



**Imperial County Local Transportation Authority**

**1503 N. Imperial Ave., Suite 104, El Centro, CA, 92243**  
**Phone: 760-592-4494 | Fax: 760-592-4410**

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## **AGENDA**

**WEDNESDAY, OCTOBER 23, 2024**  
**6:00 PM or immediately after the ICTC meeting**

**LARGE CONFERENCE ROOM**  
**1503 N. IMPERIAL AVE., SUITE 104**  
**EL CENTRO, CA 92243**

**CHAIRPERSON: LUIS PLANCARTE**

**EXECUTIVE DIRECTOR: DAVID AGUIRRE**

In compliance with the Brown Act and Government Code Section 54957.5, agenda materials distributed 72 hours prior to the meeting, which are public records relating to open session agenda items, will be available for inspection by members of the public prior to the meeting on the LTA's website: <https://www.ltaimperial.com/>

In compliance with the Americans with Disabilities Act, Government Code Section 54954.2, please contact the Secretary to the Commission at (760) 592-4494 if special assistance is needed to participate in a LTA meeting, including accessibility and translation services. Assistance is provided free of charge. Notification of at least 48 hours prior to the meeting time will assist staff in assuring reasonable arrangements can be made to provide assistance at the meeting.

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<https://us06web.zoom.us/j/89672350921?pwd=xuaMjNwsSjMOtz5D8T8LUe04JQy8Tw.1>

To Join by phone dial (669) 444-9171

Meeting ID: 844 8817 6056

Passcode: 327280

### **I. CALL TO ORDER AND ROLL CALL**

### **II. EMERGENCY ITEMS**

A. Discussion/Action of emergency items, if necessary.

### **III. PUBLIC COMMENTS**

This is an opportunity for members of the public to address the LTA Board on any subject matter within the LTA's jurisdiction, but not an item on the agenda. Any action taken because of public comment shall be limited to direction to staff. In compliance with Assembly Bill 361, the meeting will be held remotely and in person. Each speaker should contact the Secretary to the Commission at (760) 592-4494 or by email to [cristilerna@imperialctc.org](mailto:cristilerna@imperialctc.org). When addressing the Board, state your name for the record prior to providing your comments. Please address the Board as a whole, through the Chairperson. Individuals will be given three (3) minutes to address the Board; groups or topics will be given a maximum of fifteen (15) minutes. Public comments will be limited to a maximum of 30 minutes. If additional time is required for public comments, they will be heard at the end of the meeting. Please remember to follow the Public Comment Code of Conduct and respect all people that are present or watching, obey the direction of the Chair and Secretary to the Commission.

**IV. CONSENT CALENDAR**

- A. Approve Minutes for August 28, 2024 Page 4

**V. REPORTS**

- A. LTA Executive Director Report Page 7

**VI. ACTION CALENDAR**

- A. Additional Fund Request to the Local Transportation Authority (LTA) – Traffic Control Assistance for Southbound Peak Traffic on State Route 111-Imperial Avenue, Cesar Chavez Boulevard and Second Street to the Downtown Calexico West Port of Entry Page 10

The Management Committee met on January 11, 2023, and forwards the following recommendations to the Authority for review and approval after public comment, if any:

1. Approve the allocation to the City of Calexico for additional funding needed in the amount of \$250,000 for one year from the Measure D 5% Highway set-aside allocations for FY 2024-25.
2. Authorize the Chairman to sign a one-year extension for FY 2024-25 to the Memorandum of Understanding (MOU) between the City of Calexico and the Imperial County Local Transportation Authority.

- B. SR 78/86 Checkpoint Improvement Project Engineering Services – Contract Amendment No. 3 Page 80

The ICTC Executive Director forwards this item to the LTA Board for their review and approval after public comment, if any:

1. Approve the contract amendment to the Engineering Consultant Agreement for the SR86 Checkpoint Improvement Project with AECOM in the amount of \$54,455.00 modifying the total contract value to \$695,455.00.
2. Authorize the Chairperson to sign the contract amendment.

**VII. ADJOURNMENT**

## **IV. CONSENT CALENDAR**

A. APPROVAL OF LTA BOARD  
DRAFT MINUTES FOR AUGUST 28, 2024



Imperial County Local Transportation Authority

1503 N. Imperial Ave., Suite 104, El Centro, CA, 92243  
Phone: 760-592-4494 | Fax: 760-592-4410

**MINUTES FOR  
August 28, 2024**

**VOTING MEMBERS PRESENT:**

City of Brawley	Absent
City of Calipatria	Maria Nava-Froelich
City of Calexico	Camilo Garcia
City of El Centro	Martha Cardenas Singh
City of Imperial	Robert Amparano
City of Holtville	Mike Goodsell
City of Westmorland	Absent
County of Imperial	Luis Plancarte
County of Imperial	Absent

**STAFF PRESENT:** David Aguirre, Cristi Lerma, Esperanza Avila, Eric Havens (Counsel)  
**OTHERS PRESENT:** Gerard Chadergran, John Garcia: Caltrans

**I. CALL TO ORDER AND ROLL CALL**

The meeting was called to order by Chair Plancarte at 8:15 p.m. and roll call was taken.

**II. EMERGENCY ITEMS**

There were none.

**III. PUBLIC COMMENTS**

There were none.

**IV. CONSENT CALENDAR**

- A. Approved minutes for June 26, 2024. A motion was made by [Nava-Froelich](#) and seconded by [Goodsell](#) as presented, roll call:

Agency	Roll Call
City of Brawley	Absent
City of Calipatria	Yes
City of Calexico	Yes
City of El Centro	Yes
City of Holtville	Yes
City of Imperial	Yes
County of Imperial Plancarte	Yes
County of Imperial Hawk	Absent

City of Westmorland	Absent
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**Motion Carried.**

## **V. REPORTS**

- A. Mr. Aguirre reviewed the report on page 7

## **VI. ACTION CALENDAR**

- A. Audit and Accountancy Agreement for the Local Transportation Authority (LTA) for FY 2023-24, FY 2024-25, and FY 2025-26.

The ICTC Management Committee met on August 14, 2024, and forwarded this item to the LTA Board for their review and approval after public comment, if any:

1. Authorized the Chairman to sign the agreement and engagement letter for financial audit services effective July 1, 2024, for the audit period FY 2023-24, FY 2024-25 and FY 2025-26 with the firm of The Pun Group for the not to exceed annual fees per the following schedule:
  - a. For the audit period July 1, 2023, through June 30, 2024, the annual not to exceed fee set at \$82,750.00
  - b. For the audit period July 1, 2024, through June 30, 2025, the annual not to exceed fee set at \$86,060.00
  - c. For the audit period July 1, 2025, through June 30, 2026, the annual not to exceed fee set at \$89,502.00

A motion was made by [Amparano](#) and seconded by [Garcia](#) as presented. Roll call:

<b>Agency</b>	<b>Roll Call</b>
City of Brawley	Absent
City of Calipatria	Yes
City of Calexico	Yes
City of El Centro	Yes
City of Holtville	Yes
City of Imperial	Yes
County of Imperial Plancarte	Yes
County of Imperial Hawk	Absent
City of Westmorland	Absent

**Motion Carried.**

## **VII. ADJOURMENT**

- A. Meeting Adjourned at 8:22 p.m.

# **V. REPORTS**

## **A. LTA EXECUTIVE DIRECTOR REPORT**



Imperial County Local Transportation Authority

1503 N. Imperial Ave., Suite 104, El Centro, CA, 92243

Phone: 760-592-4494 | Fax: 760-592-4410

## Memorandum

**Date:** October 17, 2024  
**To:** Local Transportation Authority  
**From:** David Aguirre, Executive Director  
**Re:** Executive Director's Report

The following is a summary of the Executive Director's Report for the LTA meeting of October 23, 2024.

- 2018 LTA Bond Projects: The following lists the remaining funds for the LTA 2018 Bond.

2018 Original Bond Funds	
Calexico	\$12,375,000
Calipatria	\$1,450,000
Holtville	\$2,940,000

Remaining Bond Funds*		% Spent
Calexico	\$2,906,313	77%
Calipatria	\$0	100%
Holtville	\$0	100%

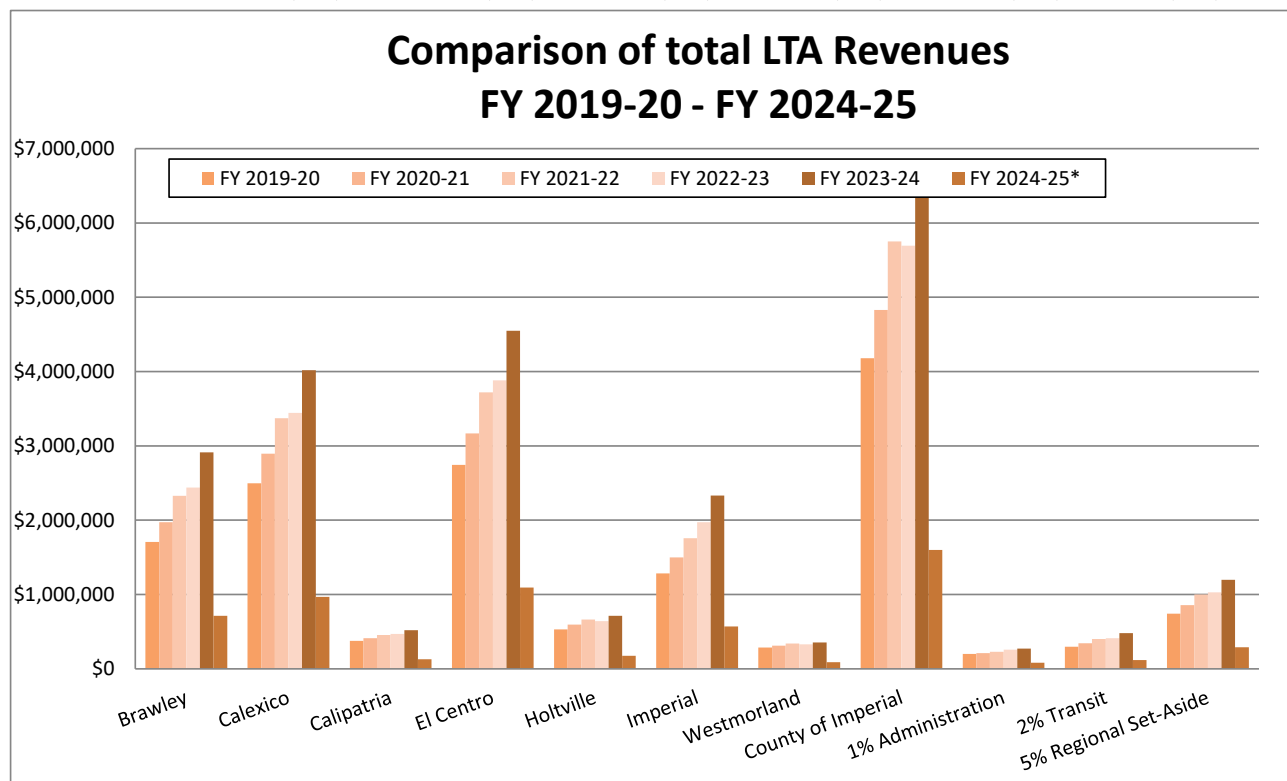
\*Remaining Project Bond funds as of Bank Statements dated 9-30-24

- LTA 2% Transit Set-Aside  
Total Allocations for FY 2024-25
  - IVT Ride \$250,000 (Brawley, Calexico, Imperial, El Centro, Heber & West Shores)
  - Available Balance 08/21/24 - \$808,676
- LTA 5% Highway Set-Aside
  - Processed Disbursements - \$5,750,645
  - Pending projects - \$3,026,754
    - Traffic Signal SR 86 & Dogwood Rd Imperial County - \$1,680,815
    - Forrester Road PSR - \$92,923
    - SR 86 Border Patrol Checkpoint - \$708,584
    - Calexico East Port of Entry Bridge Expansion - \$544,432
  - LTA 5% Regional Hwy Available Balance as of 10/17/24: \$5,595,400
- LTA Audit
  - The LTA Audit kickoff meeting was held on Friday, October 4, 2024, via zoom meeting.
  - Members were notified that PBC items are due November 8 2024, via uploads to Suralink
- LTA Overview
  - An LTA Overview presentation will be held on Thursday, October 24, 2024, during the ICTC TAC meeting. Meeting information including zoom login will be posted on the ICTC website at: <https://www.imperialctc.org/meetings-and-agendas/tac>

6. LTA FY revenues

### LTA Revenues

	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25*
Brawley	\$1,708,309.63	\$1,973,179.09	\$2,329,277.17	\$2,440,857.37	\$2,912,265.31	\$711,617.45
Calexico	\$2,496,364.99	\$2,895,513.18	\$3,373,877.73	\$3,443,349.35	\$4,017,313.18	\$968,100.87
Calipatria	\$375,010.38	\$411,033.42	\$455,012.61	\$467,550.20	\$520,741.26	\$127,645.87
El Centro	\$2,745,303.02	\$3,169,283.41	\$3,721,630.08	\$3,882,895.46	\$4,550,959.38	\$1,093,500.11
Holtville	\$530,539.51	\$592,883.74	\$661,781.67	\$641,483.65	\$713,833.01	\$173,187.50
Imperial	\$1,284,456.38	\$1,500,288.41	\$1,758,809.88	\$1,972,479.10	\$2,332,891.85	\$570,296.14
Westmorland	\$287,435.95	\$312,555.82	\$339,173.06	\$328,432.76	\$354,632.47	\$87,468.38
County of Imperial	\$4,179,704.84	\$4,830,782.66	\$5,753,297.52	\$5,695,632.54	\$6,630,055.35	\$1,598,983.33
1% Administration	\$199,626.70	\$211,624.03	\$227,015.72	\$256,416.23	\$270,880.37	\$80,001.66
2% Transit	\$296,919.39	\$341,874.07	\$400,427.43	\$411,378.42	\$479,646.72	\$116,361.33
5% Regional Set-Aside	\$742,298.46	\$854,685.13	\$1,001,068.57	\$1,028,446.07	\$1,199,116.78	\$290,903.29
	\$14,845,969.25	\$17,093,702.96	\$20,021,371.44	\$20,568,921.15	\$23,982,335.68	\$5,818,065.93



Revenue distributions listed include bond payments for the participating agencies

\*up to the month of September 2024



## **VI. ACTION CALENDAR**

A. Additional Fund Request to the Local Transportation Authority (LTA) – Traffic Control Assistance for Southbound Peak Traffic on State Route 111- Imperial Avenue, Cesar Chavez Boulevard and Second Street to the Downtown Calexico West Port of Entry

1. Approve the allocation to the City of Calexico for additional funding needed in the amount of \$250,000 for one year from the Measure D 5% Highway set-aside allocations for FY 2024-25.
2. Authorize the Chairman to sign a one-year extension for FY 2024-25 to the Memorandum of Understanding (MOU) between the City of Calexico and the Imperial County Local Transportation Authority.



**Imperial County Local Transportation Authority**

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October 16, 2024

Luis Plancarte, Chairperson  
Imperial County Transportation Commission  
1503 N. Imperial Ave., Suite 104  
El Centro, CA 92243

**SUBJECT:** Additional Fund Request to the Local Transportation Authority (LTA) – Traffic Control Assistance for Southbound Peak Traffic on State Route 111-Imperial Avenue, Cesar Chavez Boulevard and Second Street to the Downtown Calexico West Port of Entry

Dear Authority Members:

Over a three-year period ending in FY 18-19, the City of Calexico previously requested LTA funds from the regional highway set-aside for traffic control staff assistance on State Route 111/Imperial Avenue, for southbound traffic leading to the Downtown Calexico West Port of Entry (POE). The city of Calexico continues to experience significant vehicle traffic and traffic control issues at various intersections along multiple roadway sections leading to the downtown port of entry.

The LTA had previously funded three years of assistance to the city in the amount of \$150,000 per year ending in FY18-19 (total funding \$450,000). The LTA Board considered the assistance to be a temporary measure while the City looked for opportunities to implement traffic control measures to ease the need for traffic control assistance, while also possibly funding the need for traffic control staff independently. The LTA also legally evaluated the possibility of utilizing LTA funding to fund traffic control staff for an extended period and it was deemed that funding traffic control staff could only occur as a temporary measure.

The City's total annual traffic control costs are estimated at \$600,000 per previous correspondence. The city currently has multiple locations where traffic control staff are required to mitigate traffic to the downtown port of entry. The city is currently requesting funding assistance to assist with the cost of providing traffic controllers in the downtown area. Per the attached funding request correspondence, the city is requesting funding assistance in the amount of \$250,000. The city is also seeking funding to assist with the development of a POE specific traffic analysis. The traffic analysis is required to be submitted to Caltrans for consideration of any short-term access adjustments to the POE. Caltrans is currently preparing a Project Initiation Document to evaluate longer term solutions to address the traffic impacts at the POE.

The city is committed to working with all local, state and federal stakeholders to analyze and evaluate traffic control measures to assist with minimizing the need for traffic control staff. It is important to note that the roadway improvements along Highway 98 that directly impact the City's ability to fully utilize Cesar Chavez Boulevard as a significant POE entrance point have been completed.

SR-111/Imperial Avenue and Cesar Chavez Boulevard are regional corridors for Imperial County and a limited amount of revenue is available in the Regional Highway set-aside program to potentially fund the request.

The Management Committee previously discussed the potential funding of traffic control support at length during the meeting on January 11, 2023, at the City of Holtville. A motion was made and seconded to recommend a \$250,000 allocation for one year, with the caveat that the city provides a long-term solution. The motion passed.

Therefore, with Management Committee concurrence, the LTA Executive Director forwards the following items to the Authority, after the review of public comment, if any:

1. Approve the allocation to the City of Calexico for additional funding needed in the amount of \$250,000 for one year from the Measure D 5% Highway set-aside allocations for FY 2024-25 and/or approve a funding amount to be determined to assist with the development of a traffic analysis to be submitted to Caltrans for review.
2. Authorize the Chairman to sign a one-year extension for FY 2024-25 to the Memorandum of Understanding (MOU) between the City of Calexico and the Imperial County Local Transportation Authority.

Sincerely,



DAVID AGUIRRE  
Executive Director

Attachment

DA/cl



# CALEXICO *California*

WHERE CALIFORNIA AND MEXICO MEET

October 14, 2024

David Aguirre  
Executive Director  
Imperial County Transportation Commission  
1503 N. Imperial Avenue, Suite 104  
El Centro, CA 92243

Re: For Consideration of ICTC and ICTC Management Board

Dear Mr. Aguirre:

The City of Calexico respectfully requests your consideration in granting funds of **\$250,000.00**. The City of Calexico and its residents actively shape transportation development across Imperial County. Calexico's role in managing the border's traffic significantly influences transportation patterns throughout the County, often leading to the loss or gain of sales tax revenue and operational efficiency of many regional industries. The City of Calexico is facing a potential decline in revenues due to the paused parking meter collection study, a situation that could have significant financial implications for our community. The City of Calexico is also seeking assistance to pay for a traffic study to mitigate the long-term impact that the city has had on Imperial Ave.

The Calexico West Port of Entry is the third busiest border crossing in California. It is impacted with over 4 million vehicles annually. This plays a critical role in our city's economy and the region's agricultural industry. Calexico struggles with daily congestion, and traffic control is essential in providing critical rerouted traffic to drivers, especially for ambulances and public safety; this in turn impacts the City's finances due to increased traffic control costs.

As normalcy returned after the pandemic, traffic resumed; and resumed at a greater intensity; regardless of the Calexico East Port of Entry still not operating at its original operation. Traffic is no longer just at "peak" hours, but starts much earlier during the day, for a longer period. This impacts Calexico in its finances and overall impacts traffic throughout the Imperial County.

Calexico's traffic situation requires constant traffic control to somewhat alleviate the increased traffic and to ensure safety. Cesar Chavez Boulevard, Calexico's main border corridor, is highly impacted with southbound and northbound traffic, and it does address traffic control issues and somewhat keeps the traffic flowing during peak hours.

Calexico's administration remains committed to keeping its promise to keep traffic flowing during peak hours, thus allowing for shorter border crossing wait times. Calexico seeks collaboration with ICTC and all County stakeholders to tackle the problems that affects all. Thus, the City of Calexico respectfully requests continued support in the form of reimbursement for the cost of traffic control associated with the Calexico East Port of Entry and the Calexico West Port of Entry traffic issues, in addition to continued support to find long-term solutions for traffic flow in the City of Calexico.

Sincerely,

Juan A. Contreras  
Interim City Manager



Imperial County Local Transportation Authority

1503 N. Imperial Ave., Suite 104, El Centro, CA, 92243  
Phone: 760-592-4494 | Fax: 760-592-4410

7243000 LTA 5% State Hwy Set-Aside

Processed Disbursements

Agency	Project Description	Amount	LTA Board Approval	Funds Disbursed
Caltrans	Traffic Signal SR 86 & S Main St. Westmorland	\$373,000	7/24/2013	4/30/2014
County of Imperial	Traffic Signal SR 22 & SR 86 Salton City	\$438,858	9/24/2014	1/12/2015
Caltrans	Heber Bus Stop & Ped Access SR 86	\$708,240	8/27/2014	11/2/2016
City of Calexico	Two year funding for SR 111 Traffic Controllers	\$300,000	10/26/2016	1/10/2018 & 2/22/2018
Caltrans	Forrester Road PSR	\$508,621	1/25/2017	Invoiced to date
Caltrans/ICTC	SR 86 Border Patrol Checkpoint	\$587,932	9/27/2017	Invoiced to date
City of Calexico	One year funding for SR 111 Traffic Controllers	\$150,000	2/27/2019	6/26/2019
ICTC	Calexico East Port of Entry Bridge Expansion	\$1,519,512	2/27/2019	Invoiced to date
Caltrans	State Route 98 from Ollie Ave & Rockwood Ave	\$200,000	9/23/2020	6/30/2021
Caltrans	Caltrans Fund Exchange - SR 98	\$1,000,000	6/28/2023	2/27/2024
City of Imperial	Fence replacement adjacent to SR86	\$164,987	11/8/2023	5/14/2024 & 7/15/24

165,000 approved

Total Disbursements \$5,951,150

Pending Disbursements

Agency	LTA 5% Regional Hwy Balance as of 8/21/2024	\$8,199,328	Pending projects
County of Imperial	Traffic Signal SR 86 & Dogwood Rd Imperial County	\$1,680,815	LTA Board approved on 9/23/2015
Caltrans	Forrester Road PSR	\$108,879	LTA Board approved on 1/25/2017
Caltrans/ICTC	SR 86 Border Patrol Checkpoint	\$712,068	LTA Board approved on 9/27/2017
ICTC	Calexico East Port of Entry Bridge Expansion	\$324,488	LTA Board approved on 2/27/2019

			Multiple Invoices (\$617,500 approved amount)
			Multiple Invoices (\$1,300,000 approved amount)
			Multiple Invoices (\$1,844,000 approved amount)

Total pending to be Disbursed \$2,826,250

Available Balance Remaining \$5,373,078

Brawley | Calexico | Calipatria | El Centro | Holtville | Imperial | Westmorland | County of Imperial

# Calexico West Port of Entry

## TRAFFIC CIRCULATION PLAN

Prepared for:



Prepared By:



June, 2019

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# EXECUTIVE SUMMARY

## BACKGROUND

In 2018 the existing West Port of Entry (POE) located in downtown Calexico ceased processing vehicle crossings. A new POE was opened immediately west of the existing site. The new site entrances no longer connect to Imperial Avenue (SR 111) resulting in changing travel patterns. As the POE relocation is being completed in phases, this report describes recommended traffic circulation changes for each phase.

This project was completed as a joint effort by the following agencies:

- Imperial County Transportation Commission (ICTC),
- City of Calexico, California Caltrans.
- Southern California Association of Governments (SCAG)
- Imperial County – a partner agency on the project
- U.S. General Services Administration
- U.S. Customs & Border Protection

The movement of operations from the old POE to the new POE was completed in phases. Temporary traffic circulation plans were prepared for the interim phases and for the final construction phase. The traffic scenarios completed included:

Scenario 1A - southbound traffic; was moved to the new POE for the period between July 10, 2018 to September 1, 2018.

Scenario 1B - both southbound and northbound traffic accommodated by the new POE, but with Cesar Chavez Boulevard providing limited traffic access while under construction from approximately September 1, 2018 into June, 2019.

Scenario 2 – Cesar Chavez Boulevard construction completed and available for full traffic use.

## STUDY AREA

At the former POE location, both northbound and southbound traffic access was provided by SR-111 which directly connected to border crossing operations. The new POE directly lines up with Cesar Chavez Boulevard, a local street under jurisdiction of the City of Calexico. SR-111,

Cesar Chavez Boulevard and connections between these two routes (SR-98, 2<sup>nd</sup> Street and Grant Avenue) were analyzed in this Traffic Control Plan (TCP).

## **PROJECT GOALS**

A portfolio of strategies were developed and analyzed to address the following goals:

- Provide efficient mobility at the U.S. – Mexico border to the new West Calexico POE
- Reduce traffic delay for this travel
- Reduce City staff demands for traffic control
- Reduce traffic delay impacts to businesses located in the central area of Calexico
- Provide traffic circulation strategies as the new West POE is implemented in Phases

## **EXISTING CONDITIONS**

An initial task completed was to assess the traffic conditions occurring at West Calexico POE prior to moving to the new location. This analysis provides a baseline in which the future conditions can be compared.

- Described the existing transportation network
- Collected traffic counts on roadways and at intersections
- Analyzed traffic operations
- Evaluated traffic flows and traffic queues to and from the POE

## **TRAFFIC OPERATION SCENARIOS (1A AND 1B)**

Traffic flow for the anticipated traffic changes with the phased implementation of new West Calexico POE operation were estimated. Two temporary traffic circulation plans were prepared and implemented to guide travel access as first southbound traffic then northbound traffic were moved into the new West Calexico POE. For each scenario, a number of traffic circulation alternatives were considered. The project team evaluated the alternatives based on delays, access, and other project goals. A preferred traffic control plan for each scenario was determined and was presented to the public at public meetings. The traffic control plans were then implemented.

## **TRAFFIC OPERATION SCENARIO 2**

Scenario 2 describes the final scenario accommodating both northbound and southbound traffic to the new POE with the completion of Cesar Chavez Boulevard widening project. Traffic counts

were re-taken in order to capture any change in travel patterns from the existing conditions. Again, a number of traffic circulation alternatives were considered for access to-and-from the new West Calexico POE when Cesar Chavez Boulevard construction is complete. One alternative is to allow traffic to access the POE from Cesar Chavez Boulevard and from SR-111 – 2<sup>nd</sup> Street. A second alternative is to channel all southbound POE traffic to Cesar Chavez Boulevard and restrict entrance from other directions.

## **TRAFFIC MANAGEMENT STRATEGIES**

Traffic management strategies and operational approaches were identified for the recommended Scenario 2 Alternative that would be needed improve traffic flows on roadways within the project area, address projected future traffic growth, make better use of existing capacity, and improve traffic throughput. Needed revisions to lane markings and signage were also indicated.

ITS strategies are being investigated by Caltrans to provide information to motorists regarding travel speed and travel time on highways accessing both the East and West Calexico Port of Entries. These strategies include Radio Frequency Identification (RFID) technologies to measure real-time traffic volumes and speeds, Wi-Fi technologies to provide traveler information regarding delays, changeable message signs to indicate the traveler information to the public, and coordinated signals to change traffic signal timings to optimize traffic flow. The project recommendations provide an initial determination of needed traffic control. The City and Caltrans may implement additional changes once Cesar Chavez widening is completed and observed traffic conditions are identified.

## **RECOMMENDATIONS**

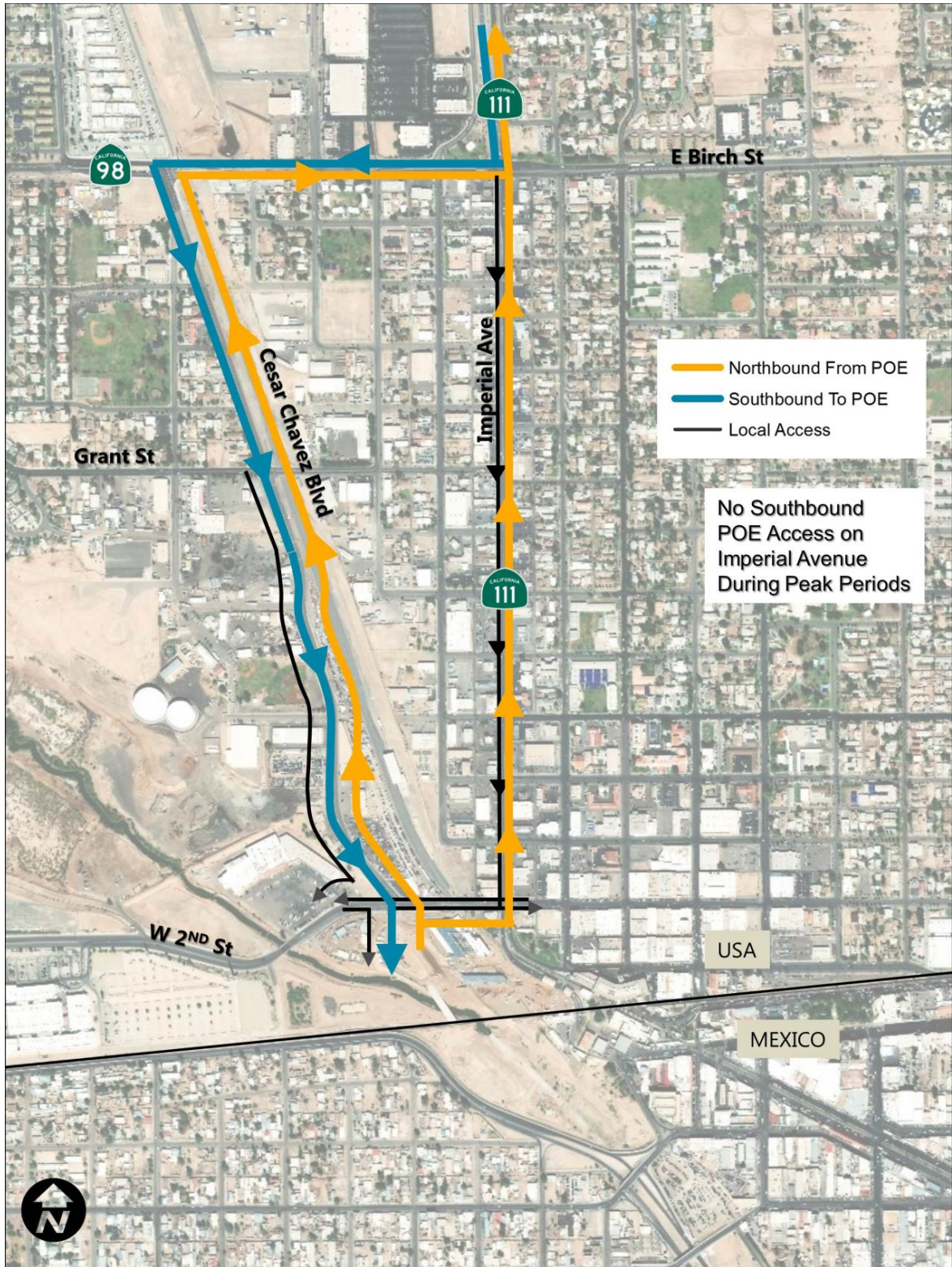
The project team evaluated the two alternatives based on delays, access, and other project goals. Traffic Operation Scenario 2, that channeled southbound access to Cesar Chavez Boulevard, was preferred by the project team as it was considered to best address the goals of reducing City staff demands for traffic control and improving access to businesses located in the central area of Calexico by reducing travel delays on SR-111. Recommendations include:

1. Provide signage to route POE traffic to Cesar Chavez Boulevard
2. Modify SR-98 / SR- 111 intersection to provide two southbound right turns
3. Adjust signal timings at major intersections to support traffic flow to the POE using Cesar Chavez Boulevard.
4. Focus manual traffic control support at Cesar Chavez Boulevard and 2<sup>nd</sup> Street
5. Implement the Caltrans ITS projects

The preferred traffic circulation plan is shown in Figure ES.1.



FIGURE ES.1: RECOMMENDED TRAFFIC CIRCULATION



# 1.0 INTRODUCTION

## 1.1 BACKGROUND

This report presents a traffic control plan for access to the new Calexico West Port of Entry (POE). The new Calexico POE is being relocated immediately west of the current site, resulting in changing travel patterns. As the POE relocation is being completed in phases, this report describes recommended traffic circulation changes for each phase.

The existing POE connects the downtown areas of the Cities of Calexico and Mexicali. The port processes up to 10,000 northbound vehicles and up to 20,000 northbound pedestrians on a typical day. In order to improve border crossing efficiency and reduce wait times, the General Services Administration (GSA) began construction of the expansion and reconfiguration of the Calexico West Port of Entry (POE) in April 2015.



SR 111 in downtown Calexico

POE construction is being completed in phases during 2018. While the expansion is anticipated to reduce delay associated with border crossings, the traffic access and circulation patterns serving the POE will significantly change. In order to maintain traffic flow during POE construction, a Traffic Circulation Plan (TCP) was initiated to develop plans to determine how best to provide access to-and-from the Calexico West POE for each phase. Additionally, the TCP will address traffic impacts during the construction of Cesar Chavez Boulevard, the primary route that will connect with the new POE.

This project is a joint effort of a number of agencies. A Technical Advisory Committee comprised of the following agencies met throughout the project and provided technical input through the development of the traffic circulation plan, and included:

- Imperial County Transportation Commission (ICTC), - the regional transportation planning and funding agency for Imperial County
- City of Calexico, California – the city where the POE is located and has jurisdiction over local streets.
- Caltrans – has jurisdiction over state highways.
- Southern California Association of Governments (SCAG) the designated Metropolitan Planning Organization for southern California, including Imperial County.
- Imperial County – a partner agency on the project



In addition to the above agencies, the following additional agencies participated in the stakeholder meetings:

- U.S. General Services Administration – the owner of the POE and responsible for construction.
- U.S. Customs & Border Protection – operator of the POE and responsible for inspection services.

## 1.2 STUDY AREA

Current traffic control measures require both northbound and southbound traffic to use only SR-111 to cross through the existing Calexico West POE. Based on the new location of the POE expansion, SR-111/2<sup>nd</sup> Street and California State Route (SR-98)/Cesar Chavez Blvd. will also be available to provide direct access to the POE. These roadways will be analyzed in this TCP. Grant Avenue will also be analyzed as it provides a connection between SR-111 and Cesar Chavez Boulevard. The study area is shown in **Figure 1.1**.

FIGURE 1.1: PROJECT VICINITY



### 1.3 STUDY PURPOSE

Vehicle processing involves northbound and southbound vehicles queuing to approach primary inspection, with some diverted to secondary inspection or denied access to cross the border. Border inspection by Mexico results in southbound travel delays in Calexico and by the U.S. Customs results in travel delays in Mexicali. Border inspection during peak crossing periods results in poor circulation and long queues that extend from the POE on to city streets and state highways. This often results in increased congestion, traffic delays, and negative consequences for the local and regional economy, and impacts travel mobility for residents. These problems could become more acute during the reconfiguration and construction of new POE facilities.

Vehicle queues and delays associated with border crossing impact the City of Calexico's budget and staff resources. During the afternoon peak, the City employs up to 12 traffic control staff in the field which assist with managing traffic at intersections along SR-111 during the southbound afternoon peak commute period. During this time period, traffic can back-up more than two miles north of the existing POE.



Right Turn Prohibition to be placed at Seventh Street



Left turn lane closure during peak hours on SR-98 at SR-111

This report describes access routes and supporting traffic operations to the newly expanded Calexico West POE. The TCP addresses current roadways, those under construction, and analyze which routes will provide for direct, less congested, safe, and timely POE crossings. A portfolio of strategies will be developed to address the impacts of the reconfiguration and expansion of the Calexico West POE on travelers, regional residents and businesses. The study also informs those travelling into and from Imperial County for work, shopping, school, business or leisure of these new connections which will minimize delays, congestion, loss of time and negative impacts to air quality in the study area.

## 2.0 EXISTING CONDITIONS

Existing conditions represent the current conditions of the study area prior to changes in POE access. This analysis provides a baseline in which the future conditions can be compared.

### 2.1 TRANSPORTATION NETWORK

#### Roadways

The principal roadways in the project study area are described below. The description includes the physical characteristics, adjacent land uses, and traffic control devices along these roadways. The existing intersection roadway geometry and control conditions are shown in **Figures 2.1**. The street and highway functional classification is shown in **Figure 2.2**. **Table 2.1** summarizes the existing physical characteristics of the study roadways as collected via field and aerial reviews, including the number of lanes, functional classification, type of median, posted speed, presence of bicycle facility, on-street parking restrictions, and sidewalk presence.

#### State Route 111/Imperial Avenue

SR-111 is the primary north-south arterial route and commercial corridor in the City of Calexico. SR-111 has been constructed as a four-lane limited access expressway facility from I-8 to SR-98. From SR-98 to 2<sup>nd</sup> Street, SR-111 is an urban arterial with signals at 2<sup>nd</sup> Street, 5th Street, 7th Street, Grant Street, and SR-98. A raised median has been constructed between 2<sup>nd</sup> Street and Fifth Street in order to eliminate cross traffic at Third and Fourth Streets. Traffic control personnel place signs or cones indicating restricted turns during the p.m. peak period.

#### State Route 98/Birch Street

SR-98 is a primary east-west arterial. Caltrans recently complete capacity improvements to SR-98 that widened the highway and added turn bay storage at the Cesar Chavez Boulevard intersection. SR-98 has four through travel lanes from the east edge of Calexico to Cesar Chavez Boulevard. SR-98 provides a connection to SR-7 and the east Calexico border crossing, with this route used by truck traffic. This intersection with SR-111 is signalized. During the p.m. peak hour, turns from westbound SR-98 to southbound SR- 111 are prohibited.

#### 2nd Street/Anza Road

2<sup>nd</sup> Street, which becomes Anza Road east and west of the City, is one of the east/west arterials near the southern edge of the City, parallel to the International Border. In the section west of SR-111, there are two lanes in each direction to the Outlet Mall, and one lane in each direction from that point to the west. East of SR- 111, the street narrows to one lane each way with angular parking provided. As the cross-street located closest to the U. S. / Mexico border, 2<sup>nd</sup> Street is impacted most when vehicle queues form waiting to be processed at the border.



### Cesar Chavez Boulevard

Cesar Chavez Boulevard is a four-lane roadway that parallels the Union Pacific Railroad tracks running northwest from 2<sup>nd</sup> Street to SR-98. Cesar Chavez Boulevard is located directly opposite the vehicle entry point at the new POE. Roadway widening design plans have been completed and with construction to occur in mid-2018 through early 2019 that would widen Cesar Chavez Boulevard to five lanes (three southbound/two northbound) between 2<sup>nd</sup> Street and Grant Street and four-lanes from Grant Street to SR-98.

### Grant Street

Grant Street is a two lane street classified in the General Plan as a secondary street. Grant Street provides one of the few connections between Cesar Chavez Boulevard and SR-111. The intersection of Grant Street and Cesar Chavez Boulevard is four-way stop controlled. This intersection will be signalized when the improvement project is completed. There is a guarded train crossing on Grant Street immediately east of Cesar Chavez Boulevard. The intersection of Grant Street and SR-111 is signalized.

**FIGURE 2.1: INTERSECTION GEOMETRY**

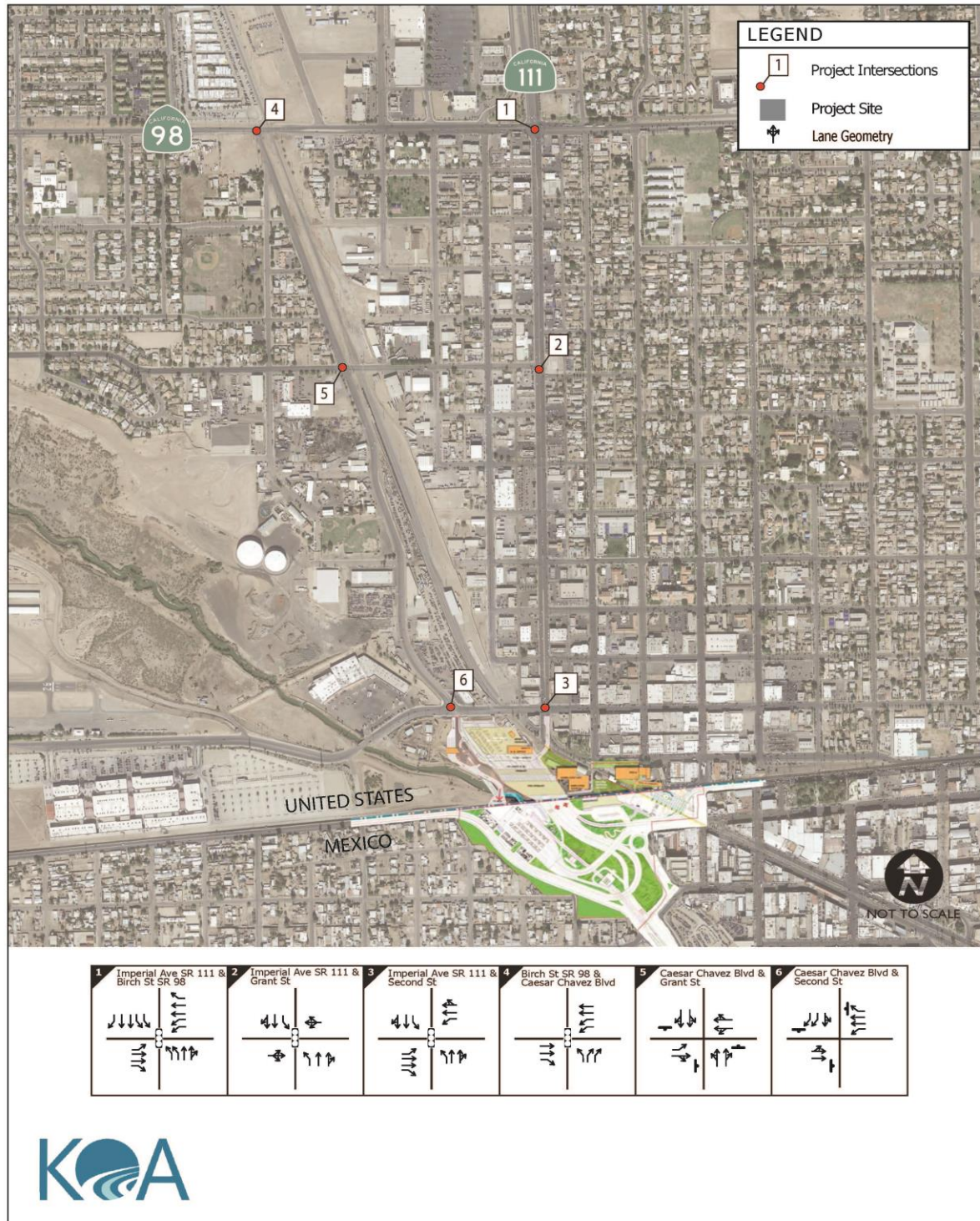




FIGURE 2.2: FUNCTIONAL



Source: Existing General Plan, City of Calexico, California

**TABLE 2.1: EXISTING ROADWAY CHARACTERISTICS**

Name	From	To	# of Lanes	Median	Functional Class	Post Speed	Side-walk	On-Street Park	Bicycle Lane
SR 111	Jasper Rd.	Cole Rd.	4	Yes	Expressway	65	No	No	Shoulder
	Cole	SR 98	4	Yes	Expressway	65/35	No	No	Shoulder
	SR 98	10th St.	4	Turn lanes	Primary Arterial	35	Yes	No	No
	10th St.	Grant St.	4	TWLTL	Primary Arterial	30	Yes	Yes	No
	Grant St.	4th St.	4	TWLTL	Primary Arterial	30	Yes	Yes	No
	4th St.	2nd St.	4	Median	Primary Arterial	30	Yes	No	No
Cesar Chavez Blvd.	SR 98	Grant St.	4	None	Arterial	30	West side	West side	No
	Grant St.	2nd St.	4	None	Arterial	30	No	No	No
SR 98	SR 111	Ollie Ave.	4	Yes	Arterial	30	Yes	North side	No
	Ollie Ave.	Chavez Blvd.	4	Painted	Arterial	30	Yes	No	Shoulder
Grant St.	SR 111	Chavez Blvd.	2	None	Secondary	30	Yes	Yes	No
2nd St.	SR 111	Chavez Blvd.	4	Painted	Arterial	30	Yes	No	No

### Transit

Transit vehicles do not cross the border at this port, instead using the Calexico East/Mexicali II POE facility. Imperial Valley Transit operates a fixed route transit system connecting Calexico with other communities in Imperial County (such as IVT bus routes 1, 21, 31, and 32). There are plans to replace or upgrade the transit transfer center is located in downtown Calexico. This new Intermodal Transportation Center is recommended to be located on the south side of Third Street between Rockwood and Heffernan Avenue. Upon completion, the transit center will accommodate Imperial Valley Transit and Greyhound bus facilities, drop off and pick up zones, amenities such as restrooms and bicycle storage, and bus bays for public and private buses.

In addition to Imperial County Transit service, other travel modes include: taxi, transit, privately operated shuttles, intercity and tour buses, contracted labor transportation, friends or relatives picking them up in private automobiles, and on foot and by bicycle. These activities are



unorganized and dispersed across downtown Calexico. It is estimated that approximately 25 transportation service providers operating, at least in part, in Calexico: taxi companies; transit or shuttle operators; tour bus operators; and farm labor bus operators.<sup>1</sup>

### **Pedestrian/Bicycle/Other**

There are no existing bicycle facilities near this port in the U.S. or Mexico. There is a supportive pedestrian environment in the vicinity of the existing U.S. Customs building where pedestrian border access takes place. Pedestrian amenities include Border Park and sidewalks on local streets.

## **2.2 TRAFFIC VOLUMES**

### **Daily Count Volumes**

Daily traffic counts were taken at two locations on SR-111 in April, 2018, in order to understand traffic levels that occur throughout the day. Average daily traffic volumes were obtained through machine data collection. Two locations were counted:

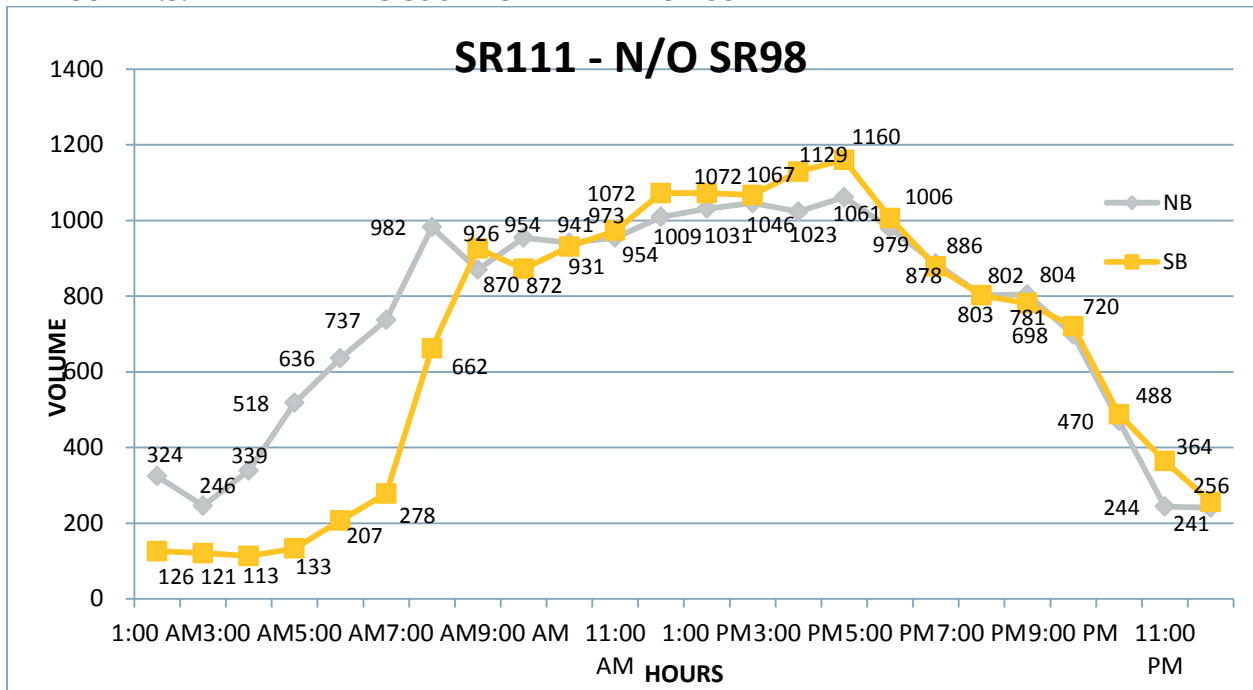
- SR-111 north of SR-98
- SR-111 south of 2<sup>nd</sup> Street

The hourly traffic volume distribution of the traffic counts taken are shown in **Figure 2.3** and **Figure 2.4**. The traffic count south of 2<sup>nd</sup> Street provides an indication of the level of traffic flow through the border inspection stations. As shown in **Figure 2.4**, the number of vehicles moving southbound to the Mexican border increased throughout the day and peaked at 1,461 for the hour between 6 p.m. and 7 p.m. This provides an indication of the capacity for southbound vehicle inspections. The northbound movement remains relatively constant reaching a peak of just over 500 vehicles per hour between 7:00 a.m. and 8:00 a.m. The daily traffic counts are provided in **Appendix A**.

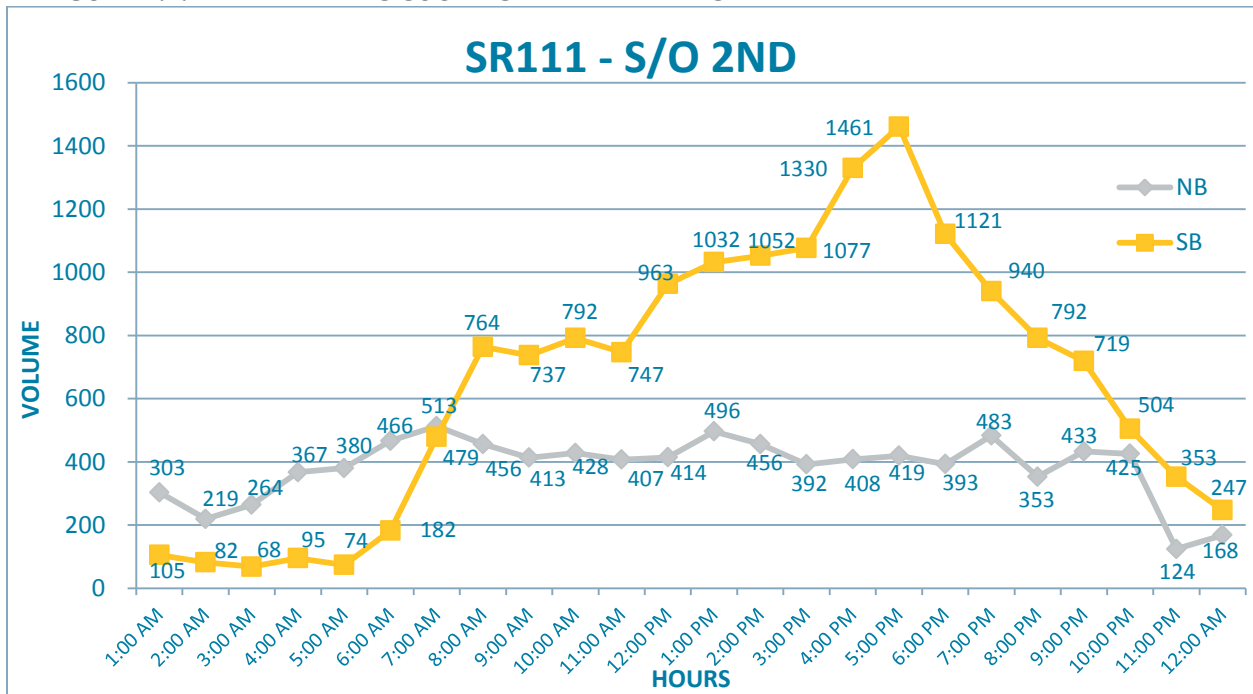
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<sup>1</sup> Calexico Border Intermodal Transportation Center Feasibility Study, 2014, p. 5.

**FIGURE 2.3: DAILY TRAFFIC COUNT SR-111 AND SR-98**



**FIGURE 2.4: DAILY TRAFFIC COUNT SR-111 AND 2<sup>ND</sup> STREET**



### **Peak Hour Count Volumes**

The intersection turning movement counts were conducted during the weekday evening peak from 3:00 PM to 6:00 PM on Wednesday April 25, 2018 for the following intersections:

#### Intersections

1. SR 111 at SR 98
2. SR 111 at Grant Street
3. SR 111 at 2nd Street
4. Cesar Chavez at SR 98
5. Cesar Chavez at Grant Street
6. Cesar Chavez at 2nd Street

The resultant existing weekday morning and evening peak hour intersection volumes are shown in **Figure 2-5**. **Appendix B** contains peak hour count data.

### **Traffic Queue**

The length of queues was recorded on Thursday May 17, 2018 between 3:00 p.m. and 6:00 p.m. The growth of the queue over this time period is shown in **Figure 2.6**.

**FIGURE 2.5: EXISTING TURNING MOVEMENT COUNTS**

EXISTING TURNING MOVEMENT COUNTS

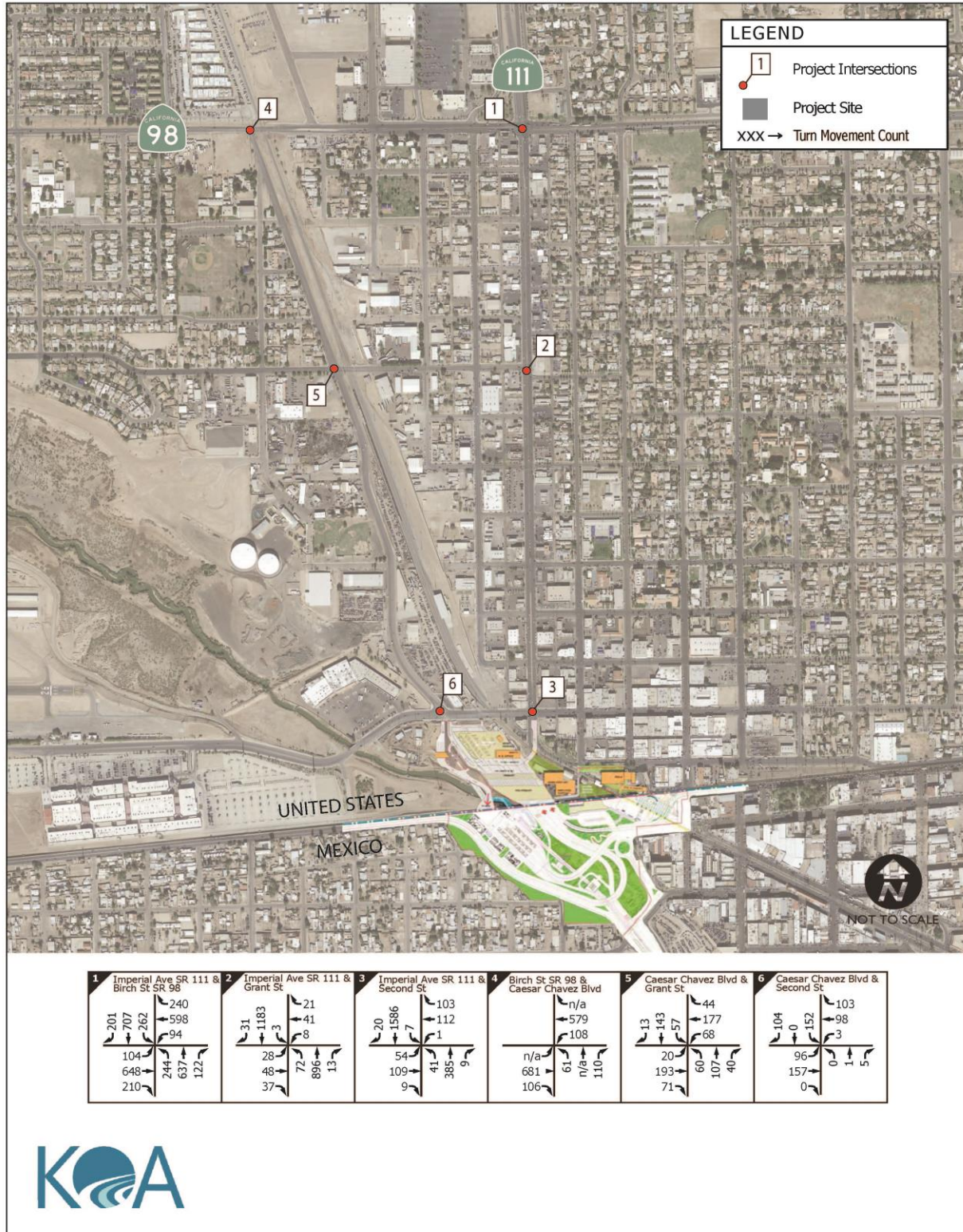




FIGURE 2.6: VEHICLE QUEUES, 3:00 P.M. TO 6:00 P.M.



## INTERSECTION LEVEL OF SERVICE

**Table 2.2** summarizes the level of service analysis results for the study area intersections using the intersection evaluation methodology described in the 2010 Highway Capacity Manual. Intersection level of service detail and worksheets are provided in **Appendix C**. While overall intersection level-of-service is shown to be satisfactory, individual traffic movements can be impacted. The primary cause of traffic delays are queues related to border crossing creating long queue lengths that impede travel movement restricting traffic counts at intersections. This analysis only partially reflects actual delays resulting from border queuing.

**TABLE 2.2: INTERSECTION LEVEL OF SERVICE**

No.	Intersection	Traffic Control	PM Peak Period		
			Avg Delay (secs.)	LOS	Southbound Queue (ft.)
1	SR-111 and SR-98	Signal	42.3	D	394
2	SR-111 and Grant	Signal	32.7	C	717
3	SR-111 and 2nd Street	Signal	20.1	C	1220
4	Cesar Chavez and SR-98	Signal	27.9	C	32 (WBL)
5	Cesar Chavez and Grant	Stop		A	n/a
6	Cesar Chavez and 2nd Street	Stop		A	n/a

The southbound queue lengths estimated by Synchro provide an estimate of the queue length from that intersection without downstream back-ups. The queues reported in Synchro while substantial, were still shorter than those observed and illustrated in **Figure 2.3**. While the calculated level-of-service and queue length are show better than observed level-of-service, they still provide a measure of comparison between alternatives and can be used for evaluating signal timing and phasing.

## PORT OF ENTRY FACILITIES

### Existing

The existing POE facilities are shown in **Figure 2.7**. The existing facility provides 10 vehicle lanes for northbound traffic entering the U.S. and six southbound vehicle inspection lanes for southbound traffic entering Mexico. Current operations in each country tend to support the operation of between four to six vehicle inspection lanes. Representatives of SAT, the agency in Mexico responsible for border operations, has stated a goal of achieving an average vehicle inspection rate of less than 60 seconds per vehicle. Typically for southbound travel, there are four vehicle inspection lanes open except during peak times when six vehicle inspection lanes may be open. For northbound travel, the U.S. Customs typically provides six open vehicle inspection lanes. During peak travel times, the number of lanes may increase. The time for vehicle inspection by U.S. Customs may exceed 60 seconds per vehicle, which can limit the volume of the northbound vehicle movement.



**FIGURE 2.7: EXISTING PORT OF ENTRY (MAY, 2018)**



### **Planned**

On the U.S. side, the POE's existing structures will be replaced by three new buildings. The project will be implemented in two phases. The first phase has been funded, and is the phase analyzed in this TCP. The first phase will include a headhouse, ten of the project's ultimate 16 northbound POV inspection lanes, five southbound POV inspection lanes with temporary asphalt paving, and a bridge across the New River for southbound traffic. The POE improvements will change the access point on the U.S. from SR 111 (Imperial Avenue) to Cesar Chavez Boulevard. These plans are shown in **Figure 2.8**.

**FIGURE 2.8: CALEXICO WEST POE EXPANSION PLANS**



Source: GSA

Mexico is also constructing a new POE that will include 10 inspection lanes. The layout for POE improvements for both the U.S. and Mexico are shown in **Figure 2.9**. While vehicle lane capacity will increase, the number of inspection lanes open will depend on operational funding from both countries. Modernization plans have also been made on the Mexican side of the border. The Mexicali expansion project will consist of a new administration building and expansion and reconfiguration of personal vehicle crossing lanes on both sides of the New River, to the east of the current processing facilities. Four southbound vehicle lanes expanding into 17 inspection booths will be created east of the river, along with reconfiguration of northbound roadways west of the railroad tracks.

Pedestrian movements will continue to be accommodated at the existing POE facilities. Phase 2 of the POE improvement project will include pedestrian improvements, including a new pedestrian processing facility. The addition of a pedestrian plaza east of the current facility is also planned during the modernization project. Additional pedestrian and bicycle facility improvements are planned in for both sides of the border which will improve pedestrian access.<sup>2</sup>

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<sup>2</sup> Pedestrian and Bicycle Transportation Access Study, ICTC, 2015



**FIGURE 2.9: MEXICALI POE EXPANSION PLANS**



Source: Gobierno del Estado de Baja California

A combined graphic of the POE improvements is shown below in **Figure 2.10**.

**FIGURE 2.10: COMBINED POE PLANS**



Source:

ICTC

## **SUMMARY**

This section describes existing traffic conditions prior to the shift of traffic from the downtown Calexico POE to the new POE to the west. It describes the existing street system, traffic volumes, queue length, and intersection level of service. This information will provide a baseline comparison for traffic conditions following circulation changes associated with the new POE.

### **3.0 TRAFFIC OPERATION SCENARIOS (1A AND 1B)**

This memorandum describes the traffic circulation alternatives developed to accommodate traffic during the initial traffic scenarios related to the phased opening of a new Port of Entry (POE) facility in downtown Calexico, California. The phased opening will require development of two temporary traffic circulation plans.

Scenario 1A - a temporary traffic during construction scenario to accommodate southbound traffic; to the new POE that would be in place, from approximately July 10, 2018 to September 1, 2018.

Scenario 1B - a temporary traffic during construction scenario; to accommodate both southbound and northbound traffic to the new POE, that would be in place from approximately September 1, 2018 into February, 2019.

This memorandum presents traffic circulation alternatives for these two scenarios.

### 3.1 SCENARIO 1A

This is a temporary traffic during construction scenario that will be in place from July 10, 2018 to approximately September 1, 2018. Cesar Chavez Boulevard will be under construction during this time, so POE traffic will be directed to use SR-111 to 2<sup>nd</sup> Street for southbound border access (see **Figure 3.1**). The estimated traffic volumes associated with this traffic shift are shown in **Figure 3.2**. Southbound volumes were adjusted to reflect variation in flow to the POE and to represent observed traffic demand.

The traffic circulation alternatives involve modifications to lane geometry and signal timings at SR-111/2<sup>nd</sup> Street and at Cesar Chavez Boulevard/2<sup>nd</sup> Street, and the road segment between these two intersections. For each alternative, a description of the lane geometry and permitted movements has been provided along with a summary of benefits and impacts and the results of a capacity analysis. The conceptual drawings for each alternative are shown in the appendix.

### 3.2 TRAFFIC CONTROL ALTERNATIVE 1: MAXIMIZE SOUTHBOUND VEHICLE THROUGHPUT

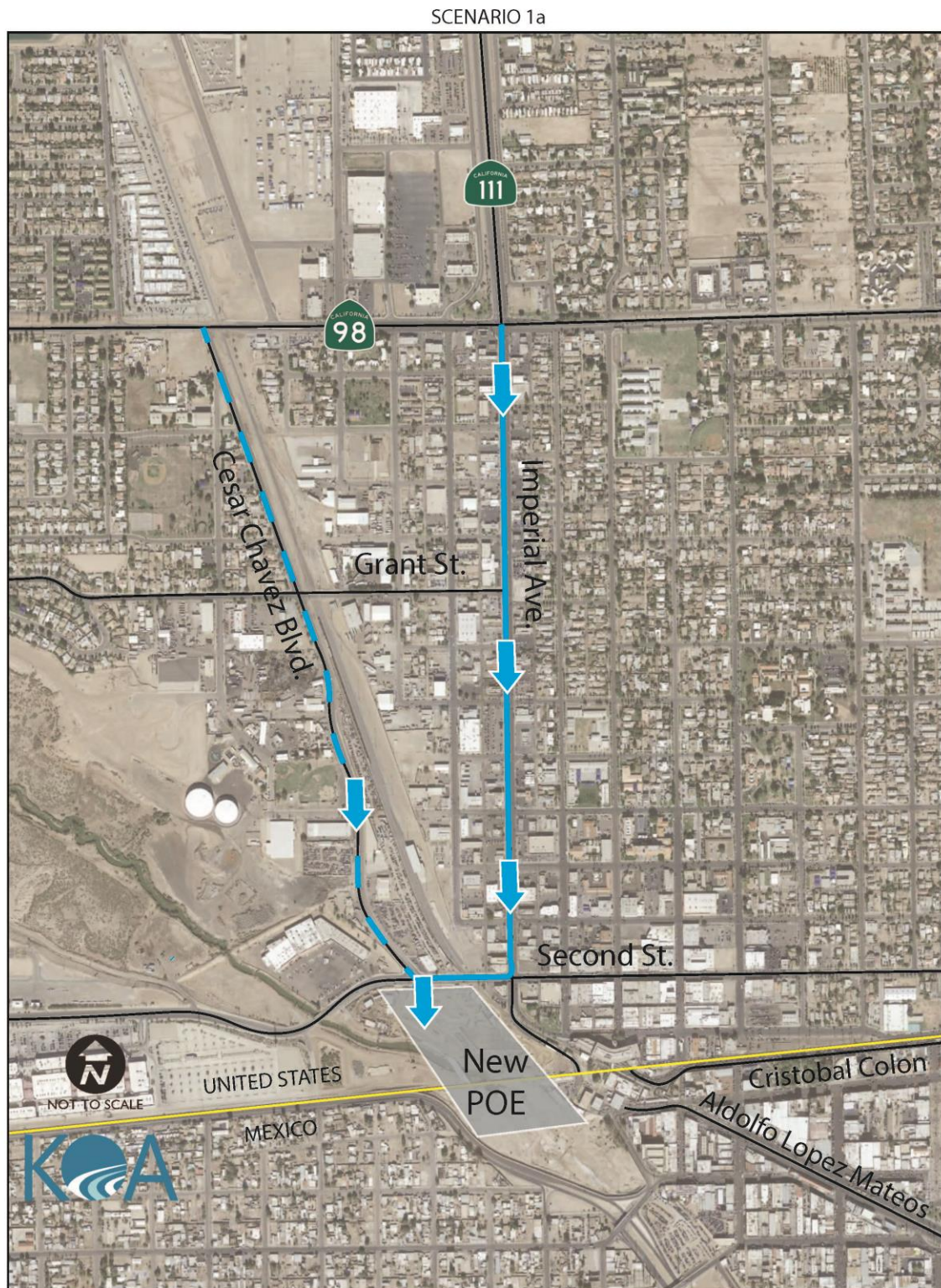
#### Alternative 1a

This alternative will provide alternatives that would seek to maximize the movement of southbound vehicles to the southbound inspection booths entering Mexico, but would impact other travel movements. Four westbound lanes would be provided on 2<sup>nd</sup> Street between SR-111 and Cesar Chavez Boulevard that would accommodate three left turn lanes into the three entrance lanes into the customs area, and a fourth lane which would provide for westbound through and right turn traffic at Cesar Chavez Boulevard. A fixed barrier protecting the left turn movement into the POE could be provided at 2<sup>nd</sup> Street and Cesar Chavez Boulevard, eliminating the need for city personnel to direct traffic. One eastbound lane would be provided between 2<sup>nd</sup> Street and Cesar Chavez Boulevard that would essentially serve construction related traffic coming out of the new POE. The remaining traffic movements would only allow turns between the north and west legs of the 2<sup>nd</sup> Street and Cesar Chavez intersection.

The intersection of SR-111 and 2<sup>nd</sup> Street would be modified to provide triple right turn lanes to facilitate the movement to the POE. Southbound left turns would not be permitted. All eastbound traffic movements would be provided from one lane. The intersection level-of service is shown in **Table 3.1**.



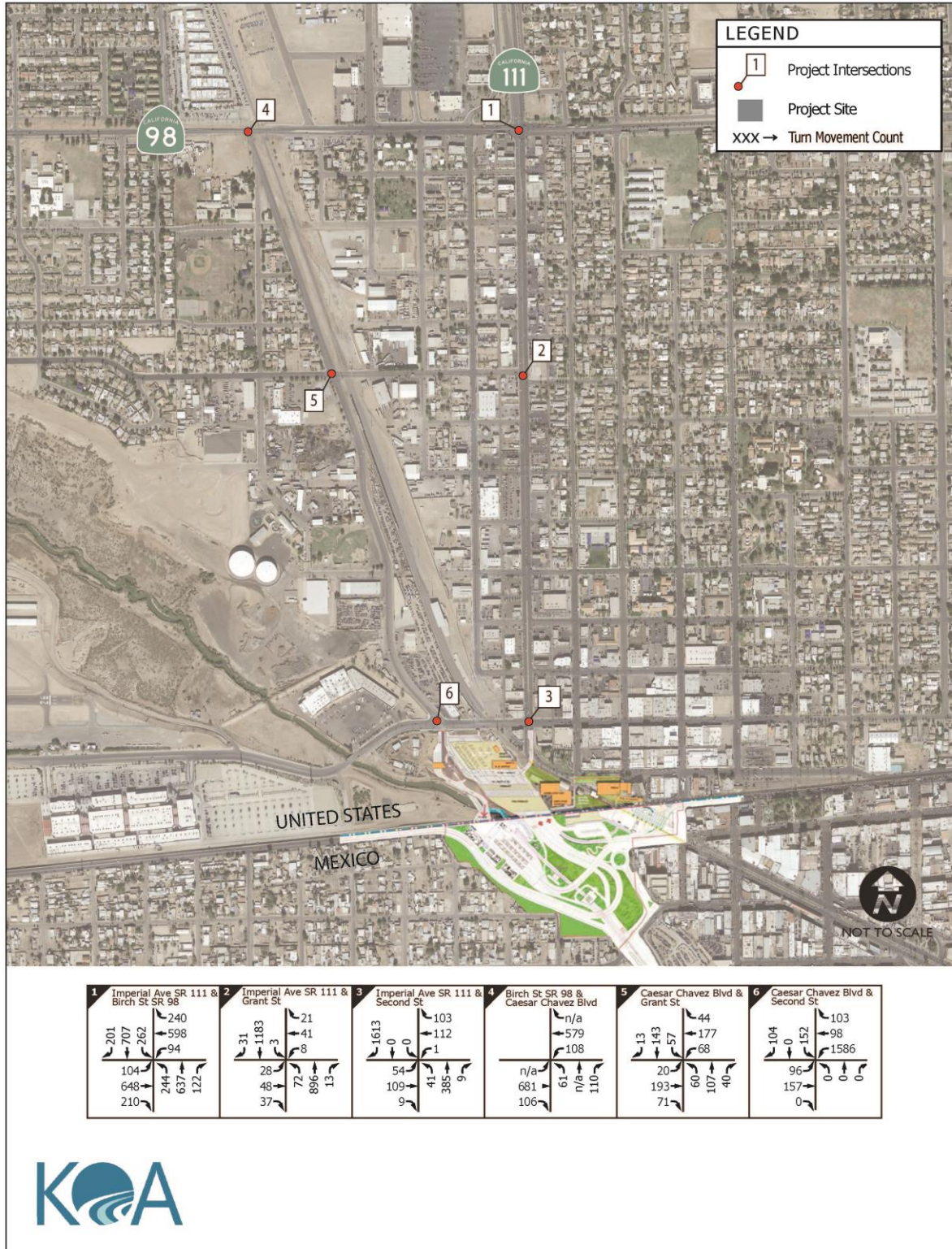
**FIGURE 3.1: CIRCULATION PATTERN WITH SOUTHBOUND TRAFFIC SHIFT**





**FIGURE 3.2: 1A – TURNING MOVEMENT COUNTS**

1A - TURNING MOVEMENT COUNTS





### Benefits

- Three lanes of vehicle capacity and queue storage on westbound 2nd Street
- Reduced need of Calexico City personnel to assist traffic at 2nd Street and Cesar Chavez Boulevard
- Westbound access provided to outlet mall / airport

### Impacts

- Limited traffic movement at 2<sup>nd</sup> Street and Cesar Chavez Blvd.
- Eastbound traffic from outlet mall / airport must use Cesar Chavez Boulevard, which will be under construction but remain open
- No southbound left turn movement provided at SR-111 and 2<sup>nd</sup> Street.

**TABLE 3.1: TRAFFIC LEVEL OF SERVICE – 1a**

SCENARIOS	LANE GROUPS		Intersection LOS	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
1A-1a	Cesar Chavez & 2nd St	Total Delay	7.6	27.5			6.1	7.9							0.6
		LOS	A	C			A	A							A
	Imperial & 2nd St	Total Delay	8.5		36.1		16	18.7		5.1	5.1				5.9
		LOS	A		D		B	B		A	A				A

### **Alternative 1b**

This alternative differs from Alternative 1a in that both eastbound and westbound lanes would be provided through the Cesar Chavez Boulevard intersection at 2<sup>nd</sup> Street. The alternative will provide a similar movement of southbound vehicles to the southbound inspection booths entering Mexico from three westbound left turn lanes. No fixed barrier would be provided at 2<sup>nd</sup> Street and Cesar Chavez Boulevard, so that traffic could be signal controlled or controlled by on-site personnel. One eastbound and westbound lane would be provided. Only a right turn is provided for southbound traffic on Cesar Chavez. The intersection of SR-111 and 2<sup>nd</sup> Street would be modified to provide triple right turn lanes, with the center left turn lane providing for all three movements, to facilitate the movement to the POE. Southbound right turns would be permitted at Cesar Chavez. The intersection level-of service is shown in **Table 3.2**.

### Benefits

- Three lanes of vehicle capacity and queue storage on westbound 2nd Street
- Westbound access provided to outlet mall / airport
- Eastbound access provided from the outlet mall/airport

### Impacts

- Limited southbound traffic movement at 2<sup>nd</sup> Street and Cesar Chavez Blvd.
- No southbound left turn movement provided at SR-111 and 2nd Street.
- Calexico City personnel may be needed to assist traffic at 2nd Street and Cesar Chavez Boulevard
- Less capacity at CCB/2<sup>nd</sup> Street

**TABLE 3.2: TRAFFIC LEVEL OF SERVICE – 1b**

SCENARIOS	LANE GROUPS		Intersection LOS	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
1A-1b	Cesar Chavez & 2nd St	Total Delay	23.8	35.7	32.9		27.4	3.2							0.6
		LOS	C	D	C		C	A							A
	Imperial & 2nd St	Total Delay	10.3		70.8		20	24.8		4.9	4.8				4.8
		LOS	B		E		B	C		A	A				A

### Alternative 1c

This alternative differs from Alternative 1a in that both eastbound and westbound lanes would be provided through the Cesar Chavez Boulevard intersection at 2<sup>nd</sup> Street **and** a southbound left turn on Cesar Chavez would be added. This alternative will provide a similar movement of southbound vehicles to the southbound inspection booths entering Mexico from three westbound left turn lanes and a third westbound lane which would provide for westbound through and right turn traffic at Cesar Chavez Boulevard. No fixed barrier would be provided at 2<sup>nd</sup> Street and Cesar Chavez Boulevard, so that traffic could be signal controlled or controlled by on-site personnel. One eastbound and westbound lane would be provided. Traffic patterns at 2<sup>nd</sup> Street and SR-111 would remain the same as in Alternative 1b. Southbound right and left turns would be permitted at Cesar Chavez. The intersection level-of service is shown in **Table 3.3**.

### Benefits

- Three lanes of vehicle capacity and queue storage on westbound 2nd Street
- Westbound access provided to outlet mall / airport
- Eastbound access provided from the outlet mall/airport

### Impacts

- No southbound left turn movement provided at SR-111 and 2nd Street
- Calexico City personnel may be needed to assist traffic at 2nd Street and Cesar Chavez Boulevard
- Less capacity at CCB/2<sup>nd</sup> Street

**TABLE 3.3: TRAFFIC LEVEL OF SERVICE – 1c**

SCENARIOS	LANE GROUPS		Intersection LOS	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
1A-1c	Cesar Chavez & 2nd St	Total Delay	38.5	84.7	82.8		35.3	12.0						40.4	
		LOS	D	F	F		D	B						D	
	Imperial & 2nd St	Total Delay	14.3		119.8		29	38.4		5.1	5.0				4.8
		LOS	B		F		C	D		A	A				A

### Alternative 1d

This alternative differs from Alternative 1a in that both eastbound and westbound lanes would be provided through the Cesar Chavez Boulevard intersection at 2<sup>nd</sup> Street **and** one southbound through lane is provide to access the new POE during construction of Cesar Chavez. This alternative will provide a similar movement of southbound vehicles to the southbound inspection booths entering Mexico from three westbound left turn lanes and a third westbound lane which would provide for westbound through and right turn traffic at Cesar Chavez Boulevard. No fixed barrier would be provided at 2<sup>nd</sup> Street and Cesar Chavez Boulevard, so that traffic could be signal controlled or controlled by on-site personnel. One eastbound and westbound lane would be provided. Southbound right and left turns and through movement to the POE would be permitted at Cesar Chavez. The intersection level-of service is shown in **Table 3.4**.

### Benefits

- Three lanes of vehicle capacity and queue storage on westbound 2nd Street
- Westbound access provided to outlet mall / airport
- Eastbound access provided from the outlet mall/airport
- Southbound access to new POE provided at Cesar Chavez

### Impacts

- No southbound left turn movement provided at SR-111 and 2nd Street
- Calexico City personnel may be needed to assist traffic at 2nd Street and Cesar Chavez Boulevard
- Less capacity at CCB/2<sup>nd</sup> Street

**TABLE 3.4: TRAFFIC LEVEL OF SERVICE – 1d**

SCENARIOS	LANE GROUPS		Intersection LOS	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
1A-1d	Cesar Chavez & 2nd St	Total Delay	52.8	84.8	92.8		49.7	21.9						57.1	
		LOS	D	F	F		D	C						C	
	Imperial & 2nd St	Total Delay	10.9		87.0		22.0	27.1		4.9	4.8				2.8
		LOS	B		F		C	C		A	A				A

## 3.3 TRAFFIC CONTROL ALTERNATIVE 2: BALANCED EAST-WEST TRAFFIC

### Alternative 2a

This alternative provides two westbound left turn lanes on 2<sup>nd</sup> Street at Cesar Chavez Boulevard to provide access to the inspection booths entering Mexico. The two westbound left turn lanes would be accommodated by the three entrance lanes into the customs area. For this alternative, a fixed barrier protecting the left turn movement into the POE could be provided at 2<sup>nd</sup> Street and Cesar Chavez Boulevard, eliminating the need for city personnel to direct traffic. One eastbound lane would be provided between 2<sup>nd</sup> Street and Cesar Chavez Boulevard, that would essentially serve construction related traffic coming out of the new POE. The remaining traffic movements would only allow turns between the north and west legs of the 2<sup>nd</sup> Street and Cesar Chavez intersection. The intersection of SR-111 and 2<sup>nd</sup> Street would be modified to provide two right turn lanes to facilitate the movement to the POE. Southbound right turns would be permitted. The intersection level-of service is shown in **Table 3.5**.

### Benefits

- Two lanes of vehicle capacity and queue storage on westbound 2nd Street
- Reduced need of Calexico City personnel to assist traffic at 2nd Street and Cesar Chavez Boulevard
- Westbound access provided to outlet mall / airport
- Left turn provided for southbound SR-111 to 2<sup>nd</sup> Street

- Less change required moving into Scenario 2

#### Impacts

- Limited traffic movement at 2<sup>nd</sup> Street and Cesar Chavez Blvd.
- Eastbound traffic from outlet mall / airport must use Cesar Chavez Boulevard, which will be under construction but remain open
- Less capacity and storage provided as compared to Traffic Control Alternative 1

**TABLE 3.5: TRAFFIC LEVEL OF SERVICE – 2a**

SCENARIOS	LANE GROUPS		Intersection LOS	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
1A-2a	Cesar Chavez & 2nd St	Total Delay	7.1	60.9			1.8	1.9							0.8
		LOS	A	E			A	A							A
	Imperial & 2nd St	Total Delay	27.4		117.4		40	48.1		19.9	4.9		4.3	22.4	22.2
		LOS	C		F		D	D		B	A		A	C	C

#### **Alternative 2b**

This alternative differs from Alternative 2a in that both eastbound and westbound lanes would be provided through the Cesar Chavez Boulevard intersection at 2<sup>nd</sup> Street. This alternative provides two westbound left turn lanes on 2<sup>nd</sup> Street at Cesar Chavez Boulevard to provide access to the inspection booths entering Mexico, and one westbound through and right turn lane. No fixed barrier would be provided at 2<sup>nd</sup> Street and Cesar Chavez Boulevard, so all eastbound traffic movements will be permitted through the intersection. Only a right turn is provided for southbound traffic on Cesar Chavez at 2<sup>nd</sup> Street. The intersection of SR-111 and 2<sup>nd</sup> Street would be modified to provide two southbound right turn lanes to facilitate the movement to the POE. Southbound right turns would be permitted at Cesar Chavez. The intersection level-of service is shown in **Table 3.6**.

#### Benefits

- Two lanes of vehicle capacity and queue storage on westbound 2nd Street
- Westbound access provided to outlet mall / airport
- Left turn provided for southbound SR-111 to 2<sup>nd</sup> Street
- Less change required moving into Scenario 2.
- Eastbound access provided from the outlet mall/airport

### Impacts

- Limited traffic movement at 2<sup>nd</sup> Street and Cesar Chavez Blvd.
- Calexico City personnel may be needed to assist traffic at 2<sup>nd</sup> Street and Cesar Chavez Boulevard
- Less capacity at CCB/2<sup>nd</sup> Street than with Alternative 2a

**TABLE 3.6: TRAFFIC LEVEL OF SERVICE – 2b**

SCENARIOS	LANE GROUPS		Intersection LOS	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
1A-2b	Cesar Chavez & 2nd St	Total Delay	20.8	9.0	57.3		20.2	30.5							0.7
		LOS	C	A	E		C	A							A
	Imperial & 2nd St	Total Delay	26.2	178.4	94.3		42.0	66.9		8.7	3.6		3.4	19.0	18.9
		LOS	C	F	F		D	E		A	A		A	B	B

### Alternative 2c

This alternative differs from Alternative 2a in that both eastbound and westbound lanes would be provided through the Cesar Chavez Boulevard intersection at 2<sup>nd</sup> Street **and** a southbound left turn on Cesar Chavez would be permitted as well as the southbound right turn. This alternative provides two westbound left turn lanes on 2<sup>nd</sup> Street to provide access to the inspection booths entering Mexico and one westbound through and right turn lane. No fixed barrier would be provided at 2<sup>nd</sup> Street and Cesar Chavez Boulevard, so all eastbound traffic movements will be permitted through the intersection. The intersection of SR-111 and 2<sup>nd</sup> Street would be modified to provide two southbound right turn lanes to facilitate the movement to the POE. Southbound right and left turns would be permitted at Cesar Chavez. The intersection level-of service is shown in **Table 3.7**.

### Benefits

- Two lanes of vehicle capacity and queue storage on westbound 2<sup>nd</sup> Street
- Westbound access provided to outlet mall / airport
- Left turn provided for southbound SR-111 to 2<sup>nd</sup> Street
- Left turn lane provided for southbound CCB to 2<sup>nd</sup> Street
- Less change required moving into Scenario 2.
- Eastbound access provided from the outlet mall/airport



### Impacts

- Limited traffic movement at 2<sup>nd</sup> Street and Cesar Chavez Blvd.
- Calexico City personnel may be needed to assist traffic at 2<sup>nd</sup> Street and Cesar Chavez Boulevard
- Less capacity at CCB/2<sup>nd</sup> Street than with Alternative 2a or 2b

**TABLE 3.7: TRAFFIC LEVEL OF SERVICE – 2c**

SCENARIO S	LANE GROUPS		Intersection LOS	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
1A-2c	Cesar Chavez & 2nd St	Total Delay	45.9	84.8	73.6		44.4	3.7							59.9
		LOS	D	F	E		D	A							E
	Imperial & 2nd St	Total Delay	65.0	173.6	87.2		54.0	78.6		168.2	91.7			52.0	52.0
		LOS	E	F	F		D	E		F	F			D	D

### Alternative 2d

This alternative differs from Alternative 2a in that both eastbound and westbound lanes would be provided through the Cesar Chavez Boulevard intersection at 2<sup>nd</sup> Street **and** one southbound through lane is provide to access the new POE during construction of Cesar Chavez. This alternative provides two westbound left turn lanes on 2<sup>nd</sup> Street to provide access to the inspection booths entering Mexico and one westbound through and right turn lane. No fixed barrier would be provided at 2<sup>nd</sup> Street and Cesar Chavez Boulevard, so all eastbound traffic movements will be permitted through the intersection. The intersection of SR-111 and 2<sup>nd</sup> Street would be modified to provide two southbound right turn lanes to facilitate the movement to the POE. Southbound right and left turns and through movement to the POE would be permitted at Cesar Chavez. The intersection level-of service is shown in **Table 3.8**.

### Benefits

- Two lanes of vehicle capacity and queue storage on westbound 2<sup>nd</sup> Street
- Westbound access provided to outlet mall / airport
- Left turn provided for southbound SR-111 to 2<sup>nd</sup> Street
- Southbound access to new POE provided at Cesar Chavez
- Less change required moving into Scenario 2.
- Eastbound access provided from the outlet mall/airport

### Impacts

- Limited traffic movement at 2<sup>nd</sup> Street and Cesar Chavez Blvd.
- Calexico City personnel needed to assist traffic at 2nd Street and Cesar Chavez Boulevard
- Less capacity at CCB/2<sup>nd</sup> Street than with Alternative 2a, 2b or 2c

**TABLE 3.8: TRAFFIC LEVEL OF SERVICE**

SCENARIOS	LANE GROUPS		Intersection LOS	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
1A-2d	Cesar Chavez & 2nd St	Total Delay	93.8	84.8	73.6		107.9	16.8						83.6	
		LOS	F	F	E		F	B						F	
	Imperial & 2nd St	Total Delay	25.2	40.3	30.8		23.0	31.2		47.5	38.7			19.9	19.9
		LOS	C	D	C		C	C		D	D			B	B

### SELECTED ALTERNATIVE

The eight alternatives were reviewed by the Technical Stakeholder Committee. Following review of eight alternatives, the committee reached a consensus on Alternative 2c. The alternatives considered and primary considerations are compared in **Table 3.9**. A primary reason for selecting Alternative 2 was that benefit that Alternative 2 would minimize the change needed when the northbound traffic moved to the new POE. The level of access provided by sub-alternatives d, c, b, was then discussed. The consensus was to not allow access from Cesar Chavez Boulevard directly into the POE while it was under construction. Methods to block the southbound access was discussed including paint delineation, use of a porkchop median and use of personnel.

**TABLE 3.9: ALTERNATIVE COMPARISON AND SELECTION**

Scenario 1A	SB Access to POE	Access to Outlet Mall	Access to Downtown	Impacts to CC Construction	Consistency between 1A and 1B
Alternative 1 - Maximize Southbound Vehicle Throughput					
a. Restrict SB CC and EB	Very	Poor	Very Poor	Good	Poor

2nd	Good				
b. Restrict SB CC to RT	Fair	Fair	Poor	Fair	Poor
c. Restrict SB CC to RT/LT	Fair	Fair	Fair	Fair	Poor
d. SB CC all movements	Fair	Fair	Fair	Poor	Poor
Alternative 2 - Balanced East-West flow on 2nd St.					
a. Restrict SB CC and EB 2nd	Good	Poor	Very Poor	Good	Good
b. Restrict SB CC to RT	Fair	Fair	Poor	Fair	Good
c. Restrict SB CC to RT/LT	Fair	Fair	Good	Fair	Good
d. SB CC all movements	Poor	Fair	Fair	Poor	Good

 Selected Alternative

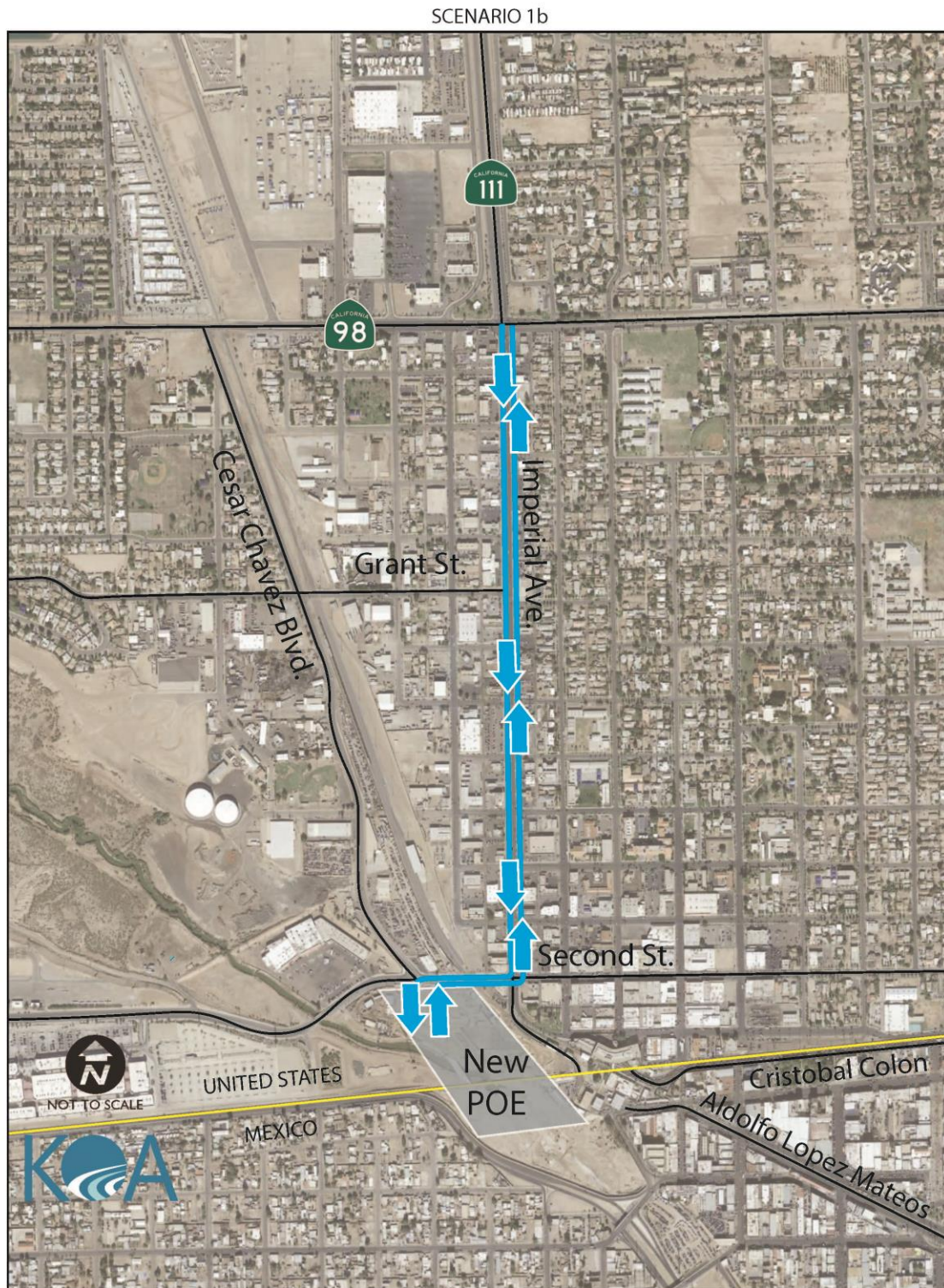
### 3.4: SCENARIO 1B

This is a temporary traffic during construction scenario that would be in place from approximately September 1, 2018 into February, 2019. . Cesar Chavez Boulevard will be under construction during this time, so POE traffic will be directed to use SR-111 to 2<sup>nd</sup> Street for northbound and southbound border access (see **Figure 3.3**).

The traffic circulation alternatives involve modifications to lane geometry and signal timings at SR-111/2<sup>nd</sup> Street and at Cesar Chavez Boulevard/2<sup>nd</sup> Street, and the road segment between these two intersections. The traffic control alternative is a modified Alternative 2c that was also selected for construction Scenario 1A, as essentially the same lane geometry can be used for both Scenario 1A and 1B. For the analysis of Scenario 1B, the northbound POE traffic has been added. The estimated traffic volumes associated with these alternatives are shown in **Figure 3.4**. The traffic level-of service has been calculated.

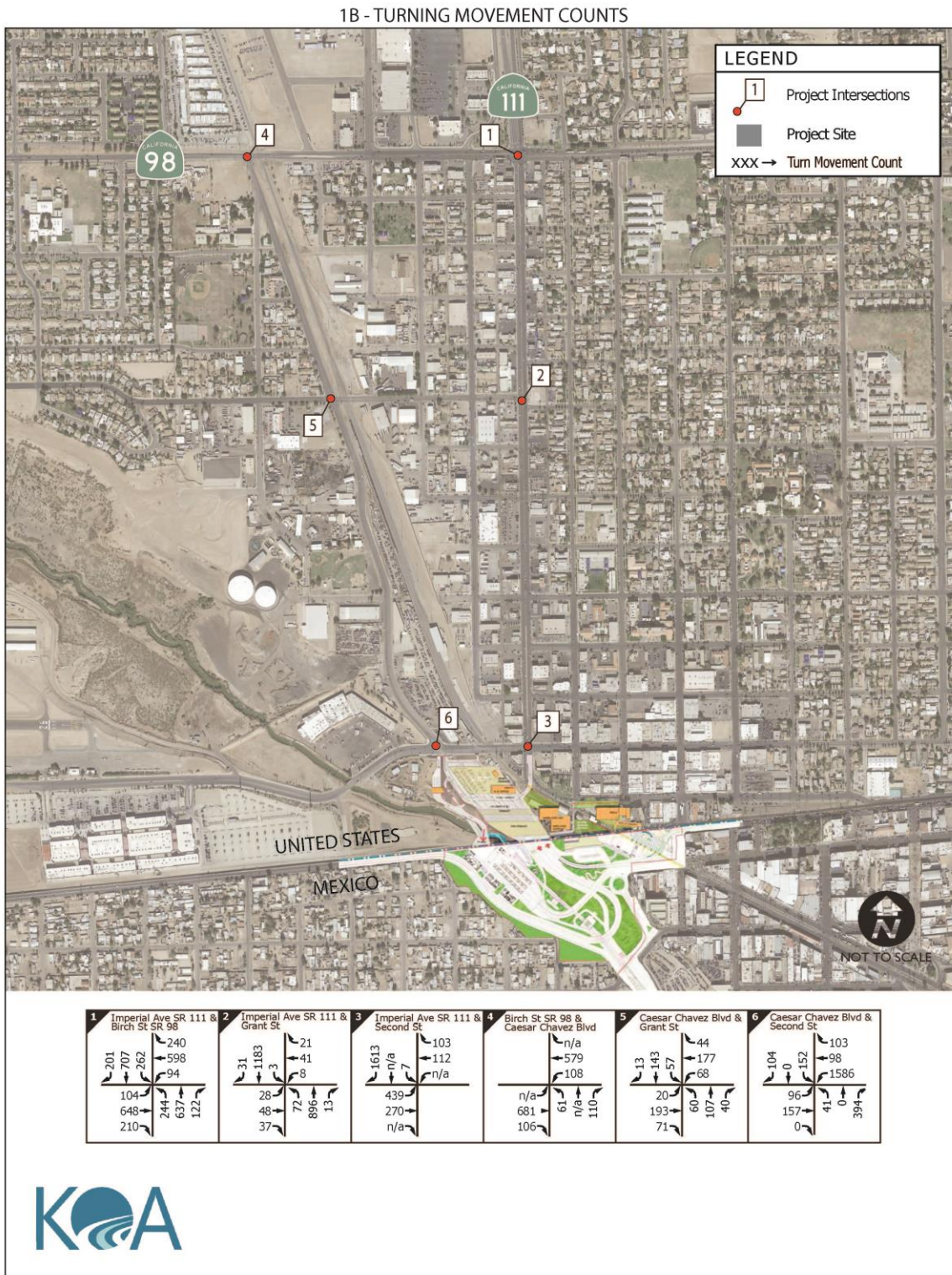
The traffic circulation alternatives involve modifications to lane geometry and signal timings at SR-111/2<sup>nd</sup> Street and at Cesar Chavez Boulevard/2<sup>nd</sup> Street, and the road segment between these two intersections. For each alternative, a description of the lane geometry and permitted movements has been provided along with a summary of benefits and impacts and the results of a capacity analysis. The conceptual drawings for each alternative are shown in the appendix.

**FIGURE 3.3: CIRCULATION PATTERN WITH SOUTHBOUND/NORTHBOUND TRAFFIC SHIFT**





**FIGURE 3.4: ESTIMATED SCENARIO 1B TRAFFIC VOLUMES**



### Traffic Control Alternative 2c

The conceptual layout for Traffic Control Alternative 2c is shown below. The level of service results shown below reflects those geometrics. The intersection level-of service is shown in **Table 3.9**.

**TABLE 3.9: TRAFFIC LEVEL OF SERVICE – 2c**

SCENARIOS	LANE GROUPS		Intersection LOS	EBL	EBT/R		WBL	WBT/R	WBT/R	NBL	NBT	NBR	SBL	SBT	SBR
1B-2C	Cesar Chavez & 2nd St	Total Delay	32.9	78.4	68.3		35.1	4.6		52.3		2.3	63.1		12.6
		LOS	C	E	E		D	A		D		A	E		B
		Queue		155	117		595	27		76		35	225		59
	Imperial & 2nd St	Total Delay	25.2	23.1	17.8				51.3				54.3		70.7
		LOS	C	C	B				D				D		E
		Queue		263	219				264				17		571



### 3.4 SUMMARY

This report section describes the information used to develop traffic circulation plans for initial traffic scenarios related to the phased opening of a new Port of Entry (POE) facility in downtown Calexico, California. Two circulation plans and traffic control plans were developed for:

Scenario 1A - to accommodate southbound traffic to the new POE that would be in place from approximately July 10, 2018 to September 1, 2018.

Scenario 1B - to accommodate both southbound and northbound traffic to the new POE that would be in place from approximately September 1, 2018 into February, 2019.

The intersection capacity results are summarized in **Table 3.10**. The high volume of traffic and length of queues between the POE and nearby intersections results in varying results. For Scenario 1B, the traffic impacts of both northbound and southbound travel impacts the SR-111 and 2<sup>nd</sup> Street intersection which in turn impacts the 2<sup>nd</sup> Street and Cesar Chavez intersection. The delays and queue at Cesar Chavez will depend on how well the SR-111 and 2<sup>nd</sup> Street intersections operate.

**TABLE 3.10 SCENARIO 1A AND 1B LEVEL OF SERVICE SUMMARY**

No.	Intersection	Traffic Control	PM Peak Period		
			Avg Delay (secs.)	LOS	Southbound Queue (ft.)
Scearnio 1A					
3	SR-111 and 2nd Street	Signal	31.6	C	#766
6	Cesar Chavez and 2nd Street	Personnel	45.8	D	#1265
Scearnio 1B					
3	SR-111 and 2nd Street	Signal	57.2	E	#571
6	Cesar Chavez and 2nd Street	Personnel	32.9	C	m597

# - intersection queue may be longer than calculated

m - intersection queue impacted by flow at adjacent intersection

## 4.0 TRAFFIC OPERATION SCENARIO 2

This memorandum describes the traffic circulation alternatives developed to accommodate traffic following the opening of a new Port of Entry (POE) facility in downtown Calexico, California. This memorandum describes the estimated traffic impacts for the widening of Cesar Chavez Boulevard based upon the previously completed design plans.

Scenario 2 describes the final scenario accommodating both northbound and southbound traffic to the new POE with the completion of Cesar Chavez Boulevard widening project. When constructed, Cesar Chavez Boulevard will have three southbound and two northbound lanes between Grant Avenue and 2<sup>nd</sup> Street. The roadway will have two lanes in each direction between Grant Avenue and SR-98. The intersections of Cesar Chavez at 2<sup>nd</sup> Street and Grant Avenue will be signalized. The completion of this project is anticipated for March, 2019.

The purpose of this analysis is to evaluate the potential traffic flow associated with the completion of Scenario 2 in order to identify projects and traffic management strategies that may be needed to support efficient traffic flow. Two traffic flow options are evaluated:

- 1) Provide signal timings and traffic control to encourage a balance of traffic flow along a network of routes to access the new POE; and
- 2) Provide signal timings, lane geometric changes and traffic control to guide southbound POE traffic from SR-111 to SR-98 to Cesar Chavez Boulevard to access the new POE.

### 4.1 TRAFFIC COUNT VOLUMES

Daily traffic counts were updated to reflect traffic flows following the opening of the new POE. The traffic counts were taken in November, 2018 at the same locations conducted in April, 2018 prior to the POE opening. At the time of November, 2018 counts, Cesar Chavez Boulevard was under construction, and the route was used by a limited amount of traffic. The November, 2018 traffic counts show POE-bound traffic primarily using SR-111 to 2<sup>nd</sup> Street for southbound border access.

#### **Daily Traffic Counts**

Average daily traffic volumes were obtained through machine data collection. Two locations were counted:

- SR-111 north of SR-98
- SR-111 south of 2<sup>nd</sup> Street

### **Peak Hour Count Volumes**

The intersection turning movement counts were conducted during the weekday evening peak from 4:00 PM to 7:00 PM on Wednesday November 7, 2018 for the following intersections:

#### **Intersections**

7. SR 111 at SR 98
8. SR 111 at Grant Street
9. SR 111 at 2nd Street
10. Cesar Chavez at SR 98
11. Cesar Chávez at Grant Street
12. Cesar Chavez at 2nd Street

The evening peak hour intersection count worksheets are shown in **Appendix A**.

## 4.2 TRAFFIC ANALYSIS

There will be two options for POE traffic access when Cesar Chavez Boulevard construction is complete. One alternative is to allow traffic to access the POE from Cesar Chavez Boulevard and from SR-111 – 2<sup>nd</sup> Street. A second alternative is to channel all southbound POE traffic to Cesar Chavez Boulevard and restrict entrance from other directions. Each of these alternatives is described below.

### **Alternative 2A – Balanced Traffic Flow to POE**

This traffic analysis reflects the use of the street network to access the new POE. The analysis reflects the proposed roadway geometrics for the widening of Cesar Chavez Boulevard. Following the design plans, the primary access route is Cesar Chavez Boulevard; with secondary access routes available include SR-111, 2<sup>nd</sup> Street and Grant Street.

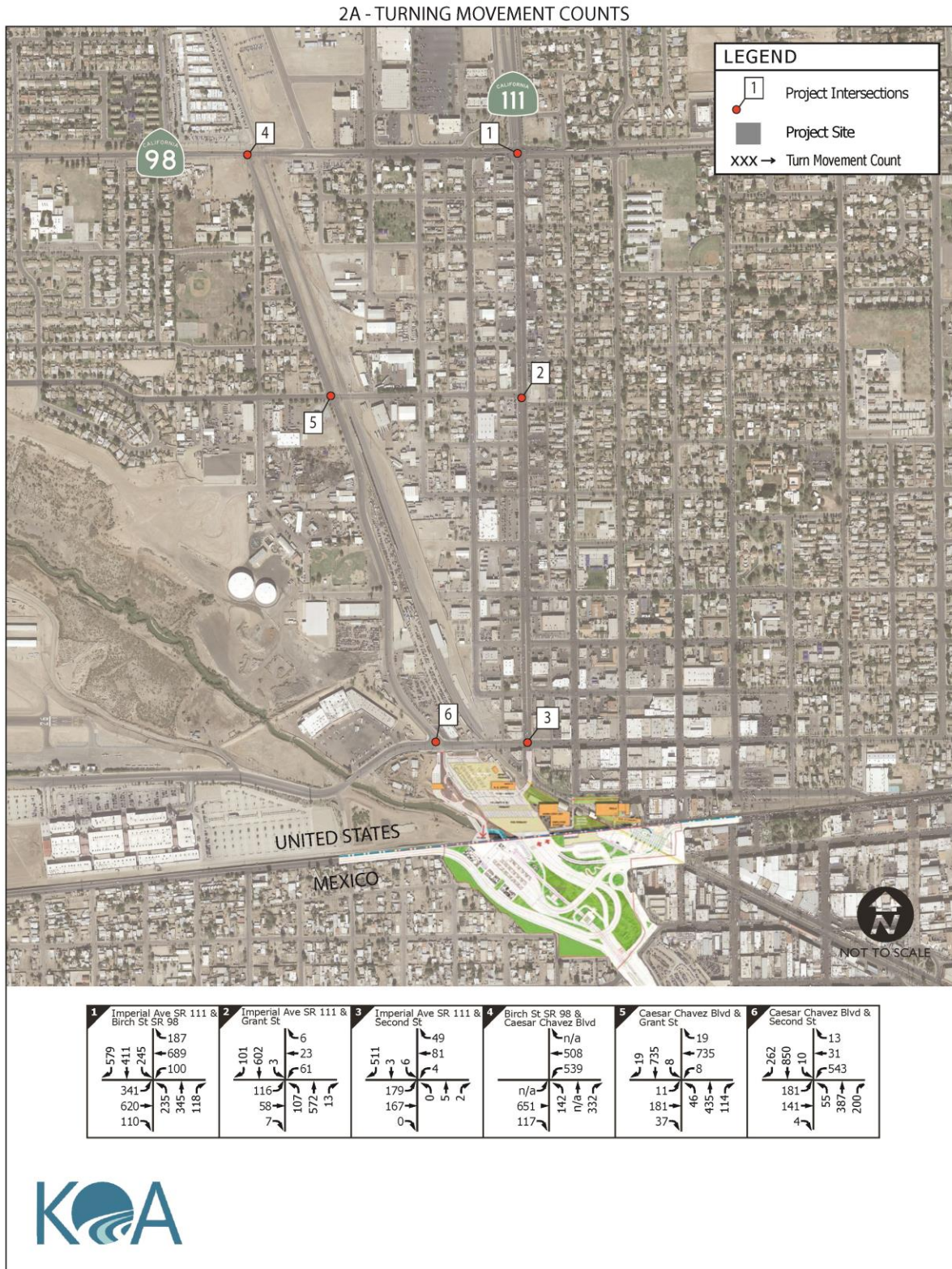
The roadway network vehicle capacity will affect travel times and should lead to the traffic flow finding a balance that equalizes travel times between the two routes. Southbound SR-111 traffic utilizing Cesar Chavez Boulevard will make a right turn at SR-98 and a left turn at Cesar Chavez Boulevard. Three lanes will be available from Cesar Chavez Boulevard to enter into the POE.

SR-111 traffic utilizing Cesar Chavez Boulevard will continue through the intersection of SR-98. Traffic will then turn right at 2<sup>nd</sup> Street and left into the POE at the intersection of Cesar Chavez Boulevard. A single right turn will be provided at 2<sup>nd</sup> Street and a single left turn provided at Cesar Chavez.

The volumes that will use each route to access the POE have been estimated based on the available capacity for the turn movements described above. The results in a traffic distribution where between 60 to 65% of POE traffic would use Cesar Chavez and between 35 to 40% traffic would use SR-111/2<sup>nd</sup> Street. The traffic forecasts at each of the six study area intersections are shown in **Figure 4.1**.

The Synchro traffic model of the area was used to analyze the traffic operation of this alternative. **Table 4.1** summarizes the level of service analysis results for the study area intersections using the intersection evaluation methodology described in the 2010 Highway Capacity Manual. The capacity analysis shows that with Alternative 2A, no geometric changes would be needed at any of the study area intersections, or to the lane geometry as planned for Cesar Chavez Boulevard. The lane geometry from the design of the Cesar Chavez and 2<sup>nd</sup> Street intersection was shown to accommodate traffic volumes from this alternative. The intersection level of service worksheets are provided in **Appendix B**.

**FIGURE 4.1: ALTERNATIVE 2A TRAFFIC FORECAST**





**TABLE 4.1: SCENARIO 2A – BALANCED POE TRAFFIC FLOW LEVEL-OF-SERVICE**

No.	Intersection	Traffic Control	PM Peak Period		
			Ave. Delay (secs.)	LOS	POE-bound Queue (ft.)
1	SR-111 and SR-98	Signal	50.3	D	222
2	SR-111 and Grant	Signal	35.5	D	424
3	SR-111 and 2nd Street	Signal	29.0	C	124
4	Cesar Chavez and SR-98	Signal	33.7	C	327
5	Cesar Chavez and Grant	Signal	18.5	B	141
6	Cesar Chavez and 2nd Street	Signal	46.2	D	347

## Findings

This approach allows traffic to use a number of routes to and from the new POE. By spreading out the travel, the level of service is level-of-service D or better. The traffic flow that would use each route to access the new POE is governed by the intersection of Cesar Chavez and 2<sup>nd</sup> Street, and in particular the capacity of the westbound 2<sup>nd</sup> Street turn bay. With the final design plan, this left turn bay will change from two-lanes to one lane, with a shorter storage length. If more than 35-40% of POE-bound traffic uses this route, traffic will back up on 2<sup>nd</sup> Street. In this case, traffic should shift to Cesar Chavez Boulevard which will provide more vehicle capacity and less travel delay.

- SR-111 and SR-98 – a large portion of POE traffic travels through this intersection. With a balanced flow, the intersection of SR-111 and SR-98 is shown to work satisfactory. While a number of lane configurations were studied, the existing lane configuration provided the best level-of-service.
- SR 111 and Grant - Traffic operational delay is shown to be satisfactory. The Synchro model results show a queue developing at Grant Street but can move through the intersection in one cycle.
- SR-111 and 2<sup>nd</sup> Street – this intersection becomes less congested.

- SR-98 and Cesar Chavez Boulevard – the overall intersection operation is satisfactory. The westbound left turn lane queue length is long, and could result in a back- up of traffic from the turn bay into a through lane during peak times.
- Cesar Chavez Boulevard and Grant – this intersection is uncongested.
- Cesar Chavez Boulevard and 2<sup>nd</sup> Street – all of the POE traffic moves through this intersection. With balanced flow, the intersection operates at LOS D.

#### **Alternative 2B - POE Traffic to Cesar Chavez Boulevard**

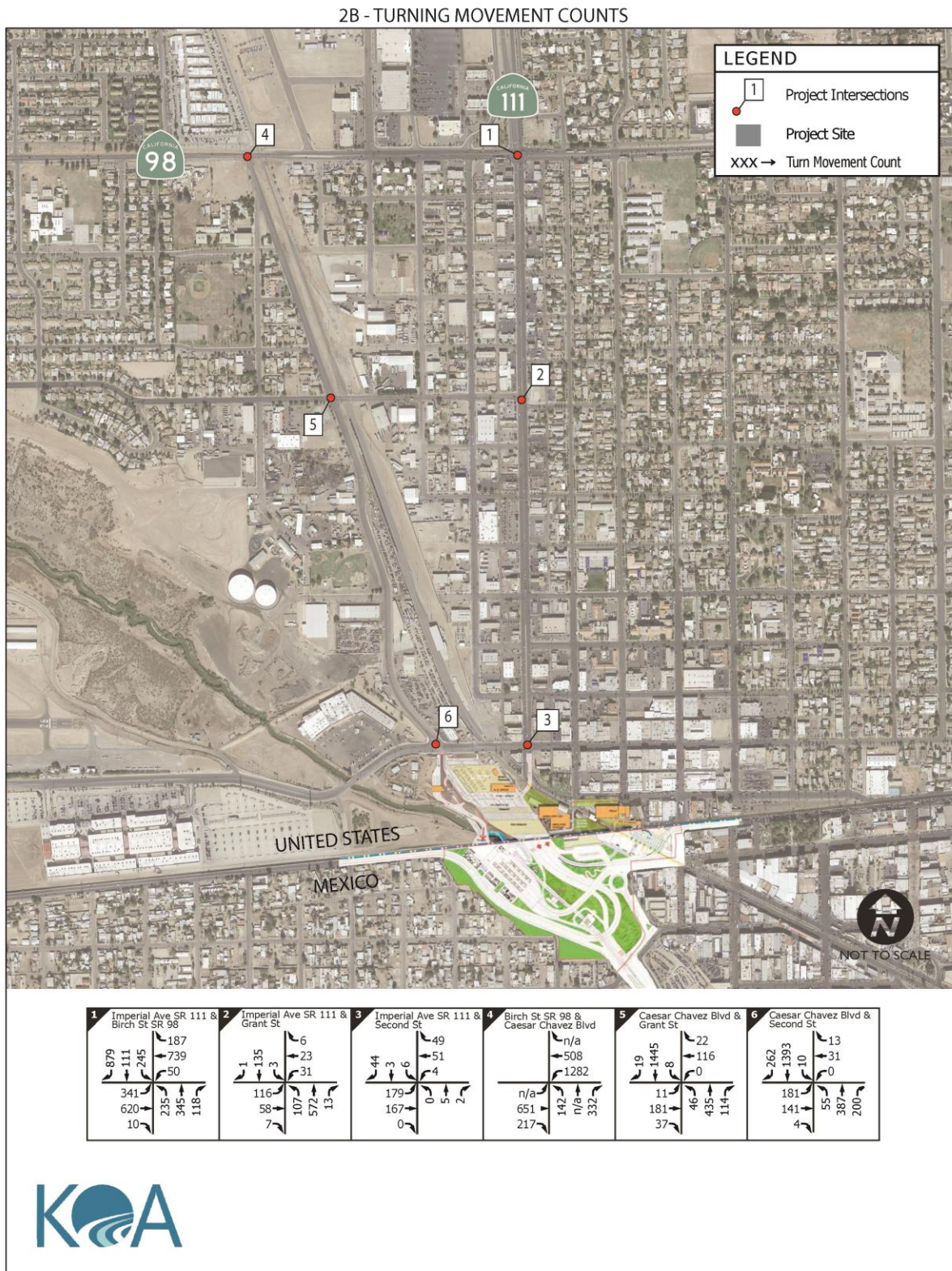
This traffic analysis reflects the full shift of southbound traffic access to the new POE to Cesar Chavez Boulevard. This alternative assumed required signage will be provided to inform motorists that access to the new POE is only provided from Cesar Chavez Boulevard during the peak travel period. Additionally, other access would be prohibited by restricting westbound left turns from Grant Street to Cesar Chavez and westbound left turns from Second Street. **Table 4.2** summarizes the level of service analysis results for the study area intersections. The anticipated volumes associated with this traffic scenario and the intersection level of service worksheets are provided in **Appendix C**.

**TABLE 4.2: SCENARIO 2B – POE TRAFFIC TO CESAR CHAVEZ LEVEL-OF-SERVICE**

No.	Intersection	Traffic Control	PM Peak Period		
			Avg Delay (secs.)	LOS	POE-bound Queue (ft.)
1	SR-111 and SR-98 Modified	Signal	49.6	D	589
2	SR-111 and Grant	Signal	21.5	C	51
3	SR-111 and 2nd Street	Signal	34.9	C	6
4	Cesar Chavez and SR-98	Signal	38.5	D	737
5	Cesar Chavez and Grant	Signal	15.1	B	201
6	Cesar Chavez and 2nd Street	Signal	10.1	B	191

The intersection operations analysis shows longer queue lengths for the southbound right turn on SR-111 at SR-98 and the westbound left turn on SR-98 at Cesar Chavez Boulevard. Traffic operation on SR-111 would be improved. With the elimination of left turns from 2<sup>nd</sup> Street into the POE, traffic operations at the intersection of Cesar Chavez would be simplified and would result in less delay as compared to Alternative 2A.

**FIGURE 4.2: ALTERNATIVE 2B TRAFFIC FORECAST**



## Findings

This alternative presents the traffic impact of one route to the new POE, although in for this analysis, the small number of right-turns into the POE from 2<sup>nd</sup> Street were permitted. Two constraints impact traffic flow - the southbound right turn volumes at SR-111 and SR-98, and the left turn volumes at SR-98 and Cesar Chavez. This alternative reduces traffic on SR-111, but creates two longer traffic queues at those locations.

- SR-111 and SR-98 – this alternative results in a higher right turn volume that needs a second right turn lane to accommodate the volume. With this change, the estimated vehicle queue length is estimated to be 589 feet.
- SR 111 and Grant – with reduced traffic on SR-111, the level of service and queue lengths are reduced.
- SR-111 and 2<sup>nd</sup> Street – with reduced traffic on SR-111, the level of service and queue lengths are reduced.
- SR-98 and Cesar Chavez Boulevard – the intersection operation is satisfactory. However, the westbound left turn lane queue length is estimated at nearly 740 feet.
- Cesar Chavez Boulevard and Grant – with westbound left turns prohibited, this intersection is uncongested.
- Cesar Chavez Boulevard and 2<sup>nd</sup> Street – with westbound left turns prohibited, this intersection is uncongested.

## 5.0 DEVELOPMENT OF TRAFFIC MANAGEMENT STRATEGIES

The purpose of this task is to present the traffic management strategy for the access to the new West Calexico Port of Entry (POE) with the completion of the Cesar Chavez Boulevard widening. Traffic management strategies and operational approaches are identified that will improve traffic flows on roadways within the project area, address projected future traffic growth, make better use of existing capacity, and improve traffic throughput. Needed revisions to lane markings and signage are indicated.

### 5.1 INTELLIGENT TRANSPORTATION SYSTEM (ITS) TECHNOLOGIES

ITS strategies are being investigated by Caltrans to provide information to motorists regarding travel speed and travel time on highways accessing both the East and West Calexico Port of Entries. The types of ITS technologies planned for implementation in the border area include:

- Radio Frequency Identification (RFID) technologies – this involves the use of electromagnetic fields to identify and track tags attached to objects. RFID has been used primarily with commercial vehicles.
- Wi-Fi technologies – readers are installed along the roadway that read a vehicles Wi-Fi signal at a specific point. Algorithms are developed that take these readings to compute travel times and travel speeds.
- Coordinated signals – signal timings can be used to manage and direct the movement of vehicles. Real-time traveler information can be used not only for traveler information, but also to adjust signal timing to move vehicles based upon real-time conditions.
- Changeable message signs (permanent & movable) – these signs display travel time information collected from RFID and Wi-Fi readers.

### 5.2 EXISTING/ PLANNED INTELLIGENT TRANSPORTATION SYSTEMS

Caltrans is currently designing ITS infrastructure that would be placed within and along-side highways. This ITS system will provide real-time traveler information to motorists traveling on SR-111, SR-98 and SR-7 leading to the East Calexico POE and the new West Calexico POE. The planned ITS infrastructure includes using Wi-Fi, RFID and changeable message signs to collect and provide traveler information. Initial locations for Wi-Fi and RFID readers and changeable message signs have been identified, but may be modified to reflect travel patterns as the project is completed.



**The initial Vehicle time detection locations include:**

- SR-111 and Heber Road
- SR-111 and Jasper Road
- SR-111 and Cole Road
- SR-111 / SR-98
- 2<sup>nd</sup> Street and Cesar Chavez Boulevard
- SR-98 and Cesar Chavez Boulevard
- SR-98 and Cole Road
- SR-7 / SR-98
- SR-7 and Maggio Road
- SR-7 and Heber Road

**The location of the portable changeable message signs are being defined but may include:**

- SR-98 west of Dogwood Road
- SR-98 west of SR-7
- SR-98 east of SR-7
- Locations on I-8

### **5.3 TRAFFIC CONTROL PLAN**

Based upon the forecast of traffic flow and traffic operation for the opening of Cesar Chavez Boulevard, the two traffic control plan alternatives have been developed. The traffic control plans are based upon the traffic forecasts and operations analysis described in Section 6. The potential to reduce staff traffic control has also been reviewed including the need and role of law enforcement strategies. While specific traffic management strategies are identified, the following recommendations provide a framework for the City of Calexico and Caltrans to manage border travel to the expanded Calexico West POE. The City and Caltrans may implement additional changes once Cesar Chavez widening is completed and observed traffic conditions are identified.

#### **Alternative 2A – Balanced Traffic Flow to POE**

Alternative 2a reflects the use of the street network to access the new POE using a number of routes. The analysis reflects the proposed roadway geometrics for the widening of Cesar Chavez Boulevard. The needed traffic control is shown with the primary access route of Cesar Chavez Boulevard, but also with secondary access routes available include SR-111, 2<sup>nd</sup> Street and Grant Street. The traffic control plan for Alternative 2A is shown in Figure 5.1.

### POE Access Routes

Southbound POE access routes include SR-111, SR-98 and Cesar Chavez Boulevard. The access routes also include continuing on SR-111 to 2<sup>nd</sup> Street. Grant Street also provides a connection between SR-111 and Cesar Chavez Boulevard.

### Signal Timing

Signal timing will be used to provide capacity to utilize all of the routes identified above. The intersection of 2<sup>nd</sup> Street and Cesar Chavez will be used to control the POE access capacity provided to Cesar Chavez Boulevard and also to the eastbound left turn movement at 2<sup>nd</sup> Street and Cesar Chavez Boulevard.

### Manual Staff Traffic Control

Manual staff control is anticipated at the intersection of Cesar Chavez and 2<sup>nd</sup> Street. The manual staff control should maintain the primary access from Cesar Chavez and secondary access from 2<sup>nd</sup> Street.

### ITS Reader and Message Signs

The ITS infrastructure should be placed as previously indicated.

### 2<sup>nd</sup> Street

2<sup>nd</sup> Street will be converted back to the original lane configurations prior to changes associated with the temporary Scenario 1A and 1B. This change will provide a consistent connection with the new design of Cesar Chavez Boulevard at 2<sup>nd</sup> Street. The general lane striping for the final configuration of 2<sup>nd</sup> Street is shown in Figure 5.2.

### **Alternative 2B - POE Traffic to Cesar Chavez Boulevard during Peak Period**

This traffic analysis reflects the full shift of access for southbound traffic access during the peak period to the expanded Calexico West POE from SR-111 to Cesar Chavez Boulevard. This alternative would involve use of signage to inform motorists that access to the new POE is only provided from Cesar Chavez Boulevard during the peak travel period. In this scenario, westbound left turns from Grant Street to Cesar Chavez and westbound left turns from Second Street into the new POE would be prohibited. The traffic control plan for Alternative 2B is shown in Figure 5.3.

### POE Access Routes

Southbound POE access routes include SR-111, SR-98 and Cesar Chavez Boulevard. The access routes continuing on SR-111 to 2<sup>nd</sup> Street, or at Grant Street will be restricted.

### Signal Timing

Signal timing will be used to provide capacity and travel time for the movement of vehicles along the primary access route during the peak period.

### Manual Staff Traffic Control

Cones prohibiting left turns on to Cesar Chavez Boulevard at Grant Street and also at 2<sup>nd</sup> Street during the peak period will need to be placed manually. Manual staff control will be needed at Cesar Chavez and 2<sup>nd</sup> Street to maintain the primary access from Cesar Chavez and to restrict for westbound traffic on 2<sup>nd</sup> Street. Access for eastbound traffic is proposed to remain open, but this travel movement should be monitored by City staff.

### ITS Reader and Message Signs

The ITS infrastructure should be placed as previously indicated.

### Intersection of SR-111 and SR-98

The lane geometry for this intersection should be modified as shown in Figure 5.4. Because of the higher southbound right turn volumes associated with this alternative, the southbound approach lanes are modified by adding a second right turn lane by reducing one left turn lane. The eastbound approach lanes have also been shifted by designating a second left turn lane. The outside lane will now accommodate both through and right turn traffic.

### 2<sup>nd</sup> Street

2<sup>nd</sup> Street will be converted back to the original lane configurations prior to changes associated with the temporary Scenario 1A and 1B. This change will provide a consistent connection with the new design of Cesar Chavez Boulevard at 2<sup>nd</sup> Street. The general lane striping for the final configuration of 2<sup>nd</sup> Street is shown in Figure 5.2.

### Existing Signs and Pavement Markings to Modify

The following signs and pavement markings will need to be modified as part of the access changes described in Scenarios 2A and 2B.



Only show one arrow. With Alternative 2B, an electronic arrow will need to be provided to only show access during the non-peak travel times.



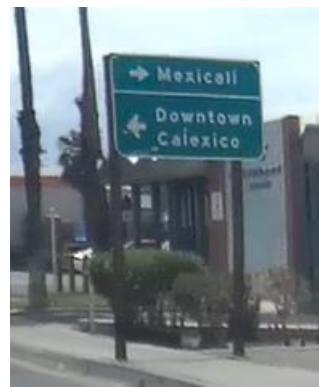
Modify to only one right turn arrow



Remove delineators, restripe.  
Only single left turn to be  
provided



Modify sign north  
of SR-98



SR-111 north of  
Third Street.  
Can keep sign for  
Alternative 2A



SR-111 north of Second Street.  
Can keep sign for Alternative 2A

### Signage Change Summary

- Revise signs on SR-111 north of SR-98 (2)
- Border directional signs on SR-98 (3)
- Add border directional sign on Cesar Chavez north of 2<sup>nd</sup> Street
- Add border lane indication sign on westbound 2<sup>nd</sup> Street
- Add border lane indication sign on eastbound 2<sup>nd</sup> Street.

## 5.3 RECOMMENDATIONS

The project team evaluated the two alternatives based on delays, access, and other project goals. Traffic Operation Scenario 2, that channeled southbound access to Cesar Chavez Boulevard, was preferred by the project team as it was considered to best address the goals of reducing City staff demands for traffic control and improving access to businesses located in the central area of Calexico by reducing travel delays on SR-111. Recommendations include:

1. Provide signage to route POE traffic to Cesar Chavez Boulevard
2. Modify SR-98 / SR- 111 intersection to provide two southbound right turns
3. Adjust signal timings at major intersections to support traffic flow to the POE using Cesar Chavez Boulevard.
4. Focus manual traffic control support at Cesar Chavez Boulevard and 2<sup>nd</sup> Street
5. Implement the Caltrans ITS projects

The preferred traffic circulation plan is shown in Figure 5.5.



Figure 5.1 Traffic Control Plan – Scenario 2A



**Figure 5.2 Lane Geometric Changes – Alternative 2A and 2B**

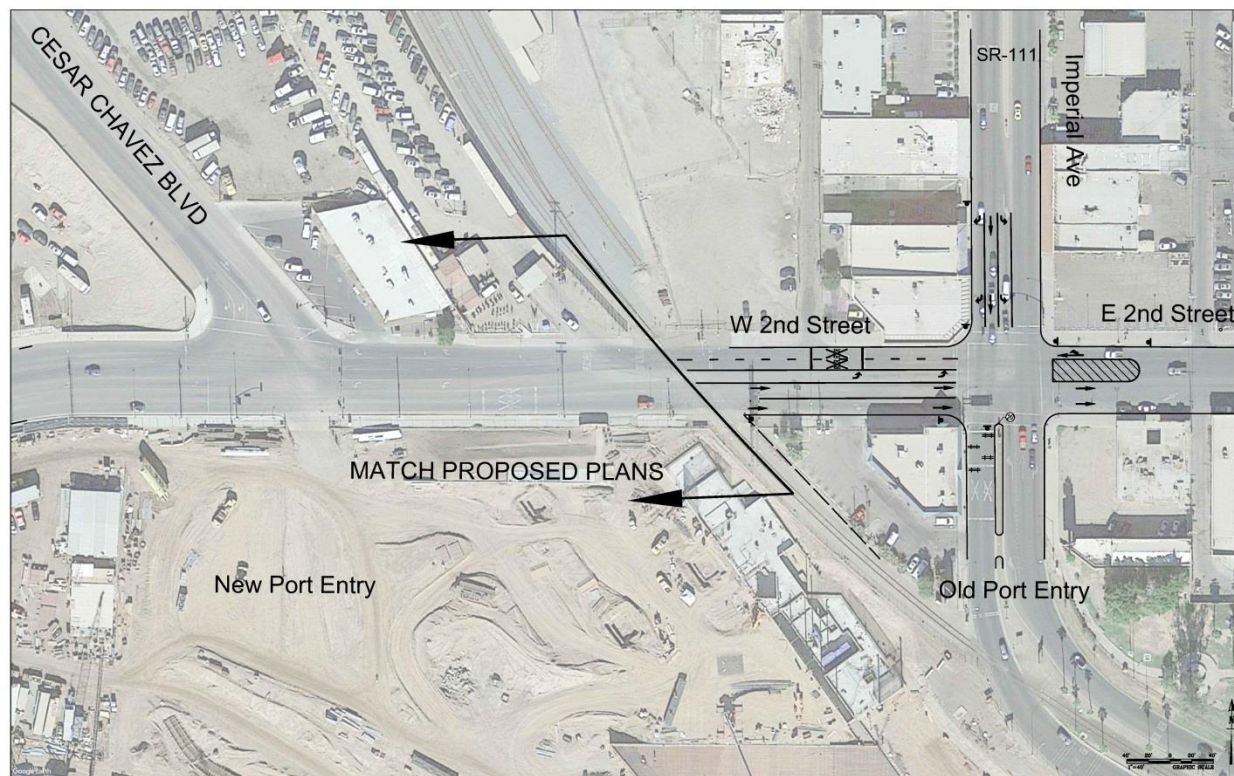




Figure 5.3 Traffic Control Plan – Scenario 2B

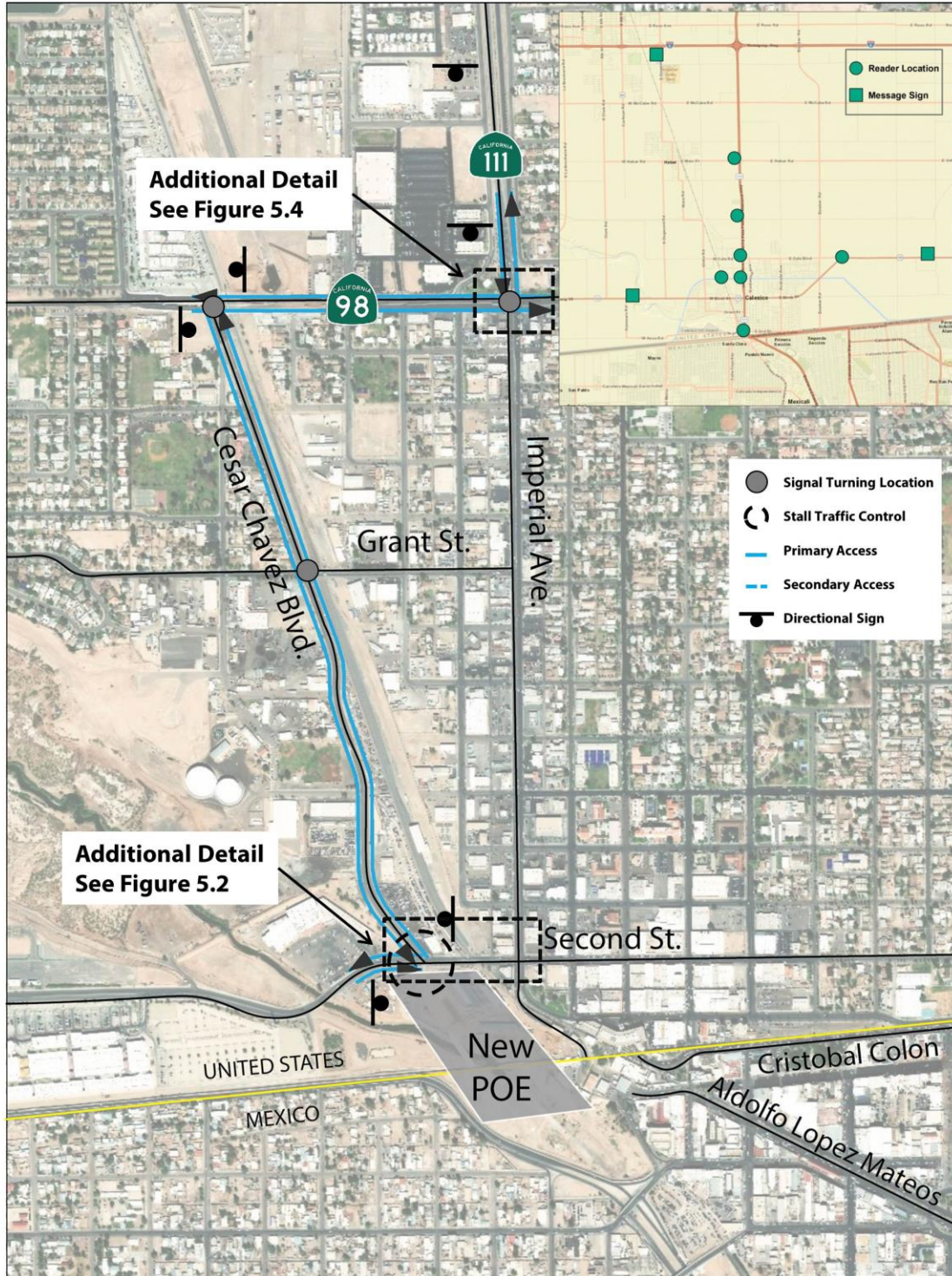


Figure 5.4 Lane Geometric Changes – Alternative 2B

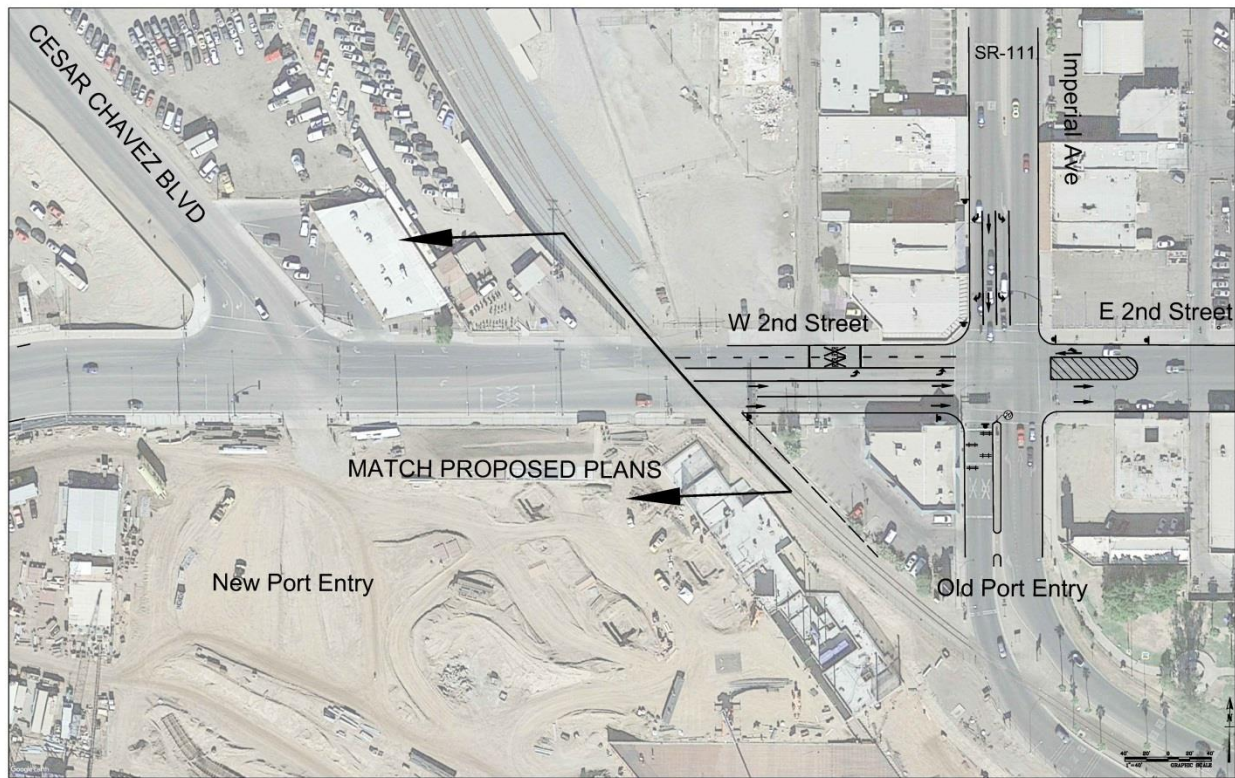
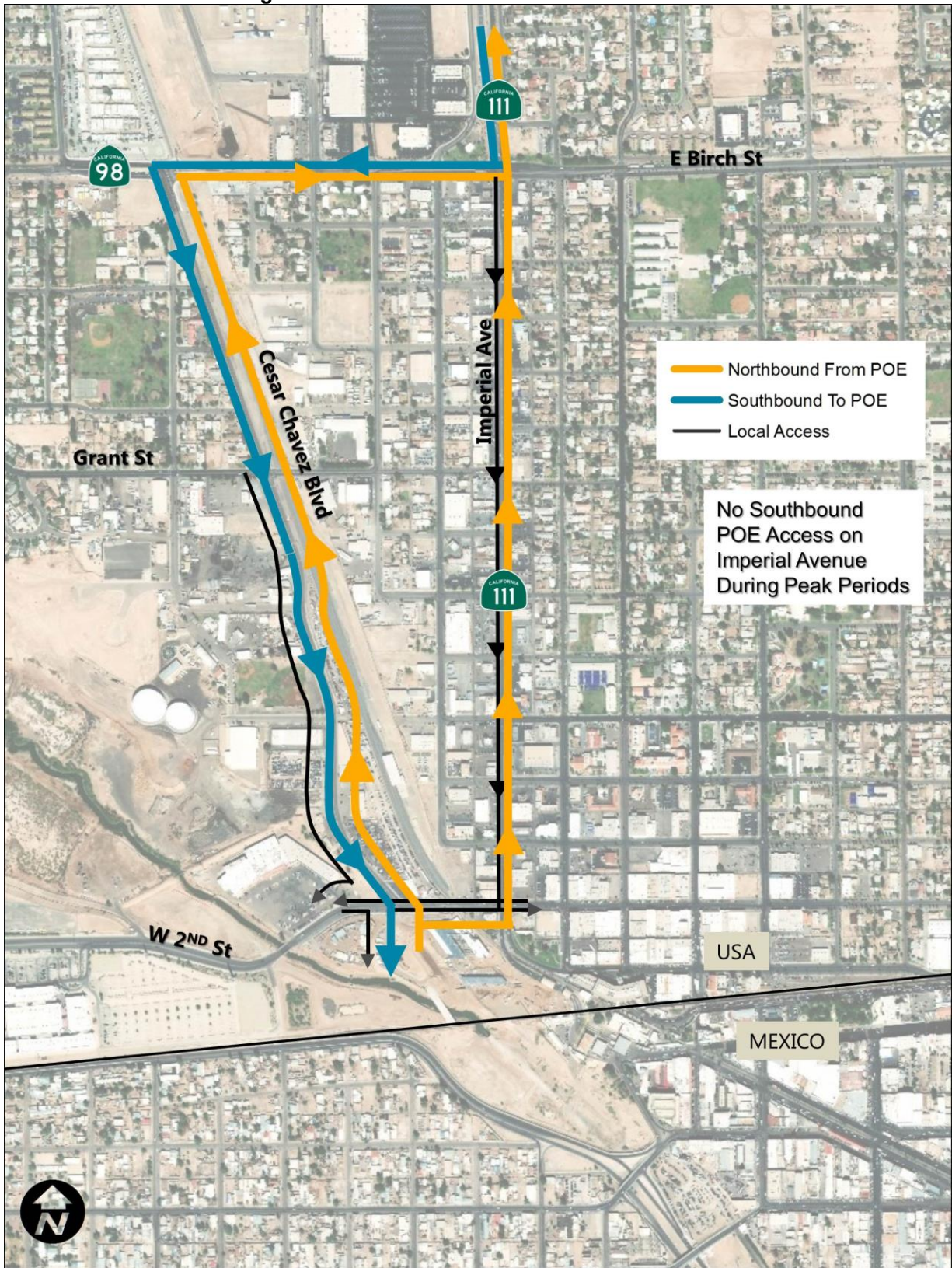




Figure 5.5 Recommended Traffic Circulation





## **VI. ACTION CALENDAR**

B. SR 78/86 Checkpoint Improvement Project Engineering Services – Contract Amendment No. 3

1. Approve the contract amendment to the Engineering Consultant Agreement for the SR86 Checkpoint Improvement Project with AECOM in the amount of \$54,455.00 modifying the total contract value to \$695,455.00.
2. Authorize the Chairperson to sign the contract amendment.



**Imperial County Local Transportation Authority**

**1503 N. Imperial Ave., Suite 104, El Centro, CA, 92243**  
**Phone: 760-592-4494 | Fax: 760-592-4410**

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October 18, 2024

Luis Plancarte, Chairperson  
Imperial County Transportation Commission  
1503 N. Imperial Ave., Suite 104  
El Centro, CA 92243

**SUBJECT: SR 78/86 Checkpoint Improvement Project Engineering Services – Contract Amendment No. 3**

Dear Board Members:

The “State Route 86 U.S. Border Patrol Checkpoint” improvement project was identified as a regional priority by the Imperial County Local Transportation Authority (LTA) and the Imperial County Transportation Commission (ICTC). The current configuration of the checkpoint has been a bottleneck and creates delays for regional travel and goods movement in Imperial Valley. The LTA approved funding for the project as part of the five percent Regional Highway Set-Aside from Measure D in the amount of \$1.3 million dollars.

On December 28, 2018, ICTC entered into an agreement with AECOM Technical Services, Inc. to complete the engineering design improvements for the SR78/86 Checkpoint. The initial Scope of Work and cost was \$319,000.00 which included the design of the new canopy, additional secondary lane, and other facility improvements. On December 16, 2020, ICTC and AECOM agreed to modify the scope of work to include additional design efforts for a widened canopy, booth layout plans, VACIS inspection area, relocation plans for the existing inspection booth, electrical plans, SR86 and SR78 intersection traffic study and a hydraulic analysis because of the scope of work modifications. The amended cost for the project became \$504,000.00. ICTC, Customs and Border Protection (CBP), AECOM and Caltrans have been participating in regular meetings regarding the design completion, acquisition of project funding and other key adjustments to the project. During the discussions it was agreed that an acceleration lane would be required to allow for vehicles to safely merge onto northbound SR86 from the secondary lanes. The acceleration lane was not considered as part of the initial scope of work therefore a contract amendment would be required to complete the design efforts. ICTC requested a formal scope of work and cost estimate from AECOM to complete the design and specifications for the acceleration lane, additional surveying services, modifications to the specifications and cost estimates and modifications to the hydraulic analysis as a result of the acceleration lane. ICTC received a proposed scope of work and cost estimate in the amount of \$139,000.00 from AECOM to complete the requested services. The total cost of the effort increased to \$641,000.00.

During the most recent submittal of the project improvement plans to Caltrans, it was requested that ICTC submit a Flood Plain Study, complete an independent structural review of the structural calculations and design,

and complete a Stormwater Data Report under the newest template and guidance. The effort associated with the Flood Plain Study requires the most significant effort of the additional efforts. In addition, there is additional cost associated with the modifications to the electrical systems at the facility.

The electrical system is being adjusted to accommodate additional technologies to the facility because of the project. The proposed costs for the additional efforts are as follows:

Flood Plain Study	\$31,050.00
Independent Structural Review	\$10,685.00
Electrical Updates	\$10,500.00
Stormwater Data Report	\$2,220.00
Total proposed cost is:	\$54,455.00

ICTC reviewed the proposed scope and fee and found the proposed cost to be reasonable after negotiation. The total revised contract would be \$695,455.00. The proposed contract amendment fee has been budgeted in ICTC FY 24/25 Budget. Any remaining funds from the initially approved budget (\$1.3 Million) would be contributed towards construction efforts as necessary.

A critical component to note is the cost of constructing the project. The initial scope of work was anticipated to cost under \$2.5 million to construct. As a result of the numerous adjustments to the project, the anticipated cost to construct the project is over \$5 million dollars. The increased cost may result in further delays for the acquisition of construction funding. ICTC and CBP are committed to exploring funding opportunities for the completion of the project.

The ICTC Executive Director forwards this item to the LTA Board for their review and approval after public comment, if any:

1. Approve the contract amendment to the Engineering Consultant Agreement for the SR86 Checkpoint Improvement Project with AECOM in the amount of \$54,455.00 modifying the total contract value to \$695,455.00.
2. Authorize the Chairperson to sign the contract amendment.

Sincerely,



David Aguirre  
Executive Director