

I-80/I-680/I-780 Corridors Highway Operations Implementation Study

DRAFT



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Prepared for:

And the Solano Highways Partnership:



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I-80/I-680/I-780 CORRIDORS HIGHWAY OPERATIONS IMPLEMENTATION STUDY

EXECUTIVE SUMMARY

This Executive Summary provides an overview of the I-80/I-680/I-780 Corridors Highway Operations Implementation Study. The overall study consisted of four main parts: Background Research and Literature Review, Operations Improvement Analysis, Visual Design Guidelines and Public Outreach.

BACKGROUND

The Solano Transportation Authority's planning, programming and project delivery duties are guided by the Comprehensive Transportation Plan (CTP), which plans for all forms of transportation and prioritizes projects, identified in the following CTP plan elements:

- Arterials, Highways and Freeways
- Transit
- Alternatives Modes

Using the goals of the CTP for direction, STA staff completed studies and plans to identify priority transportation projects that will achieve those goals. The goal of the Arterials, Highways, and Freeways element is to *"Develop a balanced transportation system that reduces congestion and improves access and travel choices through the enhancement of roads"*.

Caltrans annually provides grant opportunities through the State Transportation Planning Grant program for several categories including a Partnership Planning Grant where corridor studies are eligible. The STA has completed the I-80/I-680/I-780 Corridors Study Highway Operations Plan to follow up on the STA's previous I-80/I-680/I-780 Corridor Major Investment and Corridor Study and MTC's Freeway Performance Initiative (FPI). The I-80/I-680/I-780 Corridors Study Highway Operations Plan was developed cooperatively under the direction of the Solano Highways Partnership (SoHIP) consisting of representatives from STA, MTC, Caltrans (Districts 3 and 4), and the cities of Benicia, Dixon, Fairfield, Vacaville and Vallejo. Under this study, operational improvements and recommendations for a long range Intelligent Transportation System (ITS) including ramp metering, closed circuit television cameras (CCTV), vehicle detection and highway advisory radios are presented.

OPERATIONS IMPROVEMENT ANALYSIS

The Solano County I-80 and I-680 North Freeway Performance Initiative (FPI) studies served as the primary source for the operational improvement assessment. The objective of the FPI was to develop freeway strategic plans for each corridor by performing a technical assessment that included identification of major bottlenecks, determination of the causes of traffic congestion, development of potential mitigation strategies, and an assessment of their effectiveness. In addition, an ITS implementation plan was prepared to supplement the FPI studies focusing on the installation of ITS elements as part of the operational improvements.

I-80/I-680/I-780 CORRIDORS HIGHWAY OPERATIONS IMPLEMENTATION STUDY

EXECUTIVE SUMMARY

The Solano I-80 FPI study encompassed the 44-mile section of I-80 throughout Solano County from the Carquinez Bridge to the Solano/Yolo County line, and the I-680 North FPI study focused on the portion of I-680 located between the I-80 interchange in Solano County and the Alameda/ Contra Costa County line. Both FPI studies included an assessment of existing (2006/2007), future 2015 and future 2030 conditions. The existing conditions assessment relied on observed data from numerous sources including the Caltrans HICOMP reports, archived travel speed data from the MTC 511 Predict-a-Trip system (PeMS), and a limited number of floating vehicle travel time runs. For the future 2015 and 2030 analysis, the Solano Transportation Authority (STA) countywide travel demand model was used to develop forecasts, and a macroscopic simulation model was used to assess operating conditions. Accident data was derived from the TASAS database to assess safety concerns within the study corridor.

It is important to note that the existing conditions assessment conducted as a part of the I-680 North FPI study was performed prior to the opening of the new northbound span and toll plaza at the Benicia-Martinez Bridge. Since the opening, congestion has decreased in the area around the bridge and toll plaza. Subsequently, follow-up observations in this area were performed and used to update the existing conditions assessment presented in the FPI studies.

Because no FPI study was conducted for the I-780 corridor, additional primary analysis was undertaken as part of this study. This included the development of AM and PM peak period traffic operations models covering I-780 between I-80 and I-680. Existing Condition models were developed using freeway and ramp traffic count data available from the Caltrans Traffic Census and PeMS. The STA countywide travel forecasting model was used to determine traffic growth levels for use in the development of the traffic operations models reflecting projected 2015 and 2030 conditions. Accident data was derived from the TASAS database to assess safety concerns within the study corridor.

The FPI studies identified mitigation strategies that were organized into improvement “packages” for the Solano I-80 and I-680 corridors which included operational and system management improvements. Some of these improvement packages that were identified included auxiliary lanes, HOV lanes, ITS strategies, general purpose lanes, interchange intersection improvements and ramp metering.

Because the FPI studies only identified ITS deployments as a strategy measure, a Corridor-Level ITS Architecture and Implementation Plan was also developed as part of this study. This Architecture and Plan provides recommendations for policies and agreements that are necessary to ensure that ITS deployments are incorporated into operational improvements programmed along the three freeway corridors in Solano County. It also provides guidance for the design and deployment of specific ITS elements along the freeway corridors including any coordination and information sharing with the local cities, the County and the regional agencies.

I-80/I-680/I-780 CORRIDORS HIGHWAY OPERATIONS IMPLEMENTATION STUDY

EXECUTIVE SUMMARY

OPERATIONAL IMPROVEMENT IMPLEMENTATION PLAN

Based on the findings of the FPI studies, the I-780 operations analysis and the ITS Architecture and Implementation Plan, an overall Operations Improvement Implementation Plan was developed. This Plan started with a review of the improvement packages developed as part of the operational analysis and the ITS Implementation Plan, and then combining or bundling the packages into discrete projects that could be funded and constructed separately. Once the project bundling was developed, each project was prioritized using several factors including the ability to improve congestion, cost and overall feasibility.

The costs for the operational improvements are significantly higher than other system management strategies (e.g., ITS). Thus, ITS improvements were deemed to be more practical improvements as either standalone projects or embedded within other operational improvements.

Figures E-1 to E-4 provides a graphical summary of the prioritized projects. Tables E-1 and E-2 provide a summary description of each of the projects and their order of magnitude costs under the horizon year 2015 and 2030, respectively.

In Figure E-2, the truck climbing lane has been constructed, and the HOV on I-80 is currently under construction. In Figure E-3, the Year 2015 roadway network includes all of the programmed improvements as shown in Figure E-2. In Figure E-5, the Year 2030 roadway network includes all of the programmed improvements as shown in Figure E-2.

I-80/I-680/I-780 CORRIDORS HIGHWAY OPERATIONS IMPLEMENTATION STUDY

EXECUTIVE SUMMARY

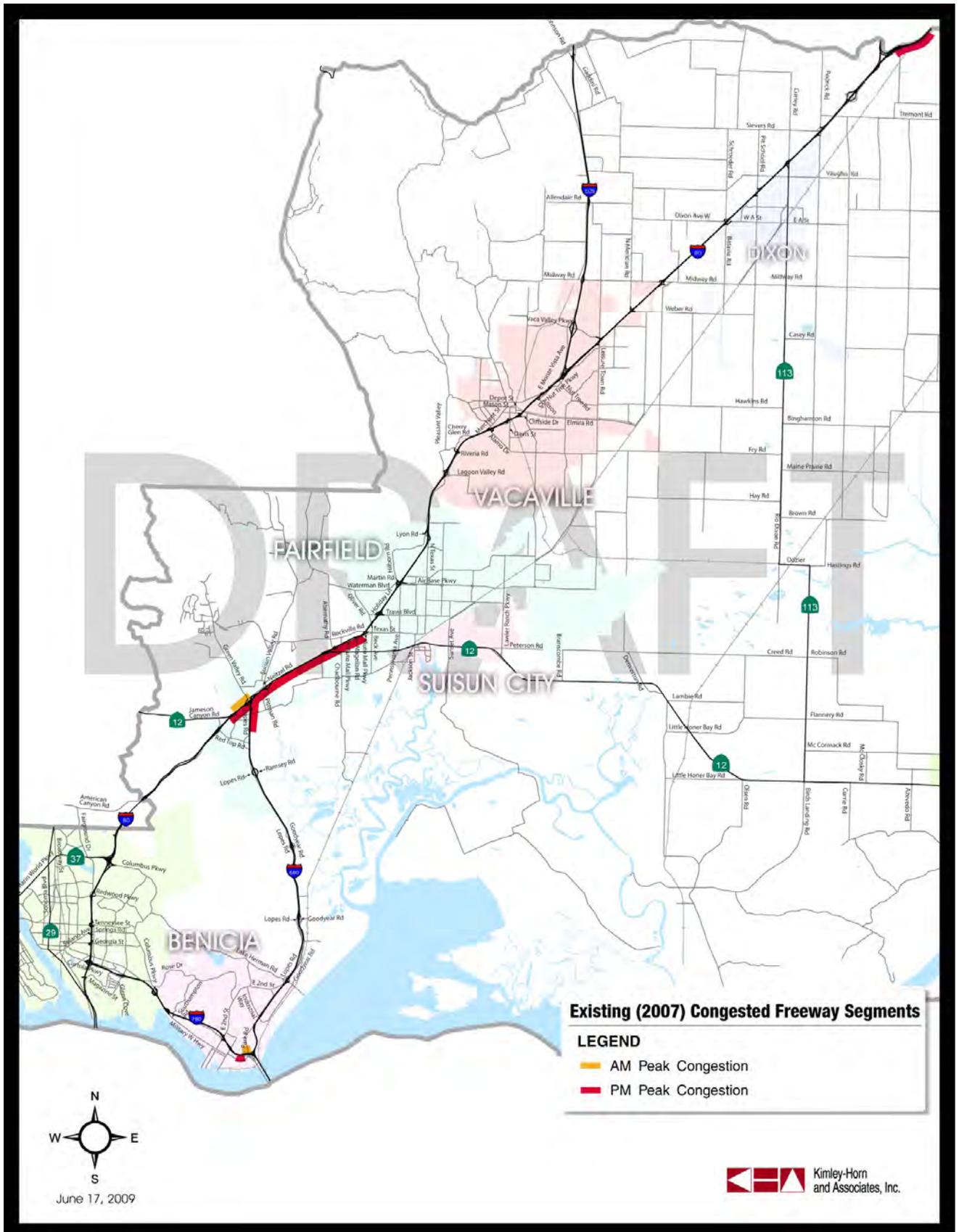


Figure E-1: Existing Congestion

I-80/I-680/I-780 CORRIDORS HIGHWAY OPERATIONS IMPLEMENTATION STUDY EXECUTIVE SUMMARY

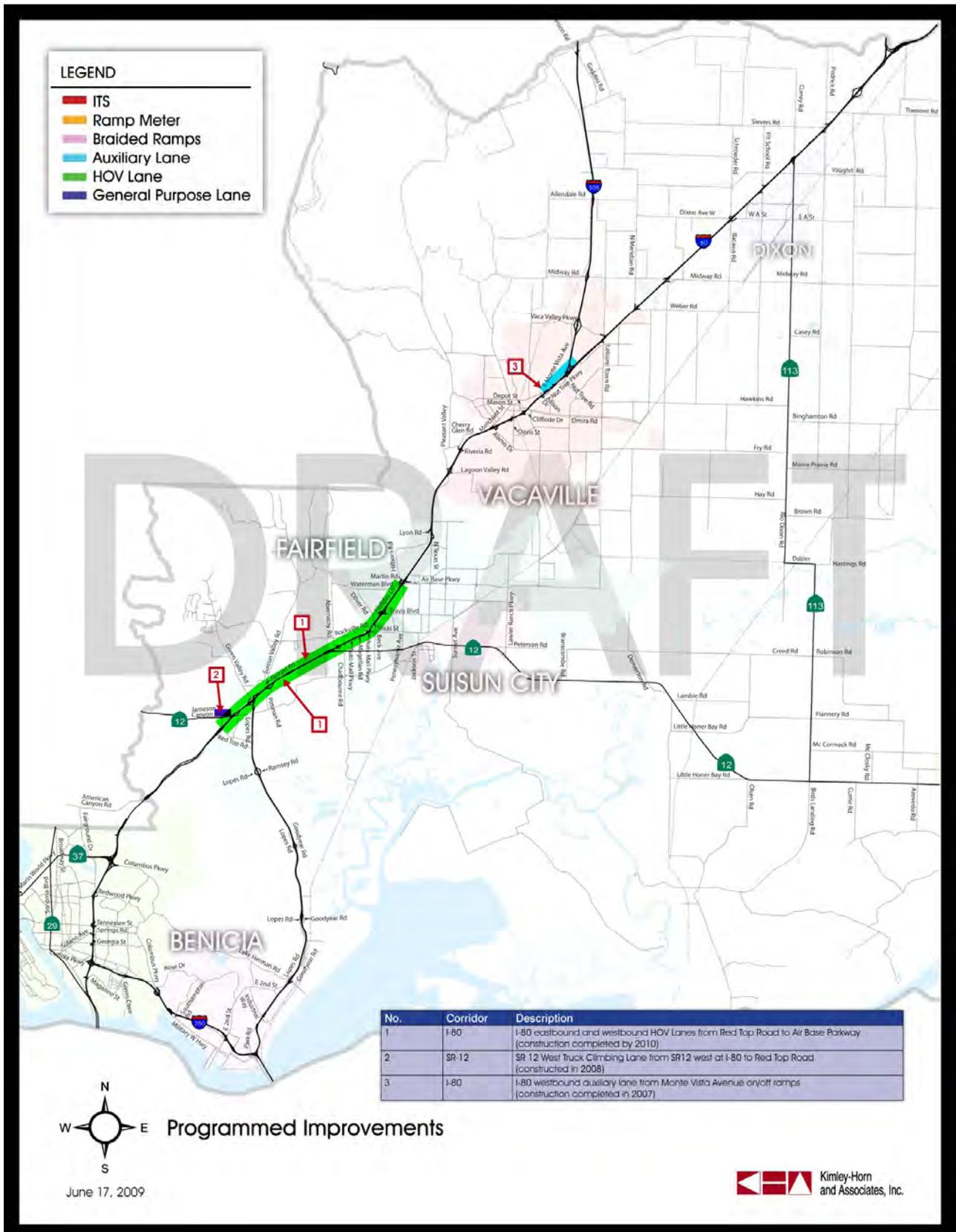


Figure E-2: Programmed Improvements

I-80/I-680/I-780 CORRIDORS HIGHWAY OPERATIONS IMPLEMENTATION STUDY

EXECUTIVE SUMMARY

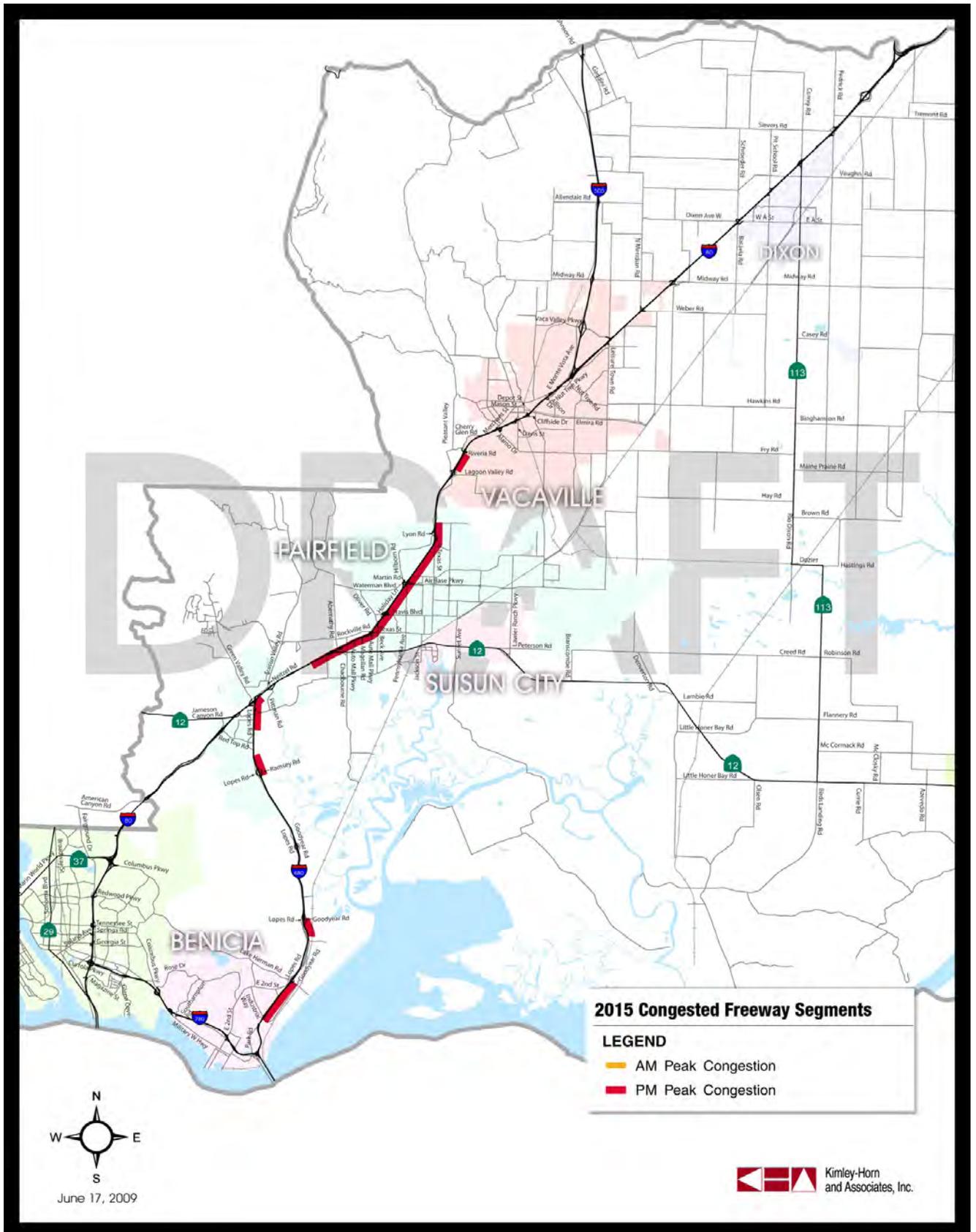


Figure E-3: Year 2015 Congestion

I-80/I-680/I-780 CORRIDORS HIGHWAY OPERATIONS IMPLEMENTATION STUDY

EXECUTIVE SUMMARY

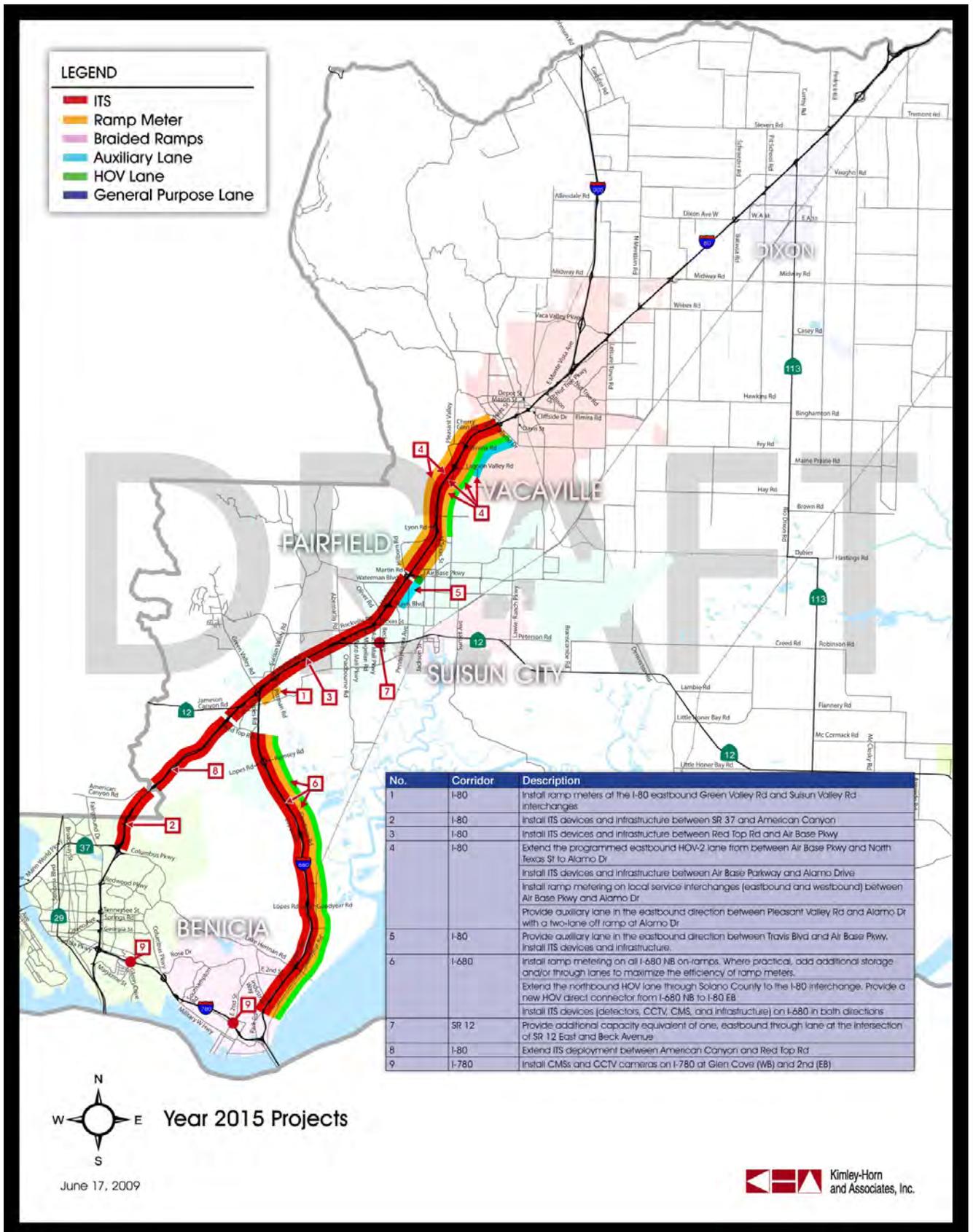


Figure E-4: Year 2015 Proposed Improvements

I-80/I-680/I-780 CORRIDORS HIGHWAY OPERATIONS IMPLEMENTATION STUDY
EXECUTIVE SUMMARY

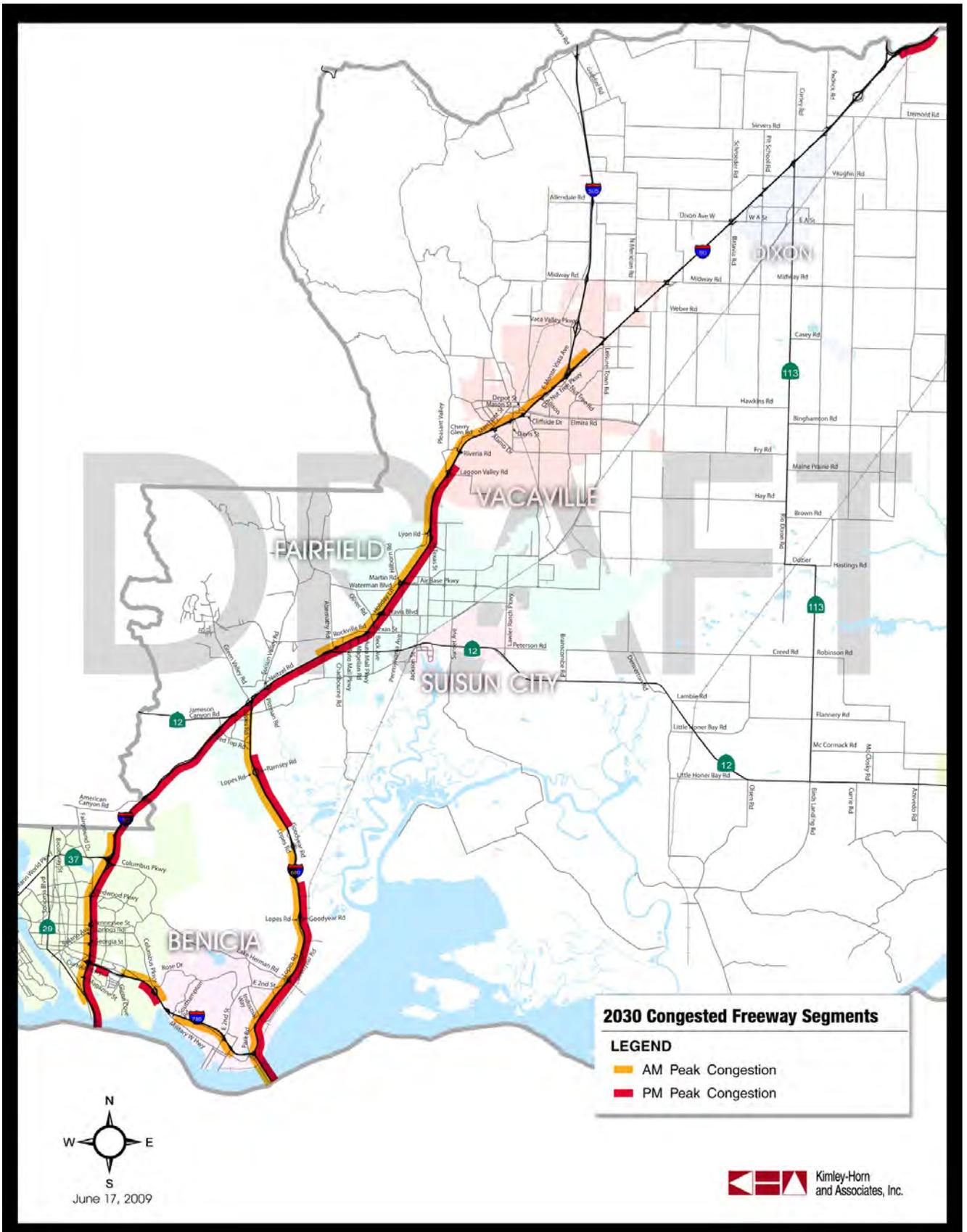


Figure E-5: Year 2030 Congestion

I-80/I-680/I-780 CORRIDORS HIGHWAY OPERATIONS IMPLEMENTATION STUDY

EXECUTIVE SUMMARY

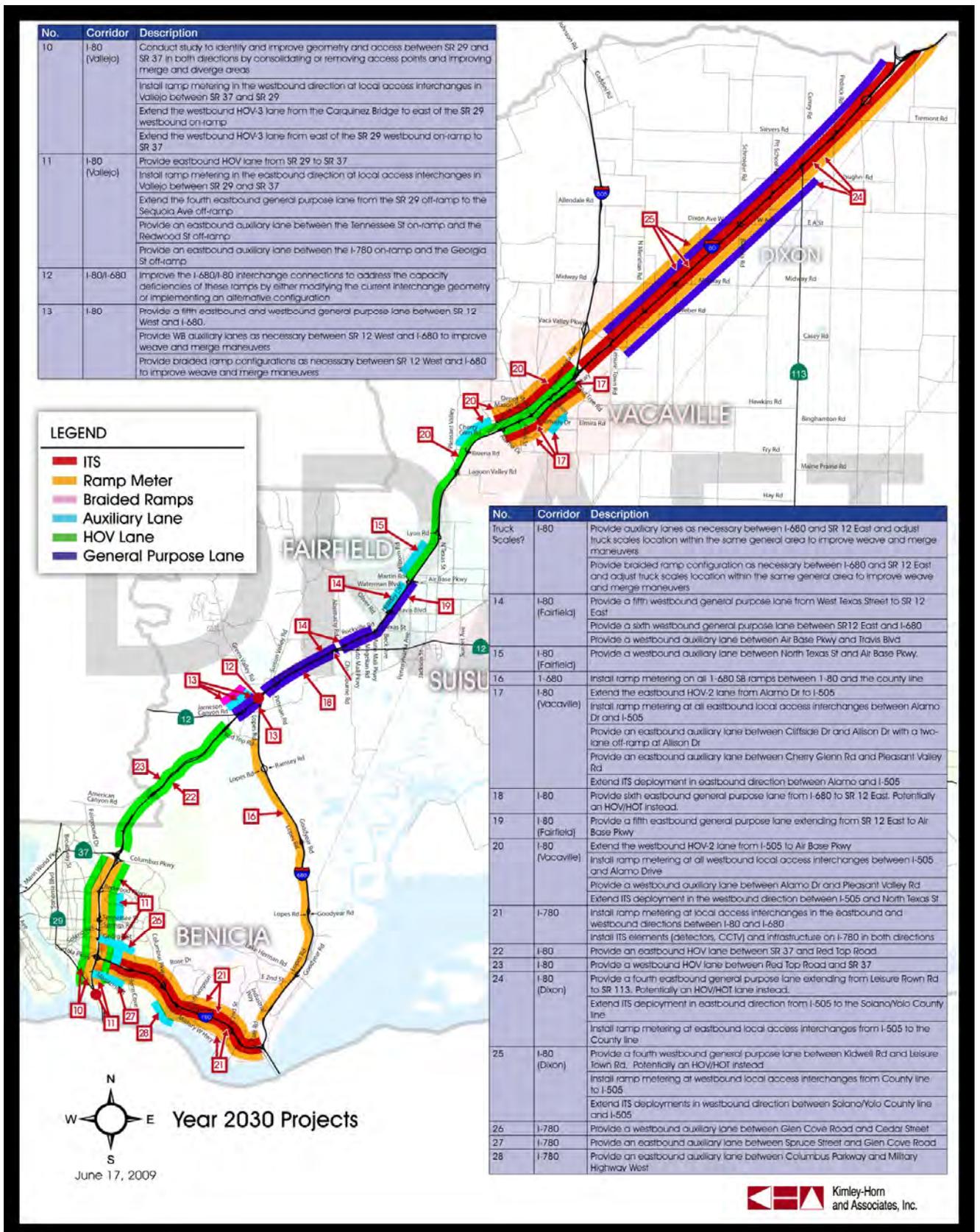


Figure E-6: Year 2030 Proposed Improvements

I-80/I-680/I-780 CORRIDORS HIGHWAY OPERATIONS IMPLEMENTATION STUDY
EXECUTIVE SUMMARY

Table E-1: Year 2015 Prioritization of Projects			
Priority	Corridor	Description	Order of Magnitude Cost
1	I-80	Install ramp meters at the I-80 eastbound Green Valley Road and Suisun Valley Road interchanges	\$400,000
2	I-80	Install ITS devices and infrastructure between SR 37 and American Canyon Road. This will consist of CCTV cameras, changeable message signs and communications infrastructure.	\$5,300,000
3	I-80	Install ITS gap between Red Top Rd and Air Base Parkway. This will consist of CCTV cameras, Highway Advisory Radio and communications infrastructure.	\$4,800,000
4	I-80	Extend the programmed eastbound HOV-2 lane from between Air Base Parkway and North Texas Street to Alamo Drive.	\$19,000,000
		Install ITS devices and infrastructure between Air Base Parkway and Alamo Drive	\$6,300,000
		Install ramp metering on local service interchanges (eastbound and westbound) between Air Base Parkway and Alamo Drive. This will include four interchanges with eight on-ramps.	\$1,600,000
		Provide an eastbound auxiliary lane between Pleasant Valley Road and Alamo Drive. Provide a two-lane off-ramp at Alamo Drive. This includes the eastbound auxiliary lane between Cherry Glen Road and Pleasant Valley Road.	\$7,200,000
		Subtotal No. 4:	\$34,100,000
5	I-80	Provide auxiliary lane in the eastbound direction between Travis Boulevard and Air Base Parkway. Install ITS devices and infrastructure.	\$18,000,000
6	I-680	Install ramp metering on all I-680 NB on-ramps. Where practical, add additional storage and/or through lanes to maximize the efficiency of ramp meters.	\$1,000,000
		Install ITS elements (detectors, CCTV, CMS & Infrastructure) on I-680 in both directions	\$7,700,000
		Extend the northbound HOV lane through Solano County to the I-80 interchange. Provide a new HOV direct connector from I-680 NB to I-80 EB.	\$43,200,000
		Subtotal No. 6:	\$51,900,000
7	SR 12	Provide additional capacity equivalent of one, eastbound through lane at the intersection of SR 12 East and Beck Avenue	\$2,900,000
8	I-80	Extend ITS deployment between American Canyon and Red Top Rd	\$2,800,000
9	I-780	Install CMS and CCTV cameras on I-780 at Glen Cove (WB) and 2nd Street (EB)	\$1,400,000
Total Year 2015 Improvements:			\$121,600,000

I-80/I-680/I-780 CORRIDORS HIGHWAY OPERATIONS IMPLEMENTATION STUDY
EXECUTIVE SUMMARY

Table E-2: Year 2030 Prioritization of Projects			
Priority	Corridor	Description	Order of Magnitude Cost
10	I-80 (Vallejo)	Conduct study to identify and improve geometry and access between SR 29 and SR 37 in both directions by consolidating or removing access points and improving merge and diverge areas.	\$300,000
		Install ramp metering in the westbound direction at local access interchanges in Vallejo between SR 37 and SR 29	\$1,600,000
		Extend the westbound HOV-3 lane to the Carquinez Bridge to east of the SR 29 westbound on-ramp	\$3,800,000
		Extend the westbound HOV-3 lane from east of the SR 29 westbound on-ramp to SR 37	\$14,900,000
		Subtotal No. 10:	\$20,600,000
11	I-80 (Vallejo)	Provide eastbound HOV lane from SR 29 to SR 37	\$15,200,000
		Install ramp metering in the eastbound direction at local access interchanges in Vallejo between SR 29 and SR 37	\$1,400,000
		Extend the fourth eastbound general purpose lane from the SR 29 off-ramp to the Sequoia Avenue off-ramp	\$3,000,000
		Provide an eastbound auxiliary lane between the Tennessee Street on-ramp and the Redwood Street off-ramp	\$13,800,000
		Provide an eastbound auxiliary lane between the I-780 on-ramp and the Georgia St off-ramp	\$9,200,000
		Subtotal No. 11:	\$42,600,000
12	I-80/I-680	Improve the I-680/I-80 interchange connections to address the capacity deficiencies of these ramps by either modifying the current interchange geometry or implementing an alternative configuration	\$100M (allocated)
13	I-80 (Fairfield)	Provide a fifth eastbound and westbound general purpose lane between SR 12 West and I-680.	\$10,800,000
		Provide WB auxiliary lanes as necessary between SR 12 West and I-680 to improve weave and merge maneuvers	\$2,600,000
		Provide braided ramp configurations as necessary between SR 12 West and I-680 to improve weave and merge maneuvers	\$4,200,000
		Subtotal No. 13:	\$12,200,000
Truck Scales	I-80	Provide auxiliary lanes as necessary between I-680 and SR 12 East and adjust truck scales location within the same general area to improve weave and merge maneuvers	(Part of EB Truck Scales Project)
		Provide braided ramp configuration as necessary between I-680 and SR 12 East and adjust truck scales location within the same general area to improve weave and merge maneuvers	(Part of EB Truck Scales Project)
14	I-80 (Fairfield)	Provide a fifth westbound general purpose lane from West Texas Street to SR 12 West	\$9,000,000
		Provide a sixth westbound general purpose lane from SR 12 East to I-680	\$11,500,000
		Provide a westbound auxiliary lane between Air Base Pkwy and Travis Blvd	\$15,000,000

I-80/I-680/I-780 CORRIDORS HIGHWAY OPERATIONS IMPLEMENTATION STUDY
EXECUTIVE SUMMARY

Table E-2: Year 2030 Prioritization of Projects			
Priority	Corridor	Description	Order of Magnitude Cost
		Subtotal No. 14:	\$35,500,000
15	I-80 (Fairfield)	Provide a westbound auxiliary lane between North Texas St and Air Base Pkwy.	\$23,000,000
16	I-680	Install ramp metering on all I-680 SB ramps between I-80 and the County line.	\$1,000,000
17	I-80 (Vacaville)	Extend the eastbound HOV-2 lane from Alamo Dr to I-505	\$19,200,000
		Install ramp metering at all eastbound local access interchanges between Alamo Dr and I-505	\$1,000,000
		Provide an eastbound auxiliary lane between Cliffside Dr and Allison Dr with a two-lane off-ramp at Allison Dr	\$2,900,000
		Provide an eastbound auxiliary lane between Cherry Glenn Rd and Pleasant Valley Rd	\$9,200,000
		Extend ITS in eastbound direction between Alamo and I-505	\$2,300,000
		Subtotal No. 17:	\$34,600,000
18	I-80	Provide sixth eastbound general purpose lane from I-680 to SR 12 East. <i>Potentially an HOV/HOT lane instead.</i>	\$36,800,000
19	I-80 (Fairfield)	Provide a fifth eastbound general purpose lane extending from SR 12 East to Air Base Parkway	\$40,300,000
20	I-80 (Vacaville)	Extend the westbound HOV-2 lane from I-505 to Air Base Parkway	\$32,800,000
		Install ramp metering at all westbound local access interchanges between I-505 and Air Base Pkwy	\$1,800,000
		Provide a westbound auxiliary lane between Alamo Dr and Pleasant Valley Rd	\$4,400,000
		Subtotal No. 20:	\$39,000,000
21	I-780	Install ramp metering at local access interchanges in the eastbound and westbound directions between I-80 and I-680	\$3,400,000
		Install ITS elements (detectors, CCTV & infrastructure on I-780 in both directions	\$5,400,000
		Subtotal No. 21:	\$8,800,000
22	I-80	Provide an eastbound HOV lane between SR 37 and Red Top Road	\$36,000,000
23	I-80	Provide a westbound HOV lane between Red Top Road and SR 37	\$36,000,000
24	I-80 (Dixon)	Provide a fourth eastbound general purpose lane extending from Leisure Town Rd to SR 113. <i>Potentially an HOV/HOT lane instead.</i>	\$78,000,000
		Extend ITS in eastbound direction from I-505 to the Solano County line	\$6,200,000
		Install ramp metering at eastbound local access interchanges from I-505 to the County line	\$1,800,000
		Subtotal No. 24:	\$86,000,000
25	I-80 (Dixon)	Provide a fourth westbound general purpose lane between Kidwell Rd and Leisure Town Rd. <i>Potentially an HOV/HOT lane instead.</i>	\$132,300,000

I-80/I-680/I-780 CORRIDORS HIGHWAY OPERATIONS IMPLEMENTATION STUDY
EXECUTIVE SUMMARY

Table E-2: Year 2030 Prioritization of Projects			
Priority	Corridor	Description	Order of Magnitude Cost
		Install ramp metering at westbound local access interchanges from County line to I-505	\$2,000,000
		Extend ITS in westbound direction between Solano/Yolo County line and I-505	\$6,100,000
Subtotal No. 25:			\$140,400,000
26	I-780	Provide a westbound auxiliary lane between Glen Cove Road and Cedar Street	\$2,900,000
27	I-780	Provide an eastbound auxiliary lane between Spruce Street and Glen Cove Road	\$2,900,000
28	I-780	Provide an eastbound auxiliary lane between Columbus Parkway and Military Highway West	\$2,900,000
Total Year 2030 Improvements:			\$605,900,000

PROJECT IDENTIFICATION AND PRIORITIZATION PROCESS

The project identification and prioritization process involved packaging the list of strategy packages identified in the FPI studies and the Corridor Level ITS Architecture and Implementation Plan and developing specific projects. The purpose of developing the specific projects is to combine strategies as appropriate in order to realize the potential synergies when constructing the projects. In addition, combining or bundling the packages into discrete projects will enable each project to be funded and constructed separately. For example, ITS strategies were combined with operational improvement strategies where practical. In one case, the installation of an auxiliary lane lends itself well to the installation of ITS devices including communications infrastructure, CCTV cameras and vehicle detection.

System management strategies in the short-term scenarios (Year 2015) were left as individual projects. Under these cases, keeping these strategies as individual projects provides the ability to prioritize them in earlier years instead of combining them with an operational improvement that is slated for installation over the long-term (Year 2030).

Once the project bundling was developed, each project was prioritized using several factors including:

- Impact on improving congestion;
- Cost; and
- Overall Feasibility

Each project's impact on improving congestion was documented in the FPI studies. Thus, the prioritization of the projects focused more on the timing and location of the projects within the horizon years.

I-80/I-680/I-780 CORRIDORS HIGHWAY OPERATIONS IMPLEMENTATION STUDY

EXECUTIVE SUMMARY

ITS coverage alone does not relieve congestion. Thus, the project identification and prioritization process attempted to combine ITS elements with operational improvements. The prioritization also attempted to order the installation of the projects such that meaningful segments of the freeways are covered with successive projects.

Year 2015

The installation of system management strategies for the short-term was deemed the highest priority for the corridors, particularly for I-80. This was done, as system management are the most cost effective strategies for the corridor under the Year 2015. These types of strategies reduce the amount of non-recurrent congestion as they provide the tools and means to identify, respond to and clear incidents in a timely manner before the incident has a severe impact on congestion.

The operational improvements for the short term (2015) focused on relieving congestion in the Fairfield and Vacaville areas along I-80. Additionally, the forecast of a series of congested locations and bottlenecks on I-680 in the northbound direction resulted in the need for operational improvements. The I-80 operational improvements ranked higher than the I-680 improvements due to the levels of congestion and cost.

Year 2030

The prioritization of projects was generally divided into segments along the freeway corridors. The areas through Vallejo ranked highest followed by areas through Fairfield and Vacaville (I-80 and I-680), through Benicia along I-780 and finally along I-80 to the county line.

The operational improvements along I-80 through Vallejo were ranked highest primarily due to the cost and amount of congestion forecast for this segment. Additionally, the corridor has been studied at length and based on the level of planning, it is anticipated that this segment may be the most prepared for the installation of the operational improvements. The improvement of the I-80/680/780 interchange, while ranked lower than the I-80 segment through Vallejo, the improvements to the interchange is largely unknown and the overall cost is anticipated to be significantly higher in comparison.

The improvements in the vicinity between SR West and SR 12 East are forecast to have significant congestion such that additional general purpose and auxiliary lanes are needed. This influenced the high ranking of projects along this segment.

The operational improvements and ITS installations along I-80, east of Alamo Drive, round out the recommended priority projects.

Along I-780, the installation of ramp metering and auxiliary lanes were ranked lower in priority as the levels of congestion forecast along this corridor are substantially less than the other corridors.

I-80/I-680/I-780 CORRIDORS HIGHWAY OPERATIONS IMPLEMENTATION STUDY

EXECUTIVE SUMMARY

VISUAL DESIGN GUIDELINES

The document is intended as a guide for use by the Cities along the corridor and engineering/design consultants responsible for preparing designs along the corridors. The guidelines provide direction to design efforts so that the corridors maintain a strong sense of identity and character throughout phased development and construction projects. The guidelines are not intended as specifications therefore state and local codes and standards shall be followed by the designers, however, if a standard is specified in this document, it shall prevail.

Goals are broad recommendations that form the baseline for the design theme. Objectives refine the intent of goals by making specific recommendations. Together they direct the design effort. The goals for the I-80/680/780 Corridor Design are:

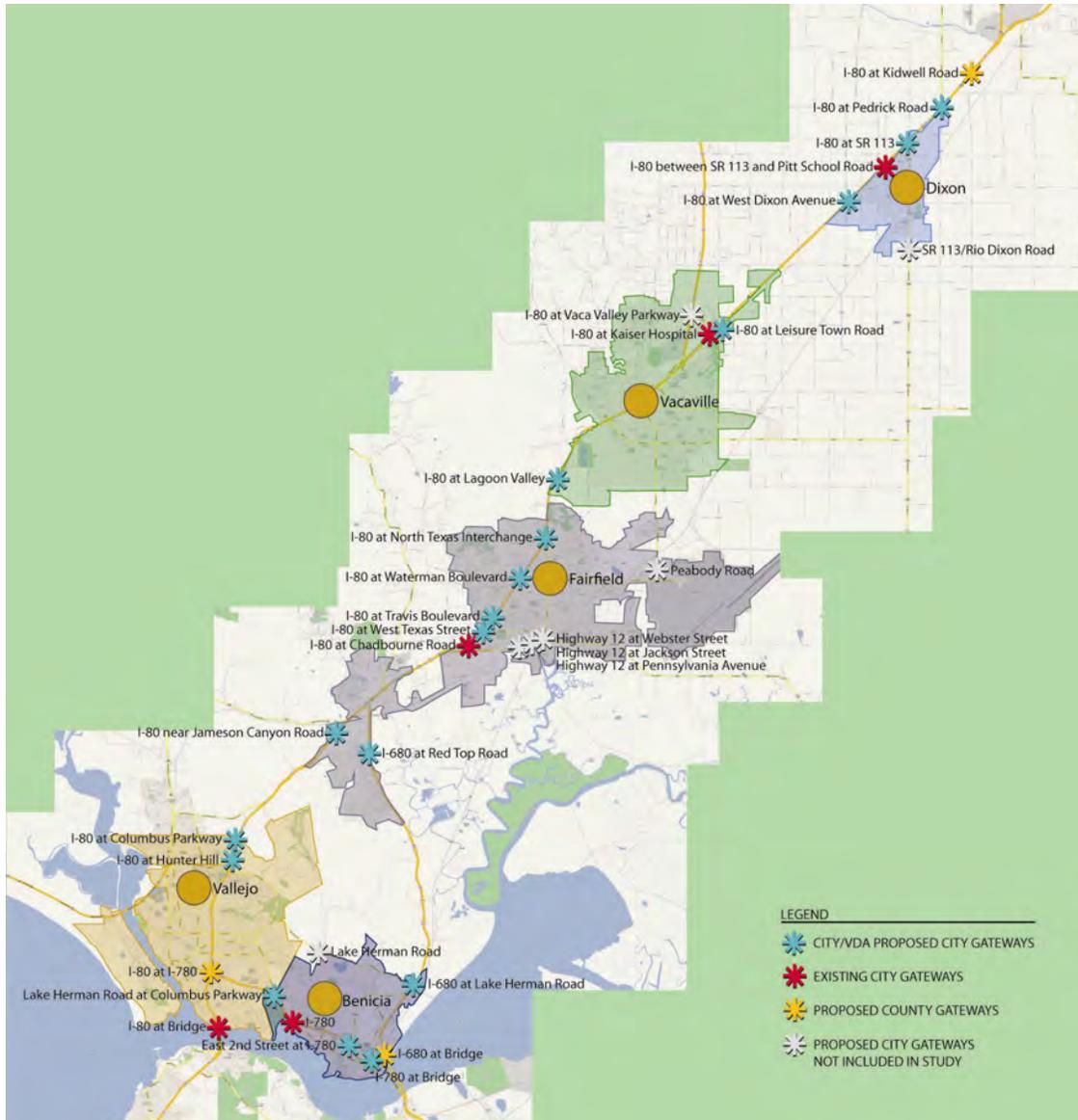
- Develop a cohesive landscape and hardscape program for the entire project area
- Develop a gateway, landscape and hardscape palette that is unique and expresses the identity of each city, yet fits into the overall program
- Create a landscape and hardscape program using sustainable, environmentally friendly and maintenance friendly plants and materials

Gateways

The design of the landscape and other design elements will create a continuous impression throughout the I-80/680/780 Corridors. Again, repetition of colors, shapes, materials, textures, key plants and site improvements within each theme will create accents at gateway locations while relating to each other to create a cohesive impression along the interstates. Each gateway location highlights a city's entry point and unique plantings are used to accent main points of interest in each city along the interstate. In many locations, a sign accompanies the unique planting scheme.

I-80/I-680/I-780 CORRIDORS HIGHWAY OPERATIONS IMPLEMENTATION STUDY

EXECUTIVE SUMMARY



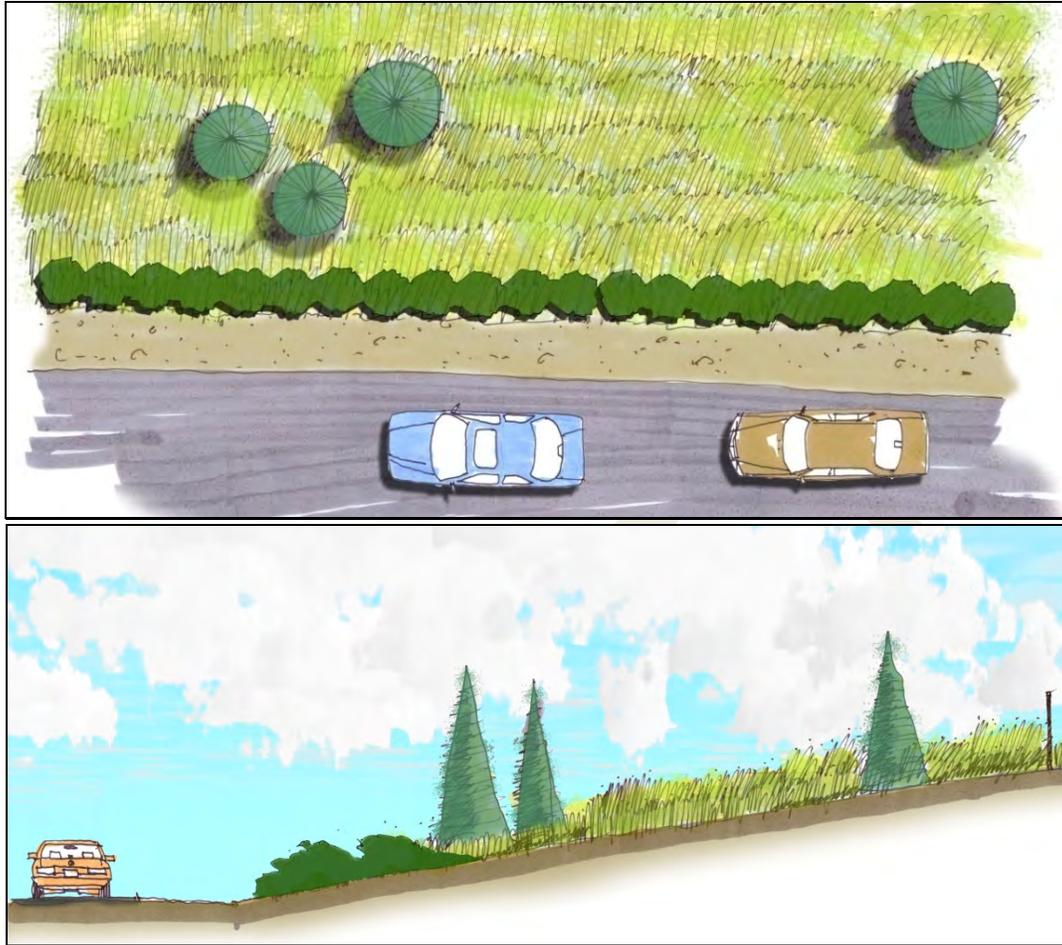
Design Themes

The design theme for the I-80/680/780 Corridors emphasizes strong planting schemes along the edges of the travel way as a unifying element and accents entry points to each City with gateway signage, overpass signage and/or special planting. The corridors were divided into three landscape themes: Nautical, Agricultural and Naturalized. Within each area and jurisdiction, gateway locations have been identified along with identity colors for each jurisdiction that will be applied to site improvements.

Nautical Theme

The nautical theme is carried through the cities of Vallejo and Benicia. Accent bands or designs illustrate the City's identity color.

I-80/I-680/I-780 CORRIDORS HIGHWAY OPERATIONS IMPLEMENTATION STUDY
EXECUTIVE SUMMARY



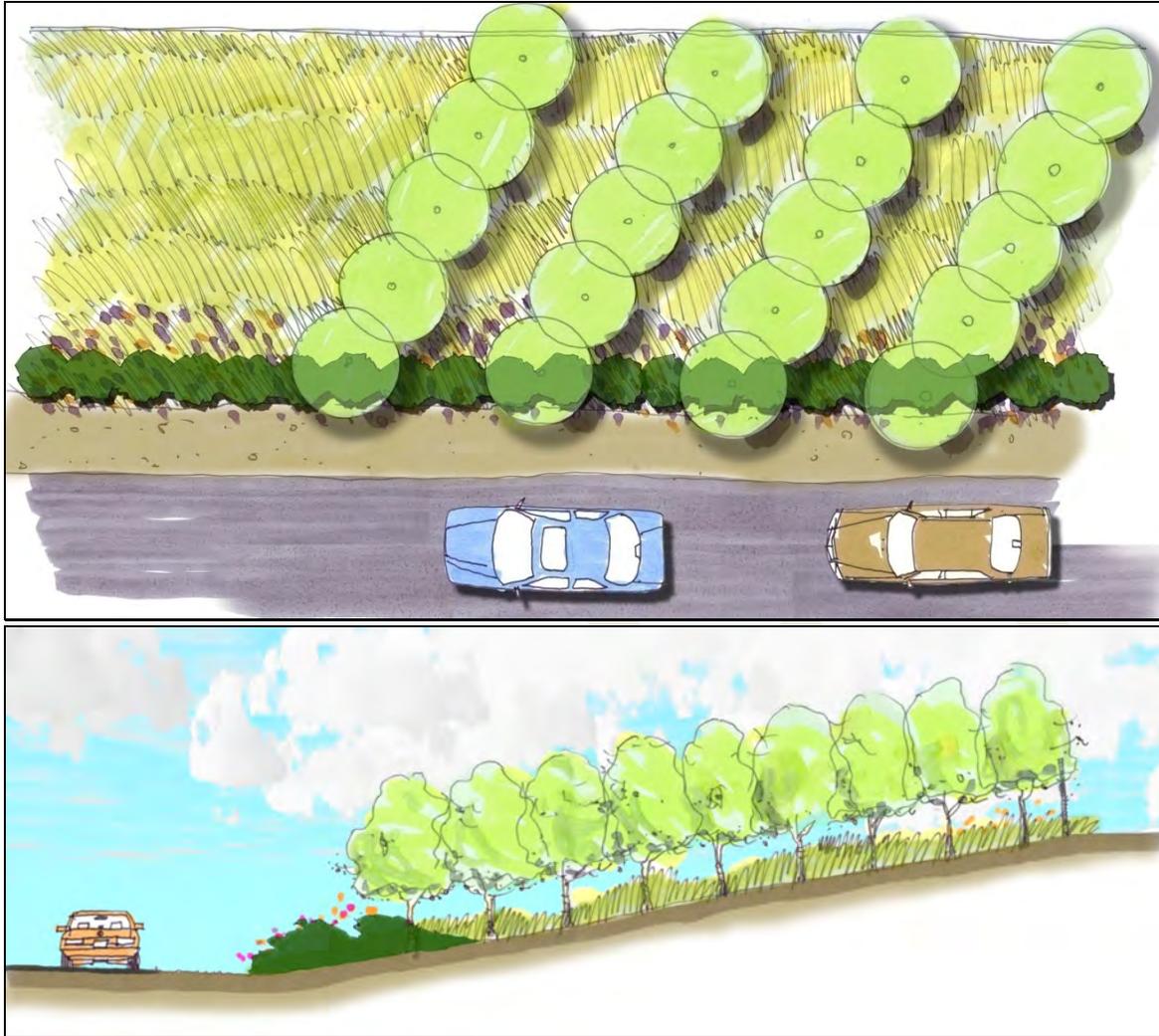
Nautical Theme

Agricultural Theme

The agricultural theme is carried through the cities of Dixon and Vacaville. The agricultural themed gateways have a similar layout to the nautical themed gateways but differ due to variation in the planting palette and pattern.

I-80/I-680/I-780 CORRIDORS HIGHWAY OPERATIONS IMPLEMENTATION STUDY

EXECUTIVE SUMMARY



Agricultural Theme

Solano County and City of Fairfield Gateways

The Solano County and Fairfield gateway are a combination of the nautical and agricultural themes. The Solano County gateway uses the stone wall, agricultural orchard planting and the nautical post with all the jurisdictional colors on it and metal cut out letters. The City of Fairfield gateway has an aeronautical theme with agricultural hedgerows planted in association with the gateway feature.

Design Elements

Several elements occur within the I-80/680/780 Corridor that contribute to the overall themes and create a unified image. These elements become a readable visual sequence along the corridor and help create a coherent image and identity for motorists.

I-80/I-680/I-780 CORRIDORS HIGHWAY OPERATIONS IMPLEMENTATION STUDY

EXECUTIVE SUMMARY

This section outlines the recommended treatment of each element to be incorporated into the design of the I-80/680/780 Corridor. Consultant engineers and designers responsible for design and construction documents for the corridor should consult these guidelines for the recommended treatment of each element. A few of the design elements include:

- Retaining Walls
- Sound Walls
- Underpass Treatments and Abutments
- Structure Treatments – Supports and Railings
- Highway Signage Support Structure

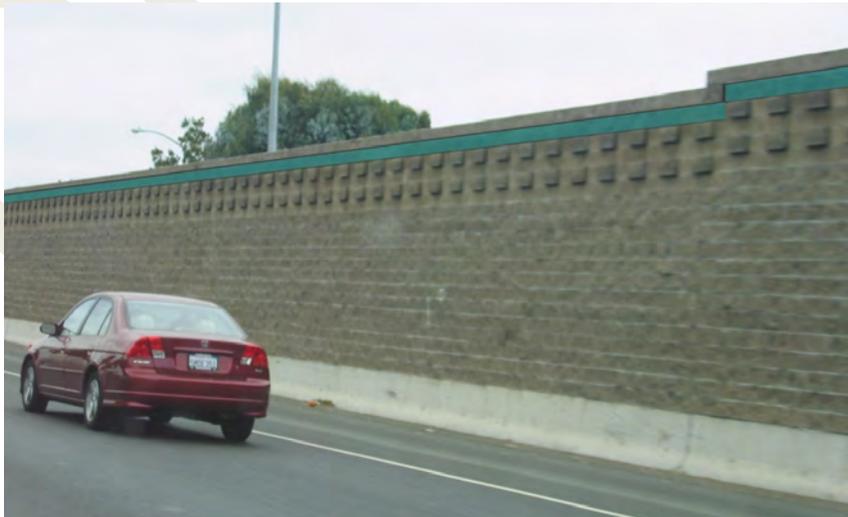
Retaining Walls

Retaining walls are used to minimize grade or elevation changes that occur along the roadway. There will be two options for retaining walls:

- Cast in place concrete with typical panel of a fractured fin texture with a recessed accent band at the top of the wall or minimal design that is reflective of a community element such as the wall in Benicia
- Custom stamped design in retaining wall such as the walls in Vacaville

Sound Walls

The sound walls are grey with split face block face and cap accented with two rows of blocks that protrude from the face of the wall every other block to make a dashed pattern at the top of the wall in the third and fifth row from the top. There is a smooth face block band below the cap block and each jurisdiction may paint the surface with their signature color to identify the area as being part of the City.



Sound Wall Treatment

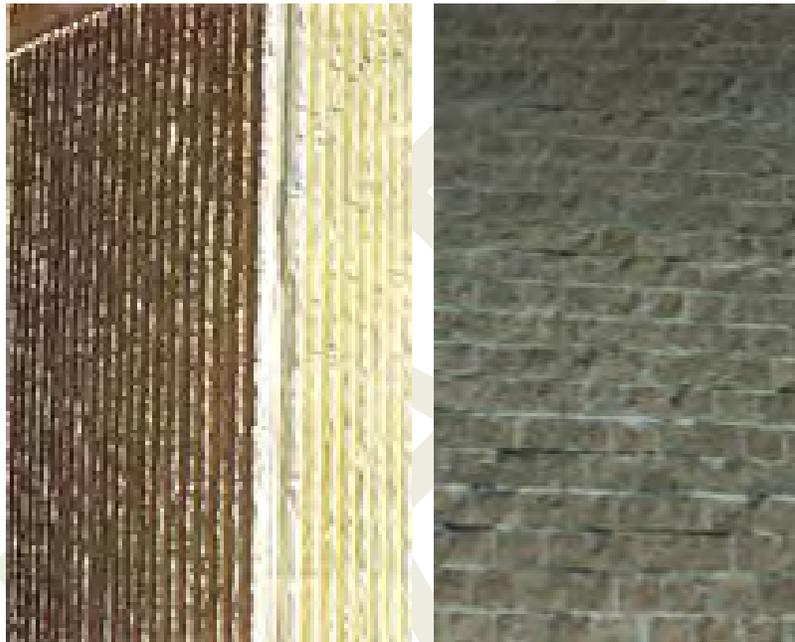
I-80/I-680/I-780 CORRIDORS HIGHWAY OPERATIONS IMPLEMENTATION STUDY

EXECUTIVE SUMMARY

Underpass Treatments

The split face texture will be surrounded by smooth concrete banding on all sides. Alternate treatment for the sloped paving may include artistic relief sculptures or designs for jurisdictional identity and enhancement. This would be done through special agreements with Caltrans.

The bridge abutment of the underpass when new will have the 'fractured fin' texture or the split face texture to match the retaining and sound walls. The fractured fin pattern is a standard Caltrans with a vertical pattern with $\frac{3}{4}$ " relief. The color will match the sound walls and will be surrounded by smooth bands of concrete on all sides.



Fractured Fin and Split Face Concrete Underpass Treatments

Structure Treatments – Supports and Railings

Consistent treatment of overpasses, underpasses and crossings reinforce the I-80/680/780 Corridor theme. Typical new structures should be the same and are natural colored concrete with split face or fractured fin accents consistent with the retaining and sound wall treatments, which further strengthens the relationship between individual elements and the overall themes. The fractured fin pattern is a standard vertical ribbed pattern with $\frac{3}{4}$ " relief. All structures shall have a smooth accent band running the length of the bridge parapet to allow for the application of identity colors. The pier column is to have rounded edges with an inset fractured fin accent band in the centre of the column on both sides.

I-80/I-680/I-780 CORRIDORS HIGHWAY OPERATIONS IMPLEMENTATION STUDY

EXECUTIVE SUMMARY



Bridge Structure Treatment

Highway Signage Support Structure

Highway signage support structures hold directional and informational signage pertinent to the driver. The recommended structure is the "arc type" and should be used for new and replacement structures as improvements occur so that within 15-20 years signage structures will be unified along the study corridor.



Freeway Signage Support Structure Treatment

PUBLIC OUTREACH STRATEGIES

Information/Education Tools

To provide a rich educational and informative reference on the various operational improvements that will be considered, an "operations improvement tool box" was developed. This toolbox provides a menu of operational improvements considered and/or recommended for the freeway corridors. In addition, fact sheets were developed for ITS management strategies that include a description of the improvement, a brief synopsis of the pros and cons, identification of the benefits, application of the improvement in other areas of California and the US with specific emphasis on areas similar to study area corridors.

I-80/I-680/I-780 CORRIDORS HIGHWAY OPERATIONS IMPLEMENTATION STUDY

EXECUTIVE SUMMARY

Toolbox

The toolbox is designed to be an interactive tool that works hand in hand with the fact sheets. The types of operational improvements that are part of the toolbox include:

OPERATIONAL IMPROVEMENTS

- HOV lanes
- Auxiliary lanes
- Truck climbing lane

INTELLIGENT TRANSPORTATION SYSTEMS (ITS)

- Ramp Meters
- Closed Circuit Television (CCTV) cameras
- Vehicle Detection Systems (VDS)
- Changeable Message Signs (CMS)
- Highway Advisory Radio (HAR)
- Communications Network

OPERATIONAL STRATEGIES

- Traffic Incident Management
- Emergency Management
- Active Traffic Management
- Diversion Management
- Lane Management
- Speed Harmonization – Variable Speed Limits
- Adaptive Ramp Metering
- Express Lanes (High Occupancy Toll or HOT Lanes)

The toolbox being an interactive tool will enable the STA to post it on the STA website and can also be provided to other agencies for posting on their websites and other public postings.

Fact Sheets

The purpose of the fact sheets is to provide brief summary material on the key ITS strategies. The intended audience includes the public and other non-technical readers who want more information on what these types of system management strategies are. The fact sheets provide valuable information on what the Solano Transportation Authority can use in its system management set of strategies to manage congestion.

