Section 3.12
Transportation and Circulation

This section examines the potential effects of the proposed Phase II project on local transportation. The analysis focuses on effects during construction, the period when local roadways would be most affected by the project. Potential effects on local roadways during future project operations also are described. The following discussion tiers off of the original PEA (Jones & Stokes 2005) and Final IS/MND (CPUC 2006) that were prepared for the Kirby Hills I project.

Environmental Setting

Existing Traffic Conditions

Regional circulation in the project area and vicinity consists of Interstates 80 and 680. State Highways 4, 12, 113, and 160 connect to the project area. The Solano County Board of Supervisors has designated portion of Interstates 80 and 680 and State Highways 12 and 113 as scenic roadways (Solano County 1977).

The local circulation system consists of Shiloh Road, Collinsville Road, Birds Landing Road, Montezuma Hills Road, Little Honker Bay Road, Olsen Road, and Talbert Lane.

Access to the project site by construction workforce and delivery vehicles from San Francisco and Sacramento would be via I-80. Vehicles from Contra Costa County would travel via I-680 to I-80 or via Highway 4 to Highway 160. Highway 113 would provide access from Dixon and I-80. Primary access to the project area from the freeway network would be from Highway 12. Existing public roadways would provide local access to the project area. Project vehicles would travel from Highway 12 to Shiloh Road and Little Honker Bay Road, which would provide access to Collinsville Road, Birds Landing Road, and Olsen Road. From Birds Landing Road, vehicles would travel to Montezuma Hills Road. From Collinsville Road, vehicles would also have access to Talbert Lane.

Direct access to the Phase II project area would be from existing roadways.

See Table 3.12-1 for average daily traffic (ADT) and other information for the roadways that may be affected by the proposed project.

Table 3.12-1. Description of Project Area Roads

Roadway	Segment	Jurisdiction	Lanes	Average Daily Traffic*	Count Year
Interstate 80	North of eastbound State Route (SR) 12	Caltrans	10	188,000	2004
Interstate 80	South of eastbound SR 12	Caltrans	10	215,000	2004
SR 12	West of SR 113	Caltrans	2	13,500	2004
SR 12	East of SR 113	Caltrans	2	16,700	2004
SR 113	North of SR 12	Caltrans	2	4,350	2004
Little Honker Bay Road	Shiloh Road and Olsen Road	Solano County	2	97	1982
Shiloh Road	SR 12 and Olsen Road	Solano County	2	255	2004
Olsen Road	Birds Landing Road and SR 12	Solano County	2	42	1984
Birds Landing Road	Olsen Road and SR 12	Solano County	2	313	1997
Collinsville Road	Olsen Road and Talbert Lane	Solano County	2	393	2004
Montezuma Hills Road	East of Collinsville Road	Solano County	2	135	1994

Sources: Solano County 2005b and Caltrans 2005b.
*Traffic levels for roads under Caltrans jurisdiction are expressed in Annual Average Daily Traffic (ADT).

Regulatory Setting

California Department of Transportation

Caltrans has jurisdiction over State highways and sets maximum load limits for trucks and safety requirements for oversized vehicles that operate on highways. Caltrans requires that a traffic analysis be conducted if a project generates:

- Greater than 100 peak-hour trips per day to Highway 12,
- Between 50 and 100 peak-hour trips to Highway 12 and level of service (LOS) C or D conditions (LOS is a qualitative evaluation of traffic flow conditions, ranging from ideal [LOS A] to breakdown [LOS F] (see Table 3.12-2),
- One to 49 peak-hour trips to Highway 12 and LOS E or F conditions.

Local roadways in the project area have extremely low volumes and generally operate at LOS A.

Solano County

Local traffic is subject to the policies and regulations of the Solano County Public Works Agency. Solano County transportation policies and standards for roadways are discussed in the Land Use and Circulation Element of the General Plan. The Solano County Road Improvement Standards and Land Development and Subdivision Requirements have set specific guidelines for the construction of public road improvements and private roads, including design standards addressing slopes, widths, connection to county roads, and other features (Solano County Transportation Department 2001).

As part of their oil and gas well drilling permit and encroachment permit process, Solano County requires posting of a security bond to ensure that damage does not occur to County-maintained roads.

Table 3.12-2. Level of Service Descriptions

			Intersections	
Level of Service	Conditions	Description	Signalized Delay (seconds/vehicle)	Unsignalized[a] Delay (seconds/vehicle)
A	Free flow	Users experience very low delay; progression is favorable and most vehicles do not stop at all	≤10.0	≤10.0
B	Stable operation	Vehicles travel with good progression; some vehicles stop, causing slight delay	10.1 to 20.0	10.1 to 15.0
C	Stable operation	Higher delays result from fair progression; a significant number of vehicles stop, although many continue to pass through the intersection without stopping	20.1 to 35.0	15.1 to 25.0
D	Approaching unstable	Congestion is noticeable; progression is unfavorable, with more vehicles stopping rather than passing through the intersection	35.1 to 55.0	25.1 to 35.0
E	Unstable operation	Traffic volumes are at capacity; users experience poor progression and long delays	55.1 to 80.0	35.1 to 50.0
F	Forced flow	Intersection's capacity is oversaturated, causing poor progression and unusually long delays	>80.0	>50.0

[a] Unsignalized intersections include two-way stop sign–controlled and all-way stop-controlled.

Source: Transportation Research Board 2000.

Impact Analysis

The transportation and circulation analysis was based on project siting and design information provided by LGS. The proposed Phase II project includes an APM to avoid causing traffic impacts, including adopting and implementing a plan to minimize peak-hour traffic and traffic congestion during the construction phase. The APM is described under *Transportation and Circulation* in Chapter 2, *Project Description.*

Significance Criteria

Criteria for determining the significance of transportation and circulation impacts were developed based on questions contained in the environmental checklist form in Appendix G of the State CEQA Guidelines and professional judgment. Based on the checklist questions, a project may have a significant effect on the environment if it would result in:

- An increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system;
- The exceedance, either individually or cumulatively, of a level-of-service standard established by Solano County for any designated roads or highways; or
- Inadequate emergency access.

Impacts

IMPACT 3.12-1: TEMPORARY INCREASE IN TRAFFIC IN THE PROJECT AREA DURING CONSTRUCTION

During the peak periods of construction, approximately 85 people would be working on the project in the area. This number includes workers associated with all aspects of project construction (e.g., pipeline construction and construction of related facilities). In addition, construction of the proposed project would entail the delivery of materials to the various project sites. LGS estimates that as many as 27 daily truck trips during the peak of construction would be required for material delivery and removal at the various project sites. Combining construction employee traffic volumes with delivery and haul truck trips, it is estimated that project construction would require a maximum of approximately 120 vehicle trips per day during the peak period of construction, which would last up to 6 months. It is estimated that approximately 95 trips would occur during the morning and afternoon peak traffic periods.

Local roadways in the project area have relatively low traffic volumes. Project-related traffic would not increase traffic on the local roads to a level that is

substantial in relation to the existing traffic load and capacity of the street system. Therefore, congestion caused by construction vehicles accessing the work areas from local roads would be minimal and limited to the short-term duration of construction.

However, the roadways in the area that provide regional access (e.g., SR 12) are often congested with traffic during the peak commute hours. Therefore, project related trips that would occur during the peak commute hours along SR 12 could result in additional traffic congestion on SR 12. This would result in a potentially significant impact. However, LGS would be required to obtain transportation permits from the County and Caltrans for hauling oversized loads. The transportation permits would include certain project stipulations, such as the designation of haul routes and requirements to repair any damage caused to roadways. In order to specifically address potential impacts associated with peak hour traffic congestion, Mitigation Measure TRA-1 (identified in the Final IS/MND [CPUC 2006]) would require construction traffic in the project area to be scheduled during off-peak hours. Implementation of the required transportation permit stipulations as well as Mitigation Measure TRA-1 would ensure that impacts related to peak hour traffic congestion would be reduced to less-than-significant levels

LGS will also implement measures from their Kirby Hills I Construction Traffic Plan pursuant to APM T-1 as described in Chapter 2 to further reduce potential construction impacts.

IMPACT 3.12-2: TEMPORARY DISRUPTION OF CIRCULATION FROM FACILITY CONSTRUCTION

Construction traffic on local roadways during construction of proposed Phase II facilities may inconvenience residents and adjacent agricultural operations. However, LGS has committed to implementing construction traffic control measures, as described in Chapter 2, *Project Description*, to ensure that construction traffic and construction activities will not disrupt routine agricultural operations and will minimize inconvenience to residents. This impact therefore is considered less than significant, and no mitigation is required.

IMPACT 3.12-3: MINIMAL INCREASE IN TRAFFIC DURING FACILITY OPERATION

As described in the Kirby Hills I PEA (Jones & Stokes 2005), the operational phase of the proposed facility will require a staff of approximately two to four local employees that would operate and maintain the facilities and pipeline. These employees are currently onsite during the day shift—5 days per week. During normal operations, the well pads are visited twice daily. Traffic volumes are not expected to increase with the operation and maintenance of the Phase II facilities. Therefore, this impact is considered less than significant, and no mitigation is necessary.

IMPACT 3.12-4: POTENTIAL FOR INTERFERENCE WITH EMERGENCY RESPONSE ROUTES

The construction-related increase in truck and vehicle traffic along project access routes could temporarily increase response times for emergency response providers along affected roadways. However, with the construction traffic safety measures that have been incorporated into the project design (described under the APMs in Chapter 2, *Project Description*), the potential for such disruptions to emergency response routes would be minimal. Therefore, this impact is considered less than significant, and no mitigation is required.

Applicant-Proposed Measures and Mitigation Measures

LGS will implement APM T-1 (described in Chapter 2, *Project Description*) as part of the proposed Phase II project to avoid and minimize potentially significant impacts on transportation-related issues. In addition to implementing measures from the construction traffic plan, LGS will implement the following mitigation measure that was identified in the Final IS/MND for the Kirby Hills I project:

Mitigation Measure TRA-1: LGS and/or the construction contractor shall schedule construction traffic, including construction worker and material delivery trips, to avoid peak traffic commute hours along SR 12. Carpooling of the construction workforce will also be encouraged.