Appendix G: Vehicle Miles Traveled (VMT) Screening Analysis

Prepared by Integrated Engineering Group

CEQ 220011

Salvador Solar
Uniun Energy Management Services

Nobles Solar
Vehicle Miles Traveled (VMT) Screening Analysis

Prepared for:
D&E Land CO, LLC
2045 E. Tahquitz Canyon Way
Palm Springs, CA 92262

Prepared by:

INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING AND ENGINEERING

23905 Clinton Keith Road 114-280
Wildomar, CA 92595

February 2022

1.0 PROJECT INTRODUCTION

The purpose of this report is to evaluate the project's VMT analysis requirements and compliance with Senate Bill 743 (SB 743) and The California Environmental Quality Act (CEQA).

1.1 PROJECT DESCRIPTION

The Project is proposing the construction and operation of a 400-megawatt (MW) battery and 60-150 MW solar facility on 166 AC connecting into the Southern California (SCE) Mirage Substation located on the north side of Ramon Blvd. The proposed project is located on a vacant lot at the southeast quadrant of Ramon Road and Vista De Oro Road intersection.

Figure 1-1 shows the Project site plan.

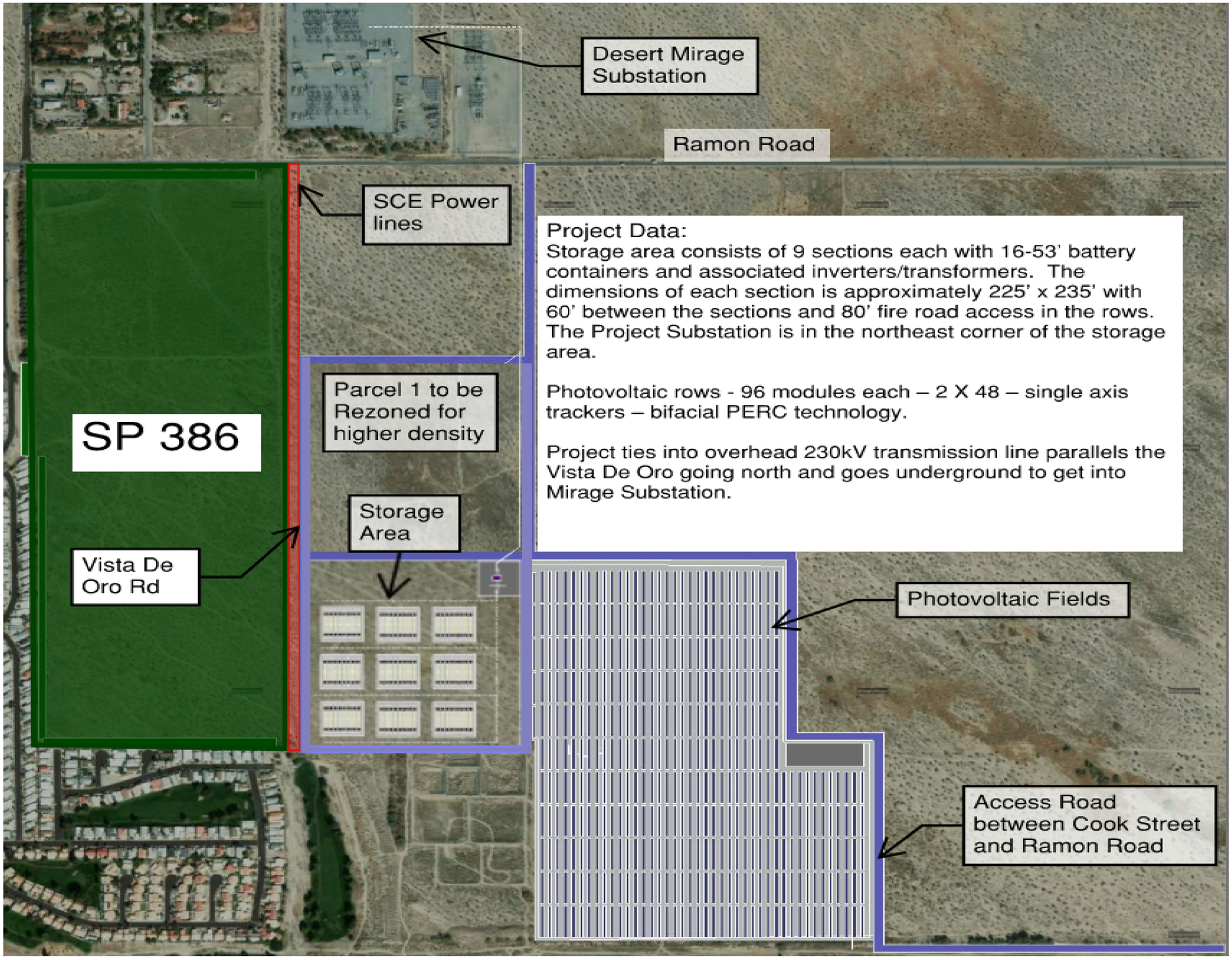
1.2 SENATE BILL 743

On September 27, 2013, SB 743 was signed into State law and started a process intended to fundamentally change transportation impact analysis as part of the CEQA compliance. The California Natural Resource Agency updated the CEQA transportation analysis guidelines in 2018. In this update automobile delay and LOS metrics are no longer to be used in determining transportation impacts. Instead VMT metrics will serve as the basis in determining impacts. Furthermore, the guidelines stated that after July 1, 2020, transportation analysis under CEQA must use VMT to determine impacts for land use projects.

1.3 GUIDANCE DOCUMENTS

The project is within the jurisdiction of the County of Riverside. The County has adopted guidance on evaluating VMT for transportation impacts under CEQA. For this project the County of Riverside's, "Transportation Analysis Guidelines for Level of Service, Vehicle Miles Traveled", December 2020[1], hereafter referred to as Guidelines.

[1] https://rctlma.org/Portals/7/2020-12-15%20-%20Transportation%20Analysis%20Guidelines.pdf



Project Data:
Storage area consists of 9 sections each with 16-53' battery containers and associated inverters/transformers. The dimensions of each section is approximately 225' x 235' with 60' between the sections and 80' fire road access in the rows. The Project Substation is in the northeast corner of the storage area.

Photovoltaic rows - 96 modules each – 2 X 48 – single axis trackers – bifacial PERC technology.

Project ties into overhead 230kV transmission line parallels the Vista De Oro going north and goes underground to get into Mirage Substation.

VICINITY MAP
NTS

OWNER/APPLICANT
Frederick Noble,
Wintec Energy Ltd.
2045 E. Tahquitz,
CA 92262

APPLICANT REPRESENTATIVE
ALBERT A. WEBB ASSOCIATES
3788 MCCRAY STREET
RIVERSIDE, CA 92506
CONTACT: SANDY CHANDLER
PHONE: 951-686-1070
FAX: 951-788-1256

ACREAGE
148± AC

APN
651-130-062 thru -065,
651-140-039 thru -042,
651-140-017 thru -025.

SCHOOL DISTRICT
Palm Springs Unified

LAND USE
Medium Density Residential; Rural Residential

UTILITY PROVIDERS
WATER Coachella Valley Water District
SEWER Imperial Irrigation District
ELECTRICAL Kinder Morgan Energy Partners
GAS Southern California Gas Co.

LEGAL DESCRIPTION

Parcel 1:
Parcels 25, 26, 27, and 28, in the County of Riverside, state of California, as shown on the records of survey, filed in book 22, page 3 of records of survey, in the office of the county recorder of said county.

Except therefrom the westerly 140.00 feet of said parcels 25 as converted to Southern California Edison company by the deed recorded August 7, 1984 as instrument no. 172083, official records.

Parcel 1A:
An easement for roadway and public utility purposes to be use in common with other over various strips of land designated of land of land designated as "road easements" as shown on the record of survey filed in book 22, page 3 of records of survey, Riverside County Records.

Parcel 2:
Parcels 41, 42, 43, 44, 45, 46, 47, 48, and 49, in the county of Riverside, state of California, as shown on the record of survey filed in book 25, page 44 of records of survey, in the office of the county recorder of said county.

Parcel 2A:
An easement for roadway and public utility purposes to be used in common with others over various strips of land designated as "road easements" as shown on the record of survey filed in book 25, page 44, or records of survey, Riverside County Records.

PROJECT DESCRIPTION
Proposed CUP for a 400MW battery and 60-150MW solar facility on 166 AC connecting into the SCE Mirage Substation located on the north side of Ramon Blvd. The proposal includes: GPA from MDR to HDR and PF, and Change of Zone from R-1 to W-2.

PRELIMINARY

Figure 1-1

N W WEBB E S

SCALE:	ALBERT A. WEBB ASSOCIATES ENGINEERING CONSULTANTS 3788 McCRAY STREET RIVERSIDE CA. 92506 PH. (951) 686-1070 FAX (951) 788-1256	PRE-APPLICATION MEETING	W.O.
DATE:			SHEET 1
DESIGNED:			OF SHEETS
CHECKED:			
PLN CK REF:			DWG. NO.
F.B.	PLOT DATE: 18-Aug-21		

2.0 ANALYSIS METHODOLGY

The Guidelines adopted by Riverside County require a 5-step process[2] for VMT analysis:

1. Project Screening: Identifies if the project needs additional VMT analysis based on if the project meets screening criteria set by Riverside County. Projects that meet any criteria would have a presumption of less than significance.
2. Identify VMT Measure: If the project does not meet any screening criteria, the project will need to identify the appropriate VMT metric as identified in the Guidelines based on land use type.
3. Identify VMT Threshold: Based on the required VMT Measure the project will need to identify the appropriate VMT Measure threshold as required in the Guidelines.
4. Assessment of Impact: Project will need to evaluate its project specific VMT Measure against the appropriate VMT Threshold to determine if the project would have an CEQA transportation VMT impact.
5. Mitigation Measures: If the project would have a VMT impact under CEQA the project would need to mitigate the impact to the extent feasible and disclose whether the project would fully mitigate its impact or require additional analysis.

2.1 SCREENING CRITERIA

2.1.1 County of Riverside Transportation Analysis Guidelines Screening Criteria

The Guidelines recognize that certain projects based on type, location, size and other contexts could lead to a *presumption of less than significance* (i.e. the project's VMT would not cause a transportation impact) and would not need additional VMT analysis. The Guidelines provide the following screening criteria[3]:

1. S*mall Projects*: This applies to projects with low trip generation per existing CEQA exemptions or based on the County Greenhouse Gas Emissions Screening Tables, result in a 3,000 Metric Tons of Carbon Dioxide Equivalent (MTCO2e) per year screening level threshold."
2. *Projects Near High Quality Transit*: High quality transit provides a viable option for many to replace automobile trips with transit trips resulting in an overall reduction in VMT.
3. *Local Retail*: The introduction of new Local-serving retail has been determined to reduce VMT by shortening trips that will occur.
4. *Affordable Housing: Lower-income residents make fewer trips on average, resulting in lower VMT overall*.
5. *Local Essential Service*: As with Local-Serving Retail, the introduction of new Local Essential services shortens non-discretionary trips by putting those goods and services closer to residents.
6. *Map*-Based Screening: This method eliminates the need for complex analyses by allowing existing VMT data to serve as a basis for the screening smaller developments. Note that screening is limited to residential and office projects.
7. *Redevelopment Projects*: Projects with lower VMT than existing on-site uses, can under limited circumstances, be presumed to have a non-significant impact. In the event this screening does not apply, projects should be analyzed as though there is no existing uses on site (project analysis cannot take credit for existing VMT).

[2] Guidelines, Figure 2 VMT Analysis Flow Chart
[3] Guidelines, Figure 3 Screening Criteria for Development Projects

2.2 VMT ANALYSIS

Projects that do not meet any of the screening criteria identified would need to perform a VMT analysis per the Guidelines. The project would need evaluate the appropriate VMT metrics and compare them to thresholds to determine significance as defined by the Guidelines[4].

2.2.1 VMT Measures

The Guidelines assign the appropriate VMT Measure for land use projects based on land use type. Residential and Office uses are required to use the relevant VMT efficiency metric, VMT per Capita or Work VMT per Employee respectively. Retail and similar uses are required to use a total VMT metric to measure the net change in VMT a project would create due to the "customer component" of the project.

2.3 VMT THRESHOLDS

Once a project identifies the appropriate VMT measures for the proposed land uses it would need to be compared to thresholds for those metrics to determine significance under CEQA. The County has chosen to base its thresholds on the county and county-wide averages.

The thresholds[5] as defined by the Guidelines provides are as follows:

- Residential Projects: exceeding 15.2 VMT/Capita, based on the county-wide average.
- Office and Other Employment Projects: exceeding 14.2 Work VMT/Employee, based on the county-wide average.
- Retail and Other Customer Projects: An increase in total region wide (county) VMT.

3.0 PROJECT ANALYSIS

The proposed project is for 400MW battery and 60-150MW solar facility on 166 AC connecting into the SCE Mirage Substation located on the north side of Ramon Blvd.

3.1 PROJECT ASSESSMENT

3.1.1 Screening Criteria Assessment

The proposed project is for a solar facility with batteries to store electricity, no offices or operation space will be constructed at the site. Once the facility is constructed it would not generate additional daily VMT as an origin or destination for the public and will be monitored remotely. Trips to and from the completed facility would be from maintenance workers who will access the facility periodically but not daily. This is not a typical land use development project that would fall into either a residential, retail or employment category.

Screening Criteria Small Projects

As stated above the project does not fit in the specific categories of small projects as shown in Figure 3 of the Guidelines. However, the final bullet for small projects states "Unless specified above, project trip generation is less than 110 trips per day per the ITE Manual or other acceptable source determined by Riverside County."

[4] Guidelines, Figure 4 Threshold
[5] Guidelines, Figure 6 VMT Threshold of Significance

Project Trip Generation Forecast

Per the County of Riverside Transportation Analysis Guidelines for Level of Service and Vehicle Miles Traveled, Trip generation may be estimated for land uses that are not included in the Institute of Transportation Engineers (ITE) Trip Generation Manual or other published sources. For the purposes of this analysis, the forecasted trips generated by the project assume that trips will occur during the construction phase only since the project, once constructed and in operation, will be unmanned with no office or operation space constructed on site. The operation of the site will be monitored remotely not requiring any employees to be present on site. Site routine maintenance and inspections will be performed consistent with an established monthly maintenance schedule and time of need.

Trip generation for the construction phase of the facility has been provided in **Table 1**.

Table 1: Nobles Solar Trip Generation

Use	Total # of Units	Passenger Vehicle Equivalent Conversion Rate	Multiplying Factor	Daily Trips	AM Peak Hour			PM Peak Hour		
					Total	In	Out	Total	In	Out
Construction Worker (single occupancy)	25	1	2	50	25	25	0	25	0	25
Construction Worker (carpooling 2+)[1]	10	0.5		10	5	5	0	5	0	5
Construction Truck Trips	10	1		20	2	1	1	2	1	1
Subtotal - NET Project Trips				***80***	***32***	***31***	***1***	***32***	***1***	***31***
Construction Truck Trips (PCE)[1]	10	3	2	60	6	3	3	6	3	3
Total - NET Project Trips (PCEs)				**120**	**36**	**33**	**3**	**36**	**3**	**33**

Notes:
[1] Carpooling two employees per vehicle; Passenger car equivalent factor of 3.0; 4+ Axle Trucks (worst case scenario)

As shown in **Table 1,** the calculated total Project daily trips is 120 ADT, including implementation of the appropriate Passenger Car Equivalent (PCE) adjustment factor for heavy vehicles. However, the following should be noted:

- The intent of SB 743 and VMT analysis per CEQA is the analysis of VMT generated "automobiles" in which OPR defines as "on-road passenger vehicles, specifically cars and light trucks." [6] The total daily trips from passenger vehicles, excluding construction truck trips, is 60 ADT (per Table 1: 50+10=60 excluding Truck trips).
- The project total daily trips is 80 ADT without applying the 3.0 PCE conversion rate to project construction truck trips. The implementation of the PCE factor is to equalize the size difference between passenger vehicles and heavy vehicles. In this case of

[6] OPR Technical Advisory (December, 2018) Page 4 – "Vehicle Types"

VMT analysis, it is not appropriate to apply the PCE factor since the VMT generated by the trucks is, in fact, not 3 times the VMT generated by a passenger vehicle making the same trip.

- Trip generation during the construction phase of the project represents the worst-case scenario of traffic generated by the project under normal conditions. Once the facility is constructed, the site will be operated remotely with intermittent routine maintenance and inspection trips that will be performed consistent with an established monthly maintenance schedule.

The proposed project would generate 80 ADT (without PCE factors) under the construction phase of the project. This would be a conservative analysis as this is the period where the site would generate the most traffic and VMT. Once the project is constructed it would not generate additional VMT on a daily basis and would not be an origin or destination for the public; therefore, **the project does qualify for small project screening**.

3.4.2 VMT Analysis

As shown in Table 2, the project would qualify for the small project screening criteria; **hence, the project would be presumed to be less than significant for VMT impacts.**

3.5 VMT IMPACT ASSESSMENT AND CONCLUSION

The proposed project is presumed to be less than significant for VMT impacts due to all the proposed uses meeting at least one of the County's screening criteria outlined in Section 2.1. The project's VMT impact assessment for the proposed uses is summarized in Table 1:

Table 2: Summary of VMT Impacts

Land Use Type	Proposed Uses	Impact	Commentary
Solar Facility - Retail	400MW battery and 60-150MW solar facility	Presumed to be less than significant	Meets County's Screening Criteria for Small Projects by temporarily generating 80 ADT at most during construction phase.

Exhibit B

SCOPING AGREEMENT FOR TRAFFIC IMPACT STUDY

This letter acknowledges the Riverside County Transportation Department requirements for traffic impact analysis of the following project. The analysis must follow the Riverside County Transportation Analysis Guidelines dated December 2020.

Case No. PAR 210152
Related Cases -
SP No.
EIR No.
GPA No.
CZ No.
Project Name: Nobles Solar
Project Address: Ramon Road and Vista De Oro Road
Project Description: Proposed CUP for a 400MW battery and 60-150MW solar facility on 166 AC connecting into the SCE Mirage Substation located on the north side of Ramon Blvd.

	Consultant	Developer
Name:	Integrated Engineering Group	Frederick Noble,
Address:	23905 Clinton Keith Road 114-280	Wintec Energy Ltd.
	Wildomar CA 92562	2045 E. Tahquitz Canyon Way
Telephone:	951-833-3105	Palm Springs, CA 92262
Fax:		

A. Trip Generation Source: Land Use Specialized Trip Generation

Current GP Land Use *Provide General Plan Land Use Designation (e.g.: MDR, CR, etc)* Proposed Land Use Solar Farm

Current Zoning R-1 Proposed Zoning W-2

Current Trip Generation	In	Out	Total	Proposed Trip Generation In	Out	Total
AM Trips	0	0	0	33	3	36
PM Trips	0	0	0	3	33	36

Internal Trip Allowance ☐ Yes ☐ No (% Trip Discount)
Pass-By Trip Allowance ☐ Yes ☐ No (% AM/PM Trip Discount)*

A passby trip discount of 25% is allowed for appropriate land uses. The passby trips at adjacent study area intersections and project driveways shall be indicated on a report figure.

B. Trip Geographic Distribution: N % S % E % W %
(attach exhibit for detailed assignment)

C. Background Traffic

Project Build-out Year: 2023 Annual Ambient Growth Rate: %
Phase Year(s) N/A

Other area projects to be analyzed:

Model/Forecast methodology N/A

Exhibit B – Scoping Agreement – Page 2

D. **Study intersections:** *(NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies.)*

1	6.
2.	7.
3.	8.
4.	9.
5.	10.

E. **Study Roadway Segments:** *(NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies.)*

1.	6.
2.	7.
3.	8.
4.	9.
5.	10.

E. Other Jurisdictional Impacts

Is this project within a City's Sphere of Influence or one-mile radius of City boundaries? ☐ Yes ☐ No

If so, name of City Jurisdiction:

F. Site Plan (please attach reduced copy)

G. Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline) (To be filled out by Transportation Department)
(NOTE: If the traffic study states that "a traffic signal is warranted" (or "a traffic signal appears to be warranted," or similar statement) at an existing unsignalized intersection under existing conditions, 8-hour approach traffic volume information must be submitted in addition to the peak hourly turning movement counts for that intersection.)

Trip generation assessment and VMT analysis will be provided for County staff review and approval

H. Existing Conditions

Traffic count data must be new or recent. Provide traffic count dates if using other than new counts.
Date of counts N/A

***NOTE* Traffic Study Submittal Form and appropriate fee must be submitted with, or prior to submittal of this form. Transportation Department staff will not process the Scoping Agreement prior to receipt of the fee.**

Recommended by:

Approved Scoping Agreement:

George Ghossain 1/13/2022

Consultant's Representative Date

Riverside County Transportation Department Date

Scoping Agreement Submitted on 1/13/2022

Revised on

INTEGRATED ENGINEERING GROUP
TRANSPORTATION PLANNING AND ENGINEERING

Project Description

The Project is proposing the construction and operation of a 400-megawatt (MW) battery and 60-150 MW solar facility on 166 AC connecting into the Southern California (SCE) Mirage Substation located on the north side of Ramon Blvd. The proposed project is located on a vacant lot at the southeast quadrant of Ramon Road and Vista De Oro Road intersection.

Project Trip Generation Forecast

Per the County of Riverside Transportation Analysis Guidelines for Level of Service and Vehicle Miles Traveled, Trip generation may be estimated for land uses that are not included in the Institute of Transportation Engineers (ITE) Trip Generation Manual or other published sources. For the purposes of this analysis, the forecasted trips generated by the project assume that trips will occur during the construction phase only since the project, once constructed and in operation, will be unmanned with no office or operation space constructed on site. The operation of the site will be monitored remotely not requiring any employees to be present on site. Site routine maintenance and inspections will be performed consistent with an established monthly maintenance schedule and time of need.

Level of Service (LOS) Assessment

Construction Trips

Project construction peak hour trips are anticipated to occur outside the typical peak hours of the network since construction workers will need to be at the construction site prior to 7am and depart the site at 3pm; however in order to evaluate the worst-case scenario, it is assumed that construction employees arrive during the AM peak hour and depart during the peak hour traffic of the adjacent street with truck trips occurring randomly over the course of the work day.

Based on these assumptions, a daily and peak hour trip generation has been calculated for the project. It is estimated that 35 employees will work on the site during the five-month peak construction period of which 25 employees will arrive alone and 10 employees will carpool. Other ancillary project related truck trips are also accounted for as follows:

- Single Occupancy - 25 employees
    - 50 (25 employees x 2 trips per day) daily trips
    - 25 inbound trips in the morning peak and
    - 25 outbound trips in the afternoon peak
- Carpool (assumed 2 in a carpool) – 10 employees
    - 10 (10 employees/2 x 2 trips per day) daily trips

- 5 inbound trips in the morning peak
- 5 outbound trips in the afternoon peak

- Truck Trips – 10 trucks
  - 60 (10 x 3 (PCE factor) x 2) daily trips
  - 3 inbound and 3 outbound trips in the morning peak
  - 3 inbound and 3 outbound trips in the afternoon peak

The following table shows the traffic generation expected from the project based on the information provided by the design team.

Project Construction Traffic Generation Forecast

Type of Trips	Total # of Units	Multiplying Factor[1]	Daily Trips	AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out
Employee Trips (single occupancy)	25		50	25	25	0	25	0	25
Employee Trips (carpooling 2+)	10		10	5	5	0	5	0	5
Truck Trips	10	3	60	6	3	3	6	3	3
NET Project Trips (PCEs)			**120**	**36**	**33**	**3**	**36**	**3**	**33**

Notes: [1] Passenger car equivalent factor of 3.0; 4+ Axle Trucks (worst case scenario)

Based on the project trip generation calculation outlined in the table above, IEG will prepare a trip generation assessment report for County staff review and approval.

Vehicle Miles Traveled (VMT) Assessment

Since the project, once constructed and in operation, will be unmanned with no office or operation space constructed on site, it will be screened out from conducted a full VMT analysis. Additionally, it should be noted that construction worker VMT is not a newly generated VMT; instead, it is redistributed throughout the regional roadway network based on the different work sites in which construction workers travel to each day. Therefore, construction workers are not generating new VMT each day, only redistributing it. This redistribution is considered to have a nominal and momentary effect on the regional and citywide daily VMT. IEG will prepare a VMT screening analysis report for staff review and approval.