



Appendix A-2

Offsite Improvements for Southern California Edison
Service

MEMORANDUM

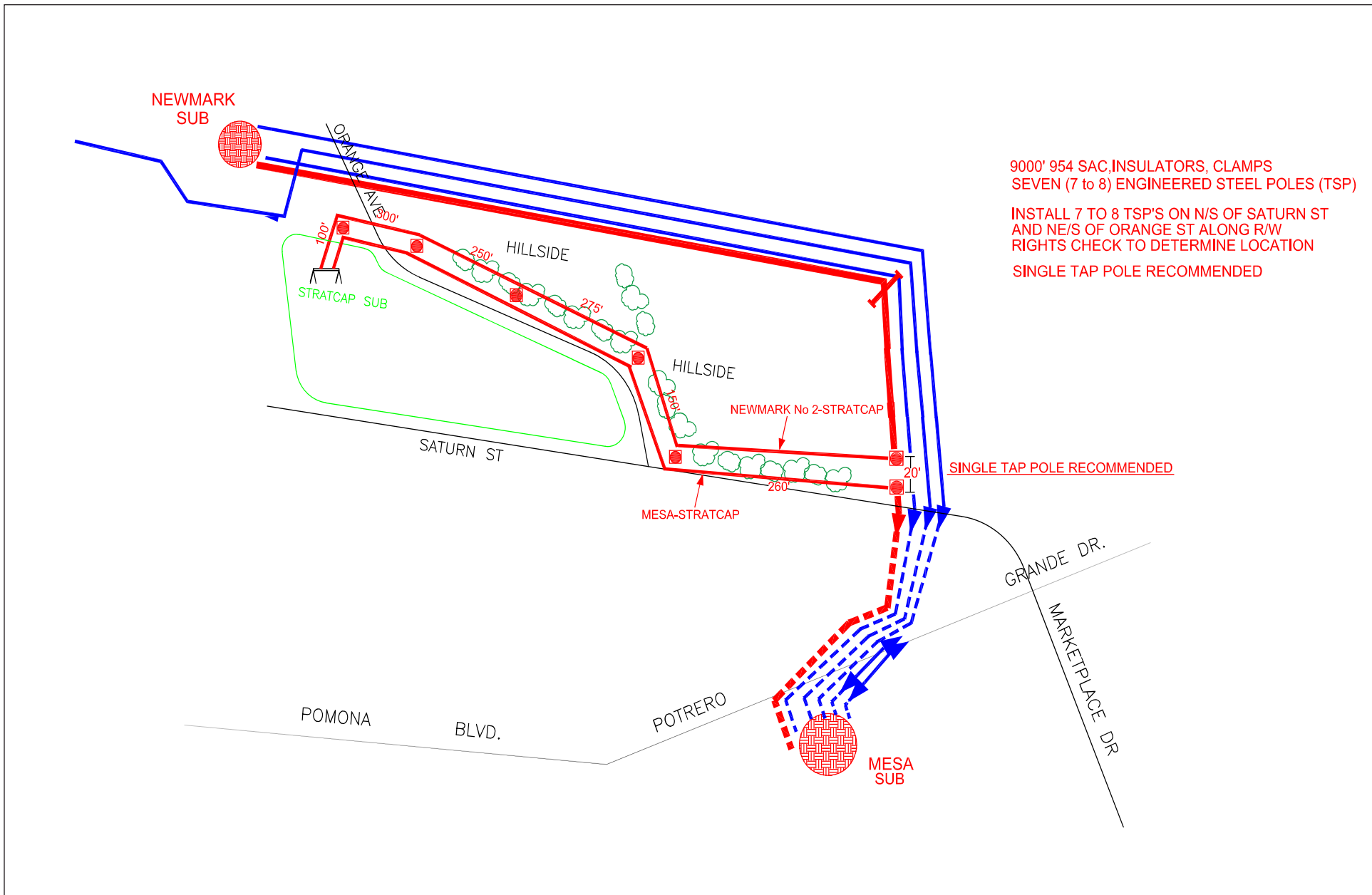
To: Bryan Marsh, CEO, SDCF Monterey Park, LLC
From: Noemi Wyss, AICP, Kimley-Horn and Associates, Inc.
Date: September 3, 2024
Subject: 1977 Saturn Data Center Project – Offsite Improvements for Southern California Edison Service

1.0 Purpose

The purpose of this memorandum is to assess potential impacts due to criteria air pollutant emissions, greenhouse gas (GHG) emissions, noise, and energy associated with construction of the offsite improvements for Southern California Edison (SCE) services. This memorandum is intended to supplement the Air Quality, GHG Emissions, and Noise technical memorandums prepared by Kimley-Horn for the 1977 Saturn Data Center Project (Project) Initial Study/Mitigated Negative Declaration (IS/MND).

2.0 Offsite Improvements for Southern California Edison Service

Southern California Edison (SCE) prepared a Method of Service Study (MOS) that verified SCE can provide power to the Project. The MOS identified the nearby Mesa Substation and the Newmark Substation as the sources of electricity for the Project. The electricity line routes from the Project to the substations, as well as the associated SCE infrastructure, as illustrated in **Figure 1: Offsite Improvements for Southern California Edison Service**. In addition, the MOS identified telecom transmission line routes from the Project to existing telecom infrastructure located at the Mesa Substation and along Potrero Grande Drive, as illustrated in **Figure 2: Transmission Telecom Improvements**. Per the MOS, preliminary review of the line routes assumes SCE will install its new facilities in franchise and/or within existing SCE right-of-way.



Source: Southern California Edison, 2024.

FIGURE 1: OFFSITE IMPROVEMENTS FOR SOUTHERN CALIFORNIA EDISON SERVICE
 1977 Saturn Data Center Project



Source: Southern California Edison, 2024.

FIGURE 2: TRANSMISSION TELECOM IMPROVEMENTS
1977 Saturn Street Project

As noted in the MOS, the construction of the transmission lines would require a Permit To Construct (PTC) from the California Public Utilities Commission (CPUC). The MOS concluded that construction of the transmission facilities would qualify for a PTC exemption when such construction activities are included in the environmental review of the Project for purposes of CEQA review. Accordingly, the IS/MND includes analysis of the SCE offsite improvements identified in the MOS for the Project.

The SCE improvements would include installation of new overhead and/or underground facilities that connect the SCE substations, and the existing telecom infrastructure, to the Project. That construction would be minor and likely occur within public and SCE existing right-of-way, which will result in minimal disturbance of land and/or airspace. Per the MOS, the improvements would mostly occur on the Project Site (for a new substation) and be limited to new rack relays at the existing Mesa Substation and Newmark Substation. Those relay installations involve minor equipment upgrades and the existing SCE substations and would not require substantial construction that could significantly impact the environment.

In addition, per the MOS, the SCE improvements include the installation of seven (7) to eight (8) tubular steel poles and steel aluminum conductor for the 66 kilovolt (kV) transmission line from the SCE substations and existing powerline infrastructure to the Project. Installation of that equipment would involve minor excavation to place the power poles, support footings, and installation of the related power transmission lines. For the telecom lines, the MOS indicates there will be primary and secondary telecom transmission lines running from the Mesa Substation to the Project. Construction of those underground lines would likely require excavation in the existing right-of-way along portions of Saturn Street, South Orange Avenue, and Potrero Grande Drive. The excavation would be limited to areas needed to install conduit for the telecom lines and a series of new manholes to access the telecom line.

It will take 2-3 days for each electrical pole installation (dig, install footing, pull wire, etc.), and an additional 2-3 weeks for the trenching needed to complete the fiber runs. For conservative purposes, the modeling assumed that the installation of poles and transmission lines were anticipated to occur over a span of 4-6 weeks in 2027. No grading was assumed for the proposed improvement, and only minor excavation is required to install the poles. **Table 1: Offsite Improvement Construction Equipment** shows the construction equipment that will be used over the duration of the installation, the horsepower of the equipment analyzed, as well as how many hours per day the equipment would be used.

Construction Equipment	Number of Equipment	Horsepower	Hours per Day
Excavators	1	36	6
Off-Highway Trucks	3	376	8
Tractors/Loaders/Backhoes	1	84	6
Auger/Drill Rig	1	83	2

3.0 Impact Analysis

Air Quality

Construction-generated emissions associated with the Project were calculated using the California Air Resources Board (CARB) Off-Road Emission Inventory tool emission factors. Using the assumptions above in **Table 1**, specific construction equipment emissions rates for Los Angeles County were pulled. See **Attachment A: Modeling Results** for more information regarding the construction assumptions used in this analysis. Predicted maximum daily construction-generated emissions for the Project are identified in **Table 2: Project Construction Emissions**.

Calendar Year	Emissions (pounds per day) ¹					
	ROG	NO _x	CO	SO ₂	PM10	PM2.5
2025	3.38	52.2	32.4	0.22	9.57	4.02
2026	1.39	11.6	17.9	0.03	1.35	0.69
2027 (Project Emissions)	1.12	6.72	11.3	0.02	1.53	0.49
2027 (Offsite Improvement) ²	3.88	26.73	27.05	0.10	0.99	0.91
<i>SCAQMD Threshold</i>	<i>75</i>	<i>100</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>55</i>
SCAQMD Threshold Exceeded?	No	No	No	No	No	No
1. Emissions were calculated using the CalEEMod version 2022.1, as recommended by the SCAQMD. Worst-case seasonal maximum daily emissions are reported. 2. Offsite improvement emissions were calculated using CalEEMod Appendix G, Table G-12.						
Source: CalEEMod version 2022.1. Refer to Attachment A for model outputs.						

The results of the emissions modeling, as summarized on **Table 2**, show that construction criteria pollutant emissions would remain below the applicable thresholds with construction of offsite improvements, and construction impacts on short-term regional air quality would remain less than significant.

Energy

Per the Project analysis in the IS/ND, construction fuel usage would represent less than 0.002 percent of the County’s diesel fuel usage, approximately 0.0004 percent of the gasoline fuel usage, and less than 0.0001 percent of the electricity usage for the County of Los Angeles. Construction modeling for the Project included approximately 38 various pieces of construction equipment. Therefore, the addition of six pieces of equipment would represent a negligible increase in energy usage and would not require increased demand or capacity. Impacts would remain less than significant.

Greenhouse Gas Emissions

As shown in **Attachment A**, GHG emissions during construction of the offsite improvements would result in approximately 124 MTCO₂e. These emissions include the conservative assumption of three off-highway truck. In reality, the trucks utilized for this offsite analysis would emit fewer emissions. For the Project, construction emissions ranged from 237 MTCO₂e to 511 MTCO₂e per year. Therefore, the additional emissions would result in a negligible increase, and impacts would remain less than significant.

Noise

Noise would be generated from construction of the offsite improvements, but it would be temporary and not long lasting. Predicted noise from construction of the offsite improvements are shown in **Table 3: Offsite Construction Noise Levels**. This conservatively assumes all four pieces of equipment are operating simultaneously nearest to the sensitive receptor approximately 200 feet north of the Project Site.

Table 3: Offsite Construction Noise Levels						
Construction Phase	Receptor Location			Modeled Exterior Noise Level (dBA L_{eq})²	Noise Threshold (dBA L_{eq})³	Exceeded?
	Land Use	Direction	Distance (feet)¹			
Offsite Improvements	Residential	North	200	72.0	80	No
1. Distance is from the nearest receptor to the main construction activity area on the Project Site. Not all equipment would operate at the closest distance to the receptor. 2. Modeled noise levels conservatively assume the simultaneous operation of all pieces of equipment. 3. The FTA Noise and Vibration Manual establishes construction noise standards of 80 dBA L _{eq(8-hour)} for residential uses.						
Source: Federal Highway Administration, Roadway Construction Noise Model, 2006. Refer to Appendix A for noise modeling results.						

As shown in **Table 3** noise levels would not exceed the FTA's maximum 8-hour noise level standards for construction noise of 80 dBA L_{eq} at residential land uses. Therefore, construction noise impacts would remain less than significant. No mitigation measures are required.

4.0 Conclusion

As discussed above, the SCE improvements would be minor and would result in negligible increases in criteria air pollutant emissions, GHG emissions, noise, and energy during Project construction. Impacts would remain less than significant, and no mitigation measures would be required.

Attachment A

Modeling Results

Model Output: OFFROAD2021 (v1.0.7) Emissions Inventory

Region Type: Sub-Area

Region: Los Angeles (SC)

Calendar Year: 2027

Scenario: All Adopted Rules - Exhaust

Vehicle Classification: OFFROAD2021 Equipment Types

Units: tons/day for Emissions, gallons/year for Fuel, hours/year for Activity, Horsepower-hours/year for Horsepower-hours

Region	Calendar Year	Vehicle Category	Model Year	Horsepower Bin	Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2.5_tpd	SOx_tpd	NH3_tpd	Fuel Consumption	Total_Activity_hpy	Total_Population	Horsepower_Hours_hhpy
Los Angeles (SC)	2027	Construction and Mining - Excavators	Aggregate	Aggregate	Diesel	0.053393403	0.064606017	0.0768865	0.631180135	0.416776647	167.4357	0.01632571	0.01502	0.001586086	0	5440851.761	1833942.12	3190.829083	106425661.1
Los Angeles (SC)	2027	Construction and Mining - Off-Highway Trucks	Aggregate	Aggregate	Diesel	0.020148537	0.02437973	0.029013893	0.158716341	0.167260214	69.85571	0.00593356	0.005459	0.00066173	0	2269973.422	266898.786	344.0214708	46643651.22
Los Angeles (SC)	2027	Construction and Mining - Tractors/Loaders/Backhoes	Aggregate	Aggregate	Diesel	0.060127983	0.07275486	0.086584296	0.840688323	0.525899452	165.5502	0.02672972	0.024591	0.001568225	0	5379581.18	2441102.914	4765.271688	100652411.9
Los Angeles (SC)	2027	Construction and Mining - Auger/Drill Rig	Aggregate	Aggregate	Diesel	0.006999584	0.008469497	0.010079401	0.068108796	0.062316808	20.49712	0.00274353	0.002524	0.000194165	0	666057.3286	117611.5378	201.9846074	13247254.67

g/hph

	HC	ROG	TOG	CO	Nox	CO2	PM10	PM2_5	Sox	NH3	Fuel_gphr
Excavators	0.166125824	0.201012247	0.239221187	1.963825394	1.296740054	520.95183	0.050795071	0.0467315	0.004934876	0	16928420.68
Trucks	0.143036503	0.173074169	0.205972564	1.126743367	1.187397182	495.91274	0.042122946	0.0387531	0.004697685	0	16114771.03
Backhoes	0.197810052	0.239350163	0.284846475	2.765710607	1.730112875	544.62969	0.08793588	0.080901	0.005159171	0	17697836.79
Auger/Drill Rig	0.174961403	0.211703298	0.251944421	1.702445529	1.557669168	512.3453	0.068577196	0.063091	0.004853348	0	16648750

	Excavator	Truck	Backhoes	Auger/Drill Rig
Construction Equipment	1	3	1	1
HP	36	376	84	83
Hours per Day	6	8	6	2
Days per Year	25	25	25	25

1 pound =

453.59 grams

Emissions Source	ROG	NOX	CO	SO2	PM10	PM2.5	CO2	metric tons/yr	PM10 tons/yr
Project Excavators	0.10	0.62	0.94	0.00	0.02	0.02	248	2.81	0.000
Project Trucks	3.44	23.62	22.42	0.09	0.84	0.77	9,866	111.88	0.010
Project Backhoes	0.27	1.92	3.07	0.01	0.10	0.09	605	6.86	0.001
Project Auger/Drill Rig	0.08	0.57	0.62	0.00	0.03	0.02	188	2.13	0.000
Total:	3.88	26.73	27.05	0.10	0.99	0.91	10906.67	123.68	0.01

Based on emission rates obtained from CARB OFFROAD Version 1.0.3.

Project: Saturn Data Center (Offsite Improvements)
Construction Noise Impact on Sensitive Receptors

Parameters

Construction Hours:	Daytime hours (7 am to 7 pm)	8
	Evening hours (7 pm to 10 pm)	0
	Nighttime hours (10 pm to 7 am)	0
Leq to L10 factor		3

		Average Distance (feet)	Distance to Property Line (feet)	Direction		
1	Receptor (Land Use)	200	200	N	RECEPTOR 1	
Construction Phase	Equipment Type	No. of Equip.	Acoustical Usage Factor	Noise Level at Receptor 1, Lmax	Noise Level at Receptor 1, Leq	
Offsite Improvements						
	Auger Drill Rig	1	20%	72.4	65.4	
	Dump Truck	3	40%	69.2	65.3	
	Excavator	1	40%	68.7	64.7	
	Tractor	1	40%	72.0	68.0	
	Combined LEQ				72.0	

Source for Ref. Noise Levels: RCNM, 2005

* Loudest piece of equipment measured from the construction boundary nearest to the receptor.