

U.S. 101/Holly Street Interchange

Prepared for the Air Quality Conformity Task Force

Presented by:

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Project Description

The City of San Carlos, in cooperation with Caltrans, proposes to modify the existing U.S. 101/Holly Street Interchange from a Type L-10 four-quadrant cloverleaf to a Type L-9 partial cloverleaf interchange configuration. The existing loop off-ramps located at the southwest and northeast quadrants of the interchange (with U.S. 101 running north-south) would be eliminated, and the diagonal on- and off-ramps would be realigned into a more squared-up pedestrian and bicycle friendly configuration. The NB loop on-ramp would be widened from one lane to two lanes plus a third high occupancy vehicle (HOV) lane, and the NB diagonal off-ramp would be widened from one to two lanes at the freeway exit.

Purpose

The primary purposes of the project are to:

- Reduce existing weaving friction areas within the U.S. 101/Holly Street interchange.
- Reduce future traffic backups on the ramps from extending onto the U.S. 101 mainline during the a.m./p.m. peak hours.
- Reduce future traffic congestion at the Holly Street/Industrial Road intersection.
- Reduce pedestrian and bicycle conflicts with vehicles within the U.S. 101/Holly Street interchange and improve pedestrian and bicycle east-west connectivity across U.S. 101.

Need

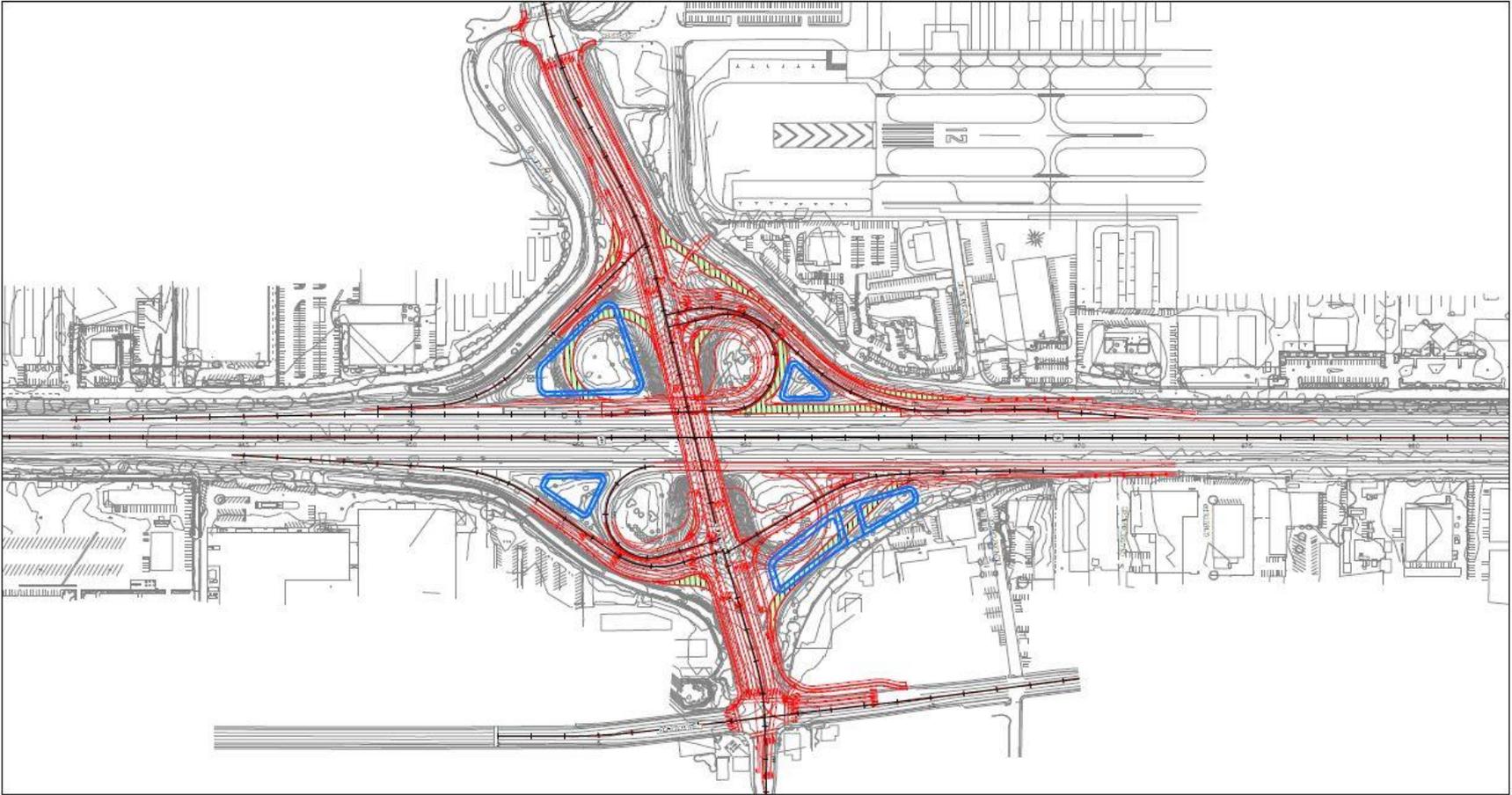
The U.S. 101/Holly Street Interchange has three categories of primary deficiencies:

- All existing movements at the interchange loop ramps have weaving friction issues, especially along eastbound (EB) Holly Street between Industrial Road and the northbound (NB) loop on-ramp due to the existing high traffic volumes and disproportionate use of the single lane leading to the ramp entrance (lane imbalance). Bicyclists traveling along Holly Street are also presented with challenging maneuvers within the traffic weaving segments between the loop on- and off-ramps.
- Traffic congestion within the interchange and adjacent Holly Street/Industrial Road intersection is projected to be high within the 20-year design period. The NB loop on-ramp and southbound (SB) loop off-ramp capacities will be insufficient by year 2035, causing long backups extending beyond the ramps, which would “lock up” the interchange during peak hours. Also by year 2035, the Holly Street/Industrial Road intersection is projected to operate at level of service (LOS) F during peak hours due to the existing lane imbalances that occur along NB Industrial Road and EB Holly Street.
- Pedestrians and bicyclists attempting to travel east-west on Holly Street across U.S. 101 are presented with challenging maneuvers. Low-speed pedestrians and bicyclists crossing at the ramps experience potential high-speed conflicts with vehicles because of the highspeed geometry configuration (large radius curves) of the on- and off-ramps at this interchange. There is also limited pedestrian and bicycle connectivity between the residential and commercial areas of the City of San Carlos to the west of U.S. 101 and the commercial and recreation areas east of U.S. 101.

Project Location



Project Improvements



Daily Traffic Volumes

Table 1: Traffic Data-Daily Traffic on U.S. 101 at Holly Street (AADT/Trucks ADT)

Model Year	Without Project	With Project	Project Related Increase in Traffic
2018	231,000/11,320	231,000/11,320	0/0
2038	280,000/13,720	280,000/13,720	0/0

Source: Fehr & Peers, Draft Traffic Operations Analysis Report, March 2014.

Table 2: Traffic Data-Daily Traffic on Holly Street (AADT/Trucks ADT)

Model Year	Without Project	With Project	Project Related Increase in Traffic
2018	38,900/1,900	38,900/1,900	0/0
2038	41,400/2,030	41,400/2,030	0/0

Source: Fehr & Peers, Draft Traffic Operations Analysis Report, March 2014

2018 Intersection Level of Service

Table 3: Intersection Analysis – Year 2018 Conditions

Intersection	Peak Hour	No Build		Build Alternative	
		Control Delay	LOS	Control Delay	LOS
1. Holly Street/Airport Way	AM	26	C	27	C
	PM	182	F	180	F
2. Holly Street/Industrial Way	AM	32	C	29	C
	PM	35	C	27	C
3. Holly Street/Old Country Road	AM	41	D	40	D
	PM	85	F	80	F
4. Holly Street/El Camino Road	AM	164	F	145	F
	PM	55	D	50	D
5. Holly Street/NB Diagonal Ramps	AM	3	A	N/A	N/A
	PM	3	A	N/A	N/A
5. Holly Street/NB Ramps	AM	N/A	N/A	22	C
	PM	N/A	N/A	17	B
6. Holly Street/NB Loop Ramps	AM	3	A	N/A	N/A
	PM	3	A	N/A	N/A
7. Holly Street/SB Loop Ramps	AM	2	A	N/A	N/A
	PM	2	A	N/A	N/A
8. Holly Street/SB Diagonal Off-Ramp	AM	5	A	N/A	N/A
	PM	4	A	N/A	N/A
8. Holly Street/SB Ramps	AM	N/A	N/A	14	B
	PM	N/A	N/A	13	B
9. Holly Street/SB Diagonal On-Ramp	AM	4	A	N/A	N/A
	PM	3	A	N/A	N/A

Source: Fehr & Peers, Draft Traffic Operations Analysis Report, March 2014.

2038 Intersection Level of Service

Table 4: Intersection Analysis – Year 2038 Conditions

Intersection	Peak Hour	No Build		Build Alternative	
		Control Delay	LOS	Control Delay	LOS
1. Holly Street/Airport Way	AM	44	D	41	D
	PM	215	F	205	F
2. Holly Street/Industrial Way	AM	46	D	34	C
	PM	59	E	32	C
3. Holly Street/Old Country Road	AM	58	E	57	E
	PM	168	F	167	F
4. Holly Street/El Camino Road	AM	197	F	190	F
	PM	123	F	115	F
5. Holly Street/NB Diagonal Ramps	AM	12	B	N/A	N/A
	PM	3	A	N/A	N/A
5. Holly Street/NB Ramps	AM	N/A	N/A	27	C
	PM	N/A	N/A	17	B
6. Holly Street/NB Loop Ramps	AM	15	C	N/A	N/A
	PM	3	A	N/A	N/A
7. Holly Street/SB Loop Ramps	AM	17	C	N/A	N/A
	PM	2	A	N/A	N/A
8. Holly Street/SB Diagonal Off-Ramp	AM	29	C	N/A	N/A
	PM	6	A	N/A	N/A
8. Holly Street/SB Ramps	AM	N/A	N/A	16	B
	PM	N/A	N/A	16	B
9. Holly Street/SB Diagonal On-Ramp	AM	19	C	N/A	N/A
	PM	3	A	N/A	N/A

Source: Fehr & Peers, Draft Traffic Operations Analysis Report, March 2014.

Analysis

The project does not qualify as a project of air quality concern (POAQC) because of the following reasons:

- The proposed Project is not a new or expanded highway project and is not considered to significantly affect diesel truck traffic on U.S. 101.
- The proposed Project does not affect intersections that are at level of service D, E, or F with a significant number of diesel vehicles.
- The proposed project does not include the construction of a new bus or rail terminal.
- The proposed project does not expand an existing bus or rail terminal.
- The proposed project is not in or affecting locations, areas, or categories of sites that are identified in the PM2.5 and PM10 applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

Conclusion

U.S. 101/Holly Street Interchange Project would improve traffic operations at the Project location. The interchange would alleviate congestion as well as accommodate future traffic numbers. The proposed Project meets the Clean Air Act requirements and 40 CFR 93.116 without any explicit hot-spot analysis. The proposed Project would not create a new, or worsen an existing, PM_{2.5} violation; therefore, the Project is not a “Project of Air Quality Concern.”