6 CUMULATIVE AND GROWTH INDUCING IMPACTS

This section includes a detailed analysis of the cumulative impacts that would be anticipated with the proposed project with a specific focus on the project's cumulative traffic impacts. In addition, this section includes a detailed discussion of the proposed project's growth-inducing impacts, the project's significant and irreversible commitment of resources, and the project's effects on global climate change.

6.1 CUMULATIVE IMPACTS OF THE PROPOSED PROJECT

This draft environmental impact report (Draft EIR) provides an analysis of overall cumulative impacts of the project taken together with other past, present, and probable future projects producing related impacts, as required by Section 15130 of the California Environmental Quality Act Guidelines (State CEQA Guidelines). The goal of such an exercise is twofold: first, to determine whether the overall long-term impacts of all such projects would be cumulatively significant; and second, to determine whether the Rocklin Crossings project itself would cause a "cumulatively considerable" (and thus significant) incremental contribution to any such cumulatively significant impacts. (See State CEQA Guidelines Sections 15130[a]-[b], Section 15355[b], Section 15064[h], Section 15065[c]; *Communities for a Better Environment v. California Resources Agency* [2002] 103 Ca1.App.4th 98, 120.) In other words, the required analysis intends to first create a broad context in which to assess the project's incremental contribution to anticipated cumulative impacts, viewed on a geographic scale well beyond the project site itself, and then to determine whether the project's incremental contribution to any significant cumulative impacts from all projects is itself significant (i.e., "cumulatively considerable" in CEQA parlance).

Pursuant to Section 15130 of the State CEQA Guidelines, "(t)he discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impacts to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact." The proposed project is considered to have a significant cumulative effect if:

1. The cumulative effects of development without the project are not significant and the project's additional impact is substantial enough, when added to the cumulative effects, to result in a significant impact; or

2. The cumulative effects of development without the project are already significant and the project contributes measurably to the effect. The term "measurably" is subject to interpretation. The standards used herein to determine measurability are that either the impact must be noticeable to a reasonable person, or must exceed an established threshold of significance.

Mitigation measures are to be developed to reduce the project's contribution to cumulative effects to a less-than-significant level or otherwise to the degree it is feasible to do so. The State CEQA Guidelines acknowledge that sometimes the only feasible method for mitigating or avoiding significant cumulative effects is to adopt ordinances or regulations that apply to all projects that contribute to the cumulative effect.

The State CEQA Guidelines Section 15130(b)(1) provide two approaches to analyzing cumulative impacts. The first is the list approach, which requires a listing of past, present, and reasonably anticipated future projects producing related or cumulative impacts. The second is the summary approach wherein the relevant projections contained in an adopted general plan or related planning document that is designed to evaluate regional or areawide conditions are summarized. For this Draft EIR, both the list and the plan approach have been combined to generate the most reliable future projections possible. A list approach is used to define specific projects that are currently proposed, but are not necessarily considered within an approved planning document. The plan approach is used to consider development consistent with an adopted plan.

6.1.1 CUMULATIVE DEVELOPMENT ASSUMPTIONS

The Rocklin General Plan is intended to provide a long-term guide for the orderly growth and development of the City of Rocklin. In describing the potential effects of this long-term growth, the general plan identified two population growth trajectories. These included a moderate growth scenario and a high growth scenario. Both of these scenarios projected population growth out to 2010. For the moderate growth scenario, the 2010 population was estimated to be approximately 36,200 people. For the high growth scenario, the 2010 population was estimated to be approximately 48,600 people. The City's existing population exceeded the high growth scenario projection by 2,310 people in 2006. Current population in the City is estimated to be 51,080 (Department of Finance 2007e).

In order to identify the long-term cumulative growth anticipated in the region, the high growth scenario population projections identified in the general plan were supplemented with projections developed by the California Department of Finance for the County. Based on these projections, the County's estimated 2006 population of 322,428 is estimated to increase by 8% to 349,113 by 2010 and by approximately 41% to 456,040 by 2020. For all resource issues with the exception of traffic, the cumulative growth baseline was based on these population growth estimates for the year 2020, which include City growth. The cumulative growth assumptions used in the traffic analysis are described in the traffic section below.

The area cumulatively affected by the individual project impacts varies depending upon the resource issue being evaluated. For example, nuisance impacts associated with dust generation during construction would be limited to areas directly surrounding the project site while the project's generation of air emissions would contribute cumulatively to the entire air basin. To ensure that the potential localized cumulative impacts are adequately evaluated, an analysis of the cumulative effects of the proposed Rocklin 60 residential development are discussed, when appropriate. As described in Chapter 3, Project Description, the proposed Rocklin 60 project includes the development of 179 single-family residential units on approximately 57 acres located directly east of the proposed project (Exhibit 3-2).

The Croftwood Estates project is located southeast of the proposed project site across Secret Ravine Creek. The Croftwood Estates project was approved by the City of Rocklin and is planned to develop 106 single family homes and 50 custom lots.

The Sierra College Boulevard/Interstate 80 interchange project is designed to improve vehicle movement and circulation at this intersection in anticipation of future urban development in the immediate area. The California Department of Transportation (Caltrans) is the lead agency for implementation of improvements to this interchange and construction is currently occurring.

The Sierra College Center, located on approximately 9.83 acres at the southeastern corner of Sierra College Boulevard and Rocklin Road, proposes construction of thirteen single story office and retail buildings. The office buildings would total approximately 59,218 square feet of floor space and the retail buildings would total approximately 18,370 square feet of floor space for an overall total of 77,588 square feet of floor space. The main use of the office space is projected to be dental/medical with a mix of other small businesses.

Placer Vineyards Specific Plan area encompasses approximately 5,230 acres located in the southwest corner of Placer County, bounded on the north by Baseline Road, on the south by the Sacramento-Placer County line, on the west by the Sutter-Placer County line, and on the east by Dry Creek and Walerga Road. As approved by the Placer County Board of Supervisors in July 2007, the Placer Vineyards Specific Plan is a mixed-use master planned community that includes residential, employment, commercial, open space, recreational, and public/quasi-public land uses. Placer Vineyards Specific Plan envisions construction of 14,132 homes in a range of housing types, styles, and densities. At build out, projected to occur over a twenty year time frame, Placer Vineyards would have a population of approximately 33,000 people, 434 acres of employment centers, 166 acres of retail commercial centers, and 920 acres of new parks and open space.

The Placer Ranch Specific Plan area encompasses approximately 2,213 acres located north and adjacent to the City of Roseville and West Roseville Specific Plan area, approximately one mile west of the SR 65/Sunset Boulevard interchange, and bisected by Fiddyment Road. The proposed Placer Ranch Specific Plan includes a mixture of industrial, commercial, office and professional, educational, and residential land uses. The Placer Ranch Specific Plan is envisioned to develop 4,618 residential units and includes land that would be developed with a California State University campus sized to accommodate between 15,000 and 25,000 full time students at build out.

The Regional University and Community Specific Plan area encompasses approximately 1,136 acres located north of Baseline Road, east of Brewer Road, and west of the future extension of Watt Avenue. The proposed Regional University and Community Specific Plan includes two primary components: a University campus (600 acres) and an adjoining community (536 acres). The Regional University is planned to accommodate approximately 6,000 students, along with 800 professors and staff, and to offer both undergraduate and graduate degrees. In addition to the institutional facilities on campus, the campus would include approximately 1,155 residential units for students and faculty, as well as retirement housing. The preliminary University program includes a full range of academic, administrative, athletic, and performing arts facilities; faculty and staff housing; student housing; and a retirement village. In addition, a portion of the campus is planned for a potential private high school that could accommodate 1,200 students and accompanying staff and faculty. The proposed Community would involve mixed-use development with a variety of residential, commercial, employment, open space, parks, and public uses. The Community would include 3,232 residential units of varying densities, commercial, open space, and recreation areas.

The West Roseville Specific Plan area, located in the northwestern-most portion of the City of Roseville, encompasses 3,162 acres and is adjacent to and east of the Placer Vineyards Specific Plan located in Placer County. The approved West Roseville Specific Plan land use plan identifies a blend of residential, service, employment, open space, and public uses and envisions housing approximately 20,810 residents and providing jobs for 3,726 employees.

The Morgan's Orchard at Secret Ravine project would develop 15.9 acres located at the southwest comer of I-80 and Penryn Parkway east of the Town of Loomis. This project would construct 68 residential lots sized to contain only the building footprint of its respective dwelling unit, thereby allowing the remainder of the land to be held as common open space. All residential lots would be developed with detached housing units.

SUMMARY OF CURRENTLY PLANNED AND PROPOSED PROJECTS

Table 6-1 provides a summary of the projects considered in the cumulative analysis. As described above and shown in Table 6-1, substantial development and growth is anticipated to occur throughout the vicinity and region.

6.1.2 CUMULATIVE IMPACTS

LAND USE

As described in the Land Use section of this Draft EIR, the impacts of the project relative to environmental plans, policies, and regulations are less than significant. As also discussed, the project is at the edge of Rocklin and would not physically divide an established community. The cumulative development within the region would result in a dramatic change in regional land uses and individual projects would need to be considered in the context of their contribution to this change. However, given that the project would not contribute to any significant impacts related to specific CEQA land use issues (division of a community, consistency with plans and policies adopted for the purpose of avoiding environmental impacts), the project would not contribute to cumulative land use impacts in the region. Therefore, the proposed project would result in a **less-than-significant** cumulative land use impact.

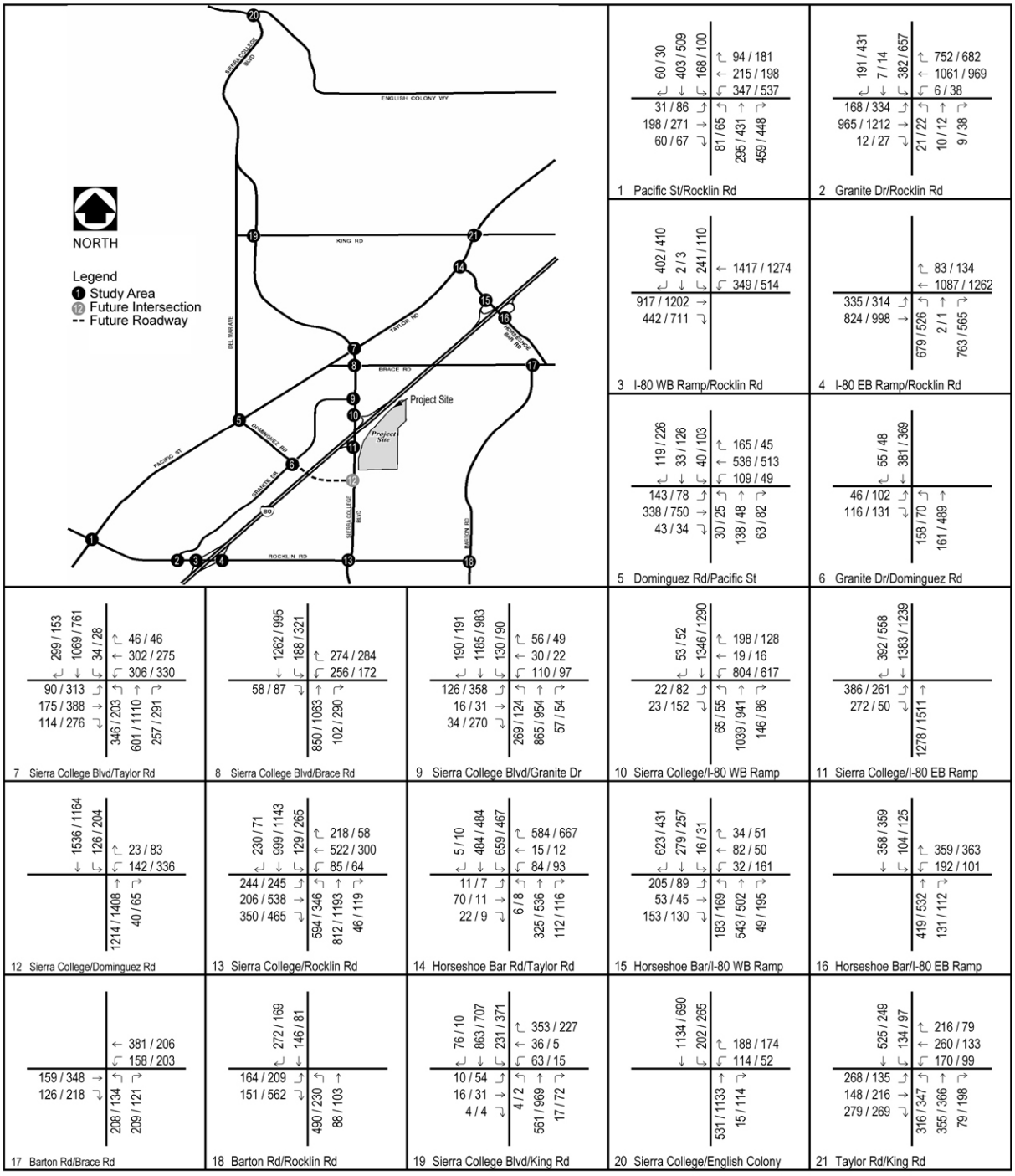
Table 6-1 Cumulative Projects				
Cumulative Project	Total Acres	Residential Land Uses (units)	Commercial/Industrial Land Uses (acres)	Population (persons)
Croftwood Estates Development	83.3	156	0	427
Rocklin 60 Development	56.9	179	0	490
Sierra College Boulevard/I-80 Interchange	N/A	0	0	0
Sierra College Center	9.83	0	9.83	0
Placer Vineyards Specific Plan	5,230	14,132	600	33,000
Placer Ranch Specific Plan	2,213	6,758*	740	18,280
Regional University and Community Specific Plan	1,136	4,387*	45	Unknown
West Roseville Specific Plan	3,162	8,390	177.2	20,810
Morgan's Orchard at Secret Ravine	15.9	68	0	186
Total	11,906.9	34,070	1,572.03	73,193
* Includes university student housing				

TRAFFIC

The City's traffic model forecasts traffic volume out to the year 2025 based on the land use and circulation system included in the City's General Plan. Therefore, for the cumulative traffic impacts, the cumulative baseline year is 2025 rather than 2020. The interchange improvements at Interstate 80/Sierra College Boulevard that are currently being constructed are assumed to be in place in 2025 for both the cumulative baseline and cumulative-plus-project scenarios. The analysis examines the traffic impacts expected to result from the addition of vehicle traffic generated by the proposed project on the cumulative traffic condition at surrounding intersections and roadway segments. The roadway map included in Exhibit 6-1 identifies the area or context of the cumulative impact analysis. This analysis also recommends mitigation measures based on the project's effects under the cumulative scenarios.

6.1.3 DEVELOPMENT OF FUTURE TRAFFIC VOLUMES

Traffic volume data for 2025 conditions were developed using forecasts from the City of Rocklin traffic model. The traffic model is based on the land use and circulation system shown in the City's General Plan. The 2025 projected volume for this analysis is based on the summary of projections method contained in the adopted General Plan. This method does not assume full buildout of all of the land uses identified in the General Plan's land use map. Instead, base-year and future-year p.m. peak-hour arterial segment volumes were forecast using the City's model, which is considered a more accurate source of information about 2025 conditions, as it reflects demographic and market assumptions superimposed on land use plans. Turn movements for the p.m. peak hour were postprocessed according to the methodology described below.



Source: LSA 2007

Year 2025 No Project Peak Hour Traffic Volumes - Without Dominguez Road **Exhibit 6-1**

6.1.4 INTERSECTION TURNING MOVEMENTS

For passenger vehicles, the base-year scenario in the City's traffic model is 2001, and the future-year scenario is 2025. The following describes the methodology used to convert traffic model volumes into a.m. and p.m. peak-hour intersection turn volumes for 2025 conditions:

1. The difference between the modeled 2001 and 2025 peak-hour directional arterial traffic volumes (for each intersection approach and departure) was identified from loaded highway network plots. This difference defines growth in traffic over the 24-year period. The incremental growth in peak-period approach and departure volumes between 2001 and 2025 was factored to develop the incremental change in peak-hour volumes.

2. The forecast growth in approach and departure volumes from 2006 to future-year 2025 was added to the existing approach and departure volumes, resulting in postprocessed forecast-year 2025 approach and departure volumes. Volume development worksheets summarizing the steps are included in Appendix E.

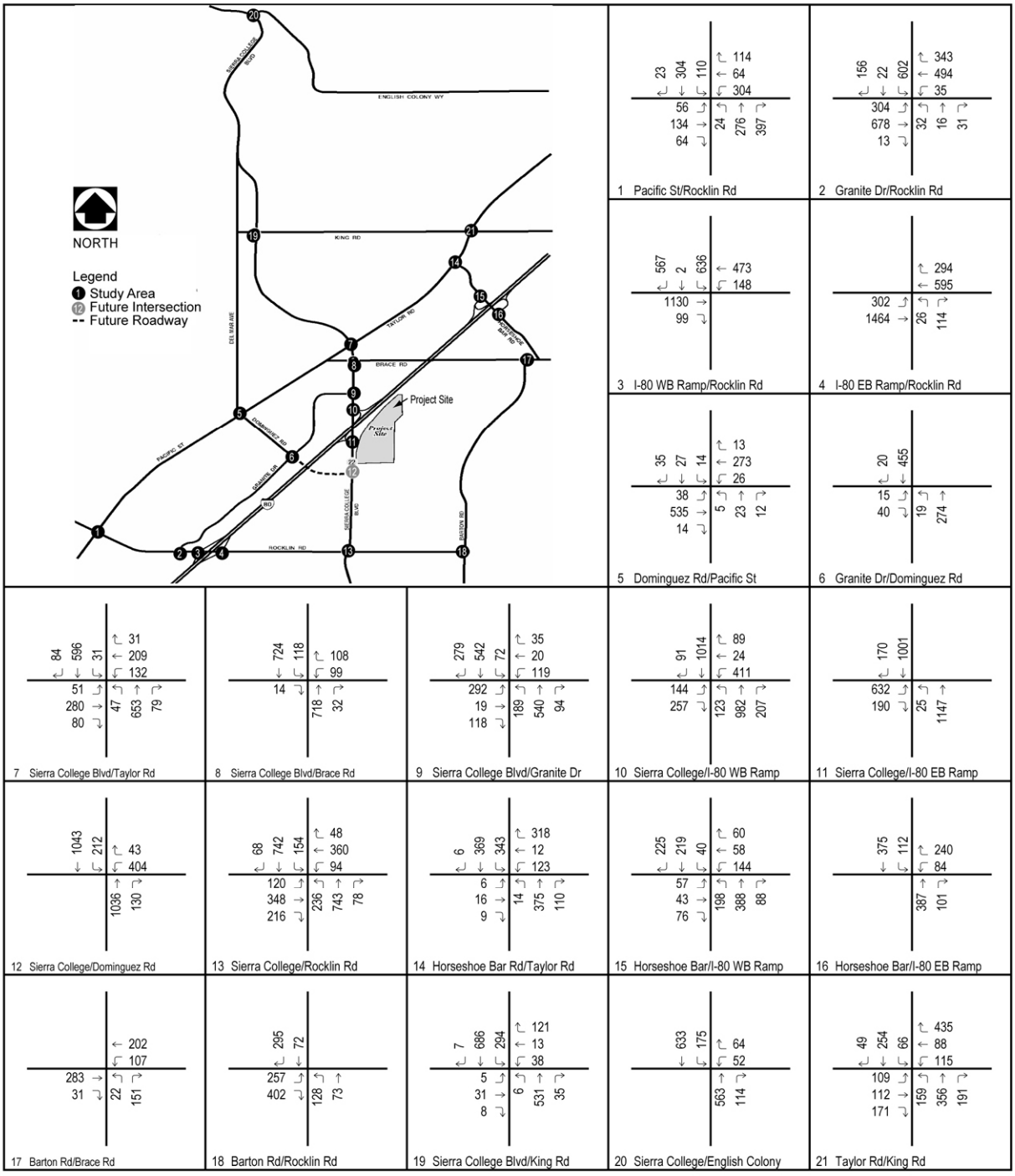
3. Forecast year 2025 turn volumes were developed using existing turn volumes and the future approach and departure volumes, based on the methodologies contained in the National Cooperative Highway Research Program Report (NCHRP) 255: *Highway Traffic Data for Urbanized Area Project Planning and Design* (Transportation Research Board, December 1982). NCHRP 255 worksheets are included in Appendix G.

The City's current traffic model is not validated for the a.m. peak hour and does not have forecasting capability for the Saturday peak hour. To validate the 2025 model a.m. peak-hour traffic volumes, the existing a.m. peak-hour traffic volumes were compared to the existing p.m. peak-hour traffic volumes and ratios between existing a.m. and p.m. peak volume were calculated. These ratios were then applied to the 2025 a.m. peak model numbers. These adjusted 2025 a.m. peak directional arterial traffic volumes were then used in the methodology described above in Step 1 to obtain the growth in traffic during the a.m. peak hour. Similarly, to develop future intersection turn movements for the Saturday peak hours, the ratios of the existing p.m. peak to Saturday peak hours were used. These ratios were applied to the postprocessed year 2025 no project p.m. peak hour traffic volumes to determine the 2025 no project Saturday peak-hour traffic volumes. Project trips were then manually added to the study area intersections to determine the 2025 plus project traffic volumes.

Year 2025 traffic volumes were forecast for two roadway networks. The network used for project impact analysis assumes that Dominguez Road terminates at Granite Drive, as in the existing condition, and is referred to as "without Dominguez Road." The alternative network assumes that Dominguez Road is extended east to Sierra College Boulevard. This alternative network is referred to as "with Dominguez Road" and is intended to provide an analysis of the effects of extending Dominguez Road. The Dominguez Road extension is in the City's Traffic Impact Fee and Capital Improvement Program and is included in the City's current General Plan although no schedule exists for construction of the new segment. The analysis of these two roadway networks is provided below with the identification of separate impacts depending upon which network is assumed. Following this analysis is an identification of the project's cumulative impacts at the Interstate 80/Sierra College Boulevard interchange and along the Interstate 80 mainline.

6.1.5 2025 NO PROJECT WITHOUT DOMINGUEZ ROAD

Weekday and Saturday peak-hour forecast traffic volumes for the 2025 no project without Dominguez Road scenario are shown in Exhibit 6-1 and Exhibit 6-2. The LOS for study area intersections and roadway segments are shown in Table 6-2 and Table 6-3. The 2025 no project without Dominguez Road traffic volume development and LOS worksheets are provided in Appendix C. All 2025 LOS include the roadway improvements assumed in the baseline condition as well as implementation of the City's General Plan roadway system as documented in the City General Plan Circulation Element. The LOS also includes the following improvements to the intersection of Sierra College Boulevard/Rocklin Road, which is planned as part of the Sierra College Boulevard widening



Source: LSA 2007

Year 2025 No Project Saturday Peak Hour Traffic Volumes - Without Dominguez Road **Exhibit 6-2**

Table 6-2
2025 No Project without Dominguez Road Condition Peak Hour Intersection Level of Service Summary

	Intersection	2025 No Project without Dominguez Road Condition					
		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/Pacific Street [1]	0.639	B	0.674	B	0.488	A
2	Rocklin Road/Granite Drive	0.564	A	0.771	C	0.570	A
3	Rocklin Road/I-80 Westbound Ramps	0.734	C	0.993	E	0.818	D
4	Rocklin RoadI-80 Eastbound Ramps	0.878	D	0.856	D	0.490	A
5	Dominguez Road/Pacific Street [1]	0.502	A	0.657	B	0.368	A
6	Dominguez Road/Granite Drive [1]	13.0 sec	B	15.1 sec	C	11.1 sec	B
7	Sierra College Boulevard/Taylor Road (Loomis)	0.825	D	0.788	C	0.466	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.497	A	0.640	B	0.288	A
9	Sierra College Boulevard/Granite Drive	0.551	A	0.559	A	0.482	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.593	A	0.592	A	0.572	A
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.584	A	0.462	A	0.529	A
12	Sierra College Boulevard/Dominguez Road	0.377	A	0.533	A	0.499	A
13	Sierra College Boulevard/Rocklin Road [1]	0.705	C	0.649	B	0.392	A
14	Taylor Road/Horseshoe Bar Road (Loomis)	1.025	F	1.087	F	0.698	B
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.475	A	0.437	A	0.401	A
16	Horseshoe Bar Road/I-80 Eastbound Ramps [2] (Loomis)	29.8 sec	D	26.9 sec	D	16.7 sec	C
17	Barton Road/Brace Road [1,2] (Loomis)	81.4 sec	F	59.9 sec	F	12.4 sec	B
18	Barton Road/Rocklin Road [1,2] (Loomis)	261.4 sec	F	20.4 sec	C	17.0 sec	C
19	Sierra College Boulevard/King Road [1] (Loomis)	0.607	B	0.744	C	0.481	A
20	Sierra College Boulevard/English Colony Way [1,2] (Placer County)	266.4 sec	F	593.7 sec	F	32.9 sec	D
21	Taylor Road/King Road [1] (Loomis)	0.802	D	0.509	A	0.589	A

Notes:
ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.
[1] LOS C required for these intersections. LOS D acceptable for all other intersections.
[2] Peak Hour volumes meet Signal Warrant #3 of the Manual of Uniform Traffic Control Devices
Outline indicates exceeds level of service criteria

Table 6-3
2025 No Project Without Dominguez Road Daily Roadway Segment Level of Service Summary

Roadway	Segment	Capacity	Volume	Capacity Configuration	V/C	LOS
Taylor Road	King Road and Horseshoe Bar Road [1] (Loomis)	15,000	19,499	Two-lane Collector	1.30	F
	Horseshoe Bar Road and Sierra College Boulevard[1] (Loomis)	15,000	14,891	Two-lane Collector	0.99	E
Pacific Street	Sierra College Boulevard and Dominguez Road [1]	30,000	17,725	Four-lane Undivided Arterial	0.59	A
	Dominguez Road and Rocklin Road [1]	30,000	22,105	Four-lane Undivided Arterial	0.74	C
Rocklin Road	Pacific Street and Granite Drive	30,000	37,534	Four-lane Undivided Arterial	1.25	F
	I-80 and Sierra College Boulevard	30,000	16,346	Four-lane Undivided Arterial	0.54	A
	Sierra College Boulevard and Barton Road [1] (Loomis)	30,000	14,281	Four-lane Undivided Arterial	0.48	A
Barton Road	Rocklin Road and Brace Road [1] (Loomis)	15,000	6,372	Two-lane Collector	0.42	A
Horseshoe Bar Road	I-80 and Brace Road (Loomis)	15,000	9,983	Two-lane Collector	0.67	B
Brace Road	I-80 and Barton Road [1] (Loomis)	15,000	9,754	Two-lane Collector	0.65	B
	I-80 and Sierra College Boulevard [1] (Loomis)	15,000	9,202	Two-lane Collector	0.61	B
Sierra College Boulevard	English Colony Way and King Road [1] (Placer County)	30,000	22,994	Four-lane Undivided Arterial	0.77	C
	King Road and Taylor Road [1] (Loomis)	30,000	21,382	Four-lane Undivided Arterial	0.71	C
	Taylor Road and I-80	50,525	32,940	Six-lane Arterial	0.65	B
	I-80 and Dominguez Road	50,525	26,424	Six-lane Arterial	0.52	A
	Dominguez Road and Rocklin Road [1]	50,525	32,628	Six-lane Arterial	0.65	B
Granite Drive	Dominguez Road and Sierra College Boulevard [1]	30,000	11,367	Four-lane Undivided Arterial	0.38	A
	Dominguez Road and Rocklin Road [1]	30,000	14,008	Four-lane Undivided Arterial	0.47	A
Dominguez Road	Taylor Road and Granite Drive [1]	15,000	4,942	Two-lane Collector	0.33	A
King Road	Sierra College Boulevard and Taylor Road [1] (Loomis)	15,000	7,037	Two-lane Collector	0.47	A

Notes:
[1] LOS C required for these segments. LOS D acceptable for all other segments.
Outline indicates exceeds level of service criteria.
Shaded areas indicate roadway Improvements consistent with City of Rocklin General Plan, Town of Loomis General Plan, and the Horseshoe Bar/Penryn Community Plan.

project: (1) Northbound – addition of a second left, third through, and exclusive right-turn lanes; (2) Southbound – addition of a third through and exclusive right-turn lanes; and (3) Westbound – addition of a second left and second through lanes. The 2025 intersection geometrics and traffic control are shown in Exhibit 6-3.

As shown in Table 6-2, the following six intersections are forecast to operate at unsatisfactory LOS in the 2025 No Project without Dominguez Road condition:

- Rocklin Road/I-80 Westbound Ramps
- Taylor Road/Horseshoe Bar Road (Loomis)
- Barton Road/Brace Road (Loomis)
- Barton Road/Rocklin Road (Loomis)
- Sierra College Boulevard/English Colony Way (Placer County)
- Taylor Road/King Road (Loomis)

The results of the roadway analysis as shown in Table 6-3 indicate that most of the study area roadway segments are forecast to operate within their daily roadway capacities with the exception of the following three segments:

- Taylor Road between King Road and Horseshoe Bar Road (Loomis)
- Taylor Road between Horseshoe Bar Road and Sierra College Boulevard (Loomis)
- Rocklin Road between Pacific Street and Granite Drive

6.1.6 2025 PLUS PROJECT WITHOUT DOMINGUEZ ROAD

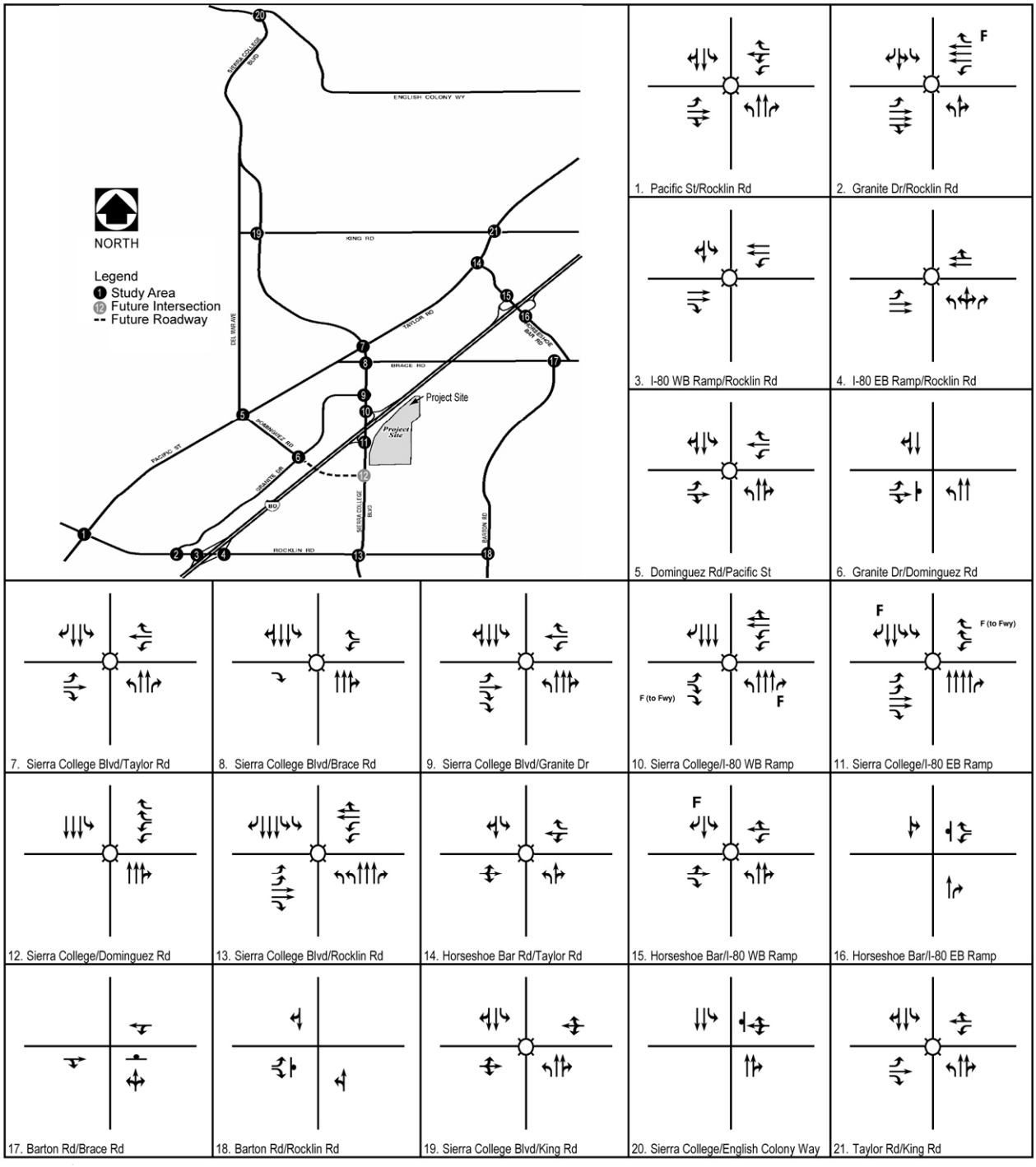
Traffic volumes generated by the proposed project were added to the 2025 no project traffic volumes, and LOS were calculated for the 2025 plus project scenario. Weekday and Saturday peak-hour forecast traffic volumes for the 2025 plus project without Dominguez Road scenario are shown in Exhibit 6-4 and Exhibit 6-5. The LOS for study area intersections and roadway segments in the 2025 plus project without Dominguez Road scenario are shown in Table 6-4 and Table 6-5. The 2025 plus project without Dominguez Road LOS worksheets are provided in Appendix C.

The proposed mitigation measures for the 2025 plus project impacts (without Dominguez Road scenario) are shown in Exhibit 6-6. These mitigation measures are also identified following the specific traffic impacts described below. Per Town of Loomis[1] and Horseshoe Bar/Penryn Community Plan, Sierra College Boulevard is planned to be widened to a four-lane arterial between Taylor Road and SR-193. This improvement is assumed to occur prior to 2025. In addition, the Town of Loomis has a proposed signal installation at the intersection of Barton Road/Rocklin Road for the near future.

IMPACT 6-1 Rocklin Road/I-80 Westbound Ramps Without Dominguez Road. *The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the westbound ramps of the Rocklin Road/I-80 intersection during the p.m. peak hour from LOS E to LOS F. This impact would be considered* ***significant****.*

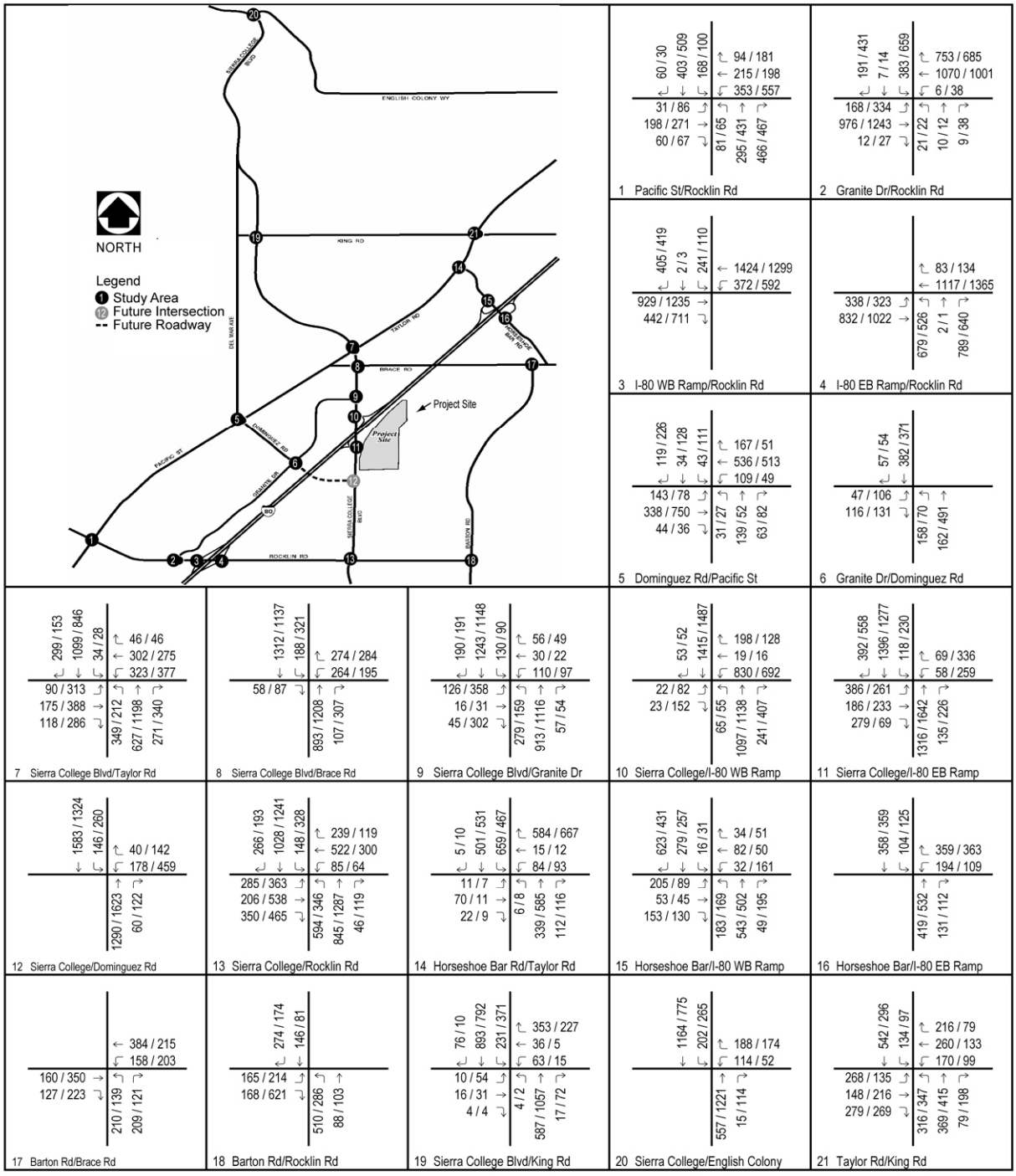
The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the westbound ramps of the Rocklin Road/I-80 intersection (Table 6-4). For the cumulative condition, this intersection operates at an LOS E and would degrade to LOS F with the addition of project traffic. This degradation would cause the intersection's unsatisfactory LOS to deteriorate by one letter grade. Because the cumulative impacts of development are already significant and the project would exceed the established significance threshold, the project would cause a **significant** cumulative impact.

[1] Brian Fraggio, Town of Loomis. Personal communication, January 17, 2007.



Source: LSA 2007

Year 2025 Geometrics and Traffic Control **Exhibit 6-3**

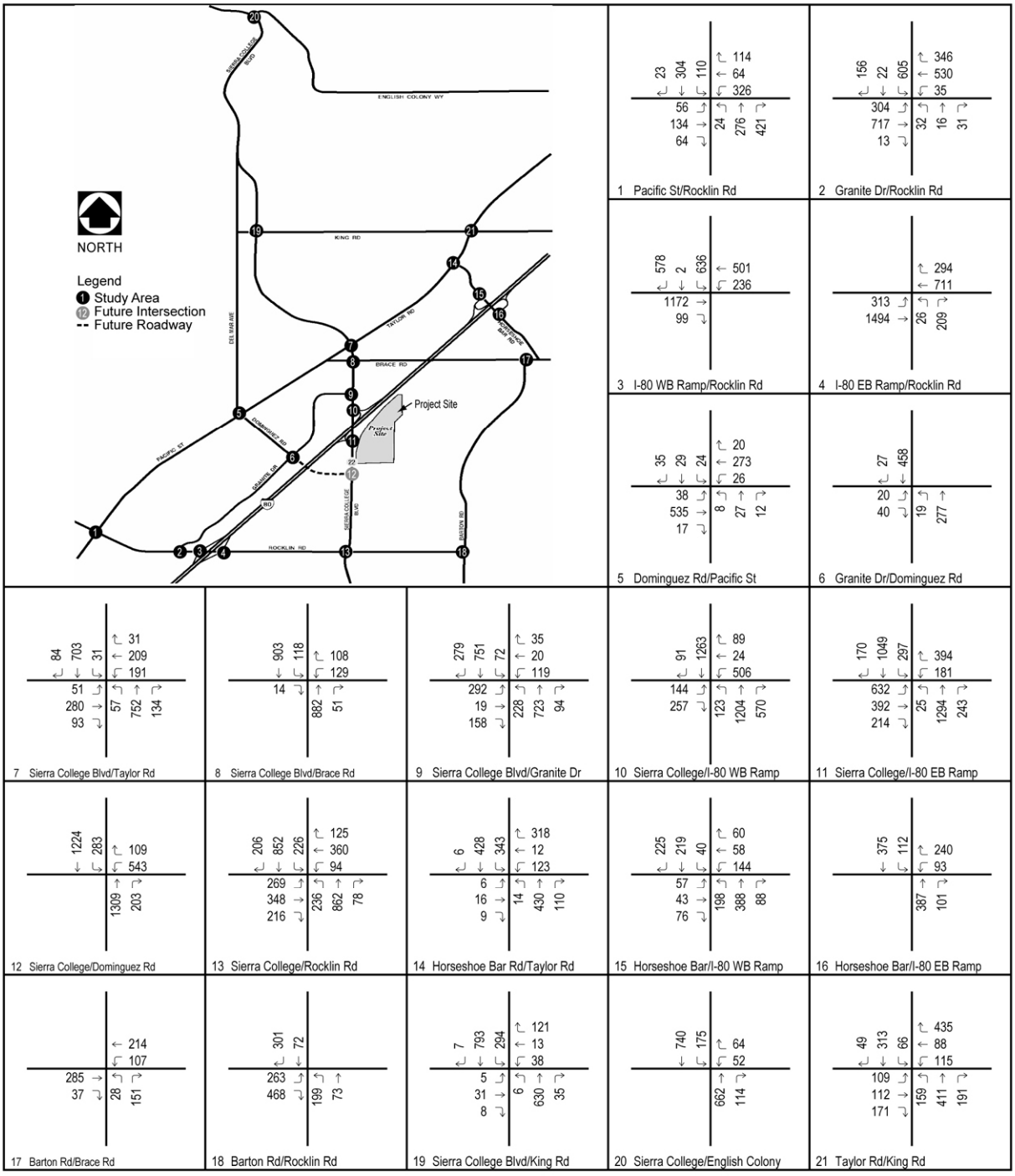


123 / 456 AM / PM Peak Hour Volume

G 06110148.01 026

Source: LSA 2007

Year 2025 Plus Project Peak Hour Traffic Volumes - Without Dominguez Road **Exhibit 6-4**



Source: LSA 2007

Year 2025 Plus Project Saturday Peak Hour Traffic Volumes - Without Dominguez Road Exhibit 6-5

Table 6-4
2025 Plus Project without Dominguez Road Condition Peak Hour Intersection Level of Service Summary

	Intersection	2025 No Project without Dominguez Road Condition						2025 Plus Project without Dominguez Road Condition					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/Pacific Street [1]	0.639	B	0.674	B	0.488	A	0.645	B	0.692	B	0.510	A
2	Rocklin Road/Granite Drive	0.564	A	0.771	C	0.570	A	0.567	A	0.780	C	0.582	A
3	Rocklin Road/I-80 Westbound Ramps	0.734	C	0.993	E	0.818	D	0.754	C	1.045	F	0.884	D
4	Rocklin RoadI-80 Eastbound Ramps	0.878	D	0.856	D	0.490	A	0.895	D	0.909	E	0.564	A
5	Dominguez Road/Pacific Street [1]	0.502	A	0.657	B	0.368	A	0.502	A	0.659	B	0.377	A
6	Dominguez Road/Granite Drive [1]	13.0 sec	B	15.1 sec	C	11.1 sec	B	13.1 sec	B	15.5 sec	C	11.5 sec	B
7	Sierra College Boulevard/Taylor Road (Loomis)	0.825	D	0.788	C	0.466	A	0.846	D	0.848	D	0.532	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.497	A	0.640	B	0.288	A	0.511	A	0.673	B	0.347	A
9	Sierra College Boulevard/Granite Drive	0.551	A	0.559	A	0.482	A	0.569	A	0.614	B	0.544	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.593	A	0.592	A	0.572	A	0.616	B	0.657	B	0.654	B
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.584	A	0.462	A	0.529	A	0.634	B	0.678	B	0.782	C
12	Sierra College Boulevard/Dominguez Road	0.377	A	0.533	A	0.499	A	0.421	A	0.663	B	0.658	B
13	Sierra College Boulevard/Rocklin Road [1]	0.705	C	0.649	B	0.392	A	0.731	C	0.672	B	0.487	A
14	Taylor Road/Horseshoe Bar Road (Loomis)	1.025	F	1.087	F	0.698	B	1.033	F [2]	1.116	F [2]	0.732	C

Table 6-4
2025 Plus Project without Dominguez Road Condition Peak Hour Intersection Level of Service Summary

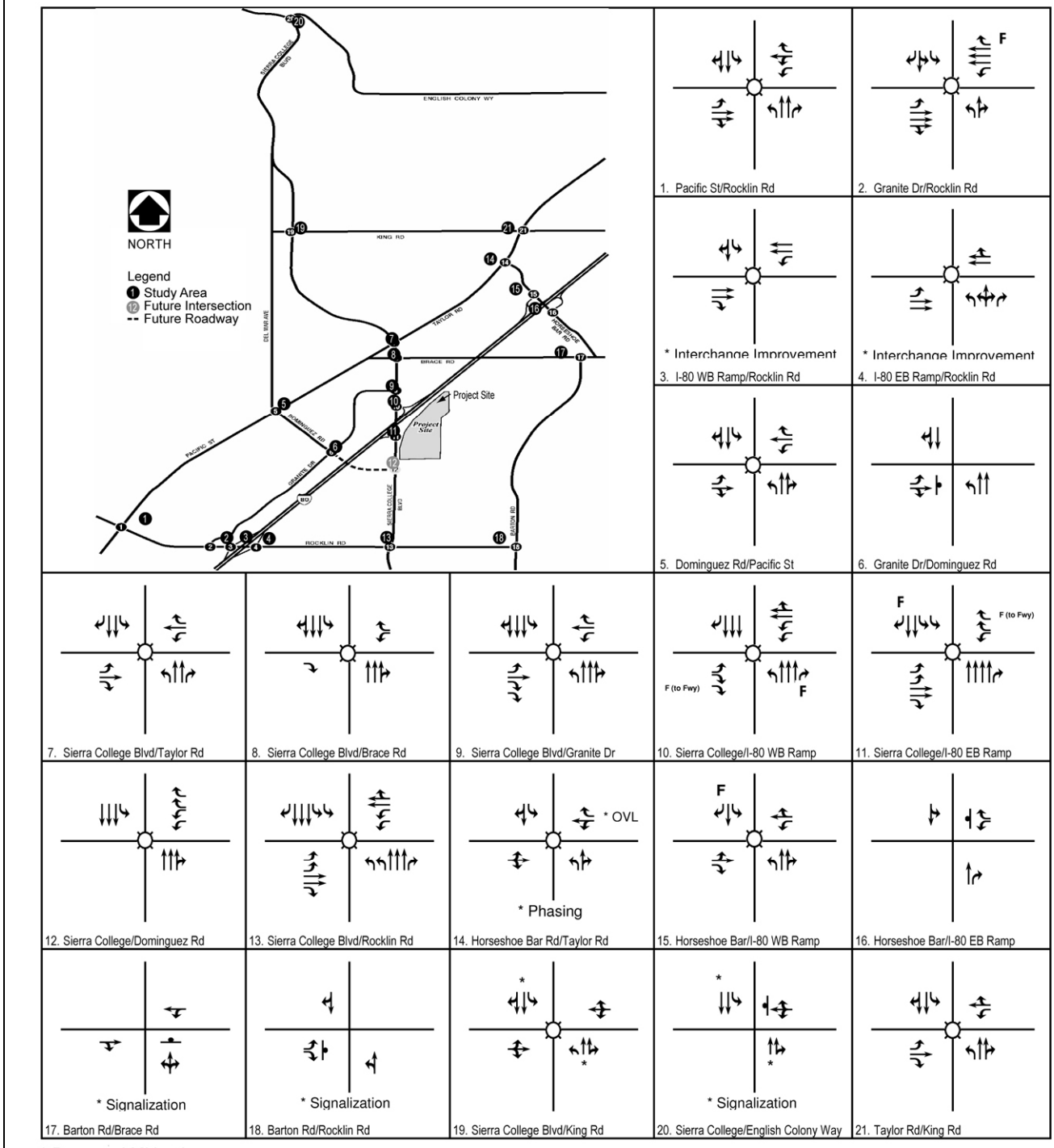
	Intersection	2025 No Project without Dominguez Road Condition						2025 Plus Project without Dominguez Road Condition					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.475	A	0.437	A	0.401	A	0.475	A	0.437	A	0.401	A
16	Horseshoe Bar Road/I-80 Eastbound Ramps [3] (Loomis)	29.8 sec	D	26.9 sec	D	16.7 sec	C	30.2 sec	D	27.7 sec	D	17.3 sec	C
17	Barton Road/Brace Road [1,3] (Loomis)	81.4 sec	F	59.9 sec	F	12.4 sec	B	85.2 sec	F [2]	68.0 sec	F	12.8 sec	B
18	Barton Road/Rocklin Road [1,3] (Loomis)	261.4 sec	F	20.4 sec	C	17.0 sec	C	304.7 sec	F	27.6 sec	D	23.9 sec	C
19	Sierra College Boulevard/King Road [1] (Loomis)	0.607	B	0.744	C	0.481	A	0.615	B	0.771	C	0.511	A
20	Sierra College Boulevard/English Colony Way [1, 3] (Placer County)	266.4 sec	F	593.7 sec	F	32.9 sec	D	305.0 sec	F	840.9 sec	F	47.3 sec	E
21	Taylor Road/King Road [1] (Loomis)	0.802	D	0.509	A	0.589	A	0.807	D [2]	0.523	A	0.605	B

Notes:
ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.
[1] LOS C required for these intersections. LOS D acceptable for all other intersections.
[2] Project impact is less than 5% of total intersection V/C or delay and therefore not a significant impact.
[3] Peak Hour volumes meet Signal Warrant #3 of the Manual of Uniform Traffic Control Devices
* Delay exceeds 1000 seconds
Outline indicates exceeds level of service criteria
Shaded areas indicate a Significant Impact

Table 6-5
2025 Plus Project Without Dominguez Road Daily Roadway Segment Level of Service Summary

Roadway	Segment	Capacity	Volume	Capacity Configuration	V/C	LOS
Taylor Road	King Road and Horseshoe Bar Road [1] (Loomis)	15,000	20,459	Two-lane Collector	1.36	F
	Horseshoe Bar Road and Sierra College Boulevard[1] (Loomis)	15,000	15,471	Two-lane Collector	1.03	F
Pacific Street	Sierra College Boulevard and Dominguez Road [1]	30,000	18,235	Four-lane Undivided Arterial	0.61	B
	Dominguez Road and Rocklin Road [1]	30,000	22,385	Four-lane Undivided Arterial	0.75	C
Rocklin Road	Pacific Street and Granite Drive	30,000	37,864	Four-lane Undivided Arterial	1.26	F
	I-80 and Sierra College Boulevard	30,000	18,006	Four-lane Undivided Arterial	0.60	B
	Sierra College Boulevard and Barton Road [1] (Loomis)	30,000	15,501	Four-lane Undivided Arterial	0.52	A
Barton Road	Rocklin Road and Brace Road [1] (Loomis)	15,000	6,962	Two-lane Collector	0.46	A
Horseshoe Bar Road	I-80 and Brace Road (Loomis)	15,000	10,033	Two-lane Collector	0.67	B
Brace Road	I-80 and Barton Road [1] (Loomis)	15,000	9,864	Two-lane Collector	0.66	B
	I-80 and Sierra College Boulevard [1] (Loomis)	15,000	9,202	Two-lane Collector	0.61	B
Sierra College Boulevard	English Colony Way and King Road [1] (Placer County)	30,000	24,724	Four-lane Undivided Arterial	0.82	D
	King Road and Taylor Road [1] (Loomis)	30,000	23,682	Four-lane Undivided Arterial	0.79	C
	Taylor Road and I-80	50,525	36,360	Six-lane Arterial	0.72	C
	I-80 and Dominguez Road	50,525	35,494	Six-lane Arterial	0.70	B
	Dominguez Road and Rocklin Road [1]	50,525	36,348	Six-lane Arterial	0.72	C
Granite Drive	Dominguez Road and Sierra College Boulevard [1]	30,000	11,387	Four-lane Undivided Arterial	0.38	A
	Dominguez Road and Rocklin Road [1]	30,000	14,068	Four-lane Undivided Arterial	0.47	A
Dominguez Road	Taylor Road and Granite Drive [1]	15,000	5,042	Two-lane Collector	0.34	A
King Road	Sierra College Boulevard and Taylor Road [1] (Loomis)	15,000	7,037	Two-lane Collector	0.47	A

Notes:
[1] LOS C required for these segments. LOS D acceptable for all other segments.
Outline indicates exceeds level of service criteria.
Shaded areas indicate roadway Improvements consistent with City of Rocklin General Plan, Town of Loomis General Plan, and the Horseshoe Bar/Penryn Community Plan.



Source: LSA 2007

Year 2025 Plus Project Without Dominguez Road – Mitigations **Exhibit 6-6**

Mitigation Measure 6-1 Rocklin Road/I-80 Westbound Ramps Without Dominguez Road

Implement Mitigation Measure 4.2-1.

Level of Significance after Mitigation

As identified in Table 6-6, with implementation of the identified mitigation measure, the LOS would be improved to LOS B during the a.m. and p.m. peak hours, and LOS C during the Saturday peak hour. This would be an acceptable level and this impact would be considered less than significant. In other words, by paying the traffic fee required by Mitigation Measure 4.2-1, the applicant would be paying its incremental fair share towards constructing facilities that will render the significant cumulative impact less than significant.

IMPACT 6-2 Rocklin Road/I-80 Eastbound Ramps Without Dominguez Road. *The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the eastbound ramps of the Rocklin Road/I-80 intersection from LOS D to LOS E during the p.m. peak hour. This impact would be considered* ***significant****.*

The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the eastbound ramps of the Rocklin Road/I-80 intersection (Table 6-4). For the cumulative condition, this intersection operates at an LOS D with a volume/capacity ratio of 0.856 during the p.m. peak hour. The project would degrade the intersection operations to an LOS E with a volume/capacity ratio of 0.909 during the p.m. peak hour. This degradation would cause the intersection's LOS to deteriorate from a satisfactory to an unsatisfactory condition. Because the project would exceed the established significance threshold, the project would cause a **significant** cumulative impact.

Mitigation Measure 6-2 Rocklin Road/I-80 Eastbound Ramps Without Dominguez Road

Implement Mitigation Measure 4.2-1 in order to reduce westbound through traffic at the intersection of Rocklin Road/I-80 eastbound ramps and improve operations at this intersection to acceptable levels.

Level of Significance after Mitigation

As identified in Table 6-6, with implementation of the identified mitigation measure, the LOS would be improved to LOS C during the a.m. and p.m. peak hours, and LOS A during the Saturday peak hour. This would be an acceptable level and this impact would be considered less than significant. In other words, by paying the traffic fee required by Mitigation Measure 4.2-1, the applicant would be paying its incremental fair share towards constructing facilities that will render the significant cumulative impact less than significant.

IMPACT 6-3 Barton Road/Brace Road Intersection Without Dominguez Road. *The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Barton Road/Brace Road intersection during the a.m. and p.m. peak hour. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered* ***significant****.*

This intersection is operating at an LOS F during the a.m. and p.m. peak hours in the cumulative condition (Table 6-4). The intersection is forecast to meet the peak-hour traffic signal warrant in the cumulative without Dominguez Road extension scenario. The intersection would continue to meet the peak-hour traffic signal warrant with the addition of project traffic. Because the cumulative impacts of development are already significant and the project would exceed the established significance threshold of a contribution of greater than 5 percent, the project would cause a **significant** cumulative impact.

Table 6-6
2025 Plus Project without Dominguez Road Condition Peak Hour Intersection Level of Service Summary – With Mitigation

	Intersection	2025 Plus Project without Dominguez Road Condition						2025 Plus Project without Dominguez Road Condition - With Mitigation					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/Pacific Street [1]	0.645	B	0.692	B	0.510	A	0.645	B	0.692	B	0.510	A
2	Rocklin Road/Granite Drive	0.567	A	0.780	C	0.582	A	0.567	A	0.780	C	0.582	A
3	Rocklin Road/I-80 Westbound Ramps	0.754	C	1.045	F	0.884	D	0.678	B	0.687	B	0.741	C
4	Rocklin RoadI-80 Eastbound Ramps	0.895	D	0.909	E	0.564	A	0.782	C	0.730	C	0.522	A
5	Dominguez Road/Pacific Street [1]	0.502	A	0.659	B	0.377	A	0.502	A	0.659	B	0.377	A
6	Dominguez Road/Granite Drive [1]	13.1 sec	B	15.5 sec	C	11.5 sec	B	13.1 sec	B	15.5 sec	C	11.5 sec	B
7	Sierra College Boulevard/Taylor Road (Loomis)	0.846	D	0.848	D	0.532	A	0.846	D	0.848	D	0.532	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.511	A	0.673	B	0.347	A	0.511	A	0.673	B	0.347	A
9	Sierra College Boulevard/Granite Drive	0.569	A	0.614	B	0.544	A	0.569	A	0.614	B	0.544	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.616	B	0.657	B	0.654	B	0.616	B	0.657	B	0.654	B
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.634	B	0.678	B	0.782	C	0.634	B	0.678	B	0.782	C
12	Sierra College Boulevard/Dominguez Road	0.421	A	0.663	B	0.658	B	0.421	A	0.663	B	0.658	B
13	Sierra College Boulevard/Rocklin Road [1]	0.731	C	0.672	B	0.487	A	0.731	C	0.672	B	0.487	A
14	Taylor Road/Horseshoe Bar Road (Loomis)	1.033	F	1.116	F	0.732	C	1.033	F	1.116	F	0.732	C
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.475	A	0.437	A	0.401	A	0.475	A	0.437	A	0.401	A

Table 6-6
2025 Plus Project without Dominguez Road Condition Peak Hour Intersection Level of Service Summary – With Mitigation

	Intersection	2025 Plus Project without Dominguez Road Condition						2025 Plus Project without Dominguez Road Condition - With Mitigation					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
16	Horseshoe Bar Road/I-80 Eastbound Ramps [2] (Loomis)	30.2 sec	D	27.7 sec	D	17.3 sec	C	30.2 sec	D	27.7 sec	D	17.3 sec	C
17	Barton Road/Brace Road [1, 2] (Loomis)	85.2 sec	F	68.0 sec	F	12.8 sec	B	0.582	A	0.628	B	0.368	A
18	Barton Road/Rocklin Road [1, 2] (Loomis)	304.7 sec	F	27.6 sec	D	23.9 sec	C	0.665	B	0.704	C	0.630	B
19	Sierra College Boulevard/King Road [1] (Loomis)	0.615	B	0.771	C	0.511	A	0.615	B	0.771	C	0.511	A
20	Sierra College Boulevard/English Colony Way [1, 2] (Placer County)	305.0 sec	F	840.9 sec	F	47.3 sec	E	0.536	A	0.702	C	0.491	A
21	Taylor Road/King Road [1] (Loomis)	0.807	D	0.523	A	0.605	B	0.807	D	0.523	A	0.605	B

Notes:
ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.
[1] LOS C required for these intersections. LOS D acceptable for all other intersections.
[2] Peak Hour volumes meet Signal Warrant #3 of the Manual of Uniform Traffic Control Devices
* Delay exceeds 1000 seconds
Outline = Mitigated condition
Shaded areas indicate a Significant Impact

Mitigation Measure 6-3 Barton Road/Brace Road Intersection Without Dominguez Road

The project applicant shall pay their fair share to the signalization of this intersection. The project applicant shall pay a traffic impact fee in an amount that constitutes the project's fair share contribution to the construction of the proposed improvement as part of the City's development review process, consistent with the City's CIP program, SPRTA program, or other applicable funding program.

Level of Significance after Mitigation

As identified in Table 6-6, with implementation of the identified mitigation measure, the LOS would be improved to LOS A during the a.m. and Saturday peak hours, and LOS B during the p.m. peak hour. This would be an acceptable level and this impact would be considered less than significant.

IMPACT 6-4 Barton Road/Rocklin Road Intersection Without Dominguez Road. *The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Barton Road/Rocklin Road intersection during the a.m. and p.m. peak hour. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered* ***significant****.*

This intersection is operating at an LOS F during the a.m. peak hours in the cumulative condition (Table 6-4). The intersection is forecast to meet the peak-hour traffic signal warrant in the cumulative without Dominguez Road extension scenario. The intersection would continue to meet the peak-hour traffic signal warrant with the addition of project traffic. Because the cumulative impacts of development are already significant and the project would exceed the established significance threshold of a contribution of greater than 5 percent, the project would cause a **significant** cumulative impact.

Mitigation Measure 6-4 Barton Road/Rocklin Road Intersection Without Dominguez Road

The project applicant shall pay their fair share to the signalization of this intersection. The project applicant shall pay a traffic impact fee in an amount that constitutes the project's fair share contribution to the construction of the proposed improvement as part of the City's development review process, consistent with the City's CIP program, SPRTA program, or other applicable funding program.

Level of Significance after Mitigation

As identified in Table 6-6, with implementation of the identified mitigation measure, the LOS would be improved to LOS B during the a.m. and Saturday peak hours, and LOS C during the p.m. peak hour. This would be an acceptable level and this impact would be considered less than significant.

IMPACT 6-5 Sierra College Boulevard/English Colony Way Intersection Without Dominguez Road. *The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the Sierra College Boulevard/English Colony Way intersection during the a.m. and p.m. peak hour and during Saturday conditions. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered* ***significant****.*

This intersection is operating at an LOS F during the a.m. and p.m. peak hours in the cumulative condition (Table 6-4). This intersection is also operating at an LOS D during the Saturdays in the cumulative condition. The intersection is forecast to meet the peak-hour traffic signal warrant in the cumulative without Dominguez Road extension scenario. The intersection would continue to meet the peak-hour traffic signal warrant with the addition of project traffic. Because the cumulative impacts of development are already significant and the project would exceed the established significance threshold of a contribution of greater than 5 percent, the project would cause a **significant** cumulative impact.

Mitigation Measure 6-5 Sierra College Boulevard/English Colony Way Intersection Without Dominguez Road

The project applicant shall pay their fair share to the signalization of this intersection. The project applicant shall pay a traffic impact fee in an amount that constitutes the project's fair share contribution to the construction of the proposed improvement as part of the City's development review process, consistent with the City's CIP program, SPRTA program, or other applicable funding program.

Level of Significance after Mitigation

As identified in Table 6-6, with implementation of the identified mitigation measure, the LOS would be improved to LOS A during the a.m. and Saturday peak hours, and LOS C during the p.m. peak hour. This would be an acceptable level and this impact would be considered less than significant.

IMPACT 6-6 Taylor Road /Horseshoe Bar Road Intersection Without Dominguez Road. *The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Taylor Road/Horseshoe Bar Road intersection. Although this intersection already operates unacceptably, the project's contribution would represent less than a 5 percent decrease in the volume/capacity ratio. Therefore, this impact would be considered* ***less than significant****.*

The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Taylor Road/Horseshoe Bar Road intersection (Table 6-4). For the cumulative condition, the Taylor Road/Horseshoe Bar Road intersection would operate at an LOS F with a volume/capacity ratio of 1.025 during the a.m. peak hour and 1.087 during the p.m. peak hour. The intersection would continue to operate at LOS F with the proposed project and the volume/capacity ratio would be degraded to 1.033 during the a.m. peak hour and 1.116 during the p.m. peak hour. This degradation represents less than a 5 percent decrease in the volume/capacity ratio.

Because the volume/capacity ratio would not be degraded by more than 5 percent for this intersection with the contribution of project traffic, the project's impacts at this intersection would be considered **less than significant**.

Mitigation Measure 6-6 Taylor Road /Horseshoe Bar Road Intersection Without Dominguez Road

No mitigation is necessary.

Level of Significance after Mitigation

The project's impacts on the Taylor Road/Horseshoe Bar Road intersection would be considered less than significant.

IMPACT 6-7 Taylor Road/King Road Intersection Without Dominguez Road. *The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Taylor Road/King Road intersection. Although this intersection already operates unacceptably, the project's contribution would represent less than a 5 percent decrease in the volume/capacity ratio. Therefore, this impact would be considered* ***less than significant****.*

The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Taylor Road/King Road intersection (Table 6-4). For the cumulative condition, the Taylor Road/King Road intersection would operate at an LOS D with a volume/capacity ratio of 0.802 during the a.m. peak hour. The intersection would continue to operate at LOS D with the proposed project and the volume/capacity ratio would be degraded to 0.807, which represents less than a 5 percent decrease.

Because the volume/capacity ratio would not be degraded by more than 5 percent for this intersection with the contribution of project traffic, the project's impacts at this intersection would be considered **less than significant**.

Mitigation Measure 6-7 Taylor Road/King Road Intersection Without Dominguez Road

No mitigation is necessary.

Level of Significance after Mitigation

The project's impacts on the Taylor Road/King Road intersection would be considered less than significant.

IMPACT 6-8 Roadway Segments Without Dominguez Road. *The proposed project would cause four roadway segments to exceed the threshold of daily capacity. However, in both the a.m. and p.m. peak hours, the traffic on all four roadway segments are forecast to operate with satisfactory volume/capacity ratios in both peak hours with project conditions. Therefore, the project's impacts on roadway segments would be considered* ***less than significant****.*

As shown in Table 6-5, the results of the roadway segment analysis indicate that the following four roadway segments are forecast to operate with unsatisfactory LOS in the 2025 plus project without Dominguez Road scenario:

- Taylor Road between King Road and Horseshoe Bar Road (Loomis)
- Taylor Road between Horseshoe Bar Road and Sierra College Boulevard (Loomis)
- Rocklin Road between Pacific Street and Granite Drive
- Sierra College Boulevard between English Colony Way and King Road (Placer County)

These segments would exceed the threshold of daily capacity in the cumulative plus project scenario. However, in both the a.m. and p.m. peak hours, as well as the Saturday peak hour, the traffic on all four roadway segments is forecast to operate with satisfactory volume/capacity ratios with project conditions, as shown in Table 6-7. Therefore, the project's impacts on roadway segments would be considered **less than significant**.

Mitigation Measure 6-8 Roadway Segments Without Dominguez Road

No mitigation is necessary.

Level of Significance after Mitigation

The project's cumulative impacts on roadway segments would be considered less than significant.

6.1.7 DOMINGUEZ ROAD ANALYSIS

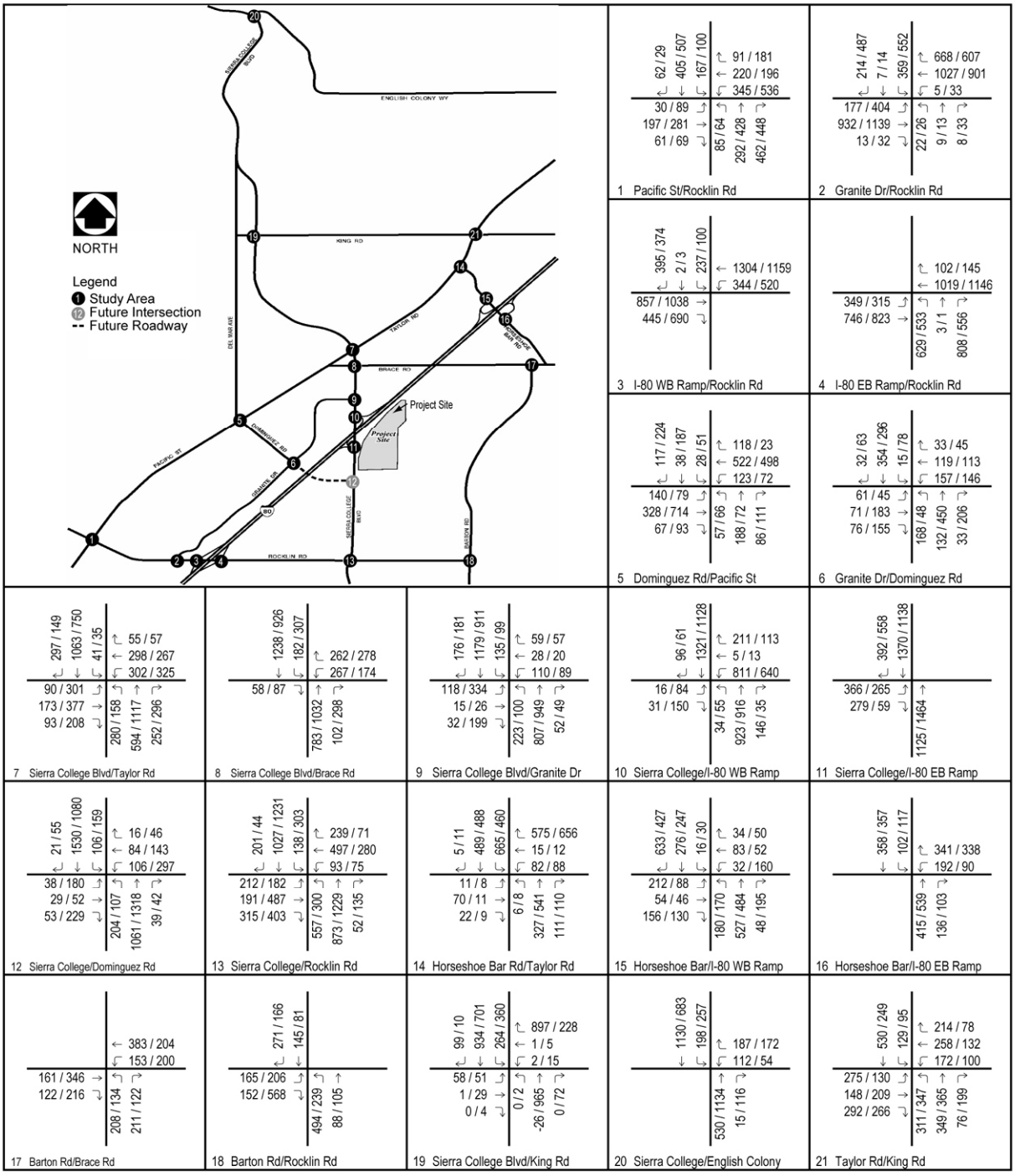
An analysis of forecast year 2025 traffic volumes was prepared assuming that Dominguez Road is extended east to Sierra College Boulevard. This alternative network is referred to as "with Dominguez Road" and is intended to provide an analysis of the effects of extending Dominguez Road.

2025 NO PROJECT WITH DOMINGUEZ ROAD

Weekday and Saturday peak-hour forecast traffic volumes for the 2025 no project with Dominguez Road scenario are shown in Exhibit 6-7 and Exhibit 6-8. The LOS for study area intersections and roadway segments are shown in Table 6-8 and Table 6-9. The 2025 no project with Dominguez Road traffic volume development and LOS worksheets are provided in Appendix C.

Table 6-7
2025 Without Dominguez Road Peak Hour Roadway Segment Level of Service Summary

Roadway	Segment	Capacity	2025 No Project			2025 Plus Project		
			Volume	V/C	LOS	Volume	V/C	LOS
Taylor Road	**King Rd and Horseshoe Bar Rd (Loomis)**							
	A.M. Peak Hour Northbound	1,650	657	0.40	A	674	0.41	A
	A.M. Peak Hour Southbound	1,650	846	0.51	A	860	0.52	A
	Total A.M. Peak Hour	*3,300*	*1,503*	*0.46*	*A*	*1,534*	*0.46*	*A*
	P.M Peak Hour Northbound	1,650	586	0.36	A	633	0.38	A
	P.M Peak Hour Southbound	1,650	660	0.40	A	709	0.43	A
	Total P.M. Peak Hour	*3,300*	*1,246*	*0.38*	*A*	*1,342*	*0.41*	*A*
	SAT Peak Hour Northbound	1,650	501	0.30	A	560	0.34	A
	SAT Peak Hour Southbound	1,650	898	0.54	A	953	0.58	A
	Total SAT Peak Hour	*3,300*	*1,399*	*0.42*	*A*	*1,513*	*0.46*	*A*
Taylor Road	**Horseshoe Bar Rd and Sierra College Blvd (Loomis)**							
	A.M. Peak Hour Northbound	1,650	1,147	0.70	C	1,164	0.71	C
	A.M. Peak Hour Southbound	1,650	921	0.56	A	935	0.57	A
	Total A.M. Peak Hour	*3,300*	*2,068*	*0.63*	*B*	*2,099*	*0.64*	*B*
	P.M Peak Hour Northbound	1,650	961	0.58	A	1,008	0.61	B
	P.M Peak Hour Southbound	1,650	1,210	0.73	C	1,259	0.76	C
	Total P.M. Peak Hour	*3,300*	*2,171*	*0.66*	*B*	*2,267*	*0.69*	*B*
	SAT Peak Hour Northbound	1,650	718	0.44	A	777	0.47	A
	SAT Peak Hour Southbound	1,650	699	0.42	A	754	0.46	A
	Total SAT Peak Hour	*3,300*	*1,417*	*0.43*	*A*	*1,531*	*0.46*	*A*
Rocklin Road	**Pacific St and Granite Dr**							
	A.M. Peak Hour Eastbound	3,300	1,815	0.55	A	1,825	0.55	A
	A.M. Peak Hour Westbound	3,300	1,355	0.41	A	1,367	0.41	A
	Total A.M. Peak Hour	*6,600*	*3,170*	*0.48*	*A*	*3,192*	*0.48*	*A*
	P.M Peak Hour Eastbound	3,300	1,691	0.51	A	1,726	0.52	A
	P.M Peak Hour Westbound	3,300	1,907	0.58	A	1,940	0.59	A
	Total P.M. Peak Hour	*6,600*	*3,598*	*0.55*	*A*	*3,666*	*0.56*	*A*
	SAT Peak Hour Eastbound	3,300	870	0.26	A	911	0.28	A
	SAT Peak Hour Westbound	3,300	1,310	0.40	A	1,352	0.41	A
	Total SAT Peak Hour	*6,600*	*2,180*	*0.33*	*A*	*2,263*	*0.34*	*A*
Sierra College Boulevard	**English Colony Way and King Road (Placer County)**							
	A.M. Peak Hour Northbound	3,300	1,333	0.40	A	1,363	0.41	A
	A.M. Peak Hour Southbound	3,300	718	0.22	A	744	0.23	A
	Total A.M. Peak Hour	*6,600*	*2,051*	*0.31*	*A*	*2,107*	*0.32*	*A*
	P.M Peak Hour Northbound	3,300	955	0.29	A	1,040	0.32	A
	P.M Peak Hour Southbound	3,300	1,307	0.40	A	1,395	0.42	A
	Total P.M. Peak Hour	*6,600*	*2,262*	*0.34*	*A*	*2,435*	*0.37*	*A*
	SAT Peak Hour Northbound	3,300	808	0.24	A	776	0.24	A
	SAT Peak Hour Southbound	3,300	627	0.19	A	915	0.28	A
	Total SAT Peak Hour	*6,600*	*1,435*	*0.22*	*A*	*1,691*	*0.26*	*A*



123 / 456 AM / PM Peak Hour Volume

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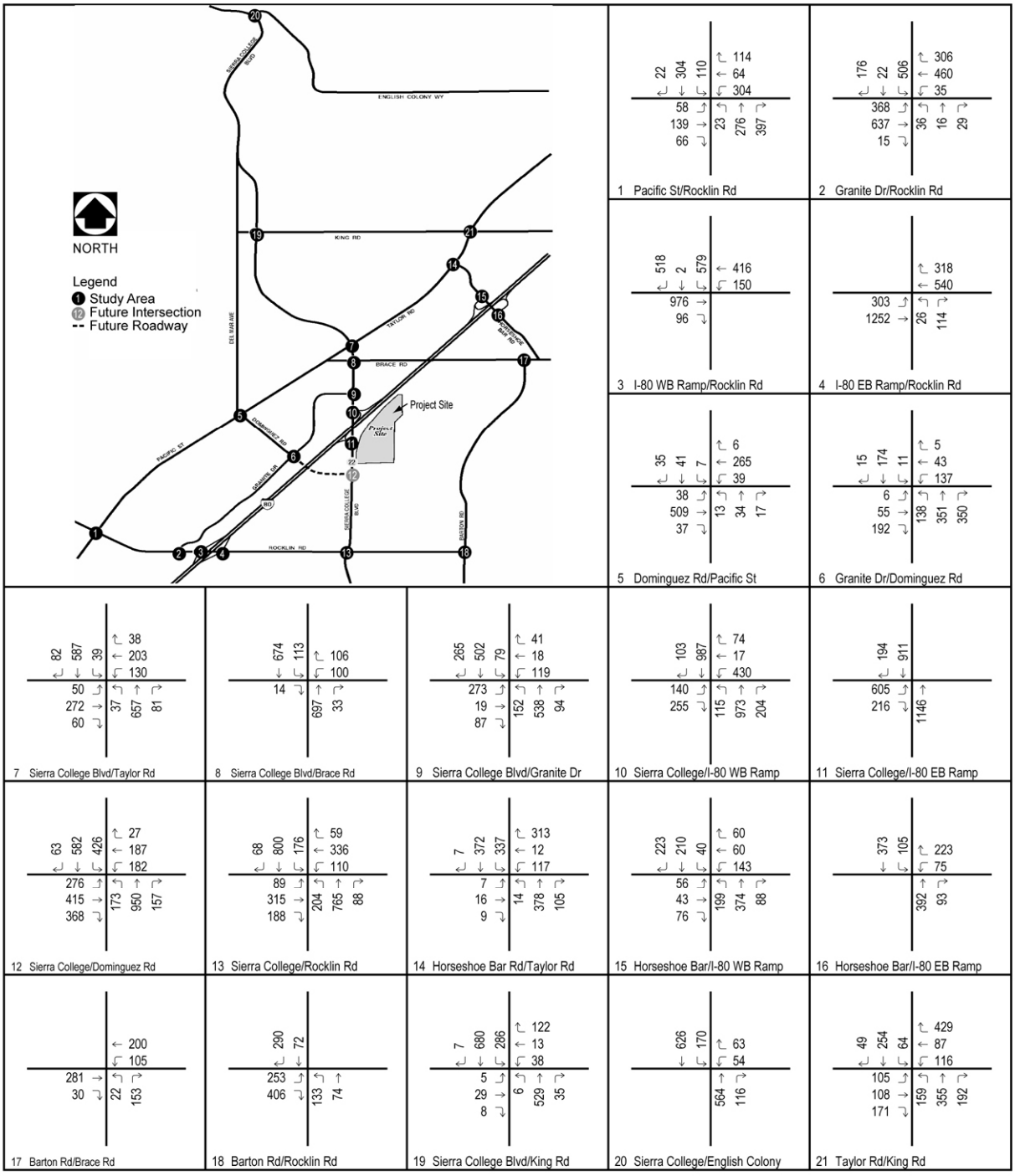
Source: LSA 2007

Year 2025 No Project Peak Hour Traffic Volumes - With Dominguez Road **Exhibit 6-7**



Source: LSA 2007

Year 2025 No Project Saturday Peak Hour Traffic Volumes – With Dominguez Road **Exhibit 6-8**

Table 6-8
2025 No Project With Dominguez Road Condition Peak Hour Intersection Level of Service Summary

	Intersection	2025 No Project without Dominguez Road Condition					
		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/Pacific Street [1]	0.641	B	0.676	B	0.490	A
2	Rocklin Road/Granite Drive	0.562	A	0.829	D	0.565	A
3	Rocklin Road/I-80 Westbound Ramps	0.719	C	0.962	E	0.738	C
4	Rocklin RoadI-80 Eastbound Ramps	0.871	D	0.824	D	0.482	A
5	Dominguez Road/Pacific Street [1]	0.507	A	0.708	C	0.385	A
6	Dominguez Road/Granite Drive [1]	48.8 sec	E	*	F	70.6 sec	F
7	Sierra College Boulevard/Taylor Road (Loomis)	0.780	C	0.785	C	0.466	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.486	A	0.623	B	0.285	A
9	Sierra College Boulevard/Granite Drive	0.516	A	0.518	A	0.443	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.577	A	0.565	A	0.567	A
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.584	A	0.433	A	0.478	A
12	Sierra College Boulevard/Dominguez Road	0.445	A	0.600	B	0.762	C
13	Sierra College Boulevard/Rocklin Road [1]	0.687	B	0.619	B	0.380	A
14	Taylor Road/Horseshoe Bar Road (Loomis)	1.024	F	1.076	F	0.691	B
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.476	A	0.431	A	0.395	A
16	Horseshoe Bar Road/I-80 Eastbound Ramps [2] (Loomis)	29.0 sec	D	24.6 sec	C	16.0 sec	C
17	Barton Road/Brace Road [1,2] (Loomis)	78.4 sec	F	57.3 sec	F	12.3 sec	B
18	Barton Road/Rocklin Road [1,2] (Loomis)	272.1 sec	F	20.8 sec	C	17.0 sec	C
19	Sierra College Boulevard/King Road [1] (Loomis)	0.607	B	0.734	C	0.475	A
20	Sierra College Boulevard/English Colony Way [1,2] (Placer County)	246.7 sec	F	587.0 sec	F	33.2 sec	D
21	Taylor Road/King Road [1] (Loomis)	0.802	D	0.508	A	0.581	A

Notes:
ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.
[1] LOS C required for these intersections. LOS D acceptable for all other intersections.
[2] Peak Hour volumes meet Signal Warrant #3 of the Manual of Uniform Traffic Control Devices
* Delay exceeds 1000 seconds
Outline indicates exceeds level of service criteria

Table 6-9
2025 No Project With Dominguez Road Daily Roadway Segment Level of Service Summary

Roadway	Segment	Capacity	Volume	Capacity Configuration	V/C	LOS
Taylor Road	King Road and Horseshoe Bar Road [1] (Loomis)	15,000	19,454	Two-lane Collector	1.30	F
	Horseshoe Bar Road and Sierra College Boulevard[1] (Loomis)	15,000	14,950	Two-lane Collector	1.00	E
Pacific Street	Sierra College Boulevard and Dominguez Road [1]	30,000	16,466	Four-lane Undivided Arterial	0.55	A
	Dominguez Road and Rocklin Road [1]	30,000	22,389	Four-lane Undivided Arterial	0.75	C
Rocklin Road	Pacific Street and Granite Drive	30,000	37,537	Four-lane Undivided Arterial	1.25	F
	I-80 and Sierra College Boulevard	30,000	13,176	Four-lane Undivided Arterial	0.44	A
	Sierra College Boulevard and Barton Road [1] (Loomis)	30,000	14,496	Four-lane Undivided Arterial	0.48	A
Barton Road	Rocklin Road and Brace Road [1] (Loomis)	15,000	6,292	Two-lane Collector	0.42	A
Horseshoe Bar Road	I-80 and Brace Road (Loomis)	15,000	9,908	Two-lane Collector	0.66	B
Brace Road	I-80 and Barton Road 1 (Loomis)	15,000	9,715	Two-lane Collector	0.65	B
	I-80 and Sierra College Boulevard [1] (Loomis)	15,000	9,161	Two-lane Collector	0.61	B
Sierra College Boulevard	English Colony Way and King Road [1] (Placer County)	30,000	23,002	Four-lane Undivided Arterial	0.77	C
	King Road and Taylor Road [1] (Loomis)	30,000	21,470	Four-lane Undivided Arterial	0.72	C
	Taylor Road and I-80	50,525	31,973	Six-lane Arterial	0.63	B
	I-80 and Dominguez Road	50,525	25,276	Six-lane Arterial	0.50	A
	Dominguez Road and Rocklin Road [1]	50,525	34,148	Six-lane Arterial	0.68	B
Granite Drive	Dominguez Road and Sierra College Boulevard [1]	30,000	9,210	Four-lane Undivided Arterial	0.31	A
	Dominguez Road and Rocklin Road [1]	30,000	13,319	Four-lane Undivided Arterial	0.44	A
Dominguez Road	Taylor Road and Granite Drive 1	15,000	7,278	Two-lane Collector	0.49	A
King Road	Sierra College Boulevard and Taylor Road [1] (Loomis)	15,000	7,019	Two-lane Collector	0.47	A

Notes:
[1] LOS C required for these segments. LOS D acceptable for all other segments.
Outline indicates exceeds level of service criteria
Shade indicates roadway improvements consistent with City of Rocklin General Plan, Town of Loomis General Plan, and the Horseshoe Bar/Penryn Community Plan

As shown in Table 6-8, the following seven intersections are forecast to operate at unsatisfactory LOS in the 2025 no project with Dominguez Road condition:

- Rocklin Road/I-80 Westbound Ramps
- Dominguez Road/Granite Drive
- Taylor Road/Horseshoe Bar Road (Loomis)
- Barton Road/Brace Road (Loomis)
- Barton Road/Rocklin Road (Loomis)
- Sierra College Boulevard/English Colony Way (Placer County)
- Taylor Road/King Road (Loomis)

2025 PLUS PROJECT WITH DOMINGUEZ ROAD

Traffic volumes generated by the proposed project were added to the 2025 no project traffic volumes, and LOS were calculated for the 2025 plus project with Dominguez Road scenario. Weekday and Saturday peak-hour forecast traffic volumes for the 2025 plus project with Dominguez Road scenario are shown in Exhibit 6-9 and Exhibit 6-10. The LOS for study area intersections and roadway segments in the 2025 plus project with Dominguez Road scenario is shown in Table 6-10 and Table 6-11. The 2025 plus project with Dominguez Road LOS worksheets are provided in Appendix C. The proposed mitigations for the 2025 plus project with Dominguez Road scenario are shown in Exhibit 6-11.

IMPACT 6-9 Rocklin Road/I-80 Westbound Ramps With Dominguez Road. *The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the westbound ramps of the Rocklin Road/I-80 intersection during the p.m. peak hour from LOS E to LOS F. This impact would be considered* ***significant****.*

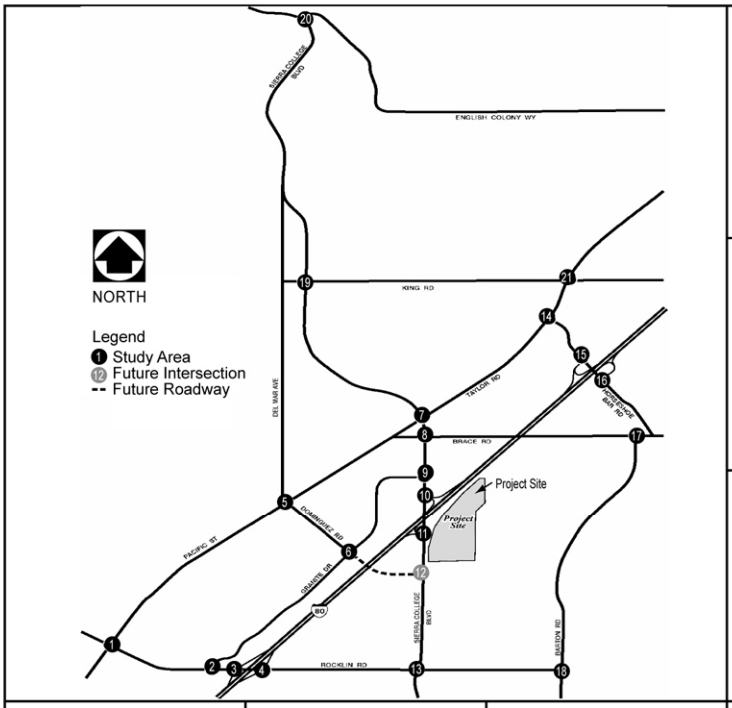
The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the westbound ramps of the Rocklin Road/I-80 intersection (Table 6-10). For the cumulative condition, this intersection operates at an LOS E and would degrade to LOS F with the addition of project traffic. The volume/capacity ratio would degrade from 0.962 to 1.015, which represents an increase of greater than five percent. Because the cumulative impacts of development are already significant and the project would exceed the established significance threshold of a contribution of greater than 5 percent, the project would cause a **significant** cumulative impact.

Mitigation Measure 6-9 Rocklin Road/I-80 Westbound Ramps with Dominguez Road

Implement Mitigation Measure 4.2-1.

Level of Significance after Mitigation

As identified in Table 6-12, with implementation of the identified mitigation measure, the LOS would be improved to LOS C or better during the intersections peak hours. This would be an acceptable level and this impact would be considered less than significant.



1 Pacific St/Rocklin Rd

	62 / 29 ↲ ↓ ↳ 405 / 507 ↳ 167 / 100	↱ 91 / 181
		← 220 / 196
30 / 89 ↳		↰ 351 / 556
197 / 281 →		↑ ↱
61 / 69 ↲	85 / 64	292 / 428 469 / 467

2 Granite Dr/Rocklin Rd

	214 / 487 ↲ ↓ ↳ 7 / 14 ↳ 360 / 554	↱ 669 / 610
		← 1036 / 933
177 / 404 ↳		↰ 5 / 33
943 / 1170 →		↑ ↱
13 / 32 ↲	22 / 26	9 / 13 8 / 33

3 I-80 WB Ramp/Rocklin Rd

	398 / 383 ↲ ↓ ↳ 2 / 3 ↳ 237 / 100	← 1311 / 1184
869 / 1071 →		↰ 367 / 598
445 / 690 ↲		

4 I-80 EB Ramp/Rocklin Rd

		↱ 102 / 145
		← 1049 / 1249
352 / 324 ↳		↰
754 / 847 →		↑ ↱
	629 / 533	3 / 1 834 / 631

5 Dominguez Rd/Pacific St

	117 / 224 ↲ ↓ ↳ 39 / 189 ↳ 31 / 59	↱ 120 / 29
		← 522 / 498
140 / 79 ↳		↰ 123 / 72
328 / 714 →		↑ ↱
68 / 95 ↲	58 / 68	189 / 76 86 / 111

6 Granite Dr/Dominguez Rd

	33 / 67 ↲ ↓ ↳ 354 / 296 ↳ 17 / 84	↱ 35 / 51
		← 120 / 115
62 / 47 ↳		↰ 158 / 148
72 / 185 →		↑ ↱
76 / 155 ↲	168 / 48	132 / 450 34 / 208

7 Sierra College Blvd/Taylor Rd

	297 / 149 ↲ ↓ ↳ 1093 / 835 ↳ 41 / 35	↱ 55 / 57
		← 298 / 267
90 / 301 ↳		↰ 319 / 372
173 / 377 →		↑ ↱
97 / 218 ↲	283 / 167	620 / 1205 266 / 345

8 Sierra College Blvd/Brace Rd

	1288 / 1068 ↓ ↳ 182 / 307	↱ 262 / 278
		↰ 275 / 197
58 / 87 ↲		↑ ↱
	826 / 1177	107 / 315

9 Sierra College Blvd/Granite Dr

	176 / 181 ↲ ↓ ↳ 1237 / 1076 ↳ 135 / 99	↱ 59 / 57
		← 28 / 20
118 / 334 ↳		↰ 110 / 89
15 / 26 →		↑ ↱
40 / 221 ↲	230 / 125	855 / 1111 52 / 49

10 Sierra College/I-80 WB Ramp

	96 / 61 ↲ ↓ ↳ 1387 / 1315	↱ 211 / 113
		← 5 / 13
16 / 84 ↳		↰ 837 / 715
31 / 150 ↲		↑ ↱
	34 / 55	978 / 1103 241 / 356

11 Sierra College/I-80 EB Ramp

	392 / 558 ↲ ↓ ↳ 1381 / 1168 ↳ 117 / 193	↱ 65 / 320
		↰ 61 / 277
366 / 265 ↳		↑ ↱
190 / 240 →		
286 / 78 ↲	1161 / 1587	128 / 221

12 Sierra College/Dominguez Rd

	21 / 55 ↲ ↓ ↳ 1577 / 1240 ↳ 123 / 208	↱ 31 / 49
		← 87 / 153
38 / 180 ↳		↰ 142 / 420
32 / 62 →		↑ ↱
53 / 229 ↲	204 / 107	1137 / 1533 59 / 99

13 Sierra College/Rocklin Rd

	237 / 166 ↲ ↓ ↳ 1056 / 1329 ↳ 157 / 366	↱ 260 / 132
		← 497 / 280
253 / 300 ↳		↰ 93 / 75
191 / 487 →		↑ ↱
315 / 403 ↲	557 / 300	906 / 1323 52 / 135

14 Horseshoe Bar Rd/Taylor Rd

	5 / 11 ↲ ↓ ↳ 506 / 535 ↳ 665 / 460	↱ 575 / 656
		← 15 / 12
11 / 8 ↳		↰ 82 / 88
70 / 11 →		↑ ↱
22 / 9 ↲	6 / 8	341 / 590 111 / 110

15 Horseshoe Bar/I-80 WB Ramp

	633 / 427 ↲ ↓ ↳ 276 / 247 ↳ 16 / 30	↱ 34 / 50
		← 83 / 52
212 / 88 ↳		↰ 32 / 160
54 / 46 →		↑ ↱
156 / 130 ↲	180 / 170	527 / 484 48 / 195

16 Horseshoe Bar/I-80 EB Ramp

	358 / 357 ↓ ↳ 102 / 117	↱ 341 / 338
		↰ 194 / 98
		↑ ↱
	415 / 539	136 / 103

17 Barton Rd/Brace Rd

		← 386 / 213
		↰ 153 / 200
162 / 348 →		↑ ↱
123 / 221 ↲		
	210 / 139	211 / 122

18 Barton Rd/Rocklin Rd

	273 / 171 ↲ ↓ ↳ 145 / 81	
166 / 211 →		↰ ↑ ↱
169 / 627 ↲		
	514 / 295	88 / 105 →

19 Sierra College Blvd/King Rd

	99 / 10 ↲ ↓ ↳ 964 / 786 ↳ 264 / 360	↱ 897 / 228
		← 1 / 5
58 / 51 ↳		↰ 2 / 15
1 / 29 →		↑ ↱
0 / 4 ↲	0 / 2	0 / 1053 0 / 72

20 Sierra College/English Colony

	1160 / 768 ↓ ↳ 198 / 257	↱ 187 / 172
		↰ 112 / 54
		↑ ↱
	556 / 1222 →	15 / 116

21 Taylor Rd/King Rd

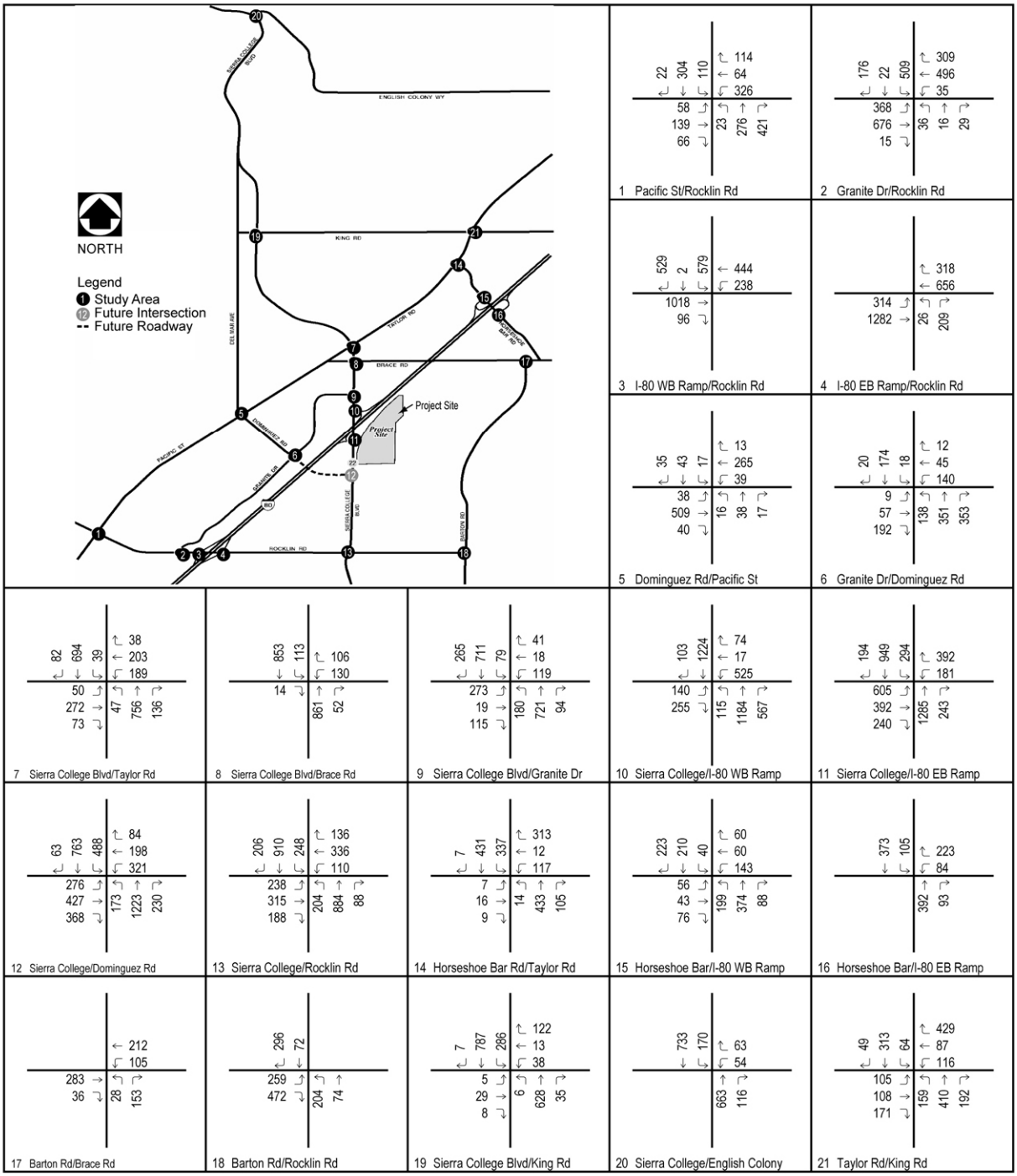
	547 / 296 ↓ ↳ 129 / 95 ↳	↱ 214 / 78
		← 258 / 132
275 / 130 ↳		↰ 172 / 100
148 / 209 →		↑ ↱
292 / 266 ↲	311 / 347	363 / 414 76 / 199

123 / 456 AM / PM Peak Hour Volume

G 06110148.01 031

Source: LSA 2007

Year 2025 Plus Project Peak Hour Traffic Volumes – With Dominguez Road **Exhibit 6-9**



Source: LSA 2007

Year 2025 Plus Project Saturday Peak Hour Traffic Volumes – With Dominguez Road **Exhibit 6-10**

Table 6-10
2025 Plus Project With Dominguez Road Condition Peak Hour Intersection Level of Service Summary

	Intersection	2025 No Project with Dominguez Road Condition						2025 Plus Project with Dominguez Road Condition					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio/ Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/ Pacific Street [1]	0.641	B	0.676	B	0.490	A	0.647	B	0.694	B	0.512	A
2	Rocklin Road/ Granite Drive	0.562	A	0.829	D	0.565	A	0.564	A	0.838	D	0.577	A
3	Rocklin Road/ I-80 Westbound Ramps	0.719	C	0.962	E	0.738	C	0.735	C	1.015	F	0.804	D
4	Rocklin Road/I-80 Eastbound Ramps	0.871	D	0.824	D	0.482	A	0.888	D	0.878	D	0.555	A
5	Dominguez Road/ Pacific Street [1]	0.507	A	0.708	C	0.385	A	0.507	A	0.711	C	0.390	A
6	Dominguez Road/ Granite Drive [1,3]	48.8 sec	E	*	F	70.6 sec	F	50.6 sec	F	*	F	81.3 sec	F
7	Sierra College Boulevard/ Taylor Road (Loomis)	0.780	C	0.785	C	0.466	A	0.801	D	0.840	D	0.532	A
8	Sierra College Boulevard/ Brace Road (Loomis)	0.486	A	0.623	B	0.285	A	0.501	A	0.656	B	0.340	A
9	Sierra College Boulevard/ Granite Drive	0.516	A	0.518	A	0.443	A	0.532	A	0.567	A	0.497	A
10	Sierra College Boulevard/ I-80 Westbound Ramps	0.577	A	0.565	A	0.567	A	0.599	A	0.628	B	0.647	B
11	Sierra College Boulevard/ I-80 Eastbound Ramps	0.584	A	0.433	A	0.478	A	0.631	B	0.636	B	0.732	C
12	Sierra College Boulevard/ Dominguez Road	0.445	A	0.600	B	0.762	C	0.466	A	0.715	C	0.909	E
13	Sierra College Boulevard/ Rocklin Road [1]	0.687	B	0.619	B	0.380	A	0.713	C	0.659	B	0.484	A
14	Taylor Road/Horseshoe Bar Road (Loomis)	1.024	F	1.076	F	0.691	B	1.032	F [2]	1.105	F [2]	0.724	C
15	Horseshoe Bar Road/ I-80 Westbound Ramps (Loomis)	0.476	A	0.431	A	0.395	A	0.476	A	0.431	A	0.395	A

Table 6-10
2025 Plus Project With Dominguez Road Condition Peak Hour Intersection Level of Service Summary

	Intersection	2025 No Project with Dominguez Road Condition						2025 Plus Project with Dominguez Road Condition					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio/ Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
16	Horseshoe Bar Road/ I-80 Eastbound Ramps [3] (Loomis)	29.0 sec	D	24.6 sec	C	16.0 sec	C	29.4 sec	D	25.3 sec	D	16.5 sec	C
17	Barton Road/Brace Road [1,3] (Loomis)	78.4 sec	F	57.3 sec	F	12.3 sec	B	82.1 sec	F [2]	64.9 sec	F	12.8 sec	B
18	Barton Road/Rocklin Road [1,3] (Loomis)	272.1 sec	F	20.8 sec	C	17.0 sec	C	316.9 sec	F	28.5 sec	D	24.0 sec	C
19	Sierra College Boulevard/ King Road [1] (Loomis)	0.607	B	0.734	C	0.475	A	0.615	B	0.760	C	0.505	A
20	Sierra College Boulevard/ English Colony Way [1,3] (Placer County)	246.7 sec	F	587.0 sec	F	33.2 sec	D	283.5 sec	F	829.8 sec	F	47.9 sec	E
21	Taylor Road/King Road [1] (Loomis)	0.802	D	0.508	A	0.581	A	0.807	D [2]	0.522	A	0.598	A

Notes:
ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.
[1] LOS C required for these intersections. LOS D acceptable for all other intersections.
[2] Project impact is less than 5% of total intersection V/C or delay and therefore not a significant impact.
[3] Peak Hour volumes meet Signal Warrant #3 of the Manual of Uniform Traffic Control Devices
* Delay exceeds 1000 seconds
Outline indicates exceeds level of service criteria
Shaded areas indicate a Significant Impact

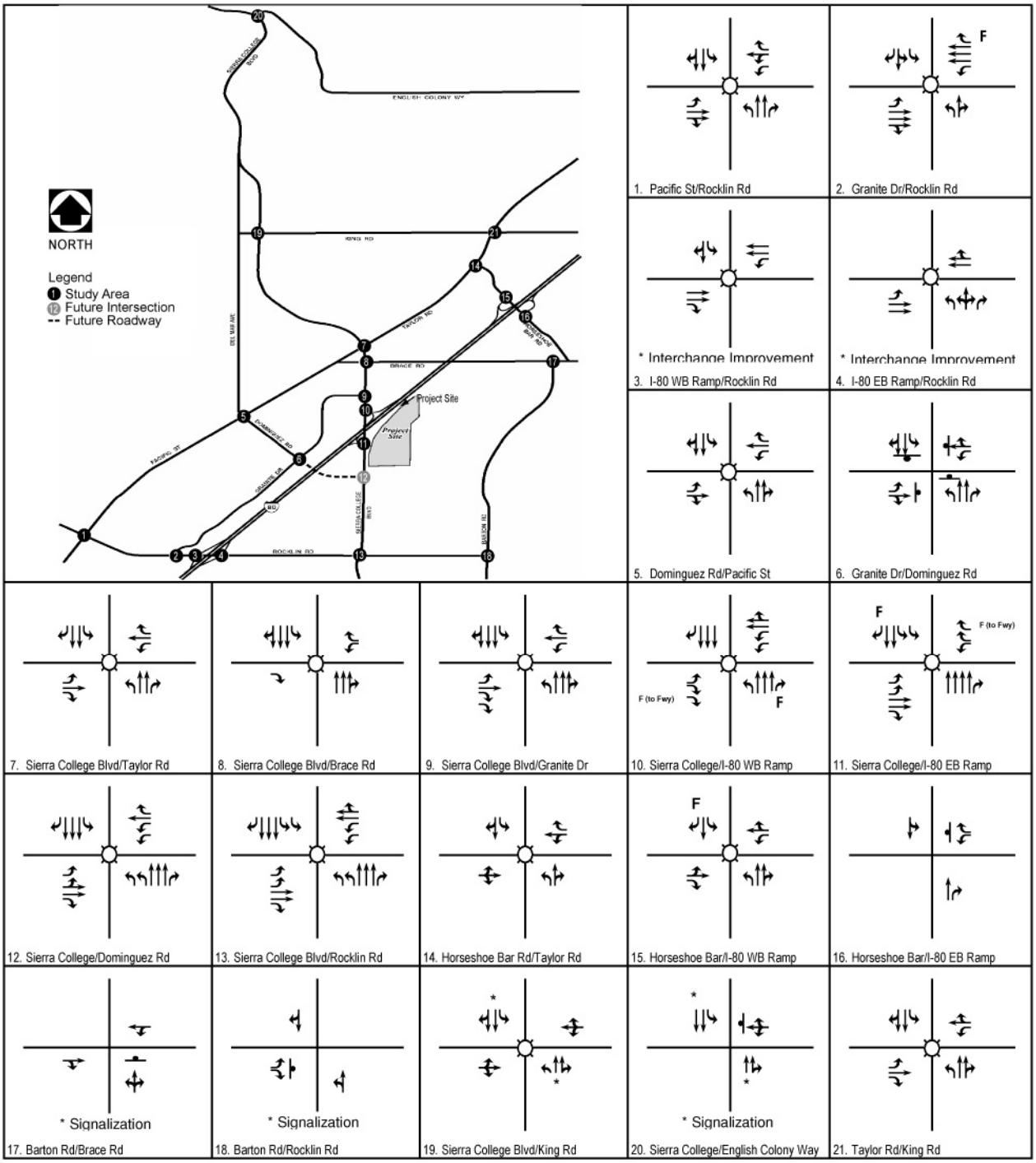
Table 6-11
2025 Plus Project With Dominguez Road Daily Roadway Segment Level of Service Summary

Roadway	Segment	Capacity	Volume	Capacity Configuration	V/C	LOS
Taylor Road	King Road and Horseshoe Bar Road [1] (Loomis)	15,000	20,414	Two-lane Collector	1.36	F
	Horseshoe Bar Road and Sierra College Boulevard [1] (Loomis)	15,000	15,530	Two-lane Collector	1.04	F
Pacific Street	Sierra College Boulevard and Dominguez Road [1]	30,000	16,976	Four-lane Undivided Arterial	0.57	A
	Dominguez Road and Rocklin Road [1]	30,000	22,669	Four-lane Undivided Arterial	0.76	C

Table 6-11
2025 Plus Project With Dominguez Road Daily Roadway Segment Level of Service Summary

Roadway	Segment	Capacity	Volume	Capacity Configuration	V/C	LOS
Rocklin Road	Pacific Street and Granite Drive	30,000	37,867	Four-lane Undivided Arterial	1.26	F
	I-80 and Sierra College Boulevard	30,000	14,836	Four-lane Undivided Arterial	0.49	A
	Sierra College Boulevard and Barton Road [1] (Loomis)	30,000	15,716	Four-lane Undivided Arterial	0.52	A
Barton Road	Rocklin Road and Brace Road [1] (Loomis)	15,000	6,882	Two-lane Collector	0.46	A
Horseshoe Bar Road	I-80 and Brace Road (Loomis)	15,000	9,958	Two-lane Collector	0.66	B
Brace Road	I-80 and Barton Road [1] (Loomis)	15,000	9,825	Two-lane Collector	0.65	B
	I-80 and Sierra College Boulevard [1] (Loomis)	15,000	9,161	Two-lane Collector	0.61	B
Sierra College Boulevard	English Colony Way and King Road [1] (Placer County)	30,000	24,732	Four-lane Undivided Arterial	0.82	D
	King Road and Taylor Road [1] (Loomis)	30,000	23,770	Four-lane Undivided Arterial	0.79	C
	Taylor Road and I-80	50,525	35,393	Six-lane Arterial	0.70	B
	I-80 and Dominguez Road	50,525	34,346	Six-lane Arterial	0.68	B
	Dominguez Road and Rocklin Road [1]	50,525	37,868	Six-lane Arterial	0.75	C
Granite Drive	Dominguez Road and Sierra College Boulevard [1]	30,000	9,230	Four-lane Undivided Arterial	0.31	A
	Dominguez Road and Rocklin Road [1]	30,000	13,379	Four-lane Undivided Arterial	0.45	A
Dominguez Road	Taylor Road and Granite Drive [1]	15,000	7,378	Two-lane Collector	0.49	A
King Road	Sierra College Boulevard and Taylor Road [1] (Loomis)	15,000	7,019	Two-lane Collector	0.47	A

Notes:
[1] LOS C required for these segments. LOS D acceptable for all other segments.
Outline indicates exceeds level of service criteria
Shade indicates roadway improvements consistent with City of Rocklin General Plan, Town of Loomis General Plan, and the Horseshoe Bar/Penryn Community Plan



Source: LSA 2007

Year 2025 Plus Project With Dominguez Road – Mitigations **Exhibit 6-11**

Table 6-12
2025 Plus Project with Dominguez Road Condition Peak Hour Intersection Level of Service Summary - With Mitigation

	Intersection	2025 Plus Project with Dominguez Road Condition						2025 Plus Project with Dominguez Road Condition - With Mitigation					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/Pacific Street [1]	0.647	B	0.694	B	0.512	A	0.647	B	0.694	B	0.512	A
2	Rocklin Road/Granite Drive	0.564	A	0.838	D	0.577	A	0.564	A	0.838	D	0.577	A
3	Rocklin Road/I-80 Westbound Ramps	0.735	C	1.015	F	0.804	D	0.636	B	0.580	A	0.713	C
4	RocklinRoadI-80 Eastbound Ramps	0.888	D	0.878	D	0.555	A	0.888	D	0.878	D	0.555	A
5	Dominguez Road/Pacific Street [1]	0.507	A	0.711	C	0.390	A	0.507	A	0.711	C	0.390	A
6	Dominguez Road/Granite Drive [1]	50.6 sec	F	*	F	81.3 sec	F	13.2 sec	B	20.8 sec	C	14.5 sec	B
7	Sierra College Boulevard/Taylor Road (Loomis)	0.801	D	0.840	D	0.532	A	0.801	D	0.840	D	0.532	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.501	A	0.656	B	0.340	A	0.501	A	0.656	B	0.340	A
9	Sierra College Boulevard/Granite Drive	0.532	A	0.567	A	0.497	A	0.532	A	0.567	A	0.497	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.599	A	0.628	B	0.647	B	0.599	A	0.628	B	0.647	B
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.631	B	0.636	B	0.732	C	0.631	B	0.636	B	0.732	C
12	Sierra College Boulevard/Dominguez Road	0.466	A	0.715	C	0.909	E	0.460	A	0.600	B	0.886	D
13	Sierra College Boulevard/Rocklin Road [1]	0.713	C	0.659	B	0.484	A	0.713	C	0.659	B	0.484	A
14	Taylor Road/Horseshoe Bar Road (Loomis)	1.032	F	1.105	F	0.724	C	1.032	F	1.105	F	0.724	C
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.476	A	0.431	A	0.395	A	0.476	A	0.431	A	0.395	A

Table 6-12
2025 Plus Project with Dominguez Road Condition Peak Hour Intersection Level of Service Summary - With Mitigation

	Intersection	2025 Plus Project with Dominguez Road Condition						2025 Plus Project with Dominguez Road Condition - With Mitigation					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
16	Horseshoe Bar Road/I-80 Eastbound Ramps [2] (Loomis)	29.4 sec	D	25.3 sec	D	16.5 sec	C	29.4 sec	D	25.3 sec	D	16.5 sec	C
17	Barton Road/Brace Road [1, 2] (Loomis)	82.1 sec	F	64.9 sec	F	12.8 sec	B	0.579	A	0.617	B	0.367	A
18	Barton Road/Rocklin Road [1, 2] (Loomis)	316.9 sec	F	28.5 sec	D	24.0 sec	C	0.652	B	0.639	B	0.633	B
19	Sierra College Boulevard/King Road [1] (Loomis)	0.615	B	0.760	C	0.505	A	0.615	B	0.760	C	0.505	A
20	Sierra College Boulevard/English Colony Way [1, 2] (Placer County)	283.5 sec	F	829.8 sec	F	47.9 sec	E	0.524	A	0.672	B	0.410	A
21	Taylor Road/King Road [1] (Loomis)	0.807	D	0.522	A	0.598	A	0.807	D	0.522	A	0.598	A

Notes:
ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.
[1] LOS C required for these intersections. LOS D acceptable for all other intersections.
[2] Peak Hour volumes meet Signal Warrant #3 of the Manual of Uniform Traffic Control Devices
* Delay exceeds 1000 seconds
Outline = Mitigated condition
Shaded areas indicate a Significant Impact

IMPACT 6-10 Dominguez Road/Granite Drive Intersection With Dominguez Road. *The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Dominguez Road/Granite Drive intersection. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered* ***significant****.*

The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Dominguez Road/Granite Drive intersection (Table 6-10). For the cumulative condition, this intersection operates at an LOS F during the p.m. peak hour and Saturday conditions, and LOS E during the a.m. peak hour. The project would further degrade the intersection operations. The degradation in the volume/capacity ratio would be greater than 5 percent. Because the cumulative impacts of development are already significant and the project would exceed the established significance threshold of a contribution of greater than 5 percent, the project would cause a **significant** cumulative impact.

Mitigation Measure 6-10 Dominguez Road/Granite Drive Intersection With Dominguez Road

The project applicant shall pay their fair share to changing the stop control from a two-way unsignalized stop to a four-way unsignalized stop. The project applicant shall pay a traffic impact fee in an amount that constitutes the project's fair share contribution to the construction of the proposed improvement as part of the City's development review process, consistent with the City's CIP program, SPRTA program, or other applicable funding program.

Level of Significance after Mitigation

As identified in Table 6-12, with implementation of the identified mitigation measure, the LOS would be improved to LOS C or better during the intersections peak hours. This would be an acceptable level and this impact would be considered less than significant.

IMPACT 6-11 Sierra College Boulevard/Dominguez Road Intersection With Dominguez Road. *The addition of project-related traffic to cumulative traffic volumes would cause this intersection to operate unacceptably with the current roadway striping. This impact would be considered* ***significant****.*

The addition of project-related traffic to cumulative traffic volumes would cause this intersection to operate unacceptably with the current roadway striping because sufficient lane capacity would not be available for the projected volume of traffic (Table 6-10). The intersection would operate at LOS E during Saturday conditions. Because the project would exceed the established significance threshold, the project would cause a **significant** cumulative impact.

Mitigation Measure 6-11 Sierra College Boulevard/Dominguez Road Intersection With Dominguez Road

The project applicant shall pay their fair share to restriping this intersection to accommodate one exclusive left turn lane, one shared left/through lane, one exclusive through lane, and one exclusive right turn lane on the eastbound leg of Dominguez Road at the time of its construction. The project applicant shall pay a traffic impact fee in an amount that constitutes the project's fair share contribution to the construction of the proposed improvement as part of the City's development review process, consistent with the City's CIP program, SPRTA program, or other applicable funding program.

Level of Significance after Mitigation

As identified in Table 6-12, with implementation of the identified mitigation measure, the LOS would be improved to LOS D or better during the intersections peak hours. This would be an acceptable level and this impact would be considered less than significant.

IMPACT 6-12 Barton Road/Brace Road Intersection With Dominguez Road. *The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Barton Road/Brace Road intersection during the a.m. and p.m. peak hour. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered* ***significant****.*

This intersection is operating at an LOS F during the a.m. and p.m. peak hours in the cumulative condition (Table 6-10). The intersection is forecast to meet the peak-hour traffic signal warrant in the cumulative With Dominguez Road extension scenario. The intersection would continue to meet the peak-hour traffic signal warrant with the addition of project traffic. Because the cumulative impacts of development are already significant and the project would exceed the established significance threshold of a contribution of greater than 5 percent, the project would cause a **significant** cumulative impact.

Mitigation Measure 6-12 Barton Road/Brace Road Intersection With Dominguez Road

The project applicant shall pay their fair share to the signalization of this intersection. The project applicant shall pay a traffic impact fee in an amount that constitutes the project's fair share contribution to the construction of the proposed improvement as part of the City's development review process, consistent with the City's CIP program, SPRTA program, or other applicable funding program.

Level of Significance after Mitigation

As identified in Table 6-12, with implementation of the identified mitigation measure, the LOS would be improved to LOS B or better during the intersections peak hours. This would be an acceptable level and this impact would be considered less than significant.

IMPACT 6-13 Barton Road/Rocklin Road Intersection With Dominguez Road. *The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Barton Road/Rocklin Road intersection during the a.m. peak hour. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered* ***significant****.*

This intersection is operating at an LOS F during the a.m. peak hours in the cumulative condition (Table 6-10). The intersection is forecast to meet the peak-hour traffic signal warrant in the cumulative With Dominguez Road extension scenario. The intersection would continue to meet the peak-hour traffic signal warrant with the addition of project traffic. Because the cumulative impacts of development are already significant and the project would exceed the established significance threshold of a contribution of greater than 5 percent, the project would cause a **significant** cumulative impact.

Mitigation Measure 6-13 Barton Road/Rocklin Road Intersection With Dominguez Road

The project applicant shall pay their fair share to the signalization of this intersection. The project applicant shall pay a traffic impact fee in an amount that constitutes the project's fair share contribution to the construction of the proposed improvement as part of the City's development review process, consistent with the City's CIP program, SPRTA program, or other applicable funding program.

Level of Significance after Mitigation

As identified in Table 6-12, with implementation of the identified mitigation measure, the LOS would be improved to LOS B during the intersections peak hours. This would be an acceptable level and this impact would be considered less than significant.

IMPACT 6-14 Sierra College Boulevard/English Colony Way Intersection With Dominguez Road. *The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the Sierra College Boulevard/English Colony Way intersection during the a.m. and p.m. peak hour and during Saturday conditions. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered* ***significant****.*

This intersection is operating at an LOS F during the a.m. and p.m. peak hours in the cumulative condition (Table 6-10). This intersection is also operating at an LOS D during Saturdays in the cumulative condition. The intersection is forecast to meet the peak-hour traffic signal warrant in the cumulative With Dominguez Road extension scenario. The intersection would continue to meet the peak-hour traffic signal warrant with the addition of project traffic. Because the cumulative impacts of development are already significant and the project would exceed the established significance threshold of a contribution of greater than 5 percent, the project would cause a **significant** cumulative impact.

Mitigation Measure 6-14 Sierra College Boulevard/English Colony Way Intersection With Dominguez Road

The project applicant shall pay their fair share to the signalization of this intersection. The project applicant shall pay a traffic impact fee in an amount that constitutes the project's fair share contribution to the construction of the proposed improvement as part of the City's development review process, consistent with the City's CIP program, SPRTA program, or other applicable funding program.

Level of Significance after Mitigation

As identified in Table 6-12, with implementation of the identified mitigation measure, the LOS would be improved to LOS B or better during the intersections peak hours. This would be an acceptable level and this impact would be considered less than significant.

IMPACT 6-15 Taylor Road /Horseshoe Bar Road Intersection With Dominguez Road. *The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Taylor Road/Horseshoe Bar Road intersection during the weekday peak hour. Although this intersection already operates unacceptably, the project's contribution would represent less than a 5 percent decrease in the volume/capacity ratio. Therefore, this impact would be considered* ***less than significant****.*

The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Taylor Road/Horseshoe Bar Road intersection (Table 6-10). For the cumulative condition, the Taylor Road/Horseshoe Bar Road intersection would operate at an LOS F with a volume/capacity ratio of 1.024 during the a.m. peak hour and 1.076 during the p.m. peak hour. The intersection would continue to operate at LOS F with the proposed project and the volume/capacity ratio would be degraded to 1.032 during the a.m. peak hour and 1.105 during the p.m. peak hour. This degradation represents less than a 5 percent decrease in the volume/capacity ratio. Because the volume/capacity ratio would not be degraded by more than 5 percent for this intersection with the contribution of project traffic, the project's impacts at this intersection would be considered **less than significant**.

Mitigation Measure 6-15 Taylor Road /Horseshoe Bar Road Intersection With Dominguez Road

No mitigation is necessary.

Level of Significance after Mitigation

The project's impacts on the Taylor Road/Horseshoe Bar Road intersection would be considered less than significant.

IMPACT 6-16 Taylor Road/King Road Intersection With Dominguez Road. *The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Taylor Road/King Road intersection during the a.m. peak hour. Although this intersection already operates unacceptably, the project's contribution would represent less than a 5 percent decrease in the volume/capacity ratio. Therefore, this impact would be considered* ***less than significant****.*

The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Taylor Road/King Road intersection (Table 6-10). For the cumulative condition, the Taylor Road/King Road intersection would operate at an LOS D with a volume/capacity ratio of 0.802 during the a.m. peak hour. The intersection would continue to operate at LOS D with the proposed project and the volume/capacity ratio would be degraded to 0.807, which represents less than a 5 percent decrease. Because the volume/capacity ratio would not be degraded by more than 5 percent for this intersection with the contribution of project traffic, the project's impacts at this intersection would be considered **less than significant**.

Mitigation Measure 6-16 Taylor Road/King Road Intersection With Dominguez Road

No mitigation is necessary.

Level of Significance after Mitigation

The project's impacts on the Taylor Road/King Road intersection would be considered less than significant.

IMPACT 6-17 Roadway Segments With Dominguez Road. *The proposed project would cause four roadway segments to exceed the threshold of daily capacity. However, in both the a.m. and p.m. peak hours, the traffic on all four roadway segments are forecast to operate with satisfactory volume/capacity ratios in both peak hours with project conditions. Therefore, the project's impacts on roadway segments would be considered* ***less than significant****.*

As shown in Table 6-11, the results of the roadway segment analysis indicate that the following four roadway segments are forecast to operate with unsatisfactory LOS in the 2025 plus project with Dominguez Road scenario:

- Taylor Road between King Road and Horseshoe Bar Road (Loomis)
- Taylor Road between Horseshoe Bar Road and Sierra College Boulevard (Loomis)
- Rocklin Road between Pacific Street and Granite Drive
- Sierra College Boulevard between English Colony Way and King Road (Placer County)

These segments would exceed the threshold of daily capacity in the cumulative plus project scenario. However, in both the a.m. and p.m. peak hours, the traffic on all four roadway segments is forecast to operate with satisfactory volume/capacity ratios in both peak hours with project conditions. Therefore, the project's impacts on roadway segments would be considered **less than significant**.

Mitigation Measure 6-17 Roadway Segments With Dominguez Road

No mitigation is necessary.

Level of Significance after Mitigation

The project's cumulative impacts on roadway segments would be considered less than significant.

6.1.8 I-80/SIERRA COLLEGE INTERCHANGE

IMPACT 6-18 Interstate 80/Sierra College Boulevard Interchange. *The proposed project would not degrade the Interstate 80/Sierra College Boulevard Interchange during the cumulative scenario. Therefore, the project's cumulative impacts on this interchange would be considered* ***less than significant****.*

An Environmental Impact Report, including a traffic operations analysis, was previously completed for the I-80/Sierra College interchange project. The traffic operations analysis was completed using the Highway Capacity Manual (HCM) methodology for signalized intersections. Traffic volumes for the I-80/Sierra College interchange project analysis were forecast using the Sacramento Metropolitan (SACMET-2001) traffic model developed by the Sacramento Area Council of Governments (SACOG). As discussed previously, 2025 forecasts for the proposed project's traffic impact analysis were prepared using the City's traffic model and the Circular 212 "Critical Movement Analysis" planning methodology for signalized intersections. However, an LOS analysis using the HCM methodology has been prepared at the interchange ramp intersections using the traffic forecasts developed for this traffic impact analysis. The purpose of this analysis is to demonstrate that the intersection would still operate satisfactorily with the planned improvements when analyzed using the City's traffic model projections and the HCM methodology.

The levels of service were analyzed at the freeway ramp intersections in the cumulative plus project with and without Dominguez Road scenarios. The LOS calculation sheets are provided in Appendix C. Table 6-13 summarizes the results of the freeway interchange analysis.

Table 6-13
I-80/Sierra College Boulevard Freeway Ramp Intersection Analysis (2025 Plus Project)

Intersection	AM Peak Hour			PM Peak Hour		
	Delay (sec)	LOS	Off-ramp Queue (ft)	Delay (sec)	LOS	Off-ramp Queue (ft)
10. I-80 Westbound/Sierra College Boulevard						
Rocklin Traffic Model with Dominguez Road[1]	38.5	D	631	45.7	D	475
Rocklin Traffic Model without Dominguez Road[1]	36.4	D	533	46.3	D	393
SACMET-2001 Model[2]	18.7	B		14.3	B	
11. I-80 Eastbound/Sierra College Boulevard						
Rocklin Traffic Model with Dominguez Road1	18.0	B	205	32.4	C	160
Rocklin Traffic Model without Dominguez Road1	21.3	C	194	32.7	C	137
SACMET-2001 Model2	30.9	C		96.6	F	

1 Intersections analyzed using the Highway Capacity Manual rather than the Circular 212 methodology and using the traffic projections included in the City's traffic model.
2 Traffic Operations Analysis, I-80/Sierra College Boulevard Interchange, Table 4, Alternative A. OMNI-MEANS, January 8, 2003

As shown in Table 6-13, the interchange would operate at LOS D or better during both peak hours when the Rocklin Traffic Model with and without Dominguez Road traffic volumes are analyzed using the HCM methodology. As identified in the thresholds of significance above, LOS D is an acceptable level of service for intersections located within ½ mile from direct access to an interstate freeway and is acceptable for freeway ramp intersections and mainline routes. Because the cumulative impacts of development would not exceed the established significance thresholds and the project would not contribute substantially to the impact, the project's cumulative impacts on this interchange would be considered **less than significant**.

Mitigation Measure 6-18 Interstate 80/Sierra College Boulevard Interchange

No mitigation is necessary.

Level of Significance after Mitigation

The project's cumulative impacts on the Interstate 80/Sierra College Boulevard Interchange would be considered less than significant.

6.1.9 FREEWAY MAINLINE ANALYSIS

IMPACT 6-19 Freeway Mainlines. *The freeway mainlines would operate acceptably during the cumulative scenario with the addition of project traffic. Therefore, the project's cumulative impacts on the freeway mainlines would be considered* ***less than significant****.*

To assess the operation of the highway system in the vicinity of the project in 2025 without and with project conditions, the I-80 freeway mainline between the Horseshoe Bar Road and Atlantic Avenue interchanges and the SR-65 mainline between the I-80 junction and Blue Oaks Boulevard were analyzed for both without and with Dominguez Road extension scenarios. The Caltrans I-80 freeway improvement project[2] between Riverside Avenue/Auburn Boulevard and SR-65, proposes to increase freeway capacity by adding HOV lane and auxiliary lanes by 2009. Since the improvement project has been approved and has funding, the improvements are used in the baseline conditions for purposes of this analysis. Therefore, the I-80 freeway mainline between Atlantic Avenue and SR-65 was analyzed as a future eight-lane (mainline) freeway, and the freeway mainline segment between SR-65 and Horseshoe Bar Road interchange was analyzed as a six-lane freeway. As shown in Table 6-14, all freeway mainline segments along I-80 are projected to operate at LOS D or better in 2025 with the proposed project (for both without and with Dominguez Road extension scenarios) with the future eight-lane freeway for the segment between Atlantic Avenue and SR-65. Also, all freeway segments along SR-65 are projected to operate at LOS D or better in 2025 with the proposed project (the HCS worksheets are provided in Appendix C). As identified in the thresholds of significance above, LOS D is an acceptable level of service for freeway mainline routes. Therefore, the project's cumulative impacts on the freeway mainlines would be considered **less than significant**.

Mitigation Measure 6-19 Freeway Mainline

No mitigation is necessary.

Level of Significance after Mitigation

The project's cumulative impacts on the freeway mainline would be considered less than significant.

[2] Freeway Improvement Project on Interstate 80 from 1.1 km west of the Sacramento/Placer County line to 1.56 km east of the Route 65 connector in Placer County, April 2003, Caltrans.

Table 6-14
2025 Peak Hour - Freeway Segment Level of Service Summary

Roadway	Segment	Without Dominguez Road Extension								With Dominguez Road Extension							
		2025 No Project				2025 With Project				2025 No Project				2025 With Project			
		AM		PM		AM		PM		AM		PM		AM		PM	
		Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS
I-80 EB	Atlantic Street to Taylor Road	26.3	D	32.0	D	26.4	D	32.7	D	26.2	D	32.0	D	26.4	D	32.7	D
	Taylor Road to RTE 65	23.6	C	27.9	D	23.8	C	28.4	D	23.6	C	27.9	D	23.7	C	28.5	D
	RTE 65 to Rocklin Road	23.9	C	27.3	D	24.2	C	28.5	D	23.9	C	27.3	D	24.2	C	28.5	D
	Rocklin Road to Sierra College Boulevard	22.6	C	29.0	D	23.0	C	30.7	D	22.9	C	29.1	D	23.3	C	30.8	D
	Sierra College Boulevard to Horseshoe Bar Road	21.1	C	30.6	D	21.2	C	31.2	D	21.1	C	30.5	D	21.2	C	31.1	D
RTE 65 NB	I-80 to Harding Boulevard	28.0	D	30.3	D	28.2	D	30.8	D	28.0	D	30.2	D	28.1	D	30.8	D
	Harding Boulevard to Blue Oaks Boulevard	27.3	D	30.5	D	27.3	D	30.8	D	27.3	D	31.1	D	27.4	D	31.3	D
I-80 WB	Atlantic Street to Taylor Road	27.7	D	30.6	D	27.9	D	31.2	D	27.5	D	30.7	D	27.7	D	31.3	D
	Taylor Road to RTE 65	24.6	C	26.8	D	24.7	C	27.3	D	24.6	C	26.8	D	24.7	C	27.3	D
	RTE 65 to Rocklin Road	24.2	C	27.9	D	24.5	C	29.1	D	24.2	C	27.8	D	24.5	C	28.9	D
	Rocklin Road to Sierra College Boulevard	26.4	D	25.0	C	26.7	D	26.2	D	26.2	D	24.6	C	26.6	D	25.8	C
	Sierra College Boulevard to Horseshoe Bar Road	27.0	D	23.7	C	27.1	D	23.9	C	26.9	D	23.7	C	27	D	23.9	C
RTE 65 SB	I-80 to Harding Boulevard	19.2	C	21.3	C	19.3	C	21.7	C	19.3	C	21.3	C	19.4	C	21.6	C
	Harding Boulevard to Blue Oaks Boulevard	21.1	C	21.9	C	21.2	C	22.1	C	21.1	C	22	C	21.2	C	22.2	C

I-80 8 lanes from Atlantic to Rte 65 then 6 lanes from Rte 65 to Horseshoe Bar Rd
Rte 65 6 lanes

IMPACT 6-20 Cumulative Regional Air Quality Emissions. *The project would contribute to cumulative regional air pollutant emissions. This would be considered a* ***significant and unavoidable*** *impact.*

All new development within the Sacramento Valley Air Basin that results in an increase in air pollutant emissions above those assumed in regional air plans contributes to cumulative air quality impacts. The increase is considered significant if the project requires a change in the existing land use designation (e.g., plan amendment, rezone) and associated emissions (i.e., ROG and NO_X) are greater than buildout of the site under the existing approved land use designations. The proposed project would require the amendment of the City's existing general plan land use designations on approximately 1.23 acres of the project site from Medium Density Residential (MDR) to Retail Commercial (RC). Due to the relatively small area of the change in land use, it would not substantially conflict with the existing land uses assumed for the site.

However, based on the modeling conducted, project operations would result in worst-case maximum unmitigated daily emissions of approximately 196 lb/day of ROG, 311 lb/day of NO_X, 281 lb/day of PM_{10}, and 2,196 lb/day of CO. Daily unmitigated operational emissions would exceed PCAPCD's significance thresholds of 82 lb/day for ROG, NO_X, and PM_{10}, or 550 lb/day for CO during both the winter and summer periods. These threshold exceedances would represent a substantial contribution of pollutants to the regional air basin that would not be reduced below the significance thresholds with implementation of identified mitigation measures. Therefore, the project's impact would be considered **significant and unavoidable**.

Mitigation Measure 6-20 Cumulative Regional Air Quality Emissions.

In accordance with the PCAPCD recommendations, the applicant shall implement the following mitigation measures during construction and operation of the proposed project (Backus, pers. comm., 2006b).

Implement Mitigation Measures 4.3-1 and 4.3-2.

The project shall implement an offsite mitigation program, coordinated through the PCAPCD, to offset the project's long-term ozone precursor emissions. The project's offsite mitigation program must be approved by PCAPCD. The project's offsite mitigation program provides monetary incentives to sources of air pollutant emissions within the SVAB that are not required by law to reduce their emissions. Therefore, the emission reductions are real, quantifiable and implement provisions of the SIP. The offsite mitigation program reduces emissions within the SVAB that would not otherwise be eliminated.

In lieu of the applicant implementing their own offsite mitigation program, the applicant can choose to participate in the PCAPCD Offsite Mitigation Program by paying an equivalent amount of money into the program. The actual amount of emission reductions needed through the Offsite Mitigation Program would be calculated when the project's average daily emissions have been determined.

Level of Significance after Mitigation

Due to the large size of the project and large number of vehicle trips generated, it is not anticipated that implementation of the mitigation measures identified above would reduce emissions to below the applicable thresholds; however, these measures would likely substantially reduce the level of emissions. In addition, because of existing nonattainment conditions of the project area for ozone and $PM_{10,}$ project implementation could still contribute substantially to an existing or projected violation of ambient air quality standards following implementation of the identified mitigation measures. Therefore, this cumulative impact would remain significant and unavoidable.

IMPACT 6-21 Cumulative Toxic Air Contaminant Emissions. *The project would contribute to localized cumulative toxic air contaminant emissions. However, because other cumulative developments in the region are not located directly adjacent to the proposed project, the combined emissions from the proposed project and other cumulative developments would not be expected to exceed established significance thresholds for sensitive receptors in the local area. This would be considered a* ***less-than-significant*** *impact.*

The cumulative developments in the region would individually contribute to localized cumulative toxic air contaminant emission concentrations. However, because toxic air contaminants disperse with distance, the concentration of emissions in excess of established significance thresholds would not typically occur unless high emission sources are concentrated in a relatively small development area with sensitive receptors within close proximity. As identified in Section 4.3, Air Quality, the proposed project would not generate toxic air contaminants in excess of established significance thresholds. Because other cumulative developments in the region are not located directly adjacent to the proposed project, the combined emissions from the proposed project and other cumulative developments would not be expected to exceed established significance thresholds for sensitive receptors in the local area. Therefore, this impact would be considered a cumulatively **less-than significant** air quality impact.

Mitigation Measure 6-21 Cumulative Toxic Air Contaminant Emissions.

No mitigation is necessary.

Level of Significance after Mitigation

The project's contribution to cumulative toxic air contaminant emissions would be considered less than significant.

NOISE

Because daytime construction is required under the City's construction noise guidelines, it can be reasonably assumed that related projects in the City would include such restrictions. Hence, cumulative noise impacts associated with construction noise sources would be expected to be **less than significant**. Further, construction noise is localized. Thus, if construction activities occur simultaneously, they would likely not result in cumulative impacts unless sites are being developed in close proximity to one another and expose sensitive receptors to significant noise levels at the same time. Construction activities at the Rocklin 60 residential development could contribute cumulatively to construction noise impacts if it is constructed at the same time as the proposed project. However, Impact 4.4-1 discusses the required installation of a sound wall along the site's eastern perimeter. The installation of this wall would be expected to substantially diminish the proposed project's contribution to cumulative construction noise impacts for existing residents to the northeast. Existing residents to the southwest are of sufficient distance from the Rocklin 60 project that construction noise impacts from this project would be negligible. Thus, cumulative construction noise impacts would be considered **less than significant**.

Likewise, following its construction, the Rocklin 60 residential development would not be expected to generate elevated noise levels that would contribute cumulatively to the noise generated from the proposed project. A masonry sound wall would separate the two developments, limiting the combined noise effect on existing residences to the northeast and southwest. Due to the localized nature of noise, other cumulative development in the region would not be expected to combine with the project's noise effects to cumulatively increase noise in the local area. Thus, the cumulative operational noise impacts would be considered **less than significant.**

Cumulative development would be expected to increase traffic volumes, and associated noise levels, on local roadways. Mitigation for this impact would be developed primarily as new development proceeds, resulting in the construction of noise walls, berms, etc. With the implementation of these measures, cumulative noise impacts would be reduced to a less-than-significant level. As described in Section 4.4, Noise, implementation of the

proposed project would slightly increase noise levels along project-area roadways. This impact was concluded to be less than significant. Because the proposed project would not be expected to contribute substantially to cumulative traffic noise levels on local roads, the proposed project would result in a **less-than-significant** cumulative noise impact.

POPULATION AND HOUSING

As described in Section 6.1.2 below, the proposed project would not be expected to substantially contribute to increases in population or housing demand. Thus, the proposed project would result in **less-than-significant** cumulative population and housing impacts.

UTILITIES AND PUBLIC SERVICES

Cumulative development would increase the demands on utilities and public services. However, the adequacy of the existing and planned utility infrastructure and public service capabilities to meet a new project's needs is a key component of the City's project review process. Based on this review process, future development projects that exceed the capacity of the available utility infrastructure and public service capabilities would be required to provide the necessary improvements to ensure significant utility and public service impacts do not occur.

The proposed project is not anticipated to contribute significantly to the demand for utilities and public services. The site would be provided municipal water from the Placer County Water Agency, which has adequate capacity and distribution capabilities to service the project site with the identified offsite water line improvements. The wastewater collection and treatment requirements of the project would be provided through a connection to an existing sewer line along the southern site boundary. The electrical supply would be provided by existing power lines at the site that tap into the PG&E power grid. The demand for police, fire protection and emergency medical services would increase with project implementation; however, the site operator would be required to coordinate closely with local service providers to ensure adequate security and fire prevention measures are implemented at the site. Thus, the proposed project would result in **less-than-significant** cumulative utility and public service impacts.

The cumulative impacts associated with diverting American River water from the permanent American River Pump Station project were addressed in the 1999 Final EIR for the Water Forum Agreement (WFA) (EDAW/SWRI 1999). The WFA is an agreement between multiple stakeholders in the Sacramento metropolitan area and lower foothill regions, including numerous water providers such as PCWA. After seven years of meetings, sub-committee negotiations, and small group operations, the Water Forum members established a working agreement that provides water quality and reliability for all participants. The WFA's co-equal goals were to (1) provide a reliable and safe supply for the region's economic health and planned development through to the year 2030, and (2) preserve the fishery, wildlife, recreational, and aesthetic values of the Lower American River.

From these co-equal goals, the Water Forum signatories determined seven major elements that must be implemented during the next 30 years if the agreement is to be successful. As a signatory of the WFA, PCWA is actively participating in all seven elements. The elements specific to reliability of water supplies include:

- Increased Surface Water Diversions;
- Actions to Meet Customers' Needs While Reducing Diversion Impacts in Drier Years, Water Conservation;
- Groundwater Management; and
- The Water Forum Successor Effort.

Because the final EIR for the Water Forum was not challenged in court, the certified document constitutes a legally satisfactory analysis of all the issues addressed therein, including cumulative water supply impacts (see Public Resources Code Section 21167.2). The findings of the FEIR and the accompanying Water Forum Action

Plan outlined a program whereby water delivery could be supplied to Water Forum Agreement stakeholders, including PCWA, through 2030, provided that the permanent pumping diversion facilities on the Sacramento River and at Auburn are constructed. The document identified and thoroughly evaluated potential impacts on water supplies resulting from implementation of the Water Forum Agreement, including impacts on both the federal Central Valley Project (CVP) run by the United States Bureau of Reclamation and the State Water Project (SWP) operated by the California Department of Water Resources.

Notably, the water demand created by the project, which is estimated to be approximately 135 acre feet per year (AFY), would represent a tiny fraction of 1% of the total Water Forum Agreement delivery agreements, and thus would cause only a virtually negligible fraction of the cumulative impacts assessed in the Water Forum Agreement EIR. (For the sake of context, the American River Pump Station itself – which is only one of many large diversions contemplated by the WFA – involves 35,500 AFY.)

As described in that EIR, implementation of the Water Forum Agreement would result in several significant environmental impacts, most of which would be reduced to a less-than-significant level through implementation of mitigation. These include impacts on groundwater, water quality, fisheries resources and aquatic habitat, flood control, hydropower supply, vegetation and wildlife, recreation, land use and growth inducement, aesthetics, cultural resources, and soils and geology.

Impacts that would remain significant or potentially significant after implementation of mitigation (i.e., significant and unavoidable) include:

- impacts on water quality in the Sacramento River and the Sacramento–San Joaquin Delta;
- impacts on Folsom Reservoir's warmwater fisheries;
- impacts on fall-run Chinook salmon, and flow and temperature impacts on splittail (February–May);
- a decrease in deliveries to SWP customers;
- a decrease in deliveries to CVP customers;
- reduced rafting and boating opportunities on the lower American River;
- reduced Folsom Reservoir boating opportunities;
- reduced availability of Folsom Reservoir swimming beaches;
- land use and growth-inducing impacts in the water service study area; and
- effects of varying water levels on cultural resources in Folsom Reservoir.

The mitigation measures applied to these resource areas would partially reduce the impacts, but would not reduce them to a less-than-significant level. The Water Forum Agreement EIR determined that even after mitigation is applied to these resource areas, the level of significance after mitigation would remain significant and unavoidable. Even so, however, the contributions of the Rocklin Crossings to these significant cumulative impacts are less than cumulatively considerable, as these contributory incremental effects are, for all practical purposes, completely negligible and undetectable in light of the scale of both the Water Forum and the water bodies and storage and conveyance facilities at issue.

CLIMATE CHANGE AND POTENTIAL IMPACTS ON CALIFORNIA WATER RESOURCES OF SIGNIFICANCE TO PLACER COUNTY

From a Statewide perspective, global climate change could affect California's environmental resources through potential, though uncertain, changes related to future air temperatures and precipitation and their resulting impacts on water temperatures, reservoir operations, stream runoff, and sea levels Sacramento Metropolitan (SACMET-2001) traffic model developed by the Sacramento Area Council of Governments (SACOG). These changes in hydrological systems could threaten California's economy, public health, and environment (California Energy Commission 2003). The types of potential climate effects that could occur on California's water resources include:

- **Water Supply.** Several recent studies have shown that existing water supply systems are sensitive to climate change (Wood 1997). Potential impacts of climate change on water supply and availability could directly and indirectly affect a wide range of institutional, economic, and societal factors (Gleick 1997). Much uncertainty remains, however, with respect to the overall impact of global climate change on future water supplies. For example, models that predict drier conditions (i.e.., parallel climate model [PCM]) suggest decreased reservoir inflows and storage and decreased river flows, relative to current conditions. By comparison, models that predict wetter conditions (i.e., HadCM2) project increased reservoir inflows and storage, and increased river flows (Brekke 2004). Both projections are equally probable based on which model is chosen for the analyses (Ibid.). Much uncertainty also exists with respect to how climate change will affect future demand of water supply (DWR 2006). Still, changes in water supply are expected to occur and many regional studies have shown that large changes in the reliability of water yields from reservoirs could result from only small changes in inflows (Kiparsky and Gleick 2003; see also Cayan et al. 2006a).

- **Surface Water Quality.** Global climate change could affect surface water quality as well. Water quality is affected by several variables, including the physical characteristics of the watershed, water temperature, and runoff rate and timing. A combination of a reduction in precipitation, the shift in volume and timing of runoff flows, and the increased temperature in lakes and rivers could affect a number of natural processes that eliminate pollutants in water bodies. For example, the overall decrease in stream flows could potentially concentrate pollutants and prevent the flushing of contaminants from point sources. The increased storm flows could tax urban water systems and cause greater flushing of pollutants to the Sacramento-San Joaquin Delta and coastal regions (Kiparsky and Gleick 2003). Still, considerable work remains to determine the potential effect of global climate change to water quality.

- **Groundwater.** Little work has been done on the effects of climate change on specific groundwater basins, groundwater quality or groundwater recharge characteristics (Kiparsky and Gleick 2003). Changes in rainfall and changes in the timing of the groundwater recharge season would result in changes in recharge. Warmer temperatures could increase the period where water on the ground by reducing soil freeze. Conversely, warmer temperatures could lead to higher evaporation or shorter rainfall seasons, which could mean that soil deficits would persist for longer time periods, shortening recharge seasons. Warmer, wetter winters would increase the amount of runoff available for groundwater recharge. This additional winter runoff, however, would be occurring at a time when some basins, particularly in Northern California, are being recharged at their maximum capacity. Reductions in spring runoff and higher evapotranspiration, on the other hand, could reduce the amount of water available for recharge. However, the extent to which climate will change and the impact of that change on groundwater are both unknown. A reduced snowpack, coupled with increased rainfall, could require a change in the operating procedures for California's existing dams and conveyance facilities (Kiparsky and Gleick 2003).

- **Fisheries and Aquatic Resources.** In California, the timing and amounts of water released from reservoirs and diverted from streams are constrained by their effects on various native fish, especially those that are listed under the federal and state endangered species acts as threatened or endangered. Several potential hydrological changes associated with global climate change could influence the ecology of aquatic life in California and have several negative effects on cold-water fish (Department of Water Resources [hereafter "DWR"] 2006). For example, if climate change raises air temperature by just a few degrees Celsius, this change could be enough to raise the water temperatures above the tolerance of salmon and trout in many streams, favoring instead non-native fishes such as sunfish and carp (DWR 2006). Unsuitable summer temperatures would be particularly problematic for many of the threatened and endangered fish that spend summers in cold-water streams, either as adults, juveniles, or both (DWR 2006). In short, climate change could significantly affect threatened and endangered fish in California. It could also cause non-threatened and non-endangered fish to reach the point where they become designated as such (DWR 2006).

- **Sea Levels.** Global climate change could cause thermal expansion of ocean waters and melting of ice from land surfaces, which in turn could cause sea levels to rise. Among the risks of sea level rise would be threats to levee integrity and tidal marshes and increased salinity in the Delta region (Kiparsky and Gleick 2003). The increased intrusion of salinity from the ocean could degrade freshwater supplies pumped from the Delta, which could require increased freshwater releases from upstream reservoirs to maintain compliance with water quality standards (DWR 2006).

- **Flood Control.** It is difficult to assess implications of climate change for flood frequency, in large part because of the absence of detailed regional precipitation information from climate models and because human settlement patterns and water-management choices can substantially influence overall flood risk (Kiparsky and Gleick 2003). Still, increased amounts of winter runoff could be accompanied by increases in flood event severity and warrant additional dedication of wet season storage space for flood control as opposed to supply conservation. This need to manage water storage facilities to handle increased runoff could in turn lead to more frequent water shortages during high water demand periods (Brekke 2004). It is recognized that these impacts would result in increased challenges for reservoir management and balancing the competing concerns of flood protection and water supply (DWR 2006).

- **Sudden Climate Change.** Most global climate models project that anthropogenic climate change will be a continuous and fairly gradual process through the end of this century (DWR 2006). California is expected to be able to adapt to the water supply challenges posed by climate change, even at some of the warmer and dryer projections for change. Sudden and unexpected changes in climate, however, could leave water managers unprepared and could, in extreme situations, have significant implications for California and its water supplies. For example, there is speculation that some of the recent droughts that occurred in California and the western United States could have been due, at least in part, to oscillating oceanic conditions resulting from climatic changes. The exact causes of these events are, however, unknown, and evidence suggests such events have occurred during at least the past 2000 years. (DWR 2006).

Because considerable uncertainty remains with respect to the overall impact of global climate change on future water supply in California, it is unknown to what degree global climate change will impact future Placer County water supply and availability. However, based on consideration of the recent regional and local climate change studies, and based on an assessment of water supply for the project, it is reasonably expected that the impacts of global climate change on water supply for urban projects in Placer County would be **less than significant.**

AESTHETIC RESOURCES

IMPACT 6-22 Cumulative Visual Impacts. *The project would contribute to cumulative changes in the local viewshed by converting undeveloped land to urban uses. This would be considered a* ***significant and unavoidable*** *impact.*

Implementation of the proposed project would substantially alter the visual character of the project site through the conversion of relatively undeveloped land to developed urban uses, resulting in a significant aesthetic impact related to degradation of visual character. Although design, architectural, development, and landscaping standards are included to ensure that urban development on the project site conforms to certain aesthetic guidelines, due to the scale and location of the proposed project, there is no mechanism to allow its implementation while avoiding the conversion of the local viewshed to urban development.

The EIR for the City of Rocklin General Plan concluded that development in accordance with the general plan would substantially alter viewsheds and vistas in the region as open grasslands and hill areas are replace in part by mixed urban development and as new sources of light and glare are generated in the region. Based on these anticipated changes in the regional visual resources, the General Plan EIR concluded that this impact would be significant and unavoidable. The project would combine with the Rocklin 60 residential project and other development along the Interstate 80 corridor to substantially alter the visual character of the area and to

substantially increase new sources of light and glare. Because the cumulative impacts of development are identified in the General Plan EIR as significant and the project would contribute measurably to this change, the project's visual resource impacts would be considered **significant and unavoidable**.

Mitigation Measure 6-22 Cumulative Visual Impacts.

Implement the mitigation measures identified in Section 4.7, Aesthetics.

Level of Significance after Mitigation

The proposed project would result in significant and unavoidable cumulative aesthetic resource impacts.

PUBLIC HEALTH AND HAZARDS

Cumulative commercial and industrial development could result in potential public health hazards associated with the transport, storage, use and sale of hazardous materials. However, existing state and federal regulations require pollution controls, release prevention plans, and accident response plans for commercial and industrial facilities to minimize the potential risk to the surrounding populations. With the implementation of these plans, the cumulative public health hazard impacts of development would be considered less than significant. The proposed project would generate potential hazards and would include the storage, use and sale of hazardous materials at the site. As with other new developments, the proposed project would be subject to existing state and federal regulations require pollution controls, release prevention plans, and accident response plans to minimize the potential risk to the surrounding populations. Because compliance with these regulations is required, the implementation of the proposed project would not result in a substantial increase in the exposure of people to public health and safety events. Thus, the proposed project would result in a **less-than-significant** cumulative public health and hazards impact.

GEOLOGY AND SOILS

The proposed project would result in potentially significant impacts related to exposure of people and structures to seismic hazards, including ground shaking and subsidence or compression of unstable soils. However, these impacts would be reduced to a less-than-significant level with implementation of recommendations included in the preliminary geotechnical report and a comprehensive site-specific geotechnical report for the proposed project. Any residual impacts would be confined to the project site; they would not combine with any geotechnical effects associated with development in other areas. Similarly, development of cumulative projects would not be expected to result in geology and soils impacts that could not be addressed by standard engineering practices. Thus, the proposed project would result in a **less-than-significant** cumulative geology and soils impact.

HYDROLOGY AND WATER QUALITY

Cumulative flooding impacts could occur if cumulative development projects contribute substantially to additional storm water runoff, resulting in increased erosion or flood hazards. However, individual development projects would be required to control storm water discharge, consistent with the storm water management requirements of the City of Rocklin and other local jurisdictions. Therefore, significant flooding impacts would not be anticipated with cumulative development. Because the proposed project's drainage system would capture peak stormwater flows on the site and on the adjacent Rocklin 60 residential development, the project would not be expected to contribute measurably to cumulative downstream flooding impacts.

Cumulative development could degrade surface water quality in the region and the proposed project could contribute to this degradation. However, individual development projects would be required to manage discharge water quality consistent with National Pollutant Discharge Elimination System (NPDES) permit requirements. With the implementation of these permit requirements, significant water quality impacts would not be anticipated

with cumulative development. The proposed project would be required to implement detailed mitigation measures to minimize the project's potential impacts on surface water quality, including specific NPDES permit requirements. With the implementation of these mitigation measures, the project would not be anticipated to substantially contribute to local water quality degradation. Therefore, the proposed project would result in **less-than-significant** cumulative hydrology and water quality impacts.

AGRICULTURE

The proposed project would result in less-than-significant impacts related to farmland conversion. The project would not convert important farmlands to urban uses and would not conflict with lands zoned for agricultural uses. Thus, the proposed project would result in a **less-than-significant** cumulative agricultural resource impact.

BIOLOGICAL RESOURCES

IMPACT 6-23 Cumulative Biological Resource Impacts. *The project would contribute to the cumulative loss of biological resources in the region. This would be considered a* ***significant and unavoidable*** *impact.*

The proposed project would result in significant impacts related to the loss of wetlands, the loss of native oaks and heritage trees, the loss of valley elderberry longhorn beetle habitat, the disturbance of raptors and migratory birds, and the degradation of fish habitat. With the exception of the short-term loss of native oaks and heritage trees, these impacts would be reduced to a less-than-significant level with implementation of mitigation measures identified in Section 4.12, Biological Resources of this Draft EIR. These mitigation measures would either compensate for the loss of sensitive biological resources by replacing lost resources or by actually avoiding the potential disturbance. However, as identified in the EIR for the City of Rocklin General Plan, the impacts on biological resources due to cumulative development within western Placer County would be significant and unavoidable. California has lost over 90 percent of its wetland and riparian habitats, and oak woodlands are also rapidly disappearing. The General Plan EIR concluded that implementation of general plan policies, the existing tree protection ordinances, and ongoing wetlands preservation practices, would not be adequate to reduce the loss of vegetation and wildlife habitat associated with cumulative development. Because the cumulative biological impacts of development are identified in the General Plan EIR as significant and unavoidable, and the project would contribute measurably to this change, the project's biological resource impacts would be considered **significant and unavoidable**.

Mitigation Measure 6-23 Cumulative Biological Resource Impacts.

Implement the mitigation measures identified in Section 4.12, Biological Resources.

Level of Significance after Mitigation

The proposed project would result in a significant and unavoidable cumulative biological resource impact.

CULTURAL RESOURCES

Due to the nature of cultural resources, adverse impacts are site-specific and need to be determined on a project-by-project basis. However, with cumulative development in the region, the number of significant cultural resources in the region may be diminished. The loss of significant cultural resources that may be eligible for listing on the California Register of Historical Resources or the National Register of Historic Places would be considered a significant impact associated with cumulative development in the region. However, implementation of the proposed project would not be expected to adversely affect significant cultural resources. Because the proposed project would not be expected to measurably contribute to significant cumulative cultural resources impacts, the proposed project would result in a **less-than-significant** cumulative cultural resource impact.

ENERGY

The proposed project would increase energy demand during both project construction and operation. Increased energy demands have the ability to contribute to environmental impacts on a national and international level associated with the development of new energy resources and expanded energy production. However, due to their relatively small scale, the region's cumulative energy demands would not be expected to substantially alter national energy development or generation activities. Because new development within California is required to comply with the energy efficiency standards outlined in Title 24 of the California Code of Regulations, the cumulative effects of development in the western Placer County region would not be expected to cause the inefficient, wasteful or unnecessary consumption of energy. In addition, the proposed project includes a number of energy efficient design components, as outlined in Section 4-14, Energy of this report that would minimize the project's consumption of energy. Based on required compliance with Title 24 regulations and the project's energy efficient design components, the proposed project would not be expected to cause the inefficient, wasteful or unnecessary consumption of energy. Thus, the proposed project would result in **less-than-significant** cumulative energy impacts.

6.2 GROWTH-INDUCING IMPACTS OF THE PROPOSED PROJECT

In compliance with CEQA requirements, this section analyzes the growth-inducing impacts of the proposed project. It also evaluates the potential for the significant and irreversible commitment of resources associated with project implementation.

6.2.1 GROWTH-INDUCING IMPACTS

REQUIREMENTS FOR ANALYSIS OF GROWTH-INDUCING IMPACTS

According to Section 15126.2(d) of the State CEQA Guidelines, an EIR must discuss the growth-inducing impacts of the proposed project. Specifically, CEQA states that the EIR shall:

Discuss ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects that would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring the construction of new facilities that could cause significant environmental effects. Also discuss characteristics of some projects that may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

A project can have direct and/or indirect growth inducement potential. Direct growth inducement would result if a project involved construction of new housing. Indirect growth inducement would result, for instance, if implementing a project resulted in substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises); or a construction effort with substantial short-term employment opportunities that indirectly stimulates the need for additional housing and services to support the new employment demand; and/or removal of an obstacle to additional growth and development, such as removing a constraint on a required public utility or service (e.g., construction of a major sewer line with excess capacity through an undeveloped area).

Growth inducement itself is not an environmental effect but may lead to environmental effects. These environmental effects may include increased demand on other community and public services and infrastructure, increased traffic and noise, degradation of air or water quality, degradation or loss of plant or animal habitats, or conversion of agricultural and open space land to urban uses.

POSSIBILITY OF GROWTH INDUCEMENT WITH THE PROPOSED PROJECT

A project may induce growth by creating jobs that attract economic or population growth to the area, promoting the construction of homes that would bring new residents to the area, or removing an existing obstacle that impedes growth in the area. Project implementation would increase construction employment within the City of Rocklin for the duration of the project's construction activities. This temporary increase in employment could increase the demand for temporary housing. According to the latest labor data available from the U.S. Census Bureau (2000), 1,164 residents in Rocklin and 10,860 residents in Placer County are employed in the construction industry. Construction workers serving the project would be expected to come from Rocklin and from nearby communities in Placer and Sacramento counties. Due to the size of the construction industry in the region, the local labor supply is expected to be of sufficient size to meet the project's construction labor needs without requiring substantial employees from out of the region. Local construction workers that already have housing in the region would be expected to commute to the site while construction is ongoing. For construction workers that did come from outside of the region, the temporary nature of the work would typically discourage a permanent relocation. Therefore, the anticipated temporary increase in construction employment would not be expected to result in a significant demand for housing within the City or region.

The proposed project is generally consistent with the City's General Plan and by extension, the employment, commercial development, and housing assumptions evaluated in the City's General Plan EIR. Implementation of the proposed project would generate employment opportunities for current and future residents consistent with the General Plan's goals and policies. Also, new housing is being constructed within the City to accommodate planned employment growth, consistent with the General Plan land use designations and the City's Housing Element requirements. Therefore, the project would not be expected to induce substantial unplanned population growth in the City or region.

The proposed project would generate new employment within the City of Rocklin, which could contribute to the demand for housing. The employment growth anticipated with the proposed project would represent an increase in total employment within the City of approximately 3.2%. However, due to the project's location along the primary transportation corridor within Placer County, employees for the project would be drawn from throughout the region. Also, due to the relatively high median home prices within the City (identified as $449,000 in 2007 [City of Rocklin 2007]) and the majority of the project's employment consisting of lower-paying service jobs, only a relatively small percentage of the project's employees may come from within the City. Employees would logically be expected to reside in communities along the Interstate 80 corridor in both Placer and Sacramento counties. Due to the density of urban development within these communities, a wide variety of housing options are available for project employees. The expected dispersal of employees across the region would minimize the effects of increased housing demands within the City. For these reasons, the proposed project would not be expected to generate a substantial demand for new housing and would not be expected to be growth inducing.

6.3 SIGNIFICANT AND IRREVERSIBLE COMMITMENT OF RESOURCES

CEQA (PRC Section 21100(b)(2)) provides that an EIR shall include a detailed statement setting forth "[i]n a separate section…[a]ny significant effects on the environment that would be irreversible if the project is implemented." State CEQA Guidelines Section 15126.2(c) provides the following guidelines for analyzing the significant irreversible environmental changes of a project:

Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irretrievable damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

The proposed project would use both renewable and nonrenewable natural resources for project construction and operation. The proposed project would use nonrenewable fossil fuels in the form of oil and gasoline during construction and operation. Other nonrenewable and slowly-renewable resources consumed as a result of project development would include, but not necessarily be limited to, lumber and other forest products, sand and gravel, asphalt, petrochemical construction materials, steel, copper, lead, and water.

The proposed project involves construction of a regional shopping center resulting in conversion of relatively undeveloped land to urban uses. This change in land use would represent a long-term commitment to urbanization, as the potential for developed land to be reverted back to undeveloped land uses is highly unlikely.

Lastly, the proposed project could result in irreversible damage from environmental accidents, such as an accidental spill or explosion of a hazardous material. During construction, equipment on the site would use various types of fuel. Operation of the proposed project would include the use and sale of hazardous materials, primarily associated with home improvement and gardening products, which could increase the risk of an accidental spill or release. However, these hazardous materials would be sold in relatively small quantities and in California, the storage, use and sale of hazardous substances are strictly regulated and enforced by various local and regional agencies. The enforcement of these existing regulations would be expected to minimize the potential for irreversible damage associated with accidental spills or explosions on the project site.

Although the proposed project would result in the irretrievable commitment of non-renewable resources, the Rocklin City Council could reasonably conclude that such consumption would be justified because the proposed project would provide a convenient shopping center for local and regional businesses and residents, and would contribute to economic development in the region.

6.4 GLOBAL CLIMATE CHANGE

The California Environmental Quality Act (CEQA) requires that lead agencies consider the reasonably foreseeable adverse environmental effects of projects they are considering for approval. Emissions of greenhouse gases (GHGs) have the potential to adversely affect the environment because such emissions contribute, on a cumulative basis, to global climate change. In turn, global climate change has the potential to result in rising sea levels, which can inundate low-lying areas; to affect rain and snow fall, leading to changes in water supply; to affect habitat, leading to adverse affects on biological resources, etc.

Cumulative impacts are the collective impacts of one or more past, present, and future projects, that, when combined, result in adverse changes to the environment. When the adverse change is substantial, the cumulative impact is considered significant. The cumulative project list for this issue (global climate) comprises anthropogenic (i.e., man-made) GHG emission sources across the entire globe, and no project alone would reasonably be expected to contribute to a noticeable incremental change to the global climate. However, legislation and executive orders on the subject of climate change in California have established a statewide context for GHG emissions, and an enforceable statewide cap on GHG emissions. Given the nature of environmental consequences from GHGs and global climate change, CEQA requires the evaluation of the cumulative impacts of GHGs. Even relatively small (on a global basis) additions need to be considered, and small contributions to this cumulative impact (from which significant effects are occurring and are expected to worsen over time) may be potentially considerable (and therefore, significant). Thus, the City of Rocklin has concluded that GHG emissions require consideration under CEQA.

6.4.1 ENVIRONMENTAL SETTING

EXISTING CLIMATE

Climate is the accumulation of daily and seasonal weather events over a long period of time, whereas weather is defined as the condition of the atmosphere at any particular time and place (Ahrens 2003). The proposed project site is located in a climatic zone characterized as dry-summer subtropical or Mediterranean (abbreviated Cs) on the Köppen climate classification system. The Köppen system's classifications are primarily based on annual and monthly averages of temperature and precipitation (See Exhibit 6-12 for a global map of climate classifications).

The Sacramento Valley Air Basin (SVAB) is relatively flat, bordered by mountains to the east, west, and north. The climate is characterized by hot, dry summers and cool, rainy winters. Periods of dense and persistent low-level fog that are most prevalent between storms are characteristic of SVAB winter weather. The extreme summer aridity of the Mediterranean climate is caused by sinking air of subtropical high pressure regions. In the case of the SVAB, the ocean has less influence than in the coastal areas, giving the interior Mediterranean climate (abbreviated Csa on the Köppen climate system) more seasonal temperature variation (Ahrens 2003).

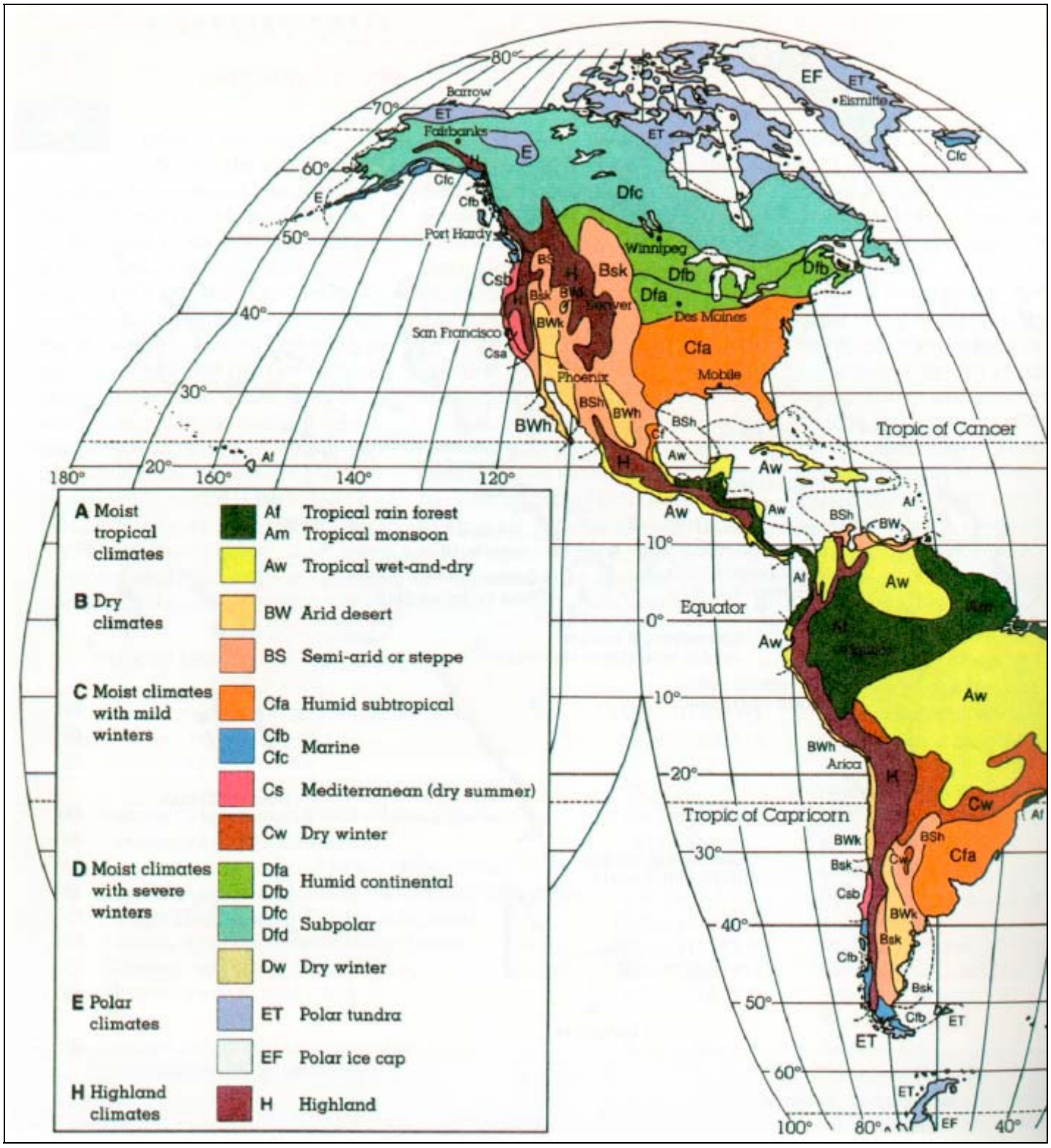
Most precipitation in the area results from air masses that move in from the Pacific Ocean during the winter months. These storms usually move from the west or northwest. More than half the total annual precipitation falls during the winter rainy season (November–February); the average winter temperature is a moderate 49 degrees Fahrenheit (°F). During the summer, daily temperatures range from 50°F to more than 100°F. The inland location and surrounding mountains shelter the area from many of the ocean breezes that keep the coastal regions moderate in temperature.

Local climate of the project site is represented by measurements recorded at the Sacramento station. The normal annual precipitation, which occurs primarily from November through March, is approximately 18 inches. January temperatures range from a normal minimum of 38°F to a normal maximum of 53°F. July temperatures range from a normal minimum of 58°F to a normal maximum of 93°F (National Oceanic and Atmospheric Administration [NOAA] 1992). The predominant wind direction and speed is from the south-southwest at 10 miles per hour (mph) (California Air Resources Board [ARB] 1994).

ATTRIBUTING CLIMATE CHANGE – THE PHYSICAL SCIENTIFIC BASIS

Various gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface, and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth, not as high-frequency solar radiation, but lower frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. The earth has a much lower temperature than the sun; therefore, the earth emits lower frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the Greenhouse Effect, is responsible for maintaining a habitable climate on Earth. Without the Greenhouse Effect, Earth would not be able to support life as we know it.

Prominent GHGs contributing to the Greenhouse Effect are carbon dioxide (CO_2), methane (CH_4), ozone, nitrous oxide, hydrofluorocarbons, chlorofluorocarbons, and sulfur hexafluoride. Human-caused emissions of these GHGs in excess of natural ambient concentrations are responsible for intensifying the Greenhouse Effect and have led to a trend of unnatural warming of the earth's climate, known as global climate change or global warming (Ahrens 2003). It is *extremely unlikely* that global climate change of the past 50 years can be explained without the contribution from human activities (Intergovernmental Panel on Climate Change [IPCC] 2007).



Source: Ahrens 2003

The Köppen Climate Classification System **Exhibit 6-12**

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants (CAPs) and toxic air contaminants (TACs), which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about 1 day), GHGs have long atmospheric lifetimes (1 year to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood that more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration. Of the total annual human-caused CO_2 emissions, approximately 54% is sequestered through ocean uptake, uptake by northern hemisphere forest regrowth, and other terrestrial sinks within a year, whereas the remaining 46% of human-caused CO_2 emissions remains stored in the atmosphere (Seinfeld and Pandis 1998).

Similarly, impacts of GHGs are borne globally, as opposed to localized air quality effects of CAPs and TACs. The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; suffice to say, the quantity is enormous, and no single project alone would be expected to measurably contribute to a noticeable incremental change in the global average temperature, or to global, local, or micro climate. From the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative.

Feedback Mechanisms and Uncertainty

Many complex mechanisms interact within Earth's energy budget to establish the global average temperature and global and regional climate conditions. For example, increases in atmospheric temperature would lead to increases in ocean temperature. As atmospheric and ocean temperatures increase, sea ice and glaciers are expected to melt, adding more fresh water to the ocean and altering salinity conditions. Both increases in ocean temperature and changes in salinity would be expected to lead to changes in circulation of ocean currents. Changes in current circulation would further alter ocean temperatures and alter terrestrial climates where currents have changed. Several interacting atmospheric, climatic, hydrologic, and terrestrial factors affecting global climate change are described below. These factors result in feedback mechanisms that could potentially increase or decrease the effects of global climate change. There is uncertainty about how some factors may affect global climate change because they have the potential to both intensify and neutralize future climate warming. Examples of these conditions are described below.

Direct and Indirect Effects of Aerosols

Aerosols, including particulate matter, reflect sunlight back to space. As air quality goals for particulate matter are met and fewer emissions of particulate matter occur, the cooling effect of aerosols would be reduced, and the Greenhouse Effect would be further intensified. Similarly, aerosols act as cloud condensation nuclei, aiding in cloud formation and increasing cloud lifetime. Under some circumstances (see discussion of the cloud effect below), clouds efficiently reflect solar radiation back to space. With a reduction in emissions of particulate matter, including aerosols, the direct and indirect positive effect of aerosols on clouds would be reduced, potentially further amplifying the Greenhouse Effect.

The Cloud Effect

As global temperature rises, the ability of the air to hold moisture increases, facilitating cloud formation. As stated above, clouds can efficiently reflect solar radiation back to space. If an increase in cloud cover occurs at low or middle altitudes, resulting in clouds with greater liquid water content, such as stratus or cumulus clouds, more radiation would be reflected back to space than under current conditions. This would result in a negative feedback mechanism, in which the increase in cloud cover resulting from global climate change acts to balance the amount of further warming. If clouds form at higher altitudes in the form of cirrus clouds, however, these clouds allow more solar radiation to pass through than they reflect and ultimately act as GHGs themselves. This results in a positive feedback mechanism, in which the side effect of global climate change (an increase in cloud cover) acts to intensify the warming process. Because of the conflicting feedback mechanisms to which increasing cloud

cover can contribute, this cloud effect is an area of relatively high uncertainty for scientists when projecting future global climate change conditions.

Other Feedback Mechanisms

As global temperature continues to rise, CH_4 gas trapped in permafrost is expected to be released into the atmosphere. As identified below in the description of CO_2 equivalents, CH_4 is approximately 23 times as efficient a GHG as CO_2; therefore, this release of CH_4 would accelerate and intensify global climate change if current trends continue. Additionally, as the surface area of polar and sea ice continues to diminish, Earth's albedo, or reflectivity, also is anticipated to decrease. More incoming solar radiation likely will be absorbed by the earth rather than be reflected back into space, further intensifying the Greenhouse Effect and associated global climate change. These and other both positive and negative feedback mechanisms are still being studied by the scientific community to better understand their potential effects on global climate change. The specific incremental increase in global average temperature that will result from the interaction of all the pertinent variables has not been pinpointed at this time. Although the amount and rate of increase in global average temperature are uncertain, there is no longer much debate within the scientific community that global climate change is occurring and that human-caused GHG emissions are contributing to this phenomenon.

ATTRIBUTING CLIMATE CHANGE - GREENHOUSE GAS EMISSION SOURCES

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors (California Energy Commission [CEC] 2006a).

An analysis of data, compiled by the United Nations Framework Convention on Climate Change (UNFCCC), indicates that in 2004, total GHG emissions were 20,135 Tg CO_2 Eq, excluding emissions/removals from land use, land use change, and forestry (UNFCCC 2006). The emissions are estimated in tons per year, which are converted to teragrams of carbon dioxide equivalents (Tg CO_2 Eq) using the formula:

Tg CO_2 Eq = (tons of gas) ÷ 1.12 (metric tons per ton) × (GWP) × (1,000,000). One Tg is equal to one million metric tons, and one metric ton is equal to 2.24.

In 2004, the U.S. contributed the most GHG emissions (35 percent of global emissions). In 2004, in the U.S., total GHG emissions were 7074.4 Tg CO_2 Eq, which is an increase of 15.8 percent from 1990 emissions (EPA 2006d). In 2005, total U.S. GHG emissions were 7,260.4 Tg CO2 Eq (EPA 2007). Overall, total U.S. emissions have risen by 16.3 percent from 1990 to 2005, while the U.S. gross domestic product has increased by 55 percent over the same period (EPA 2007). Emissions rose from 2004 to 2005, increasing by 0.8 percent (56.7 Tg CO2 Eq). The main causes of the increase are (1) strong economic growth in 2005, leading to increased demand for electricity and (2) an increase in the demand for electricity, due to warmer summer conditions (EPA 2007). However, a decrease in demand for fuels that is due to warmer winter conditions and higher fuel prices moderated the increase in emissions (EPA 2007).

California is the 12th to 16th largest emitter of CO_2 in the world (CEC 2006a). California produced 499 million gross metric tons of CO_2 equivalent (CO_2e) in 2004 (ARB 2007a). CO_2e is a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the Greenhouse Effect. This potential, known as the global warming potential (GWP) of a GHG, is dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. For example, as described in Appendix C, "Calculation References," of the General Reporting Protocol of the California Climate Action Registry (CCAR 2007), 1 ton of CH_4 has the same contribution to the Greenhouse Effect as approximately 23 tons of CO_2. Therefore, CH_4 is a much more potent GHG than CO_2. Expressing emissions in CO_2e takes the contributions of all GHG emissions to the Greenhouse Effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

During 1990 to 2003, California's gross state product grew 83 percent, while GHG emissions grew 12 percent. While California has a high amount of GHG emissions, it has relatively (to the United States) low emissions per capita. In 2004, California produced 492 Tg CO_2 Eq (CEC 2006a), which is approximately 7 percent of U.S. emissions. In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation (CEC 2006a). Emissions of CO_2 are byproducts of fossil fuel combustion. CH_4, a highly potent GHG, results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) is largely associated with agricultural practices and landfills. CO_2 sinks, or reservoirs, include vegetation and the ocean, which absorb CO_2 through sequestration and dissolution, respectively, two of the most common processes of CO_2 sequestration.

Emissions from fuel use in the commercial and residential sectors in California decreased 9.7 percent over the 1990 to 2004 period (CEC 2006a). According to the CEC, the decrease in greenhouse gases demonstrates the efficacy of energy conservation in buildings (Title 24 requirements) and appliances. The new 2005 Title 24 Standards will further reduce greenhouse gas emissions. The decrease in greenhouse gases attributed to these sources is even more substantial when the population increase in California is considered.

ADAPTATION TO CLIMATE CHANGE

According to the IPCC, which was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme, global average temperature is expected to increase by 3–7°F by the end of the century, depending on future GHG emission scenarios (IPCC 2007). Resource areas other than air quality and atmospheric temperature could be indirectly affected by the accumulation of GHG emissions. For example, an increase in the global average temperature is expected to result in a decreased volume of precipitation falling as snow in California and an overall reduction in snowpack in the Sierra Nevada. Snowpack in the Sierra Nevada provides both water supply (runoff) and storage (within the snowpack before melting), which is a major source of supply for the state (including the project site). According to the California Energy Commission (2006b), the snowpack portion of the water supply could potentially decline by 30–90% by the end of the 21st century. A study cited in a report by the California Department of Water Resources (DWR) projects that approximately 50% of the statewide snowpack will be lost by the end of the century (Knowles and Cayan 2002). Although current forecasts are uncertain, it is evident that this phenomenon could lead to significant challenges in securing an adequate water supply for a growing population. An increase in precipitation falling as rain rather than snow also could lead to increased potential for floods because water that would normally be held in the Sierra Nevada until spring could flow into the Central Valley concurrently with winter storm events. This scenario would place more pressure on California's levee/flood control system (DWR 2006).

Another outcome of global climate change is sea level rise. Sea level rose approximately 7 inches during the last century (CEC 2006b), and it is predicted to rise an additional 7–22 inches by 2100, depending on the future levels of GHG emissions (IPCC 2007). If this occurs, resultant effects could include increased coastal flooding, saltwater intrusion (especially a concern in the low-lying Sacramento–San Joaquin River Delta, where pumps delivering potable water could be threatened), and disruption of wetlands (CEC 2006b). As the existing climate throughout California changes over time, the ranges of various plant and wildlife species could shift or be reduced, depending on the favored temperature and moisture regimes of each species. In the worst cases, some species would become extinct or be extirpated from the state if suitable conditions are no longer available.

6.4.2 REGULATORY SETTING

Federal Plans, Policies, Regulations, and Laws

Atmospheric Greenhouse Gases

The U.S. Environmental Protection Agency (EPA) is the federal agency responsible for implementing the Federal Clean Air Act (CAA). The U.S. Supreme Court ruled on April 2, 2007 that CO_2 is an air pollutant as defined under the CAA, and that EPA has the authority to regulate emissions of GHGs. However, there are no federal regulations or policies regarding GHG emissions applicable to the proposed project at the time of writing.

State Plans, Policies, Regulations, and Laws

ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA), which was adopted in 1988.

Atmospheric Greenhouse Gases

Various statewide and local initiatives to reduce the state's contribution to GHG emissions have raised awareness that, even though the various contributors to and consequences of global climate change are not yet fully understood, global climate change is under way, and there is a real potential for severe adverse environmental, social, and economic effects in the long term. Because every nation emits GHGs and therefore makes an incremental cumulative contribution to global climate change, cooperation on a global scale will be required to reduce the rate of GHG emissions to a level that can help to slow or stop the human-caused increase in average global temperatures and associated changes in climatic conditions.

Assembly Bill 1493

In 2002, then-Governor Gray Davis signed Assembly Bill (AB) 1493 (Stats. 2002, ch. 200) (amending Health & Safety Code, § 42823 and adding Health & Safety Code, § 43018.5). AB 1493 requires that ARB develop and adopt, by January 1, 2005, regulations that achieve "the maximum feasible reduction of greenhouse gases emitted by passenger vehicles and light-duty trucks and other vehicles determined by ARB to be vehicles whose primary use is noncommercial personal transportation in the state."

To meet the requirements of AB 1493, in 2004 ARB approved amendments to the California Code of Regulations (CCR) adding GHG emissions standards to California's existing standards for motor vehicle emissions. Amendments to CCR Title 13, Sections 1900 and 1961 (13 CCR §§ 1900, 1961), and adoption of Section 1961.1 (13 CCR § 1961.1) require automobile manufacturers to meet fleet-average GHG emissions limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes (i.e., any medium-duty vehicle with a gross vehicle weight rating less than 10,000 pounds that is designed primarily for the transportation of persons), beginning with the 2009 model year. Emissions limits are reduced further in each model year through 2016. Emissions requirements adopted as part of 13 CCR § 1961.1 are shown in Table 6-15. For passenger cars and light-duty trucks with a loaded vehicle weight (LVW) of 3,750 pounds or less, the GHG emission limits for the 2016 model year are approximately 37% lower than the limits for the first year of the regulations, the 2009 model year. For light-duty trucks with LVW of 3,751 pounds to gross vehicle weight (GVW) of 8,500 pounds, as well as medium-duty passenger vehicles, GHG emissions are reduced approximately 24% between 2009 and 2016.

Table 6-15
Fleet-Average Greenhouse Gas Exhaust Emission Limits Included in CCR 13 1961.1

Vehicle Model Year	Fleet-Average Greenhouse Gas Emissions (CO_2e in grams per mile)	
	Passenger Cars and Light-Duty Trucks 0–3,750 Pounds LVW	Medium-Duty Passenger Vehicles and Light-Duty Trucks 3,751 Pounds LVW to 8,500 Pounds GVW*
2009	323	439
2010	301	420
2011	267	390
2012	233	361
2013	227	355
2014	222	350
2015	213	341
2016	205	332

Notes:
GVW = gross vehicle weight.
LVW = loaded vehicle weight.
* Specific characteristics of passenger cars, light-duty trucks, and medium-duty passenger vehicles are provided in Title 13, Section 1900 of the California Code of Regulations as amended to comply with Assembly Bill 1493.
Source: California Code of Regulations, Title 13, Section 1961.1

In December 2004, a group of car dealerships, automobile manufacturers, and trade groups representing automobile manufacturers filed suit against ARB to prevent enforcement of 13 CCR Sections 1900 and 1961 as amended by AB 1493 and 13 CCR 1961.1 (*Central Valley Chrysler-Jeep et al. v. Catherine E. Witherspoon, in Her Official Capacity as Executive Director of the California Air Resources Board, et al.*). The suit, still in process in the U.S. District Court for the Eastern District of California contends that California's implementation of regulations that, in effect, regulate vehicle fuel economy violates various federal laws, regulations, and policies. To date, the suit has not been settled, and the judge has issued an injunction stating that ARB cannot enforce the regulations in question before receiving appropriate authorization from EPA.

In January 2007, the judge hearing the case accepted a request from the State Attorney General's office that the trial be postponed until a decision is reached by the U.S. Supreme Court on a separate case addressing GHGs. In the Supreme Court case, *Massachusetts, et al., v. Environmental Protection Agency, et al.*, the primary issue in question was whether the CAA provides authority for EPA to regulate CO_2 emissions. EPA contended that the CAA does not authorize regulation of CO_2 emissions, whereas Massachusetts and 10 other states, including California, sued EPA to begin regulating CO_2. As mentioned above, the U.S. Supreme Court ruled on April 2, 2007, that GHGs are "air pollutants" as defined under the CAA and EPA is granted authority to regulate CO_2 (*Massachusetts v. U.S. Environmental Protection Agency* [2007] 549 U.S. 05-1120).

Executive Order S-3-05

Executive Order S-3-05, which was signed by Governor Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total greenhouse gas emission targets. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80% below the 1990 level by 2050.

The Executive Order directed the Secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce greenhouse gas emissions to the target levels. The Secretary will also submit biannual reports to the governor and state legislature describing: progress made toward reaching the emission targets; impacts of global warming on California's resources; and mitigation and adaptation plans to combat these impacts. To comply with the Executive Order, the Secretary of the CalEPA created the California Climate Action Team (CCAT) made up of members from various state agencies and commissions. CCAT released its first report in March 2006. The report proposed to achieve the targets by building on voluntary actions of California businesses, local government and community actions, as well as through state incentive and regulatory programs.

Assembly Bill 32, the California Climate Solutions Act of 2006

In September 2006, Governor Arnold Schwarzenegger signed AB 32, the California Climate Solutions Act of 2006. (See Stats. 2006, ch. 488, enacting Health & Safety Code, §§ 38500–38599.) AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction will be accomplished through an enforceable statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs ARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then ARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires that ARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrives at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves the reductions in GHG emissions necessary to meet the cap. AB 32 also includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

AB 32 does not explicitly apply to emissions from land development, though emissions associated with land development projects are closely connected to the utilities, transportation, and commercial end-use sectors. Further, because AB 32 imposes a statewide emissions cap, land development-related emissions will ultimately factor into considerations of GHG emissions in the state.

California Climate Action Registry

The California Climate Action Registry (CCAR) was established in 2000 by Senate Bill 1771 and modified in 2001 by Senate Bill 527 as a nonprofit voluntary registry for GHG emissions. (See Stats. 2000, ch. 1018 (enacting Health & Safety Code, §§ 42800–42870 and Pub. Resources Code, § 25730) and Stats. 2001, ch. 769 (amending Health and Safety Code, §§ 42810, 42821–42824, 42840–42843, 42860, and 42870.) The purpose of CCAR is to help companies and organizations with operations in the state to establish GHG emissions baselines against which any future GHG emissions reduction requirements may be applied. CCAR has developed a general protocol and additional industry-specific protocols that provide guidance on how to inventory GHG emissions for participation in the registry.

Senate Bill 97

Senate Bill (SB) 97, signed August 2007, acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. (Stats. 2007, ch. 185 (enacting Pub. Resources Code, §§ 21083.05 and 21097.) This bill directs the State Office of Planning and Research (OPR) to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA by July 1, 2009. The Resources Agency is required to certify and adopt those guidelines by January 1, 2010. This bill also removes, both retroactively and prospectively, as legitimate litigation causes of

action any claim of inadequate CEQA analysis of effects of GHG emissions associated with environmental review for projects funded by the Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act of 2006, or the Disaster Preparedness and Flood Protection Bond Act of 2006 (Proposition 1B or 1E). This provision will be repealed by operation of law on January 1, 2010, at which time such projects, if any remain unapproved, will no longer enjoy the protection against litigation claims based on failure to adequately address climate change issues. This bill would only protect a handful of public agencies from CEQA challenges on certain types of projects for a few years time.

REGIONAL AND LOCAL PLANS, POLICIES, REGULATIONS, AND LAWS

Atmospheric Greenhouse Gases

There are no regional or local policies, regulations, or laws specifically pertaining to GHG emissions.

6.4.3 ENVIRONMENTAL IMPACTS

THRESHOLDS OF SIGNIFICANCE

Under CEQA, an environmental impact report must identify and focus on the significant environmental effects of a project. Significant effect on the environment means a substantial, or potentially substantial, adverse change in the environment (Pub. Resources Code, § 21068). CEQA further states that the CEQA Guidelines shall specify certain criteria that require a finding that a project may have a significant effect on the environment. However, as of the writing of the Rocklin Crossings Project EIR, the agencies with jurisdiction over air quality regulation and GHG emissions such as the ARB and the Placer County Air Pollution Control District (PCAPCD) have not established regulations, guidance, methodologies, significance thresholds, standards or analysis protocols for the assessment of greenhouse gas emissions and climate change. Thus, a standardized, California-wide methodology to establish an appropriate baseline, such as a project-level (regional GHG emissions) inventory, to evaluate the significance of GHG emission changes has not yet been established. This places the burden for establishing a methodology, and determining significance standards, on local lead agencies, such as the City of Rocklin. Given the global nature of this impact, local lead agencies are not the most appropriate source for establishing methods and significance standards pertaining to impacts of a Project on global climate change. Further, the State is in the process, and is required by legislation (SB 97) to establish such standards, but they are several years away.

Given the challenges associated with determining a project-specific significance criteria for GHG emissions when the issue must be viewed on a global scale, and the regulatory agencies best suited for developing the methodology to do so have not yet established any criteria, a quantified significance threshold is not proposed by the City for the Rocklin Crossings Project.

To meet GHG emission targets of AB 32, California would need to generate in the future less GHG emissions than current levels. It is recognized, however, that for most projects there is no simple metric available to determine if a single project would substantially increase or decrease overall GHG emission levels or conflict with the goals of AB 32. Moreover, emitting CO into the atmosphere is not itself an adverse environmental effect. It is the increased concentration of CO_2 in the atmosphere resulting in global climate change and the associated consequences of climate change that results in adverse environmental effects (e.g., sea level rise, loss of snowpack, severe weather events). Although it is possible to generally estimate a project's incremental contribution of CO_2 into the atmosphere, it is typically not possible to determine whether or how an individual project's relatively small incremental contribution might translate into physical effects on the environment. Given the complex interactions between various global and regional-scale physical, chemical, atmospheric, terrestrial, and aquatic systems that result in the physical expressions of global climate change, it is impossible to discern whether the presence or absence of CO_2 emitted by the project would result in any altered conditions.

AB 32 requires CARB, the State agency charged with regulating statewide air quality, to adopt rules and regulations that by 2020 would achieve a reduction in greenhouse gas emissions equivalent to the statewide inventory levels of 1990. On or before June 30, 2007, CARB was required to publish a list of discrete greenhouse gas emission reduction measures that can be implemented. On April 20, 2007, CARB published their proposed early actions (CARB 2007a), which include discrete early action measures, additional greenhouse gas reduction strategies, and criteria and toxic control measures.

The California Environmental Protection Agency (CalEPA) Climate Action Team (CAT) developed a report that "proposes a path to achieve the Governor's targets [established in Executive Order S-3-05] that will build on voluntary actions of California businesses, local government and community actions, and State incentive and regulatory programs" (CAT 2006) needed to reduce activities that contribute to global climate change . The report indicates that the strategies will reduce California's emissions to the levels proposed in Executive Order S-3-05.

The basis for these greenhouse gas reduction goals that California has adopted into law is provided in the IPCC climate models that predict the climate stabilizing at approximately 2 degrees Celsius rise in average temperatures long-term. Given this information, AB 32, Executive Order S-3-05, and the CAT report all indicate that development projects need to reduce greenhouse gas emissions to the target levels by adopting the reduction measures in order to find that the project's incremental contribution to global climate change impacts are not significant. If the project is not consistent with those strategies that the Lead Agency deems feasible, then a project could potentially be deemed to have a significant impact on global climate change.

ANALYSIS METHODOLOGY

As described above, there is no available or recommended methodology (at least, not adopted by any air district or state agency) for evaluating GHG emissions from new development. In the case of the proposed project, CO_2 emissions associated with project construction and operation were modeled using URBEMIS 2007 version 9.2.2, a widely-used, ARB-approved model used in regional air quality analysis. CO_2 emissions were used as a proxy for all GHG emissions associated with the project (ARB 2007b). Indirect emissions associated with energy consumption were estimated using methodology recommended in the current CCAR General Reporting Protocol version 2.2. CO_2 emissions associated with vehicle miles traveled (VMT) are the best indicator of GHGs associated with a land development project. However, it is important to note that other GHGs have a higher GWP than CO_2. For example, 1 ton of methane associated with off-site waste disposal or waste water treatment processes from the project has an equivalent GWP of 23 tons of CO_2 (California Climate Action Registry 2007). In other words, as a GHG, methane is 23 times more effective than CO_2. Nonetheless, emissions of high GWP GHGs are typically associated with industrial processes and would be low relative to CO_2 emission levels associated with land use development projects such as the proposed project, even accounting for GWP.

It is important to note that all CO_2 emissions from project operation may not necessarily be considered "new" emissions, given that a project itself does not create "new" emitters (people) of GHGs, at least not in the traditional sense. In other words, the GHG emissions for a commercial project are not necessarily all new GHG emissions; to a large degree, a commercial project, relocates GHG emissions from one part of a market shed to another; similarly, a residential project does not create people (emitters), but accommodates them as they move from one location to another. In this sense, commercial and residential development projects occur in response to increased demand from the growing economy and population, and are not in themselves creators of economic and population growth. Emissions of GHGs are, however, influenced by the location and design of projects, to the extent that they can influence travel to and from the projects, and to the degree the projects are designed to maximize energy efficiency.

No accepted technically sound methodology exists that would allow the City to determine how many vehicle trips, or vehicle miles traveled (VMT), associated with the project, as determined through the traffic models used in Section 4.2 of this Draft EIR, are truly "new" trips, as opposed to trips coming to and from the project site instead of traveling to and from some other site or sites, or "new" VMT. For this reason, the vehicle trips are

segregated as follows: all employment-related and vendor trips and VMT identified in Section 4.2 are considered "new" for purposes of assessing the project's effects on climate change. The GHG emissions associated with shopper trips (i.e., visitors to the project site) are identified separately, and are assumed to be "relocated" from other commercial uses (i.e., the project does not create these shoppers; it relocates them from other commercial uses). The rationale for this methodology is: 1) without the project, the 800 employment trips would not occur. There is no other "originator" for these trips. This is a conservative assumption. In reality, if the employment was not created at the site but overall market demand for goods were the same, some or all of the employment would occur elsewhere in the region; 2) the shopper trips, on the other hand, would be treated as "relocated" and would not be "new". Residential development typically has an associated average daily trip generation rate that assumes work-related, shopping-related, and other types of trips occur on a daily basis originating and ending at the residential unit. It is reasonable to assume that these trips would occur without the proposed project, especially in a region with a well-developed retail mix such as in southern Placer County. It is possible that a handful of the total trip generation from shoppers would represent trips that would not occur without the project, but this potential is more than offset by the conservative assumption for employment trips.

This rationale is further supported by the findings contained in the economic analysis prepared for the project (CBRE 2006; see Appendix B), which concludes that the existing retail market in the area has grown, or is growing primarily from regional population growth and would not result in substantial risk of closure of existing establishments offering retail goods and services similar to the proposed project. It also concludes that some risk of economic impact to the existing primary and secondary market for appliances and furnishings would occur, but that, in general, the market can absorb the proposed project without causing immitigable urban decay. Thus, the approximate 800 jobs supported by the proposed project can be treated as "new" jobs to the region and to the state (and are not seen as a replacement to jobs that were eliminated elsewhere). Similarly, the vendor truck trips that would supply materials and goods to the proposed project would not replace or redistribute truck deliveries to other establishments in the region or state, and can be treated as "new" truck trips. However, the shopping-related trips are assumed to exist in the current market shed, with or without the proposed project. It is possible that the proposed project would have the effect of reducing vehicle trip length for individuals who are currently driving to a more distant shopping center location and would be more conveniently served by the proposed shopping center, or that it could draw some people from more distant locations. However, there is no available data to support that type of analysis, and, thus, it would be considered speculative under CEQA to pursue further.

To treat all shopping-related trips as "new" trips, and associated "new" potential to emit GHGs, would overstate the project's climate change impact, since, as stated above, shopping trips would occur with or without the proposed project. The City believes that the approach taken herein is a reasonably conservative approach and is a reasonable approach to evaluating the project's potential to emit GHGs. In any event, in order to further the goals and objectives of AB 32, the proposed project would need to accommodate its share of a fixed sized market for retail services in a way that allows for a lower rate of GHG generation. The best way to accomplish this is to allow people to meet their daily needs while minimizing reliance on the automobile and minimizing VMT.

The methodology used in this DEIR to analyze the project's potential effect on global warming includes a calculation of GHG emissions. The purpose of calculating the emissions is for informational and comparison purposes, as there is no adopted quantifiable emissions threshold for either a project level or cumulative level of impact. Absent an adopted regulatory standard or other regulatory guidance, the City has determined that the project's potential for creating an impact on global warming should be based on a comparative analysis of the project against the emission reduction strategies contained in the California Climate Action Team's Report to the Governor. If it is determined the proposed project is compatible or consistent with the applicable Climate Action Team (CAT) strategies, the project's cumulative impact on global climate change is considered less than significant.

IMPACT ANALYSIS

IMPACT 6-24 Cumulative Climate Change. *The proposed project would generate greenhouse gas emissions during project construction and operations. Because the proposed project would incrementally contribute to global greenhouse gas emissions, its global climate change impacts would be considered* ***potentially cumulatively significant****.*

Project Specific Impact

An individual project cannot generate enough greenhouse gas emissions to significantly influence global climate change. The project participates in this potential impact by its incremental contribution combined with the cumulative increase of all other sources of greenhouse gases, which when taken together form global climate change impacts.

Cumulative Impacts

The following discussion reviews the project's potential generation of greenhouse gases and its incremental contribution to the cumulative effect resulting from emissions of greenhouse gases. A two-tiered approach is used, as follows: (1) a discussion of project greenhouse gas emissions and (2) project compliance with the emission reduction strategies contained in the California Climate Action Team's Report to the Governor.

Long-term operation of the proposed project would generate associated GHG emissions from area- and mobile-sources, and indirectly from stationary sources associated with energy consumption. Mobile-source emissions of GHGs would include project-generated vehicle trips associated with employee commute, vendor, and shopping (i.e., visitor) trips to the project site. Area-source emissions would be associated with activities such as landscaping and maintenance of proposed land uses, natural gas distribution for space and water heating, and other sources. Increases in stationary-source emissions could occur at off-site utility providers associated with electricity and natural gas consumption by the proposed uses.

GHG emissions generated by the proposed project would predominantly consist of CO2. In comparison to CAPs, such as ozone and PM10, CO2 emissions persist in the atmosphere for a substantially longer period of time. While emissions of other GHGs, such as CH4, are important with respect to global climate change, emission levels of other GHGs are less dependent on the land use and circulation patterns associated with the proposed land use development project than are levels of CO2.

Mobile sources (vehicle trips and associated miles traveled) would be the primary emission source of GHGs associated with the proposed project. Transportation is also the largest source of GHG emissions in California and represents approximately 41% of annual CO2 emissions generated in the state (CEC 2006a). Like most land use development projects, VMT is the most direct indicator of CO2 emissions from the proposed project and associated CO2 emissions function as the best indicator of total GHG emissions. Using standard traffic engineering methodologies that treat all trips to and from a project site as a "net increase" or "new" trips and all VMT associated with the project as "new" VMT, is appropriate for localized and regional air quality or traffic analyses, where the location of CAP emissions within a distinct air basin or impacts to the local roadway network, respectively, are important. However, given the global nature of the global warming phenomenon and the statewide context through legislation for dealing with California's contribution to this global impact, it would be inappropriate to assess GHG emissions in the same manner as for air quality or traffic.

As described above, the GHGs from the proposed project are not necessarily new but are more likely redirected from other establishments serving the same market. Buildout of the proposed project would add approximately 18,788 vehicle trips per day to the project area and these trips would be the primary source of GHG emissions associated with project operation. For the proposed project, a conservative approach is taken which concludes that "new" project-related vehicle trips would be associated with the labor force employed by the project's tenants and with vendor truck trips that would deliver materials and goods to the project site. It is also assumed that all area-

source and off-site stationary-source GHG emissions from heating and electricity consumption would be "new" GHG emissions.

If the total trips (employees and shoppers) as well as area-source and off-site stationary source GHG emissions are considered, operation of the project would generate total GHG emissions of 18,339 metric tons CO2e annually during the lifetime of the project. However, if the shopper trips are removed, only 6,752 metric tons of CO2e would actually be considered "new" emissions. Construction of the proposed project would generate a finite quantity of approximately 723 metric tons of CO2 over the duration of construction activities (see Table 6-16). Construction would contribute GHG emissions to a much lesser extent than operation of the proposed project.

Table 6-16
Summary of Modeled Greenhouse Gas (CO_2e) Emissions

Source	CO_2e Emissions	
Construction Emissions (to occur over 2 year buildout period)	**metric tons[1]**	
Total "New" Direct Emissions	723	
Operational Emissions (to occur over the lifetime of the project)	**metric tons/year[1]**	
"New" Area-Source Emissions	1,044	
Mobile-Source Emissions[2]	13,967	
Employee Commute Mobile-Source "New" Emissions		1,898
Vendor-Related Mobile-Source "New" Emissions		482
Shopper/Visitor-Related Mobile-Source Emissions[3]		11,588
Stationary-Source Emissions (Energy Consumption[4])	3,327	
Total Direct and Indirect "New" Emissions	6,752	
Total Direct and Indirect Emissions	18,339	

[1] Emissions were modeled using the URBEMIS 2007 (v9.2.2) (ARB 2007b) computer model, based on trip generation rates contained in the traffic analysis prepared for the project (LSA 2007), proposed land uses identified in the project description, and default model assumptions where detailed information was not available. URBEMIS accounts for emissions from vehicles and natural gas use. URBEMIS output is in units of tons CO_2e/year, whereas a standard unit for reporting GHG emissions is in metric tons CO_2e/year. Conversions of URBEMIS output to metric units are contained in Appendix G.

[2] It should be noted that model default trip lengths and trip rates were used and are considered reasonably conservative and not necessarily project-specific, and were relied upon in absence of a project-specific trip length.

[3] Mobile-source emissions attributed to shoppers/visitors to the project site were itemized separately because these shopping-related emissions already exist associated with residents of an existing retail market, would continue to exist with or without the proposed project, and are not a direct or indirect result of the proposed project. Thus, shopping-related mobile-source GHG emissions are not considered "new" emissions.

[4] Indirect emissions associated with stationary sources (increased energy consumption) were calculated using the CCAR GRP (v2.2). These emissions are reported here for disclosure purposes and would clearly be anticipated to be regulated under AB 32, subject to mandatory emissions cap and trade programs, and, thus, would be consistent with AB 32 targets.

Notes: The values presented in Table 6-16 do not include the full life-cycle of GHG emissions that may occur over the production/transport of materials used during construction of the project, products sold for purchase and use during operation of the project, solid waste or waste water disposal over the life of the project, end-of-life of the materials and processes that would contribute to GHG emissions that occur as an indirect result of the project, etc. Doing so would be speculative and would require analysis beyond the current state of the art in impact assessment, and would lead to a false and misleading level of precision in reporting of project-related GHG emissions. Further, indirect emissions associated with in-state energy production, solid waste disposal, and waste water treatment would be regulated under AB 32 at the source or facility that would handle these processes. The emissions associated with off-site facilities in California would be closely controlled, reported, capped and traded under AB 32 and ARB programs. Therefore, this category of emissions would be consistent with AB 32 requirements, and are, in effect, double-counted.

Refer to Appendix G for detailed assumptions and modeling output files.

Source: Data modeled by EDAW 2007.

It is important to consider the context for GHG emissions. GHG emissions are dispersed throughout the atmosphere worldwide, and the effects of climate change are borne globally, unlike CAP emissions, which have regional and/or local impacts on air quality. As noted earlier, the extent to which GHG emissions attributable to the project can be treated as "new" is uncertain. For this reason and others discussed above in the section describing methods for analysis, it is more relevant to consider the GHG-efficiency (i.e., energy efficiency) of a project rather than simply the mass of GHG emissions. (See Chapter 4.14 of this DEIR relating to energy impacts.)

An analysis of data, compiled by the United Nations Framework Convention on Climate Change (UNFCCC), indicates that in 2004, total GHG emissions were 20,135 Tg CO_2 Eq, excluding emissions/removals from land use, land use change, and forestry (UNFCCC 2006). The emissions are estimated in tons per year, which are converted to teragrams of carbon dioxide equivalents (Tg CO_2 Eq) using the formula:

Tg CO_2 Eq = (tons of gas) ÷ 1.12 (metric tons per ton) × (GWP) × (1,000,000). One Tg is equal to one million metric tons, and one metric ton is equal to 2.24.

In 2004, the U.S. contributed the most GHG emissions (35 percent of global emissions). In 2004, in the U.S., total GHG emissions were 7074.4 Tg CO_2 Eq, which is an increase of 15.8 percent from 1990 emissions (EPA 2006d). In 2005, total U.S. GHG emissions were 7,260.4 Tg CO2 Eq (EPA 2007). Comparing the project GHG emissions of 18,339 metric tons per year to the global emissions of 20,135 million metric tons per year yields an exceedingly small percentage, about 9 millionths of one percent. It is reasonable to conclude that the project's incremental contribution is miniscule, viewed in the global context.

California Governor Arnold Schwarzenegger announced on June 1, 2005 through Executive Order S- 3-05 (Climate Change) GHG emission reduction targets as follows: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels (CA 2005). Some literature equates these reductions to 11 percent by 2010 and 25 percent by 2020.

AB-32 requires that by January 1, 2008, the state board shall determine what the statewide greenhouse gas emissions level was in 1990, and approve a statewide greenhouse gas emissions limit that is equivalent to that level, to be achieved by 2020. While the level of 1990 GHG emissions has not been approved at this time, other publications indicate that levels varied from 425 to 468 Tg CO_2 Eq. (CEC 2006a). In 2004, the emissions were estimated at 492 Tg CO_2 Eq. (CEC 2006a). Using the range of 1990 emissions, a reduction of between 5 and 13 percent would be needed to reduce 2004 levels to 1990 levels.

The California Environmental Protection Agency Climate Action Team developed a report that "proposes a path to achieve the Governor's targets that will build on voluntary actions of California businesses, local government and community actions, and State incentive and regulatory programs" (CAT 2006). The report indicates that the strategies will reduce California's emissions to the levels proposed in Executive Order S-3-05. The strategies that apply to the project are contained in Table 6-17. These strategies are broad in their scope and address a wide range of industries and greenhouse gas emission sources. Therefore, many of the strategies are not applicable to the development and operation of commercial land uses. Also, for those strategies that are applicable, specific regulations or detailed guidance regarding their implementation is typically not available. Thus, the project's compliance with these measures was evaluated by the City qualitatively with the understanding that exact compliance can only be determined once specifically applicable regulations are adopted. The analysis included in this table focuses on the ability of the project to substantially comply with the applicable strategies. As shown in the table, the project substantially complies with the measures to bring California to the emission reduction targets.

Table 6-17
Project Compliance with Greenhouse Gas Emission Reduction Strategies

Strategy and Description	Project Compliance
California Air Resources Board	
Vehicle Climate Change Standards AB 1493 (Pavley) required the State to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of climate change emissions emitted by passenger vehicles and light duty trucks. Regulations were adopted by the CARB in September 2004.	Not Applicable. This measure applies to passenger vehicles and light duty trucks. The project does not manufacture, sale or purchase these vehicles. Vehicles that access the site would be required to be in compliance with applicable State and federal regulations.
Other Light Duty Vehicle Technology New standards would be adopted to phase in beginning in the 2017 model year	Not Applicable. The project does not manufacture, sale or purchase light duty vehicles. Light duty trucks that access the site would be required to be in compliance with applicable State and federal regulations.
Diesel Anti-Idling In July 2004, the CARB adopted a measure to limit diesel-fueled commercial motor vehicle idling.	Compliant. The proposed project would be required to comply with CARB limits on diesel-fueled commercial motor vehicle idling.
Hydrofluorocarbon Reduction (1) Ban retail sale of HFC in small cans. (2) Require that only low GWP refrigerants be used in new vehicular systems. (3) Adopt specifications for new commercial refrigeration. (4) Add refrigerant leak-tightness to the pass criteria for vehicular inspection and maintenance programs. (5) Enforce federal ban on releasing HFCs.	Compliant. The proposed project would be required to comply with the specific strategies applicable to retail uses once they are adopted. For example, the retail sale of HFC's in small cans would be prohibited at the retail stores within the project site. However, the majority of these strategies would not be applicable to the proposed project.
Transportation Refrigeration Units (TRUs), Off-Road Electrification, Port Electrification Strategies to reduce emissions from TRUs, increase off-road electrification, and increase use of shore-side/port electrification.	Compliant. The project would be required to comply with the requirements of Mitigation Measure 6-22, identified below, related to the use of TRUs on the project site.
Manure Management Strategies to reduce volatile organic compounds from confined animal facilities.	Not Applicable
Alternative Fuels: Biodiesel Blends CARB would develop regulations to require the use of 1 to 4 percent biodiesel displacement of California diesel fuel.	Not Applicable The proposed project does not include any fuel-dispensing facilities at this time. However, if a fuel-dispensing facility is proposed on the site in the future, it would be required to comply with CARB regulations regarding the inclusion of alternative fuels.
Alternative Fuels: Ethanol Increased use of ethanol fuel.	Not Applicable The proposed project does not include any fuel-dispensing facilities at this time. However, if a fuel-dispensing facility is proposed on the site in the future, it would be required to comply with CARB regulations regarding the inclusion of alternative fuels.

Table 6-17
Project Compliance with Greenhouse Gas Emission Reduction Strategies

Strategy and Description	Project Compliance
Heavy-Duty Vehicle Emission Reduction Measures Increased efficiency in the design of heavy-duty vehicles and an education program for the heavy-duty vehicle sector.	Not Applicable The proposed project would not include any activities associated with the design of vehicles and would not include heavy-duty vehicle education programs.
Reduced Venting and Leaks in Oil and Gas Systems Rule considered for adoption by the Air Pollution Control Districts for improved management practices.	Not Applicable
Hydrogen Highway The California Hydrogen Highway Network (CA H2 Net) is a State initiative to promote the use of hydrogen as a means of diversifying the sources of transportation energy.	Not Applicable
Achieve 50 Percent Statewide Recycling Goal Achieving the State's 50 percent waste diversion mandate as established by the Integrated Waste Management Act of 1989, (AB 939, Sher, Chapter 1095, Statutes of 1989), will reduce climate change emissions associated with energy-intensive material extraction and production as well as methane emission from landfills. A diversion rate of 48 percent has been achieved on a statewide basis. Therefore, a 2 percent additional reduction is needed.	Compliant. The City of Rocklin diverts over 50% of the solid waste generated within the City from landfill disposal, consistent with the requirements of AB 939. The majority of this diversion takes place at the Western Regional Materials Recovery Facility (MRF) in Placer County. The MRF recovers recyclable materials such as glass, metals, paper, plastics, wood waste and other compostable materials. Solid waste generated from the proposed project would be delivered to the MRF. Therefore the proposed project would be consistent with this strategy. In addition, Wal-Mart in particular includes a number of recycling strategies that would improve waste diversion from the project site. These include the following: ► All Wall-Mart Supercenters collect and recycle all motor oil, tires and automobile batteries from its TLE operation; ► All cardboard generated from delivery packages is segregated and sent to a recycling center; ► Vegetable Oil: Each new super center has an indoor tank used to collect oil from cooking processes for recycling; ► Single-use Cameras: All Wall-Mart photo processing centers recycle single use cameras after photo processing; ► Wal-Mart collects and segregates all recyclable bottles and cans; ► Wal-Mart currently implements a chainwide program for "sandwich bale" recycling of plastics, e.g., bags, garment bags, shrink wrap, bubble pack, etc.; ► Silver: Wal-Mart photo labs capture silver from the photo processing. In addition, Wal-Mart Supercenter Buildings are constructed using recycled materials. ► Steel recycling: New Wal-Mart Supercenters are built of nearly 100% recycled structural steel. ► Recycled Plastic: The plastic baseboards and much of the plastic shelving is manufactured from recycled material.

Table 6-17
Project Compliance with Greenhouse Gas Emission Reduction Strategies

Strategy and Description	Project Compliance
Landfill Methane Capture Install direct gas use or electricity projects at landfills to capture and use emitted methane.	Not Applicable
Department of Forestry	
Urban Forestry A new statewide goal of planting 5 million trees in urban areas by 2020 would be achieved through the expansion of local urban forestry programs.	Compliant. The site's Landscaping Plan would be required to comply with the City's parking lot shade requirements, which would require extensive tree planting on the site. In addition, the City has adopted an Urban Forest Plan with specific strategies for expanding tree canopy within the City. The City's Urban Forest Plan has shown that development in the City that is consistent with City General Plan policies has resulted in an increase of tree canopy cover from 11% in 1952 to 18% in 2003 (a 63% increase). The Urban Forest Plan provides a framework for the City to maintain its existing tree canopy cover and to increase it to a greater extent as development continues.
Reforestation Projects Reforestation projects focus on restoring native tree cover on lands that were previously forested and are now covered with other vegetative types.	Not Applicable
Department of Water Resources	
Water Use Efficiency Approximately 19 percent of all electricity, 30 percent of all natural gas, and 88 million gallons of diesel are used to convey, treat, distribute and use water and wastewater. Increasing the efficiency of water transport and reducing water use would reduce greenhouse gas emissions.	Compliant. The project's landscape plan will be required by the City to include an automatic irrigation system, and the use of drip system irrigation will be encouraged as applicable. The project's landscape plan is also required by the City to be certified by the landscape architect as meeting the requirements of the Water Conservation in Landscaping Act (Government Code Section 65591, et. seq.). In addition, the project would be required to comply with the requirements of Mitigation Measure 6-22, identified below, related to the use of low-flow faucets within building restrooms.
Energy Commission (CEC)	
Building Energy Efficiency Standards in Place and in Progress Public Resources Code 25402 authorizes the CEC to adopt and periodically update its building energy efficiency standards (that apply to newly constructed buildings and additions to and alterations to existing buildings).	Compliant. Construction and operation of all of the proposed buildings on the site would be required to comply with the energy efficiency standards included in Title 24 of the California Code of Regulations. Title 24 identifies specific energy efficiency requirements for building construction and systems operations that are intended to ensure efficient energy usage over the long-term life of the building. Large retailers have responded to these requirements and the rising cost of energy by increasing the energy efficiency of their retail establishments. Wal-Mart in particular includes a variety of energy efficient design components in its stores including the following: ► Daylighting (skylights/dimming) - This system automatically and continuously dims all of the lights within the store as the

Table 6-17
Project Compliance with Greenhouse Gas Emission Reduction Strategies

Strategy and Description	Project Compliance
	daylight contribution through skylights increases. ► Night Dimming - Lighting is dimmed to approximately 65% of typical evening illumination during the late night hours. ► Energy Efficient HVAC Units - Super high efficiency packaged heating and air conditioning units with an energy efficiency rating of 10.8 to 13.2. ► Central Energy Management - Stores are equipped with energy management systems, which are monitored and controlled from the Home Office in Bentonville. ► Water Heating - Waste heat is captured from the refrigeration equipment to heat water for the kitchen preparation areas of the store. ► White Roofs - White membrane roofing is used in order to increase solar reflectivity and lower cooling loads. ► Interior Lighting Program - All new stores use efficient T-8 fluorescent lamps and electronic ballasts. ► LED Signage Illumination - LED lighting is used in internally illuminated building signage due to its higher efficiency when compared to fluorescent lighting. ► Water-conserving Fixtures - Restroom sinks use sensor-activated low flow faucets. Home Depot also includes energy efficient design components in its operations. Home Depot has an Energy Management System for all its main overhead building lighting and HVAC equipment. The system includes a dedicated controller that is connected to a central monitoring station in Atlanta that controls the lighting and HVAC systems to ensure they are operating efficiently and are turned off when they are not needed. A component of this system includes an integrated skylight/photo cell system with photo cells mounted to the outside of the building that measure ambient light levels. Based on these measurements, the Energy Management System can automatically adjust internal lighting levels relative to the amount of light coming through rooftop skylights. Part of this system also includes carbon dioxide sensor controls that automatically close rooftop flutes to allow for greater re-circulation of already cooled (or heated) air. The flutes automatically re-open when carbon dioxide sensors indicate that more ventilation is necessary. Energy usage is reduced by maximizing the amount of already cooled (or heated) inside air that can be re-circulated rather than having to cool (or heat) new air from outside. In addition, Home Depot uses highly energy efficient rooftop HVAC units and T-5 Fluorescent lighting systems in their stores. With the implementation of these energy-efficiency measures by the project's major retail tenants and compliance with Title 24 requirements at a minimum by the remaining tenants, the project would be expected to achieve energy efficiency in excess of Title 24 requirements.

Table 6-17
Project Compliance with Greenhouse Gas Emission Reduction Strategies

Strategy and Description	Project Compliance
Appliance Energy Efficiency Standards in Place and in Progress Public Resources Code 25402 authorizes the Energy Commission to adopt and periodically update its appliance energy efficiency standards (that apply to devices and equipment using energy that are sold or offered for sale in California).	Compliant. The appliances sold at the project site would be required to comply with all applicable Energy Commission requirements related to energy efficiency.
Cement Manufacturing Cost-effective reductions to reduce energy consumption and to lower carbon dioxide emissions in the cement industry.	Not Applicable
Municipal Utility Strategies Includes energy efficiency programs, renewable portfolio standard, combined heat and power, and transitioning away from carbon-intensive generation.	Not Applicable
Alternative Fuels: Non-Petroleum Fuels Increasing the use of non-petroleum fuels in California's transportation sector, as recommended in the CEC's 2003 and 2005 Integrated Energy Policy Reports.	Not Applicable
Business Transportation and Housing	
Smart Land Use and Intelligent Transportation Systems (ITS) Smart land use strategies encourage jobs/housing proximity, promote transit-oriented development, and encourage high-density residential/commercial development along transit corridors. ITS is the application of advanced technology systems and management strategies to improve operational efficiency of transportation systems and movement of people, goods, and services. Governor Schwarzenegger is finalizing a comprehensive 10-year strategic growth plan with the intent of developing ways to promote, through State investments, incentives and technical assistance, land use, and technology strategies that provide for a prosperous economy, social equity, and a quality environment. Smart land use, demand management, ITS, and value pricing are critical elements in this plan for improving mobility and transportation efficiency. Specific strategies include promoting jobs/housing proximity and transit-oriented development; encouraging high-density residential/commercial development along transit/rail corridor; valuing and congestion pricing; implementing intelligent transportation systems, traveler information/traffic control, and incident management; accelerating the development of broadband infrastructure; and comprehensive, integrated, multimodal/intermodal transportation planning.	Compliant. The proposed project would be required to comply with applicable City of Rocklin General Plan policies that encourage smart land use development. These policies include the following: Circulation Element, Policy 3 – "To require bike lanes in the design and construction of major new street and highway improvements, and to establish bike lanes on those City streets wide enough to accommodate bicycles safely." The City of Rocklin Bikeway System Map includes a proposed Class II bikeway on Sierra College Boulevard. The proposed project would not affect the ability to implement this bikeway and would not conflict with this policy. Circulation Element, Policy 6 – "To promote pedestrian convenience through development conditions requiring sidewalks, walking paths, or hiking trails that connect residential areas with commercial, shopping and employment centers." The project includes several features to promote pedestrian convenience, including sidewalks, pedestrian walkways in the parking areas, ADA-compliant paths of travel, and a combined emergency vehicle/pedestrian access that connects the proposed commercial project site with a proposed residential project site to the east. The proximity of the residential uses and the pedestrian connection would encourage walking or bicycling trips between the two developments and creates proximity between jobs and housing. Therefore, the project would be consistent with this policy.

Table 6-17
Project Compliance with Greenhouse Gas Emission Reduction Strategies

Strategy and Description	Project Compliance
	Circulation Element, Policy 10 – "To promote the use of public transit through development conditions requiring park-and-ride lots, bus turnouts and passenger shelters along major streets." The project would be subject to a mitigation measure that promotes transit enhancing infrastructure that includes transit shelters, benches, street lighting, route signs and displays, and/or bus turnouts/bulbs. Therefore, the project would be consistent with this policy. In addition, the proposed project locates high density retail uses adjacent to a major transportation corridor, which would encourage pass-by trips (drivers accessing the site while in route to another location rather than initiating a new trip to the site). A project with high pass-by trips minimizes the creation of new trips, which reduces GHG emissions from vehicles. Also, the project includes multiple commercial services, including grocery, restaurant, building material and general retail services, provided in a single shopping center. Such variation in commercial services allows for more efficient shopping practices and fewer vehicle trips.
Measures to Improve Transportation Energy Efficiency Builds on current efforts to provide a framework for expanded and new initiatives, including incentives, tools, and information that advance cleaner transportation and reduce climate change emissions.	Compliant. The proposed project would be required to implement fuel conservation measures that would encourage the use of public transportation, bicycle use and pedestrian access. See Mitigation Measure 4.3-2 in Section 4.3, Air Quality.
Department of Food and Agriculture	
Enteric Fermentation Cattle emit methane from digestion processes. Changes in diet could result in a reduction in emissions.	Not Applicable
State and Consumer Services Agency	
Green Buildings Initiative Green Building Executive Order, S-20-04 (CA 2004), sets a goal of reducing energy use in public and private buildings by 20 percent by the year 2015, as compared with 2003 levels. The Executive Order and related action plan spell out specific actions State agencies are to take with State-owned and -leased buildings. The order and plan also discuss various strategies and incentives to encourage private building owners and operators to achieve the 20 percent target.	Compliant. As discussed above, the project is initiating energy efficient building design measures that are intended to minimize building energy demands.
Public Utilities Commission (PUC)	
Accelerated Renewable Portfolio Standard The Governor has set a goal of achieving 33 percent renewables in the State's resource mix by 2020. The joint PUC/Energy Commission September 2005 Energy Action Plan II (EAP II) adopts the 33 percent goal.	Not Applicable

Table 6-17
Project Compliance with Greenhouse Gas Emission Reduction Strategies

Strategy and Description	Project Compliance
Investor-Owned Utility This strategy includes energy efficiency programs, combined heat and power initiative, and electricity sector carbon policy for investor owned utility.	Not Applicable

Note: As noted in the Project Description chapter, the overall size of the shopping center would be a maximum of 543,500 square feet and the known major tenants for the shopping center include a Wal-Mart Supercenter and a Home Depot. The Wal-Mart Supercenter is anticipated to be approximately 222,000 square feet, and the Home Depot is anticipated to be approximately 141,000 square feet. Collectively, these two tenants account for approximately 363,000 square feet, which represents approximately 67 percent of the shopping center's overall square footage. It should be noted that the specific project features and design items listed in this table are applicable specifically to the Wal-Mart Supercenter and Home Depot tenants, as noted in the table. Some project feature and design items noted in this table are inherent to the overall project design, such as sidewalks and pedestrian walkways in the parking areas, and these features would benefit future tenant spaces. Due to a lack of tenant identity, it is not known at this time what other tenant-specific project features and design items would also be included.

Source: Summarized from CAT 2006. MBA 2006.

Mitigation Measure 6-24 Cumulative Climate Change

The project applicant shall implement the mitigation measures identified in Section 4.3, Air Quality, in order to reduce GHG emissions. These measures are summarized as follows:

Mitigation Measure 4.3-1 identified in Section 4.3, Air Quality of this Draft EIR addresses short-term construction generated emissions and includes a listing of individual measures that are intended to reduce and minimize construction generated emissions. Included in the listing of the individual measures are several measures that would help to reduce greenhouse gas emissions. Such measures include 1) idling time for all diesel-fueled equipment shall be minimized to five minutes or less; 2) ARB diesel fuel shall be used for all diesel-powered equipment, and 3) preparation of a plan for Placer County Air District approval that would demonstrate that heavy-duty off-road vehicles to be used in the construction project will achieve a project-wide fleet average 20 percent NOx reduction and a 45% particulate matter reduction compared to the most recent ARB fleet average.

Mitigation Measure 4.3-2 identified in Section 4.3, Air Quality of this Draft EIR addresses long-term operational generated emissions and includes a listing of individual measures that are intended to reduce and minimize operational generated emissions. Included in the listing of the individual measures are several measures that would help to reduce greenhouse gas emissions. Such measures may include, but are not limited to: 1) providing transit enhancing infrastructure that include transit shelters, benches, street lighting, route signs and displays, and/or bus turnouts/bulbs; 2) providing bicycle enhancing infrastructure that includes secure bicycle parking; 3) providing electric maintenance equipment, using solar, low-emissions or central water heaters, increasing wall and attic insulation beyond Title 24 requirements, orienting of buildings to take advantage of solar heating and natural cooling, using passive solar designs, energy efficient windows (double pane and/or Low-E), highly reflective roofing materials, cool paving (high albedo pavement) and parking lot shading above that required by code, installing photovoltaic cells, programmable thermostats for all heating and cooling systems, awnings or other shade mechanisms for window and walkways, and utilizing day lighting systems such as skylights, light shelves and interior transom windows; 4) including in the parking lot design clearly marked pedestrian pathways between transit facilities and building entrances, and 5) requiring all diesel engines to be shut off when not in use for longer than 5 minutes on the premises to reduce idling emissions.

Furthermore, the City has determined that in addition to the project features identified in Table 6-17, the following mitigation measures would be appropriate for the proposed project and shall be required with project implementation.

1) All dock and delivery areas shall be posted with signs informing truck drivers of the California Air Resources Board regulations including the following:

    - Truck drivers shall turn off engines when not in use.

    - All diesel delivery trucks servicing the project shall not idle more than five minutes, consistent with Mitigation Measure 4.3-2.

    - Restrict idling emissions by using auxiliary power units and electrification in the docking areas if provided by the operator.

2) Auxilary power shall be provided for TRUs, as feasible, at all docking facilities to minimize emissions from these units while on the project site.

3) Implement carpool/vanpool program such as carpool ride matching for employees, assistance with vanpool formation, and provisions of vanpool vehicles.

4) Provide preferential employee parking for carpool and vanpool vehicles.

5) Provide transit incentives (e.g., transit subsidies for employees, implement a parking cash-out program for employees, provide transit route maps, fares, and schedules posted at the worksite in a conspicuous location [e.g., employee breakroom].

6) Restroom sinks within individual buildings on the site shall use sensor-activated, low-flow faucets. The low-flow faucets, because they regulate flow, reduce water usage by 84 percent, while the sensors, which regulate the amount of time the faucets flow, save approximately 20 percent in water usage over similar, manually operated systems.

Level of Significance After Mitigation

Implementation of the project features, City policies and mitigation measures identified above would reduce GHG emissions from construction and operation of the project, as would the energy conservation measures discussed in Section 4.14. As the preceding discussion suggests, the vast majority of GHG emissions associated with the project are attributable to the combustion of fossil fuels, either in motor vehicles or in electricity-generating power plants. It is the City's observation that there is nothing inherent in a retail project, even a regional retail project, that undermines efforts to comply with AB 32 and Executive Order S-3-05. Rather, the project's GHG emissions described above reflect the facts (i) that the human beings who will work and shop there will drive motor vehicles using petroleum-derived fuels, and (ii) that the electricity supplied to the buildings is often generated by power plants using fossil fuels such as natural gas, oil, or coal. As the preceding analysis also demonstrates, land use decisions will have limited beneficial or negative effects on climate change as long as vehicles and power plants continue to consume fossil fuels. The State, it is clear, must make significant strides in changing the make-up of transportation fuels and power plant fuels if it is to achieve compliance with AB 32. Should such strides be made, projects such as Rocklin Crossings – with shoppers and employees driving in clean cars, and electricity generated by clean power plants – may someday contribute few, if any, GHG emissions.

The discussion identifies and qualitatively analyzes various project features and City policies designed to reduce GHG gases to the extent feasible. The implementation of the above stated project features, mitigation measures and compliance with City policies would reduce the emission of greenhouse gases attributable to the project through vehicle emission reductions, vehicular trip reductions, HFC emission reductions, recycling programs,

increases in building and appliance energy efficiencies, and decreased water use. With the implementation of these project features, mitigation measures and compliance with City policies, the proposed project would be substantially consistent with the emission reduction strategies contained in the California Climate Action Team's Report to the Governor and Executive Order S-3-05. Therefore, the project's climate change impacts would be considered less than significant.