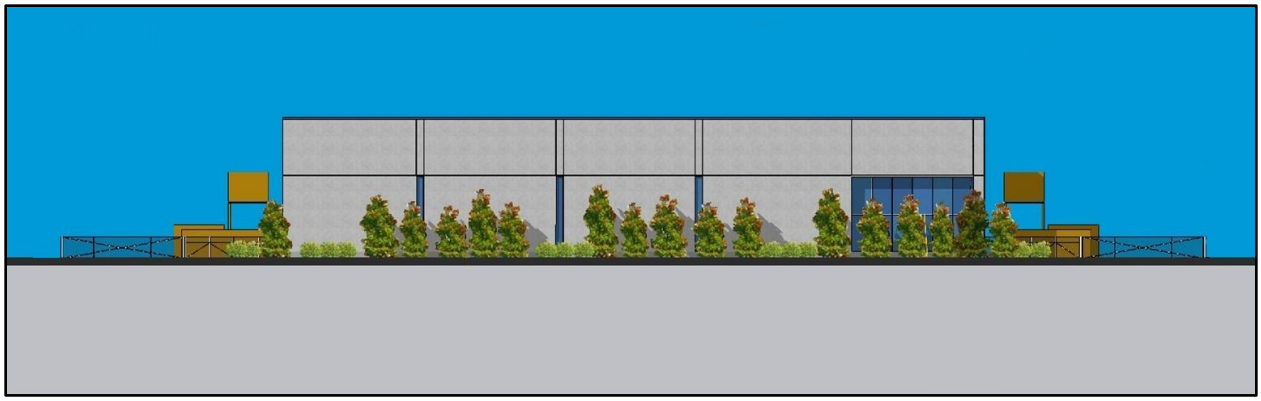
California Environmental Quality Act
Initial Study and Mitigated Negative Declaration
Commerce Energy Storage 2023

COMMERCE ENERGY STORAGE, LLC

6920 E. SLAUSON AVENUE COMMERCE, CA 90040

6904 E. SLAUSON AVENUE COMMERCE, CA 90040

6319-6337 GARFIELD AVENUE COMMERCE, CA 90040



April 2024

Prepared For:
City of Commerce Planning Division
2535 Commerce Way
Commerce, CA 90040

Prepared By:
6 Executive Circle, Suite 200
Irvine, CA 92614

Mitigated Negative Declaration

Project Name: Commerce Energy Storage 2023

Project Address: 6920 East Slauson Avenue, 6904 East Slauson Avenue, and 6319-6337 Garfield Avenue, Commerce, CA 90040

Applicant: Commerce Energy Storage, LLC, 2121 N California Blvd, Suite 1000 Walnut Creek, CA 94596

City and County: City of Commerce, Los Angeles County

Description: The City of Commerce, in its capacity as the Lead Agency under the California Environmental Quality Act (CEQA), is reviewing a request by Commerce Energy Storage, LLC (CES) to 1) construct and operate a battery energy storage system (BESS) on a 4.8-acre site at 6920 Slauson Avenue (6920 Site) and 2) approve a Site Plan Modification for a BESS project approved on May 18, 2022 (Conditional Use Permit No. 548 - 6904 E. Slauson Avenue) at the adjacent 2.6-acre site (6904 Site). Both sites are located in the City's Redevelopment Project Area 1 in the Commerce Park Planning Area. At the 6920 Site (Assessor Parcel Numbers [APNs] 6356-017-021 and 6356-017-020), facilities would include lithium-ion batteries and equipment housed in single-story buildings, an equipment storage room, maintenance staff office space, and six parking spaces. At the 6904 Site (APNs 6356-017-028 and 6356-017-900), the Site Plan Modification would add a transformer and associated substation equipment identical to the previously approved equipment, move the substation to a less visible location, reduce the size of the previously approved building, approve an alternate routing of underground utilities through adjacent parcel APN 6356-018-010, and extend by approximately 650 feet the previously approved underground electric tie-line under Garfield Avenue to accommodate a more efficient design and SCE's requested location for connection to the Laguna Bell Substation.

The Site Plan Modification would adjust the location of the riser pole within Southern California Edison's (SCE's) Laguna Bell Substation property and underground certain power lines within SCE's property to accommodate the proposed tie-line connection. Since granting access to CES to make the tie-line connection and construct the riser pole requires authorization from the California Public Utility Commission (CPUC), these activities are included in the analyses. The Commerce Energy Storage 2023 project, or "Project" as referred to herein, is the action as a whole, consisting of the City's approval of the proposed development of the 6920 Site and the proposed Site Plan Modification for the 6904 Site, and the CPUC's approval of actions proposed by SCE within its substation property to accommodate the proposed tie-line.

Findings: The environmental analysis provided in the attached Initial Study concludes that the proposed Project with mitigation will not result in any potentially significant environmental impact. For this reason, the City of Commerce determined that a Mitigated Negative Declaration is the appropriate CEQA document for the proposed Project. The following findings may also be made based on the analysis contained in the attached Initial Study:

- The proposed Project will not have the potential to degrade the quality of the environment.
- The proposed Project will not have the potential to achieve short-term goals to the disadvantage of long-term goals.
- The proposed Project will not have impacts that are individually limited but cumulatively considerable, when considering planned or proposed development in the City.
- The proposed Project will not have environmental effects that will adversely affect humans, either directly or indirectly.

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List of Acronyms and Abbreviations

Acronym	Name
AC	Alternating Current
Applicant	Commerce Energy Storage, LLC
BESS	Battery Energy Storage System
BMPs	Best Management Practices
C & D	Construction and Demolition
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emission Estimator Model
CAMEO	California Metal Enameling Company
CASQA	California Stormwater Quality Association
CDFW	California Department of Fish and Wildlife
CDWR	California Department of Water Resources
CEQA	California Environmental Quality Act
CES	Commerce Energy Storage, LLC
CFR	Code of Federal Regulations
CHRIS	California Historical Resources Information System
CNDDB	California Natural Diversity Data Base
CO2	Carbon Dioxide
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
dB	Decibel
DC	Direct Current
DOT	Department of Transportation
DTSC	Department of Toxic Substances Control
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
GhG	Greenhouse Gas
kV	Kilovolts
LACFD	Los Angeles County Fire Department
MBTA	Migratory Bird Treaty Act
MSW	Municipal Solid Waste
MW	Megawatt
MWh	Megawatt-hour
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NFPA	National Fire Protection Association
NOx	Oxides of Nitrogen
NPDES	National Pollutant Discharge Elimination System
PI	Plasticity Index
PM	Particulate Matter
POI	point of interconnection
QSP	Qualified SWPPP Practitioner
ROGs	Reactive Organic Gasses
ROW	Right-of-way
RWQCB	Regional Water Quality Control Board
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SIC	Standard Industrial Classification
SWPPP	Storm Water Pollution Prevention Plan
VHFHSZ	Very High Fire Hazard Severity Zone

1 INTRODUCTION

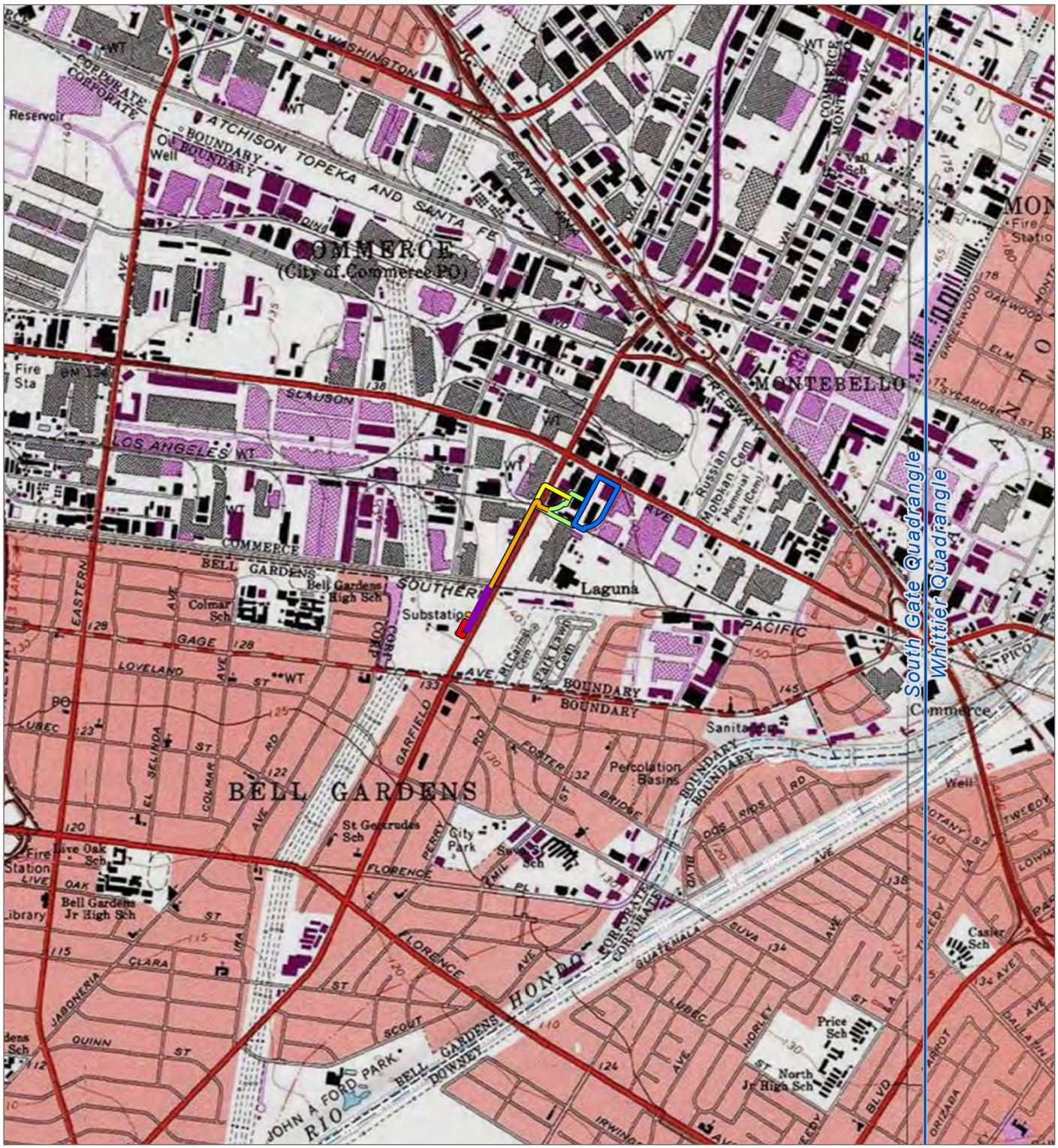
1.1 Project Background and Overview

On May 18, 2022, the Planning Commission of the City of Commerce (City) approved Conditional Use Permit No. 548 and Variance No. 21-03 - 6904 E. Slauson Avenue for Commerce Energy Storage, LLC (CES or Applicant) to construct and operate a battery energy storage facility (BESS) on a 2.6-acre site (6904 Site) at 6904 East Slauson Avenue (APNs 6356-017-028 and 6356-017-900), and an associated underground 230 kilovolt (kV) electric tie-line in the City of Commerce, California.

CES now requests the City to approve 1) construction and operation of a BESS on a 4.8-acre site at 6920 Slauson Avenue (6920 Site) and 2) a Site Plan Modification for the adjacent 6904 Site. Both sites are located in the City's Redevelopment Project Area 1 in the Commerce Park Planning Area. At the 6920 Site (Assessor Parcel Numbers [APNs] 6356-017-021 and 6356-017-020), facilities would include lithium-ion batteries and control equipment housed in single-story buildings, an equipment storage room, maintenance staff office space, and six parking spaces. The batteries would connect to the existing Southern California Edison (SCE) regional electric grid via a small substation located at the previously approved 6904 Site. At the 6904 Site (APNs 6356-017-028 and 6356-017-900), the Site Plan Modification would add a transformer and associated substation equipment identical to the previously approved equipment, move the substation to a less visible location, reduce the size of the previously approved building, approve an alternate routing of underground utility connections to the 6904 Site via adjacent parcel APN 6356-018-010, and adjust the location of an electric line riser pole on the Laguna Bell Substation property. The alternative routing of the utilities out of the site and adjusting the location of the riser pole will add approximately 650 feet to the previously approved underground electric tie-lie under Garfield Avenue. To accommodate the changed proposed tie-line connection, CES would underground certain distribution lines within the public right of way. Also, SCE would underground certain overhead power lines within its Laguna Bell substation property. Consistent with CEQA, the Commerce Energy Storage 2023 project, or "Project" as referred to herein, is the action as a whole, consisting of the City's approval of the proposed development of the 6920 Site and of the proposed Site Plan Modification for the 6904 Site, and the CPUC's approval of SCE actions within its substation property to accommodate the proposed tie-line.

The regional area surrounding the Project is shown in Figure 1, and the proposed Project boundaries are shown in Figure 2. The Project would improve the efficiency of California's electric transmission system and facilitate more efficient use of renewable energy generation resources in California by storing energy generated during the day and discharging it at times when renewable resources are less available. In doing so, the Project would improve grid reliability and help avoid rolling blackouts similar to those seen in the summer of 2020. The need for facilities such as this one is immediate; on July 30th, 2021, Governor Newsom declared a State of Emergency in California regarding statewide electricity shortages caused by climate change, drought, and wildfires and called upon agencies across the State to take actions to expedite approval of battery energy storage systems.

In addition to addressing this urgent statewide need for electric reliability, the Project would provide local and regional economic benefits from construction jobs, operations jobs, sales taxes, property taxes, and diversification of the local economy. BESS's are highly automated and have minimal staff requirements for operations and maintenance, so there would be negligible new demand on City services, particularly when compared to previous operations at the 6920 Site, which involved warehousing, 20-30 employees, and associated truck deliveries. The proposed Project would modernize the road frontage of the 6920 and 6904 sites with new buildings, frontage setbacks, and landscaping that would meet current design standards and add value to the Commerce Park Planning Area where there is visibility of the building frontage.



6920 SITE

6904 SITE

OVERHEAD LINE UNDERGROUNDING AT LAGUNA BELL SUBSTATION

ADDITIONAL AREA OF UNDERGROUND TRENCHING AT GARFIELD AVENUE

APPROVED INTERCONNECTION ROUTE

PROPOSED ALTERNATE ROUTE

USGS 7.5' QUADRANGLE BOUNDARY

BASE MAP: ESRI "USGS TOPO", 7.5' QUADRANGLE: SOUTH GATE.
DATA SOURCES: TRC, ESRI

N

0 1,000 2,000

FEET

1:24,000 1" = 2,000'

PROJECT: **COMMERCE ENERGY STORAGE, LLC.**
COMMERCE 2023 ENERGY STORAGE PROJECT
COMMERCE, CALIFORNIA

TITLE: **REGIONAL MAP**

DRAWN BY:	R. SPRING	PROJ. NO.:	393191.0000.0000
CHECKED BY:	R. BURKE		
APPROVED BY:	J. STENGER		**FIGURE 1**
DATE:	AUGUST 2023		

TRC
6 EXECUTIVE CIRCLE
SUITE 200
IRVINE, CA 92614
PHONE: 949.727.9336

FILE: COMMERCE_2023.APRX

- APPROVED RISER POLE
- PROPOSED POLES
- APPROVED ROUTE
- PROPOSED ALTERNATE ROUTE
- PROPOSED EXTENSION TO ROUTE
- PROPOSED ABOVE GROUND LINE
- PROPOSED BUILDING OUTLINE
- SCE SUBSTATION POSITION WORK AREA
- 6920 SITE
- 6904 SITE
- SUBTRANSMISSION LINE UNDERGROUNDING
- DISTRIBUTION LINE / INTERCONNECT UNDERGROUNDING

BASE MAP: ESRI "WORLD IMAGERY".
DATA SOURCES: TRC, ESRI, TIGER

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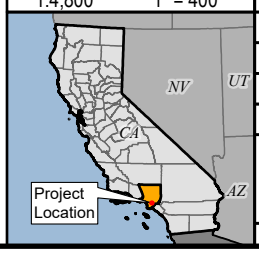
0 200 400
FEET
1:4,800 1" = 400'



PROJECT: **COMMERCE ENERGY STORAGE, LLC.**
COMMERCE 2023 ENERGY STORAGE PROJECT
COMMERCE, LOS ANGELES COUNTY, CALIFORNIA

TITLE: **PROPOSED PROJECT LOCATION AND BOUNDARIES**

DRAWN BY:	R. SPRING	PROJ. NO.:	511784.0000.0000
CHECKED BY:	F. CONTI		
APPROVED BY:	R. BURKE		**FIGURE 2**
DATE:	FEBRUARY 2024		

TRC
6 EXECUTIVE CIRCLE
SUITE 200
IRVINE, CA 92614
PHONE: 949.727.9336

FILE: COMMERCE_2023.APRX

COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET: MAP ROTATION: 0
-- SAVED BY: RSPRING ON 2/15/2024, 10:53:02 AM: FILE PATH: \\EMPLOYEES\GIS\ARCGIS\PRO1-PROJECTS\COMMERCE_ENERGY_STORAGE\511784_COMMERCE_2023\2-APRX\COMMERCE_2023.APRX: LAYOUT NAME: FIGURE02_PROPOSED_PROJECT_BOUNDARIES

The proposed Project would require various approvals including:

- Conditional Use Permit and Site Plan Review for the 6920 Site (City of Commerce)
- Flood Construction Permit for stormwater tie-ins to the existing stormwater conveyance systems for the 6920 Site (Los Angeles County Flood Control District)
- Site Plan Modification for the 6904 Site (City of Commerce)
- Modification of the existing License Agreement related to the 6904 Site Plan Modification for the underground electric tie-line and other utilities (City of Commerce)
- Unless an exemption applies, a Permit to Construct for sub-transmission line work (California Public Utilities Commission)
- Fire Department design approval

1.2 California Environmental Quality Act

Discretionary approvals constitute a "project" as defined by the California Environmental Quality Act (CEQA) (Public Resources Code, Section 21000 et seq.) and the "CEQA Guidelines" (California Code of Regulations, Title 14, Section 15000 et seq), and are thereby subject to the requirements of CEQA. For purposes of CEQA, the term "project" refers to the whole of an action which has the potential to result in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378). As the principal public agency responsible for approval of the Project, the City is the "lead agency" overseeing and administering the CEQA environmental review process.

As set forth in CEQA Statute (e.g., Section 21080), before deciding whether to approve a project, public agencies must consider the potential significant environmental impacts of the project and identify feasible measures to minimize these impacts. Pursuant to CEQA Guideline Section 15064, if any aspect of the proposed Project, either individually or cumulatively, may cause a significant effect on the environment, regardless of whether the overall effect of the Project is adverse or beneficial, an Environmental Impact Report (EIR) must be prepared.

This Initial Study is a factual document, prepared in conformance with CEQA, and written for the purpose of making the public and decision-makers aware of the potential environmental consequences of the Project. For any impact that is considered potentially "significant," the Initial Study identifies mitigation measures, where feasible, to reduce or avoid the significant effect. Before any action can be taken to approve the Project, the City must certify that it has reviewed and considered the information in the Initial Study/Proposed Mitigated Negative Declaration and that this document has been completed in conformity with the requirements of CEQA. Adoption of a Mitigated Negative Declaration does not approve or deny the Project.

1.3 Environmental Review

Consistent with CEQA, this Initial Study/Proposed Mitigated Negative Declaration is a public information document for use by governmental agencies and the public to identify and evaluate potential environmental consequences of the proposed project and to recommend mitigation measures and/or standard conditions of approval to lessen or eliminate adverse impacts. This Initial Study/Proposed Mitigated Negative Declaration is available for public review for thirty days, during which time written comments may be submitted to:

Louis Morales, Interim Director, Economic Development and Planning
City of Commerce
2535 Commerce Way
Commerce, CA 90040
lmorales@ci.commerce.ca.us

2 PROJECT DESCRIPTION

An aerial photograph showing the proposed Project location at the 6920 Site, 6904 Site, and Laguna Bell Substation Site, and surrounding properties is shown in Figure 2. Photographs of existing conditions at these sites are provided in Appendix A. A portion of the existing 6920 Site is vacant and paved and was previously used for parking, and a portion contains an existing building. The 6904 Site is vacant and was permitted for BESS development on May 18, 2022 under Conditional Use Permit No. 548 and Variance No. 21-03 -- 6904 E. Slauson Avenue. The portion of the Laguna Bell Substation Site that would be affected by the Project is occupied by existing power lines. The proposed project design, operation, and construction at the 6920 Site, proposed Site Plan Modification at the 6904 Site, proposed improvements at the Laguna Bell Substation Site, and overall Project schedule are described in the following sections.

2.1 6920 Site

PROJECT DESIGN

The 6920 Site would be designed in accordance with all applicable standards in place at the time building permits are issued, including NFPA Part 855 standards for energy storage systems. The preliminary site plan is provided in Figure 3, and preliminary design drawings and details are provided in Appendix B. Batteries and control equipment would be housed in new single-story buildings. The tallest building features would be up to 40 feet high. A mezzanine level of inverters on steel rack structures would optimize the use of space to fit the required number of inverters. The building interior would have battery storage racks separated by aisles, with relay and communications systems for automated monitoring and managing of the batteries to ensure design performance and system life. Office space and parking would be provided for up to six workers.

Batteries operate with low voltage direct current (DC) electricity that must be converted to alternating current (AC) for compatibility with the existing electric grid. Power inverters to convert between AC and DC would be located outside the buildings along with primary transformers that would convert the AC power between low voltage and medium voltage (e.g., 34.5 kV). The medium voltage power would be conveyed between the primary transformers and a 34.5 kV/230kV substation at the adjacent 6904 Site BESS via underground cables.

The 6920 Site would require only minimal grading to achieve geotechnical compaction specifications and smooth the ground surface after the existing building and pavement are removed. The portion of the site that is not occupied by buildings would be landscaped or finished with concrete, asphalt, or gravel. The site would be graded to direct stormwater runoff toward drop inlets, and underground pipes would collect stormwater runoff. Underground stormwater retention would be provided as needed to meet County and City stormwater retention requirements and a biofiltration system is included in the design for water quality treatment. Stormwater leaving the site will be conveyed to the same existing Los Angeles County Flood Control storm drain in Slauson Avenue as occurs under existing site conditions. The site also includes a perimeter road designed in accordance with Los Angeles County and Uniform Fire Code requirements. The perimeter of the 6920 Site would be fenced or walled, and the street frontage will be landscaped.

The street frontage of the 6920 Site building would contain varying wall planes and materials to provide architectural articulation to the public presentation (see Appendix B). Concrete walls would contain reveal lines to accentuate a smaller scale to the wall plane. A spandrel glass panel system compatible with other buildings in the area would emphasize the recessed portion of the building. Vertical spandrel glass would help reduce massing. Warm colored concrete, the glass panel system, and score lines would enhance visual interest at a more human scale. Painting and materials would complement the character established by adjacent buildings. Compatible screens, parapets, and extension of the exterior walls above the roof line would help screen mechanical equipment from public visibility.

OPERATION

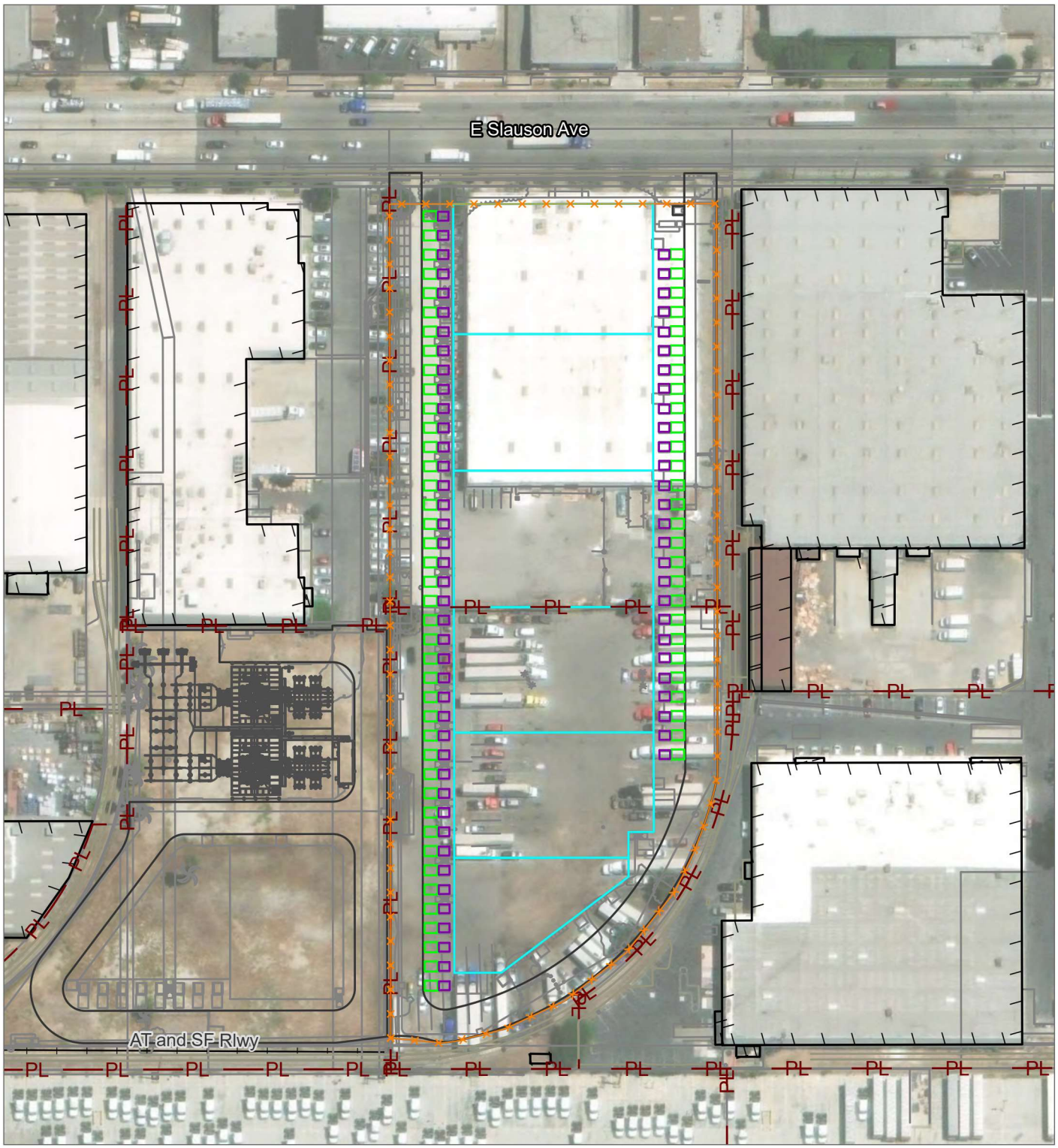
Following inspection and testing of installed electrical systems and equipment, the BESS at the 6920 Site would be put into operation. The BESS would operate year-round and would be available to receive or deliver energy 24 hours a day, 365 days a year. It is expected that no more than six workers would be onsite for routine daytime operations and maintenance. Approximately six additional staff positions will provide for night and weekend shifts, for a total of approximately 12 full-time or full-time-equivalent positions. The facility would be operated from an onsite control room, with capabilities for remote monitoring and operation as well. Routine maintenance would include periodic inspections of electrical equipment and facilities, stormwater controls, safety and security systems and equipment, HVAC filtration systems, and other project facilities. Filters, equipment, and parts would be changed out as needed.

Routine project operations and maintenance are expected to generate up to approximately ten to twelve roundtrips per day for employees, plus occasional deliveries. Approximately half of these trips would be spread through the day for occasional deliveries and night- and swing-shift employees, and half would be regular day-shift employees with approximately six incoming trips in the morning and six outgoing trips in the evening. Trash would be collected periodically by the City's contracted waste hauler. At the end of battery life, battery modules would be removed from the battery racks and returned to the manufacturer or their approved recycling partner(s) for dismantling, material processing and recovery. Other waste from maintenance activities would be managed onsite in accordance with applicable regulations and removed from the site by a licensed waste hauler. Oil-filled equipment (e.g., transformers) would be operated closed and sealed and would not typically require maintenance that would generate waste oil. Operations would not generate air emissions or require water other than employee sanitary uses and occasional testing/flushing of fire hydrants.

SAFETY

Each battery module at the 6920 Site would be monitored for electrical current, voltage, and temperature in order to optimize performance, mitigate potential failures, and prevent upset. Batteries performing out of specification would be immediately taken offline by an automated monitoring system. The system would be designed and constructed to comply with all applicable codes in effect in the City including the National Fire Protection Association (NFPA) Codes and Standards, National Electrical Code and California Fire Code. The system will be UL9540 certified. The 6920 Site would be constructed to meet all Los Angeles County Fire Department requirements including gate access, onsite road design, fire hydrants and other fire safety requirements.

Buildings would be outfitted with fire suppression systems to meet or exceed all fire safety codes and standards. Fire protection would include prevention, suppression, and isolation methods and materials. At a minimum, this would include smoke/fire detection sensors, ground fault detection, alarms, and systems for automatic shutdown of cooling fans and opening of electrical contacts in the battery system. Buildings will include a pre action water sprinkler system combined with gas and smoke detection. The batteries will be tested according to UL9540a test protocols and the results will be used to design the fire system.



SUBSTATION
PRIMARY TRANSFORMER
INVERTER
FENCELINE
PROPERTY LINE

BASE MAP: ESRI "WORLD IMAGERY".
DATA SOURCES: TRC, ESRI, TIGER

0 50 100
FEET
1:1,500 1" = 125'

PROJECT: **COMMERCE ENERGY STORAGE, LLC.**
COMMERCE 2023 ENERGY STORAGE PROJECT
COMMERCE, LOS ANGELES COUNTY, CALIFORNIA

TITLE: **6920 SITE PLAN**

DRAWN BY:	R. SPRING	PROJ. NO.:	511784.0000.0000
CHECKED BY:	R. BURKE		
APPROVED BY:	J. STENGER		**FIGURE 3**
DATE:	AUGUST 2023		

TRC
6 EXECUTIVE CIRCLE
SUITE 200
IRVINE, CA 92614
PHONE: 949.727.9336

FILE: COMMERCE_2023.APRX

COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET; MAP ROTATION: 28
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CONSTRUCTION

Construction would begin after final grading and building plans are approved by the City Engineering Division. The total duration of construction activity at the 6920 Site is expected to be 21.5 months conducted in two phases: demolition and construction. In the first phase, after construction stormwater BMPs are installed, the first few months would involve demolition of the existing building and pavement, site grading, installation of underground stormwater control systems, and relocation of fire hydrants and an existing power and light pole at the site frontage. During this phase, up to 10 workers and 25 trucks per day would be onsite (Table 1). The next phase of construction is expected to begin with pouring the footings and foundation and erecting the walls for the buildings. Walls for each building would be completed in sequence, and battery racks, batteries, and other indoor equipment would be installed in individual buildings as their erection is completed. This phase also would include installation of outdoor electrical equipment, paving and gravel surfacing, and building interior finishing.

Table 1: Estimated 6920 Site Construction Activity

Phase	Task	Peak Workers per Day	Peak Trucks per Day	Total Duration (months)
1	demolition, grading, and stormwater controls	10	25	1.5
2	buildings, equipment installation, and finishing	140	35	20

Construction staging and parking would be on-site while space is available and on other nearby suitable properties as additional space is needed. CES is seeking the temporary use of an existing paved parking area, access drive, and approximately one acre for staging on a property adjacent to the west from 6277 Slauson Avenue, approximately 0.4 miles west of Garfield. The property is owned by SCE and is currently being used for utility purposes. If this property is unavailable, then CES will explore options for leasing commercial parking within two miles of the project site.

Sanitary facilities during construction would be provided by portable self-contained units maintained by a licensed contractor. Project construction would adhere to applicable emission control requirements of South Coast Air Quality Management District (SCAQMD), including Rule 403 for control of fugitive dust emissions during construction. Key dust controls during construction would include:

- Water would be applied to disturbed soil areas during grading until the disturbed surface is stabilized. Watering would occur at least three times during a normal 8-hour workday at approximate 3-hour intervals.
- Haul trucks transporting soil, sand or other loose material offsite would be covered and would be loaded to maintain a freeboard of six inches.
- Best Management Practices (BMPs) would be implemented to minimize track-out onto adjacent public streets.
- A 15 mile per hour speed limit would be used for onsite roadways until stabilized with gravel or other treatment to minimize dust.
- Disturbed surfaces would be stabilized as soon as practical.

2.2 6904 Site Plan Modification

The requested Site Plan Modification would not materially change characteristics of the 6904 Site previously approved under Conditional Use Permit (CUP) No. 548 and Variance No. 21-03 -- 6904 E. Slauson Avenue (Figure 4).The modifications would add a transformer and associated substation equipment, move the substation to a less visible location, reduce the size of the previously approved building, and approve an alternate routing for underground utilities through adjacent parcel APN 6356-018-010 (Figure 5). Each of these proposed modifications are summarized below.

INTERCONNECTION ROUTE
SITE ACCESS EASEMENT
6904 PROJECT SITE
RISER POLE

BASE MAP: ESRI "WORLD IMAGERY".
DATA SOURCES: TRC, ESRI, TIGER

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0 200 400
FEET
1:4,800 1" = 400'

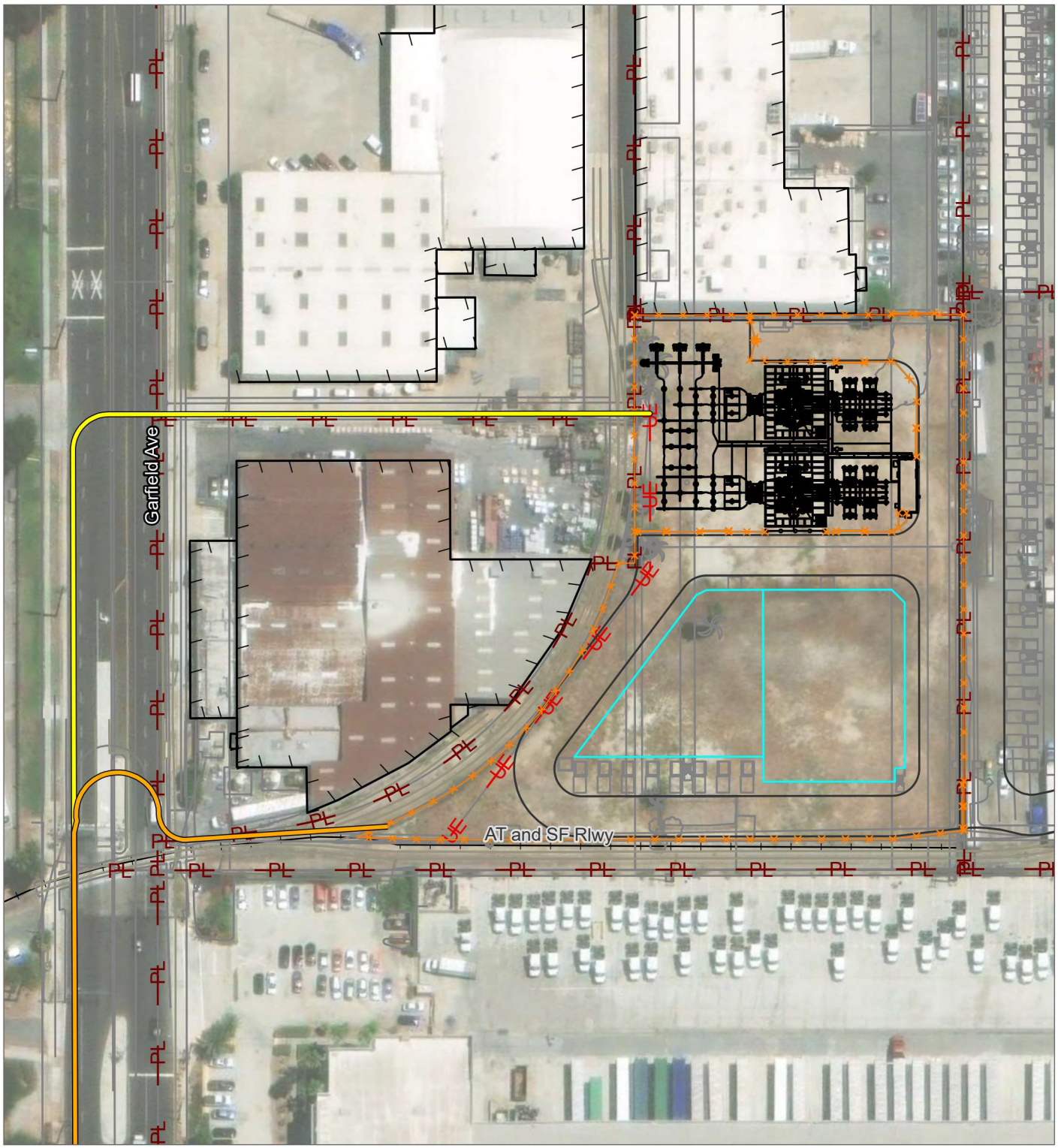
PROJECT: **COMMERCE ENERGY STORAGE, LLC.**
COMMERCE 2023 ENERGY STORAGE PROJECT
COMMERCE, LOS ANGELES COUNTY, CALIFORNIA

TITLE:
6904 SITE PLAN MODIFICATION

DRAWN BY:	R. SPRING	PROJ. NO.:	511784.0000.0000
CHECKED BY:	R. BURKE		
APPROVED BY:	J. STENGER		**FIGURE 4**
DATE:	AUGUST 2023		

TRC
6 EXECUTIVE CIRCLE
SUITE 200
IRVINE, CA 92614
PHONE: 949.727.9336

FILE: COMMERCE_2023.APRX



APPROVED INTERCONNECTION ROUTE
PROPOSED ALTERNATE ROUTE
SUBSTATION
FENCELINE
PROPERTY LINE
BUILDING OUTLINE (EXISTING)
PROPOSED BUILDING OUTLINE

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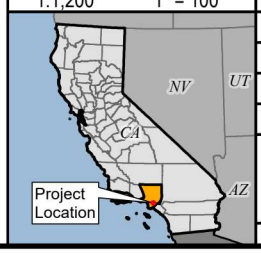
FEET
1:1,200 1" = 100'



BASE MAP: ESRI "WORLD IMAGERY".
DATA SOURCES: TRC, ESRI, TIGER

PROJECT: **COMMERCE ENERGY STORAGE, LLC.**
COMMERCE 2023 ENERGY STORAGE PROJECT
COMMERCE, LOS ANGELES COUNTY, CALIFORNIA

TITLE:
6904 SITE PLAN

DRAWN BY:	R. SPRING	PROJ. NO.:	511784.0000.0000
CHECKED BY:	R. BURKE		
APPROVED BY:	J. STENGER		**FIGURE 5**
DATE:	AUGUST 2023		

TRC
6 EXECUTIVE CIRCLE
SUITE 200
IRVINE, CA 92614
PHONE: 949.727.9336

FILE: COMMERCE_2023.APRX

COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET; MAP ROTATION: 28
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The substation equipment that would be added would be identical to the previously approved substation equipment. Moving the substation equipment to the north end of the site would render it less visible compared to the previously approved location since it would be surrounded by buildings on all four sides, blocking views from virtually all directions. The building would be reduced in size from 36,333 square feet to about 21,000 square feet, a 42 percent reduction. The smaller buildings would be constructed with tilt-up concrete panels rather than the previously approved standing seam metal construction and with a mezzanine level of inverters on steel rack structures to optimize the use of space needed to fit the required number of inverters. Appendix B provides architectural drawings of proposed modifications.

Under the previously approved CUP, the 6904 Site was to be connected to underground stormwater and electric utilities under Garfield Avenue via a route along the southern site boundary of the site. Subsequent review has revealed that that this option is tightly constrained by railroad easements that would create an inefficient routing of these lines due to the need to cross the easements at a perpendicular angle. To address these engineering constraints, the proposed Site Plan Modification includes potentially rerouting one or both of these utilities to the Garfield Avenue right-of-way via a proposed easement through parcel APN 6356-018-010. The optional routings are shown in Figure 6, labeled as "Proposed Electric Tie-Line-North Option" and "Proposed Storm Drain-North Option," respectively. CES is requesting City approval under the proposed Site Plan Modification to use either or both of these options for needed utility connections. If either North Option is used, the existing license agreement with the City for the electric tie-line and utilities would be modified to reflect such use.

The Site Plan Modification would extend by approximately 650 feet the previously approved underground electric tie-line under Garfield Avenue (see Figures 2 and 7). This extension is needed to make the tie-line route more efficient and to respond to SCE's request to connect the tie-line to its facility at the southeast corner of the Laguna Bell Substation property. The extension would add approximately 0.3 months to the original 1-month construction schedule, an addition that would be accommodated within the 21.5-month construction duration.

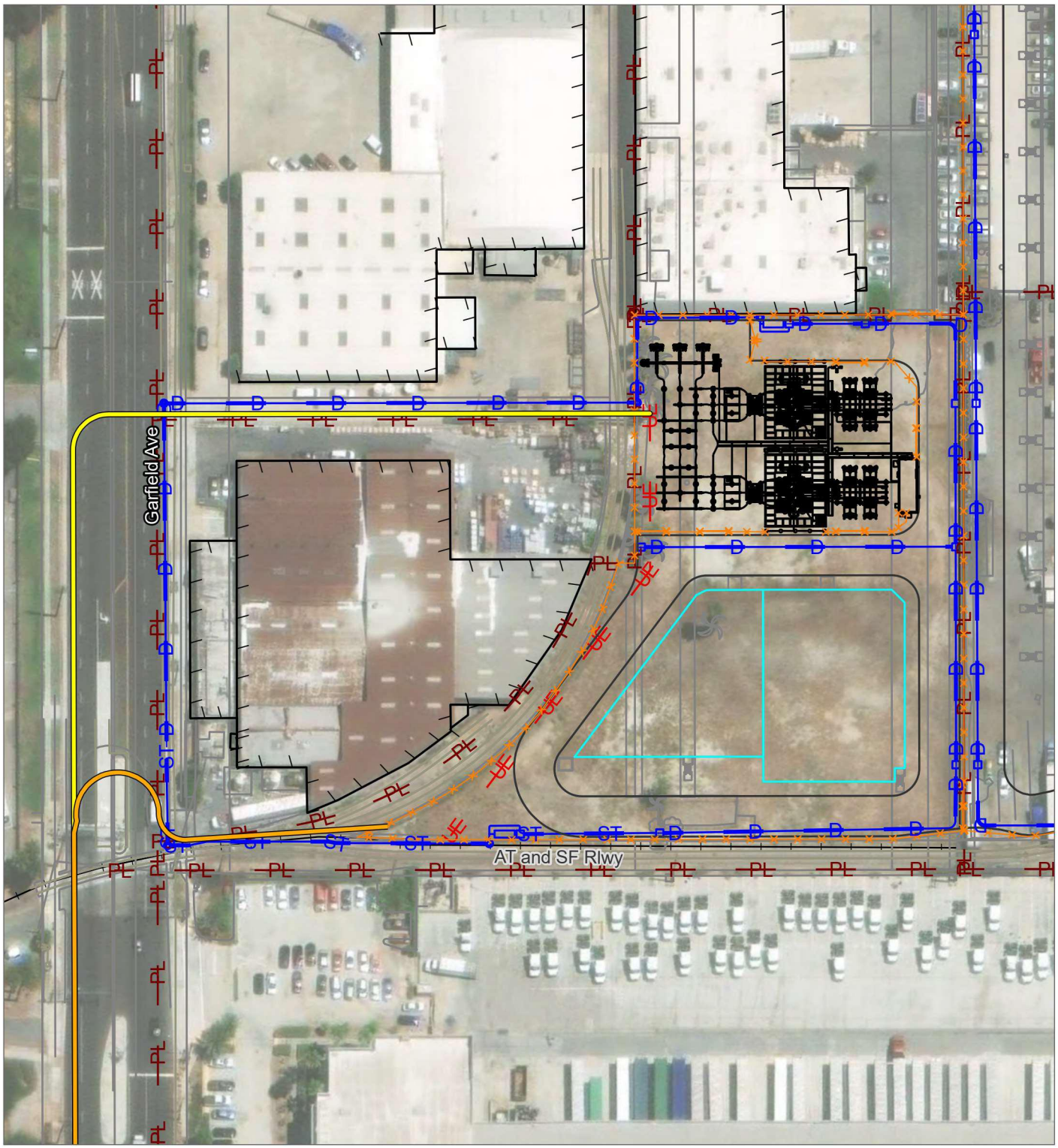
2.3 Laguna Bell Substation Site

California Code, Public Utilities Code § 851(a) states that "A public utility...shall not sell, lease, assign, mortgage, or otherwise dispose of, or encumber the whole or any part of its...property necessary or useful in the performance of its duties to the public...without first having either secured an order from the commission authorizing it to do so, or for qualified transactions... filed an advice letter and obtained approval from the commission authorizing it to do so."

The previously approved project included installation of an approximately 85-foot-high underground-to-overhead transition pole where the approved underground electric tie-line would transition to overhead next to Garfield Avenue and within the Laguna Bell Substation (see Figures 2 and 7). Based on subsequent discussions with SCE regarding potential substation connection considerations, the proposed Site Plan Modification includes moving the transition pole to a location preferred by SCE within the substation property and modifying the potential pole height to a range of 75 to 110 feet, depending upon final design. From the transition pole, SCE would extend the 220kV transmission line approximately 600 feet within the Laguna Bell substation property via two new Tubular Steel Poles (TSP's) also with a potential pole height of 75 to 110 feet, depending upon final design. The 220kV transmission line would terminate into a new position within the existing Laguna Bell 220kV switch rack. Two new five-foot by five-foot by five-foot substructures would be installed in franchise right of way near the transition pole for Project telecom fiber terminations and for utility relay protection. The fibers would continue within SCE property via two separate underground conduits into the Laguna Bell Substation Control Room with an approximate 600 feet total length.

The proposed location of the transition pole would require relocation and undergrounding of approximately 800 linear feet of two existing overhead 66kV sub- transmission lines, approximately 400

linear feet of two 16kV distribution lines, and approximately 400 linear feet of telecom lines that conflict with the modified pole location and access (see Figures 2 and 7). The undergrounding work would be designed by SCE and is expected to include, at minimum, removing overhead facilities between existing poles west of the intersection of Randolph Street and Garfield Avenue and east of the Laguna Bell Substation outside the west edge of Garfield Avenue right of way. Undergrounding of the two sub-transmission circuits would occur on substation property west of the existing lines. Undergrounding of the two distribution circuits and multiple telecommunication lines would occur under Garfield Avenue close to the substation. In both cases, undergrounding would require trenching at a depth up to 12 feet, installation of ducting and pulling structures, and pulling of power cables. Based on the final design, the installation of new 75' to 110' poles may be required within the substation property for the underground facilities to rise on. These poles could be wood and/or engineered TSP. Footings for TSP's would be up to 8 feet in diameter and up to 30 feet deep. A peak of 16 workers and 8 trucks per day is estimated for this work. Traffic controls in adjacent lanes may be required while this work is occurring. The location of the proposed work necessitated by the proposed Project at this site is shown in Figure 7.



APPROVED INTERCONNECTION ROUTE

PROPOSED ELECTRIC TIE-LINE - NORTH OPTION

SUBSTATION

FENCELINE

PROPOSED STORM DRAIN - NORTH OPTION

2022 APPROVED STORM DRAIN OPTION

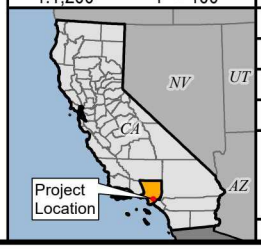
PROPERTY LINE

BUILDING OUTLINE (EXISTING)

PROPOSED BUILDING OUTLINE

BASE MAP: ESRI "WORLD IMAGERY".
DATA SOURCES: TRC, ESRI, TIGER

0 50 100
FEET
1:1,200 1" = 100'



PROJECT: **COMMERCE ENERGY STORAGE, LLC.**
COMMERCE 2023 ENERGY STORAGE PROJECT
COMMERCE, LOS ANGELES COUNTY, CALIFORNIA

TITLE: **6904 SITE ELECTRICAL TIE-LINE AND STORM DRAIN ROUTE OPTIONS**

DRAWN BY:	R. SPRING	PROJ. NO.:	511784.0000.0000
CHECKED BY:	R. BURKE		
APPROVED BY:	J. STENGER		**FIGURE 6**
DATE:	AUGUST 2023		

TRC
6 EXECUTIVE CIRCLE
SUITE 200
IRVINE, CA 92614
PHONE: 949.727.9336

FILE: COMMERCE_2023.APRX

- APPROVED RISER POLE
- PROPOSED POLES
- INTERCONNECTION ROUTE
- PROPOSED EXTENSION TO INTERCONNECTION ROUTE
- PROPOSED ABOVE GROUND LINE
- SUB-TRANSMISSION LINE UNDERGROUNDING
- DISTRIBUTION LINE UNDERGROUNDING
- EXISTING SUBTRANSMISSION / DISTRIBUTION LINES
- SCE SUBSTATION POSITION WORK AREA
- STREET TRENCHING AREA

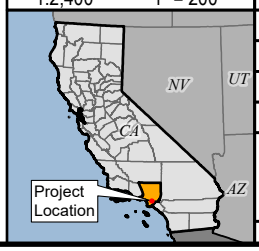
BASE MAP: ESRI "WORLD IMAGERY".
DATA SOURCES: TRC, ESRI, TIGER

N

0 100 200

FEET

1:2,400 1" = 200'



PROJECT: **COMMERCE ENERGY STORAGE, LLC.**
COMMERCE 2023 ENERGY STORAGE PROJECT
COMMERCE, LOS ANGELES COUNTY, CALIFORNIA

TITLE:
LAGUNA BELL SUBSTATION SITE

DRAWN BY:	R. SPRING	PROJ. NO.:	511784.0000.0000
CHECKED BY:	F. CONTI		
APPROVED BY:	R. BURKE		**FIGURE 7**
DATE:	FEBRUARY 2024		

TRC
6 EXECUTIVE CIRCLE
SUITE 200
IRVINE, CA 92614
PHONE: 949.727.9336

FILE: COMMERCE_2023.APRX

2.4 Project Schedule

As procurement and construction schedules are defined, CES will coordinate with City staff to finalize logistics such as the final offsite staging location, trip scheduling, access plans, and required work in the Slauson Avenue right-of-way (ROW). If construction of Slauson Avenue improvements are underway concurrently under the Slauson Avenue Corridor Improvement Project, CES will work with City Public Works staff to identify access routes to the construction and staging areas that would minimize any conflict.

Before construction begins, best management practices will be implemented in accordance with the Project's Storm Water Pollution Prevention Plan to reduce potential erosion from construction activities. In addition, if project activities are scheduled to occur between February 1 through September 15, a qualified biologist will conduct a nesting bird survey prior to construction activities within a survey buffer to be determined in the field, based on species nesting in the area, the habitat present, and site access conditions. If active nests are found, the biologist will establish a no disturbance buffer around each active nest, and no construction or ground disturbance activities will be conducted within the buffer until the biologist has determined the nest is no longer active.

Once construction begins, construction activities at the three Project sites would overlap with each other as highlighted below in Table 2. Cumulative construction workers would peak at 156 workers and deliveries at 40 trucks per day when workers are receiving and installing batteries, erecting building walls, and installing underground lines on all three Project sites.

Table 2: Estimated 6920 Site and Cumulative Construction Activity

Phase	Site	Task	Peak Workers per Day	Peak Trucks per Day	Total Duration (months)
1	6920 Site	demolition, grading, stormwater controls	10	25	1.5
2	All 3 sites	buildings, equipment installation, and finishing	156	40	20

3 CEQA INITIAL STUDY CHECKLIST

1. **Project title:** Commerce 2023 Energy Storage

2. **Contact person and phone number:**

   Louis Morales, Interim Director, Economic Development and Planning
   City of Commerce
   2535 Commerce Way
   Commerce, CA 90040
   lmorales@ci.commerce.ca.us

3. **Project location:** 6920 East Slauson Avenue, 6904 East Slauson Avenue, and 6319-6337 Garfield Avenue, Commerce, CA 90040

4. **Project sponsor's name and address:**

   Commerce Energy Storage, LLC
   c/o Jonathan Hichborn
   2121 N California Blvd, Suite 1000
   Walnut Creek, CA 94596

5. **General plan designation:** Industrial

6. **Zoning:** Heavy Manufacturing (M-2)

7. **Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)**

   Refer to project description preceding this Checklist and Preliminary Site Plans in Appendix B.

8. **Surrounding land uses and setting (briefly describe the project's surroundings):**

   The Commerce Energy Storage 2023 Project occurs in an urban setting along Garfield Avenue and south of Slauson Avenue. The Project is within an area designated as a redevelopment zone by the City. Surrounding uses are commercial and industrial. The Project area is traversed by roadways and railroad spur tracks. There are no sensitive receptors in the vicinity.

10. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)**

    Approvals that may be needed for the Project include:

    - Conditional Use Permit and Site Plan Review for the 6920 Site (City of Commerce)
    - Flood Construction Permit for stormwater tie-ins from the 6920 Site to the existing stormwater conveyance systems below Slauson and Garfield Avenues (Los Angeles County Flood Control District)
    - Site Plan Modification for the 6904 Site (City of Commerce)
    - Modification of the existing License Agreement related to the 6904 Site Plan Modification for the underground electric tie-line and other utilities (City of Commerce)
    - Unless an exemption applies, a Permit to Construct for sub-transmission line work (California Public Utilities Commission)

3.1 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this Project. Check marks are indicated by the following symbol: ☑

☑	Aesthetics	☐	Agriculture and Forest Resources	☑	Air Quality
☑	Biological Resources	☑	Cultural Resources	☐	Energy
☑	Geology/Soils	☑	Greenhouse Gas Emissions	☑	Hazards and Hazardous Materials
☑	Hydrology and Water Quality	☐	Land Use Planning	☐	Mineral Resources
☑	Noise	☐	Population/Housing	☑	Public Services
☐	Recreation	☑	Transportation	☑	Tribal Cultural Resources
☑	Utilities/Service Systems	☐	Wildfire	☑	Mandatory Findings of Significance

3.2 Determination

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☑ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Prepared By: **TRC**

4/18/24

Signature Date

Reviewed By: **Louis Morales, Interim Director, Economic Development and Planning**

4/18/24

Signature Date

3.3 Evaluation of Impacts

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS -- Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☑
No Impact: *The Project is in an urban area and would not impact any scenic vista. Therefore, there would be no impact.*				
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☑
No Impact: *No designated or eligible State scenic highways occur in the vicinity. The 6920 Site would be similar to adjacent buildings, the 6904 Site would be hidden from view by adjacent buildings, and the Laguna Bell Substation Site modifications would be similar to existing conditions (see Appendix A). There are no rock outcroppings, historic buildings, scenic tree stands, or other scenic resources on these sites. Considering these factors, there would be no impact to scenic resources.*				
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☑	☐
Less than Significant Impact: *The 6920 and 6904 sites are located in an urbanized area containing similar commercial and industrial buildings. The tallest building features at the 6920 Site would be on the order of 40 feet, a height and size that would be of similar or smaller scale than surrounding warehouses. The buildings would be designed to be compatible with other modern warehouse style buildings in the area and design features would reduce the appearance of massing. The 6904 Site Plan Modification would reduce the size of the previously approved building, reducing visual impacts. Some overhead lines at the Laguna Bell Substation Site would be relocated underground, five poles would be removed, and two poles would be added, resulting in a net improvement in the visual character along Garfield Avenue (see Figure 8). Considering these factors, the Project would not substantially degrade the existing visual character or quality of the sites or their surroundings.*				
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☑
No Impact: *The proposed improvements would not add reflective materials or lighting that would create a new source of substantial light or glare (see Appendices A and B, drawings A-1 to A-7). Considering these factors, there would be no impact to scenic resources.*				

Figure 8 - Views of Laguna Bell Substation Before and After Project

View of Existing Conditions: Laguna Bell Substation

View of Proposed Conditions: Laguna Bell Substation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FOREST RESOURCES -- In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and the forest carbon measurement methodology provided in the Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☑
No Impact: *No farmlands occur on or in the vicinity of the proposed Project, so no farmlands would be affected by the Project.*				
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☑
No Impact: *No lands zoned for agriculture occur near the proposed Project, so no lands zoned for agriculture or under a Williamson Act contract would be affected by the Project.*				
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined in Public Resources Code	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				
No Impact: *No lands zoned forest land, timberland or timberland production occur on or in the vicinity of the proposed Project, so no lands zoned forest land, timberland or timberland production would be affected by the Project.*				
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☑
No Impact: *No forest lands occur on or in the vicinity of the proposed Project, so no forest lands would be affected by the Project.*				
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☑
No Impact: *The proposed Project comprises infill development in an urbanized area. There are no farmlands or forest lands on or in the vicinity of the proposed Project that could be affected. The proposed Project does not include any action that would result in rezoning or conversion of agricultural or forest land. Therefore, there would be no impact.*				
III. AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☑	☐
Less than Significant Impact: *The Project would be located within the jurisdiction of the Southern California Air Quality Management District (SCAQMD). During construction, the Project would comply with SCAQMD requirements for construction sites including the Best Available Control Measures that are listed in Table 1 of Rule 403. Construction activities at all three sites would result in a minor amount of temporary dust and fuel-burning emissions. Maximum daily Project construction emissions estimated by CalEEMod (Appendix C) are shown below. Also shown are SCAQMD's significance thresholds for maximum daily emissions.*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

Table 3: Maximum Project Emissions

Criteria Pollutant	*Max Daily Threshold (pounds)*	*Max Project Emissions (pounds/day)*	*Significant?*
Oxides of Nitrogen (NOx)	*80*	*29.5*	*No*
Reactive Organic Gasses (ROGs)	*75*	*2.8*	*No*
Particulate Matter (PM10)	*4*	*3.8*	*No*
Particulate Matter (PM2.5)	*3*	*2.1*	*No*
Sulfur Dioxide (SO2)	*150*	*0.06*	*No*
Carbon Monoxide (CO)	*550*	*24.1*	*No*
Lead	*3*	*0.0*	*No*

Source: South Coast AQMD Air Quality Significance Thresholds, Updated April 2019 and "Appendix-c-mass-rate-list-look-up-tables" Updated October 2009. The LST analysis was performed based on the "southeast LA county" SRA. Site acreage was 1 acre, and receptor distance from site boundary was 25 meters.

At all three sites, during construction, watering of disturbed areas three times daily would reduce emissions of PM10 and PM2.5 below significance thresholds. During operation, as noted in Appendix C Emissions Modeling, the minor amount of commute and maintenance traffic expected at the 6920 Site would not be significant. Operations would not cause air emissions other than exhaust emissions from vehicle use for these infrequent site visits. Neither the 6904 Site Plan Modification nor the Laguna Bell Substation improvements would create regular commute traffic. None of the sites would add dwelling units or stationary emission sources. Therefore, construction and operation of the Project would not conflict with or obstruct implementation of any applicable air quality plan, and impacts would be less than significant.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☑	☐

Less than Significant Impact: *The South Coast Air Basin is designated under the National Ambient Air Quality Standards (NAAQS) as nonattainment (extreme) for 1-hour ozone, nonattainment (extreme) for 8-hour ozone, nonattainment (serious) for $PM_{2.5}$, and nonattainment (partial) for lead. In addition, the South Coast Air Basin is designated under the California Ambient Air Quality Standards (CAAQS) as nonattainment for 1-hour ozone, 8-hour ozone, PM_{10}, and $PM_{2.5}$. Operation of the Project would not add any stationary sources of these pollutants. Although the 6920 Site currently has no operations, the negligible increase in criteria pollutants from 6 workers and periodic maintenance visits would be too small to result in a cumulatively considerable net increase in concentrations of these pollutants. The 6904 Site Plan Modification and the Laguna Bell Substation improvements would not add emissions. Energy storage that would be provided by the Project would contribute toward increased use of renewable energy resources, thereby reducing*

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
reliance on pollution-emitting power sources and cumulatively reducing emissions of pollutants for which the basin is currently non-attainment. *Construction emissions would not exceed construction-related significance thresholds. These thresholds were designed to establish the level at which the SCAQMD believes emissions could cause significant cumulative environmental impacts when considered in conjunction with other sources. The proposed Project would not conflict with any air quality plan or regulation. Considering these factors, the proposed Project would not result in a cumulatively considerable net increase of any non-attainment criteria pollutant. Therefore, the impact would be less than significant.*				
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☑	☐
Less than Significant Impact: *Sensitive receptors are land uses that include members of the population that are particularly sensitive to the effects of air pollution such as children and the elderly and people with illnesses. Examples include residences, hospitals, schools, or convalescent homes. Pollutant concentrations resulting from operations at the 6920 Site would be negligible, particularly compared to previous warehouse operations at the site. Operations resulting from the proposed 6904 Site Plan Modifications and the Laguna Bell Substation improvements would not affect pollutant concentrations. Temporary construction emissions would be less than significant as described in Response III(a) above, and would not likely expose the nearest residents, located 0.1 mile to the south, to substantial pollutant concentrations. Therefore, the impact would be less than significant.*				
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☑	☐
Less than Significant Impact: *Project operations would not be a source of odors. During construction at all three sites, diesel engine emissions may be a potential source of odor, primarily during grading. However, because of the large distance to the nearest receptors, diesel emission odors would not adversely affect a substantial number of people. Considering these factors, the impact would be less than significant.*				
IV. BIOLOGICAL RESOURCES -- Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
No Impact: *The Project area is 100 percent disturbed and highly urbanized. No natural habitat occurs on the Site or in the Site vicinity (Figure 2 and Appendix A). No candidate, sensitive or special status species have important habitat in the vicinity. Therefore, there would be no impact.*				
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	☐	☐	☐	☑
No Impact: *No natural habitat or riparian habitat occurs on the Site or in the Site vicinity, therefore, there would be no impact (Figure 2 and Appendix A).*				
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☑
No Impact: *The Project footprint and surrounding area are 100 percent disturbed and highly urbanized with no natural habitat, riparian habitat, federally jurisdictional waters, or wetlands. The US Department of Agriculture Web Soil Survey identifies soils as Urban Land-Azuvina-Montebello complex, a non-hydric soil. US Geological Survey maps show no blueline water features on or adjacent to the Project footprint (US Geological Survey, 1972, 1981, 2018). The National Wetlands Inventory (US Fish and Wildlife, 2021) does not include any wetlands or aquatic features in the Project vicinity. There are no natural drainages on the Site or electric tie-line footprint and drainage from the vicinity is captured by Los Angeles County Flood Control District's underground box culverts. With no federally protected wetlands on or adjacent to the Project footprint, there would be no impact.*				
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☑	☐
Less than Significant Impact: *The Project is located in an area that has no natural habitats or perennial surface waters. For these reasons, the Project is not expected to interfere with the movement of any native resident or migratory fish or wildlife species or with any native resident or migratory wildlife corridor or native wildlife nursery site. Nonetheless, all three Project sites contain trees that could provide nesting habitat for migratory birds protected under the Migratory Bird Treaty Act (MBTA) that could be trimmed or removed during Project construction. For this reason, as noted above under Project Description, the Applicant's construction plans include measures to ensure*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
that the Project does not impact to the viability of any active nest during Project construction. Considering the site setting and committed measures to prevent impacting nest viability, the impact would be less than significant.				
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☑
No Impact: *The Project does not propose removal of any tree protected by ordinance or policy or conflict with any local policy or ordinance protecting biological resources. Project sites do not contain any protected habitat. Therefore, there would be no impact.*				
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☑
No Impact: *The Project is located in an urban area, not subject to any Habitat Conservation Plan or Natural Community Conservation Plan. Therefore, there would be no impact.*				
V. CULTURAL RESOURCES -- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in section 15064.5?	☐	☐	☐	☑
Less than Significant Impact: *The General Plan identifies three designated historic sites in the City; the Uniroyal Tire Plant and the Pillsbury Mill that are both listed in the State Register of Historic Places, and the Vail Landing Field commemorated by a plaque. The East Los Angeles Railroad Station also is listed in the State Register of Historic Places. None of these sites are located in the Project area. To investigate the potential presence of historical resources that could be affected by the Project, a search of the California Historical Resources Information System (CHRIS) database was conducted (Appendix D). The results of the record search indicate there have been 11 cultural resource studies within a 0.5-mile radius of the Project that have identified seven historic period cultural resources within a 0.5-mile radius of the Project. Six of these resources are outside the Project area and would not be affected by the Project. The seventh resource is the SCE Laguna Bell Substation property (Resource No. P-19-191950). Constructed in 1924, the Laguna Bell Substation property was one of nine substations that defined the SCE 220 kV electric system, and additionally, the facility served as a switching station and connection point to SCE's Long Beach Steam Plant complex. The Laguna Bell Substation was evaluated for eligibility to the National Register of Historic Places (NRHP)/California Register of Historical Resources (CRHR) in 2014. The evaluation concluded that, in its current appearance, configuration, and condition, the Laguna Bell Substation property composed of the Main substation building and the warehouse appears to be eligible for listing to the NRHP/ CRHR for its association with the historic Big Creek Hydroelectric System and the SCE 220kV system. Additionally, the Main Substation Building appears to be individually eligible for listing as an excellent example of the Stripped Classical style applied to a substation building.*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
The existing transformer racks and switch racks at the property do not appear to contribute to the eligibility of the Laguna Bell Substation property. The other buildings on the property — the control house, test shop, oil pump and filter house, storage building, and water tower - are not from the period of significance and do not appear to contribute to the eligibility of the Laguna Bell Substation property. Because the Project will not impact either the Substation building or Warehouse, construction activities would not have a significant impact on the Substation as a historical resource. No other structures or potential historical resource has been identified that could potentially be impacted by the Project. Therefore, the Project would not have the potential to change the significance of any known historical resource so the impact would be less than significant.				
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5?	☐	☑	☐	☐
Less than Significant Impact with Mitigation Incorporated: *As described in the General Plan, prior to European contact, local Gabrielino Indians lived in more than 50 villages located throughout the Los Angeles Basin, including three early villages located in the vicinity of Commerce. Gathering activities were most likely concentrated along the Los Angeles and Rio Hondo River channels. Another post-contact Indian village site, referred to as the La Jaboneria, was known to have existed on the east bank of the Rio Hondo River in an area south of Telegraph Road. To investigate the potential presence of archaeological resources that could be affected by the Project, a search of the CHRIS database was conducted (Appendix D). The results of the record search indicate there have been 11 cultural resource studies within a 0.5-mile radius of the Project. No archaeological resources were recorded as a result of these prior studies. In addition, a search of the Native American Heritage Commission (NAHC) Sacred Lands File failed to indicate the presence of Native American cultural resources in the Project area. Considering the results of the records search, previous surveys near the Project area, and NAHC response, there are no known archaeological resources on or near areas that would be disturbed by the Project. The entire Project footprint has been previously developed and the ground has been modified such that there is no preindustrial ground surface exposed; therefore, a ground survey was not conducted for this analysis. Nevertheless, given that native soil could be encountered by Site grading, excavations for the electric tie-line and storm water discharge connections, and undergrounding of power lines at the Laguna Bell Substation, there is a possibility for discovering unknown archaeological resources. Mitigation Measure CUL-1 would ensure impacts would be mitigated to a less than significant level in the event that unknown cultural resources are encountered during construction excavations.* ***Mitigation Measure CUL-1:*** *Construction shift foremen, excavation equipment operators and other construction workers with responsibility for observing construction excavations shall be trained and instructed by a representative of the Applicant or its contractor to be observant for the potential occurrence of archaeological resources in the geologic materials encountered, and shall be instructed and authorized to halt excavation in the area immediately and notify the Project Applicant's representative if such resources are discovered. In the event of a discovery, the Applicant or Applicant's representative shall promptly notify the City and work in the area shall cease until the discovery is evaluated by a qualified cultural resource specialist. If evaluation by a qualified cultural resource specialist indicates that the discovery may be significant, then excavation in the area shall be continued only as directed by a qualified cultural resource specialist and in a manner allowing for collection of significant resources and information that may otherwise be*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
affected by the Project, including development of a Research Design and Data Recovery Program if needed to mitigate impacts. If cultural artifacts are collected, they shall be cataloged and curated with an appropriate institution. A final monitoring report shall be prepared and submitted to the City if significant cultural resources are discovered.				
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☑	☐	☐
Less than Significant Impact with Mitigation Incorporated: *The native geological materials beneath the Project area are late to middle Pleistocene age old alluvial flood plain deposits (Stantec, 2021). The late to middle Pleistocene age means deposits at shallow depth may be about 12,000 years old or older. Alluvial flood plain deposits such as these can be fossil bearing, and these deposits are old enough to potentially contain fossils that could yield important information about the prehistoric record. It is expected that all or most shallow soils within the depth of general Project grading have been previously disturbed. Deeper excavation such as for Project footings, the electric tie-line trenching, undergrounding of power lines, the riser pole foundation, and the stormwater drainage connection to existing infrastructure may encounter native sediments and, therefore, have the potential to impact paleontological resources if any unknown resources are present. Mitigation Measure CUL-2 would ensure impacts would be mitigated to a less than significant level in the event that an important paleontological resource is encountered during construction.* ***Mitigation Measure CUL-2:*** *Construction shift foremen, excavation equipment operators and other construction workers with responsibility for observing construction excavations shall be trained and instructed by a representative of the Applicant or its contractor to be observant for signs that excavation is in native material, and to be observant for possible occurrence of paleontological resources when excavating in native material. Trained observers shall be instructed and authorized to halt excavation in the area immediately and notify the Project Applicant's representative if vertebrate fossils are discovered. In the event of a discovery, the Applicant or Applicant's representative shall promptly notify the City and work in the area shall cease until the discovery is evaluated by a qualified paleontologist. If evaluation by a qualified paleontologist indicates that the discovery may be significant, then excavation in the area shall be continued only as directed by a qualified paleontologist and in a manner allowing for collection of significant resources and information that may otherwise be affected by the Project. If significant fossils are collected, they shall be cataloged and curated with an appropriate institution. A final monitoring report shall be prepared and submitted to the City if significant fossils are discovered.*				
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☑
No Impact: *Given that there are no cemeteries or other known interments on or adjacent to the Project footprint, no impact to human remains is anticipated. In the unlikely event of a discovery of human remains during construction, all excavation and disturbance must stop and the County coroner immediately notified pursuant to California Health and Safety Code Section 7050.5 which includes provisions for immediate notification of the NAHC if the coroner finds reason to believe the remains are those of a Native American. Considering that there are no known interments and State law addresses potential unforeseen discoveries, no impact is expected.*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. ENERGY – WOULD THE PROJECT:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☐	☑
No Impact: *The Project would not have unusual construction requirements that would be wasteful or inefficient. Operations would have a beneficial impact since energy storage would allow more use of renewable resources thereby reducing petroleum consumption for electric power. Considering these factors, the Project would not have an adverse impact related to wasteful, inefficient, or unnecessary consumption of energy resources.*				
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☑
No Impact: *The Project would help to achieve State and local goals for renewable energy and energy storage. California's target of achieving 100 percent renewable energy by 2045 relies on storage for intermittent renewable resources. More immediately, on July 30th, 2021, Governor Newsom declared a State of Emergency in California regarding statewide electricity shortages caused by climate change, drought, and wildfires. The Governor called upon agencies across the State to take actions to expedite approval of battery energy storage systems to bring capacity online in 2022 and beyond. SCE has set forth an aggressive goal to procure 80 percent of energy supplied to the electric grid from carbon-free sources by 2030 (SCE, 2021). Energy storage is critical for achieving this goal to support use of intermittent renewable generation. SCE's Clean Power and Electricity Pathway emphasizes the urgency for energy storage investments to achieve its 2030 goal. The Project would support these goals. The Project would also be consistent with relevant General Plan Policies:* • *The role of energy storage in supporting storage of energy from clean renewable resources is consistent with Resource Management Policies 1.1 and 3.4 for protection of air and conservation of non-renewable energy.* • *Project landscaping will be drought-tolerant with efficient watering consistent with Resource Management Policy 1.4.* • *The project will conform with current energy conservation requirements consistent with Resource Management Policy 3.5.* *Considering these factors, the Project would be consistent with state and local renewable energy and energy efficiency goals. Therefore, there would be no conflict with plans for renewable energy or energy efficiency and there would be no adverse impact.*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GEOLOGY AND SOILS -- Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	☐	☐	☐	☑
No Impact: *The Project location does not occur in any Alquist-Priolo earthquake fault zone, nor does it occur on or cross any known active fault (Stantec, 2021; California Department of Conservation, 2021a). The closest active fault is the Puente Hills blind thrust fault (Los Angeles Segment), located approximately 0.9 mile from the Site (Stantec, 2021). Therefore, the Project would have no impact associated with rupture of any identified active fault.*				
ii) Strong seismic ground shaking?	☐	☐	☑	☐
Less than Significant Impact: *The Project is located in a seismically active area, and a number of fault zones occur in the region associated with the overall San Andreas fault system demarking the intersection of the North American and Pacific tectonic plates. Besides the Puente Hills Fault, 15 other known regional faults occur within 23 miles of the Site (Stantec, 2021). Strong ground motions could occur in the vicinity of the proposed Project from an earthquake on any of these or other regional faults. Strong seismic ground shaking would be a potentially substantial seismic hazard if structures are not appropriately designed. The potential for seismic ground motions to damage structures is typically reduced through proper design and construction to withstand predicted ground motions. California Building Code seismic standards are designed to reduce the potential for people or structures to be exposed to substantial risks from seismically induced ground motions. Conformance with this code would be assured through the Building Permit process of the City of Commerce. Adherence to California Building Code requirements would limit the risk of damage or injury from seismic ground shaking to level that would be less than significant.*				
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☑	☐
Less than Significant Impact: *The liquefaction potential of a site is dependent on characteristics of ground shaking, soil type, soil density, and depth-to- groundwater. The Project is not located in a California Geological Survey Liquefaction Hazard Zone (California Department of Conservation, 2021b). This zone is defined as areas where historical occurrence of liquefaction, or local geological, geotechnical and groundwater conditions indicate a potential for permanent ground displacements such that mitigation would be required. For the Project's Geotechnical Investigation, Stantec (2021) evaluated the potential for liquefaction at the Site based on a magnitude 7.3 earthquake and a peak ground acceleration of 0.93g. The Geotechnical Investigation identified stiff*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
to hard cohesive soils to a depth of 20 feet followed by interbedded very dense granular soil, and very stiff to hard cohesive soil generally from the ground surface to the maximum 51.5-foot depth of the investigation. Based on the depth of groundwater table and density of the soils, most of the soil in the top 50 feet is not considered susceptible to liquefaction. However, some of the stiff soil below the historic high depth to groundwater in the upper 50 feet is susceptible to seismically induced settlement. Seismically induced settlement is estimated to be on the order of 2 inches. Differential settlement over a span of approximately 30 feet is estimated to be approximately 1 inch. The Geotechnical Investigation recommends buildings be constructed with a stiffened foundation underlain by a recompacted fill mat to limit the potential impact of seismically induced differential settlement. Conformance with appropriate design recommendations compliant with the Building Code would be assured through the Building Permit process of the City of Commerce. Adherence to these recommendations and Code requirements would limit the risk of seismically induced damage or injury from seismic ground shaking including liquefaction to a less than significant level.				
iv) Landslides?	☐	☐	☐	☑
No Impact: *The Project area is nearly flat. There are no substantial slopes in the Project area that could result in a landslide hazard. Therefore, there would be no impact.*				
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☑	☐
Less Than Significant Impact: *The Project is in an urban area and the entire Project footprint has been previously graded and no topsoil is present. In addition, the Project area is nearly flat, limiting the potential for soil erosion. Construction would occur under the State General Permit with a Storm Water Pollution Prevention Plan (SWPPP) implementing BMPs for erosion control. The General Permit would require that a construction SWPPP be prepared by a Qualified SWPPP Developer and implemented by a Qualified SWPPP Practitioner (QSP). Standard BMPs from the California Stormwater Quality Association (CASQA) or their equivalents would be required such as scheduling to minimize the term of disturbances, stabilization of disturbed surfaces, silt fences and a stabilized construction entrance. The SWPPP would be required to address erosion control until it is demonstrated to the* RWQCB *that disturbed surfaces are stabilized and a Notice of Termination is accepted. Considering the absence of topsoil and considering that erosion would be controlled in accordance with requirements of the State General Permit, the proposed Project would not result in substantial erosion or loss of topsoil. Therefore, erosion and loss of topsoil impacts would be less than significant.*				
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☑	☐
Less than Significant Impact: *The potential for liquefaction and seismically induced settlement is addressed in Response VII (a)(iii), above. The proposed Project would not affect or be affected by any other aspect of geologic unit instability including the potential for landslides, lateral spreading,*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
subsidence, or collapse. The Project area is relatively flat and proposed grading would not result in any substantial slopes. Therefore, the Project does not have the potential to result in landslides. Lateral spreading is a phenomenon that can occur from seismic shaking or other lateral loading when the ground surface is not laterally supported on one or more sides. The Project area does not have slopes or other laterally unsupported conditions susceptible to lateral spreading. Soil collapse occurs when loosely compacted soils are disturbed by seismic shaking, rewetting, or other activities. Results of the Geotechnical Investigation (Stantec, 2021) show that soils are stiff to hard cohesive soils that are not susceptible to soil collapse. Subsidence can occur when pore pressures are reduced in unconsolidated geologic materials due to substantial fluid withdrawal. The Project does not involve substantial extraction of fluids from unconsolidated geologic deposits. Therefore, the Project does not have potential to create subsidence. Considering these factors, the Project would not be located on an unstable geologic unit or cause a unit to become unstable. Therefore, the impact would be less than significant.				
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☑	☐
Less than Significant Impact: *Soils in the Project area have a low expansion potential (Stantec, 2021). Therefore, the potential for adverse impacts from expansive soils would be less than significant.*				
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☑
No Impact: *Sewer systems are available in the project area, so the project does not require septic systems or alternative waste disposal systems. No impact to soils would occur.*				
VIII. GREENHOUSE GAS EMISSIONS -- Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☑	☐
Less than Significant Impact: *The proposed Project would not generate greenhouse gas (GhG) emissions, with the exception of carbon dioxide (CO2) generated from vehicle and equipment emissions for construction and maintenance activities. The estimated construction GhG emission calculated using CalEEMod is 244 metric tonnes of CO2 equivalent gas, well below SCAQMD's GhG significance threshold of 10,000 metric tonnes per year for stationary source projects which includes construction emissions amortized over 30 years and added to operational emissions. Once constructed, the Project would provide a new and reliable means of capturing and managing energy from renewable energy projects such as solar generation and wind generation projects, increasing the effectiveness of renewable energy technologies, reducing the dependency on fossil fuel-*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
produced electric energy, and providing an overall long-term GhG benefit. Considering that construction emissions would be below SCAQMD's significance threshold and that Project operations would contribute beneficially to GhG emission reduction regionally, GhG emissions would be less than significant both individually and cumulatively.				
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☑
No Impact: *The proposed Project would not conflict with any applicable plan, policy, or regulation adopted to reduce GhG emissions. The estimated construction GhG emission calculated using CalEEMod would be below SCAQMD's GhG significance threshold of 10,000 metric tonnes per year for stationary source projects. Once constructed, the Project would operate without GhG emissions with the exception of minor emissions from occasional maintenance vehicle trips. The Project would be available to store energy from renewable energy projects such as solar generation and wind generation projects, reducing the dependency on fossil fuel-produced electric energy and supporting the achievement of local, state and federal renewable energy goals directed at GhG reduction.*				
IX. HAZARDS AND HAZARDOUS MATERIALS -- Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☑	☐
Less than Significant Impact: *Construction would require the short-term transport, use and/or disposal of hazardous materials such as fuels, lubricants, adhesives, solvents and paints. Construction would be required to occur under a comprehensive hazard communication program in accordance with 29 CFR 1910 to ensure that construction workers are knowledgeable in the identification and proper handling of hazardous materials to prevent unsafe exposure and to avoid spills. Stormwater Best Management Practices (BMPs) would be required under the State General Permit to prevent contact of hazardous materials with stormwater. Furthermore, construction areas would not be open to the public. With these measures, the routine use of hazardous materials for construction would not create a significant hazard to the public or the environment.* *Deliveries of bulk fuels, lubricants, batteries, and other hazardous materials to construction sites would be subject to Department of Transportation (DOT) regulations at 49 CFR 172 and 173 for hazardous materials transport. These regulations include requirements for hazardous material transport licensing, packaging and containment standards, labeling, and other protection measures to prevent hazardous materials incidents during transport and to facilitate response in the event of a hazardous material accident. Hazardous wastes produced would be minimal and would be required to be removed in accordance with these same DOT regulations, as well as being managed at all times under requirements of California Code of Regulations Title 22 Division 4.5 for worker training and storage, shipping, and disposal of hazardous waste. With these existing regulations in place, the transport, production, and disposal of hazardous materials associated with facility construction would not create a significant hazard to the public or the environment.*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Operation of the proposed Project would not typically involve handling of hazardous materials. The battery modules contain sealed battery cells which contain components that would be considered hazardous waste when disposed. Battery modules and their various components replaced throughout the life of the system would be transported offsite and returned to the manufacturer or their approved and permitted recycling partner(s) for dismantling, material processing and recovery. The transformers are operated normally closed and sealed. On infrequent occasions, oil in oil-filled transformers may require filtering or replacement if it becomes contaminated. If transformer oil needs to be replaced, the used oil would be recycled at a licensed offsite recycler. Management and transport of replacement batteries and oil, used batteries, and used oil would be subject to the same management and transportation regulations and requirements as described above for construction. With these existing regulations in place, the transport, production, and disposal of hazardous materials associated with facility operations would not create a significant hazard to the public or the environment.				
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☑	☐
Less than Significant Impact: *Construction would require the short-term use and transport of hazardous materials as described in Response IX (a), above. Construction would be required to occur under a comprehensive hazard communication program in accordance with 29 CFR 1910 to ensure that construction workers are knowledgeable in the identification and proper handling of hazardous materials to avoid spills or other upset conditions that could otherwise result in unsafe exposure. The general public would be excluded from access to construction sites. Transport of bulk fuels, lubricants, batteries, and other hazardous materials would be subject to DOT regulations at 49 CFR 172 and 173 including requirements for hazardous material transport licensing, packaging and containment standards, labeling, and other protection measures to prevent hazardous materials incidents during transport and to facilitate response in the event of a hazardous material accident. Considering these factors, construction would not create a significant hazard to the public or the environment due to reasonably foreseeable upset or accident conditions.* *Operation of the proposed Project would be subject to 19 CCR Division 2, Chapter 4 requirements to submit and maintain a Hazardous Materials Business Plan and would be subject to periodic inspections by the Certified Unified Program Agency (Los Angeles County Fire Department) for safe operations related to hazardous materials. These regulations require reporting of hazardous materials present in quantities exceeding threshold quantities, worker training, emergency planning preparations to minimize potential hazards of a hazardous material upset, and immediate reporting to 911 and the California Office of Emergency Services of any release or threatened release of hazardous materials that presents a significant present or potential hazard to human health and safety, property or the environment. Oil-filled electrical equipment would be subject to 40 CFR 112 regulations that include comprehensive requirements for preventing releases of oil and for oil spill response preparedness. These regulations include safety measures such as secondary containment for oil-filled equipment, requirements for routine inspections and proper equipment maintenance, personnel training to prevent discharges, site security, oil transfer safety precautions,*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
and oil spill response planning. The energy storage system and all other equipment would be constructed according to applicable National Fire Protection Association, National Electrical Code, and California Fire Code safety standards. Batteries would contain integrated safety systems to actively monitor electrical current, voltage and temperature to optimize performance, mitigate potential failures, and prevent upset. Batteries performing out of specification would be immediately taken offline by the automated monitoring system. The system would be designed and constructed to comply with applicable building, electrical and fire codes. Battery buildings or enclosures would be outfitted with fire suppression equipment to meet or exceed fire safety codes and standards. As detailed in the Applicant's Project Description, fire protection would include prevention, suppression, and isolation methods and materials including smoke/fire detection sensors; ground fault detection, alarms, and systems for automatic shutdown of cooling fans and opening of electrical contacts in the battery system; and systems for automatic release of a fire suppression agent appropriate to the battery technology and as may be required by fire code. Operation of the facility would be remotely monitored on a continuous basis. In addition, the system would be routinely visited to perform visual inspections. Security would be provided including perimeter fencing and remote video monitoring with pan, tilt and zoom capabilities. These design measures are included to minimize the potential for upset and to immediately respond in the event of an unforeseen upset. Considering these safety systems incorporated into the Project design, and existing regulatory requirements and standards applicable to the Project that are designed to minimize hazardous material upset risks to human health and the environment, the risk of a reasonably foreseeable upset or accident scenario creating a hazard to the public or the environment during operations would be less than significant.				
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☑
No Impact: *There are no existing or proposed schools located within one-quarter mile of the Project area. The closest school is Bell Gardens High School located 0.6 mile southwest of the 6920 and 6904 Sites and more than 0.3 mile from the closest approach of the tie-line route. Therefore, there would be no impact.*				
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☑	☐
Less than Significant Impact: *The 6920 and Laguna Bell Station Sites are not located on a hazardous materials site pursuant to Government Code Section 65962.5. The 6904 Site is included on DTSC's EnviroStor list with DTSC identified as the Lead Agency for the Site cleanup program. DTSC has completed cleanup activities at the site. Monitoring continues and a land use covenant will be recorded as required under CUP No. 548 with restriction to ensure future use is protective of human health and the environment. The proposed 6904 Site Plan Modifications would make minor adjustments in the location of structures on the site, but these adjustments would not affect the*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
hazardous materials mitigation measures already adopted for this site, which are designed to limit significant hazards to the public or the environment. Therefore, impacts would be less than significant.				
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☑
No Impact: *The Project area is not within an airport land use plan or within two miles of a public or public use airport. The closest airport is the Compton/Woodley Airport, located more than eight miles to the southwest. No impact would occur.*				
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☑	☐
Less than Significant Impact: *The proposed Project would not alter any existing public or private through-way. Short-term lane closures would be needed to install the electric tie-line in or near roadway areas. An Encroachment Permit requiring a traffic control plan would be required for any lane closures. This short-term impact during construction would not impair implementation of or physically interfere with any emergency response plan or emergency evacuation plan. Therefore, the impact would be less than significant. Procedures designed to minimize emergency response impacts from short term lane closures to travel on Garfield Avenue, a Major Arterial used for emergency response, are addressed in Section XVII, Transportation, below.*				
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☑
No Impact: *The proposed Project area is in an urban area. There are no wildlands in the Project Vicinity. Considering these factors, wildland fire is not a foreseeable risk for the Project and no impact would occur.*				
X. HYDROLOGY AND WATER QUALITY -- Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☑	☐
Less than Significant Impact: *At all three sites, construction would occur under the State General Permit with a Storm Water Pollution Prevention Plan (SWPPP) implementing Best Management Practices (BMPs) for protection of water quality. The State General Permit would require that a*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
*construction SWPPP be prepared by a Qualified SWPPP Developer and implemented by a QSP. Standard BMPs from the California Stormwater Quality Association (CASQA) or their equivalents would be required for sediment and other potential pollutants. Under the State General Permit, the SWPPP would need to address water quality BMPs and the permit would require that those BMPs be implemented until it is demonstrated to the Regional Water Quality Control Board (*RWQCB) *that disturbed surfaces are stabilized and a Notice of Termination is accepted. The General Permit requires construction discharges to not violate water quality standards. With adherence to the State General permit and BMPs, no violation of any water quality standard or waste discharge requirement or substantial degradation of water quality would be expected from construction.* *A Stormwater Plan for the 6920 Site is included in the Conditional Use Permit application. Discharges from the 6920 Site during operations would be required to comply with NPDES Permit CAS004001, Waste Discharge Requirements for Municipal Storm Water and Urban Runoff Discharges Within the County of Los Angeles, and the Incorporated Cities Therein, except the City of Long Beach (RWQCB, 2007). The City of Commerce would require that the Project include all measures needed to comply with NPDES Permit CAS004001 through the City's Stormwater and Runoff Pollution Control Ordinance (Municipal Code Chapter 6.17) and the City's review of the Project design in conjunction with issuance of grading and building permits. Compliance with NPDES Permit 004001 would require that there is no discharge from the site other than stormwater and exempted non-stormwater discharges such as air conditioning condensate that do not contain pollutants. The 6920 Site design incorporates onsite retention in underground stormwater storage pipes to store the increase in peak flow that would occur due to site development so that peak flows are not increased for the 24-hour design storm in compliance with the Los Angeles County Stormwater Ordinance. In addition to design measures and NPDES permit compliance to prevent water quality degradation, the 6920 Site design includes impermeable surfacing over most of the Site that would reduce infiltration through residual impacted soils onsite which can be expected to have some beneficial effect on the quality of groundwater beneath and downgradient of the Site. Other 6920 Site design features to minimize impacts on water quality include:* • *No outdoor storage areas are proposed;* • *No floor drains or interior or exterior wash-down areas are proposed;* • *No repair/maintenance bays or fueling areas are proposed;* • *Site storm drain inlets would be stenciled;* • *No disturbance to natural water bodies and drainage systems would occur; and* • *Ongoing maintenance of stormwater controls and periodic inspections would ensure proper performance of water quality protection systems.* *Proposed Site Plan Modifications at the 6904 Site would not affect water quality. Proposed undergrounding of certain power lines at the Laguna Bell Substation Site would not affect surface water runoff and groundwater since the site would be restored to its existing condition after construction. Considering existing requirements of the State NPDES General Permit for construction and NPDES Permit CAS004001, and BMPs incorporated in the Project design, it is not expected that the Project would violate any water quality standards or waste discharge requirements or result in any substantial water quality degradation. Therefore, the impact would be less than significant.*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?	☐	☐	☑	☐
Less than Significant Impact: *For all three sites, Project construction would require water for dust control and compaction. Construction water would be supplied from an existing nearby hydrant. This use would be short-term and would not represent an ongoing water demand that could affect groundwater management of the basin. During operation, neither the 6904 Site Plan Modifications nor Laguna Bell Substation improvements would affect groundwater supplies or groundwater recharge. The amount of impervious area from the 6920 Site would not materially change from existing conditions. Assuming 50 gallons per day is used by six office staff and 260 ft of landscaping is watered along Slauson Avenue, about 100,000 gallons of water would be used at this site per year. Considering that the total extraction of groundwater in the Central Basin, where the City of Commerce is located, is about 65 billion gallons per year (from CDWR 2004), the impact would be less than significant.*				
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through addition of impervious surfaces in a manner which would:				
i) Result in substantial erosion or siltation on- or off-site?	☐	☐	☑	☐
Less than Significant Impact: *At the 6920 Site, no erosion or siltation would occur since drainage would be collected at inlets spaced around the site and directed through underground piping to the regional underground Los Angeles County Flood Control infrastructure under Slauson Avenue. Neither the 6904 Site Plan Modifications nor Laguna Bell Substation improvements would affect the drainage pattern of the site or area since all construction activities would be followed by surface grading and surfacing that would return these sites to existing conditions following installation. The Project would not alter the course of any stream or river onsite or offsite since none occur within the Project area. Considering these factors, the Project would not alter existing drainage patterns in a manner that would result in substantial erosion or siltation on- or off-site. Therefore, the impact would be less than significant.*				
ii) Substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	☐	☐	☑	☐
Less than Significant Impact: *At the 6920 Site, standard onsite storm water retention in the collection pipes would retain runoff so there would be no increase in the rate of runoff from storms. This storm water retention design would be reviewed and approved by the Los Angeles County Flood Control District as part of its permitting process to ensure that the 6920 Site would not*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
increase flood flows in the storm drain system. The 6904 Site Plan Modifications and the Laguna Bell Substation improvements would not affect the rate or amount of surface runoff since all construction activities would be followed by surface grading and surfacing that would return these sites to existing conditions following installation. Considering these factors, the Project would not alter existing drainage patterns or increase runoff in a manner that would result in flooding on- or off-site. Therefore, the impact would be less than significant.				
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☑	☐
Less than Significant Impact: *At the 6920 Site, the Project incorporates standard onsite storm water retention in the collection pipes to retain runoff so there would be no increase in the rate of runoff from storms. Battery energy storage is a clean industrial use and does not add sources of pollution. Neither the 6904 Site Plan Modifications nor Laguna Bell Substation improvements would affect capacity of drainage systems since all construction activities would be followed by surface grading and surfacing that would return these sites to existing conditions following installation. Considering these factors, Project impacts would be less than significant.*				
iv) Impede or redirect flood flows?	☐	☐	☑	☐
Less than Significant Impact: *At the 6920 Site, drainage would be collected onsite and conveyed to the same flood control infrastructure as under existing conditions, so the additional building size on the site would not impede or redirect flood flows. Furthermore, the 6920 Site is located outside the 100-year flood hazard zone and incorporates onsite storm water retention to retain the increase in peak flow so there would be no increase in peak runoff from design storms. The 6904 Site Plan Modifications and the Laguna Bell Substation improvements would not affect flood flows since all construction activities would be followed by surface grading and surfacing that would return this site to existing conditions following installation. Considering these factors, impacts would be less than significant.*				
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☑
No Impact: *The Project is located in Federal Emergency Management Act (FEMA) Flood Zone X, Area of Minimal Flood Hazard, (FEMA, 2021). The Project is not within a tsunami hazard zone (Department of Conservation, 2021b) and is located far from any water body large enough to result in seiche. For these reasons, no impact is expected.*				
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
No Impact: *At all three sites, the Project would be required to comply with the State General NPDES permit during construction and would be designed to comply with the MS4 permit during operations. Operations would be passive and clean with no air pollutant emissions, without substantial traffic generation, and no outdoor material storage or other pollutant sources. Considering these factors, the Project would not conflict with or obstruct any water quality control plan or sustainable groundwater management plan and no impact is expected.*				
XI. LAND USE AND PLANNING - Would the project:				
a) Physically divide an established community?	☐	☐	☐	☑
No Impact: *The proposed Project would not result in any physical barrier or feature that could divide an established community.*				
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☑
No Impact: *The 6920 Site and 6904 Site are located in an area zoned M-2 (Heavy Manufacturing). The requirements of the zone are intended to provide safeguards and to establish adequate buffer distances between uses that pose potentially adverse public health, safety, and welfare impacts and land uses in adjacent more restrictive zone districts. The proposed battery energy storage use has been determined to be Special Warehousing and Storage (SIC Code 4226) by the Director of Economic Development and Planning, requiring a Conditional Use Permit in M-2 zoning under Commerce Municipal Code Chapter 19.11. With this permit, the proposed use would not conflict with any land use plan, policy, or regulation. The City of Commerce General Plan designates these two sites and surrounding parcels as Industrial (City of Commerce, 2008) and within the City's Redevelopment Project Area 1 in the Commerce Park Planning Area. Land use policy for this area encourages the continued presence of all types of industry throughout the planning area. The proposed use of the sites would increase their productive use and would generate increased property taxes, employment, and general business activity consistent with goals of the City's Redevelopment Area establishment. The Laguna Bell Station Site is zoned PF - Public Facility. Proposed undergrounding of power lines and construction of a riser pole in this area would be consistent with this zoning and land use. Considering these factors, the proposed use would be consistent with the City's land use plans and policies. There would be no impact related to conflict with any land use plan, policy, or regulation.*				
XII. MINERAL RESOURCES -- Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
No Impact: *The Project area is highly developed and there are no known mineral resources that could be impacted by the Project. No impact would occur.*				
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☑
No Impact: *The Project area is highly developed and there are no known mineral resources that could be impacted by the project. The General Plan does not identify any mineral resource that could be affected by Project development.*				
XIII. NOISE - Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☑	☐	☐
Less Than Significant Impact with Mitigation Incorporated: *Construction noise would be generated at all three construction sites from equipment, tools, vehicles, and work crews. As noted in the project description, construction activity would not occur between ten p.m. and seven a.m., in conformance with the City's noise ordinance (Municipal Code section 19.19.160 – Noise). The highest noise levels would be expected during grading and site preparation when multiple pieces of equipment may be operating simultaneously for several hours each day such as bulldozers, scrapers, water trucks, compactors, loaders, and dump trucks. Typical noise levels for these types of mobile construction equipment range from 80 to 89 dBA at 50 feet (FHWA, 2006). The 6920 Site is about 300 ft wide and 800 ft long, assuming an average equipment noise level of 85 dBA located at the center of the property and a standard attenuation rate of 6 dBA for each doubling of distance, then noise levels would be an average of about 69 dBA at the closest property line during the construction period. The City's noise ordinance allows noise levels up to 70 dBA at any time in industrial zones. This code also permits noise levels 20 dBA above this level if they are less than one minute in duration. Noise levels at the 6920 Site might temporarily reach this level, for instance, if construction equipment is driven along the perimeter of the property. Thus, construction noise at the 6920 Site is not expected to exceed City noise limits either on a short-term or long-term basis. Construction noise from the proposed 6904 Site Plan Modifications would not change noise impacts from the previously approved 6904 Site Plan. Construction noise from the Laguna Bell Substation Site is not expected to exceed an average of 65 dBA at the nearest estimated receptor. Considering these factors, noise impacts during construction would be less than significant at all three sites.* *Operations at the 6920 Site would generate noise primarily from outdoor electrical equipment and roof-mounted heating, ventilation and air conditioning motors and fans. Noise levels for typical equipment include:*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

EQUIPMENT	*TYPICAL NOISE LEVEL (dBA)*
Inverters	*80 at 3.3 feet (1 meter)*
Primary Transformers	*62 at 5 feet*
Rooftop HVAC Units	*85 at 3 feet*
Substation HVAC Units	*67 dBA at 10 feet*
Step-Up Transformer	*87 dBA at 5 feet*

The City's General Plan (City of Commerce, 2008) identifies the Industrial land use designation of the 6920 Site to have a desired maximum noise level of 70 dBA and a maximum acceptable noise level of 75 dBA. Based on analyses prepared for this Project (Appendix E), noise from this equipment could exceed these levels at the site boundary. Construction of walls around the perimeter of this site (see Figure 9) would attenuate these levels to less than 70 dBA.

Mitigation Measure NOI-1 would require walls to be constructed to ensure noise impacts would be mitigated to a less than significant level during operation.

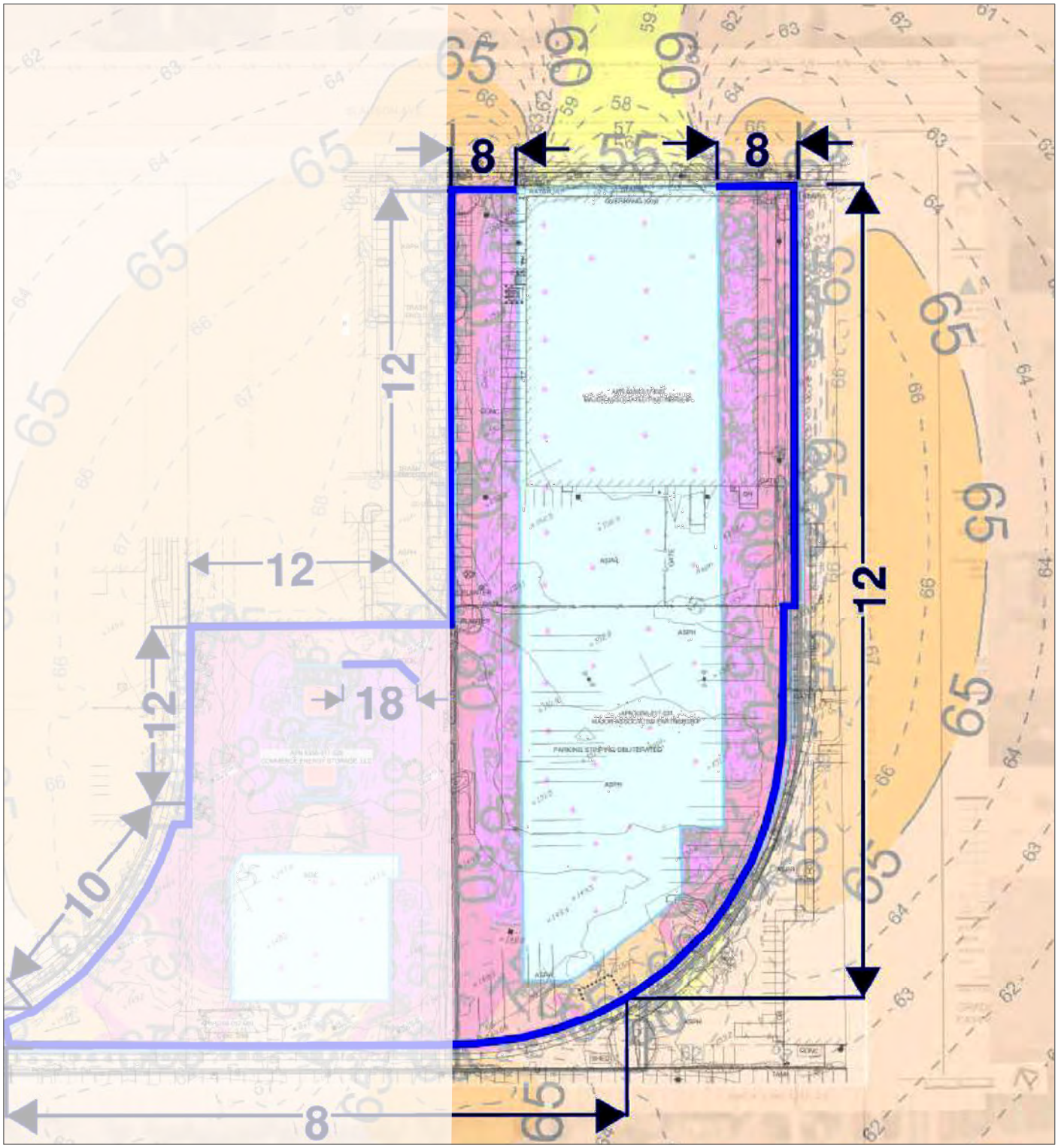
***Mitigation Measure NOI-1**: Walls shall be constructed along the 6920 Site property line to act as a noise barrier and reduce noise levels on the adjacent properties. The walls shall be 12 feet high. These walls shall be solid with no cracks or gaps and shall have a minimum surface density of 3 pounds per square foot. In addition, solid gates at the entrances along Slauson Avenue shall be provided at a height of 8 feet to reduce noise along the pedestrian walkway.*

The 6904 Site Plan Modifications include similar walls (see Figure 10) that would achieve the same attenuation described above and would ensure compliance with the City's noise ordinance during operations at this site. Therefore, these proposed modifications would have less than significant noise impacts during operation.

Proposed improvements at the Laguna Bell Substation would not change noise levels generated during operations at that location, so no operational impacts would occur.

b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☑	☐

***Less Than Significant Impact:** Grading may generate localized low-level groundborne vibration and noise but would not generate excessive groundborne vibration. Groundborne vibration and noise is attenuated rapidly with distance and would likely not be noticeable at nearby parking lots or commercial and industrial buildings. Only minor grading would be required since there would be little difference in existing and proposed elevations and no deep excavation or foundations along the site perimeter or for trenches. Considering these factors, groundborne vibration and noise impacts would be less than significant.*

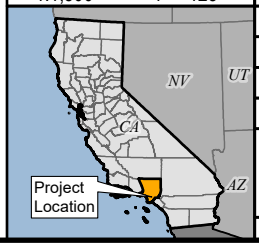


BASE MAP SOURCE: 231687 - APPENDIX E

WALL HEIGHTS SHOWN IN FEET.

NOISE LEVEL LEQ IN DB(A)

0 62.5 125
FEET
1:1,500 1" = 125'



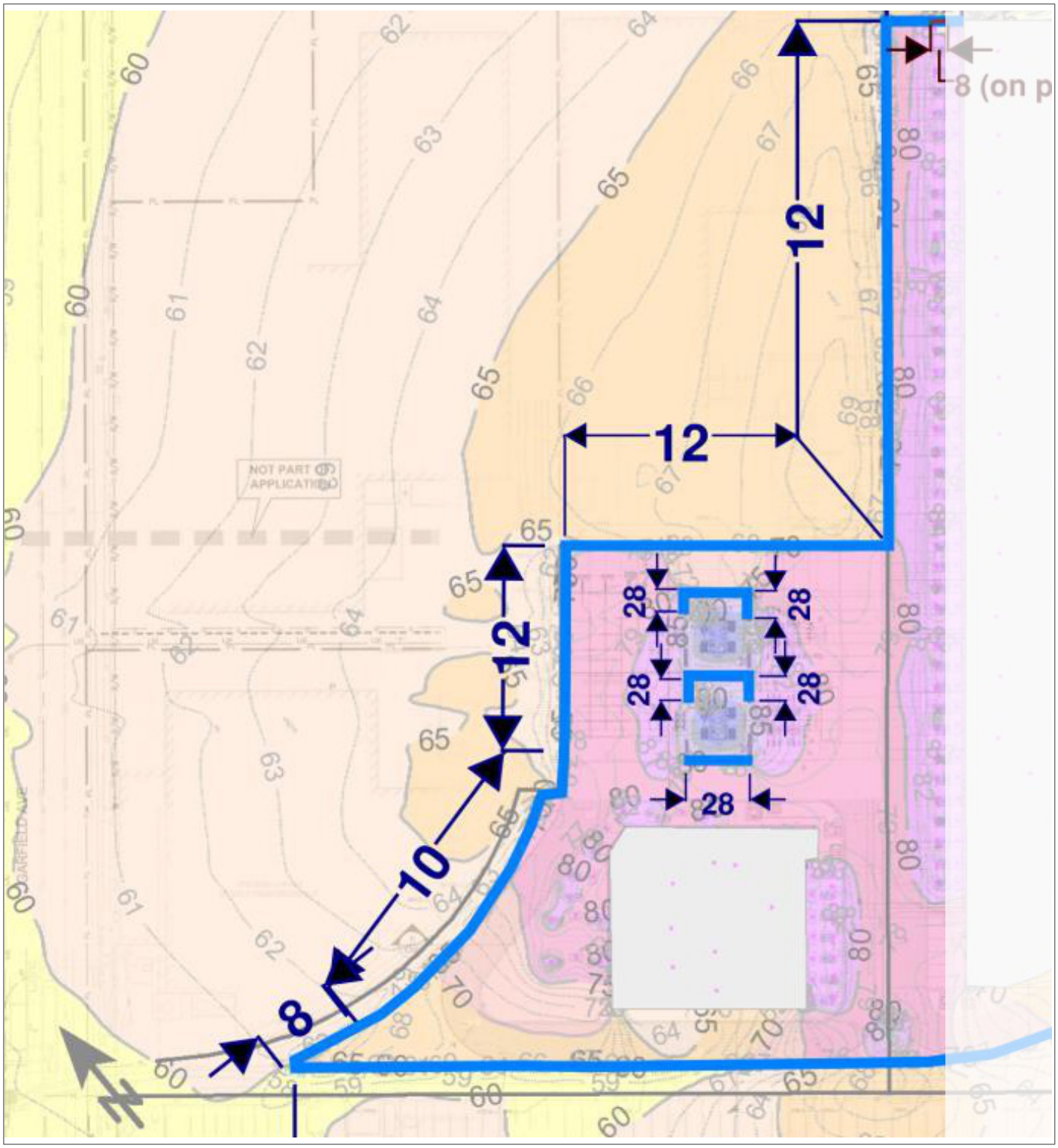
PROJECT: **COMMERCE ENERGY STORAGE, LLC.**
COMMERCE 2023 ENERGY STORAGE PROJECT
COMMERCE, LOS ANGELES COUNTY, CALIFORNIA

TITLE:
NOISE BARRIERS AT 6920 SITE

DRAWN BY:	R. SPRING	PROJ. NO.:	511784.0000.0000
CHECKED BY:	F. CONTI		**FIGURE 9**
APPROVED BY:	R. BURKE		
DATE:	APRIL 2024		

TRC
6 EXECUTIVE CIRCLE
SUITE 200
IRVINE, CA 92614
PHONE: 949.727.9336

FILE: COMMERCE_2023.APRX

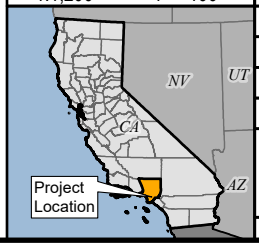


BASE MAP SOURCE: 231687 - APPENDIX E

WALL HEIGHTS SHOWN IN FEET.

NOISE LEVEL LEQ IN DB(A)

0 50 100
FEET
1:1,200 1" = 100'



PROJECT: **COMMERCE ENERGY STORAGE, LLC.**
COMMERCE 2023 ENERGY STORAGE PROJECT
COMMERCE, LOS ANGELES COUNTY, CALIFORNIA

TITLE:
NOISE BARRIERS AT 6904 SITE

DRAWN BY:	R. SPRING	PROJ. NO.:	511784.0000.0000
CHECKED BY:	F. CONTI		
APPROVED BY:	R. BURKE		**FIGURE 10**
DATE:	APRIL 2024		

TRC
6 EXECUTIVE CIRCLE
SUITE 200
IRVINE, CA 92614
PHONE: 949.727.9336

FILE: COMMERCE_2023.APRX

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☑
No Impact: *The Project area is not in the vicinity of a private airstrip or an airport land use plan or within two miles of a public or public use airport. The closest airport is the Compton/Woodley Airport more than eight miles to the southwest.*				
XIV. POPULATION AND HOUSING -- Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☑
No Impact: *The proposed Project would not generate population growth, either directly or indirectly. It does not propose any housing or commercial development, nor extension of roads or expansion of infrastructure. The business activity resulting from the Project would also not induce population growth. Construction jobs at all three sites are expected to be filled by the existing regional workforce without inducing long-term growth. During operations at the 6920 Site, positions for staff located in the office and staff employed to conduct occasional equipment inspections, monitoring and testing, and maintenance would be filled with the existing workforce without requiring relocation to the City of Commerce area. Operations resulting from the 6904 Site Plan Modifications or Laguna Bell Substation improvements would not add staff. Because the proposed Project would not generate new long-term full-time jobs or commercial businesses, construct new housing, or extend existing infrastructure, it is not expected to generate population growth and no impact would occur.*				
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑
No Impact: *Existing housing would not be displaced by the construction or operation of the proposed Project. Therefore, no impacts would occur.*				
XV. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☐	☑
No Impact: *Fire protection in the City of Commerce is provided by the Los Angeles County Fire Department (LACFD). The closest fire station to the Project area is Station 27 at 6031 Rickenbacker Road approximately 4 minutes from the 6920 and 6904 sites. The proposed Project would be designed and constructed to follow LACFD requirements for access and fire water supply. The final design would be subject to LACFD review and approval. The presence of oil in transformers onsite would require submittal of a Hazardous Materials Business Plan on the California Environmental Reporting System with an emergency response plan with emergency coordinator contact information and mechanisms for emergency access to the sites. Onsite roads would be constructed with a compacted subgrade and paved surface. All electrical systems for the Project would be required to be constructed in accordance with applicable codes. The new riser pole and related improvements at the Laguna Bell Substation would meet SCE's substation fire protection requirements. With adherence to these requirements, the Project is not expected to create a capacity or service level shortfall related to fire protection. No new or modified government facilities would be needed to provide fire protection for the Project. Therefore, there would be no impact.*				
Police protection?	☐	☐	☐	☑
No Impact: *The proposed Project would be located in the City of Commerce which contracts police protection from the Los Angeles County Sheriff's Department. Services for the Site area is from the East Los Angeles Sheriff's Station at 5019 E. Third Street, Los Angeles, approximately 16 minutes from the Project area. Construction and operation of the Project would not generate a material demand on police services. The 6920 and 6904 sites would be fenced with controlled access gates that would avoid the need for routine police protection services. Security cameras and alarms would be monitored by staff on site and remotely. Considering these factors, the proposed Project would not result in an adverse impact on police service response times, service ratios, or other performance objectives, nor would it result in the need for new or modified police facilities. No new or modified government facilities are needed to provide police protection for the Project. Therefore, there would be no impact.*				
Schools?	☐	☐	☐	☑
No Impact: *As described in Response XIV(a) above, the proposed Project would not generate population growth. Therefore, no new demands on school facilities would occur, and there would be*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
no impact on school capacities, service levels or performance objectives. The proposed Project would not require new or physically altered school facilities. Therefore, there would be no impact.				
Parks?	☐	☐	☐	☑
No Impact: *As described in Response XIV(a) above, the proposed Project would not generate population growth. Therefore, no new demands on park facilities would occur and there would be no impact on park capacities, service levels or performance objectives. The proposed Project would not require new or physically altered park facilities. Therefore, there would be no impact.*				
Other public facilities?	☐	☐	☑	☐
Less than Significant Impact: *As described in Response XIV(a) above, the proposed Project would not generate population growth or extend infrastructure. It would not create a substantial new demand for services and would not require new or physically altered public facilities, other than the riser pole and related changes to the Laguna Bell Substation described in the Project Description. Therefore, this impact would be less than significant.*				
XVI. RECREATION --				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☑
No Impact: *As described in Response XIV(a) above, the proposed Project would not generate population growth. Additionally, it would not displace, affect access to, or otherwise physically affect any park or recreational facility. Therefore, no increase or change would occur in the use of any park or recreational facility. Therefore, the proposed Project would not result in or accelerate physical deterioration of any park or recreational facility. Therefore, there would be no impact.*				
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☑
No Impact: *As described in Response XIV(a) above, the proposed Project would not generate population growth. Additionally, it would not displace, affect access to, or otherwise physically affect any existing park or recreational facility nor does it propose any new recreational facility. Therefore, there would be no impact.*				
XVII. TRANSPORTATION -- Would the project:				
a) Conflict with a program plan, ordinance or policy addressing the	☐	☐	☑	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
circulation system, including transit, roadways, bicycle and pedestrian facilities?				

Less than Significant Impact: *At the 6920 Site, the peak of 25 trucks per day and 140 workers per day would not conflict with the local circulation system. Construction worker and delivery traffic would temporarily and incrementally add to existing traffic on Garfield Avenue, Slauson Avenue, and other arterial roads between the Project and Interstates 5 and 710. Garfield and Slauson Avenues are 4-lane Major Arterials with a 40 mile per hour speed limit. These roads carry extensive large truck traffic shipping goods to and from local warehouses and other industrial facilities and can accommodate needed construction shipments for the Project. Permits from the County and the State would be needed for oversize or overweight loads. The Project would not conflict with the City's plans for improvements under the Slauson Corridor Improvement Project. CES will coordinate with City staff to finalize Project construction logistics such as the final offsite staging location, trip scheduling, access plans, and required work in the Slauson Avenue ROW. If construction of the Slauson Avenue Corridor Improvement Project is underway concurrently, CES will work with City Public Works staff to identify access routes to the construction and staging areas that would minimize any conflict. Construction workers are expected to be primarily from the existing regional workforce currently contributing traffic to regional transportation routes and would therefore not materially affect regional Vehicle Miles Traveled (VMT). During operation of the 6920 Site, facilities would be visited periodically through the year for equipment inspections, monitoring and testing, and maintenance as needed. The six staff who would travel daily to and from the site on each shift represent a negligible level of trip generation and VMT, so impacts on roadways would be less than significant. Garfield and Slauson Avenues are bus routes serviced by the City's municipal bus lines and there are bus stops on both of these streets near their intersection. No work is proposed where these bus stops are located. The City currently does not have any bicycle facilities, although Slauson Avenue is recommended for improvement to a Class II Bicycle Lane with striping and one-way bicycle movement on each side (City of Commerce, 2020). Following construction, the Project would generate negligible vehicle trips and would not affect the planned bike lane improvement. Sidewalks are present at both Garfield Avenue and E. Slauson in the Project vicinity but there is limited pedestrian traffic in the M-2 area. Work in the public rights-of-way would require an encroachment permit from the City with a standard condition that safe pedestrian access be provided at all times. The City's Public Works Encroachment Permit standard conditions limit work in Major Arterials to weekend days (8:00 a.m. to 5:00 p.m.) and weekday nights (9:00 p.m. to 6:00 a.m.) to avoid significant impacts to transportation. Additionally, the application for the City's Public Works Encroachment Permit would require submittal of a Traffic Control Plan and provision of safe pedestrian access at all times in addition to standard technical specifications for depth of burial, backfilling, and surface replacement to ensure public transportation safety.*

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
At the 6904 Site, the minor underground extension included in the 6904 Site Plan Modifications would cause a small increase in the temporary use of a portion of Garfield Avenue during construction. At no point during construction would Garfield Avenue be completely closed to traffic in either direction. Following construction each night, steel plates would be placed on top of any open or unpaved section of the trench to ensure safe vehicle operations the following day. A Traffic Control Plan would be prepared prior to issuance of an encroachment permit to ensure continuous and safe traffic operations on Garfield Avenue in both directions during the entire construction period. A small number of additional temporary lane closures may occur to accommodate construction of the tie-line extension within Garfield Avenue. Bus stops located northbound and southbound on Garfield Avenue as well as on Randolph Street at Garfield Avenue would not be affected. The City's requirements for nighttime work in Major Arterials would avoid any conflict with public transit. *Construction of the riser pole at the Laguna Bell Substation would have impacts on Garfield Avenue similar to, but less than, those described above at the 6904 Site. Continuous traffic would be maintained in both directions on Garfield Avenue under measures approved by the City, including limiting lane closures to weekday nighttime and weekend daytime hours.* *Considering the above factors, the Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, and impacts would be less than significant.*				
b) Would the Project conflict with or be inconsistent with the CEQA Guidelines Section 15064.3 Subdivision (b)?	☐	☐	☑	☐
Less than Significant Impact: *CEQA Guidelines Section 15064(b)(1) states "Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact." Since both Garfield and Slauson Avenues are bus routes serviced by the City's municipal bus lines and there are bus stops on both of these streets near their intersection less than one-half mile from the Project site, there would be no conflict with the CEQA Guidelines.*				
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☑	☐
Less than Significant Impact: *The proposed Project does not include any new construction or realignment of existing road facilities. The Project would not require new or modified streets or intersections. The 6920 Site would be accessed from Slauson Avenue in a manner that would be capable of accommodating anticipated construction trip generation. Since Garfield and Slauson Avenues are 4-lane Major Arterials and carry extensive large truck traffic shipping goods to and from local warehouse and other industrial facilities, they can accommodate needed construction shipments for the Project. Permits from the County and the State would minimize hazards from oversize or overweight loads. During operation, the small number of office staff that would visit the site would not increase hazards in the area.* *Considering these factors, neither construction nor operation would substantially increase hazards due to a design feature or incompatible use. Therefore, the impact would be less then significant.*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Result in inadequate emergency access?	☐	☐	☑	☐
Less than Significant Impact: *The 6920 Site is designed with access gates and a paved perimeter road meeting fire department access requirements and would therefore provide adequate emergency access. The 6904 Site Plan Modifications would add several days of lane closures on Garfield Avenue during installation of the extended underground electric tie-line. Lane closures near the Laguna Bell Substation would also slow traffic during the riser pole construction and undergrounding, even though these activities would occur outside the public right-of-way. These effects on emergency access would be minimized by working in streets in segments approximately 200 feet long or shorter, closing lanes at night on weekdays or during the day on weekends outside of peak traffic hours, and preparing a Traffic Control Plan to ensure continuous and safe traffic operations on Garfield Avenue in both directions during the entire construction period. Because continuous traffic would be maintained in both directions on Garfield Avenue under safety measures of a Traffic Control Plan approved by the City, and due to the short duration and length of lane closures at any given time and the overall short-term duration of construction in Garfield Avenue, the impact of temporary lane closures to emergency access would be less than significant.*				
XVIII. TRIBAL CULTURAL RESOURCES -- Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape, that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☑	☐	☐
Less than Significant with Mitigation Incorporated: *To investigate the potential presence of tribal cultural resources that could be affected by the Project, a search of the CHRIS database and the NAHC's Sacred Lands file was conducted (Appendix D). The results of the record search indicate there have been 11 cultural resource studies within a 0.5-mile radius of the Project area, but none included the subject properties. No archaeological resources were recorded as a result of these prior studies and no tribal cultural resources were identified in the Sacred Lands file. There are no designated State or local tribal cultural resources or tribal resources eligible for listing within or adjacent to the Project footprint. Mitigation Measure CUL-1 would mitigate potential impacts to an unknown archaeological resource if discovered during construction excavations.*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☑	☐	☐
Less than Significant with Mitigation Incorporated: *The records search revealed that there are no known archaeological sites within the Project area or within 0.5 miles of the subject property. There are no known significant tribal resources within or adjacent to the Project footprint. A record search of the NAHC's Sacred Lands File was conducted and results were negative for the presence of Native American cultural resources in the Project area (Appendix D). Mitigation Measure CUL-1 would mitigate the potential for impact to an unknown resource if a significant resource were to be discovered during construction excavations. The NAHC-suggested Native American Tribal contacts have been notified of the project and given opportunity to consult (Appendix D). To date, no responses have been received.*				
XIX. UTILITIES AND SERVICE SYSTEMS -- Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects?	☐	☐	☑	☐
Less than Significant Impact: *The 6920 Site would use a small amount of water and discharge a small amount of daily wastewater from its six office staff that could be accommodated by the local treatment systems. The Project would not use natural gas. Considering these factors, the Project would not require relocation or construction of new or expanded water, wastewater, natural gas, or telecommunications facilities in a manner that could cause significant environmental effects.* *The 6920 Site design includes stormwater controls that would collect runoff from the site and store the increase in peak flow due to development of impervious surfaces so there would be no increase in peak flow discharge from the site for the design storms. The Project would discharge stormwater through an underground pipe into the existing underground Los Angeles County Flood Control District underground box culvert at a location near the west end of the site on Garfield Avenue. The Project would be required to obtain a permit from Los Angeles County Flood Control District to construct the connection, and no improvements are needed beyond the connection point since peak*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
flow would not increase. The stormwater controls are part of the Project Description with impacts analyzed in other sections of this Initial Study and have been shown to be less than significant. *The 6904 Site Plan Modifications would extend the length of the 230 kV underground electric tie-line, approved under CUP 548, including dedicated redundant fiber optic lines, to the Laguna Bell Substation. Impacts of the tie-line extension are considered in the impact assessments in each section of this Initial Study as are impacts of the interconnection to the Laguna Bell Substation. Based on analysis in each of the other sections, impacts would be less than significant.*				
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☑	☐
Less than Significant Impact: *As noted above under X(b), 6920 Site water demand can be accommodated by existing and foreseeable water supplies. The 6904 Site Plan Modifications and improvements at the Laguna Bell Substation would not change existing water use. Therefore, the impact on water supply would be less than significant.*				
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☑	☐
Less than Significant Impact: *Because the need for wastewater service to the 6920 Site would only involve up to six staff at any one time, and such service is already provided to the site, the wastewater treatment provider is expected to be able to serve the Project and impacts would be less than significant.*				
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☑	☐
Less than Significant Impact: *Most Project construction waste streams would consist of recyclable materials such as wood pallets, plastic and paper packaging and scrap metal that can be taken to a waste recycling center. Under the City's Construction & Demolition Ordinance, the Project would be required to recycle or reuse at least 65% of the total Construction & Demolition (C&D) debris generated, and a Construction & Demolition Waste Management Plan would be required prior to issuance of building permits. Following construction, the Project would generate only minor quantities of non-recyclable waste during operations. Given that construction waste generation will be a one-time event and most waste recycled or reused, and given that Project operations will generate minimal quantities of waste, the Project will have negligible effect on solid waste management infrastructure in the County. The City of Commerce has 11 approved commercial haulers to collect*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
MSW and C&D debris from the site. Considering these factors, impacts would be less than significant. *Quantities of non-hazardous and hazardous waste generated by routine operations would be negligible. At the end of battery life, battery modules would be removed from the battery racks and returned to the manufacturer or their approved and permitted recycling partner(s) for dismantling, material processing and recovery. The Project would be expected to meet all State and local solid waste standards and infrastructure is in place to accommodate Project needs. Therefore, the impact would be less than significant.*				
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☑
No Impact: *The proposed Project would be required to comply with all relevant statutes and regulations, and the Project as proposed would not conflict with any statute or regulation for solid waste. Therefore, there would be no impact.*				
XX. WILDFIRE - If located near a State Responsibility Area or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☑
No Impact: *The Project is not near a State Responsibility Area or lands classified as a very high fire hazard severity zone (VHFHSZ). The City and surrounding areas are developed with no nearby State Responsibility Areas, wildlands or VHFHSZs. Therefore, there would be no impact.*				
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☑
No Impact: *The Project is not near a State Responsibility Area or lands classified as a VHFHSZ. The City and surrounding areas are developed with no nearby State Responsibility Areas, wildlands or VHFHSZs. Therefore, there would be no impact.*				
c) Require the installation of maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
No Impact: *The Project is not near a State Responsibility Area or lands classified as a VHFHSZ. The City and surrounding areas are developed with no nearby State Responsibility Areas, wildlands or VHFHSZs. Therefore, there would be no impact.*				
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☑
No Impact: *The Project is not near a State Responsibility Area or lands classified as a VHFHSZ. The City and surrounding areas are developed with no nearby State Responsibility Areas, wildlands or VHFHSZs. Therefore, there would be no impact.*				
XXI. MANDATORY FINDINGS OF SIGNIFICANCE --				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☑	☐	☐
Less than Significant Impact with Mitigation Incorporated: *The 6920 Site, 6904 Site, and the Laguna Bell Substation Site are in the midst of a region that has been urbanized for many decades and there are no natural areas in the vicinity. No special status species are known to occur. With procedures for protecting migrating birds already included in the applicant's Project, the Project would not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, nor reduce the number or restrict the range of a rare or endangered plant or animal. There are no significant historic or prehistoric resources known to occur in the area. Mitigation Measures CUL-1 and CUL-2 would ensure that in the event of a cultural resource discovery, work in the area would promptly cease until the discovery is evaluated by a qualified cultural resource specialist and treated in a manner to limit impacts to a less than significant level through avoidance or proper research and documentation.*				
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are	☐	☑	☐	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?				

Less than Significant Impact with Mitigation Incorporated: *As described in preceding sections of this Initial Study, the Project would have no potential to affect agricultural or forest lands, wasteful or inefficient energy consumption, land use planning, mineral resources, population or housing, recreation, or wildfire. The Project would not contribute cumulatively considerable incremental effects with respect to other factors for the following reasons.*

The 6920 Site building would match the form of other buildings in the area and would contribute beneficially to views of the site along Slauson Avenue. The 6904 Site Plan Modifications would not adversely affect aesthetics. The construction of the riser pole at the Laguna Bell Station would not cause a cumulatively considerable aesthetic change in that area because there are already power lines along Garfield Avenue and numerous above ground utility structures at that site (see Appendix A).

Emissions from the Project would not conflict with any air quality plan and would be expected to contribute toward a beneficial cumulative reduction in fuel-burning and GHG emissions in the region through more effective use of renewable energy sources. The Project would not impact special-status plant or animal species or important natural habitat, or conflict with any wildlife management plan. No significant cultural resources are known to occur on or adjacent to the Project footprint, and Mitigation Measures CUL-1 and CUL-2 would ensure that impacts to cultural resources are mitigated in the event of an unexpected cultural resource discovery.

The Project would have no cumulative impact related to geology or soils since there are no adjacent excavations that could have the potential to cause cumulative effects. While construction of the Project would require the use of fuels, lubricants, and other hazardous materials typical of construction sites, such use would not affect past contamination or monitoring in the area, so no cumulative impact is anticipated. The Project would not violate any water quality standard or waste discharge requirements or have an adverse impact on water quality. There would be no cumulative impact to hydrology from the 6920 Site because it would be designed to drain to the same County-maintained system as existing conditions. No other projects are expected that, in conjunction with the proposed Project, would cumulatively exceed treatment capacity of existing water and wastewater systems. Therefore, there would be no adverse cumulative effect in these areas.

Based on other reviews of cumulative projects in the City (City of Commerce, 2020), no adjacent simultaneous projects are known at this time that would contribute to the potential for cumulative construction noise impacts. Similarly, no projects along Garfield or Slauson Avenues are known that could cause cumulative delays to emergency services or other impacts to Public Services or Transportation.

Considering the factors addressed above, the Project would not contribute cumulatively considerable effects along with other past, current, or probable future projects.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☑	☐	☐
Less than Significant Impact with Mitigation Incorporated: *The Project does not have the potential for environmental effects that could cause substantial adverse effects on human beings, either directly or indirectly, with Mitigation Measures incorporated. With recommended mitigation measures CUL-1, CUL-2, and NOI-1, the Project would have less than significant impacts related to cultural resources, Tribal resources, and noise. There would be no significant direct, indirect, or cumulative impacts with these mitigation measures incorporated.*				

3.4 List of Preparers

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Irvine, CA 92614
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Richard Burke, Senior Consultant
Matthew Wetherbee, RPA, Senior Archaeologist
Michael Riley, Senior Environmental Scientist, Air Quality
Tanessa Hartwig, Senior Biologist
Francine Conti, Environmental Planner

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APPENDIX A
Views of Existing Conditions

Views of Existing Conditions: 6920 Slauson Avenue

Photo 1: Existing 6920 Slauson Avenue frontage.

Photo 2: Looking east down sidewalk in front of 6920 Slauson Ave.

Photo 3: West driveway of 6920 Slauson Ave., looking north toward Slauson Ave.

Photo 4: East side of existing building at 6950 Slauson Ave, looking north toward Slauson Ave. Weeds on right side of corridor are an inactive rail spur.

Views of Existing Conditions: 6920 Slauson Avenue

Photo 5: West side of parcel 6356-017-021 at 6920 Slauson Ave, looking southwest. 6904 Slauson Ave. parcel is visible at right.

Photo 6: Southwest corner of parcel 6356-017-020 at 6920 Slauson Ave, looking southeast.

Photo 7: Southwest corner of parcel 6356-017-020 at 6920 Slauson Ave, looking southeast.

Photo 8: West side of parcel 6356-017-021 at 6920 Slauson Ave, looking southwest to 6904 Slauson Ave. parcel.

Views of Existing Conditions: 6904 Slauson Avenue

Photo 9: Northeast corner of 6904 Slauson Ave. parcel, looking to the south, general site conditions with slight elevation change.

Photo 10: Northeast corner of 6904 Slauson Ave. parcel, looking to the the southwest, general site conditions. Palm trees are near the far end of the Site.

Photo 11: Northeast corner of 6904 Slauson Ave. parcel, looking to the west, general site conditions.

Photo 12: Northwest corner of 6904 Slauson Ave. parcel, looking to the southeast, general site conditions.

TRC Job No.	Photographs Taken By:	Page No.	Client:	Site Address:
511784.0000.0000	Jose Maldonado	3 of 4	Commerce Energy Storage	6904 E. Slauson Avenue, Commerce, CA 90040

Views of Existing Conditions: 6904 Slauson Avenue

Photo 13: Southwest corner of 6904 Slauson Ave. parcel, looking northeast toward the 6920 Slauson Av. parcel

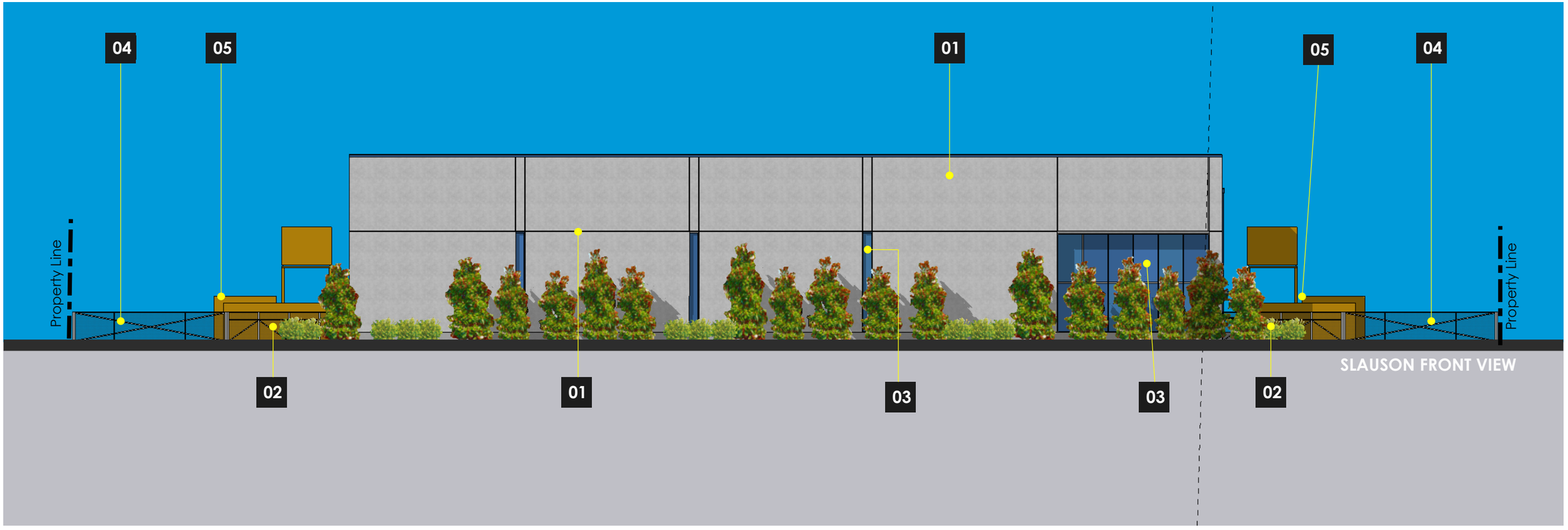
Photo 14: West side of Garfield Ave. looking southwest toward the location of the proposed new riser pole. Substation is seen in background below the tree canopies.

TRC Job No.	Photographs Taken By:	Page No.	Client:	Site Address:	
511784.0000.0000	Jose Maldonado	4 of 4	Commerce Energy Storage	6904 E. Slauson Avenue, Commerce, CA 90040	TRC

APPENDIX B
Preliminary Site Plans

COMMERCE 2023 ENERGY STORAGE

6920 E. SLAUSON AVENUE COMMERCE, CA 90040



KEY NOTES

01 Concrete Tilt-up Wall System

02 Fence

03 Spandrel Glass Panels System Over Solid Surface

04 Vehicular Gate

05 Equipment

CONCEPT - SLAUSON AVE. FRONT VIEW ELEVATION

SEPTEMBER-08-2023

SCALE : 1"=20'-0" 0' 5' 10' 20'

PRELIMINARY SITE PLANS
COMMERCE ENERGY STORAGE, LLC

6920 E. SLAUSON AVENUE
COMMERCE, CA 90040

PREPARED FOR: COMMERCE ENERGY STORAGE, LLC
2121 CALIFORNIA BOULEVARD, SUITE 1000
WALNUT CREEK, CA 94596

PREPARED BY: TRC COMPANIES, INC.
6 EXECUTIVE CIRCLE, SUITE 200
IRVINE, CA 92614

DATE: DECEMBER 2023

PROPERTY OWNERS
THE MAJOR ASSOCIATES PARTNERSHIP
7811 MONTROSE ROAD, SUITE 420
POTOMAC, MD 20854

DESCRIPTION

THE PROJECT DEPICTED IN THIS DRAWING SET CONSISTS OF THE DEVELOPMENT OF PARCELS 6356-017-020 AND 6356-017-021 TOTALING APPROXIMATELY 4.8 ACRES FOR BATTERY ENERGY STORAGE INCLUDING BATTERIES, CONTROL EQUIPMENT, AND ANCILLARY FACILITIES. BATTERIES WILL BE CONTAINED IN AN APPROXIMATELY 108,000 SQUARE FOOT SINGLE STORY BUILDING TO BE DEVELOPED IN PHASES. ANCILLARY EQUIPMENT INCLUDES AN ACCESS ROAD DESIGNED TO FIRE DEPARTMENT STANDARDS, INVERTERS, TRANSFORMERS, STORMWATER CONVEYANCE SYSTEMS, AND UNDERGROUND STORMWATER STORAGE. THE FACILITY WILL HAVE AN UNDERGROUND ELECTRIC CONNECTION TO A SUBSTATION TO BE BUILT ON THE ADJACENT APPLICANT-OWNED PARCEL 6356-017-028 PURSUANT TO CUP 548 APPROVED BY RESOLUTION NO. 22-05 ON MAY 18, 2022. THE FACILITY WILL BE OPERATED AND MAINTAINED BY APPROXIMATELY SIX ONSITE STAFF AND WILL PROVIDE APPROXIMATELY 12 JOB POSITIONS TO COVER OPERATIONS 24 HOURS PER DAY 7 DAYS PER WEEK. AN OFFICE, SUPPLY ROOM, AND SANITARY FACILITIES WILL BE PROVIDED. BECAUSE THE FACILITY WILL HAVE APPROXIMATELY 6 STAFF ON DAY SHIFTS AND FEWER STAFF ON SWING AND NIGHT SHIFTS, A VARIANCE FROM THE MINIMUM PARKING SPACES REQUIREMENT IS REQUESTED AND 6 PARKING PLACES WILL BE PROVIDED.

SITE INFORMATION

ASSESSOR'S PARCEL NUMBERS:	6356-017-021, 6356-017-020
CURRENT USE:	A 1-STY BUILDING (50,073 SF) AND A PARKING LOT
CURRENT/PROPOSED ZONING:	INDUSTRIAL (M-2)
BLDG SQ FOOTAGE:	BLDGS 1-6 (107,854 SF) + BLDGS 7-8 (23,004 SF) = 130,858 SF
BLDG CONSTRUCTION TYPE:	II-A
BLDG CONSTRUCTION MATERIAL:	TILT-UP CONCRETE
BLDG FIRE SUPPRESSION TYPE:	DOUBLE-INTERLOCK PRE-ACTION SPRINKLER SYSTEM WITH GAS DETECTION, SMOKE DETECTION AND MECHANICAL VENTILATION PER LA COUNTY FIRE CODES AND NFPA
SITE AREA:	4.80 AC (208,955 SF)
LOT COVERAGE RATIO:	107,853 SF / 208,955 SF = 0.52 x 100 = 52%
LANDSCAPED AREA PROVIDED:	0.08 AC (3,411 SF)
OPEN SPACE AREA PROVIDED:	0.16 AC (7,037 SF)
DISTURBED AREA:	4.37 AC (190,407 SF)
EXISTING IMPERVIOUS AREA:	4.30 AC (187,288 SF)
PROPOSED IMPERVIOUS AREA:	4.40 AC (191,457 SF)
REMAINING PERVIOUS AREA:	0.40 AC (17,498 SF)

EARTHWORK QUANTITIES

LIMITS OF GRADING:	4.37 AC
CUT:	14,387 CY
FILL:	4,735 CY
NET (CUT):	9,652 CY (TO BE BALANCED IN FINAL DESIGN)

PUBLIC FIRE HYDRANT REQUIREMENTS

County of Los Angeles
Fire Department
Fire Prevention Division
Land Development Unit

Install TBD Public
Install ___ Private
6"x 4"x 2 1/2" Fire Hydrants
Confirming to American Waterworld Association Standard C503

REQUIRED FIRE FLOW
TBD GPM @ 20PSI FOR TBD HOURS

03/31/2023

PRIVATE ON-SITE FIRE HYDRANT REQUIREMENTS

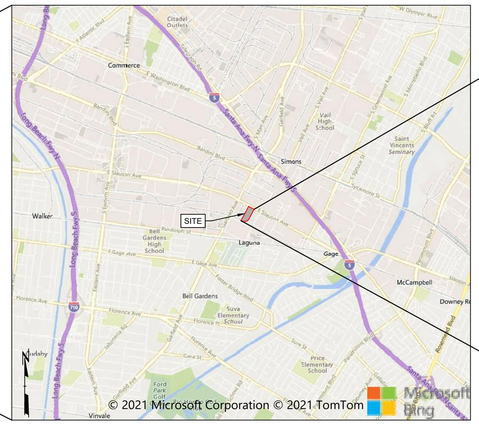
County of Los Angeles
Fire Department
Fire Prevention Division
Land Development Unit

Install ___ Public
Install 6 Private
6"x 4"x 2 1/2" Fire Hydrants
Confirming to American Waterworld Association Standard C503

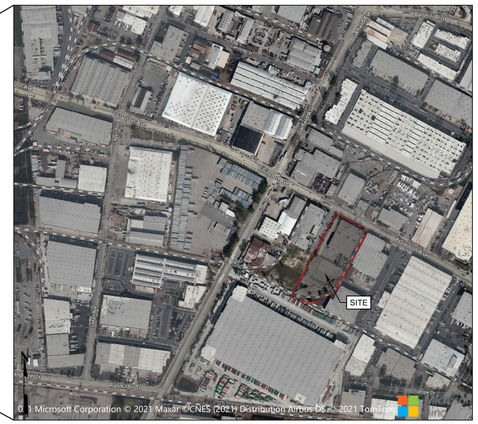
REQUIRED FIRE FLOW
2,500 GPM @ 20PSI FOR 2 HOURS

03/31/2023

LOS ANGELES COUNTY, CALIFORNIA
NTS



VICINITY MAP
NTS



SITE LOCATOR
NTS

SHEET INDEX

SEAL:

PERMIT PLAN SET
NOT FOR CONSTRUCTION

NO.	BY	DATE	REVISION	APP'D.

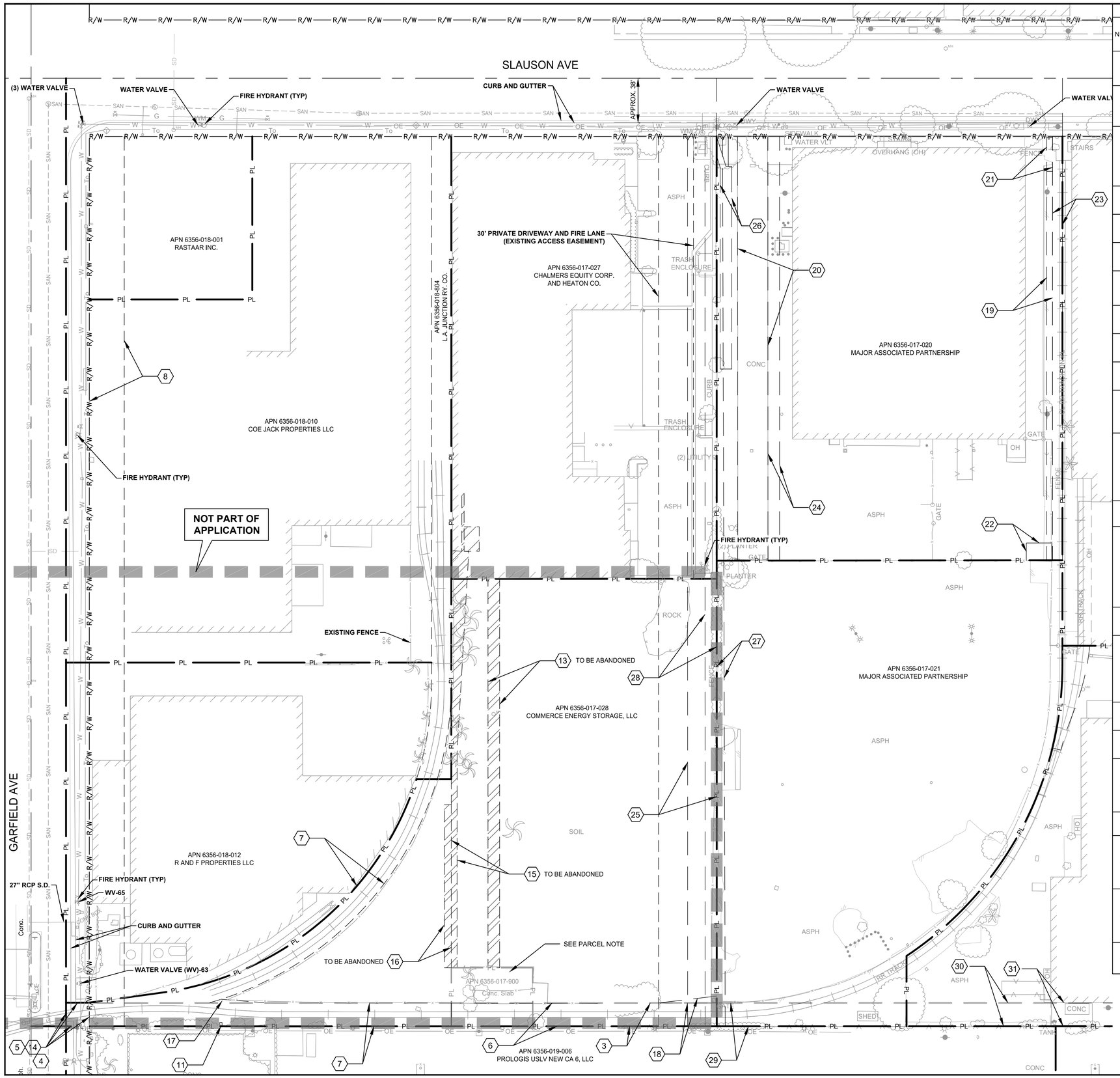
PROJECT: COMMERCE ENERGY STORAGE, LLC 2023
6920 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE: COVER SHEET

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		C-1.0
APPROVED BY:	SH		
DATE:	12/7/2023		

6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

H:\WORK IN PROGRESS\SOLAR SITES\LS POWER DEVELOPMENT\COMMERCE, CA\CAD\SITE PLANS\CUP APPLICATION\COMMERCE 2\393191_COV AND DETDWG



EXISTING EASEMENT INFORMATION

NUMBER	PARCEL/ PART NUMBER	IN FAVOR OF/ GRANTED TO	PURPOSE	RECORDING DATE	RECORDED/ RECORDING NUMBER
3	** EXCEPTION PARCEL 1		ROAD PURPOSES, RAILROAD TRACKS, CONDUITS AND POLE		IN BOOK 20716 PAGE 250, OF OFFICIAL RECORDS
4	** EXCEPTION PARCEL 2		ROAD, RAILROAD TRACKS, GAS, OIL, WATER AND SEWER PIPELINES AND PUBLIC UTILITIES		IN BOOK 20750 PAGE 18, OF OFFICIAL RECORDS
5	** EXCEPTION PARCEL 2		ROAD PURPOSES, RAILROAD TRACKS, GAS AND OIL PIPE LINES, ELECTRICITY, TELEPHONE AND TELEGRAPH WIRES, WATER AND SEWER		IN BOOK 20906 PAGE 185, OF OFFICIAL RECORDS
6	** EXCEPTION PARCEL 2		RAILROAD TRACKS AND NECESSARY FACILITIES		IN BOOK 21716 PAGE 395, OF OFFICIAL RECORDS
7	** EXCEPTION PARCEL 2		RAILROAD TRACKS AND NECESSARY FACILITIES		IN BOOK 21759 PAGE 307, OF OFFICIAL RECORDS
8	** EXCEPTION PARCEL 2	PARK WATER COMPANY, A CORPORATION	PIPE LINES	March 20, 1945	IN BOOK 22437 PAGE 414, OF OFFICIAL RECORDS
11	** EXCEPTION PARCEL 2	SOUTHERN CALIFORNIA EDISON COMPANY, A CORPORATION	PUBLIC UTILITIES	May 10, 1946	3094, IN BOOK 23405 PAGE 211, OF OFFICIAL RECORDS
14	** EXCEPTION PARCEL 2		PUBLIC ROAD AND HIGHWAY		3173, IN BOOK 36865 PAGE 342, OF OFFICIAL RECORDS
17	** EXCEPTION PARCEL 2		RAILWAY TRACK AND NECESSARY FACILITIES		4249, IN BOOK 49219 PAGE 94, OF OFFICIAL RECORDS
18	PARCEL 3 PTR 01	GILBERT FINANCIAL CO., A LIMITED PARTNERSHIP	RAILROAD	May 26, 1970	2652, IN BOOK 122 PAGE 162 OF OFFICIAL RECORDS
19	PARCEL 2 PTR 02	THIS IS PART OF THE FLAG LOT (UNIT 22). IT SHOULD NOT BE AN ISSUE AS IT IS CONTROLLED BY THE LANDOWNER.	PUBLIC UTILITY AND DRAINAGE PURPOSES		BOOK 122 PAGE 162 OF OFFICIAL RECORDS
20	PARCEL 3 PTR 02	THIS IS FOR INGRESS AND EGRESS TO THE FLAG LOT. AFTER MERGING THE PARCELS, THIS EASEMENT WILL NOT BE RELEVANT.	INGRESS AND EGRESS, DRIVEWAY AND SEWER		BOOK 122 PAGE 162 OF OFFICIAL RECORDS
21	PARCEL 4 PTR 02	OUTSIDE OF OUR BUILD AREA AND SHOULD NOT INTERFERE.	PLACEMENT AND MAINTENANCE OF SIGN		
22	PARCEL 5 PTR 02	EASEMENT WAS QUITCLAIMED TO THE PROPERTY OWNER. THE EASEMENT WILL BE TERMINATED BY MERGER SINCE BOTH THE FEE ESTATE AND EASEMENT INTEREST ARE NOW OWNED BY THE PROPERTY OWNER.	RAILROAD		BOOK 122 PAGE 162 OF OFFICIAL RECORDS
23	PARCEL 6 PTR 02		RAILROAD		BOOK 122 PAGE 162, OF OFFICIAL RECORDS
24	PARCEL 7 PTR 02	THIS IS TO ROUTE UTILITIES TO THE FLAG LOT. AFTER MERGING THE PARCELS, THIS EASEMENT WILL NOT BE RELEVANT.	UTILITY PURPOSES		IN BOOK 122 PAGE 162, OFFICIAL RECORDS
25	PARCEL 2 PTR 01		INGRESS, EGRESS AND DRIVEWAY PURPOSES		IN BOOK 122 PAGE 162, OFFICIAL RECORDS
26	EXCEPTION PTR 01 AND PTR 02	THIS SCE EASEMENT WILL BE QUITCLAIMED	ELECTRICAL POLES AND POLE LINES	June 22, 1964	5227, IN BOOK D2519 PAGE 221, OFFICIAL RECORDS
27	EXCEPTION PTR 01 AND PTR 02	THE EASEMENT IN FAVOR OF AT&T WILL BE AMENDED OR A CROSSING AGREEMENT WILL BE SECURED.	UNDERGROUND TELEPHONE, TELEGRAPH, AND COMMUNICATION STRUCTURES	November 8, 1945	4049, IN BOOK D3109 PAGE 74, OFFICIAL RECORDS
28	EXCEPTION PTR 01		SEWER AND PUBLIC UTILITY PURPOSES	May 14, 1970	2282, OFFICIAL RECORDS
29	EXCEPTION PTR 03		ROAD, RAILROAD, CONDUIT, POLE LINES, SEWER PIPE LINES, TRACK MAINTENANCE	MARCH 8, 1944 MAY 9, 1944 MARCH 13, 1945	IN BOOK 20716 PAGE 250, BOOK 20906 PAGE 185, BOOK 21716 PAGE 395, OFFICIAL RECORDS
30	EXCEPTION PTR 03		ROAD, RAILROAD, CONDUIT, POLE LINES, SEWER PIPE LINES, TRACK MAINTENANCE	MARCH 8, 1944 MAY 9, 1944 MARCH 13, 1945	IN BOOK 20716 PAGE 250, BOOK 20906 PAGE 185, BOOK 21716 PAGE 395, OFFICIAL RECORDS
31	EXCEPTION PTR 03		RAILROAD		IN BOOK 21522 PAGE 356, OFFICIAL RECORDS

GENERAL NOTES

1. THIS PRELIMINARY PLAN SET IS SUBMITTED FOR APPLICATION AND ISSUANCE OF A LAND USE ENTITLEMENT FOR THE PROJECT FROM THE CITY OF COMMERCE.
2. THIS PLAN WAS PRODUCED UTILIZING GIS RESOURCES, SURVEY, AND INFORMATION FROM MULTIPLE SOURCES, INCLUDING THE CITY OF COMMERCE AND GOOGLE EARTH PRO.
3. ALTA SURVEY INFORMATION IN THIS PLAN SET PROVIDED BY ** TSAC ENGINEERING, DATED 06/21/2021 AND BY PBLA ENGINEERING INC, FIELD WORK COMPLETED ON 09/16/2014 .

FLOOD ZONING

1. **THE SUBJECT PROPERTY DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD AS SHOWN ON THE FLOOD INSURANCE RATE MAP (COMMUNITY PANEL 06037C1810F, DATED 09/26/2008) PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA).**

PARCEL NOTE

1. **MERGER OF APN 6356-017-900 INTO APN 6356-017-028 IS PENDING.**

LEGEND

CENTERLINE
PARCEL BOUNDARY — PL
ROAD ROW — R/W — R/W
EASEMENT LINE
EX. CONTOUR — 800
MONITORING WELL — MW
SIGN
STORM DRAIN MANHOLE
STORM DRAIN GRATE
SEWER MANHOLE
MANHOLE — MH
FIRE HYDRANT
POWER POLE
GAS VALVE
WATER VALVE
ELECTRIC PULL BOX
WATER METER
SEWER CLEANOUT
AREA LIGHT/ LIGHT POLE
BOLLARD
STORM DRAIN — SD — SD
SEWER — SAN — SAN
WATER LINE — W — W
TELCO LINE — To
OVERHEAD LINE — OE
PROPOSED UNDERGROUND ELEC — UE — UE
2022 APPROVED UNDERGROUND ELECTRIC — E — E
PROPOSED STORM DRAIN
2022 APPROVED STORM DRAIN — ST — ST
GRAVEL SURFACE
ASPHALT PAVED SURFACE
CONCRETE SURFACE
PROPOSED BUILDING
EXISTING BUILDING
WALL
CHAIN LINK FENCE — X — X
PROPOSED SUBSTATION CHAIN LINK FENCE — XX — XX — XX
APPROX. CURB LINE AND GUTTER
SURFACE WATER FLOW
EXISTING PALM TREE

NORTH

GRAPHIC SCALE

40' 0 40'

1" = 40'

SEAL:

PERMIT PLAN SET NOT FOR CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.

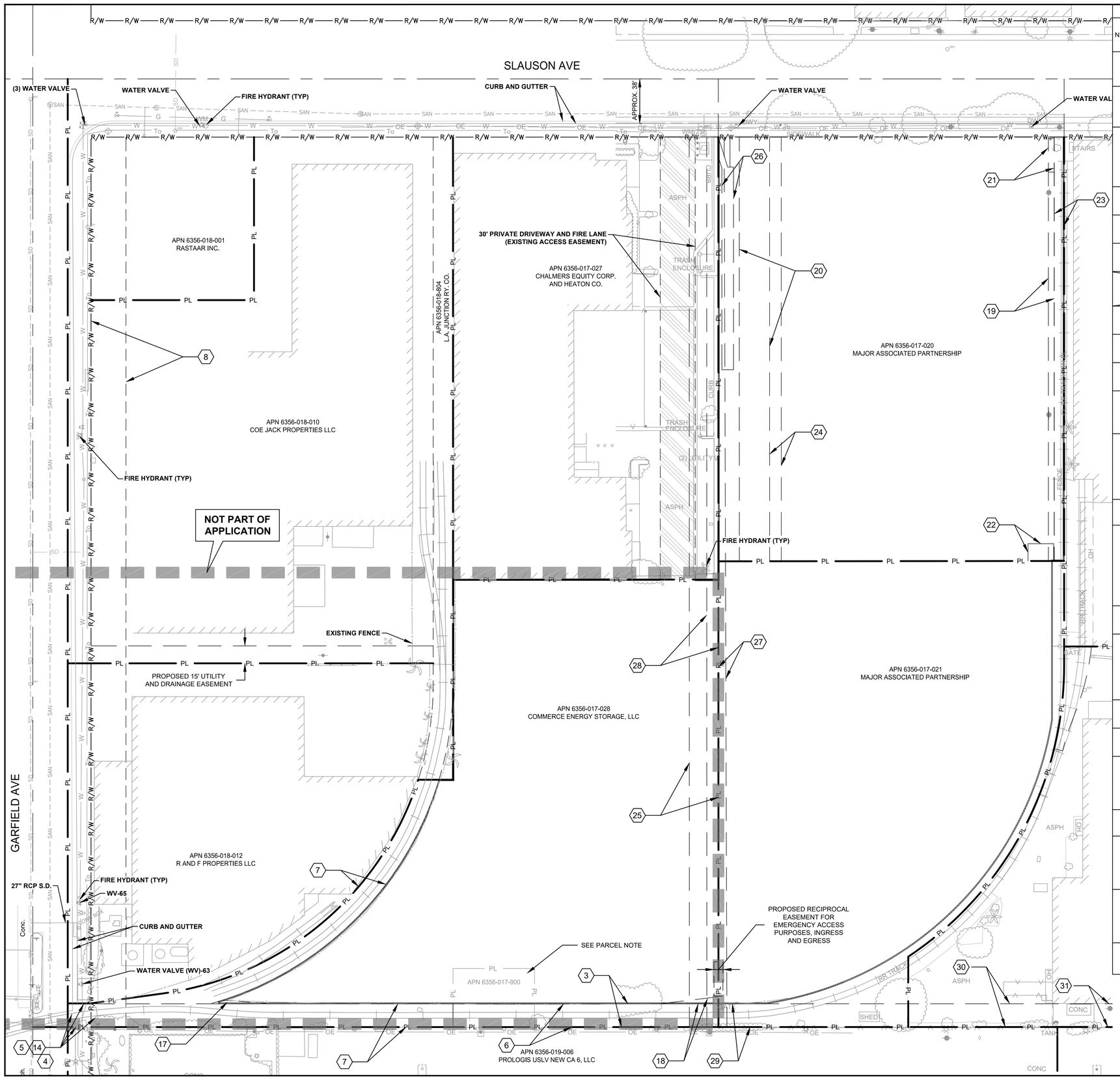
PROJECT: COMMERCE ENERGY STORAGE, LLC 2023
6920 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE: BOUNDARIES, EASEMENTS AND FLOODING (EXISTING CONDITION)

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		C-2.0
APPROVED BY:	SH		
DATE:	12/7/2023		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

H:\WORK IN PROGRESS\SOLAR SITES\LS POWER DEVELOPMENT\COMMERCE, CA\CAD\SITE PLANS\CUP APPLICATION_COMMERCE 2\393191_SITES.DWG



EXISTING EASEMENT INFORMATION

NUMBER	PARCEL/ PART NUMBER	IN FAVOR OF/ GRANTED TO	PURPOSE	RECORDING DATE	RECORDED/ RECORDING NUMBER
3	** EXCEPTION PARCEL 1		ROAD PURPOSES, RAILROAD TRACKS, CONDUITS AND POLE		IN BOOK 20716 PAGE 250, OF OFFICIAL RECORDS
4	** EXCEPTION PARCEL 2		ROAD, RAILROAD TRACKS, GAS, OIL, WATER AND SEWER PIPELINES AND PUBLIC UTILITIES		IN BOOK 20750 PAGE 18, OF OFFICIAL RECORDS
5	** EXCEPTION PARCEL 2		ROAD PURPOSES, RAILROAD TRACKS, GAS AND OIL PIPE LINES, ELECTRICITY, TELEPHONE AND TELEGRAPH WIRES, WATER AND SEWER		IN BOOK 20906 PAGE 185, OF OFFICIAL RECORDS
6	** EXCEPTION PARCEL 2		RAILROAD TRACKS AND NECESSARY FACILITIES		IN BOOK 21716 PAGE 395, OF OFFICIAL RECORDS
7	** EXCEPTION PARCEL 2		RAILROAD TRACKS AND NECESSARY FACILITIES		IN BOOK 21759 PAGE 307, OF OFFICIAL RECORDS
8	** EXCEPTION PARCEL 2	PARK WATER COMPANY, A CORPORATION	PIPE LINES	March 20, 1945	IN BOOK 22437 PAGE 414, OF OFFICIAL RECORDS
~~11~~	~~** EXCEPTION PARCEL 2~~	~~SOUTHERN CALIFORNIA EDISON COMPANY, A CORPORATION~~	~~PUBLIC UTILITIES~~	~~May 10, 1946~~	~~3094, IN BOOK 23405 PAGE 211, OF OFFICIAL RECORDS~~
14	** EXCEPTION PARCEL 2		PUBLIC ROAD AND HIGHWAY		3173, IN BOOK 36865 PAGE 342, OF OFFICIAL RECORDS
17	** EXCEPTION PARCEL 2		RAILWAY TRACK AND NECESSARY FACILITIES		4249, IN BOOK 49019 PAGE 94, OF OFFICIAL RECORDS
18	PARCEL 3 PTR 01	GILBERT FINANCIAL CO., A LIMITED PARTNERSHIP	RAILROAD	May 26, 1970	2652, IN BOOK 122 PAGE 162 OF OFFICIAL RECORDS
19	PARCEL 2 PTR 02	THIS IS PART OF THE FLAG LOT (UNIT 22). IT SHOULD NOT BE AN ISSUE AS IT IS CONTROLLED BY THE LANDOWNER.	PUBLIC UTILITY AND DRAINAGE PURPOSES		BOOK 122 PAGE 162 OF OFFICIAL RECORDS
20	PARCEL 3 PTR 02	THIS IS FOR INGRESS AND EGRESS TO THE FLAG LOT. AFTER MERGING THE PARCELS, THIS EASEMENT WILL NOT BE RELEVANT.	INGRESS AND EGRESS, DRIVEWAY AND SEWER		BOOK 122 PAGE 162 OF OFFICIAL RECORDS
21	PARCEL 4 PTR 02	OUTSIDE OF OUR BUILD AREA AND SHOULD NOT INTERFERE.	PLACEMENT AND MAINTENANCE OF SIGN		
22	PARCEL 5 PTR 02	EASEMENT WAS QUITCLAIMED TO THE PROPERTY OWNER. THE EASEMENT WILL BE TERMINATED BY MERGER SINCE BOTH THE FEE ESTATE AND EASEMENT INTEREST ARE NOW OWNED BY THE PROPERTY OWNER.	RAILROAD		BOOK 122 PAGE 162 OF OFFICIAL RECORDS
23	PARCEL 6 PTR 02		RAILROAD		BOOK 122 PAGE 162, OF OFFICIAL RECORDS
24	PARCEL 7 PTR 02	THIS IS TO ROUTE UTILITIES TO THE FLAG LOT. AFTER MERGING THE PARCELS, THIS EASEMENT WILL NOT BE RELEVANT.	UTILITY PURPOSES		IN BOOK 122 PAGE 162, OFFICIAL RECORDS
25	PARCEL 2 PTR 01		INGRESS, EGRESS AND DRIVEWAY PURPOSES		IN BOOK 122 PAGE 162, OFFICIAL RECORDS
26	EXCEPTION PTR 01 AND PTR 02	THIS SCE EASEMENT WILL BE QUITCLAIMED	ELECTRICAL POLES AND POLE LINES	June 22, 1964	5227, IN BOOK D2519 PAGE 221, OFFICIAL RECORDS
27	EXCEPTION PTR 01 AND PTR 02	THE EASEMENT IN FAVOR OF AT&T WILL BE AMENDED OR A CROSSING AGREEMENT WILL BE SECURED.	UNDERGROUND TELEPHONE, TELEGRAPH, AND COMMUNICATION STRUCTURES	November 8, 1945	4049, IN BOOK D3109 PAGE 74, OFFICIAL RECORDS
28	EXCEPTION PTR 01		SEWER AND PUBLIC UTILITY PURPOSES	May 14, 1970	2282, OFFICIAL RECORDS
29	EXCEPTION PTR 03		ROAD, RAILROAD, CONDUIT, POLE LINES, SEWER PIPE LINES, TRACK MAINTENANCE	MARCH 8, 1944 MAY 9, 1944 MARCH 13, 1945	IN BOOK 20716 PAGE 250, BOOK 20906 PAGE 185, BOOK 21716 PAGE 395, OFFICIAL RECORDS
30	EXCEPTION PTR 03		ROAD, RAILROAD, CONDUIT, POLE LINES, SEWER PIPE LINES, TRACK MAINTENANCE	MARCH 8, 1944 MAY 9, 1944 MARCH 13, 1945	IN BOOK 20716 PAGE 250, BOOK 20906 PAGE 185, BOOK 21716 PAGE 395, OFFICIAL RECORDS
31	EXCEPTION PTR 03		RAILROAD		IN BOOK 21522 PAGE 356, OFFICIAL RECORDS

GENERAL NOTES

1. THIS PRELIMINARY PLAN SET IS SUBMITTED FOR APPLICATION AND ISSUANCE OF A LAND USE ENTITLEMENT FOR THE PROJECT FROM THE CITY OF COMMERCE.
2. THIS PLAN WAS PRODUCED UTILIZING GIS RESOURCES, SURVEY, AND INFORMATION FROM MULTIPLE SOURCES, INCLUDING THE CITY OF COMMERCE AND GOOGLE EARTH PRO.
3. ALTA SURVEY INFORMATION IN THIS PLAN SET PROVIDED BY ** TSAC ENGINEERING, DATED 06/21/2021 AND BY PBLA ENGINEERING INC, FIELD WORK COMPLETED ON 09/16/2014.

FLOOD ZONING

1. **THE SUBJECT PROPERTY DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD AS SHOWN ON THE FLOOD INSURANCE RATE MAP (COMMUNITY PANEL 06037C1810F, DATED 09/26/2008) PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA).**

PARCEL NOTE

1. **MERGER OF APN 6356-017-900 INTO APN 6356-017-028 IS PENDING.**

LEGEND

CENTERLINE	——— — ———
PARCEL BOUNDARY	—— PL ——
ROAD ROW	—R/W—R/W—
EASEMENT LINE	— — — — —
EX. CONTOUR	— — 800 — —
MONITORING WELL	⊠ MW
SIGN	⊥
STORM DRAIN MANHOLE	Ⓢ SD
STORM DRAIN GRATE	□
SEWER MANHOLE	Ⓢ
MANHOLE	○ MH
FIRE HYDRANT	● HYD
POWER POLE	●
GAS VALVE	⋈ GV
WATER VALVE	⋈ WV
ELECTRIC PULL BOX	◇
WATER METER	▯
SEWER CLEANOUT	○
AREA LIGHT/ LIGHT POLE	☼
BOLLARD	●
STORM DRAIN	— — SD — — SD —
SEWER	— — SAN — — SAN —
WATER LINE	—— W —— W ——
TELCO LINE	—— To ——
OVERHEAD LINE	—— OE ——
PROPOSED UNDERGROUND ELEC	—— UE —— UE ——
2022 APPROVED UNDERGROUND ELECTRIC	—— E —— E —— E ——
PROPOSED STORM DRAIN	▬ ▬ D ▬ ▬ D ▬ ▬ D
2022 APPROVED STORM DRAIN	—— ST —— ST ——
GRAVEL SURFACE	▨
ASPHALT PAVED SURFACE	▩
CONCRETE SURFACE	▒
PROPOSED BUILDING	▭
EXISTING BUILDING	▨
WALL	—∨——∨——∨—
CHAIN LINK FENCE	—— x —— x ——
PROPOSED SUBSTATION CHAIN LINK FENCE	—— xx —— xx —— xx ——
APPROX. CURB LINE AND GUTTER	═══
SURFACE WATER FLOW	←
EXISTING PALM TREE	✢

NORTH

GRAPHIC SCALE

1" = 40'

SEAL:

PERMIT PLAN SET NOT FOR CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.

PROJECT:
COMMERCE ENERGY STORAGE, LLC 2023
6920 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
BOUNDARIES, EASEMENTS AND FLOODING
(PROPOSED CONDITION)

DRAWN BY:	TSS
CHECKED BY:	DG
APPROVED BY:	SH
DATE:	12/7/2023
PROJ. NO.:	393191

C-2.1

TRC

6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

H:\WORK IN PROGRESS\SOLAR SITES\LS POWER DEVELOPMENT\COMMERCE, CA\CAD\SITE PLANS\CUP APPLICATION_COMMERCE 2\393191_SITES.DWG

SLAUSON AVE

GARFIELD AVE

FIRE HYDRANT (TYP)

(3) WATER VALVE

WATER VALVE

FIRE HYDRANT (TYP)

CURB AND GUTTER

APPROX. 38'

WATER VALVE

WATER VALVE

30' PRIVATE DRIVEWAY AND FIRE LANE
(EXISTING ACCESS EASEMENT)

APN 6356-018-001
RASTAAR INC.

APN 6356-018-804
L.A. JUNCTION RY. CO.

APN 6356-017-027
CHALMERS EQUITY CORP.
AND HEATON CO.

APN 6356-017-020
MAJOR ASSOCIATED PARTNERSHIP

APN 6356-018-010
COE JACK PROPERTIES LLC

FIRE HYDRANT (TYP)

NOT PART OF APPLICATION

EXISTING FENCE

APN 6356-017-028
COMMERCE ENERGY STORAGE, LLC

APN 6356-017-021
MAJOR ASSOCIATED PARTNERSHIP

APN 6356-018-012
R AND F PROPERTIES LLC

FIRE HYDRANT (TYP)

27" RCP S.D.

WV-65

CURB AND GUTTER

WATER VALVE (WV)-63

APN 6356-017-900
Conc. Slab

FIRE HYDRANT (TYP)

APN 6356-019-006
PROLOGIS USLV NEW CA 6, LLC

GENERAL NOTES

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LEGEND

CENTERLINE
PARCEL BOUNDARY — PL
ROAD ROW — R/W — R/W
EASEMENT LINE
EX. CONTOUR — 800
MONITORING WELL — MW
SIGN
STORM DRAIN MANHOLE
STORM DRAIN GRATE
SEWER MANHOLE — MH
MANHOLE
FIRE HYDRANT
POWER POLE
GAS VALVE
WATER VALVE
ELECTRIC PULL BOX
WATER METER
SEWER CLEANOUT
AREA LIGHT/ LIGHT POLE — OE
BOLLARD
STORM DRAIN — SD — SD
SEWER — SAN — SAN
WATER LINE — W — W
TELCO LINE — To
OVERHEAD LINE — OE
PROPOSED UNDERGROUND ELEC — UE — UE
2022 APPROVED UNDERGROUND ELECTRIC — E — E — E
PROPOSED STORM DRAIN
2022 APPROVED STORM DRAIN — ST — ST
GRAVEL SURFACE
ASPHALT PAVED SURFACE
CONCRETE SURFACE
PROPOSED BUILDING
EXISTING BUILDING
WALL
CHAIN LINK FENCE — X — X
PROPOSED SUBSTATION CHAIN LINK FENCE — XX — XX — XX
APPROX. CURB LINE AND GUTTER
SURFACE WATER FLOW
EXISTING PALM TREE

NORTH

GRAPHIC SCALE

40' 0 40'
1" = 40'

SEAL:

PERMIT PLAN SET
NOT FOR
CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.

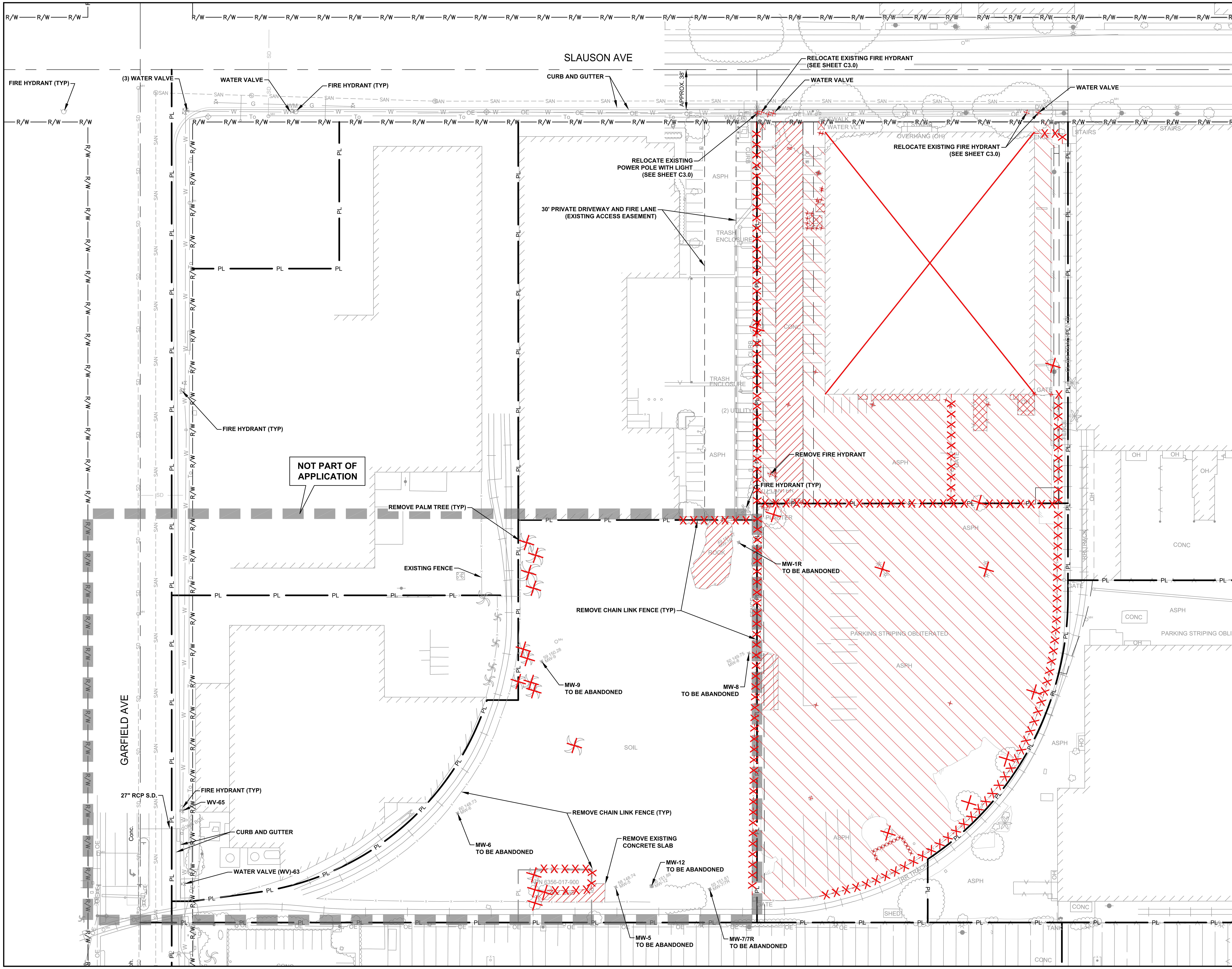
PROJECT:
COMMERCE ENERGY STORAGE, LLC 2023
6920 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
EXISTING TOPOGRAPHY AND DRAINAGE

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		C-2.2
APPROVED BY:	SH		
DATE:	12/7/2023		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

H:\WORK IN PROGRESS\SOLAR SITES\LS POWER DEVELOPMENT\COMMERCE, CA\CAD\SITE PLANS\CUP APPLICATION_COMMERCE 2\393191_SITES.DWG



GENERAL NOTES

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2. THIS PLAN WAS PRODUCED UTILIZING GIS RESOURCES, SURVEY, AND INFORMATION FROM MULTIPLE SOURCES, INCLUDING THE CITY OF COMMERCE AND GOOGLE EARTH PRO.
3. ALTA SURVEY INFORMATION IN THIS PLAN SET PROVIDED BY TSAC ENGINEERING, DATED 06/21/2021 AND BY PBLA ENGINEERING INC, FIELD WORK COMPLETED ON 09/16/2014.

DEMOLITION LEGEND (ITEMS TO BE REMOVED)

LEGEND

NORTH

GRAPHIC SCALE

1" = 40'

SEAL:

PERMIT PLAN SET NOT FOR CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.

PROJECT: COMMERCE ENERGY STORAGE, LLC 2023
6920 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE: DEMOLITION PLAN

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG	C-2.3	
APPROVED BY:	SH		
DATE:	12/7/2023		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

SLAUSON AVE

GARFIELD AVE

NOT PART OF APPLICATION

FIRE HYDRANT (TYP)

(3) WATER VALVE

WATER VALVE

FIRE HYDRANT (TYP)

CURB AND GUTTER

RELOCATED POWER POLE WITH LIGHT

PROPOSED RELOCATED FIRE HYDRANT

EXISTING FIRE HYDRANT PROPOSED TO BE RELOCATED

WATER VALVE

MATCH EXISTING GRADE

CONNECT TO EXISTING WATER

PROPOSED FENCE (TYP)

8 C-6.0

EXISTING FIRE HYDRANT PROPOSED TO BE RELOCATED

CONNECT TO EXISTING WATER

WATER VALVE

MATCH EXISTING GRADE

PROPOSED RELOCATED FIRE HYDRANT

APPROX. 38'

LANDSCAPED AREA (3,411 SF)

STAIRS

PROPOSED 6'x9' MASONRY TRASH ENCLOSURE W/GATE

ALL PROPOSED GATES SHALL BE PROVIDED WITH A FIRE DEPARTMENT APPROVED LOCKING DEVICE

ALL PROPOSED GATES SHALL BE PROVIDED WITH A FIRE DEPARTMENT APPROVED LOCKING DEVICE

30' PRIVATE DRIVEWAY AND FIRE LANE (EXISTING ACCESS EASEMENT)

9 C-6.0 PROPOSED ACOUSTIC WALL

PROPOSED BATTERY BUILDING 1 FINISHED FLOOR EL. 153.00 (19,488 SF)

PROPOSED ACOUSTIC WALL 9 C-6.0

PROPOSED CURB

PROPOSED BATTERY BUILDING 2 FINISHED FLOOR EL. 153.00 (20,438 SF)

PROPOSED INVERTER (TYP)

PROPOSED TRANSFORMER (TYP)

PROPOSED INVERTER ON PLATFORM (TYP)

PROPOSED CONCRETE STEP(S) AT MAN-DOOR (TYP)

PROPOSED BATTERY BUILDING 3 FINISHED FLOOR EL. 153.50 (20,438 SF)

28' PRIVATE DRIVEWAY AND FIRE LANE

PROPOSED PRIVATE ON-SITE FIRE HYDRANT (TYP)

ALL PROPOSED GATES SHALL BE PROVIDED WITH A FIRE DEPARTMENT APPROVED LOCKING DEVICE

PROPOSED SUBSTATION CHAIN LINK FENCE (SEE NOTE 4)

9 C-6.0 PROPOSED ACOUSTIC WALL

SITE INGRESS/EGRESS

FIRE HYDRANT (TYP)

MATCH EXIST GRADE

TOTAL BUILDINGS 1-6 (107,854 SF)

CONNECT TO EXISTING WATER

PROPOSED BATTERY BUILDING 4 FINISHED FLOOR EL. 153.50 (18,770 SF)

PROPOSED CONCRETE RAMP AT ROLL UP DOOR (TYP)

9 C-6.0 PROPOSED ACOUSTIC WALL

PROPOSED STORM DRAIN - NORTH OPTION

EXISTING FENCE

PROPOSED UNDERGROUND ELECTRIC - NORTH OPTION

1 E-1.0 PROPOSED SUBSTATION

28' PRIVATE DRIVEWAY AND FIRE LANE

PROPOSED PRIVATE ON-SITE FIRE HYDRANT (TYP)

PROPOSED SUBSTATION FIRE WALL

PROPOSED BATTERY BUILDING 5 FINISHED FLOOR EL. 153.00 (18,282 SF)

PROPOSED CONCRETE PAD AT MAN-DOOR (TYP)

SEE NOTE 5

PROPOSED FENCE (TYP) 8 C-6.0

PROPOSED 9'X18' PARKING SPACE (TYP)

9 C-6.0 PROPOSED ACOUSTIC WALL

TOTAL BUILDINGS 7-8 (23,004 SF)

PROPOSED BATTERY BUILDING 6 FINISHED FLOOR EL. 152.00 (10,438 SF)

PROPOSED CURB

27" RCP S.D.

FIRE HYDRANT (TYP)

WV-65

PROPOSED TRANSFORMER

PROPOSED CURB

PROPOSED BATTERY BUILDING 8 FINISHED FLOOR EL. 150.00 (10,069 SF)

PROPOSED BATTERY BUILDING 7 FINISHED FLOOR EL. 150.00 (12,935 SF)

PROPOSED MOUNTABLE CURB

PROPOSED 14'X18' H/C PARKING SPACE

PROPOSED CONCRETE H/C RAMP

CURB AND GUTTER

PROPOSED PRIVATE ON-SITE FIRE HYDRANT (TYP)

WATER VALVE (WV)-63

R264'

9 C-6.0 PROPOSED ACOUSTIC WALL

R292'

PROPOSED TRANSFORMER

28' PRIVATE DRIVEWAY AND FIRE LANE

OPEN SPACE AREA (7,037 SF)

R33'

R100'

OUTSIDE R47', INSIDE R19' (TYP)

PROPOSED CONCRETE RAMP AT ROLL UP DOOR (TYP)

PROPOSED CONCRETE STEP(S) AT MAN-DOOR (TYP)

PROPOSED INVERTER ON PLATFORM (TYP)

PROPOSED INVERTER (TYP)

2022 APPROVED UNDERGROUND ELECTRIC OPTION

2022 APPROVED STORM DRAIN OPTION

9 C-6.0 PROPOSED ACOUSTIC WALL

PROPOSED TRANSFORMER (TYP)

OUTSIDE R47', INSIDE R19' (TYP)

ALL PROPOSED GATES SHALL BE PROVIDED WITH A FIRE DEPARTMENT APPROVED LOCKING DEVICE

ASPH

CONC

TRASH ENCLOSURE

(2) UTILITY

FENCE

GATE

OH

PARKING STRIPING OBLITE

TANK

GENERAL NOTES

1. THIS PRELIMINARY PLAN SET IS SUBMITTED FOR THE APPLICATION AND ISSUANCE OF A LAND USE ENTITLEMENT FOR THE PROJECT FROM THE CITY OF COMMERCE.
2. THE LOCATIONS OF PROPOSED IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO: FENCING, BATTERY BUILDINGS, INVERTER/TRANSFORMER PADS, ETC., SHOWN ARE APPROXIMATE AND ARE SUBJECT TO REFINEMENT PRIOR TO GRADING AND BUILDING PERMIT APPLICATIONS DUE TO SITE CONDITIONS, PERMIT REQUIREMENTS, EQUIPMENT SPECIFICATIONS, AND/OR OTHER CONSTRAINTS.
3. CONTRACTOR SHALL CALL AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED. ADDITIONALLY, CONTRACTOR SHALL CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES.
4. SUBSTATION WILL BE SURROUNDED BY A CHAIN LINK FENCE DESIGNED IN ACCORDANCE WITH HIGH VOLTAGE ELECTRIC CODE REQUIREMENTS. SUBSTATION WILL BE SURROUNDED BY A BLOCK WALL WHERE ADJACENT TO AN EXISTING BUILDING.
5. THE FIRE APPARATUS ACCESS ROAD SHALL PROVIDE A MINIMUM UNOBSTRUCTED WIDTH OF 28 FEET, EXCLUSIVE OF SHOULDERS AND AN UNOBSTRUCTED VERTICAL CLEARANCE "CLEAR TO SKY".

LEGEND

CENTERLINE
PARCEL BOUNDARY — PL
ROAD ROW — R/W — R/W
EASEMENT LINE
EX. CONTOUR — 800
MONITORING WELL — MW
SIGN
STORM DRAIN MANHOLE
STORM DRAIN GRATE
SEWER MANHOLE
MANHOLE — MH
FIRE HYDRANT
POWER POLE
GAS VALVE
WATER VALVE
ELECTRIC PULL BOX
WATER METER
SEWER CLEANOUT
AREA LIGHT/ LIGHT POLE — OE
BOLLARD
STORM DRAIN — SD — SD
SEWER — SAN — SAN
WATER LINE — W — W
TELCO LINE — To
OVERHEAD LINE — OE
PROPOSED UNDERGROUND ELEC — UE — UE
2022 APPROVED UNDERGROUND ELECTRIC — E — E — E
PROPOSED STORM DRAIN — ST — ST
2022 APPROVED STORM DRAIN — ST — ST
GRAVEL SURFACE
ASPHALT PAVED SURFACE
CONCRETE SURFACE
PROPOSED BUILDING
EXISTING BUILDING
WALL
CHAIN LINK FENCE — X — X
PROPOSED SUBSTATION CHAIN LINK FENCE — XX — XX — XX
APPROX. CURB LINE AND GUTTER
SURFACE WATER FLOW
EXISTING PALM TREE

NORTH

GRAPHIC SCALE

40' 0 40'

1" = 40'

SEAL:

PERMIT PLAN SET NOT FOR CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.

PROJECT: COMMERCE ENERGY STORAGE, LLC 2023
6920 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE: SITE PLAN

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		C-3.0
APPROVED BY:	SH		
DATE:	12/7/2023		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

SLAUSON AVE

GARFIELD AVE

NOT PART OF APPLICATION

TIE INTO EXISTING STORM DRAIN BOX IN SIDEWALK

24" STORM DRAIN PIPE (HDPE)

STORMWATER BIOFILTRATION

24" BYPASS PIPE (CMP)

STORMWATER BIOFILTRATION BYPASS MANHOLE

CONNECT TO BYPASS MANHOLE

PROPOSED BATTERY BUILDING 1 FINISHED FLOOR EL. 153.00 (19,488 SF)

PROPOSED BATTERY BUILDING 2 FINISHED FLOOR EL. 153.00 (20,438 SF)

PROPOSED BATTERY BUILDING 3 FINISHED FLOOR EL. 153.00 (20,438 SF)

PROPOSED BATTERY BUILDING 4 FINISHED FLOOR EL. 153.00 (18,770 SF)

PROPOSED BATTERY BUILDING 5 FINISHED FLOOR EL. 153.00 (18,282 SF)

PROPOSED BATTERY BUILDING 6 FINISHED FLOOR EL. 152.00 (10,438 SF)

PROPOSED BATTERY BUILDING 7 FINISHED FLOOR EL. 151.00 (12,935 SF)

PROPOSED BATTERY BUILDING 8 FINISHED FLOOR EL. 151.00 (10,069 SF)

PROPOSED UNDERGROUND STORMWATER STORAGE PIPE (TYP)

PROPOSED DROP INLET (TYP)

PROPOSED CURB

PROPOSED MOUNTABLE CURB

PROPOSED SUBSTATION AREA

PROPOSED UNDERGROUND STORMWATER STORAGE PIPE (TYP)

PROPOSED STORM DRAIN NORTH OPTION

2022 APPROVED STORM DRAIN OPTION

STORM MANHOLE RIM ELEV = 149.11' FL IN(24" HDPE) = 145.05' FL OUT (24" HDPE) = 144.85'

STORM MANHOLE RIM ELEV = 152.00' FL IN(24" HDPE) = 145.67' FL OUT (24" HDPE) = 145.47'

STORM MANHOLE RIM ELEV = 148.81' FL IN(24" HDPE) = 144.56' FL OUT (24" HDPE) = 144.36'

STORM DRAIN PIPE (HDPE) RIM ELEV = 147.51' FL IN(24" HDPE) = 142.72' FL OUT (24" HDPE) = 142.52'

STORM MANHOLE RIM ELEV = 148.00' FL IN (24" HDPE) = 140.36' FL OUT (24" HDPE) = 140.16'

STORM MANHOLE RIM ELEV = 148.00' FL IN (24" HDPE) = 141.67' FL OUT (24" HDPE) = 141.47'

GENERAL NOTES

1. THIS PRELIMINARY PLAN SET IS SUBMITTED FOR APPLICATION AND ISSUANCE OF A LAND USE ENTITLEMENT FOR THE PROJECT FROM THE CITY OF COMMERCE.
2. ALTA SURVEY INFORMATION IN THIS PLAN SET PROVIDED BY TSAC ENGINEERING, DATED 06/21/2021 AND BY PBLA ENGINEERING INC, FIELD WORK COMPLETED ON 09/16/2014.
3. THE LOCATIONS OF PROPOSED IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO: FENCING, BATTERY BUILDINGS, INVERTER/TRANSFORMER PADS, ETC., SHOWN ARE APPROXIMATE AND ARE SUBJECT TO REFINEMENT PRIOR TO GRADING AND BUILDING PERMIT APPLICATIONS DUE TO SITE CONDITIONS, PERMIT REQUIREMENTS, EQUIPMENT SPECIFICATIONS, AND/OR OTHER CONSTRAINTS.
4. CONTRACTOR SHALL CALL AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED. ADDITIONALLY, CONTRACTOR SHALL CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES.
5. SUBSTATION WILL BE SURROUNDED BY A CHAIN LINK FENCE DESIGNED IN ACCORDANCE WITH HIGH VOLTAGE ELECTRIC CODE REQUIREMENTS.
6. ABBREVIATIONS:
   - 6.1. TP = TOP OF PAVEMENT
   - 6.2. TG = TOP OF GRATE
   - 6.3. FG = FINISHED GRADE
   - 6.4. MG = MATCH GRADE
   - 6.5. TW = TOP OF WALL

LEGEND

CENTERLINE
PARCEL BOUNDARY
ROAD ROW
EASEMENT LINE
EX. CONTOUR
MONITORING WELL
SIGN
STORM DRAIN MANHOLE
STORM DRAIN GRATE
SEWER MANHOLE
MANHOLE
FIRE HYDRANT
POWER POLE
GAS VALVE
WATER VALVE
ELECTRIC PULL BOX
WATER METER
SEWER CLEANOUT
AREA LIGHT/ LIGHT POLE
BOLLARD
STORM DRAIN
SEWER
WATER LINE
TELCO LINE
OVERHEAD LINE
PROPOSED UNDERGROUND ELEC
2022 APPROVED UNDERGROUND ELECTRIC
PROPOSED STORM DRAIN
2022 APPROVED STORM DRAIN
GRAVEL SURFACE
ASPHALT PAVED SURFACE
CONCRETE SURFACE
PROPOSED BUILDING
EXISTING BUILDING
WALL
CHAIN LINK FENCE
PROPOSED SUBSTATION CHAIN LINK FENCE
APPROX. CURB LINE AND GUTTER
SURFACE WATER FLOW
EXISTING PALM TREE

NORTH

GRAPHIC SCALE

1" = 40'

SEAL:

PERMIT PLAN SET NOT FOR CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.

PROJECT:
COMMERCE ENERGY STORAGE, LLC 2023
6920 E. SLAUSON AVENUE
COMMERCE, CA 90040

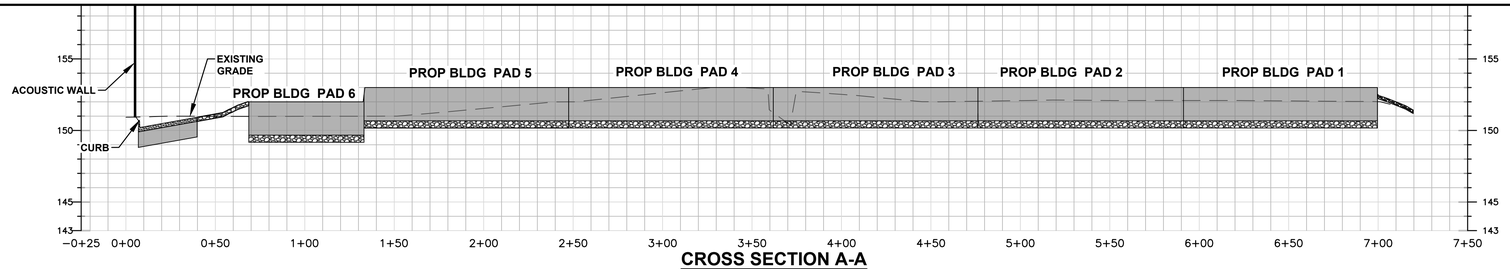
TITLE:
GRADING & DRAINAG PLAN

DRAWN BY:	TSS
CHECKED BY:	DG
APPROVED BY:	SH
DATE:	12/7/2023
PROJ. NO.:	393191

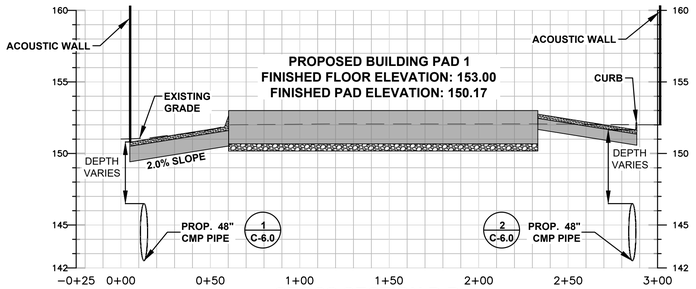
C-4.0

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

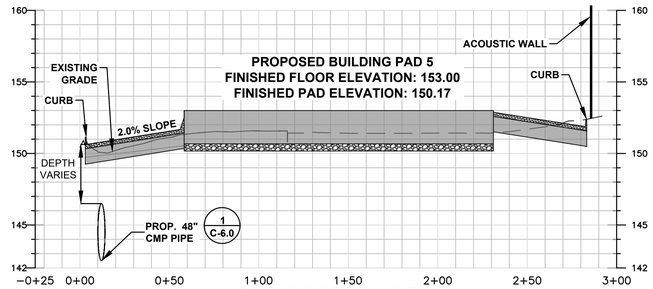
H:\WORK IN PROGRESS\SOLAR SITES\LS POWER DEVELOPMENT\COMMERCE, CA\CAD\SITE PLANS\GUP APPLICATION_COMMERCE 2\393191_GRA.DWG



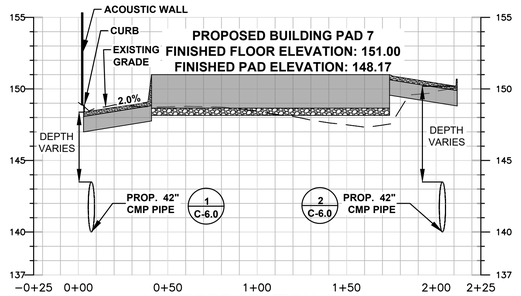
CROSS SECTION A-A
V:1" = 5' H: 1" = 40'



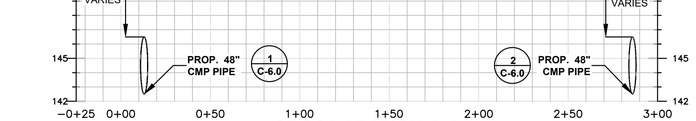
CROSS SECTION B-B
V:1" = 5' H: 1" = 40'



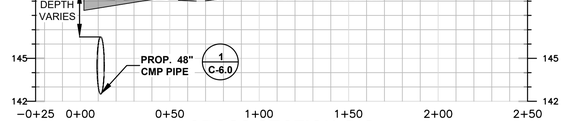
CROSS SECTION F-F
V:1" = 5' H: 1" = 40'



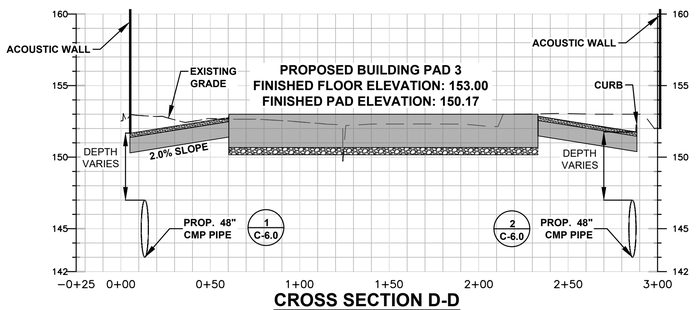
CROSS SECTION J-J
V:1" = 5' H: 1" = 40'



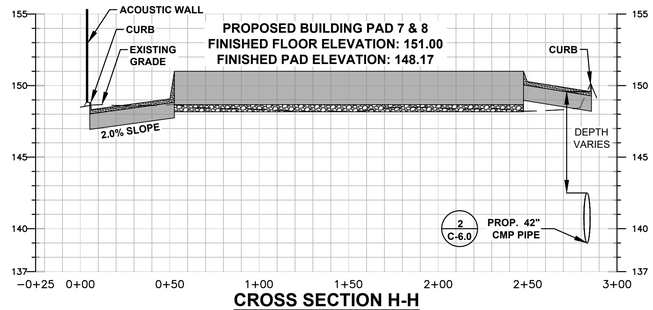
CROSS SECTION C-C
V:1" = 5' H: 1" = 40'



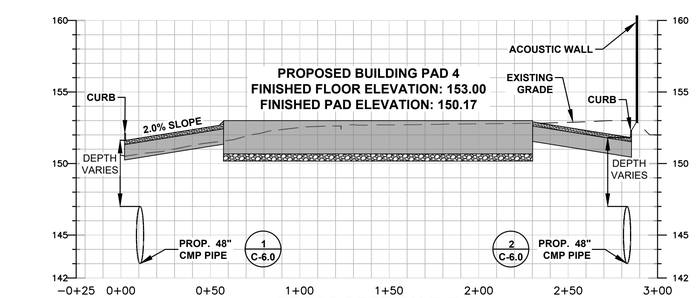
CROSS SECTION G-G
V:1" = 5' H: 1" = 40'



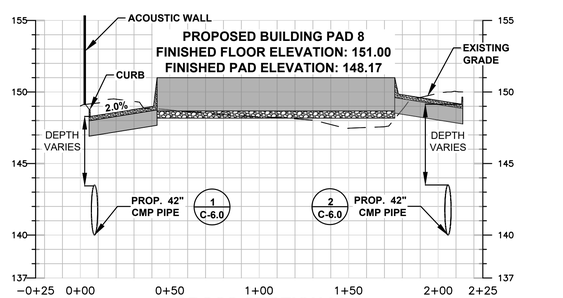
CROSS SECTION D-D
V:1" = 5' H: 1" = 40'



CROSS SECTION H-H
V:1" = 5' H: 1" = 40'



CROSS SECTION E-E
V:1" = 5' H: 1" = 40'



CROSS SECTION I-I
V:1" = 5' H: 1" = 40'

SEAL:

PERMIT PLAN SET
NOT FOR
CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.

PROJECT:
COMMERCE ENERGY STORAGE, LLC 2023
6920 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
CROSS SECTIONS

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		
APPROVED BY:	SH		C-4.1
DATE:	12/7/2023		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

SLAUSON AVE

GARFIELD AVE

PROPOSED STABILIZED CONSTRUCTION ENTRANCE (TC-1)

WM-8 CONCRETE WASTE MANAGEMENT

PROPOSED SILT FENCE (SE-1)

PROPOSED STABILIZED CONSTRUCTION ENTRANCE (TC-1)

PROPOSED SILT FENCE (SE-1)

STORM DRAIN INLET PROTECTION SC-10 (TYP)

WM-8 CONCRETE WASTE MANAGEMENT

PROPOSED STABILIZED CONSTRUCTION ENTRANCE (TC-1)

STORM DRAIN INLET PROTECTION SC-10 (TYP)

PROPOSED SILT FENCE (SE-1)

NOT PART OF APPLICATION

TRASH ENCLOSURE

TRASH ENCLOSURE

(2) UTILITY

ASPH

CONC

STAIRS

GATE

SHED

TANK

PARKING STRIPING OBLITE

GENERAL NOTES

1. THE PROPERTY OWNER IS OBLIGATED TO INSURE COMPLIANCE WITH ALL APPLICABLE STORMWATER REGULATIONS AT ALL TIMES. THE BMP'S (BEST MANAGEMENT PRACTICES) THAT HAVE BEEN INCORPORATED INTO THIS PLAN SHALL BE IMPLEMENTED AND MAINTAINED TO EFFECTIVELY PREVENT THE POTENTIALLY NEGATIVE IMPACTS OF THIS PROJECT'S CONSTRUCTION ACTIVITIES ON STORMWATER QUALITY. THE MAINTENANCE OF THE BMP'S IS THE PERMITTEE'S RESPONSIBILITY, AND FAILURE TO PROPERLY INSTALL OR MAINTAIN THE BMP'S MAY RESULT IN ENFORCEMENT ACTION IF INSTALLED BMP FAILS, IF INSTALLED BMP'S FAIL, THEY MUST BE REPAIRED OR REPLACED WITH AN ACCEPTABLE ALTERNATE WITHIN 24 HOURS, OR AS SOON AS SAFE TO DO SO.
2. A NOTICE OF INTENT (NOI) HAS BEEN OR WILL BE FILED WITH THE REGIONAL WATER QUALITY CONTROL BOARD INCLUDING A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CALIFORNIA GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION SITES FOR ALL CONSTRUCTION ASSOCIATED WITH THESE PLANS. THE PERMITTEE SHALL KEEP A COPY OF THE SWPPP ON SITE AND AVAILABLE FOR THE DURATION OF CONSTRUCTION.

LEGEND

CENTERLINE
PARCEL BOUNDARY (PL)
ROAD ROW (R/W)
EASEMENT LINE
EX. CONTOUR (800)
MONITORING WELL (MW)
SIGN
STORM DRAIN MANHOLE
STORM DRAIN GRATE
SEWER MANHOLE (MH)
MANHOLE
FIRE HYDRANT
POWER POLE
GAS VALVE
WATER VALVE
ELECTRIC PULL BOX
WATER METER
SEWER CLEANOUT
AREA LIGHT/ LIGHT POLE
BOLLARD
STORM DRAIN (SD)
SEWER (SAN)
WATER LINE (W)
TELCO LINE (To)
OVERHEAD LINE (OE)
PROPOSED UNDERGROUND ELEC (UE)
2022 APPROVED UNDERGROUND ELECTRIC (E)
PROPOSED STORM DRAIN (ST)
2022 APPROVED STORM DRAIN (ST)
GRAVEL SURFACE
ASPHALT PAVED SURFACE
CONCRETE SURFACE
PROPOSED BUILDING
EXISTING BUILDING
WALL
CHAIN LINK FENCE
PROPOSED SUBSTATION CHAIN LINK FENCE (XX)
APPROX. CURB LINE AND GUTTER
SURFACE WATER FLOW
EXISTING PALM TREE

NORTH

GRAPHIC SCALE

40' 0 40'

1" = 40'

SEAL:

PERMIT PLAN SET NOT FOR CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

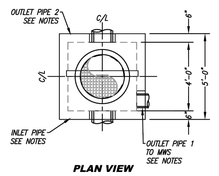
NO.	BY	DATE	REVISION	APP'D.

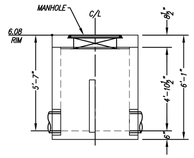
PROJECT: COMMERCE ENERGY STORAGE, LLC 2023
6920 E. SLAUSON AVENUE
COMMERCE, CA 90040

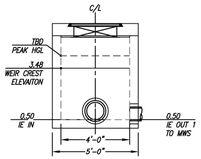
TITLE: EROSION CONTROL PLAN

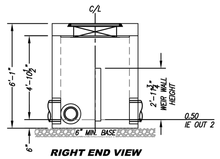
DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		C-5.0
APPROVED BY:	SH		
DATE:	12/7/2023		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336









EAST	SITE SPECIFIC DATA			WEST
PROJECT NUMBER	14733			
ORDER NUMBER	----			
PROJECT NAME	COMMERCE ENERGY STORAGE			
PROJECT LOCATION	COMMERCE, CA			
STRUCTURE ID	----			
PEAK BYPASS REQUIRED (CFS) – IF APPLICABLE			TBD	
PIPE DATA	I.E.	MATERIAL	DIAMETER	TBD
INLET PIPE 1	0.50	CMP	12"	TBD
OULET PIPE 1 TO MWS	0.50	CMP	8"	TBD
OUTLET PIPE 2	0.50	CMP	12"	TBD
RIM ELEVATION	6.08			TBD
TOP OF WEIR	3.48			TBD
SURFACE LOAD	TRAFFIC			TRAFFIC
FRAME & COVER	ø30			TBD
NOTES: PRELIMINARY NOT FOR CONSTRUCTION.				

INTERNAL BYPASS DISCLOSURE:

THE DESIGN AND CAPACITY OF THE PEAK CONVEYANCE METHOD TO BE REVIEWED AND APPROVED BY THE ENGINEER OF RECORD. HGL(S) AT PEAK FLOW SHALL BE ASSESSED TO ENSURE NO UPSTREAM FLOODING. PEAK HGL AND BYPASS CAPACITY SHOWN ON DRAWING ARE USED FOR GUIDANCE ONLY.

INSTALLATION NOTES

1. CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO OFFLOAD AND INSTALL THE SYSTEM AND APPURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURERS SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURERS CONTRACT.
2. UNIT MUST BE INSTALLED ON LEVEL BASE. MANUFACTURER RECOMMENDS A MINIMUM 6" LEVEL ROCK BASE UNLESS SPECIFIED BY THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE TO VERIFY PROJECT ENGINEERS RECOMMENDED BASE SPECIFICATIONS.
4. CONTRACTOR TO SUPPLY AND INSTALL ALL EXTERNAL CONNECTING PIPES. ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE. (PIPES CANNOT INTRUDE BEYOND FLUSH). INVERT OF OUTFLOW PIPE MUST BE FLUSH WITH DISCHARGE CHAMBER FLOOR. ALL PIPES SHALL BE SEALED WATER TIGHT PER MANUFACTURERS STANDARD CONNECTION DETAIL.
5. CONTRACTOR RESPONSIBLE FOR INSTALLATION OF ALL RISERS, MANHOLES, AND HATCHES. CONTRACTOR TO GROUT ALL MANHOLES AND HATCHES TO MATCH FINISHED SURFACE UNLESS SPECIFIED OTHERWISE.

GENERAL NOTES

1. MANUFACTURER TO PROVIDE ALL MATERIALS UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS, ELEVATIONS, SPECIFICATIONS AND CAPACITIES ARE SUBJECT TO CHANGE. FOR PROJECT SPECIFIC DRAWINGS DETAILING EXACT DIMENSIONS, WEIGHTS AND ACCESSORIES PLEASE CONTACT BIO CLEAN.

1/27/22GSCHIPPER

MODULAR WETLANDS
THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING US PATENTS: 7,425,262; 7,470,362; 7,674,378; 8,303,816; RELATED FOREIGN PATENTS OR OTHER PATENTS PENDING

PROPRIETARY AND CONFIDENTIAL:
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Bio Clean
A Forterra Company

BC-DS-4-4-6'-9"
STORMWATER BIOFILTRATION SYSTEM
STANDARD DETAIL

5 STORMWATER BIOFILTRATION DETAIL (BC-DS-4-4-6'-9")
(EAST AND WEST)
(NOT TO SCALE)

EAST	SITE SPECIFIC DATA			WEST
PROJECT NUMBER	14733			
PROJECT NAME	COMMERCE ENERGY STORAGE			
PROJECT LOCATION	COMMERCE, CA			
STRUCTURE ID	----			
TREATMENT REQUIRED				
VOLUME BASED (CF)		FLOW BASED (CFS)		TBD
5,600		N/A		TBD
TREATMENT HGL AVAILABLE (FT)			N/K	TBD
PEAK BYPASS REQUIRED (CFS) – IF APPLICABLE			OFFLINE	TBD
PIPE DATA	I.E.	MATERIAL	DIAMETER	TBD
INLET PIPE 1	0.50	CMP	8"	TBD
INLET PIPE 2	N/A	N/A	N/A	TBD
OUTLET PIPE	0.00	CMP	8"	TBD
	PRETREATMENT	BIOFILTRATION	DISCHARGE	
RIM ELEVATION	6.08	6.08	6.08	TBD
SURFACE LOAD	H20	N/A	H20	TBD
FRAME & COVER	ø30"	30" X 48"	ø24"	TBD
WETLANDMEDIA VOLUME (CY)			4.52	TBD
ORIFICE SIZE (DIA. INCHES)			ø0.81"	TBD
NOTES: PRELIMINARY NOT FOR CONSTRUCTION. UPSTREAM BYPASS SET AT 3.48.				

INSTALLATION NOTES

1. CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO OFFLOAD AND INSTALL THE SYSTEM AND APPURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURERS' SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURER'S CONTRACT.
2. UNIT MUST BE INSTALLED ON LEVEL BASE. MANUFACTURER RECOMMENDS A MINIMUM 6" LEVEL ROCK BASE UNLESS SPECIFIED BY THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PROJECT ENGINEER'S RECOMMENDED BASE SPECIFICATIONS.
4. CONTRACTOR TO SUPPLY AND INSTALL ALL EXTERNAL CONNECTING PIPES. ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE (PIPES CANNOT INTRUDE BEYOND FLUSH). INVERT OF OUTFLOW PIPE MUST BE FLUSH WITH DISCHARGE CHAMBER FLOOR. ALL PIPES SHALL BE SEALED WATERTIGHT PER MANUFACTURER'S STANDARD CONNECTION DETAIL.
5. CONTRACTOR RESPONSIBLE FOR INSTALLATION OF ALL PIPES, RISERS, MANHOLES, AND HATCHES. CONTRACTOR TO USE GROUT AND/OR BRICKS TO MATCH COVERS WITH FINISHED SURFACE UNLESS SPECIFIED OTHERWISE.
6. CONTRACTOR RESPONSIBLE FOR CONTACTING BIO CLEAN FOR ACTIVATION OF UNIT. MANUFACTURER'S WARRANTY IS VOID WITHOUT PROPER ACTIVATION BY A BIO CLEAN REPRESENTATIVE.

REQUIRED TREATMENT VOLUME (CF)	5600
DRAINDOWN DURATION (HOURS)	48
AVERAGE DISCHARGE RATE PER MWS UNIT(GPM)	14.45
OPERATING HEAD (FT)	3.4
WETLANDMEDIA INFILTRATION RATE (IN/HR)	23
WETLANDMEDIA LOADING RATE (GPM/SF)	0.23

GENERAL NOTES

1. MANUFACTURER TO PROVIDE ALL MATERIALS UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS, ELEVATIONS, SPECIFICATIONS AND CAPACITIES ARE SUBJECT TO CHANGE. FOR PROJECT SPECIFIC DRAWINGS DETAILING EXACT DIMENSIONS, WEIGHTS AND ACCESSORIES PLEASE CONTACT BIO CLEAN.

1/27/22GSCHIPPER

MODULAR WETLANDS
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Bio Clean
A Forterra Company

MWS-L-4-13-6'-0"-V-UG
STORMWATER BIOFILTRATION SYSTEM
STANDARD DETAIL

6 STORMWATER BIOFILTRATION DETAIL (MWS-L-4-13-6'-0"-V-UG)
(EAST AND WEST)
(NOT TO SCALE)

1 UNDERGROUND STORMWATER STORAGE AND WEST AND SOUTH DRIVEWAY (TYP.)
(NOT TO SCALE)

NOTES :
1. ACCESS FOR INSPECTIONS AND MAINTENANCE IS ACHIEVED VIA DROP INLET AT MAINTENANCE PORTS.
2. SEDIMENT MAY BE REMOVED WITHOUT ENTRY USING A VACUUM HOSE OR OTHER MEANS.
3. BODILY ENTRY INTO STORMWATER STORAGE PIPES SHALL NOT OCCUR BY ANY INDIVIDUAL THAT HAS NOT BEEN TRAINED IN CONFINED SPACE ENTRY AND SHALL NOT OCCUR WITHOUT CONFINED ENTRY PREPARATIONS, PRECAUTIONARY MEASURES AND PERMIT AS REQUIRED BY CalOSHA.

2 UNDERGROUND STORMWATER STORAGE NORTH AND EAST DRIVEWAY (TYP.)
(NOT TO SCALE)

3 STORM DRAIN PIPE
(NOT TO SCALE)

4 MANHOLE
(NOT TO SCALE)

7 DROP INLET
(NOT TO SCALE)

8 TYPICAL SAFETY AND SECURITY FENCE DETAIL
(NOT TO SCALE)

BLOCK WALL SCHEDULE							
HEIGHT "H"	A	B	C	D	E	F	G
8'-0"	7'-3"	2'-0"	#7 @ 12" OC	8 #7	#7 @ 12" OC	8 #7	#6 @ 24" EF
12'-0"	9'-6"	2'-6"	#8 @ 12" OC	10 #8	#8 @ 12" OC	10 #8	#6 @ 8" EF

NOTES:
IN LIEU OF DOWELS, CONTRACTOR MAY PROVIDE ONE PIECE 'G' BARS AND EXTEND INTO FOOTING WITH STD 90° HOOK (ALT BEND).

9 ACOUSTIC WALL DETAIL
(NOT TO SCALE)

SEAL:

PERMIT PLAN SET
NOT FOR
CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.

PROJECT:
COMMERCE ENERGY STORAGE, LLC 2023
6920 E. SLAUSON AVENUE
COMMERCE, CA 90040

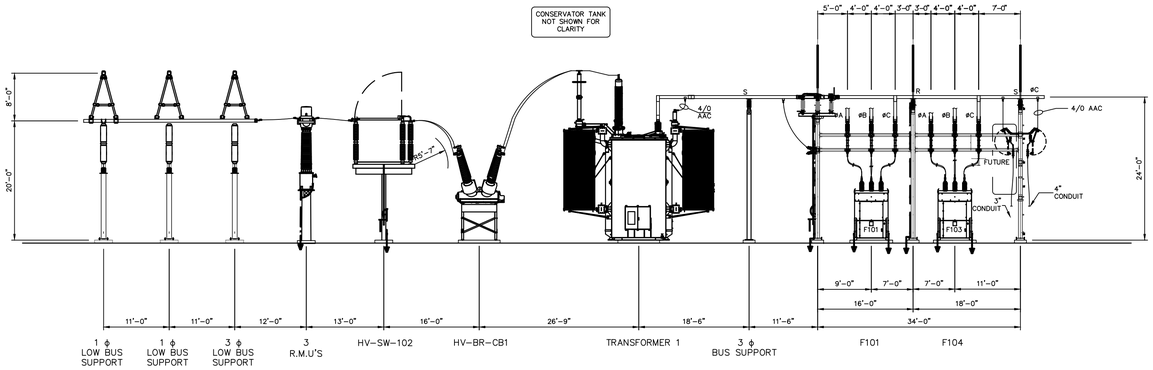
TITLE:
DETAILS

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG	C-6.0	
APPROVED BY:	SH		
DATE:	12/7/2023		

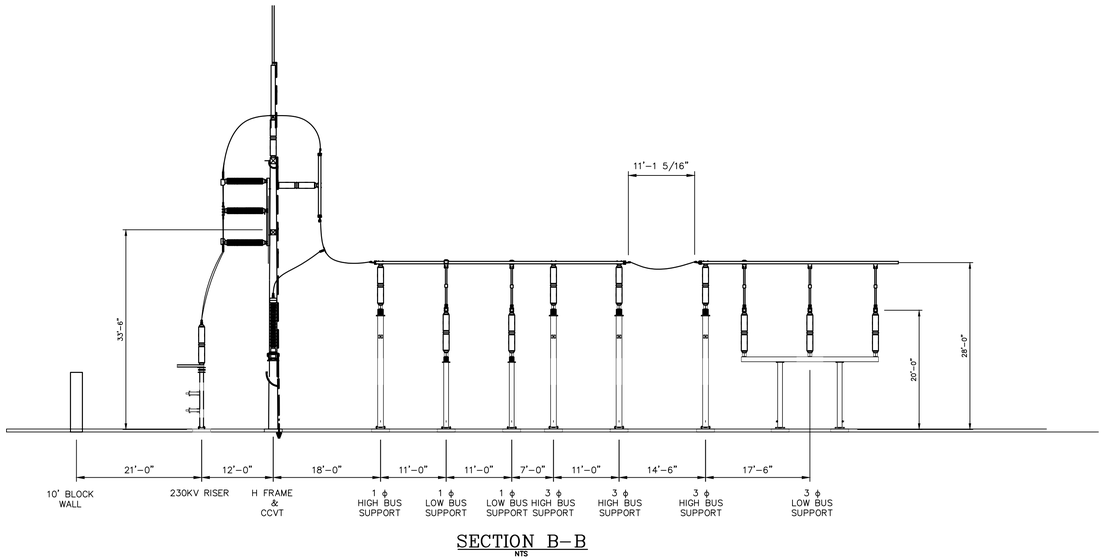
TRC

6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

H:_WORK IN PROGRESS\SOLAR SITES\LS POWER DEVELOPMENT\COMMERCE, CA\CAD\SITE PLANS\CUP APPLICATION_COMMERCE 2\393191_COV AND DET.DWG

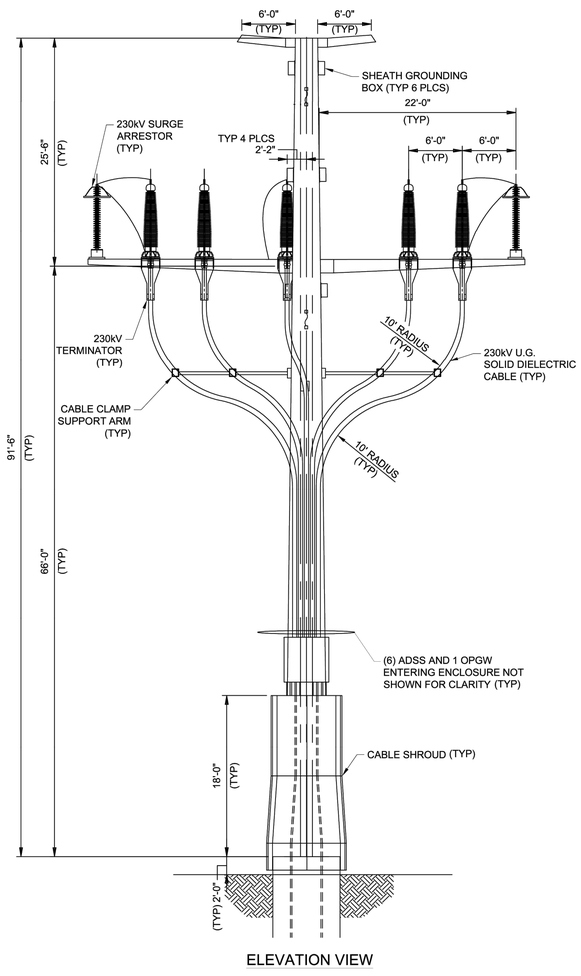


SECTION A-A
NTS

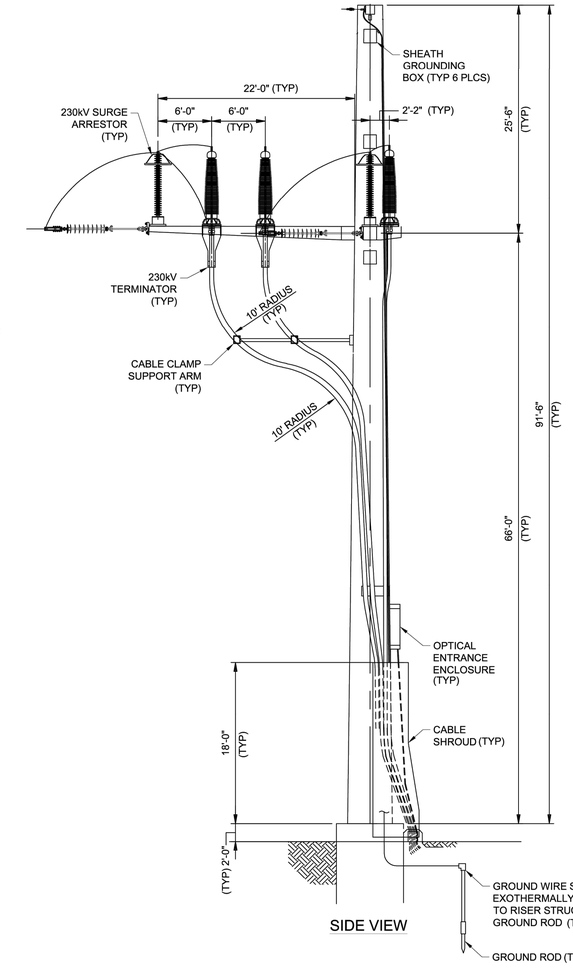


SECTION B-B
NTS

1 SUBSTATION PROFILE
(NOT TO SCALE)



ELEVATION VIEW



SIDE VIEW

2 TYPICAL RISER POLE FRAMING
(NOT TO SCALE)

SEAL:

PERMIT PLAN SET
NOT FOR
CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

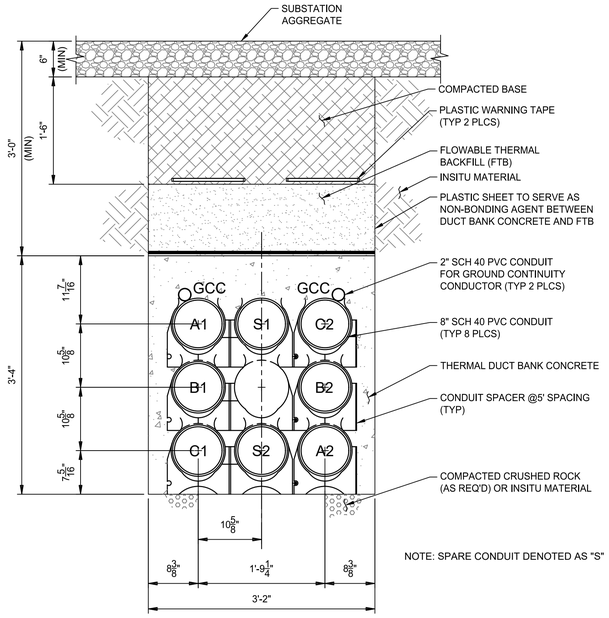
NO.	BY	DATE	REVISION	APP'D.

PROJECT:
COMMERCE ENERGY STORAGE, LLC 2023
6920 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
SUBSTATION PROFILE & ELECTRIC TIE-LINE DETAILS

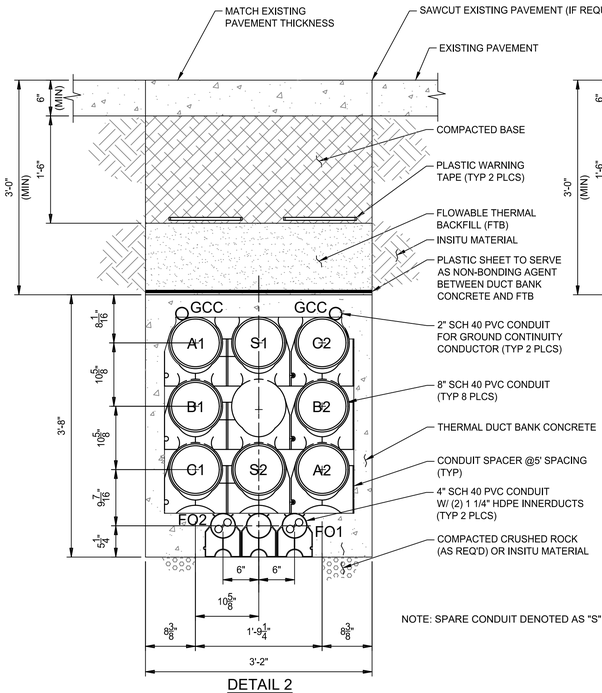
DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		
APPROVED BY:	SH		E-1.0
DATE:	12/7/2023		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336



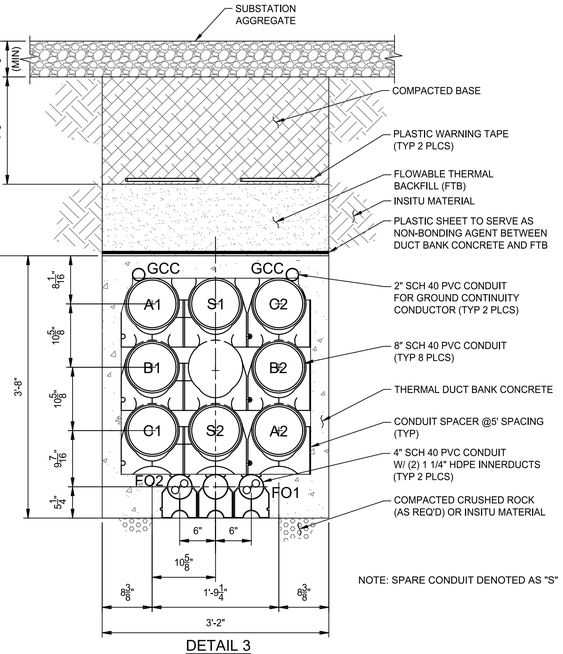
NOTE: SPARE CONDUIT DENOTED AS "S"

DETAIL 1
3X3 DUCT BANK
PAVEMENT SECTION
NTS



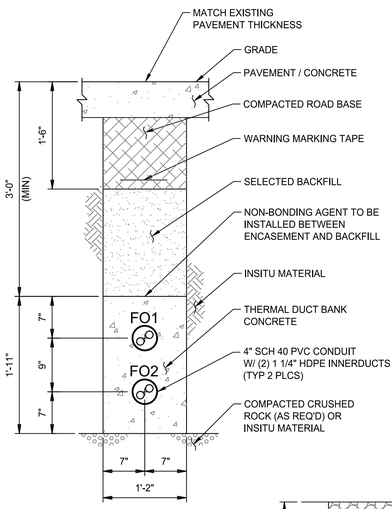
NOTE: SPARE CONDUIT DENOTED AS "S"

DETAIL 2
4X3 DUCT BANK
PAVEMENT SECTION
NTS

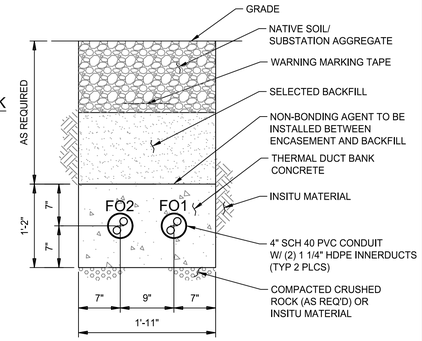


NOTE: SPARE CONDUIT DENOTED AS "S"

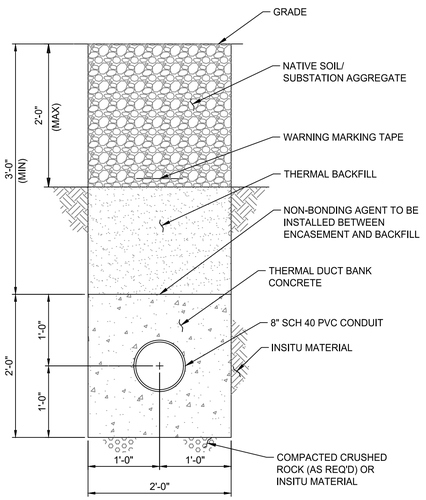
DETAIL 3
4X3 DUCT BANK
PAVEMENT SECTION
NTS



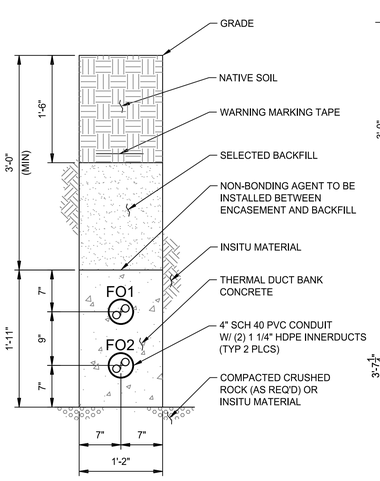
DETAIL 4
4" PVC CONDUIT
COMMUNICATION DUCT BANK
PAVEMENT SECTION
NTS



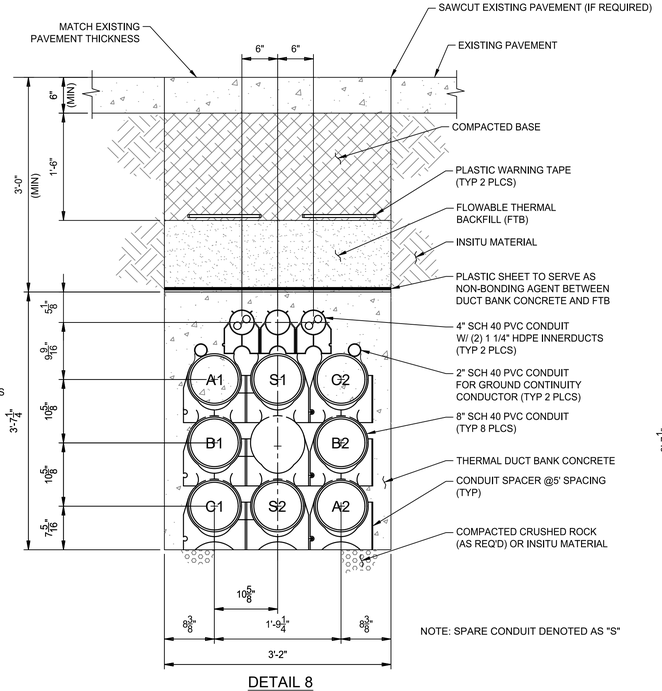
DETAIL 5
4" PVC CONDUIT
COMMUNICATION DUCT BANK
PAVEMENT SECTION
NTS



DETAIL 6
8" PVC CONDUIT
SINGLE PHASE DUCT BANK
NTS

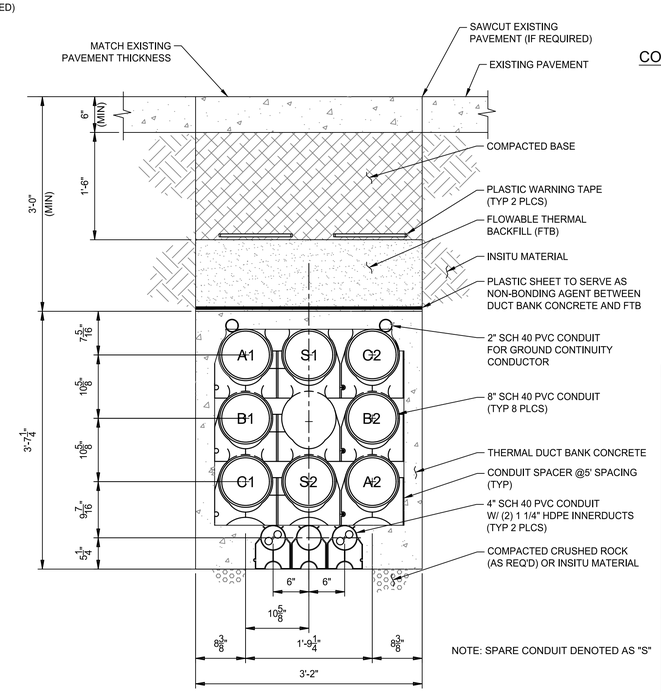


DETAIL 7
4" PVC CONDUIT
COMMUNICATION DUCT BANK
PAVEMENT SECTION
NTS



NOTE: SPARE CONDUIT DENOTED AS "S"

DETAIL 8
3X4 DUCT BANK
PAVEMENT SECTION
NTS



NOTE: SPARE CONDUIT DENOTED AS "S"

DETAIL 9
3X4 DUCT BANK
PAVEMENT SECTION
NTS

1 TYPICAL DUCT BANK DETAILS
(NOT TO SCALE)

PERMIT PLAN SET
NOT FOR
CONSTRUCTION

SEAL:

PROFESSIONAL ENGINEER:

DATE:

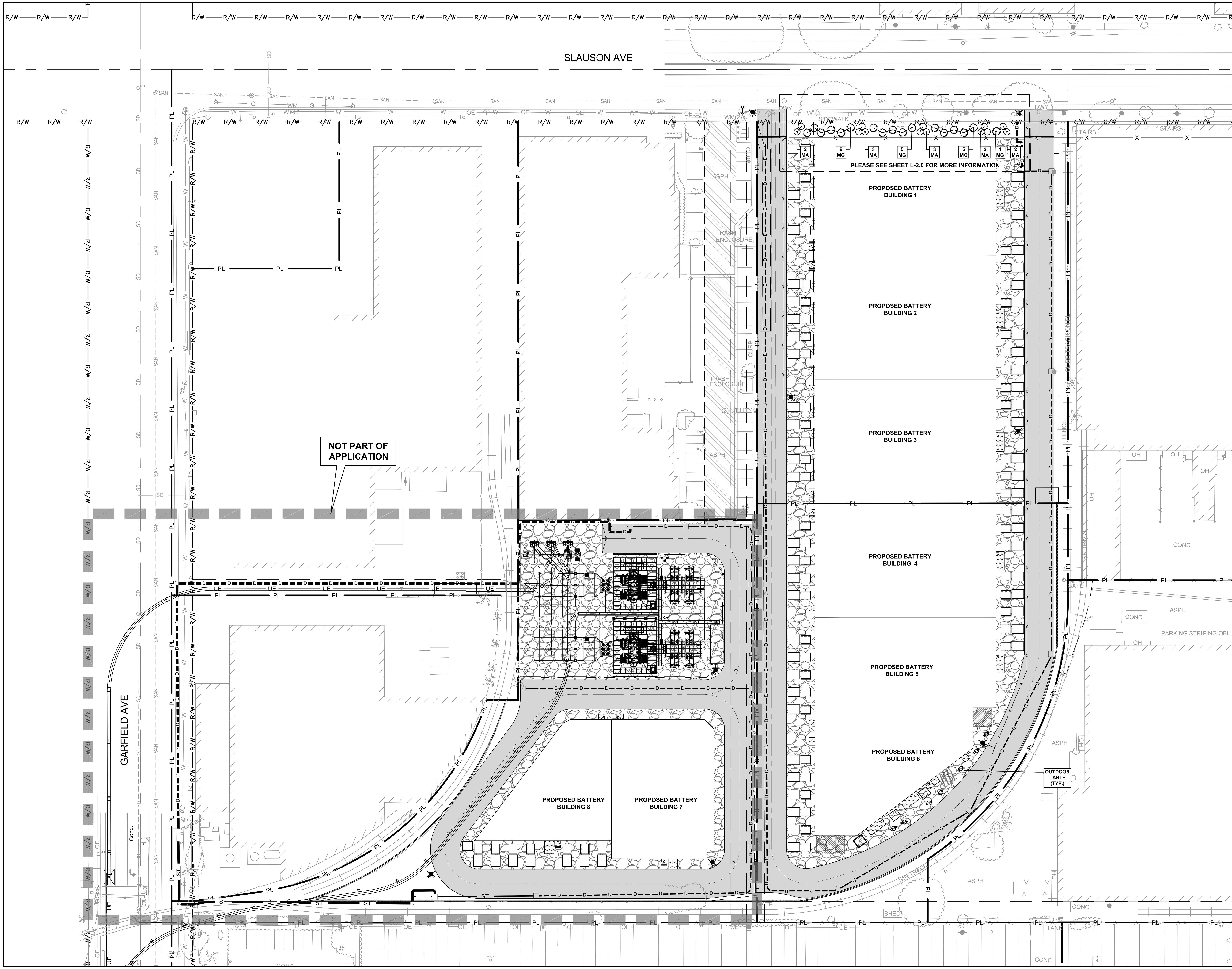
NO.	BY	DATE	REVISION	APP'D.

PROJECT:
COMMERCE ENERGY STORAGE, LLC 2023
6920 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
TYPICAL DUCT BANK DETAILS

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		
APPROVED BY:	SH		E-1.1
DATE:	12/7/2023		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336



NORTH

GRAPHIC SCALE

40' 0 40'

1" = 40'

LEGEND

CENTERLINE	
PARCEL BOUNDARY	PL
ROAD ROW	R/W
EASEMENT LINE	
EX. CONTOUR	800
MONITORING WELL	MW
SIGN	
STORM DRAIN MANHOLE	SD
STORM DRAIN GRATE	
SEWER MANHOLE	S
MANHOLE	MH
FIRE HYDRANT	HYD
POWER POLE	
GAS VALVE	GV
WATER VALVE	WV
ELECTRIC PULL BOX	
WATER METER	
SEWER CLEANOUT	
AREA LIGHT/ LIGHT POLE	
BOLLARD	
STORM DRAIN	SD
SEWER	SAN
WATER LINE	W
TELCO LINE	To
OVERHEAD LINE	OE
PROPOSED UNDERGROUND ELEC	UE
2022 APPROVED UNDERGROUND ELECTRIC	E
PROPOSED STORM DRAIN	D
2022 APPROVED STORM DRAIN	ST
GRAVEL SURFACE	
ASPHALT PAVED SURFACE	
CONCRETE SURFACE	
PROPOSED BUILDING	
EXISTING BUILDING	
WALL	
CHAIN LINK FENCE	X
PROPOSED SUBSTATION CHAIN LINK FENCE	XX
APPROX. CURB LINE AND GUTTER	
SURFACE WATER FLOW	
EXISTING PALM TREE	

SEAL:

PERMIT PLAN SET NOT FOR CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.

PROJECT: COMMERCE ENERGY STORAGE, LLC 2023
6920 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE: LANDSCAPE PLAN

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		L-1.0
APPROVED BY:	SH		
DATE:	12/7/2023		

TRC

6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

H:\WORK IN PROGRESS\SOLAR SITES\LS POWER DEVELOPMENT\COMMERCE, CA\CAD\LANDSCAPE PLANS\CUP APPLICATION_COMMERCE 2\393191_LAND.DWG

GENERAL LANDSCAPE NOTES

1. THE LANDSCAPE PLAN AND DETAILS ARE FOR LANDSCAPING INFORMATION ONLY. PLEASE REFER TO THE SITE LAYOUT PLAN, GRADING PLAN AND/OR UTILITIES PLAN FOR ALL OTHER INFORMATION.

2. MAINTENANCE RESPONSIBILITIES INCLUDE: APPROVED CULTIVATING, SPRAYING, WEEDING, WATERING, TIGHTENING OF TREE STRAP GUYS, PRUNING, FERTILIZING, MULCHING, AND ANY OTHER OPERATIONS NECESSARY TO MAINTAIN PLANT VIABILITY. MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER PLANTING AND CONTINUE FOR THE DURATION OF SOLAR ARRAY USE BY THE OWNER/OPERATOR AFTER FINAL ACCEPTANCE. WATERING OF THE LANDSCAPE BUFFER AREAS SHALL BE IMPLEMENTED BY THE USE OF A WATERING TRUCK.

3. ALL PLANTS SHALL BE ACCLIMATED BY THE SUPPLY NURSERY TO THE LOCAL HARDINESS ZONE AND BE CERTIFIED THAT THE PLANTING MATERIAL HAS BEEN GROWN FOR A MINIMUM OF (2) TWO YEARS AT THE SOURCE AND OBTAINED WITHIN 200 MILES OF PROJECT SITE UNLESS OTHERWISE APPROVED BY OWNER, CERTIFIED LANDSCAPE INSPECTOR, OR LANDSCAPE ARCHITECT.

4. THE LOCATIONS FOR PLANT MATERIAL ARE APPROXIMATE AND ARE SUBJECT TO FIELD ADJUSTMENT DUE TO SLOPE, VEGETATION, AND SITE FACTORS SUCH AS THE LOCATION OF ROCK OUTCROPS. PRIOR TO PLANTING THE CONTRACTOR SHALL ACCURATELY STAKE OUT THE LOCATIONS FOR ALL PLANTS. THE OWNER, CERTIFIED LANDSCAPE INSPECTOR, OR LANDSCAPE ARCHITECT SHALL APPROVE THE FIELD LOCATIONS OR ADJUSTMENTS OF THE PLANT MATERIAL.

5. ALL SHRUB MASSING SHALL BE MULCHED TO A DEPTH OF 3" AND SHREDDED HARDWOOD BARK MULCH SHALL BE USED FOR SHRUB MASSING AREAS.

6. NO PLANT SHALL BE PLACED IN THE GROUND BEFORE ROUGH GRADING HAS BEEN COMPLETED AND APPROVED BY THE OWNER, CERTIFIED LANDSCAPE INSPECTOR, OR LANDSCAPE CONTRACTOR. STAKING THE LOCATION OF ALL TREES AND SHRUBS SHALL BE COMPLETED PRIOR TO PLANTING FOR APPROVAL BY THE OWNER, CERTIFIED LANDSCAPE INSPECTOR, OR LANDSCAPE ARCHITECT. STAKING OF THE INSTALLED TREE MUST BE COMPLETED THE SAME DAY AS IT IS INSTALLED. ALL TREES SHALL BE STAKED OR GUYED AS PER THE DETAIL. SEE LANDSCAPING PLAN(S) FOR PLANTING DETAILS.

7. COORDINATE PLANT MATERIAL LOCATIONS WITH SITE UTILITIES. SEE SITE LAYOUT, GRADING AND/OR UTILITY PLANS FOR STORM, SANITARY, GAS, ELECTRIC, TELEPHONE AND WATER LINES. UTILITY LOCATIONS ARE APPROXIMATE. EXERCISE CARE WHEN DIGGING IN AREAS OF POTENTIAL CONFLICT WITH UNDERGROUND OR OVERHEAD UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE DUE TO CONTRACTOR'S NEGLIGENCE AND SHALL REPLACE OR REPAIR ANY DAMAGE AT CONTRACTOR'S EXPENSE.

8. LANDSCAPE PLANTING PITS MUST BE FREE DRAINING. PAVEMENT, COMPACTED SUBGRADE, AND BLASTED ROCK SHALL BE REMOVED TO A DEPTH OF 2' OR TO A GREATER DEPTH IF REQUIRED BY PLANTING DETAILS OR SPECIFICATIONS. REPLACE SOIL WITH MODERATELY COMPACTED LOAM OR SANDY LOAM FREE FROM STONES AND RUBBISH 1" OR GREATER IN DIAMETER AND ANY OTHER MATERIAL HARMFUL TO PLANT GROWTH AND DEVELOPMENT. PLANTING INSTALLATION SHALL BE AS DETAILED AND CONTAIN PLANTING MIX AS SPECIFIED UNLESS RECOMMENDED OTHERWISE BY SOIL ANALYSIS.

   PLANTING SOIL MIXTURE:
   2 PARTS PEAT MOSS
   5 PARTS TOPSOIL
   MYCORHIZA INOCULANT - "TRANSPLANT 1-STEP" AS MANUFACTURED BY ROOTS, INC. OR APPROVED EQUAL. USE PER MANUFACTURER'S RECOMMENDATIONS FOR TREES AND SHRUBS. FERTILIZER/LIME APPLY AS RECOMMENDED BY SOIL ANAYLSIS

   - TREES, AND SHRUBS: TREES AND SHRUBS SHALL BE NURSERY GROWN UNLESS OTHERWISE NOTED AND HARDY UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCATION OF THE PROJECT. THEY SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY, WITH NORMAL HABIT OF GROWTH. THEY SHALL BE SOUND, HEALTHY, VIGOROUS, WELL-BRANCHED AND DENSELY FOLIATED WHEN IN LEAF. THEY SHALL BE FREE OF DISEASE, INSECT PESTS, EGGS OR LARVAE. THEY SHALL HAVE HEALTHY AND WELL-DEVELOPED ROOT SYSTEMS. ALL TREES SHALL HAVE STRAIGHT SINGLE TRUNKS WITH THEIR MAIN LEADER INTACT UNLESS OTHERWISE STATED. THE OWNER, CERTIFIED LANDSCAPE INSPECTOR, LANDSCAPE ARCHITECT, QUEEN ANNE'S COUNTY PLANNING AND ZONING BOARD SHALL ONLY PERMIT SUBSTITUTIONS UPON WRITTEN APPROVAL. THEIR SIZES SHALL CONFORM TO THE MEASUREMENT SPECIFIED ON THE DRAWINGS. PLANTS LARGER THAN SPECIFIED ON THE DRAWINGS MAY BE USED IF APPROVED. THE USE OF SUCH PLANTS SHALL NOT INCREASE THE CONTRACT PRICE. ALL TREES AND SHRUBS SHALL BE MULCHED IN ACCORDANCE WITH THE RESPECTIVE PLANTING DETAIL(S) PROVIDED IN THE LANDSCAPING PLAN.

   - ALL PRUNING SHALL CONFORM TO THE TREE CARE INDUSTRY ASSOCIATION (TCIA) ANSI A300 (PART 1) - 2017 PRUNING STANDARDS. PRUNING STANDARDS SHALL RECOGNIZE BUT, ARE NOT LIMITED TO, THE FOLLOWING PRUNING OBJECTIVES: MANAGE RISK, MANAGE HEALTH, DEVELOP STRUCTURE, PROVIDE CLEARANCE, MANAGE SIZE OR SHAPE, IMPROVE AESTHETICS, MANAGE PRODUCTION OF FRUIT, FLOWERS, OR OTHER PRODUCTS, AND/OR MANAGE WILDLIFE HABITAT. DEVELOPING STRUCTURE SHALL IMPROVE BRANCH AND TRUNK ARCHITECTURE, PROMOTE OR SUBORDINATE CERTAIN LEADERS, STEMS, OR BRANCHES; PROMOTE DESIRABLE BRANCH SPACING; PROMOTE OR DISCOURAGE GROWTH IN A PARTICULAR DIRECTION (DIRECTIONAL PRUNING); MINIMIZE FUTURE INTERFERENCE WITH TRAFFIC, LINES OF SIGHT, INFRASTRUCTURE, OR OTHER PLANTS; RESTORE PLANTS FOLLOWING DAMAGE; AND/OR REJUVENATE SHRUBS. PROVIDING CLEARANCE SHALL ENSURE SAFE AND RELIABLE UTILITY SERVICES; MINIMIZE CURRENT INTERFERENCE WITH TRAFFIC, LINES OF SITE, INFRASTRUCTURE, OR OTHER PLANTS; RAISE CROWN(S) FOR MOVEMENT OF TRAFFIC OR LIGHT PENETRATION; ENSURE LINES OF SIGHT OR DESIRED VIEWS; PROVIDE ACCESS TO SITES, BUILDINGS, OR OTHER STRUCTURES; AND/OR COMPLY WITH REGULATIONS.

   - TOPSOIL SHALL BE INSTALLED AT A MINIMUM DEPTH OF 4 INCHES. CONTRACTOR SHALL SUBMIT TOPSOIL TO A CERTIFIED TESTING LABORATORY TO DETERMINE PH, FERTILITY, ORGANIC CONTENT AND MECHANICAL COMPOSITION. THE CONTRACTOR SHALL SUBMIT THE TEST RESULTS FROM REGIONAL EXTENSION OFFICE OF USDA TO THE OWNER, CERTIFIED LANDSCAPE INSPECTOR, OR LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL. CONTRACTOR SHALL INCORPORATE AMENDMENTS FOR GOOD PLANT GROWTH AND PROPER SOIL ACIDITY RECOMMENDED FROM THE TOPSOIL TEST.

   - NO PHOSPHOROUS SHALL BE USED AT PLANTING TIME UNLESS SOIL TESTING HAS BEEN COMPLETED AND TESTED BY A HORTICULTURAL TESTING LAB AND SOIL TESTS SPECIFICALLY INDICATE A PHOSPHOROUS DEFICIENCY THAT IS HARMFUL, OR WILL PREVENT NEW LAWNS/GRASSES AND PLANTINGS FROM ESTABLISHING PROPERLY.

   - IF SOIL TESTS INDICATE A PHOSPHOROUS DEFICIENCY THAT WILL IMPACT PLANT AND LAWN ESTABLISHMENT, PHOSPHOROUS SHALL BE APPLIED AT THE MINIMUM RECOMMENDED LEVEL PRESCRIBED IN THE SOIL TEST FOLLOWING ALL APPLICABLE STANDARDS, REQUIREMENTS, AND/OR REGULATIONS.

9. NON-NATIVE PLANT SPECIES SHALL NOT TOTAL MORE THAN 50% OF ALL PLANTINGS. INVASIVE SPECIES SHALL NOT BE PERMITTED.

10. PLANT MATERIALS SHALL NOT INCLUDE MORE THAN 25% OF ANY SINGLE SPECIES. THE PLANTINGS SHALL INCLUDE A MIX OF EVERGREEN AND DECIDUOUS TREES, UNDERSTORY TREES, SHRUBS, AND FLOWERING HERBACEOUS LAYER.

11. ALL PLANT MATERIAL SHALL CONFORM TO THE PLAN SIZE SPECIFICATIONS AS ESTABLISHED BY THE AMERICAN STANDARD FOR NURSERY STOCK LATEST EDITION.

LEGEND

PLANTING TEMPLATE - NORTHERN PLANTING BOUNDARY

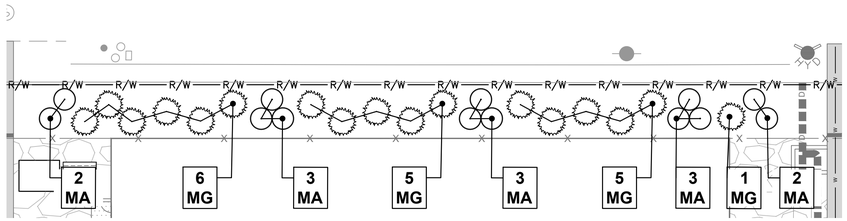
LANDSCAPE PLANTING SCHEDULE

EVERGREEN TREE

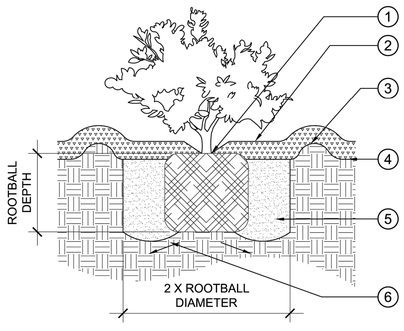
SYMBOL	BOTANICAL NAME/ COMMON PLANT NAME	QUANTITY	SIZE	ROOT	MATURE HEIGHT
MG	MAGNOLIA GRANDIFLORA 'LITTLE GEM' LITTLE GEM MAGNOLIA	17	5'-6' HT.	B&B	15'-20' HT.

SHRUBS

SYMBOL	BOTANICAL NAME/ COMMON PLANT NAME	QUANTITY	SIZE	ROOT	MATURE HEIGHT
MA	MAHONIA AQUIFOLIUM OREGON GRAPE HOLLY	13	30"-36" HT.	#3/5 CONT.	6'-7' HT.



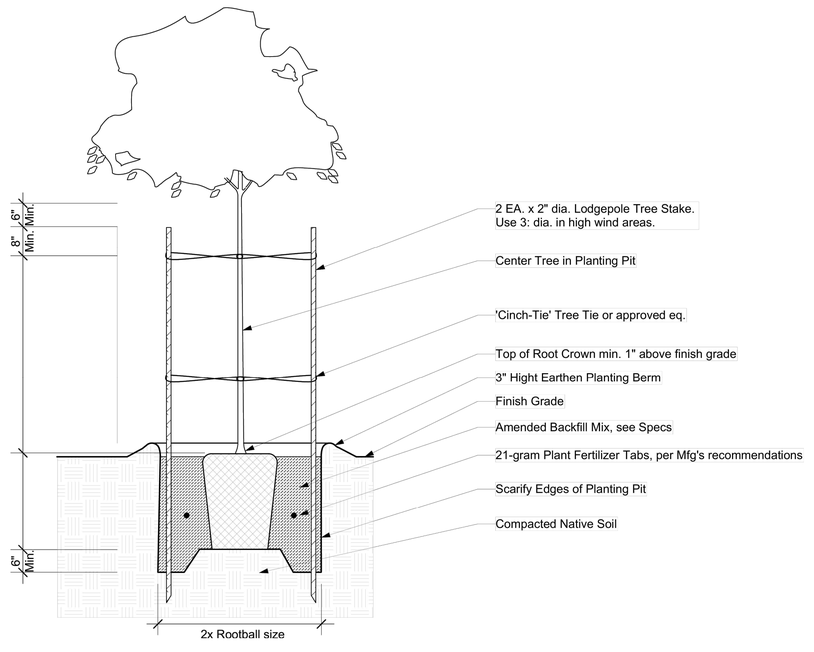
PLANTING - NORTHERN PLANTING BOUNDARY (SEE SHEET L-1.0)



1. SET TOP OF ROOTBALL 1" ABOVE FINISH GRADE
2. 3" LAYER MULCH MATERIAL (SEE SPECS)
3. 3" HIGH WATERING BERM
4. FINISH GRADE
5. PLANTING BACKFILL (SEE SPECS)
6. SLOPE PLANTING HOLE TO CORNERS

SHRUB PLANTING DETAIL

N.T.S.



TREE PLANTING DETAIL

N.T.S.

SEAL:

PERMIT PLAN SET NOT FOR CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.

PROJECT:
COMMERCE ENERGY STORAGE, LLC 2023
6920 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
LANDSCAPE DETAILS

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		
APPROVED BY:	SH		L-2.0
DATE:	12/7/2023		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

NORTH

GRAPHIC SCALE

40' 0' 40'

1" = 40'

SEAL:

DRAFT

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISIONS	APP'D.

PROJECT:

COMMERCE 2023 ENERGY STORAGE
6920 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:

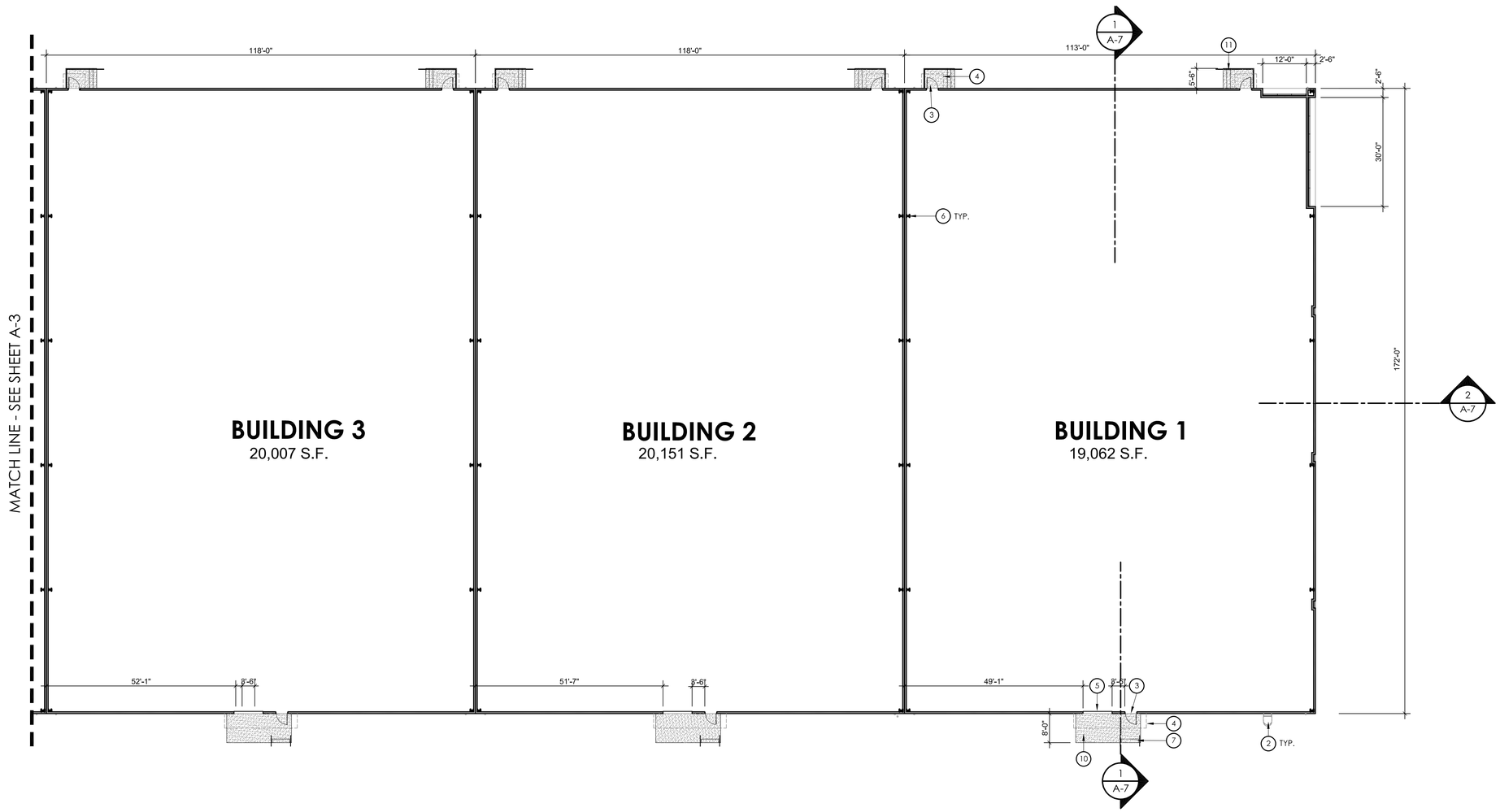
SITE PLAN

DRAWN BY: MS	PROJ. NO.: 511784
CHECKED BY: FW	
APPROVED BY:	
DATE: AUGUST- 01 - 2023	

TRC

A-1

FILE NO:



KEY NOTES

1. ROOF ACCESS LADDER
2. DOWNSPOUT LOCATION
3. METAL DOOR
4. DOOR AWNING PROJECTION
5. 8'W. x10'H. METAL ROLL-UP DOOR
6. STEEL COLUMN
7. CONCRETE STEPS
8. HANDRAIL
9. CONCRETE ACCESSIBLE RAMP W/ RAILING
10. CONCRETE RAMP
11. CONCRETE STAIR W/ RAILING

NORTH

GRAPHIC SCALE

8' 0' 16'

1/16" = 1'

SEAL:

DRAFT

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISIONS	APP'D.

PROJECT:
COMMERCE 2023 ENERGY STORAGE
6920 E. SLAUSON AVENUE
COMMERCE, CA 90040

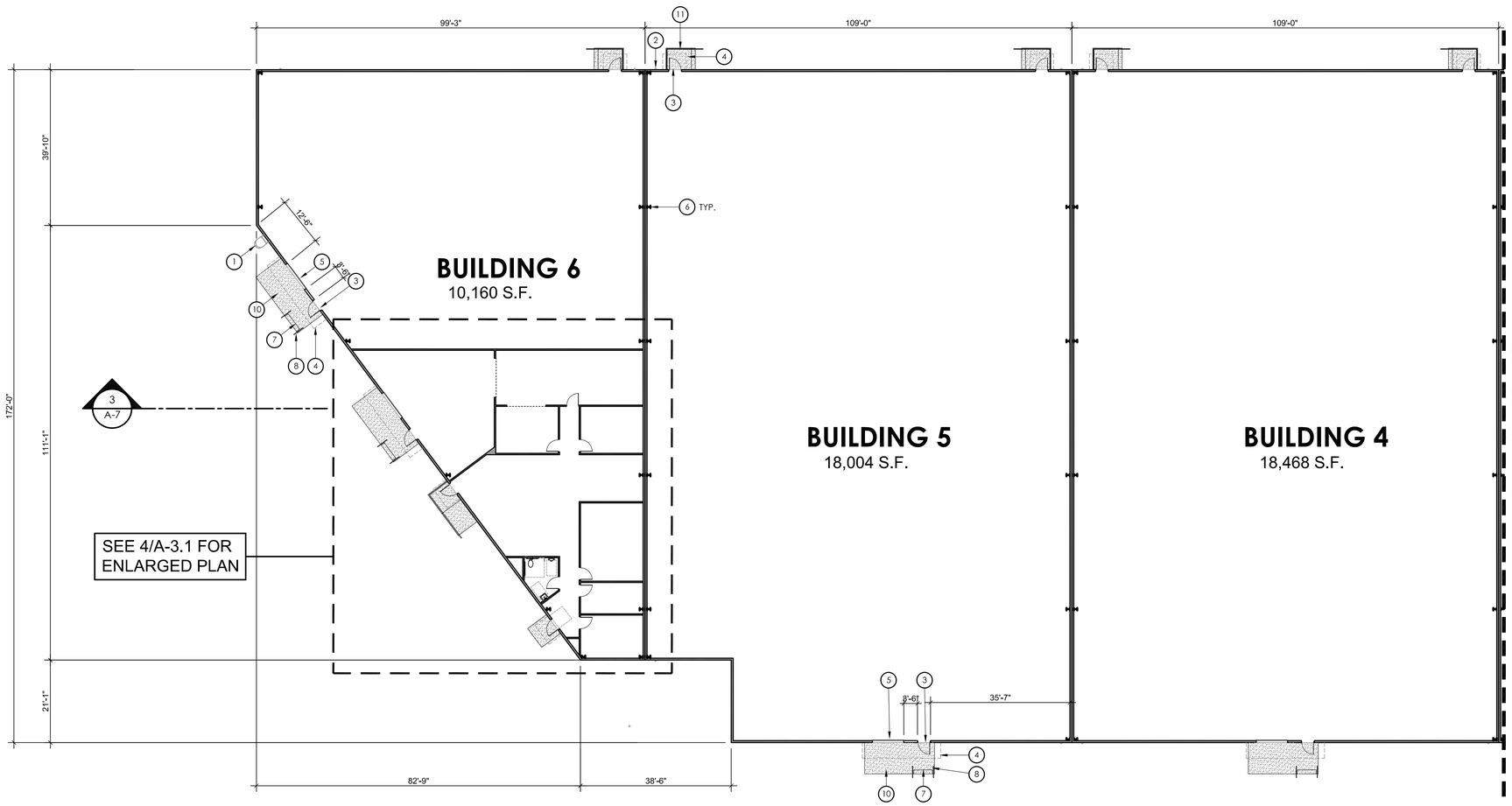
TITLE:
PARTIAL FLOOR PLAN - BLDG 1,2,3

DRAWN BY: MS	PROJ. NO.: 511784
CHECKED BY: FW	
APPROVED BY:	
DATE: AUGUST- 01 - 2023	

TRC

A-2

FILE NO:



KEY NOTES

1. ROOF ACCESS LADDER
2. DOWNSPOUT LOCATION
3. METAL DOOR
4. DOOR AWNING PROJECTION
5. 8'W. x10'H. METAL ROLL-UP DOOR
6. STEEL COLUMN
7. CONCRETE STEPS
8. HANDRAIL
9. CONCRETE ACCESSIBLE RAMP W/ RAILING
10. CONCRETE RAMP
11. CONCRETE STAIR W/ RAILING

NORTH

GRAPHIC SCALE

8' 0' 16'

1/16" = 1'

SEAL:

DRAFT

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISIONS	APP'D.

PROJECT:
COMMERCE 2023 ENERGY STORAGE
6920 E. SLAUSON AVENUE
COMMERCE, CA 90040

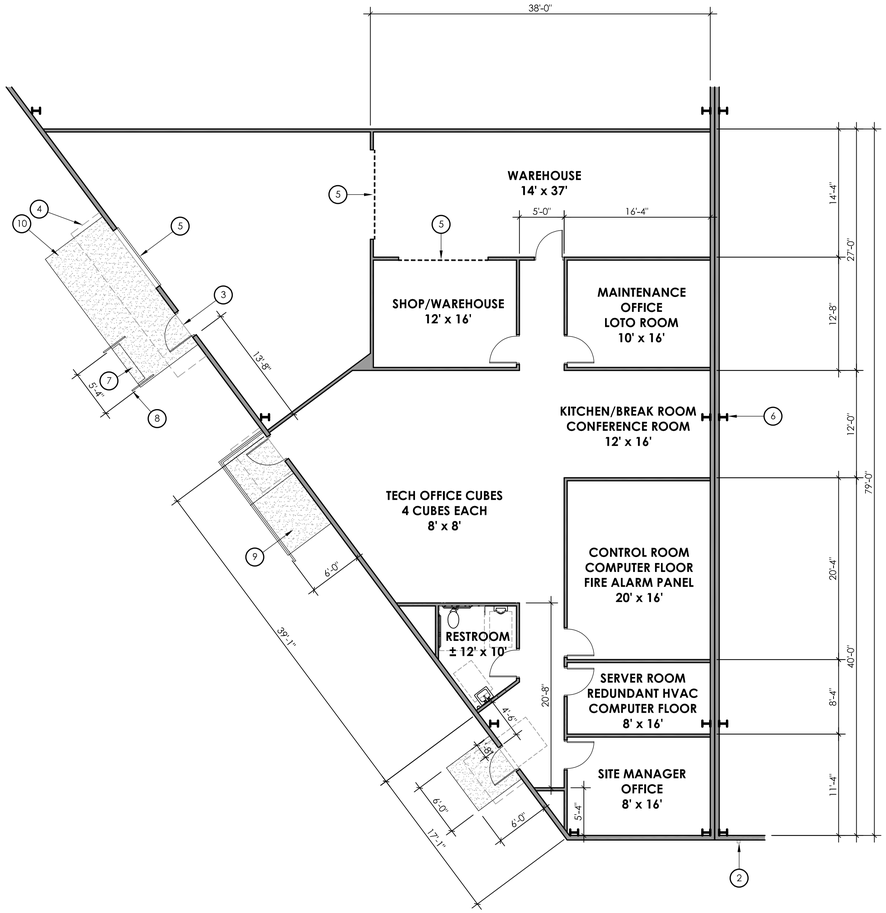
TITLE:
PARTIAL FLOOR PLAN - BLDG 4,5,6

DRAWN BY: MS	PROJ. NO.: 511784
CHECKED BY: FW	
APPROVED BY:	
DATE: AUGUST- 01 - 2023	

TRC

A-3

FILE NO:



KEY NOTES

1. NOT USED
2. DOWNSPOUT LOCATION
3. METAL DOOR
4. DOOR AWNING PROJECTION
5. 8'W, x10'H, METAL ROLL-UP DOOR
6. STEEL COLUMN
7. CONCRETE STEPS
8. HANDRAIL
9. CONCRETE ACCESSIBLE RAMP W/ RAILING
10. CONCRETE RAMP
11. NOT USED

NORTH

GRAPHIC SCALE

4' 0' 8'

1/8" = 1'

SEAL:

DRAFT

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISIONS	APP'D.

PROJECT:

COMMERCE 2023 ENERGY STORAGE
6920 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:

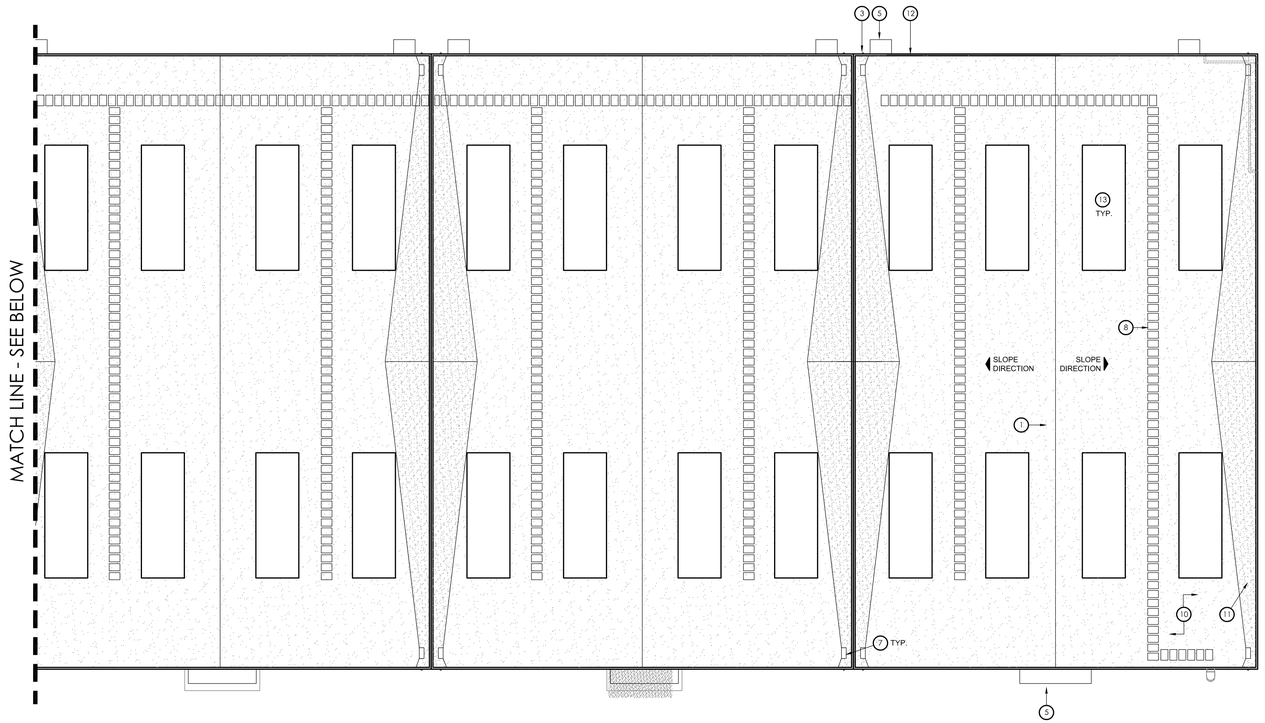
OFFICE ENLARGED PLAN

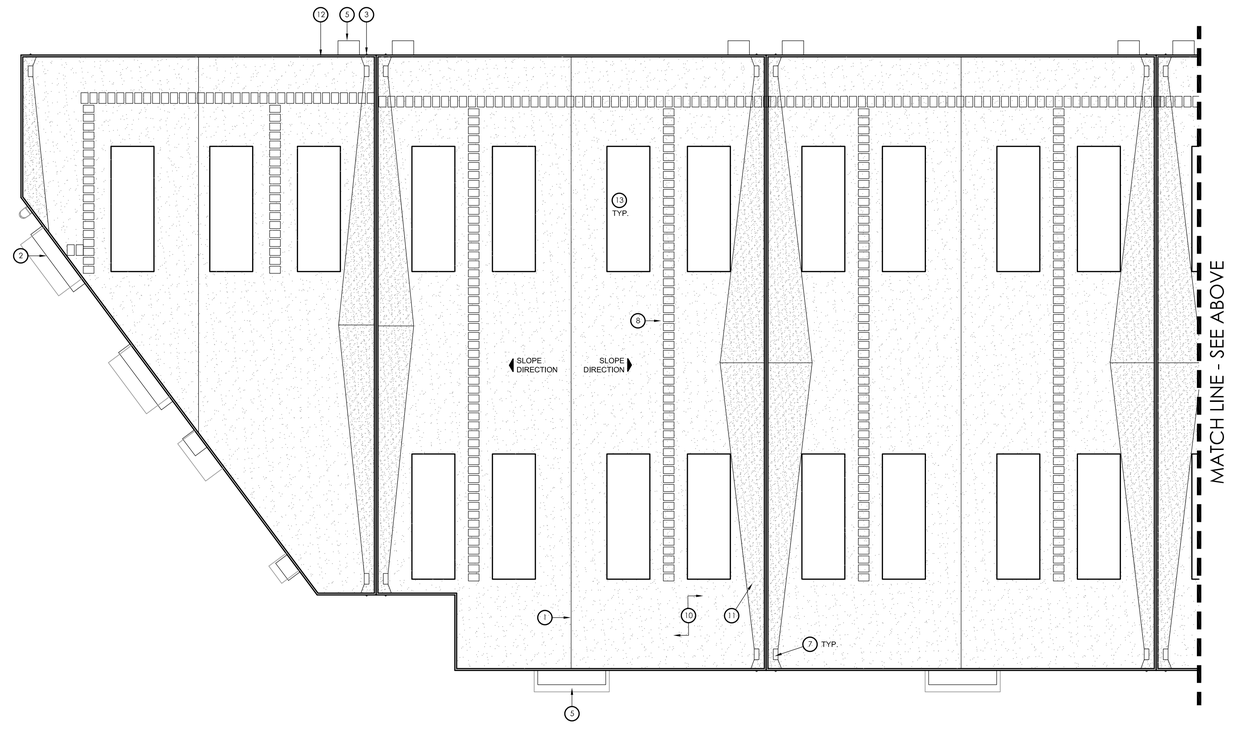
DRAWN BY: MS	PROJ. NO.: 511784
CHECKED BY: FW	
APPROVED BY:	
DATE: AUGUST- 01 - 2023	

TRC

A-3.1

FILE NO:





KEY NOTES

1. LINE INDICATE TOP OF ROOF SLOPE
2. ROOF ACCESS LADDER
3. DOWNSPOUT LOCATION
5. DOOR AWNING PROTECTION
7. ROOF DRAIN AND OVERFLOW
8. ROOF TRAFFIC PADS
10. BITUMINOUS ROOFING SYSTEM
11. ROOF CRICKET
12. PARAPET WALL
13. MECHANICAL UNITS

NORTH

GRAPHIC SCALE

10' 0' 20'

1" = 20'

SEAL:

DRAFT

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISIONS	APP'D.

PROJECT:

COMMERCE 2023 ENERGY STORAGE
6920 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:

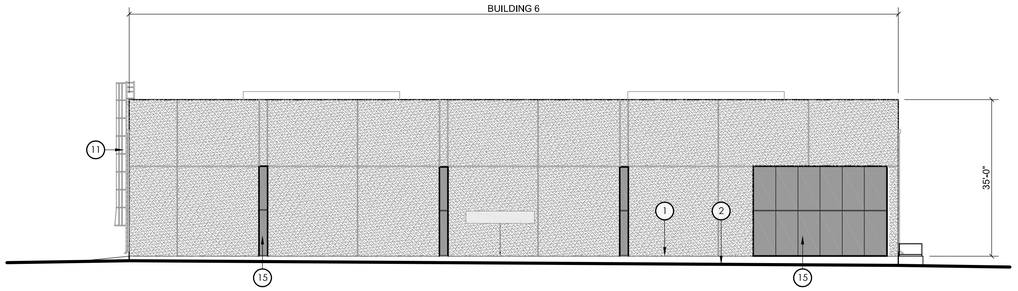
ROOF PLAN

DRAWN BY: MS	PROJ. NO.: 511784
CHECKED BY: FW	
APPROVED BY:	
DATE: AUGUST- 01 - 2023	

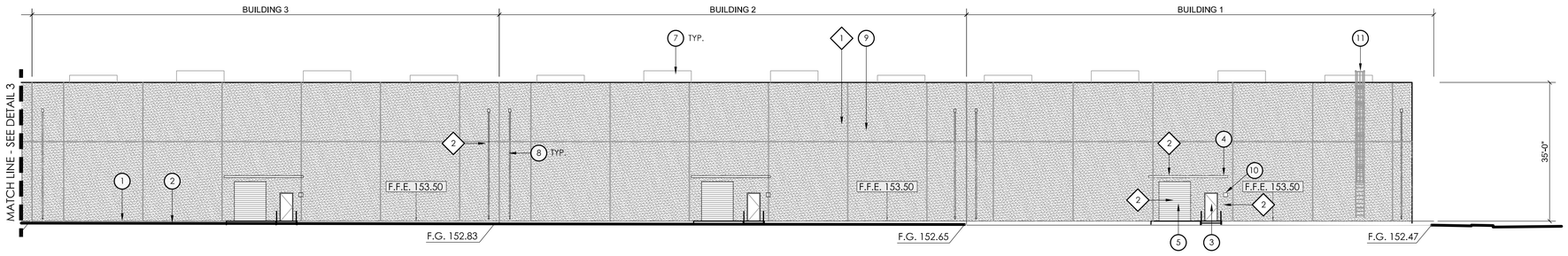
TRC

A-4

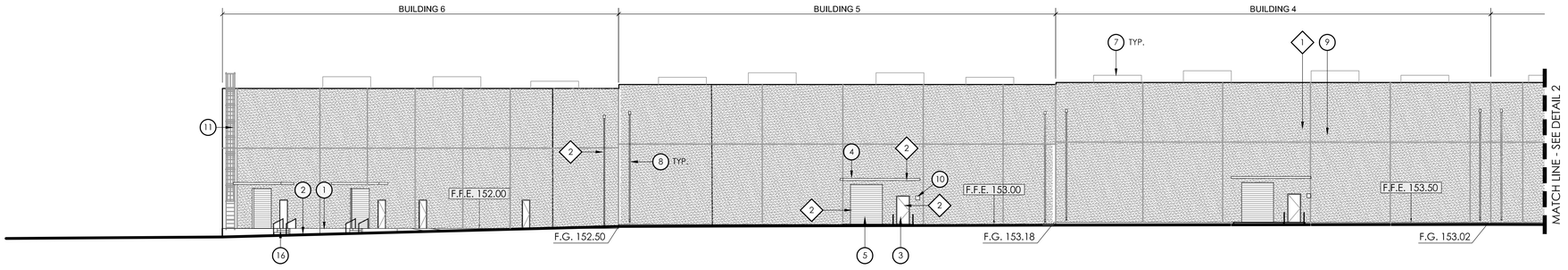
FILE NO:



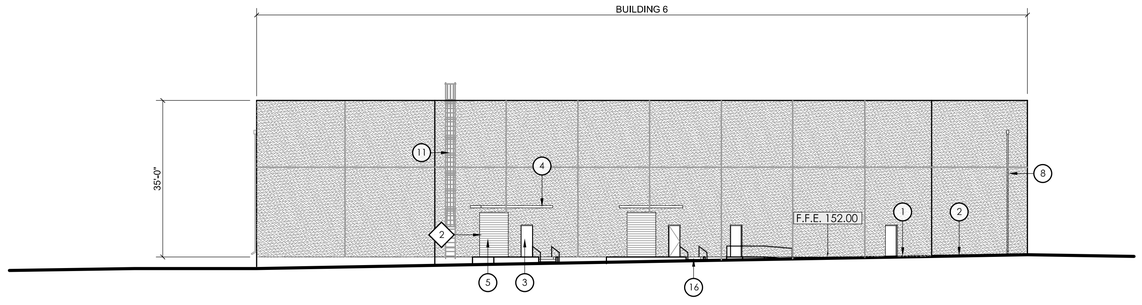
NORTH EAST ELEVATION - BUILDING 1 | 1



SOUTH EAST ELEVATION - BUILDING 1,2,3 | 2



PARTIAL - SOUTH EAST ELEVATION - BUILDING 4,5,6 | 3



SOUTH WEST ELEVATION - BUILDING 6 | 4

KEY NOTES

1. LINE OF CONCRETE FLOOR
2. GRADE
3. METAL DOOR
4. DOOR AWNING PROJECTION
5. 8'W. x10'H. METAL ROLL-UP DOOR
6. ROOF LINE PROJECTION
7. MECHANICAL UNIT
8. DOWN SPOUT
9. TILT-UP CONCRETE WALLS
10. LIGHT FIXTURE
11. ROOF ACCESS LADDER
12. CONCRETE STEPS
13. HANDRAIL
14. CONCRETE BASE
15. SPANDREL GLASS PANELS
16. CONCRETE STAIR W/ RAILING

COLOR LEGEND

1	FIELD COLOR	- NAT. CONC.
2	TRIMS COLORS	- COLOR TO BE SELECTED

FOR MORE INFORMATION SEE A5.1

NORTH

GRAPHIC SCALE

8' 0' 16'

1/16" = 1'

SEAL:

DRAFT

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISIONS	APP'D.

PROJECT:

COMMERCE 2023 ENERGY STORAGE
6920 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:

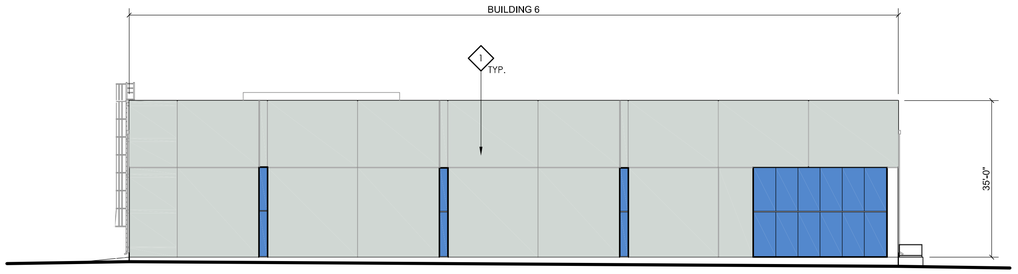
EXTERIOR ELEVATIONS

DRAWN BY: MS	PROJ. NO.: 511784
CHECKED BY: FW	
APPROVED BY:	
DATE: AUGUST- 01 - 2023	

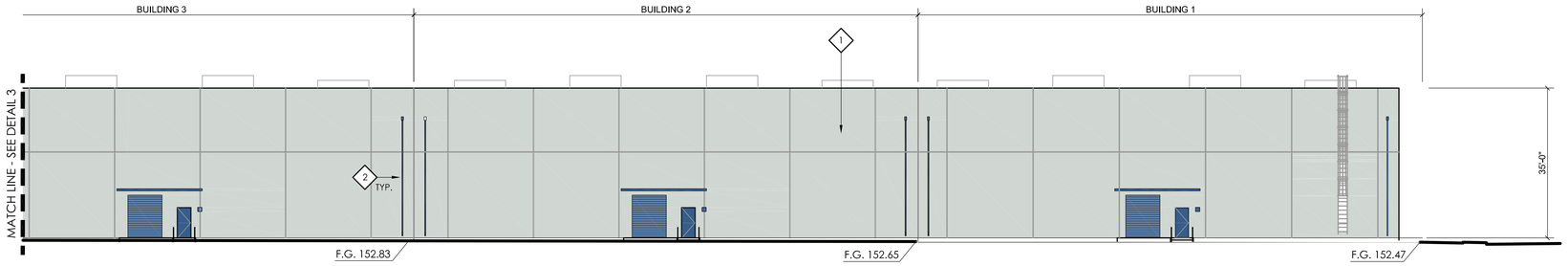
TRC

A-5

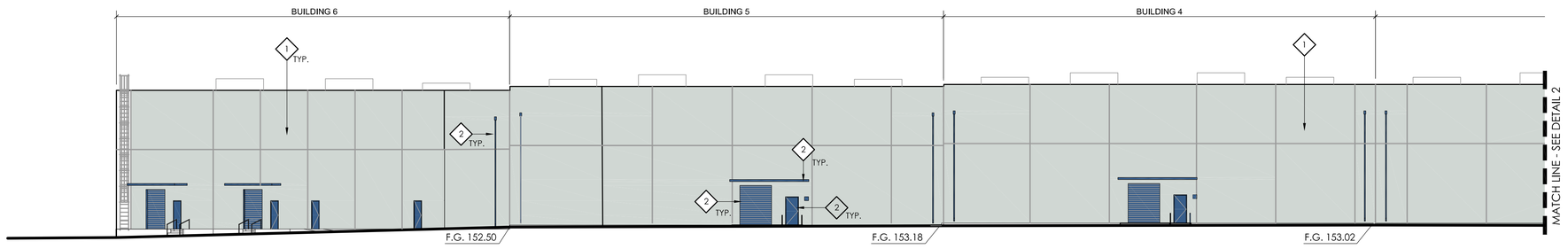
FILE NO:



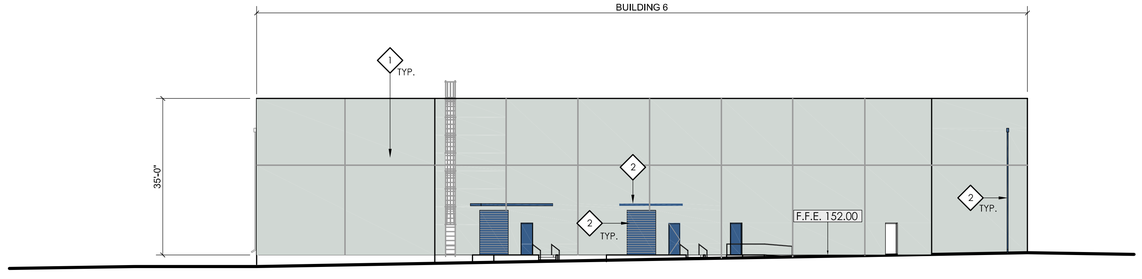
NORTH EAST ELEVATION - BUILDING 1 | 1



SOUTH EAST ELEVATION - BUILDING 1,2,3 | 2



PARTIAL - SOUTH EAST ELEVATION - BUILDING 4,5,6 | 3



SOUTH WEST ELEVATION - BUILDING 6 | 4

COLOR LEGEND

1	FIELD COLOR	CONCRETE	
2	TRIMS COLORS	- BLUE	

NORTH

GRAPHIC SCALE

8' 0' 16'

1/16" = 1'

SEAL:

DRAFT

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISIONS	APP'D.

PROJECT:
COMMERCE 2023 ENERGY STORAGE
6920 E. SLAUSON AVENUE
COMMERCE, CA 90040

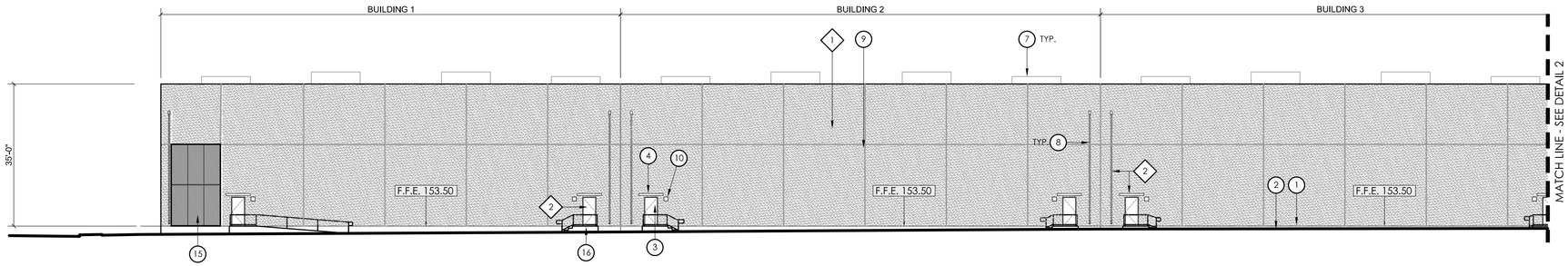
TITLE:
COLOR EXTERIOR ELEVATIONS

DRAWN BY: MS	PROJ. NO.: 511784
CHECKED BY: FW	
APPROVED BY:	
DATE: AUGUST- 01 - 2023	

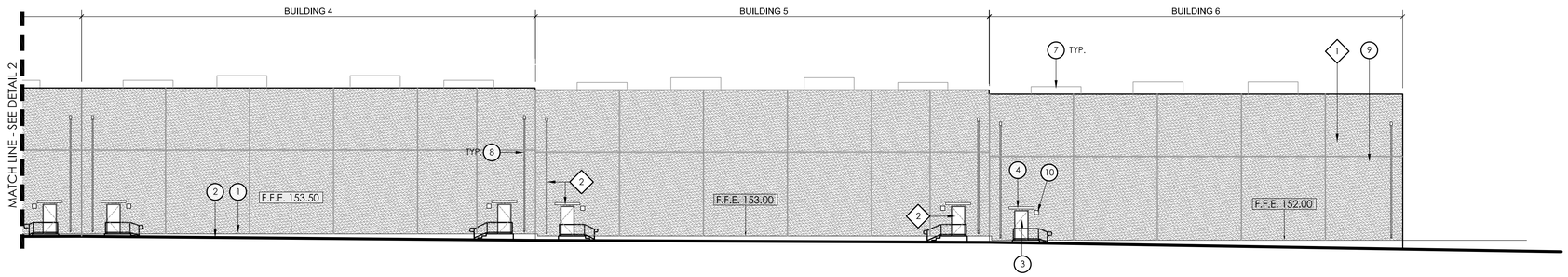
TRC

A-5.1

FILE NO:



PARTIAL - SOUTH EAST ELEVATION **1**



PARTIAL - SOUTH EAST ELEVATION **2**

KEY NOTES

1. LINE OF CONCRETE FLOOR
2. GRADE
3. METAL DOOR
4. DOOR AWNING PROJECTION
5. 8'W. x10'H. METAL ROLL-UP DOOR
6. ROOF LINE PROJECTION
7. MECHANICAL UNIT
8. DOWN SPOUT
9. ARCHITECTURAL STANDING SEAM WALL PANEL SYSTEM
10. LIGHT FIXTURE
11. ROOF ACCESS LADDER
12. CONCRETE STEPS
13. HANDRAIL
14. CONCRETE BASE
15. CONCRETE ACCESSIBLE RAMP W/ RAILING
16. CONCRETE STAIR W/ RAILING

COLOR LEGEND

1. FIELD COLOR - NAT. CONC.
2. TRIMS COLORS - COLOR TO BE SELECTED

FOR MORE INFORMATION SEE A6.1

NORTH

GRAPHIC SCALE

8' 0' 16'

1/16" = 1'

SEAL:

DRAFT

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISIONS	APP'D.

PROJECT:

COMMERCE 2023 ENERGY STORAGE
6920 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:

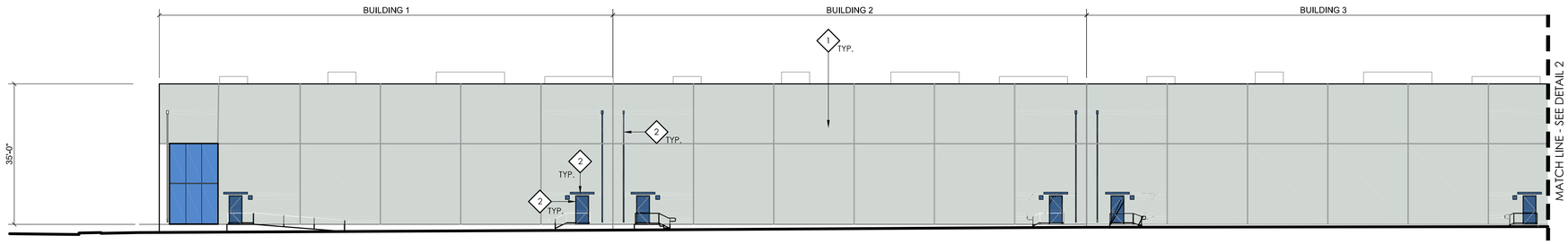
EXTERIOR ELEVATIONS

DRAWN BY: MS	PROJ. NO.: 511784
CHECKED BY: FW	
APPROVED BY:	
DATE: AUGUST- 01 - 2023	

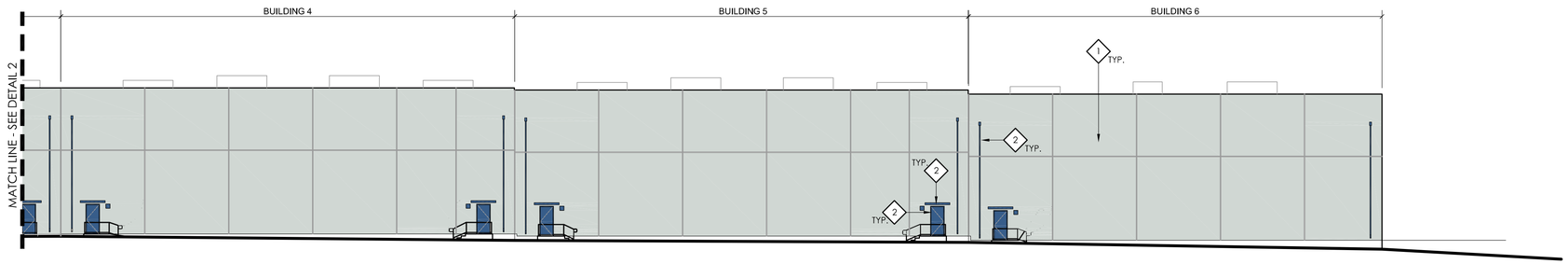
TRC

A-6

FILE NO:



PARTIAL - SOUTH EAST ELEVATION | 1



PARTIAL - SOUTH EAST ELEVATION | 2

COLOR LEGEND

1	FIELD COLOR	- CONCRETE
2	TRIMS COLORS	- BLUE

NORTH

GRAPHIC SCALE

8' 0' 16'

1/16" = 1'

SEAL:

DRAFT

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISIONS	APP'D.

PROJECT:

COMMERCE 2023 ENERGY STORAGE
6920 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:

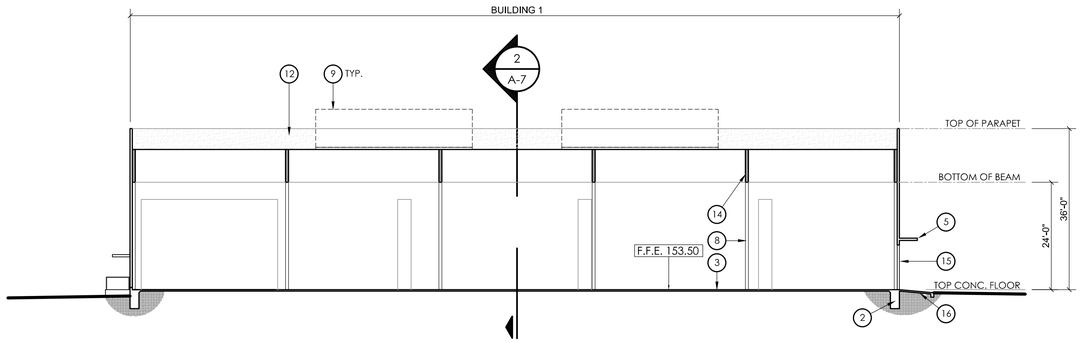
COLOR EXTERIOR ELEVATIONS

DRAWN BY: MS	PROJ. NO.: 511784
CHECKED BY: FW	
APPROVED BY:	
DATE: AUGUST- 01 - 2023	

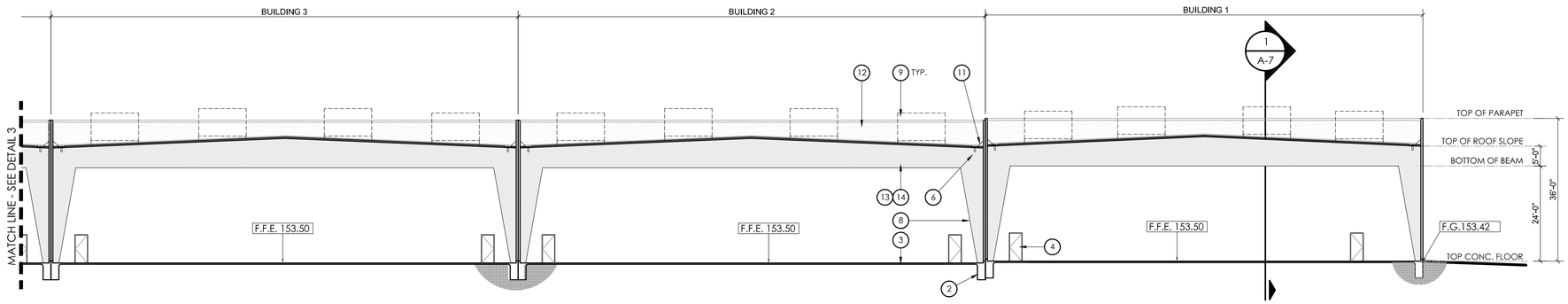
TRC

A-6.1

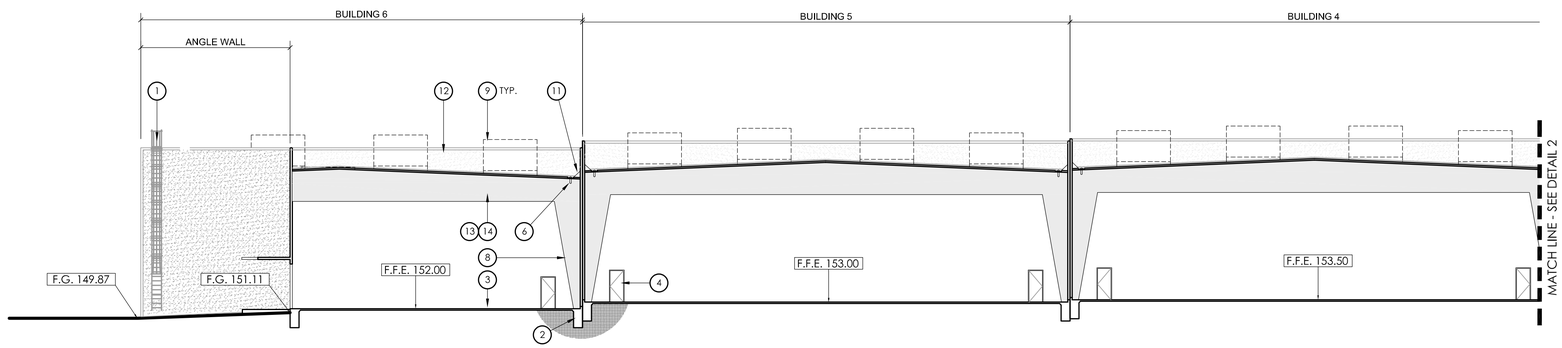
FILE NO:



BUILDING SECTION - BUILDING 1 (2,3,4,5,6 SIM.) **1**



PARTIAL BUILDING SECTION - BUILDING 1,2,3 **2**



PARTIAL BUILDING SECTION - BUILDING 4,5,6 **3**

KEY NOTES

1. ROOF ACCESS LADDER
2. CONCRETE FOOTING
3. CONCRETE SLAB
4. METAL DOOR
5. DOOR AWNING PROJECTION
6. DRAIN PIPE
7. RATED WALL
8. STEEL COLUMN
9. MECHANICAL UNITS
10. BUILT-UP ROOF - SLOPE PER ROOF PLAN
11. ROOF CRICKET
12. PARAPET WALL
13. HATCHED AREA INDICATES ROOF FRAMING STRUCTURE
14. STEEL BEAM
15. 8' W. x 10' H. METAL ROLL-UP DOOR
16. CONCRETE RAMP

NORTH

GRAPHIC SCALE

8' 0' 16'

1/16" = 1'

SEAL:

DRAFT

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISIONS	APP'D.

PROJECT:

COMMERCE 2023 ENERGY STORAGE
6920 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:

TYPICAL BUILDING SECTIONS

DRAWN BY: MS	PROJ. NO.: 511784
CHECKED BY: FW	
APPROVED BY:	
DATE: AUGUST- 01 - 2023	

TRC

A-7

FILE NO:

PRELIMINARY SITE PLANS
COMMERCE ENERGY STORAGE, LLC

6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

PROPERTY OWNER
COMMERCE ENERGY STORAGE, LLC
2121 CALIFORNIA BOULEVARD, SUITE 1000
WALNUT CREEK, CA 94596

DESCRIPTION

THE PROJECT DEPICTED IN THIS DRAWING SET REPRESENTS A PROPOSED OPTIONAL DESIGN OF THE PRELIMINARY SITE PLAN APPROVED BY THE CITY IN CONJUNCTION WITH ISSUANCE OF CUP 548 APPROVED BY RESOLUTION NO. 22-05 ON MAY 18, 2022. THERE WOULD BE NO CHANGES TO THE TYPES OF EQUIPMENT OR FACILITIES ALREADY APPROVED. THE OPTIONAL DESIGN HEREIN WOULD MODIFY THE LAYOUT OF THE PROJECT'S ONSITE SUBSTATION, BUILDING, AND ANCILLARY FACILITIES TO PROVIDE MORE FLEXIBILITY FOR UNDERGROUND UTILITY CONNECTION ROUTES TO GARFIELD AVENUE AND TO ACCOMMODATE INTEGRATION OF A PLANNED BATTERY ENERGY STORAGE FACILITY UNDERGOING PERMITTING SEPARATELY BY THE SAME OWNER ON ADJACENT PARCELS. IDENTICAL TO THE PRELIMINARY SITE PLANS ALREADY APPROVED UNDER CUP 548, UNDER THE OPTIONAL DESIGN HEREIN, BATTERIES AND CONTROL EQUIPMENT WILL BE CONTAINED IN A SINGLE-STORY BUILDING AND ANCILLARY EQUIPMENT WILL INCLUDE AN ACCESS ROAD DESIGNED TO FIRE DEPARTMENT STANDARDS, INVERTERS, TRANSFORMERS, STORMWATER CONVEYANCE SYSTEMS, AND UNDERGROUND STORMWATER STORAGE. IDENTICAL TO THE PROJECT APPROVED UNDER CUP 548, THE FACILITY WILL NOT BE OCCUPIED AND IS DESIGNED FOR FULL REMOTE OPERATION. THE APPLICANT IS REQUESTING THAT THE CITY APPROVE THIS OPTIONAL DESIGN FOR USE AS AN ALTERNATIVE TO THE PREVIOUSLY APPROVED SITE PLAN SO THAT EITHER OF THE TWO LAYOUTS CAN BE DEVELOPED. THE OPTIONAL DESIGN HEREIN WOULD ONLY BE IMPLEMENTED IF THE CITY APPROVES THE FACILITY CURRENTLY BEING PERMITTED ON THE ADJACENT PARCELS.

SITE INFORMATION

ASSESSOR'S PARCEL NUMBERS:	6356-017-028, 6356-017-900
CURRENT USE:	VACANT, NO STRUCTURES
CURRENT/PROPOSED ZONING:	INDUSTRIAL (M-2)
BLDG SQ FOOTAGE:	BLDGS 1-6 (107,854 SF) + BLDGS 7-8 (23,004 SF) = 130,858 SF
BLDG CONSTRUCTION TYPE:	II-A
BLDG CONSTRUCTION MATERIAL:	TILT-UP CONCRETE
BLDG FIRE SUPPRESSION TYPE:	DOUBLE-INTERLOCK PRE-ACTION SPRINKLER SYSTEM WITH GAS DETECTION, SMOKE DETECTION AND MECHANICAL VENTILATION PER LA COUNTY FIRE CODES AND NFPA
SITE AREA:	2.62 AC (114,163 SF)
LOT COVERAGE RATIO:	23,003 SF / 114,163 SF = 0.20 x 100 = 20%
DISTURBED AREA:	2.22 AC (96,675 SF)
EXISTING IMPERVIOUS AREA:	0.00 AC
PROPOSED IMPERVIOUS AREA:	2.06 AC (89,561 SF)
REMAINING PERVIOUS AREA:	0.56 AC (24,602 SF)

EARTHWORK QUANTITIES

LIMITS OF GRADING:	2.22 AC
CUT:	4,341 CY
FILL:	3,833 CY
NET (CUT):	508 CY (TO BE BALANCED IN FINAL DESIGN)

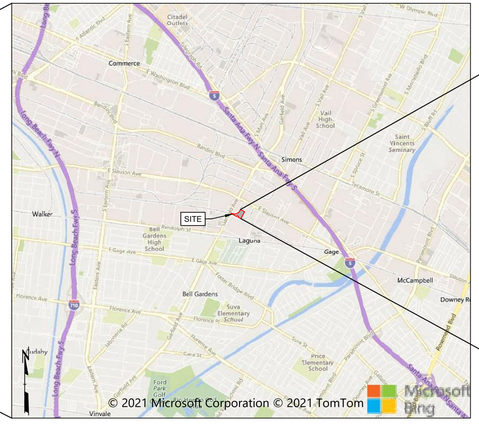
PREPARED FOR: COMMERCE ENERGY STORAGE, LLC
2121 CALIFORNIA BOULEVARD, SUITE 1000
WALNUT CREEK, CA 94596

PREPARED BY: TRC COMPANIES, INC.
6 EXECUTIVE CIRCLE, SUITE 200
IRVINE, CA 92614

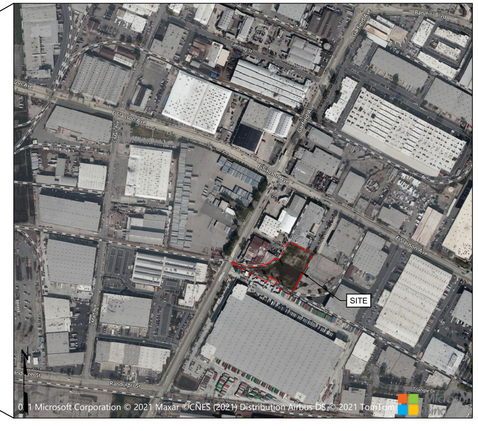
DATE: DECEMBER 2023

SHEET INDEX

LOS ANGELES COUNTY, CALIFORNIA
NTS



VICINITY MAP
NTS



SITE LOCATOR
NTS

SEAL:

PERMIT PLAN SET
NOT FOR
CONSTRUCTION

NO.	BY	DATE	REVISION	APP'D.

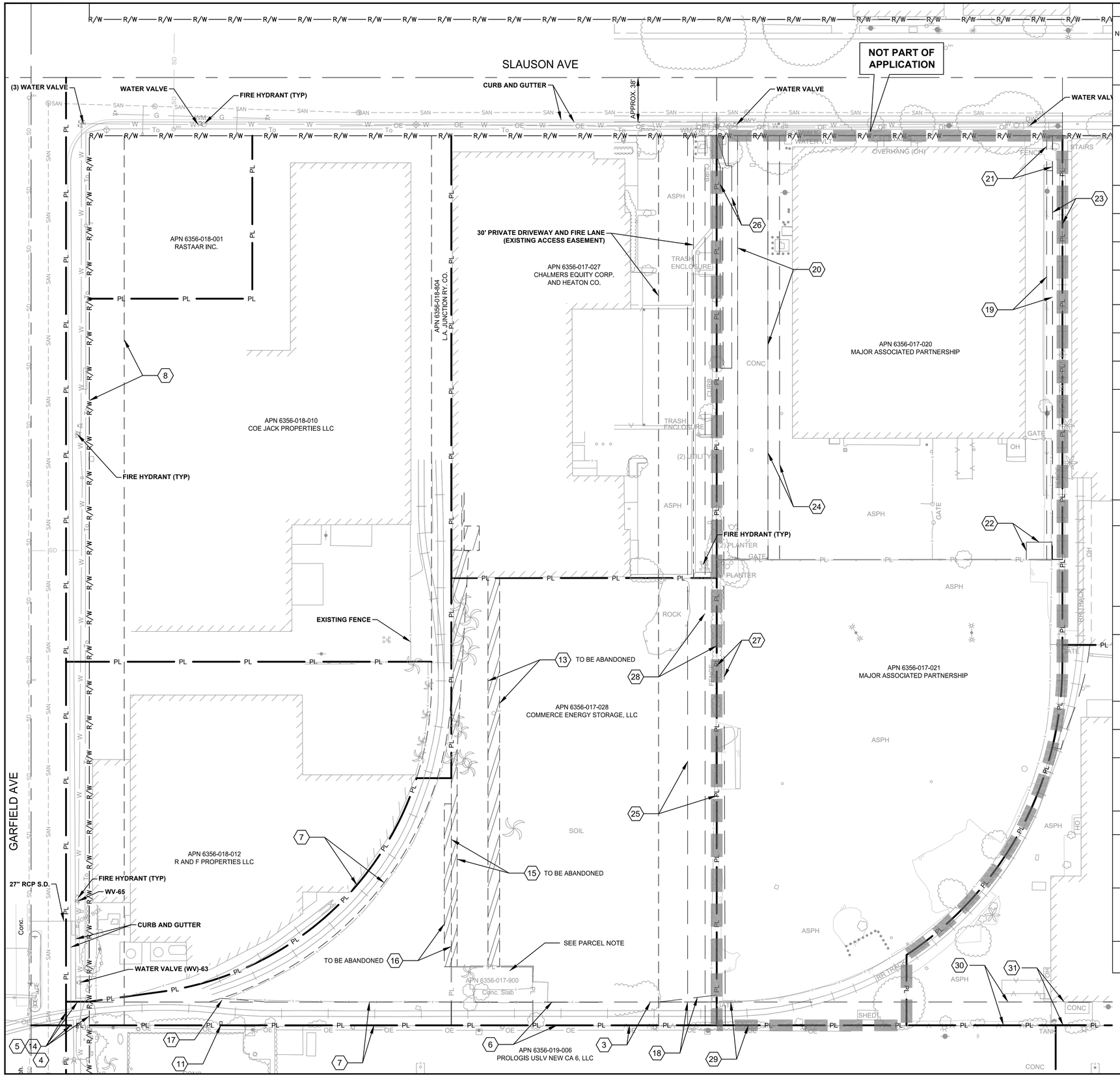
PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
COVER SHEET

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		
APPROVED BY:	SH		C-1.0
DATE:	1/4/2024		

6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

H:\WORK IN PROGRESS\SOLAR SITES\LS POWER DEVELOPMENT\COMMERCE, CA\CAD\SITE PLANS\SITE PLAN MODIFICATION\393191_COV AND DET.DWG



EXISTING EASEMENT INFORMATION

NUMBER	PARCEL/ PART NUMBER	IN FAVOR OF/ GRANTED TO	PURPOSE	RECORDING DATE	RECORDED/ RECORDING NUMBER
3	** EXCEPTION PARCEL 1		ROAD PURPOSES, RAILROAD TRACKS, CONDUITS AND POLE		IN BOOK 20716 PAGE 250, OF OFFICIAL RECORDS
4	** EXCEPTION PARCEL 2		ROAD, RAILROAD TRACKS, GAS, OIL, WATER AND SEWER PIPELINES AND PUBLIC UTILITIES		IN BOOK 20750 PAGE 18, OF OFFICIAL RECORDS
5	** EXCEPTION PARCEL 2		ROAD PURPOSES, RAILROAD TRACKS, GAS AND OIL PIPE LINES, ELECTRICITY, TELEPHONE AND TELEGRAPH WIRES, WATER AND SEWER		IN BOOK 20906 PAGE 185, OF OFFICIAL RECORDS
6	** EXCEPTION PARCEL 2		RAILROAD TRACKS AND NECESSARY FACILITIES		IN BOOK 21716 PAGE 395, OF OFFICIAL RECORDS
7	** EXCEPTION PARCEL 2		RAILROAD TRACKS AND NECESSARY FACILITIES		IN BOOK 21759 PAGE 307, OF OFFICIAL RECORDS
8	** EXCEPTION PARCEL 2	PARK WATER COMPANY, A CORPORATION	PIPE LINES	March 20, 1945	IN BOOK 22437 PAGE 414, OF OFFICIAL RECORDS
11	** EXCEPTION PARCEL 2	SOUTHERN CALIFORNIA EDISON COMPANY, A CORPORATION	PUBLIC UTILITIES	May 10, 1946	3094, IN BOOK 23405 PAGE 211, OF OFFICIAL RECORDS
14	** EXCEPTION PARCEL 2		PUBLIC ROAD AND HIGHWAY		3173, IN BOOK 36865 PAGE 342, OF OFFICIAL RECORDS
17	** EXCEPTION PARCEL 2		RAILWAY TRACK AND NECESSARY FACILITIES		4249, IN BOOK 49019 PAGE 94, OF OFFICIAL RECORDS
18	PARCEL 3 PTR 01	GILBERT FINANCIAL CO., A LIMITED PARTNERSHIP	RAILROAD	May 26, 1970	2652, IN BOOK 122 PAGE 162 OF OFFICIAL RECORDS
19	PARCEL 2 PTR 02	THIS IS PART OF THE FLAG LOT (UNIT 22). IT SHOULD NOT BE AN ISSUE AS IT IS CONTROLLED BY THE LANDOWNER.	PUBLIC UTILITY AND DRAINAGE PURPOSES		BOOK 122 PAGE 162 OF OFFICIAL RECORDS
20	PARCEL 3 PTR 02	THIS IS FOR INGRESS AND EGRESS TO THE FLAG LOT. AFTER MERGING THE PARCELS, THIS EASEMENT WILL NOT BE RELEVANT.	INGRESS AND EGRESS, DRIVEWAY AND SEWER		BOOK 122 PAGE 162 OF OFFICIAL RECORDS
21	PARCEL 4 PTR 02	OUTSIDE OF OUR BUILD AREA AND SHOULD NOT INTERFERE.	PLACEMENT AND MAINTENANCE OF SIGN		
22	PARCEL 5 PTR 02	EASEMENT WAS QUITCLAIMED TO THE PROPERTY OWNER. THE EASEMENT WILL BE TERMINATED BY MERGER SINCE BOTH THE FEE ESTATE AND EASEMENT INTEREST ARE NOW OWNED BY THE PROPERTY OWNER.	RAILROAD		BOOK 122 PAGE 162 OF OFFICIAL RECORDS
23	PARCEL 6 PTR 02		RAILROAD		BOOK 122 PAGE 162, OF OFFICIAL RECORDS
24	PARCEL 7 PTR 02	THIS IS TO ROUTE UTILITIES TO THE FLAG LOT. AFTER MERGING THE PARCELS, THIS EASEMENT WILL NOT BE RELEVANT.	UTILITY PURPOSES		IN BOOK 122 PAGE 162, OFFICIAL RECORDS
25	PARCEL 2 PTR 01		INGRESS, EGRESS AND DRIVEWAY PURPOSES		IN BOOK 122 PAGE 162, OFFICIAL RECORDS
26	EXCEPTION PTR 01 AND PTR 02	THIS SCE EASEMENT WILL BE QUITCLAIMED	ELECTRICAL POLES AND POLE LINES	June 22, 1964	5227, IN BOOK D2519 PAGE 221, OFFICIAL RECORDS
27	EXCEPTION PTR 01 AND PTR 02	THE EASEMENT IN FAVOR OF AT&T WILL BE AMENDED OR A CROSSING AGREEMENT WILL BE SECURED.	UNDERGROUND TELEPHONE, TELEGRAPH, AND COMMUNICATION STRUCTURES	November 8, 1945	4049, IN BOOK D3109 PAGE 74, OFFICIAL RECORDS
28	EXCEPTION PTR 01		SEWER AND PUBLIC UTILITY PURPOSES	May 14, 1970	2282, OFFICIAL RECORDS
29	EXCEPTION PTR 03		ROAD, RAILROAD, CONDUIT, POLE LINES, SEWER PIPE LINES, TRACK MAINTENANCE	MARCH 8, 1944 MAY 9, 1944 MARCH 13, 1945	IN BOOK 20716 PAGE 250, BOOK 20906 PAGE 185, BOOK 21716 PAGE 395, OFFICIAL RECORDS
30	EXCEPTION PTR 03		ROAD, RAILROAD, CONDUIT, POLE LINES, SEWER PIPE LINES, TRACK MAINTENANCE	MARCH 8, 1944 MAY 9, 1944 MARCH 13, 1945	IN BOOK 20716 PAGE 250, BOOK 20906 PAGE 185, BOOK 21716 PAGE 395, OFFICIAL RECORDS
31	EXCEPTION PTR 03		RAILROAD		IN BOOK 21522 PAGE 356, OFFICIAL RECORDS

GENERAL NOTES

1. THIS PRELIMINARY PLAN SET IS SUBMITTED FOR APPROVAL OF AN OPTIONAL SITE PLAN FOR THE PROJECT APPROVED IN CONJUNCTION WITH CUP NO. 548.
2. THIS PLAN WAS PRODUCED UTILIZING GIS RESOURCES, SURVEY, AND INFORMATION FROM MULTIPLE SOURCES, INCLUDING THE CITY OF COMMERCE AND GOOGLE EARTH PRO.
3. ALTA SURVEY INFORMATION IN THIS PLAN SET PROVIDED BY ** TSAC ENGINEERING, DATED 06/21/2021 AND BY PBLA ENGINEERING INC, FIELD WORK COMPLETED ON 09/16/2014 .

FLOOD ZONING

1. **THE SUBJECT PROPERTY DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD AS SHOWN ON THE FLOOD INSURANCE RATE MAP (COMMUNITY PANEL 06037C1810F, DATED 09/26/2008) PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA).**

PARCEL NOTE

1. **MERGER OF APN 6356-017-900 INTO APN 6356-017-028 IS PENDING.**

LEGEND

CENTERLINE
PARCEL BOUNDARY — PL
ROAD ROW — R/W — R/W
EASEMENT LINE
EX. CONTOUR — 800
MONITORING WELL — MW
SIGN
STORM DRAIN MANHOLE
STORM DRAIN GRATE
SEWER MANHOLE
MANHOLE — MH
FIRE HYDRANT
POWER POLE
GAS VALVE
WATER VALVE
ELECTRIC PULL BOX
WATER METER
SEWER CLEANOUT
AREA LIGHT/ LIGHT POLE — OE
BOLLARD
STORM DRAIN — SD — SD
SEWER — SAN — SAN
WATER LINE — W — W
TELCO LINE — To
OVERHEAD LINE — OE
PROPOSED UNDERGROUND ELEC — UE — UE
2022 APPROVED UNDERGROUND ELECTRIC — E — E — E
PROPOSED STORM DRAIN
2022 APPROVED STORM DRAIN — ST — ST
GRAVEL SURFACE
ASPHALT PAVED SURFACE
CONCRETE SURFACE
PROPOSED BUILDING
EXISTING BUILDING
WALL
CHAIN LINK FENCE — X — X
PROPOSED SECURITY FENCE — XX — XX — XX
APPROX. CURB LINE AND GUTTER
SURFACE WATER FLOW
EXISTING PALM TREE

NORTH

GRAPHIC SCALE
40' 0 40'
1" = 40'

SEAL:

PERMIT PLAN SET NOT FOR CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

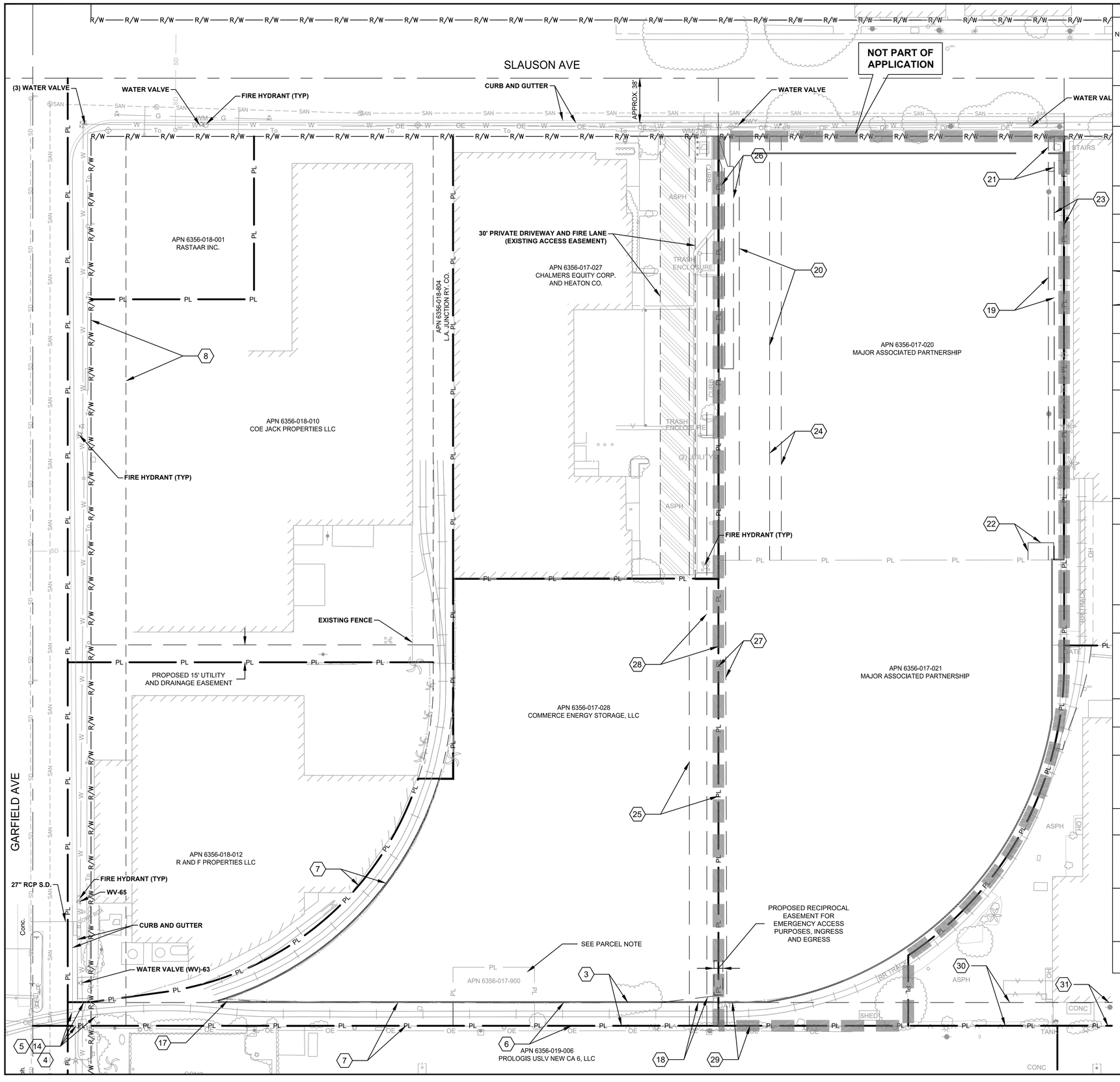
NO.	BY	DATE	REVISION	APP'D.

PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
BOUNDARIES, EASEMENTS AND FLOODING (EXISTING CONDITION)

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		C-2.0
APPROVED BY:	SH		
DATE:	12/11/2023		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336



EXISTING EASEMENT INFORMATION

NUMBER	PARCEL/ PART NUMBER	IN FAVOR OF/ GRANTED TO	PURPOSE	RECORDING DATE	RECORDED/ RECORDING NUMBER
3	** EXCEPTION PARCEL 1		ROAD PURPOSES, RAILROAD TRACKS, CONDUITS AND POLE		IN BOOK 20716 PAGE 250, OF OFFICIAL RECORDS
4	** EXCEPTION PARCEL 2		ROAD, RAILROAD TRACKS, GAS, OIL, WATER AND SEWER PIPELINES AND PUBLIC UTILITIES		IN BOOK 20750 PAGE 18, OF OFFICIAL RECORDS
5	** EXCEPTION PARCEL 2		ROAD PURPOSES, RAILROAD TRACKS, GAS AND OIL PIPE LINES, ELECTRICITY, TELEPHONE AND TELEGRAPH WIRES, WATER AND SEWER		IN BOOK 20906 PAGE 185, OF OFFICIAL RECORDS
6	** EXCEPTION PARCEL 2		RAILROAD TRACKS AND NECESSARY FACILITIES		IN BOOK 21716 PAGE 395, OF OFFICIAL RECORDS
7	** EXCEPTION PARCEL 2		RAILROAD TRACKS AND NECESSARY FACILITIES		IN BOOK 21759 PAGE 307, OF OFFICIAL RECORDS
8	** EXCEPTION PARCEL 2	PARK WATER COMPANY, A CORPORATION	PIPE LINES	March 20, 1945	IN BOOK 22437 PAGE 414, OF OFFICIAL RECORDS
~~11~~	~~** EXCEPTION PARCEL 2~~	~~SOUTHERN CALIFORNIA EDISON COMPANY, A CORPORATION~~	~~PUBLIC UTILITIES~~	~~May 10, 1946~~	~~3054, IN BOOK 23405 PAGE 211, OF OFFICIAL RECORDS~~
14	** EXCEPTION PARCEL 2		PUBLIC ROAD AND HIGHWAY		3173, IN BOOK 36865 PAGE 342, OF OFFICIAL RECORDS
17	** EXCEPTION PARCEL 2		RAILWAY TRACK AND NECESSARY FACILITIES		4249, IN BOOK 49219 PAGE 94, OF OFFICIAL RECORDS
18	PARCEL 3 PTR 01	GILBERT FINANCIAL CO., A LIMITED PARTNERSHIP	RAILROAD	May 26, 1970	2652, IN BOOK 122 PAGE 162 OF OFFICIAL RECORDS
19	PARCEL 2 PTR 02	THIS IS PART OF THE FLAG LOT (UNIT 22). IT SHOULD NOT BE AN ISSUE AS IT IS CONTROLLED BY THE LANDOWNER.	PUBLIC UTILITY AND DRAINAGE PURPOSES		BOOK 122 PAGE 162 OF OFFICIAL RECORDS
20	PARCEL 3 PTR 02	THIS IS FOR INGRESS AND EGRESS TO THE FLAG LOT. AFTER MERGING THE PARCELS, THIS EASEMENT WILL NOT BE RELEVANT.	INGRESS AND EGRESS, DRIVEWAY AND SEWER		BOOK 122 PAGE 162 OF OFFICIAL RECORDS
21	PARCEL 4 PTR 02	OUTSIDE OF OUR BUILD AREA AND SHOULD NOT INTERFERE.	PLACEMENT AND MAINTENANCE OF SIGN		
22	PARCEL 5 PTR 02	EASEMENT WAS QUITCLAIMED TO THE PROPERTY OWNER. THE EASEMENT WILL BE TERMINATED BY MERGER SINCE BOTH THE FEE ESTATE AND EASEMENT INTEREST ARE NOW OWNED BY THE PROPERTY OWNER.	RAILROAD		BOOK 122 PAGE 162 OF OFFICIAL RECORDS
23	PARCEL 6 PTR 02		RAILROAD		BOOK 122 PAGE 162, OF OFFICIAL RECORDS
24	PARCEL 7 PTR 02	THIS IS TO ROUTE UTILITIES TO THE FLAG LOT. AFTER MERGING THE PARCELS, THIS EASEMENT WILL NOT BE RELEVANT.	UTILITY PURPOSES		IN BOOK 122 PAGE 162, OFFICIAL RECORDS
25	PARCEL 2 PTR 01		INGRESS, EGRESS AND DRIVEWAY PURPOSES		IN BOOK 122 PAGE 162, OFFICIAL RECORDS
26	EXCEPTION PTR 01 AND PTR 02	THIS SCE EASEMENT WILL BE QUITCLAIMED	ELECTRICAL POLES AND POLE LINES	June 22, 1964	5227, IN BOOK D2519 PAGE 221, OFFICIAL RECORDS
27	EXCEPTION PTR 01 AND PTR 02	THE EASEMENT IN FAVOR OF AT&T WILL BE AMENDED OR A CROSSING AGREEMENT WILL BE SECURED.	UNDERGROUND TELEPHONE, TELEGRAPH, AND COMMUNICATION STRUCTURES	November 8, 1945	4049, IN BOOK D3109 PAGE 74, OFFICIAL RECORDS
28	EXCEPTION PTR 01		SEWER AND PUBLIC UTILITY PURPOSES	May 14, 1970	2282. OFFICIAL RECORDS
29	EXCEPTION PTR 03		ROAD, RAILROAD, CONDUIT, POLE LINES, SEWER PIPE LINES, TRACK MAINTENANCE	MARCH 8, 1944 MAY 9, 1944 MARCH 13, 1945	IN BOOK 20716 PAGE 250, BOOK 20906 PAGE 185, BOOK 21716 PAGE 395, OFFICIAL RECORDS
30	EXCEPTION PTR 03		ROAD, RAILROAD, CONDUIT, POLE LINES, SEWER PIPE LINES, TRACK MAINTENANCE	MARCH 8, 1944 MAY 9, 1944 MARCH 13, 1945	IN BOOK 20716 PAGE 250, BOOK 20906 PAGE 185, BOOK 21716 PAGE 395, OFFICIAL RECORDS
31	EXCEPTION PTR 03		RAILROAD		IN BOOK 21522 PAGE 356, OFFICIAL RECORDS

GENERAL NOTES

1. THIS PRELIMINARY PLAN SET IS SUBMITTED FOR APPROVAL OF AN OPTIONAL SITE PLAN FOR THE PROJECT APPROVED IN CONJUNCTION WITH CUP NO. 548.
2. THIS PLAN WAS PRODUCED UTILIZING GIS RESOURCES, SURVEY, AND INFORMATION FROM MULTIPLE SOURCES, INCLUDING THE CITY OF COMMERCE AND GOOGLE EARTH PRO.
3. ALTA SURVEY INFORMATION IN THIS PLAN SET PROVIDED BY ** TSAC ENGINEERING, DATED 06/21/2021 AND BY PBLA ENGINEERING INC, FIELD WORK COMPLETED ON 09/16/2014.

FLOOD ZONING

1. **THE SUBJECT PROPERTY DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD AS SHOWN ON THE FLOOD INSURANCE RATE MAP (COMMUNITY PANEL 06037C1610F, DATED 09/26/2008) PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA).**

PARCEL NOTE

1. **MERGER OF APN 6356-017-900 INTO APN 6356-017-028 IS PENDING.**

LEGEND

CENTERLINE
PARCEL BOUNDARY — PL
ROAD ROW — R/W — R/W
EASEMENT LINE
EX. CONTOUR — 800
MONITORING WELL — MW
SIGN
STORM DRAIN MANHOLE
STORM DRAIN GRATE
SEWER MANHOLE
MANHOLE — MH
FIRE HYDRANT
POWER POLE
GAS VALVE
WATER VALVE
ELECTRIC PULL BOX
WATER METER
SEWER CLEANOUT
AREA LIGHT/ LIGHT POLE
BOLLARD
STORM DRAIN — SD — SD
SEWER — SAN — SAN
WATER LINE — W — W
TELCO LINE — To
OVERHEAD LINE — OE
PROPOSED UNDERGROUND ELEC — UE — UE
2022 APPROVED UNDERGROUND ELECTRIC
PROPOSED STORM DRAIN — ST — ST
2022 APPROVED STORM DRAIN
GRAVEL SURFACE
ASPHALT PAVED SURFACE
CONCRETE SURFACE
PROPOSED BUILDING
EXISTING BUILDING
WALL
CHAIN LINK FENCE — X — X
PROPOSED SECURITY FENCE — XX — XX — XX
APPROX. CURB LINE AND GUTTER
SURFACE WATER FLOW
EXISTING PALM TREE

NORTH

GRAPHIC SCALE
40' 0 40'
1" = 40'

SEAL:

PERMIT PLAN SET NOT FOR CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.

PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
BOUNDARIES, EASEMENTS AND FLOODING
(PROPOSED CONDITION)

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		
APPROVED BY:	SH		C-2.1
DATE:	12/11/2023		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

H:\WORK IN PROGRESS\SOLAR SITES\LS POWER DEVELOPMENT\COMMERCE, CA\CAD\SITE PLANS\SITE PLAN MODIFICATION\393191_SITES.DWG

SLAUSON AVE

GARFIELD AVE

FIRE HYDRANT (TYP)

(3) WATER VALVE

WATER VALVE

CURB AND GUTTER

APPROX. 38'

30' PRIVATE DRIVEWAY AND FIRE LANE (EXISTING ACCESS EASEMENT)

EXISTING FENCE

APN 6356-018-001
RASTAAR INC.

APN 6356-018-010
COE JACK PROPERTIES LLC

APN 6356-018-804
L.A. JUNCTION RY. CO.

APN 6356-017-027
CHALMERS EQUITY CORP. AND HEATON CO.

APN 6356-017-020
MAJOR ASSOCIATED PARTNERSHIP

APN 6356-017-021
MAJOR ASSOCIATED PARTNERSHIP

APN 6356-017-028
COMMERCE ENERGY STORAGE, LLC

APN 6356-018-012
R AND F PROPERTIES LLC

APN 6356-017-900
Conc. Slab

APN 6356-019-006
PROLOGIS USLV NEW CA 6, LLC

27" RCP S.D.

WV-65

WATER VALVE (WV)-63

NOT PART OF APPLICATION

OVERHANG (OH)

FENCE

STAIRS

TRASH ENCLOSURE

PLANTER

ROCK

SOIL

ASPH

CONC

GATE

SHED

TANK

PARKING STRIPING OBLITE

IRR TRACK

(2) UTILITY

GENERAL NOTES

1. THIS PRELIMINARY PLAN SET IS SUBMITTED FOR APPROVAL OF AN OPTIONAL SITE PLAN FOR THE PROJECT APPROVED IN CONJUNCTION WITH CUP NO. 548.
2. THIS PLAN WAS PRODUCED UTILIZING GIS RESOURCES, SURVEY, AND INFORMATION FROM MULTIPLE SOURCES, INCLUDING THE CITY OF COMMERCE AND GOOGLE EARTH PRO.
3. ALTA SURVEY INFORMATION IN THIS PLAN SET PROVIDED BY TSAC ENGINEERING, DATED 06/21/2021 AND BY PBLA ENGINEERING INC, FIELD WORK COMPLETED ON 09/16/2014.

LEGEND

CENTERLINE
PARCEL BOUNDARY — PL
ROAD ROW — R/W — R/W
EASEMENT LINE
EX. CONTOUR — 800
MONITORING WELL — MW
SIGN
STORM DRAIN MANHOLE
STORM DRAIN GRATE
SEWER MANHOLE — MH
MANHOLE
FIRE HYDRANT
POWER POLE
GAS VALVE
WATER VALVE — W
ELECTRIC PULL BOX
WATER METER
SEWER CLEANOUT
AREA LIGHT/ LIGHT POLE — OE
BOLLARD
STORM DRAIN — SD — SD
SEWER — SAN — SAN
WATER LINE — W — W
TELCO LINE — To
OVERHEAD LINE — OE
PROPOSED UNDERGROUND ELEC — UE — UE
2022 APPROVED UNDERGROUND ELECTRIC — E — E — E
PROPOSED STORM DRAIN
2022 APPROVED STORM DRAIN — ST — ST
GRAVEL SURFACE
ASPHALT PAVED SURFACE
CONCRETE SURFACE
PROPOSED BUILDING
EXISTING BUILDING
WALL
CHAIN LINK FENCE — X — X
PROPOSED SECURITY FENCE — XX — XX — XX
APPROX. CURB LINE AND GUTTER
SURFACE WATER FLOW
EXISTING PALM TREE

NORTH

GRAPHIC SCALE

40' 0 40'
1" = 40'

SEAL:

PERMIT PLAN SET NOT FOR CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.

PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
EXISTING TOPOGRAPHY AND DRAINAGE

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		C-2.2
APPROVED BY:	SH		
DATE:	12/11/2023		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

H:\WORK IN PROGRESS\SOLAR SITES\LS POWER DEVELOPMENT\COMMERCE, CA\CAD\SITE PLANS\SITE PLAN MODIFICATION\393191_SITES.DWG

SLAUSON AVE

GARFIELD AVE

FIRE HYDRANT (TYP)

(3) WATER VALVE

WATER VALVE

FIRE HYDRANT (TYP)

CURB AND GUTTER

APPROX. 38'

RELOCATE EXISTING FIRE HYDRANT (SEE SHEET C3.0)

WATER VALVE

RELOCATE EXISTING POWER POLE WITH LIGHT (SEE SHEET C3.0)

30' PRIVATE DRIVEWAY AND FIRE LANE (EXISTING ACCESS EASEMENT)

RELOCATE EXISTING FIRE HYDRANT (SEE SHEET C3.0)

WATER VALVE

NOT PART OF APPLICATION

REMOVE FIRE HYDRANT

FIRE HYDRANT (TYP)

REMOVE PALM TREE (TYP)

EXISTING FENCE

MW-1R TO BE ABANDONED

REMOVE CHAIN LINK FENCE (TYP)

MW-9 TO BE ABANDONED

MW-8 TO BE ABANDONED

FIRE HYDRANT (TYP)

27" RCP S.D.

WV-65

CURB AND GUTTER

WATER VALVE (WV)-63

REMOVE CHAIN LINK FENCE (TYP)

MW-6 TO BE ABANDONED

REMOVE EXISTING CONCRETE SLAB

MW-12 TO BE ABANDONED

MW-5 TO BE ABANDONED

MW-7/7R TO BE ABANDONED

GENERAL NOTES

1. THIS PRELIMINARY PLAN SET IS SUBMITTED FOR APPROVAL OF AN OPTIONAL SITE PLAN FOR THE PROJECT APPROVED IN CONJUNCTION WITH CUP NO. 548.
2. THIS PLAN WAS PRODUCED UTILIZING GIS RESOURCES, SURVEY, AND INFORMATION FROM MULTIPLE SOURCES, INCLUDING THE CITY OF COMMERCE AND GOOGLE EARTH PRO.
3. ALTA SURVEY INFORMATION IN THIS PLAN SET PROVIDED BY TSAC ENGINEERING, DATED 06/21/2021 AND BY PBLA ENGINEERING INC, FIELD WORK COMPLETED ON 09/16/2014.

DEMOLITION LEGEND (ITEMS TO BE REMOVED)

LEGEND

CENTERLINE
PARCEL BOUNDARY
ROAD ROW
EASEMENT LINE
EX. CONTOUR
MONITORING WELL
SIGN
STORM DRAIN MANHOLE
STORM DRAIN GRATE
SEWER MANHOLE
MANHOLE
FIRE HYDRANT
POWER POLE
GAS VALVE
WATER VALVE
ELECTRIC PULL BOX
WATER METER
SEWER CLEANOUT
AREA LIGHT/ LIGHT POLE
BOLLARD
STORM DRAIN
SEWER
WATER LINE
TELCO LINE
OVERHEAD LINE
PROPOSED UNDERGROUND ELEC
2022 APPROVED UNDERGROUND ELECTRIC
PROPOSED STORM DRAIN
2022 APPROVED STORM DRAIN
GRAVEL SURFACE
ASPHALT PAVED SURFACE
CONCRETE SURFACE
PROPOSED BUILDING
EXISTING BUILDING
WALL
CHAIN LINK FENCE
PROPOSED SECURITY FENCE
APPROX. CURB LINE AND GUTTER
SURFACE WATER FLOW
EXISTING PALM TREE

NORTH

GRAPHIC SCALE

1" = 40'

SEAL:

PERMIT PLAN SET NOT FOR CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.

PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
DEMOLITION PLAN

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		C-2.3
APPROVED BY:	SH		
DATE:	12/11/2023		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

SLAUSON AVE

GARFIELD AVE

GENERAL NOTES

1. THIS PRELIMINARY PLAN SET IS SUBMITTED FOR APPROVAL OF AN OPTIONAL SITE PLAN FOR THE PROJECT APPROVED IN CONJUNCTION WITH CUP NO. 548.
2. THE LOCATIONS OF PROPOSED IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO: FENCING, BATTERY BUILDINGS, INVERTER/TRANSFORMER PADS, ETC., SHOWN ARE APPROXIMATE AND ARE SUBJECT TO REFINEMENT PRIOR TO GRADING AND BUILDING PERMIT APPLICATIONS DUE TO SITE CONDITIONS, PERMIT REQUIREMENTS, EQUIPMENT SPECIFICATIONS, AND/OR OTHER CONSTRAINTS.
3. CONTRACTOR SHALL CALL AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED. ADDITIONALLY, CONTRACTOR SHALL CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES.
4. PROTECT IN PLACE ALL MONITORING WELLS NOT IDENTIFIED FOR DEMOLITION.
5. THE FIRE APPARATUS ACCESS ROAD SHALL PROVIDE A MINIMUM UNOBSTRUCTED WIDTH OF 28 FEET, EXCLUSIVE OF SHOULDERS AND AN UNOBSTRUCTED VERTICAL CLEARANCE "CLEAR TO SKY".

LEGEND

CENTERLINE
PARCEL BOUNDARY — PL
ROAD ROW — R/W — R/W
EASEMENT LINE
EX. CONTOUR — 800
MONITORING WELL — MW
SIGN
STORM DRAIN MANHOLE
STORM DRAIN GRATE
SEWER MANHOLE
MANHOLE — MH
FIRE HYDRANT
POWER POLE
GAS VALVE
WATER VALVE
ELECTRIC PULL BOX
WATER METER
SEWER CLEANOUT
AREA LIGHT/ LIGHT POLE — OE
BOLLARD
STORM DRAIN — SD — SD
SEWER — SAN — SAN
WATER LINE — W — W
TELCO LINE — To — To
OVERHEAD LINE — OE — OE
PROPOSED UNDERGROUND ELEC — UE — UE
2022 APPROVED UNDERGROUND ELECTRIC — E — E — E
PROPOSED STORM DRAIN — ST — ST
2022 APPROVED STORM DRAIN — ST — ST
GRAVEL SURFACE
ASPHALT PAVED SURFACE — ASPH
CONCRETE SURFACE — CONC
PROPOSED BUILDING
EXISTING BUILDING
WALL
CHAIN LINK FENCE — X — X
PROPOSED SECURITY FENCE — XX — XX — XX
APPROX. CURB LINE AND GUTTER
SURFACE WATER FLOW
EXISTING PALM TREE

NORTH

GRAPHIC SCALE
40' 0 40'
1" = 40'

SEAL:

PERMIT PLAN SET
NOT FOR
CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.

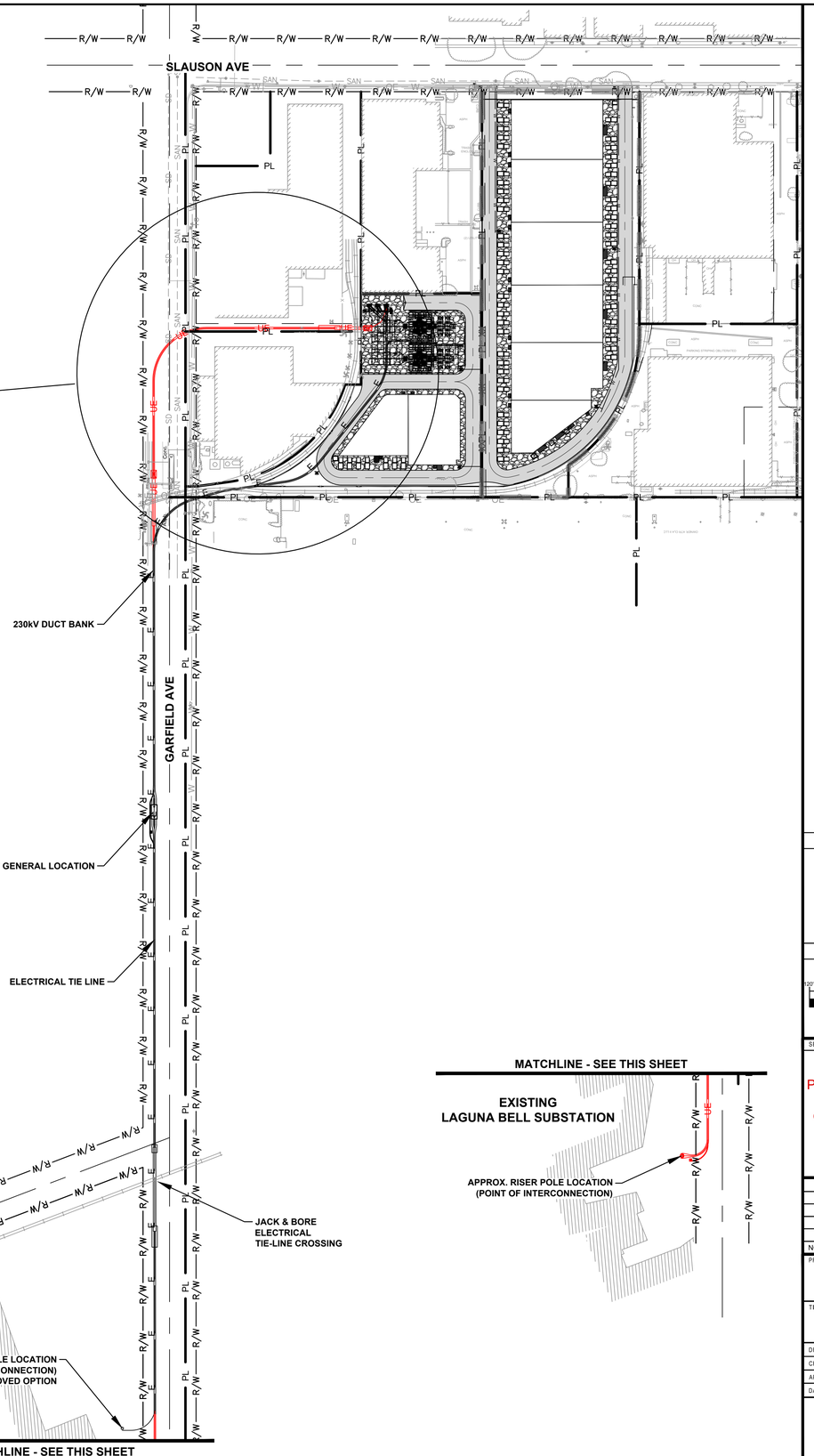
PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
SITE PLAN

DRAWN BY:	TSS	PROJ. NO.: 393191
CHECKED BY:	DG	
APPROVED BY:	SH	C-3.0
DATE:	12/11/2023	

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

PROPOSED OPTIONAL ELECTRICAL CONNECTION
TO APPROVED GARFIELD AVENUE TIE-LINE
SCALE: 1"=40'



THE APPLICATION FOR SITE PLAN MODIFICATION INCLUDES THE PORTIONS OF THE ELECTRICAL CONNECTION SHOWN IN RED ON THIS DRAWING. THE REMAINDER OF ELECTRICAL CONNECTION SHOWN IN THIS DRAWING WAS APPROVED IN 2022 AND IS FOR INFORMATIONAL PURPOSES ONLY.

LEGEND

CENTERLINE
PARCEL BOUNDARY — PL
ROAD ROW — R/W — R/W
EASEMENT LINE
EX. CONTOUR — 800
MONITORING WELL — MW
SIGN
STORM DRAIN MANHOLE
STORM DRAIN GRATE
SEWER MANHOLE — MH
MANHOLE
FIRE HYDRANT
POWER POLE
GAS VALVE
WATER VALVE
ELECTRIC PULL BOX
WATER METER
SEWER CLEANOUT
AREA LIGHT/ LIGHT POLE — OE
BOLLARD
STORM DRAIN — SD — SD
SEWER — SAN — SAN
WATER LINE — W — W
TELCO LINE — To
OVERHEAD LINE — OE
PROPOSED UNDERGROUND ELEC — UE — UE
2022 APPROVED UNDERGROUND ELECTRIC — E — E — E
PROPOSED STORM DRAIN
2022 APPROVED STORM DRAIN — ST — ST
GRAVEL SURFACE
ASPHALT PAVED SURFACE
CONCRETE SURFACE
PROPOSED BUILDING
EXISTING BUILDING
WALL
CHAIN LINK FENCE — X — X
PROPOSED SECURITY FENCE — XX — XX — XX
APPROX. CURB LINE AND GUTTER
SURFACE WATER FLOW
EXISTING PALM TREE

NORTH

GRAPHIC SCALE
120' 0 120'
1" = 120'

SEAL:

PERMIT PLAN SET
NOT FOR
CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.

PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
ELECTRICAL CONNECTION PLAN

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		
APPROVED BY:	SH		C-3.1
DATE:	12/11/2023		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

H:\WORK IN PROGRESS\SOLAR SITES\LS POWER DEVELOPMENT\COMMERCE, CA\CAD\SITE PLANS\SITE PLAN MODIFICATION\393191_SITE.DWG

SLAUSON AVE

GARFIELD AVE

GENERAL NOTES

1. THIS PRELIMINARY PLAN SET IS SUBMITTED FOR APPLICATION AND ISSUANCE OF A LAND USE ENTITLEMENT FOR THE PROJECT FROM THE CITY OF COMMERCE.
2. ALTA SURVEY INFORMATION IN THIS PLAN SET PROVIDED BY TSAC ENGINEERING, DATED 06/21/2021 AND BY PBLA ENGINEERING INC, FIELD WORK COMPLETED ON 09/16/2014.
3. THE LOCATIONS OF PROPOSED IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO: FENCING, BATTERY BUILDINGS, INVERTER/TRANSFORMER PADS, ETC., SHOWN ARE APPROXIMATE AND ARE SUBJECT TO REFINEMENT PRIOR TO GRADING AND BUILDING PERMIT APPLICATIONS DUE TO SITE CONDITIONS, PERMIT REQUIREMENTS, EQUIPMENT SPECIFICATIONS, AND/OR OTHER CONSTRAINTS.
4. CONTRACTOR SHALL CALL AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED. ADDITIONALLY, CONTRACTOR SHALL CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES.
5. ABBREVIATIONS:
   - 5.1. TP = TOP OF PAVEMENT
   - 5.2. TG = TOP OF GRATE
   - 5.3. FG = FINISHED GRADE
   - 5.4. MG = MATCH GRADE
   - 5.5. TW = TOP OF WALL

LEGEND

- CENTERLINE
- PARCEL BOUNDARY (PL)
- ROAD ROW (R/W)
- EASEMENT LINE
- EX. CONTOUR (800)
- MONITORING WELL (MW)
- SIGN
- STORM DRAIN MANHOLE
- STORM DRAIN GRATE
- SEWER MANHOLE (MH)
- FIRE HYDRANT
- POWER POLE
- GAS VALVE
- WATER VALVE
- ELECTRIC PULL BOX
- WATER METER
- SEWER CLEANOUT
- AREA LIGHT/ LIGHT POLE
- BOLLARD
- STORM DRAIN (SD)
- SEWER (SAN)
- WATER LINE (W)
- TELCO LINE (To)
- OVERHEAD LINE (OE)
- PROPOSED UNDERGROUND ELEC (UE)
- 2022 APPROVED UNDERGROUND ELECTRIC (E)
- PROPOSED STORM DRAIN (ST)
- 2022 APPROVED STORM DRAIN (ST)
- GRAVEL SURFACE
- ASPHALT PAVED SURFACE
- CONCRETE SURFACE
- PROPOSED BUILDING
- EXISTING BUILDING
- WALL
- CHAIN LINK FENCE
- PROPOSED SECURITY FENCE (XX)
- APPROX. CURB LINE AND GUTTER
- SURFACE WATER FLOW
- EXISTING PALM TREE

NORTH

GRAPHIC SCALE

40' 0 40'

1" = 40'

SEAL:

PERMIT PLAN SET NOT FOR CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.

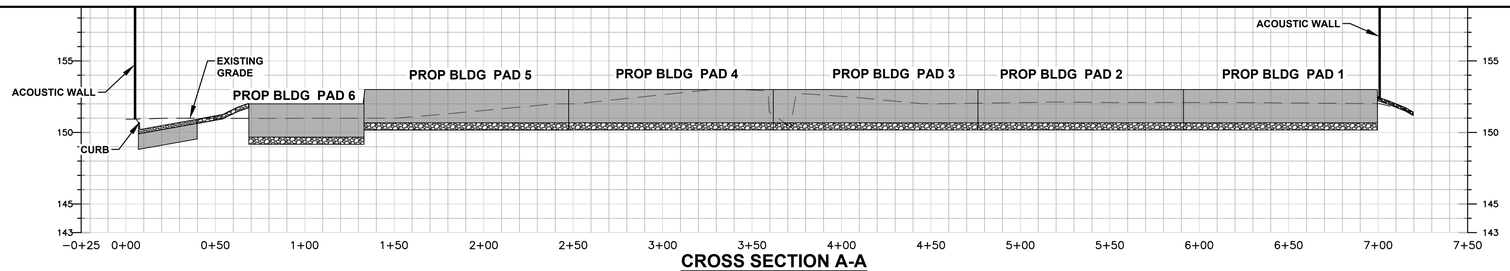
PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
GRADING & DRAINAGE PLAN

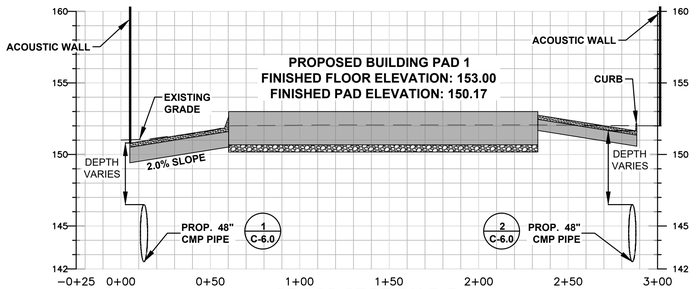
DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		
APPROVED BY:	SH		C-4.0
DATE:	12/11/2023		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

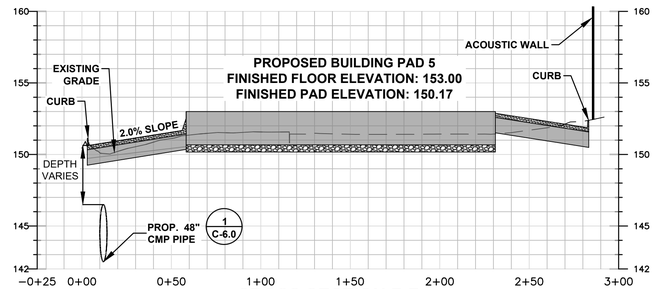
H:\WORK IN PROGRESS\SOLAR SITES\LS POWER DEVELOPMENT\COMMERCE, CA\CAD\SITE PLANS\SITE PLAN MODIFICATION\393191_GRA.DWG



CROSS SECTION A-A
V:1" = 5' H: 1" = 40'



CROSS SECTION B-B
V:1" = 5' H: 1" = 40'



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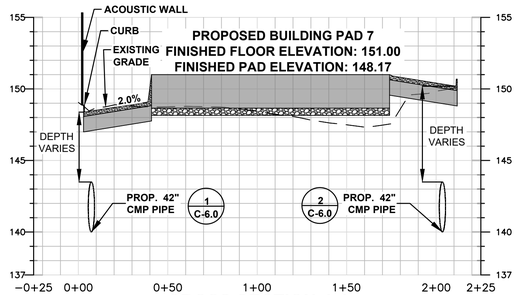

CROSS SECTION J-J
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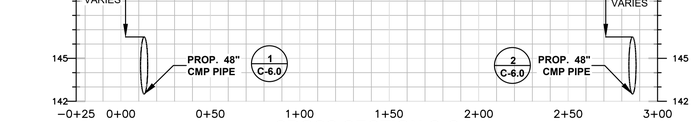

CROSS SECTION C-C
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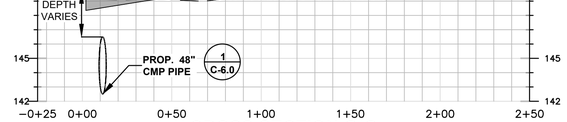
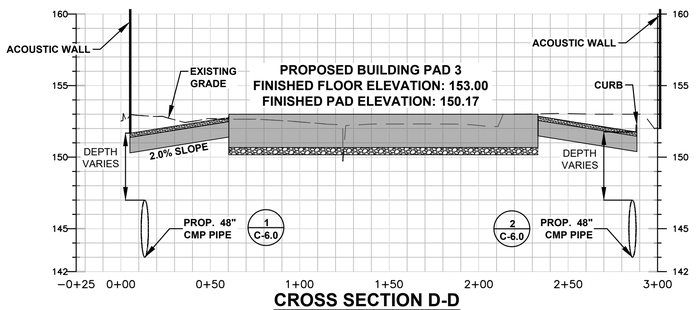
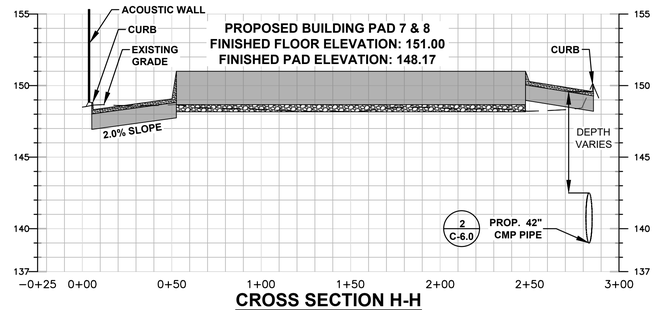


CROSS SECTION G-G
V:1" = 5' H: 1" = 40'



CROSS SECTION D-D
V:1" = 5' H: 1" = 40'



CROSS SECTION H-H
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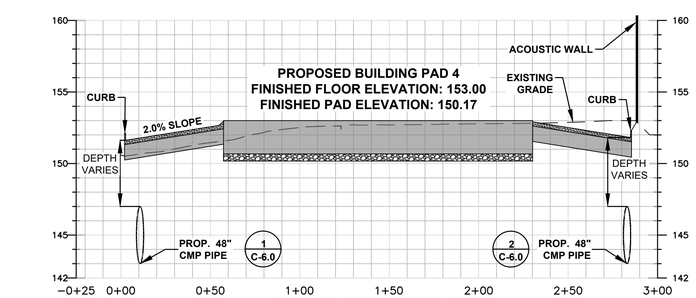

CROSS SECTION E-E
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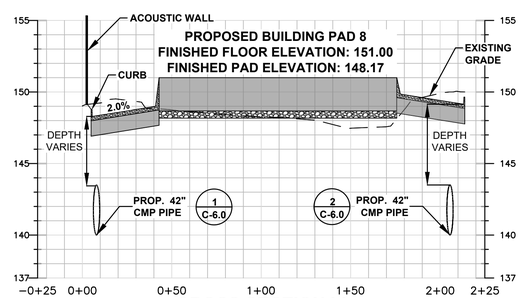


CROSS SECTION I-I
V:1" = 5' H: 1" = 40'

SEAL:

PERMIT PLAN SET
NOT FOR
CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

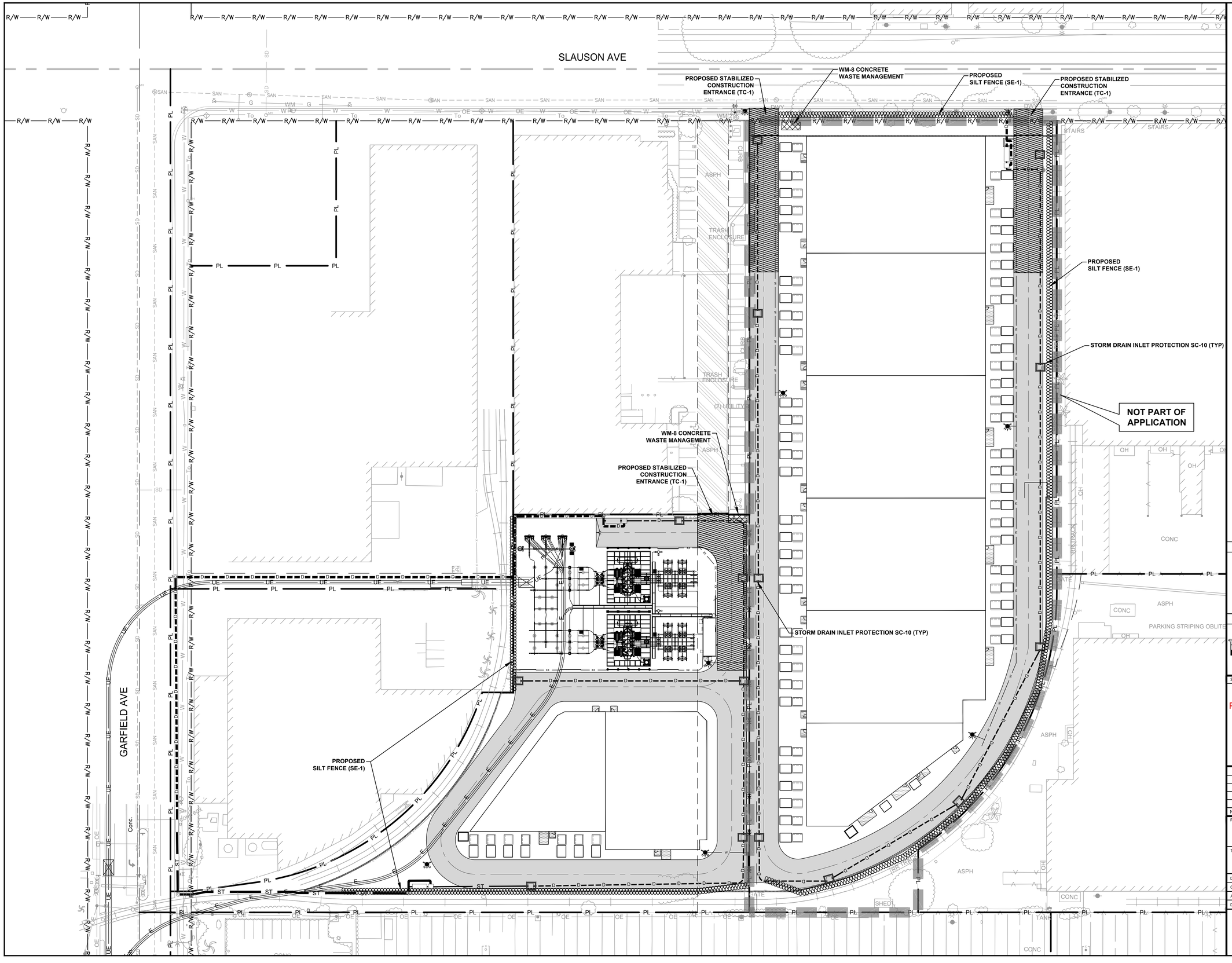
NO.	BY	DATE	REVISION	APP'D.

PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
CROSS SECTIONS

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		
APPROVED BY:	SH		C-4.1
DATE:	12/11/2023		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336



GENERAL NOTES

1. THIS PRELIMINARY PLAN SET IS SUBMITTED FOR APPROVAL OF AN OPTIONAL SITE PLAN FOR THE PROJECT APPROVED IN CONJUNCTION WITH CUP NO. 548.
2. THE PROPERTY OWNER IS OBLIGATED TO INSURE COMPLIANCE WITH ALL APPLICABLE STORMWATER REGULATIONS AT ALL TIMES. THE BMP'S (BEST MANAGEMENT PRACTICES) THAT HAVE BEEN INCORPORATED INTO THIS PLAN SHALL BE IMPLEMENTED AND MAINTAINED TO EFFECTIVELY PREVENT THE POTENTIALLY NEGATIVE IMPACTS OF THIS PROJECT'S CONSTRUCTION ACTIVITIES ON STORMWATER QUALITY. THE MAINTENANCE OF THE BMP'S IS THE PERMITTEE'S RESPONSIBILITY, AND FAILURE TO PROPERLY INSTALL OR MAINTAIN THE BMP'S MAY RESULT IN ENFORCEMENT ACTION IF INSTALLED BMP FAILS. IF INSTALLED BMP'S FAIL, THEY MUST BE REPAIRED OR REPLACED WITH AN ACCEPTABLE ALTERNATE WITHIN 24 HOURS, OR AS SOON AS SAFE TO DO SO.
3. A NOTICE OF INTENT (NOI) HAS BEEN OR WILL BE FILED WITH THE REGIONAL WATER QUALITY CONTROL BOARD INCLUDING A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CALIFORNIA GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION SITES FOR ALL CONSTRUCTION ASSOCIATED WITH THESE PLANS. THE PERMITTEE SHALL KEEP A COPY OF THE SWPPP ON SITE AND AVAILABLE FOR THE DURATION OF CONSTRUCTION.

LEGEND

CENTERLINE	
PARCEL BOUNDARY	PL
ROAD ROW	R/W — R/W
EASEMENT LINE	
EX. CONTOUR	800
MONITORING WELL	MW
SIGN	
STORM DRAIN MANHOLE	
STORM DRAIN GRATE	
SEWER MANHOLE	
MANHOLE	MH
FIRE HYDRANT	
POWER POLE	
GAS VALVE	
WATER VALVE	
ELECTRIC PULL BOX	
WATER METER	
SEWER CLEANOUT	
AREA LIGHT/ LIGHT POLE	
BOLLARD	
STORM DRAIN	SD
SEWER	SAN
WATER LINE	W
TELCO LINE	To
OVERHEAD LINE	OE
PROPOSED UNDERGROUND ELEC	UE
2022 APPROVED UNDERGROUND ELECTRIC	E
PROPOSED STORM DRAIN	
2022 APPROVED STORM DRAIN	ST
GRAVEL SURFACE	
ASPHALT PAVED SURFACE	
CONCRETE SURFACE	
PROPOSED BUILDING	
EXISTING BUILDING	
WALL	
CHAIN LINK FENCE	X
PROPOSED SECURITY FENCE	XX
APPROX. CURB LINE AND GUTTER	
SURFACE WATER FLOW	
EXISTING PALM TREE	

NORTH

GRAPHIC SCALE

40' 0 40'

1" = 40'

SEAL:

PERMIT PLAN SET NOT FOR CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.

PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
EROSION CONTROL PLAN

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		C-5.0
APPROVED BY:	SH		
DATE:	12/11/2023		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

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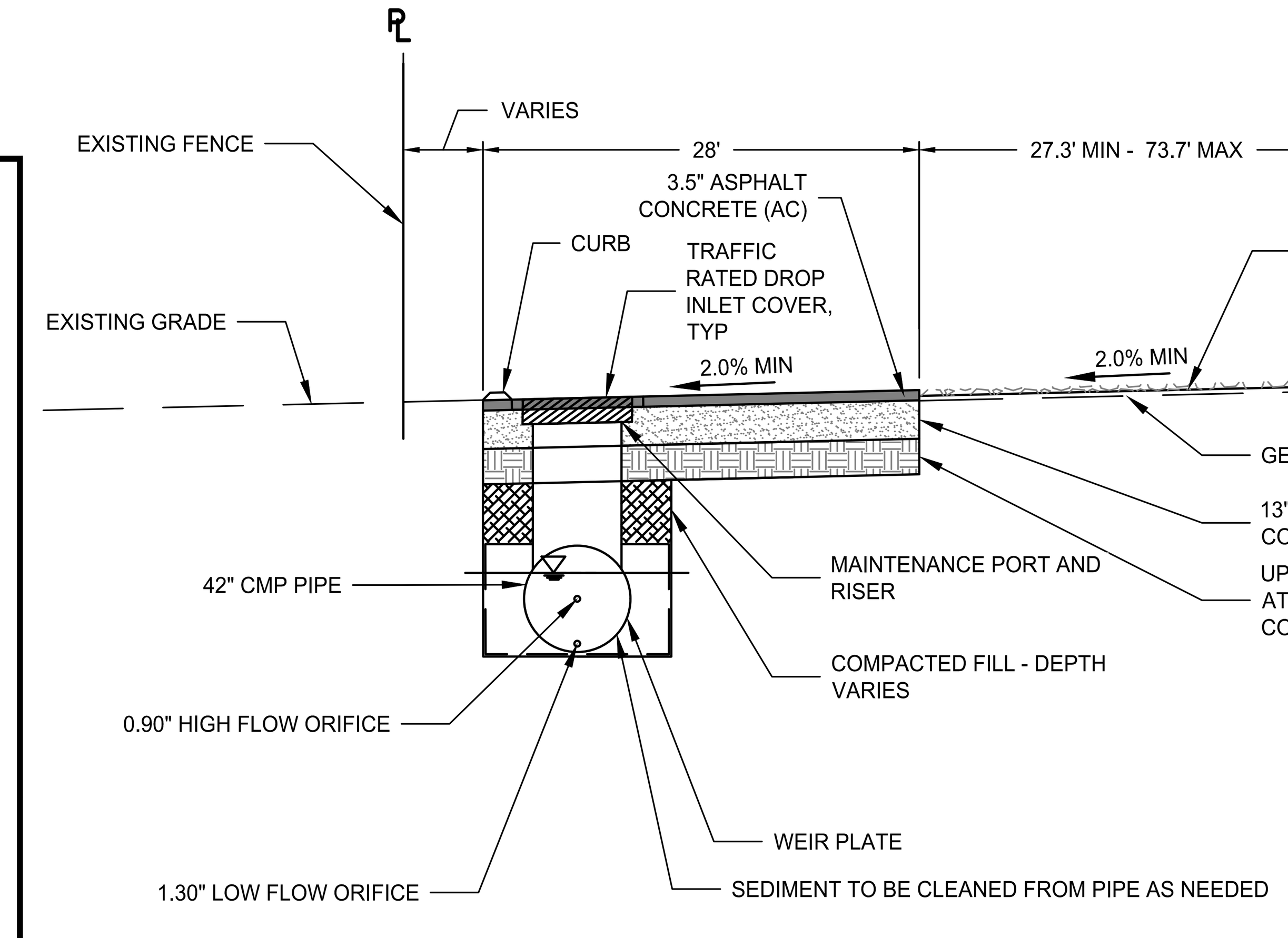
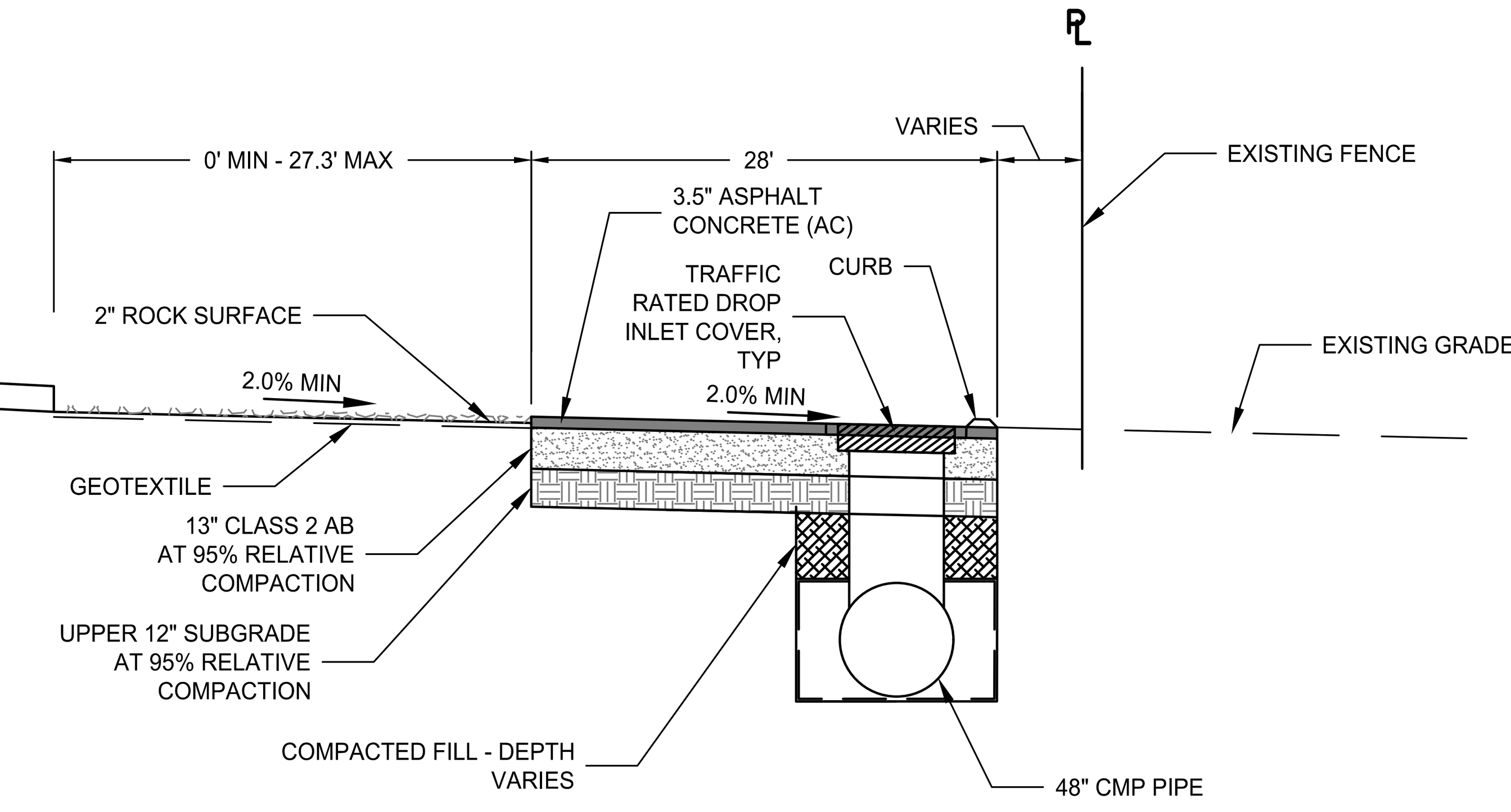


1 UNDERGROUND STORMWATER STORAGE AND WEST AND SOUTH DRIVEWAY (TYP)
(NOT TO SCALE)

NOTES :
1. ACCESS FOR INSPECTIONS AND MAINTENANCE IS ACHIEVED VIA DROP INLET AT MAINTENANCE PORTS.
2. SEDIMENT MAY BE REMOVED WITHOUT ENTRY USING A VACUUM HOSE OR OTHER MEANS.
3. BODILY ENTRY INTO STORMWATER STORAGE PIPES SHALL NOT OCCUR BY ANY INDIVIDUAL THAT HAS NOT BEEN TRAINED IN CONFINED SPACE ENTRY AND SHALL NOT OCCUR WITHOUT CONFINED ENTRY PREPARATIONS, PRECAUTIONARY MEASURES AND PERMIT AS REQUIRED BY CalOSHA.



2 UNDERGROUND STORMWATER STORAGE NORTH AND EAST DRIVEWAY (TYP)
(NOT TO SCALE)

EAST	SITE SPECIFIC DATA			WEST
PROJECT NUMBER	14733			
ORDER NUMBER	----			
PROJECT NAME	COMMERCE ENERGY STORAGE			
PROJECT LOCATION	COMMERCE, CA			
STRUCTURE ID	----			
PEAK BYPASS REQUIRED (CFS) – IF APPLICABLE			TBD	
PIPE DATA	I.E.	MATERIAL	DIAMETER	TBD
INLET PIPE 1	0.50	CMP	12"	TBD
OULET PIPE 1 TO MWS	0.50	CMP	8"	TBD
OUTLET PIPE 2	0.50	CMP	12"	TBD
RIM ELEVATION	6.08			TBD
TOP OF WEIR	3.48			TBD
SURFACE LOAD	TRAFFIC			TRAFFIC
FRAME & COVER	ø30			TBD
NOTES: PRELIMINARY NOT FOR CONSTRUCTION.				

INTERNAL BYPASS DISCLOSURE:

THE DESIGN AND CAPACITY OF THE PEAK CONVEYANCE METHOD TO BE REVIEWED AND APPROVED BY THE ENGINEER OF RECORD. HGL(S) AT PEAK FLOW SHALL BE ASSESSED TO ENSURE NO UPSTREAM FLOODING. PEAK HGL AND BYPASS CAPACITY SHOWN ON DRAWING ARE USED FOR GUIDANCE ONLY.

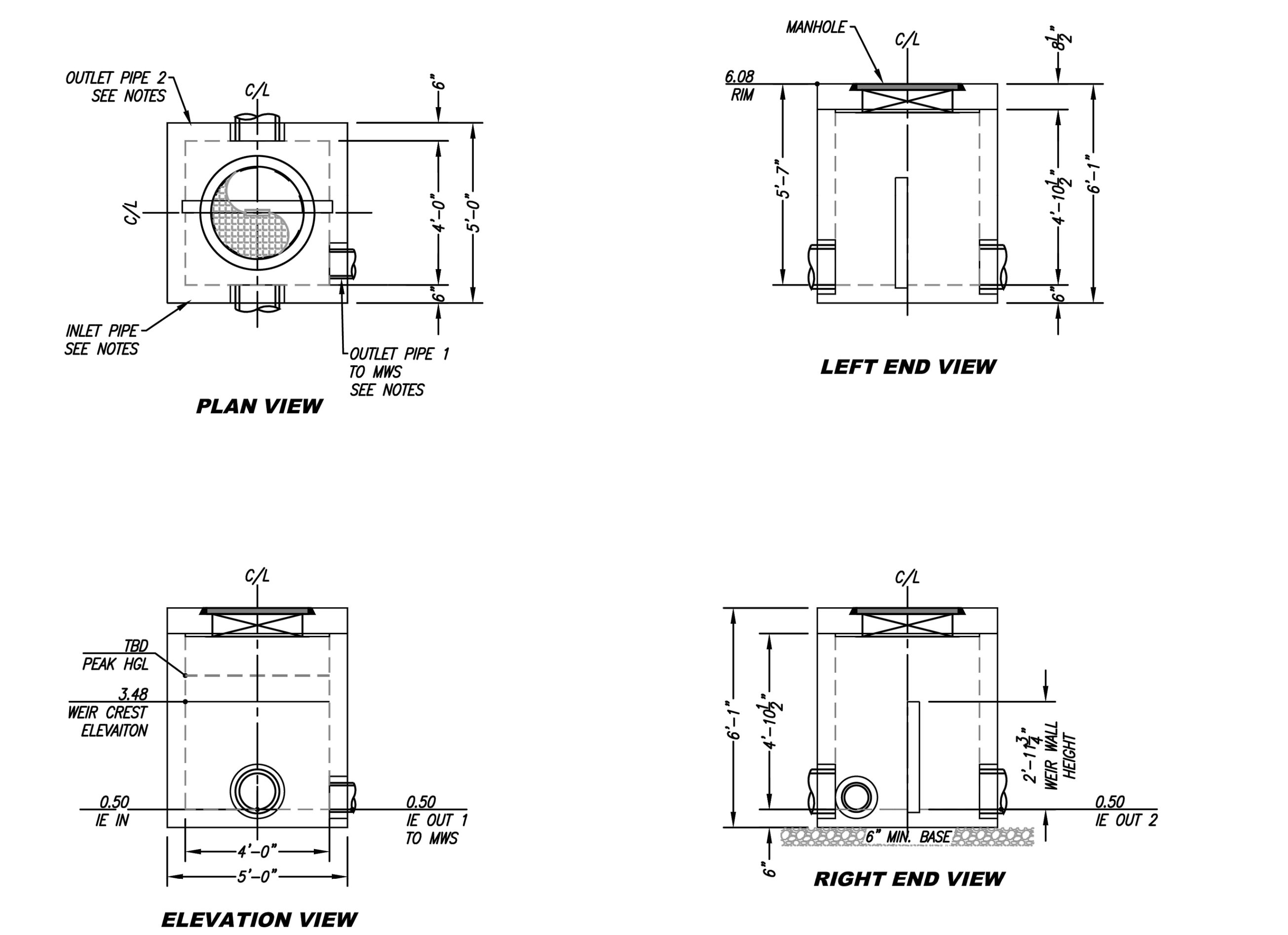
INSTALLATION NOTES

1. CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO OFFLOAD AND INSTALL THE SYSTEM AND APPURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURERS SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURERS CONTRACT.
2. UNIT MUST BE INSTALLED ON LEVEL BASE. MANUFACTURER RECOMMENDS A MINIMUM 6" LEVEL ROCK BASE UNLESS SPECIFIED BY THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE TO VERIFY PROJECT ENGINEERS RECOMMENDED BASE SPECIFICATIONS.
4. CONTRACTOR TO SUPPLY AND INSTALL ALL EXTERNAL CONNECTING PIPES. ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE. (PIPES CANNOT INTRUDE BEYOND FLUSH). INVERT OF OUTFLOW PIPE MUST BE FLUSH WITH DISCHARGE CHAMBER FLOOR. ALL PIPES SHALL BE SEALED WATER TIGHT PER MANUFACTURERS STANDARD CONNECTION DETAIL.
5. CONTRACTOR RESPONSIBLE FOR INSTALLATION OF ALL RISERS, MANHOLES, AND HATCHES. CONTRACTOR TO GROUT ALL MANHOLES AND HATCHES TO MATCH FINISHED SURFACE UNLESS SPECIFIED OTHERWISE.

GENERAL NOTES

1. MANUFACTURER TO PROVIDE ALL MATERIALS UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS, ELEVATIONS, SPECIFICATIONS AND CAPACITIES ARE SUBJECT TO CHANGE. FOR PROJECT SPECIFIC DRAWINGS DETAILING EXACT DIMENSIONS, WEIGHTS AND ACCESSORIES PLEASE CONTACT BIO CLEAN.

1/27/22GSCHIPPER



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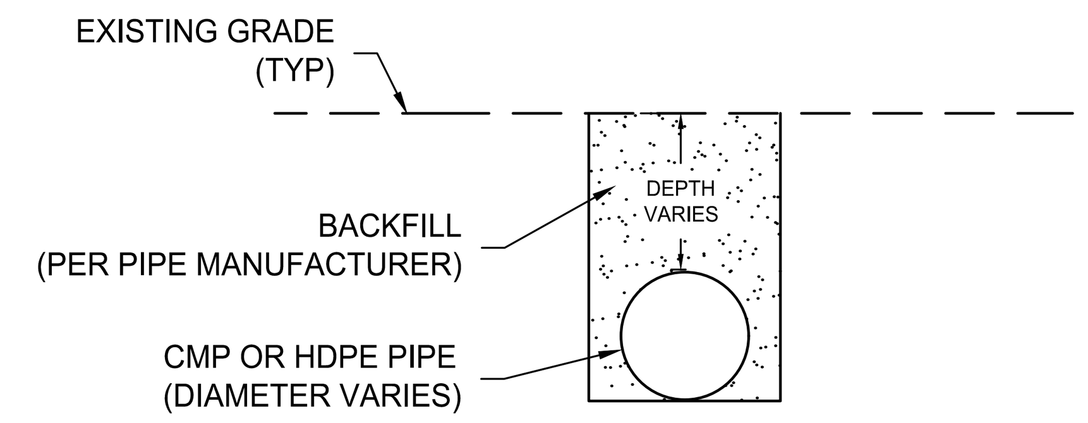
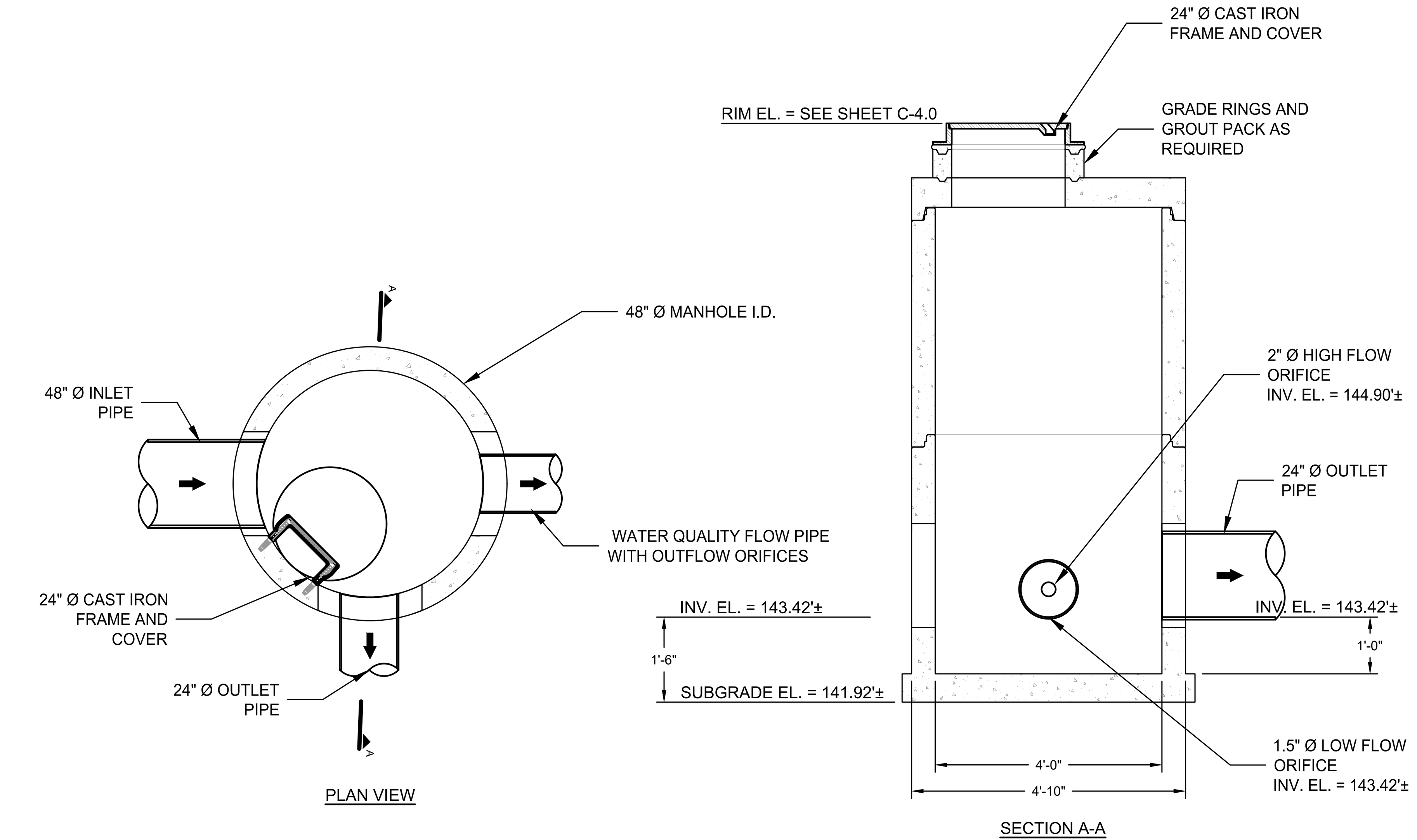
Bio Clean A Forterra Company

BC-DS-4-4-6'-9"
STORMWATER BIOFILTRATION SYSTEM
STANDARD DETAIL

5 STORMWATER BIOFILTRATION DETAIL (BC-DS-4-4-6'-9") (EAST AND WEST)
(NOT TO SCALE)



3 STORM DRAIN PIPE
(NOT TO SCALE)



4 MANHOLE
(NOT TO SCALE)

EAST	SITE SPECIFIC DATA			WEST
PROJECT NUMBER	14733			
PROJECT NAME	COMMERCE ENERGY STORAGE			
PROJECT LOCATION	COMMERCE, CA			
STRUCTURE ID	----			
TREATMENT REQUIRED				
VOLUME BASED (CF)		FLOW BASED (CFS)		TBD
5,600		N/A		TBD
TREATMENT HGL AVAILABLE (FT)			N/K	TBD
PEAK BYPASS REQUIRED (CFS) – IF APPLICABLE			OFFLINE	TBD
PIPE DATA	I.E.	MATERIAL	DIAMETER	TBD
INLET PIPE 1	0.50	CMP	8"	TBD
INLET PIPE 2	N/A	N/A	N/A	TBD
OUTLET PIPE	0.00	CMP	8"	TBD
	PRETREATMENT	BIOFILTRATION	DISCHARGE	
RIM ELEVATION	6.08	6.08	6.08	TBD
SURFACE LOAD	H20	N/A	H20	TBD
FRAME & COVER	ø30"	30" X 48"	ø24"	TBD
WETLANDMEDIA VOLUME (CY)			4.52	TBD
ORIFICE SIZE (DIA. INCHES)			ø0.81"	TBD
NOTES: PRELIMINARY NOT FOR CONSTRUCTION. UPSTREAM BYPASS SET AT 3.48.				

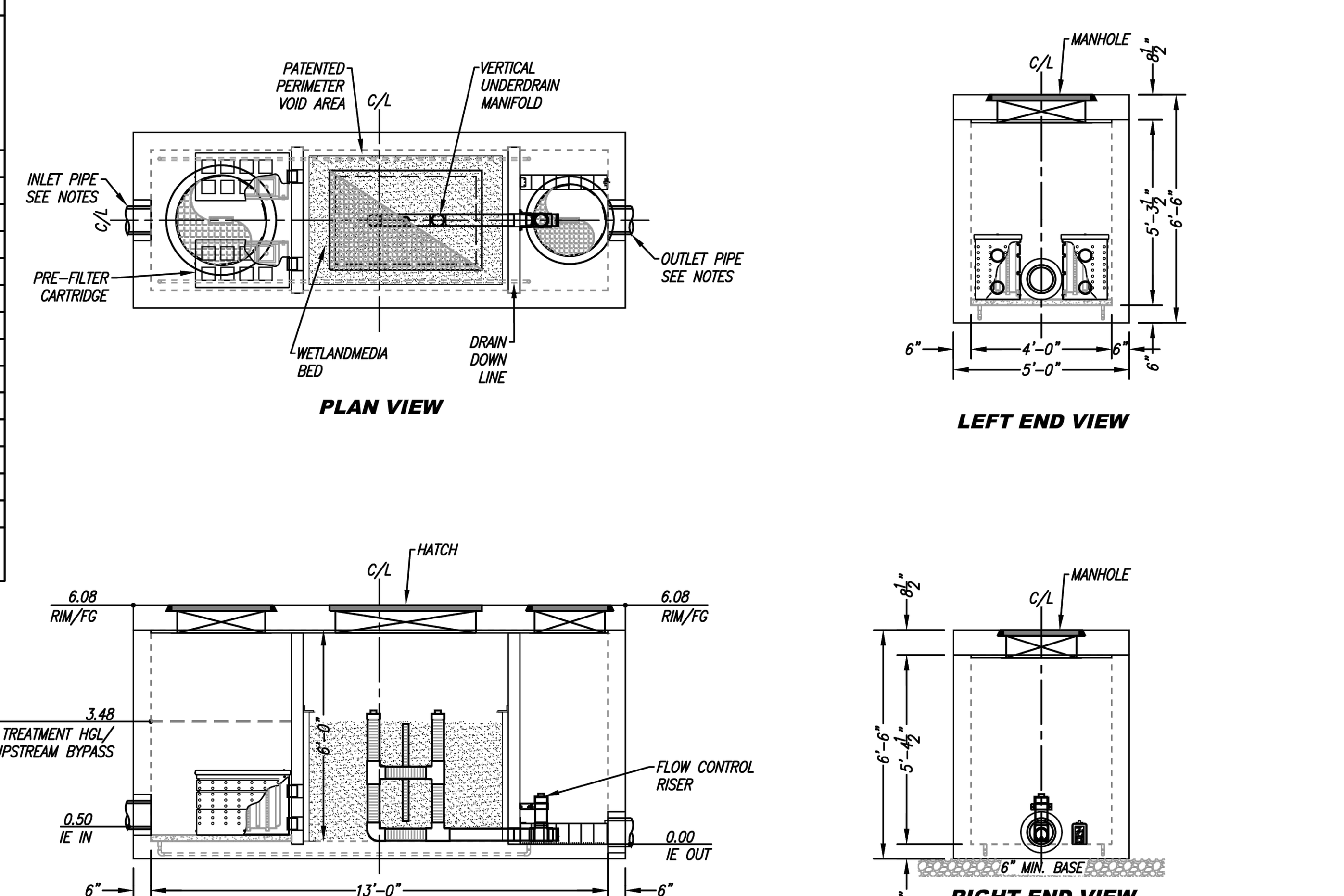
INSTALLATION NOTES

1. CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO OFFLOAD AND INSTALL THE SYSTEM AND APPURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURERS' SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURER'S CONTRACT.
2. UNIT MUST BE INSTALLED ON LEVEL BASE. MANUFACTURER RECOMMENDS A MINIMUM 6" LEVEL ROCK BASE UNLESS SPECIFIED BY THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PROJECT ENGINEER'S RECOMMENDED BASE SPECIFICATIONS.
4. CONTRACTOR TO SUPPLY AND INSTALL ALL EXTERNAL CONNECTING PIPES. ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE (PIPES CANNOT INTRUDE BEYOND FLUSH). INVERT OF OUTFLOW PIPE MUST BE FLUSH WITH DISCHARGE CHAMBER FLOOR. ALL PIPES SHALL BE SEALED WATERTIGHT PER MANUFACTURER'S STANDARD CONNECTION DETAIL.
5. CONTRACTOR RESPONSIBLE FOR INSTALLATION OF ALL PIPES, RISERS, MANHOLES, AND HATCHES. CONTRACTOR TO USE GROUT AND/OR BRICKS TO MATCH COVERS WITH FINISHED SURFACE UNLESS SPECIFIED OTHERWISE.
6. CONTRACTOR RESPONSIBLE FOR CONTACTING BIO CLEAN FOR ACTIVATION OF UNIT. MANUFACTURER'S WARRANTY IS VOID WITHOUT PROPER ACTIVATION BY A BIO CLEAN REPRESENTATIVE.

GENERAL NOTES

1. MANUFACTURER TO PROVIDE ALL MATERIALS UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS, ELEVATIONS, SPECIFICATIONS AND CAPACITIES ARE SUBJECT TO CHANGE. FOR PROJECT SPECIFIC DRAWINGS DETAILING EXACT DIMENSIONS, WEIGHTS AND ACCESSORIES PLEASE CONTACT BIO CLEAN.

1/27/22GSCHIPPER



REQUIRED TREATMENT VOLUME (CF)	5600
DRAINDOWN DURATION (HOURS)	48
AVERAGE DISCHARGE RATE PER MWS UNIT(GPM)	14.45
OPERATING HEAD (FT)	3.4
WETLANDMEDIA INFILTRATION RATE (IN/HR)	23
WETLANDMEDIA LOADING RATE (GPM/SF)	0.23

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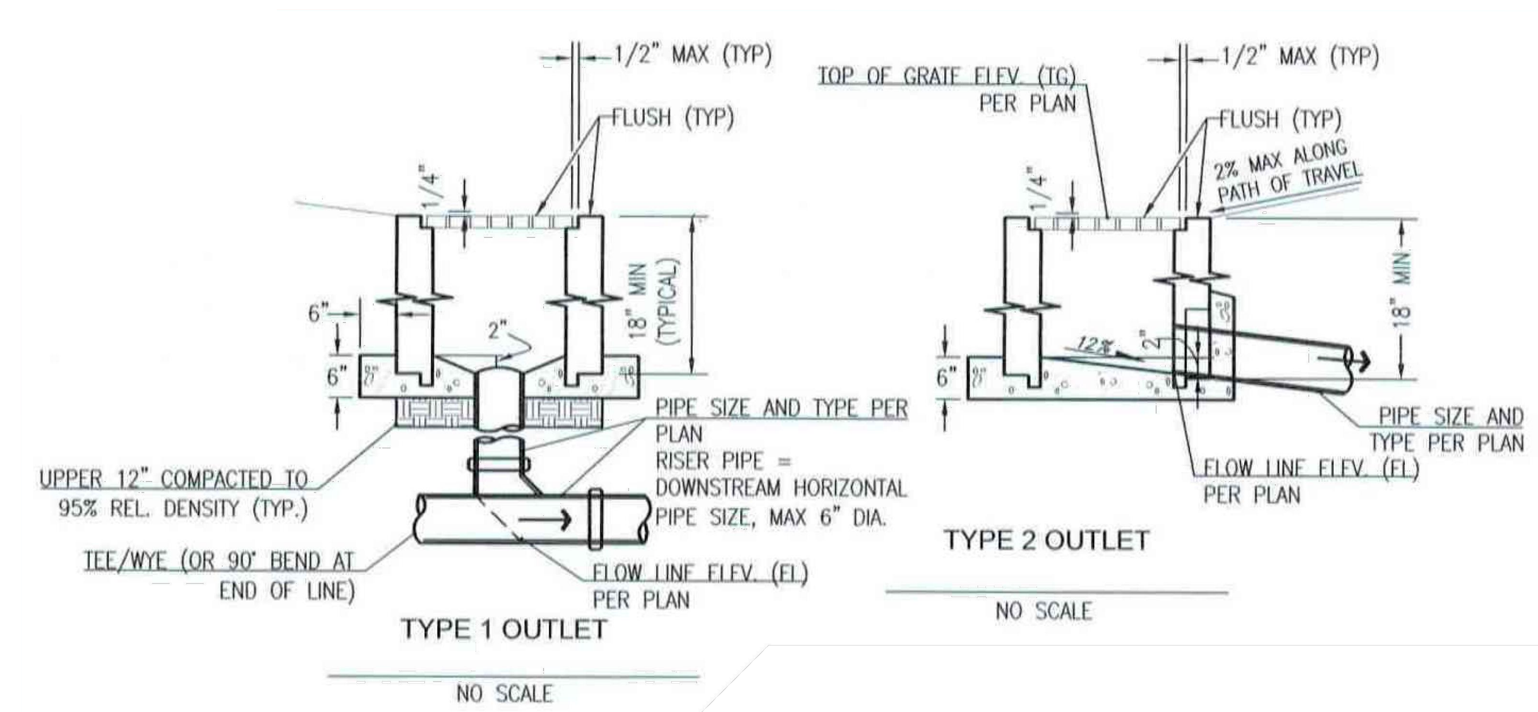
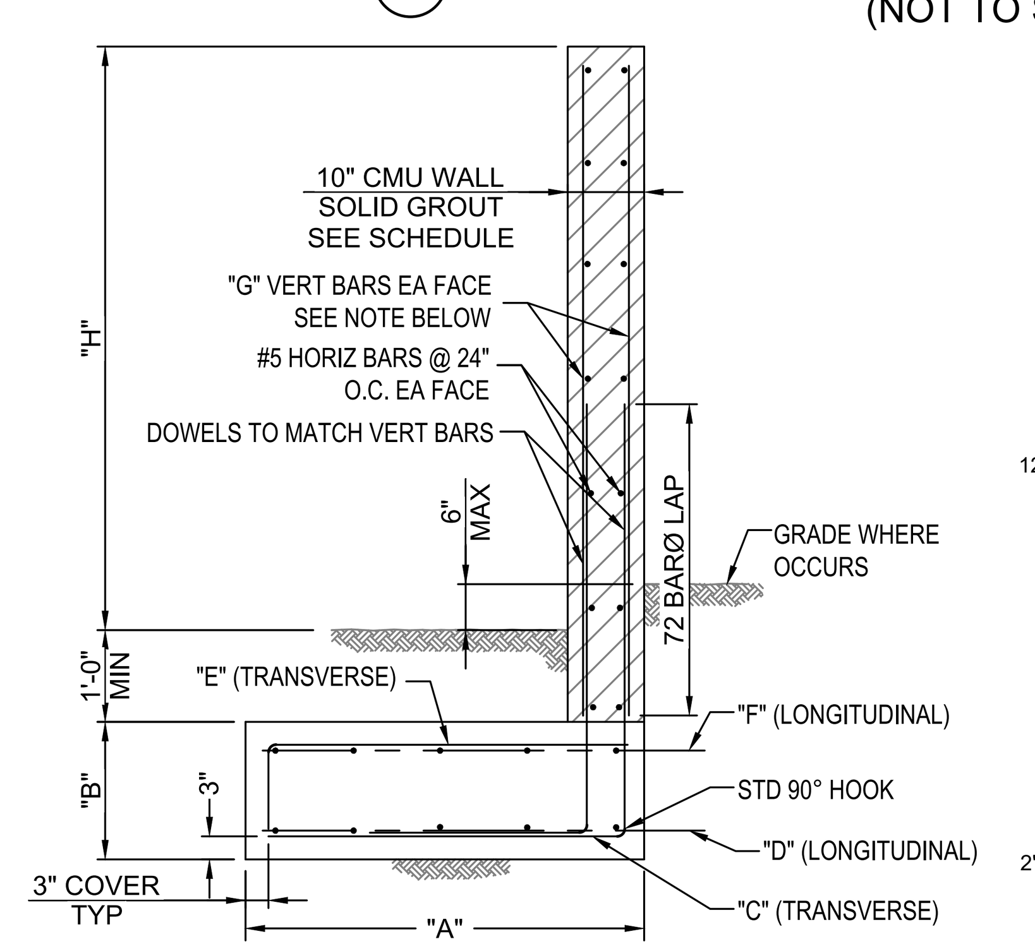
Bio Clean A Forterra Company

MWS-L-4-13-6'-0"-V-UG
STORMWATER BIOFILTRATION SYSTEM
STANDARD DETAIL

6 STORMWATER BIOFILTRATION DETAIL (MWS-L-4-13-6'-0"-V-UG) (EAST AND WEST)
(NOT TO SCALE)



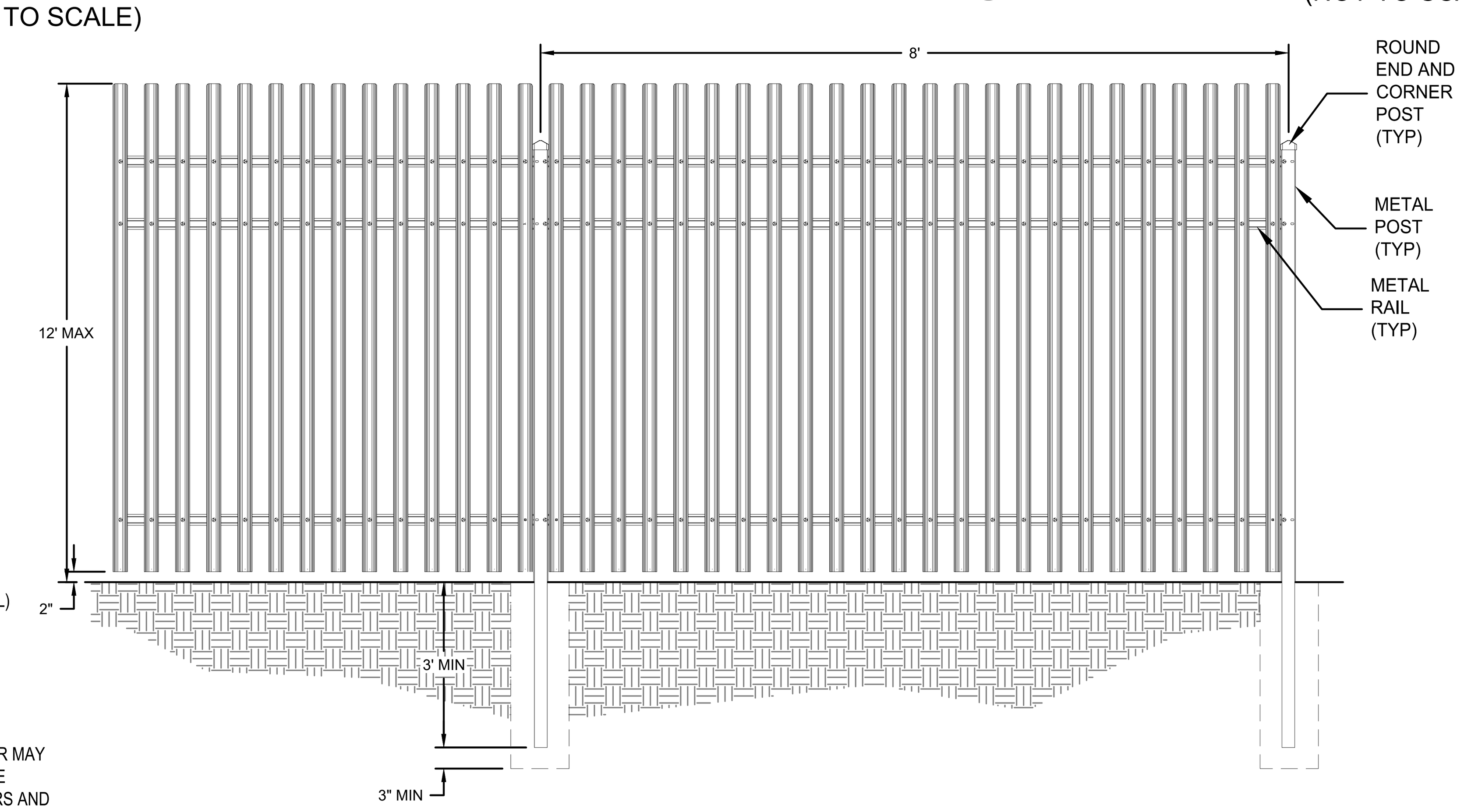
7 DROP INLET
(NOT TO SCALE)



BLOCK WALL SCHEDULE							
HEIGHT "H"	A	B	C	D	E	F	G
8'-0"	7'-3"	2'-0"	#7 @ 12" OC	8 #7	#7 @ 12" OC	8 #7	#6 @ 24" EF
12'-0"	9'-6"	2'-6"	#8 @ 12" OC	10 #8	#8 @ 12" OC	10 #8	#6 @ 8" EF

NOTES:
IN LIEU OF DOWELS, CONTRACTOR MAY PROVIDE ONE PIECE 'G' BARS AND EXTEND INTO FOOTING WITH STD 90° HOOK (ALT BEND).

8 ACOUSTIC WALL DETAIL
(NOT TO SCALE)



9 TYPICAL SAFETY AND SECURITY FENCE DETAIL
(NOT TO SCALE)

SEAL:

PERMIT PLAN SET NOT FOR CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

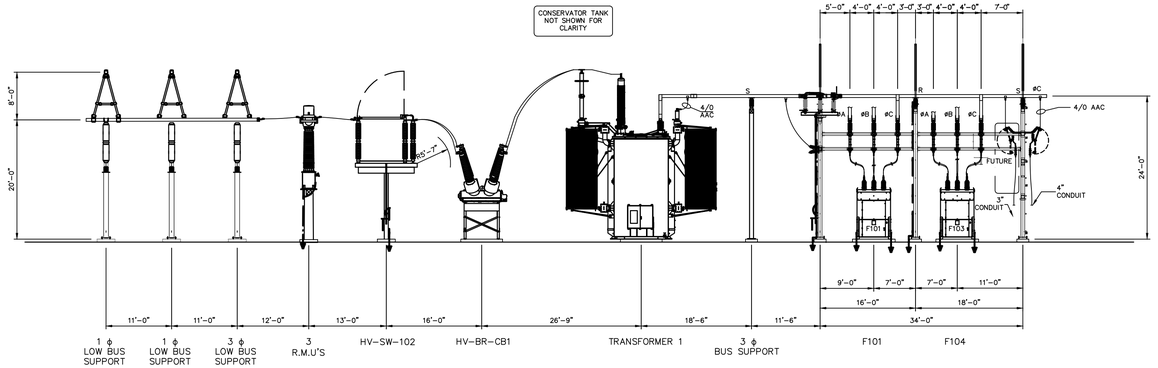
NO.	BY	DATE	REVISION	APP'D.

PROJECT: COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

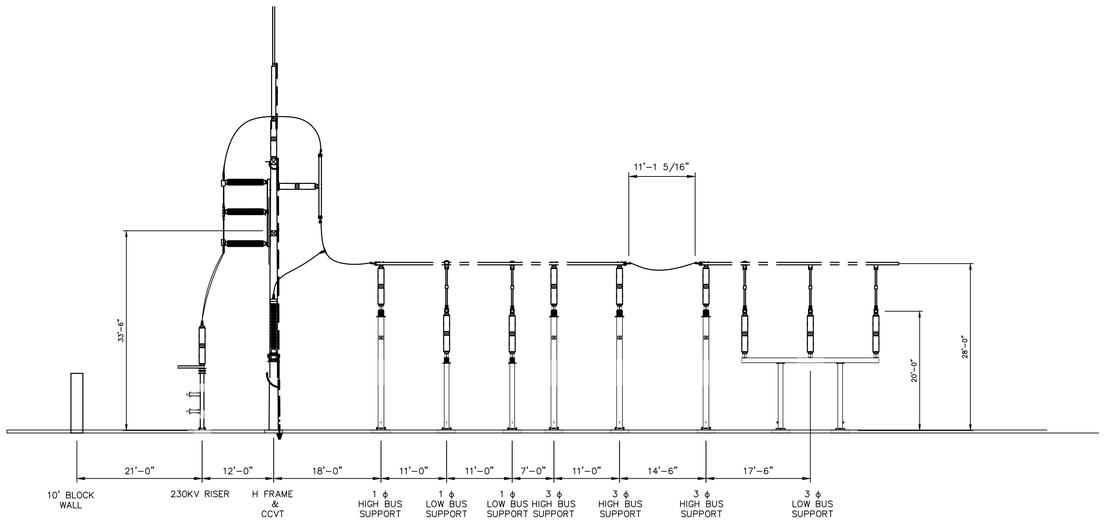
TITLE: DETAILS

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		C-6.0
APPROVED BY:	SH		
DATE:	12/11/2023		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

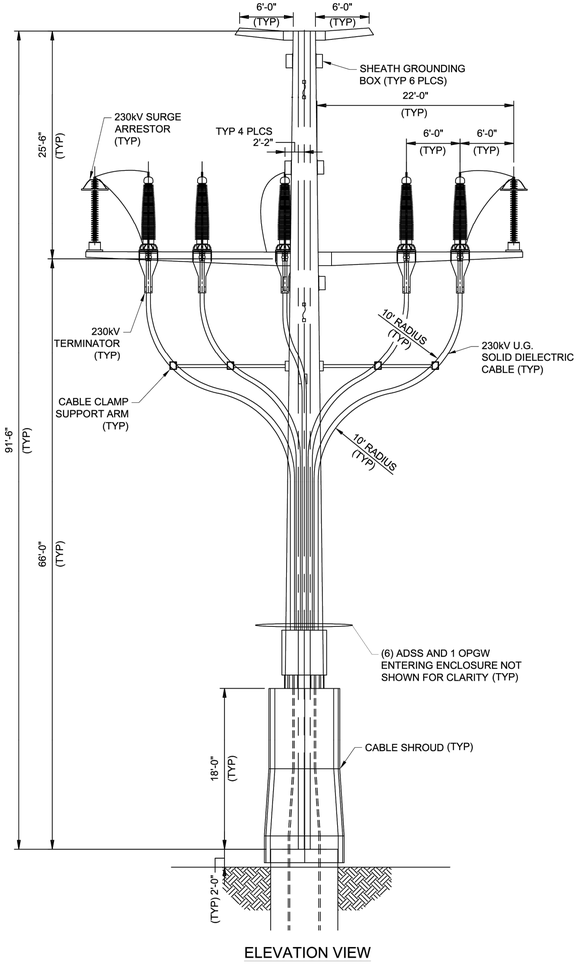


SECTION A–A
NTS

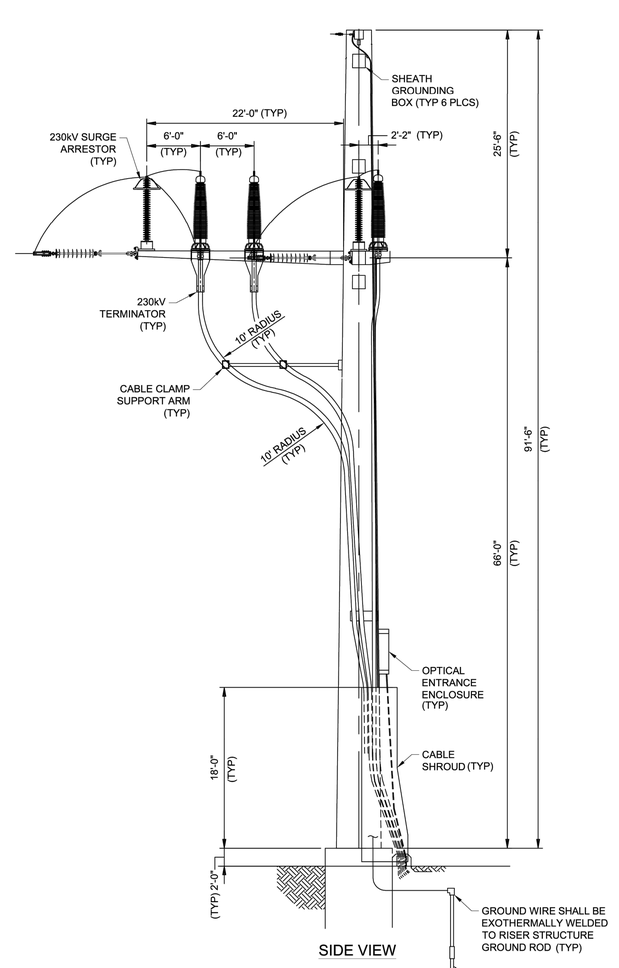


SECTION B–B
NTS

1 SUBSTATION PROFILE
(NOT TO SCALE)



ELEVATION VIEW



SIDE VIEW

2 TYPICAL RISER POLE FRAMING
(NOT TO SCALE)

SEAL:

PERMIT PLAN SET
NOT FOR
CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

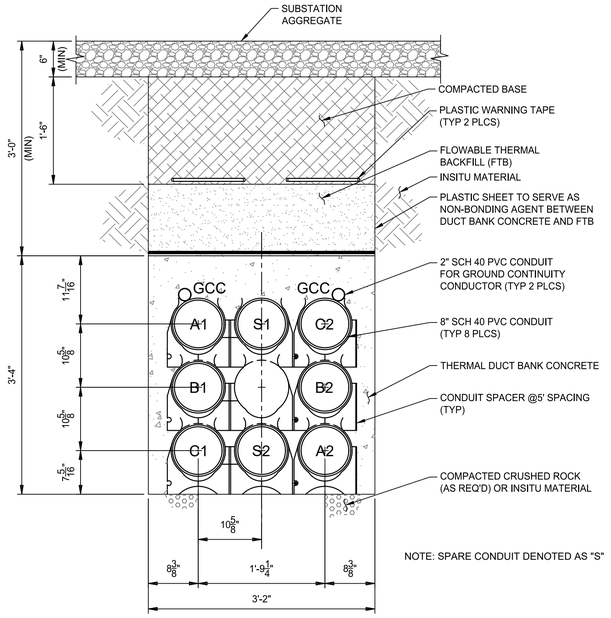
NO.	BY	DATE	REVISION	APP'D.

PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

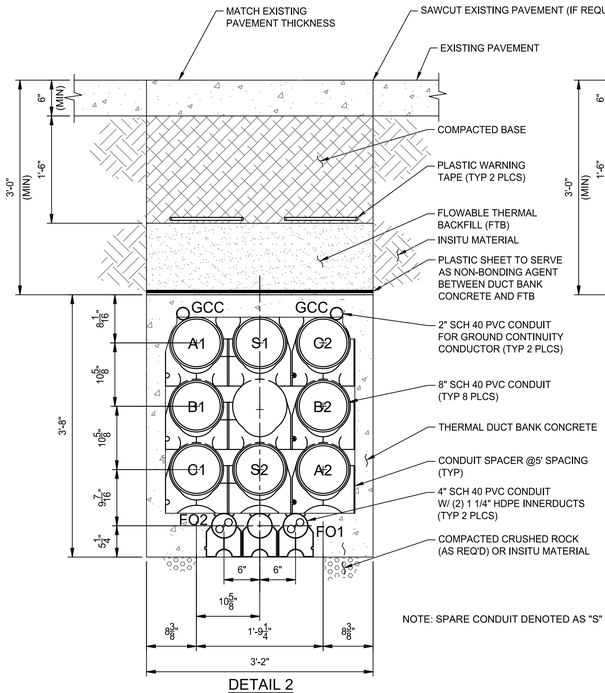
TITLE:
SUBSTATION PROFILE & ELECTRIC TIE-LINE DETAILS

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		
APPROVED BY:	SH		E-1.0
DATE:	12/11/2023		

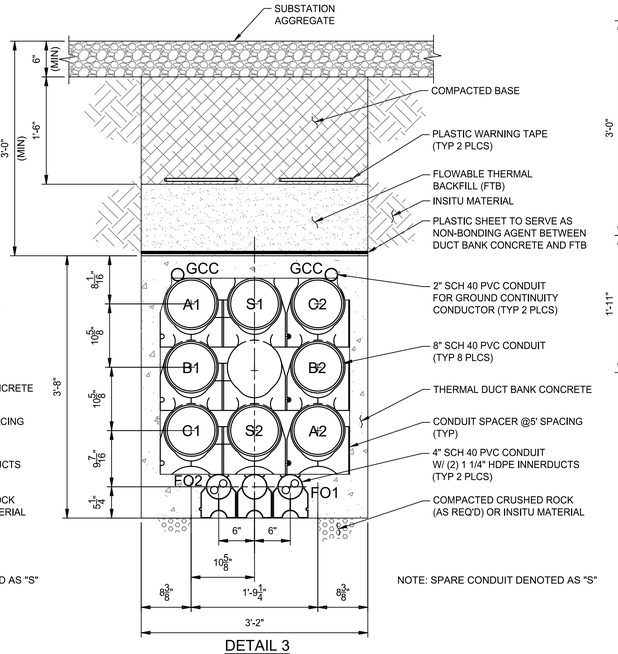
TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336



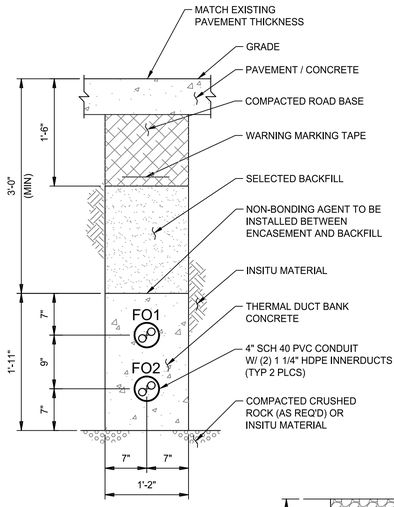
DETAIL 1
3X3 DUCT BANK
PAVEMENT SECTION
NTS



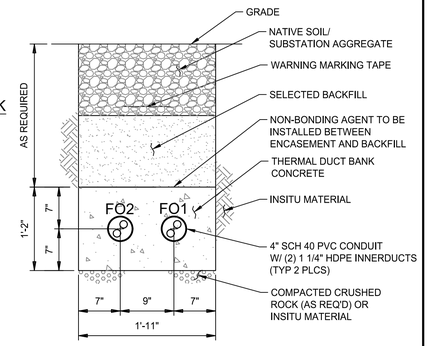
DETAIL 2
4X3 DUCT BANK
PAVEMENT SECTION
NTS



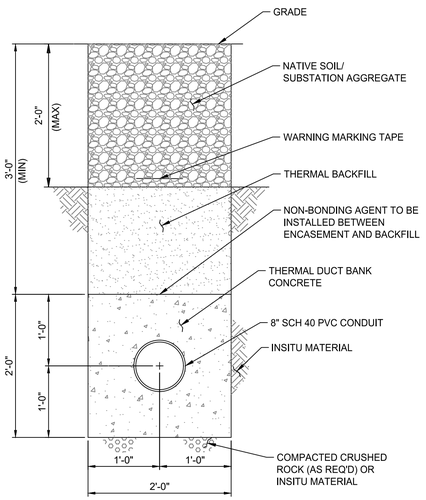
DETAIL 3
4X3 DUCT BANK
PAVEMENT SECTION
NTS



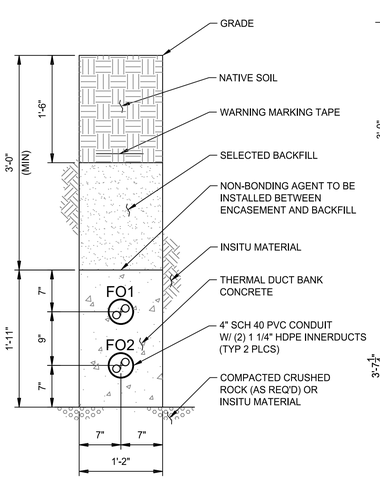
DETAIL 4
4" PVC CONDUIT
COMMUNICATION DUCT BANK
PAVEMENT SECTION
NTS



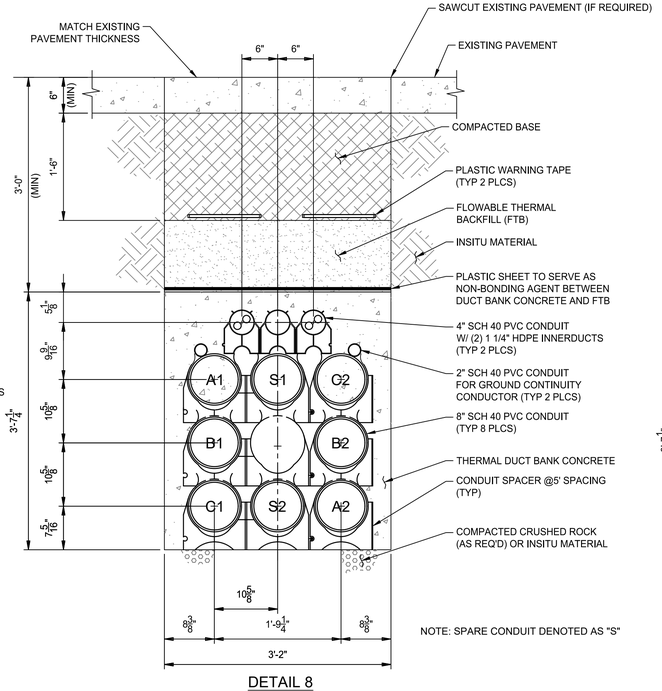
DETAIL 5
4" PVC CONDUIT
COMMUNICATION DUCT BANK
PAVEMENT SECTION
NTS



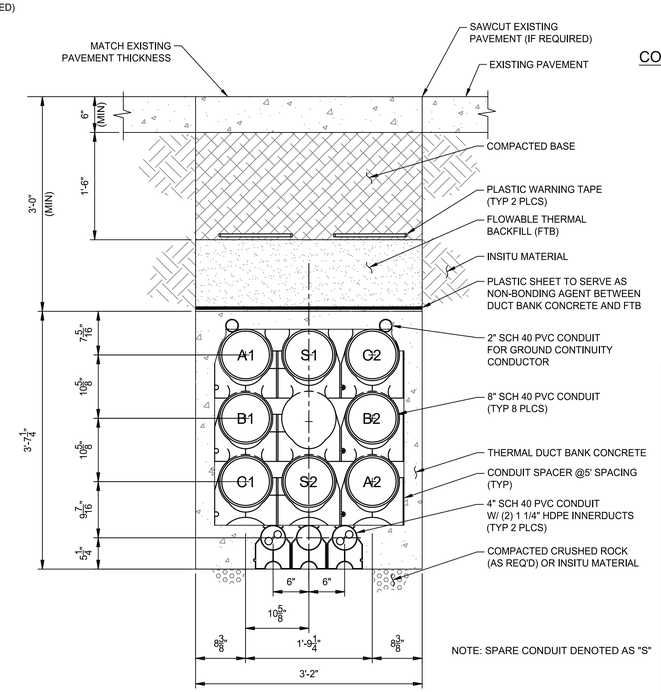
DETAIL 6
8" PVC CONDUIT
SINGLE PHASE DUCT BANK
NTS



DETAIL 7
4" PVC CONDUIT
COMMUNICATION DUCT BANK
PAVEMENT SECTION
NTS



DETAIL 8
3X4 DUCT BANK
PAVEMENT SECTION
NTS



DETAIL 9
3X4 DUCT BANK
PAVEMENT SECTION
NTS

1 TYPICAL DUCT BANK DETAILS
(NOT TO SCALE)

SEAL:

PERMIT PLAN SET
NOT FOR
CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.

PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
TYPICAL DUCT BANK DETAILS

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		
APPROVED BY:	SH		E-1.1
DATE:	12/11/2023		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

SLAUSON AVE

GARFIELD AVE

PROPOSED BATTERY BUILDING 1

PROPOSED BATTERY BUILDING 2

PROPOSED BATTERY BUILDING 3

PROPOSED BATTERY BUILDING 4

PROPOSED BATTERY BUILDING 5

PROPOSED BATTERY BUILDING 6

PROPOSED BATTERY BUILDING 7

PROPOSED BATTERY BUILDING 8

PLEASE SEE SHEET L-2.0 FOR MORE INFORMATION

NOT PART OF APPLICATION

OUTDOOR TABLE (TYP.)

TRASH ENCLOSURE

(2) SILLY

ASPH

CONC

STAIRS

PARKING STRIPING OBLITE

TANK

SHED

LEGEND

- CENTERLINE
- PARCEL BOUNDARY
- ROAD ROW
- EASEMENT LINE
- EX. CONTOUR
- MONITORING WELL
- SIGN
- STORM DRAIN MANHOLE
- STORM DRAIN GRATE
- SEWER MANHOLE
- MANHOLE
- FIRE HYDRANT
- POWER POLE
- GAS VALVE
- WATER VALVE
- ELECTRIC PULL BOX
- WATER METER
- SEWER CLEANOUT
- AREA LIGHT/ LIGHT POLE
- BOLLARD
- STORM DRAIN
- SEWER
- WATER LINE
- TELCO LINE
- OVERHEAD LINE
- PROPOSED UNDERGROUND ELEC
- 2022 APPROVED UNDERGROUND ELECTRIC
- PROPOSED STORM DRAIN
- 2022 APPROVED STORM DRAIN
- GRAVEL SURFACE
- ASPHALT PAVED SURFACE
- CONCRETE SURFACE
- PROPOSED BUILDING
- EXISTING BUILDING
- WALL
- CHAIN LINK FENCE
- PROPOSED SECURITY FENCE
- APPROX. CURB LINE AND GUTTER
- SURFACE WATER FLOW
- EXISTING PALM TREE

NORTH

GRAPHIC SCALE

40' 0 40'

1" = 40'

SEAL:

PERMIT PLAN SET NOT FOR CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.

PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
LANDSCAPE PLAN

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		L-1.0
APPROVED BY:	SH		
DATE:	12/11/2023		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

GENERAL LANDSCAPE NOTES

1. THE LANDSCAPE PLAN AND DETAILS ARE FOR LANDSCAPING INFORMATION ONLY. PLEASE REFER TO THE SITE LAYOUT PLAN, GRADING PLAN AND/OR UTILITIES PLAN FOR ALL OTHER INFORMATION.

2. MAINTENANCE RESPONSIBILITIES INCLUDE: APPROVED CULTIVATING, SPRAYING, WEEDING, WATERING, TIGHTENING OF TREE STRAP GUYS, PRUNING, FERTILIZING, MULCHING, AND ANY OTHER OPERATIONS NECESSARY TO MAINTAIN PLANT VIABILITY. MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER PLANTING AND CONTINUE FOR THE DURATION OF SOLAR ARRAY USE BY THE OWNER/OPERATOR AFTER FINAL ACCEPTANCE. WATERING OF THE LANDSCAPE BUFFER AREAS SHALL BE IMPLEMENTED BY THE USE OF A WATERING TRUCK.

3. ALL PLANTS SHALL BE ACCLIMATED BY THE SUPPLY NURSERY TO THE LOCAL HARDINESS ZONE AND BE CERTIFIED THAT THE PLANTING MATERIAL HAS BEEN GROWN FOR A MINIMUM OF (2) TWO YEARS AT THE SOURCE AND OBTAINED WITHIN 200 MILES OF PROJECT SITE UNLESS OTHERWISE APPROVED BY OWNER, CERTIFIED LANDSCAPE INSPECTOR, OR LANDSCAPE ARCHITECT.

4. THE LOCATIONS FOR PLANT MATERIAL ARE APPROXIMATE AND ARE SUBJECT TO FIELD ADJUSTMENT DUE TO SLOPE, VEGETATION, AND SITE FACTORS SUCH AS THE LOCATION OF ROCK OUTCROPS. PRIOR TO PLANTING THE CONTRACTOR SHALL ACCURATELY STAKE OUT THE LOCATIONS FOR ALL PLANTS. THE OWNER, CERTIFIED LANDSCAPE INSPECTOR, OR LANDSCAPE ARCHITECT SHALL APPROVE THE FIELD LOCATIONS OR ADJUSTMENTS OF THE PLANT MATERIAL.

5. ALL SHRUB MASSING SHALL BE MULCHED TO A DEPTH OF 3" AND SHREDDED HARDWOOD BARK MULCH SHALL BE USED FOR SHRUB MASSING AREAS.

6. NO PLANT SHALL BE PLACED IN THE GROUND BEFORE ROUGH GRADING HAS BEEN COMPLETED AND APPROVED BY THE OWNER, CERTIFIED LANDSCAPE INSPECTOR, OR LANDSCAPE CONTRACTOR. STAKING THE LOCATION OF ALL TREES AND SHRUBS SHALL BE COMPLETED PRIOR TO PLANTING FOR APPROVAL BY THE OWNER, CERTIFIED LANDSCAPE INSPECTOR, OR LANDSCAPE ARCHITECT. STAKING OF THE INSTALLED TREE MUST BE COMPLETED THE SAME DAY AS IT IS INSTALLED. ALL TREES SHALL BE STAKED OR GUYED AS PER THE DETAIL. SEE LANDSCAPING PLAN(S) FOR PLANTING DETAILS.

7. COORDINATE PLANT MATERIAL LOCATIONS WITH SITE UTILITIES. SEE SITE LAYOUT, GRADING AND/OR UTILITY PLANS FOR STORM, SANITARY, GAS, ELECTRIC, TELEPHONE AND WATER LINES. UTILITY LOCATIONS ARE APPROXIMATE. EXERCISE CARE WHEN DIGGING IN AREAS OF POTENTIAL CONFLICT WITH UNDERGROUND OR OVERHEAD UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE DUE TO CONTRACTOR'S NEGLIGENCE AND SHALL REPLACE OR REPAIR ANY DAMAGE AT CONTRACTOR'S EXPENSE.

8. LANDSCAPE PLANTING PITS MUST BE FREE DRAINING. PAVEMENT, COMPACTED SUBGRADE, AND BLASTED ROCK SHALL BE REMOVED TO A DEPTH OF 2' OR TO A GREATER DEPTH IF REQUIRED BY PLANTING DETAILS OR SPECIFICATIONS. REPLACE SOIL WITH MODERATELY COMPACTED LOAM OR SANDY LOAM FREE FROM STONES AND RUBBISH 1" OR GREATER IN DIAMETER AND ANY OTHER MATERIAL HARMFUL TO PLANT GROWTH AND DEVELOPMENT. PLANTING INSTALLATION SHALL BE AS DETAILED AND CONTAIN PLANTING MIX AS SPECIFIED UNLESS RECOMMENDED OTHERWISE BY SOIL ANALYSIS.

   PLANTING SOIL MIXTURE:
   2 PARTS PEAT MOSS
   5 PARTS TOPSOIL
   MYCORHIZA INOCULANT - "TRANSPLANT 1-STEP" AS MANUFACTURED BY ROOTS, INC. OR APPROVED EQUAL. USE PER MANUFACTURER'S RECOMMENDATIONS FOR TREES AND SHRUBS. FERTILIZER/LIME APPLY AS RECOMMENDED BY SOIL ANAYLSIS

   - TREES, AND SHRUBS: TREES AND SHRUBS SHALL BE NURSERY GROWN UNLESS OTHERWISE NOTED AND HARDY UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCATION OF THE PROJECT. THEY SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY, WITH NORMAL HABIT OF GROWTH. THEY SHALL BE SOUND, HEALTHY, VIGOROUS, WELL-BRANCHED AND DENSELY FOLIATED WHEN IN LEAF. THEY SHALL BE FREE OF DISEASE, INSECT PESTS, EGGS OR LARVAE. THEY SHALL HAVE HEALTHY AND WELL-DEVELOPED ROOT SYSTEMS. ALL TREES SHALL HAVE STRAIGHT SINGLE TRUNKS WITH THEIR MAIN LEADER INTACT UNLESS OTHERWISE STATED. THE OWNER, CERTIFIED LANDSCAPE INSPECTOR, LANDSCAPE ARCHITECT, QUEEN ANNE'S COUNTY PLANNING AND ZONING BOARD SHALL ONLY PERMIT SUBSTITUTIONS UPON WRITTEN APPROVAL. THEIR SIZES SHALL CONFORM TO THE MEASUREMENT SPECIFIED ON THE DRAWINGS. PLANTS LARGER THAN SPECIFIED ON THE DRAWINGS MAY BE USED IF APPROVED. THE USE OF SUCH PLANTS SHALL NOT INCREASE THE CONTRACT PRICE. ALL TREES AND SHRUBS SHALL BE MULCHED IN ACCORDANCE WITH THE RESPECTIVE PLANTING DETAIL(S) PROVIDED IN THE LANDSCAPING PLAN.

   - ALL PRUNING SHALL CONFORM TO THE TREE CARE INDUSTRY ASSOCIATION (TCIA) ANSI A300 (PART 1) - 2017 PRUNING STANDARDS. PRUNING STANDARDS SHALL RECOGNIZE BUT, ARE NOT LIMITED TO, THE FOLLOWING PRUNING OBJECTIVES: MANAGE RISK, MANAGE HEALTH, DEVELOP STRUCTURE, PROVIDE CLEARANCE, MANAGE SIZE OR SHAPE, IMPROVE AESTHETICS, MANAGE PRODUCTION OF FRUIT, FLOWERS, OR OTHER PRODUCTS, AND/OR MANAGE WILDLIFE HABITAT. DEVELOPING STRUCTURE SHALL IMPROVE BRANCH AND TRUNK ARCHITECTURE, PROMOTE OR SUBORDINATE CERTAIN LEADERS, STEMS, OR BRANCHES; PROMOTE DESIRABLE BRANCH SPACING; PROMOTE OR DISCOURAGE GROWTH IN A PARTICULAR DIRECTION (DIRECTIONAL PRUNING); MINIMIZE FUTURE INTERFERENCE WITH TRAFFIC, LINES OF SIGHT, INFRASTRUCTURE, OR OTHER PLANTS; RESTORE PLANTS FOLLOWING DAMAGE; AND/OR REJUVENATE SHRUBS. PROVIDING CLEARANCE SHALL ENSURE SAFE AND RELIABLE UTILITY SERVICES; MINIMIZE CURRENT INTERFERENCE WITH TRAFFIC, LINES OF SITE, INFRASTRUCTURE, OR OTHER PLANTS; RAISE CROWN(S) FOR MOVEMENT OF TRAFFIC OR LIGHT PENETRATION; ENSURE LINES OF SIGHT OR DESIRED VIEWS; PROVIDE ACCESS TO SITES, BUILDINGS, OR OTHER STRUCTURES; AND/OR COMPLY WITH REGULATIONS.

   - TOPSOIL SHALL BE INSTALLED AT A MINIMUM DEPTH OF 4 INCHES. CONTRACTOR SHALL SUBMIT TOPSOIL TO A CERTIFIED TESTING LABORATORY TO DETERMINE PH, FERTILITY, ORGANIC CONTENT AND MECHANICAL COMPOSITION. THE CONTRACTOR SHALL SUBMIT THE TEST RESULTS FROM REGIONAL EXTENSION OFFICE OF USDA TO THE OWNER, CERTIFIED LANDSCAPE INSPECTOR, OR LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL. CONTRACTOR SHALL INCORPORATE AMENDMENTS FOR GOOD PLANT GROWTH AND PROPER SOIL ACIDITY RECOMMENDED FROM THE TOPSOIL TEST.

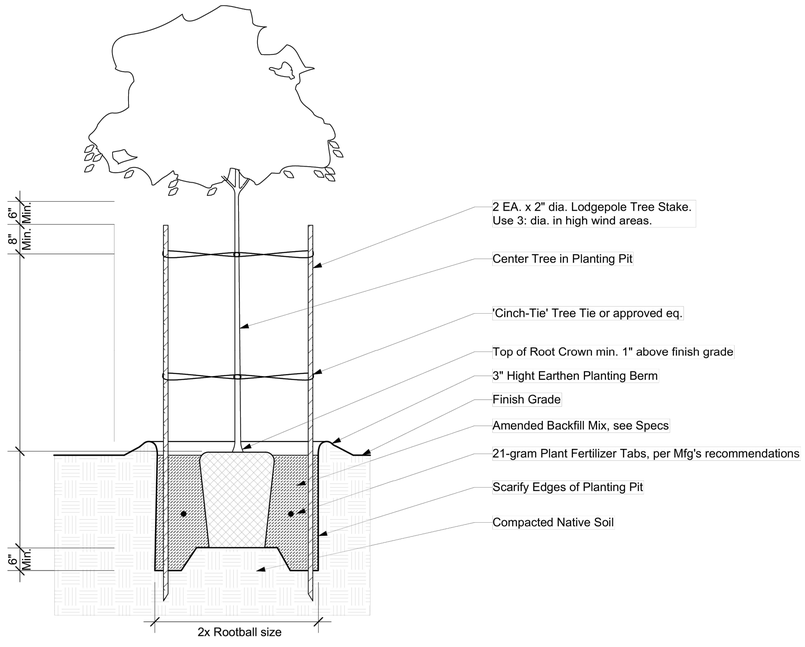
   - NO PHOSPHOROUS SHALL BE USED AT PLANTING TIME UNLESS SOIL TESTING HAS BEEN COMPLETED AND TESTED BY A HORTICULTURAL TESTING LAB AND SOIL TESTS SPECIFICALLY INDICATE A PHOSPHOROUS DEFICIENCY THAT IS HARMFUL, OR WILL PREVENT NEW LAWNS/GRASSES AND PLANTINGS FROM ESTABLISHING PROPERLY.

   - IF SOIL TESTS INDICATE A PHOSPHOROUS DEFICIENCY THAT WILL IMPACT PLANT AND LAWN ESTABLISHMENT, PHOSPHOROUS SHALL BE APPLIED AT THE MINIMUM RECOMMENDED LEVEL PRESCRIBED IN THE SOIL TEST FOLLOWING ALL APPLICABLE STANDARDS, REQUIREMENTS, AND/OR REGULATIONS.

9. NON-NATIVE PLANT SPECIES SHALL NOT TOTAL MORE THAN 50% OF ALL PLANTINGS. INVASIVE SPECIES SHALL NOT BE PERMITTED.

10. PLANT MATERIALS SHALL NOT INCLUDE MORE THAN 25% OF ANY SINGLE SPECIES. THE PLANTINGS SHALL INCLUDE A MIX OF EVERGREEN AND DECIDUOUS TREES, UNDERSTORY TREES, SHRUBS, AND FLOWERING HERBACEOUS LAYER.

11. ALL PLANT MATERIAL SHALL CONFORM TO THE PLAN SIZE SPECIFICATIONS AS ESTABLISHED BY THE AMERICAN STANDARD FOR NURSERY STOCK LATEST EDITION.



TREE PLANTING DETAIL

N.T.S.

LEGEND

PLANTING TEMPLATE - NORTHERN PLANTING BOUNDARY

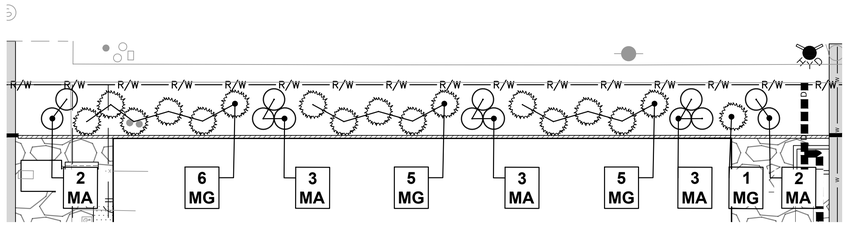
LANDSCAPE PLANTING SCHEDULE

EVERGREEN TREE

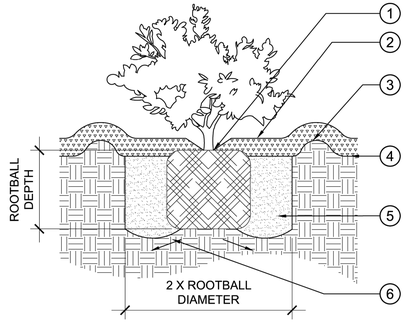
SYMBOL	BOTANICAL NAME/ COMMON PLANT NAME	QUANTITY	SIZE	ROOT	MATURE HEIGHT
MG	MAGNOLIA GRANDIFLORA 'LITTLE GEM' LITTLE GEM MAGNOLIA	17	5'-6' HT.	B&B	15'-20' HT.

SHRUBS

SYMBOL	BOTANICAL NAME/ COMMON PLANT NAME	QUANTITY	SIZE	ROOT	MATURE HEIGHT
MA	MAHONIA AQUIFOLIUM OREGON GRAPE HOLLY	13	30"-36" HT.	#3/5 CONT.	6'-7' HT.



PLANTING - NORTHERN PLANTING BOUNDARY (SEE SHEET L-1.0)



1. SET TOP OF ROOTBALL 1" ABOVE FINISH GRADE
2. 3" LAYER MULCH MATERIAL (SEE SPECS)
3. 3" HIGH WATERING BERM
4. FINISH GRADE
5. PLANTING BACKFILL (SEE SPECS)
6. SLOPE PLANTING HOLE TO CORNERS

SHRUB PLANTING DETAIL

N.T.S.

SEAL:

PERMIT PLAN SET NOT FOR CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.

PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
LANDSCAPE DETAILS

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		
APPROVED BY:	SH		L-2.0
DATE:	12/11/2023		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

NORTH

GRAPHIC SCALE

40' 0' 40'

1" = 40'

SEAL:

DRAFT

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISIONS	APP'D.
1	EK		ISSUED FOR LAND USE PERMITTING	BH

PROJECT:

COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:

SITE PLAN

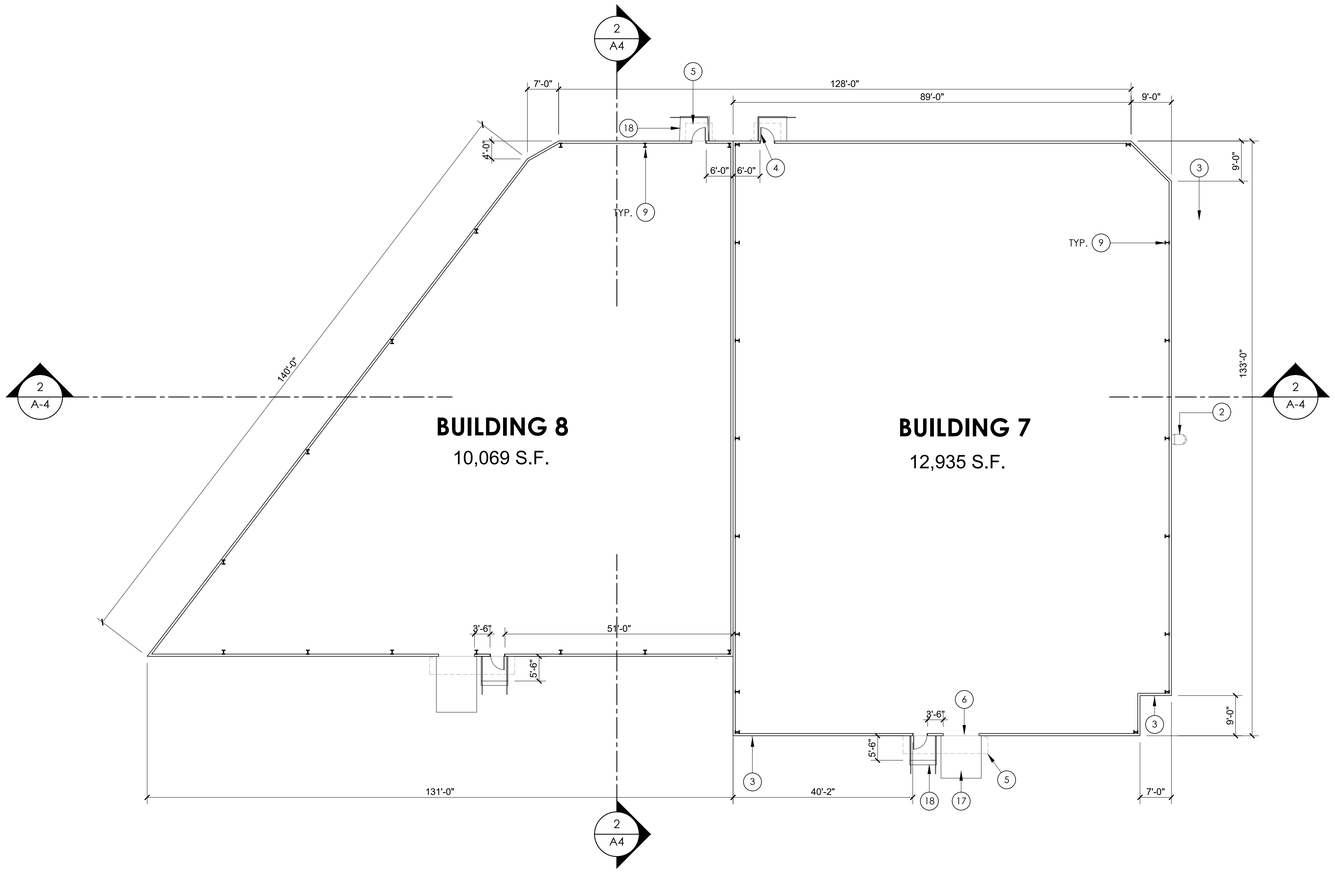
DRAWN BY: MS	PROJ. NO.: 511784
CHECKED FW	
APPROVED BY:	
DATE:	

TRC

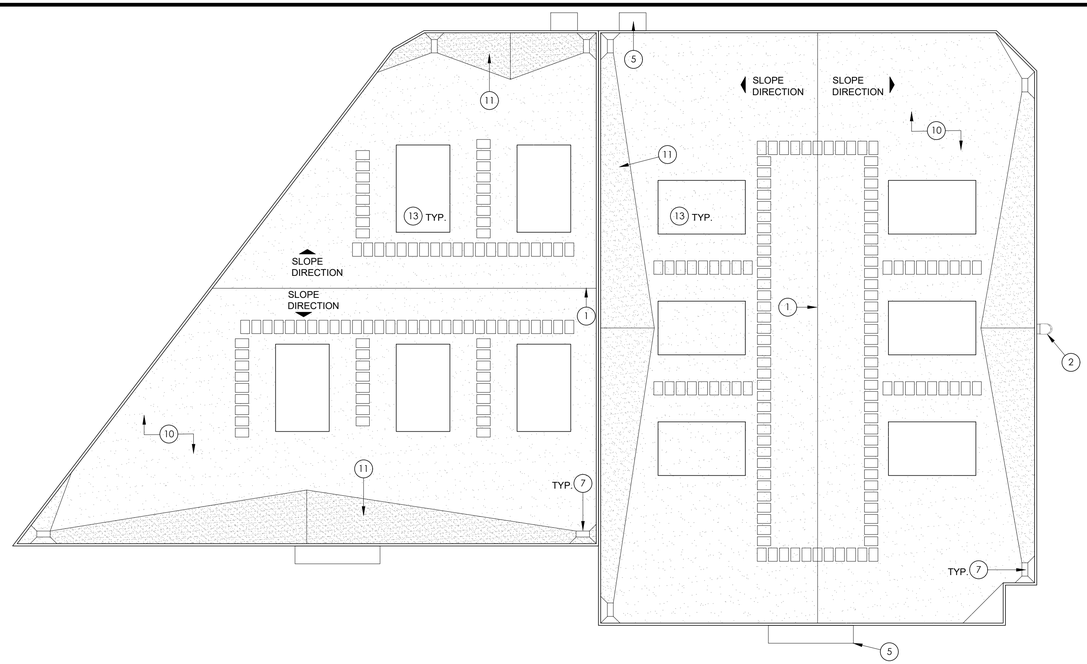
A-1

FILE NO:

SITE PLAN



FLOOR PLAN - BUILDING 7 AND 8 | 4



ROOF PLAN - BUILDING 7 AND 8 | 4

KEY NOTES

1. LINE INDICATE TOP OF ROOF SLOPE
2. ROOF ACCESS LADDER
3. DOWNSPOUT LOCATION
4. METAL DOOR
5. DOOR AWNING PROJECTION
6. 8'W. x10'H. METAL ROLL-UP DOOR
7. ROOF DRAIN AND OVERFLOW
8. ROOF TRAFFIC PADS
9. STEEL COLUMN
10. BITUMINOUS ROOFING SYSTEM
11. ROOF CRICKET
12. PARAPET WALL
13. MECHANICAL UNITS
14. ROOF ACCESS
15. CONCRETE STEPS
16. HANDRAIL
17. CONCRETE RAMP
18. CONCRETE STEP W/ RAILING

NORTH

GRAPHIC SCALE

8' 0' 16'

1/16" = 1'

SEAL:

DRAFT

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISIONS	APP'D.
1	EK		ISSUED FOR LAND USE PERMITTING	BH

PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

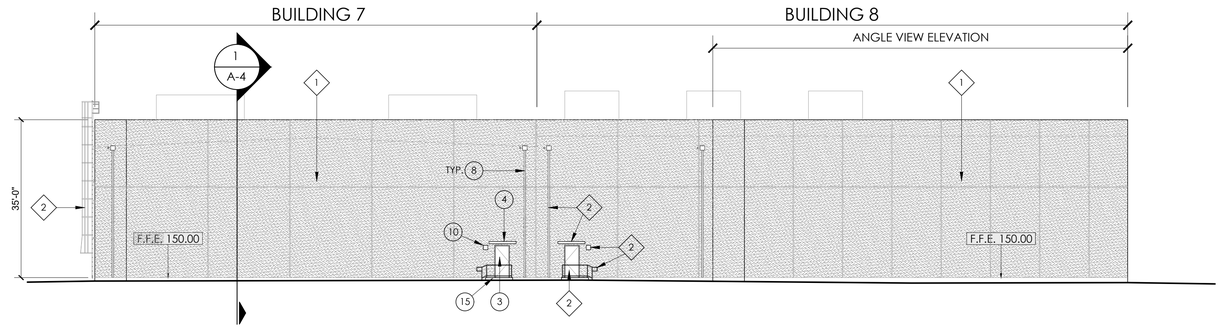
TITLE:
FLOOR PLAN - ROOF PLAN
BUILDING 7 AND 8

DRAWN BY: MS	PROJ. NO.: 511784
CHECKED FW	
APPROVED BY:	
DATE:	

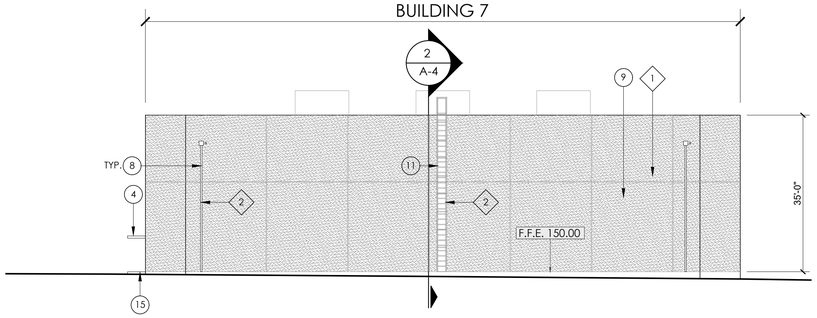
TRC

A-2

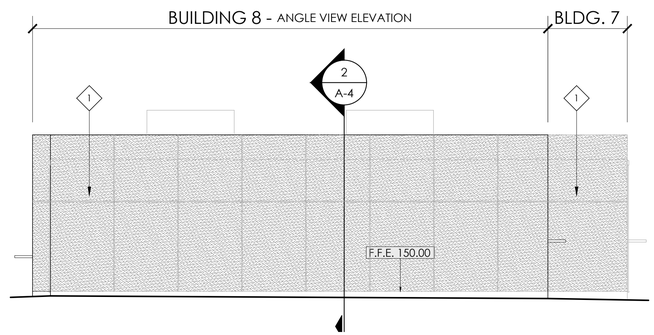
FILE NO:



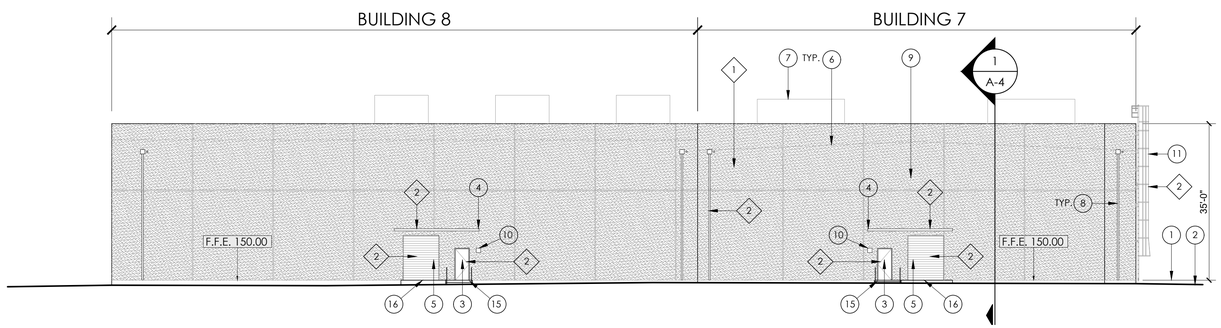
NORTH EAST ELEVATION - BUILDING 7 AND8 **2**



SOUTH EAST ELEVATION - BUILDING 7 **11**



NORTH WEST ELEVATION - BUILDING 8 **3**



SOUTH WEST ELEVATION - BUILDING 7,8 **4**

KEY NOTES

1. LINE OF CONCRETE FLOOR
2. GRADE
3. METAL DOOR
4. DOOR AWNING PROJECTION
5. 8'W, x10'H, METAL ROLL-UP DOOR
6. ROOF LINE PROJECTION
7. MECHANICAL UNIT
8. DOWN SPOUT
9. TILT-UP CONCRETE WALLS
10. LIGHT FIXTURE
11. ROOF ACCESS LADDER
12. CONCRETE STEPS
13. HANDRAIL
14. CONCRETE BASE
15. CONCRETE STEP W/ RAILING
16. CONCRETE RAMP

COLOR LEGEND

1	FIELD COLOR	- NAT. CONC.
2	TRIMS COLORS	- COLOR TO BE SELECTED

FOR MORE INFORMATION SEE A3.1

NORTH

GRAPHIC SCALE

8' 0' 16'

1/16" = 1'

SEAL:

DRAFT

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISIONS	APP'D.
1	EK		ISSUED FOR LAND USE PERMITTING	BH

PROJECT:

COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:

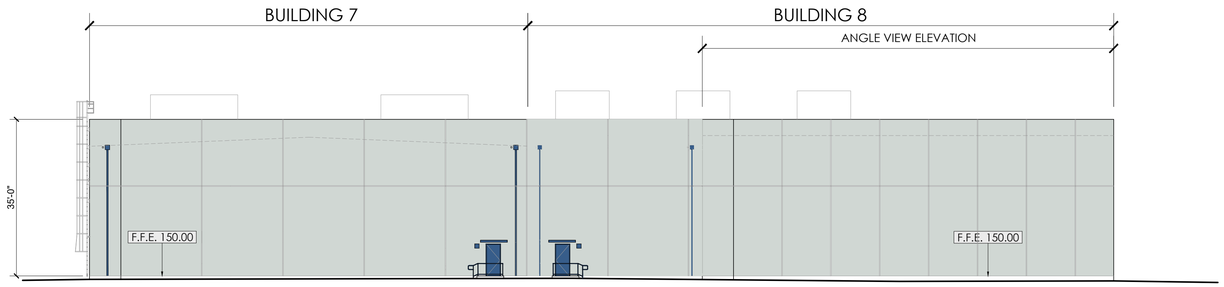
EXTERIOR ELEVATIONS

DRAWN BY: MS	PROJ. NO.: 511784
CHECKED FW	
APPROVED BY:	
DATE:	

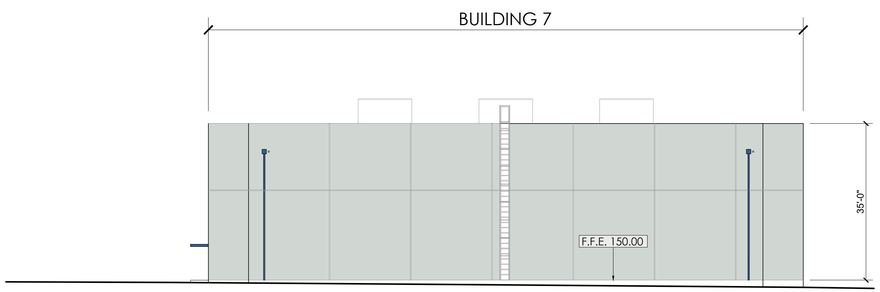
TRC

A-3

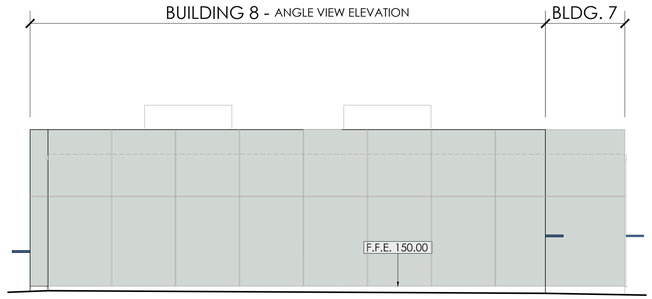
FILE NO:



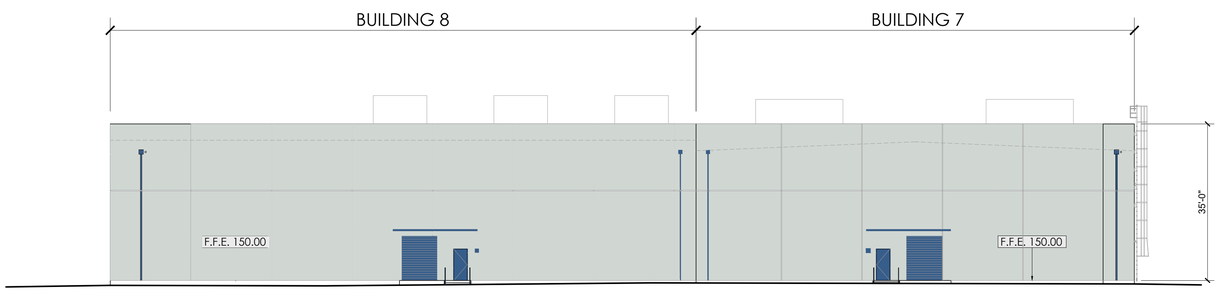
NORTH EAST ELEVATION - BUILDING 7 & 8 **2**



SOUTH EAST ELEVATION - BUILDING 7 **11**



NORTH WEST ELEVATION - BUILDING 8 **3**



SOUTH WEST ELEVATION - BUILDING 7 & 8 **4**

COLOR LEGEND

1	FIELD COLOR	CONCRETE	
2	TRIMS COLORS	- BLUE	

NORTH

GRAPHIC SCALE

8' 0' 16'

1/16" = 1'

SEAL:

DRAFT

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISIONS	APP'D.
1	EK		ISSUED FOR LAND USE PERMITTING	BH

PROJECT:

COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:

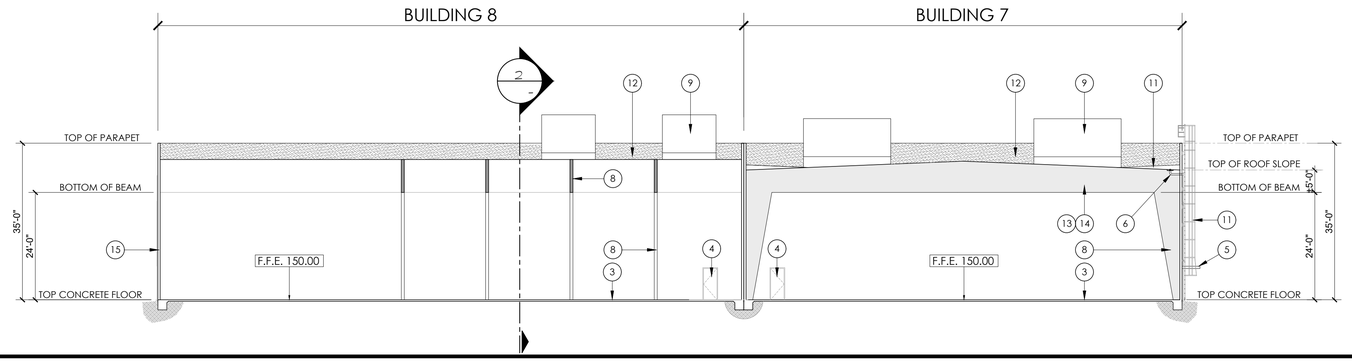
COLOR EXTERIOR ELEVATIONS

DRAWN BY: MS	PROJ. NO.: 511784
CHECKED FW	
APPROVED BY:	
DATE:	

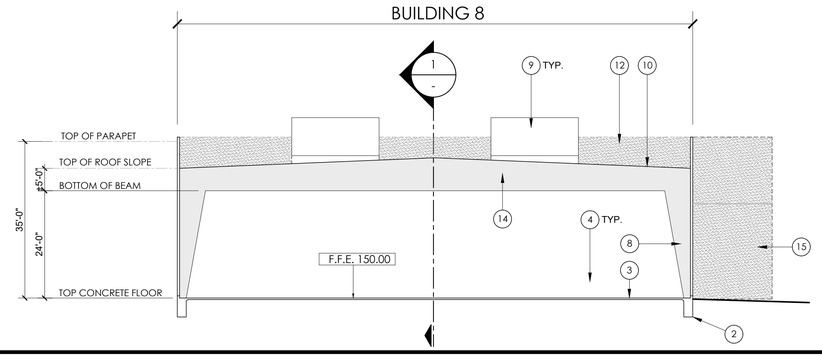
TRC

A-3.1

FILE NO:



BUILDING 7 AND 8 SECTION **1**



BUILDING 7 AND 8 SECTION **2**

KEY NOTES

1. ROOF ACCESS LADDER
2. CONCRETE FOOTING
3. CONCRETE SLAB
4. METAL DOOR
5. DOOR AWNING PROJECTION
6. DRAIN PIPE
7. RATED WALL
8. STEEL COLUMN
9. MECHANICAL UNITS
10. BUILT-UP ROOF - SLOPE PER ROOF PLAN
11. ROOF CRICKET
12. PARAPET WALL
13. HATCHED AREA INDICATES ROOF FRAMING STRUCTURE
14. STEEL BEAM
15. TILT-UP CONCRETE WALLS

NORTH

GRAPHIC SCALE

8' 0' 16'

1/16" = 1'

SEAL:

DRAFT

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISIONS	APP'D.
1	EK		ISSUED FOR LAND USE PERMITTING	BH

PROJECT:

COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:

TYPICAL BUILDING SECTIONS

DRAWN BY: MS	PROJ. NO.: 511784
CHECKED FW	
APPROVED BY:	
DATE:	

TRC

A-4

FILE NO:

APPENDIX C
Emissions Modeling

Commerce 2023 Energy Storage Project Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Commerce 2023 Energy Storage Project
Construction Start Date	3/1/2024
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	0.50
Precipitation (days)	18.2
Location	6920 E Slauson Ave, Commerce, CA 90040, USA
County	Los Angeles-South Coast
City	Commerce
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4199
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.16

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Unrefrigerated Warehouse-No Rail	108	1000sqft	5.03	108,000	1,240	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.33	1.96	18.3	19.6	0.03	0.84	2.90	3.73	0.77	1.37	2.14	—	3,276	3,276	0.14	0.10	3,310
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.45	2.75	29.5	24.1	0.06	1.10	2.90	3.79	1.02	1.37	2.14	—	7,080	7,080	0.34	0.60	7,267
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.07	0.89	7.68	10.1	0.02	0.32	0.53	0.85	0.29	0.18	0.47	—	2,076	2,076	0.09	0.06	2,098
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.20	0.16	1.40	1.84	< 0.005	0.06	0.10	0.16	0.05	0.03	0.09	—	344	344	0.01	0.01	347

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.33	1.96	18.3	19.6	0.03	0.84	2.90	3.73	0.77	1.37	2.14	—	3,276	3,276	0.14	0.10	3,310
2025	1.57	1.32	11.1	15.6	0.03	0.44	0.52	0.96	0.40	0.13	0.53	—	3,259	3,259	0.14	0.10	3,294
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.45	2.75	29.5	24.1	0.06	1.10	2.90	3.79	1.02	1.37	2.14	—	7,080	7,080	0.34	0.60	7,267
2025	1.57	1.32	11.2	15.3	0.03	0.44	0.52	0.96	0.40	0.13	0.53	—	3,237	3,237	0.14	0.10	3,270
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.07	0.89	7.68	8.80	0.02	0.32	0.53	0.85	0.29	0.18	0.47	—	2,076	2,076	0.09	0.06	2,098
2025	1.02	0.85	7.29	10.1	0.02	0.29	0.30	0.60	0.27	0.07	0.34	—	2,038	2,038	0.09	0.06	2,057
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.20	0.16	1.40	1.61	< 0.005	0.06	0.10	0.16	0.05	0.03	0.09	—	344	344	0.01	0.01	347
2025	0.19	0.16	1.33	1.84	< 0.005	0.05	0.06	0.11	0.05	0.01	0.06	—	337	337	0.01	0.01	341

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.99	3.19	0.66	5.88	0.01	0.05	0.15	0.20	0.05	0.04	0.09	0.05	1,336	1,336	0.12	0.01	1,344
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.15	2.42	0.63	1.12	< 0.005	0.04	0.15	0.19	0.04	0.04	0.08	0.05	1,310	1,310	0.12	0.01	1,317

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.72	2.95	0.66	4.36	0.01	0.05	0.15	0.19	0.05	0.04	0.08	0.05	1,325	1,325	0.12	0.01	1,333
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.13	0.54	0.12	0.80	< 0.005	0.01	0.03	0.04	0.01	0.01	0.02	0.01	219	219	0.02	< 0.005	221

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.09	0.08	0.06	0.71	< 0.005	< 0.005	0.15	0.15	< 0.005	0.04	0.04	—	167	167	0.01	0.01	169
Area	0.84	3.08	0.04	4.70	< 0.005	0.01	—	0.01	0.01	—	0.01	—	19.3	19.3	< 0.005	< 0.005	19.4
Energy	0.06	0.03	0.56	0.47	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,150	1,150	0.10	0.01	1,155
Water	—	—	—	—	—	—	—	—	—	—	—	0.05	0.27	0.33	0.01	< 0.005	0.51
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.99	3.19	0.66	5.88	0.01	0.05	0.15	0.20	0.05	0.04	0.09	0.05	1,336	1,336	0.12	0.01	1,344
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.09	0.08	0.07	0.65	< 0.005	< 0.005	0.15	0.15	< 0.005	0.04	0.04	—	160	160	0.01	0.01	162
Area	—	2.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.06	0.03	0.56	0.47	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,150	1,150	0.10	0.01	1,155
Water	—	—	—	—	—	—	—	—	—	—	—	0.05	0.27	0.33	0.01	< 0.005	0.51
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.15	2.42	0.63	1.12	< 0.005	0.04	0.15	0.19	0.04	0.04	0.08	0.05	1,310	1,310	0.12	0.01	1,317

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.09	0.08	0.07	0.67	< 0.005	< 0.005	0.15	0.15	< 0.005	0.04	0.04	—	162	162	0.01	0.01	164
Area	0.57	2.84	0.03	3.22	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	13.2	13.2	< 0.005	< 0.005	13.3
Energy	0.06	0.03	0.56	0.47	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,150	1,150	0.10	0.01	1,155
Water	—	—	—	—	—	—	—	—	—	—	—	0.05	0.27	0.33	0.01	< 0.005	0.51
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.72	2.95	0.66	4.36	0.01	0.05	0.15	0.19	0.05	0.04	0.08	0.05	1,325	1,325	0.12	0.01	1,333
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.02	0.01	0.01	0.12	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	26.7	26.7	< 0.005	< 0.005	27.2
Area	0.10	0.52	< 0.005	0.59	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.19	2.19	< 0.005	< 0.005	2.20
Energy	0.01	0.01	0.10	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	190	190	0.02	< 0.005	191
Water	—	—	—	—	—	—	—	—	—	—	—	0.01	0.05	0.05	< 0.005	< 0.005	0.08
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.13	0.54	0.12	0.80	< 0.005	0.01	0.03	0.04	0.01	0.01	0.02	0.01	219	219	0.02	< 0.005	221

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	3.12	2.62	24.9	21.7	0.03	1.06	—	1.06	0.98	—	0.98	—	3,425	3,425	0.14	0.03	3,437
Demolition	—	—	—	—	—	—	1.63	1.63	—	0.25	0.25	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.02	0.89	< 0.005	0.04	—	0.04	0.04	—	0.04	—	141	141	0.01	< 0.005	141
Demolition	—	—	—	—	—	—	0.07	0.07	—	0.01	0.01	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.19	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	23.3	23.3	< 0.005	< 0.005	23.4
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	0.70	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	138	138	0.01	0.01	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Hauling	0.26	0.07	4.56	1.69	0.02	0.04	0.92	0.97	0.04	0.25	0.30	—	3,517	3,517	0.19	0.56	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.75	5.75	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Hauling	0.01	< 0.005	0.19	0.07	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	145	145	0.01	0.02	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.95	0.95	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.9	23.9	< 0.005	< 0.005	—

3.3. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.26	1.90	18.2	18.8	0.03	0.84	—	0.84	0.77	—	0.77	—	2,958	2,958	0.12	0.02	2,969
Dust From Material Movement	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.26	1.90	18.2	18.8	0.03	0.84	—	0.84	0.77	—	0.77	—	2,958	2,958	0.12	0.02	2,969
Dust From Material Movement	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.75	0.77	< 0.005	0.03	—	0.03	0.03	—	0.03	—	122	122	< 0.005	< 0.005	122
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.05	0.05	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.14	0.14	< 0.005	0.01	—	0.01	0.01	—	0.01	—	20.1	20.1	< 0.005	< 0.005	20.2
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.81	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	145	145	0.01	0.01	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	0.70	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	138	138	0.01	0.01	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.75	5.75	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.95	0.95	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—

3.5. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.26	1.90	18.2	18.8	0.03	0.84	—	0.84	0.77	—	0.77	—	2,958	2,958	0.12	0.02	2,969
Dust From Material Movement	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.09	0.08	0.75	0.77	< 0.005	0.03	—	0.03	0.03	—	0.03	—	122	122	< 0.005	< 0.005	122
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.05	0.05	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.14	0.14	< 0.005	0.01	—	0.01	0.01	—	0.01	—	20.1	20.1	< 0.005	< 0.005	20.2
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.81	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	145	145	0.01	0.01	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.75	5.75	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.95	0.95	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—

3.7. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.47	0.39	3.64	4.26	0.01	0.16	—	0.16	0.15	—	0.15	—	779	779	0.03	0.01	782
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.67	0.78	< 0.005	0.03	—	0.03	0.03	—	0.03	—	129	129	0.01	< 0.005	129

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.19	0.16	2.45	0.00	0.00	0.40	0.40	0.00	0.09	0.09	—	439	439	0.02	0.02	—
Vendor	0.04	0.02	0.55	0.28	< 0.005	0.01	0.12	0.12	0.01	0.03	0.04	—	438	438	0.02	0.06	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.18	0.19	2.12	0.00	0.00	0.40	0.40	0.00	0.09	0.09	—	417	417	0.02	0.02	—
Vendor	0.04	0.02	0.57	0.29	< 0.005	0.01	0.12	0.12	0.01	0.03	0.04	—	439	439	0.02	0.06	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.72	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	137	137	0.01	0.01	—
Vendor	0.01	0.01	0.19	0.09	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	142	142	0.01	0.02	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	22.7	22.7	< 0.005	< 0.005	—
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.6	23.6	< 0.005	< 0.005	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—

3.9. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.47	1.84	< 0.005	0.06	—	0.06	0.06	—	0.06	—	338	338	0.01	< 0.005	339
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.27	0.34	< 0.005	0.01	—	0.01	0.01	—	0.01	—	55.9	55.9	< 0.005	< 0.005	56.1
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.17	0.16	1.96	0.00	0.00	0.40	0.40	0.00	0.09	0.09	—	408	408	0.02	0.02	—
Vendor	0.03	0.01	0.55	0.27	< 0.005	0.01	0.12	0.12	< 0.005	0.03	0.03	—	431	431	0.02	0.06	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.03	0.02	0.02	0.29	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	58.3	58.3	< 0.005	< 0.005	—
Vendor	< 0.005	< 0.005	0.08	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	60.8	60.8	< 0.005	0.01	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.66	9.66	< 0.005	< 0.005	—
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.1	10.1	< 0.005	< 0.005	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—

3.11. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.55	0.46	4.29	5.36	0.01	0.18	—	0.18	0.16	—	0.16	—	985	985	0.04	0.01	989

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.78	0.98	< 0.005	0.03	—	0.03	0.03	—	0.03	—	163	163	0.01	< 0.005	164
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.18	0.14	2.26	0.00	0.00	0.40	0.40	0.00	0.09	0.09	—	430	430	0.02	0.02	—
Vendor	0.03	0.01	0.53	0.27	< 0.005	0.01	0.12	0.12	< 0.005	0.03	0.03	—	431	431	0.02	0.06	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.17	0.16	1.96	0.00	0.00	0.40	0.40	0.00	0.09	0.09	—	408	408	0.02	0.02	—
Vendor	0.03	0.01	0.55	0.27	< 0.005	0.01	0.12	0.12	< 0.005	0.03	0.03	—	431	431	0.02	0.06	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	0.84	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	170	170	0.01	0.01	—
Vendor	0.01	0.01	0.23	0.11	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	177	177	0.01	0.02	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.2	28.2	< 0.005	< 0.005	—
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	29.3	29.3	< 0.005	< 0.005	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—

3.13. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	1,517
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	1,517
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	1.12	1.50	< 0.005	0.05	—	0.05	0.05	—	0.05	—	228	228	0.01	< 0.005	229
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.20	0.27	< 0.005	0.01	—	0.01	0.01	—	0.01	—	37.7	37.7	< 0.005	< 0.005	37.8
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.05	0.75	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	142	142	0.01	0.01	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.05	0.65	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	135	135	0.01	0.01	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	20.6	20.6	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.42	3.42	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—

3.15. Trenching (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.24	1.04	7.01	6.77	0.03	0.25	—	0.25	0.23	—	0.23	—	2,992	2,992	0.12	0.02	3,003
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.06	1.02	< 0.005	0.04	—	0.04	0.03	—	0.03	—	451	451	0.02	< 0.005	452
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.19	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	74.7	74.7	< 0.005	< 0.005	74.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.81	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	145	145	0.01	0.01	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	21.1	21.1	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.49	3.49	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	—

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.09	0.08	0.06	0.71	< 0.005	< 0.005	0.15	0.15	< 0.005	0.04	0.04	—	167	167	0.01	0.01	169
Total	0.09	0.08	0.06	0.71	< 0.005	< 0.005	0.15	0.15	< 0.005	0.04	0.04	—	167	167	0.01	0.01	169
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.09	0.08	0.07	0.65	< 0.005	< 0.005	0.15	0.15	< 0.005	0.04	0.04	—	160	160	0.01	0.01	162

Total	0.09	0.08	0.07	0.65	< 0.005	< 0.005	0.15	0.15	< 0.005	0.04	0.04	—	160	160	0.01	0.01	162
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.02	0.01	0.01	0.12	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	26.7	26.7	< 0.005	< 0.005	27.2
Total	0.02	0.01	0.01	0.12	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	26.7	26.7	< 0.005	< 0.005	27.2

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	483	483	0.05	0.01	486
Total	—	—	—	—	—	—	—	—	—	—	—	—	483	483	0.05	0.01	486
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	483	483	0.05	0.01	486
Total	—	—	—	—	—	—	—	—	—	—	—	—	483	483	0.05	0.01	486
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	79.9	79.9	0.01	< 0.005	80.4
Total	—	—	—	—	—	—	—	—	—	—	—	—	79.9	79.9	0.01	< 0.005	80.4

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.06	0.03	0.56	0.47	< 0.005	0.04	—	0.04	0.04	—	0.04	—	667	667	0.06	< 0.005	669
Total	0.06	0.03	0.56	0.47	< 0.005	0.04	—	0.04	0.04	—	0.04	—	667	667	0.06	< 0.005	669
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.06	0.03	0.56	0.47	< 0.005	0.04	—	0.04	0.04	—	0.04	—	667	667	0.06	< 0.005	669
Total	0.06	0.03	0.56	0.47	< 0.005	0.04	—	0.04	0.04	—	0.04	—	667	667	0.06	< 0.005	669
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.01	0.01	0.10	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	110	110	0.01	< 0.005	111
Total	0.01	0.01	0.10	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	110	110	0.01	< 0.005	111

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	2.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.84	0.77	0.04	4.70	< 0.005	0.01	—	0.01	0.01	—	0.01	—	19.3	19.3	< 0.005	< 0.005	19.4
Total	0.84	3.08	0.04	4.70	< 0.005	0.01	—	0.01	0.01	—	0.01	—	19.3	19.3	< 0.005	< 0.005	19.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	2.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	2.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.42	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.10	0.10	< 0.005	0.59	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.19	2.19	< 0.005	< 0.005	2.20
Total	0.10	0.52	< 0.005	0.59	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.19	2.19	< 0.005	< 0.005	2.20

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	0.05	0.27	0.33	0.01	< 0.005	0.51
Total	—	—	—	—	—	—	—	—	—	—	—	0.05	0.27	0.33	0.01	< 0.005	0.51
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	0.05	0.27	0.33	0.01	< 0.005	0.51
Total	—	—	—	—	—	—	—	—	—	—	—	0.05	0.27	0.33	0.01	< 0.005	0.51
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated Warehou Rail	—	—	—	—	—	—	—	—	—	—	—	0.01	0.05	0.05	< 0.005	< 0.005	0.08
Total	—	—	—	—	—	—	—	—	—	—	—	0.01	0.05	0.05	< 0.005	< 0.005	0.08

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehou se-No Rail	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehou se-No Rail	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehou se-No Rail	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	3/1/2024	3/21/2024	5.00	15.0	—
Rough Grading	Grading	3/22/2024	4/11/2024	5.00	15.0	—
Fine Grading	Grading	4/12/2024	5/2/2024	5.00	15.0	—

Building	Building Construction	7/19/2024	3/13/2025	5.00	170	—
Installation	Building Construction	5/30/2025	12/25/2025	5.00	150	—
Paving / Surfacing	Paving	3/14/2025	5/29/2025	5.00	55.0	—
Trenching / Foundations	Trenching	5/3/2024	7/18/2024	5.00	55.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Rough Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Rough Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Rough Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Rough Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Fine Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Fine Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Fine Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Fine Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building	Welders	Diesel	Average	1.00	8.00	46.0	0.45

Installation	Cranes	Diesel	Average	1.00	7.00	367	0.29
Installation	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Installation	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Installation	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Installation	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving / Surfacing	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving / Surfacing	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving / Surfacing	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Trenching / Foundations	Off-Highway Trucks	Diesel	Average	2.00	3.00	376	0.38
Trenching / Foundations	Off-Highway Trucks	Diesel	Average	2.00	3.00	376	0.38
Trenching / Foundations	Off-Highway Trucks	Diesel	Average	2.00	3.00	376	0.38

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Rough Grading	—	—	—	—
Rough Grading	Worker	15.0	12.6	LDA,LDT1,LDT2
Rough Grading	Vendor	—	7.75	HHDT,MHDT
Rough Grading	Hauling	0.00	20.0	HHDT
Rough Grading	Onsite truck	—	—	HHDT
Fine Grading	—	—	—	—
Fine Grading	Worker	15.0	12.6	LDA,LDT1,LDT2
Fine Grading	Vendor	—	7.75	HHDT,MHDT
Fine Grading	Hauling	0.00	20.0	HHDT
Fine Grading	Onsite truck	—	—	HHDT
Building	—	—	—	—

Building	Worker	45.4	12.6	LDA,LDT1,LDT2
Building	Vendor	17.7	7.75	HHDT,MHDT
Building	Hauling	0.00	20.0	HHDT
Building	Onsite truck	—	—	HHDT
Installation	—	—	—	—
Installation	Worker	45.4	12.6	LDA,LDT1,LDT2
Installation	Vendor	17.7	7.75	HHDT,MHDT
Installation	Hauling	0.00	20.0	HHDT
Installation	Onsite truck	—	—	HHDT
Paving / Surfacing	—	—	—	—
Paving / Surfacing	Worker	15.0	12.6	LDA,LDT1,LDT2
Paving / Surfacing	Vendor	—	7.75	HHDT,MHDT
Paving / Surfacing	Hauling	0.00	20.0	HHDT
Paving / Surfacing	Onsite truck	—	—	HHDT
Trenching / Foundations	—	—	—	—
Trenching / Foundations	Worker	15.0	12.6	LDA,LDT1,LDT2
Trenching / Foundations	Vendor	—	7.75	HHDT,MHDT
Trenching / Foundations	Hauling	0.00	20.0	HHDT
Trenching / Foundations	Onsite truck	—	—	HHDT
Demolition	—	—	—	—
Demolition	Worker	15.0	12.6	LDA,LDT1,LDT2
Demolition	Vendor	—	7.75	HHDT,MHDT
Demolition	Hauling	49.9	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	65,000	—
Rough Grading	—	—	5.03	0.00	—
Fine Grading	—	—	5.03	0.00	—
Paving / Surfacing	0.00	0.00	0.00	0.00	1.00

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	Other	60%	60%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Unrefrigerated Warehouse-No Rail	1.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	349	0.03	< 0.005
2025	0.00	349	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	23.8	23.8	23.8	8,672	208	208	208	75,774

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	162,000	54,000	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	505,479	349	0.0330	0.0040	2,081,824

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	28,470	17,390

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

8. User Changes to Default Data

Screen	Justification
Land Use	Lot acreage is total to be graded during construction: 4.8 acre + (650 ft long)*(12 ft wide) + (200 ft long)*(12 ft wide) = 5.034 acre. 108,000 square feet is the size of warehouse structure.
Construction: Construction Phases	Phases and phase duration assumed based on the 6904 site schedule provided by construction contractor.
Construction: Off-Road Equipment	Equipment list assumed based on the 6904 site equipment list provided by construction contractor.
Construction: Dust From Material Movement	Area to be graded provided by construction contractor.
Operations: Vehicle Data	Up to 12 round trips per day is assumed, including maintenance.
Operations: Consumer Products	The site is not a city park or golf course.
Operations: Architectural Coatings	Building is not architecturally coated, nor will be.
Operations: Water and Waste Water	Up to 6 staff will occupy the building. Assuming each staff consume 13 gallons water per day, 365 days/year.
Operations: Solid Waste	Up to 6 staff will occupy the building. Assuming each staff generate 1.24 lbs/day, 365 days/year, the solid waste generation rate is calculated to be 0.0013578 tons/unit/year.
Construction: Paving	Paved area estimated based on site plan.

APPENDIX D

Cultural Resources Record Search and Native American Heritage Commission Sacred Lands File Search

APPENDIX E
Noise Impact Study

COFFMAN ENGINEERS

COMMERCE BATTERY ENERGY STORAGE

Noise Impact Study

COFFMAN PROJECT NO. 231687

90% Submittal

April 12, 2024

Prepared for: Rev Renewables

NOISE IMPACT STUDY

FOR

COMMERCE BATTERY ENERGY STORAGE

Commerce, CA

Coffman Project Number: 231687

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D	04/12/2024	90% Submittal

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APPENDICES

I. INTRODUCTION

The project consists of the development of a 7.4 acres site for battery energy storage facility including batteries, control equipment, and ancillary facilities across two parcels (6904 & 6920 E. Slauson Avenue) in the City of Commerce, California. Batteries will be contained in two (2) purpose built one-story structures. The first structure is approximately 107,700 sf and the second structure is approximately 17,361 sf. Each structure is subdivided into separate buildings. The intent of the facility is to store energy in lithium-ion batteries to provide grid services. Ancillary equipment such as inverters, switchgears and transformers will be installed outdoors.

This Noise Study assesses the noise generation of the project with respect to the requirements of the City of Commerce Municipal Code noise standards.

Project noise sources considered in this analysis include:

- Rooftop HVAC units
- Battery Storage Inverters
- Medium Voltage Transformers
- Substation Transformers
- Emergency Power Generator

II. SITE DESCRIPTION

The project is located in an industrially zoned area along East Slauson Avenue. Property addresses are 6904 & 6920 East Slauson Ave., Commerce, CA. The nearest residential land uses are single-family homes approximately 1,200 feet to the southeast. Figure 1 shows the project site and vicinity.

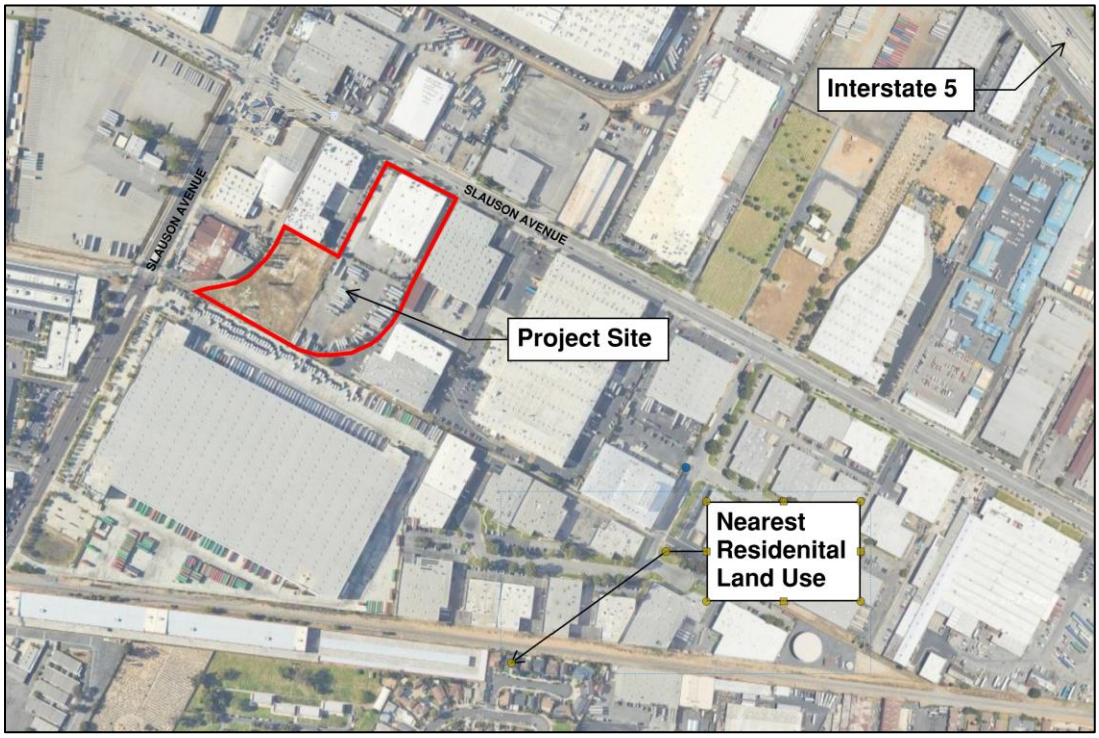


Figure 1: Vicinity Map

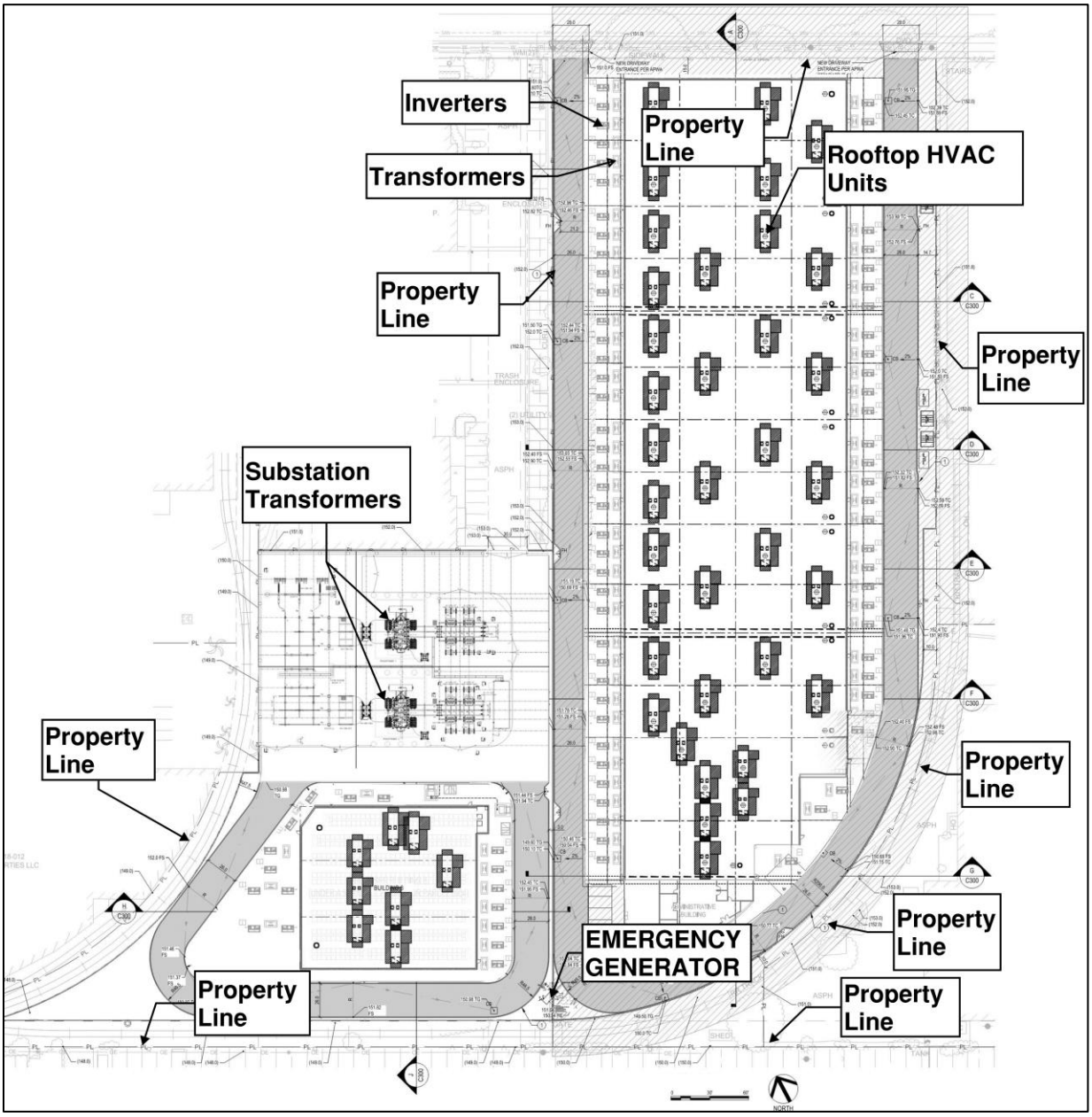


Figure 2: Project Site Map

III. NOISE ENVIRONMENT

Ambient Noise Measurements

Ambient noise measurements were conducted on Monday, October 9, 2023, to quantify the noise environment of the project site vicinity and at the nearest residential homes to the south. Figure 3 shows the noise measurement locations.

Figure 3: Ambient Noise Measurement Locations

The noise measurement NM-1 was located near the west property line of the project site at a height of five feet above ground. The noise measurement location was set back 400 feet from the traffic of Slauson Avenue. Therefore, the reading is also representative of the minimum ambient noise exposure at the adjacent properties. During the 15-minute noise measurement, there was noise from distant traffic and HVAC as well as five overhead aircraft. Figure 4 shows the 1-second time-history charts. The measured L_{50} was 55 dBA.

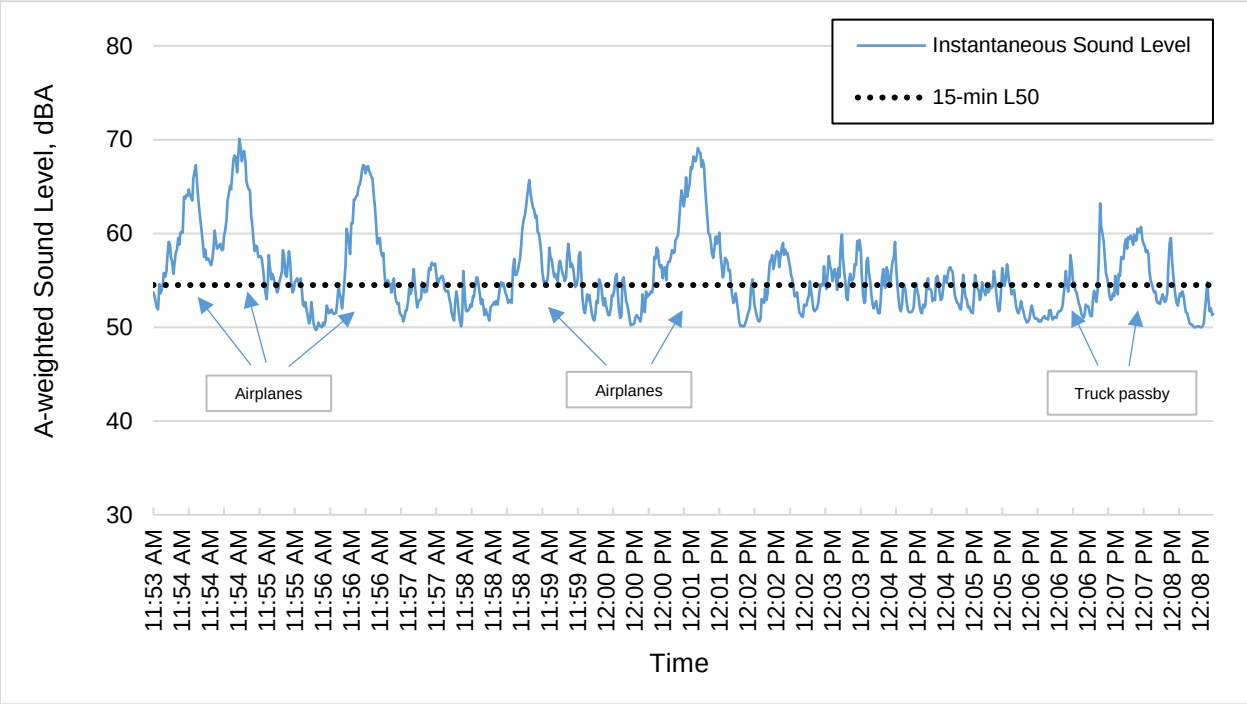


Figure 4: Measured Sound Level at NM-1

The noise measurement NM-2 was located near 6725 Danielson Court at a height of five feet above ground. During the 15-minute noise measurement, there were car passbys and two aircraft. Figure 5 shows the 1-second time-history charts. The measured L_{50} was 44 dBA.

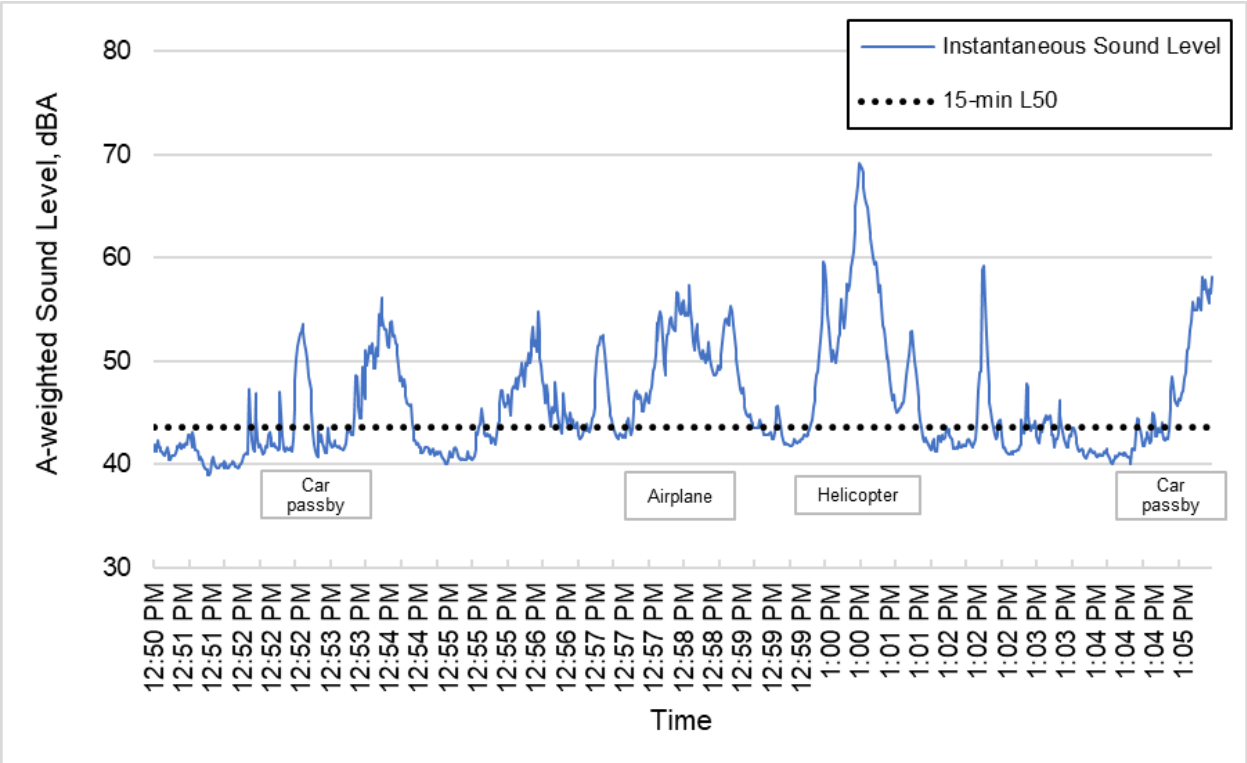


Figure 5: Measured Sound Level at NM-2

Table 1 shows a summary of the noise measurements and the statistical descriptors in the noise ordinance. The L_{50} statistical descriptor is highlighted for comparison with the Municipal Code Table 19.19.160A (Table 2 of this report).

Receiver		Time	A-weighted Sound Level, dBA						
			L_{eq}	L_{max}	L_2	L_8	L_{25}	L_{50}	L_{90}
NM-1	Project Site	11:53 AM – 12:08 PM	58	70	67	64	58	**55**	51
NM-2	Homes to the South (Danielson Court)	12:50 PM – 1:05 PM	52	69	60	55	49	**44**	41

Table 1 Ambient Noise Measurement Summary

IV. ACOUSTICAL CRITERIA

City of Commerce Municipal Code

Section 19.19.160 of the City's Code of Ordinances includes noise standards that apply to the project as shown in Table 2.

Zone	Time	Allowable Noise Level, dBA
Residential	7 AM – 7 PM	55
	7 PM – 10 PM	50
	10 PM – 7 AM	45
Commercial	7 AM – 10 PM	65
	10 PM – 7 AM	55
Industrial	Anytime	70

Table 2 (City of Commerce Municipal Code, Section 19.19.160, Table 19.19.160A)

Because the areas surrounding the site are zoned for industrial use, the applicable noise limit is 70 dBA at the project property line. At the residences that are located 1,200 feet to the southeast, the most restrictive noise limit is 45 dBA at night.

The noise limits apply to steady noise level (e.g. for noise sources with cumulative durations of more than 30 minutes in any hour). The ordinance includes provisions to adjust the noise limits if the equipment runs for shorter durations or if the ambient noise level exceeds the noise limit. Since the equipment would run continuously for more than an hour and the measured ambient noise levels (L_{50}) do not exceed the industrial standard of 70 dBA nor the residential standard of 45 dBA at night, adjustments to the noise ordinance allowable noise levels are not warranted.

City of Commerce 2020 General Plan (Adopted 2008)

The City of Commerce General Plan establishes noise and land use compatibility standards for use in land use planning. These standards are typically used for assessing the compatibility of new noise sensitive land uses proposed in noisy areas. The General Plan also provides a summary of the City's Municipal Code sections that have regulations regarding noise. The General Plan summary does not refer to the Municipal Code Section 19.19.160 and misstates the Municipal Code noise limits.

Noise Level Limits Used in this Noise Study

This noise study uses the noise limits shown in Table 2 as currently found online in the City's Municipal Code (https://library.municode.com/ca/commerce/codes/code_of_ordinances).

This noise study does not use the Noise and Land Use Compatibility Standards of the General Plan which are appropriate for assessing the compatibility of the project with existing noise sources such as traffic rather than as performance standards for regulating project generated noise. The text of the Municipal Code and General Plan noise criteria are included in the Appendix of this report.

V. EQUIPMENT DESCRIPTION

The outdoor equipment is expected to dominate the project generated noise level. Noise from the indoor equipment such as the battery racks would be reduced by the building shell. Thus, the exterior equipment is the focus of this analysis. Table 3 shows the provided equipment information.

The inverters will be located outdoors along the sides of the buildings. About half of the 168 inverters will be at ground level and the others will be elevated above the ground on a steel platform structure above the ground level inverters. The height of the platform will be approximately 14.5 feet above the ground.

Type	Model	Qty	Sound Data
Inverter (PCS)	SMA SUNNY CENTRAL STORAGE 3950 UP-US	168	Sound Power Level (PWL) 93 dBA equivalent to Sound Pressure level (SPL) 65.0 dBA at 10 meters
Rooftop HVAC Unit	Daikin Packaged Rooftop Units Models DPSA040, DPSA060, DPSA075. All models with Quiet Condenser Fans and Compressor Sound Blankets	45	Radiated Sound Power Level (PWL) DPSA075 85 dBA DPSA060 85 dBA DPSA040 83 dBA
MV Transformer	WESTRAFO 6760 kVA 34,5-0,69 kV Dy11y11 KNAN IEEE	84	NEMA Sound Rating 65 dBA at 1 meter (KNAN)
Substation Transformer	Mars Transformer (item #24007631/C)	2	NEMA Sound Rating 88 dBA (ONAF)
Auxiliary Service Entrance Transformer	Eaton Pad Mounted 2500 and 4000 kVA	4	Calculated NEMA Sound Rating of 62 - 64 dBA based on kVA rating
Emergency Power Generator	Rolls Royce MTU 4R0113 DS100 100 kW Diesel Generator with Level 3 Steel Enclosure	1	73.3 dBA at 7 meters

Table 3 Provided Sound Data

The Appendix of this report includes equipment data and datasheets.

VI. NOISE MODELING RESULTS

The SoundPLAN computer model was used to predict the noise levels generated by the proposed facility. SoundPLAN uses a standard noise propagation model (ISO 9613) and accounts for the attenuation from distance and barriers as well as acoustical reflections from the project buildings. The effect of acoustical reflections from buildings on the neighboring properties are not included in the modeling. The predicted noise levels at the surrounding properties as a result of the planned electrical equipment including the substation transformers are shown in Figure 6. The predicted noise levels include the noise contribution of the emergency engine generator located near the south end of the site. The generator is expected to operate during power outages and periodically for testing.

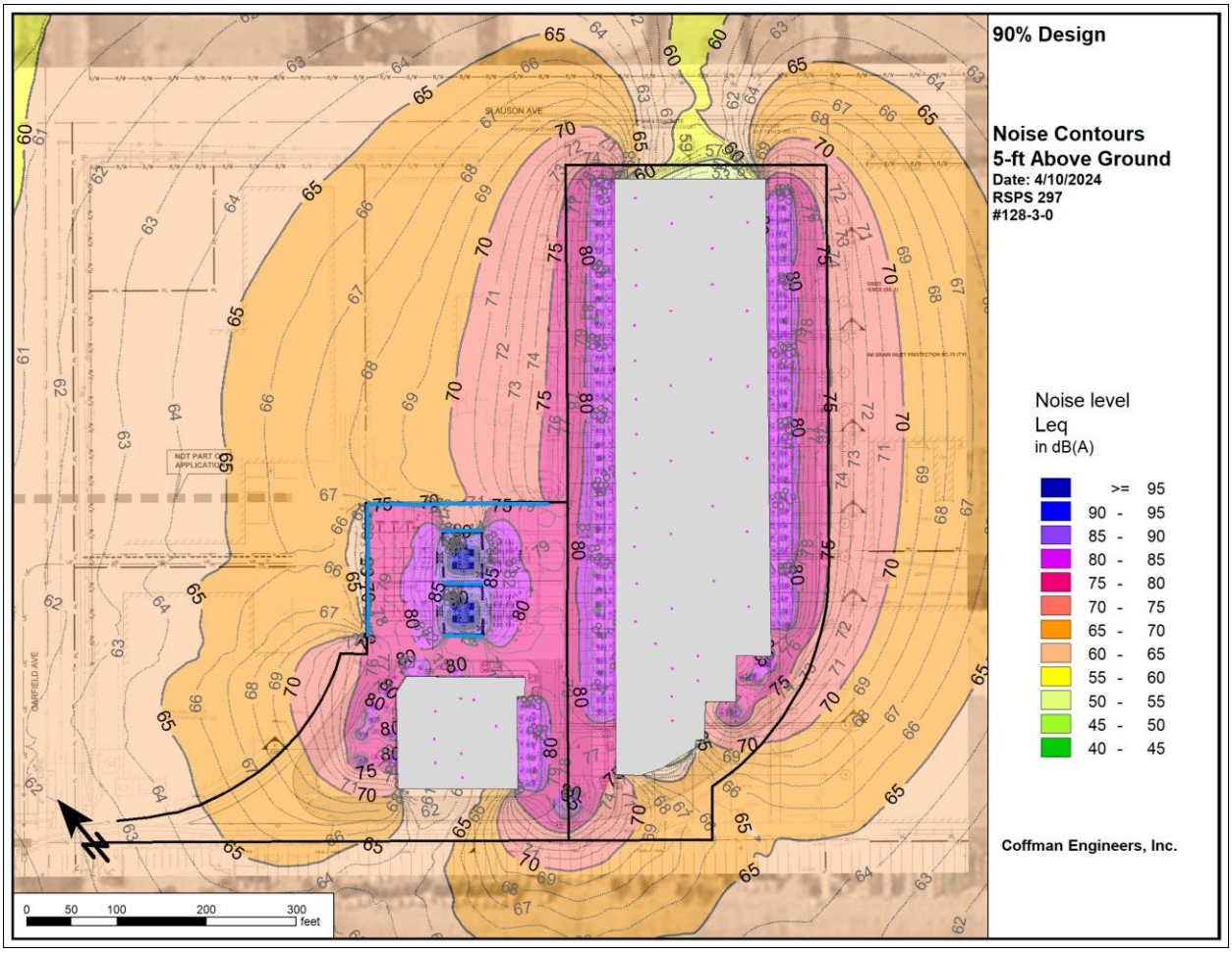


Figure 6: Noise Contours at 5 feet above Ground.

The property line noise levels will be the highest along the west and east property lines that are closest to the outdoor equipment. The predicted noise level is up to 78 dBA at the west property line and 75 dBA at the east property line. Figure 6 shows the calculated noise contours generated by the project equipment for a receiver that is 5 feet above the ground.

The predicted noise level for the nearest residential land use (see Figure 1 for location of the residential land use relative to the project site) is 43 dBA from the planned equipment and the substation transformers. The height of this receiver represents the second level of the two-story homes along Danielson Court. Noise level at the nearest residential land use meets the residential noise limit of 45 dBA.

VII. NOISE REDUCTION MEASURES

Based on the noise modeling, noise reduction measures will be required to meet the noise limit of 70 dBA at the neighboring industrial property line. Noise reduction measures will be a combination of constructing noise barriers at the property line and around certain outdoor equipment (explained below). Figure 8 below shows the calculated noise contours from the planned project equipment with a property line noise barrier having a maximum height of 12 feet and an 8 feet tall noise barrier on the north end of the inverter rack west of Building 1. This analysis uses a receiver height of 5 feet above the ground to represent the elevation of a standing person's ear. Figure 9 shows the heights of the barrier around the perimeter of the property.

Property Line Noise Barrier

A solid wall will be constructed along the property line to act as a noise barrier and reduce the noise level for people on the adjacent properties. A noise barrier works by blocking the direct line-of-sight between the noise source and the receiver. The barrier will be solid with no cracks or gaps and have a minimum surface weight of 4 pounds per square foot.

Substation Transformer Barrier

In addition to the property line noise barrier, the firewalls around the transformers in the substation will be extended to partially "wrap" the transformer to reduce the noise propagation from the substation transformers to the property north of the substation (see Figure 9).

Solid Gates

Some of the noise barrier locations shown in Figure 9 will require operable gates for vehicle access. These gates will be solid and have a minimum surface density or minimum sound transmission loss (STC) performance. The solid material should have a minimum surface density. For a 'rigid' material such as sheet metal the minimum is 2.5 pounds per square foot (e.g. 1/16-inch-thick steel). For a 'limp' material such as mass loaded vinyl the minimum is 1.5 pounds per square foot (e.g. Sound Seal BBC-EXT-N).

The solid gates at the entrances along 6920 E. Slauson Avenue are provided to reduce the noise along the pedestrian walkway. Although the City's Municipal Code does not contain specific noise standards for sidewalks, the 70 dBA standard for industrial land use is applied. The height of the gates at the entrance of 6920 E. Slauson Avenue will be 8 feet. The solid gate at the substation entrance of (6904 E. Slauson Avenue) will be 12 feet (see Figure 9). The perimeter of the gates should be designed to minimize cracks or gaps. This will be achieved by overlapping the ends of the masonry wall with the solid gate and limiting the gap between at the bottom of the gate and the ground to 2-inches.

Inverter Rack Noise Barrier – Northwest Corner of 6920 E. Slauson Avenue

A solid, sound absorptive noise barrier is needed at the north end of the inverter rack that is west of Building 1 as shown in Figure 7. The length of this barrier is 13 feet, the width of the platform. The surface that faces the inverter should be sound absorptive (minimum NRC of 0.90). In addition to the vertical barrier, a horizontal barrier is needed at the platform level to reduce sound transfer through the open metal grate. The horizontal barrier should be the same width as the platform and extend from the base of the vertical barrier to the south face of the northernmost elevated inverter. This horizontal barrier can be constructed with metal acoustical panels located below the grating and fit within depth of the horizontal structural members. The surface that faces down should be sound absorptive (minimum NRC of 0.90).

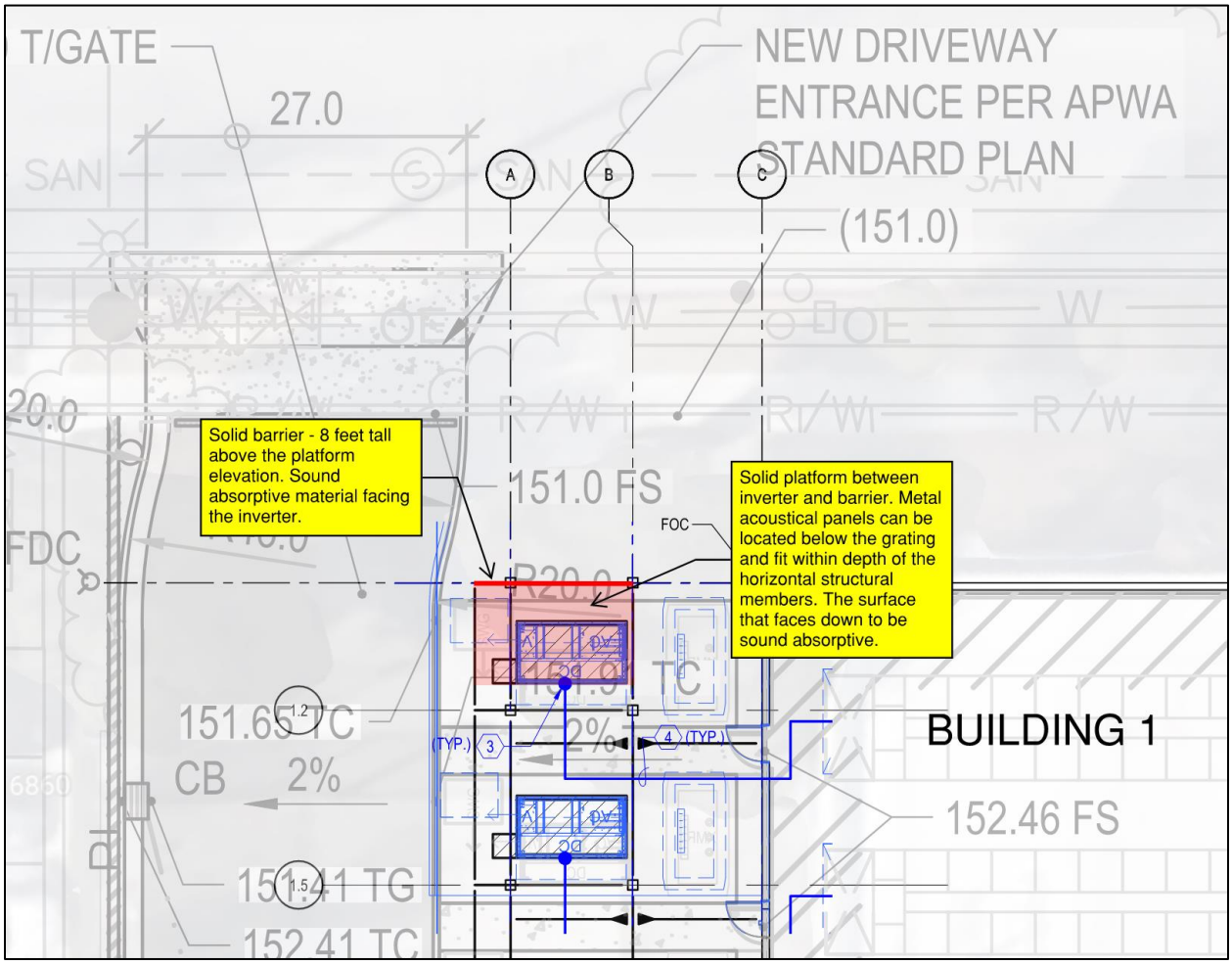


Figure 7: Inverter Rack Noise Barrier and Platform

Emergency Engine Generator Enclosure/Engine Exhaust Muffler

The noise level predictions include the contribution of the proposed Level 3 steel engine generator enclosure. The noise data used for the modelling is provided by the manufacturer and accounts for the engine casing and radiator fan noise but not the engine exhaust. The engine

generator will also require a muffler on the engine exhaust. At this time, the muffler has not been selected. The selected muffler should provide sufficient noise attenuation so that the noise contribution from the engine exhaust is reduced to a noise level of 85 dBA at 1 meter.

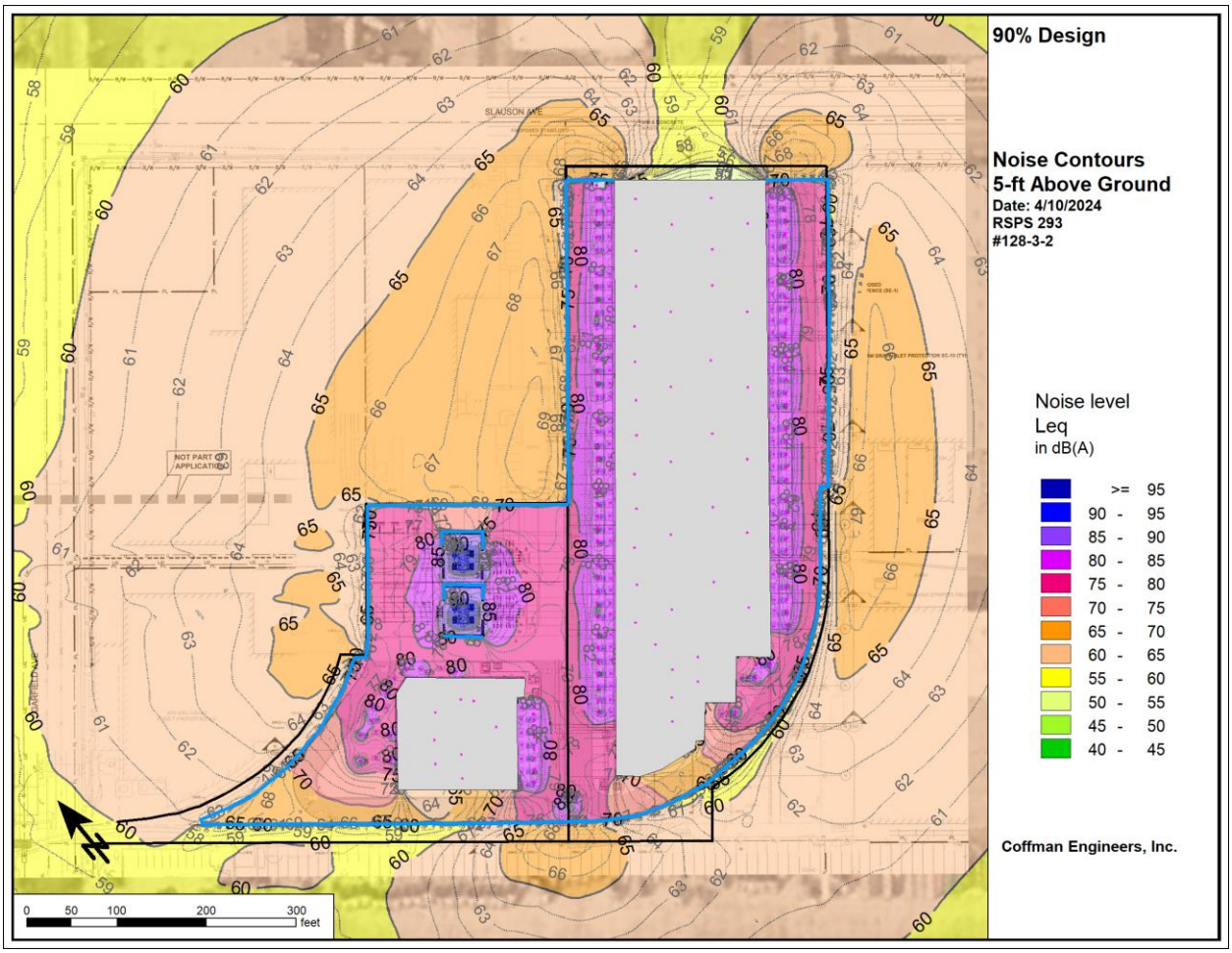


Figure 8: Noise Contours at a receiver height of 5 feet above Ground.
With Property Line Noise Barrier

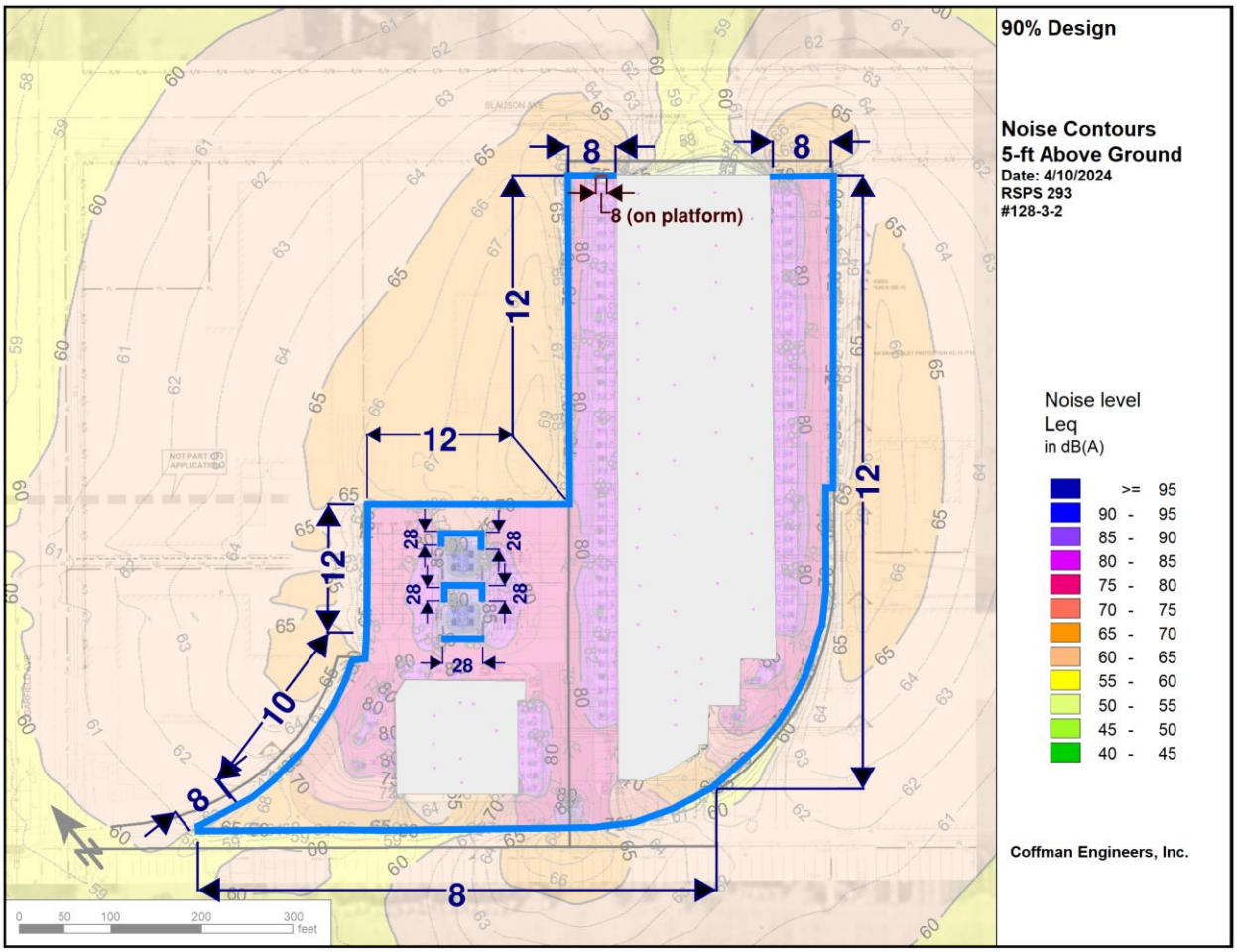


Figure 9: Property Line Noise Barrier Heights (in ft.)

VIII. CONCLUSIONS

Property Line Receivers

- Without additional noise reduction measures the outdoor equipment noise is calculated to exceed the City's Municipal Code noise level limit of 70 dBA for industrial land uses at the adjacent properties to the west, east and south. A noise reduction of up to 8 dBA is needed to achieve the City's noise limit.

- Calculations indicate that a property line noise barrier with a height of up to 12 feet and extended fire walls at the substation would achieve the City's noise limits at the adjacent properties.

- Residential Receivers: Noise is calculated to be 43 dBA at the nearest homes located approximately 1,200 feet southwest of the project site. This noise level meets the City's Municipal Code noise level limit of 45 dBA for nighttime noise at residential land uses.

Appendix A

City of Commerce Municipal Code

19.19.160 - Noise.

A. It is the policy of the city to prohibit unnecessary, excessive, and annoying noises from all sources subject to its police power, as certain noise levels are detrimental to the health and welfare of individuals. Therefore, any individual or organization that creates, maintains, causes, or allows to be created, caused, or maintained, any noise or vibration in a manner prohibited by or not in conformity with the provisions of this subsection, shall be considered to be creating a public nuisance and shall be punishable as such.

B. Any sound level measurement made pursuant to the provisions of this subsection shall be measured with a sound level meter using the "A" weighting scale at slow response or at a fast response for impulsive sounds.

C. Precise noise measurements shall be taken throughout the city at specified locations. These measurements shall be established as the ambient levels for the areas in which the measurements are taken. The ambient levels established by the precise measurements shall be published periodically and utilized for determinations of violations of this subsection.

D. The location selected for measuring exterior noise levels shall be at any point on the receptor property, and at least four feet above the ground and five feet from the nearest structure or wall. Interior noise measurements shall be made within the receptor dwelling unit, at a point at least four feet from the wall, ceiling, or floor nearest the noise source with windows and doors closed.

E. No person shall, at any location within the city, create nor allow the creation of noise on property owned, leased, occupied, or otherwise controlled by such person, that causes the noise level when measured on any property to exceed the ambient noise level or the noise standards set forth in Table 19.19.160A, whichever is greater.

F. Increases in permitted noise levels prescribed in Table 19.19.160A may be permitted in accordance with the standards outline in Table 19.19.160B.

Table 19.19.160A
Noise Standards

Zone	Time	Allowable Noise Level - dBA
Residential	7 a.m. - 7 p.m. (day)	55
Residential	7 p.m. - 10 p.m. (evening)	50
Residential	10 p.m. - 7 a.m. (night)	45
Commercial	7 a.m. - 10 p.m. (day/evening)	65
Commercial	10 p.m. - 7 a.m. (night)	55
Industrial	Anytime	70

Table 19.19.160B
Permitted Increases in Noise Levels

Permitted Increase (dBA)	Duration of Increase (cumulative minutes/hour)
5	15
10	5
15	1
20	Less than one minute

G. If the receptor property of a noise is located on the boundary between two different noise zones, the lower noise level standard applicable to the quieter zone shall apply.

H. If a noise source is continuous and cannot be reasonably discontinued for sufficient time in which to determine the ambient noise level, the measured noise level obtained while the source is in operation shall be compared directly to the noise level standards in Table 19.19.160B.

I. No person shall, at any location within the city, create any noise, nor shall any person allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person that causes the noise level when measured within any receptor dwelling unit to exceed the noise standards outlined in Table 19.19.160C.

Table 19.19.160C
Permitted Increases in Interior Noise Levels

Allowable (dBA)	Time (cumulative minutes per hour)
45	Anytime
+5	1 minute
10	Less than one minute

J. In the event the ambient noise level exceeds the noise standards set forth in Table 19.19.160C, the levels in the allowable column shall be increased to reflect the actual ambient noise level.

K. The following acts, or the causing thereof, are declared to be in violation of this subsection:

1. No person shall, within any residential zone in the city, use or operate any radio receiving set, musical instrument, phonograph, tape player, compact disk player, television set, or other machine or device that produces, reproduces, or amplifies sound, between the hours of ten p.m. and seven a.m. such that it exceeds the exterior noise standards set forth in subsection L of this section.

2. No person shall create any noise on any street, sidewalk, or public place adjacent to any school, institution of learning, or church while the same is in use or adjacent to any hospital, that exceeds the interior noise standards set forth in subsection L of this section.

3. No person or organization within any residential zone, or within a radius of five hundred feet of a residential zone, shall operate equipment or perform any outside construction or repair work on buildings, structures, or projects, or operate any pile driver, steam shovel, pneumatic hammer, derrick, steam, electric hoist, or other construction type device between the hours of ten p.m. and seven a.m., unless a permit has been obtained from the city.

4. No person within any residential zone shall repair, rebuild, or test any motor vehicle between the hours of ten p.m. and seven a.m. in a manner that exceeds the noise levels set forth in subsection L of this section.

5. No person or organization shall use or operate for any noncommercial purpose any loudspeaker, public address system, or similar device between the hours of ten p.m. and seven a.m. in a manner that exceeds the noise levels set forth in subsection L of this section.

6. No person or organization shall use or operate for any commercial purpose any loudspeaker, public address system, or similar device in a manner that creates noise in any residential zone in excess of the noise levels set forth in subsection L of this section.

7. Loading, unloading, opening, closing, or other handling of boxes, crates, containers, building materials, garbage cans, or similar objects between the hours of ten p.m. and seven a.m. in such a manner as to cause noise in excess of the noise standards in any residential zone is unlawful.

L. The city shall order an immediate halt to any sound that exposes any person to continuous sound levels in excess of those shown in Table 19.19.160D or Table 19.19.160E. Within ten working days following issuance of such an order, the community development director or his designee may apply to the appropriate court for an injunction to replace the order. No order shall be issued if the only persons exposed to sound levels in excess of those listed in Table 19.19.160D and Table 19.19.160E are exposed as a result of trespass; invitation upon private property by the person causing or permitting the sound; or employment by the person or a contractor of the person causing or permitting the sound.

Table 19.19.160D
Continuous Sound Levels
(Measured at 50 feet)

Sound Level Limit (dbA)	Duration
90	8 hours
95	4 hours
100	2 hours
105	1 hour
110	30 minutes

Table 19.19.160E
Impulsive Sound Levels
(Measured at 50 feet)

Sound Level Limit (dbA)	Number of Repetitions (per 24-hour period)
145	1
135	10
125	100

M. Any person subject to an order pursuant to this section shall comply with such order until the sound is brought into compliance with the order, as determined by the noise control officer; or a judicial order has superseded the noise control officer order.

Appendix B

City of Commerce General Plan

either changed or modified once it becomes obsolete or impractical.)

- *Safety Policy 5.4.* The city of Commerce will encourage city leaders and those persons living or working in the city to be trained as emergency response personnel.

The Santa Ana Freeway is located on the other side of the sound wall shown in the photograph.

7.3.6 Issue: Noise Control Measures

Noise levels may be significantly reduced by employing relatively simple design measures, such as the use of sound walls, extra insulation, double-paned windows, etc. The following policies underscore the city's continued efforts to control noise exposure through land use planning and building design.

- *Safety Policy 6.1.* The city of Commerce will ensure that residents are protected from harmful and irritating noise sources to the greatest extent possible.
- *Safety Policy 6.2.* The city of Commerce will work with businesses in the city and other public agencies to identify ways to reduce noise impacts throughout the city.
- *Safety Policy 6.3.* The city of Commerce will continue to enforce the existing city's noise control ordinance.
- *Safety Policy 6.4.* The city of Commerce will incorporate noise considerations into land use planning decisions.
- *Safety Policy 6.5.* The city of Commerce will prohibit noise-intensive land uses adjacent to or near residential areas, schools, convalescent homes, and other noise-sensitive receptors.
- *Safety Policy 6.6.* The city of Commerce will encourage acoustical design in all new construction.
- *Safety Policy 6.7.* The city of Commerce will require additional landscaping in industrial and commercial projects to help reduce noise impacts through increased setbacks.
- *Safety Policy 6.8.* The city of Commerce will evaluate and implement measures to control stationary non-transportation noise impacts.
- *Safety Policy 6.9.* The city of Commerce will continue to use the Sheriff's Department or expand the responsibility of the city's Code Enforcement Division to monitor and respond to noise complaints.
- *Safety Policy 6.10.* The city of Commerce will establish and maintain coordination among the city agencies involved in noise abatement.

7.3.7 Issue: Noise Control from Mobile Sources

As indicated in the previous section, the city's location near the regional freeway network, the presence of major roadways that carry large volumes of truck traffic, and the numerous railroad facilities in the city, have all contributed to a relatively noisy environment. The following policies underscore the city's continued efforts to control noise exposure through design measures that will be effective in reducing the effects of transportation-related noise.

- *Safety Policy 7.1.* The city of Commerce will strive to reduce railroad noise impacts in the vicinity of Astor Avenue.
- *Safety Policy 7.2.* The city of Commerce will work with Union Pacific Railroad to reduce noise impacts from railroad operations in the vicinity of Washington Boulevard.
- *Safety Policy 7.3.* The city of Commerce will provide for measures to reduce noise impacts from transportation-related noise sources.
- *Safety Policy 7.4.* The city of Commerce will evaluate the feasibility of constructing sound

barriers to mitigate transportation-related noise from railroads and the freeways.

- *Safety Policy 7.5.* The city of Commerce, together with the railroads, will consider the feasibility of constructing sound walls wherever residential uses abut railroad rights-of-way.

- *Safety Policy 7.6.* The city of Commerce will ensure the inclusion of noise mitigation measures in the design of new roadway projects.

- *Safety Policy 7.7.* The city of Commerce will mitigate potential impacts for future helicopter operations by restricting residential uses in the vicinity of the heliports.

- *Safety Policy 7.8.* The city of Commerce will mitigate noise impacts related to truck loading and unloading (including garbage trucks) by requiring trash pick-up to be changed to daytime periods.

7.3.8 Issue: Environmental Justice

The following policies underscore the city's continued commitment to identifying strategies that will improve the community's overall safety. The policies contained in this section promote education and prevention as a means to address a number of safety-related issues.

- *Safety Policy 8.1.* The city of Commerce will work to minimize hazards to public health, safety, and welfare, and prevent loss of life, bodily injury, and property damage resulting from natural and manmade phenomena.

- *Safety Policy 8.2.* The city of Commerce will provide public safety information focusing on the prevention of accidents that may be life-threatening or result in property damage.

- *Safety Policy 8.3.* The city of Commerce will continue to provide adequate levels of emergency services to meet existing and projected demand through the maintenance of contracts with emergency service providers.

- *Safety Policy 8.4.* The city of Commerce will continue to encourage coordination among city officials, and between the city and other agencies, that provides disaster response and relief services.

- *Safety Policy 8.5.* The city of Commerce will cooperate with, and support in every way possible, the federal, state, and county agencies responsible for the enforcement of health, safety, and environmental laws.

7.4 Health & Safety Programs

The following programs will either be continued or implemented as part of this General Plan.

- *Building Code Review.* The city will periodically review, and if necessary, modify the city's Building Code (Los Angeles County) to reflect current technology and regulations. Procedures for the periodic review of the Building Code will be identified by the Community Development Director. Review will be undertaken by designated individuals to identify appropriate changes that should be considered. Following this review, amendments to the city's Building Code will be made, as required.

- *Code Enforcement.* A significant cause of damage, injury, and loss of life to fire involves unsafe structures with poor or obsolete wiring or construction materials. The Building Code contains regulations regarding construction techniques and materials that may be effective in eliminating or reducing the spread of fire. Code enforcement will also ensure that the city's noise control ordinance is adhered to. For this reason, ongoing code enforcement efforts are an important implementation program within this element.

- *Disaster Response Database.* In the event of a major earthquake or other major disaster, persons living or working in the city may need to be self-sufficient for up to 72 hours before the results of any major relief efforts are realized. Under this program, a database will be created to identify medical professionals, heavy equipment operators, and volunteers trained in first aid and search-and-rescue. The database would identify other volunteers that would staff emergency collection centers, distribution centers, and otherwise assist in the recovery efforts. This information, and the appropriate procedures, would then be incorporated into the city's emergency preparedness plan.

- *Fire Prevention.* The city shall continue to work with the Fire Department to promote fire prevention and fire safety programs. The city shall also encourage periodic inspections of existing structures by the fire department for compliance with fire safety standards and

in the future without mitigation. Appropriate measures should be implemented as a means to reduce the effects of noise exposure in these areas.

The development policies and standards described in the Safety Element provide the foundation for Exhibits 6-1 and 6-2. These exhibits should be used as a general guide for the identification and location of naturally occurring or manmade hazard areas in the city. In addition, Exhibit 6-2 (Predicted CNEL Noise Levels) should be used as a guide to determine where measures to reduce interior noise levels will be required for new residential developments.

To regulate development within flood hazard areas, the city of Commerce utilizes the designations contained within the flood insurance rate maps (FIRM) prepared by the Federal Emergency Management Agency (FEMA) to denote areas impacted by 100-year storm events. The intent of the federal and city regulations is to protect public health, safety, and welfare, and to minimize public and private losses caused by flooding.

There are a large number of federal and state regulations that govern the manufacturing, use, storage, and/or disposal of hazardous substances. The great majority of the federal regulations governing environmental quality are found in Title 40 of the Code of Federal Regulations (CFR Title 40). The state's regulations are contained in the State of California Health and Safety Code (Division 20) and Government Code (Title 22).

7.5.1 Noise and Land Use Compatibility

Years ago, the state Office of Noise Control prepared *Guidelines for the Preparation and Content of Noise Elements of General Plans*. These guidelines indicated the compatibility of noise-sensitive land uses in areas subject to noise levels of 55 to 80 dB CNEL or Ldn.

Residential uses are normally unacceptable in areas exceeding 70 dB CNEL; and conditionally acceptable between 55-70 dB CNEL for low-density single-family dwelling units, duplexes, and mobile homes, and between 60-70 dB CNEL for multiple-family units. Schools, libraries, hospitals, and nursing homes are treated as noise-sensitive land uses, requiring acoustical studies within areas exceeding 60 dB CNEL. Commercial/professional office buildings and industrial land uses are normally unacceptable in areas exceeding 75 dB CNEL, and are conditionally acceptable within 67 to 78 dB CNEL (for commercial/professional offices only).

What is a decibel?

The decibel is a measurement of sound level pressure. The noise levels associated with various activities are provided below:

Noise Level Activity in Decibels

Very quiet night	10 dB
Library	35 dB
Refrigerator	45 dB
Light traffic	45 dB
Air conditioner	60 dB
Freeway traffic (50 ft.)	80 dB

7.5.1 Noise Control Standards

The city of Commerce maintains a number of ordinances to regulate noise levels within the city.

- Section 5.24.010 of the Municipal Code regulates the noise from sound trucks used for advertising. This section of the city's Municipal Code prohibits sound levels from speakers on vehicles to be audible from a distance of 200 feet.
- Section 8.04.840 of the Municipal Code is concerned with nuisance noise caused by domestic animals.
- Section 9.04.020 prohibits unreasonable loud noise and considers the making of loud noise as "disorderly conduct."
- The city's Noise Control Ordinance, together with the General Plan, establishes exterior noise standards for a wide range of land uses in the city. Residential uses, hospitals, schools, and churches are considered "noise-sensitive," and the following standards apply: between the hours of 7:00 p.m. and 10:00 p.m., external ambient noise levels must not exceed 60 dBA; between the hours of 10:00 p.m. and 7:00 a.m., external ambient noise levels must not exceed 50 dBA.

The code also regulates noise levels for nonresidential land uses. For these land uses, the following standards apply: between the hours of 7:00 a.m. and 10:00 p.m., external ambient noise levels must not exceed 75 dBA; between the hours of 10:00 p.m. and 7:00 a.m., external ambient noise levels must not exceed 65 dBA. The noise control ordinance also makes it unlawful for the generation

of specific noise levels for specific periods of time:

- The noise standards may not be exceeded by 5 dBA for more than 15 minutes in any given hour;
- The noise standards may not be exceeded by 10 dBA for more than 5 minutes in any given hour;
- The noise standards may not be exceeded by 15 dBA for more than one minute in any given hour; and,
- The noise standards may not be exceeded by 20 dBA for any period of time.

For land use planning purposes, the city has recognized land use and noise compatibility standards for various land uses in the City. These standards are indicated in Table 7-1.

Table 7-1
Noise and Land use Compatibility Standards

Land Use	Desirable Maximum	Maximum Acceptable
Low-Density Residential	55 dBA	65 dBA
Medium-Density Residential	60 dBA	65 dBA
High-Density Residential	65 dBA	70 dBA
Schools	60 dBA	70 dBA
Office Commercial	65 dBA	75 dBA
Industrial	70 dBA	75 dBA

Source: City of Commerce

7.5.2 Noise Control Regulations

A number of other federal, state, and local agencies have adopted standards and recommended noise criteria to protect people in both the working and home environments. A summary of major existing noise regulations are provided below:

- The Federal Highway Works Administration (FHWA) has established noise exposure standards for different land uses. These standards apply to the planning and design of federally funded highway projects, and are expressed in terms of both equivalent noise level (Leq) and L_{10}.
- The Department of Housing and Urban Development (HUD) has adopted environmental criteria and standards for determining project acceptability and necessary mitigation measures to ensure that projects assisted by HUD provide a suitable living environment. Standards include maximum levels of 65 dB Ldn for residential areas.
- The Noise Control Act of 1972 authorized the Environmental Protection Agency (EPA) to publish descriptive data on the effects of noise and establish levels of sound "requisite to protect the public welfare with an adequate margin of safety." These levels are separated into health (hearing loss levels), and welfare (annoyance levels), with an adequate margin of safety.
- The California Motor Vehicle Code establishes noise standards for those areas not regulated by the federal government. State standards regulate the noise levels of motor vehicles and motorboats; establish noise impact boundaries around airports; regulate freeway noise affecting classrooms, sound transmission control, and occupational noise control; and identify noise insulation standards. The California Motor Vehicle Code sets operational noise limits according to the type of vehicle and date of manufacture.
- Sound Transmission Control Standards contained in the California Administrative Code, Title 24, Building Standards, Chapter 2.35 outline noise insulation performance standards to protect persons within new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings. These standards require an interior noise level of 45 dB CNEL or less for residential projects. For residential buildings or structures within the 60 dB CNEL of an airport, or vehicular or industrial noise source, an acoustical analysis must be conducted to show compliance with the standards.
- The California Occupational Noise Control Standards contained in the California Code of Regulations, Title 8, Industrial Relations, Chapter 4, outlines permissible noise exposure at a workplace. Employees should not be exposed to noise levels of 90 dBA for more than eight hours in any workday.

Appendix C

Equipment Datasheets

Sunny Central 4000 UP-US

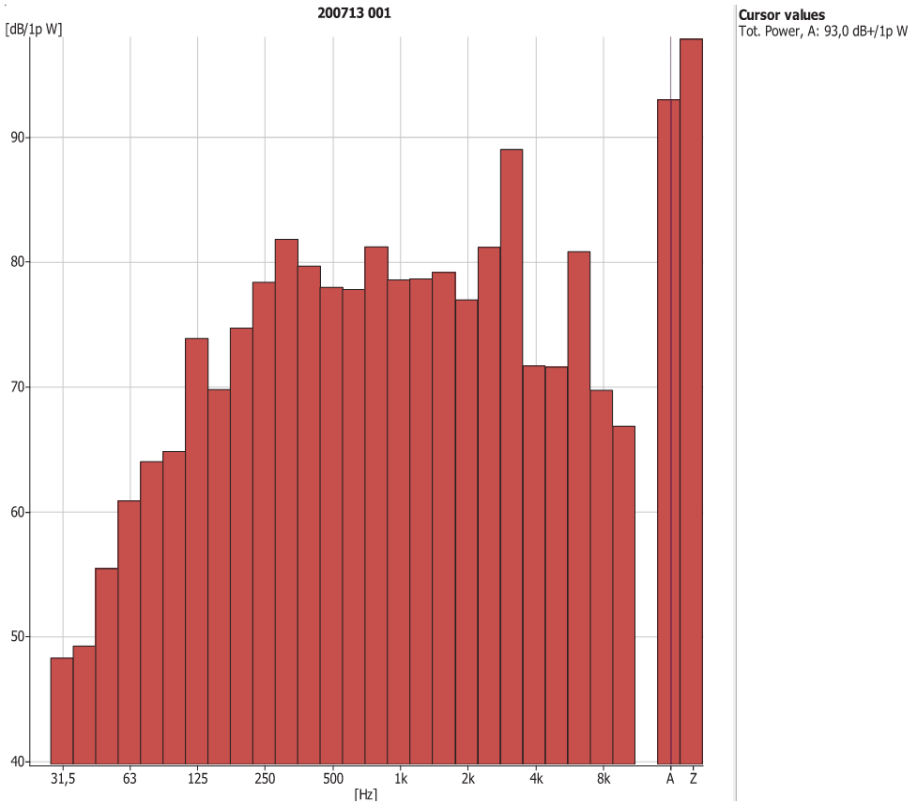
SUNNY CENTRAL STORAGE 3450 UP-US / 3600 UP-US

Technical Data	SCS 3450 UP-US	SCS 3600 UP-US
Battery side (DC)		
Operating DC voltage range V_{DC}	880 V to 1500 V	921 V to 1500 V
Max. DC current $I_{DC, max}$	4750 A	4750 A
Max. interruption current capabillity[12]	6400 A	6400 A
Max. interruption short circuit current capability[14]	150 kA	
Single DC busbar 26 connections per pole / split DC busbar 6 / 5 / 6 connections per pole	● / ○	
DC connection	with terminal lug	
Grid side (AC)		
Nominal AC apparent power at 1200 Vdc and cos φ =1.0 and 25 °C	3450 kW	3620 kW
AC apparent power at 1200 Vdc (at 25 °C / at 40 °C / at 50 °C)[3] [13]	3450 kVA / 3140 kVA / 2930 kVA	3620 kVA / 3290 kVA / 3075 kVA
Max. AC current $I_{AC, max}$ (at 25 °C / at 40 °C / at 50 °C)	3320 A / 3020 A / 2820 A	
Max. total harmonic distortion	< 3% at nominal power	< 3% at nominal power
Nominal AC voltage / nominal AC voltage range[1] [8]	600 V / 480 V to 720 V	630 V / 504 V to 756 V
AC power frequency / range	50 Hz / 47 Hz to 53 Hz 60 Hz / 57 Hz to 63 Hz	
Min. short-circuit ratio at the AC terminals[9]	> 2	
Power factor at rated power / displacement power factor adjustable[8] [10]	1 / 0.8 overexcited to 0.8 underexcited	
AC connection	with busbar system (three busbars, one per line conductor)	
Efficiency		
Max. efficiency[2]	98.8%	98.8%
Protective Devices		
Input-side disconnection point	DC load break switch	
Output-side disconnection point	AC circuit breaker	
DC overvoltage protection	Surge arrester, type I	
AC overvoltage protection (optional)	Surge arrester, class I	
Lightning protection (according to IEC 62305-1)	Lightning Protection Level III	
Insulation monitoring	●	
Degree of protection: electronics / air duct / connection area (as per UL 50E)	UL Type 3R / Type 1 / Type 1	
General Data		
Dimensions (W / H / D)	2815 / 2318 / 1588 mm (110.8 / 91.3 / 62.5 inch)	
Weight	< 3700 kg / < 8200 lb	
Self-consumption (max.[4] / partial load[5] / average[6])	< 8100 W / < 1800 W / < 2000 W	
Self-consumption (standby)	< 370 W	
Auxiliary power supply: integrated 8.4 kVA transformer / external	● / ○	
Operating temperature range[8]	−25 °C to 60 °C / −13 °F to 140 °F	
Noise emission[7]	65.0 dB(A)	
Temperature range (standby)	−40 °C to 60 °C / −40 °F to 140 °F	
Temperature range (storage)	−40 °C to 70 °C / −40 °F to 158 °F	
Max. permissible value for relative humidity (condensing / non-condensing)	95% to 100% (2 month/year) / 0% to 95%	
Maximum operating altitude above MSL[8] 1000 m / 2000 m[11]	● / ○	● / ○
Fresh air consumption	6500 m³/h	
Features		
Grid forming / black start ready without grid forming	○ / ○	
DC connection	Terminal lug on each input (without fuse)	
AC connection	With busbar system (three busbars, one per line conductor)	
Communication	Ethernet, Modbus Master, Modbus Slave	
Communication with SMA string monitor (transmission medium)	Modbus TCP / Ethernet (FO MM, Cat-5)	
Enclosure / roof color	RAL 9016 / RAL 7004	
Supply transformer for external loads	○ (2.5 kVA)	
Certifications and approvals	UL 62109-1, UL 1741 Chapter 13 CRD 61, UL 1741 SA, IEEE 1547, UL 1998, CAN/CSA C22.2 107.1-1	
EMC standards	IEC / EN 61000-6-4, IEC / EN 61000-6-2, EN 55022, CISPR 22:2008 modified class A, FCC Part 15 Class A	
Quality standards and directives complied with	VDI/VDE 2862 page 2, DIN EN ISO 9001	
● Standard features ○ Optional – not available		
Type designation	SCS 3450 UP-US	SCS 3600 UP-US

1) At nominal AC voltage, nominal AC power decreases in the same proportion
2) Efficiency measured without internal power supply
3) AC apparent power at higher dc voltages on request
4) Self-consumption at rated operation
5) Self-consumption at < 75% Pn at 25 °C
6) Self-consumption averaged out from 5% to 100% Pn at 25 °C
7) Sound pressure level at a distance of 10 m
8) Values apply only to inverters. Permissible values for SMA MV solutions from SMA can be found in the corresponding data sheets.
9) A short-circuit ratio of < 2 requires a special approval from SMA
10) Depending on the DC voltage / expanded reactive power range (<PF 0.8 - 0.8 upon request), a further apparent derating is possible if the PF is < 0.9 underexcited
11) Earlier temperature-dependent de-rating and reduction of DC open-circuit voltage
12) Battery short circuit disconnection has to be done on the battery side
13) Depending on the ratio of reactive power (cos φ), additional power derating may occur
14) Split DC Bus option must be in combination with pre-fuses of the type SQB-DC154 aR from SIBA GmbH

4.2.5 Measurement at 4600 kVA, 1350 V DC U0N modulation J-Schneider coil 100% fan load without silencer

Sound Power Levels of the Third Octave Band Frequencies according to EN ISO 9614-2



Noise Emission

Product	Noise emission at a distance of 10 m
Sunny Central 4000 UP, Sunny Central 4200 UP, Sunny Central 4400 UP, Sunny Central 4600 UP Sunny Central 4000 UP-US, Sunny Central 4200 UP-US, Sunny Central 4400 UP-US, Sunny Central 4600 UP-US Sunny Central Storage 3450 UP(-XT), Sunny Central Storage 3600 UP(-XT), Sunny Central Storage 3800 UP(-XT), Sunny Central Storage 3950 UP(-XT) Sunny Central Storage 3450 UP(-XT)-US, Sunny Central Storage 3600 UP(-XT)-US, Sunny Central Storage 3800 UP(-XT)-US, Sunny Central Storage 3950 UP(-XT)-US	62 dB(A)
Sunny Central 2660 UP, Sunny Central 2800 UP, Sunny Central 2930 UP, Sunny Central 3060 UP Sunny Central 2660 UP-US, Sunny Central 2800 UP-US, Sunny Central 2930 UP-US, Sunny Central 3060 UP-US Sunny Central Storage 2300 UP-XT, Sunny Central Storage 2400 UP-XT, Sunny Central Storage 2530 UP-XT, Sunny Central Storage 2630 UP-XT Sunny Central Storage 2300 UP-XT-US, Sunny Central Storage 2400 UP-XT-US, Sunny Central Storage 2530 UP-XT-US, Sunny Central Storage 2630 UP-XT-US	61 dB(A)

7 Contact

If you have technical problems with our products, please contact the SMA Service Line. The following data is required in order to provide you with the necessary assistance:

- Device type
- Serial number
- Firmware version
- Event message
- Type of communication
- Type and number of PV modules
- Type and size of additional energy sources
- Optional equipment, e.g. communication products
- Detailed description of the problem

Daikin Packaged Rooftop Unit
with Quiet Condenser Fans and Compressor Sound Blankets

SUBMITTAL DATA

Job Name	Commerce 2 BESS
For	
Sold To	
Prepared For	
Customer PO#	
Prepared By	Matt Gregg
Date	2/6/2024

75 Ton Rooftop | Technical Data Sheet

Job Information	*Technical Data Sheet*
Job Name	Commerce 2 BESS
Date	2/6/2024
Submitted By	Matt Gregg
Software Version	05.40
Unit Tag	75 Ton Rooftop

Unit Overview

Model Number	Voltage	Design Supply CFM	Design Cooling Capacity	AHRI 360 Standard Efficiency		ASHRAE 90.1	Altitude
				EER	IEER		
DPSA075	460/60/3	28000 CFM	791018 Btu/hr	10.3	16.5	High Efficiency	0

Physical

Unit Dimensions and Weights

Unit Length	Unit Width	Unit Height	Unit Weight
305 in	96.5 in	102.0 in	10953 lb

Unit Construction and Performance

Construction:	Thermally Broken Double Wall	**Exterior:**	Pre-painted Steel 3000 hr Salt Spray ASTM B-117
Insulation:	R-value of 13.0	**Liners:**	Standard Galvanized Liners
Air Leakage@ design:	Less than 0.5% of airflow up to 5 in. w.c.	**Drain Pan Material**	Stainless Steel
ASHRAE Std 111:	Class 6 @ +/- 6"w.c static pressure	**Doors:**	Fan, Filter, Control Panel, and Heat Vestibule Sections

Duct Connections

Return Air	Bottom	**Supply Air**	Bottom

Rigging Information

Lugs per side	2 Lugs per Side

Sound

Sound Power (db)

Frequency	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	86	96	90	85	82	76	66	57
Discharge	92	95	102	98	98	98	93	89
Radiated (dbA)	50	65	70	79	80	80	76	69

60 Ton Rooftop | Technical Data Sheet

Job Information	*Technical Data Sheet*
Job Name	Commerce 2 BESS
Date	2/6/2024
Submitted By	Matt Gregg
Software Version	05.40
Unit Tag	60 Ton Rooftop

Unit Overview

Model Number	Voltage	Design Supply CFM	Design Cooling Capacity	AHRI 360 Standard Efficiency		ASHRAE 90.1	Altitude
				EER	IEER		
DPSA060	460/60/3	24000 CFM	647429 Btu/hr	11.0	17.4	High Efficiency	0

Physical

Unit Dimensions and Weights

Unit Length	Unit Width	Unit Height	Unit Weight
305 in	96.5 in	102.0 in	10826 lb

Unit Construction and Performance

Construction:	Thermally Broken Double Wall	**Exterior:**	Pre-painted Steel 3000 hr Salt Spray ASTM B-117
Insulation:	R-value of 13.0	**Liners:**	Standard Galvanized Liners
Air Leakage@ design:	Less than 0.5% of airflow up to 5 in. w.c.	**Drain Pan Material**	Stainless Steel
ASHRAE Std 111:	Class 6 @ +/- 6"w.c static pressure	**Doors:**	Fan, Filter, Control Panel, and Heat Vestibule Sections

Duct Connections

Return Air	Bottom	**Supply Air**	Bottom

Rigging Information

Lugs per side	2 Lugs per Side

Sound

Sound Power (db)

Frequency	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	84	94	88	83	80	75	65	57
Discharge	90	93	101	96	97	96	91	87
Radiated (dbA)	49	65	70	78	80	79	76	68

40 Ton Rooftop | Technical Data Sheet

Job Information	*Technical Data Sheet*
Job Name	Commerce 2 BESS
Date	2/6/2024
Submitted By	Matt Gregg
Software Version	05.40
Unit Tag	40 Ton Rooftop

Unit Overview

Model Number	Voltage	Design Supply CFM	Design Cooling Capacity	AHRI 360 Standard Efficiency		ASHRAE 90.1	Altitude
				EER	IEER		
DPSA040	460/60/3	16000 CFM	439611 Btu/hr	11.1	16.4	High Efficiency	0

Physical

Unit Dimensions and Weights

Unit Length	Unit Width	Unit Height	Unit Weight
249 in	96.5 in	77.6 in	6896 lb

Unit Construction and Performance

Construction:	Thermally Broken Double Wall	**Exterior:**	Pre-painted Steel 3000 hr Salt Spray ASTM B-117
Insulation:	R-value of 13.0	**Liners:**	Standard Galvanized Liners
Air Leakage@ design:	Less than 0.5% of airflow up to 5 in. w.c.	**Drain Pan Material**	Stainless Steel
ASHRAE Std 111:	Class 6 @ +/- 6”w.c static pressure	**Doors:**	Fan, Filter, Control Panel, and Heat Vestibule Sections

Duct Connections

Return Air	Bottom	**Supply Air**	Bottom

Rigging Information

Lugs per side	2 Lugs per Side

Sound

Sound Power (db)

Frequency	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	85	91	86	81	81	79	78	67
Discharge	91	97	92	93	93	91	90	83
Radiated (dbA)	52	63	70	77	78	77	75	67

MV Transformer

WESTRAFO

Westrafo S.r.l. - Via della Meccanica 4, 36100 - Vicenza (Italy)
Headquarter: Contrada Ronchi 3, 36064 - Montebello Vicentino (Italy)
Tel. +39 0444 1831601 / Fax. +39 0444 1831602
VAT 03912090242 / REA 364385/VI / Share capital: 1.000.000 €

POWER TRANSFORMERS

TECHNICAL DATASHEET	TRA190000657	REV.	00	TYPE	Final design	DATE	28/02/2024

AUTHOR:	J. Avogaro	APPROVED BY	R. Bordacchini

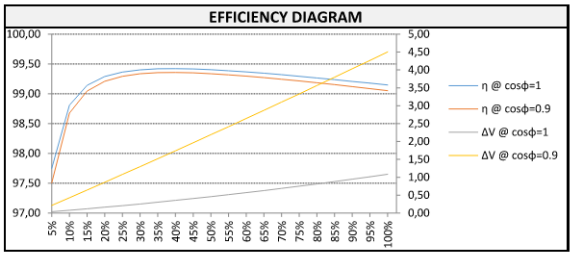
Three phase power transformer immersed in dielectric fluid with the following features:

Reference norms:	IEEE C57.12.00
Type of load:	Continuous - 7940kVA @25°C - 5950kVA @60°C (***)
Mechanical construction type	Sealed tank completely filled with cooling fins
Type of cooling	KNAN

EFFICIENCY (KNAN)				
	100%	75%	50%	25%
cos Ø = 1	99,15	99,29	99,40	99,36
cos Ø = 0,9	99,05	99,22	99,34	99,29
cos Ø = 0,8	98,94	99,12	99,26	99,21

VOLTAGE DROP (KNAN)				
	100%	75%	50%	25%
cos Ø = 1	1,08	0,75	0,46	0,21
cos Ø = 0,9	4,50	3,33	2,19	1,08
cos Ø = 0,8	5,71	4,25	2,81	1,39

EFFICIENCY DIAGRAM



ELECTRICAL DATA				
	HV SIDE		LV SIDE	
	KNAN	KNAF	KNAN	KNAF
Rated power [kVA]	6760		3380 - 3380	
Rated voltage [V]	34500		690 - 690	
Rated current [A]	113,13		2828,18 - 2828,18 (*)	
Insulation level [kV]	Um 36 / LI 200 / AC 50		Um 3,6 / LI - / AC 10	
Winding material	AL		AL	
Tap changer	No			
Taps	/			
Connection type	D		y - y	
Number of bushings	3		3 - 3	
Type of bushings	Plug In - Interface E		Busbar	
Bushings electrical features [kV/A]	38/600		3,6/5000 - 3,6/5000	
Bushings exit position	Top cover		Top cover	
Cable exit protection degree	IP00		IP00	
Screen between windings	Yes			

	KNAN	KNAF	TOLERANCE (%)	REFERENCE NORM
Frequency [Hz]	60			
Vector Group	Dy11y11			
Impedance Voltage @105°C [%]	8,25±17% MV-LV1//LV2 @Sr | 7,25±17% MV-LV1=MV-LV2 & ≥9 LV1-LV2 @Sr/2			
No load losses [W]	7650		+10%	IEEE
No load current [%]	0,5			
Load losses @105°C [W]	50500			
Total losses @105°C [W]	58150		+6%	IEEE
PEI [%]	/			
Sound pressure level [dB] @1m	65		0	IEEE

MECHANICAL AND SITE DATA		
Magnetic circuit	Cold-rolled grain-oriented electrical steel - core type - three limb - step-lap joints	
Design temperature [°C]	-25	+50
Overtemperature oil/windings [°C]	70	75 (**)
Max installation altitude [m]	1000	
Paint corrosivity category	C5-H	300 µm
Painting Color	RAL7033	
Type of fluid	FR3 - Cargill Envirotemp	
Trolley dimensions	1070x1070	
Wheels	No wheels	
Transformer dimensions [LxWxH]	2932 x 1572 H= 2288	
Fluid volume [dm³] / weight [kg]	3020 / 2780 kg - 6130 lb	
Total weight [kg]	11330 kg - 24985 lb	

WESTRAFO

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POWER TRANSFORMERS

TECHNICAL DATASHEET	TRA190000657	**REV.**	00	**TYPE**	Final design	**DATE**	28/02/2024

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Reference norms:	IEEE C57.12.00
Type of load:	Continuous - 7940kVA @25°C - 5950kVA @60°C (***)
Mechanical construction type	Sealed tank completely filled with cooling fins
Type of cooling	KNAN

ACCESSORIES INCLUDED	
Quantity	**Description**
2	Earthing terminals
1	Set of lifting lugs
1	Name plate
1	Oil drain valve
1	DMCR
1	Spare thermometer pocket
1	Electrostatic screen
1	Overpressure valve with 1x CO contact
1	Oil level indicator with 1x CO contact
1	Oil thermometer with 2x CO contacts
1	Winding thermometer with 2x CO contacts
1	Probe PT100 with exit 4-20 mA
1	Marshalling box
4	Anti-vibration pads

TESTS INCLUDED	
Quantity	**Description**
1	Set of routine tests

NOTES

Painting: Applied following the corrosivity category of ISO 12944 specified in datasheet on all external parts. Internal parts (ex. Inside of cable box) treated with protective coating.

Wheels: The colour of wheels, if present, is not matching the specified RAL but according to supplier's choice.

Dimension & weight: All dimensions and weights in the preliminary phase are approximate and not contractual.

Suggested oil temperature thresholds: 120 °C for trip and 115 °C for alarm

(*) Currents of LV windings shall be in phase.
(**) This overtemperature is guaranteed on the average between both LV windings. The single LV winding can exceed this value.
(***) The transformer is rated also for 24 hours duty cycle operation @ 45°C ambient temperature as follows:
- 7120 kVA load for 4 hours then **0 kVA load for 2 hours** then **7120 kVA load for 4 hours** then **0 kVA load for 14 hours - .**

NOTE on short circuit impedances: Difference between uk MV-LV1 @Sr/2 and uk MV-LV2 @Sr/2 is guaranteed to be < 0,5%

Substation Transformer

Commerce Energy Storage **Execution Version**

Main Power Transformer
Scope of Supply

Following in the ANSI data sheet for the Main Power Transformer to be supplied.

MARS TRANSFORMERS

TECHNICAL PROPOSAL INFORMATION

Customer: *MARS TRANSFORMERS, LLC* Date: 07/24/23

Proposal No: Spec No: SCOPE OF SUPPLY 6.20.2023 Item No: 24007631/C

RATING									
Type	Transformer		Class	H Winding		X Winding		Y Winding	
Phase	3			220 Wye	kV	34.5 Wye	kV	13.8 Delta	kV
Hertz	60		ONAN	167,000	KVA	167,000	KVA	-	KVA
Temp Rise	65 °C		ONAF	222,000	KVA	222,000	KVA	-	KVA
Insul Liquid	Oil Type II(inhibited)		ONAF	279,000	KVA	279,000	KVA	-	KVA
			-	-	KVA	-	KVA	-	KVA

ADDITIONAL TAP VOLTAGES		
H Winding (Kv)	± 16 of .625 %	LTC - FCBN
X Winding (Kv)	-	-
Y Winding (Kv)	Buried	

CONNECTIONS FOR OPERATION

Transformers in Bank	To Transformer From	Phase	Connected	To Transformer To	Phase	Connected
-	-	-	-	-	-	-

PERFORMANCE BASED ON A LOADING OF					DIELECTRIC TESTS				INSULATION LEVELS		
									ITEMS	Basic Lightning Impulse (kV)	
										Winding	Bushing
H Winding	220.0	kV	167.0	MVA	Applied Voltage	H Winding	34	kV	H Line	900	1050
X Winding	34.5	kV	167.0	MVA	(To other wind-	X Winding	70	kV	H neutral	110	110
Y Winding	13.8	kV	-	MVA	ing and ground)	Y Winding	-	kV	X line	200	200
-	-	-	-	-	Induced	One Hour	210	kV	X neutral	200	200
-	-	-	-	-	Voltage	Enh 7200cy	240	kV	Y line	110	-

PERFORMANCE DATA, Based on 85 °C Reference Temperature, 167 MVA Altitude: 1000 Mts.

Exciting Current		Losses (KW)			Regulation	
Excitation	% Ex	No Load Losses (20°C)	Load Losses	Total Losses	Power Factor	% Regulation
100%	.19	97	301	398	0.80	5.793
110%	.844	148.5 *	301	449.5 *	1.0	0.583
-	-	* Not Guaranteed			-	-

AUXILIARY (COOLING) LOSSES			
Transformer KVA	Class	KWatts Loss	
167,000 -	ONAN	0	
222,000 -	ONAF	7	
279,000 -	ONAF	14	
- -	-	-	
- -	-	-	
Average Sound Level	85/87/88	dB	ONAN/ONAF/ONAF

PERCENT IMPEDANCE VOLTS					
% IZ	Between Windings	At kVA	% IZ Zero	Between Windings	At kVA
9	H-X	167,000	7.7*	H-X	167,000
-	-	-	-	-	-
-	-	-	-	-	-

* APPROXIMATE ONLY, NOT GUARANTEED

EFFICIENCIES (p.f = 1) AT 167 MVA				
Load	Full Load	3/4 Load	1/2 Load	1/4 Load
%	99.764	99.79	99.796	99.725

MECHANICAL DATA
Not for Construction Purposes

Outline Dwg No: DW_240076C31

Dimensions (Approximate)		Ft. (Mts.)
Height	(A)	24.4 (7.44)
Width	(B)	41.0 (12.50)
Depth	(C)	24.2 (7.37)
Height over Cover	(D)	16.6 (5.05)
Untanking (Plus slings)	(E)	27.8 (8.46)
Shipping Dimensions:Ft	WxDxH	28.3 x 12.4 x 16
Masses (Approximate)		pounds (Kg)
Core and Coils		281,200 (127,550)
Tank and Fittings		134,880 (61,180)
Liquid 19,830	Gal	149,000 (67,580)
Total Mass		565,080 (256,310)
Shipping without OIL		359,080 (162,880)
Shipping with OIL H=		480,520 (217,960)

Auxiliary Transformers

Three-Phase Transformers
CA202003EN

Effective July 2015
Supersedes 210-12 August 2013

COOPER POWER SERIES

Three-phase pad-mounted compartmental type transformer

General

At Eaton, we are constantly striving to introduce new innovations to the transformer industry, bringing you the highest quality, most reliable transformers. Eaton's Cooper Power series Transformer Products are ISO 9001 compliant, emphasizing process improvement in all phases of design, manufacture, and testing. In order to drive this innovation, we have invested both time and money in the Thomas A. Edison Technical Center, our premier research facility in Franksville, Wisconsin. Such revolutionary products as distribution-class UltraSIL™ Polymer-Housed Evolution™ surge arresters and Envirotemp™ FR3™ fluid have been developed at our Franksville lab.

With transformer sizes ranging from 45 kVA to 12 MVA and high voltages ranging from 2400 V to 46 kV, Eaton has you covered. From fabrication of the tanks and cabinets to winding of the cores and coils, to production of arresters, switches, tap changers, expulsion fuses, current limit fuses, bushings (live and dead) and molded rubber goods, Eaton does it all. Eaton's Cooper Power series transformers are available with electrical grade mineral oil or Envirotemp™ FR3™ fluid, a less-flammable and bio-degradable fluid. Electrical codes recognize the advantages of using Envirotemp™ FR3™ fluid both indoors and outdoors for fire sensitive applications. The bio-based fluid meets Occupational Safety and Health Administration (OSHA) and Section 450.23 NEC Requirements.

EATON
Powering Business Worldwide

Three-phase pad-mounted compartmental type transformer

Catalog Data **CA202003EN**
Effective July 2015

Table 2. Three-Phase Ratings

Three-Phase 50 or 60 Hz
kVA Available[1] 45, 75, 112.5, 150, 225, 300, 500, 750, 1000, 1500, 2000, 2500, 3000, 3750, 5000, 7500, 10000

[1]Transformers are available in the standard ratings and configurations shown or can be customized to meet specific needs.

Table 3. Impedance Voltage

	Low-voltage rating		
Rating (kVA)	**≤ 600 V**	**2400 Δ through 4800 Δ**	**6900 Δ through 13800GY/7970 or 13800 Δ**
45-75	2.70-5.75	2.70-5.75	2.70-5.75
112.5-300	3.10-5.75	3.10-5.75	3.10-5.75
500	4.35-5.75	4.35-5.75	4.35-5.75
750-2500	5.75	5.75	5.75
3750	5.75	5.75	6.00
5000		6.00	6.50

Note: The standard tolerance is ± 7.5%

Table 4. Audible Sound Levels

	NEMA® TR-1 Average
Self-Cooled, Two Winding kVA Rating	**Decibels (dB)**
45-500	56
501-700	57
701-1000	58
1001-1500	60
1501-2000	61
2001-2500	62
2501-3000	63
3001-4000	64
4001-5000	65
5001-6000	66
6001-7500	67
7501-10000	68

Table 5. Insulation Test Levels

KV Class	Induced Test 180 or 400 Hz 7200 Cycle	kV BIL Distribution	Applied Test 60 Hz (kV)
1.2	Twice Rated Voltage	30	10
2.5		45	15
5		60	19
8.7		75	26
15		95	34
25		125	40
34.5		150	50

Table 6. Temperature Rise Ratings 0-3300 Feet (0-1000 meters)

	Standard	Optional
Unit Rating (Temperature Rise Winding)	65 °C	55 °C, 55/65 °C, 75 °C
Ambient Temperature Max	40 °C	50 °C
Ambient Temperature 24 Hour Average	30 °C	40 °C
Temperature Rise Hotspot	80 °C	65 °C

Diesel Generator Set

MTU 4R0113 DS100

100 kWe/60 Hz/Standby/208 - 600V
Reference MTU 4R0113 DS100 (90 kWe) for Prime Rating Technical Data

System ratings

Voltage (L-L)	240V †	240V †	208V †	240V †	480V †	600V
Phase	1	1	3	3	3	3
PF	1	1	0.8	0.8	0.8	0.8
Hz	60	60	60	60	60	60
kW	100	100	100	100	100	100
kVA	100	100	125	125	125	125
Amps	417	417	347	301	150	120
skVA@30% voltage dip	136	311	258	258	344	270
Generator model	431CSL6204	363CSL1617	362CSL1606	362CSL1606	362CSL1606	362PSL1636
Temp rise	130 °C/40 °C	130 °C/40 °C	130 °C/40 °C	130 °C/40 °C	130 °C/40 °C	130 °C/40 °C
Connection	12 LEAD DOUBLE DELTA	4 LEAD	12 LEAD LOW WYE	12 LEAD HI DELTA	12 LEAD HI WYE	4 LEAD WYE

† UL 2200 offered

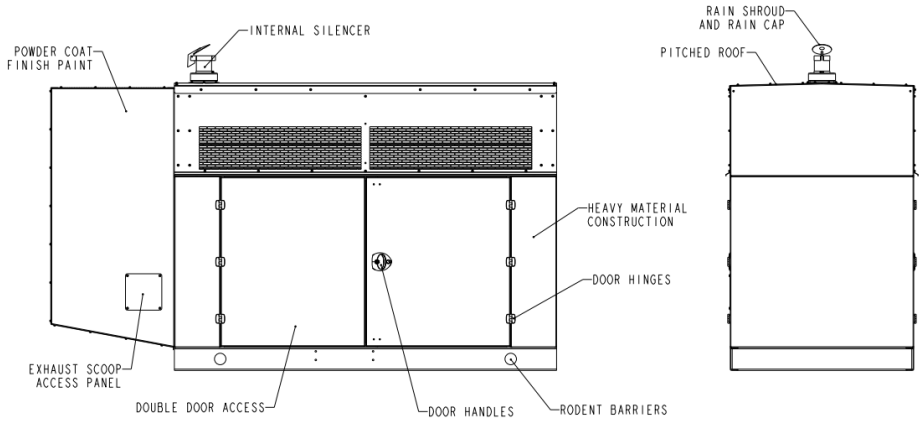
Certifications and standards

- Emissions
  - EPA Tier 3 certified
  - South Coast Air Quality Management District (SCAQMD)
- Generator set is designed and manufactured in facilities certified to standards ISO 9001:2008 and ISO 14001:2004
- UL 2200 - optional (refer to *System ratings* for availability)
- CSA - optional
  - CSA C22.2 No. 100
  - CSA C22.2 No. 14
- Performance Assurance Certification (PAC)
  - Generator set tested to ISO 8528-5 for transient response
  - Verified product design, quality and performance integrity
  - All engine systems are prototype and factory tested
- Power rating
  - Accepts rated load in one step per NFPA 110

A Rolls-Royce solution

ENCLOSURE AND SOUND DATA SHEET - DIESEL INFINITE EXHAUST

60 Hz: 80-200 kW Standby / 80-180 kW Prime



Level 3 Enclosure (pictured)*

OPTIONAL FEATURES

- Door restraints
- AC or DC light package
- Motorized / gravity louvers (where available)
- 190 mph wind rating
- For other custom options, please consult factory.

Source: *Engineer's Guidebook*, MTU a Rolls Royce Solution
https://www.pacificpowergroup.com/wp-content/uploads/2021/07/EngineersGuidebook.pdf

ENCLOSURE AND SOUND DATA SHEET - DIESEL INFINITE EXHAUST

60 Hz: 80-200 kW Standby / 80-180 kW Prime

			1 Meter		7 Meters			
Application	Model	Power Node	Engine Exhaust (1)	OPU	Level 1	Level 2	Level 3**	Level 3 with Exhaust Scoop Sound Attenuation Kit***
60 Hz Prime	MTU 4R0113 DS80	80 kW	C/F	92	78.9	75.2	70.9	66.7
	MTU 4R0113 DS100	90 kW	C/F	95	80.4	76.8	73.3	69
	MTU 4R0113 DS125	111 kW	C/F	97.9	83.3	81.8	72.9	N/A
	MTU 6R0113 DS150	135 kW	C/F	96.6	84.2	82.8	73.6	N/A
	MTU 6R0113 DS180	180 kW	C/F	98.1	85.1	83.3	74.6	N/A

(1) Undampened engine exhaust noise

NOTE:

- Measurements with infinite exhaust connection
- Aluminum enclosure sound levels are approximately 2 dB(A) higher than listed sound levels for steel enclosures
- For installation within 50 miles of the coast, aluminum enclosures are recommended to prevent accelerated corrosion
- Sound pressure levels subject to environment, instrumentation, measurement, installation, and generator set variability
- Generator set is tested on level ground without spring isolators installed
- Sound power levels per ISO 8528-10 and ANSI S1.13-2005
- Sound data measured with:
  - Full-rated load
  - Standard radiator package

C/F = Consult Factory
N/A = Not Available

* **Note**: Visual appearance may differ between power nodes.

** 80-100 kW: Without foam in scoop, however it is optional. Refer to Level 3 w/exhaust scoop sound attenuation kit.
125-200 kW: Foam in scoop is standard.

*** The Level 3 w/exhaust scoop sound attenuation kit is only available for 80-100 kW range.

Source: *Engineer's Guidebook*, MTU a Rolls Royce Solution
https://www.pacificpowergroup.com/wp-content/uploads/2021/07/EngineersGuidebook.pdf