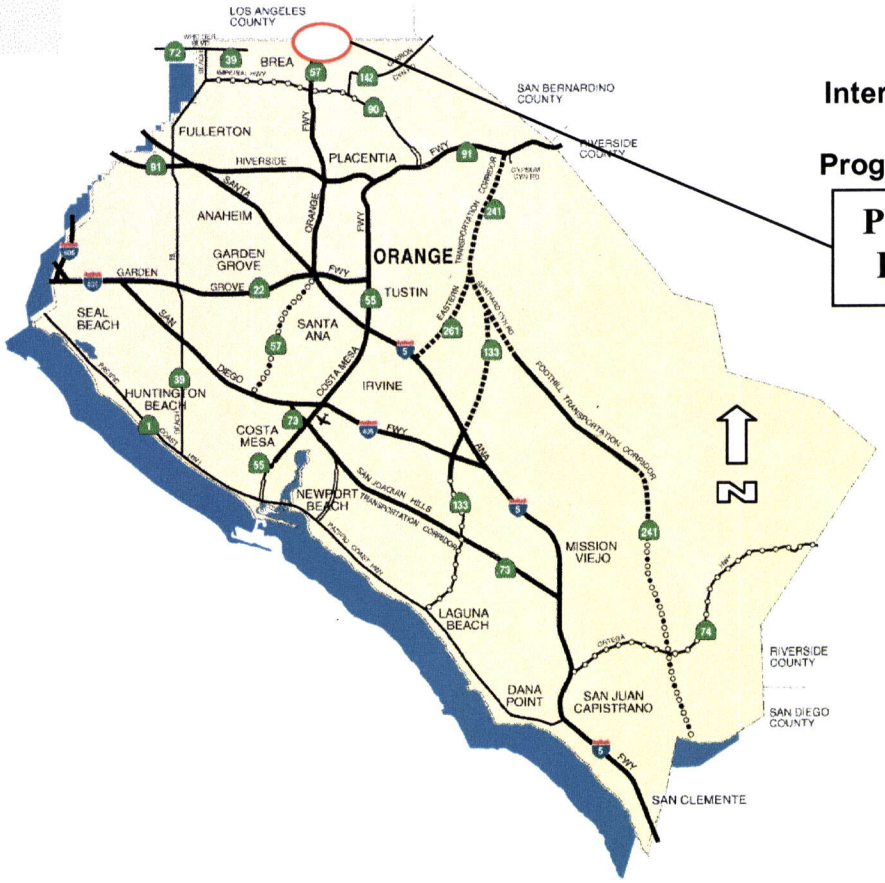
Caltrans Metric

PROJECT STUDY REPORT

State Route 57
12-ORA-57
KP 34.0/36.3
07-LA-57
KP 0.0/1.1
EA: 0C120K
Interregional Transportation Improvement Program
Program Code:20.50.025.714



SR-57 Northbound Climbing Lane Widening

AT: Between Lambert Road Undercrossing and 1 km north of Orange County / Los Angeles County line
IN: Orange County and Los Angeles County, California
NEAR: City of Brea and Orange County and Los Angeles County Line.

I have reviewed the right of way information contained in this Project Report and the R/W Data Sheet attached hereto, and find the data to be complete, current and accurate.

APPROVAL RECOMMENDED BY:

7/26/01
Gary Slater, *Chief*
Project Studies Branch
Date

8-14-01
Pija Ansari
Project Manager
Date

APPROVED BY:

8-7-01
Kathy Anderson
Right of Way - Project Coordinator
Date

9/13/01
Frank Lin
Office Chief, Design
Date

Cindy Quon
District Director

Table of Contents

Tables

Exhibits

Attachments

A SR-57 NB Improvement with Climbing lane
B SR-57 NB Improvement with Climbing lane and Continuous Auxiliary Lane
C SR-57 NB Existing (Year 2000) AM Peak Hour Volumes –by PTG
SR-57 NB Existing (Year 2000) PM Peak Hour Volumes –by PTG
D SR-57 NB Existing (Year 2000) Average Daily Traffic (ADT) Volumes –by PTG
E SR-57 NB Existing (Year 2000) HOV AM/PM/ADT Volumes –by PTG
F Manual Truck Traffic Counts
Congestion Monitoring Data 1999
Year 2000 15-minute Loop Traffic Data Report
G 2020 Daily Truck Volume Forecasted by Southern California Association of Governments (April 1998)
H Traffic Accident Surveillance Analysis System TASAS Table B
Time Period: 01/01/1995 – 12/31/1999
Location: SR-57 Northbound
Lambert Road to Los Angeles County Line
I Plan Sheets
Vicinity Map
Typical Sections X-1 through X-4
Construction Staging SC-1
Ramp Profiles P-1 through P-4
Layout – Alternative 1 L-1 through L-12
Layout – Alternative 2 L-1 through L-12
Layout – Alternative 3 L-1 through L-12
Layout – Alternative 4 L-6, L-8 through L-12 (L-1 through L-5, and L-7 are identical to Alternative 2, thus, use Alternative 2 plans)
J Structures Advanced Planning Study
Planning Study of Tonner Canyon Road UC – Alternative 1
Planning Study of Tonner Canyon Road UC – Alternative 2
Planning Study of Soil Nail Wall Typical Cross Sections
K Preliminary PSR Cost Estimate
Alternative 1 through 4
L Preliminary Environmental Assessment Report
M Right of Way Data Sheet

REGISTERED CIVIL ENGINEER STAMP

12-ORA-57 KP 34.0 to KP 36.3
EA 0C120K
July 2001

This Project Study Report 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.

7/30/2001

Hammer X. Sui
Registered Civil Engineer

DATE

1. Introduction

The purpose of this Project Study Report is to program for the design of a climbing lane in the northbound direction of SR-57 Freeway. The project limits are from Lambert Road to approximately 1 km north of Orange County / Los Angeles County line.

In addition to the No-Build alternative, four (4) build alternatives were developed to be presented in this report. Preliminary Environmental Assessment was conducted and documentation was prepared. Tentative project schedules were developed for these alternatives, the cost of each alternative was estimated between $54 millions and $77 millions. The proposed project is recommended for project development as a "Category 4A" project as defined in the Project Development Procedures Manual, and for programming as Interregional Improvement Program (ITIP). Possibilities also exist in applying for measure "M" funds and/or Regional Transportation Improvement Program funds.

This project would be eligible for Federal funding. SR-57 connects Interstate 5, 10, and 210, therefore, is on the interstate system but the project would not be an interstate completion nor be considered as new or reconstruction. Therefore, per Federal Highway Administration (FHWA)/California Department of Transportation (the Department) stewardship agreements, this project would be exempt from federal oversight.

2. Background

Current SR-57 geometric configuration consists of two High Occupancy Vehicle (HOV) lanes and 8-mixed flow lanes. Due to the large percentage of existing truck volume and long climbing grade, SR-57 northbound is experiencing a significant level of delay within the project limits. The entire corridor in the northbound direction is affected by this congestion choke point. Orange County Transportation Authority (OCTA) has recently completed an "Operations Enhancement Study of SR-57". The findings from that study ranks this improvement as the first to be implemented along the SR-57 corridor. OCTA supports the Department going forward with the proposed climbing lane widening project, as it opens up the gateway from Orange County to the north into Los Angeles County, addresses interregional congestion and improves mobility between the regions. The Department's District 7 has reviewed the concept of the proposed project and is in support of the project proposal.

This project would be the first of three projects along the northbound SR-57 corridor from Katella Avenue in the south. The City of Brea also expressed strong support for the project since it would improve the Lambert Road northbound on-ramp to SR-57. The proposed project will also address the long existing concerns of a failing slope located between Lambert Road northbound on-ramp and Tonner Canyon Bridge. In addition, there are two other separate projects underway to improve the SR-57 Lambert Interchange. One project would improve the northbound on-ramp. The second project would reconstruct the southbound on and off-ramps and constructs a new northbound loop on ramp. Both of those projects are in the Project Study Report phase as well.

2.1 Previous Studies

Recently Orange County Transportation Authority (OCTA) in partnership with Caltrans District 12 completed a "Operations Enhancement Study of SR-57" (completed March 7, 2001). The "Enhancement Study" concluded that the northbound climbing lane widening project from Lambert Road to past the Orange County / Los Angeles County line would result in significant improvements of freeway operations. Ultimately a 39% reduction in total delay could be achieved.

Attachment A shows the improvements. Furthermore, accompanying other strategic improvements such as a continuous auxiliary lane from Orangethorpe on-ramp to Lambert on-ramp, plus a 4th lane between the westbound SR-91 ramps, as much as 59% of total delay reduction can be realized. **Attachment B** exhibits the improvements with continuous auxiliary lane.

Operational enhancement project studies along SR-57 in the northbound direction are underway with the presumption of that this climbing lane widening project would be constructed. These studies are separated into two segments;

Segment 1 – SR-57/ 5 /22 Interchange north to Orangethorpe Avenue Undercrossing under contract with Parsons Transportation Group by OCTA

Segment 2 – Orangethorpe Avenue Undercrossing north to Lambert Road under contract with RBF Consulting by OCTA.

2.2 Other Projects

In 1994, District 12 contracted with Boyle Engineering Corporation to provide plans to repair a segment, approximately 300 meters long of cut slope between the Lambert Road Undercrossing and the Tonner Canyon Road Undercrossing of SR-57. A subcontractor, Ninyo & Moore Inc., prepared a geotechnical report on March 1, 1994, which included preliminary recommendations for repairing of the slope.

Contract (12-059504) was awarded in 1996 to perform minor restoration of the areas where the slumps have occurred. This contract consisted of trimming the lower portion of the cut, reducing the existing 6.0-m wide bench by 1.5-m and blending the new grade with the original contour at the toe of the slope (wedge type grading). A second phase of this contract was to have restored native vegetation to the slope but the contract was terminated due to the failure of the non-engineered fills during a storm in December 1996. Documentation is available in the project folder for this project.

Late 1998, a PS&E project was started for slope stabilization (flatten slope from 1:1.5 to 1:2.5 contract number 12-078404) of the same slope described above. PS&E was halted due to discovery of natural occurring hydrocarbon during the environmental engineering phase. Environmental Engineering is still studying the slope and has not completed its plan to deal with the contaminants. This segment of the freeway is included in the widening project but the treatment of the contaminated soil is being studied under separate efforts with Environmental Engineering Branch. These efforts may be combined into this project if this project is approved for programming.

A High Speed Weigh in Motion System is in the Plans, Specifications, and Estimate stage of the project development process. The contract number for this project is 12-0B1204. This advanced truck weighing system is to be located immediately north of Lambert Road Undercrossing at KP 33.79 (PM 21.00). Embedded axle sensors will be placed in northbound and southbound pavement. Controller cabinet and telephone demarcation cabinet will be placed off the shoulder of northbound side.

Table 1 lists all active projects within the proposed project limits as of July 2001.

3. Need and Purpose

Heavy trucks are slow on long climbing grades, which results in further congestion along SR-57 corridor. The Department performed manual truck traffic counts that indicated that there was over 12% of truck traffic during peak hour and 17.63% truck traffic during midday hour within the project limits. A climbing lane would improve truck traffic travel speed and would increase the throughput of northbound SR-57.

The Department and OCTA has identified SR-57 northbound from Lambert Road Undercrossing to approximately one kilometer north of Orange County/Los Angeles County line as a chokepoint in this major north/south transportation corridor serving Orange County and the region. The Department is preparing this Project Study Report to develop alternative solutions to program available funding for design of a climbing lane in the northbound direction.

"Operations Enhancement Study of SR-57 Between I-5/22/57 Interchange and the Los Angeles County Line" year 2000 traffic conditions were used as the existing conditions for the purpose of this study. The existing northbound Peak Hour volume within the proposed project limits was 6,710 vehicles per hour for the mixed flow lanes and 1,630 for the High Occupancy Vehicles (HOV) lane. The existing northbound average daily traffic (ADT) was 92,840 vehicles per day for the mixed flow lanes and 17,790 for the HOV lane. **Attachment C, D and E** show the Peak Hour, ADT and HOV traffic volume diagrams. This simulation study concluded the existing average travel speed was approximately 10 miles per hour during P.M. peak hour in the northbound direction of SR-57, or equivalent to a Level of Service (LOS) "F".

The forecasted 2020 peak hour volume is 23,558 vehicles per hour. Apply existing directional split of 54% in SR-57 northbound P.M. peak hour, 2020 peak hour volume in the northbound direction will be 12,720 vehicles per hour.

Attachment F exhibits the following:

i. Manual Traffic Counts
ii. Congestion Monitoring Data 1999
iii. Year 2000 15-minute Loop Traffic Data Report

The Southern California Association of Governments (SCAG) Region 1998 Regional Transportation Plan projected that the 2020 daily truck volumes of SR-57 will be 40,000 or more. This makes the SR-57 a major interregional goods movement corridor. **Attachment G** shows the SCAG projected year 2020 truck volume.

Traffic Studies Branch of the Department conducted a research of accidents within the project limits between January 1, 1995 and December 31, 1999. The result shows that the actual accident rate is not higher than the average of similar state highways. There were total of 76 accidents during the period within project limits. Of which, 46% of all accidents involved trucks, 19% of injury accidents involved trucks, and the only fatality occurring during this period involved a truck. Data also shows that the majority of the truck-related accidents occur on weekdays, during daylight hours, under dry pavement conditions. All accidents were non-alcohol related. The majority of the accidents occurred during morning and afternoon peak periods. Predominant accident locations were in the right lane.

One additional climbing lane potentially would be capable of improving the safety of the traveling public. A larger percentage of the heavy vehicles and slower traffic is expected to use the climbing lane, hence, reduce the percentage of the truck/passenger car mix within the proposed project limits. Traffic Accident Surveillance and Analysis System Table B is included in **Attachment H**.

4. Alternatives

The existing SR-57 facility consists of 8+2 HOV lanes. Widening the existing freeway would remove the current traffic congestion chokepoint. The following alternatives were developed for the continuous climbing grade in the northbound direction. Typical cross sections, ramp profiles, and layout plans are included in **Attachment I**. Project limits are from SR-57 Lambert Road Undercrossing to approximately 1100--m north of Orange County/Los Angeles County line in all alternatives. In alternatives 2, 3, and 4 discussed below, the SR-57 mainline was proposed widening to accommodate two future traffic lanes where in Alternative 1 one future lane was proposed. The geometric design of the Lambert Road northbound on-ramp and the Tonner Canyon northbound off-ramp described in Alternative 1 would apply to all alternatives. The Department's area maintenance unit requested a 5.5-m shoulder at retaining wall locations for the accessibility of motorized cleaning equipment. This request was accommodated in all alternatives due to this area frequently experiencing slope surface slides.

The left shoulder is proposed to keep the existing 0.6-m from the median barrier for all alternatives. Physical constrains created by the steep existing cut slopes, larger environmental impact, and tremendous additional construction cost derived this decision. A Fact Sheet of mandatory design exception has been prepared.

The Department's Division of Structures performed an Advanced Planning Study for the Tonner Canyon Road Undercrossing widening and the soil nail earth retaining walls on cut slopes. In this planning study, Alternative 2 – two-lane bridge widening would also be applicable to Alternative 3, and 4. The structures advanced planning study plans are included in **Attachment J**.

4.1 Minimum Build Alternative –Alternative 1

One-lane widening with retaining walls – Construct one additional 3.6-m lane with 5.5-m shoulder where retaining wall would be required in SR-57 northbound. Widen Tonner Canyon Bridge for one additional 3.6-m lane with 3-m right shoulder plus 1.2-m buffer between HOV lane and the mix-flow lanes. Construct soil nail retaining walls for all cut slopes, Mechanically Stabilized Embankment (MSE) at the fill slope for Tonner Canyon Bridge south abutment with minimum grading.

Alternative 1 would realign and widen northbound on-ramp at Lambert Road. The design provided three metered lanes (10.8 m) on the ramp with 1.2-m shoulder on both sides, as well as the needed storage length to relieve peak hour traffic congestion on Lambert Road. The ramp termini would be held as existing at Lambert Road.

Realignment of SR-57 northbound off-ramp at Tonner Canyon Road to accommodate the added climbing lane would also be required. The slope at the off-ramp left shoulder would be graded back at 1:2 to allow the ramp realignment. Grading in this area would be within the existing Right of Way. The proposed design holds the exiting ramp geometry at the ramp termini at Tonner Canyon Road. The ramp was designed with a Portland Cement Concrete (PCC) structural section with Asphalt Concrete shoulders.

This alternative would require approximately 403 square meters additional right-of-way at Tonner Canyon Creek for bridge widening.

There would be seven retaining walls required in this alternative. Retaining Wall 2 would be on embankment; remaining walls would be on cut slopes. Layout sheet L-1 through L-12 is included in Attachment I and the estimated cost of this alternative is as follow:

R/W Cost = $0.73 million
Environmental Mitigation Cost = $8.13 millions
Roadway Items Cost = $14.37 millions
Retaining Wall Cost = $16.7 millions
Bridge Cost = $1.6 millions

The Department completed a geotechnical investigation within the project limits. Upon the completion and availability of the Geotechnical Recommendations Report, slope stabilization measures would recommend whether the existing cut slopes soil conditions permit the type of proposed retaining walls would be determined.

4.2 Alternative 2

Two-lane widening with retaining walls - Construct two additional 3.6-m lane with no shoulder, but widen to allow a 5.5-m shoulder to be constructed in the future from the Lambert Road Undercrossing to approximately 1100-m north of Orange County/Los Angeles County line. Widen Tonner Canyon Bridge for two additional 3.6-m lanes with a 3-m right shoulder, plus a 1.2-m buffer between the HOV lane and the mixed-flow lanes and construct the Soil Nail retaining walls for the cut slopes at the proposed edge of shoulder. Type 60D concrete barrier (see the Department's Standard Plans for details) would be utilized at the retaining wall face in all alternatives.

This alternative would require approximately 653 m^2 additional right-of-way at Tonner Canyon Creek for bridge widening.

There would be six retaining walls required in this alternative. The Retaining Wall 2 would be on embankment; the remaining walls would be on cut slopes. Due to the height and soil conditions, headquarters Structure Advanced Planning Studies recommends the use of the Soil Nail earth retaining system on the cut slopes and the Type I retaining wall on piles for the embankment Wall 2. The existing slopes beyond the retaining wall limits would remain undisturbed in this alternative.

New pavement limits would be from the existing Edge of Traveled way (ETW) to the new ETW covering the two new lanes. Pave only the traveled lanes, using the outside future lane as the interim shoulder. A swale would be graded within the 5.5-m unpaved section to help drainage. With this configuration, the interim shoulder would have a 2% cross-slope Since is would be a future lane. The cross-slope on the new traveled way pavement section should be investigated further in the design phase, perhaps sloping the outer lanes at 2.5% to 3% would help keeping the water off the pavement. If a 2.5% to 3% cross-slope would be desirable, a mandatory design exception is required. This suggestion applies to all alternatives. Layout plan sheets L-1 through L-12 are included in Attachment I.

The estimated cost of this alternative is as follow:

R/W Cost = $0.98 million
Environmental Mitigation Cost = $8.45 millions
Roadway Items Cost = $17.81 millions
Retaining Wall Cost = $22.6 millions
Bridge Cost = $2.4 millions

4.3 Alternative 3

Retaining Walls and flat slope - Applying the same geometric as Alternative 2, but with grading of the cut slopes to 1:2.5 or flatter where possible. Maintain top of slopes between 3.0-m to 17.0-m to the existing Right of Way fence and compact the soil to create a "cap" for the slope per previous geotechnical recommendations made by Ninyo & Moore Inc. in the 1994 study. A 10.0-m Temporary Grading / Construction Easement would be required from STA 219+80 to STA 228+00. Grading the hill to 1:2.5 slope between the SR-57 freeway and the Brea Olinda High School between STA 222+80 to STA 225+00 would cause the toe of cut slopes encroach the Brea Olinda High School property line. Other construction requirements would be buttress fill at the slope failure located near station 224+00 and the grading of a bench at the top of slope with access from the Lambert Road on-ramp. SR-57 mainline north of Tonner Canyon Road in Alternative 3 would be very similar to Alternative 2.

The Department's Environmental Engineering Branch has conducted an initial site assessment and determined that no freeway noise will impact the High School and no soundwall would be required.

The Layout sheets L-1 through L-12 are included in Attachment I and the estimated cost of this alternative is as follow:

R/W Cost	= $1.13 millions
Environmental Mitigation	Cost = $11.67 millions
Roadway Items Cost	= $29.93 millions
Retaining Wall Cost	= $14.24 millions
Bridge Cost	= $2.4 millions

4.4 Alternative 4

Widen southbound side fill slope, realign SR-57 mainline north of Tonner Canyon off-ramp
This alternative would combine with Alternative 2 from the Lambert Road Undercrossing to approximately 380-m north of the Tonner Canyon Bridge. Alternative 4 layout sheets L-1 through L-5 and L-7 are the same as Alternative 2 plans; therefore, reference Alternative 2 plans. Alternative 4 plan sheets L-6, L8 through L-12 are included in Attachment I. In this alternative the existing SR-57 centerline alignment would be shifted approximately 10.0-m to the west, widen the southbound side fill slope, construct the Mechanically Stabilized Embankments (MSE) at the edge of shoulder. In addition to the widening for the northbound climbing lanes, one extra lane would be provided for southbound future widening. This traveled lane would be paved and used as a interim shoulder. There would be a 3.0-m wide unpaved section for future shoulder.

At the proposed SR-57 centerline, the Type 60GC median concrete barrier would be employed to accommodate approximately 300-mm grade separation between the northbound and the southbound roadway. The existing median shoulders would be replaced with Portland Cement Concrete (PCC) pavement or Asphalt Concrete (AC) pavement to match existing. The type of pavement section would be determined by matching with the adjacent existing traveled lane pavement. The Southbound side pavement section would apply the same strategy of removing the existing shoulder and constructing proposed pavement matching the existing pavement type.

The environmental impact would be addressed during the project approval phase of the project initiation and development processes.

R/W Cost = $0.98 million
Environmental Mitigation Cost = $8.06 millions
Roadway Items Cost = $23.36 millions
Retaining Wall Cost = $15.89 millions
Bridge Cost = $2.4 millions

4.5 Other Concepts Considered

During the project study phase additional concepts and a number of potential candidate alternatives were developed and determined not cost effective. These concepts include:

4.5.a Maximum Grading - Apply the same Geometric as in Alternative 2, grade the cut slopes at 1:2.5 to daylight. This concept explored the maximum Right of Way impact and environmental impact as displayed in Exhibit 1

4.5.b Wall on slope - Apply the same Geometric as in Alternative 2, construct retaining wall on the graded 1:2.5 slope where the wall would be placed 38-m (median distance from proposed toe of slope to existing Right of Way) away from the proposed edge of shoulder. This proposal held the top of slope (slope is also 1:2.5) 3-m to existing R/W line.

4.5.c Raised CD Road – Typical cross section of this concept is shown in Exhibit 2. Immediately after Lambert Road undercrossing create a single lane exit ramp from the mainline. Raise the profile after the exit-nose to join with the northbound on-ramp adding one more lane. Continue to raise this two-lane collector-distributor road to approximately 2 to 3 meters above the existing northbound roadway centerline profile. This concept limited the access to Tonner Canyon Road.

4.5.d Two Walls on Slope - Apply the same Geometric as in Alternative 2; construct two retaining walls on the graded 1:2.5 slope. As illustrated in Exhibit 2, the lower wall would be at the proposed edge of shoulder, while the higher wall would be located in the middle of the cut slope. The purpose of introducing this concept is to reduce the wall height in comparison with Alternative 2.

4,5,e Separate NB Profile - Construct a retaining wall in the median of the existing freeway, raising the full width of the northbound roadway approximately 3.0 meters beginning at the Lambert Road Undercrossing. This would allow widening as Alternative 2, at the same time, greatly reducing retaining wall height. The slope flattened back to 1:2.5 to the existing Right of Way line where possible, and the excavated earth would be used as embankment material.

4.5.f Double Deck – Construct an elevated viaduct on top of the existing freeway in the northbound direction to increase the through traffic flow rate.

4.5.g Half Tunnel – Construct half tunnel contain two traveled lanes with 1.5-m left shoulder and 3.0-m right shoulder. Allow 3-meter shoulder between the tunnel and the existing freeway. The tunnel top would be open on the side of existing freeway with columns and arches evenly spaced. On the cut slope side, the tunnel top would be enclosed and the side would be formed by retaining wall.

4.6 No Build Alternative

No build - This alternative would create a standstill condition for the design year 2026. Using the OCTA recent Operations Enhancements Study as a reference, the existing average travel speed along SR-57 corridor northbound is at about 10 miles per hour during the peak hours. With peak hour volume nearly doubling, the peak duration would extend to 3 to 4 hours in both morning and evening. There would also be developments occurring near the Tonner Canyon Road Undercrossing. Tonner Hills development project proposed by the Nuevo Energy Company, for example, is already in the Environmental Study stage at the time this report is prepared. This would make future R/W acquisition very costly if not impossible.

4.7 Analysis of Proposal

The forecasted 2020 peak hour volume would be 23,558 vehicles per hour. Apply existing directional split of 54% in SR-57 northbound P.M. peak hour, 2020 peak hour volume in the northbound direction would be 12,720 vehicles per hour. The Department's System Planning Branch extrapolates traffic volumes using a growth factor to 2026 for 20 years after completion of the proposed construction. In 2026 null scenario, the ADT is forecasted to be 180,700 vehicles per day in northbound; in Concept scenario, the ADT would be 168,300 vehicles per day.

Alternative 1 – add one lane - This alternative would set the ultimate capacity of SR-57 to 1 HOV + 4 Mixed flow lanes + 1 climbing lane in the northbound direction. It would not be economically or technologically justifiable to replace these retaining walls for widening again in the future. The estimated cost of this alternative is not significantly lower than the "add 2 lanes" alternatives.

Alternative 2 - add two lanes - Depending on the geotechnical recommendations from April 2001 geotechnical investigation, slope stabilization measures might be required for the existing cut slopes before a retaining wall would be permitted. For segments where geotechnical data would not support a surcharged soil nail wall, slope stabilization means such as evenly spaced soil nails may need to be introduced, or the application of Alternative 3 (discussed in section 4.3) could be an alternative.

Alternative 3 - add two lanes - In comparison with Alternative 2, this alternative could reduce retaining wall heights and lengths at three locations, thereby, reducing the cost of retaining walls by $11.6 millions. The same benefits could not be obtained on the cut slope north of Tonner Canyon Road due to the height of the existing slope. One of the goals of this alternative would be to construct retaining walls only as necessary to keep cut slopes within existing Right of Way. Retaining wall locations are generally the same as in Alternative 2 with reduced length and height. Nevertheless, the roadway construction cost of this alternative increased by $12.1 millions compared to Alternative 2 due to the increased earthwork. The estimated environmental mitigation cost also increased over $3.2 millions to $7.4 millions. In addition, the hazardous material mitigation may cost $4.2 million.

Alternative 4 - add two and three lanes - This alternative eliminates the need of a 960-m long, and a 70-m long retaining wall on the cut slopes north of Tonner Canyon off-ramp. By shifting SR-57 centerline approximately 10-m to the west, widening the southbound side fill slope and constructing Mechanically Stabilized Embankments, the needed pavement width would be achieved.

The advantages of this alternative would be minimizing construction impact on corridor operations; construction of the MSE widening would be cost-effective compared to the soil nail retaining wall on cut slopes. In addition, this alternative would offer one additional lane in the southbound direction between Sta. 236+00 to Sta. 250+22 for future widening; and better earthwork balance by allowing contaminated cut material from the northbound slopes to be placed as backfill for the widened section along the southbound lanes. In the Environmental Document phase of the project would address this idea and could possibly save significant portion of hazardous material mitigation cost. Grading of one additional lane in the southbound direction for future widening would also be in conformance of the Transportation Concept Report.

During the course of the SR-57 northbound climbing lane widening study, the project was identified as a candidate for a Value Engineering Analysis. Since the project has not been programmed, it is recommended that the value analysis be postponed to the Project Report phase. This recommendation was made because the project is in the proposal stage, and is lack of geotechnical recommendations, and the type of retaining walls could not be determined for the value analysis.

4.8 Costs

Preliminary construction costs were estimated on four viable alternatives 1, 2, 3, and 4. The estimated categories include, Roadway, Structures (bridges and retaining walls), Right-of-Way, and Environmental Mitigation, Itemized cost details are presented in **Attachment K**, summaries are tabulated in the following Tables 2, 3, 4 and 5.

Table 2 Roadway Cost Estimate (Current $)

	Alternative 1 (add 1 lane)	Alternative 2 (add 2 lanes)	Alternative 3 (add 2 lanes)	Alternative 4 (add 2&3 lanes)
Structures				
Bridge	$1,600,000	$2,400,000	$2,400,000	$2,400,000
Retaining Walls	$16,700,000	$22,600,000	$14,240,000	$15,890,000
Roadway Items	$14,374,000	$17,810,000	$29,934,000	$23,365,000
Support Cost	$12,581,000	$16,142,000	$17,813,000	$14,988,000
Subtotal	$45,255,000	$58,952,000	$64,387,000	$56,643,000

Table 3 Right-Of-Way Cost Estimate (Current $)

	Alternative 1 (add 1 lane)	Alternative 2 (add 2 lanes)	Alternative 3 (ALT. 2A on Data Sheet) (add 2 lanes)	Alternative 4 (add 2&3 lanes)
R/W	$733,700	$986,000	$1,129,000	$986,000

Table 4 Environmental Cost Estimate (Current $)

	Alternative 1 (add 1 lane)	Alternative 2 (add 2 lanes)	Alternative 3 (add 2 lanes)	Alternative 4 (add 2&3 lanes)
Environmental				
Bio Mitigation	$3,931,000	$4,246,000	$7,471,000	$3,856,000
Hazardous Mat.	$4,200,000	$4,200,000	$4,200,000	$4,200,000
Subtotal	$8,131,000	$8,446,000	$11,671,000	$8,056,000

Table 5 Alternative Cost Summary (Current $)

	Alternative 1 (add 1 lane)	Alternative 2 (add 2 lanes)	Alternative 3 (add 2 lanes)	Alternative 4 (add 2&3 lanes)
Preliminary Estimated Total	$54,120,000	$68,384,000	$77,187,000	$65,685,000

Table 6 Support Cost (Alternative 4)

SR-57 NB Climbing Lane Project
EA: 0C120K

SB45 HOUR DISTRIBUTION PER FISCAL YEAR :

SB45	HOURS	PY'S	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06 +
ENVIR	16,209	9.22			333	447	6,059	3,015	2,045	4,311
PS&E	112,315	63.89			666	893	6,208	4,290	44,942	55,316
R/W	15,462	8.80			333	447	447	555	7,067	6,614
CON SU	93,230	53.03			333	447	447	448	447	91,109
TOTAL=	237,217	**134.94**			1,664	2,234	13,160	8,308	54,501	157,350

$ 86,552.52	$ 120,210.94	$ 733,066.21	$ 479,008.74	$ 3,252,111.64	$ 10,317,103.44	**$ 14,988,053**

5. System Planning

District System Management Plan –Routes 57 improvements from I-5/22/57 interchange to Los Angeles County line and freeway extension to Interstate 405 were studied. The proposed project complements District 12 SR-57 freeway Transportation Concept Report. The concept report described that the existing 10-lane facility (2 HOV + 8 mixed-flow) was operating at Level of Service (LOS) "F0" during peak hour in 1997. The report further projected that in 2020 with 2 HOV lanes + 8 mixed-flow lanes + 2 lanes + auxiliary lane configuration, peak hour LOS would be "F2". The Department is currently developing a strategy emphasizing system management and operational improvements of our existing freeway system optimizing the capacity. This strategy is referred to as Traffic Operations Strategies (TOPS). TOPS maximize the utilization of the existing urban freeway system through performance-based investment strategies. If fully implemented, the concept for this route could be improved to a Level of Service "E".

SR-57 serves as a major goods movement corridor. From SR-91 north to SR-60, there is a large presence of commercial and industrial developments adjacent to SR-57 and near Imperial Highway. Manual truck traffic-counts results showed 11.98% of trucks volume during peak hours between Lambert Road and Los Angeles County line. The highest hourly truck count revealed truck traffic as high as 17.6% midday.

SR-57 connects SR-60, Interstate 10, Interstate 210 northerly in Los Angeles County, SR-91 in the middle, Interstate 5, SR-22 and 55 southerly in Orange County. The proposed project would be located at the Orange County and Los Angeles County line and would serve as an essential element – a gateway to the north of the entire corridor in Orange County.

Recent OCTA study indicated that a number of operational improvements project studies for SR-57 northbound are underway (contracted to consultants by OCTA) with the assumption of this proposed climbing lane widening project would be constructed. These OCTA contracted projects include additional auxiliary lane(s) at SR-91 between the eastbound and the westbound connectors, and from Imperial Highway to Lambert Road Undercrossing. The proposed climbing lane widening project would serve as a gateway of Orange County north to San Gabriel Valley and Inland Empires, and would be integrated with other state highway improvements. The OCTA "SR-57 Operation Enhancements Study" concluded that the climbing lane project would result in significant improvements of travel speeds along the corridor-approximately 75% to 115% increase in average travel speed over existing conditions and a reduction in total delay by 39% to 59%.

The Department is studying direct HOV connection to and from SR-60 east of SR-57. The direct HOV connection project would further enhance the mobility of these two corridors by reducing weaving movements, thus reaching better overall level of service. The direct HOV connector project is not currently programmed.

Orange County Transportation Authority is also proposing a Centerline Rail Transit system, which will connect Fullerton, Anaheim, Santa Ana, Irvine, and Lake Forest. This system is intended to relief the North-South congestion. When this system is complete and operational, an extension of the Centerline from the City of Fullerton to the City of Walnut could provide an interregional multi-modal transportation system for the San Gabriel Valley and the Inland Empire to south Orange County commuting public. Currently Walnut has Metro Link east-west alignment station.

6. Hazardous Waste

A portion of the SR-57 cut slope, between Lambert Road and Tonner Canyon, contains naturally occurring petroleum hydrocarbons. The slope in this area has been experiencing failures due to the unstable soil conditions.

The Department's Environmental Engineering Branch (EE Branch) is currently conducting subsurface Site Investigation (SI) in order to evaluate the nature and extent of the contaminated area. As a part of this investigation, EE Branch performed a few deep drillings along the slope and collected soil samples. The collected samples were tested and a SI report containing test results is being prepared. In order for EE Branch to generate remedial measure alternatives for the impacted soil in this area, the SI report would have to be submitted to regulatory agencies for review and recommendations. Once the regulatory agency provides the review comments, EE Branch would then be in a position to evaluate alternatives for handling the contaminated soil. Consequently, the associated cost for remedial or disposal of the contaminated soil would be estimated and included into the total cost of the climbing lane widening project. Currently, the estimated amount for the Hazardous Waste related work is $4,200,000, which may need to be revised once the assessment of the impacted soil is finalized.

Lead Investigation

The soil in unpaved areas next to the traffic lanes or shoulders might be contaminated with the Lead from vehicle emissions. Soil samples would be collected, tested and analyzed for lead contamination during the Plans Specification & Estimate (PS&E) phase of the project development process. The EE Branch would conduct the Lead Investigation during the early stage of design since the typical lead investigation process takes about four to six months. It would be essential that the Design Branch provide EE Branch with two sets of the plans showing the limits of the excavation at the early stage of PS&E for lead investigation. If lead contamination were found, the results/conclusions would be included in the PS&E package.

7. Traffic Management Plan

Traffic Management Plan (TMP) was developed to manage the traffic during construction. SR-57 during construction, all lanes would be delineated to 3.35-m in width, shoulders would temporarily be removed except where horizontal curves exist, HOV lane buffer would temporarily be reduced to 0.3-m. Type K temporary railing would be employed to protect the construction zone. Full freeway closures would not be expected for this project; however, localized temporary lane closure of up to 2 mix flow lanes on the right side from 10:00 P.M. to 5:00 A.M. would be expected at the beginning of the project. These off peak closures would offer the window to construct a temporary shoring 4.0m from the existing edge of Shoulder. In Attachment I, construction-staging plan SC-1 shows preliminary staging concepts.

The Transportation Management Plan would be developed during design to identify methods that would minimize construction impact on traffic. Up to six (6) Fixed and/or Portable Changeable Message Signs would be expected through out the construction phase. Construction area signs, Detour signs, Freeway service patrol, COZEEP/ CHP Support, Traffic Management Center, Traffic Signal Modifications, Traffic Management Team, and Public Awareness would all be integral parts of this effort. Implementation for the proposed Traffic Management Plan is estimated at approximately $365,000.

8. Environmental Determination

The preliminary investigation of the proposed project focused on the direct impacts regarding a build alternative, typically from median of the highway to the top of the slope on either side. The potential for adverse impacts in this environmentally sensitive area would affect the viability of alternatives and involve extensive studies and time-consuming processes that could effect schedules. The anticipated documentation for CEQA and NEPA compliance would be an Environmental Impact Report/Environmental Impact Statement (EIR/EIS), with Caltrans as the Lead Agency for CEQA and Federal Highway Administration (FHWA) as the Lead Agency for NEPA. The EIR/EIS could require three years to prepare without extensive studies or time-consuming processes.

The reviews for biological concerns, cultural resources, and hazardous materials identified potential issues that could affect cost and/or schedules. The environmental setting includes Endangered Species (Federal and State), Species of Concern, and would require a Biological Assessment and Wetland Delineation, incorporated into a Natural Environmental Study (NES). The NES could help identify mitigation for temporary and permanent impacts. Reasonable mitigation costs are generally considered to be up to 10% of the project cost. For this project, biological mitigation could include California Gnatcatcher exclusion, restricted construction scheduling, habitat enhancement, habitat restoration, or habitat replacement. Special considerations for the following processes have the potential to complicate, slow, and essentially lengthen the environmental process. For this project special considerations may entail; Section 7 Coordination, bird surveys, turtle surveys, wetland delineation, coordination with several resource and/or regulatory agencies, possible NEPA 404 Coordination, and adherence to the Migratory Bird Treaty Act.

Time constraints for performing the surveys required in the NES are dictated by the regulatory agency and seasonal conditions. Surveys can require one to three years. Excluding the cost for surveys, permits, and monitoring of the mitigated areas; the biological issues could cost $4,756,000. There appears to be no cultural resources located within the project limits; however, the presence of fossil fuels could suggest paleontological resources. Hazardous waste may occur within the project limits. An Initial Site Assessment would report the findings and confirm or negate an added $4,200,000 for Hazardous Waste to the project cost making the mitigation costs $8,900,000.

The following table presents the anticipated permits required for this proposed project.

Regulation and Description		Resource Agency
Section 7	Endangered Species Act - Conserve End. Species	US Fish and Wildlife Service
Section 1601	Fish and Game Code - Streambed Alteration	CA Department of Fish and Game
Section 404	Clean Water Act - Dredge and Fill	US Army Corps. of Engineers
Section 401	Clean Water Act - Waste Discharge Certification	Santa Ana RWQCB
Section 402	Clean Water Act - NPDES, Stormwater	Santa Ana RWQCB
Section 10	Rivers and Harbors Act - Navigable Waters	US Army Corps. of Engineers

For more detailed information please review **Attachment L**, which is the Preliminary Environmental Assessment Report.

9. Right of Way

Tonner Canyon Bridge widening would require additional right-of-way. Temporary Construction Easements would be required from the Nuevo Energy Company for work adjacent to the south bridge abutment. One lane widening concept would require 403 m^2 additional R/W, and the two lane widening concept would require 653 m^2 additional R/W. Temporary Construction easements

would also be required at numerous locations for grading purposes. These areas were identified on the layout plans. There would also be extensive utility involvement as outlined in Attachment M.

The County of Orange issued a Notice of Intent to Prepare Environmental Impact Report (EIR) #581 on March 27, 2001. The Tonner Hills Specific Plan Environmental Impact Report is a proposed project, which involves a comprehensive plan to reuse 789.8 acres of land that has been used for oil and gas production for approximately 100 years. This project boarders with SR-57 R/W on both northbound and southbound between Tonner Canyon Road and Lambert Road Undercrossing. The Department's Project Studies Branch reviewed and commented on this notice via inter governmental review process.

Temporary construction easement would be required for grading purposes at the top of slope north of Lambert Road Undercrossing. The Department's right-of-way abuts the Olinda High School from approximately Station 221+00 to 228+00 of SR-57. Uniformly 10-m (15-m for sta. 222+40 to 225+00) of Temporary construction easement would be required for Alternative 3 construction.

For detailed information, refer to **Attachment M** - Right of Way Data Sheet. The Alternative 2A in the Right of Way Data Sheet is referred as Alternative 3 in this report.

There would be no Railroad involvement for the proposed project.

10. Construction

10.1 Staging and Detours

Lambert Road northbound two lane on-ramp would remain operational during its realignment and widening construction. Temporary night closures would allow traffic shifts from existing ramp alignment to the easterly half of the proposed ramp. Prior to construction, the oil well and oil pipelines would need to be protected in place. Tonner Canyon Road off-ramp will remain open with a minimum of one lane during the realignment. Temporary ramp closure would be anticipated for the duration of weekend days. This period would be required for the bridge abutment widening grading work and ramp realignment construction. In the event of prolonged ramp closure, detours would be available as illustrated in Figure 1 and Figure 2 below.

The following is anticipated construction staging sequence for Tonner Canyon off-ramp realignment:

- Mobilization
- Implement Traffic Management Plan
- Re-delineate freeway within the project limits
- Clearing & Grubbing, existing features removal and salvage
- Structures Construction
- Close the left lane of the Tonner Canyon off-ramp setup Type K barrier on the existing station line
- Slope excavation would take place first to the off-ramp left shoulder
- Grading and paving portion of new ramp
- Shift traffic to the new ramp with one lane open
- Grading and paving remaining portion of new ramp

Within the Tonner Canyon off-ramp loop area, approximately 13,000 m^2 space may be usable for storage by the contractor. In addition, under the undercrossing structure about 3,000 m^2 would be available for construction site office plus equipment yard use.

Alternative 4 staging would occur in south and north segments. The south segment begins with the Lambert Road on-ramp to the north of Tonner Canyon Road off-ramp at Station 235+40, where the north segment begins at Station 235+40 to the end of the project in Los Angeles County. The south segment would utilize the same methods to construct Alternative 2. The first stage of the north segment would construct the MSE Walls 4 and 7 to achieve the roadway width. Next stage would be constructing the southbound widened pavement section between STA. 236+40 and STA. 250+22; then, shift traffic to the newly constructed southbound roadway, begin construct the median pavement; finally shift northbound traffic to its new roadway, and construct northbound side soil nail Walls 5 and 6. Construction staging would be studied further in the design phase.

Detours

Tonner Canyon off-ramp detour from Lambert Road exit ramp (Figure 1):

- SR-57 northbound Exit Lambert Road going west
- to State College Blvd. going northwest
- to North Brea Blvd. going north to Tonner Canyon Road

Tonner Canyon off-ramp detour from Diamond Bar Blvd. exit ramp (Figure 2):

- SR-57 northbound Exit Diamond Bar Blvd. going east
- to Brea Canyon Road going south
- to Tonner Canyon Road

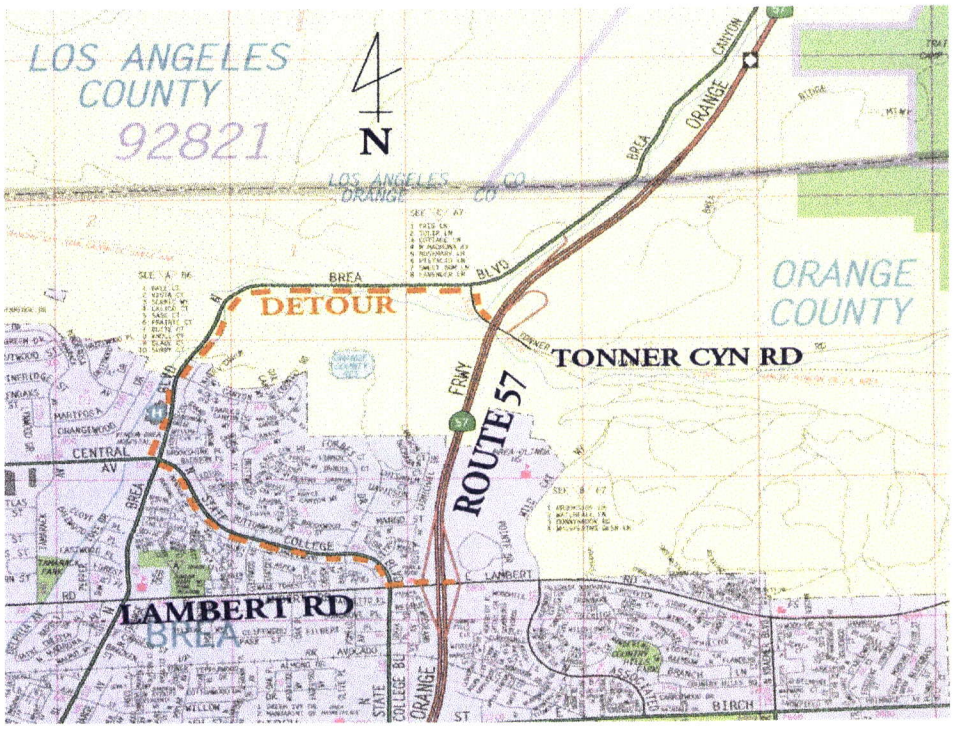


Figure 1 Tonner Canyon Ramp Detour Map (from Lambert Road exit ramp)

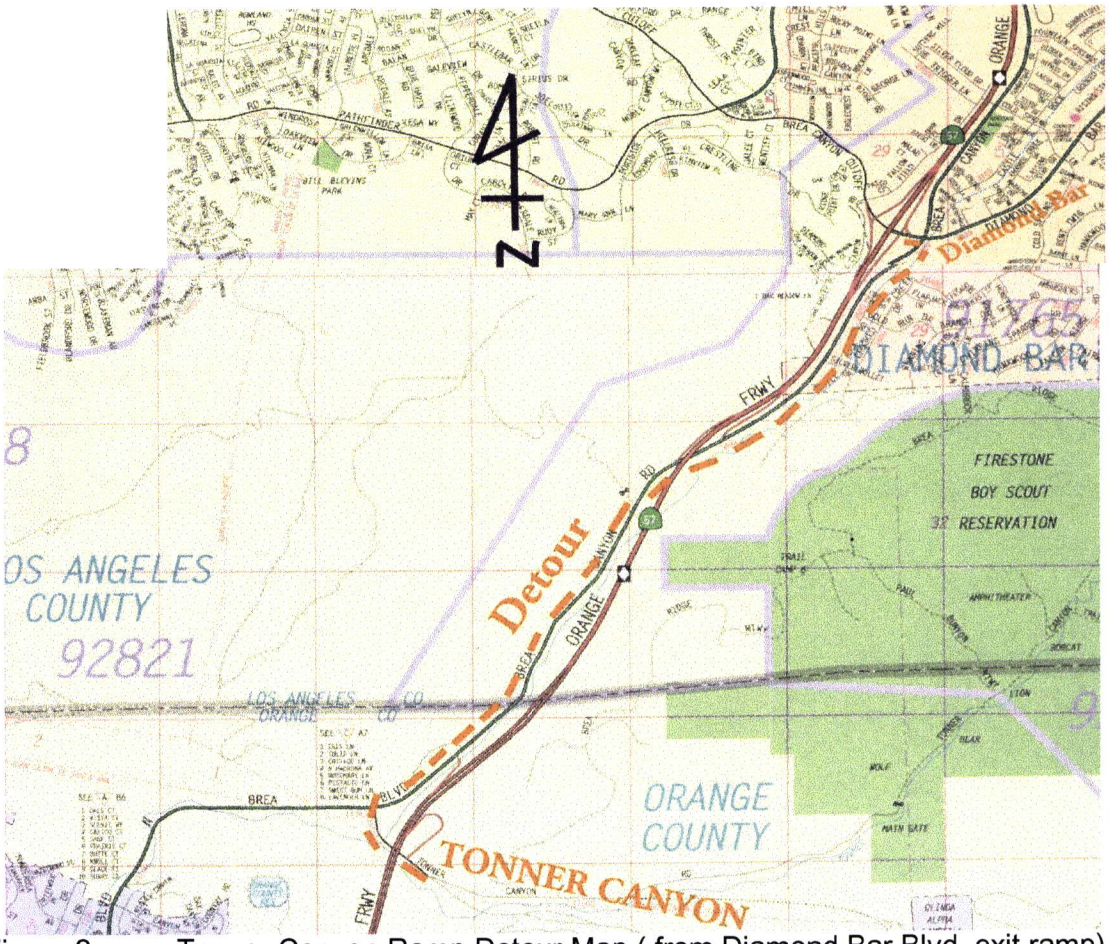


Figure 2 Tonner Canyon Ramp Detour Map (from Diamond Bar Blvd. exit ramp)

10.2 NPDES Permit Compliance Requirements

National Pollutant Discharge Elimination System (NPDES) permit is required for construction projects. The storm water pollution control provisions are provided in the Department's Manual "Storm Water Quality Handbooks – Project Planning and Design Guide", Section 2, Storm Water Quality Considerations during Project Planning. For ease of reference, below an attachment is also included herewith, which outlines NPDES Provisions.

NPDES PROVISIONS

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Contractor shall fully conform to the requirements of the Caltrans Statewide National Pollutant Discharge Elimination System (NPDES) Storm Water Permit, Order No. 99-06-DWQ, NPDES No. CAS000003, adopted by the State Water Resources Control Board on July 15, 1999. When applicable, the contractor shall also conform to the requirements of the General NPDES Permit for Construction Activities, Order No. 99-08-DWQ, NPDES No. CAS000002, and any subsequent General Permit in effect at the time. These permits regulate storm water and non-storm water discharges associated with year-round construction activities. Please note that the Santa Ana Regional Water Quality Control Board has designated October 1st through May 1st as the "Rainy Season".

For all projects resulting in 2 hectares (5 acres) or more of soil disturbance or otherwise subject to the NPDES program, the Contractor shall develop, implement, and maintain a Storm Water Pollution Prevention Plan (SWPPP) conforming to the requirements of the Caltrans Specification Section 7-1.01G "Water Pollution Control", Caltrans Statewide NPDES Permit, the General NPDES Permit for Construction Activities, and Caltrans Storm Water Quality Handbooks "Storm Water Pollution prevention Program (SWPPP) and Water Pollution Control Program (WPCP) preparation Manual" and Construction Site Best Management Practices (BMPs) Manual" effective November, 2000 and subsequent revisions.

For all projects resulting in less than 2 hectares (5 acres) of soil disturbance or not otherwise subject to the requirements of the NPDES program, the Contractor shall develop, implement, and maintain a Water Pollution Control Program (WPCP) conforming to the requirements of Caltrans Standard Specifications Section 7-1.01G, "Water Pollution Control", and "Caltrans Storm Water Quality Handbooks "Storm Water Pollution Prevention Plan (SWPPP) and Water Pollution Control Program (WPCP) Preparation Manual" and Construction Site Best Management Practices (BMPs) Manual" effective November, 2000 and subsequent revisions.

Copies of the Permits and the Caltrans Storm Water Quality Handbooks may be obtained from the Department of Transportation, Material Operations Branch, Publication Distribution Unit, 1900 Royal Oaks Drive, Sacramento, California 95815, Telephone: (916) 445-3520. Copies of the Permits and Handbook are also available for review at Caltrans District 12, 3351 Michelson Drive, 3rd floor, Irvine, California 92612, Telephone: (949) 724-2188. Copies of the manuals may also be obtained from the Department's Internet Web Site at: http://www.dot.ca.gov/hq/construc/stormwater.html

Revised 02/01

NPDES Budgetary Cost Estimate

In order to establish a budgetary cost, the engineer should calculate the area of disturbance and determine the type of water pollution control document to be prepared for the project. If the area of disturbance is less than 5 acres, (1 acre for projects with a construction completion date after March 2003), a Water Pollution Control Program (WPCP) is required. If the area of disturbance is more than 5 acres, (1 acre for projects with a construction completion date after March 2003), a Storm Water Pollution Prevention Plan (SWPPP) is required. The proposed project has a total disturbed area approximately 23 acres. Thus, SWPPP would be applicable to this project.

SWPPP - Preparation

Section 2.5.1 of the above referenced manual suggests budgetary cost estimate for SWPPP Preparation to be about $5,000 to 10,000, plus $200 for each water pollution control sheet. A budgetary estimate of $7,500 would be suggested for this item.

SWPPP - Implementation

Section 2.5.2 of the above referenced manual suggests budgetary cost estimate for SWPPP implementation to be between 2% and 5% of the total construction cost, depending on project location and type and complexity of project as shown in Table 2-5 of the above referenced manual. Based on the estimated total roadway item cost, for budgetary estimate roughly 2% should be adequate for SWPPP implementation.

11. Funding/Scheduling

This project is considered as a "Category 4A" project for project development category assignment. The 2002 State Transportation Improvement Program (STIP) in the Interregional Transportation Improvement Program (ITIP) should fund the proposed project under program code 20.50.025.714. Funding may also be available through the State Highway Operation and Protection Program (SHOPP), as non-capacity increasing operational improvement project, or apply for local Measure "M" funding. The proposed construction begins fiscal year 2005/2006.

Interregional Transportation Improvement Program (ITIP) should be considered, as SR-57 is becoming increasingly important on goods movements. And the route will be carrying over 40,000 trucks a day by year 2020, as forecasted by the Southern California Associated Governments in April 1998 Regional Transportation Plan. This climbing lane widening is critical to be implemented now in order to facilitate the forecasted truck volume between the Orange County and Los Angeles regions.

Other funding sources should be considered are Orange County Measure "M" and the Regional Transportation Improvement Program. In the event that the current RTIP allocated to transit becomes available for highway use, this project has high priority for inter-regional goods movement. Table 6 shows the support cost distribution per Fiscal Year of Alternative 4.

In addition, Congestion Mitigation and Air Quality Improvement Funding (CMAQ) should also be utilized as this project enhances operation and reduces emission. This must be analyzed further in the Project Report and alternative analysis phase of the project initiation and development process. "Methods to Fund the Cost Effectiveness of the Funding Air Quality Projects" has been prepared as a guide for the preparation of an emission reduction analysis and can be found on California Department of Transportation website at (www.dot.ca .gov/hq/transprog/).

12. Recommendations

It is recommended that capital support costs for the next phase of this project be programmed. Support cost covers all alternatives studied until the PA&ED defines a preferred alternative.

13. DISTRICT CONTACT

Hammer Sui Project Engineer, Project Studies Unit	(949) 724-2412
Gary Slater Chief, Project Studies	(949) 756-7685
Pija Ansari Project Manager, Project Management	(949) 440-4497
Jose Hernandez Transportation Engineer, Traffic Operations North	(949) 724-2327
Saied Hashemi Chief, Traffic Operations North	(949) 724-2525
Leslie Manderschied Chief, Environmental Planning, Branch B	(949) 724-2122

APPROVAL RECOMMENDED BY:

for Eduardo Aminzcue DATE: 8/22/2001

SAIED HASHEMI
Branch Chief, Traffic Operations North
District Program Advisor

14. CONCURRENCE:

DATE: 8/31/01

CLARENCE OHARA
Office Chief
Engineering Services

DATE: 8-6-01

JAMES BEIL
Deputy District Director
Program/Project Management

Gail Farber DATE: 9-13-01

GAIL FARBER
Deputy District Director
Planning

DATE: 9/13/01

ENRIQUE ALONSO
Acting Deputy District Director
Operations and Maintenance

Frank Lin DATE: 9/13/01

FRANK LIN
Office Chief
Design

Krystal Merkwan Dwyer DATE: 8-22-01

KRYSTAL MERKWAN-DWYER
Acting Office Chief
Construction Administration

15. Reference

1. November 1989 — *Caltrans District 12* ***DISTRICT SYSTEM MANAGEMENT PLAN***
2. 1992 Draft — *Caltrans District 12* ***DISTRICT SYSTEM MANAGEMENT PLAN***
3. January 1991 — *Caltrans District 7 SR-57* ***ROUTE CONCEPT REPORT***
4. July 1999 — *Caltrans District 12* ***TRANSPORTATION SYSTEM DEVELOPMENT PROGRAM***
5. November 1999 — *Caltrans District 12 SR-57* ***ROUTE CONCEPT REPORT***
6. September 1998 — *Caltrans Districts 7,8 and 12* ***COUNTY LINE STUDY*** *(Draft)*
7. March 7, 2001 — *OCTA* ***OPERATIONS ENHANCEMENT STUDY of SR-57 Between I-5/22/57 Interchange and the Los Angeles County line*** (by Parsons Transportation Group)
8. June 2000 — *OCTA and SCAG* ***FOUR CORNERS STUDY*** *(by Parsons Brinckerhoff Quade & Douglas, Inc.)*
9. April 1998 — *SCAG* ***REGIONAL TRANSPORTATION PLAN*** *(by Southern California Associated Governments)*
10. July 1999 — *OCTA and SCAG* ***FOUR CORNERS STUDY*** *(by Parsons Brinckerhoff Quade & Douglas, Inc.)*

Attachment A

SR-57 NB Improvement with Climbing Lane
(from "Operational Enhancement Study of SR-57"
Between the I-5/22/57 Interchange
and the Los Angeles County Line)

Table 1 List of Active Projects within the Proposed Climbing Lane Widening Project Limits

Ea Without Phase	Pmcs Ea	Ppno	RTE	BPM	APM	CODE	ELEM	RDWY $	STRC $	RW $	Local Const $	Local Rw $	DESCRIPTION	LOCATION	Appr Psr TARG	Pa&Ed TARG	Dist Pse TARG	JCOMP TARG	Doc Type ENV
09880	098801		057	0	0	HA42	RAS	$45	$0	$0	$0		$0 REPAIR EXISTING SOUNDWALLS	ON RTE 57 AND RTE 405 AT VARIUS LOC			2/1/99	10/1/99	CE
0C040	0C040K		057	10.7	22.6	HB4N	OHC	$415	$0	$0	$415		$0 SR-57 OPERATION ENHANCEMENT STUDY	IN ORANGE FROM I-5 TO LA COUNTY	8/1/00	4/1/01	3/1/02	5/1/03	CE
07170	071700	3744	057	10.8	22.5	HE13	400	$70,174	$631,565	$0	$701,739		$0 CONSTRUCT VIADUCT EXPRESSWAY	FROM ROUTE 73 TO THE TERMINUS OF	4/1/91	7/1/98	2/1/99	8/1/05	ES
0769U	0769U1	1973	057	10.8	22.6	HB4N	TSM	$3,460	$0	$0	$0		$0 FIBER OPTIC COMMUNICATION SYSTEM	IN ORANGE COUNTY IN ORANGE, ANAHEIM	7/1/96	8/1/97	1/1/98	2/1/00	CE
09410	094101	3639	057	11	22.6	HA22	RAS	$12,159	$0	$0	$0		$0 GRIND SURFACE CONC.SLABS TO FIT VER	IN ORANGE ANAHEIM FULLERTON BREA OR	9/1/99	11/1/00	7/1/01	4/1/03	CE
0C170	0C1701		057	11.3	22.5	HM4		$305	$0	$0	$0		$0 REMOVE AND REPLACE RAISED PAVEMENT	IN ORANGE ANAHEIM PLACENTIA FULLER				10/1/02	CE
0C200	0C2001		057	12.5	22.5	HM1		$540	$0	$0	$0		$0 SEAL COAT	IN ANAHEIM,PLACENTIA,FULLERTON&BREA				8/1/02	CE
0A600	0A6001		057	14.9	22	HM2		$165	$0	$0	$0		$0 REMOVE AND REPLACE EXISTING DIKES	IN ORANGE COUNTY INM ANAHAIM,		12/1/99	12/1/99	7/1/00	CE
0E870	0E870K	3802	057	16.6	21.9	HA25	RAS	$1,350	$0	$0	$0		$0 HIGHWAY RESTORATION	IN PLACENTIA RTE 57 FR ORANGETHORP	10/1/00	3/1/01	2/1/05	3/1/06	CE
0C110	0C110K	3835	057	19.9	21.5	HE11	IRS	$7,000	$5,000	$0	$12,000		$0 RECONFIGURE RAMP AT SR-57 & LAMBERT	IN BREA 0.5 MILE NORTH OF IMPERIAL	2/1/01	1/1/02	7/1/02	4/1/04	CE
0B120	0B1201	3846A	057	21	21	HA42	RAS	$360	$0	$0	$0		$0 INSTALL WEIGH IN MOTION SYSTEM	IN ORANGE COUNTY IN BREA AT 0.2 KM		1/1/01	1/1/01	10/1/01	CE
0E320	0E320K	3846	057	21.1	21.6	HA22	RAS	$15,000	$0	$0	$0		$0 REGRADE SLOPE	IN BREA FROM 300 METERS NORTH OF__	12/1/01	6/1/02	6/1/03	3/1/05	CE
0C120	0C120K	3847A	057	21.2	22.6	HE13	FCR	$23,365	$18,290	$986	$0		$0 RECONSTRUCT CLIMBING AUXILIARY LANE	IN BREA FROM LAMBERT ROAD TO ORANGE	4/1/01	10/1/02	5/1/04	10/1/06	EIR/EIS

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Ora	57	34.0/36.3		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

Hammer X. Sui
No. C 50486
EXP. 6-30-01
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

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 Metric

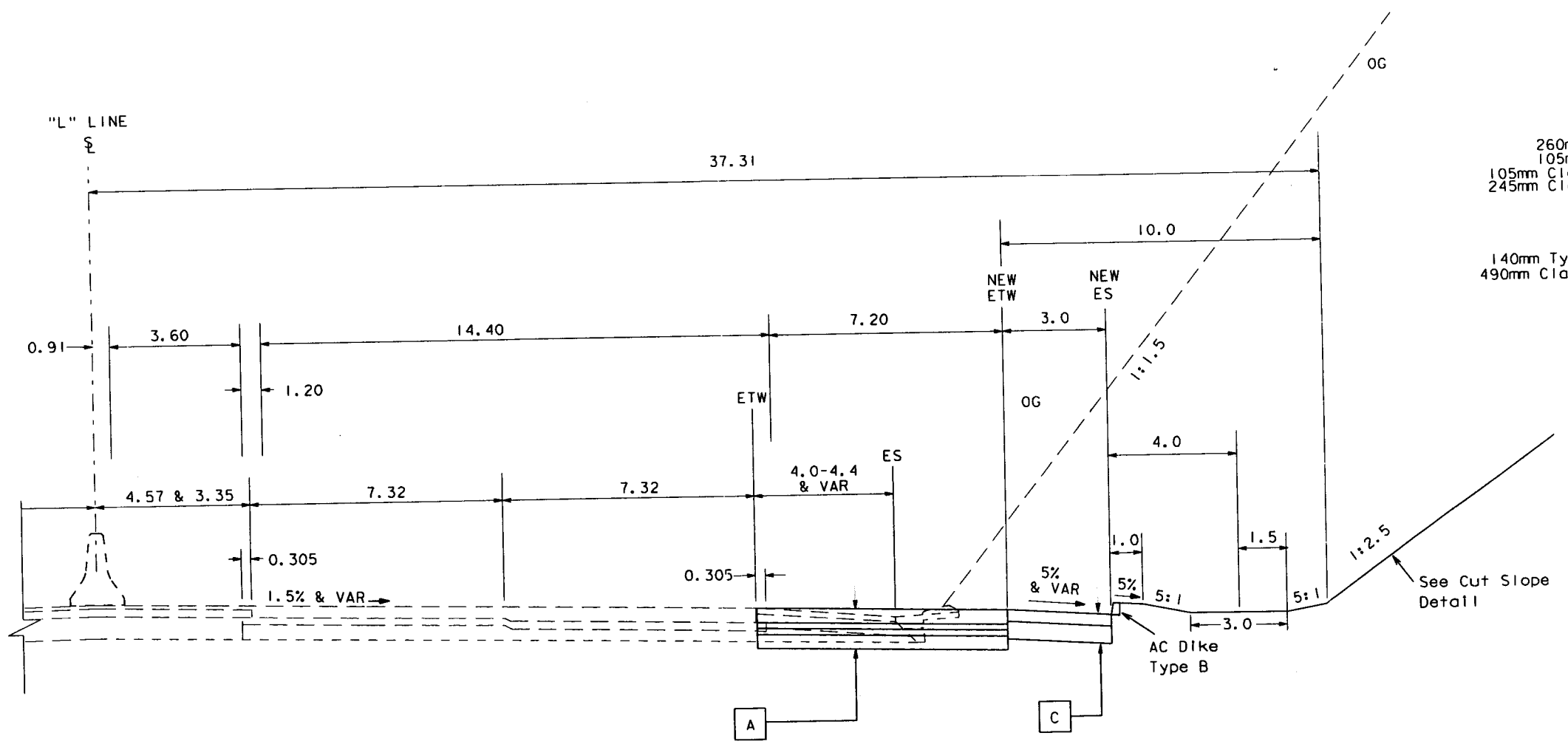
DATE	REVISED BY
	DATE REVISED

CALCULATED/ DESIGNED BY

CHECKED BY

PROJECT ENGINEER
HAMMER SUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans PROJECT DEVELOPMENT



NB ROUTE 57

STA 221+80 TO 229+12.3
STA 234+93 TO 250+74

ALL DIMENSIONS ARE IN METERS
UNLESS OTHERWISE SHOWN

MAXIMUM GRADING CONCEPT

EXHIBIT 1

NO SCALE

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
12	Ora	57	34.0/36.3		

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.

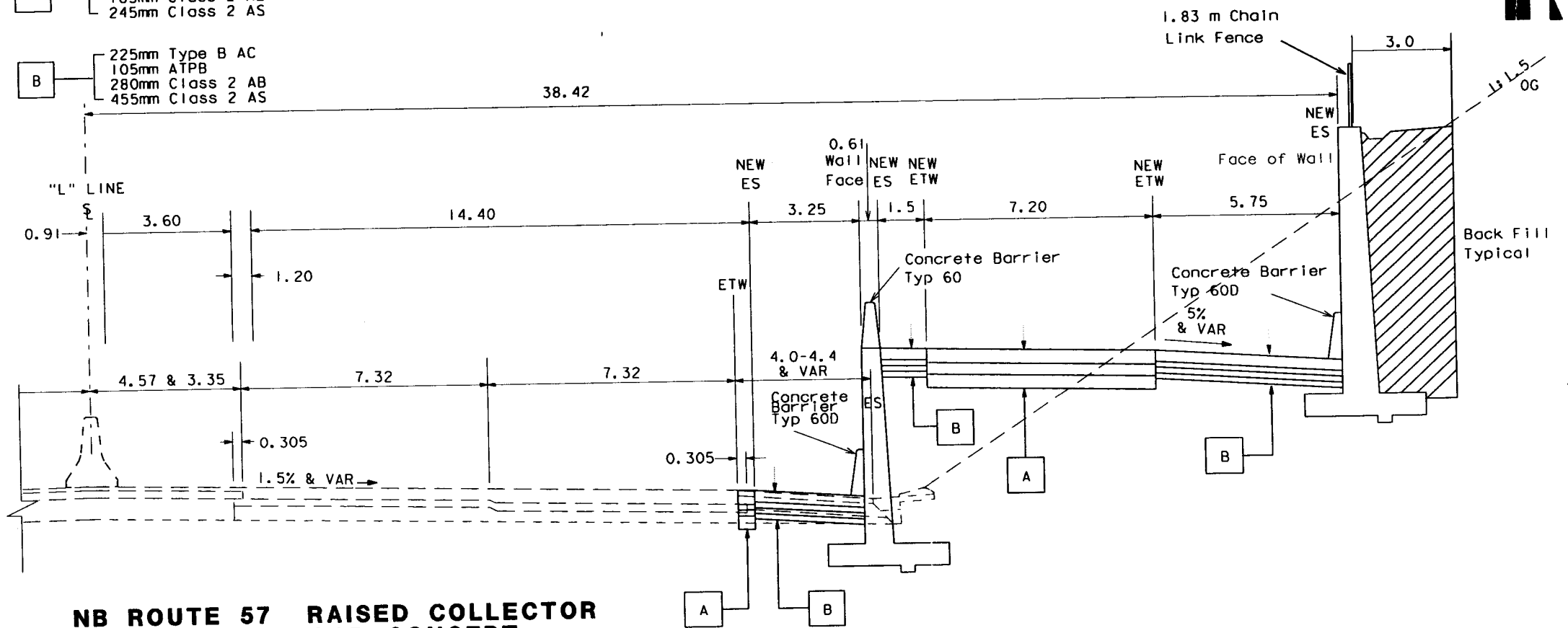
REGISTERED PROFESSIONAL ENGINEER — Hammer X. Sui — No. C 50486 — Exp. 6-30-01 — CIVIL — STATE OF CALIFORNIA

Caltrans Metric

Typical Structural Sections

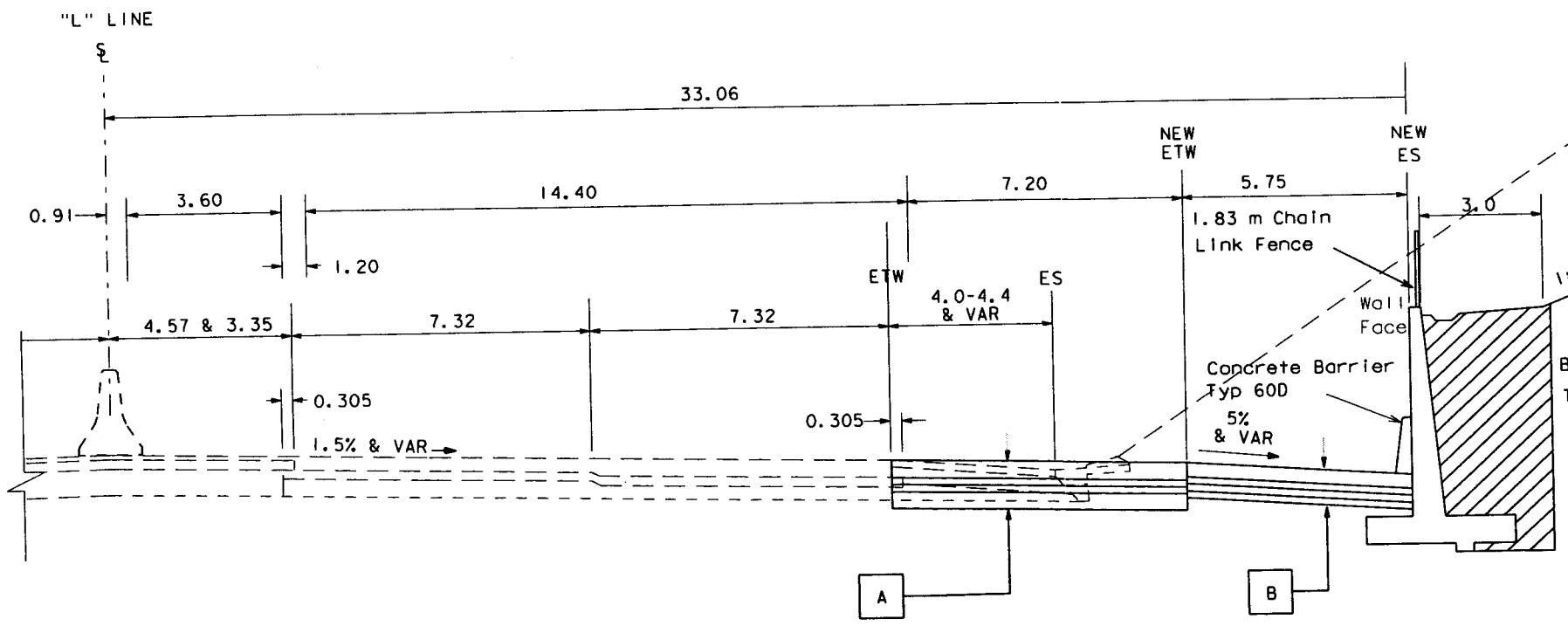
A
- 260mm PCCP
- 105mm ATPB
- 105mm Class 2 AB
- 245mm Class 2 AS

B
- 225mm Type B AC
- 105mm ATPB
- 280mm Class 2 AB
- 455mm Class 2 AS



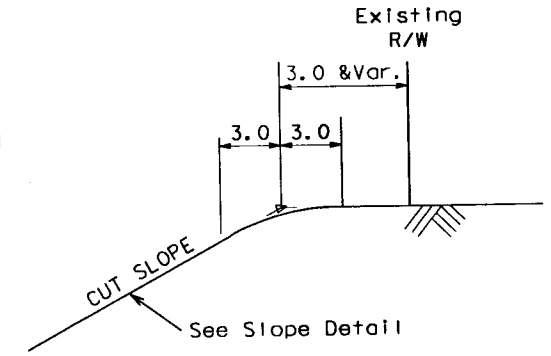
NB ROUTE 57 RAISED COLLECTOR DISTRIBUTION ROAD CONCEPT

STA 222+00 TO 250+74



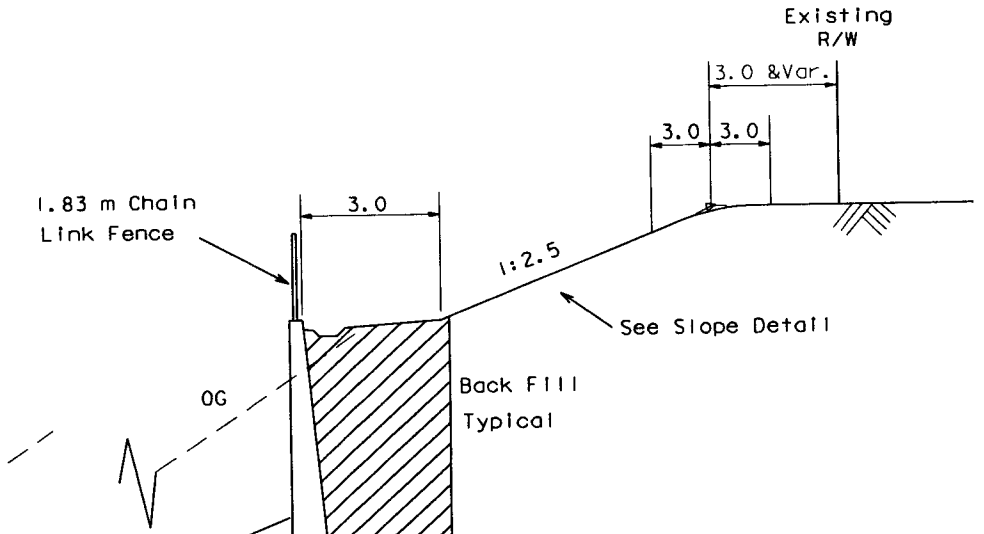
NB ROUTE 57 TWO WALLS ON SLOPE CONCEPT

STA 221+80 TO 250+74



SLOPE ROUNDING DETAIL

NO SCALE



OTHER CONCEPTS

EXHIBIT 2

NO SCALE

7B

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY

CHECKED BY

PROJECT ENGINEER: HAMMER SUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans PROJECT DEVELOPMENT

TABLE 2
SR-57 NORTHBOUND IMPROVEMENT
CLIMBING LANE (2)

CLIMBING LANE FROM LAMBERT ON-RAMP AND EXTENDS PAST COUNTY LINE

Highway Statistics Measures of Effectiveness (MOE's)	Existing Conditions	Project Conditions	Change in MOE	MOE Percentage Improvement
Vehicle-Miles	168,555	210,090	41,535	**24.64%**
Vehicle-Minutes	983,023	697,364	-285,659	**29.06%**
Speed (MPH)	10.29	18.08	7.79	**75.70%**
Total Delay (Veh-Min)	660,398	400,920	-259,478	**39.29%**
Travel Time (Min) / (Veh-Mile)	5.83	3.32	-2.51	**43.05%**
Delay Time (Min) / (Veh-Mile)	3.92	1.91	-2.01	**51.28%**

Attachment B

SR-57 NB Improvement with Climbing Lane with
Continuous Auxiliary Lane
(from "Operational Enhancement Study of SR-57"
Between the I-5/22/57 Interchange
and the Los Angeles County Line)

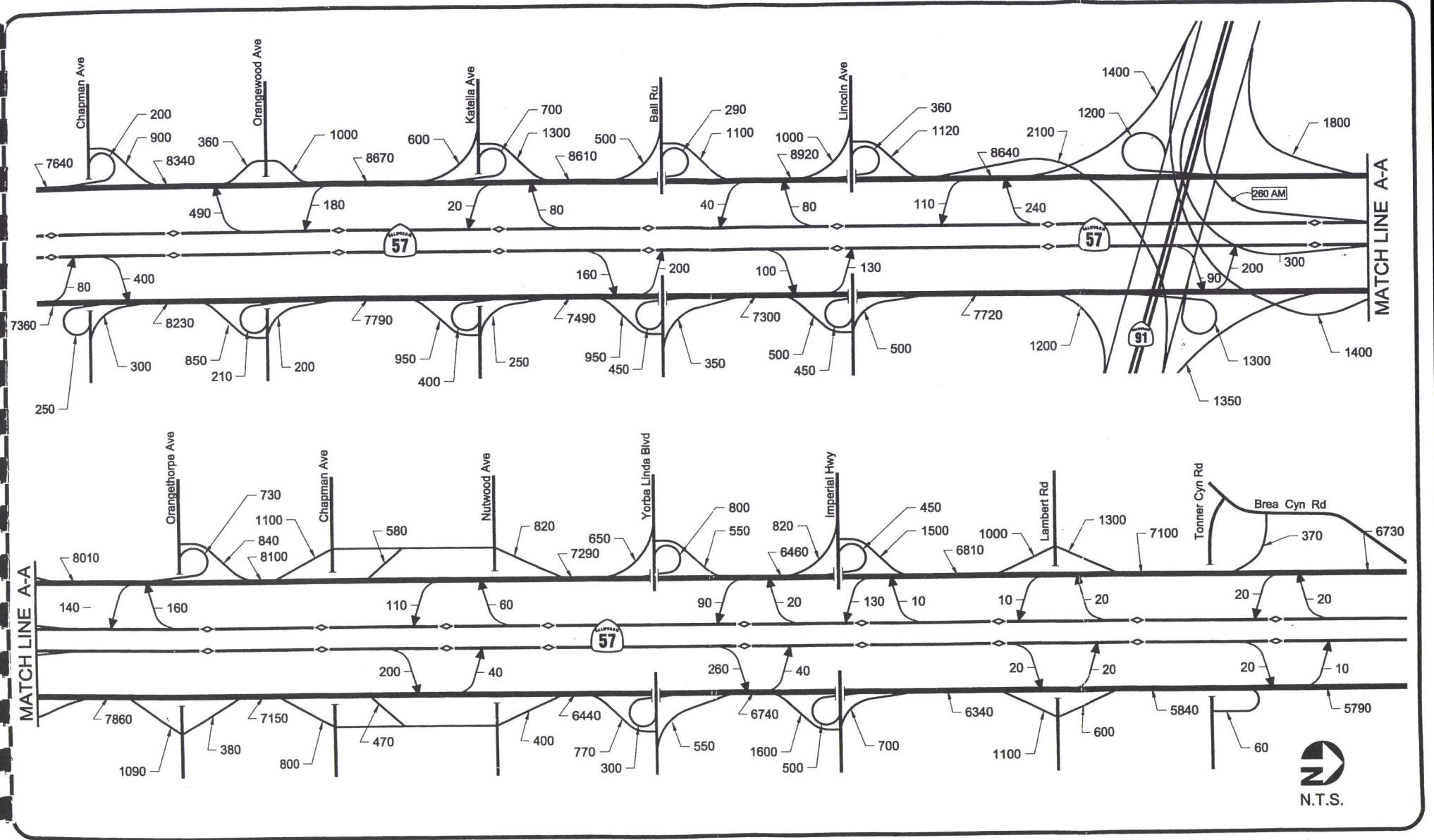
TABLE 16
SR-57 NORTHBOUND IMPROVEMENT
OPTION 2H

CONTINUOUS AUXILIARY LANE FROM ORANGETHORPE ON-RAMP TO LAMBERT ON-RAMP + 4TH LANE BETWEEN WB SR-91 RAMPS + CLIMBING LANE FROM LAMBERT ON-RAMP EXTENDING PAST COUNTY LINE

Highway Statistics Measures of Effectiveness (MOE's)	Existing Conditions	Project Conditions	Change in MOE	MOE Percentage Improvement
Vehicle-Miles	168,555	212,867	44,312	**26.29%**
Vehicle-Minutes	983,023	576,956	-406,067	**41.31%**
Speed (MPH)	10.29	22.14	11.85	**115.16%**
Total Delay (Veh-Min)	660,398	269,913	-390,485	**59.13%**
Travel Time (Min) / (Veh-Mile)	5.83	2.71	-3.12	**53.52%**
Delay Time (Min) / (Veh-Mile)	3.92	1.27	-2.65	**67.60%**

Attachment C

SR-57 Existing (Year 2000) AM & PM Peak Hour Volume
(from "Operational Enhancement Study of SR-57"
Between the I-5/22/57 Interchange
and the Los Angeles County Line)

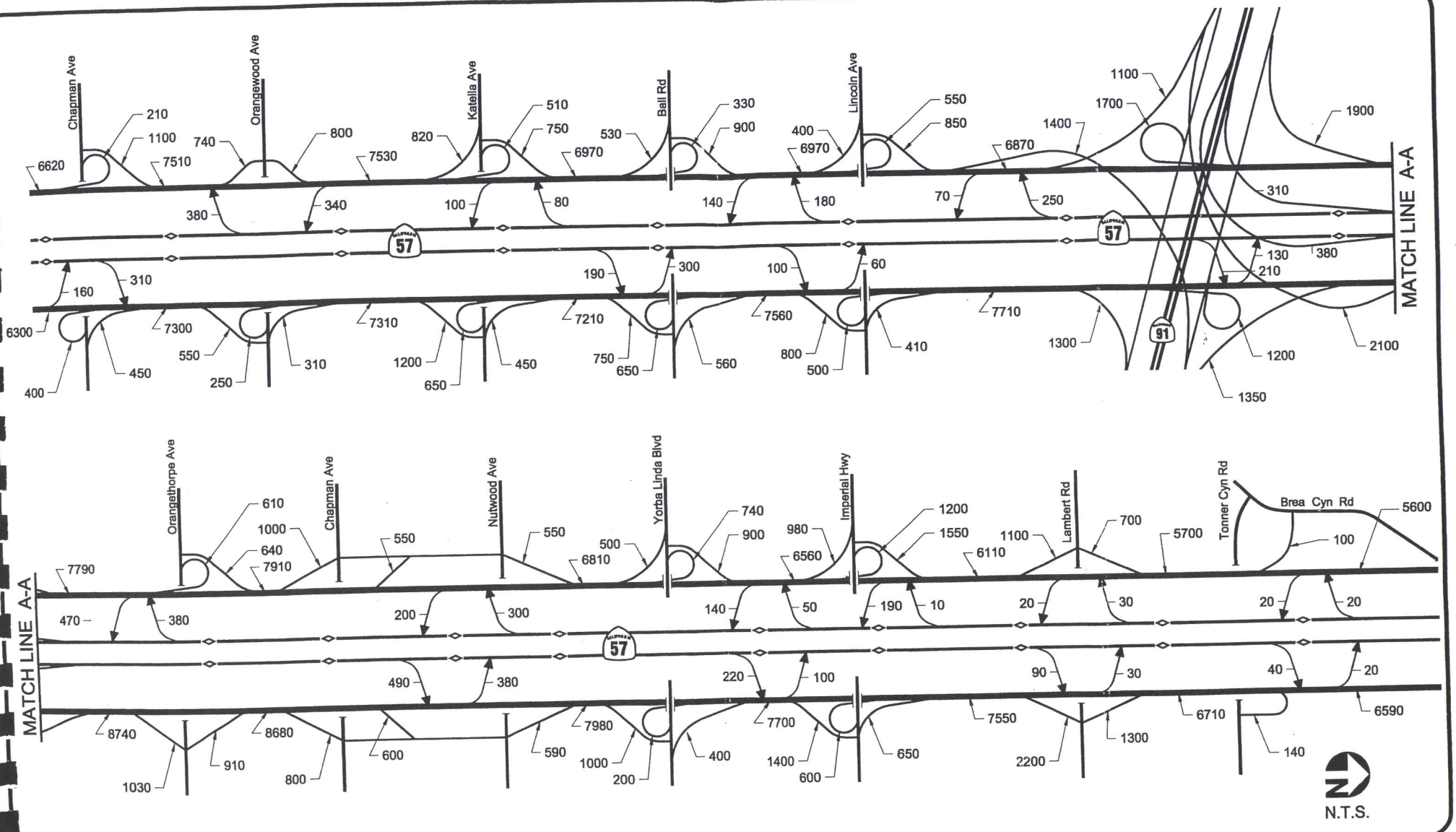


SR-57 Northbound/Southbound Existing (Year 2000) AM Peak Hour Volumes

PARSONS TRANSPORTATION GROUP

FIGURE 1

SR-57



SR-57 Northbound/Southbound Existing (Year 2000) PM Peak Hour Volumes

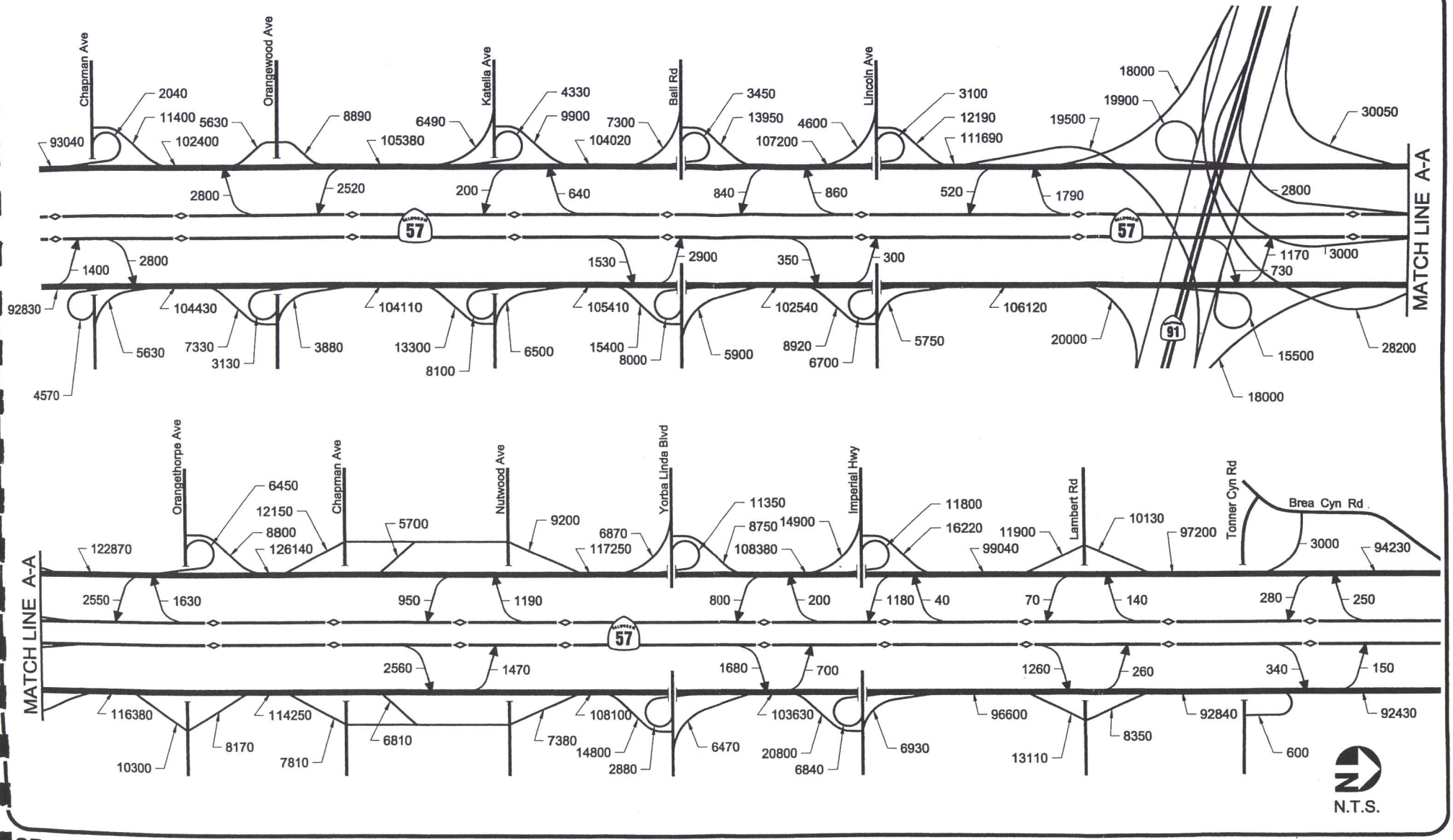
FIGURE 2

PARSONS TRANSPORTATION GROUP

SR-57

Attachment D

SR-57 Existing (Year 2000) Average Daily Traffic Volume
(from "Operational Enhancement Study of SR-57"
Between the I-5/22/57 Interchange
and the Los Angeles County Line)



SR-57 Northbound/Southbound Existing (Year 2000) Average Daily Traffic Volumes (ADTs)

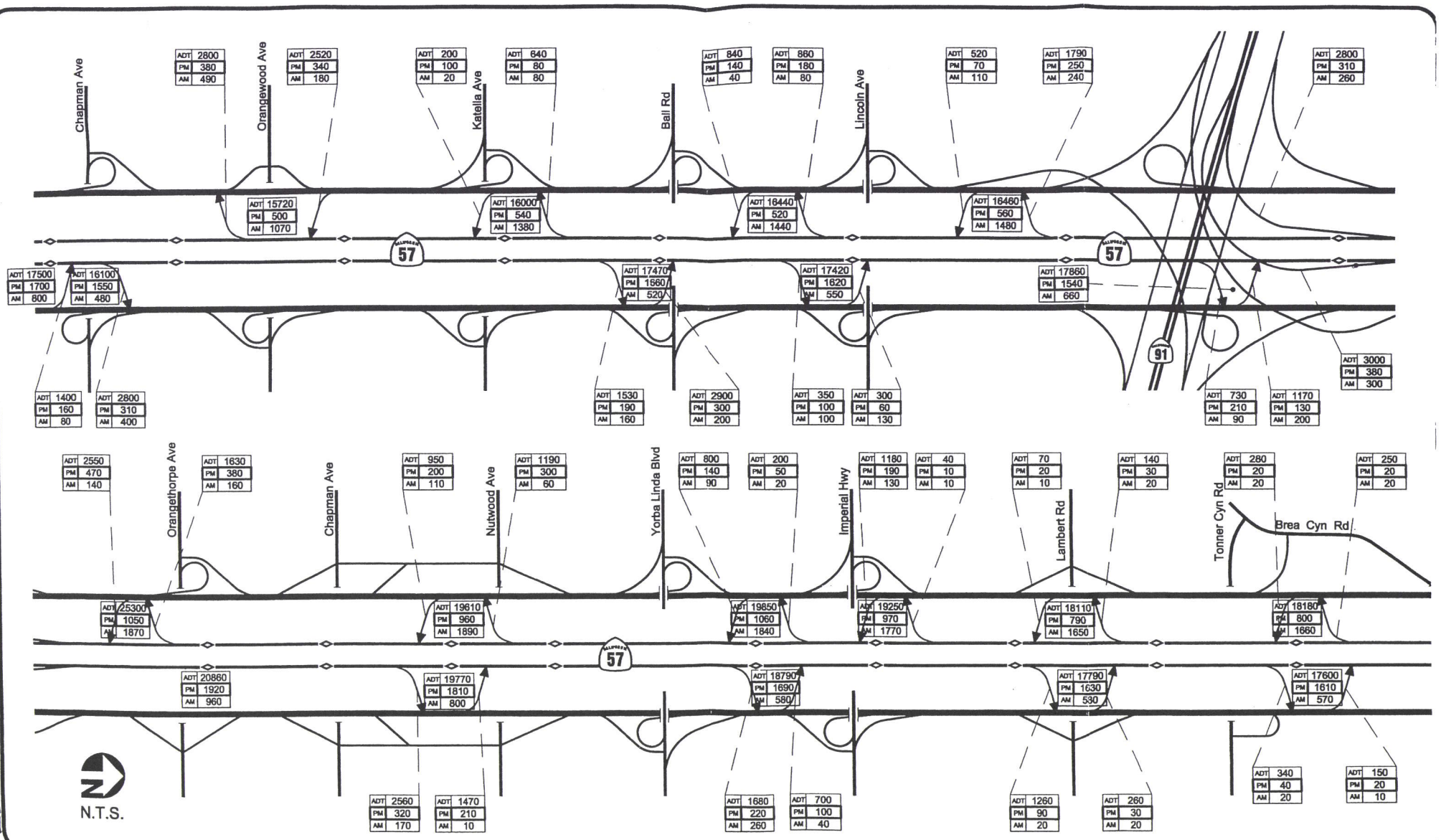
PARSONS TRANSPORTATION GROUP

SR-57

FIGURE 3

Attachment E

SR-57 Existing (Year 2000) HOV AM/PM/ADT Volume
(from "Operational Enhancement Study of SR-57"
Between the I-5/22/57 Interchange
and the Los Angeles County Line)



SR-57 Northbound/Southbound Existing (Year 2000) HOV AM/PM/ADT Volumes

PARSONS TRANSPORTATION GROUP

SR-57

FIGURE 4

Attachment F

Manual Truck Traffic Counts

Congestion Monitoring Data 1999

Year 2000 15-minute Loop Traffic Data Report

Manual Traffic Count
N/B SR 57 Tonner Cyn Rd.
AM 11/08/00---PM 11/28/00

County:ORA	PM 21.776	RTE:57	11/29/00	Day of Week:Tuesday
Tonner Canyon Bridge			N/B SR 57 Tonner Cyn Rd.	
Legal Description:N/B			By: Ghassan Bashoura	

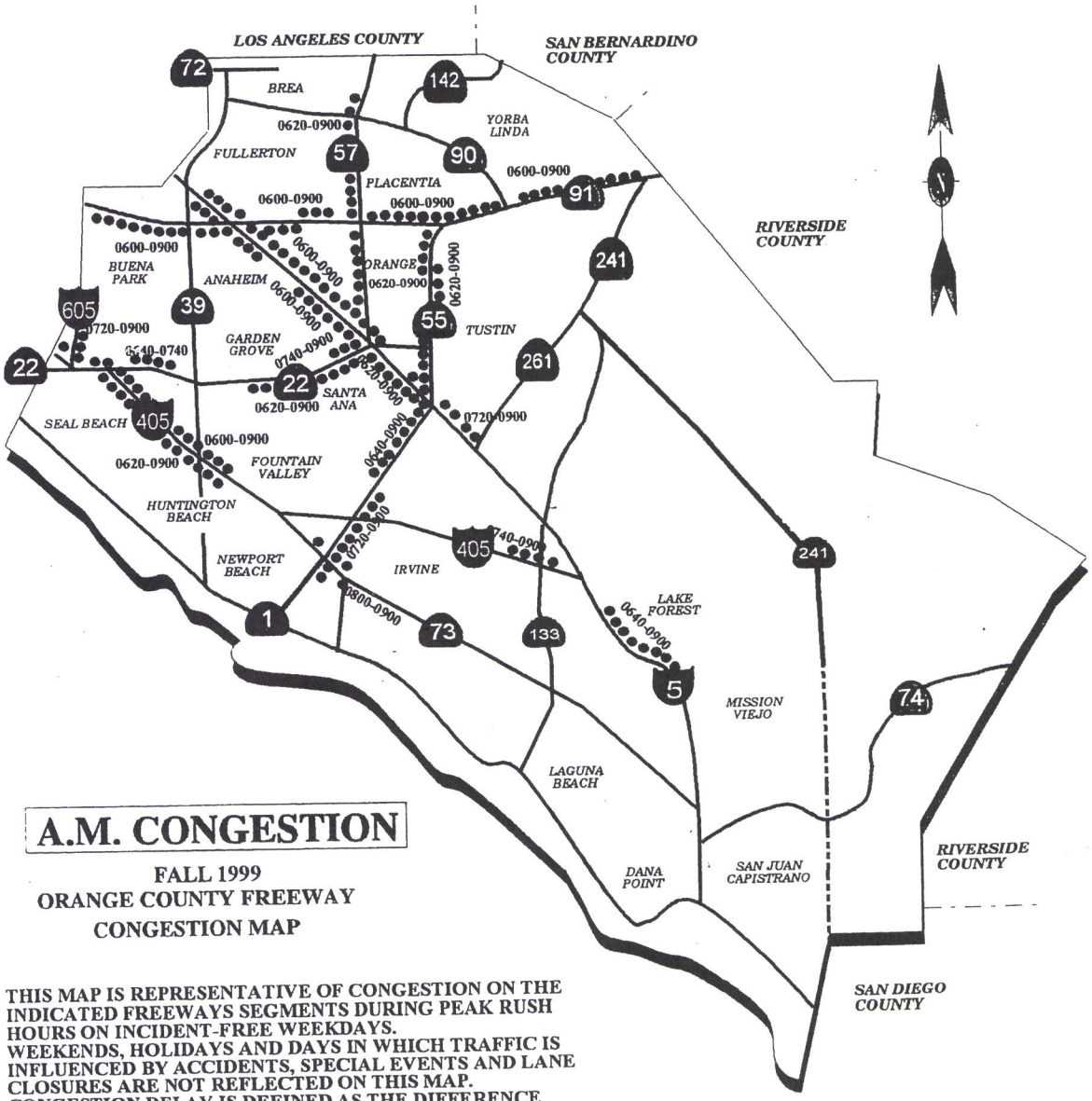
Time		Truck Count	Traffic Data report	Truck %
0600	00-15	103		
	15-30	103		
	30-45	118		
	45-60	101		
Hour Total		425	4200	10.12%
0700	00-15	109		
	15-30	91		
	30-45	76		
	45-60	75		
Hour Total		351	5261	6.67%
0800	00-15	70		
	15-30	121		
	30-45	115		
	45-60	144		
Hour Total		450	4431	10.16%
AM Total		1226		
1100	00-15	207		
	15-30	224		
	30-45	162		
	45-60	194		
Hour Total		787	4464	17.63%
1200	00-15	177		
	15-30	200		
	30-45	187		
	45-60	207		
Hour Total		771	4507	17.11%
Noon Total		1558		
1500	00-15	150		
	15-30	168		
	30-45	153		
	45-60	169		
Hour Total		640	5254	12.18%
1600	00-15	173		
	15-30	149		
	30-45	153		
	45-60	151		
Hour Total		626	5437	11.51%
1700	00-15	149		
	15-30	151		
	30-45	130		
	45-60	123		
Hour Total		553	4876	11.34%
PM Total		1819		
Day Total		4603	38430	11.98%

Manual Traffic Count
N/B SR 57 Lambert

County:ORA	21.15	RTE:57	11/8/00	Day of Week:Wednesday
Tonner Canyon Bridge	BTWN IMPERIAL & LAMBERT		N/B SR 57 Lambert	
Legal Description:N/B			By: Gamini Weratunga& Majid Ghamami	

Time		Truck Count	Traffic Data report	Truck %
0600	00-15	65		
	15-30	68		
	30-45	80		
	45-60	68		
Hour Total		281	3904	7.20%
0700	00-15	70		
	15-30	62		
	30-45	73		
	45-60	55		
Hour Total		260	4690	5.54%
0800	00-15	37		
	15-30	70		
	30-45	71		
	45-60	118		
Hour Total		296	3987	7.42%
AM Total		837		
1100	00-15	144		
	15-30	193		
	30-45	167		
	45-60	160		
Hour Total		664	4058	16.36%
1200	00-15	138		
	15-30	150		
	30-45	186		
	45-60	207		
Hour Total		681	3984	17.09%
Noon Total		1345		
1500	00-15	134		
	15-30	142		
	30-45	144		
	45-60	140		
Hour Total		560	4653	12.04%
1600	00-15	146		
	15-30	135		
	30-45	119		
	45-60	74		
Hour Total		474	4349	10.90%
1700	00-15	89		
	15-30	63		
	30-45	56		
	45-60	64		
Hour Total		272	3058	8.89%
PM Total		1306		
Day Total		3488	32683	10.67%

Fall 1999 Congestion Monitoring Data on Orange County Freeways



A.M. CONGESTION

FALL 1999
ORANGE COUNTY FREEWAY
CONGESTION MAP

THIS MAP IS REPRESENTATIVE OF CONGESTION ON THE INDICATED FREEWAYS SEGMENTS DURING PEAK RUSH HOURS ON INCIDENT-FREE WEEKDAYS. WEEKENDS, HOLIDAYS AND DAYS IN WHICH TRAFFIC IS INFLUENCED BY ACCIDENTS, SPECIAL EVENTS AND LANE CLOSURES ARE NOT REFLECTED ON THIS MAP. CONGESTION DELAY IS DEFINED AS THE DIFFERENCE IN TRAVEL TIME BETWEEN 35 MPH AND LOWER CONGESTED SPEED.

SPEED UNDER 35 MPH

Caltrans
DISTRICT 12

Runtime: 11-29-2000, 14:09

TRAFFIC DATA REPORT
15 Minute Loop Data

FROM: 11-08-2000 00:00:00 **TO:** 11-09-2000 00:00:00

A = Adjusted , ND = No Data, NA = Not Applicable
All values are suspect until verified by Engineer

VDS DESCRIPTION: ORA-57-N, **PM:** 21.16 **LAMBERT**

Main Line / HOV

VDS ID: 1202464

NOV-08-2000 WEDNESDAY	HOV 1 VOL	HOV 1 OCC	HOV 1 SPD	HOV 1 %GD	ML 1 VOL	ML 1 OCC	ML 1 SPD	ML 1 %GD	ML 2 VOL	ML 2 OCC	ML 2 SPD	ML 2 %GD	ML 3 VOL	ML 3 OCC	ML 3 SPD	ML 3 %GD	ML 4 VOL	ML 4 OCC	ML 4 SPD	ML 4 %GD	ML STATION TOT VOL	ML STATION AVG OCC	ML STATION EST SPD	
00:15:00	NA	NA	NA	0	71	1.7	59	100	94	2.4	55	100	73	1.7	71	100	33	1.5	43	100	271	1.8	59	
00:30:00	NA	NA	NA	0	76	1.8	59	100	100	2.5	54	100	62	1.8	59	100	24	1.1	43	100	262	1.8	56	
00:45:00	NA	NA	NA	0	52	1.3	56	100	77	1.9	57	100	68	1.6	71	100	38	1.5	48	100	235	1.6	59	
01:00:00	NA	NA	NA	0	39	0.9	60	100	68	1.8	53	100	50	1.4	61	100	20	0.9	41	100	177	1.2	55	
1ht:	**NA**				**238**				**339**				**253**				**115**				**945**			
01:15:00	NA	NA	NA	0	30	0.7	59	100	49	1.3	52	100	39	0.8	80	100	22	1.3	32	100	140	1.0	58	
01:30:00	NA	NA	NA	0	40	1.0	58	100	53	1.3	54	100	43	1.2	60	100	24	1.3	34	100	160	1.2	54	
01:45:00	NA	NA	NA	0	31	0.8	54	100	42	1.0	56	100	31	1.0	51	100	18	0.9	39	100	122	0.9	52	
02:00:00	NA	NA	NA	0	27	0.7	57	100	46	1.1	57	100	37	1.0	62	100	21	1.0	41	100	131	0.9	56	
1ht:	**NA**				**128**				**190**				**150**				**85**				**553**			
02:15:00	NA	NA	NA	0	26	0.6	56	100	38	1.0	55	100	28	0.7	67	100	18	1.1	31	100	110	0.8	54	
02:30:00	NA	NA	NA	0	34	0.8	58	100	46	1.1	56	100	40	1.1	64	100	23	1.4	32	100	143	1.1	55	
02:45:00	NA	NA	NA	0	27	0.7	56	100	33	0.9	52	100	31	0.8	64	100	22	1.3	32	100	113	0.9	52	
03:00:00	NA	NA	NA	0	25	0.6	60	97	33	0.9	53	97	34	1.0	60	97	14	0.7	38	97	106	0.8	55	
1ht:	**NA**				**112A**				**150A**				**133A**				**78A**				**473**			
03:15:00	NA	NA	NA	0	17	0.4	62	23	37	0.9	54	100	24	0.9	44	100	22	1.7	24	100	100	1.0	46	
03:30:00	NA	NA	NA	0	NA	NA	NA	0	43	1.1	53	100	36	1.1	57	100	16	0.9	32	100	127	1.0	51	A
03:45:00	NA	NA	NA	0	NA	NA	NA	0	32	0.8	52	100	33	1.1	51	100	17	1.1	30	100	109	1.0	47	A
04:00:00	NA	NA	NA	0	NA	NA	NA	0	37	0.9	56	97	37	1.3	49	97	20	1.4	27	97	125	1.2	47	A
1ht:	**NA**				**69A**				**149A**				**130A**				**75A**				**423**			
04:15:00	NA	NA	NA	0	NA	NA	NA	0	53	1.4	51	100	25	0.7	58	100	34	2.2	29	100	149	1.4	46	A
04:30:00	NA	NA	NA	0	48	1.2	54	97	63	1.7	51	100	49	1.9	43	100	28	2.0	27	100	188	1.7	46	
04:45:00	NA	NA	NA	0	58	1.4	55	100	82	2.2	51	100	63	2.2	47	100	31	1.8	33	100	234	1.9	49	
05:00:00	NA	NA	NA	0	83	2.0	57	100	117	3.1	52	100	74	2.8	45	100	38	2.6	28	100	312	2.6	49	
1ht:	**NA**				**252A**				**315**				**211**				**131**				**909**			
05:15:00	NA	NA	NA	0	108	2.7	54	100	133	3.6	51	100	75	2.8	45	100	51	2.9	33	100	367	3.0	48	
05:30:00	NA	NA	NA	0	170	4.3	54	100	184	4.8	52	100	127	4.1	52	100	54	2.5	41	100	535	3.9	51	
05:45:00	NA	NA	NA	0	244	6.1	55	100	229	6.3	50	100	149	5.3	47	100	55	3.0	35	100	677	5.2	50	
06:00:00	NA	NA	NA	0	257	6.4	55	100	242	6.5	51	100	146	4.4	56	100	73	4.0	34	100	718	5.3	52	
1ht:	**NA**				**779**				**788**				**497**				**233**				**2297**			
06:15:00	NA	NA	NA	0	325	7.9	56	100	274	7.3	52	100	173	5.6	52	100	71	3.7	37	100	843	6.1	52	
06:30:00	NA	NA	NA	0	434	10.7	56	100	332	8.8	51	100	193	6.7	48	100	90	3.8	46	100	1049	7.5	52	
06:45:00	NA	NA	NA	0	531	13.2	55	100	380	10.4	50	100	210	7.2	49	100	77	3.7	39	100	1198	8.6	51	
07:00:00	NA	NA	NA	0	487	12.4	54	100	387	10.5	51	100	232	7.4	52	100	82	3.7	42	100	1188	8.5	52	
1ht:	**NA**				**1777**				**1373**				**808**				**320**				**4278**			

Runtime: 11-29-2000, 14:09

TRAFFIC DATA REPORT
15 Minute Loop Data

FROM: 11-08-2000 00:00:00 **TO:** 11-09-2000 00:00:00

A = Adjusted , ND = No Data, NA = Not Applicable
All values are suspect until verified by Engineer

VDS DESCRIPTION: ORA-57-N, **PM:** 21.16 **LAMBERT**

Main Line / HOV

VDS ID: 1202464

NOV-08-2000 WEDNESDAY	HOV 1 VOL	HOV 1 OCC	HOV 1 SPD	HOV 1 %GD	ML 1 VOL	ML 1 OCC	ML 1 SPD	ML 1 %GD	ML 2 VOL	ML 2 OCC	ML 2 SPD	ML 2 %GD	ML 3 VOL	ML 3 OCC	ML 3 SPD	ML 3 %GD	ML 4 VOL	ML 4 OCC	ML 4 SPD	ML 4 %GD	ML STATION TOT VOL	ML STATION AVG OCC	ML STATION EST SPD
07:15:00	NA	NA	NA	0	575	14.9	53	100	409	11.2	50	100	238	8.0	50	100	97	4.3	43	100	1319	9.6	51
07:30:00	NA	NA	NA	0	590	15.2	53	100	440	12.1	50	100	254	8.4	51	100	108	4.2	49	100	1392	10.0	51
07:45:00	NA	NA	NA	0	578	14.8	54	100	419	11.6	50	100	237	7.6	52	100	113	5.7	38	100	1347	9.9	51
08:00:00	NA	NA	NA	0	483	11.7	57	100	357	9.4	52	100	193	6.3	51	100	77	3.6	41	100	1110	7.7	53
1ht:	**NA**				**2226**				**1625**				**922**				**395**				**5168**		
08:15:00	NA	NA	NA	0	442	10.6	57	100	336	8.8	52	100	199	6.6	51	100	71	3.7	36	100	1048	7.4	53
08:30:00	NA	NA	NA	0	439	10.6	56	100	318	8.7	50	100	196	6.9	48	100	96	4.5	40	100	1049	7.7	51
08:45:00	NA	NA	NA	0	457	10.9	58	100	350	9.2	52	100	206	7.3	47	100	87	4.0	41	100	1100	7.8	53
09:00:00	NA	NA	NA	0	434	10.5	57	100	359	9.5	52	100	218	8.1	45	100	104	4.9	40	100	1115	8.3	51
1ht:	**NA**				**1772**				**1363**				**819**				**358**				**4312**		
09:15:00	NA	NA	NA	0	439	10.6	57	100	343	9.1	52	100	198	7.5	44	100	102	5.4	36	100	1082	8.1	51
09:30:00	NA	NA	NA	0	448	10.9	56	100	367	9.9	51	100	205	8.6	40	100	101	6.1	32	100	1121	8.9	49
09:45:00	NA	NA	NA	0	470	11.4	56	100	348	9.5	50	100	201	9.0	38	100	112	6.0	36	100	1131	9.0	49
10:00:00	NA	NA	NA	0	435	10.6	56	100	353	9.6	50	100	237	9.7	41	100	98	5.4	34	100	1123	8.8	49
1ht:	**NA**				**1792**				**1411**				**841**				**413**				**4457**		
10:15:00	NA	NA	NA	0	436	10.5	57	100	338	9.0	51	100	214	8.6	42	100	103	5.5	36	100	1091	8.4	50
10:30:00	NA	NA	NA	0	445	11.1	55	100	348	9.7	49	100	224	10.2	37	100	109	6.3	33	100	1126	9.3	47
10:45:00	NA	NA	NA	0	433	10.4	57	100	337	9.5	49	100	229	10.9	35	100	104	6.4	31	100	1103	9.3	47
11:00:00	NA	NA	NA	0	408	10.0	56	100	348	9.6	49	100	233	10.9	36	100	103	5.6	35	100	1092	9.0	48
1ht:	**NA**				**1722**				**1371**				**900**				**419**				**4412**		
11:15:00	NA	NA	NA	0	411	9.9	57	100	342	9.4	50	100	212	9.0	39	100	123	6.7	35	100	1088	8.8	49
11:30:00	NA	NA	NA	0	427	10.7	55	100	327	9.1	49	100	233	10.2	38	100	113	6.7	32	100	1100	9.2	47
11:45:00	NA	NA	NA	0	432	10.9	54	100	333	9.3	49	100	222	10.2	36	100	136	7.3	35	100	1123	9.4	47
12:00:00	NA	NA	NA	0	429	10.7	55	97	357	9.9	49	97	220	9.5	39	97	110	6.5	32	97	1116	9.1	48
1ht:	**NA**				**1699A**				**1358A**				**887A**				**482A**				**4426**		
12:15:00	NA	NA	NA	0	397	9.6	57	100	347	9.3	51	100	224	9.0	41	100	95	5.4	34	100	1063	8.3	50
12:30:00	NA	NA	NA	0	420	10.4	55	100	348	9.4	51	100	212	8.9	40	100	104	5.5	36	100	1084	8.5	49
12:45:00	NA	NA	NA	0	424	10.8	54	100	350	9.8	49	100	220	9.8	38	100	122	6.6	35	100	1116	9.3	47
13:00:00	NA	NA	NA	0	414	10.1	56	100	330	9.1	49	100	231	9.8	39	100	111	6.2	34	100	1086	8.8	48
1ht:	**NA**				**1655**				**1375**				**887**				**432**				**4349**		
13:15:00	NA	NA	NA	0	472	11.5	56	100	346	9.9	48	100	243	10.3	40	100	118	5.9	38	100	1179	9.4	48
13:30:00	NA	NA	NA	0	478	11.9	55	100	393	10.9	49	100	248	9.6	43	100	112	5.5	39	100	1231	9.5	49
13:45:00	NA	NA	NA	0	508	12.9	54	100	400	11.1	49	100	255	10.4	41	100	109	5.8	36	100	1272	10.0	48
14:00:00	NA	NA	NA	0	477	11.9	55	97	376	10.3	50	97	258	9.3	46	97	127	5.5	44	97	1238	9.3	50
1ht:	**NA**				**1935A**				**1515A**				**1003A**				**466A**				**4919**		

TRAFFIC DATA REPORT
15 Minute Loop Data

FROM: 11-08-2000 00:00:00 **TO:** 11-09-2000 00:00:00

A = Adjusted , ND = No Data, NA = Not Applicable
All values are suspect until verified by Engineer

VDS DESCRIPTION: ORA-57-N, **PM:** 21.16 **LAMBERT**

Main Line / HOV

VDS ID: 1202464

NOV-08-2000 WEDNESDAY	HOV 1 VOL	OCC	SPD	%GD	ML 1 VOL	OCC	SPD	%GD	ML 2 VOL	OCC	SPD	%GD	ML 3 VOL	OCC	SPD	%GD	ML 4 VOL	OCC	SPD	%GD	ML STATION TOT VOL	AVG OCC	EST SPD
14:15:00	NA	NA	NA	0	532	13.9	52	100	418	12.1	47	100	263	11.0	40	100	129	6.3	39	100	1342	10.8	47
14:30:00	NA	NA	NA	0	554	14.4	53	100	464	13.2	48	100	289	11.6	42	100	125	5.7	42	100	1432	11.2	48
14:45:00	NA	NA	NA	0	582	15.7	51	100	465	13.2	48	100	289	11.4	42	100	147	6.4	44	100	1483	11.7	48
15:00:00	NA	NA	NA	0	511	18.7	37	100	456	15.2	41	100	322	11.6	46	100	179	6.8	50	100	1468	13.1	42
1ht:	**NA**				**2179**				**1803**				**1163**				**580**				**5725**		
15:15:00	NA	NA	NA	0	540	14.5	51	100	473	13.2	49	100	305	10.8	47	100	143	5.2	52	100	1461	10.9	50
15:30:00	NA	NA	NA	0	556	17.7	43	100	475	14.6	44	100	326	11.6	47	100	140	4.8	55	100	1497	12.2	45
15:45:00	NA	NA	NA	0	549	16.4	46	100	479	14.3	46	100	330	12.0	46	100	156	6.1	48	100	1514	12.2	46
16:00:00	NA	NA	NA	0	501	15.0	46	100	456	14.2	44	100	355	13.6	44	100	212	8.1	50	100	1524	12.7	45
1ht:	**NA**				**2146**				**1883**				**1316**				**651**				**5996**		
16:15:00	NA	NA	NA	0	498	19.5	35	100	485	20.6	32	100	347	18.0	32	100	224	10.5	41	100	1554	17.1	34
16:30:00	NA	NA	NA	0	454	21.5	29	100	452	22.6	27	100	321	18.1	30	100	232	11.4	39	100	1459	18.4	30
16:45:00	NA	NA	NA	0	462	25.9	24	100	446	24.4	25	100	306	24.0	21	100	249	14.0	34	100	1463	22.1	26
17:00:00	NA	NA	NA	0	418	31.0	18	100	398	31.6	17	100	331	29.4	19	100	249	23.3	20	100	1396	28.8	19
1ht:	**NA**				**1832**				**1781**				**1305**				**954**				**5872**		
17:15:00	NA	NA	NA	0	371	31.1	16	100	369	34.7	15	100	277	32.9	14	100	210	30.8	13	100	1227	32.4	15
17:30:00	NA	NA	NA	0	329	37.7	12	100	324	39.4	11	100	247	37.6	11	100	186	43.5	8	100	1086	39.6	11
17:45:00	NA	NA	NA	0	348	36.5	13	100	325	39.1	11	100	233	41.1	9	100	206	40.6	10	100	1112	39.3	11
18:00:00	NA	NA	NA	0	290	36.9	11	97	295	41.9	10	97	212	40.0	9	97	159	47.5	6	97	956	41.6	9
1ht:	**NA**				**1339A**				**1314A**				**970A**				**762A**				**4385**		
18:15:00	NA	NA	NA	0	322	39.7	11	100	298	41.7	10	100	212	40.7	9	100	177	44.5	8	100	1009	41.6	10
18:30:00	NA	NA	NA	0	292	38.6	10	100	291	41.4	10	100	225	41.1	9	100	181	45.9	7	100	989	41.7	9
18:45:00	NA	NA	NA	0	359	34.5	14	100	344	36.4	13	100	266	33.5	13	100	193	43.9	8	100	1162	37.1	13
19:00:00	NA	NA	NA	0	349	33.9	14	100	339	33.5	14	100	274	33.8	14	100	192	39.9	9	100	1154	35.3	13
1ht:	**NA**				**1322**				**1272**				**977**				**743**				**4314**		
19:15:00	NA	NA	NA	0	412	28.0	20	100	398	28.1	19	100	334	24.0	23	100	248	16.7	28	100	1392	24.2	22
19:30:00	NA	NA	NA	0	409	25.2	22	100	386	27.5	19	100	312	23.9	22	100	272	20.8	25	100	1379	24.3	22
19:45:00	NA	NA	NA	0	484	15.1	44	100	439	13.6	44	100	330	9.6	58	100	208	6.5	61	100	1461	11.2	49
20:00:00	NA	NA	NA	0	367	9.3	54	100	323	8.6	51	100	249	6.2	67	100	113	3.6	60	100	1052	6.9	57
1ht:	**NA**				**1672**				**1546**				**1225**				**841**				**5284**		
20:15:00	NA	NA	NA	0	299	7.5	55	100	278	7.3	52	100	216	5.6	65	100	76	2.3	64	100	869	5.6	57
20:30:00	NA	NA	NA	0	308	7.7	54	100	271	7.3	51	100	190	5.4	59	100	101	3.2	60	100	870	5.9	55
20:45:00	NA	NA	NA	0	296	7.3	56	100	268	6.9	53	100	206	4.9	70	100	84	2.8	57	100	854	5.5	59
21:00:00	NA	NA	NA	0	271	6.6	56	100	273	7.1	52	100	205	5.1	67	100	82	2.4	64	100	831	5.3	58
1ht:	**NA**				**1174**				**1090**				**817**				**343**				**3424**		

TRAFFIC DATA REPORT
15 Minute Loop Data

FROM: 11-08-2000 00:00:00 **TO:** 11-09-2000 00:00:00

A = Adjusted , ND = No Data, NA = Not Applicable
All values are suspect until verified by Engineer

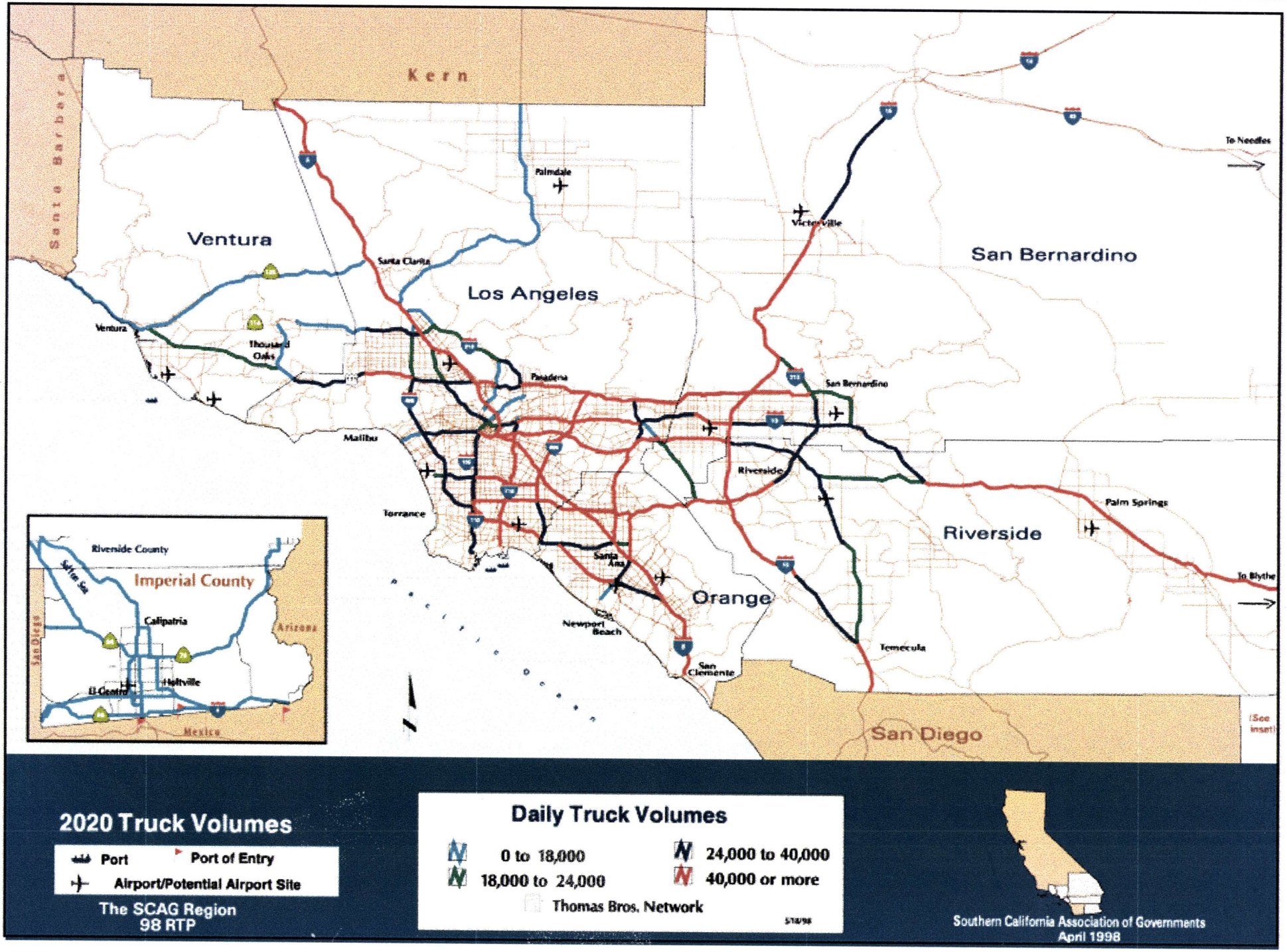
VDS DESCRIPTION: ORA-57-N, **PM:** 21.16 **LAMBERT** Main Line / HOV

VDS ID: 1202464

NOV-08-2000 WEDNESDAY	HOV 1 VOL	HOV 1 OCC	HOV 1 SPD	HOV 1 %GD	ML 1 VOL	ML 1 OCC	ML 1 SPD	ML 1 %GD	ML 2 VOL	ML 2 OCC	ML 2 SPD	ML 2 %GD	ML 3 VOL	ML 3 OCC	ML 3 SPD	ML 3 %GD	ML 4 VOL	ML 4 OCC	ML 4 SPD	ML 4 %GD	ML STATION TOT VOL	ML STATION AVG OCC	ML STATION EST SPD
21:15:00	NA	NA	NA	0	286	6.9	57	100	277	7.0	54	100	206	4.9	71	100	105	2.9	69	100	874	5.4	61
21:30:00	NA	NA	NA	0	286	7.0	56	100	284	7.4	53	100	233	5.3	73	100	107	3.0	68	100	910	5.7	61
21:45:00	NA	NA	NA	0	306	7.3	57	100	283	7.3	53	100	214	4.9	73	100	111	3.4	61	100	914	5.7	60
22:00:00	NA	NA	NA	0	310	7.1	60	97	283	7.1	54	97	206	4.6	75	97	93	2.7	67	97	892	5.4	62
1ht:	**NA**				**1188A**				**1127A**				**859A**				**416A**				**3590**		
22:15:00	NA	NA	NA	0	282	6.8	57	100	268	6.8	54	100	180	4.4	68	100	85	2.8	58	100	815	5.2	58
22:30:00	NA	NA	NA	0	302	7.2	57	100	261	6.6	54	100	182	4.6	66	100	90	2.7	64	100	835	5.3	59
22:45:00	NA	NA	NA	0	224	5.4	57	100	214	5.6	53	100	164	3.8	72	100	74	2.9	49	100	676	4.4	58
23:00:00	NA	NA	NA	0	147	3.5	57	100	158	4.0	54	100	128	3.3	66	100	51	2.0	48	100	484	3.2	58
1ht:	**NA**				**955**				**901**				**654**				**300**				**2810**		
23:15:00	NA	NA	NA	0	123	2.9	57	100	142	3.6	54	100	104	2.6	66	100	42	1.7	48	100	411	2.7	57
23:30:00	NA	NA	NA	0	130	3.1	57	100	150	3.8	54	100	102	2.9	60	100	54	2.0	52	100	436	2.9	56
23:45:00	NA	NA	NA	0	93	2.2	58	100	119	3.0	54	100	83	2.0	71	100	53	1.9	53	100	348	2.3	59
00:00:00	NA	NA	NA	0	77	1.8	59	97	102	2.6	55	97	74	1.9	66	97	38	1.6	46	97	291	1.9	58
1ht:	**NA**				**424A**				**514A**				**364A**				**188A**				**1490**		
24ht:	**NA**				**31860A**				**26568A**				**18100A**				**9783A**				**84816**		

Attachment G

2020 Daily Truck Volume
Forecasted by
Southern California Association of Governments


Kern
Santa Barbara
Ventura
Los Angeles
San Bernardino
Riverside
Orange
San Diego
Imperial County
Palmdale
Victorville
Santa Clarita
Ventura
Thousand Oaks
Pasadena
San Bernardino
Malibu
Riverside
Torrance
Santa Ana
Newport Beach
San Clemente
Temecula
Palm Springs
To Needles
To Blythe
(See inset)
Riverside County
Salton Sea
Calipatria
Arizona
San Diego
El Centro
Holtville
Mexico
2020 Truck Volumes
Port
Port of Entry
Airport/Potential Airport Site
The SCAG Region
98 RTP
Daily Truck Volumes
0 to 18,000
18,000 to 24,000
24,000 to 40,000
40,000 or more
Thomas Bros. Network
5/18/98
Southern California Association of Governments
April 1998

Attachment H

Traffic Accident Surveillance Analysis System

Time Period: 01/01/1995 – 12/31/1999
Location: SR-57 Northbound
Lambert Road to Los Angeles County Line

TASAS Table B

TASAS TABLE B DISTRICT 12
SELECTIVE ACCIDENT RATE CALCULATION
ROUTE SEQUENCE

LOCATION DESCRIPTION	RA GRP (RUS)	*-NUMBER OF ACCIDENTS/SIGNIFICANCE* TOT	FAT	INJ	F+I	MULTI VEH	WET	DARK	PER KLD INJ	*ADT * MAIN X-ST	TOTAL MV+ OR MVM	*-ACCIDENT RATE ACCS/MV+ OR MVM-* ACTUAL FAT	F+I	TOT	AVERAGE FAT	F+I	TOT
057 ORA 21.979 NB OFF TONNER CYN	R22	1	0	1	1	0	0	0	0	.6	.66+	.000	1.52	1.52	.004	.50	1.35
12-0001 97-07-01 00-06-30 36 MO	(S)								1								

+ DENOTES MV USED IN RATES

Attachment I

Plan Sheets

Vicinity Map
Typical Sections X-1 through X-4
Construction Staging SC-1
Ramp Profiles P-1 through P-4
Layout – Alternative 1 L-1 through L-12
Layout – Alternative 2 L-1 through L-12
Layout – Alternative 3 L-1 through L-12
Layout – Alternative 4 L-6, L-8 through L-12 (L-1 through L-5, and L-7 are identical to Alternative 2 plans, thus, use Alternative 2 plans)

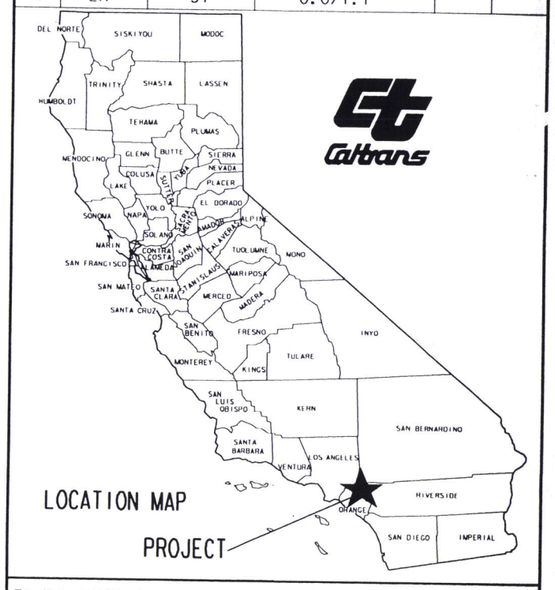
STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORA	57	34.0/36.3		
7	LA	57	0.0/1.1		



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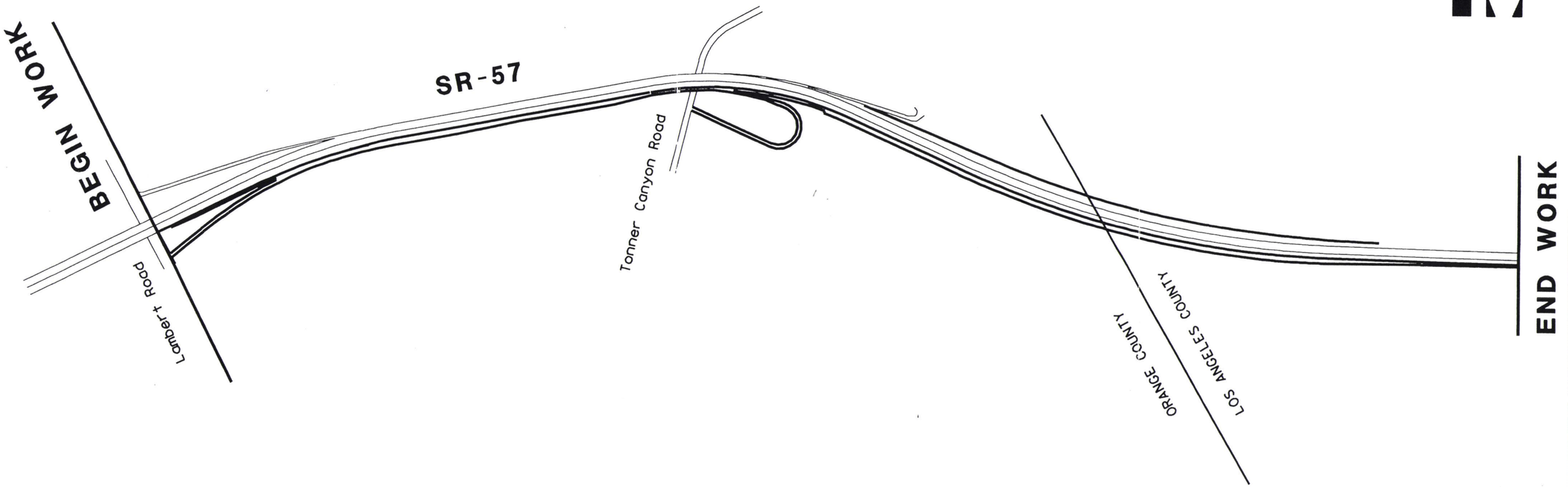
Caltrans Metric



VICINITY MAP

PROJECT ENGINEER	DATE	PROJECT MANAGER	DATE

FOR REDUCED PLANS ORIGINAL 0 20 40 60 80

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Ora	57	34.0/36.3		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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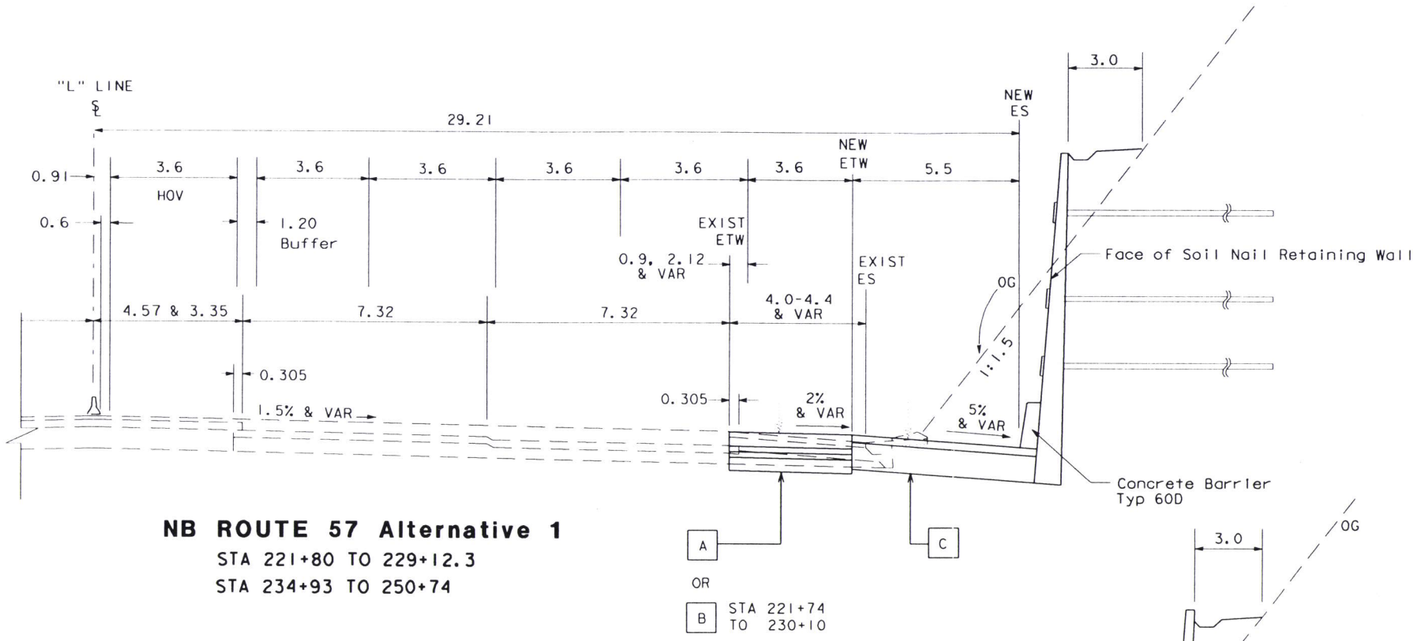
REGISTERED PROFESSIONAL ENGINEER — Hammer X. Sui — No. C 50486 — Exp. 6-30-05 — CIVIL — STATE OF CALIFORNIA

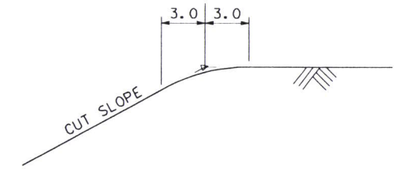
Caltrans Metric



NB ROUTE 57 Alternative 1

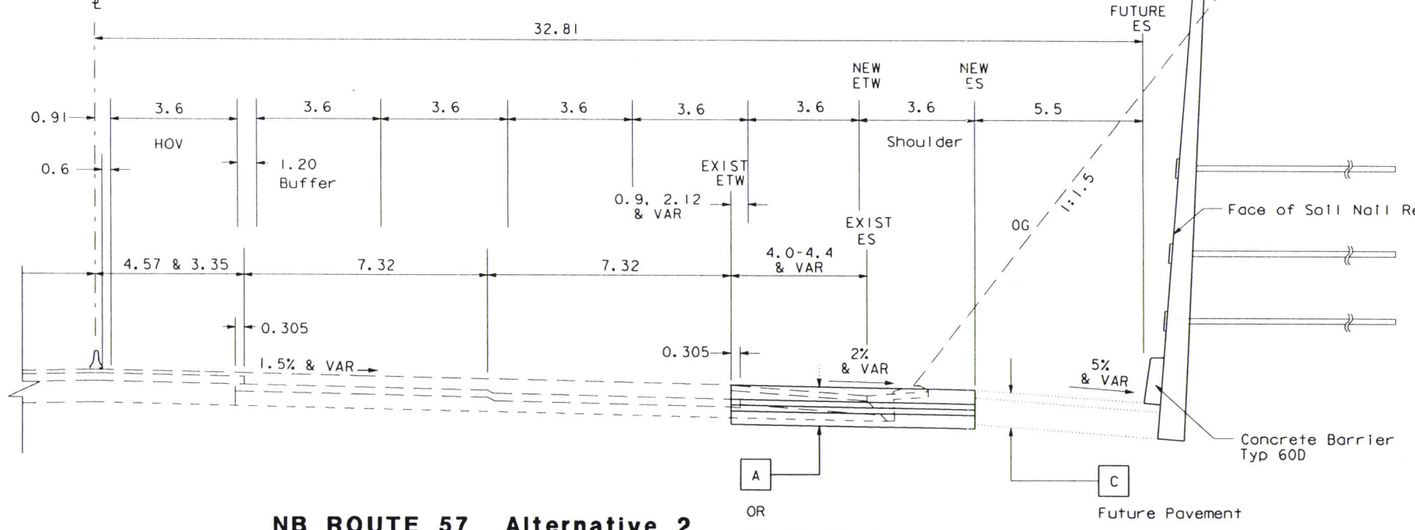
STA 221+80 TO 229+12.3

STA 234+93 TO 250+74



SLOPE ROUNDING DETAIL

NO SCALE



NB ROUTE 57 Alternative 2

STA 221+80 TO 229+12.3

STA 234+93 TO 250+74

260mm PCCP
105mm ATPB
105mm Class2 AB
245mm Class2 AS — A

225mm TYPE B AC
105mm ATPB
280mm Class2 AB
455mm Class2 AS — B

140mm Type B AC
490mm Class2 AB — C

ALL DIMENSIONS ARE IN METERS
UNLESS OTHERWISE SHOWN

TYPICAL CROSS SECTIONS

NO SCALE

X-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans PROJECT DEVELOPMENT

PROJECT ENGINEER: Hammer X. Sui

DATE	REVISED BY	DATE REVISED
	CALCULATED/ DESIGNED BY	
	CHECKED BY	

LAST REVISION 00-00-00

TIME PLOTTED => $$$$$$$SYTIME$$$$$$$

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => $$$$$$USER$$$$$$
DGN FILE => $$$$$$$$$$DGNSPEC$$$$$$$$$

CU 12222

EA 0C120K

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Ora	57	34.0/36.3		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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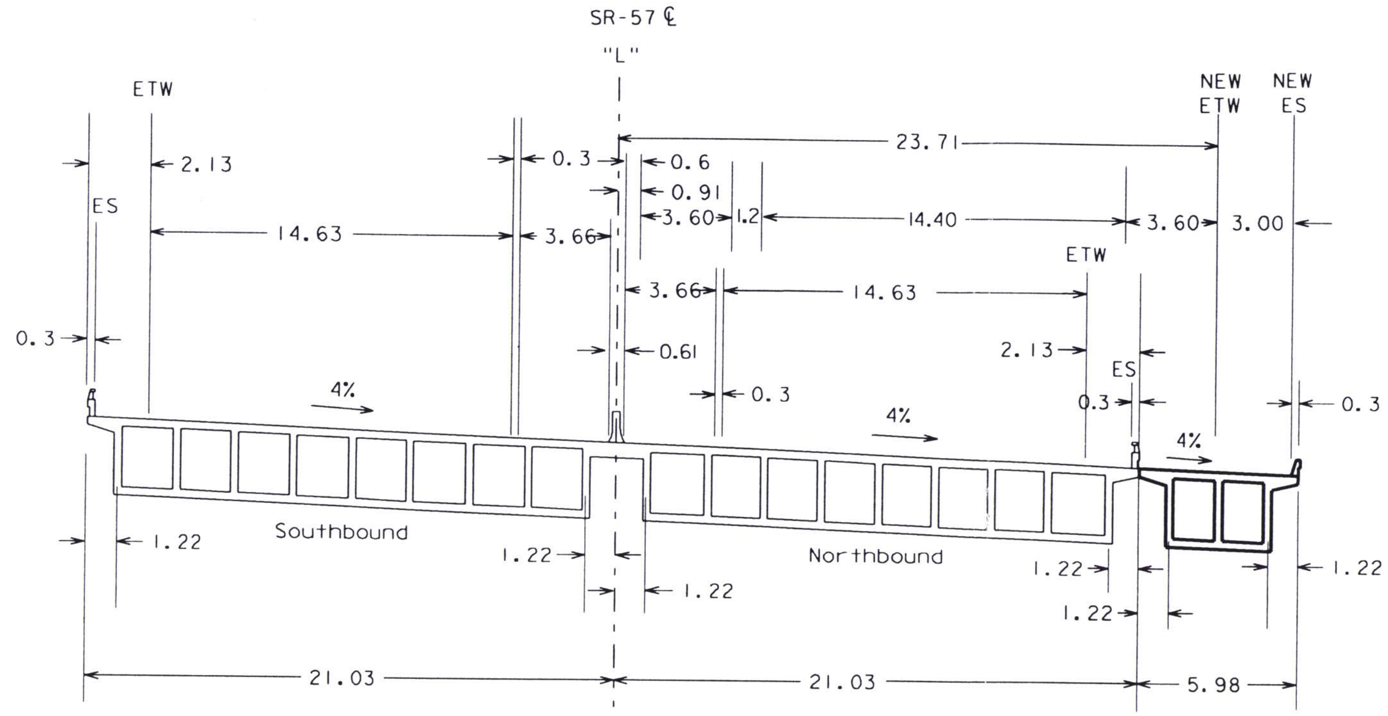
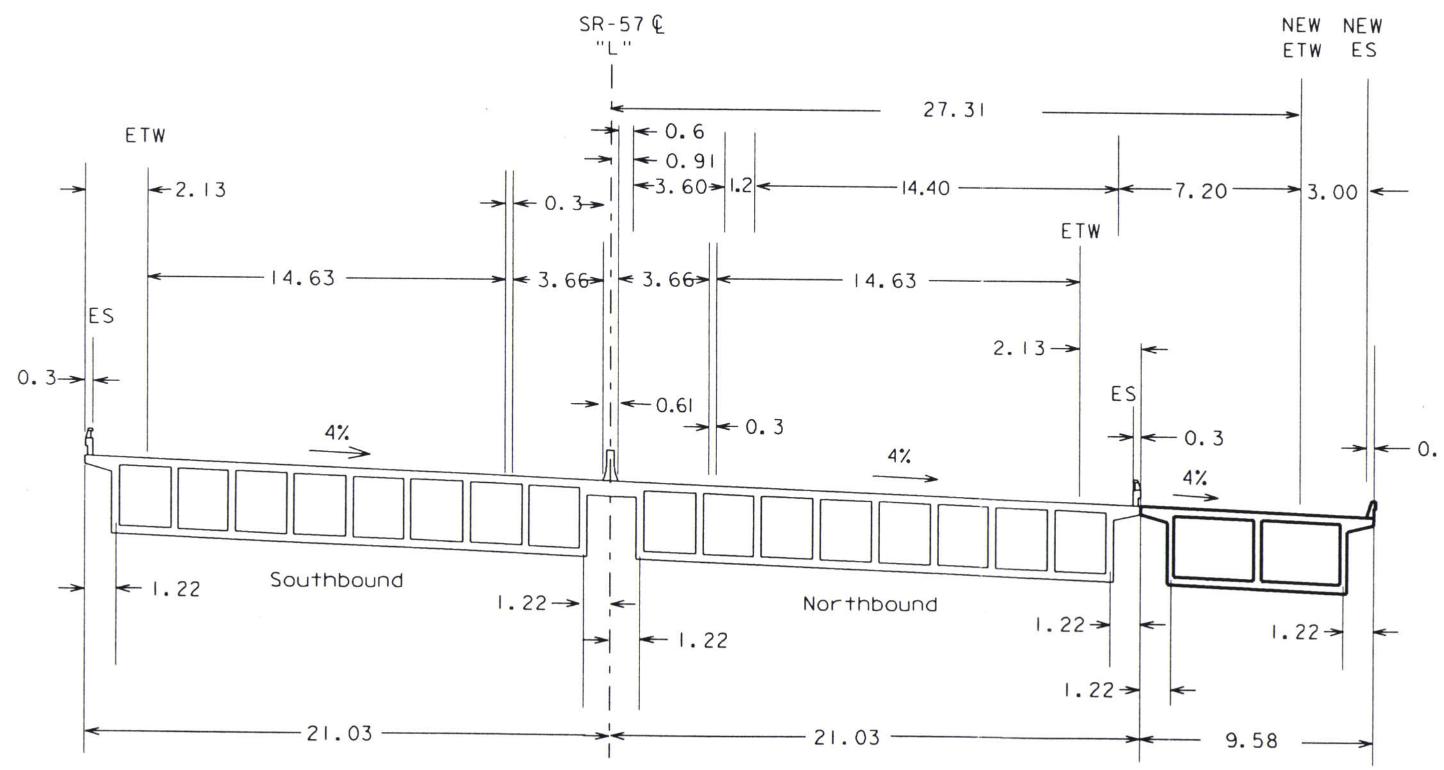
REGISTERED PROFESSIONAL ENGINEER
Hammer X. Sui
No. C 50486
Exp. 6-30-01
CIVIL
STATE OF CALIFORNIA

Caltrans Metric



ALT. 1



ALT. 2, 3, &4

TONNER CANYON BRIDGE
TYPICAL SECTIONS

NO SCALE

ALL DIMENSIONS ARE IN METERS
UNLESS OTHERWISE SHOWN

X-2

Caltrans PROJECT DEVELOPMENT

PROJECT ENGINEER Hammer X. Sui

CALCULATED/DESIGNED BY | CHECKED BY | DATE | REVISED BY | DATE REVISED

USERNAME => $$$$$$USER$$$$$$

LAST REVISION

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Ora	57	34.0/36.3		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

Hammer X. Sui No. C 50486 Exp. 6-30-05 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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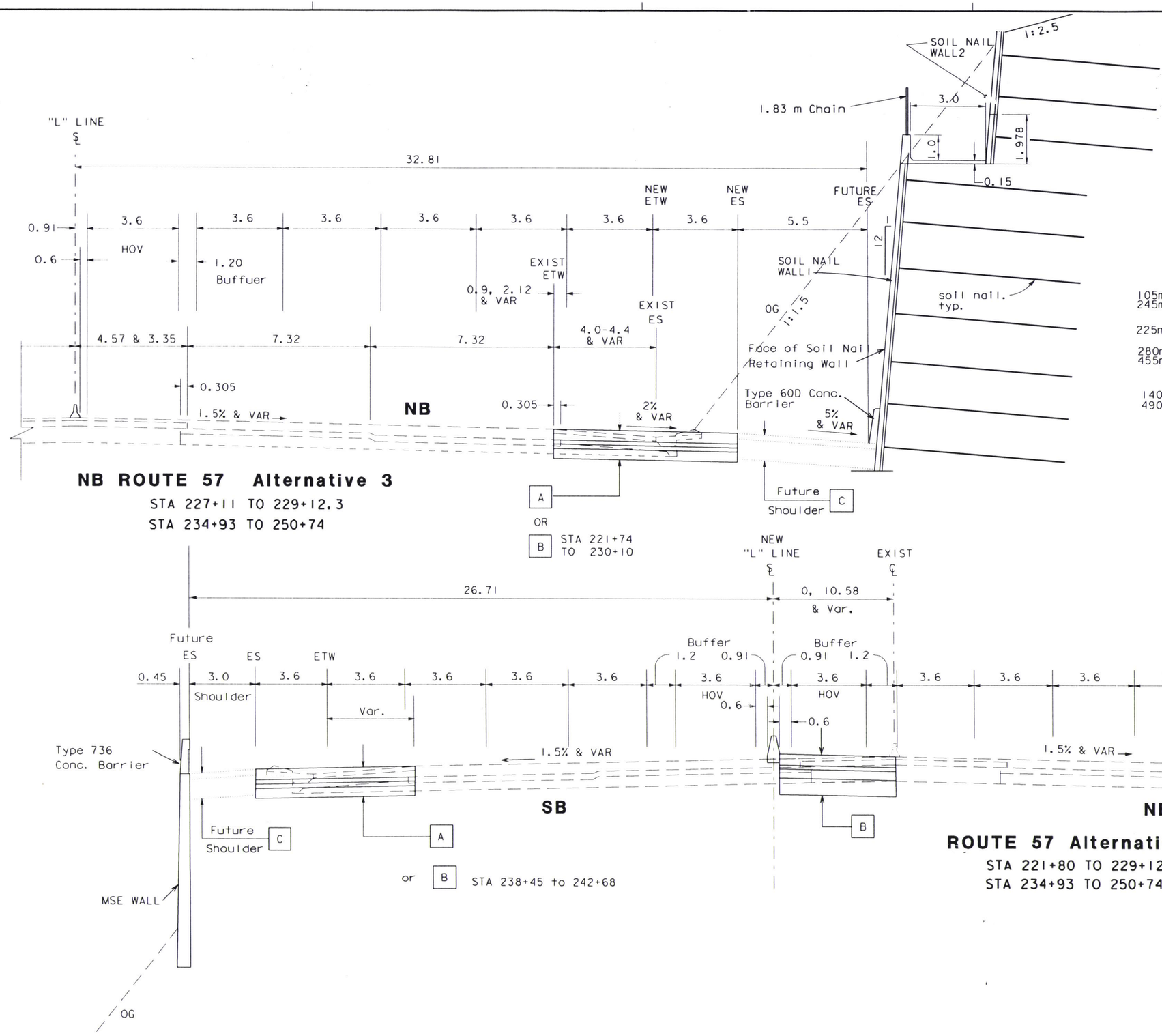


NB ROUTE 57 Alternative 3

STA 227+11 TO 229+12.3

STA 234+93 TO 250+74

ROUTE 57 Alternative 4

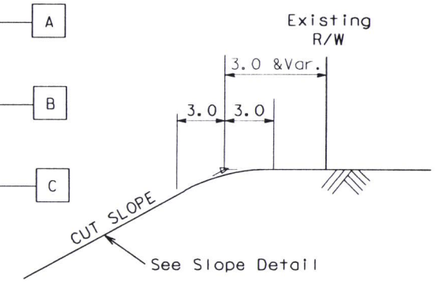
STA 221+80 TO 229+12.3

STA 234+93 TO 250+74

260mm PCCP
105mm ATPB
105mm Class2 AB
245mm Class2 AS
A

225mm Type B AC
105mm ATPB
280mm Class2 AB
455mm Class2 AS
B

140mm Type B AC
490mm Class2 AB
C



SLOPE ROUNDING DETAIL

NO SCALE

ALL DIMENSIONS ARE IN METERS
UNLESS OTHERWISE SHOWN

TYPICAL CROSS SECTIONS

NO SCALE

X-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans PROJECT DEVELOPMENT

PROJECT ENGINEER: Hammer X. Sui

DATE REVISED BY | DATE REVISED

CALCULATED/ DESIGNED BY | CHECKED BY

LAST REVISION

FOR REPRINT PLANS ORIGINAL 0 20 40 60 80 USERNAME => $$$$$$USER$$$$$$

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Ora	57	34.0/36.3		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

Hammer X. Sui No. C 50486 Exp. 6-30-05 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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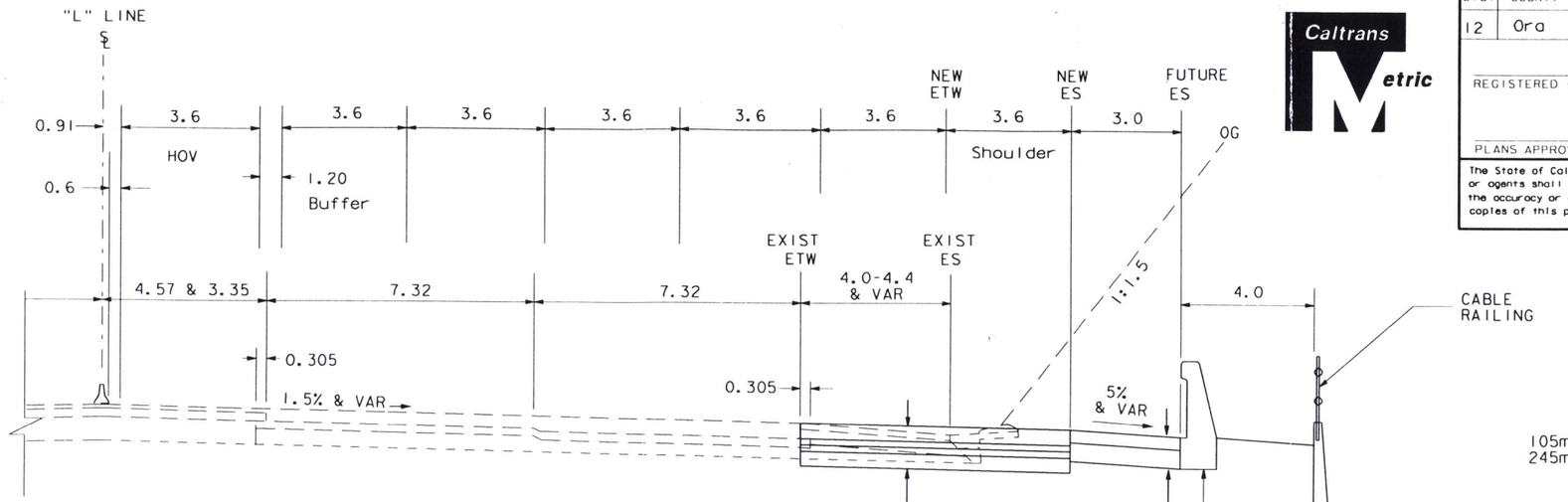
CALCULATED/ DESIGNED BY | CHECKED BY

PROJECT ENGINEER — HAMMER SUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans PROJECT DEVELOPMENT

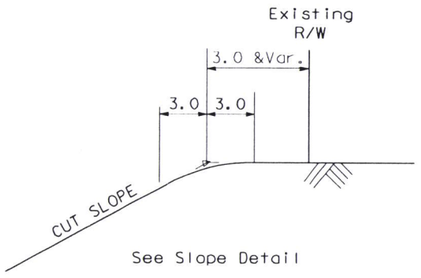


260mm PCCP
105mm ATPB
105mm Class 2 AB
245mm Class 2 AS — A

225mm TYPE B AC
105mm ATPB
280mm Class2 AB
455mm Class2 AS — B

140mm Type B AC
490 Class 2 AB — C

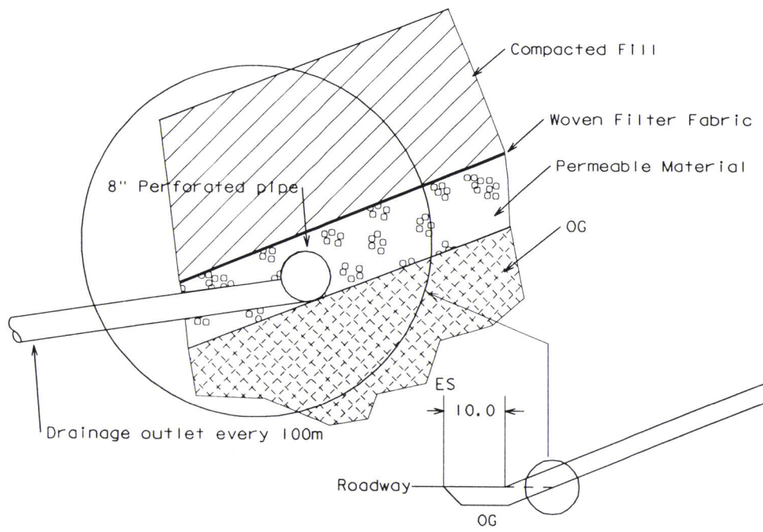
ALT. 2, 3, & 4
NB ROUTE 57
STA 229+20 TO 230+20

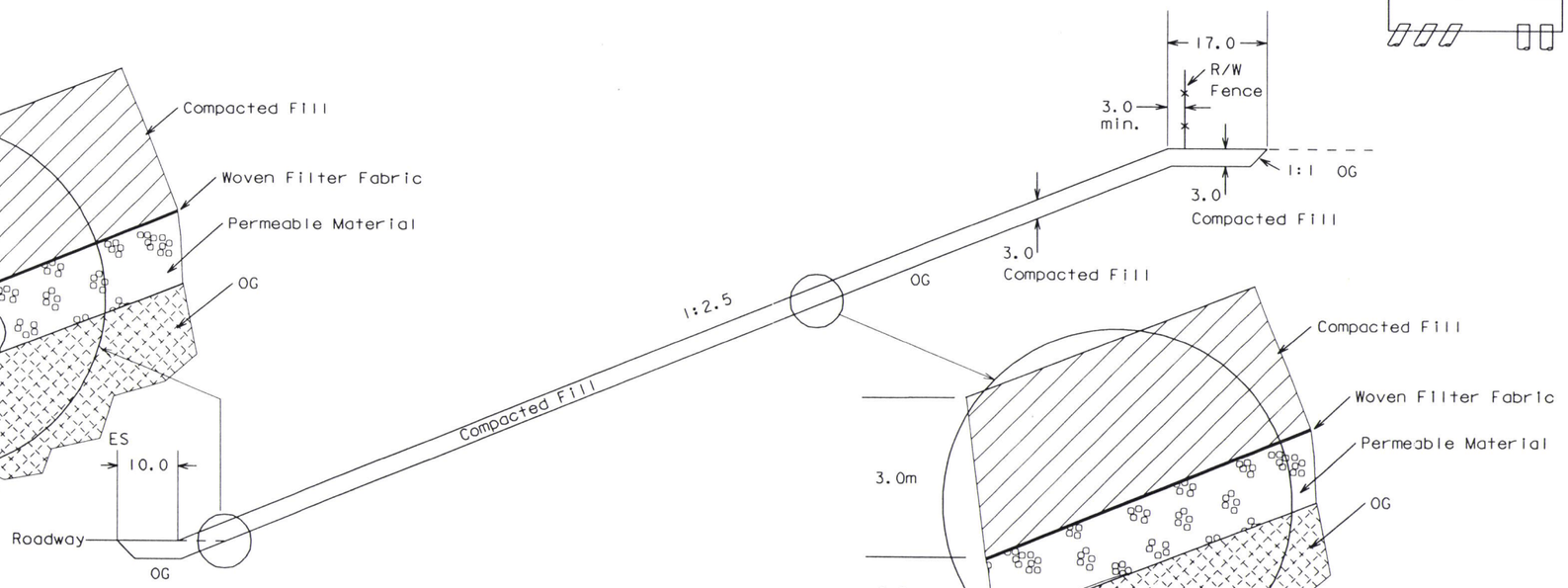


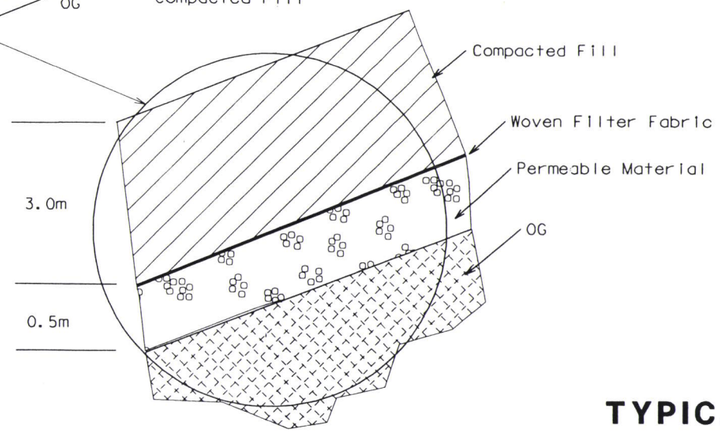
See Slope Detail

SLOPE ROUNDING DETAIL

NO SCALE







CUT SLOPE DETAIL

TYPICAL CROSS SECTIONS

NO SCALE

X-4

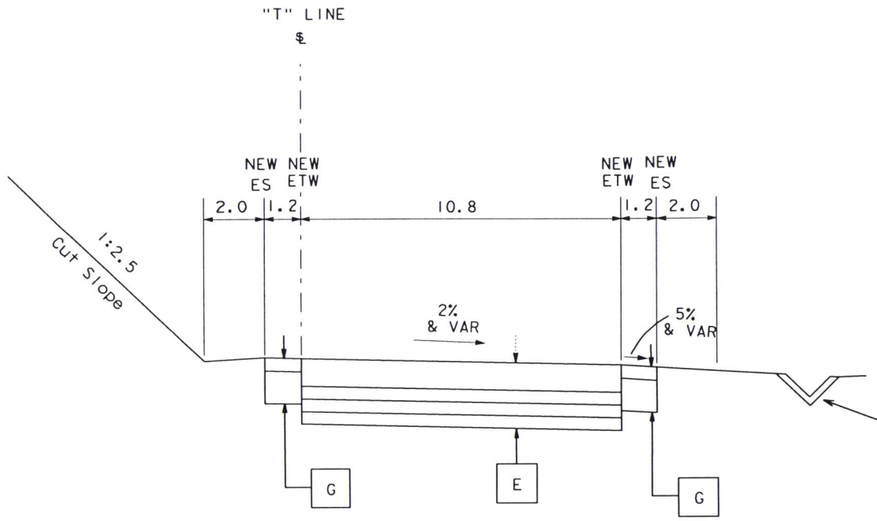
ALL DIMENSIONS ARE IN METERS
UNLESS OTHERWISE SHOWN

LAST REVISION

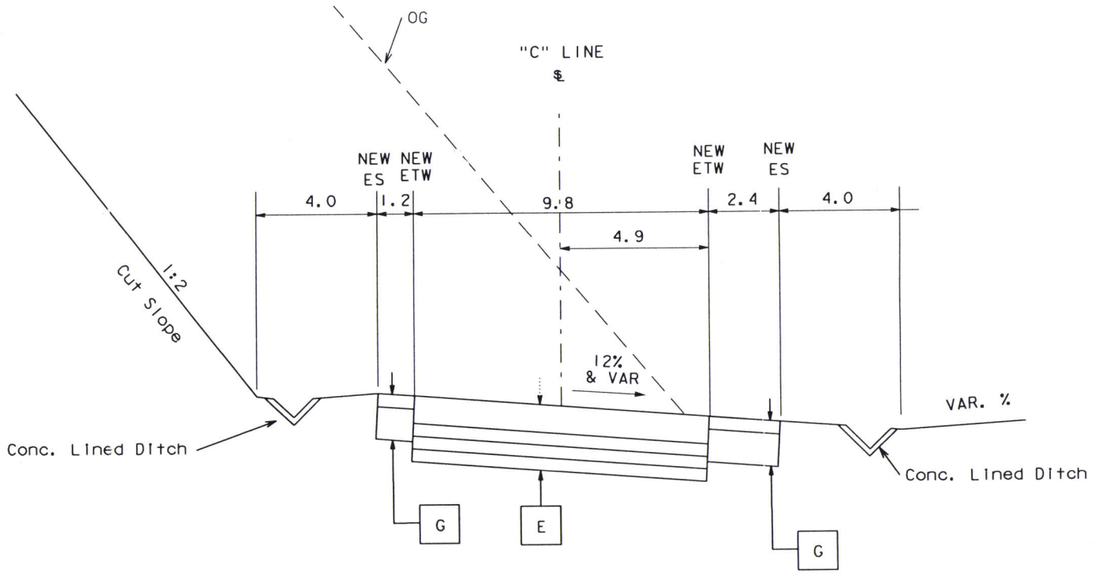
FOR REDUCED PLANS ORIGINAL 0 20 40 60 80 USERNAME = \\ &&&&&&&USER&&&&&&&

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric



Ramp "T"
Lambert Road
Northbound On-Ramp



Ramp "C"
Tonner Canyon Road
Northbound Off-Ramp

Ramp Typical
Structural Sections

E
- 230mm PCCP
- 105mm ATPB
- 105mm Class2 AB
- 105mm Class2 AS

G
- 110mm Type B AC
- 370mm Class2 AB

ALL DIMENSIONS ARE IN METERS
UNLESS OTHERWISE SHOWN

TYPICAL CROSS SECTIONS

NO SCALE

X-5

LAST REVISION

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans PROJECT DEVELOPMENT

PROJECT ENGINEER
HAMMER SUI

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CHECKED BY

DATE REVISED BY
DATE REVISED

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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Ora	57	34.0/36.3		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

Hammer X. Sui
No. C 50486
Exp. 6-30-01
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

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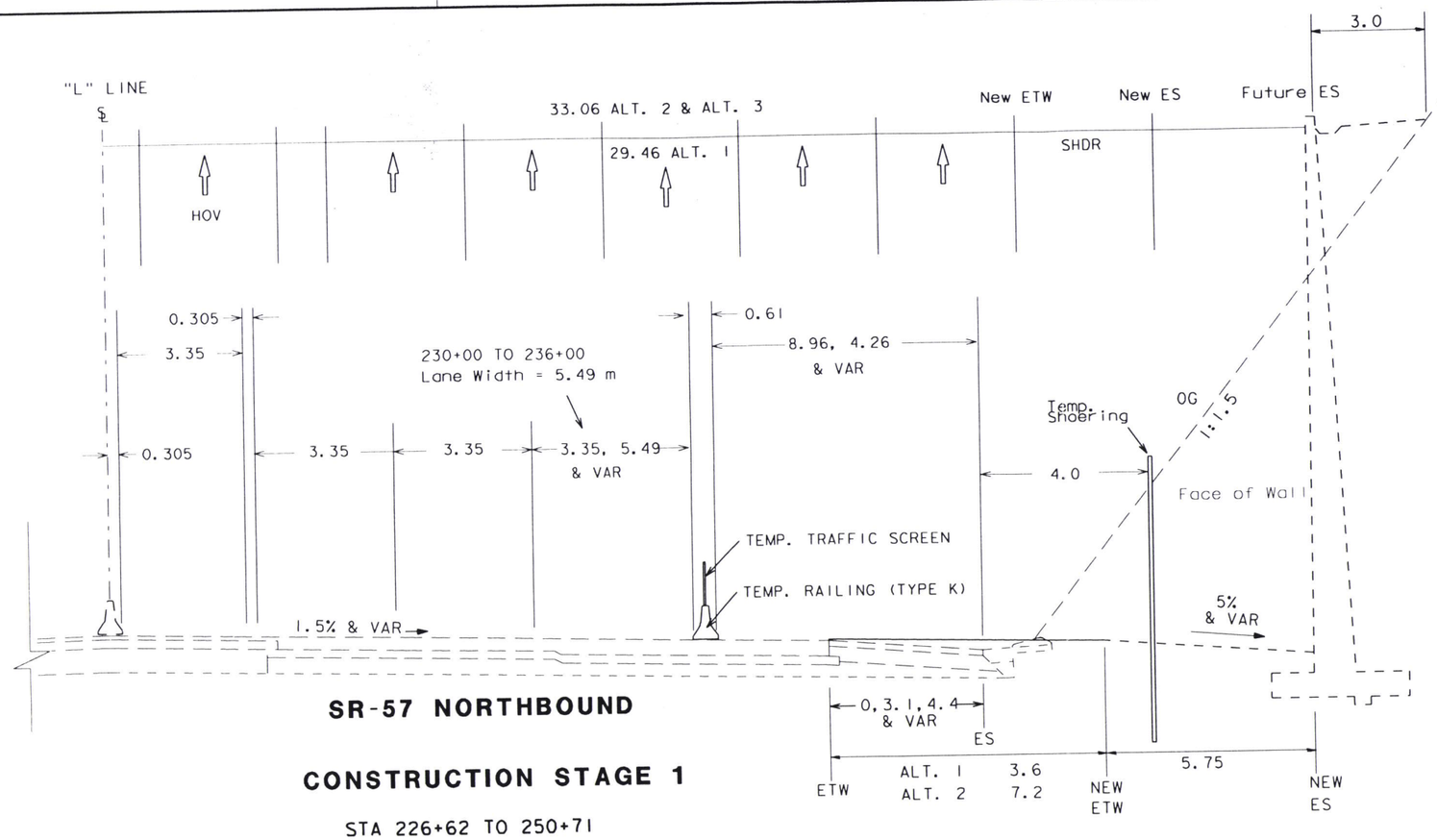
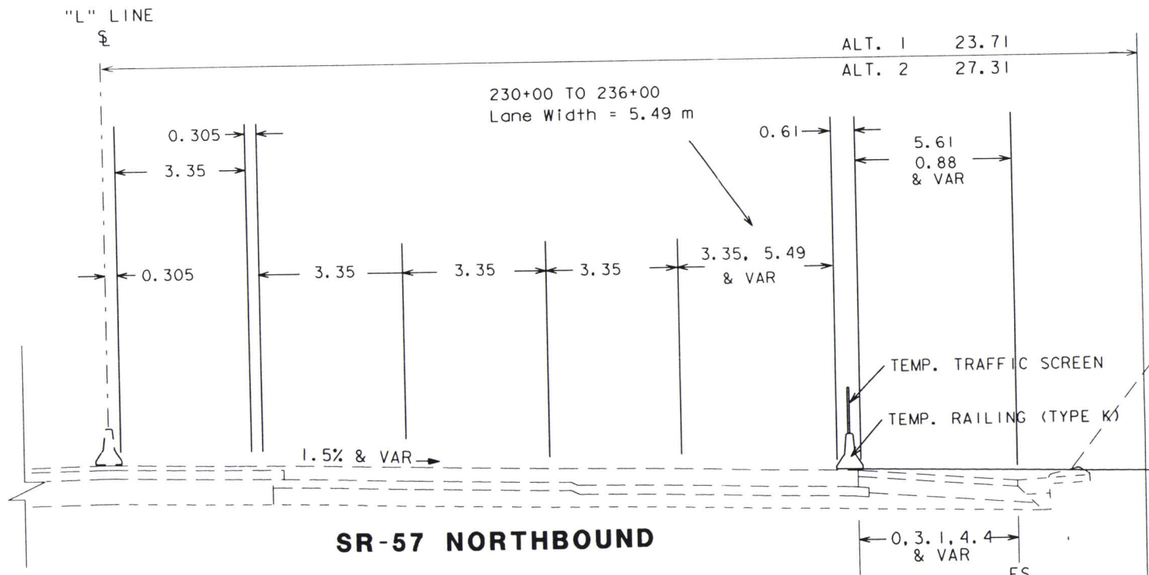


SR-57 NORTHBOUND

CONSTRUCTION STAGE 1

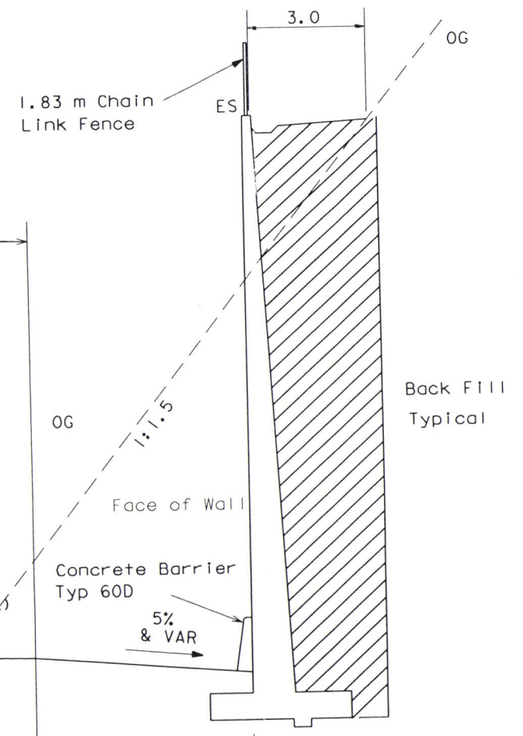
STA 226+62 TO 250+71



SR-57 NORTHBOUND

CONSTRUCTION STAGE 2

STA 226+62 TO 250+71



CONSTRUCTION STAGING

NO SCALE

SC-1

ALL DIMENSIONS ARE IN METERS
UNLESS OTHERWISE SHOWN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans PROJECT DEVELOPMENT

PROJECT ENGINEER
Hammer X. Sui

DATE	REVISED BY	DATE REVISED

CALCULATED/ DESIGNED BY

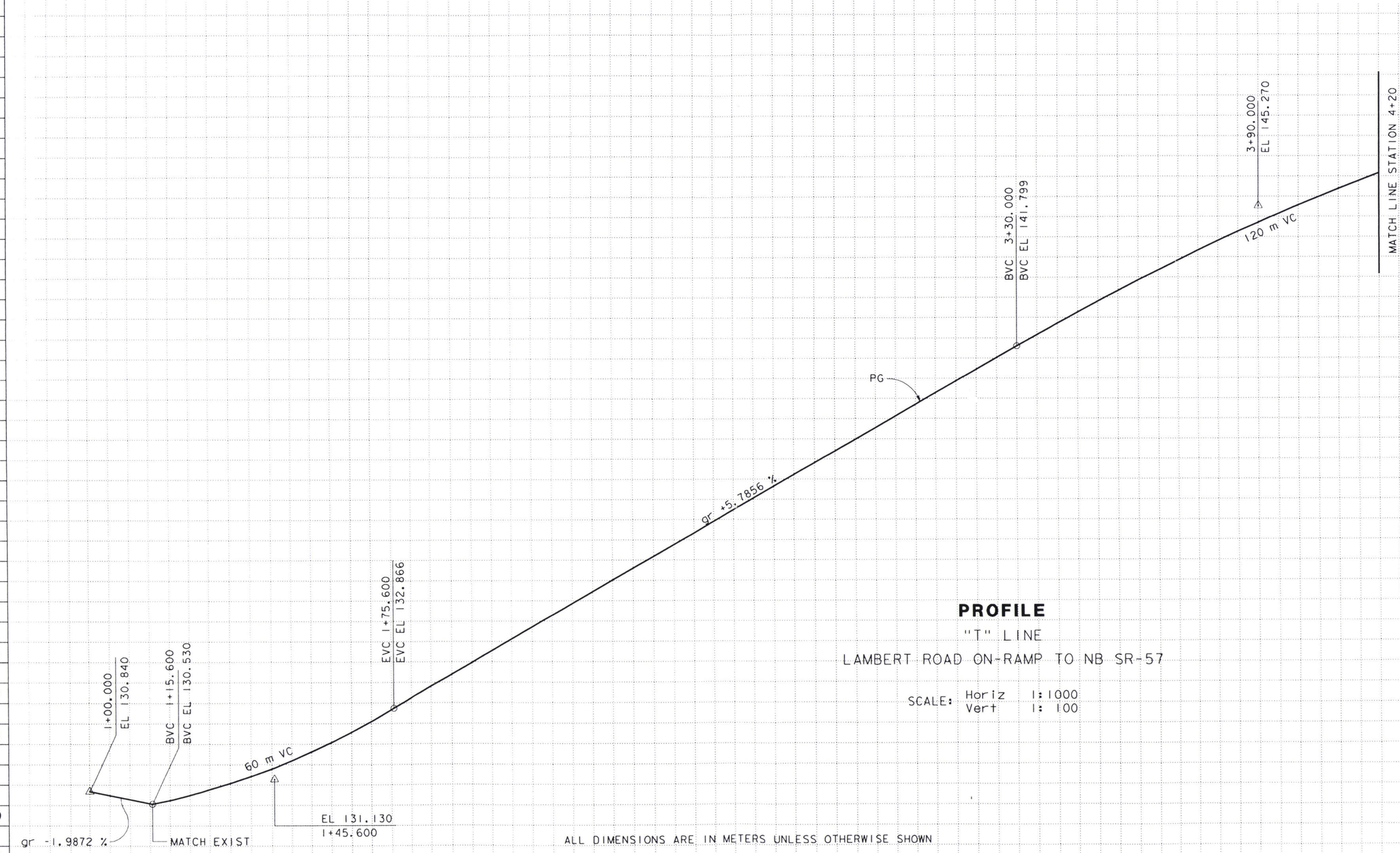
CHECKED BY

LAST REVISION

FOR REDUCED PLANS ORIGINAL 0 20 40 60 80 USERNAME = \\\\\\USER\\\\\\

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric



PROFILE

"T" LINE

LAMBERT ROAD ON-RAMP TO NB SR-57

SCALE: Horiz 1:1000
Vert 1:100

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE
SCALE AS SHOWN
P-1

Station	1+00	+20	+40	+60	+80	2+00	+20	+40	+60	+80	3+00	+20	+40	+60	+80	4+00	+20	+40
m^3 Exc																		
m^3 Emb																		

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PROJECT ENGINEER
HAMMER SUI

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FOR REDUCED PLANS ORIGINAL 0 20 40 60 80

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric

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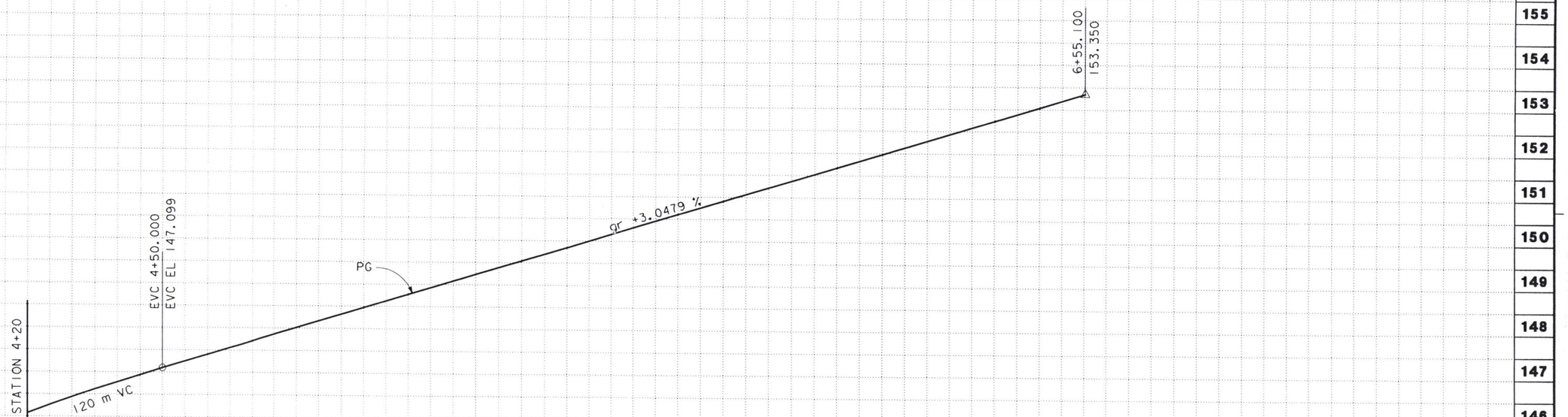


PROFILE

"T" LINE

LAMBERT ROAD ON-RAMP TO NB SR-57

SCALE: Horiz 1:1000
Vert 1:100

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

Station		4+00	+20	+40	+60	+80	5+00	+20	+40	+60	+80	6+00	+20	+40	+60	+80	7+00
m^3	Exc																
	Emb																

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

FOR REVISED PLANS ORIGINAL 0 20 40 60 80

PROFILE

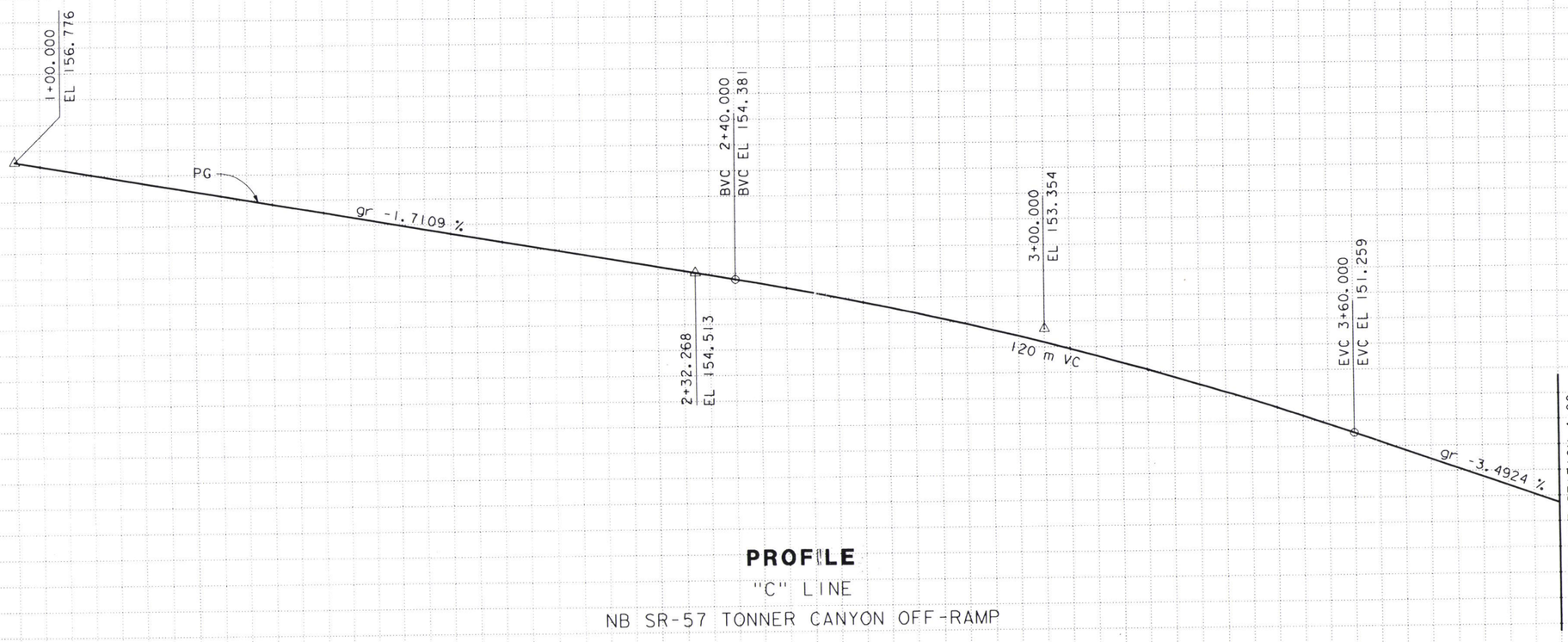
SCALE AS SHOWN

P-2

LAST REVISION

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric



PROFILE

"C" LINE

NB SR-57 TONNER CANYON OFF-RAMP

SCALE: Horiz 1:1000
Vert 1: 100

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE
SCALE AS SHOWN
P-3

Station	1+00	+20	+40	+60	+80	2+00	+20	+40	+60	+80	3+00	+20	+40	+60	+80	4+00	+20
m^3 Exc																	
m^3 Emb																	

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION

FOR REDUCED PLANS ORIGINAL 0 20 40 60 80

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric

DATE REVISED BY

DATE REVISED

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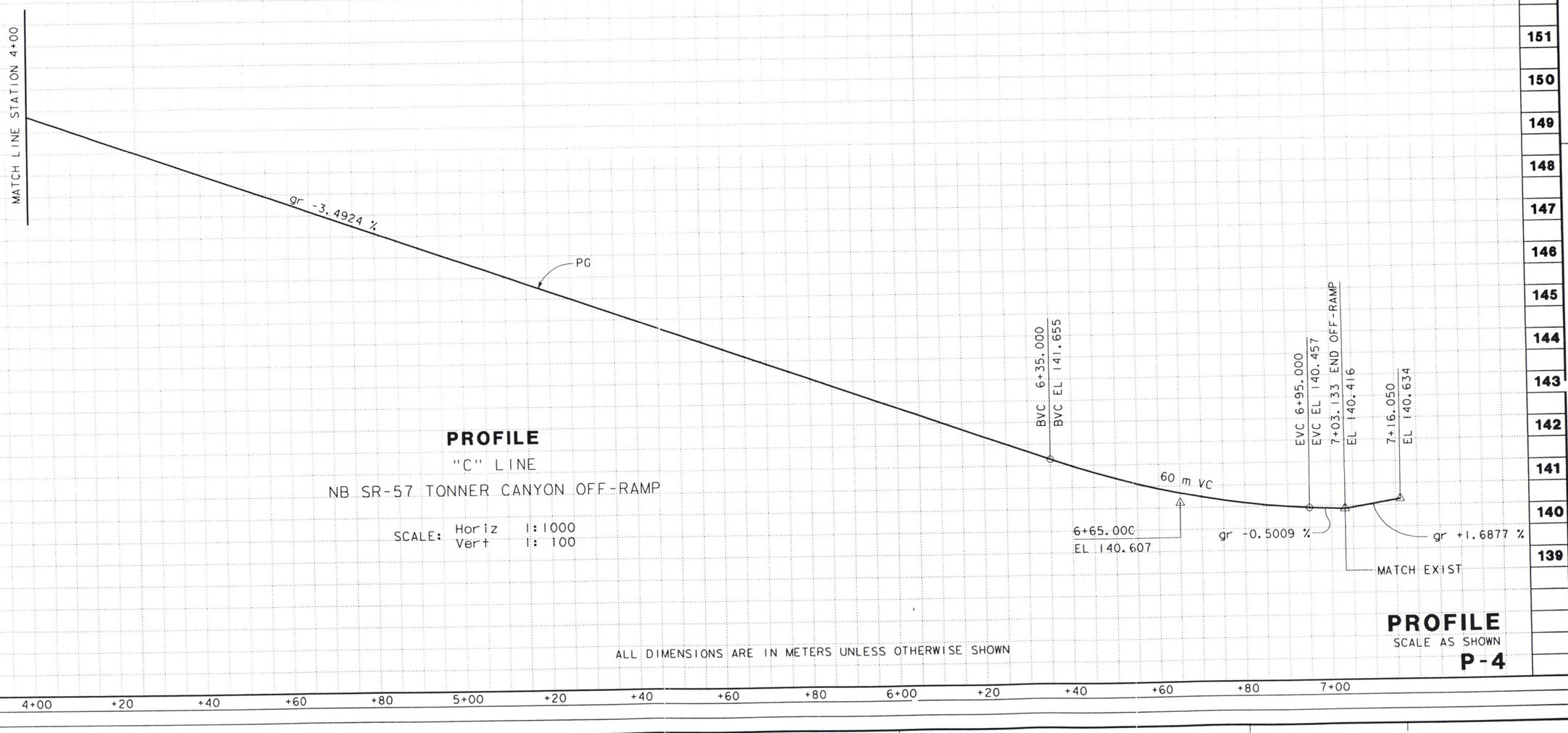
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans



PROFILE

"C" LINE

NB SR-57 TONNER CANYON OFF-RAMP

SCALE: Horiz 1:1000
Vert 1: 100

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PROFILE

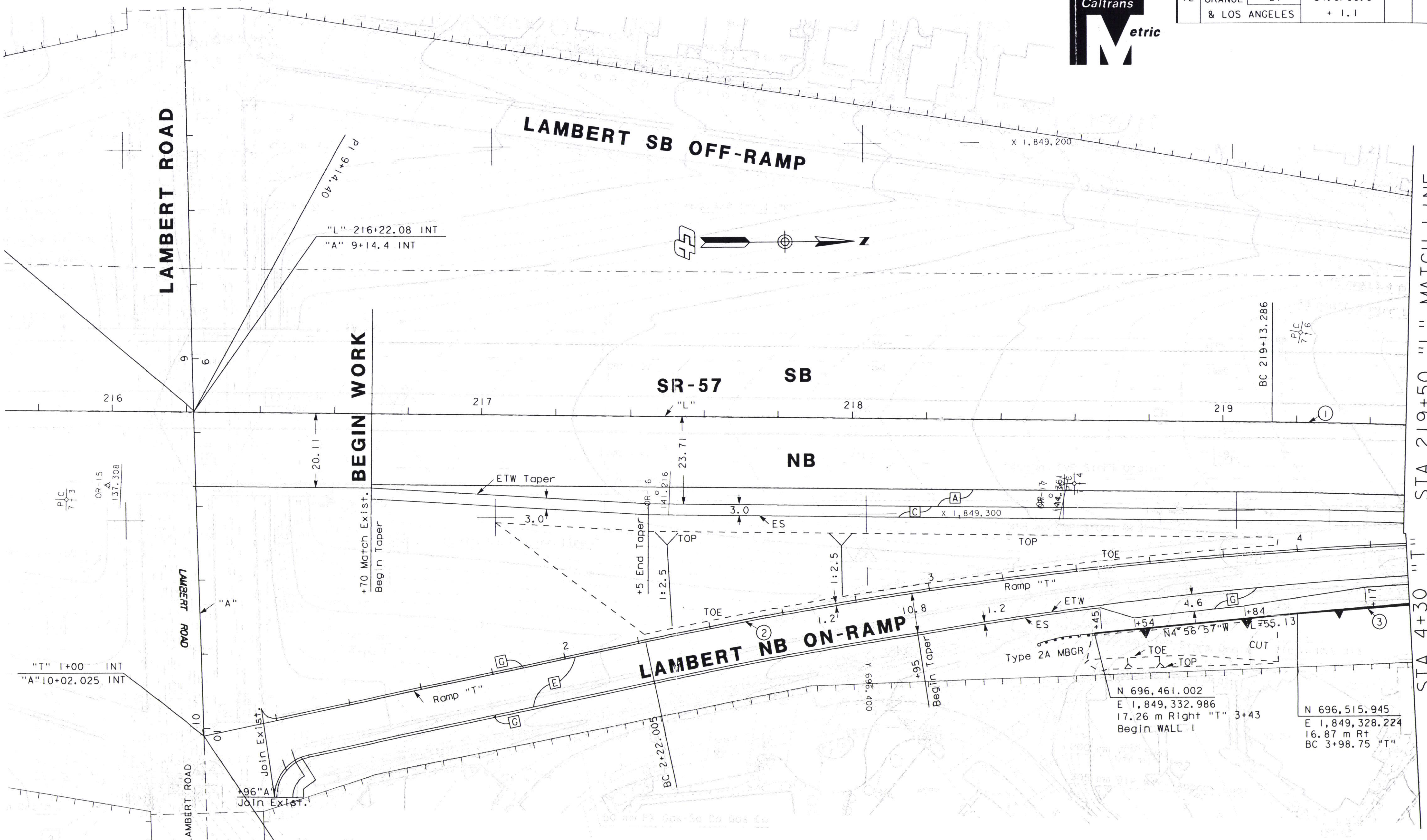
SCALE AS SHOWN

P-4

LAST REVISION

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric



LAMBERT SB OFF-RAMP
LAMBERT ROAD
PI 9+14.40
"L" 216+22.08 INT
"A" 9+14.4 INT
BEGIN WORK
SR-57
SB
NB
"L"
216
217
218
219
BC 219+13.286
20.11
23.71
ETW Taper
3.0
ES
TOP
TOE
+70 Match Exist. Begin Taper
+5 End Taper
1:2.5
OR-6 141.216
OR-15 137.308
P/C 7+3
P/C 7+6
"A"
"T" 1+00 INT
"A" 10+02.025 INT
Ramp "T"
LAMBERT NB ON-RAMP
BC 2+22.005
+95 Begin Taper
10.8
1.2
4.6
ETW
+45
+54
+84
+17
N4°56'57"W
L=55.13
CUT
Type 2A MBGR
N 696,461.002
E 1,849,332.986
17.26 m Right "T" 3+43
Begin WALL 1
N 696,515.945
E 1,849,328.224
16.87 m Rt
BC 3+98.75 "T"
Join Exist.
+96"A" Join Exist.
X 1,849,200
X 1,849,300
X 1,849,400
Y 696,400
STA 219+50 "L" MATCH LINE
STA 4+30 "T" MATCH LINE

Curve Data Table

No.	R	△	T	L	North	East
1	1524.0	15°27'9"	206.76	411.02	696481.32	1850799.82
2	1209.35	11°16'7"	119.31	237.85	696582.77	1850518.84
3	995.0	19°37'54"	172.16	340.94	696604.07	1850319.36

LAYOUT L-1

Scale 1:1000

ALT.1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

PROJECT ENGINEER: HAMMER SUI

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DATE | REVISED BY | DATE REVISED

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric

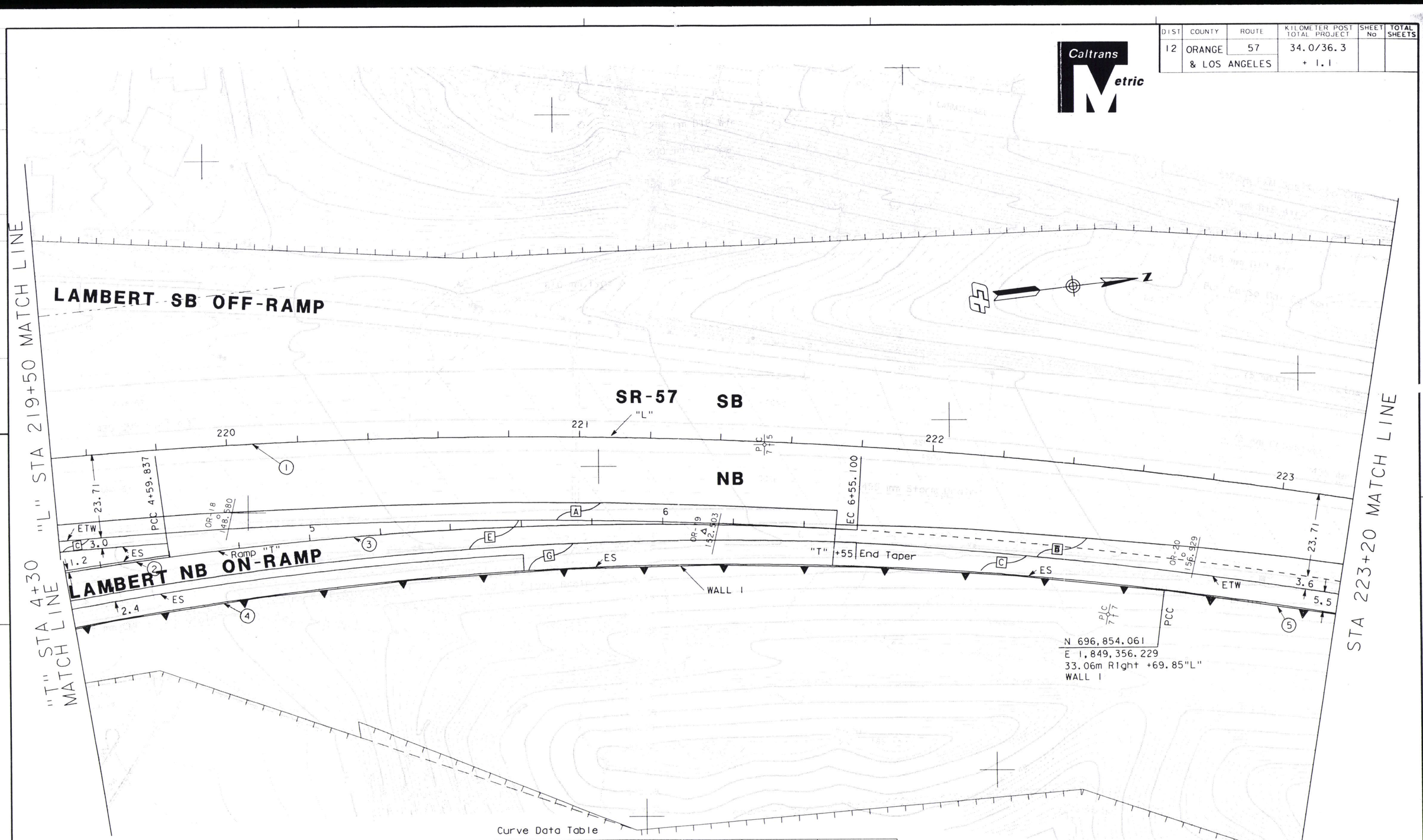
DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY

CHECKED BY

PROJECT ENGINEER
HAMMER SUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans



Curve Data Table

No.						
1	1524.0	15°27'9"	206.76	411.02	696481.32	1850799.82
2	1209.35	11°16'7"	119.31	237.85	696582.77	1850518.84
3	1010.38	11°4'11"	97.91	195.21	696579.57	1850319.88
4	995.0	19°37'54"	172.16	340.94	696604.07	1850319.36
5	1490.94	2°2'50"	26.64	53.27	696481.32	1850799.82

LAYOUT

Scale 1:1000

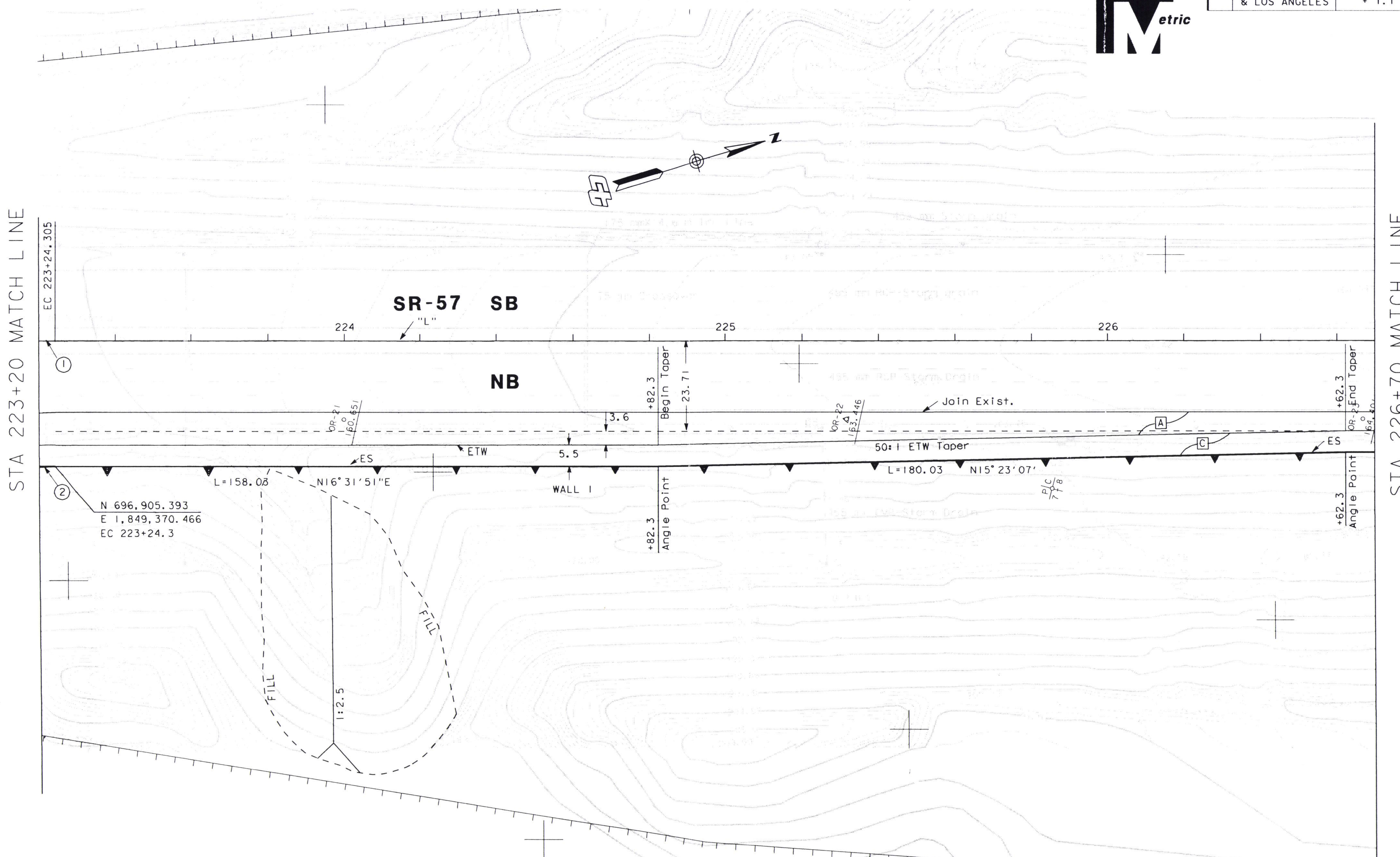
L-2
ALT.1

LAST REVISION

FOR REPRINT PLANS ORIGINAL 0 20 40 60 80

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric



Curve Data Table

No.	R	Δ	T	L	North	East
①	1524.0	15°27'9"	206.76	411.02	696481.32	1850799.82
②	1524.0	2°2'50"	26.64	53.27	696481.32	1850799.82

LAYOUT L-3

Scale 1:1000

ALT.1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

PROJECT ENGINEER: HAMMER SUI

CALCULATED/DESIGNED BY

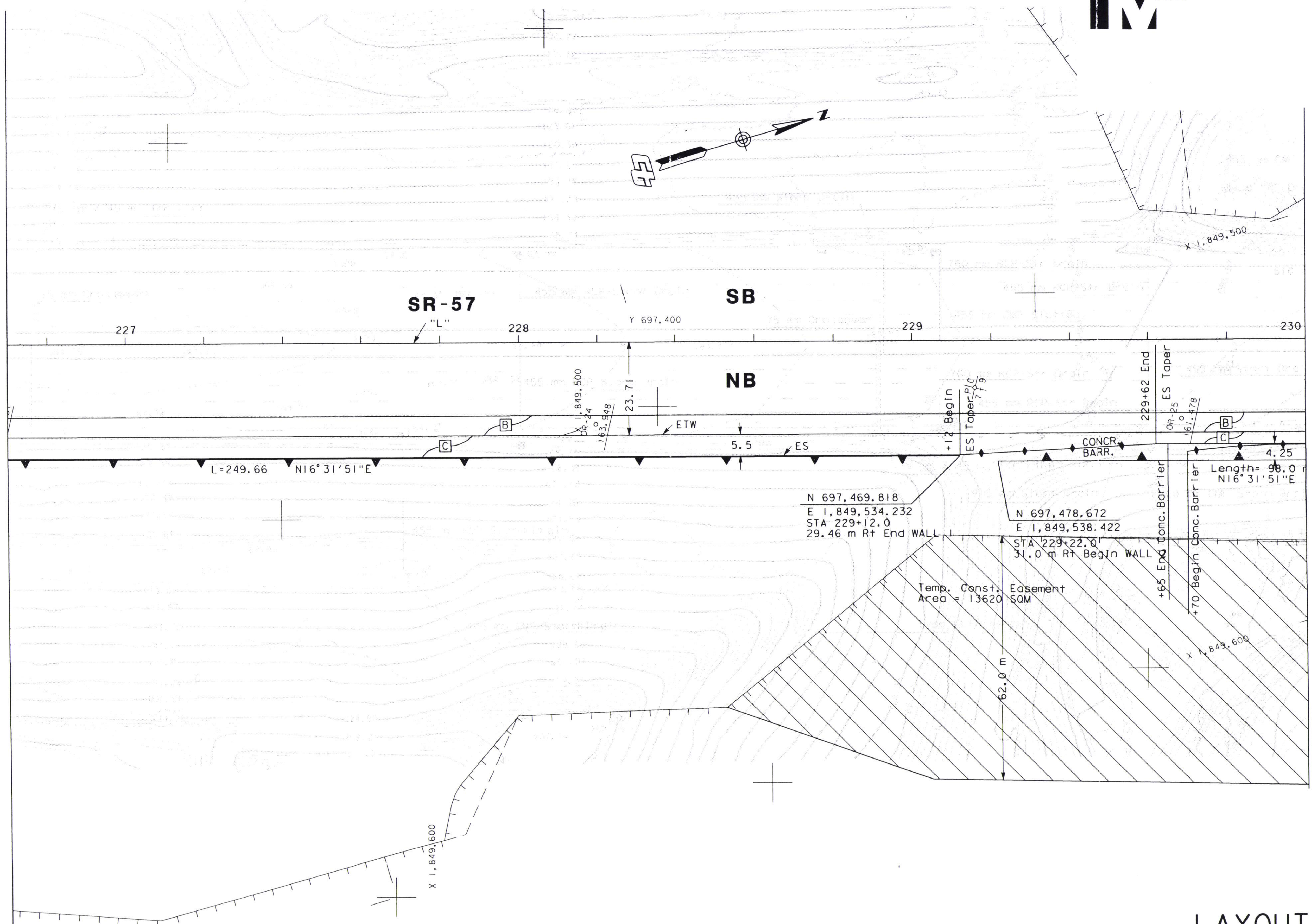
CHECKED BY

DATE REVISED BY

DATE REVISED

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric



STA 226+70 MATCH LINE
STA 230+00 MATCH LINE
SR-57
"L"
SB
NB
227
228
229
230
Y 697,400
23.71
ETW
5.5
ES
L=249.66
N16°31'51"E
X 1,849,500
OR-24
163.948
B
C
+12 Begin ES Taper
229+62 End ES Taper
OR-25
161.478
CONCR. BARR.
4.25
Length= 98.0 m
N16°31'51"E
N 697,469.818
E 1,849,534.232
STA 229+12.0
29.46 m Rt End WALL
N 697,478.672
E 1,849,538.422
STA 229+22.0
31.0 m Rt Begin WALL
+65 End Conc. Barrier
+70 Begin Conc. Barrier
Temp. Const. Easement
Area = 13620 SQM
62.0 m
X 1,849,500
X 1,849,600
X 1,849,600

LAYOUT L-4

Scale 1:1000

ALT.1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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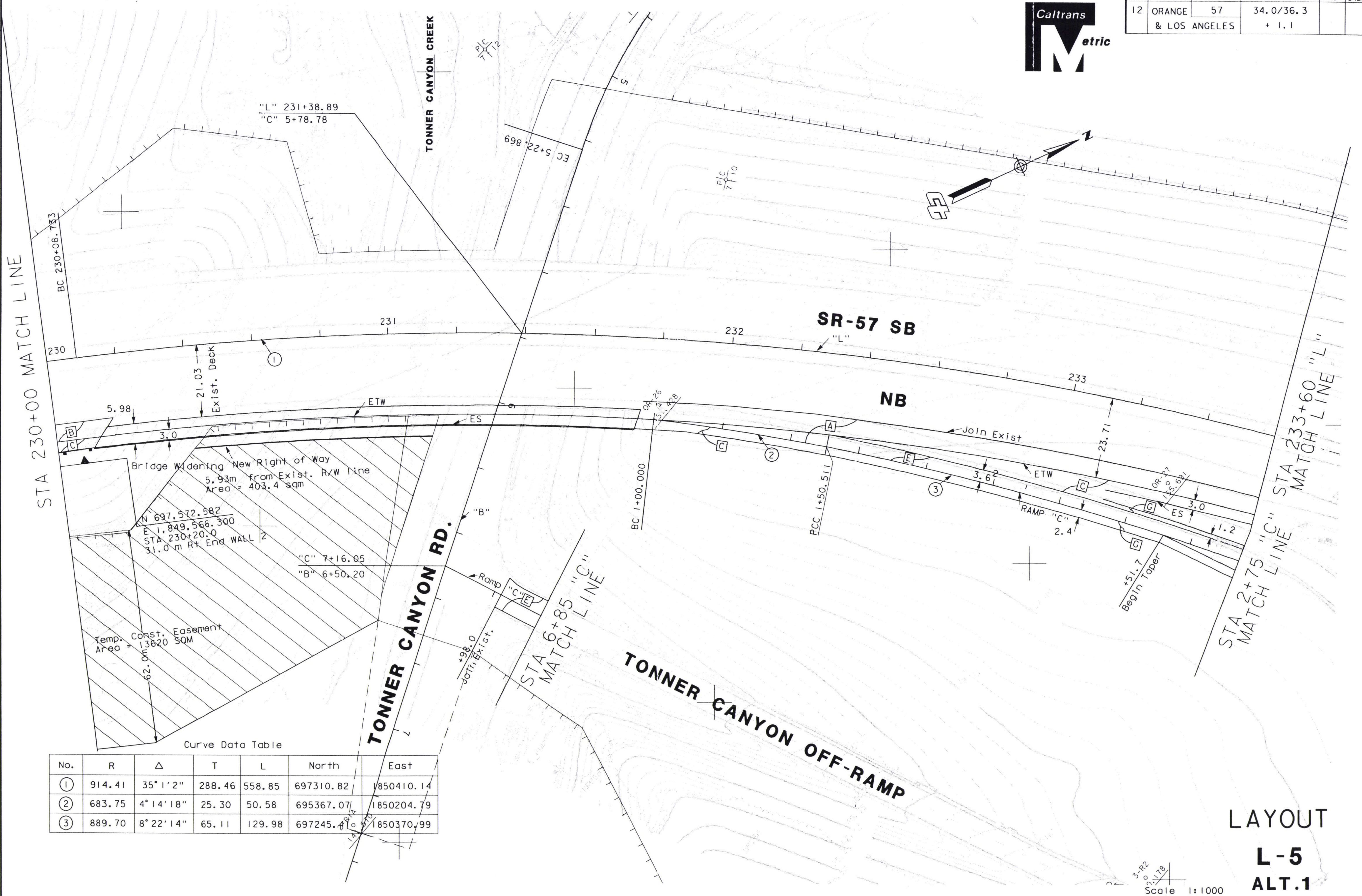
PROJECT ENGINEER	CALCULATED/ DESIGNED BY	DATE	REVISED BY
HAMMER SUI	CHECKED BY		DATE REVISED

LAST REVISION

FOR REDUCED PLANS ORIGINAL 0 20 40 60 80

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		



Caltrans Metric
TONNER CANYON CREEK
"L" 231+38.89
"C" 5+78.78
EC 5+22.869
P/C 7 T 12
P/C 7 T 10
BC 230+08.733
STA 230+00 MATCH LINE
SR-57 SB
"L"
NB
230
231
232
233
21.03 Exist. Deck
5.98
3.0
ETW
ES
Bridge Widening
New Right of Way 5.93m from Exist. R/W line Area = 403.4 sqm
N 697,572.582
E 1,849,566.300
STA 230+20.0
31.0 m Rt. End WALL
"C" 7+16.05
"B" 6+50.20
"B"
TONNER CANYON RD.
Ramp "C"
+98.0 Join Exist.
STA 6+85 "C" MATCH LINE
Temp. Const. Easement Area = 13620 SQM
62.0m
TONNER CANYON OFF-RAMP
BC 1+00.000
PCC 1+50.511
Join Exist
23.71
3.6
3.2
ETW
RAMP "C"
2.4
3.0
ES
1.2
+51.7 Begin Taper
STA 233+60 "L" MATCH LINE
STA 2+75 "C" MATCH LINE
Scale 1:1000

Curve Data Table

No.	R	Δ	T	L	North	East
1	914.41	35°1'2"	288.46	558.85	697310.82	1850410.14
2	683.75	4°14'18"	25.30	50.58	695367.07	1850204.79
3	889.70	8°22'14"	65.11	129.98	697245.41	1850370.99

LAYOUT
L-5
ALT.1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

PROJECT ENGINEER	HAMMER SUI
CALCULATED/DESIGNED BY	
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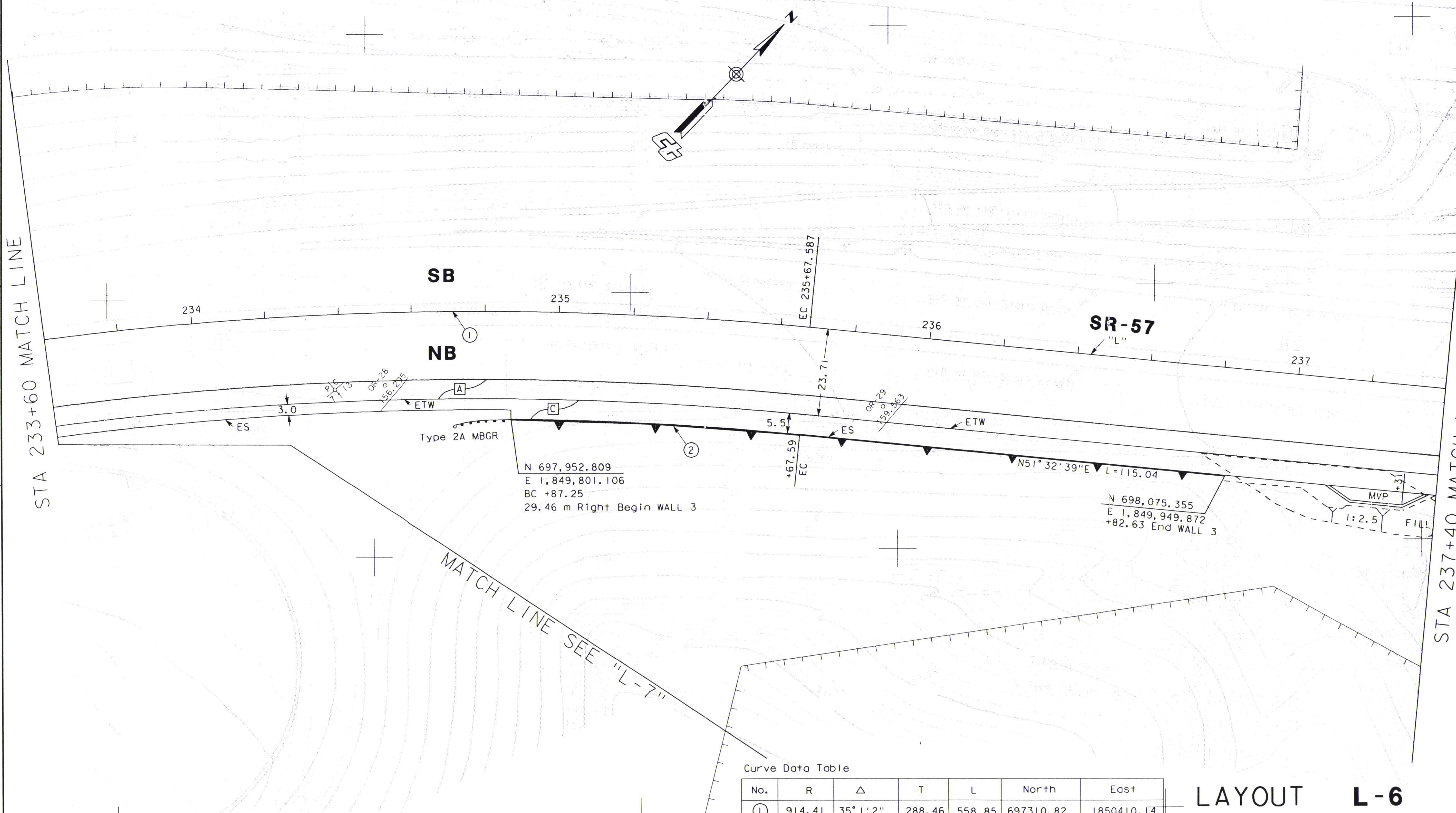
DATE REVISED BY	
DATE REVISED	

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric



Curve Data Table

No.	R	Δ	T	L	North	East
1	914.41	35° 1' 2"	288.46	558.85	697310.82	1850410.14
2	884.95	5° 2' 7"	38.91	77.77	697310.82	1850410.14

LAYOUT L-6 ALT.1

Scale 1:1000

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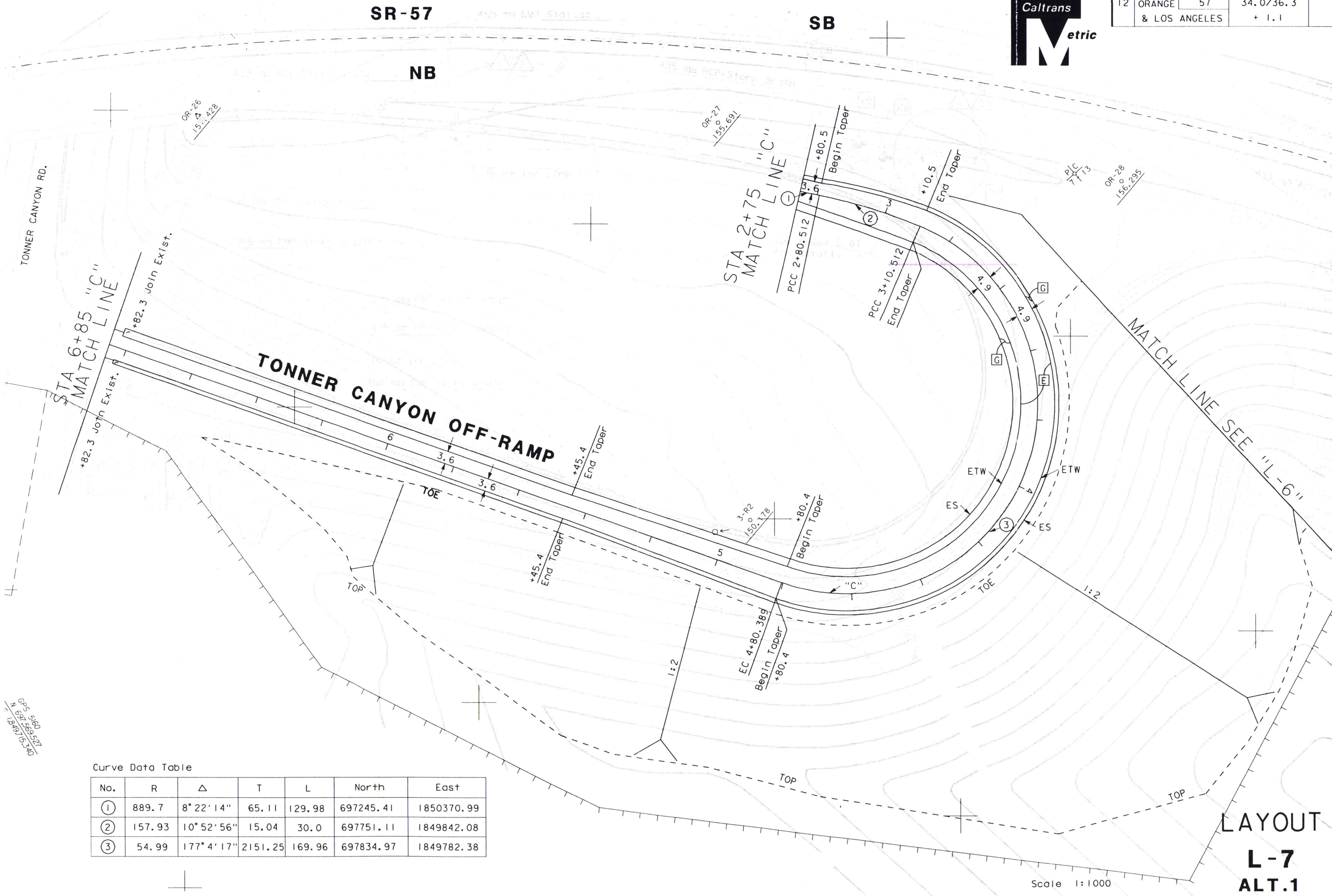
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FOR REDUCED PLANS ORIGINAL 0 20 40 60 80

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric



Curve Data Table

No.	R	△	T	L	North	East
1	889.7	8°22'14"	65.11	129.98	697245.41	1850370.99
2	157.93	10°52'56"	15.04	30.0	697751.11	1849842.08
3	54.99	177°4'17"	2151.25	169.96	697834.97	1849782.38

Scale 1:1000

LAYOUT
L-7
ALT.1

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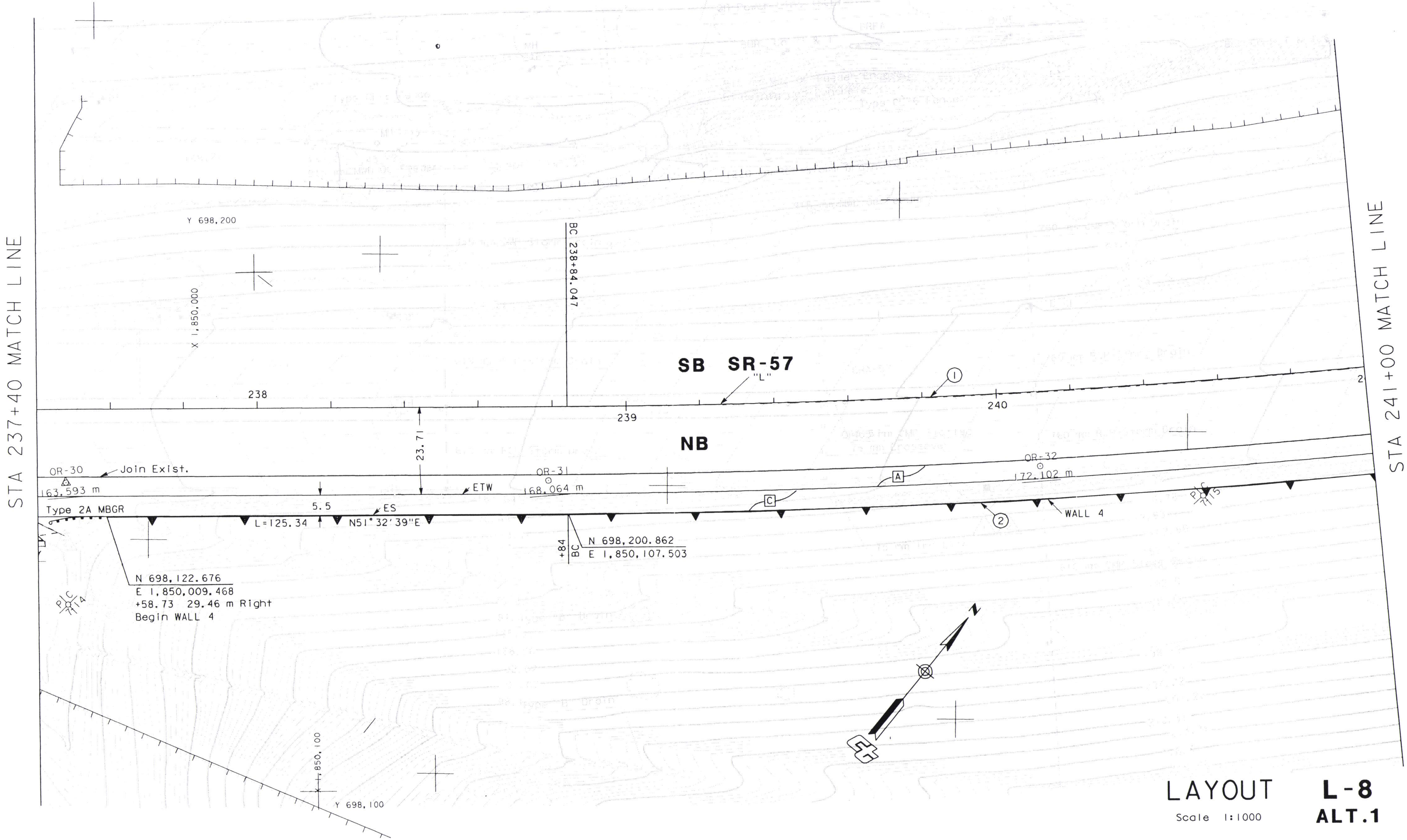
LAST REVISION

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric

Curve Data Table

No.	R	Δ	T	L	North	East
1	2543.6	22° 36′ 20″	508.4	1003.54	700211.36	1848502.21
2	2573.01	16° 24′ 19″	370.9	736.72	700211.36	1848502.21



LAYOUT L-8
ALT.1
Scale 1:1000

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Caltrans

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric

STA 241+00 MATCH LINE

STA 244+40 MATCH LINE

SR-57 SB

NB

"L"

Y 549,400 m

X 2,012,100 m

X 2,012,000 m

241

242

243

244

23.71

5.5

ETW

ES

WALL 4

OR-34

173.379 m

Join Exist.

A

C

P.I.C. 7+18

P.I.C. 7+16

LOS ANGELES COUNTY
ORANGE COUNTY

X 2,012,

Curve Data Table

No.	R	Δ	T	L	North	East
①	2543.6	22° 36' 20"	508.4	1003.54	700211.36	1848502.21
②	2573.01	16° 24' 19"	370.9	736.72	700211.36	1848502.21

LAYOUT

Scale 1:1000

L-9

ALT.1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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PROJECT ENGINEER

HAMMER SUI

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DATE	REVISED BY	DATE REVISED

LAST REVISION

FOR REVISED PLANS ORIGINAL 0 20 40 60 80

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

PROJECT ENGINEER: HAMMER SUI

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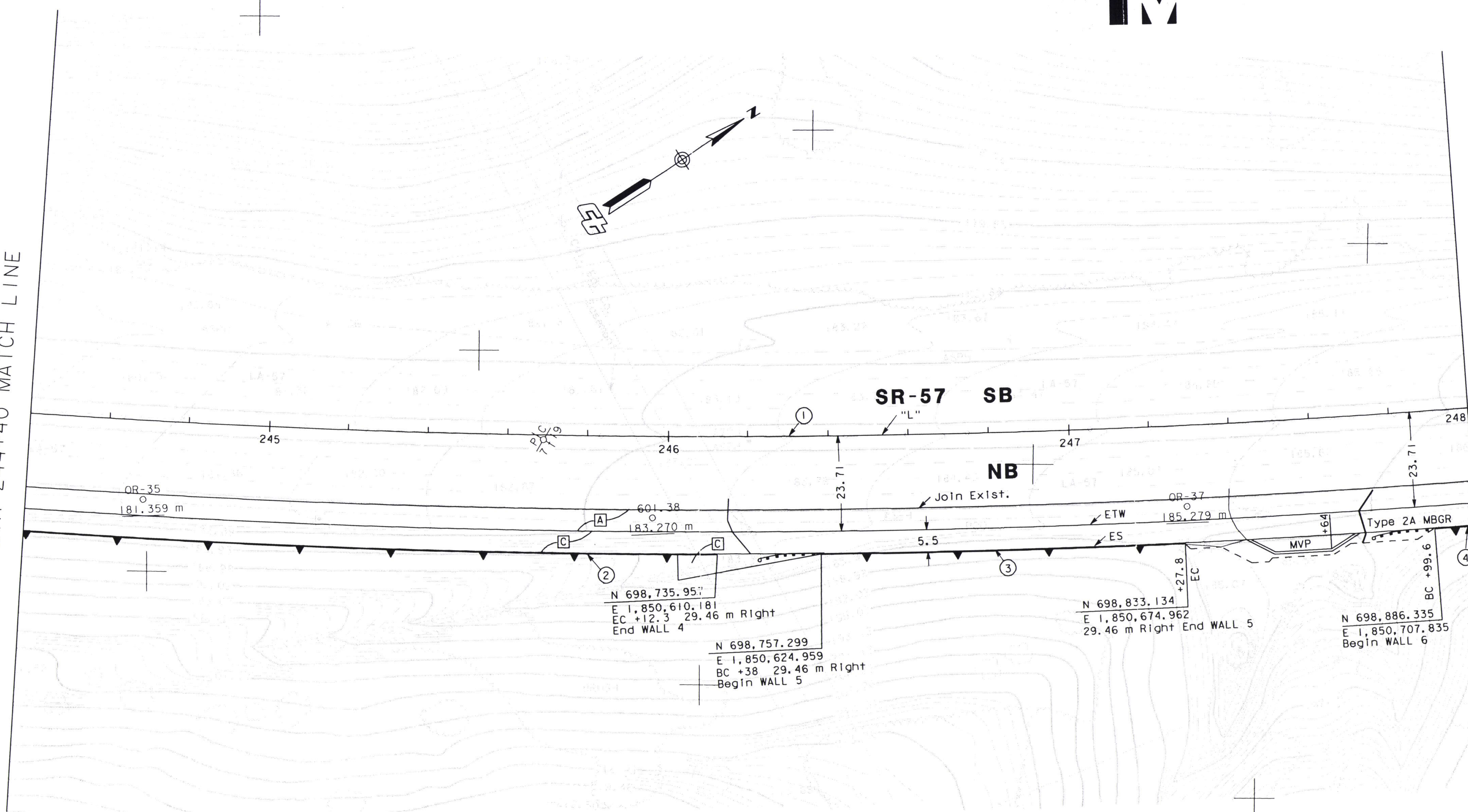

Curve Data Table

No.	R	Δ	T	L	North	East
1	2543.55	22°36′20″	508.38	1003.54	700211.36	1848502.21
2	2573.01	16°24′16″	370.88	736.69	700211.36	1848502.21
3	2573.01	2°1′22″	45.43	90.84	700211.36	1848502.21
4	2573.01	1°44′19″	39.04	78.08	700211.36	1848502.21

Scale 1:1000

LAYOUT

L-10

ALT.1

FOR REDUCED PLANS ORIGINAL 0 20 40 60 80

LAST REVISION | DATE PLOTTED

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric

DATE	REVISED BY
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PROJECT ENGINEER
HAMMER SUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

STA 248+00 MATCH LINE

STA 251+60 MATCH LINE

Y 550,100 m

X 2,012,500 m

EC 248+87.608

P/C 7+50

P/C 7+21

SB SR-57 "L"

NB

248 249 250 251

OR-38 187.385 m

OR-39 188.888 m

OR-40 190.799 m

+00

MVP

A

C

L=149.2 N28° 43' 17"E

ETW

ES

23.71

5.5

+88 Begin Taper

20:1 ES Taper

+38 End Taper

3.0

N 698,953.899
E 1,850,746.968
EC +66.8
29.46 m Right End WALL 6

N 699,002.707
E 1,850,773.888
+22.3 Begin WALL 7
29.46 m Right

N 699,133.539
E 1,850,845.581
+71.5 End WALL 7
29.46 Right

X 2,012,600 m

Curve Data Table

No.	R	Δ	T	L	North	East
①	2543.6	22° 36' 20"	508.4	1003.54	700211.36	1848502.21
②	2573.01	1° 44' 19"	39.04	78.08	700211.36	1848502.21

4-RI 234.187 m

Y 550,0

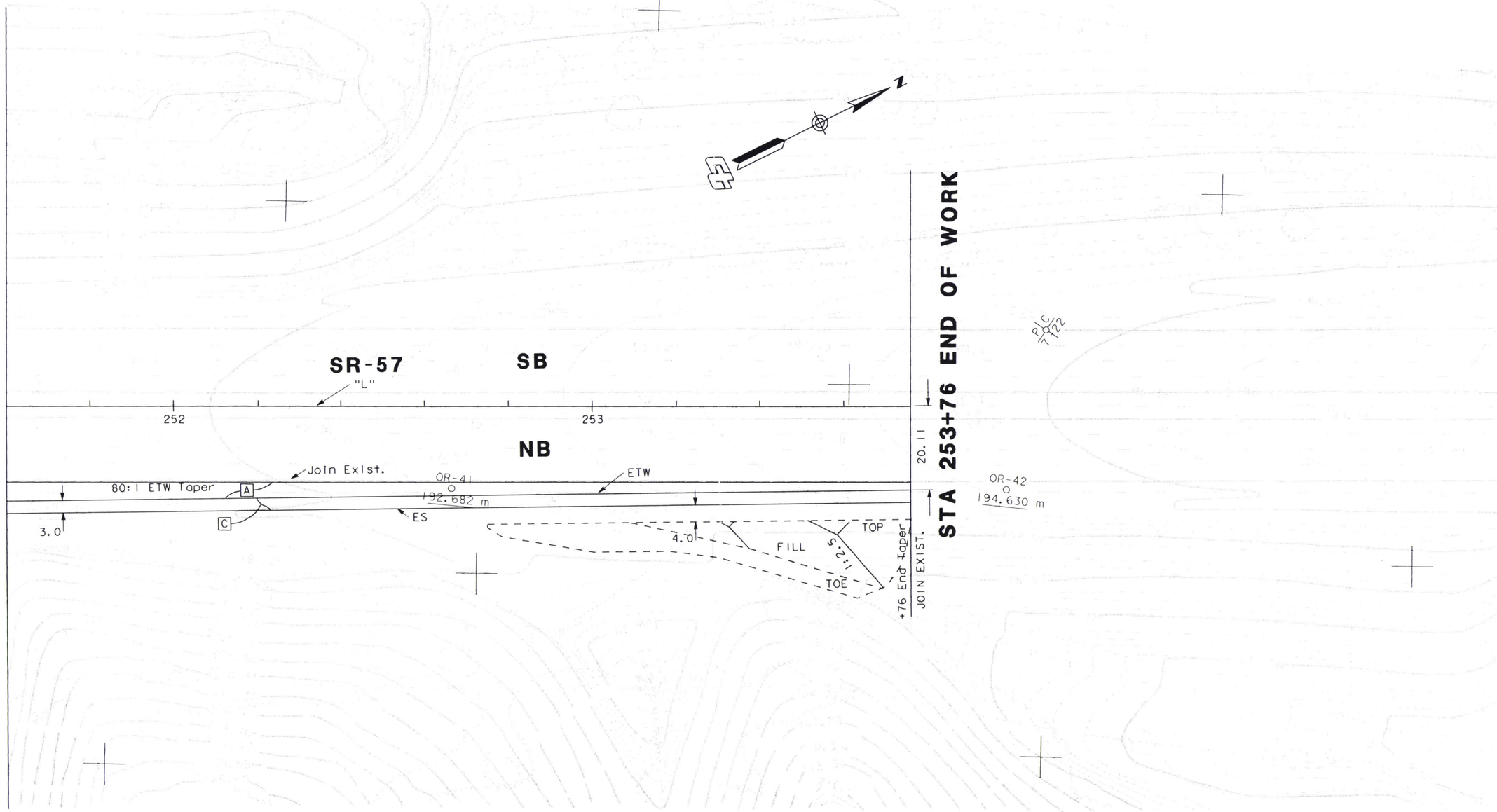
FOR REVISED PLANS ORIGINAL 0 20 40 60 80

LAYOUT L-11
Scale 1:1000 ALT.1

LAST REVISION

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric



LAYOUT

L-12

ALT.1

Scale 1:1000

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

PROJECT ENGINEER

HAMMER SUI

DATE	REVISED BY	DATE REVISED

CALCULATED/ DESIGNED BY

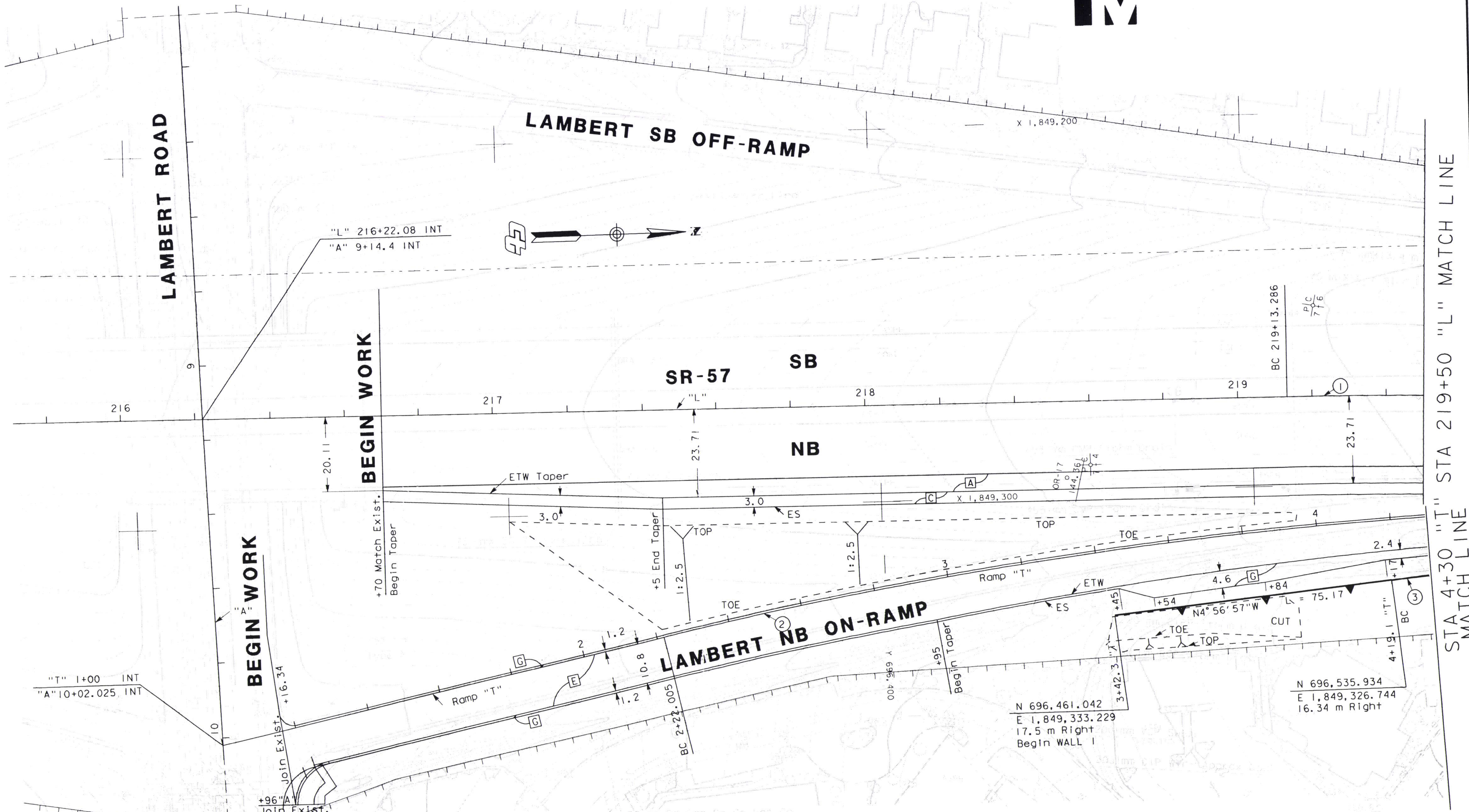
CHECKED BY

FOR REPRINTS OF ORIGINAL 0 20 40 60 80

LAST REVISION

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric



LAMBERT SB OFF-RAMP
LAMBERT ROAD
"L" 216+22.08 INT
"A" 9+14.4 INT
BEGIN WORK
SR-57
SB
NB
"L"
216
217
218
219
BC 219+13.286
23.71
20.11
ETW Taper
3.0
ES
TOP
TOE
+70 Match Exist.
Begin Taper
+5 End Taper
1:2.5
X 1,849,300
X 1,849,200
Ramp "T"
ETW
4.6
+84
+54
+45
N4°56'57"W
L = 75.17
CUT
2.4
+17
BC 4+19.1 "T"
3+42.3
"T" 1+00 INT
"A" 10+02.025 INT
"A"
+16.34
Join Exist.
+96"A"
LAMBERT NB ON-RAMP
1.2
10.8
BC 2+22.005
Y 696,400
+95
Begin Taper
N 696,461.042
E 1,849,333.229
17.5 m Right
Begin WALL 1
N 696,535.934
E 1,849,326.744
16.34 m Right
STA 219+50 "L" MATCH LINE
STA 4+30 "T" MATCH LINE

Curve Data Table

No.	R	△	T	L	North	East
①	1524.0	15°27′9"	206.76	411.02	696481.32	1850799.82
②	1209.35	11°16′7"	119.31	237.85	696582.77	1850518.84
③	800.0	15°22′3"	107.93	214.57	696605.20	1850123.74

Scale 1:1000

LAYOUT L-1

ALT. 2

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY

CHECKED BY

PROJECT ENGINEER

HAMMER SUI

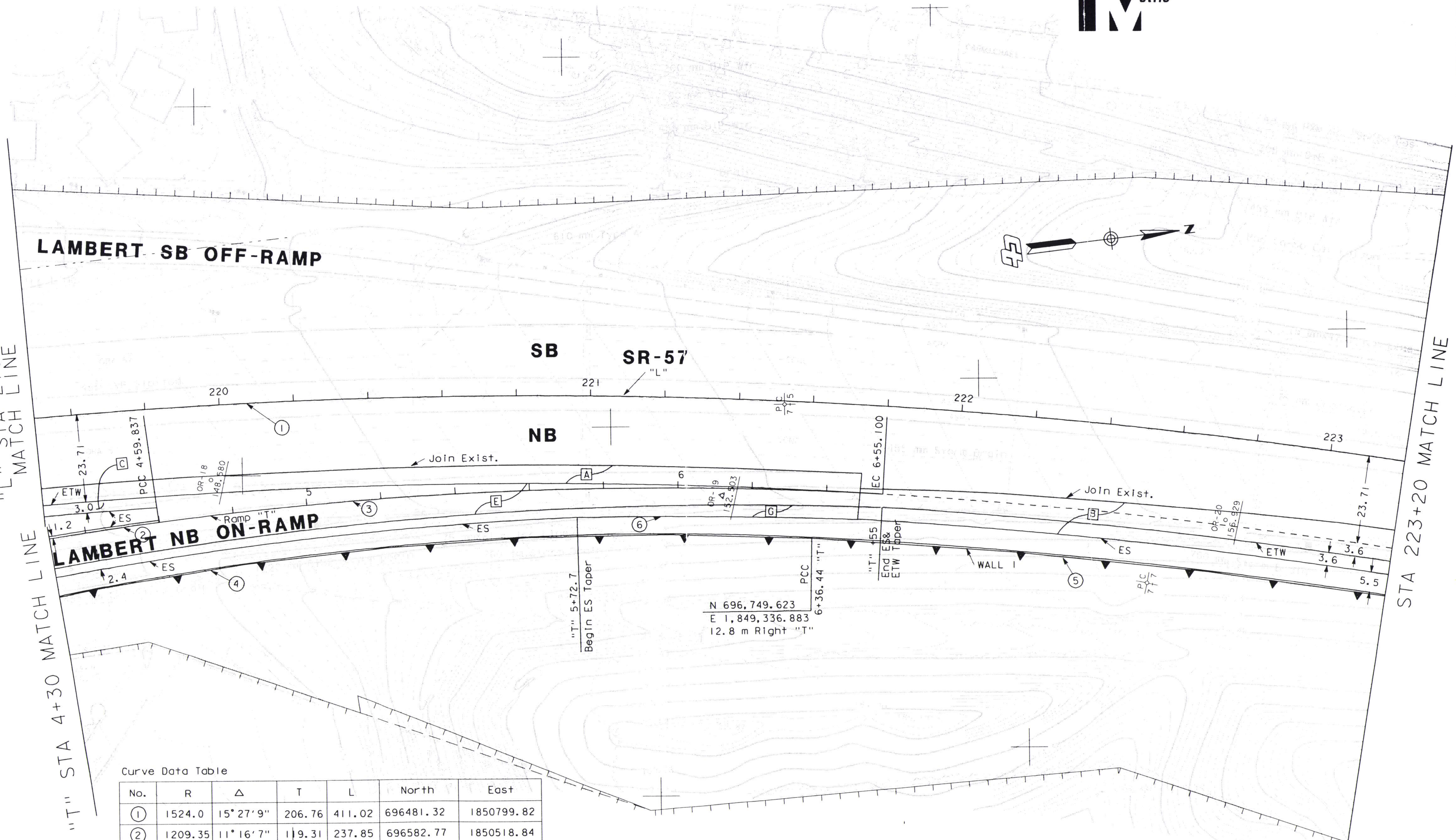
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

0 20 40 60 80

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric



Curve Data Table

No.	R	Δ	T	L	North	East
1	1524.0	15°27′9″	206.76	411.02	696481.32	1850799.82
2	1209.35	11°16′7″	119.31	237.85	696582.77	1850518.84
3	1010.38	11°4′11″	97.91	195.21	696579.57	1850319.88
4	800.0	15°22′3″	107.93	214.57	696605.20	1850123.74
5	1487.34	6°7′57″	79.67	159.19	696481.32	1850799.82
6	1491.19	2°53′40″	37.67	75.33	696481.32	1850799.82

LAYOUT

Scale 1:1000

L-2

ALT. 2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

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LAST REVISION

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

PROJECT ENGINEER: HAMMER SUI

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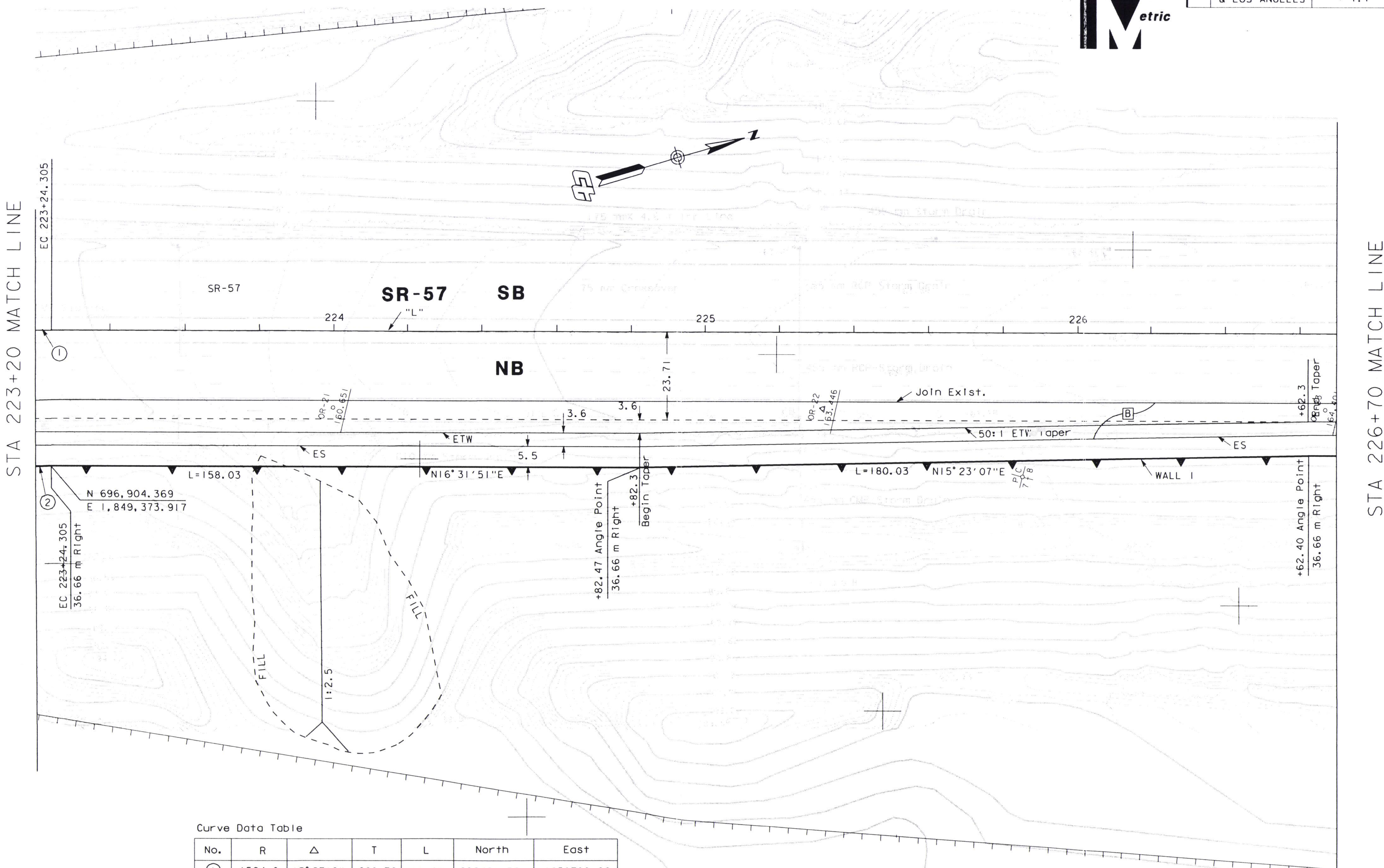
DATE REVISED

DATE



Curve Data Table

No.	R	Δ	T	L	North	East
1	1524.0	15°27'9"	206.76	411.02	696481.32	1850799.82
2	1487.34	6°7'57"	79.67	159.19	696481.32	1850799.82

LAYOUT L-3

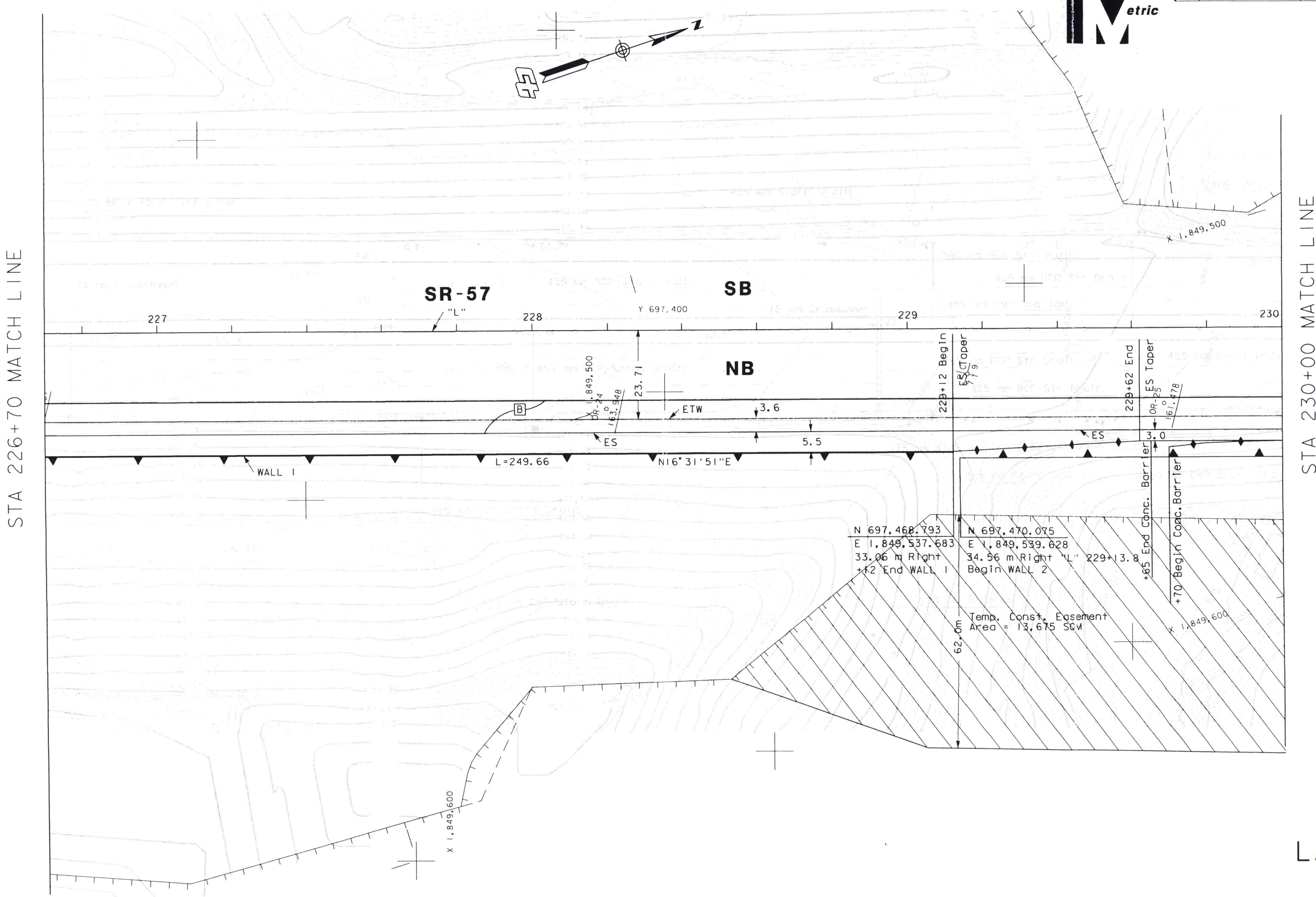
Scale 1:1000

ALT. 2

LAST REVISION

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric



STA 226+70 MATCH LINE
STA 230+00 MATCH LINE
SR-57
"L"
SB
NB
227
228
229
230
Y 697,400
23.71
3.6
5.5
3.0
ETW
ES
WALL 1
L=249.66
N16°31'51"E
229+12 Begin ES Taper
229+62 End ES Taper
+65 End Conc. Barrier
+70 Begin Conc. Barrier
N 697,468.793
E 1,849,537.683
33.06 m Right
+12 End WALL 1
N 697,470.075
E 1,849,539.628
34.56 m Right "L" 229+13.8
Begin WALL 2
Temp. Const. Easement
Area = 13,675 SCM
62.0m
X 1,849,500
X 1,849,600

LAYOUT

L-4

ALT. 2

Scale 1:1000

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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DATE REVISED

LAST REVISION

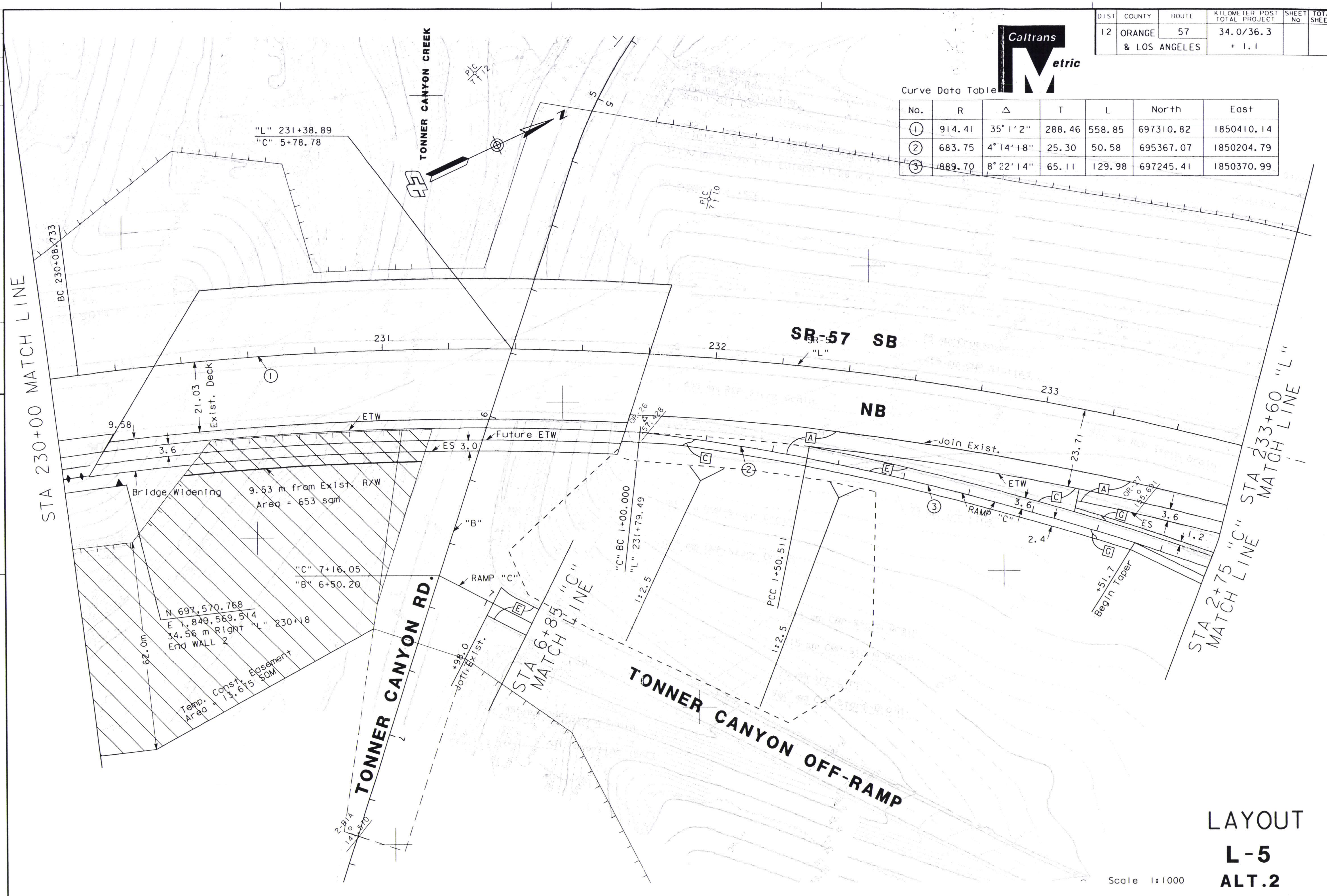
FOR REDUCED PLANS ORIGINAL ... 0 20 40 60 80

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric

Curve Data Table

No.	R	Δ	T	L	North	East
1	914.41	35° 1'2"	288.46	558.85	697310.82	1850410.14
2	683.75	4° 14'18"	25.30	50.58	695367.07	1850204.79
3	1889.70	8° 22'14"	65.11	129.98	697245.41	1850370.99



TONNER CANYON CREEK
"L" 231+38.89
"C" 5+78.78
BC 230+08.733
STA 230+00 MATCH LINE
SR-57 SB
SR-57 "L"
231
232
233
NB
21.03 Exist. Deck
9.58
3.6
ETW
Future ETW
ES 3.0
Join Exist.
23.71
Bridge Widening
9.53 m from Exist. R/W
Area = 653 sqm
"B"
"C" 7+16.05
"B" 6+50.20
RAMP "C"
N 697,570.768
E 1,849,569.514
34.56 m Right "L" 230+18
End WALL 2
62.0m
Temp. Const. Easement
Area = 13,675 SQM
TONNER CANYON RD.
+98.0
Join Exist.
STA 6+85 "C" MATCH LINE
TONNER CANYON OFF-RAMP
"C" BC 1+00.000
"L" 231+79.49
1:2.5
PCC 1+50.511
1:2.5
RAMP "C"
3.6
2.4
3.6
1.2
ES
+51.7 Begin Taper
STA 2+75 "C" MATCH LINE
STA 233+60 "L" MATCH LINE

LAYOUT

L-5

ALT.2

Scale 1:1000

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PROJECT ENGINEER	HAMMER SUI

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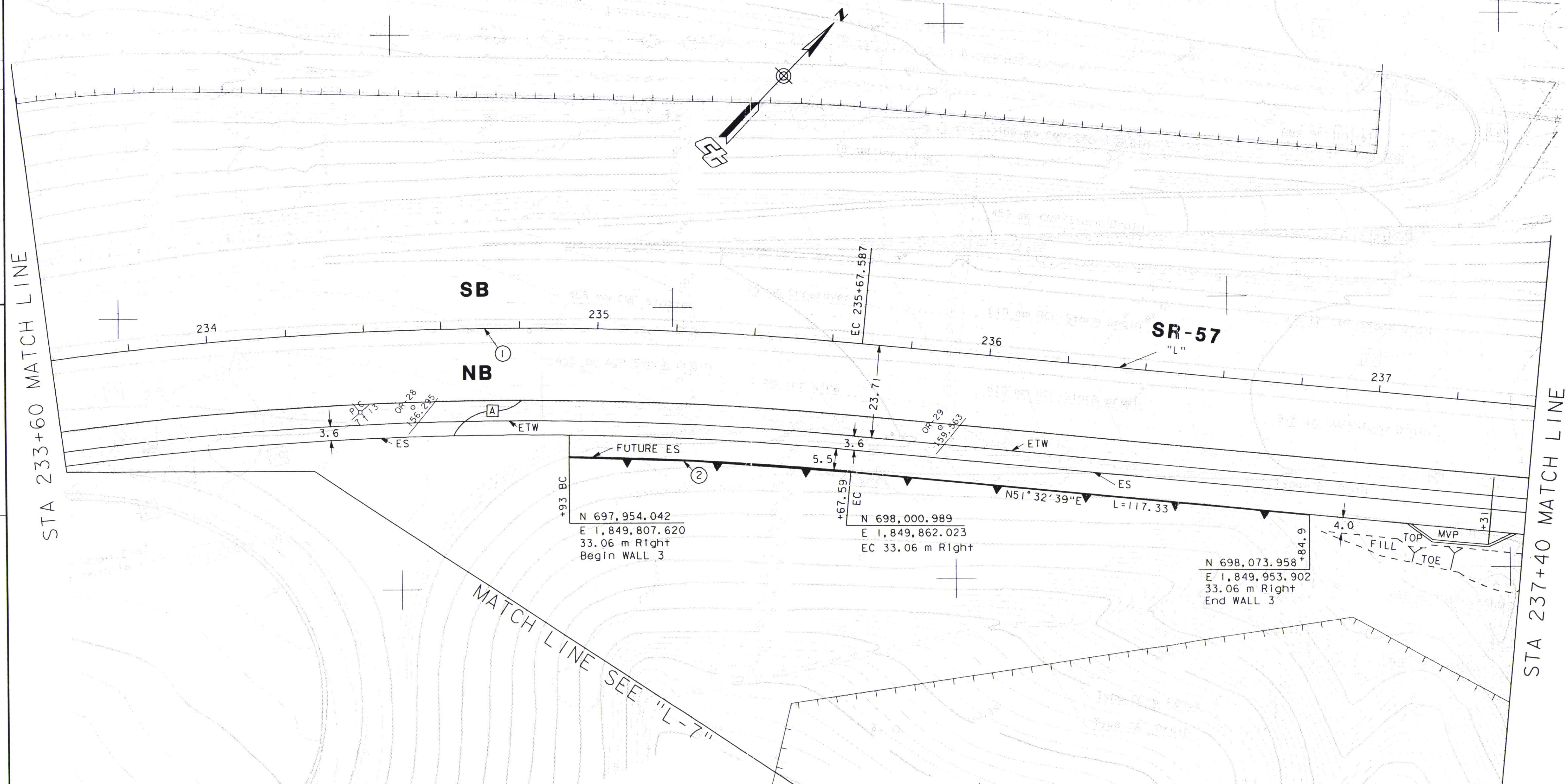
LAST REVISION

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric



Curve Data Table

No.	R	Δ	T	L	North	East
1	914.41	35° 1' 2"	288.46	558.85	697310.82	1850410.14
2	881.35	4° 40' 22"	35.96	71.88	697310.82	1850410.14

LAYOUT L-6

ALT.2

Scale 1:1000

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DATE REVISED

LAST REVISION

FOR REDUCED PLANS ORIGINAL ... 0 20 40 60 80

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric

SR-57

NB

SB

TONNER CANYON RD.

STA 6+85 "C" MATCH LINE

+82.3 Join Exist.

+82.3 Join Exist.

TONNER CANYON OFF-RAMP

ETW

ES

1.2

6

3.6

3.6

5

+45.4 End Taper

+45.4 End Taper

TOE

TOP

OR-26 157.428

OR-27 155.691

OR-28 156.295

P.I.C 7+13

STA 2+75 "C" MATCH LINE

+80.5 Begin Taper

PCC 2+80.512

+10.5 End Taper

PCC 3+10.512 End Taper

4.9

4.9

4.9

G

G

E

ETW

ETW

ES

ES

3-R2 150.178

+80.4 Begin Taper

EC 4+80.389 Begin Taper +80.4

"C"

TOE

TOP

TOP

MATCH LINE SEE "L-6"

GPS STA 5+60 N 697569.527 E 1849715.340

Curve Data Table

No.	R	Δ	T	L	North	East
①	889.7	8°22'14"	65.11	129.98	697245.41	1850370.99
②	157.93	10°52'56"	15.04	30.0	697751.11	1849842.08
③	54.99	177°4'17"	2151.25	169.96	697834.97	1849782.38

Scale 1:1000

LAYOUT

L-7

ALT.2

LAST REVISION

DATE	REVISED BY	DATE REVISED

CALCULATED/ DESIGNED BY

CHECKED BY

PROJECT ENGINEER

HAMMER SUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

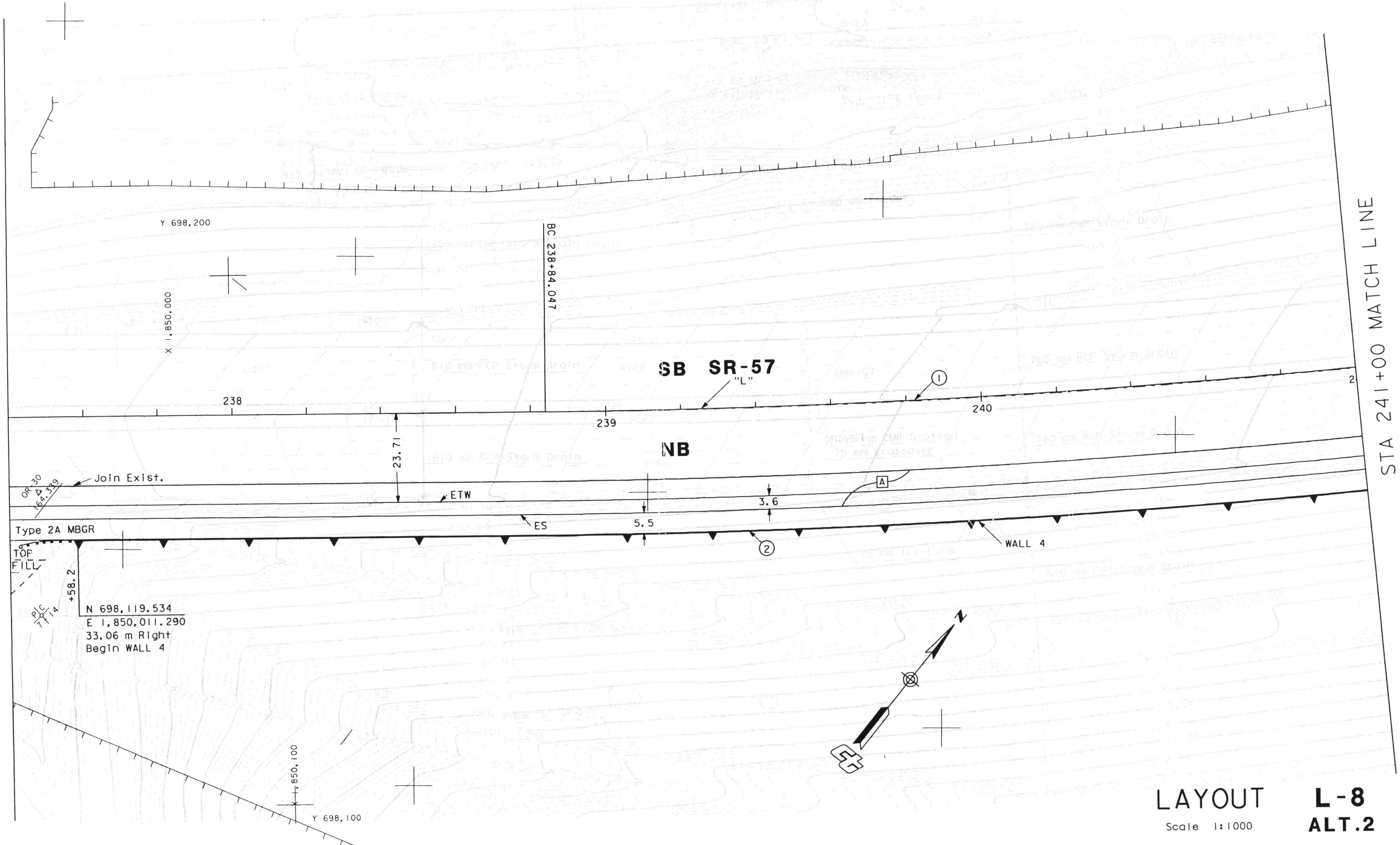
FOR REQUESTED PLANS ORIGINAL 0 20 40 60 80

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric

Curve Data Table

No.	R	Δ	T	L	North	East
1	2543.6	22°36'20"	508.4	1003.54	700211.36	1848502.21
2	2576.61	19°1'36"	431.79	855.63	700211.36	1848502.21



LAYOUT **L-8**

Scale 1:1000 **ALT.2**

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PROJECT ENGINEER: HAMMER SUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric

DATE	REVISED BY
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CALCULATED/ DESIGNED BY

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PROJECT ENGINEER

HAMMER SUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

STA 241+00 MATCH LINE

STA 244+40 MATCH LINE

N

SR-57 SB

SR-57 "L"

NB

SR-57 "L"

Y 549,400 m

X 2,012,100 m

X 2,012,000 m

241

242

243

244

23.71

3.6

5.5

ETW

ES

WALL 4

OR-34

173.379 m

Join Exist.

A

P.I.C 7+16.18

P.I.C 7+16

LOS ANGELES COUNTY
ORANGE COUNTY

X 2,012,

Curve Data Table

No.	R	Δ	T	L	North	East
①	2543.6	22° 36' 20"	508.4	1003.54	700211.36	1848502.21
②	2576.61	18° 19' 29"	415.58	824.07	700211.36	1848502.21

0 20 40 60 80

LAYOUT

L-9

ALT.2

Scale 1:1000

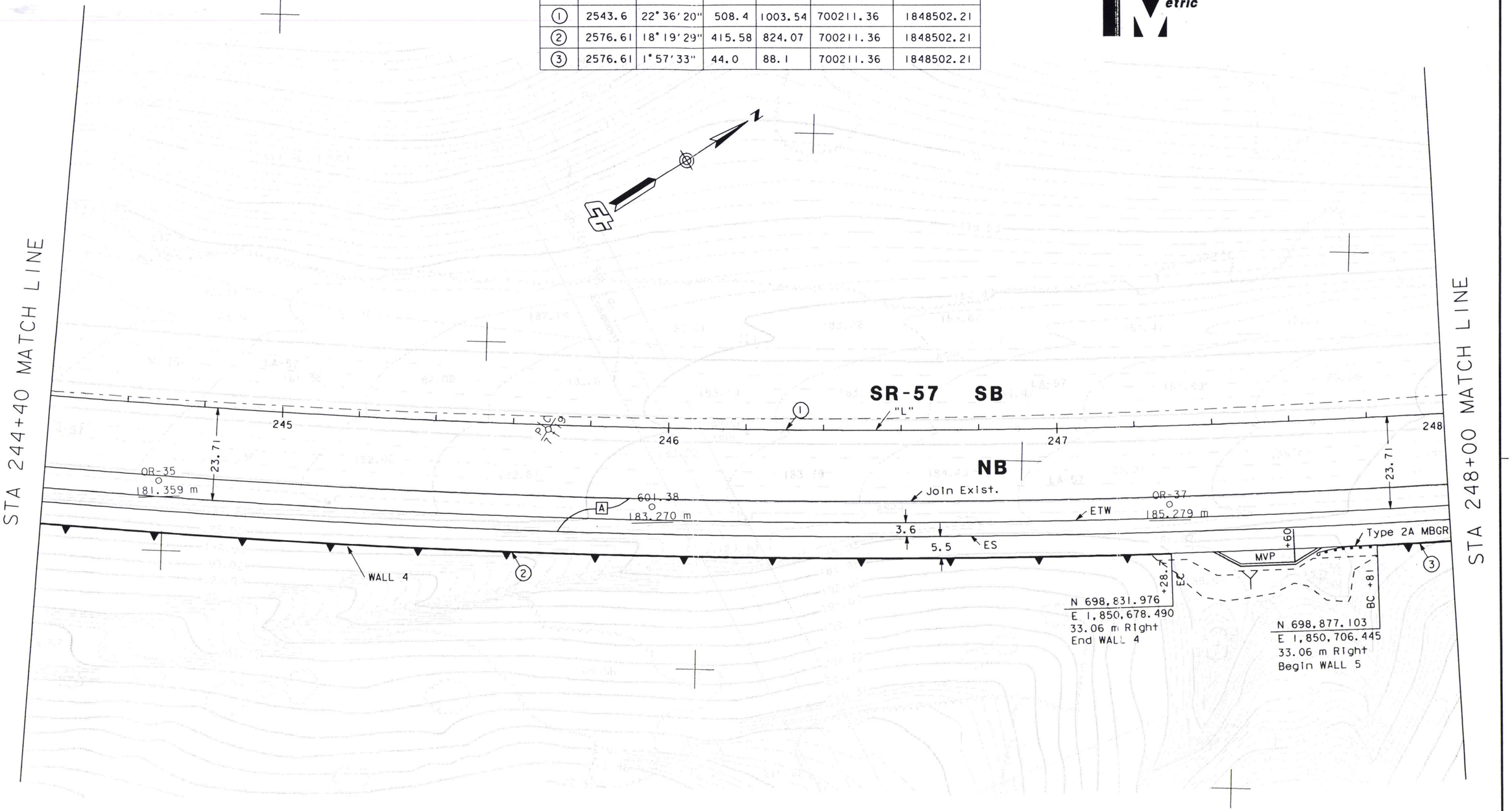
LAST REVISION

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric

Curve Data Table

No.	R	Δ	T	L	North	East
①	2543.6	22°36'20"	508.4	1003.54	700211.36	1848502.21
②	2576.61	18°19'29"	415.58	824.07	700211.36	1848502.21
③	2576.61	1°57'33"	44.0	88.1	700211.36	1848502.21



LAYOUT
L-10
ALT.2

Scale 1:1000

FOR REVISED PLANS ORIGINAL 0 20 40 60 80

LAST REVISION

	DATE	REVISED BY	DATE REVISED
CALCULATED/ DESIGNED BY			
CHECKED BY			

PROJECT ENGINEER
HAMMER SUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric

DATE	REVISED BY
	DATE REVISED

CALCULATED/ DESIGNED BY

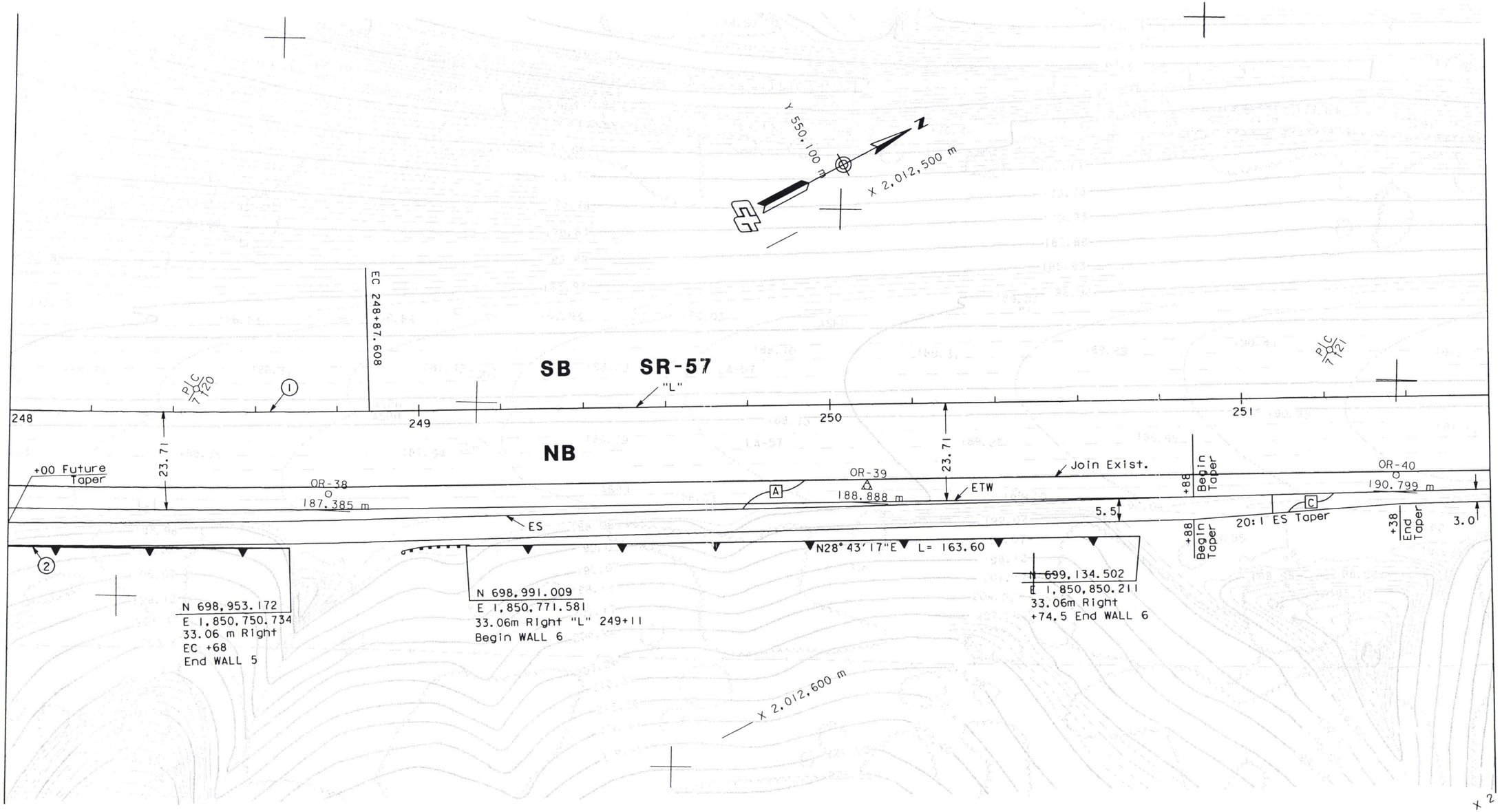
CHECKED BY

PROJECT ENGINEER

HAMMER SUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans



Curve Data Table

No.	R	Δ	T	L	North	East
①	2543.55	22° 36' 20"	508.38	1003.54	700211.36	1848502.21
②	2576.6	1° 57' 27"	44.02	88.03	700211.36	1848502.21

LAYOUT L-11

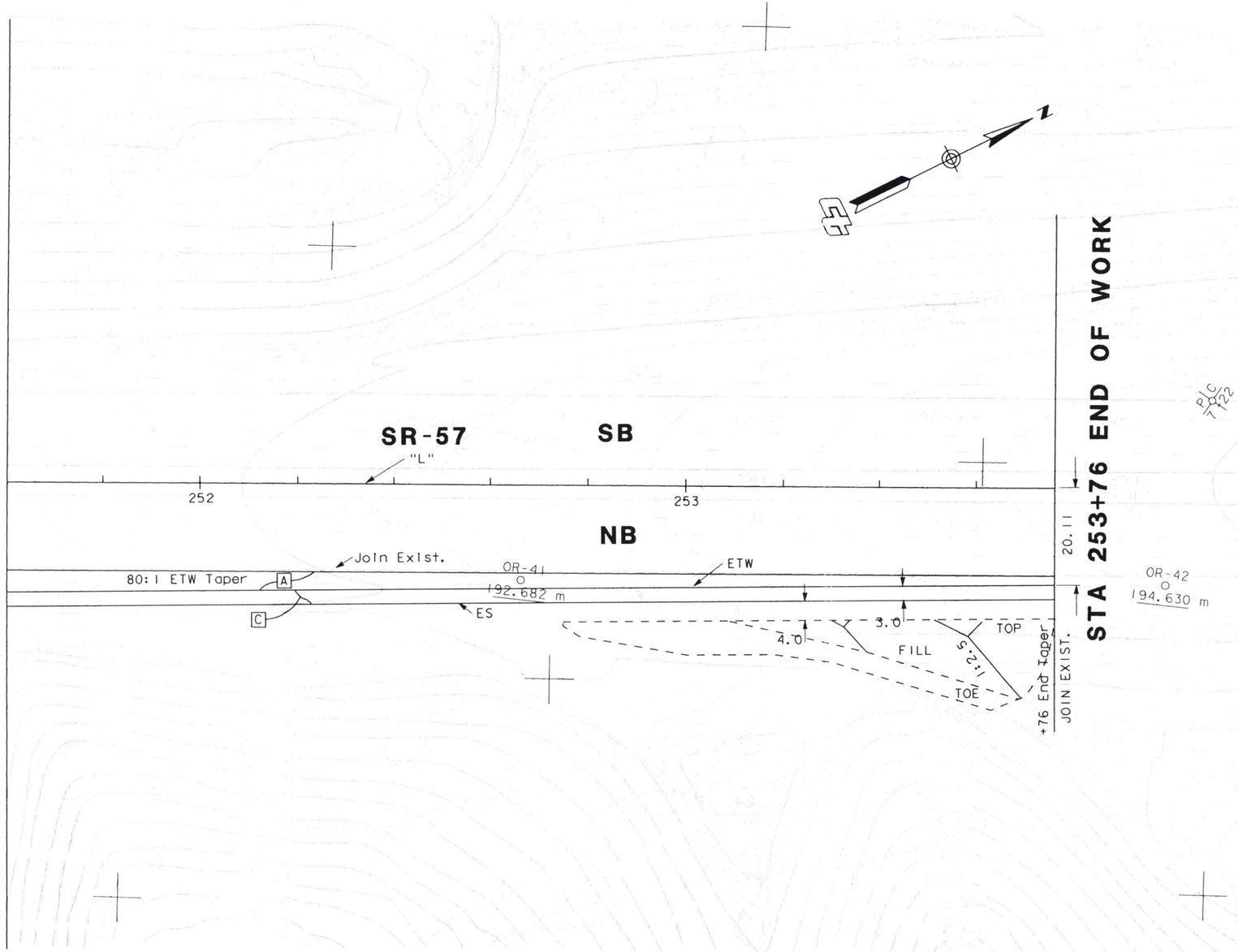
Scale 1:1000

ALT.2

LAST REVISION

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric



DATE	REVISED BY	DATE REVISED

CALCULATED/ DESIGNED BY

CHECKED BY

PROJECT ENGINEER
HAMMER SUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAYOUT

L-12
ALT.2

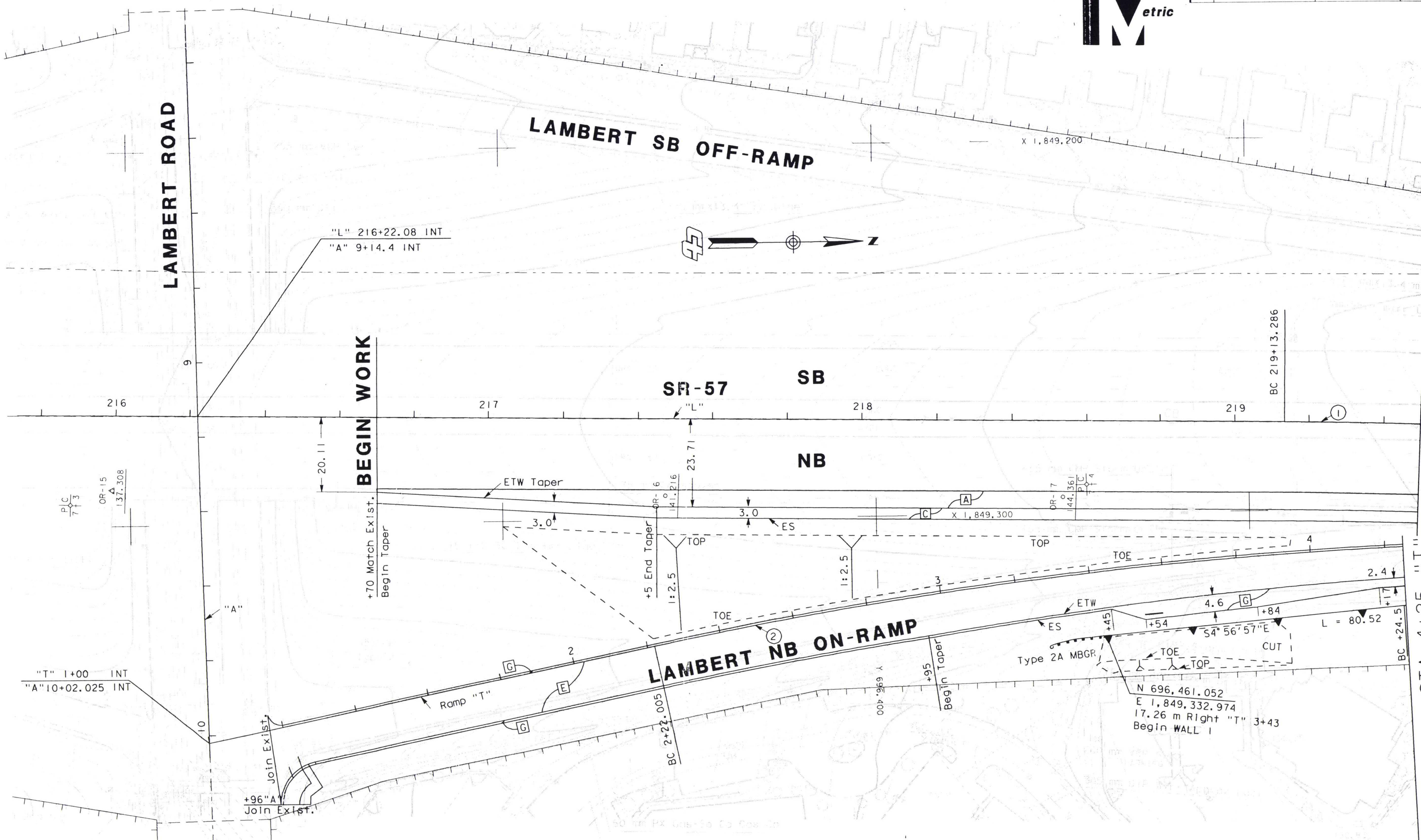
Scale 1:1000

FOR REPRINT PLANS ORIGINAL 0 20 40 60 80

LAST REVISION

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric



LAMBERT ROAD
LAMBERT SB OFF-RAMP
"L" 216+22.08 INT
"A" 9+14.4 INT
X 1,849,200
BEGIN WORK
SR-57
"L"
SB
NB
216
217
218
219
BC 219+13.286
STA 219+50 "L" MATCH LINE
20.11
23.71
ETW Taper
3.0
ES
TOP
TOE
1:2.5
+70 Match Exist. Begin Taper
+5 End Taper
OR-15
137.308
OR-6
141.216
OR-7
144.361
X 1,849,300
"A"
"T" 1+00 INT
"A" 10+02.025 INT
Ramp "T"
LAMBERT NB ON-RAMP
BC 2+22.005
Y 696,400
+95 Begin Taper
ETW
Type 2A MBGR
+45
+54
+84
4.6
2.4
1.7
S4° 56' 57"E
CUT
L = 80.52
BC +24.5
N 696,461.052
E 1,849,332.974
17.26 m Right "T" 3+43
Begin WALL I
STA 4+25 "T" MATCH LINE
Join Exist.
+96"A"
Join Exist.
X 1,849,400

Curve Data Table

No.	R	Δ	T	L	North	East
1	1524.0	15°27'9"	206.76	411.02	696481.32	1850799.82
2	1209.35	11°16'7"	119.31	237.85	696582.77	1850518.84

Scale 1:1000

LAYOUT L-1

ALT. 3

DATE | REVISED BY | DATE REVISED

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PROJECT ENGINEER: HAMMER SUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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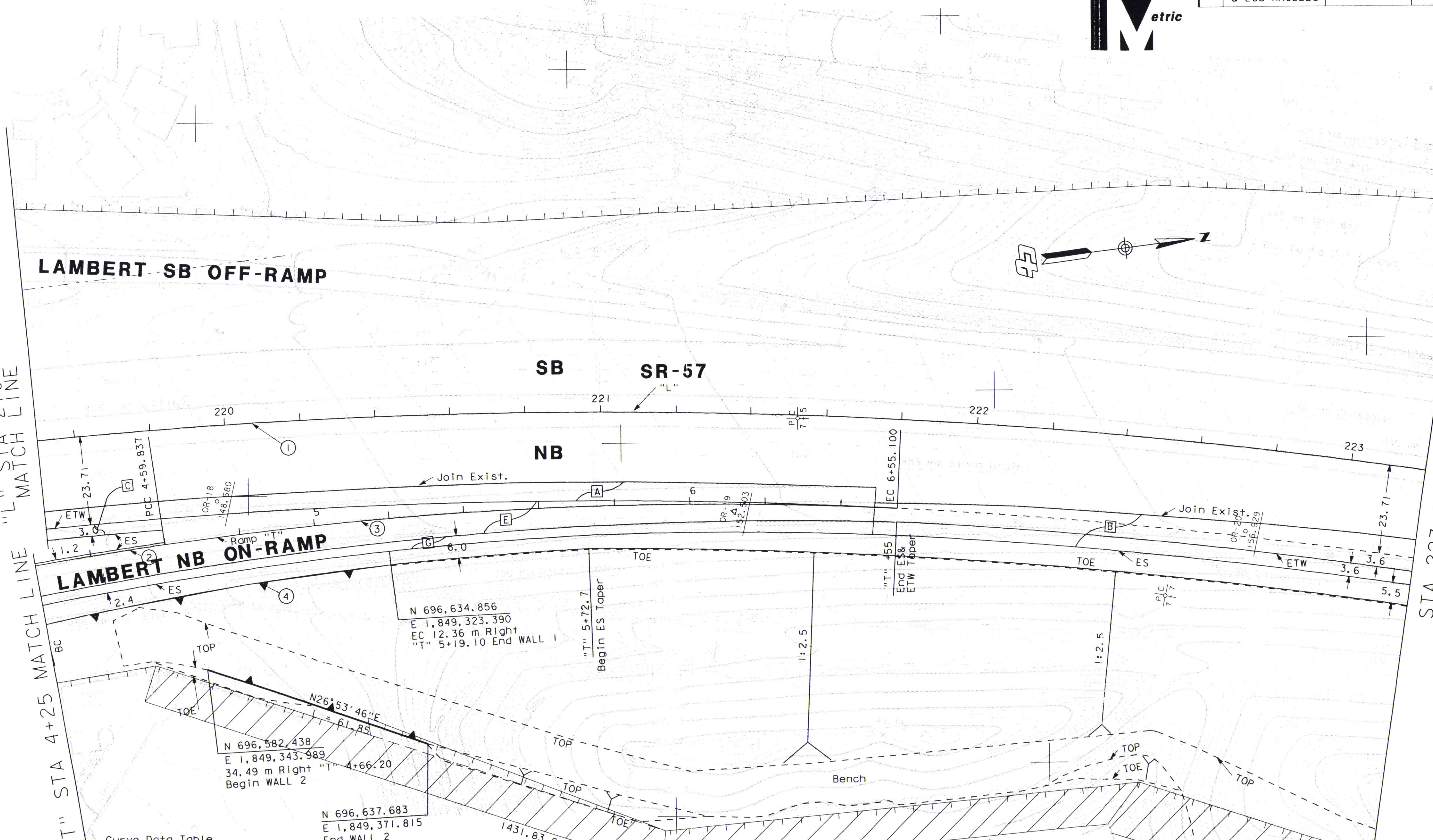
LAST REVISION

FOR REDUCED PLANS ORIGINAL SCALE 0 20 40 60 80

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric


LAMBERT SB OFF-RAMP
SB
SR-57
"L"
NB
220
221
222
223
"L" STA 210+50 MATCH LINE
STA 223+20 MATCH LINE
"T" STA 4+25 MATCH LINE
Join Exist.
Join Exist.
PCC 4+59.837
EC 6+55.100
Ramp "T"
LAMBERT NB ON-RAMP
ETW
ES
TOE
TOP
BC
23.71
23.71
N 696,634.856
E 1,849,323.390
EC 12.36 m Right
"T" 5+19.10 End WALL 1
"T" 5+72.7
Begin ES Taper
"T" +55
End ES&
ETW Taper
1:2.5
1:2.5
N26°53'46"E
= 61.85
N 696,582.438
E 1,849,343.989
34.49 m Right "T" 4+66.20
Begin WALL 2
N 696,637.683
E 1,849,371.815
End WALL 2
1431.83 SQM
Bench
10 m Temporary Construction Easement
1225.35 SQM
15 m Temporary Construction Easement
1028.07 SQM

Curve Data Table

No.	R	Δ	T	L	North	East
(1)	1524.0	15°27'9"	206.76	411.02	696481.32	1850799.82
(2)	1209.35	11°16'7"	119.31	237.85	696582.77	1850518.84
(3)	1010.38	11°4'11"	97.91	195.21	696579.57	1850319.88
(4)	800.0	6°42'48"	46.92	93.74	696610.62	1850123.02

Scale 1:1000

LAYOUT

L-2
ALT. 3

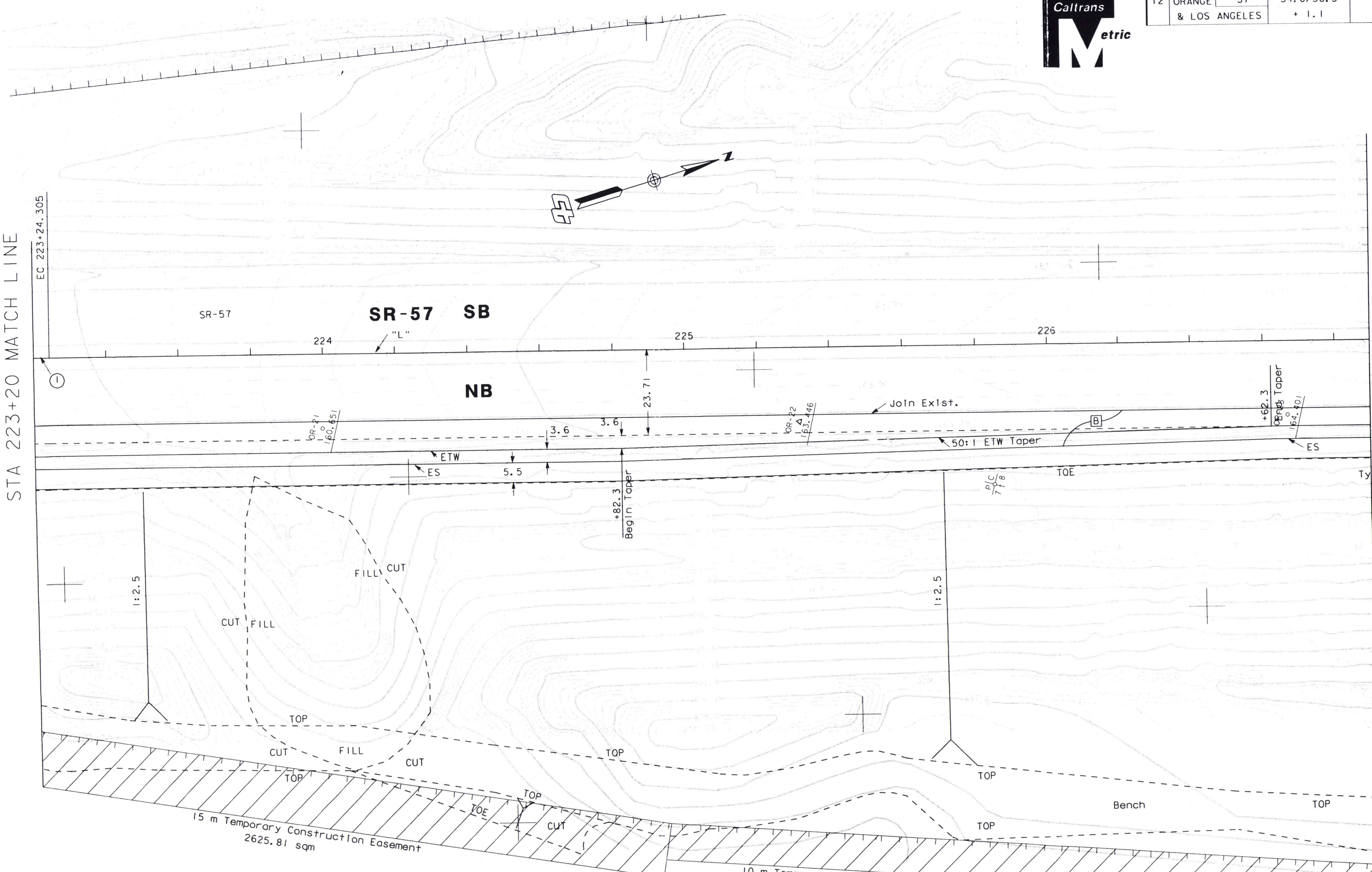
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

PROJECT ENGINEER: HAMMER SUI
CALCULATED/DESIGNED BY
CHECKED BY
DATE REVISED BY
DATE REVISED

LAST REVISION

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric



Curve Data Table

No.	R	Δ	T	L	North	East
1	1524.0	15°27'9"	206.76	411.02	696481.32	1850799.82

LAYOUT L-3
ALT. 3

Scale 1:1000

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY	CHECKED BY

PROJECT ENGINEER: HAMMER SUI

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Caltrans

LAST REVISION

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric

DATE	REVISED BY	DATE REVISED
	CALCULATED/ DESIGNED BY	CHECKED BY

PROJECT ENGINEER
HAMMER SUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

STA 226+90 MATCH LINE

STA 230+00 MATCH LINE

SR-57

SB

NB

"L"

227 228 229 230

Y 697,400

X 1,849,500

23.71

JOIN EXIST

B

ETW

3.6

5.5

ES

229+12 Begin ES Taper 7:1

229+62 End ES Taper OR 25

51.478

CONC. BARRIER ES

3.0

L= 201.1

N16°31'51"E

L= 105

N16°31'51"E

TOE Type 2A MBGR

Begin WALL 3
N 697,276.230
E 1,849,480.530
33.06 m Right "L" 227+11

N 697,469.048
E 1,849,537.759
33.06 m Right "L" 229+12.3
End WALL 3

N 697,470.075
E 1,849,539.628
34.56 m Right "L" 229+13.8
Begin WALL 4

+65 End Conc. Barrier

+70 Begin Conc. Barrier

1:2.5

Conc. Swale with Energy Dissipaters

1:2.5

CUT

62.0m

Temp. Const. Easement
Area = 13,675 SQM

TOP

TOP

TOP

1,849,600

10 m Temporary Construction Easement
940.52 SQM

LAYOUT
L-4
ALT. 3

Scale 1:1000

FOR REPRINT PLANS ORIGINAL 0 20 40 60 80

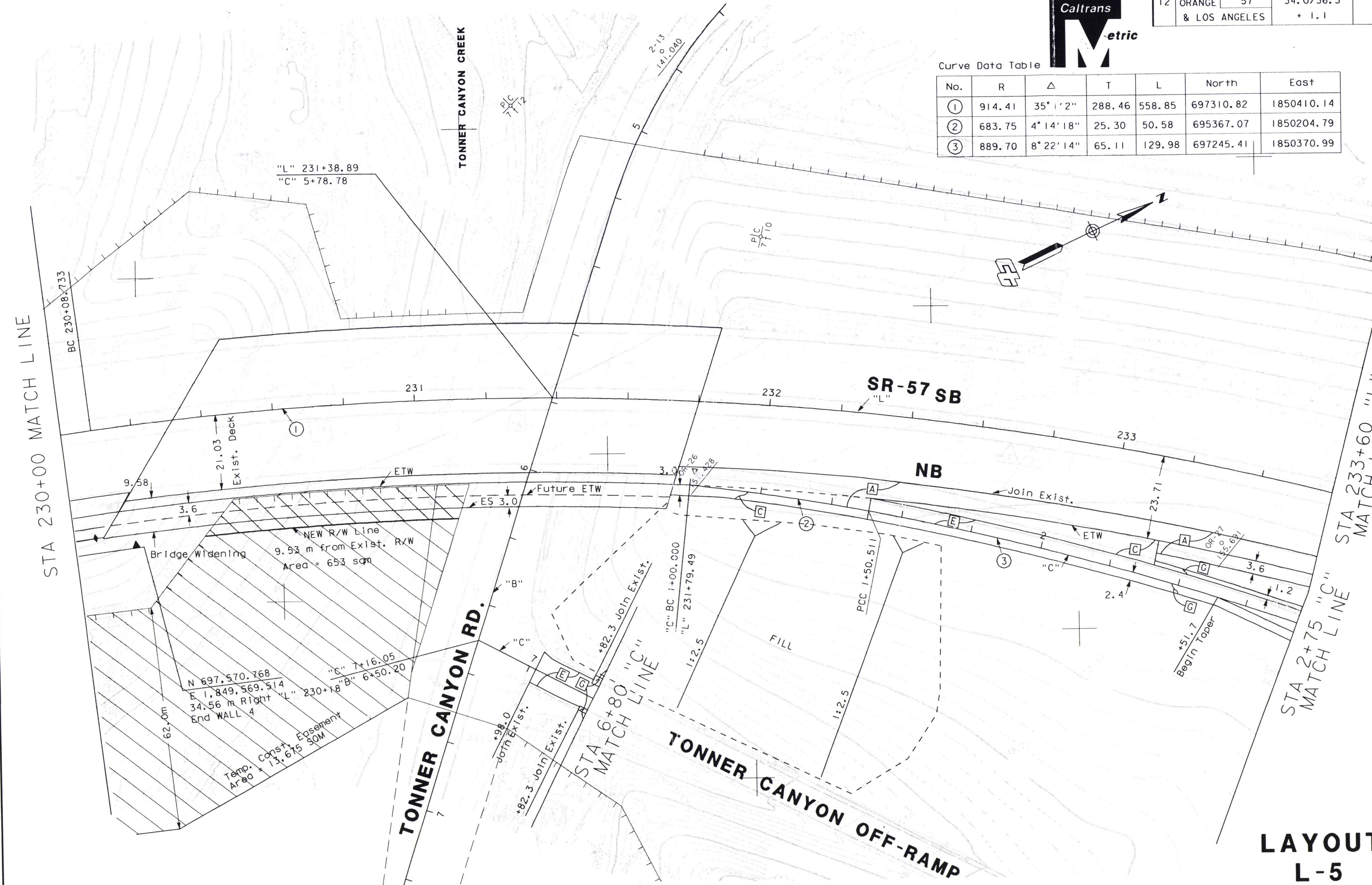
LAST REVISION

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric

Curve Data Table

No.	R	△	T	L	North	East
1	914.41	35° 1′ 2″	288.46	558.85	697310.82	1850410.14
2	683.75	4° 14′ 18″	25.30	50.58	695367.07	1850204.79
3	889.70	8° 22′ 14″	65.11	129.98	697245.41	1850370.99



TONNER CANYON CREEK
"L" 231+38.89
"C" 5+78.78
BC 230+08.733
STA 230+00 MATCH LINE
SR-57 SB
NB
231
232
233
21.03 Exist. Deck
9.58
3.6
ETW
Future ETW
ES 3.0
NEW R/W Line
9.53 m from Exist. R/W
Area = 653 sqm
Bridge Widening
N 697,570.768
E 1,849,569.514
34.56 m Right "L" 230+18
End WALL 4
"C" 7+16.05
"B" 6+50.20
62.0m
Temp. Const. Easement
Area = 13,675 SQM
TONNER CANYON RD.
"B"
"C"
+82.3 Join Exist.
+98.0 Join Exist.
+82.3 Join Exist.
STA 6+80 "C" MATCH LINE
"C" BC 1+00.000
"L" 231+79.49
1:2.5
FILL
PCC 1+50.511
TONNER CANYON OFF-RAMP
Join Exist.
ETW
23.71
"C"
3.6
1.2
2.4
+51.7 Begin Taper
STA 233+60 "L" MATCH LINE
STA 2+75 "C" MATCH LINE

LAYOUT
L-5
ALT. 3

Scale 1:1000

DATE | REVISED BY | DATE REVISED

CALCULATED/DESIGNED BY | CHECKED BY

PROJECT ENGINEER HAMMER SUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

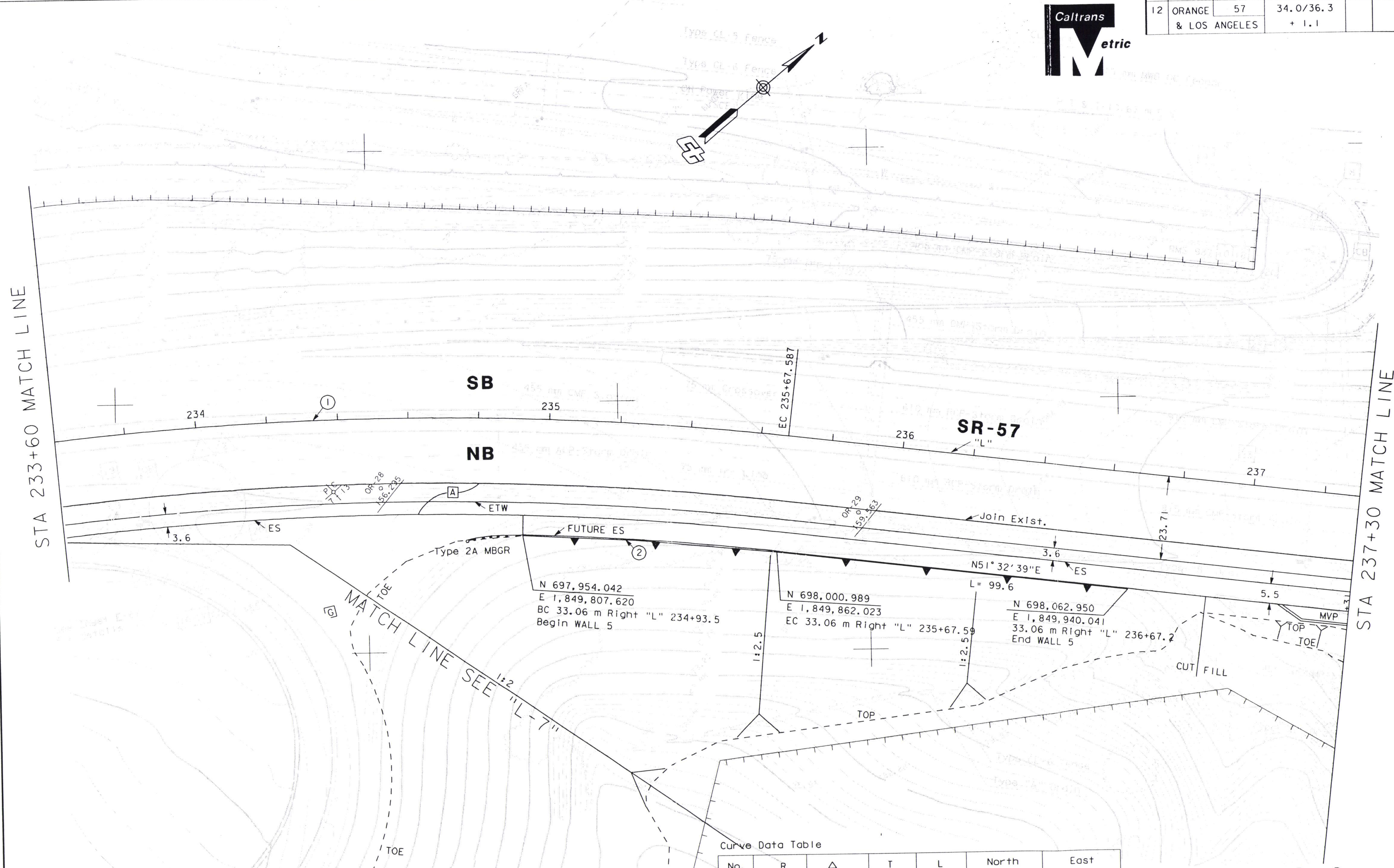
Caltrans

LAST REVISION

FOR REDUCED PLANS ORIGINAL 0 20 40 60 80

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric



Curve Data Table

No.	R	Δ	T	L	North	East
(1)	914.41	35° 1' 2"	288.46	558.85	697310.82	1850410.14
(2)	881.35	4° 40' 22"	35.96	71.88	697310.82	1850410.14

LAYOUT L-6
ALT. 3

Scale 1:1000

PROJECT ENGINEER	HAMMER SUI
CALCULATED/DESIGNED BY	CHECKED BY
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric

SR-57

SB

NB

TONNER CANYON RD.

OR-26
15.428

OR-27
0
155.691

OR-28
0
156.295

P.I.C.
7+13

MATCH LINE
STA 6+80 (L-5)

MATCH LINE
STA 2+75

TONNER CANYON OFF-RAMP

+80.5 Begin Taper

+10.5 End Taper

PCC 2+80.512

PCC 3+10.512 End Taper

+45.4 End Taper

+80.4 Begin Taper

3-R2
150.178

EC 4+80.389 Begin Taper +80.4

Type 2A MBGR

TOE

TOP

1:2

"C"

Curve Data Table

No.	R	Δ	T	L	North	East
①	889.7	8°22'14"	65.11	129.98	697245.41	1850370.99
②	157.93	10°52'56"	15.04	30.0	697751.11	1849842.08
③	54.99	177°4'17"	2151.25	169.96	697834.97	1849782.38

Scale 1:1000

LAYOUT
L-7
ALT.3

DATE	REVISED BY	DATE REVISED
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CHECKED BY		

PROJECT ENGINEER

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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FOR REDUCED PLANS ORIGINAL 0 20 40 60 80

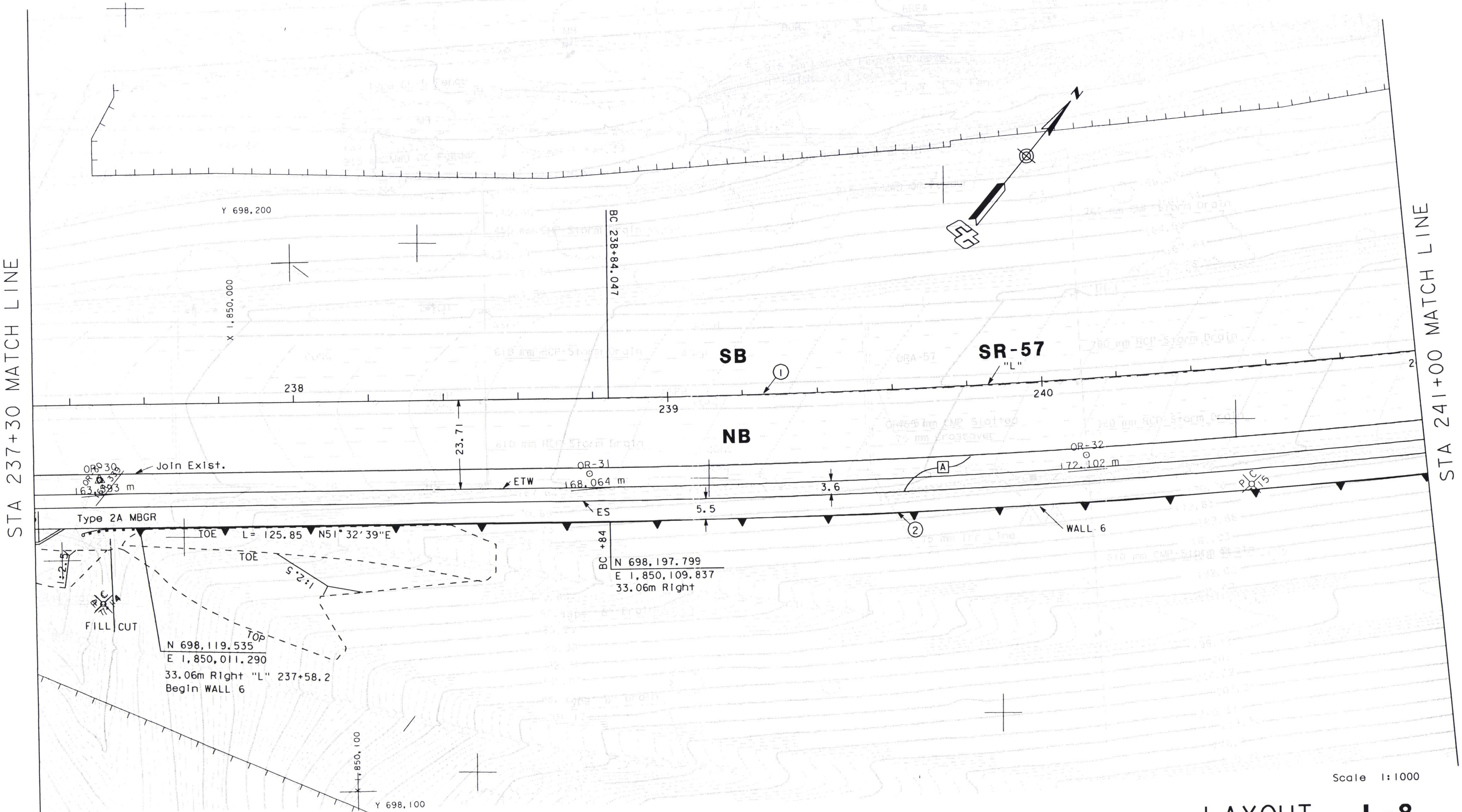
LAST REVISION

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric

Curve Data Table

No.	R	Δ	T	L	North	East
(1)	2543.6	22° 36' 20"	508.4	1003.54	700211.36	1848502.21
(2)	2576.61	18° 19' 29"	415.58	824.07	700211.36	1848502.21



Scale 1:1000

LAYOUT L-8
ALT.3

Scale 1:1000

DATE | REVISED BY | DATE REVISED

CALCULATED/DESIGNED BY | CHECKED BY

PROJECT ENGINEER

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

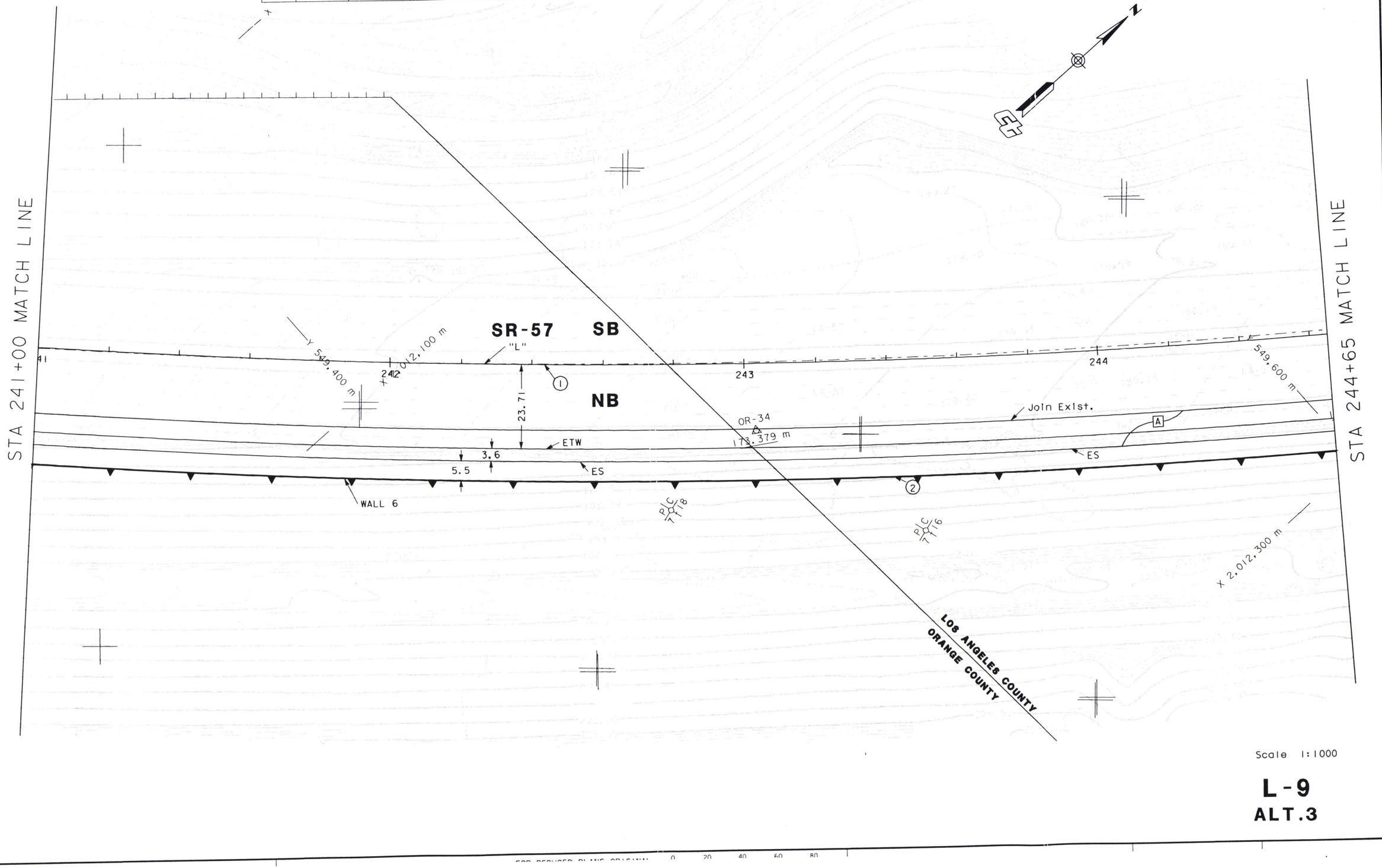
Caltrans

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric

Curve Data Table

No.	R	Δ	T	L	North	East
①	2543.6	22° 36' 20"	508.4	1003.54	700211.36	1848502.21
②	2576.61	18° 19' 29"	415.58	824.07	700211.36	1848502.21



Scale 1:1000

L-9
ALT.3

LAST REVISION

PROJECT ENGINEER
HAMMER SUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

DATE	REVISED BY	DATE REVISED

CALCULATED/ DESIGNED BY
CHECKED BY

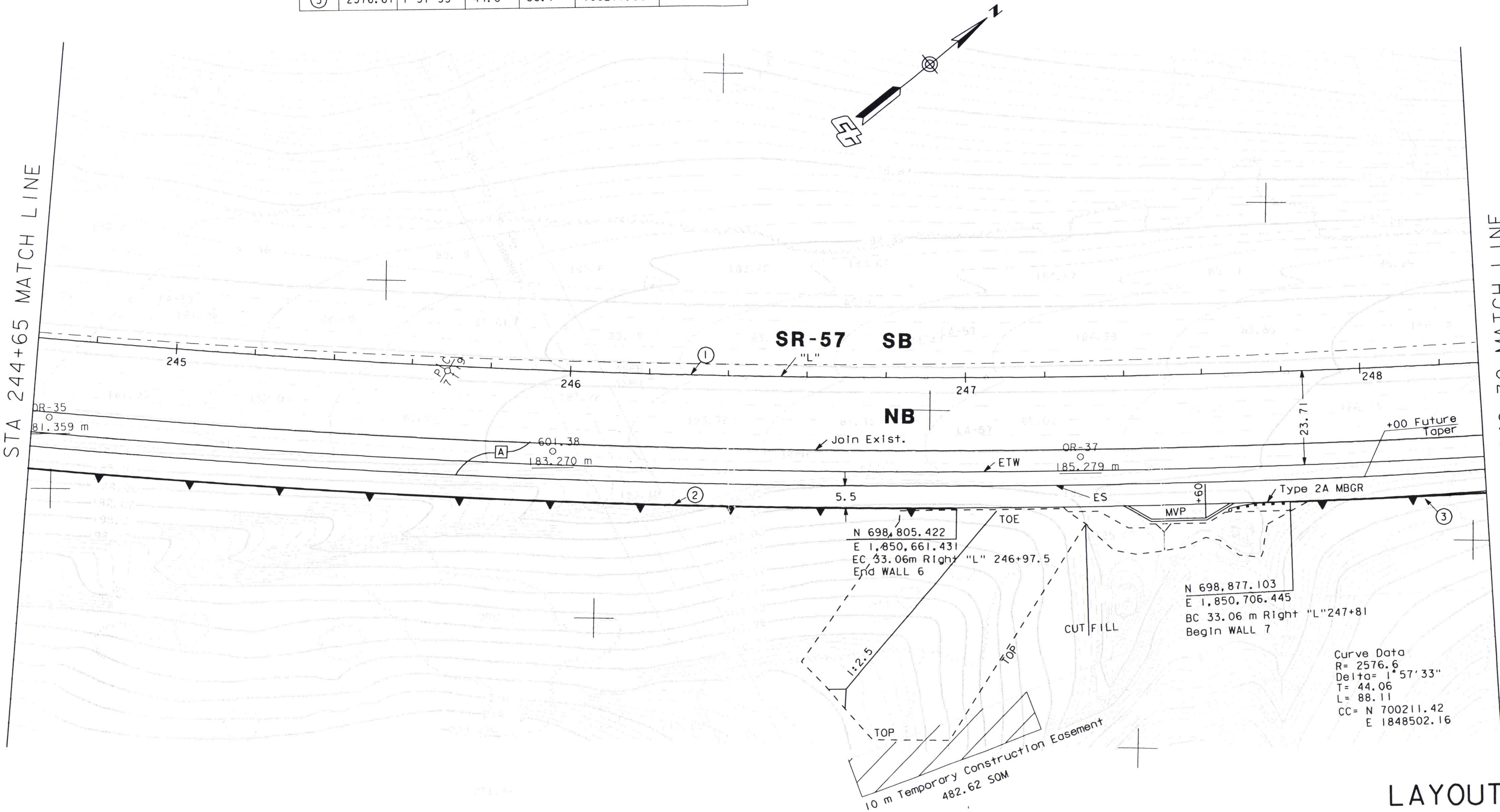
FOR REDUCED PLANS ORIGINAL 0 20 40 60 80

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric

Curve Data Table

No.	R	△	T	L	North	East
①	2543.6	22° 36′ 20″	508.4	1003.54	700211.36	1848502.21
②	2576.61	18° 19′ 29″	415.58	824.07	700211.36	1848502.21
③	2576.61	1° 57′ 33″	44.0	88.1	700211.36	1848502.21



LAYOUT

L-10

ALT.3

Scale 1:1000

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

PROJECT ENGINEER: HAMMER SUI

CALCULATED/DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

FOR REDUCED PLANS ORIGINAL 0 20 40 60 80

LAST REVISION

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric

DATE	REVISED BY
	DATE REVISED

CALCULATED/ DESIGNED BY

CHECKED BY

PROJECT ENGINEER

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

STA 248+30 MATCH LINE

STA 251+80 MATCH LINE

Y 550,100 m

X 2,012,500 m

N

EC 248+87.608

P/C 1720

P/C 1121

SB

SR-57

"L"

249

250

251

NB

OR-38

187.385 m

ETW

ES

OR-39

188.888 m

A

Join Exist.

+88 Begin Taper

OR-40

190.799 m

C

5.5

20:1 ES Taper

+38 End Taper

3.0

N28° 43' 17"E L= 163.60

Type 2A MBGR

N 698,953.243
E 1,850,750.773
EC 33.06 m Right
"L" 248+60.8
End WALL 7

N 698,991.009
E 1,850,771.581
33.06m Right "L" 249+11
Begin WALL 8

N 699,134.502
E 1,850,850.211
33.06m Right "L" 250+74.5
End WALL 8

X 2,012,600 m

Y 012,700 m

Curve Data Table

No.	R	Δ	T	L	North	East
①	2576.6	1°57'33"	44.0	88.1	700211.36	1848502.21
②	2543.6	22°36'20"	508.4	1003.54	700211.36	1848502.21

LAYOUT

Scale 1:1000

L-11

ALT.3

LAST REVISION

FOR REDUCED PLANS ORIGINAL 0 20 40 60 80

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric

DATE	REVISED BY	DATE REVISED

CALCULATED/ DESIGNED BY

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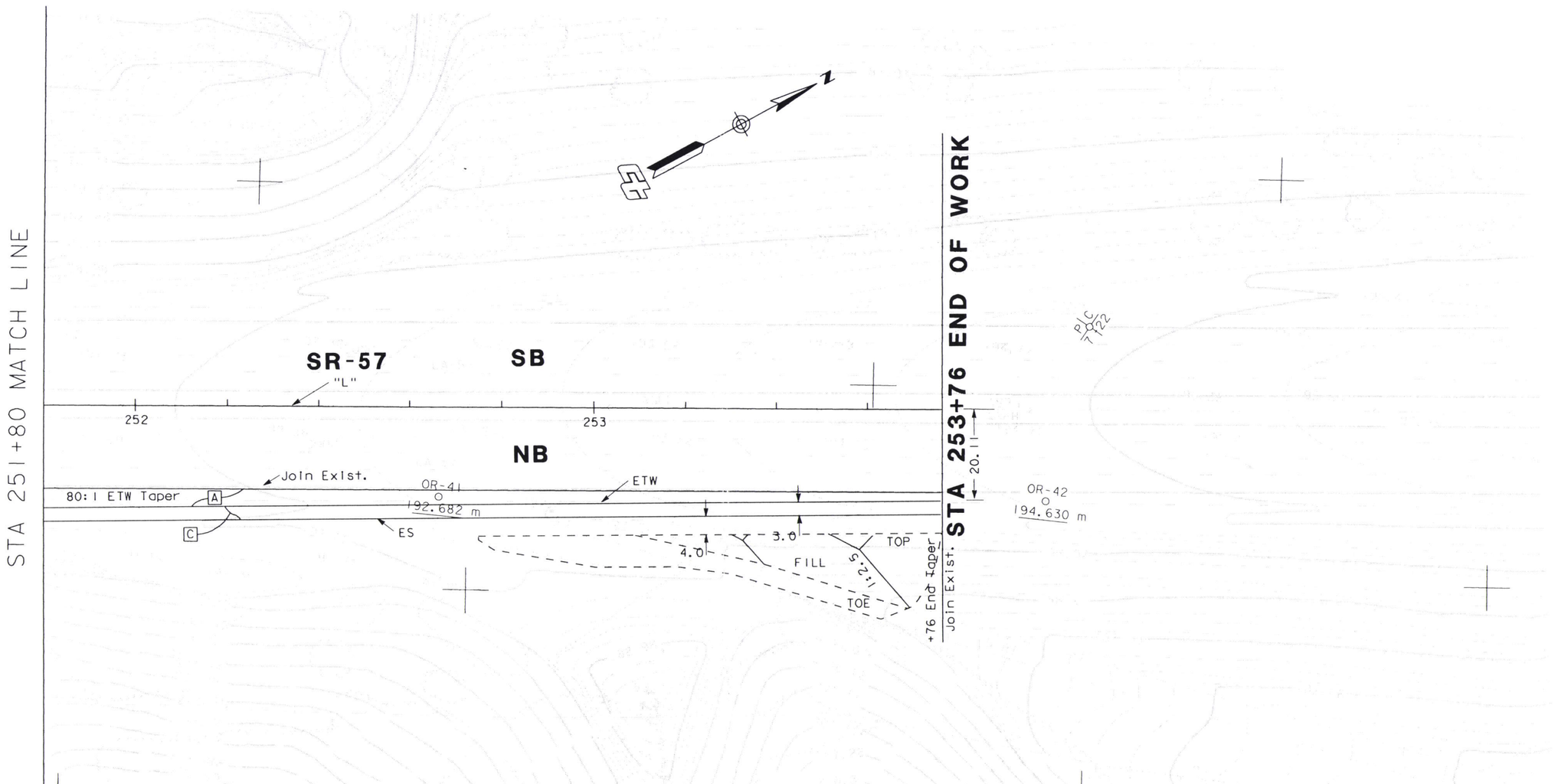
PROJECT ENGINEER

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans



LAYOUT

L-12

ALT.3

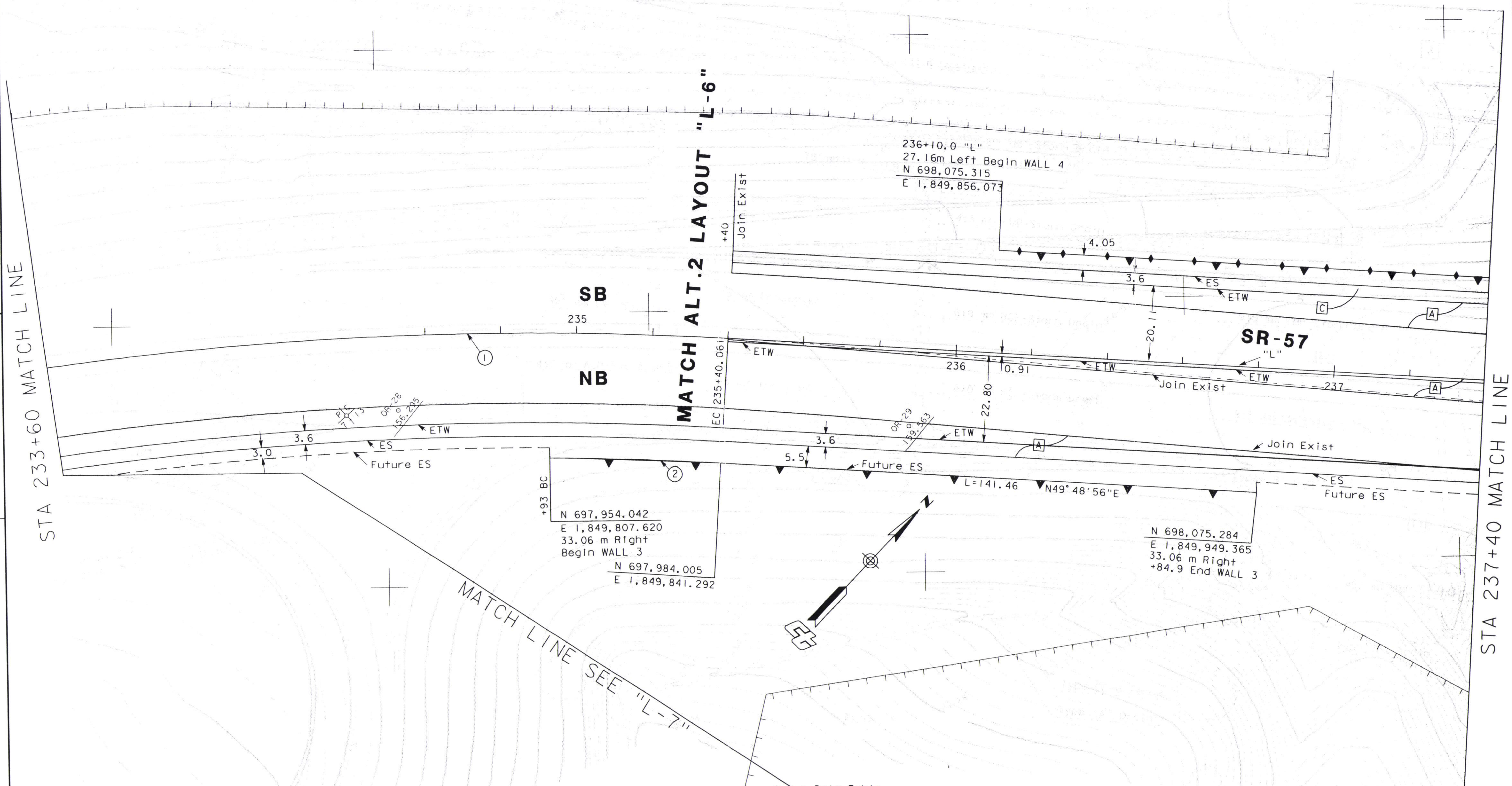
Scale 1:1000

FOR REPRODUCED PLANS ORIGINAL 0 20 40 60 80

LAST REVISION

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric



STA 233+60 MATCH LINE
STA 237+40 MATCH LINE
MATCH ALT.2 LAYOUT "L-6"
MATCH LINE SEE "L-7"
SB
NB
SR-57
"L"
235
236
237
236+10.0 "L"
27.16m Left Begin WALL 4
N 698,075.315
E 1,849,856.073
Join Exist
+40
4.05
3.6
ES
ETW
20.11
0.91
22.80
Join Exist
EC 235+40.061
OR-28
156.295
OR-29
159.563
3.6
3.0
ES
Future ES
5.5
Future ES
L=141.46
N49° 48' 56"E
+93 BC
N 697,954.042
E 1,849,807.620
33.06 m Right
Begin WALL 3
N 697,984.005
E 1,849,841.292
N 698,075.284
E 1,849,949.365
33.06 m Right
+84.9 End WALL 3
N

Curve Data Table

No.	R	△	T	L	North	East
1	914.41	33° 17′ 33"	273.40	531.33	697310.82	1850410.14
2	881.35	2° 56′ 53"	22.68	45.35	697310.82	1850410.14

LAYOUT L-6

Scale 1:1000

ALT.4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

PROJECT ENGINEER: HAMMER SUI

CALCULATED/DESIGNED BY

CHECKED BY

DATE REVISED BY

DATE REVISED

LAST REVISION

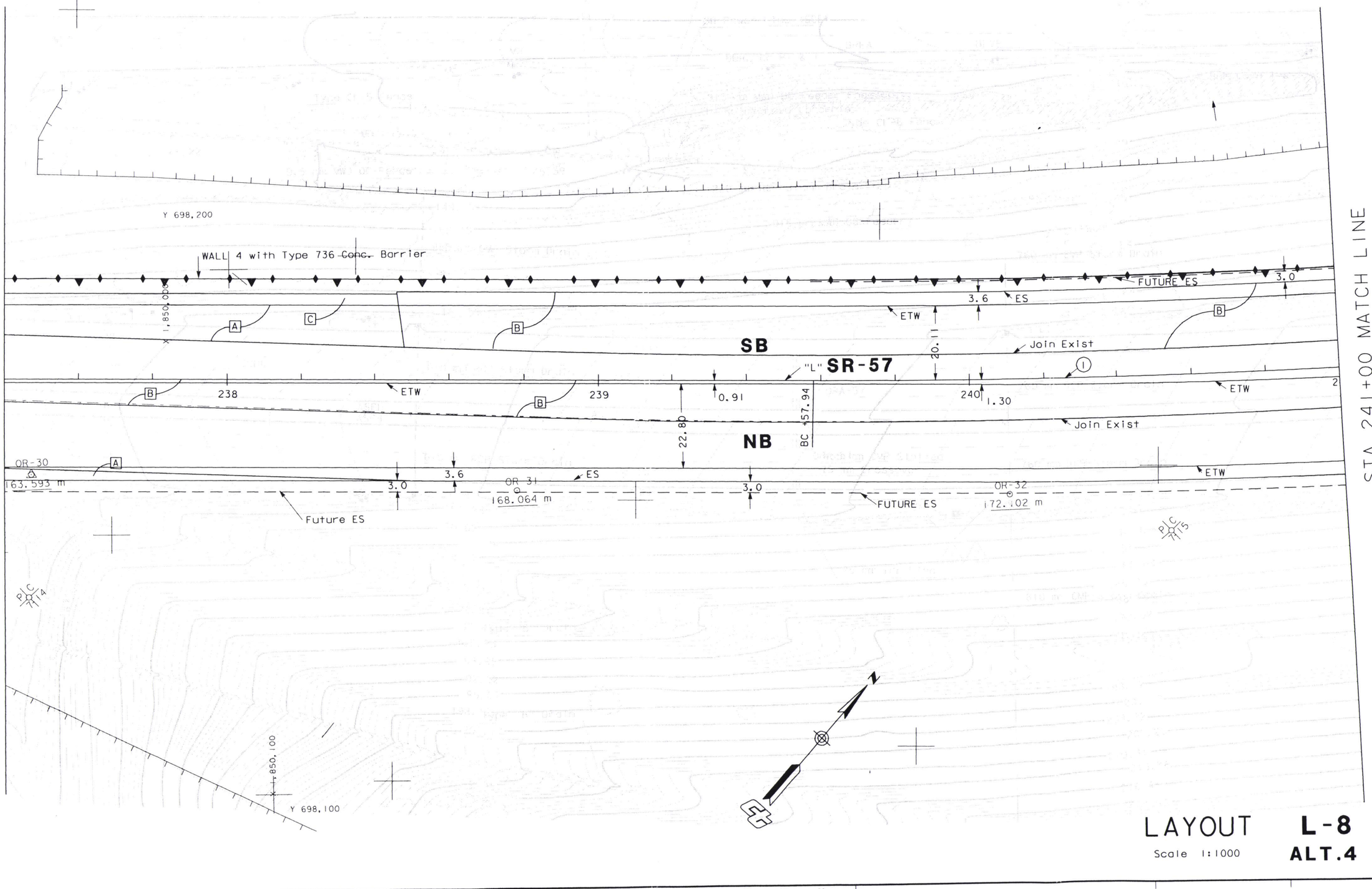
0 20 40 60 80

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric

Curve Data Table

No.	R	Δ	T	L	North	East
(1)	2550.0	13°35'55"	304.04	605.22	700227.47	1848494.34



LAYOUT **L-8**

Scale 1:1000 **ALT.4**

DATE	REVISED BY	DATE REVISED
	CALCULATED/ DESIGNED BY	CHECKED BY

PROJECT ENGINEER
HAMMER SUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

FOR REDUCED PLANS ORIGINAL 0 20 40 60 80

LAST REVISION

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric

DATE	REVISED BY	DATE REVISED

CALCULATED/ DESIGNED BY

CHECKED BY

PROJECT ENGINEER
HAMMER SUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

STA 241+00 MATCH LINE

STA 244+40 MATCH LINE

Box Covert

X 2,012,000 m

N 698,531.775
E 1,850,362.323
+95.86 End WALL 4
27.16m Left

End Conc. Barrier
Type 2A MBGR

WALL 4

+15.8

Future ES

3.0

ES

3.6

ETW

SB

SR-57

"L"

Join Exist

20.

ETW

241

242

243

244

ETW

2.75

Y 549,400 m

X 2,012,100 m

NB

22.80

3.6

OR-33

+75.666 m

ES

ETW

Join Exist

OR-34

+78.866 m

3.0

ES

Future ES

A

B

PJC
R16

LOS ANGELES COUNTY

ORANGE COUNTY

X 2,012,3

Curve Data Table

No.	R	Δ	T	L	North	East
①	2550.0	13° 35' 55"	304.04	605.22	700227.47	1848494.34
②	60.0	54° 45' 31"	31.07	57.34	698568.64	1850259.72

LAYOUT

L-9

ALT.4

Scale 1:1000

FOR REQUIRED PLANS ORIGINAL 0 20 40 60 80

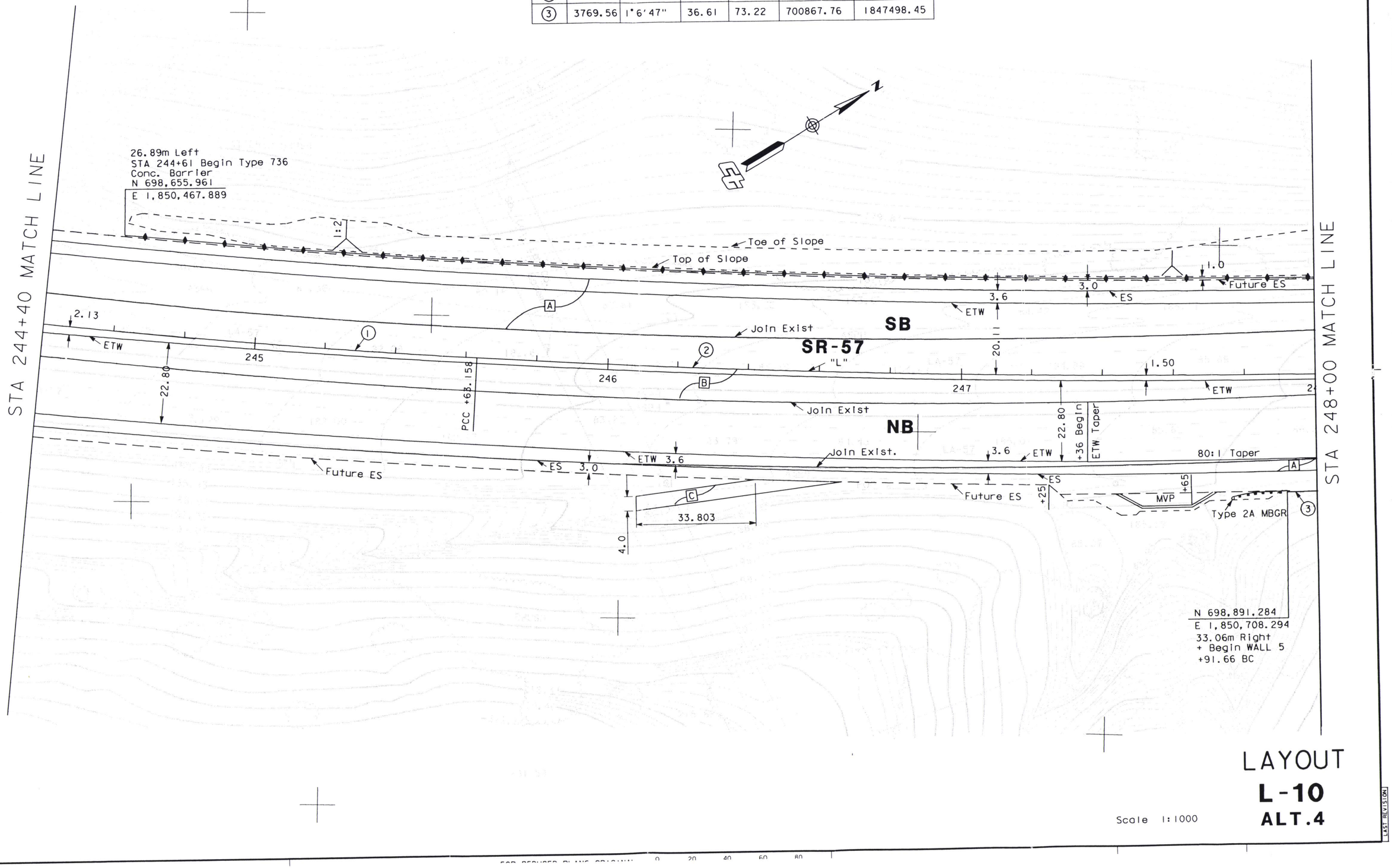
LAST REVISION

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric

Curve Data Table

No.	R	Δ	T	L	North	East
①	2550.0	13°35'55"	304.04	605.22	700227.47	1848494.34
②	3500.0	7°30'38"	229.72	458.79	700789.17	1847728.19
③	3769.56	1°6'47"	36.61	73.22	700867.76	1847498.45



LAYOUT

L-10

ALT.4

Scale 1:1000

DATE	REVISED BY	DATE REVISED

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CHECKED BY

PROJECT ENGINEER

HAMMER SUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FOR REPRINT PLANS ORIGINAL 0 20 40 60 80

LAST REVISION

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric

Curve Data Table

No.	R	Δ	T	L	North	East
①	3500.0	7°30'38"	229.72	458.79	700789.17	1847728.19
②	3769.56	1°6'47"	36.61	73.22	700867.76	1847498.45
③	3769.56	1°33'31"	51.27	102.54	700867.76	1847498.45

STA 248+00 MATCH LINE

STA 251+60 MATCH LINE

STA 248+60 "L"
27.16m Left Begin WALL 7
N 698,964.421
E 1,850,683.002

Y 550,100

X 2,012,500 m

N 699,120.262
E 1,850,743.739
End WALL 7 & Barrier
27.16m Left
+22 Join Exist

1:2

1.0

3.0

ES

3.6

ETW

Future ES

+62

A

SR-57

SB

20.11

1.5

①

B

48

Join Exist

ETW

249

"L"

ETW

250

EC+21.95
+24 End
ETW Taper

0.91

ETW

251

NB

Join Exist

A

ETW

ETW

ES

ETW

OR-40

190.799 m

A

+00

MVP

②

③

ES

C

80:1 Taper

20:1 Taper

ES

+42 End
ES Taper

N 699,003.047
E 1,850,774.485
31.31m Right
+20 Begin WALL 6

EC+21.95
30.09 Right
+24 Begin
ES Taper

+70 Begin
Shoulder &
ES Taper

N 699,132.706
E 1,850,845.315
29.63m Right
+67 End WALL 6

N 698,954.002
E 1,850,746.078
32.07m Right EC
+64 End WALL 5

X 2,012,600 m

X 2,01

Y 550,0

LAYOUT

Scale 1:1000

L-11

ALT.4

LAST REVISION

PROJECT ENGINEER
HAMMER SUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

DATE	REVISED BY	DATE REVISED

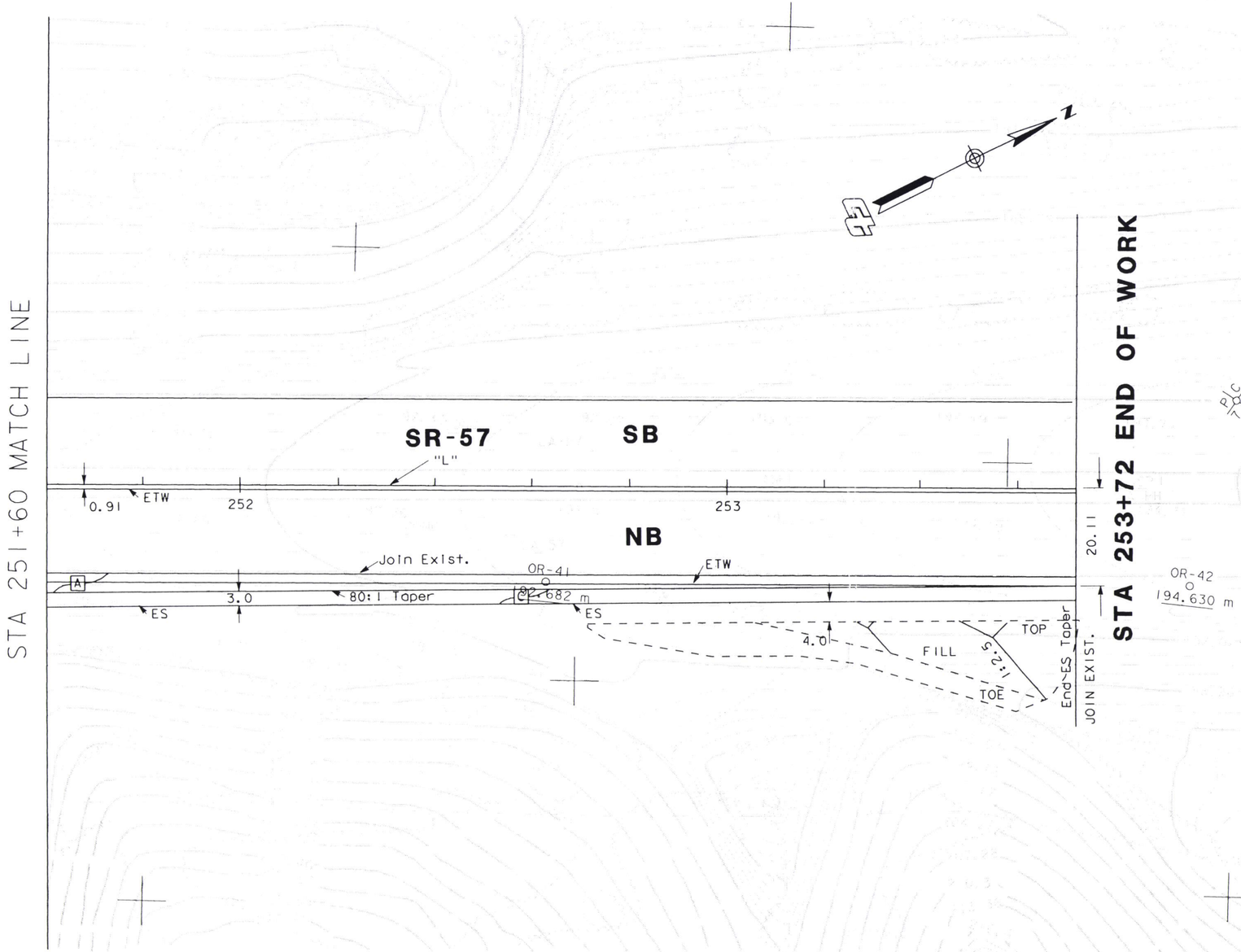
CALCULATED/DESIGNED BY

CHECKED BY

FOR REDUCED PLANS ORIGINAL 0 20 40 60 80

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	ORANGE & LOS ANGELES	57	34.0/36.3 + 1.1		

Caltrans Metric



LAYOUT **L-12**

Scale 1:1000 **ALT.4**

CALCULATED/ DESIGNED BY	DATE	REVISED BY
CHECKED BY		DATE REVISED

PROJECT ENGINEER
HAMMER SUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

FOR REPRINT PLANS ORIGINAL 0 20 40 60 80

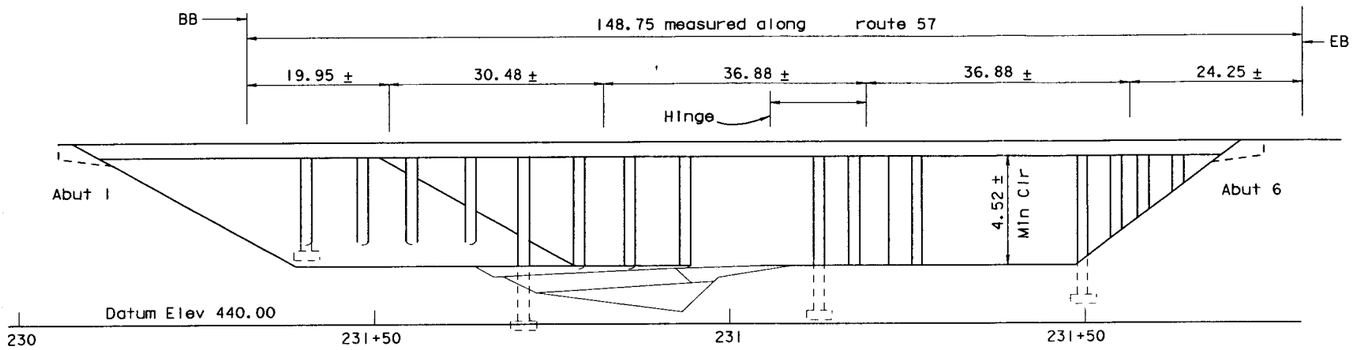
LAST REVISION

Attachment J

Structure Planning Study
Plan Sheets

Planning Study of Tonner Canyon Road UC – Alternative 1
Planning Study of Tonner Canyon Road UC – Alternative 2
Planning Study of Soil Nail Wall Typical Cross Sections

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF STRUCTURES

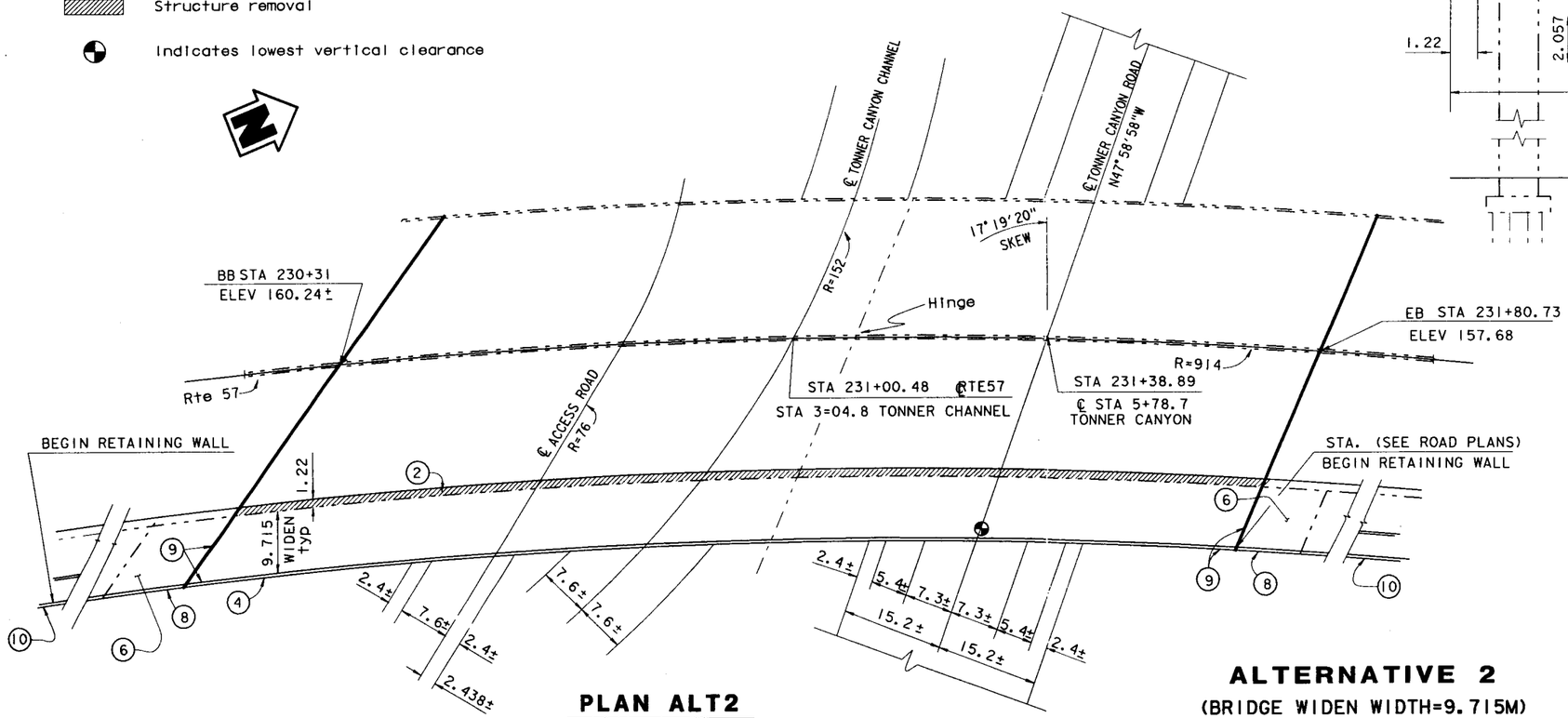


ELEVATION

1:400

LEGEND

- Indicates newstructure
- Indicates existing structure
- Structure removal
- Indicates lowest vertical clearance



PLAN ALT2

1:400

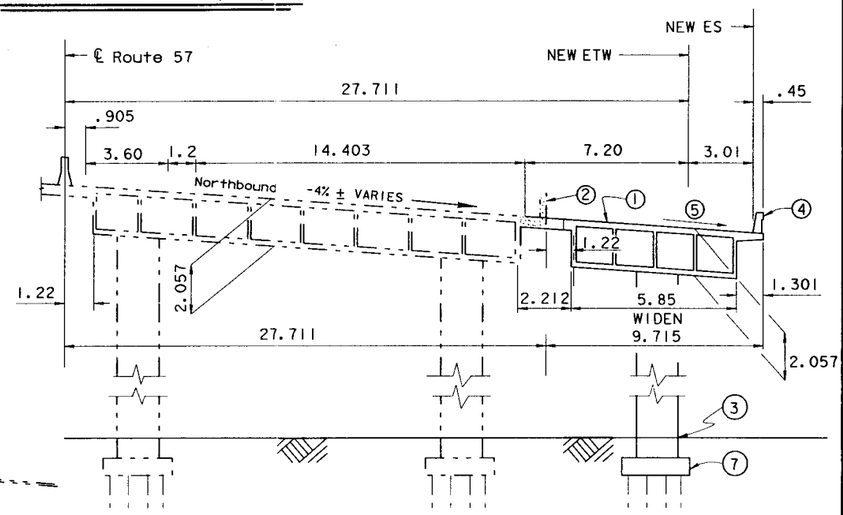
DATE OF ESTIMATE		7-9-0' P6A
BRIDGE REMOVAL	=	N/A
STRUCTURE DEPTH	=	2.057m
LENGTH	=	148.75m
WIDTH	=	9.715m
AREA	=	1445m²
COST/ □_ INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	$1,646
TOTAL COST	=	$2,400,000

Soil Nail Walls = $22,600,000

Caltrans Metric

DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT
12	ORANGE	57	43.0/36.3+ 1.1

INCOMPLETE PLAN FOR DESIGN STUDY PRINTED
DATE: 7-11-01
Office of Structure Design
STATE OF CALIFORNIA



TYPICAL SECTION

1:125

NOTES

1. Match existing structure type
2. Remove existing barrier, railing and overhang
3. Assume 1.8 m Dia column
4. Concrete Barrier Type 732
5. Match to existing grade and crossslope
6. Structure approach slab type R(9D)
7. Assume footing supported by piles
8. Assume retain wall Type I supported by piles, length=6m±(No wing wall)
9. Assumed diaphragm abutment supported by piles
10. Other Soil/Nail Wall not shown but included in estimate

ALTERNATIVE 2

(BRIDGE WIDEN WIDTH=9.715M)

2 LANE + SHOULDER

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

DESIGNED BY	R. WILSON	DATE	6-17 01
DRAWN BY	F. RASHEDI	DATE	6-17-01
CHECKED BY		DATE	
APPROVED		DATE	

STRUCTURE DESIGN SECTION 18

PLANNING STUDY

TONNER CANYON ROAD UC (WIDEN)

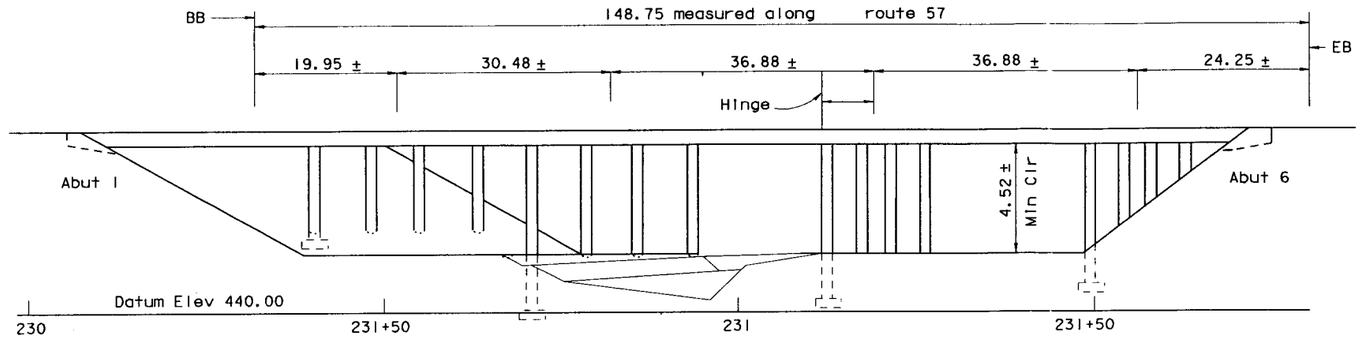
BRIDGE NO. 55-0504	CU 12
SCALE: VARIES	EA 12-0C120K

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET (METRIC) (REV. 4/20/00)

FILE => plan513111312

USERNAME => soutta DATE PLOTTED => 13-Jul-2001 TIME PLOTTED => 11:13

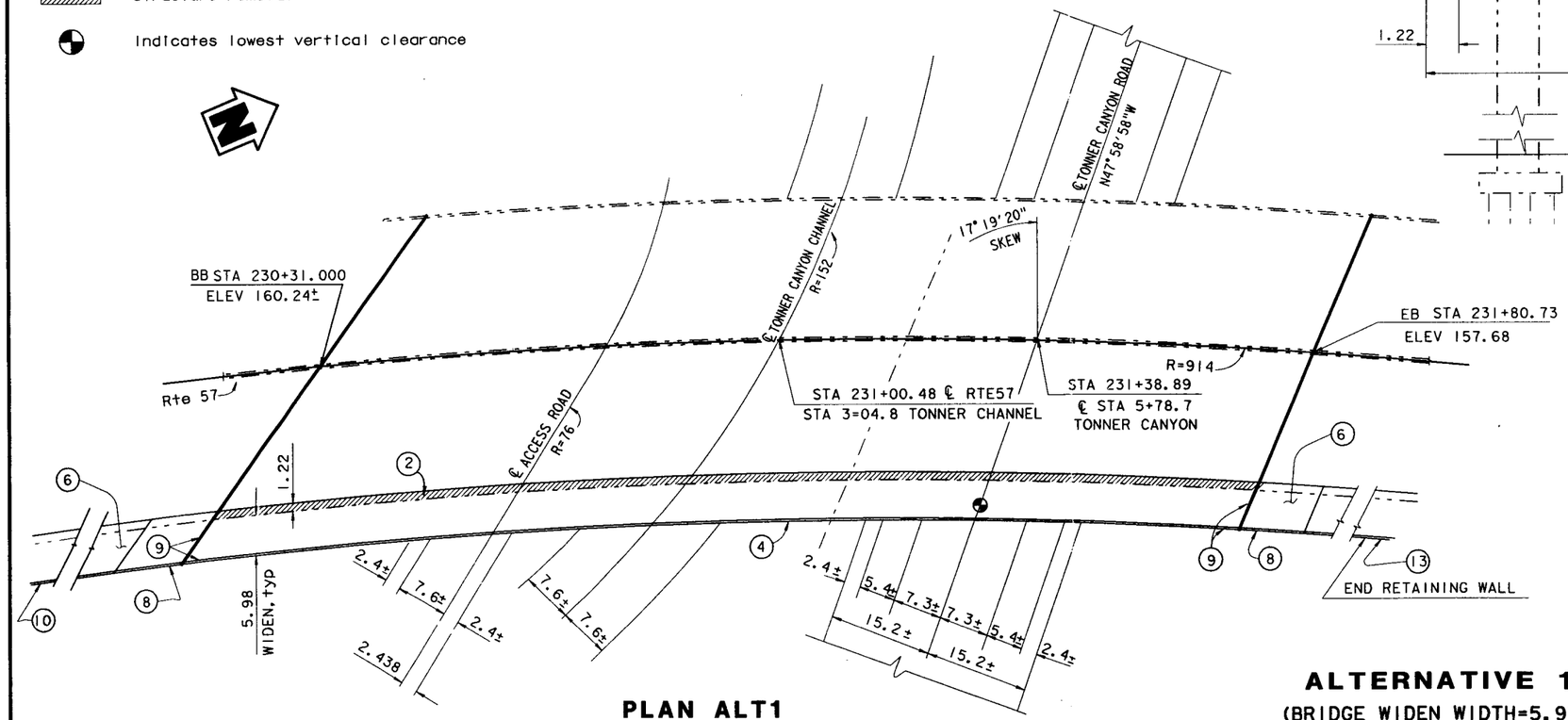
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF STRUCTURES



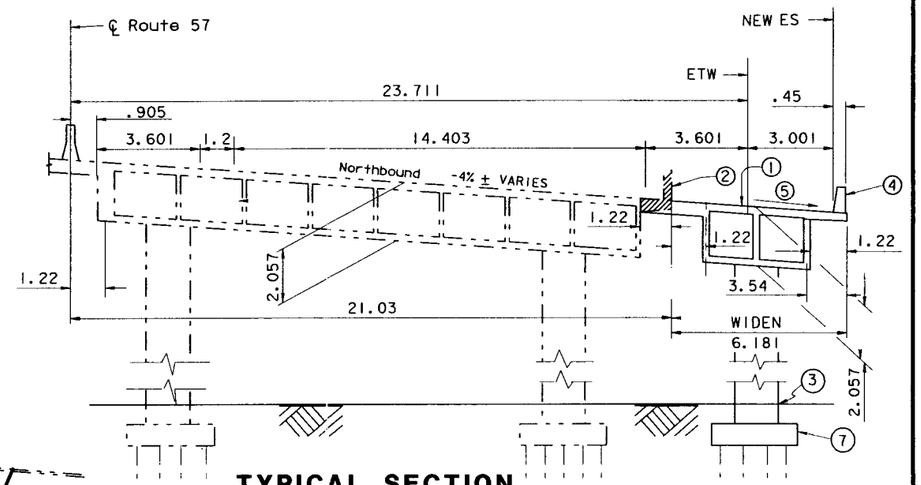
ELEVATION
1:400

LEGEND

- Indicates newstructure
- Indicates existing structure
- Structure removal
- Indicates lowest vertical clearance



PLAN ALT1
1:400



TYPICAL SECTION
1:100

DATE OF ESTIMATE	=	7-9-01 P6A
BRIDGE REMOVAL	=	N/A
STRUCTURE DEPTH	=	2.057m
LENGTH	=	148.75m
WIDTH	=	6.181m
AREA	=	9.90m²
COST/ □__ INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	$1,739
TOTAL COST	=	$1,600,000

Soil Nail Walls = $16,700,000

Caltrans Metric

DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT
12	ORANGE	57	34.0/36.3+ 1.1

INCOMPLETE PLAN FOR DESIGN STUDY PRINTED
DATE: 7-11-01
Office of Structure Design
STATE OF CALIFORNIA

NOTES

1. Match existing structure type
2. Remove existing barrier, railing and overhang
3. Assume 1.8 m Dia column
4. Concrete Barrier Type 732
5. Match to existing grade and crossslope
6. Structure approach slab type R(9D)
7. Assume footing supported by piles
8. Assume retain wall Type I supported by piles, length=6m±(No wing wall)
9. Assumed diaphragm abutment supported by piles
10. Other Soil/Nail Wall not shown but included in estimate

ALTERNATIVE 1
(BRIDGE WIDEN WIDTH=5.98M)
1 LANE + SHOULDER

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

DESIGNED BY	R. WILSON	DATE	6-17 01
DRAWN BY	F. RASHEDI	DATE	6-17-01
CHECKED BY		DATE	
APPROVED		DATE	

STRUCTURE DESIGN SECTION 18

PLANNING STUDY

TONNER CANYON ROAD UC (WIDEN)

BRIDGE NO. 55-0504	CU 12
SCALE: VARIES	EA 12-0C120K

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET (METRIC) (REV. 4/20/00)

FILE => plan513094127

USERNAME => sdutta DATE PLOTTED => 13-JUL-2001 TIME PLOTTED => 09:41

Attachment K

Preliminary PSR Cost Estimate

Alternative 1 through 4

PRELIMINARY PSR COST ESTIMATE SUMMARY
ALTERNATIVE 1

Dist-Co-Rt 12-ORA-57

KP(PM) 34.0/36.3 (21.13/22.56) +1.1

EA 0C120K

Prgm. Code 20.50.025.714

PROJECT DESCRIPTION:

Limits: ORA-57 from Lambert Road to 1.1 Km North of County Line

Proposed Improvement (Scope) Construct climbing lane in the northbound direction

Alternative: 1

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	$	14,374,000
TOTAL STRUCTURE ITEMS	$	18,300,000
SUBTOTAL CONSTRUCTION COSTS	$	32,674,000
TOTAL RIGHT OF WAY ITEMS	$	733,700
HAZARDOUS WAST MITIGATION COST	$	4,200,000
ENVIRONMENTAL MITIGATION COST	$	2,016,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	$	39,623,700
USE	$	**39,624,000**

Reviewed by
District Program Advisor
Eduardo Amezcua for Saied Hashemi Phone No: (949) 724-2929 Date: 8/22/2001

Reviewed by
District Program Manager
George Kopjak Phone No: (949) 724-2233 Date: 8/27/01

Approved by
Project Manager
Pija Ansari Phone No: (949) 440-4497 Date: 8/27/01

ALTERNATIVE 1
ATTACHMENT K
Sheet 1 of 6

PRELIMINARY PSR COST ESTIMATE SUMMARY

Dist-Co-Rt	12-ORA-57
KP(PM)	34.0/36.3 (21.13/22.56) +1.1
EA	0C120K
Prgm. Code	20.50.025.714

I. ROADWAY ITEMS

Section 1 Earthwork

	Quantity	Unit	Unit Price	Item Cost	Section Cost
Roadway Excavation	100,900	M3	$15	$1,513,500	
Imported Borrow	7,000	M3	$10	$70,000	
Clearing & Grubbing	1	LS	$200,000	$200,000	
				Subtotal Earthwork	$1,783,500

Section 2 Structural Section*

Portland Concrete Cement Pavement (PCCP)	5,504	M3	$300	$1,651,174	
Ashpalt Concrete (Type B)	9,029	TONNE	$60	$541,732	
Asphalt Treatment Permeable Base (ATPB)	3,016	M3	$110	$331,706	
Class 2 Aggregate Base (AB)	12,732	M3	$50	$636,617	
Class 2 Aggregate Subbase (AS)	7,635	M3	$35	$267,216	
				Total Structural Items	$3,428,445

Section 3 Drainage

Sand Backfill (Abandon Pipe)	467	M3	$80	$37,360	
Remove Inlet	23	EA	$960	$22,080	
Concrete Channel Removal	90	M3	$73	$6,570	
New Inlet	23	EA	$2,700	$62,100	
New Manhole	4	EA	$3,600	$14,400	
450 mm RCP	15	M	$185	$2,775	
600 mm RCP	1,258	M	$250	$314,500	
750 mm RCP	395	M	$260	$102,700	
900 mm RCP	153	M	$300	$45,900	
900 mm RCP (Channel Replacement)	125	M	$300	$37,500	
1050 mm RCP (Extension)	6	M	$350	$2,100	
1200 mm RCP	393	M	$360	$141,480	
				Total Drainage	$789,465

* Reference sketch showing typical pavement structural section elements of the roadway. Include (if available) T.I., R-Value and date tests were performed.

ALTERNATIVE 1
ATTACHMENT K

PRELIMINARY PSR COST ESTIMATE SUMMARY

Dist-Co-Rt 12-ORA-57
KP(PM) 34.0/36.3 (21.13/22.56) +1.1
EA 0C120K
Prgm. Code 20.50.025.714

Section 4 Specialty Items	Quantity	Unit	Unit Price	Item Cost	Section Cost
Retaining Walls (H=1200 mm)		M	$500		
Maint. Vehicle Pullouts at Var. Locations	5	EA	$10,000	$50,000	
Edge Drain	4,398	M	$20	$87,960	
Remove Concrete Barrier	900	M	$30	$27,000	
Concrete Barrier Type 60D	2,527	M	$130	$328,510	
Remove AC Dike	3,798	M	$15	$56,970	
AC Dike	2,659	M	$15	$39,885	
MBGR (Wood Post)	195	M	$130	$25,350	
Remove AC Pavement	18,295	M^2	$20	$365,900	
Salvage MBGR		M	$25		
Landscape	1	LS	$75,000	$75,000	
Erosion Control	1	LS	$54,000	$54,000	
Slope Protection		LS			
R/E office		LS			
Water Pollution Control	1	LS	$550,000	$550,000	
Progress Schedule		LS			
			Total Specialty Items		$1,660,575
Section 5 Traffic Items					
Relocate Call Box	6	EA	$1,000	$6,000	
Relocate Lighting Standard	20	EA	$2,500	$50,000	
Temporary Lighting	1	LS	$20,000	$20,000	
Temporary Striping	1	LS	$20,000	$20,000	
Pavement Delineation	1	LS	$22,100	$22,100	
Overhead Sign Structures	1	EA	$6,500	$6,500	
Roadside Signs	1	LS	$5,500	$5,500	
Traffic Control Systems	1	LS	$40,000	$40,000	
Fiber Optic System Relocation	1	LS	$500,000	$500,000	
CCTV Relocation	1	LS	$30,000	$30,000	
Construction Signs	1	LS	$6,000	$6,000	
Temporary Crash Cushion	55	EA	$350	$19,250	
Temporary K-Rail	5,830	M	$45	$262,350	
Traffic Management Plan (TMP)					
Public Awareness Campaign	1	LS	$20,000	$20,000	
Traffic Management Team	1	LS	$24,000	$24,000	
Portable CMS	4	EA	$15,000	$60,000	
CHP / COZEEP (9 Hours, 200 nights)	1	LS	$198,000	$198,000	
FSP / Tow Truck Service	1	LS	$60,000	$60,000	
			Total Traffic Items		$1,349,700
			SUBTOTAL SECTIONS 1-5		**$7,776,146**

ALTERNATIVE 1
ATTACHMENT K
Sheet 3 of 6

PRELIMINARY PSR COST ESTIMATE SUMMARY

Dist-Co-Rt 12-ORA-57
KP(PM) 34.0/36.3 (21.13/22.56) +1.1
EA 0C120K
Prgm. Code 20.50.025.714

				Item Cost	Section Cost
Section 6 Minor Items	$9,011,685 (Subtotal Sections 1-5)	X	10% (5% - 10%)	$901,169	
				Total Minor Items	$901,169
Section 7 Roadway Mobilization					
	$9,912,854 (Subtotal Sections 1-6)	X	10% 10%	$991,285	
				Total Roadway Mobilization	$991,285
Section 8 Roadway Additions					
Supplemental Work	$9,912,854 (Subtotal Sections 1-6)	X	10% (5% - 10%)	$991,285	
Contingencies	$9,912,854 (Subtotal Sections 1-6)	X	25% (**%)*	$2,478,213	
				Total Roadway Additions	$3,469,499
				TOTAL ROADWAY ITEMS (Total of sections 1-8)	$14,373,638
				USE	**$14,374,000**

Estimate Prepared By Hammer Sui Phone # (949) 724-2412 Date 8/21/01

Estimate Checked By Gary Slater Phone # (949) 724-7685 Date 8/21/01

*Use appropriate Percentage per Chapter 3-50 of Project Development Procedures Manual.

ALTERNATIVE 1
ATTACHMENT K
Sheet 4 of 6

PRELIMINARY PSR COST ESTIMATE SUMMARY

Dist-Co-Rt 12-ORA-57
KP(PM) 34.0/36.3 (21.13/22.56) +1.1
EA 0C120K
Prgm. Code 20.50.025.714

STRUCTURES ITEMS

	STRUCTURE No. 1	No. 2	No. 3	No. 4
Bridge Name	Tonner Canyon Road UC			
Structure Type	Cast in Place Box Girder			
Width M (out to out)	6.18			
Lengths M.	148.75			
Total Area Sq. M.	919.40			
Footing Type (Pile/Spread)				
Cost Per square M (include 10% mobilization and 20% contingency)	$1,739			
Total Cost for Structure	$1,600,000			
Soil Nail Walls	$16,700,000			

SUBTOTAL STRUCTURES ITEMS $18,300,000

Railroad Related Costs

SUBTOTAL RAILROAD ITEMS

TOTAL STRUCTURES ITEMS $18,300,000

USE $18,300,000

COMMENTS

Estimate Prepared By Elias Kurani (Print Name) Phone # Date 7/13/01

ALTERNATIVE 1
ATTACHMENT K
Sheet 5 of 6

(If appropriate, attach additional pages and backup)

PRELIMINARY PSR COST ESTIMATE SUMMARY

Dist-Co-Rt 12-ORA-57
KP(PM) 34.0/36.3 (21.13/22.56) +1.1
EA 0C120K
Prgm. Code 20.50.025.714

III. RIGHT OF WAY

	CURRENT VALUE	
A. Acquisition, including excess lands and damages to remainder(s): (Temp. Const. Easements)	$530,000	
B. Utility Relocation (State share)	$200,000	
C. RAP		
D. Clearance/Demolition		
E. Title and Escrow Fees	$1,200	
E. Developmental Fees (Env. Permit etc.)	$2,500	
TOTAL RIGHT OF WAY ITEMS		$733,700
USE:		**$733,700**

Anticipated Date of Right of Way Certification (Date to which Values are Escalated) 07/04

F. Construction Contract Work

Brief Description of Work _____

Right of Way Branch Cost Estimate for Work*

*This dollar amount is to be included in the Roadway and/or Structures Items of Work, as appropriate. Do not include in Right of Way Items.

COMMENTS:

Estimate Prepared By Harry Pantoja (Print Name) Phone # _____ Date 06/29/01

ALTERNATIVE 1
ATTACHMENT K

(If appropriate, attach additional pages and backup)

PRELIMINARY PSR COST ESTIMATE SUMMARY
ALTERNATIVE 2

Dist-Co-Rt 12-ORA-57

KP(PM) 34.0/36.3 (21.13/22.56) +1.1

EA 0C120K

Prgm. Code 20.50.025.714

PROJECT DESCRIPTION:

Limits: ORA-57 from Lambert Road to 1.1 Km North of County Line

Proposed Improvement (Scope) Construct climbing lane in the northbound direction

Alternatives: 2

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	$	17,810,000
TOTAL STRUCTURE ITEMS	$	25,000,000
SUBTOTAL CONSTRUCTION COSTS	$	42,810,000
TOTAL RIGHT OF WAY ITEMS	$	986,000
HAZARDOUS WAST MITIGATION COST	$	4,200,000
ENVIRONMENTAL MITIGATION COST	$	2,120,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	$	50,116,000
USE	$	**50,116,000**

Reviewed by
District Program Advisor
Eduardo Amaya for Saied Hashemi Phone No: (949) 724-2929 Date: 8/22/2001

Reviewed by
District Program Manager
George Kopjak Phone No: (949) 724-2233 Date: 8/27/01

Approved by
Project Manager
Pija Ansari Phone No: (949) 440-4497 Date: 8/27/01

ALTERNATIVE 2
ATTACHMENT K
Sheet 1 of 6

PRELIMINARY PSR COST ESTIMATE SUMMARY

Dist-Co-Rt	12-ORA-57
KP(PM)	34.0/36.3 (21.13/22.56) +1.1
EA	0C120K
Prgm. Code	20.50.025.714

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Item Cost	Section Cost
Roadway Excavation	230,617	M3	$15	$3,459,255	
Imported Borrow	7,035	M3	$10	$70,350	
Clearing & Grubbing	1	LS	$200,000	$200,000	
				Subtotal Earthwork	$3,729,605

Section 2 Structural Section*					
Portland Concrete Cement Pavement (PCCP)	7,034	M3	$300	$2,110,282	
Ashpalt Concrete (Type B)	5,869	TONNE	$60	$352,145	
Asphalt Treatment Permeable Base (ATPB)	3,878	M3	$110	$426,601	
Class 2 Aggregate Base (AB)	7,380	M3	$50	$369,003	
Class 2 Aggregate Subbase (AS)	10,135	M3	$35	$354,736	
				Total Structural Items	$3,612,766

Section 3 Drainage					
Sand Backfill (Abandon Pipe)	467	M3	$80	$37,360	
Remove Inlet	23	EA	$960	$22,080	
Concrete Channel Removal	90	M3	$73	$6,570	
New Inlet	23	EA	$2,700	$62,100	
New Manhole	4	EA	$3,600	$14,400	
450 mm RCP	15	M	$185	$2,775	
600 mm RCP	1,258	M	$250	$314,500	
750 mm RCP	395	M	$260	$102,700	
900 mm RCP	153	M	$300	$45,900	
900 mm RCP (Channel Replacement)	125	M	$300	$37,500	
1050 mm RCP (Extension)	6	M	$350	$2,100	
1200 mm RCP	393	M	$360	$141,480	
				Total Drainage	$789,465

* Reference sketch showing typical pavement structural section elements of the roadway. Include (if available) T.I., R-Value and date tests were performed.

ALTERNATIVE 2
ATTACHMENT K
Sheet 2 of 6

PRELIMINARY PSR COST ESTIMATE SUMMARY

Dist-Co-Rt 12-ORA-57
KP(PM) 34.0/36.3 (21.13/22.56) +1.1
EA 0C120K
Prgm. Code 20.50.025.714

Section 4 Speciality Items	Quantity	Unit	Unit Price	Item Cost	Section Cost
Retaining Walls (H=1200 mm)		M	$500		
Maint. Vehicle Pullouts at Var. Locations	5	EA	$10,000	$50,000	
Edge Drain	4,398	M	$20	$87,960	
Remove Concrete Barrier	900	M	$30	$27,000	
Concrete Barrier Type 60D	2,555	M	$130	$332,150	
Remove AC Dike	3,798	M	$15	$56,970	
AC Dike	3,798	M	$15	$56,970	
MBGR (Wood Post)	216	M	$130	$28,080	
Remove AC Pavement	18,295	M^2	$20	$365,900	
Salvage MBGR		M	$25		
Landscape	1	LS	$75,000	$75,000	
Erosion Control	1	LS	$54,000	$54,000	
Slope Protection		LS			
R/E office		LS			
Water Pollution Control	1	LS	$550,000	$550,000	
Progress Schedule		LS			
			Total Specialty Items		$1,684,030

Section 5 Traffic Items					
Relocate Call Box	6	EA	$1,000	$6,000	
Relocate Lighting Standard	20	EA	$2,500	$50,000	
Temporary Lighting	1	LS	$20,000	$20,000	
Temporary Striping	1	LS	$20,000	$20,000	
Pavement Delineation	1	LS	$22,100	$22,100	
Overhead Sign Structures	1	EA	$6,500	$6,500	
Roadside Signs	1	LS	$5,500	$5,500	
Traffic Control Systems	1	LS	$40,000	$40,000	
Fiber Optic System Relocation	1	LS	$500,000	$500,000	
CCTV Relocation	1	LS	$30,000	$30,000	
Construction Signs	1	LS	$6,000	$6,000	
Temporary Crash Cushion	55	EA	$350	$19,250	
Temporary K-Rail	5,830	M	$45	$262,350	

Traffic Management Plan (TMP)					
Public Awareness Campaign	1	LS	$20,000	$20,000	
Traffic Management Team	1	LS	$24,000	$24,000	
Portable CMS	4	EA	$15,000	$60,000	
CHP / COZEEP (9 Hours, 200 nights)	1	LS	$198,000	$198,000	
FSP / Tow Truck Service	1	LS	$60,000	$60,000	
			Total Traffic Items		$1,349,700

SUBTOTAL SECTIONS 1-5 **$10,015,227**

ALTERNATIVE 2
ATTACHMENT K
Sheet 3 of 6

PRELIMINARY PSR COST ESTIMATE SUMMARY

Dist-Co-Rt 12-ORA-57
KP(PM) 34.0/36.3 (21.13/22.56) +1.1
EA 0C120K
Prgm. Code 20.50.025.714

				Item Cost	Section Cost
Section 6 Minor Items	$11,165,566 (Subtotal Sections 1-5)	X	10% (5% - 10%)	$1,116,557	
			Total Minor Items		$1,116,557
Section 7 Roadway Mobilization					
	$12,282,123 (Subtotal Sections 1-6)	X	10% 10%	$1,228,212	
			Total Roadway Mobilization		$1,228,212
Section 8 Roadway Additions					
Supplemental Work	$12,282,123 (Subtotal Sections 1-6)	X	10% (5% - 10%)	$1,228,212	
Contingencies	$12,282,123 (Subtotal Sections 1-6)	X	25% (**%)*	$3,070,531	
			Total Roadway Additions		$4,298,743
			TOTAL ROADWAY ITEMS (Total of sections 1-8)		$17,809,078
			USE		**$17,810,000**

Estimate Prepared By Hammer Sui Phone # (949) 724-2412 Date 8/21/01

Estimate Checked By Gary Slater Phone # (949) 724-7685 Date 8/21/01

*Use appropriate Percentage per Chapter 3-50 of Project Development Procedures Manual.

ALTERNATIVE 2
ATTACHMENT K
Sheet 4 of 6

PRELIMINARY PSR COST ESTIMATE SUMMARY

Dist-Co-Rt 12-ORA-57
KP(PM) 34.0/36.3 (21.13/22.56) +1.1
EA 0C120K
Prgm. Code 20.50.025.714

STRUCTURES ITEMS

	STRUCTURE No. 1	No. 2	No. 3	No. 4
Bridge Name	Tonner Canyon Road UC			
Structure Type	Cast in Place Box Girder			
Width M (out to out)	9.72			
Lengths M.	148.75			
Total Area Sq. M.	1,445.00			
Footing Type (Pile/Spread)				
Cost Per square M (include 10% mobilization and 20% contingency)	$1,646			
Total Cost for Structure	$2,400,000			
Soil Nail Walls	$22,600,000			

SUBTOTAL STRUCTURES ITEMS $25,000,000

Railroad Related Costs

SUBTOTAL RAILROAD ITEMS

TOTAL STRUCTURES ITEMS $25,000,000

USE $25,000,000

COMMENTS

Estimate Prepared By Elias Kurani Phone # Date 7/13/01

ALTERNATIVE 2
ATTACHMENT K
Sheet 5 of 6

(If appropriate, attach additional pages and backup)

PRELIMINARY PSR COST ESTIMATE SUMMARY

Dist-Co-Rt 12-ORA-57
KP(PM) 34.0/36.3 (21.13/22.56) +1.1
EA 0C120K
Prgm. Code 20.50.025.714

III. RIGHT OF WAY

	CURRENT VALUE
A. Acquisition, including excess lands and damages to remainder(s): (Temp. Const. Easements)	$780,000
B. Utility Relocation (State share)	$200,000
C. RAP	
D. Clearance/Demolition	
E. Title and Escrow Fees	$6,000

TOTAL RIGHT OF WAY ITEMS $986,000

USE: **$986,000**

Anticipated Date of Right of Way Certification _____
(Date to which Values are Escalated)

F. Construction Contract Work
Brief Description of Work _____

Right of Way Branch Cost Estimate for Work*
*This dollar amount is to be included in the Roadway and/or Structures Items of Work, as appropriate. Do not include in Right of Way Items.

COMMENTS:

Estimate Prepared By Harry Pantoja Phone # _____ Date _____

(If appropriate, attach additional pages and backup)

PRELIMINARY PSR COST ESTIMATE SUMMARY
ALTERNATIVE 3

Dist-Co-Rt 12-ORA-57

KP(PM) 34.0/36.3 (21.13/22.56) +1.1

EA 0C120K

Prgm. Code 20.50.025.714

PROJECT DESCRIPTION:

Limits: ORA-57 from Lambert Road to 1.1 Km North of County Line

Proposed Improvement (Scope) Construct climbing lane in the northbound direction

Alternatives: 3

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	$ 29,934,000
TOTAL STRUCTURE ITEMS	$ 16,640,000
SUBTOTAL CONSTRUCTION COSTS	$ 46,574,000
TOTAL RIGHT OF WAY ITEMS	$ 1,129,000
HAZARDOUS WAST MITIGATION COST	$ 4,200,000
ENVIRONMENTAL MITIGATION COST	$ 2,120,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	$ 54,023,000
USE	$ **54,023,000**

Reviewed by
District Program Advisor
Eduardo Campos for Saied Hashemi Phone No: (949) 724-2929 Date: 8/22/2001

Reviewed by
District Program Manager
George Kopjak Phone No: (949) 724-2233 Date: 8/27/01

Approved by
Project Manager
Pija Ansari Phone No: (949) 440-4497 Date: 8/27/01

PRELIMINARY PSR COST ESTIMATE SUMMARY

Dist-Co-Rt	12-ORA-57
KP(PM)	34.0/36.3 (21.13/22.56) +1.1
EA	0C120K
Prgm. Code	20.50.025.714

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Item Cost	Section Cost
Roadway Excavation	726,045	M3	$15	$10,890,675	
Imported Borrow	7,035	M3	$10	$70,350	
Clearing & Grubbing	1	LS	$200,000	$200,000	
				Subtotal Earthwork	$11,161,025

Section 2 Structural Section*					
Portland Concrete Cement Pavement (PCCP)	7,034	M3	$300	$2,110,282	
Ashpalt Concrete (Type B)	5,869	TONNE	$60	$352,145	
Asphalt Treatment Permeable Base (ATPB)	3,878	M3	$110	$426,601	
Class 2 Aggregate Base (AB)	7,380	M3	$50	$369,003	
Class 2 Aggregate Subbase (AS)	10,135	M3	$35	$354,736	
				Total Structural Items	$3,612,766

Section 3 Drainage					
Sand Backfill (Abandon Pipe)	467	M3	$80	$37,360	
Remove Inlet	23	EA	$960	$22,080	
Concrete Channel Removal	90	M3	$73	$6,570	
New Inlet	23	EA	$2,700	$62,100	
New Manhole	4	EA	$3,600	$14,400	
450 mm RCP	15	M	$185	$2,775	
600 mm RCP	1,258	M	$250	$314,500	
750 mm RCP	395	M	$260	$102,700	
900 mm RCP	153	M	$300	$45,900	
900 mm RCP (Channel Replacement)	125	M	$300	$37,500	
1050 mm RCP (Extension)	6	M	$350	$2,100	
1200 mm RCP	393	M	$360	$141,480	
				Total Drainage	$789,465

* Reference sketch showing typical pavement structural section elements of the roadway. Include (if available) T.I., R-Value and date tests were performed.

ALTERNATIVE 3
ATTACHMENT K

PRELIMINARY PSR COST ESTIMATE SUMMARY

Dist-Co-Rt 12-ORA-57
KP(PM) 34.0/36.3 (21.13/22.56) +1.1
EA 0C120K
Prgm. Code 20.50.025.714

Section 4 Specialty Items	Quantity	Unit	Unit Price	Item Cost	Section Cost
Retaining Walls (H=1200 mm)		M	$500		
Maint. Vehicle Pullouts at Var. Locations	5	EA	$10,000	$50,000	
Edge Drain	4,398	M	$20	$87,960	
Remove Concrete Barrier	900	M	$30	$27,000	
Concrete Barrier Type 60D	2,555	M	$130	$332,150	
Remove AC Dike	3,798	M	$15	$56,970	
AC Dike	3,798	M	$15	$56,970	
MBGR (Wood Post)	216	M	$130	$28,080	
Remove AC Pavement	18,295	M2	$20	$365,900	
Salvage MBGR		M	$25		
Landscape	1	LS	$75,000	$75,000	
Erosion Control	1	LS	$54,000	$54,000	
Slope Protection		LS			
R/E office		LS			
Water Pollution Control	1	LS	$720,000	$720,000	
Progress Schedule		LS			
			Total Specialty Items		$1,854,030
Section 5 Traffic Items					
Relocate Call Box	6	EA	$1,000	$6,000	
Relocate Lighting Standard	20	EA	$2,500	$50,000	
Temporary Lighting	1	LS	$20,000	$20,000	
Temporary Striping	1	LS	$20,000	$20,000	
Pavement Delineation	1	LS	$22,100	$22,100	
Overhead Sign Structures	1	EA	$6,500	$6,500	
Roadside Signs	1	LS	$5,500	$5,500	
Traffic Control Systems	1	LS	$40,000	$40,000	
Fiber Optic System Relocation	1	LS	$500,000	$500,000	
CCTV Relocation	1	LS	$30,000	$30,000	
Construction Signs	1	LS	$6,000	$6,000	
Temporary Crash Cushion	55	EA	$350	$19,250	
Temporary K-Rail	5,830	M	$45	$262,350	
Traffic Management Plan (TMP)					
Public Awareness Campaign	1	LS	$20,000	$20,000	
Traffic Management Team	1	LS	$24,000	$24,000	
Portable CMS	4	EA	$15,000	$60,000	
CHP / COZEEP (9 Hours, 200 nights)	1	LS	$198,000	$198,000	
FSP / Tow Truck Service	1	LS	$60,000	$60,000	
			Total Traffic Items		$1,349,700
			SUBTOTAL SECTIONS 1-5		**$17,616,647**

ALTERNATIVE 3
ATTACHMENT K

PRELIMINARY PSR COST ESTIMATE SUMMARY

Dist-Co-Rt 12-ORA-57
KP(PM) 34.0/36.3 (21.13/22.56) +1.1
EA 0C120K
Prgm. Code 20.50.025.714

				Item Cost	Section Cost
Section 6 Minor Items	$18,766,986 (Subtotal Sections 1-5)	X	10% (5% - 10%)	$1,876,699	
			Total Minor Items		$1,876,699
Section 7 Roadway Mobilization					
	$20,643,685 (Subtotal Sections 1-6)	X	10% 10%	$2,064,368	
			Total Roadway Mobilization		$2,064,368
Section 8 Roadway Additions					
Supplemental Work	$20,643,685 (Subtotal Sections 1-6)	X	10% (5% - 10%)	$2,064,368	
Contingencies					
	$20,643,685 (Subtotal Sections 1-6)	X	25% (**%)*	$5,160,921	
			Total Roadway Additions		$7,225,290
			TOTAL ROADWAY ITEMS (Total of sections 1-8)		$29,933,343
				USE	**$29,934,000**

Estimate Prepared By Hammer Sui Phone # (949) 724-2412 Date 8/21/01

Estimate Checked By Gary Slater Phone # (949) 724-7685 Date 8/21/01

*Use appropriate Percentage per Chapter 3-50 of Project Development Procedures Manual.

ALTERNATIVE 3
ATTACHMENT K
Sheet 4 of 6

PRELIMINARY PSR COST ESTIMATE SUMMARY

Dist-Co-Rt 12-ORA-57
KP(PM) 34.0/36.3 (21.13/22.56) +1.1
EA 0C120K
Prgm. Code 20.50.025.714

STRUCTURES ITEMS

	STRUCTURE No. 1	No. 2	No. 3	No. 4
Bridge Name	Tonner Canyon Road UC			
Structure Type	Cast in Place Box Girder			
Width M (out to out)	9.72			
Lengths M.	148.75			
Total Area Sq. M.	1,445.00			
Footing Type (Pile/Spread)				
Cost Per square M (include 10% mobilization and 20% contingency)	$1,646			
Total Cost for Structure	$2,400,000			

Soil Nail Walls (NB) $14,240,000

SUBTOTAL STRUCTURES ITEMS $16,640,000

Railroad Related Costs

SUBTOTAL RAILROAD ITEMS

TOTAL STRUCTURES ITEMS $16,640,000

USE $16,640,000

COMMENTS

Estimate Prepared By Elias Kurani Phone # Date 7/13/01

ALTERNATIVE 3
ATTACHMENT K
Sheet 5 of 6

(If appropriate, attach additional pages and backup)

PRELIMINARY PSR COST ESTIMATE SUMMARY

Dist-Co-Rt 12-ORA-57
KP(PM) 34.0/36.3 (21.13/22.56) +1.1
EA 0C120K
Prgm. Code 20.50.025.714

III. RIGHT OF WAY

	CURRENT VALUE	
A. Acquisition, including excess lands and damages to remainder(s): (Temp. Const. Easements)	$924,000	
B. Utility Relocation (State share)	$200,000	
C. RAP		
D. Clearance/Demolition		
E. Title and Escrow Fees	$2,500	
F. Developmental Fees (Env. Permit etc.)	$2,500	
TOTAL RIGHT OF WAY ITEMS		$1,129,000
USE:		**$1,129,000**

Anticipated Date of Right of Way Certification (Date to which Values are Escalated) 07/04

F. Construction Contract Work

Brief Description of Work

Right of Way Branch Cost Estimate for Work*

*This dollar amount is to be included in the Roadway and/or Structures Items of Work, as appropriate. Do not include in Right of Way Items.

COMMENTS:

Estimate Prepared By Harry Pantoja (Print Name) Phone # Date 06/29/01

(If appropriate, attach additional pages and backup)

ALTERNATIVE 3
ATTACHMENT K
Sheet 6 of 6

PRELIMINARY PSR COST ESTIMATE SUMMARY
ALTERNATIVE 4

Dist-Co-Rt 12-ORA-57

KP(PM) 34.0/36.3 (21.13/22.56) +1.1

EA 0C120K

Prgm. Code 20.50.025.714

PROJECT DESCRIPTION:

Limits: ORA-57 from Lambert Road to 1.1 Km North of County Line

Proposed Improvement (Scope) Construct climbing lane in the northbound direction

Alternatives: 4

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	$ 23,365,000
TOTAL STRUCTURE ITEMS	$ 18,290,000
SUBTOTAL CONSTRUCTION COSTS	$ 41,655,000
TOTAL RIGHT OF WAY ITEMS	$ 986,000
HAZARDOUS WAST MITIGATION COST	$ 4,200,000
ENVIRONMENTAL MITIGATION COST	$ 2,120,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	$ 48,961,000
USE	$ **48,961,000**

Reviewed by
District Program Advisor
Edward Kimsey for Saied Hashemi
Phone No: (949) 724-2929 Date: 8/22/2001

Reviewed by
District Program Manager
George Kopjak
Phone No: (949) 724-2233 Date: 8/27/01

Approved by
Project Manager
Pija Ansari
Phone No: (949) 440-4497 Date: 8/27/01

ALTERNATIVE 4
ATTACHMENT K
Sheet 1 of 6

PRELIMINARY PSR COST ESTIMATE SUMMARY

Dist-Co-Rt	12-ORA-57
KP(PM)	34.0/36.3 (21.13/22.56) +1.1
EA	0C120K
Prgm. Code	20.50.025.714

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Item Cost	Section Cost
Roadway Excavation	180,268	M3	$15	$2,704,020	
Imported Borrow	38,893	M3	$10	$388,930	
Clearing & Grubbing	1	LS	$200,000	$200,000	
				Subtotal Earthwork	$3,292,950

Section 2 Structural Section*					
Portland Concrete Cement Pavement (PCCP)	7,469	M3	$300	$2,240,690	
Ashpalt Concrete (Type B)	10,589	TONNE	$60	$635,318	
Asphalt Treatment Permeable Base (ATPB)	6,003	M3	$110	$660,279	
Class 2 Aggregate Base (AB)	20,018	M3	$50	$1,000,884	
Class 2 Aggregate Subbase (AS)	18,990	M3	$35	$664,640	
				Total Structural Items	$5,201,811

Section 3 Drainage					
Sand Backfill (Abandon Pipe)	900	M3	$80	$72,000	
Remove Inlet	46	EA	$960	$44,160	
Concrete Channel Removal	90	M3	$73	$6,570	
New Inlet	50	EA	$2,700	$135,000	
New Manhole	8	EA	$3,600	$28,800	
450 mm RCP	50	M	$185	$9,250	
600 mm RCP	2,500	M	$250	$625,000	
750 mm RCP	800	M	$260	$208,000	
900 mm RCP	300	M	$300	$90,000	
900 mm RCP (Channel Replacement)	250	M	$300	$75,000	
1050 mm RCP (Extension)	6	M	$350	$2,100	
1200 mm RCP	800	M	$360	$288,000	
				Total Drainage	$1,583,880

* Reference sketch showing typical pavement structural section elements of the roadway. Include (if available) T.I., R-Value and date tests were performed.

ALTERNATIVE 4
ATTACHMENT K

PRELIMINARY PSR COST ESTIMATE SUMMARY

Dist-Co-Rt 12-ORA-57
KP(PM) 34.0/36.3 (21.13/22.56) +1.1
EA 0C120K
Prgm. Code 20.50.025.714

Section 4 Speciality Items	Quantity	Unit	Unit Price	Item Cost	Section Cost
Retaining Walls (H=1200 mm)		M	$500		
Maint. Vehicle Pullouts at Var. Locations	5	EA	$10,000	$50,000	
Edge Drain	5,574	M	$20	$111,480	
Remove Concrete Barrier	2,382	M	$30	$71,460	
Concrete Barrier Type 60D	2,549	M	$130	$331,370	
Concrete Barrier Type 60GC	1,440	M	$300	$432,000	
Concrete Barrier Type 736	1,267	M	$260	$329,420	
Remove AC Dike	5,276	M	$15	$79,140	
AC Dike	5,276	M	$15	$79,140	
MBGR (Wood Post)	232	M	$130	$30,160	
Remove AC Pavement	33,811	M2	$20	$676,220	
Salvage MBGR		M	$25		
Landscape	1	LS	$75,000	$75,000	
Erosion Control	1	LS	$54,000	$54,000	
Slope Protection		LS			
R/E office		LS			
Water Pollution Control	1	LS	$550,000	$550,000	
Progress Schedule		LS			
			Total Specialty Items		$2,869,390
Section 5 Traffic Items					
Relocate Call Box	10	EA	$1,000	$10,000	
Relocate Lighting Standard	20	EA	$2,500	$50,000	
Temporary Lighting	1	LS	$20,000	$20,000	
Temporary Striping	1	LS	$70,000	$70,000	
Pavement Delineation	1	LS	$71,700	$71,700	
Overhead Sign Structures	3	LS	$6,500	$19,500	
Roadside Signs	1	LS	$5,200	$5,200	
Traffic Control Systems	1	LS	$40,000	$40,000	
Fiber Optic System Relocation	1	LS	$500,000	$500,000	
CCTV Relocation	1	LS	$30,000	$30,000	
Construction Signs	1	LS	$6,000	$6,000	
Temporary Crash Cushion	77	EA	$350	$26,950	
Temporary K-Rail	10,206	M	$45	$459,270	
Traffic Management Plan (TMP)					
Public Awareness Campaign	1	LS	$20,000	$20,000	
Traffic Management Team	1	LS	$24,000	$24,000	
Portable CMS	6	EA	$15,000	$90,000	
CHP / COZEEP (9 Hours, 200 nights)	1	LS	$198,000	$198,000	
FSP / Tow Truck Service	1	LS	$60,000	$60,000	
			Total Traffic Items		$1,700,620
			SUBTOTAL SECTIONS 1-5		**$12,322,848**

ALTERNATIVE 4
ATTACHMENT K

PRELIMINARY PSR COST ESTIMATE SUMMARY

Dist-Co-Rt 12-ORA-57
KP(PM) 34.0/36.3 (21.13/22.56) +1.1
EA 0C120K
Prgm. Code 20.50.025.714

				Item Cost	Section Cost
Section 6 Minor Items	$14,648,651 (Subtotal Sections 1-5)	X	10% (5% - 10%)	$1,464,865	
			Total Minor Items		$1,464,865
Section 7 Roadway Mobilization					
	$16,113,516 (Subtotal Sections 1-6)	X	10% 10%	$1,611,352	
			Total Roadway Mobilization		$1,611,352
Section 8 Roadway Additions					
Supplemental Work					
	$16,113,516 (Subtotal Sections 1-6)	X	10% (5% - 10%)	$1,611,352	
Contingencies					
	$16,113,516 (Subtotal Sections 1-6)	X	25% (**%)*	$4,028,379	
			Total Roadway Additions		$5,639,731
			TOTAL ROADWAY ITEMS (Total of sections 1-8)		$23,364,599
				USE	**$23,365,000**

Estimate Prepared By Hammer Sui Phone # (949) 724-2412 Date 8/21/01

Estimate Checked By Gary Slater Phone # (949) 724-7685 Date 8/21/01

*Use appropriate Percentage per Chapter 3-50 of Project Development Procedures Manual.

ALTERNATIVE 4
ATTACHMENT K
Sheet 4 of 6

PRELIMINARY PSR COST ESTIMATE SUMMARY

Dist-Co-Rt 12-ORA-57
KP(PM) 34.0/36.3 (21.13/22.56) +1.1
EA 0C120K
Prgm. Code 20.50.025.714

STRUCTURES ITEMS

	STRUCTURE No. 1	No. 2	No. 3	No. 4	
Bridge Name	Tonner Canyon Road UC				
Structure Type	Cast in Place Box Girder				
Width M (out to out)	9.72				
Lengths M.	148.75				
Total Area Sq. M.	1,445.00				
Footing Type (Pile/Spread)					
Cost Per square M (include 10% mobilization and 20% contingency)	$1,646				
Total Cost for Structure	$2,400,000				
Soil Nail Walls (NB)	$13,824,420				
MSE (SB)	$2,065,165				
				SUBTOTAL STRUCTURES ITEMS	$18,289,585
Railroad Related Costs					
				SUBTOTAL RAILROAD ITEMS	
				TOTAL STRUCTURES ITEMS	$18,289,585
				USE	$18,290,000

COMMENTS

Estimate Prepared By _____ Phone #_____ Date 7/13/01
Elias Kurani

(If appropriate, attach additional pages and backup)

PRELIMINARY PSR COST ESTIMATE SUMMARY

Dist-Co-Rt 12-ORA-57
KP(PM) 34.0/36.3 (21.13/22.56) +1.1
EA 0C120K
Prgm. Code 20.50.025.714

III. RIGHT OF WAY

	CURRENT VALUE	
A. Acquisition, including excess lands and damages to remainder(s): (Temp. Const. Easements)	$780,000	
B. Utility Relocation (State share)	$200,000	
C. RAP		
D. Clearance/Demolition		
E. Title and Escrow Fees	$6,000	
TOTAL RIGHT OF WAY ITEMS		$986,000
USE:		**$986,000**

Anticipated Date of Right of Way Certification (Date to which Values are Escalated) 07/04

F. Construction Contract Work

Brief Description of Work _____

Right of Way Branch Cost Estimate for Work*

*This dollar amount is to be included in the Roadway and/or Structures Items of Work, as appropriate. Do not include in Right of Way Items.

COMMENTS:

Estimate Prepared By Harry Pantoja (Print Name) Phone # _____ Date _____

(If appropriate, attach additional pages and backup)

ALTERNATIVE 4
ATTACHMENT K
Sheet 6 of 6

Attachment L

Preliminary Environmental Assessment Report

State of California Business Transportation and Housing Agency

Memorandum

To: GARY SLATER
DISTRICT 12
CHIEF PROJECT STUDY REPORT UNIT

Attn: Hammer Sui

Date: August 2, 2001

From: LESLIE MANDERSCHEID
DEPARTMENT OF TRANSPORTATION
DISTRICT 12
CHIEF, ENVIRONMENTAL PLANNING, BRANCH B

File: 12-ORA-57
KP 34.04/36.29
Climbing Lane
0C120K

Subject: Additional Environmental Planning Commentary Regarding the PSR

After reviewing the draft PSR and assessing our comments dated July 12, 2001 (attached), we request The Environmental Determination section of the be revised. The July 12, 2001 comments are still valid and need to be addressed. Furthermore, we have attached a revised copy of the Preliminary Environmental Assessment Report (PEAR).

Comments:

1. Include the following for the *Section 8 Environmental Determination*, which was formerly on page 11.

   The preliminary investigation of the proposed project focused on the direct impacts regarding a build alternative, typically from median of the highway to the top of the slope on either side. The potential for adverse impacts in this environmentally sensitive area would affect the viability of alternatives and involve extensive studies and time-consuming processes that could effect schedules. The anticipated documentation for CEQA and NEPA compliance would be an Environmental Impact Report/Environmental Impact Statement (EIR/EIS), with Caltrans as the Lead Agency for CEQA and Federal Highway Administration (FHWA) as the Lead Agency for NEPA. The EIR/EIS could require three years to prepare without extensive studies or time-consuming processes.

   The reviews for biological concerns, cultural resources, and hazardous materials identified potential issues that could affect cost and/or schedules. The environmental setting includes Endangered Species (Federal and State), Species of Concern, and would require a Biological Assessment and Wetland Delineation, incorporated into a Natural Environmental Study (NES). The NES could help identify mitigation for temporary and permanent impacts. Reasonable mitigation costs are generally considered to be up to 10% of the project cost. For this project, biological mitigation could include California Gnatcatcher exclusion, restricted construction scheduling, habitat enhancement, habitat restoration, or habitat replacement. Special considerations for the following processes have the potential to complicate, slow, and essentially lengthen the environmental process. For this project special considerations may entail; Section 7 Coordination, bird surveys, turtle surveys, wetland delineation,

coordination with several resource and/or regulatory agencies, possible NEPA 404 Coordination, and adherence to the Migratory Bird Treaty Act.

Time constraints for performing the surveys required in the NES are dictated by the regulatory agency and seasonal conditions. Surveys can require one to three years. Excluding the cost for surveys, permits, and monitoring of the mitigated areas; the biological issues could cost $4,756,000. There appears to be no cultural resources located within the project limits; however, the presence of fossil fuels could suggest paleontological resources. Hazardous waste may occur within the project limits. An Initial Site Assessment would report the findings and confirm or negate an added $4,200,000 for Hazardous Waste to the project cost making the mitigation costs $8,900,000.

The following table presents the anticipated permits required for this proposed project.

Regulation and Description		**Resource Agency**
Section 7	Endangered Species Act – Conserve End. Species	US Fish and Wildlife Service
Section 1601	Fish and Game Code – Streambed Alteration	CA Department of Fish and Game
Section 404	Clean Water Act – Dredge and Fill	US Army Corps. of Engineers
Section 401	Clean Water Act – Waste Discharge Certification	Santa Ana RWQCB
Section 402	Clean Water Act – NPDES, Stormwater	Santa Ana RWQCB
Section 10	Rivers and Harbors Act – Navigable Waters	US Army Corps. of Engineers

You may contact Shay Lynn Harrison of my staff at x 4460 or me at x 2122 with any concerns regarding these comments.

Attachments

c: Pija Ansari, Project Manager
Shay Lynn Harrison, Environmental Planner, Branch B

Preliminary Environmental Analysis Report: District 12

Project Information

District 12 County ORA Route 57 Kilometer Post (Post Mile) 34.04/36.29 (21.15/22.55) EA 0C120K

Project Title: SR-57 Northbound Climbing Lane

Project Manager Pija Ansari Phone # 440-4497

Project Engineer Hammer X. Sui Phone # 724-2436

Environmental Branch Chief Leslie Manderscheid Phone # 724-2122

Environmental Coordinator Shay Lynn Harrison Phone # 440-4460

Project Description

Purpose and Need: The proposed project contains the area, which has been identified as a cokepoint by OCTA. The State Route 57 is a major link between Orange County and Los Angles County and this particular segment contains traffic for the local area, which includes traffic from SR-90 and . At peak hour the current Level of service is "F." Although the area does not have an accident rate higher than the average State highway system, in which 46% of all accidents involved trucks.

The proposed project would increase the level of service, relieving a chokepoint area, as defined by OCTA. This may improve safety by removing some of the vehicles that are typically involved with 46% of the accidents. The increase in capacity would meet the current and future demand.

For more detail, please review the "Project Study Report: SR-57 Northbound Climbing Lane Widening."

Description of work: In all alternatives, this project proposes the construction of a climbing truck lane (northbound only) on SR 57 starting from Lambert Road north to the Orange County/L.A. County Line. Due to the variable terrain along this stretch of SR-57 as well as complicated retaining wall placement, grading and new retaining walls placement must occur. Dewatering and bridge work would occur to span the creek. Additional grading would be required to allow for ramp realignment. One alternative (Alternative 4) proposed widening on the Southbound side and changing the centerline, but all other work would be applicable. Further review for the description of work can be found within the corresponding Project Study Report.

Alternatives: Fourteen project concepts were considered, but only five were advanced for alternative consideration. However, for environmental scoping purposes, an overall core project area was selected and studied, since the proposed project concepts were not finalized to proposed alternatives. The five Alternatives could be further reviewed in the Project Study

Report for this proposed project. The Five alternatives are; No build, Minimum Build, Ultimate Build, Interim Build, and a southbound build.

Anticipated Environmental Approval

CEQA	NEPA
☐ Categorical/Statutory Exemption	☐ Categorical Exclusion
☐ Negative Declaration	☐ Finding of No Significant Impact
☒ Environmental Impact Report	☒ Environmental Impact Statement

The anticipated document for the proposed project is an EIR/EIS. The proposed project may result in substantial impacts to wildlife and plant life that may not be less than significant after mitigation. In addition, extensive soil contamination from past oil refining activities would require study and documentation. At minimum an EIR/EIS would require three years to prepare.

PSR Summary Statement (to be included with the Environmental Compliance Section)

The preliminary investigation of the proposed project focused on the direct impacts regarding a build alternative, typically from median of the highway to the top of the slope on either side. The potential for adverse impacts in this environmentally sensitive area would affect the viability of alternatives and involve extensive studies and time-consuming processes that could effect schedules. The anticipated documentation for CEQA and NEPA compliance would be an Environmental Impact Report/Environmental Impact Statement (EIR/EIS), with Caltrans as the Lead Agency for CEQA and Federal Highway Administration (FHWA) as the Lead Agency for NEPA. The EIR/EIS could require three years to prepare without extensive studies or time-consuming processes.

The reviews for biological concerns, cultural resources, and hazardous materials identified potential issues that could affect cost and/or schedules. The environmental setting includes Endangered Species (Federal and State), Species of Concern, and would require a Biological Assessment and Wetland Delineation, incorporated into a Natural Environmental Study (NES). The NES could help identify mitigation for temporary and permanent impacts. Reasonable mitigation costs are generally considered to be up to 10% of the project cost. For this project, biological mitigation could include California Gnatcatcher exclusion, restricted construction scheduling, habitat enhancement, habitat restoration, or habitat replacement. Special considerations for the following processes have the potential to complicate, slow, and essentially lengthen the environmental process. For this project special considerations may entail; Section 7 Coordination, bird surveys, turtle surveys, wetland delineation, coordination with several resource and/or regulatory agencies, possible NEPA 404 Coordination, and adherence to the Migratory Bird Treaty Act.

Time constraints for performing the surveys required in the NES are dictated by the regulatory agency and seasonal conditions. Surveys can require one to three years. Excluding the cost for surveys, permits, and monitoring of the mitigated areas; the biological issues could cost $4,756,000. There appears to be no cultural resources located within the project limits; however, the presence of fossil fuels could suggest paleontological resources. Hazardous waste may occur within the project limits. An Initial Site Assessment would report the findings

and confirm or negate an added $4,200,000 for Hazardous Waste to the project cost making the mitigation costs $8,900,000.

The following table presents the anticipated permits required for this proposed project.

Regulation and Description		Resource Agency
Section 7	Endangered Species Act – Conserve End. Species	US Fish and Wildlife Service
Section 1601	Fish and Game Code – Streambed Alteration	CA Department of Fish and Game
Section 404	Clean Water Act – Dredge and Fill	US Army Corps. of Engineers
Section 401	Clean Water Act – Waste Discharge Certification	Santa Ana RWQCB
Section 402	Clean Water Act – NPDES, Stormwater	Santa Ana RWQCB
Section 10	Rivers and Harbors Act – Navigable Waters	US Army Corps. of Engineers

Special Considerations

Special Considerations would fluctuate depending on the proposed project alternative. Until reasonable and feasible alternatives are identified. which meet the goals and objectives of the proposed project, Environmental Planning has reviewed the most likely "footprint" of the proposed project with focus on the direct impacts regarding a build alternative. In general, special considerations would incorporate any special processes and/or seasonal constraints that may effect project delivery and require unusual, exceptional, or extended environmental processes. As noted, the proposed project footprint overlays an environmentally sensitive area.

Biological monitoring would most likely be required in addition to limiting the construction window. Special Considerations for the most likely "footprint" for this project may entail Section 7 Coordination, bird surveys, turtle surveys, wetland delineation, coordination with several resource and/or regulatory agencies, and possible NEPA 404 Coordination. The previous items have the potential, in and of themselves; to complicate, slow essentially lengthen the environmental process. Oil wells are located in the corridor, which increase the potential for paleontological resources and the potential for hazardous materials to be present.

Anticipated Project Mitigation

Mitigation for temporary and permanent impacts to sensitive biological resources (wetlands, riparian vegetation, regulated plants and animals) would be required. Temporary bat roosts may be required for bats displaced by construction disturbance. Avoidance of California Gnatcatcher nests may be required from February 1 through August 31. Reasonable mitigation costs are generally considered to be up to 10% of the project cost. For this project, biological mitigation could include California Gnatcatcher exclusion, restricted construction scheduling, habitat enhancement, habitat restoration, or habitat replacement; the cost of which is estimated to be around $4,756,000.00 dollars, which excludes the cost for species surveys (by outside consultants), permit association fees, and mitigation monitoring. Hazardous waste mitigation could add an additional $4.2 million.

Disclaimer

This report is not an environmental document. Preliminary analysis, determinations, and estimates of mitigation costs are based on the project description provided in this report. The estimates and conclusions provided are approximate and are based on cursory analysis of probable effects related directly to the project impact. This report is to provide a preliminary

level of environmental analysis to supplement the Project Study Report. Changes in project scope, alternatives, or environmental laws, processes, or permit requirements after the completion of the PEAR would require additional evaluation later in the project development process.

Reviewed by:

Leslie Manderscheid
Environmental Branch Chief

Date: 8/2/01

N/A
Project Manager

Date: _____

Environmental Technical Reports or Studies Required

	Study/ Report	Document Text Only	Not Anticipated
Community Impact Assessment	☐	☒	☐
Farmland	☐	☐	☒
Section 4(f) Evaluation	☐	☐	☒
Visual Resources	☐	☒	☐
Water Quality	☒	☐	☐
Floodplain Evaluation and Hydrology	☐	☒	☐
Noise Study	☒	☐	☐
Air Quality Study	☒	☐	☐
Paleontology	☐	☒	☐
Cumulative Impacts	☐	☒	☐
Other: Geology, Traffic, Utilities	☒	☐	☐
Landuse, Mineral, Population & Housing, Public Services, and Recreation	☐	☒	☐

Cultural

ASR	☐	☐	☒
HSR	☐	☐	☒
HASR	☐	☐	☒
HPSR	☐	☐	☒
Section 106/SHPO	☐	☐	☒
Native American Coordination	☐	☒	☐
Other: Field visit 12/11/00	☐	☒	☐
Literature Review	☐	☐	☐

Hazardous Waste

ISA (Additional)	☒	☐	☐
PSA	☒	☐	☐
Other:	☐	☐	☐
	☐	☐	☐

Biological

Endangered Species (Federal)	☒	☐	☐
Endangered Species (State)	☒	☐	☐
Species of Concern (CNPS, USFWS, BLM, S, F)	☒	☐	☐
Biological Assessment (USWFS, NMFS, State)	☒	☐	☐
Wetlands	☒	☐	☐
Natural Environment Study	☒	☐	☐
Biological Assessment	☒	☐	☐
NEPA 404 Coordination	☐	☐	☒
Other: May require Sect. 7 consultation	☒	☐	☐
	☐	☐	☐
	☐	☐	☐

Permits

401 Permit Coordination	☒	☐	☐
404 Permit Coordination	☒	☐	☐
1601 Permit Coordination	☒	☐	☐
City/County Coastal Permit Coordination	☐	☐	☒
State Coastal Permit Coordination	☐	☐	☒
NPDES Coordination	☐	☒	☐
US Coast Guard (Section 10)	☐	☐	☒

Project Screening

An attached project location map indicates all known and/or potential hazardous waste, cultural (not archaeological) and biological sites identified. Also included are drainage and/or waterways.

1. Project Features: **New R/W?** No **Excavation?** Yes **Railroad Involvement?** No
Structure demolition/modification? Yes **Subsurface utility relocation?** Yes

2. Project Setting: SR-57 from Lambert Road and the LA/Orange county line climbs through the hills of Brea Canyon.

Rural or Urban: Urban land use with mixed residential, rural, and light industrial.

Current land uses: Transportation

Adjacent land uses: Residential, light industrial, rural

Existing landscaping /planting: Native vegetation and no planting

Discussion of Technical Review

Below are brief paragraphs focused on topics that would need environmental review including reasons for any absence of issues. The paragraphs follow the Checklist. Typical evaluation for the following issues would be written as separate documentation from the EIR/EIS, but only separate/formal technical studies would be included as attachments to the EIR/EIS.

Socio-economic and Community Effects: The project is not expected to have any effects on the local community or the economy which would require a separate technical study, because no right of way takes are required and the assumption is made that the communities agree that this is a transportation issue that can be resolved with a truck lane. Documentation for Community Involvement would occur through the environmental document, not a separate study.

Scoping meetings/Open Houses with the communities involved would give a better indication for level of documentation required. The communities surrounding the proposed project include residences, users of the high school, and the businesses, along either side of the freeway. If a Community Impact Assessment were requested, the formal technical report would require at least 3 months preparation.

Farmlands: The site visit and aerial photographs did not indicate the presence of farmland. The environmental document would site GIS data to conclude (if founded) that no impacts to farmland are expected, since farmland is not located near the proposed project limits. A separate technical study is not required.

4(f) Impacts: No impacts regarding Section 4(f) are anticipated due to a map review and literature search, which would have identified parks and recreation and historic properties (using National Register of Historic Places, California Register of Historic Resources, State Historic Landmarks, or Points of Historic Interest, and the state and local inventories). Section 4(f) issues would be addressed within the environmental document, since a formal technical study is not required.

Visual Effects: Visual resources shall be reviewed and documented within the environmental document, since substantial impacts are not anticipated; however, further coordination with a Landscape Architect is required.

Water Quality and Erosion: The site would be evaluated for potential water quality impacts associated with the project. Site access for construction must be included in any water quality analysis. A separate Water Quality Technical Report would be completed which would take approximately three months to prepare.

The project is covered under the Statewide NPDES Storm Water Permit (Order # 99-06-DWQ, NPDES # CAS 000003). A Storm Water Pollution Prevention Plan (SWPPP) would need to be prepared and implemented for this project. Preparation for a SWPPP generally requires 2 ½ months (30 days to write, 15 days to review, 15 days to re-submit, and 15 day for a final review). Note that specialized Best Management Practices (BMP's) are required for work within or around a creek.

Additional constraints could include slurry disposal, concrete waste management, and a permit for Section 10 of the Rivers and Harbors Act for additions to the bridge above Tonner Canyon Creek.

Floodplain: A floodplain evaluation report would be prepared to analyze the effects of the alterations to the bridge on the 100-year floodplain. Only a qualified hydraulic engineer can make a determination regarding floodplain issues, but a review the Flood Hazard Maps from ESRI/FEMA indicate a low impact to the 100-year floodplain.

Air and Noise: Air quality and noise impacts should be assessed by Air Quality and Noise Quality Engineers to ensure compliance with the appropriate laws. Work and time estimates should be made by Environmental Engineering.

Paleontology: The presence of oil increases the likelihood of paleontological resources. Further study would be necessary to determine impacts regarding paleontology. A formal technical study is not anticipated; however, preparation for inclusion into the environmental documentation would require three months.

Cumulative Impacts: Cumulative Impacts would be incorporated into the environmental documentation; therefore, a separate technical study is not anticipated.

Geology: Geology of the project area is best understood through the preparation of a formal technical study.

Traffic: Traffic of the project area is best understood through the preparation of a separate technical study.

Utilities: Utilities within the project area are best understood through the preparation of a formal technical study.

Landuse, Mineral, Population & Housing, Public Services, and Recreation: These topics would be reviewed and incorporated into the environmental documentation. Separate technical studies are not anticipated.

Cultural Resources: Archaeology: A field inspection occurred on 12/11/00 by Philippe Lapin the District Archaeologist. There were no cultural materials identified during this field survey conducted from Lambert Road to Tonner Creek Bridge (KP 34/35). Since there appears to be no cultural resources located within the project, this project would have "no affect" on historic properties contingent upon the following conditions.

1. Additional review of the proposed project to ensure that the alternatives are within the proposed core project area.
2. If cultural remains and/or human remains are discovered in or adjacent to Caltrans Right of Way during excavation and/or construction activities, all earth moving activity within and around the site area must stop and the Caltrans Archaeologist notified immediately.

The proposed project appears to comply with the laws and regulation regarding cultural resources, any changes in the project scope, alternatives, or work activity must be presented to the environmental coordinator, so that additional cultural reviews can occur as appropriate.

Historic: The state route structures were built in 1971; therefore, impacts to historic properties are not anticipated.

Native American Coordination: Further Native American Coordination is not anticipated. A letter was sent to the Native American Heritage Commission in regards to the proposed project. The letter would be documented within the environmental documentation and a separate technical study is not anticipated.

Hazardous Waste/Materials: A detailed subsurface site investigation is anticipated to be conducted in early Summer of 2001. The purpose of this investigation is to evaluate and assess the possible impacts of natural petroleum hydrocarbons to the subsurface soil materials along the existing cut slope located with in the project area between Lambert Road and Tonner Canyon. The result of this investigation will be incorporated into the environmental document. Therefore, it is anticipated that this study would be finalized in the PA/ED phase. Work and time estimates should be made by Environmental Engineering.

Biological Resources: This project would affect sensitive biological resources. This project would lower the value and quantity of native plants and impact all sensitive wildlife associated with the plant communities, and have impacts to Waters of the United States, therefore, the biologist concluded that this project may have significant impacts to sensitive biological resources and would require mitigation and coordination. In addition the following coordination would occur: biological surveys in which further review is necessary to obtain accurate work and time estimates; the Natural Diversity Data Base (NDDB) indicated the presence of the California Gnatcatcher, with in the project limits, which has threatened status under federal law and is a species of concern status under State law; and future protocol surveys would be required to determine the presence/absence of this species, which may have to be consulted out. These surveys could include:

- In addition, formal consultation with California Fish and Game on the Southwest Pond Turtle may be required; thus, a future protocol survey must be completed to determine the presence of this species within the project limits;
- The existing bridge should be inspected for the presence/absence of bats, nesting swallows and other protected species. Bird and bat surveys should be completed in the spring/summer season.

The NDDB does not indicate any other known sensitive biological resources in this location. Furthermore, any work, including soil borings, between the months of February to August should be coordinated with the District Biologist to ensure compliance with the environmental laws regarding the sensitive flora and fauna.

Wetlands: Executive Order 11990 requires an avoidance alternative analysis for wetland impacts unless there is no practicable alternative available. Impacts to waters of the U.S. and wetlands from the project and any temporary access roads would need to be quantified through a Wetland Delineation technical study.

Invasive Pest Plant Species: Executive Order 13112 requires that any federal action may not cause or promote the spread or introduction of invasive species. The proposed project may introduce invasive species through landscaping; therefore, measures to ensure this project complies with EO 13112 would be taken.

Right-of-Way Relocation or Staging Areas: No new Right-of-Way is indicated for this project. Material sites and disposal sites are assumed, but not identified. These areas, which must be identified prior to initiating environmental studies, would require complete environmental evaluation as part of this project.

Mitigation: Mitigation for temporary and permanent impacts to sensitive biological resources (wetlands, riparian vegetation, regulated plants and animals) would be required. Temporary bat roosts may be required for bats displaced by construction disturbance. Avoidance of California Gnatcatcher nests may be required from February 1 through August 31. Reasonable mitigation costs are generally considered to be up to 10% of the project cost. For this project, biological mitigation could include California Gnatcatcher exclusion, restricted construction scheduling, habitat enhancement, habitat restoration, or habitat replacement; the cost of which is estimated to be around $4,756,000.00 dollars, which excludes the cost for species surveys (by outside consultants), permit association fees, and mitigation monitoring. Hazardous waste mitigation could add an additional $4.2 million.

Permits: The proposed project would require the permits identified below and additional permits for the material site and disposal site may be required.

- Coordination with California Department of Fish and Game for a 1601 permit regarding streambed alternation
- Coordination with US Army Corps. of Engineers for Section 404 of the Nationwide Permit.
- Coordination with the Regional Water Quality Control Board (RWQCB) for a section 401 certification/waiver regarding the activities which involve natural drainages.
- Santa Ana Regional Water Quality Control Board (SARWQCB) for coverage with the Caltrans NPDES Permit.
- Possible permit for Section 10 of the Rivers and Harbors Act.

Coastal Zone: This project is neither within state coastal jurisdiction nor within state appealable jurisdiction.

List of Preparers

Hazardous Waste Review by: Mitch Khalilifar Date 3/20/01
Biological Review by: Kedest Ketsela Date 2/20/01
Cultural Review by: Philippe Lapin Date 1/2/01 & 5/9/01

Attachment A - PEAR Mitigation and Compliance Cost Estimate*

A reporting mechanism for specific mitigation as required by the CTC (estimates may be inappropriate if utilized for other purposes)

Dist.-Co.-Rte.-KP(PM): 12-ORA-57-34.04/36.29 (21.15/22.55) **EA:** 0C120K

Project Description: This project proposes the construction of a climbing truck lane (northbound only) on SR 57 starting from Lambert Road north to the Orange County/L.A. County Line. Due to the variable terrain along this stretch of SR-57 as well as complicated retaining wall placement.

Person completing form/Dist. Branch: Shay Lynn Harrison, Environmental Planning, Branch B

Project Manager: Pija Ansari **Phone number**: 440-4497

Date: April 12, 2001

	Mitigation			Compliance
	Project Feature[1]	Enviro. Obligation[2]	Statutory Require.[3]	Permit & Agreement[4]
Fish & Game 1601 Agreement				✓
Coastal Development Permit				
State Lands Agreement				
NPDES Permit				✓
COE 404 Permit- Nationwide				✓
COE 404 Permit- Individual				
COE Section 10 Permit				
COE Section 9 Permit				
Other:				
Noise attenuation				
Special landscaping				
Archaeological				
Biological		4700		
Historical				
Scenic resources				
Wetland/riparian		56		
Other: Hazardous Waste (4.2m)				
TOTAL (Enter zeros if no cost)	0	$4,756	0	TBD

- Costs are to be reported in $1,000s.
- Costs are to include all costs to complete the commitment including: capital outlay and staff support; cost of right-of-way or easements; long-term monitoring and reporting, and; any follow-up maintenance.
- **A copy of the completed form shall be included in the project approval report (Project Report/PSSR), and a copy sent to Headquarters Environmental Program, attention: John Hebner**.

[1] Mitigation Caltrans would normally do if not required by a permit or environmental agreement.
[2] Mitigation Caltrans would not normally do but is required by conditions of a permit or environmental agreement.
[3] Mitigation Caltrans would not normally do and is not required by a permit or Enviro. agreement but is required by a law.
[4] Non-mitigation Caltrans would not normally do but is required by conditions of a permit or agreement.

Attachment M

Right of Way Data Sheet

Note: Alternative 2A is referred as Alternative 3
in the report and plan sheets

To: Gary Slater, Chief
Project Studies Branch

Attn: Hammer Sui

Date: June 29, 2001
Dist: 12 Co: ORA Route 57NB
KP: 34.04/36.29 (PM:21.15/22.55)
E.A.: 0C120K – **ALTERNATIVE 1**
Project Description: Congestion Relief – 57NB from Lambert Road to Orange County/Los Angeles County Line.

From: YOSHIKO HENSLEE, Chief
Right of Way Capital
Coordinator

Subject: CURRENT ESTIMATED RIGHT OF WAY COSTS

We have completed an estimate of the right of way costs for the above referenced project based on maps we received from you on May 16, 2001, and the following assumptions and limiting conditions:

[ ] 1. The mapping did not provide sufficient detail to determine the limits of the right of way required.

[ ] 2. The transportation facilities have not been sufficiently designed so our estimator could determine the damage to any of the remainder parcels affected by the project.

[ ] 3. Additional right of way requirements are anticipated, but are not defined due to the preliminary nature of the early design requirements.

[x] 4. As per maps provided.

[ ] 5. We have determined there are no right of way functional involvement's in the proposed project at this time, as designed.

Right of Way Lead Time will require a minimum of 18 months after we begin Regular right of way (PYPSCAN node No. 224), necessary environmental clearance has been obtained, and freeway agreements have been approved. From the date of receipt of final right of way requirements (PYPSCAN node No. 265), we will require a minimum of 14 months prior to the date of certification of the project.

Yoshiko Henslee
Right of Way Capital Coordinator
YOSHIKO HENSLEE, Chief, R/W P&M

Attachments:

[x] Right of Way Data Sheet – Page one (always required)
[x] Right of Way Data Sheet – All Pages (required when interest in real property is being acquired)
[X] Utility Information Sheet
[ ] Railroad Information Sheet

RIGHT OF WAY DATA SHEET

To: Gary Slater, Chief
Project Studies Branch

Attn: Hammer Sui

DATE: June 29, 2001

Dist 12 Co ORA Rte 57NB
KP: 34.04/36.29 (PM: 21.15/22.55)
EA 0C120K
Project Description: Congestion Relief – 57NB From Lambert Road to Orange County/Los Angeles County line.

Subject: RIGHT OF WAY DATA - Alternative No. **Alternative 1**

1. Right of Way Cost Estimate:

	Current Value (Future Use)	Annual Escalation Rate	Escalated Value
A. Acquisition, including Excess Lands, Damages And Goodwill	$530,000.00	5%	$640,000.00
B. Utility Relocation (State Share)	$200,000.00	5%	$240,000.00
C. Relocation Assistance	$ 0.00	%	$ 0.00
D. Clearance / Demolition	$ 0.00	%	$ 0.00
E. Title and Escrow Fees	$ 1,200.00	%	$ 1,200.00
F. Developmental Fees (Env. Perm etc)	$ 2,500.00	%	$ 2,500.00
G. Total Current Value (Future Use)	$733,700.00	%	$
H. **TOTAL ESCALATED VALUE**			$883,700.00
I. Construction Contract Work	$0.00		
2. Anticipated Date of Right of Way Certification	07/04		

3. Parcel Data:

Type		Dual / Appr
X		
A	3	
B	2	*1
C		
D		
E	XXXX	
F	XXXX	

Total 5

Utilities	
U4 -1	0
-2	0
-3	3
-4	0
U5 -7	3
-8	0
-9	3

RR Involvement's	
None	X
C&M Agreement	
Svc Contract	
Lic / RR Clauses	

Misc R/W Work	
RAP Displ	N/A
Clear / Demo	N/A
Const Permits	N/A
Condemnation	N/A

Areas: Right of Way 14,023m2 No. Excess Parcels 0 Excess 0
Enter PMCS Screens 06/26/01 by CYNTHIA HALL
enter AGRE Screen (Railroad data only) _____ by _____

TWO (2) OIL WELLS AND ONE (1) PRODUCTS TESTING STATION M&E APPRAISAL REPORT.

4. Are there any major items of construction contract work? Yes _____ No X (If yes, explain).

5. Provide a general description of the right of way and excess lands required (zoning, use, major improvements, critical or sensitive parcels, etc.). No right of way required.

- ***PERMANENT STRUCTURE EASEMENTS AND TEMPORARY CONSTRUCTION EASEMENTS (TCE) WILL BE ACQUIRED FROM PRODUCTIVE NUEVO ENERGY OIL COMPANY (OIL) FIELDS AND ENVIRONMENTALLY SENSITIVE TONNER CREEK PROPERTY FROM THE COUNTY AND/OR CITY. NUEVO ENERGY COMPANY PRIVATE PROPERTY IS CURRENTLY A PRODUCTIVE OIL FIELD THAT CONTAINS NUMEROUS ACTIVE OIL WELLS WITH EXTENSIVE ABOVE GROUND PIPE FACILITIES RUNNING THROUGHOUT AND NEAR STATE ROUTE 57 STRUCTURE. THIS RIGHT OF WAY ESTIMATE PROVIDES FOR RE-CAPPING AND RE-INTRODUCING TWO (2) OIL WELLS AND ONE (1) PRODUCTS TESTING STATION FOR 18 MONTHS FOR STRUCTURE WIDENING/100-150 TON CRANE OPERATIONS. IT IS ANTICIPATED THAT CONSTRUCTION M&E (IE) 100-150 TON CRANE & 10 TON EXCAVATOR WILL BE SITUATED WITHIN AN OIL FIELD ACCESS ROAD AND TONER CANYON CREEK BED AREA. DURING CONSTRUCTION, OIL FIELD ACCESS FOR CONSTRUCTION WILL PROBABLY BE FROM NUEVO ENERGY COMPANY ACCESS GATE AND ROAD NEAR THE STATE ROUTE 57 STRUCTURE.***

- ***DAMAGES: THE RE-CAPPING AND RE-INTRODUCTION OF TWO (2) OIL WELLS HAS THE POTENTIAL OF DECREASING THE PRODUCTION RATE IN THE AFTER CONDITION. THIS POTENTIAL LIABILITY HAS NOT BEEN ACCOUNTED FOR IN THIS RIGHT OF WAY DATA SHEET. THERE ARE POTENTIAL UTILITY INVOLVEMENTS CONCERNING AERIAL CONVERSION OF SOUTHERN CALIFORNIA EDISON'S 12KV DISTRIBUTION AND PACIFIC BELL'S FIBER OPTIC TO CLEAR STRUCTURE WIDENING AND CRANE OPERATIONS.***

6. Is there an effect on assessed valuation? Yes _____ Not Significant X
No _____ (If yes, explain).

7. Are utility facilities or rights of way affected? Yes X No _____ (If yes, attach Utility Information Sheet *Exhibit 01-01-05*).

8. Are Railroad facilities or rights of way affected? Yes _____ No X (If yes, attach Railroad Information Sheet *Exhibit 01-01-06*).

9. Were any previously unidentified sites with hazardous waste and / or material found? Yes _____
None Evident X (If yes, attach memorandum per Procedural Handbook *Volume 1, Section 101.011)*

10. Are RAP displacements required? Yes _____ No X (If yes, provide the following information)

No. of single family _____ No. of business/nonprofit _____

No. of multi-family _____ No. of farms _____

Based on Draft/Final Relocation Impact Statement/Study dated _____ it is anticipated that sufficient replacement housing (will / will not) be available without Last Resort Housing.

11. Are there material borrow and / or disposal site required? Yes _____ No X (If yes, explain).

12. Are there potential relinquishments and/or abandonments? Yes _____ No X (If yes, explain)

13. Are there any existing and/or potential Airspace Sites? Yes _____ No X (If yes, explain)

14. Indicate the anticipated Right of Way schedule and lead time requirements. (Discuss if District proposes less than PMCS lead time and / or if significant pressures for project advancement are anticipated).

PMCS calculated REG R/W lead time (from parcel maps from R/W Engineering to R/W Appraisals) months 18 .

PMCS calculated FINAL R/W lead time (from final maps to R/W to project certification) 14 months.

15. Is it anticipated that all Right of Way work will be performed by CALTRANS staff?
Yes X No (If no discuss).

Evaluation Prepared By:

Right of Way: Name Harry Pantoja Date 6.29.01

Railroad: Name Kathy Anderson for Ken Moore Date 6-29-01

Utilities: Name Laney Bocanegra Date 6/29/01

Recommended for Approval:

Yoshiko Henslee
Right of Way Capital Coordinator
YOSHIKO HENSLEE, Chief R/W P&M

I have personally reviewed this Right of Way Data Sheet and all supporting information. It is my opinion that the probable Highest and Best Use, estimated values, escalation rates, and assumptions are reasonable and proper subject to the limiting conditions set forth, and find this Data Sheet complete and current.

Kathy Anderson
KATHY J. ANDERSON, Chief
Right of Way Project Coordinator
Irvine Office
Southern Right of Way Region

6-29-01
Date

cc: Program Manager
Project Manager

UTILITY INFORMATION SHEET

1. Name of utility companies involved in project:

- Nuevo Energy
- Torch Energy
- Southern California Gas
- Southern California Edison (SCE)
- Pacific Bell
- Adelphia Communications

2. Types of facilities and agreements required:

- Notice to owner to pothole. SCE with utility agreement.
- Notice to owner to relocate. SCE and Pacific Bell with utility agreement.

3. Additional information concerning utility involvement's on this project:

- An SCE 12kv aerial distribution line and Pacific Bell aerial communications line may require conversion to underground to clear Caltrans' construction and necessary M&E operations and will require 14-18 months time from conflict letter to owner to actual physical relocation.

4. PMCS Input Information

Total estimated cost of State's obligation for Utility relocation on this project:

Unescalated: $200,000.00

Escalated : $240,000.00

Utility Involvements

U4-1	0	U5-7	3
-2	0	-8	0
-3	3	-9	3
-4	0		

Prepared By:

Nancy Bocanegra

Right of Way Utility Coordinator

6/29/01

Date

R/W ESTIMATOR'S INFORMATION SHEET FOR DEVELOPMENTAL FEES

ORGANIZATION PERMIT REQUESTED FROM:	TYPE OF PERMIT/SERVICE REQUESTED	DOLLAR AMOUNT OF PERMIT
Regional Water	**1601**	**$1,500.00**
Fish and Game	**401**	**$1,000.00**
		$
		$
		$
		$

TOTAL NUMBER OF PERMITS: **2**

TOTAL DOLLAR AMOUNT OF PERMITS: **$2,500.00**

Prepared By: Harry Pantoja

R/W ESTIMATOR

6.29.01

DATE

To: Gary Slater, Chief
Project Studies Branch

Attn: Hammer Sui

Date: June 29, 2001
Dist: 12 Co: ORA Route 57NB
KP: 34.04/36.29 (PM:21.15/22.55)
E.A.: 0C120K – **ALTERNATIVE 2A**
Project Description: Congestion Relief – 57NB from Lambert Road to Orange County/Los Angeles County Line.

From: YOSHIKO HENSLEE, Chief
Right of Way Capital
Coordinator

Subject: CURRENT ESTIMATED RIGHT OF WAY COSTS

We have completed an estimate of the right of way costs for the above referenced project based on maps we received from you on May 16, 2001, and the following assumptions and limiting conditions:

[ ] 1. The mapping did not provide sufficient detail to determine the limits of the right of way required.

[ ] 2. The transportation facilities have not been sufficiently designed so our estimator could determine the damage to any of the remainder parcels affected by the project.

[ ] 3. Additional right of way requirements are anticipated, but are not defined due to the preliminary nature of the early design requirements.

[x] 4. As per maps provided.

[ ] 5. We have determined there are no right of way functional involvement's in the proposed project at this time, as designed.

Right of Way Lead Time will require a minimum of 18 months after we begin Regular right of way (PYPSCAN node No. 224), necessary environmental clearance has been obtained, and freeway agreements have been approved. From the date of receipt of final right of way requirements (PYPSCAN node No. 265), we will require a minimum of 14 months prior to the date of certification of the project.

Yoshiko Henslee
Right of Way Capital Coordinator
YOSHIKO HENSLEE, Chief, R/W P&M

Attachments:

[x] Right of Way Data Sheet – Page one (always required)
[x] Right of Way Data Sheet – All Pages (required when interest in real property is being acquired)
[x] Utility Information Sheet
[ ] Railroad Information Sheet

To: Gary Slater, Chief
Project Studies Branch

Attn: Hammer Sui

Date: August 2, 2001
Dist: 12 Co: ORA Route 57NB
KP: 34.04/36.29 (PM:21.15/22.55)
E.A.: 0C120K – **ALTERNATIVE 2**
Project Description: To design a climbing in the Northbound direction of SR-57 Freeway from Lambert Road to approximately 1 km north Of Orange County/Los Angeles County line.

From: YOSHIKO HENSLEE, Chief
Right of Way Capital
Coordinator

Subject: CURRENT ESTIMATED RIGHT OF WAY COSTS

We have completed an estimate of the right of way costs for the above referenced project based on maps we received from you on July 11, 2001, and the following assumptions and limiting conditions:

[ ] 1. The mapping did not provide sufficient detail to determine the limits of the right of way required.

[ ] 2. The transportation facilities have not been sufficiently designed so our estimator could determine the damage to any of the remainder parcels affected by the project.

[ ] 3. Additional right of way requirements are anticipated, but are not defined due to the preliminary nature of the early design requirements.

[x] 4. As per maps provided.

[ ] 5. We have determined there are no right of way functional involvement's in the proposed project at this time, as designed.

Right of Way Lead Time will require a minimum of 18 months after we begin Regular right of way (PYPSCAN node No. 224), necessary environmental clearance has been obtained, and freeway agreements have been approved. From the date of receipt of final right of way requirements (PYPSCAN node No. 265), we will require a minimum of 14 months prior to the date of certification of the project.

FOR

Right of Way Capital Coordinator
YOSHIKO HENSLEE, Chief, R/W P&M

Attachments:

[x] Right of Way Data Sheet – Page one (always required)
[x] Right of Way Data Sheet – All Pages (required when interest in real property is being acquired)
[X] Utility Information Sheet
[ ] Railroad Information Sheet

RIGHT OF WAY DATA SHEET

To: Gary Slater, Chief
Project Studies Branch

Attn: Hammer Sui

DATE: August 2, 2001

Dist 12 Co ORA Rte 57NB
KP: 34.04/36.29 [PM: 21.15/22.55]
EA 0C120K

Project Description: To design a climbing in the Northbound direction of SR-57 Freeway from Lambert Road to approximately 1 km north Of Orange County/Los Angeles County line.

Subject: RIGHT OF WAY DATA **-ALTERNATIVE 2 [Sta.216+70 to Sta.253+76, Layout Sheet L-1 to L-12]**

1. Right of Way Cost Estimate:

	Current Value (Future Use)	Annual Escalation Rate	Escalated Value
A. Acquisition, including Excess Lands, Damages And Goodwill	$780,000.00	5%	$ 900,000.00
B. Utility Relocation (State Share)	$200,000.00	%	$ 240,000.00
C. Relocation Assistance	$ 0.00	%	$ 0.00
D. Clearance / Demolition	$ 0.00	%	$ 0.00
E. Title and Escrow Fees	$ 2,500.00	%	$ 2,500.00
F. Developmental Fees (Env. Perm etc)	$ 3,500.00	%	$ 3,500.00
G. Total Current Value (Future Use)	$986,000.00	%	$
H. **TOTAL ESCALATED VALUE**			$1,146,000.00
I. Construction Contract Work	$0.00		
2. Anticipated Date of Right of Way Certification	07/04		

3. Parcel Data:

	Type	Dual / Appr
X		
A	1	
B	3	
C	*	
D		
E	XXXX	
F	XXXX	

Total 4

Utilities	
U4 -1	0
-2	0
-3	3
-4	0
U5 -7	3
-8	0
-9	3

RR Involvement's	
None	X
C&M Agreement	
Svc Contract	
Lic / RR Clauses	

Misc R/W Work	
RAP Displ	N/A
Clear / Demo	N/A
Const Permits	N/A
Condemnation	N/A

Areas: Right of Way 14,329 sq. meters No. Excess Parcels 0 Excess 0
Enter PMCS Screens 07/26/01 by CYNTHIA HALL
enter AGRE Screen (Railroad data only) _____ by _____

TWO(2) OIL WELLS AND ONE (1) PRODUCTS TESTING STATION, M&E APPRAISAL REPORT.

ALTERNATIVE 4

4. Are there any major items of construction contract work? Yes _____ No X _____
(If yes, explain).

5. Provide a general description of the right of way and excess lands required (zoning, use, major improvements, critical or sensitive parcels, etc.). No right of way required. _____

- ***PERMANENT STRUCTURE EASEMENTS,FOOTING EASEMENTS AND TEMPORARY CONSTRUCTION EASEMENTS (TCE) WILL BE ACQUIRED FROM PRODUCTIVE NUEVO ENERGY OIL COMPANY (OIL) FIELDS AND ENVIRONMENTALLY SENSITIVE TONNER CREEK PROPERTY FROM THE COUNTY AND/OR CITY. NUEVO ENERGY COMPANY PRIVATE PROPERTY IS CURRENTLY A PRODUCTIVE OIL FIELD THAT CONTAINS NUMEROUS ACTIVE OIL WELLS WITH EXTENSIVE ABOVE GROUND PIPE FACILITIES RUNNING THROUGHOUT AND NEAR STATE ROUTE 57 STRUCTURE. THIS RIGHT OF WAY ESTIMATE PROVIDES FOR RE-CAPPING AND RE-INTRODUCING TWO (2) OIL WELLS AND ONE (1) PRODUCTS TESTING STATION FOR 18 MONTHS FOR STRUCTURE WIDENING/ CRANE AND EXCAVATION OPERATIONS. IT IS ANTICIPATED THAT CONSTRUCTION M&E (IE) 100-150 TON CRANE & 10 TON EXCAVATOR WILL BE SITUATED WITHIN AN OIL FIELD ACCESS ROAD AND TONER CANYON CREEK BED AREA. DURING CONSTRUCTION, OIL FIELD ACCESS FOR CONSTRUCTION WILL PROBABLY BE FROM NUEVO ENERGY COMPANY ACCESS GATE AND ROAD NEAR THE STATE ROUTE 57 STRUCTURE.DAMAGES: THE RE-CAPPING AND RE-INTRODUCTION OF TWO (2) OIL WELLS HAS THE POTENTIAL OF CAUSING THE DECREASE OF THE PRODUCTION RATE IN THE AFTER CONDITION. THIS POTENTIAL LIABILITY HAS NOT BEEN ACCOUNTED FOR IN THIS RIGHT OF WAY DATA SHEET. THERE ARE POTENTIAL UTILITY INVOLVEMENTS CONCERNING AERIAL CONVERSION OF SOUTHERN CALIFORNIA EDISON'S 12KV DISTRIBUTION POWER LINE AND PACIFIC BELL'S FIBER OPTIC LINE TO UNDERGROUND TO CLEAR STRUCTURE WIDENING AND CRANE OPERATIONS.***

6. Is there an effect on assessed valuation? Yes _____ Not Significant _____
No X (If yes, explain).

7. Are utility facilities or rights of way affected? Yes X No _____ (If yes, attach Utility Information Sheet *Exhibit 01-01-05*).

8. Are Railroad facilities or rights of way affected? Yes _____ No X (If yes, attach Railroad Information Sheet *Exhibit 01-01-06*).

9. Were any previously unidentified sites with hazardous waste and / or material found? Yes _____
None Evident X (If yes, attach memorandum per Procedural Handbook *Volume 1, Section 101.011)*

10. Are RAP displacements required? Yes _____ No X (If yes, provide the following information)

No. of single family _____ No. of business/nonprofit _____

No. of multi-family _____ No. of farms _____

Based on Draft/Final Relocation Impact Statement/Study dated _____ it is anticipated that sufficient replacement housing (will / will not) be available without Last Resort Housing.

11. Are there material borrow and / or disposal site required? Yes _____ No X (If yes, explain).

12. Are there potential relinquishments and/or abandonments? Yes _____ No X (If yes, explain)

13. Are there any existing and/or potential Airspace Sites? Yes _____ No X (If yes, explain)

14. Indicate the anticipated Right of Way schedule and lead time requirements. (Discuss if District proposes less than PMCS lead time and / or if significant pressures for project advancement are anticipated).

PMCS calculated REG R/W lead time (from parcel maps from R/W Engineering to R/W Appraisals) months. 18

PMCS calculated FINAL R/W lead time (from final maps to R/W to project certification) 14 months.

ALTERNATIVE 2

15. Is it anticipated that all Right of Way work will be performed by CALTRANS staff?
Yes X No (If no discuss).

Evaluation Prepared By:

Right of Way: Name Harry Pantoja Date 8.3.01

Railroad: Name Kathy Anderson for Ken Moore Date 8-6-01

Utilities: Name Nancy Bocanegra Date 8/6/01

Recommended for Approval:

for _____
Right of Way Capital Coordinator
YOSHIKO HENSLEE, Chief R/W P&M

I have personally reviewed this Right of Way Data Sheet and all supporting information. It is my opinion that the probable Highest and Best Use, estimated values, escalation rates, and assumptions are reasonable and proper subject to the limiting conditions set forth, and find this Data Sheet complete and current.

_____
KATHY J. ANDERSON, Chief
Right of Way Project Coordinator
Irvine Office
Southern Right of Way Region

August 6, 2001
Date

cc: Program Manager
Project Manager

ALTERNATIVE 2

UTILITY INFORMATION SHEET

1. Name of utility companies involved in project:

- Nuevo Energy
- Torch Energy
- Southern California Gas
- Southern California Edison (SCE)
- Pacific Bell
- Adelphia Communications

2. Types of facilities and agreements required:

- Notice to owner to pothole. SCE with utility agreement.
- Notice to owner to relocate. SCE and Pacific Bell with utility agreement.

3. Additional information concerning utility involvement's on this project:

- An SCE 12kv aerial distribution line and Pacific Bell aerial communications line may require conversion to underground to clear Caltrans' construction and necessary M&E operations and will require 14-18 months time from conflict letter to owner to actual physical relocation.

4. Additional information concerning utility involvement's on this project:

5. PMCS Input Information

Total estimated cost of State's obligation for Utility relocation on this project:

Unescalated: $200,000.00

Escalated : $240,000.00

Utility Involvements

U4-1	0	U5-7	3
-2	0	-8	0
-3	3	-9	3
-4	0		

Prepared By:

Nancy Bocanegra

Right of Way Utility Coordinator

8/6/01

Date

ALTERNATIVE 2

R/W' ESTIMATOR'S INFORMATION SHEET FOR DEVELOPMENTAL FEES

ORGANIZATION PERMIT REQUESTED FROM:	TYPE OF PERMIT/SERVICE REQUESTED	DOLLAR AMOUNT OF PERMIT
California Dept. of Fish and Game	Section 1601	$1,500.00
California Regional Quality Control Board	Section 401	$1,000.00
Orange County Public Facilities & Resource	Permit /Permit	$1,000.00
		$
		$
		$

TOTAL NUMBER OF PERMITS: 3

TOTAL DOLLAR AMOUNT OF PERMITS: $3,500.00

Prepared By: Harry Pontoyo

R/W ESTIMATOR

8.3.01

DATE

RIGHT OF WAY DATA SHEET

To: Gary Slater, Chief
Project Studies Branch

Attn: Hammer Sui

DATE: June 29, 2001

Dist 12 Co ORA Rte 57NB
KP: 34.04/36.29 (PM: 21.15/22.55)
EA 0C120K

Project Description: Congestion Relief – 57NB From Lambert Road to Orange County/Los Angeles County line.

Subject: RIGHT OF WAY DATA - Alternative No. **Alternative 2A**

1. Right of Way Cost Estimate:

	Current Value (Future Use)	Annual Escalation Rate	Escalated Value
A. Acquisition, including Excess Lands, Damages And Goodwill	$924,000.00	5%	$1,124,000.00
B. Utility Relocation (State Share)	$200,000.00	5%	$ 240,000.00
C. Relocation Assistance	$ 0.00	%	$ 0.00
D. Clearance / Demolition	$ 0.00	%	$ 0.00
E. Title and Escrow Fees	$ 2,500.00	%	$ 2,500.00
F. Developmental Fees (Env. Perm etc)	$ 2,500.00	%	$ 2,500.00
G. Total Current Value (Future Use)	$ 1,129,000.00	%	$
H. **TOTAL ESCALATED VALUE**			$1,369,000.00
I. Construction Contract Work	$0.00		
2. Anticipated Date of Right of Way Certification	07/04		

3. Parcel Data:

Type		Dual / Appr	Utilities		RR Involvement's	
X			U4 -1	0	None	X
A	3		-2	0	C&M Agreement	
B	4	*1	-3	3	Svc Contract	
C			-4	0	Lic / RR Clauses	
D			U5 -7	3		
E	XXXX		-8	0	Misc R/W Work	
F	XXXX		-9	3	RAP Displ	N/A
					Clear / Demo	N/A
Total	7				Const Permits	N/A
					Condemnation	N/A

Areas: Right of Way 23,547 No. Excess Parcels 0 Excess 0
Enter PMCS Screens 06/26/01 by CYNTHIA HALL
enter AGRE Screen (Railroad data only) _____ by _____

TWO (2) OIL WELLS AND ONE (1) PRODUCTS TESTING STATION, M&E APPRAISAL REPORT.

4. Are there any major items of construction contract work? Yes _____ No _X_____ (If yes, explain).

5. Provide a general description of the right of way and excess lands required (zoning, use, major improvements, critical or sensitive parcels, etc.). No right of way required.

- ***PERMANENT STRUCTURE EASEMENTS, FOOTING EASEMENTS AND TEMPORARY CONSTRUCTION EASEMENTS (TCE) WILL BE ACQUIRED FROM BREA SCHOOL DISTRICT, PRODUCTIVE NUEVO ENERGY OIL COMPANY (OIL) FIELDS AND ENVIRONMENTALLY SENSITIVE TONNER CREEK PROPERTY FROM THE COUNTY/ CITY. NUEVO ENERGY COMPANY PRIVATE PROPERTY IS CURRENTLY A PRODUCTIVE OIL FIELD THAT CONTAINS NUMEROUS ACTIVE OIL WELLS WITH EXTENSIVE ABOVE GROUND PIPE FACILITIES RUNNING THROUGHOUT AND NEAR STATE ROUTE 57 STRUCTURE. THIS RIGHT OF WAY ESTIMATE PROVIDES FOR RE-CAPPING AND RE-INTRODUCING TWO (2) OIL WELLS AND ONE (1) PRODUCTS TESTING STATION FOR 18 MONTHS FOR STRUCTURE WIDENING/100-150 TON CRANE OPERATIONS AND TEN (10) TON EXCAVATION OPERATIONS. IT IS ANTICIPATED THAT CONSTRUCTION M&E (IE) 100-150 TON CRANE & 10 TON EXCAVATOR WILL BE SITATED WITHIN AN OIL FIELD ACCESS ROAD AND TONNER CANYON CREEK BED AREA. DURING CONSTRUCTION, OIL FIELD ACCESS FOR CONSTRUCTION WILL PROBABLY BE FROM NUEVO ENERGY COMPANY ACCESS GATE AND ROAD NEAR THE STATE ROUTE 57 STRUCTURE.***
- ***DAMAGES: THE RE-CAPPING AND RE-INTRODUCTION OF TWO (2) OIL WELLS HAS THE POTENTIAL OF CAUSING THE DECREASE OF THE PRODUCTION RATE IN THE AFTER CONDITION. THIS POTENTIAL LIABILITY HAS NOT BEEN ACCOUNTED FOR IN THIS RIGHT OF WAY DATA SHEET. THERE ARE POTENTIAL UTILITY INVOLVEMENTS CONCERNING AERIAL CONVERSION OF SOUTHERN CALIFORNIA EDISON'S 12KV DISTRIBUTION POWER LINE AND PACIFIC BELL'S FIBER OPTIC LINE TO UNDERGROUND TO CLEAR STRUCTURE WIDENING AND CRANE OPERATIONS.***

6. Is there an effect on assessed valuation? Yes _____ Not Significant _____X_____.
No _____ (If yes, explain).

7. Are utility facilities or rights of way affected? Yes X No _____ (If yes, attach Utility Information Sheet *Exhibit 01-01-05*).

8. Are Railroad facilities or rights of way affected? Yes _____ No _X_ (If yes, attach Railroad Information Sheet *Exhibit 01-01-06*).

9. Were any previously unidentified sites with hazardous waste and / or material found? Yes _____
None Evident X (If yes, attach memorandum per Procedural Handbook *Volume 1, Section 101.011)*

10. Are RAP displacements required? Yes _____ No _X_ (If yes, provide the following information)

No. of single family _____ No. of business/nonprofit _____

No. of multi-family _____ No. of farms _____

Based on Draft/Final Relocation Impact Statement/Study dated _____ it is anticipated that sufficient replacement housing (will / will not) be available without Last Resort Housing.

11. Are there material borrow and / or disposal site required? Yes _____ No _X_ (If yes, explain).

12. Are there potential relinquishments and/or abandonments? Yes _____ No _X_ (If yes, explain)

13. Are there any existing and/or potential Airspace Sites? Yes _____ No X (If yes, explain)

14. Indicate the anticipated Right of Way schedule and lead time requirements. (Discuss if District proposes less than PMCS lead time and / or if significant pressures for project advancement are anticipated).

PMCS calculated REG R/W lead time (from parcel maps from R/W Engineering to R/W Appraisals) months _____18_____.

PMCS calculated FINAL R/W lead time (from final maps to R/W to project certification) 14 months.

15. Is it anticipated that all Right of Way work will be performed by CALTRANS staff?
Yes X No (If no discuss).

Evaluation Prepared By:

Right of Way: Name Harry Pantoja Date 6-29-01

Railroad: Name for Kathy Anderson Date 6-29-01

Utilities: Name Nancy Bocanegra Date 6/29/01

Recommended for Approval:

Yoshiko Henslee
Right of Way Capital Coordinator
YOSHIKO HENSLEE, Chief R/W P&M

I have personally reviewed this Right of Way Data Sheet and all supporting information. It is my opinion that the probable Highest and Best Use, estimated values, escalation rates, and assumptions are reasonable and proper subject to the limiting conditions set forth, and find this Data Sheet complete and current.

Kathy J. Anderson
KATHY J. ANDERSON, Chief
Right of Way Project Coordinator
Irvine Office
Southern Right of Way Region

6-29-01
Date

cc: Program Manager
Project Manager

UTILITY INFORMATION SHEET

1. Name of utility companies involved in project:

- Nuevo Energy
- Torch Energy
- Southern California Gas
- Southern California Edison (SCE)
- Pacific Bell
- Adelphia Communications

2. Types of facilities and agreements required:

- Notice to owner to pothole. SCE with utility agreement.
- Notice to owner to relocate. SCE and Pacific Bell with utility agreement.

3. Additional information concerning utility involvement's on this project:

- An SCE 12kv aerial distribution line and Pacific Bell aerial communications line may require conversion to underground to clear Caltrans' construction and necessary M&E operations and require 14-18 months time from conflict letter to owner to actual physical relocation.

4. PMCS Input Information

Total estimated cost of State's obligation for Utility relocation on this project:

Unescalated: $200,000.00

Escalated : $240,000.00

Utility Involvements

U4-1	0	U5-7	3
-2	0	-8	0
-3	3	-9	3
-4	0		

Prepared By:

Nancy Bocanegra

Right of Way Utility Coordinator

6/29/01

Date

R/W ESTIMATORS INFORMATION SHEET FOR DEVELOPMENTAL FEES

ORGANIZATION PERMIT REQUESTED FROM:	TYPE OF PERMIT/SERVICE REQUESTED	DOLLAR AMOUNT OF PERMIT
		$
Regional Water	1601	$1,500.00
Fish and Game	401	$1,000.00
		$
		$
		$

TOTAL NUMBER OF PERMITS: 2

TOTAL DOLLAR AMOUNT OF PERMITS: $2,500.00

Prepared By:

Harry Dantzler

R/W ESTIMATOR

6.29.01

DATE

To: Gary Slater, Chief
Project Studies Branch

Attn: Hammer Sui

Date: August 2, 2001
Dist: 12 Co: ORA Route 57NB
KP: 34.04/36.29 (PM:21.15/22.55)
E.A.: 0C120K – **ALTERNATIVE 4**
Project Description: To design a climbing in the Northbound direction of SR-57 Freeway from Lambert Road to approximately 1 km north Of Orange County/Los Angeles County line.

From: YOSHIKO HENSLEE, Chief
Right of Way Capital
Coordinator

Subject: CURRENT ESTIMATED RIGHT OF WAY COSTS

We have completed an estimate of the right of way costs for the above referenced project based on maps we received from you on July 11, 2001, and the following assumptions and limiting conditions:

[ ] 1. The mapping did not provide sufficient detail to determine the limits of the right of way required.

[ ] 2. The transportation facilities have not been sufficiently designed so our estimator could determine the damage to any of the remainder parcels affected by the project.

[ ] 3. Additional right of way requirements are anticipated, but are not defined due to the preliminary nature of the early design requirements.

[x] 4. As per maps provided.

[ ] 5. We have determined there are no right of way functional involvement's in the proposed project at this time, as designed.

Right of Way Lead Time will require a minimum of 18 months after we begin Regular right of way (PYPSCAN node No. 224), necessary environmental clearance has been obtained, and freeway agreements have been approved. From the date of receipt of final right of way requirements (PYPSCAN node No. 265), we will require a minimum of 14 months prior to the date of certification of the project.

for

Right of Way Capital Coordinator
YOSHIKO HENSLEE, Chief, R/W P&M

Attachments:

[x] Right of Way Data Sheet – Page one (always required)
[x] Right of Way Data Sheet – All Pages (required when interest in real property is being acquired)
[X] Utility Information Sheet
[ ] Railroad Information Sheet

RIGHT OF WAY DATA SHEET

To: Gary Slater, Chief
Project Studies Branch

Attn: Hammer Sui

DATE: August 2, 2001

Dist 12 Co ORA Rte 57NB
KP: 34.04/36.29 [PM: 21.15/22.55]
EA 0C120K

Project Description: To design a climbing in the Northbound direction of SR-57 Freeway from Lambert Road to approximately 1 km north Of Orange County/Los Angeles County line.

Subject: RIGHT OF WAY DATA - **ALTERNATIVE 4 [Sta.216+70 to Sta.253+40, Layout Sheet L-1 to L-12; From Sta.235+40 to Sta.253+76 Layout Sheet L-6, L-8 through L-12].]**

1. Right of Way Cost Estimate:

	Current Value (Future Use)	Annual Escalation Rate	Escalated Value
A. Acquisition, including Excess Lands, Damages And Goodwill	$780,000.00	5%	$ 900,000.00
B. Utility Relocation (State Share)	$200,000.00	%	$ 240,000.00
C. Relocation Assistance	$ 0.00	%	$ 0.00
D. Clearance / Demolition	$ 0.00	%	$ 0.00
E. Title and Escrow Fees	$ 2,500.00	%	$ 2,500.00
F. Developmental Fees (Env. Perm etc)	$ 3,500.00	%	$ 3,500.00
G. Total Current Value (Future Use)	$986,000.00	%	$
H. **TOTAL ESCALATED VALUE**			$1,146,000.00
I. Construction Contract Work	$0.00		
2. Anticipated Date of Right of Way Certification	07/04		

3. Parcel Data:

	Type	Dual / Appr	Utilities		RR Involvement's	
X			U4 -1	0	None	X
A	1		-2	0	C&M Agreement	
B	3		-3	3	Svc Contract	
C	*		-4	0	Lic / RR Clauses	
D			U5 -7	3		
E	XXXX		-8	0	Misc R/W Work	
F	XXXX		-9	3	RAP Displ	N/A
					Clear / Demo	N/A
	Total 4				Const Permits	N/A
					Condemnation	N/A

Areas: Right of Way 14,329 sq. meters No. Excess Parcels 0 Excess 0
Enter PMCS Screens 07/26/01 by CYNTHIA HALL
enter AGRE Screen (Railroad data only) _____ by _____ .

TWO(2) OIL WELLS AND ONE (1) PRODUCTS TESTING STATION, M&E APPRAISAL REPORT.

ALTERNATIVE 2

4. Are there any major items of construction contract work? Yes _____ No X _____
(If yes, explain).

5. Provide a general description of the right of way and excess lands required (zoning, use, major improvements, critical or sensitive parcels, etc.). No right of way required. _____

- ***PERMANENT STRUCTURE EASEMENTS, FOOTING EASEMENTS, AND TEMPORARY CONSTRUCTION EASEMENTS (TCE) WILL BE ACQUIRED FROM PRODUCTIVE NUEVO ENERGY OIL COMPANY (OIL) FIELDS AND ENVIRONMENTALLY SENSITIVE TONNER CREEK PROPERTY FROM THE COUNTY AND/OR CITY. NUEVO ENERGY COMPANY PRIVATE PROPERTY IS CURRENTLY A PRODUCTIVE OIL FIELD THAT CONTAINS NUMEROUS ACTIVE OIL WELLS WITH EXTENSIVE ABOVE GROUND PIPE FACILITIES RUNNING THROUGHOUT AND NEAR STATE ROUTE 57 STRUCTURE. THIS RIGHT OF WAY ESTIMATE PROVIDES FOR RE-CAPPING AND RE-INTRODUCING TWO (2) OIL WELLS AND ONE (1) PRODUCTS TESTING STATION FOR 18 MONTHS FOR STRUCTURE WIDENING/CRANE AND EXCAVATION OPERATIONS. IT IS ANTICIPATED THAT CONSTRUCTION M&E (IE) 100-150 TON CRANE & 10 TON EXCAVATOR WILL BE SITUATED WITHIN AN OIL FIELD ACCESS ROAD AND TONER CANYON CREEK BED AREA. DURING CONSTRUCTION, OIL FIELD ACCESS FOR CONSTRUCTION WILL PROBABLY BE FROM NUEVO ENERGY COMPANY ACCESS GATE AND ROAD NEAR THE STATE ROUTE 57 STRUCTURE.DAMAGES: THE RE-CAPPING AND RE-INTRODUCTION OF TWO (2) OIL WELLS HAS THE POTENTIAL OF CAUSING THE DECREASE OF THE PRODUCTION RATE IN THE AFTER CONDITION. THIS POTENTIAL LIABILITY HAS NOT BEEN ACCOUNTED FOR IN THIS RIGHT OF WAY DATA SHEET. THERE ARE POTENTIAL UTILITY INVOLVEMENTS CONCERNING AERIAL CONVERSION OF SOUTHERN CALIFORNIA EDISON'S 12KV DISTRIBUTION POWER LINE AND PACIFIC BELL'S FIBER OPTIC LINE TO UNDERGROUND TO CLEAR STRUCTURE WIDENING AND CRANE OPERATIONS.***

6. Is there an effect on assessed valuation? Yes _____ Not Significant _____
No X (If yes, explain).

7. Are utility facilities or rights of way affected? Yes X No _____ (If yes, attach Utility Information Sheet *Exhibit 01-01-05*).

8. Are Railroad facilities or rights of way affected? Yes_____ No X (If yes, attach Railroad Information Sheet *Exhibit 01-01-06*).

9. Were any previously unidentified sites with hazardous waste and / or material found? Yes_____
None Evident X (If yes, attach memorandum per Procedural Handbook *Volume 1, Section 101.011)*

10. Are RAP displacements required? Yes _____ No X (If yes, provide the following information)

No. of single family _____ No. of business/nonprofit _____

No. of multi-family _____ No. of farms _____

Based on Draft/Final Relocation Impact Statement/Study dated _____ it is anticipated that sufficient replacement housing (will / will not) be available without Last Resort Housing.

11. Are there material borrow and / or disposal site required? Yes _____ No X (If yes, explain).

12. Are there potential relinquishments and/or abandonments? Yes _____ No X (If yes, explain)

13. Are there any existing and/or potential Airspace Sites? Yes _____ No X (If yes, explain)

14. Indicate the anticipated Right of Way schedule and lead time requirements. (Discuss if District proposes less than PMCS lead time and / or if significant pressures for project advancement are anticipated).

PMCS calculated REG R/W lead time (from parcel maps from R/W Engineering to R/W Appraisals) months. 18

PMCS calculated FINAL R/W lead time (from final maps to R/W to project certification) 14 months.

ALTERNATIVE 4

15. Is it anticipated that all Right of Way work will be performed by CALTRANS staff?
Yes X No (If no discuss).

Evaluation Prepared By:

Right of Way: Name Harry Pantoja Date 8.3.01

Railroad: for Name Kathy Anderson Date 8-6-01
Ken Moore

Utilities: Name Nancy Bocanegra Date 8/6/01

Recommended for Approval:

FOR _____
Right of Way Capital Coordinator
YOSHIKO HENSLEE, Chief R/W P&M

I have personally reviewed this Right of Way Data Sheet and all supporting information. It is my opinion that the probable Highest and Best Use, estimated values, escalation rates, and assumptions are reasonable and proper subject to the limiting conditions set forth, and find this Data Sheet complete and current.

_____
KATHY J. ANDERSON, Chief
Right of Way Project Coordinator
Irvine Office
Southern Right of Way Region

August 6, 2001
Date

cc: Program Manager
Project Manager

ALTERNATIVE 4

UTILITY INFORMATION SHEET

1. Name of utility companies involved in project:

- Nuevo Energy
- Torch Energy
- Southern California Gas
- Southern California Edison (SCE)
- Pacific Bell
- Adelphia Communications

2. Types of facilities and agreements required:

- Notice to owner to pothole. SCE with utility agreement.
- Notice to owner to relocate. SCE and Pacific Bell with utility agreement.

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- An SCE 12kv aerial distribution line and Pacific Bell aerial communications line may require conversion to underground to clear Caltrans' construction and necessary M&E operations and will require 14-18 months time from conflict letter to owner to actual physical relocation.

4. Additional information concerning utility involvement's on this project:

5. PMCS Input Information

Total estimated cost of State's obligation for Utility relocation on this project:

Unescalated: $200,000.00

Escalated : $240,000.00

Utility Involvements

U4-1	0	U5-7	3
-2	0	-8	0
-3	3	-9	3
-4	0		

Prepared By:

nancy Bocanegra

Right of Way Utility Coordinator

8/6/01

Date

ALTERNATIVE 4

R/W' ESTIMATOR'S INFORMATION SHEET FOR DEVELOPMENTAL FEES

ORGANIZATION PERMIT REQUESTED FROM:	TYPE OF PERMIT/SERVICE REQUESTED	DOLLAR AMOUNT OF PERMIT
California Dept. of Fish and Game	Section 1601	$1,500.00
California Regional Quality Control Board	Section 401	$1,000.00
Orange County Public Facilities & Resource	Permit /Permit	$1,000.00
		$
		$
		$

TOTAL NUMBER OF PERMITS: 3

TOTAL DOLLAR AMOUNT OF PERMITS: $3,500.00

Prepared By:

Harry Bintoyl

R/W ESTIMATOR

8.3.01

DATE