

San Mateo County State Highway System Congestion and Safety Performance Assessment 2019 Update

C/CAG Board of Directors
October 15, 2020

Introduction

- Initial analysis performed in 2017
- Co-funded by C/CAG and SMCTA
- Used GPS, C/CAG Model, and CHP Collision Data
- Analysis and report was completed pre-COVID-19

Performance Measures

Congestion

- Total Vehicle Hours of Delay Per Mile
- Travel Speed
- Travel Time Reliability

Safety

- Traffic Collisions Per Million-Vehicle-Miles

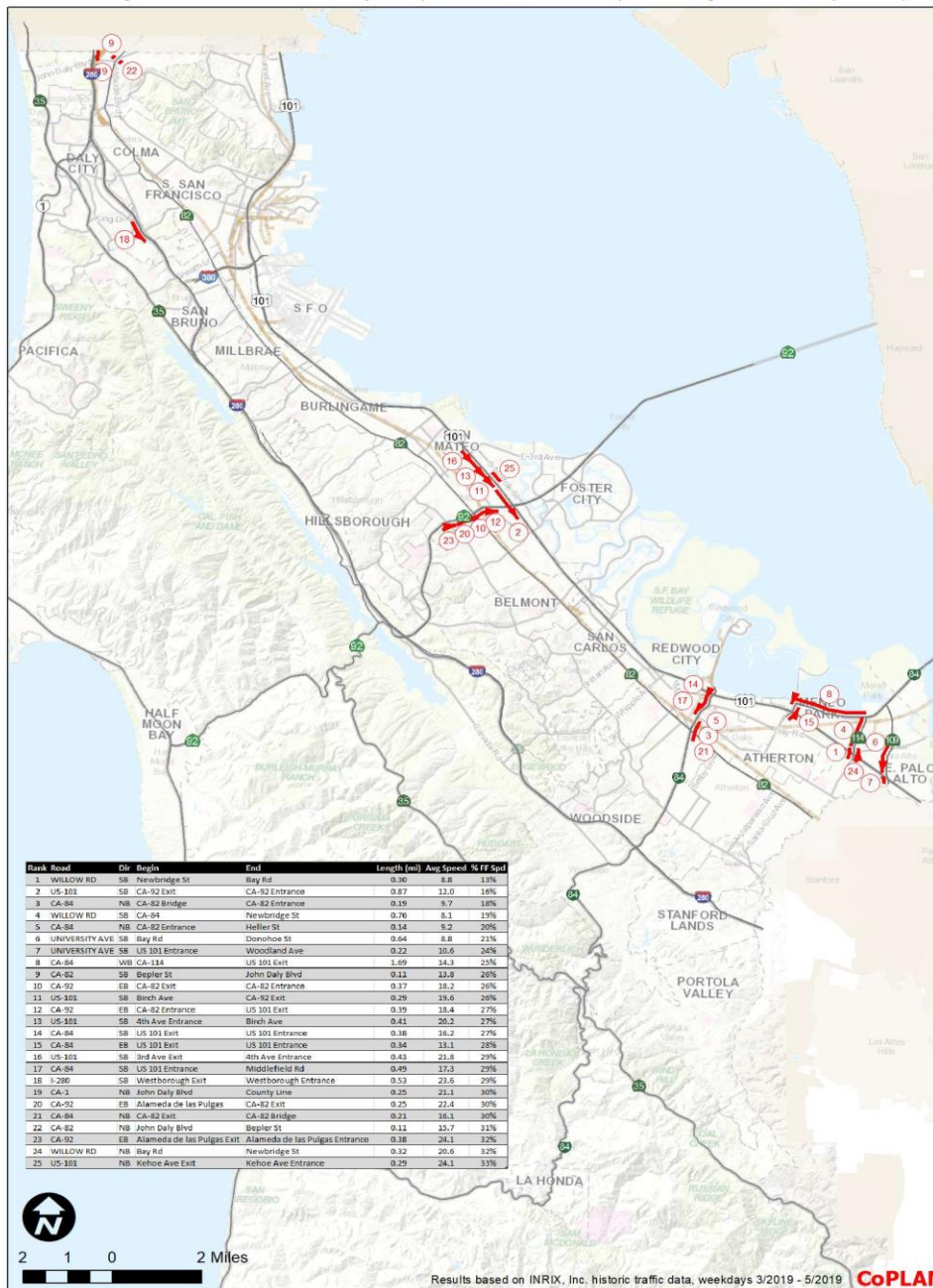
Total Vehicle-Hours of Delay per Mile

- Vehicle Hours of Delay (VHD) is a measure of the overall amount of excess time vehicles spend in congestion.
- A measure of congestion intensity.

Travel Speed (Percent of Free Flow)

- Observed travel speeds, as measured by the percentage of when segments experience free flow speed.

Worst 25 Segments based on Travel Speed (Percent of Free Flow) : Morning Peak Hour (8-9 AM)

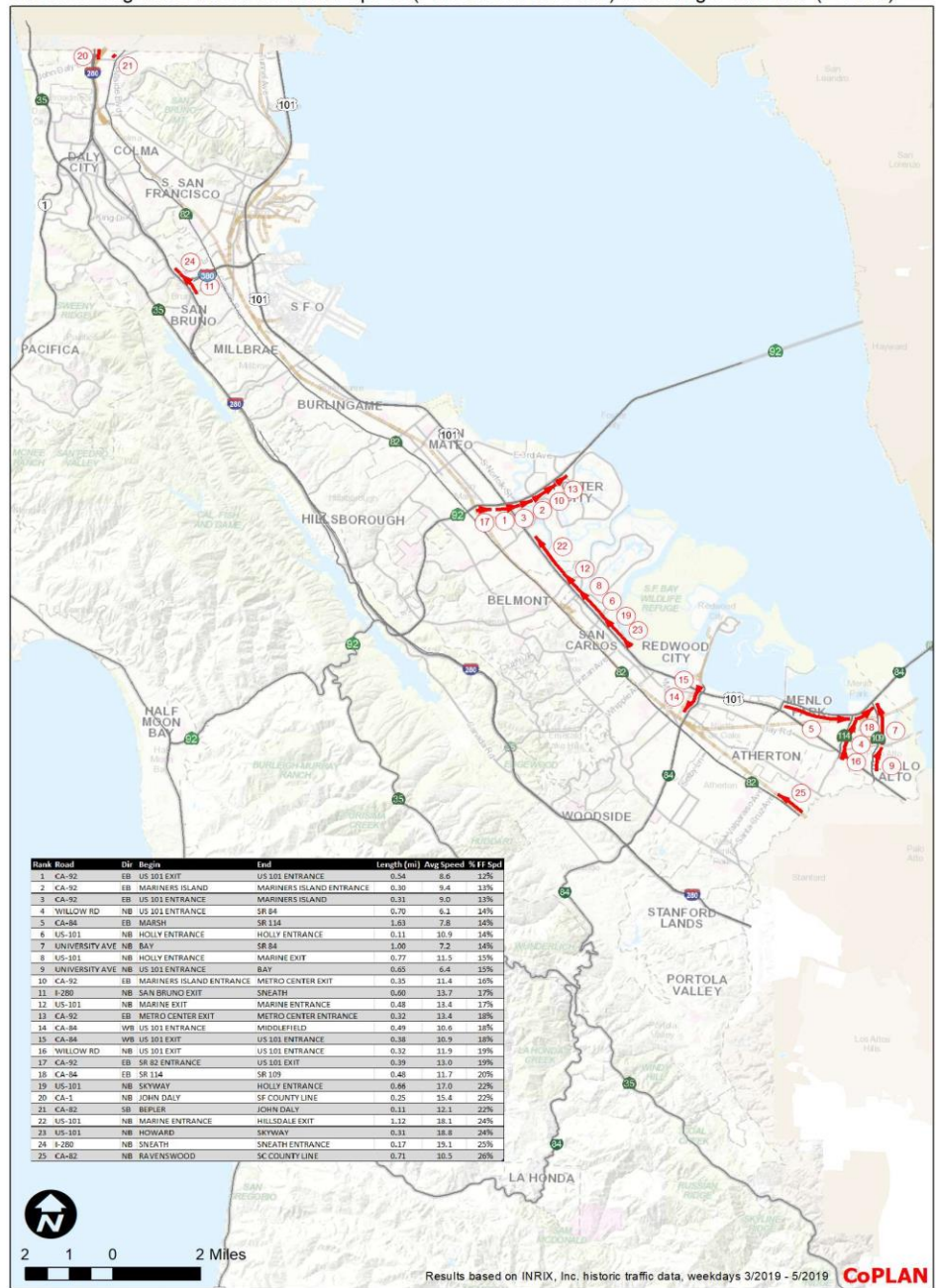


Legend

→ Worst 25 Segments based on % Free Flow Speed (8-9 AM)

Results based on INRIX, Inc. historic traffic data, weekdays 3/2019 - 5/2019 **CoPLAN**

Worst 25 Segments based on Travel Speed (Percent of Free Flow) : Evening Peak Hour (5-6 PM)



Legend

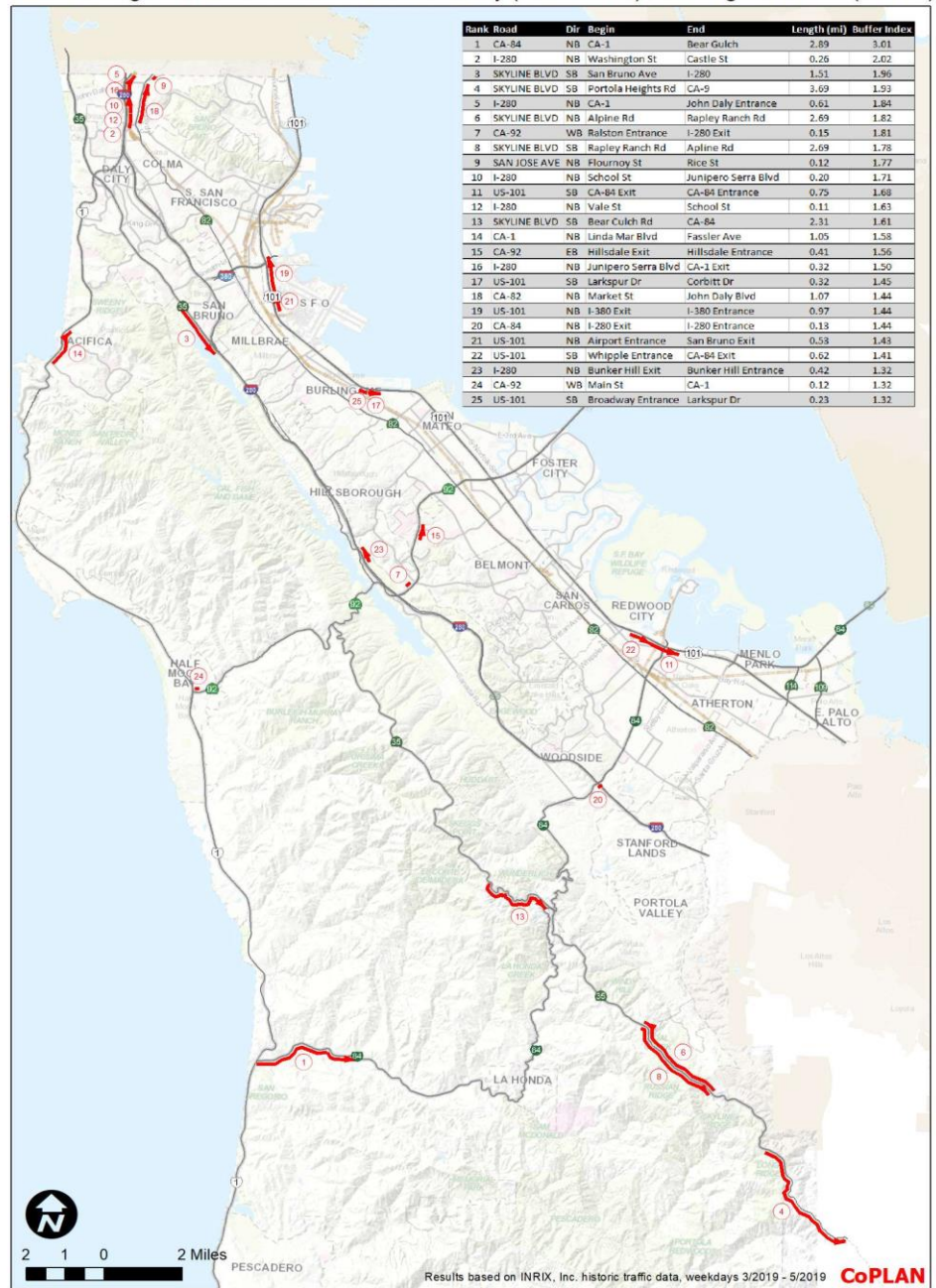
→ Worst 25 Segments based on % Free Flow Speed (5-6 PM)

Results based on INRIX, Inc. historic traffic data, weekdays 3/2019 - 5/2019 **CoPLAN**

Travel Time Reliability (Buffer Index)

- Consistency or dependability in travel times

Worst 25 Segments based on Travel Time Reliability (Buffer Index) : Morning Peak Hour (8-9 AM)

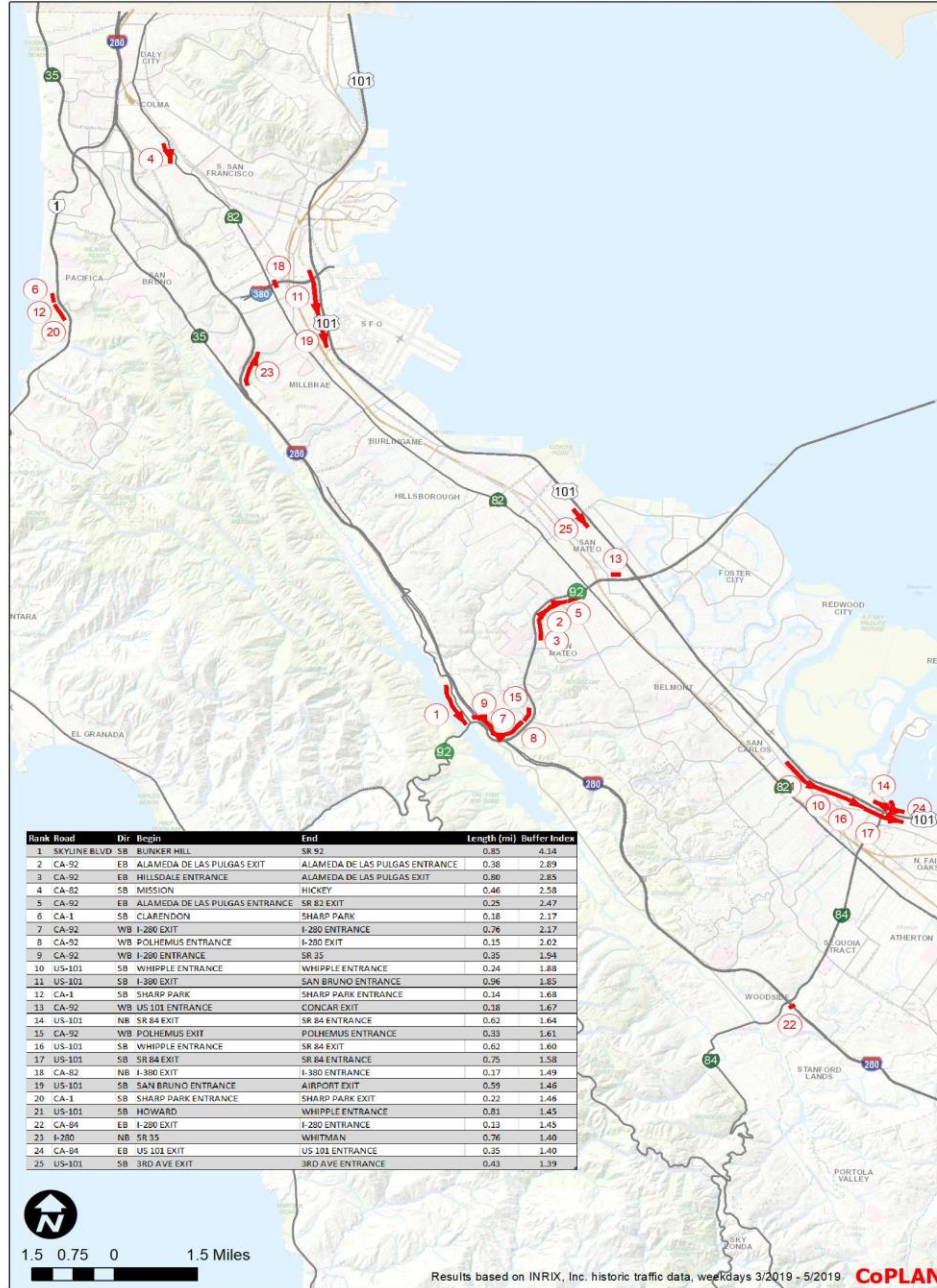


Legend

→ Worst 25 Segments based on Travel Time Reliability (Buffer Index) (8-9 AM)

Results based on INRIX, Inc. historic traffic data, weekdays 3/2019 - 5/2019 CoPLAN

Worst 25 Segments based on Travel Time Reliability (Buffer Index) : Evening Peak Hour (5-6 PM)



Rank	Road	Dir	Begin	End	Length (mi)	Buffer Index
1	SKYLINE BLVD SR 92	SB	BURNER HILL	SR 92	0.25	4.24
2	CA-92	EB	ALAMEDA DE LAS PULGAS EXIT	ALAMEDA DE LAS PULGAS ENTRANCE	0.38	2.89
3	CA-92	EB	HILSDALE ENTRANCE	ALAMEDA DE LAS PULGAS ENTRANCE	0.80	2.85
4	CA-82	SB	MISSION	HICKEY	0.46	2.58
5	CA-92	EB	ALAMEDA DE LAS PULGAS ENTRANCE	SR 82 EXIT	0.25	2.47
6	CA-1	SB	CLARENDOON	SHARP PARK	0.18	2.17
7	CA-92	WB	I-280 EXIT	I-280 ENTRANCE	0.76	2.17
8	CA-92	WB	POLHEMUS ENTRANCE	I-280 EXIT	0.15	2.02
9	CA-92	WB	I-280 ENTRANCE	SR 35	0.35	1.94
10	US-101	SB	WHIPPLE ENTRANCE	WHIPPLE ENTRANCE	0.24	1.88
11	US-101	SB	I-380 EXIT	SAN BRUNO ENTRANCE	0.96	1.85
12	CA-1	SB	SHARP PARK	SHARP PARK ENTRANCE	0.14	1.68
13	CA-92	WB	US 101 ENTRANCE	CONCAR EXIT	0.18	1.67
14	US-101	NB	SR 84 EXIT	SR 84 ENTRANCE	0.62	1.64
15	CA-92	WB	POLHEMUS EXIT	POLHEMUS ENTRANCE	0.33	1.61
16	US-101	SB	WHIPPLE ENTRANCE	SR 84 EXIT	0.62	1.60
17	US-101	SB	SR 84 EXIT	SR 84 ENTRANCE	0.75	1.58
18	CA-82	NB	I-380 EXIT	I-380 ENTRANCE	0.17	1.49
19	US-101	SB	SAN BRUNO ENTRANCE	AIRPORT EXIT	0.59	1.46
20	CA-1	SB	SHARP PARK ENTRANCE	SHARP PARK EXIT	0.22	1.46
21	US-101	SB	HOWARD	WHIPPLE ENTRANCE	0.81	1.45
22	CA-94	EB	I-280 EXIT	I-280 ENTRANCE	0.33	1.45
23	I-280	NB	SR 35	WHITMAN	0.76	1.40
24	CA-84	EB	US 101 EXIT	US 101 ENTRANCE	0.35	1.40
25	US-101	SB	3RD AVE EXIT	3RD AVE ENTRANCE	0.43	1.39



Results based on INRIX, Inc. historic traffic data, weekdays 3/2019 - 5/2019 **CoPLAN**

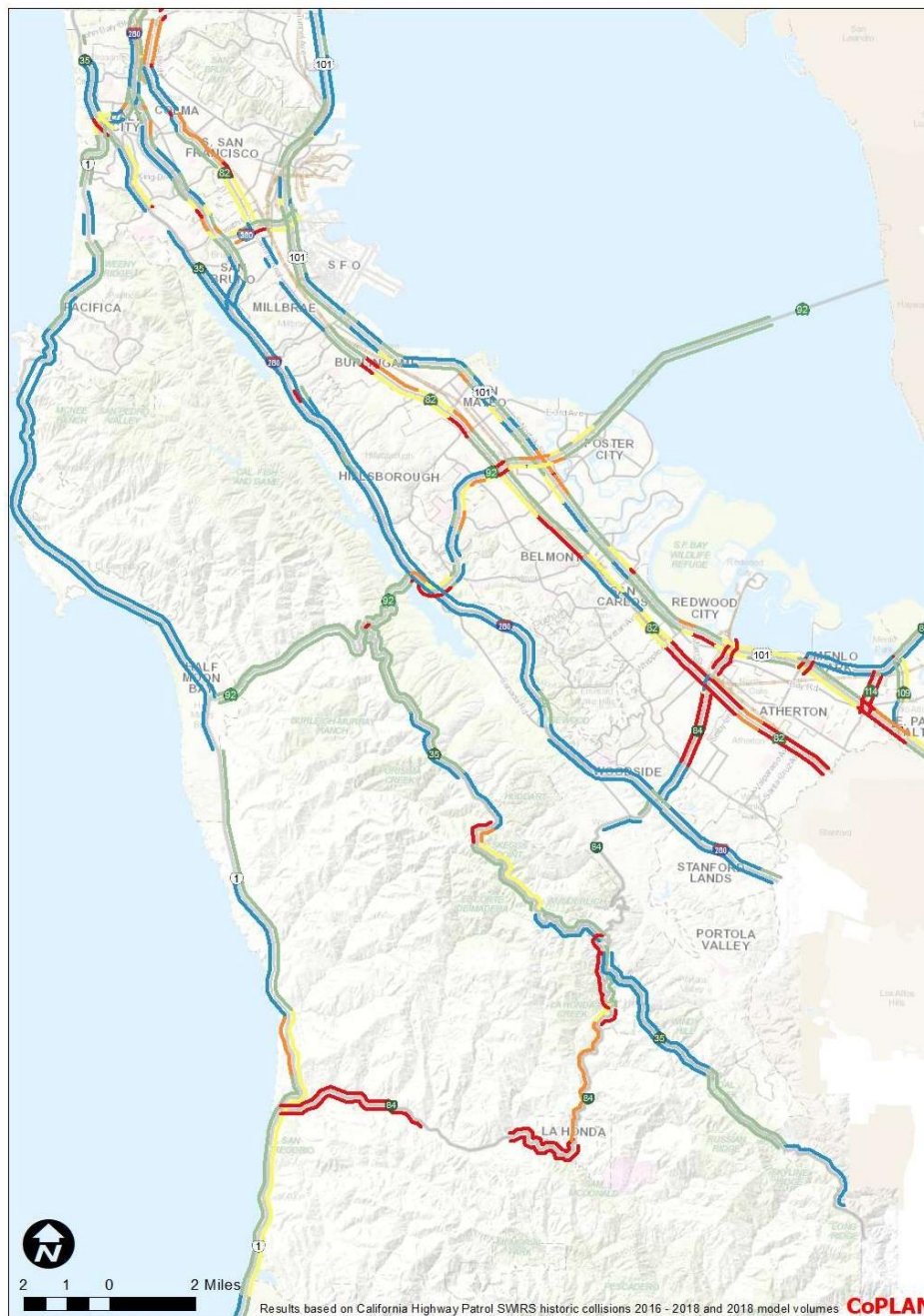
Legend

➔ Worst 25 Segments based on Travel Time Reliability (Buffer Index) (5-6 PM)



Traffic Collisions

- Collision data from Statewide Integrated Traffic Records System (SWITRS)



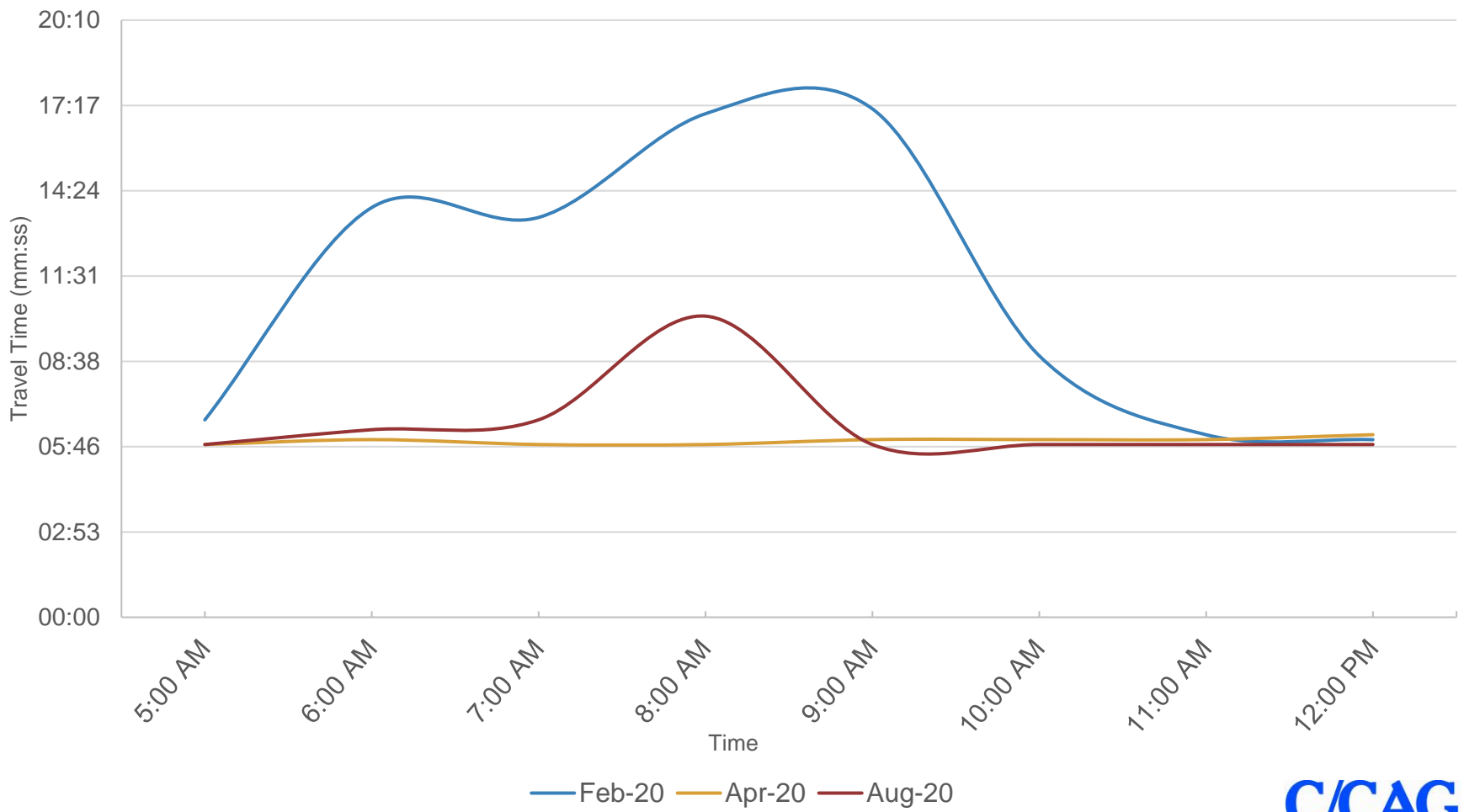
Legend

Crashes Per Million VMT — 0.01 - 0.25 — 0.25 - 0.50 — 0.50 - 0.75 — 0.75 - 1.00 — > 1.00

Monitoring Trends During a Pandemic

- COVID-19 has significantly altered travel patterns
- Travel patterns after the resolution of COVID-19 are dependent on multiple interrelated variables.
- Currently, there is no reliable methodology for projecting near-term future traffic conditions.
- There are available tools (e.g. Streetlight and INRIX) for C/CAG to monitor existing traffic levels

AM Travel Time on San Mateo Bridge



Thanks!
Any questions?