

**COUNTY OF SACRAMENTO  
CALIFORNIA**

For the Agenda of:  
July 28, 2015  
Timed: 2:00 p.m.

To: Board of Supervisors

From: Department of Community Development

Subject: Workshop For Jackson Highway Master Plans (West Jackson Highway Master Plan (PLNP2008-00240), Jackson Township Specific Plan (PLNP2011-00095), NewBridge Specific Plan (PLNP2010-00081), And Mather South Community Master Plan (PLNP2013-00065)

Supervisory District(s): Nottoli

Contact: Todd Smith, Senior Planner, 874-6918  
Dean Blank, Principal Civil Engineer, 874-6121

**Overview**

County staff will provide an overview of some unique solutions to enhance and better manage a transportation network to serve the proposed development within the Jackson Corridor. Items to be discussed include:

- Mitigation Strategy
- The Dynamic Implementation Tool
- Rural Roadways
- Jackson Corridor Transit Network and Service
- Jackson Corridor Trail Network

**Recommendations:**

1. Receive and file this informational report; and
2. Direct staff to return with a third workshop to focus on infrastructure and services within the Jackson Highway corridor when more information is available regarding the non-transportation infrastructure needs and the potential financing mechanisms for the projects.

**Measures/Evaluation**

Processing of these Master Plans is pursuant to the 2030 General Plan and Master Plan Guidelines.

**Fiscal Impact**

The Master Plan process is funded entirely by the applicants as outlined in each project's Funding Agreements.

## **BACKGROUND**

The four master plans are being processed pursuant to the 2030 General Plan and Board-adopted Master Plan Procedures and Preparation Guidelines (Guidelines). As part of the entitlement process, each project will have an Environmental Impact Report (EIR) prepared pursuant to the California Environmental Quality Act (CEQA). The County requires preparation of a transportation impact study as one of the supporting technical studies to identify transportation-related impacts associated with the projects and to determine the appropriate infrastructure needed for the projects.

## **DISCUSSION**

### **The Jackson Corridor Joint Traffic Study**

Since the four Jackson Corridor development projects are being processed in the same relative timeframe, County staff and the applicants collaborated on having a single traffic analysis conducted that would evaluate the transportation related impacts of each individual project as stand-alone projects as well as the transportation impacts of all four projects combined. Substantial and on-going coordination with the applicants and adjacent jurisdictions, including the Cities of Sacramento, Rancho Cordova, Elk Grove, and Folsom in addition to Caltrans and the Capital Southeast Connector Joint Powers Authority, led to agreement on the area to be studied for transportation impacts. The resulting study area includes 261 roadway segments and 164 intersections within an area bounded by US 50 on the north, Calvine Road on the south, Power Inn Road on the west and Grant Line Road on the east. While additional detail will be available when the environmental documents are completed for the projects, Attachment 1 provides a summary of the roadway segments and intersections that are impacted by the projects.

### **The Jackson Corridor Mitigation Strategy**

*Fair Share Funding of Transportation Improvements.* The Sacramento County General Plan policy CI-9 establishes a Level of Service (LOS) to define an acceptable threshold for capacity and operational impacts for urban roadways LOS E. The County would typically recommend that a development project be fully responsible for mitigating those roadway and intersection impacts identified in the project's CEQA document. The resulting implication is that the General Plan policy establishes a specific LOS threshold and should a development project's vehicle trips exceed that threshold, the project would be responsible for fully funding the improvements to construct additional roadway capacity to accommodate the project's travel demand. This "you break it, you fix it" policy can lead to a disproportionate obligation on development projects to fund and implement transportation improvements. As an extreme example, a development project that results in a travel demand that is under the LOS threshold by a single vehicle trip would not be responsible for an impact and no improvements required, whereas, a development project that exceeds the LOS threshold by a single vehicle trip would be responsible for an impact and required to fund and construct roadway capacity improvements that would result in an acceptable LOS.

The Department of Transportation is recommending an alternative approach to how the Jackson Corridor development projects would be responsible for mitigating their transportation impacts. As mentioned previously, the joint traffic study considered the transportation impacts of all four individual projects combined and identified each project's fair share component of the travel demand on each study roadway segment and intersection. Instead of assigning full responsibility for improvements to only those projects that happen to exceed the LOS threshold, and no responsibility to projects that would utilize the existing capacity of a roadway, but not exceed the LOS threshold, the Department is recommending that each project be financially responsible for their fair share component of the improvements to the transportation infrastructure necessary to support the proposed Jackson Corridor development projects. This alternative approach introduces a sense of equality among the Jackson Corridor projects in funding needed transportation improvements and neither penalizes nor rewards the first project nor the last project that may receive approval.

*Alternative Mitigations.* Another aspect of the Mitigation Strategy is the introduction of Alternative Mitigations. The General Plan Transportation Plan Diagram provides a backbone transportation network of roadways and transit to support both the existing and anticipated future growth in the County. The backbone transportation network is based on generalized land use assumptions and programmatic transportation analyses and establishes an appropriate transportation network given the generalized assumptions. When specific development projects are being considered a much more rigorous, project-specific transportation analysis is conducted. This analysis may inform the County on modifications to the transportation network to better accommodate the local and regional travel demand. In the case of the Jackson Corridor development projects, South Watt Avenue, Bradshaw Road, and Jackson Road are primary roadways serving the proposed development and carry a considerable amount of travel demand. The major intersections of these primary roadways tend to be the weakest link in the network and if subject to high travel demands can become the source of extensive delays and long vehicle queues that can ripple through the transportation network.

The 2011 General Plan update introduced a new transportation improvement, the high-capacity intersection that is intended to address major high demand intersections of which a traditional, at-grade intersection cannot effectively accommodate. A high-capacity intersection would utilize special treatments to increase the capacity of the intersection in order to reduce congestion and travel delay. The special treatments would be site specific to address the specific needs at each location. The existing General Plan designates high-capacity intersections along South Watt Avenue at the intersections with Folsom Blvd, Kiefer Blvd, and Jackson Road. The traffic analysis for the Jackson Corridor development projects supports the future need for these high-capacity intersections on South Watt Avenue, and also identifies two new locations, Bradshaw Road at the intersection with Jackson Road and at an extension of Mayhew Road, that should be considered for the high-capacity intersection designation. Refer to Attachment 2 for greater detail on these high-capacity intersections, the projected travel demand at these intersections, and a summary of the recommended improvements.

It should be noted that these high-capacity improvements would not be required to be constructed in the near-term as a traditional at-grade intersection will serve the travel demand for a considerable period of time. However, right-of-way and a funding mechanism should be

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considered to preserve future implementation. It is also important to understand that these high-capacity intersections would not be implemented at the expense of other modes of travel such as transit, bicycles and pedestrians. Solutions to enhance access and accommodation of other modes will be considered just as important as providing additional vehicle capacity.

*Sequencing the Mitigation Strategy for Multiple Projects.* The Jackson Corridor development projects will not likely be considered for approval at the same time, but rather will be considered lineally one project at a time. This poses challenges in structuring a mitigation strategy that is fair to all projects. The mitigation strategy includes a concept that would be dynamic in that each subsequent project to be approved will be subject to the same mitigation strategy and responsible for funding improvements on a fair share basis. With each subsequent project approval, the fair share components for each project will be recalculated as there will be additional land uses and fee generation to lower the per dwelling unit cost.

### **The Dynamic Implementation Tool**

The County has long strived to ensure that the investments in transportation infrastructure keep up with the growth in land use development. In past years, the County has instituted improvement triggers associated with a specific amount of dwelling units. While this has been effective on smaller scale developments, it does not always dictate the appropriate timing and location of improvements to be constructed on large Specific Plans. Staff has been working on a new approach in triggering the necessary improvements that will be much more attuned to the actual location of the development to assure an efficient use of transportation funds are focused on the improvements to support the development potential in an area as large area as the Jackson Corridor.

This new approach has led to what we are currently referring to as the Dynamic Implementation Tool (Tool). For any amount of development that might be implemented in the Jackson Corridor, the Tool is capable of estimating the vehicle trips that would be generated, where those new vehicle trips would go, and if the addition of those new vehicle trips causes any roadway segments or intersections to operate at an unacceptable LOS. In this way, the Department will be capable of monitoring and managing the transportation network proactively and will be able to assign improvements to roadways and intersections in support of where the growth occurs in the Jackson Corridor.

The Tool is based on and is consistent with the traffic modelling conducted for the joint traffic study. While the traffic study determines the transportation impacts of full build out of the proposed land uses, a process that would likely occur over many decades, staff desired to have an understanding of the impacts incremental development would have on the transportation network. To provide this level of understanding, the proposed land uses for the Jackson Corridor development projects were subdivided into a network of smaller districts. Each district's size and location is such that the trip generating land uses within each district have the same trip distribution. In all, there are 64 districts in the Jackson Corridor development projects, each with varying mixes of residential, employment and commercial land uses. The traffic modelling for the joint traffic study tracked the trip generation and trip distribution associated with each

district. With this information, the specific transportation impacts of any amount of interim land use development can be determined.

### **Rural Roadways – Functional Improvements**

The existing roadway network in the Jackson Corridor and the surrounding area of the eastern Sacramento County is composed of rural roadways with narrow travel lanes with no roadway shoulders. These roadways were constructed many years ago and tended to serve as roadway connections between small rural towns and communities and to serve as farm to market roadways. While these narrow roadways have adequately served the travel demand of the historical past, they are not intended to serve the greater travel demands that local higher density residential and commercial development may impose.

The County expects that the functionality of these rural roadways will change with the proposed intensified land uses. These adjacent rural roadways will see increases in traffic volumes and the introduction of various modes of travel, including transit, bicyclists, and pedestrians. With these changes in the functionality of the roadway comes the possibility of increased interactions between varying modes of travel as well as the increased interaction between greater volumes of vehicles on narrow rural roadways.

There are fourteen different rural roadways (thirty four roadway segments) that may be affected by the Jackson Corridor development projects. Attachment 3 provides a list of the roadway segments, the existing traffic volume, and future traffic volume with the proposed Jackson Corridor development projects. Consistent with the County's General Plan, many of these rural roadways are anticipated to be future 4-lane or 6-lane roadways. Typically, two-lane roadways with twelve foot wide travel lanes and six foot wide shoulders will accommodate traffic volumes of approximately 18,000 daily vehicles before being recommended for widening to four lanes. In the case of rural, 2-lane roadways with narrow travel lanes and no shoulders, staff recommends improving these narrow rural roadways to current County improvement standards with twelve-foot travel lanes and six-foot roadway shoulders when traffic volumes exceed 6,000 daily vehicles. Staff is basing this 6,000 vehicle threshold on research conducted by national transportation associations and by studies conducted on Sacramento County rural roadways.

Staff acknowledges that improving these rural roadways with wider travel lanes and paved shoulders may attract additional vehicles from parallel roadways that are not improved and that overall travel speeds may increase due to a wider pavement surface. While a small increment of additional traffic and increased travel speed may result from the improvements, staff believes that the negative attributes of these improvements will be more than offset by the overall positive benefits towards improved safety due to a greater separation between both opposing vehicle traffic flow and between bicyclists/pedestrians and vehicle travel lanes. Staff would monitor these roadways to ensure they are being operated in a safe manner, especially in segments where existing residential and business properties are fronting.

### **The Jackson Corridor Transit Network and Service**

The General Plan includes specific policies and provisions to guide new development towards a “Smart Growth” model of land use that integrates both land uses and transportation infrastructure to encourage alternative modes of travel. The County has collaborated with the master plan applicants to include a proposed transit network and service to provide a convenient and useable transit service which provides an alternative travel mode for travel within the Jackson Corridor that is also interconnected to the regional transit network.

Sacramento Regional Transit (RT) is the transit service provider for the Jackson Corridor area. However, transit service in the Jackson Corridor is currently very limited. The nearest operating bus service is Route 72 (Rosemont to Lincoln Village) with 30 minute headways and the Light Rail Gold Line operating adjacent to Folsom Blvd.

The RT Transit Action Plan, a long-range transit plan, anticipates three additional high frequency transit lines near the Jackson Corridor with implementation of Tier one of the Transit Action Plan; Jackson Road (west of Excelsior Road), South Watt Avenue, Florin Road (west of Bradshaw Road). While these three transit lines would provide some service to the proposed growth in the Jackson Corridor, implementation of these transit lines is not certain as they are contingent on additional sources of revenue to be established. However, even with this additional transit network, the Jackson Corridor development projects would not meet the County’s General Plan policies for transit oriented development.

In order to meet the intent of General Plan Policy LU-120, County staff along with representatives of RT, the Jackson Corridor development project applicants, and DKS Associates participated in an iterative process to define an appropriate transit network and service frequency to connect the various land uses proposed in the Jackson Corridor and provide for connections to the existing Light Rail Transit network. An important component of defining a transit network for the Jackson Corridor is that the proposed development consists of four separate development projects. Hence, a separate transit network was developed to support each project as a standalone transit system, but would also serve as a cohesive and complimentary transit system that will operate efficiently together should more than one project be approved for development.

A series of transit networks and service frequencies were collaboratively developed and tested using the Sacramento Area Council of Governments (SACOG) SACSIM model to optimize transit ridership and the number of passenger boardings. Utilizing RT’s performance criteria for evaluating the effectiveness of the various transit lines and service frequencies, an optimum transit network and frequency was developed for the Jackson Corridor.

The resulting transit network consists of four separate transit lines, each operating at 15-minute headways during typical operating hours (6 AM to 8 PM) during weekdays. The transit analysis assumed the inclusion of transit queue jumps, transit signal priority and bus only lanes at major signalized intersections on Bradshaw Road (Kiefer Blvd to Rock Creek Parkway) and on Jackson Road (Watt Avenue to Excelsior Road) to minimize delays to transit operations on these heavily used roadway segments. Under the 2035 MTP plus all four projects scenario, the transit

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ridership exceeds 21,000 daily passenger boardings. Refer to Attachment 4 for the transit network and transit boardings.

Given the Jackson Corridor transit network operating at 15-minute headways, the resulting mode split for transit work trips is 2.4% in the existing plus all four projects scenario and is 4.1% for the 2035 MTP plus all four projects scenario.

In order to gain an understanding of the cost to provide such a transit service for the community, an estimate of the capital, operational, and maintenance costs were developed. Utilizing cost recommendations provided by RT, it is estimated that for the 2035 MTP plus all four projects scenario, in today's dollars, the capital costs are \$1,100,000 per year and the maintenance and operation costs are \$8,500,000 per year, for a total yearly cost of \$9,600,000. This amount could be financed through an assessment on each dwelling unit, which at 30,070 proposed residential dwelling units, equates to \$296 per year per household. This cost per dwelling unit could be significantly reduced by spreading the cost on the employment and commercial properties in addition to the residential units or by charging riders a fee.

While 15-minute headways is the recognized goal established by RT's Transit Action Plan for Hi-Bus/BRT, an evaluation of operating transit in the Jackson Corridor at 30-minute and 60-minute headways was also evaluated. Whereas in the 2035 MTP plus all four projects scenario, the transit ridership at 15-minute headways is 21,400 daily boardings. If the frequency is cut in half to 30-minute headways, the ridership drops to 14,500 daily boardings, a drop of 6,900 daily boardings or a 32% reduction in ridership. If the frequency is cut in half again to 60-minute headways, the ridership drops to 10,500 daily boardings, a drop of 10,900 daily boardings or 51% reduction in ridership when compared to 15-minute headways. While lower frequency service results in lower ridership, costs to provide the service is roughly cut in half each time the frequency is cut in half. Whereas the total yearly cost for 15-minute headways is \$9,600,000, the yearly cost for 30-minute headways is \$4,800,000, and for 60-minute headways \$2,500,000.

### **The Jackson Corridor Trail Network**

A community that includes an extensive network of off-roadway trails for walking and bicycling not only provides for an environment that supports alternative modes of travel, but will also provide for much needed health-oriented forms of commuting and recreation. County staff from the Departments of Transportation, Regional Parks, and Community Development, along with the Jackson Corridor applicants has collaborated in developing an integrated network of off-roadway trails that will connect future residential communities with schools, parks, transit centers, employment centers, and commercial areas. The trail network (Attachment 6) will also provide connectivity to the existing and planned regional trail networks, including connectivity to the American River Parkway.

A hierarchy of three trail cross sections has been developed to provide for the varying needs of the trail users and to best fit into the land use context. The trail corridors will be located along the various creeks and water courses or adjacent to but separated from a roadway.

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The Regional Trail is intended to serve as the backbone trail network that provides connectivity between the Jackson Corridor development projects as well as connectivity to existing and planned regional trails outside of the Jackson Corridor. The Regional Trail consists of 40-foot corridor with a 12-foot wide paved surface with 2-foot decomposed shoulders.

The Conventional Trail will serve as a feeder network of trails that provide for greater connectivity to the Regional Trails and connectivity to primary destinations within each Jackson Corridor development project. The Conventional Trail consists of a 30-foot wide corridor with a 10-foot wide paved surface with 2-foot decomposed shoulders.

The Local Trail will serve as a finer network of connectivity within the community, linking the residential communities with the schools, parks, and other public amenities, as well as to the Regional and Conventional Trails. The Local Trail consists of a 24-foot wide corridor with an 8-foot paved surface with a single 2-foot decomposed shoulder.

Attachment 5 shows the proposed trail network within the Jackson Corridor. To preserve the intent of the trail plan of providing off-roadway trails that connect residential communities with schools, parks, transit centers, employment centers, and commercial areas, the proposed trail plan is intended to be a living document that is enhanced and adjusted as more detailed specific land uses and maps are considered in the future.

An enhanced crossing is identified at locations where trails cross a major roadway or at locations near schools and parks where inexperienced or younger users may be present in greater numbers. The enhanced crossings may include grade separation structures, signalized trail crossing, raised crossing tables, roadway chokers and, special signs, markings, and lighting. Of special note, two bridge crossings of the Folsom South Canal are proposed to improve the east-west mobility due to the limited number of roadway crossings of the Folsom South Canal.

It is anticipated that most of the Local Trail network which serves local communities would be implemented concurrently with the building of those communities. However, staff would recommend that trails within open space and creek corridors as well as trails that provide regional connectivity should be included in the finance plan to minimize gaps in trail connectivity and to provide assurance that the trail can be implemented when needed by the community.

### **Next Steps**

Staff intends to conduct a third workshop to cover non-transportation infrastructure and public facilities financing. The date for the third workshop has not been determined at this time; the workshop will be scheduled when more information is available regarding individual projects' proposed Urban Services Plans (USPs) and Public Facilities Financing Plans (PFFPs). The third workshop would be scheduled after a draft USP and PFFP have been submitted and reviewed, and a DEIR is ready to be released for the first project. The third workshop is not intended to delay progress on any one of the proposed projects.

### **MEASURES/EVALUATION**

Workshop For Jackson Highway Master Plans (West Jackson Highway Master Plan (PLNP2008-00240), Jackson Township Specific Plan (PLNP2011-00095), NewBridge Specific Plan (PLNP2010-00081), And Mather South Community Master Plan (PLNP2013-00065)

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Processing of these Master Plans is pursuant to the 2030 General Plan and Master Plan Guidelines.

**FINANCIAL ANALYSIS**

The Master Plan process is funded entirely by the applicants as outlined in the projects' respective Funding Agreements.

Respectfully submitted,

APPROVED:  
BRADLEY J. HUDSON  
County Executive

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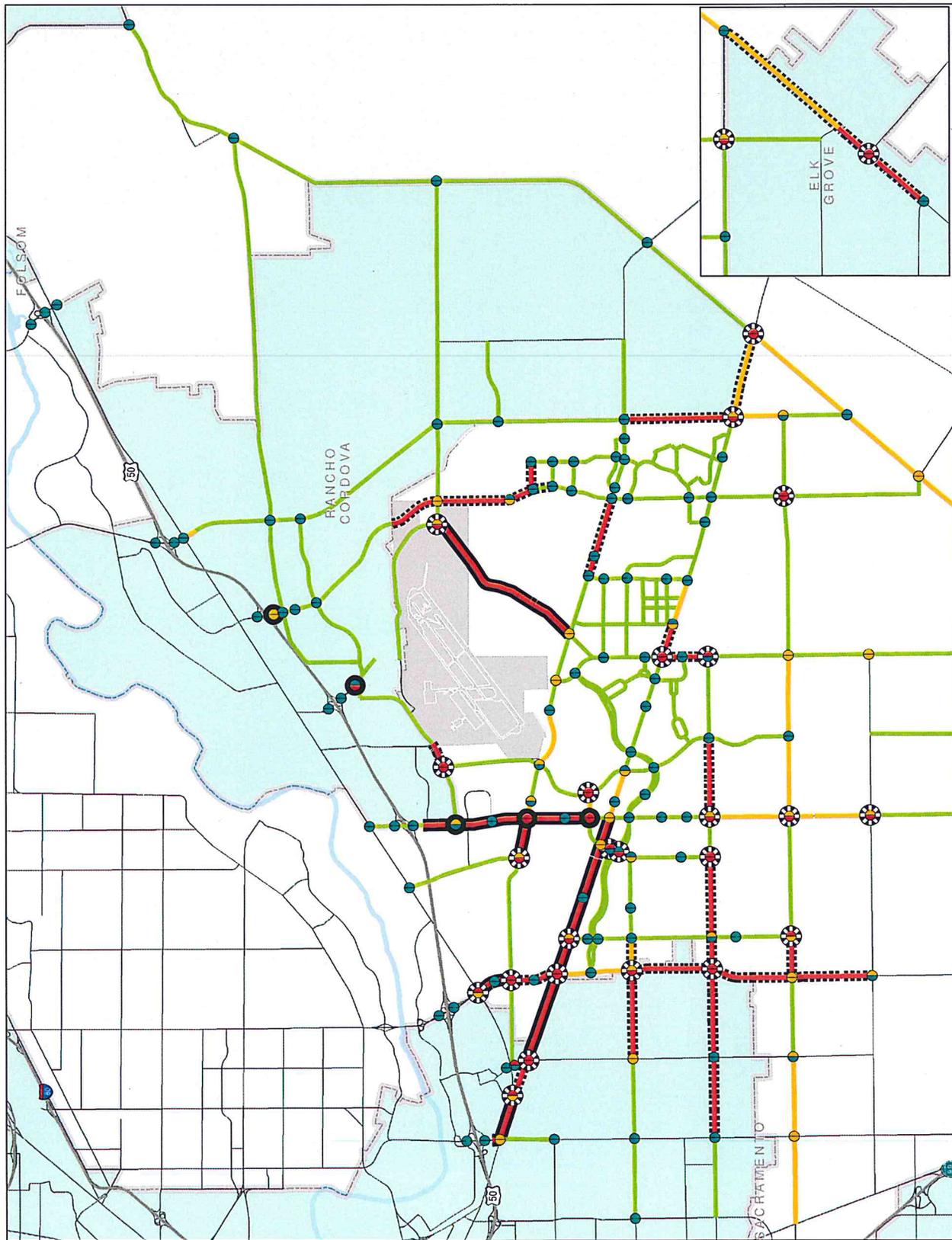
LORI A. MOSS, Director  
Department of Community Development

BY: \_\_\_\_\_  
ROBERT B. LEONARD  
Chief Deputy County Executive

Attachments:

1. Summary Plus Four - Jackson Corridor
2. Summary of CEQA – Jackson Corridor
3. Summary of High Capacity Intersections
4. Rural Roadways – Functional Improvements Impacts
5. Jackson Corridor Transit Network & Boardings
6. Jackson Corridor Trail Network

**FIGURE 4.5  
EXISTING PLUS FOUR PROJECTS  
ROADWAY SEGMENT AND  
INTERSECTION LOS AND IMPACTS**



**Legend**

**Intersections (AM Peak Hour)**

- LOS A-D
- LOS E
- LOS F

**Intersections (PM Peak Hour)**

- LOS A-D
- LOS E
- LOS F

- ⊛ Mitigable Intersection Impact
- Unavoidable Intersection Impact

**Roadway Segments**

- LOS A-D
- LOS E
- LOS F

**Impacts**

- Unavoidable Segment Impact
- - - Mitigable Segment Impact
- ▭ Cities
- ▭ Mather Airport



**Table 4.16**  
**Existing Plus FOUR PROJECTS Summary of Impacted Roadway Segments**



ID	Roadway	Segment	
		From	To
<b>Level of Service Impact Fully Mitigated by General Plan Lanes</b>			
23	Elder Creek Rd	Power Inn Rd	Florin-Perkins Rd
24	Elder Creek Rd	Florin Perkins Rd	South Watt Ave
25	Elder Creek Rd	South Watt Ave	Hedge Ave
26	Elder Creek Rd	Hedge Ave	Mayhew Rd
28.1	Elder Creek Rd	Bradshaw Rd	Vineyard Rd
29	Elk Grove-Florin Rd	Florin Rd	Gerber Rd
31.1	Excelsior Rd	Jackson Rd	Collector WJ-6
31.2	Excelsior Rd	Collector WJ-6	Elder Creek Rd
39	Florin Rd	South Watt Ave	Hedge Ave
47	Fruitridge Rd	Florin Perkins Rd	South Watt Ave
48	Fruitridge Rd	South Watt Ave	Hedge Ave
55	Grant Line Rd	Calvine Rd	Sheldon Rd
56	Grant Line Rd	Sheldon Rd	Wilton Rd
57	Grant Line Rd	Wilton Rd	Bond Rd
65	Jackson Rd	Folsom Blvd	Florin Perkins Rd
71.1	Jackson Rd	Excelsior Rd	Collector JT-3
73	Jackson Rd	Sunrise Blvd	Grant Line Rd
89.1	Mayhew Rd	Jackson Rd	Rock Creek Pkwy
92	Old Placerville Rd	Happy Ln	Routier Rd
97	South Watt Ave	Kiefer Blvd	Jackson Rd
99	South Watt Ave	Fruitridge Rd	Elder Creek Rd
100	South Watt Ave	Elder Creek Rd	Florin Rd
106	Sunrise Blvd	Kiefer Blvd	Jackson Rd
122	Zinfandel Dr	City Limit	Douglas Rd
123.1	Zinfandel Dr	Douglas Rd	Collector MS-2
200	Kiefer Blvd	Tree View Ln	Eagles Nest Rd
405	Collector JT-3	Collector JT-5	Jackson Rd
602	Collector MS-2	Eagles Nest Rd	Collector MS-5
<b>Level of Service Impact Not Fully Mitigated by General Plan Lanes</b>			
2	Bradshaw Rd	US 50	Lincoln Village Dr
3	Bradshaw Rd	Lincoln Village Dr	Old Placerville Rd
4	Bradshaw Rd	Old Placerville Rd	Goethe Rd
5.1	Bradshaw Rd	Goethe Rd	Collector WJ-8
5.2	Bradshaw Rd	Collector WJ-8	Kiefer Blvd
6.1	Bradshaw Rd	Kiefer Blvd	Collector WJ-9
6.2	Bradshaw Rd	Collector WJ-9	Mayhew Rd

Note: Refer to Table 4.12 for detailed description of impacts and mitigations.

**Table 4.16**  
**Existing Plus FOUR PROJECTS Summary of Impacted Roadway Segments**



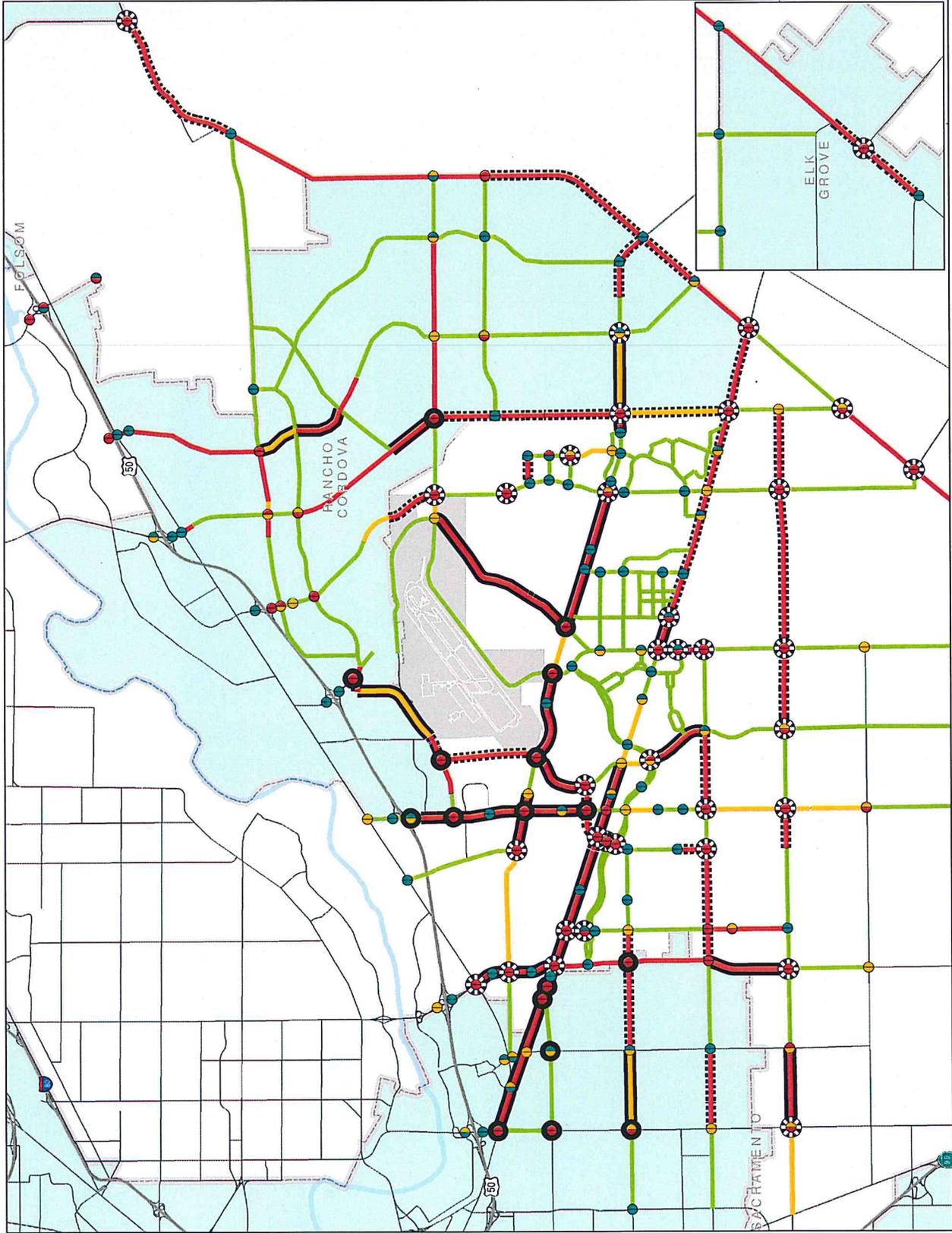
ID	Roadway	Segment	
		From	To
44	Folsom Blvd	Howe Ave	Jackson Rd
62	Howe Ave	US 50	Folsom Blvd
66	Jackson Rd	Florin Perkins Rd	South Watt Ave
67	Jackson Rd	South Watt Ave	Hedge Ave
68.1	Jackson Rd	Hedge Ave	Collector WJ-3
68.2	Jackson Rd	Collector WJ-3	Mayhew Rd
69	Jackson Rd	Mayhew Rd	Bradshaw Rd
76	Kiefer Blvd	Mayhew Rd	Bradshaw Rd
83	Mather Blvd-Excelsior Rd	Douglas Rd	Kiefer Blvd
96	South Watt Ave	Folsom Blvd	Kiefer Blvd
110	Watt Ave	US 50	Folsom Blvd
118	Zinfandel Dr	US 50	White Rock Rd

Note: Refer to Table 4.12 for detailed description of impacts and mitigations.

<b>Table 4.17 Existing Plus FOUR PROJECTS Summary of Impacted Intersections</b>	
<b>Intersection</b>	<b>Alternative Mitigation</b>
<b>Level of Service Impact Fully Mitigated by General Plan Lanes</b>	
6 Jackson Road/Notre Dame Dr. & Folsom Blvd.	**
9 Florin Perkins Road & Jackson Road	
17 S. Watt Avenue & Fruitridge Road	
18 S. Watt Avenue & Elder Creek Road	
23 Hedge Avenue & Jackson Road	**
27 Hedge Avenue & Florin Road	
31 Mayhew Road & Elder Creek Road	**
39 Bradshaw Road & Elder Creek Road	
40 Bradshaw Road & Florin Road	
41 Bradshaw Road & Gerber Road	
42 Happy Lane & Old Placerville Road	**
46 Excelsior Road & Elder Creek Road	
52 Mather Boulevard & Douglas Road	
61 Eagles Nest Road & Florin Road	
70 Sunrise Boulevard & Jackson Road	
80 Grant Line Road & Jackson Road	
90 Excelsior Road & Calvine Rd	
93 Grant Line Rd & Dwy/Wilton Rd	

<b>Table 4.17 Existing Plus FOUR PROJECTS Summary of Impacted Intersections</b>		<b>Alternative Mitigation</b>
<b>Intersection</b>		
310	Mayhew Road & Rock Creek Pkwy WB	
311	Mayhew Road & Rock Creek Pkwy EB	
326	Happy Lane & Mayhew Road	
<b>Level of Service Impact Not Fully Mitigated by General Plan Lanes But Designated High Capacity Intersection</b>		
12	Watt Avenue & Folsom Blvd.	**
14	S. Watt Avenue & Kiefer Blvd.	**
16	S. Watt Avenue & Jackson Road	**
<b>Level of Service Impact Not Fully Mitigated by General Plan Lanes</b>		
28	Mayhew Road & Kiefer Boulevard	**
36	Bradshaw Road & Old Placerville Road	
37	Bradshaw Road & Kiefer Boulevard	*
45	Excelsior Road & Jackson Road	**
51	Mather Field Road & Rockingham Drive	
54	Zinfandel Drive & US 50 EB Ramps/Gold Center Drive	
318	Bradshaw Road & Mayhew Road	*
<p><sup>1</sup> Alternative mitigations represent proposed mitigations beyond the General Plan, excluding designated high capacity intersections, as proposed by the County of Sacramento.</p> <p>* denotes alternative mitigations that improve operations but do not fully mitigate the impact. ** denotes alternative mitigations that fully mitigate the impact.</p>		

**FIGURE 6.6**  
**CEQA CUM PLUS FOUR PROJECTS**  
**ROADWAY SEGMENT AND**  
**INTERSECTION LOS AND IMPACTS**



**Legend**

**Intersections (AM Peak Hour)**

- LOS A-D
- LOS E
- LOS F

**Intersections (PM Peak Hour)**

- LOS A-D
- LOS E
- LOS F

★ Mitigable Intersection Impact

● Unavoidable Intersection Impact

**Roadway Segments**

- LOS A-D
- LOS E
- LOS F

**Impacts**

▬ Unavoidable Segment Impact

▬ Mitigable Segment Impact

▭ Cities

▨ Mather Airport

**Table 6.16**  
**CEQA Cumulative Plus FOUR PROJECTS Summary of Impacted Roadway Segments**



ID	Roadway	Segment	
		From	To
<b>Level of Service Impact Fully Mitigated by General Plan Lanes</b>			
23	Elder Creek Rd	Power Inn Rd	Florin-Perkins Rd
25	Elder Creek Rd	South Watt Ave	Hedge Ave
26	Elder Creek Rd	Hedge Ave	Mayhew Rd
28.1	Elder Creek Rd	Bradshaw Rd	Vineyard Rd
31.1	Excelsior Rd	Jackson Rd	Collector WJ-6
31.2	Excelsior Rd	Collector WJ-6	Elder Creek Rd
41	Florin Rd	Mayhew Rd	Bradshaw Rd
42.2	Florin Rd	Vineyard Rd	Excelsior Rd
43	Florin Rd	Excelsior Rd	Sunrise Blvd
47	Fruitridge Rd	Florin Perkins Rd	South Watt Ave
48	Fruitridge Rd	South Watt Ave	Hedge Ave
51.1	Grant Line Rd	Douglas Rd	Chrysanthy Blvd
51.2	Grant Line Rd	Chrysanthy Blvd	Kiefer Blvd
56	Grant Line Rd	Sheldon Rd	Wilton Rd
57	Grant Line Rd	Wilton Rd	Bond Rd
71.2	Jackson Rd	Collector JT-3	Tree View Ln
71.3	Jackson Rd	Tree View Ln	Collector JT-4
71.4	Jackson Rd	Collector JT-4	Eagles Nest Rd
72.1	Jackson Rd	Eagles Nest Rd	Rockbridge Dr
72.2	Jackson Rd	Rockbridge Dr	Sunrise Blvd
73	Jackson Rd	Sunrise Blvd	Grant Line Rd
89.1	Mayhew Rd	Jackson Rd	Rock Creek Pkwy
89.2	Mayhew Rd	Rock Creek Pkwy	Fruitridge Rd
92	Old Placerville Rd	Happy Ln	Routier Rd
105	Sunrise Blvd	Douglas Rd	Kiefer Blvd
106	Sunrise Blvd	Kiefer Blvd	Jackson Rd
117	White Rock Rd	Grant Line Rd	Prairie City Rd
122	Zinfandel Dr	City Limit	Douglas Rd
132	Kiefer Blvd	Americanos Blvd	Grant Line Rd
308	Mayhew Rd	Happy Ln	Bradshaw Rd
309	Mayhew Rd	Bradshaw Rd	Jackson Rd
311	Mayhew Rd	Collector WJ-13	Elder Creek Rd
405	Collector JT-3	Collector JT-5	Jackson Rd
602	Collector MS-2	Eagles Nest Rd	Collector MS-5
<b>Level of Service Impact Not Fully Mitigated by General Plan Lanes</b>			
2	Bradshaw Rd	US 50	Lincoln Village Dr

Note: Refer to Table 6.12 for detailed description of impacts and mitigations.

**Table 6.16**  
**CEQA Cumulative Plus FOUR PROJECTS Summary of Impacted Roadway Segments**



ID	Roadway	Segment	
		From	To
3	Bradshaw Rd	Lincoln Village Dr	Old Placerville Rd
4	Bradshaw Rd	Old Placerville Rd	Goethe Rd
5.1	Bradshaw Rd	Goethe Rd	Collector WJ-8
5.2	Bradshaw Rd	Collector WJ-8	Kiefer Blvd
6.1	Bradshaw Rd	Kiefer Blvd	Collector WJ-9
6.2	Bradshaw Rd	Collector WJ-9	Mayhew Rd
37	Florin Rd	Power Inn Rd	Florin-Perkins Rd
44	Folsom Blvd	Howe Ave	Jackson Rd
46	Fruitridge Rd	Power Inn Rd	Florin Perkins Rd
58	Happy Ln	Old Placerville Rd	Kiefer Blvd
62	Howe Ave	US 50	Folsom Blvd
65	Jackson Rd	Folsom Blvd	Florin Perkins Rd
66.1	Jackson Rd	Florin Perkins Rd	14th Ave
66.2	Jackson Rd	14th Ave	Rock Creek Pkwy
66.3	Jackson Rd	Rock Creek Pkwy	Aspen 1 Dwy
66.4	Jackson Rd	Aspen 1 Dwy	South Watt Ave
67	Jackson Rd	South Watt Ave	Hedge Ave
68.1	Jackson Rd	Hedge Ave	Collector WJ-3
68.2	Jackson Rd	Collector WJ-3	Mayhew Rd
69	Jackson Rd	Mayhew Rd	Bradshaw Rd
70.1	Jackson Rd	Bradshaw Rd	Collector WJ-4
70.2	Jackson Rd	Collector WJ-4	Happy Ln
71.1	Jackson Rd	Excelsior Rd	Collector JT-3
76	Kiefer Blvd	Mayhew Rd	Bradshaw Rd
77.1	Kiefer Blvd	Bradshaw Rd	Collector WJ-14
78.4	Kiefer Blvd	E Collector MS-1	Sunrise Blvd
79	Kiefer Blvd	Sunrise Blvd	Rancho Cordova Pkwy
83	Mather Blvd-Excelsior Rd	Douglas Rd	Kiefer Blvd
93	Old Placerville Rd	Routier Rd	Rockingham Dr
95	Rockingham Dr	Old Placerville Rd	Mather Field Rd
96	South Watt Ave	Folsom Blvd	Kiefer Blvd
97	South Watt Ave	Kiefer Blvd	Jackson Rd
100	South Watt Ave	Elder Creek Rd	Florin Rd
104.3	Sunrise Blvd	Rio Del Oro Pkwy	Douglas Rd
110	Watt Ave	US 50	Folsom Blvd
135	Rancho Cordova Pkwy	White Rock Rd	International Dr
136	Rancho Cordova Pkwy	International Dr	Rio Del Oro Pkwy

Note: Refer to Table 6.12 for detailed description of impacts and mitigations.

**Table 6.16**  
**CEQA Cumulative Plus FOUR PROJECTS Summary of Impacted Roadway Segments**



ID	Roadway	Segment	
		From	To
200	Kiefer Blvd	Tree View Ln	Eagles Nest Rd
302	Happy Ln	Kiefer Blvd	Mayhew Rd
305	Kiefer Blvd	Happy Ln	Collector WJ-15
306	Kiefer Blvd	Collector WJ-15	Douglas Rd
319	Vineyard Rd	Rock Creek Pkwy	Elder Creek Rd
410	Kiefer Blvd	Excelsior Rd	Tree View Ln

Note: Refer to Table 6.12 for detailed description of impacts and mitigations.

<b>Table 6.17</b>	
<b>CEQA Cumulative Plus FOUR PROJECTS Summary of Impacted Intersections</b>	
<b>Intersection</b>	<b>Alternative Mitigation</b>
<b>Level of Service Impact Fully Mitigated by General Plan Lanes</b>	
20 Elk Grove Florin Road/S. Watt Ave. & Florin Road	**
23 Hedge Avenue & Jackson Road	**
29 Mayhew Road & Jackson Road	
31 Mayhew Road & Elder Creek Road	**
32 Woodring Drive & Zinfandel Drive	
39 Bradshaw Road & Elder Creek Road	
40 Bradshaw Road & Florin Road	
46 Excelsior Road & Elder Creek Road	**
47 Excelsior Road & Florin Road	
58 Zinfandel Drive & Douglas Road	
61 Eagles Nest Road & Florin Road	
69 Sunrise Boulevard & Kiefer Boulevard	
70 Sunrise Boulevard & Jackson Road	
72 Sheldon Lake Drive/Sunrise Boulevard & Grant Line Road	
76 Prairie City Road & White Rock Road	
86 Power Inn Road & Florin Rd	
91 Grant Line Rd & Eagles Nest Rd/Sloughhouse Rd	
93 Grant Line Rd & Dwy/Wilton Rd	
105 Rancho Cordova Pkwy & Kiefer Blvd	

<b>Table 6.17</b>		
<b>CEQA Cumulative Plus FOUR PROJECTS Summary of Impacted Intersections</b>		
<b>Intersection</b>		<b>Alternative Mitigation</b>
306	Excelsior Road & Collector WJ-6	
308	Hedge Avenue & Rock Creek Pkwy WB	
310	Mayhew Road & Rock Creek Pkwy WB	
311	Mayhew Road & Rock Creek Pkwy EB	
314	Vineyard Road/Happy Lane & Rock Creek Pkwy	
326	Happy Lane & Mayhew Road	
328	Vineyard Road & Florin Road	
400	Collector JT-3 & Jackson Road	
605	Collector MS-5 & Collector MS-4	
<b>Level of Service Impact Not Fully Mitigated by General Plan Lanes But Designated High Capacity Intersection</b>		
12	Watt Avenue & Folsom Blvd.	**
14	S. Watt Avenue & Kiefer Blvd.	**
16	S. Watt Avenue & Jackson Road	**
<b>Level of Service Impact Not Fully Mitigated by General Plan Lanes</b>		
3	Power Inn Road/Howe Avenue & Folsom Blvd	
4	Power Inn Road & 14th Avenue	
5	Power Inn Road & Fruitridge Road	
17	S. Watt Avenue & Fruitridge Road	*
28	Mayhew Road & Kiefer Boulevard	**
35	Bradshaw Road & US 50 EB Ramps	

<b>Table 6.17</b>	
<b>CEQA Cumulative Plus FOUR PROJECTS Summary of Impacted Intersections</b>	
<b>Intersection</b>	<b>Alternative Mitigation</b>
36 Bradshaw Road & Old Placerville Road	
37 Bradshaw Road & Kiefer Boulevard	*
42 Happy Lane & Old Placerville Road	*
43 Happy Lane & Kiefer Boulevard	*
44 Excelsior Road & Kiefer Boulevard	
45 Excelsior Road & Jackson Road	**
51 Mather Field Road & Rockingham Drive	
59 Eagles Nest Road/Zinfandel Drive & Kiefer Boulevard	**
67 Sunrise Boulevard & Douglas Road	
80 Grant Line Road & Jackson Road	**
95 Florin Perkins Road & 14th Avenue	
96 Jackson Road & 14th Avenue	
97 Rock Creek Pkwy & Jackson Road	
318 Bradshaw Road & Mayhew Road	*
325 Douglas Road & Kiefer Boulevard	*
<p><sup>1</sup> Alternative mitigations represent proposed mitigations beyond the General Plan, excluding designated high capacity intersections, as proposed by the County of Sacramento.</p> <p>* denotes alternative mitigations that improve operations but do not fully mitigate the impact.</p> <p>** denotes alternative mitigations that fully mitigate the impact.</p>	

## Attachment 3 Summary of High Capacity Intersections

### *High Capacity Intersections*

Three intersections are currently designated as “High Capacity Intersections” on the County’s General Plan: Watt Avenue & Folsom Boulevard, Watt Avenue & Kiefer Boulevard, and Watt Avenue & Jackson Road. At two intersections on Bradshaw Road where an LOS impact could not be mitigated by implementing the County’s standard number of approach lanes, the County has proposed alternative mitigation measures by designating those two intersections as High Capacity Intersections: Bradshaw Road & Mayhew Road and Bradshaw Road & Jackson Road.

A high capacity intersection would utilize special treatments to increase the capacity of the intersection so as to reduce congestion and travel delay. Since each intersection could have unique travel movements, volumes and existing context sensitive conditions, the special treatments utilized at each high capacity intersection will be selected to meet the specific needs of each intersection. The range of special treatments is quite wide, ranging from the restriction of certain turning movements to various combinations that could include grade separating certain movements. While the field of traffic engineering is ever expanding and evolving resulting in the use of new technologies and treatments, special treatments such as the following could be utilized at a high capacity intersection:

- Restricting turning movements
- Median U-turns
- Roundabouts
- Split intersections
- Quadrant roadway intersections
- Bowtie intersections
- Directional flyovers
- Center turn overpass
- Grade separated Roundabout
- Diverging diamond grade separation
- Compact diamond grade separation
- Single point urban grade separation
- Traditional urban grade separation

The County has conducted conceptual engineering to define potential improvements at the three study area intersections on Watt Avenue that are currently designated as “High Capacity Intersections” on the County's General Plan. These are:

- At the **Watt Avenue & Folsom Boulevard** intersection, the County proposes an ultimate configuration involving grade separation of the northbound and southbound through movements of Watt Avenue. Access to and from Folsom Boulevard would be accomplished via on and off-ramps from the left lanes of Watt Avenue to a single signalized intersection. A bus rapid transit (BRT) lane along Watt Avenue would also intersect Folsom Boulevard at the traffic signal. This design is consistent with the recommendations of the South Watt Area Transportation Study (SWATS) dated

## Attachment 3 Summary of High Capacity Intersections

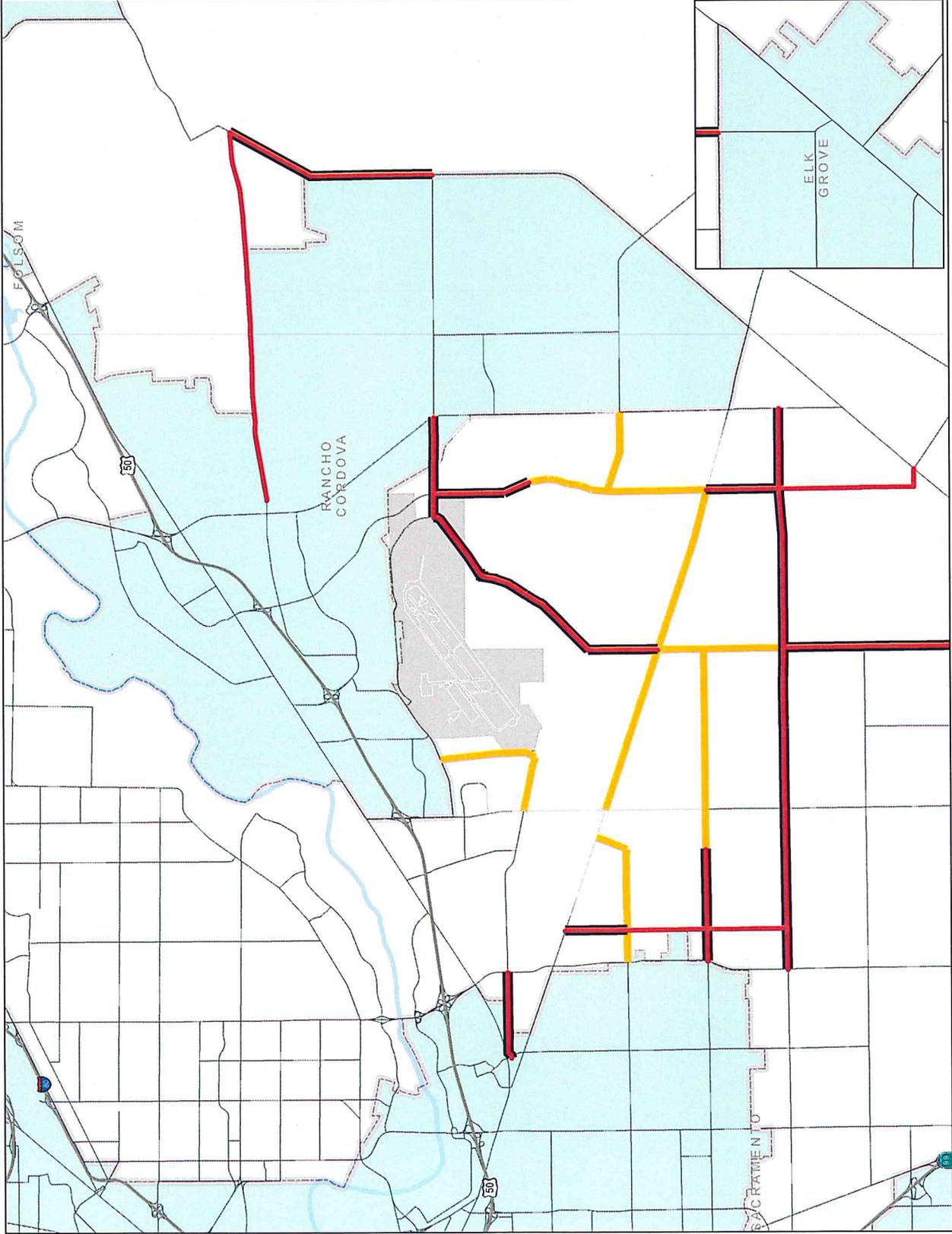
November 1, 2002 and approved by the Board of Supervisors on November 26, 2002, and with the planning study for the *State Route 16 (Jackson Road) Corridor Study* (Fehr & Peers, 2012). It should be noted that the State Route 16 study has only had a staff-level review done by Caltrans, Sacramento County Department of Transportation, City of Rancho Cordova, and City of Sacramento. Other equivalent mitigation measures may be selected to the satisfaction of the Department of Transportation to mitigate the project's impact.

- At the **Watt Avenue & Kiefer Boulevard** intersection, the County proposes a tight diamond interchange as the ultimate improvement. The through movements (and BRT lane) on Watt Avenue would be grade separated from Kiefer Boulevard. Access to and from Kiefer Boulevard would be accomplished via on and off-ramps at two signalized intersections along Kiefer Boulevard. This design is proposed in the planning study prepared for *State Route 16 (Jackson Road) Corridor Study* (Fehr & Peers, 2012). It should be noted that the State Route 16 study has only had a staff-level review done by Caltrans, Sacramento County Department of Transportation, City of Rancho Cordova, and City of Sacramento. Other equivalent mitigation measures may be selected to the satisfaction of the Department of Transportation to mitigate the project's impact.
  
- At the **Watt Avenue & Jackson Road** intersection, the County proposes a standard six-by-six signalized intersection (two left-turn lanes, three through lanes, and one right-turn lane, on each approach) with three modifications. 1) The southbound left-turn movement would be grade separated; 2) The westbound right-turn movement would be grade separated; and 3) Three northbound left-turn lanes are proposed. This configuration represents an enhanced version of Alternative 6 in the planning study prepared for *State Route 16 (Jackson Road) Corridor Study* (Fehr and Peers, 2012). It should be noted that the State Route 16 study has only had a staff-level review done by Caltrans, Sacramento County Department of Transportation, City of Rancho Cordova, and City of Sacramento. Other equivalent mitigation measures may be selected to the satisfaction of the Department of Transportation to mitigate the project's impact.

At the two new proposed "High Capacity Intersections" along Bradshaw Road, the ultimate configurations have not been defined. A number of improvement options involving one or more of the special treatments identified above could be defined that would mitigate the LOS impact at these locations. Since each of these intersections have unique travel movements, volumes and existing context sensitive conditions (potential environmental issues, right-of-way, physical constraints, etc.), the special treatments utilized at each location will need to be studied to select the treatments that mitigate the LOS impact, while avoiding or minimizing other impacts. At Bradshaw Road & Mayhew Road, heavy southbound right turns and westbound left turns suggest that a combination of triple left-turn lanes, dual right-turn lanes and/or overlap phasing may be effective. A high conflicting northbound and southbound volume suggests that grade separating one or more movements may also be necessary to fully mitigate the LOS impact. At Bradshaw Road & Jackson Road, the critical movements are the conflicting through volumes on all approaches. Grade separating either the Bradshaw Road or Jackson Road through movements is likely the only option that would mitigate the LOS impact at this location.

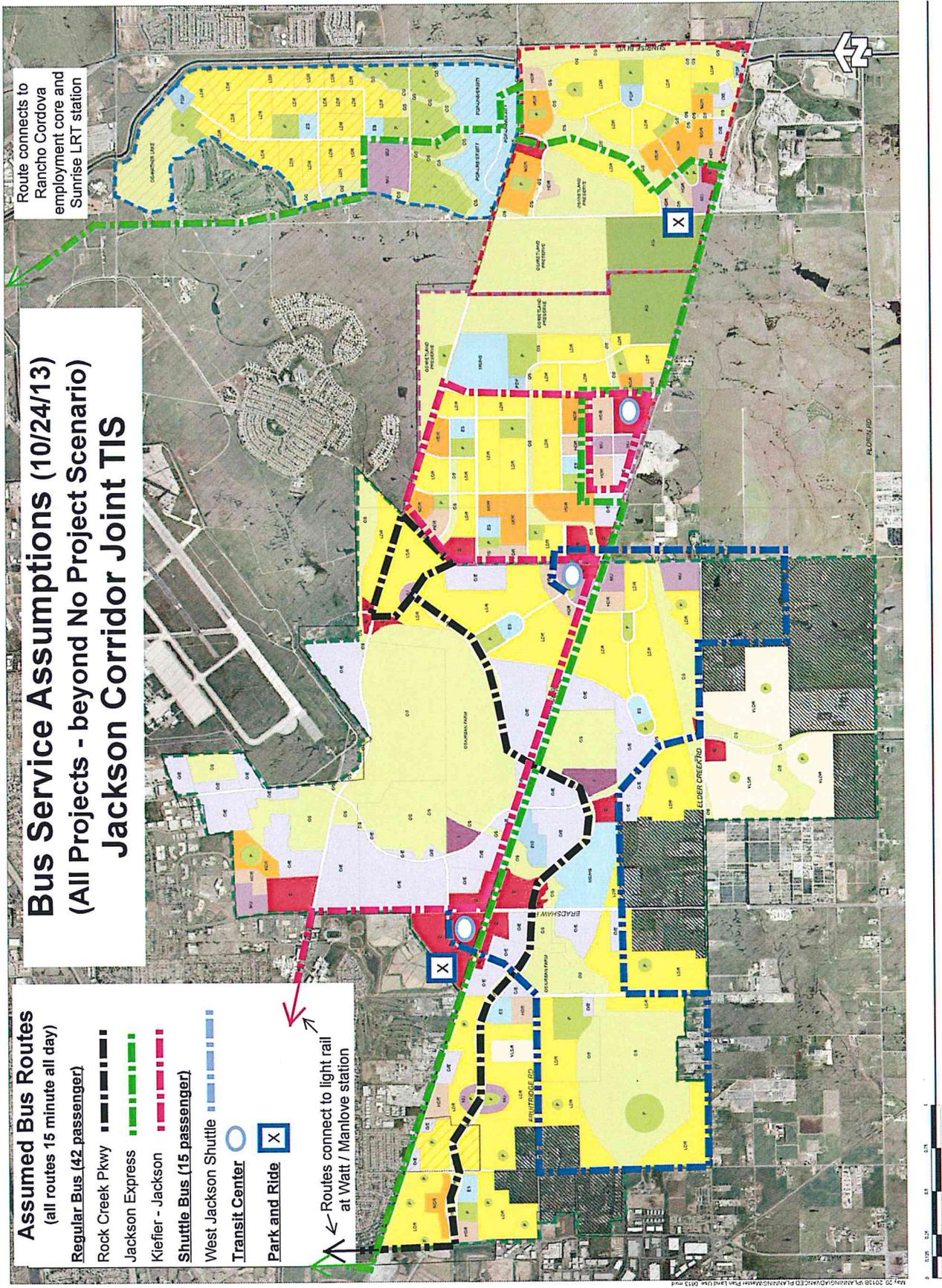
**FIGURE 4.6  
EXISTING PLUS FOUR PROJECTS  
FUNCTIONALITY IMPACTS**

- Legend**
-  Substandard Roadways
  -  Functionality Impact
  -  Functionality Impact if Roadway is Not Already Improved
  -  Cities
  -  Mather Airport



**Jackson Corridor Development Projects  
Rural Roadway - Functional Improvements**

Roadway Segment	From	To	Daily Traffic Volumes		
			Existing	Existing + Four Projects	Growth
Douglas Road	Mather Boulevard	Zinfandel Drive	6,635	12,160	5,525
Douglas Road	Zinfandel Drive	Sunrise Boulevard	8,369	11,450	3,081
Eagles Nest Road	Douglas Road	Kiefer Boulevard	2,848	23,220	20,372
Eagles Nest Road	Kiefer Boulevard	Jackson Road	740	12,100	11,360
Eagles Nest Road	Jackson Road	Florin Road	517	8,250	7,733
Elder Creek Road	South Watt Avenue	Hedge Avenue	5,576	26,230	20,654
Elder Creek Road	Hedge Avenue	Mayhew Road	5,797	25,670	19,873
Elder Creek Road	Mayhew Road	Bradshaw Road	5,355	15,260	9,905
Elder Creek Road	Bradshaw Road	Excelsior Road	2,158	23,810	21,652
Excelsior Road	Kiefer Boulevard	Jackson Road	3,716	25,010	21,294
Excelsior Road	Jackson Road	Elder Creek Road	5,075	30,490	25,415
Excelsior Road	Elder Creek Road	Florin Road	4,203	11,610	7,407
Excelsior Road	Florin Road	Gerber Road	5,423	14,730	9,307
Excelsior Road	Gerber Road	Calvine Road	4,229	11,350	7,121
Florin Road	South Watt Avenue	Hedge Avenue	7,718	18,340	10,622
Florin Road	Hedge Avenue	Mayhew Road	6,312	14,890	8,578
Florin Road	Mayhew Road	Bradshaw Road	6,317	15,190	8,873
Florin Road	Bradshaw Road	Excelsior Road	3,478	17,150	13,672
Florin Road	Excelsior Road	Sunrise Boulevard	3,835	8,750	4,915
Fruitridge Road	South Watt Avenue	Hedge Avenue	2,890	17,250	14,360
Fruitridge Road	Hedge Avenue	Mayhew Road	1,790	20,950	19,160
Grant Line Road	White Rock Road	Douglas Road	7,189	8,980	1,791
Happy Lane	Old Placerville Road	Kiefer Boulevard	4,635	26,210	21,575
Hedge Avenue	Jackson Road	Fruitridge Road	3,061	8,750	5,689
Hedge Avenue	Fruitridge Road	Elder Creek Road	3,737	3,780	43
Hedge Avenue	Elder Creek Road	Florin Road	2,722	4,250	1,528
Jackson Road	Bradshaw Road	Excelsior Road	13,030	51,570	38,540
Jackson Road	Excelsior Road	Eagles Nest Road	10,478	47,230	36,752
Kiefer Boulevard	Florin Perkins Road	South Watt Avenue	4,616	6,900	2,284
Kiefer Boulevard	Bradshaw Road	Happy Lane	4,618	49,480	44,862
Kiefer Boulevard	Eagles Nest Road	Sunrise Boulevard	656	12,540	11,884
Mather Boulevard-Excelsior Rd	Douglas Road	Kiefer Boulevard	6,751	16,410	9,659
Mayhew Road	Jackson Road	Fruitridge Road	1,616	36,540	34,924
White Rock Road	Fitzgerald Road	Grant Line Road	2,490	1,870	-620



# Bus Service Assumptions (10/24/13)

## (All Projects - beyond No Project Scenario)

### Jackson Corridor Joint TIS

- Assumed Bus Routes**  
(all routes 15 minute all day)
- Regular Bus (42 passenger)**
    - Rock Creek Pkwy
    - Jackson Express
    - Kiefler - Jackson
  - Shuttle Bus (15 passenger)**
    - West Jackson Shuttle
  - Transit Center**
  - Park and Ride**
- ← Routes connect to light rail at Watt / Manlove station

Route connects to Rancho Cordova employment core and Sunrise LRT station



Map 20 2013B 99\_Aerial/GRID/WA/ED PLAN/IN/Map/Plan Land Use 0113.mxd

Attachment 5  
Jackson Corridor Transit Network and Boardings

Scenario	Daily Passenger Boardings						Total
	Rock Creek Pkwy (to Watt/Manlove LRT Station)	Jackson Rd (Watt/Manlove LRT Station to Sunrise LRT Station)	Kiefer - Jackson (to Watt/Manlove LRT Station)	West Jackson Shuttle	Eastern Portion of Jackson Rd (to Sunrise LRT Station)		
<b>Existing Plus Individual Projects</b>							
- West Jackson	2,099	2,007	1,949	1,445		7,500	
- Jackson Township			1,882			1,882	
- New Bridge					2,322	2,322	
- Mather South					2,364	2,364	
<b>Existing Plus All Projects</b>	1,489	5,984	3,284	1,489		12,246	
<b>2035 MTP Plus All Projects</b>							
15 minute headways	3,000	11,531	4,991	1,878		21,400	
30 minute headways	2,140	7,803	3,483	1,081		14,507	
60 minute headways	1,672	5,615	2,497	732		10,516	
	30 minute headways / 15 minute headways =						68%
	60 minute headways / 15 minute headways =						49%

Cost Comparison for 2035 MTP Plus All Projects						
Headways	Bus Revenue Hours	Percent of 15 minute headways	Bus Fleet	Percent of 15 minute headways	Annual Cost	Percent of 15 minute headways
15 minute	339.0		25		\$9,648,800	
30 minute	170.8	50.4%	13	52.0%	\$4,882,160	50.6%
60 minute	85.5	25.2%	8	32.0%	\$2,506,600	26.0%

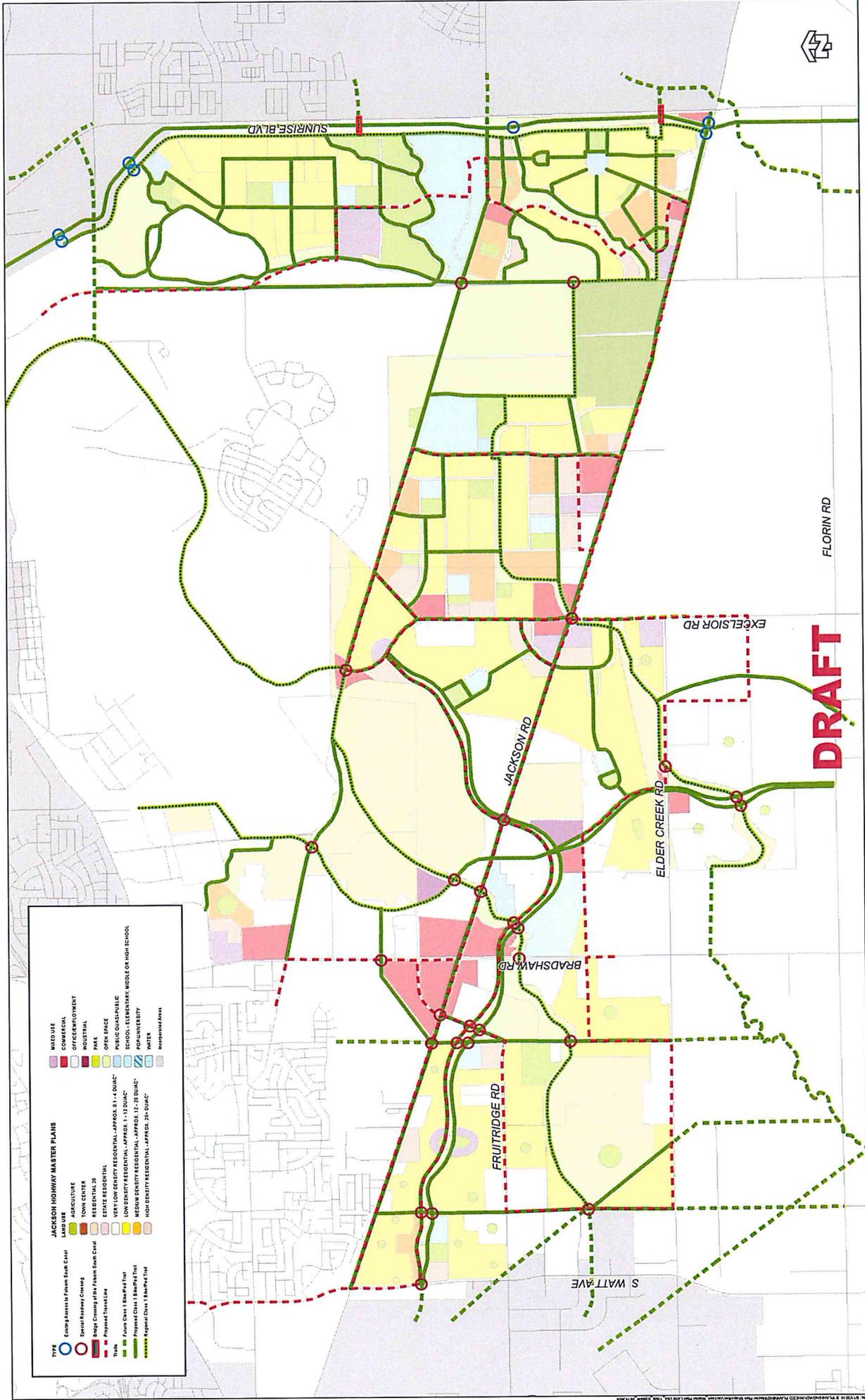
Calculation of Number of Buses		Bus Revenue Hours		Buses Needed	
		Regular Bus	Shuttle Bus	Regular Bus	Shuttle Bus
Existing Plus Individual Projects	- West Jackson	111.8	66.2	10	5
	- Jackson Township	75.2		6	
	- New Bridge		75.6		6
- Mather South		62.1		5	
Existing Plus All Projects		245.9	66.7	18	5
<b>2035 MTP Plus All Projects</b>					
15 minute headways		262.1	76.9	19	6
30 minute headways		132.2	38.6	10	3
60 minute headways		66.2	19.3	6	2

Cost Estimates for Transit Service		O&M Cost per Year		Capital Cost per Year		Total Cost per Year	Dwelling Units	Cost per DU
		Regular Bus	Shuttle Bus	Regular Bus	Shuttle Bus			
Existing Plus Individual Projects	- West Jackson	\$2,817,360	\$1,668,240	\$500,000	\$130,000	\$5,115,600	15,899	\$322
	- Jackson Township	\$1,895,040	\$0	\$300,000	\$0	\$2,195,040	6,764	\$325
	- New Bridge	\$0	\$1,905,120	\$0	\$156,000	\$2,061,120	3,848	\$536
- Mather South		\$1,564,920	\$0	\$250,000	\$0	\$1,814,920	3,559	\$510
Existing Plus All Projects		\$6,196,680	\$1,680,840	\$900,000	\$130,000	\$8,907,520	30,070	\$296
<b>2035 MTP Plus All Projects</b>								
15 minute headways		\$6,604,920	\$1,937,880	\$950,000	\$156,000	\$9,648,800	30,070	\$321
30 minute headways		\$3,331,440	\$972,720	\$500,000	\$78,000	\$4,882,160	30,070	\$162
60 minute headways		\$1,668,240	\$486,360	\$300,000	\$52,000	\$2,506,600	30,070	\$83

**Assumptions:**

<b>O&amp;M Cost per Bus Revenue Hour</b>	<b>Cost per Bus</b>	<b>Service Days per year</b>	<b>Bus Life (years)</b>
Regular Bus	\$100	Regular Bus \$600,000	Regular Bus 12
Shuttle Bus	\$100	Shuttle Bus \$130,000	Shuttle Bus 5
		Weekdays (w/o holidays) 252	
		Weekends/Holidays <sup>1</sup> 0	
		Total 252	

<sup>1</sup> Service hours and frequency assumed to be less than weekdays thus number reflects "equivalent weekdays"



**JACKSON CORRIDOR TRAILS MASTER PLAN**  
JUNE 2014

**DRAFT**

