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VICTORVILLE 2 HYBRID POWER PROJECT

SUPPLEMENTARY TRAFFIC AND TRANSPORTATION EVALUATION TO ADDRESS SITE VEHICULAR ACCESS ROUTE REVISION

The following pages assess the potential traffic and transportation related impacts associated with modifying the proposed VV2 Project site access route from the route presented in the AFC. The AFC presented the proposed site access route as extending north from Air Expressway through SCLA via Phantom Street and a planned extension of Perimeter Road. The Perimeter Road extension would be permitted and constructed by the City of Victorville as part of overall improvements associated with development activities at SCLA. However, as noted in the response to CEC Data Request 85 submitted on July 23, 2007, the City's plans to extend Perimeter Road may be delayed and thus, the VV2 Project now plans to use existing roads as the primary site access. As described in the response to Data Request 85, Project site access now will be via Adelanto Road (traveling north from Air Expressway to Colusa Road), and then east on Colusa Road to Helendale Road and then north on Helendale Road a short distance to the site entrance (See Figure DR85-1). The following pages provide the additional traffic analysis that was identified as in preparation at the time of the July 23 submittal. The analysis is provided (i.e., uses Table numbers) as a supplement to the response provided on July 23 to Data Request 85.

The discussion below addresses the various items covered in the AFC Traffic and Transportation section with respect to the modified access route – LORS, agency contacts, required permits, environmental setting, Project impacts during construction and operation, cumulative impacts, mitigation measures, and references. This discussion provides additional or modified information that addresses the Project's modified access route. Information provided in the AFC that is not affected by the proposed access route change is not repeated below.

LORS COMPLIANCE

The proposed Project will continue to meet or exceed all applicable LORS pertaining to traffic and transportation. There are no additional or modified Federal, State, or City of Victorville LORS that apply to the Project as a result of the proposed access route modification. However, as a portion of the proposed revised access route is within the City of Adelanto, City of Adelanto LORS, specifically the City's General Plan Circulation Element, are now applicable.

City of Adelanto, Circulation Element of the General Plan

Rights-of-Way H-1. Establish all major rights of way according to the requirements of the buildout projections of the General Plan. Of particular relevance to the VV2 Project, the 1994 General Plan indicated a plan for the long-term improvement of Air Expressway within the City of Adelanto to four-lane arterial status. City of Adelanto Engineering Department personnel indicate that the City still plans to upgrade Air Expressway, but could not provide a specific indication of when this would occur (personal communication, Coapstick, 2007).

AGENCIES AND AGENCY CONTACTS

Table DR85-1 identifies additional agency contacts for Project traffic and transportation issues.

Table DR85-1 Agency Contacts

Issue	Contact	ntact Title		
Excavation Permit for work in the public ROW in the City of Adelanto	Kelly Zimmermann City of Adelanto Engineering Dept. 11600 Air Expressway Adelanto, Ca 92301	Administrative Assistant	(760) 246-2350	
Transportation Permit for Oversize Loads on City of Adelanto Streets	Kelly Zimmermann City of Adelanto Engineering Dept. 11600 Air Expressway Adelanto, Ca 92301	Administrative Assistant	(760) 246-2350	

REQUIRED PERMITS AND PERMITTING SCHEDULE

Table DR85-2 identifies the required traffic and transportation permits and permit schedule for Project activities using roadways in the City of Adelanto.

Table DR85-2 Permits Required and Permit Schedule

Permit/Approval Required	Due Date
City of Adelanto Encroachment Permit (for construction work in City Rights of Way)	Submit plans showing work 90 days prior to construction work in public ROW
City of Adelanto Transportation Permit (for transporting oversize loads on city streets)	Apply at least 2 working days prior to oversize load on City roadways

ENVIRONMENTAL SETTING

This section describes baseline traffic and transportation conditions in the Project area. The AFC description of the Regional Traffic and Transportation setting is unaffected by the proposed Project site access route modification and no further discussion of regional baseline conditions is provided.

LOCAL SETTING

Project vehicular traffic (commuter vehicles, as well as deliveries of materials and equipment and offsite shipments such as wastes) during both construction and operation will use the proposed revised access route: Air Expressway (primarily from the east) to Adelanto Road north to Colusa

Road and east on Colusa to Helendale. The Project site extends northeast from the Colusa-Helendale intersection and the site entrance will be from Helendale, a short distance north of Colusa.

As shown in Figure DR85-1, the revised access route currently includes roadway segments that are unimproved and have dirt surfaces. Colusa Road is unpaved along the entire distance (approximately 1.5 miles) from the Adelanto Road intersection east to Helendale Road (it also is unpaved all the way west to U.S. 395). Adelanto Road is unpaved from north of Crippen Avenue to Colusa Road. Adelanto Road is improved with two paved lanes in each direction north of Air Expressway to Bartlett Avenue where it narrows to a single paved lane in each direction to Crippen Avenue. Access to the Project site using this route will require upgrading Colusa Road from Adelanto Road east to Helendale Road and Adelanto Road north of Crippen Avenue to Colusa Road. A short stretch of Helendale Road, which is also unimproved, will also be paved from the Colusa Road intersection northerly to the site entrance, a distance of a few hundred yards. For each of these roadway segments, it is expected that the upgrade will involve paving two 14-foot lanes with graded shoulders.

Current Roadway Operating Characteristics

Existing and Baseline Year 2009 (the year of peak Project construction) peak hour traffic volumes on roadways that would be affected by the modification in the site access route (portions of Air Expressway, Adelanto, Colusa, and Helendale Roads) are summarized in Table DR85-3, together with approximate capacities and Levels of Service (LOS). Except for the segments of U.S. 395 north and south of Air Expressway that were evaluated using the latest methodology for two-lane highways, the LOS values presented in Table DR85-3 are based on existing ratios of traffic volumes to roadway segment capacity, the standard method for urban streets.

Table DR85-4 presents P.M. peak hour LOS for the intersections of Air Expressway/U.S. 395 and Air Expressway/Adelanto Road calculated using the latest methodologies (Highway Capacity Manual, Transportation Research Board, 2000) for signalized and all-way-stop control intersections; this table also presents LOS for segments of U.S. 395 immediately north and south of Air Expressway, as requested by CEC Staff (Mr. Jim Adams). The LOS values for the two intersections and for the segments of U.S. 395 are based on traffic counts that recently became available from the City of Victorville from a traffic study for a different development project in Victorville (Mountain Pacific, 2007). As was the case in the AFC, the Baseline Year 2009 traffic volumes in the table reflect the ongoing SCLA master planning to include expected future development at SCLA, particularly the early operational phase of the major rail project (the "Intermodal" project) planned at SCLA.

Table DR85-3 shows that the roadway segments of concern for this modified traffic impact analysis currently operate at an acceptable LOS (LOS A-D) during typical weekday periods from a capacity perspective. The table also shows that, with the exception of the segments of U.S. 395, these roadways are forecast to operate at acceptable LOS under Year 2009 Baseline conditions, which assume continuing planned development of SCLA as a major regional cargo distribution hub, e.g., the Intermodal project. The 2004 EIR for the SCLA Specific Plan Amendment/Rail Service Project includes a number of roadway improvements designed to provide LOS that meets the requirements of the San Bernardino County Association of Government's Congestion Management Program, such as the future improvement of Air Expressway to a four to six lane facility with the timing and specific

location of the improvements dictated by need (City of Victorville, 2004). The EIR also identifies the need for signalization of the intersections of Air Expressway/U.S. 395 and Air Expressway/Adelanto Road. The intersection of Air Expressway and Adelanto Road has since been signalized.

As noted above, the City of Adelanto's General Plan includes improving Air Expressway to four lanes, which includes the area from U.S. 395 east through Adelanto Road to the Adelanto/Victorville boundary. Caltrans plans signalization of the intersection of U.S. 395 and Air Expressway at the end of 2007, but geometric improvements (i.e., widening the intersection to four lanes) which typically occurs as part of a Caltrans signalization project for a two lane roadway, is not currently included in the 2007 U.S. 395 signalization project. Caltrans plans widening to four lanes of U.S. 395 between I-15 and Adelanto in 2011 (personal communication, Kopulsky, 2007). Caltrans personnel indicate that they currently expect the signalization project to be advertised for construction by early October 2007 and hope that construction gets underway in December 2007 (Kopulsky, 2007).

Table DR85-4 shows that the intersections of Air Expressway with U.S. 395 and Adelanto Road currently operate at an LOS D and B respectively during the evening peak hour with existing all-way stop controls at U.S. 395 and traffic signals at Adelanto Road. The segments of U.S. 395 immediately north and south of Air Expressway currently operate at LOS D. By Year 2009, increases in background traffic levels are forecast to cause PM peak hour operations to deteriorate to LOS E/F on segments of U.S. 395. The intersection of Air Expressway with U.S. 395 is expected to operate at LOS D in 2009 assuming that the geometric improvements occur (widening the intersection to four lanes) in addition to the signalization that is expected at the end of 2007.

U.S. 395 in the Victorville area currently is a mixture of two lanes and four lanes. The four-lane sections currently operate at acceptable LOS although the two-lane sections are currently near capacity (LOS D/E). As noted above, the remaining two-lane sections between I-15 and the north end of Adelanto are programmed by Caltrans to be widened to four lanes in 2011 and will operate well when this widening to four lanes occurs. However, this widening will occur after VV2 Project construction has been completed.

State Route 18 (SR-18) or Palmdale Road extends easterly from the City of Palmdale across U.S. 395 and then continues easterly through the southern portion of the City of Victorville where it intersects I-15 with a grade separated interchange. It continues easterly from I-15 through Apple Valley and Lucerne where it turns southerly to the Big Bear area. In general, SR-18 currently operates at acceptable LOS in the area east of U.S. 395, having been widened to four lanes (Mountain Pacific, Inc. 2007). However as Palmdale Road approaches I-15, peak hour traffic conditions become increasingly congested. Major intersections are typically controlled with traffic signals and can become congested (LOS D/E) during peak periods (Mountain Pacific, Inc., 2007).

Table DR85-3 Baseline Peak Hour Roadway Traffic Volumes, Design Capacities, and Levels of Service (Without VV2 Project)

Roadway/ Segment	Existing Conditions				Year 2009 Conditions with Planned SCLA Development ³			
	Travel Lanes	Volume ¹	Capacity ¹	LOS	Travel Lanes	Volume ¹	Capacity ¹	LOS
U.S. 395 / Bartlett to Crippen	2	1,552	2,000	D	2	1,7184	NA ⁵	E/F
U.S. 395 / South of Air Expressway	2	1,600	2,000	D	2	1,7714	NA ⁵	E/F
Air Expressway / U.S. 395 to Adelanto Road	2	470	2,000	A	42	2,678	6,800	A
Air Expressway / Adelanto Road to Phantom	4	720	6,800	A	4	3,637	6,800	A
Air Expressway / Phantom to Village Drive	4	900	6,800	A	4	4,280	6,800	В
Air Expressway / Village Drive to National Trails Highway	2	700	2,000	A	42	4,080	6,800	A
Adelanto Road / Air Expressway to Bartlett Avenue	4	230	6,800	A	4	1,220	6,800	A
Adelanto Road / Bartlett Avenue to Crippen Avenue	2	45	2,000	A	2	686	2,000	A
Colusa Road / Adelanto Road to Helendale Road	2 ²	negligible	2,000²	A	22	180	2,000 ²	A
Helendale Road north of Colusa	22	negligible	2,000²	A	22	180	2,0002	A

Sources: City of Adelanto, 2003, 2004, 2005; City of Victorville, 2006; 2007; Mountain-Pacific 2007, and 2004 EIR for SCLA Specific Plan Amendment and Rail Service Project

¹ Two-way volume in vehicles per hour

² Assumes planned SCLA development- related improvements of Air Expressway to 4-lane Arterial status and City of Victorville upgrade of Adelanto Road from Crippen to Colusa; Colusa from Adelanto to Helendale; and Helendale north to the VV Project site access point with minimum (2) 14-foot paved lanes and graded shoulders.

³ Assumes pro-rata increase of Year 2025 traffic forecasts from 2004 EIR for SCLA Specific Plan Amendment and Rail Service Project to represent Year 2009 background conditions.

Forecast assumes continued growth in volumes at rate shown in Caltrans traffic volumes for Year 2003 to 2006.

LOS calculated using Highway Capacity Manual methodology for 2-lane highways which is not based on single-value for capacity on an individual roadway section.

Table DR85-4 Intersection and Roadway Segment PM Peak Hour Levels of Service						
Location	Condition					
	Existing	Year 2009 Baseline	Year 2009 Plus Project			
Roadway Segment: U.S. 395 (North of Air Expressway)	D	E/F	E/F			
Roadway Segment: U.S. 395 (South of Air Expressway)	D	E/F	E/F			
Intersection: Air Expressway/U.S. 395	D	Dı	D¹			
Intersection: Air Expressway/Adelanto Road	В	С	D			

¹ LOS D assumes that signalization and geometric improvement of this intersection occurs by the time of peak Project construction in 2009. While signalization is considered likely as construction of this signal is expected to begin by the end of 2007, the geometric improvement is not currently part of the signalization project and such geometric improvement is needed by 2009 to ensure LOS D. Without the geometric improvement, the intersection will operate at LOS E/F, as will the segments of U.S. 395 immediately to the north and south.

Current Rail and Bus Transportation

As discussed in the AFC, a siding for offloading materials or equipment is located at "D" Street in Victorville, and a major intermodal/multimodal rail project is planned at SCLA to the south of the VV2 Project site which may be in operation by the time VV2 Project construction reaches the stage of major equipment deliveries. However, using the planned SCLA rail spur for the VV2 Project would require that the extension of Perimeter Road also be in place in order to transport heavy equipment/materials to the VV2 Project site. As the Perimeter Road extension may be delayed, the planned SCLA rail spur may not be usable by the VV2 Project. If the rail spur is not available for use, oversize loads would be expected to be directed along Air Expressway to Adelanto Road to Colusa and on to the Project site.

Current Bicycle and Pedestrian Circulation and Airport Operations

The proposed modification in the roadway access route would have no effects on current bicycle and pedestrian circulation or on airport operations as they were described in the AFC; no further discussion is provided.

ENVIRONMENTAL CONSEQUENCES

The evaluation methodology and significance criteria for this evaluation of the proposed modification to the VV2 Project access route are unchanged from the AFC and are not discussed further.

Construction Phase Impacts

The VV2 Project construction schedule, construction work force, estimated number of automobile and truck trips, and construction worker origins are unchanged from those discussed in the AFC. The only difference is the revised access route during Project construction which involves Air Expressway to Adelanto Road, Adelanto Road north to Colusa Road, Colusa Road east to Helendale Road. This revised analysis of construction phase impacts also uses updated traffic volume data that recently became available from analyses performed for another development project in Victorville, as discussed above. This newly available data also covers segments of U.S. 395 north and south of Air Expressway and, at the request of CEC Staff, these segments are included in the analysis.

Table DR85-5 summarizes expected traffic peak hour volumes and LOS on roadways associated with the modified access route with and without the VV2 Project. Predicted LOS values with and without the Project were also presented in Table DR85-4. As shown in Table D85-5, Project construction related increases in traffic will not significantly affect access route roadways; even at peak VV2 Project construction (767 workers commuting to/from the site), all roadways are forecast to continue operating at baseline Year 2009 LOS conditions. Project-related traffic increases generally will be limited to lightly traveled roadways (Adelanto, Colusa, and Helendale Roads); and no significant impacts are expected on these roadways. It should be noted, however, that the VV2 Project is expected to add an estimated 65 vehicles in the PM peak hour to U.S. 395 south of Air Expressway, and this segment as well as the intersection of U.S. 395 and Air Expressway are expected to be operating at near capacity (LOS E/F). However, the Project increment would represent only a small share of the total peak hour volume of over 1,800 vehicles, the LOS E/F condition would exist with or without the VV2 Project, and the Project's effects would be short term and temporary (a few months before and after the peak month of VV2 Project construction).

A review of the potential for Project related impacts to SR-18 (Palmdale Boulevard) between U.S. 395 and I-15 as requested by CEC Staff (Mr. Jim Adams) showed impacts to be less than significant. This segment is expected to experience very little, if any Project related traffic during the peak period. Project related traffic approaching from the south on I-15 is expected to follow I-15 to Hook Road or Mojave Drive, travel west to Amargosa Road and follow Amagosa to Village Drive to Air Expressway where they would travel west to Adelanto Road and the Project site. Project traffic also would utilize the D Street offramp of I-15 and follow a short segment of National Trails Highway to Air Expressway and head west to Adelanto Road. Project traffic is not expected to follow U.S. 395 north to SR-18 and then SR-18 east to Amargosa because of the number of signaled intersections which would be encountered versus the I-15 freeway. Likewise, because of peak hour congestion on SR-18 in the immediate vicinity of I-15, it is considered unlikely for Project traffic to exit I-15 at SR-18 and proceed westward to Amargosa or further west toward U.S. 395 before heading north to the Project site.

Table D85-5 Peak Hour Roadway Traffic Volumes, Design Capacities and Levels of Service (With VV2 Project Traffic)

	Year 2009 Conditions without Project				Year 2009 Conditions with Project				
	Construction Traffic ¹				Construction Traffic ¹				
Roadway/	Travel	Volume	Capacity ²	LOS	Travel	Volume	Capacity ²	LOS	
Segment	Lanes				Lanes				
U.S. 395 / Bartlett to Crippen	2	1,718	NA⁴	D	2	1,758	NA⁴	E/F	
U.S. 395 / South of Air Expressway	2	1,771	NA⁴	D	2	1,836	NA⁴	E/F	
Air Expressway / U.S. 395 to Adelanto Road	2	2,678	2,000	A	43	3,273	6,800	A	
Air Expressway / Adelanto Road to Phantom Street.	4	3,637	6,800	A	4	4,149	6,800	В	
Air Expressway / Phantom to Village Drive	4	4,280	6,800	A	4	4,792	6,800	B/C	
Air Expressway/ Village Drive to National Trails Highway	2	4,080	2,000	A	4	4,157	6,800	A	
Adelanto Road / Air Expressway to Bartlett Avenue	4	1,220	6,800	A	43	1,827	6,800	A	
Adelanto Road / Bartlett Avenue to Crippen Avenue	23	686	2,000³	A	23	1,333	2,000	A	
Colusa Road / Adelanto Road to Helendale Road	23	180	. 2,000 ³	A	2	947	2,000³	A	
Helendale Road North/Colusa Road	23	180	2.000 ³	A	2	947	2,000³	A	

¹ Assumes predicted volumes associated with planned SCLA development; also assumes VV2 Project Month 12 peak construction traffic levels of 767 workers

² Two-way volume in vehicles per hour

³ Assumes planned improvement of Air Expressway to 4-lane Arterial status and upgrade of Adelanto Road from Crippen to Colusa; Colusa from Adelanto to Helendale; and Helendale north to the Project site with a minimum of (2) 14-foot paved lanes and graded shoulders.

⁴ LOS calculated using Highway Capacity Manual methodology for 2-lane highways which is not based on single-value for capacity on an individual roadway section.

As discussed in the AFC, Project construction will involve transport to the site of several pieces of equipment that exceed roadway load or size limits and will require special permits for on-road transport. Oversized equipment includes combustion turbines, generators, heat recovery steam generator modules, and main transformers.

As it is uncertain if the Intermodal project rail siding/Perimeter Road extension will be in place in time for VV2 Project construction phase use, it is assumed that the existing rail siding on D Street in Victorville would be used. In this case, the oversized Project equipment would be transported via multi-axle trucks along National Trails Highway to Air Expressway to Adelanto Road to Colusa Road to Helendale Road and the Project site. The maximum allowable load without a special permit is 80,000 pounds. Transport of oversized Project equipment from the D Street siding likely would require use of a truck and trailer with multiple axles, advance and trailing warning vehicles, and possibly police control in Victorville and Adelanto. The moving contractor will be required to file for and obtain a permit from Caltrans, the City of Victorville, and the City of Adelanto following the determination of the size of the truck and configuration of the axles.

With the revised Project site access route discussed above, transportation impacts associated with construction of the proposed VV2 Project would not be significant for the following reasons:

- The proposed revised site access route using Adelanto Road, Colusa Avenue and Helendale Road have minimal traffic volumes and are forecast to continue operating at acceptable LOS even during the peak period of VV2 construction activity when the workforce exceeds 760 construction workers.
- The requirements to obtain special permits to move oversize or overweight materials and
 equipment to and from the site would ensure use of proper vehicles, scheduling, routes, and
 escorts to minimize impacts.
- No bike lanes are currently present in the Project area that could be impacted by construction traffic; no significant impacts are expected to bus or rail transportation systems, nor to aircraft operations at SCLA.
- During peak construction periods however, the Project has the potential to increase traffic volumes somewhat on U.S. 395, thereby also potentially affecting the intersection of Air Expressway/U.S. 395. However, if widening the intersection to four lanes before peak VV2 Project construction, the intersection is forecast to operate at LOS E/F with or without the VV2 Project. Project impacts on U.S. 395 still would be considered less than significant in that the Project's incremental volumes are small, short-term and temporary, and as noted above, this situation would exist with or without VV2 Project construction. However, the Project would be adding additional vehicles to a roadway expected to be operating at close to capacity.

Operations Phase Impacts

VV2 Project operations will generate very small amounts of vehicular traffic because of the small operational work force (36 workers) and the small number of truck trips (estimated at 2-3 per day). Given the minimal Project traffic volumes, no changes in LOS and no significant traffic impacts are expected on roadways in the Project vicinity as a result of the proposed change in the Project vehicular access route.

Potential Impacts on Aircraft Operations

As indicated in the AFC, the Project's potential for impacts on SCLA flight operations would stem from operations of the Project's combustion turbines, HRSG, and cooling towers and glare from the solar mirror, none of which are affected by the revised vehicular access route. Thus, the revised Project access route will have no impacts to aircraft operations.

Cumulative Impacts

Because of its very low trip generation during operations, the VV2 Project is not expected to have cumulatively considerable effects on vehicular traffic conditions. This conclusion is not affected by the change in vehicular access routes

MITIGATION MEASURES

The revised Project access route would require that the mitigation measures presented in the AFC be expanded so that the construction phase Traffic Management Plan covers the road improvements and construction traffic use on the affected roadway segments within the City of Adelanto (Adelanto Road north of Air Expressway and Colusa Road eastward from its intersection with Colusa Road), in addition to the mitigation measures that may be required for roadways within the City of Victorville.

In addition, during peak construction periods, even though the Project's contribution to overall traffic volumes on U.S. 395 are negligible and short-term, Project traffic will be directed away from U.S. 395 to minimize impacts to a roadway forecast to be operating close to capacity by 2009. This will be provided by Project management as a directive to construction employees through their employers (construction contractors and subcontractors).

If background 2009 traffic volumes on Air Expressway traffic increase as forecast in the 2004 EIR for SCLA Specific Plan Amendment and Rail Service Project, the southbound approach on Adelanto Road may need to be re-striped to include two left turn lanes. Congestion levels should be monitored and the re-striping performed if needed.

ADDITONAL REFERENCES

Coapstick, Nathan, 2007. City of Adelanto Engineering Department. Personal communication with John Wilson, Wilson Engineering. February.

Kopulsky, Daniel, 2007. Chief IGR and Community Planning, Caltrans District 8. Personal communication with John Wilson, Wilson Engineering. September.

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Mountain Pacific, Inc., 2007. Interim Draft Traffic Study Report, West Project, City of Victorville.

Zimmermann, Kelly, 2007. City of Adelanto Engineering Department. Personal communication with John Wilson, Wilson engineering,. August.



