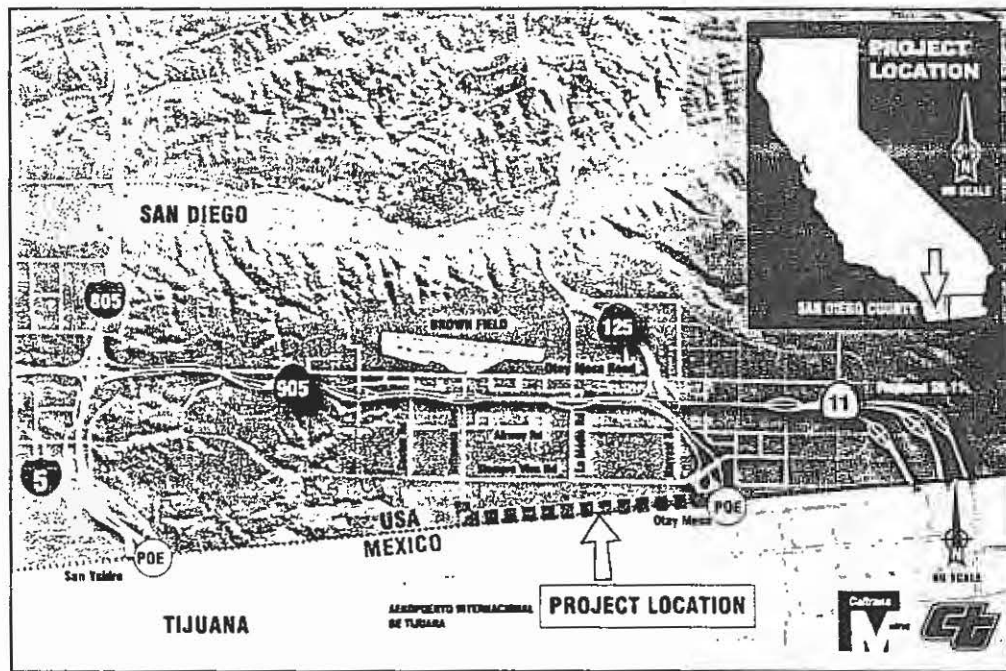


52.1.
Otay Mesa POE Truck Facilities
Britannia Blvd. To U.S. Customs House
SB TER (Truck Export Road)

PROJECT STUDY REPORT (Project Development Support)

This document can be used to program only the Engineering and Environmental Support for Project Approval and the Environmental Document component. The remaining support and capital components of the project are preliminary estimates and are not suitable for programming purposes. Either a Supplemental PSR or a Project Report will serve as the programming document for the remaining support and capital components of the project.



Approval by:

D. Cruz Gonzalez

D. Cruz Gonzalez
City of San Diego
Director, Transportation Department

Date

Approved by:

Pedro Orso-Delgado 10/31/03

Pedro Orso-Delgado
District Director

Date

Otay Mesa POE Truck Facilities
Britannia Blvd. To U.S. Customs House
SB-TER (Truck Export Road)

This Project Study Report (Project Development Support) has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

Edmund R. Kennedy
REGISTERED CIVIL ENGINEER

Aug. 27, 2003
DATE



Project Study Report (Project Development Support)

1. Introduction

This project proposes to construct approximately 6.4 lane kilometers (3.9 lane miles) of new roadway and widen the existing Southbound Truck Export Road (SB-TER) near the Otay Mesa Port of Entry in the City of San Diego. The current SB-TER is located just north of the Secondary Border Fence between La Media Road and the Otay Mesa US Customs House. This project is needed to alleviate traffic congestion caused by the large volume of laden and unladen (empty) southbound trucks. This traffic congestion hinders U.S. Customs and Border Patrol activities as well as private businesses. The proposed project consists of adding one lane to the existing SB-TER and extending the SB-TER from La Media Road to Britannia Boulevard with a continuous extra wide shoulder for emergency and/or law enforcement use. As part of this project, Britannia Boulevard will be improved from the Border Frontage Road to Bristow Court by adding a part of the westerly segment of the street. Please see Exhibit A. The preliminary estimate in 2003 dollars for the preferred alternative is \$11.5 million in construction costs, \$2.0 million in right of way costs, and \$2.9 million for support costs, for a total of \$16.4 million. Total costs escalated for the proposed construction year of 2007 are \$19.3 million. The funding sources have yet to be fully identified. Caltrans has committed \$600,000 for this project.

2. Background:

The Otay Mesa Border Crossing is the largest commercial crossing on the California-Mexico border and handles the third highest dollar amount of trade among all U.S.-Mexico border crossings. Southbound trucks currently carry over \$8.5 billion (2002) in exports yearly through the Otay Mesa Cargo Port of Entry. Since the enactment of the North American Free Trade Agreement (NAFTA), the annual volume of trucks at Otay Mesa has increased 60 percent to 1.2 million trucks. Virtually all of the trade through the Otay Mesa crossing is transported by truck.

The US-Mexico border in this area consists of a primary border fence at the actual border, an open area approximately 30 meters wide and a secondary fence at the north side of this open area. Between the two fences are drainage facilities and occasional service roads for maintenance and law enforcement access. Between La Media Road and Britannia Boulevard there is a single lane service road running along the north side of the secondary fence.

Until recently, all southbound laden trucks used the one-lane southbound truck export road along the Secondary Fence, at the US/Mexico border between La Media Road and Drucker Road. This road was constructed so the laden truck queue going into Mexico would not interfere with local businesses in the Otay Mesa area. The southbound laden trucks traveled along La Media Road to enter the one-way segment of the Border Frontage Road that was one lane wide and had a 3.6 meter (12') extra wide shoulder. The U.S. Border Patrol, other Federal Agencies and local emergency services used the extra wide shoulder that is located just north of the Secondary Border Fence for emergency and law enforcement activities. Unladen trucks traveled into Mexico using the normal southbound passenger vehicle lanes.

Truck queues in the area are a recurring problem. Anecdotal information is that queues can extend up to and onto Otay Mesa Road. Truck 'standing' is banned on Otay Mesa Road, so local law enforcement officials reasonably require trucks to move off Otay Mesa Road. Truck drivers often respond by using local streets in the area southwest of Otay Mesa Road rendering them partially and sometimes completely impassable. This is particularly a problem on the first working day after a U.S. or Mexican Holiday as the customs gates are closed on holidays.

In 2002, Mexican Customs began inspecting all trucks traveling into Mexico instead of just laden trucks. This increased the time to process trucks and caused a substantial queue. A temporary agreement was reached between U.S. Customs, the U.S. Border Patrol, and the City of San Diego that required unladen trucks to use Siempre Viva Road, Drucker Lane and then join the laden trucks at the Border Frontage Road on the extra wide shoulder for about 0.8 km (0.5 miles). This dual queue allows the unladen trucks to stay out of normal border traffic, and increases capacity, lessening delay for all trucks. However, this interferes with the use of that portion of the shoulder for emergency and law enforcement use. Additionally, as volume increases and with the longer border crossing time, trucks are again spilling onto the local streets interfering with important local circulation in this commercial area. Local, State and Federal interests want a better solution to the truck queuing issues.

Need and Purpose

The export business is very important to the economy of San Diego County, the State of California and the United States. For sustained export activity, it is important to provide the infrastructure. At the same time, it is imperative to provide acceptable access to the Otay Mesa industrial and commercial area. This area can be impacted by truck queues when delays at the U.S. or Mexican Customs facilities occur or breakdowns take place. Typically the queue extends back from the Custom's gate to the intersection of La Media and Siempre Viva Road. In cases when truck volume is high or there is a delay in processing at the border, trucks can completely fill the existing truck export road system and spill over into other streets. These other streets are intended for local delivery only, so spill over of export trucks render these local

streets effectively unusable.

Traffic Analysis:

Currently La Media Road from Otay Mesa Road to the Customs House gate and along the Border Frontage Road has room for up to 140 vehicles in a single queue. Depending on the cycle time, the existing queuing area could fill in 15 to 30 minutes if traffic stops either at the export gate or along the dedicated truck only road system. If this occurs, local vehicle traffic eventually cannot use La Media Road. As a queue typically develops because of the varying arrivals of trucks, the current arrangement acts as kind of a 'shock absorber' to even out flows at the export gate. This shock absorber effect is limited by the storage capacity of the truck only roads and the capacity for processing trucks at the export gate.

A traffic analysis based on a data from a Caltrans study conducted in 2001, shows that adding the proposed construction alternative will keep truck traffic from spilling out onto Otay Mesa Road for some time as it substantially increases the size and therefore capacity of the previously mentioned 'shock absorber'. It is assumed that trucks will tend to use only Britannia Boulevard and La Media Road mitigating the problem of congestion on the local streets in the Otay Mesa area. Based on modeling the system capacity and expected truck traffic growth rates, this project is expected to meet truck traffic needs until around 2020. At that time, under normal operating conditions, trucks on La Media Road will typically back up to a little south of Airway Road. Trucks on Britannia Boulevard will back up to a little north of Siempre Viva.

Safety:

The use of Drucker Lane for unladen trucks is a temporary mitigation. The unladen trucks use the extra wide shoulder for a length of 0.8 km (0.5 miles), causing an impact to the normal use of this shoulder by the US Border Patrol, other Federal agencies and emergency vehicles. This extra wide shoulder needs to be returned to its original use because there is currently no means for emergency vehicles or law enforcement forces to reliably access portions of this area.

Community Support:

There is general agreement between the Federal Government Agencies, Caltrans, the City of San Diego, local leaders, and the business community that the best solution is to create an adequate truck queuing area that is generally off City arterial and collector streets. The City of San Diego, Caltrans, and the Federal Government now need to adopt a plan to have the improvements completed as soon as possible.

3. Alternatives:

No build:

The No-build Alternative is to leave the area in its current condition. This would not improve access to the Otay Mesa industrial park businesses that currently experience restricted access due to southbound truck queues. The Federal government agencies would continue to be hindered from performing their normal and required operations due to the congestion. In addition, the No-build Alternative would have a negative impact on Otay Mesa Road as truck queues lengthen thereby increasing congestion on that regional arterial. This alternative would not be consistent with the regional transportation goals set forth in the RTP.

Construction Alternative:

This Alternative constructs a new SB-TER from the intersection of Britannia Boulevard and Bristow Court to La Media Road and then to the US Customs House, a distance of 4.2 km (2.6 miles). Please see Exhibit A. There are no plans for detours at this time. It is also expected that some of the improvements, especially from La Media eastward, could require night work. For discussion purposes, this Alternative has been divided into four segments. Please see Exhibit B. Construction of this project may be phased. The completed project will be a City of San Diego Street.

Segment 1; See Cross-section A-A. Exhibit C

Construct a 7.2 meter (24') wide truck road along Britannia Boulevard from Bristow Court to the Secondary Border Fence. Segments 1 and 2 have a total cost of \$13.1 million.

This segment of the project proposes to construct approximately 0.5 kilometers (0.3 miles) of new southbound truck export roadway from the intersection of Britannia Boulevard and Bristow Court to the Border. This will construct portion of the westerly half of Britannia Boulevard as the easterly portion is already constructed. The easterly half is striped as a two-lane road with no shoulders and would continue to serve local traffic. The new southbound truck road would add a 3.6 meter (12') lane for southbound laden trucks and a 3.6 meter (12') extra wide shoulder. The SB-TER will be a full PCC structural section, including shoulders.

This segment would require a 4.6 meter (15') wide strip of right of way along the west side of Britannia Boulevard. This parcel is currently agricultural. There are drainage facilities and fire hydrants that need to be relocated as part of this project.

Segment 2: See Cross-section B-B. Exhibit C

Construct a 7.8 meter (26 feet) wide truck road from Britannia Boulevard to La Media Road. Segments 1 and 2 have a total cost of \$13.1 million.

This segment of the project proposes to construct the new SB-TER parallel to the border for a length of 1.6 km (1.0 miles). It is located just north of the secondary fence between Britannia Boulevard and La Media Road. The new SB-TER would have a 0.6 meter curb on the north side, one 3.6 meter lane for laden trucks and a 3.6 meter extra wide shoulder next to the fence. The SB-TER will be a full PCC structural section, including the shoulders. It is intended to incorporate the existing service road into the new cross section.

This segment would require right of way along the north side between 4.0 – 6.0 meters in width. There are underground utilities along the base of the secondary fence that need to be protected in place or relocated. A ground mounted electrical transformer box near La Media Road will need to be relocated.

This segment has a natural drainage course crossing through and interrupting the existing service road and the secondary fence. The ground drops down as it approaches this drainage course so the existing service road north of the secondary fence is on an embankment through a portion of this area. The embankment blocks the normal drainage flows forcing them toward an existing drainage structure. This drainage structure is a reinforced concrete box culvert with apron, wing walls and trash rack. The project would need to extend the box culvert approximately 9 meters and construct new apron, headwall and wingwalls. Please see the discussion under Drainage.

Segment 3; See Cross-section C-C. Exhibit C

Widen the existing 7.9 meter wide truck road to provide an 12.0 meter wide truck road between La Media Road and Drucker Lane. Segment 3 has a total cost of \$2.0 million.

This segment of the project proposes to widen the existing SB-TER parallel to the border for a length of 1.3 km (0.76 miles). It is located just north of the Secondary Border Fence between La Media Road and Drucker Lane. To accomplish this, it is necessary to widen the existing road on the north side and improve some drainage facilities. After widening, the proposed SB-TER would have a 0.6 meter curb a 0.6 meter shoulder (total 1.2m), a 4.2 meter lanes for laden trucks, a 3.6 meter lane for unladen trucks, and a 3.6 meter extra wide shoulder next to the secondary fence. The improvements would be a full PCC structural section, including shoulders.

Along the north side where development has occurred, a grade difference exists between the truck road and the existing properties. This grade difference varies between 0.6 and 1.5 meters where the development pads are higher than the truck road. An "L" shaped retaining wall is proposed so all work could be accomplished without acquiring temporary construction easements from the adjacent properties. The excavation for the retaining wall would require a vertical cut at the property line. Existing fences would

need to be protected in place. Should the private fences interfere with the section, they will be relocated to the north.

Segment 4; See Cross-section D-D. Exhibit C

Widen the existing 7.6 meter wide truck road to provide an 11.6 meter wide truck road between Drucker Lane and the U.S. Customs House. Segment 4 has a total cost of \$1.8 million.

This segment of the project proposes to widen the existing SB-TER parallel to the border for a length of 0.8 km (0.5 miles). It is located just north of the Secondary Border Fence between Drucker Lane and the U.S. Customs House. After widening, the proposed SB-TER would have a 0.6 meter curb on the north side, one 4.2 meter lane for unladen trucks, a 3.6 meter lane for laden trucks, and a 3.6 meter extra wide shoulder next to the secondary fence. The SB-TER will be a full PCC structural section, including shoulders.

This segment has adequate right of way and all widening will be on the north side, with one exception. At one spot location about 400 meters east of Drucker Lane, the alignment of the existing truck road and the Secondary Border Fence jogs to the north creating a pinch point. A drainage channel section transition structure between the primary and secondary fence causes this condition. The distance between the secondary fence and the northerly private property fence at this pinch point is 10.4 meters (34'). In consultation with the project sponsor it has been decided that the best approach to dealing with this constraint is to relocate the secondary fence in that area to the south effectively straightening it out. The City of San Diego has also decided to widen or straighten the fence out at the east end of the Border Frontage Road to allow for increasing the width of the export gate.

Along the north side where development has occurred, a grade difference exists between the truck road and the existing properties. This grade difference varies between 0.6 and 1.8 meters where the development pads are higher than the truck road. If there is not enough width for a 1:2 slope, then an "L" shaped retaining wall is proposed so all work could be accomplished without acquiring temporary construction easements from the adjacent properties. The excavation for the retaining wall, if needed, would require a vertical cut at the property line. Existing fences would need to be protected in place.

Drainage:

The historical drainage pattern in the area of the project flows toward Mexico. The United States Section of the International Boundary and Water Commission (USIBWC) requests that the project meets the City of San Diego's (City) requirements to guard the downstream properties from flows greater than pre-development conditions. The City requires that each property owner provide detention facilities so that there will be no increase in the rate of run-off due to development for the 5 year, 10 year, 25 year and 50 year storms.

Hydraulics has stated that to comply with the above requirements, approximately 5 detention basins are required for this project. They have further stated that drainage for

the area would be conveyed to the detention basins by pipe or ditch. It is not the purpose of a PSR/PDS to develop a projects design to the level that might be expected for a regular PSR. Therefore sizing and placement of detention basins, catch basin units and general drainage design should be done in a future stage of the project development process. Hydraulics has advised allowing 100m² per detention basin. This amount has been included in the Right of Way estimate.

4. System and Regional Planning

This project is included in the Regional Transportation Plan. The growth rate for the area is a function of existing and proposed land use. It is expected that additional goods movement, manufacturing and warehousing will be a prominent activity of the area. Other trip generators than may change are Brown Field and the Aeropuerto Internacional de Tijuana. This project is coordinated with the design of State Route 905. The interchanges at Britannia Boulevard and La Media Road have been designed to accommodate a high volume of trucks. However, the project's need and purpose show that the project is needed to solve a local problem in the Otay Mesa area. These improvements will be needed whether or not 905 is constructed, are operationally independent of planned improvements on State Route 905 and do not reduce the need for the improvements on State Route 905.

A goods movement capacity enhancement at the north bound import gate is proposed using the FAST (Free and Secure Trade) lane program as a separate but complimentary project.

5. Environmental Determination and Environmental Issues

A preliminary review by the Caltrans District 11 environmental group stated that it is expected that the likely environmental document for the project would be a Negative Declaration / Finding of No Significant Impact. This would take approximately two years for the studies and to complete the environmental processing. The following issues would likely require studies:

- Biological and Cultural Resources including possible vernal pools.
- Water Quality – On July 15, 1999, State Water Resources Control Board, SWRCB adopted order 99-06 DWQ, National Pollutant Discharge Elimination System (NPDES) Permit for Storm Water Discharges from the State of California Department of Transportation properties, facilities and activities. This project will be designed in conformance with the National Pollutant Discharge Elimination System (NPDES) requirements. Caltrans guidance documents will be used to assess any potential storm water issues. Best management practices (BMP's) will be utilized to reduce or eliminate run-off of sediment from the proposed work during construction will be given priority consideration on this project. Post-construction BMP's will be implemented as a standard practice whenever feasible.

- Farmland Conversion
- Visual Impact
- Air Quality
- Noise Impacts
- Social / Community / Economic Impact – There would be impacts to adjacent businesses. No homes or businesses are expected to be directly impacted, so no relocation is likely.
- Hydrology - (International Boundary Water Commission)
- Traffic and Circulation - (The use of Britannia Boulevard for southbound laden trucks)

The following permits may also be required:

- 401 Clean Water Act, Regional Water Quality Board
- 404 Discharge of Dredged or Fill Material in a Water Course of Wetlands, Army Corp of Engineers
- 1601 Stream Bed Alteration, Department of Fish And Game, State of California
- Section 7 Consultation with U.S. Fish and Wildlife Service (if endangered species are impacted.)

Landscape Issues:

Unpaved right of way could be landscaped with a groundcover or some other type of permanent erosion control. It will need irrigation if it is landscaped. Potential visual impacts created by this project may occur with the removal of mature trees or vegetation and the addition of retaining walls. Resources should be allocated to perform a review of the project for this reason.

6. Right of Way:

In Segments 1 and 2, a total of six parcels will be involved. From each parcel, a strip of land adjacent to the project will need to be acquired. The width of the strip is constant for each parcel and is between 4.0 and 6.0 meters. Two of the parcels are developed, two have agricultural use, and two are undeveloped. It is not anticipated that relocation will be required for any parcels. It is intended that the City of San Diego will be the owner of these parcels and will lead in the acquisition of these parcels. Various utilities need protected in place, redesigned or relocated including a ground mounted electrical transformer pad just west of La Media Road and the Border Frontage Road. As relocation of the Secondary Border Control Fence is a design feature, the negotiations with the US General Services Administration and other stakeholders in the fence should probably be put on a similar time line and resourced as another parcel. Also, please see the previous discussion regarding detention basins in the Design Section under Drainage.

The preferred schedule for right of way certification is two years. If willing sellers are assumed, then one year could be used. Maintenance of the completed project would be the responsibility of the City of San Diego

7. Reviews:

This project has been reviewed by:

Dave Cordova, HQ Design
 Richard Leja, City of San Diego

8. Risk Assessment & Value Analysis:

This is an unusual and fast track project that does not lend itself well to the Value Analysis process. Preliminary risks for The City's completion of this project include funding availability, delays in the availability of City staff and increases right of way costs due to market volatility.

9. Funding/Scheduling:

One or more Cooperative Agreements are required between the City of San Diego, the Federal Government and Caltrans to specify roles and responsibilities. The City will be lead for environmental clearance, design, right of way acquisition and construction administration. This cooperative agreement would also specify funding responsibilities and the project schedule. Until this agreement is in place, the funding package and proposed schedule cannot be addressed.

The estimated project costs in 2003 dollars, suitable only for PR & ED support, are shown below:

Estimate	2003	2007
Construction Costs	\$ 11.9 million	\$ 13.7 million
Right of Way Costs	\$ 2.0 million	\$ 2.3 million
Total Capital Costs	\$ 13.9 million	\$ 16.0 million
PR & ED Support	\$ 0.5 million	\$ 0.6 million
PS&E Support	\$ 0.9 million	\$ 0.9 million
R/W Support	\$ 0.2 million	\$ 0.3 million
Construction Support	\$ 1.4 million	\$ 1.5 million
Total Support Costs	\$ 3.0 million	\$ 3.3 million
Total Project Cost	\$ 16.9 million	\$ 19.3 million

10. Programming Recommendation:

It is recommended that a Cooperative Agreement be pursued and that funding be secured for this project to begin the Project Report and Environmental Phase.

10. Programming Recommendation:

It is recommended that a Cooperative Agreement be pursued and that funding be secured for this project to begin the Project Report and Environmental Phase.

Submitted by: [Signature] 9-29-03 Armando S. Garcia, Date
 Design Manager
 Concur: [Signature] 9/29/03 Randy Sanchez, Date
 Project Manager

Recommend Approval: [Signature] Allan Kosup, Date
 Deputy District Director
 Program Project Management

Recommend Approval: [Signature] 10/4/03 Bill Figge, Date
 Deputy District Director
 Planning

Recommend Approval: [Signature] 10/21/03 Joe Hull, Date
 Deputy District Director
 Traffic Operations

Recommend Approval: [Signature] Joel Haven, Date 10/1/03
 Deputy District Director
 Design

Recommend Approval: [Signature] Anne Marc-Aurele, Date
 Deputy District Director
 Right of Way
Special Right of Way Statement:

Recommend Approval: [Signature] Charles Muggs Stoll, Date 10/22/03
 Deputy District Director
 Environmental

I have reviewed the right of way information contained in this document and find the data to be complete, current and accurate.

District Contacts:

Project Coordinator	Jose Ornelas	858-467-2367
Project Manager	Randy Sanchez	619-688-6728
Project Engineer	Edmund Kennedy	619-688-3647
City Contact	Richard Leja	619-533-3764

Exhibits:

Exhibit A	Location Map
Exhibit B	Aerial Photo Layouts
Exhibit C	Cross-sections
Exhibit D	11-Page Estimate

BROWN FIELD

BORDER TRUCK EXPORT ROAD IMPROVEMENTS LOCATION MAP

Otay Mesa Road

Airway Rd

Britannia Blvd

La Media Rd

Siempre Viva Rd

905

Drucker Lane

**Otay Mesa
Port of Entry**

USA

MEXICO

**AEROPUERTO INTERNACIONAL
DE TIJUANA**



BRITANNIA BLVD

A

A

B

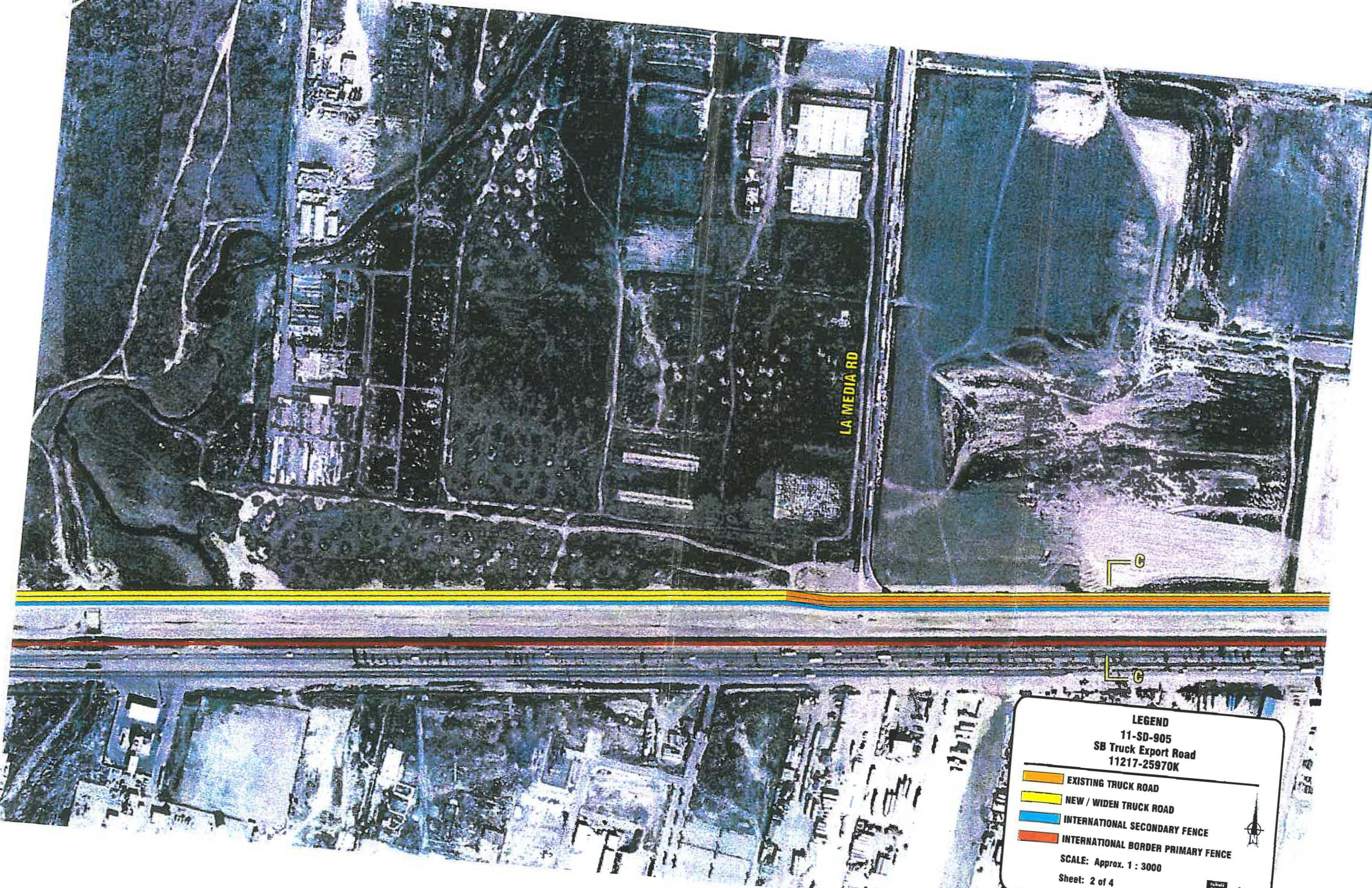
B

AEROPUERTO INTERNACIONAL
DE TIJUANA

LEGEND
11-SD-905
SB Truck Export Road
11217-25970K

- EXISTING TRUCK ROAD
- NEW TRUCK ROAD
- INTERNATIONAL SECONDARY FENCE
- INTERNATIONAL BORDER PRIMARY FENCE

SCALE: Approx. 1 : 3000
Sheet: 1 of 4



LA MEDIA RD

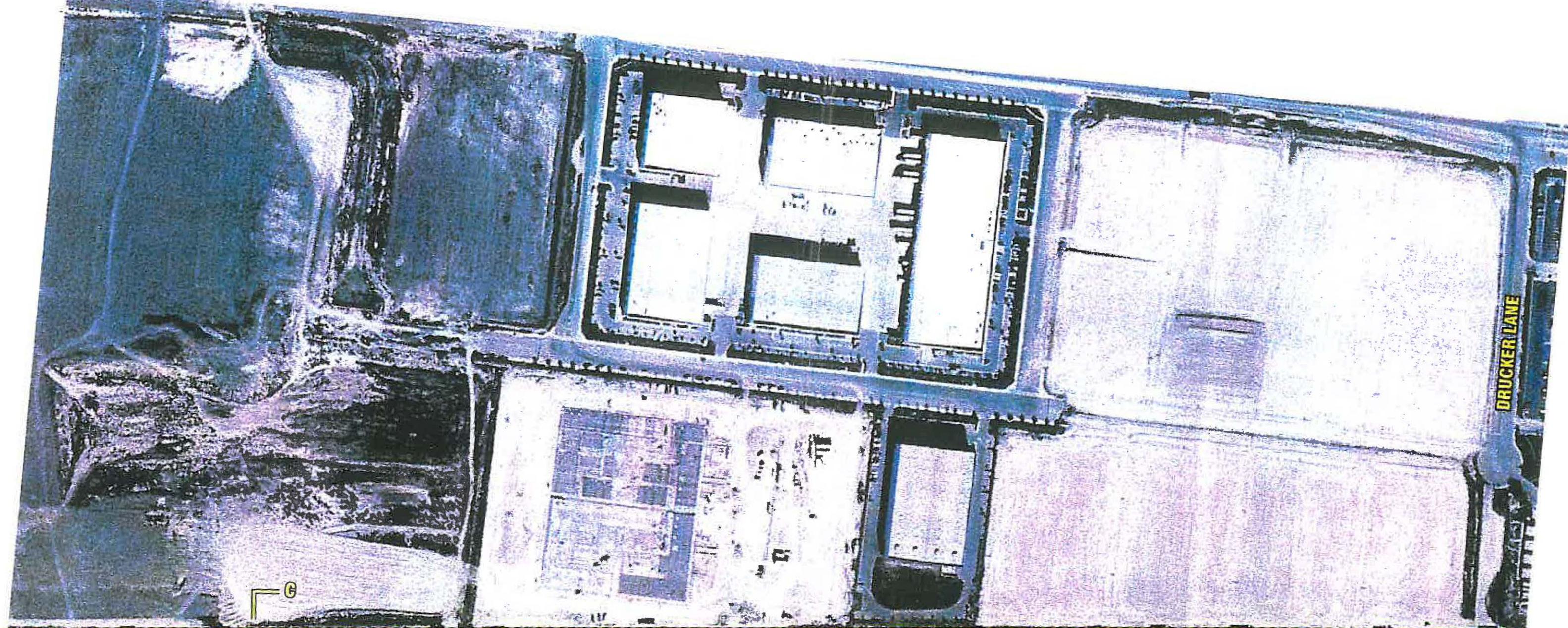
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LEGEND
11-SD-905
SB Truck Export Road
11217-25970K

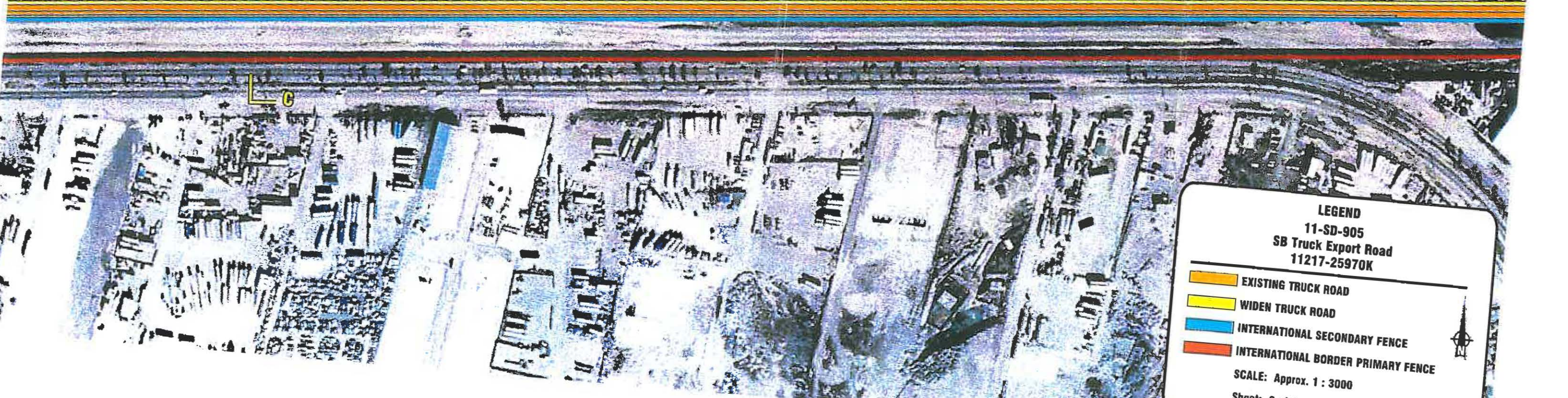
- EXISTING TRUCK ROAD
- NEW / WIDEN TRUCK ROAD
- INTERNATIONAL SECONDARY FENCE
- INTERNATIONAL BORDER PRIMARY FENCE

SCALE: Approx. 1 : 3000
Sheet: 2 of 4



DRUCKER LANE

G

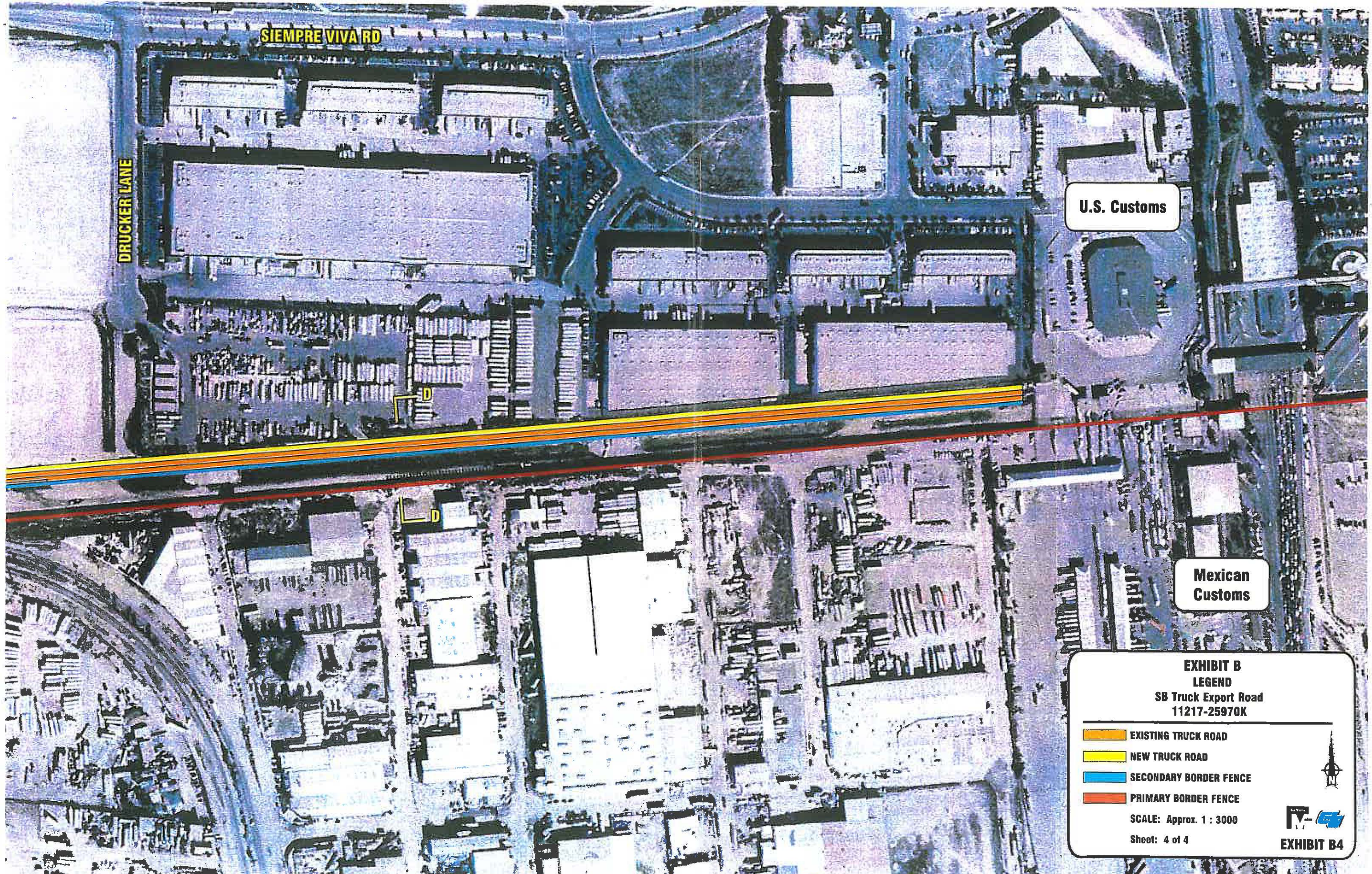


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LEGEND
11-SD-905
SB Truck Export Road
11217-25970K

- EXISTING TRUCK ROAD
- WIDEN TRUCK ROAD
- INTERNATIONAL SECONDARY FENCE
- INTERNATIONAL BORDER PRIMARY FENCE

SCALE: Approx. 1 : 3000
Sheet: 3 of 4







SIEMPRE VIVA RD

DRUCKER LANE

U.S. Customs

Mexican Customs

**EXHIBIT B
LEGEND
SB Truck Export Road
11217-25970K**

-  EXISTING TRUCK ROAD
-  NEW TRUCK ROAD
-  SECONDARY BORDER FENCE
-  PRIMARY BORDER FENCE

SCALE: Approx. 1 : 3000
Sheet: 4 of 4






EXHIBIT B4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	PROJECT ENGINEER	CALCULATED/DESIGNED BY	DATE	REVISED BY	DATE
Caltrans		CHECKED BY		DATE REVISED	



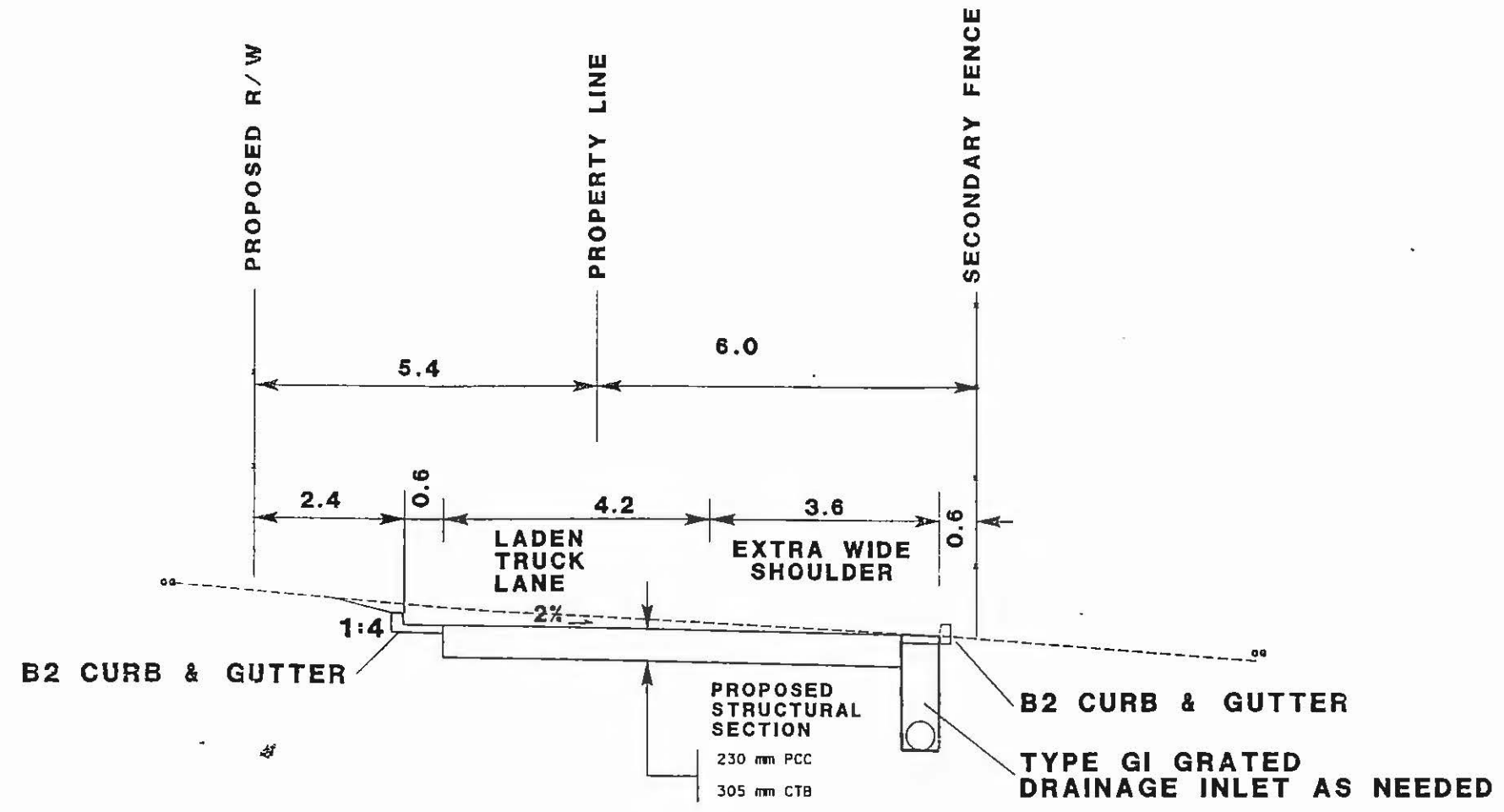
DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	905			

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

Caltrans now has a web site! To get to the web site, go to: <http://www.dcd.ca.gov>



SECTION B-B

SCALE 1:100

EXHIBIT C
TYPICAL SECTION
SB TRUCK EXPORT ROAD
BRITANNIA BLVD TO
LA MEDIA ROAD

DATE PLOTTED => 04-NOV-2003
 TIME PLOTTED => 08:10
 00-00-00



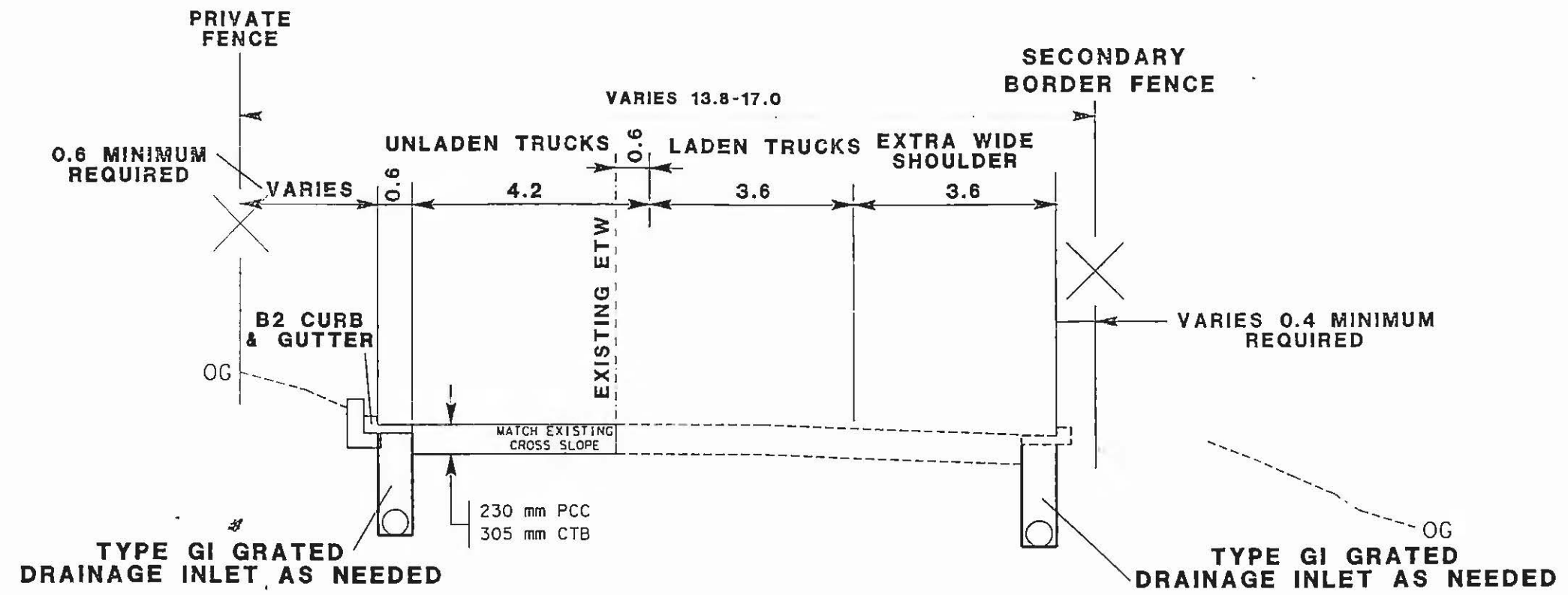
DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
11	SD	905			

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan.

CalTrans now has a web site! To get to the web site, go to: <http://trscad.ca.gov>



SECTION DD

EXHIBIT C
TYPICAL SECTION
SB TRUCK EXPORT ROAD
DRUCKER LANE TO
US CUSTOMS HOUSE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	PROJECT ENGINEER	CALCULATED/DESIGNED BY	DATE	REVISED BY
Galtrans		CHECKED BY		DATE REVISED
ADVANCED PLANNING				

Type of Estimate : PSR(PDS)
 Program Code :
 Project Description 11-SD-905, SB Export Truck Road
 Limits : Britannia Boulevard to the US Customs House along the Border Frontage Road
 Proposed Improvement Extend and Improve SB truck road
 Scope : Britannia Blvd. and Bristow Ct. to US Customs House along Border, 5.1 lane km
 Alternative : Improve SB Truck Export Road

Estimate suitable for PR/ED support only

	Current ¹	Escalated ²
ROADWAY ITEMS	\$ 11,942,390	\$ 13,704,168
STRUCTURE ITFMS	\$ <u>0</u>	\$ <u>0</u>
SUBTOTAL CONSTRUCTION COST	\$ 11,942,390	\$ 13,704,168
RIGHT OF WAY	\$ <u>1,975,000</u>	\$ 2,266,358
TOTAL CAPITAL COST	\$ 13,917,390	\$ 16,000,000
PR/ED SUPPORT	\$ 490,000	\$ 536,700
PS&E SUPPORT	\$ 840,000	\$ 920,000
RIGHT OF WAY SPRT.	\$ 224,000	\$ 245,400
CONSTRUCTION SPRT.	\$ <u>1,400,000</u>	\$ <u>1,533,400</u>
TOTAL SUPPORT COST	\$ 2,954,000	\$ 3,235,500
TOTAL PROJECT COST	\$ 16,900,000	\$ 19,300,000

*ESCALATED PROJECT COST FY

¹Year of PSR= 2003
²Year of Construction= 2007
 4

Reviewed by District O.E.

L.G. Edmonds 9/25/03 x6735
 Leon G. Edmonds Date Phone

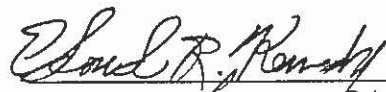
Approved by Project Manager

[Signature] 9-23-03 x-6728
 _____ Date Phone

² Escalation Rates are based on the 2000 Fund Estimate, Pg 4-2, of the 2000 STIP. Escalation rates are 2.3% for Support Cost and 3.5% for Capital Costs compounded annually to construction year. Escalation should only be used when a project has not been programmed. Revised 11/20/00 MDR


Section	Cost
Earthwork	\$ 729,000
Structural Section	\$ 2,322,000
Drainage	\$ 879,525
Specialty Items	\$ 926,928
Environmental	\$ 1,092,600
Traffic Items	\$ 1,293,777
Detours	\$ 0
Minor Items	\$ 362,191
Overhead	\$ 845,114
Supplemental Work	\$ 437,557
Roadway Mobilization	\$ 845,114
State Furnished	\$ 95,800
Contingencies	\$ 2,112,784
TOTAL ROADWAY ITEMS*	\$ 11,942,390

Estimate Prepared By


Date

619-688-3647
Phone

Estimate Reviewed By


Date

619-688-2157
Phone

*Verify that total equals total on Page 8

Section 1 EARTHWORK

	Unit	Quantity		Unit Price (\$)	=	Cost
190101 Roadway Excavation	m3	40,000	x	20.00	=	\$800,000
198050 Embankment	m3	0	x		=	\$0
198001 Imported Borrow	m3	0	x		=	\$0
160101 Clearing & Grubbing	LS		x		=	\$0
170101 Develop Water Supply	LS	1	x	10,000.00	=	\$10,000
Removal or Relocation of Existing Facilities	LS		x		=	\$0

SUBTOTAL EARTHWORK	\$	810,000
OVERHEAD	\$	81,000
TOTAL EARTHWORK	\$	729,000

Section 2 STRUCTURAL SECTION

	Unit	Quantity		Unit Price (\$)	=	Cost
401000 PCC Pavement (230mm Depth)	m3	6,700	x	185.00	=	\$1,239,500
390102 Asphalt Concrete (Type A)	tonne		x		=	\$0
390155 with Asphalt Price Index	tonne		x		=	\$0
390108 Asphalt Concrete Base (Type A)	tonne	0	x	65.00	=	\$0
390171 with asphalt Price Index	tonne		x		=	\$0
2.306 tonne/m3 150mm						
390128 RAC- Type G	tonne		x		=	\$0
390163 with Asphalt Price Index	tonne		x		=	\$0
260201 Class 2 Aggregate Base 105mm	m3	0	x	45.00	=	\$0
250401 Class 4 Aggregate Subbase 68mm	m3	0	x	28.00	=	\$0
290301 Cement trtd prmbld base 305mm	m3	8,800	x	125.00	=	\$1,100,000
731504 Mnr Cnrt Curb B-2	m3	1,300	x	185.00	=	\$240,500
731502 Minor Concrete (Misc Const)	m3		x		=	\$0
XXXXXX Remove Concrete	m3		x		=	\$0
390095 Replace AC Surfacing	m2		x		=	\$0
XXXXXX Place AC (Misc Area)	m2		x		=	\$0
1531XX Cold Plane ___mm	m2		x		=	\$0
1531XX Cold Plane ___mm	m2		x		=	\$0
68XXXX Permeable Material Blanket	m		x		=	\$0
68XXXX Edgedrains	m		x		=	\$0

JBTOTAL STRUCTURAL SECTION	\$	2,580,000
OVERHEAD	\$	258,000
TOTAL STRUCTURAL SECTION	\$	2,322,000

Section 3 DRAINAGE

	Unit	Quantity		Unit Price (\$)	=	Cost
Project Drainage	LS		x		=	\$0
650079 900mm RCP	m	0	x	500.00	=	\$0
750030, Inlet Frame and grate	ea	22	x	475.00	=	\$10,450
69450 450mm Type of Pipe	m	5,400	x	150.00	=	\$810,000
6XXXXX ___ mm Type of Pipe	m		x		=	\$0
6XXXXX ___ mm Type of Pipe	m		x		=	\$0
510502 Minor Concrete (minor structure)	m3	12	x	1,400.00	=	\$16,800
152604 Modify Inlet	EA		x		=	\$0
72XXXX Rock Slope Protection Type___	m3		x		=	\$0
729010 Rock Slope Protection Fabric	m2		x		=	\$0
510104 Class A Concrete box culvert	m3	100	x	1,400.00	=	\$140,000

SUBTOTAL DRAINAGE \$ 977,250
OVERHEAD \$ 97,725
TOTAL DRAINAGE \$ 879,525

Section 4 SPECIALTY ITEMS

	Unit	Quantity		Unit Price (\$)	=	Cost
Aesthetic Treatment for Ret Walls ?	m2		x		=	\$0
80042A, Sandia Border Fence	m	160	x	600.00	=	\$96,000
839XXX Cable Railing	m	500	x	30.00	=	\$15,000
800427 Chain Link Fence CL-3.0	m	4,000	x	48.00	=	\$192,000
839601 Crash Cushions (Type CAT)	EA	2	x	6,500.00	=	\$13,000
Hazardous Waste Work	LS		x		=	\$0
192037 Structure Excavation (Ret.Wall)	m3	880	x	40.00	=	\$35,200
193013 Structure Backfill (Ret. Wall)	m3	660	x	42.00	=	\$27,720
193031 Pervious Backfill Material (Ret. \	m3		x		=	\$0
520103 Bar Reinf. Steel (Ret. Wall)	KG	12,000	x	2.00	=	\$24,000
510133A Type 1 Ret. Wall 1800mm	m2	1,100	x	570.00	=	\$627,000

SUBTOTAL SPECIALTY \$ 1,029,920
OVERHEAD \$ 102,992
TOTAL SPECIALTY \$ 926,928

Section 5 ENVIRONMENTAL

5A - Environmental & Landscape

	Unit	Quantity		Unit Price (\$)	=	Cost
20XXXXLandscape & Irrigation	LS	1	x	50,000.00	=	\$50,000
208XXX Extend Crossovers	m		x		=	\$0
204XXX Planting	HA		x		=	\$0
204099 Plant Establishment	LS		x		=	\$0
201700 Top Soil	m3		x		=	\$0
20XXXX Irrigation Crossovers	m		x		=	\$0
20XXXX Erosion Control (Type ___)	HA		x		=	\$0
8000XX Fence (type)	m		x		=	\$0
Biological Mitigation	LS	1	x	500,000.00	=	\$500,000
Extend Plant Establishment (___ Years)	LS		x		=	\$0
Water Supply	LS	1	x	100,000.00	=	\$100,000
Maintenance Vehicle Pullouts	EA		x		=	\$0

5B - NPDES

074019 Prepare SWPPP	LS	1	x	10,000.00	=	\$10,000
074020 Water Pollution Control	LS	1	x	550,000.00	=	\$550,000
074023 Temporary Erosion Control	m2		x		=	\$0
074027 Temp. Erosion Control Blanket	m2		x		=	\$0
203561 Jute Mesh	m2		x		=	\$0
074033A Temp. Construction Entrance	EA		x		=	\$0
074032A Temporary Concrete Washout	EA	1	x	4,000.00	=	\$4,000
074031A Temporary Gravel Bags	EA		x		=	\$0
074028 Temporary Fiber Rolls	m		x		=	\$0
074029 Temporary Silt Fence	m		x		=	\$0

SUBTOTAL ENVIRONMENTAL \$ 1,214,000
OVERHEAD \$ 121,400
TOTAL ENVIRONMENTAL \$ 1,092,600

Estimate Reviewed By John Ajishol 9-19-03 Environmental Branch Chief Phone 858-616-6610
 Estimate Reviewed By Stephen A. Moore 09/19/03 District Landscape Architect Phone 2542
 Estimate Reviewed By J. Ugo 9/23/03 NPDES Architect Phone X3126

Section 6 TRAFFIC ITEMS

6A - Traffic Electrical

	Unit	Quantity		Unit Price (\$)	=	Cost
86055X Lighting & Sign Illumination	LS	1	x	490,000.00	=	\$490,000
8602XX Traffic Signals & Lighting	LS		x		=	\$0
560213 Furnish Overhead Sign Structure	LS		x		=	\$0
560219 Install Overhead Sign Structures	LS		x		=	\$0
XXXXXX Fiber Optic Conduit System	LS		x		=	\$0
8611XX Ramp Metering System	LS		x		=	\$0
XXXXXX Interconnection Facilities	LS		x		=	\$0
860810 Inductive Loop Detectors	LS	0	x	600.00	=	\$0
86093X Traffic Monitoring Stations	LS	0	x	60,000.00	=	\$0

6B - Traffic Signing and Striping

566011 Ground Mounted Signs	EA	25	x	150.00	=	\$3,750
568016 Overhead Sign Panels	EA		x		=	\$0
840656 Permanent Pavement Delineation	m	9,500	x	6.00	=	\$57,000
832001 Metal Beam Guard Railing	m		x		=	\$0
120159 Temporary Pavement Delineation	m	3,800	x	1.25	=	\$4,750
120090 Construction Area Signs	LS	1	x	40,000.00	=	\$40,000
129000 Temporary Railing "Type K"	m	1,900	x	60.00	=	\$114,000
129100 Temporary Crash Cushions Mod	EA	6	x	5.00	=	\$30
120152 Temporary Pavement Markings	m2		x		=	\$0
840515 Thermoplastic Pavement Marking	m2		x		=	\$0
120199A Traffic Plastic Drums	EA		x		=	\$0
120120 Type III Barricades	EA		x		=	\$0

6C - Traffic Management Plan

066063 Public Information	LS	1	x	300,000.00	=	\$300,000
066061 COZEEP	LS	1	x	88,000.00	=	\$88,000
120100 Traffic Control System	LS	1	x	200,000.00	=	\$200,000
066090 Maintain Traffic	LS	1	x	120,000.00	=	\$120,000
128650 Portable Changeable Message Sign	EA	2	x	10,000.00	=	\$20,000

SUBTOTAL TRAFFIC ITEMS \$ 1,437,530

OVERHEAD \$ 143,753

TOTAL TRAFFIC ITEMS \$ 1,293,777

Estimate Reviewed By

Enrique P. Bual
for Dale Wilson Date Traffic Design Phone

Estimate Reviewed By

Camille Abou-Fadel
for Camille Abou-Fadel Date Traffic Operations Phone x43009

Section 7 DETOURS*

	Unit	Quantity	Unit Price (\$)	=	Cost
190101 Roadway Excavation	m3	x	=		\$0
198050 Embankment	m3	x	=		\$0
198001 Import Borrow	m3	x	=		\$0
390102 Asphalt Concrete (Type A)	tonne	x	=		\$0
390155 with Asphalt Price Index	tonne	x	=		\$0
260201 Class 2Aggregate Base	m3	x	=		\$0
250101 Class 4 Aggregate Subbase	m3	x	=		\$0
Temporary Drainage	LS	x	=		\$0
129000 Temporary Railing Type "K"	m	x	=		\$0
12XXXX Temporary Signals	EA	x	=		\$0
120159 Temporary Pavement Delineatio	m	x	=		\$0

* Includes constructing, maintaining, and removal

SUBTOTAL DETOURS \$ 0
OVERHEAD \$ 0
TOTAL DETOURS \$ 0

SUBTOTAL SECTION 7 (with Overhead) \$ 8,048,700

Section 8 MINOR ITEMS (5%-10%)

Subtotal Section 1-7 = \$ 8,048,700 x 5% = \$402,435

SUBTOTAL MINOR ITEMS \$ 402,435
OVERHEAD \$ 40,244
TOTAL MINOR ITEMS \$ 362,191

Section 9 OVERHEAD

Overhead Section 1-8 = \$ 845,114

Unit Quantity Unit Price (\$) Cost

070015 Overhead DAY 200 x 4,225.57 = \$845,114

TOTAL OVERHEAD \$ 845,114

Section 10 SUPPLEMENTAL WORK (5%-10%)

Subtotal Section 1-8 = \$ 8,451,135
\$ 8,451,135 x 5% = \$422,557

WPCP Implementation** \$ 8,451,135 x 0% = \$0

Unit Quantity Unit Price (\$) Cost

066666 Price Index For AC LS 1 x 15,000.00 = \$15,000

TOTAL SUPPLEMENTAL WORK \$ 437,557

**Use in all project with less than 2 heclares of disturbed soil. --- Contact NPDES unit to obtain appropriate percentage to use.

II. STRUCTURES ITEMS

Bridge Name

Bridge Number

Structure Type

Width (M) [out to out]

Total Bridge Length (M)

Total Area (SQM) 0

Structure Depth (M)

Footing Type (pile/spread)

Cost Per SQM
(incl. 10% mobilization,
20% contingency & special
aesthetic treatment)

Total Cost for Structure \$

SUBTOTAL STRUCTURES ITEMS \$ 0

Railroad Related Costs \$ 0

TOTAL STRUCTURES ITEMS \$ 0

COMMENTS:

Date

Phone

III. RIGHT OF WAY

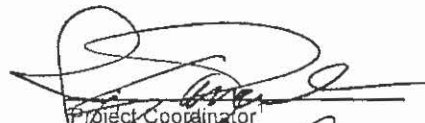
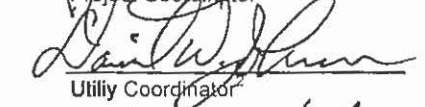
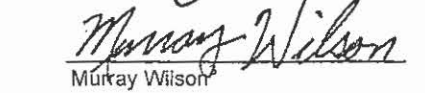
Acquisition, including Excess Land Purchases, Damages to Remainder(s) & Goodwill Loss	SF	101,000	x	10	\$	\$1,010,000
Condemnation Settlements ___%					\$	0
Acquisition of Offsite Mitigation (out to Out)	farmland easement for farmland mitigation				\$	30,000
Utility Relocation (State Share)	LS	\$1.00	x	300,000	\$	\$300,000
Clearance and Demolition					\$	0
RAP and/or Last Resort Housing Costs					\$	0
Title and Escrow Fees					\$	0
Sub total					\$	\$1,340,000
Contingency 25%	%	25.00%		\$1,340,000	\$	335,000
Base Right of Way Cost					\$	1,675,000
Design Appreciation Factor ___%	LS	\$1.00	x	300,000	\$	\$300,000

TOTAL RIGHT OF WAY \$ 1,975,000

RIGHT OF WAY SUPPORT \$ 200,000
\$224,000

ESCALATED RIGHT OF WAY \$ 0

COMMENTS: (TOTAL ACREAGE, PARCEL COUNT, ESCALATION RATE THROUGH PROGRAMMED YEAR)

Support Cost Estimate Prepared By		9/22	3359
	Project Coordinator	Date	Phone
Utility Estimate Prepared By		9/22/03	6944
	Utility Coordinator	Date	Phone
RAW Acquisition Estimate Prepared By		9/22	x6850
	Murray Wilson	Date	Phone

¹ When estimate has Support Costs only ² When estimate has Utility Relocation ³ When RAW Acquisition is required

