2023 Solano County Congestion Management Program

September 2023

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Introduction

The Congestion Management Program (CMP) is a mobility monitoring and planning tool for California counties that contain an urbanized area with a population of 200,000 or more. The 1991 CMP legislation allows the locally designated Congestion Management Agency (CMA) to prepare, monitor and update the CMP. As the CMA for Solano County, the Solano Transportation Authority (STA) is required to update the CMP biannually on odd-numbered years. CMP development is guided by the Metropolitan Transportation Commission (MTC) with the last guidelines established in January 2023.

The major goals of the CMP are:

- To maintain mobility on Solano County's streets and highways;
- To ensure that the Solano County transportation system operates effectively as part of the larger Bay Area and northern California transportation systems;
- To conform with and support implementation of MTC's adopted Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), officially called Plan Bay Area 2050;
- To align the CMP with the current Federal transportation bill, Moving Ahead for Progress in the 21st Century (MAP-21);
- To provide information and data to include in the STA's Solano County Comprehensive Transportation Plan; and
- To provide a basis for the STA to review and comment upon land use proposals that may impact roadways and intersections included in the CMP Network

Highlights of the 2023 Solano County CMP

Chapter 1 Defining the CMP Network

Solano County's CMP Network was established in 1991 with the development of the first CMP document. By law, it has not changed. The CMP Network is divided into segments for the purposes of measuring LOS.

Chapter 2 Roadway Level of Service (LOS) Monitoring

Level of Service (LOS) is monitored on 60 segments of roadway in Solano County: 48 segments on State owned Interstates and State Highways, and 12 on local arterial streets. LOS is also monitored at 5 intersections where CMP arterials meet. The LOS standard is E for all roadway segments and intersections, except for 25 segments that have a grandfathered standard of F. Grandfathered segments are those that

measured at LOS F when the first CMP was developed in 1991. Such segments are not required to be mitigated if it continues to operate at LOS F.

The monitoring results from 2023 show that all roadway segments and CMP intersections are in compliance with the established CMP standard. One local roadway segment, Peabody Road between the Fairfield city limit to the Vacaville city limit, utilized one of the exemptions of reducing the number of interregional trips in order to meet the established monitoring standard. This 2-lane roadway operated at LOS F with the inclusion of interregional trips and the CMP standard for this segment is LOS E. With the interregional trip reduction, the segment operates at LOS D.

Chapter 3 CMP Network Performance

To measure the effectiveness of Solano County's multimodal transportation system, STA sets performance measures by which the transit system and bike/ pedestrian system are measured. These measures include intercity transit ridership, bike and pedestrian counts, multimodal commute patterns, and travel time reliability.

Solano County's transit system includes a network of bus, rail, and ferry connections. Solano Express intercity bus routes connect Solano residents to locations within the county and to BART and Sacramento.

Bike and pedestrian network progress is measured by the number of miles completed in the network, and by conducting bike and pedestrian counts at various locations throughout the county when feasible. Currently, Solano County has approximately 250 miles of bike infrastructure, and estimated 2007 miles of pedestrian sidewalks.

Chapter 4 Transportation Demand Management (TDM)

Transportation Demand Management (TDM) is an integral part of mitigating congestion on Solano County's roadways because they are utilized to improve the efficiency of existing transportation systems, without significant capacity expansions. Most of the strategies focus on ways to reduce single occupancy vehicles, or to eliminate the need to drive all together. Strategies to reduce single occupancy vehicles include carpool, vanpool, bicycles, transit, and park and ride lots. Encouraging the link between land use and transportation can also help to encourage non-auto modes of transportation, or to encourage a better balance of available jobs and housing. TDM strategies are a cost-effective method of increasing efficiency on existing transportation infrastructure and easing congestion on roadways.

Chapter 5 Land Use Analysis

The CMP represents a unique opportunity for STA and its member agencies to collaborate on land use decisions that may affect the regional transportation system. The Land Use Analysis Program focuses in two main areas; first, it requests that member agencies submit development notices for projects that are expected to generate at least 100 P.M. peak hour trips or, second, is going through a general plan

amendment or update. STA will review these projects to examine potential impacts on the CMP Network, and may comment with proposed mitigation efforts. The second area of analysis is updating the countywide traffic model to be consistent with MTC's Regional Model, with consideration of general plan projections for land use, housing, and jobs. STA works with its member agencies whenever such updates occur to add this data. Doing so ensures that the model continues to produce accurate forecasts when projecting traffic in the forecast year that is consistent with MTC's RTP/Plan Bay Area 2050. The Land Use Analysis program will also be shaped by the upcoming switch from Level of Service (LOS) to Vehicle Miles Traveled (VMT) as the preferred method of analyzing transportation impacts under CEQA. While the legislation did not require the switch for the CMP, STA is engaging with the seven cities and the County of Solano on how to incorporate both LOS and VMT in future documents.

Chapter 6 Local Conformance and Deficiency Plans

The CMP legislation requires STA to give a conformance determination for all local jurisdictions within its boundaries. Conformance determinations are based on the local jurisdiction's ability to:

- Maintain the highway Level of Service (LOS) standards outlined in the CMP
- Participating in the adoption and implementation of a deficiency plan, if required
- Participating in the Land Use Analysis Program

Deficiency plans are required when an LOS segment falls below the accepted standard for two consecutive monitoring cycles. These plans will be prepared by the local agency responsible for the deficient segment in question, in coordination with STA, and will contain projects to help return the roadway segment to an acceptable LOS. In certain circumstances, if a jurisdiction does not complete a deficiency plan as required, it may face withholding of certain gas tax subvention funds, and/or not having projects programmed in the Regional Transportation Improvement Plan (RTIP).

STA works with all of its member agencies to ensure compliance. All incorporated cities in Solano County, along with the unincorporated county, are in conformance at this time.

Chapter 7 Travel Demand Model

STA maintains the Solano Activity Based Model, which serves as the countywide model for Solano County. The model is used to project congestion in the model's forecast year, and to measure the impact of proposed projects on the overall transportation system. In this way, the model is utilized in STA's Land Use Analysis Program, where the impact of major development projects may be measured. STA's travel model was originally developed as a joint effort with the Napa Valley Transportation Authority in 2008 as the Solano-Napa Travel Demand Model.

Since then, the model has been updated to an Activity Based Model, and in 2018, the model was split between Solano and Napa Counties to better predict differing traffic patterns in the two counties. The

CMP legislation requires that STA's countywide travel demand model be consistent with MTC's regional model and is currently undergoing a land use update which is expected to be completed in early 2024.

Chapter 8 Capital Improvement Program (CIP)

STA, as part of its biannual CMP update, is required to prepare a seven-year Capital Improvement Program (CIP) of projects that will help to mitigate congestion on Solano County's roadways. This CIP is also the basis by which Solano County projects are included in the Regional Transportation Improvement Program (RTIP), prepared by MTC. The RTIP is the basis by which the State Transportation Improvement Program (STIP) is formed, which allows projects to receive State transportation funding.

The CIP for this CMP is consistent with the projects included in Plan Bay Area 2050, the most recently adopted RTP, and the Regional Traffic Impact Fee (RTIF), an impact fee assessed on development in Solano County and used for transportation projects.

CHAPTER 1 DEFINING THE CMP SYSTEM

1.1 Purpose and Intent of Legislation

California law requires that each Congestion Management Agency (CMA) in the State have an adopted Congestion Management Program (CMP) Network on which levels of congestion are measured using established Level of Service (LOS) standards. The intent was to include regionally significant roadways, such as freeways and highways, to monitor congestion and create a Capital Improvement Program (CIP) of projects that would help to mitigate the congestion. As such, all State owned roadways within Solano County are required to be included. Several principal arterials and intersections with regional connections are also included.

Solano County's CMP Network was established in 1991 following the passage of the CMP legislation by the State of California. Once a roadway is included in the CMP Network, it is not allowed to be removed. As such, the network has not changed since it was established.

1.2 Purpose of a CMP

The CMP is a planning tool by which Congestion Management Agencies monitor and plan to mitigate congestion on the county's roadways. The CMP is specifically required to measure congestion levels on all State owned roadways, as well as several local arterials identified in the CMP Network and include a seven year CIP to address the findings. The ultimate goal of the CMP is to plan for and mitigate congestion either before it occurs, or before it worsens. Besides the LOS monitoring of congestion on roadways, CMPs also measure performance on the county's transit systems, bike and pedestrian network, and TDM programs. The CMP is also used to collaborate on land use decisions that may have an impact on the countywide transportation system, and is the basis for maintaining a countywide traffic model.

As the CMA for Solano County, STA updates its CMP every two years. The STA collaborates with other local, regional, and State agencies in doing so, as the resulting CMP CIP projects would not occur without this collaboration.

1.3 Role of Local and Regional Agencies in CMP Process

Although the CMP is prepared by STA, the roadways that are monitored for congestion are all owned by either the State or one of STA's member agencies (i.e. cities and the County of Solano). As such, it is vital to collaborate with these agencies in the development and implementation of the CMP. Under the CMP legislation, local agencies are required to make necessary improvements to their arterials and intersections designated in the CMP to keep them at an acceptable previously determined LOS standard.

Segments that fall below accepted standards may be required to have a deficiency plan prepared by the local agency, with proposed improvements to bring the LOS back to an acceptable standard.

The CMP also provides an opportunity for Solano County's local governments to collaborate on land use decisions and examine how they may impact the regional transportation system. As part of the CMP Land Use Analysis program, STA will review land use development proposals that are expected to generate more than 100 trips in the P.M. peak hour, as well as any general plan amendments or updates. In tandem to the CEQA analysis done by the local agency, STA will review the projects to see if it will have a measurable impact on the transportation system. If so, STA may suggest measures that could help to mitigate the impacts. Few other programs exist in Solano County that provide an opportunity for this collaboration to occur on land use decisions. Additionally, as Solano County's local agencies have made the switch to using Vehicle Miles Traveled (VMT) as the preferred metric of analyzing transportation impacts under CEQA, the CMP Land Use Analysis program will provide the opportunities to identify methods for reducing VMT on a project-by-project basis, with STA and the member agency working together.

Regional and State agencies also play a role in the development and implementation of the CMP. MTC, as the metropolitan planning organization (MPO) for the Bay Area, publishes guidance every odd numbered year on guidelines for developing a CMP. MTC also reviews all CMPs in the Bay Area to ensure consistency with its own adopted Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), Plan Bay Area 2050. As part of the CMP legislation, STA is required to maintain a countywide travel model and ensure consistency with the regional model maintained by MTC. Projects that are included in the CIP for this CMP is consistent with Solano's portion of the Regional Transportation Improvement Program (RTIP). The RTIP is used to develop the STIP, which is how State transportation dollars are disbursed to local agencies.

The California Department of Transportation (Caltrans), as the agency responsible for maintaining all State highways, plays an important role in the CMP. LOS monitoring is done by STA working closely with Caltrans. STA also collaborates with Caltrans to develop any proposed improvements on the State highway system. Many of these projects are included in the CIP of this CMP.

1.4 Relationship to Regional Plans

The CMP is a short-range planning document that is required to be consistent with long range transportation plans at the local and regional level. One such document is the Comprehensive Transportation Plan, or CTP. STA produces the Countywide CTP in coordination with the RTP/SCS, produced by MTC. The most recent CTP was adopted in June 2020, while the most recent RTP/SCS was

adopted in October 2021, known as Plan Bay Area 2050. Additionally, the CMP is required to be consistent with MTC bi-annual regional guidance on the CMP to the Bay Area CMAs which detail the CMP consistency guidelines. The last guidance was released in 2023, and as such this CMP will conform to those guidelines.

1.5 Solano CMP Network

The CMP system in Solano County consists of all State owned roadways, as well as several regionally significant local arterials and intersections that connect Solano's communities to the State owned highway system, or to each other. As required by the CMP legislation of 1990, all segments of the CMP Network are monitored for congestion using the LOS standard. Doing so assists CMAs in preparing a list of projects to mitigate the congestion, implement TDM strategies, and monitor local land use decisions and their impact on the designated CMP Network. In the future, the CMP Network may be monitored using the Vehicle Miles Traveled (VMT) metric, as well as the LOS metric, as California moves towards using VMT to analyze transportation impacts under CEQA.

Figures 1-3 illustrate all of the designated CMP roadways facilities included in the CMP Network within Solano County. The following State owned roadways are included as part of the network:

1. Interstate 80: From Carquinez Bridge to Yolo County Line
2. Interstate 505: From I-80 to Yolo County Line
3. Interstate 680: From I-80 to Benicia-Martinez Bridge
4. Interstate 780: From I-80 to I-680
5. State Route 12: From Napa County Line to Rio Vista Bridge
6. State Route 29: From Napa County Line to I-80
7. State Route 37: From I-80 to Sonoma County Line
8. State Route 84: From SR-12 to Yolo County Line
9. State Route 113: From I-80 to SR-12
10. State Route 128: From Yolo County Line to Napa County Line
11. State Route 220: From SR-84 to J-Mack Ferry

Additionally, the following local arterials and intersections are also included in the CMP Network:

1. Military East in Benicia
2. Military West in Benicia
3. Peabody Road (Fairfield City Limit to California Drive in Vacaville)
4. Walters Road (Air Base Pkwy in Fairfield to SR-12 in Suisun City)

5. Air Base Parkway in Fairfield (Walters Rd to Peabody Rd)
6. Elmira Road in Vacaville (Leisure Town Rd to A St in unincorporated Elmira)
7. Vaca Valley Parkway in Vacaville (I-80 to I-505)
8. Tennessee Street in Vallejo (Mare Island Wy to I-80)
9. Curtola Parkway in Vallejo (Lemon St to Maine St)
10. Mare Island Way in Vallejo (Maine St to Tennessee St)
11. Vanden Road (Peabody Rd in Fairfield to Leisure Town Rd in Vacaville)
12. Intersection of Peabody Rd and Cement Hill Rd/Vanden Rd in Fairfield
13. Intersection of Walters Rd and Air Base Pkwy in Fairfield
14. Intersection of Tennessee St and Sonoma Blvd in Vallejo
15. Intersection of Curtola Pkwy and Sonoma Blvd in Vallejo
16. Intersection of Mare Island Way and Tennessee St in Vallejo

Figure 1 Solano County CMP Network

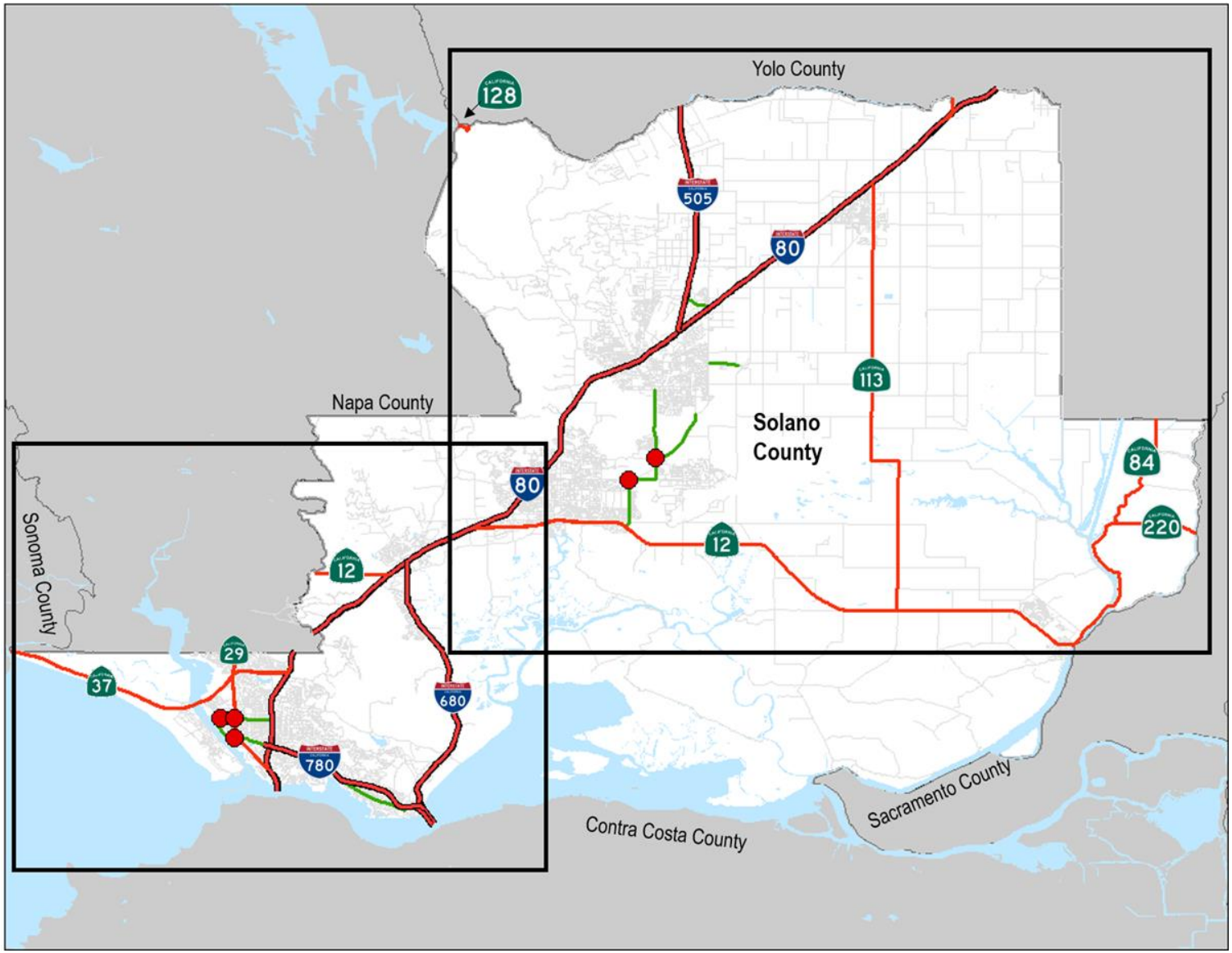


Figure 2 Solano County CMP Network – North County

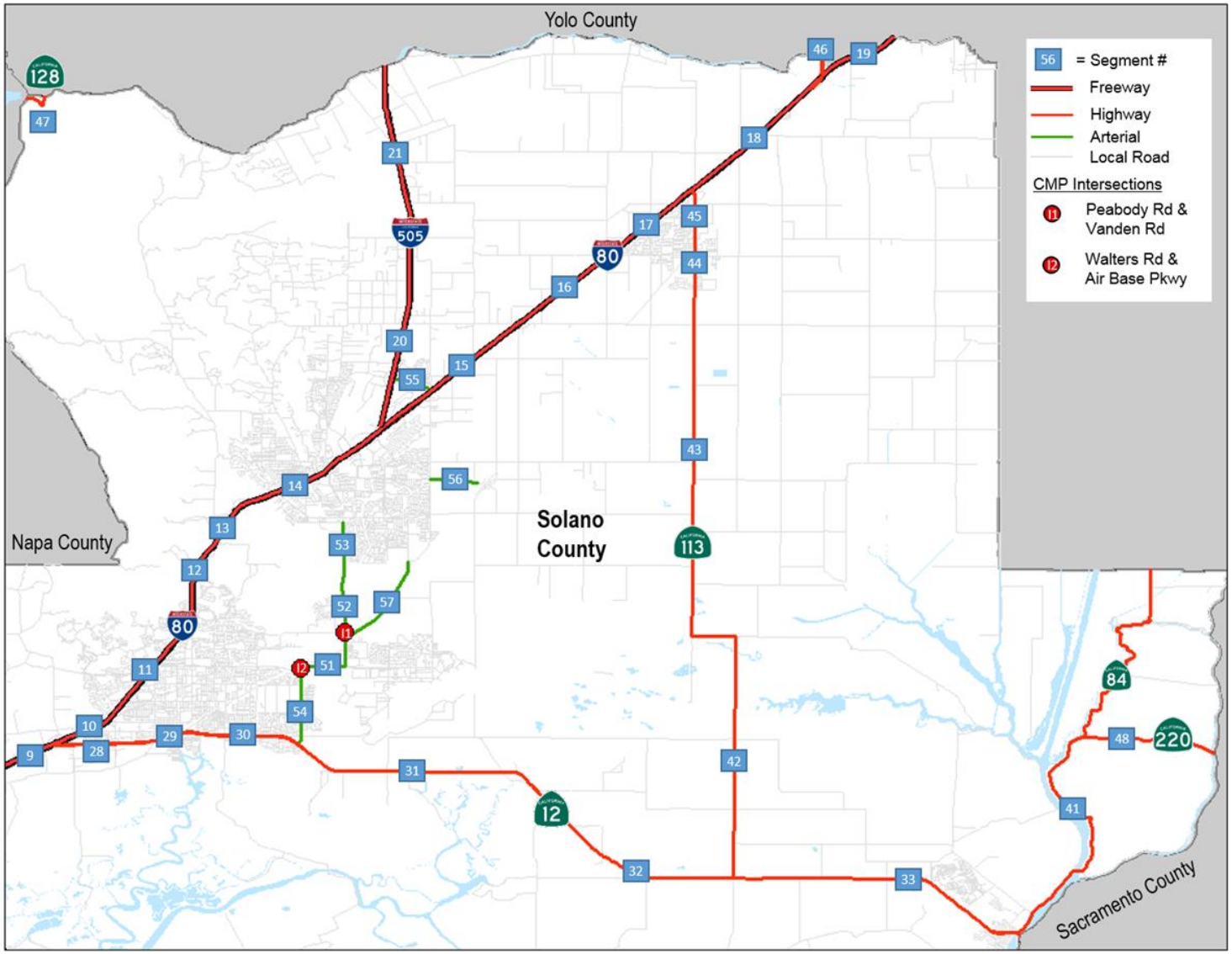


Figure 3 Solano County CMP Network – South County

CHAPTER 2 ROADWAY LEVEL OF SERVICE MONITORING

2.1 Purpose and Intent of Legislation

The CMP Legislation of 1990 requires that each segment in the designated CMP Network be monitored using the Level of Service (LOS) standard. According to the legislation, LOS must be measured either using the Circular 212 method, by using the Transportation Research Board's Highway Capacity Manual (HCM), or an accepted alternative. All State owned roadways and principal arterials must be designated as part of the CMP Network. Once a roadway is designated as part of the network, it may not be removed. LOS monitoring occurs biannually on odd numbered years, in tandem with the update of the CMP. A segment's LOS standard must not fall below LOS E, unless it was measured at LOS F when the first CMP measurement occurred in 1991. These segments are considered "grandfathered" and do not need to meet the LOS E requirement.

2.2 LOS Explained

Level of Service (LOS) is a mechanism by which transportation planners and engineers measure the amount of congestion on a roadway, based on factors such as speed, travel time, maneuverability, delay, and safety. It provides a quantitative tool that can be used to analyze the impacts of land use changes on the CMP Network, and to be used as a measure of network performance (e.g. congestion). LOS is designated based on a letter grade, ranging from A to F (A represents the best conditions, while F represents the worst). While there are several ways to calculate LOS, it is often done through a volume to capacity ratio (V/C) calculation. This is the most common way to calculate LOS on freeways, multi-lane highways, and two-lane highways as it accurately shows the amount of capacity on the roadway that is being used, which typically corresponds to levels of congestion. The V/C ratios and typical freeway speeds associated with each level of LOS are shown in Table 1.

LOS is also calculated for an intersection using the Circular 212 method. This is done by dividing the sum of critical volumes by the intersection's capacity, creating a volume-to-capacity ratio as with LOS calculations on freeways, highways, and arterials. Critical movements are defined as the combinations of through movements, plus right-turn movements if there is no exclusive right-turn lane, and opposing left-turn movements that represent the highest per-lane volumes.

Table 1 Level of Service (LOS) Standards

LOS Level	Description	V/C Ratio	Typical Freeway Speed
A	Free-flow conditions with unimpeded maneuverability.	0.00 to 0.60	60 mph
B	Reasonably unimpeded operations with slightly restricted maneuverability.	0.61 to 0.70	57 mph
C	Stable operations with somewhat more restrictions. Motorists will experience appreciable tension while driving.	0.71 to 0.80	54 mph
D	Approaching unstable operations where small increases in volume produce substantial increases in delay and decreases in speed.	0.81 to 0.90	46 mph
E	Unstable flow at or near capacity levels with poor levels of comfort and convenience.	0.91 to 1.00	30 mph
F	Forced traffic flow in which the amount of traffic approaching a point exceeds the amount that can be served. Characterized by stop-and-go waves and poor travel times.	Greater than 1.00	< 30 mph

Sources: San Mateo CCAG Traffic Level of Service Calculation Methods, Highway Capacity Manual, & Virginia DOT

2.3 LOS Standards

Every odd numbered year, STA is required to determine whether local governments have been conforming to the CMP by maintaining LOS on their roadways above the accepted standard. STA has established the minimum LOS standard across the network as LOS E, with one exception: grandfathered segments. Grandfathered segments are all segments that measured at an LOS F when the first CMP was completed in 1991. No action is required on these facilities if it remains at an LOS F in the 2019 monitoring results. These segments are excluded from local government requirements to maintain the adopted LOS standard as part of any new development approval process. Currently, 24 CMP Network segments in Solano County are considered grandfathered, as well as one intersection.

STA performs all monitoring of LOS conditions on the CMP Network, in cooperation with its member agencies. Member agencies may be asked to submit traffic counts for arterial segments in the CMP Network, if the agency has performed the counts within the previous two years before the CMP update occurs. For this CMP update, traffic counts were conducted on all segments and intersections, supplemented by count data from Caltrans, as well as outputs from the Solano-Napa Activity Based Model (SNABM), and GPS based big data sources like INRIX.

Different types of locations require different techniques for LOS measurement as follows:

- LOS should be assessed at intersections where CMP Network principal arterials meet. Such intersections should be measured using the Circular 212 method.
- For mainline freeways, highways, and arterials, the standards by the Highway Capacity Manual (HCM) shall be used. For mainline freeways and highways, the segments correspond to those shown in the Caltrans Route Segment Report (RSR). If no other source data is readily available from Caltrans, the most recent RSR may be used as the source of traffic data to determine LOS along any segment in the State system.
    - For arterials in the network that do not intersect other network segments for considerable distances, STA, in collaboration with its member agencies, will determine where segment level LOS must be determined. The arterials that fall under this category are listed in Table 2.

Table 2 Segment Level of Service Determinations using the Highway Capacity Manual Method

Arterial	Segment Measurement Limits
Military West in Benicia	Between West 3rd and West 5th
Walters Road in Suisun City	Between Petersen and Bella Vista
Walters Road in Solano County	Between Fairfield and Suisun City
Peabody Road in Solano County	Between Fairfield and Vacaville
Peabody Road in Vacaville	South of California Drive
Elmira Road in Vacaville	East of Leisure Town Road

Each jurisdiction is responsible for segments or intersections within its jurisdiction. If a segment falls within more than one jurisdiction, then the jurisdiction with the greatest number of mileage is determined to be the responsible agency, with the other agencies working in cooperation with the responsible agency. Should the LOS of a segment or intersection fall below the accepted standard for two monitoring cycles, the segment may be considered deficient and the jurisdiction may be required to submit a deficiency plan, if the segment is still deficient after allowed exemptions are removed. These exemptions include:

- Interregional travel (trips not beginning or ending in Solano County)
- Trips generated from low and very low income housing

If a segment still falls below the accepted LOS standard after these exceptions have been removed, then the segment may require a deficiency plan with planned improvements to remedy the congestion and bring it back to an acceptable LOS. See Chapter 6 for more information on Deficiency Plans.

2.4 LOS Monitoring Results 2023

LOS measurements are conducted on a biannual basis. For this 2023 CMP update, the monitoring was conducted by TJKM on behalf of STA. In order to provide a foundation for current and future CMPs, TJKM in its 2023 data collection effort, conducted new traffic counts on all CMP Network segments. Roadway segment counts were counted during the week of August 22nd, 2023 in the AM peak period (7 a.m. – 9 a.m.) and PM peak period (5 p.m. – 7 p.m.). Intersection counts were counted in the 4 p.m. – 6 p.m. peak period during the week of May 22nd, 2023. Table 3 below details the LOS standards for each required segment, compared with historical results.

The 2023 monitoring of Solano County's CMP Network shows that one local roadway segments, Peabody Road between the Fairfield city limit and the Vacaville city limit, does not meet the CMP monitoring requirement. This segment operates at LOS F and has a CMP standard of LOS E. The monitoring result of this segment in 2019 as well as in 2010 was LOS E. The LOS for local roadway segments are measured as volume over capacity. The capacity of this segment is defined as 1,100 vehicles per hour. The measured volume of this segment in 2023 was 1128 vehicles during the PM peak hour resulting in a v/c ratio of 1.03, which means that the volume is greater than the capacity. The volume on vehicles on this segment in 2019 was 1050 vehicles.

Based on California Government Code Section 65088.4(f), exclusions can make for cases of interregional travel and trips generated by low income housing developments. This segment of Peabody Road was re-evaluated for interregional travel using the Solano Napa Activity Based Model, which demonstrates an approximate average of 20 percent interregional trips on this segment. Based on this re-evaluation, this segment now operates at LOS D.

All roadway and freeway segments as well as CMP intersections meet the CMP monitoring standards.

Table 3 State Highway LOS 2023 Results with Historical Comparisons

ID	Roadway	From (Postmile)	To (Postmile)	Standard	2001	2003	2005	2007	2010	2015	2019	2023
1	I-80	0	0.933	F	D	D	E	F	D	D	A	A
2	I-80	0.933	1.114	F	F	E		E	D	D	C	B
3	I-80	1.114	4.432	F	F	D*	D*	D	E	C	C	C
4	I-80	4.432	6.814	F	F	D*	D*	D	E	B	C	C
5	I-80	8.004	10.015	E	D	D	D	C	B	B	B	A
6	I-80	10.015	11.976	E	C	D*	C	C	B	A	C	C
7	I-80	11.976	12.408	E	D	D*	E	E	D	B	B	A
8	I-80	12.408	13.76	F	F	D*	F	F	C	A	B	B
9	I-80	13.76	15.57	F	F	D*	F	E	D	B	A	C
10	I-80	15.57	17.217	F	F	E*	E	E	E	A	C	B
11	I-80	17.217	21.043	F	F	E*	F	E	E	B	D_2	B
12	I-80	21.043	23.034	F	D	D*	E	D	C	B	D	D
13	I-80	23.034	24.08	E	E	E	D	D	D	B	D	D
14	I-80	24.08	28.359	F	D	D	D	C	D	A	A	A
15	I-80	28.359	32.691	F	D	D	C	C	D	A	C	B
16	I-80	32.691	35.547	F	E	E	D	C	C	A	B	C
17	I-80	35.547	38.21	F	D	D	E	D	C	A	B	B
18	I-80	38.21	42.53	E	C	C*	C*	D	C	A	A	A
19	I-80	42.53	44.72	E	D	C	D	D	D	A	D_1	A
20	I-80	0	0.933	F	D	D	E	F	D	D	A	A
21	I-505	3.075	10.626	E	A	A	B	A	A	A	A	A
22	I-680	0	0.679	F	F	F	F	F	D	A	A	B
23	I-680	0.679	2.819	E	C	B*	B*	***	D	A	C	C
24	I-680	2.819	8.315	E	C	C	D	D	D	A	D	C
25	I-680	8.315	13.126	E	C	***	D	***	C	A	C	C
26	I-780	0.682	7.186	E	C	C*	C*	***	E	A	A	A
27	SR-12	0	2.794	F	C	F	F	F	F	B	E	F
28	SR-12	1.801	3.213	E	B	B*	B	B	C	B	B	B
29	SR-12	3.213	5.15	F	B	B**	B	C	E	A	A	A
30	SR-12	5.15	7.7	F	B	B**	B**	A	D	A	A	A
31	SR-12	7.7	13.625	E	B	B	B	B	B	A	A	A
32	SR-12	13.625	20.68	F	B	B	B	B	B	A	A	A
33	SR-12	20.68	26.41	E	E	E**	E**	E**	E**	D	D	D
34	SR-29	0	2.066	E	A	A*	A*	A	E	A	A	A

ID	Roadway	From (Postmile)	To (Postmile)	Standard	2001	2003	2005	2007	2010	2015	2019	2023
35	SR-29	2.066	4.725	E	B	B*	B*	B	E	D	A_1	A
36	SR-29	4.725	5.955	E	C	C*	C*	C	F	D	A	A
37	SR-37	0	6.067	F	C	C*	C*	A	F	A	C	D
38	SR-37	6.067	8.312	E	B	B*	B*	A	C	A	A	A
39	SR-37	8.312	10.96	F	F	F*	F*	A	C	B	B	A
40	SR-37	10.96	12.01	F	F	F*	F*	A	C	A	C	D
41	SR-84	0.134	13.772	E	C	C	C	C	C	A	A	A
42	SR-113	0	8.04	E	B	B	B	A	A	A	A	A
43	SR-113	8.04	18.56	E	B	B	B	A	A	A	A	A
44	SR-113	18.56	19.637	F	F	F	***	C	A	A	A	A
45	SR-113	19.637	21.24	F	F	F	***	D	C	A	A	A
46	SR-113	21.24	22.45	E	C	C	C	B	B	A	B	A
47	SR-128	0	0.754	E	C	C	C	C	C	A	A	A
48	SR-220	0	3.2	E	C	C	C	C	C	A	A	A

Note: Segment IDs correspond to the designated CMP roadways facilities included in the CMP Network within Solano County.

1 On Segments 19 and 35, some congestion was observed in the video footage from traffic counts that may have lowered the traffic volumes observed at this location, resulting in a higher LOS. For Segment 19, demand was added to the LOS calculation and the letter grade was changed to D to more accurately reflect traffic conditions.

2 At Segment 11, Caltrans PeMs 2018 data was used.

* LOS reported from STA's I-80/I-680/I-780 Corridor Study

** SR-12 MIS 2001

Table 4 Local Roadway LOS 2023 Results with Historical Comparisons

ID	Roadway	From	To	Standard	2001	2003	2005	2007	2010	2019	2023
49	Military East	E. 2nd St	Adams St	E	***	***	C	***	C	A	A
50	Military West	I-780	E. 2nd St	E	B	***	A	***	B	A	A
51	Air Base Parkway	Walters Rd	Peabody Rd	E	***	***	***	C	B	A_5	A
52	Peabody Road	Fairfield City Limit	Vacaville City Limit	E	D	E	D	D	E	E	D*
53	Peabody Road	Vacaville City Limit	California Dr	E	A	A	D	C	A	A	A
54	Walters Road	Petersen Rd	Bella Vista Rd	E	B	***	***	***	A	A	A
55	Vaca Valley Pkwy	I-80	I-505	E	C	C	C	D	A	A	A
56	Elmira Road	Leisure Town Rd	Vacaville City Limit	E	B	B	C	C	B	A	A
57	Vanden Rd	Peabody Rd	Leisure Town Rd	D	B	B	B	C	B	A_3	A
58	Tennessee St	Mare Island Wy	I-80	E	***	***	***	C	D	A	A
59	Curtola Pkwy	Lemon St	Maine St	E	***	***	***	B	E	A	A
60	Mare Island Way	Maine St	Tennessee St	F	***	***	***	B	B	A	A

Note: Segment IDs correspond to the designated CMP roadways facilities included in the CMP Network within Solano County.

3 City of Fairfield noted that there is construction on part of Segment 57 and may cause some diversion of traffic.

5 While the observed conditions are LOS A on Air Base Pkwy for the study period, the City of Fairfield notes that this segment is often closer to LOS C.

*This result is based on interregional trip reductions. Prior to this reduction, LOS is F.

*** Data not available

Table 5 Intersection LOS 2023 Results with Historical Comparison

ID	Intersection	Jurisdiction	Standard	2001	2003	2005	2007	2010	2019	2023
I1	Peabody Road at Cement Hill/Vanden Rd	Fairfield	E	***	E	***	B	B	C	C
I2	Walters Road at Air Base Parkway	Fairfield	E	B	B	***	A	E_1	D	E
I3	Tennessee Street at Sonoma Blvd	Vallejo	E	D	C	B	B	B	D	C
I4	Curtola Parkway at	Vallejo	E	C	C	C	C	C	D	D
I5	Mare Island Way at Tennessee Street	Vallejo	F	D	D	B	B	B	C	D

1 LOS Reported by City of Fairfield

*** Data not available

Figure 4 Segment LOS 2023 – North County

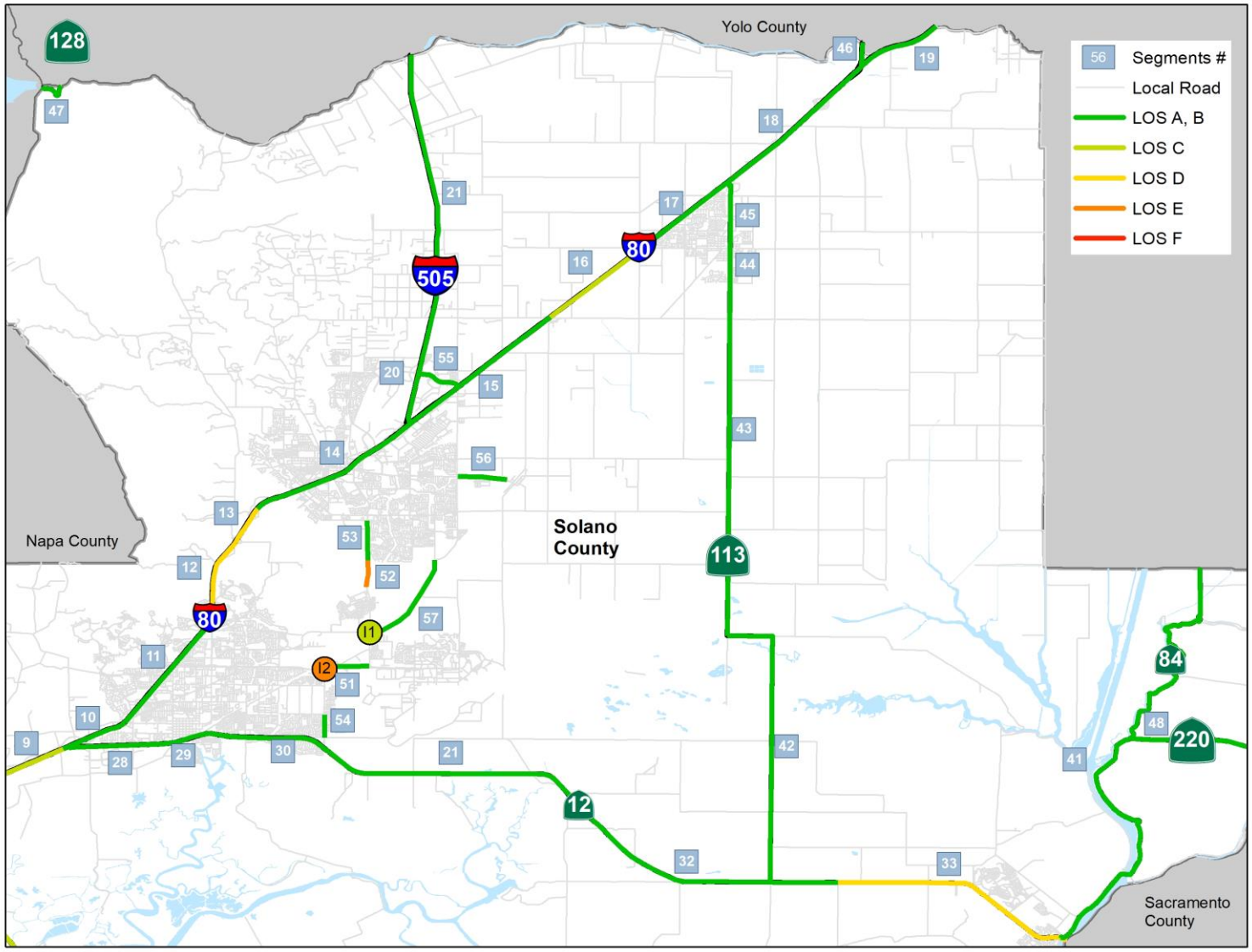


Figure 5 Segment LOS 2023 – South County

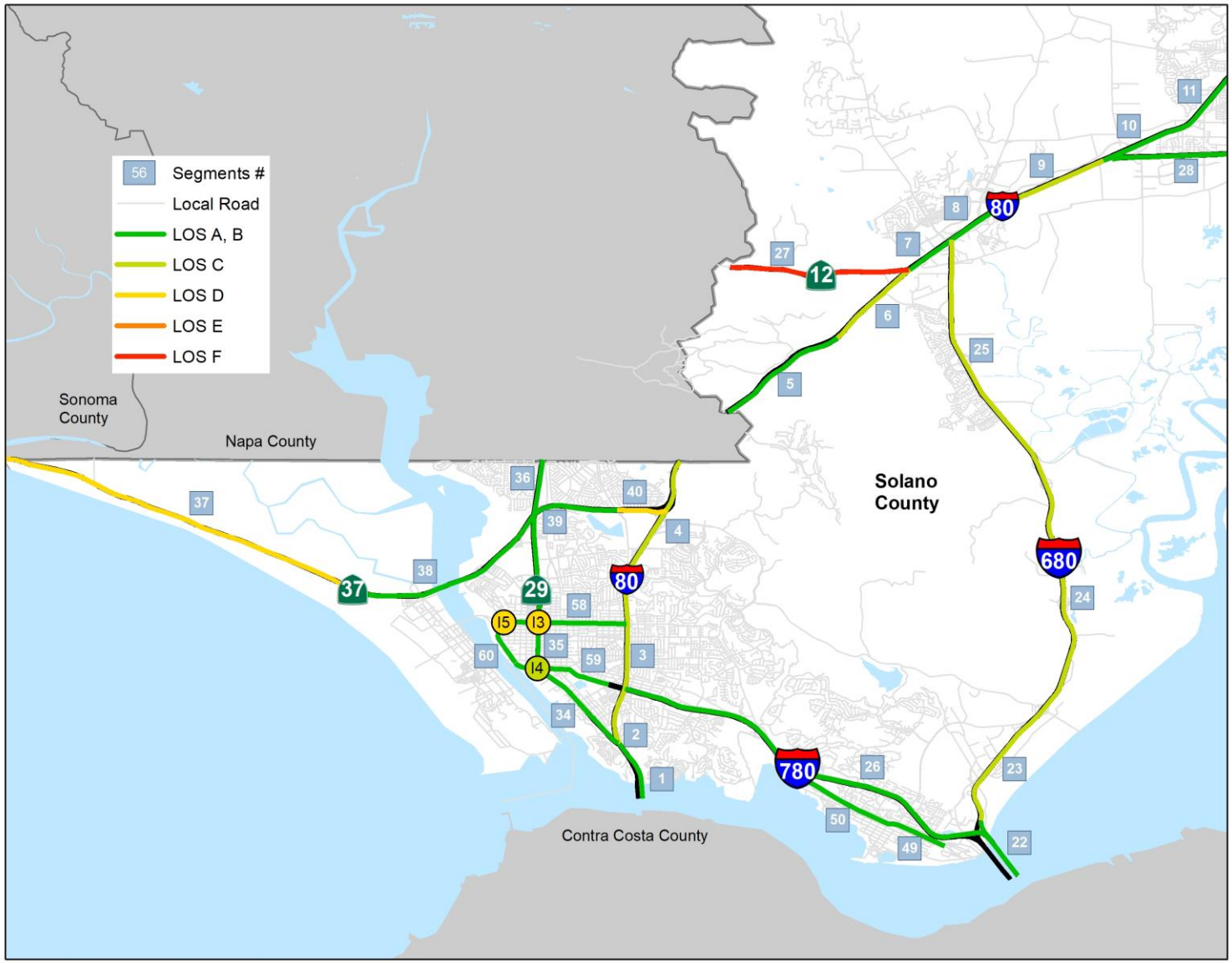


Figure 6 LOS Results Compared with Established Standard – North County

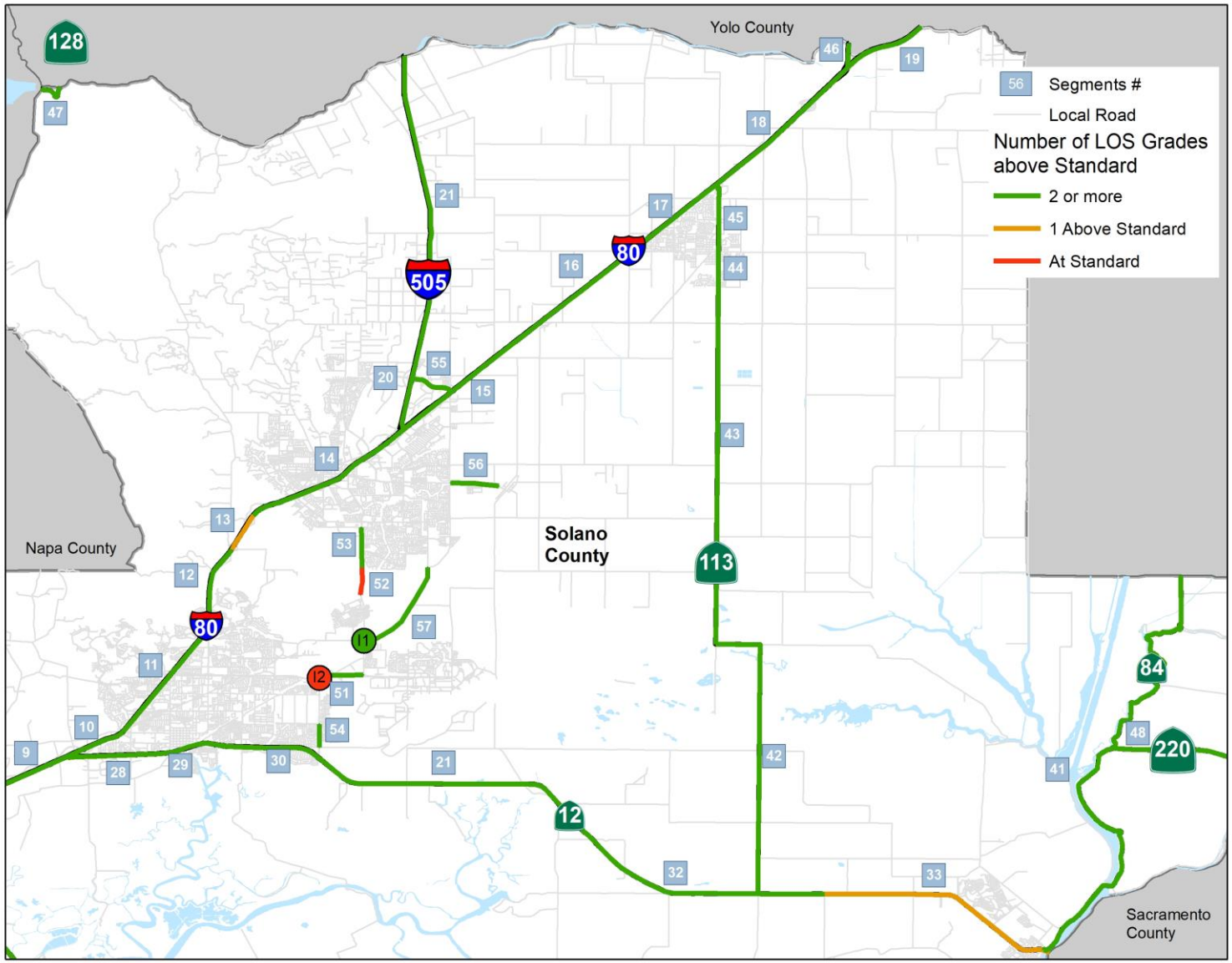
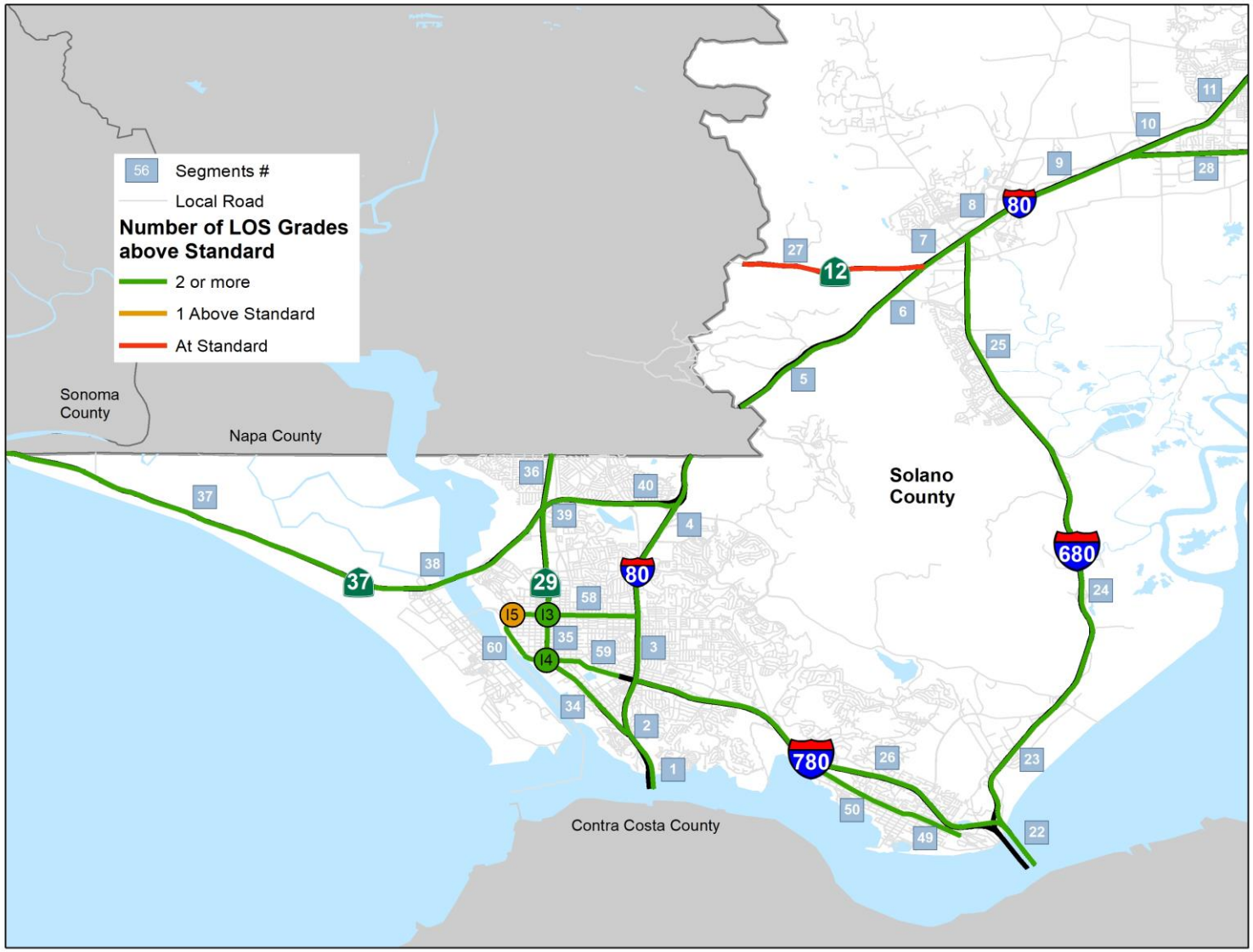


Figure 7 LOS Results Compared with Established Standard – South County



2.5 Future of LOS: Switch to VMT

A new aspect to this and future CMPs is the transition from LOS to Vehicle Miles Traveled (VMT) to analyze transportation impacts under the California Environmental Quality Act (CEQA). Senate Bill 743 (SB 743), passed in 2013, required changes in the guidelines to implementing CEQA. Rather than using the traditional LOS metric, VMT was adopted as the primary metric by which all transportation impacts would be measured under CEQA. Under this law, LOS and other similar metrics are no longer considered a significant environmental impact under CEQA. Regardless, LOS still provides a valuable metric for analyzing congestion.

SB 743 represents a significant shift in how all projects that require a CEQA analysis will be analyzed. Previously, under the LOS metric, the goal of CEQA analysis was to ensure that the project would not have an adverse effect on the LOS of nearby CMP Network segments or intersections; in other words, the analysis was done to ensure the project would not significantly increase congestion on nearby roadways. Projects to mitigate LOS increases may consist of roadway widening, but could also include bike or pedestrian projects, or TDM measures. Under a VMT analysis, a project will be analyzed based on how many total vehicle miles traveled the project will generate. Mitigation measures will include projects that will reduce the amount of VMT generated by a project; in other words, the goal will be to reduce the overall number of vehicle trips rather than simply reducing congestion. Mitigation projects under this are more likely to be TDM measures or bike and pedestrian projects, as they are projects that can have a direct impact on reducing VMT by giving people options besides the automobile.

Previous legislative efforts, such as AB 32, SB 375, and SB 32 have set greenhouse gas emission reduction standards for California to meet. For example, AB 32 (2006) required California to reduce its GHG emissions to 1990 levels by 2020, and SB 32 (2016) further requires a 40% reduction in GHG emissions from 1990 levels by 2030. SB 375 set further goals by directing regional MPOs to develop a sustainable community strategy that will outline strategies for helping California meeting its climate goals. SB 743 represents a next step in curbing GHG emissions in California. Transportation accounts for 40% of all GHG emissions, with cars and light trucks accounting for three quarters of those emissions (30% overall). As such, reducing single occupancy vehicle (SOV) trips is imperative to curb GHG emissions in California. Switching to using VMT as the primary analysis metric under CEQA will lead to mitigation efforts that have a more lasting impact on reducing SOV trips across the State.

Since July 1, 2020, local agencies are required to use VMT as the primary metric for analyzing transportation impacts under CEQA. SB 743 did not amend the CMP legislation to require CMPs to adopt the VMT metric instead of LOS, however, MTC has discussed ideas to address this change. It is probable that by the next biannual CMP update in 2025, VMT will be used as a metric for monitoring the CMP Network. While it is not being used as a metric for this CMP update, STA wishes to include a discussion of VMT in order to prepare for future CMP updates.

SB 743 made one change to the CMP legislation, by amending it to reinstate the designation of "infill opportunity zones" where the CMP LOS would not apply. According to Section 65088.1(g) of the California Government Code, these areas may be established by a city of county for a compact residential or mixed-use development within one third of a mile of a rail station, a ferry terminal, an intersection of at least two major bus routes with maximum headways of 15 minutes or less for at least 5 hours per day. Previous infill opportunity zones expired in 2009, and no member agency in Solano County had taken advantage of the designation.

Vehicle Hours Delay

Another shift in this CMP is examining how the LOS is measured. In previous CMPs and in the current one, traffic count data has typically come from Caltrans or their PeMS (Performance Measurement System) database, which maintains traffic counts for all State owned roadways. LOS calculated from this data is typically done using a volume to capacity (V/C) ratio. Recently, with the increase in the amount and reliability of big data from companies such as INRIX, the subject of data sources for LOS monitoring is worth reexamining. INRIX data, when calculated to LOS, is calculated using a formula that requires travel times and speed on each roadway segment. The result is an LOS that reflects the delay that a vehicle experiences on said segment, rather than showing which segments are at capacity or over capacity. Several other CMAs measure congestion on their CMP Network using this method, and it may be advantageous for STA to consider in future CMP monitoring cycles. While the typical data source for traffic counts has been Caltrans, it is worth considering other sources as big data continues to grow in the amount available and its accuracy. Doing so would result in greater accuracies on showing speeds and delay on CMP segments.

CHAPTER 3 CMP NETWORK PERFORMANCE

3.1 Network Performance Purpose and Intent of Legislation

The CMP Legislation of 1990 requires all CMAs to establish performance measures to evaluate the current and future multimodal network performance, in addition to the LOS metric presented for roadways. Solano County has a robust multimodal transportation network that features many public transportation options, a connected network of bicycle and pedestrian paths, and TDM measures to encourage commuters to use alternative forms of transportation, such as carpool and vanpool. Each of these are described in detail in this chapter. The measures should not be confused with "standards," as no level of performance is required by the legislation. Rather, the intent is to determine whether the goals of the CMP are being met (see Executive Summary for a full list of CMP goals). These measures could also be used in developing the CMP CIP projects, or be used in the land-use analysis program.

3.2 Performance Measures

There are many ways to assess the effectiveness of a transportation network besides the level of congestion on roadways using LOS. Only using LOS would ignore the fact that the transportation network is multimodal, and that LOS does not work for measuring the effectiveness of a transit line or a bike path. As such, STA must use other performance measures to measure the effectiveness of Solano County's transit system and bike/pedestrian system. These performance measures are designed to support mobility, air quality, land use, economic objectives, and are used in the development of the Capital Improvement Plan. Unlike LOS, however, these performance measures do not have a standard that must be met; rather they provide a measuring stick to measure the effectiveness of each component. These standards are:

- Ridership for Commuter Bus Service
    - SE Benchmarks adopted by the STA Board for FY 2023-24:
    - Service Design Benchmark
        - Speed- 35 MPH
    - Service Productivity Benchmark
        - Passenger per Vehicle Revenue Hour- 25.0
        - Passengers per Trip- 15.0
        - Capacity Utilization- 35.00%
    - Cost Efficiency Benchmark
        - Cost per Vehicle Revenue Hour- $210.00
        - Cost per Vehicle Revenue Mile- $3.87
    - Cost Effectiveness Benchmark
        - Subsidy per Passenger Trip- $3.71

    - Farebox Recovery Ratio- 20%
- Bicycle and Pedestrian Movement
    - Bicycle and Pedestrian Plan Implementation in the CIP; number of miles of infrastructure built, and gap closures to improve safety and encourage use
- Multimodal Split (See Chapter 4)
    - Percent of trips per mode taken based on American Community Survey data
- Travel Time Reliability
    - Measuring the reliability of travel times on freeways and highways
- I-80 High Occupancy Vehicle (HOV) Lane Travel Times
    - Measuring the travel times in the HOV/Express Lanes and compare to general lanes

3.3 Current Transit Operations in Solano County

The transit system consists of:

- Solano Express, Solano County's main regional bus service, is operated by SolTrans through a contract provided by the STA Board. Solano Express routes serve BART in El Cerrito Del Norte, Walnut Creek, and the San Francisco Ferry Building. Two local operators, Dixon Readi-Ride and the Rio Vista Delta Breeze also provide limited regional service. Dixon Readi-Ride provides medical trips to facilities in Davis, CA and the Rio Vista Delta Breeze provides a commuter run to Pittsburg, Bay Point, Antioch.
- Passenger rail service provided by the Capitol Corridor, connecting Solano County to Sacramento and the Bay Area. The Capitol Corridor has two stops in Solano County: Solano Rail Hub (Suisun-Fairfield Train Station) and Hannigan Train Station (Fairfield-Vacaville Hannigan Train Station).
- Passenger ferry service operated by the San Francisco Bay Ferry, connecting Vallejo to downtown San Francisco. Caltrans also operates two small car ferries to provide access to Ryer Island near Rio Vista.
- Local bus service provided by Dixon Readi-Ride, primarily serves Dixon and provides limited medical trips to Davis and Vacaville, FAST serves Fairfield, Rio Vista Delta Breeze serves Rio Vista, Suisun, and Fairfield, Suisun Microtransit primarily serves the City of Suisun City, but provides transportation to 9 locations within Fairfield and Vacaville City Coach serves Vacaville.
- The Intercity Taxi Card Program can be used by ADA certified individuals to pay for taxi fare. Additionally, any Solano County Veteran can use the program to get to Solano County Medical Facilities, Travis Air Force Base, the Martinez VA clinic, the Hume Center and Med Evals/QTR Assessment Center in Concord.
- The subsidized Lyft Program provides subsidized Lyft rides to help commuters who use alternate modes of transportation to travel to work and have problems connecting with Solano County transit hubs for the first/last mile of their trip.
- Older Adults Medical Trip Concierge Service provides subsidized Uber and Lyft rides through GoGo Grandparent for Solano County residents to get to and from medical appointments and essential trips within Solano County.

Blue Ribbon Task Force

The MTC Blue Ribbon Transit Recovery Task Force (BRTRTF) was created in mid-2020 to address how transit would look in the Bay Area post-pandemic. The Task Force ultimately provided 27 recommendations on how to improve, integrate, and coordinate transit in the Bay Area. As part of these recommendations, $5M was available region-wide, to facilitate early implementation strategies. In July

2021 the task force had 27 recommendations which then have been narrowed to six functional areas noted below.

Table 6 Blue Ribbon Task Force Summary of Six Functional Areas

Preliminary Regional Transit Focus Areas (or Functional Areas)	
Fare integration Policy	• Set the regional vision • Establish regional policies • Establish policy implementation plans, including the identification of funding
Wayfinding & Mapping	• Set the regional vision • Establish regional policies (e.g., design standards, compliance requirements) • Establish policy implementation plans, including the identification of funding, Deliver centralized procurement, where relevant
Accessibility	• Embed accessibility within each of the other functional area plans • Define a regional vision for paratransit operations • Identify improvements needs: implementation of paratransit policies and requirements • Establish a regional implementation plan
Bus Transit Priority	• Set the regional vision • Define BTP corridors and identify needs/initiatives • Serve as the central coordination point for state, county, and city stakeholders • Establish policy implementation plans, including the identification of funding
Rail Network Management	• Set the vision for the regional rail network • Translate regional vision into regional implementation plan (project prioritization, sequencing, integration points, project funding, delivery approach, etc.)
Connected Network Planning	• Identify critical regional transit gaps to create CNP • Establish and create data tools for regional planning • Identify funding priorities and establish service standards • Draft changes to Countywide Transportation Plan guidelines, as needed

Solano Connected Mobility Implementation Plan

STA evaluated and analyzed opportunities to implement the Blue Ribbon Transit Recovery Task Force 27 recommendations on how to improve, integrate and coordinate transit in the Bay Area. In early August 2021, the MTC Program and Allocations Committee approved the $500,000 request from STA to carry out the Solano Connected Mobility Implementation Plan and have a holistic approach to narrow down actionable items that were feasible for Solano County. STA has engaged a consultant, TMD, to undertake the Solano Connected Mobility Implementation Plan to conduct a comprehensive assessment of the Solano Express system.

At the September 2021, STA Board meeting, an amendment to add these additional funds to the Plan was approved. The additional funding allowed for further scope expansion, which can be found below:

- Address BRTRTF's 27 recommendations as they relate to transit services in Solano County.
- Expand Solano Express Operational Analysis and Bus Rapid Transit (BRT) Lite recommendations to include SR-37, I-505 and I-80 corridors.
- Utilizing the existing route structure, recommend how additional operational hours should be invested into the system (e.g. additional 10k, 20k, and 40k annual hours).
- Assist on components of Solano Express Transition Plan, from 2 operators to 1 operator.
- Expand Microtransit recommendations into a Microtransit Implementation Plan, focusing on connecting to regional transit.

Thus far, three main aspects have been completed, reviewed, and adopted by the STA Board. The completed work so far was the initial Public Outreach, Market Assessment, and the STA Mobility Benchmarks. The Solano Connected Mobility Implementation Plan will be finalized and ready for the STA Board in FY 2023-2024.

Solano Express Intercity Bus Service

Solano Express is managed by the Solano Transportation Authority and provides express intercity bus service throughout Solano County and beyond. Through the STA Policy Board, all Solano Express routes are now currently operated by Solano County Transit (SolTrans). In 2021, the STA Board took action to transition to a single operator model to gain operating efficiencies. The Green Line and Blue Line were transferred from FAST to SolTrans. The Solano Express Intercity Bus service consists of the Green Line, Blue Line, Yellow Line, Red Line and the most recent Route 82. These routes reach destinations from Davis to Walnut Creek BART and El Cerrito del Norte BART as well as the San Francisco Ferry Building. The Blue Line, Green Line, and Yellow Line all went into service in July 2018, and consolidated several prior route services. The Blue Line combined the previous Routes 20, 30, and 40, the Green Line was formed from the previous Route 90, and the Yellow Line was formed from the previous Route 78. In July 2019, the old Routes 80, 85, and 200 combined to form the Red Line. The consolidation of Solano Express route occurred to create more frequent, efficient service and to consolidate overlapping routes. It is noted that as of August 2023, the northern portion of the Blue Line was discontinued and no longer serves Sacramento as the termini is now UC Davis. Transit operations described herein are based on transit service as of July 31, 2023 unless otherwise noted.

Solano Express buses operate as early as 4:30 A.M. on weekdays, and as late as midnight on weekdays. Headways vary by route but range (in the peak hours) from 15 minutes (Red Line) to 60 minutes (Yellow Line).

Figure 8 Solano Express Route Map

All Solano Express buses are equipped with accessible features (e.g., lifts, dedicated seating, etc.) in compliance with the Americans with Disabilities Act (ADA). All Solano Express routes accept Clipper, the Bay Area's universal transit fare card, and are equipped with Automated Vehicle Locators (AVL), allowing passengers to track their bus's arrival in real time. SolTrans uses the Transit App and Moovit App to track their local and Solano Express routes respectively. In January 2023, SolTrans received $2 million in Federal funding for the 100 percent Battery Electric Commuter Coaches project to produce clean, battery-powered electric buses. SolTrans is in the process of transitioning the existing fleet of diesel, hybrid diesel and CNG buses to an all-electric fleet.

Solano Express Route Performance

The quarantine orders due to the COVID-19 pandemic led to rapid and significant modifications to Solano Express services. Since the initial reductions of service, STA and the partner agencies' who fund Solano Express staff from SolTrans have worked on plans to stabilize the service and create a connected and sustainable longer-term regional bus service plan. During the pandemic, then two operators, FAST and Soltrans, of Solano Express used a combination of reductions in service, frequency (trips per hour) and the span of service (start time to finish time of available service) to reduce 50% reduction in service, as demonstrated in the chart below.

Table 7 Solano Express COVID-19 Reductions

Routes	Overview *Intra-county and outside of UC Davis, Sacramento, BART Pleasant Hill, BART El Cerrito del Norte, and BART Walnut Creek.*	Pre-Pandemic	Pre-Pandemic Planned 8/2020	Operator Pandemic - 1			Operator Pandemic - 2	
		Service Hours	Service Hours	Service Hours	Change	Rough Overview	Service Hours	Rough Overview
Blue Line	From BART Pleasant Hill to Sacramento via Fairfield, Vacaville, Dixon	24,681	24,681	13,377	-46%	Cut early trips, cut mid-day trips to Sacramento	13,377	No Change
Green Line	Commute express service BAR ECDN to Fairfield/Suisun	11,133	11,133	2,706	-76%	Cut early trips, mid-day trips and late trips, cut frequency. For example 26 FTC departures cut to 7.	2,705	No Change
Yellow Line	From BART WC to Vallejo via Benicia	12,578	12,578	7,124	-43%	Cut early trips, cut frequency to roughly once every 2 hours	6,615	Further cut and reduced weekday service. Further reduced and modified actual Saturday service.
Red Line	From BART ECDN to Fairfield/Suisun via Vallejo	31,729	36,222	15,326	-52%	Cut early trips, cut frequency, converted weekday service to service normally operated on Saturday.	14,978	Further reduced and modified actual Saturday service, splitting route, reducing Vallejo to Fairfield to every two hours.

STA, FAST, Soltrans, and consultants developed the Solano Express Partial Service Restoration Plan and budget that addresses the health and safety, ridership demands, and financial sustainability of service given the global pandemic. These factors reduced Solano Express service from roughly 80,000 pre-pandemic annual service hours to roughly 45,000 annual service hours. Under the STA Partial Restoration Plan, staff sought to obtain better service span, frequency, and coverage. A summary of each route can be found below:

Proposed Partial Service Restoration Plan around the following criteria for weekday service:

- Retain span of service from pre-pandemic service levels: This was the most severe cut made by the initial urgent cuts, particularly in commuter trips to BART and UCD/Sacramento.
- Target 1-hour frequency on core segments: Certain exceptions will have to be made. For example, the Yellow Line (Vallejo-Benicia-BART) will stay at once every two hours but would gain back span of service. When new funding resources become available, STA has schedules ready to go that would increase frequency to once per hour and beyond that 30 minutes frequency.
- Retain core system – Blue, Yellow, Red, Green Routes. This is the route network that was approved by the STA Board in December 2014 that replaced seven independent routes into three basic routes with added GX express service during peak periods.

Table 8 Partial Service Restoration Plan for Solano Express

Partial Service Restoration Plan for Solano Express		
Route	**Hours**	**General Outcomes by Route**
Blue Line	17,167	• Half hour peak service, which turns into hourly frequency throughout the day. • Weekday: Add early trip to BART Pleasant Hill to connect with early trains • Weekday: Add early trip to Sacramento, restoring an early commute trip • Weekday: Add late trip to net later round trip to BART • Saturday: Restore service that was cancelled in the initial changes
Green Line	3,589 (Weekday Only)	• Hourly peak service during commute hours • Limited changes – possible adjustments • Possible later express trip from BART • Create printed timetable that includes Red Line as off-peak option for Fairfield/Suisun City commuters
Yellow Line	5,927	• 2 hour frequency throughout the day • Weekday: Add early trip Vallejo to BART • Weekday: Add late trip BART to Vallejo
Red Line	18,177	• Half hour peak service, which turns into hourly frequency throughout the day • Weekday: Add early trips to BART from Vallejo • Weekday: Add early trip to Fairfield from Vallejo • Weekday: Hourly frequency north segment • Saturday: Return through-routed route, eliminate split route

Since the initial implementation of the Solano Express Partial Restoration Plan in July 2020, Staff from STA, SolTrans, and Fairfield Transit (FAST) have monitored the performance of the Solano Express system. Based upon staff observations, modifications were made to the Red Line that included the expansion of Route (RT) 82 as a pilot into San Francisco which was approved by the STA Board on December 9, 2020.

On September 14, 2021, the STA Board took action and authorized the Executive Director to develop a Solano Express Transition Plan to transition the Solano Express service from a two transit operator system to a one transit operator system; and authorized the Executive Director to negotiate a contract with SolTrans for the operations of the four routes comprising the Solano Express Service consistent with a draft framework of transition plan outlined in the Solano Express Transition Plan. The functions to be transferred included Operations (bus operators, dispatch, road supervisors, etc.), Vehicle Maintenance (tires, lubricants, farebox, etc.), general Administration (operations manager, finance, etc.), and Non-Vehicle Maintenance (facilities, bus stop signs, etc.).

On April 4, 2022, the Green Line was successfully transferred from Fairfield Transit (FAST) to SolTrans, subsequently on August 8, 2022, the Blue Line also transitioned from Fairfield Transit FAST to SolTrans. Furthermore in August 2023, Soltrans implemented a service realignment to provide reliability within the Solano Express system. They could not maintain an adequate number of bus operators to sustain the level of service that was planned to be operated.

Solano Express Transit Ridership Incentives

Solano Express 2-for-1 Incentive

To encourage new ridership on the Solano Express bus lines, the STA initiated a 2-for-1 incentive through the Solano Mobility Call Center in October 2021. There were 25 2-for-1 matching pass incentives valued at $2,762 redeemed in FY 2022-23 by Solano Express riders. In November of 2022, the STA began offering a $125 Clipper Card for riders purchasing a monthly Solano Express pass. 40 Clipper Cards valued at $5,000 were provided in FY 2022-23.

Solano Express Guaranteed Ride (GR)

The Solano Mobility Guaranteed Ride Home program was expanded by STA during FY 2022-23, to increase equity and accessibility for those who are not able to afford to pay for their ride and wait for reimbursement. The Guaranteed Ride program added an Uber Voucher option for Solano Express riders with a route canceled. 243 Solano Express riders signed up for the GR program. 2,371 rides totaling $93,609.76 were provided.

Table 9 Solano Express Routes

Route	Origin	Intermediate Stops	Destination	Approx. Peak Headways	Approx. Off Peak Headways
Blue Line	Fairfield Transportation Center (FTC)	Vacaville, Dixon, UC Davis	Davis	30 min	60 min
Green Line	Suisun/Fairfield Amtrak	FTC	El Cerrito Del Norte BART	20 min	No off peak service
Red Line	Suisun/Fairfield Amtrak & Solano Mall (off peak trips)	FTC, Fairgrounds Dr, Vallejo Transit Center	El Cerrito Del Norte BART	15 min (60 min to Fairfield)	20 min (60 min to Fairfield)
Yellow Line	Vallejo Transit Center	Curtola P&R, Downtown Benicia, Sun Valley Mall	Pleasant Hill BART (AM Eastbound only) & Walnut Creek BART	60 min	90 min

Table reflects service as of August 7, 2023

Figure 9 Solano Express Ridership FY 2017 - 2022

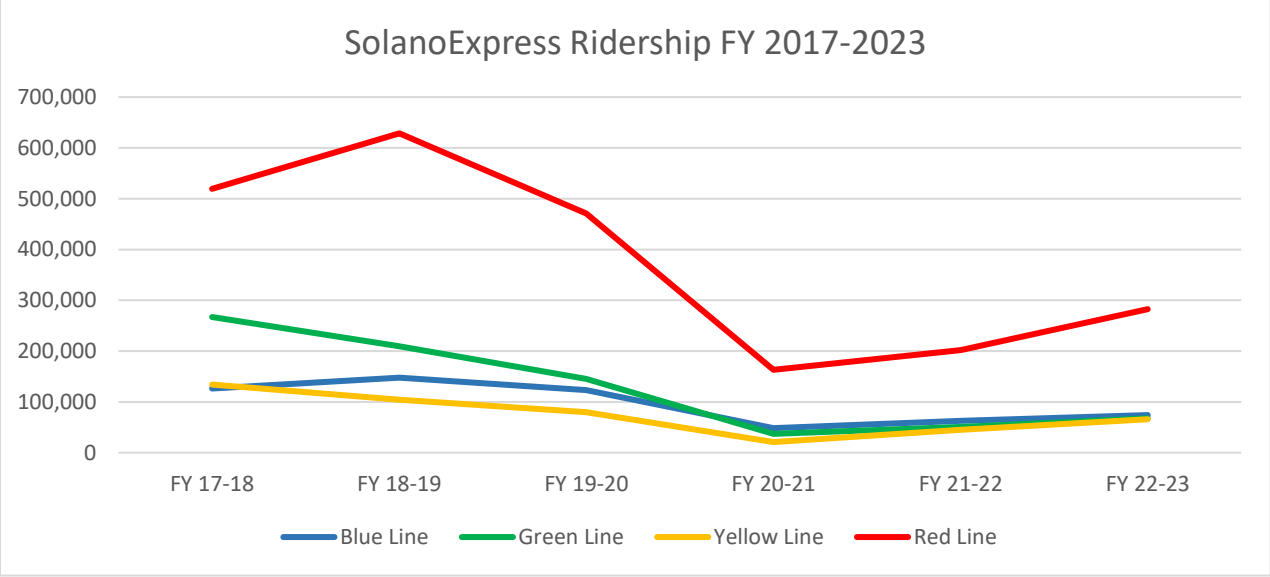


Table 10 Solano Express Ridership by Route

	Fiscal Year Solano Express Ridership						Farebox Recovery Ratio
Solano Express Routes	**FY 17-18**	**FY 18-19**	**FY 19-20**	**FY 20-21**	**FY 21-22**	**FY 22-23**	**FY 22-23**
Blue Line	126,614	147,720	122,998	48,354	62,418	73,789	6%
Green Line	267,104	209,226	145,101	37,105	50,900	68,003	13%
Yellow Line	134,097	104,063	79,864	20,916	45,222	66,144	8%
Red Line	519,681	628,690	471,001	163,164	201,838	282,653	21%
RT 82	-	-	-	-	-	9,194	26%
Total	**1,047,496**	**1,089,699**	**818,964**	**269,539**	**360,378**	**499,783**	**13%**

Updated 12.19.23

Another metric to measure Solano Express system performance is the fare box recovery ratio of each route. This represents the revenue collected in fares, divided by the cost to operate the route; in other words, it shows how much of the route's operating costs are paid for by passenger fares. The established standard set by the State of California is generally 20% fare box recovery except for rural service, in which case the standard is 10% fare box recovery. However, due to the pandemic, as per state legislative action has suspended the farebox recovery requirement until FY 2025-26.

Other Intercity Fixed Routes serving Solano County

In addition to the Solano Express regional bus system, several transit operators have intercity bus service serving Solano County. Napa VINE has two routes that serve Solano County. Route 11 begins at Redwood P&R in Napa, and serves downtown Napa, Napa Valley College, American Canyon, and Sereno Transit Center before ending at the Vallejo Ferry Terminal. Route 21, which is financially subsidized by STA, begins at the Soscol Transit Center in downtown Napa, and serves Napa Valley College, Fairfield Transportation Center and the Solano Rail Hub. Furthermore, as a result of Solano Express no longer servicing Sacramento, the STA initiated Solano Mobility Express Vanpool Pilot Program serving Vacaville and Dixon to Sacramento. STA is exploring additional opportunities to service the I-80, HWY-37 and the HWY-505 corridors through the Solano Connected Mobility Implementation Plan

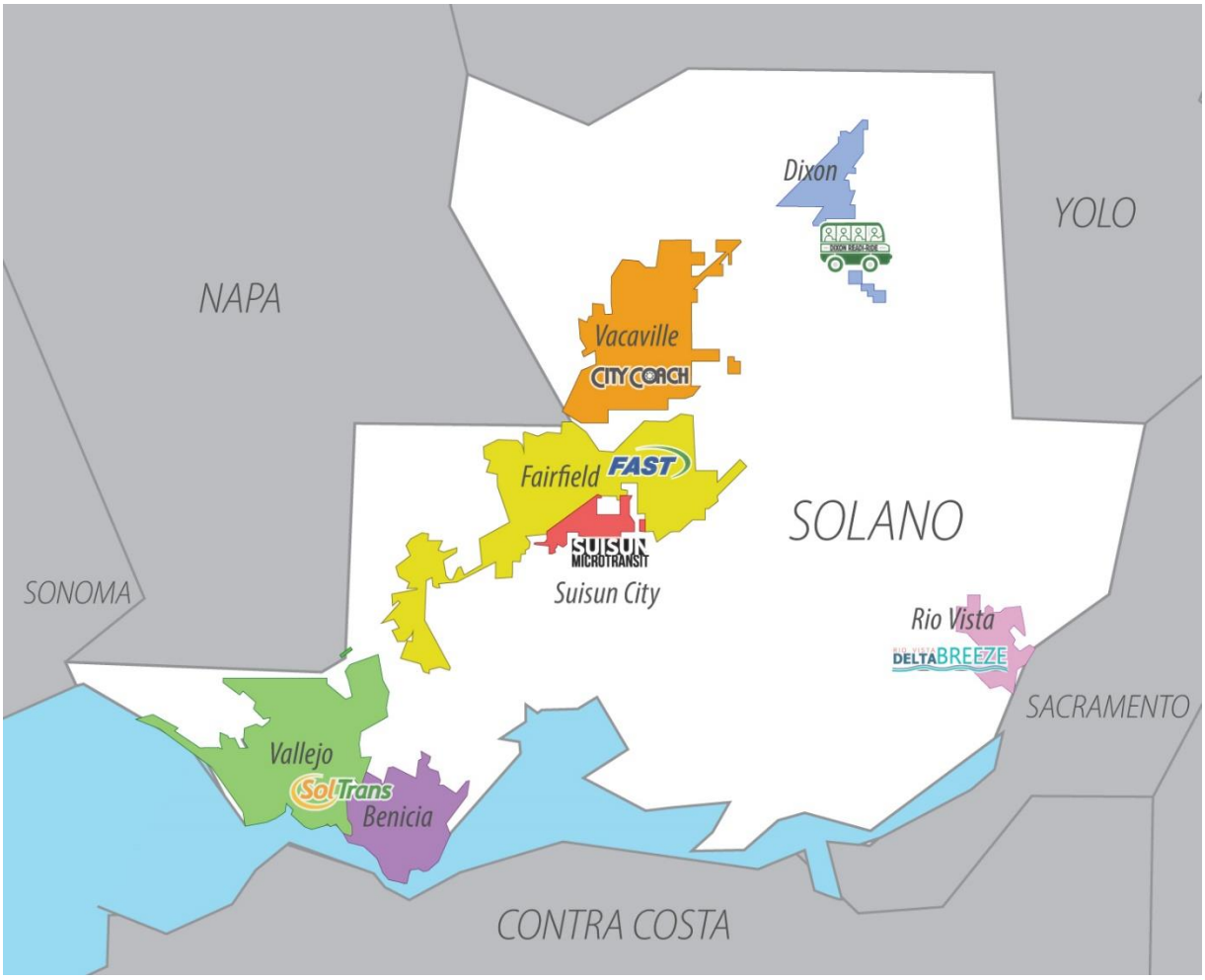
Table 11 Other Intercity Bus Routes serving Solano County

Route	Origin	Intermediate Stops	Destination	Approx. Peak Headways	Approx. Off Peak Headways	Provider
Route 50	Downtown Rio Vista	Trilogy, Suisun Walmart	Fairfield Transportation Center	1 WB Trip; 1 EB Trip Daily	1 WB Trip; 1 EB Trip Daily	Rio Vista Delta Breeze
Route 11	Redwood P&R Napa	Downtown Napa, NVC, Sereno Transit Center	Vallejo Ferry Terminal	60 min	60 min	Napa VINE
Route 21	Soscol Transit Center Napa	NVC, Fairfield Transportation Center	Solano Rail Hub (Suisun-Fairfield Train Station)	60 min	60 min	Napa VINE

LOCAL TRANSIT SERVICES

Solano County has six transit operators, serving all seven cities in Solano County and providing connections to intercity transit. All transit providers have experienced changes due to the COVID-19 pandemic and adjustments continue to be made as service is reimagined post-pandemic due to this issue, the transit service reported covers ridership data from 2018-2019 that was obtained from the transit agencies 2020 Short Range Transit Plans (SRTP). Due to the impacts due to the COVID-19 pandemic, the State of California has eliminated the required Farebox Recovery ratio metric until FY 2025-26.

Figure 10 Solano County Local Transit Operator Map



As of August 2023

Below is a summary of each operator and their services:

Solano County Transit, or SolTrans, is a Joint Powers Authority (JPA) that operates Solano Express through a contract provided by STA as discussed in the previous regional transit services section above and also offers the following services for the cities of Vallejo and Benicia:

- Vallejo Transit Services: Local Routes 11 local routes serve major destinations in Vallejo and Benicia Monday-Saturday, with one route operating on Sundays. SolTrans local routes operate between 5:30 A.M. and 9:00 P.M. and most routes operate on 60 minute headways throughout the day.
- Benicia Transit Services: Paratransit, School Trippers. As a result of Soltrans' 2018 Comprehensive Operational Analysis (COA), Soltrans requested STA to provide the Benicia Lyft Program. STA operates this program in partnership with the City of the Benicia.
- Paratransit service is offered to eligible individuals upon requests to destinations within Vallejo and Benicia Monday-Saturday, and limited destinations regionally.

Due to the COVID-19 pandemic, SolTrans conducted an emergency service reduction by running Saturday scheduled on all routes, Monday through Friday. Service frequencies went from two trips to one trip per hour on most local routes. Saturday service was reduced from approximately 178 service hours to 92 service hours. In July 2020, service was restored to pre-COVID schedule while maintaining 60-minute frequency on most local routes. In FY 2018-19, Fixed-route local ridership was 688,167.

FAST, is the transit service for the City of Fairfield. In September 2020, a Comprehensive Operational Analysis (COA) was completed that provided a 10-year road map identifying changes needed for FAST to be a high functioning and sustainable transit network post-pandemic. FAST currently operates the following services:

- FAST Fixed Route fleet operates 5 routes Monday-Saturday and serve major destinations in Fairfield. FAST operates 6:00 AM-8:00 PM on weekdays, and from 9:00 AM-5:00 PM on Saturday.
- Dial-a-Ride Paratransit service called FAST Connect ADA is offered to eligible individuals upon request Monday-Saturday to destinations within Fairfield and Suisun City, and limited destinations regionally. FAST Connect ADA runs the same hours as FAST fixed route and runs in conjunction with the new FAST Connect on-demand service.
- FAST Connect, is a new on-demand microtransit service that went live as of September 5, 2023. The service uses a new rideshare app called Ride Pingo. Fast Connect allows riders to book a shared transit trip in specific areas called "zones." Fast Connect is currently being piloted in two areas of Fairfield, Cordelia/Green valley and Northeast Fairfield (which includes Travis Air Force Base).

In FY 2018-19, local ridership was 395,118. Local ridership in FY 2022-23 was 228,645, which is 58% pre-pandemic levels. All FAST has transitioned away from using paper passes on FAST fixed route and FAST Connect services. FAST Connect ADA riders still have the option to use paper passes or Token Transit phone application until implementation of Clipper 2. FAST currently uses Clipper and Token Transit and cash as payment option. The transit agency is working towards implementing Clipper 2.0.

Vacaville City Coach is the City operated local transit service for Vacaville. City Coach offers the following services:

- Local Routes: 5 local routes operate Monday-Saturday and serve major destinations in Vacaville, and operates along major arterials. City Coach routes operate 6:00 AM-6:30 PM on weekdays, and from 8:00 AM-6:00 PM for routes that run on Saturday.
- Dial-a-Ride Service: Includes Paratransit, with origin-to-destination service for qualified individuals, and Local Taxi Service, which supplements the Paratransit Program service for ADA qualified individuals.
- City Coach Direct is an on-demand Microtransit service that was made available since March 2020. The service that will pick-up and drop-off anywhere within Vacaville. This service operates Monday-Friday from 7:00 AM-7:00 PM and Saturday from 8:00 AM-6:00 PM.

In FY 2018-19, Vacaville City Coach routes achieved a ridership of 378,874. Ridership in FY 2022-23 was 279,873. The transit agency is working towards implementing Clipper 2.0.

Dixon Readi-Ride is the City operated dial-a-ride transit service for Dixon residents. Readi-Ride offers the following services:

- Readi-Ride offers curb-to-curb general public demand-response service that is available Monday-Friday and is currently operating reduced hours from 7:00 AM-12:00 PM and 1:00 PM-4:00 PM within Dixon City Limits. The service serves all Dixon schools, and connects to the SolanoExpress Blue Line at the Dixon Market Lane Park and Ride. It also offers service to neighboring Davis and Vacaville for ADA-certified individuals.

In FY 2018-19, Dixon Readi-Ride's transported 61,726 riders, sixty percent of which were children or youth, many of whom were traveling to or from school. Ridership in FY 2022-23 was 35,331.

Rio Vista Delta Breeze is managed by STA through a contract, serves Rio Vista and nearby Isleton in Sacramento County. Delta Breeze offers the following services:

- Dial-a-Ride service: Delta Breeze offers Dial-a-Ride service Monday-Friday from 10:00 AM-4:30 PM within Rio Vista city limits and Isleton city limits, as well as the Delta resort communities between the two cities along State Route 160.

- Intercity Routes: Delta Breeze operates two intercity routes Monday-Friday to Fairfield/ Suisun as Route 50 with three round trips per day, as well as limited commute service into Contra Costa County. The deviated fixed routes operate Monday-Friday from 5:15 AM through 7:15 PM
- ADA Paratransit with priority service for ADA certified paratransit passengers on the Dial-A-Ride service.

In FY 2018-19, Rio Vista Delta Breeze transported 10,441 riders. Ridership in FY 2022-23 was 4,018. The transit agency is working towards implementing Clipper 2.0.

Suisun Microtransit is a new service, effective January 3, 2023, for the City of Suisun City operated by STA which offers fixed route/school trips service as well as curb-to-curb transit service within Suisun City limits and 9 select destinations in Fairfield.

- Dial-a-Ride service: Suisun Microtransit offers Dial-a-Ride service Monday-Friday from 7:00 AM to 7:00 PM within the Suisun City limits, as well as 9 selected locations within the City of Fairfield. The select destinations in Fairfield are as follows:
    - Fairfield Transportation Center (FTC)
    - David Grant Medical Facility (Travis Air Force Base)
    - Solano County Government Center
    - Sutter Medical Campus
    - NorthBay Medical Center
    - Kaiser Medical Offices
    - Ole Health Clinic
    - DaVita Dialysis Center
    - Health and Human Social Services Center
- Fixed Route/school trip service is available year-round during peak in the morning and evening
- ADA Paratransit with priority service for ADA certified paratransit passengers on the Dial-A-Ride service

Suisun Microtransit ridership between January 2023 and September 2023 was 8,640 and is working towards implementing Clipper 2.0.

RAIL SERVICE

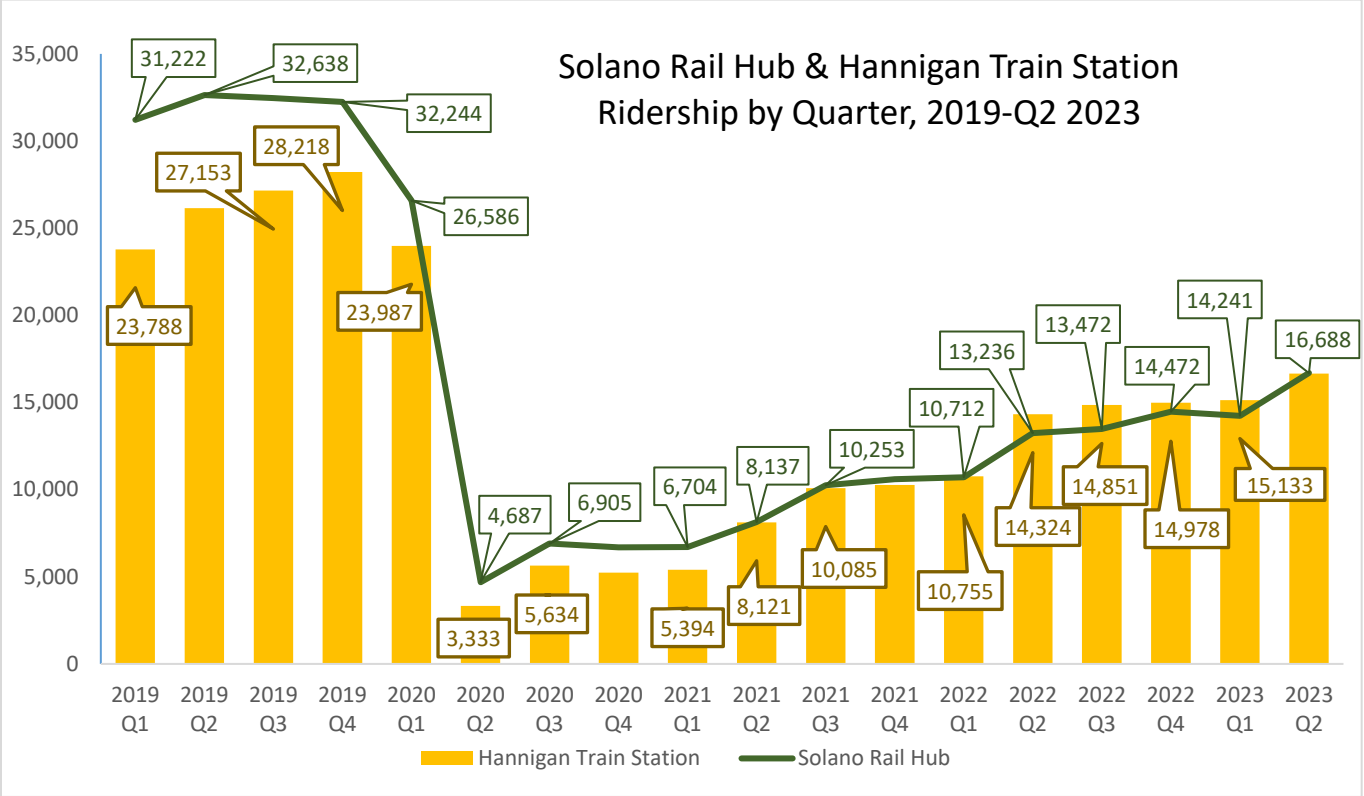
The Capitol Corridor Joint Powers Authority (CCJPA) operates passenger rail service between San Jose and Auburn, serving Oakland, San Francisco (via bus connection), Richmond, and Sacramento in between. The Capitol Corridor has two stops in Solano County: The Solano Rail Hub (Suisun-Fairfield Train Station) and the Hannigan Train Station (Fairfield-Vacaville Hannigan Train Station). Each station is served by 24 trains per day on weekdays, and 22 trains per day on weekends. The tracks run through Solano County for 41.5 miles, from the Yolo County line to the Benicia-Martinez Bridge across the Carquinez Strait. The service is popular among commuters and students. In 2019, ridership averaged 58,000 per quarter. In 2020, ridership dropped to about 10,000 per quarter. Ridership has been slowly increasing with 29,374 riders in

the first quarter of 2023 and 33,353 riders in the second quarter of 2023, which is a little over half pre-COVID ridership.

The **Solano Rail Hub** (Suisun-Fairfield Train Station) is located in downtown Suisun City at the intersection of Main Street and SR-12. The station has a single building with two automated ticket machines, and a cafe. There is indoor and outdoor seating under a covered station platform, and two bus shelters adjacent to the station. Parking is available adjacent to the station, or across the street at the Lotz Way Park and Ride lot. Bike parking racks and eLockers are also available at the station and the Lotz Way Park & Ride lot. The Solano Rail Hub is served by the Solano Express Red Line and Green Line, the Napa VINE Route 21, and the Rio Vista Delta Breeze Route 50. Greyhound makes a stop at the station, and it is also served by STA's Lyft First/Last Mile Program. The station serves as an anchor for Suisun City's waterfront downtown PDA and the adjacent Fairfield Downtown Priority Development Area (PDA) and is expected to benefit from future growth in housing and retail in the area.

The **Hannigan Train Station** (Fairfield-Vacaville Hannigan Train Station) is located in northeast Fairfield at the intersection of Peabody Road and Vanden Road. The station is equipped with automated ticket machines, adjacent parking, and bike parking. The station is expected to be a catalyst for new development that is planned to occur in the northeast Fairfield area. Over 6,000 housing units are planned to be built within the Hannigan Train Station Priority Development Area (PDA), which surrounds the newly opened station. The station also serves Solano County's largest employer, Travis Air Force Base which is located less than three miles from the station, along with transit connections are provided by Vacaville's City Coach Direct as well as FAST Connect .

Figure 11 Capitol Corridor Ridership by Quarter



Source: Capital Corridor Joint Powers Authority (CCJPA)

Ferry Service

San Francisco Bay Ferry service began in Solano County in 1986, operating a single route between Vallejo and San Francisco. Originally, the service was operated by the City of Vallejo, but has since been transferred to the San Francisco Bay Ferry, which is operated by the Water Emergency Transportation Authority, or WETA. This single route remains, carrying commuters from the downtown Vallejo waterfront to the San Francisco Ferry Building and Pier 41 and Oracle Park.

There are two ferry stops in Vallejo. The Mare Island stop has limited ferry service. Free parking is available at the terminal, and ticketing is available on the ferry. The Mare Island Terminal is served by 4 outgoing and 6 incoming boats on weekdays, and 3 outgoing and 3 incoming boats on weekends.

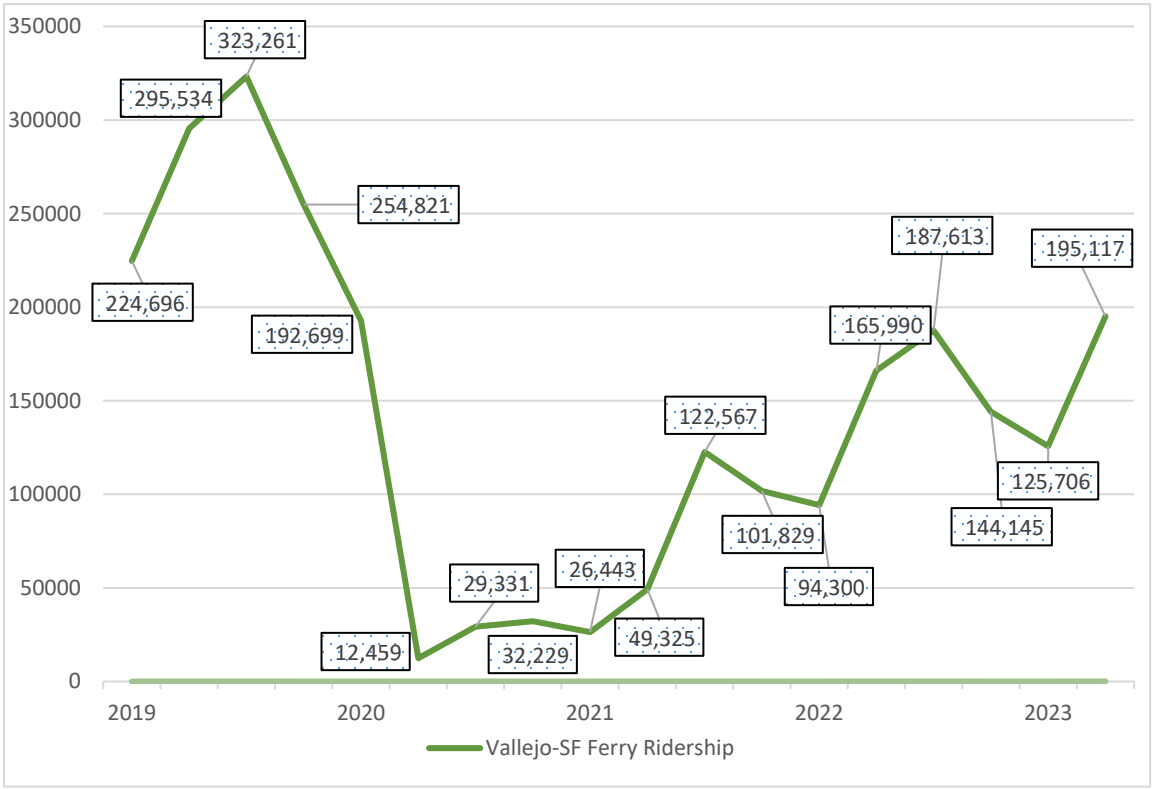
The Vallejo Ferry Terminal is located at the intersection of Mare Island Way and Georgia Street. This popular terminal enjoys direct ferry service to downtown San Francisco 7 days a week with 13 outgoing and 14 incoming boats on weekdays and eight outgoing and incoming boats on weekends. Each season

the schedule is changed to reflect fluctuating ridership trends such as increased use during summer tourism. Seasonal ferry service is provided from Vallejo to San Francisco Giants games during the spring and summer seasons. On weekends, the ferry serves the ballpark directly in both directions, but on weekdays it is only direct on the return trip and ferry riders must use regularly scheduled trips to the SF Ferry Building to get to San Francisco.

The Ferry Terminal is directly adjacent to the Vallejo Transit Center, which is served by all SolTrans local routes, Solano Express Red Line, and Yellow Line, and the Napa VINE Routes 11 and 11X, as well as Flixbus. Paid parking is available across the street from the terminal, or in a nearby parking garage with 750 spots. Plans are underway to expand the parking garage and add mixed use residential/retail buildings adjacent to the Ferry Building.

In FY23, total ridership for the Vallejo-SF Ferry Route was 652,581, which is 35% more than FY22 with 484,686 riders and 40% less than FY19 which experienced ridership levels of 1,081,655. Ridership is continuing to increase and recover from the COVID-19 pandemic declines.

Figure 12 Vallejo-SF Ferry Ridership by Quarter



The Vallejo-SF Ferry Route is one of the San Francisco Bay Ferry's most productive routes pre-COVID with fare box recovery up to 65%. Several boats during peak hours were often at capacity, and sometimes turned away passengers at the dock. Regional Measure 3, a bridge toll increase passed by Bay Area voters in 2018, will include additional funds to expand ferry service between Vallejo and San Francisco.

In FY21, the farebox recovery was 19%, then 23% in FY22 and continuing to increase to 26% in FY23.

Caltrans Delta Ferries

Caltrans operates two small car ferries in the Delta: the Real McCoy II Ferry on SR-84, and the J-Mack Ferry on SR-220. Each ferry can accommodate cars, light trucks, and RVs. The Real McCoy II is classified as an extension of Highway 84. It provides service to Ryer Island residents and its visitors by crossing the Cache Slough to Rio Vista. The capacity of the Real McCoy II Ferry is 8 cars. The Real McCoy II operates on the following schedule: crossings are scheduled every 20 minutes; on the hour, 20 minutes after the hour, and 40 minutes after the hour.

The J-Mack Ferry crosses Steamboat Slough in the Sacramento Delta, connecting Grand Island to East Ryer Island. The vessel is classified as an extension of Highway 220. The J-Mack currently operates 24 hours a day, 7 days a week. The J-Mack can carry up to six vehicles.

Specialized Transit Services

Travel Training

Travel training provides a vital service to members of the public who would like to learn how to ride public transportation. A qualified trainer will meet the patron at their closest transit stop, and show them step-by-step how to get from Point A to Point B, depending on the needs of the patron. The trainer will show the patron how to read a bus schedule, how to board the bus, pay the fare, where to get off the bus, etc. This service, especially the group field trip training option, is highly popular among those who would otherwise not feel comfortable riding public transportation. In FY 2022-23 a total of 199 Travel Training (Individual/Field Trip/Classroom) were conducted. There were 16 presentations to 426 audience members and 2,295 individuals received information during 32 Outreach activities.

Intercity Taxi Card Program

The Solano County Intercity Taxi Card Program is a result of two Senior and Disabled Transit summits sponsored by STA and the County of Solano in 2009. The program provides a flexible option for those who qualify for ADA paratransit to get a ride anywhere in Solano County. Such persons are eligible to purchase discounted taxi fares, which are loaded onto a prepaid debit card that may only be used for its purpose. Rides must be scheduled in advance. Additionally, wheelchair accessible vehicles are available for

individuals that are non-ambulatory. In FY 2022-23, STA entered into a formal agreement with the main Solano Taxi provider, Veteran's Corp., to be the exclusive wheelchair accessible provider for this program, with 35 wheelchair accessible rides taken and 3,208 Intercity taxi trips."

ADA Paratransit

All six of Solano County's transit operators provide ADA wheelchair accessible vehicles to their qualified residents within their service area. In all cases, the service is available by reservation only, and generally must be reserved at least a couple of hours in advance. SolTrans and FAST offer paratransit which provides a shared ride, origin to destination bus service. Advance appointment is required and service operates parallel to the fixed route system, during the same hours and days as their fixed route service. Paratransit provides rides within a ¾ mile area on either side and at the ends of fixed route corridors and Dixon and Rio Vista offer WAV services as part of their general public dial-a-ride service. City Coach Special Services operates within the city boundaries of Vacaville. Any person who is unable to use general public fixed-route transit service, such as Vacaville City Coach, is eligible for City Coach Special Services. Dixon also offers paratransit rides to Davis and Vacaville by advance reservation only.

Older Adult Medical Trip Concierge Service (GoGo) Program

Based on the 2019 Solano Mobility Study for Older Adults and People with Disabilities, the number one mobility issue affecting older adults was getting transportation to and from medical appointments. Upon the direction of STA's Consolidated Transportation Services Agency – Advisory Committee (CTSA-AC), the GoGo program was introduced in 2019 with funding provided by the Napa/Solano Area Agency on Aging. The program provides subsidized Uber/Lyft rides to Solano County residents 60 and older utilizing the GoGo Grandparent Concierge service. In March 2023, wheelchair accessible vehicles (WAV) vehicle access were added to this program to provide trips for those in wheelchairs. The program is also available to Solano County Veterans to access Veterans Affairs and Medical facilities within Solano County and several locations in Contra Costa County. The benefit of using GoGo is that customers can call to order an Uber/Lyft ride and do not have to own a smart phone with the app. Customers received 30 one-way rides per month and can travel to medical or other essential destinations within the County. There are exceptions for Rio Vista residents who can use this service to travel out of county to 3 specific medical facilities in Antioch. It is for ambulatory individuals able to enter and exit a cab independently. There were 201 WAV rides provided between March 2023 and June 2023. In FY 2022-23 there were 11,548 rides taken using the GoGo Program. This is an increase of 3,253 rides over the last fiscal year.

Veteran's Mobility Program

Given that Travis Air Force Base is the largest employer in Solano County, the STA through its CTSA developed a Veterans Program which was implemented in April of 2022, to provide transportation access to Solano County Veterans to the VA Clinics within Solano and Contra Costa County. In FY 22-23, 108 rides provided, with 130 veterans outreached.

Solano Mobility Express Vanpool Pilot Program

Pursuant to the Solano Express Service Realignment effective August 7, 2023, the Blue Line no longer services Sacramento. Solano County residents requiring transportation to employment centers in Sacramento needed to seek alternative modes. State employees returned to their offices on a hybrid schedule effective July 2023; therefore, it was necessary to provide an alternate solution for Solano County commuters to travel to and from Sacramento. At the STA Board meeting on June 14, 2023, the STA Board authorized the Executive Director to expand existing mobility programs to meet this need.

Based on this authorization, STA staff expanded the existing Commute with Enterprise agreement to provide Solano Express Blue Line commuters with a weekday connection to Sacramento from Vacaville and Dixon. Currently, four Solano Mobility Express Vanpools that travel from Dixon and Vacaville. Riders need to apply through Solano Mobility website or by calling the Solano Mobility Call center at 800-535-6883.

3.4 Bicycle and Pedestrian

Active modes of transportation, such as bicycling and walking, are a healthy alternative to driving. Providing systems and an environment that is conducive to bicycling and walking is key to increasing these modes of active transportation.

3.4.1 Current System

The bicycle network in Solano County is approximately 250 miles of a mix of Class I multi-use paths, Class II bike lanes, and Class II bike routes.

The pedestrian network is made up of sidewalks, Class I paths, crosswalks, and other enhanced pedestrian treatments. As part of the recently adopted Active Transportation Plan, STA recently mapped all sidewalks in each Solano County city and pockets of unincorporated County. The total countywide sidewalk mileage is 2,007 miles.

Active Transportation Plan

The Solano County Active Transportation Plan (ATP) was adopted in 2020 and builds upon previous active transportation planning efforts by consolidating STA's separate Countywide Bicycle, Pedestrian, Safe Routes to School, and Safe Routes to Transit Plans into one cohesive Plan. It establishes countywide priorities and provides project lists and program guidance which STA and local jurisdictions can use to help people of all ages and abilities feel comfortable walking and biking. Additionally, the ATP has provided each jurisdiction with its own chapter, containing existing conditions, public outreach results, and prioritized projects to adopt as their own Active Transportation Plan, should the jurisdiction wish to. Previously, jurisdictions were given the option of adopting the Countywide Bike or Pedestrian plan to qualify for grant funding. This approach gives each jurisdiction a more personalized approach with action items and projects to follow up on. Projects are based on public outreach, data analysis, and feedback from local jurisdictions. In May 2022, the STA amended the original ATP plan to include 39 new projects submitted by each individual jurisdiction. The ATP amendment also adds the countywide Safe Routes to School (SR2S) projects list to the ATP project list, establishing consistency between the documents. In addition, the STA is currently updating its Comprehensive Transportation Plan (CTP) in which the priority projects for the Active Transportation element will be updated along with the other two elements (Arterials/Highways/Freeways and Transit Element) in time for the next anticipated RTP update for MTC's Plan Bay Area 2060.

Funding Programs

STA and its member agencies use many fund sources to complete bike and pedestrian projects, but the most common sources include:

- Congestion Mitigation and Air Quality Funds (CMAQ): Federal funds that are passed through to local agencies via MTC's One Bay Area Grant (OBAG). CMAQ funds may be used for bike and pedestrian projects, or any project that helps to reduce air pollution.
- Transportation Development Act Article 3: Sales tax funds that return to Solano County to be used for bike and pedestrian capital projects. Every five years, the funds may be used for bike and pedestrian planning.
- Transportation Funds for Clean Air (TFCA): From the Bay Area Air Quality Management District (BAAQMD). Projects must help to reduce air emissions, including bike and pedestrian projects.
- Clean Air Funds (CAF): From the Yolo-Solano Air Quality Management District (YSAQMD). Projects must help to reduce air emissions, including bike and pedestrian projects.

Bike and Pedestrian Counts

As part of this CMP update, TJKM conducted bicycle and pedestrian counts at the five intersections included in the CMP Network. In all cases, counts were conducted between 4 PM and 6 PM on a weekday in May 2023. These intersections include:

- Peabody Road at Cement Hill Road/Vanden Road in Fairfield
- Walters Road at Air Base Pkwy in Fairfield
- Tennessee Street at Sonoma Blvd in Vallejo
- Curtola Pkwy at Sonoma Blvd in Vallejo
- Mare Island Way at Tennessee Street in Vallejo

Table 12 CMP Intersection Bicycle Counts 2023

Bicycle Counts	EB	WB	NB	SB	NEB	Total
Peabody Rd at Cement Hill Rd	0	0	0	2	N/A	2
Walters Rd at Air Base Pkwy	0	2	0	2	N/A	4
Tennessee St at Sonoma Blvd	1	0	0	0	N/A	1
Curtola Pkwy at Sonoma Blvd	0	0	0	0	0	0
Mare Island Way at Tennessee St	1	0	1	0	N/A	2

Source: 2023 CMP Data Collection

Overall, bicycle counts were low across the board at all three intersections. This is likely due to the fact that the five CMP intersections in question are high traffic volume and often high speed intersections. Of the roadways listed at each intersection, only Peabody Rd at Cement Hill Rd has bike lanes south of the

intersection (and a Class I path under construction along Cement Hill Rd), and Mare Island Way has a Class I path. The lack of bicycle facilities at several of these roadways, combined with high volumes of traffic, may explain the relative lack of bicycle traffic.

Table 13 CMP Intersection Pedestrian Counts 2023

Pedestrian Counts	EB	WB	NB	SB	SWB	Total
Peabody Rd at Cement Hill Rd	1	0	0	0	N/A	1
Walters Rd at Air Base Pkwy	2	2	1	0	N/A	5
Tennessee St at Sonoma Blvd	14	13	9	13	N/A	49
Curtola Pkwy at Sonoma Blvd	7	3	9	1	6	26
Mare Island Way at Tennessee St	7	10	4	5	N/A	26

Source: 2023 CMP Data Collection

Pedestrian traffic ranked low at the Fairfield intersections, but higher at the Vallejo intersections. This can be explained by the fact that the Vallejo intersections are located in a more urban environment close to town, while the two Fairfield intersections are far from most destinations. The one exception is the Peabody Rd at Cement Hill Rd intersection, where the Fairfield/ Vacaville Train Station. Additionally, the two Fairfield intersections lack sidewalks on some of the streets leading up to the intersection, while this is not the case at Vallejo's intersections.

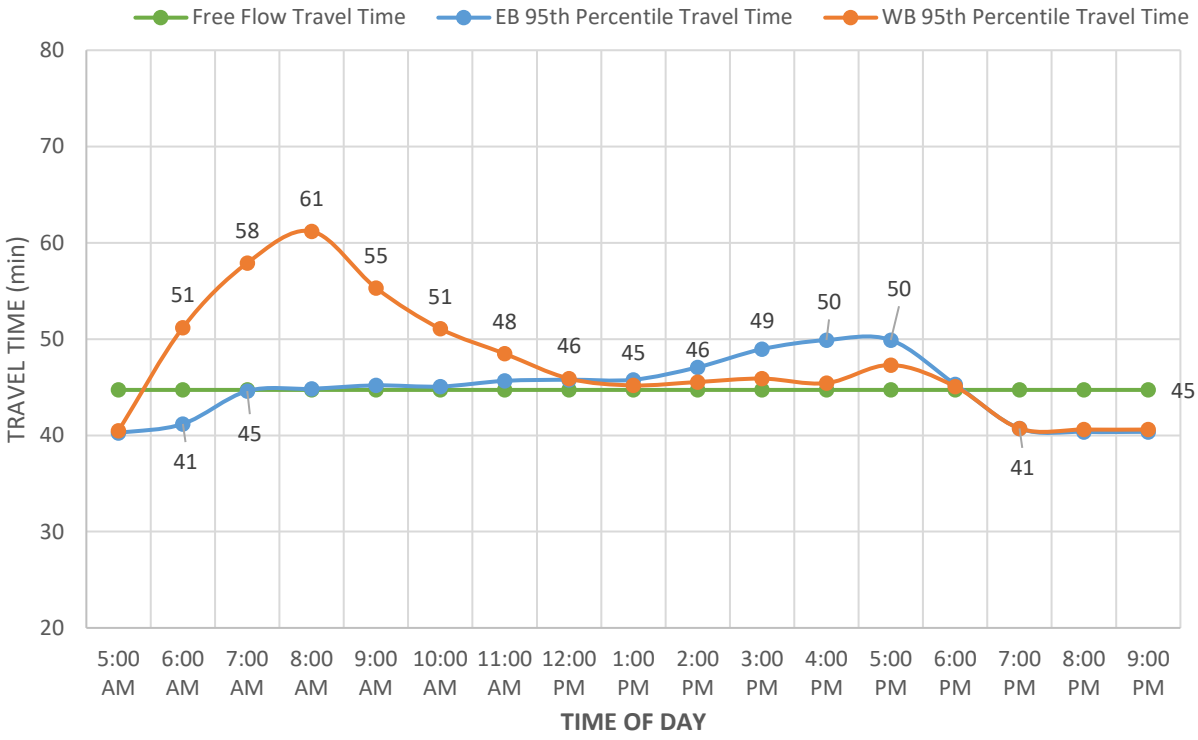
3.5 Travel Time Reliability

Travel time reliability is the consistency or dependability in travel times, as measured from day-to-day or across different times of day. This metric is particularly important for commuters who travel along congested corridors, where traffic patterns may be unreliable. Consider this example: if a major commuter route has a travel time of 20 minutes in free flow traffic, but experiences congestion on all weekdays with an average travel time of 28 minutes, a reasonable commuter will plan for the average travel time to account for traffic. However, when unforeseen incidents slow down traffic further than the average (accidents, bad weather, etc.), it could take 35 minutes to make the same commute, or perhaps even longer. Travel time reliability allows commuters to plan for this variability so that they will arrive on time. Otherwise, the commuter may end up being late 50% of the time, or early 50% of the time because they planned on an average commute time. For STA, travel time reliability allows the agency to further measure transportation system performance in Solano County.

Data was collected from freely available travel time reliability data from Caltrans' Performance Measurement System (PeMS) database. The PeMS database utilizes thousands of traffic counters/monitors on state routes throughout California to report on several metrics. Data was selected

on Tuesdays, Wednesdays and Thursdays during the months of February, March and April 2023 and are averaged for a typical weekday. Below is a chart showing actual travel time on I-80 between Vallejo and the Yolo County Line.

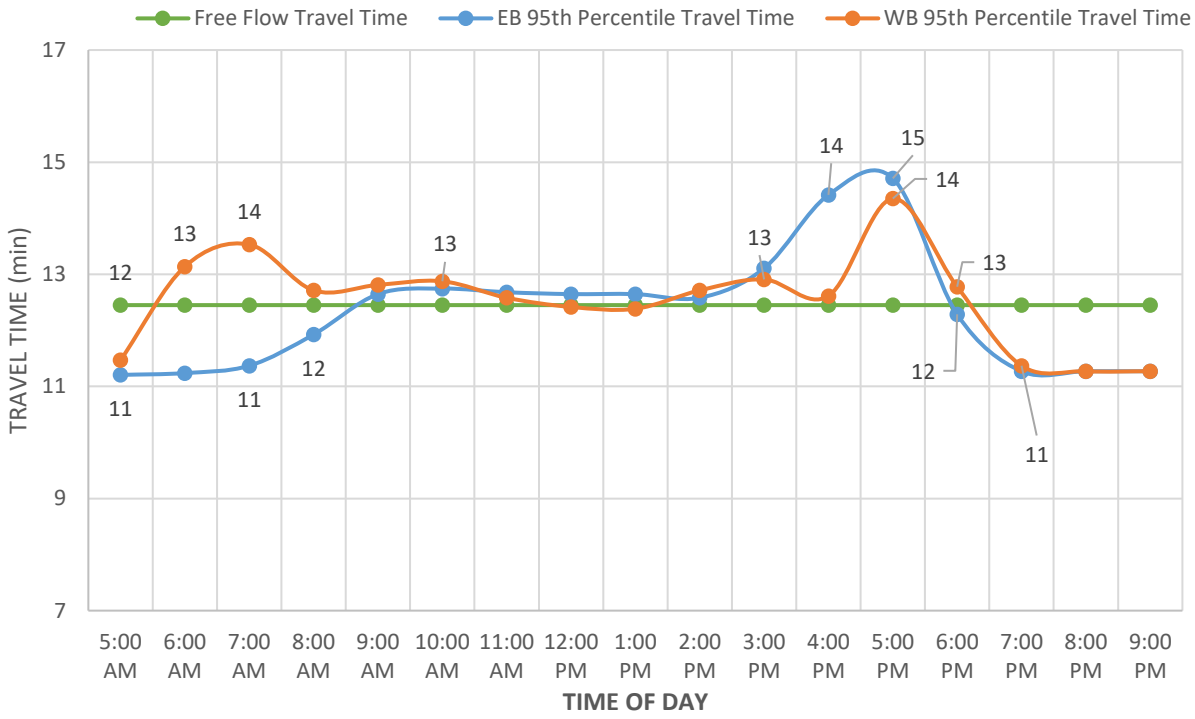
Figure 13 Travel Time Reliability on I-80



Source: 2023 CMP Data Collection

The chart shows that under free flow conditions, the time to travel the length of this 44.72 mile segment of I-80 is 45 minutes. However, during the AM peak at 8:00 AM the travel time rises to 61 minutes to travel this segment of I-80 in the westbound direction. The morning peak period begins at 5:30 AM and ends at 12:00 PM. During the afternoon peak, it takes approximately 50 minutes to travel the segment in the eastbound direction. The afternoon peak begins at 4:30 PM and ends at 6:30 PM. These results are consistent with typical traffic conditions in the area.

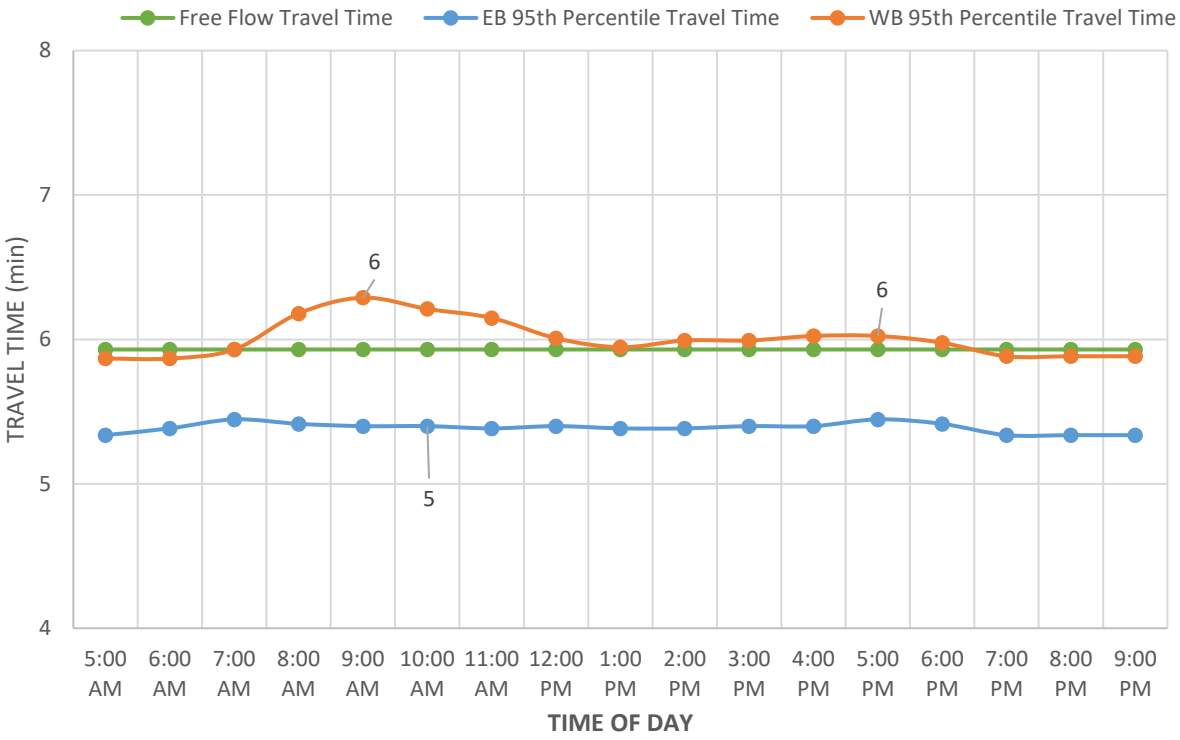
Figure 14 Travel Time Reliability on I-680



Source: 2023 CMP Data Collection

The chart shows that under free flow conditions, the time to travel this 12.45 long segment of I-680 is 12 minutes. However, at 7:00 AM, the travel time peaks 14 minutes to travel this segment of I-680 in the westbound direction. The morning peak period begins at 5:30 AM and ends at 8:30 AM. At 5:00 PM in the afternoon, it takes approximately 15 minutes to travel the segment in the eastbound direction and 14 minutes in the westbound direction. The afternoon peak period begins at 3:00 PM in the eastbound direction and 4:30 PM in the westbound direction and ends at 6:30 PM for both directions. These results are consistent with typical traffic conditions in the area.

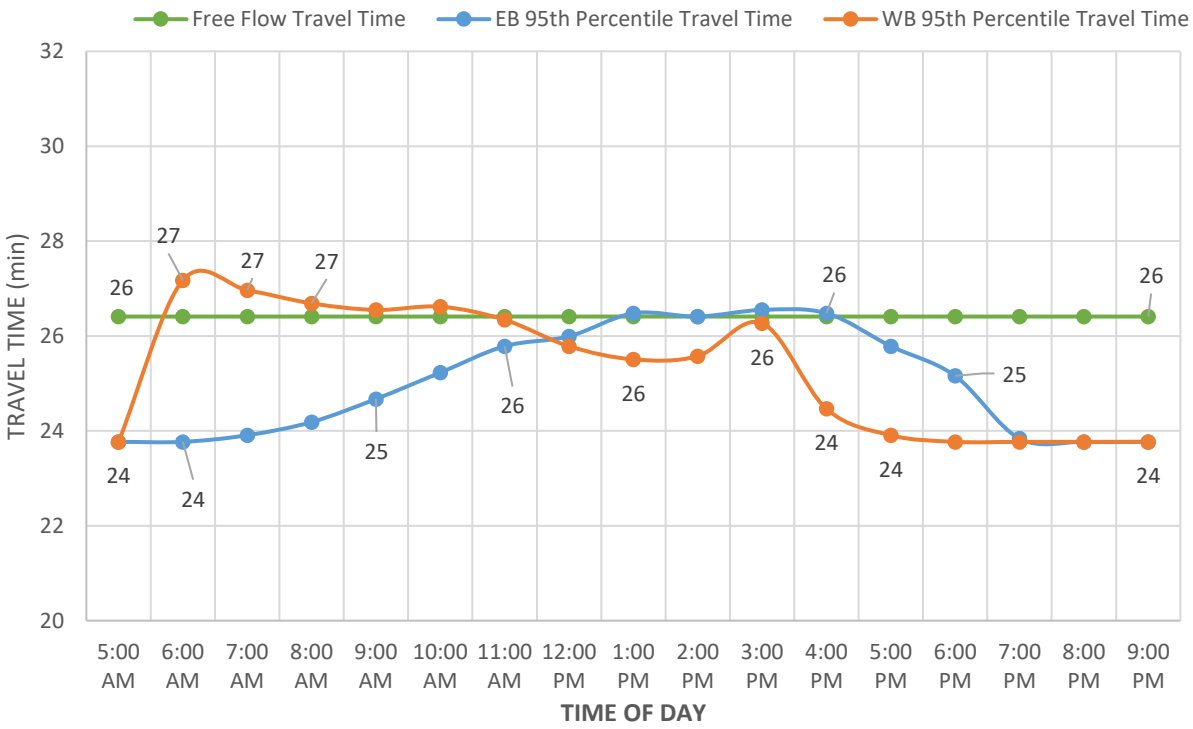
Figure 15 Travel Time Reliability on I-780



Source: 2023 CMP Data Collection

The chart shows that under free flow conditions, the time to travel this 5.93 mile segment of I-780 is 6 minutes. Throughout the day, the measured travel time in the eastbound direction is only 5 minutes along I-780. During the A.M. peak at 9:00 AM, the travel time is slightly more than the free flow travel time.

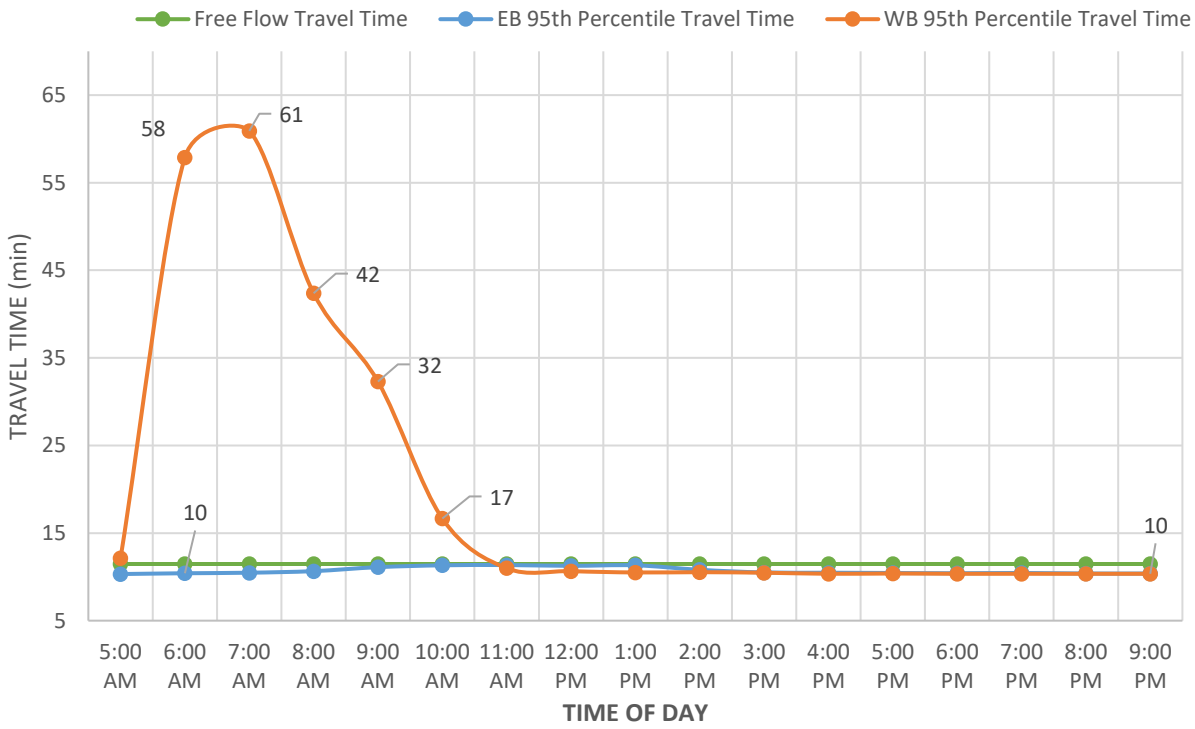
Figure 16 Travel Time Reliability on SR-12



Source: 2023 CMP Data Collection

The chart shows that under free flow conditions, the time to travel the entire 26.41 mile portions of SR-12 within Solano County is 26 minutes. Throughout the day, the measured travel time is at or below the free flow travel time, with the exception of the westbound direction at 6:00 AM, the travel time is 27 minutes.

Figure 17 Travel Time Reliability on SR-37



Source: 2023 CMP Data Collection

The chart shows that under free flow conditions on the SR 37 that is captured in the CMP Network approximately an 11.47 mile segment that spans from I-80/SR 37 interchange, through Mare Island towards Sears Point, stopping at the Solano County Line. Commuters heading to work in the morning experience severe daily AM peak period westbound traffic congestion, peaking 61 minutes to travel this segment. Commuters coming back from work, traveling eastbound, also experience severe PM traffic congestion, however Figure 17 does not capture eastbound traffic since this segment of traffic falls under the jurisdictions of Sonoma and Marin County.

3.6 I-80 High Occupancy Vehicle (HOV) Lane Travel Times

HOV lanes help encourage ridesharing as well as provide improved travel times for bus transportation by providing a dedicated lane separate from general purpose travel lanes. General purpose travel lanes may become congested during peak periods and thus the HOV lane would provide a benefit of reduced travel times during peak periods. To monitor the effectiveness of HOV lanes, studies are performed to measure the average speed and travel time in an HOV lane and compare that to a general purpose lane.

Travel time data in the HOV lane was collected on Tuesday, August 29th, 2023 from 7:00 AM to 9:00 AM and from 5:00 PM to 7:00 PM using the floating car method with four runs per peak period. On I-80 from Redtop Road to Texas Street, the HOV lane is 5.8 miles in length. This segment of HOV lane was studied for this CMP monitoring cycle.

The data indicated that the travel time in the HOV lanes was slightly faster (8%) during the southbound direction during the AM peak with 4.86 minutes on average in the HOV lane compared to 5.24 minutes in the general purpose lane. For the northbound direction during the PM peak, the travel time in the HOV lane is 17% faster at 6.08 minutes compared to 7.13 minutes.

Table 14 HOV Travel Times

	Travel Times in Minutes			
	AM PEAK		PM PEAK	
	Northbound	Southbound	Northbound	Southbound
General Purpose Lane	4.83	5.24	7.13	4.94
High Occupancy Vehicle Lane	4.92	4.86	6.08	4.94
Percent Time Savings in HOV Lane	-2%	8%	17%	0%

Source: 2023 CMP Data Collection

CHAPTER 4 TRANSPORTATION DEMAND MANAGEMENT

4.1 Purpose and Intent of Legislation

Transportation Demand Management, or TDM, refers to the improved efficiency of existing transportation systems without significant expansion of the infrastructures. Most often, these strategies focus on ways to reduce single occupancy vehicles, or to eliminate the need for driving altogether. Common strategies to reduce solo driving include carpool, vanpool, bicycles, transit, and public transit. Strategies to reduce Vehicle Miles Traveled (VMT) include telecommuting, alternative work schedules, and parking cash-out programs. Promoting housing near high quality transit can help to eliminate the need for a car, as well as promoting a healthy balance between the location of jobs and housing. Skewing these areas can lead to higher commute distances and increased congestion.

Subsection 3 of the California Government Code Section 65089(b) requires that all CMPs include a TDM element that outlines strategies to promote alternative forms of transportation; hereby reducing traffic congestion and improving air quality. The emphasis of this section is to use strategies that will result in reduced VMT on Solano County's freeways and roadways, and promote reduced GHG emissions. Local governments also have an opportunity to contribute to reduced VMT as they review new development proposals. Local land use decisions are key to contributing to the overall TDM strategies by locating housing and jobs near transit and near to each other.

4.2 Air Quality Conformity

MTC Resolution 3000 Revised requires all CMPs to be consistent with the region's adopted Transportation Control Measures (TCMs) that are based on Federal and State Clean Air Plans. TCMs help to achieve and maintain standards for ozone and carbon monoxide set by the Federal, State, and Regional Clean Air Plans. As required by State statute, Solano County's CMP conforms to the transportation-related vehicle emission air quality mitigation measures. The Bay Area Air Quality Management District's (BAAQMD) 2017 Clean Air Plan lists 15 TCMs that are better refined from previous Federal and State plans and include greenhouse gas emission mitigation actions. As part of MTC's conformity determination for this CMP, MTC will evaluate the CMP to see how it meets each of the TCM related to transportation.

Below lists where each TCM is addressed in the Solano County CMP:

Table 15 2017 Bay Area Clean Air Plan Transportation Control Measures

TCM	Description	CMP Reference
TR1 Clean Air Teleworking Initiative	Develop teleworking best practices for employers and develop additional strategies to promote teleworking. Promote teleworking on Spare the Air Days.	Chapter 4, Transportation Demand Management
TR2 Trip Reduction Programs	Implement the regional Commuter Benefits Program (Rule 14-1) that requires employers with 50 or more Bay Area employees to provide commuter benefits. Encourage trip reduction policies and programs in local plans, e.g. general and specific plans while providing grants to support trip reduction efforts. Encourage local governments to require mitigation of vehicle travel as part of new development approval, to adopt transit benefits ordinances in order to reduce transit costs to employees, and to develop innovative ways to encourage rideshare, transit, cycling, and walking for work trips. Fund various employer-based trip reduction programs.	Chapter 4, Transportation Demand Management
TR3 Local and Regional Bus Service	Fund local and regional bus projects, including operations and maintenance.	Chapter 3, System Performance and Chapter 8 CIP
TR4 Local and Regional Rail Service	Fund local and regional rail service projects, including operations and maintenance.	Chapter 3, System Performance and Chapter 8 CIP
TR5 Transit Efficiency and Use	Improve transit efficiency and make transit more convenient for riders through continued operation of 511 Transit, full implementation of Clipper fare payment system and the Transit Hub Signage Program.	Chapter 3, System Performance
TR6 Freeway and Arterial Operations	Improve the performance and efficiency of freeway and arterial systems through operational improvements, such as implementing the Freeway Performance Initiative, the Freeway Service Patrol, and the Arterial Management Program.	Chapter 8, Capital Improvement Program
TR7 Safe Routes to School and Safe Routes to Transit	Provide funds for the regional Safe Routes to School and Safe Routes to Transit Programs.	Chapter 3, System Performance and Chapter 8 CIP

TCM	Description	CMP Reference
TR8 Ridesharing, Last-Mile Connection	Promote carpooling and vanpooling by providing funding to continue regional and local ridesharing programs, and support the expansion of carsharing programs. Provide incentive funding for pilot projects to evaluate the feasibility and cost-effectiveness of innovative ridesharing and other last-mile solution trip reduction strategies. Encourage employers to promote ridesharing and car sharing to their employees.	Chapter 4, Transportation Demand Management
TR9 Bicycle and Pedestrian Access and Facilities	Encourage planning for bicycle and pedestrian facilities in local plans, e.g. fund bike lanes, routes, paths, and bicycle parking facilities.	Chapters 3, 4, and Chapter 8 CIP
TR10 Land Use Strategies	Support implementation of Plan Bay Area, maintain and disseminate information on current climate action plans and other local best practices, and collaborate with regional partners to identify innovative funding mechanisms to help local governments address air quality and climate change in their general plans.	Chapter 5, Land Use Analysis
TR11 Value Pricing	Implement and/or consider various value pricing strategies.	Not applicable to Solano County
TR12 Smart Driving	Implement smart driving programs with businesses, public agencies, and possibly schools and fund smart driving projects.	Chapter 4, Transportation Demand Management
TR13 Parking Policies	Encourage parking policies and programs in local plans, e.g. reduce minimum parking requirements; limit the supply of off-street parking in transit-oriented areas; unbundle the price of parking spaces; support implementation of demand-based pricing (such as “SF Park”) in high-traffic areas.	Chapter 4, Transportation Demand Management
TR15 Public Outreach and Education	Implement the Spare the Air Every Day Campaign including Spare the Air alerts, employer program, and community resource teams, a PEV Outreach campaign, and Spare the Air Youth Program.	Chapter 4, Transportation Demand Management

SOURCE: BAY AREA AIR QUALITY MANAGEMENT DISTRICT’S 2017 CLEAN AIR PLAN

4.3 Transportation Demand Management in Solano County

STA and its member agencies remain committed to reducing congestion on Solano County’s roadways through TDM measures. As the population of Solano County and its surrounding areas grow, peak-period travel speeds will continue to deteriorate on freeways and arterials within the county without mitigation. TDM strategies are crucial because they provide a more cost-effective way of reducing congestion without expensive infrastructure expansion. Along with improving roadway operations and local transit service,

TDM measures are crucial to improving operating efficiency within the existing county transportation system.

TDM strategies in Solano County can be divided into three main categories:

- Trip Reduction: Focuses on reducing single occupancy vehicle trips by promoting alternative forms of transportation, such as transit, carpooling, cycling, etc.
- Operational Improvements: Mostly uses existing transportation system to provide upgrades to improve operations, such as signal timing, parking management, or HOV lanes. Some capacity increases are used, such as on the Solano Express Lanes project.
- Land Use: Promoting denser and mixed use land uses near transit stations

How are Solano Residents Commuting?

Before exploring the various options available to Solano residents to help out their commute, it may be helpful to show how Solano residents are commuting currently. Based on data from the American Community Survey (ACS), there are 203,334 Solano residents age 16 years or older who are in the workforce. Of these, they are commuting in the following ways:

Table 16 Solano County Commute Modes 2021

Commute Mode	Number of Workers		Percentage by Mode	
	2021	2017	2021	2017
Drive Alone	149,972	148,850	73.80%	76.60%
Worked at Home	25,953	7,938	12.80%	4.10%
Carpooled	16,838	26,488	8.30%	13.60%
Other Means (Including Cycling)	4,397	2,667	2.20%	1.40%
Public Transportation	3,455	5,745	1.70%	3.00%
Walked	2,719	2,620	1.30%	1.30%
TOTAL	203,334	194,308	100%	100%

SOURCE: 2017 AMERICAN COMMUNITY SURVEY AND 2021 (MOST RECENT DATA)

While the percentage of public transportation, walking, and cycling commuters remains low, it is noteworthy to point out the high percentage of people who now work at home due to changes in commute patterns due to COVID-19. In 2017, the percentage of people who worked at home was only 4.1%. Also, notable is the drastic reduction in commuters who carpool in Solano County as it went from 13.6% in 2017 to 8.3%.

The mean travel time to work for Solano residents is 31.4 minutes. Solano commuters are commuting to the following locations:

Table 17 Destination of Solano County Commuters; 2020

Work Destination	Number of Commuters		Percentage by Destination	
	2020	2015	2020	2015
Solano County	65,332	66,899	33.8%	35.8%
Contra Costa County	24,597	23,431	12.7%	12.5%
Alameda County	17,458	15,720	9.0%	8.4%
Sacramento County	12,767	12,288	6.6%	6.6%
Napa County	12,253	12,207	6.3%	6.5%
San Francisco City & County	12,111	11,635	6.3%	6.2%
Santa Clara County	6,904	6,432	3.6%	3.4%
Marin County	5,586	5,001	2.9%	2.7%
Sonoma County	5,530	5,514	2.9%	3.0%
San Mateo County	5,266	5,300	2.7%	2.8%
Other Counties	25,610	22,322	13.2%	12.0%

Source: Center for Economic Studies, 2020 and Solano County Index of Economic and Community Progress 2017

Trip Reduction Programs

Solano Mobility implements most of the trip reduction based TDM programs in Solano County. Some of the programs that are currently offered include:

Mobility Call Center

Tying all of these services together is the Solano Mobility Call Center, the one stop shop for all things alternative transportation in Solano County. The Mobility Call Center has friendly staff that will answer questions on transportation options, such as how to form a vanpool, which bus to take to get from Point A to Point B, or how to become ADA certified to use Paratransit and the Inter City Taxi Card program. The call center is open Monday-Friday from 8am-5pm, and can be visited in person at the STA office building.

Call center staff are also involved in promoting local and regional transit services, as well as other alternative modes of transportation at community events, job fairs, health fairs, and other employer events.

Lyft First/Last Mile Program

Solano Mobility has partnered with Lyft to offer the First/Last Mile Program that provides 80% subsidized Lyft rides (up to a maximum of $25 per ride) to and from 12 Solano County transit hubs for Solano County Employees and residents who have trouble connecting to transit for their commute. The goal is to encourage transit use and decrease single occupancy vehicle usage. In FY 2022-23 there were 643 commuters registered, increasing the Program participation to 1,296.

STA in partnership with the Capitol Corridor launched an Amtrak + Lyft Program designed to reduce greenhouse gas emissions by reducing the number of solo vehicles on the road. For $20, the program provides participants a 10-ride Amtrak pass plus Solano County train station Lyft connections (up to $25). Participants must be residents of, or employed in Fairfield, Suisun City, or Vacaville and new to Amtrak for commuting. Participants can use this program up to 3 times. In FY 2022-23 twenty three (23) commuters enrolled in the program increasing the total enrollment to 100 since the start of the program in 2019.

Carpool/Vanpool Subsidies

Vanpooling is a convenient way to commute to work, especially for people who work far from home. Vanpools can cut commute times in half and potentially save thousands of dollars a year in commute costs. Official vanpools have 7 to 15 passengers, including the driver who usually rides for free.

In April 2021, Solano Mobility launched a new Vanpool subsidy to encourage residents and employees in Solano County to use vanpools for their commute to work. In partnership with Commute with Enterprise, STA's Solano Mobility provides a $200 per month subsidy for two years to new, qualifying vanpools. This subsidy adds to the Metropolitan Transportation Commission (MTC) $400 subsidy for a total of $600 per month to help offset the cost of new vanpools. STA subsidized 12 vanpools in FY 21-22, and this increased to 23 vanpools in FY 22-23.

Another form of commuting is the casual carpool, which was popular prior to Covid-19. It is unknown how well the casual carpool has recovered. Unofficial pick-up points are established across the Bay Area (two in Solano County: Fairfield Transportation Center and Vallejo's Curtola Park and Ride). Commuters who wish to catch a ride line up at these locations. Other commuters who are traveling to San Francisco and want to pick up passengers can go to these locations and pick up several people, who pay a small fee to cover bridge toll and gas. Forming these carpools allows the vehicle to use the HOV lanes and receive discounted bridge tolls, saving time and money for all involved. This service began mostly organically, but is growing in popularity and becoming more organized. In 2018, STA partnered with MTC to conduct a casual carpool survey at the Fairfield Transportation Center, and the Curtola Park and Ride in Vallejo. They found that the top three reasons that commuters choose to casual carpool is to save money, to save time, and to take advantage of the HOV lane.

Solano County has 20 park and ride locations countywide with at least one in each city to serve carpools and vanpools. Many choose to meet at these locations as they provide a central location for carpoolers and vanpoolers to meet near transit stops and/or freeways.

Table 18 Solano County Park and Ride Locations

City	Location	Parking Capacity	EV Charging?	Bike Parking?	Transit Service?
Benicia	E. 2nd St & E. S St	14	No	No	No
Benicia	Park Rd & Industrial Wy (Benicia Bus Hub)	50	Yes	No	Solano Express Blue Line
Dixon	Market Ln & Pitt School Rd	90	No	Yes	Solano Express Blue
Dixon	N. Jefferson & West B St (Dixon Trans Ctr)	114	Yes	Yes	Dixon Readi-Ride
Fairfield	Red Top Rd & I-80	214	No	Yes	No
Fairfield	Fairfield Trans. Ctr. Cadenasso Dr & I-80	640	Yes	Yes	Solano Express Blue Line, Green Line & Red Line, FAST Local, RV Delta Breeze, Napa VINE
Fairfield	Oliver Rd & I-80	178	No	No	No
Fairfield	Fairfield-Vacaville Hannigan Train Station	139	No	Yes	Capitol Corridor, FAST Local
Rio Vista	1 Main St	10	Yes	No	Rio Vista Delta Breeze
Suisun City	Solano Rail Hub (Suisun-Fairfield Train Station)	306	Yes	Yes	Capitol Corridor, Solano Express Red Line & Green Line, FAST Local, RV Delta, Breeze, Napa VINE
Vacaville	Cliffside Dr & Mason St	125	No	No	No
Vacaville	Davis St & I-80	250	Yes	Yes	Vacaville City Coach
Vacaville	Bella Vista & I-80	201	Yes	Yes	No
Vacaville	Leisure Town Rd & I-80	45	Yes	No	No
Vallejo	Benicia Road & I-80	14	No	No	No
Vallejo	Curtola Park and Ride	590	Yes	Yes	Solano Express Yellow Line, SolTrans Local
Vallejo	Lemon St & Curtola	64	No	Yes	SolTrans
Vallejo	Magazine St & I-80	19	Yes	No	SolTrans
Vallejo	Vallejo Transit Center & Ferry Terminal	900	No	Yes	SF Bay Ferry, Solano Express Red Line & Yellow Line, Soltrans Local, Napa VINE

Guaranteed Ride Home

Another incentive offered by Solano Mobility to encourage alternative forms of transportation is the Guaranteed Ride Home program. One of the top reasons cited for not using transit and other alternative modes is needing to go home in case of an unexpected emergency; such as an illness, picking up a child from school, etc. The Guaranteed Ride Home Program supports Solano County employees who commute by reimbursing the cost of a ride home (up to $100) if an emergency arises or their transit route is canceled. Program participants may use taxi, Uber, or Lyft. To participate in the program, commuters must live in Solano County. Program participants who commute into Solano County must live within 100 miles of Solano County. Participants can use the program no more than three times per calendar month and no more than six times during a calendar year. There are 3,844 Commute Solano members registered for the program.

Commute Solano Online Platform

Solano Mobility works with employers to help them understand their options when it comes to offering commute incentives to their employees. As part of the employer program, Solano Mobility developed an online Employer Toolkit that will give employers the resources to create and carry out their benefits program. The website platform provides access to STA's commuter programs, rideshare matching, trip planning and e-incentives for alternative commutes.

The commuterinfo.net platform was developed in partnership with STA and Ride Amigos to host all of Solano Mobility's TDM programs in one online platform. Using this, an employer may choose from a menu of options when building their commuter benefits program. Commuter benefits are required for employers with 50 or more employees in the Bay Area Air Quality Management District (BAAQMD).

One program on the platform is the Solano Commute Challenge that rewards commuters for using alternative modes of transportation. Typically, these are in the form of prizes or gift cards, offered to commuters who log their trips on the commuterinfo.net platform.

During the second quarter of FY 22-23, 733 commuters logged approximately 9,800 alternative commute trips for an estimated savings of 68.3 tons of CO2. 217 new users joined during the quarter.

Telecommuting/Spare the Air

Telecommuting is an effective method to reduce peak hour traffic congestion. Many employees have jobs that do not have to be performed at the worksite each day. Other employees may have jobs that could consider a flexible work schedule outside of the normal 8am-5pm work hours. Whenever feasible, employers are encouraged to implement telecommuting or flexible work hour arrangements.

STA also supports BAAQMD's Spare the Air program, which aims to reduce single occupancy vehicle use on days where air quality is poor. On such days, employees who are able are encouraged not to drive, or to use alternative modes of transportation.

Additionally, STA supports MTC and BAAQMD in their efforts to implement regional smart driving as part of the outreach component of their Transportation Climate Action Campaign. Smart driving teaches motorists to drive in a more fuel efficient manner.

Active Transportation

As part of the overall TDM strategy for Solano County, STA through its Solano Mobility and Safe Routes to School programs encourages increased biking and walking for commuting and recreational purposes by providing resources and funding capital projects.

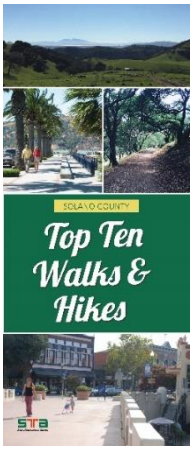
In addition to the existing system, funding strategies, and recently completed capital projects outlined in Chapter 3, STA and Solano Mobility offer the following programs/resources to encourage Solano County residents to bike and walk.

Biking and Walking Resources

Bucks for Bikes: Commuters who live or work in Solano County and wish to purchase a new bike for the purposes of commuting can get up to 60% off of the cost of the bike and helmet up to $300. Riders are encouraged to log in their trips on the Commute Solano (Rideamigos) platform to earn additional incentives. In FY 2022-23 there were 12 participants.

Top 10 Bike Rides in Solano County: Brochure and interactive website that highlights the best bike rides in Solano, with rides ranging from easy to difficult. The brochure wascreated in collaboration with the Solano Bicycle Advisory Committee.

Top 10 Walks and Hikes in Solano County: Similar to the Top 10 Bike Rides, this brochure lists the best walks and hikes of varying difficulty. Both urban walks and remote hikes are included. The brochure was created in collaboration with the Solano Pedestrian Advisory Committee.



Xplore Solano Community on the Outerspatial App: STA has partnered with seven member agencies, with the County Office of Education, cities of Fairfield and Vacaville, the greater Vallejo Recreation Department (GVRD), Solano County Parks and Solano Land Trust to create the Xplore Solano Community on the Outerspatial mobile app, which allows digital access to trails, parks, recreational areas, events and destinations across Solano County. Due to the STA's Bicycle and Pedestrian Advisory Committee's recommendation and STA Board support, the Solano County Top Ten Bike Rides and Top Ten Walks and Hikes were made available through the Xplore Solano Community, which expands the reach and access to these brochures.

Yolo-Solano Bike Links Map: Comprehensive map showing all bike facilities in Solano County and most of Yolo County.

Safe Routes to School Program

The Solano Safe Routes to School Program works with each Solano city, school district, and the County of Solano to encourage students to bike and walk to school and address safety concerns around schools. The goals of the program include not only encouraging kids to bike and walk, but to reduce traffic congestion around schools and increase students' daily exercise. Safe Routes to School offers many free programs to Solano County schools, including:

- **Walking School Buses**: Allows kids to walk to school in a safe, supervised manner. Kids can be dropped off at an off-school location and escorted to school by volunteer adults with other kids to school. Walking School Buses help to reduce congestion in front of schools by diverting drop off points.
- **Walking Programs (WoW Wednesday, Fit Friday, etc.**): These regular walk or wheel programs encourage students and families to choose active transportation options on a recurring basis, building healthy habits and providing the school community a regular active travel day each week or on a monthly basis.
- **Enforcement Grants**: Enable local police departments to work with schools to address unsafe biking and walking behavior. Several communities have hired Community Service Officers (CSOs) to work directly with the SR2S programs and implement biking and walking education programs.

- **Safety assemblies**: Fun, educational assemblies put on by local theater groups that teach kids how to safely bike and walk in an interactive way.
- **Bike Rodeos**: These interactive events help elementary students to learn biking and safety skills in a safe and comfortable environment. Various agility courses on are set up on school grounds for students to practice the important skills necessary to ride a bike safely and confidently.
- **Bike Mobile**: Bike Repair: This program provides free bike repair at school and community events.
- **National Bike to School Day in May:** This annual event encourages students to travel to school by bike, scooter or skateboard. Bike safety and helmet education is provided for schools and students that participate. In 2019, 28 schools participated by encouraging student to ride to school with participation in each of the 7 cities and 7 school districts.
- **International Walk to School Day in October**: This annual event encourages school communities to walk to school or park a couple blocks away and walk the rest. This event showsthe impact of walking to school on morning traffic congestion and offers a fun opportunity for students to get some exercise on the way to school. IN 2019, 48 schools participated representing each Solano County city and school district.

4.4 Operational Improvements

High Occupancy Vehicle (HOV)/Express Lanes

HOV lanes provide shorter trip times for public transit and passenger vehicles with multiple occupants by allowing them to queue jump through heavy traffic. As discussed in Section 3.6, the current time savings is approximately 8% and 17% during the peak periods in the peak direction. This time savings encourages more transit usage and carpooling, which in turn reduces congestion for other motorists. Express lanes allow busses and HOVs to travel for free, as in an HOV lane, but also allow single occupancy vehicle to travel in the lane for a toll during peak hours. Since the 2007 CMP update, the Bay Area has begun planning and implementing a region-wide express/HOV lane network. To date, express lanes have been implemented on three Bay Area freeways outside of Solano County (I-680, I-580, and SR-237), and under construction on one other (I-880).

In Solano County, STA in partnership with Caltrans, began construction of the Solano I-80 Express Lanes project in May, 2022. The on-going project will convert a nine mile stretch of existing HOV lanes to express lanes/HOV on I-80 from Red Top Rd to Air Base Pkwy, and add nine miles of new express HOV lanes from Air Base Pkwy in Fairfield to I-505 in Vacaville.

Signal Timing

Signal timing helps to improve the operational efficiency of a CMP roadway in three primary ways:

- Coordinates the flow of traffic on roadways, thereby reducing stop and go traffic
- Ramp metering measures the flow of traffic onto freeways, reducing the congestion that occurs when a large number of vehicles seek to enter the freeway at one time.
- Improves the efficiency of transit services, such as express and local buses by reducing travel times through transit priority signaling.

STA encourages its member agencies to consider signal timing as an operational improvement on their roadways. An example project is transit priority signals adjacent to the Fairfield Transportation Center along Beck Ave and West Texas St in Fairfield for Solano Express buses. Westbound Solano Express buses have to travel through four traffic signals once leaving I-80 to reach the Fairfield Transportation Center. Transponders were installed in each Solano Express bus to activate each traffic signal as it passes through, thus reducing the amount of time each Solano Express bus waits at each light, and improving overall on-time performance.

A completed project STA worked with Caltrans was in installing metering lights on eastbound and westbound on- ramps to I-80 in Fairfield and Vacaville. Currently, metering lights exist in the eastbound and westbound direction on all on-ramps between Redwood St in Vallejo, and I-505 in Vacaville. The first phase (Red Top Rd to N. Texas St in Fairfield) was activated in 2014, with a second phase activated in 2015.

Dedicated Transit Lanes

Another operational improvement strategy that local agencies in the County can deploy to further reduce transit travel time is to install dedicated transit lanes. The STA, for example, in partnership with Caltrans, constructed a transit-only access ramp for eastbound Solano Express (SE) routes from I-80 off-ramp directly to the Fairfield Transit Center bus bay. This improvement reduced transit travel time by approximately six minutes for each bus on the SE's Blue Line, Red Line, and Green Line. The construction of the I-80 managed lanes between Air Base Parkway in Fairfield and I-505 in Vacaville will also provide the likelihood to generate travel time savings to SE buses using the lanes during peak periods.

Parking Management

One of the ways that agencies can further encourage alternative forms of transportation is through parking management. Agencies can encourage employers to offer:

- Discontinue subsidized parking: This is more common in dense, urban areas where parking is at a premium. Most areas in Solano County, with low density land uses and plentiful free parking, would not benefit from this program.
- Parking cash out: State law requires employers with over 50 employees to offer parking "cash-out" programs if they meet the following requirements:
    - The employer leases parking for its employees, and
    - The employer can reduce the number of available parking spaces available to employees without penalty (such as breaking a lease or violating planning regulations).

In these cases, employers are required to offer employees a cash out option for their parking space, if they commute by an alternative mode of transportation. Incentives for employees could be in the form of preferential parking for carpools/vanpools, subsidized transit passes, or bike commuter facilities (such as lockers or showers).

As local agencies, cities and counties can also consider removing minimum parking requirements, or adjusting them in higher density areas near transit. This is particularly important in Priority Development Areas (PDAs), which are typically located near regional transit such as rail, ferry, or express bus service.

4.5 Land Use

Coordination between land use and transportation is a critical part of the overall strategy to reduce congestion on freeways and arterials, as land use decisions can have a much more lasting impact than other TDM programs. There are two components to land use decision making that can have a lasting and beneficial impact on the transportation system:

- Ensuring a good balance of housing and jobs in Solano County: Currently, there are more housing units in Solano County than there are jobs, unique among job-rich Bay Area counties. Ensuring a good balance of jobs to housing units can help to reduce congestion on local roads and highways by locating people closer to where they work, effectively reducing time spent on freeways commuting to work. It also increases the likelihood that they may be willing to try an alternative mode, if they are close enough to bike, walk, or use regional and local transit.
- Locating housing near transit options: Encouraging increased regional and local transit use can be done through land use decisions, simply by placing dense housing or mixed-use developments near transit options. Having high quality transit options within walking distance of housing encourages those residents to commute using transit.

STA is currently working with each of its member agencies to encourage more housing and jobs to be built in each city's Priority Development Area (PDA), as a measure to address the Bay Area's housing crisis. Solano County is the most affordable county in the Bay Area, so it is critical to provide affordable housing options near regional transit service so that new residents commuting to the Bay Area have the option to choose transit, rather than increasing congestion on I-80. Transportation and Land Use is discussed in further detail in Chapter 5.

CHAPTER 5 LAND USE ANALYSIS

5.1 Purpose and Intent of Legislation

One of the key features of the 1990 CMP legislation was the attempt to link land use decisions to the ability to provide satisfactory transportation facilities and services. Since its inception the CMP legislation has required CMAs to include a program to analyze the impact of local land use decisions on the regional transportation system (both highways and transit). The program also must include an estimate of the costs to mitigate the impact of such developments. Costs to mitigate interregional travel (trips not beginning or ending in Solano County) may be excluded.

While the legislation requires STA to track and comment on proposed development, it does not change the role of local jurisdictions in making their own land use decisions, and in determining the responsibilities of mitigating impacts. Local jurisdictions still have full control over their land use decisions; the CMP Land Use monitoring program simply allows the STA to monitor the effects of development on the regional transportation system, and make suggestions to mitigate the impacts if necessary. The intent of the Land Use Analysis Program is to improve the linkage between local land use decisions and regional transportation facility decisions; to better assess the impacts of development in one community on another; and to promote information sharing between local governments when the decisions made by one jurisdiction have an impact on another.

STA serves as a resource to local governments when assessing the impact of land use changes on the regional transportation system. For example, STA's countywide travel model, the Solano-Napa Activity Based Model (SNABM), is available for local jurisdictions to analyze the countywide transportation effects of their land use decisions and general plan amendments.

At the regional level, MTC's has adopted Resolution 4530, which sets a regional Transit-Oriented Communities (TOC) Policy, which seeks to support the region's transit investments by creating communities around transit stations along transit corridors that not only support transit ridership, but that are places where Bay Area residents of all abilities, income levels and racial ethnic backgrounds can live, work and access services, such as education, childcare, and healthcare. The TOC Policy is rooted in Plan Bay Area 2050, the region's Long Range Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and addresses all four elements of the Plan, including, transportation, housing, the economy, and the environment. The TOC Policy builds on the Transit-Oriented Development Policy adopted in 2005. The TOC Policy reflects the changes in regional transportation and land use trends since 2005.

5.2 Current STA Land Use & Transportation Planning Efforts

A unique aspect of this CMP is noting how STA is linking land use and transportation decisions to help mitigate congestion. While serving as a congestion management agency that is focused on transportation planning, projects, and programs, STA has traditionally also been involved in land use planning through the lens of linking it to transportation. Land use and transportation planning are closely linked together, as the decisions of one can greatly affect the other. For example, locating more dense housing near a high-volume transit stop can have a more positive effect on freeway congestion, as more of these residents are likely to use transit to commute to work. Consequently, low density suburban development can have the opposite effect if it is not located near transit, as these residents would be more likely to need to rely on a car. STA has been promoting integrated transportation and land use planning since the late 1990's.

Priority Development Areas (PDA)

STA has been linking transportation with land use decisions since the late 1990's and early 2000's, when the Jepson Parkway Concept Plan was completed (the first of its kind in the Bay Area). STA and MTC also helped fund one of the Bay Area's first Transportation for Livable Communities (TLC) capital project in 2001; a streetscape project in downtown Rio Vista. As the regional TLC program run by MTC has evolved into the PDA Program it is today, STA has been working to plan for smart land uses near regional transit centers, and invest in capital projects to support them.

In 2008, prior to MTC's One Bay Area Grant (OBAG) process, local jurisdictions designated areas within their communities that they would like to prioritize for growth as part of an Association of Bay Area Governments (ABAG) program. These areas, called PDAs, are at least 100 acres in size, located near transit, and are areas that the local jurisdiction has prioritized for increased housing and/or job growth and community amenities.

Located in downtowns, along main streets around rail stations and other transit hubs, PDAs help the Bay Area reduce greenhouse gas emissions and solve our housing crisis. All PDAs are created and planned by local governments, which nominate eligible areas to ABAG for adoption.

PDAs promote greater equity for all by increasing access to housing, and economic and cultural opportunities, regardless of race or income. With a variety of mobility options, PDAs enable residents to live a car-free or car-light lifestyle. PDAs are located in places served by existing infrastructure, making the most of public investments and minimizing development impacts on communities and the environment.

Bay Area local governments have established more than 200 PDAs since 2008. Through the PDA Planning Grant and Technical Assistance Grant programs, cities across the region have adopted plans for roughly 110,000 new homes and 200,000 jobs.

There are 16 PDA in Solano County listed in **Table 19**.

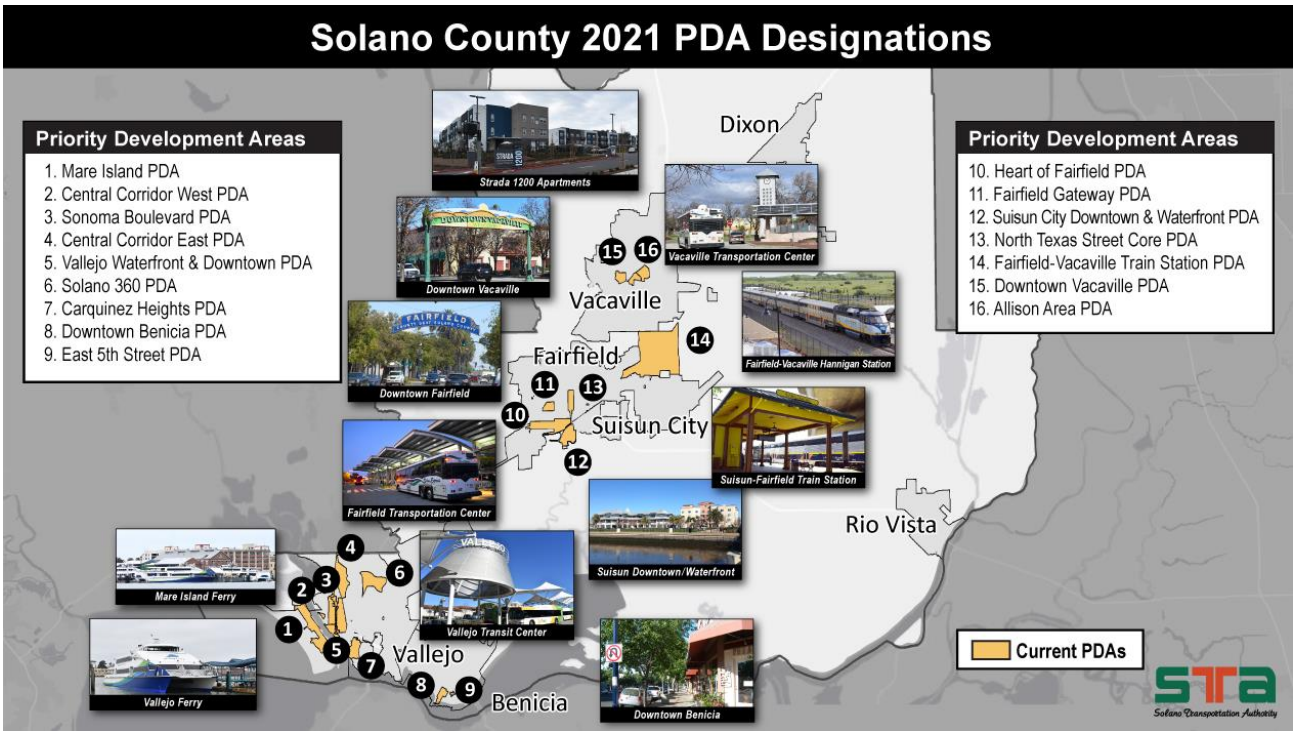
Table 19 Solano County Priority Development Areas (PDA)

Jurisdiction	PDA
Benicia	Downtown Benicia PDA
Benicia	East 5th Street PDA
Fairfield	Heart of Fairfield
Fairfield	Fairfield Gateway
Fairfield	North Texas Street Core
Fairfield	Fairfield-Vacaville Hannigan Train Station
Fairfield	Downtown & Waterfront
Vacaville	Allison Area PDA
Vacaville	Downtown Vacaville PDA
Vallejo	Central Corridor East PDA
Vallejo	Solano 360 PDA
Vallejo	Central Corridor West PDA
Vallejo	Waterfront & Downtown
Vallejo	Sonoma Boulevard
Vallejo	Carquinez Heights PDA
Vallejo	Mare Island PDA

As of Fiscal Year (FY) 2022-2023, STA has invested over $253 million in transportation infrastructure within PDAs, ranging from large capital projects like the Fairfield-Vacaville Hannigan Train Station, to pedestrian enhancements like the Vallejo Downtown Streetscape Project. These investments have helped to facilitate past, current, and future housing and employment growth within Solano County's PDAs, and has enhanced the landscape and transportation facilities of each. STA has also invested significant funds in PDA planning, including funding the completion of five PDA plans in Benicia, Dixon, Fairfield, Rio Vista, and Suisun City. STA, in partnership with local agencies, has completed concept plans for the Jepson Pkwy corridor and the North Connector corridor.

The MTC/ABAG issued a call for grant applications for their Priority Production Area (PPA) and Priority Development Area (PDA) Grant Program in December 2022. The PDA Grant Program is intended to promote higher density development close to transit facilities. As of June 2023, Benicia, Fairfield, Suisun City, Vacaville and Vallejo were successful in receiving a combined total of $4.3 million in PDA Grant awards for their respective PDA planning implementation.

Figure 18 Solano County Priority Production Areas (PDA) Designations 2021



Priority Conservation Areas (PCA)

PCAs represent areas that local jurisdictions have set aside for conservation; for open space, agricultural, or recreational purposes. PCAs are categorized by four designations that recognize the vitality of the area's natural systems, rural economy and health of all residents. These four designations are natural landscapes, agricultural lands, urban greening, and regional recreation. Currently, Solano County has 10 designated PCAs.

Table 20 Solano County Priority Conservation Areas (PCA)

Jurisdiction	PCA
Fairfield	Fairfield-Vacaville Greenbelt & Cement Hill PCA
Vallejo	Mare Island Open Space
Vallejo	Napa-Sonoma Marshes Wildlife Area
Vallejo	White Slough Wetlands Area
Unincorporated Solano County	Blue Ridge Hills PCA
Unincorporated Solano County	Suisun Valley PCA
Unincorporated Solano County	Tri-City & County Cooperative Planning Area PCA
Unincorporated Solano County	Cache Slough
Unincorporated Solano County	Dixon Agricultural Service Area
Unincorporated Solano County	Western Hills PCA

Figure 19 Solano County Priority Conservation Areas (PCA) Designations 2021

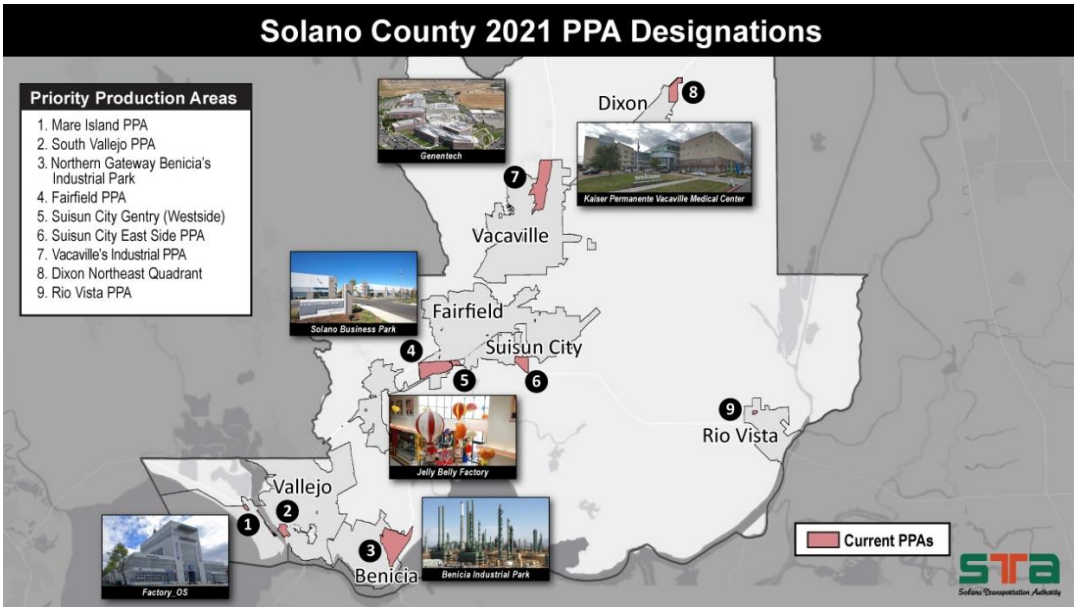
Priority Production Areas (PPA)

The preservation and expansion of businesses are essential to the growth of the economy, and critical in ensuring that Solano County residents have access to good, middle-wage jobs. PPAs identify clusters of industrial businesses and prioritize them for economic development investments and protection from competing land uses. These districts are already well-served by the region's goods movement network. Typical businesses in PPAs include manufacturing, distribution, warehousing and supply chains. Currently, Solano County has ten designated PPAs as identified in Table 21.

Table 21 Solano County Priority Production Areas (PPA)

Jurisdiction	PPA
Benicia	Northern Gateway - Benicia's Industrial Park
Dixon	Northeast Quadrant
Fairfield	Fairfield PPA
Rio Vista	Rio Vista PPA
Suisun	Gentry PPA
Suisun	East Side PPA
Vacaville	Airport Business Area
Vacaville	Interchange Business Park
Vacaville	Vacaville-Golden Hills Business Park
Vallejo	South Vallejo PPA
Vallejo	Mare Island PPA

Figure 20 Solano County Priority Production Areas (PPA) Designations 2021



Housing and Comprehensive Transportation Plan (CTP) Land Use

As the Bay Area's housing crisis deepens, Solano County has stood out as the most affordable county in the region. More Bay Area residents are moving to Solano in search of less expensive housing and a relatively reasonable commute to their jobs in the Bay Area. As the CMA for Solano County, STA is committed to relieving and helping to mitigate congestion on I-80 and other highways countywide. As such, STA has been working with its member agencies to build more housing in their Priority Development Areas (PDAs) near their transit centers. STA has co-hosted two summits on housing, bringing together elected officials and staff from across the county.

The second of these occurred in February 2019, and drew an attendance of nearly 200 people. STA has also been meeting with each jurisdiction to discuss their current and upcoming housing projects, and to identify potential transportation related projects in these areas that might incentivize developers to build housing. Another task has been identifying funding sources for these projects, and in response STA developed the SubHIP (Suburban Housing Incentive Pool) pilot program, which brought $4 million in 2020 to Solano County to build a transportation related project that will directly benefit housing growth near the Hannigan Train Station (Fairfield-Vacaville Hannigan Train Station) PDA and near the Vacaville Transportation Center PDA. STA is also working with the cities and county to leverage SB2 planning and capital funds with transportation funding to support affordable housing production adjacent to regional transit.

In addition, the STA was designated by the County of Solano to be the County Collaborative on Housing in an effort to coordinate with ABAG on expediting planning funding to assist with the cities and the County Housing Element Updates. The County Collaborative on Housing designation made available Regional Early Action Planning (REAP) grant resources for the STA and its member agencies to use for Regional Housing Needs Allocation (RHNA) process and in updating their individual Housing Elements.

Each City and the unincorporated County have been working on their Housing Elements. Five member agencies (Dixon, Fairfield, Rio Vista, Suisun City, Vacaville) had their Housing Elements approved by the State of Housing and Community Development (HCD). The three remaining member agencies (Benicia, Vallejo, unincorporated County) are close to wrapping up their Housing Elements before or by the end of Spring 2024.

Tying all of these efforts together is the Comprehensive Transportation Plan (CTP) Land Use Chapter. This chapter will assess past and current development in Solano County's PDAs, and lay a foundation for helping STA understand future growth needs. It will also identify potential strategies for incentivizing growth in PDAs.

In addition to seeking funding for housing and transportation projects at the regional level, funding sources for these projects exist at the State level as well. A prime example of this is the Affordable

Housing and Sustainable Communities (AHSC) grant from the California Department of Housing and Community Development. The purpose of the grant is to fund land use, housing, transportation, and land preservation projects that support in-fill and compact development that reduce greenhouse gas (GHG) emissions. STA has applied for these grant funds in the past and will continue to pursue future opportunities.

5.3 Thresholds for Analysis

As part of the Land Use Analysis program, STA requests that all local jurisdictions in Solano County (in coordination with their respective Planning/Community Development departments) submit two types of information:

- Development notices as they occur prior to the public comment period
- General plan projections on land use/housing/jobs when regional model updates occur

These two submittals of information serve different purposes. The first allows STA to review land use developments as they occur and submit comments if necessary. Typically, STA will review a notice if it meets the following criteria:

- The development is projected to produce more than 100 trips in the P.M. peak hour
- A General Plan update is occurring
- A General Plan amendment is occurring

The P.M. peak hour is used for determining a threshold of trips because the P.M. peak hour typically experiences a greater amount of congestion than that A.M. peak hour. Examples of projects that typically meet the 100-trip threshold include 100 single-family homes, 150 apartment units, 5,000 square feet of retail space, or 40,000 square feet of office space.

When noticing a project to the STA, the following information should be included:

- Location of the project with maps noting street access locations
- Proposed project land use(s) and number of dwelling units or square footage of development
- Any available traffic studies, including trip generation rates assumed in determining whether the project exceeds the 100 trip threshold
- Expected occupancy of each land use in 2040, with completion date and phasing

Once STA receives notice of a development meeting these criteria, it will conduct a review and utilize the Solano Napa Activity Base Model (SABM) if needed to analyze the impacts of the development on the regional transportation system. The analysis process may be done through the existing CEQA process in order to avoid duplication of efforts. STA will either find the development to adequately mitigate the effects of the added trips on the CMP Network, or it will submit comments on potential mitigation measures. These may include (but are not limited to): accommodating bikes and pedestrians, adding

transit service, or minimizing parking. STA will work with the local jurisdiction(s) to bring the project into full compliance with CMP standards. In the unlikely event that a project should be found out of compliance, a Deficiency Plan would need to be filed, explained in Chapter 6.

The second data collection method is general plan projections for land use, housing, and jobs. Since the SNABM relies on each of these projections to make accurate assumptions about future traffic patterns, it is critical that each jurisdiction submit these projections whenever updates to the model occur. This typically happens when MTC releases its new RTP/SCS, which is every 5 years. In 2020, the STA completed an update to the SNABM that aligned with MTC's Travel Model 1.5. Additionally, STA worked with its member agencies to add the most recent general plan projections on land use, housing, and jobs. Additional calibration may be done in the future when MTC releases its travel model 2.0.

5.4 Switch to Vehicle Miles Traveled (VMT)

As discussed in Chapter 2, starting July 1, 2020, SB 743 changed the preferred method of analysis of transportation impacts under CEQA from LOS to VMT. The legislation does not require the shift to occur in CMP monitoring at this time, however STA expects that the shift will occur within the next couple of CMP monitoring cycles.

For local governments, the legislation represents a significant change in how CEQA analysis will be conducted. Cities and counties are required to consider mitigation efforts beyond reducing traffic congestion; they are be required to consider measures that will increase biking, walking, transit use, carpooling/vanpooling, or other alternative modes of transportation. This is due to the fact that each project will be required to analyze how many VMT will result from the project. In other words, if a project is designed in such a way that commuters are encouraged to drive, it will result in a higher VMT forecast. New CEQA regulations require that the City or County make efforts to reduce the amount of VMT a project would produce. It is a fundamental switch away from LOS, which only forced cities and counties to consider how their project would affect traffic congestion on nearby roadways.

For STA, the VMT switch will affect the way the Land Use Analysis program in the Solano CMP is conducted. Rather than examining how a project or general plan amendment will affect the transportation system's LOS, it will examine how much it will grow the regional transportation system's VMT by. Mitigation projects will focus on reducing overall VMT, rather than improving a freeway or intersection's LOS. This will result in more bike and pedestrian or TDM related projects, rather than capacity increasing roadway projects. It is expected that in the 2025 CMP Update, more details will be available on how the VMT metric will be incorporated into the CMP. Within this context, the STA has begun to work with its member agencies to consider a VMT mitigation tool that provides resources to provide member agencies with options on how to reduce VMT as part of their CEQA analysis.

CHAPTER 6 LOCAL CONFORMANCE AND DEFICIENCY PLANS

6.1 Purpose and Intent of Legislation

CMP legislation as outlined in California Government Code Section 65089.4 requires STA, as the congestion management agency for Solano County, to determine conformance for all local jurisdictions in Solano County. The determination is based on the local jurisdictions participation in:

- Maintaining the highway LOS standards outlined in the CMP (Chapter 2)
- Participating in adoption and implementation of a deficiency plan if a segment of the CMP Network is found to be out of compliance with established LOS levels
- Participate in a program to analyze the impact of land use decisions, including the estimate of costs associated with mitigating these impacts

By monitoring congestion on the CMP Network biannually, STA is taking steps to ensure that all Solano County jurisdictions will remain in compliance.

6.2 Role of Local and Regional Agencies

MTC

As the Metropolitan Planning Organization (MPO) for the Bay Area, MTC is tasked by the CMP legislation to ensure that each Bay Area county's CMP conforms to its guidelines and meets the goals of the most recently adopted RTP/SCS, Plan Bay Area 2050. While STA makes a conformance determination for each of its member agencies, MTC will make a conformance finding for the Solano CMP itself. MTC also ensures consistency between its regional travel demand model and the countywide model maintained by STA, explained in greater detail in Chapter 7.

STA's Member Agencies

STA's member agencies play a critical role in the development and implementation of the CMP. As the agencies that own and maintain local arterials in the CMP Network, the member agencies play a vital role by maintaining proper LOS on their local arterials, and implementing projects to improve operations on each of them. Member agencies also participate in the development of a deficiency plan, should one be necessary. Deficiency plans allow STA to collaborate with the member agency in question to address severe congestion on one of the agency's roadways, and find solutions to mitigate it.

The member agencies also make land use decisions on major projects, General Plan amendments, and General Plan updates. Participation in the CMP Land Use Analysis Program allows them to collaborate with STA and with each other to examine the impact their land use decisions could have on the countywide transportation system. STA will work with their member agencies to address any impacts a project could bring, should any potential impact be found.

6.3 Local Government Conformance Requirements

Outlined below are the major actions that may be required to ensure CMP conformance. Currently STA performs all required LOS monitoring, and works with its member agencies to mitigate congestion if needed.

Maintaining Highway Level of Service (LOS) standards outlined in CMP

STA monitors the CMP Network biannually on designated segments within Solano County and its jurisdictions. Currently, STA and its consultant perform all traffic counts and data collection associated with the monitoring. Turning movements are taken at the five CMP Network intersections, as well as bike and pedestrian counts when available. LOS analysis for the biannual CMP is based on these counts. To determine trends on each individual segments, the LOS is compared with previous CMPs. Additional LOS analysis can be conducted to exclude trips that do not have an origin or destination in the region (inter-regional trips), and also trips due to low income housing. Should a segment fall below the established LOS standard for that segment, a deficiency plan may be necessary to mitigate the congestion.

Participation in Required Deficiency Plans

When a roadway segment falls below the established LOS standard, the congestion should be monitored on this segment for two CMP cycles. If, after two cycles the segment still falls below the LOS standard, it may be considered deficient. A determination must be made to see if a Deficiency Plan will be required, once the exempted trips allowed in the State legislation are assumed not to exist (e.g. interregional travel and trips generated from low-income housing).

If it is determined that the non-grandfathered segment doesn't meet the accepted LOS standards, then the jurisdiction responsible for the segment must immediately propose and designate funds for measures that would improve the LOS to acceptable standards, or create a Deficiency Plan in accordance with CMP requirements. A deficiency plan must include

- Analysis of the cause of the deficiency and defined improvements to the facility to maintain previous LOS standards, or
- Defined improvements that have a measurable improvement on the transportation system's LOS or substantial air quality benefit and determine the cost of the improvements.

LOS Conformance Findings

Currently, all incorporated cities in Solano County are in conformance. The unincorporated Solano County is also in conformance at this time, although one local roadway segment has fallen below the acceptable standard.

Peabody Road within Solano County, between the Fairfield city limits and Vacaville city limits, was found to operate at LOS F for the first time since the CMP Network was monitored. The LOS of this segment in 2019 and in 2010 was LOS E.

If this segment continues to operate at LOS F in the next CMP monitoring cycle in 2025, then Solano County will be deemed to be out of conformance at that time and will be required to mitigate and/or develop a deficiency plan. At this time, no action is required.

Land Use Analysis

Land use impact analysis as required by the CMP are detailed in Chapter 5, but in general entail:

- Inform STA of any general plan update, general plan amendment, or any development proposal that would generate 100 or more P.M. peak hour trips so that the impacts on the countywide transportation system can be fully analyzed. This may include applying the Solano-Napa Activity Based Model (SNABM) to see how the proposed project will impact congestion.
- Periodically update the SNABM with new General Plan land use, housing, and jobs projections from each jurisdiction.

Both of these measures allow STA to collaborate with its member agencies to examine how land use decisions may impact the countywide transportation system, and propose mitigation measures if necessary.

Land Use Non-Conformance Procedures

If a project or general plan update/amendment causes a segment or intersection in the CMP Network to fall below the adopted LOS standard within the seven-year timeframe of the Capital Improvement Program (CIP), and the jurisdiction does not place mitigations on the project to bring the LOS up to an acceptable standard, then the jurisdiction in question may be required to complete a deficiency plan. A deficiency plan is required by California law if STA believes that a local government is not conforming to CMP requirements, and the following steps are taken:

- A public hearing is held to determine areas of nonconformance
- Written notice is given to the jurisdiction citing specific areas of non-conformance
- The jurisdiction is given 90 days past the date written notice is given to remedy the instances of nonconformance

If, after all of these steps are taken and the jurisdiction is still found to not be in compliance, the jurisdiction may face withholding of certain gas tax subvention funds and/or not having projects programmed in the RTIP.

CHAPTER 7 TRAVEL DEMAND MODEL

7.1 Purpose and Intent of Legislation

The CMP Legislation requires all CMAs to develop a uniform database on traffic impacts in the form of a transportation computer model. State statute also requires this model to be consistent with the modeling methodology and databases used by the regional transportation planning agency. The CMA also approves sub-county area transportation models and models used by local jurisdictions for land-use impact analysis, if local jurisdictions decide to use them.

The purpose of developing and maintaining a travel model is to help the CMA in identifying projects and programs that will have the most impact on mitigating congestion and maintaining LOS standards. A travel model can help to consider the benefits of transit service and TDM programs, and to show the benefit of capital projects in reducing congestion on the CMP Network. It is also used to help local agencies in assessing the impact of new development on the transportation system. Inputting local land use projections is an important component of travel modeling that helps to provide accurate projections in the model's horizon year.

7.2 Overview of the Solano Napa Activity Based Model (SNABM)

STA maintains the SNABM, which serves as the countywide travel demand model for Solano County and Napa County. The model was created in coordination with the Napa Valley Transportation Authority (NVTA) in 2008 as the Solano-Napa Travel Demand Model.

It was originally created as a joint effort to monitor congestion on major highways and freeways in both counties, due to similar traffic patterns and a high number of commuters who travel in between the two counties. In 2014, the model was converted to an Activity Based Model, which more closely replicates actual traveler decisions than a trip based model does. Though the model was originally developed with a 2000 base year and 2030 forecast year, in 2020 it was updated to a 2015 base year and 2040 forecast year. In 2023, the land use was updated to be consistent with Plan Bay Area 2050 land use projections.

Role of Model in CMP Process

The SNABM is used to monitor forecasted congestion on the CMP Network. As discussed in Chapter 5, STA routinely requests local jurisdictions to submit general plan forecasts for land use, housing, and jobs whenever the model is updated. This data is used in tandem with data provided by MTC/ABAG. Since the SNABM is required to be consistent with the regional travel model for the Bay Area, it is vital that this information be included in the model.

STA also uses the SNABM to evaluate projects that go in the CIP for the CMP, as well as other STA documents like the CTP. Using the model allows STA to view forecasted congestion levels without the

project, and see if the project would make a measurable improvement in congestion when it is added to the model.

MTC Modeling Consistency

As required by CMP legislation, the updated SNABM is now consistent with MTC's Travel Model 1.5. The last consistency finding occurred following the adoption of the first Plan Bay Area. The base year of the model is 2015 and the forecast year is 2050. The model has been updated to include information on public transportation in both Solano and Napa Counties, so that ridership on express buses may be projected. Additionally, the model will add a number of enhanced features, including new population synthesis software, inclusion of Transportation Control Measures (TNCs) and autonomous vehicles, and will be better calibrated to perform public transit forecasts.

Model Update Process

In 2018, STA and NVTA embarked on a process to validate the SNABM. At the time, the model was not accurately forecasting traffic in both the 2015 base year and the 2040 forecast year. It was also mutually agreed between the two agencies to split the model into separate county models, rather than one regional, two county travel model. The split occurred to better focus validation efforts within each county, and to account for increasingly different traffic patterns in the two counties. For example, during the validation process, it was identified that Napa and Solano counties have different peak hours for congestion in both the A.M. and P.M. peak hours. Napa County's peak congestion time occurs later in the A.M. and earlier in the P.M. than in Solano County, which is more in line with the rest of the Bay Area. The validation work also included the addition of public transit information, so that the model may be used to forecast demand on the express bus system in both counties.

As part of this update TJKM also sought to develop a model that is consistent with the Metropolitan Transportation Commission's (MTC's) Regional Travel Model, while providing additional detail, calibration and validation within Solano and Napa counties. With this goal, the project team decided to deploy MTC's Travel Model 1.5 (TM1.5) for this update. TM1.5 is a major update to MTC's Travel Model One (TM1). With the update completed, the SNABM is consistent with MTC's Travel Model 1.5, which is used for forecasting in Plan Bay Area 2050.

The STA is currently working with TJKM to update land use component in the model, which is expected to be completed by early 2024.

CHAPTER 8 CAPITAL IMPROVEMENT PROGRAM (CIP)

8.1 Purpose and Intent of Legislation

CMPs are required by California Government Code Section 65089(b)(5) to include a seven-year CIP to maintain or improve the performance of the multimodal system for the movement of people and goods and to mitigate regional transportation impacts identified through the Land Use Analysis Program. All projects must conform to Federal, State, and regional air quality mitigation measures.

8.2 Relationship to Local and Regional Plans

The projects contained in the CIP must be consistent with other regional & State plans and programs, such as the Regional Transportation Plan (RTP/SCS), and the Regional Transportation Improvement Program (RTIP). The RTP/SCS is prepared by MTC and is adopted every 4 years. The projects included in this CIP are consistent with the goals, policies, and actions identified in the RTP/SCS. MTC's most recently adopted RTP/SCS is Plan Bay Area 2050, adopted in October 2021.

The Regional Transportation Improvement Program (RTIP) is the first step to obtaining a funding commitment for a particular project from the State. Projects that MTC includes in the RTP/SCS are recommended to the California Transportation Commission (CTC) for inclusion in the State Transportation Improvement Program (STIP). In order for a project to be included in the RTIP, it first must be included in the CIP for the CMP. The CIP for this CMP update is based on information from the most recently adopted RTIP in September 2022.

STA's CIP project list must also conform to air quality attainment plans. The 2017 Bay Area Clean Air Plan, prepared by the Bay Area Air Quality Management District (BAAQMD), cites 15 Transportation Control Measures (TCMs) that this CMP must conform to. References to how this CMP conforms to the TCMs is contained in Chapter 4. MTC gives priority to proposed projects that support or help implement any of the TCMs.

8.3 Solano CMP Capital Improvement Program (CIP)

As part of the CMP development process, STA must develop a seven-year CIP with projects that will help to mitigate and improve congestion on Solano County's roadways. The projects contained within this CIP are used to inform the Regional Transportation Improvement Program (RTIP), which sets the region's priority for the STIP. MTC adopts that RTIP every two years. The last RTIP was adopted in December 2021, following the most recent RTP/SCS in 2020. The most recent STIP was adopted in March 2022.

Table 22 Solano County STIP Projects

Project	Agency	Total Funding	Funds (1,000s)						
			22-23	23-24	24-25	25-26	26-27	27-28	28-29
Planning, Programming & Monitoring	STA	929	0	0	159	200	200	200	170
Route 12/Church Rd, Intersection Improvements	Caltrans	1,939	1,939	0	0	0	0	0	0

Source California Transportation Commission STIP 2022

STA also works with MTC to develop a program of projects for the Regional Transportation Plan, which is the Bay Area's financially constrained master plan for transportation in the Bay Area over the next 30 years. Solano County's RTP projects for Plan Bay Area 2050 are currently being updated as part of the STA's Comprehensive Transportation Plan update and will be included in the next CMP cycle in 2025. Below is the current list of projects approved in 2020.

Table 23 Solano County Plan Bay Area 2050 RTP/SCS Projects ($1,000s)

Jurisdiction	Project	Project Status	Regional Funds	Federal Funds	State Funds	Local Funds	Total Cost
Benicia	East Fifth Street PDA-Affordable Housing Street Scape Improvements	PE		261			428
Benicia	Park Road Improvements	Awaiting funding					5,858
Benicia	Eastern Gateway Infrastructure Master Plan	On-going	312				312
Benicia	Port of Benicia Infrastructure & Facility Modernization Plan	On-going	750				750
Dixon	Parkway Blvd Overcrossing/UPRR Grade Separation	Awaiting funding	5,700			6,000	40,800
Fairfield	West Texas Road Diet	Completed	9,000			2,000	11,000
Fairfield	Fairfield/Vacaville Train Station Building, Access, and Parking	Completed	10,000			80,000	90,000
Fairfield	Cadenasso Drive Paving	Re Bid- Dec 2023	1,394			666	2,060
Fairfield	Fairfield West Texas Street Complete Streets	In Design			10,903		10,903
Fairfield	Grange Middle School SR2S and Pavement Preservation	Completed	2,360			274	2,634
Fairfield	East Tabor Tolena's SR2S Sidewalk Gap Closure Project	PE		2,731		100	3,084
Fairfield	Jepson Parkway Phase 2B	Awaiting Funding					30,200
Fairfield	Jepson Parkway Phase 2C	Awaiting Funding					9,00
Fairfield	Linear Park Node 4 Safe Routes to School and Transit	PE		2,239			5050
Fairfield	Travis Safe Routes to School and Transit	PE		3,960			5,960
Fairfield/Suisun City/STA	Solano Rail Hub PDA Planning Grant	Planning Effort to Kick off in 2024	400				400
Suisun City	Railroad Avenue Pavement Rehabilitation	Completed	491			64	555
Suisun City	McCoy Creek Trail Phase 2	Construction			4,137	150	4,287
Vacaville	Pavement Preservation	Construction	1,900			1,350	3,250
Vacaville	Jepson Parkway Phase 1B	Out for Bid	5,000	3,100	9,296		21,000
Vacaville	Lagoon Valley Interchange	PID Study					
Vacaville	Jepson Parkway Phase 1C	Awaiting Funding					41,000

Jurisdiction	Project	Project Status	Regional Funds	Federal Funds	State Funds	Local Funds	Total Cost
Vacaville	Vaca Valley/I-505 Multimodal Improvements	In Design				30,500	35,500
Vacaville	Allison Policy Plan	On-going	1,200				1,200
Vallejo	Sacramento Street Road Diet Phase 1	Completed	681			89	770
Vallejo	Vallejo Bay Trail/Vine Trail Gap Closure	Construction	1,116	1,800	5,626	1,586	10,128
Vallejo	Springs Rd Pavement Preservation	Ready to Bid	1,800			457	2,257
Vallejo	American Canyon Overcrossing	PID Study					
Vallejo	Vallejo Station Parking Structure Phase B	Awaiting Funding	25,000			5,000	30,000
Vallejo	Sacramento Street Road Diet Phase 2	PE		850			976
Vallejo	Downtown/Waterfront Parking Management Program Evaluation and Action Plan	On-going	150				150
Vallejo	Downtown Plan update and Street Design	On-going	1,200				1,200
Vallejo	Waterfront Plan Update	On-going	1,200				1,200
Unincorporated Solano County	Suisun Valley Bicycle and Pedestrian Improvements	Completed	1,175			402	7,577
Unincorporated Solano County	Farm to Market Phase 3	Completed	3,050			397	3,447
Unincorporated Solano County	SR 113 Re-Alignment Study and Implementation	Completed	5,000			45,000	50,000
Unincorporated Solano County	Midway Road Preservation	Completed	506			111	617
Unincorporated Solano County	Redwood Parkway Interchange & Fairgrounds Drive Phase 2	Design Completed	20,600		5,000		27,600
Unincorporated Solano County	Solano 360 Transit and Rideshare Center	On-going		2,101			2713
Caltrans	SR12 Rehabilitation Projects/McClosky Road/Summerset Road/Church Road	SHOPP Project- In progress	2,900		44,500	400	47,800
Caltrans	SR 29 Rehabilitation/ Complete Streets Project	SHOPP Project- In progress				721	26,759
STA/Caltrans	SR 37 Fairgrounds Drive Diverging Dimond Interchange	Design Completed	15,000		5,000	600	27,600
STA	East and North Bay Express Lanes Environmental and Design Phases for Future Segments	Completed					200,000

Jurisdiction	Project	Project Status	Regional Funds	Federal Funds	State Funds	Local Funds	Total Cost
STA	I-80/I-680/SR 12 Interchange Package 2A	Completed	480,000			20,000	650,000
STA	I-80/I-680/SR 12 Interchange Packages 3, 4, 6, 8	Unfunded-Cost Estimate TBD					
STA	I-80/I-680/SR 12 Interchange Package 5	PS&E	10,800				
STA	I-80 Express Lanes in both directions: Air Base Parkway to Red Top Road Converting existing HOV to Manage Lane/ Air Base Parkway to I-505 New Manage Lanes	Construction					279,567
STA	Solano WB I-80 Cordelia Truck Scales	Fully Funded-In Design	126,000		94,104		220,104
STA	Solano Rail Hub	PA/ED	2,000				150,000
STA	Jepson Walters Road Extension, Peabody Widening	Awaiting funding		630		824	13,431
STA	Solano Mobility Program	On-going	1,500				3,583
STA	Safe Routes to School Program	On-going	1,000				5,451
STA	Regional Planning/Programming Activities (SOL21)	On-going					8,322
STA	Solano Countywide Climate Adaptation for Transportation Infrastructure (Solano CCAP)	Planning Effort to Kick off in 2024			500	80	580
STA	Aligning middle-wage jobs with housing in Solano County-PPA Planning Grant	On-going	500				500

Project status as of October 2023

State Highway Operations Protection Program (SHOPP)

SHOPP is a four-year Caltrans program of projects that focus on capital improvements to safety, operations, maintenance, and rehabilitation of State highways. No capacity increasing projects are allowed under the SHOPP program. The following projects have been programmed in the 2022 SHOPP in Solano County:

Table 24 2022 SHOPP Projects in Solano County

Route	Post Miles	Location/Description	FY	Total Cost ($1,000)
12	20.6/26.4	In and near Rio Vista, from Currie Road to Sacramento County line. Roadway rehabilitation	22-23	$2,618
12	7.9/14.1	Near Suisun City, from 0.5 mile west of Walters Road to 0.5 mile west of Lambie Road/Shiloh Road. Rehabilitate roadway and upgrade guardrail.	23-24	$32,383
12	3.2/7.5	In Fairfield and Suisun, from Beck Avenue to Lawler Ranch Parkway/Walters Road. Install flashing beacons, signal ahead warning signs and pavement markings.	23-24	$5,846
12	25.5/26.4	In Rio Vista, from Drouin Drive to Sacramento County line. Roadway resurfacing and rehabilitation, widening, and sidewalk upgrade.	22-23	$18,595
29	0.0/6.0	In Vallejo, from Route 80 to Napa County line (PM 0.0/5.955). Rehabilitate pavement, upgrade facilities to ADA standards, widen sidewalks, and construct 3.6 miles of Class 2 and 4 bikeways, curb extensions, LED light fixtures, and green bikeway markings/	22-23	$35,435
37	7.4	In Vallejo, at Napa River Bridge No. 23-0064. Apply polyester concrete overlay to bridge deck.	22-23	$16,764
37	7.390	In Vallejo, at Napa River Bridge No. 23-0064. Repair damaged bridge fender system and protect bridge column.	22-23	$8,840
37	9.5	Near Vallejo, at Route 37/29 Junction. Remove beaver dam, repair access road, trace and repair the leaking pipe.	22-23	$1,245
80	1.8/5.7	In and near Vallejo, from west of Route 780 to Route 37 at various locations. Construct permanent Best Management Practices to achieve statewide National Pollutant Discharge Elimination System permit compliance units for trash capture and Total Maximum Daily Load.	24-25	$11,233
80	12.600/20.500	In and near Fairfield, from 0.2 mile west of Green Valley Road to 0.5 miles west of North Texas Street, at various locations. Construct permanent Best Management Practices (BMPs) to achieve statewide National Pollutant Discharge Elimination System (NPDES) permit compliance units for trash capture.	22-23	$10,000
80	15.0/30.7	Bridge Deck Preservation.	23-24	$2,786

Route	Post Miles	Location/Description	FY	Total Cost ($1,000)
80	22.1/23.0	Near Fairfield, from 1.0 mile west to 0.1 mile west of Cherry Glen Road. Install outer separation concrete barrier between westbound Route 80 and Lyon Road.	23-24	$9,637
80		In and near Fairfield, Vacaville, and Dixon, on Routes 12, 80, and 680 at various locations. Apply polyester concrete overlay to bridge decks.	22-23	$16,610
84	12.0/12.4	Near Rio Vista, at Miner Slough Bridge No. 23-0035. Replace bridge.	25-26	$58,291
84	2.5	Near Rio Vista, at Cache Slough Ferry Crossing. Upgrade the existing fender systems, concrete ramps, and swing gate systems, modify the ferry boat deck, surface, and install traffic counter and Vehicle Detection Systems (VDS).	23-24	$4,770
84	12.5	Near Rio Vista, at 0.7 mile south of Oxford Road. Repair the earthen slope and damaged pavement, and install rock slope protection.	22-23	$768
128	0.7	Near Winters, at Putah Creek Bridge No. 23-0099. Rehabilitate bridges by upgrading bridge rails and overlaying bridge deck.	24-25	$11,631
505	5.7	Near Vacaville, at southbound off-ramp to Allendale Road. Restore slope washout between off-ramp and adjacent frontage road by placing rock slope protection.	22-23	$2,093
680	R.8.400	In Fairfield, at 1.4 mile south of Gold Hill Road. Construct retaining wall, repair slope, and add rock slope protection.	22-23	$9,561
Various		In Solano County, on Routes 12, 112, and 113 at various locations. Repair damaged pavement and replace striping.	22-23	$9,561
Various		In Solano County, on Routes 12, 29, 37, 80, 113, 505, and 780 at various locations. Enhance pedestrian safety by installing Accessible Pedestrian Signal systems and countdown timers and upgrading crosswalk markings.	23-24	$5,200
Various		In Solano County, on Routes 29, 37, 80, and 780 at various locations. Enhance pedestrian and bicyclist safety by installing flashing beacon systems and upgrading crosswalk markings.	23-24	$8,576
Total				**$282,443**

Source: Caltrans 2022 SHOPP

Regional Traffic Impact Fee

STA and the County of Solano coordinate on the collection and management of the Regional Traffic Impact Fee (RTIF), assessed as part of the County's Public Facilities Fee. Since the program began in 2013, STA has collected a total of $20,570,325 with over $17 million of the funds committed to priority RTIF projects.

As of October 2019, the Nexus study for the County's Public Facilities Fee (PFF) was updated and increased from $1,500 to $2,500 for each new dwelling unit equivalent (DUE) development to help mitigate traffic impacts associated with the new developments.

The RTIF is managed by seven working groups, six of which are geographically based. The remaining is for transit projects countywide. Projects chosen by each geographically based working group must be located where the funds are collected. For FY 2021-22, the seven working groups have selected the following projects to receive RTIF funds through 2023:

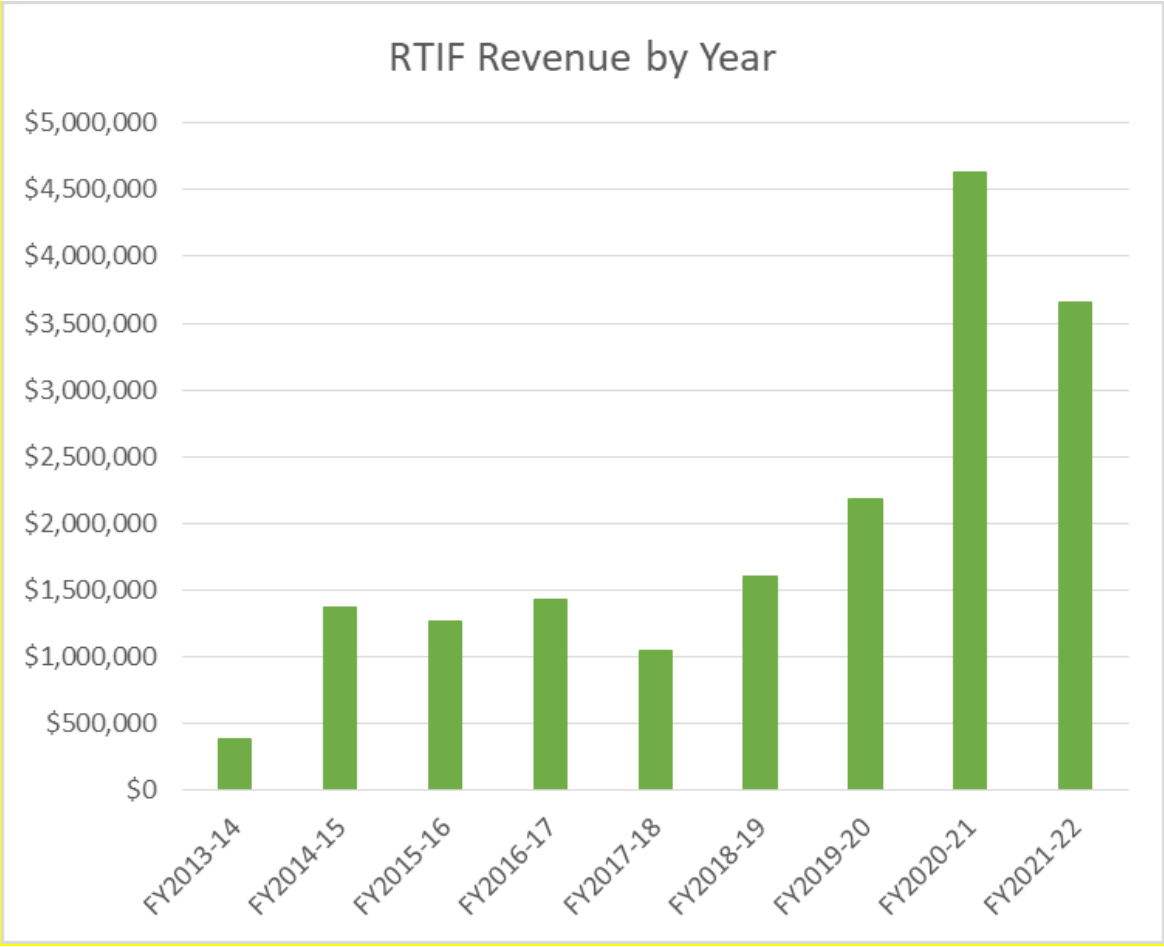
Table 25 2021-22 RTIF Projects

Working Groups	Agencies	Projects	RTIF Funding Commitment ($1,000s)
District 1	Fairfield	Canon Road Overcrossing Near-Term Improvements	$385
	Vacaville	Jepson Parkway Phase 1B	$1,500
District 2	Fairfield	West Texas Complete Street	$645
	Suisun City	Railroad Avenue Extension	$800
District 4	Fairfield	West Texas Complete Street	$550
	Fairfield and County	Rockville Road Crossing Improvements	$175
District 5	Dixon	Parkway Boulevard Overcrossing Project	$1,900
District 7	County	Benicia Rd Improvements Phase 1	$200
	County	County Roads Safety Project	$175
	County	McCormack Rd Improvements Phase 2	$100
	County/Fairfield	Rockville Rd Crossing Improvements	$175

Source: STA Solano County Regional Transportation Impact Fee 9th Annual Report Dec 2022

The total RTIF revenue collected for FY 2021-22 was $3,657 million (after accounting for STA's two percent administrative fee to manage the program). This amounts to a 26% decrease from the revenue collected in FY 2020-21. However, when FY 2021-22 is compared to FY 2019-20, the revenue is approximately 67% higher. Although there has been a steady increase in revenues year after year, there is a more noticeable increase since 2019. This increase in revenue is associated with the growth of Solano County's economy and population, as well as increase in RTIF fees for each new DUE development.

Figure 21 RTIF Revenue from 2013-2022



Source: STA Solano County Regional Transportation Impact Fee 9th Annual Report Dec 2022

Active Transportation Projects

In April of 2020 STA completed the development of its Active Transportation Plan which combined all previous active transportation planning efforts STA has undertaken. The plan includes an updated list of prioritized projects for each jurisdiction. Currently STA staff is working on updating the Active Transportation Element in the Comprehensive Transportation Plan to capture new bike and pedestrian projects proposed by STA's member agencies. Individual projects will be implemented by local agencies as funding becomes available. Funding sources include, but are not limited to, Active Transportation Program, CMAQ, TFCA, Transportation Development Act Article 3, and CAF. By reference, the Solano County CMP recognizes these plans and planned facilities.

Completed Active Transportation Projects

STA and its member agencies are committed to encouraging bicycle and pedestrian transportation by dedicating funds to the construction of active transportation capital facilities. Below is a snapshot, rather than a complete list of Bicycle and pedestrian projects that have been recently completed:

- Panorama Drive Safety Project in Benicia
- Railroad Avenue Bicycle Lanes Project in Suisun City
- Crystal Middle School Traffic Calming in Suisun City
- Farm 2 Market and Solano County Road Preservation in Solano County
- Markham School Pedestrian Improvements in Vacaville

Ongoing Active Transportation Projects

Below is a snapshot, rather than a complete list, of bicycle and pedestrian projects that are currently in progress:

- Bay Trail / Vine Trail Project in Vallejo
- McCoy Creek Phase II in Suisun City
- Benicia Road Complete Streets
- SR-113 at B Street Pedestrian Improvements in Dixon
- Airport Road Bicycle and Pedestrian Promenade in Rio Vista
- Sacramento Street Road Diet Phase II in Vallejo
- Military East / East 5th Street Bicycle and Pedestrian Safety Improvements in Benicia
- Rockville Parks Crossing Project in Solano County
- Bike Lanes on Norman Richardson Drive and Airport Road in Rio Vista
- Pedrick Road Bicycle Improvements in Solano County
- Travis Safe Routes to School and Transit Project in Fairfield

Project Progress since the 2021 CMP Update

Since the 2021 CMP update, STA has made progress on its transportation goals by completing projects and furthering progress on others. The following is a quick snapshot of project progress:

- Solano I-80 Managed Lanes: This project is fully designed and environmentally cleared. In December 2020, this project was awarded $123.4M in funding from the Trade Corridor Enhancement Program. Construction began in Spring 2022 and will be complete in 2025.
- New Vallejo Ferry Terminal Improvements (RTP ID 22629): Improvements of this project include construction of additional parking capacity, upgrading bus transfer facilities, and providing pedestrian access improvements. Phase 2 of the Vallejo Station Parking Garage moves forward. Recently, the City of Vallejo removed the old Post Office building to make room for the expanded parking garage. Mixed use residential and retail buildings are also planned for this project.
- Jepson Parkway from SR12 to I-80 at Leisure Town Road (RTP ID 94151): Significant progress continues to be made on this project. The City of Vacaville recently completed the sections on Leisure Town Road from Vanden Road to Elmira Road and the section from Elmira Rd to Sequoia Drive will be going into construction in Spring 2024. The City of Vacaville's final segment will widen Leisure Town Road from Sequoia Drive to the Horse Creek Bridge. The City of Fairfield completed a section of Vanden Road from Peabody Road to south of Canon Road, near the new Fairfield/Vacaville Train Station. Remaining sections include (1) Vanden Road from Canon Road to Leisure Town Road, (2) Cement Hill Road, and (3) the Walters Road Extension. STA is assisting the cities of Fairfield and Vacaville develop funding plans to complete the remaining segments of the project.
- Fairgrounds Drive and Redwood Pkwy Interchange and Roadway Improvements (RTP ID 230313): Progress continues on this project. STA constructed bus stops on the on/off ramps to SR-37 at Fairgrounds Drive, along with pedestrian enhancements to the nearby areas. STA also completed the design of the Fairgrounds Drive improvements.
- I-80/I-680/SR-12 Interchange: Package 1 and 2 improvements are now completed and open to the public. STA is working on securing funding for Packages 3 through 7.
- I-505/Vaca Valley Pkwy Interchange Improvements (RTP ID 240210): This project includes widening of southbound off-ramp at Vaca Valley Pkwy, widening of Vaca Valley Pkwy to provide protected left turn pockets, and signalization of the southbound ramp intersection. The City of Vacaville is working on securing construction funding and completing the design of the project.
- Solano Express Transit Fleet Replacement (RTP ID 240576): STA has secured grant funding to begin the electrification of the Solano Express fleet, including installing shared induction charging pads at regionally significant transit facilities and purchasing electric buses. This is expected to be phased in by 2026.