4.14 TRANSPORTATION

This section describes potential traffic and circulation impacts, including roadway congestion, traffic hazards, and alternative transportation conflicts. The setting includes a description of the existing roadway network near the Project site, as well as applicable regulations and General Plan policies. This is followed by a summary of the evaluation criteria and the methodology used for assessing impacts.

SETTING AND REGULATORY FRAMEWORK

Street Classifications

City of Vallejo and City of Benicia

The City of Vallejo General Plan (City of Vallejo 1999) and City of Benicia General Plan (City of Benicia 1999) classify streets as follows:

Freeways – Freeways are designed to provide rapid movement for large volumes of through traffic. Access is controlled, and there are no at-grade intersections, traffic signals, stop signs, pedestrians or bicycles.

Arterial Streets – Arterial streets are primary movers of traffic within the City and as such, carry traffic to and from the freeways and provide the primary routes through the City. Arterial streets frequently provide the major visual orientation to a city, therefore everything possible should be done to enhance their attractiveness by undergrounding utilities, providing curbs, gutters and sidewalks, landscaping, and making a general effort to beautify these facilities. No driveways for low-density residential uses are permitted off arterials. Other driveways should be kept to a minimum by combining driveways for different uses within a zone. Traffic intensive uses on corners should preferably have driveways off the cross streets.

Major Arterials – Roadways which connect freeways to minor arterials, other major arterials and collector streets.

Minor Arterials – Roadways which connect major arterials to collectors and local streets.

Collector Streets – Collector streets distribute traffic between local streets and major arterials, or connect residential neighborhoods with arterial streets. They provide a means of through traffic movement within a limited area as well as give direct access to abutting land uses.

Local Streets – Local streets provide direct access to abutting properties.

Solano County

Solano County classifies streets as follows.

Urban Interstate Freeway – Limited access interregional roadway. These facilities do not provide direct access to land and, in general, access is restricted and provided only at interchanges with arterials.

Urban Freeway or Expressway – Limited access regional roadway. An urban freeway or expressway serves through trips for both regional and local purposes, but provides limited access to land uses via local streets.

Urban Minor Arterial – A roadway that emphasizes mobility within urbanized communities and connections to freeways. Arterials are designed to carry high volumes of local traffic and allow direct service to land uses.

Rural Major Arterial – A roadway that emphasizes mobility between urbanized and rural communities and connections to freeways.

Major Collector – A roadway that emphasizes access to major employment, shopping, or freeways. Collectors distribute traffic from residential or local roadways to facilities that are designed to carry high volumes of traffic, such as arterials. Collectors carry light to moderate traffic and serve adjacent land uses.

Local Roadway Intersections

Localized traffic conditions were evaluated for thirteen intersections near the Project site, the locations of which are shown on Figure 4.14-1. The intersections are within the City of Vallejo, except for intersection 11, which is in the City of Benicia, and intersection 12, which is located in unincorporated Solano County.

1. Columbus Parkway and Admiral Callaghan Lane
2. Columbus Parkway and Ascot Parkway (North)
3. Columbus Parkway and St. Johns Mine Road
4. Columbus Parkway and Redwood Parkway
5. Columbus Parkway and Lake Herman Road
6. Columbus Parkway and Ascot Parkway (South)
7. Columbus Parkway and Tennessee Street
8. Columbus Parkway and Springs Road
9. Columbus Parkway and Georgia Street
10. Columbus Parkway and Benicia Street
11. Columbus Parkway and State Park Road/Rose Drive
12. Lake Herman Road and the Project Main Access
13. Columbus Parkway and Lowe's Entrance

Columbus Parkway is a four-lane (two-lane between Springs Road and Rose Drive/State Park Road) Major Arterial which extends in a north-south direction from I-80 in the north to I-780 in the south. Columbus Parkway is characterized by 35 to 45 mph posted speed limits, standard 12-foot lanes, bicycle lanes and ample shoulders, a divided median through most of its length, and sidewalks and crosswalks throughout its length. As noted in the City of Vallejo General Plan, the City has long term plans to improve the two-lane section between Springs Road and State Park Road/Rose Drive to a four-lane facility.

Lake Herman Road is a four-lane or two-lane Major Arterial which extends in an east-west direction, from I-680 in the east to Columbus Parkway. Lake Herman Road has standard 12-foot lanes, bicycle lanes with ample shoulders, and contains a divided median along its four-lane length. Lake Herman Road bisects the southwestern portion of the Project site. The posted speed limit is 35 mph near the quarry entrance and 55 mph further east.

Admiral Callaghan Lane and Ascot Parkway are classified as Major Arterials which extend north-south through the City of Vallejo within the Project study area. These major arterials intersect Columbus Parkway.

Redwood Parkway, Tennessee Street, Springs Road, Georgia Street, and Benicia Road are classified as Major Arterials which extend east-west through the City of Vallejo within the Project study area. These major arterials intersect Columbus Parkway.

St. Johns Mine Road is classified as a Collector which extends north-south in the Project study area and intersects Columbus Parkway.

State Park Road/Rose Drive are Major/Minor Arterials within the City of Benicia at the southern limits of the Project study area. They provide access to I-780.

Trip Distribution

The City of Vallejo has established Lake Herman Road and Columbus Parkway as truck routes providing access to I-80 and I-780 from the Lake Herman Quarry. All truck trips travel to and from the quarry via Lake Herman Road and Columbus Parkway. Trips traveling north are accessing I-80, and those traveling south are accessing I-780. Currently, the majority of truck trips travel north on Columbus Parkway to I-80 to deliver aggregate materials throughout Solano County and the Bay Area. This travel pattern would continue for the proposed Project.

Level of Service Standards

Level of service (LOS) measures the relative ease or difficulty of traffic movement at designated points along a roadway. The LOS standards for the Cities of Vallejo and Benicia, the County of Solano, the Solano Transportation Authority and Caltrans are summarized below.

City of Vallejo

The City's LOS standards are included in the City's Traffic Impact Analysis/Study Guidelines. The City's Guidelines require an assessment of both LOS and the difference in Volume to Capacity (V/C) ratio with and without the project. The Guidelines require mitigation methods to be identified for any intersections that operate at LOS D or worse or show a significant impact per the V/C ratios below:

- Greater than 0.0400 increase in V/C ratio for an intersection currently at LOS C.
- Greater than 0.0200 increase in V/C ratio for an intersection currently at LOS D.
- Greater than 0.0100 increase in V/C ratio for an intersection currently at LOS E or F.

In addition, the City of Vallejo requires trip generation estimates for heavy vehicles be calculated and shown separately. All truck trips must be converted into passenger car equivalents (PCE) for intersection capacity analysis using the following factors:

- 2-axle trucks: 2.0 PCE
- 3-axle trucks: 2.5 PCE
- 4-and more axle trucks: 3.0 PCE

City of Benicia

The City's policy is to maintain intersection operation at LOS D or better, except where improvements would be infeasible or undesirable due to consideration of right-of-way, impacts of neighboring properties, aesthetics, or community character.

Solano County

The goal of Solano County is to maintain LOS C on all roads and intersections, except where the existing LOS is already below C. If the existing LOS is below C, the project shall be designed such that there will be no decrease in the existing level of service. Levels of Service need to be calculated using the Transportation Research Board's most recent Highway Capacity Manual.

Solano Transportation Authority (STA)

STA has adopted a minimum LOS E for arterials and highways in Solano County.

Caltrans

The Guide for the Preparation of Traffic Impact Studies (Caltrans 2002) is intended to provide a consistent basis for evaluating traffic impacts to State facilities. Caltrans strives to maintain service levels between LOS C and LOS D. If an existing state highway facility is operating worse than the appropriate target LOS, the existing measure of effectiveness should be maintained.

Public Transit Service

There is currently no public transit service to Lake Herman Quarry or within the immediate vicinity of the site. Within the City of Vallejo, Vallejo Transit operates city and intercity bus, ferry, paratransit and taxi service. The City bus service includes six fixed routes that operate on weekdays and Saturdays and one fixed route that operates on Sundays. The intercity bus service, Baylink Express, is a fixed route service that provides bus service linking the cities of Vacaville, Fairfield, Suisun City, Cordelia, Benicia and Vallejo to locations beyond the City, such as Bay Area Rapid Transit (BART). The City of Benicia operates the Benicia Breeze, which is a fixed route bus service located in the City. Currently, the Benicia Breeze provides flex route service within the City, regional service between Benicia and Central Contra Costa County, a local taxi scrip program for seniors and persons with disabilities, and a paratransit service.

Bicycle and Pedestrian Facilities

Bicycle and pedestrian facilities include sidewalks, crosswalks and multi-use trails. The circulation elements of the applicable Project study area General Plans classify bikeways based on the Caltrans classification system for off-road and on-road facilities, as described below:

- Class I Bike Paths are facilities specifically designated for the exclusive use of bicycles and pedestrians. Class I paths are separate from streets, but may cross roadways.
- Class II Bike Lanes are striped lanes on a street or highway designated for use by bicycles and typically designed using standards for pavement markings and signage. Vehicle parking and vehicle pedestrian cross-flows are permitted at designated locations.
- Class III Bike Routes are usually designated by signs and/or pavement markings to indicate the use of bicycles within the vehicular travel lane of a roadway.

Class II Bike Lanes are provided along both northbound and southbound Columbus Parkway from Admiral Callaghan Lane to south of Springs Road, where the four-lane roadway drops to two lanes. Class II bike lanes are also provided along the four-lane section of Lake Herman Road. Class III bike routes are provided along the two-lane segment of Columbus Parkway and Lake Herman Road.

General Plan Goals and Policies

The following are the transportation goals and policies from the Solano County, City of Vallejo, and City of Benicia General Plans that are applicable to the Project.

<u>Solano County</u>

TC.G-1 Maintain and improve the County's transportation systems to enhance safety, resident access to basic needs, mobility, and convenience.

TC.G-2 Promote coordinated approaches to creating, maintaining and improving transportation corridors and facilities by working with other jurisdictions and transportation agencies in funding and implementing projects.

TC.G-5 Encourage and maintain the safe, convenient transfer of goods and services from agricultural lands and industrial locations to regional and interregional transportation facilities.

TC.P-1 Maintain and improve current transportation systems to remedy safety and congestion issues, and establish specific actions to address these issues when they occur.

TC.P-2 Fairly attribute to each development the cost of on- and off-site improvements needed for state and county roads and other transportation systems to accommodate that development, including the potential use of development impact fees to generate revenue.

TC.P-11 Maintain and improve the current roadways and highway system to meet recommended design standards set forth by the County, including streets that also carry transit and non-motorized traffic.

TC.P.13 Designate and reserve adequate transportation right-of-way to meet projected traffic volumes, anticipating reasonable future demand.

City of Vallejo

Mobility To have mobility for all segments of the community with a transportation system that minimizes pollution and conserves energy and that reduces travel costs, accidents and congestion.

Traffic Safety To have a street and highway system that is safe to use.

Compatibility To have a street and highway system that services all land uses with a minimum adverse impact.

Policy D-3 All truck traffic and regional bus service should be restricted to peripheral major streets and north-south, east-west arterial and collector streets having the least number of residences and schools. Only small trucks servicing the neighborhood centers should be allowed on other streets. Where possible, unloading facilities should be provided off alleys rather than streets.

City of Benicia

Goal 2.20 To have mobility for all segments of the community with a transportation system that minimizes pollution and conserves energy and that reduces travel costs, accidents and congestion. Provide a balanced street system to serve automobiles, pedestrians, bicycles, and transit, balancing vehicle-flow improvements with multi-modal considerations.

Policy 2.20.1 To have a street and highway system that is safe to use. Maintain at least Level of Service D on all city roads, street segments, and intersections.

EVALUATION CRITERIA WITH THRESHOLD OF SIGNIFICANCE

TABLE 4.14-1
Evaluation Criteria with Significance Threshold - Transportation

Evaluation Criteria	As Measured By	Significance Threshold	Sources of Criteria
TR-1: Will the Project conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	Increase in traffic along access roadways due to construction activities. Level of Service and Volume to Capacity (V/C) along affected roadways and at intersections.	Increase that exceeds roadway capacity. Unincorporated Solano County: Maintain LOS C or better. Benicia: Maintain LOS D or better. Vallejo: > 0.0400 increase in V/C ratio for an intersection currently at LOS C. > 0.0200 increase in V/C ratio for an intersection currently at LOS D. > 0.0100 increase in V/C ratio for an intersection currently at LOS E or F	CEQA Guidelines Appendix G, Checklist Item XVI (a) Solano County General Plan City of Benicia General Plan City of Vallejo General Plan City of Vallejo Traffic Impact Analysis / Study Guidelines
TR- 2: Will the Project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	Level of Service	Maintain LOS E or better	CEQA Guidelines Appendix G, Checklist Item XVI (b) Solano Transportation Authority

Evaluation Criteria	As Measured By	Significance Threshold	Sources of Criteria
TR-3: Will the Project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Number of locations not in accordance with defined safety regulations.	Greater than 0 locations	CEQA Guidelines Appendix G, Checklist Item XVI (d)
TR-4: Will the Project result in inadequate emergency access?	Delay of emergency vehicles	Blockage of right of way	CEQA Guidelines Appendix G, Checklist Item XVI (e)
TR-5: Will the Project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	Number of conflicting adopted policies, plans, or programs.	Greater than 0 conflicts	CEQA Guidelines Appendix G, Checklist Item XVI (f) Solano County General Plan City of Vallejo General Plan City of Benicia General Plan

METHODOLOGY

Potential impacts to roadway LOS and capacity are evaluated for both construction and operational activities. The need for temporary lane closures during construction also is assessed.

Because the Project is not located near an airport and does not affect air flight, no air-traffic related impacts would occur. No further discussion of air traffic impacts is provided in this chapter.

IMPACTS AND MITIGATION MEASURES

Impact: **TR-1: Will the Project conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?**

Analysis: *Less than Significant*

Construction

Roadway improvements and utility relocations along Lake Herman Road would require temporary partial lane closures, but would not impede two-way traffic flow. Improvements at the bridge site would not require any road closures on Sky Valley Road.

The roadway and utility work along Lake Herman Road would take up to six months to complete. The temporary lane closures that may be required during this time would affect the roadway capacity of Lake Herman Road. However, the intersection of Lake Herman Road and the Quarry entrance currently operates at LOS A, which is the optimal

level of service for a roadway. Based on the existing level of service in the area of the roadway improvements, delays caused by a temporary partial lane closure to Lake Herman Road would be less than significant.

Operation

Peak AM and PM traffic counts were collected at the study intersections on Wednesday, March 10, 2010. On the day of the traffic counts, which was early in the construction season, the Quarry experienced lower than average production compared with annual average trip data. Therefore, to normalize the existing traffic volumes for the existing average sales level, an additional 94 truck trips were added to the AM peak hour. Table 4.14-2 on the following page summarizes the existing peak LOS for the study intersections. The analysis determined that all intersections currently operate at acceptable levels of service during the AM peak hour and the following three intersections currently operate at unacceptable levels of service during the PM peak hour:

- Int. 1 - Columbus Parkway & Admiral Callaghan Lane (PM Peak Hour/LOS D)
- Int. 6 - Columbus Parkway & Ascot Parkway (south) (PM Peak Hour/LOS D)
- Int. 10 - Columbus Parkway & Benicia Street (PM Peak Hour/LOS F)

The Project would not result in any new daily trips during the AM or PM peak hours. Therefore, because the Project would not result in new daily trips, each of the study intersections that currently operate at acceptable LOS C or better would continue to do so, and the Project would not increase the volume to capacity ratio of the roadways beyond applicable significance thresholds, or affect the volume to capacity ratio of intersections currently operating unacceptably in the PM peak hour. Therefore, operational impacts are considered less than significant.

Mitigation: No mitigation is necessary.

TABLE 4.14-2
Existing Intersection Level of Service

No.	Study Intersection	Control	Existing					
			AM Peak			PM Peak		
			Delay	V/C Ratio	LOS	Delay	V/C Ratio	LOS
1	Columbus Pkwy. & Admiral Callaghan Ln.	Signalized	20.3	0.43	C	37.8	0.69	D
2	Columbus Pkwy. & Ascot Pkwy. (North)	Signalized	10.4	0.29	B	9.9	0.28	A
3	Columbus Pkwy. & St. John's Mine Rd.	Signalized	27.4	0.27	C	34.1	0.25	C
4	Columbus Pkwy. & Redwood Pkwy.	Signalized	11.9	0.28	B	8.2	0.24	A
5	Columbus Pkwy. & Lake Herman Rd.	Signalized	15.7	0.31	B	10.2	0.2	B
6	Columbus Pkwy. & Ascot Pkwy. (South)	Signalized	33.6	0.36	C	35.9	0.45	D
7	Columbus Pkwy. & Tennessee St.	Signalized	17.6	0.34	B	12.1	0.3	B
8	Columbus Pkwy. & Springs Rd.	Signalized	21.4	0.28	C	21.9	0.28	C
9	Columbus Pkwy. & Georgia St.	Signalized	13.8	0.49	B	14.9	0.61	B
10	Columbus Pkwy. & Benicia Rd.	Unsignalized	23.6	0.41	C	58.3	0.41	F
	Eastbound Approach (Benicia Rd.)	*Stop*	*23.6*	*0.33*	*C*	*58.3*	*0.67*	*F*
	Northbound Left	*Yield*	*10.5*	*0.14*	*B*	*9.1*	*0.09*	*A*
11	Columbus Pkwy. & State Park Rd./Rose Dr.	Signalized	27.6	0.68	C	45.8	0.86	D
12	Lake Herman Rd. & Project Main Access	Unsignalized	8.9	0.07	A	9.3	0.09	A
	Southbound Approach (Project Entrance)	*Stop*	*8.9*	*0.10*	*A*	*9.3*	*0.01*	*A*
	Eastbound Left	*Yield*	*2.7*	*0.07*	*A*	*0.3*	*0.12*	*A*

Notes:
1. Delay is calculated in average seconds per vehicle in queue
2. For Intersection 11, existing LOS D in the PM peak hour is acceptable per Benicia criteria.
3. Intersection 13 is not analyzed for existing conditions because it has not yet been constructed.

Impact: **TR-2: Will the Project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?**

Analysis: *Less than Significant*

The Solano Transportation Authority (STA) serves as the congestion management agency for the Project area. The STA has adopted a minimum standard of LOS E for arterials and highways in Solano County. The LOS standards are intended to regulate long-term impacts due to future operation of Projects and were not developed for temporary construction projects. Therefore, this evaluation criterion is not applicable to Project construction.

Only Intersection 10 - Columbus Parkway & Benicia Street, located in the City of Vallejo, currently operates below the minimum standard at LOS F during the PM peak hour. However, the proposed Project would not result in any new daily trips during the AM or PM peak hours, and therefore, would not increase the volume to capacity ratio of Intersection 10 - Columbus Parkway & Benicia Street. Therefore, operational impacts are considered less than significant.

An evaluation of the Project in conjunction with the cumulative scenario is contained in the Cumulative Impacts section at the end of this chapter. For the cumulative condition, model outputs were obtained from the STA *Napa-Solano Travel Demand Model*. The model has been validated for the Counties of Napa and Solano, and is used to project future travel demands on the roadway network.

Mitigation: No mitigation is necessary.

Impact: **TR-3: Will the Project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

Analysis: *No Impact*

The Project would have a long-term beneficial effect by enhancing vehicular safety and truck access to the site. This would include enhancing the pavement structural section, lane widening, addition of paved shoulders, addition of a left turn lane into the quarry entrance for eastbound truck traffic, a merge lane for westbound trucks leaving the quarry, as well as a transition section on the east side of the quarry entrance.

The Project will continue to use existing established haul routes. Existing sight distance at all study intersections were determined to be acceptable. Sight distance is the distance required by the driver of a vehicle, traveling at a given speed, to bring the vehicle to a stop after an object on the road becomes visible.

Collision rates were calculated for surrounding intersections based on records for 2004 through 2008 obtained from the California Highway Patrol. The findings of the analysis indicate that all study intersections collision rates are below the state average for the type of intersection.

Mitigation: No mitigation is necessary.

Impact: **TR-4: Will the Project result in inadequate emergency access?**

Analysis: *Significant (Short-term), Beneficial (Long-term)*

The Project would have a long-term beneficial effect on emergency access. This would include improvements to Lake Herman Road near the main quarry entrance, and a new bridge off of Sky Valley Road which would allow fire and other emergency vehicle access to the quarry from the east, and allow quarry personnel emergency egress from the west.

During construction, work being performed within the Lake Herman Road right-of-way and adjacent to Sky Valley Road may cause a temporary delay for any emergency vehicles that need to utilize these roadways. This short term impact is considered to be significant.

Mitigation: **TR-4 Traffic Control Procedures**

The applicant shall obtain an Encroachment Permit from the County of Solano prior to beginning work on Lake Herman Road and the bridge off Sky Valley Road. Standard conditions of Solano County Encroachment Permits require providing for public safety and convenience and proper traffic control during construction in accordance with the requirements set forth in the current Manual of Uniform Traffic Control Devices (MUTCD), the MUTCD California Supplement, and in Sections 7-1.08 and 7-1.09 of the Caltrans Standard Specifications.

Construction shall be coordinated with facility owners or administrators of police and fire departments, ambulance companies, and hospitals. Emergency service providers shall be notified in advance of the timing, location, and duration of construction activities and the locations of any lane closures or detours.

Pedestrian and bicycle access and circulation shall be maintained during project construction where safe to do so. If construction activities encroach on a bicycle lane, warning signs shall be posted that indicate bicycles and vehicles are sharing the lane.

After Mitigation: *Less than Significant*

Mitigation Measures TR-4 requires notification of emergency service providers and the use of standard traffic control procedures to minimize traffic congestion and traffic hazards during construction. Through proper notification of emergency service providers and residents, and implementation of traffic safety measures, this impact is considered less than significant after mitigation.

Impact: TR-5: Will the Project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Analysis: *Significant*

There are no bus routes that operate along Lake Herman Road. Operation of the Project would not generate demand for any new transit, bicycle, or pedestrian services, and would not conflict with any adopted policies, plans, or programs supporting alternative transportation.

Class II bike lanes are provided along the four-lane section of Lake Herman Road, and Class III lanes along the two-lane segment adjacent to the quarry entrance. Construction of the roadway and utility improvements within Lake Herman Road would temporarily increase the normal safety hazard in the Project area to bicycle and pedestrian facilities. This short term impact is considered to be significant.

Mitigation: **TR-4 Traffic Control Procedures**

Refer to Impact TR-4 above for a description of this mitigation measure.

After Mitigation: *Less than Significant*

Mitigation Measures TR-4 requires the use of standard traffic control procedures to minimize traffic hazards during construction. Through implementation of traffic safety measures, this impact is considered less than significant after mitigation.

CUMULATIVE IMPACTS

Impact: **TR-C1: Will the Project's incremental effect on traffic be cumulatively considerable, based on criteria 1 and 2?**

Analysis: *No Impact*

A cumulative conditions scenario was simulated to account for increases in traffic due to General Plan build-out and regional growth to the year 2030. The transportation network under cumulative growth conditions includes an upgrade of Columbus Parkway to a four-lane facility between the southern end of Ascot Parkway and I-780.

Under the General Plan build-out scenario (thru 2030), the following four intersections were determined to operate at unacceptable levels of service during the AM and PM peak hours due to cumulative planned growth without the Project.

- Int. 1 - Columbus Parkway & Admiral Callaghan Lane (PM Peak Hour/LOS F)
- Int. 6 - Columbus Parkway & Ascot Parkway (south) (AM/PM Peak Hour/LOS D)
- Int. 10 - Columbus Parkway & Benicia Street (AM/PM Peak Hour/LOS F)
- Int. 11 - Columbus Parkway & State Park Rd./Rose Dr. (AM/PM Peak Hour/LOS F)

The other intersections would operate at acceptable LOS "C" or better during the AM and PM peak hours under the cumulative scenario.

Because the Project would not result in new daily trips, each of the study intersections projected to operate at acceptable LOS C or better would continue to do so, and the Project would not increase the volume to capacity ratio of intersections projected to operate unacceptably in the cumulative conditions scenario. The proposed Project would not contribute to a significant cumulative traffic impact, and there would be no impact to the cumulative condition.

Mitigation: No mitigation is necessary.

Impact: **TR-C2: Will the Project's incremental effect on traffic be cumulatively considerable, based on criteria 3 through 4?**

Analysis: *No Impact*

These criteria are site specific hazards and would not be subject to cumulative impacts from other projects. Mitigation Measure TR-4 would reduce the traffic-related impacts of the proposed Project to a less-than-significant level. Implementation of the Project would not result in significant cumulative impacts.

Mitigation: No mitigation is necessary.

Project Site

Quarry Expansion Area

City of Vallejo

City of Benicia

1 Study Intersection

Major Highway

Major Road

Paper Size 8.5" x 11" (ANSI A)

0 875 1,750 2,625 3,500

Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California II FIPS 0402 Feet

N

GHD

Solano County
Lake Herman Quarry EIR

Job Number 1174109001
Revision A
Date 17 Apr 2013

Transportation Network

Figure 4.14-1

718 Third Street Eureka CA 95501 USA T 707 443 8326 F 707 444 8330 E eureka@ghd.com W www.ghd.com

G:\2005 & Beyond\11741 SolanoCo-DeptResourceMgmt\11741-09-001 SyarQuarry-EIR\GIS\Maps\Figures\A-CEQA_Sections\F4-14-1_Location_GHD.mxd

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Data source: ESRI Tele Atlas; Solano County GIS: City Boundaries. Created by:gldavidson

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