage - 24 inch SICPP	Other General Equipment	Diesel	175	0.43	2	0	2	0
Parking Lot	Drainage - 24 inch SICPP	Pickup Truck	Diesel	600	0.59	2	0	2	0

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023	Hours of Activity - 2024
Parking Lot	Drainage - 24 inch SICPP	Roller	Diesel	100	0.59	2	0	2	0
Parking Lot	Drainage - 6 inch Perforated Underdrain	Dump Truck	Diesel	600	0.59	4	0	4	0
Parking Lot	Drainage - 6 inch Perforated Underdrain	Loader	Diesel	175	0.59	4	0	4	0
Parking Lot	Drainage - 6 inch Perforated Underdrain	Other General Equipment	Diesel	175	0.43	4	0	4	0
Parking Lot	Drainage - 6 inch Perforated Underdrain	Pickup Truck	Diesel	600	0.59	4	0	4	0
Parking Lot	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	Diesel	100	0.21	4	0	4	0
Parking Lot	Excavation (Borrow)	Dozer	Diesel	175	0.59	2	0	2	0
Parking Lot	Excavation (Borrow)	Dump Truck (12 cy)	Diesel	600	0.59	2	0	2	0
Parking Lot	Excavation (Borrow)	Pickup Truck	Diesel	600	0.59	2	0	2	0
Parking Lot	Excavation (Borrow)	Roller	Diesel	100	0.59	1	0	1	0
Parking Lot	Excavation (Cut to Fill)	Dozer	Diesel	175	0.59	1	0	1	0
Parking Lot	Excavation (Cut to Fill)	Dump Truck (12 cy)	Diesel	600	0.59	4	0	4	0
Parking Lot	Excavation (Cut to Fill)	Excavator	Diesel	175	0.59	1	0	1	0
Parking Lot	Excavation (Cut to Fill)	Pickup Truck	Diesel	600	0.59	1	0	1	0
Parking Lot	Excavation (Cut to Fill)	Roller	Diesel	100	0.59	1	0	1	0

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023	Hours of Activity - 2024
Parking Lot	Excavation (Cut to Fill)	Scraper	Diesel	600	0.59	1	0	1	0
Parking Lot	Excavation (Topsoil Stripping)	Dozer	Diesel	175	0.59	1	0	1	0
Parking Lot	Fencing	Concrete Truck	Diesel	600	0.59	1	0	1	0
Parking Lot	Fencing	Dump Truck	Diesel	600	0.59	3	0	3	0
Parking Lot	Fencing	Other General Equipment	Diesel	175	0.43	3	0	3	0
Parking Lot	Fencing	Pickup Truck	Diesel	600	0.59	3	0	3	0
Parking Lot	Fencing	Skid Steer Loader	Diesel	75	0.21	3	0	3	0
Parking Lot	Fencing	Tractors/Loader/Backhoe	Diesel	100	0.21	3	0	3	0
Parking Lot	Grading	Dozer	Diesel	175	0.59	0	0	0	0
Parking Lot	Grading	Grader	Diesel	300	0.59	0	0	0	0
Parking Lot	Grading	Roller	Diesel	100	0.59	0	0	0	0
Parking Lot	Hydroseeding	Hydroseeder	Diesel	600	0.59	0	0	0	0
Parking Lot	Hydroseeding	Off-Road Truck	Diesel	600	0.59	0	0	0	0
Parking Lot	Markings	Flatbed Truck	Diesel	600	0.59	1	0	1	0
Parking Lot	Markings	Other General Equipment	Diesel	175	0.43	1	0	1	0
Parking Lot	Markings	Pickup Truck	Diesel	600	0.59	1	0	1	0
Parking Lot	Sidewalks	Concrete Truck	Diesel	600	0.59	2	0	2	0
Parking Lot	Sidewalks	Dump Truck	Diesel	600	0.59	2	0	2	0
Parking Lot	Sidewalks	Pickup Truck	Diesel	600	0.59	2	0	2	0
Parking Lot	Sidewalks	Tractors/Loader/Backhoe	Diesel	100	0.21	2	0	2	0
Parking Lot	Sidewalks	Vibratory Compactor	Diesel	6	0.43	2	0	2	0

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023	Hours of Activity - 2024
Parking Lot	Soil Erosion/Sediment Control	Other General Equipment	Diesel	175	0.43	0	0	0	0
Parking Lot	Soil Erosion/Sediment Control	Pickup Truck	Diesel	600	0.59	1	0	1	0
Parking Lot	Soil Erosion/Sediment Control	Pumps	Diesel	11	0.43	0	0	0	0
Parking Lot	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	Diesel	100	0.21	0	0	0	0
Parking Lot	Street Lighting	Dump Truck	Diesel	600	0.59	0	0	0	0
Parking Lot	Street Lighting	Loader	Diesel	175	0.59	0	0	0	0
Parking Lot	Street Lighting	Other General Equipment	Diesel	175	0.43	0	0	0	0
Parking Lot	Street Lighting	Pickup Truck	Diesel	600	0.59	0	0	0	0
Parking Lot	Street Lighting	Skid Steer Loader	Diesel	75	0.21	0	0	0	0
Parking Lot	Street Lighting	Tractors/Loader/Backhoe	Diesel	100	0.21	0	0	0	0
Parking Lot	Subbase Placement	Dozer	Diesel	175	0.59	1	0	1	0
Parking Lot	Subbase Placement	Dump Truck (12 cy)	Diesel	600	0.59	5	0	5	0
Parking Lot	Subbase Placement	Pickup Truck	Diesel	600	0.59	1	0	1	0
Parking Lot	Subbase Placement	Roller	Diesel	100	0.59	1	0	1	0
Parking Lot	Topsoil Placement	Dozer	Diesel	175	0.59	1	0	1	0
Parking Lot	Topsoil Placement	Dump Truck	Diesel	600	0.59	1	0	1	0
Parking Lot	Topsoil Placement	Pickup Truck	Diesel	600	0.59	1	0	1	0
Parking Lot	Tree Planting	Flatbed Truck	Diesel	600	0.59	0	0	0	0
Parking Lot	Tree Planting	Other General Equipment	Diesel	175	0.43	0	0	0	0

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023	Hours of Activity - 2024
Parking Lot	Tree Planting	Pickup Truck	Diesel	600	0.59	0	0	0	0
Parking Lot	Tree Planting	Tractors/Loader/Backhoe	Diesel	100	0.21	0	0	0	0
Service Road	Clearing and Grubbing	Chain Saw	Diesel	11	0.7	11	0	11	0
Service Road	Clearing and Grubbing	Chipper/Stump Grinder	Diesel	100	0.43	11	0	11	0
Service Road	Clearing and Grubbing	Pickup Truck	Diesel	600	0.59	14	0	14	0
Service Road	Concrete Placement	Air Compressor	Diesel	100	0.43	11	0	11	0
Service Road	Concrete Placement	Concrete Saws	Diesel	40	0.59	11	0	11	0
Service Road	Concrete Placement	Concrete Truck	Diesel	600	0.59	44	0	44	0
Service Road	Concrete Placement	Other General Equipment	Diesel	175	0.43	21	0	21	0
Service Road	Concrete Placement	Pickup Truck	Diesel	600	0.59	32	0	32	0
Service Road	Concrete Placement	Rubber Tired Loader	Diesel	175	0.59	11	0	11	0
Service Road	Concrete Placement	Slip Form Paver	Diesel	175	0.59	11	0	11	0
Service Road	Concrete Placement	Surfacing Equipment (Grooving)	Diesel	25	0.59	11	0	11	0
Service Road	Drainage - 24 inch SICPP	Dozer	Diesel	175	0.59	39	0	39	0
Service Road	Drainage - 24 inch SICPP	Dump Truck	Diesel	600	0.59	39	0	39	0
Service Road	Drainage - 24 inch SICPP	Excavator	Diesel	175	0.59	39	0	39	0
Service Road	Drainage - 24 inch SICPP	Loader	Diesel	175	0.59	39	0	39	0
Service Road	Drainage - 24 inch SICPP	Other General Equipment	Diesel	175	0.43	39	0	39	0

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023	Hours of Activity - 2024
Service Road	Drainage - 24 inch SICPP	Pickup Truck	Diesel	600	0.59	39	0	39	0
Service Road	Drainage - 24 inch SICPP	Roller	Diesel	100	0.59	39	0	39	0
Service Road	Drainage - 6 inch Perforated Underdrain	Dump Truck	Diesel	600	0.59	22	0	22	0
Service Road	Drainage - 6 inch Perforated Underdrain	Loader	Diesel	175	0.59	22	0	22	0
Service Road	Drainage - 6 inch Perforated Underdrain	Other General Equipment	Diesel	175	0.43	22	0	22	0
Service Road	Drainage - 6 inch Perforated Underdrain	Pickup Truck	Diesel	600	0.59	22	0	22	0
Service Road	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	Diesel	100	0.21	22	0	22	0
Service Road	Dust Control	Water Truck	Diesel	600	0.59	2880	0	2880	0
Service Road	Excavation (Borrow)	Dozer	Diesel	175	0.59	18	0	18	0
Service Road	Excavation (Borrow)	Dump Truck (12 cy)	Diesel	600	0.59	18	0	18	0
Service Road	Excavation (Borrow)	Pickup Truck	Diesel	600	0.59	18	0	18	0
Service Road	Excavation (Borrow)	Roller	Diesel	100	0.59	8	0	8	0
Service Road	Excavation (Cut to Fill)	Dozer	Diesel	175	0.59	13	0	13	0
Service Road	Excavation (Cut to Fill)	Dump Truck (12 cy)	Diesel	600	0.59	36	0	36	0
Service Road	Excavation (Cut to Fill)	Excavator	Diesel	175	0.59	11	0	11	0

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023	Hours of Activity - 2024
Service Road	Excavation (Cut to Fill)	Pickup Truck	Diesel	600	0.59	11	0	11	0
Service Road	Excavation (Cut to Fill)	Roller	Diesel	100	0.59	11	0	11	0
Service Road	Excavation (Cut to Fill)	Scraper	Diesel	600	0.59	13	0	13	0
Service Road	Excavation (Topsoil Stripping)	Dozer	Diesel	175	0.59	5	0	5	0
Service Road	Fencing	Concrete Truck	Diesel	600	0.59	13	0	13	0
Service Road	Fencing	Dump Truck	Diesel	600	0.59	53	0	53	0
Service Road	Fencing	Other General Equipment	Diesel	175	0.43	53	0	53	0
Service Road	Fencing	Pickup Truck	Diesel	600	0.59	53	0	53	0
Service Road	Fencing	Skid Steer Loader	Diesel	75	0.21	53	0	53	0
Service Road	Fencing	Tractors/Loader/Backhoe	Diesel	100	0.21	53	0	53	0
Service Road	Grading	Dozer	Diesel	175	0.59	5	0	5	0
Service Road	Grading	Grader	Diesel	300	0.59	5	0	5	0
Service Road	Grading	Roller	Diesel	100	0.59	5	0	5	0
Service Road	Hydroseeding	Hydroseeder	Diesel	600	0.59	4	0	4	0
Service Road	Hydroseeding	Off-Road Truck	Diesel	600	0.59	4	0	4	0
Service Road	Markings	Flatbed Truck	Diesel	600	0.59	66	0	66	0
Service Road	Markings	Other General Equipment	Diesel	175	0.43	66	0	66	0
Service Road	Markings	Pickup Truck	Diesel	600	0.59	66	0	66	0
Service Road	Sidewalks	Concrete Truck	Diesel	600	0.59	33	0	33	0
Service Road	Sidewalks	Dump Truck	Diesel	600	0.59	33	0	33	0
Service Road	Sidewalks	Pickup Truck	Diesel	600	0.59	33	0	33	0
Service Road	Sidewalks	Tractors/Loader/Backhoe	Diesel	100	0.21	33	0	33	0

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023	Hours of Activity - 2024
Service Road	Sidewalks	Vibratory Compactor	Diesel	6	0.43	33	0	33	0
Service Road	Soil Erosion/Sediment Control	Other General Equipment	Diesel	175	0.43	4	0	4	0
Service Road	Soil Erosion/Sediment Control	Pickup Truck	Diesel	600	0.59	7	0	7	0
Service Road	Soil Erosion/Sediment Control	Pumps	Diesel	11	0.43	4	0	4	0
Service Road	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	Diesel	100	0.21	4	0	4	0
Service Road	Street Lighting	Dump Truck	Diesel	600	0.59	32	0	32	0
Service Road	Street Lighting	Loader	Diesel	175	0.59	32	0	32	0
Service Road	Street Lighting	Other General Equipment	Diesel	175	0.43	32	0	32	0
Service Road	Street Lighting	Pickup Truck	Diesel	600	0.59	32	0	32	0
Service Road	Street Lighting	Skid Steer Loader	Diesel	75	0.21	32	0	32	0
Service Road	Street Lighting	Tractors/Loader/Backhoe	Diesel	100	0.21	32	0	32	0
Service Road	Subbase Placement	Dozer	Diesel	175	0.59	7	0	7	0
Service Road	Subbase Placement	Dump Truck (12 cy)	Diesel	600	0.59	47	0	47	0
Service Road	Subbase Placement	Pickup Truck	Diesel	600	0.59	7	0	7	0
Service Road	Subbase Placement	Roller	Diesel	100	0.59	7	0	7	0
Service Road	Topsoil Placement	Dozer	Diesel	175	0.59	10	0	10	0
Service Road	Topsoil Placement	Dump Truck	Diesel	600	0.59	10	0	10	0
Service Road	Topsoil Placement	Pickup Truck	Diesel	600	0.59	10	0	10	0
Service Road	Tree Planting	Flatbed Truck	Diesel	600	0.59	0	0	0	0

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023	Hours of Activity - 2024
Service Road	Tree Planting	Other General Equipment	Diesel	175	0.43	0	0	0	0
Service Road	Tree Planting	Pickup Truck	Diesel	600	0.59	0	0	0	0
Service Road	Tree Planting	Tractors/Loader/Backhoe	Diesel	100	0.21	0	0	0	0
Site Work - 10000 sqft	Construction Mob & Layout	Survey Crew Trucks	Diesel	600	0.59	171	14	86	71
Site Work - 10000 sqft	Construction Mob & Layout	Tractor Trailers Temp Fac.	Diesel	600	0.59	68	6	34	28
Site Work - 10000 sqft	Site Clearing-Remove Trees & Shrubs	Bulldozer	Diesel	175	0.59	684	57	343	284
Site Work - 10000 sqft	Site Clearing-Remove Trees & Shrubs	Chain Saws	Diesel	11	0.7	684	57	343	284
Site Work - 10000 sqft	Site Clearing-Remove Trees & Shrubs	Flat Bed or Dump Trucks	Diesel	600	0.59	1368	115	685	568
Site Work - 10000 sqft	Site Clearing-Remove Trees & Shrubs	Front Loader	Diesel	100	0.21	684	57	343	284
Site Work - 10000 sqft	Site Clearing-Remove Trees & Shrubs	Grub the site down 2'-0	Diesel	40	0.59	684	57	343	284
Site Work - 10000 sqft	Site Clearing-Remove Trees & Shrubs	Log Chipper	Diesel	100	0.43	684	57	343	284
Site Work - 10000 sqft	Site Clearing-Remove Trees & Shrubs	Mulcher	Diesel	100	0.43	684	57	343	284
Site Work - 10000 sqft	Site Clearing-Remove Trees & Shrubs	Ten Wheelers	Diesel	600	0.59	684	57	343	284

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023	Hours of Activity - 2024
Site Work - 10000 sqft	Site Clearing-Remove Trees & Shrubs	Tractor	Diesel	100	0.21	1368	115	685	568
Site Work - 10000 sqft	Site Restoration-Landscaping (Curbing)	Bob Cat	Diesel	75	0.21	410	34	206	170
Site Work - 10000 sqft	Site Restoration-Landscaping (Curbing)	Concrete Ready Mix Trucks	Diesel	600	0.59	410	34	206	170
Site Work - 10000 sqft	Site Restoration-Landscaping (Curbing)	Tractor Trailer with Boom Hoist- Delivery	Diesel	600	0.59	410	34	206	170
Site Work - 10000 sqft	Site Restoration-Landscaping (Rough Grading)	Compacting Equipment	Diesel	6	0.43	410	34	206	170
Site Work - 10000 sqft	Site Restoration-Landscaping (Rough Grading)	Small Dozer	Diesel	175	0.59	410	34	206	170
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Forktruck (Hoist)	Diesel	100	0.59	1368	115	685	568
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Roller	Diesel	100	0.59	684	57	343	284
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Seed Truck Spreader	Diesel	600	0.59	274	23	137	114
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Tractor Trailer- Material Delivery	Diesel	600	0.59	1368	115	685	568

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023	Hours of Activity - 2024
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Backhoe	Diesel	100	0.21	2052	172	1028	852
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Fork Truck	Diesel	100	0.59	1026	86	514	426
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Tractor Trailer- Material Delivery	Diesel	600	0.59	513	43	257	213

Table C2. 2022 Electric CUP, construction-phase non-road equipment criteria air pollutant emission factors.

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Concrete Foundations	Backhoe	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01
Building - 100000 sqft- 10 stories	Concrete Foundations	Concrete Pump	4.32E+00	2.64E+00	8.19E-01	2.16E-03	2.85E-01	2.77E-01
Building - 100000 sqft- 10 stories	Concrete Foundations	Concrete Ready Mix Trucks	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Building - 100000 sqft- 10 stories	Concrete Foundations	Excavator	4.59E-01	1.60E-01	2.41E-02	1.45E-03	3.87E-02	3.76E-02
Building - 100000 sqft- 10 stories	Concrete Foundations	Fork Truck	9.02E-01	1.08E-01	1.07E-02	1.58E-03	1.83E-02	1.78E-02
Building - 100000 sqft- 10 stories	Concrete Foundations	Tool Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Building - 100000 sqft- 10 stories	Concrete Foundations	Tractor Trailer- Material Delivery	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Building - 100000 sqft- 10 stories	Construction Mob & Layout	Survey Crew Trucks	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Building - 100000 sqft- 10 stories	Construction Mob & Layout	Tractor Trailers Temp Fac.	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Fork Truck	9.02E-01	1.08E-01	1.07E-02	1.58E-03	1.83E-02	1.78E-02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Generator	3.44E+00	1.02E+00	2.90E-01	1.83E-03	1.75E-01	1.70E-01
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Grout Mixer	1.70E+00	7.93E-01	1.11E-01	1.65E-03	1.21E-01	1.17E-01
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Grout Wheel Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Man Lift	4.13E+00	2.98E+00	6.12E-01	2.22E-03	3.87E-01	3.75E-01
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Tool Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Tractor Trailer- Material Delivery	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Truck Tower (Mantiwoc type)	5.77E-01	1.44E-01	3.97E-02	1.47E-03	2.62E-02	2.54E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Fork Truck	9.02E-01	1.08E-01	1.07E-02	1.58E-03	1.83E-02	1.78E-02
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Man Lift	4.13E+00	2.98E+00	6.12E-01	2.22E-03	3.87E-01	3.75E-01
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Tool Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Tractor Trailer- Material Delivery	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Building - 100000 sqft- 10 stories	Roofing	High Lift	9.02E-01	1.08E-01	1.07E-02	1.58E-03	1.83E-02	1.78E-02
Building - 100000 sqft- 10 stories	Roofing	Man Lift	4.13E+00	2.98E+00	6.12E-01	2.22E-03	3.87E-01	3.75E-01
Building - 100000 sqft- 10 stories	Roofing	Material Deliveries	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Building - 100000 sqft- 10 stories	Roofing	Tractor Trailer- Material Delivery	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Building - 100000 sqft- 10 stories	Roofing	Truck Tower (Mantiwoc type)	5.77E-01	1.44E-01	3.97E-02	1.47E-03	2.62E-02	2.54E-02
Building - 100000 sqft- 10 stories	Security & Safety Systems	High Lift	9.02E-01	1.08E-01	1.07E-02	1.58E-03	1.83E-02	1.78E-02
Building - 100000 sqft- 10 stories	Security & Safety Systems	Tool Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	90 Ton Crane	5.77E-01	1.44E-01	3.97E-02	1.47E-03	2.62E-02	2.54E-02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Concrete Pump	4.32E+00	2.64E+00	8.19E-01	2.16E-03	2.85E-01	2.77E-01
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Concrete Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Fork Truck	9.02E-01	1.08E-01	1.07E-02	1.58E-03	1.83E-02	1.78E-02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Tool Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Tractor Trailer- Steel Deliveries	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Trowel Machine	1.70E+00	7.93E-01	1.11E-01	1.65E-03	1.21E-01	1.17E-01
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Truck Tower (Mantiwoc type)	5.77E-01	1.44E-01	3.97E-02	1.47E-03	2.62E-02	2.54E-02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Dump Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Excavator	4.59E-01	1.60E-01	2.41E-02	1.45E-03	3.87E-02	3.76E-02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Loader	7.04E-01	2.49E-01	4.31E-02	1.49E-03	5.86E-02	5.68E-02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Roller	1.39E+00	6.28E-01	5.34E-02	1.66E-03	9.13E-02	8.86E-02
Drainage System	Drainage - 24 inch SICPP	Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Drainage System	Drainage - 24 inch SICPP	Dump Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Drainage System	Drainage - 24 inch SICPP	Excavator	4.59E-01	1.60E-01	2.41E-02	1.45E-03	3.87E-02	3.76E-02
Drainage System	Drainage - 24 inch SICPP	Loader	7.04E-01	2.49E-01	4.31E-02	1.49E-03	5.86E-02	5.68E-02
Drainage System	Drainage - 24 inch SICPP	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Drainage System	Drainage - 24 inch SICPP	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Drainage System	Drainage - 24 inch SICPP	Roller	1.39E+00	6.28E-01	5.34E-02	1.66E-03	9.13E-02	8.86E-02
Drainage System	Drainage Structures	Dump Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Drainage System	Drainage Structures	Excavator	4.59E-01	1.60E-01	2.41E-02	1.45E-03	3.87E-02	3.76E-02
Drainage System	Drainage Structures	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Drainage System	Drainage Structures	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Drainage System	Hydroseeding	Hydroseeder	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Drainage System	Hydroseeding	Off-Road Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Drainage System	Soil Erosion/Sediment Control	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Drainage System	Soil Erosion/Sediment Control	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Drainage System	Soil Erosion/Sediment Control	Pumps	4.32E+00	2.64E+00	8.19E-01	2.16E-03	2.85E-01	2.77E-01
Drainage System	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01
Drainage System	Topsoil Placement	Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Drainage System	Topsoil Placement	Dump Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Drainage System	Topsoil Placement	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fencing	Clearing and Grubbing	Chain Saw	1.53E+00	2.66E+02	7.31E+01	4.14E-03	9.75E+00	8.97E+00
Fencing	Clearing and Grubbing	Chipper/Stump Grinder	3.28E+00	1.52E+00	3.11E-01	1.87E-03	2.90E-01	2.82E-01

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fencing	Clearing and Grubbing	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fencing	Excavation (Cut to Fill)	Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Fencing	Excavation (Cut to Fill)	Dump Truck (12 cy)	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fencing	Excavation (Cut to Fill)	Excavator	4.59E-01	1.60E-01	2.41E-02	1.45E-03	3.87E-02	3.76E-02
Fencing	Excavation (Cut to Fill)	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fencing	Excavation (Cut to Fill)	Roller	1.39E+00	6.28E-01	5.34E-02	1.66E-03	9.13E-02	8.86E-02
Fencing	Fencing	Concrete Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fencing	Fencing	Dump Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fencing	Fencing	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Fencing	Fencing	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fencing	Fencing	Skid Steer Loader	4.38E+00	3.77E+00	7.59E-01	2.23E-03	5.36E-01	5.20E-01
Fencing	Fencing	Tractors/Loader/Backhoe	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01
Fencing	Grading	Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Fencing	Grading	Grader	3.67E-01	1.35E-01	2.79E-02	1.46E-03	2.69E-02	2.61E-02
Fencing	Grading	Roller	1.39E+00	6.28E-01	5.34E-02	1.66E-03	9.13E-02	8.86E-02
Fencing	Hydroseeding	Hydroseeder	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fencing	Hydroseeding	Off-Road Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fencing	Soil Erosion/Sediment Control	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Fencing	Soil Erosion/Sediment Control	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fencing	Soil Erosion/Sediment Control	Pumps	4.32E+00	2.64E+00	8.19E-01	2.16E-03	2.85E-01	2.77E-01
Fencing	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01
Fencing	Topsoil Placement	Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Fencing	Topsoil Placement	Dump Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fencing	Topsoil Placement	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Clearing and Grubbing	Chain Saw	1.53E+00	2.66E+02	7.31E+01	4.14E-03	9.75E+00	8.97E+00
Fuel Tanks	Clearing and Grubbing	Chipper/Stump Grinder	3.28E+00	1.52E+00	3.11E-01	1.87E-03	2.90E-01	2.82E-01
Fuel Tanks	Clearing and Grubbing	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Concrete Placement	Air Compressor	1.88E+00	7.72E-01	9.15E-02	1.71E-03	1.29E-01	1.25E-01
Fuel Tanks	Concrete Placement	Concrete Saws	2.63E+00	3.88E-01	1.09E-01	1.61E-03	4.22E-02	4.09E-02
Fuel Tanks	Concrete Placement	Concrete Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Concrete Placement	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Fuel Tanks	Concrete Placement	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Concrete Placement	Rubber Tired Loader	7.04E-01	2.49E-01	4.31E-02	1.49E-03	5.86E-02	5.68E-02
Fuel Tanks	Concrete Placement	Slip Form Paver	6.54E-01	2.46E-01	4.09E-02	1.49E-03	5.89E-02	5.71E-02
Fuel Tanks	Concrete Placement	Surfacing Equipment (Grooving)	3.77E+00	1.51E+00	3.56E-01	2.19E-03	1.73E-01	1.68E-01
Fuel Tanks	Construction/Erect Tanks	Crane	5.77E-01	1.44E-01	3.97E-02	1.47E-03	2.62E-02	2.54E-02
Fuel Tanks	Construction/Erect Tanks	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Construction/Erect Tanks	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Drainage - 24 inch SICPP	Excavator	4.59E-01	1.60E-01	2.41E-02	1.45E-03	3.87E-02	3.76E-02
Fuel Tanks	Drainage	Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Fuel Tanks	Drainage	Dump Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Drainage	Loader	7.04E-01	2.49E-01	4.31E-02	1.49E-03	5.86E-02	5.68E-02
Fuel Tanks	Drainage	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Fuel Tanks	Drainage	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Drainage	Roller	1.39E+00	6.28E-01	5.34E-02	1.66E-03	9.13E-02	8.86E-02
Fuel Tanks	Dust Control	Water Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Excavation (Borrow)	Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Fuel Tanks	Excavation (Borrow)	Dump Truck (12 cy)	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Excavation (Borrow)	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Excavation (Borrow)	Roller	1.39E+00	6.28E-01	5.34E-02	1.66E-03	9.13E-02	8.86E-02
Fuel Tanks	Excavation (Cut to Fill)	Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Fuel Tanks	Excavation (Cut to Fill)	Dump Truck (12 cy)	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Excavation (Cut to Fill)	Excavator	4.59E-01	1.60E-01	2.41E-02	1.45E-03	3.87E-02	3.76E-02
Fuel Tanks	Excavation (Cut to Fill)	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Excavation (Cut to Fill)	Roller	1.39E+00	6.28E-01	5.34E-02	1.66E-03	9.13E-02	8.86E-02
Fuel Tanks	Excavation (Cut to Fill)	Scraper	8.29E-01	3.42E-01	4.87E-02	1.53E-03	5.54E-02	5.37E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Excavation (Topsoil Stripping)	Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Fuel Tanks	Fencing	Concrete Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Fencing	Dump Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Fencing	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Fuel Tanks	Fencing	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Fencing	Skid Steer Loader	4.38E+00	3.77E+00	7.59E-01	2.23E-03	5.36E-01	5.20E-01
Fuel Tanks	Fencing	Tractors/Loader/Backhoe	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01
Fuel Tanks	Grading	Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Fuel Tanks	Grading	Grader	3.67E-01	1.35E-01	2.79E-02	1.46E-03	2.69E-02	2.61E-02
Fuel Tanks	Grading	Roller	1.39E+00	6.28E-01	5.34E-02	1.66E-03	9.13E-02	8.86E-02
Fuel Tanks	Hydroseeding	Hydroseeder	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Hydroseeding	Off-Road Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Markings	Flatbed Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Markings	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Fuel Tanks	Markings	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Soil Erosion/Sediment Control	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Fuel Tanks	Soil Erosion/Sediment Control	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Soil Erosion/Sediment Control	Pumps	4.32E+00	2.64E+00	8.19E-01	2.16E-03	2.85E-01	2.77E-01
Fuel Tanks	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Street Lighting	Dump Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Street Lighting	Loader	7.04E-01	2.49E-01	4.31E-02	1.49E-03	5.86E-02	5.68E-02
Fuel Tanks	Street Lighting	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Fuel Tanks	Street Lighting	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Street Lighting	Skid Steer Loader	4.38E+00	3.77E+00	7.59E-01	2.23E-03	5.36E-01	5.20E-01
Fuel Tanks	Street Lighting	Tractors/Loader/Backhoe	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01
Fuel Tanks	Subbase Placement	Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Fuel Tanks	Subbase Placement	Dump Truck (12 cy)	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Subbase Placement	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Subbase Placement	Roller	1.39E+00	6.28E-01	5.34E-02	1.66E-03	9.13E-02	8.86E-02
Fuel Tanks	Topsoil Placement	Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Fuel Tanks	Topsoil Placement	Dump Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Topsoil Placement	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Landscaping	Hydroseeding	Hydroseeder	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Landscaping	Hydroseeding	Off-Road Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Landscaping	Mulching	Dump Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Landscaping	Mulching	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Landscaping	Mulching	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Landscaping	Mulching	Tractors/Loader/Backhoe	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01
Landscaping	Sodding	Flatbed Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Landscaping	Sodding	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Landscaping	Sodding	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Landscaping	Sodding	Skid Steer Loader	4.38E+00	3.77E+00	7.59E-01	2.23E-03	5.36E-01	5.20E-01

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Landscaping	Topsoil Placement	Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Landscaping	Topsoil Placement	Dump Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Landscaping	Topsoil Placement	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Landscaping	Tree Planting	Flatbed Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Landscaping	Tree Planting	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Landscaping	Tree Planting	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Landscaping	Tree Planting	Tractors/Loader/Backhoe	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01
Landscaping	Tree Pruning	Aerial Lift	4.13E+00	2.98E+00	6.12E-01	2.22E-03	3.87E-01	3.75E-01
Landscaping	Tree Pruning	Chipper/Stump Grinder	3.28E+00	1.52E+00	3.11E-01	1.87E-03	2.90E-01	2.82E-01
Landscaping	Tree Pruning	Dump Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Landscaping	Tree Pruning	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Landscaping	Tree Pruning	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Landscaping	Tree Pruning	Pruning Saw/Chain Saw	1.53E+00	2.66E+02	7.31E+01	4.14E-03	9.75E+00	8.97E+00
Open Parking Lot @Grade - 10000 sqft	Binder Coat of Pavement	Paving Machine	1.03E+00	3.37E-01	6.25E-02	1.52E-03	7.99E-02	7.75E-02
Open Parking Lot @Grade - 10000 sqft	Binder Coat of Pavement	Ten Wheelers- Material Delivery	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Open Parking Lot @Grade - 10000 sqft	Construction Mob & Layout	Survey Crew Trucks	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Open Parking Lot @Grade - 10000 sqft	Construction Mob & Layout	Tractor Trailers Temp Fac.	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Open Parking Lot @Grade - 10000 sqft	Curbing	Bob Cat	4.38E+00	3.77E+00	7.59E-01	2.23E-03	5.36E-01	5.20E-01
Open Parking Lot @Grade - 10000 sqft	Curbing	Concrete Ready Mix Trucks	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Open Parking Lot @Grade - 10000 sqft	Curbing	Material Deliveries	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Open Parking Lot @Grade - 10000 sqft	Curbing	Tractor Trailer with Boom Hoist-Delivery	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Bulldozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Front Loader	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Ten Wheelers	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Auger Drill	2.63E+00	6.82E-01	2.03E-01	1.67E-03	1.59E-01	1.54E-01
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Fork Truck	9.02E-01	1.08E-01	1.07E-02	1.58E-03	1.83E-02	1.78E-02
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Front Loader	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Tractor Trailer- Material Delivery	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Bulldozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Chain Saws	1.53E+00	2.66E+02	7.31E+01	4.14E-03	9.75E+00	8.97E+00
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Flat Bed or Dump Trucks	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Log Chipper	3.28E+00	1.52E+00	3.11E-01	1.87E-03	2.90E-01	2.82E-01
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Mulcher	3.28E+00	1.52E+00	3.11E-01	1.87E-03	2.90E-01	2.82E-01
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Tractor	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01
Open Parking Lot @Grade - 10000 sqft	Rough Grading	Compacting Equipment	4.22E+00	2.59E+00	8.13E-01	2.16E-03	2.69E-01	2.61E-01
Open Parking Lot @Grade - 10000 sqft	Rough Grading	Small Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	40 Ton Rough Terrain Crane	5.77E-01	1.44E-01	3.97E-02	1.47E-03	2.62E-02	2.54E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	High Lift	9.02E-01	1.08E-01	1.07E-02	1.58E-03	1.83E-02	1.78E-02
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	Tractor Trailer- Material Delivery	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Open Parking Lot @Grade - 10000 sqft	Stripping	Line Painting Truck and Sprayer	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Backhoe	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Roller	1.39E+00	6.28E-01	5.34E-02	1.66E-03	9.13E-02	8.86E-02
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Tractor Trailer- Material Delivery	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Open Parking Lot @Grade - 10000 sqft	Top Coat of Asphalt	Paving Machine	1.03E+00	3.37E-01	6.25E-02	1.52E-03	7.99E-02	7.75E-02
Open Parking Lot @Grade - 10000 sqft	Top Coat of Asphalt	Ten Wheelers- Material Delivery	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Backhoe	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Fork Truck	9.02E-01	1.08E-01	1.07E-02	1.58E-03	1.83E-02	1.78E-02
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Tractor Trailer- Material Delivery	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Clearing and Grubbing	Chain Saw	1.53E+00	2.66E+02	7.31E+01	4.14E-03	9.75E+00	8.97E+00
Parking Lot	Clearing and Grubbing	Chipper/Stump Grinder	3.28E+00	1.52E+00	3.11E-01	1.87E-03	2.90E-01	2.82E-01
Parking Lot	Clearing and Grubbing	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Concrete Placement	Air Compressor	1.88E+00	7.72E-01	9.15E-02	1.71E-03	1.29E-01	1.25E-01
Parking Lot	Concrete Placement	Concrete Saws	2.63E+00	3.88E-01	1.09E-01	1.61E-03	4.22E-02	4.09E-02
Parking Lot	Concrete Placement	Concrete Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Concrete Placement	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Parking Lot	Concrete Placement	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Concrete Placement	Rubber Tired Loader	7.04E-01	2.49E-01	4.31E-02	1.49E-03	5.86E-02	5.68E-02
Parking Lot	Concrete Placement	Slip Form Paver	6.54E-01	2.46E-01	4.09E-02	1.49E-03	5.89E-02	5.71E-02
Parking Lot	Concrete Placement	Surfacing Equipment (Grooving)	3.77E+00	1.51E+00	3.56E-01	2.19E-03	1.73E-01	1.68E-01
Parking Lot	Curbing	Concrete Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Curbing	Curb/Gutter Paver	6.54E-01	2.46E-01	4.09E-02	1.49E-03	5.89E-02	5.71E-02
Parking Lot	Curbing	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Parking Lot	Curbing	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Drainage - 24 inch SICPP	Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Parking Lot	Drainage - 24 inch SICPP	Dump Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Drainage - 24 inch SICPP	Excavator	4.59E-01	1.60E-01	2.41E-02	1.45E-03	3.87E-02	3.76E-02
Parking Lot	Drainage - 24 inch SICPP	Loader	7.04E-01	2.49E-01	4.31E-02	1.49E-03	5.86E-02	5.68E-02
Parking Lot	Drainage - 24 inch SICPP	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Parking Lot	Drainage - 24 inch SICPP	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Drainage - 24 inch SICPP	Roller	1.39E+00	6.28E-01	5.34E-02	1.66E-03	9.13E-02	8.86E-02
Parking Lot	Drainage - 6 inch Perforated Underdrain	Dump Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Drainage - 6 inch Perforated Underdrain	Loader	7.04E-01	2.49E-01	4.31E-02	1.49E-03	5.86E-02	5.68E-02
Parking Lot	Drainage - 6 inch Perforated Underdrain	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Parking Lot	Drainage - 6 inch Perforated Underdrain	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01
Parking Lot	Excavation (Borrow)	Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Parking Lot	Excavation (Borrow)	Dump Truck (12 cy)	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Excavation (Borrow)	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Excavation (Borrow)	Roller	1.39E+00	6.28E-01	5.34E-02	1.66E-03	9.13E-02	8.86E-02
Parking Lot	Excavation (Cut to Fill)	Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Parking Lot	Excavation (Cut to Fill)	Dump Truck (12 cy)	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Excavation (Cut to Fill)	Excavator	4.59E-01	1.60E-01	2.41E-02	1.45E-03	3.87E-02	3.76E-02
Parking Lot	Excavation (Cut to Fill)	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Excavation (Cut to Fill)	Roller	1.39E+00	6.28E-01	5.34E-02	1.66E-03	9.13E-02	8.86E-02
Parking Lot	Excavation (Cut to Fill)	Scraper	8.29E-01	3.42E-01	4.87E-02	1.53E-03	5.54E-02	5.37E-02
Parking Lot	Excavation (Topsoil Stripping)	Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Parking Lot	Fencing	Concrete Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Fencing	Dump Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Fencing	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Parking Lot	Fencing	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Fencing	Skid Steer Loader	4.38E+00	3.77E+00	7.59E-01	2.23E-03	5.36E-01	5.20E-01
Parking Lot	Fencing	Tractors/Loader/Backhoe	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01
Parking Lot	Grading	Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Parking Lot	Grading	Grader	3.67E-01	1.35E-01	2.79E-02	1.46E-03	2.69E-02	2.61E-02
Parking Lot	Grading	Roller	1.39E+00	6.28E-01	5.34E-02	1.66E-03	9.13E-02	8.86E-02
Parking Lot	Hydroseeding	Hydroseeder	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Hydroseeding	Off-Road Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Markings	Flatbed Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Markings	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Parking Lot	Markings	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Sidewalks	Concrete Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Sidewalks	Dump Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Sidewalks	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Sidewalks	Tractors/Loader/Backhoe	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01
Parking Lot	Sidewalks	Vibratory Compactor	4.22E+00	2.59E+00	8.13E-01	2.16E-03	2.69E-01	2.61E-01
Parking Lot	Soil Erosion/Sediment Control	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Parking Lot	Soil Erosion/Sediment Control	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Soil Erosion/Sediment Control	Pumps	4.32E+00	2.64E+00	8.19E-01	2.16E-03	2.85E-01	2.77E-01
Parking Lot	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01
Parking Lot	Street Lighting	Dump Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Street Lighting	Loader	7.04E-01	2.49E-01	4.31E-02	1.49E-03	5.86E-02	5.68E-02
Parking Lot	Street Lighting	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Parking Lot	Street Lighting	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Street Lighting	Skid Steer Loader	4.38E+00	3.77E+00	7.59E-01	2.23E-03	5.36E-01	5.20E-01
Parking Lot	Street Lighting	Tractors/Loader/Backhoe	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01
Parking Lot	Subbase Placement	Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Parking Lot	Subbase Placement	Dump Truck (12 cy)	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Subbase Placement	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Subbase Placement	Roller	1.39E+00	6.28E-01	5.34E-02	1.66E-03	9.13E-02	8.86E-02
Parking Lot	Topsoil Placement	Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Parking Lot	Topsoil Placement	Dump Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Topsoil Placement	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Tree Planting	Flatbed Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Tree Planting	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Parking Lot	Tree Planting	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Tree Planting	Tractors/Loader/Backhoe	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01
Service Road	Clearing and Grubbing	Chain Saw	1.53E+00	2.66E+02	7.31E+01	4.14E-03	9.75E+00	8.97E+00

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Clearing and Grubbing	Chipper/Stump Grinder	3.28E+00	1.52E+00	3.11E-01	1.87E-03	2.90E-01	2.82E-01
Service Road	Clearing and Grubbing	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Concrete Placement	Air Compressor	1.88E+00	7.72E-01	9.15E-02	1.71E-03	1.29E-01	1.25E-01
Service Road	Concrete Placement	Concrete Saws	2.63E+00	3.88E-01	1.09E-01	1.61E-03	4.22E-02	4.09E-02
Service Road	Concrete Placement	Concrete Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Concrete Placement	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Service Road	Concrete Placement	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Concrete Placement	Rubber Tired Loader	7.04E-01	2.49E-01	4.31E-02	1.49E-03	5.86E-02	5.68E-02
Service Road	Concrete Placement	Slip Form Paver	6.54E-01	2.46E-01	4.09E-02	1.49E-03	5.89E-02	5.71E-02
Service Road	Concrete Placement	Surfacing Equipment (Grooving)	3.77E+00	1.51E+00	3.56E-01	2.19E-03	1.73E-01	1.68E-01
Service Road	Drainage - 24 inch SICPP	Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Service Road	Drainage - 24 inch SICPP	Dump Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Drainage - 24 inch SICPP	Excavator	4.59E-01	1.60E-01	2.41E-02	1.45E-03	3.87E-02	3.76E-02
Service Road	Drainage - 24 inch SICPP	Loader	7.04E-01	2.49E-01	4.31E-02	1.49E-03	5.86E-02	5.68E-02
Service Road	Drainage - 24 inch SICPP	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Service Road	Drainage - 24 inch SICPP	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Drainage - 24 inch SICPP	Roller	1.39E+00	6.28E-01	5.34E-02	1.66E-03	9.13E-02	8.86E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Drainage - 6 inch Perforated Underdrain	Dump Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Drainage - 6 inch Perforated Underdrain	Loader	7.04E-01	2.49E-01	4.31E-02	1.49E-03	5.86E-02	5.68E-02
Service Road	Drainage - 6 inch Perforated Underdrain	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Service Road	Drainage - 6 inch Perforated Underdrain	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01
Service Road	Dust Control	Water Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Excavation (Borrow)	Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Service Road	Excavation (Borrow)	Dump Truck (12 cy)	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Excavation (Borrow)	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Excavation (Borrow)	Roller	1.39E+00	6.28E-01	5.34E-02	1.66E-03	9.13E-02	8.86E-02
Service Road	Excavation (Cut to Fill)	Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Service Road	Excavation (Cut to Fill)	Dump Truck (12 cy)	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Excavation (Cut to Fill)	Excavator	4.59E-01	1.60E-01	2.41E-02	1.45E-03	3.87E-02	3.76E-02
Service Road	Excavation (Cut to Fill)	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Excavation (Cut to Fill)	Roller	1.39E+00	6.28E-01	5.34E-02	1.66E-03	9.13E-02	8.86E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Excavation (Cut to Fill)	Scraper	8.29E-01	3.42E-01	4.87E-02	1.53E-03	5.54E-02	5.37E-02
Service Road	Excavation (Topsoil Stripping)	Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Service Road	Fencing	Concrete Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Fencing	Dump Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Fencing	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Service Road	Fencing	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Fencing	Skid Steer Loader	4.38E+00	3.77E+00	7.59E-01	2.23E-03	5.36E-01	5.20E-01
Service Road	Fencing	Tractors/Loader/Backhoe	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01
Service Road	Grading	Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Service Road	Grading	Grader	3.67E-01	1.35E-01	2.79E-02	1.46E-03	2.69E-02	2.61E-02
Service Road	Grading	Roller	1.39E+00	6.28E-01	5.34E-02	1.66E-03	9.13E-02	8.86E-02
Service Road	Hydroseeding	Hydroseeder	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Hydroseeding	Off-Road Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Markings	Flatbed Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Markings	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Service Road	Markings	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Sidewalks	Concrete Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Sidewalks	Dump Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Sidewalks	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Sidewalks	Tractors/Loader/Backhoe	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01
Service Road	Sidewalks	Vibratory Compactor	4.22E+00	2.59E+00	8.13E-01	2.16E-03	2.69E-01	2.61E-01
Service Road	Soil Erosion/Sediment Control	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Soil Erosion/Sediment Control	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Soil Erosion/Sediment Control	Pumps	4.32E+00	2.64E+00	8.19E-01	2.16E-03	2.85E-01	2.77E-01
Service Road	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01
Service Road	Street Lighting	Dump Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Street Lighting	Loader	7.04E-01	2.49E-01	4.31E-02	1.49E-03	5.86E-02	5.68E-02
Service Road	Street Lighting	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Service Road	Street Lighting	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Street Lighting	Skid Steer Loader	4.38E+00	3.77E+00	7.59E-01	2.23E-03	5.36E-01	5.20E-01
Service Road	Street Lighting	Tractors/Loader/Backhoe	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01
Service Road	Subbase Placement	Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Service Road	Subbase Placement	Dump Truck (12 cy)	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Subbase Placement	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Subbase Placement	Roller	1.39E+00	6.28E-01	5.34E-02	1.66E-03	9.13E-02	8.86E-02
Service Road	Topsoil Placement	Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Service Road	Topsoil Placement	Dump Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Topsoil Placement	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Tree Planting	Flatbed Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Tree Planting	Other General Equipment	1.09E+00	2.45E-01	5.81E-02	1.51E-03	5.94E-02	5.77E-02
Service Road	Tree Planting	Pickup Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Service Road	Tree Planting	Tractors/Loader/Backhoe	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Site Work - 10000 sqft	Construction Mob & Layout	Survey Crew Trucks	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Site Work - 10000 sqft	Construction Mob & Layout	Tractor Trailers Temp Fac.	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Bulldozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Chain Saws	1.53E+00	2.66E+02	7.31E+01	4.14E-03	9.75E+00	8.97E+00
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Flat Bed or Dump Trucks	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Front Loader	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Grub the site down 2'-0	2.63E+00	3.88E-01	1.09E-01	1.61E-03	4.22E-02	4.09E-02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Log Chipper	3.28E+00	1.52E+00	3.11E-01	1.87E-03	2.90E-01	2.82E-01
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Mulcher	3.28E+00	1.52E+00	3.11E-01	1.87E-03	2.90E-01	2.82E-01
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Ten Wheelers	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Tractor	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01
Site Work - 10000 sqft	Site Restoration- Landscaping (Curbing)	Bob Cat	4.38E+00	3.77E+00	7.59E-01	2.23E-03	5.36E-01	5.20E-01

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Site Work - 10000 sqft	Site Restoration-Landscaping (Curbing)	Concrete Ready Mix Trucks	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Site Work - 10000 sqft	Site Restoration-Landscaping (Curbing)	Tractor Trailer with Boom Hoist-Delivery	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Site Work - 10000 sqft	Site Restoration-Landscaping (Rough Grading)	Compacting Equipment	4.22E+00	2.59E+00	8.13E-01	2.16E-03	2.69E-01	2.61E-01
Site Work - 10000 sqft	Site Restoration-Landscaping (Rough Grading)	Small Dozer	6.06E-01	2.13E-01	3.26E-02	1.48E-03	5.21E-02	5.05E-02
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Forktruck (Hoist)	9.02E-01	1.08E-01	1.07E-02	1.58E-03	1.83E-02	1.78E-02
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Roller	1.39E+00	6.28E-01	5.34E-02	1.66E-03	9.13E-02	8.86E-02
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Seed Truck Spreader	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Tractor Trailer- Material Delivery	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Backhoe	2.93E+00	3.02E+00	4.82E-01	2.14E-03	3.98E-01	3.86E-01
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Fork Truck	9.02E-01	1.08E-01	1.07E-02	1.58E-03	1.83E-02	1.78E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Tractor Trailer- Material Delivery	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02

Table C3. 2022 Electric CUP, construction-phase non-road equipment greenhouse gas emission factors.

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Building - 100000 sqft- 10 stories	Concrete Foundations	Backhoe	2.58E-02	3.32E-02	6.95E+02	7.06E+02
Building - 100000 sqft- 10 stories	Concrete Foundations	Concrete Pump	6.81E-02	2.81E-02	5.88E+02	6.01E+02
Building - 100000 sqft- 10 stories	Concrete Foundations	Concrete Ready Mix Trucks	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Concrete Foundations	Excavator	2.07E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Concrete Foundations	Fork Truck	8.47E-04	2.84E-02	5.96E+02	6.04E+02
Building - 100000 sqft- 10 stories	Concrete Foundations	Tool Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Concrete Foundations	Tractor Trailer- Material Delivery	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Construction Mob & Layout	Survey Crew Trucks	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Construction Mob & Layout	Tractor Trailers Temp Fac.	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Fork Truck	8.47E-04	2.84E-02	5.96E+02	6.04E+02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Generator	2.09E-02	2.81E-02	5.90E+02	5.99E+02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Grout Mixer	6.58E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Grout Wheel Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Man Lift	2.70E-02	3.32E-02	6.94E+02	7.06E+02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Tool Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Tractor Trailer- Material Delivery	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Truck Tower (Mantiwoc type)	3.38E-03	2.53E-02	5.31E+02	5.38E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Fork Truck	8.47E-04	2.84E-02	5.96E+02	6.04E+02
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Man Lift	2.70E-02	3.32E-02	6.94E+02	7.06E+02
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Tool Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Tractor Trailer- Material Delivery	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Roofing	High Lift	8.47E-04	2.84E-02	5.96E+02	6.04E+02
Building - 100000 sqft- 10 stories	Roofing	Man Lift	2.70E-02	3.32E-02	6.94E+02	7.06E+02
Building - 100000 sqft- 10 stories	Roofing	Material Deliveries	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Roofing	Tractor Trailer- Material Delivery	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Roofing	Truck Tower (Mantiwoc type)	3.38E-03	2.53E-02	5.31E+02	5.38E+02
Building - 100000 sqft- 10 stories	Security & Safety Systems	High Lift	8.47E-04	2.84E-02	5.96E+02	6.04E+02
Building - 100000 sqft- 10 stories	Security & Safety Systems	Tool Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	90 Ton Crane	3.38E-03	2.53E-02	5.31E+02	5.38E+02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Concrete Pump	6.81E-02	2.81E-02	5.88E+02	6.01E+02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Concrete Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Fork Truck	8.47E-04	2.84E-02	5.96E+02	6.04E+02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Tool Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Tractor Trailer- Steel Deliveries	1.48E-03	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Trowel Machine	6.58E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Truck Tower (Mantiwoc type)	3.38E-03	2.53E-02	5.31E+02	5.38E+02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Dump Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Excavator	2.07E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Loader	3.64E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Roller	4.45E-03	2.84E-02	5.96E+02	6.04E+02
Drainage System	Drainage - 24 inch SICPP	Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch SICPP	Dump Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch SICPP	Excavator	2.07E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch SICPP	Loader	3.64E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch SICPP	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Drainage System	Drainage - 24 inch SICPP	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch SICPP	Roller	4.45E-03	2.84E-02	5.96E+02	6.04E+02
Drainage System	Drainage Structures	Dump Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage Structures	Excavator	2.07E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage Structures	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Drainage System	Drainage Structures	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Hydroseeding	Hydroseeder	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Hydroseeding	Off-Road Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Soil Erosion/Sediment Control	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Drainage System	Soil Erosion/Sediment Control	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Soil Erosion/Sediment Control	Pumps	6.81E-02	2.81E-02	5.88E+02	6.01E+02
Drainage System	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.58E-02	3.32E-02	6.95E+02	7.06E+02
Drainage System	Topsoil Placement	Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Topsoil Placement	Dump Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Topsoil Placement	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Clearing and Grubbing	Chain Saw	1.19E+00	4.19E-02	6.86E+02	7.95E+02
Fencing	Clearing and Grubbing	Chipper/Stump Grinder	1.01E-02	2.81E-02	5.89E+02	5.98E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Fencing	Clearing and Grubbing	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Excavation (Cut to Fill)	Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Excavation (Cut to Fill)	Dump Truck (12 cy)	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Excavation (Cut to Fill)	Excavator	2.07E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Excavation (Cut to Fill)	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Excavation (Cut to Fill)	Roller	4.45E-03	2.84E-02	5.96E+02	6.04E+02
Fencing	Fencing	Concrete Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Fencing	Dump Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Fencing	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Fencing	Fencing	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Fencing	Skid Steer Loader	3.00E-02	3.32E-02	6.94E+02	7.05E+02
Fencing	Fencing	Tractors/Loader/Backhoe	2.58E-02	3.32E-02	6.95E+02	7.06E+02
Fencing	Grading	Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Grading	Grader	2.18E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Grading	Roller	4.45E-03	2.84E-02	5.96E+02	6.04E+02
Fencing	Hydroseeding	Hydroseeder	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Hydroseeding	Off-Road Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Soil Erosion/Sediment Control	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Fencing	Soil Erosion/Sediment Control	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Fencing	Soil Erosion/Sediment Control	Pumps	6.81E-02	2.81E-02	5.88E+02	6.01E+02
Fencing	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.58E-02	3.32E-02	6.95E+02	7.06E+02
Fencing	Topsoil Placement	Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Topsoil Placement	Dump Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Topsoil Placement	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Clearing and Grubbing	Chain Saw	1.19E+00	4.19E-02	6.86E+02	7.95E+02
Fuel Tanks	Clearing and Grubbing	Chipper/Stump Grinder	1.01E-02	2.81E-02	5.89E+02	5.98E+02
Fuel Tanks	Clearing and Grubbing	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Concrete Placement	Air Compressor	7.17E-03	2.81E-02	5.90E+02	5.98E+02
Fuel Tanks	Concrete Placement	Concrete Saws	1.37E-02	2.84E-02	5.96E+02	6.05E+02
Fuel Tanks	Concrete Placement	Concrete Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Concrete Placement	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Fuel Tanks	Concrete Placement	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Concrete Placement	Rubber Tired Loader	3.64E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Concrete Placement	Slip Form Paver	3.46E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Concrete Placement	Surfacing Equipment (Grooving)	3.14E-02	2.84E-02	5.95E+02	6.05E+02
Fuel Tanks	Construction/Erect Tanks	Crane	3.38E-03	2.53E-02	5.31E+02	5.38E+02
Fuel Tanks	Construction/Erect Tanks	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Fuel Tanks	Construction/Erect Tanks	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Drainage - 24 inch SICPP	Excavator	2.07E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Drainage	Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Drainage	Dump Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Drainage	Loader	3.64E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Drainage	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Fuel Tanks	Drainage	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Drainage	Roller	4.45E-03	2.84E-02	5.96E+02	6.04E+02
Fuel Tanks	Dust Control	Water Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Excavation (Borrow)	Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Excavation (Borrow)	Dump Truck (12 cy)	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Excavation (Borrow)	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Excavation (Borrow)	Roller	4.45E-03	2.84E-02	5.96E+02	6.04E+02
Fuel Tanks	Excavation (Cut to Fill)	Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Excavation (Cut to Fill)	Dump Truck (12 cy)	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Excavation (Cut to Fill)	Excavator	2.07E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Excavation (Cut to Fill)	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Excavation (Cut to Fill)	Roller	4.45E-03	2.84E-02	5.96E+02	6.04E+02
Fuel Tanks	Excavation (Cut to Fill)	Scraper	4.23E-03	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Fuel Tanks	Excavation (Topsoil Stripping)	Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Fencing	Concrete Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Fencing	Dump Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Fencing	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Fuel Tanks	Fencing	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Fencing	Skid Steer Loader	3.00E-02	3.32E-02	6.94E+02	7.05E+02
Fuel Tanks	Fencing	Tractors/Loader/Backhoe	2.58E-02	3.32E-02	6.95E+02	7.06E+02
Fuel Tanks	Grading	Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Grading	Grader	2.18E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Grading	Roller	4.45E-03	2.84E-02	5.96E+02	6.04E+02
Fuel Tanks	Hydroseeding	Hydroseeder	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Hydroseeding	Off-Road Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Markings	Flatbed Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Markings	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Fuel Tanks	Markings	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Soil Erosion/Sediment Control	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Fuel Tanks	Soil Erosion/Sediment Control	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Soil Erosion/Sediment Control	Pumps	6.81E-02	2.81E-02	5.88E+02	6.01E+02
Fuel Tanks	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.58E-02	3.32E-02	6.95E+02	7.06E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Fuel Tanks	Street Lighting	Dump Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Street Lighting	Loader	3.64E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Street Lighting	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Fuel Tanks	Street Lighting	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Street Lighting	Skid Steer Loader	3.00E-02	3.32E-02	6.94E+02	7.05E+02
Fuel Tanks	Street Lighting	Tractors/Loader/Backhoe	2.58E-02	3.32E-02	6.95E+02	7.06E+02
Fuel Tanks	Subbase Placement	Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Subbase Placement	Dump Truck (12 cy)	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Subbase Placement	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Subbase Placement	Roller	4.45E-03	2.84E-02	5.96E+02	6.04E+02
Fuel Tanks	Topsoil Placement	Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Topsoil Placement	Dump Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Topsoil Placement	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Hydroseeding	Hydroseeder	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Hydroseeding	Off-Road Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Mulching	Dump Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Mulching	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Landscaping	Mulching	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Mulching	Tractors/Loader/Backhoe	2.58E-02	3.32E-02	6.95E+02	7.06E+02
Landscaping	Sodding	Flatbed Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Sodding	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Landscaping	Sodding	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Sodding	Skid Steer Loader	3.00E-02	3.32E-02	6.94E+02	7.05E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Landscaping	Topsoil Placement	Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Topsoil Placement	Dump Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Topsoil Placement	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Tree Planting	Flatbed Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Tree Planting	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Landscaping	Tree Planting	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Tree Planting	Tractors/Loader/Backhoe	2.58E-02	3.32E-02	6.95E+02	7.06E+02
Landscaping	Tree Pruning	Aerial Lift	2.70E-02	3.32E-02	6.94E+02	7.06E+02
Landscaping	Tree Pruning	Chipper/Stump Grinder	1.01E-02	2.81E-02	5.89E+02	5.98E+02
Landscaping	Tree Pruning	Dump Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Tree Pruning	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Landscaping	Tree Pruning	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Tree Pruning	Pruning Saw/Chain Saw	1.19E+00	4.19E-02	6.86E+02	7.95E+02
Open Parking Lot @Grade - 10000 sqft	Binder Coat of Pavement	Paving Machine	4.95E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Binder Coat of Pavement	Ten Wheelers- Material Delivery	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Construction Mob & Layout	Survey Crew Trucks	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Construction Mob & Layout	Tractor Trailers Temp Fac.	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Curbing	Bob Cat	3.00E-02	3.32E-02	6.94E+02	7.05E+02
Open Parking Lot @Grade - 10000 sqft	Curbing	Concrete Ready Mix Trucks	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Curbing	Material Deliveries	1.48E-03	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Open Parking Lot @Grade - 10000 sqft	Curbing	Tractor Trailer with Boom Hoist-Delivery	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Bulldozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Front Loader	2.58E-02	3.32E-02	6.95E+02	7.06E+02
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Ten Wheelers	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Auger Drill	8.85E-03	2.53E-02	5.30E+02	5.38E+02
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Fork Truck	8.47E-04	2.84E-02	5.96E+02	6.04E+02
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Front Loader	2.58E-02	3.32E-02	6.95E+02	7.06E+02
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Tractor Trailer- Material Delivery	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Bulldozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Chain Saws	1.19E+00	4.19E-02	6.86E+02	7.95E+02
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Flat Bed or Dump Trucks	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Log Chipper	1.01E-02	2.81E-02	5.89E+02	5.98E+02
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Mulcher	1.01E-02	2.81E-02	5.89E+02	5.98E+02
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Tractor	2.58E-02	3.32E-02	6.95E+02	7.06E+02
Open Parking Lot @Grade - 10000 sqft	Rough Grading	Compacting Equipment	7.07E-02	2.81E-02	5.88E+02	6.02E+02
Open Parking Lot @Grade - 10000 sqft	Rough Grading	Small Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	40 Ton Rough Terrain Crane	3.38E-03	2.53E-02	5.31E+02	5.38E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	High Lift	8.47E-04	2.84E-02	5.96E+02	6.04E+02
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	Tractor Trailer- Material Delivery	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Stripping	Line Painting Truck and Sprayer	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Backhoe	2.58E-02	3.32E-02	6.95E+02	7.06E+02
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Roller	4.45E-03	2.84E-02	5.96E+02	6.04E+02
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Tractor Trailer- Material Delivery	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Top Coat of Asphalt	Paving Machine	4.95E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Top Coat of Asphalt	Ten Wheelers- Material Delivery	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Backhoe	2.58E-02	3.32E-02	6.95E+02	7.06E+02
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Fork Truck	8.47E-04	2.84E-02	5.96E+02	6.04E+02
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Tractor Trailer- Material Delivery	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Clearing and Grubbing	Chain Saw	1.19E+00	4.19E-02	6.86E+02	7.95E+02
Parking Lot	Clearing and Grubbing	Chipper/Stump Grinder	1.01E-02	2.81E-02	5.89E+02	5.98E+02
Parking Lot	Clearing and Grubbing	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Concrete Placement	Air Compressor	7.17E-03	2.81E-02	5.90E+02	5.98E+02
Parking Lot	Concrete Placement	Concrete Saws	1.37E-02	2.84E-02	5.96E+02	6.05E+02
Parking Lot	Concrete Placement	Concrete Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Concrete Placement	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Concrete Placement	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Concrete Placement	Rubber Tired Loader	3.64E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Concrete Placement	Slip Form Paver	3.46E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Concrete Placement	Surfacing Equipment (Grooving)	3.14E-02	2.84E-02	5.95E+02	6.05E+02
Parking Lot	Curbing	Concrete Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Curbing	Curb/Gutter Paver	3.46E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Curbing	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Curbing	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Drainage - 24 inch SICPP	Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Drainage - 24 inch SICPP	Dump Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Drainage - 24 inch SICPP	Excavator	2.07E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Drainage - 24 inch SICPP	Loader	3.64E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Drainage - 24 inch SICPP	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Drainage - 24 inch SICPP	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Drainage - 24 inch SICPP	Roller	4.45E-03	2.84E-02	5.96E+02	6.04E+02
Parking Lot	Drainage - 6 inch Perforated Underdrain	Dump Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Drainage - 6 inch Perforated Underdrain	Loader	3.64E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Drainage - 6 inch Perforated Underdrain	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Drainage - 6 inch Perforated Underdrain	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	2.58E-02	3.32E-02	6.95E+02	7.06E+02
Parking Lot	Excavation (Borrow)	Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Excavation (Borrow)	Dump Truck (12 cy)	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Excavation (Borrow)	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Excavation (Borrow)	Roller	4.45E-03	2.84E-02	5.96E+02	6.04E+02
Parking Lot	Excavation (Cut to Fill)	Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Excavation (Cut to Fill)	Dump Truck (12 cy)	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Excavation (Cut to Fill)	Excavator	2.07E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Excavation (Cut to Fill)	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Excavation (Cut to Fill)	Roller	4.45E-03	2.84E-02	5.96E+02	6.04E+02
Parking Lot	Excavation (Cut to Fill)	Scraper	4.23E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Excavation (Topsoil Stripping)	Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Fencing	Concrete Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Fencing	Dump Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Fencing	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Fencing	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Fencing	Skid Steer Loader	3.00E-02	3.32E-02	6.94E+02	7.05E+02
Parking Lot	Fencing	Tractors/Loader/Backhoe	2.58E-02	3.32E-02	6.95E+02	7.06E+02
Parking Lot	Grading	Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Grading	Grader	2.18E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Grading	Roller	4.45E-03	2.84E-02	5.96E+02	6.04E+02
Parking Lot	Hydroseeding	Hydroseeder	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Hydroseeding	Off-Road Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Markings	Flatbed Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Markings	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Markings	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Sidewalks	Concrete Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Sidewalks	Dump Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Sidewalks	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Sidewalks	Tractors/Loader/Backhoe	2.58E-02	3.32E-02	6.95E+02	7.06E+02
Parking Lot	Sidewalks	Vibratory Compactor	7.07E-02	2.81E-02	5.88E+02	6.02E+02
Parking Lot	Soil Erosion/Sediment Control	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Soil Erosion/Sediment Control	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Soil Erosion/Sediment Control	Pumps	6.81E-02	2.81E-02	5.88E+02	6.01E+02
Parking Lot	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.58E-02	3.32E-02	6.95E+02	7.06E+02
Parking Lot	Street Lighting	Dump Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Street Lighting	Loader	3.64E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Street Lighting	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Street Lighting	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Street Lighting	Skid Steer Loader	3.00E-02	3.32E-02	6.94E+02	7.05E+02
Parking Lot	Street Lighting	Tractors/Loader/Backhoe	2.58E-02	3.32E-02	6.95E+02	7.06E+02
Parking Lot	Subbase Placement	Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Subbase Placement	Dump Truck (12 cy)	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Subbase Placement	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Subbase Placement	Roller	4.45E-03	2.84E-02	5.96E+02	6.04E+02
Parking Lot	Topsoil Placement	Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Topsoil Placement	Dump Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Topsoil Placement	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Tree Planting	Flatbed Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Tree Planting	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Tree Planting	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Tree Planting	Tractors/Loader/Backhoe	2.58E-02	3.32E-02	6.95E+02	7.06E+02
Service Road	Clearing and Grubbing	Chain Saw	1.19E+00	4.19E-02	6.86E+02	7.95E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Service Road	Clearing and Grubbing	Chipper/Stump Grinder	1.01E-02	2.81E-02	5.89E+02	5.98E+02
Service Road	Clearing and Grubbing	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Concrete Placement	Air Compressor	7.17E-03	2.81E-02	5.90E+02	5.98E+02
Service Road	Concrete Placement	Concrete Saws	1.37E-02	2.84E-02	5.96E+02	6.05E+02
Service Road	Concrete Placement	Concrete Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Concrete Placement	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Service Road	Concrete Placement	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Concrete Placement	Rubber Tired Loader	3.64E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Concrete Placement	Slip Form Paver	3.46E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Concrete Placement	Surfacing Equipment (Grooving)	3.14E-02	2.84E-02	5.95E+02	6.05E+02
Service Road	Drainage - 24 inch SICPP	Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Drainage - 24 inch SICPP	Dump Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Drainage - 24 inch SICPP	Excavator	2.07E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Drainage - 24 inch SICPP	Loader	3.64E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Drainage - 24 inch SICPP	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Service Road	Drainage - 24 inch SICPP	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Drainage - 24 inch SICPP	Roller	4.45E-03	2.84E-02	5.96E+02	6.04E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Service Road	Drainage - 6 inch Perforated Underdrain	Dump Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Drainage - 6 inch Perforated Underdrain	Loader	3.64E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Drainage - 6 inch Perforated Underdrain	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Service Road	Drainage - 6 inch Perforated Underdrain	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	2.58E-02	3.32E-02	6.95E+02	7.06E+02
Service Road	Dust Control	Water Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Excavation (Borrow)	Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Excavation (Borrow)	Dump Truck (12 cy)	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Excavation (Borrow)	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Excavation (Borrow)	Roller	4.45E-03	2.84E-02	5.96E+02	6.04E+02
Service Road	Excavation (Cut to Fill)	Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Excavation (Cut to Fill)	Dump Truck (12 cy)	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Excavation (Cut to Fill)	Excavator	2.07E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Excavation (Cut to Fill)	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Excavation (Cut to Fill)	Roller	4.45E-03	2.84E-02	5.96E+02	6.04E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Service Road	Excavation (Cut to Fill)	Scraper	4.23E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Excavation (Topsoil Stripping)	Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Fencing	Concrete Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Fencing	Dump Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Fencing	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Service Road	Fencing	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Fencing	Skid Steer Loader	3.00E-02	3.32E-02	6.94E+02	7.05E+02
Service Road	Fencing	Tractors/Loader/Backhoe	2.58E-02	3.32E-02	6.95E+02	7.06E+02
Service Road	Grading	Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Grading	Grader	2.18E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Grading	Roller	4.45E-03	2.84E-02	5.96E+02	6.04E+02
Service Road	Hydroseeding	Hydroseeder	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Hydroseeding	Off-Road Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Markings	Flatbed Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Markings	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Service Road	Markings	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Sidewalks	Concrete Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Sidewalks	Dump Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Sidewalks	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Sidewalks	Tractors/Loader/Backhoe	2.58E-02	3.32E-02	6.95E+02	7.06E+02
Service Road	Sidewalks	Vibratory Compactor	7.07E-02	2.81E-02	5.88E+02	6.02E+02
Service Road	Soil Erosion/Sediment Control	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Service Road	Soil Erosion/Sediment Control	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Soil Erosion/Sediment Control	Pumps	6.81E-02	2.81E-02	5.88E+02	6.01E+02
Service Road	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.58E-02	3.32E-02	6.95E+02	7.06E+02
Service Road	Street Lighting	Dump Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Street Lighting	Loader	3.64E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Street Lighting	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Service Road	Street Lighting	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Street Lighting	Skid Steer Loader	3.00E-02	3.32E-02	6.94E+02	7.05E+02
Service Road	Street Lighting	Tractors/Loader/Backhoe	2.58E-02	3.32E-02	6.95E+02	7.06E+02
Service Road	Subbase Placement	Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Subbase Placement	Dump Truck (12 cy)	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Subbase Placement	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Subbase Placement	Roller	4.45E-03	2.84E-02	5.96E+02	6.04E+02
Service Road	Topsoil Placement	Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Topsoil Placement	Dump Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Topsoil Placement	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Tree Planting	Flatbed Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Tree Planting	Other General Equipment	4.84E-03	2.53E-02	5.31E+02	5.38E+02
Service Road	Tree Planting	Pickup Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Tree Planting	Tractors/Loader/Backhoe	2.58E-02	3.32E-02	6.95E+02	7.06E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Site Work - 10000 sqft	Construction Mob & Layout	Survey Crew Trucks	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Construction Mob & Layout	Tractor Trailers Temp Fac.	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Bulldozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Chain Saws	1.19E+00	4.19E-02	6.86E+02	7.95E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Flat Bed or Dump Trucks	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Front Loader	2.58E-02	3.32E-02	6.95E+02	7.06E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Grub the site down 2'-0	1.37E-02	2.84E-02	5.96E+02	6.05E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Log Chipper	1.01E-02	2.81E-02	5.89E+02	5.98E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Mulcher	1.01E-02	2.81E-02	5.89E+02	5.98E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Ten Wheelers	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Tractor	2.58E-02	3.32E-02	6.95E+02	7.06E+02
Site Work - 10000 sqft	Site Restoration- Landscaping (Curbing)	Bob Cat	3.00E-02	3.32E-02	6.94E+02	7.05E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Site Work - 10000 sqft	Site Restoration- Landscaping (Curbing)	Concrete Ready Mix Trucks	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Site Restoration- Landscaping (Curbing)	Tractor Trailer with Boom Hoist- Delivery	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Site Restoration- Landscaping (Rough Grading)	Compacting Equipment	7.07E-02	2.81E-02	5.88E+02	6.02E+02
Site Work - 10000 sqft	Site Restoration- Landscaping (Rough Grading)	Small Dozer	2.83E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Site Restoration- Landscaping (Top Soil Seed and Plantings)	Forktruck (Hoist)	8.47E-04	2.84E-02	5.96E+02	6.04E+02
Site Work - 10000 sqft	Site Restoration- Landscaping (Top Soil Seed and Plantings)	Roller	4.45E-03	2.84E-02	5.96E+02	6.04E+02
Site Work - 10000 sqft	Site Restoration- Landscaping (Top Soil Seed and Plantings)	Seed Truck Spreader	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Site Restoration- Landscaping (Top Soil Seed and Plantings)	Tractor Trailer- Material Delivery	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Backhoe	2.58E-02	3.32E-02	6.95E+02	7.06E+02
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Fork Truck	8.47E-04	2.84E-02	5.96E+02	6.04E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Tractor Trailer- Material Delivery	1.48E-03	2.56E-02	5.37E+02	5.44E+02

Table C4. 2023 Electric CUP, construction-phase non-road equipment criteria air pollutant emission factors.

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Concrete Foundations	Backhoe	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01
Building - 100000 sqft- 10 stories	Concrete Foundations	Concrete Pump	4.28E+00	2.60E+00	8.20E-01	2.16E-03	2.75E-01	2.67E-01
Building - 100000 sqft- 10 stories	Concrete Foundations	Concrete Ready Mix Trucks	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Building - 100000 sqft- 10 stories	Concrete Foundations	Excavator	3.52E-01	1.15E-01	1.75E-02	1.44E-03	2.64E-02	2.56E-02
Building - 100000 sqft- 10 stories	Concrete Foundations	Fork Truck	8.76E-01	7.87E-02	9.01E-03	1.57E-03	1.37E-02	1.33E-02
Building - 100000 sqft- 10 stories	Concrete Foundations	Tool Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Building - 100000 sqft- 10 stories	Concrete Foundations	Tractor Trailer- Material Delivery	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Building - 100000 sqft- 10 stories	Construction Mob & Layout	Survey Crew Trucks	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Building - 100000 sqft- 10 stories	Construction Mob & Layout	Tractor Trailers Temp Fac.	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Fork Truck	8.76E-01	7.87E-02	9.01E-03	1.57E-03	1.37E-02	1.33E-02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Generator	3.34E+00	9.37E-01	2.67E-01	1.80E-03	1.58E-01	1.54E-01
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Grout Mixer	1.57E+00	7.31E-01	1.02E-01	1.63E-03	1.13E-01	1.09E-01

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Grout Wheel Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Man Lift	3.95E+00	2.70E+00	5.47E-01	2.18E-03	3.44E-01	3.34E-01
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Tool Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Tractor Trailer- Material Delivery	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Truck Tower (Mantiwoc type)	4.70E-01	1.18E-01	3.33E-02	1.46E-03	2.16E-02	2.10E-02
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Fork Truck	8.76E-01	7.87E-02	9.01E-03	1.57E-03	1.37E-02	1.33E-02
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Man Lift	3.95E+00	2.70E+00	5.47E-01	2.18E-03	3.44E-01	3.34E-01
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Tool Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Tractor Trailer- Material Delivery	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Building - 100000 sqft- 10 stories	Roofing	High Lift	8.76E-01	7.87E-02	9.01E-03	1.57E-03	1.37E-02	1.33E-02
Building - 100000 sqft- 10 stories	Roofing	Man Lift	3.95E+00	2.70E+00	5.47E-01	2.18E-03	3.44E-01	3.34E-01
Building - 100000 sqft- 10 stories	Roofing	Material Deliveries	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Building - 100000 sqft- 10 stories	Roofing	Tractor Trailer- Material Delivery	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Building - 100000 sqft- 10 stories	Roofing	Truck Tower (Mantiwoc type)	4.70E-01	1.18E-01	3.33E-02	1.46E-03	2.16E-02	2.10E-02
Building - 100000 sqft- 10 stories	Security & Safety Systems	High Lift	8.76E-01	7.87E-02	9.01E-03	1.57E-03	1.37E-02	1.33E-02
Building - 100000 sqft- 10 stories	Security & Safety Systems	Tool Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	90 Ton Crane	4.70E-01	1.18E-01	3.33E-02	1.46E-03	2.16E-02	2.10E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Concrete Pump	4.28E+00	2.60E+00	8.20E-01	2.16E-03	2.75E-01	2.67E-01
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Concrete Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Fork Truck	8.76E-01	7.87E-02	9.01E-03	1.57E-03	1.37E-02	1.33E-02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Tool Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Tractor Trailer- Steel Deliveries	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Trowel Machine	1.57E+00	7.31E-01	1.02E-01	1.63E-03	1.13E-01	1.09E-01
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Truck Tower (Mantiwoc type)	4.70E-01	1.18E-01	3.33E-02	1.46E-03	2.16E-02	2.10E-02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Dump Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Excavator	3.52E-01	1.15E-01	1.75E-02	1.44E-03	2.64E-02	2.56E-02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Loader	5.83E-01	2.07E-01	3.54E-02	1.47E-03	4.85E-02	4.70E-02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Roller	1.28E+00	5.05E-01	4.29E-02	1.64E-03	7.41E-02	7.18E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Drainage System	Drainage - 24 inch SICPP	Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Drainage System	Drainage - 24 inch SICPP	Dump Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Drainage System	Drainage - 24 inch SICPP	Excavator	3.52E-01	1.15E-01	1.75E-02	1.44E-03	2.64E-02	2.56E-02
Drainage System	Drainage - 24 inch SICPP	Loader	5.83E-01	2.07E-01	3.54E-02	1.47E-03	4.85E-02	4.70E-02
Drainage System	Drainage - 24 inch SICPP	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Drainage System	Drainage - 24 inch SICPP	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Drainage System	Drainage - 24 inch SICPP	Roller	1.28E+00	5.05E-01	4.29E-02	1.64E-03	7.41E-02	7.18E-02
Drainage System	Drainage Structures	Dump Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Drainage System	Drainage Structures	Excavator	3.52E-01	1.15E-01	1.75E-02	1.44E-03	2.64E-02	2.56E-02
Drainage System	Drainage Structures	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Drainage System	Drainage Structures	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Drainage System	Hydroseeding	Hydroseeder	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Drainage System	Hydroseeding	Off-Road Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Drainage System	Soil Erosion/Sediment Control	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Drainage System	Soil Erosion/Sediment Control	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Drainage System	Soil Erosion/Sediment Control	Pumps	4.28E+00	2.60E+00	8.20E-01	2.16E-03	2.75E-01	2.67E-01

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Drainage System	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01
Drainage System	Topsoil Placement	Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Drainage System	Topsoil Placement	Dump Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Drainage System	Topsoil Placement	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fencing	Clearing and Grubbing	Chain Saw	1.53E+00	2.66E+02	7.31E+01	4.14E-03	9.75E+00	8.97E+00
Fencing	Clearing and Grubbing	Chipper/Stump Grinder	3.02E+00	1.38E+00	2.77E-01	1.84E-03	2.60E-01	2.53E-01
Fencing	Clearing and Grubbing	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fencing	Excavation (Cut to Fill)	Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Fencing	Excavation (Cut to Fill)	Dump Truck (12 cy)	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fencing	Excavation (Cut to Fill)	Excavator	3.52E-01	1.15E-01	1.75E-02	1.44E-03	2.64E-02	2.56E-02
Fencing	Excavation (Cut to Fill)	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fencing	Excavation (Cut to Fill)	Roller	1.28E+00	5.05E-01	4.29E-02	1.64E-03	7.41E-02	7.18E-02
Fencing	Fencing	Concrete Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fencing	Fencing	Dump Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fencing	Fencing	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Fencing	Fencing	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fencing	Fencing	Skid Steer Loader	4.23E+00	3.52E+00	6.99E-01	2.21E-03	4.94E-01	4.80E-01
Fencing	Fencing	Tractors/Loader/Backhoe	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01
Fencing	Grading	Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Fencing	Grading	Grader	2.82E-01	9.61E-02	2.16E-02	1.45E-03	1.92E-02	1.86E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fencing	Grading	Roller	1.28E+00	5.05E-01	4.29E-02	1.64E-03	7.41E-02	7.18E-02
Fencing	Hydroseeding	Hydroseeder	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fencing	Hydroseeding	Off-Road Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fencing	Soil Erosion/Sediment Control	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Fencing	Soil Erosion/Sediment Control	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fencing	Soil Erosion/Sediment Control	Pumps	4.28E+00	2.60E+00	8.20E-01	2.16E-03	2.75E-01	2.67E-01
Fencing	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01
Fencing	Topsoil Placement	Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Fencing	Topsoil Placement	Dump Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fencing	Topsoil Placement	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fuel Tanks	Clearing and Grubbing	Chain Saw	1.53E+00	2.66E+02	7.31E+01	4.14E-03	9.75E+00	8.97E+00
Fuel Tanks	Clearing and Grubbing	Chipper/Stump Grinder	3.02E+00	1.38E+00	2.77E-01	1.84E-03	2.60E-01	2.53E-01
Fuel Tanks	Clearing and Grubbing	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fuel Tanks	Concrete Placement	Air Compressor	1.72E+00	6.52E-01	7.60E-02	1.68E-03	1.10E-01	1.07E-01
Fuel Tanks	Concrete Placement	Concrete Saws	2.59E+00	3.51E-01	1.03E-01	1.59E-03	3.42E-02	3.32E-02
Fuel Tanks	Concrete Placement	Concrete Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fuel Tanks	Concrete Placement	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Concrete Placement	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fuel Tanks	Concrete Placement	Rubber Tired Loader	5.83E-01	2.07E-01	3.54E-02	1.47E-03	4.85E-02	4.70E-02
Fuel Tanks	Concrete Placement	Slip Form Paver	5.47E-01	2.10E-01	3.40E-02	1.47E-03	5.05E-02	4.90E-02
Fuel Tanks	Concrete Placement	Surfacing Equipment (Grooving)	3.77E+00	1.50E+00	3.54E-01	2.19E-03	1.72E-01	1.67E-01
Fuel Tanks	Construction/Erect Tanks	Crane	4.70E-01	1.18E-01	3.33E-02	1.46E-03	2.16E-02	2.10E-02
Fuel Tanks	Construction/Erect Tanks	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Fuel Tanks	Construction/Erect Tanks	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fuel Tanks	Drainage - 24 inch SICPP	Excavator	3.52E-01	1.15E-01	1.75E-02	1.44E-03	2.64E-02	2.56E-02
Fuel Tanks	Drainage	Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Fuel Tanks	Drainage	Dump Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fuel Tanks	Drainage	Loader	5.83E-01	2.07E-01	3.54E-02	1.47E-03	4.85E-02	4.70E-02
Fuel Tanks	Drainage	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Fuel Tanks	Drainage	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fuel Tanks	Drainage	Roller	1.28E+00	5.05E-01	4.29E-02	1.64E-03	7.41E-02	7.18E-02
Fuel Tanks	Dust Control	Water Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fuel Tanks	Excavation (Borrow)	Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Fuel Tanks	Excavation (Borrow)	Dump Truck (12 cy)	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fuel Tanks	Excavation (Borrow)	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fuel Tanks	Excavation (Borrow)	Roller	1.28E+00	5.05E-01	4.29E-02	1.64E-03	7.41E-02	7.18E-02
Fuel Tanks	Excavation (Cut to Fill)	Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Excavation (Cut to Fill)	Dump Truck (12 cy)	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fuel Tanks	Excavation (Cut to Fill)	Excavator	3.52E-01	1.15E-01	1.75E-02	1.44E-03	2.64E-02	2.56E-02
Fuel Tanks	Excavation (Cut to Fill)	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fuel Tanks	Excavation (Cut to Fill)	Roller	1.28E+00	5.05E-01	4.29E-02	1.64E-03	7.41E-02	7.18E-02
Fuel Tanks	Excavation (Cut to Fill)	Scraper	7.04E-01	2.82E-01	4.13E-02	1.51E-03	4.58E-02	4.45E-02
Fuel Tanks	Excavation (Topsoil Stripping)	Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Fuel Tanks	Fencing	Concrete Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fuel Tanks	Fencing	Dump Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fuel Tanks	Fencing	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Fuel Tanks	Fencing	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fuel Tanks	Fencing	Skid Steer Loader	4.23E+00	3.52E+00	6.99E-01	2.21E-03	4.94E-01	4.80E-01
Fuel Tanks	Fencing	Tractors/Loader/Backhoe	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01
Fuel Tanks	Grading	Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Fuel Tanks	Grading	Grader	2.82E-01	9.61E-02	2.16E-02	1.45E-03	1.92E-02	1.86E-02
Fuel Tanks	Grading	Roller	1.28E+00	5.05E-01	4.29E-02	1.64E-03	7.41E-02	7.18E-02
Fuel Tanks	Hydroseeding	Hydroseeder	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fuel Tanks	Hydroseeding	Off-Road Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fuel Tanks	Markings	Flatbed Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fuel Tanks	Markings	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Fuel Tanks	Markings	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Soil Erosion/Sediment Control	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Fuel Tanks	Soil Erosion/Sediment Control	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fuel Tanks	Soil Erosion/Sediment Control	Pumps	4.28E+00	2.60E+00	8.20E-01	2.16E-03	2.75E-01	2.67E-01
Fuel Tanks	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01
Fuel Tanks	Street Lighting	Dump Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fuel Tanks	Street Lighting	Loader	5.83E-01	2.07E-01	3.54E-02	1.47E-03	4.85E-02	4.70E-02
Fuel Tanks	Street Lighting	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Fuel Tanks	Street Lighting	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fuel Tanks	Street Lighting	Skid Steer Loader	4.23E+00	3.52E+00	6.99E-01	2.21E-03	4.94E-01	4.80E-01
Fuel Tanks	Street Lighting	Tractors/Loader/Backhoe	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01
Fuel Tanks	Subbase Placement	Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Fuel Tanks	Subbase Placement	Dump Truck (12 cy)	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fuel Tanks	Subbase Placement	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fuel Tanks	Subbase Placement	Roller	1.28E+00	5.05E-01	4.29E-02	1.64E-03	7.41E-02	7.18E-02
Fuel Tanks	Topsoil Placement	Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Fuel Tanks	Topsoil Placement	Dump Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fuel Tanks	Topsoil Placement	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Landscaping	Hydroseeding	Hydroseeder	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Landscaping	Hydroseeding	Off-Road Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Landscaping	Mulching	Dump Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Landscaping	Mulching	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Landscaping	Mulching	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Landscaping	Mulching	Tractors/Loader/Backhoe	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01
Landscaping	Sodding	Flatbed Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Landscaping	Sodding	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Landscaping	Sodding	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Landscaping	Sodding	Skid Steer Loader	4.23E+00	3.52E+00	6.99E-01	2.21E-03	4.94E-01	4.80E-01
Landscaping	Topsoil Placement	Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Landscaping	Topsoil Placement	Dump Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Landscaping	Topsoil Placement	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Landscaping	Tree Planting	Flatbed Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Landscaping	Tree Planting	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Landscaping	Tree Planting	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Landscaping	Tree Planting	Tractors/Loader/Backhoe	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01
Landscaping	Tree Pruning	Aerial Lift	3.95E+00	2.70E+00	5.47E-01	2.18E-03	3.44E-01	3.34E-01
Landscaping	Tree Pruning	Chipper/Stump Grinder	3.02E+00	1.38E+00	2.77E-01	1.84E-03	2.60E-01	2.53E-01
Landscaping	Tree Pruning	Dump Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Landscaping	Tree Pruning	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Landscaping	Tree Pruning	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Landscaping	Tree Pruning	Pruning Saw/Chain Saw	1.53E+00	2.66E+02	7.31E+01	4.14E-03	9.75E+00	8.97E+00
Open Parking Lot @Grade - 10000 sqft	Binder Coat of Pavement	Paving Machine	8.91E-01	2.83E-01	5.19E-02	1.50E-03	6.64E-02	6.44E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Open Parking Lot @Grade - 10000 sqft	Binder Coat of Pavement	Ten Wheelers- Material Delivery	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Open Parking Lot @Grade - 10000 sqft	Construction Mob & Layout	Survey Crew Trucks	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Open Parking Lot @Grade - 10000 sqft	Construction Mob & Layout	Tractor Trailers Temp Fac.	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Open Parking Lot @Grade - 10000 sqft	Curbing	Bob Cat	4.23E+00	3.52E+00	6.99E-01	2.21E-03	4.94E-01	4.80E-01
Open Parking Lot @Grade - 10000 sqft	Curbing	Concrete Ready Mix Trucks	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Open Parking Lot @Grade - 10000 sqft	Curbing	Material Deliveries	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Open Parking Lot @Grade - 10000 sqft	Curbing	Tractor Trailer with Boom Hoist- Delivery	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Bulldozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Front Loader	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Ten Wheelers	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Auger Drill	2.41E+00	6.26E-01	1.86E-01	1.65E-03	1.46E-01	1.42E-01
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Fork Truck	8.76E-01	7.87E-02	9.01E-03	1.57E-03	1.37E-02	1.33E-02
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Front Loader	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Tractor Trailer- Material Delivery	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Bulldozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Chain Saws	1.53E+00	2.66E+02	7.31E+01	4.14E-03	9.75E+00	8.97E+00
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Flat Bed or Dump Trucks	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Log Chipper	3.02E+00	1.38E+00	2.77E-01	1.84E-03	2.60E-01	2.53E-01
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Mulcher	3.02E+00	1.38E+00	2.77E-01	1.84E-03	2.60E-01	2.53E-01
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Tractor	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01
Open Parking Lot @Grade - 10000 sqft	Rough Grading	Compacting Equipment	4.20E+00	2.57E+00	8.18E-01	2.16E-03	2.62E-01	2.54E-01
Open Parking Lot @Grade - 10000 sqft	Rough Grading	Small Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	40 Ton Rough Terrain Crane	4.70E-01	1.18E-01	3.33E-02	1.46E-03	2.16E-02	2.10E-02
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	High Lift	8.76E-01	7.87E-02	9.01E-03	1.57E-03	1.37E-02	1.33E-02
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	Tractor Trailer- Material Delivery	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Open Parking Lot @Grade - 10000 sqft	Stripping	Line Painting Truck and Sprayer	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Backhoe	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Roller	1.28E+00	5.05E-01	4.29E-02	1.64E-03	7.41E-02	7.18E-02
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Tractor Trailer- Material Delivery	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Open Parking Lot @Grade - 10000 sqft	Top Coat of Asphalt	Paving Machine	8.91E-01	2.83E-01	5.19E-02	1.50E-03	6.64E-02	6.44E-02
Open Parking Lot @Grade - 10000 sqft	Top Coat of Asphalt	Ten Wheelers- Material Delivery	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Backhoe	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Fork Truck	8.76E-01	7.87E-02	9.01E-03	1.57E-03	1.37E-02	1.33E-02
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Tractor Trailer- Material Delivery	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Clearing and Grubbing	Chain Saw	1.53E+00	2.66E+02	7.31E+01	4.14E-03	9.75E+00	8.97E+00
Parking Lot	Clearing and Grubbing	Chipper/Stump Grinder	3.02E+00	1.38E+00	2.77E-01	1.84E-03	2.60E-01	2.53E-01
Parking Lot	Clearing and Grubbing	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Concrete Placement	Air Compressor	1.72E+00	6.52E-01	7.60E-02	1.68E-03	1.10E-01	1.07E-01
Parking Lot	Concrete Placement	Concrete Saws	2.59E+00	3.51E-01	1.03E-01	1.59E-03	3.42E-02	3.32E-02
Parking Lot	Concrete Placement	Concrete Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Concrete Placement	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Parking Lot	Concrete Placement	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Concrete Placement	Rubber Tired Loader	5.83E-01	2.07E-01	3.54E-02	1.47E-03	4.85E-02	4.70E-02
Parking Lot	Concrete Placement	Slip Form Paver	5.47E-01	2.10E-01	3.40E-02	1.47E-03	5.05E-02	4.90E-02
Parking Lot	Concrete Placement	Surfacing Equipment (Grooving)	3.77E+00	1.50E+00	3.54E-01	2.19E-03	1.72E-01	1.67E-01
Parking Lot	Curbing	Concrete Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Curbing	Curb/Gutter Paver	5.47E-01	2.10E-01	3.40E-02	1.47E-03	5.05E-02	4.90E-02
Parking Lot	Curbing	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Parking Lot	Curbing	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Drainage - 24 inch SICPP	Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Parking Lot	Drainage - 24 inch SICPP	Dump Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Drainage - 24 inch SICPP	Excavator	3.52E-01	1.15E-01	1.75E-02	1.44E-03	2.64E-02	2.56E-02
Parking Lot	Drainage - 24 inch SICPP	Loader	5.83E-01	2.07E-01	3.54E-02	1.47E-03	4.85E-02	4.70E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Drainage - 24 inch SICPP	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Parking Lot	Drainage - 24 inch SICPP	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Drainage - 24 inch SICPP	Roller	1.28E+00	5.05E-01	4.29E-02	1.64E-03	7.41E-02	7.18E-02
Parking Lot	Drainage - 6 inch Perforated Underdrain	Dump Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Drainage - 6 inch Perforated Underdrain	Loader	5.83E-01	2.07E-01	3.54E-02	1.47E-03	4.85E-02	4.70E-02
Parking Lot	Drainage - 6 inch Perforated Underdrain	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Parking Lot	Drainage - 6 inch Perforated Underdrain	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01
Parking Lot	Excavation (Borrow)	Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Parking Lot	Excavation (Borrow)	Dump Truck (12 cy)	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Excavation (Borrow)	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Excavation (Borrow)	Roller	1.28E+00	5.05E-01	4.29E-02	1.64E-03	7.41E-02	7.18E-02
Parking Lot	Excavation (Cut to Fill)	Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Parking Lot	Excavation (Cut to Fill)	Dump Truck (12 cy)	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Excavation (Cut to Fill)	Excavator	3.52E-01	1.15E-01	1.75E-02	1.44E-03	2.64E-02	2.56E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Excavation (Cut to Fill)	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Excavation (Cut to Fill)	Roller	1.28E+00	5.05E-01	4.29E-02	1.64E-03	7.41E-02	7.18E-02
Parking Lot	Excavation (Cut to Fill)	Scraper	7.04E-01	2.82E-01	4.13E-02	1.51E-03	4.58E-02	4.45E-02
Parking Lot	Excavation (Topsoil Stripping)	Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Parking Lot	Fencing	Concrete Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Fencing	Dump Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Fencing	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Parking Lot	Fencing	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Fencing	Skid Steer Loader	4.23E+00	3.52E+00	6.99E-01	2.21E-03	4.94E-01	4.80E-01
Parking Lot	Fencing	Tractors/Loader/Backhoe	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01
Parking Lot	Grading	Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Parking Lot	Grading	Grader	2.82E-01	9.61E-02	2.16E-02	1.45E-03	1.92E-02	1.86E-02
Parking Lot	Grading	Roller	1.28E+00	5.05E-01	4.29E-02	1.64E-03	7.41E-02	7.18E-02
Parking Lot	Hydroseeding	Hydroseeder	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Hydroseeding	Off-Road Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Markings	Flatbed Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Markings	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Parking Lot	Markings	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Sidewalks	Concrete Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Sidewalks	Dump Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Sidewalks	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Sidewalks	Tractors/Loader/Backhoe	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Sidewalks	Vibratory Compactor	4.20E+00	2.57E+00	8.18E-01	2.16E-03	2.62E-01	2.54E-01
Parking Lot	Soil Erosion/Sediment Control	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Parking Lot	Soil Erosion/Sediment Control	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Soil Erosion/Sediment Control	Pumps	4.28E+00	2.60E+00	8.20E-01	2.16E-03	2.75E-01	2.67E-01
Parking Lot	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01
Parking Lot	Street Lighting	Dump Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Street Lighting	Loader	5.83E-01	2.07E-01	3.54E-02	1.47E-03	4.85E-02	4.70E-02
Parking Lot	Street Lighting	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Parking Lot	Street Lighting	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Street Lighting	Skid Steer Loader	4.23E+00	3.52E+00	6.99E-01	2.21E-03	4.94E-01	4.80E-01
Parking Lot	Street Lighting	Tractors/Loader/Backhoe	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01
Parking Lot	Subbase Placement	Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Parking Lot	Subbase Placement	Dump Truck (12 cy)	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Subbase Placement	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Subbase Placement	Roller	1.28E+00	5.05E-01	4.29E-02	1.64E-03	7.41E-02	7.18E-02
Parking Lot	Topsoil Placement	Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Parking Lot	Topsoil Placement	Dump Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Topsoil Placement	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Tree Planting	Flatbed Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Tree Planting	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Parking Lot	Tree Planting	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Tree Planting	Tractors/Loader/Backhoe	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01
Service Road	Clearing and Grubbing	Chain Saw	1.53E+00	2.66E+02	7.31E+01	4.14E-03	9.75E+00	8.97E+00
Service Road	Clearing and Grubbing	Chipper/Stump Grinder	3.02E+00	1.38E+00	2.77E-01	1.84E-03	2.60E-01	2.53E-01
Service Road	Clearing and Grubbing	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Service Road	Concrete Placement	Air Compressor	1.72E+00	6.52E-01	7.60E-02	1.68E-03	1.10E-01	1.07E-01
Service Road	Concrete Placement	Concrete Saws	2.59E+00	3.51E-01	1.03E-01	1.59E-03	3.42E-02	3.32E-02
Service Road	Concrete Placement	Concrete Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Service Road	Concrete Placement	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Service Road	Concrete Placement	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Service Road	Concrete Placement	Rubber Tired Loader	5.83E-01	2.07E-01	3.54E-02	1.47E-03	4.85E-02	4.70E-02
Service Road	Concrete Placement	Slip Form Paver	5.47E-01	2.10E-01	3.40E-02	1.47E-03	5.05E-02	4.90E-02
Service Road	Concrete Placement	Surfacing Equipment (Grooving)	3.77E+00	1.50E+00	3.54E-01	2.19E-03	1.72E-01	1.67E-01
Service Road	Drainage - 24 inch SICPP	Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Service Road	Drainage - 24 inch SICPP	Dump Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Service Road	Drainage - 24 inch SICPP	Excavator	3.52E-01	1.15E-01	1.75E-02	1.44E-03	2.64E-02	2.56E-02
Service Road	Drainage - 24 inch SICPP	Loader	5.83E-01	2.07E-01	3.54E-02	1.47E-03	4.85E-02	4.70E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Drainage - 24 inch SICPP	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Service Road	Drainage - 24 inch SICPP	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Service Road	Drainage - 24 inch SICPP	Roller	1.28E+00	5.05E-01	4.29E-02	1.64E-03	7.41E-02	7.18E-02
Service Road	Drainage - 6 inch Perforated Underdrain	Dump Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Service Road	Drainage - 6 inch Perforated Underdrain	Loader	5.83E-01	2.07E-01	3.54E-02	1.47E-03	4.85E-02	4.70E-02
Service Road	Drainage - 6 inch Perforated Underdrain	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Service Road	Drainage - 6 inch Perforated Underdrain	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Service Road	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01
Service Road	Dust Control	Water Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Service Road	Excavation (Borrow)	Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Service Road	Excavation (Borrow)	Dump Truck (12 cy)	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Service Road	Excavation (Borrow)	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Service Road	Excavation (Borrow)	Roller	1.28E+00	5.05E-01	4.29E-02	1.64E-03	7.41E-02	7.18E-02
Service Road	Excavation (Cut to Fill)	Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Service Road	Excavation (Cut to Fill)	Dump Truck (12 cy)	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Excavation (Cut to Fill)	Excavator	3.52E-01	1.15E-01	1.75E-02	1.44E-03	2.64E-02	2.56E-02
Service Road	Excavation (Cut to Fill)	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Service Road	Excavation (Cut to Fill)	Roller	1.28E+00	5.05E-01	4.29E-02	1.64E-03	7.41E-02	7.18E-02
Service Road	Excavation (Cut to Fill)	Scraper	7.04E-01	2.82E-01	4.13E-02	1.51E-03	4.58E-02	4.45E-02
Service Road	Excavation (Topsoil Stripping)	Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Service Road	Fencing	Concrete Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Service Road	Fencing	Dump Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Service Road	Fencing	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Service Road	Fencing	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Service Road	Fencing	Skid Steer Loader	4.23E+00	3.52E+00	6.99E-01	2.21E-03	4.94E-01	4.80E-01
Service Road	Fencing	Tractors/Loader/Backhoe	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01
Service Road	Grading	Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Service Road	Grading	Grader	2.82E-01	9.61E-02	2.16E-02	1.45E-03	1.92E-02	1.86E-02
Service Road	Grading	Roller	1.28E+00	5.05E-01	4.29E-02	1.64E-03	7.41E-02	7.18E-02
Service Road	Hydroseeding	Hydroseeder	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Service Road	Hydroseeding	Off-Road Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Service Road	Markings	Flatbed Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Service Road	Markings	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Service Road	Markings	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Service Road	Sidewalks	Concrete Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Service Road	Sidewalks	Dump Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Service Road	Sidewalks	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Sidewalks	Tractors/Loader/Backhoe	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01
Service Road	Sidewalks	Vibratory Compactor	4.20E+00	2.57E+00	8.18E-01	2.16E-03	2.62E-01	2.54E-01
Service Road	Soil Erosion/Sediment Control	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Service Road	Soil Erosion/Sediment Control	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Service Road	Soil Erosion/Sediment Control	Pumps	4.28E+00	2.60E+00	8.20E-01	2.16E-03	2.75E-01	2.67E-01
Service Road	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01
Service Road	Street Lighting	Dump Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Service Road	Street Lighting	Loader	5.83E-01	2.07E-01	3.54E-02	1.47E-03	4.85E-02	4.70E-02
Service Road	Street Lighting	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Service Road	Street Lighting	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Service Road	Street Lighting	Skid Steer Loader	4.23E+00	3.52E+00	6.99E-01	2.21E-03	4.94E-01	4.80E-01
Service Road	Street Lighting	Tractors/Loader/Backhoe	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01
Service Road	Subbase Placement	Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Service Road	Subbase Placement	Dump Truck (12 cy)	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Service Road	Subbase Placement	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Service Road	Subbase Placement	Roller	1.28E+00	5.05E-01	4.29E-02	1.64E-03	7.41E-02	7.18E-02
Service Road	Topsoil Placement	Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Service Road	Topsoil Placement	Dump Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Service Road	Topsoil Placement	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Tree Planting	Flatbed Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Service Road	Tree Planting	Other General Equipment	9.06E-01	1.97E-01	4.56E-02	1.48E-03	4.67E-02	4.53E-02
Service Road	Tree Planting	Pickup Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Service Road	Tree Planting	Tractors/Loader/Backhoe	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01
Site Work - 10000 sqft	Construction Mob & Layout	Survey Crew Trucks	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Site Work - 10000 sqft	Construction Mob & Layout	Tractor Trailers Temp Fac.	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Site Work - 10000 sqft	Site Clearing-Remove Trees & Shrubs	Bulldozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Site Work - 10000 sqft	Site Clearing-Remove Trees & Shrubs	Chain Saws	1.53E+00	2.66E+02	7.31E+01	4.14E-03	9.75E+00	8.97E+00
Site Work - 10000 sqft	Site Clearing-Remove Trees & Shrubs	Flat Bed or Dump Trucks	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Site Work - 10000 sqft	Site Clearing-Remove Trees & Shrubs	Front Loader	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01
Site Work - 10000 sqft	Site Clearing-Remove Trees & Shrubs	Grub the site down 2'-0	2.59E+00	3.51E-01	1.03E-01	1.59E-03	3.42E-02	3.32E-02
Site Work - 10000 sqft	Site Clearing-Remove Trees & Shrubs	Log Chipper	3.02E+00	1.38E+00	2.77E-01	1.84E-03	2.60E-01	2.53E-01
Site Work - 10000 sqft	Site Clearing-Remove Trees & Shrubs	Mulcher	3.02E+00	1.38E+00	2.77E-01	1.84E-03	2.60E-01	2.53E-01
Site Work - 10000 sqft	Site Clearing-Remove Trees & Shrubs	Ten Wheelers	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Site Work - 10000 sqft	Site Clearing-Remove Trees & Shrubs	Tractor	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01
Site Work - 10000 sqft	Site Restoration-Landscaping (Curbing)	Bob Cat	4.23E+00	3.52E+00	6.99E-01	2.21E-03	4.94E-01	4.80E-01
Site Work - 10000 sqft	Site Restoration-Landscaping (Curbing)	Concrete Ready Mix Trucks	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Site Work - 10000 sqft	Site Restoration-Landscaping (Curbing)	Tractor Trailer with Boom Hoist- Delivery	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Site Work - 10000 sqft	Site Restoration-Landscaping (Rough Grading)	Compacting Equipment	4.20E+00	2.57E+00	8.18E-01	2.16E-03	2.62E-01	2.54E-01
Site Work - 10000 sqft	Site Restoration-Landscaping (Rough Grading)	Small Dozer	4.60E-01	1.74E-01	2.61E-02	1.46E-03	4.25E-02	4.13E-02
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Forktruck (Hoist)	8.76E-01	7.87E-02	9.01E-03	1.57E-03	1.37E-02	1.33E-02
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Roller	1.28E+00	5.05E-01	4.29E-02	1.64E-03	7.41E-02	7.18E-02
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Seed Truck Spreader	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Tractor Trailer- Material Delivery	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Backhoe	2.78E+00	2.84E+00	4.45E-01	2.12E-03	3.73E-01	3.62E-01
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Fork Truck	8.76E-01	7.87E-02	9.01E-03	1.57E-03	1.37E-02	1.33E-02
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Tractor Trailer- Material Delivery	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02

Table C5. 2023 Electric CUP, construction-phase non-road equipment greenhouse gas emission factors.

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Building - 100000 sqft- 10 stories	Concrete Foundations	Backhoe	2.46E-02	3.32E-02	6.95E+02	7.06E+02
Building - 100000 sqft- 10 stories	Concrete Foundations	Concrete Pump	6.92E-02	2.81E-02	5.88E+02	6.01E+02
Building - 100000 sqft- 10 stories	Concrete Foundations	Concrete Ready Mix Trucks	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Concrete Foundations	Excavator	1.46E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Concrete Foundations	Fork Truck	6.81E-04	2.84E-02	5.96E+02	6.04E+02
Building - 100000 sqft- 10 stories	Concrete Foundations	Tool Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Concrete Foundations	Tractor Trailer- Material Delivery	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Construction Mob & Layout	Survey Crew Trucks	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Construction Mob & Layout	Tractor Trailers Temp Fac.	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Fork Truck	6.81E-04	2.84E-02	5.96E+02	6.04E+02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Generator	2.03E-02	2.81E-02	5.90E+02	5.99E+02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Grout Mixer	6.30E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Grout Wheel Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Man Lift	2.58E-02	3.32E-02	6.94E+02	7.06E+02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Tool Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Tractor Trailer- Material Delivery	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Truck Tower (Mantiwoc type)	2.73E-03	2.53E-02	5.31E+02	5.38E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Fork Truck	6.81E-04	2.84E-02	5.96E+02	6.04E+02
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Man Lift	2.58E-02	3.32E-02	6.94E+02	7.06E+02
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Tool Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Tractor Trailer- Material Delivery	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Roofing	High Lift	6.81E-04	2.84E-02	5.96E+02	6.04E+02
Building - 100000 sqft- 10 stories	Roofing	Man Lift	2.58E-02	3.32E-02	6.94E+02	7.06E+02
Building - 100000 sqft- 10 stories	Roofing	Material Deliveries	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Roofing	Tractor Trailer- Material Delivery	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Roofing	Truck Tower (Mantiwoc type)	2.73E-03	2.53E-02	5.31E+02	5.38E+02
Building - 100000 sqft- 10 stories	Security & Safety Systems	High Lift	6.81E-04	2.84E-02	5.96E+02	6.04E+02
Building - 100000 sqft- 10 stories	Security & Safety Systems	Tool Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	90 Ton Crane	2.73E-03	2.53E-02	5.31E+02	5.38E+02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Concrete Pump	6.92E-02	2.81E-02	5.88E+02	6.01E+02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Concrete Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Fork Truck	6.81E-04	2.84E-02	5.96E+02	6.04E+02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Tool Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Tractor Trailer- Steel Deliveries	1.10E-03	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Trowel Machine	6.30E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Truck Tower (Mantiwoc type)	2.73E-03	2.53E-02	5.31E+02	5.38E+02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Dump Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Excavator	1.46E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Loader	2.96E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Roller	3.58E-03	2.84E-02	5.96E+02	6.04E+02
Drainage System	Drainage - 24 inch SICPP	Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch SICPP	Dump Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch SICPP	Excavator	1.46E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch SICPP	Loader	2.96E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch SICPP	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Drainage System	Drainage - 24 inch SICPP	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch SICPP	Roller	3.58E-03	2.84E-02	5.96E+02	6.04E+02
Drainage System	Drainage Structures	Dump Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage Structures	Excavator	1.46E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage Structures	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Drainage System	Drainage Structures	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Hydroseeding	Hydroseeder	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Hydroseeding	Off-Road Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Soil Erosion/Sediment Control	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Drainage System	Soil Erosion/Sediment Control	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Soil Erosion/Sediment Control	Pumps	6.92E-02	2.81E-02	5.88E+02	6.01E+02
Drainage System	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.46E-02	3.32E-02	6.95E+02	7.06E+02
Drainage System	Topsoil Placement	Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Topsoil Placement	Dump Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Topsoil Placement	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Clearing and Grubbing	Chain Saw	1.19E+00	4.19E-02	6.86E+02	7.95E+02
Fencing	Clearing and Grubbing	Chipper/Stump Grinder	9.41E-03	2.81E-02	5.90E+02	5.98E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Fencing	Clearing and Grubbing	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Excavation (Cut to Fill)	Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Excavation (Cut to Fill)	Dump Truck (12 cy)	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Excavation (Cut to Fill)	Excavator	1.46E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Excavation (Cut to Fill)	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Excavation (Cut to Fill)	Roller	3.58E-03	2.84E-02	5.96E+02	6.04E+02
Fencing	Fencing	Concrete Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Fencing	Dump Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Fencing	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Fencing	Fencing	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Fencing	Skid Steer Loader	2.93E-02	3.32E-02	6.94E+02	7.05E+02
Fencing	Fencing	Tractors/Loader/Backhoe	2.46E-02	3.32E-02	6.95E+02	7.06E+02
Fencing	Grading	Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Grading	Grader	1.58E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Grading	Roller	3.58E-03	2.84E-02	5.96E+02	6.04E+02
Fencing	Hydroseeding	Hydroseeder	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Hydroseeding	Off-Road Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Soil Erosion/Sediment Control	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Fencing	Soil Erosion/Sediment Control	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Fencing	Soil Erosion/Sediment Control	Pumps	6.92E-02	2.81E-02	5.88E+02	6.01E+02
Fencing	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.46E-02	3.32E-02	6.95E+02	7.06E+02
Fencing	Topsoil Placement	Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Topsoil Placement	Dump Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Topsoil Placement	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Clearing and Grubbing	Chain Saw	1.19E+00	4.19E-02	6.86E+02	7.95E+02
Fuel Tanks	Clearing and Grubbing	Chipper/Stump Grinder	9.41E-03	2.81E-02	5.90E+02	5.98E+02
Fuel Tanks	Clearing and Grubbing	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Concrete Placement	Air Compressor	6.18E-03	2.81E-02	5.90E+02	5.98E+02
Fuel Tanks	Concrete Placement	Concrete Saws	1.32E-02	2.84E-02	5.96E+02	6.05E+02
Fuel Tanks	Concrete Placement	Concrete Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Concrete Placement	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Fuel Tanks	Concrete Placement	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Concrete Placement	Rubber Tired Loader	2.96E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Concrete Placement	Slip Form Paver	2.86E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Concrete Placement	Surfacing Equipment (Grooving)	3.12E-02	2.84E-02	5.95E+02	6.05E+02
Fuel Tanks	Construction/Erect Tanks	Crane	2.73E-03	2.53E-02	5.31E+02	5.38E+02
Fuel Tanks	Construction/Erect Tanks	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Fuel Tanks	Construction/Erect Tanks	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Drainage - 24 inch SICPP	Excavator	1.46E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Drainage	Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Drainage	Dump Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Drainage	Loader	2.96E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Drainage	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Fuel Tanks	Drainage	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Drainage	Roller	3.58E-03	2.84E-02	5.96E+02	6.04E+02
Fuel Tanks	Dust Control	Water Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Excavation (Borrow)	Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Excavation (Borrow)	Dump Truck (12 cy)	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Excavation (Borrow)	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Excavation (Borrow)	Roller	3.58E-03	2.84E-02	5.96E+02	6.04E+02
Fuel Tanks	Excavation (Cut to Fill)	Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Excavation (Cut to Fill)	Dump Truck (12 cy)	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Excavation (Cut to Fill)	Excavator	1.46E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Excavation (Cut to Fill)	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Excavation (Cut to Fill)	Roller	3.58E-03	2.84E-02	5.96E+02	6.04E+02
Fuel Tanks	Excavation (Cut to Fill)	Scraper	3.61E-03	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Fuel Tanks	Excavation (Topsoil Stripping)	Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Fencing	Concrete Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Fencing	Dump Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Fencing	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Fuel Tanks	Fencing	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Fencing	Skid Steer Loader	2.93E-02	3.32E-02	6.94E+02	7.05E+02
Fuel Tanks	Fencing	Tractors/Loader/Backhoe	2.46E-02	3.32E-02	6.95E+02	7.06E+02
Fuel Tanks	Grading	Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Grading	Grader	1.58E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Grading	Roller	3.58E-03	2.84E-02	5.96E+02	6.04E+02
Fuel Tanks	Hydroseeding	Hydroseeder	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Hydroseeding	Off-Road Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Markings	Flatbed Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Markings	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Fuel Tanks	Markings	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Soil Erosion/Sediment Control	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Fuel Tanks	Soil Erosion/Sediment Control	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Soil Erosion/Sediment Control	Pumps	6.92E-02	2.81E-02	5.88E+02	6.01E+02
Fuel Tanks	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.46E-02	3.32E-02	6.95E+02	7.06E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Fuel Tanks	Street Lighting	Dump Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Street Lighting	Loader	2.96E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Street Lighting	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Fuel Tanks	Street Lighting	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Street Lighting	Skid Steer Loader	2.93E-02	3.32E-02	6.94E+02	7.05E+02
Fuel Tanks	Street Lighting	Tractors/Loader/Backhoe	2.46E-02	3.32E-02	6.95E+02	7.06E+02
Fuel Tanks	Subbase Placement	Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Subbase Placement	Dump Truck (12 cy)	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Subbase Placement	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Subbase Placement	Roller	3.58E-03	2.84E-02	5.96E+02	6.04E+02
Fuel Tanks	Topsoil Placement	Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Topsoil Placement	Dump Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Topsoil Placement	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Hydroseeding	Hydroseeder	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Hydroseeding	Off-Road Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Mulching	Dump Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Mulching	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Landscaping	Mulching	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Mulching	Tractors/Loader/Backhoe	2.46E-02	3.32E-02	6.95E+02	7.06E+02
Landscaping	Sodding	Flatbed Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Sodding	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Landscaping	Sodding	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Sodding	Skid Steer Loader	2.93E-02	3.32E-02	6.94E+02	7.05E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Landscaping	Topsoil Placement	Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Topsoil Placement	Dump Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Topsoil Placement	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Tree Planting	Flatbed Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Tree Planting	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Landscaping	Tree Planting	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Tree Planting	Tractors/Loader/Backhoe	2.46E-02	3.32E-02	6.95E+02	7.06E+02
Landscaping	Tree Pruning	Aerial Lift	2.58E-02	3.32E-02	6.94E+02	7.06E+02
Landscaping	Tree Pruning	Chipper/Stump Grinder	9.41E-03	2.81E-02	5.90E+02	5.98E+02
Landscaping	Tree Pruning	Dump Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Tree Pruning	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Landscaping	Tree Pruning	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Tree Pruning	Pruning Saw/Chain Saw	1.19E+00	4.19E-02	6.86E+02	7.95E+02
Open Parking Lot @Grade - 10000 sqft	Binder Coat of Pavement	Paving Machine	4.18E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Binder Coat of Pavement	Ten Wheelers- Material Delivery	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Construction Mob & Layout	Survey Crew Trucks	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Construction Mob & Layout	Tractor Trailers Temp Fac.	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Curbing	Bob Cat	2.93E-02	3.32E-02	6.94E+02	7.05E+02
Open Parking Lot @Grade - 10000 sqft	Curbing	Concrete Ready Mix Trucks	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Curbing	Material Deliveries	1.10E-03	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Open Parking Lot @Grade - 10000 sqft	Curbing	Tractor Trailer with Boom Hoist-Delivery	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Bulldozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Front Loader	2.46E-02	3.32E-02	6.95E+02	7.06E+02
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Ten Wheelers	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Auger Drill	8.50E-03	2.53E-02	5.31E+02	5.38E+02
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Fork Truck	6.81E-04	2.84E-02	5.96E+02	6.04E+02
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Front Loader	2.46E-02	3.32E-02	6.95E+02	7.06E+02
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Tractor Trailer- Material Delivery	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Bulldozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Chain Saws	1.19E+00	4.19E-02	6.86E+02	7.95E+02
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Flat Bed or Dump Trucks	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Log Chipper	9.41E-03	2.81E-02	5.90E+02	5.98E+02
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Mulcher	9.41E-03	2.81E-02	5.90E+02	5.98E+02
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Tractor	2.46E-02	3.32E-02	6.95E+02	7.06E+02
Open Parking Lot @Grade - 10000 sqft	Rough Grading	Compacting Equipment	7.16E-02	2.81E-02	5.88E+02	6.02E+02
Open Parking Lot @Grade - 10000 sqft	Rough Grading	Small Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	40 Ton Rough Terrain Crane	2.73E-03	2.53E-02	5.31E+02	5.38E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	High Lift	6.81E-04	2.84E-02	5.96E+02	6.04E+02
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	Tractor Trailer- Material Delivery	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Stripping	Line Painting Truck and Sprayer	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Backhoe	2.46E-02	3.32E-02	6.95E+02	7.06E+02
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Roller	3.58E-03	2.84E-02	5.96E+02	6.04E+02
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Tractor Trailer- Material Delivery	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Top Coat of Asphalt	Paving Machine	4.18E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Top Coat of Asphalt	Ten Wheelers- Material Delivery	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Backhoe	2.46E-02	3.32E-02	6.95E+02	7.06E+02
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Fork Truck	6.81E-04	2.84E-02	5.96E+02	6.04E+02
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Tractor Trailer- Material Delivery	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Clearing and Grubbing	Chain Saw	1.19E+00	4.19E-02	6.86E+02	7.95E+02
Parking Lot	Clearing and Grubbing	Chipper/Stump Grinder	9.41E-03	2.81E-02	5.90E+02	5.98E+02
Parking Lot	Clearing and Grubbing	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Concrete Placement	Air Compressor	6.18E-03	2.81E-02	5.90E+02	5.98E+02
Parking Lot	Concrete Placement	Concrete Saws	1.32E-02	2.84E-02	5.96E+02	6.05E+02
Parking Lot	Concrete Placement	Concrete Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Concrete Placement	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Concrete Placement	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Concrete Placement	Rubber Tired Loader	2.96E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Concrete Placement	Slip Form Paver	2.86E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Concrete Placement	Surfacing Equipment (Grooving)	3.12E-02	2.84E-02	5.95E+02	6.05E+02
Parking Lot	Curbing	Concrete Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Curbing	Curb/Gutter Paver	2.86E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Curbing	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Curbing	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Drainage - 24 inch SICPP	Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Drainage - 24 inch SICPP	Dump Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Drainage - 24 inch SICPP	Excavator	1.46E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Drainage - 24 inch SICPP	Loader	2.96E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Drainage - 24 inch SICPP	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Drainage - 24 inch SICPP	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Drainage - 24 inch SICPP	Roller	3.58E-03	2.84E-02	5.96E+02	6.04E+02
Parking Lot	Drainage - 6 inch Perforated Underdrain	Dump Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Drainage - 6 inch Perforated Underdrain	Loader	2.96E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Drainage - 6 inch Perforated Underdrain	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Drainage - 6 inch Perforated Underdrain	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	2.46E-02	3.32E-02	6.95E+02	7.06E+02
Parking Lot	Excavation (Borrow)	Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Excavation (Borrow)	Dump Truck (12 cy)	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Excavation (Borrow)	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Excavation (Borrow)	Roller	3.58E-03	2.84E-02	5.96E+02	6.04E+02
Parking Lot	Excavation (Cut to Fill)	Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Excavation (Cut to Fill)	Dump Truck (12 cy)	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Excavation (Cut to Fill)	Excavator	1.46E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Excavation (Cut to Fill)	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Excavation (Cut to Fill)	Roller	3.58E-03	2.84E-02	5.96E+02	6.04E+02
Parking Lot	Excavation (Cut to Fill)	Scraper	3.61E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Excavation (Topsoil Stripping)	Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Fencing	Concrete Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Fencing	Dump Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Fencing	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Fencing	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Fencing	Skid Steer Loader	2.93E-02	3.32E-02	6.94E+02	7.05E+02
Parking Lot	Fencing	Tractors/Loader/Backhoe	2.46E-02	3.32E-02	6.95E+02	7.06E+02
Parking Lot	Grading	Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Grading	Grader	1.58E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Grading	Roller	3.58E-03	2.84E-02	5.96E+02	6.04E+02
Parking Lot	Hydroseeding	Hydroseeder	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Hydroseeding	Off-Road Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Markings	Flatbed Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Markings	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Markings	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Sidewalks	Concrete Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Sidewalks	Dump Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Sidewalks	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Sidewalks	Tractors/Loader/Backhoe	2.46E-02	3.32E-02	6.95E+02	7.06E+02
Parking Lot	Sidewalks	Vibratory Compactor	7.16E-02	2.81E-02	5.88E+02	6.02E+02
Parking Lot	Soil Erosion/Sediment Control	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Soil Erosion/Sediment Control	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Soil Erosion/Sediment Control	Pumps	6.92E-02	2.81E-02	5.88E+02	6.01E+02
Parking Lot	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.46E-02	3.32E-02	6.95E+02	7.06E+02
Parking Lot	Street Lighting	Dump Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Street Lighting	Loader	2.96E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Street Lighting	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Street Lighting	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Street Lighting	Skid Steer Loader	2.93E-02	3.32E-02	6.94E+02	7.05E+02
Parking Lot	Street Lighting	Tractors/Loader/Backhoe	2.46E-02	3.32E-02	6.95E+02	7.06E+02
Parking Lot	Subbase Placement	Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Subbase Placement	Dump Truck (12 cy)	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Subbase Placement	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Subbase Placement	Roller	3.58E-03	2.84E-02	5.96E+02	6.04E+02
Parking Lot	Topsoil Placement	Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Topsoil Placement	Dump Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Topsoil Placement	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Tree Planting	Flatbed Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Tree Planting	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Tree Planting	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Tree Planting	Tractors/Loader/Backhoe	2.46E-02	3.32E-02	6.95E+02	7.06E+02
Service Road	Clearing and Grubbing	Chain Saw	1.19E+00	4.19E-02	6.86E+02	7.95E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Service Road	Clearing and Grubbing	Chipper/Stump Grinder	9.41E-03	2.81E-02	5.90E+02	5.98E+02
Service Road	Clearing and Grubbing	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Concrete Placement	Air Compressor	6.18E-03	2.81E-02	5.90E+02	5.98E+02
Service Road	Concrete Placement	Concrete Saws	1.32E-02	2.84E-02	5.96E+02	6.05E+02
Service Road	Concrete Placement	Concrete Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Concrete Placement	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Service Road	Concrete Placement	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Concrete Placement	Rubber Tired Loader	2.96E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Concrete Placement	Slip Form Paver	2.86E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Concrete Placement	Surfacing Equipment (Grooving)	3.12E-02	2.84E-02	5.95E+02	6.05E+02
Service Road	Drainage - 24 inch SICPP	Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Drainage - 24 inch SICPP	Dump Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Drainage - 24 inch SICPP	Excavator	1.46E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Drainage - 24 inch SICPP	Loader	2.96E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Drainage - 24 inch SICPP	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Service Road	Drainage - 24 inch SICPP	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Drainage - 24 inch SICPP	Roller	3.58E-03	2.84E-02	5.96E+02	6.04E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Service Road	Drainage - 6 inch Perforated Underdrain	Dump Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Drainage - 6 inch Perforated Underdrain	Loader	2.96E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Drainage - 6 inch Perforated Underdrain	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Service Road	Drainage - 6 inch Perforated Underdrain	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	2.46E-02	3.32E-02	6.95E+02	7.06E+02
Service Road	Dust Control	Water Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Excavation (Borrow)	Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Excavation (Borrow)	Dump Truck (12 cy)	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Excavation (Borrow)	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Excavation (Borrow)	Roller	3.58E-03	2.84E-02	5.96E+02	6.04E+02
Service Road	Excavation (Cut to Fill)	Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Excavation (Cut to Fill)	Dump Truck (12 cy)	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Excavation (Cut to Fill)	Excavator	1.46E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Excavation (Cut to Fill)	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Excavation (Cut to Fill)	Roller	3.58E-03	2.84E-02	5.96E+02	6.04E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Service Road	Excavation (Cut to Fill)	Scraper	3.61E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Excavation (Topsoil Stripping)	Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Fencing	Concrete Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Fencing	Dump Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Fencing	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Service Road	Fencing	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Fencing	Skid Steer Loader	2.93E-02	3.32E-02	6.94E+02	7.05E+02
Service Road	Fencing	Tractors/Loader/Backhoe	2.46E-02	3.32E-02	6.95E+02	7.06E+02
Service Road	Grading	Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Grading	Grader	1.58E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Grading	Roller	3.58E-03	2.84E-02	5.96E+02	6.04E+02
Service Road	Hydroseeding	Hydroseeder	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Hydroseeding	Off-Road Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Markings	Flatbed Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Markings	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Service Road	Markings	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Sidewalks	Concrete Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Sidewalks	Dump Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Sidewalks	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Sidewalks	Tractors/Loader/Backhoe	2.46E-02	3.32E-02	6.95E+02	7.06E+02
Service Road	Sidewalks	Vibratory Compactor	7.16E-02	2.81E-02	5.88E+02	6.02E+02
Service Road	Soil Erosion/Sediment Control	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Service Road	Soil Erosion/Sediment Control	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Soil Erosion/Sediment Control	Pumps	6.92E-02	2.81E-02	5.88E+02	6.01E+02
Service Road	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.46E-02	3.32E-02	6.95E+02	7.06E+02
Service Road	Street Lighting	Dump Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Street Lighting	Loader	2.96E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Street Lighting	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Service Road	Street Lighting	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Street Lighting	Skid Steer Loader	2.93E-02	3.32E-02	6.94E+02	7.05E+02
Service Road	Street Lighting	Tractors/Loader/Backhoe	2.46E-02	3.32E-02	6.95E+02	7.06E+02
Service Road	Subbase Placement	Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Subbase Placement	Dump Truck (12 cy)	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Subbase Placement	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Subbase Placement	Roller	3.58E-03	2.84E-02	5.96E+02	6.04E+02
Service Road	Topsoil Placement	Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Topsoil Placement	Dump Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Topsoil Placement	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Tree Planting	Flatbed Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Tree Planting	Other General Equipment	3.84E-03	2.53E-02	5.31E+02	5.38E+02
Service Road	Tree Planting	Pickup Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Tree Planting	Tractors/Loader/Backhoe	2.46E-02	3.32E-02	6.95E+02	7.06E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Site Work - 10000 sqft	Construction Mob & Layout	Survey Crew Trucks	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Construction Mob & Layout	Tractor Trailers Temp Fac.	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Bulldozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Chain Saws	1.19E+00	4.19E-02	6.86E+02	7.95E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Flat Bed or Dump Trucks	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Front Loader	2.46E-02	3.32E-02	6.95E+02	7.06E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Grub the site down 2'-0	1.32E-02	2.84E-02	5.96E+02	6.05E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Log Chipper	9.41E-03	2.81E-02	5.90E+02	5.98E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Mulcher	9.41E-03	2.81E-02	5.90E+02	5.98E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Ten Wheelers	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Tractor	2.46E-02	3.32E-02	6.95E+02	7.06E+02
Site Work - 10000 sqft	Site Restoration- Landscaping (Curbing)	Bob Cat	2.93E-02	3.32E-02	6.94E+02	7.05E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Site Work - 10000 sqft	Site Restoration-Landscaping (Curbing)	Concrete Ready Mix Trucks	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Site Restoration-Landscaping (Curbing)	Tractor Trailer with Boom Hoist-Delivery	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Site Restoration-Landscaping (Rough Grading)	Compacting Equipment	7.16E-02	2.81E-02	5.88E+02	6.02E+02
Site Work - 10000 sqft	Site Restoration-Landscaping (Rough Grading)	Small Dozer	2.22E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Forktruck (Hoist)	6.81E-04	2.84E-02	5.96E+02	6.04E+02
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Roller	3.58E-03	2.84E-02	5.96E+02	6.04E+02
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Seed Truck Spreader	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Tractor Trailer- Material Delivery	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Backhoe	2.46E-02	3.32E-02	6.95E+02	7.06E+02
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Fork Truck	6.81E-04	2.84E-02	5.96E+02	6.04E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Tractor Trailer- Material Delivery	1.10E-03	2.56E-02	5.37E+02	5.44E+02

Table C6. 2024 Electric CUP, construction-phase non-road equipment criteria air pollutant emission factors.

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Concrete Foundations	Backhoe	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01
Building - 100000 sqft- 10 stories	Concrete Foundations	Concrete Pump	4.26E+00	2.57E+00	8.23E-01	2.16E-03	2.67E-01	2.59E-01
Building - 100000 sqft- 10 stories	Concrete Foundations	Concrete Ready Mix Trucks	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Building - 100000 sqft- 10 stories	Concrete Foundations	Excavator	2.81E-01	8.46E-02	1.32E-02	1.43E-03	1.81E-02	1.76E-02
Building - 100000 sqft- 10 stories	Concrete Foundations	Fork Truck	8.63E-01	6.04E-02	8.03E-03	1.57E-03	1.09E-02	1.05E-02
Building - 100000 sqft- 10 stories	Concrete Foundations	Tool Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Building - 100000 sqft- 10 stories	Concrete Foundations	Tractor Trailer- Material Delivery	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Building - 100000 sqft- 10 stories	Construction Mob & Layout	Survey Crew Trucks	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Building - 100000 sqft- 10 stories	Construction Mob & Layout	Tractor Trailers Temp Fac.	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Fork Truck	8.63E-01	6.04E-02	8.03E-03	1.57E-03	1.09E-02	1.05E-02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Generator	3.22E+00	8.46E-01	2.44E-01	1.77E-03	1.38E-01	1.34E-01
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Grout Mixer	1.45E+00	6.74E-01	9.39E-02	1.62E-03	1.05E-01	1.02E-01

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Grout Wheel Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Man Lift	3.79E+00	2.44E+00	4.92E-01	2.15E-03	3.07E-01	2.98E-01
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Tool Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Tractor Trailer- Material Delivery	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Truck Tower (Mantiwoc type)	3.90E-01	9.83E-02	2.86E-02	1.45E-03	1.83E-02	1.78E-02
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Fork Truck	8.63E-01	6.04E-02	8.03E-03	1.57E-03	1.09E-02	1.05E-02
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Man Lift	3.79E+00	2.44E+00	4.92E-01	2.15E-03	3.07E-01	2.98E-01
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Tool Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Tractor Trailer- Material Delivery	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Building - 100000 sqft- 10 stories	Roofing	High Lift	8.63E-01	6.04E-02	8.03E-03	1.57E-03	1.09E-02	1.05E-02
Building - 100000 sqft- 10 stories	Roofing	Man Lift	3.79E+00	2.44E+00	4.92E-01	2.15E-03	3.07E-01	2.98E-01
Building - 100000 sqft- 10 stories	Roofing	Material Deliveries	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Building - 100000 sqft- 10 stories	Roofing	Tractor Trailer- Material Delivery	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Building - 100000 sqft- 10 stories	Roofing	Truck Tower (Mantiwoc type)	3.90E-01	9.83E-02	2.86E-02	1.45E-03	1.83E-02	1.78E-02
Building - 100000 sqft- 10 stories	Security & Safety Systems	High Lift	8.63E-01	6.04E-02	8.03E-03	1.57E-03	1.09E-02	1.05E-02
Building - 100000 sqft- 10 stories	Security & Safety Systems	Tool Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	90 Ton Crane	3.90E-01	9.83E-02	2.86E-02	1.45E-03	1.83E-02	1.78E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Concrete Pump	4.26E+00	2.57E+00	8.23E-01	2.16E-03	2.67E-01	2.59E-01
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Concrete Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Fork Truck	8.63E-01	6.04E-02	8.03E-03	1.57E-03	1.09E-02	1.05E-02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Tool Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Tractor Trailer- Steel Deliveries	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Trowel Machine	1.45E+00	6.74E-01	9.39E-02	1.62E-03	1.05E-01	1.02E-01
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Truck Tower (Mantiwoc type)	3.90E-01	9.83E-02	2.86E-02	1.45E-03	1.83E-02	1.78E-02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Dump Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Excavator	2.81E-01	8.46E-02	1.32E-02	1.43E-03	1.81E-02	1.76E-02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Loader	4.88E-01	1.77E-01	2.96E-02	1.46E-03	4.16E-02	4.03E-02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Roller	1.19E+00	4.17E-01	3.51E-02	1.62E-03	6.23E-02	6.04E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Drainage System	Drainage - 24 inch SICPP	Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Drainage System	Drainage - 24 inch SICPP	Dump Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Drainage System	Drainage - 24 inch SICPP	Excavator	2.81E-01	8.46E-02	1.32E-02	1.43E-03	1.81E-02	1.76E-02
Drainage System	Drainage - 24 inch SICPP	Loader	4.88E-01	1.77E-01	2.96E-02	1.46E-03	4.16E-02	4.03E-02
Drainage System	Drainage - 24 inch SICPP	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Drainage System	Drainage - 24 inch SICPP	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Drainage System	Drainage - 24 inch SICPP	Roller	1.19E+00	4.17E-01	3.51E-02	1.62E-03	6.23E-02	6.04E-02
Drainage System	Drainage Structures	Dump Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Drainage System	Drainage Structures	Excavator	2.81E-01	8.46E-02	1.32E-02	1.43E-03	1.81E-02	1.76E-02
Drainage System	Drainage Structures	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Drainage System	Drainage Structures	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Drainage System	Hydroseeding	Hydroseeder	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Drainage System	Hydroseeding	Off-Road Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Drainage System	Soil Erosion/Sediment Control	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Drainage System	Soil Erosion/Sediment Control	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Drainage System	Soil Erosion/Sediment Control	Pumps	4.26E+00	2.57E+00	8.23E-01	2.16E-03	2.67E-01	2.59E-01

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Drainage System	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01
Drainage System	Topsoil Placement	Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Drainage System	Topsoil Placement	Dump Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Drainage System	Topsoil Placement	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fencing	Clearing and Grubbing	Chain Saw	1.53E+00	2.66E+02	7.31E+01	4.14E-03	9.75E+00	8.97E+00
Fencing	Clearing and Grubbing	Chipper/Stump Grinder	2.78E+00	1.24E+00	2.45E-01	1.81E-03	2.32E-01	2.25E-01
Fencing	Clearing and Grubbing	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fencing	Excavation (Cut to Fill)	Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Fencing	Excavation (Cut to Fill)	Dump Truck (12 cy)	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fencing	Excavation (Cut to Fill)	Excavator	2.81E-01	8.46E-02	1.32E-02	1.43E-03	1.81E-02	1.76E-02
Fencing	Excavation (Cut to Fill)	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fencing	Excavation (Cut to Fill)	Roller	1.19E+00	4.17E-01	3.51E-02	1.62E-03	6.23E-02	6.04E-02
Fencing	Fencing	Concrete Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fencing	Fencing	Dump Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fencing	Fencing	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Fencing	Fencing	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fencing	Fencing	Skid Steer Loader	4.10E+00	3.28E+00	6.46E-01	2.18E-03	4.57E-01	4.43E-01
Fencing	Fencing	Tractors/Loader/Backhoe	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01
Fencing	Grading	Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Fencing	Grading	Grader	2.26E-01	7.05E-02	1.75E-02	1.43E-03	1.40E-02	1.36E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fencing	Grading	Roller	1.19E+00	4.17E-01	3.51E-02	1.62E-03	6.23E-02	6.04E-02
Fencing	Hydroseeding	Hydroseeder	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fencing	Hydroseeding	Off-Road Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fencing	Soil Erosion/Sediment Control	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Fencing	Soil Erosion/Sediment Control	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fencing	Soil Erosion/Sediment Control	Pumps	4.26E+00	2.57E+00	8.23E-01	2.16E-03	2.67E-01	2.59E-01
Fencing	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01
Fencing	Topsoil Placement	Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Fencing	Topsoil Placement	Dump Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fencing	Topsoil Placement	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fuel Tanks	Clearing and Grubbing	Chain Saw	1.53E+00	2.66E+02	7.31E+01	4.14E-03	9.75E+00	8.97E+00
Fuel Tanks	Clearing and Grubbing	Chipper/Stump Grinder	2.78E+00	1.24E+00	2.45E-01	1.81E-03	2.32E-01	2.25E-01
Fuel Tanks	Clearing and Grubbing	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fuel Tanks	Concrete Placement	Air Compressor	1.58E+00	5.40E-01	6.29E-02	1.66E-03	9.26E-02	8.98E-02
Fuel Tanks	Concrete Placement	Concrete Saws	2.57E+00	3.24E-01	9.90E-02	1.58E-03	2.84E-02	2.76E-02
Fuel Tanks	Concrete Placement	Concrete Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fuel Tanks	Concrete Placement	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Concrete Placement	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fuel Tanks	Concrete Placement	Rubber Tired Loader	4.88E-01	1.77E-01	2.96E-02	1.46E-03	4.16E-02	4.03E-02
Fuel Tanks	Concrete Placement	Slip Form Paver	4.47E-01	1.77E-01	2.78E-02	1.46E-03	4.29E-02	4.16E-02
Fuel Tanks	Concrete Placement	Surfacing Equipment (Grooving)	3.76E+00	1.50E+00	3.53E-01	2.19E-03	1.71E-01	1.66E-01
Fuel Tanks	Construction/Erect Tanks	Crane	3.90E-01	9.83E-02	2.86E-02	1.45E-03	1.83E-02	1.78E-02
Fuel Tanks	Construction/Erect Tanks	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Fuel Tanks	Construction/Erect Tanks	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fuel Tanks	Drainage - 24 inch SICPP	Excavator	2.81E-01	8.46E-02	1.32E-02	1.43E-03	1.81E-02	1.76E-02
Fuel Tanks	Drainage	Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Fuel Tanks	Drainage	Dump Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fuel Tanks	Drainage	Loader	4.88E-01	1.77E-01	2.96E-02	1.46E-03	4.16E-02	4.03E-02
Fuel Tanks	Drainage	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Fuel Tanks	Drainage	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fuel Tanks	Drainage	Roller	1.19E+00	4.17E-01	3.51E-02	1.62E-03	6.23E-02	6.04E-02
Fuel Tanks	Dust Control	Water Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fuel Tanks	Excavation (Borrow)	Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Fuel Tanks	Excavation (Borrow)	Dump Truck (12 cy)	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fuel Tanks	Excavation (Borrow)	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fuel Tanks	Excavation (Borrow)	Roller	1.19E+00	4.17E-01	3.51E-02	1.62E-03	6.23E-02	6.04E-02
Fuel Tanks	Excavation (Cut to Fill)	Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Excavation (Cut to Fill)	Dump Truck (12 cy)	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fuel Tanks	Excavation (Cut to Fill)	Excavator	2.81E-01	8.46E-02	1.32E-02	1.43E-03	1.81E-02	1.76E-02
Fuel Tanks	Excavation (Cut to Fill)	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fuel Tanks	Excavation (Cut to Fill)	Roller	1.19E+00	4.17E-01	3.51E-02	1.62E-03	6.23E-02	6.04E-02
Fuel Tanks	Excavation (Cut to Fill)	Scraper	5.88E-01	2.32E-01	3.52E-02	1.49E-03	3.81E-02	3.69E-02
Fuel Tanks	Excavation (Topsoil Stripping)	Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Fuel Tanks	Fencing	Concrete Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fuel Tanks	Fencing	Dump Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fuel Tanks	Fencing	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Fuel Tanks	Fencing	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fuel Tanks	Fencing	Skid Steer Loader	4.10E+00	3.28E+00	6.46E-01	2.18E-03	4.57E-01	4.43E-01
Fuel Tanks	Fencing	Tractors/Loader/Backhoe	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01
Fuel Tanks	Grading	Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Fuel Tanks	Grading	Grader	2.26E-01	7.05E-02	1.75E-02	1.43E-03	1.40E-02	1.36E-02
Fuel Tanks	Grading	Roller	1.19E+00	4.17E-01	3.51E-02	1.62E-03	6.23E-02	6.04E-02
Fuel Tanks	Hydroseeding	Hydroseeder	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fuel Tanks	Hydroseeding	Off-Road Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fuel Tanks	Markings	Flatbed Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fuel Tanks	Markings	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Fuel Tanks	Markings	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Soil Erosion/Sediment Control	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Fuel Tanks	Soil Erosion/Sediment Control	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fuel Tanks	Soil Erosion/Sediment Control	Pumps	4.26E+00	2.57E+00	8.23E-01	2.16E-03	2.67E-01	2.59E-01
Fuel Tanks	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01
Fuel Tanks	Street Lighting	Dump Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fuel Tanks	Street Lighting	Loader	4.88E-01	1.77E-01	2.96E-02	1.46E-03	4.16E-02	4.03E-02
Fuel Tanks	Street Lighting	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Fuel Tanks	Street Lighting	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fuel Tanks	Street Lighting	Skid Steer Loader	4.10E+00	3.28E+00	6.46E-01	2.18E-03	4.57E-01	4.43E-01
Fuel Tanks	Street Lighting	Tractors/Loader/Backhoe	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01
Fuel Tanks	Subbase Placement	Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Fuel Tanks	Subbase Placement	Dump Truck (12 cy)	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fuel Tanks	Subbase Placement	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fuel Tanks	Subbase Placement	Roller	1.19E+00	4.17E-01	3.51E-02	1.62E-03	6.23E-02	6.04E-02
Fuel Tanks	Topsoil Placement	Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Fuel Tanks	Topsoil Placement	Dump Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Fuel Tanks	Topsoil Placement	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Landscaping	Hydroseeding	Hydroseeder	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Landscaping	Hydroseeding	Off-Road Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Landscaping	Mulching	Dump Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Landscaping	Mulching	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Landscaping	Mulching	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Landscaping	Mulching	Tractors/Loader/Backhoe	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01
Landscaping	Sodding	Flatbed Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Landscaping	Sodding	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Landscaping	Sodding	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Landscaping	Sodding	Skid Steer Loader	4.10E+00	3.28E+00	6.46E-01	2.18E-03	4.57E-01	4.43E-01
Landscaping	Topsoil Placement	Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Landscaping	Topsoil Placement	Dump Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Landscaping	Topsoil Placement	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Landscaping	Tree Planting	Flatbed Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Landscaping	Tree Planting	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Landscaping	Tree Planting	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Landscaping	Tree Planting	Tractors/Loader/Backhoe	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01
Landscaping	Tree Pruning	Aerial Lift	3.79E+00	2.44E+00	4.92E-01	2.15E-03	3.07E-01	2.98E-01
Landscaping	Tree Pruning	Chipper/Stump Grinder	2.78E+00	1.24E+00	2.45E-01	1.81E-03	2.32E-01	2.25E-01
Landscaping	Tree Pruning	Dump Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Landscaping	Tree Pruning	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Landscaping	Tree Pruning	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Landscaping	Tree Pruning	Pruning Saw/Chain Saw	1.53E+00	2.66E+02	7.31E+01	4.14E-03	9.75E+00	8.97E+00
Open Parking Lot @Grade - 10000 sqft	Binder Coat of Pavement	Paving Machine	7.55E-01	2.44E-01	4.40E-02	1.49E-03	5.70E-02	5.53E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Open Parking Lot @Grade - 10000 sqft	Binder Coat of Pavement	Ten Wheelers- Material Delivery	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Open Parking Lot @Grade - 10000 sqft	Construction Mob & Layout	Survey Crew Trucks	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Open Parking Lot @Grade - 10000 sqft	Construction Mob & Layout	Tractor Trailers Temp Fac.	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Open Parking Lot @Grade - 10000 sqft	Curbing	Bob Cat	4.10E+00	3.28E+00	6.46E-01	2.18E-03	4.57E-01	4.43E-01
Open Parking Lot @Grade - 10000 sqft	Curbing	Concrete Ready Mix Trucks	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Open Parking Lot @Grade - 10000 sqft	Curbing	Material Deliveries	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Open Parking Lot @Grade - 10000 sqft	Curbing	Tractor Trailer with Boom Hoist- Delivery	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Bulldozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Front Loader	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Ten Wheelers	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Auger Drill	2.11E+00	5.61E-01	1.64E-01	1.63E-03	1.29E-01	1.25E-01
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Fork Truck	8.63E-01	6.04E-02	8.03E-03	1.57E-03	1.09E-02	1.05E-02
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Front Loader	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Tractor Trailer- Material Delivery	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Bulldozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Chain Saws	1.53E+00	2.66E+02	7.31E+01	4.14E-03	9.75E+00	8.97E+00
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Flat Bed or Dump Trucks	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Log Chipper	2.78E+00	1.24E+00	2.45E-01	1.81E-03	2.32E-01	2.25E-01
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Mulcher	2.78E+00	1.24E+00	2.45E-01	1.81E-03	2.32E-01	2.25E-01
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Tractor	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01
Open Parking Lot @Grade - 10000 sqft	Rough Grading	Compacting Equipment	4.20E+00	2.54E+00	8.21E-01	2.16E-03	2.57E-01	2.50E-01
Open Parking Lot @Grade - 10000 sqft	Rough Grading	Small Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	40 Ton Rough Terrain Crane	3.90E-01	9.83E-02	2.86E-02	1.45E-03	1.83E-02	1.78E-02
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	High Lift	8.63E-01	6.04E-02	8.03E-03	1.57E-03	1.09E-02	1.05E-02
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	Tractor Trailer- Material Delivery	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Open Parking Lot @Grade - 10000 sqft	Stripping	Line Painting Truck and Sprayer	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Backhoe	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Roller	1.19E+00	4.17E-01	3.51E-02	1.62E-03	6.23E-02	6.04E-02
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Tractor Trailer- Material Delivery	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Open Parking Lot @Grade - 10000 sqft	Top Coat of Asphalt	Paving Machine	7.55E-01	2.44E-01	4.40E-02	1.49E-03	5.70E-02	5.53E-02
Open Parking Lot @Grade - 10000 sqft	Top Coat of Asphalt	Ten Wheelers- Material Delivery	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Backhoe	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Fork Truck	8.63E-01	6.04E-02	8.03E-03	1.57E-03	1.09E-02	1.05E-02
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Tractor Trailer- Material Delivery	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Clearing and Grubbing	Chain Saw	1.53E+00	2.66E+02	7.31E+01	4.14E-03	9.75E+00	8.97E+00
Parking Lot	Clearing and Grubbing	Chipper/Stump Grinder	2.78E+00	1.24E+00	2.45E-01	1.81E-03	2.32E-01	2.25E-01
Parking Lot	Clearing and Grubbing	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Concrete Placement	Air Compressor	1.58E+00	5.40E-01	6.29E-02	1.66E-03	9.26E-02	8.98E-02
Parking Lot	Concrete Placement	Concrete Saws	2.57E+00	3.24E-01	9.90E-02	1.58E-03	2.84E-02	2.76E-02
Parking Lot	Concrete Placement	Concrete Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Concrete Placement	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Parking Lot	Concrete Placement	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Concrete Placement	Rubber Tired Loader	4.88E-01	1.77E-01	2.96E-02	1.46E-03	4.16E-02	4.03E-02
Parking Lot	Concrete Placement	Slip Form Paver	4.47E-01	1.77E-01	2.78E-02	1.46E-03	4.29E-02	4.16E-02
Parking Lot	Concrete Placement	Surfacing Equipment (Grooving)	3.76E+00	1.50E+00	3.53E-01	2.19E-03	1.71E-01	1.66E-01
Parking Lot	Curbing	Concrete Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Curbing	Curb/Gutter Paver	4.47E-01	1.77E-01	2.78E-02	1.46E-03	4.29E-02	4.16E-02
Parking Lot	Curbing	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Parking Lot	Curbing	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Drainage - 24 inch SICPP	Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Parking Lot	Drainage - 24 inch SICPP	Dump Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Drainage - 24 inch SICPP	Excavator	2.81E-01	8.46E-02	1.32E-02	1.43E-03	1.81E-02	1.76E-02
Parking Lot	Drainage - 24 inch SICPP	Loader	4.88E-01	1.77E-01	2.96E-02	1.46E-03	4.16E-02	4.03E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Drainage - 24 inch SICPP	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Parking Lot	Drainage - 24 inch SICPP	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Drainage - 24 inch SICPP	Roller	1.19E+00	4.17E-01	3.51E-02	1.62E-03	6.23E-02	6.04E-02
Parking Lot	Drainage - 6 inch Perforated Underdrain	Dump Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Drainage - 6 inch Perforated Underdrain	Loader	4.88E-01	1.77E-01	2.96E-02	1.46E-03	4.16E-02	4.03E-02
Parking Lot	Drainage - 6 inch Perforated Underdrain	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Parking Lot	Drainage - 6 inch Perforated Underdrain	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01
Parking Lot	Excavation (Borrow)	Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Parking Lot	Excavation (Borrow)	Dump Truck (12 cy)	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Excavation (Borrow)	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Excavation (Borrow)	Roller	1.19E+00	4.17E-01	3.51E-02	1.62E-03	6.23E-02	6.04E-02
Parking Lot	Excavation (Cut to Fill)	Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Parking Lot	Excavation (Cut to Fill)	Dump Truck (12 cy)	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Excavation (Cut to Fill)	Excavator	2.81E-01	8.46E-02	1.32E-02	1.43E-03	1.81E-02	1.76E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Excavation (Cut to Fill)	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Excavation (Cut to Fill)	Roller	1.19E+00	4.17E-01	3.51E-02	1.62E-03	6.23E-02	6.04E-02
Parking Lot	Excavation (Cut to Fill)	Scraper	5.88E-01	2.32E-01	3.52E-02	1.49E-03	3.81E-02	3.69E-02
Parking Lot	Excavation (Topsoil Stripping)	Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Parking Lot	Fencing	Concrete Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Fencing	Dump Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Fencing	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Parking Lot	Fencing	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Fencing	Skid Steer Loader	4.10E+00	3.28E+00	6.46E-01	2.18E-03	4.57E-01	4.43E-01
Parking Lot	Fencing	Tractors/Loader/Backhoe	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01
Parking Lot	Grading	Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Parking Lot	Grading	Grader	2.26E-01	7.05E-02	1.75E-02	1.43E-03	1.40E-02	1.36E-02
Parking Lot	Grading	Roller	1.19E+00	4.17E-01	3.51E-02	1.62E-03	6.23E-02	6.04E-02
Parking Lot	Hydroseeding	Hydroseeder	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Hydroseeding	Off-Road Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Markings	Flatbed Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Markings	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Parking Lot	Markings	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Sidewalks	Concrete Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Sidewalks	Dump Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Sidewalks	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Sidewalks	Tractors/Loader/Backhoe	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Sidewalks	Vibratory Compactor	4.20E+00	2.54E+00	8.21E-01	2.16E-03	2.57E-01	2.50E-01
Parking Lot	Soil Erosion/Sediment Control	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Parking Lot	Soil Erosion/Sediment Control	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Soil Erosion/Sediment Control	Pumps	4.26E+00	2.57E+00	8.23E-01	2.16E-03	2.67E-01	2.59E-01
Parking Lot	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01
Parking Lot	Street Lighting	Dump Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Street Lighting	Loader	4.88E-01	1.77E-01	2.96E-02	1.46E-03	4.16E-02	4.03E-02
Parking Lot	Street Lighting	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Parking Lot	Street Lighting	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Street Lighting	Skid Steer Loader	4.10E+00	3.28E+00	6.46E-01	2.18E-03	4.57E-01	4.43E-01
Parking Lot	Street Lighting	Tractors/Loader/Backhoe	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01
Parking Lot	Subbase Placement	Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Parking Lot	Subbase Placement	Dump Truck (12 cy)	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Subbase Placement	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Subbase Placement	Roller	1.19E+00	4.17E-01	3.51E-02	1.62E-03	6.23E-02	6.04E-02
Parking Lot	Topsoil Placement	Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Parking Lot	Topsoil Placement	Dump Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Topsoil Placement	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Tree Planting	Flatbed Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Tree Planting	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Parking Lot	Tree Planting	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Parking Lot	Tree Planting	Tractors/Loader/Backhoe	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01
Service Road	Clearing and Grubbing	Chain Saw	1.53E+00	2.66E+02	7.31E+01	4.14E-03	9.75E+00	8.97E+00
Service Road	Clearing and Grubbing	Chipper/Stump Grinder	2.78E+00	1.24E+00	2.45E-01	1.81E-03	2.32E-01	2.25E-01
Service Road	Clearing and Grubbing	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Service Road	Concrete Placement	Air Compressor	1.58E+00	5.40E-01	6.29E-02	1.66E-03	9.26E-02	8.98E-02
Service Road	Concrete Placement	Concrete Saws	2.57E+00	3.24E-01	9.90E-02	1.58E-03	2.84E-02	2.76E-02
Service Road	Concrete Placement	Concrete Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Service Road	Concrete Placement	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Service Road	Concrete Placement	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Service Road	Concrete Placement	Rubber Tired Loader	4.88E-01	1.77E-01	2.96E-02	1.46E-03	4.16E-02	4.03E-02
Service Road	Concrete Placement	Slip Form Paver	4.47E-01	1.77E-01	2.78E-02	1.46E-03	4.29E-02	4.16E-02
Service Road	Concrete Placement	Surfacing Equipment (Grooving)	3.76E+00	1.50E+00	3.53E-01	2.19E-03	1.71E-01	1.66E-01
Service Road	Drainage - 24 inch SICPP	Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Service Road	Drainage - 24 inch SICPP	Dump Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Service Road	Drainage - 24 inch SICPP	Excavator	2.81E-01	8.46E-02	1.32E-02	1.43E-03	1.81E-02	1.76E-02
Service Road	Drainage - 24 inch SICPP	Loader	4.88E-01	1.77E-01	2.96E-02	1.46E-03	4.16E-02	4.03E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Drainage - 24 inch SICPP	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Service Road	Drainage - 24 inch SICPP	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Service Road	Drainage - 24 inch SICPP	Roller	1.19E+00	4.17E-01	3.51E-02	1.62E-03	6.23E-02	6.04E-02
Service Road	Drainage - 6 inch Perforated Underdrain	Dump Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Service Road	Drainage - 6 inch Perforated Underdrain	Loader	4.88E-01	1.77E-01	2.96E-02	1.46E-03	4.16E-02	4.03E-02
Service Road	Drainage - 6 inch Perforated Underdrain	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Service Road	Drainage - 6 inch Perforated Underdrain	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Service Road	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01
Service Road	Dust Control	Water Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Service Road	Excavation (Borrow)	Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Service Road	Excavation (Borrow)	Dump Truck (12 cy)	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Service Road	Excavation (Borrow)	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Service Road	Excavation (Borrow)	Roller	1.19E+00	4.17E-01	3.51E-02	1.62E-03	6.23E-02	6.04E-02
Service Road	Excavation (Cut to Fill)	Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Service Road	Excavation (Cut to Fill)	Dump Truck (12 cy)	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Excavation (Cut to Fill)	Excavator	2.81E-01	8.46E-02	1.32E-02	1.43E-03	1.81E-02	1.76E-02
Service Road	Excavation (Cut to Fill)	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Service Road	Excavation (Cut to Fill)	Roller	1.19E+00	4.17E-01	3.51E-02	1.62E-03	6.23E-02	6.04E-02
Service Road	Excavation (Cut to Fill)	Scraper	5.88E-01	2.32E-01	3.52E-02	1.49E-03	3.81E-02	3.69E-02
Service Road	Excavation (Topsoil Stripping)	Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Service Road	Fencing	Concrete Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Service Road	Fencing	Dump Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Service Road	Fencing	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Service Road	Fencing	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Service Road	Fencing	Skid Steer Loader	4.10E+00	3.28E+00	6.46E-01	2.18E-03	4.57E-01	4.43E-01
Service Road	Fencing	Tractors/Loader/Backhoe	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01
Service Road	Grading	Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Service Road	Grading	Grader	2.26E-01	7.05E-02	1.75E-02	1.43E-03	1.40E-02	1.36E-02
Service Road	Grading	Roller	1.19E+00	4.17E-01	3.51E-02	1.62E-03	6.23E-02	6.04E-02
Service Road	Hydroseeding	Hydroseeder	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Service Road	Hydroseeding	Off-Road Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Service Road	Markings	Flatbed Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Service Road	Markings	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Service Road	Markings	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Service Road	Sidewalks	Concrete Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Service Road	Sidewalks	Dump Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Service Road	Sidewalks	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Sidewalks	Tractors/Loader/Backhoe	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01
Service Road	Sidewalks	Vibratory Compactor	4.20E+00	2.54E+00	8.21E-01	2.16E-03	2.57E-01	2.50E-01
Service Road	Soil Erosion/Sediment Control	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Service Road	Soil Erosion/Sediment Control	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Service Road	Soil Erosion/Sediment Control	Pumps	4.26E+00	2.57E+00	8.23E-01	2.16E-03	2.67E-01	2.59E-01
Service Road	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01
Service Road	Street Lighting	Dump Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Service Road	Street Lighting	Loader	4.88E-01	1.77E-01	2.96E-02	1.46E-03	4.16E-02	4.03E-02
Service Road	Street Lighting	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Service Road	Street Lighting	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Service Road	Street Lighting	Skid Steer Loader	4.10E+00	3.28E+00	6.46E-01	2.18E-03	4.57E-01	4.43E-01
Service Road	Street Lighting	Tractors/Loader/Backhoe	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01
Service Road	Subbase Placement	Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Service Road	Subbase Placement	Dump Truck (12 cy)	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Service Road	Subbase Placement	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Service Road	Subbase Placement	Roller	1.19E+00	4.17E-01	3.51E-02	1.62E-03	6.23E-02	6.04E-02
Service Road	Topsoil Placement	Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Service Road	Topsoil Placement	Dump Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Service Road	Topsoil Placement	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Tree Planting	Flatbed Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Service Road	Tree Planting	Other General Equipment	7.57E-01	1.70E-01	3.82E-02	1.47E-03	3.98E-02	3.86E-02
Service Road	Tree Planting	Pickup Truck	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Service Road	Tree Planting	Tractors/Loader/Backhoe	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01
Site Work - 10000 sqft	Construction Mob & Layout	Survey Crew Trucks	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Site Work - 10000 sqft	Construction Mob & Layout	Tractor Trailers Temp Fac.	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Site Work - 10000 sqft	Site Clearing-Remove Trees & Shrubs	Bulldozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Site Work - 10000 sqft	Site Clearing-Remove Trees & Shrubs	Chain Saws	1.53E+00	2.66E+02	7.31E+01	4.14E-03	9.75E+00	8.97E+00
Site Work - 10000 sqft	Site Clearing-Remove Trees & Shrubs	Flat Bed or Dump Trucks	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Site Work - 10000 sqft	Site Clearing-Remove Trees & Shrubs	Front Loader	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01
Site Work - 10000 sqft	Site Clearing-Remove Trees & Shrubs	Grub the site down 2'-0	2.57E+00	3.24E-01	9.90E-02	1.58E-03	2.84E-02	2.76E-02
Site Work - 10000 sqft	Site Clearing-Remove Trees & Shrubs	Log Chipper	2.78E+00	1.24E+00	2.45E-01	1.81E-03	2.32E-01	2.25E-01
Site Work - 10000 sqft	Site Clearing-Remove Trees & Shrubs	Mulcher	2.78E+00	1.24E+00	2.45E-01	1.81E-03	2.32E-01	2.25E-01
Site Work - 10000 sqft	Site Clearing-Remove Trees & Shrubs	Ten Wheelers	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Tractor	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01
Site Work - 10000 sqft	Site Restoration- Landscaping (Curbing)	Bob Cat	4.10E+00	3.28E+00	6.46E-01	2.18E-03	4.57E-01	4.43E-01
Site Work - 10000 sqft	Site Restoration- Landscaping (Curbing)	Concrete Ready Mix Trucks	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Site Work - 10000 sqft	Site Restoration- Landscaping (Curbing)	Tractor Trailer with Boom Hoist- Delivery	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Site Work - 10000 sqft	Site Restoration- Landscaping (Rough Grading)	Compacting Equipment	4.20E+00	2.54E+00	8.21E-01	2.16E-03	2.57E-01	2.50E-01
Site Work - 10000 sqft	Site Restoration- Landscaping (Rough Grading)	Small Dozer	3.58E-01	1.27E-01	1.94E-02	1.44E-03	2.99E-02	2.90E-02
Site Work - 10000 sqft	Site Restoration- Landscaping (Top Soil Seed and Plantings)	Forktruck (Hoist)	8.63E-01	6.04E-02	8.03E-03	1.57E-03	1.09E-02	1.05E-02
Site Work - 10000 sqft	Site Restoration- Landscaping (Top Soil Seed and Plantings)	Roller	1.19E+00	4.17E-01	3.51E-02	1.62E-03	6.23E-02	6.04E-02
Site Work - 10000 sqft	Site Restoration- Landscaping (Top Soil Seed and Plantings)	Seed Truck Spreader	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03
Site Work - 10000 sqft	Site Restoration- Landscaping (Top Soil Seed and Plantings)	Tractor Trailer- Material Delivery	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Backhoe	2.65E+00	2.66E+00	4.10E-01	2.10E-03	3.49E-01	3.38E-01
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Fork Truck	8.63E-01	6.04E-02	8.03E-03	1.57E-03	1.09E-02	1.05E-02
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Tractor Trailer- Material Delivery	1.83E-01	5.23E-02	1.34E-02	1.43E-03	9.49E-03	9.20E-03

Table C7. 2024 Electric CUP, construction-phase non-road equipment greenhouse gas emission factors.

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Building - 100000 sqft- 10 stories	Concrete Foundations	Backhoe	2.34E-02	3.32E-02	6.95E+02	7.06E+02
Building - 100000 sqft- 10 stories	Concrete Foundations	Concrete Pump	7.02E-02	2.81E-02	5.88E+02	6.01E+02
Building - 100000 sqft- 10 stories	Concrete Foundations	Concrete Ready Mix Trucks	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Concrete Foundations	Excavator	1.06E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Concrete Foundations	Fork Truck	5.88E-04	2.84E-02	5.96E+02	6.04E+02
Building - 100000 sqft- 10 stories	Concrete Foundations	Tool Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Concrete Foundations	Tractor Trailer- Material Delivery	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Construction Mob & Layout	Survey Crew Trucks	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Construction Mob & Layout	Tractor Trailers Temp Fac.	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Fork Truck	5.88E-04	2.84E-02	5.96E+02	6.04E+02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Generator	1.96E-02	2.81E-02	5.90E+02	5.99E+02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Grout Mixer	6.01E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Grout Wheel Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Man Lift	2.47E-02	3.32E-02	6.95E+02	7.06E+02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Tool Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Tractor Trailer- Material Delivery	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Truck Tower (Mantiwoc type)	2.22E-03	2.53E-02	5.31E+02	5.38E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Fork Truck	5.88E-04	2.84E-02	5.96E+02	6.04E+02
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Man Lift	2.47E-02	3.32E-02	6.95E+02	7.06E+02
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Tool Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Tractor Trailer- Material Delivery	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Roofing	High Lift	5.88E-04	2.84E-02	5.96E+02	6.04E+02
Building - 100000 sqft- 10 stories	Roofing	Man Lift	2.47E-02	3.32E-02	6.95E+02	7.06E+02
Building - 100000 sqft- 10 stories	Roofing	Material Deliveries	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Roofing	Tractor Trailer- Material Delivery	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Roofing	Truck Tower (Mantiwoc type)	2.22E-03	2.53E-02	5.31E+02	5.38E+02
Building - 100000 sqft- 10 stories	Security & Safety Systems	High Lift	5.88E-04	2.84E-02	5.96E+02	6.04E+02
Building - 100000 sqft- 10 stories	Security & Safety Systems	Tool Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	90 Ton Crane	2.22E-03	2.53E-02	5.31E+02	5.38E+02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Concrete Pump	7.02E-02	2.81E-02	5.88E+02	6.01E+02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Concrete Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Fork Truck	5.88E-04	2.84E-02	5.96E+02	6.04E+02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Tool Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Tractor Trailer- Steel Deliveries	8.21E-04	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Trowel Machine	6.01E-03	2.56E-02	5.37E+02	5.44E+02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Truck Tower (Mantiwoc type)	2.22E-03	2.53E-02	5.31E+02	5.38E+02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Dump Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Excavator	1.06E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Loader	2.46E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Roller	2.91E-03	2.84E-02	5.96E+02	6.04E+02
Drainage System	Drainage - 24 inch SICPP	Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch SICPP	Dump Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch SICPP	Excavator	1.06E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch SICPP	Loader	2.46E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch SICPP	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Drainage System	Drainage - 24 inch SICPP	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage - 24 inch SICPP	Roller	2.91E-03	2.84E-02	5.96E+02	6.04E+02
Drainage System	Drainage Structures	Dump Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage Structures	Excavator	1.06E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Drainage Structures	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Drainage System	Drainage Structures	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Drainage System	Hydroseeding	Hydroseeder	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Drainage System	Hydroseeding	Off-Road Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Drainage System	Soil Erosion/Sediment Control	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Drainage System	Soil Erosion/Sediment Control	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Drainage System	Soil Erosion/Sediment Control	Pumps	7.02E-02	2.81E-02	5.88E+02	6.01E+02
Drainage System	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.34E-02	3.32E-02	6.95E+02	7.06E+02
Drainage System	Topsoil Placement	Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Topsoil Placement	Dump Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Drainage System	Topsoil Placement	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fencing	Clearing and Grubbing	Chain Saw	1.19E+00	4.19E-02	6.86E+02	7.95E+02
Fencing	Clearing and Grubbing	Chipper/Stump Grinder	8.76E-03	2.81E-02	5.90E+02	5.98E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Fencing	Clearing and Grubbing	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fencing	Excavation (Cut to Fill)	Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Excavation (Cut to Fill)	Dump Truck (12 cy)	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fencing	Excavation (Cut to Fill)	Excavator	1.06E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Excavation (Cut to Fill)	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fencing	Excavation (Cut to Fill)	Roller	2.91E-03	2.84E-02	5.96E+02	6.04E+02
Fencing	Fencing	Concrete Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fencing	Fencing	Dump Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fencing	Fencing	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Fencing	Fencing	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fencing	Fencing	Skid Steer Loader	2.86E-02	3.32E-02	6.94E+02	7.06E+02
Fencing	Fencing	Tractors/Loader/Backhoe	2.34E-02	3.32E-02	6.95E+02	7.06E+02
Fencing	Grading	Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Grading	Grader	1.18E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Grading	Roller	2.91E-03	2.84E-02	5.96E+02	6.04E+02
Fencing	Hydroseeding	Hydroseeder	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fencing	Hydroseeding	Off-Road Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fencing	Soil Erosion/Sediment Control	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Fencing	Soil Erosion/Sediment Control	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Fencing	Soil Erosion/Sediment Control	Pumps	7.02E-02	2.81E-02	5.88E+02	6.01E+02
Fencing	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.34E-02	3.32E-02	6.95E+02	7.06E+02
Fencing	Topsoil Placement	Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Topsoil Placement	Dump Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fencing	Topsoil Placement	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Clearing and Grubbing	Chain Saw	1.19E+00	4.19E-02	6.86E+02	7.95E+02
Fuel Tanks	Clearing and Grubbing	Chipper/Stump Grinder	8.76E-03	2.81E-02	5.90E+02	5.98E+02
Fuel Tanks	Clearing and Grubbing	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Concrete Placement	Air Compressor	5.25E-03	2.81E-02	5.90E+02	5.98E+02
Fuel Tanks	Concrete Placement	Concrete Saws	1.29E-02	2.84E-02	5.96E+02	6.05E+02
Fuel Tanks	Concrete Placement	Concrete Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Concrete Placement	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Fuel Tanks	Concrete Placement	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Concrete Placement	Rubber Tired Loader	2.46E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Concrete Placement	Slip Form Paver	2.31E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Concrete Placement	Surfacing Equipment (Grooving)	3.11E-02	2.84E-02	5.95E+02	6.05E+02
Fuel Tanks	Construction/Erect Tanks	Crane	2.22E-03	2.53E-02	5.31E+02	5.38E+02
Fuel Tanks	Construction/Erect Tanks	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Fuel Tanks	Construction/Erect Tanks	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Drainage - 24 inch SICPP	Excavator	1.06E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Drainage	Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Drainage	Dump Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Drainage	Loader	2.46E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Drainage	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Fuel Tanks	Drainage	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Drainage	Roller	2.91E-03	2.84E-02	5.96E+02	6.04E+02
Fuel Tanks	Dust Control	Water Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Excavation (Borrow)	Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Excavation (Borrow)	Dump Truck (12 cy)	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Excavation (Borrow)	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Excavation (Borrow)	Roller	2.91E-03	2.84E-02	5.96E+02	6.04E+02
Fuel Tanks	Excavation (Cut to Fill)	Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Excavation (Cut to Fill)	Dump Truck (12 cy)	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Excavation (Cut to Fill)	Excavator	1.06E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Excavation (Cut to Fill)	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Excavation (Cut to Fill)	Roller	2.91E-03	2.84E-02	5.96E+02	6.04E+02
Fuel Tanks	Excavation (Cut to Fill)	Scraper	3.03E-03	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Fuel Tanks	Excavation (Topsoil Stripping)	Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Fencing	Concrete Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Fencing	Dump Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Fencing	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Fuel Tanks	Fencing	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Fencing	Skid Steer Loader	2.86E-02	3.32E-02	6.94E+02	7.06E+02
Fuel Tanks	Fencing	Tractors/Loader/Backhoe	2.34E-02	3.32E-02	6.95E+02	7.06E+02
Fuel Tanks	Grading	Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Grading	Grader	1.18E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Grading	Roller	2.91E-03	2.84E-02	5.96E+02	6.04E+02
Fuel Tanks	Hydroseeding	Hydroseeder	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Hydroseeding	Off-Road Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Markings	Flatbed Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Markings	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Fuel Tanks	Markings	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Soil Erosion/Sediment Control	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Fuel Tanks	Soil Erosion/Sediment Control	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Soil Erosion/Sediment Control	Pumps	7.02E-02	2.81E-02	5.88E+02	6.01E+02
Fuel Tanks	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.34E-02	3.32E-02	6.95E+02	7.06E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Fuel Tanks	Street Lighting	Dump Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Street Lighting	Loader	2.46E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Street Lighting	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Fuel Tanks	Street Lighting	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Street Lighting	Skid Steer Loader	2.86E-02	3.32E-02	6.94E+02	7.06E+02
Fuel Tanks	Street Lighting	Tractors/Loader/Backhoe	2.34E-02	3.32E-02	6.95E+02	7.06E+02
Fuel Tanks	Subbase Placement	Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Subbase Placement	Dump Truck (12 cy)	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Subbase Placement	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Subbase Placement	Roller	2.91E-03	2.84E-02	5.96E+02	6.04E+02
Fuel Tanks	Topsoil Placement	Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Topsoil Placement	Dump Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Topsoil Placement	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Landscaping	Hydroseeding	Hydroseeder	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Landscaping	Hydroseeding	Off-Road Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Landscaping	Mulching	Dump Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Landscaping	Mulching	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Landscaping	Mulching	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Landscaping	Mulching	Tractors/Loader/Backhoe	2.34E-02	3.32E-02	6.95E+02	7.06E+02
Landscaping	Sodding	Flatbed Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Landscaping	Sodding	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Landscaping	Sodding	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Landscaping	Sodding	Skid Steer Loader	2.86E-02	3.32E-02	6.94E+02	7.06E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Landscaping	Topsoil Placement	Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Landscaping	Topsoil Placement	Dump Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Landscaping	Topsoil Placement	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Landscaping	Tree Planting	Flatbed Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Landscaping	Tree Planting	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Landscaping	Tree Planting	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Landscaping	Tree Planting	Tractors/Loader/Backhoe	2.34E-02	3.32E-02	6.95E+02	7.06E+02
Landscaping	Tree Pruning	Aerial Lift	2.47E-02	3.32E-02	6.95E+02	7.06E+02
Landscaping	Tree Pruning	Chipper/Stump Grinder	8.76E-03	2.81E-02	5.90E+02	5.98E+02
Landscaping	Tree Pruning	Dump Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Landscaping	Tree Pruning	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Landscaping	Tree Pruning	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Landscaping	Tree Pruning	Pruning Saw/Chain Saw	1.19E+00	4.19E-02	6.86E+02	7.95E+02
Open Parking Lot @Grade - 10000 sqft	Binder Coat of Pavement	Paving Machine	3.60E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Binder Coat of Pavement	Ten Wheelers- Material Delivery	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Construction Mob & Layout	Survey Crew Trucks	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Construction Mob & Layout	Tractor Trailers Temp Fac.	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Curbing	Bob Cat	2.86E-02	3.32E-02	6.94E+02	7.06E+02
Open Parking Lot @Grade - 10000 sqft	Curbing	Concrete Ready Mix Trucks	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Curbing	Material Deliveries	8.21E-04	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Open Parking Lot @Grade - 10000 sqft	Curbing	Tractor Trailer with Boom Hoist- Delivery	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Bulldozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Front Loader	2.34E-02	3.32E-02	6.95E+02	7.06E+02
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Ten Wheelers	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Auger Drill	8.05E-03	2.53E-02	5.31E+02	5.38E+02
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Fork Truck	5.88E-04	2.84E-02	5.96E+02	6.04E+02
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Front Loader	2.34E-02	3.32E-02	6.95E+02	7.06E+02
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Tractor Trailer- Material Delivery	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Bulldozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Chain Saws	1.19E+00	4.19E-02	6.86E+02	7.95E+02
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Flat Bed or Dump Trucks	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Log Chipper	8.76E-03	2.81E-02	5.90E+02	5.98E+02
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Mulcher	8.76E-03	2.81E-02	5.90E+02	5.98E+02
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Tractor	2.34E-02	3.32E-02	6.95E+02	7.06E+02
Open Parking Lot @Grade - 10000 sqft	Rough Grading	Compacting Equipment	7.21E-02	2.81E-02	5.88E+02	6.02E+02
Open Parking Lot @Grade - 10000 sqft	Rough Grading	Small Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	40 Ton Rough Terrain Crane	2.22E-03	2.53E-02	5.31E+02	5.38E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	High Lift	5.88E-04	2.84E-02	5.96E+02	6.04E+02
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	Tractor Trailer- Material Delivery	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Stripping	Line Painting Truck and Sprayer	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Backhoe	2.34E-02	3.32E-02	6.95E+02	7.06E+02
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Roller	2.91E-03	2.84E-02	5.96E+02	6.04E+02
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Tractor Trailer- Material Delivery	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Top Coat of Asphalt	Paving Machine	3.60E-03	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Top Coat of Asphalt	Ten Wheelers- Material Delivery	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Backhoe	2.34E-02	3.32E-02	6.95E+02	7.06E+02
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Fork Truck	5.88E-04	2.84E-02	5.96E+02	6.04E+02
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Tractor Trailer- Material Delivery	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Clearing and Grubbing	Chain Saw	1.19E+00	4.19E-02	6.86E+02	7.95E+02
Parking Lot	Clearing and Grubbing	Chipper/Stump Grinder	8.76E-03	2.81E-02	5.90E+02	5.98E+02
Parking Lot	Clearing and Grubbing	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Concrete Placement	Air Compressor	5.25E-03	2.81E-02	5.90E+02	5.98E+02
Parking Lot	Concrete Placement	Concrete Saws	1.29E-02	2.84E-02	5.96E+02	6.05E+02
Parking Lot	Concrete Placement	Concrete Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Concrete Placement	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Concrete Placement	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Concrete Placement	Rubber Tired Loader	2.46E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Concrete Placement	Slip Form Paver	2.31E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Concrete Placement	Surfacing Equipment (Grooving)	3.11E-02	2.84E-02	5.95E+02	6.05E+02
Parking Lot	Curbing	Concrete Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Curbing	Curb/Gutter Paver	2.31E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Curbing	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Curbing	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Drainage - 24 inch SICPP	Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Drainage - 24 inch SICPP	Dump Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Drainage - 24 inch SICPP	Excavator	1.06E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Drainage - 24 inch SICPP	Loader	2.46E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Drainage - 24 inch SICPP	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Drainage - 24 inch SICPP	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Drainage - 24 inch SICPP	Roller	2.91E-03	2.84E-02	5.96E+02	6.04E+02
Parking Lot	Drainage - 6 inch Perforated Underdrain	Dump Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Drainage - 6 inch Perforated Underdrain	Loader	2.46E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Drainage - 6 inch Perforated Underdrain	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Drainage - 6 inch Perforated Underdrain	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	2.34E-02	3.32E-02	6.95E+02	7.06E+02
Parking Lot	Excavation (Borrow)	Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Excavation (Borrow)	Dump Truck (12 cy)	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Excavation (Borrow)	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Excavation (Borrow)	Roller	2.91E-03	2.84E-02	5.96E+02	6.04E+02
Parking Lot	Excavation (Cut to Fill)	Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Excavation (Cut to Fill)	Dump Truck (12 cy)	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Excavation (Cut to Fill)	Excavator	1.06E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Excavation (Cut to Fill)	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Excavation (Cut to Fill)	Roller	2.91E-03	2.84E-02	5.96E+02	6.04E+02
Parking Lot	Excavation (Cut to Fill)	Scraper	3.03E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Excavation (Topsoil Stripping)	Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Fencing	Concrete Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Fencing	Dump Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Fencing	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Fencing	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Fencing	Skid Steer Loader	2.86E-02	3.32E-02	6.94E+02	7.06E+02
Parking Lot	Fencing	Tractors/Loader/Backhoe	2.34E-02	3.32E-02	6.95E+02	7.06E+02
Parking Lot	Grading	Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Grading	Grader	1.18E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Grading	Roller	2.91E-03	2.84E-02	5.96E+02	6.04E+02
Parking Lot	Hydroseeding	Hydroseeder	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Hydroseeding	Off-Road Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Markings	Flatbed Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Markings	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Markings	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Sidewalks	Concrete Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Sidewalks	Dump Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Sidewalks	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Sidewalks	Tractors/Loader/Backhoe	2.34E-02	3.32E-02	6.95E+02	7.06E+02
Parking Lot	Sidewalks	Vibratory Compactor	7.21E-02	2.81E-02	5.88E+02	6.02E+02
Parking Lot	Soil Erosion/Sediment Control	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Soil Erosion/Sediment Control	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Soil Erosion/Sediment Control	Pumps	7.02E-02	2.81E-02	5.88E+02	6.01E+02
Parking Lot	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.34E-02	3.32E-02	6.95E+02	7.06E+02
Parking Lot	Street Lighting	Dump Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Street Lighting	Loader	2.46E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Street Lighting	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Street Lighting	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Street Lighting	Skid Steer Loader	2.86E-02	3.32E-02	6.94E+02	7.06E+02
Parking Lot	Street Lighting	Tractors/Loader/Backhoe	2.34E-02	3.32E-02	6.95E+02	7.06E+02
Parking Lot	Subbase Placement	Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Subbase Placement	Dump Truck (12 cy)	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Subbase Placement	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Subbase Placement	Roller	2.91E-03	2.84E-02	5.96E+02	6.04E+02
Parking Lot	Topsoil Placement	Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Topsoil Placement	Dump Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Topsoil Placement	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Tree Planting	Flatbed Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Tree Planting	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Tree Planting	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Tree Planting	Tractors/Loader/Backhoe	2.34E-02	3.32E-02	6.95E+02	7.06E+02
Service Road	Clearing and Grubbing	Chain Saw	1.19E+00	4.19E-02	6.86E+02	7.95E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Service Road	Clearing and Grubbing	Chipper/Stump Grinder	8.76E-03	2.81E-02	5.90E+02	5.98E+02
Service Road	Clearing and Grubbing	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Concrete Placement	Air Compressor	5.25E-03	2.81E-02	5.90E+02	5.98E+02
Service Road	Concrete Placement	Concrete Saws	1.29E-02	2.84E-02	5.96E+02	6.05E+02
Service Road	Concrete Placement	Concrete Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Concrete Placement	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Service Road	Concrete Placement	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Concrete Placement	Rubber Tired Loader	2.46E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Concrete Placement	Slip Form Paver	2.31E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Concrete Placement	Surfacing Equipment (Grooving)	3.11E-02	2.84E-02	5.95E+02	6.05E+02
Service Road	Drainage - 24 inch SICPP	Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Drainage - 24 inch SICPP	Dump Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Drainage - 24 inch SICPP	Excavator	1.06E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Drainage - 24 inch SICPP	Loader	2.46E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Drainage - 24 inch SICPP	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Service Road	Drainage - 24 inch SICPP	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Drainage - 24 inch SICPP	Roller	2.91E-03	2.84E-02	5.96E+02	6.04E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Service Road	Drainage - 6 inch Perforated Underdrain	Dump Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Drainage - 6 inch Perforated Underdrain	Loader	2.46E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Drainage - 6 inch Perforated Underdrain	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Service Road	Drainage - 6 inch Perforated Underdrain	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	2.34E-02	3.32E-02	6.95E+02	7.06E+02
Service Road	Dust Control	Water Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Excavation (Borrow)	Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Excavation (Borrow)	Dump Truck (12 cy)	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Excavation (Borrow)	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Excavation (Borrow)	Roller	2.91E-03	2.84E-02	5.96E+02	6.04E+02
Service Road	Excavation (Cut to Fill)	Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Excavation (Cut to Fill)	Dump Truck (12 cy)	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Excavation (Cut to Fill)	Excavator	1.06E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Excavation (Cut to Fill)	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Excavation (Cut to Fill)	Roller	2.91E-03	2.84E-02	5.96E+02	6.04E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Service Road	Excavation (Cut to Fill)	Scraper	3.03E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Excavation (Topsoil Stripping)	Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Fencing	Concrete Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Fencing	Dump Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Fencing	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Service Road	Fencing	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Fencing	Skid Steer Loader	2.86E-02	3.32E-02	6.94E+02	7.06E+02
Service Road	Fencing	Tractors/Loader/Backhoe	2.34E-02	3.32E-02	6.95E+02	7.06E+02
Service Road	Grading	Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Grading	Grader	1.18E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Grading	Roller	2.91E-03	2.84E-02	5.96E+02	6.04E+02
Service Road	Hydroseeding	Hydroseeder	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Hydroseeding	Off-Road Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Markings	Flatbed Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Markings	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Service Road	Markings	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Sidewalks	Concrete Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Sidewalks	Dump Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Sidewalks	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Sidewalks	Tractors/Loader/Backhoe	2.34E-02	3.32E-02	6.95E+02	7.06E+02
Service Road	Sidewalks	Vibratory Compactor	7.21E-02	2.81E-02	5.88E+02	6.02E+02
Service Road	Soil Erosion/Sediment Control	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Service Road	Soil Erosion/Sediment Control	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Soil Erosion/Sediment Control	Pumps	7.02E-02	2.81E-02	5.88E+02	6.01E+02
Service Road	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.34E-02	3.32E-02	6.95E+02	7.06E+02
Service Road	Street Lighting	Dump Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Street Lighting	Loader	2.46E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Street Lighting	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Service Road	Street Lighting	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Street Lighting	Skid Steer Loader	2.86E-02	3.32E-02	6.94E+02	7.06E+02
Service Road	Street Lighting	Tractors/Loader/Backhoe	2.34E-02	3.32E-02	6.95E+02	7.06E+02
Service Road	Subbase Placement	Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Subbase Placement	Dump Truck (12 cy)	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Subbase Placement	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Subbase Placement	Roller	2.91E-03	2.84E-02	5.96E+02	6.04E+02
Service Road	Topsoil Placement	Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Service Road	Topsoil Placement	Dump Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Topsoil Placement	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Tree Planting	Flatbed Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Tree Planting	Other General Equipment	3.24E-03	2.53E-02	5.31E+02	5.38E+02
Service Road	Tree Planting	Pickup Truck	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Service Road	Tree Planting	Tractors/Loader/Backhoe	2.34E-02	3.32E-02	6.95E+02	7.06E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Site Work - 10000 sqft	Construction Mob & Layout	Survey Crew Trucks	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Construction Mob & Layout	Tractor Trailers Temp Fac.	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Bulldozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Chain Saws	1.19E+00	4.19E-02	6.86E+02	7.95E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Flat Bed or Dump Trucks	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Front Loader	2.34E-02	3.32E-02	6.95E+02	7.06E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Grub the site down 2'-0	1.29E-02	2.84E-02	5.96E+02	6.05E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Log Chipper	8.76E-03	2.81E-02	5.90E+02	5.98E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Mulcher	8.76E-03	2.81E-02	5.90E+02	5.98E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Ten Wheelers	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Tractor	2.34E-02	3.32E-02	6.95E+02	7.06E+02
Site Work - 10000 sqft	Site Restoration- Landscaping (Curbing)	Bob Cat	2.86E-02	3.32E-02	6.94E+02	7.06E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Site Work - 10000 sqft	Site Restoration-Landscaping (Curbing)	Concrete Ready Mix Trucks	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Site Restoration-Landscaping (Curbing)	Tractor Trailer with Boom Hoist- Delivery	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Site Restoration-Landscaping (Rough Grading)	Compacting Equipment	7.21E-02	2.81E-02	5.88E+02	6.02E+02
Site Work - 10000 sqft	Site Restoration-Landscaping (Rough Grading)	Small Dozer	1.61E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Forktruck (Hoist)	5.88E-04	2.84E-02	5.96E+02	6.04E+02
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Roller	2.91E-03	2.84E-02	5.96E+02	6.04E+02
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Seed Truck Spreader	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Tractor Trailer- Material Delivery	8.21E-04	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Backhoe	2.34E-02	3.32E-02	6.95E+02	7.06E+02
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Fork Truck	5.88E-04	2.84E-02	5.96E+02	6.04E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Tractor Trailer- Material Delivery	8.21E-04	2.56E-02	5.37E+02	5.44E+02

Table C8. 2022 Electric CUP, construction-phase non-road equipment criteria air pollutant emissions.

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Concrete Foundations	Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Concrete Foundations	Concrete Pump	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Concrete Foundations	Concrete Ready Mix Trucks	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Concrete Foundations	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Concrete Foundations	Fork Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Concrete Foundations	Tool Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Concrete Foundations	Tractor Trailer- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Construction Mob & Layout	Survey Crew Trucks	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Construction Mob & Layout	Tractor Trailers Temp Fac.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Fork Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Generator	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Grout Mixer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Grout Wheel Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Man Lift	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Tool Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Tractor Trailer- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Truck Tower (Mantiwoc type)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Fork Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Man Lift	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Tool Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Tractor Trailer- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Roofing	High Lift	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Roofing	Man Lift	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Roofing	Material Deliveries	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Roofing	Tractor Trailer- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Roofing	Truck Tower (Mantiwoc type)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Security & Safety Systems	High Lift	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Security & Safety Systems	Tool Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	90 Ton Crane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Concrete Pump	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Fork Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Tool Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Tractor Trailer- Steel Deliveries	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Trowel Machine	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Truck Tower (Mantiwoc type)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Drainage System	Drainage - 24 inch SICPP	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage - 24 inch SICPP	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage - 24 inch SICPP	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage - 24 inch SICPP	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage - 24 inch SICPP	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage - 24 inch SICPP	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage - 24 inch SICPP	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage Structures	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage Structures	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage Structures	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage Structures	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Hydroseeding	Hydroseeder	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Hydroseeding	Off-Road Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Soil Erosion/Sediment Control	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Soil Erosion/Sediment Control	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Soil Erosion/Sediment Control	Pumps	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Drainage System	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Topsoil Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Topsoil Placement	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Topsoil Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Clearing and Grubbing	Chain Saw	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Clearing and Grubbing	Chipper/Stump Grinder	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Clearing and Grubbing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Excavation (Cut to Fill)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Excavation (Cut to Fill)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Excavation (Cut to Fill)	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Excavation (Cut to Fill)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Excavation (Cut to Fill)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Fencing	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Fencing	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Fencing	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Fencing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Fencing	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Fencing	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Grading	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Grading	Grader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fencing	Grading	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Hydroseeding	Hydroseeder	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Hydroseeding	Off-Road Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Soil Erosion/Sediment Control	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Soil Erosion/Sediment Control	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Soil Erosion/Sediment Control	Pumps	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Topsoil Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Topsoil Placement	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Topsoil Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Clearing and Grubbing	Chain Saw	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Clearing and Grubbing	Chipper/Stump Grinder	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Clearing and Grubbing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Air Compressor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Concrete Saws	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Concrete Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Rubber Tired Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Slip Form Paver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Surfacing Equipment (Grooving)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Construction/Erect Tanks	Crane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Construction/Erect Tanks	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Construction/Erect Tanks	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Drainage - 24 inch SICPP	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Drainage	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Drainage	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Drainage	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Drainage	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Drainage	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Drainage	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Dust Control	Water Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Borrow)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Borrow)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Borrow)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Borrow)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Excavation (Cut to Fill)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Scraper	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Topsoil Stripping)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Fencing	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Fencing	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Fencing	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Fencing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Fencing	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Fencing	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Grading	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Grading	Grader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Grading	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Hydroseeding	Hydroseeder	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Hydroseeding	Off-Road Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Markings	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Markings	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Markings	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Soil Erosion/Sediment Control	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Soil Erosion/Sediment Control	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Soil Erosion/Sediment Control	Pumps	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Subbase Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Subbase Placement	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Subbase Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Subbase Placement	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Topsoil Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Topsoil Placement	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Topsoil Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Hydroseeding	Hydroseeder	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Hydroseeding	Off-Road Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Mulching	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Landscaping	Mulching	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Mulching	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Mulching	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Sodding	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Sodding	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Sodding	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Sodding	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Topsoil Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Topsoil Placement	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Topsoil Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Planting	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Planting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Planting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Planting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Aerial Lift	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Chipper/Stump Grinder	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Pruning Saw/Chain Saw	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Binder Coat of Pavement	Paving Machine	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Open Parking Lot @Grade - 10000 sqft	Binder Coat of Pavement	Ten Wheelers- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Construction Mob & Layout	Survey Crew Trucks	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Construction Mob & Layout	Tractor Trailers Temp Fac.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Curbing	Bob Cat	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Curbing	Concrete Ready Mix Trucks	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Curbing	Material Deliveries	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Curbing	Tractor Trailer with Boom Hoist- Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Bulldozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Front Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Ten Wheelers	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Auger Drill	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Fork Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Front Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Tractor Trailer- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Bulldozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Chain Saws	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Flat Bed or Dump Trucks	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Log Chipper	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Mulcher	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Tractor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Rough Grading	Compacting Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Rough Grading	Small Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	40 Ton Rough Terrain Crane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	High Lift	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	Tractor Trailer- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Stripping	Line Painting Truck and Sprayer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Tractor Trailer- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Top Coat of Asphalt	Paving Machine	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Top Coat of Asphalt	Ten Wheelers- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Fork Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Tractor Trailer- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Clearing and Grubbing	Chain Saw	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Clearing and Grubbing	Chipper/Stump Grinder	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Clearing and Grubbing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Air Compressor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Concrete Saws	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Rubber Tired Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Slip Form Paver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Surfacing Equipment (Grooving)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Curbing	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Curbing	Curb/Gutter Paver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Curbing	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Curbing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 24 inch SICPP	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 24 inch SICPP	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 24 inch SICPP	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 24 inch SICPP	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Drainage - 24 inch SICPP	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 24 inch SICPP	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 24 inch SICPP	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 6 inch Perforated Underdrain	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 6 inch Perforated Underdrain	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 6 inch Perforated Underdrain	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 6 inch Perforated Underdrain	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Borrow)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Borrow)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Borrow)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Borrow)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Cut to Fill)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Cut to Fill)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Cut to Fill)	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Excavation (Cut to Fill)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Cut to Fill)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Cut to Fill)	Scraper	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Topsoil Stripping)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Fencing	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Fencing	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Fencing	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Fencing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Fencing	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Fencing	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Grading	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Grading	Grader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Grading	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Hydroseeding	Hydroseeder	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Hydroseeding	Off-Road Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Markings	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Markings	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Markings	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Sidewalks	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Sidewalks	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Sidewalks	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Sidewalks	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Sidewalks	Vibratory Compactor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Soil Erosion/Sediment Control	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Soil Erosion/Sediment Control	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Soil Erosion/Sediment Control	Pumps	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Street Lighting	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Street Lighting	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Street Lighting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Street Lighting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Street Lighting	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Street Lighting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Subbase Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Subbase Placement	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Subbase Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Subbase Placement	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Topsoil Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Topsoil Placement	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Topsoil Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Tree Planting	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Tree Planting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Tree Planting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Tree Planting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Clearing and Grubbing	Chain Saw	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Clearing and Grubbing	Chipper/Stump Grinder	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Clearing and Grubbing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Air Compressor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Concrete Saws	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Rubber Tired Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Slip Form Paver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Surfacing Equipment (Grooving)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 24 inch SICPP	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 24 inch SICPP	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 24 inch SICPP	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 24 inch SICPP	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Drainage - 24 inch SICPP	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 24 inch SICPP	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 24 inch SICPP	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 6 inch Perforated Underdrain	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 6 inch Perforated Underdrain	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 6 inch Perforated Underdrain	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 6 inch Perforated Underdrain	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Dust Control	Water Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Borrow)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Borrow)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Borrow)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Borrow)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Cut to Fill)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Cut to Fill)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Excavation (Cut to Fill)	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Cut to Fill)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Cut to Fill)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Cut to Fill)	Scraper	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Topsoil Stripping)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Fencing	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Fencing	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Fencing	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Fencing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Fencing	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Fencing	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Grading	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Grading	Grader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Grading	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Hydroseeding	Hydroseeder	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Hydroseeding	Off-Road Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Markings	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Markings	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Markings	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Sidewalks	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Sidewalks	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Sidewalks	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Sidewalks	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Sidewalks	Vibratory Compactor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Soil Erosion/Sediment Control	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Soil Erosion/Sediment Control	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Soil Erosion/Sediment Control	Pumps	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Street Lighting	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Street Lighting	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Street Lighting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Street Lighting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Street Lighting	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Street Lighting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Subbase Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Subbase Placement	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Subbase Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Subbase Placement	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Topsoil Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Topsoil Placement	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Topsoil Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Tree Planting	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Tree Planting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Tree Planting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Tree Planting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Construction Mob & Layout	Survey Crew Trucks	1.58E-03	5.66E-04	1.09E-04	8.06E-06	1.00E-04	9.74E-05
Site Work - 10000 sqft	Construction Mob & Layout	Tractor Trailers Temp Fac.	6.32E-04	2.26E-04	4.34E-05	3.22E-06	4.02E-05	3.90E-05
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Bulldozer	3.95E-03	1.38E-03	2.13E-04	9.61E-06	3.39E-04	3.29E-04
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Chain Saws	7.43E-04	1.29E-01	3.55E-02	2.01E-06	4.74E-03	4.36E-03
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Flat Bed or Dump Trucks	1.26E-02	4.52E-03	8.68E-04	6.45E-05	8.04E-04	7.79E-04
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Front Loader	3.88E-03	4.01E-03	6.39E-04	2.83E-06	5.28E-04	5.12E-04
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Grub the site down 2'-0	3.92E-03	5.78E-04	1.63E-04	2.39E-06	6.28E-05	6.10E-05
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Log Chipper	8.89E-03	4.14E-03	8.44E-04	5.08E-06	7.88E-04	7.64E-04
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Mulcher	8.89E-03	4.14E-03	8.44E-04	5.08E-06	7.88E-04	7.64E-04
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Ten Wheelers	6.32E-03	2.26E-03	4.34E-04	3.22E-05	4.02E-04	3.90E-04

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Tractor	7.76E-03	8.01E-03	1.28E-03	5.66E-06	1.06E-03	1.02E-03
Site Work - 10000 sqft	Site Restoration- Landscaping (Curbing)	Bob Cat	2.61E-03	2.25E-03	4.53E-04	1.33E-06	3.20E-04	3.10E-04
Site Work - 10000 sqft	Site Restoration- Landscaping (Curbing)	Concrete Ready Mix Trucks	3.79E-03	1.36E-03	2.60E-04	1.93E-05	2.41E-04	2.34E-04
Site Work - 10000 sqft	Site Restoration- Landscaping (Curbing)	Tractor Trailer with Boom Hoist- Delivery	3.79E-03	1.36E-03	2.60E-04	1.93E-05	2.41E-04	2.34E-04
Site Work - 10000 sqft	Site Restoration- Landscaping (Rough Grading)	Compacting Equipment	4.12E-04	2.53E-04	7.94E-05	2.11E-07	2.63E-05	2.55E-05
Site Work - 10000 sqft	Site Restoration- Landscaping (Rough Grading)	Small Dozer	2.37E-03	8.31E-04	1.28E-04	5.77E-06	2.04E-04	1.97E-04
Site Work - 10000 sqft	Site Restoration- Landscaping (Top Soil Seed and Plantings)	Forktruck (Hoist)	6.72E-03	8.01E-04	7.93E-05	1.18E-05	1.37E-04	1.33E-04
Site Work - 10000 sqft	Site Restoration- Landscaping (Top Soil Seed and Plantings)	Roller	5.19E-03	2.34E-03	1.99E-04	6.17E-06	3.40E-04	3.30E-04
Site Work - 10000 sqft	Site Restoration- Landscaping (Top Soil Seed and Plantings)	Seed Truck Spreader	2.53E-03	9.05E-04	1.74E-04	1.29E-05	1.61E-04	1.56E-04
Site Work - 10000 sqft	Site Restoration- Landscaping (Top Soil Seed and Plantings)	Tractor Trailer- Material Delivery	1.26E-02	4.52E-03	8.68E-04	6.45E-05	8.04E-04	7.79E-04

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Backhoe	1.16E-02	1.20E-02	1.92E-03	8.50E-06	1.58E-03	1.54E-03
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Fork Truck	5.04E-03	6.01E-04	5.95E-05	8.81E-06	1.02E-04	9.94E-05
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Tractor Trailer- Material Delivery	4.74E-03	1.70E-03	3.26E-04	2.42E-05	3.01E-04	2.92E-04

Table C9. 2022 Electric CUP, construction-phase non-road equipment greenhouse gas emissions.

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Building - 100000 sqft- 10 stories	Concrete Foundations	Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Concrete Foundations	Concrete Pump	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Concrete Foundations	Concrete Ready Mix Trucks	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Concrete Foundations	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Concrete Foundations	Fork Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Concrete Foundations	Tool Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Concrete Foundations	Tractor Trailer- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Construction Mob & Layout	Survey Crew Trucks	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Construction Mob & Layout	Tractor Trailers Temp Fac.	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Fork Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Generator	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Grout Mixer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Grout Wheel Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Man Lift	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Tool Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Tractor Trailer- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Truck Tower (Mantiwoc type)	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Fork Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Man Lift	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Tool Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Tractor Trailer- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Roofing	High Lift	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Roofing	Man Lift	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Roofing	Material Deliveries	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Roofing	Tractor Trailer- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Roofing	Truck Tower (Mantiwoc type)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Security & Safety Systems	High Lift	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Security & Safety Systems	Tool Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	90 Ton Crane	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Concrete Pump	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Fork Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Tool Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Tractor Trailer- Steel Deliveries	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Trowel Machine	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Truck Tower (Mantiwoc type)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage - 24 inch SICPP	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage - 24 inch SICPP	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage - 24 inch SICPP	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage - 24 inch SICPP	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage - 24 inch SICPP	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Drainage System	Drainage - 24 inch SICPP	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage - 24 inch SICPP	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage Structures	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage Structures	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage Structures	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage Structures	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Hydroseeding	Hydroseeder	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Hydroseeding	Off-Road Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Soil Erosion/Sediment Control	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Soil Erosion/Sediment Control	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Soil Erosion/Sediment Control	Pumps	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Topsoil Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Topsoil Placement	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Topsoil Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Clearing and Grubbing	Chain Saw	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Clearing and Grubbing	Chipper/Stump Grinder	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Fencing	Clearing and Grubbing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Excavation (Cut to Fill)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Excavation (Cut to Fill)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Excavation (Cut to Fill)	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Excavation (Cut to Fill)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Excavation (Cut to Fill)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Fencing	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Fencing	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Fencing	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Fencing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Fencing	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Fencing	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Grading	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Grading	Grader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Grading	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Hydroseeding	Hydroseeder	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Hydroseeding	Off-Road Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Soil Erosion/Sediment Control	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Soil Erosion/Sediment Control	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Fencing	Soil Erosion/Sediment Control	Pumps	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Topsoil Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Topsoil Placement	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Topsoil Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Clearing and Grubbing	Chain Saw	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Clearing and Grubbing	Chipper/Stump Grinder	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Clearing and Grubbing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Air Compressor	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Concrete Saws	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Rubber Tired Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Slip Form Paver	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Surfacing Equipment (Grooving)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Construction/Erect Tanks	Crane	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Construction/Erect Tanks	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Fuel Tanks	Construction/Erect Tanks	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Drainage - 24 inch SICPP	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Drainage	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Drainage	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Drainage	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Drainage	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Drainage	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Drainage	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Dust Control	Water Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Borrow)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Borrow)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Borrow)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Borrow)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Scraper	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Fuel Tanks	Excavation (Topsoil Stripping)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Fencing	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Fencing	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Fencing	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Fencing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Fencing	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Fencing	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Grading	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Grading	Grader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Grading	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Hydroseeding	Hydroseeder	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Hydroseeding	Off-Road Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Markings	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Markings	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Markings	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Soil Erosion/Sediment Control	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Soil Erosion/Sediment Control	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Soil Erosion/Sediment Control	Pumps	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Fuel Tanks	Street Lighting	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Subbase Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Subbase Placement	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Subbase Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Subbase Placement	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Topsoil Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Topsoil Placement	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Topsoil Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Hydroseeding	Hydroseeder	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Hydroseeding	Off-Road Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Mulching	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Mulching	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Mulching	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Mulching	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Sodding	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Sodding	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Sodding	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Sodding	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Landscaping	Topsoil Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Topsoil Placement	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Topsoil Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Planting	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Planting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Planting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Planting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Aerial Lift	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Chipper/Stump Grinder	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Pruning Saw/Chain Saw	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Binder Coat of Pavement	Paving Machine	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Binder Coat of Pavement	Ten Wheelers- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Construction Mob & Layout	Survey Crew Trucks	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Construction Mob & Layout	Tractor Trailers Temp Fac.	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Curbing	Bob Cat	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Curbing	Concrete Ready Mix Trucks	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Curbing	Material Deliveries	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Open Parking Lot @Grade - 10000 sqft	Curbing	Tractor Trailer with Boom Hoist- Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Bulldozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Front Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Ten Wheelers	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Auger Drill	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Fork Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Front Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Tractor Trailer- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Bulldozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Chain Saws	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Flat Bed or Dump Trucks	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Log Chipper	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Mulcher	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Tractor	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Rough Grading	Compacting Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Rough Grading	Small Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	40 Ton Rough Terrain Crane	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	High Lift	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	Tractor Trailer- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Stripping	Line Painting Truck and Sprayer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Tractor Trailer- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Top Coat of Asphalt	Paving Machine	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Top Coat of Asphalt	Ten Wheelers- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Fork Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Tractor Trailer- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Clearing and Grubbing	Chain Saw	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Clearing and Grubbing	Chipper/Stump Grinder	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Clearing and Grubbing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Air Compressor	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Concrete Saws	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Concrete Placement	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Rubber Tired Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Slip Form Paver	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Surfacing Equipment (Grooving)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Curbing	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Curbing	Curb/Gutter Paver	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Curbing	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Curbing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 24 inch SICPP	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 24 inch SICPP	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 24 inch SICPP	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 24 inch SICPP	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 24 inch SICPP	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 24 inch SICPP	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 24 inch SICPP	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 6 inch Perforated Underdrain	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Drainage - 6 inch Perforated Underdrain	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 6 inch Perforated Underdrain	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 6 inch Perforated Underdrain	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Borrow)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Borrow)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Borrow)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Borrow)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Cut to Fill)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Cut to Fill)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Cut to Fill)	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Cut to Fill)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Cut to Fill)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Cut to Fill)	Scraper	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Topsoil Stripping)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Fencing	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Fencing	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Fencing	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Fencing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Fencing	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Fencing	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Grading	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Grading	Grader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Grading	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Hydroseeding	Hydroseeder	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Hydroseeding	Off-Road Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Markings	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Markings	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Markings	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Sidewalks	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Sidewalks	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Sidewalks	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Sidewalks	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Sidewalks	Vibratory Compactor	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Soil Erosion/Sediment Control	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Soil Erosion/Sediment Control	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Soil Erosion/Sediment Control	Pumps	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Street Lighting	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Street Lighting	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Street Lighting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Street Lighting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Street Lighting	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Street Lighting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Subbase Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Subbase Placement	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Subbase Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Subbase Placement	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Topsoil Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Topsoil Placement	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Topsoil Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Tree Planting	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Tree Planting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Tree Planting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Tree Planting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Clearing and Grubbing	Chain Saw	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Service Road	Clearing and Grubbing	Chipper/Stump Grinder	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Clearing and Grubbing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Air Compressor	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Concrete Saws	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Rubber Tired Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Slip Form Paver	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Surfacing Equipment (Grooving)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 24 inch SICPP	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 24 inch SICPP	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 24 inch SICPP	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 24 inch SICPP	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 24 inch SICPP	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 24 inch SICPP	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 24 inch SICPP	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Service Road	Drainage - 6 inch Perforated Underdrain	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 6 inch Perforated Underdrain	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 6 inch Perforated Underdrain	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 6 inch Perforated Underdrain	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Dust Control	Water Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Borrow)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Borrow)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Borrow)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Borrow)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Cut to Fill)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Cut to Fill)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Cut to Fill)	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Cut to Fill)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Cut to Fill)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Service Road	Excavation (Cut to Fill)	Scraper	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Topsoil Stripping)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Fencing	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Fencing	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Fencing	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Fencing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Fencing	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Fencing	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Grading	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Grading	Grader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Grading	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Hydroseeding	Hydroseeder	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Hydroseeding	Off-Road Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Markings	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Markings	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Markings	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Sidewalks	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Sidewalks	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Sidewalks	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Sidewalks	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Sidewalks	Vibratory Compactor	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Soil Erosion/Sediment Control	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Service Road	Soil Erosion/Sediment Control	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Soil Erosion/Sediment Control	Pumps	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Street Lighting	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Street Lighting	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Street Lighting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Street Lighting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Street Lighting	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Street Lighting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Subbase Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Subbase Placement	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Subbase Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Subbase Placement	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Topsoil Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Topsoil Placement	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Topsoil Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Tree Planting	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Tree Planting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Tree Planting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Tree Planting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Site Work - 10000 sqft	Construction Mob & Layout	Survey Crew Trucks	8.24E-06	1.43E-04	3.00E+00	3.04E+00
Site Work - 10000 sqft	Construction Mob & Layout	Tractor Trailers Temp Fac.	3.30E-06	5.72E-05	1.20E+00	1.22E+00
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Bulldozer	1.84E-05	1.67E-04	3.50E+00	3.54E+00
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Chain Saws	5.77E-04	2.04E-05	3.33E-01	3.87E-01
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Flat Bed or Dump Trucks	6.59E-05	1.14E-03	2.40E+01	2.43E+01
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Front Loader	3.42E-05	4.40E-05	9.21E-01	9.36E-01
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Grub the site down 2'-0	2.04E-05	4.23E-05	8.88E-01	9.01E-01
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Log Chipper	2.73E-05	7.63E-05	1.60E+00	1.62E+00
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Mulcher	2.73E-05	7.63E-05	1.60E+00	1.62E+00
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Ten Wheelers	3.30E-05	5.72E-04	1.20E+01	1.22E+01
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Tractor	6.84E-05	8.79E-05	1.84E+00	1.87E+00
Site Work - 10000 sqft	Site Restoration- Landscaping (Curbing)	Bob Cat	1.79E-05	1.98E-05	4.14E-01	4.21E-01

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Site Work - 10000 sqft	Site Restoration-Landscaping (Curbing)	Concrete Ready Mix Trucks	1.98E-05	3.43E-04	7.20E+00	7.29E+00
Site Work - 10000 sqft	Site Restoration-Landscaping (Curbing)	Tractor Trailer with Boom Hoist- Delivery	1.98E-05	3.43E-04	7.20E+00	7.29E+00
Site Work - 10000 sqft	Site Restoration-Landscaping (Rough Grading)	Compacting Equipment	6.91E-06	2.75E-06	5.75E-02	5.88E-02
Site Work - 10000 sqft	Site Restoration-Landscaping (Rough Grading)	Small Dozer	1.11E-05	1.00E-04	2.10E+00	2.13E+00
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Forktruck (Hoist)	6.31E-06	2.12E-04	4.44E+00	4.50E+00
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Roller	1.66E-05	1.06E-04	2.22E+00	2.25E+00
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Seed Truck Spreader	1.32E-05	2.29E-04	4.80E+00	4.86E+00
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Tractor Trailer- Material Delivery	6.59E-05	1.14E-03	2.40E+01	2.43E+01
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Backhoe	1.03E-04	1.32E-04	2.76E+00	2.81E+00
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Fork Truck	4.73E-06	1.59E-04	3.33E+00	3.37E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Tractor Trailer- Material Delivery	2.47E-05	4.29E-04	9.00E+00	9.11E+00

Table C10. 2023 Electric CUP, construction-phase non-road equipment criteria air pollutant emissions.

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Concrete Foundations	Backhoe	7.33E-03	7.47E-03	1.17E-03	5.58E-06	9.82E-04	9.52E-04
Building - 100000 sqft- 10 stories	Concrete Foundations	Concrete Pump	9.53E-04	5.78E-04	1.82E-04	4.81E-07	6.12E-05	5.93E-05
Building - 100000 sqft- 10 stories	Concrete Foundations	Concrete Ready Mix Trucks	7.50E-03	2.43E-03	5.32E-04	4.77E-05	4.37E-04	4.24E-04
Building - 100000 sqft- 10 stories	Concrete Foundations	Excavator	1.52E-03	4.96E-04	7.57E-05	6.21E-06	1.14E-04	1.11E-04
Building - 100000 sqft- 10 stories	Concrete Foundations	Fork Truck	6.48E-03	5.83E-04	6.67E-05	1.16E-05	1.01E-04	9.83E-05
Building - 100000 sqft- 10 stories	Concrete Foundations	Tool Truck	2.50E-03	8.11E-04	1.77E-04	1.59E-05	1.46E-04	1.41E-04
Building - 100000 sqft- 10 stories	Concrete Foundations	Tractor Trailer- Material Delivery	5.00E-03	1.62E-03	3.54E-04	3.18E-05	2.91E-04	2.83E-04
Building - 100000 sqft- 10 stories	Construction Mob & Layout	Survey Crew Trucks	2.08E-04	6.76E-05	1.48E-05	1.33E-06	1.21E-05	1.18E-05
Building - 100000 sqft- 10 stories	Construction Mob & Layout	Tractor Trailers Temp Fac.	8.33E-05	2.70E-05	5.91E-06	5.30E-07	4.85E-06	4.71E-06
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Fork Truck	1.13E-02	1.02E-03	1.17E-04	2.04E-05	1.77E-04	1.72E-04
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Generator	1.20E-03	3.37E-04	9.61E-05	6.48E-07	5.69E-05	5.52E-05
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Grout Mixer	6.10E-02	2.84E-02	3.96E-03	6.35E-05	4.38E-03	4.25E-03
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Grout Wheel Truck	3.33E-03	1.08E-03	2.36E-04	2.12E-05	1.94E-04	1.88E-04
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Man Lift	2.73E-02	1.86E-02	3.78E-03	1.51E-05	2.38E-03	2.31E-03
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Tool Truck	8.75E-03	2.84E-03	6.20E-04	5.57E-05	5.10E-04	4.94E-04
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Tractor Trailer- Material Delivery	1.75E-02	5.68E-03	1.24E-03	1.11E-04	1.02E-03	9.89E-04
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Truck Tower (Mantiwoc type)	1.27E-03	3.19E-04	8.98E-05	3.93E-06	5.83E-05	5.66E-05

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Fork Truck	2.16E-02	1.94E-03	2.22E-04	3.88E-05	3.38E-04	3.28E-04
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Man Lift	5.20E-02	3.55E-02	7.20E-03	2.88E-05	4.53E-03	4.39E-03
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Tool Truck	3.33E-02	1.08E-02	2.36E-03	2.12E-04	1.94E-03	1.88E-03
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Tractor Trailer- Material Delivery	3.33E-02	1.08E-02	2.36E-03	2.12E-04	1.94E-03	1.88E-03
Building - 100000 sqft- 10 stories	Roofing	High Lift	2.16E-03	1.94E-04	2.22E-05	3.88E-06	3.38E-05	3.28E-05
Building - 100000 sqft- 10 stories	Roofing	Man Lift	6.50E-04	4.44E-04	9.00E-05	3.60E-07	5.66E-05	5.49E-05
Building - 100000 sqft- 10 stories	Roofing	Material Deliveries	1.25E-03	4.06E-04	8.86E-05	7.95E-06	7.28E-05	7.06E-05
Building - 100000 sqft- 10 stories	Roofing	Tractor Trailer- Material Delivery	8.33E-04	2.70E-04	5.91E-05	5.30E-06	4.85E-05	4.71E-05
Building - 100000 sqft- 10 stories	Roofing	Truck Tower (Mantiwoc type)	1.90E-03	4.78E-04	1.35E-04	5.90E-06	8.75E-05	8.49E-05
Building - 100000 sqft- 10 stories	Security & Safety Systems	High Lift	1.08E-02	9.71E-04	1.11E-04	1.94E-05	1.69E-04	1.64E-04
Building - 100000 sqft- 10 stories	Security & Safety Systems	Tool Truck	1.67E-02	5.41E-03	1.18E-03	1.06E-04	9.71E-04	9.42E-04
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	90 Ton Crane	3.80E-03	9.56E-04	2.70E-04	1.18E-05	1.75E-04	1.70E-04
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Concrete Pump	3.18E-04	1.93E-04	6.08E-05	1.60E-07	2.04E-05	1.98E-05
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Concrete Truck	1.25E-03	4.06E-04	8.86E-05	7.95E-06	7.28E-05	7.06E-05
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Fork Truck	8.64E-03	7.77E-04	8.89E-05	1.55E-05	1.35E-04	1.31E-04
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Tool Truck	3.33E-03	1.08E-03	2.36E-04	2.12E-05	1.94E-04	1.88E-04
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Tractor Trailer- Steel Deliveries	7.50E-03	2.43E-03	5.32E-04	4.77E-05	4.37E-04	4.24E-04

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Trowel Machine	5.81E-03	2.70E-03	3.77E-04	6.05E-06	4.17E-04	4.04E-04
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Truck Tower (Mantiwoc type)	1.14E-02	2.87E-03	8.09E-04	3.54E-05	5.25E-04	5.09E-04
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Dozer	2.64E-05	1.00E-05	1.50E-06	8.40E-08	2.45E-06	2.37E-06
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Dump Truck	4.44E-05	1.44E-05	3.15E-06	2.83E-07	2.59E-06	2.51E-06
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Excavator	2.02E-05	6.61E-06	1.01E-06	8.27E-08	1.52E-06	1.47E-06
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Loader	3.35E-05	1.19E-05	2.04E-06	8.48E-08	2.79E-06	2.71E-06
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Other General Equipment	3.80E-05	8.27E-06	1.91E-06	6.22E-08	1.96E-06	1.90E-06
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Pickup Truck	4.44E-05	1.44E-05	3.15E-06	2.83E-07	2.59E-06	2.51E-06
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Roller	4.20E-05	1.66E-05	1.41E-06	5.38E-08	2.43E-06	2.36E-06
Drainage System	Drainage - 24 inch SICPP	Dozer	1.44E-05	5.44E-06	8.18E-07	4.57E-08	1.33E-06	1.29E-06
Drainage System	Drainage - 24 inch SICPP	Dump Truck	2.42E-05	7.84E-06	1.71E-06	1.54E-07	1.41E-06	1.37E-06
Drainage System	Drainage - 24 inch SICPP	Excavator	1.10E-05	3.59E-06	5.49E-07	4.50E-08	8.26E-07	8.02E-07
Drainage System	Drainage - 24 inch SICPP	Loader	1.82E-05	6.48E-06	1.11E-06	4.61E-08	1.52E-06	1.47E-06
Drainage System	Drainage - 24 inch SICPP	Other General Equipment	2.07E-05	4.50E-06	1.04E-06	3.38E-08	1.07E-06	1.03E-06

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Drainage System	Drainage - 24 inch SICPP	Pickup Truck	2.42E-05	7.84E-06	1.71E-06	1.54E-07	1.41E-06	1.37E-06
Drainage System	Drainage - 24 inch SICPP	Roller	2.28E-05	9.02E-06	7.68E-07	2.93E-08	1.32E-06	1.28E-06
Drainage System	Drainage Structures	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage Structures	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage Structures	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage Structures	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Hydroseeding	Hydroseeder	2.11E-06	6.86E-07	1.50E-07	1.35E-08	1.23E-07	1.19E-07
Drainage System	Hydroseeding	Off-Road Truck	2.11E-06	6.86E-07	1.50E-07	1.35E-08	1.23E-07	1.19E-07
Drainage System	Soil Erosion/Sediment Control	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Soil Erosion/Sediment Control	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Soil Erosion/Sediment Control	Pumps	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Topsoil Placement	Dozer	3.10E-06	1.17E-06	1.76E-07	9.84E-09	2.87E-07	2.78E-07
Drainage System	Topsoil Placement	Dump Truck	5.20E-06	1.69E-06	3.69E-07	3.31E-08	3.03E-07	2.94E-07
Drainage System	Topsoil Placement	Pickup Truck	5.20E-06	1.69E-06	3.69E-07	3.31E-08	3.03E-07	2.94E-07
Fencing	Clearing and Grubbing	Chain Saw	1.56E-05	2.71E-03	7.44E-04	4.21E-08	9.93E-05	9.13E-05
Fencing	Clearing and Grubbing	Chipper/Stump Grinder	1.72E-04	7.85E-05	1.58E-05	1.05E-07	1.48E-05	1.44E-05

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fencing	Clearing and Grubbing	Pickup Truck	1.41E-04	4.56E-05	9.97E-06	8.95E-07	8.19E-06	7.95E-06
Fencing	Excavation (Cut to Fill)	Dozer	8.23E-05	3.11E-05	4.68E-06	2.61E-07	7.61E-06	7.39E-06
Fencing	Excavation (Cut to Fill)	Dump Truck (12 cy)	4.61E-04	1.50E-04	3.27E-05	2.93E-06	2.68E-05	2.60E-05
Fencing	Excavation (Cut to Fill)	Excavator	6.30E-05	2.06E-05	3.14E-06	2.57E-07	4.73E-06	4.59E-06
Fencing	Excavation (Cut to Fill)	Pickup Truck	1.38E-04	4.49E-05	9.80E-06	8.79E-07	8.05E-06	7.81E-06
Fencing	Excavation (Cut to Fill)	Roller	1.31E-04	5.16E-05	4.39E-06	1.68E-07	7.57E-06	7.35E-06
Fencing	Fencing	Concrete Truck	8.30E-04	2.69E-04	5.89E-05	5.28E-06	4.84E-05	4.69E-05
Fencing	Fencing	Dump Truck	3.32E-03	1.08E-03	2.35E-04	2.11E-05	1.93E-04	1.88E-04
Fencing	Fencing	Other General Equipment	2.84E-03	6.18E-04	1.43E-04	4.65E-06	1.46E-04	1.42E-04
Fencing	Fencing	Pickup Truck	3.32E-03	1.08E-03	2.35E-04	2.11E-05	1.93E-04	1.88E-04
Fencing	Fencing	Skid Steer Loader	2.78E-03	2.31E-03	4.58E-04	1.45E-06	3.24E-04	3.15E-04
Fencing	Fencing	Tractors/Loader/Backhoe	2.43E-03	2.48E-03	3.89E-04	1.85E-06	3.26E-04	3.16E-04
Fencing	Grading	Dozer	2.50E-05	9.44E-06	1.42E-06	7.93E-08	2.31E-06	2.24E-06
Fencing	Grading	Grader	2.62E-05	8.95E-06	2.01E-06	1.35E-07	1.79E-06	1.73E-06
Fencing	Grading	Roller	3.96E-05	1.57E-05	1.33E-06	5.08E-08	2.30E-06	2.23E-06
Fencing	Hydroseeding	Hydroseeder	3.78E-05	1.23E-05	2.68E-06	2.40E-07	2.20E-06	2.14E-06
Fencing	Hydroseeding	Off-Road Truck	3.78E-05	1.23E-05	2.68E-06	2.40E-07	2.20E-06	2.14E-06
Fencing	Soil Erosion/Sediment Control	Other General Equipment	3.01E-05	6.54E-06	1.51E-06	4.92E-08	1.55E-06	1.50E-06
Fencing	Soil Erosion/Sediment Control	Pickup Truck	7.03E-05	2.28E-05	4.99E-06	4.47E-07	4.10E-06	3.97E-06

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fencing	Soil Erosion/Sediment Control	Pumps	8.93E-06	5.42E-06	1.71E-06	4.51E-09	5.73E-07	5.56E-07
Fencing	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.58E-05	2.63E-05	4.12E-06	1.96E-08	3.45E-06	3.35E-06
Fencing	Topsoil Placement	Dozer	1.39E-04	5.24E-05	7.89E-06	4.41E-07	1.28E-05	1.25E-05
Fencing	Topsoil Placement	Dump Truck	2.33E-04	7.56E-05	1.65E-05	1.48E-06	1.36E-05	1.32E-05
Fencing	Topsoil Placement	Pickup Truck	2.33E-04	7.56E-05	1.65E-05	1.48E-06	1.36E-05	1.32E-05
Fuel Tanks	Clearing and Grubbing	Chain Saw	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Clearing and Grubbing	Chipper/Stump Grinder	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Clearing and Grubbing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Air Compressor	5.10E-06	1.93E-06	2.25E-07	4.98E-09	3.26E-07	3.16E-07
Fuel Tanks	Concrete Placement	Concrete Saws	4.21E-06	5.70E-07	1.68E-07	2.59E-09	5.55E-08	5.39E-08
Fuel Tanks	Concrete Placement	Concrete Truck	2.29E-05	7.42E-06	1.62E-06	1.45E-07	1.33E-06	1.29E-06
Fuel Tanks	Concrete Placement	Other General Equipment	9.38E-06	2.04E-06	4.72E-07	1.54E-08	4.84E-07	4.69E-07
Fuel Tanks	Concrete Placement	Pickup Truck	1.65E-05	5.34E-06	1.17E-06	1.05E-07	9.59E-07	9.30E-07
Fuel Tanks	Concrete Placement	Rubber Tired Loader	4.14E-06	1.47E-06	2.51E-07	1.05E-08	3.44E-07	3.34E-07
Fuel Tanks	Concrete Placement	Slip Form Paver	3.88E-06	1.49E-06	2.42E-07	1.05E-08	3.58E-07	3.48E-07
Fuel Tanks	Concrete Placement	Surfacing Equipment (Grooving)	3.82E-06	1.52E-06	3.59E-07	2.22E-09	1.75E-07	1.69E-07
Fuel Tanks	Construction/Erect Tanks	Crane	2.01E-04	5.04E-05	1.42E-05	6.22E-07	9.23E-06	8.95E-06
Fuel Tanks	Construction/Erect Tanks	Other General Equipment	6.01E-04	1.31E-04	3.03E-05	9.85E-07	3.10E-05	3.01E-05

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Construction/Erect Tanks	Pickup Truck	7.03E-04	2.28E-04	4.99E-05	4.47E-06	4.10E-05	3.97E-05
Fuel Tanks	Drainage - 24 inch SICPP	Excavator	3.82E-05	1.25E-05	1.90E-06	1.56E-07	2.87E-06	2.78E-06
Fuel Tanks	Drainage	Dozer	4.99E-05	1.89E-05	2.84E-06	1.58E-07	4.62E-06	4.48E-06
Fuel Tanks	Drainage	Dump Truck	8.38E-05	2.72E-05	5.94E-06	5.33E-07	4.88E-06	4.74E-06
Fuel Tanks	Drainage	Loader	6.33E-05	2.25E-05	3.84E-06	1.60E-07	5.26E-06	5.10E-06
Fuel Tanks	Drainage	Other General Equipment	7.17E-05	1.56E-05	3.61E-06	1.17E-07	3.70E-06	3.59E-06
Fuel Tanks	Drainage	Pickup Truck	8.38E-05	2.72E-05	5.94E-06	5.33E-07	4.88E-06	4.74E-06
Fuel Tanks	Drainage	Roller	7.92E-05	3.13E-05	2.66E-06	1.02E-07	4.59E-06	4.45E-06
Fuel Tanks	Dust Control	Water Truck	2.53E-01	8.21E-02	1.79E-02	1.61E-03	1.47E-02	1.43E-02
Fuel Tanks	Excavation (Borrow)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Borrow)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Borrow)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Borrow)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Scraper	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Excavation (Topsoil Stripping)	Dozer	1.53E-06	5.77E-07	8.68E-08	4.85E-09	1.41E-07	1.37E-07
Fuel Tanks	Fencing	Concrete Truck	1.93E-05	6.27E-06	1.37E-06	1.23E-07	1.13E-06	1.09E-06
Fuel Tanks	Fencing	Dump Truck	7.73E-05	2.51E-05	5.48E-06	4.92E-07	4.51E-06	4.37E-06
Fuel Tanks	Fencing	Other General Equipment	6.61E-05	1.44E-05	3.33E-06	1.08E-07	3.41E-06	3.31E-06
Fuel Tanks	Fencing	Pickup Truck	7.73E-05	2.51E-05	5.48E-06	4.92E-07	4.51E-06	4.37E-06
Fuel Tanks	Fencing	Skid Steer Loader	6.47E-05	5.37E-05	1.07E-05	3.37E-08	7.55E-06	7.33E-06
Fuel Tanks	Fencing	Tractors/Loader/Backhoe	5.67E-05	5.78E-05	9.07E-06	4.31E-08	7.60E-06	7.37E-06
Fuel Tanks	Grading	Dozer	3.20E-06	1.21E-06	1.82E-07	1.02E-08	2.96E-07	2.87E-07
Fuel Tanks	Grading	Grader	3.36E-06	1.15E-06	2.58E-07	1.72E-08	2.29E-07	2.22E-07
Fuel Tanks	Grading	Roller	5.07E-06	2.01E-06	1.71E-07	6.51E-09	2.94E-07	2.85E-07
Fuel Tanks	Hydroseeding	Hydroseeder	4.84E-06	1.57E-06	3.43E-07	3.08E-08	2.82E-07	2.73E-07
Fuel Tanks	Hydroseeding	Off-Road Truck	4.84E-06	1.57E-06	3.43E-07	3.08E-08	2.82E-07	2.73E-07
Fuel Tanks	Markings	Flatbed Truck	3.37E-05	1.09E-05	2.39E-06	2.15E-07	1.97E-06	1.91E-06
Fuel Tanks	Markings	Other General Equipment	2.88E-05	6.28E-06	1.45E-06	4.72E-08	1.49E-06	1.44E-06
Fuel Tanks	Markings	Pickup Truck	3.37E-05	1.09E-05	2.39E-06	2.15E-07	1.97E-06	1.91E-06
Fuel Tanks	Soil Erosion/Sediment Control	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Soil Erosion/Sediment Control	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Soil Erosion/Sediment Control	Pumps	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Street Lighting	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Subbase Placement	Dozer	2.05E-06	7.74E-07	1.17E-07	6.51E-09	1.90E-07	1.84E-07
Fuel Tanks	Subbase Placement	Dump Truck (12 cy)	2.42E-05	7.86E-06	1.72E-06	1.54E-07	1.41E-06	1.37E-06
Fuel Tanks	Subbase Placement	Pickup Truck	3.44E-06	1.12E-06	2.44E-07	2.19E-08	2.01E-07	1.95E-07
Fuel Tanks	Subbase Placement	Roller	3.17E-06	1.25E-06	1.07E-07	4.06E-09	1.84E-07	1.78E-07
Fuel Tanks	Topsoil Placement	Dozer	1.42E-05	5.38E-06	8.09E-07	4.52E-08	1.32E-06	1.28E-06
Fuel Tanks	Topsoil Placement	Dump Truck	2.39E-05	7.76E-06	1.70E-06	1.52E-07	1.39E-06	1.35E-06
Fuel Tanks	Topsoil Placement	Pickup Truck	2.39E-05	7.76E-06	1.70E-06	1.52E-07	1.39E-06	1.35E-06
Landscaping	Hydroseeding	Hydroseeder	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Hydroseeding	Off-Road Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Mulching	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Mulching	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Mulching	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Mulching	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Sodding	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Sodding	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Sodding	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Sodding	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Landscaping	Topsoil Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Topsoil Placement	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Topsoil Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Planting	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Planting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Planting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Planting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Aerial Lift	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Chipper/Stump Grinder	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Pruning Saw/Chain Saw	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Binder Coat of Pavement	Paving Machine	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Binder Coat of Pavement	Ten Wheelers- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Construction Mob & Layout	Survey Crew Trucks	3.52E-04	1.14E-04	2.49E-05	2.24E-06	2.05E-05	1.99E-05
Open Parking Lot @Grade - 10000 sqft	Construction Mob & Layout	Tractor Trailers Temp Fac.	3.52E-04	1.14E-04	2.49E-05	2.24E-06	2.05E-05	1.99E-05
Open Parking Lot @Grade - 10000 sqft	Curbing	Bob Cat	1.76E-03	1.46E-03	2.91E-04	9.20E-07	2.06E-04	2.00E-04
Open Parking Lot @Grade - 10000 sqft	Curbing	Concrete Ready Mix Trucks	2.11E-03	6.85E-04	1.50E-04	1.34E-05	1.23E-04	1.19E-04
Open Parking Lot @Grade - 10000 sqft	Curbing	Material Deliveries	2.11E-03	6.85E-04	1.50E-04	1.34E-05	1.23E-04	1.19E-04

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Open Parking Lot @Grade - 10000 sqft	Curbing	Tractor Trailer with Boom Hoist- Delivery	2.11E-03	6.85E-04	1.50E-04	1.34E-05	1.23E-04	1.19E-04
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Bulldozer	8.37E-04	3.16E-04	4.76E-05	2.66E-06	7.75E-05	7.51E-05
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Front Loader	1.03E-03	1.05E-03	1.65E-04	7.84E-07	1.38E-04	1.34E-04
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Ten Wheelers	1.41E-03	4.56E-04	9.97E-05	8.95E-06	8.19E-05	7.95E-05
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Auger Drill	4.79E-03	1.25E-03	3.69E-04	3.29E-06	2.91E-04	2.82E-04
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Fork Truck	1.37E-03	1.23E-04	1.41E-05	2.46E-06	2.14E-05	2.07E-05
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Front Loader	1.55E-03	1.58E-03	2.47E-04	1.18E-06	2.07E-04	2.01E-04
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Tractor Trailer- Material Delivery	1.05E-03	3.42E-04	7.48E-05	6.71E-06	6.15E-05	5.96E-05
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Bulldozer	2.09E-03	7.91E-04	1.19E-04	6.65E-06	1.94E-04	1.88E-04
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Chain Saws	3.11E-04	5.42E-02	1.49E-02	8.42E-07	1.99E-03	1.83E-03
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Flat Bed or Dump Trucks	3.52E-03	1.14E-03	2.49E-04	2.24E-05	2.05E-04	1.99E-04
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Log Chipper	3.44E-03	1.57E-03	3.15E-04	2.09E-06	2.96E-04	2.87E-04
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Mulcher	3.44E-03	1.57E-03	3.15E-04	2.09E-06	2.96E-04	2.87E-04
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Tractor	2.58E-03	2.63E-03	4.12E-04	1.96E-06	3.45E-04	3.35E-04
Open Parking Lot @Grade - 10000 sqft	Rough Grading	Compacting Equipment	1.91E-04	1.17E-04	3.72E-05	9.84E-08	1.19E-05	1.16E-05
Open Parking Lot @Grade - 10000 sqft	Rough Grading	Small Dozer	8.37E-04	3.16E-04	4.76E-05	2.66E-06	7.75E-05	7.51E-05
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	40 Ton Rough Terrain Crane	1.07E-03	2.69E-04	7.58E-05	3.32E-06	4.92E-05	4.77E-05

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	High Lift	9.12E-04	8.19E-05	9.38E-06	1.64E-06	1.43E-05	1.38E-05
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	Tractor Trailer- Material Delivery	1.41E-03	4.56E-04	9.97E-05	8.95E-06	8.19E-05	7.95E-05
Open Parking Lot @Grade - 10000 sqft	Stripping	Line Painting Truck and Sprayer	7.03E-04	2.28E-04	4.99E-05	4.47E-06	4.10E-05	3.97E-05
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Backhoe	1.03E-03	1.05E-03	1.65E-04	7.84E-07	1.38E-04	1.34E-04
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Roller	1.33E-03	5.25E-04	4.47E-05	1.70E-06	7.71E-05	7.47E-05
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Tractor Trailer- Material Delivery	1.41E-03	4.56E-04	9.97E-05	8.95E-06	8.19E-05	7.95E-05
Open Parking Lot @Grade - 10000 sqft	Top Coat of Asphalt	Paving Machine	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Top Coat of Asphalt	Ten Wheelers- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Backhoe	1.55E-03	1.58E-03	2.47E-04	1.18E-06	2.07E-04	2.01E-04
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Fork Truck	1.37E-03	1.23E-04	1.41E-05	2.46E-06	2.14E-05	2.07E-05
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Tractor Trailer- Material Delivery	1.05E-03	3.42E-04	7.48E-05	6.71E-06	6.15E-05	5.96E-05
Parking Lot	Clearing and Grubbing	Chain Saw	1.56E-05	2.71E-03	7.44E-04	4.21E-08	9.93E-05	9.13E-05
Parking Lot	Clearing and Grubbing	Chipper/Stump Grinder	1.72E-04	7.85E-05	1.58E-05	1.05E-07	1.48E-05	1.44E-05
Parking Lot	Clearing and Grubbing	Pickup Truck	1.41E-04	4.56E-05	9.97E-06	8.95E-07	8.19E-06	7.95E-06
Parking Lot	Concrete Placement	Air Compressor	9.22E-05	3.49E-05	4.07E-06	9.01E-08	5.90E-06	5.72E-06
Parking Lot	Concrete Placement	Concrete Saws	7.62E-05	1.03E-05	3.03E-06	4.68E-08	1.00E-06	9.74E-07
Parking Lot	Concrete Placement	Concrete Truck	4.13E-04	1.34E-04	2.93E-05	2.63E-06	2.41E-05	2.34E-05

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Concrete Placement	Other General Equipment	1.70E-04	3.69E-05	8.54E-06	2.78E-07	8.75E-06	8.49E-06
Parking Lot	Concrete Placement	Pickup Truck	2.98E-04	9.66E-05	2.11E-05	1.89E-06	1.73E-05	1.68E-05
Parking Lot	Concrete Placement	Rubber Tired Loader	7.49E-05	2.66E-05	4.55E-06	1.89E-07	6.23E-06	6.04E-06
Parking Lot	Concrete Placement	Slip Form Paver	7.02E-05	2.69E-05	4.37E-06	1.89E-07	6.48E-06	6.29E-06
Parking Lot	Concrete Placement	Surfacing Equipment (Grooving)	6.91E-05	2.76E-05	6.50E-06	4.02E-08	3.16E-06	3.06E-06
Parking Lot	Curbing	Concrete Truck	1.07E-04	3.48E-05	7.60E-06	6.82E-07	6.25E-06	6.06E-06
Parking Lot	Curbing	Curb/Gutter Paver	7.59E-05	2.91E-05	4.72E-06	2.05E-07	7.01E-06	6.80E-06
Parking Lot	Curbing	Other General Equipment	9.17E-05	2.00E-05	4.61E-06	1.50E-07	4.73E-06	4.59E-06
Parking Lot	Curbing	Pickup Truck	1.07E-04	3.48E-05	7.60E-06	6.82E-07	6.25E-06	6.06E-06
Parking Lot	Drainage - 24 inch SICPP	Dozer	1.19E-04	4.49E-05	6.76E-06	3.78E-07	1.10E-05	1.07E-05
Parking Lot	Drainage - 24 inch SICPP	Dump Truck	2.00E-04	6.48E-05	1.42E-05	1.27E-06	1.16E-05	1.13E-05
Parking Lot	Drainage - 24 inch SICPP	Excavator	9.10E-05	2.97E-05	4.53E-06	3.72E-07	6.83E-06	6.62E-06
Parking Lot	Drainage - 24 inch SICPP	Loader	1.51E-04	5.36E-05	9.15E-06	3.81E-07	1.25E-05	1.22E-05
Parking Lot	Drainage - 24 inch SICPP	Other General Equipment	1.71E-04	3.72E-05	8.59E-06	2.80E-07	8.81E-06	8.55E-06
Parking Lot	Drainage - 24 inch SICPP	Pickup Truck	2.00E-04	6.48E-05	1.42E-05	1.27E-06	1.16E-05	1.13E-05
Parking Lot	Drainage - 24 inch SICPP	Roller	1.89E-04	7.46E-05	6.34E-06	2.42E-07	1.09E-05	1.06E-05
Parking Lot	Drainage - 6 inch Perforated Underdrain	Dump Truck	3.33E-04	1.08E-04	2.36E-05	2.12E-06	1.94E-05	1.88E-05

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Drainage - 6 inch Perforated Underdrain	Loader	2.51E-04	8.93E-05	1.53E-05	6.35E-07	2.09E-05	2.03E-05
Parking Lot	Drainage - 6 inch Perforated Underdrain	Other General Equipment	2.85E-04	6.19E-05	1.43E-05	4.66E-07	1.47E-05	1.42E-05
Parking Lot	Drainage - 6 inch Perforated Underdrain	Pickup Truck	3.33E-04	1.08E-04	2.36E-05	2.12E-06	1.94E-05	1.88E-05
Parking Lot	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	2.44E-04	2.49E-04	3.90E-05	1.86E-07	3.27E-05	3.17E-05
Parking Lot	Excavation (Borrow)	Dozer	9.84E-05	3.72E-05	5.60E-06	3.13E-07	9.11E-06	8.83E-06
Parking Lot	Excavation (Borrow)	Dump Truck (12 cy)	1.65E-04	5.37E-05	1.17E-05	1.05E-06	9.63E-06	9.35E-06
Parking Lot	Excavation (Borrow)	Pickup Truck	1.65E-04	5.37E-05	1.17E-05	1.05E-06	9.63E-06	9.35E-06
Parking Lot	Excavation (Borrow)	Roller	7.21E-05	2.85E-05	2.42E-06	9.25E-08	4.18E-06	4.06E-06
Parking Lot	Excavation (Cut to Fill)	Dozer	7.38E-05	2.79E-05	4.20E-06	2.34E-07	6.83E-06	6.63E-06
Parking Lot	Excavation (Cut to Fill)	Dump Truck (12 cy)	3.31E-04	1.07E-04	2.34E-05	2.10E-06	1.93E-05	1.87E-05
Parking Lot	Excavation (Cut to Fill)	Excavator	4.52E-05	1.48E-05	2.25E-06	1.85E-07	3.39E-06	3.29E-06
Parking Lot	Excavation (Cut to Fill)	Pickup Truck	9.92E-05	3.22E-05	7.03E-06	6.31E-07	5.78E-06	5.61E-06
Parking Lot	Excavation (Cut to Fill)	Roller	9.38E-05	3.71E-05	3.15E-06	1.20E-07	5.44E-06	5.27E-06
Parking Lot	Excavation (Cut to Fill)	Scraper	3.87E-04	1.55E-04	2.27E-05	8.29E-07	2.52E-05	2.45E-05
Parking Lot	Excavation (Topsoil Stripping)	Dozer	2.78E-05	1.05E-05	1.58E-06	8.83E-08	2.57E-06	2.49E-06
Parking Lot	Fencing	Concrete Truck	5.96E-05	1.93E-05	4.22E-06	3.79E-07	3.47E-06	3.37E-06

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Fencing	Dump Truck	2.38E-04	7.73E-05	1.69E-05	1.52E-06	1.39E-05	1.35E-05
Parking Lot	Fencing	Other General Equipment	2.04E-04	4.43E-05	1.03E-05	3.34E-07	1.05E-05	1.02E-05
Parking Lot	Fencing	Pickup Truck	2.38E-04	7.73E-05	1.69E-05	1.52E-06	1.39E-05	1.35E-05
Parking Lot	Fencing	Skid Steer Loader	1.99E-04	1.65E-04	3.29E-05	1.04E-07	2.33E-05	2.26E-05
Parking Lot	Fencing	Tractors/Loader/Backhoe	1.75E-04	1.78E-04	2.79E-05	1.33E-07	2.34E-05	2.27E-05
Parking Lot	Grading	Dozer	2.47E-05	9.35E-06	1.41E-06	7.86E-08	2.29E-06	2.22E-06
Parking Lot	Grading	Grader	2.60E-05	8.87E-06	2.00E-06	1.33E-07	1.77E-06	1.72E-06
Parking Lot	Grading	Roller	3.93E-05	1.55E-05	1.32E-06	5.04E-08	2.28E-06	2.21E-06
Parking Lot	Hydroseeding	Hydroseeder	3.74E-05	1.22E-05	2.65E-06	2.38E-07	2.18E-06	2.12E-06
Parking Lot	Hydroseeding	Off-Road Truck	3.74E-05	1.22E-05	2.65E-06	2.38E-07	2.18E-06	2.12E-06
Parking Lot	Markings	Flatbed Truck	4.46E-05	1.45E-05	3.16E-06	2.84E-07	2.60E-06	2.52E-06
Parking Lot	Markings	Other General Equipment	3.81E-05	8.30E-06	1.92E-06	6.24E-08	1.97E-06	1.91E-06
Parking Lot	Markings	Pickup Truck	4.46E-05	1.45E-05	3.16E-06	2.84E-07	2.60E-06	2.52E-06
Parking Lot	Sidewalks	Concrete Truck	2.14E-04	6.96E-05	1.52E-05	1.36E-06	1.25E-05	1.21E-05
Parking Lot	Sidewalks	Dump Truck	2.14E-04	6.96E-05	1.52E-05	1.36E-06	1.25E-05	1.21E-05
Parking Lot	Sidewalks	Pickup Truck	2.14E-04	6.96E-05	1.52E-05	1.36E-06	1.25E-05	1.21E-05
Parking Lot	Sidewalks	Tractors/Loader/Backhoe	1.57E-04	1.60E-04	2.51E-05	1.20E-07	2.11E-05	2.04E-05
Parking Lot	Sidewalks	Vibratory Compactor	2.92E-05	1.78E-05	5.68E-06	1.50E-08	1.82E-06	1.77E-06
Parking Lot	Soil Erosion/Sediment Control	Other General Equipment	3.01E-05	6.54E-06	1.51E-06	4.92E-08	1.55E-06	1.50E-06
Parking Lot	Soil Erosion/Sediment Control	Pickup Truck	7.03E-05	2.28E-05	4.99E-06	4.47E-07	4.10E-06	3.97E-06

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Soil Erosion/Sediment Control	Pumps	8.93E-06	5.42E-06	1.71E-06	4.51E-09	5.73E-07	5.56E-07
Parking Lot	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.58E-05	2.63E-05	4.12E-06	1.96E-08	3.45E-06	3.35E-06
Parking Lot	Street Lighting	Dump Truck	2.34E-05	7.61E-06	1.66E-06	1.49E-07	1.37E-06	1.32E-06
Parking Lot	Street Lighting	Loader	1.77E-05	6.29E-06	1.07E-06	4.47E-08	1.47E-06	1.43E-06
Parking Lot	Street Lighting	Other General Equipment	2.00E-05	4.36E-06	1.01E-06	3.28E-08	1.03E-06	1.00E-06
Parking Lot	Street Lighting	Pickup Truck	2.34E-05	7.61E-06	1.66E-06	1.49E-07	1.37E-06	1.32E-06
Parking Lot	Street Lighting	Skid Steer Loader	1.96E-05	1.63E-05	3.24E-06	1.02E-08	2.29E-06	2.22E-06
Parking Lot	Street Lighting	Tractors/Loader/Backhoe	1.72E-05	1.75E-05	2.75E-06	1.31E-08	2.30E-06	2.23E-06
Parking Lot	Subbase Placement	Dozer	3.73E-05	1.41E-05	2.12E-06	1.18E-07	3.45E-06	3.35E-06
Parking Lot	Subbase Placement	Dump Truck (12 cy)	4.41E-04	1.43E-04	3.13E-05	2.81E-06	2.57E-05	2.49E-05
Parking Lot	Subbase Placement	Pickup Truck	6.27E-05	2.03E-05	4.44E-06	3.99E-07	3.65E-06	3.54E-06
Parking Lot	Subbase Placement	Roller	5.77E-05	2.28E-05	1.94E-06	7.40E-08	3.35E-06	3.25E-06
Parking Lot	Topsoil Placement	Dozer	5.50E-05	2.08E-05	3.13E-06	1.75E-07	5.09E-06	4.93E-06
Parking Lot	Topsoil Placement	Dump Truck	9.23E-05	3.00E-05	6.55E-06	5.87E-07	5.38E-06	5.22E-06
Parking Lot	Topsoil Placement	Pickup Truck	9.23E-05	3.00E-05	6.55E-06	5.87E-07	5.38E-06	5.22E-06
Parking Lot	Tree Planting	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Tree Planting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Tree Planting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Tree Planting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Clearing and Grubbing	Chain Saw	1.40E-04	2.44E-02	6.70E-03	3.79E-07	8.94E-04	8.22E-04

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Clearing and Grubbing	Chipper/Stump Grinder	1.55E-03	7.07E-04	1.42E-04	9.42E-07	1.33E-04	1.29E-04
Service Road	Clearing and Grubbing	Pickup Truck	1.27E-03	4.11E-04	8.97E-05	8.05E-06	7.37E-05	7.15E-05
Service Road	Concrete Placement	Air Compressor	8.70E-04	3.29E-04	3.84E-05	8.51E-07	5.57E-05	5.40E-05
Service Road	Concrete Placement	Concrete Saws	7.19E-04	9.74E-05	2.86E-05	4.42E-07	9.48E-06	9.20E-06
Service Road	Concrete Placement	Concrete Truck	3.90E-03	1.27E-03	2.77E-04	2.48E-05	2.27E-04	2.21E-04
Service Road	Concrete Placement	Other General Equipment	1.60E-03	3.49E-04	8.06E-05	2.62E-06	8.26E-05	8.02E-05
Service Road	Concrete Placement	Pickup Truck	2.81E-03	9.12E-04	1.99E-04	1.79E-05	1.64E-04	1.59E-04
Service Road	Concrete Placement	Rubber Tired Loader	7.07E-04	2.51E-04	4.29E-05	1.79E-06	5.88E-05	5.70E-05
Service Road	Concrete Placement	Slip Form Paver	6.63E-04	2.54E-04	4.13E-05	1.79E-06	6.12E-05	5.94E-05
Service Road	Concrete Placement	Surfacing Equipment (Grooving)	6.53E-04	2.60E-04	6.13E-05	3.79E-07	2.98E-05	2.89E-05
Service Road	Drainage - 24 inch SICPP	Dozer	2.03E-03	7.66E-04	1.15E-04	6.44E-06	1.87E-04	1.82E-04
Service Road	Drainage - 24 inch SICPP	Dump Truck	3.40E-03	1.10E-03	2.41E-04	2.16E-05	1.98E-04	1.92E-04
Service Road	Drainage - 24 inch SICPP	Excavator	1.55E-03	5.06E-04	7.73E-05	6.34E-06	1.16E-04	1.13E-04
Service Road	Drainage - 24 inch SICPP	Loader	2.57E-03	9.13E-04	1.56E-04	6.49E-06	2.14E-04	2.07E-04
Service Road	Drainage - 24 inch SICPP	Other General Equipment	2.91E-03	6.33E-04	1.46E-04	4.77E-06	1.50E-04	1.46E-04
Service Road	Drainage - 24 inch SICPP	Pickup Truck	3.40E-03	1.10E-03	2.41E-04	2.16E-05	1.98E-04	1.92E-04
Service Road	Drainage - 24 inch SICPP	Roller	3.22E-03	1.27E-03	1.08E-04	4.12E-06	1.86E-04	1.81E-04

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Drainage - 6 inch Perforated Underdrain	Dump Truck	1.89E-03	6.14E-04	1.34E-04	1.20E-05	1.10E-04	1.07E-04
Service Road	Drainage - 6 inch Perforated Underdrain	Loader	1.43E-03	5.07E-04	8.66E-05	3.61E-06	1.19E-04	1.15E-04
Service Road	Drainage - 6 inch Perforated Underdrain	Other General Equipment	1.62E-03	3.52E-04	8.14E-05	2.65E-06	8.34E-05	8.09E-05
Service Road	Drainage - 6 inch Perforated Underdrain	Pickup Truck	1.89E-03	6.14E-04	1.34E-04	1.20E-05	1.10E-04	1.07E-04
Service Road	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	1.39E-03	1.41E-03	2.22E-04	1.05E-06	1.86E-04	1.80E-04
Service Road	Dust Control	Water Truck	2.53E-01	8.21E-02	1.79E-02	1.61E-03	1.47E-02	1.43E-02
Service Road	Excavation (Borrow)	Dozer	9.29E-04	3.51E-04	5.29E-05	2.95E-06	8.60E-05	8.34E-05
Service Road	Excavation (Borrow)	Dump Truck (12 cy)	1.56E-03	5.07E-04	1.11E-04	9.93E-06	9.09E-05	8.82E-05
Service Road	Excavation (Borrow)	Pickup Truck	1.56E-03	5.07E-04	1.11E-04	9.93E-06	9.09E-05	8.82E-05
Service Road	Excavation (Borrow)	Roller	6.81E-04	2.69E-04	2.29E-05	8.73E-07	3.95E-05	3.83E-05
Service Road	Excavation (Cut to Fill)	Dozer	6.97E-04	2.63E-04	3.96E-05	2.21E-06	6.45E-05	6.25E-05
Service Road	Excavation (Cut to Fill)	Dump Truck (12 cy)	3.12E-03	1.01E-03	2.21E-04	1.99E-05	1.82E-04	1.76E-04
Service Road	Excavation (Cut to Fill)	Excavator	4.27E-04	1.39E-04	2.13E-05	1.74E-06	3.20E-05	3.11E-05
Service Road	Excavation (Cut to Fill)	Pickup Truck	9.37E-04	3.04E-04	6.64E-05	5.96E-06	5.46E-05	5.29E-05
Service Road	Excavation (Cut to Fill)	Roller	8.85E-04	3.50E-04	2.97E-05	1.13E-06	5.13E-05	4.98E-05

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Excavation (Cut to Fill)	Scraper	3.66E-03	1.47E-03	2.14E-04	7.83E-06	2.38E-04	2.31E-04
Service Road	Excavation (Topsoil Stripping)	Dozer	2.62E-04	9.92E-05	1.49E-05	8.33E-07	2.43E-05	2.35E-05
Service Road	Fencing	Concrete Truck	1.17E-03	3.80E-04	8.31E-05	7.45E-06	6.83E-05	6.62E-05
Service Road	Fencing	Dump Truck	4.69E-03	1.52E-03	3.32E-04	2.98E-05	2.73E-04	2.65E-04
Service Road	Fencing	Other General Equipment	4.01E-03	8.72E-04	2.02E-04	6.56E-06	2.07E-04	2.01E-04
Service Road	Fencing	Pickup Truck	4.69E-03	1.52E-03	3.32E-04	2.98E-05	2.73E-04	2.65E-04
Service Road	Fencing	Skid Steer Loader	3.92E-03	3.25E-03	6.47E-04	2.04E-06	4.58E-04	4.44E-04
Service Road	Fencing	Tractors/Loader/Backhoe	3.43E-03	3.50E-03	5.50E-04	2.61E-06	4.60E-04	4.47E-04
Service Road	Grading	Dozer	2.39E-04	9.03E-05	1.36E-05	7.59E-07	2.21E-05	2.14E-05
Service Road	Grading	Grader	2.51E-04	8.56E-05	1.93E-05	1.29E-06	1.71E-05	1.66E-05
Service Road	Grading	Roller	3.79E-04	1.50E-04	1.27E-05	4.86E-07	2.20E-05	2.13E-05
Service Road	Hydroseeding	Hydroseeder	3.62E-04	1.17E-04	2.56E-05	2.30E-06	2.11E-05	2.04E-05
Service Road	Hydroseeding	Off-Road Truck	3.62E-04	1.17E-04	2.56E-05	2.30E-06	2.11E-05	2.04E-05
Service Road	Markings	Flatbed Truck	5.79E-03	1.88E-03	4.10E-04	3.68E-05	3.37E-04	3.27E-04
Service Road	Markings	Other General Equipment	4.95E-03	1.08E-03	2.49E-04	8.10E-06	2.55E-04	2.48E-04
Service Road	Markings	Pickup Truck	5.79E-03	1.88E-03	4.10E-04	3.68E-05	3.37E-04	3.27E-04
Service Road	Sidewalks	Concrete Truck	2.87E-03	9.31E-04	2.03E-04	1.82E-05	1.67E-04	1.62E-04
Service Road	Sidewalks	Dump Truck	2.87E-03	9.31E-04	2.03E-04	1.82E-05	1.67E-04	1.62E-04
Service Road	Sidewalks	Pickup Truck	2.87E-03	9.31E-04	2.03E-04	1.82E-05	1.67E-04	1.62E-04
Service Road	Sidewalks	Tractors/Loader/Backhoe	2.10E-03	2.14E-03	3.36E-04	1.60E-06	2.82E-04	2.73E-04
Service Road	Sidewalks	Vibratory Compactor	3.90E-04	2.38E-04	7.59E-05	2.01E-07	2.43E-05	2.36E-05
Service Road	Soil Erosion/Sediment Control	Other General Equipment	2.71E-04	5.89E-05	1.36E-05	4.43E-07	1.40E-05	1.35E-05

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Soil Erosion/Sediment Control	Pickup Truck	6.33E-04	2.05E-04	4.49E-05	4.03E-06	3.69E-05	3.58E-05
Service Road	Soil Erosion/Sediment Control	Pumps	8.04E-05	4.88E-05	1.54E-05	4.06E-08	5.16E-06	5.01E-06
Service Road	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.32E-04	2.36E-04	3.71E-05	1.76E-07	3.11E-05	3.01E-05
Service Road	Street Lighting	Dump Truck	2.81E-03	9.13E-04	1.99E-04	1.79E-05	1.64E-04	1.59E-04
Service Road	Street Lighting	Loader	2.12E-03	7.54E-04	1.29E-04	5.37E-06	1.77E-04	1.71E-04
Service Road	Street Lighting	Other General Equipment	2.40E-03	5.23E-04	1.21E-04	3.94E-06	1.24E-04	1.20E-04
Service Road	Street Lighting	Pickup Truck	2.81E-03	9.13E-04	1.99E-04	1.79E-05	1.64E-04	1.59E-04
Service Road	Street Lighting	Skid Steer Loader	2.35E-03	1.95E-03	3.88E-04	1.23E-06	2.75E-04	2.66E-04
Service Road	Street Lighting	Tractors/Loader/Backhoe	2.06E-03	2.10E-03	3.30E-04	1.57E-06	2.76E-04	2.68E-04
Service Road	Subbase Placement	Dozer	3.52E-04	1.33E-04	2.00E-05	1.12E-06	3.26E-05	3.16E-05
Service Road	Subbase Placement	Dump Truck (12 cy)	4.16E-03	1.35E-03	2.95E-04	2.65E-05	2.43E-04	2.35E-04
Service Road	Subbase Placement	Pickup Truck	5.92E-04	1.92E-04	4.19E-05	3.76E-06	3.45E-05	3.34E-05
Service Road	Subbase Placement	Roller	5.45E-04	2.15E-04	1.83E-05	6.98E-07	3.16E-05	3.06E-05
Service Road	Topsoil Placement	Dozer	5.31E-04	2.01E-04	3.02E-05	1.69E-06	4.91E-05	4.77E-05
Service Road	Topsoil Placement	Dump Truck	8.92E-04	2.89E-04	6.32E-05	5.67E-06	5.20E-05	5.04E-05
Service Road	Topsoil Placement	Pickup Truck	8.92E-04	2.89E-04	6.32E-05	5.67E-06	5.20E-05	5.04E-05
Service Road	Tree Planting	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Tree Planting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Tree Planting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Tree Planting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Site Work - 10000 sqft	Construction Mob & Layout	Survey Crew Trucks	7.53E-03	2.44E-03	5.34E-04	4.79E-05	4.39E-04	4.25E-04
Site Work - 10000 sqft	Construction Mob & Layout	Tractor Trailers Temp Fac.	3.01E-03	9.77E-04	2.14E-04	1.92E-05	1.75E-04	1.70E-04
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Bulldozer	1.79E-02	6.78E-03	1.02E-03	5.69E-05	1.66E-03	1.61E-03
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Chain Saws	4.44E-03	7.74E-01	2.13E-01	1.20E-05	2.83E-02	2.61E-02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Flat Bed or Dump Trucks	6.02E-02	1.95E-02	4.27E-03	3.83E-04	3.51E-03	3.40E-03
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Front Loader	2.21E-02	2.25E-02	3.53E-03	1.68E-05	2.96E-03	2.87E-03
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Grub the site down 2'-0	2.31E-02	3.13E-03	9.21E-04	1.42E-05	3.05E-04	2.96E-04
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Log Chipper	4.91E-02	2.24E-02	4.50E-03	2.99E-05	4.23E-03	4.10E-03
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Mulcher	4.91E-02	2.24E-02	4.50E-03	2.99E-05	4.23E-03	4.10E-03
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Ten Wheelers	3.01E-02	9.77E-03	2.14E-03	1.92E-04	1.75E-03	1.70E-03
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Tractor	4.41E-02	4.50E-02	7.06E-03	3.36E-05	5.91E-03	5.74E-03
Site Work - 10000 sqft	Site Restoration- Landscaping (Curbing)	Bob Cat	1.51E-02	1.25E-02	2.49E-03	7.88E-06	1.76E-03	1.71E-03

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Site Work - 10000 sqft	Site Restoration-Landscaping (Curbing)	Concrete Ready Mix Trucks	1.81E-02	5.86E-03	1.28E-03	1.15E-04	1.05E-03	1.02E-03
Site Work - 10000 sqft	Site Restoration-Landscaping (Curbing)	Tractor Trailer with Boom Hoist- Delivery	1.81E-02	5.86E-03	1.28E-03	1.15E-04	1.05E-03	1.02E-03
Site Work - 10000 sqft	Site Restoration-Landscaping (Rough Grading)	Compacting Equipment	2.46E-03	1.50E-03	4.78E-04	1.26E-06	1.53E-04	1.49E-04
Site Work - 10000 sqft	Site Restoration-Landscaping (Rough Grading)	Small Dozer	1.08E-02	4.07E-03	6.12E-04	3.42E-05	9.95E-04	9.65E-04
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Forktruck (Hoist)	3.90E-02	3.51E-03	4.02E-04	7.01E-05	6.11E-04	5.92E-04
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Roller	2.85E-02	1.12E-02	9.56E-04	3.65E-05	1.65E-03	1.60E-03
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Seed Truck Spreader	1.20E-02	3.91E-03	8.54E-04	7.66E-05	7.02E-04	6.81E-04
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Tractor Trailer- Material Delivery	6.02E-02	1.95E-02	4.27E-03	3.83E-04	3.51E-03	3.40E-03
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Backhoe	6.62E-02	6.75E-02	1.06E-02	5.04E-05	8.87E-03	8.61E-03
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Fork Truck	2.93E-02	2.63E-03	3.01E-04	5.26E-05	4.58E-04	4.44E-04

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Tractor Trailer- Material Delivery	2.26E-02	7.33E-03	1.60E-03	1.44E-04	1.32E-03	1.28E-03

Table C11. 2023 Electric CUP, construction-phase non-road equipment greenhouse gas emissions.

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Building - 100000 sqft- 10 stories	Concrete Foundations	Backhoe	6.48E-05	8.73E-05	1.83E+00	1.86E+00
Building - 100000 sqft- 10 stories	Concrete Foundations	Concrete Pump	1.54E-05	6.26E-06	1.31E-01	1.34E-01
Building - 100000 sqft- 10 stories	Concrete Foundations	Concrete Ready Mix Trucks	3.66E-05	8.52E-04	1.79E+01	1.81E+01
Building - 100000 sqft- 10 stories	Concrete Foundations	Excavator	6.32E-06	1.10E-04	2.32E+00	2.35E+00
Building - 100000 sqft- 10 stories	Concrete Foundations	Fork Truck	5.04E-06	2.10E-04	4.41E+00	4.47E+00
Building - 100000 sqft- 10 stories	Concrete Foundations	Tool Truck	1.22E-05	2.84E-04	5.96E+00	6.04E+00
Building - 100000 sqft- 10 stories	Concrete Foundations	Tractor Trailer- Material Delivery	2.44E-05	5.68E-04	1.19E+01	1.21E+01
Building - 100000 sqft- 10 stories	Construction Mob & Layout	Survey Crew Trucks	1.02E-06	2.37E-05	4.96E-01	5.03E-01
Building - 100000 sqft- 10 stories	Construction Mob & Layout	Tractor Trailers Temp Fac.	4.06E-07	9.46E-06	1.99E-01	2.01E-01
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Fork Truck	8.82E-06	3.68E-04	7.72E+00	7.82E+00
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Generator	7.31E-06	1.01E-05	2.12E-01	2.15E-01
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Grout Mixer	2.45E-04	9.94E-04	2.08E+01	2.11E+01

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Grout Wheel Truck	1.63E-05	3.79E-04	7.94E+00	8.05E+00
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Man Lift	1.79E-04	2.29E-04	4.80E+00	4.88E+00
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Tool Truck	4.27E-05	9.94E-04	2.09E+01	2.11E+01
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Tractor Trailer- Material Delivery	8.53E-05	1.99E-03	4.17E+01	4.23E+01
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Truck Tower (Mantiwoc type)	7.35E-06	6.82E-05	1.43E+00	1.45E+00
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Fork Truck	1.68E-05	7.01E-04	1.47E+01	1.49E+01
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Man Lift	3.40E-04	4.37E-04	9.14E+00	9.29E+00
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Tool Truck	1.63E-04	3.79E-03	7.94E+01	8.05E+01
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Tractor Trailer- Material Delivery	1.63E-04	3.79E-03	7.94E+01	8.05E+01
Building - 100000 sqft- 10 stories	Roofing	High Lift	1.68E-06	7.01E-05	1.47E+00	1.49E+00
Building - 100000 sqft- 10 stories	Roofing	Man Lift	4.25E-06	5.46E-06	1.14E-01	1.16E-01
Building - 100000 sqft- 10 stories	Roofing	Material Deliveries	6.09E-06	1.42E-04	2.98E+00	3.02E+00
Building - 100000 sqft- 10 stories	Roofing	Tractor Trailer- Material Delivery	4.06E-06	9.46E-05	1.99E+00	2.01E+00
Building - 100000 sqft- 10 stories	Roofing	Truck Tower (Mantiwoc type)	1.10E-05	1.02E-04	2.15E+00	2.18E+00
Building - 100000 sqft- 10 stories	Security & Safety Systems	High Lift	8.40E-06	3.50E-04	7.35E+00	7.45E+00
Building - 100000 sqft- 10 stories	Security & Safety Systems	Tool Truck	8.13E-05	1.89E-03	3.97E+01	4.02E+01
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	90 Ton Crane	2.21E-05	2.05E-04	4.29E+00	4.35E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Concrete Pump	5.13E-06	2.09E-06	4.36E-02	4.46E-02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Concrete Truck	6.09E-06	1.42E-04	2.98E+00	3.02E+00
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Fork Truck	6.72E-06	2.80E-04	5.88E+00	5.96E+00
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Tool Truck	1.63E-05	3.79E-04	7.94E+00	8.05E+00
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Tractor Trailer- Steel Deliveries	3.66E-05	8.52E-04	1.79E+01	1.81E+01
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Trowel Machine	2.33E-05	9.46E-05	1.98E+00	2.01E+00
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Truck Tower (Mantiwoc type)	6.62E-05	6.14E-04	1.29E+01	1.31E+01
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Dozer	1.28E-07	1.47E-06	3.09E-02	3.13E-02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Dump Truck	2.17E-07	5.04E-06	1.06E-01	1.07E-01
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Excavator	8.42E-08	1.47E-06	3.09E-02	3.13E-02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Loader	1.71E-07	1.47E-06	3.09E-02	3.13E-02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Other General Equipment	1.61E-07	1.06E-06	2.23E-02	2.26E-02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Pickup Truck	2.17E-07	5.04E-06	1.06E-01	1.07E-01
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Roller	1.18E-07	9.34E-07	1.96E-02	1.99E-02

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Drainage System	Drainage - 24 inch SICPP	Dozer	6.94E-08	8.00E-07	1.68E-02	1.70E-02
Drainage System	Drainage - 24 inch SICPP	Dump Truck	1.18E-07	2.74E-06	5.76E-02	5.83E-02
Drainage System	Drainage - 24 inch SICPP	Excavator	4.58E-08	8.00E-07	1.68E-02	1.70E-02
Drainage System	Drainage - 24 inch SICPP	Loader	9.28E-08	8.00E-07	1.68E-02	1.70E-02
Drainage System	Drainage - 24 inch SICPP	Other General Equipment	8.75E-08	5.77E-07	1.21E-02	1.23E-02
Drainage System	Drainage - 24 inch SICPP	Pickup Truck	1.18E-07	2.74E-06	5.76E-02	5.83E-02
Drainage System	Drainage - 24 inch SICPP	Roller	6.39E-08	5.08E-07	1.07E-02	1.08E-02
Drainage System	Drainage Structures	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage Structures	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage Structures	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage Structures	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Hydroseeding	Hydroseeder	1.03E-08	2.40E-07	5.04E-03	5.11E-03
Drainage System	Hydroseeding	Off-Road Truck	1.03E-08	2.40E-07	5.04E-03	5.11E-03
Drainage System	Soil Erosion/Sediment Control	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Soil Erosion/Sediment Control	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Soil Erosion/Sediment Control	Pumps	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Drainage System	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Topsoil Placement	Dozer	1.49E-08	1.72E-07	3.62E-03	3.66E-03
Drainage System	Topsoil Placement	Dump Truck	2.54E-08	5.91E-07	1.24E-02	1.26E-02
Drainage System	Topsoil Placement	Pickup Truck	2.54E-08	5.91E-07	1.24E-02	1.26E-02
Fencing	Clearing and Grubbing	Chain Saw	1.21E-05	4.27E-07	6.99E-03	8.10E-03
Fencing	Clearing and Grubbing	Chipper/Stump Grinder	5.35E-07	1.60E-06	3.35E-02	3.40E-02
Fencing	Clearing and Grubbing	Pickup Truck	6.86E-07	1.60E-05	3.35E-01	3.40E-01
Fencing	Excavation (Cut to Fill)	Dozer	3.97E-07	4.58E-06	9.61E-02	9.74E-02
Fencing	Excavation (Cut to Fill)	Dump Truck (12 cy)	2.25E-06	5.23E-05	1.10E+00	1.11E+00
Fencing	Excavation (Cut to Fill)	Excavator	2.62E-07	4.58E-06	9.61E-02	9.74E-02
Fencing	Excavation (Cut to Fill)	Pickup Truck	6.74E-07	1.57E-05	3.29E-01	3.34E-01
Fencing	Excavation (Cut to Fill)	Roller	3.66E-07	2.91E-06	6.10E-02	6.18E-02
Fencing	Fencing	Concrete Truck	4.05E-06	9.43E-05	1.98E+00	2.00E+00
Fencing	Fencing	Dump Truck	1.62E-05	3.77E-04	7.91E+00	8.02E+00
Fencing	Fencing	Other General Equipment	1.20E-05	7.93E-05	1.66E+00	1.69E+00
Fencing	Fencing	Pickup Truck	1.62E-05	3.77E-04	7.91E+00	8.02E+00
Fencing	Fencing	Skid Steer Loader	1.92E-05	2.18E-05	4.55E-01	4.63E-01
Fencing	Fencing	Tractors/Loader/Backhoe	2.15E-05	2.90E-05	6.08E-01	6.17E-01
Fencing	Grading	Dozer	1.21E-07	1.39E-06	2.92E-02	2.95E-02
Fencing	Grading	Grader	1.47E-07	2.38E-06	5.00E-02	5.06E-02

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Fencing	Grading	Roller	1.11E-07	8.82E-07	1.85E-02	1.88E-02
Fencing	Hydroseeding	Hydroseeder	1.84E-07	4.29E-06	9.01E-02	9.13E-02
Fencing	Hydroseeding	Off-Road Truck	1.84E-07	4.29E-06	9.01E-02	9.13E-02
Fencing	Soil Erosion/Sediment Control	Other General Equipment	1.27E-07	8.40E-07	1.76E-02	1.79E-02
Fencing	Soil Erosion/Sediment Control	Pickup Truck	3.43E-07	7.99E-06	1.68E-01	1.70E-01
Fencing	Soil Erosion/Sediment Control	Pumps	1.44E-07	5.87E-08	1.23E-03	1.25E-03
Fencing	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.28E-07	3.07E-07	6.43E-03	6.54E-03
Fencing	Topsoil Placement	Dozer	6.70E-07	7.72E-06	1.62E-01	1.64E-01
Fencing	Topsoil Placement	Dump Truck	1.14E-06	2.65E-05	5.55E-01	5.63E-01
Fencing	Topsoil Placement	Pickup Truck	1.14E-06	2.65E-05	5.55E-01	5.63E-01
Fuel Tanks	Clearing and Grubbing	Chain Saw	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Clearing and Grubbing	Chipper/Stump Grinder	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Clearing and Grubbing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Air Compressor	1.83E-08	8.32E-08	1.75E-03	1.77E-03
Fuel Tanks	Concrete Placement	Concrete Saws	2.15E-08	4.61E-08	9.67E-04	9.82E-04
Fuel Tanks	Concrete Placement	Concrete Truck	1.11E-07	2.60E-06	5.45E-02	5.52E-02
Fuel Tanks	Concrete Placement	Other General Equipment	3.97E-08	2.62E-07	5.50E-03	5.57E-03

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Fuel Tanks	Concrete Placement	Pickup Truck	8.02E-08	1.87E-06	3.92E-02	3.97E-02
Fuel Tanks	Concrete Placement	Rubber Tired Loader	2.11E-08	1.82E-07	3.81E-03	3.86E-03
Fuel Tanks	Concrete Placement	Slip Form Paver	2.03E-08	1.82E-07	3.81E-03	3.86E-03
Fuel Tanks	Concrete Placement	Surfacing Equipment (Grooving)	3.16E-08	2.88E-08	6.04E-04	6.14E-04
Fuel Tanks	Construction/Erect Tanks	Crane	1.16E-06	1.08E-05	2.26E-01	2.30E-01
Fuel Tanks	Construction/Erect Tanks	Other General Equipment	2.55E-06	1.68E-05	3.52E-01	3.57E-01
Fuel Tanks	Construction/Erect Tanks	Pickup Truck	3.43E-06	7.99E-05	1.68E+00	1.70E+00
Fuel Tanks	Drainage - 24 inch SICPP	Excavator	1.59E-07	2.78E-06	5.83E-02	5.90E-02
Fuel Tanks	Drainage	Dozer	2.41E-07	2.78E-06	5.83E-02	5.90E-02
Fuel Tanks	Drainage	Dump Truck	4.09E-07	9.52E-06	2.00E-01	2.02E-01
Fuel Tanks	Drainage	Loader	3.22E-07	2.78E-06	5.83E-02	5.90E-02
Fuel Tanks	Drainage	Other General Equipment	3.04E-07	2.00E-06	4.20E-02	4.26E-02
Fuel Tanks	Drainage	Pickup Truck	4.09E-07	9.52E-06	2.00E-01	2.02E-01
Fuel Tanks	Drainage	Roller	2.22E-07	1.76E-06	3.70E-02	3.75E-02
Fuel Tanks	Dust Control	Water Truck	1.23E-03	2.87E-02	6.03E+02	6.11E+02
Fuel Tanks	Excavation (Borrow)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Borrow)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Borrow)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Borrow)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Fuel Tanks	Excavation (Cut to Fill)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Scraper	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Topsoil Stripping)	Dozer	7.37E-09	8.49E-08	1.78E-03	1.81E-03
Fuel Tanks	Fencing	Concrete Truck	9.43E-08	2.20E-06	4.61E-02	4.67E-02
Fuel Tanks	Fencing	Dump Truck	3.77E-07	8.78E-06	1.84E-01	1.87E-01
Fuel Tanks	Fencing	Other General Equipment	2.80E-07	1.85E-06	3.88E-02	3.93E-02
Fuel Tanks	Fencing	Pickup Truck	3.77E-07	8.78E-06	1.84E-01	1.87E-01
Fuel Tanks	Fencing	Skid Steer Loader	4.48E-07	5.07E-07	1.06E-02	1.08E-02
Fuel Tanks	Fencing	Tractors/Loader/Backhoe	5.02E-07	6.76E-07	1.42E-02	1.44E-02
Fuel Tanks	Grading	Dozer	1.54E-08	1.78E-07	3.73E-03	3.78E-03
Fuel Tanks	Grading	Grader	1.89E-08	3.05E-07	6.40E-03	6.48E-03
Fuel Tanks	Grading	Roller	1.42E-08	1.13E-07	2.37E-03	2.40E-03
Fuel Tanks	Hydroseeding	Hydroseeder	2.36E-08	5.49E-07	1.15E-02	1.17E-02
Fuel Tanks	Hydroseeding	Off-Road Truck	2.36E-08	5.49E-07	1.15E-02	1.17E-02
Fuel Tanks	Markings	Flatbed Truck	1.64E-07	3.83E-06	8.04E-02	8.14E-02
Fuel Tanks	Markings	Other General Equipment	1.22E-07	8.05E-07	1.69E-02	1.71E-02
Fuel Tanks	Markings	Pickup Truck	1.64E-07	3.83E-06	8.04E-02	8.14E-02

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Fuel Tanks	Soil Erosion/Sediment Control	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Soil Erosion/Sediment Control	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Soil Erosion/Sediment Control	Pumps	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Subbase Placement	Dozer	9.89E-09	1.14E-07	2.39E-03	2.42E-03
Fuel Tanks	Subbase Placement	Dump Truck (12 cy)	1.18E-07	2.75E-06	5.77E-02	5.85E-02
Fuel Tanks	Subbase Placement	Pickup Truck	1.68E-08	3.91E-07	8.20E-03	8.31E-03
Fuel Tanks	Subbase Placement	Roller	8.87E-09	7.05E-08	1.48E-03	1.50E-03
Fuel Tanks	Topsoil Placement	Dozer	6.87E-08	7.92E-07	1.66E-02	1.68E-02
Fuel Tanks	Topsoil Placement	Dump Truck	1.17E-07	2.71E-06	5.70E-02	5.77E-02
Fuel Tanks	Topsoil Placement	Pickup Truck	1.17E-07	2.71E-06	5.70E-02	5.77E-02
Landscaping	Hydroseeding	Hydroseeder	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Hydroseeding	Off-Road Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Mulching	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Landscaping	Mulching	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Mulching	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Mulching	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Sodding	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Sodding	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Sodding	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Sodding	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Topsoil Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Topsoil Placement	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Topsoil Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Planting	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Planting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Planting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Planting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Aerial Lift	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Chipper/Stump Grinder	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Pruning Saw/Chain Saw	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Binder Coat of Pavement	Paving Machine	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Open Parking Lot @Grade - 10000 sqft	Binder Coat of Pavement	Ten Wheelers- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Construction Mob & Layout	Survey Crew Trucks	1.71E-06	3.99E-05	8.38E-01	8.49E-01
Open Parking Lot @Grade - 10000 sqft	Construction Mob & Layout	Tractor Trailers Temp Fac.	1.71E-06	3.99E-05	8.38E-01	8.49E-01
Open Parking Lot @Grade - 10000 sqft	Curbing	Bob Cat	1.22E-05	1.38E-05	2.89E-01	2.94E-01
Open Parking Lot @Grade - 10000 sqft	Curbing	Concrete Ready Mix Trucks	1.03E-05	2.40E-04	5.03E+00	5.09E+00
Open Parking Lot @Grade - 10000 sqft	Curbing	Material Deliveries	1.03E-05	2.40E-04	5.03E+00	5.09E+00
Open Parking Lot @Grade - 10000 sqft	Curbing	Tractor Trailer with Boom Hoist- Delivery	1.03E-05	2.40E-04	5.03E+00	5.09E+00
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Bulldozer	4.04E-06	4.66E-05	9.77E-01	9.90E-01
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Front Loader	9.12E-06	1.23E-05	2.57E-01	2.61E-01
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Ten Wheelers	6.86E-06	1.60E-04	3.35E+00	3.40E+00
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Auger Drill	1.69E-05	5.04E-05	1.06E+00	1.07E+00
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Fork Truck	1.06E-06	4.43E-05	9.30E-01	9.43E-01
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Front Loader	1.37E-05	1.84E-05	3.86E-01	3.92E-01
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Tractor Trailer- Material Delivery	5.14E-06	1.20E-04	2.51E+00	2.55E+00
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Bulldozer	1.01E-05	1.16E-04	2.44E+00	2.48E+00
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Chain Saws	2.42E-04	8.54E-06	1.40E-01	1.62E-01
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Flat Bed or Dump Trucks	1.71E-05	3.99E-04	8.38E+00	8.49E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Log Chipper	1.07E-05	3.20E-05	6.71E-01	6.80E-01
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Mulcher	1.07E-05	3.20E-05	6.71E-01	6.80E-01
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Tractor	2.28E-05	3.07E-05	6.43E-01	6.54E-01
Open Parking Lot @Grade - 10000 sqft	Rough Grading	Compacting Equipment	3.26E-06	1.28E-06	2.68E-02	2.74E-02
Open Parking Lot @Grade - 10000 sqft	Rough Grading	Small Dozer	4.04E-06	4.66E-05	9.77E-01	9.90E-01
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	40 Ton Rough Terrain Crane	6.20E-06	5.76E-05	1.21E+00	1.22E+00
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	High Lift	7.09E-07	2.96E-05	6.20E-01	6.28E-01
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	Tractor Trailer- Material Delivery	6.86E-06	1.60E-04	3.35E+00	3.40E+00
Open Parking Lot @Grade - 10000 sqft	Stripping	Line Painting Truck and Sprayer	3.43E-06	7.99E-05	1.68E+00	1.70E+00
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Backhoe	9.12E-06	1.23E-05	2.57E-01	2.61E-01
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Roller	3.72E-06	2.96E-05	6.20E-01	6.29E-01
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Tractor Trailer- Material Delivery	6.86E-06	1.60E-04	3.35E+00	3.40E+00
Open Parking Lot @Grade - 10000 sqft	Top Coat of Asphalt	Paving Machine	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Top Coat of Asphalt	Ten Wheelers- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Backhoe	1.37E-05	1.84E-05	3.86E-01	3.92E-01
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Fork Truck	1.06E-06	4.43E-05	9.30E-01	9.43E-01
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Tractor Trailer- Material Delivery	5.14E-06	1.20E-04	2.51E+00	2.55E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Clearing and Grubbing	Chain Saw	1.21E-05	4.27E-07	6.99E-03	8.10E-03
Parking Lot	Clearing and Grubbing	Chipper/Stump Grinder	5.35E-07	1.60E-06	3.35E-02	3.40E-02
Parking Lot	Clearing and Grubbing	Pickup Truck	6.86E-07	1.60E-05	3.35E-01	3.40E-01
Parking Lot	Concrete Placement	Air Compressor	3.31E-07	1.51E-06	3.16E-02	3.20E-02
Parking Lot	Concrete Placement	Concrete Saws	3.89E-07	8.34E-07	1.75E-02	1.78E-02
Parking Lot	Concrete Placement	Concrete Truck	2.02E-06	4.69E-05	9.85E-01	9.98E-01
Parking Lot	Concrete Placement	Other General Equipment	7.19E-07	4.74E-06	9.94E-02	1.01E-01
Parking Lot	Concrete Placement	Pickup Truck	1.45E-06	3.38E-05	7.09E-01	7.19E-01
Parking Lot	Concrete Placement	Rubber Tired Loader	3.81E-07	3.29E-06	6.90E-02	6.99E-02
Parking Lot	Concrete Placement	Slip Form Paver	3.68E-07	3.29E-06	6.90E-02	6.99E-02
Parking Lot	Concrete Placement	Surfacing Equipment (Grooving)	5.72E-07	5.21E-07	1.09E-02	1.11E-02
Parking Lot	Curbing	Concrete Truck	5.23E-07	1.22E-05	2.56E-01	2.59E-01
Parking Lot	Curbing	Curb/Gutter Paver	3.97E-07	3.55E-06	7.45E-02	7.55E-02
Parking Lot	Curbing	Other General Equipment	3.88E-07	2.56E-06	5.37E-02	5.45E-02
Parking Lot	Curbing	Pickup Truck	5.23E-07	1.22E-05	2.56E-01	2.59E-01
Parking Lot	Drainage - 24 inch SICPP	Dozer	5.74E-07	6.61E-06	1.39E-01	1.41E-01
Parking Lot	Drainage - 24 inch SICPP	Dump Truck	9.74E-07	2.27E-05	4.76E-01	4.82E-01
Parking Lot	Drainage - 24 inch SICPP	Excavator	3.79E-07	6.61E-06	1.39E-01	1.41E-01
Parking Lot	Drainage - 24 inch SICPP	Loader	7.67E-07	6.61E-06	1.39E-01	1.41E-01

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Drainage - 24 inch SICPP	Other General Equipment	7.23E-07	4.77E-06	1.00E-01	1.01E-01
Parking Lot	Drainage - 24 inch SICPP	Pickup Truck	9.74E-07	2.27E-05	4.76E-01	4.82E-01
Parking Lot	Drainage - 24 inch SICPP	Roller	5.28E-07	4.20E-06	8.81E-02	8.93E-02
Parking Lot	Drainage - 6 inch Perforated Underdrain	Dump Truck	1.62E-06	3.78E-05	7.93E-01	8.04E-01
Parking Lot	Drainage - 6 inch Perforated Underdrain	Loader	1.28E-06	1.10E-05	2.31E-01	2.34E-01
Parking Lot	Drainage - 6 inch Perforated Underdrain	Other General Equipment	1.21E-06	7.95E-06	1.67E-01	1.69E-01
Parking Lot	Drainage - 6 inch Perforated Underdrain	Pickup Truck	1.62E-06	3.78E-05	7.93E-01	8.04E-01
Parking Lot	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	2.16E-06	2.91E-06	6.09E-02	6.19E-02
Parking Lot	Excavation (Borrow)	Dozer	4.75E-07	5.48E-06	1.15E-01	1.16E-01
Parking Lot	Excavation (Borrow)	Dump Truck (12 cy)	8.06E-07	1.88E-05	3.94E-01	3.99E-01
Parking Lot	Excavation (Borrow)	Pickup Truck	8.06E-07	1.88E-05	3.94E-01	3.99E-01
Parking Lot	Excavation (Borrow)	Roller	2.02E-07	1.60E-06	3.37E-02	3.41E-02
Parking Lot	Excavation (Cut to Fill)	Dozer	3.56E-07	4.11E-06	8.62E-02	8.73E-02
Parking Lot	Excavation (Cut to Fill)	Dump Truck (12 cy)	1.61E-06	3.76E-05	7.88E-01	7.99E-01
Parking Lot	Excavation (Cut to Fill)	Excavator	1.88E-07	3.29E-06	6.90E-02	6.99E-02

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Excavation (Cut to Fill)	Pickup Truck	4.84E-07	1.13E-05	2.36E-01	2.40E-01
Parking Lot	Excavation (Cut to Fill)	Roller	2.62E-07	2.09E-06	4.38E-02	4.43E-02
Parking Lot	Excavation (Cut to Fill)	Scraper	1.99E-06	1.41E-05	2.96E-01	3.00E-01
Parking Lot	Excavation (Topsoil Stripping)	Dozer	1.34E-07	1.55E-06	3.24E-02	3.29E-02
Parking Lot	Fencing	Concrete Truck	2.90E-07	6.77E-06	1.42E-01	1.44E-01
Parking Lot	Fencing	Dump Truck	1.16E-06	2.71E-05	5.68E-01	5.75E-01
Parking Lot	Fencing	Other General Equipment	8.63E-07	5.69E-06	1.19E-01	1.21E-01
Parking Lot	Fencing	Pickup Truck	1.16E-06	2.71E-05	5.68E-01	5.75E-01
Parking Lot	Fencing	Skid Steer Loader	1.38E-06	1.56E-06	3.27E-02	3.32E-02
Parking Lot	Fencing	Tractors/Loader/Backhoe	1.55E-06	2.08E-06	4.36E-02	4.43E-02
Parking Lot	Grading	Dozer	1.19E-07	1.38E-06	2.89E-02	2.93E-02
Parking Lot	Grading	Grader	1.46E-07	2.36E-06	4.95E-02	5.02E-02
Parking Lot	Grading	Roller	1.10E-07	8.74E-07	1.83E-02	1.86E-02
Parking Lot	Hydroseeding	Hydroseeder	1.83E-07	4.25E-06	8.92E-02	9.04E-02
Parking Lot	Hydroseeding	Off-Road Truck	1.83E-07	4.25E-06	8.92E-02	9.04E-02
Parking Lot	Markings	Flatbed Truck	2.17E-07	5.06E-06	1.06E-01	1.08E-01
Parking Lot	Markings	Other General Equipment	1.62E-07	1.07E-06	2.23E-02	2.27E-02
Parking Lot	Markings	Pickup Truck	2.17E-07	5.06E-06	1.06E-01	1.08E-01
Parking Lot	Sidewalks	Concrete Truck	1.05E-06	2.44E-05	5.11E-01	5.18E-01
Parking Lot	Sidewalks	Dump Truck	1.05E-06	2.44E-05	5.11E-01	5.18E-01
Parking Lot	Sidewalks	Pickup Truck	1.05E-06	2.44E-05	5.11E-01	5.18E-01
Parking Lot	Sidewalks	Tractors/Loader/Backhoe	1.39E-06	1.87E-06	3.92E-02	3.99E-02

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Sidewalks	Vibratory Compactor	4.97E-07	1.95E-07	4.08E-03	4.17E-03
Parking Lot	Soil Erosion/Sediment Control	Other General Equipment	1.27E-07	8.40E-07	1.76E-02	1.79E-02
Parking Lot	Soil Erosion/Sediment Control	Pickup Truck	3.43E-07	7.99E-06	1.68E-01	1.70E-01
Parking Lot	Soil Erosion/Sediment Control	Pumps	1.44E-07	5.87E-08	1.23E-03	1.25E-03
Parking Lot	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.28E-07	3.07E-07	6.43E-03	6.54E-03
Parking Lot	Street Lighting	Dump Truck	1.14E-07	2.66E-06	5.59E-02	5.66E-02
Parking Lot	Street Lighting	Loader	9.00E-08	7.76E-07	1.63E-02	1.65E-02
Parking Lot	Street Lighting	Other General Equipment	8.49E-08	5.60E-07	1.17E-02	1.19E-02
Parking Lot	Street Lighting	Pickup Truck	1.14E-07	2.66E-06	5.59E-02	5.66E-02
Parking Lot	Street Lighting	Skid Steer Loader	1.36E-07	1.54E-07	3.21E-03	3.27E-03
Parking Lot	Street Lighting	Tractors/Loader/Backhoe	1.52E-07	2.05E-07	4.29E-03	4.36E-03
Parking Lot	Subbase Placement	Dozer	1.80E-07	2.08E-06	4.35E-02	4.41E-02
Parking Lot	Subbase Placement	Dump Truck (12 cy)	2.15E-06	5.01E-05	1.05E+00	1.06E+00
Parking Lot	Subbase Placement	Pickup Truck	3.06E-07	7.12E-06	1.49E-01	1.51E-01
Parking Lot	Subbase Placement	Roller	1.62E-07	1.28E-06	2.69E-02	2.73E-02
Parking Lot	Topsoil Placement	Dozer	2.65E-07	3.06E-06	6.42E-02	6.50E-02
Parking Lot	Topsoil Placement	Dump Truck	4.50E-07	1.05E-05	2.20E-01	2.23E-01
Parking Lot	Topsoil Placement	Pickup Truck	4.50E-07	1.05E-05	2.20E-01	2.23E-01
Parking Lot	Tree Planting	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Tree Planting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Tree Planting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Tree Planting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Clearing and Grubbing	Chain Saw	1.09E-04	3.84E-06	6.29E-02	7.29E-02
Service Road	Clearing and Grubbing	Chipper/Stump Grinder	4.82E-06	1.44E-05	3.02E-01	3.06E-01
Service Road	Clearing and Grubbing	Pickup Truck	6.17E-06	1.44E-04	3.02E+00	3.06E+00
Service Road	Concrete Placement	Air Compressor	3.12E-06	1.42E-05	2.98E-01	3.02E-01
Service Road	Concrete Placement	Concrete Saws	3.67E-06	7.87E-06	1.65E-01	1.68E-01
Service Road	Concrete Placement	Concrete Truck	1.90E-05	4.43E-04	9.30E+00	9.42E+00
Service Road	Concrete Placement	Other General Equipment	6.79E-06	4.47E-05	9.39E-01	9.51E-01
Service Road	Concrete Placement	Pickup Truck	1.37E-05	3.19E-04	6.70E+00	6.78E+00
Service Road	Concrete Placement	Rubber Tired Loader	3.60E-06	3.10E-05	6.51E-01	6.60E-01
Service Road	Concrete Placement	Slip Form Paver	3.47E-06	3.10E-05	6.51E-01	6.60E-01
Service Road	Concrete Placement	Surfacing Equipment (Grooving)	5.40E-06	4.92E-06	1.03E-01	1.05E-01
Service Road	Drainage - 24 inch SICPP	Dozer	9.78E-06	1.13E-04	2.37E+00	2.40E+00
Service Road	Drainage - 24 inch SICPP	Dump Truck	1.66E-05	3.86E-04	8.11E+00	8.22E+00
Service Road	Drainage - 24 inch SICPP	Excavator	6.45E-06	1.13E-04	2.37E+00	2.40E+00
Service Road	Drainage - 24 inch SICPP	Loader	1.31E-05	1.13E-04	2.37E+00	2.40E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Service Road	Drainage - 24 inch SICPP	Other General Equipment	1.23E-05	8.13E-05	1.71E+00	1.73E+00
Service Road	Drainage - 24 inch SICPP	Pickup Truck	1.66E-05	3.86E-04	8.11E+00	8.22E+00
Service Road	Drainage - 24 inch SICPP	Roller	9.00E-06	7.15E-05	1.50E+00	1.52E+00
Service Road	Drainage - 6 inch Perforated Underdrain	Dump Truck	9.22E-06	2.15E-04	4.51E+00	4.57E+00
Service Road	Drainage - 6 inch Perforated Underdrain	Loader	7.26E-06	6.26E-05	1.31E+00	1.33E+00
Service Road	Drainage - 6 inch Perforated Underdrain	Other General Equipment	6.85E-06	4.51E-05	9.47E-01	9.60E-01
Service Road	Drainage - 6 inch Perforated Underdrain	Pickup Truck	9.22E-06	2.15E-04	4.51E+00	4.57E+00
Service Road	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	1.23E-05	1.65E-05	3.46E-01	3.51E-01
Service Road	Dust Control	Water Truck	1.23E-03	2.87E-02	6.03E+02	6.11E+02
Service Road	Excavation (Borrow)	Dozer	4.49E-06	5.17E-05	1.08E+00	1.10E+00
Service Road	Excavation (Borrow)	Dump Truck (12 cy)	7.61E-06	1.77E-04	3.72E+00	3.77E+00
Service Road	Excavation (Borrow)	Pickup Truck	7.61E-06	1.77E-04	3.72E+00	3.77E+00
Service Road	Excavation (Borrow)	Roller	1.91E-06	1.51E-05	3.18E-01	3.22E-01
Service Road	Excavation (Cut to Fill)	Dozer	3.36E-06	3.88E-05	8.14E-01	8.25E-01
Service Road	Excavation (Cut to Fill)	Dump Truck (12 cy)	1.52E-05	3.55E-04	7.44E+00	7.54E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Service Road	Excavation (Cut to Fill)	Excavator	1.78E-06	3.10E-05	6.51E-01	6.60E-01
Service Road	Excavation (Cut to Fill)	Pickup Truck	4.57E-06	1.06E-04	2.23E+00	2.26E+00
Service Road	Excavation (Cut to Fill)	Roller	2.48E-06	1.97E-05	4.13E-01	4.19E-01
Service Road	Excavation (Cut to Fill)	Scraper	1.87E-05	1.33E-04	2.79E+00	2.83E+00
Service Road	Excavation (Topsoil Stripping)	Dozer	1.27E-06	1.46E-05	3.06E-01	3.10E-01
Service Road	Fencing	Concrete Truck	5.71E-06	1.33E-04	2.79E+00	2.83E+00
Service Road	Fencing	Dump Truck	2.29E-05	5.32E-04	1.12E+01	1.13E+01
Service Road	Fencing	Other General Equipment	1.70E-05	1.12E-04	2.35E+00	2.38E+00
Service Road	Fencing	Pickup Truck	2.29E-05	5.32E-04	1.12E+01	1.13E+01
Service Road	Fencing	Skid Steer Loader	2.71E-05	3.07E-05	6.43E-01	6.53E-01
Service Road	Fencing	Tractors/Loader/Backhoe	3.04E-05	4.09E-05	8.58E-01	8.71E-01
Service Road	Grading	Dozer	1.15E-06	1.33E-05	2.79E-01	2.83E-01
Service Road	Grading	Grader	1.41E-06	2.28E-05	4.78E-01	4.85E-01
Service Road	Grading	Roller	1.06E-06	8.44E-06	1.77E-01	1.79E-01
Service Road	Hydroseeding	Hydroseeder	1.76E-06	4.11E-05	8.62E-01	8.73E-01
Service Road	Hydroseeding	Off-Road Truck	1.76E-06	4.11E-05	8.62E-01	8.73E-01
Service Road	Markings	Flatbed Truck	2.82E-05	6.57E-04	1.38E+01	1.40E+01
Service Road	Markings	Other General Equipment	2.10E-05	1.38E-04	2.90E+00	2.94E+00
Service Road	Markings	Pickup Truck	2.82E-05	6.57E-04	1.38E+01	1.40E+01
Service Road	Sidewalks	Concrete Truck	1.40E-05	3.26E-04	6.84E+00	6.93E+00
Service Road	Sidewalks	Dump Truck	1.40E-05	3.26E-04	6.84E+00	6.93E+00
Service Road	Sidewalks	Pickup Truck	1.40E-05	3.26E-04	6.84E+00	6.93E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Service Road	Sidewalks	Tractors/Loader/Backhoe	1.86E-05	2.51E-05	5.25E-01	5.33E-01
Service Road	Sidewalks	Vibratory Compactor	6.64E-06	2.61E-06	5.46E-02	5.58E-02
Service Road	Soil Erosion/Sediment Control	Other General Equipment	1.15E-06	7.56E-06	1.59E-01	1.61E-01
Service Road	Soil Erosion/Sediment Control	Pickup Truck	3.09E-06	7.19E-05	1.51E+00	1.53E+00
Service Road	Soil Erosion/Sediment Control	Pumps	1.30E-06	5.28E-07	1.10E-02	1.13E-02
Service Road	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	2.05E-06	2.76E-06	5.79E-02	5.88E-02
Service Road	Street Lighting	Dump Truck	1.37E-05	3.19E-04	6.70E+00	6.79E+00
Service Road	Street Lighting	Loader	1.08E-05	9.32E-05	1.95E+00	1.98E+00
Service Road	Street Lighting	Other General Equipment	1.02E-05	6.72E-05	1.41E+00	1.43E+00
Service Road	Street Lighting	Pickup Truck	1.37E-05	3.19E-04	6.70E+00	6.79E+00
Service Road	Street Lighting	Skid Steer Loader	1.63E-05	1.84E-05	3.86E-01	3.92E-01
Service Road	Street Lighting	Tractors/Loader/Backhoe	1.82E-05	2.46E-05	5.15E-01	5.23E-01
Service Road	Subbase Placement	Dozer	1.70E-06	1.96E-05	4.11E-01	4.17E-01
Service Road	Subbase Placement	Dump Truck (12 cy)	2.03E-05	4.73E-04	9.92E+00	1.01E+01
Service Road	Subbase Placement	Pickup Truck	2.88E-06	6.72E-05	1.41E+00	1.43E+00
Service Road	Subbase Placement	Roller	1.52E-06	1.21E-05	2.54E-01	2.58E-01
Service Road	Topsoil Placement	Dozer	2.56E-06	2.95E-05	6.20E-01	6.28E-01
Service Road	Topsoil Placement	Dump Truck	4.35E-06	1.01E-04	2.13E+00	2.15E+00
Service Road	Topsoil Placement	Pickup Truck	4.35E-06	1.01E-04	2.13E+00	2.15E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Service Road	Tree Planting	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Tree Planting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Tree Planting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Tree Planting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Construction Mob & Layout	Survey Crew Trucks	3.67E-05	8.55E-04	1.79E+01	1.82E+01
Site Work - 10000 sqft	Construction Mob & Layout	Tractor Trailers Temp Fac.	1.47E-05	3.42E-04	7.18E+00	7.27E+00
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Bulldozer	8.65E-05	9.97E-04	2.09E+01	2.12E+01
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Chain Saws	3.46E-03	1.22E-04	1.99E+00	2.31E+00
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Flat Bed or Dump Trucks	2.94E-04	6.84E-03	1.44E+02	1.45E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Front Loader	1.95E-04	2.63E-04	5.51E+00	5.60E+00
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Grub the site down 2'-0	1.18E-04	2.53E-04	5.31E+00	5.39E+00
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Log Chipper	1.53E-04	4.57E-04	9.57E+00	9.71E+00
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Mulcher	1.53E-04	4.57E-04	9.57E+00	9.71E+00
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Ten Wheelers	1.47E-04	3.42E-03	7.18E+01	7.27E+01

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Tractor	3.91E-04	5.26E-04	1.10E+01	1.12E+01
Site Work - 10000 sqft	Site Restoration- Landscaping (Curbing)	Bob Cat	1.05E-04	1.18E-04	2.48E+00	2.52E+00
Site Work - 10000 sqft	Site Restoration- Landscaping (Curbing)	Concrete Ready Mix Trucks	8.81E-05	2.05E-03	4.31E+01	4.36E+01
Site Work - 10000 sqft	Site Restoration- Landscaping (Curbing)	Tractor Trailer with Boom Hoist- Delivery	8.81E-05	2.05E-03	4.31E+01	4.36E+01
Site Work - 10000 sqft	Site Restoration- Landscaping (Rough Grading)	Compacting Equipment	4.18E-05	1.64E-05	3.44E-01	3.52E-01
Site Work - 10000 sqft	Site Restoration- Landscaping (Rough Grading)	Small Dozer	5.19E-05	5.98E-04	1.26E+01	1.27E+01
Site Work - 10000 sqft	Site Restoration- Landscaping (Top Soil Seed and Plantings)	Forktruck (Hoist)	3.04E-05	1.27E-03	2.66E+01	2.69E+01
Site Work - 10000 sqft	Site Restoration- Landscaping (Top Soil Seed and Plantings)	Roller	7.97E-05	6.33E-04	1.33E+01	1.35E+01
Site Work - 10000 sqft	Site Restoration- Landscaping (Top Soil Seed and Plantings)	Seed Truck Spreader	5.87E-05	1.37E-03	2.87E+01	2.91E+01
Site Work - 10000 sqft	Site Restoration- Landscaping (Top Soil Seed and Plantings)	Tractor Trailer- Material Delivery	2.94E-04	6.84E-03	1.44E+02	1.45E+02

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Backhoe	5.86E-04	7.89E-04	1.65E+01	1.68E+01
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Fork Truck	2.28E-05	9.49E-04	1.99E+01	2.02E+01
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Tractor Trailer- Material Delivery	1.10E-04	2.56E-03	5.38E+01	5.45E+01

Table C12. 2024 Electric CUP, construction-phase non-road equipment criteria air pollutant emissions.

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Concrete Foundations	Backhoe	7.63E-03	7.66E-03	1.18E-03	6.05E-06	1.01E-03	9.76E-04
Building - 100000 sqft- 10 stories	Concrete Foundations	Concrete Pump	1.04E-03	6.26E-04	2.00E-04	5.27E-07	6.50E-05	6.30E-05
Building - 100000 sqft- 10 stories	Concrete Foundations	Concrete Ready Mix Trucks	6.66E-03	1.91E-03	4.90E-04	5.20E-05	3.46E-04	3.35E-04
Building - 100000 sqft- 10 stories	Concrete Foundations	Excavator	1.33E-03	4.00E-04	6.25E-05	6.74E-06	8.57E-05	8.31E-05
Building - 100000 sqft- 10 stories	Concrete Foundations	Fork Truck	6.99E-03	4.89E-04	6.50E-05	1.27E-05	8.80E-05	8.54E-05
Building - 100000 sqft- 10 stories	Concrete Foundations	Tool Truck	2.22E-03	6.36E-04	1.63E-04	1.73E-05	1.15E-04	1.12E-04
Building - 100000 sqft- 10 stories	Concrete Foundations	Tractor Trailer- Material Delivery	4.44E-03	1.27E-03	3.27E-04	3.46E-05	2.31E-04	2.24E-04
Building - 100000 sqft- 10 stories	Construction Mob & Layout	Survey Crew Trucks	1.85E-04	5.30E-05	1.36E-05	1.44E-06	9.61E-06	9.32E-06
Building - 100000 sqft- 10 stories	Construction Mob & Layout	Tractor Trailers Temp Fac.	7.40E-05	2.12E-05	5.44E-06	5.77E-07	3.84E-06	3.73E-06

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Fork Truck	1.22E-02	8.56E-04	1.14E-04	2.23E-05	1.54E-04	1.49E-04
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Generator	1.27E-03	3.33E-04	9.60E-05	6.98E-07	5.42E-05	5.26E-05
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Grout Mixer	6.17E-02	2.87E-02	4.00E-03	6.89E-05	4.48E-03	4.35E-03
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Grout Wheel Truck	2.96E-03	8.48E-04	2.18E-04	2.31E-05	1.54E-04	1.49E-04
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Man Lift	2.87E-02	1.85E-02	3.72E-03	1.63E-05	2.32E-03	2.25E-03
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Tool Truck	7.77E-03	2.22E-03	5.72E-04	6.06E-05	4.03E-04	3.91E-04
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Tractor Trailer- Material Delivery	1.55E-02	4.45E-03	1.14E-03	1.21E-04	8.07E-04	7.83E-04
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Truck Tower (Mantiwoc type)	1.15E-03	2.90E-04	8.45E-05	4.27E-06	5.42E-05	5.25E-05
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Fork Truck	2.33E-02	1.63E-03	2.17E-04	4.24E-05	2.93E-04	2.85E-04
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Man Lift	5.47E-02	3.52E-02	7.09E-03	3.11E-05	4.43E-03	4.30E-03
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Tool Truck	2.96E-02	8.48E-03	2.18E-03	2.31E-04	1.54E-03	1.49E-03
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Tractor Trailer- Material Delivery	2.96E-02	8.48E-03	2.18E-03	2.31E-04	1.54E-03	1.49E-03
Building - 100000 sqft- 10 stories	Roofing	High Lift	2.33E-03	1.63E-04	2.17E-05	4.24E-06	2.93E-05	2.85E-05
Building - 100000 sqft- 10 stories	Roofing	Man Lift	6.84E-04	4.40E-04	8.86E-05	3.88E-07	5.53E-05	5.37E-05
Building - 100000 sqft- 10 stories	Roofing	Material Deliveries	1.11E-03	3.18E-04	8.16E-05	8.66E-06	5.76E-05	5.59E-05
Building - 100000 sqft- 10 stories	Roofing	Tractor Trailer- Material Delivery	7.40E-04	2.12E-04	5.44E-05	5.77E-06	3.84E-05	3.73E-05
Building - 100000 sqft- 10 stories	Roofing	Truck Tower (Mantiwoc type)	1.73E-03	4.36E-04	1.27E-04	6.41E-06	8.12E-05	7.88E-05

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Security & Safety Systems	High Lift	1.17E-02	8.15E-04	1.08E-04	2.12E-05	1.47E-04	1.42E-04
Building - 100000 sqft- 10 stories	Security & Safety Systems	Tool Truck	1.48E-02	4.24E-03	1.09E-03	1.15E-04	7.69E-04	7.45E-04
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	90 Ton Crane	3.46E-03	8.71E-04	2.54E-04	1.28E-05	1.62E-04	1.58E-04
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Concrete Pump	3.45E-04	2.09E-04	6.68E-05	1.76E-07	2.17E-05	2.10E-05
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Concrete Truck	1.11E-03	3.18E-04	8.16E-05	8.66E-06	5.76E-05	5.59E-05
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Fork Truck	9.32E-03	6.52E-04	8.67E-05	1.70E-05	1.17E-04	1.14E-04
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Tool Truck	2.96E-03	8.48E-04	2.18E-04	2.31E-05	1.54E-04	1.49E-04
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Tractor Trailer- Steel Deliveries	6.66E-03	1.91E-03	4.90E-04	5.20E-05	3.46E-04	3.35E-04
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Trowel Machine	5.88E-03	2.73E-03	3.81E-04	6.56E-06	4.27E-04	4.14E-04
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Truck Tower (Mantiwoc type)	1.04E-02	2.61E-03	7.61E-04	3.84E-05	4.87E-04	4.73E-04
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Dozer	2.25E-05	8.02E-06	1.22E-06	9.09E-08	1.88E-06	1.83E-06
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Dump Truck	3.95E-05	1.13E-05	2.90E-06	3.08E-07	2.05E-06	1.99E-06
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Excavator	1.77E-05	5.33E-06	8.33E-07	8.99E-08	1.14E-06	1.11E-06
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Loader	3.08E-05	1.12E-05	1.87E-06	9.21E-08	2.62E-06	2.54E-06
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Other General Equipment	3.47E-05	7.79E-06	1.75E-06	6.74E-08	1.83E-06	1.77E-06

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Pickup Truck	3.95E-05	1.13E-05	2.90E-06	3.08E-07	2.05E-06	1.99E-06
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Roller	4.27E-05	1.50E-05	1.26E-06	5.85E-08	2.24E-06	2.17E-06
Drainage System	Drainage - 24 inch SICPP	Dozer	1.23E-05	4.36E-06	6.64E-07	4.94E-08	1.02E-06	9.94E-07
Drainage System	Drainage - 24 inch SICPP	Dump Truck	2.15E-05	6.14E-06	1.58E-06	1.67E-07	1.11E-06	1.08E-06
Drainage System	Drainage - 24 inch SICPP	Excavator	9.61E-06	2.90E-06	4.53E-07	4.89E-08	6.21E-07	6.03E-07
Drainage System	Drainage - 24 inch SICPP	Loader	1.67E-05	6.08E-06	1.02E-06	5.01E-08	1.42E-06	1.38E-06
Drainage System	Drainage - 24 inch SICPP	Other General Equipment	1.89E-05	4.24E-06	9.54E-07	3.67E-08	9.94E-07	9.65E-07
Drainage System	Drainage - 24 inch SICPP	Pickup Truck	2.15E-05	6.14E-06	1.58E-06	1.67E-07	1.11E-06	1.08E-06
Drainage System	Drainage - 24 inch SICPP	Roller	2.33E-05	8.17E-06	6.86E-07	3.18E-08	1.22E-06	1.18E-06
Drainage System	Drainage Structures	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage Structures	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage Structures	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage Structures	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Hydroseeding	Hydroseeder	1.88E-06	5.38E-07	1.38E-07	1.47E-08	9.75E-08	9.46E-08
Drainage System	Hydroseeding	Off-Road Truck	1.88E-06	5.38E-07	1.38E-07	1.47E-08	9.75E-08	9.46E-08
Drainage System	Soil Erosion/Sediment Control	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Drainage System	Soil Erosion/Sediment Control	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Soil Erosion/Sediment Control	Pumps	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Topsoil Placement	Dozer	2.64E-06	9.39E-07	1.43E-07	1.06E-08	2.21E-07	2.14E-07
Drainage System	Topsoil Placement	Dump Truck	4.62E-06	1.32E-06	3.40E-07	3.60E-08	2.40E-07	2.33E-07
Drainage System	Topsoil Placement	Pickup Truck	4.62E-06	1.32E-06	3.40E-07	3.60E-08	2.40E-07	2.33E-07
Fencing	Clearing and Grubbing	Chain Saw	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Clearing and Grubbing	Chipper/Stump Grinder	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Clearing and Grubbing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Excavation (Cut to Fill)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Excavation (Cut to Fill)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Excavation (Cut to Fill)	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Excavation (Cut to Fill)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Excavation (Cut to Fill)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Fencing	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Fencing	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Fencing	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Fencing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fencing	Fencing	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Fencing	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Grading	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Grading	Grader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Grading	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Hydroseeding	Hydroseeder	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Hydroseeding	Off-Road Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Soil Erosion/Sediment Control	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Soil Erosion/Sediment Control	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Soil Erosion/Sediment Control	Pumps	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Topsoil Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Topsoil Placement	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Topsoil Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Clearing and Grubbing	Chain Saw	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Clearing and Grubbing	Chipper/Stump Grinder	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Clearing and Grubbing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Air Compressor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Concrete Placement	Concrete Saws	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Rubber Tired Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Slip Form Paver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Surfacing Equipment (Grooving)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Construction/Erect Tanks	Crane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Construction/Erect Tanks	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Construction/Erect Tanks	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Drainage - 24 inch SICPP	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Drainage	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Drainage	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Drainage	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Drainage	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Drainage	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Drainage	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Dust Control	Water Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Borrow)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Borrow)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Excavation (Borrow)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Borrow)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Scraper	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Topsoil Stripping)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Fencing	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Fencing	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Fencing	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Fencing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Fencing	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Fencing	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Grading	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Grading	Grader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Grading	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Hydroseeding	Hydroseeder	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Hydroseeding	Off-Road Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Markings	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Markings	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Markings	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Soil Erosion/Sediment Control	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Soil Erosion/Sediment Control	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Soil Erosion/Sediment Control	Pumps	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Subbase Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Subbase Placement	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Subbase Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Subbase Placement	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Topsoil Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Topsoil Placement	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Topsoil Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Landscaping	Hydroseeding	Hydroseeder	9.46E-04	2.71E-04	6.95E-05	7.37E-06	4.91E-05	4.76E-05
Landscaping	Hydroseeding	Off-Road Truck	9.46E-04	2.71E-04	6.95E-05	7.37E-06	4.91E-05	4.76E-05
Landscaping	Mulching	Dump Truck	8.27E-04	2.37E-04	6.08E-05	6.45E-06	4.29E-05	4.17E-05
Landscaping	Mulching	Other General Equipment	7.28E-04	1.63E-04	3.68E-05	1.41E-06	3.83E-05	3.72E-05
Landscaping	Mulching	Pickup Truck	8.27E-04	2.37E-04	6.08E-05	6.45E-06	4.29E-05	4.17E-05
Landscaping	Mulching	Tractors/Loader/Backhoe	7.11E-04	7.13E-04	1.10E-04	5.64E-07	9.37E-05	9.09E-05
Landscaping	Sodding	Flatbed Truck	4.19E-03	1.20E-03	3.08E-04	3.27E-05	2.18E-04	2.11E-04
Landscaping	Sodding	Other General Equipment	3.69E-03	8.28E-04	1.86E-04	7.16E-06	1.94E-04	1.88E-04
Landscaping	Sodding	Pickup Truck	4.19E-03	1.20E-03	3.08E-04	3.27E-05	2.18E-04	2.11E-04
Landscaping	Sodding	Skid Steer Loader	4.19E-03	3.35E-03	6.60E-04	2.23E-06	4.66E-04	4.52E-04
Landscaping	Topsoil Placement	Dozer	1.33E-03	4.74E-04	7.21E-05	5.37E-06	1.11E-04	1.08E-04
Landscaping	Topsoil Placement	Dump Truck	2.33E-03	6.68E-04	1.72E-04	1.82E-05	1.21E-04	1.17E-04
Landscaping	Topsoil Placement	Pickup Truck	2.33E-03	6.68E-04	1.72E-04	1.82E-05	1.21E-04	1.17E-04
Landscaping	Tree Planting	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Planting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Planting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Planting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Aerial Lift	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Chipper/Stump Grinder	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Landscaping	Tree Pruning	Pruning Saw/Chain Saw	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Binder Coat of Pavement	Paving Machine	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Binder Coat of Pavement	Ten Wheelers- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Construction Mob & Layout	Survey Crew Trucks	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Construction Mob & Layout	Tractor Trailers Temp Fac.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Curbing	Bob Cat	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Curbing	Concrete Ready Mix Trucks	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Curbing	Material Deliveries	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Curbing	Tractor Trailer with Boom Hoist- Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Bulldozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Front Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Ten Wheelers	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Auger Drill	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Fork Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Front Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Tractor Trailer- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Bulldozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Chain Saws	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Flat Bed or Dump Trucks	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Log Chipper	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Mulcher	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Tractor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Rough Grading	Compacting Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Rough Grading	Small Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	40 Ton Rough Terrain Crane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	High Lift	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	Tractor Trailer- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Stripping	Line Painting Truck and Sprayer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Tractor Trailer- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Top Coat of Asphalt	Paving Machine	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Top Coat of Asphalt	Ten Wheelers- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Fork Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Tractor Trailer- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Clearing and Grubbing	Chain Saw	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Clearing and Grubbing	Chipper/Stump Grinder	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Clearing and Grubbing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Air Compressor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Concrete Saws	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Rubber Tired Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Slip Form Paver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Surfacing Equipment (Grooving)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Curbing	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Curbing	Curb/Gutter Paver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Curbing	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Curbing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 24 inch SICPP	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 24 inch SICPP	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Drainage - 24 inch SICPP	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 24 inch SICPP	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 24 inch SICPP	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 24 inch SICPP	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 24 inch SICPP	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 6 inch Perforated Underdrain	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 6 inch Perforated Underdrain	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 6 inch Perforated Underdrain	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 6 inch Perforated Underdrain	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Borrow)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Borrow)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Borrow)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Borrow)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Cut to Fill)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Excavation (Cut to Fill)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Cut to Fill)	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Cut to Fill)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Cut to Fill)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Cut to Fill)	Scraper	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Topsoil Stripping)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Fencing	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Fencing	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Fencing	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Fencing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Fencing	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Fencing	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Grading	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Grading	Grader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Grading	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Hydroseeding	Hydroseeder	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Hydroseeding	Off-Road Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Markings	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Markings	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Markings	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Sidewalks	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Sidewalks	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Sidewalks	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Sidewalks	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Sidewalks	Vibratory Compactor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Soil Erosion/Sediment Control	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Soil Erosion/Sediment Control	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Soil Erosion/Sediment Control	Pumps	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Street Lighting	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Street Lighting	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Street Lighting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Street Lighting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Street Lighting	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Street Lighting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Subbase Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Subbase Placement	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Subbase Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Subbase Placement	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Topsoil Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Topsoil Placement	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Topsoil Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Tree Planting	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Tree Planting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Tree Planting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Tree Planting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Clearing and Grubbing	Chain Saw	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Clearing and Grubbing	Chipper/Stump Grinder	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Clearing and Grubbing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Air Compressor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Concrete Saws	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Rubber Tired Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Slip Form Paver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Surfacing Equipment (Grooving)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 24 inch SICPP	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 24 inch SICPP	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Drainage - 24 inch SICPP	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 24 inch SICPP	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 24 inch SICPP	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 24 inch SICPP	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 24 inch SICPP	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 6 inch Perforated Underdrain	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 6 inch Perforated Underdrain	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 6 inch Perforated Underdrain	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 6 inch Perforated Underdrain	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Dust Control	Water Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Borrow)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Borrow)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Borrow)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Borrow)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Excavation (Cut to Fill)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Cut to Fill)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Cut to Fill)	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Cut to Fill)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Cut to Fill)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Cut to Fill)	Scraper	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Topsoil Stripping)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Fencing	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Fencing	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Fencing	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Fencing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Fencing	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Fencing	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Grading	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Grading	Grader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Grading	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Hydroseeding	Hydroseeder	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Hydroseeding	Off-Road Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Markings	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Markings	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Markings	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Sidewalks	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Sidewalks	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Sidewalks	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Sidewalks	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Sidewalks	Vibratory Compactor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Soil Erosion/Sediment Control	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Soil Erosion/Sediment Control	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Soil Erosion/Sediment Control	Pumps	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Street Lighting	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Street Lighting	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Street Lighting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Street Lighting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Street Lighting	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Street Lighting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Subbase Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Subbase Placement	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Subbase Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Subbase Placement	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Topsoil Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Topsoil Placement	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Topsoil Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Tree Planting	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Tree Planting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Tree Planting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Tree Planting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Construction Mob & Layout	Survey Crew Trucks	5.06E-03	1.45E-03	3.72E-04	3.95E-05	2.63E-04	2.55E-04
Site Work - 10000 sqft	Construction Mob & Layout	Tractor Trailers Temp Fac.	2.03E-03	5.80E-04	1.49E-04	1.58E-05	1.05E-04	1.02E-04
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Bulldozer	1.16E-02	4.12E-03	6.26E-04	4.66E-05	9.67E-04	9.38E-04
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Chain Saws	3.68E-03	6.41E-01	1.76E-01	9.97E-06	2.35E-02	2.16E-02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Flat Bed or Dump Trucks	4.05E-02	1.16E-02	2.98E-03	3.16E-04	2.10E-03	2.04E-03
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Front Loader	1.74E-02	1.75E-02	2.70E-03	1.38E-05	2.29E-03	2.23E-03
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Grub the site down 2'-0	1.90E-02	2.40E-03	7.31E-04	1.17E-05	2.10E-04	2.04E-04
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Log Chipper	3.74E-02	1.67E-02	3.30E-03	2.44E-05	3.12E-03	3.03E-03

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Mulcher	3.74E-02	1.67E-02	3.30E-03	2.44E-05	3.12E-03	3.03E-03
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Ten Wheelers	2.03E-02	5.80E-03	1.49E-03	1.58E-04	1.05E-03	1.02E-03
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Tractor	3.48E-02	3.49E-02	5.39E-03	2.76E-05	4.59E-03	4.45E-03
Site Work - 10000 sqft	Site Restoration- Landscaping (Curbing)	Bob Cat	1.21E-02	9.71E-03	1.91E-03	6.46E-06	1.35E-03	1.31E-03
Site Work - 10000 sqft	Site Restoration- Landscaping (Curbing)	Concrete Ready Mix Trucks	1.22E-02	3.48E-03	8.94E-04	9.48E-05	6.31E-04	6.12E-04
Site Work - 10000 sqft	Site Restoration- Landscaping (Curbing)	Tractor Trailer with Boom Hoist- Delivery	1.22E-02	3.48E-03	8.94E-04	9.48E-05	6.31E-04	6.12E-04
Site Work - 10000 sqft	Site Restoration- Landscaping (Rough Grading)	Compacting Equipment	2.03E-03	1.23E-03	3.98E-04	1.05E-06	1.25E-04	1.21E-04
Site Work - 10000 sqft	Site Restoration- Landscaping (Rough Grading)	Small Dozer	6.94E-03	2.47E-03	3.76E-04	2.80E-05	5.80E-04	5.63E-04
Site Work - 10000 sqft	Site Restoration- Landscaping (Top Soil Seed and Plantings)	Forktruck (Hoist)	3.19E-02	2.23E-03	2.97E-04	5.81E-05	4.01E-04	3.89E-04
Site Work - 10000 sqft	Site Restoration- Landscaping (Top Soil Seed and Plantings)	Roller	2.19E-02	7.71E-03	6.48E-04	3.00E-05	1.15E-03	1.12E-03
Site Work - 10000 sqft	Site Restoration- Landscaping (Top Soil Seed and Plantings)	Seed Truck Spreader	8.10E-03	2.32E-03	5.96E-04	6.32E-05	4.21E-04	4.08E-04

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Tractor Trailer- Material Delivery	4.05E-02	1.16E-02	2.98E-03	3.16E-04	2.10E-03	2.04E-03
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Backhoe	5.22E-02	5.24E-02	8.09E-03	4.14E-05	6.88E-03	6.68E-03
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Fork Truck	2.39E-02	1.67E-03	2.22E-04	4.35E-05	3.01E-04	2.92E-04
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Tractor Trailer- Material Delivery	1.52E-02	4.35E-03	1.12E-03	1.18E-04	7.89E-04	7.65E-04

Table C13. 2024 Electric CUP, construction-phase non-road equipment greenhouse gas emissions.

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Building - 100000 sqft- 10 stories	Concrete Foundations	Backhoe	6.74E-05	9.56E-05	2.00E+00	2.04E+00
Building - 100000 sqft- 10 stories	Concrete Foundations	Concrete Pump	1.71E-05	6.85E-06	1.43E-01	1.46E-01
Building - 100000 sqft- 10 stories	Concrete Foundations	Concrete Ready Mix Trucks	2.99E-05	9.33E-04	1.96E+01	1.98E+01
Building - 100000 sqft- 10 stories	Concrete Foundations	Excavator	5.03E-06	1.21E-04	2.54E+00	2.57E+00
Building - 100000 sqft- 10 stories	Concrete Foundations	Fork Truck	4.76E-06	2.30E-04	4.83E+00	4.89E+00
Building - 100000 sqft- 10 stories	Concrete Foundations	Tool Truck	9.98E-06	3.11E-04	6.52E+00	6.61E+00
Building - 100000 sqft- 10 stories	Concrete Foundations	Tractor Trailer- Material Delivery	2.00E-05	6.22E-04	1.30E+01	1.32E+01

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Building - 100000 sqft- 10 stories	Construction Mob & Layout	Survey Crew Trucks	8.31E-07	2.59E-05	5.44E-01	5.51E-01
Building - 100000 sqft- 10 stories	Construction Mob & Layout	Tractor Trailers Temp Fac.	3.33E-07	1.04E-05	2.17E-01	2.20E-01
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Fork Truck	8.33E-06	4.03E-04	8.45E+00	8.56E+00
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Generator	7.71E-06	1.11E-05	2.32E-01	2.36E-01
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Grout Mixer	2.56E-04	1.09E-03	2.28E+01	2.31E+01
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Grout Wheel Truck	1.33E-05	4.14E-04	8.70E+00	8.81E+00
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Man Lift	1.87E-04	2.51E-04	5.26E+00	5.34E+00
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Tool Truck	3.49E-05	1.09E-03	2.28E+01	2.31E+01
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Tractor Trailer- Material Delivery	6.98E-05	2.18E-03	4.57E+01	4.63E+01
Building - 100000 sqft- 10 stories	Exterior Wall Framing	Truck Tower (Mantiwoc type)	6.57E-06	7.47E-05	1.57E+00	1.59E+00
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Fork Truck	1.59E-05	7.67E-04	1.61E+01	1.63E+01
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Man Lift	3.56E-04	4.78E-04	1.00E+01	1.02E+01
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Tool Truck	1.33E-04	4.14E-03	8.70E+01	8.81E+01
Building - 100000 sqft- 10 stories	Interior Build-Out/ Finishes	Tractor Trailer- Material Delivery	1.33E-04	4.14E-03	8.70E+01	8.81E+01
Building - 100000 sqft- 10 stories	Roofing	High Lift	1.59E-06	7.67E-05	1.61E+00	1.63E+00
Building - 100000 sqft- 10 stories	Roofing	Man Lift	4.44E-06	5.98E-06	1.25E-01	1.27E-01
Building - 100000 sqft- 10 stories	Roofing	Material Deliveries	4.99E-06	1.55E-04	3.26E+00	3.30E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Building - 100000 sqft- 10 stories	Roofing	Tractor Trailer- Material Delivery	3.33E-06	1.04E-04	2.17E+00	2.20E+00
Building - 100000 sqft- 10 stories	Roofing	Truck Tower (Mantiwoc type)	9.85E-06	1.12E-04	2.35E+00	2.38E+00
Building - 100000 sqft- 10 stories	Security & Safety Systems	High Lift	7.94E-06	3.84E-04	8.05E+00	8.15E+00
Building - 100000 sqft- 10 stories	Security & Safety Systems	Tool Truck	6.65E-05	2.07E-03	4.35E+01	4.41E+01
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	90 Ton Crane	1.97E-05	2.24E-04	4.70E+00	4.77E+00
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Concrete Pump	5.70E-06	2.28E-06	4.77E-02	4.88E-02
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Concrete Truck	4.99E-06	1.55E-04	3.26E+00	3.30E+00
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Fork Truck	6.35E-06	3.07E-04	6.44E+00	6.52E+00
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Tool Truck	1.33E-05	4.14E-04	8.70E+00	8.81E+00
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Tractor Trailer- Steel Deliveries	2.99E-05	9.33E-04	1.96E+01	1.98E+01
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Trowel Machine	2.43E-05	1.04E-04	2.17E+00	2.20E+00
Building - 100000 sqft- 10 stories	Structural Steel Erection & Decks	Truck Tower (Mantiwoc type)	5.91E-05	6.72E-04	1.41E+01	1.43E+01
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Dozer	1.01E-07	1.61E-06	3.38E-02	3.43E-02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Dump Truck	1.77E-07	5.52E-06	1.16E-01	1.17E-01
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Excavator	6.70E-08	1.61E-06	3.38E-02	3.43E-02

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Loader	1.55E-07	1.61E-06	3.38E-02	3.43E-02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Other General Equipment	1.49E-07	1.16E-06	2.44E-02	2.47E-02
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Pickup Truck	1.77E-07	5.52E-06	1.16E-01	1.17E-01
Drainage System	Drainage - 24 inch Reinforced Concrete Pipe	Roller	1.05E-07	1.02E-06	2.15E-02	2.17E-02
Drainage System	Drainage - 24 inch SICPP	Dozer	5.52E-08	8.76E-07	1.84E-02	1.86E-02
Drainage System	Drainage - 24 inch SICPP	Dump Truck	9.64E-08	3.00E-06	6.31E-02	6.39E-02
Drainage System	Drainage - 24 inch SICPP	Excavator	3.64E-08	8.76E-07	1.84E-02	1.86E-02
Drainage System	Drainage - 24 inch SICPP	Loader	8.42E-08	8.76E-07	1.84E-02	1.86E-02
Drainage System	Drainage - 24 inch SICPP	Other General Equipment	8.09E-08	6.32E-07	1.33E-02	1.34E-02
Drainage System	Drainage - 24 inch SICPP	Pickup Truck	9.64E-08	3.00E-06	6.31E-02	6.39E-02
Drainage System	Drainage - 24 inch SICPP	Roller	5.69E-08	5.56E-07	1.17E-02	1.18E-02
Drainage System	Drainage Structures	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage Structures	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage Structures	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Drainage Structures	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Hydroseeding	Hydroseeder	8.44E-09	2.63E-07	5.52E-03	5.59E-03

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Drainage System	Hydroseeding	Off-Road Truck	8.44E-09	2.63E-07	5.52E-03	5.59E-03
Drainage System	Soil Erosion/Sediment Control	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Soil Erosion/Sediment Control	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Soil Erosion/Sediment Control	Pumps	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Topsoil Placement	Dozer	1.19E-08	1.89E-07	3.96E-03	4.01E-03
Drainage System	Topsoil Placement	Dump Truck	2.08E-08	6.47E-07	1.36E-02	1.38E-02
Drainage System	Topsoil Placement	Pickup Truck	2.08E-08	6.47E-07	1.36E-02	1.38E-02
Fencing	Clearing and Grubbing	Chain Saw	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Clearing and Grubbing	Chipper/Stump Grinder	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Clearing and Grubbing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Excavation (Cut to Fill)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Excavation (Cut to Fill)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Excavation (Cut to Fill)	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Excavation (Cut to Fill)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Excavation (Cut to Fill)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Fencing	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Fencing	Fencing	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Fencing	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Fencing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Fencing	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Fencing	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Grading	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Grading	Grader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Grading	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Hydroseeding	Hydroseeder	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Hydroseeding	Off-Road Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Soil Erosion/Sediment Control	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Soil Erosion/Sediment Control	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Soil Erosion/Sediment Control	Pumps	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Topsoil Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Topsoil Placement	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Topsoil Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Clearing and Grubbing	Chain Saw	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Clearing and Grubbing	Chipper/Stump Grinder	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Fuel Tanks	Clearing and Grubbing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Air Compressor	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Concrete Saws	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Rubber Tired Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Slip Form Paver	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Placement	Surfacing Equipment (Grooving)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Construction/Erect Tanks	Crane	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Construction/Erect Tanks	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Construction/Erect Tanks	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Drainage - 24 inch SICPP	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Drainage	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Drainage	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Drainage	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Drainage	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Drainage	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Drainage	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Dust Control	Water Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Fuel Tanks	Excavation (Borrow)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Borrow)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Borrow)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Borrow)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Cut to Fill)	Scraper	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Excavation (Topsoil Stripping)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Fencing	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Fencing	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Fencing	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Fencing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Fencing	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Fencing	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Grading	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Grading	Grader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Grading	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Fuel Tanks	Hydroseeding	Hydroseeder	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Hydroseeding	Off-Road Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Markings	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Markings	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Markings	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Soil Erosion/Sediment Control	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Soil Erosion/Sediment Control	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Soil Erosion/Sediment Control	Pumps	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Street Lighting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Subbase Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Subbase Placement	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Subbase Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Subbase Placement	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Fuel Tanks	Topsoil Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Topsoil Placement	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Topsoil Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Hydroseeding	Hydroseeder	4.25E-06	1.32E-04	2.78E+00	2.81E+00
Landscaping	Hydroseeding	Off-Road Truck	4.25E-06	1.32E-04	2.78E+00	2.81E+00
Landscaping	Mulching	Dump Truck	3.72E-06	1.16E-04	2.43E+00	2.46E+00
Landscaping	Mulching	Other General Equipment	3.12E-06	2.43E-05	5.11E-01	5.18E-01
Landscaping	Mulching	Pickup Truck	3.72E-06	1.16E-04	2.43E+00	2.46E+00
Landscaping	Mulching	Tractors/Loader/Backhoe	6.28E-06	8.91E-06	1.87E-01	1.90E-01
Landscaping	Sodding	Flatbed Truck	1.88E-05	5.87E-04	1.23E+01	1.25E+01
Landscaping	Sodding	Other General Equipment	1.58E-05	1.23E-04	2.59E+00	2.63E+00
Landscaping	Sodding	Pickup Truck	1.88E-05	5.87E-04	1.23E+01	1.25E+01
Landscaping	Sodding	Skid Steer Loader	2.92E-05	3.39E-05	7.09E-01	7.21E-01
Landscaping	Topsoil Placement	Dozer	6.00E-06	9.52E-05	2.00E+00	2.02E+00
Landscaping	Topsoil Placement	Dump Truck	1.05E-05	3.26E-04	6.85E+00	6.94E+00
Landscaping	Topsoil Placement	Pickup Truck	1.05E-05	3.26E-04	6.85E+00	6.94E+00
Landscaping	Tree Planting	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Planting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Planting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Planting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Aerial Lift	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Chipper/Stump Grinder	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Landscaping	Tree Pruning	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Tree Pruning	Pruning Saw/Chain Saw	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Binder Coat of Pavement	Paving Machine	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Binder Coat of Pavement	Ten Wheelers- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Construction Mob & Layout	Survey Crew Trucks	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Construction Mob & Layout	Tractor Trailers Temp Fac.	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Curbing	Bob Cat	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Curbing	Concrete Ready Mix Trucks	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Curbing	Material Deliveries	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Curbing	Tractor Trailer with Boom Hoist- Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Bulldozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Front Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Grub the site down 2 ft.	Ten Wheelers	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Auger Drill	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Fork Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Front Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Lighting Pre-Cast Concrete Piers (10)	Tractor Trailer- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Bulldozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Chain Saws	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Flat Bed or Dump Trucks	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Log Chipper	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Mulcher	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Remove Trees and shrubs	Tractor	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Rough Grading	Compacting Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Rough Grading	Small Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	40 Ton Rough Terrain Crane	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	High Lift	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Set in-place Light Poles	Tractor Trailer- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Stripping	Line Painting Truck and Sprayer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Subgrade Materials installed	Tractor Trailer- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Top Coat of Asphalt	Paving Machine	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Top Coat of Asphalt	Ten Wheelers- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Fork Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Underground Conduits	Tractor Trailer- Material Delivery	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Clearing and Grubbing	Chain Saw	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Clearing and Grubbing	Chipper/Stump Grinder	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Clearing and Grubbing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Air Compressor	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Concrete Saws	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Rubber Tired Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Slip Form Paver	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Placement	Surfacing Equipment (Grooving)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Curbing	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Curbing	Curb/Gutter Paver	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Curbing	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Curbing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 24 inch SICPP	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Drainage - 24 inch SICPP	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 24 inch SICPP	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 24 inch SICPP	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 24 inch SICPP	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 24 inch SICPP	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 24 inch SICPP	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 6 inch Perforated Underdrain	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 6 inch Perforated Underdrain	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 6 inch Perforated Underdrain	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 6 inch Perforated Underdrain	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Borrow)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Borrow)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Borrow)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Borrow)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Excavation (Cut to Fill)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Cut to Fill)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Cut to Fill)	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Cut to Fill)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Cut to Fill)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Cut to Fill)	Scraper	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Excavation (Topsoil Stripping)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Fencing	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Fencing	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Fencing	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Fencing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Fencing	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Fencing	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Grading	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Grading	Grader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Grading	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Hydroseeding	Hydroseeder	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Hydroseeding	Off-Road Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Markings	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Markings	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Markings	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Sidewalks	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Sidewalks	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Sidewalks	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Sidewalks	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Sidewalks	Vibratory Compactor	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Soil Erosion/Sediment Control	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Soil Erosion/Sediment Control	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Soil Erosion/Sediment Control	Pumps	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Street Lighting	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Street Lighting	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Street Lighting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Street Lighting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Street Lighting	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Street Lighting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Subbase Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Subbase Placement	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Subbase Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Subbase Placement	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Topsoil Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Topsoil Placement	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Topsoil Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Tree Planting	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Tree Planting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Tree Planting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Tree Planting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Clearing and Grubbing	Chain Saw	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Clearing and Grubbing	Chipper/Stump Grinder	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Clearing and Grubbing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Air Compressor	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Concrete Saws	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Rubber Tired Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Slip Form Paver	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Placement	Surfacing Equipment (Grooving)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 24 inch SICPP	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Service Road	Drainage - 24 inch SICPP	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 24 inch SICPP	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 24 inch SICPP	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 24 inch SICPP	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 24 inch SICPP	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 24 inch SICPP	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 6 inch Perforated Underdrain	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 6 inch Perforated Underdrain	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 6 inch Perforated Underdrain	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 6 inch Perforated Underdrain	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Drainage - 6 inch Perforated Underdrain	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Dust Control	Water Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Borrow)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Borrow)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Borrow)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Service Road	Excavation (Borrow)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Cut to Fill)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Cut to Fill)	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Cut to Fill)	Excavator	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Cut to Fill)	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Cut to Fill)	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Cut to Fill)	Scraper	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Excavation (Topsoil Stripping)	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Fencing	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Fencing	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Fencing	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Fencing	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Fencing	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Fencing	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Grading	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Grading	Grader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Grading	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Hydroseeding	Hydroseeder	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Hydroseeding	Off-Road Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Markings	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Markings	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Service Road	Markings	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Sidewalks	Concrete Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Sidewalks	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Sidewalks	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Sidewalks	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Sidewalks	Vibratory Compactor	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Soil Erosion/Sediment Control	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Soil Erosion/Sediment Control	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Soil Erosion/Sediment Control	Pumps	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Soil Erosion/Sediment Control	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Street Lighting	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Street Lighting	Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Street Lighting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Street Lighting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Street Lighting	Skid Steer Loader	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Street Lighting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Subbase Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Subbase Placement	Dump Truck (12 cy)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Subbase Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Service Road	Subbase Placement	Roller	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Topsoil Placement	Dozer	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Topsoil Placement	Dump Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Topsoil Placement	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Tree Planting	Flatbed Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Tree Planting	Other General Equipment	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Tree Planting	Pickup Truck	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Tree Planting	Tractors/Loader/Backhoe	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Construction Mob & Layout	Survey Crew Trucks	2.27E-05	7.09E-04	1.49E+01	1.51E+01
Site Work - 10000 sqft	Construction Mob & Layout	Tractor Trailers Temp Fac.	9.10E-06	2.84E-04	5.95E+00	6.03E+00
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Bulldozer	5.21E-05	8.27E-04	1.74E+01	1.76E+01
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Chain Saws	2.86E-03	1.01E-04	1.65E+00	1.92E+00
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Flat Bed or Dump Trucks	1.82E-04	5.67E-03	1.19E+02	1.21E+02
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Front Loader	1.54E-04	2.18E-04	4.57E+00	4.64E+00
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Grub the site down 2'-0	9.53E-05	2.10E-04	4.40E+00	4.47E+00
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Log Chipper	1.18E-04	3.79E-04	7.94E+00	8.05E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Mulcher	1.18E-04	3.79E-04	7.94E+00	8.05E+00
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Ten Wheelers	9.10E-05	2.84E-03	5.95E+01	6.03E+01
Site Work - 10000 sqft	Site Clearing- Remove Trees & Shrubs	Tractor	3.07E-04	4.36E-04	9.14E+00	9.28E+00
Site Work - 10000 sqft	Site Restoration-Landscaping (Curbing)	Bob Cat	8.47E-05	9.81E-05	2.05E+00	2.09E+00
Site Work - 10000 sqft	Site Restoration-Landscaping (Curbing)	Concrete Ready Mix Trucks	5.46E-05	1.70E-03	3.57E+01	3.62E+01
Site Work - 10000 sqft	Site Restoration-Landscaping (Curbing)	Tractor Trailer with Boom Hoist- Delivery	5.46E-05	1.70E-03	3.57E+01	3.62E+01
Site Work - 10000 sqft	Site Restoration-Landscaping (Rough Grading)	Compacting Equipment	3.49E-05	1.36E-05	2.85E-01	2.92E-01
Site Work - 10000 sqft	Site Restoration-Landscaping (Rough Grading)	Small Dozer	3.12E-05	4.96E-04	1.04E+01	1.05E+01
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Forktruck (Hoist)	2.17E-05	1.05E-03	2.20E+01	2.23E+01
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Roller	5.37E-05	5.25E-04	1.10E+01	1.12E+01
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Seed Truck Spreader	3.64E-05	1.13E-03	2.38E+01	2.41E+01

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Site Work - 10000 sqft	Site Restoration-Landscaping (Top Soil Seed and Plantings)	Tractor Trailer- Material Delivery	1.82E-04	5.67E-03	1.19E+02	1.21E+02
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Backhoe	4.61E-04	6.54E-04	1.37E+01	1.39E+01
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Fork Truck	1.63E-05	7.87E-04	1.65E+01	1.67E+01
Site Work - 10000 sqft	Underground Services to 5 ft. of Building	Tractor Trailer- Material Delivery	6.82E-05	2.13E-03	4.46E+01	4.52E+01

Table C14. Pump house and boiler house, construction-phase non-road equipment activity.

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023
Building - 10000 sqft- 1 story	Demolition	Excavator	Nonroad Diesel Fuel	314	0.59	1,083	380	703
Building - 10000 sqft- 1 story	Demolition	Hydraulic Hammer	Nonroad Diesel Fuel	24.8	0.59	271	95	176
Building - 10000 sqft- 1 story	Demolition	Grapple	Nonroad Diesel Fuel	314	0.59	271	95	176
Building - 10000 sqft- 1 story	Demolition	Standard Bucket	Nonroad Diesel Fuel	141	0.59	1,083	380	703
Building - 10000 sqft- 1 story	Demolition	Water Truck	Nonroad Diesel Fuel	350	0.59	271	95	176
Building - 10000 sqft- 1 story	Demolition	Bobcat Skid	Nonroad Diesel Fuel	100	0.21	1,083	380	703
Building - 10000 sqft- 1 story	Demolition	Haul Truck	Nonroad Diesel Fuel	405	0.59	4,331	1,519	2,812

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023
Building - 10000 sqft- 1 story	Demolition	Concrete Saws	Gasoline	13	0.78	271	95	176
Building - 10000 sqft- 1 story	Construction	Concrete Pumping Truck	Nonroad Diesel Fuel	335	0.59	1,805	633	1,172
Building - 10000 sqft- 1 story	Construction	Motorized Trowel	Nonroad Diesel Fuel	50	0.59	1,805	633	1,172
Building - 10000 sqft- 1 story	Construction	Cranes	Nonroad Diesel Fuel	500	0.43	451	158	293
Building - 10000 sqft- 1 story	Construction	Bobcat	Nonroad Diesel Fuel	100	0.21	1,805	633	1,172
Building - 10000 sqft- 1 story	Construction	Backhoe	Nonroad Diesel Fuel	69	0.21	1,805	633	1,172
Building - 10000 sqft- 1 story	Construction	Trench Compactor	Nonroad Diesel Fuel	69	0.59	1,805	633	1,172
Building - 10000 sqft- 1 story	Construction	Fuel Truck	Nonroad Diesel Fuel	350	0.59	451	158	293
Building - 10000 sqft- 1 story	Construction	Dump Trucks	Nonroad Diesel Fuel	430	0.59	4,060	1,424	2,636
Drainage System	Demolition	Excavator	Nonroad Diesel Fuel	314	0.59	46	16	30
Drainage System	Demolition	Hydraulic Hammer	Nonroad Diesel Fuel	24.8	0.59	12	4	8
Drainage System	Demolition	Grapple	Nonroad Diesel Fuel	314	0.59	12	4	8
Drainage System	Demolition	Standard Bucket	Nonroad Diesel Fuel	141	0.59	46	16	30
Drainage System	Demolition	Water Truck	Nonroad Diesel Fuel	350	0.59	12	4	8
Drainage System	Demolition	Bobcat Skid	Nonroad Diesel Fuel	100	0.21	46	16	30
Drainage System	Demolition	Haul Truck	Nonroad Diesel Fuel	405	0.59	185	65	120
Drainage System	Demolition	Concrete Saws	Gasoline	13	0.78	12	4	8

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023
Drainage System	Construction	Concrete Pumping Truck	Nonroad Diesel Fuel	335	0.59	77	27	50
Drainage System	Construction	Motorized Trowel	Nonroad Diesel Fuel	50	0.59	77	27	50
Drainage System	Construction	Cranes	Nonroad Diesel Fuel	500	0.43	19	7	13
Drainage System	Construction	Bobcat	Nonroad Diesel Fuel	100	0.21	77	27	50
Drainage System	Construction	Backhoe	Nonroad Diesel Fuel	69	0.21	77	27	50
Drainage System	Construction	Trench Compactor	Nonroad Diesel Fuel	69	0.59	77	27	50
Drainage System	Construction	Fuel Truck	Nonroad Diesel Fuel	350	0.59	19	7	13
Drainage System	Construction	Dump Trucks	Nonroad Diesel Fuel	430	0.59	173	61	113
Fencing	Demolition	Excavator	Nonroad Diesel Fuel	314	0.59	46	16	30
Fencing	Demolition	Hydraulic Hammer	Nonroad Diesel Fuel	24.8	0.59	12	4	7
Fencing	Demolition	Grapple	Nonroad Diesel Fuel	314	0.59	12	4	7
Fencing	Demolition	Standard Bucket	Nonroad Diesel Fuel	141	0.59	46	16	30
Fencing	Demolition	Water Truck	Nonroad Diesel Fuel	350	0.59	12	4	7
Fencing	Demolition	Bobcat Skid	Nonroad Diesel Fuel	100	0.21	46	16	30
Fencing	Demolition	Haul Truck	Nonroad Diesel Fuel	405	0.59	184	65	120

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023
Fencing	Demolition	Concrete Saws	Gasoline	13	0.78	12	4	7
Fencing	Construction	Concrete Pumping Truck	Nonroad Diesel Fuel	335	0.59	77	27	50
Fencing	Construction	Motorized Trowel	Nonroad Diesel Fuel	50	0.59	77	27	50
Fencing	Construction	Cranes	Nonroad Diesel Fuel	500	0.43	19	7	12
Fencing	Construction	Bobcat	Nonroad Diesel Fuel	100	0.21	77	27	50
Fencing	Construction	Backhoe	Nonroad Diesel Fuel	69	0.21	77	27	50
Fencing	Construction	Trench Compactor	Nonroad Diesel Fuel	69	0.59	77	27	50
Fencing	Construction	Fuel Truck	Nonroad Diesel Fuel	350	0.59	19	7	12
Fencing	Construction	Dump Trucks	Nonroad Diesel Fuel	430	0.59	173	61	112
Fuel Tanks	Demolition	Excavator	Nonroad Diesel Fuel	314	0.59	2,315	812	1,503
Fuel Tanks	Demolition	Hydraulic Hammer	Nonroad Diesel Fuel	24.8	0.59	579	203	376
Fuel Tanks	Demolition	Grapple	Nonroad Diesel Fuel	314	0.59	579	203	376
Fuel Tanks	Demolition	Standard Bucket	Nonroad Diesel Fuel	141	0.59	2,315	812	1,503
Fuel Tanks	Demolition	Water Truck	Nonroad Diesel Fuel	350	0.59	579	203	376
Fuel Tanks	Demolition	Bobcat Skid	Nonroad Diesel Fuel	100	0.21	2,315	812	1,503
Fuel Tanks	Demolition	Haul Truck	Nonroad Diesel Fuel	405	0.59	9,260	3,247	6,013

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023
Fuel Tanks	Demolition	Concrete Saws	Gasoline	13	0.78	579	203	376
Fuel Tanks	Construction	Concrete Pumping Truck	Nonroad Diesel Fuel	335	0.59	3,858	1,353	2,505
Fuel Tanks	Construction	Motorized Trowel	Nonroad Diesel Fuel	50	0.59	3,858	1,353	2,505
Fuel Tanks	Construction	Cranes	Nonroad Diesel Fuel	500	0.43	965	338	626
Fuel Tanks	Construction	Bobcat	Nonroad Diesel Fuel	100	0.21	3,858	1,353	2,505
Fuel Tanks	Construction	Backhoe	Nonroad Diesel Fuel	69	0.21	3,858	1,353	2,505
Fuel Tanks	Construction	Trench Compactor	Nonroad Diesel Fuel	69	0.59	3,858	1,353	2,505
Fuel Tanks	Construction	Fuel Truck	Nonroad Diesel Fuel	350	0.59	965	338	626
Fuel Tanks	Construction	Dump Trucks	Nonroad Diesel Fuel	430	0.59	8,681	3,044	5,637
Parking Lot	Demolition	Excavator	Nonroad Diesel Fuel	314	0.59	17	6	11
Parking Lot	Demolition	Hydraulic Hammer	Nonroad Diesel Fuel	24.8	0.59	4	1	3
Parking Lot	Demolition	Grapple	Nonroad Diesel Fuel	314	0.59	4	1	3
Parking Lot	Demolition	Standard Bucket	Nonroad Diesel Fuel	141	0.59	17	6	11
Parking Lot	Demolition	Water Truck	Nonroad Diesel Fuel	350	0.59	4	1	3
Parking Lot	Demolition	Bobcat Skid	Nonroad Diesel Fuel	100	0.21	17	6	11
Parking Lot	Demolition	Haul Truck	Nonroad Diesel Fuel	405	0.59	68	24	44
Parking Lot	Demolition	Concrete Saws	Gasoline	13	0.78	4	1	3

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023
Parking Lot	Construction	Concrete Pumping Truck	Nonroad Diesel Fuel	335	0.59	28	10	18
Parking Lot	Construction	Motorized Trowel	Nonroad Diesel Fuel	50	0.59	28	10	18
Parking Lot	Construction	Cranes	Nonroad Diesel Fuel	500	0.43	7	2	5
Parking Lot	Construction	Bobcat	Nonroad Diesel Fuel	100	0.21	28	10	18
Parking Lot	Construction	Backhoe	Nonroad Diesel Fuel	69	0.21	28	10	18
Parking Lot	Construction	Trench Compactor	Nonroad Diesel Fuel	69	0.59	28	10	18
Parking Lot	Construction	Fuel Truck	Nonroad Diesel Fuel	350	0.59	7	2	5
Parking Lot	Construction	Dump Trucks	Nonroad Diesel Fuel	430	0.59	64	22	41
Site Work - 10000 sqft	Demolition	Excavator	Nonroad Diesel Fuel	314	0.59	333	117	216
Site Work - 10000 sqft	Demolition	Hydraulic Hammer	Nonroad Diesel Fuel	24.8	0.59	83	29	54
Site Work - 10000 sqft	Demolition	Grapple	Nonroad Diesel Fuel	314	0.59	83	29	54
Site Work - 10000 sqft	Demolition	Standard Bucket	Nonroad Diesel Fuel	141	0.59	333	117	216
Site Work - 10000 sqft	Demolition	Water Truck	Nonroad Diesel Fuel	350	0.59	83	29	54
Site Work - 10000 sqft	Demolition	Bobcat Skid	Nonroad Diesel Fuel	100	0.21	333	117	216
Site Work - 10000 sqft	Demolition	Haul Truck	Nonroad Diesel Fuel	405	0.59	1,332	467	865
Site Work - 10000 sqft	Demolition	Concrete Saws	Gasoline	13	0.78	83	29	54
Site Work - 10000 sqft	Construction	Concrete Pumping Truck	Nonroad Diesel Fuel	335	0.59	555	195	360
Site Work - 10000 sqft	Construction	Motorized Trowel	Nonroad Diesel Fuel	50	0.59	555	195	360

Project	Construction Activity	Equipment Type	Fuel	Average Horsepower	Load Factor	Hours of Activity	Hours of Activity - 2022	Hours of Activity - 2023
Site Work - 10000 sqft	Construction	Cranes	Nonroad Diesel Fuel	500	0.43	139	49	90
Site Work - 10000 sqft	Construction	Bobcat	Nonroad Diesel Fuel	100	0.21	555	195	360
Site Work - 10000 sqft	Construction	Backhoe	Nonroad Diesel Fuel	69	0.21	555	195	360
Site Work - 10000 sqft	Construction	Trench Compactor	Nonroad Diesel Fuel	69	0.59	555	195	360
Site Work - 10000 sqft	Construction	Fuel Truck	Nonroad Diesel Fuel	350	0.59	139	49	90
Site Work - 10000 sqft	Construction	Dump Trucks	Nonroad Diesel Fuel	430	0.59	1,248	438	811

Table C15. 2022 Pump house and boiler house, construction-phase non-road equipment criteria air pollutant emission factors.

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Building - 10000 sqft- 1 story	Demolition	Excavator	5.69E-01	2.27E-01	3.49E-02	1.49E-03	3.77E-02	3.66E-02
Building - 10000 sqft- 1 story	Demolition	Hydraulic Hammer	3.77E+00	1.50E+00	3.54E-01	2.19E-03	1.72E-01	1.67E-01
Building - 10000 sqft- 1 story	Demolition	Grapple	1.70E+00	7.93E-01	1.11E-01	1.65E-03	1.21E-01	1.17E-01
Building - 10000 sqft- 1 story	Demolition	Standard Bucket	1.08E+00	3.61E-01	6.70E-02	1.53E-03	8.60E-02	8.34E-02
Building - 10000 sqft- 1 story	Demolition	Water Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Building - 10000 sqft- 1 story	Demolition	Bobcat Skid	3.66E+00	3.91E+00	7.41E-01	2.21E-03	5.65E-01	5.48E-01
Building - 10000 sqft- 1 story	Demolition	Haul Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Building - 10000 sqft- 1 story	Demolition	Concrete Saws	2.06E+00	2.71E+02	5.30E+00	6.35E-03	1.35E-01	1.25E-01
Building - 10000 sqft- 1 story	Construction	Concrete Pumping Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Building - 10000 sqft- 1 story	Construction	Motorized Trowel	2.90E+00	8.50E-01	1.31E-01	1.74E-03	9.81E-02	9.52E-02
Building - 10000 sqft- 1 story	Construction	Cranes	1.38E+00	4.22E-01	8.65E-02	1.60E-03	6.73E-02	6.53E-02
Building - 10000 sqft- 1 story	Construction	Bobcat	3.66E+00	3.91E+00	7.41E-01	2.21E-03	5.65E-01	5.48E-01
Building - 10000 sqft- 1 story	Construction	Backhoe	3.78E+00	2.77E+00	5.02E-01	2.17E-03	3.50E-01	3.40E-01
Building - 10000 sqft- 1 story	Construction	Trench Compactor	2.74E+00	5.60E-01	9.51E-02	1.68E-03	6.13E-02	5.95E-02
Building - 10000 sqft- 1 story	Construction	Fuel Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Building - 10000 sqft- 1 story	Construction	Dump Trucks	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Drainage System	Demolition	Excavator	5.69E-01	2.27E-01	3.49E-02	1.49E-03	3.77E-02	3.66E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Drainage System	Demolition	Hydraulic Hammer	3.77E+00	1.50E+00	3.54E-01	2.19E-03	1.72E-01	1.67E-01
Drainage System	Demolition	Grapple	1.70E+00	7.93E-01	1.11E-01	1.65E-03	1.21E-01	1.17E-01
Drainage System	Demolition	Standard Bucket	1.08E+00	3.61E-01	6.70E-02	1.53E-03	8.60E-02	8.34E-02
Drainage System	Demolition	Water Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Drainage System	Demolition	Bobcat Skid	3.66E+00	3.91E+00	7.41E-01	2.21E-03	5.65E-01	5.48E-01
Drainage System	Demolition	Haul Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Drainage System	Demolition	Concrete Saws	2.06E+00	2.71E+02	5.30E+00	6.35E-03	1.35E-01	1.25E-01
Drainage System	Construction	Concrete Pumping Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Drainage System	Construction	Motorized Trowel	2.90E+00	8.50E-01	1.31E-01	1.74E-03	9.81E-02	9.52E-02
Drainage System	Construction	Cranes	1.38E+00	4.22E-01	8.65E-02	1.60E-03	6.73E-02	6.53E-02
Drainage System	Construction	Bobcat	3.66E+00	3.91E+00	7.41E-01	2.21E-03	5.65E-01	5.48E-01
Drainage System	Construction	Backhoe	3.78E+00	2.77E+00	5.02E-01	2.17E-03	3.50E-01	3.40E-01
Drainage System	Construction	Trench Compactor	2.74E+00	5.60E-01	9.51E-02	1.68E-03	6.13E-02	5.95E-02
Drainage System	Construction	Fuel Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Drainage System	Construction	Dump Trucks	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fencing	Demolition	Excavator	5.69E-01	2.27E-01	3.49E-02	1.49E-03	3.77E-02	3.66E-02
Fencing	Demolition	Hydraulic Hammer	3.77E+00	1.50E+00	3.54E-01	2.19E-03	1.72E-01	1.67E-01

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fencing	Demolition	Grapple	1.70E+00	7.93E-01	1.11E-01	1.65E-03	1.21E-01	1.17E-01
Fencing	Demolition	Standard Bucket	1.08E+00	3.61E-01	6.70E-02	1.53E-03	8.60E-02	8.34E-02
Fencing	Demolition	Water Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fencing	Demolition	Bobcat Skid	3.66E+00	3.91E+00	7.41E-01	2.21E-03	5.65E-01	5.48E-01
Fencing	Demolition	Haul Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fencing	Demolition	Concrete Saws	2.06E+00	2.71E+02	5.30E+00	6.35E-03	1.35E-01	1.25E-01
Fencing	Construction	Concrete Pumping Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fencing	Construction	Motorized Trowel	2.90E+00	8.50E-01	1.31E-01	1.74E-03	9.81E-02	9.52E-02
Fencing	Construction	Cranes	1.38E+00	4.22E-01	8.65E-02	1.60E-03	6.73E-02	6.53E-02
Fencing	Construction	Bobcat	3.66E+00	3.91E+00	7.41E-01	2.21E-03	5.65E-01	5.48E-01
Fencing	Construction	Backhoe	3.78E+00	2.77E+00	5.02E-01	2.17E-03	3.50E-01	3.40E-01
Fencing	Construction	Trench Compactor	2.74E+00	5.60E-01	9.51E-02	1.68E-03	6.13E-02	5.95E-02
Fencing	Construction	Fuel Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fencing	Construction	Dump Trucks	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Demolition	Excavator	5.69E-01	2.27E-01	3.49E-02	1.49E-03	3.77E-02	3.66E-02
Fuel Tanks	Demolition	Hydraulic Hammer	3.77E+00	1.50E+00	3.54E-01	2.19E-03	1.72E-01	1.67E-01
Fuel Tanks	Demolition	Grapple	1.70E+00	7.93E-01	1.11E-01	1.65E-03	1.21E-01	1.17E-01
Fuel Tanks	Demolition	Standard Bucket	1.08E+00	3.61E-01	6.70E-02	1.53E-03	8.60E-02	8.34E-02
Fuel Tanks	Demolition	Water Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Demolition	Bobcat Skid	3.66E+00	3.91E+00	7.41E-01	2.21E-03	5.65E-01	5.48E-01
Fuel Tanks	Demolition	Haul Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Demolition	Concrete Saws	2.06E+00	2.71E+02	5.30E+00	6.35E-03	1.35E-01	1.25E-01
Fuel Tanks	Construction	Concrete Pumping Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Construction	Motorized Trowel	2.90E+00	8.50E-01	1.31E-01	1.74E-03	9.81E-02	9.52E-02
Fuel Tanks	Construction	Cranes	1.38E+00	4.22E-01	8.65E-02	1.60E-03	6.73E-02	6.53E-02
Fuel Tanks	Construction	Bobcat	3.66E+00	3.91E+00	7.41E-01	2.21E-03	5.65E-01	5.48E-01
Fuel Tanks	Construction	Backhoe	3.78E+00	2.77E+00	5.02E-01	2.17E-03	3.50E-01	3.40E-01
Fuel Tanks	Construction	Trench Compactor	2.74E+00	5.60E-01	9.51E-02	1.68E-03	6.13E-02	5.95E-02
Fuel Tanks	Construction	Fuel Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Fuel Tanks	Construction	Dump Trucks	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Demolition	Excavator	5.69E-01	2.27E-01	3.49E-02	1.49E-03	3.77E-02	3.66E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Demolition	Hydraulic Hammer	3.77E+00	1.50E+00	3.54E-01	2.19E-03	1.72E-01	1.67E-01
Parking Lot	Demolition	Grapple	1.70E+00	7.93E-01	1.11E-01	1.65E-03	1.21E-01	1.17E-01
Parking Lot	Demolition	Standard Bucket	1.08E+00	3.61E-01	6.70E-02	1.53E-03	8.60E-02	8.34E-02
Parking Lot	Demolition	Water Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Demolition	Bobcat Skid	3.66E+00	3.91E+00	7.41E-01	2.21E-03	5.65E-01	5.48E-01
Parking Lot	Demolition	Haul Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Demolition	Concrete Saws	2.06E+00	2.71E+02	5.30E+00	6.35E-03	1.35E-01	1.25E-01
Parking Lot	Construction	Concrete Pumping Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Construction	Motorized Trowel	2.90E+00	8.50E-01	1.31E-01	1.74E-03	9.81E-02	9.52E-02
Parking Lot	Construction	Cranes	1.38E+00	4.22E-01	8.65E-02	1.60E-03	6.73E-02	6.53E-02
Parking Lot	Construction	Bobcat	3.66E+00	3.91E+00	7.41E-01	2.21E-03	5.65E-01	5.48E-01
Parking Lot	Construction	Backhoe	3.78E+00	2.77E+00	5.02E-01	2.17E-03	3.50E-01	3.40E-01
Parking Lot	Construction	Trench Compactor	2.74E+00	5.60E-01	9.51E-02	1.68E-03	6.13E-02	5.95E-02
Parking Lot	Construction	Fuel Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Parking Lot	Construction	Dump Trucks	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Site Work - 10000 sqft	Demolition	Excavator	5.69E-01	2.27E-01	3.49E-02	1.49E-03	3.77E-02	3.66E-02
Site Work - 10000 sqft	Demolition	Hydraulic Hammer	3.77E+00	1.50E+00	3.54E-01	2.19E-03	1.72E-01	1.67E-01
Site Work - 10000 sqft	Demolition	Grapple	1.70E+00	7.93E-01	1.11E-01	1.65E-03	1.21E-01	1.17E-01
Site Work - 10000 sqft	Demolition	Standard Bucket	1.08E+00	3.61E-01	6.70E-02	1.53E-03	8.60E-02	8.34E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Site Work - 10000 sqft	Demolition	Water Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Site Work - 10000 sqft	Demolition	Bobcat Skid	3.66E+00	3.91E+00	7.41E-01	2.21E-03	5.65E-01	5.48E-01
Site Work - 10000 sqft	Demolition	Haul Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Site Work - 10000 sqft	Demolition	Concrete Saws	2.06E+00	2.71E+02	5.30E+00	6.35E-03	1.35E-01	1.25E-01
Site Work - 10000 sqft	Construction	Concrete Pumping Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Site Work - 10000 sqft	Construction	Motorized Trowel	2.90E+00	8.50E-01	1.31E-01	1.74E-03	9.81E-02	9.52E-02
Site Work - 10000 sqft	Construction	Cranes	1.38E+00	4.22E-01	8.65E-02	1.60E-03	6.73E-02	6.53E-02
Site Work - 10000 sqft	Construction	Bobcat	3.66E+00	3.91E+00	7.41E-01	2.21E-03	5.65E-01	5.48E-01
Site Work - 10000 sqft	Construction	Backhoe	3.78E+00	2.77E+00	5.02E-01	2.17E-03	3.50E-01	3.40E-01
Site Work - 10000 sqft	Construction	Trench Compactor	2.74E+00	5.60E-01	9.51E-02	1.68E-03	6.13E-02	5.95E-02
Site Work - 10000 sqft	Construction	Fuel Truck	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02
Site Work - 10000 sqft	Construction	Dump Trucks	2.83E-01	1.01E-01	1.94E-02	1.44E-03	1.80E-02	1.74E-02

Table C16. 2022 Pump house and boiler house, construction-phase non-road equipment greenhouse gas emission factors.

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Building - 10000 sqft- 1 story	Demolition	Excavator	3.09E-03	2.56E-02	5.37E+02	5.44E+02
Building - 10000 sqft- 1 story	Demolition	Hydraulic Hammer	3.12E-02	2.84E-02	5.95E+02	6.05E+02
Building - 10000 sqft- 1 story	Demolition	Grapple	6.58E-03	2.56E-02	5.37E+02	5.44E+02
Building - 10000 sqft- 1 story	Demolition	Standard Bucket	5.24E-03	2.56E-02	5.37E+02	5.44E+02
Building - 10000 sqft- 1 story	Demolition	Water Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Building - 10000 sqft- 1 story	Demolition	Bobcat Skid	2.64E-02	3.32E-02	6.94E+02	7.05E+02
Building - 10000 sqft- 1 story	Demolition	Haul Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Building - 10000 sqft- 1 story	Demolition	Concrete Saws	7.78E-01	5.07E-02	1.04E+03	1.12E+03
Building - 10000 sqft- 1 story	Construction	Concrete Pumping Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Building - 10000 sqft- 1 story	Construction	Motorized Trowel	1.38E-02	2.84E-02	5.96E+02	6.05E+02
Building - 10000 sqft- 1 story	Construction	Cranes	6.35E-03	2.53E-02	5.31E+02	5.38E+02
Building - 10000 sqft- 1 story	Construction	Bobcat	2.64E-02	3.32E-02	6.94E+02	7.05E+02
Building - 10000 sqft- 1 story	Construction	Backhoe	2.99E-02	3.32E-02	6.95E+02	7.06E+02
Building - 10000 sqft- 1 story	Construction	Trench Compactor	1.19E-02	2.84E-02	5.96E+02	6.05E+02
Building - 10000 sqft- 1 story	Construction	Fuel Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Building - 10000 sqft- 1 story	Construction	Dump Trucks	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Demolition	Excavator	3.09E-03	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Drainage System	Demolition	Hydraulic Hammer	3.12E-02	2.84E-02	5.95E+02	6.05E+02
Drainage System	Demolition	Grapple	6.58E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Demolition	Standard Bucket	5.24E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Demolition	Water Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Demolition	Bobcat Skid	2.64E-02	3.32E-02	6.94E+02	7.05E+02
Drainage System	Demolition	Haul Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Demolition	Concrete Saws	7.78E-01	5.07E-02	1.04E+03	1.12E+03
Drainage System	Construction	Concrete Pumping Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Construction	Motorized Trowel	1.38E-02	2.84E-02	5.96E+02	6.05E+02
Drainage System	Construction	Cranes	6.35E-03	2.53E-02	5.31E+02	5.38E+02
Drainage System	Construction	Bobcat	2.64E-02	3.32E-02	6.94E+02	7.05E+02
Drainage System	Construction	Backhoe	2.99E-02	3.32E-02	6.95E+02	7.06E+02
Drainage System	Construction	Trench Compactor	1.19E-02	2.84E-02	5.96E+02	6.05E+02
Drainage System	Construction	Fuel Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Construction	Dump Trucks	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Demolition	Excavator	3.09E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Demolition	Hydraulic Hammer	3.12E-02	2.84E-02	5.95E+02	6.05E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Fencing	Demolition	Grapple	6.58E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Demolition	Standard Bucket	5.24E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Demolition	Water Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Demolition	Bobcat Skid	2.64E-02	3.32E-02	6.94E+02	7.05E+02
Fencing	Demolition	Haul Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Demolition	Concrete Saws	7.78E-01	5.07E-02	1.04E+03	1.12E+03
Fencing	Construction	Concrete Pumping Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Construction	Motorized Trowel	1.38E-02	2.84E-02	5.96E+02	6.05E+02
Fencing	Construction	Cranes	6.35E-03	2.53E-02	5.31E+02	5.38E+02
Fencing	Construction	Bobcat	2.64E-02	3.32E-02	6.94E+02	7.05E+02
Fencing	Construction	Backhoe	2.99E-02	3.32E-02	6.95E+02	7.06E+02
Fencing	Construction	Trench Compactor	1.19E-02	2.84E-02	5.96E+02	6.05E+02
Fencing	Construction	Fuel Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Construction	Dump Trucks	1.48E-03	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Fuel Tanks	Demolition	Excavator	3.09E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Demolition	Hydraulic Hammer	3.12E-02	2.84E-02	5.95E+02	6.05E+02
Fuel Tanks	Demolition	Grapple	6.58E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Demolition	Standard Bucket	5.24E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Demolition	Water Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Demolition	Bobcat Skid	2.64E-02	3.32E-02	6.94E+02	7.05E+02
Fuel Tanks	Demolition	Haul Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Demolition	Concrete Saws	7.78E-01	5.07E-02	1.04E+03	1.12E+03
Fuel Tanks	Construction	Concrete Pumping Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Construction	Motorized Trowel	1.38E-02	2.84E-02	5.96E+02	6.05E+02
Fuel Tanks	Construction	Cranes	6.35E-03	2.53E-02	5.31E+02	5.38E+02
Fuel Tanks	Construction	Bobcat	2.64E-02	3.32E-02	6.94E+02	7.05E+02
Fuel Tanks	Construction	Backhoe	2.99E-02	3.32E-02	6.95E+02	7.06E+02
Fuel Tanks	Construction	Trench Compactor	1.19E-02	2.84E-02	5.96E+02	6.05E+02
Fuel Tanks	Construction	Fuel Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Construction	Dump Trucks	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Demolition	Excavator	3.09E-03	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Demolition	Hydraulic Hammer	3.12E-02	2.84E-02	5.95E+02	6.05E+02
Parking Lot	Demolition	Grapple	6.58E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Demolition	Standard Bucket	5.24E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Demolition	Water Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Demolition	Bobcat Skid	2.64E-02	3.32E-02	6.94E+02	7.05E+02
Parking Lot	Demolition	Haul Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Demolition	Concrete Saws	7.78E-01	5.07E-02	1.04E+03	1.12E+03
Parking Lot	Construction	Concrete Pumping Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Construction	Motorized Trowel	1.38E-02	2.84E-02	5.96E+02	6.05E+02
Parking Lot	Construction	Cranes	6.35E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Construction	Bobcat	2.64E-02	3.32E-02	6.94E+02	7.05E+02
Parking Lot	Construction	Backhoe	2.99E-02	3.32E-02	6.95E+02	7.06E+02
Parking Lot	Construction	Trench Compactor	1.19E-02	2.84E-02	5.96E+02	6.05E+02
Parking Lot	Construction	Fuel Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Construction	Dump Trucks	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Demolition	Excavator	3.09E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Demolition	Hydraulic Hammer	3.12E-02	2.84E-02	5.95E+02	6.05E+02
Site Work - 10000 sqft	Demolition	Grapple	6.58E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Demolition	Standard Bucket	5.24E-03	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Site Work - 10000 sqft	Demolition	Water Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Demolition	Bobcat Skid	2.64E-02	3.32E-02	6.94E+02	7.05E+02
Site Work - 10000 sqft	Demolition	Haul Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Demolition	Concrete Saws	7.78E-01	5.07E-02	1.04E+03	1.12E+03
Site Work - 10000 sqft	Construction	Concrete Pumping Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Construction	Motorized Trowel	1.38E-02	2.84E-02	5.96E+02	6.05E+02
Site Work - 10000 sqft	Construction	Cranes	6.35E-03	2.53E-02	5.31E+02	5.38E+02
Site Work - 10000 sqft	Construction	Bobcat	2.64E-02	3.32E-02	6.94E+02	7.05E+02
Site Work - 10000 sqft	Construction	Backhoe	2.99E-02	3.32E-02	6.95E+02	7.06E+02
Site Work - 10000 sqft	Construction	Trench Compactor	1.19E-02	2.84E-02	5.96E+02	6.05E+02
Site Work - 10000 sqft	Construction	Fuel Truck	1.48E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Construction	Dump Trucks	1.48E-03	2.56E-02	5.37E+02	5.44E+02

Table C17. 2023 Pump house and boiler house, construction-phase non-road equipment criteria air pollutant emission factors.

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Building - 10000 sqft- 1 story	Demolition	Excavator	4.67E-01	1.85E-01	2.99E-02	1.47E-03	3.12E-02	3.03E-02
Building - 10000 sqft- 1 story	Demolition	Hydraulic Hammer	3.76E+00	1.50E+00	3.53E-01	2.19E-03	1.72E-01	1.67E-01
Building - 10000 sqft- 1 story	Demolition	Grapple	1.57E+00	7.31E-01	1.02E-01	1.63E-03	1.13E-01	1.09E-01
Building - 10000 sqft- 1 story	Demolition	Standard Bucket	9.35E-01	3.03E-01	5.58E-02	1.51E-03	7.17E-02	6.96E-02
Building - 10000 sqft- 1 story	Demolition	Water Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Building - 10000 sqft- 1 story	Demolition	Bobcat Skid	3.47E+00	3.64E+00	6.79E-01	2.18E-03	5.23E-01	5.07E-01
Building - 10000 sqft- 1 story	Demolition	Haul Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Building - 10000 sqft- 1 story	Demolition	Concrete Saws	2.06E+00	2.71E+02	5.30E+00	6.35E-03	1.35E-01	1.25E-01
Building - 10000 sqft- 1 story	Construction	Concrete Pumping Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Building - 10000 sqft- 1 story	Construction	Motorized Trowel	2.85E+00	7.51E-01	1.18E-01	1.71E-03	8.44E-02	8.19E-02
Building - 10000 sqft- 1 story	Construction	Cranes	1.13E+00	3.39E-01	7.03E-02	1.56E-03	5.41E-02	5.25E-02
Building - 10000 sqft- 1 story	Construction	Bobcat	3.47E+00	3.64E+00	6.79E-01	2.18E-03	5.23E-01	5.07E-01
Building - 10000 sqft- 1 story	Construction	Backhoe	3.68E+00	2.60E+00	4.66E-01	2.15E-03	3.25E-01	3.15E-01
Building - 10000 sqft- 1 story	Construction	Trench Compactor	2.69E+00	4.77E-01	8.43E-02	1.65E-03	4.99E-02	4.84E-02
Building - 10000 sqft- 1 story	Construction	Fuel Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Building - 10000 sqft- 1 story	Construction	Dump Trucks	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Drainage System	Demolition	Excavator	4.67E-01	1.85E-01	2.99E-02	1.47E-03	3.12E-02	3.03E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Drainage System	Demolition	Hydraulic Hammer	3.76E+00	1.50E+00	3.53E-01	2.19E-03	1.72E-01	1.67E-01
Drainage System	Demolition	Grapple	1.57E+00	7.31E-01	1.02E-01	1.63E-03	1.13E-01	1.09E-01
Drainage System	Demolition	Standard Bucket	9.35E-01	3.03E-01	5.58E-02	1.51E-03	7.17E-02	6.96E-02
Drainage System	Demolition	Water Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Drainage System	Demolition	Bobcat Skid	3.47E+00	3.64E+00	6.79E-01	2.18E-03	5.23E-01	5.07E-01
Drainage System	Demolition	Haul Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Drainage System	Demolition	Concrete Saws	2.06E+00	2.71E+02	5.30E+00	6.35E-03	1.35E-01	1.25E-01
Drainage System	Construction	Concrete Pumping Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Drainage System	Construction	Motorized Trowel	2.85E+00	7.51E-01	1.18E-01	1.71E-03	8.44E-02	8.19E-02
Drainage System	Construction	Cranes	1.13E+00	3.39E-01	7.03E-02	1.56E-03	5.41E-02	5.25E-02
Drainage System	Construction	Bobcat	3.47E+00	3.64E+00	6.79E-01	2.18E-03	5.23E-01	5.07E-01
Drainage System	Construction	Backhoe	3.68E+00	2.60E+00	4.66E-01	2.15E-03	3.25E-01	3.15E-01
Drainage System	Construction	Trench Compactor	2.69E+00	4.77E-01	8.43E-02	1.65E-03	4.99E-02	4.84E-02
Drainage System	Construction	Fuel Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Drainage System	Construction	Dump Trucks	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fencing	Demolition	Excavator	4.67E-01	1.85E-01	2.99E-02	1.47E-03	3.12E-02	3.03E-02
Fencing	Demolition	Hydraulic Hammer	3.76E+00	1.50E+00	3.53E-01	2.19E-03	1.72E-01	1.67E-01

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fencing	Demolition	Grapple	1.57E+00	7.31E-01	1.02E-01	1.63E-03	1.13E-01	1.09E-01
Fencing	Demolition	Standard Bucket	9.35E-01	3.03E-01	5.58E-02	1.51E-03	7.17E-02	6.96E-02
Fencing	Demolition	Water Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fencing	Demolition	Bobcat Skid	3.47E+00	3.64E+00	6.79E-01	2.18E-03	5.23E-01	5.07E-01
Fencing	Demolition	Haul Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fencing	Demolition	Concrete Saws	2.06E+00	2.71E+02	5.30E+00	6.35E-03	1.35E-01	1.25E-01
Fencing	Construction	Concrete Pumping Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fencing	Construction	Motorized Trowel	2.85E+00	7.51E-01	1.18E-01	1.71E-03	8.44E-02	8.19E-02
Fencing	Construction	Cranes	1.13E+00	3.39E-01	7.03E-02	1.56E-03	5.41E-02	5.25E-02
Fencing	Construction	Bobcat	3.47E+00	3.64E+00	6.79E-01	2.18E-03	5.23E-01	5.07E-01
Fencing	Construction	Backhoe	3.68E+00	2.60E+00	4.66E-01	2.15E-03	3.25E-01	3.15E-01
Fencing	Construction	Trench Compactor	2.69E+00	4.77E-01	8.43E-02	1.65E-03	4.99E-02	4.84E-02
Fencing	Construction	Fuel Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fencing	Construction	Dump Trucks	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Demolition	Excavator	4.67E-01	1.85E-01	2.99E-02	1.47E-03	3.12E-02	3.03E-02
Fuel Tanks	Demolition	Hydraulic Hammer	3.76E+00	1.50E+00	3.53E-01	2.19E-03	1.72E-01	1.67E-01
Fuel Tanks	Demolition	Grapple	1.57E+00	7.31E-01	1.02E-01	1.63E-03	1.13E-01	1.09E-01
Fuel Tanks	Demolition	Standard Bucket	9.35E-01	3.03E-01	5.58E-02	1.51E-03	7.17E-02	6.96E-02
Fuel Tanks	Demolition	Water Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fuel Tanks	Demolition	Bobcat Skid	3.47E+00	3.64E+00	6.79E-01	2.18E-03	5.23E-01	5.07E-01
Fuel Tanks	Demolition	Haul Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fuel Tanks	Demolition	Concrete Saws	2.06E+00	2.71E+02	5.30E+00	6.35E-03	1.35E-01	1.25E-01
Fuel Tanks	Construction	Concrete Pumping Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fuel Tanks	Construction	Motorized Trowel	2.85E+00	7.51E-01	1.18E-01	1.71E-03	8.44E-02	8.19E-02
Fuel Tanks	Construction	Cranes	1.13E+00	3.39E-01	7.03E-02	1.56E-03	5.41E-02	5.25E-02
Fuel Tanks	Construction	Bobcat	3.47E+00	3.64E+00	6.79E-01	2.18E-03	5.23E-01	5.07E-01
Fuel Tanks	Construction	Backhoe	3.68E+00	2.60E+00	4.66E-01	2.15E-03	3.25E-01	3.15E-01
Fuel Tanks	Construction	Trench Compactor	2.69E+00	4.77E-01	8.43E-02	1.65E-03	4.99E-02	4.84E-02
Fuel Tanks	Construction	Fuel Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Fuel Tanks	Construction	Dump Trucks	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Demolition	Excavator	4.67E-01	1.85E-01	2.99E-02	1.47E-03	3.12E-02	3.03E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Demolition	Hydraulic Hammer	3.76E+00	1.50E+00	3.53E-01	2.19E-03	1.72E-01	1.67E-01
Parking Lot	Demolition	Grapple	1.57E+00	7.31E-01	1.02E-01	1.63E-03	1.13E-01	1.09E-01
Parking Lot	Demolition	Standard Bucket	9.35E-01	3.03E-01	5.58E-02	1.51E-03	7.17E-02	6.96E-02
Parking Lot	Demolition	Water Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Demolition	Bobcat Skid	3.47E+00	3.64E+00	6.79E-01	2.18E-03	5.23E-01	5.07E-01
Parking Lot	Demolition	Haul Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Demolition	Concrete Saws	2.06E+00	2.71E+02	5.30E+00	6.35E-03	1.35E-01	1.25E-01
Parking Lot	Construction	Concrete Pumping Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Construction	Motorized Trowel	2.85E+00	7.51E-01	1.18E-01	1.71E-03	8.44E-02	8.19E-02
Parking Lot	Construction	Cranes	1.13E+00	3.39E-01	7.03E-02	1.56E-03	5.41E-02	5.25E-02
Parking Lot	Construction	Bobcat	3.47E+00	3.64E+00	6.79E-01	2.18E-03	5.23E-01	5.07E-01
Parking Lot	Construction	Backhoe	3.68E+00	2.60E+00	4.66E-01	2.15E-03	3.25E-01	3.15E-01
Parking Lot	Construction	Trench Compactor	2.69E+00	4.77E-01	8.43E-02	1.65E-03	4.99E-02	4.84E-02
Parking Lot	Construction	Fuel Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Parking Lot	Construction	Dump Trucks	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Site Work - 10000 sqft	Demolition	Excavator	4.67E-01	1.85E-01	2.99E-02	1.47E-03	3.12E-02	3.03E-02
Site Work - 10000 sqft	Demolition	Hydraulic Hammer	3.76E+00	1.50E+00	3.53E-01	2.19E-03	1.72E-01	1.67E-01
Site Work - 10000 sqft	Demolition	Grapple	1.57E+00	7.31E-01	1.02E-01	1.63E-03	1.13E-01	1.09E-01
Site Work - 10000 sqft	Demolition	Standard Bucket	9.35E-01	3.03E-01	5.58E-02	1.51E-03	7.17E-02	6.96E-02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Site Work - 10000 sqft	Demolition	Water Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Site Work - 10000 sqft	Demolition	Bobcat Skid	3.47E+00	3.64E+00	6.79E-01	2.18E-03	5.23E-01	5.07E-01
Site Work - 10000 sqft	Demolition	Haul Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Site Work - 10000 sqft	Demolition	Concrete Saws	2.06E+00	2.71E+02	5.30E+00	6.35E-03	1.35E-01	1.25E-01
Site Work - 10000 sqft	Construction	Concrete Pumping Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Site Work - 10000 sqft	Construction	Motorized Trowel	2.85E+00	7.51E-01	1.18E-01	1.71E-03	8.44E-02	8.19E-02
Site Work - 10000 sqft	Construction	Cranes	1.13E+00	3.39E-01	7.03E-02	1.56E-03	5.41E-02	5.25E-02
Site Work - 10000 sqft	Construction	Bobcat	3.47E+00	3.64E+00	6.79E-01	2.18E-03	5.23E-01	5.07E-01
Site Work - 10000 sqft	Construction	Backhoe	3.68E+00	2.60E+00	4.66E-01	2.15E-03	3.25E-01	3.15E-01
Site Work - 10000 sqft	Construction	Trench Compactor	2.69E+00	4.77E-01	8.43E-02	1.65E-03	4.99E-02	4.84E-02
Site Work - 10000 sqft	Construction	Fuel Truck	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02
Site Work - 10000 sqft	Construction	Dump Trucks	2.25E-01	7.31E-02	1.60E-02	1.43E-03	1.31E-02	1.27E-02

Table C18. 2023 Pump house and boiler house, construction-phase non-road equipment greenhouse gas emission factors.

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Building - 10000 sqft- 1 story	Demolition	Excavator	2.51E-03	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Building - 10000 sqft- 1 story	Demolition	Hydraulic Hammer	3.11E-02	2.84E-02	5.95E+02	6.05E+02
Building - 10000 sqft- 1 story	Demolition	Grapple	6.30E-03	2.56E-02	5.37E+02	5.44E+02
Building - 10000 sqft- 1 story	Demolition	Standard Bucket	4.44E-03	2.56E-02	5.37E+02	5.44E+02
Building - 10000 sqft- 1 story	Demolition	Water Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Building - 10000 sqft- 1 story	Demolition	Bobcat Skid	2.55E-02	3.32E-02	6.94E+02	7.05E+02
Building - 10000 sqft- 1 story	Demolition	Haul Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Building - 10000 sqft- 1 story	Demolition	Concrete Saws	7.78E-01	5.07E-02	1.04E+03	1.12E+03
Building - 10000 sqft- 1 story	Construction	Concrete Pumping Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Building - 10000 sqft- 1 story	Construction	Motorized Trowel	1.32E-02	2.84E-02	5.96E+02	6.05E+02
Building - 10000 sqft- 1 story	Construction	Cranes	5.23E-03	2.53E-02	5.31E+02	5.38E+02
Building - 10000 sqft- 1 story	Construction	Bobcat	2.55E-02	3.32E-02	6.94E+02	7.05E+02
Building - 10000 sqft- 1 story	Construction	Backhoe	2.90E-02	3.32E-02	6.95E+02	7.06E+02
Building - 10000 sqft- 1 story	Construction	Trench Compactor	1.12E-02	2.84E-02	5.96E+02	6.05E+02
Building - 10000 sqft- 1 story	Construction	Fuel Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Building - 10000 sqft- 1 story	Construction	Dump Trucks	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Demolition	Excavator	2.51E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Demolition	Hydraulic Hammer	3.11E-02	2.84E-02	5.95E+02	6.05E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Drainage System	Demolition	Grapple	6.30E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Demolition	Standard Bucket	4.44E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Demolition	Water Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Demolition	Bobcat Skid	2.55E-02	3.32E-02	6.94E+02	7.05E+02
Drainage System	Demolition	Haul Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Demolition	Concrete Saws	7.78E-01	5.07E-02	1.04E+03	1.12E+03
Drainage System	Construction	Concrete Pumping Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Construction	Motorized Trowel	1.32E-02	2.84E-02	5.96E+02	6.05E+02
Drainage System	Construction	Cranes	5.23E-03	2.53E-02	5.31E+02	5.38E+02
Drainage System	Construction	Bobcat	2.55E-02	3.32E-02	6.94E+02	7.05E+02
Drainage System	Construction	Backhoe	2.90E-02	3.32E-02	6.95E+02	7.06E+02
Drainage System	Construction	Trench Compactor	1.12E-02	2.84E-02	5.96E+02	6.05E+02
Drainage System	Construction	Fuel Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Drainage System	Construction	Dump Trucks	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Demolition	Excavator	2.51E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Demolition	Hydraulic Hammer	3.11E-02	2.84E-02	5.95E+02	6.05E+02
Fencing	Demolition	Grapple	6.30E-03	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Fencing	Demolition	Standard Bucket	4.44E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Demolition	Water Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Demolition	Bobcat Skid	2.55E-02	3.32E-02	6.94E+02	7.05E+02
Fencing	Demolition	Haul Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Demolition	Concrete Saws	7.78E-01	5.07E-02	1.04E+03	1.12E+03
Fencing	Construction	Concrete Pumping Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Construction	Motorized Trowel	1.32E-02	2.84E-02	5.96E+02	6.05E+02
Fencing	Construction	Cranes	5.23E-03	2.53E-02	5.31E+02	5.38E+02
Fencing	Construction	Bobcat	2.55E-02	3.32E-02	6.94E+02	7.05E+02
Fencing	Construction	Backhoe	2.90E-02	3.32E-02	6.95E+02	7.06E+02
Fencing	Construction	Trench Compactor	1.12E-02	2.84E-02	5.96E+02	6.05E+02
Fencing	Construction	Fuel Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fencing	Construction	Dump Trucks	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Demolition	Excavator	2.51E-03	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Fuel Tanks	Demolition	Hydraulic Hammer	3.11E-02	2.84E-02	5.95E+02	6.05E+02
Fuel Tanks	Demolition	Grapple	6.30E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Demolition	Standard Bucket	4.44E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Demolition	Water Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Demolition	Bobcat Skid	2.55E-02	3.32E-02	6.94E+02	7.05E+02
Fuel Tanks	Demolition	Haul Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Demolition	Concrete Saws	7.78E-01	5.07E-02	1.04E+03	1.12E+03
Fuel Tanks	Construction	Concrete Pumping Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Construction	Motorized Trowel	1.32E-02	2.84E-02	5.96E+02	6.05E+02
Fuel Tanks	Construction	Cranes	5.23E-03	2.53E-02	5.31E+02	5.38E+02
Fuel Tanks	Construction	Bobcat	2.55E-02	3.32E-02	6.94E+02	7.05E+02
Fuel Tanks	Construction	Backhoe	2.90E-02	3.32E-02	6.95E+02	7.06E+02
Fuel Tanks	Construction	Trench Compactor	1.12E-02	2.84E-02	5.96E+02	6.05E+02
Fuel Tanks	Construction	Fuel Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Fuel Tanks	Construction	Dump Trucks	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Demolition	Excavator	2.51E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Demolition	Hydraulic Hammer	3.11E-02	2.84E-02	5.95E+02	6.05E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Demolition	Grapple	6.30E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Demolition	Standard Bucket	4.44E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Demolition	Water Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Demolition	Bobcat Skid	2.55E-02	3.32E-02	6.94E+02	7.05E+02
Parking Lot	Demolition	Haul Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Demolition	Concrete Saws	7.78E-01	5.07E-02	1.04E+03	1.12E+03
Parking Lot	Construction	Concrete Pumping Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Construction	Motorized Trowel	1.32E-02	2.84E-02	5.96E+02	6.05E+02
Parking Lot	Construction	Cranes	5.23E-03	2.53E-02	5.31E+02	5.38E+02
Parking Lot	Construction	Bobcat	2.55E-02	3.32E-02	6.94E+02	7.05E+02
Parking Lot	Construction	Backhoe	2.90E-02	3.32E-02	6.95E+02	7.06E+02
Parking Lot	Construction	Trench Compactor	1.12E-02	2.84E-02	5.96E+02	6.05E+02
Parking Lot	Construction	Fuel Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Parking Lot	Construction	Dump Trucks	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Demolition	Excavator	2.51E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Demolition	Hydraulic Hammer	3.11E-02	2.84E-02	5.95E+02	6.05E+02
Site Work - 10000 sqft	Demolition	Grapple	6.30E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Demolition	Standard Bucket	4.44E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Demolition	Water Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02

Project	Construction Activity	Equipment Type	Emission Factors (g/hp-hr)			
			CH4	N2O	CO2	CO_2e
Site Work - 10000 sqft	Demolition	Bobcat Skid	2.55E-02	3.32E-02	6.94E+02	7.05E+02
Site Work - 10000 sqft	Demolition	Haul Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Demolition	Concrete Saws	7.78E-01	5.07E-02	1.04E+03	1.12E+03
Site Work - 10000 sqft	Construction	Concrete Pumping Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Construction	Motorized Trowel	1.32E-02	2.84E-02	5.96E+02	6.05E+02
Site Work - 10000 sqft	Construction	Cranes	5.23E-03	2.53E-02	5.31E+02	5.38E+02
Site Work - 10000 sqft	Construction	Bobcat	2.55E-02	3.32E-02	6.94E+02	7.05E+02
Site Work - 10000 sqft	Construction	Backhoe	2.90E-02	3.32E-02	6.95E+02	7.06E+02
Site Work - 10000 sqft	Construction	Trench Compactor	1.12E-02	2.84E-02	5.96E+02	6.05E+02
Site Work - 10000 sqft	Construction	Fuel Truck	1.10E-03	2.56E-02	5.37E+02	5.44E+02
Site Work - 10000 sqft	Construction	Dump Trucks	1.10E-03	2.56E-02	5.37E+02	5.44E+02

Table C19. 2022 Pump house and boiler house, construction-phase non-road equipment criteria air pollutant emissions.

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Building - 10000 sqft- 1 story	Demolition	Excavator	4.41E-02	1.76E-02	2.71E-03	1.15E-04	2.92E-03	2.84E-03
Building - 10000 sqft- 1 story	Demolition	Hydraulic Hammer	5.77E-03	2.30E-03	5.42E-04	3.35E-06	2.63E-04	2.55E-04
Building - 10000 sqft- 1 story	Demolition	Grapple	3.29E-02	1.54E-02	2.14E-03	3.20E-05	2.34E-03	2.27E-03

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Building - 10000 sqft- 1 story	Demolition	Standard Bucket	3.75E-02	1.26E-02	2.33E-03	5.34E-05	2.99E-03	2.90E-03
Building - 10000 sqft- 1 story	Demolition	Water Truck	6.11E-03	2.19E-03	4.20E-04	3.12E-05	3.89E-04	3.77E-04
Building - 10000 sqft- 1 story	Demolition	Bobcat Skid	3.22E-02	3.44E-02	6.51E-03	1.94E-05	4.96E-03	4.81E-03
Building - 10000 sqft- 1 story	Demolition	Haul Truck	1.13E-01	4.05E-02	7.77E-03	5.77E-04	7.19E-03	6.98E-03
Building - 10000 sqft- 1 story	Demolition	Concrete Saws	2.18E-03	2.88E-01	5.63E-03	6.73E-06	1.44E-04	1.32E-04
Building - 10000 sqft- 1 story	Construction	Concrete Pumping Truck	3.90E-02	1.40E-02	2.68E-03	1.99E-04	2.48E-03	2.40E-03
Building - 10000 sqft- 1 story	Construction	Motorized Trowel	5.98E-02	1.75E-02	2.69E-03	3.58E-05	2.02E-03	1.96E-03
Building - 10000 sqft- 1 story	Construction	Cranes	5.17E-02	1.58E-02	3.24E-03	6.01E-05	2.52E-03	2.45E-03
Building - 10000 sqft- 1 story	Construction	Bobcat	5.37E-02	5.73E-02	1.09E-02	3.23E-05	8.27E-03	8.02E-03
Building - 10000 sqft- 1 story	Construction	Backhoe	3.82E-02	2.80E-02	5.08E-03	2.19E-05	3.54E-03	3.43E-03
Building - 10000 sqft- 1 story	Construction	Trench Compactor	7.77E-02	1.59E-02	2.70E-03	4.76E-05	1.74E-03	1.69E-03
Building - 10000 sqft- 1 story	Construction	Fuel Truck	1.02E-02	3.65E-03	7.00E-04	5.20E-05	6.48E-04	6.28E-04
Building - 10000 sqft- 1 story	Construction	Dump Trucks	1.13E-01	4.03E-02	7.74E-03	5.75E-04	7.16E-03	6.95E-03
Drainage System	Demolition	Excavator	1.88E-03	7.52E-04	1.16E-04	4.93E-06	1.25E-04	1.21E-04
Drainage System	Demolition	Hydraulic Hammer	2.46E-04	9.83E-05	2.32E-05	1.43E-07	1.12E-05	1.09E-05
Drainage System	Demolition	Grapple	1.40E-03	6.56E-04	9.15E-05	1.37E-06	9.99E-05	9.69E-05
Drainage System	Demolition	Standard Bucket	1.60E-03	5.37E-04	9.97E-05	2.28E-06	1.28E-04	1.24E-04

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Drainage System	Demolition	Water Truck	2.61E-04	9.35E-05	1.79E-05	1.33E-06	1.66E-05	1.61E-05
Drainage System	Demolition	Bobcat Skid	1.38E-03	1.47E-03	2.78E-04	8.28E-07	2.12E-04	2.06E-04
Drainage System	Demolition	Haul Truck	4.84E-03	1.73E-03	3.32E-04	2.47E-05	3.07E-04	2.98E-04
Drainage System	Demolition	Concrete Saws	9.33E-05	1.23E-02	2.40E-04	2.88E-07	6.14E-06	5.65E-06
Drainage System	Construction	Concrete Pumping Truck	1.67E-03	5.96E-04	1.14E-04	8.50E-06	1.06E-04	1.03E-04
Drainage System	Construction	Motorized Trowel	2.55E-03	7.47E-04	1.15E-04	1.53E-06	8.63E-05	8.37E-05
Drainage System	Construction	Cranes	2.21E-03	6.76E-04	1.39E-04	2.57E-06	1.08E-04	1.05E-04
Drainage System	Construction	Bobcat	2.29E-03	2.45E-03	4.64E-04	1.38E-06	3.53E-04	3.43E-04
Drainage System	Construction	Backhoe	1.63E-03	1.20E-03	2.17E-04	9.36E-07	1.51E-04	1.47E-04
Drainage System	Construction	Trench Compactor	3.32E-03	6.80E-04	1.15E-04	2.03E-06	7.44E-05	7.22E-05
Drainage System	Construction	Fuel Truck	4.35E-04	1.56E-04	2.99E-05	2.22E-06	2.77E-05	2.68E-05
Drainage System	Construction	Dump Trucks	4.81E-03	1.72E-03	3.30E-04	2.46E-05	3.06E-04	2.97E-04
Fencing	Demolition	Excavator	1.88E-03	7.49E-04	1.15E-04	4.91E-06	1.24E-04	1.21E-04
Fencing	Demolition	Hydraulic Hammer	2.45E-04	9.79E-05	2.31E-05	1.43E-07	1.12E-05	1.09E-05
Fencing	Demolition	Grapple	1.40E-03	6.54E-04	9.12E-05	1.36E-06	9.95E-05	9.65E-05
Fencing	Demolition	Standard Bucket	1.60E-03	5.34E-04	9.93E-05	2.27E-06	1.27E-04	1.24E-04
Fencing	Demolition	Water Truck	2.60E-04	9.31E-05	1.79E-05	1.33E-06	1.65E-05	1.60E-05

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fencing	Demolition	Bobcat Skid	1.37E-03	1.46E-03	2.77E-04	8.25E-07	2.11E-04	2.05E-04
Fencing	Demolition	Haul Truck	4.82E-03	1.72E-03	3.31E-04	2.46E-05	3.06E-04	2.97E-04
Fencing	Demolition	Concrete Saws	9.29E-05	1.23E-02	2.39E-04	2.87E-07	6.11E-06	5.62E-06
Fencing	Construction	Concrete Pumping Truck	1.66E-03	5.94E-04	1.14E-04	8.47E-06	1.05E-04	1.02E-04
Fencing	Construction	Motorized Trowel	2.54E-03	7.44E-04	1.15E-04	1.52E-06	8.59E-05	8.34E-05
Fencing	Construction	Cranes	2.20E-03	6.73E-04	1.38E-04	2.56E-06	1.07E-04	1.04E-04
Fencing	Construction	Bobcat	2.28E-03	2.44E-03	4.62E-04	1.37E-06	3.52E-04	3.41E-04
Fencing	Construction	Backhoe	1.62E-03	1.19E-03	2.16E-04	9.32E-07	1.51E-04	1.46E-04
Fencing	Construction	Trench Compactor	3.31E-03	6.77E-04	1.15E-04	2.02E-06	7.41E-05	7.19E-05
Fencing	Construction	Fuel Truck	4.34E-04	1.55E-04	2.98E-05	2.21E-06	2.76E-05	2.67E-05
Fencing	Construction	Dump Trucks	4.79E-03	1.72E-03	3.29E-04	2.45E-05	3.05E-04	2.96E-04
Fuel Tanks	Demolition	Excavator	9.43E-02	3.76E-02	5.79E-03	2.47E-04	6.25E-03	6.06E-03
Fuel Tanks	Demolition	Hydraulic Hammer	1.23E-02	4.92E-03	1.16E-03	7.16E-06	5.63E-04	5.46E-04
Fuel Tanks	Demolition	Grapple	7.03E-02	3.29E-02	4.58E-03	6.83E-05	5.00E-03	4.85E-03

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Demolition	Standard Bucket	8.01E-02	2.68E-02	4.99E-03	1.14E-04	6.40E-03	6.21E-03
Fuel Tanks	Demolition	Water Truck	1.31E-02	4.68E-03	8.97E-04	6.67E-05	8.31E-04	8.06E-04
Fuel Tanks	Demolition	Bobcat Skid	6.88E-02	7.35E-02	1.39E-02	4.14E-05	1.06E-02	1.03E-02
Fuel Tanks	Demolition	Haul Truck	2.42E-01	8.66E-02	1.66E-02	1.23E-03	1.54E-02	1.49E-02
Fuel Tanks	Demolition	Concrete Saws	4.67E-03	6.16E-01	1.20E-02	1.44E-05	3.07E-04	2.83E-04
Fuel Tanks	Construction	Concrete Pumping Truck	8.34E-02	2.98E-02	5.73E-03	4.25E-04	5.30E-03	5.14E-03
Fuel Tanks	Construction	Motorized Trowel	1.28E-01	3.74E-02	5.76E-03	7.66E-05	4.32E-03	4.19E-03
Fuel Tanks	Construction	Cranes	1.11E-01	3.38E-02	6.94E-03	1.29E-04	5.39E-03	5.23E-03
Fuel Tanks	Construction	Bobcat	1.15E-01	1.22E-01	2.32E-02	6.91E-05	1.77E-02	1.72E-02
Fuel Tanks	Construction	Backhoe	8.16E-02	6.00E-02	1.09E-02	4.68E-05	7.57E-03	7.34E-03
Fuel Tanks	Construction	Trench Compactor	1.66E-01	3.40E-02	5.77E-03	1.02E-04	3.72E-03	3.61E-03
Fuel Tanks	Construction	Fuel Truck	2.18E-02	7.80E-03	1.50E-03	1.11E-04	1.38E-03	1.34E-03
Fuel Tanks	Construction	Dump Trucks	2.41E-01	8.62E-02	1.65E-02	1.23E-03	1.53E-02	1.48E-02
Parking Lot	Demolition	Excavator	6.94E-04	2.77E-04	4.26E-05	1.82E-06	4.60E-05	4.46E-05
Parking Lot	Demolition	Hydraulic Hammer	9.08E-05	3.62E-05	8.53E-06	5.27E-08	4.14E-06	4.02E-06
Parking Lot	Demolition	Grapple	5.17E-04	2.42E-04	3.37E-05	5.03E-07	3.68E-05	3.57E-05
Parking Lot	Demolition	Standard Bucket	5.90E-04	1.98E-04	3.67E-05	8.40E-07	4.71E-05	4.57E-05

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Demolition	Water Truck	9.62E-05	3.44E-05	6.61E-06	4.91E-07	6.12E-06	5.93E-06
Parking Lot	Demolition	Bobcat Skid	5.07E-04	5.41E-04	1.02E-04	3.05E-07	7.81E-05	7.58E-05
Parking Lot	Demolition	Haul Truck	1.78E-03	6.38E-04	1.22E-04	9.09E-06	1.13E-04	1.10E-04
Parking Lot	Demolition	Concrete Saws	3.44E-05	4.53E-03	8.86E-05	1.06E-07	2.26E-06	2.08E-06
Parking Lot	Construction	Concrete Pumping Truck	6.14E-04	2.20E-04	4.22E-05	3.13E-06	3.90E-05	3.79E-05
Parking Lot	Construction	Motorized Trowel	9.41E-04	2.75E-04	4.24E-05	5.64E-07	3.18E-05	3.08E-05
Parking Lot	Construction	Cranes	8.14E-04	2.49E-04	5.11E-05	9.46E-07	3.97E-05	3.85E-05
Parking Lot	Construction	Bobcat	8.45E-04	9.01E-04	1.71E-04	5.09E-07	1.30E-04	1.26E-04
Parking Lot	Construction	Backhoe	6.01E-04	4.41E-04	7.99E-05	3.45E-07	5.57E-05	5.40E-05
Parking Lot	Construction	Trench Compactor	1.22E-03	2.51E-04	4.25E-05	7.49E-07	2.74E-05	2.66E-05
Parking Lot	Construction	Fuel Truck	1.60E-04	5.74E-05	1.10E-05	8.18E-07	1.02E-05	9.89E-06
Parking Lot	Construction	Dump Trucks	1.77E-03	6.35E-04	1.22E-04	9.04E-06	1.13E-04	1.09E-04
Site Work - 10000 sqft	Demolition	Excavator	1.36E-02	5.41E-03	8.33E-04	3.55E-05	8.99E-04	8.72E-04
Site Work - 10000 sqft	Demolition	Hydraulic Hammer	1.77E-03	7.08E-04	1.67E-04	1.03E-06	8.09E-05	7.85E-05
Site Work - 10000 sqft	Demolition	Grapple	1.01E-02	4.72E-03	6.59E-04	9.83E-06	7.19E-04	6.97E-04
Site Work - 10000 sqft	Demolition	Standard Bucket	1.15E-02	3.86E-03	7.17E-04	1.64E-05	9.21E-04	8.93E-04
Site Work - 10000 sqft	Demolition	Water Truck	1.88E-03	6.73E-04	1.29E-04	9.59E-06	1.19E-04	1.16E-04
Site Work - 10000 sqft	Demolition	Bobcat Skid	9.90E-03	1.06E-02	2.00E-03	5.96E-06	1.53E-03	1.48E-03
Site Work - 10000 sqft	Demolition	Haul Truck	3.48E-02	1.25E-02	2.39E-03	1.78E-04	2.21E-03	2.15E-03

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Site Work - 10000 sqft	Demolition	Concrete Saws	6.71E-04	8.85E-02	1.73E-03	2.07E-06	4.42E-05	4.06E-05
Site Work - 10000 sqft	Construction	Concrete Pumping Truck	1.20E-02	4.29E-03	8.24E-04	6.12E-05	7.62E-04	7.39E-04
Site Work - 10000 sqft	Construction	Motorized Trowel	1.84E-02	5.38E-03	8.29E-04	1.10E-05	6.21E-04	6.02E-04
Site Work - 10000 sqft	Construction	Cranes	1.59E-02	4.86E-03	9.97E-04	1.85E-05	7.76E-04	7.52E-04
Site Work - 10000 sqft	Construction	Bobcat	1.65E-02	1.76E-02	3.34E-03	9.93E-06	2.54E-03	2.47E-03
Site Work - 10000 sqft	Construction	Backhoe	1.17E-02	8.62E-03	1.56E-03	6.74E-06	1.09E-03	1.06E-03
Site Work - 10000 sqft	Construction	Trench Compactor	2.39E-02	4.89E-03	8.30E-04	1.46E-05	5.36E-04	5.20E-04
Site Work - 10000 sqft	Construction	Fuel Truck	3.13E-03	1.12E-03	2.15E-04	1.60E-05	1.99E-04	1.93E-04
Site Work - 10000 sqft	Construction	Dump Trucks	3.46E-02	1.24E-02	2.38E-03	1.77E-04	2.20E-03	2.14E-03

Table C20. 2022 Pump house and boiler house, construction-phase non-road equipment greenhouse gas emissions.

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Building - 10000 sqft- 1 story	Demolition	Excavator	2.40E-04	1.98E-03	4.16E+01	4.22E+01
Building - 10000 sqft- 1 story	Demolition	Hydraulic Hammer	4.77E-05	4.35E-05	9.11E-01	9.27E-01
Building - 10000 sqft- 1 story	Demolition	Grapple	1.28E-04	4.96E-04	1.04E+01	1.05E+01
Building - 10000 sqft- 1 story	Demolition	Standard Bucket	1.83E-04	8.91E-04	1.87E+01	1.89E+01
Building - 10000 sqft- 1 story	Demolition	Water Truck	3.19E-05	5.53E-04	1.16E+01	1.18E+01

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Building - 10000 sqft- 1 story	Demolition	Bobcat Skid	2.32E-04	2.91E-04	6.10E+00	6.20E+00
Building - 10000 sqft- 1 story	Demolition	Haul Truck	5.90E-04	1.02E-02	2.15E+02	2.18E+02
Building - 10000 sqft- 1 story	Demolition	Concrete Saws	8.25E-04	5.38E-05	1.11E+00	1.19E+00
Building - 10000 sqft- 1 story	Construction	Concrete Pumping Truck	2.03E-04	3.53E-03	7.40E+01	7.50E+01
Building - 10000 sqft- 1 story	Construction	Motorized Trowel	2.84E-04	5.85E-04	1.23E+01	1.24E+01
Building - 10000 sqft- 1 story	Construction	Cranes	2.38E-04	9.49E-04	1.99E+01	2.02E+01
Building - 10000 sqft- 1 story	Construction	Bobcat	3.86E-04	4.86E-04	1.02E+01	1.03E+01
Building - 10000 sqft- 1 story	Construction	Backhoe	3.03E-04	3.35E-04	7.02E+00	7.14E+00
Building - 10000 sqft- 1 story	Construction	Trench Compactor	3.38E-04	8.07E-04	1.69E+01	1.72E+01
Building - 10000 sqft- 1 story	Construction	Fuel Truck	5.31E-05	9.21E-04	1.93E+01	1.96E+01
Building - 10000 sqft- 1 story	Construction	Dump Trucks	5.88E-04	1.02E-02	2.14E+02	2.17E+02
Drainage System	Demolition	Excavator	1.02E-05	8.47E-05	1.78E+00	1.80E+00
Drainage System	Demolition	Hydraulic Hammer	2.04E-06	1.86E-06	3.89E-02	3.96E-02
Drainage System	Demolition	Grapple	5.45E-06	2.12E-05	4.44E-01	4.51E-01
Drainage System	Demolition	Standard Bucket	7.80E-06	3.81E-05	7.98E-01	8.09E-01
Drainage System	Demolition	Water Truck	1.36E-06	2.36E-05	4.96E-01	5.02E-01
Drainage System	Demolition	Bobcat Skid	9.91E-06	1.25E-05	2.61E-01	2.65E-01

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Drainage System	Demolition	Haul Truck	2.52E-05	4.37E-04	9.17E+00	9.30E+00
Drainage System	Demolition	Concrete Saws	3.53E-05	2.30E-06	4.73E-02	5.09E-02
Drainage System	Construction	Concrete Pumping Truck	8.69E-06	1.51E-04	3.16E+00	3.20E+00
Drainage System	Construction	Motorized Trowel	1.21E-05	2.50E-05	5.24E-01	5.32E-01
Drainage System	Construction	Cranes	1.02E-05	4.05E-05	8.50E-01	8.62E-01
Drainage System	Construction	Bobcat	1.65E-05	2.08E-05	4.34E-01	4.41E-01
Drainage System	Construction	Backhoe	1.29E-05	1.43E-05	3.00E-01	3.05E-01
Drainage System	Construction	Trench Compactor	1.45E-05	3.45E-05	7.23E-01	7.34E-01
Drainage System	Construction	Fuel Truck	2.27E-06	3.94E-05	8.26E-01	8.37E-01
Drainage System	Construction	Dump Trucks	2.51E-05	4.35E-04	9.13E+00	9.25E+00
Fencing	Demolition	Excavator	1.02E-05	8.44E-05	1.77E+00	1.79E+00
Fencing	Demolition	Hydraulic Hammer	2.03E-06	1.85E-06	3.88E-02	3.94E-02
Fencing	Demolition	Grapple	5.43E-06	2.11E-05	4.43E-01	4.49E-01
Fencing	Demolition	Standard Bucket	7.77E-06	3.79E-05	7.95E-01	8.06E-01
Fencing	Demolition	Water Truck	1.36E-06	2.35E-05	4.94E-01	5.00E-01
Fencing	Demolition	Bobcat Skid	9.87E-06	1.24E-05	2.60E-01	2.64E-01

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Fencing	Demolition	Haul Truck	2.51E-05	4.35E-04	9.14E+00	9.26E+00
Fencing	Demolition	Concrete Saws	3.51E-05	2.29E-06	4.71E-02	5.07E-02
Fencing	Construction	Concrete Pumping Truck	8.66E-06	1.50E-04	3.15E+00	3.19E+00
Fencing	Construction	Motorized Trowel	1.21E-05	2.49E-05	5.22E-01	5.29E-01
Fencing	Construction	Cranes	1.01E-05	4.04E-05	8.47E-01	8.59E-01
Fencing	Construction	Bobcat	1.64E-05	2.07E-05	4.33E-01	4.40E-01
Fencing	Construction	Backhoe	1.29E-05	1.43E-05	2.99E-01	3.04E-01
Fencing	Construction	Trench Compactor	1.44E-05	3.43E-05	7.20E-01	7.31E-01
Fencing	Construction	Fuel Truck	2.26E-06	3.92E-05	8.23E-01	8.33E-01
Fencing	Construction	Dump Trucks	2.50E-05	4.33E-04	9.09E+00	9.22E+00
Fuel Tanks	Demolition	Excavator	5.12E-04	4.24E-03	8.90E+01	9.02E+01
Fuel Tanks	Demolition	Hydraulic Hammer	1.02E-04	9.30E-05	1.95E+00	1.98E+00
Fuel Tanks	Demolition	Grapple	2.73E-04	1.06E-03	2.22E+01	2.25E+01
Fuel Tanks	Demolition	Standard Bucket	3.90E-04	1.90E-03	4.00E+01	4.05E+01
Fuel Tanks	Demolition	Water Truck	6.82E-05	1.18E-03	2.48E+01	2.51E+01

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Fuel Tanks	Demolition	Bobcat Skid	4.96E-04	6.23E-04	1.30E+01	1.33E+01
Fuel Tanks	Demolition	Haul Truck	1.26E-03	2.19E-02	4.59E+02	4.65E+02
Fuel Tanks	Demolition	Concrete Saws	1.76E-03	1.15E-04	2.37E+00	2.55E+00
Fuel Tanks	Construction	Concrete Pumping Truck	4.35E-04	7.54E-03	1.58E+02	1.60E+02
Fuel Tanks	Construction	Motorized Trowel	6.07E-04	1.25E-03	2.62E+01	2.66E+01
Fuel Tanks	Construction	Cranes	5.09E-04	2.03E-03	4.26E+01	4.31E+01
Fuel Tanks	Construction	Bobcat	8.26E-04	1.04E-03	2.17E+01	2.21E+01
Fuel Tanks	Construction	Backhoe	6.47E-04	7.17E-04	1.50E+01	1.53E+01
Fuel Tanks	Construction	Trench Compactor	7.23E-04	1.72E-03	3.62E+01	3.67E+01
Fuel Tanks	Construction	Fuel Truck	1.14E-04	1.97E-03	4.13E+01	4.19E+01
Fuel Tanks	Construction	Dump Trucks	1.26E-03	2.18E-02	4.57E+02	4.63E+02
Parking Lot	Demolition	Excavator	3.77E-06	3.12E-05	6.55E-01	6.64E-01
Parking Lot	Demolition	Hydraulic Hammer	7.52E-07	6.85E-07	1.43E-02	1.46E-02
Parking Lot	Demolition	Grapple	2.01E-06	7.80E-06	1.64E-01	1.66E-01
Parking Lot	Demolition	Standard Bucket	2.87E-06	1.40E-05	2.94E-01	2.98E-01
Parking Lot	Demolition	Water Truck	5.02E-07	8.70E-06	1.83E-01	1.85E-01
Parking Lot	Demolition	Bobcat Skid	3.65E-06	4.59E-06	9.60E-02	9.75E-02

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Demolition	Haul Truck	9.29E-06	1.61E-04	3.38E+00	3.42E+00
Parking Lot	Demolition	Concrete Saws	1.30E-05	8.46E-07	1.74E-02	1.87E-02
Parking Lot	Construction	Concrete Pumping Truck	3.20E-06	5.55E-05	1.16E+00	1.18E+00
Parking Lot	Construction	Motorized Trowel	4.47E-06	9.20E-06	1.93E-01	1.96E-01
Parking Lot	Construction	Cranes	3.75E-06	1.49E-05	3.13E-01	3.18E-01
Parking Lot	Construction	Bobcat	6.08E-06	7.65E-06	1.60E-01	1.63E-01
Parking Lot	Construction	Backhoe	4.76E-06	5.28E-06	1.11E-01	1.12E-01
Parking Lot	Construction	Trench Compactor	5.32E-06	1.27E-05	2.66E-01	2.70E-01
Parking Lot	Construction	Fuel Truck	8.36E-07	1.45E-05	3.04E-01	3.08E-01
Parking Lot	Construction	Dump Trucks	9.25E-06	1.60E-04	3.36E+00	3.41E+00
Site Work - 10000 sqft	Demolition	Excavator	7.37E-05	6.10E-04	1.28E+01	1.30E+01
Site Work - 10000 sqft	Demolition	Hydraulic Hammer	1.47E-05	1.34E-05	2.80E-01	2.85E-01
Site Work - 10000 sqft	Demolition	Grapple	3.92E-05	1.52E-04	3.20E+00	3.24E+00
Site Work - 10000 sqft	Demolition	Standard Bucket	5.61E-05	2.74E-04	5.75E+00	5.82E+00
Site Work - 10000 sqft	Demolition	Water Truck	9.80E-06	1.70E-04	3.57E+00	3.61E+00
Site Work - 10000 sqft	Demolition	Bobcat Skid	7.13E-05	8.96E-05	1.88E+00	1.91E+00
Site Work - 10000 sqft	Demolition	Haul Truck	1.82E-04	3.15E-03	6.60E+01	6.69E+01
Site Work - 10000 sqft	Demolition	Concrete Saws	2.54E-04	1.65E-05	3.41E-01	3.66E-01
Site Work - 10000 sqft	Construction	Concrete Pumping Truck	6.26E-05	1.08E-03	2.28E+01	2.31E+01

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Site Work - 10000 sqft	Construction	Motorized Trowel	8.73E-05	1.80E-04	3.77E+00	3.83E+00
Site Work - 10000 sqft	Construction	Cranes	7.33E-05	2.92E-04	6.12E+00	6.21E+00
Site Work - 10000 sqft	Construction	Bobcat	1.19E-04	1.49E-04	3.13E+00	3.18E+00
Site Work - 10000 sqft	Construction	Backhoe	9.30E-05	1.03E-04	2.16E+00	2.19E+00
Site Work - 10000 sqft	Construction	Trench Compactor	1.04E-04	2.48E-04	5.20E+00	5.28E+00
Site Work - 10000 sqft	Construction	Fuel Truck	1.63E-05	2.83E-04	5.94E+00	6.02E+00
Site Work - 10000 sqft	Construction	Dump Trucks	1.81E-04	3.13E-03	6.57E+01	6.66E+01

Table C21. 2023 Pump house and boiler house, construction-phase non-road equipment criteria air pollutant emissions.

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Building - 10000 sqft- 1 story	Demolition	Excavator	6.70E-02	2.66E-02	4.30E-03	2.12E-04	4.49E-03	4.35E-03
Building - 10000 sqft- 1 story	Demolition	Hydraulic Hammer	1.07E-02	4.25E-03	1.00E-03	6.20E-06	4.87E-04	4.73E-04
Building - 10000 sqft- 1 story	Demolition	Grapple	5.63E-02	2.62E-02	3.66E-03	5.87E-05	4.05E-03	3.92E-03
Building - 10000 sqft- 1 story	Demolition	Standard Bucket	6.03E-02	1.95E-02	3.59E-03	9.74E-05	4.63E-03	4.49E-03
Building - 10000 sqft- 1 story	Demolition	Water Truck	9.01E-03	2.92E-03	6.39E-04	5.73E-05	5.25E-04	5.09E-04
Building - 10000 sqft- 1 story	Demolition	Bobcat Skid	5.64E-02	5.93E-02	1.11E-02	3.55E-05	8.50E-03	8.25E-03
Building - 10000 sqft- 1 story	Demolition	Haul Truck	1.67E-01	5.41E-02	1.18E-02	1.06E-03	9.72E-03	9.43E-03

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Building - 10000 sqft- 1 story	Demolition	Concrete Saws	4.04E-03	5.33E-01	1.04E-02	1.25E-05	2.66E-04	2.45E-04
Building - 10000 sqft- 1 story	Construction	Concrete Pumping Truck	5.75E-02	1.87E-02	4.08E-03	3.66E-04	3.35E-03	3.25E-03
Building - 10000 sqft- 1 story	Construction	Motorized Trowel	1.08E-01	2.86E-02	4.49E-03	6.53E-05	3.22E-03	3.12E-03
Building - 10000 sqft- 1 story	Construction	Cranes	7.84E-02	2.36E-02	4.88E-03	1.08E-04	3.76E-03	3.65E-03
Building - 10000 sqft- 1 story	Construction	Bobcat	9.40E-02	9.89E-02	1.84E-02	5.92E-05	1.42E-02	1.37E-02
Building - 10000 sqft- 1 story	Construction	Backhoe	6.89E-02	4.86E-02	8.73E-03	4.02E-05	6.09E-03	5.90E-03
Building - 10000 sqft- 1 story	Construction	Trench Compactor	1.42E-01	2.51E-02	4.43E-03	8.66E-05	2.63E-03	2.55E-03
Building - 10000 sqft- 1 story	Construction	Fuel Truck	1.50E-02	4.87E-03	1.06E-03	9.55E-05	8.75E-04	8.49E-04
Building - 10000 sqft- 1 story	Construction	Dump Trucks	1.66E-01	5.39E-02	1.18E-02	1.06E-03	9.68E-03	9.39E-03
Drainage System	Demolition	Excavator	2.86E-03	1.14E-03	1.84E-04	9.04E-06	1.92E-04	1.86E-04
Drainage System	Demolition	Hydraulic Hammer	4.56E-04	1.82E-04	4.27E-05	2.65E-07	2.08E-05	2.02E-05
Drainage System	Demolition	Grapple	2.41E-03	1.12E-03	1.56E-04	2.51E-06	1.73E-04	1.68E-04
Drainage System	Demolition	Standard Bucket	2.58E-03	8.35E-04	1.54E-04	4.16E-06	1.98E-04	1.92E-04
Drainage System	Demolition	Water Truck	3.85E-04	1.25E-04	2.73E-05	2.45E-06	2.24E-05	2.18E-05
Drainage System	Demolition	Bobcat Skid	2.41E-03	2.53E-03	4.72E-04	1.52E-06	3.63E-04	3.52E-04
Drainage System	Demolition	Haul Truck	7.13E-03	2.31E-03	5.05E-04	4.53E-05	4.15E-04	4.03E-04
Drainage System	Demolition	Concrete Saws	1.73E-04	2.28E-02	4.45E-04	5.33E-07	1.14E-05	1.05E-05

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Drainage System	Construction	Concrete Pumping Truck	2.46E-03	7.97E-04	1.74E-04	1.56E-05	1.43E-04	1.39E-04
Drainage System	Construction	Motorized Trowel	4.63E-03	1.22E-03	1.92E-04	2.79E-06	1.37E-04	1.33E-04
Drainage System	Construction	Cranes	3.35E-03	1.01E-03	2.08E-04	4.63E-06	1.61E-04	1.56E-04
Drainage System	Construction	Bobcat	4.02E-03	4.22E-03	7.87E-04	2.53E-06	6.06E-04	5.87E-04
Drainage System	Construction	Backhoe	2.94E-03	2.08E-03	3.73E-04	1.72E-06	2.60E-04	2.52E-04
Drainage System	Construction	Trench Compactor	6.05E-03	1.07E-03	1.89E-04	3.70E-06	1.12E-04	1.09E-04
Drainage System	Construction	Fuel Truck	6.42E-04	2.08E-04	4.55E-05	4.08E-06	3.74E-05	3.63E-05
Drainage System	Construction	Dump Trucks	7.10E-03	2.30E-03	5.03E-04	4.51E-05	4.13E-04	4.01E-04
Fencing	Demolition	Excavator	2.85E-03	1.13E-03	1.83E-04	9.00E-06	1.91E-04	1.85E-04
Fencing	Demolition	Hydraulic Hammer	4.54E-04	1.81E-04	4.26E-05	2.64E-07	2.07E-05	2.01E-05
Fencing	Demolition	Grapple	2.40E-03	1.12E-03	1.56E-04	2.50E-06	1.72E-04	1.67E-04
Fencing	Demolition	Standard Bucket	2.57E-03	8.32E-04	1.53E-04	4.14E-06	1.97E-04	1.91E-04
Fencing	Demolition	Water Truck	3.83E-04	1.24E-04	2.72E-05	2.44E-06	2.23E-05	2.17E-05
Fencing	Demolition	Bobcat Skid	2.40E-03	2.52E-03	4.70E-04	1.51E-06	3.62E-04	3.51E-04
Fencing	Demolition	Haul Truck	7.10E-03	2.30E-03	5.03E-04	4.52E-05	4.14E-04	4.01E-04

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fencing	Demolition	Concrete Saws	1.72E-04	2.27E-02	4.43E-04	5.31E-07	1.13E-05	1.04E-05
Fencing	Construction	Concrete Pumping Truck	2.45E-03	7.94E-04	1.73E-04	1.56E-05	1.43E-04	1.38E-04
Fencing	Construction	Motorized Trowel	4.61E-03	1.22E-03	1.91E-04	2.78E-06	1.37E-04	1.33E-04
Fencing	Construction	Cranes	3.34E-03	1.00E-03	2.08E-04	4.61E-06	1.60E-04	1.55E-04
Fencing	Construction	Bobcat	4.00E-03	4.21E-03	7.84E-04	2.52E-06	6.03E-04	5.85E-04
Fencing	Construction	Backhoe	2.93E-03	2.07E-03	3.71E-04	1.71E-06	2.59E-04	2.51E-04
Fencing	Construction	Trench Compactor	6.02E-03	1.07E-03	1.89E-04	3.68E-06	1.12E-04	1.08E-04
Fencing	Construction	Fuel Truck	6.39E-04	2.07E-04	4.53E-05	4.07E-06	3.72E-05	3.61E-05
Fencing	Construction	Dump Trucks	7.07E-03	2.29E-03	5.01E-04	4.49E-05	4.12E-04	3.99E-04
Fuel Tanks	Demolition	Excavator	1.43E-01	5.68E-02	9.19E-03	4.52E-04	9.59E-03	9.30E-03
Fuel Tanks	Demolition	Hydraulic Hammer	2.28E-02	9.09E-03	2.14E-03	1.33E-05	1.04E-03	1.01E-03
Fuel Tanks	Demolition	Grapple	1.20E-01	5.61E-02	7.82E-03	1.25E-04	8.65E-03	8.39E-03
Fuel Tanks	Demolition	Standard Bucket	1.29E-01	4.18E-02	7.69E-03	2.08E-04	9.89E-03	9.59E-03
Fuel Tanks	Demolition	Water Truck	1.93E-02	6.25E-03	1.37E-03	1.23E-04	1.12E-03	1.09E-03
Fuel Tanks	Demolition	Bobcat Skid	1.21E-01	1.27E-01	2.36E-02	7.60E-05	1.82E-02	1.76E-02
Fuel Tanks	Demolition	Haul Truck	3.57E-01	1.16E-01	2.53E-02	2.27E-03	2.08E-02	2.02E-02

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Fuel Tanks	Demolition	Concrete Saws	8.64E-03	1.14E+00	2.23E-02	2.67E-05	5.69E-04	5.23E-04
Fuel Tanks	Construction	Concrete Pumping Truck	1.23E-01	3.99E-02	8.72E-03	7.82E-04	7.16E-03	6.95E-03
Fuel Tanks	Construction	Motorized Trowel	2.32E-01	6.11E-02	9.59E-03	1.40E-04	6.88E-03	6.67E-03
Fuel Tanks	Construction	Cranes	1.68E-01	5.04E-02	1.04E-02	2.32E-04	8.04E-03	7.80E-03
Fuel Tanks	Construction	Bobcat	2.01E-01	2.11E-01	3.94E-02	1.27E-04	3.03E-02	2.94E-02
Fuel Tanks	Construction	Backhoe	1.47E-01	1.04E-01	1.87E-02	8.59E-05	1.30E-02	1.26E-02
Fuel Tanks	Construction	Trench Compactor	3.03E-01	5.37E-02	9.48E-03	1.85E-04	5.61E-03	5.45E-03
Fuel Tanks	Construction	Fuel Truck	3.21E-02	1.04E-02	2.28E-03	2.04E-04	1.87E-03	1.81E-03
Fuel Tanks	Construction	Dump Trucks	3.55E-01	1.15E-01	2.52E-02	2.26E-03	2.07E-02	2.01E-02
Parking Lot	Demolition	Excavator	1.06E-03	4.18E-04	6.76E-05	3.33E-06	7.06E-05	6.85E-05
Parking Lot	Demolition	Hydraulic Hammer	1.68E-04	6.69E-05	1.57E-05	9.76E-08	7.67E-06	7.44E-06
Parking Lot	Demolition	Grapple	8.87E-04	4.13E-04	5.76E-05	9.23E-07	6.37E-05	6.18E-05
Parking Lot	Demolition	Standard Bucket	9.49E-04	3.08E-04	5.66E-05	1.53E-06	7.28E-05	7.06E-05
Parking Lot	Demolition	Water Truck	1.42E-04	4.60E-05	1.01E-05	9.02E-07	8.26E-06	8.02E-06
Parking Lot	Demolition	Bobcat Skid	8.88E-04	9.34E-04	1.74E-04	5.59E-07	1.34E-04	1.30E-04
Parking Lot	Demolition	Haul Truck	2.63E-03	8.52E-04	1.86E-04	1.67E-05	1.53E-04	1.48E-04
Parking Lot	Demolition	Concrete Saws	6.36E-05	8.39E-03	1.64E-04	1.96E-07	4.19E-06	3.85E-06

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Parking Lot	Construction	Concrete Pumping Truck	9.05E-04	2.94E-04	6.42E-05	5.76E-06	5.27E-05	5.12E-05
Parking Lot	Construction	Motorized Trowel	1.71E-03	4.50E-04	7.06E-05	1.03E-06	5.06E-05	4.91E-05
Parking Lot	Construction	Cranes	1.23E-03	3.71E-04	7.68E-05	1.71E-06	5.92E-05	5.74E-05
Parking Lot	Construction	Bobcat	1.48E-03	1.56E-03	2.90E-04	9.32E-07	2.23E-04	2.16E-04
Parking Lot	Construction	Backhoe	1.08E-03	7.65E-04	1.37E-04	6.33E-07	9.58E-05	9.29E-05
Parking Lot	Construction	Trench Compactor	2.23E-03	3.95E-04	6.98E-05	1.36E-06	4.13E-05	4.01E-05
Parking Lot	Construction	Fuel Truck	2.36E-04	7.67E-05	1.68E-05	1.50E-06	1.38E-05	1.34E-05
Parking Lot	Construction	Dump Trucks	2.61E-03	8.48E-04	1.85E-04	1.66E-05	1.52E-04	1.48E-04
Site Work - 10000 sqft	Demolition	Excavator	2.06E-02	8.17E-03	1.32E-03	6.51E-05	1.38E-03	1.34E-03
Site Work - 10000 sqft	Demolition	Hydraulic Hammer	3.28E-03	1.31E-03	3.08E-04	1.91E-06	1.50E-04	1.45E-04
Site Work - 10000 sqft	Demolition	Grapple	1.73E-02	8.07E-03	1.12E-03	1.80E-05	1.24E-03	1.21E-03
Site Work - 10000 sqft	Demolition	Standard Bucket	1.85E-02	6.01E-03	1.11E-03	2.99E-05	1.42E-03	1.38E-03
Site Work - 10000 sqft	Demolition	Water Truck	2.77E-03	8.99E-04	1.96E-04	1.76E-05	1.61E-04	1.57E-04
Site Work - 10000 sqft	Demolition	Bobcat Skid	1.73E-02	1.82E-02	3.40E-03	1.09E-05	2.61E-03	2.54E-03
Site Work - 10000 sqft	Demolition	Haul Truck	5.13E-02	1.66E-02	3.64E-03	3.26E-04	2.99E-03	2.90E-03
Site Work - 10000 sqft	Demolition	Concrete Saws	1.24E-03	1.64E-01	3.20E-03	3.83E-06	8.18E-05	7.52E-05
Site Work - 10000 sqft	Construction	Concrete Pumping Truck	1.77E-02	5.74E-03	1.25E-03	1.12E-04	1.03E-03	9.99E-04
Site Work - 10000 sqft	Construction	Motorized Trowel	3.33E-02	8.79E-03	1.38E-03	2.01E-05	9.89E-04	9.59E-04
Site Work - 10000 sqft	Construction	Cranes	2.41E-02	7.24E-03	1.50E-03	3.33E-05	1.16E-03	1.12E-03

Project	Construction Activity	Equipment Type	Emissions (tons/yr)					
			NOx	CO	VOC	SO2	PM10	PM2.5
Site Work - 10000 sqft	Construction	Bobcat	2.89E-02	3.04E-02	5.67E-03	1.82E-05	4.36E-03	4.23E-03
Site Work - 10000 sqft	Construction	Backhoe	2.12E-02	1.50E-02	2.68E-03	1.24E-05	1.87E-03	1.82E-03
Site Work - 10000 sqft	Construction	Trench Compactor	4.35E-02	7.72E-03	1.36E-03	2.66E-05	8.07E-04	7.83E-04
Site Work - 10000 sqft	Construction	Fuel Truck	4.62E-03	1.50E-03	3.27E-04	2.94E-05	2.69E-04	2.61E-04
Site Work - 10000 sqft	Construction	Dump Trucks	5.11E-02	1.66E-02	3.62E-03	3.25E-04	2.98E-03	2.89E-03

Table C22. 2023 Pump house and boiler house, construction-phase non-road equipment greenhouse gas emissions.

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Building - 10000 sqft- 1 story	Demolition	Excavator	3.60E-04	3.67E-03	7.71E+01	7.81E+01
Building - 10000 sqft- 1 story	Demolition	Hydraulic Hammer	8.81E-05	8.05E-05	1.69E+00	1.72E+00
Building - 10000 sqft- 1 story	Demolition	Grapple	2.26E-04	9.18E-04	1.93E+01	1.95E+01
Building - 10000 sqft- 1 story	Demolition	Standard Bucket	2.86E-04	1.65E-03	3.46E+01	3.51E+01
Building - 10000 sqft- 1 story	Demolition	Water Truck	4.39E-05	1.02E-03	2.15E+01	2.18E+01
Building - 10000 sqft- 1 story	Demolition	Bobcat Skid	4.14E-04	5.40E-04	1.13E+01	1.15E+01
Building - 10000 sqft- 1 story	Demolition	Haul Truck	8.14E-04	1.89E-02	3.98E+02	4.03E+02
Building - 10000 sqft- 1 story	Demolition	Concrete Saws	1.53E-03	9.96E-05	2.05E+00	2.20E+00
Building - 10000 sqft- 1 story	Construction	Concrete Pumping Truck	2.80E-04	6.53E-03	1.37E+02	1.39E+02

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Building - 10000 sqft- 1 story	Construction	Motorized Trowel	5.01E-04	1.08E-03	2.27E+01	2.30E+01
Building - 10000 sqft- 1 story	Construction	Cranes	3.63E-04	1.76E-03	3.69E+01	3.74E+01
Building - 10000 sqft- 1 story	Construction	Bobcat	6.91E-04	9.00E-04	1.88E+01	1.91E+01
Building - 10000 sqft- 1 story	Construction	Backhoe	5.43E-04	6.21E-04	1.30E+01	1.32E+01
Building - 10000 sqft- 1 story	Construction	Trench Compactor	5.91E-04	1.49E-03	3.13E+01	3.18E+01
Building - 10000 sqft- 1 story	Construction	Fuel Truck	7.32E-05	1.71E-03	3.58E+01	3.63E+01
Building - 10000 sqft- 1 story	Construction	Dump Trucks	8.10E-04	1.89E-02	3.96E+02	4.01E+02
Drainage System	Demolition	Excavator	1.54E-05	1.57E-04	3.29E+00	3.34E+00
Drainage System	Demolition	Hydraulic Hammer	3.77E-06	3.44E-06	7.21E-02	7.33E-02
Drainage System	Demolition	Grapple	9.66E-06	3.92E-05	8.23E-01	8.34E-01
Drainage System	Demolition	Standard Bucket	1.22E-05	7.05E-05	1.48E+00	1.50E+00
Drainage System	Demolition	Water Truck	1.88E-06	4.37E-05	9.18E-01	9.30E-01
Drainage System	Demolition	Bobcat Skid	1.77E-05	2.31E-05	4.83E-01	4.90E-01
Drainage System	Demolition	Haul Truck	3.48E-05	8.10E-04	1.70E+01	1.72E+01
Drainage System	Demolition	Concrete Saws	6.53E-05	4.25E-06	8.76E-02	9.42E-02
Drainage System	Construction	Concrete Pumping Truck	1.20E-05	2.79E-04	5.85E+00	5.93E+00
Drainage System	Construction	Motorized Trowel	2.14E-05	4.62E-05	9.70E-01	9.84E-01

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Drainage System	Construction	Cranes	1.55E-05	7.51E-05	1.57E+00	1.60E+00
Drainage System	Construction	Bobcat	2.95E-05	3.84E-05	8.04E-01	8.17E-01
Drainage System	Construction	Backhoe	2.32E-05	2.65E-05	5.55E-01	5.65E-01
Drainage System	Construction	Trench Compactor	2.53E-05	6.38E-05	1.34E+00	1.36E+00
Drainage System	Construction	Fuel Truck	3.13E-06	7.29E-05	1.53E+00	1.55E+00
Drainage System	Construction	Dump Trucks	3.46E-05	8.06E-04	1.69E+01	1.71E+01
Fencing	Demolition	Excavator	1.53E-05	1.56E-04	3.28E+00	3.32E+00
Fencing	Demolition	Hydraulic Hammer	3.75E-06	3.43E-06	7.18E-02	7.30E-02
Fencing	Demolition	Grapple	9.62E-06	3.91E-05	8.19E-01	8.31E-01
Fencing	Demolition	Standard Bucket	1.22E-05	7.02E-05	1.47E+00	1.49E+00
Fencing	Demolition	Water Truck	1.87E-06	4.35E-05	9.14E-01	9.26E-01
Fencing	Demolition	Bobcat Skid	1.76E-05	2.30E-05	4.81E-01	4.88E-01
Fencing	Demolition	Haul Truck	3.46E-05	8.06E-04	1.69E+01	1.71E+01
Fencing	Demolition	Concrete Saws	6.50E-05	4.24E-06	8.73E-02	9.38E-02
Fencing	Construction	Concrete Pumping Truck	1.19E-05	2.78E-04	5.83E+00	5.91E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Fencing	Construction	Motorized Trowel	2.13E-05	4.61E-05	9.66E-01	9.80E-01
Fencing	Construction	Cranes	1.54E-05	7.47E-05	1.57E+00	1.59E+00
Fencing	Construction	Bobcat	2.94E-05	3.83E-05	8.01E-01	8.14E-01
Fencing	Construction	Backhoe	2.31E-05	2.64E-05	5.53E-01	5.62E-01
Fencing	Construction	Trench Compactor	2.52E-05	6.36E-05	1.33E+00	1.35E+00
Fencing	Construction	Fuel Truck	3.12E-06	7.26E-05	1.52E+00	1.54E+00
Fencing	Construction	Dump Trucks	3.45E-05	8.02E-04	1.68E+01	1.71E+01
Fuel Tanks	Demolition	Excavator	7.69E-04	7.85E-03	1.65E+02	1.67E+02
Fuel Tanks	Demolition	Hydraulic Hammer	1.88E-04	1.72E-04	3.61E+00	3.67E+00
Fuel Tanks	Demolition	Grapple	4.84E-04	1.96E-03	4.12E+01	4.17E+01
Fuel Tanks	Demolition	Standard Bucket	6.12E-04	3.53E-03	7.40E+01	7.50E+01
Fuel Tanks	Demolition	Water Truck	9.39E-05	2.19E-03	4.59E+01	4.65E+01
Fuel Tanks	Demolition	Bobcat Skid	8.86E-04	1.15E-03	2.41E+01	2.45E+01
Fuel Tanks	Demolition	Haul Truck	1.74E-03	4.05E-02	8.50E+02	8.61E+02
Fuel Tanks	Demolition	Concrete Saws	3.27E-03	2.13E-04	4.39E+00	4.71E+00
Fuel Tanks	Construction	Concrete Pumping Truck	5.99E-04	1.40E-02	2.93E+02	2.97E+02

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Fuel Tanks	Construction	Motorized Trowel	1.07E-03	2.31E-03	4.85E+01	4.93E+01
Fuel Tanks	Construction	Cranes	7.76E-04	3.76E-03	7.88E+01	7.99E+01
Fuel Tanks	Construction	Bobcat	1.48E-03	1.92E-03	4.02E+01	4.09E+01
Fuel Tanks	Construction	Backhoe	1.16E-03	1.33E-03	2.78E+01	2.83E+01
Fuel Tanks	Construction	Trench Compactor	1.26E-03	3.19E-03	6.70E+01	6.80E+01
Fuel Tanks	Construction	Fuel Truck	1.57E-04	3.65E-03	7.65E+01	7.75E+01
Fuel Tanks	Construction	Dump Trucks	1.73E-03	4.03E-02	8.46E+02	8.57E+02
Parking Lot	Demolition	Excavator	5.66E-06	5.78E-05	1.21E+00	1.23E+00
Parking Lot	Demolition	Hydraulic Hammer	1.39E-06	1.27E-06	2.66E-02	2.70E-02
Parking Lot	Demolition	Grapple	3.56E-06	1.45E-05	3.03E-01	3.07E-01
Parking Lot	Demolition	Standard Bucket	4.51E-06	2.60E-05	5.45E-01	5.52E-01
Parking Lot	Demolition	Water Truck	6.92E-07	1.61E-05	3.38E-01	3.42E-01
Parking Lot	Demolition	Bobcat Skid	6.52E-06	8.50E-06	1.78E-01	1.81E-01
Parking Lot	Demolition	Haul Truck	1.28E-05	2.98E-04	6.26E+00	6.34E+00
Parking Lot	Demolition	Concrete Saws	2.40E-05	1.57E-06	3.23E-02	3.47E-02
Parking Lot	Construction	Concrete Pumping Truck	4.41E-06	1.03E-04	2.16E+00	2.19E+00
Parking Lot	Construction	Motorized Trowel	7.89E-06	1.70E-05	3.57E-01	3.63E-01
Parking Lot	Construction	Cranes	5.71E-06	2.77E-05	5.80E-01	5.88E-01

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Parking Lot	Construction	Bobcat	1.09E-05	1.42E-05	2.96E-01	3.01E-01
Parking Lot	Construction	Backhoe	8.54E-06	9.77E-06	2.05E-01	2.08E-01
Parking Lot	Construction	Trench Compactor	9.31E-06	2.35E-05	4.93E-01	5.00E-01
Parking Lot	Construction	Fuel Truck	1.15E-06	2.68E-05	5.63E-01	5.71E-01
Parking Lot	Construction	Dump Trucks	1.27E-05	2.97E-04	6.23E+00	6.31E+00
Site Work - 10000 sqft	Demolition	Excavator	1.11E-04	1.13E-03	2.37E+01	2.40E+01
Site Work - 10000 sqft	Demolition	Hydraulic Hammer	2.71E-05	2.48E-05	5.19E-01	5.28E-01
Site Work - 10000 sqft	Demolition	Grapple	6.95E-05	2.82E-04	5.92E+00	6.00E+00
Site Work - 10000 sqft	Demolition	Standard Bucket	8.80E-05	5.07E-04	1.06E+01	1.08E+01
Site Work - 10000 sqft	Demolition	Water Truck	1.35E-05	3.15E-04	6.60E+00	6.69E+00
Site Work - 10000 sqft	Demolition	Bobcat Skid	1.27E-04	1.66E-04	3.47E+00	3.53E+00
Site Work - 10000 sqft	Demolition	Haul Truck	2.50E-04	5.83E-03	1.22E+02	1.24E+02
Site Work - 10000 sqft	Demolition	Concrete Saws	4.70E-04	3.06E-05	6.31E-01	6.78E-01
Site Work - 10000 sqft	Construction	Concrete Pumping Truck	8.62E-05	2.01E-03	4.21E+01	4.27E+01
Site Work - 10000 sqft	Construction	Motorized Trowel	1.54E-04	3.33E-04	6.98E+00	7.08E+00
Site Work - 10000 sqft	Construction	Cranes	1.12E-04	5.40E-04	1.13E+01	1.15E+01
Site Work - 10000 sqft	Construction	Bobcat	2.12E-04	2.77E-04	5.79E+00	5.88E+00
Site Work - 10000 sqft	Construction	Backhoe	1.67E-04	1.91E-04	4.00E+00	4.06E+00

Project	Construction Activity	Equipment Type	Emissions (tons/yr)			
			CH4	N2O	CO2	CO_2e
Site Work - 10000 sqft	Construction	Trench Compactor	1.82E-04	4.59E-04	9.63E+00	9.77E+00
Site Work - 10000 sqft	Construction	Fuel Truck	2.25E-05	5.24E-04	1.10E+01	1.12E+01
Site Work - 10000 sqft	Construction	Dump Trucks	2.49E-04	5.80E-03	1.22E+02	1.23E+02

APPENDIX D: DETAILED FUGITIVES EMISSION INVENTORY DATA FOR PROPOSED PROJECT

Table D1. Electric CUP, construction-phase fugitives inputs and PM10 emissions.
Table D2. 2022 Electric CUP, construction-phase fugitives criteria air pollutant emissions.
Table D3. 2022 Electric CUP, construction-phase fugitives greenhouse gas emissions.
Table D4. 2023 Electric CUP, construction-phase fugitives criteria air pollutant emissions.
Table D5. 2023 Electric CUP, construction-phase fugitives greenhouse gas emissions.
Table D6. 2024 Electric CUP, construction-phase fugitives criteria air pollutant emissions.
Table D7. 2024 Electric CUP, construction-phase fugitives greenhouse gas emissions.
Table D8. Pump house and boiler house, construction-phase fugitives inputs and PM10 emissions.
Table D9. 2022 Pump house and boiler house, construction-phase fugitives criteria air pollutant emissions.
Table D10. 2022 Pump house and boiler house, construction-phase fugitives greenhouse gas emissions.
Table D11. 2023 Pump house and boiler house, construction-phase fugitives criteria air pollutant emissions.
Table D12. 2023 Pump house and boiler house, construction-phase fugitives greenhouse gas emissions.

Table D1. Electric CUP, construction-phase fugitives inputs and PM10 emissions.

Project Type	Construction Activity	Calculation	Input	Units
Building - 100000 sqft- 10 stories	Concrete Mixing/Batching	V = Volume of asphalt = 0.111 x L x W x 1.25 / 3	2296.451	yd3
Building - 100000 sqft- 10 stories	Concrete Mixing/Batching	PM10 = 0.037 x V	0.042	tons
Building - 100000 sqft- 10 stories	Material Movement (Paved Roads)	sL = Road surface silt loading	0.100	g/m3
Building - 100000 sqft- 10 stories	Material Movement (Paved Roads)	Wt. = Mean vehicle weight	32.000	tons
Building - 100000 sqft- 10 stories	Material Movement (Paved Roads)	VMT = Vehicle miles traveled	1921.571	miles
Building - 100000 sqft- 10 stories	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	0.009	tons
Building - 100000 sqft- 10 stories	Material Movement (Unpaved Roads)	s = Surface material silt content	0.043	fraction
Building - 100000 sqft- 10 stories	Material Movement (Unpaved Roads)	Wt. = Mean vehicle weight	32.000	tons
Building - 100000 sqft- 10 stories	Material Movement (Unpaved Roads)	VMT = Vehicle miles traveled	1971.224	miles
Building - 100000 sqft- 10 stories	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	0.027	tons
Drainage System	Material Movement (Unpaved Roads)	s = Surface material silt content	0.043	fraction
Drainage System	Material Movement (Unpaved Roads)	Wt. = Mean vehicle weight	32.000	tons
Drainage System	Material Movement (Unpaved Roads)	VMT = Vehicle miles traveled	4.165	miles
Drainage System	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	0.000	tons
Drainage System	Material Movement (Paved Roads)	sL = Road surface silt loading	0.100	g/m3
Drainage System	Material Movement (Paved Roads)	Wt. = Mean vehicle weight	32.000	tons
Drainage System	Material Movement (Paved Roads)	VMT = Vehicle miles traveled	0.000	miles
Drainage System	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	0.000	tons
Drainage System	Unstabilized Land and Wind Erosion	A = Area affected = L x W / 43560.0	0.007	acres
Drainage System	Unstabilized Land and Wind Erosion	TPConv = TSP/PM10 conversion	0.500	fraction
Drainage System	Unstabilized Land and Wind Erosion	CE = Control efficiency	0.630	fraction
Drainage System	Unstabilized Land and Wind Erosion	t = year (e.g. 0.65 year)	0.762	years
Drainage System	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t	0.000	tons
Drainage System	Soil Handling	u = Wind speed	10.500	mph
Drainage System	Soil Handling	m = Moisture content	0.250	fraction
Drainage System	Soil Handling	T = Mass of aggregate storage pile = L x W x 0.5 x 110 / 2000	8.910	tons
Drainage System	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	0.000	tons
Fencing	Soil Handling	u = Wind speed	10.500	mph

Project Type	Construction Activity	Calculation	Input	Units
Fencing	Soil Handling	m = Moisture content	0.250	fraction
Fencing	Soil Handling	T = Mass of aggregate storage pile = L x W x 0.5 x 110 / 2000	233.800	tons
Fencing	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	0.006	tons
Fencing	Unstabilized Land and Wind Erosion	A = Area affected = L x W / 43560.0	0.195	acres
Fencing	Unstabilized Land and Wind Erosion	TPConv = TSP/PM10 conversion	0.500	fraction
Fencing	Unstabilized Land and Wind Erosion	CE = Control efficiency *	0.000	fraction
Fencing	Unstabilized Land and Wind Erosion	t = year (e.g. 0.65 year)	0.406	years
Fencing	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t / 2000	0.015	tons
Fencing	Material Movement (Unpaved Roads)	s = Surface material silt content	0.043	fraction
Fencing	Material Movement (Unpaved Roads)	Wt. = Mean vehicle weight	32.000	tons
Fencing	Material Movement (Unpaved Roads)	VMT = Vehicle miles traveled	1295.500	miles
Fencing	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	0.018	tons
Fencing	Material Movement (Paved Roads)	sL = Road surface silt loading	0.100	g/m3
Fencing	Material Movement (Paved Roads)	Wt. = Mean vehicle weight	32.000	tons
Fencing	Material Movement (Paved Roads)	VMT = Vehicle miles traveled	1290.000	miles
Fencing	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	0.006	tons
Asphalt Option - Fuel Tanks	Asphalt Drying	A = Area of land affected = L x W x 0.0929	15.600	m2
Asphalt Option - Fuel Tanks	Asphalt Drying	Emission Factor	0.053	ton/acre
Asphalt Option - Fuel Tanks	Asphalt Drying	Conversion Factor m2 per acre	4046.860	m2/acre
Asphalt Option - Fuel Tanks	Asphalt Drying	VOC = EF x A / 4046.86	0.000	tons
Asphalt Option - Fuel Tanks	Asphalt Storage and Batching	Mass of Asphalt Loaded	0.189	lbs
Asphalt Option - Fuel Tanks	Asphalt Storage and Batching	PM10 = (0.027 + 0.00042) x T	0.000	tons
Asphalt Option - Fuel Tanks	Asphalt Storage and Batching	CO = (0.4 + 0.0004) x T	0.000	tons
Asphalt Option - Fuel Tanks	Asphalt Storage and Batching	NOx = (0.025) x T	0.000	tons
Asphalt Option - Fuel Tanks	Asphalt Storage and Batching	SOx = (0.0046) x T	0.000	tons
Asphalt Option - Fuel Tanks	Asphalt Storage and Batching	VOC = (0.0082 + 0.0042) x T	0.000	tons
Fuel Tanks	Concrete Mixing/Batching	V = Volume of asphalt = 0.111 x L x W x 1.25 / 3	7.764	yd3
Fuel Tanks	Concrete Mixing/Batching	PM10 = 0.037 x V	0.000	tons
Fuel Tanks	Material Movement (Unpaved Roads)	s = Surface material silt content	0.043	fraction
Fuel Tanks	Material Movement (Unpaved Roads)	Wt. = Mean vehicle weight	32.000	tons

Project Type	Construction Activity	Calculation	Input	Units
Fuel Tanks	Material Movement (Unpaved Roads)	VMT = Vehicle miles traveled	2582.700	miles
Fuel Tanks	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	0.035	tons
Fuel Tanks	Material Movement (Paved Roads)	sL = Road surface silt loading	0.100	g/m3
Fuel Tanks	Material Movement (Paved Roads)	Wt. = Mean vehicle weight	32.000	tons
Fuel Tanks	Material Movement (Paved Roads)	VMT = Vehicle miles traveled	2580.000	miles
Fuel Tanks	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	0.012	tons
Fuel Tanks	Unstabilized Land and Wind Erosion	A = Area affected = L x W / 43560.0	0.004	acres
Fuel Tanks	Unstabilized Land and Wind Erosion	TPConv = TSP/PM10 conversion	0.500	fraction
Fuel Tanks	Unstabilized Land and Wind Erosion	CE = Control efficiency	0.630	fraction
Fuel Tanks	Unstabilized Land and Wind Erosion	t = year (e.g. 0.65 year)	0.139	years
Fuel Tanks	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t	0.000	tons
Fuel Tanks	Soil Handling	u = Wind speed	10.500	mph
Fuel Tanks	Soil Handling	m = Moisture content	0.250	fraction
Fuel Tanks	Soil Handling	T = Mass of aggregate storage pile = L x W x 0.5 x 110 / 2000	4.617	tons
Fuel Tanks	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	0.249	tons
Landscaping	Material Movement (Unpaved Roads)	s = Surface material silt content	0.043	fraction
Landscaping	Material Movement (Unpaved Roads)	Wt. = Mean vehicle weight	32.000	tons
Landscaping	Material Movement (Unpaved Roads)	VMT = Vehicle miles traveled	20.400	miles
Landscaping	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	0.000	tons
Landscaping	Material Movement (Paved Roads)	sL = Road surface silt loading	0.100	g/m3
Landscaping	Material Movement (Paved Roads)	Wt. = Mean vehicle weight	32.000	tons
Landscaping	Material Movement (Paved Roads)	VMT = Vehicle miles traveled	0.000	miles
Landscaping	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	0.000	tons
Landscaping	Soil Handling	u = Wind speed	10.500	mph
Landscaping	Soil Handling	m = Moisture content	0.250	fraction
Landscaping	Soil Handling	T = Mass of aggregate storage pile = L x W x 0.5 x 110 / 2000	3437.500	tons
Landscaping	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	0.093	tons
Open Parking Lot @Grade - 10000 sqft	Material Movement (Paved Roads)	sL = Road surface silt loading	0.000	g/m3
Open Parking Lot @Grade - 10000 sqft	Material Movement (Paved Roads)	Wt. = Mean vehicle weight	32.000	tons

Project Type	Construction Activity	Calculation	Input	Units
Open Parking Lot @Grade - 10000 sqft	Material Movement (Paved Roads)	VMT = Vehicle miles traveled	1290.000	miles
Open Parking Lot @Grade - 10000 sqft	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	0.000	tons
Open Parking Lot @Grade - 10000 sqft	Material Movement (Unpaved Roads)	s = Surface material silt content	0.043	fraction
Open Parking Lot @Grade - 10000 sqft	Material Movement (Unpaved Roads)	Wt. = Mean vehicle weight	32.000	tons
Open Parking Lot @Grade - 10000 sqft	Material Movement (Unpaved Roads)	VMT = Vehicle miles traveled	1040.000	miles
Open Parking Lot @Grade - 10000 sqft	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	0.014	tons
Open Parking Lot @Grade - 10000 sqft	Soil Handling	u = Wind speed	10.500	mph
Open Parking Lot @Grade - 10000 sqft	Soil Handling	m = Moisture content	0.250	fraction
Open Parking Lot @Grade - 10000 sqft	Soil Handling	T = Mass of aggregate storage pile = L x W x 0.5 x 110 / 2000	275.000	tons
Open Parking Lot @Grade - 10000 sqft	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	0.007	tons
Open Parking Lot @Grade - 10000 sqft	Unstabilized Land and Wind Erosion	A = Area affected = L x W / 43560.0	0.230	acres
Open Parking Lot @Grade - 10000 sqft	Unstabilized Land and Wind Erosion	TPConv = TSP/PM10 conversion	0.500	fraction
Open Parking Lot @Grade - 10000 sqft	Unstabilized Land and Wind Erosion	CE = Control efficiency	0.000	fraction
Open Parking Lot @Grade - 10000 sqft	Unstabilized Land and Wind Erosion	t = year (e.g. 0.65 year)	0.139	years
Open Parking Lot @Grade - 10000 sqft	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t	0.006	tons
Open Parking Lot @Grade - 10000 sqft	Asphalt Drying	A = Area of land affected = L x W x 0.0929	0.000	m2
Open Parking Lot @Grade - 10000 sqft	Asphalt Drying	Emission Factor	0.053	ton/acre
Open Parking Lot @Grade - 10000 sqft	Asphalt Drying	Conversion Factor m2 per acre	4046.860	m2/acre
Open Parking Lot @Grade - 10000 sqft	Asphalt Drying	VOC = EF x A / 4046.86	0.000	tons
Asphalt Option - Parking Lot	Asphalt Drying	A = Area of land affected = L x W x 0.0929	283.300	m2
Asphalt Option - Parking Lot	Asphalt Drying	Emission Factor	0.053	ton/acre
Asphalt Option - Parking Lot	Asphalt Drying	Conversion Factor m2 per acre	4046.860	m2/acre
Asphalt Option - Parking Lot	Asphalt Drying	VOC = EF x A / 4046.86	0.004	tons
Asphalt Option - Parking Lot	Asphalt Storage and Batching	T = Mass of asphalt loaded = L x W x 0.1667 x 145 / 2000	3.424	lbs
Asphalt Option - Parking Lot	Asphalt Storage and Batching	PM10 = (0.027 + 0.00042) x T	0.000	tons
Asphalt Option - Parking Lot	Asphalt Storage and Batching	CO = (0.4 + 0.0004) x T	0.000	tons
Asphalt Option - Parking Lot	Asphalt Storage and Batching	NOx = (0.025) x T	0.000	tons

Project Type	Construction Activity	Calculation	Input	Units
Asphalt Option - Parking Lot	Asphalt Storage and Batching	SOx = (0.0046) x T	0.000	tons
Asphalt Option - Parking Lot	Asphalt Storage and Batching	VOC = (0.0082 + 0.0042) x T	0.000	tons
Parking Lot	Concrete Mixing/Batching	V = Volume of asphalt = 0.111 x L x W x 1.25 / 3	141.100	yd3
Parking Lot	Concrete Mixing/Batching	PM10 = 0.037 x V	0.003	tons
Parking Lot	Material Movement (Unpaved Roads)	s = Surface material silt content	0.043	fraction
Parking Lot	Material Movement (Unpaved Roads)	Wt. = Mean vehicle weight	32.000	tons
Parking Lot	Material Movement (Unpaved Roads)	VMT = Vehicle miles traveled	2595.900	miles
Parking Lot	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	0.036	tons
Parking Lot	Material Movement (Paved Roads)	sL = Road surface silt loading	0.100	g/m3
Parking Lot	Material Movement (Paved Roads)	Wt. = Mean vehicle weight	32.000	tons
Parking Lot	Material Movement (Paved Roads)	VMT = Vehicle miles traveled	2580.000	miles
Parking Lot	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	0.012	tons
Parking Lot	Soil Handling	u = Wind speed	10.500	mph
Parking Lot	Soil Handling	m = Moisture content	0.250	fraction
Parking Lot	Soil Handling	T = Mass of aggregate storage pile = L x W x 0.5 x 110 / 2000	83.900	tons
Parking Lot	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	0.002	tons
Parking Lot	Unstabilized Land and Wind Erosion	A = Area affected = L x W / 43560.0	0.070	acres
Parking Lot	Unstabilized Land and Wind Erosion	TPConv = TSP/PM10 conversion	0.500	fraction
Parking Lot	Unstabilized Land and Wind Erosion	CE = Control efficiency	0.630	fraction
Parking Lot	Unstabilized Land and Wind Erosion	t = year (e.g. 0.65 year)	0.139	years
Parking Lot	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t	0.001	tons
Asphalt Option - Service Road	Asphalt Drying	A = Area of land affected = L x W x 0.0929	2675.500	m2
Asphalt Option - Service Road	Asphalt Drying	Emission Factor	0.053	fraction
Asphalt Option - Service Road	Asphalt Drying	Conversion Factor m2 per acre	4046.860	lbs/l
Asphalt Option - Service Road	Asphalt Drying	VOC = EF x A / 4046.86	0.035	tons
Asphalt Option - Service Road	Asphalt Storage and Batching	T = Mass of asphalt loaded = L x W x 0.1667 x 145 / 2000	32.335	tons
Asphalt Option - Service Road	Asphalt Storage and Batching	PM10 = (0.027 + 0.00042) x T	0.000	tons
Asphalt Option - Service Road	Asphalt Storage and Batching	CO = (0.4 + 0.0004) x T	0.000	tons
Asphalt Option - Service Road	Asphalt Storage and Batching	NOx = (0.025) x T	0.000	tons
Asphalt Option - Service Road	Asphalt Storage and Batching	SOx = (0.0046) x T	0.000	tons
Asphalt Option - Service Road	Asphalt Storage and Batching	VOC = (0.0082 + 0.0042) x T	0.000	tons

Project Type	Construction Activity	Calculation	Input	Units
Service Road	Concrete Mixing/Batching	V = Volume of asphalt = 0.111 x L x W x 1.25 / 3	1332.000	yd3
Service Road	Concrete Mixing/Batching	PM10 = 0.037 x V	0.025	tons
Service Road	Material Movement (Unpaved Roads)	s = Surface material silt content	0.043	fraction
Service Road	Material Movement (Unpaved Roads)	Wt. = Mean vehicle weight	32.000	tons
Service Road	Material Movement (Unpaved Roads)	VMT = Vehicle miles traveled	2782.800	miles
Service Road	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	0.038	tons
Service Road	Material Movement (Paved Roads)	sL = Road surface silt loading	0.100	g/m3
Service Road	Material Movement (Paved Roads)	Wt. = Mean vehicle weight	32.000	tons
Service Road	Material Movement (Paved Roads)	VMT = Vehicle miles traveled	2580.000	miles
Service Road	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	0.012	tons
Service Road	Unstabilized Land and Wind Erosion	A = Area affected = L x W / 43560.0	0.661	acres
Service Road	Unstabilized Land and Wind Erosion	TPConv = TSP/PM10 conversion	0.500	fraction
Service Road	Unstabilized Land and Wind Erosion	CE = Control efficiency	0.630	fraction
Service Road	Unstabilized Land and Wind Erosion	t = year (e.g. 0.65 year)	0.139	years
Service Road	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t	0.006	tons
Service Road	Soil Handling	u = Wind speed	10.500	mph
Service Road	Soil Handling	m = Moisture content	0.250	fraction
Service Road	Soil Handling	T = Mass of aggregate storage pile = L x W x 0.5 x 110 / 2000	792.000	tons
Service Road	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	0.021	tons
Site Work - 10000 sqft	Material Movement (Unpaved Roads)	s = Surface material silt content	0.043	fraction
Site Work - 10000 sqft	Material Movement (Unpaved Roads)	Wt. = Mean vehicle weight	32.000	tons
Site Work - 10000 sqft	Material Movement (Unpaved Roads)	VMT = Vehicle miles traveled	22484.040	miles
Site Work - 10000 sqft	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	0.308	tons
Site Work - 10000 sqft	Material Movement (Paved Roads)	sL = Road surface silt loading	0.100	g/m3
Site Work - 10000 sqft	Material Movement (Paved Roads)	Wt. = Mean vehicle weight	32.000	tons
Site Work - 10000 sqft	Material Movement (Paved Roads)	VMT = Vehicle miles traveled	22056.586	miles
Site Work - 10000 sqft	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	0.102	tons

Project Type	Construction Activity	Calculation	Input	Units
Site Work - 10000 sqft	Soil Handling	u = Wind speed	10.500	mph
Site Work - 10000 sqft	Soil Handling	m = Moisture content	0.250	fraction
Site Work - 10000 sqft	Soil Handling	T = Mass of aggregate storage pile = L x W x 0.5 x 110 / 2000	275.000	tons
Site Work - 10000 sqft	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	0.007	tons
Site Work - 10000 sqft	Unstabilized Land and Wind Erosion	A = Area affected = L x W / 43560.0	0.230	acres
Site Work - 10000 sqft	Unstabilized Land and Wind Erosion	TPConv = TSP/PM10 conversion	0.500	fraction
Site Work - 10000 sqft	Unstabilized Land and Wind Erosion	CE = Control efficiency *	0.000	fraction
Site Work - 10000 sqft	Unstabilized Land and Wind Erosion	t = year (e.g. 0.65 year)	1.167	years
Site Work - 10000 sqft	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t	0.051	tons

* Conservatively set control efficiency to zero. Watering will be performed once every 2 hours when winds are greater than 5mph, therefore actual control efficiency will be greater than zero.

Table D2. 2022 Electric CUP, construction-phase fugitives criteria air pollutant emissions.

Project Type	Construction Activity	Emissions (tons/yr)					
		NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Concrete Mixing/Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Mixing/Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Asphalt Drying	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Mixing/Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Mixing/Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Emissions (tons/yr)					
		NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.57E-03	2.14E-03
Site Work - 10000 sqft	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.58E-02	2.58E-03
Site Work - 10000 sqft	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.22E-04	9.33E-05
Asphalt Option - Fuel Tanks	Asphalt Drying	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Fuel Tanks	Asphalt Storage and Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Parking Lot	Asphalt Drying	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Parking Lot	Asphalt Storage and Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Service Road	Asphalt Drying	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Service Road	Asphalt Storage and Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table D3. 2022 Electric CUP, construction-phase fugitives greenhouse gas emissions.

Project Type	Construction Activity	Emissions (tons/yr)			
		CH4	N2O	CO2	CO2e
Building - 100000 sqft- 10 stories	Concrete Mixing/Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Mixing/Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Emissions (tons/yr)			
		CH4	N2O	CO2	CO2e
Landscaping	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Asphalt Drying	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Mixing/Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Mixing/Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Fuel Tanks	Asphalt Drying	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Fuel Tanks	Asphalt Storage and Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Parking Lot	Asphalt Drying	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Parking Lot	Asphalt Storage and Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Service Road	Asphalt Drying	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Service Road	Asphalt Storage and Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table D4. 2023 Electric CUP, construction-phase fugitives criteria air pollutant emissions.

Project Type	Construction Activity	Emissions (tons/yr)					
		NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Concrete Mixing/Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E-02	3.04E-03
Building - 100000 sqft- 10 stories	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E-03	1.06E-03
Building - 100000 sqft- 10 stories	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-02	1.29E-03
Drainage System	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.72E-05	2.72E-06
Drainage System	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-04	1.72E-05
Drainage System	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.79E-04	2.68E-05
Fencing	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.00E-03	1.50E-03
Fencing	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.78E-02	1.78E-03
Fencing	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.31E-03	9.47E-04
Fencing	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-02	2.26E-03
Fencing	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-02	2.26E-03
Fuel Tanks	Concrete Mixing/Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-04	2.15E-05
Fuel Tanks	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-02	2.99E-03
Fuel Tanks	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.54E-02	3.54E-03
Fuel Tanks	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E-01	3.74E-02
Fuel Tanks	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-08	2.92E-09
Landscaping	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Asphalt Drying	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	1.42E-03
Open Parking Lot @Grade - 10000 sqft	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.43E-03	1.11E-03
Open Parking Lot @Grade - 10000 sqft	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.06E-03	9.09E-04
Parking Lot	Concrete Mixing/Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E-03	3.92E-04
Parking Lot	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-02	2.99E-03
Parking Lot	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.55E-02	3.55E-03
Parking Lot	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.27E-03	3.40E-04
Parking Lot	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.82E-04	1.02E-04
Service Road	Concrete Mixing/Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.46E-02	3.70E-03
Service Road	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-02	2.99E-03
Service Road	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.81E-02	3.81E-03
Service Road	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E-02	3.21E-03

Project Type	Construction Activity	Emissions (tons/yr)					
		NOx	CO	VOC	SO2	PM10	PM2.5
Service Road	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.44E-03	9.66E-04
Site Work - 10000 sqft	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.13E-02	1.28E-02
Site Work - 10000 sqft	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-01	1.54E-02
Site Work - 10000 sqft	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.72E-03	5.58E-04
Site Work - 10000 sqft	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.56E-02	3.83E-03
Asphalt Option - Fuel Tanks	Asphalt Drying	0.00E+00	0.00E+00	2.04E-04	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Fuel Tanks	Asphalt Storage and Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Parking Lot	Asphalt Drying	0.00E+00	0.00E+00	3.71E-03	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Parking Lot	Asphalt Storage and Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Service Road	Asphalt Drying	0.00E+00	0.00E+00	3.50E-02	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Service Road	Asphalt Storage and Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table D5. 2023 Electric CUP, construction-phase fugitives greenhouse gas emissions.

Project Type	Construction Activity	Emissions (tons/yr)			
		CH4	N2O	CO2	CO2e
Building - 100000 sqft- 10 stories	Concrete Mixing/Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Mixing/Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Emissions (tons/yr)			
		CH4	N2O	CO2	CO2e
Landscaping	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Asphalt Drying	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Mixing/Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Mixing/Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Fuel Tanks	Asphalt Drying	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Fuel Tanks	Asphalt Storage and Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Parking Lot	Asphalt Drying	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Parking Lot	Asphalt Storage and Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Service Road	Asphalt Drying	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Service Road	Asphalt Storage and Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table D6. 2024 Electric CUP, construction-phase fugitives criteria air pollutant emissions.

Project Type	Construction Activity	Emissions (tons/yr)					
		NOx	CO	VOC	SO2	PM10	PM2.5
Building - 100000 sqft- 10 stories	Concrete Mixing/Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E-02	3.33E-03
Building - 100000 sqft- 10 stories	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.66E-03	1.17E-03
Building - 100000 sqft- 10 stories	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E-02	1.41E-03

Project Type	Construction Activity	Emissions (tons/yr)					
		NOx	CO	VOC	SO2	PM10	PM2.5
Drainage System	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.98E-05	2.98E-06
Drainage System	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-04	1.89E-05
Drainage System	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-04	2.94E-05
Fencing	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Mixing/Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-04	2.80E-05
Landscaping	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.28E-02	1.39E-02
Open Parking Lot @Grade - 10000 sqft	Asphalt Drying	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Mixing/Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Mixing/Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.25E-02	1.06E-02
Site Work - 10000 sqft	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-01	1.28E-02
Site Work - 10000 sqft	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.08E-03	4.63E-04

Project Type	Construction Activity	Emissions (tons/yr)					
		NOx	CO	VOC	SO2	PM10	PM2.5
Site Work - 10000 sqft	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-02	3.18E-03
Asphalt Option - Fuel Tanks	Asphalt Drying	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Fuel Tanks	Asphalt Storage and Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Parking Lot	Asphalt Drying	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Parking Lot	Asphalt Storage and Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Service Road	Asphalt Drying	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Service Road	Asphalt Storage and Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table D7. 2024 Electric CUP, construction-phase fugitives greenhouse gas emissions.

Project Type	Construction Activity	Emissions (tons/yr)			
		CH4	N2O	CO2	CO2e
Building - 100000 sqft- 10 stories	Concrete Mixing/Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 100000 sqft- 10 stories	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Concrete Mixing/Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Landscaping	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Asphalt Drying	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Emissions (tons/yr)			
		CH4	N2O	CO2	CO2e
Open Parking Lot @Grade - 10000 sqft	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Open Parking Lot @Grade - 10000 sqft	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Concrete Mixing/Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Concrete Mixing/Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Service Road	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Fuel Tanks	Asphalt Drying	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Fuel Tanks	Asphalt Storage and Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Parking Lot	Asphalt Drying	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Parking Lot	Asphalt Storage and Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Service Road	Asphalt Drying	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Asphalt Option - Service Road	Asphalt Storage and Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table D8. Pump house and boiler house, construction-phase fugitives inputs and PM10 emissions.

Project Type	Construction Activity	Calculation	Input	Units
Building - 10000 sqft- 1 story	Concrete Mixing/Batching	V = Volume of asphalt = 0.111 x L x W x 1.25 / 3	313.344	yd3
Building - 10000 sqft- 1 story	Concrete Mixing/Batching	PM10 = 0.037 x V	0.006	tons
Building - 10000 sqft- 1 story	Material Movement (Paved Roads)	sL = Road surface silt loading	0.100	g/m3
Building - 10000 sqft- 1 story	Material Movement (Paved Roads)	Wt. = Mean vehicle weight	32.000	tons
Building - 10000 sqft- 1 story	Material Movement (Paved Roads)	VMT = Vehicle miles traveled	1747.950	miles
Building - 10000 sqft- 1 story	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	0.008	tons

Project Type	Construction Activity	Calculation	Input	Units
Building - 10000 sqft- 1 story	Material Movement (Unpaved Roads)	s = Surface material silt content	0.043	fraction
Building - 10000 sqft- 1 story	Material Movement (Unpaved Roads)	Wt. = Mean vehicle weight	32.000	tons
Building - 10000 sqft- 1 story	Material Movement (Unpaved Roads)	VMT = Vehicle miles traveled	1747.950	miles
Building - 10000 sqft- 1 story	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	0.024	tons
Drainage System	Material Movement (Unpaved Roads)	s = Surface material silt content	0.043	fraction
Drainage System	Material Movement (Unpaved Roads)	Wt. = Mean vehicle weight	32.000	tons
Drainage System	Material Movement (Unpaved Roads)	VMT = Vehicle miles traveled	26.100	miles
Drainage System	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	0.000	tons
Drainage System	Material Movement (Paved Roads)	sL = Road surface silt loading	0.100	g/m3
Drainage System	Material Movement (Paved Roads)	Wt. = Mean vehicle weight	32.000	tons
Drainage System	Material Movement (Paved Roads)	VMT = Vehicle miles traveled	0.000	miles
Drainage System	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	0.000	tons
Drainage System	Unstabilized Land and Wind Erosion	A = Area affected = L x W / 43560.0	0.545	acres
Drainage System	Unstabilized Land and Wind Erosion	TPConv = TSP/PM10 conversion	0.500	fraction
Drainage System	Unstabilized Land and Wind Erosion	CE = Control efficiency	0.630	fraction
Drainage System	Unstabilized Land and Wind Erosion	t = year (e.g. 0.65 year)	1.000	years
Drainage System	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t	0.038	tons
Drainage System	Soil Handling	u = Wind speed	5.000	mph
Drainage System	Soil Handling	m = Moisture content	0.250	fraction
Drainage System	Soil Handling	T = Mass of aggregate storage pile = L x W x 0.5 x 110 / 2000	653.100	tons
Drainage System	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	0.007	tons
Fencing	Soil Handling	u = Wind speed	5.000	mph
Fencing	Soil Handling	m = Moisture content	0.250	fraction
Fencing	Soil Handling	T = Mass of aggregate storage pile = L x W x 0.5 x 110 / 2000	110.000	tons
Fencing	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	0.001	tons
Fencing	Unstabilized Land and Wind Erosion	A = Area affected = L x W / 43560.0	0.092	acres
Fencing	Unstabilized Land and Wind Erosion	TPConv = TSP/PM10 conversion	0.500	fraction
Fencing	Unstabilized Land and Wind Erosion	CE = Control efficiency	0.630	fraction

Project Type	Construction Activity	Calculation	Input	Units
Fencing	Unstabilized Land and Wind Erosion	t = year (e.g. 0.65 year)	1.000	years
Fencing	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t	0.006	tons
Fencing	Material Movement (Unpaved Roads)	s = Surface material silt content	0.043	fraction
Fencing	Material Movement (Unpaved Roads)	Wt. = Mean vehicle weight	32.000	tons
Fencing	Material Movement (Unpaved Roads)	VMT = Vehicle miles traveled	1292.600	miles
Fencing	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	0.018	tons
Fencing	Material Movement (Paved Roads)	sL = Road surface silt loading	0.100	g/m3
Fencing	Material Movement (Paved Roads)	Wt. = Mean vehicle weight	32.000	tons
Fencing	Material Movement (Paved Roads)	VMT = Vehicle miles traveled	1290.000	miles
Fencing	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	0.006	tons
Fuel Tanks	Asphalt Drying	A = Area of land affected = L x W x 0.0929	8.918	m2
Fuel Tanks	Asphalt Drying	Emission Factor	0.053	ton/acre
Fuel Tanks	Asphalt Drying	Conversion Factor m2 per acre	4046.860	m2/acre
Fuel Tanks	Asphalt Drying	VOC = EF x A / 4046.86	0.000	tons
Fuel Tanks	Asphalt Storage and Batching	T = Mass of asphalt loaded = L x W x 0.1667 x 145 / 2000	1.160	tons
Fuel Tanks	Asphalt Storage and Batching	PM10 = (0.027 + 0.00042) x T	0.000	tons
Fuel Tanks	Asphalt Storage and Batching	CO = (0.4 + 0.0004) x T	0.000	tons
Fuel Tanks	Asphalt Storage and Batching	NOx = (0.025) x T	0.000	tons
Fuel Tanks	Asphalt Storage and Batching	SOx = (0.0046) x T	0.000	tons
Fuel Tanks	Asphalt Storage and Batching	VOC = (0.0082 + 0.0042) x T	0.000	tons
Fuel Tanks	Material Movement (Unpaved Roads)	s = Surface material silt content	0.043	fraction
Fuel Tanks	Material Movement (Unpaved Roads)	Wt. = Mean vehicle weight	32.000	tons
Fuel Tanks	Material Movement (Unpaved Roads)	VMT = Vehicle miles traveled	3872.000	miles
Fuel Tanks	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	0.053	tons
Fuel Tanks	Material Movement (Paved Roads)	sL = Road surface silt loading	0.100	g/m3
Fuel Tanks	Material Movement (Paved Roads)	Wt. = Mean vehicle weight	32.000	tons
Fuel Tanks	Material Movement (Paved Roads)	VMT = Vehicle miles traveled	3870.000	miles
Fuel Tanks	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	0.018	tons
Fuel Tanks	Unstabilized Land and Wind Erosion	A = Area affected = L x W / 43560.0	0.002	acres
Fuel Tanks	Unstabilized Land and Wind Erosion	TPConv = TSP/PM10 conversion	0.500	fraction

Project Type	Construction Activity	Calculation	Input	Units
Fuel Tanks	Unstabilized Land and Wind Erosion	CE = Control efficiency	0.630	fraction
Fuel Tanks	Unstabilized Land and Wind Erosion	t = year (e.g. 0.65 year)	1.000	years
Fuel Tanks	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t	0.000	tons
Fuel Tanks	Soil Handling	u = Wind speed	5.000	mph
Fuel Tanks	Soil Handling	m = Moisture content	0.250	fraction
Fuel Tanks	Soil Handling	T = Mass of aggregate storage pile = L x W x 0.5 x 110 / 2000	2.640	tons
Fuel Tanks	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	0.000	tons
Parking Lot	Asphalt Drying	A = Area of land affected = L x W x 0.0929	68.600	m2
Parking Lot	Asphalt Drying	Emission Factor	0.053	ton/acre
Parking Lot	Asphalt Drying	Conversion Factor m2 per acre	4046.860	m2/acre
Parking Lot	Asphalt Drying	VOC = EF x A / 4046.86	0.001	tons
Parking Lot	Asphalt Storage and Batching	T = Mass of asphalt loaded = L x W x 0.1667 x 145 / 2000	8.919	tons
Parking Lot	Asphalt Storage and Batching	PM10 = (0.027 + 0.00042) x T	0.000	tons
Parking Lot	Asphalt Storage and Batching	CO = (0.4 + 0.0004) x T	0.000	tons
Parking Lot	Asphalt Storage and Batching	NOx = (0.025) x T	0.000	tons
Parking Lot	Asphalt Storage and Batching	SOx = (0.0046) x T	0.000	tons
Parking Lot	Asphalt Storage and Batching	VOC = (0.0082 + 0.0042) x T	0.000	tons
Parking Lot	Material Movement (Unpaved Roads)	s = Surface material silt content	0.043	fraction
Parking Lot	Material Movement (Unpaved Roads)	Wt. = Mean vehicle weight	32.000	tons
Parking Lot	Material Movement (Unpaved Roads)	VMT = Vehicle miles traveled	3875.200	miles
Parking Lot	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	0.053	tons
Parking Lot	Material Movement (Paved Roads)	sL = Road surface silt loading	0.100	g/m3
Parking Lot	Material Movement (Paved Roads)	Wt. = Mean vehicle weight	32.000	tons
Parking Lot	Material Movement (Paved Roads)	VMT = Vehicle miles traveled	3870.000	miles
Parking Lot	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	0.018	tons
Parking Lot	Soil Handling	u = Wind speed	5.000	mph
Parking Lot	Soil Handling	m = Moisture content	0.250	fraction
Parking Lot	Soil Handling	T = Mass of aggregate storage pile = L x W x 0.5 x 110 / 2000	20.300	tons
Parking Lot	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	0.000	tons
Parking Lot	Unstabilized Land and Wind Erosion	A = Area affected = L x W / 43560.0	0.017	acres
Parking Lot	Unstabilized Land and Wind Erosion	TPConv = TSP/PM10 conversion	0.500	fraction

Project Type	Construction Activity	Calculation	Input	Units
Parking Lot	Unstabilized Land and Wind Erosion	CE = Control efficiency	0.630	fraction
Parking Lot	Unstabilized Land and Wind Erosion	t = year (e.g. 0.65 year)	1.000	years
Parking Lot	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t	0.001	tons
Site Work - 10000 sqft	Material Movement (Unpaved Roads)	s = Surface material silt content	0.043	fraction
Site Work - 10000 sqft	Material Movement (Unpaved Roads)	Wt. = Mean vehicle weight	32.000	tons
Site Work - 10000 sqft	Material Movement (Unpaved Roads)	VMT = Vehicle miles traveled	2605.000	miles
Site Work - 10000 sqft	Material Movement (Unpaved Roads)	PM10 = 1.5 x [(s/12)^0.9] x [(Wt./3)^0.45] x VMT	0.036	tons
Site Work - 10000 sqft	Material Movement (Paved Roads)	sL = Road surface silt loading	0.100	g/m3
Site Work - 10000 sqft	Material Movement (Paved Roads)	Wt. = Mean vehicle weight	32.000	tons
Site Work - 10000 sqft	Material Movement (Paved Roads)	VMT = Vehicle miles traveled	2580.000	miles
Site Work - 10000 sqft	Material Movement (Paved Roads)	PM10 = 0.0022 x (sL^0.91) x (Wt^1.02) x VMT	0.012	tons
Site Work - 10000 sqft	Soil Handling	u = Wind speed	5.000	mph
Site Work - 10000 sqft	Soil Handling	m = Moisture content	0.250	fraction
Site Work - 10000 sqft	Soil Handling	T = Mass of aggregate storage pile = L x W x 0.5 x 110 / 2000	275.000	tons
Site Work - 10000 sqft	Soil Handling	PM10 = T x 0.35 x 0.0032 x [(u/5)^1.3] / [(m/2)^1.4]	0.003	tons
Site Work - 10000 sqft	Unstabilized Land and Wind Erosion	A = Area affected = L x W / 43560.0	0.230	acres
Site Work - 10000 sqft	Unstabilized Land and Wind Erosion	TPConv = TSP/PM10 conversion	0.500	fraction
Site Work - 10000 sqft	Unstabilized Land and Wind Erosion	CE = Control efficiency	0.630	fraction
Site Work - 10000 sqft	Unstabilized Land and Wind Erosion	t = year (e.g. 0.65 year)	1.000	years
Site Work - 10000 sqft	Unstabilized Land and Wind Erosion	PM10 = 0.38 x A x TPConv x (1-CE) x t	0.016	tons

* Conservatively set control efficiency to zero. Watering will be performed once every 2 hours when winds are greater than 5mph, therefore actual control efficiency will be greater than zero.

Table D9. 2022 Pump house and boiler house, construction-phase fugitives criteria air pollutant emissions.

Project Type	Construction Activity	Emissions (tons/yr)					
		NOx	CO	VOC	SO2	PM10	PM2.5
Building - 10000 sqft- 1 story	Concrete Mixing/Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E-03	3.05E-04
Building - 10000 sqft- 1 story	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.85E-03	7.11E-04
Building - 10000 sqft- 1 story	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.39E-03	8.39E-04

Project Type	Construction Activity	Emissions (tons/yr)					
		NOx	CO	VOC	SO2	PM10	PM2.5
Drainage System	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-04	1.25E-05
Drainage System	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-02	2.02E-03
Drainage System	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.36E-03	3.54E-04
Fencing	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.97E-04	5.96E-05
Fencing	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.27E-03	3.40E-04
Fencing	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.21E-03	6.21E-04
Fencing	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E-03	5.25E-04
Fuel Tanks	Asphalt Drying	0.00E+00	0.00E+00	4.10E-05	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Asphalt Storage and Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-02	1.86E-03
Fuel Tanks	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.30E-03	1.57E-03
Fuel Tanks	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.93E-05	7.40E-06
Fuel Tanks	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.53E-06	1.43E-06
Parking Lot	Asphalt Drying	0.00E+00	0.00E+00	3.15E-04	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Asphalt Storage and Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-02	1.86E-03
Parking Lot	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.30E-03	1.57E-03
Parking Lot	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.33E-05	1.10E-05
Parking Lot	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.19E-04	6.29E-05
Site Work - 10000 sqft	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-02	1.25E-03
Site Work - 10000 sqft	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.20E-03	1.05E-03
Site Work - 10000 sqft	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.93E-04	1.49E-04
Site Work - 10000 sqft	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.67E-03	8.51E-04

Table D10. 2022 Pump house and boiler house, construction-phase fugitives greenhouse gas emissions.

Project Type	Construction Activity	Emissions (tons/yr)			
		CH4	N2O	CO2	CO2e
Building - 10000 sqft- 1 story	Concrete Mixing/Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Emissions (tons/yr)			
		CH4	N2O	CO2	CO2e
Drainage System	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Asphalt Drying	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Asphalt Storage and Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Asphalt Drying	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Asphalt Storage and Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table D11. 2023 Pump house and boiler house, construction-phase fugitives criteria air pollutant emissions.

Project Type	Construction Activity	Emissions (tons/yr)					
		NOx	CO	VOC	SO2	PM10	PM2.5
Building - 10000 sqft- 1 story	Concrete Mixing/Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.76E-03	5.65E-04
Building - 10000 sqft- 1 story	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.27E-03	1.32E-03
Building - 10000 sqft- 1 story	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-02	1.55E-03
Drainage System	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.32E-04	2.32E-05
Drainage System	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E-02	3.73E-03
Drainage System	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.36E-03	6.55E-04
Fencing	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.35E-04	1.10E-04

Project Type	Construction Activity	Emissions (tons/yr)					
		NOx	CO	VOC	SO2	PM10	PM2.5
Fencing	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.20E-03	6.30E-04
Fencing	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-02	1.15E-03
Fencing	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.89E-03	9.72E-04
Fuel Tanks	Asphalt Drying	0.00E+00	0.00E+00	7.58E-05	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Asphalt Storage and Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.44E-02	3.44E-03
Fuel Tanks	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-02	2.92E-03
Fuel Tanks	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.13E-05	1.37E-05
Fuel Tanks	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.76E-05	2.65E-06
Parking Lot	Asphalt Drying	0.00E+00	0.00E+00	5.83E-04	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Asphalt Storage and Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.45E-02	3.45E-03
Parking Lot	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-02	2.92E-03
Parking Lot	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-04	2.03E-05
Parking Lot	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.76E-04	1.16E-04
Site Work - 10000 sqft	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.32E-02	2.32E-03
Site Work - 10000 sqft	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.78E-03	1.94E-03
Site Work - 10000 sqft	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-03	2.76E-04
Site Work - 10000 sqft	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-02	1.57E-03

Table D12. 2023 Pump house and boiler house, construction-phase fugitives greenhouse gas emissions.

Project Type	Construction Activity	Emissions (tons/yr)			
		CH4	N2O	CO2	CO2e
Building - 10000 sqft- 1 story	Concrete Mixing/Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Building - 10000 sqft- 1 story	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Drainage System	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fencing	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Project Type	Construction Activity	Emissions (tons/yr)			
		CH4	N2O	CO2	CO2e
Fuel Tanks	Asphalt Drying	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Asphalt Storage and Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fuel Tanks	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Asphalt Drying	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Asphalt Storage and Batching	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Parking Lot	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Movement (Unpaved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Material Movement (Paved Roads)	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Soil Handling	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Site Work - 10000 sqft	Unstabilized Land and Wind Erosion	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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