INITIAL STUDY
GOAL LINE RELIABILITY PROJECT
ESCONDIDO, CA

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July 2023

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SECTION 1.0 – PROJECT DESCRIPTION AND ENVIRONMENTAL SETTING

1.1 PROJECT OVERVIEW

Onward Energy proposes to construct, own, and operate the Goal Line Reliability Project (Project), a lithium-ion battery energy storage facility capable of delivering up to 50 MW of energy storage with an 8-hour capacity rating on approximately 4.5 acres within the approximately 6.5-acre site containing an existing electrical generation facility and a non-operational ice-rink facility (Project Site). Energy stored in the Project will then be discharged into the grid when the energy is needed, providing important electrical reliability services to the local area. It is expected that between two to four staff members will visit the site weekly and as needed for maintenance and monitoring of the Project. The Project will be operated remotely with no permanent on-site operations personnel. No changes are proposed to the existing electrical generation assets or operations as part of the Project.

1.2 PROJECT DESCRIPTION

The approximately 6.5-acre Project Site is located at 555 Tulip Street, within Escondido, California, 92025 (Figure 1). The Project Site currently contains a non-operational ice-rink and a 50 MW natural gas power plant (Figure 2). The existing ice-rink will be demolished and the Project facilities will be constructed in its place. The parking facilities and other structures adjacent to the natural gas power plant facilities, which will remain. This includes an area of approximately 4.5 acres.

1.3 FACILITIES DESCRIPTION

The Project will be capable of delivering energy storage services to the electrical transmission grid through SDGE's Esco substation. The major components of the Project are described below and summarized in Table 1-1. The ultimate make, model, and manufacturer of the batteries, including equipment sizing and count, is still under consideration. As such, details associated with Project facilities is intended to "envelope" the foreseeable component models available at the time of Project construction. Exact dimensions and specifications are dependent on technology selection; however, the following information is a reasonable "worst case" assumption for the purposes of permitting and analyzing impacts from the Project.

Batteries housed within BESS Enclosures: The Project consists of lithium-based battery modules installed in racks and housed within purpose-built outdoor Battery Energy Storage System (BESS) enclosures. A typical BESS enclosure will house hundreds of battery modules where each enclosure is typically capable of storing between 0.4 to 5 megawatt-hours (MWh) of energy.

Each individual module within an enclosure is equipped with integrated operational management systems, fire and safety systems (HVAC systems, ventilation, gas, heat and smoke detection and alarms, and fire suppression systems) all designed, constructed, and operated pursuant to the version of the California Fire Code in effect at the time of building permit issuance. The modules within each enclosure are accessed for maintenance from the outside via cabinet doors.

The dimensions of a typical BESS enclosure vary between manufacturers and are arranged in repeated "blocks" across the site. System blocks may consist of a single enclosure, or several smaller enclosures set side-by-side to create banks of batteries with similar overall dimensions. Smaller enclosures are typically closely spaced or physically attached at the time to construction, and larger enclosures are placed in

smaller groupings or individually. An enclosure grouping typically consist of 4 to 12 enclosures measuring approximately 30 feet long by 6 feet wide with a height of 10 feet. Smaller enclosures may be as small as 3.5 feet long by 5 feet wide by 8 feet tall while larger enclosures may measure over 50 feet long by 12 feet wide with a height of up to 20 feet. Enclosures may also be double stacked if designed to do so, which is anticipated for this Project. However, the number, size, layout, and capabilities of each enclosure will vary depending on the battery, enclosure manufacturer design, and BESS system manufacturer(s) selected for the Project. Regardless of the system manufacturer, the Project's developed footprint and overall capability will remain substantially the same. In some instances, the battery enclosures may contain inverters which convert low voltage direct current (DC) to alternating current (AC) (and vice-versa when charging).

Current technological selections include two options for mounting HVAC on the containers: side mounted and top mounted. Each individual module is monitored and controlled to ensure safe and efficient operations. Battery enclosures will be placed within a defined and stable total footprint on the Project site.

Power Conversion System (PCS): Low voltage DC cables will connect the battery enclosures to low profile, pad-mounted PCS inverter-transformers located adjacent to each enclosure. Inverters within the PCS convert electricity from low voltage DC to low voltage AC when power is being taken (discharged) from the battery into the grid. The opposite occurs when charging the battery from the grid. A medium voltage transformer within the PCS is used to convert the low voltage AC current to medium voltage AC current and vice versa.

Medium Voltage (MV) Transformers: As stated above, in some instances the inverter is contained within the battery enclosures and a stand-alone transformer is used instead of a PCS. In this instance, the MV Transformer equipment is connected directly to the battery enclosures via low-voltage AC wiring. Additional MV Transformers, also referred to as Auxiliary Transformers, will also be sited to provide power to auxiliary equipment and other site electrical needs such as lighting, receptacles, and life-safety equipment and to power the PDC.

Outdoor Electrical Equipment: Other additional electrical equipment such as electrical cabinets and panels will be installed outside the BESS enclosures within the site area. This equipment is smaller in size than the equipment listed above and is distributed through the site as needed based on the design parameters of the battery and power conversion equipment chosen. In addition, buried cable will be placed throughout the site to connect power and communications to individual components and to the Project Substation. All outside electrical equipment will be housed in the appropriate National Electrical Manufacturers Association (NEMA) rated enclosures.

Power Distribution Center (PDC): The PDCs are enclosures that house and protect key Project electrical, communication and command equipment located near the Main Power Transformers.

Main Power Transformer (MPT): The Main Power Transformers step-up the medium voltage electricity from the inverter-transformer to the high-voltage level of the transmission system, delivering it into the grid via a high-voltage generation tie-line.

Generation tie-line: The Project will interconnect to the existing, adjacent SDGE Esco Substation via an existing overhead generation tie-line.

Other Site Design Features: The Project includes other essential design features to ensure safety, security, and efficiency as well as compliance with all building, fire, and health and safety regulations, including setbacks, fire-operations access roads, security fencing and lighting, and separation between equipment and other features. Drainage facilities will be installed to route stormwater to the existing on-site storm drain systems in a manner generally consistent with the existing facilities.

Table 1-1. Project Equipment Details

Equipment	Description	Number of Units/Size of Footprint in Acres	Height
Battery Containers with Top Mounted A/C	Integrated battery, battery controls and ancillary equipment with HVAC.	Approximately 4.5 acres	Up to 20 feet
Battery Containers with Side Mounted A/C	Integrated battery, battery controls and ancillary equipment with HVAC.	Approximately 4.5 acres	Up to 25 feet
PCS's and/or MV Transformers	Power conversion systems (PCS) inverters and LV-MV Transformer equipment and skids	Contained within the approximately 4.5 acres of battery containers	10 feet
PDC	Power Distribution Center - substation controls building	Contained within the approximately 6.5 acres of overall project area	20 feet
MPT (aka GSU)	Main power high voltage transformer	Contained within the approximately 6.5 acres of overall project area	30 feet; static masts up to 100 feet
Auxiliary Transformers	MV-LV Auxiliary Transformers for equipment back-feed power	Approximately 5; Contained within the approximately 4.5 acres of battery containers	10 feet
Transmission Towers/Poles	Steel monopole or wood pole electrical transmission structures	Up to 2, depending on interconnection conditions	Up to 100 feet depending on interconnection conditions
Other lighting, electrical, safety, communications, and security equipment	Various	–	Switchgear cabinets and power distribution panels up to 10 feet; junction boxes and telephony equipment up to 8 feet

Access to the Project site will be provided via two driveways from Tulip Road. Site access will comply with City and County regulations in order to provide access to operational, fire department, and emergency vehicle access to the facility. The site plan proposes to abandon the two existing central drives and adjust the existing sidewalk accordingly.

The Project Site currently has retail electrical, telecommunications, water, sanitary sewer, storm sewer and natural gas services. No sanitary sewer or natural gas connections are proposed as part of the Project

with the existing services to the existing natural gas plant to remain in place. Additional storm sewer connections and fire water connections will be made on an as-needed basis, as determined by final equipment selection. Reconfiguration of retail electrical infrastructure is anticipated with the demolition phase. On-site upgrades to telecommunications infrastructure are anticipated. However, no significant offsite system upgrades are anticipated to any utilities at this time.

1.4 PROJECT LOCATION AND LAND USE DESIGNATION

The Project Site is located within the City of Escondido's (City) General Plan land use designation of General Industrial (GI) and is within the Planned Development – Industrial (PD-I) zone (Figures 3 and 4). The Project is surrounded by developed parcels consisting of businesses such as a building materials supplier to the northwest, construction and paint businesses to the north, and the Plaza Las Palmas shopping mall to the south across the channel. Interstate 15 borders the Project site to the south.

The Project includes a Zoning Map Amendment (ZMA) to amend the underlying zoning designation to General Industrial (M-2). With a zoning change to M-2, the Project site would be consistent with the City's zoning. This designation permits a wide range of manufacturing warehousing/distributing, assembling and other heavy or intensive uses. This designation allows "utilities," including the Project. Under Section 33-564 of the Municipal Code, utilities are considered a permitted use within the M-1 and M-2 zone. Additionally, the Project includes a Zoning Text Amendment (ZTA) to modify existing fence standards to allow for an increase in fence height on a case-by-case basis. Finally, the Project will require a Major Plot Plan for the construction of the energy storage facility.

The following entitlements are required from the City:

- Zone Map Amendment to amend the City's Zoning Map
- Zone Text Amendment to amend the City's Zoning Ordinance to allow for an increase in fence height on a case-by-case basis
- Major Plot Plan for the development of the site for the purposes of the energy storage facility.

Figure 1 - Project Location and Vicinity Map

Figure 2 – Project Site Plan

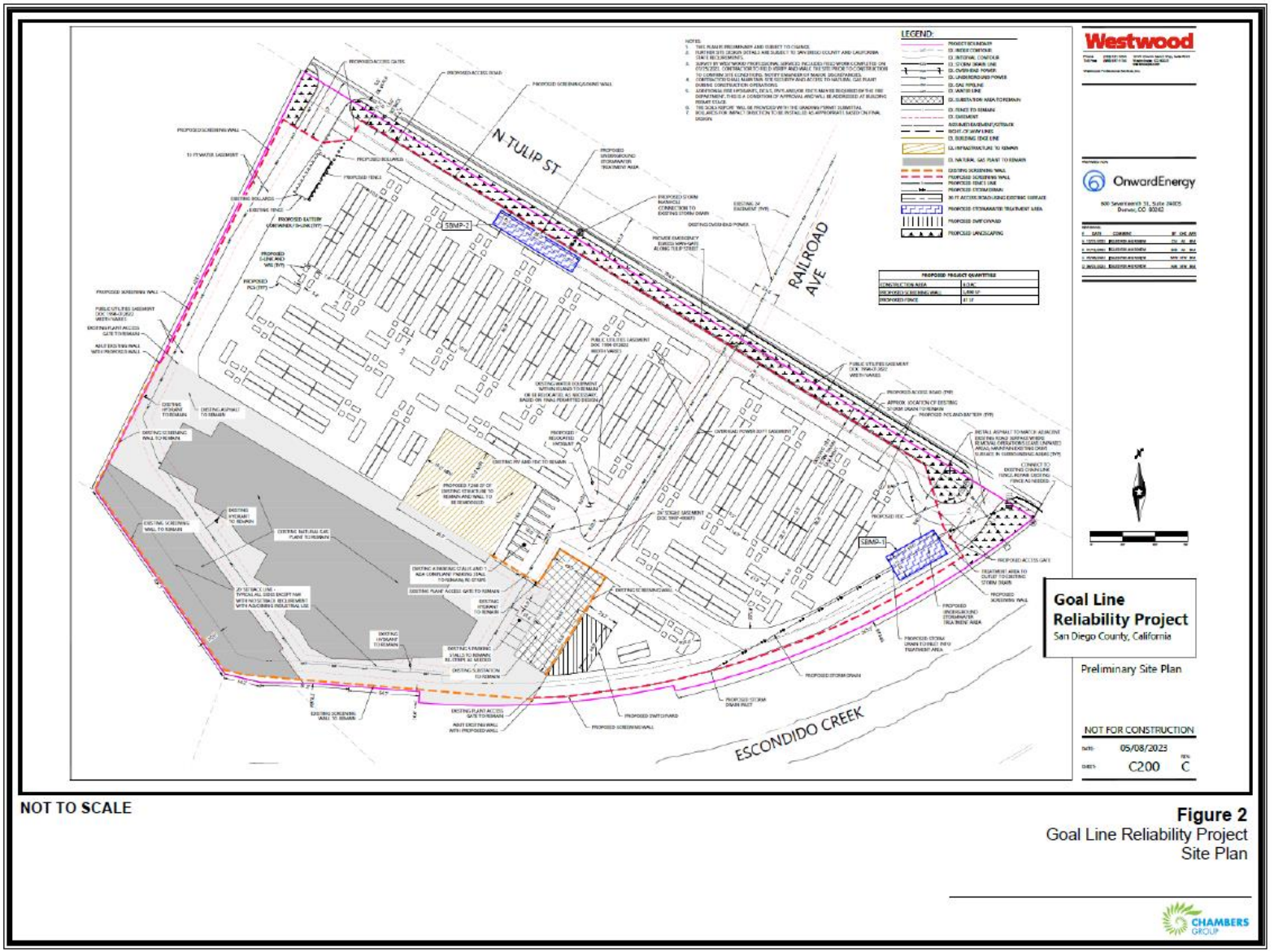


Figure 3 – Land Use/General Plan Map

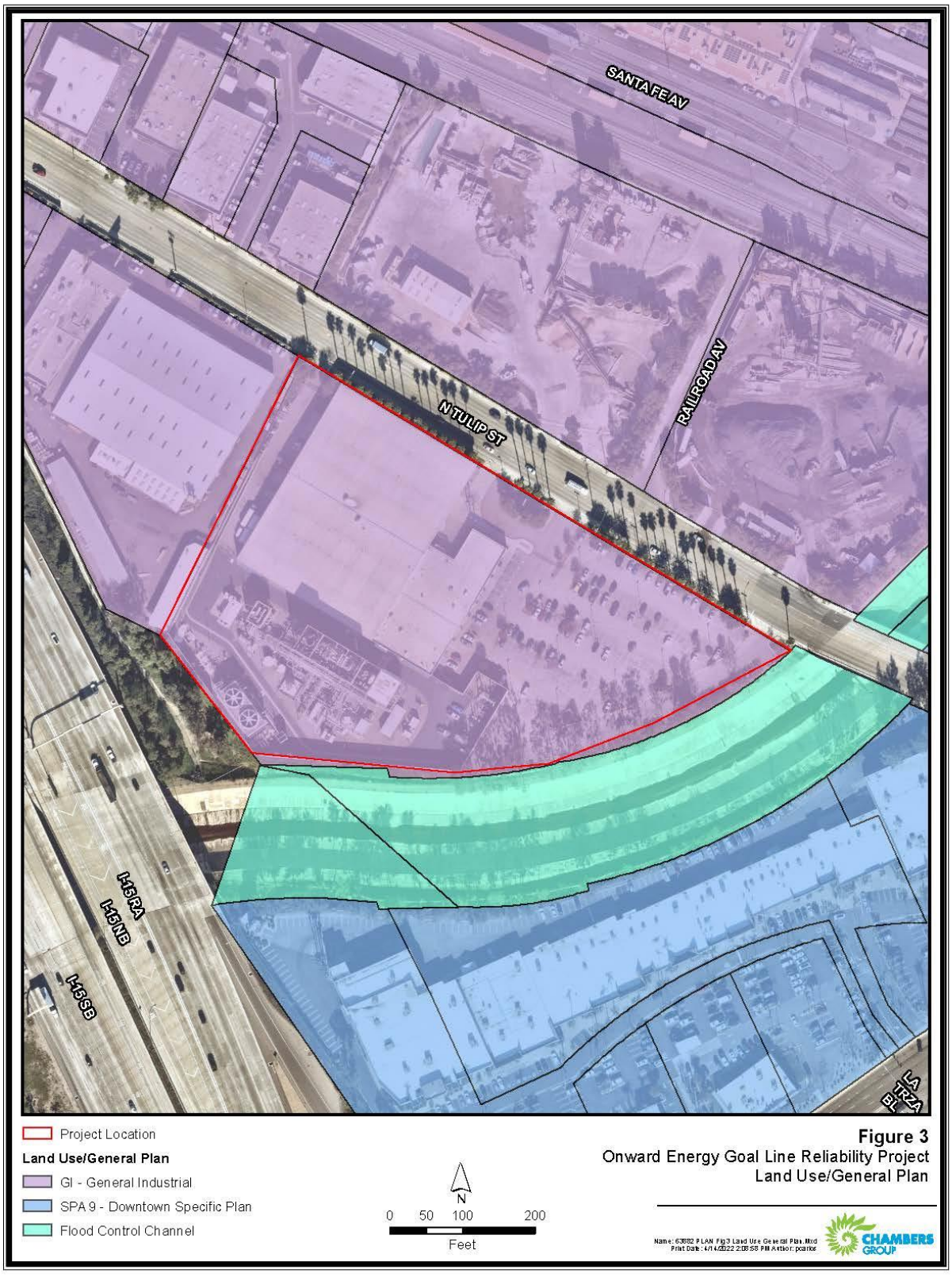
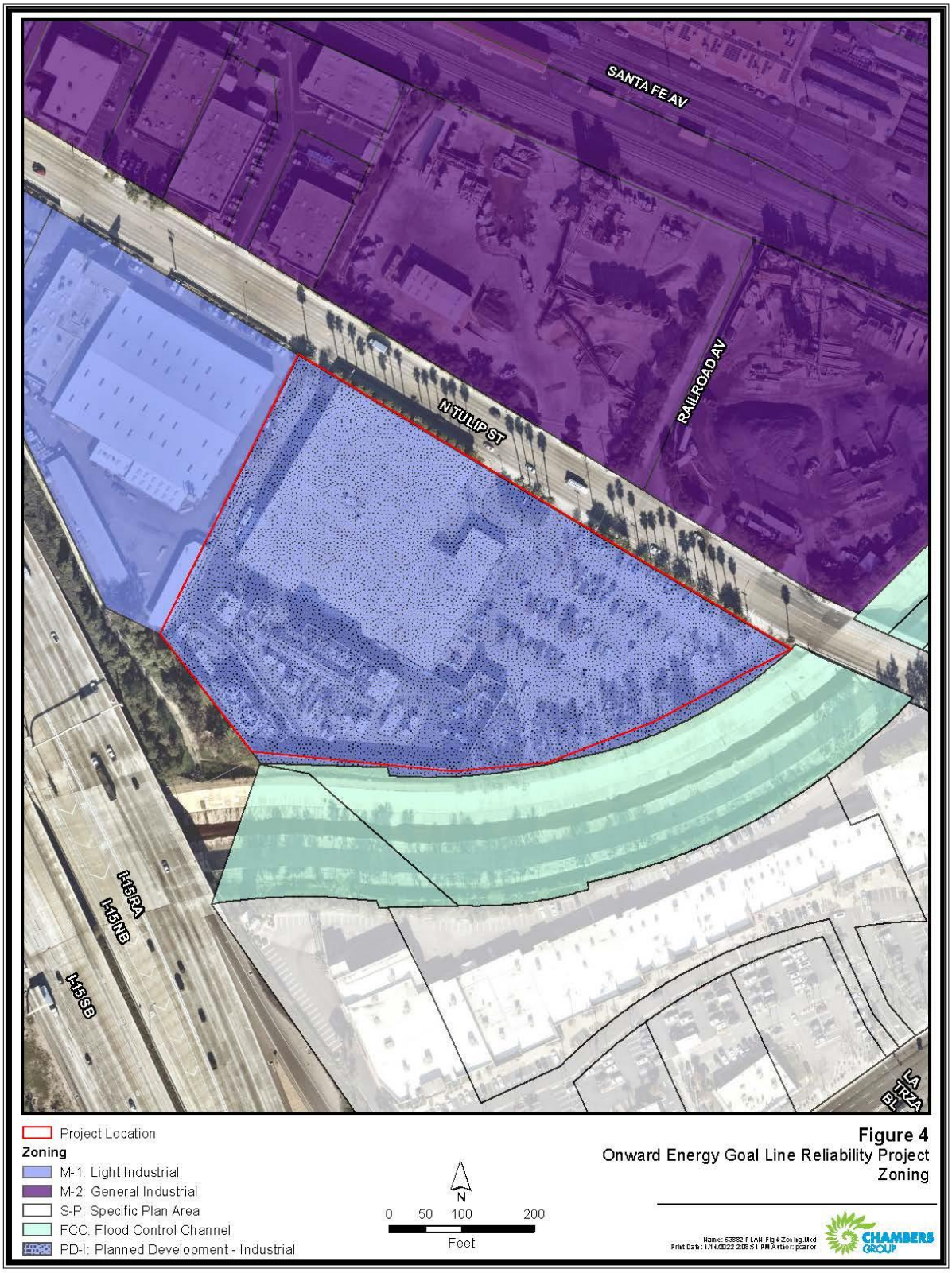


Figure 4 – Zoning Map



1.5 PROJECT CONSTRUCTION

Project construction will be conducted in two parts[1]:

1. Demolition Phase: demolition of existing facilities

2. Construction Phase: construction of BESS containers

Project construction includes demolition of the existing facility, site preparation and grading, installation of drainage and retention basins, foundations/supports, setting battery enclosures, wiring and electrical system installation, and assembly of the accessory components including inverter transformers and generation step-up transformers. Earth cut and fill are proposed to be balanced within the Project site such that no import of fill material or export of in-situ material is proposed. Due to unknown site conditions beneath the existing infrastructure, this may need to be modified after demolition operations. Up to 30,000 cubic yards of material may need to be imported if site conditions require mitigation.

Further, it is anticipated that approximately 5,000 cubic yards of surfacing (asphalt and/or open graded crushed rock aggregate) and trench fill material will be required.

Raw materials required for construction include gravel for roads and pads; concrete, sand, and cement for foundations; and water for concrete, dust control, and erosion controls. Table 1-2 provides anticipated construction workforce and examples of typical heavy equipment that may be used during Project construction activities.

Table 1-2. Construction Workforce and Equipment Required for a Typical Battery Storage Facility

Construction Activity	Workforce	Typical Construction Equipment *
Demolition	12	Dozer, bobcat, dump truck

[1] An earlier version of the Project contemplated a second phase, capable of delivering up to an additional 400 MWh of stored energy. As the Project moved through design, it was determined that implementation of this second phase was not feasible. The primary difference between the Project that is currently defined, and the prior iteration is that BESS containers will not be stacked and therefore fewer will be located within the site. The Project's footprint is materially the same. Much of the analysis contained herein is substantially similar to that of the current Project, however analyses specific to air quality and noise was performed using the number of containers specific to the larger Project and additional construction phasing. This represents an assessment of impacts that is necessarily greater than the Project, as currently defined. Therefore, the analysis contained herein is intended to be an incredibly conservative impact assessment and an overestimation of impacts compared to the proposed Project.

Construction Activity	Workforce	Typical Construction Equipment *
Foundations	30	Dozer, grader, excavator or drill rig, crane, concrete pump trucks, concrete trucks, pickup trucks with trailers, all terrain forklifts, water trucks, dump trucks, compactors, generators, welders
Fence Construction	10	Forklift, backhoe, pickup trucks
Roads	7	Dozer, grader, front end loaders, compactor, roller, pickup trucks, water trucks, dump trucks, compactors, scrapers
Battery Placement	20	Crane, forklift, pickup trucks
Laborers	50	Pickup trucks
Owner Representatives	6	Pickup trucks
Battery Supplier	40	Pickup trucks
Total Number of Workers:	**175**	

* Equipment primarily runs on diesel fuel

The sequence of Project construction activities for each phase would generally occur as follows, and will be repeated for Phase 1 and Phase 2:

1. Installation of erosion control best management practices (BMPs)
2. Demolition of existing facility
3. Equipment staging and mobilization
4. Site preparation and mass grading and compaction
5. Trenching for electrical cables, wires, and conduits
6. Install below-ground conduit banks and conduit and backfill of trenching
7. Earthwork Preparation of equipment foundations
8. Pour-in-place concrete footings, pad foundations, and/or piers and install driven pilings
9. Foundation backfill and site compaction (as necessary)
10. Install PCS, power distribution systems, BESS, and pad-mounted transformers
11. Pull cables and connect equipment
12. Install above-ground utilities
13. Placement of finished surface material
14. Install safety features, permanent fencing, and security lighting
15. Commissioning
16. Removal of BMPs

The approximately 10 acre-feet of water required during construction is expected to be provided by municipal sources through a temporary on-site hydrant meter.

1.6 PROJECT SCHEDULE

The proposed construction schedule includes approximately 6 months for demolition and 15 months for Phase 1 construction. Phase 2 construction will follow Phase 1 at a yet to be determined time. This duration is required to conduct grading activities, install facility equipment, and interconnect to the transmission infrastructure. Additional offsite infrastructure upgrades to existing offsite facilities may be

required with Phase 2. Seasonal constraints are not anticipated to preclude construction from occurring in accordance with this schedule (Table 1-3).

Table 1-3. Construction Schedule

Approximate Duration	Construction Activity
6 months	Demolition of existing facilities slated for Phase 1 activities
Up to 3 months	Commence Phase 1 Grading Activities
12 months	Phase 1 BESS Equipment Construction (trenching, foundations, etc.)
15 months	Installation of Phase 1 Equipment and Commercial Delivery (concurrent with Phase I BESS Equipment Construction)
3 months	Phase 1 Reclamation Complete
TBD	Phase 2 demolition and construction

1.7 OPERATIONS AND MAINTENANCE

The Project will operate 24 hours per day/seven days per week. It will be operated remotely, with no new buildings or parking areas. It is estimated that maintenance will include two to four staff performing maintenance visits weekly and as needed.

In addition to regularly scheduled maintenance and as part of Project operations, augmentation of batteries and battery enclosures will be required. Depending on technology selection, augmentation could include replacement of batteries within enclosures and/or the phased installation of additional BESS enclosures throughout the life of the Project, beyond what is needed to be installed during the "beginning of life" up to the permitted footprint of the Project. In order to fully analyze potential impacts from the Project, all possible battery enclosures that would be constructed and operated through the life of the Project have been included in Projects planning and impact assessments.

SECTION 2.0 – ENVIRONMENTAL DETERMINATION

2.1 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would potentially be affected by this project, involving at least one impact that is a "Potentially Significant Impact," as indicated by the checklists on the following pages. For each of the potentially affected factors, mitigation measures are recommended that would reduce the impacts to less than significant levels.

☐ *Aesthetics*	☐ *Agriculture and Forestry Resources*	☐ *Air Quality*
☒ *Biological Resources*	☒ *Cultural Resources*	☐ *Energy*
☒ *Geology /Soils*	☐ *Greenhouse Gas Emissions*	☐ *Hazards & Hazardous Materials*
☐ *Hydrology /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*

2.2 DETERMINATION

On the basis of this initial evaluation:

1. I find that the project **could not** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared. ☐
2. 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. ☒
3. I find the proposed project **may have a significant effect** on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required. ☐
4. 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. ☐
5. 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. ☐

Signature	7-10-23 Date
A. Finestone Name	City Planner Title

SECTION 3.0 – EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if substantial evidence exists that an effect may be significant. If one or more "Potentially Significant Impact" entries are marked when the determination is made, an EIR is required.
4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level (mitigation measures from earlier analyses may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
    a. Earlier Analysis Used. Identify and state where they are available for review.
    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. The explanation of each issue should identify:
    a. The significance criteria or threshold, if any, used to evaluate each question; and
    b. The mitigation measure identified, if any, to reduce the impact to less than significant.

**Note: Instructions may be omitted from final document.*

SECTION 4.0 – CHECKLIST OF ENVIRONMENTAL ISSUES

4.1 AESTHETICS

1.	AESTHETICS. Except as provided in Public Resources Code Section 21099, would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
(b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
(c)	Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
(d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

4.1.1 Impact Analysis

a) Would the project have a substantial adverse effect on a scenic vista?

Less than Significant. The City of Escondido (City) provides a distinct character from other communities in the region with its series of valleys surrounded by hillsides and ridgelines. Scenic natural features are scattered throughout the City that include creeks and riparian areas, rock outcroppings and lakes. Other large open areas showcase parks, Multiple Habitat Conservation Program (MHCP) lands and other designated conservation areas. In additional to natural formations, the City includes man-made scenic resources that include prominent vegetation such as street trees and ornamental trees, agricultural lands, and landmarks (City 2012).

The Project would not have a substantial adverse effect on a scenic vista. The Project site is developed and within an industrial zoned area. There are no designated scenic resources within the Project site. The Project site contains existing structures which would be demolished and replaced with new structures that would match the existing design and aesthetics of the area. The existing views from the Project site would remain consistent with the existing conditions. Due to the existing design and aesthetics of the Project site, and with the lack of scenic resources within the Project site, impacts would be less than significant.

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. Scenic roadways within the City include portions of Interstate 15, segments of Del Dios Highway, Via Rancho Parkway, Bear Valley Parkway, and Lake Wohlford Road. The Project is located within an industrial zoned area of the City east of Interstate 15. The Project site is not located near a designated or eligible state scenic highway (Caltrans 2022). No impact would occur.

c) *Would the project Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?*

Less than Significant Impact. The Project site is located in an industrial and developed area of the City. The Project would not result in degradation of the existing visual character because the proposed construction of the new facility would be a permitted use within the industrial zone. The Project site contains structures that would be demolished, and new structures would be built in its place. The design of the new structures, including the security wall/fencing, would be compatible with the surrounding because of the industrial aesthetic of both the Project site and the area. Additionally, and designs of the walls and fencing shall require approval through the City's Development Services Department. Impacts, therefore, are less than significant.

d) *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

Less than Significant Impact. The demolition and construction of the Project site would introduce new light and glare with the presence of construction equipment which would be limited during the construction phases. Once constructed, the Project site would have similar lighting that is required for industrial facilities including security lighting. Because the Project site will be unmanned during the majority of its operations outside of weekly and as needed maintenance, it would not result in a significant increase in lighting to the area. Impacts therefore are less than significant.

4.2 AGRICULTURE & FORESTRY RESOURCES

2.	**AGRICULTURE & 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 Department 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 forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:**	**Potentially Significant Impact**	**Less than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
(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 nonagricultural use?	☐	☐	☐	☒
(b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒

2.	**AGRICULTURE & 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 Department 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 forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:**	**Potentially Significant Impact**	**Less than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
(c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
(d)	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
(e)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use or the conversion of forest land to non-forest use?	☐	☐	☐	☒

4.2.1 Impact Analysis

a) Would the project 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 nonagricultural use?

No Impact. The Project Site is located within the City's General Industrial land use designation and is zoned Planned Development – Industrial (PD-I) The Project site is developed and currently contains a non-operational ice-rink and a 50 MW natural gas power plant. The California Department of Conservation categorizes the site as *Urban and Built-Up Land* because it has been previously disturbed and developed. Therefore, the Project site does not contain Prime Farmland, Unique Farmland, or Farmland of Statewide of Importance (DOC 2022). The Project would have no impacts on farmland.

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. As mentioned above, the Project site is zoned Planned Development – Industrial (PD-I)which is not an agricultural zone. The Project site is not located within or adjacent to land under a Williamson Act contract. The Project site lies between commercial, and industrial areas. Thus, the Project would have no impact to existing zoning for agricultural use or a Williamson Act contract.

c) *Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?*

No Impact. The Project site comprises previously disturbed land located within an urban, developed area of the City. Zoning of the Project site is Planned Development – Industrial (PD-I), which is not a forest or timber land zone. No designated forest lands or timberland production zones are in the vicinity of the Project site. Surrounding land uses include commercial and industrial. No impacts to forest resources would result from the Project.

d) *Would the project result in the loss of forest land or conversion of forest land to non-forest use?*

No Impact. The Project site comprises previously disturbed land located within an urban, developed area of the City. Zoning of the Project site is Planned Development – Industrial (PD-I), which is not forest land and no designated forest lands are in the vicinity of the Project site. The Project would not result in the loss of forest land, nor would it convert forest land to non-forest use. No impacts to forest resources would result from the Project.

e) *Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use or the conversion of forest land to non-forest use?*

No Impact. As previously mentioned in Impacts 4.2 (a) through (d), the Project site does not contain, nor is it near, farmland or forest land; therefore, the Project would not result in the conversion of Farmland to nonagricultural use or the conversion of forest land to non-forest use. No impacts would occur.

4.3 AIR QUALITY

3.	AIR QUALITY. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
(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?	☐	☐	☒	☐
(c)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
(d)	Result in other emissions, such as those leading to odors adversely affecting a substantial number of people?	☐	☐	☒	☐

An air quality analysis was performed by Ldn Consulting, Inc. (Ldn Consulting) in October 2022. The analysis was completed to determine potential air quality impacts associated with construction and operation of the Project under federal, state, and regional standards.

Air Quality impacts related to construction and daily operations were calculated using the latest CalEEMod 2020.4.0 air quality model, which was developed by BREEZE Software for South Coast Air Quality Management District (SCAQMD) in 2021. The construction module in CalEEMod is used to calculate the emissions associated with the construction of the project and uses methodologies presented in the USEPA AP-42 document with emphasis on Chapter 11.9.

4.3.1 Impact Analysis

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less than Significant Impact. The California Environmental Quality Act (CEQA) requires a discussion of any inconsistencies between a proposed project and applicable General Plans and regional plans (CEQA Guidelines Section 15125). The regional plan that applies to the Proposed Project includes the San Diego Air Pollution Control District's (SDAPCD) Regional Air Quality Strategy (RAQS), which was developed to provide control measures to try to reach criteria pollutant standards set by the State Implementation Plan (SIP). The RAQS relies on population and projected growth in the County, mobile, area, and all other source emissions in order to predict future emissions and determine from that the strategies necessary for the reduction of stationary source emissions through regulatory controls. Mobile source emission projections and growth projections are based on population and vehicle trends and land use plans developed by the cities and by the County. As such, projects that are consistent with the growth anticipated by the General Plan would be considered consistent with the RAQS. The Project site is consistent with the General Plan land use category and zoning for the site. Based on this, the Project was accounted for in the City's General Plan. Therefore, no cumulative operational impacts are anticipated since the Project would be consistent with the RAQS and SIP. Impacts would be less than significant.

b) Would the project 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 Proposed Project would not 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. The following section calculates the potential air emissions associated with the construction and operations of the Proposed Project and compares the emissions to the significance thresholds established in the City's municipal code.

Construction Emissions

The CalEEMod model was used to calculate the construction-related emissions from the Proposed Project and the input parameters used in this analysis are detailed in Attachment A of Appendix A. Construction emissions from the construction operations and equipment identified in Section 1.5 is provided in Table 4-1 below.

Table 4-1. Expected Construction Emissions Summary

Year	ROG	NO_X	CO	SO_2	PM_{10}			$PM_{2.5}$		
					Dust	Exhaust	Total	Dust	Exhaust	Total
2023	2.10	20.97	19.13	0.04	0.67	0.93	1.60	0.12	0.86	0.97
2024	1.46	13.19	17.76	0.04	1.46	0.48	1.78	0.30	0.46	0.63

Year	ROG	NO_X	CO	SO_2	PM_{10}			$PM_{2.5}$		
					Dust	Exhaust	Total	Dust	Exhaust	Total
2025	1.38	12.42	17.59	0.03	0.66	0.43	1.09	0.18	0.41	0.58
2026	1.46	12.96	21.09	0.04	1.46	0.41	1.74	0.30	0.39	0.57
2027	1.73	15.72	22.57	0.04	0.66	0.53	1.19	0.18	0.50	0.68
Significance Threshold	**75**	**250**	**550**	**250**	**–**	**–**	**100**	**–**	**–**	**55**
Exceeds Significance Threshold?	**No**	**No**	**No**	**No**	**–**	**–**	**No**	**–**	**–**	**No**

As shown in Table 4-1, the Proposed Project would not exceed City significance thresholds and would not require mitigation to comply.

Operational Emissions

The intent of the Proposed Project is to charge during the day when solar energy production is at it is peak on SDGE's electrical grid, store the energy, and then re-supply the grid at night, as needed. Operational air emission sources would include area sources such as landscaping and maintenance activities that include mobile sources that would be generated from traffic associated with monthly maintenance site visits. For purposes of this analysis, it was assumed that the Proposed Project would generate as many as four trips per day. CalEEMod was updated to reflect Project related operational conditions.

Completion of Project construction and start of operations is expected to occur in 2024/2025 for Phase 1, and 2026/2027 for Phase 2. The Project traffic generation was assumed to be as many as four trips per day during a worst-case day. Additionally, the model was run for the winter and summer scenarios to determine maximum daily operational impacts for operation.

The expected daily pollutant generation can be calculated used the product of the average daily miles traveled and the expected emissions inventory calculated by EMFAC2017; CALEEMOD 2020.4.0 performs this calculation. The daily pollutants calculated for summer and winter are shown in Table 4-2 and Table 4-3.

Table 4-2. Expected Summer Daily Pollutant Generation

Category	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	0.000	0.000	0.000	0.000	0.000	0.000
Energy	0.000	0.000	0.000	0.000	0.000	0.000
Mobile	0.017	0.020	0.179	0.000	0.029	0.008
Total (unmitigated)	**0.017**	**0.020**	**0.179**	**0.000**	**0.029**	**0.008**
CityThresholds	**75**	**250**	**550**	**250**	**100**	**55**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Category	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$

Notes:
1) Daily pollutant generation assumes trip distances within CalEEMod
2) The final numbers are all rounded within Excel and are reported as rounded numbers.

Table 4-3. Expected Winter Daily Pollutant Generation

Category	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	0.000	0.000	0.000	0.000	0.000	0.000
Energy	0.000	0.000	0.000	0.000	0.000	0.000
Mobile	0.012	0.014	0.119	0.000	0.029	0.008
Total (unmitigated)	**0.02**	**0.014**	**0.119**	**0.000**	**0.029**	**0.008**
City Thresholds	**75**	**250**	**550**	**250**	**100**	**55**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Notes:
1) Daily pollutant generation assumes trip distances within CalEEMod
2) The final numbers are all rounded within Excel and are reported as rounded numbers.

As shown in Table 4-2 and Table 4-3, the Proposed Project would not exceed City significance thresholds and would not require mitigation to comply. Based on these calculations, the Proposed Project would result in less than significant air quality impacts.

c) Would the project expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact. The Proposed Project would not expose sensitive receptors to substantial pollutant concentrations. The local concentrations of criteria pollutant emissions produced in the nearby vicinity of the Proposed Project, which may expose sensitive receptors to substantial concentrations have been calculated above in Section 4.3 (b) for both construction and operations, which are discussed separately below. The nearest sensitive receptors to the Project site are single-family residences located approximately 1,000 feet to the southeast of the Project site.

Construction-Related Sensitive Receptor Impacts

Construction activities have the potential to expose sensitive receptors to substantial pollutant concentrations of localized criteria pollutant concentrations and from toxic air contaminant emissions created from onsite construction equipment, which are described below.

Local Criteria Pollutant Impacts from Construction

As discussed above, construction of the Proposed Project would not exceed the local ROG, NO_X, CO, SO_X, PM_{10} and $PM_{2.5}$ thresholds of significance. Furthermore, the nearest sensitive receptors, single-family residences southeast of the Project site, are located approximately 1,000 feet away and Project-related emissions would considerably dissipate before reaching those residences. Therefore, construction of the Proposed Project would create a less than significant construction-related impact to sensitive receptors and no mitigation would be required.

Operations-Related Sensitive Receptor Impacts

Project operations would generate as many as four daily trips and as discussed above, would not exceed the local ROG, NO_X, CO, SO_X, PM_{10} and $PM_{2.5}$ thresholds of significance. Furthermore, the nearest sensitive receptors, single-family residences southeast of the Project site, are located approximately 1,000 feet away and Project-related emissions would considerably dissipate before reaching those residences. Therefore, operation of the Proposed Project would create a less than significant impact to sensitive receptors and no mitigation would be required.

d) Would the project result in other emissions, such as those leading to odors adversely affecting a substantial number of people?

Less than Significant Impact. The Proposed Project would create temporary objectionable odors resulting from diesel engine exhaust during construction; odors resulting from Project operations are not expected. Individual responses to odors are highly variable and can result in a variety of effects. Generally, the impact of an odor results from a variety of factors such as frequency, duration, offensiveness, location, and sensory perception. The frequency is a measure of how often an individual is exposed to an odor in the ambient environment. The intensity refers to an individual's or group's perception of the odor strength or concentration. The duration of an odor refers to the elapsed time over which an odor is experienced. The offensiveness of the odor is the subjective rating of the pleasantness or unpleasantness of an odor. The location accounts for the type of area in which a potentially affected person lives, works, or visits; the type of activity in which he or she is engaged; and the sensitivity of the impacted receptor.

Sensory perception has four major components: detectability, intensity, character, and hedonic tone. The detection (or threshold) of an odor is based on a panel of responses to the odor. There are two types of thresholds: the odor detection threshold and the recognition threshold. The detection threshold is the lowest concentration of an odor that will elicit a response in a percentage of the people that live and work in the immediate vicinity of the Project site and is typically presented as the mean (or 50 percent of the population). The recognition threshold is the minimum concentration that is recognized as having a characteristic odor quality, this is typically represented by recognition by 50 percent of the population. The intensity refers to the perceived strength of the odor. The odor character is what the substance smells like. The hedonic tone is a judgment of the pleasantness or unpleasantness of the odor. The hedonic tone varies in subjective experience, frequency, odor character, odor intensity, and duration. Potential odor impacts have been analyzed separately for construction and operations below.

Construction-Related Odor Impacts

Potential sources that may emit odors during construction activities include emissions from diesel equipment. As such, the objectionable odors that may be produced during the construction process would be temporary and would not likely be noticeable for extended periods of time beyond the Project site's boundaries. Through compliance with the applicable regulations that reduce odors and due to the transitory nature of construction odors, a less than significant odor impact would occur, and no mitigation would be required.

Operations-Related Odor Impacts

The Proposed Project would consist of the development of an energy storage facility. The on-going operation of the Proposed Project is not anticipated to include any known sources of odors. Therefore, a less than significant odor impact would occur from operation of the Proposed Project and no mitigation would be required.

4.4 BIOLOGICAL RESOURCES

4.	BIOLOGICAL RESOURCES. Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(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 Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
(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 Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
(c)	Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
(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?	☐	☐	☐	☒
(e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
(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?	☐	☐	☐	☒

4.4.1 Impact Analysis

a) Would the project have a substantial adverse effect, either directly or through habitat modification, on any species identified as candidate, sensitive or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Less than Significant Impact with Mitigation Incorporated. The City is located within the boundary of the MHCP for Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista. The City is primarily developed with the larger areas that have potential for habitats to be located in the City's periphery closer to undeveloped areas of the County. The five large areas of habitats are located

in the Northeastern, Eastern, Southern, Southwestern, and Northwestern Habitat Areas of the City which contain the majority of its open spaces (City 2012).

The Project site is located in a developed area of the City with Interstate 15 located immediately southwest of the Project site. The area is zoned as PD-I with an existing electrical generation facility and non-operational ice-rink in the Project site. Vegetation within the area consists of trees lining the parking lot and channel.

The Project site is developed with no areas designated as a habitat for any candidate, sensitive or special status species. According to the MHCP and MSCP Area Map provided in the General Plan Update Final Environmental Impact Report (GPU EIR), the Project site is not located within or adjacent to any designated MHCP/MSCP areas and its classification is designated as Urban/Development. (City 2012). Because the City's urban core consists of urban and developed land, and that these areas do not support sensitive species.

Trees are located along the parking lot areas and line the channel to the south of the Project. The existing trees are potential habitat to nesting birds. While the area is not a designated habitat for candidate, sensitive or special status species, Project disturbances would occur that could result in disturbance to nesting birds. To minimize potential impacts to nesting birds protected under the Migratory Bird Treaty Act (MBTA), construction activities should take place outside nesting season (February 1 to August 31) to the greatest extent practicable.

If construction activities must occur during nesting season, the following mitigation measure shall be implemented to address potential impacts to nesting birds. In addition, to the maximum extent practicable, a minimum buffer zone around occupied nests should be determined by a qualified biologist to avoid impacts to the active nest. The buffer should be maintained during physical ground-disturbing activities. Once nesting has ceased, the buffer may be removed.

Because the Project site does not contain any sensitive plant species, lacks any sensitive habitat, and has not been found to house sensitive wildlife species, impacts would be less than significant. While there are no sensitive species that are expected to occur, MBTA applies to bird species native to the U.S. To address potential impacts to nesting birds, mitigation measure **MM-BIO-1** would be implemented and result in impacts to nesting birds to be less than significant.

MM-BIO-1: To minimize potential impacts to nesting birds protected under the Migratory Bird Treaty Act (MBTA), construction activities should take place outside nesting season (February 1 to August 31) to the greatest extent practicable. If construction activities must occur during nesting season, the following shall be implemented to address potential impacts to nesting birds: A pre-construction nesting bird survey shall be conducted approximately 3 days prior to ground-disturbing activities by a qualified biologist retained by the Applicant. If nests are found during surveys, they shall be flagged and a 250-foot buffer to a 500-foot buffer (for raptors) shall be fenced around the nests. The buffer area shall be kept in place until the young have fledged and leave the nest. To the maximum extent practicable, a minimum buffer zone around occupied nests should be determined by a qualified biologist to avoid impacts to the active nest. The buffer should be maintained during physical ground-disturbing activities. Once nesting has ceased, the buffer may be removed.

b) *Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

No Impact. Riparian habitats/communities are mainly found in the five habitats of the City. Vegetation classifications and communities are shown in the Vegetation Classes Figure 4.4.2 of the General Plan Update Final EIR. According to the figure, there are various vegetation classifications designated throughout the outer boundaries of the City. The Project site's classification under this figure is Urban/Development with no other vegetation classifications found within or surrounding the Project site. Due to the developed nature of the Project site, no impact would occur.

c) *Would the project have a substantial adverse effect on state or federally protected wetlands (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

No Impact. The Project site is within the developed urban core of the City. The Project site contains existing structures, sidewalks, and paved parking lots. There are no wetlands, marshes, or vernal pools in the Project site and therefore, the Project would not result in hydrological interruption in these areas. According to the United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) Surface Waters and Wetlands Mapper, the Project site does not contain any wetlands or surface water (USFWS 2022). However, a riverine habitat is present south of the Project site which is an existing channel. While the Project is located adjacent to a channel, no work is proposed that would result in disruption or modification to the channel. No impact would occur.

d) *Would the project 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?*

No Impact. As noted in the GPU EIR, the Project site is not located within the open space areas of the City that contain habitats for various biological species. The Project site is in a developed area zoned for industrial uses. No areas within the Project site would be a suitable habitat for migratory or native species. No impact would occur.

e) *Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

Less than Significant. The Project proposes the construction of an energy storage facility within an existing and developed industrial site. The Project will demolish the existing facilities and construct new structures on the site. Because the Project is located in a developed area of the City, it would not result in the removal of protected biological resources. Trees are located on the Project site; however, these trees are located along the parking lot areas for landscaping purposes. Trees are also lined along the channel which is located south of the Project site. The proposed construction activities would not include the removal of the existing trees. Due to the nature of the Project and site conditions, impacts would be less than significant.

f) *Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservancy Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

No Impact. The GPU Final EIR calls out specific areas in the City that contains a majority of the protected habitats in the area. It includes a list of focused planning areas where some lands may be

dedicated for open space and habitat conservation. These include Daley Ranch, Rancho San Pasqual, Kit Carson Park, San Pasqual Valley, Lake Wohlford, and Bernardo Mountain. The Project is not located within these habitat and focused planning areas. No work is proposed to affect these designated areas as the Project construction and operation would be limited to the industrial zoned area. No impact would occur.

4.5 CULTURAL RESOURCES

5.	CULTURAL RESOURCES. Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☒	☐	☐
(b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
(c)	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Chambers Group conducted a cultural resources records search and literature review within the Project site and surrounding study area in October 2022. The purpose of the review was to gather and analyze information needed to assess the potential for impacts to cultural resources within the proposed Project area. In addition, Chambers Group evaluated whether the Project would result in impacts to cultural resources that would warrant additional studies, including a site visit or field survey. The Cultural Resources Records Search and Literature Review Letter Report is provided in Appendix B and the results are discussed below.

4.5.1 Survey

No on-ground survey of the Project site was conducted by a Chambers Group archaeologist or paleontologist. This decision was based on existing conditions at the Project site, being nearly completely covered in hardscape or building footprint, with minimal exposure of on-site sediments. These exposures are primarily limited to three-to-one and two-to-one tapered margins along the Project site perimeter and are generally ensconced in ornamental landscaping. Other Chambers Group staff did attend an on-site meeting whereby several existing condition photographs were taken, including ground surfaces where exposed. Review of these photographs illustrate results typical of engineered surfaces to be used for landscaping and other permeable surface purposes. Sediments appear homogeneous, frequently with inclusions of crushed rock gravel, and appear typical of mixed materials prepared for finish grading prior to project construction.

4.5.2 Literature Review and Background Research

Chambers Group requested a records search from the California Historical Resources Information System (CHRIS) South Coastal Information Center (SCIC) at California State University, San Diego on September 19, 2022. The SCIC returned the records search results on October 3, 2022, providing information on all documented cultural resources and previous archaeological investigations within 0.5-mile radius of the Project site. A 0.5-mile study area was requested to provide additional context to the Project site and

surrounding area and more information on which to base this review. Resources consulted during the records search conducted by the SCIC included the NRHP, California Historical Landmarks (CHL), California Points of Historical Interest (CPHI), Caltrans Historic Highway Bridge Inventory, the California State Historic Resources Inventory, local registries of historic properties, and a review of available Sanborn Fire Insurance maps as well as historic photographs, maps, and aerial imagery. The task also included a search for potential prehistoric and/or historic burials (human remains) evident in previous site records and/or historical maps. In addition, Chambers Group submitted a request to the Native American Heritage Commission (NAHC) for a review of the Sacred Land Files (SLF) for the Project site and surrounding vicinity. Results of the records search and additional research are detailed below and included in Attachment A of Appendix B.

Based on the records search conducted by the SCIC, 20 cultural resource studies have previously been completed within the 0.5-mile records search radius. Table 4-4 provides further details of these 20 studies, of which, four encompass the Project site in some manner. These projects are bolded and italicized in the table below.

Table 4-4. Previous Cultural Resources Studies within the 0.5-Mile Study Area

Report Number	Year	Author	Title	Resources	Within Project Boundary?
SD-00783	1986	Cheever, Dayle, and Dennis Gallegos	Cultural Resource Survey of the La Terraza Project Escondido, California	–	No
SD-04301	1980	Banks, Thomas, and David M. Van Horn	Archaeological Survey Report: The Proposed Escondido Auto Park in the City of Escondido, California	37-000153, 37-000154, 37-000156, 37-001035, 37-001505, 37-005501, 37-005502, 37-005503, 37-005504	No
SD-04909	1985	County of San Diego	Historic Property Survey Report Escondido Transit Center, San Diego County, CA	–	No
SD-08588	***1980***	***City of Escondido***	***Draft Environmental Impact Report for Expansion of Wastewater Treatment Facility***	**–**	***Yes***
SD-08596	***1992***	***Keller Environmental Associates, Inc***	***Appendices-Reclaimed Water Distribution System Project: Draft Environmental Impact Report***	**–**	***Yes***
SD-08729	1989	Mitchell, Patricia	The Oceanside to Escondido Rail Project	–	No

Report Number	Year	Author	Title	Resources	Within Project Boundary?
SD-09546	2001	Guerrero, Monica, Dennis Gallegos, Tracy Stropes, Steve Bouscaren, Susan Bugbee, and Richard Cerreto	Cultural Resource Test Report for Oceanside-Escondido Rail Project Oceanside, California	–	No
SD-09622	2005	Mason, Roger, Evelyn Chandler, and Cary Cotterman	Cultural Resources Record Search and Field Survey Report for a Verizon Telecommunications Facility: Valley Parkway, Escondido, San Diego County, California	–	No
SD-10352	2006	Robbins-Wade, Mary	Lowe's General Plan Amendment - Escondido Case Numbers: ER 2005-40, 2005-02-GPA, 2005-58/PD/CP/CZ, Tract 946 Cultural Resources (AFFINIS Job No. 2089)	37-005210, 37-006726, 37-006727, 37-006728, 37-006729, 37-007785	No
SD-12039	2007	Guerrero, Monica, and Dennis R. Gallegos	Cultural Resources Monitoring Report for the North County Transit District (NCTD) Sprinter Rail Project Oceanside to Escondido, California	37-012095, 37-012096, 37-012097, 37-015576, 37-015595	No
SD-12394	2009	Pierson, Larry J.	A Historical Assessment of 1050 West Washington Avenue, Escondido, San Diego County, California, APN 228-250-17	–	No
SD-12835	2010	Robbins-Wade, Mary	Escondido Ballpark- Cultural Resources Survey	–	No
SD-14328	2013	Wilson, Stacie	Letter Report: ETS 20872 Cultural Resources Monitoring for TL6956 Undergrounding Trench Excavation, City of Escondido, California- IO 200414230	–	No
SD-14394	1983	Donald A. Cotton Associates	Survey Report on Historic/ Cultural Resources City of Escondido	–	No
SD-15266	2015	David Brunzell	Cultural Resources Assessment of the Westside Park Project, Escondido, San Diego County, California (BCR Consulting Project No. TRF1434)	–	No

Report Number	Year	Author	Title	Resources	Within Project Boundary?
SD-15868	2014	Wills, Carrie D., and Sarah A. Williams	Cultural Resource Records Search and Site Visit Results for AT&T Mobility, LLC Candidate SD1870 (Escondido Transit Center), 520 West Gannon Place, Escondido, San Diego County, California	–	No
SD-16896	2016	Smith, Brian F., and Kristen R. Reinicke	Historic Structure Assessment for 852 Metcalf Street Escondido, California APN 228-220-22	–	No
SD-17233	2017	Brunzell, David	San Diego 129 Project, San Diego County, California (BCR Consulting Project No. SYN1622)	–	No
SD-17339	***2015***	***Robbins-Wade, Mary, and Nicole Falvey***	***Recycled Water Easterly Main and Tanks Project and Brine Line, Broadway to Hale Avenue Resource Recovery Facility (HARRF) Project - Cultural Resources Study***	**–**	***Yes***
SD-18976	***2020***	***Cooley, Theodore G., and Mary Robbins-Wade***	***City of Escondido Brine Line Project - Cultural Resources Monitoring***	**–**	***Yes***

Based upon the records search conducted by the SCIC, one previously recorded cultural resource was recorded within the 0.5-mile records search radius. The resource, an isolated mano fragment and lithic flake, was not located within the Project area. As a result of the records search review and archival research, no previously recorded resources or any other listed or potentially significant properties are located within the Project site. However, 47 properties do occur outside the Project site but within the 0.5-mile study area, and are listed on the BERD inventory, and reproduced in Table 3 of Appendix B.

4.5.3 Impact Analysis

a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less Than Significant with Mitigation Incorporated. An archival records search through the SCIC of the CHRIS database and a background study of the Project site were conducted as part of the study. In addition, Chambers Group submitted a search request of the NAHC SLF to determine the presence or absence of data regarding any known sacred lands or similar resources previously reported within the Project area or surrounding vicinity. The SCIC records search identified four cultural resources reports that encompassed the Project site in some fashion and identified no cultural resources within the Project site. None of the reports appear to have required access to the Project site as part of a

visual inspection survey, or similar program. The NAHC SLF search results have not been received at as of the date of this Initial Study. It is noted, however, a recent NAHC SLF search request for a project located approximately 350 meters north-northeast resulted in positive findings within that search radius (Helix 2020). The location and nature of these results have not been disclosed.

Based on the results of the records search review and background research, there is potential to encounter intact buried native formations (Appendix B). The depths of these potential intact native formations remain unknown. In addition to intact native formations there is also the potential to encounter buried archaeological and paleontological resources. Similarly, consultation with Native American groups may indicate the presence of additional significant resources. Because data at present are insufficient to declare with certainty that cultural and paleontological resources will not be encountered during project construction, the following Mitigation Measures (MMs) shall be incorporated to reduce potential impacts to a less-than-significant level.

If additional information is obtained with more specific details regarding the previous or current subsurface conditions within the Project site, that information will be incorporated in a Cultural Resources Monitoring Program (CRMP). The relevant additional information may be included through obtaining and reviewing documentation with more detailed evidence regarding the past development and associated ground disturbance at the site or through additional studies performed related to the Project, such as geotechnical analysis related to advanced design. The CRMP, particularly if relevant additional information is obtained, will allow for more tailored and focused monitoring and mitigation programs to be prepared, in concert with the City and participating tribes.

MM-CUL-1 If requested by one or more participating tribes, the applicant shall enter into a Tribal Cultural Resource Treatment and Monitoring Agreement (also known as a pre-excavation agreement) with a tribe that is traditionally and culturally affiliated with the Project Location (TCA Tribe) prior to issuance of a grading permit to be submitted to the City. The purposes of the agreement are (1) to provide the applicant with clear expectations regarding tribal cultural resources; and (2) to formalize protocols and procedures between the City and the TCA Tribe for the protection and treatment of, including but not limited to, Native American human remains; funerary objects; cultural and religious landscapes; ceremonial items; traditional gathering areas; and cultural items located and/or discovered through a monitoring program in conjunction with the construction of the Proposed Project, including additional archaeological surveys and/or studies, excavations, geotechnical investigations, grading, and all other ground disturbing activities.

MM-CUL-2 Prior to issuance of a grading permit, the applicantshall retain a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (U.S. Department of the Interior, 2008) to prepare the CRMP in coordination with participating tribe(s). The CRMP will include any additional information that can be utilized to determine the appropriate monitoring program. The qualified archeologist and Native American monitors associated with a TCA Tribe will implement the monitoring program, as described in the CRMP. Because the Project is located within shared territory of the Luiseño and Kumeyaay people, Native American monitors representing the interest and values of both the Luiseño and Kumeyaay people shall be retained for the project. The archaeologist shall be responsible for coordinating with the Native American monitor. This verification shall be presented to the City in a letter from the qualified archaeologist that confirms that Native American monitors

representing both Luiseño and Kumeyaay TCA Tribes have been retained. The City, prior to any pre-construction meeting, shall approve all persons involved in the monitoring program.

MM-CUL-3 The qualified archaeologist and, if requested by the participating tribe(s), a Native American monitor shall attend the pre-grading meeting with the grading contractors to explain and coordinate the requirements of the monitoring program.

MM-CUL-4 As required by the CRMP, the qualified archaeologist and the Native American monitor shall be on site during the initial grubbing, site grading, excavation or disturbance of the ground surface . The CRMP shall include protocols for monitoring and, if available, shall include any additional information and related monitoring procedures for specific areas of the Project site that have been previously disturbed. The frequency of inspections shall depend on the rate of excavation, the materials excavated, and any discoveries of tribal cultural resources as defined in California Public Resources Code Section 21074. Archaeological and Native American monitoring will be discontinued when the depth of grading and soil conditions no longer retain the potential to contain cultural deposits. The qualified archaeologist, in consultation with the Native American monitor, shall be responsible for determining the duration and frequency of monitoring.

MM-CUL-5 In the event that previously unidentified cultural resources that qualify as historical, unique archaeological, and/or tribal cultural resources are discovered, the qualified archaeologist and the Native American monitor shall have the authority to temporarily divert or temporarily halt ground disturbance operation in the area of discovery to allow for the evaluation of potentially significant cultural resources. Isolates and clearly non-significant deposits shall be minimally documented in the field and collected so the monitored grading can proceed.

MM-CUL-6 If a potentially significant historical, unique archaeological, and/or tribal cultural resource is discovered, the qualified archaeologist shall notify the City of said discovery. The qualified archaeologist, in consultation with the City, the TCA Tribe and the Native American monitor, shall determine the significance of the discovered resource. Recommendations for the resource's treatment and disposition shall be made by the qualified archaeologist in consultation with the TCA Tribe and the Native American monitor and be submitted to the City for review and approval.

MM-CUL-7 The avoidance and/or preservation of significant cultural resources that qualify as historical, unique archaeological, and/or tribal cultural resources must first be considered and evaluated as required by CEQA. Where any significant resources have been discovered and avoidance and/or preservation measures are deemed to be infeasible by the City, then a research design and data recovery program to mitigate impacts shall be prepared by the qualified archaeologist (using professional archaeological methods), in consultation with the TCA Tribe and the Native American monitor, and shall be subject to approval by the City. The archaeological monitor, in consultation with the Native American monitor, shall determine the amount of material to be recovered for an adequate artifact sample for analysis. Before construction activities are allowed to resume in the affected area, the research design and data recovery program activities must be concluded to the satisfaction of the City.

MM-CUL-8 As specified by California Health and Safety Code Section 7050.5, if human remains are found on the project site during construction or during archaeological work, the person responsible for the excavation, or his or her authorized representative, shall immediately notify the San Diego County Coroner's office. Determination of whether the remains are human shall be conducted on-site and in situ where they were discovered by a forensic anthropologist, unless the forensic anthropologist and the Native American monitor agree to remove the remains to an off-site location for examination. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the Coroner has made the necessary findings as to origin and disposition. A temporary construction exclusion zone shall be established surrounding the area of the discovery so that the area would be protected, and consultation and treatment could occur as prescribed by law. In the event that the remains are determined to be of Native American origin, the Most Likely Descendant, as identified by the Native American Heritage Commission, shall be contacted in order to determine proper treatment and disposition of the remains in accordance with California Public Resources Code section 5097.98. The Native American remains shall be kept in-situ, or in a secure location in close proximity to where they were found, and the analysis of the remains shall only occur on-site in the presence of a Native American monitor.

MM-CUL-9 If the qualified archaeologist elects to collect any archaeological materials that qualify as tribal cultural resources, the Native American monitor must be present during any testing or cataloging of those resources. Moreover, if the qualified archaeologist does not collect the archaeological materials that qualify as tribal cultural resources that are unearthed during the ground disturbing activities, the Native American monitor, may at their discretion, collect said resources and provide them to the TCA Tribe for respectful and dignified treatment in accordance with the Tribe's cultural and spiritual traditions. The project archaeologist shall document evidence that all cultural materials have been curated and/or repatriated as follows:

1) It is the preference of the City that all tribal cultural resources be repatriated to the TCA Tribe as such preference would be the most culturally sensitive, appropriate, and dignified. Therefore, any tribal cultural resources collected by the qualified archaeologist shall be provided to the TCA Tribe. Evidence that all cultural materials collected have been repatriated shall be in the form of a letter from the TCA Tribe to whom the tribal cultural resources have been repatriated identifying that the archaeological materials have been received.

OR

2) Any tribal cultural resources collected by the qualified archaeologist shall be curated with its associated records at a San Diego curation facility or a culturally-affiliated Tribal curation facility that meets federal standards per 36 CFR Part 79, and, therefore, would be professionally curated and made available to other archaeologists/ researchers for further study. The collection and associated records, including title, shall be transferred to the San Diego curation facility or culturally affiliated Tribal curation facility and shall be accompanied by payment of the fees necessary for permanent curation. Evidence that all cultural materials collected have been curated shall be in the form of a letter form the curation facility stating the prehistoric archaeological materials have been received and that all fees have been paid.

MM-CUL-10 Prior to the release of the grading bond, a monitoring report and/or evaluation report, if appropriate, which describes the results, analysis and conclusion of the archaeological monitoring program and any data recovery program on the project site shall be submitted by the qualified archaeologist to the City. The Native American monitor shall be responsible for providing any notes or comments to the qualified archaeologist in a timely manner to be submitted with the report. The report will include California Department of Parks and Recreation Primary and Archaeological Site Forms for any newly discovered resources.

4.6 ENERGY

6.	ENERGY Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
(b)	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

4.6.1 Impact Analysis

a) Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less Than Significant Impact. The Project, which comprises a lithium-ion BESS facility, is intended to provide important electrical reliability services to the local area. During construction, the Project would require the temporary use of construction equipment fueled with gasoline and diesel. The Project does not include any permanent components that would increase demand for existing sources of energy, with the exception of gasoline usage for weekly maintenance visits. By building the Project, a clean, reliable resource would be gained to help integrate renewable energy sources, reduce dependence on gas-fired generation, and reduce GHG and criteria air pollutant emissions. Therefore, less than significant impacts to energy resources would result.

b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less Than Significant Impact. The Project, which comprises a lithium-ion BESS facility, would be part of a sustainable solution to enable increasing amounts of renewable energy-generating sources to be accessed. Renewable energy is one of the focuses of the City's Climate Action Plan; therefore, the Project would be in alignment with the City's energy goals (City 2021a). No conflicts with renewable energy or energy efficiency plans would occur; therefore, less than significant energy-related impacts would result from the Project.

4.7 GEOLOGY AND SOILS

7.	GEOLOGY AND SOILS. Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Directly or indirectly cause 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? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
	ii) Strong seismic ground shaking?	☐	☐	☒	☐
	iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
	iv) Landslides?	☐	☐	☒	☐
(b)	Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
(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?	☐	☐	☒	☐
(d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
(e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
(f)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

4.7.1 Impact Analysis

a) i) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving 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? Refer to Division of Mines and Geology Special Publication 42.

Less than Significant Impact. The City is located in the Peninsular Range Region of Western San Diego County, along the Pacific Rim in the Southern California. The region contains active faults, steep topography, and other various geological characteristics. This region is characterized by rolling to hilly uplands with narrow winding valleys (City 2012). The local seismic setting of the City shows three active faults which include the San Jacinto Fault, Elsinore Fault, and Rose Canyon Fault which has the potential to result in seismic ground shaking within the City. The nearest active fault to the Project site in the Elsinore Fault located approximately 20 miles directly to the northeast.

The San Diego region has 34 soil associations with various susceptibility to erosive forces, depending on the individual characteristics. According to the GPU Final EIR, the soils in the area consist of well-drained, medium-to coarse-grained, often rocky sandy loams. Most of the soils within the area have limited erosion potential. The soil at the Project site consists of Visalia sandy loam. Sandy loams are soil materials that contain 20 percent clay or less (City 2012).

The Project site is located in Southern California is which a seismically active area. As such, many areas in Southern California could be subject to some seismic activity. The Project site is approximately 20 miles, direct distance, southwest of the nearest active fault which is the Elsinore Fault. The Project site is not located in the immediate vicinity of an active fault. No active faults have been mapped within or trending towards the Project site and it is not within a designated Alquist-Priolo Earthquake Fault Zone. Impacts would be less than significant.

ii) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

Less than Significant Impact. Ground shaking is a potential hazard resulting from earthquakes along major active or potentially active faults. While the region is exposed to seismic events, the Project site does not appear to have experienced more seismicity in comparison to other areas in Southern California. The Elsinore Fault Zone has a 12-mile-wide area occupied by four major fault zones that includes a state-designated Earthquake Fault Rupture Zone (City 2012). The Project site is not located within this zone.

Because of the Project site's location, it is not expected that it would cause substantial adverse effects involving strong seismic ground shaking. Furthermore, the Project would not involve any excavation or ground disturbing activities that could exacerbate any nearby fault zones. The Seismic Design Categories of the California Building Code (CBC) are based on occupancy type and severity of the ground motion and consists of six design categories (A through F); A having the least seismic potential and F having the highest seismic potential. Both San Diego County and the City are within the seismic design categories of E and F. The Project will be constructed to comply with the CBC and will include the required standards to protect life safety and prevent collapse. Impacts would be less than significant.

iii) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

Less than Significant Impact. Secondary seismic hazards for the region include liquefaction, slope instability, earthquake-induced seiches, tsunami flooding and slope instability. Liquefaction occurs when loosely packed, water saturated sediments that are near or at ground surface lose their strength due to ground shaking, which in turn, causes the sediment to act like a fluid. For liquefaction to occur, the area has to have loose, clean granular soils, be shallow groundwater, and have strong, long durations of ground shaking.

Approximately 4,082 acres of soil within the City has potential for liquefaction to occur. These areas are primarily located along natural waterways such as the Escondido Creek and near Lake Wohlford. The Liquefaction Hazard Area figure in the GPU EIR depicts areas with the potential for liquefaction to occur. The Project site is located within this area given its proximity to the existing channel.

The Project consists of the demolition of existing structures and construction of a battery energy facility. The Project will occur within an already disturbed and developed site that currently has existing buildings, parking lots, walkways, and roadways. The Project will include site preparation and grading which would disturb the soils under the pavement. However, foundations/supports will be constructed for the new structures and the Project would be built in compliance with CBC standards. Furthermore, seismically induced rupture at the Project site is not likely to occur due to the lack of active faults in the area. Therefore, because the Project site is in a developed area with no active faults in the immediate vicinity, and in compliance with the CBC, impact would be less than significant.

iv) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

Less than Significant Impact. Landslides occur when there is a disturbance in the stability of a sloped area which can be initiated by rainfall, snowmelt, change in water levels, erosion, groundwater changes, earthquakes, volcanic activity, disturbance through human activities, or a combination of these factors. Seismically induced landslides and other similar slope failures are a common occurrence during or after earthquakes, particularly within the region.

According to the Landslide Hazard Areas of the GPU Final EIR, the Project site is not located in areas that have soils subject to potential landslides (City 2012). The Project site is relatively flat and developed. The Project would not result in ground disturbances that would create new slopes to the area that could result in soil instability creating landslides. Furthermore, the Project would not involve any disturbances to the existing channel that would create a risk for landslides such as loose soil and steep slopes. Ground disturbances would be limited to the Project site. Because the Project site has not been found to be an area with potential landslides, impacts would be less than significant.

b) Would the project result in substantial soil erosion or the loss of topsoil?

Less than Significant Impact. Topsoil is the top layer of soil that usually holds high concentrations of organic matter, which are typically found in fields and other vegetated areas. Loss of topsoil or any type of soil erosion occurs when dirt is left exposed to physical factors such as strong winds, rain, and flowing water. The presence of topsoil is typically associated with supporting animal or plant life and therefore, any disturbance of toil soil could indicate a disruption of a food chain or local ecosystem.

A location may have potential for topsoil for areas that are undeveloped. The Project site is developed and covered by buildings, parking lots, walkways, and roadways with minimal areas of landscaping. The area is zoned for industrial uses and therefore does not contain, nor is it permitted for any agricultural type uses that would require topsoil or other materials that would be capable of supporting a local ecosystem. Therefore, impacts involving loss of topsoil would be less than significant.

The Project includes site preparation and grading for the demolition of existing structures and construction of a battery storage facility. Breaking ground during construction would expose underlying soils in the area that could be subjected to wind and rain thereby disturbing the existing dirt/soils. As part of AQMD's Rule 403 addressing fugitive dust, implementation of dust control measures would minimize potential for soil erosion. Typical construction methods implemented such as use of barrier covers and other best management practices (BMPs) for erosion control are required

under the National Pollution Discharge Elimination System (NPDES) regulations pursuant to the federal Clean Water Act (City 2012). In addition, the Project under these regulations would require preparing a Stormwater Pollution Prevention Plan (SWPPP) to be prepared to protect water quality from erosion and runoff. Therefore, impacts due to soil erosion would be less than significant.

c) *Would the project 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. Lateral spreading is the lateral movement, usually soils, which are caused by earthquake-induced liquefaction. The shaking reduces the stiffness and strength of the soil thereby causing ground movement ranging from a few centimeters to several meters. Lateral spreading often occurs along shorelines and riverbanks where there are loose, saturated sandy soils that are at shallow depths.

Subsidence on land is the downward shift (gradual or sudden) of the land surface that can be caused by natural or human-induced activities through the moving of earth materials such as soils. Main causes of land subsidence include but are not limited to drainage of organic soils, underground mining, sinkholes, compaction, or removal of underground water.

According to the Multi-jurisdictional Hazard Mitigation Plan, the entire County of San Diego, including the City, has had no known cases of lateral spreading resulting damage to property or structures (City 2012). The Project site is not located along any riverbank or waterbody. The Project site is located north of an existing channel. The channel is a cement-lined at a lower elevation and its waters are not anticipated to intrude into the soils of the Project site. The Project construction and operational activities will not include removal of groundwater not would any grading or excavation occur along the sloped areas along the channel. Therefore, lateral spreading and subsidence is unlikely to occur at the Project site due to the lack of liquefaction potential, lack of groundwater, and lack of sloped areas. Therefore, impacts would be less than significant.

d) *Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?*

Less than Significant Impact. Expansive soils are soils, clay, and other fine viscous particles that are prone to expansion or shrinkage due to a direct variation in water content/volume. Swelling would occur when there is a large amount of water present and shrink when water evaporates. The continued cycle of swelling and shrinking causes soil to move which can cause structures built on expansive soil to sink or rise unevenly, thereby requiring foundation repairs.

Expansive soils in the City are mostly limited in the peripheries of the City. Soils that are considered to be expansive in the City include Las Posas stony fine sandy loam, Las Posas fine sandy loam, Auld Clay, and Huerhuero loam. The majority of land uses within the General Plan area that have expansive soils would be low density. The Project site is located in a developed industrial area in the City. There are no waterbodies in the area that could result in the continuous expansion or shrinkage of soils. While the Project is located north of an existing channel, the channel is concrete-lined. and it is not expected for water to encroach into the Project site. Because the Project is not located on expansive soil and new facilities will be constructed in accordance with the CBC, impacts would be less than significant.

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. The Project site currently has electrical, telecommunications, water, sanitary sewer, storm sewer, and natural gas services. The Project will not require new installations of any septic tanks or waste water disposal systems. No impact would occur.

f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant with Mitigation Incorporated. On September 19, 2022, Chambers Group requested a paleontological records search from the San Diego Natural History Museum (SDNHM). This information was requested with the intent to provide further context related to the paleontological sensitivity of the area based on known fossil locations identified within the Project site or 0.5-mile study area. The paleontological records provide insight into what associated geological formations are more likely to contain fossils as well as the associated depths and placement of the known fossil locals relative to the geological formations in the area. On September 30, 2022, Chambers Group received the results of the records search. The results show that no known fossil localities lay directly within the proposed Project site. Based on the records search results, the paleontological sensitivity is considered by the SDNHM to be low for upper surface sediments dating to the late Pleistocene to Holocene period and increasing to a moderate status within middle to late Pleistocene deposits that underlay the Project site. No fossil localities are expected to be identified within the basement granitic bedrock underlying the region (Appendix B).

Based on the results of the records search review and background research, there the potential to encounter buried paleontological resources. Because data at present are insufficient to declare with certainty that paleontological resources will not be encountered during project construction, the following mitigation measures shall be considered and implemented to reduce potential impacts to a to less-than-significant level. If additional information is obtained with more specific details regarding the previous or current subsurface conditions within the Project site, that information will be incorporated in a Paleontological Mitigation Plan (PMP). The relevant additional information may be included through obtaining and reviewing documentation with more detailed evidence regarding the past development and associated ground disturbance at the site or through additional studies performed related to the Project, such as geotechnical analysis related to advanced design. The PMP, particularly if relevant additional information is obtained, will allow for more tailored and focused monitoring and mitigation programs to be prepared

MM-GEO-01 Prior to issuance of a grading permit, the applicant shall retain the services of a qualified paleontologist to remain on-call for the duration of the proposed ground disturbing construction activity. The paleontologist selected must be approved by the appropriate City/Lead Agency representative. The qualified paleontologist may also be a qualified archaeologist. Upon approval or request by the City, a paleontological mitigation plan (PMP) outlining procedures and protocols for paleontological monitoring and data recovery shall be prepared for the Proposed Project and submitted to the City for review and approval. The development and implementation of the PMP shall include any additional information that can be utilized to determine the appropriate monitoring program, consultations with the applicant's engineering geologist, as well as a requirement that the curation of all specimens recovered under any scenario shall be through an appropriate repository agreed upon by the City. All

specimens become the property of the City unless the City chooses otherwise. If the City accepts ownership, the curation location may be revised. The PMP shall include developing a multilevel ranking system, or Potential Fossil Yield Classification (PFYC), as a tool to demonstrate the potential yield of fossils within a given stratigraphic unit. The PMP shall outline the monitoring and salvage protocols to address paleontological resources encountered during ground disturbing activities. As well as the appropriate recording, collection, and processing protocols to appropriately address any resources discovered. The cost of data recovery is limited to the discovery of a reasonable sample of available material. The interpretation of reasonableness rests with the City, in consultation with the qualified paleontologist.

MM-GEO-02 At the completion of all ground-disturbing activities, the qualified paleontologist shall prepare a final paleontological mitigation report summarizing all monitoring efforts and observations, as performed in line with the PMP, and all paleontological resources encountered, if any. As well as providing follow-up reports of any specific discovery, if necessary. If no paleontological resources are identified during monitoring, the final reporting shall be addressed within the archaeological monitoring and/or evaluation report. A standalone paleontological mitigation report is only required if paleontological resources are encountered during monitoring.

With implementation of MMs PAL-01 and PAL-2, impacts to unique paleontological resources or sites or unique geologic features would be reduced to a less-than-significant level.

4.8 GREENHOUSE GAS EMISSIONS

8.	GREENHOUSE GAS EMISSIONS. Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
(b)	Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

A Greenhouse Gas (GHG) Analysis was conducted by Ldn Consulting in October 2022. GHGs analyzed in this study include Carbon Dioxide (CO_2), Methane (CH_4), and Nitrous Oxide (N_2O) because these are the most prevalent GHGs generated from projects such as the Proposed Project. To simplify GHG calculations, both CH_4 and N_2O are converted to equivalent amounts of CO_2 and are identified as *carbon dioxide equivalent* (CO_2e). CO_2e is calculated by multiplying the calculated levels of CH_4 and N_2O by a Global Warming Potential (GWP). The Intergovernmental Panel on Climate Change (IPCC) as source data for GWP factors for both CH_4 and N_2O using the 100-year periods of 25, 298 respectively (IPCC 2007).

4.8.1 Impact Analysis

a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

GHGs related to construction and daily operations were calculated using the latest CalEEMod 2020.4.0 GHG model. The construction module in CalEEMod is used to calculate the emissions associated with the construction of the project. The CalEEMod input/output model is shown on Attachment A in Appendix A. The model was manually updated to include 4 trips per day to the site to provide conservative GHG estimates. Results from this analysis have been incorporated below.

Construction Emissions

Project construction dates were estimated based on a construction kickoff starting in the middle of 2023. The project would be constructed in three phases and would start with demolition, which is expected to last 6 months. Phase 1 would follow and would be expected to take as long as 15 months to complete. Phase 2 would commence at a later date that has not yet been established. For purposes of this analysis, it is assumed that construction for phase 2 would be one year later. The project will import material, which is assumed to be as much as 30,000 CY of soil and as much as 5,000 CY of surface material (such as asphalt or crushed stone with roughly ½ of the material necessary for each phase). Phase 2 may have additional offsite construction in the immediate vicinity of the Project; therefore, additional equipment was assumed as part of this phase.

Based on modeling conducted, construction of the Proposed Project would generate approximately 1,234.16 $MTCO_2e$ over the construction life of the Project (Appendix A). Given the fact that the total emissions would ultimately contribute to cumulative levels, it is acceptable to average the total construction emission over the life of the Project, which is assumed to be 30 years. Given this, the project would add approximately 141.14 $MTCO_2e$ per year. A summary of the construction emissions is shown in Table 4-5.

Table 4-5. Annual Construction Emissions in $MTCO_2e$

Year	Bio-CO_2	NBio-CO_2	Total CO_2	CH_4	N_20	$MTCO_2e$
2023	0.00	258.60	258.60	0.08	0.00	261.14
2024	0.00	383.91	383.91	0.07	0.01	389.86
2025	0.00	59.42	59.42	0.01	0.00	59.94
2026	0.00	401.89	401.89	0.07	0.01	407.70
2027	0.00	114.58	114.58	0.02	0.00	115.52
					Total	**1,234.16**
					Amortized 30 Year annual Emissions	**141.14**

Notes: Expected Construction emissions are based upon CalEEMod modeling assumptions

Operational Emissions

Operational-related emissions would result primarily from vehicle exhaust emissions associated with the maintenance crews traveling to and from the site. However, the larger contribution to GHGs is

related to amortized construction emissions. The combined emissions from both operations and construction are summarized in Table 4-6.

Table 4-6. Operational Emissions in $MTCO_2e$

Category	Bio-CO_2	NBio-CO_2	Total CO_2	CH_4	N_20	$MTCO_2e$
Area	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	3.16	3.16	0.00	0.00	3.20
Waste	0.00	0.00	0.00	0.00	0.00	0.0
Water	0.00	0.00	0.00	0.00	0.00	0.00
					Subtotal (MT/year)	**3.21**
					Amortized Construction Emissions (Table 4-5)	**41.14**
					Total Construction and Operations (MT/Year)	**44.35**

Notes: Data is presented in decimal format to two significant digits and may have minor rounding errors.

The City of Escondido has a CAP Checklist screening level suggesting that projects that emit less than 500 MTCO2e would have a less than significant impact on the environment. As shown in Table 4-6, the Proposed Project would create 44.35 MTCO2e per year when averaged over a 30-year period, which would be less than the City's screening threshold. Therefore, the Proposed Project would result in less than significant impacts related to GHG emissions.

b) *Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

Less than Significant Impact. The City of Escondido developed an update to the 2013 Climate Action Plan (CAP; City 2021a), which outlines strategies and measures that the City will undertake to achieve its proportional share of State GHG emissions reduction targets. The CAP's strategies and measures are designed to reduce GHG emissions for build-out under the General Plan. The CAP does so by (1) calculating a baseline GHG emissions level as of 2012; (2) estimating future 2030 and 2035 emissions under a business-as-usual standard; and (3) implementing state mandated GHG reduction targets. Measures to reduce GHG emissions for projects with land use consistent with the City's General Plan are found in the CAP.

The City has also developed a Climate Action Plan Consistency Review Checklist (CAP Consistency Checklist), in conjunction with the CAP, to provide a streamlined review process for proposed new development projects that are subject to discretionary review and trigger environmental review pursuant to CEQA. This memorandum summarizes the methodology and application of a GHG screening threshold (set at 500 metric tons carbon dioxide equivalent [$MTCO_2e$] per year) for new development projects in order to determine if a project would need to demonstrate consistency with the CAP through the CAP Consistency Checklist. The memorandum also describes application of a numerical GHG threshold (set at 2.0 MTCO2e per service population (SP) per year) for use as a supplemental method for demonstrating consistency with the CAP.

A project's adherence to the City's General Plan (City 2012) can be determined through demonstrating consistency with General Plan assumptions and policies. If a project would generate GHG emissions

consistent with the maximum allowable buildout as defined by the General Plan, the Project would be consistent with the estimated GHG emissions for that site. The City's General Plan adopts the CAP's goals and policies that incorporates environmental responsibility into the City's daily management of growth and development, education, energy and water use, air quality, transportation, waste reduction, economic development, open space, and natural habitats. The Project would generate 44.35 $MTCO_2e$ per year when averaged over a 30-year period, which is well below the annual 500 $MTCO_2e$ threshold of significance established in the CAP; therefore, the Project is consistent with the City's General Plan and CAP.

The Proposed Project would not conflict with the City's 2021 CAP, General Plan or any applicable plan, policy or regulation of an agency adopted for the purpose of reducing GHG emissions; therefore, impacts would be less than significant.

4.9 HAZARDS AND HAZARDOUS MATERIALS

9.	HAZARDS AND HAZARDOUS MATERIALS. Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
(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?	☐	☐	☒	☐
(c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
(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?	☐	☐	☒	☐
(e)	For a project located within an airport land use plan or, where such a plan had not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☒	☐
(f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
(g)	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☒	☐

4.9.1 Impact Analysis

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than Significant Impact. The California Environmental Project Agency (CalEPA) oversees California's Unified Program, which protects Californians from hazardous waste and hazardous materials by ensuring local regulatory agencies consistently apply statewide standards when they issue permits, conduct inspections, and engage in enforcement activities.

Construction of the Proposed Project would result in the generation, transport and use of various waste materials that would require recycling and/or disposal. Some of the waste generate could be classified as hazardous wastes/hazardous materials. Hazardous materials typically consist of chemicals that may be categorized as toxic, corrosive, flammable, reactive, an irritant, or strong sensitizer. During construction, the Proposed Project will use potentially hazardous materials from petroleum-based fuels, lubricants, cleaning products and other similar materials. The quantities of the used chemicals that will be present at the Project site would be limited and temporary.

Project operations will mainly be operated remotely with no permanent on-site personnel. Battery storage facilities typically emit gasses such as carbon monoxide, carbon dioxide, hydrogen, methane, ethane, and other hydrocarbons. Other emission types would be based on the chemistry of the batteries being used. Two to four staff members will visit the site weekly and as needed for maintenance and monitoring of the Project. Maintenance may include use of cleaning equipment.

According to the City's GPU Final EIR, any business within the area that handles, stores, or disposes of a hazardous substance at a given threshold quantity must prepare a Hazardous Materials Business Plan (HMBP) that is submitted to County Department of Environmental Health (DEH) for approval. HMBPs intend to minimize hazards to human health and the environment from fires, explosions, or an unplanned release of hazardous substances into air, soil, or surface water. The applicable HMBP must be carried out immediately whenever a fire, explosion, or unplanned chemical release occurs. A HMBP includes three sections: 1) an inventory of hazardous materials, including a site map, which details their location; 2) an emergency response plan; and 3) an employee training program. HMBPs aid employers and employees in managing emergencies at a given facility. They also prepare emergency response personnel to handle a wide range of emergencies that might occur at the facility.

The Hazardous Materials Division of DEH conducts routine inspections at businesses required to submit HMBPs. The purpose of these inspections is to: 1) ensure compliance with existing laws and regulations concerning HMBP requirements; 2) identify existing safety hazards that could cause or contribute to an accidental spill or release; and 3) suggest preventative measures designed to minimize the risk of a spill or release of hazardous materials. After initial submission of an HMBP, the business must review and recertify the HMBP every year.

The Project will handle, store, and dispose of materials used during construction and operation in compliance with the manufacturer's standards for storage and spill procedures, and with existing regulations such as the California Health and Safety Code, Hazardous Materials Transportation Act, and Resource Conservation and Recovery Act. The Project will not have any effects regarding hazards and hazardous materials with the preparation and approval of a HMBP prior to building permit issuance. Impacts would be less than significant.

b) Would the project 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?

d) Would the project 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 Project site is located at 555 North Tulip Street. The Project location is not located within a Hazardous Waste and Substances Site List (Cortese) (DTSC 2022). According to the Department of Toxic Substances (DTSC) Envirostor database, there are two cases associated with the address, one as a leaking underground storage tank (LUST) cleanup site, and one as a cleanup program site. The identified potential contaminants of concern included alcohols, waste oil, and motor and hydraulic lubricating fluids. As of 1996, both cases have been deemed completed (State Water Resources Control Board 2022).

During construction, the Project would result in construction emissions which would be temporary in nature. Dust suppression methods would be implemented to control particulate spread. In addition, additional on-site construction measures including spill control, erosion control, and other BMPs in the SWPPP would manage accidental release of materials into the environment.

Potential hazards during operations, which would be mainly remote, are thermal runaway (uncontrollable self-heating of a battery cell), off gassing (gases released to an explosive limit with an ignition source), and stranded energy (no safe method of discharging stored energy). Battery failures that could create these hazards include thermal abuse, electrical abuse, mechanical abuse, internal faults, and other environmental conditions such as floods, debris, and rodents.

The Project would include various safety features both for the facility and the BESS enclosures. The enclosures will be equipped with integrated operational management systems, fire and safety systems (HVAC systems, ventilation, gas, heat and smoke detection and alarms, and fire suppression systems) all designed, constructed, and operated pursuant to the version of the California Fire Code in effect at the time of building permit issuance. The modules within each enclosure are accessed for maintenance from the outside via cabinet doors. In addition, while the majority of the operations would occur remotely, the Project site would be visited for maintenance and monitoring.

Therefore, implementation of the construction BMPs, HMBP, and with the design and operations of the Project to comply with hazardous materials handling, the Project would result in less than significant impacts.

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less than Significant Impact. The nearest school to the Project site is Learn4Life Innovation High School which is approximately 2,000 feet directly to the south west of the Project site, or approximately 0.5-mile driving distance. Emissions would occur during short-term construction from the use of construction equipment. These emissions would be primarily composed of particulates and criteria air pollutants that do not pose a significant health risk. During long-term operations, implementation and compliance of the HMBP and use of the on-site security and safety systems would address potential emissions and hazards to public health and safety. Therefore, impacts would be less than significant.

e) For a project located within an airport land use plan or, where such a plan had not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact. McClellan-Palomar Airport is located approximately 12 miles driving distance to the west of the Project site. The nearest international airport is San Diego International Airport, which is located approximately 33 miles driving distance to the south of the Project site. Blackington Airport Property is a private airport located approximately 15 miles driving distance to the north of the Project site. Construction and operations of the Project would not be located within an airport land use plan, nor would it involve any modification of an airport land use plan. No impact would occur.

f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than Significant Impact. The City maintains an Emergency Action Plan for City employees, while the City Emergency Response Team (CERT) program is a joint effort between the Escondido Fire Department and the residents of the City. CERT training prepares residents for natural disasters and acts of terrorism. County wide, emergency response and evacuation plans include the San Diego County Multi—Jurisdictional Hazard Mitigation Plan and Operational Area.

The Project is located within the Lake Wohlford Dam Failure Inundation Area. The City's Public Works Department maintains the Lake Wohlford Dam Emergency Action Plan. The plan includes information regarding addressing the physical situation, evacuation routes, jurisdictions, event responses staging areas, command posts and shelter facilities (City 2012).

The Project would be confined to the boundaries of the Project site and would not interfere or require changes to any existing evacuation and emergency response plans. In the event temporary lane closures are required for safe delivery of materials during construction or operation, the required permits will be obtained, and the activities conducted such that there is no interference with emergency operations. On a long-term operational basis, the Project is not anticipated to generate traffic capable of interfering with emergency operations. Impacts would be less than significant.

g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Less than Significant Impact. The California Department of Forestry and Fire Protection's Fire and Resource Assessment Program (FRAP) provides a Fire Hazards Severity Zone Viewer (FHSZ) to provide a visual reference to locate fire hazards areas in California. The maps were developed utilizing science and field-tested models that assigns a hazard score based on factors that influence fire likelihood and behavior. Factors include but are not limited to fire history, existing and potential fuel (natural vegetation), predicted flame length, embers, terrain, and typical fire weather in the area (CAL Fire 2022).

Portions of the City support various natural habitats that include grasslands, sage scrub and chaparral. These areas are known as wildlands and therefore has potential to be a resource for wildland fires (City 2012). The Project site is not located within a FHSZ under the CAL FIRE maps. The Project site is designated to be within a moderate fire hazard areas according to the Wildfire Risk figure in the GPU Final EIR (City 2012).

The Project site is located within an urbanized area and has been disturbed with the presence of existing infrastructure. There is limited vegetation onsite and its proximity to the BESS structures would not create a fire hazard. In addition, the safety features and design of the Project would be implemented to address any potential fire hazards. Impact would be less than significant.

4.10 HYDROLOGY AND WATER QUALITY

10.	HYDROLOGY AND WATER QUALITY. Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
(b)	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
(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 the addition of impervious surfaces, in a manner which would:				
	i) Result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
	ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flood on- or off-site;	☐	☐	☒	☐
	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; or	☐	☐	☒	☐
	iv) Impede or redirect flood flows?	☐	☐	☒	☐
(d)	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
(e)	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

4.10.1 Impact Analysis

a) Would the project violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality?

Less than Significant Impact. Impacts related to water quality would be categorized under short-term construction related impacts and long-term operational impacts. Construction related activities have the potential to degrade surface and groundwater quality by exposing soils to surface runoff from debris and other materials, including runoff from various construction equipment. Pollutants of concern during typical construction activities include sediments, dry and wet solid wastes, petroleum products, solvents, cleaning agents and other similar chemicals. During ground disturbing activities, excavated soil would be exposed thereby creating a potential for soil erosion. During a storm event or water spill, these pollutants and soils could be spilled, leaked, or transported as runoff into drainages or downstream waters, and potentially into receiving waters.

The Project site is located within the Carlsbad Watershed. It is currently developed and mostly covered by buildings, parking lots, roadways, and sidewalks with minimal landscaping. The construction phase of the Project would result in onsite grading that would remove the parking lot asphalt and expose the soil/dirt underneath. The ground disturbances would expose the Project site to particulates, debris and other chemicals typically used during construction. The San Diego Regional Water Quality Control Board (RWQCB) oversees permits in the City. The Project applicant/contractor shall obtain the necessary coverage under the General Construction Permit prior to commencing construction activities. The Project will implement a SWPPP in addition to erosion and grading plan to implement construction and post-construction BMPs to ensure the Project does not violate water quality standards or waste discharge requirements. Typical construction BMPs include but are not limited to watering soil, soil cover of inactive areas, gravel bags, and fiber rolls.

b) *Would the project 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. The Project site would not result in the substantial decrease in groundwater supplies because the area is currently paved. The Project site is developed with existing buildings, parking lots, roadways, and sidewalk. Minimal landscape is on the Project site along the parking lot and south along the existing channel. The Project site has existing utilities including water, sanitary sewer, and storm sewer. This would provide the site existing resources for construction and operational water uses. Operations of the Project would occur remotely with weekly visits by staff for monitoring and maintenance. Therefore, the Project water needs would be mainly from irrigation and maintenance needs. In addition, The Project will include installation of drainage and retention basins to handle flows created on site once construction is completed. Impacts would be less than significant.

c) i) *Would the project 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 the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site;*

ii) *Would the project 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 the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;*

iii) *Would the project 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 the addition of impervious surfaces, in a manner which would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources or polluted runoff; or*

iv) *Would the project 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 the addition of impervious surfaces, in a manner which would impede or redirect flood flows?*

Less than Significant Impact. Drainage patterns are typically formed by the streams, rivers, lakes, or other bodies of water. Overtime, the system is formed via a network of channels and tributaries that are determined the type of geologic features of a particular landscape. The Project site has no natural drainage courses, rivers, or streams as it is fully developed and paved, outside of the minimal landscaping. According to the Federal Emergency Management Agency (FEMA) flood

maps, the Project site is located in Zone X (Other Flood Areas) which are areas with a 0.2% annual chance flood which indicates a moderate flood hazard area (FEMA 2012). The City's GPU Final EIR shows that Project site to be located in a 500-Year Flood Plain (City 2012).

The proposed construction would involve the demolition of the existing facilities and new construction of an energy facility which would not result in a significant increase of impervious surfaces than what is already present. Any alteration of drainage patterns has been previously done during the initial construction of the Project site. The construction activities have potential to degrade water quality through exposure of surface runoff to exposed soils, dust, and other site debris. However, as discussed, the Project would implement erosion control and grading plans, in addition to BMPs outlined in the SWPPP to address site erosion and runoff during construction and operations as required by the San Diego RWQCB. Therefore, the Project, due to the site conditions and proposed construction, would not substantially alter the existing drainage, result in a significant increase in erosion or surface runoff or exceed stormwater drainage capacities. The Project would not involve any alteration of an existing stream, river, or the existing channel that could result in impacting or redirecting flood flows. Impacts would be less than significant.

d) *Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?*

Less than Significant Impact. Tsunamis are high sea waves typically caused by earthquakes and underwater landslides. Seiche occurs in bodies of water (semi or full-enclosed) and are caused by strong winds or rapid changes in the atmosphere that pushes water from one end to another and typically acts as a standing wave/oscillating body of water. Floods are an overflow of large bodies of water beyond its normal capacity.

The Project site is not in a coastal area nor is it located nearby any rivers, streams, or other large bodies of water. The Project is within the Lake Wohlford Dam Failure Inundation Area. The City's Public Works Department maintains the Lake Wohlford Dam Emergency Action Plan addressing routes and responses in the event of a dam failure. Under the Multi-Jurisdictional Hazard Mitigation Plan, it identifies the Lake Wohlford Dam as having a low-risk failure.

The Project site is fully developed. The Project proposes the demolition of the existing structures and new construction of an energy storage facility. During construction and operations, the Project would implement the guidelines from the HMBP which will include procedures to address the release of pollutants in the event of a spill or emergency such as floods. Implementation of the HMBP, Lake Wohlford Dam Emergency Action Plan, and coordination with the City's Public Works Department would result in less than significant impacts.

e) *Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

Less Than Significant Impact. As mentioned above, the Project will be unmanned during operations, with no buildings or parking areas and would not require restroom facilities. Any operational water that may be required for routine maintenance is expected to be provided by municipal sources through a temporary on-site hydrant meter. Limited water required during the construction phase is also expected to be provided by municipal sources through a temporary on-site hydrant meter. No groundwater would be used for any purposes during construction or operational phases of the Project. The majority of the Project would consist of gravel infill and remain pervious to allow

infiltration of precipitation. The incremental amount of impervious surface that would be introduced by the Project would be small and would not substantially interfere with groundwater recharge. In addition, drainage and retention basins will be installed onsite to handle any additional flows created by the additional impervious surface on the Project site. As a result, the Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Impacts would be less than significant.

4.11 LAND USE AND PLANNING

11.	LAND USE/PLANNING Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Physically 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?	☐	☐	☒	☐

4.11.1 Impact Analysis

a) Would the project physically divide an established community?

No Impact. The Project is consistent with surrounding general industrial land use. The Project would include construction of an access road but does not propose the introduction of major infrastructure such as public roadways, facilities, or water supply systems. The project would not physically divide an established community; therefore, no impact would occur.

b) Would the project 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?

Less than Significant Impact. The Project Site is located within the City's General Plan Land Use Designation of General Industrial, and is zoned Planned Development (PD-I).. The Project includes a request to amend the zone to General Industrial (M-2). This designation allows "utilities," which includes battery storage facilities such as the Proposed Project. Under Section 33-564 of the City's Municipal Code, utilities are considered a permitted use within the M-2 zone. Therefore, the Project would be consistent with the City's General Plan. To ensure adequate security and to protect the general public, the Proposed Project includes a zone text amendment to permit walls and other security gates or fences to be up to 12 feet in height for industrial areas. The Proposed Project operations involve electrical and power generation equipment that presents hazards such as electrocution, falls, and potential fires. The currently allowed wall height of up to 8 feet is easily scalable by a 6-foot-tall person and a taller wall is required to provide the appropriate security level for this land use. Increasing the wall height up to 12 feet can effectively prevent the hazards mentioned above and even improve public health, safety, and welfare for the surrounding properties. Furthermore, the proposed wall design and materials will be consistent with other institutional projects nearby at the City's request and would not block access or encroach on neighboring properties.

A revision to the permitted wall/fence height is consistent with the City of Escondido's General Plan as it would help to further GOAL 3 within the Community Protection Element. Goal 3 states: Protection

of life and property, and enforcement of law that enhances personal safety in the community. This goal can be achieved by implementing Police Services Policy 3.7 which requires that defensible space practices that contribute to personal and property safety and crime prevention be incorporated into development projects, such as security and design features (e.g., site and building lighting, visual observation of areas, secured areas). This would include the adequate wall height needed to protect the surrounding community. The Proposed Project will not create a significant environmental impact due to a conflict with existing land use policies. The proposed amendments will be consistent with the City's General Plan; impacts would be less than significant.

4.12 MINERAL RESOURCES

12.	MINERAL RESOURCES Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(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?	☐	☐	☐	☒
(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?	☐	☐	☐	☒

4.12.1 Impact Analysis

a) Would the project 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?

b) Would the project 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. According to maps published in the *County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements: Mineral Resources* (County 2008), the Project Area is classified as Mineral Resource Zone 4 (MRZ-4) and has no known mineral resource deposits in close proximity; the MRZ-4 classification defines areas where available information is inadequate to assign another category. The Project site is zoned Planned Development Industrial (PD-I) and is not designated for mineral extraction or compatible uses. There are no recorded mineral deposits within the Project Area; therefore, no impacts would occur.

4.13 NOISE

13.	NOISE Would the project result in:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(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?	☐	☐	☒	☐
(b)	Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐

13.	NOISE Would the project result in:	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?	☐	☐	☐	☒

A noise study was completed by Ldn Consulting in October 2022 to determine the noise impacts associated with the construction or operation of Proposed Project. To determine the existing noise environment and to assess potential noise impacts, 24-hour measurements were taken at two locations with the greatest impact potential from the Proposed Project (i.e., having a relatively flat terrain and minimal or no obstruction from trees or structures).

Existing Noise Conditions

The site is located east of Interstate 15, between Washington Avenue and Valley Parkway. Access to the site is from Interstate 15 to the west via Valley Parkway to the south. Existing noise occurs mainly from vehicular traffic traveling on Interstate 15 and nearby/adjacent roadways.

Ambient noise level measurements were taken at two locations (Monitoring Location 1 [M1] and Monitoring Location 2 [M2]). M1 was located across the Escondido Creek, to the southeast at the existing commercial and retail uses; M2 was located south of West Valley Parkway, at the nearest residential uses along Upas Street (Appendix C). Noise measurements were recorded between 10 a.m. Monday, October 10 and 10 a.m. Tuesday, October 11, 2022. Noise measurements were taken using Larson-Davis Spark Model 706 Type 2 precision sound level meters, programmed, in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were mounted on a tripod 5 feet above the ground and equipped with a windscreen during all measurements. The sound level meter was calibrated before and after the monitoring using a Larson-Davis calibrator, Model CAL 200.

The results of the noise level measurement are presented in Table 4-7 and the noise monitoring data printouts are provided in Appendix C.

Table 4-7. Long-Term Noise Level Summary

Time	M1 (dBA L_{eq})	M2 (dBA L_{eq})
11:00 a.m.	68.1	62.8
12:00 p.m.	61.2	62.9
1:00 p.m.	60.9	63.4
2:00 p.m.	62.7	63.6
3:00 p.m.	62.3	64.2
4:00 p.m.	63.1	64.2

Time	M1 (dBA L_{eq})	M2 (dBA L_{eq})
5:00 p.m.	63	64.7
6:00 p.m.	62.1	64.6
7:00 p.m.	61.9	63.9
8:00 p.m.	62.5	63.2
9:00 p.m.	63	62.7
10:00 p.m.	58.9	60.9
11:00 p.m.	57.7	59.7
12:00 a.m.	49.8	58.5
1:00 a.m.	53.4	56.9
2:00 a.m.	56.5	51.5
3:00 a.m.	43.8	52.2
4:00 a.m.	59.1	52.8
5:00 a.m.	60.6	56
6:00 a.m.	60.2	59.1
7:00 a.m.	60.7	60.4
8:00 a.m.	61.2	62.6
9:00 a.m.	63.1	60.8
10:00 a.m.	61	61.9
Overall	**61.6**	**61.8**

4.13.1 Impact Analysis

a) Would the project result in 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. The Proposed Project would not generate 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. The following section calculates the potential noise emissions associated with the temporary construction activities and long-term operations of the Proposed Project and compares the noise levels to the City standards.

Construction Noise

Noise impacts from construction activities associated with the Proposed Project would be a function of the noise generated by construction equipment, equipment location, sensitivity of nearby land uses, and the timing and duration of the construction activities.

Sections 17-234 and 17-240 of the City's Municipal Code regulate construction noise. Any piece of construction equipment or any combination of construction equipment cannot be operated so as to cause an average noise level excess of 75 dBA Leq during the allowable hours of operation. Per City regulations, construction equipment can only be operated from 7:00 a.m. to 6:00 p.m., Monday through Friday, and on Saturday from 9:00 a.m. to 5:00 p.m. Construction equipment cannot be operated on Sundays or holidays. Operation of any construction equipment during non-allowable hours is permitted only by a variance from the City Manager.

Table 4-8 below shows noise levels associated with each type of construction equipment that would be used during construction of the Proposed Project.

Table 4-8. Construction Noise Levels

Construction Equipment	Quantity	Duty cycle (hours/day)	Source Level at 50 feet (dBA)	Combined Noise Level at 50 feet (dBA L_{eq}-8h)
Dozer	1	8	74	74.0
Grader	1	8	73	73.0
Excavator	1	8	78	78.0
Water Truck	1	8	70	70.0
Dump Truck	1	8	75	75.0
Roller/Compactor	1	8	74	74.0
			Total Noise Level @ 50 Feet (dBA)	**82.4**
			Distance	120
			Noise Reduction Due to Distance	-7.6
			Nearest Property Line Noise Level	**74.8**

As shown in Table 4-8, if all the equipment was operating simultaneously and in the same location (which is not physically possible) at a distance as close as 120 feet from the nearest property line, the point source noise attenuation from construction activities would be -7.6 dBA. This would result in an anticipated worst-case 8-hour-average combined noise level of 74.8 dBA at the northern (closest) property line. Given this and the spatial separation of the equipment, the noise levels will comply with the City of Escondido's 75 dBA standard at all Project property lines; therefore, impacts would be less than significant, and no mitigation is required.

Operational Noise

The Proposed Project would consist of the development and operation of an energy storage project. The Project would create operational noise from the proposed onsite equipment. The adjacent property to the northwest is zoned light industrial and has a noise standard of 70 dBA Leq anytime. The properties to the northeast across Tulip Street are zoned industrial and have a noise standard of 75 dBA Leq anytime. The property to the south and southeast across the Escondido Creek is zoned SPA 9, Downtown Specific Plan; the Downtown Specific Plan does not indicate a land use goal for this area other than residential uses are not permitted, however, the existing land use is commercial, therefore, the evening noise standard of 55 dBA Leq was utilized. The nearest residential land use is

located south of West Valley Parkway along Upas Street more than 900 feet southwest of the Project site and has an evening noise standard of 45 dBA Leq.

Project Phase	Cumulative Noise Level by Property Line Type			
	Residential	Commercial	Light Industrial	General Industrial
Phase 1	39	51	60	58
Phase 1 and 2	42	52	56	56
Significance Threshold	**45**	**55**	**70**	**75**
Exceeds Significance Threshold?	**No**	**No**	**No**	**No**

The unmitigated noise levels from the battery storage containers were found to be below the City's evening thresholds at all property lines. The allowable one-hour average sound level at the nearest residences is the lowest ambient noise level of 51.5 dBA. The Project would be in compliance with the ambient noise level as well as the more restrictive nighttime threshold of 45 dBA. Therefore, impacts would be less than significant, and no mitigation is required.

Facility Maintenance

Periodic site maintenance of the BESS facility would be required, is anticipated to occur at most 10 times per year and would generally require less than one day to complete. Section 10.80.040 of the Noise Ordinance sets a most restrictive operational exterior noise limit for the noise sensitive land uses of 60 dBA L_{eq} for daytime hours of 7 a.m. to 7 p.m. Therefore, the most restrictive 60 dBA L_{eq} standard was applied at the property lines. On-site activities are not anticipated to result in noise levels in excess of existing landscape maintenance on the existing and surrounding properties. Therefore, on-site maintenance is not anticipated to result in a substantial increase in noise levels. Similarly, on-site maintenance is not anticipated to exceed City noise standards. Additionally, since the on-site operations will be limited to the daytime hours of 7 a.m. to 7 p.m., impacts would be less than significant, and no mitigation is required.

b) *Would the project result in generation of excessive groundborne vibration or groundborne noise levels?*

Less Than Significant Impact. The proposed project would not generate or expose persons to excessive groundborne vibration or groundborne noise levels. The following section analyzes the potential vibration impacts associated with the construction and operations of the Proposed Project.

Construction-Related Vibration Impacts

Vibration impacts from construction activities associated with the Proposed Project would typically be created from the operation of heavy off-road equipment. Equipment proposed for use during construction includes dozer, grader, excavator, water truck, dump truck, and drum roller.

The City's Municipal Code does not explicitly limit vibration levels associated with construction equipment. The nearest offsite structure where people may sit, which increases susceptibility to vibration, is greater than 120 feet away from the Project site. Furthermore, the Project would utilize a drum roller rather than a vibratory roller or other type of vibratory compactor, which would produce

less vibration during construction activities. The Project would also follow City noise regulations limiting use of construction equipment from 7:00 a.m. to 6:00 p.m., Monday through Friday, and on Saturday from 9:00 a.m. to 5:00 p.m. Impacts would be less than significant.

Operations-Related Vibration Impacts

The Proposed Project would consist of the operation of an energy storage facility. The on-going operation of the Proposed Project would not include the operation of any known vibration sources. Therefore, a less than significant vibration impact is anticipated from the operation of the Proposed Project.

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 us airport, would the project expose people residing or working in the project area to excessive noise levels?*

No Impact. The Proposed Project would not expose people residing or working in the Project area to excessive noise levels from aircraft. The nearest airport is McClellan-Palomar Airport, located approximately 10.4 miles northwest of the Project site. The Project site is located outside of the McClellan-Palomar Airport's Influence Area and Noise Impact Notification Area (McClellan-Palomar Airport 2005). No impacts would occur from aircraft noise.

4.14 POPULATION AND HOUSING

14.	POPULATION AND HOUSING. Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Induce substantial unplanned 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)?	☐	☐	☐	☒
(b)	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

4.14.1 Impact Analysis

a) *Would the project induce substantial unplanned 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 Project is a lithium-ion BESS facility; therefore, it does not involve development of residential units. Additionally, the Project would not induce population growth in the area because there would be no operational employees during operation of the Project. The Project would not cause an extension of new major infrastructure, such as public roadways or other infrastructure, into previously unserved areas; and no regulatory changes would occur that would allow increased population growth. Therefore, no impacts would occur.

b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The Project would not displace any existing people or housing because the Project site currently contains a non-operational ice-rink and a 50-MW natural gas power plant. No impacts would occur.

4.15 PUBLIC SERVICES

15.	PUBLIC SERVICES.	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Would the project result in substantial adverse physical impacts associated 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:				
	i) Fire Protection?	☐	☐	☒	☐
	ii) Police Protection?	☐	☐	☒	☐
	iii) Schools?	☐	☐	☐	☒
	iv) Parks?	☐	☐	☐	☒
	v) Other public facilities?	☐	☐	☒	☐

4.15.1 Impact Analysis

a) i) Would the project result in substantial adverse physical impacts associated 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 fire protection?

Less Than Significant Impact. The Escondido Fire Department provides service to the Project site. The nearest fire station to the Project site is Escondido Fire Department Station 1, located at 310 North Quince Street #1, Escondido, CA. The station is approximately 0.5 mile west of the Project site, or an approximately 2-minute drive (Google 2022). The Project consists of lithium-based battery modules installed in racks and housed within purpose-built outdoor BESS enclosures. Each induvial module within an enclosure is equipped with integrated operational management systems, fire and safety systems (HVAC systems, ventilation, gas, heat and smoke detection and alarms, and fire suppression systems) all designed, constructed, and operated pursuant to the version of the California Fire Code in effect at the time of building permit issuance. Implementation of the Project is not expected to significantly affect service ratios, response times, or other performance objectives for fire protection. Thus, the Project would not result in the construction of new or physically altered fire protection facilities. Impacts would be less than significant.

ii) Would the project result in substantial adverse physical impacts associated 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 police protection?

Less Than Significant Impact. The Escondido Police Department provides service to the Project Site. The nearest police station to the Project site is the Escondido Police Department, located at 1163 Centre City Parkway, Escondido, CA. The station is approximately 1.2 miles north of the Project site, or an approximately 6-minute drive (Google 2022). Implementation of the Project would not substantially increase the need for additional police protection services to the Project site because the Project would be unmanned and surrounded by security fencing and lighting. As a result, Project implementation is not anticipated to increase response times to the Project site or surrounding vicinity or require the construction of new or physically altered police protection facilities. Impacts would be less than significant.

iii) Would the project result in substantial adverse physical impacts associated 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 schools?

No Impact. The Project would be unmanned during operations. It is expected that between two to four staff members will visit the site weekly and as needed for maintenance and monitoring of the Project; these visits would not induce population growth in the area. As such, implementation of the Project would not result in the need for the construction or physical alteration of school facilities and no impacts would occur.

iv) Would the project result in substantial adverse physical impacts associated 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 parks?

No Impact. As mentioned above, the Project would be unmanned during operations. It is expected that between two to four staff members will visit the site weekly and as needed for maintenance and monitoring of the Project; these visits would not induce population growth in the area. As such, implementation of the Project would not result in the need for the construction or physical alteration of park facilities and no impacts would occur.

v) Would the project result in substantial adverse physical impacts associated 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 other public facilities?

Less Than Significant Impact. The Project is industrial in nature and would be unmanned during operations; thus, the Project would not result in impacts on public facilities beyond those described above in Section 4.15. Impacts would be less than significant.

4.16 RECREATION

16.	RECREATION. Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(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?	☐	☐	☐	☒
(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?	☐	☐	☐	☒

4.16.1 Impact Analysis

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. The Project does not propose any residential use, included but not limited to a residential subdivision, mobile home park, or construction for a single-family residence that may increase the use of existing neighborhood and regional parks or other recreational facilities in the vicinity. In addition, since the Project includes construction of an unmanned facility, it would not induce population growth in the area that would impact recreational facilities. No impact to parks or recreation facilities would occur.

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. The Project does not include recreational facilities or require the construction or expansion of recreational facilities. No impacts would occur.

4.17 TRANSPORTATION

17.	TRANSPORTATION. Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities?	☐	☐	☒	☐
(b)	Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
(c)	Substantially increase hazards due to a geometric design feature (e. g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
(d)	Result in inadequate emergency access?	☐	☐	☒	☐

A Transportation Study Memorandum was prepared for the Proposed Project by Westwood Professional Services, Inc. (Westwood) in October 2022. The purpose of this technical report is to analyze potential Trip Generation and Parking impacts associated with construction and operation of the Proposed Project. There will be minimal traffic generated by the Project once the construction is complete because the Project would be unmanned during normal operations. It is expected that between two to four staff members will visit the site weekly and as needed for maintenance and monitoring of the Project. Because the Project site will be unmanned, the Traffic Letter Report focuses on the construction phase of the Project. Results from the report have been summarized below, but for more details regarding methods and results refer to Appendix D.

Construction of the Project will generate additional traffic in the surrounding area. Construction traffic relates to the traffic generated from construction vehicles, which consist primarily of heavy-duty trucks, smaller vendor trucks, and worker vehicles. Project construction includes demolition of the existing facility, site preparation and grading, installation of drainage and retention basins, foundations/supports, setting battery enclosures, wiring and electrical system installation, and assembly of the accessory components including inverter transformers and generation step-up transformers. Construction activities would occur in three parts: Demolition, Phase 1 Construction, and Phase 2 Construction. Earth cut and fill are proposed to be balanced within the Project site such that no import of fill material or export of *in-situ* material is proposed.

The Project would limit the use of construction equipment from 7:00 a.m. to 6:00 p.m., Monday through Friday, and on Saturday from 9:00 a.m. to 5:00 p.m. Completion of Project construction and start of operations is expected to occur in 2024/2025 for Phase 1, and 2026/2027 for Phase 2. Battery storage construction projects will generally exhibit a bell curve distribution of workers throughout the construction period. Initial site mobilization and early site preparation work will have fewer workers, then the number of workers will peak during the period of greatest activity. As construction draws to a close, the average number of workers per day will decrease as crews complete their work. Typically, each worker would be expected to arrive and depart the site once per day, resulting in a daily trip rate of two (2) vehicle trips per worker per day. A preliminary estimate of 125 daily trips is projected during the peak of construction for the Proposed Project.

The Project would remain unmanned during normal operations, and it is expected that between two to four staff members will visit the site weekly and as needed for maintenance and monitoring of the Project. The Project is conservatively expected to generate as many as 35 weekday trips for up to nine full-time employees during operations.

4.17.1 Impact Analysis

a) Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities?

Less than Significant Impact. Senate Bill (SB) 743 was signed in 2013 with the intent to identify new metrics for identifying and mitigating transportation impacts within CEQA. For land use projects, the Governor's Office of Planning and Research (OPR) identified Vehicle Miles Traveled (VMT) per capita, VMT per employee, and net VMT as new metrics for transportation analysis. Per the Office of Planning and Research Technical Advisory, lead agencies may screen out projects from VMT impacts using various metrics.

According to the City's Transportation Impact Analysis Guidelines (City 2021b), Project generating 200 or fewer net new daily vehicle trips may be presumed to have a less than significant impact. The Traffic Impact Analysis provided in Appendix D conservatively estimates that the Project would generate as many as 125 daily trips during the construction period and as many as 35 new daily trips during operations, both of which are below the City's significance threshold of 200 daily trips; therefore, impacts would be less than significant.

b) Would the project Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less than Significant Impact. Senate Bill (SB) 743 was signed in 2013 with the intent to identify new metrics for identifying and mitigating transportation impacts within CEQA. For land use projects, the Governor's Office of Planning and Research (OPR) identified Vehicle Miles Traveled (VMT) per capita, VMT per employee, and net VMT as new metrics for transportation analysis.

Per the Office of Planning and Research Technical Advisory, lead agencies may screen out projects from VMT impacts using various metrics. According to the City's Transportation Impact Analysis Guidelines (City 2021b), Project generating 200 or fewer net new daily vehicle trips may be presumed to have a less than significant impact.

The Project would involve the demolition of existing structure and construction of a new energy storage facility. Construction operations will include trips involving construction equipment and construction workers traveling to and from the Project site. While there would be an increased in trips during the construction period, this would be short term and the level of traffic is unlikely to degrade the existing street segments.

The operations of the facility would be mostly unmanned outside of staff visiting the site for monitoring and maintenance on a weekly basis or as needed. According to the Air Quality Analysis, the Project's trip generation was estimated to be four trips per day during a worst-case project scenario which is less than the 200 trip requirements by the City's Transportation Impact Analysis. Furthermore, the Project site has been used for industrial uses and the Project is not introducing a new use to the site that could affect the number of trips required for project operations. Based on the Project operations and estimated trips, the Project would result in less than significant impacts.

c) Would the project 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. Demolition and construction would occur within the Project site. There are no proposed changes to the existing driveways that would create a driving hazard. The Project will be visited by staff for maintenance and monitoring, or by emergency responders in the event of an emergency. The onsite access road would accommodate large trucks and vehicles, including fire trucks per City regulations. Therefore, the Project would not significantly increase hazards due to design features or incompatible uses. Impacts would be less than significant.

d) Would the project result in inadequate emergency access?

Less than Significant Impact. The construction process would be confined to the boundaries of the Project site with only temporary impacts to surrounding roadways. Should temporary lane closures or detours be required for safe delivery of materials during construction or operation, the required permits will be obtained so that the activities conducted would not interfere with emergency operations. On a long-term operational basis, the Project is not anticipated to generate traffic capable

of interfering with emergency operations. Furthermore, the Project site plans will be reviewed by the City and the fire department to ensure adequate access and circulation to the site in the event of an emergency. Impacts would be less than significant.

4.18 TRIBAL CULTURAL RESOURCES

18.	**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:**	**Potentially Significant Impact**	**Less than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
(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	☐	☒	☐	☐
(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.	☐	☒	☐	☐

4.18.1 Impact Analysis

a) *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 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)?*

b) *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 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. On September 19, 2022, Chambers Group requested that the Native American Heritage Commission (NAHC) conduct a search of its Sacred Lands File (SLF) to determine if resources important to Native Americans have been recorded in the Project footprint and buffer area. As of the date of the cultural resources report (Appendix B), no responses have been received; however, it is noted that a 2020 cultural resources survey project located approximately 350 m north-northeast returned a positive finding from the NAHC (Helix 2020).

Based on the results of the records search review and background research, there is potential to encounter buried archaeological and paleontological resources. Similarly, consultation with Native American groups may indicate the presence of additional significant resources.

The City sent letters to the Rincon Band of Luiseno Indians, San Luis Rey Band of Mission Indians, San Pasqual Band of Mission Indians, Soboba Band of Luiseno Indians, and Mesa Grande Band of Mission Indians to initial Assembly Bill 52 (AB 52 Consultation) regarding the Proposed Project. A representative from the San Pasqual Band of Mission Indians requested consultation. The City provided the tribe the requested Cultural Report and coordinated a site visit of the Project site. The tribe conclude consultation on June 15, 2023 with the request that a monitor be present during construction of the Project. As such, in addition to the mitigation measures noted in CUL-1 through CUL-10, TCR-1 will be implemented to address potential impacts to tribal cultural resources. Impacts therefore are less than significant with mitigation incorporated.

MM-TCR-1: Retain a Native American Monitor/Consultant: Prior to the commencement of any ground disturbing activity at the Project site, the Project applicant shall retain a Native American Monitor (Tribal Monitor) that is a documented lineal descendant from an ancestral tribe (of Kumeyay Descent) of the Project area. A copy of the executed contract shall be submitted to the Lead Agency prior to the issuance of any permit necessary to commence a ground-disturbing activity. It is the contractor's responsibility to ensure the proper scheduling of the Tribal Monitor with a minimum of 48 hours' notice. If the scheduled Tribal Monitor does not arrive on time or without prior warning of absence, the work may proceed, IF an archaeological monitor is on-site. Per CUL-02, the participating Tribe(s) shall coordinate with the qualified archaeologist and the applicant to prepare a CRMP document that outlines an agreed upon monitoring program and associated protocols and procedures. The Tribal Monitor will only be present on-site during the construction phases that involve ground-disturbing activities involving intact, native, previously unexcavated, or undocumented fill sediments, and shall have the authority to temporarily halt or divert construction equipment if a potential find is made. Ground disturbing activities are defined by the Tribe as activities that may include, but are not limited to, pavement removal, potholing or auguring, grubbing, tree removals, boring, grading, excavation, drilling, and trenching, within the project area. The Tribal Monitor will complete daily monitoring logs that will provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The on-site Tribal monitoring shall end when all ground-disturbing activities on the Project site are completed, or when the Tribal Representatives or Tribal Monitor have indicated that all upcoming ground-disturbing activities at the Project site have little to no potential for impacting Tribal Cultural Resources (TCRs). Upon discovery of any TCRs, construction activities shall cease in the immediate vicinity of the find (not less than the surrounding 50 feet) until the find can be assessed. If the find is archaeological in nature, a qualified archaeologist must inspect it and work with the Tribal monitor to determine appropriate evaluation methods. All TCRs unearthed by project activities shall be evaluated by the Tribal monitor and a qualified archaeologist. If the resources are Native American in origin, the appropriate ancestral Tribe may be offered the respective resources, once the finds have been properly documented and analyzed by a qualified archaeologist. The participating Tribe, in consultation with the City and qualified archaeologist, will determine the correct treatment of the artifacts. Repatriation is the preferred manner of treatment. If repatriation is not feasible, preservation in place or treatment that includes implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis shall be implemented.

4.19 UTILITIES AND SERVICE SYSTEMS

19.	UTILITIES/SERVICE SYSTEMS. Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(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 or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
(b)	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
(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?	☐	☐	☐	☒
(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?	☐	☐	☒	☐
(e)	Negatively impact the provision of solid waste services or impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
(f)	Comply with federal, state, and local management and reduction statutes and regulations related to solid wastes?	☐	☐	☒	☐

4.19.1 Impact Analysis

a) Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or expansion of which could cause significant environmental effects?

Less Than Significant Impact. The Project includes a high-voltage generation tie-line that would interconnect to the existing, adjacent SDGE Esco Substation. The batteries will be charged from the SDGE grid via the Project's interconnection to the SDGE Esco Substation. The Proposed Project would charge during the day when solar energy production is at it is peak on SDGE's electrical grid, store the energy, and then re-supply the grid at night, as needed. Operational water that may be required for routine maintenance would be trucked in from offsite or sourced by a new municipal service and would be minimal if it is even required for Project operations. Since no habitable structures will be constructed as part of the Project, the operational water required for the Project will not require the need for new or expanded water or wastewater facilities. Drainage facilities will be installed to route stormwater to the existing on-site storm drain systems in a manner generally consistent with the existing facilities. The Project does not require construction or expansion of wastewater treatment facilities because no wastewater would be generated. Similarly, no natural gas or telecommunications facilities would be required. Therefore, the Project would not require the construction of new or expanded facilities and impacts would be less than significant.

b) Would the project 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. The Project would not require restroom facilities. Any operational water that may be required for routine maintenance would be trucked in from offsite or sourced by a new municipal service. No groundwater would be used for any purposes during construction or operational phases of the Project. The approximately 10 acre-feet of water required during the duration of construction is expected to be provided by municipal sources through a temporary on-site hydrant meter. Therefore, the Project would have sufficient water supplies available to serve the Project and impacts would be less than significant.

c) Would the project 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?

No Impact. The Project would be remotely operated and there would be no full-time employees at the site; therefore, no bathroom or septic facilities would be required. No wastewater would be generated as a result of the Project. Therefore, the Project will not interfere with any wastewater treatment providers service capacity and no impacts would occur.

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?

e) Would the project negatively impact the provision of solid waste services or impair the attainment of solid waste reduction goals?

Less Than Significant Impact. The Project would be unmanned and is expected to generate minimal solid waste. All solid waste facilities, including landfills require solid waste facility permits to operate. In San Diego County, the County Department of Environmental Health, Local Enforcement Agency issues solid waste facility permits with concurrence from the Department of Resources Recycling and Recovery (CalRecycle) under the authority of the Public Resources Code (Sections 44001-44018) and California Code of Regulations Title 27, Division 2, Subdivision 1, Chapter 4 (Section 21440 et seq.). There are four permitted active landfills in San Diego County with remaining capacity, the Sycamore Landfill being the closest, approximately 20 miles south of the Project site. The Sycamore Landfill is estimated to have sufficient capacity into the year 2031 and the Las Pulgas Landfill, approximately 25 miles north of the Project site, is estimated to have capacity into the year 2047 (CalRecycle 2022). Therefore, there is sufficient existing permitted solid waste capacity in the City should future needs for solid waste ever arise, and the Project would not impair the attainment of solid waste reduction goals as no solid waste is currently expected. Impacts would be less than significant.

f) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less Than Significant Impact. The Project would be unmanned and would generate minimal solid waste. During operations, the Project would deposit all solid waste at a permitted solid waste facility and, therefore, would comply with federal, state, and local statutes and regulations related to solid waste. Impacts would be less than significant.

4.20 WILDFIRE

20.	WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
(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?	☐	☐	☒	☐
(c)	Require the installation or 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?	☐	☐	☒	☐
(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?	☐	☐	☒	☐

4.20.1 Impact Analysis

a) Would the project impair an adopted emergency response plan or emergency evacuation plan?

b) Would the project, 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?

c) Would the project require the installation or 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?

d) Would the project 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?

Less than Significant Impact. As discussed in Section 4.9 Hazards and Hazardous Materials, the Project site is not located within a fire hazard zone per the CAL FIRE maps. The Project site is designated to be within a moderate fire hazard areas according to the Wildfire Risk figure in the GPU Final EIR (City 2012).

As discussed in Section 4.9 Hazards and Hazardous Materials, City maintains an Emergency Action Plan for City employees, and the CERT program with the Escondido Fire Department and the residents of the City. County wide, emergency response and evacuation plans include the San Diego County Multi—Jurisdictional Hazard Mitigation Plan and Operational Area.

The Project would be confined to the boundaries of the Project site and would not interfere or require changes to any existing evacuation and emergency response plans. Any lane closures required would be coordinated with the City. Traffic generation during Project operations are not expected to interfere with emergency operations.

The Project site is located within an urbanized area with limited vegetation onsite. The area has been disturbed with the presence of existing infrastructure. The Project site is relatively flat with no slopes and would not be susceptible to unstable land conditions (Section 4.7 Geology and Soils) that would exacerbate wildfire risk. The Project would not require installation or maintenance of infrastructures such as roads, fuel break, emergency water sources or powerlines.

The Project will include installation of BESS structures. These are not expected to create a fire hazard with the implementation of a HMBP. In addition, the safety features and design of the Project would be implemented to address any potential fire hazards. Therefore, because of the introduction of the BESS structures along with the implementation of the HMBP and other safety features of the Project, impacts would be less than significant.

4.21 MANDATORY FINDINGS OF SIGNIFICANCE

21.	MANDATORY FINDINGS OF SIGNIFICANCE.	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Does the project have the potential to substantially 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, substantially 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?	☐	☐	☒	☐
(b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects?)	☐	☒	☐	☐
(c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

4.21.1 Impact Analysis

a) Does the project have the potential to substantially 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, substantially 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. The Project site is developed and does not have areas designated as a habitat for any candidate, sensitive or special status species. According to the MHCP and MSCP Area Map provided in the GPU EIR, the Project site is not located within or adjacent to any designated MHCP/MSCP areas, and its classification is designated as Urban/Development (City 2012). While there are no sensitive species that are expected to occur, the MBTA applies to bird species native to the U.S.

To address potential impacts to nesting birds, mitigation measure MM-BIO-1 would be implemented; impacts to nesting birds would be less than significant. No historic resources or important examples of California history or pre-history were found within a 0.5-mile radius of the Project site. Overall, impacts are considered to be less than significant.

b) *Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are 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. The potential for cumulative impacts occurs when the independent impacts of the Project are combined with the impact of related projects in proximity to the Project such that impacts occur that are greater than the impacts of the Project alone. As discussed above, it has been determined that the Project would have no impact, impacts would be less than significant, or impacts would be less than significant with implementation of mitigation measures. Where the Project would have no impact or a less than significant impact, it would not contribute to cumulative impacts.

According to the City's Planning website, other future projects in the vicinity of the Proposed Project include those listed below in Table 4-9.

Table 4-9. Future Projects in the Vicinity of the Proposed Project

Project	Description	Status
PHG 15-0010 - EDI CUP	Expansion of Materials Recovery Facility	In Review
PHG 14-0022 - La Terraza Office Building/Parking Lot	Office	Approved
TPM 2004-16 - Tulip	3 SFR	Approved
ADM14-0043 - 130 N. Hale Southland Paving	Office, Wash Bay & Maintenance Shop	Approved
209 N. Tulip. SUB18-0017	4-Lot TPM	Approved
ADM 18-0168, EDI. 1044 W. Mission	Modification in Anaerobic Digestor	Under Construction
PHG 19-0058, 1280 W. Valley Parkway	Drive-through CUP for Raising Canes	Approved
ADM 19-0043 1220 W. Washington	Commercial Store Expansion	Approved

While these projects will occur nearby the Proposed Project, the impacts associated with the Proposed Project would not be significant when compared to applicable thresholds; therefore, none of the impacts associated with the Project would make cumulatively considerable, incremental contributions to significant cumulative impacts.

c) *Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

Less than Significant Impact. Effects to human beings are generally associated with air quality, geology/soils, hazards/hazardous materials, noise, and traffic safety. The Proposed Project would not

result in any significant impacts that would cause adverse effects on human beings, either directly or indirectly. As noted in Sections 4.3, 4.7, 4.9, 4.13, and 4.17, no significant impacts would occur as a result of Project construction or operation; therefore, impacts would be less than significant.

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APPENDIX A – AIR QUALITY AND GREENHOUSE MEMO

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April 26, 2023

Eunice Bagwan
Chambers Group, Inc.
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San Diego, CA 92121

RE: Memorandum for Air Quality and Greenhouse Gas – Goal Line Energy Storage Project, City of Escondido

This letter will serve to augment the evaluations of the potential environmental impacts associated with the proposed Project's emissions of air quality and greenhouse gases (GHG) in response to the recent changes to the site plan and project description. This memorandum letter is based on information provided in the original Air Quality and GHG Studies prepared by Ldn Consulting, dated December 19, 2022.

Discussion

The modeling and results of the original Air Quality and GHG Studies were based on the Project (Project) delivering up to 150 MW of energy storage capacity with a 4-to-8-hour capacity rating. Achievement of 150 MW of storage would be completed in three phases with a demolition phase removing the existing ice-rink facility, Phase 1 storing 50 MW for 8 hours (400 MWh), and Phase 2 storing approximately 100 MW for 4 hours (400 MWh) or another 50 MW for 8 hours (400 MWh).

The Project has been revised to construct 50 MW of battery energy storage. Which may occur in a single phase and would reduce the construction duration.

Air Quality

The construction duration for the revised Project is anticipated to be reduced and therefore the emissions in the original analysis are conservative. The overall construction methods will not change and daily emissions are anticipated to be the same if not lower.

From a health risk persecuted, based upon the reduced construction duration the exposure from the Projects diesel Particulate Matter (DPM) is anticipated to be less. Therefore, the health risk findings would not change and remain less than significant.

Eunice Bagwan
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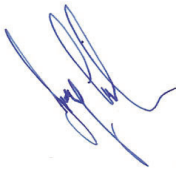
Operational and cumulative air quality emissions did not change due to the updated site plan. The project would generate a less than significant impact related to operational emissions.

Greenhouse Gas

Similar to the revised air quality analysis, the construction emissions estimate for greenhouse gases (GHG) would be reduced. Operational emissions would not change from the values presented in the previous analysis as a result of the changes to the Project. Given this, the project would not exceed the City's 500 MT screening level and is not expected to result in a significant cumulative contribution to global climate change, consistent with the conclusion of the previous GHG Analysis. As noted in the previous GHG Analysis, the proposed project would result in development that is generally less than what would be allowed under the current use.

The changes to the Project would not change the conclusions of the original Air Quality Study or Global Climate Change Analysis.

Sincerely,
Ldn Consulting, Inc.



Jeremy Louden, Principal

AIR QUALITY ASSESSMENT

GOAL LINE
BATTERY ENERGY STORAGE SYSTEM PROJECT
ESCONDIDO CA

Prepared for:

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October 20, 2022

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1.0 INTRODUCTION

1.1 Purpose of this Study

The purpose of this Air Quality study is to determine potential air quality impacts (if any) that may be created during the construction or operation of the proposed Goal Line Battery Energy Storage System (BESS) Project which would be constructed in the City of Escondido. Should impacts be determined, the intent of this study would be to recommend mitigation measures, which would reduce those impacts. Daily operations of the project will be primarily from maintenance and worker trips, although some emissions are expected, they would be minimal and below the screening level thresholds within the City of Escondido Municipal Code Section 33-924 of Article 47 in Chapter 33.

1.2 Project Location

The Project site is located at 555 Tulip Street and will utilize approximately 4.5 acres of a larger 6.5 acre parcel containing an existing electrical generation facility and a non-operational ice-rink facility (Project Site). A general project vicinity map is shown in Figure 1-A.

1.3 Project Description

Onward Energy proposes to construct, own, and operate the Goal Line Reliability Project (Project), a lithium-ion battery energy storage facility capable of delivering up to 150 MW of energy storage capacity with a 4-to-8-hour capacity rating. Achievement of 150 MW of storage would be completed in three phases with a demolition phase removing the existing ice-rink facility, Phase 1 storing 50 MW for 8 hours (400 MWh), and Phase 2 storing approximately 100 MW for 4 hours (400 MWh) or another 50 MW for 8 hours (400 MWh).

The Project consists of lithium-based battery modules installed in racks and housed within purpose-built outdoor Battery Energy Storage System (BESS) enclosures. A typical BESS enclosure will house hundreds of battery modules where each enclosure is typically capable of storing between 0.4 to 5 megawatt-hours (MWh) of energy.

The dimensions of a typical BESS enclosure vary between manufacturers and are arranged in repeated "blocks" across the site. System blocks may consist of a single enclosure, or several smaller enclosures set side-by-side to create banks of batteries with similar overall dimensions. Smaller enclosures are typically closely spaced or physically attached at the time to construction, and larger enclosures are placed in smaller groupings or individually. An enclosure grouping typically consist of 4 to 12 enclosures measuring approximately 30 feet long by 6 feet wide with a height of 10 feet. Smaller enclosures may be as small as 3.5 feet

long by 5 feet wide by 8 feet tall while larger enclosures may measure over 50 feet long by 12 feet wide with a height of up to 20 feet. Enclosures may also be double-stacked if designed to do so, which is anticipated for this Project. However, the number, size, layout, and capabilities of each enclosure will vary depending on the battery, enclosure manufacturer design, and BESS system manufacturer(s) selected for the Project. Regardless of the system manufacturer, the Project's developed footprint and overall capability will remain substantially the same. In some instances, the battery enclosures may contain inverters which convert low voltage direct current (DC) to alternating current (AC) (and vice-versa when charging).

Energy stored in the Project will then be discharged into the grid when the energy is needed, providing important electrical reliability services to the local area. The Project will interconnect to the existing, adjacent SDGE Esco Substation via an existing overhead generation tie-line.

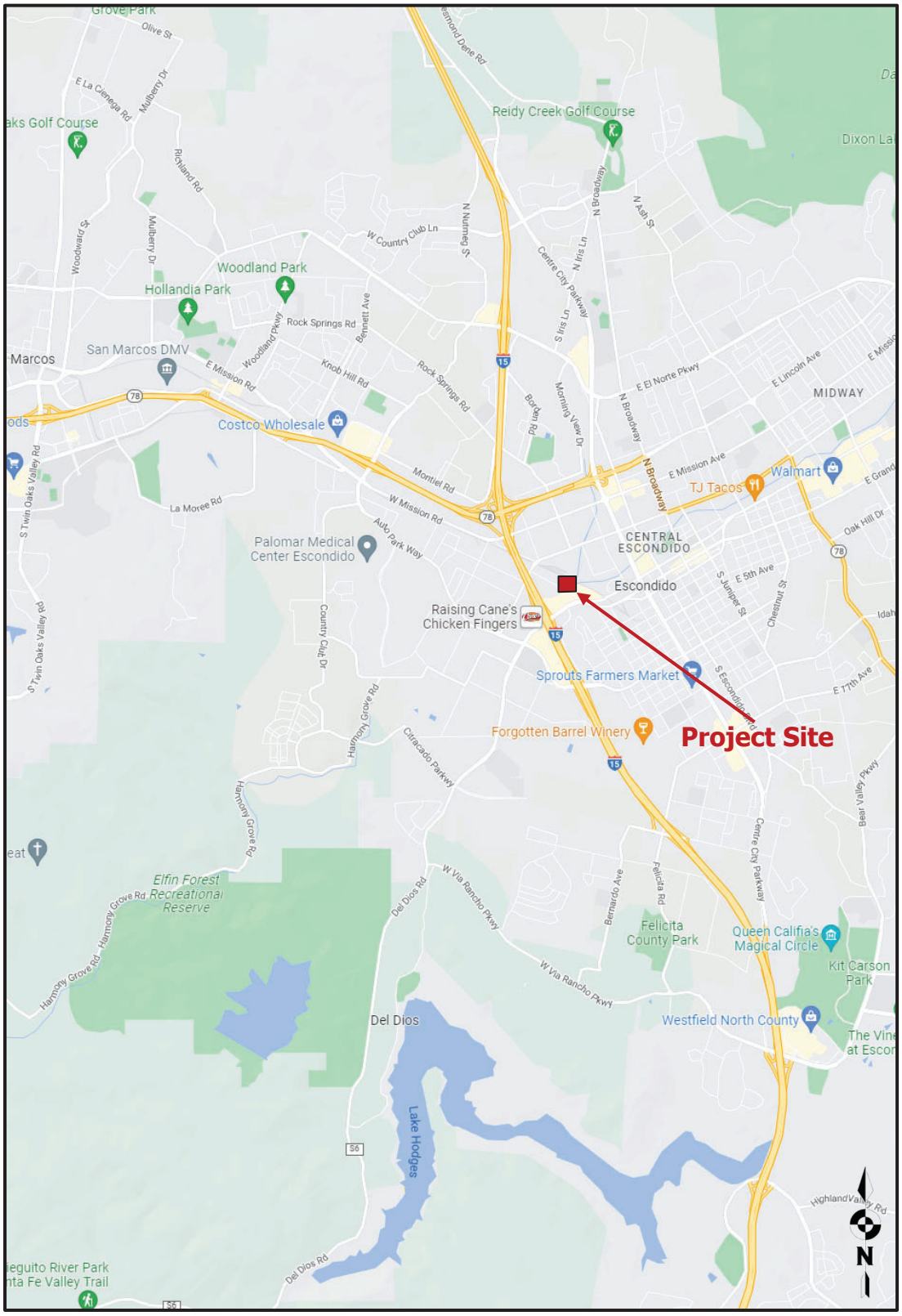
It is expected that between two to four staff members will visit the site weekly and as needed for maintenance and monitoring of the Project. The Project will be operated remotely with no permanent on-site operations personnel. No changes are proposed to the existing electrical generation assets or operations as part of the Project.

The Project would be constructed three parts to include demolition of the existing facilities followed by Phase 1. Phase 2 would be constructed at a later date which has not yet been established. For purposes of this analysis, Phase 2 was assumed to be constructed one year later. Operations of Phase 1 and Phase 2 are assumed as the baseline analysis. Figure 1-B shows the Conceptual Plan of the Project.

Project construction includes demolition of the existing facility, site preparation and grading, installation of drainage and retention basins, foundations/supports, setting battery enclosures, wiring and electrical system installation, and assembly of the accessory components including inverter transformers and generation step-up transformers. Earth cut and fill are proposed to be balanced within the Project site. It is assumed up to 30,000 cubic yards (CY) of material may needed with an additional 5,000 CY of surfacing material (asphalt and/or open graded crushed rock aggregate) to complete the project.

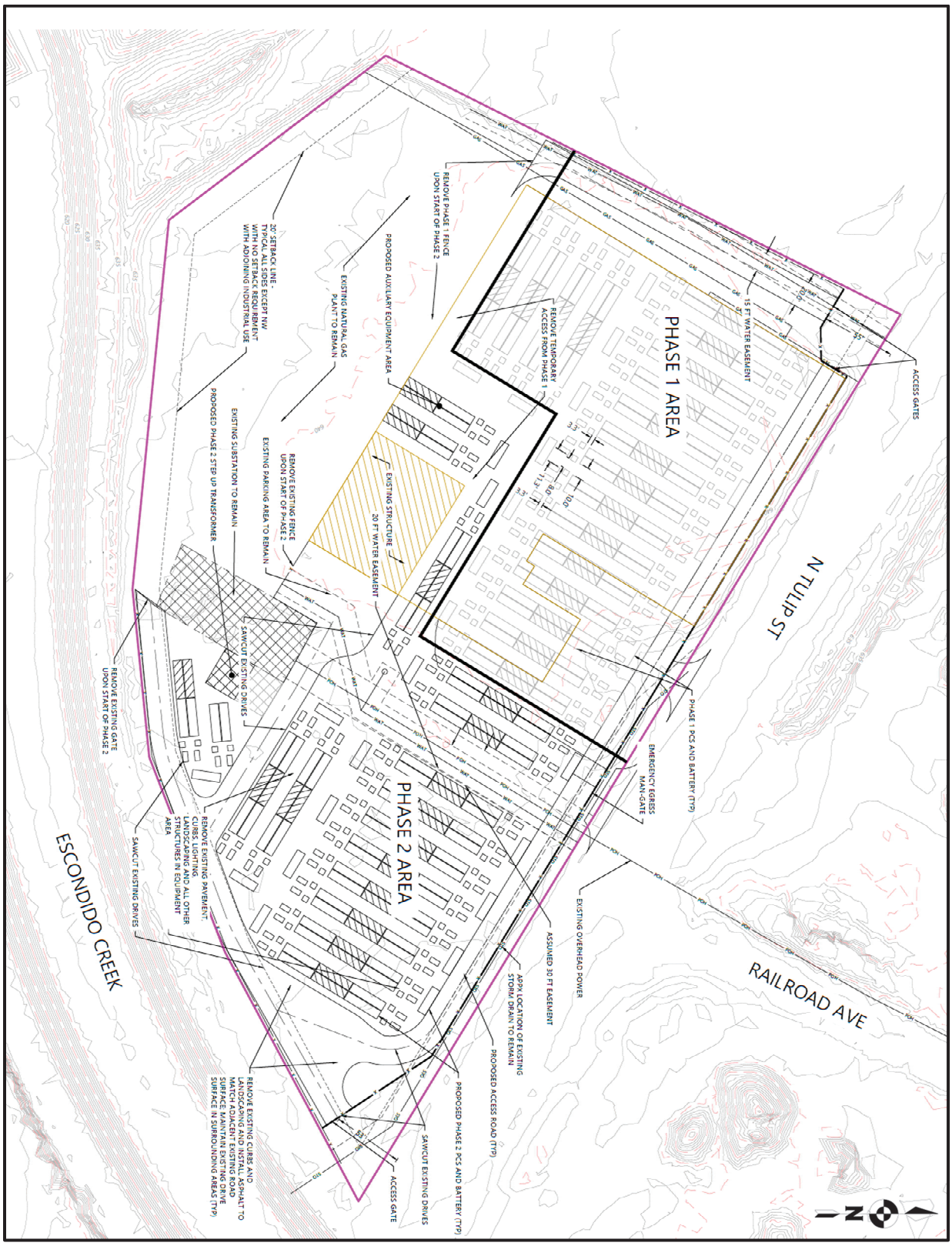
The proposed construction schedule includes approximately 6 months for demolition and 15 months for Phase 1 construction. Phase 2 construction will follow Phase 1 and would also take roughly 15 months to complete. Additional offsite infrastructure upgrades to existing offsite facilities may be required with Phase 2 but would occur during the 15-month duration.

Figure 1-A: Project Vicinity Map



Source: (Google, 2022)

Figure 1-B: Site Development Plan



Source: (Westwood Professional Services, Inc., 2022)

2.0 EXISTING ENVIRONMENTAL SETTING

2.1 Existing Setting

The Project site is located at 555 N. Tulip Street and will utilize up to 4.5 acres within a 6.5-acre parcel (232-131-25-00). The site topography is flat, with an elevation of approximately 640 feet above sea level. Access to the Project site will be provided via two driveways from Tulip Road. The project site is within the General Industrial (GI) zone district. The project is surrounded by industrial uses to the north a flood control channel to the south and Interstate 15 to the west.

2.2 Climate and Meteorology

Climate within the San Diego Air Basin (SDAB) area often varies dramatically over short geographical distances with cooler temperatures on the western coast gradually warming to the east as prevailing winds from the west heat up. Most of southern California is dominated by high-pressure systems for much of the year, which keeps San Diego mostly sunny and warm. Typically, during the winter months, the high-pressure system drops to the south and brings cooler, moister weather from the north. It is common for inversion layers to develop within high-pressure areas, which mostly define pressure patterns over the SDAB. These inversions are caused when a thin layer of the atmosphere increases in temperature with height. An inversion acts like a lid preventing vertical mixing of air through convective overturning.

Meteorological trends within Escondido produce daytime highs ranging between 65ºF in the winter to approximately 88ºF in the summer with August usually being the hottest month. Median temperatures range from approximately 57ºF in the winter to approximately 78ºF in the summer. Precipitation is generally about 16.2 inches per year (WRCC, 2018). Prevailing wind patterns for the area vary during any given month during the year and also vary depending on the time of day or night. The predominant pattern though throughout the year is usually from the west or westerly (WRCC, 2018).

2.3 Regulatory Standards

2.3.1 Federal Standards and Definitions

The Federal Air Quality Standards were developed per the requirements of The Federal Clean Air Act, which is a federal law that was passed in 1970 and further amended in 1990. This law provides the basis for the national air pollution control effort. An important element of

the act included the development of National Ambient Air Quality Standards (NAAQS) for major air pollutants.

The Clean Air Act established two types of air quality standards otherwise known as primary and secondary standards. ***Primary Standards*** set limits for the intention of protecting public health, which includes sensitive populations such as asthmatics, children and elderly. ***Secondary Standards*** set limits to protect public welfare to include the protection against decreased visibility, damage to animals, crops, vegetation and buildings.

The EPA Office of Air Quality Planning and Standards (OAQPS) has set NAAQS for principal pollutants, which are called "criteria" pollutants. These pollutants are defined below:

1. ***Carbon Monoxide (CO):*** *is a colorless, odorless, and tasteless gas and is produced from the partial combustion of carbon-containing compounds, notably in internal-combustion engines. Carbon monoxide usually forms when there is a reduced availability of oxygen present during the combustion process. Exposure to CO near the levels of the ambient air quality standards can lead to fatigue, headaches, confusion, and dizziness. CO interferes with the blood's ability to carry oxygen.*
2. ***Lead (Pb):*** *is a potent neurotoxin that accumulates in soft tissues and bone over time. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Because lead is only slowly excreted, exposures to small amounts of lead from a variety of sources can accumulate to harmful levels. Effects from inhalation of lead near the level of the ambient air quality standard include impaired blood formation and nerve conduction. Lead can adversely affect the nervous, reproductive, digestive, immune, and blood-forming systems. Symptoms can include fatigue, anxiety, short-term memory loss, depression, weakness in the extremities, and learning disabilities in children.*
3. ***Nitrogen Dioxide (NO_2):*** *is a reactive, oxidizing gas capable of damaging cells lining the respiratory tract and is one of the nitrogen oxides emitted from high-temperature combustion, such as those occurring in trucks, cars, power plants, home heaters, and gas stoves. In the presence of other air contaminants, NO_2 is usually visible as a reddish-brown air layer over urban areas. NO_2 along with other traffic-related pollutants is associated with respiratory symptoms, respiratory illness and respiratory impairment. Studies in animals have reported biochemical, structural, and cellular changes in the lung when exposed to NO_2 above the level of the current state air quality standard. Clinical studies of human subjects suggest that NO_2 exposure to levels near the current standard may worsen the effect of allergens in allergic asthmatics, especially in children.*
4. ***Particulate Matter (PM_{10} or $PM_{2.5}$):*** *is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary in shape, size and chemical composition, and can be made up of multiple materials such as metal, soot, soil, and dust. PM_{10} particles are 10 microns (µm) or less and $PM_{2.5}$ particles are 2.5 (µm) or less. These particles can contribute significantly to regional haze and reduction of visibility in California. Exposure to PM levels exceeding current air quality standards increases the risk of allergies such as asthma and respiratory illness.*
5. ***Ozone (O_3)****: is a highly oxidative unstable gas capable of damaging the linings of the respiratory tract. This pollutant forms in the atmosphere through reactions between chemicals directly emitted from vehicles, industrial plants, and many other sources. Exposure to ozone above ambient air quality standards can lead to human health effects such as lung inflammation, tissue damage and impaired lung functioning. Ozone can also damage materials such as rubber, fabrics and plastics.*

6. ***Sulfur Dioxide (SO_2)****: is a gaseous compound of sulfur and oxygen and is formed when sulfur-containing fuel is burned by mobile sources, such as locomotives, ships, and off-road diesel equipment. SO_2 is also emitted from several industrial processes, such as petroleum refining and metal processing. Effects from SO_2 exposures at levels near the one-hour standard include bronchoconstriction accompanied by symptoms, which may include wheezing, shortness of breath and chest tightness, especially during exercise or physical activity. Children, the elderly, and people with asthma, cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most susceptible to these symptoms. Continued exposure at elevated levels of SO_2 results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality.*

2.3.2 State Standards and Definitions

California Air Resource Board (CARB) sets the laws and regulations for air quality on the state level. The California Ambient Air Quality Standards (CAAQS) is similar to the NAAQS and also restricts four additional contaminants. Table 2.1 on the following page identifies both the NAAQS and CAAQS. The additional contaminants as regulated by the CAAQS are defined below:

1. ***Visibility Reducing Particles****: Particles in the Air that obstruct the visibility.*
2. ***Sulfates****: are salts of Sulfuric Acid. Sulfates occur as microscopic particles (aerosols) resulting from fossil fuel and biomass combustion. They increase the acidity of the atmosphere and form acid rain.*
3. ***Hydrogen Sulfide (H_2S)****: is a colorless, toxic and flammable gas with a recognizable smell of rotten eggs or flatulence. H_2S occurs naturally in crude petroleum, natural gas, volcanic gases, and hot springs. Usually, H_2S is formed from bacterial breakdown of organic matter. Exposure to low concentrations of hydrogen sulfide may cause irritation to the eyes, nose, or throat. It may also cause difficulty in breathing for some asthmatics. Brief exposures to high concentrations of hydrogen sulfide (greater than 500 Parts per Million (ppm)) can cause a loss of consciousness and possibly death.*
4. ***Vinyl Chloride****: also known as chloroethene and is a toxic, carcinogenic, colorless gas with a sweet odor. It is an industrial chemical mainly used to produce its polymer, polyvinyl chloride (PVC).*

Table 2.1: Ambient Air Quality Standards

Ambient Air Quality Standards						
Pollutant	**Average Time**	**California Standards[1]**		**Federal Standards[2]**		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m3)	Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m3)		0.070 ppm (137 µg/m3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m3	Gravimetric or Beta Attenuation	150 µg/m3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m3		-		
Fine Particulate Matter (PM2.5)[9]	24 Hour	No Separate State Standard		35 µg/m3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m3	Gravimetric or Beta Attenuation	12.0 µg/m3	15 µg/m3	
Carbon Monoxide (CO)	8 hour	9.0 ppm (10mg/m3)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m3)	-	Non-Dispersive Infrared Photometry
	1 hour	20 ppm (23 mg/m3)		35 ppm (40 mg/m3)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m3)		-	-	-
Nitrogen Dioxide (NO_2)[10]	Annual Arithmetic Mean	0.030 ppm (57 µg/m3)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m3)[8]	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.18 ppm (339 µg/m3)		0.100 ppm[8] (188/ µg/m3)	-	
Sulfur Dioxide (SO_2)[11]	Annual Arithmetic Mean	-	Ultraviolet Fluorescence	0.030 ppm[10] (for Certain Areas)	-	Ultraviolet Flourescence; Spectrophotometry (Pararoosaniline Method)[9]
	24 Hour	0.04 ppm (105 µg/m3)		0.14 ppm[10] (for Certain Areas) (See Footnote 9)	-	
	3 Hour	-		-	0.5 ppm (1300 µg/m3)	
	1 Hour	0.25 ppm (655 µg/m3)		75 ppb (196 µg/m3)	-	
Lead[12,13]	30 Day Average	1.5 µg/m3	Atomic Absorption	-		-
	Calendar Quarter	-		1.5 µg/m3	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average	-		0.15 µg/m3		
Visibility Reducing Particles	8 Hour	See footnote 14				
Sulfates	24 Hour	25 µg/m3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m3)	Gas Chromatography			

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent procedure which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 µg/m3 to 12.0 µg/m3 . The existing national 24- hour PM2.5 standards (primary and secondary) were retained at 35 µg/m3 , as was the annual secondary standard of 15 µg/m3 . The existing 24-hour PM10 standards (primary and secondary) of 150 µg/m3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
12. The CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Source: (California Air Resources Board, 5/4/2016)

2.3.3 Regional Standards

The State of California has 35 specific air districts, which are each responsible for ensuring that the criteria pollutants are below the NAAQS and CAAQS. Air basins that exceed either the NAAQS or the CAAQS for any criteria pollutants are designated as "non-attainment areas" for that pollutant. Currently, there are 15 non-attainment areas for the federal ozone standard and two non-attainment areas for the $PM_{2.5}$ standard and many areas are in non-attainment for PM_{10} as well. California therefore created the California State Implementation Plan (SIP), which is designed to provide control measures needed to attain ambient air quality standards.

The San Diego Air Pollution Control District (SDAPCD) is the government agency which regulates sources of air pollution within the county. Therefore, the SDAPCD developed a RAQS to provide control measures to try to achieve attainment status for state ozone standards with control measures focused on Volatile Organic Compounds (VOCs) and oxides of nitrogen (NO_X). Currently, San Diego is in "non-attainment" status for federal and state O_3 and state PM_{10} and $PM_{2.5.}$ An attainment plan is available for O_3. The RAQS was adopted in 1992 and has been updated as recently as 2016 which was the latest update incorporating minor changes to the prior 2009 update.

The 2016 update mostly summarizes how the 2009 update has lowered NO_X and VOCs emissions which reduces ozone and clarifies and enhances emission reductions by introducing for discussion three new VOC and four new NO_X reduction measures. NO_X and VOCs are precursors to the formation of ozone in the atmosphere. The criteria pollutant standards are generally attained when each monitor within the region has had no exceedances during the previous three calendar years. A complete listing of the current attainment status for criteria pollutants with respect to both federal and state nonattainment status by pollutants for County is shown in Table 2.2 on the following page (SDAPCD, 2019).

The RAQS is largely based on population predictions by the San Diego Association of Governments (SANDAG). Projects that produce less growth than predicted by SANDAG would generally conform to the RAQS. Projects that create more growth than projected by SANDAG may create a significant impact if the Project produces unmitigable air quality emissions or if the Project produces cumulative impacts.

Table 2.2: San Diego County Air Basin Attainment Status by Pollutant

Criteria Pollutant	Federal Designation	State Designation
Ozone (8-Hour)	Nonattainment	Nonattainment
Ozone (1-Hour)	Attainment *	Nonattainment
Carbon Monoxide	Attainment	Attainment
PM10	Unclassifiable **	Nonattainment
PM2.5	Attainment	Nonattainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	No Federal Standard	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility	No Federal Standard	Unclassified

** The federal 1-hour standard of 12 pphm was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in State Implementation Plans.*
*** At the time of designation, if the available data does not support a designation of attainment or nonattainment, the area is designated as unclassifiable.*
(SDAPCD, 2019)

2.4 California Environmental Quality Act Significance Thresholds

The California Environmental Quality Act (CEQA) has provided a checklist to identify the significance of air quality impacts. These guidelines are found in Appendix G of the CEQA guidelines and are as follows:

AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management district 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?
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?
C: Expose sensitive receptors to substantial pollutant concentrations?
D: Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?

2.5 Escondido Municipal Code (Section 33-924 Coordination of CEQA, Quality of Life Standards)

The City of Escondido has established threshold in Section 33-924 of Article 47 in Chapter 33 of the Municipal Code to address and implement CEQA guidelines and should be used for the preparation of Air Quality Impact Assessments (AQIA). The Code provides screening criteria

that can be used to demonstrate that a Project's total emissions would not result in a significant impact as defined by CEQA. Should emissions be found to exceed these thresholds, additional modeling is required to demonstrate that the Project's total air quality impacts are below the state and federal ambient air quality standards. The screening thresholds for construction and daily operations are shown in Table 2.3.

Table 2.3: Screening Threshold for Criteria Pollutants

Pollutant	Total Emissions (Pounds per Day)
Air Quality Emissions Screening Levels	
Respirable Particulate Matter (PM_{10})	100
Respirable Particulate Matter ($PM_{2.5}$)	55
Nitrogen Oxide (NO_x)	250
Sulfur Oxide (SO_x)	250
Carbon Monoxide (CO)	550
Lead and Lead Compounds	3.2
Volatile Organic Compounds (VOCs) (Operations)	55
Volatile Organic Compounds (VOCs) (Construction)	75
Source: (City of Escondido Municiple Code)	

2.6 SDAPCD Rule 1200 – New Source Review

Non-Criteria pollutants such as Hazardous Air Pollutants (HAPs) or Toxic Air Contaminants (TACs) are also regulated by the SDAPCD. Rule 1200 (Toxic Air Contaminants - New Source Review) adopted on June 12, 1996, requires evaluation of potential health risks for any new, relocated, or modified emission unit which may increase emissions of one or more toxic air contaminants. The rule requires that projects that propose to increase cancer risk between 1 and 10 in one million need to implement toxics best available control technology (T-BACT) or impose the most effective emission limitation, emission control device or control technique to reduce the cancer risk. At no time shall the Project increase the cancer risk to over 10 in one million. Projects creating cancer risks less than one in one million are not required to implement T-BACT technology. This report assumes that Volatile Organic Compounds (VOC) and Reactive Organic Gases (ROG) are essentially the same due to the fact that emissions generated from the Project represent non-methane organic compounds.

2.7 Local Air Quality

Criteria pollutants are measured continuously throughout the San Diego Air Basin. This data is used to track ambient air quality patterns throughout the County. As mentioned earlier,

this data is also used to determine attainment status when compared to the NAAQS and CAAQS. The SDAPCD is responsible for monitoring and reporting monitoring data. The District operates 10 monitoring sites, which collect data on criteria pollutants. The proposed development project is closest to the Carmel Mountain Ranch and Camp Pendleton monitoring stations which are located roughly 10 and 18 miles from the Project site respectively. Table 2.4 identifies the criteria pollutants monitored at the aforementioned station. Four additional sites collect meteorological data which is used by the District to assist with pollutant forecasting, data analysis and characterization of pollutant transport. SDAPCD published the five-year air quality summary for all of the monitoring stations (SDAPCD, 2021).

Table 2.4: Two-Year Ambient Air Quality Summary near the Project Site

Pollutant	Closest Recorded Ambient Monitoring Site	Averaging Time	CAAQS	NAAQS	2019	2020	Days Exceeded over 2 years
O_3 (ppm)	Camp Pendleton or Carmel Mountain Ranch	1 Hour	0.09 ppm	No Standard	0.08	0.09	0
		8 Hour	0.070 ppm	0.070 ppm	0.06	0.07	3
PM_{10} (µg/m3)		24 Hour	50 µg/m3	150 µg/m3	PM10 Data Not Available for Monitoring Sites near Project Site		
		Annual Arithmetic Mean	20 µg/m3	No Standard			
* $PM_{2.5}$ (µg/m^3)		24 Hour	No standard -	35 µg/m3	18.9	40.2	N/A
		Annual Arithmetic Mean	12 µg/m3	15 µg/m3	8.2	9.3	N/A
NO_2 (ppm)		Annual Arithmetic Mean	0.030 ppm	0.053 ppm	0.014	0.013	N/A
		1 Hour	0.18 ppm	0.100 ppm	0.086	0.056	N/A
* CO (ppm)		1 Hour	20 ppm	35 ppm	4.1	3.3	N/A
		8 Hour	9 ppm	9 ppm	2.5	1.7	N/A

Notes:
1. - Yearly maximums marked with "-" indicated data was not available for either monitoring station.
2. * Data was selected from the Carmel Mountain Ranch station which began in 2019. All other data presented was collected at the Camp Pendleton Monitoring Station.
3. SO_2 is only monitored at the El Cajon Monitoring Station. Within the entire County of San Diego, SO_2 emissions within the County are essentially Zero for all metrics including the Average, Maximum 24 hour and 1- hour standards. The Highest 1-hr measurement identified is 0.004 ppm and the most restrictive standard (CAAQS for SO_2) is 0.25 ppm.

3.0 METHODOLOGY

3.1 Construction Emissions Calculations

Air Quality impacts related to construction and daily operations were calculated using the latest CalEEMod 2020.4.0 air quality model, which was developed by BREEZE Software for South Coast Air Quality Management District (SCAQMD) in 2021. The construction module in CalEEMod is used to calculate the emissions associated with the construction of the project and uses methodologies presented in the U.S. EPA AP-42 document with emphasis on Chapter 11.9. The CalEEMod input/output model is shown in ***Attachment A*** to this report.

The notable toxic air contaminant from construction is diesel exhaust since exposure to diesel exhaust is known to cause cancer and acute and chronic health effects. The project however is in an industrial/commercial zone and sensitive receptors such as residential or schools are not located in the nearby vicinity. Given this, health risks would not be expected.

3.2 Construction Assumptions

The Project construction dates were estimated based on a construction kickoff starting in the middle of 2023. The project would be constructed in three phases and would start with demolition which would be expected to last 6 months. Phase 1 would follow and would be expected to take up to 15 months to complete. Phase 2 would commence at a later date which has not yet been established. For purposes of this analysis, it is assumed that construction for phase 2 would be one year later. The project will import material and is assumed to be as much as 30,000 CY of soil and up to 5,000 CY of surface material such as asphalt or crushed stone with roughly ½ of the material necessary for each phase. Phase 2 may have additional offsite construction in the immediate vicinity of the project, so additional equipment was assumed as part of this phase.

CalEEMod 2020.4.0 was utilized for all calculations. Table 3.1 shows the expected timeframes for the construction processes for all the Project infrastructure, facilities, improvements and structures at the proposed Project location, as well as the expected number of pieces of equipment. CalEEMod has been updated to reflect the anticipated construction activities.

Table 3.1: Expected Construction Equipment and Durations

Equipment Identification	Proposed Start	Proposed Completion	Quantity
Demolition Phase 1 and Phase 2 Area	06/01/2023	12/27/2023	
Excavators			3
Rubber Tired Dozers			2
Skid Steer Loaders			2
Grading and Excavation for Pads Phase 1	01/01/2024	03/22/2024	
Excavators			1
Graders			1
Skid Steer Loaders			3
Building Construction and concrete placement Phase 1	03/23/2024	02/28/2025	
Generator Sets			1
Plate Compactors			1
Rollers			1
Rough Terrain Forklifts			3
Skid Steer Loaders			1
Welders			1
Crane Use to set Units Phase 1	12/01/2024	01/24/2025	
Cranes			1
Grading and Excavation for Pads Phase 2	02/01/2026	04/24/2026	
Excavators			1
Graders			1
Skid Steer Loaders			3
Building Construction including offsite work and concrete placement Phase 2	04/25/2026	04/02/2027	
Generator Sets			1
Plate Compactors			1
Rollers			1
Rough Terrain Forklifts			4
Skid Steer Loaders			2
Welders			2
Crane Use to set Units Phase 2	01/15/2027	03/11/2027	
Cranes			1
This equipment list is based upon equipment inventory and durations provide by the Project engineer.			

3.3 Operational Assumptions

The intent of this project is to charge during the day when solar energy production is at it is peak on SDGE's electrical grid and then re-supply the grid at night. Operational air emission sources would include area sources such as landscaping and maintenance activities to include mobile sources which would be generated from traffic associated with monthly maintenance

site visits. For purposes of this analysis, it is assumed that the Project would generate as many as four (4) trips per day. CalEEMod has been updated to reflect Project related operational conditions.

3.4 Odor Impacts (Onsite)

Potential onsite odor generators would include short-term construction odors from construction equipment during demolition though odors would likely be minimal and since sensitive receptors are not located in the vicinity of the Project site, odor impacts would be less than significant.

Operational odors would not be expected and a less than significant impact would be expected from this battery storage project since daily operations onsite would not occur.

4.0 FINDINGS

4.1 Construction Emission Findings

Construction emissions in pounds per day from the construction operations and equipment identified in Section 3.2 above is shown in Table 4.1. Based on these numbers, the Project would not exceed City significance thresholds and would not require mitigation to comply.

Table 4.1: Expected Construction Emissions Summary – Pounds per Day

Year	ROG	NO_x	CO	SO_2	PM_{10} (Dust)	PM_{10} (Exhaust)	PM_{10} (Total)	$PM_{2.5}$ (Dust)	$PM_{2.5}$ (Exhaust)	$PM_{2.5}$ (Total)
2023	2.10	20.97	19.13	0.04	0.67	0.93	1.60	0.12	0.86	0.97
2024	1.46	13.19	17.76	0.04	1.46	0.48	1.78	0.30	0.46	0.63
2025	1.38	12.42	17.59	0.03	0.66	0.43	1.09	0.18	0.41	0.58
2026	1.46	12.96	21.09	0.04	1.46	0.41	1.74	0.30	0.39	0.57
2027	1.73	15.72	22.57	0.04	0.66	0.53	1.19	0.18	0.50	0.68
Significance Threshold (lb/day)	75	250	550	250	-	-	100	-	-	55
Exceeds Screening Threshold?	**No**	**No**	**No**	**No**	-	-	**No**	-	-	**No**

4.2 Operational Findings

Project Buildout of Phase 1 in 2024/2025 and Phase 2 in 2026/2027 would be expected. The Project traffic generation was assumed to be as high as 4 trips per day during a worst-case day and was used within this analysis. Additionally, the model was run for the winter, summer scenarios to determine maximum daily operational impacts for operation.

The expected daily pollutant generation can be calculated utilizing the product of the average daily miles traveled and the expected emissions inventory calculated by EMFAC2017; CALEEMOD 2020.4.0 performs this calculation. The daily pollutants calculated for summer and winter are shown in Tables 4.2 and 4.3. Based upon these calculations, the proposed Project would produce less than significant air quality impacts under CEQA.

Table 4.2: Expected Summer Daily Pollutant Generation

	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area	0.000	0.000	0.000	0.000	0.000	0.000
Energy	0.000	0.000	0.000	0.000	0.000	0.000
Mobile	0.017	0.020	0.179	0.000	0.029	0.008
Total (Unmitigated)	**0.017**	**0.020**	**0.179**	**0.000**	**0.029**	**0.008**
County Thresholds	75	250	550	250	100	55
Significant?	**No**	**No**	**No**	**No**	**No**	**No**
Daily pollutant generation assumes trip distances within CalEEMod The final numbers are all rounded within Excel and are reported as rounded numbers.						

Table 4.3: Expected Winter Daily Pollutant Generation

	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area	0.000	0.000	0.000	0.000	0.000	0.000
Energy	0.000	0.000	0.000	0.000	0.000	0.000
Mobile	0.012	0.014	0.119	0.000	0.029	0.008
Total (Unmitigated)	**0.012**	**0.014**	**0.119**	**0.000**	**0.029**	**0.008**
County Thresholds	75	250	550	250	100	55
Significant?	**No**	**No**	**No**	**No**	**No**	**No**
Daily pollutant generation assumes trip distances within CalEEMod The final numbers are all rounded within Excel and are reported as rounded numbers.						

4.3 RAQS and SIP Analysis

The proposed Project site operated a natural gas power plant and Ice-Skating Rink. The proposed Project would remove the rink but maintain the natural gas power plant and install battery storage for electricity. The project would have less than significant air quality impacts for both construction and operations and would not require a zone change for the Project. Since the project is consistent with the Industrial Zoning, and since the Project would not generate direct impacts, the Project would be compatible with the area RAQS and SIP.

4.4 Odor Impact Findings

The Project may create temporary construction odors from combustion engine equipment but would not be considered significant due to the highly dispersive nature of diesel exhaust and since the project is not located near any sensitive receptors. Operational odors would not be expected. Therefore, less than significant odor impacts are expected.

5.0 REFERENCES

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6.0 CERTIFICATIONS

The contents of this report represent an accurate depiction of the air quality environment and impacts within and surrounding the proposed development. This report was prepared utilizing the latest emission rates and reduction methodologies.

DRAFT

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Date October 20, 2022

ATTACHMENT A

CALEEMOD 2020.4.0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Escondido Goal Line BESS

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	4.50	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2025
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project would install battery storage containers and operations onsite will be remote

Construction Phase - Project would install fully constructed containers shipped to the site on trucks. Cranes lift the units off and set them on either a concrete pad or Steel colums driven into the ground.

Off-road Equipment - ce

Off-road Equipment - ce

Off-road Equipment - ce

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - CE

Off-road Equipment - ce

Off-road Equipment - ce

Escondido Goal Line BESS - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Trips and VMT - Worker and vendor trips per day for concrete placement added. Trips added for crane operator

Demolition -

Grading -

Architectural Coating -

Vehicle Trips - 4 trips per day

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use -

Water And Wastewater - Basic onsite landscaping will be watered 100 gal/day

Solid Waste - solid waste is not likely though 1 ton per year was assumed. Systems will be remotly managed.

Construction Off-road Equipment Mitigation - Tier 3 equipment with DPF

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	245.00
tblConstructionPhase	NumDays	230.00	40.00
tblConstructionPhase	NumDays	230.00	245.00
tblConstructionPhase	NumDays	230.00	40.00
tblConstructionPhase	NumDays	20.00	150.00
tblConstructionPhase	NumDays	8.00	60.00
tblConstructionPhase	NumDays	8.00	60.00
tblGrading	MaterialImported	0.00	17,500.00
tblGrading	MaterialImported	0.00	17,500.00
tblLandUse	LotAcreage	0.00	4.50
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	4.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	PhaseName		Buiding Construction including offsite work and concrete placement Phase 2
tblOffRoadEquipment	PhaseName		Buiding Construction including offsite work and concrete placement Phase 2
tblOffRoadEquipment	PhaseName		Buiding Construction including offsite work and concrete placement Phase 2
tblOffRoadEquipment	PhaseName		Grading and Excavation for Pads Phase 2
tblOffRoadEquipment	PhaseName		Buiding Construction including offsite work and concrete placement Phase 2
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	18.00	12.00
tblTripsAndVMT	WorkerTripNumber	13.00	30.00
tblTripsAndVMT	WorkerTripNumber	0.00	70.00
tblTripsAndVMT	WorkerTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	13.00	30.00
tblTripsAndVMT	WorkerTripNumber	0.00	70.00
tblTripsAndVMT	WorkerTripNumber	0.00	2.00
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	WD_TR	0.00	4.00

2.0 Emissions Summary

Escondido Goal Line BESS - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	2.1039	20.9674	19.1327	0.0390	0.6726	0.9310	1.6036	0.1183	0.8566	0.9749	0.0000	3,804.9032	3,804.9032	1.1603	0.0277	3,842.1700
2024	1.4622	13.1890	17.7593	0.0415	1.4555	0.4833	1.7811	0.3037	0.4577	0.6341	0.0000	4,328.7287	4,328.7287	0.6942	0.3821	4,459.9626
2025	1.3766	12.4239	17.5898	0.0348	0.6592	0.4300	1.0892	0.1764	0.4070	0.5834	0.0000	3,361.9850	3,361.9850	0.6432	0.0424	3,390.6944
2026	1.4570	12.9557	21.0872	0.0404	1.4555	0.4100	1.7401	0.3037	0.3918	0.5670	0.0000	4,221.4769	4,221.4769	0.7010	0.3668	4,348.2983
2027	1.7261	15.7183	22.5713	0.0422	0.6592	0.5277	1.1869	0.1764	0.5001	0.6765	0.0000	4,047.5608	4,047.5608	0.8260	0.0400	4,080.1255
Maximum	**2.1039**	**20.9674**	**22.5713**	**0.0422**	**1.4555**	**0.9310**	**1.7811**	**0.3037**	**0.8566**	**0.9749**	**0.0000**	**4,328.7287**	**4,328.7287**	**1.1603**	**0.3821**	**4,459.9626**

Escondido Goal Line BESS - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	2.1039	20.9674	19.1327	0.0390	0.6726	0.9310	1.6036	0.1183	0.8566	0.9749	0.0000	3,804.9032	3,804.9032	1.1603	0.0277	3,842.1700
2024	1.4622	13.1890	17.7593	0.0415	1.4555	0.4833	1.7811	0.3037	0.4577	0.6341	0.0000	4,328.7287	4,328.7287	0.6942	0.3821	4,459.9626
2025	1.3766	12.4239	17.5898	0.0348	0.6592	0.4300	1.0892	0.1764	0.4070	0.5834	0.0000	3,361.9850	3,361.9850	0.6432	0.0424	3,390.6944
2026	1.4570	12.9557	21.0872	0.0404	1.4555	0.4100	1.7401	0.3037	0.3918	0.5670	0.0000	4,221.4769	4,221.4769	0.7010	0.3668	4,348.2983
2027	1.7261	15.7183	22.5713	0.0422	0.6592	0.5277	1.1869	0.1764	0.5001	0.6765	0.0000	4,047.5608	4,047.5608	0.8260	0.0400	4,080.1255
Maximum	**2.1039**	**20.9674**	**22.5713**	**0.0422**	**1.4555**	**0.9310**	**1.7811**	**0.3037**	**0.8566**	**0.9749**	**0.0000**	**4,328.7287**	**4,328.7287**	**1.1603**	**0.3821**	**4,459.9626**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**	**0.00**

Escondido Goal Line BESS - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0123	0.0129	0.1168	2.7000e-004	0.0291	2.0000e-004	0.0293	7.7600e-003	1.8000e-004	7.9400e-003		27.8321	27.8321	1.7200e-003	1.1000e-003	28.2024
Total	**0.0123**	**0.0129**	**0.1169**	**2.7000e-004**	**0.0291**	**2.0000e-004**	**0.0293**	**7.7600e-003**	**1.8000e-004**	**7.9400e-003**		**27.8323**	**27.8323**	**1.7200e-003**	**1.1000e-003**	**28.2027**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0123	0.0129	0.1168	2.7000e-004	0.0291	2.0000e-004	0.0293	7.7600e-003	1.8000e-004	7.9400e-003		27.8321	27.8321	1.7200e-003	1.1000e-003	28.2024
Total	**0.0123**	**0.0129**	**0.1169**	**2.7000e-004**	**0.0291**	**2.0000e-004**	**0.0293**	**7.7600e-003**	**1.8000e-004**	**7.9400e-003**		**27.8323**	**27.8323**	**1.7200e-003**	**1.1000e-003**	**28.2027**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	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	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition Phase 1 and Phase 2 Area	Demolition	6/1/2023	12/27/2023	5	150	
2	Grading and Excavation for Pads Phase 1	Grading	1/1/2024	3/22/2024	5	60	
3	Building Construction and concrete placement Phase 1	Building Construction	3/23/2024	2/28/2025	5	245	
4	Crane Use to set Units Phase 1	Building Construction	12/1/2024	1/24/2025	5	40	
5	Grading and Excavation for Pads Phase 2	Grading	2/1/2026	4/24/2026	5	60	
6	Buiding Construction including offsite work and concrete placement Phase 2	Building Construction	4/25/2026	4/2/2027	5	245	
7	Crane Use to set Units Phase 2	Building Construction	1/15/2027	3/11/2027	5	40	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 30

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition Phase 1 and Phase 2 Area	Excavators	3	8.00	158	0.38
Demolition Phase 1 and Phase 2 Area	Rubber Tired Dozers	2	8.00	247	0.40
Demolition Phase 1 and Phase 2 Area	Skid Steer Loaders	2	8.00	65	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading and Excavation for Pads Phase 1	Excavators	1	8.00	158	0.38
Grading and Excavation for Pads Phase 1	Graders	1	8.00	187	0.41
Grading and Excavation for Pads Phase 1	Skid Steer Loaders	3	8.00	65	0.37
Building Construction and concrete placement Phase 1	Generator Sets	1	8.00	84	0.74
Building Construction and concrete placement Phase 1	Plate Compactors	1	4.00	8	0.43
Building Construction and concrete placement Phase 1	Rollers	1	4.00	80	0.38
Building Construction and concrete placement Phase 1	Rough Terrain Forklifts	3	8.00	100	0.40
Building Construction and concrete placement Phase 1	Skid Steer Loaders	1	7.00	65	0.37
Building Construction and concrete placement Phase 1	Welders	1	8.00	46	0.45
Crane Use to set Units Phase 1	Cranes	1	7.00	231	0.29
Grading and Excavation for Pads Phase 2	Excavators	1	8.00	158	0.38
Grading and Excavation for Pads Phase 2	Graders	1	8.00	187	0.41
Grading and Excavation for Pads Phase 2	Skid Steer Loaders	3	8.00	65	0.37
Buiding Construction including offsite work and concrete placement Phase 2	Generator Sets	1	8.00	84	0.74
Buiding Construction including offsite work and concrete placement Phase 2	Plate Compactors	1	4.00	8	0.43
Buiding Construction including offsite work and concrete placement Phase 2	Rollers	1	4.00	80	0.38
Buiding Construction including offsite work and concrete placement Phase 2	Rough Terrain Forklifts	4	8.00	100	0.40
Buiding Construction including offsite work and concrete placement Phase 2	Skid Steer Loaders	2	7.00	65	0.37
Buiding Construction including offsite work and concrete placement Phase 2	Welders	2	8.00	46	0.45
Crane Use to set Units Phase 2	Cranes	1	7.00	231	0.29

Trips and VMT

Escondido Goal Line BESS - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition Phase 1 and Phase 2 Area	7	12.00	0.00	364.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading and Excavation for Pads P	5	30.00	0.00	2,188.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction and concrete placeme	8	70.00	10.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Crane Use to set Units Phase 1	1	2.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading and Excavation for Pads P	5	30.00	0.00	2,188.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Buiding Construction including offsite work	11	70.00	10.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Crane Use to set Units Phase 2	1	2.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition Phase 1 and Phase 2 Area - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5315	0.0000	0.5315	0.0805	0.0000	0.0805			0.0000			0.0000
Off-Road	2.0655	20.6295	18.7568	0.0367		0.9278	0.9278		0.8535	0.8535		3,555.2908	3,555.2908	1.1499		3,584.0371
Total	**2.0655**	**20.6295**	**18.7568**	**0.0367**	**0.5315**	**0.9278**	**1.4593**	**0.0805**	**0.8535**	**0.9340**		**3,555.2908**	**3,555.2908**	**1.1499**		**3,584.0371**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition Phase 1 and Phase 2 Area - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.5000e-003	0.3174	0.0872	1.4500e-003	0.0424	2.6900e-003	0.0451	0.0116	2.5800e-003	0.0142		160.4700	160.4700	8.0900e-003	0.0255	168.2768
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0328	0.0204	0.2888	8.7000e-004	0.0986	5.3000e-004	0.0991	0.0262	4.9000e-004	0.0266		89.1424	89.1424	2.3900e-003	2.1900e-003	89.8561
Total	**0.0383**	**0.3378**	**0.3760**	**2.3200e-003**	**0.1410**	**3.2200e-003**	**0.1443**	**0.0378**	**3.0700e-003**	**0.0409**		**249.6124**	**249.6124**	**0.0105**	**0.0277**	**258.1329**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5315	0.0000	0.5315	0.0805	0.0000	0.0805			0.0000			0.0000
Off-Road	2.0655	20.6295	18.7568	0.0367		0.9278	0.9278		0.8535	0.8535	0.0000	3,555.2908	3,555.2908	1.1499		3,584.0371
Total	**2.0655**	**20.6295**	**18.7568**	**0.0367**	**0.5315**	**0.9278**	**1.4593**	**0.0805**	**0.8535**	**0.9340**	**0.0000**	**3,555.2908**	**3,555.2908**	**1.1499**		**3,584.0371**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition Phase 1 and Phase 2 Area - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.5000e-003	0.3174	0.0872	1.4500e-003	0.0424	2.6900e-003	0.0451	0.0116	2.5800e-003	0.0142		160.4700	160.4700	8.0900e-003	0.0255	168.2768
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0328	0.0204	0.2888	8.7000e-004	0.0986	5.3000e-004	0.0991	0.0262	4.9000e-004	0.0266		89.1424	89.1424	2.3900e-003	2.1900e-003	89.8561
Total	**0.0383**	**0.3378**	**0.3760**	**2.3200e-003**	**0.1410**	**3.2200e-003**	**0.1443**	**0.0378**	**3.0700e-003**	**0.0409**		**249.6124**	**249.6124**	**0.0105**	**0.0277**	**258.1329**

3.3 Grading and Excavation for Pads Phase 1 - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5712	0.0000	0.5712	0.0635	0.0000	0.0635			0.0000			0.0000
Off-Road	0.7218	8.0379	9.0750	0.0180		0.2836	0.2836		0.2609	0.2609		1,742.4746	1,742.4746	0.5636		1,756.5634
Total	**0.7218**	**8.0379**	**9.0750**	**0.0180**	**0.5712**	**0.2836**	**0.8548**	**0.0635**	**0.2609**	**0.3243**		**1,742.4746**	**1,742.4746**	**0.5636**		**1,756.5634**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading and Excavation for Pads Phase 1 - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0816	4.7289	1.3286	0.0214	0.6378	0.0407	0.6786	0.1748	0.0390	0.2138		2,369.0068	2,369.0068	0.1252	0.3770	2,484.4882
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0771	0.0458	0.6746	2.1100e-003	0.2464	1.2600e-003	0.2477	0.0654	1.1600e-003	0.0665		217.2473	217.2473	5.4300e-003	5.1300e-003	218.9111
Total	**0.1587**	**4.7747**	**2.0032**	**0.0235**	**0.8843**	**0.0420**	**0.9263**	**0.2402**	**0.0401**	**0.2803**		**2,586.2542**	**2,586.2542**	**0.1307**	**0.3821**	**2,703.3992**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5712	0.0000	0.5712	0.0635	0.0000	0.0635			0.0000			0.0000
Off-Road	0.7218	8.0379	9.0750	0.0180		0.2836	0.2836		0.2609	0.2609	0.0000	1,742.4746	1,742.4746	0.5636		1,756.5634
Total	**0.7218**	**8.0379**	**9.0750**	**0.0180**	**0.5712**	**0.2836**	**0.8548**	**0.0635**	**0.2609**	**0.3243**	**0.0000**	**1,742.4746**	**1,742.4746**	**0.5636**		**1,756.5634**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading and Excavation for Pads Phase 1 - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0816	4.7289	1.3286	0.0214	0.6378	0.0407	0.6786	0.1748	0.0390	0.2138		2,369.0068	2,369.0068	0.1252	0.3770	2,484.4882
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0771	0.0458	0.6746	2.1100e-003	0.2464	1.2600e-003	0.2477	0.0654	1.1600e-003	0.0665		217.2473	217.2473	5.4300e-003	5.1300e-003	218.9111
Total	**0.1587**	**4.7747**	**2.0032**	**0.0235**	**0.8843**	**0.0420**	**0.9263**	**0.2402**	**0.0401**	**0.2803**		**2,586.2542**	**2,586.2542**	**0.1307**	**0.3821**	**2,703.3992**

3.4 Building Construction and concrete placement Phase 1 - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9755	9.5870	14.4364	0.0229		0.3500	0.3500		0.3351	0.3351		2,151.5298	2,151.5298	0.4699		2,163.2760
Total	**0.9755**	**9.5870**	**14.4364**	**0.0229**		**0.3500**	**0.3500**		**0.3351**	**0.3351**		**2,151.5298**	**2,151.5298**	**0.4699**		**2,163.2760**

Escondido Goal Line BESS - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction and concrete placement Phase 1 - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0115	0.4258	0.1509	2.0100e-003	0.0677	2.6200e-003	0.0704	0.0195	2.5100e-003	0.0220		217.1931	217.1931	6.8500e-003	0.0315	226.7353
Worker	0.1798	0.1069	1.5741	4.9100e-003	0.5750	2.9500e-003	0.5780	0.1525	2.7100e-003	0.1552		506.9105	506.9105	0.0127	0.0120	510.7925
Total	**0.1913**	**0.5327**	**1.7250**	**6.9200e-003**	**0.6428**	**5.5700e-003**	**0.6483**	**0.1720**	**5.2200e-003**	**0.1773**		**724.1035**	**724.1035**	**0.0195**	**0.0434**	**737.5278**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9755	9.5870	14.4364	0.0229		0.3500	0.3500		0.3351	0.3351	0.0000	2,151.5298	2,151.5298	0.4699		2,163.2760
Total	**0.9755**	**9.5870**	**14.4364**	**0.0229**		**0.3500**	**0.3500**		**0.3351**	**0.3351**	**0.0000**	**2,151.5298**	**2,151.5298**	**0.4699**		**2,163.2760**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction and concrete placement Phase 1 - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0115	0.4258	0.1509	2.0100e-003	0.0677	2.6200e-003	0.0704	0.0195	2.5100e-003	0.0220		217.1931	217.1931	6.8500e-003	0.0315	226.7353
Worker	0.1798	0.1069	1.5741	4.9100e-003	0.5750	2.9500e-003	0.5780	0.1525	2.7100e-003	0.1552		506.9105	506.9105	0.0127	0.0120	510.7925
Total	**0.1913**	**0.5327**	**1.7250**	**6.9200e-003**	**0.6428**	**5.5700e-003**	**0.6483**	**0.1720**	**5.2200e-003**	**0.1773**		**724.1035**	**724.1035**	**0.0195**	**0.0434**	**737.5278**

3.4 Building Construction and concrete placement Phase 1 - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9174	9.1308	14.4032	0.0229		0.3067	0.3067		0.2935	0.2935		2,151.3511	2,151.3511	0.4661		2,163.0045
Total	**0.9174**	**9.1308**	**14.4032**	**0.0229**		**0.3067**	**0.3067**		**0.2935**	**0.2935**		**2,151.3511**	**2,151.3511**	**0.4661**		**2,163.0045**

Escondido Goal Line BESS - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction and concrete placement Phase 1 - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0112	0.4216	0.1483	1.9700e-003	0.0677	2.6200e-003	0.0703	0.0195	2.5000e-003	0.0220		213.0498	213.0498	7.0300e-003	0.0308	222.4130
Worker	0.1694	0.0969	1.4767	4.7500e-003	0.5750	2.8200e-003	0.5779	0.1525	2.6000e-003	0.1551		494.4830	494.4830	0.0115	0.0112	498.1183
Total	**0.1806**	**0.5184**	**1.6250**	**6.7200e-003**	**0.6428**	**5.4400e-003**	**0.6482**	**0.1720**	**5.1000e-003**	**0.1771**		**707.5328**	**707.5328**	**0.0186**	**0.0421**	**720.5313**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9174	9.1308	14.4032	0.0229		0.3067	0.3067		0.2935	0.2935	0.0000	2,151.3511	2,151.3511	0.4661		2,163.0045
Total	**0.9174**	**9.1308**	**14.4032**	**0.0229**		**0.3067**	**0.3067**		**0.2935**	**0.2935**	**0.0000**	**2,151.3511**	**2,151.3511**	**0.4661**		**2,163.0045**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction and concrete placement Phase 1 - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0112	0.4216	0.1483	1.9700e-003	0.0677	2.6200e-003	0.0703	0.0195	2.5000e-003	0.0220		213.0498	213.0498	7.0300e-003	0.0308	222.4130
Worker	0.1694	0.0969	1.4767	4.7500e-003	0.5750	2.8200e-003	0.5779	0.1525	2.6000e-003	0.1551		494.4830	494.4830	0.0115	0.0112	498.1183
Total	**0.1806**	**0.5184**	**1.6250**	**6.7200e-003**	**0.6428**	**5.4400e-003**	**0.6482**	**0.1720**	**5.1000e-003**	**0.1771**		**707.5328**	**707.5328**	**0.0186**	**0.0421**	**720.5313**

3.5 Crane Use to set Units Phase 1 - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2903	3.0663	1.5529	5.0500e-003		0.1276	0.1276		0.1174	0.1174		488.9564	488.9564	0.1581		492.9099
Total	**0.2903**	**3.0663**	**1.5529**	**5.0500e-003**		**0.1276**	**0.1276**		**0.1174**	**0.1174**		**488.9564**	**488.9564**	**0.1581**		**492.9099**

Escondido Goal Line BESS - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Crane Use to set Units Phase 1 - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1400e-003	3.0600e-003	0.0450	1.4000e-004	0.0164	8.0000e-005	0.0165	4.3600e-003	8.0000e-005	4.4400e-003		14.4832	14.4832	3.6000e-004	3.4000e-004	14.5941
Total	**5.1400e-003**	**3.0600e-003**	**0.0450**	**1.4000e-004**	**0.0164**	**8.0000e-005**	**0.0165**	**4.3600e-003**	**8.0000e-005**	**4.4400e-003**		**14.4832**	**14.4832**	**3.6000e-004**	**3.4000e-004**	**14.5941**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2903	3.0663	1.5529	5.0500e-003		0.1276	0.1276		0.1174	0.1174	0.0000	488.9564	488.9564	0.1581		492.9099
Total	**0.2903**	**3.0663**	**1.5529**	**5.0500e-003**		**0.1276**	**0.1276**		**0.1174**	**0.1174**	**0.0000**	**488.9564**	**488.9564**	**0.1581**		**492.9099**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Crane Use to set Units Phase 1 - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1400e-003	3.0600e-003	0.0450	1.4000e-004	0.0164	8.0000e-005	0.0165	4.3600e-003	8.0000e-005	4.4400e-003		14.4832	14.4832	3.6000e-004	3.4000e-004	14.5941
Total	**5.1400e-003**	**3.0600e-003**	**0.0450**	**1.4000e-004**	**0.0164**	**8.0000e-005**	**0.0165**	**4.3600e-003**	**8.0000e-005**	**4.4400e-003**		**14.4832**	**14.4832**	**3.6000e-004**	**3.4000e-004**	**14.5941**

3.5 Crane Use to set Units Phase 1 - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2737	2.7720	1.5194	5.0500e-003		0.1178	0.1178		0.1084	0.1084		488.9730	488.9730	0.1581		492.9266
Total	**0.2737**	**2.7720**	**1.5194**	**5.0500e-003**		**0.1178**	**0.1178**		**0.1084**	**0.1084**		**488.9730**	**488.9730**	**0.1581**		**492.9266**

Escondido Goal Line BESS - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Crane Use to set Units Phase 1 - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8400e-003	2.7700e-003	0.0422	1.4000e-004	0.0164	8.0000e-005	0.0165	4.3600e-003	7.0000e-005	4.4300e-003		14.1281	14.1281	3.3000e-004	3.2000e-004	14.2320
Total	**4.8400e-003**	**2.7700e-003**	**0.0422**	**1.4000e-004**	**0.0164**	**8.0000e-005**	**0.0165**	**4.3600e-003**	**7.0000e-005**	**4.4300e-003**		**14.1281**	**14.1281**	**3.3000e-004**	**3.2000e-004**	**14.2320**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2737	2.7720	1.5194	5.0500e-003		0.1178	0.1178		0.1084	0.1084	0.0000	488.9730	488.9730	0.1581		492.9266
Total	**0.2737**	**2.7720**	**1.5194**	**5.0500e-003**		**0.1178**	**0.1178**		**0.1084**	**0.1084**	**0.0000**	**488.9730**	**488.9730**	**0.1581**		**492.9266**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Crane Use to set Units Phase 1 - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8400e-003	2.7700e-003	0.0422	1.4000e-004	0.0164	8.0000e-005	0.0165	4.3600e-003	7.0000e-005	4.4300e-003		14.1281	14.1281	3.3000e-004	3.2000e-004	14.2320
Total	**4.8400e-003**	**2.7700e-003**	**0.0422**	**1.4000e-004**	**0.0164**	**8.0000e-005**	**0.0165**	**4.3600e-003**	**7.0000e-005**	**4.4300e-003**		**14.1281**	**14.1281**	**3.3000e-004**	**3.2000e-004**	**14.2320**

3.6 Grading and Excavation for Pads Phase 2 - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5712	0.0000	0.5712	0.0635	0.0000	0.0635			0.0000			0.0000
Off-Road	0.6561	7.0546	8.9911	0.0180		0.2433	0.2433		0.2238	0.2238		1,742.0024	1,742.0024	0.5634		1,756.0873
Total	**0.6561**	**7.0546**	**8.9911**	**0.0180**	**0.5712**	**0.2433**	**0.8145**	**0.0635**	**0.2238**	**0.2873**		**1,742.0024**	**1,742.0024**	**0.5634**		**1,756.0873**

Escondido Goal Line BESS - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Grading and Excavation for Pads Phase 2 - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0797	4.5930	1.3656	0.0204	0.6379	0.0402	0.6780	0.1748	0.0385	0.2133		2,272.5073	2,272.5073	0.1331	0.3622	2,383.7746
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0686	0.0379	0.5972	1.9700e-003	0.2464	1.1500e-003	0.2476	0.0654	1.0600e-003	0.0664		206.9673	206.9673	4.5200e-003	4.5500e-003	208.4364
Total	**0.1483**	**4.6309**	**1.9628**	**0.0224**	**0.8843**	**0.0413**	**0.9256**	**0.2402**	**0.0395**	**0.2797**		**2,479.4745**	**2,479.4745**	**0.1376**	**0.3668**	**2,592.2110**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5712	0.0000	0.5712	0.0635	0.0000	0.0635			0.0000			0.0000
Off-Road	0.6561	7.0546	8.9911	0.0180		0.2433	0.2433		0.2238	0.2238	0.0000	1,742.0024	1,742.0024	0.5634		1,756.0873
Total	**0.6561**	**7.0546**	**8.9911**	**0.0180**	**0.5712**	**0.2433**	**0.8145**	**0.0635**	**0.2238**	**0.2873**	**0.0000**	**1,742.0024**	**1,742.0024**	**0.5634**		**1,756.0873**

Escondido Goal Line BESS - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Grading and Excavation for Pads Phase 2 - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0797	4.5930	1.3656	0.0204	0.6379	0.0402	0.6780	0.1748	0.0385	0.2133		2,272.5073	2,272.5073	0.1331	0.3622	2,383.7746
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0686	0.0379	0.5972	1.9700e-003	0.2464	1.1500e-003	0.2476	0.0654	1.0600e-003	0.0664		206.9673	206.9673	4.5200e-003	4.5500e-003	208.4364
Total	**0.1483**	**4.6309**	**1.9628**	**0.0224**	**0.8843**	**0.0413**	**0.9256**	**0.2402**	**0.0395**	**0.2797**		**2,479.4745**	**2,479.4745**	**0.1376**	**0.3668**	**2,592.2110**

3.7 Buiding Construction including offsite work and concrete placement Phase 2 - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2861	12.4502	19.5472	0.0307		0.4047	0.4047		0.3869	0.3869		2,867.9619	2,867.9619	0.6505		2,884.2248
Total	**1.2861**	**12.4502**	**19.5472**	**0.0307**		**0.4047**	**0.4047**		**0.3869**	**0.3869**		**2,867.9619**	**2,867.9619**	**0.6505**		**2,884.2248**

Escondido Goal Line BESS - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Buiding Construction including offsite work and concrete placement Phase 2 - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0109	0.4170	0.1465	1.9300e-003	0.0677	2.6000e-003	0.0703	0.0195	2.4800e-003	0.0220		208.9797	208.9797	7.2000e-003	0.0302	218.1679
Worker	0.1601	0.0884	1.3935	4.6000e-003	0.5750	2.6900e-003	0.5777	0.1525	2.4700e-003	0.1550		482.9236	482.9236	0.0106	0.0106	486.3516
Total	**0.1710**	**0.5055**	**1.5400**	**6.5300e-003**	**0.6428**	**5.2900e-003**	**0.6480**	**0.1720**	**4.9500e-003**	**0.1770**		**691.9033**	**691.9033**	**0.0178**	**0.0409**	**704.5195**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2861	12.4502	19.5472	0.0307		0.4047	0.4047		0.3869	0.3869	0.0000	2,867.9619	2,867.9619	0.6505		2,884.2248
Total	**1.2861**	**12.4502**	**19.5472**	**0.0307**		**0.4047**	**0.4047**		**0.3869**	**0.3869**	**0.0000**	**2,867.9619**	**2,867.9619**	**0.6505**		**2,884.2248**

Escondido Goal Line BESS - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Buiding Construction including offsite work and concrete placement Phase 2 - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0109	0.4170	0.1465	1.9300e-003	0.0677	2.6000e-003	0.0703	0.0195	2.4800e-003	0.0220		208.9797	208.9797	7.2000e-003	0.0302	218.1679
Worker	0.1601	0.0884	1.3935	4.6000e-003	0.5750	2.6900e-003	0.5777	0.1525	2.4700e-003	0.1550		482.9236	482.9236	0.0106	0.0106	486.3516
Total	**0.1710**	**0.5055**	**1.5400**	**6.5300e-003**	**0.6428**	**5.2900e-003**	**0.6480**	**0.1720**	**4.9500e-003**	**0.1770**		**691.9033**	**691.9033**	**0.0178**	**0.0409**	**704.5195**

3.7 Buiding Construction including offsite work and concrete placement Phase 2 - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2861	12.4502	19.5472	0.0307		0.4047	0.4047		0.3869	0.3869		2,867.9619	2,867.9619	0.6505		2,884.2248
Total	**1.2861**	**12.4502**	**19.5472**	**0.0307**		**0.4047**	**0.4047**		**0.3869**	**0.3869**		**2,867.9619**	**2,867.9619**	**0.6505**		**2,884.2248**

Escondido Goal Line BESS - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Buiding Construction including offsite work and concrete placement Phase 2 - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0106	0.4126	0.1451	1.8900e-003	0.0677	2.5700e-003	0.0703	0.0195	2.4600e-003	0.0220		204.6565	204.6565	7.3600e-003	0.0296	213.6608
Worker	0.1514	0.0812	1.3219	4.4600e-003	0.5750	2.5300e-003	0.5776	0.1525	2.3300e-003	0.1549		472.4702	472.4702	9.7000e-003	0.0101	475.7212
Total	**0.1620**	**0.4938**	**1.4669**	**6.3500e-003**	**0.6428**	**5.1000e-003**	**0.6479**	**0.1720**	**4.7900e-003**	**0.1768**		**677.1268**	**677.1268**	**0.0171**	**0.0397**	**689.3821**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2861	12.4502	19.5472	0.0307		0.4047	0.4047		0.3869	0.3869	0.0000	2,867.9619	2,867.9619	0.6505		2,884.2248
Total	**1.2861**	**12.4502**	**19.5472**	**0.0307**		**0.4047**	**0.4047**		**0.3869**	**0.3869**	**0.0000**	**2,867.9619**	**2,867.9619**	**0.6505**		**2,884.2248**

Escondido Goal Line BESS - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Buiding Construction including offsite work and concrete placement Phase 2 - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0106	0.4126	0.1451	1.8900e-003	0.0677	2.5700e-003	0.0703	0.0195	2.4600e-003	0.0220		204.6565	204.6565	7.3600e-003	0.0296	213.6608
Worker	0.1514	0.0812	1.3219	4.4600e-003	0.5750	2.5300e-003	0.5776	0.1525	2.3300e-003	0.1549		472.4702	472.4702	9.7000e-003	0.0101	475.7212
Total	**0.1620**	**0.4938**	**1.4669**	**6.3500e-003**	**0.6428**	**5.1000e-003**	**0.6479**	**0.1720**	**4.7900e-003**	**0.1768**		**677.1268**	**677.1268**	**0.0171**	**0.0397**	**689.3821**

3.8 Crane Use to set Units Phase 2 - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2737	2.7720	1.5194	5.0500e-003		0.1178	0.1178		0.1084	0.1084		488.9730	488.9730	0.1581		492.9266
Total	**0.2737**	**2.7720**	**1.5194**	**5.0500e-003**		**0.1178**	**0.1178**		**0.1084**	**0.1084**		**488.9730**	**488.9730**	**0.1581**		**492.9266**

Escondido Goal Line BESS - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Crane Use to set Units Phase 2 - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3300e-003	2.3200e-003	0.0378	1.3000e-004	0.0164	7.0000e-005	0.0165	4.3600e-003	7.0000e-005	4.4200e-003		13.4992	13.4992	2.8000e-004	2.9000e-004	13.5920
Total	**4.3300e-003**	**2.3200e-003**	**0.0378**	**1.3000e-004**	**0.0164**	**7.0000e-005**	**0.0165**	**4.3600e-003**	**7.0000e-005**	**4.4200e-003**		**13.4992**	**13.4992**	**2.8000e-004**	**2.9000e-004**	**13.5920**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2737	2.7720	1.5194	5.0500e-003		0.1178	0.1178		0.1084	0.1084	0.0000	488.9730	488.9730	0.1581		492.9266
Total	**0.2737**	**2.7720**	**1.5194**	**5.0500e-003**		**0.1178**	**0.1178**		**0.1084**	**0.1084**	**0.0000**	**488.9730**	**488.9730**	**0.1581**		**492.9266**

Escondido Goal Line BESS - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Crane Use to set Units Phase 2 - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3300e-003	2.3200e-003	0.0378	1.3000e-004	0.0164	7.0000e-005	0.0165	4.3600e-003	7.0000e-005	4.4200e-003		13.4992	13.4992	2.8000e-004	2.9000e-004	13.5920
Total	**4.3300e-003**	**2.3200e-003**	**0.0378**	**1.3000e-004**	**0.0164**	**7.0000e-005**	**0.0165**	**4.3600e-003**	**7.0000e-005**	**4.4200e-003**		**13.4992**	**13.4992**	**2.8000e-004**	**2.9000e-004**	**13.5920**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0123	0.0129	0.1168	2.7000e-004	0.0291	2.0000e-004	0.0293	7.7600e-003	1.8000e-004	7.9400e-003		27.8321	27.8321	1.7200e-003	1.1000e-003	28.2024
Unmitigated	0.0123	0.0129	0.1168	2.7000e-004	0.0291	2.0000e-004	0.0293	7.7600e-003	1.8000e-004	7.9400e-003		27.8321	27.8321	1.7200e-003	1.1000e-003	28.2024

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	4.00	0.00	0.00	9,880	9,880
Total	4.00	0.00	0.00	9,880	9,880

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

Escondido Goal Line BESS - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Escondido Goal Line BESS - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Escondido Goal Line BESS

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	4.50	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2025
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project would install battery storage containers and operations onsite will be remote

Construction Phase - Project would install fully constructed containers shipped to the site on trucks. Cranes lift the units off and set them on either a concrete pad or Steel colums driven into the ground.

Off-road Equipment - ce

Off-road Equipment - ce

Off-road Equipment - ce

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - CE

Off-road Equipment - ce

Off-road Equipment - ce

Escondido Goal Line BESS - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Trips and VMT - Worker and vendor trips per day for concrete placement added. Trips added for crane operator

Demolition -

Grading -

Architectural Coating -

Vehicle Trips - 4 trips per day

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use -

Water And Wastewater - Basic onsite landscaping will be watered 100 gal/day

Solid Waste - solid waste is not likely though 1 ton per year was assumed. Systems will be remotly managed.

Construction Off-road Equipment Mitigation - Tier 3 equipment with DPF

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	245.00
tblConstructionPhase	NumDays	230.00	40.00
tblConstructionPhase	NumDays	230.00	245.00
tblConstructionPhase	NumDays	230.00	40.00
tblConstructionPhase	NumDays	20.00	150.00
tblConstructionPhase	NumDays	8.00	60.00
tblConstructionPhase	NumDays	8.00	60.00
tblGrading	MaterialImported	0.00	17,500.00
tblGrading	MaterialImported	0.00	17,500.00
tblLandUse	LotAcreage	0.00	4.50
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	4.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	PhaseName		Buiding Construction including offsite work and concrete placement Phase 2
tblOffRoadEquipment	PhaseName		Buiding Construction including offsite work and concrete placement Phase 2
tblOffRoadEquipment	PhaseName		Buiding Construction including offsite work and concrete placement Phase 2
tblOffRoadEquipment	PhaseName		Grading and Excavation for Pads Phase 2
tblOffRoadEquipment	PhaseName		Buiding Construction including offsite work and concrete placement Phase 2
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	18.00	12.00
tblTripsAndVMT	WorkerTripNumber	13.00	30.00
tblTripsAndVMT	WorkerTripNumber	0.00	70.00
tblTripsAndVMT	WorkerTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	13.00	30.00
tblTripsAndVMT	WorkerTripNumber	0.00	70.00
tblTripsAndVMT	WorkerTripNumber	0.00	2.00
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	WD_TR	0.00	4.00

2.0 Emissions Summary

Escondido Goal Line BESS - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	2.1063	20.9827	19.1195	0.0390	0.6726	0.9310	1.6036	0.1183	0.8566	0.9749	0.0000	3,800.1591	3,800.1591	1.1605	0.0279	3,837.4903
2024	1.4780	13.2206	17.6864	0.0414	1.4555	0.4833	1.7811	0.3037	0.4578	0.6341	0.0000	4,319.1571	4,319.1571	0.6943	0.3829	4,450.6325
2025	1.3918	12.4541	17.5239	0.0345	0.6592	0.4301	1.0893	0.1764	0.4070	0.5834	0.0000	3,334.4622	3,334.4622	0.6440	0.0434	3,363.4917
2026	1.4714	12.9844	21.0286	0.0403	1.4555	0.4100	1.7402	0.3037	0.3918	0.5670	0.0000	4,212.4807	4,212.4807	0.7010	0.3675	4,339.5265
2027	1.7404	15.7463	22.5155	0.0419	0.6592	0.5277	1.1869	0.1764	0.5001	0.6765	0.0000	4,021.3362	4,021.3362	0.8267	0.0409	4,054.1883
Maximum	**2.1063**	**20.9827**	**22.5155**	**0.0419**	**1.4555**	**0.9310**	**1.7811**	**0.3037**	**0.8566**	**0.9749**	**0.0000**	**4,319.1571**	**4,319.1571**	**1.1605**	**0.3829**	**4,450.6325**

Escondido Goal Line BESS - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	2.1063	20.9827	19.1195	0.0390	0.6726	0.9310	1.6036	0.1183	0.8566	0.9749	0.0000	3,800.1591	3,800.1591	1.1605	0.0279	3,837.4903
2024	1.4780	13.2206	17.6864	0.0414	1.4555	0.4833	1.7811	0.3037	0.4578	0.6341	0.0000	4,319.1571	4,319.1571	0.6943	0.3829	4,450.6325
2025	1.3918	12.4541	17.5239	0.0345	0.6592	0.4301	1.0893	0.1764	0.4070	0.5834	0.0000	3,334.4622	3,334.4622	0.6440	0.0434	3,363.4917
2026	1.4714	12.9844	21.0286	0.0403	1.4555	0.4100	1.7402	0.3037	0.3918	0.5670	0.0000	4,212.4807	4,212.4807	0.7010	0.3675	4,339.5265
2027	1.7404	15.7463	22.5155	0.0419	0.6592	0.5277	1.1869	0.1764	0.5001	0.6765	0.0000	4,021.3362	4,021.3362	0.8267	0.0409	4,054.1883
Maximum	**2.1063**	**20.9827**	**22.5155**	**0.0419**	**1.4555**	**0.9310**	**1.7811**	**0.3037**	**0.8566**	**0.9749**	**0.0000**	**4,319.1571**	**4,319.1571**	**1.1605**	**0.3829**	**4,450.6325**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**	**0.00**

Escondido Goal Line BESS - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0120	0.0140	0.1190	2.5000e-004	0.0291	2.0000e-004	0.0293	7.7600e-003	1.8000e-004	7.9400e-003		26.6155	26.6155	1.8100e-003	1.1500e-003	27.0047
Total	**0.0120**	**0.0140**	**0.1191**	**2.5000e-004**	**0.0291**	**2.0000e-004**	**0.0293**	**7.7600e-003**	**1.8000e-004**	**7.9400e-003**		**26.6157**	**26.6157**	**1.8100e-003**	**1.1500e-003**	**27.0049**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0120	0.0140	0.1190	2.5000e-004	0.0291	2.0000e-004	0.0293	7.7600e-003	1.8000e-004	7.9400e-003		26.6155	26.6155	1.8100e-003	1.1500e-003	27.0047
Total	**0.0120**	**0.0140**	**0.1191**	**2.5000e-004**	**0.0291**	**2.0000e-004**	**0.0293**	**7.7600e-003**	**1.8000e-004**	**7.9400e-003**		**26.6157**	**26.6157**	**1.8100e-003**	**1.1500e-003**	**27.0049**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	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	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition Phase 1 and Phase 2 Area	Demolition	6/1/2023	12/27/2023	5	150	
2	Grading and Excavation for Pads Phase 1	Grading	1/1/2024	3/22/2024	5	60	
3	Building Construction and concrete placement Phase 1	Building Construction	3/23/2024	2/28/2025	5	245	
4	Crane Use to set Units Phase 1	Building Construction	12/1/2024	1/24/2025	5	40	
5	Grading and Excavation for Pads Phase 2	Grading	2/1/2026	4/24/2026	5	60	
6	Buiding Construction including offsite work and concrete placement Phase 2	Building Construction	4/25/2026	4/2/2027	5	245	
7	Crane Use to set Units Phase 2	Building Construction	1/15/2027	3/11/2027	5	40	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 30

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition Phase 1 and Phase 2 Area	Excavators	3	8.00	158	0.38
Demolition Phase 1 and Phase 2 Area	Rubber Tired Dozers	2	8.00	247	0.40
Demolition Phase 1 and Phase 2 Area	Skid Steer Loaders	2	8.00	65	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading and Excavation for Pads Phase 1	Excavators	1	8.00	158	0.38
Grading and Excavation for Pads Phase 1	Graders	1	8.00	187	0.41
Grading and Excavation for Pads Phase 1	Skid Steer Loaders	3	8.00	65	0.37
Building Construction and concrete placement Phase 1	Generator Sets	1	8.00	84	0.74
Building Construction and concrete placement Phase 1	Plate Compactors	1	4.00	8	0.43
Building Construction and concrete placement Phase 1	Rollers	1	4.00	80	0.38
Building Construction and concrete placement Phase 1	Rough Terrain Forklifts	3	8.00	100	0.40
Building Construction and concrete placement Phase 1	Skid Steer Loaders	1	7.00	65	0.37
Building Construction and concrete placement Phase 1	Welders	1	8.00	46	0.45
Crane Use to set Units Phase 1	Cranes	1	7.00	231	0.29
Grading and Excavation for Pads Phase 2	Excavators	1	8.00	158	0.38
Grading and Excavation for Pads Phase 2	Graders	1	8.00	187	0.41
Grading and Excavation for Pads Phase 2	Skid Steer Loaders	3	8.00	65	0.37
Buiding Construction including offsite work and concrete placement Phase 2	Generator Sets	1	8.00	84	0.74
Buiding Construction including offsite work and concrete placement Phase 2	Plate Compactors	1	4.00	8	0.43
Buiding Construction including offsite work and concrete placement Phase 2	Rollers	1	4.00	80	0.38
Buiding Construction including offsite work and concrete placement Phase 2	Rough Terrain Forklifts	4	8.00	100	0.40
Buiding Construction including offsite work and concrete placement Phase 2	Skid Steer Loaders	2	7.00	65	0.37
Buiding Construction including offsite work and concrete placement Phase 2	Welders	2	8.00	46	0.45
Crane Use to set Units Phase 2	Cranes	1	7.00	231	0.29

Trips and VMT

Escondido Goal Line BESS - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition Phase 1 and Phase 2 Area	7	12.00	0.00	364.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading and Excavation for Pads P	5	30.00	0.00	2,188.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction and concrete placeme	8	70.00	10.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Crane Use to set Units Phase 1	1	2.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading and Excavation for Pads P	5	30.00	0.00	2,188.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Buiding Construction including offsite work	11	70.00	10.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Crane Use to set Units Phase 2	1	2.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition Phase 1 and Phase 2 Area - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5315	0.0000	0.5315	0.0805	0.0000	0.0805			0.0000			0.0000
Off-Road	2.0655	20.6295	18.7568	0.0367		0.9278	0.9278		0.8535	0.8535		3,555.2908	3,555.2908	1.1499		3,584.0371
Total	**2.0655**	**20.6295**	**18.7568**	**0.0367**	**0.5315**	**0.9278**	**1.4593**	**0.0805**	**0.8535**	**0.9340**		**3,555.2908**	**3,555.2908**	**1.1499**		**3,584.0371**

Escondido Goal Line BESS - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition Phase 1 and Phase 2 Area - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.1700e-003	0.3303	0.0883	1.4500e-003	0.0424	2.7000e-003	0.0451	0.0116	2.5800e-003	0.0142		160.6259	160.6259	8.0700e-003	0.0255	168.4399
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0356	0.0229	0.2744	8.2000e-004	0.0986	5.3000e-004	0.0991	0.0262	4.9000e-004	0.0266		84.2424	84.2424	2.5400e-003	2.3700e-003	85.0133
Total	**0.0408**	**0.3532**	**0.3627**	**2.2700e-003**	**0.1410**	**3.2300e-003**	**0.1443**	**0.0378**	**3.0700e-003**	**0.0409**		**244.8683**	**244.8683**	**0.0106**	**0.0279**	**253.4532**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5315	0.0000	0.5315	0.0805	0.0000	0.0805			0.0000			0.0000
Off-Road	2.0655	20.6295	18.7568	0.0367		0.9278	0.9278		0.8535	0.8535	0.0000	3,555.2908	3,555.2908	1.1499		3,584.0371
Total	**2.0655**	**20.6295**	**18.7568**	**0.0367**	**0.5315**	**0.9278**	**1.4593**	**0.0805**	**0.8535**	**0.9340**	**0.0000**	**3,555.2908**	**3,555.2908**	**1.1499**		**3,584.0371**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition Phase 1 and Phase 2 Area - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.1700e-003	0.3303	0.0883	1.4500e-003	0.0424	2.7000e-003	0.0451	0.0116	2.5800e-003	0.0142		160.6259	160.6259	8.0700e-003	0.0255	168.4399
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0356	0.0229	0.2744	8.2000e-004	0.0986	5.3000e-004	0.0991	0.0262	4.9000e-004	0.0266		84.2424	84.2424	2.5400e-003	2.3700e-003	85.0133
Total	**0.0408**	**0.3532**	**0.3627**	**2.2700e-003**	**0.1410**	**3.2300e-003**	**0.1443**	**0.0378**	**3.0700e-003**	**0.0409**		**244.8683**	**244.8683**	**0.0106**	**0.0279**	**253.4532**

3.3 Grading and Excavation for Pads Phase 1 - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5712	0.0000	0.5712	0.0635	0.0000	0.0635			0.0000			0.0000
Off-Road	0.7218	8.0379	9.0750	0.0180		0.2836	0.2836		0.2609	0.2609		1,742.4746	1,742.4746	0.5636		1,756.5634
Total	**0.7218**	**8.0379**	**9.0750**	**0.0180**	**0.5712**	**0.2836**	**0.8548**	**0.0635**	**0.2609**	**0.3243**		**1,742.4746**	**1,742.4746**	**0.5636**		**1,756.5634**

Escondido Goal Line BESS - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading and Excavation for Pads Phase 1 - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0767	4.9200	1.3450	0.0214	0.6378	0.0408	0.6786	0.1748	0.0390	0.2139		2,371.3503	2,371.3503	0.1249	0.3774	2,486.9398
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0838	0.0515	0.6423	1.9900e-003	0.2464	1.2600e-003	0.2477	0.0654	1.1600e-003	0.0665		205.3322	205.3322	5.7900e-003	5.5400e-003	207.1293
Total	**0.1604**	**4.9715**	**1.9873**	**0.0234**	**0.8843**	**0.0421**	**0.9263**	**0.2402**	**0.0402**	**0.2804**		**2,576.6826**	**2,576.6826**	**0.1307**	**0.3829**	**2,694.0691**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5712	0.0000	0.5712	0.0635	0.0000	0.0635			0.0000			0.0000
Off-Road	0.7218	8.0379	9.0750	0.0180		0.2836	0.2836		0.2609	0.2609	0.0000	1,742.4746	1,742.4746	0.5636		1,756.5634
Total	**0.7218**	**8.0379**	**9.0750**	**0.0180**	**0.5712**	**0.2836**	**0.8548**	**0.0635**	**0.2609**	**0.3243**	**0.0000**	**1,742.4746**	**1,742.4746**	**0.5636**		**1,756.5634**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading and Excavation for Pads Phase 1 - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0767	4.9200	1.3450	0.0214	0.6378	0.0408	0.6786	0.1748	0.0390	0.2139		2,371.3503	2,371.3503	0.1249	0.3774	2,486.9398
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0838	0.0515	0.6423	1.9900e-003	0.2464	1.2600e-003	0.2477	0.0654	1.1600e-003	0.0665		205.3322	205.3322	5.7900e-003	5.5400e-003	207.1293
Total	**0.1604**	**4.9715**	**1.9873**	**0.0234**	**0.8843**	**0.0421**	**0.9263**	**0.2402**	**0.0402**	**0.2804**		**2,576.6826**	**2,576.6826**	**0.1307**	**0.3829**	**2,694.0691**

3.4 Building Construction and concrete placement Phase 1 - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9755	9.5870	14.4364	0.0229		0.3500	0.3500		0.3351	0.3351		2,151.5298	2,151.5298	0.4699		2,163.2760
Total	**0.9755**	**9.5870**	**14.4364**	**0.0229**		**0.3500**	**0.3500**		**0.3351**	**0.3351**		**2,151.5298**	**2,151.5298**	**0.4699**		**2,163.2760**

Escondido Goal Line BESS - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction and concrete placement Phase 1 - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0112	0.4437	0.1555	2.0100e-003	0.0677	2.6400e-003	0.0704	0.0195	2.5200e-003	0.0220		217.5107	217.5107	6.8200e-003	0.0315	227.0738
Worker	0.1955	0.1203	1.4987	4.6400e-003	0.5750	2.9500e-003	0.5780	0.1525	2.7100e-003	0.1552		479.1086	479.1086	0.0135	0.0129	483.3017
Total	**0.2066**	**0.5640**	**1.6542**	**6.6500e-003**	**0.6428**	**5.5900e-003**	**0.6483**	**0.1720**	**5.2300e-003**	**0.1773**		**696.6193**	**696.6193**	**0.0203**	**0.0445**	**710.3756**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9755	9.5870	14.4364	0.0229		0.3500	0.3500		0.3351	0.3351	0.0000	2,151.5298	2,151.5298	0.4699		2,163.2760
Total	**0.9755**	**9.5870**	**14.4364**	**0.0229**		**0.3500**	**0.3500**		**0.3351**	**0.3351**	**0.0000**	**2,151.5298**	**2,151.5298**	**0.4699**		**2,163.2760**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction and concrete placement Phase 1 - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0112	0.4437	0.1555	2.0100e-003	0.0677	2.6400e-003	0.0704	0.0195	2.5200e-003	0.0220		217.5107	217.5107	6.8200e-003	0.0315	227.0738
Worker	0.1955	0.1203	1.4987	4.6400e-003	0.5750	2.9500e-003	0.5780	0.1525	2.7100e-003	0.1552		479.1086	479.1086	0.0135	0.0129	483.3017
Total	**0.2066**	**0.5640**	**1.6542**	**6.6500e-003**	**0.6428**	**5.5900e-003**	**0.6483**	**0.1720**	**5.2300e-003**	**0.1773**		**696.6193**	**696.6193**	**0.0203**	**0.0445**	**710.3756**

3.4 Building Construction and concrete placement Phase 1 - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9174	9.1308	14.4032	0.0229		0.3067	0.3067		0.2935	0.2935		2,151.3511	2,151.3511	0.4661		2,163.0045
Total	**0.9174**	**9.1308**	**14.4032**	**0.0229**		**0.3067**	**0.3067**		**0.2935**	**0.2935**		**2,151.3511**	**2,151.3511**	**0.4661**		**2,163.0045**

Escondido Goal Line BESS - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction and concrete placement Phase 1 - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0108	0.4394	0.1530	1.9700e-003	0.0677	2.6300e-003	0.0704	0.0195	2.5100e-003	0.0220		213.3688	213.3688	6.9900e-003	0.0309	222.7524
Worker	0.1846	0.1089	1.4081	4.4900e-003	0.5750	2.8200e-003	0.5779	0.1525	2.6000e-003	0.1551		467.4146	467.4146	0.0123	0.0121	471.3413
Total	**0.1954**	**0.5483**	**1.5611**	**6.4600e-003**	**0.6428**	**5.4500e-003**	**0.6482**	**0.1720**	**5.1100e-003**	**0.1771**		**680.7834**	**680.7834**	**0.0193**	**0.0430**	**694.0937**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9174	9.1308	14.4032	0.0229		0.3067	0.3067		0.2935	0.2935	0.0000	2,151.3511	2,151.3511	0.4661		2,163.0045
Total	**0.9174**	**9.1308**	**14.4032**	**0.0229**		**0.3067**	**0.3067**		**0.2935**	**0.2935**	**0.0000**	**2,151.3511**	**2,151.3511**	**0.4661**		**2,163.0045**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction and concrete placement Phase 1 - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0108	0.4394	0.1530	1.9700e-003	0.0677	2.6300e-003	0.0704	0.0195	2.5100e-003	0.0220		213.3688	213.3688	6.9900e-003	0.0309	222.7524
Worker	0.1846	0.1089	1.4081	4.4900e-003	0.5750	2.8200e-003	0.5779	0.1525	2.6000e-003	0.1551		467.4146	467.4146	0.0123	0.0121	471.3413
Total	**0.1954**	**0.5483**	**1.5611**	**6.4600e-003**	**0.6428**	**5.4500e-003**	**0.6482**	**0.1720**	**5.1100e-003**	**0.1771**		**680.7834**	**680.7834**	**0.0193**	**0.0430**	**694.0937**

3.5 Crane Use to set Units Phase 1 - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2903	3.0663	1.5529	5.0500e-003		0.1276	0.1276		0.1174	0.1174		488.9564	488.9564	0.1581		492.9099
Total	**0.2903**	**3.0663**	**1.5529**	**5.0500e-003**		**0.1276**	**0.1276**		**0.1174**	**0.1174**		**488.9564**	**488.9564**	**0.1581**		**492.9099**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Crane Use to set Units Phase 1 - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5800e-003	3.4400e-003	0.0428	1.3000e-004	0.0164	8.0000e-005	0.0165	4.3600e-003	8.0000e-005	4.4400e-003		13.6888	13.6888	3.9000e-004	3.7000e-004	13.8086
Total	**5.5800e-003**	**3.4400e-003**	**0.0428**	**1.3000e-004**	**0.0164**	**8.0000e-005**	**0.0165**	**4.3600e-003**	**8.0000e-005**	**4.4400e-003**		**13.6888**	**13.6888**	**3.9000e-004**	**3.7000e-004**	**13.8086**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2903	3.0663	1.5529	5.0500e-003		0.1276	0.1276		0.1174	0.1174	0.0000	488.9564	488.9564	0.1581		492.9099
Total	**0.2903**	**3.0663**	**1.5529**	**5.0500e-003**		**0.1276**	**0.1276**		**0.1174**	**0.1174**	**0.0000**	**488.9564**	**488.9564**	**0.1581**		**492.9099**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Crane Use to set Units Phase 1 - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5800e-003	3.4400e-003	0.0428	1.3000e-004	0.0164	8.0000e-005	0.0165	4.3600e-003	8.0000e-005	4.4400e-003		13.6888	13.6888	3.9000e-004	3.7000e-004	13.8086
Total	**5.5800e-003**	**3.4400e-003**	**0.0428**	**1.3000e-004**	**0.0164**	**8.0000e-005**	**0.0165**	**4.3600e-003**	**8.0000e-005**	**4.4400e-003**		**13.6888**	**13.6888**	**3.9000e-004**	**3.7000e-004**	**13.8086**

3.5 Crane Use to set Units Phase 1 - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2737	2.7720	1.5194	5.0500e-003		0.1178	0.1178		0.1084	0.1084		488.9730	488.9730	0.1581		492.9266
Total	**0.2737**	**2.7720**	**1.5194**	**5.0500e-003**		**0.1178**	**0.1178**		**0.1084**	**0.1084**		**488.9730**	**488.9730**	**0.1581**		**492.9266**

Escondido Goal Line BESS - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Crane Use to set Units Phase 1 - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2700e-003	3.1100e-003	0.0402	1.3000e-004	0.0164	8.0000e-005	0.0165	4.3600e-003	7.0000e-005	4.4300e-003		13.3547	13.3547	3.5000e-004	3.5000e-004	13.4669
Total	**5.2700e-003**	**3.1100e-003**	**0.0402**	**1.3000e-004**	**0.0164**	**8.0000e-005**	**0.0165**	**4.3600e-003**	**7.0000e-005**	**4.4300e-003**		**13.3547**	**13.3547**	**3.5000e-004**	**3.5000e-004**	**13.4669**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2737	2.7720	1.5194	5.0500e-003		0.1178	0.1178		0.1084	0.1084	0.0000	488.9730	488.9730	0.1581		492.9266
Total	**0.2737**	**2.7720**	**1.5194**	**5.0500e-003**		**0.1178**	**0.1178**		**0.1084**	**0.1084**	**0.0000**	**488.9730**	**488.9730**	**0.1581**		**492.9266**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Crane Use to set Units Phase 1 - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2700e-003	3.1100e-003	0.0402	1.3000e-004	0.0164	8.0000e-005	0.0165	4.3600e-003	7.0000e-005	4.4300e-003		13.3547	13.3547	3.5000e-004	3.5000e-004	13.4669
Total	**5.2700e-003**	**3.1100e-003**	**0.0402**	**1.3000e-004**	**0.0164**	**8.0000e-005**	**0.0165**	**4.3600e-003**	**7.0000e-005**	**4.4300e-003**		**13.3547**	**13.3547**	**3.5000e-004**	**3.5000e-004**	**13.4669**

3.6 Grading and Excavation for Pads Phase 2 - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5712	0.0000	0.5712	0.0635	0.0000	0.0635			0.0000			0.0000
Off-Road	0.6561	7.0546	8.9911	0.0180		0.2433	0.2433		0.2238	0.2238		1,742.0024	1,742.0024	0.5634		1,756.0873
Total	**0.6561**	**7.0546**	**8.9911**	**0.0180**	**0.5712**	**0.2433**	**0.8145**	**0.0635**	**0.2238**	**0.2873**		**1,742.0024**	**1,742.0024**	**0.5634**		**1,756.0873**

Escondido Goal Line BESS - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Grading and Excavation for Pads Phase 2 - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0747	4.7797	1.3817	0.0204	0.6379	0.0403	0.6781	0.1748	0.0385	0.2134		2,274.8253	2,274.8253	0.1328	0.3626	2,386.1992
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0750	0.0426	0.5701	1.8600e-003	0.2464	1.1500e-003	0.2476	0.0654	1.0600e-003	0.0664		195.6531	195.6531	4.8500e-003	4.9200e-003	197.2399
Total	**0.1497**	**4.8223**	**1.9519**	**0.0223**	**0.8843**	**0.0414**	**0.9257**	**0.2402**	**0.0396**	**0.2798**		**2,470.4784**	**2,470.4784**	**0.1376**	**0.3675**	**2,583.4391**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5712	0.0000	0.5712	0.0635	0.0000	0.0635			0.0000			0.0000
Off-Road	0.6561	7.0546	8.9911	0.0180		0.2433	0.2433		0.2238	0.2238	0.0000	1,742.0024	1,742.0024	0.5634		1,756.0873
Total	**0.6561**	**7.0546**	**8.9911**	**0.0180**	**0.5712**	**0.2433**	**0.8145**	**0.0635**	**0.2238**	**0.2873**	**0.0000**	**1,742.0024**	**1,742.0024**	**0.5634**		**1,756.0873**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Grading and Excavation for Pads Phase 2 - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0747	4.7797	1.3817	0.0204	0.6379	0.0403	0.6781	0.1748	0.0385	0.2134		2,274.8253	2,274.8253	0.1328	0.3626	2,386.1992
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0750	0.0426	0.5701	1.8600e-003	0.2464	1.1500e-003	0.2476	0.0654	1.0600e-003	0.0664		195.6531	195.6531	4.8500e-003	4.9200e-003	197.2399
Total	**0.1497**	**4.8223**	**1.9519**	**0.0223**	**0.8843**	**0.0414**	**0.9257**	**0.2402**	**0.0396**	**0.2798**		**2,470.4784**	**2,470.4784**	**0.1376**	**0.3675**	**2,583.4391**

3.7 Buiding Construction including offsite work and concrete placement Phase 2 - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2861	12.4502	19.5472	0.0307		0.4047	0.4047		0.3869	0.3869		2,867.9619	2,867.9619	0.6505		2,884.2248
Total	**1.2861**	**12.4502**	**19.5472**	**0.0307**		**0.4047**	**0.4047**		**0.3869**	**0.3869**		**2,867.9619**	**2,867.9619**	**0.6505**		**2,884.2248**

Escondido Goal Line BESS - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Buiding Construction including offsite work and concrete placement Phase 2 - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0105	0.4347	0.1511	1.9300e-003	0.0677	2.6100e-003	0.0703	0.0195	2.4900e-003	0.0220		209.2992	209.2992	7.1700e-003	0.0303	218.5074
Worker	0.1749	0.0994	1.3303	4.3500e-003	0.5750	2.6900e-003	0.5777	0.1525	2.4700e-003	0.1550		456.5238	456.5238	0.0113	0.0115	460.2265
Total	**0.1854**	**0.5342**	**1.4814**	**6.2800e-003**	**0.6428**	**5.3000e-003**	**0.6481**	**0.1720**	**4.9600e-003**	**0.1770**		**665.8231**	**665.8231**	**0.0185**	**0.0418**	**678.7339**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2861	12.4502	19.5472	0.0307		0.4047	0.4047		0.3869	0.3869	0.0000	2,867.9619	2,867.9619	0.6505		2,884.2248
Total	**1.2861**	**12.4502**	**19.5472**	**0.0307**		**0.4047**	**0.4047**		**0.3869**	**0.3869**	**0.0000**	**2,867.9619**	**2,867.9619**	**0.6505**		**2,884.2248**

Escondido Goal Line BESS - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Buiding Construction including offsite work and concrete placement Phase 2 - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0105	0.4347	0.1511	1.9300e-003	0.0677	2.6100e-003	0.0703	0.0195	2.4900e-003	0.0220		209.2992	209.2992	7.1700e-003	0.0303	218.5074
Worker	0.1749	0.0994	1.3303	4.3500e-003	0.5750	2.6900e-003	0.5777	0.1525	2.4700e-003	0.1550		456.5238	456.5238	0.0113	0.0115	460.2265
Total	**0.1854**	**0.5342**	**1.4814**	**6.2800e-003**	**0.6428**	**5.3000e-003**	**0.6481**	**0.1720**	**4.9600e-003**	**0.1770**		**665.8231**	**665.8231**	**0.0185**	**0.0418**	**678.7339**

3.7 Buiding Construction including offsite work and concrete placement Phase 2 - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2861	12.4502	19.5472	0.0307		0.4047	0.4047		0.3869	0.3869		2,867.9619	2,867.9619	0.6505		2,884.2248
Total	**1.2861**	**12.4502**	**19.5472**	**0.0307**		**0.4047**	**0.4047**		**0.3869**	**0.3869**		**2,867.9619**	**2,867.9619**	**0.6505**		**2,884.2248**

Escondido Goal Line BESS - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Buiding Construction including offsite work and concrete placement Phase 2 - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0102	0.4302	0.1496	1.8900e-003	0.0677	2.5800e-003	0.0703	0.0195	2.4700e-003	0.0220		204.9755	204.9755	7.3300e-003	0.0297	213.9994
Worker	0.1657	0.0913	1.2632	4.2200e-003	0.5750	2.5300e-003	0.5776	0.1525	2.3300e-003	0.1549		446.6640	446.6640	0.0104	0.0109	450.1754
Total	**0.1759**	**0.5215**	**1.4128**	**6.1100e-003**	**0.6428**	**5.1100e-003**	**0.6479**	**0.1720**	**4.8000e-003**	**0.1768**		**651.6395**	**651.6395**	**0.0177**	**0.0406**	**664.1748**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2861	12.4502	19.5472	0.0307		0.4047	0.4047		0.3869	0.3869	0.0000	2,867.9619	2,867.9619	0.6505		2,884.2248
Total	**1.2861**	**12.4502**	**19.5472**	**0.0307**		**0.4047**	**0.4047**		**0.3869**	**0.3869**	**0.0000**	**2,867.9619**	**2,867.9619**	**0.6505**		**2,884.2248**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Buiding Construction including offsite work and concrete placement Phase 2 - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0102	0.4302	0.1496	1.8900e-003	0.0677	2.5800e-003	0.0703	0.0195	2.4700e-003	0.0220		204.9755	204.9755	7.3300e-003	0.0297	213.9994
Worker	0.1657	0.0913	1.2632	4.2200e-003	0.5750	2.5300e-003	0.5776	0.1525	2.3300e-003	0.1549		446.6640	446.6640	0.0104	0.0109	450.1754
Total	**0.1759**	**0.5215**	**1.4128**	**6.1100e-003**	**0.6428**	**5.1100e-003**	**0.6479**	**0.1720**	**4.8000e-003**	**0.1768**		**651.6395**	**651.6395**	**0.0177**	**0.0406**	**664.1748**

3.8 Crane Use to set Units Phase 2 - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2737	2.7720	1.5194	5.0500e-003		0.1178	0.1178		0.1084	0.1084		488.9730	488.9730	0.1581		492.9266
Total	**0.2737**	**2.7720**	**1.5194**	**5.0500e-003**		**0.1178**	**0.1178**		**0.1084**	**0.1084**		**488.9730**	**488.9730**	**0.1581**		**492.9266**

Escondido Goal Line BESS - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Crane Use to set Units Phase 2 - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7400e-003	2.6100e-003	0.0361	1.2000e-004	0.0164	7.0000e-005	0.0165	4.3600e-003	7.0000e-005	4.4200e-003		12.7618	12.7618	3.0000e-004	3.1000e-004	12.8622
Total	**4.7400e-003**	**2.6100e-003**	**0.0361**	**1.2000e-004**	**0.0164**	**7.0000e-005**	**0.0165**	**4.3600e-003**	**7.0000e-005**	**4.4200e-003**		**12.7618**	**12.7618**	**3.0000e-004**	**3.1000e-004**	**12.8622**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2737	2.7720	1.5194	5.0500e-003		0.1178	0.1178		0.1084	0.1084	0.0000	488.9730	488.9730	0.1581		492.9266
Total	**0.2737**	**2.7720**	**1.5194**	**5.0500e-003**		**0.1178**	**0.1178**		**0.1084**	**0.1084**	**0.0000**	**488.9730**	**488.9730**	**0.1581**		**492.9266**

Escondido Goal Line BESS - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Crane Use to set Units Phase 2 - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7400e-003	2.6100e-003	0.0361	1.2000e-004	0.0164	7.0000e-005	0.0165	4.3600e-003	7.0000e-005	4.4200e-003		12.7618	12.7618	3.0000e-004	3.1000e-004	12.8622
Total	**4.7400e-003**	**2.6100e-003**	**0.0361**	**1.2000e-004**	**0.0164**	**7.0000e-005**	**0.0165**	**4.3600e-003**	**7.0000e-005**	**4.4200e-003**		**12.7618**	**12.7618**	**3.0000e-004**	**3.1000e-004**	**12.8622**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0120	0.0140	0.1190	2.5000e-004	0.0291	2.0000e-004	0.0293	7.7600e-003	1.8000e-004	7.9400e-003		26.6155	26.6155	1.8100e-003	1.1500e-003	27.0047
Unmitigated	0.0120	0.0140	0.1190	2.5000e-004	0.0291	2.0000e-004	0.0293	7.7600e-003	1.8000e-004	7.9400e-003		26.6155	26.6155	1.8100e-003	1.1500e-003	27.0047

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	4.00	0.00	0.00	9,880	9,880
Total	4.00	0.00	0.00	9,880	9,880

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

Escondido Goal Line BESS - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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October 14, 2022

Corinne Lytle Bonine
Chambers Group, Inc.
9909 Huennekens Street, Suite 206
San Diego, CA 92121

RE: Goal Line Battery Energy Storage System Project Greenhouse Gas Screening Letter – Escondido CA

The purpose of this greenhouse gas (GHG) screening assessment, conducted for the Ramona Creelman EnerSmart Battery Energy Storage System (BESS) Project, is to determine GHG significance under CEQA specific to estimated GHG emission produced by the construction and operations of the Project. More specifically, this screening analysis is to provide documentation showing Project conformance with greenhouse gas laws and regulations in the City of Escondido.

City of Escondido General Plan

A project's adherence to the City's General Plan can be determined through demonstrating consistency with General Plan assumptions and policies. If a project would generate GHG emissions consistent with the maximum allowable buildout as defined by the General Plan, the Project would be consistent with the estimated GHG emissions for that site.

City of Escondido Climate Action Plan

The City of Escondido developed an update to the 2013 Climate Action Plan (CAP) (City of Escondido, 2020). The CAP outlines strategies and measures that the City will undertake to achieve its proportional share of State GHG emissions reduction targets. The CAP's strategies and measures are designed to reduce GHG emissions for build-out under the General Plan. The CAP does so by (1) calculating a baseline GHG emissions level as of 2012; and (2) estimating future 2030 and 2035 emissions under a business as usual standard; and (3) implementing state mandated GHG reduction targets. Measures to reduce GHG emissions for projects with land use consistent with the City's General Plan are found in the CAP. The CAP aims to achieve the following local community wide GHG reduction targets:

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- 4 percent below 2012 levels (907,000 MTCO2e) by 2020,
- 42 percent below 2012 levels (547,000 MTCO2e) by 2030, and
- 52 percent below 2012 levels (456,000 MTCO2e) by 2035.

The City has also developed a Climate Action Plan Consistency Review Checklist (CAP Consistency Checklist), in conjunction with the CAP, to provide a streamlined review process for proposed new development projects that are subject to discretionary review and trigger environmental review pursuant to CEQA. This memorandum summarizes the methodology and application of a GHG screening threshold (set at 500 metric tons carbon dioxide equivalent [$MTCO_2e$] per year) for new development projects in order to determine if a project would need to demonstrate consistency with the CAP through the CAP Consistency Checklist. The memorandum also describes application of a numerical GHG threshold (set at 2.0 $MTCO_2e$ per service population (SP) per year) for use as a supplemental method for demonstrating consistency with the CAP.

Project Location

The Project site is located at 555 Tulip Street and will utilize approximately 4.5 acres of a larger 6.5 acre parcel containing an existing electrical generation facility and a non-operational ice-rink facility (Project Site).

Project Description

Onward Energy proposes to construct, own, and operate the Goal Line Reliability Project (Project), a lithium-ion battery energy storage facility capable of delivering up to 150 MW of energy storage capacity with a 4-to-8-hour capacity rating. Achievement of 150 MW of storage would be completed in three phases with a demolition phase removing the existing ice-rink facility, Phase 1 storing 50 MW for 8 hours (400 MWh), and Phase 2 storing approximately 100 MW for 4 hours (400 MWh) or another 50 MW for 8 hours (400 MWh).

The Project consists of lithium-based battery modules installed in racks and housed within purpose-built outdoor Battery Energy Storage System (BESS) enclosures. A typical BESS enclosure will house hundreds of battery modules where each enclosure is typically capable of storing between 0.4 to 5 megawatt-hours (MWh) of energy.

The dimensions of a typical BESS enclosure vary between manufacturers and are arranged in repeated "blocks" across the site. System blocks may consist of a single enclosure, or several smaller enclosures set side-by-side to create banks of batteries with similar overall dimensions. Smaller enclosures are typically closely spaced or physically attached at the time to construction, and larger enclosures are placed in smaller groupings or individually. An enclosure grouping typically consist of 4 to 12 enclosures measuring approximately 30 feet long by 6 feet wide with

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a height of 10 feet. Smaller enclosures may be as small as 3.5 feet long by 5 feet wide by 8 feet tall while larger enclosures may measure over 50 feet long by 12 feet wide with a height of up to 20 feet. Enclosures may also be double-stacked if designed to do so, which is anticipated for this Project. However, the number, size, layout, and capabilities of each enclosure will vary depending on the battery, enclosure manufacturer design, and BESS system manufacturer(s) selected for the Project. Regardless of the system manufacturer, the Project's developed footprint and overall capability will remain substantially the same. In some instances, the battery enclosures may contain inverters which convert low voltage direct current (DC) to alternating current (AC) (and vice-versa when charging).

Energy stored in the Project will then be discharged into the grid when the energy is needed, providing important electrical reliability services to the local area. The Project will interconnect to the existing, adjacent SDGE Esco Substation via an existing overhead generation tie-line.

It is expected that between two to four staff members will visit the site weekly and as needed for maintenance and monitoring of the Project. The Project will be operated remotely with no permanent on-site operations personnel. No changes are proposed to the existing electrical generation assets or operations as part of the Project.

The Project would be constructed three parts to include demolition of the existing facilities followed by Phase 1. Phase 2 would be constructed at a later date which has not yet been established. For purposes of this analysis, Phase 2 was assumed to be constructed one year later. Operations of Phase 1 and Phase 2 are assumed as the baseline analysis.

Project construction includes demolition of the existing facility, site preparation and grading, installation of drainage and retention basins, foundations/supports, setting battery enclosures, wiring and electrical system installation, and assembly of the accessory components including inverter transformers and generation step-up transformers. Earth cut and fill are proposed to be balanced within the Project site. It is assumed up to 30,000 cubic yards (CY) of material may needed with an additional 5,000 CY of surfacing material (asphalt and/or open graded crushed rock aggregate) to complete the project.

The proposed construction schedule includes approximately 6 months for demolition and 15 months for Phase 1 construction. Phase 2 construction will follow Phase 1 and would also take roughly 15 months to complete. Additional offsite infrastructure upgrades to existing offsite facilities may be required with Phase 2 but would occur during the 15-month duration.

The facility would be unoccupied and is designed for remote operation; therefore, no septic system or sewer connection would be required. The proposed Project would be operated independent operator remotely, however, would require periodic site visits for maintenance activities along with basic landscaping and weed control. Access to the site would be expected 3 times per year. For purposes of this analysis however, it was assumed that daily weekday

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trips would be taken with up to 4 trips per day. This assumption is conservative and would be worst-case in terms of GHG emission generation.

GHG Modeling

GHGs analyzed in this study are Carbon Dioxide (CO_2), Methane (CH_4), and Nitrous Oxide (N_2O) since these are the most prevalent GHG gasses generated from projects like this. To simplify GHG calculations, both CH_4 and N_2O are converted to equivalent amounts of CO_2 and are identified as carbon dioxide equivalent (CO_2e). CO_2e is calculated by multiplying the calculated levels of CH_4 and N_2O by a Global Warming Potential (GWP). The Intergovernmental Panel on Climate Change (IPCC) as source data for GWP factors for both CH_4 and N_2O using the 100 year periods of 25, 298 respectively (IPCC, 2007).

GHGs related to construction and daily operations were calculated using the latest CalEEMod 2020.4.0 GHG model. The construction module in CalEEMod is used to calculate the emissions associated with the construction of the project. The CalEEMod input/output model is shown in ***Attachment A*** to this report. The model was manually updated to include 4 trips per day to the site. This is not expected but was done to provide conservative GHG estimates.

GHG emissions for Construction are provided as a total GHG emission generated over the construction duration. Based on South Coast Air Quality Management District (SCAQMD) methodology, it is recommended to average this emission over a 30 year duration.

Proposed Project Related Construction Emissions

The Project construction dates were estimated based on a construction kickoff starting in the middle of 2023. The project would be constructed in three phases and would start with demolition which would be expected to last 6 months. Phase 1 would follow and would be expected to take up to 15 months to complete. Phase 2 would commence at a later date which has not yet been established. For purposes of this analysis, it is assumed that construction for phase 2 would be one year later. The project will import material and is assumed to be as much as 30,000 CY of soil and up to 5,000 CY of surface material such as asphalt or crushed stone with roughly ½ of the material necessary for each phase. Phase 2 may have additional offsite construction in the immediate vicinity of the project, so additional equipment was assumed as part of this phase.

Table 1 shows the expected timeframes for the construction processes for all the Project infrastructure, facilities, improvements and structures at the proposed Project location, as well as the expected number of pieces of equipment.

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Table 1: Expected Construction Equipment and Durations

Equipment Identification	Proposed Start	Proposed Completion	Quantity
Demolition Phase 1 and Phase 2 Area	06/01/2023	12/27/2023	
Excavators			3
Rubber Tired Dozers			2
Skid Steer Loaders			2
Grading and Excavation for Pads Phase 1	01/01/2024	03/22/2024	
Excavators			1
Graders			1
Skid Steer Loaders			3
Building Construction and concrete placement Phase 1	03/23/2024	02/28/2025	
Generator Sets			1
Plate Compactors			1
Rollers			1
Rough Terrain Forklifts			3
Skid Steer Loaders			1
Welders			1
Crane Use to set Units Phase 1	12/01/2024	01/24/2025	
Cranes			1
Grading and Excavation for Pads Phase 2	02/01/2026	04/24/2026	
Excavators			1
Graders			1
Skid Steer Loaders			3
Building Construction including offsite work and concrete placement Phase 2	04/25/2026	04/02/2027	
Generator Sets			1
Plate Compactors			1
Rollers			1
Rough Terrain Forklifts			4
Skid Steer Loaders			2
Welders			2
Crane Use to set Units Phase 2	01/15/2027	03/11/2027	
Cranes			1
This equipment list is based upon equipment inventory and durations provide by the Project engineer.			

Based on modeling conducted, construction of the project would generate approximately 1,234.16 MT CO_2e over the construction life of the project. Given the fact that the total emissions would ultimately contribute to cumulative levels, it is acceptable to average the total construction emission over the life of the project which is assumed to be 30 years. Given this,

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the project would add approximately 141.14 $MTCO_2e$ per year. A summary of the construction emissions is shown in Table 2.

Table 2: Annual Construction Emissions MT CO_2e

Year	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e (MT)
2023	0.00	258.60	258.60	0.08	0.00	261.14
2024	0.00	383.91	383.91	0.07	0.01	389.86
2025	0.00	59.42	59.42	0.01	0.00	59.94
2026	0.00	401.89	401.89	0.07	0.01	407.70
2027	0.00	114.58	114.58	0.02	0.00	115.52
Total						1,234.16
Amortized 30 Year annual Emissions						41.14
Expected Construction emissions are based upon CalEEMod modeling assumptions (Table 1 above)						

Project Related Operational Emissions

Operational-related emissions would result primarily from vehicle exhaust emissions associated with the maintenance crews traveling to and from the site. The larger contribution to GHGs however are related to amortized construction emissions. The combined emissions from both operations and construction are summarized below in Table 3 on the following page.

The City of Escondido has a CAP Checklist screening level suggesting that projects that emit fewer than 500 MT CO_2e would have a less than significant impact on the environment. The proposed project would produce 44.35 MT CO2e per year which would be less than the City's screening threshold and would have a less than significant GHG impact. It should also be noted that the existing use on the site included an Ice Rink opened to the public which generated a significantly higher operational emission from patrons to the facility. These emissions have been removed from the GHG inventory for the City, however no corrections were applied to the proposed Project.

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Table 3: Operational Emissions Summary MT/Year

Year	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e (MT/Yr)
Area	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	3.16	3.16	0.00	0.00	3.20
Waste	0.00	0.00	0.00	0.00	0.00	0.00
Water	0.00	0.00	0.00	0.00	0.00	0.00
Sub Total (MT/Year)						**3.21**
Amortized Construction Emissions (Table 2 above)						**41.14**
Total Construction and Operations (MT/Year)						**44.35**
Data is presented in decimal format and may have rounding errors.						

As discussed above, the project would be considered less than significant for GHG emissions. If you have any questions, please do not hesitate to contact me directly at (760) 473-1253.

Sincerely,
Ldn Consulting, Inc.

DRAFT

Jeremy Louden

Attachments:

Attachment A: CALEEMOD Inputs/Outputs

Sources:

City of Escondido. (2020). Climate Action Plan (2020).

IPCC. (2007). *IPCC Fourth Assessment Report: Climate Change 2007 : Working Group I: The Physical Science Basis.* Retrieved from https://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Escondido Goal Line BESS

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	4.50	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2025
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project would install battery storage containers and operations onsite will be remote

Construction Phase - Project would install fully constructed containers shipped to the site on trucks. Cranes lift the units off and set them on either a concrete pad or Steel colums driven into the ground.

Off-road Equipment - ce

Off-road Equipment - ce

Off-road Equipment - ce

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - CE

Off-road Equipment - ce

Off-road Equipment - ce

Escondido Goal Line BESS - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Trips and VMT - Worker and vendor trips per day for concrete placement added. Trips added for crane operator

Demolition -

Grading -

Architectural Coating -

Vehicle Trips - 4 trips per day

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use -

Water And Wastewater - Basic onsite landscaping will be watered 100 gal/day

Solid Waste - solid waste is not likely though 1 ton per year was assumed. Systems will be remotly managed.

Construction Off-road Equipment Mitigation - Tier 3 equipment with DPF

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	245.00
tblConstructionPhase	NumDays	230.00	40.00
tblConstructionPhase	NumDays	230.00	245.00
tblConstructionPhase	NumDays	230.00	40.00
tblConstructionPhase	NumDays	20.00	150.00
tblConstructionPhase	NumDays	8.00	60.00
tblConstructionPhase	NumDays	8.00	60.00
tblGrading	MaterialImported	0.00	17,500.00
tblGrading	MaterialImported	0.00	17,500.00
tblLandUse	LotAcreage	0.00	4.50
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	4.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	PhaseName		Buiding Construction including offsite work and concrete placement Phase 2
tblOffRoadEquipment	PhaseName		Buiding Construction including offsite work and concrete placement Phase 2
tblOffRoadEquipment	PhaseName		Buiding Construction including offsite work and concrete placement Phase 2
tblOffRoadEquipment	PhaseName		Grading and Excavation for Pads Phase 2
tblOffRoadEquipment	PhaseName		Buiding Construction including offsite work and concrete placement Phase 2
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	18.00	12.00
tblTripsAndVMT	WorkerTripNumber	13.00	30.00
tblTripsAndVMT	WorkerTripNumber	0.00	70.00
tblTripsAndVMT	WorkerTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	13.00	30.00
tblTripsAndVMT	WorkerTripNumber	0.00	70.00
tblTripsAndVMT	WorkerTripNumber	0.00	2.00
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	WD_TR	0.00	4.00

2.0 Emissions Summary

Escondido Goal Line BESS - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.1578	1.5736	1.4339	2.9200e-003	0.0502	0.0698	0.1200	8.8100e-003	0.0643	0.0731	0.0000	258.6031	258.6031	0.0790	1.9000e-003	261.1421
2024	0.1472	1.4483	1.9738	4.2800e-003	0.1067	0.0471	0.1538	0.0260	0.0447	0.0707	0.0000	383.9125	383.9125	0.0654	0.0145	389.8594
2025	0.0261	0.2330	0.3572	6.8000e-004	0.0136	7.7700e-003	0.0214	3.6600e-003	7.4000e-003	0.0111	0.0000	59.4184	59.4184	0.0108	8.4000e-004	59.9373
2026	0.1543	1.5175	2.2096	4.5200e-003	0.0993	0.0452	0.1445	0.0240	0.0430	0.0670	0.0000	401.8856	401.8856	0.0734	0.0134	407.7047
2027	0.0533	0.4834	0.7226	1.3200e-003	0.0210	0.0159	0.0369	5.6400e-003	0.0151	0.0207	0.0000	114.5842	114.5842	0.0229	1.2100e-003	115.5181
Maximum	**0.1578**	**1.5736**	**2.2096**	**4.5200e-003**	**0.1067**	**0.0698**	**0.1538**	**0.0260**	**0.0643**	**0.0731**	**0.0000**	**401.8856**	**401.8856**	**0.0790**	**0.0145**	**407.7047**

Escondido Goal Line BESS - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.1578	1.5736	1.4339	2.9200e-003	0.0502	0.0698	0.1200	8.8100e-003	0.0643	0.0731	0.0000	258.6028	258.6028	0.0790	1.9000e-003	261.1418
2024	0.1472	1.4483	1.9738	4.2800e-003	0.1067	0.0471	0.1538	0.0260	0.0447	0.0707	0.0000	383.9122	383.9122	0.0654	0.0145	389.8591
2025	0.0261	0.2330	0.3572	6.8000e-004	0.0136	7.7700e-003	0.0214	3.6600e-003	7.4000e-003	0.0111	0.0000	59.4184	59.4184	0.0108	8.4000e-004	59.9372
2026	0.1543	1.5175	2.2096	4.5200e-003	0.0993	0.0452	0.1445	0.0240	0.0430	0.0670	0.0000	401.8852	401.8852	0.0734	0.0134	407.7044
2027	0.0533	0.4834	0.7226	1.3200e-003	0.0210	0.0159	0.0369	5.6400e-003	0.0151	0.0207	0.0000	114.5841	114.5841	0.0229	1.2100e-003	115.5180
Maximum	**0.1578**	**1.5736**	**2.2096**	**4.5200e-003**	**0.1067**	**0.0698**	**0.1538**	**0.0260**	**0.0643**	**0.0731**	**0.0000**	**401.8852**	**401.8852**	**0.0790**	**0.0145**	**407.7044**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2023	8-31-2023	0.7581	0.7581
2	9-1-2023	11-30-2023	0.7502	0.7502
3	12-1-2023	2-29-2024	0.5203	0.5203
4	3-1-2024	5-31-2024	0.3915	0.3915
5	6-1-2024	8-31-2024	0.3708	0.3708
6	9-1-2024	11-30-2024	0.3678	0.3678
7	12-1-2024	2-28-2025	0.4163	0.4163

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

11	**12-1-2025**	**2-28-2026**	0.1268	0.1268
12	**3-1-2026**	**5-31-2026**	0.4379	0.4379
13	**6-1-2026**	**8-31-2026**	0.4736	0.4736
14	**9-1-2026**	**11-30-2026**	0.4694	0.4694
15	**12-1-2026**	**2-28-2027**	0.5133	0.5133
16	**3-1-2027**	**5-31-2027**	0.1821	0.1821
		Highest	0.7581	0.7581

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.5400e-003	1.8000e-003	0.0152	3.0000e-005	3.7000e-003	3.0000e-005	3.7200e-003	9.9000e-004	2.0000e-005	1.0100e-003	0.0000	3.1567	3.1567	2.1000e-004	1.3000e-004	3.2021
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.5400e-003**	**1.8000e-003**	**0.0152**	**3.0000e-005**	**3.7000e-003**	**3.0000e-005**	**3.7200e-003**	**9.9000e-004**	**2.0000e-005**	**1.0100e-003**	**0.0000**	**3.1567**	**3.1567**	**2.1000e-004**	**1.3000e-004**	**3.2021**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.5400e-003	1.8000e-003	0.0152	3.0000e-005	3.7000e-003	3.0000e-005	3.7200e-003	9.9000e-004	2.0000e-005	1.0100e-003	0.0000	3.1567	3.1567	2.1000e-004	1.3000e-004	3.2021
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.5400e-003**	**1.8000e-003**	**0.0152**	**3.0000e-005**	**3.7000e-003**	**3.0000e-005**	**3.7200e-003**	**9.9000e-004**	**2.0000e-005**	**1.0100e-003**	**0.0000**	**3.1567**	**3.1567**	**2.1000e-004**	**1.3000e-004**	**3.2021**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition Phase 1 and Phase 2 Area	Demolition	6/1/2023	12/27/2023	5	150	
2	Grading and Excavation for Pads Phase 1	Grading	1/1/2024	3/22/2024	5	60	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3	Building Construction and concrete placement Phase 1	Building Construction	3/23/2024	2/28/2025	5	245	
4	Crane Use to set Units Phase 1	Building Construction	12/1/2024	1/24/2025	5	40	
5	Grading and Excavation for Pads Phase 2	Grading	2/1/2026	4/24/2026	5	60	
6	Buiding Construction including offsite work and concrete placement Phase 2	Building Construction	4/25/2026	4/2/2027	5	245	
7	Crane Use to set Units Phase 2	Building Construction	1/15/2027	3/11/2027	5	40	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 30

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition Phase 1 and Phase 2 Area	Excavators	3	8.00	158	0.38
Demolition Phase 1 and Phase 2 Area	Rubber Tired Dozers	2	8.00	247	0.40
Demolition Phase 1 and Phase 2 Area	Skid Steer Loaders	2	8.00	65	0.37
Grading and Excavation for Pads Phase 1	Excavators	1	8.00	158	0.38
Grading and Excavation for Pads Phase 1	Graders	1	8.00	187	0.41
Grading and Excavation for Pads Phase 1	Skid Steer Loaders	3	8.00	65	0.37
Building Construction and concrete placement Phase 1	Generator Sets	1	8.00	84	0.74
Building Construction and concrete placement Phase 1	Plate Compactors	1	4.00	8	0.43
Building Construction and concrete placement Phase 1	Rollers	1	4.00	80	0.38
Building Construction and concrete placement Phase 1	Rough Terrain Forklifts	3	8.00	100	0.40
Building Construction and concrete placement Phase 1	Skid Steer Loaders	1	7.00	65	0.37
Building Construction and concrete placement Phase 1	Welders	1	8.00	46	0.45

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Crane Use to set Units Phase 1	Cranes	1	7.00	231	0.29
Grading and Excavation for Pads Phase 2	Excavators	1	8.00	158	0.38
Grading and Excavation for Pads Phase 2	Graders	1	8.00	187	0.41
Grading and Excavation for Pads Phase 2	Skid Steer Loaders	3	8.00	65	0.37
Buiding Construction including offsite work and concrete placement Phase 2	Generator Sets	1	8.00	84	0.74
Buiding Construction including offsite work and concrete placement Phase 2	Plate Compactors	1	4.00	8	0.43
Buiding Construction including offsite work and concrete placement Phase 2	Rollers	1	4.00	80	0.38
Buiding Construction including offsite work and concrete placement Phase 2	Rough Terrain Forklifts	4	8.00	100	0.40
Buiding Construction including offsite work and concrete placement Phase 2	Skid Steer Loaders	2	7.00	65	0.37
Buiding Construction including offsite work and concrete placement Phase 2	Welders	2	8.00	46	0.45
Crane Use to set Units Phase 2	Cranes	1	7.00	231	0.29

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition Phase 1 and Phase 2 Area	7	12.00	0.00	364.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading and Excavation for Pads P	5	30.00	0.00	2,188.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction and concrete placeme	8	70.00	10.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Crane Use to set Units Phase 1	1	2.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading and Excavation for Pads P	5	30.00	0.00	2,188.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Buiding Construction including offsite work	11	70.00	10.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Crane Use to set Units Phase 2	1	2.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition Phase 1 and Phase 2 Area - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0399	0.0000	0.0399	6.0400e-003	0.0000	6.0400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1549	1.5472	1.4068	2.7500e-003		0.0696	0.0696		0.0640	0.0640	0.0000	241.8979	241.8979	0.0782	0.0000	243.8538
Total	**0.1549**	**1.5472**	**1.4068**	**2.7500e-003**	**0.0399**	**0.0696**	**0.1095**	**6.0400e-003**	**0.0640**	**0.0701**	**0.0000**	**241.8979**	**241.8979**	**0.0782**	**0.0000**	**243.8538**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-004	0.0247	6.5700e-003	1.1000e-004	3.1200e-003	2.0000e-004	3.3200e-003	8.6000e-004	1.9000e-004	1.0500e-003	0.0000	10.9226	10.9226	5.5000e-004	1.7400e-003	11.4540
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4400e-003	1.6900e-003	0.0206	6.0000e-005	7.2200e-003	4.0000e-005	7.2600e-003	1.9200e-003	4.0000e-005	1.9500e-003	0.0000	5.7825	5.7825	1.7000e-004	1.6000e-004	5.8343
Total	**2.8400e-003**	**0.0264**	**0.0271**	**1.7000e-004**	**0.0103**	**2.4000e-004**	**0.0106**	**2.7800e-003**	**2.3000e-004**	**3.0000e-003**	**0.0000**	**16.7052**	**16.7052**	**7.2000e-004**	**1.9000e-003**	**17.2883**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition Phase 1 and Phase 2 Area - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0399	0.0000	0.0399	6.0400e-003	0.0000	6.0400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1549	1.5472	1.4068	2.7500e-003		0.0696	0.0696		0.0640	0.0640	0.0000	241.8976	241.8976	0.0782	0.0000	243.8535
Total	**0.1549**	**1.5472**	**1.4068**	**2.7500e-003**	**0.0399**	**0.0696**	**0.1095**	**6.0400e-003**	**0.0640**	**0.0701**	**0.0000**	**241.8976**	**241.8976**	**0.0782**	**0.0000**	**243.8535**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-004	0.0247	6.5700e-003	1.1000e-004	3.1200e-003	2.0000e-004	3.3200e-003	8.6000e-004	1.9000e-004	1.0500e-003	0.0000	10.9226	10.9226	5.5000e-004	1.7400e-003	11.4540
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4400e-003	1.6900e-003	0.0206	6.0000e-005	7.2200e-003	4.0000e-005	7.2600e-003	1.9200e-003	4.0000e-005	1.9500e-003	0.0000	5.7825	5.7825	1.7000e-004	1.6000e-004	5.8343
Total	**2.8400e-003**	**0.0264**	**0.0271**	**1.7000e-004**	**0.0103**	**2.4000e-004**	**0.0106**	**2.7800e-003**	**2.3000e-004**	**3.0000e-003**	**0.0000**	**16.7052**	**16.7052**	**7.2000e-004**	**1.9000e-003**	**17.2883**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading and Excavation for Pads Phase 1 - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0171	0.0000	0.0171	1.9000e-003	0.0000	1.9000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2411	0.2723	5.4000e-004		8.5100e-003	8.5100e-003		7.8300e-003	7.8300e-003	0.0000	47.4224	47.4224	0.0153	0.0000	47.8058
Total	**0.0217**	**0.2411**	**0.2723**	**5.4000e-004**	**0.0171**	**8.5100e-003**	**0.0257**	**1.9000e-003**	**7.8300e-003**	**9.7300e-003**	**0.0000**	**47.4224**	**47.4224**	**0.0153**	**0.0000**	**47.8058**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.3900e-003	0.1472	0.0401	6.4000e-004	0.0187	1.2200e-003	0.0200	5.1500e-003	1.1700e-003	6.3200e-003	0.0000	64.5006	64.5006	3.4000e-003	0.0103	67.6448
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2900e-003	1.5200e-003	0.0193	6.0000e-005	7.2200e-003	4.0000e-005	7.2600e-003	1.9200e-003	3.0000e-005	1.9500e-003	0.0000	5.6376	5.6376	1.5000e-004	1.5000e-004	5.6859
Total	**4.6800e-003**	**0.1487**	**0.0593**	**7.0000e-004**	**0.0260**	**1.2600e-003**	**0.0272**	**7.0700e-003**	**1.2000e-003**	**8.2700e-003**	**0.0000**	**70.1382**	**70.1382**	**3.5500e-003**	**0.0104**	**73.3306**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading and Excavation for Pads Phase 1 - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0171	0.0000	0.0171	1.9000e-003	0.0000	1.9000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2411	0.2723	5.4000e-004		8.5100e-003	8.5100e-003		7.8300e-003	7.8300e-003	0.0000	47.4223	47.4223	0.0153	0.0000	47.8058
Total	**0.0217**	**0.2411**	**0.2723**	**5.4000e-004**	**0.0171**	**8.5100e-003**	**0.0257**	**1.9000e-003**	**7.8300e-003**	**9.7300e-003**	**0.0000**	**47.4223**	**47.4223**	**0.0153**	**0.0000**	**47.8058**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.3900e-003	0.1472	0.0401	6.4000e-004	0.0187	1.2200e-003	0.0200	5.1500e-003	1.1700e-003	6.3200e-003	0.0000	64.5006	64.5006	3.4000e-003	0.0103	67.6448
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2900e-003	1.5200e-003	0.0193	6.0000e-005	7.2200e-003	4.0000e-005	7.2600e-003	1.9200e-003	3.0000e-005	1.9500e-003	0.0000	5.6376	5.6376	1.5000e-004	1.5000e-004	5.6859
Total	**4.6800e-003**	**0.1487**	**0.0593**	**7.0000e-004**	**0.0260**	**1.2600e-003**	**0.0272**	**7.0700e-003**	**1.2000e-003**	**8.2700e-003**	**0.0000**	**70.1382**	**70.1382**	**3.5500e-003**	**0.0104**	**73.3306**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction and concrete placement Phase 1 - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0985	0.9683	1.4581	2.3100e-003		0.0354	0.0354		0.0338	0.0338	0.0000	197.1353	197.1353	0.0431	0.0000	198.2116
Total	**0.0985**	**0.9683**	**1.4581**	**2.3100e-003**		**0.0354**	**0.0354**		**0.0338**	**0.0338**	**0.0000**	**197.1353**	**197.1353**	**0.0431**	**0.0000**	**198.2116**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1400e-003	0.0445	0.0155	2.0000e-004	6.7100e-003	2.7000e-004	6.9700e-003	1.9400e-003	2.5000e-004	2.1900e-003	0.0000	19.9127	19.9127	6.3000e-004	2.8800e-003	20.7881
Worker	0.0180	0.0119	0.1512	4.7000e-004	0.0567	3.0000e-004	0.0570	0.0151	2.7000e-004	0.0153	0.0000	44.2867	44.2867	1.2100e-003	1.1700e-003	44.6655
Total	**0.0191**	**0.0564**	**0.1666**	**6.7000e-004**	**0.0634**	**5.7000e-004**	**0.0640**	**0.0170**	**5.2000e-004**	**0.0175**	**0.0000**	**64.1994**	**64.1994**	**1.8400e-003**	**4.0500e-003**	**65.4536**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction and concrete placement Phase 1 - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0985	0.9683	1.4581	2.3100e-003		0.0354	0.0354		0.0338	0.0338	0.0000	197.1351	197.1351	0.0431	0.0000	198.2114
Total	**0.0985**	**0.9683**	**1.4581**	**2.3100e-003**		**0.0354**	**0.0354**		**0.0338**	**0.0338**	**0.0000**	**197.1351**	**197.1351**	**0.0431**	**0.0000**	**198.2114**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1400e-003	0.0445	0.0155	2.0000e-004	6.7100e-003	2.7000e-004	6.9700e-003	1.9400e-003	2.5000e-004	2.1900e-003	0.0000	19.9127	19.9127	6.3000e-004	2.8800e-003	20.7881
Worker	0.0180	0.0119	0.1512	4.7000e-004	0.0567	3.0000e-004	0.0570	0.0151	2.7000e-004	0.0153	0.0000	44.2867	44.2867	1.2100e-003	1.1700e-003	44.6655
Total	**0.0191**	**0.0564**	**0.1666**	**6.7000e-004**	**0.0634**	**5.7000e-004**	**0.0640**	**0.0170**	**5.2000e-004**	**0.0175**	**0.0000**	**64.1994**	**64.1994**	**1.8400e-003**	**4.0500e-003**	**65.4536**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction and concrete placement Phase 1 - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0197	0.1963	0.3097	4.9000e-004		6.5900e-003	6.5900e-003		6.3100e-003	6.3100e-003	0.0000	41.9610	41.9610	9.0900e-003	0.0000	42.1883
Total	**0.0197**	**0.1963**	**0.3097**	**4.9000e-004**		**6.5900e-003**	**6.5900e-003**		**6.3100e-003**	**6.3100e-003**	**0.0000**	**41.9610**	**41.9610**	**9.0900e-003**	**0.0000**	**42.1883**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.4000e-004	9.3900e-003	3.2300e-003	4.0000e-005	1.4300e-003	6.0000e-005	1.4800e-003	4.1000e-004	5.0000e-005	4.7000e-004	0.0000	4.1580	4.1580	1.4000e-004	6.0000e-004	4.3409
Worker	3.6100e-003	2.3000e-003	0.0302	1.0000e-004	0.0121	6.0000e-005	0.0121	3.2100e-003	6.0000e-005	3.2600e-003	0.0000	9.1971	9.1971	2.4000e-004	2.3000e-004	9.2726
Total	**3.8500e-003**	**0.0117**	**0.0335**	**1.4000e-004**	**0.0135**	**1.2000e-004**	**0.0136**	**3.6200e-003**	**1.1000e-004**	**3.7300e-003**	**0.0000**	**13.3552**	**13.3552**	**3.8000e-004**	**8.3000e-004**	**13.6135**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction and concrete placement Phase 1 - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0197	0.1963	0.3097	4.9000e-004		6.5900e-003	6.5900e-003		6.3100e-003	6.3100e-003	0.0000	41.9609	41.9609	9.0900e-003	0.0000	42.1882
Total	**0.0197**	**0.1963**	**0.3097**	**4.9000e-004**		**6.5900e-003**	**6.5900e-003**		**6.3100e-003**	**6.3100e-003**	**0.0000**	**41.9609**	**41.9609**	**9.0900e-003**	**0.0000**	**42.1882**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.4000e-004	9.3900e-003	3.2300e-003	4.0000e-005	1.4300e-003	6.0000e-005	1.4800e-003	4.1000e-004	5.0000e-005	4.7000e-004	0.0000	4.1580	4.1580	1.4000e-004	6.0000e-004	4.3409
Worker	3.6100e-003	2.3000e-003	0.0302	1.0000e-004	0.0121	6.0000e-005	0.0121	3.2100e-003	6.0000e-005	3.2600e-003	0.0000	9.1971	9.1971	2.4000e-004	2.3000e-004	9.2726
Total	**3.8500e-003**	**0.0117**	**0.0335**	**1.4000e-004**	**0.0135**	**1.2000e-004**	**0.0136**	**3.6200e-003**	**1.1000e-004**	**3.7300e-003**	**0.0000**	**13.3552**	**13.3552**	**3.8000e-004**	**8.3000e-004**	**13.6135**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Crane Use to set Units Phase 1 - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.1900e-003	0.0337	0.0171	6.0000e-005		1.4000e-003	1.4000e-003		1.2900e-003	1.2900e-003	0.0000	4.8793	4.8793	1.5800e-003	0.0000	4.9188
Total	**3.1900e-003**	**0.0337**	**0.0171**	**6.0000e-005**		**1.4000e-003**	**1.4000e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**4.8793**	**4.8793**	**1.5800e-003**	**0.0000**	**4.9188**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	4.0000e-005	4.7000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1378	0.1378	0.0000	0.0000	0.1390
Total	**6.0000e-005**	**4.0000e-005**	**4.7000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1378**	**0.1378**	**0.0000**	**0.0000**	**0.1390**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Crane Use to set Units Phase 1 - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.1900e-003	0.0337	0.0171	6.0000e-005		1.4000e-003	1.4000e-003		1.2900e-003	1.2900e-003	0.0000	4.8793	4.8793	1.5800e-003	0.0000	4.9188
Total	**3.1900e-003**	**0.0337**	**0.0171**	**6.0000e-005**		**1.4000e-003**	**1.4000e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**4.8793**	**4.8793**	**1.5800e-003**	**0.0000**	**4.9188**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	4.0000e-005	4.7000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1378	0.1378	0.0000	0.0000	0.1390
Total	**6.0000e-005**	**4.0000e-005**	**4.7000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1378**	**0.1378**	**0.0000**	**0.0000**	**0.1390**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Crane Use to set Units Phase 1 - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.4600e-003	0.0250	0.0137	5.0000e-005		1.0600e-003	1.0600e-003		9.8000e-004	9.8000e-004	0.0000	3.9923	3.9923	1.2900e-003	0.0000	4.0246
Total	**2.4600e-003**	**0.0250**	**0.0137**	**5.0000e-005**		**1.0600e-003**	**1.0600e-003**		**9.8000e-004**	**9.8000e-004**	**0.0000**	**3.9923**	**3.9923**	**1.2900e-003**	**0.0000**	**4.0246**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	3.6000e-004	0.0000	1.4000e-004	0.0000	1.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1100	0.1100	0.0000	0.0000	0.1109
Total	**4.0000e-005**	**3.0000e-005**	**3.6000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**1.5000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1100**	**0.1100**	**0.0000**	**0.0000**	**0.1109**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Crane Use to set Units Phase 1 - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.4600e-003	0.0250	0.0137	5.0000e-005		1.0600e-003	1.0600e-003		9.8000e-004	9.8000e-004	0.0000	3.9923	3.9923	1.2900e-003	0.0000	4.0246
Total	**2.4600e-003**	**0.0250**	**0.0137**	**5.0000e-005**		**1.0600e-003**	**1.0600e-003**		**9.8000e-004**	**9.8000e-004**	**0.0000**	**3.9923**	**3.9923**	**1.2900e-003**	**0.0000**	**4.0246**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	3.6000e-004	0.0000	1.4000e-004	0.0000	1.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1100	0.1100	0.0000	0.0000	0.1109
Total	**4.0000e-005**	**3.0000e-005**	**3.6000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**1.5000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1100**	**0.1100**	**0.0000**	**0.0000**	**0.1109**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Grading and Excavation for Pads Phase 2 - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0171	0.0000	0.0171	1.9000e-003	0.0000	1.9000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0197	0.2116	0.2697	5.4000e-004		7.3000e-003	7.3000e-003		6.7100e-003	6.7100e-003	0.0000	47.4095	47.4095	0.0153	0.0000	47.7929
Total	**0.0197**	**0.2116**	**0.2697**	**5.4000e-004**	**0.0171**	**7.3000e-003**	**0.0244**	**1.9000e-003**	**6.7100e-003**	**8.6100e-003**	**0.0000**	**47.4095**	**47.4095**	**0.0153**	**0.0000**	**47.7929**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.3300e-003	0.1430	0.0412	6.1000e-004	0.0187	1.2100e-003	0.0200	5.1500e-003	1.1500e-003	6.3000e-003	0.0000	61.8740	61.8740	3.6200e-003	9.8600e-003	64.9035
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0400e-003	1.2500e-003	0.0171	6.0000e-005	7.2200e-003	3.0000e-005	7.2500e-003	1.9200e-003	3.0000e-005	1.9500e-003	0.0000	5.3717	5.3717	1.3000e-004	1.3000e-004	5.4143
Total	**4.3700e-003**	**0.1442**	**0.0582**	**6.7000e-004**	**0.0260**	**1.2400e-003**	**0.0272**	**7.0700e-003**	**1.1800e-003**	**8.2500e-003**	**0.0000**	**67.2457**	**67.2457**	**3.7500e-003**	**9.9900e-003**	**70.3178**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Grading and Excavation for Pads Phase 2 - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0171	0.0000	0.0171	1.9000e-003	0.0000	1.9000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0197	0.2116	0.2697	5.4000e-004		7.3000e-003	7.3000e-003		6.7100e-003	6.7100e-003	0.0000	47.4095	47.4095	0.0153	0.0000	47.7928
Total	**0.0197**	**0.2116**	**0.2697**	**5.4000e-004**	**0.0171**	**7.3000e-003**	**0.0244**	**1.9000e-003**	**6.7100e-003**	**8.6100e-003**	**0.0000**	**47.4095**	**47.4095**	**0.0153**	**0.0000**	**47.7928**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.3300e-003	0.1430	0.0412	6.1000e-004	0.0187	1.2100e-003	0.0200	5.1500e-003	1.1500e-003	6.3000e-003	0.0000	61.8740	61.8740	3.6200e-003	9.8600e-003	64.9035
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0400e-003	1.2500e-003	0.0171	6.0000e-005	7.2200e-003	3.0000e-005	7.2500e-003	1.9200e-003	3.0000e-005	1.9500e-003	0.0000	5.3717	5.3717	1.3000e-004	1.3000e-004	5.4143
Total	**4.3700e-003**	**0.1442**	**0.0582**	**6.7000e-004**	**0.0260**	**1.2400e-003**	**0.0272**	**7.0700e-003**	**1.1800e-003**	**8.2500e-003**	**0.0000**	**67.2457**	**67.2457**	**3.7500e-003**	**9.9900e-003**	**70.3178**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Buiding Construction including offsite work and concrete placement Phase 2 - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1151	1.1143	1.7495	2.7400e-003		0.0362	0.0362		0.0346	0.0346	0.0000	232.8585	232.8585	0.0528	0.0000	234.1790
Total	**0.1151**	**1.1143**	**1.7495**	**2.7400e-003**		**0.0362**	**0.0362**		**0.0346**	**0.0346**	**0.0000**	**232.8585**	**232.8585**	**0.0528**	**0.0000**	**234.1790**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.5000e-004	0.0387	0.0133	1.7000e-004	5.9400e-003	2.3000e-004	6.1800e-003	1.7200e-003	2.2000e-004	1.9400e-003	0.0000	16.9786	16.9786	5.8000e-004	2.4600e-003	17.7255
Worker	0.0142	8.7200e-003	0.1188	3.9000e-004	0.0502	2.4000e-004	0.0505	0.0134	2.2000e-004	0.0136	0.0000	37.3932	37.3932	9.0000e-004	9.2000e-004	37.6896
Total	**0.0152**	**0.0474**	**0.1321**	**5.6000e-004**	**0.0562**	**4.7000e-004**	**0.0567**	**0.0151**	**4.4000e-004**	**0.0155**	**0.0000**	**54.3718**	**54.3718**	**1.4800e-003**	**3.3800e-003**	**55.4151**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Buiding Construction including offsite work and concrete placement Phase 2 - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1151	1.1143	1.7495	2.7400e-003		0.0362	0.0362		0.0346	0.0346	0.0000	232.8583	232.8583	0.0528	0.0000	234.1787
Total	**0.1151**	**1.1143**	**1.7495**	**2.7400e-003**		**0.0362**	**0.0362**		**0.0346**	**0.0346**	**0.0000**	**232.8583**	**232.8583**	**0.0528**	**0.0000**	**234.1787**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.5000e-004	0.0387	0.0133	1.7000e-004	5.9400e-003	2.3000e-004	6.1800e-003	1.7200e-003	2.2000e-004	1.9400e-003	0.0000	16.9786	16.9786	5.8000e-004	2.4600e-003	17.7255
Worker	0.0142	8.7200e-003	0.1188	3.9000e-004	0.0502	2.4000e-004	0.0505	0.0134	2.2000e-004	0.0136	0.0000	37.3932	37.3932	9.0000e-004	9.2000e-004	37.6896
Total	**0.0152**	**0.0474**	**0.1321**	**5.6000e-004**	**0.0562**	**4.7000e-004**	**0.0567**	**0.0151**	**4.4000e-004**	**0.0155**	**0.0000**	**54.3718**	**54.3718**	**1.4800e-003**	**3.3800e-003**	**55.4151**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Buiding Construction including offsite work and concrete placement Phase 2 - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0424	0.4109	0.6451	1.0100e-003		0.0134	0.0134		0.0128	0.0128	0.0000	85.8585	85.8585	0.0195	0.0000	86.3453
Total	**0.0424**	**0.4109**	**0.6451**	**1.0100e-003**		**0.0134**	**0.0134**		**0.0128**	**0.0128**	**0.0000**	**85.8585**	**85.8585**	**0.0195**	**0.0000**	**86.3453**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4000e-004	0.0141	4.8500e-003	6.0000e-005	2.1900e-003	9.0000e-005	2.2800e-003	6.3000e-004	8.0000e-005	7.1000e-004	0.0000	6.1308	6.1308	2.2000e-004	8.9000e-004	6.4007
Worker	4.9600e-003	2.9500e-003	0.0416	1.4000e-004	0.0185	8.0000e-005	0.0186	4.9200e-003	8.0000e-005	5.0000e-003	0.0000	13.4896	13.4896	3.0000e-004	3.2000e-004	13.5932
Total	**5.3000e-003**	**0.0171**	**0.0465**	**2.0000e-004**	**0.0207**	**1.7000e-004**	**0.0209**	**5.5500e-003**	**1.6000e-004**	**5.7100e-003**	**0.0000**	**19.6204**	**19.6204**	**5.2000e-004**	**1.2100e-003**	**19.9939**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Buiding Construction including offsite work and concrete placement Phase 2 - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0424	0.4109	0.6451	1.0100e-003		0.0134	0.0134		0.0128	0.0128	0.0000	85.8584	85.8584	0.0195	0.0000	86.3452
Total	**0.0424**	**0.4109**	**0.6451**	**1.0100e-003**		**0.0134**	**0.0134**		**0.0128**	**0.0128**	**0.0000**	**85.8584**	**85.8584**	**0.0195**	**0.0000**	**86.3452**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4000e-004	0.0141	4.8500e-003	6.0000e-005	2.1900e-003	9.0000e-005	2.2800e-003	6.3000e-004	8.0000e-005	7.1000e-004	0.0000	6.1308	6.1308	2.2000e-004	8.9000e-004	6.4007
Worker	4.9600e-003	2.9500e-003	0.0416	1.4000e-004	0.0185	8.0000e-005	0.0186	4.9200e-003	8.0000e-005	5.0000e-003	0.0000	13.4896	13.4896	3.0000e-004	3.2000e-004	13.5932
Total	**5.3000e-003**	**0.0171**	**0.0465**	**2.0000e-004**	**0.0207**	**1.7000e-004**	**0.0209**	**5.5500e-003**	**1.6000e-004**	**5.7100e-003**	**0.0000**	**19.6204**	**19.6204**	**5.2000e-004**	**1.2100e-003**	**19.9939**

Escondido Goal Line BESS - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Crane Use to set Units Phase 2 - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.4700e-003	0.0554	0.0304	1.0000e-004		2.3600e-003	2.3600e-003		2.1700e-003	2.1700e-003	0.0000	8.8718	8.8718	2.8700e-003	0.0000	8.9435
Total	**5.4700e-003**	**0.0554**	**0.0304**	**1.0000e-004**		**2.3600e-003**	**2.3600e-003**		**2.1700e-003**	**2.1700e-003**	**0.0000**	**8.8718**	**8.8718**	**2.8700e-003**	**0.0000**	**8.9435**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	5.0000e-005	7.2000e-004	0.0000	3.2000e-004	0.0000	3.2000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2336	0.2336	1.0000e-005	1.0000e-005	0.2354
Total	**9.0000e-005**	**5.0000e-005**	**7.2000e-004**	**0.0000**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2336**	**0.2336**	**1.0000e-005**	**1.0000e-005**	**0.2354**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Crane Use to set Units Phase 2 - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.4700e-003	0.0554	0.0304	1.0000e-004		2.3600e-003	2.3600e-003		2.1700e-003	2.1700e-003	0.0000	8.8718	8.8718	2.8700e-003	0.0000	8.9435
Total	**5.4700e-003**	**0.0554**	**0.0304**	**1.0000e-004**		**2.3600e-003**	**2.3600e-003**		**2.1700e-003**	**2.1700e-003**	**0.0000**	**8.8718**	**8.8718**	**2.8700e-003**	**0.0000**	**8.9435**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	5.0000e-005	7.2000e-004	0.0000	3.2000e-004	0.0000	3.2000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2336	0.2336	1.0000e-005	1.0000e-005	0.2354
Total	**9.0000e-005**	**5.0000e-005**	**7.2000e-004**	**0.0000**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2336**	**0.2336**	**1.0000e-005**	**1.0000e-005**	**0.2354**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.5400e-003	1.8000e-003	0.0152	3.0000e-005	3.7000e-003	3.0000e-005	3.7200e-003	9.9000e-004	2.0000e-005	1.0100e-003	0.0000	3.1567	3.1567	2.1000e-004	1.3000e-004	3.2021
Unmitigated	1.5400e-003	1.8000e-003	0.0152	3.0000e-005	3.7000e-003	3.0000e-005	3.7200e-003	9.9000e-004	2.0000e-005	1.0100e-003	0.0000	3.1567	3.1567	2.1000e-004	1.3000e-004	3.2021

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	4.00	0.00	0.00	9,880	9,880
Total	4.00	0.00	0.00	9,880	9,880

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX B – CULTURAL RESOURCES RECORDS SEARCH AND LITERATURE REVIEW LETTER REPORT

CULTURAL RESOURCES RECORDS SEARCH AND LITERATURE REVIEW LETTER REPORT FOR THE GOAL LINE RELIABILITY PROJECT

City of Escondido

CHAMBERS GROUP

October 26, 2022
9620 Chesapeake Drive, Suite 202
San Diego, CA 92123
(21359)

Emiliano Pelegri
Senior Director
Onward Energy

Subject: Goal Line Reliability Project Cultural Resources Records Search and Literature Review Letter Report

Dear Mr. Pelegri,

Chambers Group is providing this Letter Report for the cultural resources records search and literature review to City of Escondido in support of the Goal Line Reliability Project (Project, Proposed Project) in the City of Escondido, San Diego County, California. This assessment included a cultural resources records search and literature review for the Project site and study area (Figure 1). The purpose of the review is to gather and analyze information needed to assess the potential for impacts to cultural resources within the Proposed Project area.

Project Description

The Project Applicant proposes to construct, own, and operate the Goal Line Reliability Project, a lithium-ion battery energy storage facility capable of delivering up to 150 MW of energy storage capacity with a 4-to-8-hour capacity rating on approximately 4.5 acres within the approximately 6.5-acre site containing an existing electrical generation facility and a non-operational ice-rink facility (Project Site). Achievement of 150 MW of storage would be completed in three phases with a demolition phase removing the existing ice-rink facility, Phase 1 storing 50 MW for 8 hours (400 MWh), and Phase 2 storing approximately 100 MW for 4 hours (400 MWh) or another 50 MW for 8 hours (400 MWh). Energy stored in the Project will then be discharged into the grid when the energy is needed, providing important electrical reliability services to the local area. It is expected that between two to four staff members will visit the site weekly and as needed for maintenance and monitoring of the Project. The Project will be operated remotely with no permanent on-site operations personnel. No changes are proposed to the existing electrical generation assets or operations as part of the Project.

The City of Escondido is the lead agency for the Proposed Project. An Initial Study has been prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] §21000 et seq.) and the State CEQA Guidelines (Title 14, California Code of Regulations [CCR] §15000 et seq.) and has determined that preparation of a Mitigated Negative Declaration would be appropriate under CEQA.

Project Construction

Project construction includes demolition of the existing facility, site preparation and grading, installation of drainage and retention basins, foundations/supports, setting battery enclosures, wiring and electrical system installation, and assembly of the accessory components including inverter transformers and generation step-up transformers. Earth cut and fill are proposed to be balanced within the Project site such that no import of fill material or export of *in situ* material is proposed. Due to unknown site conditions beneath the existing infrastructure, this may need to be modified after demolition operations. Up to 30,000 cubic yards of material may need to be imported if site conditions require mitigation. Further, it is anticipated that approximately 5,000 cubic yards of surfacing (asphalt and/or open graded crushed rock aggregate) and trench fill material will be required.

The proposed Project estimates that utility/cable installation will require trenching up to five feet, foundations will require excavation of up to six feet for the main power transformer near the existing transformer, with shallower depths being sufficient for other transformers, while driven/drilled pile foundations will extend approximately 12 feet below

grade. Additionally, if an additional storm-drain is needed, it would likely extend to approximately the same depths as the existing storm drain.

Location and Setting

The approximately 6.5-acre Project Site is located at 555 Tulip Street, assessor's parcel number (APN) 232-131-25-00, within Escondido, California, 92626 (Figure 1). The Project Site currently contains a non-operational ice-rink and a 50 MW natural gas power plant. Project facilities will be constructed within the existing ice-rink and parking facilities and adjacent to the natural gas power plant facilities, which will remain. This includes an area of approximately 4.5 acres. Phase 1 proposes to use a majority of the existing parking area as laydown and an offsite laydown facility would be located within two miles of the project site, if required for Phase 2 construction.

Figure 1: Project Location

Regulatory Context

As the lead agency for the Proposed Project, the City of Escondido must comply with the provisions of CEQA, which requires a lead agency to determine whether a project may have a significant effect on historical resources (PRC Section 21084.1). In addition to State regulations, projects built in the City of Moorpark are also subject to a number of local regulations relating to historical resources. Chapter 15.36 of the Moorpark Municipal Code pertains specifically to historic preservation within the city. The regulatory framework as it pertains to cultural resources under CEQA has been detailed below.

Under the provisions of CEQA, including the CEQA Statutes (PRC §§ 21083.2 and 21084.1), the CEQA Guidelines (Title 14 CCR § 15064.5), and PRC § 5024.1 (Title 14 CCR § 4850 et seq.), properties expected to be directly or indirectly affected by a proposed project must be evaluated for eligibility for listing in the California Register of Historical Resources (CRHR, PRC § 5024.1).

The purpose of the CRHR is to maintain listings of the State's historical resources and to indicate which properties are to be protected, to the extent prudent and feasible, from material impairment and substantial adverse change. The term *historical resources* includes a resource listed in or determined to be eligible for listing in the CRHR; a resource included in a local register of historical resources; and any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (CCR § 15064.5[a]). The criteria for listing properties in the CRHR were expressly developed in accordance with previously established criteria developed for listing in the National Register of Historic Places (NRHP). The California Office of Historic Preservation (OHP 1995:2) regards "any physical evidence of human activities over 45 years old" as meriting recordation and evaluation.

California Register of Historic Resources

A cultural resource is considered "historically significant" under CEQA if the resource meets one or more of the criteria for listing in the CRHR. The CRHR was designed to be used by State and local agencies, private groups, and citizens to identify existing cultural resources within the state and to indicate which of those resources should be protected, to the extent prudent and feasible, from substantial adverse change. The following criteria have been established for the CRHR. A resource is considered significant if it:

1. is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. is associated with the lives of persons important in our past;
3. embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. has yielded, or may be likely to yield, information important in prehistory or history.

In addition to meeting one or more of the above criteria, historical resources eligible for listing in the CRHR must retain enough of their historic character or appearance to be able to convey the reasons for their significance. Such integrity is evaluated in regard to the retention of location, design, setting, materials, workmanship, feeling, and association.

Under CEQA, if an archeological site is not a historical resource but meets the definition of a "unique archeological resource" as defined in PRC § 21083.2, then it should be treated in accordance with the provisions of that section. A *unique archaeological resource* is defined as follows:

- An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:
    - Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information
    - Has a special and particular quality, such as being the oldest of its type or the best available example of its type

- Is directly associated with a scientifically recognized important prehistoric or historic event or person

Resources that neither meet any of these criteria for listing in the CRHR nor qualify as a "unique archaeological resource" under CEQA PRC § 21083.2 are viewed as not significant. Under CEQA, "A non-unique archaeological resource need be given no further consideration, other than the simple recording of its existence by the lead agency if it so elects" (PRC § 21083.2[h]).

Impacts that adversely alter the significance of a resource listed in or eligible for listing in the CRHR are considered a significant effect on the environment. Impacts to historical resources from a proposed project are thus considered significant if the project:

(1) physically destroys or damages all or part of a resource;

(2) changes the character of the use of the resource or physical feature within the setting of the resource, which contributes to its significance; or

(3) introduces visual, atmospheric, or audible elements that diminish the integrity of significant features of the resource.

Assembly Bill 52

Assembly Bill (AB) 52 was enacted in 2015 and expands CEQA by defining a new resource category: tribal cultural resources. AB 52 establishes that "a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (PRC Section 21084.2). AB 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified. AB 52 requires that lead agencies "begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." Native American tribes to be included in the process are those that have requested notice of projects proposed in the jurisdiction of the lead agency. It further states that the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3). PRC Section 21074 (a)(1)(A) and (B) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and meets either of the following criteria:

- Listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC Section 5020.1(k)
- 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 PRC Section 5024.1 (in applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe)

Local

In addition to State regulations, projects built in the City of Escondido are also subject to a number of local regulations relating to historical resources. Section J of Chapter VII of the City of Escondido General Plan (City of Escondido 2012) pertains specifically to historic preservation within the city.

City of Escondido General Plan

Goals and policies regarding Cultural Resources within the City of Escondido General Plan (City of Escondido 2012) include the following:

GOAL 5: Preservation of important cultural and paleontological resources that contribute to the unique identity and character of Escondido.

Cultural Resources Policy 5.1: Maintain and update the Escondido Historic Sites Survey to include significant resources that meet local, state, or federal criteria.

Cultural Resources Policy 5.2: Preserve significant cultural and paleontological resources listed on the national, State, or local registers through: maintenance or development of appropriate ordinances that protect, enhance, and perpetuate resources; incentive programs; and/or the development review process.

Cultural Resources Policy 5.3: Consult with appropriate organizations and individuals (e.g., South Coastal Information Center of the California Historical Resources Information System, Native American Heritage Commission, Native American groups and individuals, and San Diego Natural History Museum) early in the development process to minimize potential impacts to cultural and paleontological resources.

Cultural Resources Policy 5.4: Recognize the sensitivity of locally significant cultural resources and the need for more detailed assessments through the environmental review process.

Cultural Resources Policy 5.5: Preserve historic buildings, landscapes, and districts with special and recognized historic or architectural value in their original locations through preservation, rehabilitation (including adaptive reuse), and restoration where the use is compatible with the surrounding area.

Cultural Resources Policy 5.6: Review proposed new development and/or remodels for compatibility with the surrounding historic context.

Cultural Resources Policy 5.7: Comply with appropriate local, State, or federal regulations governing historical resources.

Cultural Resources Policy 5.8: Consider providing financial incentives, and educational information on existing incentives provided by the federal government to private owners and development in order to maintain, rehabilitate, and preserve historic resources.

Cultural Resources Policy 5.9: Educate the public on the City's important historic resources in increased awareness for protection.

City of Escondido Landmark Criteria

Prior to granting a resource Local Register or Historical Landmark status, the City Council shall consider the definitions for historical resources and historical districts and shall find that the resource conforms to one or more of the criteria listed below. A structural resource proposed for the Local Register shall be evaluated against criteria number one (1) through seven (7) and must meet at least two of the criteria; signs proposed shall meet at least one (1) of the criteria numbered eight (8) through ten (10); landscape features shall meet criterion number eleven (11); archaeological resources shall meet criterion number twelve (12). Local Register resources proposed for Local Landmark designation shall be evaluated against criterion number thirteen (13). The criteria are as follows:

1) Escondido historical resources that are strongly identified with a person or persons who significantly contributed to the culture, history, prehistory, or development of the City of Escondido, region, state or nation;
2) Escondido building or buildings that embody distinguishing characteristics of an architectural type, specimen, or are representative of a recognized architect's work and are not substantially altered;
3) Escondido historical resources that are connected with a business or use that was once common but is now rare;
4) Escondido historical resources that are the sites of significant historic events;
5) Escondido historical resources that are fifty (50) years old or have achieved historical significance within the past fifty (50) years;
6) Escondido historical resources that are an important key focal point in the visual quality or character of a neighborhood, street, area or district;

7) Escondido historical building that is one of the few remaining examples in the city possessing distinguishing characteristics of an architectural type;
8) Sign that is exemplary of technology, craftsmanship or design of the period when it was constructed, uses historical sign materials and is not significantly altered;
9) Sign that is integrated into the architecture of the building, such as the sign pylons on buildings constructed in the Modern style and later styles;
10) Sign that demonstrates extraordinary aesthetic quality, creativity, or innovation;
11) Escondido landscape feature that is associated with an event or person of historical significance to the community or warrants special recognition due to size, condition, uniqueness or aesthetic qualities;
12) Escondido archaeological site that has yielded, or may be likely to yield, information important in prehistory;
13) Escondido significant historical resource that has an outstanding rating of the criteria used to evaluate local register requests. (Ord. No. 2000-23, § 4, 9-13-00; Ord. No. 2008-16, § 4, 7-16-08).

Environmental Setting

The project is located within the coastal foothills of northern San Diego County within the watersheds of Reidy and Escondido creeks. The project area is flat, with an elevation of approximately 640 feet above mean sea level (AMSL). Geologically, the project area is primarily underlain by old alluvial flood-plain deposits from the late to middle Pleistocene, and by younger alluvial deposits from Reidy and Escondido creeks (Kennedy and Tan 2007; Tan and Kennedy 1999). It should be noted that the current configuration of Reidy Creek is not reflective of its natural course, in particular as it relates to the Project site. Analysis of historic aerial imagery and USGS topographic maps indicate that Reidy Creek once bisected the Project site on its way to merging with Escondido Creek. The mouth of Reidy Creek was eventually diverted approximately 290 m (950 ft.) east-northeast, and the creek bed, along with Escondido Creek, were channelized between 1964 and 1967. Thus, while recent topological and geologic maps indicate Reidy Creek coursing east of the Project site and joining Escondido Creek upstream, historic aerials and topographic maps record the confluence immediately proximate to the Project site, suggesting a possibly greater presence of young alluvial deposits within the Project area than mapped.

Soils within the Project site are mapped as Visalia sandy loam, 2 to 5 percent slopes (USDA 2022). The Visalia series of soils is characterized by moderately well-drained, very deep sandy loams and are formed from granitic alluvial deposits (Bowman 1973). Visalia soils generally support vegetation such as annual grasses, chamise *(Adenostoma fasciculatum)*, flattop buckwheat *(Eriogonum fasciculatum)*, California live oak *(Quercus agrifolia)* and scrub oak *(Quercus berberidifolia)* (Bowman 1973). As a prominent feature, Escondido Creek, with its associated riparian setting and nearby foothills, would have provided an excellent seasonal water source and storehouse for local Native American populations, providing food, medicine, resources for tools and ceremonial items (Bean and Shipek 1978; Hedges and Beresford 1986)

Cultural Setting

Prehistoric Overview

The prehistoric cultural sequence in northern San Diego County is generally conceived as comprising three basic periods: (1) the Paleoindian Period, dated between about 11,500 and 8,500 years ago; (2) the Archaic Period, lasting from about 8,500 to 1,500 years ago (A.D. 500); and (3) the Late Prehistoric Period, lasting from about 1,500 years ago to historic contact (i.e., A.D. 500 to 1769) and represented by the Cuyamaca and San Luis Rey Complexes.

Paleoindian Period

The Paleoindian Period in San Diego County is most closely associated with the San Dieguito Complex, as identified by Rogers (1938, 1939, 1945). The San Dieguito assemblage consists of well-made scraper planes, choppers, scraping tools,

crescentics, elongated bifacial knives, and leaf-shaped projectile points. The most thoroughly investigated San Dieguito component in San Diego County is found at CA-SDI-149 (the C.W. Harris site), located on a terrace overlooking the San Dieguito River. The San Dieguito Complex is thought to represent an early emphasis on hunting (Warren et al. 1993).

Archaic Period

The Archaic Period in coastal San Diego County is represented by the La Jolla Complex, a local manifestation of the widespread Millingstone Horizon. Archaic assemblages in interior northern San Diego County have been designated as the Pauma Complex. The La Jolla and Pauma complexes have very similar assemblages and are thought to be different environmental adaptations of the same culture (True 1958).

Both La Jolla and Pauma Complex assemblages suggest a generalized subsistence focus with an emphasis on hard seeds. This emphasis is indicated by the increased frequency of slab and basin metates and the adoption of a mixed cobble/core-based tool assemblage composed primarily of crudely made choppers, scrapers, and cobble hammerstones. For coastal La Jolla Complex sites, large deposits of marine shell argue for the importance of shellfish gathering to the coastal Archaic economy.

Pauma Complex sites are typically found on terraces or ridges above a water source such as a stream. They often do not have discernible midden development, but they may have subsurface deposits. While they typically have numerous portable metates and manos, they lack bedrock milling and mortars and pestles (True and Waugh 1981).

There seems to have been some reorientation in settlement from coastal to inland settings during the latter portion of this period in northern San Diego County. This settlement shift appears to have occurred around 4,000 years ago and is thought to relate to the final phases of Holocene sea level rise and the resulting siltation of coastal lagoons. Prior to this time, the lagoons had been highly productive sources of shellfish for La Jollan people (Gallegos 1987; Warren et al. 1993).

Late Prehistoric Period

The late prehistoric archaeology of the San Diego coast and foothills, beginning approximately 1,500 years ago, is characterized by two major complexes: The San Luis Rey and the Cuyamaca. The definition of the San Luis Rey complex was based primarily on excavations near Pala, about 10 miles north-northwest of the Project Area. The San Luis Rey complex is thought to represent the ancestors of the ethnographic Luiseño (True 1966, 1970) who arrived in northern San Diego County as part of the large series of coastward migrations of Shoshonean speakers, sometimes called the Takic Wedge (Meighan 1954; Waugh 1986). San Luis Rey I is characterized by slab metates and mortars, both of which can be found in shaped and unshaped, bedrock and portable configurations. Cremations, bone awls, and stone and shell ornaments are also prominent in the material culture. In San Luis Rey II assemblage, pottery cooking and storage vessels, and cremation urns, polychrome pictographs appear. Chipped stone arrow points are dominated by the Cottonwood Triangular series, but Desert Side-notched, Dos Cabezas Serrated, leaf-shaped, and stemmed styles also occur.

The Cuyamaca complex is primarily known from the work of D. L. True at Cuyamaca Rancho State Park. The Cuyamaca complex is characterized by the presence of steatite arrow shaft straighteners, steatite pendants, steatite *comales* (heating stones), Tizon Brown Ware pottery, ceramic figurines reminiscent of Hohokam styles, ceramic "Yuman bow pipes," ceramic rattles, miniature pottery, various cobble-based tools (e.g., scrapers, choppers, hammerstones), bone awls, manos and metates, mortars and pestles, and Desert Side-Notched (more common) and Cottonwood Series projectile points.

Ethnographic Overview

The Project site lies within a transitional area traditionally occupied by the Luiseño, so called after their historic-period association with Mission San Luis Rey (Bean and Shipek 1978) and the Kumeyaay, or Diegueño, named after their association with the Mission San Diego de Alcalá (Luomala 1978).

Luiseño

The Luiseño are the most southwesterly of the Shoshonean or Uto-Aztecan speakers. Luiseño territory encompassed much of northern San Diego and Orange Counties, extending south from Orange County to approximately Carlsbad, and generally easterly to Warner's Ranch, where it intersected with Cupeño and Cahuilla territories, in northern San Diego County.

Luiseño settlement systems have been carefully reconstructed on the basis of extensive ethnographic and ethnohistoric research (Bean and Shipek 1978; Kroeber 1925; Sparkman 1908; Strong 1929; White 1963). White (1963) suggested that the average inland rancheria had a territory of approximately 30 square miles. He suggested that the Luiseño settlement system consisted of a series of villages or rancherias located on terraces above a valley bottom watercourse (e.g., the San Luis Rey River). The rancheria owned territory in a contiguous strip leading from the valley bottom to upland areas. This vertical pattern of rancheria territory facilitated gathering plant foods through the year. In early spring, tubers and berries first ripened along the watercourse below the rancheria. As spring turned to summer, chaparral plants near the rancheria became ripe. Later, those at a higher elevation above the rancheria ripened. In fall, the people moved temporarily to higher elevations (e.g., Palomar Mountain) for the acorn harvest (White 1963).

The material culture among the ethnohistorically known Luiseño encompassed a wide range of tools made of locally available and also imported materials. A simple shoulder-height bow for hunting was made of mesquite or willow. Arrows had either fire-hardened wood or flaked stone points. Numerous other flaked stone tools were made including scrapers, choppers, flake-based cutting tools, and bifacial knives. Preferred stone types were locally available metavolcanics, quartz, and chert. Obsidian was imported from the deserts to the north and east. Ground stone objects include mortars and pestles typically made of fine-grained granite. Mortars are associated with grinding acorns, although a variety of other materials were processed in them as well (Yohe et al. 1991). Simple basin metates and cobble manos were also used for grinding grass seeds and other items. Shaped metates were not known until the arrival of the Spanish (Kroeber 1925; Sparkman 1908). The manufacture and use of native ceramic vessels were also common and was used in part by True (1993), and True and Waugh (1981, 1982, 1983) to distinguish the pre-ceramic San Luis Rey I period from the later San Luis Rey II period.

Kumeyaay

The Kumeyaay were the predominant Native American people occupying the southern three-fourths of San Diego county at the time of European contact in the late eighteenth century were the. Eighteenth-century Spanish explorers and settlers used the collective term "Diegueño" for these people, which referred to bands living near the presidio and mission of San Diego de Alcalá. Today, members of the tribe prefer to be called Kumeyaay (Luomala 1978).

The territory of the Kumeyaay extended north from Todos Santos Bay near Ensenada, Mexico to the mouth of the San Luis Rey River in north San Diego County, and east to the Sand Hills bordering Imperial Valley. The Kumeyaay occupied the southern and eastern desert portions of the territory, while the Ipai inhabited the northern coastal region (Luomala 1978).

The primary source of subsistence for the of Kumeyaay was vegetal food. Seasonal travel followed the ripening of plants from the lowlands to higher elevations of the mountain slopes. Buds, blossoms, potherbs, wild seeds, cactus fruits, and wild plums were among the diet of both groups. The Kumeyaay practiced limited agriculture within the floodplain areas of their territory. Melons, maize, beans, cowpeas, and teparies were planted. Women sometimes transplanted wild onion and tobacco plants to convenient locations and sowed wild tobacco seeds. Deer, rodents, and birds provided meat as a secondary source of sustenance. Families also gathered acorns and piñon nuts at the higher altitudes. Village locations were selected for seasonal use and were occupied by exogamous, patrilineal clans. Three or four clans would winter together and then disperse into smaller bands during the spring and summer (Luomala 1978).

Kumeyaay structures varied with the seasons. Summer shelter consisted of a wind break, tree, or a cave fronted with rocks. Winter dwellings had slightly sunken floors with dome-shaped structures made of brush thatch covered with grass and earth (Gifford 1931; Luomala 1978).

Upon death, the Kumeyaay cremated the body of the deceased. Ashes were placed in a ceramic urn and buried or hidden in a cluster of rocks. The family customarily held a mourning ceremony one year after the death of a family member. During this ceremony, the clothes of the deceased individual were burned to ensure that the spirit would not return for his or her possessions (Gifford 1931; Luomala 1978).

It is estimated that the pre-contact Kumeyaay population living in this region ranged from approximately 3,000 (Kroeber 1925) to 9,000 (Luomala 1978). Beginning in 1775, the semi-nomadic life of the Kumeyaay began to change as a result of contact with European-Americans, particularly from the influence of the Spanish missions. Through successive Spanish, Mexican, and Anglo-American control, the Kumeyaay people were forced to adopt a sedentary lifestyle and accept Christianity (Luomala 1978). As of 1968, Kumeyaay population was somewhere between approximately 1,322 (Shipek 1972, included in Luomala 1978) and 1,522 (Luomala 1978).

Historic Overview

Post-European contact history for the state of California is generally divided into three periods: the Spanish Period (1540–1822), the Mexican Period (1822–1848), and the American Period (1848–present). Briefly, and in very general terms, the Spanish Period encompassed the earliest historic-period explorations of the West, followed by colonization, missionization and proselytization across the western frontier later during their occupation. The Spanish Period witnessed the establishment of pueblos such as Los Angeles and Monterey and a line of missions and presidios with attendant satellite communities, minor prospecting, and a foundational economic structure based on nascent ranchos and cattle herds, and a ship-based trade and exchange system. The Mexican Period initiated with a continuation of the same Spanish structures; however, commensurate with the political changes that led to the establishment of the Mexican state the missions and presidios were secularized, the lands parceled into ranchos, and Indian laborers released from Church lands only to be conscripted into the ranchos. Increased global trade introduced both foreign and American actors into the Mexican economic and political spheres, and both coincidentally and purposefully, smoothing the transition to the American Period. The American Period was ushered in, following the conclusion of the Mexican-American War of 1846, with a momentous influx of people seeking fortune in the Sierra foothills where gold was "discovered" in 1848. By the early 1850s people from all over the globe had made their way to California. Expansive industries were required to supply the early mining operations, such as forestry products and food networks. Grains, poultry, cattle, and water systems, which were initiated in the early Mexican Period, were intensified into a broad system of ranches and supply networks. Additionally, this period witnessed the development and expansion of port cities to supply hard goods and clothes, animals, and people transported along improved trail and road networks throughout the interior regions of the state. California cycled through boom and bust for several decades until World War I when the Department of the Navy began porting war ships along the west coast. Subsequently, California has grown, and contracted, predominantly around military policy along the west coast, and the Pacific Ocean. Following the industrial expansion related to World War II and the Cold War, technology and systems associated have come to fore as economic drivers.

City of Escondido

Escondido is located in northern San Diego County, approximately 30 miles north of downtown San Diego and 18 miles east of the Pacific Ocean. The community is situated in a natural valley at approximately 615 feet above mean sea level (MSL) and surrounded by rolling hills and rugged terrain ranging up to 4,200 MSL. Escondido is bounded on the north by the unincorporated communities of Valley Center and Hidden Meadows, on the west by the City of San Marcos, on the south by Lake Hodges and the City of San Diego, and on the east by unincorporated San Diego County. Interstate 15 bisects Escondido in a north-south direction and State Route 78 transitions from freeway to surface streets in an east-west direction through the community (City of Escondido 2012).

Most of Escondido occupies the former Rancho Rincon del Diablo ("Devil's Corner") which was given to Juan Bautista Alvarado in 1843 by Mexican Governor Manuel Micheltorena (City of Escondido 2012; Escondido History Center 2022). Following the signing of the Treaty of Guadalupe Hidalgo, ending the Mexican–American war the Public Land Commission, established to review land grant claims, and patent legitimate applications confirmed Alvarado's patent

in 1872; however, by then the rancho had already been sold to a San Diego judge, Oliver S. Witherby in the 1850s, who sold it to John, Matthew, and Josiah Wolfskill and Edward McGearey in 1868 (Helix 2020). In 1886, the Escondido Land and Town Company acquired the land grant, laid out the town site, and divided the valley into small farms suitable for grapes or citrus. Several model homes were built for prospective residents to temporarily locate while looking for property to buy. A branch line of the Santa Fe Railroad was extended to the community in 1887. Escondido was incorporated as San Diego County's fourth municipality, and California's 78th city, on October 8, 1888 (City of Escondido 2012). Escondido remained a rural community within the county through the first half of the twentieth century, and only when Highway 395 was completed in the 1950s, was there a major corridor between Escondido and San Diego. With convenient access established, population and development in the region boomed, and housing subdivisions began replacing the many citrus groves and vineyards (Escondido History Center 2019). In time, Escondido's position matured to become inland Northern San Diego County's center for retail, services, health care and cultural facilities while maintaining a special feeling of small-town living. (City of Escondido 2012).

Methods of Review

Chambers Group requested a records search from the California Historical Resources Information System (CHRIS) South Coastal Information Center (SCIC) at California State University, San Diego on September 19, 2022. The SCIC returned the records search results on October 3, 2022, providing information on all documented cultural resources and previous archaeological investigations within 0.5-mile radius of the Project site. A 0.5-mile study area was requested to provide additional context to the Project site and surrounding area and more information on which to base this review. Resources consulted during the records search conducted by the SCIC included the NRHP, California Historical Landmarks (CHL), California Points of Historical Interest (CPHI), Caltrans Historic Highway Bridge Inventory, the California State Historic Resources Inventory, local registries of historic properties, and a review of available Sanborn Fire Insurance maps as well as historic photographs, maps, and aerial imagery. The task also included a search for potential prehistoric and/or historic burials (human remains) evident in previous site records and/or historical maps. In addition, Chambers Group submitted a request to the Native American Heritage Commission (NAHC) for a review of the Sacred Land Files (SLF) for the Project site and surrounding vicinity. Results of the records search and additional research are detailed below and included in Attachment A.

Additionally, on September 19, 2022, Chambers Group requested a paleontological records search from the San Diego Natural History Museum (SDNHM). This information was requested with the intent to provide further context related to the paleontological sensitivity of the area based on known fossil locations identified within the Project site or 0.5-mile study area. The paleontological records provide insight into what associated geological formations are more likely to contain fossils as well as the associated depths and placement of the known fossil locals relative to the geological formations in the area. On September 30, 2022, Chambers Group received the results of the records search. The results show that no known fossil localities lay directly within the proposed Project site.

Cultural Resources Reports within the Study Area

Based on the records search conducted by the SCIC, 20 cultural resource studies have previously been completed within the 0.5-mile records search radius. Table 1 provides further details of these 20 studies, of which, four encompass the Project site in some manner. These projects are bolded and italicized in the table below.

Table 1: Previous Cultural Resources Studies within the 0.5-Mile Study Area

Report Number	Year	Author	Title	Resources	Within Project Boundary?
SD-00783	1986	Cheever, Dayle, and Dennis Gallegos	Cultural Resource Survey of the La Terraza Project Escondido, California		No
SD-04301	1980	Banks, Thomas, and David M. Van Horn	Archaeological Survey Report: The Proposed Escondido Auto Park in the City of Escondido, California	37-000153, 37-000154, 37-000156, 37-001035, 37-001505, 37-005501, 37-005502, 37-005503, 37-005504	No
SD-04909	1985	County of San Diego	Historic Property Survey Report Escondido Transit Center, San Diego County, CA		No
SD-08588	***1980***	***City of Escondido***	***Draft Environmental Impact Report for Expansion of Wastewater Treatment Facility***		***Yes***
SD-08596	***1992***	***Keller Environmental Associates, Inc***	***Appendices-Reclaimed Water Distribution System Project: Draft Environmental Impact Report***		***Yes***
SD-08729	1989	Mitchell, Patricia	The Oceanside to Escondido Rail Project		No
SD-09546	2001	Guerrero, Monica, Dennis Gallegos, Tracy Stropes, Steve Bouscaren, Susan Bugbee, and Richard Cerreto	Cultural Resource Test Report for Oceanside-Escondido Rail Project Oceanside, California		No
SD-09622	2005	Mason, Roger, Evelyn Chandler, and Cary Cotterman	Cultural Resources Record Search and Field Survey Report for a Verizon Telecommunications Facility: Valley Parkway, Escondido, San Diego County, California		No
SD-10352	2006	Robbins-Wade, Mary	Lowe's General Plan Amendment - Escondido Case Numbers: ER 2005-40, 2005-02-GPA, 2005-58/PD/CP/CZ, Tract 946 Cultural Resources (AFFINIS Job No. 2089)	37-005210, 37-006726, 37-006727, 37-006728, 37-006729, 37-007785	No
SD-12039	2007	Guerrero, Monica, and Dennis R. Gallegos	Cultural Resources Monitoring Report for the North County Transit District (NCTD) Sprinter Rail Project Oceanside to Escondido, California	37-012095, 37-012096, 37-012097, 37-015576, 37-015595	No
SD-12394	2009	Pierson, Larry J.	A Historical Assessment of 1050 West Washington Avenue, Escondido, San Diego County, California, APN 228-250-17		No
SD-12835	2010	Robbins-Wade, Mary	Escondido Ballpark- Cultural Resources Survey		No
SD-14328	2013	Wilson, Stacie	Letter Report: ETS 20872 Cultural Resources Monitoring for TL6956 Undergrounding Trench Excavation, City of Escondido, California- IO 200414230		No
SD-14394	1983	Donald A. Cotton Associates	Survey Report on Historic/ Cultural Resources City of Escondido		No
SD-15266	2015	David Brunzell	Cultural Resources Assessment of the Westside Park Project, Escondido, San Diego County, California (BCR Consulting Project No. TRF1434)		No
SD-15868	2014	Wills, Carrie D., and Sarah A. Williams	Cultural Resource Records Search and Site Visit Results for AT&T Mobility, LLC Candidate SD1870 (Escondido Transit Center), 520 West Gannon Place, Escondido, San Diego County, California		No
SD-16896	2016	Smith, Brian F., and Kristen R. Reinicke	Historic Structure Assessment for 852 Metcalf Street Escondido, California APN 228-220-22		No
SD-17233	2017	Brunzell, David	San Diego 129 Project, San Diego County, California (BCR Consulting Project No. SYN1622)		No

Table 1: Previous Cultural Resources Studies within the 0.5-Mile Study Area

Report Number	Year	Author	Title	Resources	Within Project Boundary?
SD-17339	*2015*	*Robbins-Wade, Mary, and Nicole Falvey*	*Recycled Water Easterly Main and Tanks Project and Brine Line, Broadway to Hale Avenue Resource Recovery Facility (HARRF) Project - Cultural Resources Study*		*Yes*
SD-18976	*2020*	*Cooley, Theodore G., and Mary Robbins-Wade*	*City of Escondido Brine Line Project - Cultural Resources Monitoring*		*Yes*

Two reports on proposed projects within parcels immediately north of the Project site were reviewed to identify any salient information that may inform this review of what may be identified below the existing built environment. Reports by Affinis (2010) and Helix (2020) involve parcels approximately 350 to 530 m north-northeast of the Project site and exhibit similar environmental parameters that define the Project site.

Affinis (2010 – SCIC report number SD-12835) briefly reported on a proposed Escondido Ballpark project located approximately 530 m north-northeast of the current proposed Project. Among other already developed areas, the proposed Ballpark project involved a proposed off-site parking lot situated on approximately 10.3 acres of generally undeveloped land immediately north of the train depot, reported as the City storage yard (APN: 232-090-72-00). This parcel was surveyed by Affinis, who did not identify any archaeological materials. Affinis did, however, note that "there is some potential for subsurface cultural resources, due to some alluvial deposition from Escondido Creek" (Affinis 2010:4). Affinis also noted that their record search returned a number of prehistoric period sites recorded by Malcolm Rogers. Rogers noted a few of the sites were in an excellent situation for habitation, though there was sparce evidence of intensive use, suggesting the reason for such was due to their location along the boundary between Luiseño and Kumeyaay territories (Affinis 2010).

Helix (2020) reported on a proposed City of Escondido infrastructure project that would utilize the City storage yard (APN: 232-090-72-00) identified in the Affinis 2010 report for the proposed Escondido Ballpark project. This project is located approximately 350 m north-northeast of the proposed Goal Line Project. The project would consist of an approximately 25,000-square foot Membrane Filtration Reverse Osmosis (MFRO) facility housed in a commercial/industrial-like building and would connect to the existing influent pipeline located adjacent to the Escondido Creek concrete-lined Flood Control Channel along the southern side of the project site. The project area was surveyed and the reported noted that the property was highly disturbed, with areas containing equipment, storage containers, spoils piles, as well as hardscape and buildings. Much like the earlier Affinis report, no cultural resources were identified during the survey.

Previously Recorded Cultural Resources within the Study Area

Based upon the records search conducted by the SCIC, one previously recorded cultural resource was recorded within the 0.5-mile records search radius (Table 2). The resource, an isolated mano fragment and lithic flake, was not located within the Project area. A map of the record search results is included in Attachment A.

Table 2: Previously Recorded Cultural Resources within the 0.5-Mile Study Area

Primary Number	Trinomial	Resource Names	Site Description	Within Project Boundary?
37-015577	N/A	N/A	Granitic mano fragment, porphyritic flake	No

Background Research Results

In addition to the records search review, Chambers Group archaeologists completed extensive background research to determine if any additional historic properties, landmarks, bridges, or other potentially significant or listed properties are located within the Project footprint or 0.5-mile study area. This background research included, but was not limited to, the NRHP, California State Historic Property Data Files, California State Historical Landmarks, California Points of Historical Interest, Office of Historic Preservation Archaeological Determinations of Eligibility, historic aerial imagery accessed via NETR Online, Historic U.S. Geological Survey topographic maps, Built Environment Resource Directory (BERD), and California Department of Transportation (Caltrans) State and Local Bridge Surveys.

As a result of the records search review and archival research, no previously recorded resources or any other listed or potentially significant properties are located within the Project site. However, 47 properties do occur outside the Project site but within the 0.5-mile study area, and are listed on the BERD inventory, and reproduced in Table 3.

Table 3: Historic Properties Listed on the BERD within the 0.5-Mile Study Area

APN	Address	Street Name	Year Built	NRHP/CRHR/Local Status	Within Project Boundary
232-232-05	932	West 2nd Ave	1925	**7N** - Needs to be reevaluated	No
232-233-16	959	West 2nd Ave	1915	7N	No
232-290-07	961	West 3rd Ave	1925	7N	No
232-282-03	969	West 3rd Ave	1886	**3S** - Appears eligible for NR through survey evaluation	No
232-282-01	989	West 3rd Ave	1920	7N	No
232-170-12	925	Grand Court	1910	3S	No
233-021-01	665	West Grand Ave	1920	7N	No
233-100-18	701	West Grand Ave	1887	3S	No
232-110-06	856	West Grand Ave	1890	3S	No
232-220-17	869	West Grand Ave	1895	7N	No
232-061-25	559	North Hale Ave.	1930	7N	No
232-200-11	151	Howell Heights Drive	1911	3S	No
232-190-20	178	Howell Heights Drive	1936	3S	No
228-250-59	610	Metcalf Street	1900	7N	No
228-250-62	646	Metcalf Street	1890	**5S2** - Individual property eligible for local listing or designation	No
232-070-32	775	Metcalf Street	1920	3S	No
228-250-37	945	West Mission Ave	1920	7N	No
228-250-36	957	West Mission Ave	1920	7N	No

Table 3: Historic Properties Listed on the BERD within the 0.5-Mile Study Area

APN	Address	Street Name	Year Built	NRHP/CRHR/Local Status	Within Project Boundary
228-220-40	1024	West Mission Ave	1920	3S	No
228-220-63	1070	West Mission Ave	1930	7N	No
228-220-72	1100	West Mission Ave	1920	7N	No
232-070-38	1105	West Mission Ave	1930	7N	No
228-220-72	1112	West Mission Ave	1941	**7R** - Identified in Reconnaissance Level Survey: Not evaluated	No
228-220-72	1110	West Mission Ave	1941	7R	No
232-070-30	1155	West Mission Ave	1934	7N	No
228-220-73	1120	West Mission Ave	1920	7N	No
229-271-07	534	North Quince Street	1935	7N	No
229-271-06	538	North Quince Street	1930	7N	No
229-271-05	546	North Quince Street	1930	7N	No
228-270-24	634	North Rock Springs Road	1920	7N	No
228-270-23	650	North Rock Springs Road	1940	7N	No
228-270-04	704	North Rock Springs Road	1938	7N	No
232-170-02	100	North Tulip Street	1903	3S	No
232-110-20	116	North Tulip Street	1920	5S2	No
232-170-05	121	North Tulip Street	1910	7N	No
232-170-03	209	North Tulip Street	1935	5S2	No
232-360-14	220	North Tulip Street	1935	3S	No
232-170-15	101	South Tulip Street	1900	3S	No
232-220-19	152	South Tulip Street	1925	7N	No
232-281-10	245	South Tulip Street	1915	7N	No
232-281-18	225	South Tulip Street	1900	7N	No
232-290-09	312	South Tulip Street	1895	3S	No
228-270-48	738	West Washington Ave	1890	3S	No
232-070-37	1100	West Washington Ave	1940	7R	No
N/A	N/A	Highway 395 (P-37-033557)	1910	Unknown	No
229-331-10	238	North Quince Street	1953-1964	**6Z** - Found ineligible for NR, CR or Local designation through survey evaluation	No

Native American Heritage Commission Sacred Lands File Search

On September 19, 2022, Chambers Group requested that the Native American Heritage Commission (NAHC) conduct a search of its Sacred Lands File (SLF) to determine if resources important to Native Americans have been recorded in the Project footprint and buffer area.

As of the date of this report, no responses have been received; however, it is noted that a 2020 cultural resources survey project located approximately 350 m north-northeast returned a positive finding from the NAHC (Helix 2020).

AB 52 Consultation

California Assembly Bill 52 (AB 52) was enacted in 2014 (Chapter 532, Statutes of 2014), requiring an update to Appendix G (Initial Study Checklist) of the CEQA Guidelines to include questions related to impacts to tribal cultural resources (Public Resources Code [PRC] § 21074), and establishing a formal consultation process for California tribes within the CEQA process (PRC § 21080.3.1, 21080.3.2). The bill specifies that any project may affect or cause a substantial adverse change in the significance of a tribal cultural resource would require a lead agency to "begin consultation with a California Native American tribe that is traditional and culturally affiliated with the geographic area of the proposed project." Public Resources Code § 21074 defines "tribal cultural resources" (TCR) as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and is either listed on or eligible for the California Register of Historical Resources or a local historic register, or if the lead agency chooses to treat the resource as a tribal cultural resource. As a Lead Agency the City of Escondido may be required to conduct AB 52 consultation with requesting tribal groups on a government-to-government basis.

PRC § 21074 defines a resource as a TCR if it meets either of the following criteria:

1. sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a tribe that are listed, or determined to be eligible for listing, in the national or state register of historical resources, or listed in a local register of historic resources; or
2. a resource that the lead agency determines, in its discretion, is a tribal cultural resource

As of the date of this report, Chambers Group staff understand that AB 52 consultation between the City of Escondido and requesting tribal governments with respect to the Project have yet to take place. Once notification is made pursuant to AB 52 and if consultation is requested, this report can be supplemented with the results.

Paleontological Resources

On September 30, 2022, Chambers Group received the results of the paleontological records search from the SDNHM. The results indicate that no fossil localities lay within a half-mile radius of, or directly within the Proposed Project site. Per the SDNHM, the Project site is underlain at the surface by late Pleistocene- to Holocene-age young alluvial flood plain deposits (generally less than 11,700 years old) associated with the historical flood plain of Escondido Creek, which generally do not contain fossil material. However, these sediments overlay middle to late Pleistocene-age (approximately 774,000 to 11,700 years old) old alluvial flood plain deposits, which have produced impressive collections of terrestrial vertebrate fossils including pond turtle, passenger pigeon, hawk, mole, rabbit, gopher, squirrel, capybara, wolf, horse, camel, deer, bison, mastodon, mammoth, and ground sloth. Early Cretaceous-age intrusive igneous rocks (e.g., granodiorite) likely underlie these surficial deposits at unknown depths within the Project site. Intrusive igneous rocks, and generally do not preserve or contain fossil materials due to their formational processes.

Based on the records search results the paleontological sensitivity is considered by the SDNHM to be low for upper surface sediments dating to the late Pleistocene to Holocene period, and increasing to a moderate status within middle to late Pleistocene deposits that underlay the Project site. It should be noted that, the SDNHM determination above notwithstanding, Tan and Kennedy (1999) mapped the Project site, and nearby surrounding surface areas, as older alluvial river deposits dating to middle to late Pleistocene. Tan and Kennedy did not map younger alluvial or colluvial

sediments overlaying the Pleistocene deposits within the Project site, except along the Escondido Creek margin. No fossil localities are expected to be identified within the basement granitic bedrock underlying the region.

Survey

No on-ground survey of the Project site was conducted by a Chambers Group archaeologist or paleontologist. This decision was based on existing conditions at the Project site, being nearly completely covered in hardscape or building footprint, with minimal exposure of on-site sediments. These exposures are primarily limited to three-to-one and two-to-one tapered margins along the Project site perimeter and are generally ensconced in ornamental landscaping. Other Chambers Group staff did attend an on-site meeting whereby several existing condition photographs were taken, including ground surfaces where exposed. Review of these photographs illustrate results typical of engineered surfaces to be used for landscaping and other permeable surface purposes. Sediments appear homogeneous, frequently with inclusions of crushed rock gravel, and appear typical of mixed materials prepared for finish grading prior to project construction.

Discussion

Chambers Group conducted a cultural resources records search and literature review within the Goal Line Reliability Project site and surrounding study area in October 2022. The purpose of the review was to gather and analyze information needed to assess the potential for impacts to cultural resources within the proposed Project area. In addition, Chambers Group evaluated whether the Project would result in impacts to cultural resources that would warrant additional studies, including a site visit or field survey.

An archival records search through the SCIC of the CHRIS database and a background study of the Project site were conducted as part of the study. In addition, Chambers Group submitted a search request of the NAHC SLF to determine the presence or absence of data regarding any known sacred lands or similar resources previously reported within the Project area or surrounding vicinity. The SCIC records search identified four cultural resources reports that encompassed the Project site in some fashion, and identified no cultural resources within the Project site. None of the reports appear to have required access to the Project site as part of a visual inspection survey, or similar program. The NAHC SLF search results have not been received at the time of this report. It is noted, however, a recent NAHC SLF search request for a project located approximately 350 m north-northeast resulted in **positive** findings within that search radius (Helix 2020). The location and nature of these results have not been disclosed.

A review of the Helix report (2020) indicates that the project site subject to that study, located approximately 350 m north-northeast, and the Project site under this review are part of the same geological past and exhibit the same general landform history. While Helix did not identify any prehistoric or historic-period cultural resources, or any paleontological resources during their investigation, their background research did note the San Luis Rey Band of Mission Indians have indicated that sensitive discoveries have occurred immediately north of the Escondido Creek channel, and that the project area is considered sensitive to the tribe. The Rincon Band of Luiseño Indians also indicated that although there were no tribal cultural resources identified on the Helix project site, there is the potential for the proposed project to impact unknown tribal cultural resource.

Based on the review of available historic maps and aerial imagery the Project site was previously used for agricultural purposes, and no particular development (e.g., residential, or agricultural buildings) are noted within the Project site prior to 1953 (NETRonline 2022). A series of small buildings had been developed along the northern edge of the Project site (along Tulip Street) sometime between 1953 and 1964. Additionally, as noted above, Reidy Creek's convergence with Escondido Creek was redirected upstream of its original location along the parcel's southern boundary. The removal of the creek and subsequent development of the Project site would have necessitated the filling in of the old creek bed. This appears to have been done following the channelization of both Reidy and Escondido creeks, and was certainly completed by 1978, when the Project site was being used in part for temporary storage. By 1987 the buildings along Tulip Street had been removed, and by 1993 the parcel appears to have been cleared of all surface encumbrances. The vertical extent of this clearance cannot be determined by the aerial photograph, nor whether the surface sediments

represented cleared at-grade materials, or raised, imported materials. The 1994 aerial indicates that the parcel had been developed into its current configuration (NETRonline 2022). Similarly, historic United States Geological Survey (USGS) topographic maps appear to indicate that the area was not developed until the issuance of the 1968 7.5-minute Escondido quadrangle (USGS 1948, 1968).

Due to the nature of construction in the middle twentieth century, the circa 1960 buildings constructed along Tulip Street were likely erected without major excavation; that is, without resorting to intensive ground-disturbing activities associated with more recent cut-and-fill or over-excavation (over-ex) construction methods. Therefore, the nature of the previous disturbance may have allowed for native soils and geologic formations below these surficial disturbances to remain intact, preserving any potentially buried cultural and paleontological resources.

By the 1990s geotechnical engineering of potentially unstable or unconsolidated sediments was usually required prior to construction of buildings and structures supporting human occupation and use. Documents on file with the City of Escondido indicate that the existing project was reviewed by the City of Escondido between 1992 and 1993, and developed shortly thereafter (City of Escondido n.d.). Unfortunately, results from the SCIC did not include data that indicate that the parcel was surveyed prior to construction, nor that a cultural resources monitoring program was executed during construction. The City of Escondido (n.d.) documents give some indication of the level of cultural resources activities that may have been included prior to or during construction of the Arroyo Energy LTD. Partners Icefloe Center (Ice Floe) Project (also known as the Ice-plex building) (City of Escondido n.d.). Three references within the discretionary permit application record are of particular note. As part of the Mitigated Negative Declaration Initial Study Part II, docketed during the January 14, 1993, City Council meeting, Comment 19 notes "Archaeological/Paleontological: The proposal will not result in the alteration of a significant archaeological or historical site, structure, object, or building since no resources currently exist on the site (City of Escondido n.d.:220). No attending archaeological investigation is cited or attached, and as indicated above, records relating to this project do not appear to have been submitted to the SCIC.

During a later City Council meeting further evidence regarding the disposition of cultural resources was made in the City Analysis document that noted:

> A Mitigated Negative Declaration, City Log No. ER 92-49 was issued on January 14, 1993. Mitigation measures agreed to by the applicant were developed to reduce the potential for adverse impacts with respect to air quality, noise, light and glare, natural resources, human health, traffic volumes, utilities, and aesthetics. A copy of the Mitigated Negative Declaration is included within this staff report (City of Escondido n.d.:175).

By omission, this analysis appears to indicate that adverse effects to cultural resources were determined not to be significant, and the project was not in need of mitigation measures to lessen effects to less than significant. However, a requirement (number 27) was issued under the adopted Encroachment Permit General Provisions document which stated:

> Archaeological: The permitee shall cease work in the vicinity of any archaeological resources that are revealed. The Permit Engineer shall be notified immediately. A qualified archaeologist retained by the permitee will evaluate the situation and make recommendations to the Permit Engineer concerning the continuation of the work (City of Escondido n.d.:331).

This latter statement appears to indicate that archaeological monitoring was not required during project construction. Again, no monitoring results report appears to have been filed with the SCIC.

Grading plans for the Ice Floe project state that the project site was to accommodate 5.750 cy (cubic yards) of cut, which was to be balanced with 6,340 cy of fill, along with the import of 700 cy of off-site materials. Per language in the Mitigated Negative Declaration Initial Study Part II filed during the January 14, 1993, City Council meeting Comment 1 noted:

> Earth: The development of the site will necessitate the movement of approximately 10,000 cubic yards of earth. Grading of the site will be performed in a manner that ensures a balance of cut/fill. All grading and subsequent compaction of the site, as necessary. will be per City standards and to the satisfaction of the City Engineer (City of Escondido n.d.:210).

While noting that all fill materials must be compacted to 95 percent, the Ice Floe project grading plans do not provide clarity of where or how deep any cut and fill, or import were planned. Some inference can be made by comparing the proposed finished grade plans within the Ice Floe project plan set with the existing site topography map filed during the February 10, 1993, City Council meeting (City of Escondido n.d.:172). Such review indicates that the finished grade for the Ice Floe project site was elevated generally one-foot above existing grade, and flattened in a broad, flat topography. The only reference to any particular depth of excavation is noted on profile drawings for utility installation related to sewer and storm drain alignments. A sewer profile illustrated the flow-line between 626 feet and 624 feet AMSL, while the storm drain profile illustrated a slope between 629 feet and 621 feet AMSL (Grading plans for the Arroyo Energy LTD. Partners Icefloe Center Project). These represent cuts of approximately nine to 17 feet below surface, depending on location. Unfortunately, however, the grading plans do not detail depth of trenching for foundations, footings, minor utilities, or similar excavations usually necessary to support construction such as the Ice Floe project.

The proposed Project estimates that utility/cable installation will require trenching up to five feet, foundations will require excavation of up to six feet for the main power transformer near the existing transformer, with shallower depths being sufficient for other transformers, while driven/drilled pile foundations will extend approximately 12 feet below grade. Additionally, if an additional storm-drain is needed, it would likely extend to approximately the same depths as the existing storm drain.

Similarly, because the existing development at the Project site appears to be founded on an engineered sediment base of undetermined thickness, it is difficult to ascertain to what depth intact old alluvial (middle to late Pleistocene) deposits may be encountered. Tan and Kennedy (1999) did map the underlying area as old alluvial river deposit formation, and this formation should be expected to be encountered at any depth where not previously impacted. The SDNHM has indicated that this formation has demonstrated an elevated capacity for preserving paleontological materials. As such, encountering paleontological resources during Project construction should be considered possible.

Recommendations

It is apparent that the proposed Project site had been subject to changes in both use and in setting. The past agricultural use may have disturbed only the uppermost sediments, while the circa 1960 buildings located along Tulip Street near Escondido Creek may have required minor grading to level and clear the land for construction. The abandonment of Reidy Creek and later clearance of the land for use as temporary storage may have resulted in the burial of undisturbed sediments along the former creek alignment. The circa 1994 Ice Floe development of the Project site into its current configuration appears to have been carried out under well-practiced CEQA guidelines and building codes of the day; however, apart from available project construction plans illustrating only finished grade, documentation resulting from project construction, such as a monitoring report (which was not required as a condition of project approval – see discussion above), appears not to be available for review at this time. As a result, little data, such as as-built documents or over-ex grading requirements for soil conditioning and unification, is readily available to consult. This results in a poor understanding of whether or not the Proposed Project will extend below this assumed, but unknown depth of prior construction. Similarly, per grading plans for the prior Ice Floe project, approximately 700 cy was to be imported onto the project site; however, there appears to be little known data at available to describe the type and condition of the fill soil while it was incorporated into the site. (The concern being that it cannot be determined whether or not this fill soil may have contained artifactual materials removed from another location prior to deposition and incorporation into the Ice Floe project site. This was an issue, though rare, with projects at various times in the past prior to the best practices taken today.)

Based on the results of the records search review and background research, Chambers Group suggests that there is potential to encounter intact buried native formations. The depths of these potential intact native formations remain unknown. In addition to intact native formations there is also the potential to encounter buried archaeological and paleontological resources. Similarly, consultation with Native American groups may indicate the presence of additional significant resources. Chambers Group recommends formal discussion with tribes requesting consultation under AB 52 legislation.

Because data at present are insufficient to declare with certainty that cultural and paleontological resources will not be encountered during project construction Chambers Group recommends the following mitigation measures be considered and implemented to reduce potential impacts to cultural resources to less than significant. If additional information is obtained with more specific details regarding the previous or current subsurface conditions within the Project site, that information will be incorporated in a Cultural Resources Monitoring Program (CRMP) and Paleontological Mitigation Plan (PMP). The relevant additional information may be included through obtaining and reviewing documentation with more detailed evidence regarding the past development and associated ground disturbance at the site or through additional studies performed related to the Project, such as geotechnical analysis related to advanced design. The CRMP and PMP, particularly if relevant additional information is obtained, will allow for more tailored and focused monitoring and mitigation programs to be prepared, in concert with the City and participating tribes. If cultural resources are identified, these would need to be evaluated for eligibility for the CRHR. Evaluation for archaeological sites may consist of an archaeological testing program. If determined eligible by the CEQA lead agency or the State Historic Preservation Office, mitigation, consisting of data recovery for archaeological sites, would be required if avoidance or preservation is not feasible.

CUL-1 If requested by one or more participating tribes, it is recommended the City of Escondido Planning Division (City) should enter into a Tribal Cultural Resource Treatment and Monitoring Agreement (also known as a pre-excavation agreement) with a tribe that is traditionally and culturally affiliated with the Project Location (TCA Tribe) prior to issuance of a grading permit. The purposes of the agreement are (1) to provide the applicant with clear expectations regarding tribal cultural resources; and (2) to formalize protocols and procedures between the City and the TCA Tribe for the protection and treatment of, including but not limited to, Native American human remains; funerary objects; cultural and religious landscapes; ceremonial items; traditional gathering areas; and cultural items located and/or discovered through a monitoring program in conjunction with the construction of the Proposed Project, including additional archaeological surveys and/or studies, excavations, geotechnical investigations, grading, and all other ground disturbing activities.

CUL-2 Prior to issuance of a grading permit, the City shall retain a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (U.S. Department of the Interior, 2008) to prepare the CRMP in coordination with participating tribe(s). The CRMP will include any additional information that can be utilized to determine the appropriate monitoring program. The qualified archeologist and Native American monitors associated with a TCA Tribe will implement the monitoring program, as described in the CRMP. Because the Project is located within shared territory of the Luiseño and Kumeyaay people, Native American monitors representing the interest and values of both the Luiseño and Kumeyaay people shall be retained for the project. The archaeologist shall be responsible for coordinating with the Native American monitor. This verification shall be presented to the City in a letter from the qualified archaeologist that confirms that Native American monitors representing both Luiseño and Kumeyaay TCA Tribes have been retained. The City, prior to any pre-construction meeting, shall approve all persons involved in the monitoring program.

CUL-3 The qualified archaeologist and, if requested by the participating tribe(s), a Native American monitor shall attend the pre-grading meeting with the grading contractors to explain and coordinate the requirements of the monitoring program.

CUL-4 As required by the CRMP**,** the qualified archaeologist and the Native American monitor shall be on site during the initial grubbing, site grading, excavation or disturbance of the ground surface, . The CRMP shall include protocols for monitoring and, if available, shall include any additional information and related monitoring procedures for specific areas of the Project site that have been previously disturbed. The frequency of inspections shall depend on the rate of excavation, the materials excavated, and any discoveries of tribal cultural resources as defined in California Public Resources Code Section 21074. Archaeological and Native American monitoring will be discontinued when the depth of grading and soil conditions no longer retain the potential to contain cultural deposits. The qualified archaeologist, in consultation with the Native American monitor, shall be responsible for determining the duration and frequency of monitoring.

CUL-5 In the event that previously unidentified cultural resources that qualify as historical, unique archaeological, and/or tribal cultural resources are discovered, the qualified archaeologist and the Native American monitor shall have the authority to temporarily divert or temporarily halt ground disturbance operation in the area of discovery to allow for the evaluation of potentially significant cultural resources. Isolates and clearly non-significant deposits shall be minimally documented in the field and collected so the monitored grading can proceed.

CUL-6 If a potentially significant historical, unique archaeological, and/or tribal cultural resource is discovered, the qualified archaeologist shall notify the City of said discovery. The qualified archaeologist, in consultation with the City, the TCA Tribe and the Native American monitor, shall determine the significance of the discovered resource. Recommendations for the resource's treatment and disposition shall be made by the qualified archaeologist in consultation with the TCA Tribe and the Native American monitor and be submitted to the City for review and approval.

CUL-7 The avoidance and/or preservation of significant cultural resources that qualify as historical, unique archaeological, and/or tribal cultural resources must first be considered and evaluated as required by CEQA. Where any significant resources have been discovered and avoidance and/or preservation measures are deemed to be infeasible by the City, then a research design and data recovery program to mitigate impacts shall be prepared by the qualified archaeologist (using professional archaeological methods), in consultation with the TCA Tribe and the Native American monitor, and shall be subject to approval by the City. The archaeological monitor, in consultation with the Native American monitor, shall determine the amount of material to be recovered for an adequate artifact sample for analysis. Before construction activities are allowed to resume in the affected area, the research design and data recovery program activities must be concluded to the satisfaction of the City.

CUL-8 As specified by California Health and Safety Code Section 7050.5, if human remains are found on the project site during construction or during archaeological work, the person responsible for the excavation, or his or her authorized representative, shall immediately notify the San Diego County Coroner's office. Determination of whether the remains are human shall be conducted on-site and in situ where they were discovered by a forensic anthropologist, unless the forensic anthropologist and the Native American monitor agree to remove the remains to an off-site location for examination. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the Coroner has made the necessary findings as to origin and disposition. A temporary construction

exclusion zone shall be established surrounding the area of the discovery so that the area would be protected, and consultation and treatment could occur as prescribed by law. In the event that the remains are determined to be of Native American origin, the Most Likely Descendant, as identified by the Native American Heritage Commission, shall be contacted in order to determine proper treatment and disposition of the remains in accordance with California Public Resources Code section 5097.98. The Native American remains shall be kept in-situ, or in a secure location in close proximity to where they were found, and the analysis of the remains shall only occur on-site in the presence of a Native American monitor.

CUL-9 If the qualified archaeologist elects to collect any archaeological materials that qualify as tribal cultural resources, the Native American monitor must be present during any testing or cataloging of those resources. Moreover, if the qualified archaeologist does not collect the archaeological materials that qualify as tribal cultural resources that are unearthed during the ground disturbing activities, the Native American monitor, may at their discretion, collect said resources and provide them to the TCA Tribe for respectful and dignified treatment in accordance with the Tribe's cultural and spiritual traditions. The project archaeologist shall document evidence that all cultural materials have been curated and/or repatriated as follows:

1) It is the preference of the City that all tribal cultural resources be repatriated to the TCA Tribe as such preference would be the most culturally sensitive, appropriate, and dignified. Therefore, any tribal cultural resources collected by the qualified archaeologist shall be provided to the TCA Tribe. Evidence that all cultural materials collected have been repatriated shall be in the form of a letter from the TCA Tribe to whom the tribal cultural resources have been repatriated identifying that the archaeological materials have been received.

OR

2) Any tribal cultural resources collected by the qualified archaeologist shall be curated with its associated records at a San Diego curation facility or a culturally-affiliated Tribal curation facility that meets federal standards per 36 CFR Part 79, and, therefore, would be professionally curated and made available to other archaeologists/ researchers for further study. The collection and associated records, including title, shall be transferred to the San Diego curation facility or culturally affiliated Tribal curation facility and shall be accompanied by payment of the fees necessary for permanent curation. Evidence that all cultural materials collected have been curated shall be in the form of a letter form the curation facility stating the prehistoric archaeological materials have been received and that all fees have been paid.

CUL-10 Prior to the release of the grading bond, a monitoring report and/or evaluation report, if appropriate, which describes the results, analysis and conclusion of the archaeological monitoring program and any data recovery program on the project site shall be submitted by the qualified archaeologist to the City. The Native American monitor shall be responsible for providing any notes or comments to the qualified archaeologist in a timely manner to be submitted with the report. The report will include California Department of Parks and Recreation Primary and Archaeological Site Forms for any newly discovered resources.

PAL-01 Prior to issuance of a grading permit, the applicant shall retain the services of a qualified paleontologist to remain on-call for the duration of the proposed ground disturbing construction activity. The paleontologist selected must be approved by the appropriate City/Lead Agency representative. The qualified paleontologist may also be a qualified archaeologist. Upon approval or request by the City, a paleontological mitigation plan (PMP) outlining procedures and protocols for paleontological monitoring

and data recovery shall be prepared for the Proposed Project and submitted to the City for review and approval. The development and implementation of the PMP shall include any additional information that can be utilized to determine the appropriate monitoring program, consultations with the applicant's engineering geologist, as well as a requirement that the curation of all specimens recovered under any scenario shall be through an appropriate repository agreed upon by the City. All specimens become the property of the City unless the City chooses otherwise. If the City accepts ownership, the curation location may be revised. The PMP shall include developing a multilevel ranking system, or Potential Fossil Yield Classification (PFYC), as a tool to demonstrate the potential yield of fossils within a given stratigraphic unit. The PMP shall outline the monitoring and salvage protocols to address paleontological resources encountered during ground disturbing activities. As well as the appropriate recording, collection, and processing protocols to appropriately address any resources discovered. The cost of data recovery is limited to the discovery of a reasonable sample of available material. The interpretation of reasonableness rests with the City, in consultation with the qualified paleontologist.

PAL-02 At the completion of all ground-disturbing activities, the qualified paleontologist shall prepare a final paleontological mitigation report summarizing all monitoring efforts and observations, as performed in line with the PMP, and all paleontological resources encountered, if any. As well as providing follow-up reports of any specific discovery, if necessary. If no paleontological resources are identified during monitoring, the final reporting shall be addressed within the archaeological monitoring and/or evaluation report. A standalone paleontological mitigation report is only required if paleontological resources are encountered during monitoring.

Chambers Group is available to assist with any further support or document preparation related to Cultural Resources, including tribal consultation. Please contact Corinne Lytle Bonine, Vice President, Environmental Planning, at 858-541-2800 ext. 7100, Lucas Tutschulte, Cultural Resources Team Lead, at 858-541-2800 ext. 7114, or me at the contact information below if you have any questions or comments regarding this report.

Sincerely,

CHAMBERS GROUP, INC.

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Attachments

Attachment A (Confidential): Record Search Results

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Photographs

Photo 1: Existing conditions along Tulip Street.
View southeast.

Photo 2: Existing conditions along Tulip Street from near the northern parcel corner.
View southeast.

Photo 3: Existing conditions within Project site.
View east-southeast.

Photo 4: Existing conditions within Project site along the southern boundary.
View west.

Photo 5: Existing conditions within Project site along the northern boundary.
View northeast.

Photo 6: Existing conditions within Project site along the northern boundary.
View southeast.

Photo 7: Existing conditions within Project site along the southern boundary.
View west.

Photo 8: Existing conditions immediately outside Project site near eastern parcel corner.
View south.

Photo 9: Existing conditions immediately outside Project site near eastern parcel corner.
View north.

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ATTACHMENT A (CONFIDENTIAL) – RECORD SEARCH RESULTS

Attachment A (Confidential): Record Search Results

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APPENDIX C – NOISE ASSESSMENT

NOISE ASSESSMENT

GOAL LINE ENERGY
BATTERY ENERGY STORAGE SYSTEM PROJECT
CITY OF ESCONDIDO, CA

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March 30, 2023

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COMMON TERMS

Sound Pressure Level (SPL): a ratio of one sound pressure to a reference pressure (L_{ref}) of 20 µPa. Because of the dynamic range of the human ear, the ratio is calculated logarithmically by 20 log (L/L_{ref}).

A-weighted Sound Pressure Level (dBA): Some frequencies of noise are more noticeable than others. To compensate for this fact, different sound frequencies are weighted more.

Minimum Sound Level (L_{min}): Minimum SPL or the lowest SPL measured over the time interval using the A-weighted network and slow time weighting.

Maximum Sound Level (L_{max}): Maximum SPL or the highest SPL measured over the time interval the A-weighted network and slow time weighting.

Equivalent sound level (L_{eq}): the true equivalent sound level measured over the run time. Leq is the A-weighted steady sound level that contains the same total acoustical energy as the actual fluctuating sound level.

Day Night Sound Level (Ldn): Representing the Day/Night sound level, this measurement is a 24 –hour average sound level where 10 dB is added to all the readings that occur between 10 pm and 7 am. This is primarily used in community noise regulations where there is a 10 dB "Penalty" for nighttime noise. Typically, Ldn's are measured using A weighting.

Community Noise Exposure Level (CNEL): The accumulated exposure to sound measured in a 24-hour sampling interval and artificially boosted during certain hours. For CNEL, samples taken between 7 pm and 10 pm are boosted by 5 dB; samples taken between 10 pm and 7 am are boosted by 10 dB.

Octave Band: An octave band is defined as a frequency band whose upper band-edge frequency is twice the lower band frequency.

Third-Octave Band: A third-octave band is defined as a frequency band whose upper band-edge frequency is 1.26 times the lower band frequency.

Response Time (F,S,I): The response time is a standardized exponential time weighting of the input signal according to fast (F), slow (S) or impulse (I) time response relationships. Time response can be described with a time constant. The time constants for fast, slow and impulse responses are 1.0 seconds, 0.125 seconds and 0.35 milliseconds, respectively.

EXECUTIVE SUMMARY

This noise study has been completed to determine the noise impacts associated with the development of the proposed approximate 50-Megawatt (MW) battery energy storage project. The Project site is located at 555 Tulip Street in Escondido, CA. The proposed project would consist of battery energy storage system (BESS) facilities on a single parcel.

Operational Noise

Based on the empirical data, the manufacturers specifications and the distances to the property lines, it was determined that the cumulative noise levels from the proposed battery storage containers and transformers and the existing CoGen plant would comply with the most restrictive nighttime property line standards at the surrounding land uses. Therefore, no mitigation is required.

Major facility maintenance is anticipated to occur at most 10 times per year and would generally require less than a day to complete. Maintenance activities would be limited during the daytime hours of 7am - 7pm. No direct or cumulative noise impacts are anticipated with these noise reduction measures.

Construction Noise

At a distance as close as 120 feet, the point source noise attenuation from the grading activities and the nearest property line is -7.6 dBA. This would result in an anticipated worst-case 8-hour average combined noise level of 75 dBA at the property line during grading. No blasting or rock crushing is anticipated during the grading operations. Therefore, no impulsive noise sources are expected and the Project will comply with the City of Escondido's Noise Ordinance.

1.0 INTRODUCTION

1.1 Purpose of this Study

This noise study was completed to determine the noise impacts associated with the construction or operation of the proposed Battery Energy Storage System (BESS) Project. The project site is located within the City of Escondido, in northern San Diego County. Should impacts be determined, the intent of this study would be to recommend mitigation measures, which would reduce those impacts.

1.2 Project Location

The Project site is located at 555 Tulip Street on a 6.5-acre parcel (232-131-25-00). A general project vicinity map is shown in Figure 1-A.

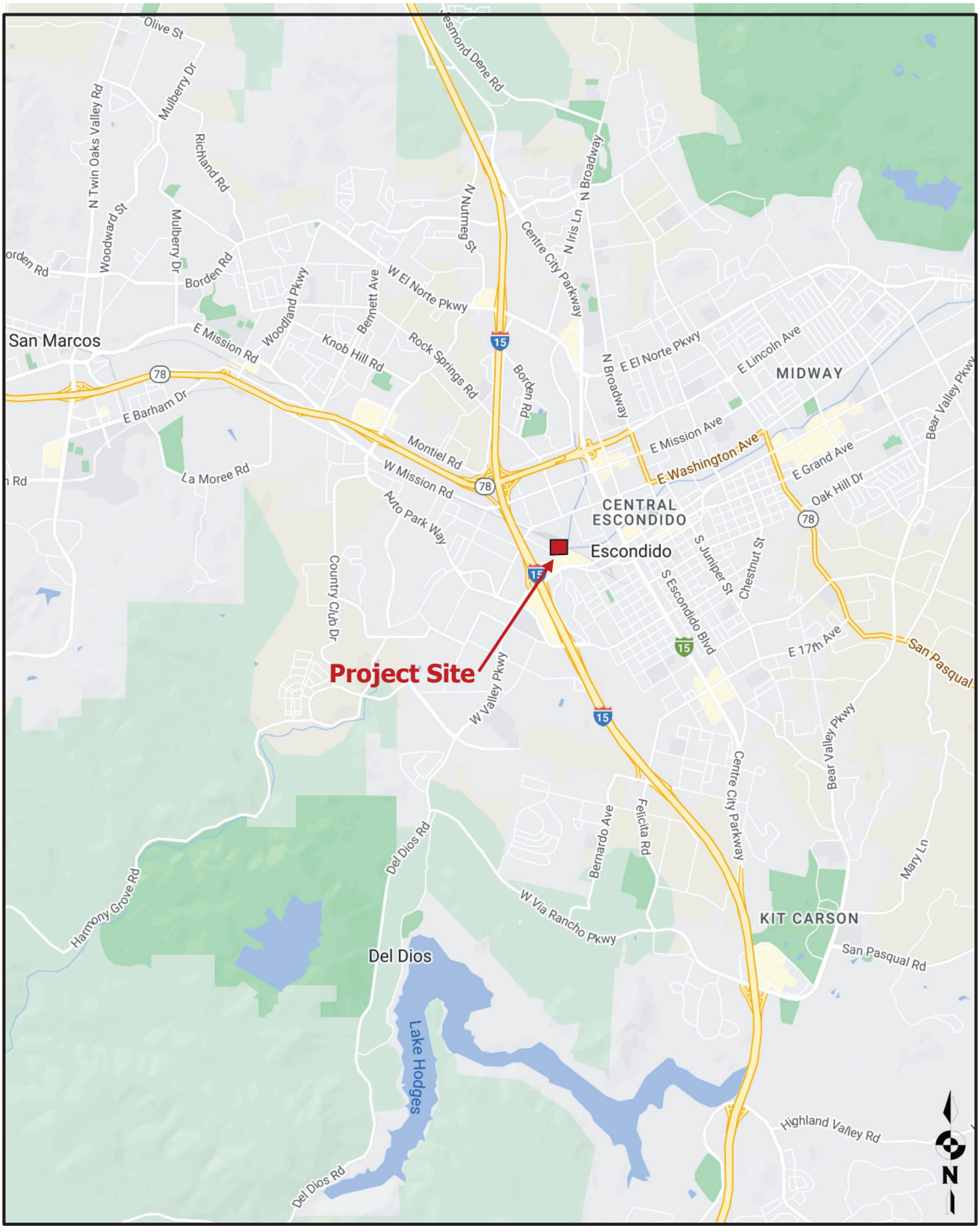
1.3 Project Description

The Project proposes to construct 50 MW of battery energy storage on a parcel that has a General Plan Land Use Designation of General Industrial (GI) and zoned Planned Development Industrial (PD-I); however, the proposal includes a zone change to General Industrial (M-2). The Project would utilize advanced technology batteries and control systems contained within an approximate 6.5-acre lot.

The Project consists of lithium-based battery modules installed in racks and housed within purpose-built outdoor Battery Energy Storage System (BESS) enclosures. A typical BESS enclosure will house hundreds of battery modules where each enclosure is typically capable of storing between 0.4 to 5 megawatt-hours (MWh) of energy. Each BESS enclosure would be approximately 30-feet long, 6-feet wide, and 10-feet tall, in groups consisting of 4 to 6 enclosures. The battery storage containers would be set back at least 10 feet from the fence line and would be separated by a minimum of 5 feet from each other.

The Project would provide electrical service for the local electric utility, SDG&E, and the California Independent System Operator ("CAISO"). Each grouping of BESS enclosures would have a power conversion system (PCS) containing an inverter and transformer. In addition, the system would be equipped with integrated operational management systems, fire and safety systems (HVAC systems, ventilation, gas, heat, and smoke detection and alarms, and fire suppression systems) all designed, constructed, and operated pursuant to the version of the California Fire Code in effect at the time of building permit issuance.

Figure 1-A: Project Vicinity Map



Source: (Google, 2023)

The Project would be constructed by Onward Energy of Denver, CO. The proposed construction schedule includes approximately 6 months for demolition and 15 months for construction. Construction would occur Monday through Saturday.

The Project will operate 24 hours per day/seven days per week. It will be operated remotely, with no new buildings or parking areas. It is estimated that maintenance will include two to four staff performing maintenance visits weekly and as needed. Figure 1-B shows the Conceptual Plan of the Project.

1.4 Environmental Settings & Existing Conditions

a) Settings & Locations

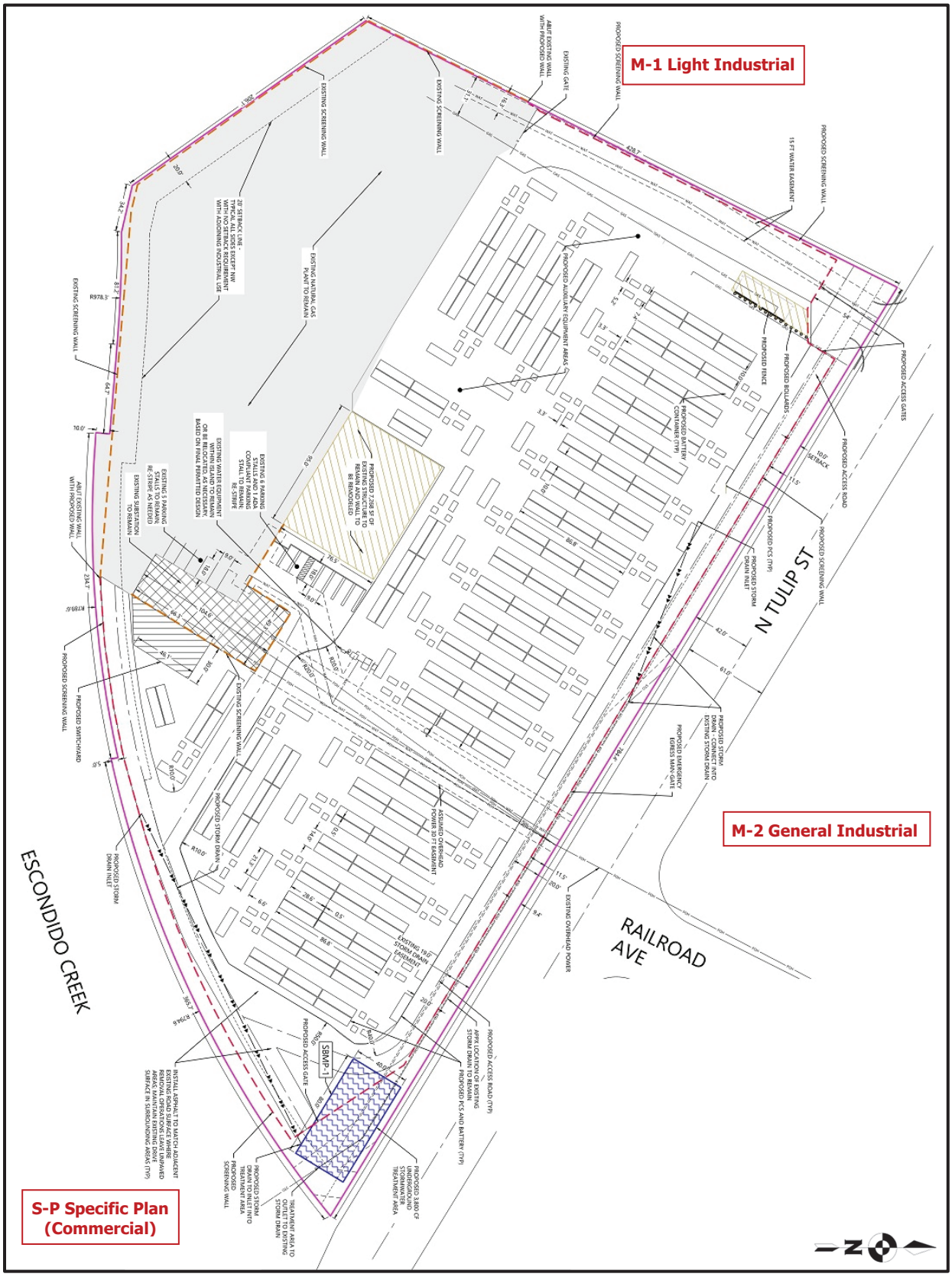
The site topography is flat, with an elevation of approximately 640 feet above sea level. The project site currently contains a non-operational ice-rink and a 50 MW natural gas power plant (CoGen plant). Project facilities will be constructed within the existing ice-rink and parking facilities and adjacent to the natural gas power plant facilities, which will remain. This includes an area of approximately 4.5 acres.

The Project Site is located within the City of Escondido's (City) Planned Development: Industrial zone (PD-I) land use, has a General Plan Land Use Designation of Planned Development Industrial (PD-I); however, the proposal includes a zone change to General Industrial (M-2). This designation allows "utilities," including the Project. Under Section 33-564 of the Municipal Code, utilities are considered a permitted use within the M-2 zone.

b) Existing Noise Conditions

The site is located at 555 Tulip Street, east of Interstate 15 (I-15) between Washington Avenue and Valley Parkway. Access to the site is from Interstate 15 to the west via Valley Parkway to the south. Existing noise occurs mainly from vehicular traffic traveling on I-15 and nearby roadways.

Figure 1-B: Site Development Plan



Source: (Westwood Professional Services, Inc., 2023)

1.5 Methodology and Equipment

a) Noise Measuring Methodology and Procedures

To determine the existing noise environment and to assess potential noise impacts, 24-hour measurements were taken at two locations with the greatest impact potential from the proposed project having a relatively flat terrain and no obstruction from trees or structures. The noise measurements were recorded on Monday October 10th to Tuesday October 11th, 2022 by Ldn Consulting between approximately 10:00 a.m. and 10:00 a.m. the following day. Noise measurements were taken using Larson-Davis Spark Model 706 Type 2 precision sound level meters, programmed, in "slow" mode, to record noise levels in "A" weighted form. The sound level meters and microphones were mounted on a tripod, five feet above the ground and equipped with a windscreen during all measurements. The sound level meter was calibrated before and after the monitoring using a Larson-Davis calibrator, Model CAL 200.

Table 1-1 provides the hourly noise levels along with the average values. The noise measurement locations were determined based on site access and noise impact potential to the proposed sensitive uses. Monitoring location 1 (M1) was located across the Escondido Creek to the southeast at the existing commercial and retail uses. Monitoring location 2 (M2) was located south of West Valley Parkway at the nearest residential uses along Upas Street. The noise monitoring locations are provided graphically in Figure 1-C on the following page.

Table 1-1: Long-Term Noise Level Summary

	M1 (dBA L_{eq})	M2 (dBA L_{eq})
11:00 AM	68.1	62.8
12:00 PM	61.2	62.9
1:00 PM	60.9	63.4
2:00 PM	62.7	63.6
3:00 PM	62.3	64.2
4:00 PM	63.1	64.2
5:00 PM	63.0	64.7
6:00 PM	62.1	64.6
7:00 PM	61.9	63.9
8:00 PM	62.5	63.2
9:00 PM	63.0	62.7
10:00 PM	58.9	60.9
11:00 PM	57.7	59.7
12:00 AM	49.8	58.5
1:00 AM	53.4	56.9
2:00 AM	56.5	51.5
3:00 AM	43.8	52.2
4:00 AM	59.1	52.8
5:00 AM	60.6	56.0
6:00 AM	60.2	59.1
7:00 AM	60.7	60.4
8:00 AM	61.2	62.6
9:00 AM	63.1	60.8
10:00 AM	61.0	61.9
Overall	**61.6**	**61.8**

Figure 1-C: Noise Measurement Locations

b) Noise Calculations and Factors

Noise is defined as unwanted or annoying sound which interferes with or disrupts normal activities. Exposure to high noise levels has been demonstrated to cause hearing loss. The individual human response to environmental noise is based on the sensitivity of that individual, the type of noise that occurs and when the noise occurs.

Sound is measured on a logarithmic scale consisting of sound pressure levels known as a decibel (dB). The sounds heard by humans typically do not consist of a single frequency but of a broadband of frequencies having different sound pressure levels. The method for evaluating all the frequencies of the sound is to apply an A-weighting to reflect how the human ear responds to the different sound levels at different frequencies. The A-weighted sound level adequately describes the instantaneous noise whereas the equivalent sound level depicted as L_{eq} represents a steady sound level containing the same total acoustical energy as the actual fluctuating sound level over a given time interval.

The Community Noise Equivalent Level (CNEL) is the 24 hour A-weighted average for sound, with corrections for evening and nighttime hours. The corrections require an addition of 5 decibels to sound levels in the evening hours between 7 p.m. and 10 p.m. and an addition of 10 decibels to sound levels at nighttime hours between 10 p.m. and 7 a.m. These additions are made to account for the increased sensitivity during the evening and nighttime hours when sound appears louder.

A vehicles noise level is from a combination of the noise produced by the engine, exhaust and tires. The cumulative traffic noise levels along a roadway segment are based on three primary factors: the amount of traffic, the travel speed of the traffic, and the vehicle mix ratio or number of medium and heavy trucks. The intensity of traffic noise is increased by higher traffic volumes, greater speeds and increased number of trucks. Because mobile/traffic noise levels are calculated on a logarithmic scale, a doubling of the traffic noise or acoustical energy results in a noise level increase of 3 dBA. Therefore, the doubling of the traffic volume, without changing the vehicle speeds or mix ratio, results in a noise increase of 3 dBA. Mobile noise levels radiant in an almost oblique fashion from the source and drop off at a rate of 3 dBA for each doubling of distance under hard site conditions and at a rate of 4.5 dBA for soft site conditions. Hard site conditions consist of concrete, asphalt and hard pack dirt while soft site conditions exist in areas having slight grade changes, landscaped areas and vegetation.

On the other hand, fixed/point sources radiate outward uniformly as it travels away from the source. Their sound levels attenuate or drop off at a rate of 6 dBA for each doubling of distance. The most effective noise reduction methods consist of controlling the noise at the source, blocking the noise transmission with barriers or relocating the receiver. Any or all of these methods may be required to reduce noise levels to an acceptable level.

2.0 OPERATIONAL ACTIVITIES

The City of Escondido has published noise regulations and guidelines in the Noise Element of the General Plan and the Municipal Code. The City of Escondido Noise Element has identified several policies on noise and acceptable noise levels with respect to noise receptors; however, none apply to the type of use associated with the proposed Project. With respect to noise generators, the Noise Element states that Projects that increase noise levels by five (5) dBA or greater would result in a significant impact.

The majority of City noise regulations and guidelines that apply to the Project are found in Section 17 of Article 12 (Noise Abatement and Control) of the City Municipal Code.

Sections 17-234 and 17-240 regulate construction noise. Any piece of construction equipment or any combination of construction equipment cannot be operated so as to cause an average noise level excess of 75 dBA L_{eq} during the allowable hours of operation. Per City regulations, construction equipment can only be operated from 7:00 AM to 6:00 PM, Monday through Friday, and on Saturday from 9:00 AM to 5:00 PM. Construction equipment cannot be operated on Sundays or holidays. Operation of any construction equipment during non-allowable hours is permitted only by a variance from the City Manager.

Operational noise limits at the common property lines of adjacent land uses are regulated by Section 17-229 of Article 12 of the Municipal Code. These limits are shown in Table 2-1.

Table 2-1: Sound Level Limits

Zone	Time	Applicable Limit One-Hour Average Sound Level (dBA)
Residential zones	7 a.m. to 10 p.m.	50
	10 p.m. to 7 a.m.	45
Multi-residential zones	7 a.m. to 10 p.m.	55
	10 p.m. to 7 a.m.	50
Commercial zones	7 a.m. to 10 p.m.	60
	10 p.m. to 7 a.m.	55
Light industrial/Industrial park zones	Anytime	70*
General industrial zones	Anytime	75*
*Subject to provisions of Section 17-229 (c)(5).		

Section 17-229(c) of Article 12 of the Municipal Code allows for corrections to the sound level limits identified in Table 2-1. The corrections applicable to proposed Project are described below:

If the noise is continuous, the Leq for any hour will be represented by any lesser time period within that hour. Noise measurements of a few minutes only will thus suffice to define the noise level.

If the noise is intermittent, the Leq for any hour may be represented by a time period typical of the operating cycle. Measurement should be made of a representative number of noisy/quiet periods. A measurement period of not less than 15 minutes is, however, strongly recommended when dealing with intermittent noise.

The sound level limit at a location on a boundary between two land use classifications is the limit applicable to the receiving land use. If the measured ambient level exceeds that permissible, the allowable noise exposure standard shall be the ambient noise level. The ambient level shall be measured when the alleged noise violations source is not operating.

Section 17-242 of Article 12 of the Municipal Code describes exemptions to the noise level limits are as follows:

(a) Emergency Work. The provisions of this article shall not apply to any emergency work as defined in Section 17-227(1), provided that (1) a variance has been obtained from the City Manager, and (2) any vehicle device, apparatus, or equipment used, related to or connected with emergency work is designed, modified, or equipped to reduce sounds produced to the lowest possible level consistent with effective operation of such vehicle, device, apparatus, or equipment.

(b) Sporting, Entertainment, Public Events. The provisions of this article shall not apply to:

1. Those reasonable sounds emanating from authorized school bands, school athletic and school entertainment events.
2. Sporting, entertainment and public events which are conducted pursuant to a license or permit issued by the Building Director for noise exceeding criteria, standards or levels as set forth in this article.
3. Those reasonable sounds emanating from a sporting, entertainment, or public event; provided, however, it shall be unlawful to exceed those levels set forth in Section 17-229 when measured at or within the property lines of any property which is developed and used either in part or in whole for residential purposes unless a variance has been granted allowing sounds in excess of said levels.

2.1 Guidelines for the Determination of Significance

Operational noise limits at the property lines are regulated by Section 17-229 of Article 12 of the Municipal Code as stated above in Section 3 of this report. If the measured ambient level exceeds that permissible, the allowable noise exposure standard shall be the ambient noise level. Section 17-242 of Article 12 of the Municipal Code describes exemptions to the noise level limits as they pertain to this Project are as follows:

The provisions of Section 17-242 of Article 12 shall not apply to sporting, entertainment and public events which are conducted pursuant to a license or permit issued by the Building Director for noise exceeding criteria, standards or levels as set forth in this article. Those reasonable sounds emanating from a sporting, entertainment, or public event; provided, however, it shall be unlawful to exceed those levels set forth in Section 17-229 when measured at or within the property lines of any property which is developed and used either in part or in whole for residential purposes unless a variance has been granted allowing sounds in excess of said levels.

For the purposes of this analysis, the adjacent property to the northwest is zoned light industrial and has a noise standard of 70 dBA Leq anytime. The properties to the northeast across Tulip Street are zoned industrial and have a noise standard of 75 dBA Leq anytime. The property to the south and southeast across the Escondido Creek is zoned SPA 9, Downtown Specific Plan. The Downtown Specific Plan does not indicate a land use goal for this area other than residential uses are not permitted, however, the existing land use is commercial, therefore, the evening noise standard of 55 dBA Leq was utilized. The nearest residential land use is located south of W Valley Parkway along Upas Street over 900-feet southwest of the project site and has an evening noise standard of 45 dBA Leq.

It was determined during the ambient measurements that the current noise levels at the nearest residential land uses along Upas Street exceed the allowable standards. The lowest hourly ambient noise level of 51.5 dBA during the nighttime hours as shown above in Table 1-1. Therefore, the allowable one-hour average sound level at the nearest residences shall be 51.5 dBA for the purposes of this analysis.

2.2 Potential Operational Noise Impacts

Each battery storage container has four (4) internal heating, ventilation, and air conditioning (HVAC) systems. Each grouping of BESS enclosures would have a power conversion system (PCS) containing an inverter and transformer. In addition, the system would be equipped with integrated operational management systems, fire and safety systems (HVAC systems, ventilation, gas, heat, and smoke detection and alarms, and fire suppression systems) all designed,

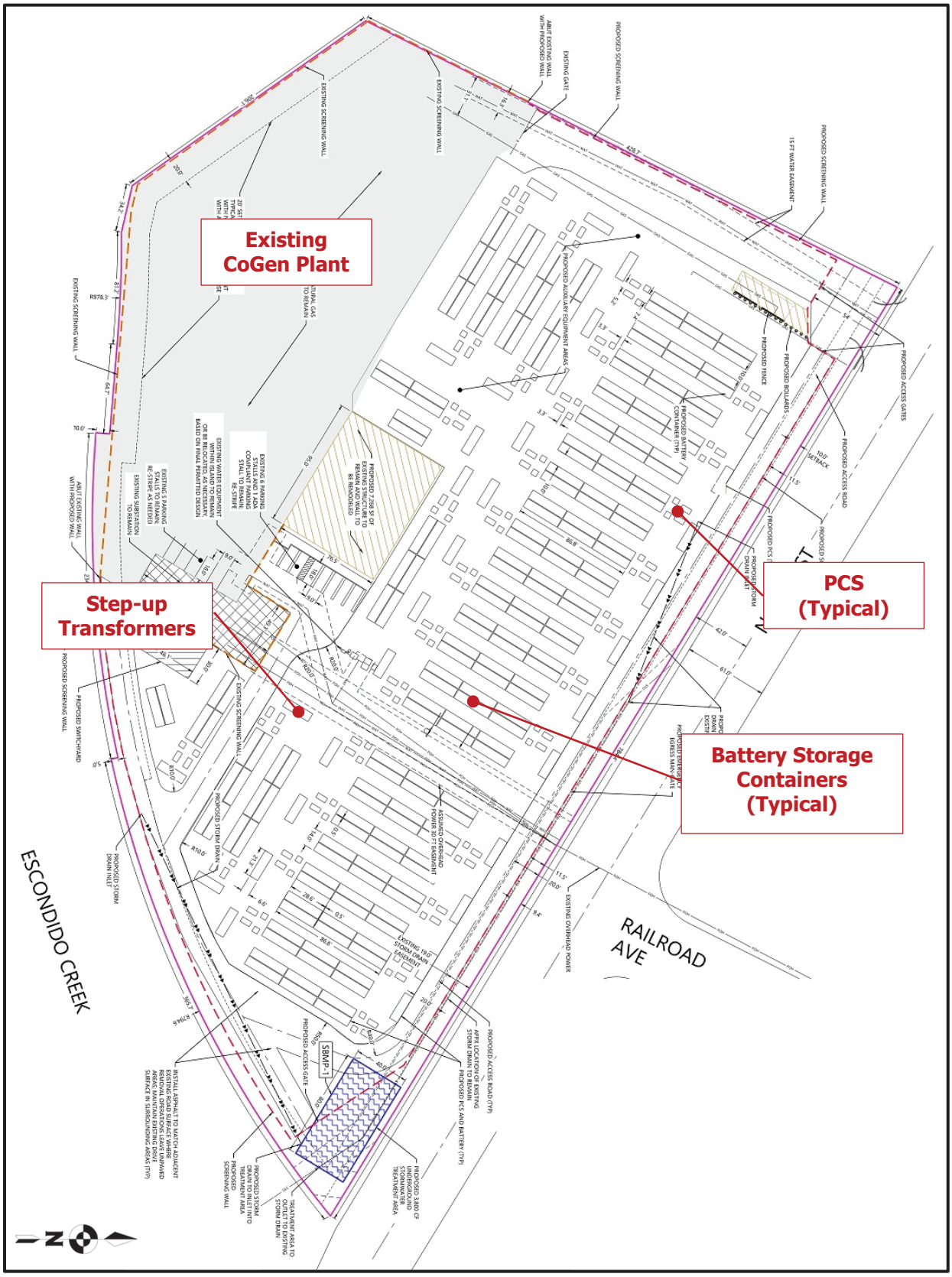
constructed, and operated pursuant to the version of the California Fire Code in effect at the time of building permit issuance. The proposed project would also include a step-up transformer.

This section examines the potential stationary noise source impacts associated with the operation of the proposed project. Specifically, noise levels from the proposed battery storage containers, transformers, inverters, and project maintenance.

The proposed battery storage containers, power conversion systems (PCS), and step-up transformer locations for the site can be seen in Figure 2-A on the following page. The project is not proposing any back-up generators. On-site operation is anticipated to be remote with occasional major maintenance trips at most 10 times a year and minor maintenance/landscaping visits twice monthly.

The existing CoGen plant is a 50 MW natural gas power plant that utilizes gas turbines to generate electricity to provide to San Diego Gas & Electric. The existing plant operations would continue to generate noise to the surrounding community. An existing 15 to 20-foot wall surrounds the CoGen plant to the west, south, and east. The existing building on the Project site provides shielding to the north which will be demolished.

Figure 2-A: Proposed Equipment Location and Property Line Orientation



2.2.1 Operational Equipment Noise Levels On-site

Fixed or point sources radiate outward uniformly as sound travels away from the source. Their sound levels attenuate or drop off at a rate of 6 dBA for each doubling of distance. Using a point-source noise prediction model, calculations of the expected operational noise impacts were completed. The essential model input data for these performance equations include the source levels of each type of equipment, relative source to receiver horizontal and vertical separations, and any transmission loss from topography or barriers.

Proposed Battery Storage System

In order to examine the potential stationary noise source impacts associated with the operation of the proposed BESS, reference noise levels were used for the step-up transformers (*Source: Cooper Power Series Three Phase Transformers CA202003EN).* The project is proposing to use two transformers up to 10,000 kVA with unshielded noise levels anticipated to be 68 dBA at 3 feet.

The project proposes to use Freemaq PCSM / Multi PCSM power conversion systems (PCS), or equivalent, with a reference noise level of less than 79 dBA at 3 feet from the rear part (*Source: Power Electronics Hardware and Installation Manual, Freemaq PCSM / Multi PCSM).*

The project is proposing to use an LG Energy Solution ESS B-Link System for the battery storage containers, or equivalent. Each of the proposed BESS enclosures would be equipped with four (4) Envicool HVAC units Model MC50HDNC1U with a reference noise level of 65 dBA at 3 feet. The reference noise levels of the HVAC, transformers, and inverters are shown in Table 2-2 below.

Table 2-2: Project Related Operational Noise Sources

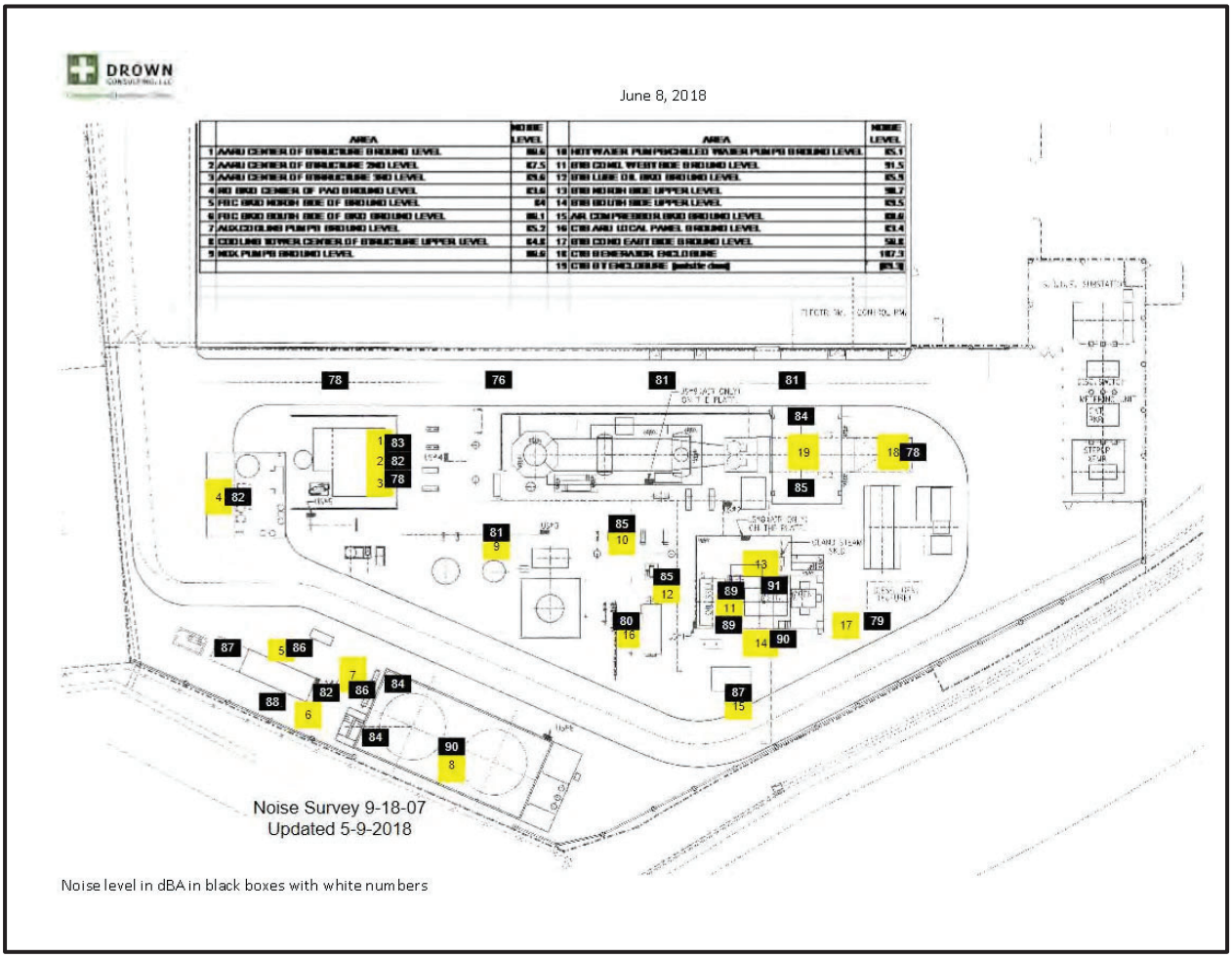
Quantity	Equipment Description	Related Sound Level Distance (ft)	Noise Level (dBA)
768	HVAC	3	65
33	Power Conversion System	3	79
2	Step-Up Transformer	3	68

Existing CoGen Plant

In order to examine the existing stationary noise source impacts associated with the operation of the existing CoGen plant, noise dosimetry was conducted by Drown Consulting, LLC and the results were summarized in a session report for each location dated June 8, 2018. As seen in Figure 2-B, the predominant sources of noise at the plant are at dosimetry locations 13 and 14 with an average

noise level of 91 and 90 dBA Leq, respectively. Although most of the noise sources at the CoGen plant would be at the ground level and shielded by the existing 15 to 20-foot noise wall surrounding the site, the combined noise level at the property line is a conservative representation of the potential noise impacts from the CoGen plant. The cumulative noise level of the CoGen plant operations was determined to be 68.5 dBA Leq at a distance of 54-feet. Overall, the noise levels from the CoGen plant would be lower when measured at the nearest property line.

Figure 2-B: CoGen Noise Dosimetry Locations



2.2.2 Findings

It was determined based on the site configuration and equipment locations that the worst-case noise exposure would occur at the commercial uses to the southwest and the residential uses located south of West Valley Parkway along Upas Street. Additionally, although the noise standards are higher, the industrial uses to the northwest and northeast were analyzed due to their close proximity

to the project site. The location and relationship to the surrounding land uses can be seen in Figure 2-A above. The noise levels for each source along with the calculated cumulative noise levels are based upon a conservative approach that all the noise producing equipment is operating at the same time.

The noise level projections were calculated based on the site plan provided by Westwood Professional Services, Inc. dated January 2023, showing the location of the proposed equipment and the property lines. The noise sources were grouped into separate areas to improve the accuracy of the calculations. The results of the propagated noise levels at the property lines are shown in Tables 2-3 through 2-6. The project is proposing a minimum 8-foot wall surrounding the Project which would reduce noise levels at the adjacent property lines by a minimum of 5 dBA. The existing 15 to 20-foot wall that currently surrounds the CoGen plant to the west, south, and east would also reduce noise levels a minimum of 5 dBA from the operational noises of the plant. Additionally, the proposed BESS enclosures would provide additional shielding to the surrounding property lines.

The existing residential homes along Upas Street are elevated 80-feet or more and could potentially have direct line-of-sight to the noise sources. Therefore, to be conservative, no reductions from existing or proposed structures were taken into account. In reality, the proposed 8-foot perimeter wall, the proposed BESS enclosures, and the existing commercial building to the south of the Project could provide partial shielding to the residences, further reducing noise levels at the residences.

The unmitigated noise levels from the proposed battery storage containers and existing CoGen plant were found to be below the City's evening thresholds at all property lines. As mentioned previously, the allowable one-hour average sound level at the nearest residences is the lowest ambient noise level of 51.5 dBA. The project would be in compliance with the ambient noise level as well as the more restrictive nighttime threshold of 45 dBA. Therefore, no mitigation is required.

It should be noted that the existing CoGen plant is operational an average of 50 times per year when additional power is required for the electrical grid during peak summer months. Additionally, the plant does not generally operate during the nighttime and late evening hours. Therefore, potential noise impacts during the nighttime and late evening hours would be further reduced.

Table 2-3: Operational Noise Levels (Residential Property Line)

Source	Reference Noise Level (dBA)	Quantity	Distance to Property Line (Feet)	Noise Reduction (dBA)	Resultant Noise Level at Property Line (dBA Leq)
Area 1					
HVAC	65	360	1,464	--	37
HVAC	65	144	1,536	--	32
PCS	79	14	1,464	--	37
PCS	79	4	1,536	--	31
Step-Up Transformer	68	1	1,180	--	16
Area 2					
HVAC	65	192	1,178	--	36
HVAC	65	72	1,282	--	31
PCS	79	10	1,178	--	37
PCS	79	5	1,282	--	33
Step-Up Transformer	68	1	1,180	--	16
CoGen Plant	68.5	1	1,450	--	40
CUMULATIVE NOISE LEVEL @ PROPERTY LINE (dBA)					**45**

Table 2-4: Operational Noise Levels (Commercial Property Line)

Source	Reference Noise Level (dBA)	Quantity	Distance to Property Line (Feet)	Noise Reduction (dBA)	Resultant Noise Level at Property Line (dBA Leq)
Area 1					
HVAC (West)	65	360	545	-5.0	40
HVAC (West)	65	144	530	-5.0	37
PCS (West)	79	14	545	-5.0	40
PCS (West)	79	4	530	-5.0	35
Step-Up Transformer	68	1	280	-5.0	24
Area 2					
HVAC (East)	65	192	430	-5.0	40
HVAC (East)	65	72	330	-5.0	38
PCS (East)	79	10	430	-5.0	41
PCS (East)	79	5	330	-5.0	40
Step-Up Transformer	68	1	255	-5.0	24
CoGen Plant	68.5	1	320	-5.0	48
CUMULATIVE NOISE LEVEL @ PROPERTY LINE (dBA)					**51**

Table 2-5: Operational Noise Levels (Light Industrial Property Line)

Source	Reference Noise Level (dBA)	Quantity	Distance to Property Line (Feet)	Noise Reduction (dBA)	Resultant Noise Level at Property Line (dBA Leq)
Area 1					
HVAC (West)	65	360	216	-5.0	48
HVAC (West)	65	144	156	-5.0	47
PCS (West)	79	14	216	-5.0	48
PCS (West)	79	4	156	-5.0	46
Step-Up Transformer	68	1	496	-5.0	19
Area 2					
HVAC (East)	65	192	516	-5.0	36
HVAC (East)	65	72	394	-5.0	39
PCS (East)	79	10	516	-5.0	39
PCS (East)	79	5	394	-5.0	18
Step-Up Transformer	68	1	504	-5.0	53
CoGen Plant	68.5	1	190	-5.0	36
CUMULATIVE NOISE LEVEL @ PROPERTY LINE (dBA)					**56**

Table 2-6: Operational Noise Levels (Gen Industrial Property Line)

Source	Reference Noise Level (dBA)	Quantity	Distance to Property Line (Feet)	Noise Reduction (dBA)	Resultant Noise Level at Property Line (dBA Leq)
Area 1					
HVAC (West)	65	360	220	-5.0	48
HVAC (West)	65	144	376	-5.0	40
PCS (West)	79	14	220	-5.0	48
PCS (West)	79	4	376	-5.0	38
Step-Up Transformer	68	1	370	-5.0	21
Area 2					
HVAC (East)	65	192	255	-5.0	44
HVAC (East)	65	72	328	-5.0	38
PCS (East)	79	10	255	-5.0	45
PCS (East)	79	5	328	-5.0	40
Step-Up Transformer	68	1	392	-5.0	21
CoGen Plant	68.5	1	506	--	49
CUMULATIVE NOISE LEVEL @ PROPERTY LINE (dBA)					**55**

The unmitigated noise levels from the proposed battery storage containers and existing CoGen plant were found to be below the City's evening thresholds at all property lines. As mentioned previously, the allowable one-hour average sound level at the nearest residences is the lowest ambient noise level of 51.5 dBA. Additionally, the analysis of the commercial property line to the south is located at the rear of the existing retail use building where no outdoor uses exist. The nearest outdoor use area within the commercial property is located an additional 500-feet or more away. Therefore, noise levels would be further reduced. The project would be in compliance with the ambient noise level as well as the more restrictive nighttime threshold of 45 dBA. Therefore, no mitigation is required.

2.2.3 Maintenance Noise Levels On-site

Periodic site maintenance of the BESS facility would be required. Section 10.80.040 of the Noise Ordinance sets a most restrictive operational exterior noise limit for the noise sensitive land uses of 60 dBA L_{eq} for daytime hours of 7 a.m. to 7 p.m. Therefore, the most restrictive 60 dBA L_{eq} standard was applied at the property lines. On-site activities are not anticipated to result in noise levels in excess of existing landscape maintenance on the existing and surrounding properties. Therefore, on-site maintenance is not anticipated to result in a substantial increase in noise levels. Similarly, on-site maintenance is not anticipated to exceed City noise standards. Additionally, since the on-site operations will be limited to the daytime hours of 7 a.m. to 7 p.m., no impacts are anticipated.

2.3 Conclusions

Based on the empirical data, the manufacturers specifications and the distances to the property lines, it was determined that the cumulative noise levels from the proposed battery storage containers and transformers and the existing CoGen plant would comply with the most restrictive nighttime property line standards at the surrounding land uses. Therefore, no mitigation is required.

Major facility maintenance is anticipated to occur at most 10 times per year and would generally require less than a day to complete. Maintenance activities would be limited during the daytime hours of 7am - 7pm. No direct or cumulative noise impacts are anticipated with these noise reduction measures.

3.0 CONSTRUCTION ACTIVITIES

3.1 Guidelines for the Determination of Significance

Sections 17-234 and 17-240 of the City of Escondido Municipal Code regulate construction noise. Any piece of construction equipment or any combination of construction equipment cannot be operated so as to cause an average noise level excess of 75 dBA Leq during the allowable hours of operation. Per City regulations, construction equipment can only be operated from 7:00 AM to 6:00 PM, Monday through Friday, and on Saturday from 9:00 AM to 5:00 PM. Construction equipment cannot be operated on Sundays or holidays. Operation of any construction equipment during non-allowable hours is permitted only by a variance from the City Manager.

Except for emergency work, the provisions of this article shall not apply to any emergency work as defined in Section 17-227, provided that (1) a variance has been obtained from the City Manager, and (2) any vehicle device, apparatus, or equipment used, related to or connected with emergency work is designed, modified, or equipped to reduce sounds produced to the lowest possible level consistent with effective operation of such vehicle, device, apparatus, or equipment.

3.2 Construction Noise Levels

Construction noise represents a short-term impact on the ambient noise levels. Noise generated by construction equipment includes haul trucks, water trucks, graders, dozers, loaders and pile drivers can reach relatively high levels. Grading activities typically represent one of the highest potential sources for noise impacts. The most effective method of controlling construction noise is through local control of construction hours and by limiting the hours of construction to normal weekday working hours.

The U.S. Environmental Protection Agency (U.S. EPA) and the U.S. Department of Transportation (U.S. DOT) have compiled data regarding the noise generating characteristics of specific types of construction equipment. Noise levels generated by heavy construction equipment can range from 60 dBA to in excess of 100 dBA when measured at 50 feet. However, these noise levels diminish rapidly with distance from the construction site at a rate of approximately 6 dBA per doubling of distance. For example, a noise level of 75 dBA measured at 50 feet from the noise source to the receptor would be reduced to 69 dBA at 100 feet from the source to the receptor, and reduced to 63 dBA at 200 feet from the source.

3.3 Potential Property Line Noise Impacts

Project construction includes demolition of the existing facility, site preparation and grading, installation of drainage and retention basins, foundations/supports, setting battery enclosures, wiring and electrical system installation, and assembly of the accessory components including

inverter transformers and generation step-up transformers. Earth cut and fill are proposed to be balanced within the Project site such that no import of fill material or export of material is proposed. Due to unknown site conditions beneath the existing infrastructure, this may need to be modified after demolition operations. Up to 30,000 cubic yards of material may need to be imported if site conditions require mitigation. Further, it is anticipated that approximately 5,000 cubic yards of surfacing (asphalt and/or open graded crushed rock aggregate) and trench fill material will be required. The proposed construction schedule includes approximately 6 months for demolition and 15 months for construction. Construction would occur Monday through Friday, between the hours of 7 AM and 6 PM and Saturday between the hours of 9 AM and 5 PM.

Grading operations are typically the loudest construction activity. The grading operations may utilize a total of up to a dozer, grader, excavator, water truck, dump truck, and drum roller. This list is considered conservative and provides a worst-case assessment from a noise perspective. The noise levels utilized in this analysis of on-site construction are based upon the conservative list of equipment as shown in Table 3-1 below. Most of the construction activities will consist of demolition of existing structures for the preparation of the BESS containers and inverters. Based on the project site plan, the acoustical center for the grading operation would be approximately 120 feet from the nearest property line with an occupied structure.

As can be seen in Table 3-1, if all the equipment was operating in the same location, which is not physically possible, at a distance as close as 120 feet from the nearest property line the point source noise attenuation from construction activities is -7.6 dBA. This would result in an anticipated worst-case eight-hour average combined noise level of 75 dBA at the northern property line. Given this and the spatial separation of the equipment, the noise levels will comply with the City of Escondido's 75 dBA standard at all project property lines.

Table 3-1: Construction Noise Levels

Construction Equipment	Quantity	Duty Cycle Hours/Day)	Source Level @ 50-Feet (dBA)	Combined Noise Level @ 50-Feet (dBA Leq-8h)
Dozer	1	8	74	74.0
Grader	1	8	73	73.0
Excavator	1	8	78	78.0
Water Truck	1	8	70	70.0
Dump Truck	1	8	75	75.0
Roller/Compactor	1	8	74	74.0
Total Noise Level @ 50 Feet (dBA)				**82.4**
Distance				**120**
Noise Reduction Due to Distance				**-7.6**
NEAREST PROPERTY LINE NOISE LEVEL				**74.8**

3.4 Conclusions

At a distance as close as 120 feet, the point source noise attenuation from the grading activities and the nearest property line is -7.6 dBA. This would result in an anticipated worst-case 8-hour average combined noise level of 75 dBA at the property line during grading. No blasting or rock crushing is anticipated during the grading operations. Therefore, no impulsive noise sources are expected and the Project will comply with the City of Escondido's Noise Ordinance.

4.0 SUMMARY OF PROJECT IMPACTS, MITIGATION & CONCLUSIONS

- Operational Noise Analysis

  Based on the empirical data, the manufacturers specifications and the distances to the property lines, it was determined that the cumulative noise levels from the proposed battery storage containers and transformers and the existing CoGen plant would comply with the most restrictive nighttime property line standards at the surrounding land uses. Therefore, no mitigation is required.

  Major facility maintenance is anticipated to occur at most 10 times per year and would generally require less than a day to complete. Maintenance activities would be limited during the daytime hours of 7am - 7pm. No direct or cumulative noise impacts are anticipated with these noise reduction measures.

- Construction Noise Analysis

  At a distance as close as 120 feet, the point source noise attenuation from the grading activities and the nearest property line is -7.6 dBA. This would result in an anticipated worst-case 8-hour average combined noise level of 75 dBA at the property line during grading. No blasting or rock crushing is anticipated during the grading operations. Therefore, no impulsive noise sources are expected and the Project will comply with the City of Escondido's Noise Ordinance.

5.0 CERTIFICATIONS

The contents of this report represent an accurate depiction of the existing and future acoustical environment and impacts within the proposed Project. This report was prepared utilizing the latest project information and methodologies.

Jeremy Louden, Principal
Ldn Consulting, Inc.
760-473-1253
jlouden@ldnconsulting.net

Date March 30, 2023

APPENDIX D – TRANSPORTATION STUDY

Scoping Agreement for Transportation Studies

PART 1

General Project Information and Description

Project Information

Project Name: Goal Line Energy Storage Project

Project Location: 555 N Tulip Street, Escondido, CA 92025

Project Description

Land Uses and Intensities: Battery Energy Storage System - 179,836 sf

Gross and Developable Acreage: Gross: ~6.58 ac Developable: ~ 4.13 ac

Building Square Footage or Number of Dwelling Units: 179,836 sf

Vehicle Parking Spaces: 15 (including 1 disabled parking space)

Bicycle Parking Spaces: N/A

Motorcycle Spaces: N/A

Electric Vehicle Spaces: N/A

Project Applicant:

Name: Onward Energy

Address: 600 Seventeenth St., Suite 2400S, Denver, CO 80202

Telephone and Email:

Consultant

Firm: Westwood Professional Services

Project Manager: Hosam Stanikzai

Address: Parkway Centre 1, 2901 Dallas Parkway, Suite 400, Plano, Texas 75093

Telephone and Email: (469) 704-2237, hosam.stanikzai@westwoodps.com

Project Trip Generation

Source: ITE Trip Generation, 11th Ed.	**Pass-by Trips:** 0
Total Daily Trips*: 35 (*-see below)	**Diverted Trips:** 0
Internal Capture Rate: 0	**Trip Credit:** 0
Alternative Modes: 0	**Net New Daily Trips:** 35

*If truck traffic accounts for 25% or more of project trips, then a Passenger Car Equivalent (PCE) factor of 2.5 should be applied to all truck trips.

* 125 daily trips are conservatively estimated during the construction period.

General Plan Consistency

Is this project consistent with the General Plan? ☐ Yes ☐ No

Site Plan

Attach 11x17 copies of the project location/vicinity map and site plan containing the following:
• Driveway locations and access type
• Pedestrian access, bicycle access, and on-site pedestrian circulation
• Location and distance to nearest existing transit stop (measure as walking distance to project entrance or middle of parcel) 0.5 mi (see next page)
• Location of planned or proposed pedestrian or bicycle improvements within ¼ mile of the project identified in the General Plan Mobility and Infrastructure Element or the Bicycle Master Plan

CEQA Transportation Analysis Screening

Project Type Screening Criteria for CEQA Vehicle Miles Travelled (VMT) Analysis

1) Select the Land Uses that apply to your project 2) Answer the questions for each Land Use that applies to your project *(if "Yes" in any land use category below then that land use (or a portion of the land use) is screened from CEQA VMT Analysis; If a project is screened out, a technical memorandum is still required to document the screening process)*	Screened Out Yes	Not Screened Out No
☐ **1. Small Residential and Employment Projects:**		
a. Does the project result in 200 daily trips or less?	☐	☐
☐ **2. Project is Located in a Transit-Accessible Area:**		
a. Is the project located within a half-mile walking distance of an existing major transit stop or an existing stop along a high-quality transit corridor?	☐	☐
b. Additional project features:		
i. Does the project have a Floor Area Ratio ≥ 0.75?	☐	☐
ii. Does project include the least amount of parking required for residents, customers, or employees (i.e. not more than required)?	☐	☐
iii. Is the project consistent with SANDAG's most recent Sustainable Communities Strategy or the City of Escondido General Plan?	☐	☐
iv. Does the project replace affordable residential units with a greater number of moderate- or high-income residential units?	☐	☐
v. Does the project have basic walking and biking access to transit (e.g., sidewalks connecting to transit stops)?	☐	☐
☐ **3. Project is in a VMT-Efficient Area:**		
a. Is the project in a VMT/Capita or VMT/Employee Efficient Area per SANDAG screening maps?	☐	☐
☐ **4. Locally-Serving Retail Project:**		
a. Is the project less than 50,000 square feet and expected to draw at least 75% of customers from the local area?	☐	☐
☑ **5. Locally Serving Public Facility:**		
a. Is the project a locally serving public facility?	☑	☐
☐ **6. Redevelopment Project:**		
a. Does the project result in a net decrease in total Project VMT than the existing use?	☐	☐

555 N Tulip St, Escondido, CA 92025

Escondido Transit Center, Escondido, CA

Add destination

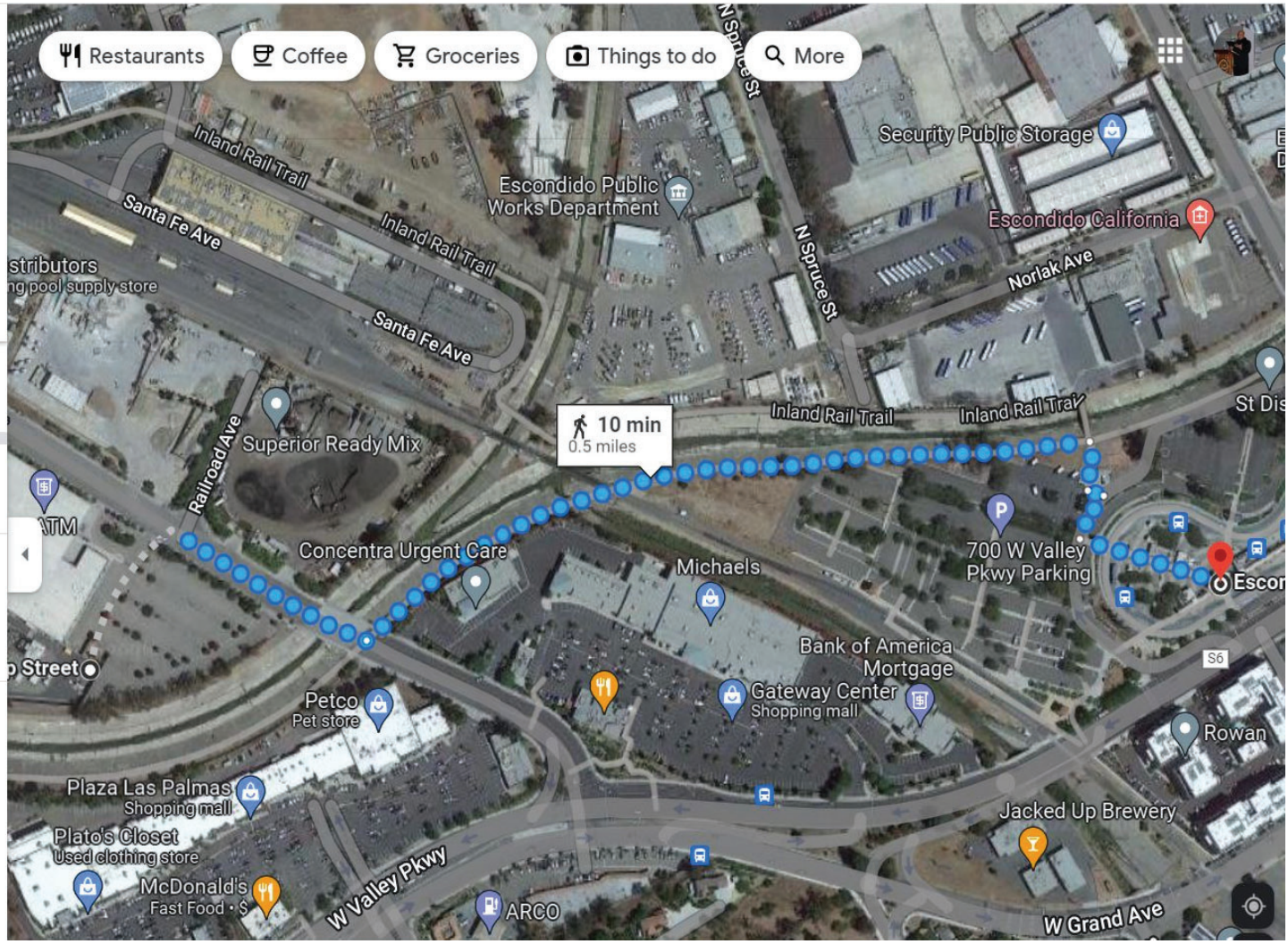
Leave now

Options

Send directions to your phone

via N Tulip St — 10 min — 0.5 mile

Details



Non-CEQA Local Mobility Analysis

Local Mobility Analysis (LMA) Requirement

1) Select the Street Classifications for each street in the study area 2) Answer the questions for each Street Classification that applies to your project	Yes	No
☐ **1. Prime Arterial:**		
a. Does the project add 900 ADT or more to any segment classified as 8-lane Prime Arterial?	☐	☐
b. Does the project add 800 ADT or more to any segment classified as 6-lane Prime Arterial?	☐	☐
☐ **2. Major Road:**		
a. Does the project add 700 ADT or more to any segment classified as 6-lane Major Road?	☐	☐
b. Does the project add 500 ADT or more to any segment classified as 4-lane Major Road?	☐	☐
☑ **3. Collector:**		
a. Does the project add 500 ADT or more to any segment classified as 4-lane Collector without parking?	☐	☑
b. Does the project add 250 ADT or more to any segment classified as 4-lane Collector with parking?	☐	☐
☐ **4. Local Collector and other:**		
a. Does the project add 200 ADT or more to any segment classified as 2-lane Local Collector or any other classifications?	☐	☐

Certain types of projects which generate less than 500 ADT may be considered by the City staff for an LMA waiver only where the affected segments and intersections operate at LOS C or better.
Please briefly explain why your project might be eligible for an LMA waiver.

The project is expected to generate 35 weekday trips (35 ADT) for 9 full-time employees.

125 daily trips are conservatively estimated during the construction period.

PART 2

Trip Distribution and Trip Assignment

☐ **Select Zone (Model Series_____)**	Projects that generate greater than 2,400 daily trips
☑ **Manual Estimation**	Projects that generate less than 2,400 daily trips

Provide an exhibit detailing the project's trip distribution and trip assignment.
Provide a table with the project's daily trip assignment for each street segment in the study area.

Study Intersections and Roadway Segments (NOTE: Subject to change based of staff review)

1.	6.
2.	7.
3.	8.
4.	9.
5.	10.

Attach a separate page if the number of study locations exceeds 10.

Other Jurisdictions

Is this project located within one mile of another Local Jurisdiction? ☐ Yes ☐ No

If yes, name of Jurisdiction:

Specific Issues to be addressed within the Study

(in addition to requirements described in the Guidelines – to be filled out by City Staff)

1.
2.
3.
4.
5.

Recommended by:

Paul Villaluz, P.E., PTOE — 10/25/2022

Consultant's Representative — Date

Scoping Agreement Submitted on _____ Date

Scoping Agreement Re-submitted on _____ Date

Approved Scoping Agreement:

_____ _____

City of Escondido Transportation Specialist — Date

Westwood

12701 Whitewater Drive, Suite 300
Minnetonka, MN 55343

Main (952) 937-5150
Fax (952) 937-5822

westwoodps.com
(888) 937-5150

MEMORANDUM

Date: October 25, 2022

Re: **Goal Line Energy Storage Project**
File #0035339.00

To: City of Escondido

From: Paul Villaluz, P.E., PTOE, RSP$_1$

This memorandum has been prepared to support the Scoping Agreement for Transportation Studies for the Goal Line Energy Storage project. This memorandum will contain the following:

- Trip Generation Analysis
- Parking Analysis

The Goal Line Energy Storage project will be developed as a 179,836 sf Battery Energy Storage System project. A proposed site plan is included in **Appendix C**.

Trip Generation

The 11th Edition of the Institute of Transportation Engineers' (ITE) Trip Generation Manual was used to estimate the number of vehicle trips that could be generated by the project. This manual is a standard reference used by municipalities and public agencies throughout the United States. The trip generation characteristics included in the manual are summarized by general land use type and are based on actual trip generation studies performed at numerous locations in areas of various populations.

Weekday Trip Generation for the proposed Goal Line Energy Storage project is based on average rates for a Utility (ITE Land Use Code 170). Nine full-time employees are assumed to staff the project after completion. The resulting trip generation is summarized in **Table 1**. Calculations are provided in **Appendix A**.

Table 1 – Project Trip Generation

ITE Code	Land Use	Size	Weekday		
			In	Out	Total
170	**Utility**	9 employees	17	18	35

Institute of Transportation Engineers (ITE) Trip Generation, 11th Edition

These types of construction projects will generally exhibit a bell curve distribution of workers throughout the construction period. Initial site mobilization and early site preparation work will have fewer workers. The number of workers will peak during the period of greatest activity. As construction draws to a close, the average number of workers per day will decrease as crews complete their work. A preliminary estimate of 125 daily trips is projected during the peak of construction.

Parking Analysis

The developer proposes to provide 15 on-site parking stalls. According to the 5th edition of ITE's Parking Generation Manual, the peak parking demand rate for Land Use Code 170 is 0.72 stalls per employee. The resulting estimated peak parking demand is 6 stalls (i.e., 0.72 stalls x 9 employees) (see **Appendix B**).

The 15 stalls provided in the parking field are adequate for the estimated demand of 6 stalls.

APPENDIX A
TRIP GENERATION CALCULATIONS

Utility
(170)

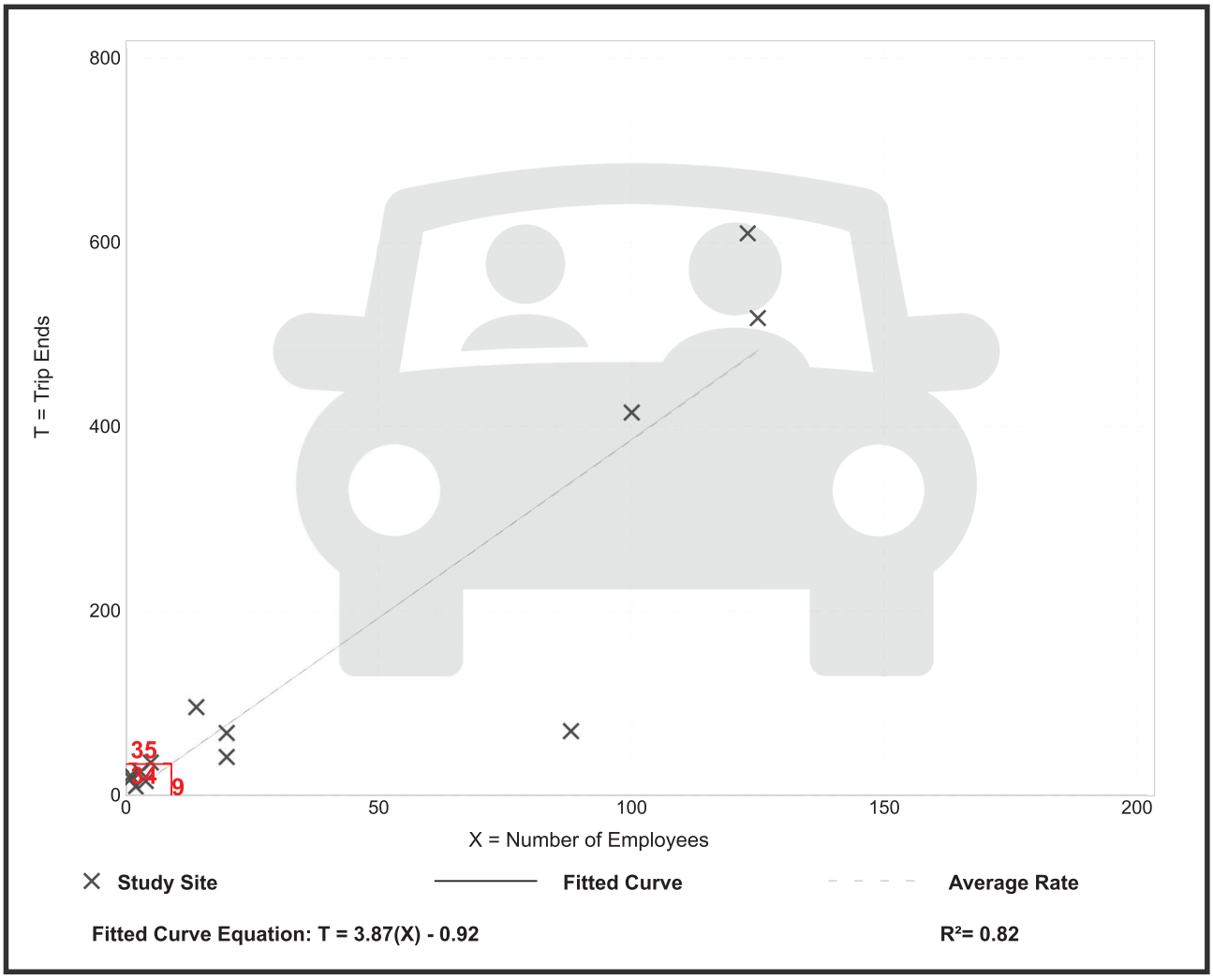
Vehicle Trip Ends vs: **Employees**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 13
Avg. Num. of Employees: 39
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
3.85	0.80 - 22.00	1.99

Data Plot and Equation



Trip Gen Manual, 11th Edition • Institute of Transportation Engineers

APPENDIX B

PARKING GENERATION CALCULATIONS

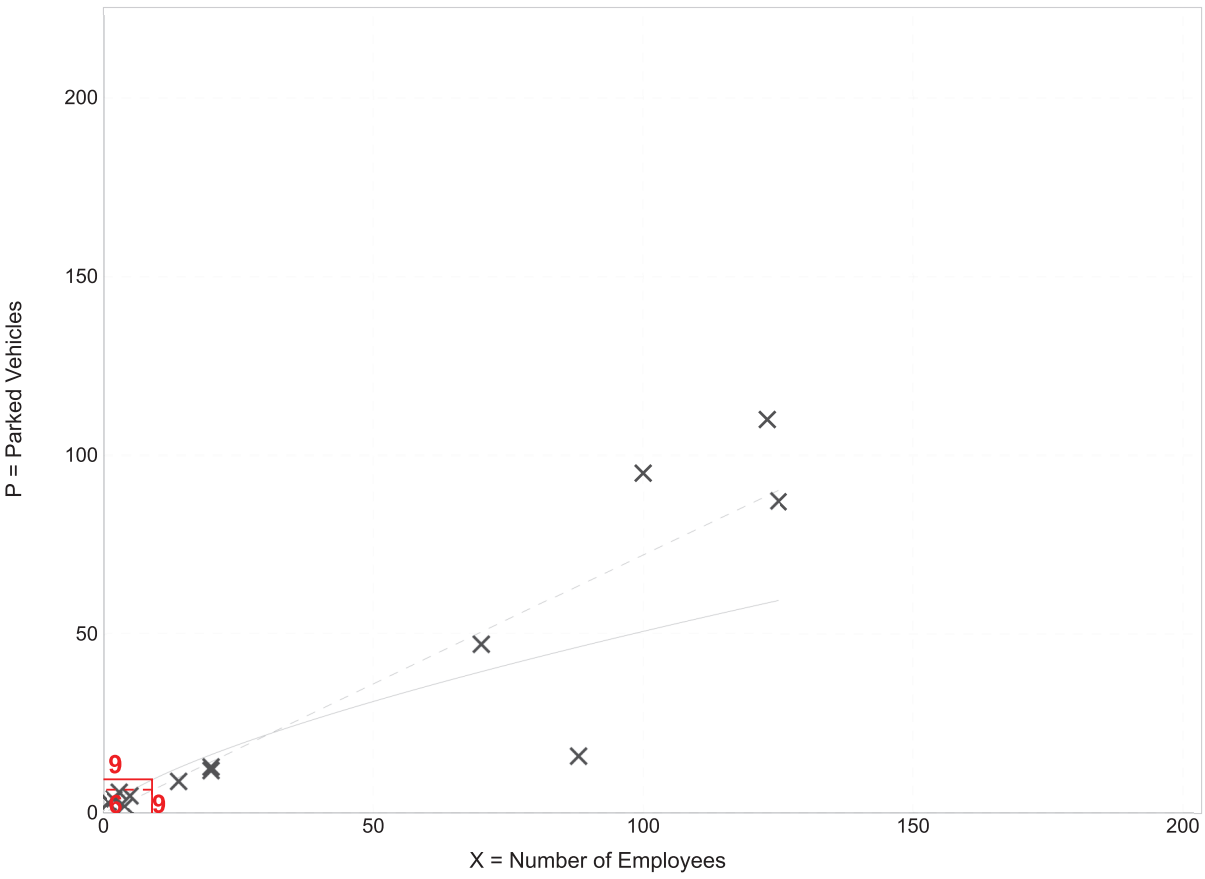
Utility
(170)

Peak Period Parking Demand vs:	**Employees**
On a:	**Weekday (Monday - Friday)**
Setting/Location:	**General Urban/Suburban**
Peak Period of Parking Demand:	**9:00 a.m. - 4:00 p.m.**
Number of Studies:	14
Avg. Num. of Employees:	41

Peak Period Parking Demand per Employee

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.72	0.18 - 3.00	0.65 / 2.75	***	0.32 (44%)

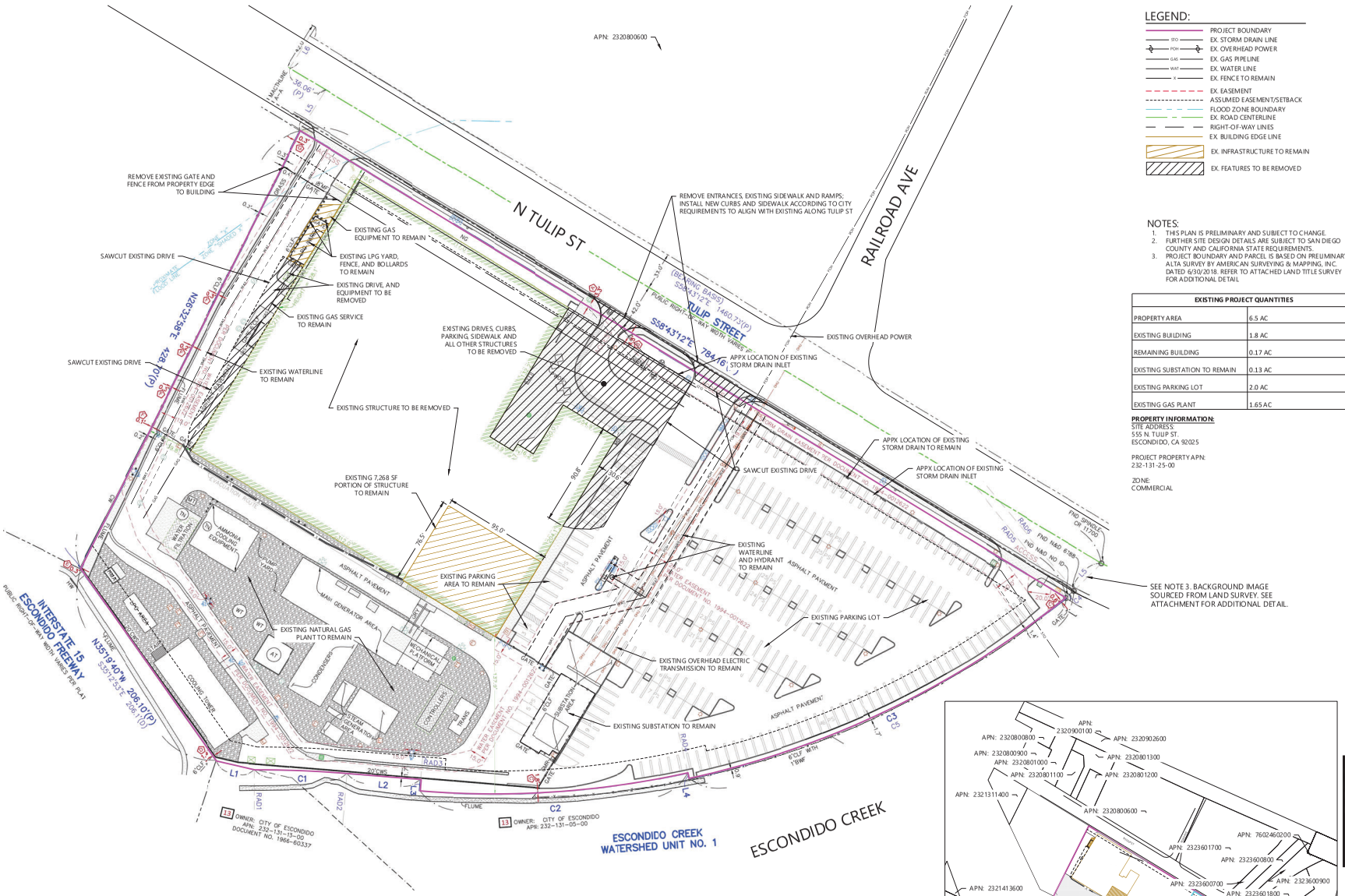
Data Plot and Equation



Fitted Curve Equation: Ln(P) = 0.70 Ln(X) + 0.70

R^2= 0.84

APPENDIX C
PRELIMINARY SITE PLAN



LEGEND:

- PROJECT BOUNDARY
- EX. STORM DRAIN LINE
- EX. OVERHEAD POWER
- EX. GAS PIPELINE
- EX. WATER LINE
- EX. FENCE TO REMAIN
- EX. EASEMENT
- ASSUMED EASEMENT/SETBACK
- FLOOD ZONE BOUNDARY
- EX. ROAD CENTERLINE
- RIGHT-OF-WAY LINES
- EX. BUILDING EDGE LINE
- EX. INFRASTRUCTURE TO REMAIN
- EX. FEATURES TO BE REMOVED

NOTES:

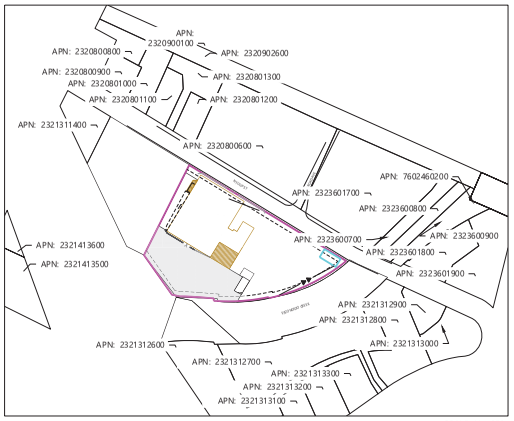
1. THIS PLAN IS PRELIMINARY AND SUBJECT TO CHANGE.
2. FURTHER SITE DESIGN DETAILS ARE SUBJECT TO SAN DIEGO COUNTY AND CALIFORNIA STATE REQUIREMENTS.
3. PROJECT BOUNDARY AND PARCEL IS BASED ON PRELIMINARY ALTA SURVEY BY AMERICAN SURVEYING & MAPPING, INC. DATED 6/30/2018. REFER TO ATTACHED LAND TITLE SURVEY FOR ADDITIONAL DETAIL

EXISTING PROJECT QUANTITIES	
PROPERTY AREA	6.5 AC
EXISTING BUILDING	1.8 AC
REMAINING BUILDING	0.17 AC
EXISTING SUBSTATION TO REMAIN	0.13 AC
EXISTING PARKING LOT	2.0 AC
EXISTING GAS PLANT	1.65 AC

PROPERTY INFORMATION:
SITE ADDRESS:
555 N. TULIP ST.
ESCONDIDO, CA 92025

PROJECT PROPERTY APN:
232-131-25-00

ZONE:
COMMERCIAL



SCALE: 1" = 250'

Westwood

Phone (720) 531-8350 10170 Church Ranch Way, Suite #201
Toll Free (888) 937-5150 Westminster, CO 80021
westwoodps.com

Westwood Professional Services, Inc.

PREPARED FOR:

OnwardEnergy

600 Seventeenth St., Suite 2400S
Denver, CO 80202

REVISIONS:

#	DATE	COMMENT	BY	CHK	APR
A	10/21/2022	ISSUED FOR PLOT PLAN	CN	AK	BM

0 40 80 120

Goal Line Energy Storage Project

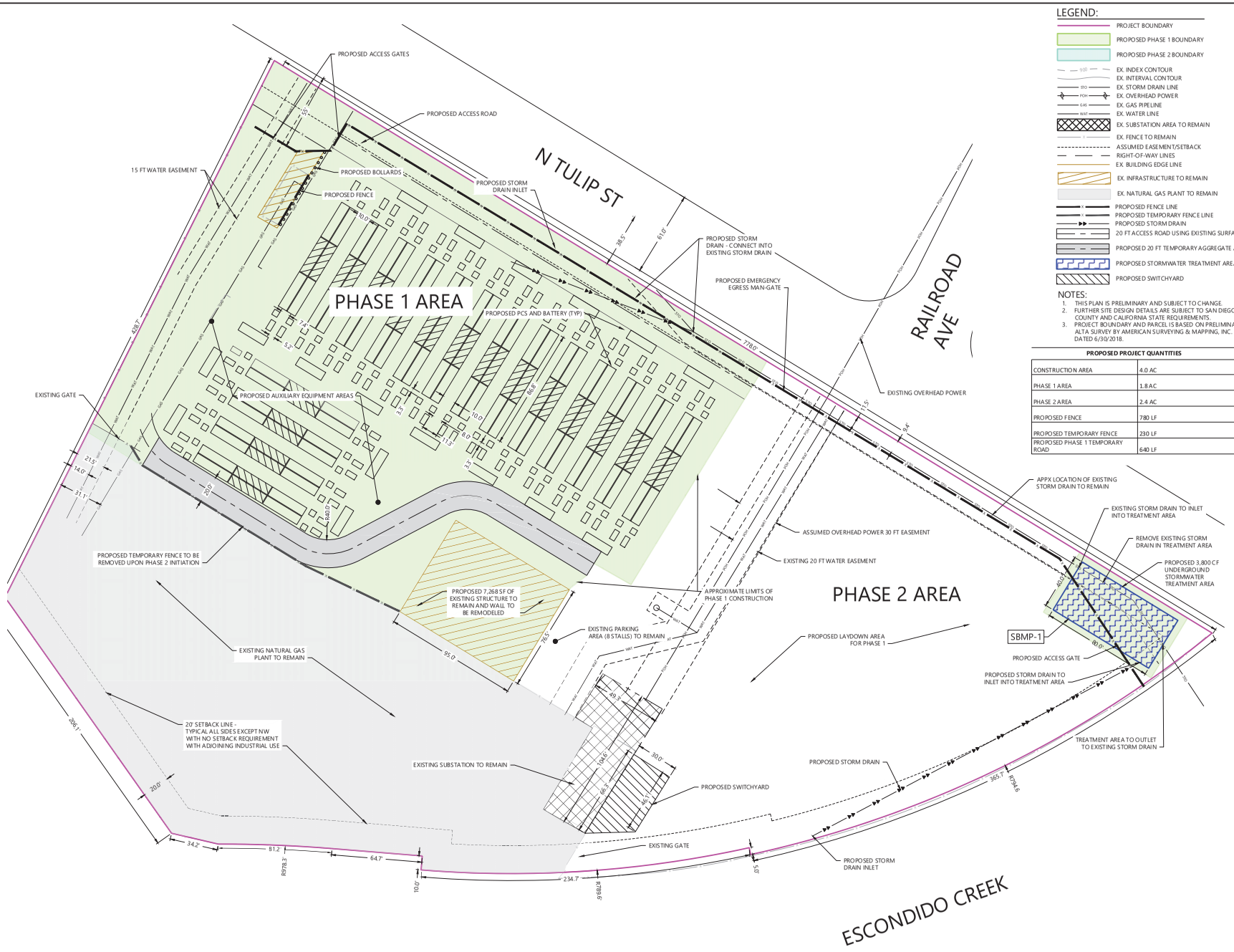
San Diego County, California

Existing Conditions & Removal Plan

NOT FOR CONSTRUCTION

DATE: 10/21/2022

SHEET: C100 REV: A



LEGEND:

- PROJECT BOUNDARY
- PROPOSED PHASE 1 BOUNDARY
- PROPOSED PHASE 2 BOUNDARY
- EX. INDEX CONTOUR
- EX. INTERVAL CONTOUR
- EX. STORM DRAIN LINE
- EX. OVERHEAD POWER
- EX. GAS PIPELINE
- EX. WATER LINE
- EX. SUBSTATION AREA TO REMAIN
- EX. FENCE TO REMAIN
- ASSUMED EASEMENT/SETBACK
- RIGHT-OF-WAY LINES
- EX. BUILDING EDGE LINE
- EX. INFRASTRUCTURE TO REMAIN
- EX. NATURAL GAS PLANT TO REMAIN
- PROPOSED FENCE LINE
- PROPOSED TEMPORARY FENCE LINE
- PROPOSED STORM DRAIN
- 20 FT ACCESS ROAD USING EXISTING SURFACE
- PROPOSED 20 FT TEMPORARY AGGREGATE ACCESS ROAD
- PROPOSED STORMWATER TREATMENT AREA
- PROPOSED SWITCHYARD

NOTES:

1. THIS PLAN IS PRELIMINARY AND SUBJECT TO CHANGE.
2. FURTHER SITE DESIGN DETAILS ARE SUBJECT TO SAN DIEGO COUNTY AND CALIFORNIA STATE REQUIREMENTS.
3. PROJECT BOUNDARY AND PARCEL IS BASED ON PRELIMINARY ALTA SURVEY BY AMERICAN SURVEYING & MAPPING, INC. DATED 6/30/2018.

PROPOSED PROJECT QUANTITIES

CONSTRUCTION AREA	4.0 AC
PHASE 1 AREA	1.8 AC
PHASE 2 AREA	2.4 AC
PROPOSED FENCE	780 LF
PROPOSED TEMPORARY FENCE	230 LF
PROPOSED PHASE 1 TEMPORARY ROAD	640 LF

Westwood
Phone (720) 531-8350 10170 Church Ranch Way, Suite #201
Toll Free (888) 937-5150 Westminster, CO 80021
westwoodps.com
Westwood Professional Services, Inc.

PREPARED FOR:

OnwardEnergy

600 Seventeenth St., Suite 2400S
Denver, CO 80202

REVISIONS:

#	DATE	COMMENT	BY	CHK	APR
A	10/21/2022	ISSUED FOR PLOT PLAN	CN	AK	BM

0' 30' 60' 90'

Goal Line Energy Storage Project

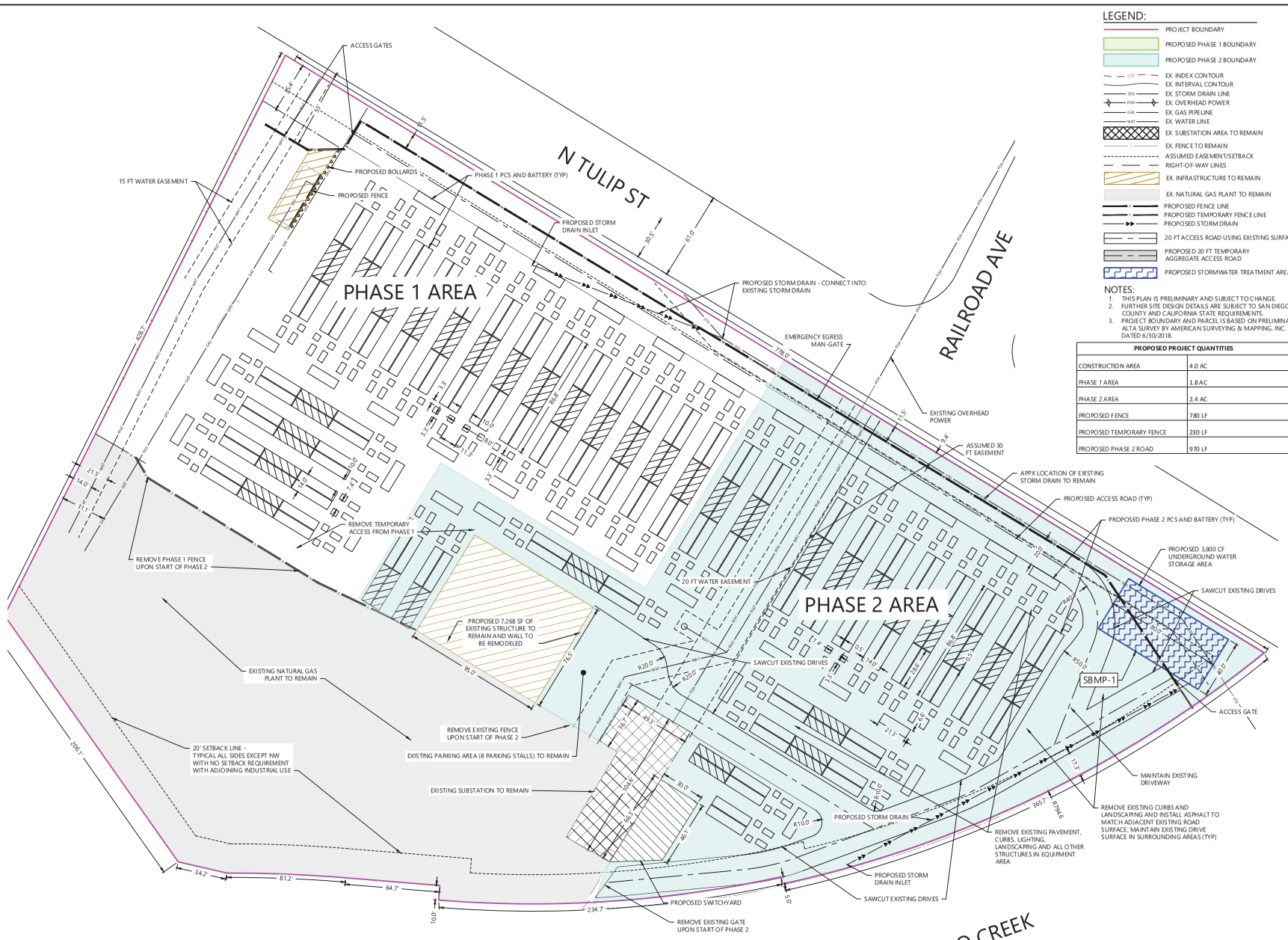
San Diego County, California

Preliminary Site Plan - Phase 1

NOT FOR CONSTRUCTION

DATE: 10/21/2022

SHEET: C200 REV: A



LEGEND:

- PROJECT BOUNDARY
- PROPOSED PHASE 1 BOUNDARY
- PROPOSED PHASE 2 BOUNDARY
- EX. INDEX CONTOUR
- EX. INTERVAL CONTOUR
- EX. STORM DRAIN LINE
- EX. OVERHEAD POWER
- EX. GAS PIPELINE
- EX. WATER LINE
- EX. SUBSTATION AREA TO REMAIN
- EX. FENCE TO REMAIN
- ASSUMED EASEMENT/SETBACK
- RIGHT-OF-WAY LINES
- EX. INFRASTRUCTURE TO REMAIN
- EX. NATURAL GAS PLANT TO REMAIN
- PROPOSED FENCE LINE
- PROPOSED TEMPORARY FENCE LINE
- PROPOSED STORM DRAIN
- 20 FT ACCESS ROAD USING EXISTING SURFACE
- PROPOSED 20 FT TEMPORARY AGGREGATE ACCESS ROAD
- PROPOSED STORMWATER TREATMENT AREA

NOTES:

1. THIS PLAN IS PRELIMINARY AND SUBJECT TO CHANGE.
2. FURTHER SITE DESIGN DETAILS ARE SUBJECT TO SAN DIEGO COUNTY AND CALIFORNIA STATE REQUIREMENTS.
3. PROJECT BOUNDARY AND PARCEL IS BASED ON PRELIMINARY ALTA SURVEY BY AMERICAN SURVEYING & MAPPING, INC. DATED 6/30/2018.

PROPOSED PROJECT QUANTITIES	
CONSTRUCTION AREA	4.0 AC
PHASE 1 AREA	1.8 AC
PHASE 2 AREA	2.4 AC
PROPOSED FENCE	780 LF
PROPOSED TEMPORARY FENCE	230 LF
PROPOSED PHASE 2 ROAD	970 LF

0' 40' 80' 120'

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Westwood Professional Services, Inc.

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600 Seventeenth St, Suite 2400S
Denver, CO 80202

REVISIONS:

#	DATE	COMMENT	BY	CHK	APR
A	10/21/2022	ISSUED FOR PLOT PLAN	CN	AK	BM

Goal Line Energy Storage Project

San Diego County, California

Preliminary Site Plan - Phase 2

NOT FOR CONSTRUCTION

DATE: 10/21/2022

SHEET: C201 REV: A