Appendix I. Transportation Analysis Report (TAR) Update – 2023

FEHR PEERS

Memorandum

Date: October 16, 2023

To: Tim Hayes, Psomas

From: Emily Finkel & Sarah Brandenberg, Fehr & Peers

Subject: Lincoln Bridge Transportation Analysis Report 2023 Update

LA17-2940

Methodology

Overview

Fehr & Peers prepared this Updated Transportation Memo for the Lincoln Bridge Multi-Modal Improvement Project, which proposes to replace the existing Lincoln Boulevard Bridge over Ballona Creek. The new structure will provide enhanced multi-modal travel opportunities, including an additional southbound travel lane, protected bike lanes in both directions, new sidewalks, and additional improvements to Culver Boulevard and Lincoln Boulevard.

This report provides an updated analysis of volume forecasting and traffic operations, based on new Opening Year and Design Year assumptions.

The transportation analysis was conducted for five scenarios:

- Existing Conditions (2019)
- Opening Year No Build Conditions (2030)
- Opening Year Build Conditions (2030)
- Design Year No Build Conditions (2050)
- Design Year Build Conditions (2050)

In addition to the forecast years, the other primary methodology changes since the 2020 Transportation Analysis Report are:

- Collected updated signal timing from LADOT
- Synchro analysis based on HCM 6th Edition methodology

Study Area

The study area is defined as Lincoln Boulevard between Fiji Way and Jefferson Boulevard. The study area also includes the Culver Boulevard overpass. This study evaluates the following intersections:

1. Lincoln Boulevard & Fiji Way
2. Lincoln Boulevard & Culver Loop to Lincoln Boulevard
3. Lincoln Boulevard & Jefferson Boulevard
4. Culver Boulevard & Culver Loop to Lincoln Boulevard

Travel Demand Forecasting

Fehr & Peers used the 2016 City of Los Angeles Travel Demand Model to generate 2040 forecasts within the study area. AM and PM peak hour traffic forecasts were developed for each of the four study intersections based on post-processed model outputs using the difference methodology. The Base Year (2016) and Future Year (2040) models were used to calculate straight-line annual growth rates for turning movements at study intersections. The growth rates were then applied to existing traffic counts (collected November 2019) to develop the Opening Year (2030) and Design Year (2050) No Build Conditions traffic projections. The City of Los Angeles Travel Demand Model network was then edited to include the additional southbound lane on Lincoln Boulevard to reflect Build Conditions, and post-processed volumes were developed as outlined previously for the Opening Year (2030) and Design Year (2050) Build scenarios.

Data Collection

Traffic and transportation data collection efforts were previously undertaken to determine existing peak hour traffic volumes and lane configurations within the study area.

Weekday intersection turning movement vehicle counts were conducted during the morning (7:00 to 10:00 AM) and evening (3:00 to 6:00 PM) peak periods at all of the study intersections in November 2019. All counts were conducted while schools were in session and are included in. Peak hour volumes were balanced across the study intersections to account for the differences in unique intersection peak hours. Signal timing was updated based on signal timing sheets provided by LADOT in September 2023.

Traffic Operations Analysis Methodology

Traffic operations for the study area were analyzed using the Synchro 11.0 software program. Synchro calculates vehicle delay and level of service based on procedures outlined in the Transportation Research Board's *Highway Capacity Manual*, Sixth Edition (HCM 6).

The analysis results include a descriptive term known as level of service (LOS). LOS is a measure of traffic operating conditions, which varies from LOS A (indicating free-flow traffic conditions with

little or no delay) to LOS F (representing over-saturated conditions where traffic flows exceed design capacity resulting in long queues and delays). **Table 1** summarizes the relationship between the average control delay per vehicle and LOS for signalized and unsignalized intersections. Results from Synchro were used to determine delay and LOS at all intersections.

TABLE 1: LOS THRESHOLDS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS

LOS	Signalized Intersection Average Control Delay (sec/veh)	Unsignalized Intersection Average Control Delay (sec/veh)	General Description
A	≤ 10	≤ 10	Little to no congestion or delays.
B	> 10 to 20	> 10 to 15	Limited congestion. Short delays.
C	> 20 to 35	> 15 to 25	Some congestion with average delays.
D	> 35 to 55	> 25 to 35	Significant congestion and delays.
E	> 55 to 80	> 35 to 50	Severe congestion and delays.
F	> 80	> 50	Total breakdown with extreme delays.

Source: *Highway Capacity Manual, 6th Edition*, Transportation Research Board, 2016.

Existing (2019) Traffic Operations Analysis

Intersection Traffic Operations

Existing intersection traffic volumes, lane configurations, and signal timings were used to calculate LOS for the study intersections during the AM and PM peak hours. The results of the LOS analysis were calculated using Synchro 11.0 software and are presented in **Table 2**.

The traffic volumes collected along Lincoln Boulevard reveal peak hour directionality. Peak hour volumes are heavier in the northbound direction in the AM peak hour and in the southbound direction during the PM peak hour. The following intersections operate at LOS D, E, or F during one or more of the peak hours analyzed:

1. Lincoln Boulevard & Fiji Way (LOS D during the AM peak hour)
2. Lincoln Boulevard & Culver Loop to Lincoln Boulevard (LOS F during the AM peak hour)

3. Lincoln Boulevard & Jefferson Boulevard (LOS F during the AM peak hour and LOS D during the PM peak hour)

TABLE 2: EXISTING (2023) CONDITIONS PEAK HOUR INTERSECTION OPERATIONS

	Intersection	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
1	Lincoln Boulevard & Fiji Way	37.1	D	29.7	C
2	Lincoln Boulevard & Culver Loop to Lincoln Boulevard [1]	101.3	F	31.6	C
3	Lincoln Boulevard & Jefferson Boulevard	91.9	F	44.2	D
4	Culver Boulevard & Culver Loop to Lincoln Boulevard [2]	<5.0	A	<5.0	A

Source: Fehr & Peers, 2023.
[1] LOS calculated using HCM 2000 due to the unsupported phase setting in HCM 6th.
[2]Unsignalized intersection - LOS calculated using HCM 6th, as a Two-Way Stop Control.

Queue Analysis

Table 3 shows the 95th percentile queue lengths for critical turning movements at each of the four intersections in the study area. Queue lengths exceed storage lengths at the following approaches:

- Lincoln Boulevard & Fiji Way – NBL (AM peak hour)
- Lincoln Boulevard & Culver Loop to Lincoln Boulevard – WBR (AM peak hour)
- Lincoln Boulevard & Culver Loop to Lincoln Boulevard – WBL (PM peak hour)
- Lincoln Boulevard & Jefferson Boulevard – SBL (AM and PM peak hours)
- Lincoln Boulevard & Jefferson Boulevard – WBL (AM peak hours)
- Lincoln Boulevard & Jefferson Boulevard – WBR (AM and PM peak hour)
- Lincoln Boulevard & Jefferson Boulevard – EBL (AM peak hour)

TABLE 3: EXISTING (2019) CONDITIONS PEAK HOUR 95TH PERCENTILE QUEUES

Intersection		Movement	Storage Length (ft)	95th Percentile Queue (ft)	
				AM	PM
1	Lincoln Boulevard & Fiji Way	NBL	330	**#525**	325
		SBL	215	100	75
		EBL	175	100	100
		EBR[2]	--	**--**	**--**
2	Lincoln Boulevard & Culver Loop to Lincoln Boulevard	WBR	310	**350**	300
		WBL	310	175	**#500**
3	Lincoln Boulevard & Jefferson Boulevard	NBL	200	50	50
		NBR	210	75	50
		SBL	250	**#450**	**m#250**
		WBL	440	**#250**	350
		WBR	440	**#775**	**#375**
		EBL	200	**#475**	175
4	Culver Boulevard & Culver Loop to Lincoln Boulevard	WBL	250	50[1]	75[1]

Source: Fehr & Peers, 2023.
Notes: Queue lengths have been rounded to the next 25 feet.
[1]Queue length calculated based on HCM 6th LOS analysis and an average vehicle length of 25 feet.
[2]This movement has a dedicated right-turn lane, with a Yield control, and merges with SB Lincoln Boulevard downstream.
Bold indicates that 95th percentile queue length exceeds available storage.
# indicates that 95th percentile volume exceeds capacity, queue may be longer.
m indicates volume for 95th percentile queue is metered by upstream signal.

Travel Demand Forecasts

Average Daily Traffic Forecasts

Average daily traffic (ADT) forecasts were developed for the segments listed below for the four future year scenarios:

- Lincoln Boulevard (northbound and southbound) between Jefferson Boulevard and Fiji Way
- Culver Loop south of Marina Freeway westbound off ramp

ADT forecasts were developed using straight-line growth from 2017 Caltrans ADT data available for the segment, based on the 2016 and 2040 Los Angeles Travel Model volumes. Volume

increases in 2030 and 2050 are larger under Build Scenarios, as is seen in turning movement volume forecasts. Truck ADT can be found in the technical appendix.

TABLE 4: AVERAGE DAILY TRAFFIC (ADT) VOLUMES

Location	2017 PeMS ADT[1]	Opening Year (2030)		Design Year (2050)	
		No Build	Build	No Build	Build
Lincoln Boulevard	60,000	67,200	69,900	78,700	81,800
Culver Loop	33,615	34,700	35,000	36,400	36,700

[1]2017 counts from Caltrans Performance Management System (PeMS).
Source: Fehr & Peers, 2023.

Opening Year & Design Year Traffic Operations Analysis

No Build Assumptions

Under this scenario, Lincoln Boulevard and Culver Boulevard would remain unchanged. The lane configurations along Culver Boulevard and Lincoln Boulevard in the study area are the same as Existing (2019) Conditions. Existing signal timings were used for this analysis. This scenario does not meet the project Purpose and Need. Rather, it provides a basis for the analysis and evaluation of the proposed Project.

Build Assumptions

Under this scenario, vehicle lane configurations would reflect the following changes:

- Between Fiji Way and Jefferson Boulevard, the existing 2-lane segment of southbound Lincoln Boulevard would be widened to 3 travel lanes
- The Lincoln Boulevard southbound approach lane configuration at the Lincoln Boulevard & Jefferson Boulevard intersection would be changed from two left turn lanes, three through lanes and a shared through/right-turn lane to two left turn lanes, three through lanes and a separate right-turn lane (L-L-T-T-T-TR to L-L-T-T-T-R)

Existing signal timings were also used for this analysis.

Opening Year (2030) Intersection Operations

Table 5 presents the LOS results for each of the study intersections. Three of the four intersections operate at LOS C or better under the Build scenario in the PM peak hour. The following intersections operate at LOS D, E, or F during one or more of the peak hours analyzed:

1. Lincoln Boulevard & Fiji Way (LOS D during the AM peak hour, No Build and Build)
2. Lincoln Boulevard & Culver Loop to Lincoln Boulevard (LOS F during the AM peak hour, No Build and Build; and LOS D during the PM peak hour, No Build)

3. Lincoln Boulevard & Jefferson Boulevard (LOS F during the AM peak hour, No Build and Build; LOS D during the PM peak hour, No Build and Build)

Decreases in delay in the Build scenario, as at the intersection of Lincoln Boulevard & Culver Loop to Lincoln Boulevard, can be attributed to the additional southbound travel lane on Lincoln Boulevard.

TABLE 5: OPENING YEAR (2030) CONDITIONS PEAK HOUR INTERSECTIONS OPERATIONS

	Intersection	No Build				Build			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	Lincoln Boulevard & Fiji Way	39.0	**D**	32.9	C	39.1	**D**	33.6	C
2	Lincoln Boulevard & Culver Loop to Lincoln Boulevard[1]	116.8	**F**	40.9	**D**	114.5	**F**	25.8	C
3	Lincoln Boulevard & Jefferson Boulevard	95.8	**F**	46.8	**D**	96.0	**F**	47.4	**D**
4	Culver Boulevard & Culver Loop to Lincoln Boulevard[2]	<5.0	A	<5.0	A	<5.0	A	<5.0	A

Source: Fehr & Peers, 2023.
[1]LOS calculated using HCM 2000 due to the unsupported phase setting in HCM 6th.
[2]Unsignalized intersection – LOS calculated using HCM 6th, as a Two-Way Stop control.
Bold indicates intersection operating at LOS D or worse.

Opening Year (2030) Queue Analysis

Table 6 shows the 95th percentile queue lengths for critical turning movements at each of the four intersections in the study area. Queue lengths exceed storage capacities at the following approaches:

- Lincoln Boulevard & Fiji Way – NBL (AM and PM peak hours, No Build and Build)
- Lincoln Boulevard & Culver Loop to Lincoln Boulevard – WBR (AM peak hour, No Build and Build; PM peak hour, No Build and Build)
- Lincoln Boulevard & Culver Loop to Lincoln Boulevard – WBL (PM peak hour, No Build and Build)
- Lincoln Boulevard & Jefferson Boulevard – SBL (AM and PM peak hours, No Build and Build)
- Lincoln Boulevard & Jefferson Boulevard – SBR (PM peak hour, Build only)
- Lincoln Boulevard & Jefferson Boulevard – WBR (AM and PM peak hours, No Build and Build)
- Lincoln Boulevard & Jefferson Boulevard – EBL (AM and PM peak hours, No Build and Build)

TABLE 6: OPENING YEAR (2030) CONDITIONS PEAK HOUR 95TH PERCENTILE QUEUES

Intersection		Movement	Storage Length (ft)	95th Percentile Queue (ft)			
				No Build		Build	
				AM	PM	AM	PM
1	Lincoln Boulevard & Fiji Way	NBL	330	**#550**	**375**	**#550**	**375**
		SBL	215	125	100	125	100
		EBL	175	100	125	100	125
		EBR[2]	--	**--**	**--**	**--**	**--**
2	Lincoln Boulevard & Culver Loop to Lincoln Boulevard	WBR	310	**#400**	**325**	**#425**	**325**
		WBL	310	175	**#525**	200	**#525**
3	Lincoln Boulevard & Jefferson Boulevard	NBL	200	75	75	75	75
		NBR	210	75	50	75	50
		SBL	250	**m#475**	**m#325**	**#525**	**m#425**
		SBR	125	-	-	125	**m525**
		WBL	440	275	350	275	350
		WBR	440	**#800**	**#500**	**#800**	**#500**
		EBL	200	**#500**	**#300**	**#525**	**#300**
4	Culver Boulevard & Culver Loop to Lincoln Boulevard	WBL	250	75[1]	75[1]	75[1]	75[1]

Source: Fehr & Peers, 2023.
Notes: Queue lengths have been rounded to the next 25 feet.
[1]Queue length calculated based on HCM 6th LOS analysis and an average vehicle length of 25 feet.
[2]This movement has a dedicated right-turn lane, with a Yield control, and merges with SB Lincoln Boulevard downstream.
Bold indicates that 95th percentile queue length exceeds available storage.
# indicates that 95th percentile volume exceeds capacity, queue may be longer.
m indicates volume for 95th percentile queue is metered by upstream signal.

Design Year (2050) Intersection Operations

Table 7 presents the LOS results for each of the study intersections. One of the four intersections is estimated to operate at LOS C or better during both the AM and PM peak hour under No Build and Build scenarios. The following intersections are estimated to operate at LOS D, E, or F during one or more peak hour:

1. Lincoln Boulevard & Fiji Way (LOS D during the AM and PM peak hours, No Build and Build.)

2. Lincoln Boulevard & Culver Loop to Lincoln Boulevard (LOS F during the AM peak hour, No Build and Build; LOS E during the PM peak hour, No Build and LOS D during the PM peak hour, Build)
3. Lincoln Boulevard & Jefferson Boulevard (LOS F during the AM peak hour, No Build and Build; LOS E during the PM peak hour, No Build and LOS F during the PM peak hour, Build)

Decreases in delay in the Build scenario, as at the intersection of Lincoln Boulevard & Culver Loop to Lincoln Boulevard, can be attributed to the additional southbound travel lane on Lincoln Boulevard in the Build scenario. The intersection of Lincoln Boulevard & Culver Loop to Lincoln Boulevard is estimated to operate at LOS E during the PM peak hour under No Build conditions, and improve to LOS D during the PM peak hour under Build conditions.

TABLE 7: DESIGN YEAR (2050) CONDITIONS PEAK HOUR INTERSECTION OPERATIONS

	Intersection	No Build				Build			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	Lincoln Boulevard & Fiji Way	45.0	**D**	39.7	**D**	48.8	**D**	48.7	**D**
2	Lincoln Boulevard & Culver Loop to Lincoln Boulevard[1]	162.0	**F**	70.4	**E**	133.2	**F**	52.6	**D**
3	Lincoln Boulevard & Jefferson Boulevard	102.7	**F**	73.5	**E**	102.5	**F**	86.3	**F**
4	Culver Boulevard & Culver Loop to Lincoln Boulevard[2]	<5.0	A	<5.0	A	6.1	A	<5.0	A

Source: Fehr & Peers, 2023.
[1]LOS calculated using HCM 2000 due to the unsupported phase setting in HCM 6th.
[2]Unsignalized intersection – LOS calculated using HCM 6th, as a Two-Way Stop control.
Bold indicates intersection operating at LOS D or worse.
Underline indicates LOS worsens under Build Conditions.

Design Year (2050) Queue Analysis

Table 8 shows the 95th percentile queue for critical turning movements at each of the four intersections in the study area. Queue lengths are estimated to exceed storage capacities at the following approaches:

- Lincoln Boulevard & Fiji Way – NBL (AM and PM peak hours, No Build and Build)
- Lincoln Boulevard & Culver Loop to Lincoln Boulevard – WBR (AM and PM peak hours, No Build and Build)
- Lincoln Boulevard & Culver Loop to Lincoln Boulevard – WBL (PM peak hour, No Build and Build)

- Lincoln Boulevard & Jefferson Boulevard – SBL (AM and PM peak hours, No Build and Build)
- Lincoln Boulevard & Jefferson Boulevard – SBR (PM peak hour, Build only)
- Lincoln Boulevard & Jefferson Boulevard – WBR (AM and PM peak hours, No Build and Build)
- Lincoln Boulevard & Jefferson Boulevard – EBL (AM and PM peak hours, No Build and Build)

TABLE 8: DESIGN YEAR (2050) CONDITIONS PEAK HOUR 95TH PERCENTILE QUEUES

Intersection		Movement	Storage Length (ft)	95th Percentile Queue (ft)			
				No Build		Build	
				AM	PM	AM	PM
1	Lincoln Boulevard & Fiji Way	NBL	330	**#550**	**#525**	**m#575**	**#525**
		SBL	215	125	125	125	125
		EBL	175	125	125	125	125
		EBR[2]	--	**--**	**--**	**--**	**--**
2	Lincoln Boulevard & Culver Loop to Lincoln Boulevard	WBR	310	**500**	**350**	**675**	**375**
		WBL	310	200	**#525**	275	**#525**
3	Lincoln Boulevard & Jefferson Boulevard	NBL	200	75	100	75	100
		NBR	210	100	50	100	50
		SBL	250	**m#375**	**m#375**	**#625**	**m#450**
		SBR	125	-	-	m125	**m650**
		WBL	440	300	#400	300	400
		WBR	440	**#850**	**#575**	**#850**	**#625**
		EBL	200	**#525**	**#650**	**#525**	**#650**
4	Culver Boulevard & Culver Loop to Lincoln Boulevard	WBL	250	75[1]	75[1]	100[1]	100[1]

Source: Fehr & Peers, 2023.
Notes: Queue lengths have been rounded to the next 25 feet.
[1]Queue length calculated based on HCM 2010 LOS analysis and an average vehicle length of 25 feet.
[2]This movement has a dedicated right-turn lane, with a Yield control, and merges with SB Lincoln Boulevard downstream.
Bold indicates that 95th percentile queue length exceeds available storage.
# indicates that 95th percentile volume exceeds capacity, queue may be longer.
m indicates volume for 95th percentile queue is metered by upstream signal.
Underline indicates queue worsens under Build Conditions.

VMT Analysis

An estimate of daily vehicle miles traveled (VMT) related to a project is an important input for the greenhouse gas and air quality sections of an environmental impact report.

The Los Angeles Travel Demand Model was used to estimate VMT by isolating all roadway segments within a 1.5-mile radius of the Lincoln Bridge. The number of vehicles on each roadway segment was multiplied by the segment length within this boundary using the 2040 model, under both No Build and Build Conditions. Straight line growth rates were developed between the 2016 base year model and the 2040 model results, and then applied to 2040 VMT results to determine estimates for Opening Year (2030) and Design Year (2050) Conditions. **Table 9** summarizes the results of this analysis, comparing VMT estimates for No Build and Build Conditions. The VMT results for Build Conditions reflect the additional southbound lane on Lincoln Boulevard.

As a result of the Project, VMT in the study area is estimated to decrease by approximately 1.7% compared to No Build conditions in 2030, and by 4.7% in 2050. The decrease in VMT is due to the elimination of the existing southbound bottleneck on the bridge, which results in vehicles using alternate routes that, while time efficient, require traveling a greater distance. The 1.5-mile radius used for this analysis includes alternative routes across Ballona Creek, including SR-90 and Centinela Avenue, both east of the Project. VMT reductions as a result of the Project can therefore be attributed to the Project's addition of southbound capacity, providing a more direct route for many trips.

TABLE 9: VEHICLE MILES TRAVELED (VMT)

Year	No Build	Build	Difference	Percent Difference
Opening Year (2030)	632,532	621,550	-10,982	-1.7%
Design Year (2050)	700,441	667,226	-33,215	-4.7%

Source: Fehr & Peers, 2023.

Vehicle Speed Analysis

The Los Angeles Travel Demand Model was used to estimate vehicle speeds on the Lincoln Bridge during congested conditions. **Table 10** summarizes the results of this analysis, comparing congested speed estimates for Base Year, No Project, and Plus Project Scenario using the 2016 and 2040 models. As a result of the Project, congested speed is estimated to increase by 3 mph in AM Peak Period and 4 mph in PM Peak Period in the southbound direction. The increase in congested speed is due to the elimination of the existing southbound bottleneck on the bridge. Congested speed increases as a result of the Project can therefore be attributed to the Project's

addition of southbound capacity, allowing more vehicles to pass the bridge faster during the peak hours. The technical appendix shows the detailed congested speed for all study segments.

TABLE 10: CONGESTED SPEED ON LINCOLN BRIDGE SEGMENT

Direction	2016 Base		2040 No Project		2040 Plus Project	
	AM	PM	AM	PM	AM	PM
	6-9 AM	3-7 PM	6-9 AM	3-7 PM	6-9 AM	3-7 PM
NB	22	24	21	21	21	21
SB	25	21	22	20	25	24

Source: Fehr & Peers, 2023

Traffic Analysis Summary

Intersection Operations

In the Opening Year (2030) scenario, three of the four study intersections are expected to operate at LOS D, E, or F in both No Build and Build scenarios in at least one peak hour. However, two of the four intersections are expected to operate as LOS C during the PM peak hour, under the Build scenarios. In the Design Year (2050) scenario, three of the four intersections are expected to operate at LOS D, E, or F in both No Build and Build scenarios. In the Design Year, the intersection of Lincoln Boulevard & Fiji Way is estimated to operate at LOS D during the AM and PM peak hours, under No Build and Build conditions, with minor increases in average delay in the Build scenario due to induced demand for the additional capacity available on Lincoln Boulevard downstream of the intersection. Also, in the Design Year AM and PM peak hours, the intersection of Lincoln Boulevard & Culver Loop to Lincoln Boulevard is expected to operate at LOS F and LOS E, respectively, under No Build conditions and with shorter delays in both the AM and PM peak hours under Build conditions, with improvement to LOS D in the PM peak hour.

Queue Analysis

In the Opening Year (2030) scenario, peak hour queues are estimated to exceed available storage at five of thirteen turn lanes during the AM peak hour and at seven of thirteen turn lanes during the PM peak hour under Build conditions, including the added southbound right-turn lane at Lincoln Boulevard & Jefferson Boulevard in the PM peak hour. In the Design Year (2050) scenario, peak hour queues are estimated to exceed available storage at five of thirteen turn lanes during the AM peak hour and at seven of thirteen turn lanes during the PM peak hour under Build conditions, including the added southbound right-turn at Lincoln Boulevard & Jefferson Boulevard in both AM and PM peak hours.

Signal Timing Optimization

Signal timing optimization was tested on select Build scenarios, while still accounting for corridor coordination, and found delay improvement. For example, Intersection 2 Lincoln Boulevard & Culver Loop to Lincoln Boulevard improves from 133.2 seconds of delay during the AM peak hour under Design Year Build conditions to 96 seconds of delay, through signal timing optimization. LADOT can continue to refine signal timing in the future to achieve improved corridor operations, with improved vehicle delay.