

HSIP ANALYZER (for BCR Applications)

Benefit Cost Ratio (BCR) Calculation for Highway Safety Improvement Program (HSIP) Application

Important: Review and follow the step-by-step instructions in the HSIP Analyzer Manual. Completing the HSIP Analyzer without referencing to the manual may result in an application with fatal flaws that will be disqualified from the ranking and selection process.

This is a dynamic form (i.e. later steps vary depending on the data entered in earlier steps). If any error messages appear, please fix the errors prior to proceeding to the next steps.

Save this file using "HA" + Application ID as the file name (e.g. "HA03-Sacramento-01.pdf").

Section I: General Information

Application ID, Project Location and Project Description (copy from the HSIP Application Form):

Application ID:

10-Tracy-01

Project Location:
(limited to 250 characters)

Multiple unsignalized intersections and 2 roadway segments throughout the City of Tracy

Project Description:
(limited to 250 characters)

Installation of a combination of engineering countermeasures such as larger stop signs, updating intersection parking marking, and improving sight distance at identified unsignalized intersections throughout the city systematically.

Number of Signalized Intersections:

Number of Non-signalized Intersections:

116

Miles of Roadways*:

0.2

*Do not include the length of the intersections that have been accounted for in the number of intersections above.

Functional Classification (FC):

For California Road System (CRS) maps to check the FC, click [here](#).

Urban / Rural Area:

What is the approximate total cost percentage that is HR3 eligible?

Annual Average Daily Traffic (see instructions):

AADT (Major Road) AADT (Minor Road) Year of AADT

Posted Speed Limit (mph):

Which of the California's Strategic Highway Safety Plan (SHSP) Challenge Areas does the project address primarily? Multiple Challenge Areas may be checked. For example, if this project is for pedestrian safety at intersections, both "Intersections" and "Pedestrians" should be checked. For more information on the SHSP and its Challenge Areas, click [here](#).

- Intersections
- Lane Departures
- Pedestrians
- Bicyclists
- Emergency Response
- Emerging Technologies
- Work Zones
- Speed Management/ Aggressive Driving

How were the safety needs and potential countermeasures for this project first identified?

California established Systemic Safety Analysis Report Program (SSARP) in 2016 and Local Roadway Safety Plan (LRSP) Program in 2019. Was this project identified through the SSARP or LRSP?

Is the project focused primarily on "spot location(s)" or "systemic" improvements?

If it is systemic, the primary type of the "systemic" improvements is:

What is the primary mode of travel intended to be benefited by this project?

Approximate percentage of project cost going to improvements related to **motorized** travel

Based on project location(s), please provide:

State Senate District(s): (Use commas to separate if multiple)

State Assembly District(s): (Use commas to separate if multiple)

Section II: Project Schedule

The local agency is expected to deliver the project per [the HSIP Program Delivery requirements](#). Assuming the HSIP Cycle 12 projects selected for funding will be programmed by January 1, 2025, please enter your best estimated dates for the following implementation milestones. Leave blank if not applicable.

Will this project use HSIP funds for Preliminary Engineering (PE) Phase?

Will an external consultant be hired to do the PE work?

Delivery Milestones to be met: PE Authorization by 9/30/2025; CON Authorization by 6/30/2028.

PE Authorization Date:

Environmental Clearance Date:

Right of Way Clearance Date:

Final PS&E Date:

CON Authorization Date:

Construction Contract Award Date:

Construction Completion Date:

Project Close-Out Date:

Section III. Safety Countermeasures, Crash Data and Project Benefit Calculation

The benefit of an HSIP safety project is achieved by reducing potential future crashes due to the application of the safety countermeasures (CMs). In this section, you will need to provide information regarding the historical crash data at the project sites.

Different CMs will reduce crashes of different types during the life of the safety improvements. Depending on the selected CMs for the application, you will be required to fill in one or more crash data tables, for any combination of the five crash types (datasets): "All", "Night", "Ped & Bike", "Emergency Vehicle", and "Animal" (Each of the later four datasets is a sub-dataset of the "All" dataset.)

Note: If a Roundabout CM is selected, additional information (such as roundabout configuration and ADT) is required.

For more information regarding crash data, please refer to the Manual for HSIP Analyzer and the Local Roadway Safety Manual.

1. Please indicate the sources of the crash data. Typical sources include Statewide Integrated Traffic Records System (SWITRS), UC Berkeley SafeTREC TIMS, your locally preferred mapping software (such as Crossroads) or any other data sources.

UC Berkeley SafeTREC TIMS

2. Please explain how "incremental approach" has been pursued if CM R15, R16, R17 or R18 is proposed. Please skip this question if none of these CMs are being proposed.

Countermeasure R15 (Widen shoulder), R16 (Curve shoulder widening (outside only)), R17 (Improve horizontal alignment (flatten curves)) and R18 (Flatten crest vertical curve) are not eligible unless they are done as the last step of an "incremental approach".

Applicants need to document they have already installed lower cost and lower impact CMs but the crash rate is unacceptably high. What safety improvements have been pursued and installed at the project sites within the last ten years?

NA

Step 1: Select safety countermeasures

Does this application include Signalized Intersections (SI)?

Does this application include Non-signalized Intersections (NS)?

Does this application include Roadway Segments (R)?

** Normally a BCR application only includes locations of one of the above 3 categories (SI, NS or R). Multiple categories may be selected if the application proposes corridor safety improvements or uses a systemic approach, or the applicant chooses to bundle multiple locations in the same vicinity together.*

Non-signalized Intersections (NS):

Click the check box in the 1st column to select up to 3 countermeasures.

Select	No.	Countermeasure Name
<input checked="" type="checkbox"/>	8	NS08: Install/upgrade larger or additional stop signs or other intersection warning/regulatory signs (CRF=0.15 for All crashes; Life=10 yrs; FE=90%)
<input checked="" type="checkbox"/>	9	NS09: Upgrade intersection pavement markings (NS.I.) (CRF=0.25 for All crashes; Life=10 yrs; FE=90%)
<input checked="" type="checkbox"/>	13	NS13: Improve sight distance to intersection (Clear Sight Triangles) (CRF=0.2 for All crashes; Life=10 yrs; FE=90%)

Roadways (R):

Click the check box in the 1st column to select up to 3 countermeasures.

Select	No.	Countermeasure Name
<input checked="" type="checkbox"/>	1	R01NT: Add segment lighting (CRF=0.35 for Night crashes; Life=20 yrs; FE=90%)
<input checked="" type="checkbox"/>	22	R22: Install/Upgrade signs with new fluorescent sheeting (regulatory or warning) (CRF=0.15 for All crashes; Life=10 yrs; FE=90%)
<input checked="" type="checkbox"/>	23	R23: Install chevron signs on horizontal curves (CRF=0.4 for All crashes; Life=10 yrs; FE=90%)

Step 2: Click to generate table for project locations, enter the project locations and select countermeasures for each location. If any of the selections have been changed, you must re-click the below button to refresh.

[Click to Generate Table for Project Locations Entry](#)

CMs have been selected. Ok to proceed.

+/- Line	Location No.	Location Description (Intersection Name or Road Limit or General Description)	Click to select Countermeasures			Error Messages (must resolve)
(Non-signalized Intersections)						
			NS08	NS09	NS13	
+ -	NSI_1	16 Unsignalized Intersections		●		
+ -	NSI_2	1 Unsignalized Intersections			●	
+ -	NSI_3	12 Unsignalized Intersections	●	●		
+ -	NSI_4	2 Unsignalized Intersections	●		●	
+ -	NSI_5	52 Unsignalized Intersections		●	●	
+ -	NSI_6	28 Unsignalized Intersections	●	●	●	
(Roadway Segments)						
			R01NT	R22	R23	
+ -	R_1	Valley View Dr and Foothill Ranch Dr		●		
+ -	R_2	Chrisman Rd and Brichetto Rd	●	●	●	

Step 3: Click to generate tables for crash data and provide crash data. If any changes have been made in the previous two steps, you must re-click to refresh.

[Click to Generate Tables for Crash Data Entry](#)

No crash tables have been created since there are unresolved error messages in the last column of the location table. Please correct first.

Crash Data Periods: you may use one or two time periods. The total time periods must be between 3 and 5 years. The crash data to be entered are combined from both periods if two periods are used.

Crash Data Period 1: from (MM/DD/YYYY): To (MM/DD/YYYY):

Crash Data Period 2: from (MM/DD/YYYY): To (MM/DD/YYYY):

Combined Crash Data Period (years) = 4.99

Fill out the crash data table(s) for the crash type(s) as required by the selected countermeasure(s) in Step 2.

Fill in yellow fields only. "Total" fields are calculated. Gray fields (if any) are locked as data are NOT needed for those fields.

Crash Data Table for Crash Type: <u>ALL</u>							
No.	Location No : Description (from Step 2)	Fatal (ALL)	Severe Injury (ALL)	Other Visible Injury (ALL)	Complaint of Pain (ALL)	PDO (ALL)	Total
1	NSI_1: 16 Unsignalized Intersections	0	1	9	11	0	21
2	NSI_2: 1 Unsignalized Intersections	0	0	0	1	0	1
3	NSI_3: 12 Unsignalized Intersections	1	3	6	7	0	17
4	NSI_4: 2 Unsignalized Intersections	0	0	0	4	0	4
5	NSI_5: 52 Unsignalized Intersections	1	5	16	40	0	62
6	NSI_6: 28 Unsignalized Intersections	0	3	22	13	0	38
7	R_1: Valley View Dr and Foothill Ranch Dr	0	0	1	0	0	1
8	R_2: Chrisman Rd and Brichetto Rd	0	0	2	0	0	2
	Total	2	12	56	76	0	146

Crash Data Table for Crash Type: <u>Night-time (Night)</u>							
No.	Location No : Description (from Step 2)	Fatal (Night)	Severe Injury (Night)	Other Visible Injury (Night)	Complaint of Pain (Night)	PDO (Night)	Total
1	NSI_1: 16 Unsignalized Intersections	0	0	0	0	0	0
2	NSI_2: 1 Unsignalized Intersections	0	0	0	0	0	0
3	NSI_3: 12 Unsignalized Intersections	0	0	0	0	0	0

No.	Location No : Description (from Step 2)	Fatal (Night)	Severe Injury (Night)	Other Visible Injury (Night)	Complaint of Pain (Night)	PDO (Night)	Total
4	NSI_4: 2 Unsignalized Intersections	0	0	0	0	0	0
5	NSI_5: 52 Unsignalized Intersections	0	0	0	0	0	0
6	NSI_6: 28 Unsignalized Intersections	0	0	0	0	0	0
7	R_1: Valley View Dr and Foothill Ranch Dr	0	0	0	0	0	0
8	R_2: Chrisman Rd and Brichetto Rd	0	0	0	0	0	0
	Total	0	0	0	0	0	0

Step 4: Click to Calculate the project benefit. If any changes have been made in the previous two steps, you must re-click to refresh.

[Click to Perform Benefit Calculation](#)

Benefit Summary:

Benefit by Locations

Location No : Description	[CMI ID]	[CMI] Benefit	[CM2 ID]	[CM2] Benefit	[CM3 ID]	[CM3] Benefit	Total Benefit
NSI_1: 16 Unsignalized Intersections	[None]	\$0	[NS09]	\$3,197,004	[None]	\$0	\$3,197,004
NSI_2: 1 Unsignalized Intersections	[None]	\$0	[None]	\$0	[NS13]	\$44,049	\$44,049
NSI_3: 12 Unsignalized Intersections	[NS08]	\$4,269,855	[NS09]	\$7,116,424	[None]	\$0	\$11,386,279
NSI_4: 2 Unsignalized Intersections	[NS08]	\$120,819	[None]	\$0	[NS13]	\$161,091	\$281,910
NSI_5: 52 Unsignalized Intersections	[None]	\$0	[NS09]	\$12,515,049	[NS13]	\$10,012,039	\$22,527,088
NSI_6: 28 Unsignalized Intersections	[NS08]	\$3,923,320	[NS09]	\$6,538,866	[NS13]	\$5,231,093	\$15,693,279
R_1: Valley View Dr and Foothill Ranch Dr	[None]	\$0	[R22]	\$57,964	[None]	\$0	\$57,964
R_2: Chrisman Rd and Brichetto Rd	[R01NT]	\$0	[R22]	\$103,281	[R23]	\$275,415	\$378,696
Total							\$53,566,269

Benefit by Countermeasures

No.	Countermeasure	Benefit
1	NS09: Upgrade intersection pavement markings (NS.I.)	\$29,367,343
2	NS13: Improve sight distance to intersection (Clear Sight Triangles)	\$15,448,272
3	NS08: Install/upgrade larger or additional stop signs or other intersection warning/regulatory signs	\$8,313,994
4	R22: Install/Upgrade signs with new fluorescent sheeting (regulatory or warning)	\$161,245
5	R01NT: Add segment lighting	\$0
6	R23: Install chevron signs on horizontal curves	\$275,415
	TOTAL	\$53,566,269

Section IV. Construction Cost Estimate and Cost Breakdown

The purpose of this section is to:

- o Provide a detailed engineer's estimate for construction items. The costs for other phases i.e. Preliminary Engineering (PE), Right of Way (ROW), and Construction Engineering (CE) will be accounted for in the next section.
- o Determine the project's maximum Funding Reimbursement Ratio (FRR).

IV.1 Detailed Engineer's Estimate for Construction Items:

Cost breakdown:

For each item, enter cost percentages for this project's safety countermeasures (CMs) and "Other Safety (OS)" respectively (e.g. enter 10 for 10%). The percentage for "Non-safety (NS)" is then calculated. If an item is a general one (such as traffic control, mobilization, etc.), check the "General item" box and the cost breakdown is not needed. A general item will NOT be used in determining the project's overall percentages of countermeasures, other safety and non-safety costs.

	No.	Item Description	Unit	Quantity	Unit Cost	Total	General Item? (Click center to check)	% for CMs	% for OS	% for NS
+ -	1	Stop Sign	Each	55	\$750.00	41,250		100 %	0 %	0 %
+ -	2	Warning Signs	Each	39	\$750.00	29,250		100 %	0 %	0 %
+ -	3	Day Lighting Area	Per In	52	\$6927.00	360,204		100 %	0 %	0 %
+ -	4	Stop Ahead Pavement Marking	Each	8	\$20.00	160		100 %	0 %	0 %
+ -	5	Centerline Pavement Marking	LF	10,700	\$5.00	53,500		100 %	0 %	0 %
+ -	6	Advanced Stop Bar	LF	3,620	\$5.00	18,100		100 %	0 %	0 %
+ -	7	Lighting	Per M	0	900,000	180,000		100 %	0 %	0 %
+ -	8	W1-1 Sign	Each	2	\$700.00	1,400		100 %	0 %	0 %
+ -	9	W1-2 Sign	Each	2	\$700.00	1,400		100 %	0 %	0 %
+ -	10	W13-1P(20 MPH)	Each	2	\$700.00	1,400		100 %	0 %	0 %
		Weighted Average (%)						100%		
		Total (\$)				\$686,664				

Contingencies, as % of the above "Total" of the construction items:

(e.g. enter 10 for 10%)

Total Construction Cost (Con Items & Contingencies):

(Rounded up to the nearest hundreds)

IV.2 Funding Reimbursement Ratio

Project's Maximum Funding Reimbursement Ratio = 90.0%

The project's Maximum Funding Reimbursement Ratio is calculated from the least of the FEs of the project's countermeasures and reduced if the non-safety cost percentage is in excess of 10%. See the HSIP Analyzer Manual for details. This is the maximum value allowed to be entered in "HSIP/Total(%)" column in Section II (Project Cost Estimate).

Section V. Project Cost Estimate

All project costs, for all phases and by all funding sources, must be accounted for on this form.

- i. **"Total Cost"**: Round all costs up to the nearest hundred dollars.
- ii. **"HSIP/Total (%)"**: The maximum allowed is the project's Funding Reimbursement Ratio (FRR) as determined in Section I. Click the button to assign the maximum to all, OR enter if not the maximum.
- iii. **"HSIP Funds"** and **"Local/Other Funds"** are calculated.

Pay attention to the interactive warning/error messages below the table. The messages, if any, must be fixed, or exceptions should be justified in narrative question No. 3 in the HSIP Application Form.

Project's maximum Funding Reimbursement Ratio (FRR) %
(from Section I, rounded up to integer)

To set all "HSIP/Total (%)" in the below table to the above maximum FRR, click "Set":

Description	Total Cost	HSIP/Total (%)	HSIP Funds	Local/Other Funds
Preliminary Engineering (PE) Phase				
Environmental	\$123,600	90 %	\$111,240	\$12,360
PS&E	\$82,400	90 %	\$74,160	\$8,240
Subtotal - PE	\$206,000	90 %	\$185,400	\$20,600
Right of Way (ROW) Phase				
Right of Way Engineering	\$0	0 %	\$0	\$0
Appraisals, Acquisitions & Utilities	\$0	0 %	\$0	\$0
Subtotal - Right of Way (ROW)	\$0	0 %	\$0	\$0
Construction (CON) Phase				
Construction Engineering (CE)	\$123,600	90 %	\$111,240	\$12,360
Construction Items	\$824,000 <small>(Read only - from Section I)</small>	90 %	\$741,600	\$82,400
Subtotal - Construction	\$947,600	90 %	\$852,840	\$94,760
PROJECT TOTAL	\$1,153,600	90 %	\$1,038,240	\$115,360

Agency does NOT request HSIP funds for PE Phase (automatically checked if PE - HSIP funds is \$0).

Interactive Warning/Error Messages:

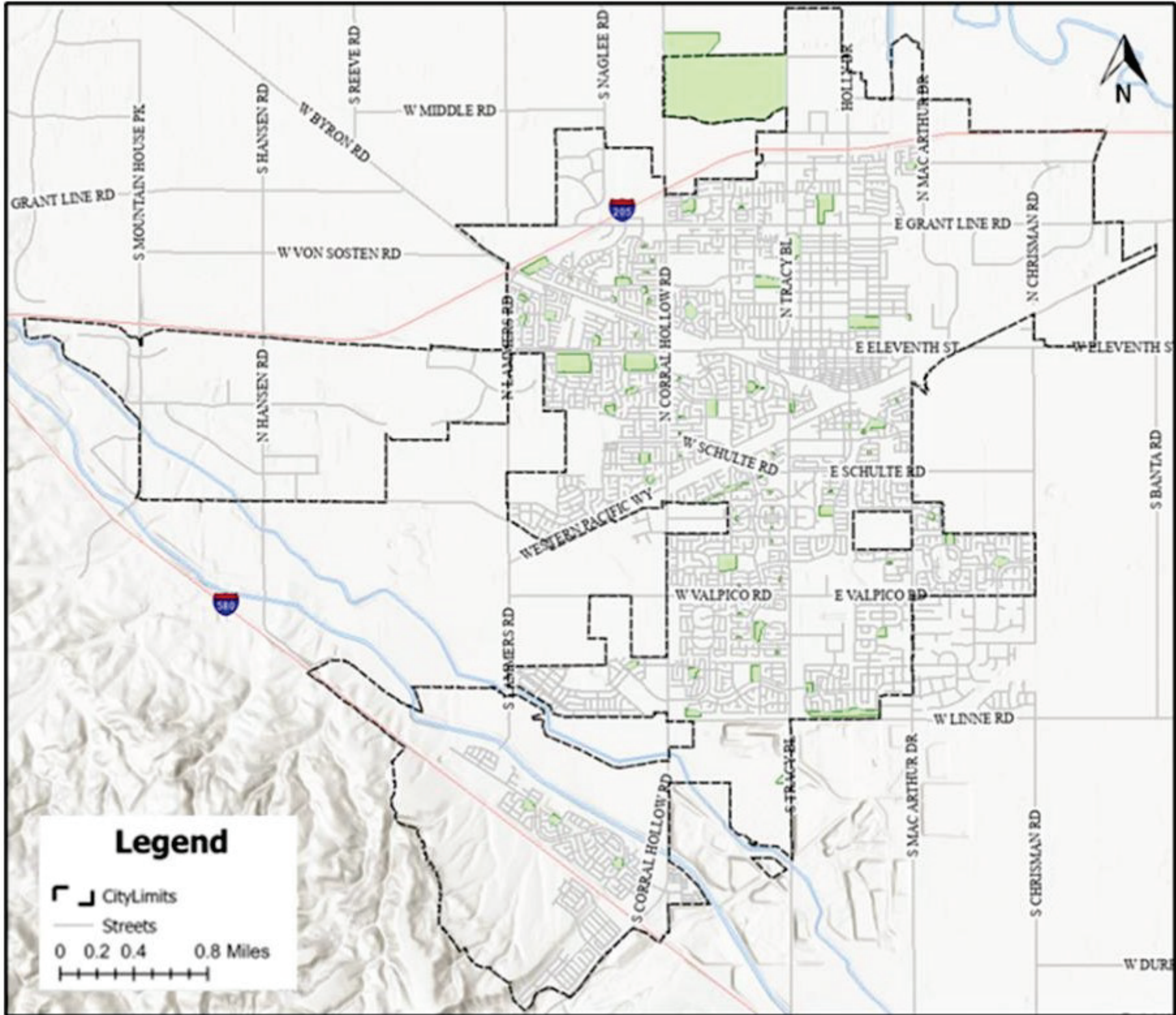
If there are any messages in the below box, please fix OR explain justification for exceptions in narrative question No 3 in the HSIP application form.

Section VI. Summary




Transfer the "Total Project Cost" , "HSIP Funds Requested" and the BCR to Page 2 of the HSIP Application Form.

Cost, FRR, Benefit and BCR:

Total Project Cost	HSIP Funds Requested	Max. FRR
\$1,153,600	\$1,038,240	90%
Total Expected Benefit	Benefit Cost Ratio (BCR)	
53,566,269	46.43	



Legend

-  City Limits
 -  Streets
- 0 0.2 0.4 0.8 Miles
- 

Tennis Ln & N. Hickory Ave - Existing Conditions



Facing Northbound on Hickory Ave



Facing Southbound on Hickory Ave



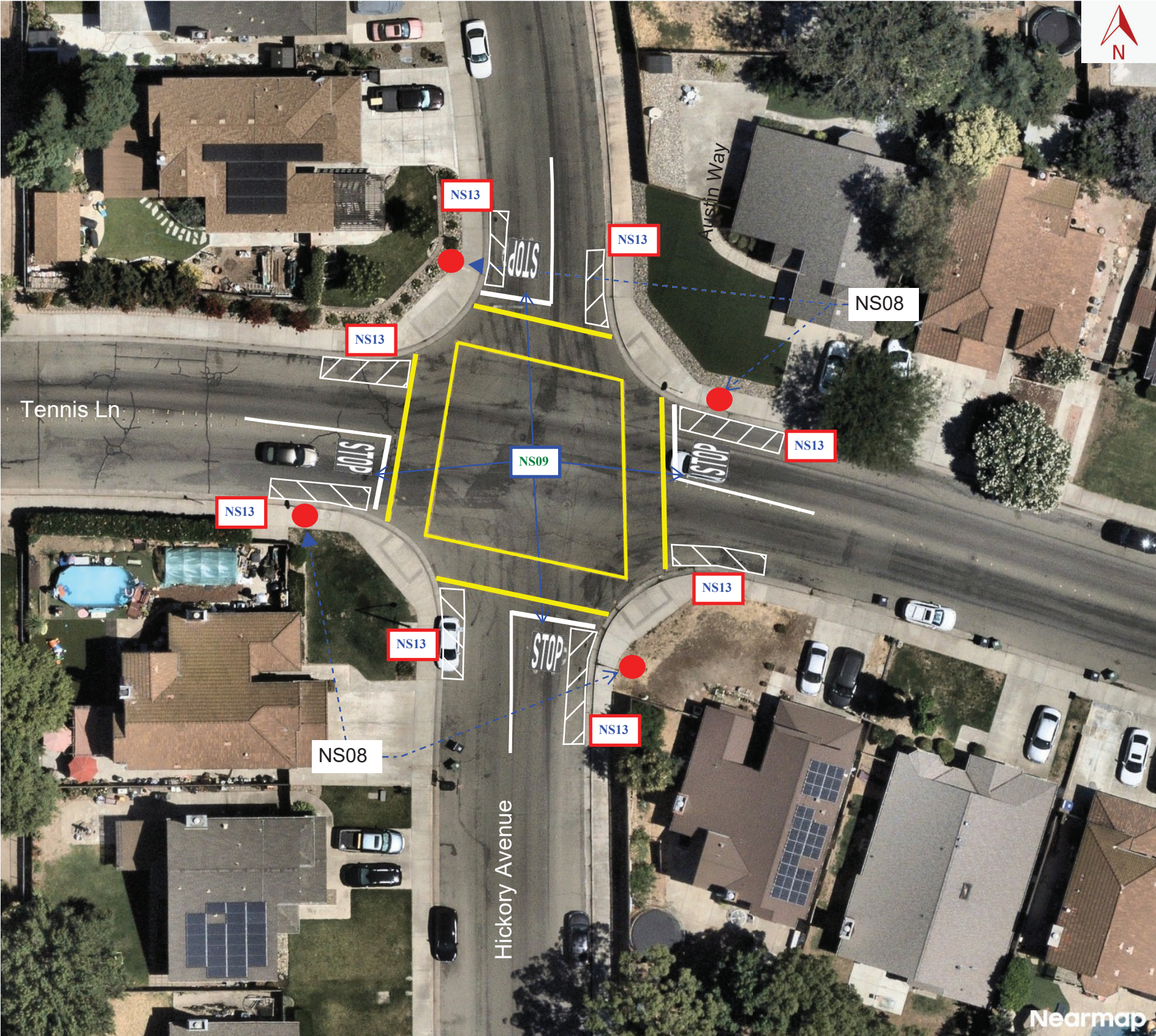
Facing Eastbound on Tennis Ln



Facing Westbound on Tennis Ln

Source: Google Maps Street View

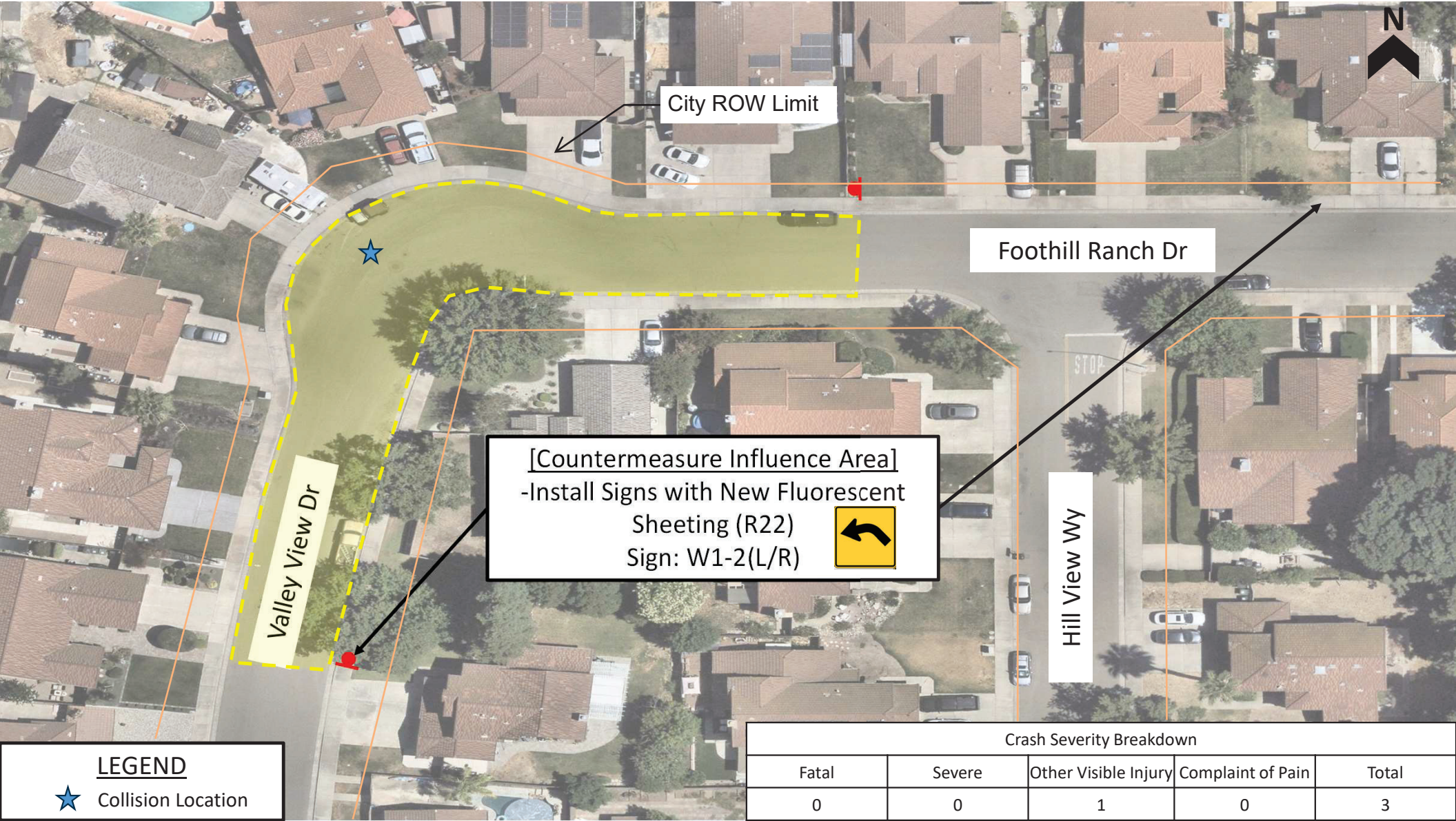
Tennis Ln & N. Hickory Ave - Proposed Conditions (Sample)




NS08 - Install/Upgrade larger or additional Stop Signs or other intersection warning/regulatory signs

NS09 - Upgrade intersection pavement parkings

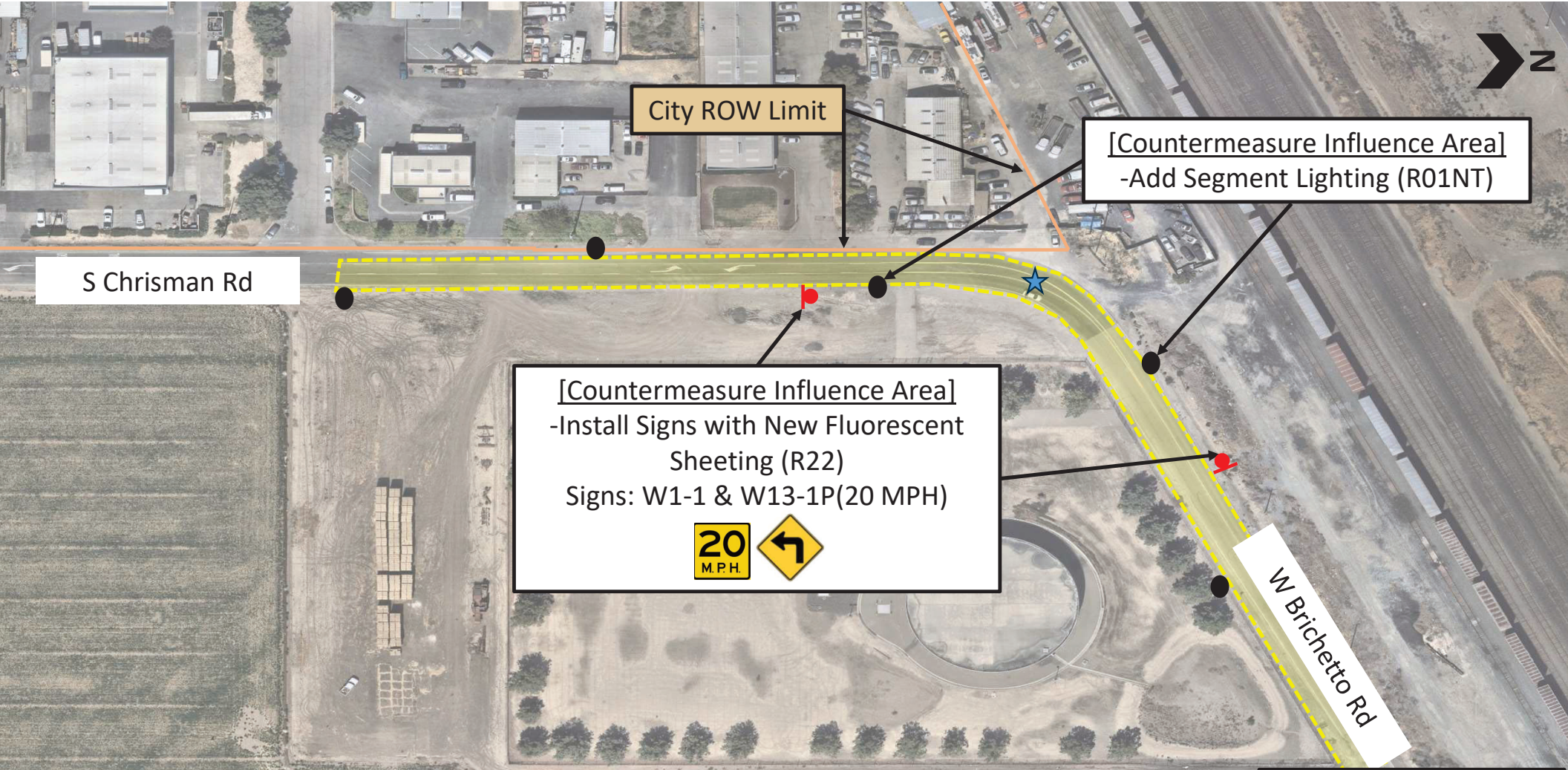
NS13 - Improve sight distance to intersection (Clear Sight Triangles)



[Countermeasure Influence Area]
 -Install Signs with New Fluorescent
 Sheeting (R22)
 Sign: W1-2(L/R) 

LEGEND
 Collision Location

Crash Severity Breakdown				
Fatal	Severe	Other Visible Injury	Complaint of Pain	Total
0	0	1	0	3



City ROW Limit

[Countermeasure Influence Area]
-Add Segment Lighting (R01NT)

S Chrisman Rd

[Countermeasure Influence Area]
-Install Signs with New Fluorescent
Sheeting (R22)
Signs: W1-1 & W13-1P(20 MPH)



W Brichetto Rd

Crash Severity Breakdown				
Fatal	Severe	Other Visible Injury	Complaint of Pain	Total
0	0	2	0	3

LEGEND

-  Collision Location
-  Streetlight

City of Tracy - Cycle 12 HSIP Grant - Unsignalized Intersections and Countermeasures

9/9/2024

No.	Primary Street	Secondary Street	Countermeasure	Countermeasures					Notes	
				NS-08		NS-09		NS-13		
				Larger Stop Signs	& Other Warning Signs	Centerline (ft)	Stop Bar (ft)	Stop Ahead		Daylighting (8*25 = 200 ft)
1	CAROL ANN DR	GARY GABRIEL CT	NS9&13		-	50			600	
2	REDBRIDGE RD	HUTTON PL	NS9			150				No space for Daylighting
3	NORTH TRACY BL	W BEVERLY PL	NS9&13			50	20		400	
4	ORCHARD PKWY	JOSEPH DAMON DR	NS8&9		1	100				No space for Daylighting
5	W LOWELL	CHESTER	NS8&9&13	2	2	200	40		1600	Adding pedestrian crossing signs
6	CORAL HOLLOW RD	LINNE RD	NS8&9	1		150	20	1		No space for Daylighting
7	10TH ST	F ST	NS9&13			100	40		800	
8	BESSIE AV	W 12TH ST	NS9			200				Bulbout Exists - No Daylighting Needed
9	ALDEN GLEN DR	CYPRESS DR	NS9			150	20			Bike Lane - and No space for Daylighting
10	HOLLY DR	LAGUNA	NS9&13			50			1200	
11	MAC ARTHUR	MT DIABLO	NS9				30			
12	WEST GRANT LINE RD	OHARA DR	NS8&9&13		1	50			200	
13	TRACY BL	SYCAMORE PKWY	NS8&NS9		1		30			Adding warning sign. Bike lane exist no daylighting needed
14	SYCAMORE PKWY	MONUMENT DR	NS9				60			No space - Travel Lanes
15	PARKER AV	WHITTIER AV	NS9&13			200			1600	Faded center line
16	CORRAL HOLLOW RD	TENNIS LN	NS8&9		2		60			Adding warning sign. Bike lane exist no daylighting needed
17	W LOWELL AV	PARKER AV	NS8&9&13							same as 90
18	CYPRESS RD	BANFF AV	NS9			50	60			Bike lane - no daylighting
19	9TH ST	E ST	NS8&9&13		2	200			1600	
20	LOWELL AV	CHESTER DR	NS8&9&13							Same as 5
21	SYCAMORE PKWY	SIENNA PARK DR	NS9				60			No space for daylighting
22	CENTRAL AV	7TH ST	NS9&13				40		400	Angle Parking - no daylighting on central
23	EATON AV	PARKER AV	NS8&9&13	4	-	200	80		1600	
24	MACARTHUR DR	WAGTAIL DR	NS13						400	Bike lane - on MacArthur
25	GLENBRIAR CIR	CLOVER HILL CT	NS9&13			150	20		800	No daylighting along south side
26	E MT DIABLO	E 3RD ST	NS9&13			100	20		800	daylighting not possible on NB approach and WB Approach
27	HOLLY DR	LOWELL AV	NS9&13			200	80		1600	
28	JACKSON AV	MCDOWELL	NS9&13			150			800	
29	BESSIE AV	12TH ST	NS9							Same as 82
30	PARKER AV	12TH ST	NS8&9&13		1		20		400	Daylighting on NB and SB Approach
31	N MACARTHUR DR	E 6TH ST	NS8&9&13	1	2	150	20	1	200	
32	VALPICO RD	PEBBLEBROOKE RD	NS8&9		2	100	20			
33	PARKSIDE DR	GLACIER ST	NS8&13			150	20		800	
34	SYCAMORE PKWY	ALLEGHENY ST	NS9&13				20		400	Daylighting only on Allegheny St
35	BEECHNUT AV	SEQUOIA BL	NS9&13			150	60		1000	
36	GIANELLI ST	SCHULTE RD	NS8&9&13		2		40		400	Daylighting only on SB Approach
37	TRACY BL	W WHITTIER AV	NS9&13				20		400	Daylighting only on WB Approach
38	W SCHULTE RD	MORRIS PHELPS DR	NS9&13				120		400	Daylighting only on SB Approach
39	10TH ST	TAFT AV	NS9&13			200	40		1600	
40	E GRANT LINE RD	COLONY DR	NS9&13			100	40		800	Daylighting on NB and SB Approach
41	PARKER AV	12TH ST	NS8&9&13							Same as 30
42	11th St	Safeway Plaza								Private Driveway - Not Included
43	TRACY BL	GANDY DANCER DR	NS9&13			50	40		400	Daylighting on WB Approach
44	11th St	El Portal Dr								State Highway - Not Included
45	BYRON RD	BELCONTE	NS8&9&13	1		400	30		800	
46	N CENTRAL AV	4TH ST	NS8&9&13	2		100			400	

City of Tracy - Cycle 12 HSIP Grant - Unsignalized Intersections and Countermeasures

9/9/2024

No.	Primary Street	Secondary Street	Countermeasure	Countermeasures					Notes	
				NS-08		NS-09		NS-13		
				Larger Stop Signs	& Other Warning Signs	Centerline (ft)	Stop Bar (ft)	Stop Ahead		Daylighting (8*25 = 200 ft)
47	MAC ARTHUR DR	MOUNT DIABLO AV	NS9							Same as 118
48	GOLDEN LEAF LN	CAROL ANN DR	NS8&9&13	3		150	60	1	1200	
49	TRACY BL	MADISON AV	NS9&13				20		400	Daylighting on Madison
50	REDBRIDGE RD	HAMLET LN	NS8&9&13	1		150	20		1200	
50			NS8&9&13	1		50	20		400	
51	VALPICO RD	LAKEVIEW DR	NS9				40			No Daylighting - Bike lane and narrow lane
52	JOSEPH DAMOND WY	ORCHARD PKWY	NS8&9							Same as 4
53	10TH ST	WINDELER AV	NS8&9&13		1		60		1600	
54	GRANT LINE RD	BUTHMAN AV	NS8&9&13							Same as 60 and 97
55	10TH ST	ROOSEVELT AV	NS9&13			200	40		1600	
56	WINDSONG DR	WHISPERING WIND DR	NS8&9&13	4		200	100		1600	
57	SYCAMORE PKWY	DOVE DR	NS8&9	1			30			
58	N CENTER AV	1ST ST	NS8&9&13	2		100	40		1200	
59	11th St	Sumner Ln								State Highway - Not Included
60	GRANT LINE RD	BUTHMAN	NS8&9&13							Same as 54
61	JACKSON AV	CROSSROADS AV	NS8&9&13	1		150			200	
62	TENNIS LN	LAURIANA LN	NS8&9&13	4		50	120		800	
63	TRACY BLVD	LARCH RD	NS9			200	120			Travel lanes do not allow for Daylighting
64	BYRON RD	BELCONTE DR	NS8&9&13							Same as 45
65	GOLDEN LEAF LN	ADAIRE LN	NS8&9&13	3		150	60	1	1200	
66	11th St	Adam St								State Highway - Not Included
67	LINCOLN BLVD	DUNCAN DR	NS9&13			100	40		1600	
68	EAST ST	LOWELL AVE	NS9&13			100			1600	
69	HOLLY DR	LARCH RD	NS9			100	50			No space
70	CYPRESS DR	REDWOOD DR	NS9&13			150	20		800	
71	SCHULTE RD	JORANOLLO DR	NS9&13			50	20		400	Daylighting on NB Approach
72	CORIANDER ST	SACRAMENTO DR	NS9&13			150	60		1200	
73	EAST ST	WHITTIER AVE	NS9&13			50			800	
74	NAGLEE RD	LARCH RD	NS8&9		1		20			
75	EAST ST	NINTH ST	NS9&13			50	30		1000	
76	EAST ST	ACACIA ST	NS9&13			100			1600	
77	CYPRESS DR	BANFF AVE	NS9							Same as 18
78	REGENCY ST.	W. LOWELL AVE.	NS9				20			Bike Lane
79	10TH ST	TAFT AV	NS9&13							Same as 39
80	MARIE AV	DOVENSHIRE DR	NS9&13			150	20		800	
81	MACARTHUR DR	STONEBRIDGE DR	NS9				40			Truck Turnings - No Day Lighting
82	BESIE	CARLTON WY	NS8&9	2	2	200		2		Cross Steet Do No Stop Sign. No Daylighting as Bulb-outs
83	TOLBERT DR	COCHRAN DR	NS9&13			150	20		800	
84	VALPICO RD	ELISSAGARAY DR	NS9&13				30		400	
85	CYPRESS DR	LAURIANA DR	NS9				20			
86	TRACY BL	EMERSON AV	NS9&13			50	20		400	
87	HENLY PKWY	BRIDLE CREEK DR	NS9&13			50	50		400	Daylighting allong Bride Creek Cir
88	HOLLY DR	EMERSON AV	NS9&13			200	40		1600	Daylighting All Sides
89	W LARCH RD	NORTH TRACY BL	NS9							Same as 63
90	PARKER AV	W LOWELL AV	NS8&9&13	4		200	80		1600	
91	W 4TH ST	A ST	NS9&13			50	20		400	Daylighting on 4th St

City of Tracy - Cycle 12 HSIP Grant - Unsignalized Intersections and Countermeasures

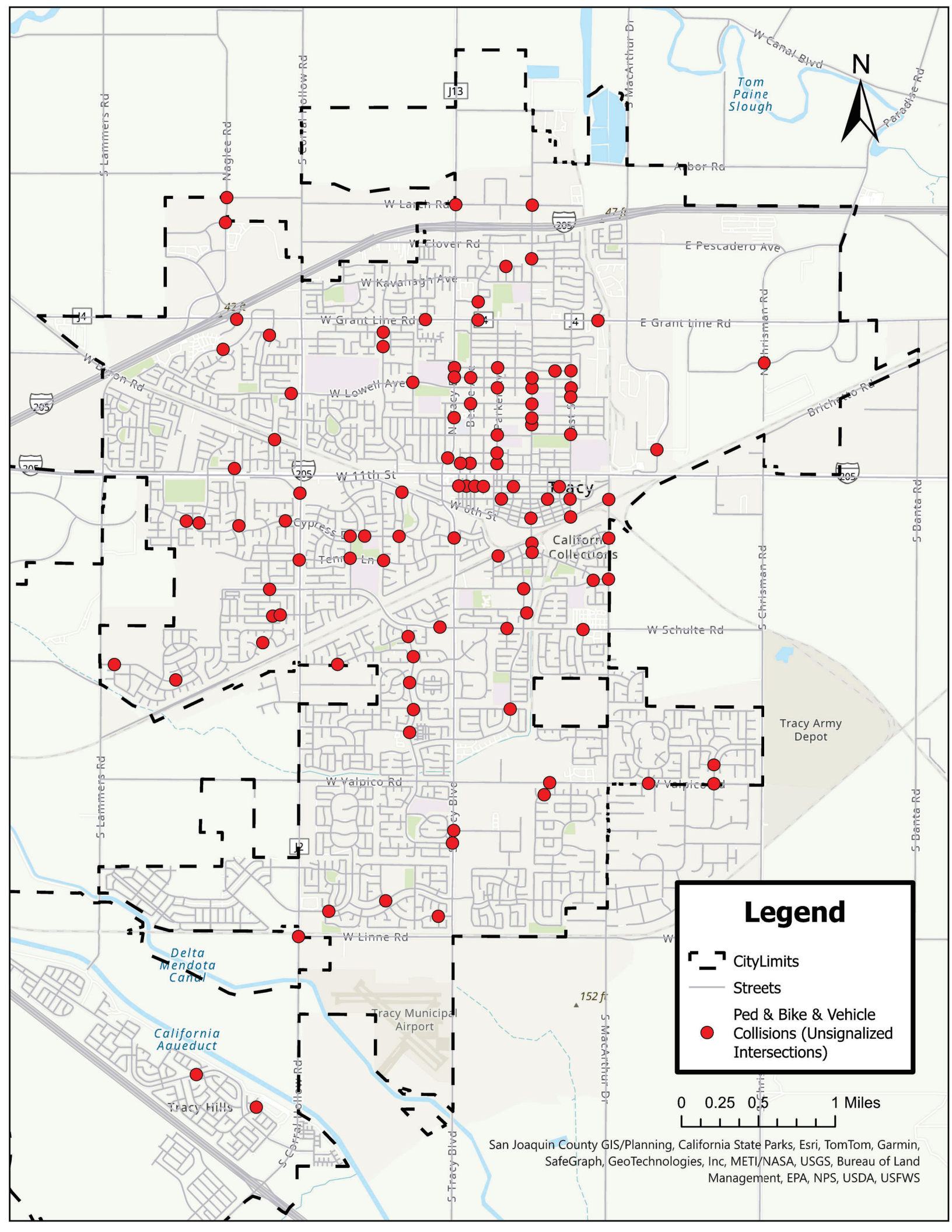
9/9/2024

No.	Primary Street	Secondary Street	Countermeasure	Countermeasures						Notes
				NS-08		NS-09			NS-13	
				Larger Stop Signs	& Other Warning Signs	Centerline (ft)	Stop Bar (ft)	Stop Ahead	Daylighting (8*25 = 200 ft)	
92	W SCHULTE	JORANOLLO	NS9&13							Same as 71
93	WINDSONG DR	MORNING BROOK LN	NS9&13			100	40		1600	Daylighting All Sides
94	SCHULTE RD	MORRIS PHELPS DR	NS9&13							Same as 38
95	GRANT LINE RD	TOSTE RD	NS8&9&13		1	50	20			
96	N CORRAL HOLLOW RD	TENNIS LN	NS8&9							Same as 16
97	GRANT LINE RD	BUTHMAN AV	NS8&9&13							Same as 54
98	ELISSAGARAY DR	ROGERS DR	NS9&13			150	80		1600	Daylighting All Sides
99	EAST ST	EATON AV	NS8&9&13	2				2	1600	
100	CORRAL HOLLOW RD	KROHN RD	NS8&9	2	2	100	40			Adding 2 warning signs
101	PARKSIDE AV	GLACIER CT	NS8&13							Same as 33
102	MOUNT DIABLO AV	C ST	NS8&9&13	2	2	200			1600	
103	BUTHMANN AV	CARDOZA RD	NS9&13			50	20		800	Daylighting on limited sides
104	BESSIE AV	CARLTON WY	NS8&9							Same as 82
105	WHITTIER AV	MAE AV	NS9&13			50	20		800	Daylighting on Mac and Whitties South Side
106	LINCOLN BL	DUNCAN RD	NS9&13							Same as 67
107	SCHULTE RD	BARCELONA DR	NS8&9		2		40			No Daylighting - Bike Lanes and no Shoulder
108	11th St	ROOSEVELT AV								State Highway - Not Included
109	W GRANT LINE RD	OHARA DR	NS8&9&13							Same as 12
110	W SCHULTE RD	MORRIS PHELPS DR	NS9&13							Same as 38
111	LOWELL AV	CHESTER DR	NS8&9&13							Same as 5
112	E DEERWOOD LN	SOUTH CENTRAL AV	NS8&9&13	2	2		60		1600	
113	PARADISE RD	CHRISMAN RD	NS8&9		2	100	120			Daylighting Not Feasible
114	PARKER AV	HIGHLAND AV	NS9&13			200			1600	
115	W GRANT LINE RD	OHARA DR	NS8&9&13							Same as 109 and 12
116	6TH ST	EAST ST	NS9&13			50	20		800	Daylighting on 6th St North Side and East St
117	LINCOLN BL	VALLERAND RD	NS9&13			50	20		800	T intersection
118	NAGLEE RD	AUTO PLAZA WY	NS8&9&13		2	100	40		800	Some Daylighting Exist
119	10TH ST	B ST	NS9			200	80			Bulb-outs no Daylighting needed
120	CORRAL HOLLOW RD	TENNIS LN	NS9&13			100	40		1600	Same as 16
121	BESSIE AV	W EMERSON ST	NS9&13							Same as 140
122	BUTHMAN RD	CARDOZA DR	NS9&13							Same as 103
123	11th St	Bessie Ave								State Highway - Not Included
124	11th St	EAST ST								State Highway - Not Included
125	3RD ST	N CENTRAL AV	NS8&9&13	4		200	80		1600	
126	W 9TH ST	A ST	NS9&13			100	40		1600	Angle parking needs to be adjusted
127	HOLLYWOOD AV	HOLLY DR	NS8&13	1	1				1200	Signal Ahead Sign
128	F ST	10TH ST	NS9&13							Same as 71
129	DUNCAN DR	LINCOLN BL	NS9&13							Same as 67
130	NORTH TRACY BL	CENTRE COURT DR	NS9&13			50	40		400	Bike Lane and narrow lane - Daylighting only on EB Approach
131	CORRAL HOLLOW RD	TENNIS LN	NS8&9							Same as 96 and 120
132	W. 11th St	9th St								State Highway - Not Included
133	12TH ST	ROOSEVELT AV	NS8&9&13	2	2	200			1600	
134	10TH ST	F ST	NS9&13							Same as 7
135	NORTH TRACY BL	CENTRE COURT DR	NS9&13							Same as 130
136	SUMMER LN	GREYSTONE	NS9&13			100	40		1600	
137	MOUNT OSO AV	SOUTH CENTRAL AV	NS9&13			50	20		600	

City of Tracy - Cycle 12 HSIP Grant - Unsignalized Intersections and Countermeasures

9/9/2024

No.	Primary Street	Secondary Street	Countermeasure	Countermeasures						Notes
				NS-08		NS-09			NS-13	
				Larger Stop Signs	& Other Warning Signs	Centerline (ft)	Stop Bar (ft)	Stop Ahead	Daylighting (8*25 = 200 ft)	
138	MIDDLEFIELD DR	ROXBURY DR	NS9				20			Bike lanes and narrow lanes no Daylighting
139	W SCHULTE RD	S BARCELONA DR	NS8&9							Same as 107
140	BESSIE AV	EMERSON AV	NS9&13							Same as 121
141	EAST AV	E BATON AV	NS8&9&13							Same as 99
142	SYCAMORE PKWY	AMBERWOOD WY	NS9				40			Bike lanes and narrow lanes no Daylighting
143	TRACY BL	LARCH RD	NS9							Same as 63
144	EAST AV	E LOWELL AV	NS9&13							Same as 68
145	HOLLY DR	W BEVERLEY PL	NS9&13			150	20		800	Daylighting on some approaches
146	TENNIS LN	HICKORY AV	NS9&13			200	80		1600	
147	10TH ST	WALL ST	NS9&13			100	40		800	Daylighting only on 10th St
148	PARKER	WHITTIER AV	NS9&13							Same as 15
149	NAGLEE RD	AUTO PLAZA WY	NS8&9&13							Same as 118
150	W. 11th St	WALL ST								State Highway - Not Included
151	TRACY HILLS DR	TOURMALINE WAY	NS8&9&13		1	50	20		400	
152	HOLLY DR	W CARLTON WY	NS9&13			50	20		800	



Legend

- CityLimits
- Streets
- Ped & Bike & Vehicle Collisions (Unsignaled Intersections)



San Joaquin County GIS/Planning, California State Parks, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, USFWS

Collision List - Unsignalized Intersections

Number	CASE_ID	YEAR	DATE	SEVERITY	PCF VIOLATION	CRASH TYPE	MOTOR VEHICLE INVOLVED WITH	LIGHTING
1	8534030	2018	1/1/2018	4	08	D	C	A
2	8537163	2018	1/22/2018	4	22	D	C	-
3	8563109	2018	2/22/2018	4	09	D	C	A
4	8581847	2018	3/16/2018	4	09	D	C	A
5	8587201	2018	2/20/2018	4	09	D	C	A
6	8597405	2018	4/11/2018	4	09	D	C	B
7	8616435	2018	5/5/2018	4	09	D	C	A
8	8618816	2018	5/14/2018	4	09	B	C	A
9	8618879	2018	5/13/2018	3	08	A	I	B
10	8649700	2018	7/22/2018	4	09	D	D	A
11	8659800	2018	7/3/2018	3	03	C	C	A
12	8671782	2018	7/22/2018	3	09	D	C	A
13	8680822	2018	1/5/2018	2	09	D	C	C
14	8695037	2018	9/4/2018	4	09	D	C	A
15	8695194	2018	6/28/2018	2	12	D	C	A
16	8695261	2018	6/8/2018	2	09	D	C	C
17	8724876	2018	10/3/2018	3	06	B	G	A
18	8724880	2018	10/13/2018	4	06	B	C	B
19	8734401	2018	10/1/2018	2	09	D	C	A
20	8735789	2019	1/22/2019	4	09	D	C	A
21	8739430	2018	11/27/2018	4	08	D	C	A
22	8754506	2018	11/29/2018	4	09	D	C	C
23	8767415	2018	12/21/2018	4	12	D	B	C
24	8767876	2018	12/19/2018	4	00	D	C	C
25	8797261	2019	2/1/2019	4	08	A	I	C
26	8797265	2019	2/1/2019	4	09	D	C	C
27	8799558	2019	2/10/2019	4	03	C	C	A
28	8804343	2019	2/21/2019	4	08	A	C	A
29	8804361	2019	2/18/2019	3	09	-	C	A
30	8812806	2019	3/2/2019	3	12	D	C	A
31	8820564	2019	2/27/2019	2	11	G	B	C
32	8821018	2019	3/8/2019	4	09	D	C	A
33	8831023	2019	3/17/2019	4	09	D	C	A
34	8831027	2019	3/18/2019	4	12	B	B	A
35	8836174	2019	3/29/2019	4	08	A	C	B
36	8836178	2019	3/31/2019	2	01	E	I	C
37	8839425	2019	4/14/2019	2	08	D	C	A
38	8881264	2019	6/17/2019	4	03	C	C	B
39	8886510	2019	6/24/2019	4	09	D	C	A
40	8889405	2019	6/25/2019	4	09	-	C	A
41	8889968	2019	5/7/2019	4	12	D	C	A
42	8900216	2019	7/15/2019	3	09	D	C	A
43	8918365	2019	8/13/2019	3	05	D	G	A
44	8918381	2019	8/12/2019	4	12	G	B	A
45	8929970	2019	8/20/2019	4	09	D	C	A
46	8932286	2019	8/30/2019	3	10	A	B	A
47	8932863	2019	8/30/2019	4	03	C	C	A
48	8940543	2019	9/12/2019	3	09	-	G	A
49	8942288	2019	9/26/2019	3	08	D	C	A
50	8958003	2019	9/23/2019	4	09	D	C	A
51	8958032	2019	10/5/2019	4	12	D	C	A
52	8958796	2019	10/17/2019	4	09	D	C	A
53	8958966	2019	10/18/2019	3	21	B	E	A
54	8976132	2019	11/8/2019	4	08	D	G	A
55	8980527	2019	11/14/2019	3	09	D	G	C
56	8980602	2019	11/18/2019	4	10	G	B	A
57	9006231	2019	12/27/2019	4	09	D	G	A
58	9006239	2019	12/27/2019	3	09	D	G	A
59	9015076	2019	12/19/2019	3	10	G	G	-
60	82117840	2023	7/19/2023	3	1	D	C	B
61	82136654	2023	8/7/2023	3	5	D	G	A
62	82141357	2023	8/11/2023	3	10	G	B	A
63	82161360	2023	9/4/2023	4	8	D	C	C
64	82173058	2023	9/19/2023	4	9	D	C	A

Collision List - Unsignalized Intersections

Number	CASE_ID	YEAR	DATE	SEVERITY	PCF VIOLATION	CRASH TYPE	MOTOR VEHICLE INVOLVED WITH	LIGHTING
65	82177918	2023	9/26/2023	2	12	D	C	A
66	82203014	2023	10/19/2023	3	8	H	G	A
67	82240137	2023	11/20/2023	2	8	D	C	A
68	82240138	2023	11/20/2023	2	8	G	B	A
69	82265429	2023	12/19/2023	4	5	D	C	A
70	82276182	2023	1/2/2024	4	8	A	C	C
71	82278733	2023	1/4/2024	4	8	D	C	A
72	82295450	2023	1/24/2024	4	12	E	I	A
73	82295477	2023	1/24/2024	4	9	D	C	A
74	91636745	2021	11/29/2021	3	9	D	C	A
75	9222794	2021	3/16/2021	3	9	D	C	A
76	9229194	2021	4/8/2021	4	9	D	G	A
77	9234181	2021	3/29/2021	3	1	E	I	C
78	9250485	2021	4/30/2021	4	9	D	C	A
79	9259480	2021	5/18/2021	4	8	D	C	A
80	9265696	2021	6/1/2021	3	9	D	C	A
81	9274467	2021	7/30/2021	3	1	A	I	C
82	9274469	2021	7/30/2021	3	3	C	C	A
83	9292206	2021	9/3/2021	4	3	C	C	A
84	9292534	2021	7/27/2021	4	9	-	C	A
85	9298088	2021	9/17/2021	4	12	C	C	A
86	9314644	2021	10/8/2021	4	12	D	C	C
87	9316087	2021	9/18/2021	4	9	A	C	A
88	9320737	2021	6/24/2023	1	1	D	D	A
89	9325913	2021	11/9/2021	4	8	D	C	C
90	9325914	2021	10/26/2021	4	-	A	C	A
91	9339636	2021	10/25/2021	3	9	D	C	A
92	9341208	2021	10/25/2021	4	9	D	C	B
93	9345555	2021	11/18/2021	3	9	D	C	A
94	9370317	2021	1/5/2022	3	1	-	I	C
95	9372766	2021	12/14/2021	4	0	D	C	C
96	9377730	2021	1/24/2022	3	6	D	G	A
97	9377842	2021	1/13/2022	4	9	D	C	A
98	9381330	2022	1/27/2022	3	10	G	B	C
99	9381331	2022	3/14/2022	3	9	D	C	A
100	9381928	2022	2/1/2022	2	12	D	G	A
101	9401544	2022	3/3/2022	4	9	D	D	A
102	9415010	2022	3/1/2022	3	8	B	C	A
103	9427097	2022	4/6/2022	3	9	-	C	A
104	9431170	2022	4/15/2022	3	1	B	I	C
105	9435056	2022	5/3/2022	4	3	D	C	A
106	9443045	2022	4/29/2022	3	3	-	B	A
107	9455638	2022	6/29/2022	3	10	D	B	C
108	9460675	2022	6/24/2022	3	12	D	C	A
109	9465838	2022	2/3/2023	4	9	-	C	A
110	9465839	2022	1/27/2023	4	9	D	C	A
111	9465840	2022	1/27/2023	3	9	D	C	A
112	9474528	2022	7/8/2022	3	9	D	C	A
113	9474530	2022	7/8/2022	3	9	D	C	A
114	9477971	2022	8/4/2022	4	16	-	C	A
115	9478146	2022	8/19/2022	3	9	D	C	A
116	9479266	2022	8/17/2022	4	8	D	C	A
117	9485100	2022	8/26/2022	4	9	D	C	A
118	9486224	2022	9/22/2022	3	10	G	B	B
119	9496093	2022	9/20/2022	4	9	D	C	A
120	9499871	2022	11/16/2022	4	10	G	B	A
121	9503714	2022	9/26/2022	4	12	D	C	A
122	9509152	2022	12/22/2022	4	9	D	C	A
123	9519636	2023	2/21/2023	4	9	D	C	A
124	9520185	2022	1/26/2023	1	8	D	C	A
125	9528541	2022	11/23/2022	3	8	G	G	A
126	9529058	2022	11/28/2022	3	9	D	C	A
127	9533620	2023	2/16/2023	3	1	E	I	C
128	9537190	2022	1/4/2023	4	9	D	C	A

Number	CASE_ID	YEAR	DATE	SEVERITY	PCF VIOLATION	CRASH TYPE	MOTOR VEHICLE INVOLVED WITH	LIGHTING
129	9542494	2022	2/2/2023	2	1	E	I	C
130	9548222	2023	3/23/2023	4	1	D	C	A
131	9550722	2023	4/6/2023	3	9	D	C	A
132	9557000	2023	4/14/2023	3	9	D	C	A
133	9562914	2023	4/25/2023	3	5	D	G	A
134	9577631	2023	5/15/2023	3	9	D	C	A
135	9577632	2023	5/15/2023	4	1	-	C	D
136	9579195	2023	5/25/2023	4	9	-	C	A
137	9579526	2023	5/20/2023	3	-	D	C	A
138	9579527	2023	5/20/2023	4	12	D	C	A
139	9580399	2023	6/22/2023	4	9	D	C	A
140	9581342	2023	6/27/2023	4	9	-	C	A
141	9581716	2023	6/30/2023	3	9	D	C	A
142	9587717	2023	6/16/2023	3	8	D	C	A
143	9587718	2023	6/16/2023	3	9	-	C	A
144	8889693	2019	7/4/2019	3	00	H	J	A
145	9477972	2022	8/4/2022	3	00	A	J	D
146	9481191	2022	8/8/2022	3	00	-	J	D

Severity: 1-Fatal Injury 2-Suspected Serious Injury or Severe Injury 3- Suspected Minor Injury or Visible Injury 4-Possible Injury or Complaint of Pain 0-No Injury, also Known as property damage only or PDO

PCF Violation: 01-Driving or Bicycling Under the influence of Alcohol or Drug 02-Impeding Traffic 03-Unsafe Speed 04-Following Too Closely 05-Wrong Side of Road 06-Improper Turning 09-Automobile Right of Way 11-Pedestrian Violation 12-Traffic Signals and Signs 13-Hazardous Parking 14-Lights 15-Brakes 16-Other Equipment 17-Other Hazardous Violation 18-Other Than Driver (Or Pedestrian) 19-NA 20-NA 21-Unsafe Starting or Backing 22-Other Improper Driving 23-Pedestrian or "Other" Under the Influence of Alcohol or Drug 24-Fell Asleep 00-Unknown

Crash Type: A-Head on B-Sideswipe C-Rear End D-Broadside E-Hit Object F-Overtaken G-Vehicle/Pedestrian H-Other

Motor Vehicle Involved With: A- Non Collision B-Pedestrian C-Other Motor Vehicle D-Motor Vehicle on Other Roadway E-Parked Motor Vehicle F-Train G-Bicycle H-Animal I-Fixed Object J-Other Object O-Non-Collision and Additional Object 1-Pedestrian and Additional Object 2-Other Motor Vehicle and Additional Object 3-Motor Vehicle on Other Roadway and Additional Object 4-Parked Motor Vehicle and Additional Object 5-Train and Additional Object 6-Bicycle and Additional Object 7-Animal and Additional Object 8-Fixed Object and Additional Object 9-Other Object and Additional Object

Lighting: A- Daylight B-Dusk-Dawn C-Dark-Street Lights D-Dark-No Street Lights E-Dark-Street Lights Not Functioning