

I-10 ExpressLanes Extension PA/ED Study

Alternative 3 (2 HOT): Revised Off-Peak Forecast Volumes

Transportation Conformity Working Group

January 23, 2024

I-10 Project Corridor Overview



Purpose of I-10 ExpressLanes

- Enhance operations by improving trip reliability and travel times
- Improve traffic flow and operations by maximizing throughput
- Increase continuity of regional managed lanes network by closing the gap
- Improve performance of regional managed lanes network
- Expand multi-modal travel options (arterial improvements, active transportation etc.)

PA/ED Alternatives

- Alt 1: No Build
- Alt 2: Single ExpressLane
- Alt 3: Dual ExpressLane
- Alt 4: Dual HOV Lane



Basis for Meeting (Background)

July 25 TCWG meeting – Discussions on Alt 3 (2-HOT) related to air quality concern

Alt 3 increases forecast truck volumes on project corridor by ~5,000 vpd compared to the No-Build (Alt. 1)

Need for potential hot spot analysis



Revisit the model assumptions related to tolling rates

Initial Approach (Truck Volumes)

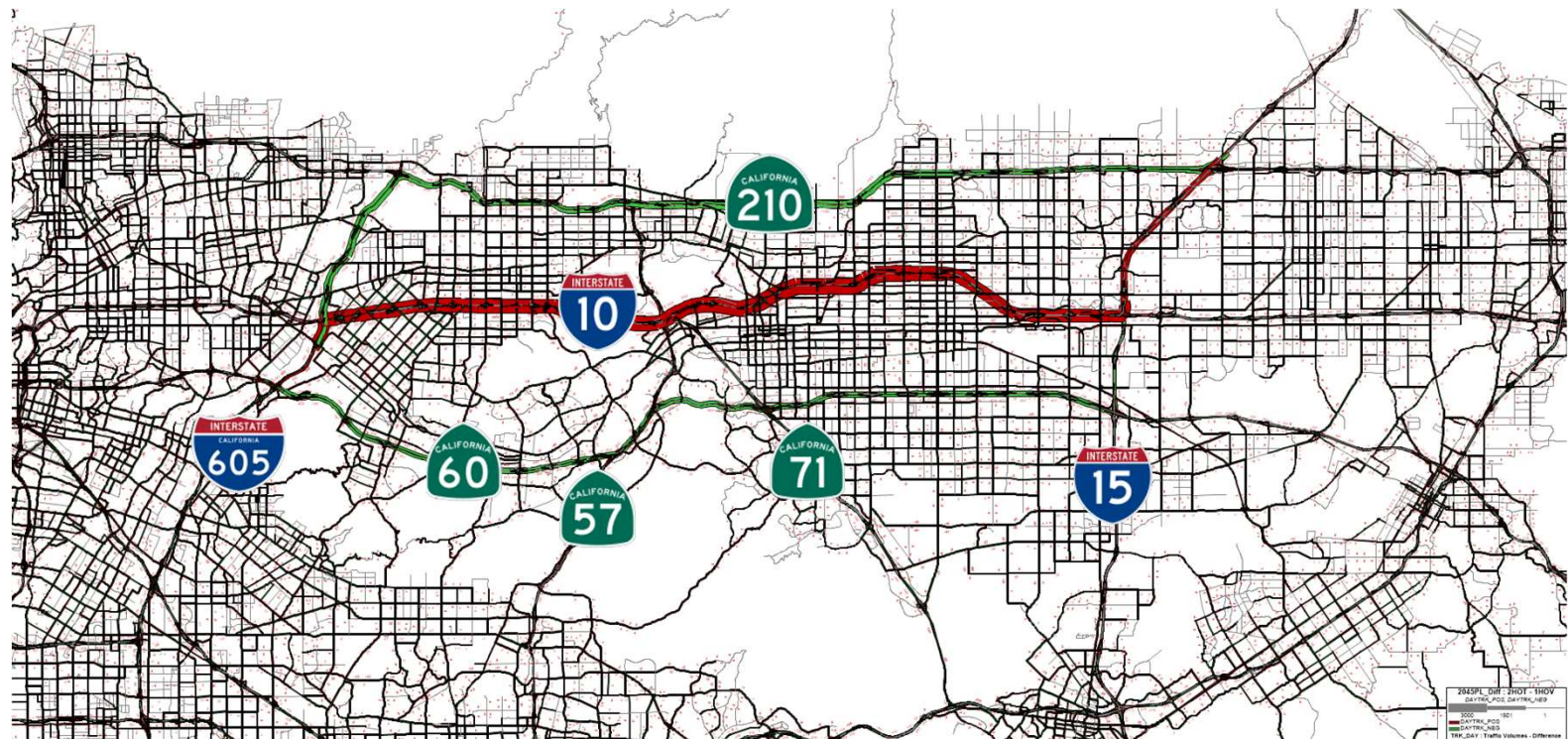
Daily Truck Volumes (2way) & Difference from Nobuild	2029 - Daily Truck Volumes				2029 : Difference from No-Build			2045 - Daily Truck Volumes				2045 : Difference from No-Build		
	Alt. 1 (No-Build) 1HOV	Alt. 2 1HOT	Alt. 3 2HOT	Alt. 4 2HOV	1HOT	2HOT	2HOV	Alt. 1 (No-Build) 1HOV	Alt. 2 1HOT	Alt. 3 2HOT	Alt. 4 2HOV	1HOT	2HOT	2HOV
Between Garvey Ave & I-605	12,538	12,819	13,801	12,526	281	1,262	-12	15,138	15,059	16,036	15,189	-78	898	51
Between Bess Ave & Baldwin Park Blvd	24,715	27,211	29,997	24,737	2,496	5,282	21	29,013	29,944	33,559	29,094	931	4,546	80
Between Baldwin Park Off & Francisquito On	24,875	27,393	30,202	24,896	2,519	5,328	21	29,313	30,289	33,944	29,405	976	4,630	92
Between Puente Ave & Vineland Ave	24,637	27,160	29,989	24,660	2,523	5,352	23	29,084	30,031	33,695	29,176	947	4,610	92
Between Cameron Ave & Garvey Ave	25,210	27,676	30,490	25,235	2,466	5,280	25	29,737	30,662	34,274	29,830	925	4,538	94
Between Vincent Ave & West Covina Pkwy	25,345	27,844	30,777	25,374	2,499	5,432	29	30,078	31,083	34,795	30,222	1,005	4,717	144
Between Vincent Ave & Azusa Ave	26,162	28,632	31,485	26,179	2,470	5,323	16	30,981	31,944	35,669	31,068	962	4,688	86
Between Azusa Ave & Citrus St	26,527	29,014	31,911	26,533	2,487	5,384	7	31,441	32,396	36,173	31,513	955	4,732	72
Between Cirus St & Barranca St	26,465	28,939	31,833	26,461	2,475	5,369	-3	31,434	32,350	36,123	31,474	916	4,690	40
Between Garvey Ave Off & Grand Ave On	26,545	28,933	31,777	26,539	2,388	5,233	-6	31,540	32,360	36,061	31,592	820	4,521	53
Between Holt Ave On & Grand Ave Off	26,203	28,659	31,447	26,203	2,456	5,244	0	31,246	32,141	35,798	31,286	895	4,553	40
Between Holt Ave & Via Verde St	26,421	28,883	31,644	26,405	2,462	5,224	-16	31,461	32,369	36,017	31,496	908	4,556	35
Between Via Verde St & Kellog Dr	25,839	28,319	31,091	25,830	2,480	5,252	-9	30,860	31,779	35,477	30,921	919	4,617	61
Between Fairplex Dr & SR 57	36,293	38,881	41,962	36,267	2,587	5,669	-26	42,267	43,048	46,959	42,480	781	4,692	213
Between Gillette Rd On & Dudley St Off	35,780	38,340	41,235	35,781	2,560	5,455	1	41,632	42,588	46,232	41,820	956	4,600	188
Between Dudley St and N.White Ave	36,171	38,840	41,711	36,141	2,668	5,540	-30	42,053	43,136	46,742	42,191	1,082	4,689	137
Between NGarey Ave On & NWhite On	35,917	38,692	41,522	35,887	2,775	5,605	-30	41,845	42,961	46,566	42,026	1,116	4,722	182
Between NTowne On & NOrange Ave Off	35,945	38,657	41,465	35,953	2,712	5,520	9	41,594	42,724	46,354	41,825	1,131	4,760	232
Between NTowne Ave & S.Indian Hill Blvd	35,964	38,787	41,582	35,991	2,823	5,618	26	41,639	42,841	46,497	41,883	1,203	4,859	244
Between Indian Hill Blvd & Monte Vista Ave	36,280	39,062	41,853	36,284	2,781	5,573	4	42,044	43,280	46,898	42,271	1,235	4,854	227

Resulting truck volume increase poses an air quality concern.

Initial Approach (Truck Volumes)

Daily Truck Volume Differences: Alt. 3 – Alt. 1 (Red = Increase Green = Decrease)

- Alt 3 shows trucks attracted to I-10 from the I-210 and SR 60 corridors.
- Net zero truck volume change in E-W travel shed.
- Truck drivers not likely to change their routes, despite model indications.



Initial Approach (Truck Volumes)

Highlights

- Truck volume changes greatest during off-peak periods
- Future SCAG tolls in project corridor are consistent with Metro's min. toll rates during am/pm peak periods
- Future SCAG tolls in project corridor exceedingly low and below Metro's min. toll rates during off-peak periods
- Toll rates within the project limit are different than the rates west of I-605. Metro is working with SCAG to have consistent rate through out the corridor
- Toll rates west of I-605 are higher to manage higher traffic volumes traveling toward downtown Los Angeles

Finding

- Low off-peak tolls attract more vehicles to HOT lanes, even though congestion is not severe
- Provides reserve capacity in GP lanes for trucks

Revised Approach (Alt 3 2-HOT)

Average Toll per Mile (2011 \$) Used in SCAG Model, Weekday Drive-Alone Users

SCAG Time Period	Westbound		Eastbound	
	West of I-605	Project Corridor	West of I-605	Project Corridor
AM (6-9am)	\$0.3840	\$0.2496	\$0.2400	\$0.1080
PM (3-7pm)	\$0.2780	\$0.1811	\$0.3840	\$0.2496
Midday (9am-3pm)	\$0.3070	\$0.0200	\$0.2500	\$0.0130
Evening (7-9 pm)	\$0.2400	\$0.0040	\$0.3070	\$0.0120
Night (9pm-6am)	\$0.2400	\$0.0010	\$0.2400	\$0.0050



\$0.10 per mile equates to \$0.07 per mile in 2011 \$

Toll Rate Increase - December 30, 2022

Effective December 30, 2022, the maximum toll rate on Metro ExpressLanes will be increased from \$2.10 per mile to \$2.20 per mile. These changes are necessary to continue to manage congestion and provide a safe, reliable, and predictable commute.

Our minimum toll rates of \$0.35 per mile during peak hours and \$0.10 per mile during the off-peak hour will remain unchanged.

Metro ExpressLanes operates in the center lanes of I-10 and I-110, seven days per week, 24 hours per day. Peak hours are Mondays through Fridays, from 5am to 9am and from 4pm to 7pm. Non-peak hours are Mondays through Fridays, from 9am to 4pm and 7pm to 5am; as well as all day Saturdays, Sundays and holidays.

Please note that to use Metro ExpressLanes, you must have a valid FasTrak transponder mounted in your vehicle at the time of travel.

For more information about the upcoming toll rate increase or for other information regarding Metro Expresslanes, please visit our website at metroexpresslanes.net.

Revised Approach (Alt 3 2-HOT)

- Metro toll Policy: “Effective December 30, 2022... Our minimum toll rates of \$0.35 per mile during peak hours and \$0.10 per mile during the off-peak hour will remain unchanged”
- Increased drive-alone toll rates for off-peak periods only in Project Corridor to better match Metro ExpressLanes policy
 - Midday
 - Evening *No change to peak period toll rates: within range with respect to Metro’s toll policy*
 - Night
- Tolls deflated to 2011 dollars to be consistent with SCAG model monetary inputs
- Reran ExpressLane Alternatives (1-HOT and 2-HOT)
 - 2029
 - 2045

Revised Approach (Alt 3 2-HOT)

Revised Average Toll per Mile (2011 \$) Used in SCAG Model, Weekday Drive-Alone Users

SCAG Time Period	I-10 Westbound		I-10 Eastbound	
	West of I-605	Project Corridor	West of I-605	Project Corridor
AM (6-9am)	\$0.3840	\$0.2496	\$0.2400	\$0.1080
PM (3-7pm)	\$0.2780	\$0.1811	\$0.3840	\$0.2496
Midday (9am-3pm)	\$0.3070	\$0.0200 \$0.0700	\$0.2500	\$0.0130 \$0.0700
Evening (7-9 pm)	\$0.2400	\$0.0040 \$0.0700	\$0.3070	\$0.0120 \$0.0700
Night (9pm-6am)	\$0.2400	\$0.0010 \$0.0700	\$0.2400	\$0.0050 \$0.0700

Results: Change in Daily Truck Volumes in Corridor

Daily Truck Volumes (2way) & Difference from Nobuild	2029 - Daily Truck Volumes				2029 : Difference from No-Build			2045 - Daily Truck Volumes				2045 : Difference from No-Build		
	Alt. 1 (No-Build) 1HOV	Alt. 2 1HOT	Alt. 3 2HOT	Alt. 4 2HOV	1HOT	2HOT	2HOV	Alt. 1 (No-Build) 1HOV	Alt. 2 1HOT	Alt. 3 2HOT	Alt. 4 2HOV	1HOT	2HOT	2HOV
Between Garvey Ave & I-605	12,538	12,654	13,382	12,526	116	844	-12	15,138	14,826	15,606	15,189	-312	469	51
Between Bess Ave & Baldwin Park Blvd	24,715	25,491	26,920	24,737	776	2,205	21	29,013	28,713	30,383	29,094	-300	1,369	80
Between Baldwin Park Off & Francisquito On	24,875	25,671	27,129	24,896	797	2,255	21	29,313	29,051	30,734	29,405	-262	1,421	92
Between Puente Ave & Vineland Ave	24,637	25,441	26,901	24,660	804	2,264	23	29,084	28,799	30,481	29,176	-285	1,397	92
Between Cameron Ave & Garvey Ave	25,210	25,982	27,399	25,235	772	2,189	25	29,737	29,420	31,093	29,830	-316	1,356	94
Between Vincent Ave & West Covina Pkwy	25,345	26,144	27,633	25,374	799	2,288	29	30,078	29,782	31,530	30,222	-296	1,453	144
Between Vincent Ave & Azusa Ave	26,162	26,946	28,367	26,179	784	2,205	16	30,981	30,658	32,373	31,068	-324	1,392	86
Between Azusa Ave & Citrus St	26,527	27,292	28,734	26,533	766	2,207	7	31,441	31,082	32,825	31,513	-359	1,384	72
Between Cirus St & Barranca St	26,465	27,210	28,651	26,461	745	2,187	-3	31,434	31,028	32,764	31,474	-406	1,331	40
Between Garvey Ave Off & Grand Ave On	26,545	27,202	28,592	26,539	657	2,048	-6	31,540	31,036	32,710	31,592	-504	1,170	53
Between Holt Ave On & Grand Ave Off	26,203	26,926	28,263	26,203	723	2,060	0	31,246	30,801	32,437	31,286	-444	1,191	40
Between Holt Ave & Via Verde St	26,421	27,151	28,463	26,405	731	2,043	-16	31,461	31,030	32,656	31,496	-431	1,195	35
Between Via Verde St & Kellog Dr	25,839	26,489	27,796	25,830	650	1,957	-9	30,860	30,390	31,998	30,921	-471	1,138	61
Between Fairplex Dr & SR 57	36,293	37,087	38,577	36,267	794	2,284	-26	42,267	41,639	43,499	42,480	-628	1,232	213
Between Gillette Rd On & Dudley St Off	35,780	36,603	37,922	35,781	823	2,142	1	41,632	41,219	42,863	41,820	-413	1,231	188
Between Dudley St and N.White Ave	36,171	37,176	38,510	36,141	1,005	2,338	-30	42,053	41,793	43,467	42,191	-260	1,414	137
Between NGarey Ave On & NWhite On	35,917	36,997	38,306	35,887	1,080	2,389	-30	41,845	41,627	43,305	42,026	-218	1,460	182
Between NTowne On & NOrange Ave Off	35,945	37,004	38,297	35,953	1,059	2,352	9	41,594	41,467	43,183	41,825	-126	1,589	232
Between NTowne Ave & S.Indian Hill Blvd	35,964	37,139	38,400	35,991	1,174	2,435	26	41,639	41,584	43,304	41,883	-54	1,665	244
Between Indian Hill Blvd & Monte Vista Ave	36,280	37,447	38,751	36,284	1,167	2,471	4	42,044	42,043	43,753	42,271	-1	1,708	227

Change in truck volumes that are similar to projects determined to be not of air quality concern.

Results: Change in Total Daily Volumes in Corridor

Daily Total Volumes (2way) & Difference to Nobuild	2029 - Daily Total Volumes				2029 : Difference to No-Build			2045 - Daily Total Volumes				2045 : Difference to No-Build		
	1HOV(NB)	1HOT	2HOT	2HOV	1HOT	2HOT	2HOV	1HOV(NB)	1HOT	2HOT	2HOV	1HOT	2HOT	2HOV
Between Garvey Ave & I-605	251,067	254,133	263,187	254,626	3,066	12,119	3,559	251,924	257,831	265,967	254,501	5,907	14,043	2,577
Between Bess Ave & Baldwin Park Blvd	262,068	267,279	278,701	266,089	5,211	16,633	4,022	262,924	269,298	278,972	265,801	6,375	16,048	2,877
Between Baldwin Park Off & Francisquito On	257,236	262,578	274,706	261,780	5,342	17,470	4,544	257,947	263,908	273,952	261,017	5,961	16,005	3,070
Between Puente Ave & Vineland Ave	241,807	247,324	259,642	246,364	5,517	17,835	4,557	242,355	248,343	258,649	245,432	5,988	16,294	3,077
Between Cameron Ave & Garvey Ave	249,862	255,859	268,873	254,509	5,998	19,011	4,647	249,904	255,945	266,726	252,880	6,042	16,822	2,976
Between Vincent Ave & West Covina Pkwy	246,850	252,459	265,791	251,778	5,609	18,941	4,928	245,047	250,583	261,692	248,136	5,536	16,645	3,089
Between Vincent Ave & Azusa Ave	266,318	271,774	285,201	271,830	5,456	18,883	5,511	265,292	270,959	281,762	268,721	5,667	16,470	3,429
Between Azusa Ave & Citrus St	267,875	273,006	286,917	272,872	5,131	19,043	4,997	266,880	272,577	283,391	270,292	5,697	16,511	3,412
Between Cirus St & Barranca St	260,539	265,461	278,752	265,416	4,921	18,213	4,877	259,357	264,476	274,890	262,757	5,119	15,532	3,400
Between Garvey Ave Off & Grand Ave On	257,791	263,842	276,535	262,080	6,050	18,744	4,289	256,483	263,130	272,973	259,627	6,648	16,491	3,145
Between Holt Ave On & Grand Ave Off	241,442	246,940	258,243	245,627	5,498	16,801	4,185	239,786	246,082	254,340	242,906	6,297	14,554	3,120
Between Holt Ave & Via Verde St	237,166	241,346	252,289	241,330	4,180	15,124	4,164	235,943	240,599	248,401	238,785	4,657	12,458	2,842
Between Via Verde St & Kellog Dr	233,311	236,788	247,025	237,100	3,477	13,714	3,789	231,881	236,075	243,286	234,598	4,194	11,404	2,717
Between Fairplex Dr & SR 57	279,322	283,178	293,616	282,980	3,855	14,293	3,658	275,819	282,110	289,365	277,859	6,290	13,546	2,040
Between Gillette Rd On & Dudley St Off	265,287	268,718	279,278	268,607	3,431	13,991	3,321	262,009	267,751	275,310	263,784	5,742	13,301	1,775
Between Dudley St and N.White Ave	272,965	276,297	286,976	276,330	3,331	14,010	3,365	269,913	275,456	282,969	271,816	5,544	13,056	1,904
Between NGarey Ave On & NWhite On	262,486	265,362	275,792	266,169	2,876	13,306	3,683	256,481	262,266	269,769	259,297	5,785	13,288	2,816
Between NTowne On & NOrange Ave Off	268,177	273,383	283,625	271,296	5,206	15,448	3,119	264,757	273,319	280,871	267,339	8,562	16,115	2,582
Between NTowne Ave & S.Indian Hill Blvd	268,200	275,387	286,045	271,105	7,188	17,846	2,906	265,167	275,539	283,829	267,567	10,372	18,662	2,401
Between Indian Hill Blvd & Monte Vista Ave	272,211	281,880	292,518	274,979	9,668	20,307	2,768	269,802	282,703	291,187	272,114	12,901	21,385	2,312

Conclusion

- The original off-peak period SCAG toll rates in the Project Corridor are so low that drive-alone vehicles shift to ExpressLane(s) even when congestion is not severe, opening reserve capacity for trucks to shift from parallel corridors to I-10
- The revised toll rates
 - Are more realistic and supported by Metro ExpressLanes tolling policy
 - Result in lower truck volumes on the project corridor, in effect shifting trucks back to I-210 and SR 60
 - Result in changes in truck volumes similar to projects determined to be not of air quality concern
- There are no changes made to the peak period rates. Therefore, the traffic operations analysis is unaffected
- The revised toll rates apply to the future forecasts only; does not impact model validation

Coordination

- Metro coordinated with SCAG regarding the toll rate changes
- SCAG concurred with the toll rate changes
- Metro to provide toll rate changes to SCAG as part of 2024 RTP/SCS update
- **Revised traffic volumes and PM Hot-Spot Form submitted to TCWG for reconsideration on Alt 3 (2 HOT)**

Discussion