APPENDIX B

TRAFFIC ASSESSMENT MEMORANDUM
&
SUPPLEMENTAL CONSTRUCTION TRAFFIC ANALYSIS

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CHEN RYAN

October 22, 2013

Mr. Dwight L. Carey
Environmental Management Associates, Inc.
588 Explorer Street
Brea, CA 92821-3108

Subject: Seville Solar Farm Project – Revised Transportation Analysis

The purpose of this letter is to document the anticipated trip generation for the proposed Seville Solar Farm project, as well as provide an assessment of the traffic operations during the project's day-to-day operations and during project construction.

PROJECT LOCATION

Regenerate Power, LLC (the project applicant) is proposing to construct the Seville Solar Farm Complex which will contain up to five photovoltaic energy generation facilities. The proposed project will be developed on the 2,440-acre Allegretti Farms property, located in Imperial County, CA, approximately eight (8) miles west of State Route (SR) 86 and directly south of SR-78, as shown in **Figure 1** below.

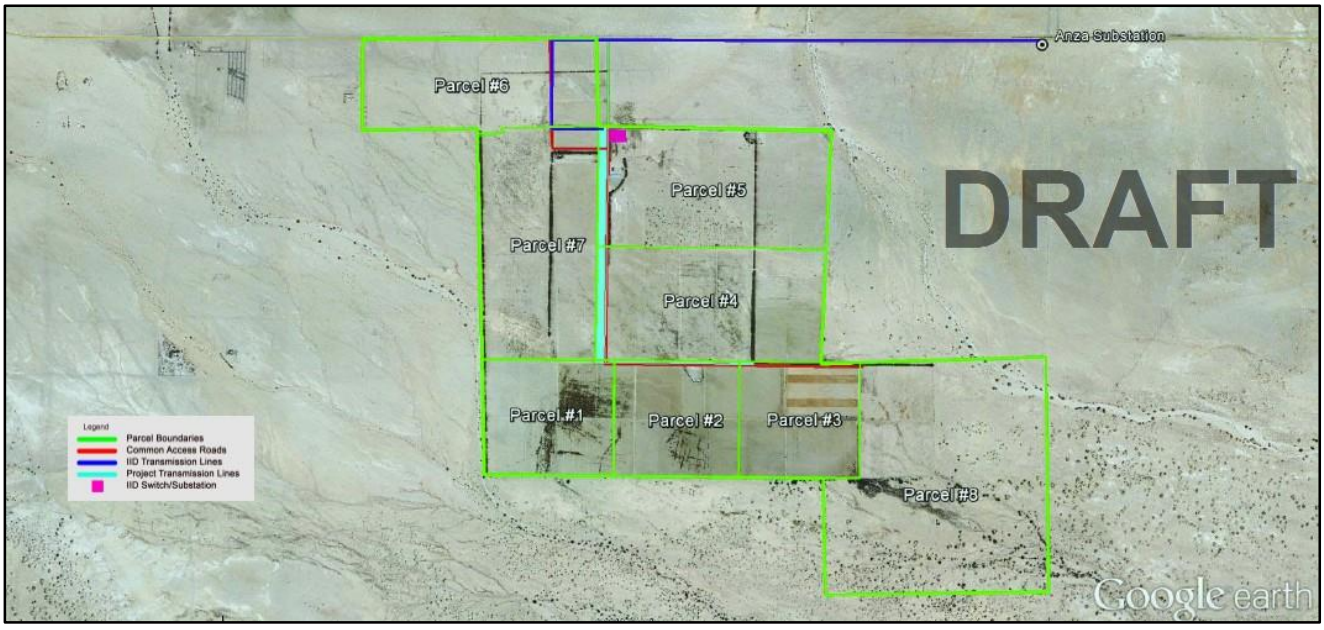

Figure 1 -Project Location

The property is currently accessed using a gated, private road from State Highway 78 which crosses approximately one-half mile of public land managed by the Bureau of Land Management (BLM). This road would continue to be used for agricultural operations on the property, and for secondary, emergency access to the solar development projects. The principal access to the property will be via a new, private access road from the north, off of State Highway 78, constructed on the property approximately one-quarter mile west of the existing access road (see Figure on previous page). The new primary access road would be equipped with a minimum of 30-foot double swing gate which will have a coded entry system and a "Knox Box" for emergency access. Internal to the property, a network of private roads would provide operations and maintenance access to all property parcels and Project components.

TYPICAL DAILY OPERATIONS

This section assesses traffic operations on a typical day at the site and potential traffic impacts of the proposed solar farm.

Typical Project Trip Generation

The proposed project is expected to have a small regular on-site staff consisting of daily maintenance personnel, security for the site will be handled at an off-site location and will be monitored via closed circuit cameras. Additional workers would occasionally be required to access the site to clean the solar panels, as well as to perform landscaping on one of the sites. Deliveries would occur infrequently. As a worst-case scenario, it was assumed that all panel cleaning and landscaping activities would be performed on the same day (for a single site), that all employees would drive separate vehicles to/from the project site, and that all employees would arrive during the AM peak hour and depart during the PM peak hour. **Table 1** displays the assumed project vehicle trip generation during its day-to-day operations.

Table 1
Typical Daily Trip Generation

Task	Number of On-Site Employees Required	Total Daily Trips	AM Peak		PM Peak	
			In	Out	In	Out
Maintenance	5	10	5	0	0	5
Cleaning	2	4	2	0	0	2
Landscaping	2	4	2	0	0	2
Delivery		2	0	0	0	0
Total	**9**	**20**	**9**	**0**	**0**	**9**

Source: EMA, October 2013

As shown, the solar farm is anticipated to generate 20 daily vehicle trips with 9 trips arriving at the plant during the AM peak hour and 9 trips departing from the plant during the PM peak hour. As noted above, this represents a worst case scenario during times in which all maintenance duties would be performed on the same day. In general, these trips would typically be spread out over several days during a week.

Project Study Area

The closest intersection to the project site (with a paved road) is located over 9 miles to the east (SR-86) and over 8 miles to the west (Split Mountain Road), along SR-78. Due to the distance of these intersections from the proposed project site, as well as the anticipated low project trip generation (20 daily trips and 9 peak hour trips) the only facilities analyzed by this study are the segment of SR-78 that fronts the proposed project and the proposed project access point (only during project construction). Based on discussions

with County of Imperial staff, it was determined that due to the reasons mentioned above, project traffic would have a minimal effect on the operations any of intersection under the County's jurisdiction. Therefore, no analysis of County controlled intersections was included in this study.

Study Scenarios

Roadway segment analyses were conducted on SR-78, along the proposed project frontage, under both with and without project conditions for the following scenarios:

Existing Conditions

Based on Caltrans 2012 count data, the segment of SR-78 that fronts the proposed project site serves an annual average daily traffic (AADT) volume of 1,000 vehicles per day (vpd) with a two-way volume of 190 vehicles during the peak hour.

Near-Term Year 2015 / Project Opening Year

Based on a review of recently conducted Environmental Impact Reports (EIR) conducted within the County and discussions with County of Imperial staff, only the Salton City Landfill Expansion project was identified to contribute additional traffic to the segment of SR-78 that fronts the project site, prior to the construction of the proposed project. As identified in the Salton City Landfill Expansion project Traffic Impact Report, under Year 2017 conditions the project is anticipated to contribute a "nominal" amount of traffic (less than 50 trips) to SR-78, west of SR-86. Since an exact number of trips that the Salton City Landfill Expansion project would contribute to SR-78 west of SR-86 in Year 2015 was not identified, this study assumes the highest number of 50 trips would be contributed to the segment. Relevant pages from the Salton City Landfill Expansion project Traffic Impact Report are provided in **Attachment 1**.

Long-Term Year 2025

The *County of Imperial Circulation and Scenic Highways Element, January 2008* projects that the AADT on SR-78, along the project frontage, is projected to increase to 8,100 vpd by Year 2025.

Typical Project Level of Service Analysis

State Highway Level of Service and performance is based upon procedures developed by Caltrans District 11, which are derived from the 2000 Highway Capacity Manual (HCM 2000). The procedure for calculating highway Level of Service involves estimating a peak hour volume to capacity (V/C) ratio. Peak hour volumes are estimated from the application of design hour ("K"), directional ("D") and Heavy Vehicle Factors ("HVF") to Average Daily Traffic (ADT) volumes. The analysis assumed a capacity of 1,700 passenger-cars per hour per lane (pc/h/ln), a peak-hour factor (PHF) of 0.92, and a 60/40 directional split.

As displayed in **Table 2**, this segment of SR-78 is projected to operate at LOS B or better, with and without project traffic under all of the study scenarios. LOS C or better is used in this study as the threshold for acceptable highway operations based upon Caltrans and County of Imperial requirements. Traffic count data is provided in **Attachment 2**.

Based on the good level of operations of SR-78 as well as the limited number of trips in which the proposed project is estimated to generate, no transportation-related impacts would be associated with the proposed project during its typical daily operations; therefore, no mitigation is required and no additional analyses are needed.

Table 2
SR-78 Roadway Segment Level of Service – Typical Operations

Scenario	AADT	K	Peak Hour Volume	D	Lanes	PHF	HVF	Volume (pc/h/ln)	V/C	LOS
Existing	1,000	24.0%	240	0.6	1	0.92	33.7%	236	0.14	A
Existing Plus Project	1,020	24.0%	245	0.6	1	0.92	33.7%	241	0.14	A
Near-Term Year 2015	1,050	24.0%	252	0.6	1	0.92	33.7%	248	0.15	A
Near-Term Year 2015 Plus Project	1,070	24.0%	257	0.6	1	0.92	33.7%	253	0.15	A
Long-Term Year 2025	8,100	10.0%	810	0.6	1	0.92	33.7%	797	0.47	B
Long-Term Year 2025 Plus Project	8,120	10.0%	812	0.6	1	0.92	33.7%	799	0.47	B

Source: Chen Ryan Associates; October 2013

Notes:

K: Percent of AADT that occurs during the peak hour. The source for existing K factor is the Caltrans *2012 Traffic Volumes on the California State highway System*. It is assumed as traffic volumes increase on the segment the K factor will reduce to a level that is more consistent with the adjacent segments both to the east and the west.

D: Directional split, assumed value

PHF: Peak Hour Factor, assumed value

HVF: Heavy Vehicle Factor, based on Caltrans *2011 Annual Average Daily Truck Traffic on the California State highway System*.

V/C: Volume to Capacity Ratio

CONSTRUCTION-RELATED OPERATIONS

This section assesses the projected roadway operations and impacts associated with the construction of the proposed solar farm.

Construction of each of the solar development projects is expected to be completed in approximately three to four months (for each of the three smaller parcels) or five to six months (for each of the two larger parcels). Each of the proposed five solar development projects would be constructed independently, and construction of any one project is not expected to overlap the construction of another.

Construction Traffic Trip Generation

During construction of the solar farm, approximately 14 delivery trucks would arrive at and depart from the project site at staggered times throughout the day. Project construction would require a maximum of 150 workers on-site at any given time. To provide a worst-case scenario, all construction workers were assumed to arrive during the AM peak hour and depart during the PM peak hour, and all workers were assumed to drive separate vehicles to and from the project site. **Table 3** displays the assumed project vehicle trip generation during project construction. Construction estimates provided by the project applicant are included in **Attachment 3**.

Table 3
Project Construction Trip Generation

Task	Total Daily Trips	PVE	Total Daily Trips	AM Peak		PM Peak	
				In	Out	In	Out
Workers	300	1	300	150	0	0	150
Vendor Trucks	14	3	42	0	0	0	0
Haul Trucks	14	3	42	0	0	0	0
Total			**384**	**150**	**0**	**0**	**150**

Source: EMA, October 2013

As shown, during project construction the solar farm is anticipated to generate 384 daily vehicle trips per day with 150 trips arriving to the plant during the AM peak hour and 150 trips departing from the plant during the PM peak hour.

Construction-Level of Service Analysis

Near-Term Year 2015 conditions were used as the base condition for the analysis of project construction. Traffic volumes during project construction were developed by adding the estimated number of trips associated with project construction (displayed in Table 3) to Near-Term Year 2015 roadway volumes (Table 2). It was assumed that a third of the construction worker traffic would travel to and from the west (i.e., in San Diego and other local residential developments) while the remaining two-thirds would originate from the various Imperial Valley Cities to the east, as shown in **Figure 2**.

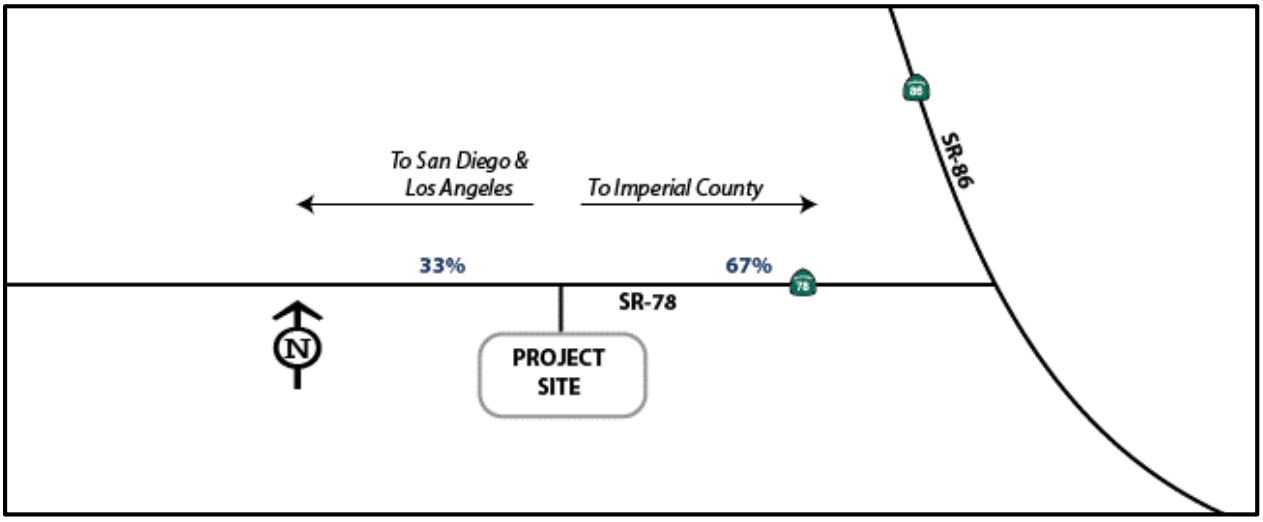

Figure 2
Assumed Trip Distribution - Project Construction Traffic

Table 4
SR-78 Roadway Segment Level of Service – Project Construction

Scenario	AADT	K	Peak Hour Volume	D	Lanes	PHF	HVF	Volume (pc/h/ln)	V/C	LOS
Project Construction	1,308	24.0%	314	0.6	1	0.92	33.7%	309	0.18	A

Source: Chen Ryan Associates, October 2013

As shown in **Table 4**, SR-78 is projected to continue to operate LOS A during the construction period of the proposed project.

Due to the relatively high number of vehicles that are projected to arrive at and depart from the project site during the AM and PM peak hours, respectively, a peak hour HCM 2000 analysis was conducted for the SR-78/Project Driveway intersection, which is assumed to be one-way stop controlled. **Table 5** provides a summary of the projected peak hour driveway operations during project construction.

Table 5
Peak Hour Intersection Level of Service – Project Construction

	AM		PM	
Intersection	Delay	LOS	Delay	LOS
SR-78 / Project Driveway	7.6	A	10.4	B

Source: Chen Ryan Associates, October 2013

As shown in Table 5, the project driveway is anticipated to operate at LOS B or better during project construction; therefore, it is anticipated that there will be no traffic related impacts associated with the construction of the proposed project. However, it is recommended that a construction management plan be prepared to address Caltrans requirements. Peak hour LOS analysis worksheets are provided in **Attachment 4**.

Please feel free to contact me if you have any questions or concerns regarding this letter.

Sincerely

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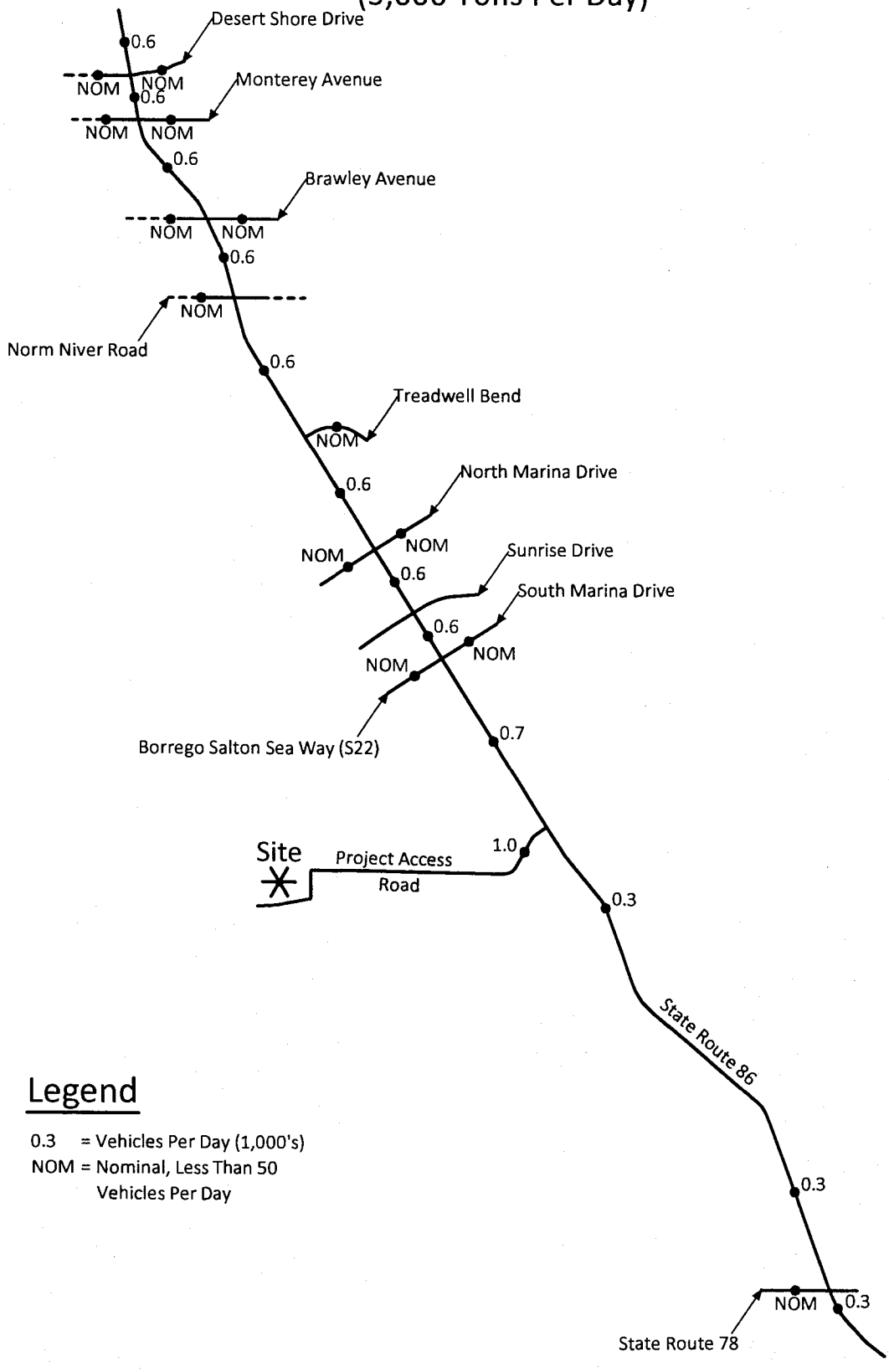
Attachment 1
Cumulative Project Data

Figure 30
Project Year 2017 Average Daily Traffic Volumes
(3,000 Tons Per Day)



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Attachment 2
Traffic Count Data

Dist	Route	County	Postmile	Description	Back Peak Hour	Back Peak Month	Back AADT	Ahead Peak Hour	Ahead Peak AADT	Ahead AADT
11	78	SD	35.96	RAMONA, SIXTH STREET	1500	18600	18400	1300	16700	16400
11	78	SD	36.29	RAMONA, THIRD STREET	1300	16700	16400	750	19100	9600
11	78	SD	37.11	MAGNOLIA AVENUE	750	19100	9600	750	7800	7600
11	78	SD	41.96	SUTHERLAND DAM ROAD	750	7800	7600	640	5800	5600
11	78	SD	51.108	WEST JCT. RTE. 79	960	6400	5500	820	5100	4100
11	78	SD	56.91	PINE HILLS ROAD	820	5100	4100	810	5200	4550
11	78	SD	57.88	JULIAN, MAIN/WASHINGTON ST	810	5200	4550	680	5500	4850
11	78	SD	58.133	EAST JCT. RTE. 79	680	5500	4850	420	4200	3750
11	78	SD	58.64	MANZANITA ROAD	360	3400	3200	250	2400	2200
11	78	SD	59.24	CANYON DRIVE	250	2400	2200	190	1700	1550
11	78	SD	60.273	WYNOLA ROAD	190	1700	1550	140	1300	1200
11	78	SD	69.693	VALLECITOS ROAD	100	900	850	130	1150	1100
11	78	SD	70.01	SAN FELIPE ROAD	130	1150	1100	300	1800	1050
11	78	SD	76.84	YAQUI PASS ROAD	300	1800	1050	190	1250	880
11	78	SD	85.61	BORREGO SPRINGS ROAD	190	1250	880	260	1750	1250
11	78	SD	95.313	SAN DIEGO/IMPERIAL COUNTY LINE	260	1750	1250			
11	78	IMP	0	SAN DIEGO/IMPERIAL COUNTY LINE				190	1000	780
11	78	IMP	18.651	WEST JCT. RTE. 115	450	4500	3900	450	4450	3400
11	78	IMP	21.023	EAST JCT. RTE. 115	450	4450	3400	390	2050	1600
11	78	IMP	25.927	GREEN ROAD	390	2050	1600	320	1600	1350
11	78	IMP	41.004	GLAMIS	320	1600	1350	350	1650	1450
11	78	IMP	52.348	OGILBY ROAD	350	1650	1450	400	1900	1600
11	78	IMP	80.442	PALO VERDE, FOURTH/MAIN ST	440	2100	1750	210	1900	1600
11	78	IMP	80.743	IMPERIAL/RIVERSIDE COUNTY LINE	210	1900	1600			
8	78	RIV	0	IMPERIAL/RIVERSIDE COUNTY LINE				210	1900	1600
8	78	RIV	3.06	32ND AVENUE/PALO VERDE BLVD	210	1900	1600	250	2250	1900
8	78	RIV	6.35	CRANNELLS BLVD/28TH AVE	250	2250	1900	240	2150	1800
8	78	RIV	9.352	28TH AVE/NEIGHBORS BLVD	240	2150	1800	190	2200	2000
8	78	RIV	10.62	RIPLEY, BROADWAY STREET	190	2200	2000	280	3200	2900
8	78	RIV	16.169	JCT. RTE. 10	280	3200	2900	280	3200	2900

Attachment 3
Construction Estimates

SEVILLE SOLAR FARM COMPLEX ESTIMATED TRAFFIC

October 9, 2013

The Seville Solar Farm Complex (Project) consists of the construction, operation and reclamation of up to five solar energy projects, including a new access road from Highway 78 and internal access roads, an Imperial Irrigation Districts (IID) electrical switch station, electrical substations for each of the five projects, and internal solar development transmission lines to the substations and IID switch station. The Project would also include the construction for, and operation by, the IID of new 92 kV transmission line for interconnection to the existing IID Anza Substation.

Eight parcels (lots) would be specifically developed as the Seville Solar Farm Complex (Project area). Lots 1-5 would be developed as individual solar farm projects. Seville Solar Farm Projects One – Three would develop Lots 1-3, respectively, each of which is approximately 185 acres. Seville Solar Farm Projects Four and Five would develop Lots 4 and 5, respectively, each of which is approximately 330 acres. Lots A, C and D would be developed specifically for the benefit of all five solar farm projects. These three common development interest lots include land for the IID electrical switch (Lot C), land for the solar development substations (Lot D) and land for the solar development transmission lines to the solar development substations (Lot A). Lot B would be a common development interest lot for the internal property road system supporting all of the other lots.

Construction of each of the five solar development projects is expected to be completed in approximately four to five months (for each of the three smaller lots) or seven to eight months (for each of the two larger lots). Each of the proposed five solar development projects would be constructed independently, and construction of any one solar project is not expected to overlap the construction of another. However, construction of the first solar project would overlap construction of the common interest development lots and the IID transmission line.

Attachment 1 provides the construction traffic estimates prepared for estimating air pollutant emissions during construction of the individual solar projects and the common interest development lots. Table 16, Table 17 and Table 18 summarize the expected number of worker, vendor truck and haul truck trips, respectively, expected per day for each phase of the solar project construction for Lots 1 through 3. Table 19, Table 20 and Table 21 summarize the expected number of worker, vendor truck and haul truck trips, respectively, expected per day for each phase of the solar project construction for Lots 4 and 5. Table 22, Table 23 and Table 24 summarize the expected number of worker, vendor truck and haul truck trips, respectively, expected per day for the common infrastructure phases of the project construction.

Table 1 provides a summary of the anticipated Project construction traffic (round-trips), assuming the contemporaneous construction of one of the solar projects and the common infrastructure activities.

Table 1: Anticipated Project Construction Traffic

Use	Total Daily Trips	AM Peak Inbound Trips	AM Peak Outbound Trips	PM Peak Inbound Trips	PM Peak Outbound Trips
Construction Haul Trucks	14	0	0	0	0
Construction Vendor Trucks	14	0	0	0	0
Construction Worker Traffic	300	150	0	0	150
Total	**328**	**150**	**0**	**0**	**150**

During operations, each solar project is expected to have no more than one daily maintenance worker. Additional workers would occasionally be required to access the site to clean the solar panels or to perform specific maintenance, like weed abatement, around each site. Deliveries would occur irregularly. To estimate operational traffic from all five projects it was assumed that panel cleaning and landscaping activities would each be performed for one solar project on the same day, that all workers would drive separate vehicles to and from each project, and that all workers would arrive during the AM peak hour and depart during the PM peak hour. Table 2 presents this Project operation vehicle trip generation information.

Table 2: Anticipated Project Operation Traffic

Use	Number of On-Site Employees Required	Daily Trips	AM Peak Inbound Trips	AM Peak Outbound Trips	PM Peak Inbound Trips	PM Peak Outbound Trips
Maintenance	5	10	5	0	0	5
Panel Cleaning	2	4	2	0	0	2
Landscaping/Other	2	4	2	0	0	2
Delivery		2	0	0	0	0
Totals	**9**	**20**	**9**	**0**	**0**	**9**

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Attachment 1

CONSTRUCTION TRAFFIC ESTIMATES

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Table 16– Anticipated Worker Trips During Project Construction for Lots 1 through 3

	Month 1				Month 2				Month 3				Month 4				Month 5				Month 6				Month 7				Month 8			
	Week #																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Complex Internal Roads			30	30																												
Demolition			8	8																												
Site Preparation			8	8																												
Grading				30	30	30	30	30																								
Solar Panel Installation									230	230	230	230	230	230	230	230	230	230	230	230												
Building Erection									20	20	20	20	20	20	20	20	20	20	20	20												
Substation Construction					10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10												
GenTie Power Line Constrc					12	12	12	12	12	12	12	12	12	12	12	12																
Total One-Way Worker Trips	**0**	**0**	**46**	**76**	**52**	**52**	**52**	**52**	**272**	**272**	**272**	**272**	**272**	**272**	**272**	**272**	**260**	**260**	**260**	**260**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Table 17– Anticipated Vendor Truck Trips During Project Construction for Lots 1 through 3

	Month 1				Month 2				Month 3				Month 4				Month 5				Month 6				Month 7				Month 8			
	Week #																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Complex Internal Roads			0	0																												
Demolition			0	0																												
Site Preparation			0	0																												
Grading				0	0	0	0	0																								
Solar Panel Installation									10	10	10	10	10	10	10	10	10	10	10	10												
Building Erection									2	2	2	2	2	2	2	2	2	2	2	2												
Substation Construction					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
GenTie Power Line Constrc					2	2	2	2	2	2	2	2	2	2	2	2																
Total One-Way Vendor Trips	**0**	**0**	**0**	**0**	**2**	**2**	**2**	**2**	**14**	**14**	**14**	**14**	**14**	**14**	**14**	**14**	**12**	**12**	**12**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Table 18 - Anticipated Haul Truck Trips During Project Construction for Lots 1 through 3

	Month 1				Month 2				Month 3				Month 4				Month 5				Month 6				Month 7				Month 8			
	Week #																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Complex Internal Roads			6	6																												
Demolition			6	6																												
Site Preparation			6	6																												
Grading				4	4	4	4	4																								
Solar Panel Installation									0	0	0	0	0	0	0	0	0	0	0	0												
Building Erection									4	4	4	4	4	4	4	4	4	4	4	4												
Substation Construction					4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4												
GenTie Power Line Constrc					0	0	0	0	0	0	0	0	0	0	0	0																
Total One-Way Haul Trips	0	0	18	22	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	0	0	0	0	0	0	0	0	0	0	0	0

Table 19– Anticipated Worker Trips During Project Construction for Lots 4 and 5

	Month 1				Month 2				Month 3				Month 4				Month 5				Month 6				Month 7				Month 8			
	Week #																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Complex Internal Roads			30	30																												
Demolition			8	8																												
Site Preparation			8	8																												
Grading				30	30	30	30	30	30	30																						
Solar Panel Installation											230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230
Building Erection											20	20	20	20	20	20	20	20	20	20												
Substation Construction					10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10												
GenTie Power Line Constrc									12	12	12	12	12	12	12	12																
Total One-Way Worker Trips	**0**	**0**	**46**	**76**	**40**	**40**	**40**	**40**	**52**	**52**	**272**	**272**	**272**	**272**	**272**	**272**	**260**	**260**	**260**	**260**	**230**	**230**	**230**	**230**	**230**	**230**	**230**	**230**	**230**	**230**	**230**	**230**

Table 20 - Anticipated Vendor Truck Trips During Project Construction for Lots 4 and 5

	Month 1				Month 2				Month 3				Month 4				Month 5				Month 6				Month 7				Month 8			
	Week #																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Complex Internal Roads			0	0																												
Demolition			0	0																												
Site Preparation			0	0																												
Grading				0	0	0	0	0	0	0																						
Solar Panel Installation											10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Building Erection											0	0	0	0	0	0	0	0	0	0												
Substation Construction					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
GenTie Power Line Constrc									2	2	2	2	2	2	2	2																
Total One-Way Vendor Trips	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**2**	**12**	**12**	**12**	**12**	**12**	**12**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**

Table 21 - Anticipated Haul Truck Trips During Project Construction for Lots 4 and 5

	Month 1				Month 2				Month 3				Month 4				Month 5				Month 6				Month 7				Month 8			
	Week #																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Complex Internal Roads			6	6																												
Demolition			6	6																												
Site Preparation			6	6																												
Grading				4	4	4	4	4	4	4																						
Solar Panel Installation											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Building Erection											4	4	4	4	4	4	4	4	4	4												
Substation Construction					2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2												
GenTie Power Line Constrc									0	0	0	0	0	0	0	0																
Total One-Way Trips	**0**	**0**	**18**	**22**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Table 22 – Anticipated Worker Trips During Project Construction for the Common Infrastructure

	Month 1				Month 2				Month 3				Month 4				Month 5				Month 6				Month 7				Month 8			
	Week #																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
New Access Road	30	30																														
Switch Station Construction			10	10	10	10	10	10	10	10	10	10	10	10	10	10																
Transmission Line Construction			12	12	12	12	12	12	12	12	12	12	12	12	12	12																
Total One-Way Trips	**30**	**30**	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Table 23 - Anticipated Vendor Truck Trips During Project Construction for the Common Infrastructure

	Month 1				Month 2				Month 3				Month 4				Month 5				Month 6				Month 7				Month 8			
	Week #																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
New Access Road	0	0																														
Switch Station Construction			0	0	0	0	0	0	0	0	0	0	0	0	0	0																
Transmission Line Construction			0	0	0	0	0	0	0	0	0	0	0	0	0	0																
Total One-Way Trips	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Table 24 - Anticipated Haul Truck Trips During Project Construction for the Common Infrastructure

	Month 1				Month 2				Month 3				Month 4				Month 5				Month 6				Month 7				Month 8			
	Week #																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
New Access Road	12	12																														
Switch Station Construction			4	4	4	4	4	4	4	4	4	4	4	4	4	4																
Transmission Line Construction			2	2	2	2	2	2	2	2	2	2	2	2	2	2																
Total One-Way Trips	**12**	**12**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Attachment 4
Peak Hour LOS Worksheets

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Seville Solar
Project Construction Conditions
AM Peak

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

****

Intersection #1 SR-78 / Project Driveway

****

Average Delay (sec/veh): 2.2 Worst Case Level Of Service: A[7.6]

****

Street Name:	Project Driveway						SR-78					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 0 1 0 0			0 1 0 0 0		
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	100	0	100	140	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	100	0	100	140	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	0	0	0	0	0	0	109	0	109	152	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	0	0	109	0	109	152	0
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	478	478	109	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	109	xxxx	xxxxx
Potent Cap.:	546	486	945	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1482	xxxx	xxxxx
Move Cap.:	513	448	945	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1482	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.07	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.2	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	A	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	*			*			*			*		

****

Note: Queue reported is the number of cars per lane.

****

Seville Solar
Project Construction
PM Peak

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

****

Intersection #1 SR-78 / Project Driveway

****

Average Delay (sec/veh): 4.0 Worst Case Level Of Service: B[10.4]

****

Street Name:	Project Driveway						SR-78					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 0 1 0 0			0 0 1 0 0		
Volume Module:												
Base Vol:	50	0	100	0	0	0	0	140	0	0	100	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	50	0	100	0	0	0	0	140	0	0	100	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	54	0	109	0	0	0	0	152	0	0	109	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	54	0	109	0	0	0	0	152	0	0	109	0
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	261	261	152	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	728	644	894	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	728	644	894	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.07	0.00	0.12	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	831	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	10.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	*	*	*
ApproachDel:		10.4			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS:		B			*			*			*	

****

Note: Queue reported is the number of cars per lane.

****

CHEN RYAN

February 25, 2014

Mr. Dwight L. Carey
Environmental Management Associates, Inc.
588 Explorer Street
Brea, CA 92821-3108

Subject: **Seville Solar Farm Complex – Supplemental Construction Traffic Analysis**

The purpose of this letter is to document the projected traffic operations along State Route (SR) 78 between Split Mountain Road and SR-86 during the construction of the proposed Seville Solar Farm Complex and the proposed modifications to the existing Imperial Irrigation District (IID) Anza Substation (located at mile post 47.2), within the County of Imperial.

PROJECT LOCATION

The Seville Solar Farm Complex will contain up to five photovoltaic energy generation facilities. The proposed project will be developed on the 2,440-acre Allegretti Farms property, located in Imperial County, CA, approximately eight (8) miles west of State Route (SR) 86 and directly south of SR-78, as shown in **Figure 1** below.

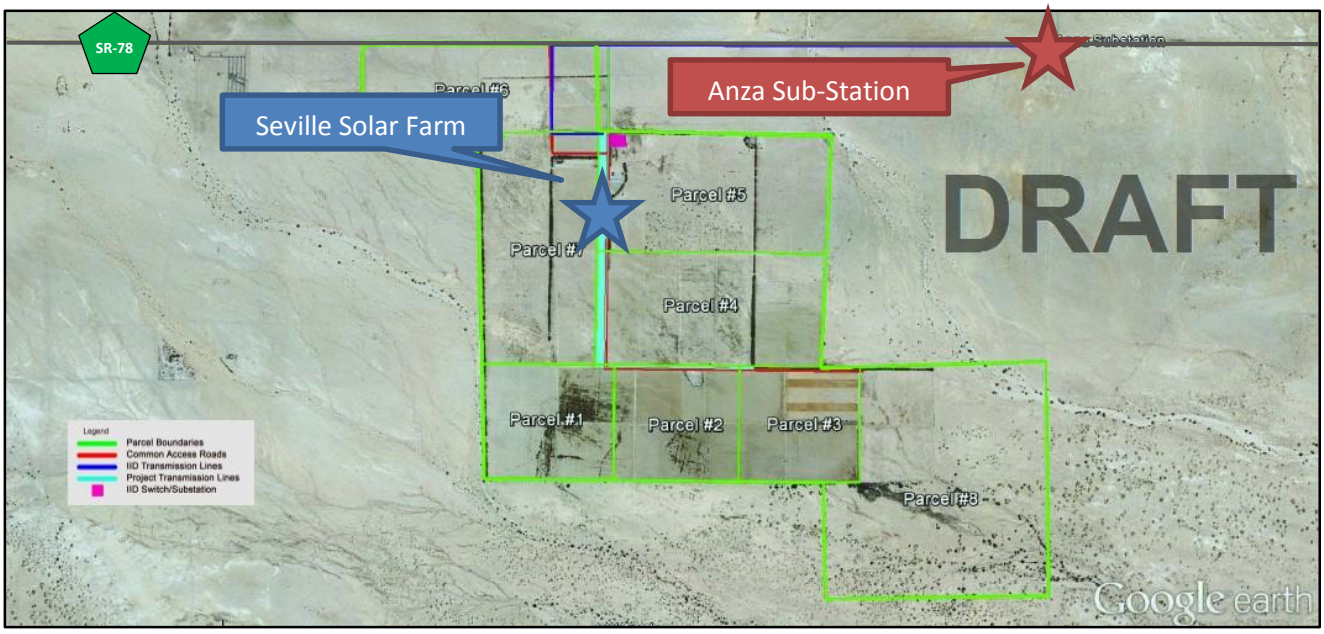

Figure 1 -Project Location

The property is currently accessing SR-78 via a gated, private road, which crosses approximately one-half mile of public land managed by the Bureau of Land Management (BLM). This road would continue to be used for agricultural operations on the property, and as secondary and emergency access to the solar development projects. The primary access to the Seville Solar Farm Complex will be provided via a new, private access road from the north, off of State Highway 78, constructed on the property approximately one-quarter mile west of the existing access road (see Figure on previous page).

As shown in Figure 1, the Anza Substation is also located directly south of SR-78, approximately 2.25 miles east of the proposed Seville Solar Farm Complex. The substation currently has direct access off of SR-78 via a single gated entrance, as shown below in **Figure 2**.

Figure 2 – Existing Anza Substation

BACKGROUND

The Draft EIR for the Seville Solar Farm Complex is currently being prepared by the County of Imperial. As part of the project's Notice of Preparation (NOP) package, the project applicant (Regenerate Power, LLC) provided a letter identifying and documenting all potential transportation related impacts associated with the proposed Seville Solar Farm Complex (*Transportation Letter, Chen Ryan Associates, October 22, 2013*). The Transportation Letter was approved by County of Imperial Staff in October 2013, and its findings will be incorporated into the Draft EIR. However, after the transportation letter was approved, the IID announced that they are planning to make modifications to the Anza Substation, and the construction period will overlap with the construction of the Seville Solar Farm Complex.

To account for the additional construction related traffic associated with the Anza Substation, this letter provides a supplemental transportation analysis which assumes the concurrent construction of both the solar farm and the modifications to the substation.

Construction Traffic Trip Generation

Seville Solar Farm Complex

During construction of the solar farm, approximately 14 delivery trucks would arrive at and depart from the project site at staggered times throughout the day. Project construction would require a maximum of 150 workers on-site at any given time. To provide a worst-case scenario, all construction workers were assumed to arrive during the AM peak hour and depart during the PM peak hour, and all workers were assumed to drive separate vehicles to and from the project site. **Table 1** displays the assumed project vehicle trip generation during project construction.

Table 1
Seville Solar Complex - Construction Trip Generation

Task	Total Daily Trips	PVE	Total Daily Trips	AM Peak		PM Peak	
				In	Out	In	Out
Workers	300	1	300	150	0	0	150
Vendor Trucks	14	3	42	0	0	0	0
Haul Trucks	14	3	42	0	0	0	0
Total			**384**	**150**	**0**	**0**	**150**

Source: EMA, October 2013

As shown, during project construction the solar farm is anticipated to generate 384 daily vehicle trips per day with 150 trips arriving to the plant during the AM peak hour and 150 trips departing from the plant during the PM peak hour.

Anza Substation

During the construction of the modifications to the Anza Substation, approximately three (3) haul trucks would arrive at and depart from the project site at staggered times throughout the day. Project construction would require a maximum of eight (8) workers on-site at any given time. To provide a worst-case scenario, all construction workers were assumed to arrive during the AM peak hour and depart during the PM peak hour, and all workers were assumed to drive separate vehicles to and from the project site. **Table 2** displays the assumed vehicle trip generation during the construction of the modifications.

Table 2
Anza Substation - Construction Trip Generation

Task	Total Daily Trips	PVE	Total Daily Trips	AM Peak		PM Peak	
				In	Out	In	Out
Workers	16	1	16	8	0	0	8
Haul Trucks	6	3	18	0	0	0	0
Total			**34**	**8**	**0**	**0**	**8**

Source: EMA, February 2014

As shown, the construction of the modifications to the Anza Substation is anticipated to generate 34 daily vehicle trips per day with 8 trips arriving to the plant during the AM peak hour and 8 trips departing from the plant during the PM peak hour. It should be noted that the improvements to the Anza Substation are not anticipated to generate any additional operational traffic after construction is completed.

CONSTRUCTION-RELATED OPERATIONS

This section assesses the projected roadway operations and impacts associated with the construction of the proposed solar farm and modifications to the substation.

Table 3 displays the projected traffic operations along SR-78 between Split Mountain Road and SR-86 during the construction of both the solar farm and the modifications to the substation.

Table 3
SR-78 Roadway Segment Level of Service

Scenario	AADT	K	Peak Hour Volume	D	Lanes	PHF	HVF	Volume (pc/h/ln)	V/C	LOS
Seville Solar Farm Complex Construction	1,342*	24.0%	322	0.6	1	0.92	33.7%	317	0.19	A

Source: Chen Ryan Associates, February 2014

Note
*More detailed construction traffic information is provided in the *Seville Solar Farm Complex - Transportation Letter, Chen Ryan Associates, October 22, 2013. AADT Volume (1,342) = Construction AADT volume form Transportation Letter (1,308) plus additional daily construction traffic from Anza Substation (34).*

As shown, SR-78 is projected to continue to operate LOS A during the construction period of both the proposed solar farm and the modifications to the substation.

Due to the relatively high number of vehicles that are projected to arrive at and depart from the Seville Soar Farm Complex, a peak hour HCM 2000 analysis was conducted for the SR-78/Project Driveway intersection in the October 22, 2013 Transportation Letter. However, it is assumed that all of the construction traffic associated with the Anza Substation modifications would be coming directly to/from the IID which is located to the east of both projects. Therefore, the traffic associated with the construction of the modifications would not reach/impact the operations of the solar farm driveway and the analysis in the Transportation Letter would still be valid.

Conclusion

Based on the analyses presented above, the additional traffic associated with the construction of the modifications to the Anza Substation would not create any additional transportation related impacts on SR-78 during the construction period of the proposed Seville Solar Farm Complex. Therefore, the transportation related findings included in the project's Draft EIR are still valid.

Please feel free to contact me if you have any questions or concerns regarding this letter.

Sincerely

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