

Appendix A
Option Two (I-3)

Option Number Two (I-5)

Relocate rail right-of-way to I-5 Corridor from Sorrento Valley to Palomar Airport Road in Carlsbad.

Project Description

Relocate the rail corridor from the coastline to an area adjacent to the I-5 corridor and extending from Palomar Airport Road in Carlsbad to Sorrento Valley where it would connect with the existing right of way. Consideration would be given to the need for longer curves and for the need to maintain less than a 2% grade.

Roughly paralleling the I-5 this new rail line would require 3.3 miles of cut and fill, 8.3 miles of tunnels and 7.2 miles of bridges for a total of 18.8 miles. Along this particular route there are twelve (12) on/off ramps.

Preliminary Cost Estimate

- Tunnels:
 - Double Track and signal
 - \$119 million per mile
 - Total: \$987.7 million.
- Bridges over lagoons and valleys:
 - Double track and signal
 - \$ 70 million per mile
 - Total: \$504 million.
- Cut and Fill:
 - Double track and signal
 - \$ 5.9 million per mile
 - Total: \$19.47 million.
- Rail infrastructure designed to avoid interference with the on/off ramps on I-5:
 - twelve on/off ramps
 - \$ 25 million each
 - Total: \$ 300 million.
- Total project cost estimate (infrastructure only): \$1.82 billion
- Preliminary cost estimate does not include:
 - Land acquisition
 - Relocation of businesses and residences
 - Diversions to avoid institutional structures (Scripps Hospital and the water treatment plant in Carlsbad).
 - Construction cost of building rail and other mass transit stations and parking facilities.

Benefits

- Relocates rail line and rail traffic away from coastal region.
- Contributes to a reduction in the vibrations to the coastal bluffs from the rail.

- Allows for the consolidation of all *through* transportation for North San Diego County into one corridor.
- Represents a reduced amount of environmental impact along the coastline.
- May represent an opportunity for greater access for the *potential* rail passenger.
- The project may qualify for State/Federal funds as a truck/rail corridor (goods movement).
- Will provide the project sponsors with the ability to reallocate certain portions of the coastal rail right of way to pedestrian and bike path use.
- Presents an opportunity for a significant public works project and the cost/benefits that are normally associated with such projects.

Negative Impact

- Requires 19 - 20 miles of right-of-way acquisition: Current real estate prices are obviously on the upswing in the County.
- Relocation of businesses/industry.
- This could have serious ramifications since not only will land price be a factor but also loss of business, loss of staff, and other factors are likely to make this very costly and disruptive.
- Relocation of residences.
- Diversions to avoid institutional structures (Scripps Hospital and the water treatment plant in Carlsbad are just two examples).
- May represent a reduction in public transportation for the downtown businesses.
- Involves a significant public works project with all the attendant difficulties usually associated with such a project.

DEPARTMENT OF TRANSPORTATION

DISTRICT 11
P.O. BOX 85406
San Diego, CA 92186-5406
PHONE (619) 688-8888
FAX (619) 688-3122



January 30, 2001

11-SD-5
PM 30.0-47.5

Mr. Jeffrey Amos
Senior Associate
Don Breazeale & Associates
533 Summer View Circle
Encinitas, CA 92024

RE: Encinitas Rail Study
Option Number Two - I-5 Rail

Dear Mr. Amos:

At your request, we have reviewed the estimate presented in the Encinitas Rail Project Study, Option No. 2 by your company. We have the following comments:

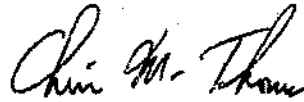
1. The mileage you show is 18.8 miles. The postmile difference between Sorrento Valley and Palomar Airport Rd is 16.7 miles. We are assuming that you added a mile on each end to transition from Interstate 5 (I-5) to the existing rail lines.
2. Assuming a 48-foot wide typical section, the tunnel cost you are using is \$470/ sq. ft. This tunnel cost seems reasonable, as long as extremely soft or caveable strata or extremely hard plutonic rock is not encountered. The latter is not likely in the coastal area.
3. Assuming a 48-foot wide structure, the elevated structure costs that you are using is \$275/ sq. ft. This compares to \$185 to \$230/sq.ft. that we used on the I-5 elevated express lane structure. Considering the extra loading requirements of rail, this cost seems reasonable.
4. The at-grade (cut/fill) sections estimate of \$6 million/mile seems reasonable.
5. The need to avoid interference at the interchanges may not be required for tunnel and elevated structure options. The \$25 million cost seems reasonable per interchange.
6. The above comments only refer to construction costs. We have been adding support costs to our estimates. We recommend adding 25% for support costs.

Mr. Jeffrey Amos
January 30, 2001
Page Two

7. It should be noted that the above estimates do not reflect environmental mitigation and right-of-way costs.

Thank you for the opportunity to review this estimate. If you have any questions, please call me at (619) 688-6668 or Bob Hoglen at (619) 220-5384.

Sincerely,



For
GARY L. GALLEGOS
District Director

Appendix B
Option Seven (7)

Option Number Seven

Double track, trench, and cover the Encinitas Rail Corridor.

Project Description

Double track, trench, and cover for a distance of 5.1 miles from the south side of San Elijo Lagoon to the south side of Batiquitos Lagoon and construct a new rail bridge.

Preliminary Cost Estimates

- Double track with trench and cover:
 - 5.1 miles
 - \$ 33.55 million per mile
 - Total: \$ 171.105 million
- Construct new rail bridge:
 - One (1) mile
 - \$ 66 million per mile
 - Total: \$ 66 million
- Total estimated cost: \$237.105 million

Benefits

- Scheduling: a more customer friendly schedule could be developed for the Coaster and Amtrak passenger trains and the freight trains would be better served as well.
- Horn/whistle blowing: Eliminated
- Pedestrian/bike access: greatly improved between the east and west sides of the tracks in downtown.
- The pedestrian/bike access would not be at-grade through Leucadia, Encinitas and Cardiff (safer).
- Ground water diversion: could possibly contribute to ground water diversion that may slow the erosion of the bluffs (speculation and not backed by facts).
- Automobile and pedestrian traffic circulation: would be greatly enhanced especially in the downtown area and businesses on both sides of the right of way will benefit.
- The City of Encinitas could use covered portion of trench for pedestrian/bike/vehicle crossings plus additional parking or green belt, or a linear park.

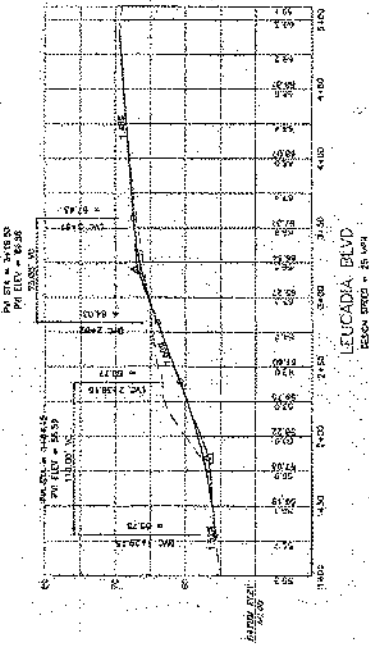
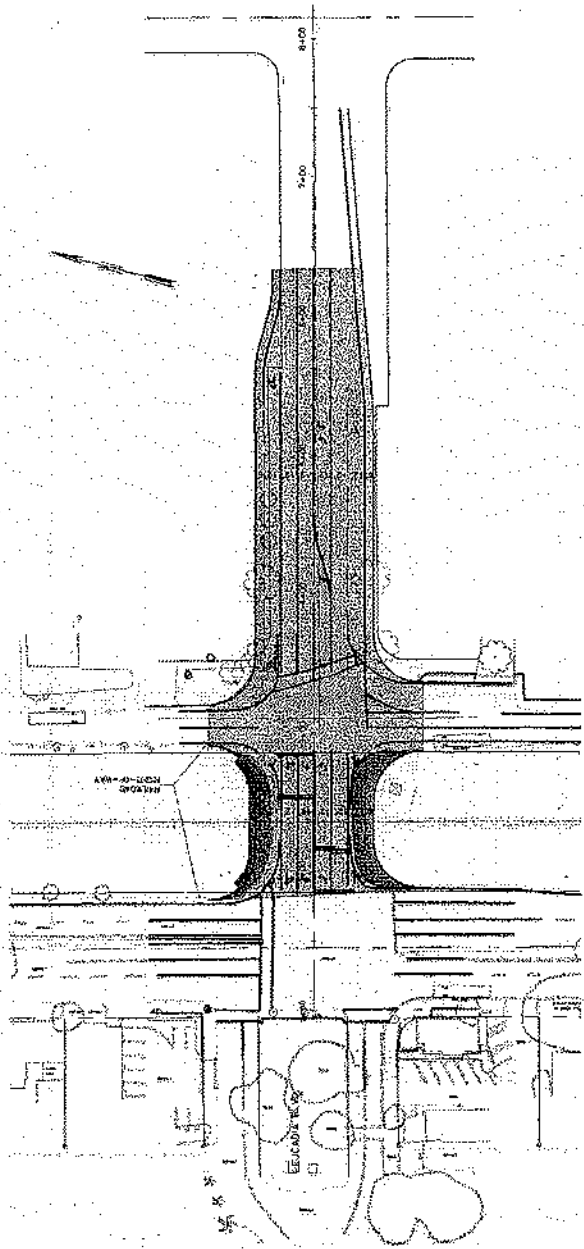
Negative Impact

- Disruption for approximately two years during construction.

Appendix C

Rail Funding and Spread Sheet Supporting Funding Issues

Attachment B



WILLDAN
Soil & Foundation Engineering
600 University Court, Suite 200, Redwood City, CA 94063
Telephone: (650) 352-7800 Fax: (650) 352-7801
http://www.willdan.com

PROJECT

PROJECT NAME	LEUCADIA BLVD AND PALM CORRIDOR GRADE SEPARATION
PROJECT NO.	10000301
DRAWING NO.	10000301-01

SCALE

PLAN	1" = 40'
VERTICAL	1" = 4'

APPROVALS

DESIGNED BY	CHECKED BY	APPROVED
DRAWN BY	DATE	

CITY OF ENCINITAS ENGINEERING DEPARTMENT

LEUCADIA BLVD AND PALM CORRIDOR GRADE SEPARATION

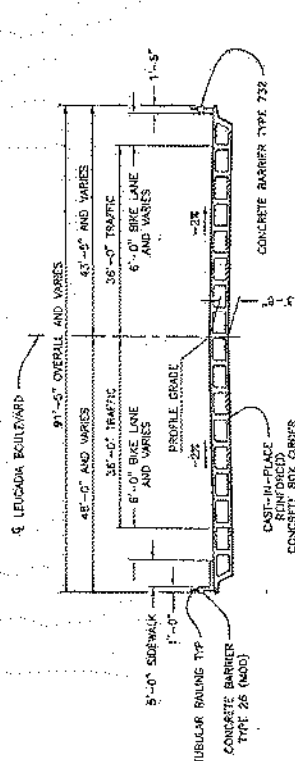
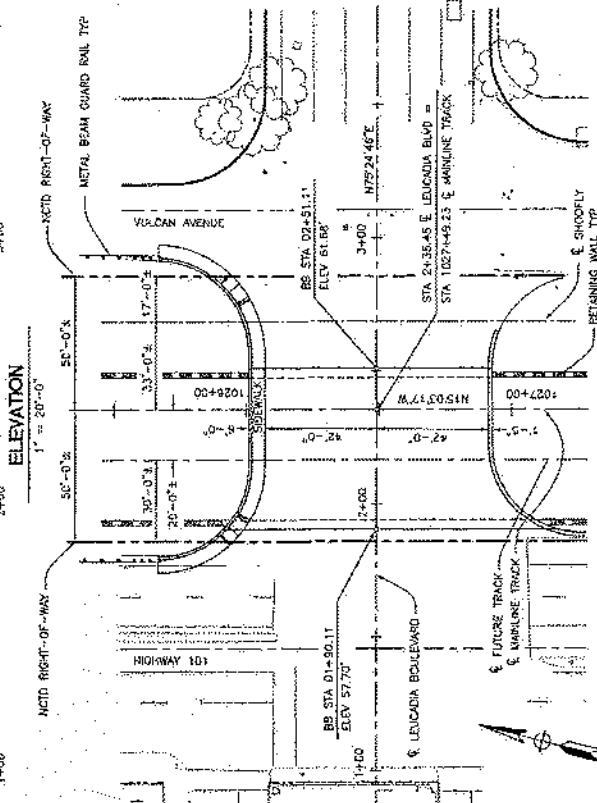
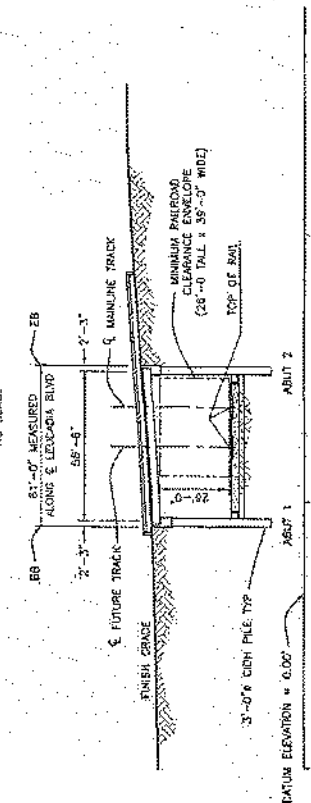
STUDY - ALTERNATIVE 1

LEUCADIA BLVD OVER RAILROAD TRENCH PLAN & PROFILE

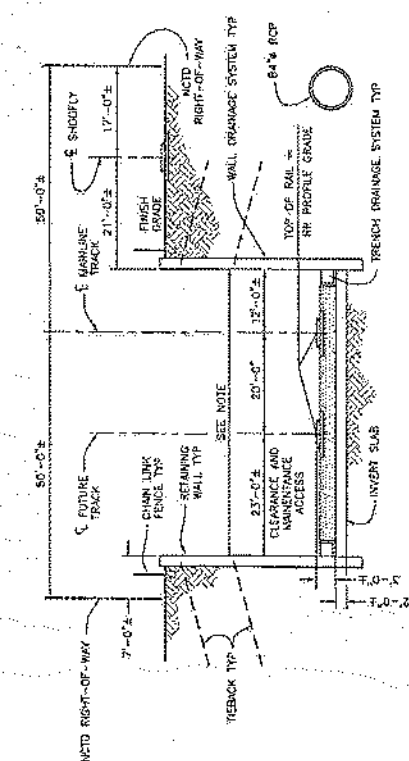
WORK SHEET 31

SHEET 1 OF 1

110'-0" VERTICAL CURVE
 PVI STA = 1+84.15
 PVI ELEV = 58.35'
 41.82%
 75'-0" VERTICAL CURVE
 ELEV 60.77
 47.68%
 PVI STA = 3+19.50
 PVI ELEV = 66.88'
 BVC STA 0+45.00
 ELEV 67.43'
 EVC STA 02+39.15
 ELEV 60.77
 81'-0" MEASURED
 ALONG E. LEUCADIA BLVD
 55'-8"
 2'-3"
 2'-3"
 3'-0" CONC PILE TYP
 FINISH GRADE
 FUTURE TRACK
 MANLINE TRACK
 MINIMUM PARALLEL
 CLEARANCE ENCLICURE
 (24'-0" TALL x 55'-0" WIDE)
 TOP OF RAIL
 DATE: 02/10/06
 ELEV 60.00
 ELEV 60.00



TYPICAL SECTION
1" = 10'-0"



TYPICAL RAILROAD TRENCH SECTION
1" = 10'-0"

ADVANCE PLANNING STUDY - FEBRUARY 10, 2006

PLAN
1" = 20'-0"

APPROVE	DATE	REVISIONS	DATE

SIMON WONG ENGINEERING
 9968 HIBBERT ST. SUITE 202
 RICHMOND, BC V6X 4E1
 TEL: 604-273-3113
 FAX: 604-273-3113

CITY OF ENCLICITAS
 LEUCADIA BOULEVARD AND RAIL CORRIDOR
 GRADE SEPARATION STUDY
 PRELIMINARY GENERAL PLAN - LEUCADIA BOULEVARD DM
 FROM PLANNO. NO. 14-214-206



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 VERTICAL

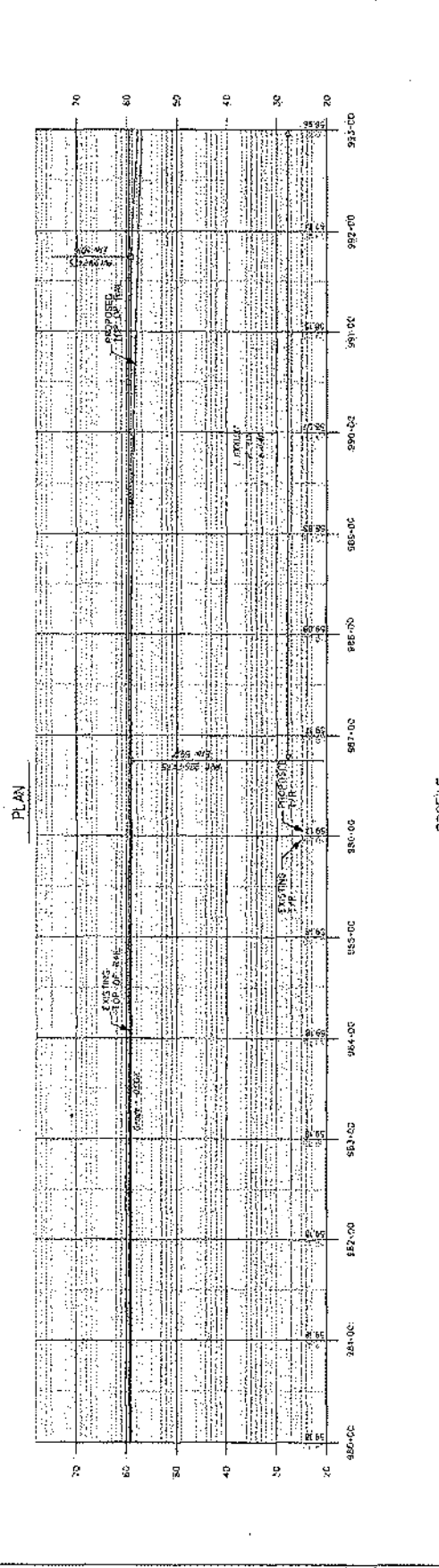
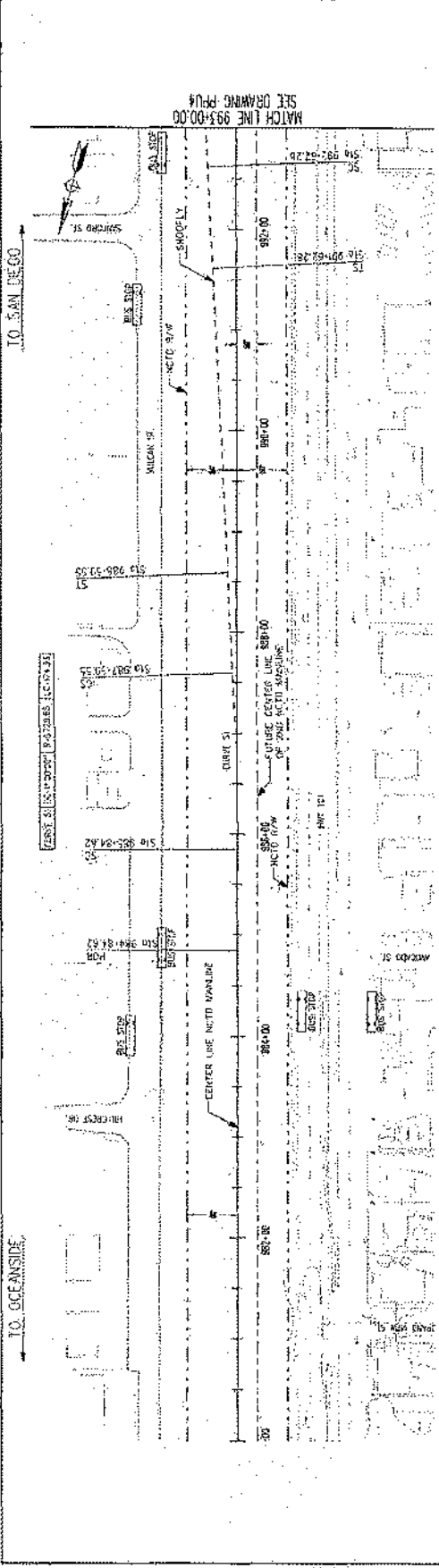
BENCH MARK
 1027+00
 1028+00

APPROVALS
 RECOMMENDED
 APPROVED

ENGINEER'S NAME: SIMON WONG ENGINEERING
 ADDRESS: 9968 HIBBERT ST. SUITE 202
 PHONE NO: 604-273-3113

ENGINEERING DEPARTMENT
 DRAWING NO.

SHEET 1 OF 1



PRELIMINARY

PROFILE



SCALE
HORIZONTAL: 1" = 100'
VERTICAL: 1" = 10'

REVISIONS

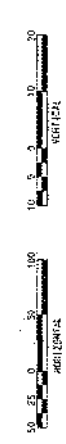
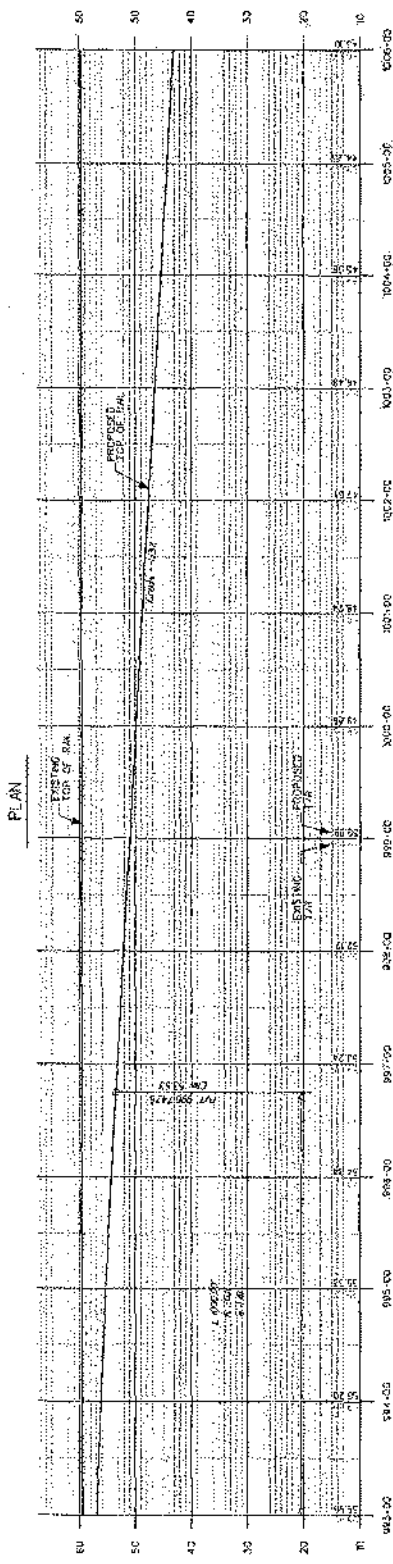
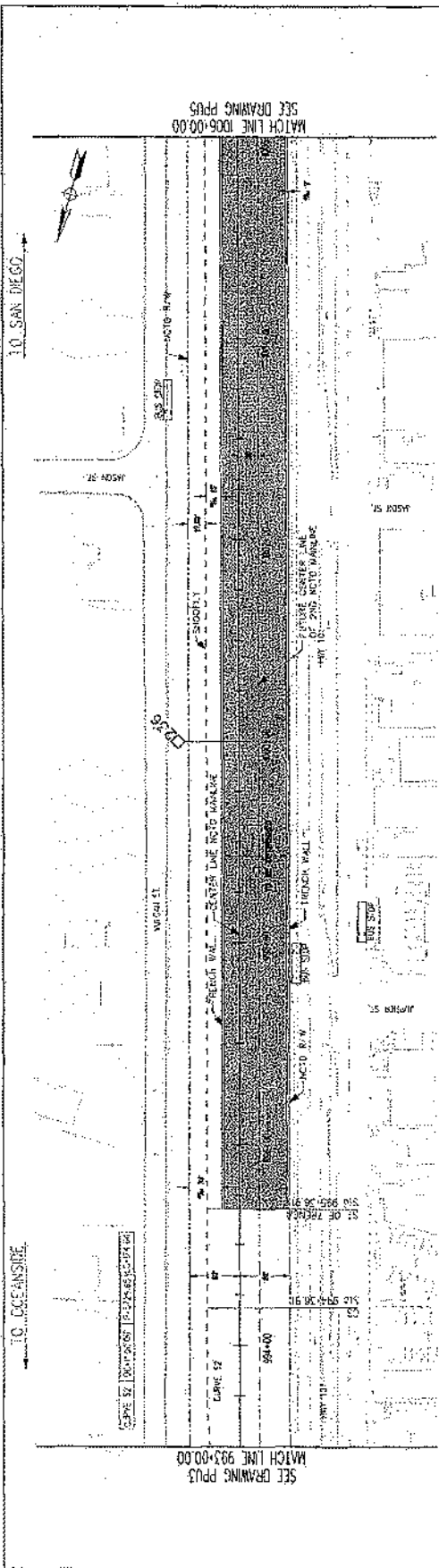
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APPROVALS

NAME	TITLE

ENGINEER'S NAME: HANSSON WILSON
 ADDRESS: 275 W. HOSPITALITY LANE STE. 300
 PHONE NO.: (909) 806-8000

CITY OF ENCINITAS ENGINEERING DEPARTMENT DRAWING NO. 15-5115-04
 LEGEND: BLOCK & WALL CORRIDOR GRADE SEPARATION STUDY
 PLAN AND PROFILE
 980+00 TO 993+00
 DATE: 11-15-15
 SHEET 1 OF 1



PRELIMINARY

PROFILE



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DESIGNER: [Signature] DATE: [Blank]

CHECKED: [Signature] DATE: [Blank]

APPROVED: [Signature] DATE: [Blank]

PROJECT NO. 93-010-05

CITY OF ENCINITAS, ENGINEERING DEPARTMENT

LEONARDO BLANCO, CIVIL ENGINEER

LEONARDO BLANCO, CIVIL ENGINEER

LEONARDO BLANCO, CIVIL ENGINEER

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LEONARDO BLANCO, CIVIL ENGINEER

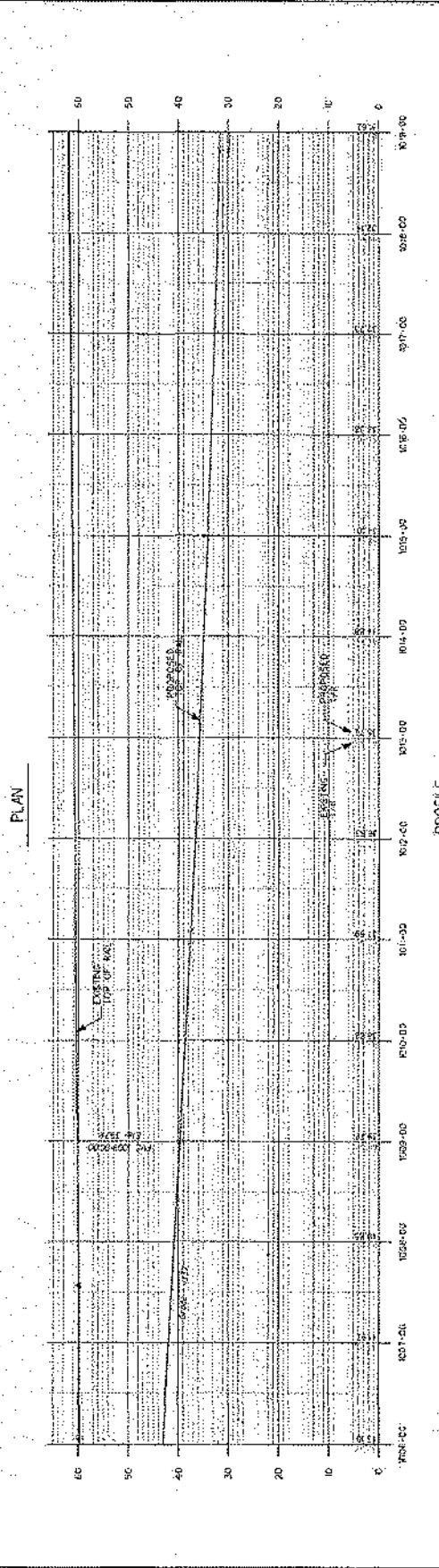
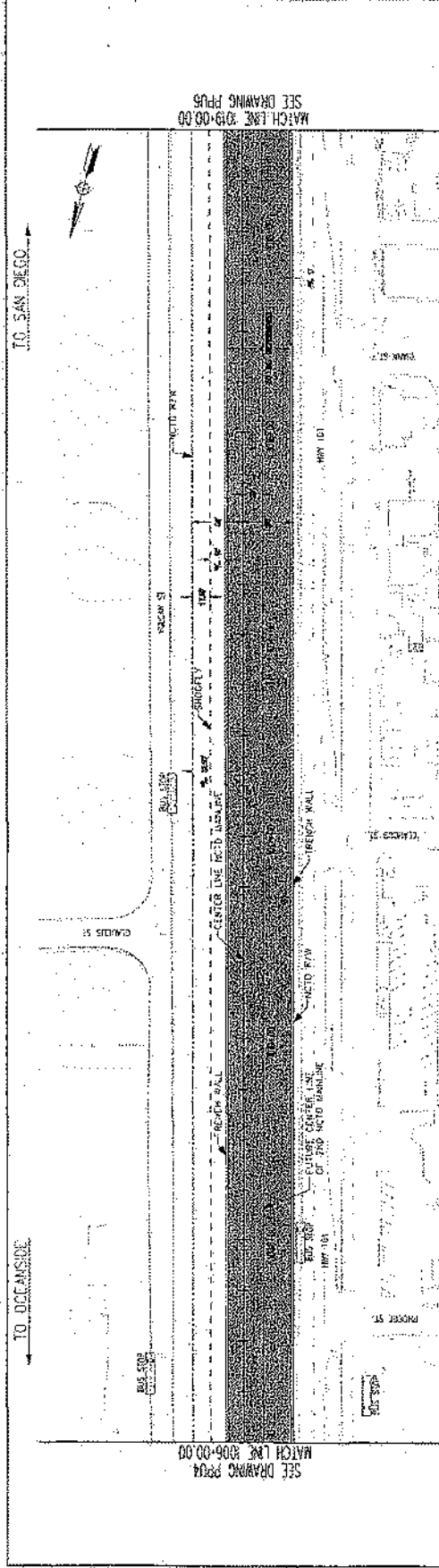
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LEONARDO BLANCO, CIVIL ENGINEER

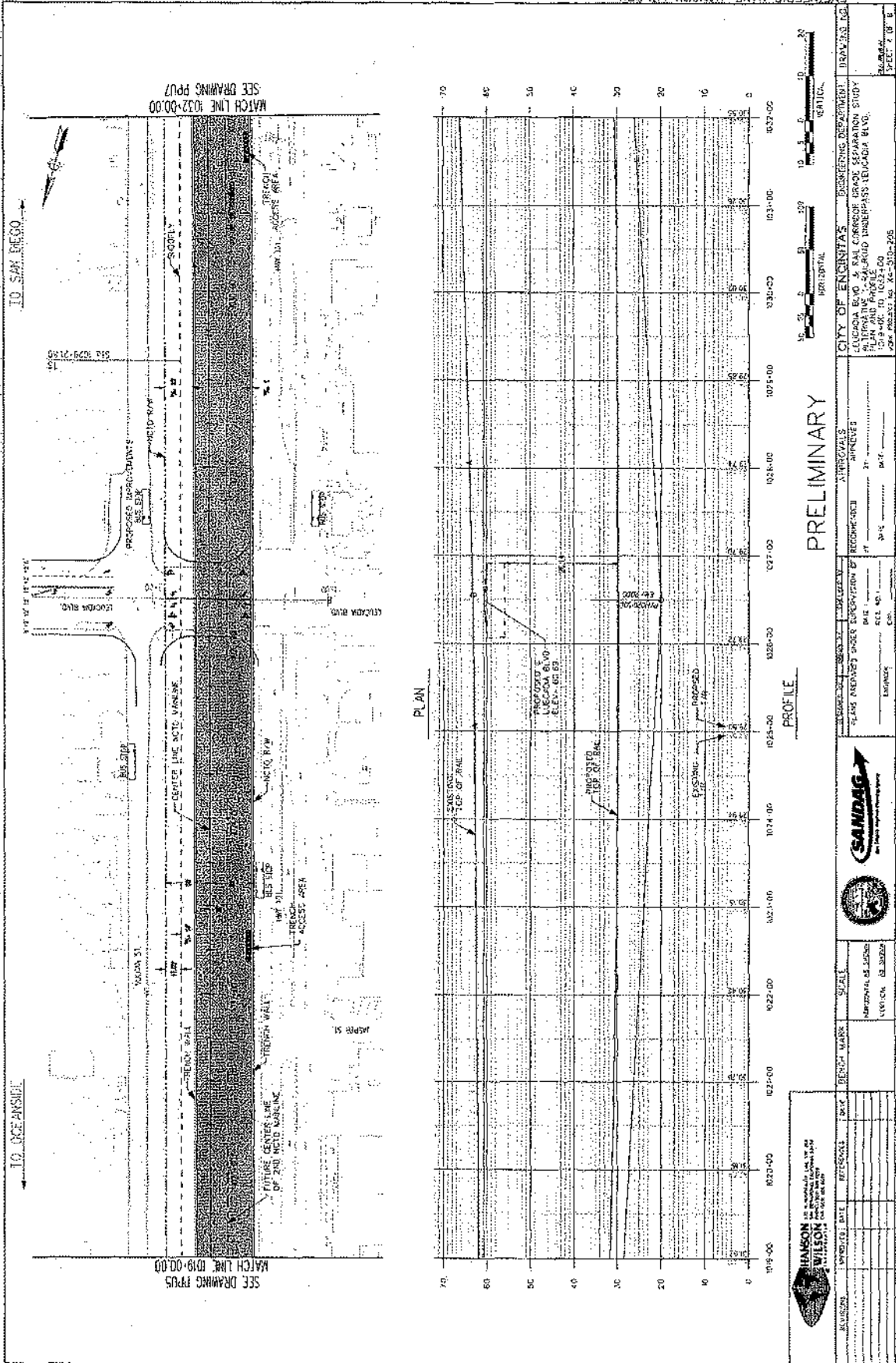
LEONARDO BLANCO, CIVIL ENGINEER



HANSON WILSON ENGINEERS ARCHITECTS PLANNERS 3175 LA JOLLA VILLAGE ROAD, SUITE 100 SAN DIEGO, CALIFORNIA 92161-1500 PHONE (619) 444-8000		PRELIMINARY CITY OF ENCINITAS ALTERNATIVE LEASING AND DEVELOPMENT STUDY 1004+00 TO 1014+00
PROJECT NO. _____ DATE _____ SCALE _____	SHEET NO. _____ TOTAL SHEETS _____	APPROVALS DESIGNED BY _____ CHECKED BY _____ DRAWN BY _____ DATE _____ CITY ENGINEER _____ CIVIL ENGINEER _____

ENGINEER'S NAME: HANSON WILSON
 PHONE NO.: (619) 444-8000

ENGINEER'S NAME: HANSON WILSON
 ADDRESS: 275 W. HOSPITALITY LANE, STE. 300
 PHONE NO.: (909) 806-8000



CITY OF ENCINITAS
 ENGINEERING DEPARTMENT
 ENCINITAS BLVD. & RAIL CORNER GRADE SEPARATION STUDY
 PLAN AND PROFILE
 1019+00 TO 1032+00
 JOB PROJECT NO. XC-304-295

APPROVALS

DESIGNED BY	REVISIONS
DATE	BY
SCALE	DATE
BY	DATE
DATE	DATE



REVISION	DATE	DESCRIPTION



HANSON WILSON ENGINEERING

ENGINEER'S NAME: HANSON WILSON
 ADDRESS: 295 W. HOSPITALITY LANE, STE. 300
 PHONE NO.: (909) 806-8080

CITY OF ENCINITAS ENGINEERING DEPARTMENT
 ALTERNATIVE LOCAL COUNCIL UNDER SEPARATION STUDY
 PLAN AND PROFILE
 PROJECT NO. 14-200-025
 DATE: 12/14/14

PRELIMINARY

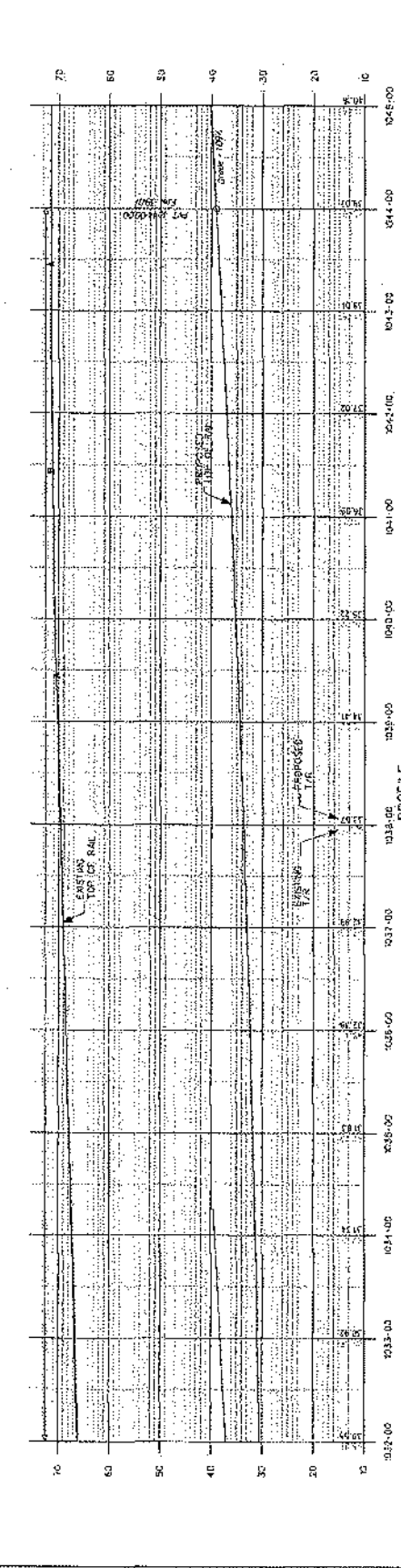
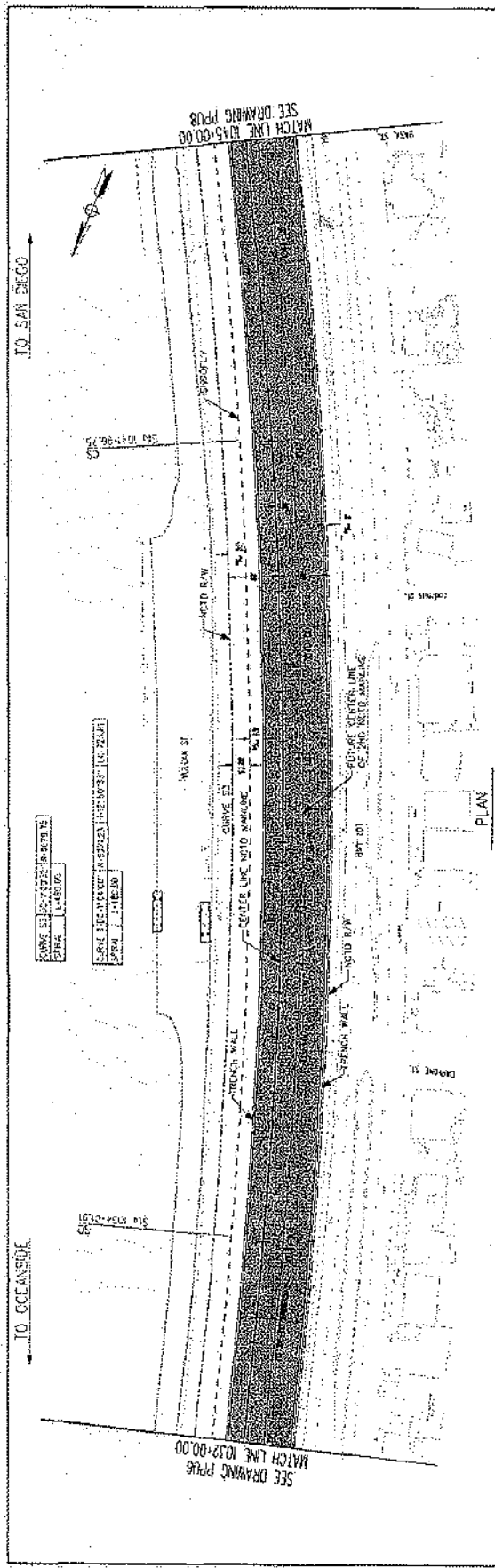
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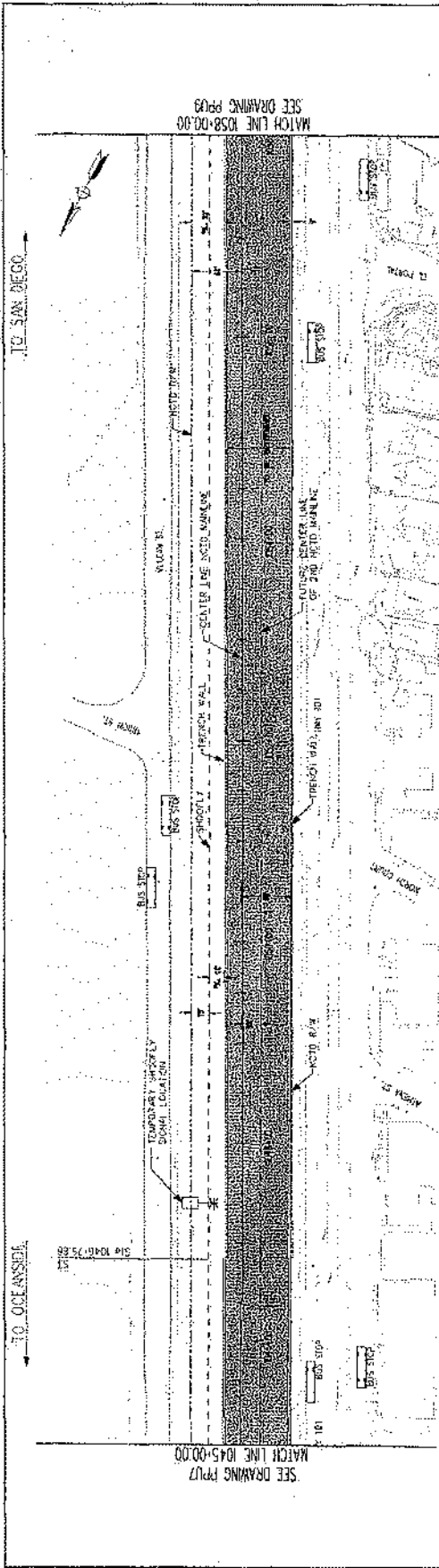


SCALE
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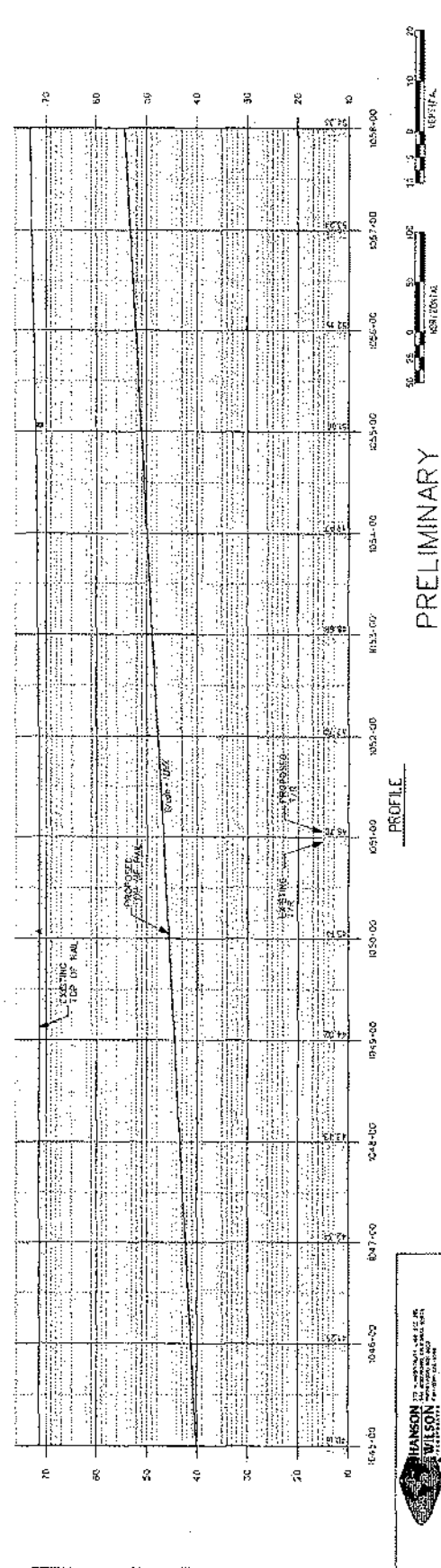
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HANSON WILSON
 1410 S. CALLE DEL MAR, SUITE 300
 ENCINITAS, CA 92026
 TEL: 909.806.8080
 FAX: 909.806.8081
 WWW.HANSONWILSON.COM





PLAN



PROFILE

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DATE	10/15/00
BY	WILSON
CHECKED BY	WILSON
SCALE	AS SHOWN
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PROJECT LOCATION	TRANSIT
PROJECT DESCRIPTION	TRANSIT
PROJECT OWNER	TRANSIT
PROJECT ADDRESS	TRANSIT
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PROJECT WEBSITE	TRANSIT
PROJECT URL	TRANSIT



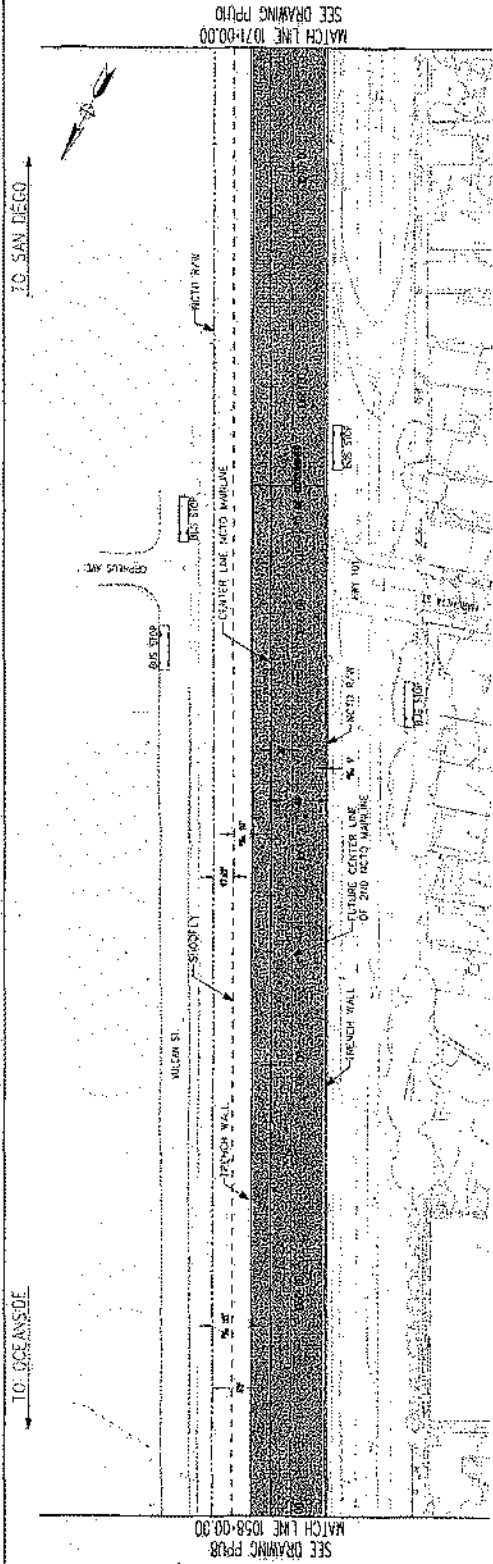
PRELIMINARY

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 ENCINITAS, CALIFORNIA
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 JOB NO. 1045-00-00

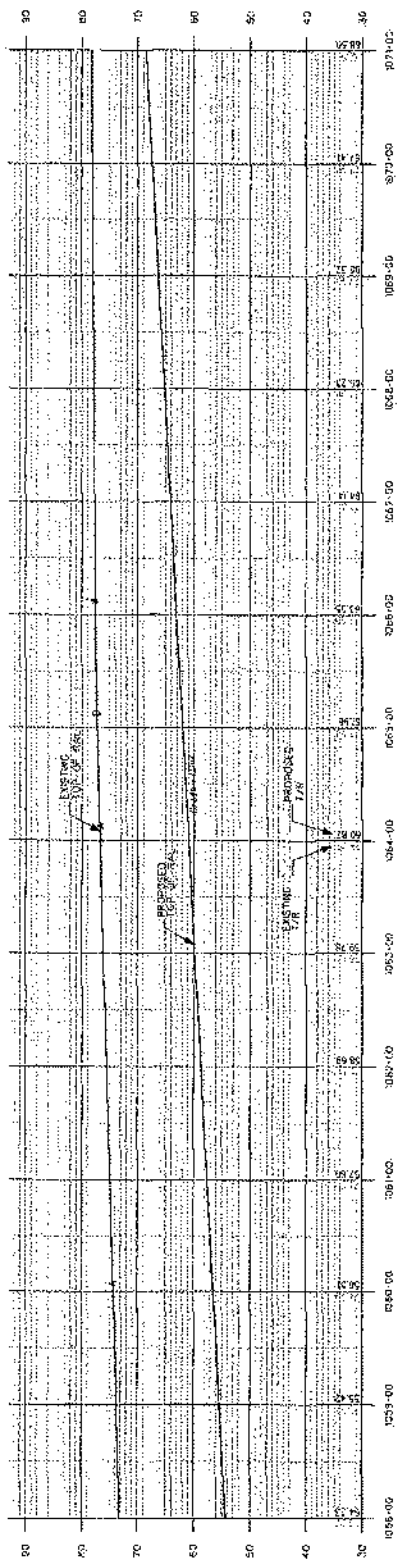
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 DATE: [Date]
 CHECKED BY: [Signature]
 DATE: [Date]

ENGINEER'S NAME: HANSON WILSON
 ADDRESS: 3825 W. HOSPITALITY LANE, STE. 300
 PHONE NO.: (909) 806-8000

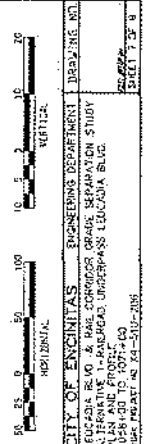
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PLAN



PROFILE

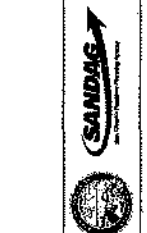


PRELIMINARY

APPROVALS

APPROVED BY: _____

DATE: _____



SCALE

HORIZONTAL: AS SHOWN

VERTICAL: AS SHOWN

NO.	DATE	REVISIONS

HANSON WILSON

ENGINEERS

10000 SAN DIEGO AVENUE, SUITE 100

SAN DIEGO, CALIFORNIA 92121

PHONE: (619) 591-8888

FAX: (619) 591-8889

WWW.HANSONWILSON.COM

CITY OF ENCINITAS ENGINEERING DEPARTMENT

PROJECT NO. 10-0000

PROJECT NAME: ALTERNATIVE 1 - PASADENA UNDERPASS

DATE: 10/11/10

SCALE: 1" = 100'

VERTICAL SCALE: 1" = 10'

ENGINEER: _____

DATE: _____

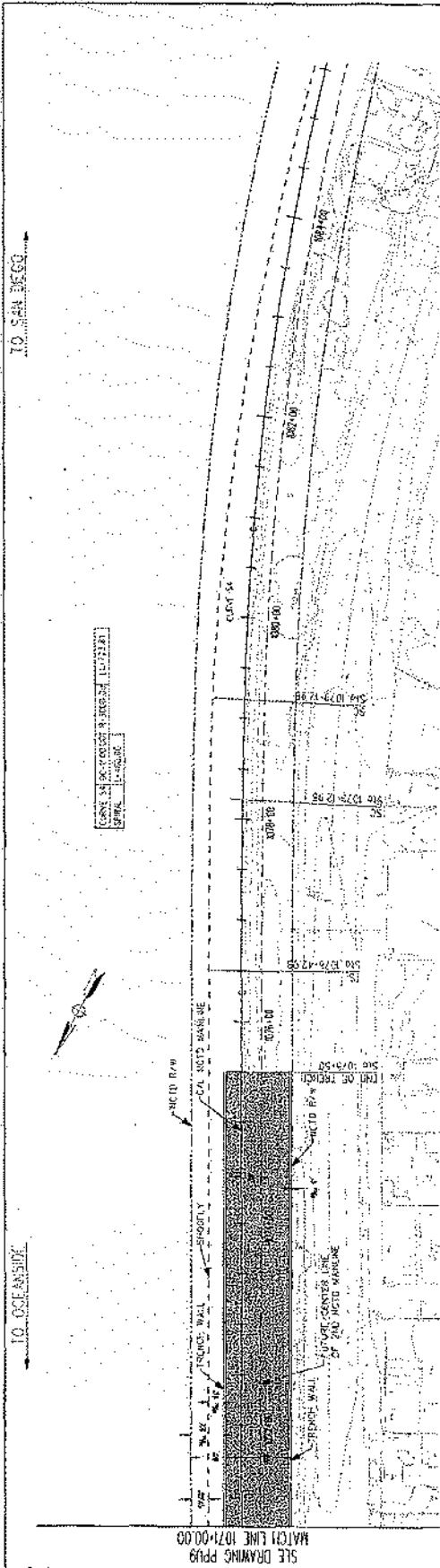
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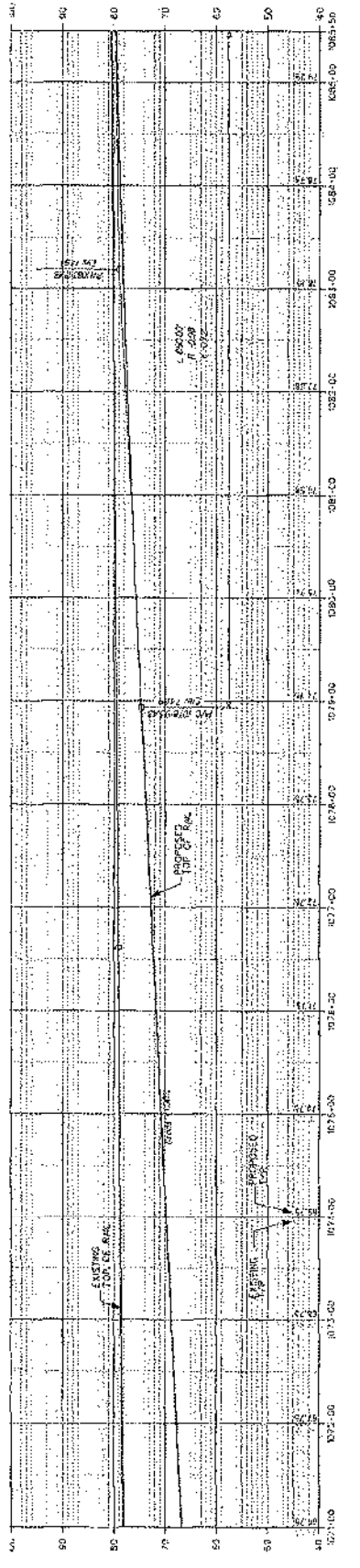
DATE: 10/11/10

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VERTICAL SCALE: 1" = 10'



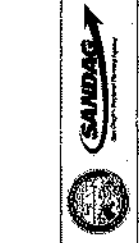
PLAN



PROFILE

REVISION	DATE	BY	DESCRIPTION

SCALE	HORIZONTAL SCALE	VERTICAL SCALE
1" = 10'-0"	1" = 50'-0"	1" = 10'-0"



PRELIMINARY

APPROVED BY: [Signature] DATE: 05/21/08
 CITY OF ENCINITAS ENGINEERING DEPARTMENT
 LEONARD BLVD. & RAIL CORRIDOR GRADE SEPARATION STUDY
 PLAN AND PROFILE
 1071+00 TO 1085+50
 DATE: 05/21/08
 DRAWN BY: J. WILSON
 CHECKED BY: J. WILSON

CITY OF ENCINITAS ENGINEERING DEPARTMENT
 LEONARD BLVD. & RAIL CORRIDOR GRADE SEPARATION STUDY
 PLAN AND PROFILE
 1071+00 TO 1085+50
 DATE: 05/21/08
 DRAWN BY: J. WILSON
 CHECKED BY: J. WILSON

ENGINEER'S NAME: HANSON WILSON
 ADDRESS: 278 W. HOSPITALITY LANE, STE. 300
 PHONE NO.: (959) 806-8000

CONCEPTUAL PROJECT COST ESTIMATE FOR
LEUCADIA GRADE SEPARATION

PROJECT DESCRIPTION: Leucadia Boulevard and Railroad Corridor Grade Separation Study PSR
Proposed Improvement (Scope): Alternative 1 - Trench Alternative at Leucadia Boulevard

ALTERNATIVE 1
SUMMARY OF PROJECT COST ESTIMATE



TOTAL ROADWAY ITEMS	\$98,783,730
TOTAL STRUCTURE ITEMS	\$10,000,000
SUBTOTAL CONSTRUCTION COSTS	\$108,783,730
TOTAL RIGHT-OF-WAY ITEMS	\$2,000,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	\$110,783,730
SUPPORT COSTS (35% OF CONSTRUCTION COST)	38,774,305
TOTAL PROJECT COSTS	<u>\$149,558,035</u>
USE	<u><u>\$150,000,000</u></u>

**CONCEPTUAL PROJECT COST ESTIMATE FOR
LEUCADIA GRADE SEPARATION**

I. ROADWAY ITEMS

<u>Section 1 Earthwork</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Roadway Excavation	1,100,000	CY	\$5.5	\$6,050,000	
Clearing and Grubbing	1	LS	\$100,000	\$100,000	
Fill		CY		\$0	
				Subtotal Earthwork	\$6,150,000
<u>Section 2 Structural Section</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Asphalt Concrete	450	TON	\$70	\$31,500	
Aggregate Base	150	CY	\$85	\$12,750	
				Subtotal Payment Structural Section	\$44,250
<u>Section 3 Drainage</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Inlets	40	EA	\$6,000	\$240,000	
Remove Inlets	10	EA	\$500	\$5,000	
RCP -	9,000	LF	\$2,000	\$18,000,000	
Bridge Drains	300	LF	\$60	\$18,000	
Other Drainage Improvements (Filters)	40	EA	\$500	\$20,000	
Interceptor Channel	7,000	LF	\$60	\$420,000	
Pump Station	1	EA	\$3,000,000	\$3,000,000	
				Subtotal Drainage	\$21,703,000

I. ROADWAY ITEMS (Continued)

<u>Section 4 Specialty Items</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Curb and Gutter	900	LF	\$20	\$18,000	
Retaining Walls	1	LS	\$41,408,200	\$41,408,200	
Pump Station Structure	1	LS	\$150,000	\$150,000	
SWPPP	1	LS	\$250,000	\$250,000	
Architectural Treatment		LS		\$0	
				Total Specialty Items	\$41,826,200

I. ROADWAY ITEMS (Continued)

<u>Section 5 Traffic</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Traffic Signals and Lighting	1	LS	\$150,000	\$150,000	
Overhead Sign Structures				\$0	
Signing and Striping	1	LS	\$20,000	\$20,000	
Traffic Control System	1	LS	\$500,000	\$500,000	
Traffic Management Plan	1	LS		\$0	
				Subtotal Traffic	\$670,000
				TOTAL SECTIONS 1-5	\$70,393,450

I. ROADWAY ITEMS (Continued)

<u>Section 6 Minor Items (excludes retaining walls)</u>				<u>Item Cost</u>	<u>Section Cost</u>
	\$28,985,250	X (5%)		1,449,263	
(Subtotal Sections 1-5 minus retaining walls)					
				Total Minor Items	\$1,449,263
<u>Section 7 Roadway Mobilization (includes ret walls)</u>					
	\$71,842,713	X (10%)		7,184,271	
(Subtotal Sections 1-6)					
				Total Roadway Mobilization	\$7,184,271
<u>Section 8 Roadway Additions</u>					
Supplemental Work	\$71,842,713	X (0)		0	
(Subtotal Sections 1-6)					
Contingencies	\$79,026,984	X (25%)		\$19,756,746	
(Subtotal Sections 1-7)					
				TOTAL ROADWAY ADDITIONS	\$28,398,280
				TOTAL ROADWAY ITEMS	\$98,783,730
				(Subtotal for Sections 1-8)	

ESTIMATE PREPARED BY: Sunnie House
DATE: Sept 2005

PHONE (858) 450-4700

CONCEPTUAL PROJECT COST ESTIMATE FOR LEUCADIA GRADE SEPARATION

II. STRUCTURES ITEMS

Structure

(1)

Bridge Name: Leucadia Blvd. Overhead

Structure Type: CIP Box Girder and Tunnel

Width (out to out) - (LF) 97.30

Span Lengths - (LF) 61.00

Total Area - (SF) 5,935.30

Footing Type (pile/spread)

Sub Total Cost for Structure #####

SUBTOTAL STRUCTURES ITEMS \$1,289,378
(Sum of Total Cost for Structures)

Railroad Related Costs: 5,919,324 \$5,919,324

TOTAL RAILROAD AND STRUCTURE ITEMS \$7,208,702

10% Mobilization \$720,870

25% Contingency \$1,982,392.96

TOTAL STRUCTURES ITEMS \$9,911,965
For Budget Purpose \$10,000,000

ESTIMATE PREPARED BY: Jim Frost
DATE: September 2005

PHONE (858) 566-3113

CONCEPTUAL PROJECT COST ESTIMATE FOR
LEUCADIA GRADE SEPARATION

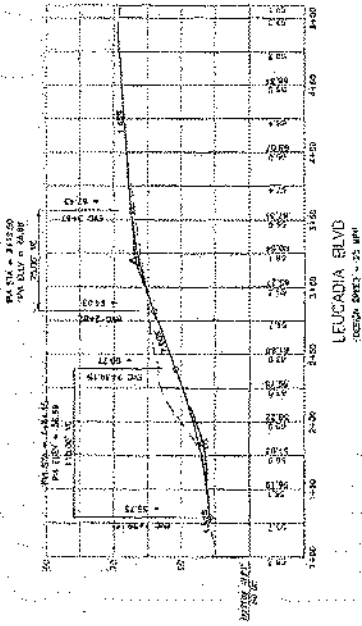
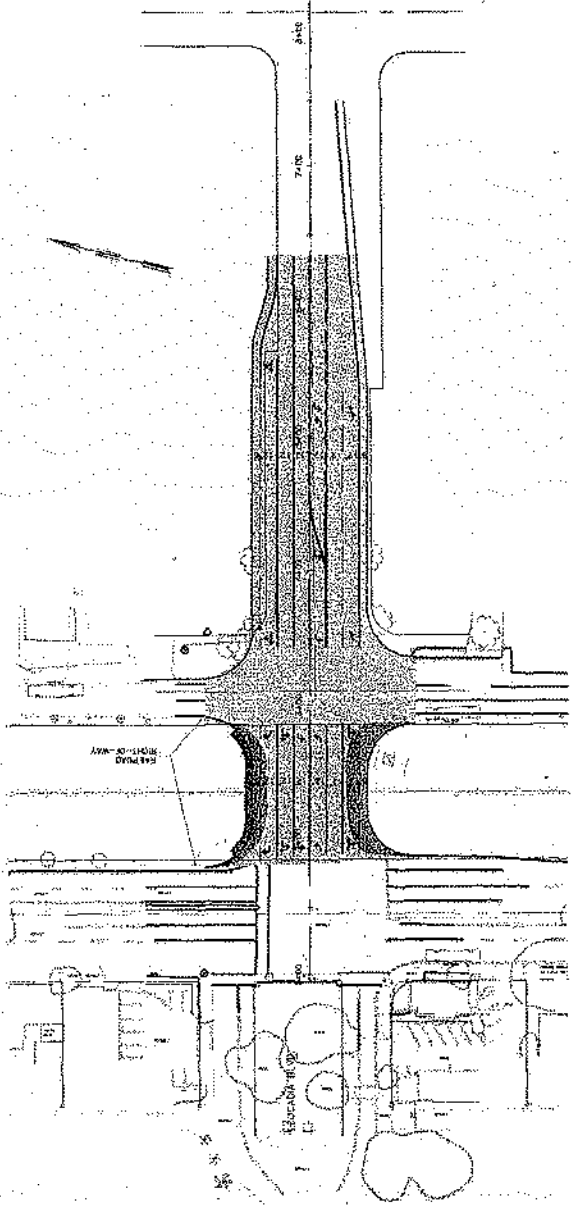
III. RIGHT OF WAY ITEMS

	VALUE	
A. Acquisition, including excess lands, damages to remainder (s) and goodwill		
B. Utility Relocation	\$2,000,000	
C. Relocation Assistance	\$0	
D. Clearance/Demolition	\$0	
E. Title and Escrow Fees	\$0	
TOTAL RIGHT OF WAY ITEMS (Escalated Value)		\$2,000,000
Anticipated Date of Right-of-Way Certification (Date to which Values are Escalated)		2005

ESTIMATE PREPARED BY: Sunnic House
DATE: September 2005

PHONE (858) 450-4700

Attachment D



WILDAN
 Serving Public Agencies
 4000 Conquistador Court, Suite 100, San Diego, California 92121
 (619) 594-1100
 www.wildan.com

REVISION	DATE	BY	CHKD

SCALE
 HORIZONTAL: 1"=40'
 VERTICAL: 1"=8'

BENCH MARK

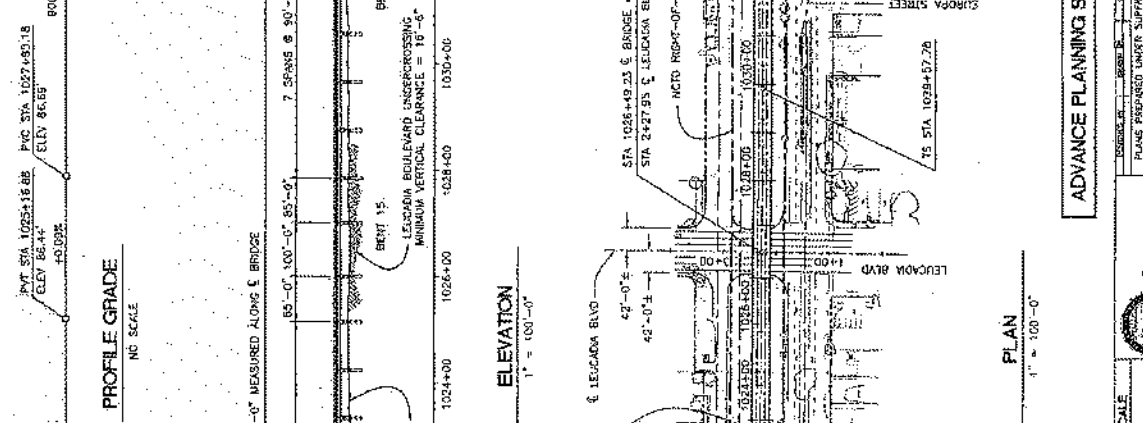
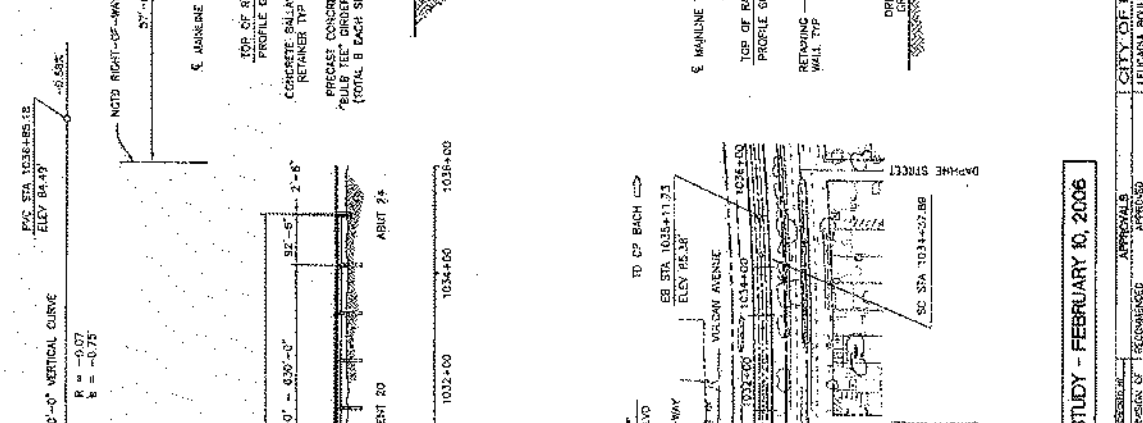
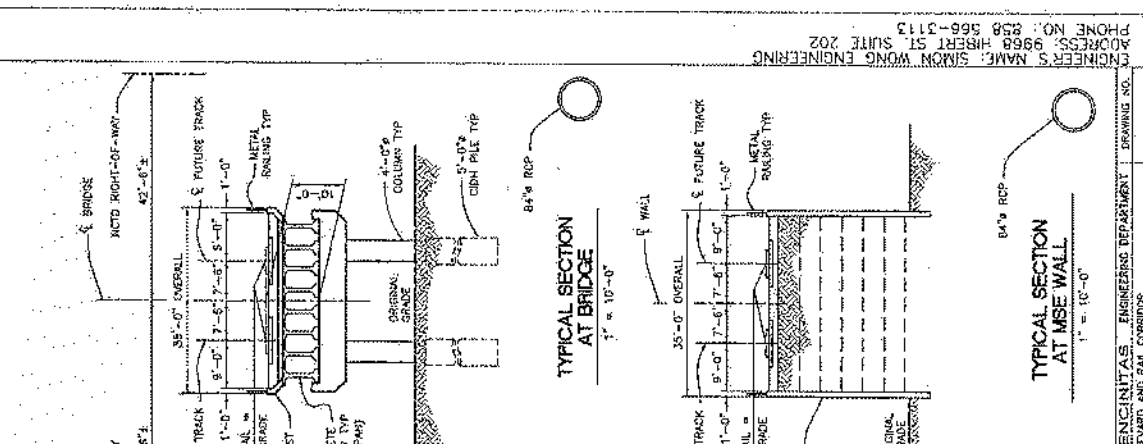
APPROVALS

DESIGNED BY: []
 CHECKED BY: []
 PLANS PREPARED UNDER SUPERVISION OF: []
 DATE: []
 SHEET NO.: []
 DATE: []
 DATE: []
 DATE: []

CITY OF ENCINITAS ENGINEERING DEPARTMENT
 LEUCADIA BLVD GRADE SEPARATION AND RAIL CORRIDOR
 ENHANCEMENT STUDY - ALTERNATIVE 2
 RAILROAD BRIDGE OVER LEUCADIA BLVD PLAN & PROFILE
 CIVIL PROJECT 18

DRAWING NO.
SHEET 1 OF 1

Quantity Book 02/10/2015 - 1:14:00 PM - 1/14/2015 - 1:14:00 PM - 1/14/2015 - 1:14:00 PM



APPROVALS		RECOMMENDED		APPROVED	
DATE	BY	DATE	BY	DATE	BY

APPROVALS		RECOMMENDED		APPROVED	
DATE	BY	DATE	BY	DATE	BY

ENGINEER & NAME: SIMON WONG ENGINEERING
 ADDRESS: 9968 HIBERT ST
 PHONE NO.: 928 888-3113

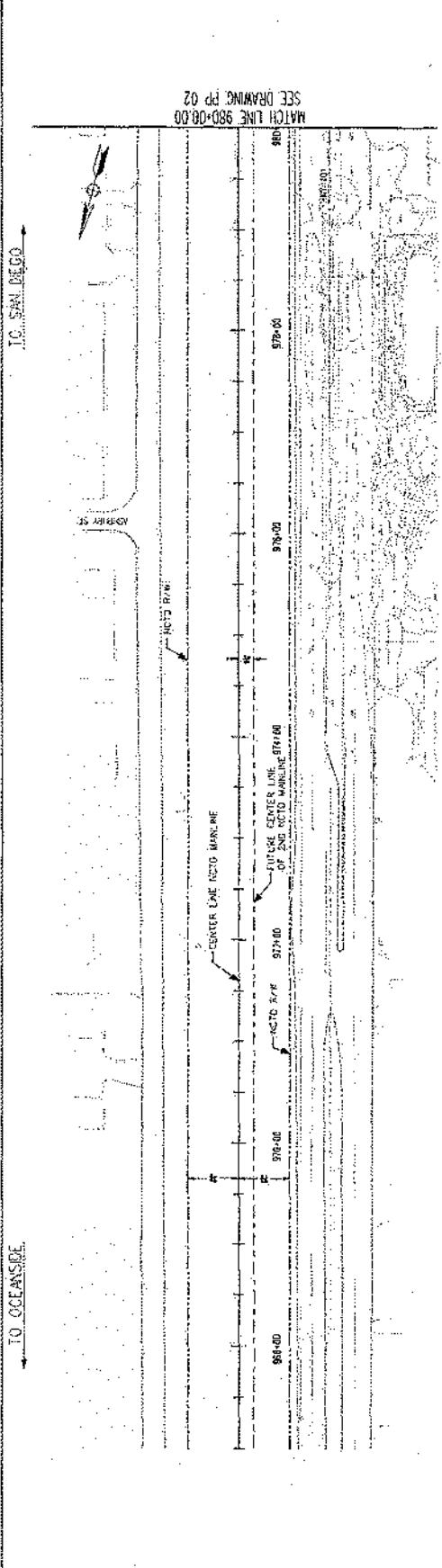
CITY OF ENCINITAS, ENGINEERING DEPARTMENT
 ENCINITAS BOULEVARD AND RAIL CORRIDOR
 GRADE SEPARATION STUDY FOR LEUCADIA BLVD
 PRELIMINARY GENERAL PLAN - LEUCADIA BOULEVARD LP
 DRAWING NO. 24-10-008
 SHEET 3 OF 1

ADVANCE PLANNING STUDY - FEBRUARY 10, 2006

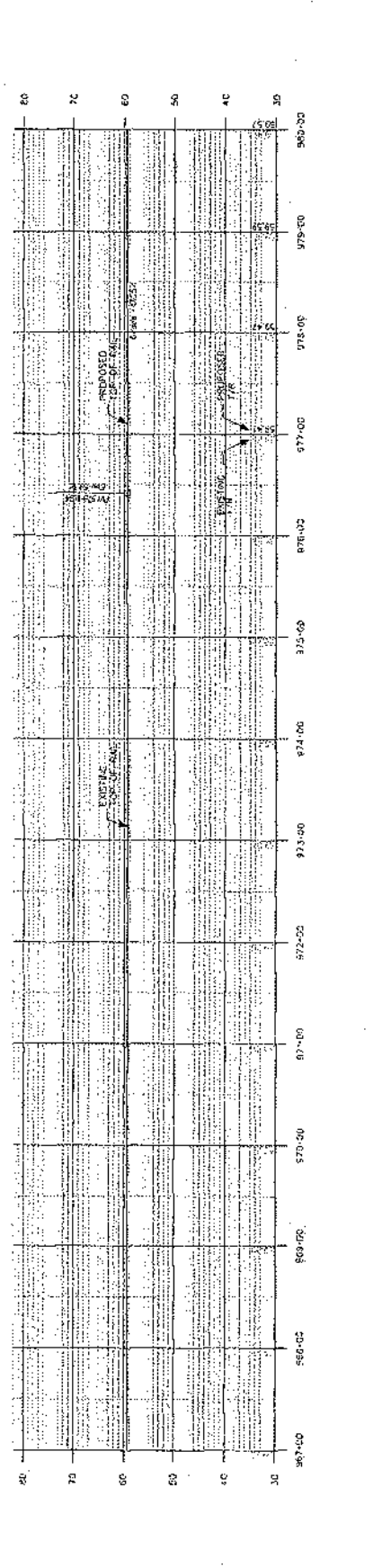
SIMON WONG ENGINEERING
 9968 HIBERT ST, SUITE 202
 ENCINITAS, CA 92036-3111
 TEL: 928-888-3113
 FAX: 928-888-3114

SCALE: HORIZONTAL: 1" = 100'-0"
 VERTICAL: 1" = 10'-0"

DATE:



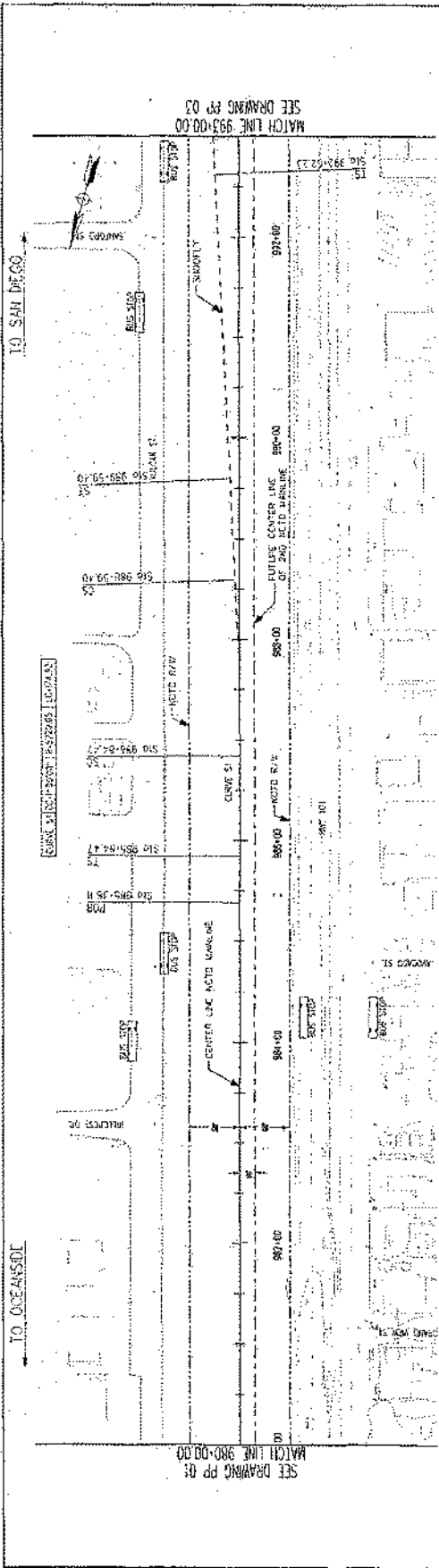
PLAN



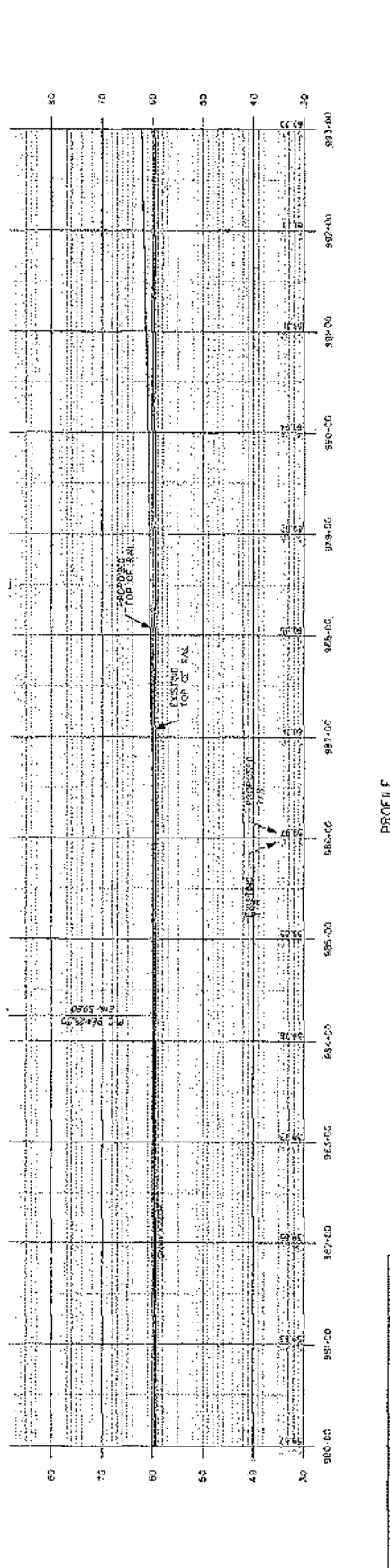
PROFILE

PROJECT NO. _____ SHEET NO. _____	SCALE _____ ORIGINAL ALL SIZES COPIES ALL SIZES	ENGINEER _____ DATE _____	CHECKED _____ DATE _____
CITY OF ENCINITAS ENGINEERING DEPARTMENT 1515 AVENUE D, ENCINITAS, CALIFORNIA 92025 PHONE (619) 941-2100		PROJECT NO. _____ SHEET NO. _____	

ENGINEER'S NAME: HANSON WILSON
 ADDRESS: 275 W. HOSPITALITY LANE STE. 300
 PHONE NO: (909) 906-8000



PLAN



PROFILE

REVISION	DATE	BY	APPROVED

SCALE	1" = 40'
VERTICAL SCALE	1" = 4'
HORIZONTAL SCALE	1" = 40'



PLANS PREPARED UNDER SUPERVISION OF RECOMMENDED ENGINEER

APPROVALS

DATE: _____ BY: _____

DATE: _____ BY: _____

PRELIMINARY

CITY OF ENCINITAS ENGINEERING DEPARTMENT DRAWING NO. _____

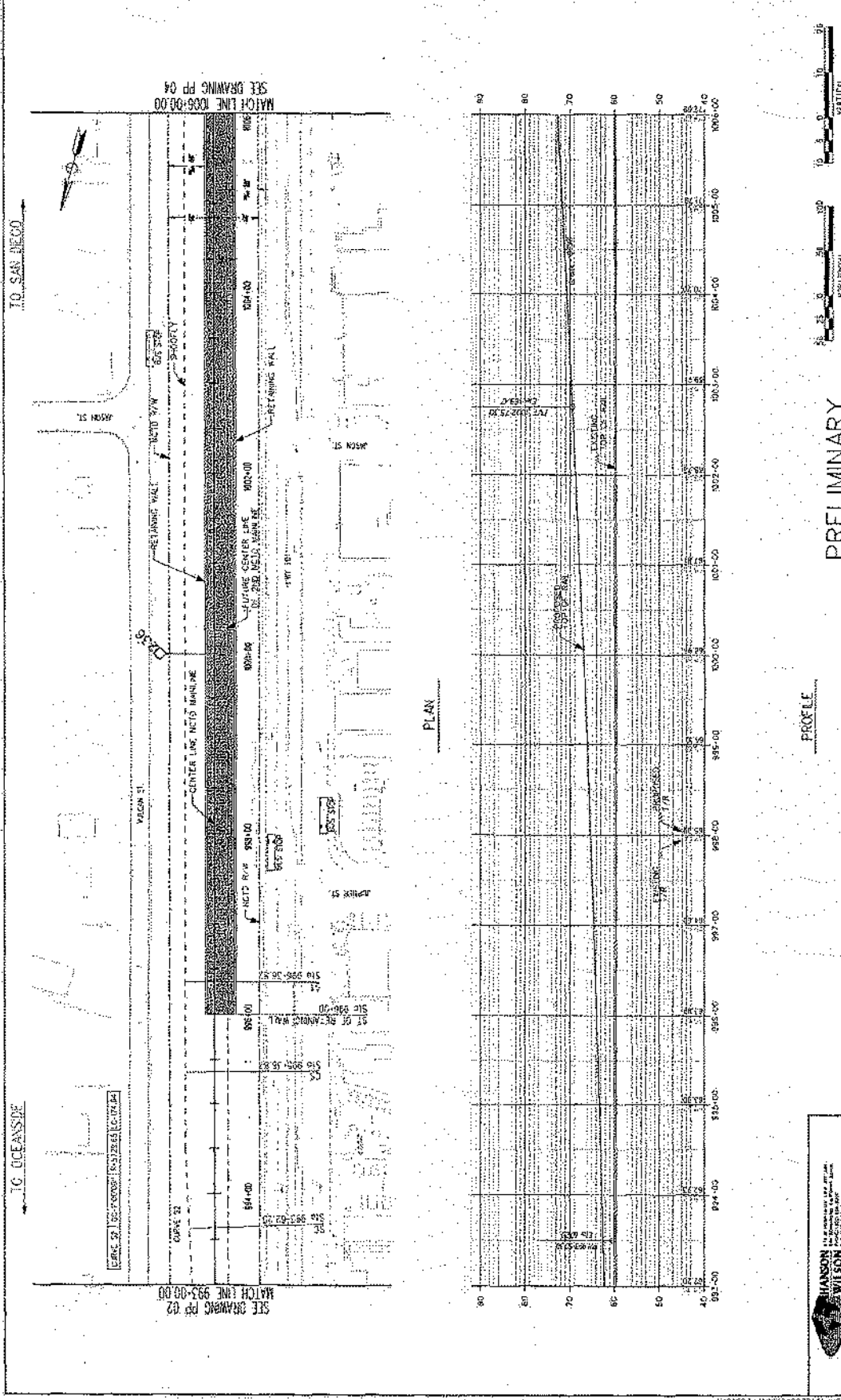
ENCINITAS, CALIFORNIA

PROJECT: _____

DATE: _____

SCALE: _____

ENGINEER'S NAME: HANSON WILSON
 ADDRESS: 275 W. HOSPITALITY LANE STE. 200
 PHONE NO.: (909) 806-8000



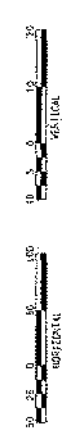
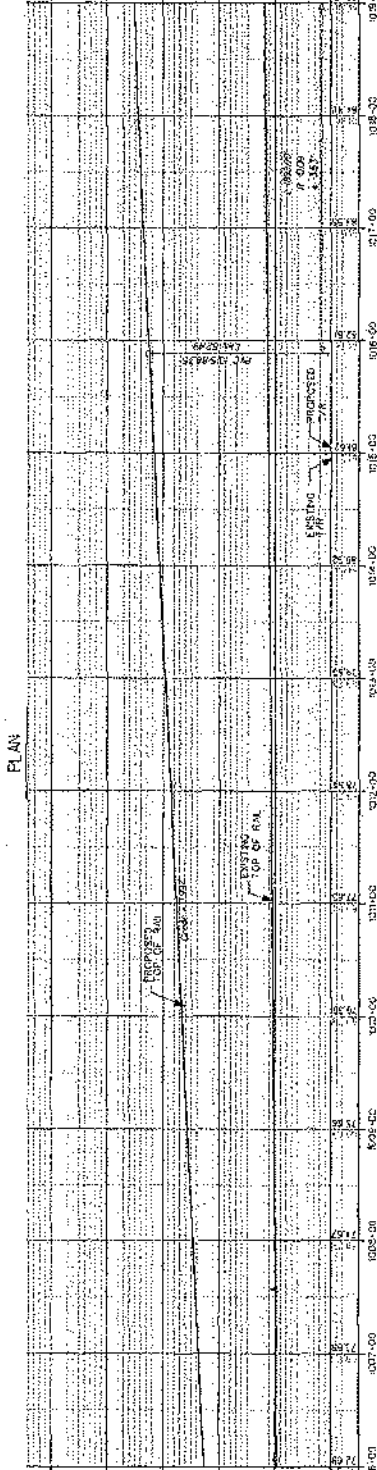
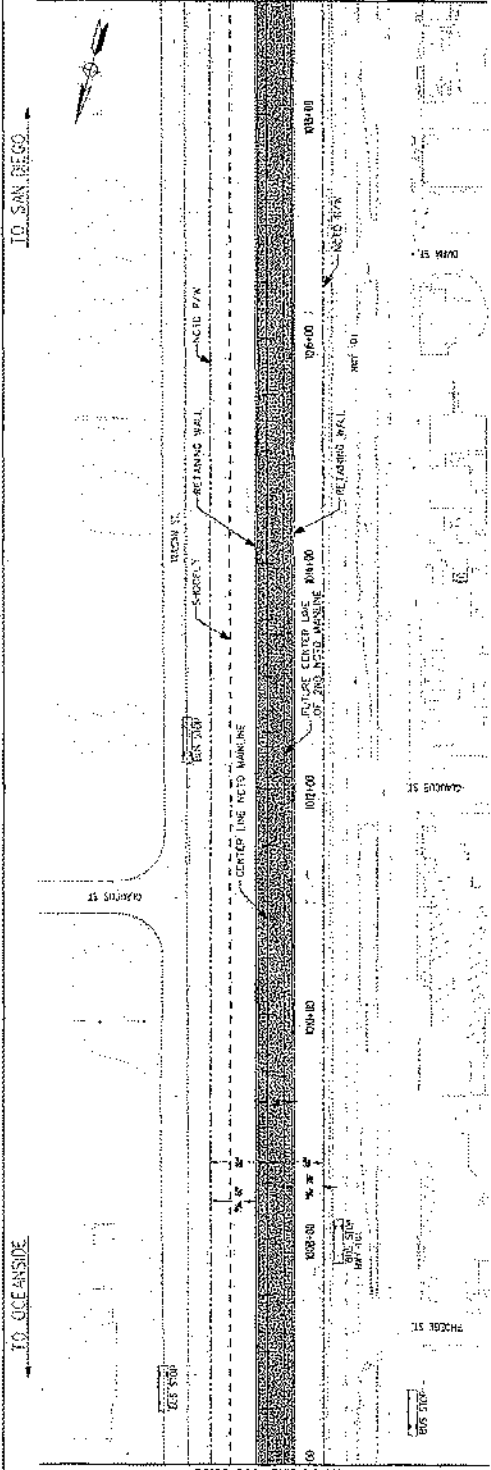
REVISIONS		DATE		BY		CHECKED		DATE		BY	
NO.	DESCRIPTION	DATE	BY	DATE	BY	DATE	BY	DATE	BY	DATE	BY

 HANSON WILSON ENGINEERS ARCHITECTS 275 W. HOSPITALITY LANE, STE. 300 SAN DIEGO, CA 92108 TEL: (619) 594-8000 FAX: (619) 594-8001 WWW: WWW.HANSONWILSON.COM	SCALE: HORIZONTAL: AS SHOWN VERTICAL: 1" = 20'-0"	APPROVALS: PREPARED BY: [Name] CHECKED BY: [Name] DESIGNED BY: [Name] DATE: [Date] DATE: [Date] DATE: [Date]	CITY OF ENCINITAS ENGINEERING DEPARTMENT 1510 W. MICHIGAN BLVD., 2ND FLOOR ENCINITAS, CA 92025 TEL: (760) 941-1000 FAX: (760) 941-1001 WWW: WWW.CITYOFENCINITAS.COM
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

PRELIMINARY

PROFILE

ENGINEER'S MARK: HANSON WILSON
 ADDRESS: 275 W. HOSPITALITY LANE, STE. 300
 PHONE NO: (909) 866-8000



PRELIMINARY

PROFILE

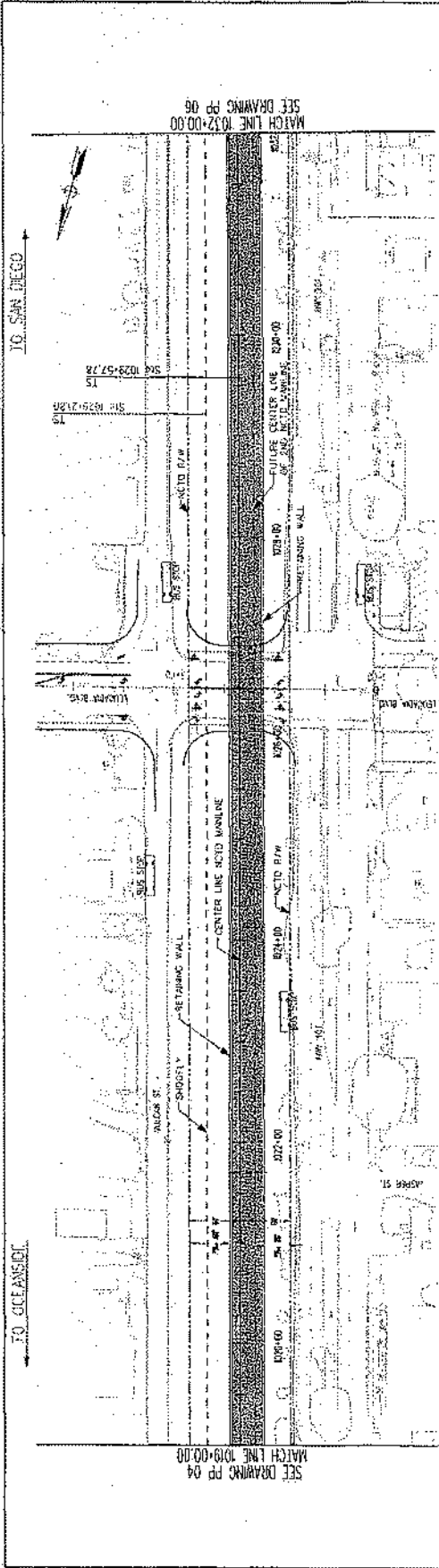
DESIGNED BY	DATE	SCALE
CHECKED BY	DATE	SCALE
APPROVED BY	DATE	SCALE
PROJECT NO.		
SHEET NO.		



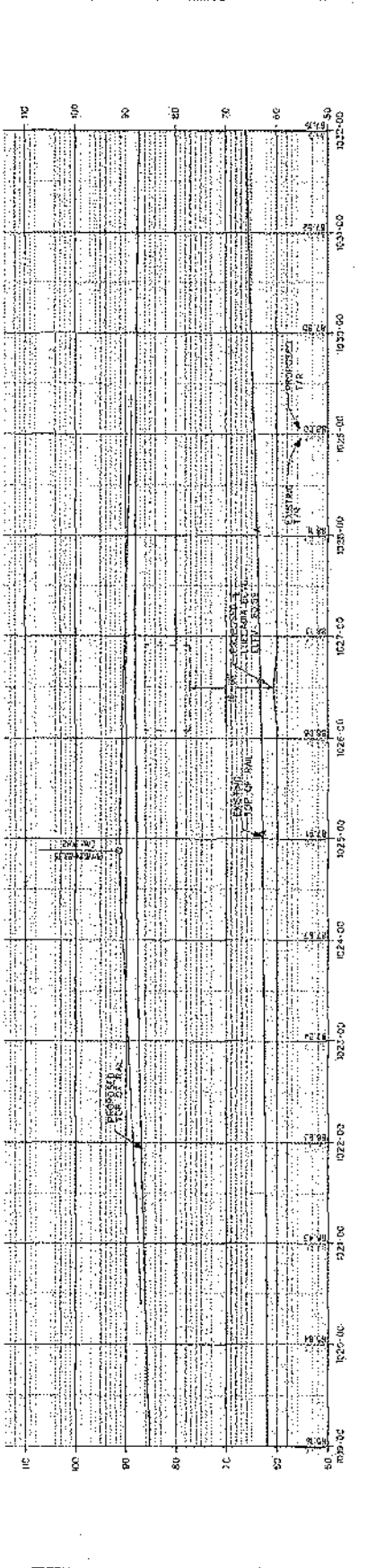
CITY OF ENCINITAS
ENGINEERING DEPARTMENT
DRAWING NO. 1006-00-00

APPROVALS
DATE
SCALE

ENGINEER'S NAME: HANSON WILSON
ADDRESS: 275 W. HOSPITALITY LANE, STE. 300
PHONE: (909) 906-8000



PLAN



PROFILE



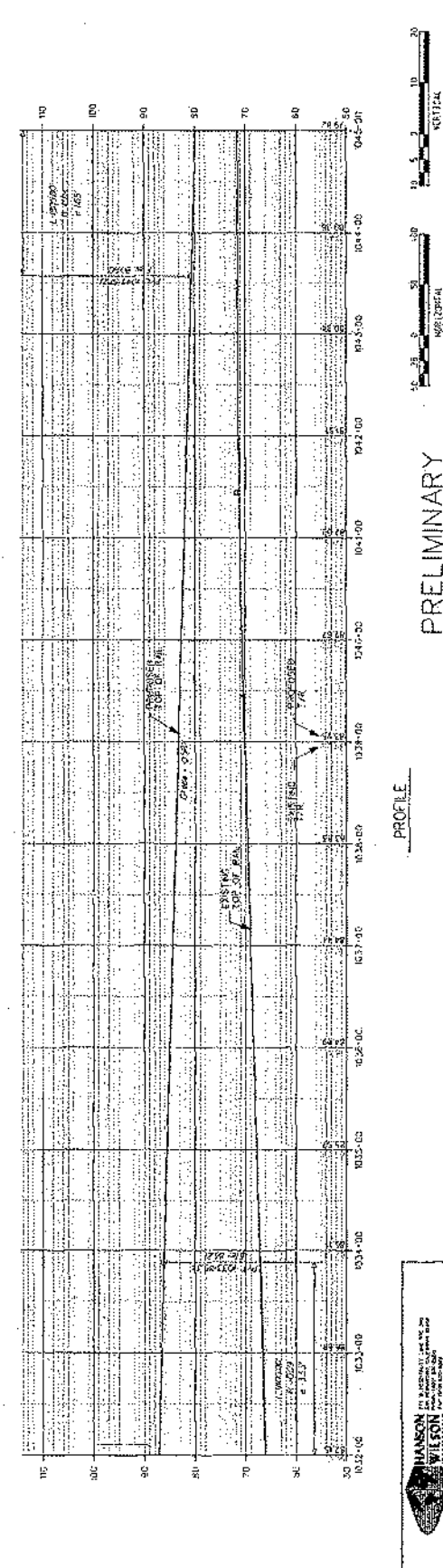
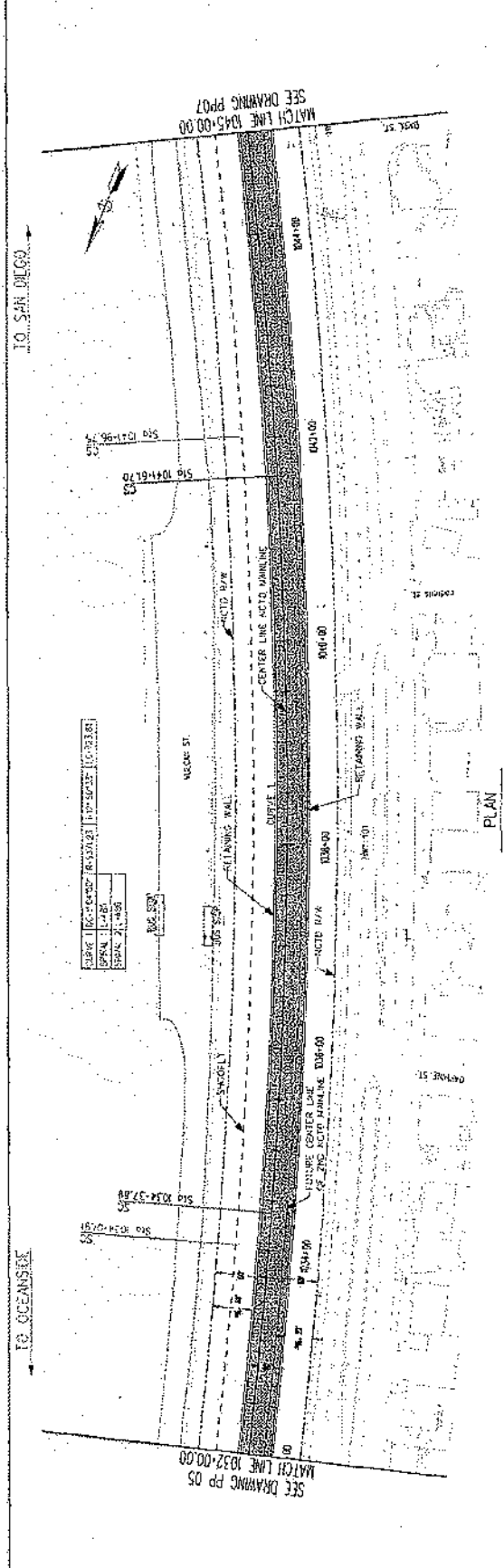
HANSON WILSON CIVIL & SANITARY ENGINEERS 275 W. HOSPITALITY LANE, STE. 300 SAN DIEGO, CA 92108 PHONE (619) 596-8000		PROJECT P-15 DATE 08/15/15 DESIGNED BY JAW CHECKED BY JAW APPROVED BY JAW		SCALE HORIZONTAL: 1" = 50'-0" VERTICAL: 1" = 10'-0"		SANDAG SANDAG REGIONAL WATER TREATMENT PLANT		APPROVALS PREPARED BY: JAW CHECKED BY: JAW DATE: 08/15/15 APPROVED BY: [Signature] DATE: [Blank]		CITY OF ENCINITAS ENGINEERING DEPARTMENT PROJECT NO. 15-0000 ENCINITAS BLVD. A PARK CORRIDOR GRADE SEPARATION STUDY PLAN AND PROFILE 1019+00 TO 1032+00 JOB MODEL NO. 15-0000-006		SHEET NO. 15-0000-006 TOTAL SHEETS: 10	
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MATCH LINE 1032+00.00
SEE DRAWING PP 06

MATCH LINE 1019+00.00
SEE DRAWING PP 04

TO SAN DIEGO

TO CLEARFIELD



PRELIMINARY

APPROVALS



SCALE: HORIZONTAL AS SHOWN, VERTICAL AS SHOWN

REVISION	DATE	BY	REASON

CITY OF ENCINITAS ENGINEERING DEPARTMENT

ENCINITAS, CALIFORNIA

PROJECT: **ENCINITAS CITY CENTER CORRIDOR STREET RECONSTRUCTION STUDY**

LOCATION: **ENCINITAS CITY CENTER CORRIDOR STREET RECONSTRUCTION STUDY**

DATE: **10/15/2014**

PROJECT NO.: **1045-00**

DRAWING NO.: **1045-00-01**

SHEET NO. OF 12

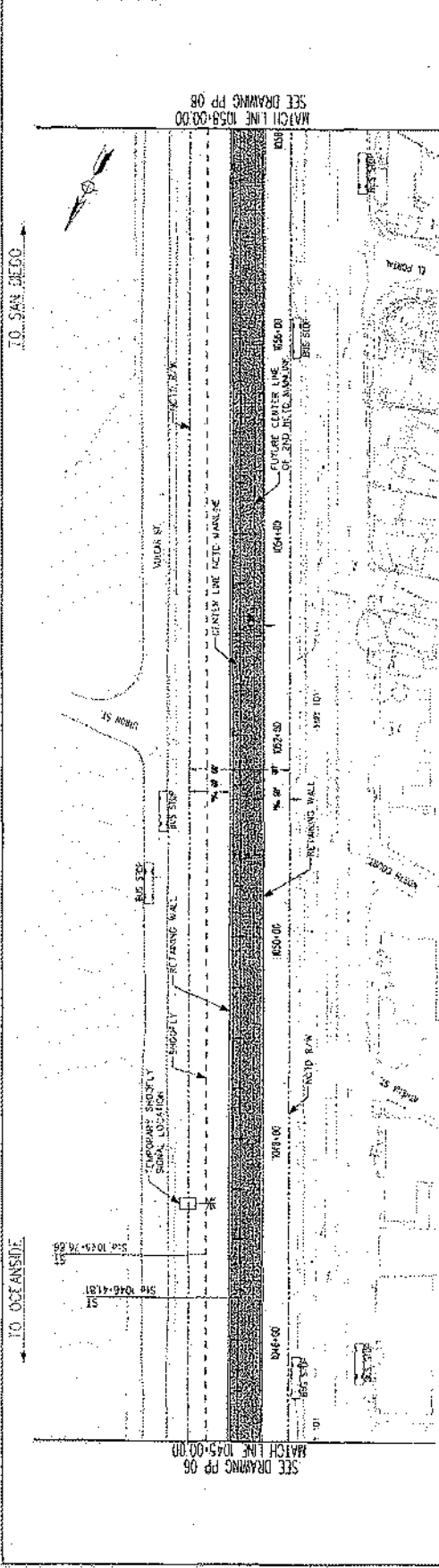
DESIGNED BY: _____

CHECKED BY: _____

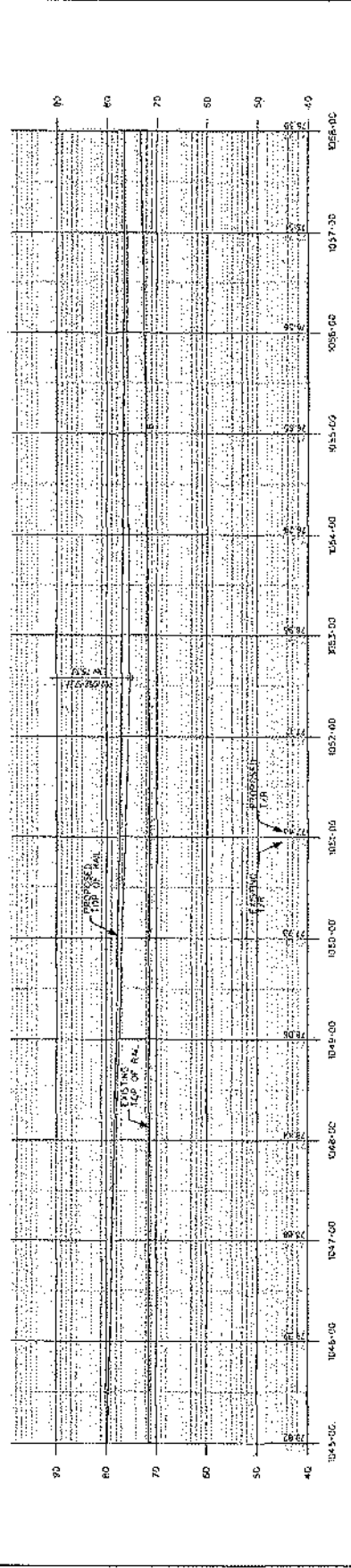
APPROVED BY: _____

DATE: _____

ENGINEER'S NAME: HANSON WILSON
 ADDRESS: 275 W. HOSPITALITY LANE, STE. 300
 PHONE NO: 909-93-806-8080

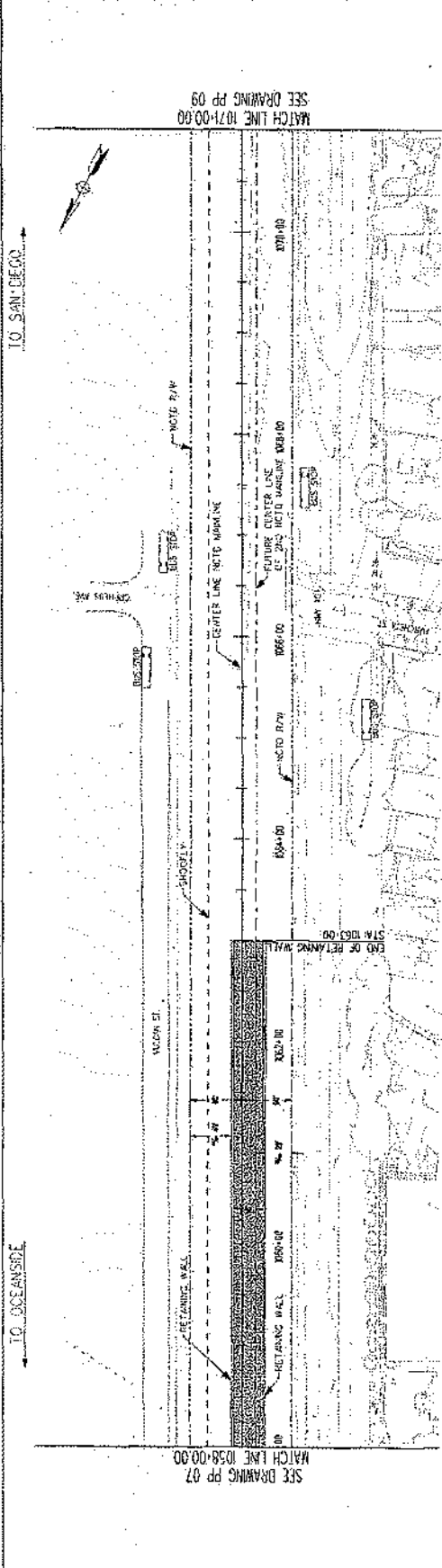


PLAN

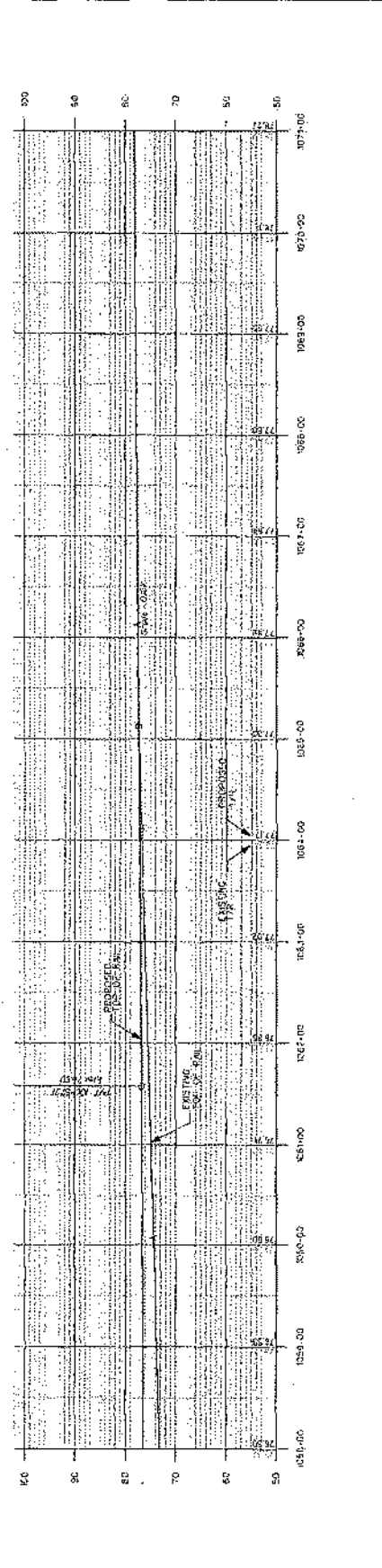


PROFILE

HANSON WILSON ENGINEERS, ARCHITECTS & PLANNERS 225 W. HOSPITALITY LANE, STE. 300 SAN DIEGO, CA 92108-8008 PHONE NO. (619) 592-8008		PRELIMINARY CITY OF ENCINITAS ENGINEERING DEPARTMENT SEWERAGE DEPARTMENT STUDY LOCAL 1500 - 25th STREET REAR AND FRONT 1045+00 TO 1058+00 PLAN NUMBER: 04-1058-208	
APPROVED BY: _____ DATE: _____	RECOMMENDED BY: _____ DATE: _____	SCALE: _____ HORIZONTAL: _____ VERTICAL: 1" = 50.00'	SHEET NO. _____ OF _____



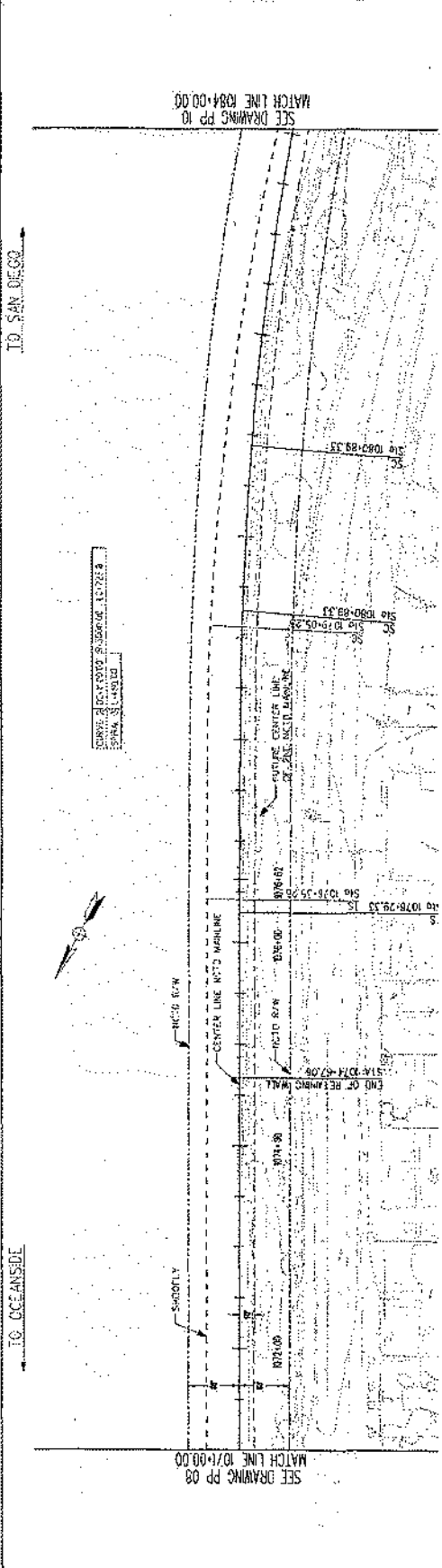
PLAN



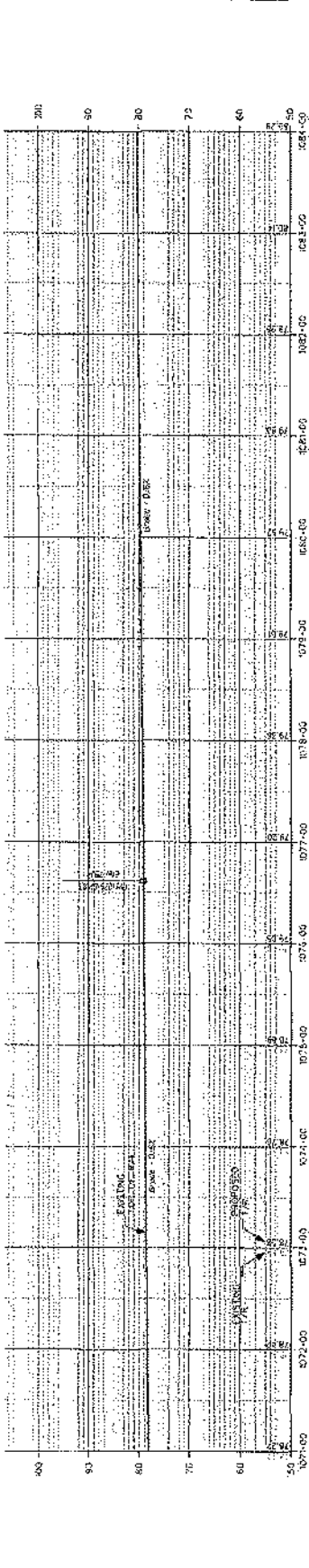
PROFILE

REVISION APPROVED DATE REVISIONS	SCALE HORIZONTAL VERTICAL	PROJECT NO. SHEET NO.	DATE DRAWN BY CHECKED BY ENGINEER
<p style="text-align: center;">PRELIMINARY</p>			
CITY OF ENCINITAS DEPARTMENT OF PUBLIC WORKS 1500 G STREET, SUITE 205 ENCINITAS, CA 92024		ENGINEERING DEPARTMENT 1500 G STREET, SUITE 205 ENCINITAS, CA 92024	

ENGINEER'S NAME: HANSON WILSON
 ADDRESS: 273 W. HOSPITALITY LANE, STE. 200
 PHONE NO: (909) 806-8000



PLAN



PROFILE



PRELIMINARY



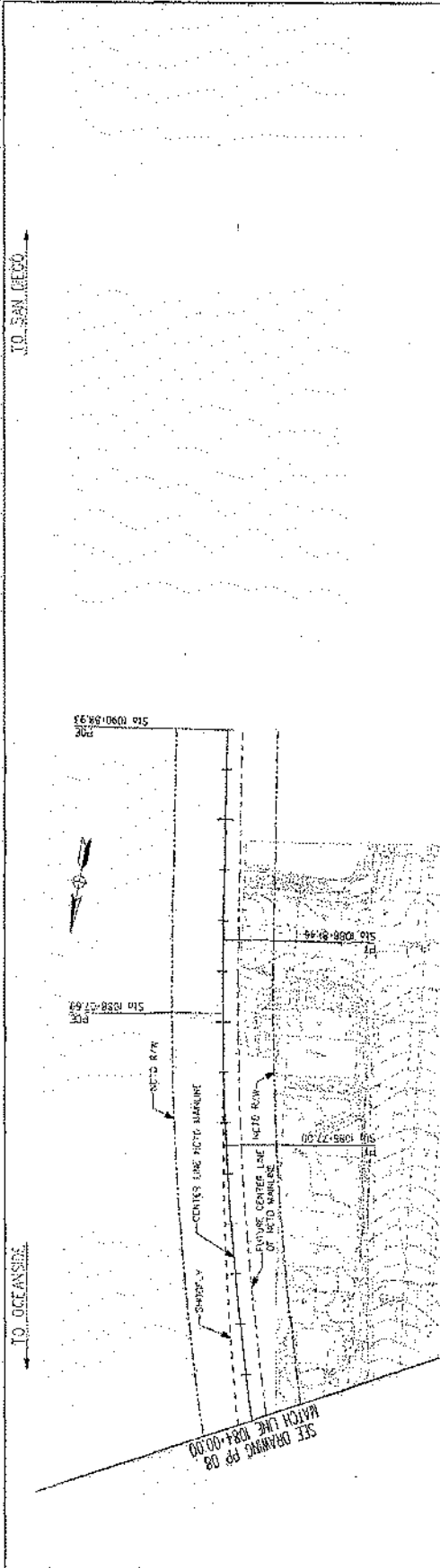
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REVISION		DATE		SCALE	VERTICAL 1"=20'
DESIGNED BY		DATE			
CHECKED BY		DATE			
APPROVED BY		DATE			

ENGINEER'S NAME: HANSON WILSON
 ADDRESS: 273 W. HOSPITALITY LANE STE. 200
 PHONE NO.: 952-806-8000
 ENGINEERING AGREEMENT
 PROJECT NO. 1071-00
 DATE 08/11/00
 SCALE HORIZONTAL 1"=100' VERTICAL 1"=20'
 CITY OF ENCINITAS ENGINEERING DEPARTMENT
 PROJECT NO. 1071-00
 DATE 08/11/00
 SCALE HORIZONTAL 1"=100' VERTICAL 1"=20'
 ALTERNATIVE 7 - PARALLEL OVER ALVARADO BLVD
 PLAN AND PROFILE
 SHEET NO. 1071-00

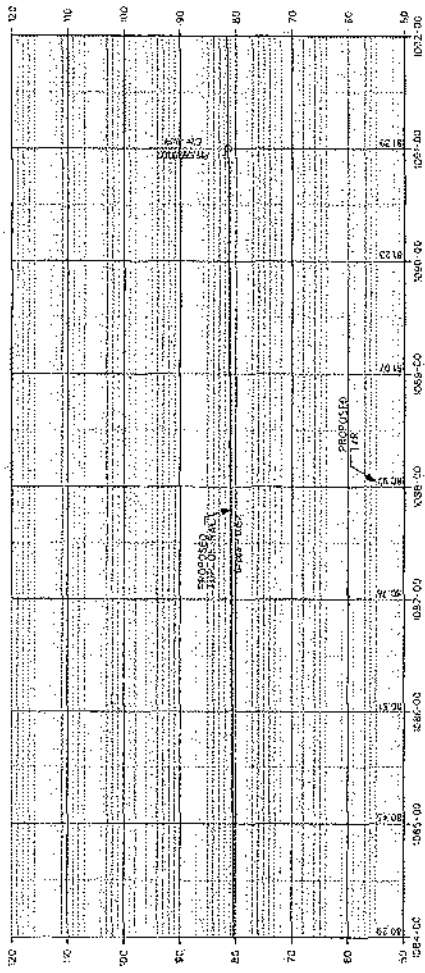
HANSON WILSON
 1071-00
 08/11/00
 1"=100'
 1"=20'
 HORIZONTAL 1"=100'
 VERTICAL 1"=20'
 SANDAG
 CITY OF ENCINITAS

TO SAN DIEGO

TO OCEANSIDE



PLAN



PROFILE



PRELIMINARY

APPROVED BY: [Signature]

DATE: [Date]



SCALE: AS SHOWN

VERTICAL: AS SHOWN

PROJECT: [Project Name]

DATE: [Date]

BY: [Name]

DATE: [Date]

CITY OF ENCINITAS - ENGINEERING DEPARTMENT - DRAWING NO. [Number]

ENCINITAS WATER TREATMENT PLANT - GRASS EXHAUSTION STUDY

ALTERNATIVE 2 - RAILROAD AVENUE - ENCINITAS BLVD.

PLAN AND PROFILE

DATE: [Date]

BY: [Name]

DATE: [Date]

SCALE: [Scale]

CONCEPTUAL PROJECT COST ESTIMATE FOR
LEUCADIA GRADE SEPARATION

PROJECT DESCRIPTION: Leucadia Boulevard and Railroad Corridor Grade Separation Study PSR
Proposed Improvement (Scope): Alternative 2 - Berm and Bridge at Leucadia Boulevard

ALTERNATIVE 2
SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	\$41,509,171
TOTAL STRUCTURE ITEMS	\$23,300,000
SUBTOTAL CONSTRUCTION COSTS	\$64,809,171
TOTAL RIGHT-OF-WAY ITEMS	\$250,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	\$65,059,171
SUPPORT COSTS (35% OF CONSTRUCTION COST)	22,770,710
TOTAL PROJECT COSTS	\$87,829,881
USE	<u>\$88,000,000</u>

**CONCEPTUAL PROJECT COST ESTIMATE FOR
LEUCADIA GRADE SEPARATION**

I. ROADWAY ITEMS

<u>Section 1 Earthwork</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Roadway Excavation	0	CY	\$6	\$0	
Clearing and Grubbing	1	LS	\$75,000	\$75,000	
Fill	8,100	CY	\$45	\$364,500	
				Subtotal Earthwork	\$439,500

<u>Section 2 Structural Section</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Asphalt Concrete	900	TON	\$70	\$63,000	
Aggregate Base	600	CY	\$85	\$51,000	
				Subtotal Pavement Structural Section	\$114,000

<u>Section 3 Drainage</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Inlets	40	EA	\$6,000	\$240,000	
RCP -	9,000	LF	\$2,000	\$18,000,000	
Other Drainage Improvements (Filters)	40	EA	\$500	\$20,000	
Pump Station		EA		\$0	
				Subtotal Drainage	\$18,260,000

I. ROADWAY ITEMS (Continued)

<u>Section 4 Specialty Items</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Curb and Gutter	1,173	LF	\$20	\$23,460	
Construct PCC Sidewalk	5	CY	\$1,000	\$5,000	
Retaining Walls	1	LS	\$9,700,930	\$9,700,930	
Pump Station Structure	1	LS		\$0	
Pump Station Equipment				\$0	
Erosion Control		LS		\$0	
SWPPP	1	LS	\$250,000	\$250,000	
Architectural Treatment		LS		\$0	
				Total Specialty Items	\$9,979,390

I. ROADWAY ITEMS (Continued)

<u>Section 5 Traffic</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Traffic Signals and Lighting	1	LS	\$150,000	\$150,000	
Overhead Sign Structures				\$0	
Signing and Striping	1	LS	\$20,000	\$20,000	
Traffic Control System	1	LS	\$250,000	\$250,000	
Traffic Management Plan	1	LS		\$0	
				Subtotal Traffic	\$420,000
				TOTAL SECTIONS 1-5	\$29,212,890

I. ROADWAY ITEMS (Continued)

<u>Section 6 Minor Items (excludes retaining walls)</u>				<u>Item Cost</u>	<u>Section Cost</u>
			\$19,511,960	X (5%)	975,598
	(Subtotal Sections 1-5 minus retaining walls)				
				Total Minor Items	\$975,598

<u>Section 7 Roadway Mobilization (includes ret walls)</u>					
			\$30,188,488	X (10%)	3,018,849
	(Subtotal Sections 1-6)				
				Total Roadway Mobilization	\$3,018,849

<u>Section 8 Roadway Additions</u>					
Supplemental Work			\$30,188,488	X (0%)	0
	(Subtotal Sections 1-6)				

Contingencies			\$33,207,337	X (25%)	\$8,301,834
	(Subtotal Sections 1-7)				
				TOTAL ROADWAY ADDITIONS	\$12,296,281

TOTAL ROADWAY ITEMS \$41,509,171
(Subtotal for Sections 1-8)

ESTIMATE PREPARED BY: Sunnie House
DATE: September 2005

PHONE (858) 467-6950

**CONCEPTUAL PROJECT COST ESTIMATE FOR
LEUCADIA GRADE SEPARATION**

II. STRUCTURES ITEMS

Structure:

(1)

Bridge Name: Leucadia Blvd. Overhead

Structure Type: CIP Box Girder and Tunnel

Width (out to out) - (LF) 35.00
Span Lengths - (LF) 2,080.00
Total Area - (SF) 72,800.00

Footing Type (pile/spread)

Sub Total Cost for Structure \$11,798,156

SUBTOTAL STRUCTURES ITEMS \$11,798,156
(Sum of Total Cost for Structures)

Railroad Related Costs: 5,134,778 \$5,134,778

TOTAL RAILROAD AND STRUCTURE ITEMS \$16,932,934

10% Mobilization \$1,693,293
25% Contingency \$4,656,557
Cost per m2
(incl. 10% mobilization and
20% contingency)

TOTAL STRUCTURES ITEMS \$23,282,784
For Budget Purpose \$23,300,000

ESTIMATE PREPARED BY: Jim Frost
DATE: September 2005

PHONE (858) 566-3113

**CONCEPTUAL PROJECT COST ESTIMATE FOR
LEUCADIA GRADE SEPARATION**

III. RIGHT OF WAY ITEMS

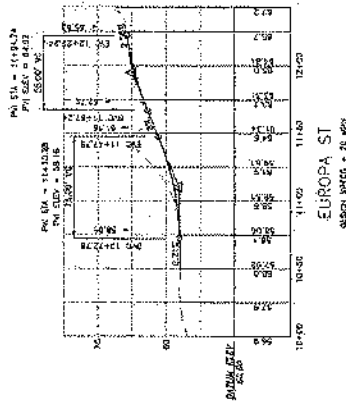
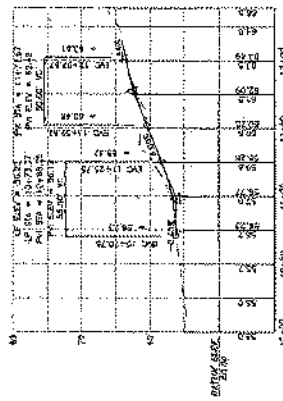
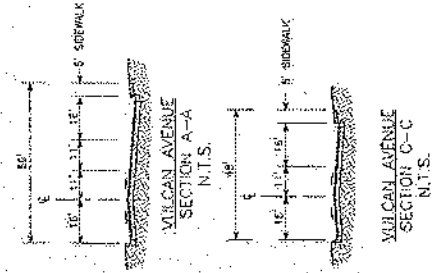
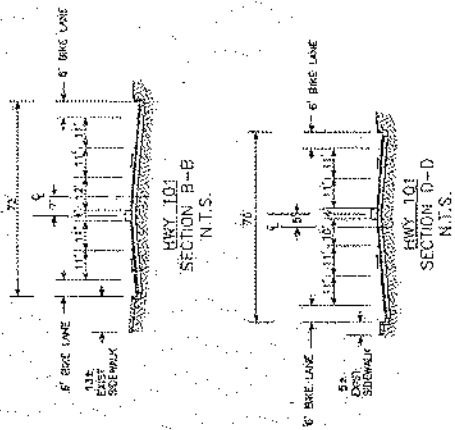
	VALUE
A. Acquisition, including excess lands, damages to remainder (s) and goodwill	
B. Utility Relocation	\$250,000
C. Relocation Assistance	\$0
D. Clearance/Demolition	\$0
E. Title and Escrow Fees	\$0
	-
TOTAL RIGHT OF WAY ITEMS (Escalated Value)	\$250,000

Anticipated Date of Right-of-Way Certification
(Date to which Values are Escalated) 2004

ESTIMATE PREPARED BY: Sunnie House
DATE: September 2005

PHONE: (858) 450-4700

Attachment F



WILDAN
 Serving Public Agencies
 and Contractors
 CONSULTING ENGINEERS
 1000 W. 10th St., Suite 100
 Lincoln, NE 68502
 Phone: (402) 441-1111
 Fax: (402) 441-1112
 Email: info@wildan.com



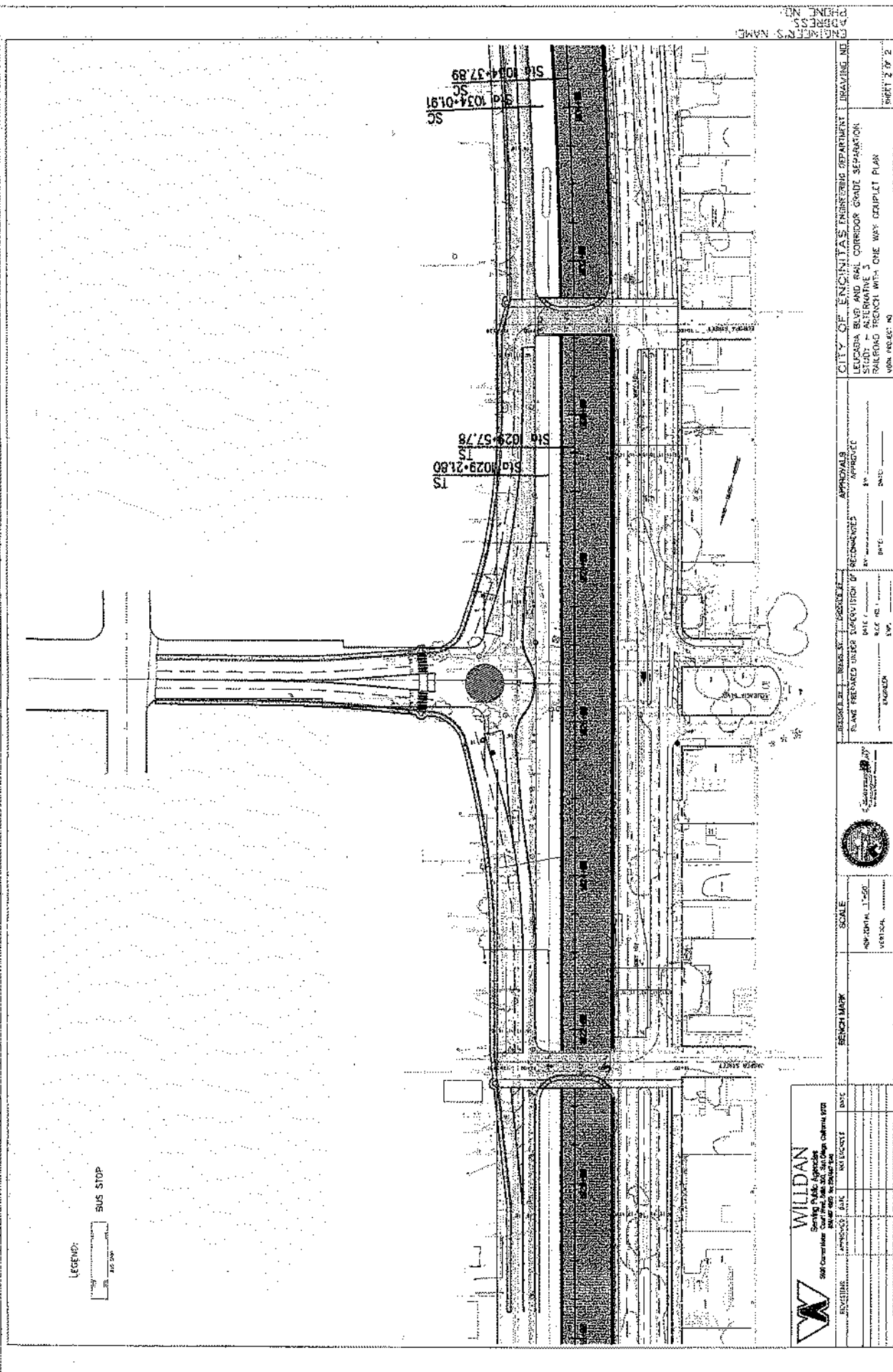
REVISION	DATE	BY	CHKD


SCALE	HORIZONTAL: 1"=40'	VERTICAL: 1"=4'
BENCHMARK		

DESIGNED BY	
CHECKED BY	
DATE	
PROJECT NO.	
DATE	
PROJECT NO.	

CITY OF ENCLINITYAS ENGINEERING DEPARTMENT
 DRAWING NO. _____
 PROJECT NO. _____
 SHEET 1 OF 2

11/20/2018 10:12:28 AM - Encinity has used the PLS-CAD-CORRIDOR-SEMI-TRAIL-3-CR-18-02-DWG



LEGEND:
 BUS STOP

WILDAN
 Surveying & Mapping
 5000 Cornerstone
 Raleigh, NC 27617
 Phone: 919.876.1100
 Fax: 919.876.1101
 Website: www.wildan.com

PROJECT NO. _____ DATE _____
 DRAWING NO. _____ DATE _____
 SHEET NO. _____ DATE _____

SCALE
 HORIZONTAL: 1"=50'
 VERTICAL: _____



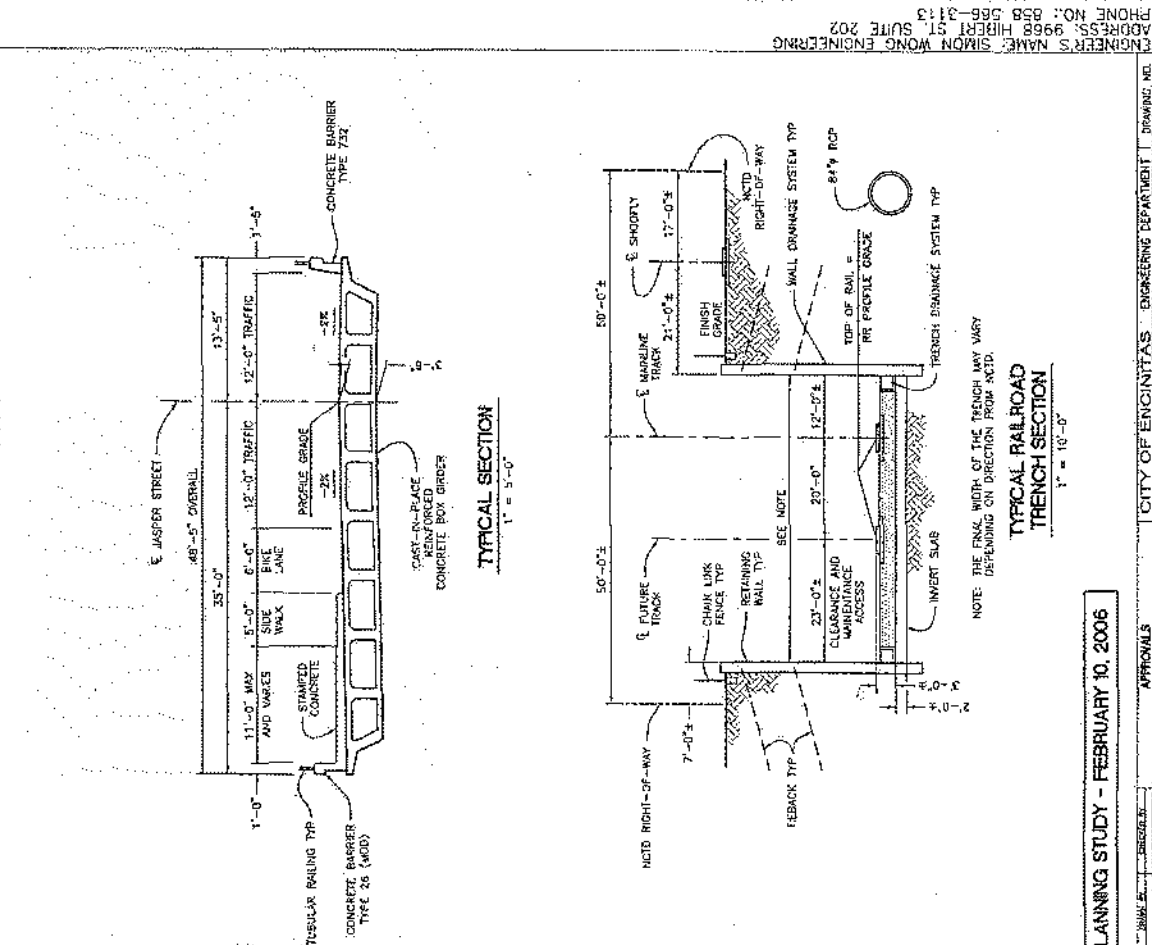
DESIGNED BY: _____
 CHECKED BY: _____
 DATE: _____
 SCALE: _____
 SHEET NO.: _____

APPROVALS
 APPROVED BY: _____
 DATE: _____
 TITLE: _____

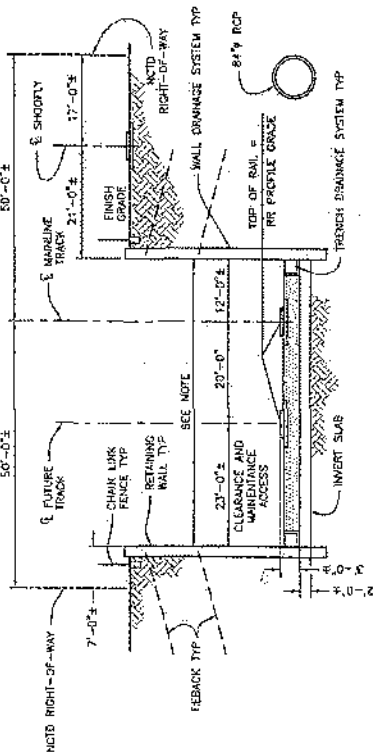
CITY OF ENCHILITAS ENGINEERING DEPARTMENT
 ENCHILITAS, TEXAS
 PROJECT NO. _____

ENGINEER'S NAME: _____
 ADDRESS: _____
 PHONE NO.: _____
 SHEET 2 OF 2

Surveying & Mapping - License No. 10000 - Willdan Engineering, Inc. - Raleigh, NC

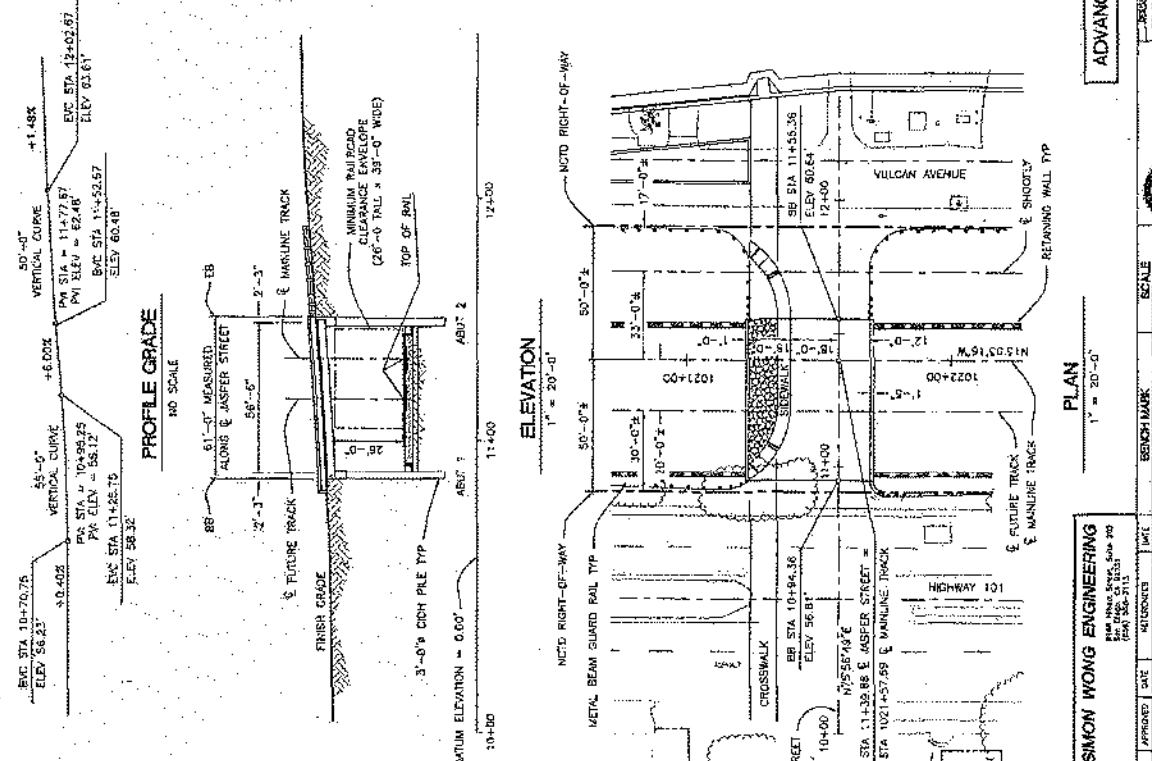


TYPICAL SECTION
1" = 5'-0"



NOTE: THE FINAL WIDTH OF THE TRENCH MAY VARY DEPENDING ON DIRECTION FROM AC'D.

TYPICAL RAILROAD
TRENCH SECTION
1" = 10'-0"



ELEVATION
1" = 20'-0"

PLAN
1" = 20'-0"

SIMON WONG ENGINEERING			
APPROVED	DATE	DRAWN	DATE

REVISIONS	DATE	BY	DESCRIPTION

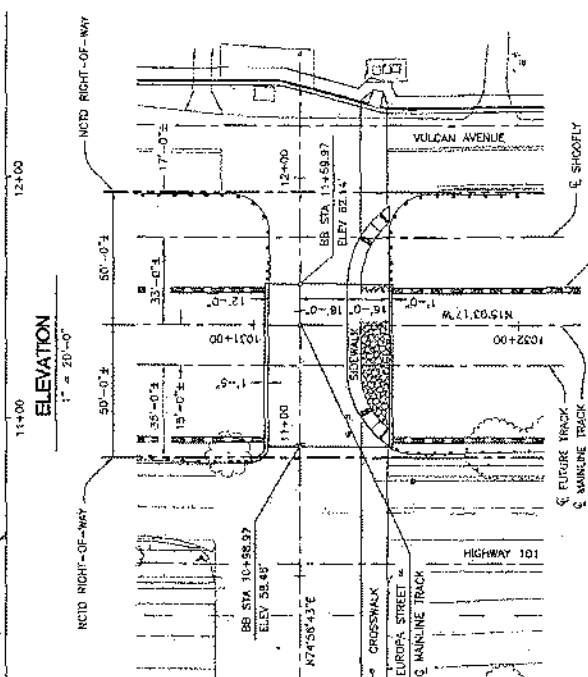
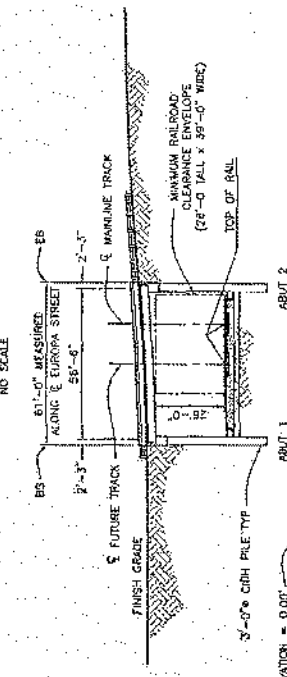
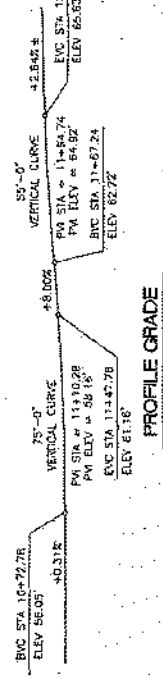
ADVANCE PLANNING STUDY - FEBRUARY 10, 2006

CITY OF ENCINITAS - ENGINEERING DEPARTMENT

LEUCASIA BOULEVARD AND RAIL CORRIDOR
 GRASSY AREA BETWEEN LEUCASIA BOULEVARD AND TRENCH #1 ONE WAY COUPLET
 PRELIMINARY GENERAL PLAN - JASPER STREET CH
 HIGHWAY 101 - 11-20-03

DRAWING NO. 068
 SHEET 1 OF 1

APPROVED: _____
 RECOMMENDED: _____
 BY: _____
 DATE: _____
 DRAWN BY: _____
 CHECKED BY: _____
 SCALE: _____
 SHEET NO.: _____



SIMON WONG ENGINEERING
 9988 HIBERT ST, SUITE 202
 BOSTON, MA 02124
 TEL: 858-566-3113

DATE	DESCRIPTION

SCALE: VERTICAL
 HORIZONTAL

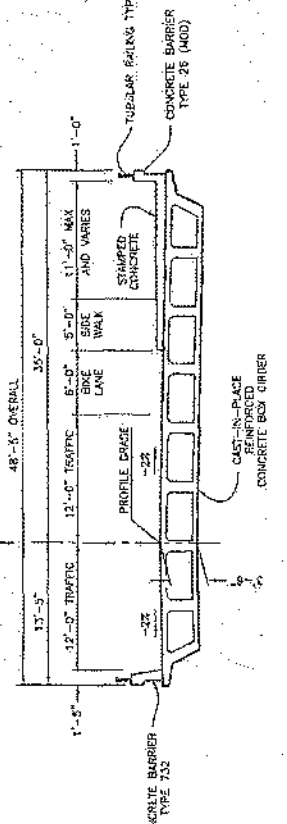
SANDAG

ADVANCE PLANNING STUDY - FEBRUARY 10, 2006

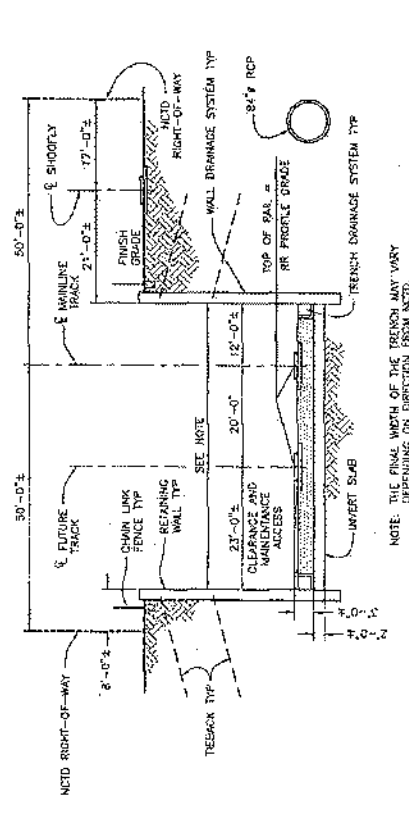
RECOMMENDED BY: []
 APPROVED BY: []
 DATE: []

CITY OF ENCINITAS ENGINEERING DEPARTMENT DRAWING NO.
 15-000-0000-0000-0000
 PROJECT NAME: RAIL CORRIDOR
 ALTERNATIVE 2 - RAILROAD TRENCH W/ ONE WAY CORPSET
 PRELIMINARY GENERAL PLAN - EUROPA STREET BH
 WORK PROJECT NO. 15-000-0000

SHEET 1 OF 1




TYPICAL SECTION
 1" = 5'-0"



TYPICAL RAILROAD
 TRENCH SECTION
 1" = 10'-0"

NOTE: THE FINAL WIDTH OF THE TRENCH MAY VARY
 DEPENDING ON DIRECTION FROM NCTD.



HANSON WILSON
INCORPORATED
Professional Engineers

REVISION	DATE	BY	DESCRIPTION

SCALE

HORIZONTAL: AS SHOWN
VERTICAL: AS SHOWN



SANDAG
San Diego Area Regional Transit Authority

PROJECT

TRUCK REPAIR BAY UNDER SUPERVISION OF
CONCRETE

DATE: 05/11/07
BY: [Signature]

APPROVALS

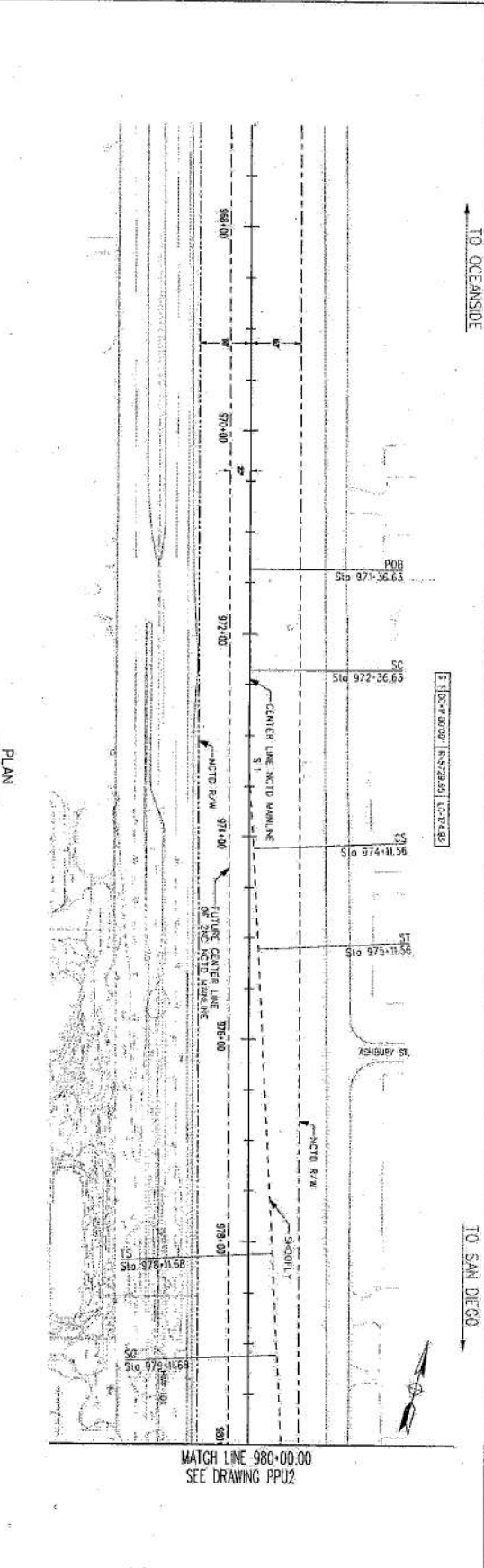
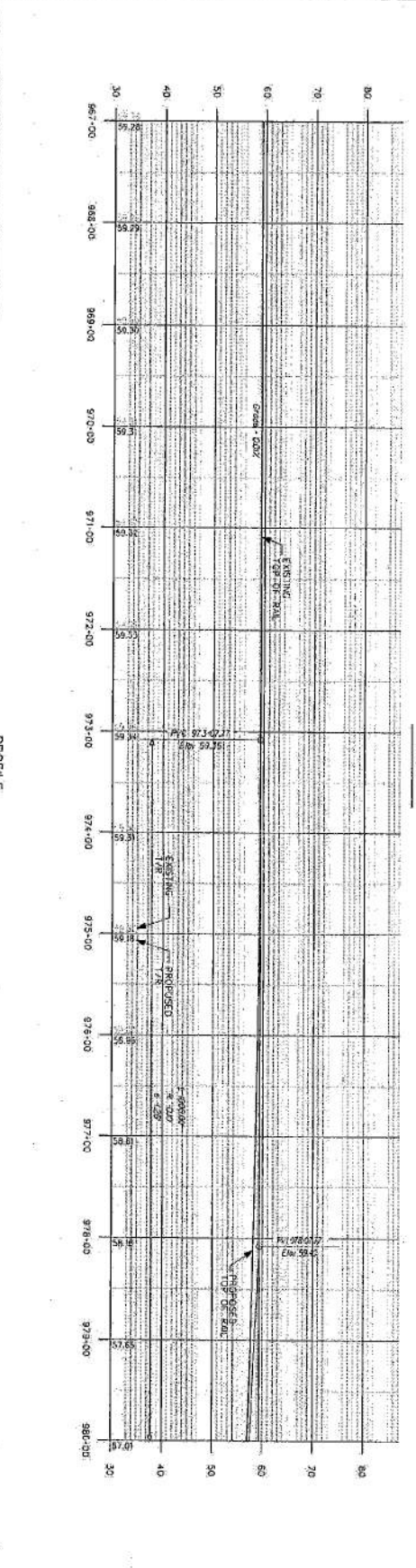
APPROVED: [Signature] DATE: 05/11/07
RECOMMENDED: [Signature] DATE: 05/11/07

CITY OF ENCINITAS

ENGINEERING DEPARTMENT | DRAWING NO. 957-00 TO 980-00
ALTERNATIVE 2 - REAL ROAD TRENCH WORKWAY CONSULT
DATE: 05/11/07

PRELIMINARY

50' 0" 100' 0" 150' 0" 200' 0" (1:50 SCALE)
100' 0" 200' 0" 300' 0" 400' 0" (1:100 SCALE)

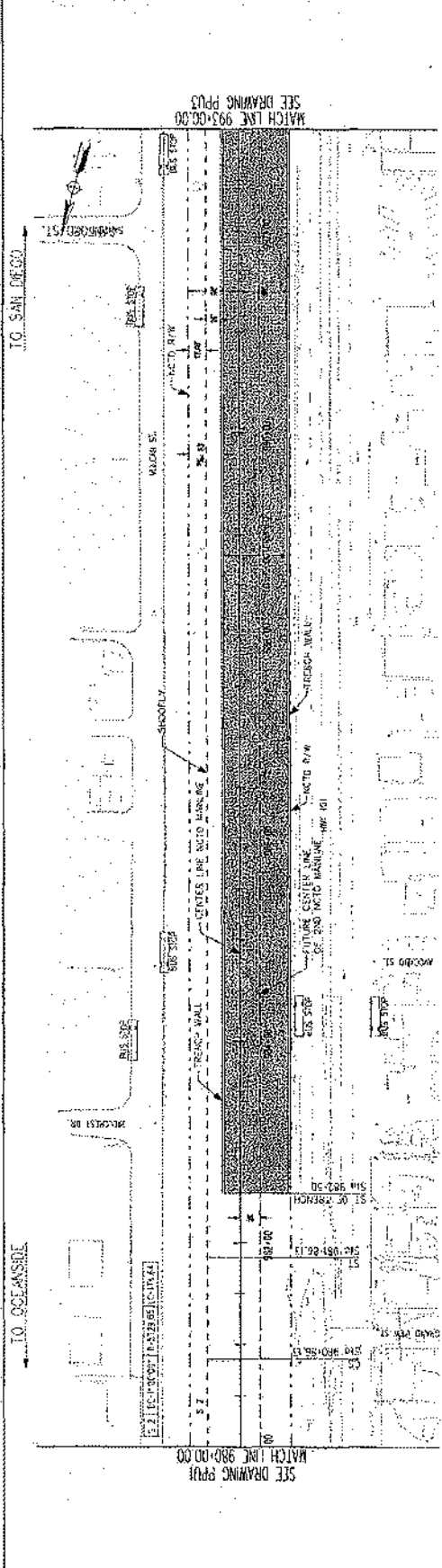


TO OCEANSIDE

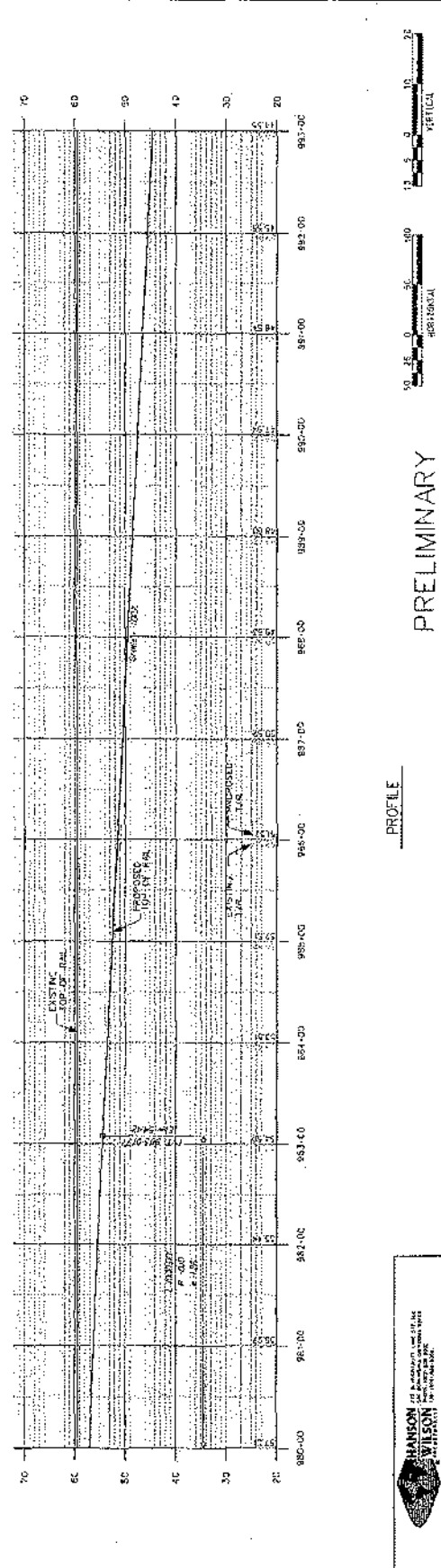
TO SAN DIEGO

MATCH LINE 980+00.00
SEE DRAWING PPU2

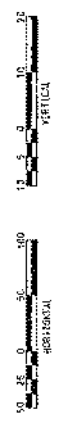
ENGINEER'S NAME: HANSON WILSON
ADDRESS: 275 W. HOSPITALITY LANE STE. 300
PHONE NO.: (909)-806-8000



PLAN

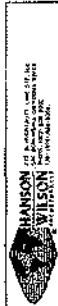


PROFILE



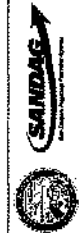
MATCH LINE 993+00.00
SEE DRAWING PPU3

MATCH LINE 980+00.00
SEE DRAWING PPU1



REVISION	DATE	BY	DESCRIPTION

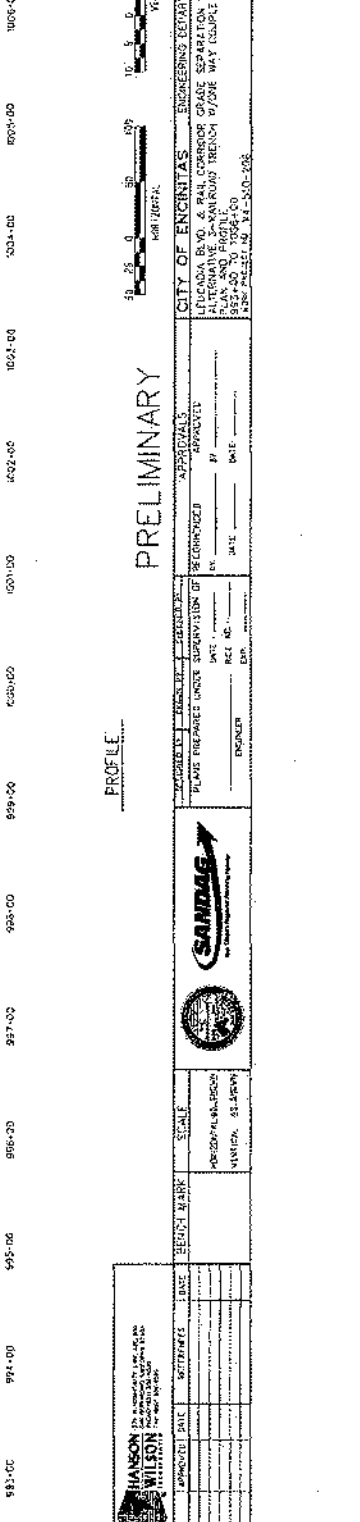
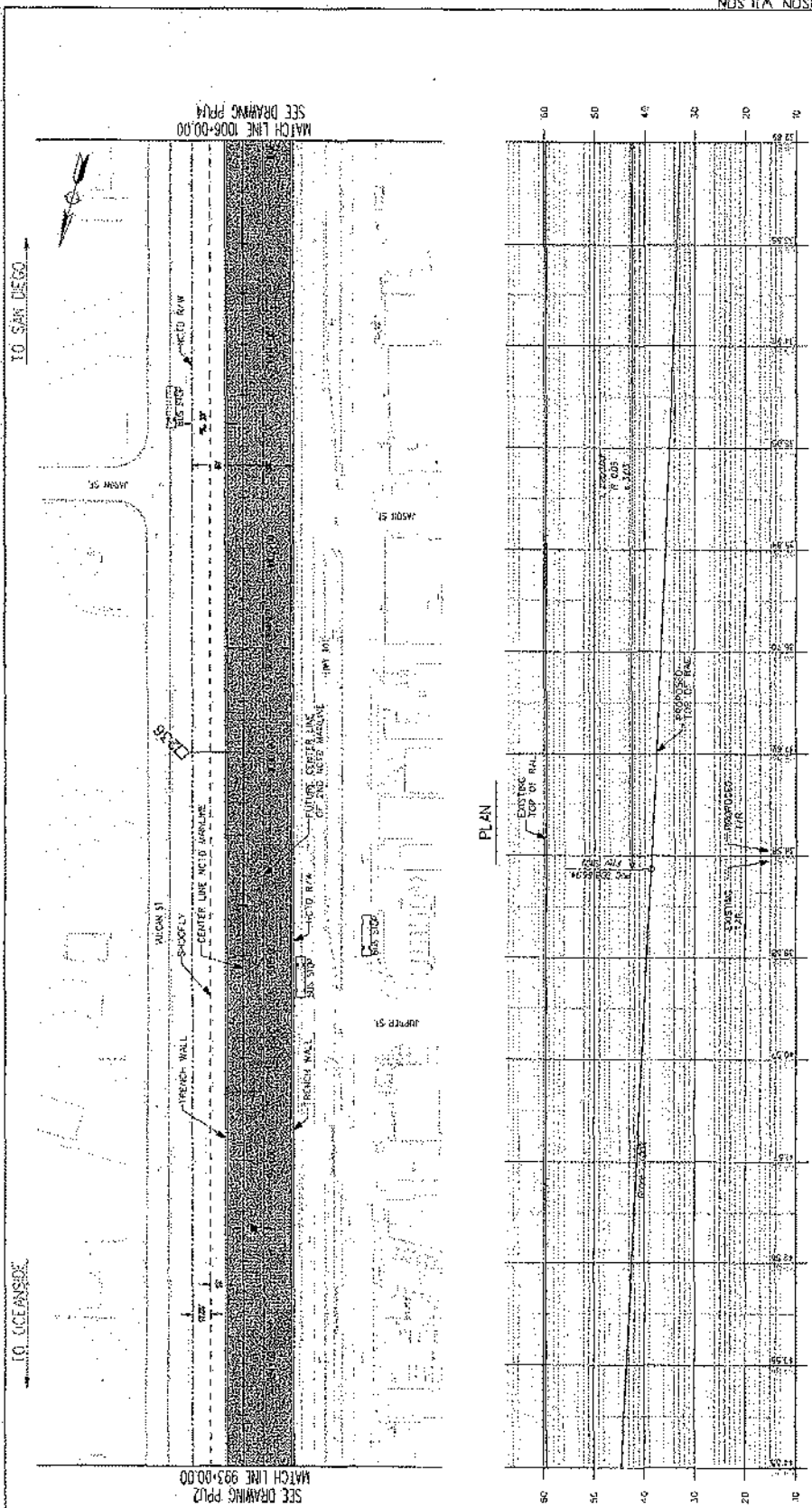
SCALE
HORIZONTAL: 1" = 50'
VERTICAL: 1" = 20'



DESIGNED BY: [Name]
 CHECKED BY: [Name]
 DATE: [Date]

APPROVED BY: [Signature]
 DATE: [Date]

CITY OF ENCINITAS ENGINEERING DEPARTMENT
 1100 W. ENCINITAS BLVD. SUITE 200
 ENCINITAS, CA 92026
 PHONE NO. (760) 941-8000
 ADDRESS: 275 W. HOSPITALITY LANE, STE. 300



SEE DRAWING P912

SEE DRAWING P914

PRELIMINARY

ENGINEER'S NAME: HANSON WILSON
 ADDRESS: 273 W. HOSPITALITY LANE, STE. 300
 PHONE NO.: (909) 806-8000

CITY OF ENCINITAS
 ENGINEERING DEPARTMENT
 LUCIANA BLVD. & RAIL CORRIDOR GRADE SEPARATION STUDY
 PLUS AROUND TRENCH D/Y/SE W/4/20/11
 987+00 TO 1004+00
 25% SCALE (HORIZONTAL)

APPROVED	DATE	APPROVED	DATE

DESIGNED BY	CHECKED BY	DATE

APPROVED	DATE

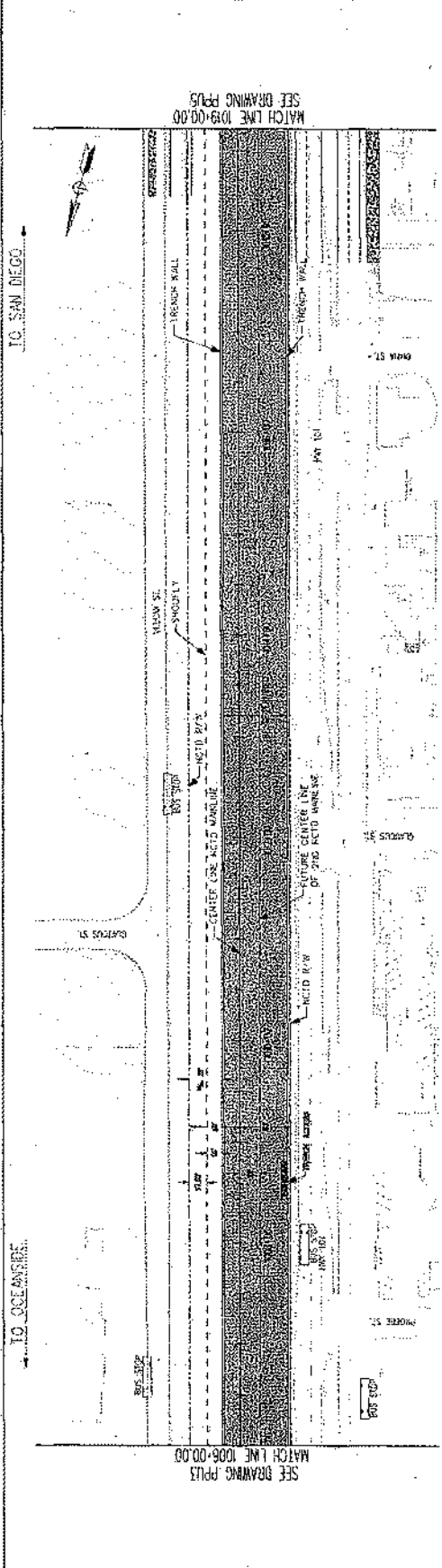
PROJECT NO.	DRAWING NO.

SCALE	DATE

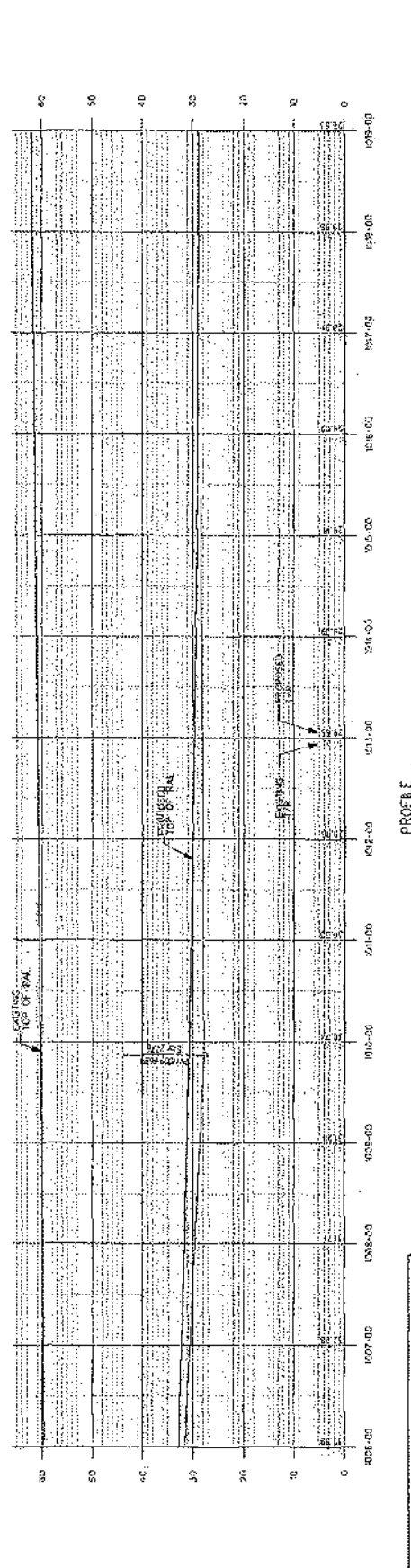
SCALE	DATE

ENCINITAS
 SANDAG
 SANDAG

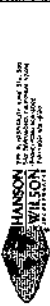
SHEET 3 OF 32



PLAN



PROFILE



DATE	DESCRIPTION	BY

SCALE	HORIZONTAL AS SHOWN



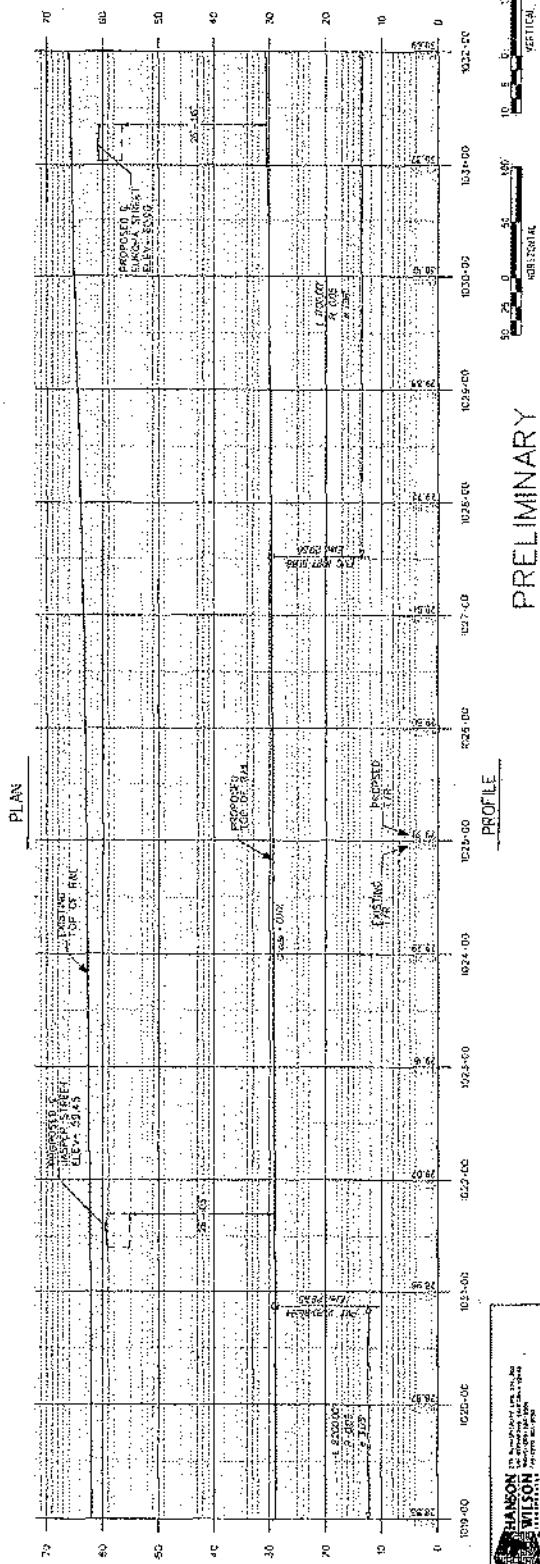
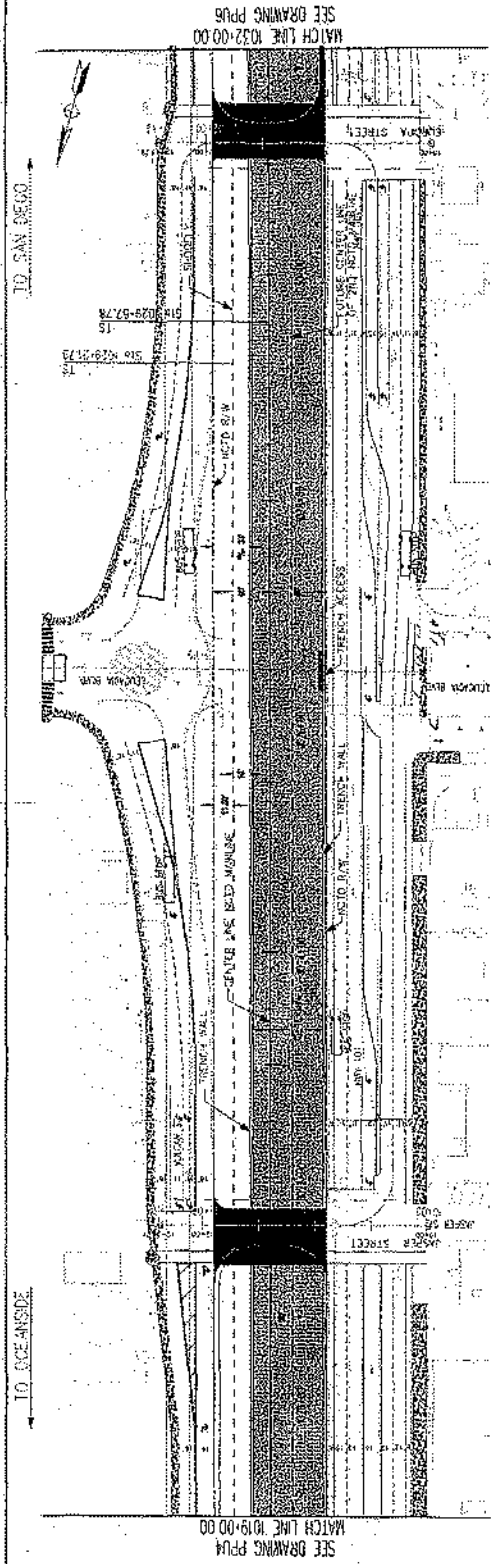
PLANS PREPARED UNDER SUPERVISION OF ENGINEERED BY

PRELIMINARY

APPROVALS	DATE

CITY OF ENCINITAS
 ENGINEERING DEPARTMENT
 1500 GARDEN STREET, ENCINITAS, CA 92025
 PHONE: (909) 806-8000

ENGINEER'S NAME: HANSON WILSON
 ADDRESS: 275 W. HOSPITALITY LANE STE 300
 PHONE: (903) 806-8000



PRELIMINARY

CITY OF ENCINITAS
 ENGINEERING DEPARTMENT
 ENCINITAS, CALIFORNIA

LEONARDO S. VILLOTA, P.E.
 PROJECT ENGINEER

APPROVED: _____
 DATE: _____

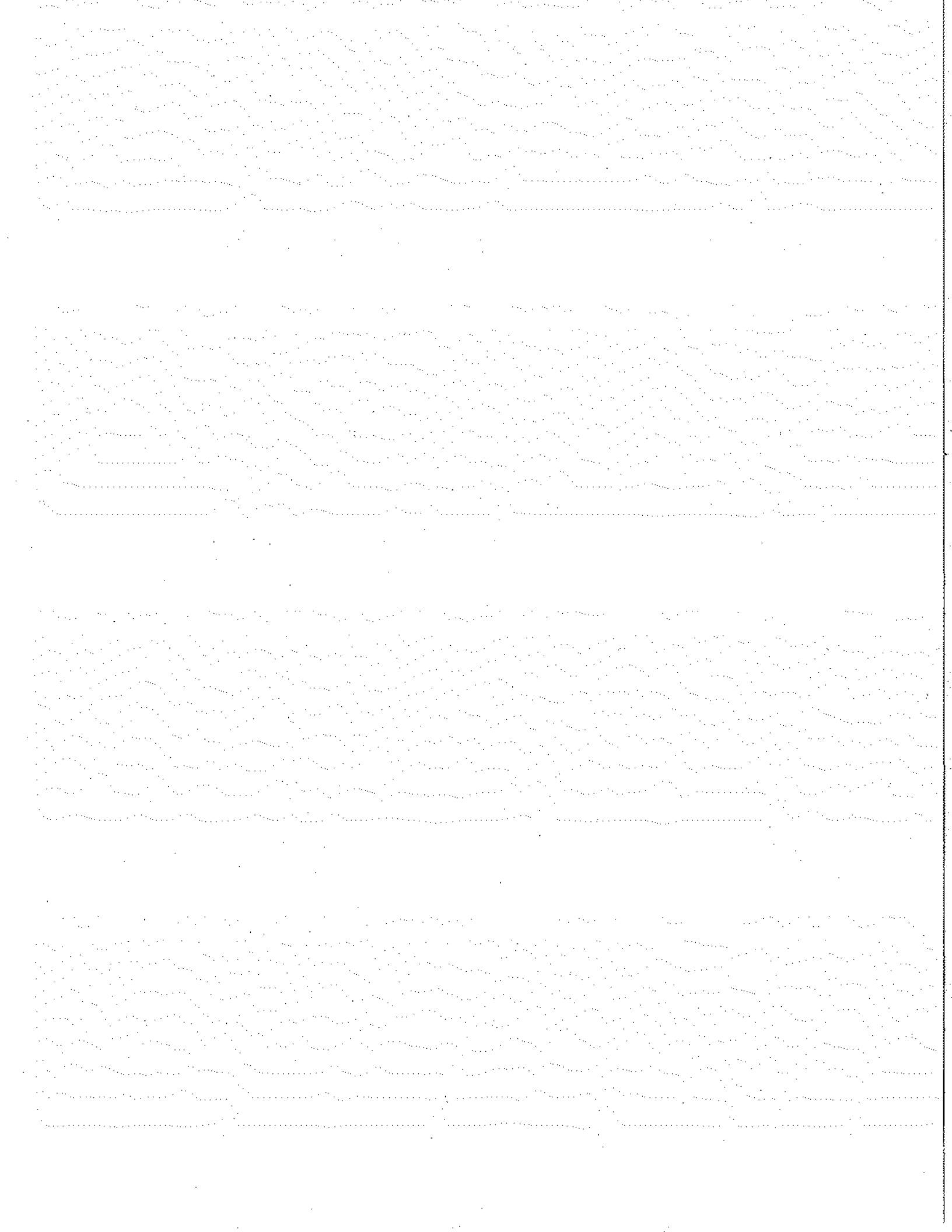
RECOMMENDED: _____
 DATE: _____

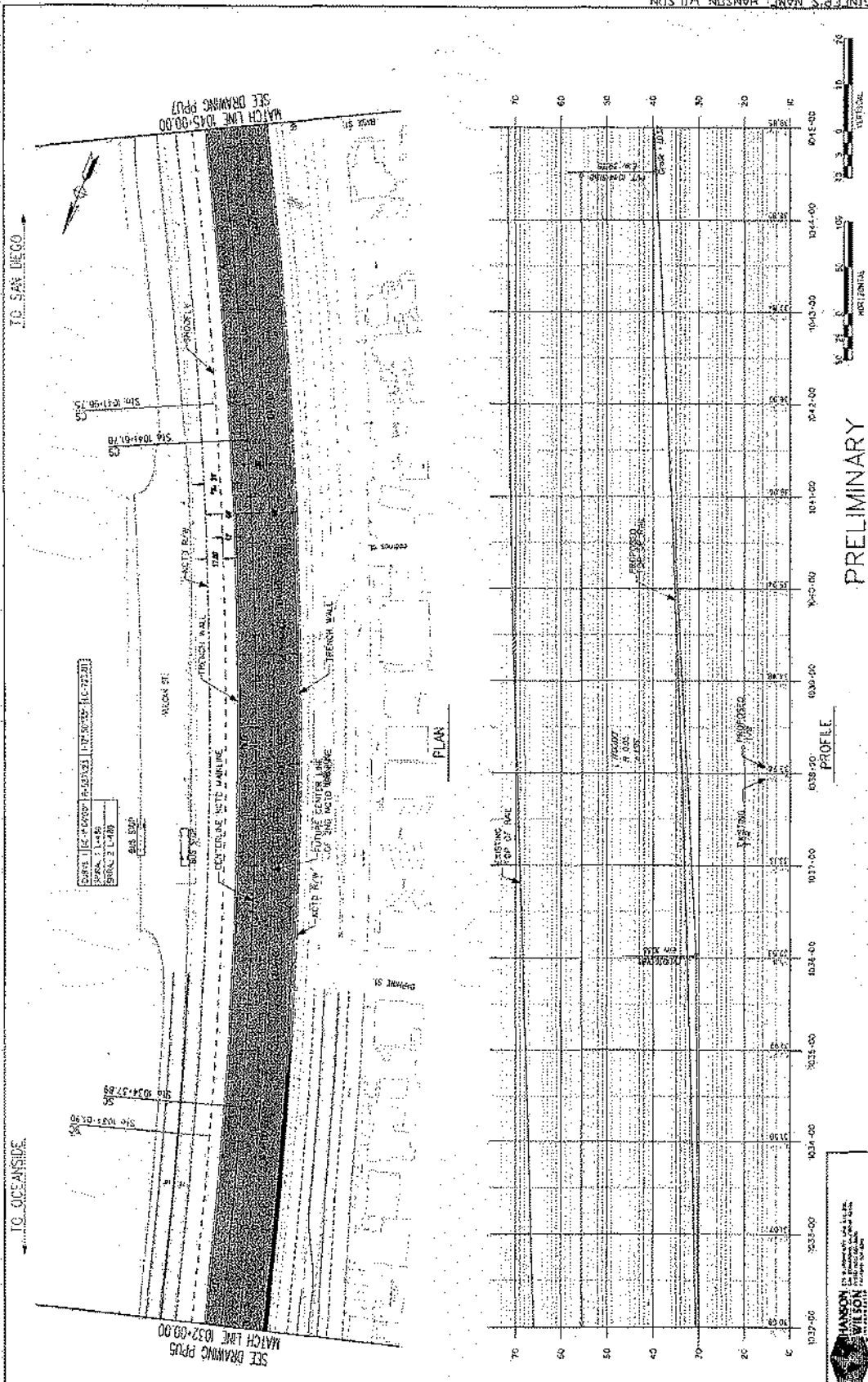
REVISIONS:

NO.	DATE	DESCRIPTION

HANSON WILSON
 ENGINEERS ARCHITECTS

SCALE HORIZONTAL: 1" = 40' VERTICAL: 1" = 10'	SHEET NO. 10 OF 10





PRELIMINARY

	DATE: _____	SCALE: _____
	BY: _____	CHECKED BY: _____

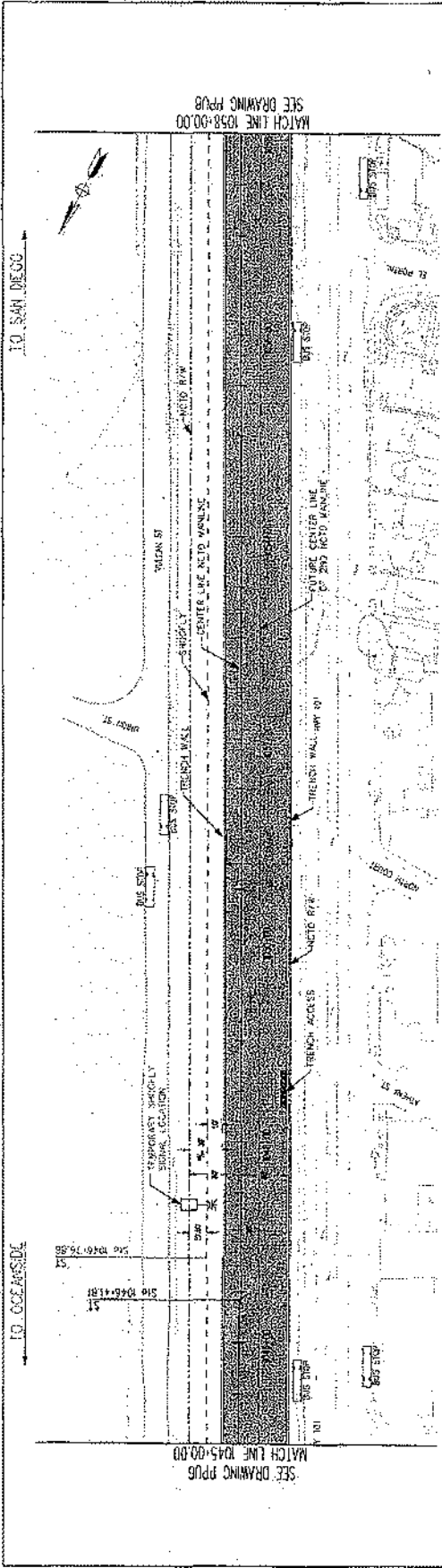
	DATE: _____	SCALE: _____
	BY: _____	CHECKED BY: _____

	DATE: _____	SCALE: _____
	BY: _____	CHECKED BY: _____

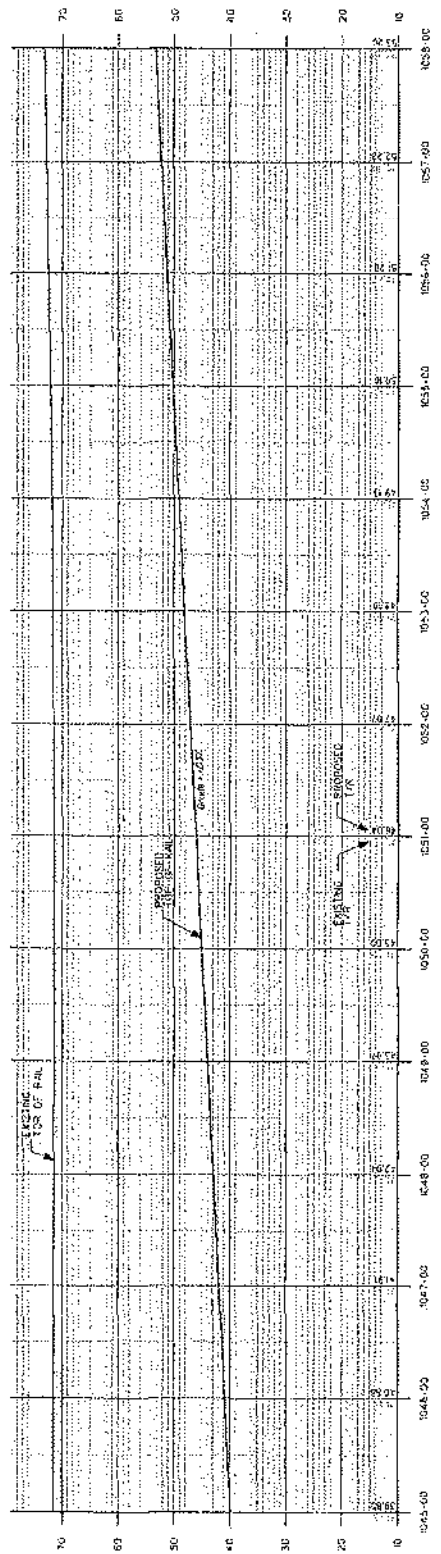
	CITY OF ENCINITAS	ENGINEERING DEPARTMENT
	LEUCADIA BLVD. & RAIL CORRIDOR (DRAINAGE SEPARATOR STUDY)	PROJECT NO. _____
	PLAN (FROM PREVIOUS PERIOD) SHEET NO. _____	DATE: _____
	SECTION 10 TO 1045+00	DATE: _____
	SECTION 1032 TO 1045+00	DATE: _____
	SECTION 1032 TO 1045+00	DATE: _____

ENGINEER'S NAME: HANSON WILSON
 ADDRESS: 275 W. HOSPITALITY LANE, STE. 300
 PHONE NO.: (909) 896-8880

SHEET NO. 10
 OF 32



PLANS



PROFILE

NO.	DATE	BY	REVISION

	SCALE	BENCH MARK
	HORIZONTAL 1" = 50'-0"	VERTICAL 1" = 5'-0"



PRELIMINARY

APPROVALS
 CITY OF ENCINITAS ENGINEERING DEPARTMENT
 LEGENDA B.V. & RAY GONRICKS CHAIR, OPERATIONAL STUDY
 ALAN RAY, CHIEF ENGINEER
 1045+00 TO 1058+00
 SEE SHEET NO. 1044-00

DRAWING NO.
 SHEET 7 OF 10

ENGINEER'S NAME: HANSON WILSON
 ADDRESS: 275 W. HOSPITALITY LANE, S.C. 300
 PHONE NO.: (909) 806-8000

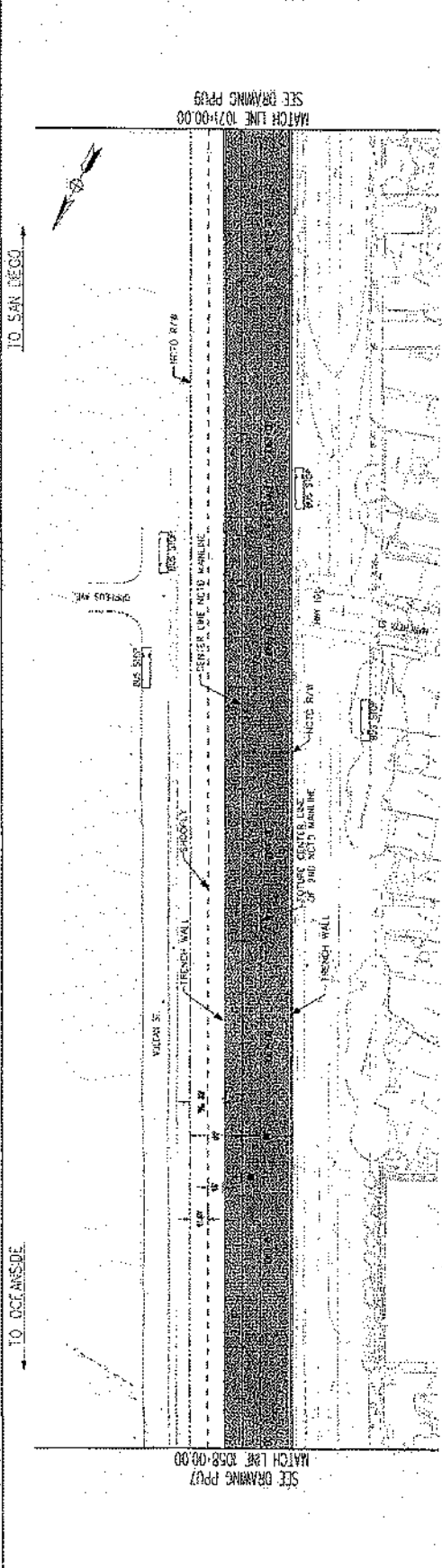
TO OCEANSIDE

TO SAN DIEGO

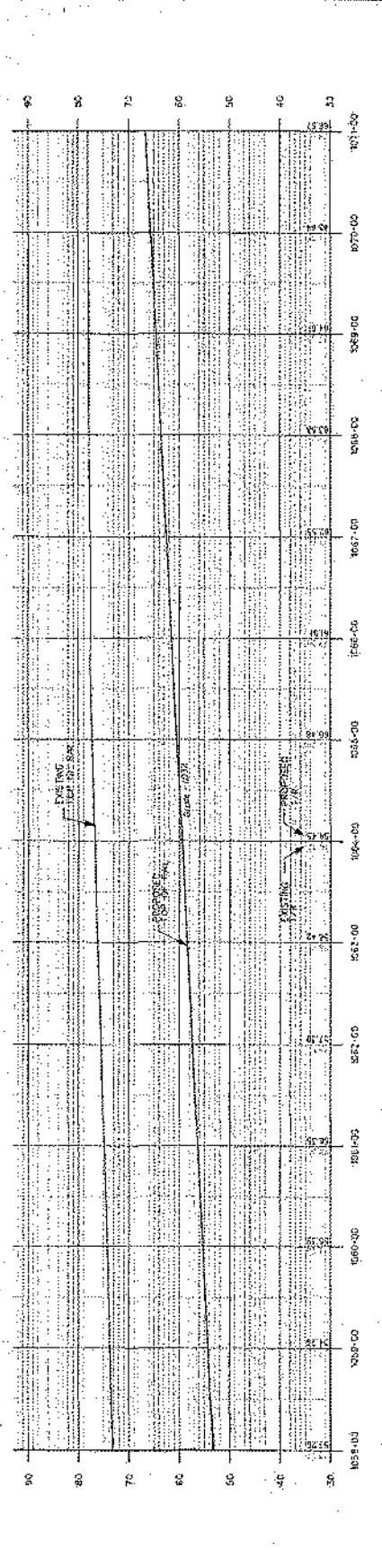
MATCH LINE 1045+00.00
 SEE DRAWING PPG 6

MATCH LINE 1058+00.00
 SEE DRAWING PPG 8

PH: (916) 777-0254 FAX: (916) 777-0255



PLAN



PROFILE

REVISION DATE DRAWN BY CHECKED BY SCALE	PROJECT NO. SHEET NO. OF 10 SHEET TITLE DATE	CITY OF ENCINITAS ENGINEERING DEPARTMENT 1054-00 TO 1071+00 1054-00 TO 1071+00 1054-00 TO 1071+00	APPROVAL APPROVED BY DATE

PRELIMINARY

HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 10'

ENGINEER'S NAME: HANSON WILSON
 ADDRESS: 275 W. HOSPITALITY LANE, STE. 300
 PHONE NO.: (909) 896-8000

HANSON WILSON
 ENGINEERING & ARCHITECTURE
 275 W. HOSPITALITY LANE, STE. 300
 SAN DIEGO, CA 92108
 (619) 444-8000

REVISIONS	DATE	DESCRIPTION

SANDAG
 SAN DIEGO AREA REGIONAL TRANSPORTATION AUTHORITY

DATE	BY	SCALE

APPROVALS	DATE

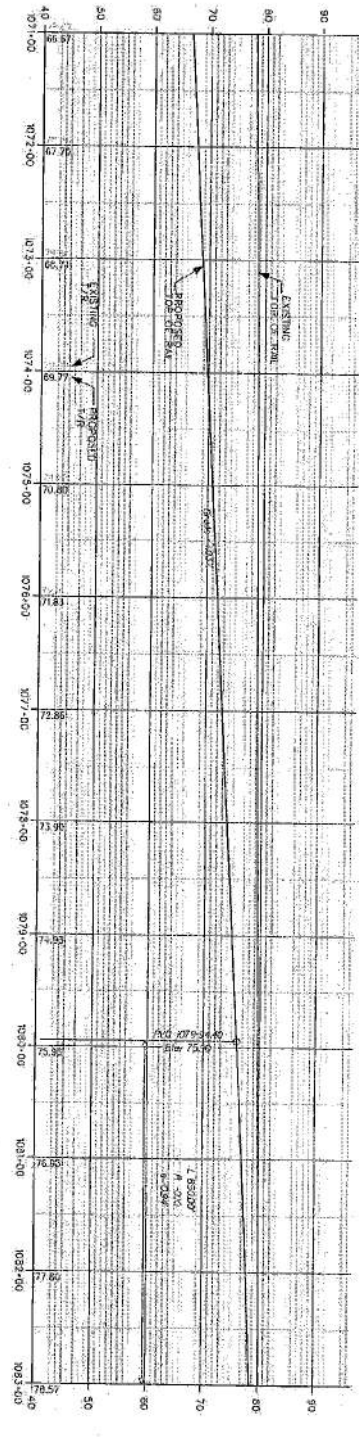
CITY OF ENCINITAS
 ENGINEERING DEPARTMENT
 1001 N. MICHIGAN AVE.
 ENCINITAS, CA 92026
 (760) 941-1000

PROFILE

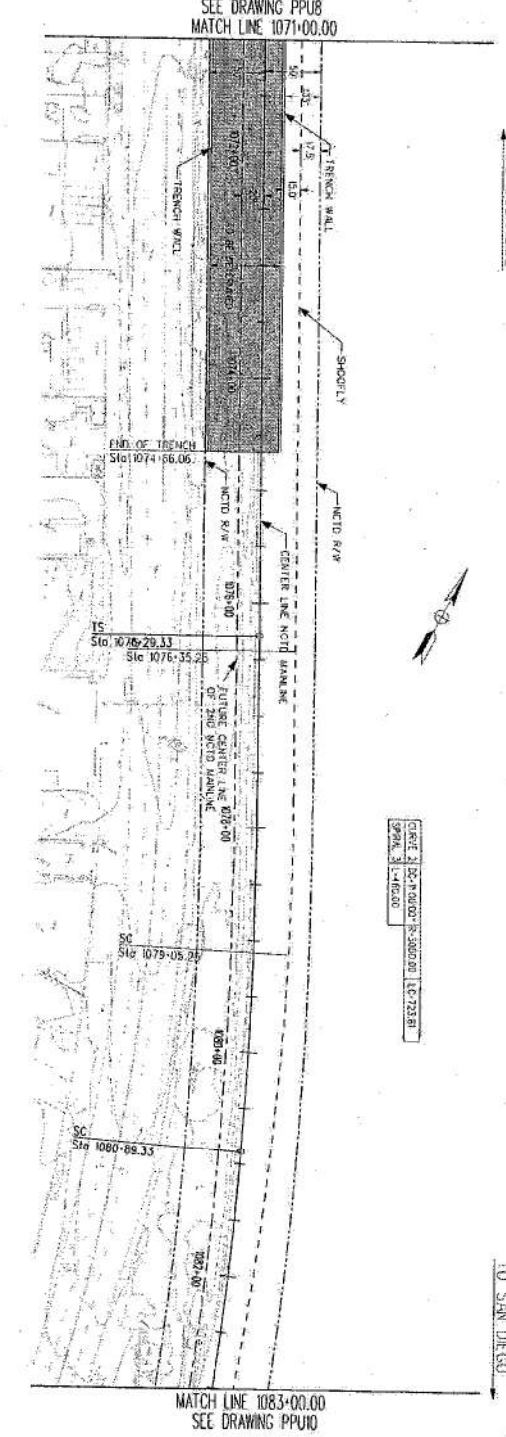
PRELIMINARY

1" = 10'

1" = 20'



PLAN

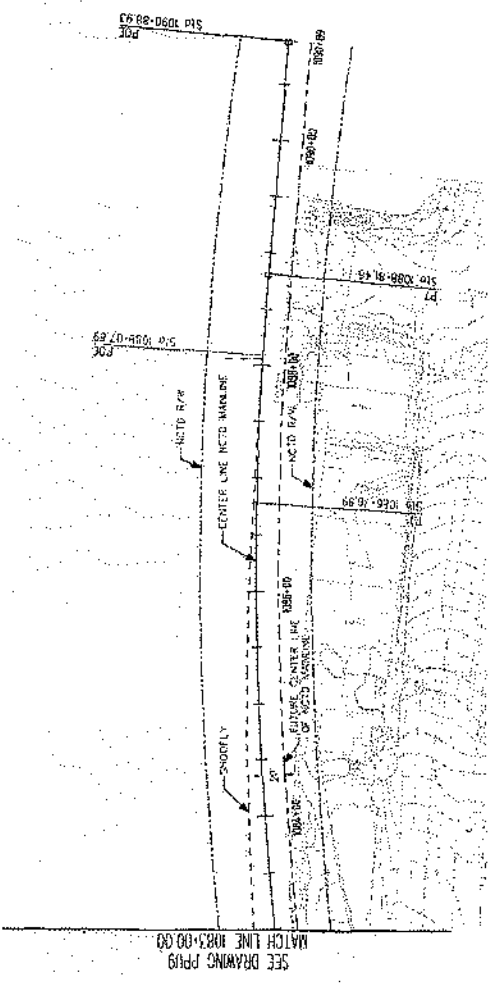


TO OCEANSIDE

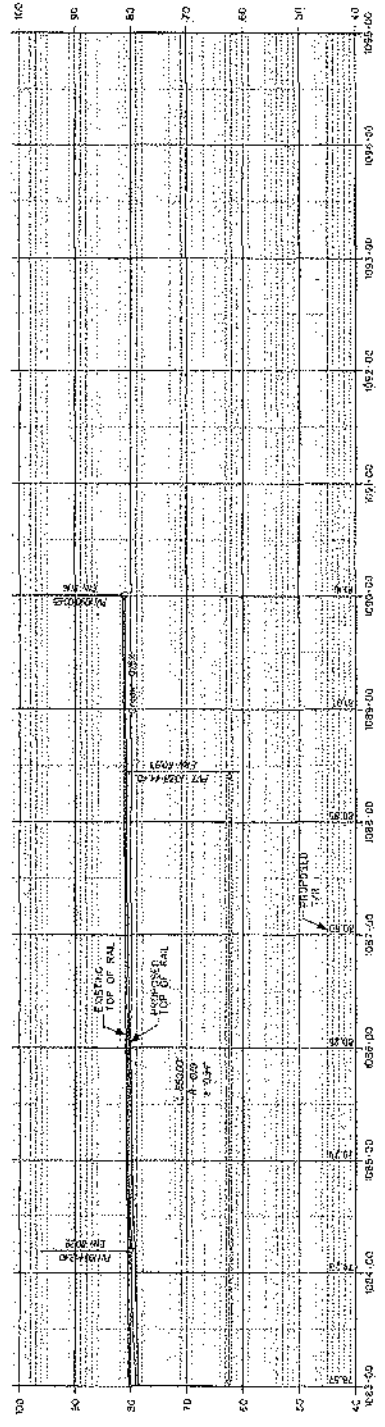
TO SAN DIEGO

TO SAN DIEGO

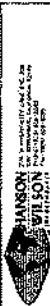
TO OCEANSIDE



PLAN



PROFILE



PROJECT NO.	DATE	REVISIONS	SCALE



HORIZONTAL AS SHOWN
VERTICAL AS SHOWN

PRELIMINARY

APPROVALS
 PREPARED BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____
 DESIGNED BY: _____ DATE: _____
 RECOMMENDED BY: _____ DATE: _____
 APPROVED BY: _____ DATE: _____

CITY OF ENCINITAS ENGINEERING DEPARTMENT
 1000 N. MICHIGAN ST., 3RD FLOOR, ENCINITAS, CA 92026
 TEL: (760) 941-1000 FAX: (760) 941-1001
 WWW.CITYOFENCINITAS.CA.GOV

PROJECT NO. 02-002
 SHEET NO. 10 OF 10



ENGINEER'S NAME: HANSON WILSON
 ADDRESS: 3375 W. HOSPITALITY LANE, STE. 300
 PHONE NO.: (909) 806-8000

PT:1111-9910-011814715102350000P010.0 5/11



CONCEPTUAL PROJECT COST ESTIMATE FOR
LEUCADIA GRADE SEPARATION

PROJECT DESCRIPTION: Leucadia Boulevard and Railroad Corridor Grade Separation Study PSR
Proposed Improvement (Scope): Alternative 3 - Trench Alternative with One-Way Couplet

ALTERNATIVE 3
SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	\$104,232,494
TOTAL STRUCTURE ITEMS	\$11,300,000
SUBTOTAL CONSTRUCTION COSTS	\$115,532,494
TOTAL RIGHT-OF-WAY ITEMS	\$3,000,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	\$118,532,494
SUPPORT COSTS (35% OF CONSTRUCTION COST)	41,486,373
TOTAL PROJECT COSTS	\$160,018,867
USE	<u>\$160,000,000</u>

**CONCEPTUAL PROJECT COST ESTIMATE FOR
LEUCADIA GRADE SEPARATION**

I. ROADWAY ITEMS

<u>Section 1 Earthwork</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Roadway Excavation	1,343,000	CY	\$5.5	\$7,386,500	
Clearing and Grubbing	1	LS	\$50,000	\$50,000	
Fill		CY		\$0	

Subtotal Earthwork \$7,436,500

<u>Section 2 Structural Section</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Asphalt Concrete	1,900	TON	\$70	\$133,000	
Aggregate Base	700	CY	\$85	\$59,500	

Subtotal Pavement Structural Section \$192,500

<u>Section 3 Drainage</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Inlets	40	EA	\$6,000	\$240,000	
Remove Inlets	10	EA	\$500	\$5,000	
RCP -	9,000	LF	\$2,000	\$18,000,000	
Bridge Drains	300	LF	\$60	\$18,000	
Other Drainage Improvements (Filters)	40	EA	\$500	\$20,000	
Interceptor Channel	7,500	LF	\$60	\$450,000	
Pump Station	1	EA	\$3,000,000	\$3,000,000	

Subtotal Drainage \$21,733,000

<u>Section 4 Specialty Items</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Curb and Gutter	7,500	LF	\$20	\$150,000	
Construct PCC Sidewalk	400	CY	\$1,000	\$400,000	
Retaining Walls	1	LS	\$43,113,700	\$43,113,700	
Pump Station Structure	1	LS	\$150,000	\$150,000	
SWPPP	1	LS	\$250,000	\$250,000	
Architectural Treatment		LS		\$0	

Total Specialty Items \$44,063,700

I. ROADWAY ITEMS (Continued)

<u>Section 5 Traffic</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>	<u>Section Cost</u>
Traffic Signals and Lighting	1	LS	\$300,000	\$300,000	
Overhead Sign Structures				\$0	
Signing and Striping	1	LS	\$23,000	\$23,000	
Traffic Control System	1	LS	\$500,000	\$500,000	
Traffic Management Plan	1	LS		\$0	

Subtotal Traffic \$823,000

TOTAL SECTIONS 1-5 \$74,248,700

I. ROADWAY ITEMS (Continued)

<u>Section 6 Minor Items (excludes retaining walls)</u>				<u>Item Cost</u>	<u>Section Cost</u>
	\$31,135,000	X (5%)		1,556,750	
(Subtotal Sections 1-5 minus retaining walls)					

Total Minor Items \$1,556,750

<u>Section 7 Roadway Mobilization (includes ret walls)</u>					
	\$75,805,450	X (10%)		7,580,545	
(Subtotal Sections 1-6)					

Total Roadway Mobilization \$7,580,545

<u>Section 8 Roadway Additions</u>					
Supplemental Work	\$75,805,450	X (0%)		0	
(Subtotal Sections 1-6)					

Contingencies	\$83,385,995	X (25%)		\$20,846,499	
(Subtotal Sections 1-7)					

TOTAL ROADWAY ADDITIONS \$29,983,794

TOTAL ROADWAY ITEMS \$104,232,494

(Subtotal for Sections 1-8)

ESTIMATE PREPARED BY: Sunnic House
DATE: September 2005

PHONE (858) 450-4700

**CONCEPTUAL PROJECT COST ESTIMATE FOR
LEUCADIA GRADE SEPARATION**

II. STRUCTURES ITEMS

Structure:
(1)

Bridge Name: Leucadia Blvd. Overhead

Structure Type: CIP Box Girder and Tunnel

Width (out to out) - (LF) 96.84
Span Lengths - (LF) 61.00
Total Area - (SF) 5,907.24

Footling Type (pile/spread)

Sub Total Cost for Structure: \$1,211,912.80

SUBTOTAL STRUCTURES ITEMS \$1,211,913
(Sum of Total Cost for Structures)

Railroad Related Costs: 6,951,371 \$6,951,371

TOTAL RAILROAD AND STRUCTURE ITEMS \$8,163,284

10% Mobilization \$816,328
25% Contingency \$2,244,903.16

TOTAL STRUCTURES ITEMS \$11,224,516
For Budget Purpose \$11,300,000

ESTIMATE PREPARED BY: Jim Frost
DATE: September 2005

PHONE (858) 566-3113

CONCEPTUAL PROJECT COST ESTIMATE FOR
LEUCADIA GRADE SEPARATION

III. RIGHT OF WAY ITEMS

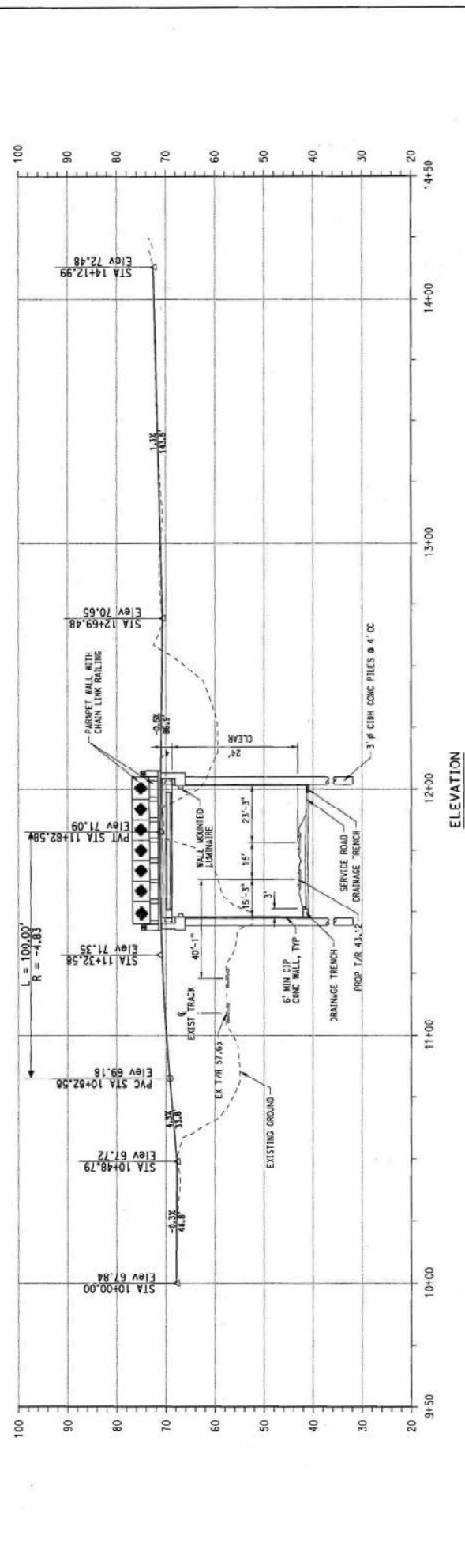
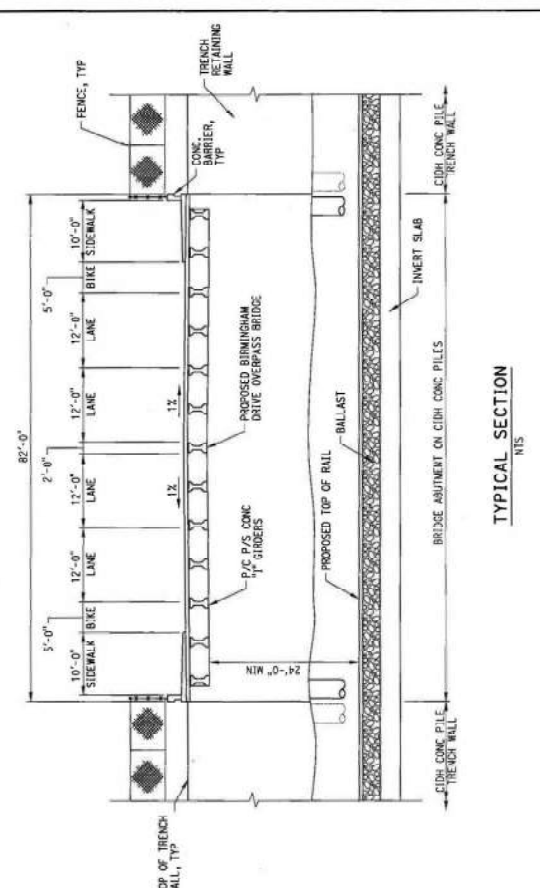
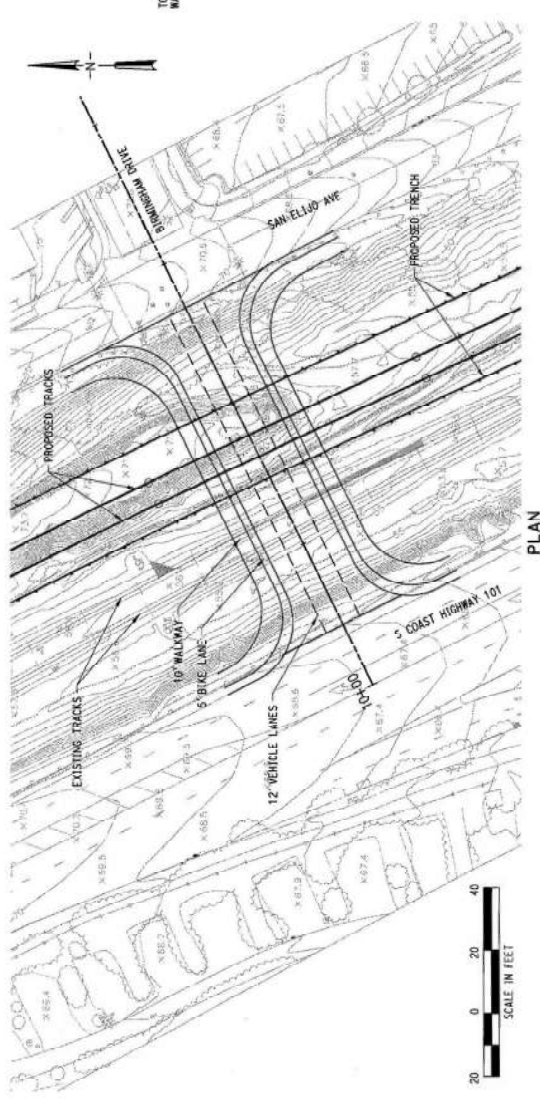
	VALUE	
A. Acquisition, including excess lands, damages to remainder (s) and goodwill	\$1,000,000	
B. Utility Relocation	\$2,000,000	
C. Relocation Assistance	\$0	
D. Clearance/Demolition	\$0	
E. Title and Escrow Fees	\$0	
TOTAL RIGHT OF WAY ITEMS (Escalated Value)		\$3,000,000

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

2004

ESTIMATE PREPARED BY: Sonnie House
DATE: September 2005

PHONE: (858) 450-4700



REV.	DATE	DESCRIPTION

DESIGNED BY	
CHECKED BY	
DATE	MONTH 2013

APPROVED	DATE

 HDR Engineering, Inc. 10000 Highway 101, Suite 200 Houston, Texas 77036	 San Diego's Regional Planning Agency
-----------------------------------------------------------------------------------	------------------------------------------

CONTRACT NO.	
DRAWING NO.	
REVISION SHEET NO.	
SCALE	

BIRMINGHAM DRIVE GRADE SEPARATION

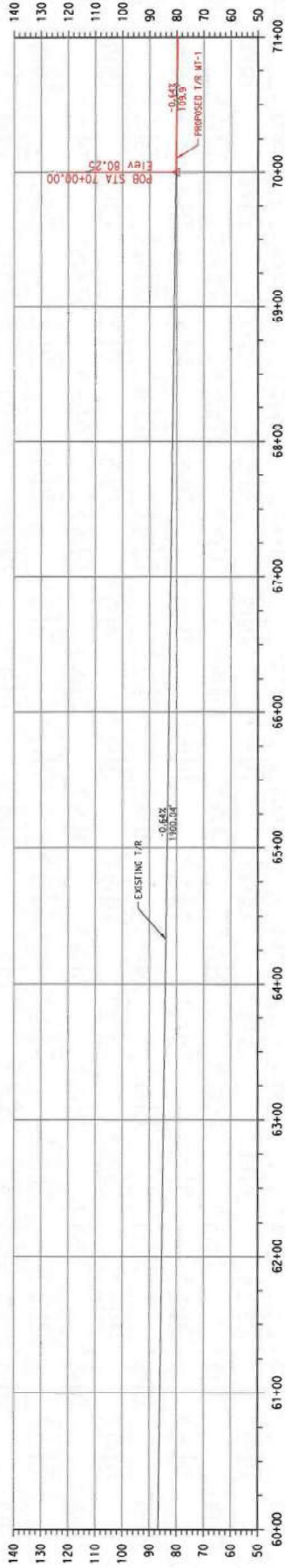
BIRMINGHAM BRIDGE EXHIBIT

TO CP SWAMI
FULLERTON
(TIMETABLE WEST)



MATCH LINE MT-1 STA 71+00
(SEE DWG. SEL-TR02)

PLAN VIEW



PROFILE VIEW

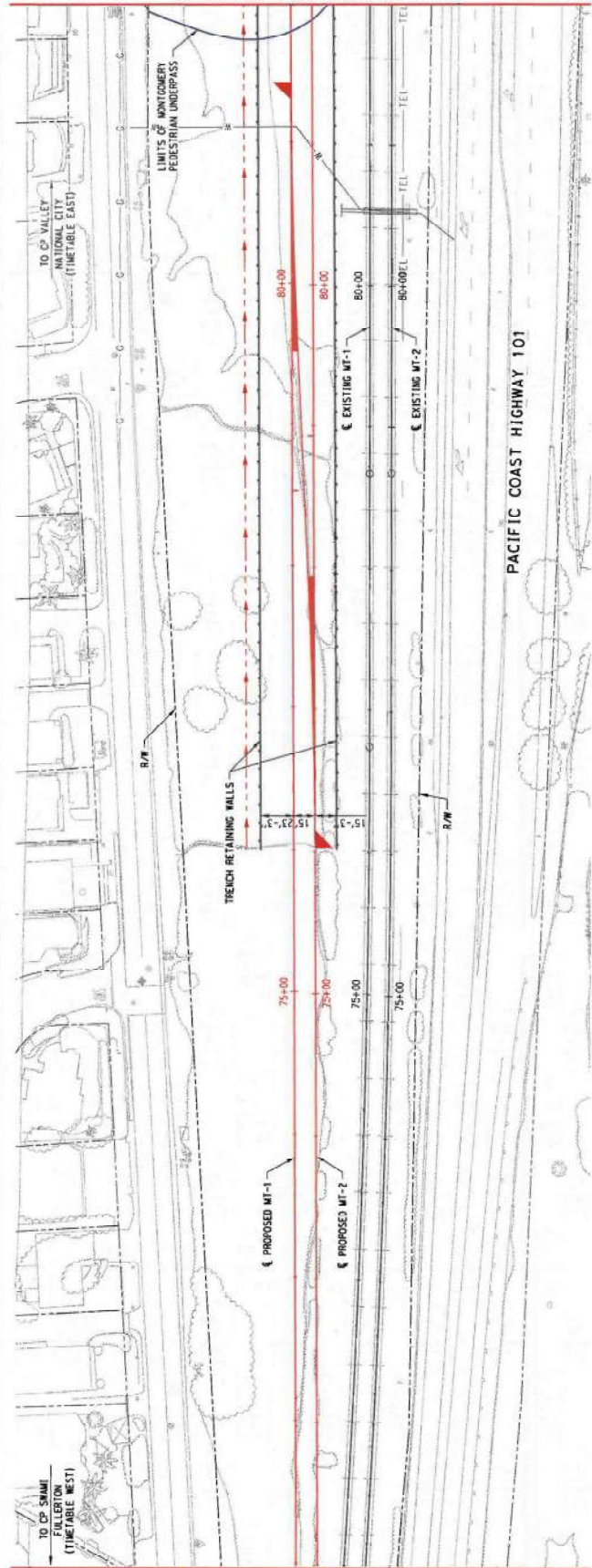
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CONTRACT NO.
DRAWING NO. SEL-TR01
REV. STATION SHEET NO.
- - - CF
SCALE AS NOTED

BIRMINGHAM DRIVE GRADE SEPARATION
TRACK PLAN AND PROFILE
MT-1 STA 60+00 TO STA 71+00



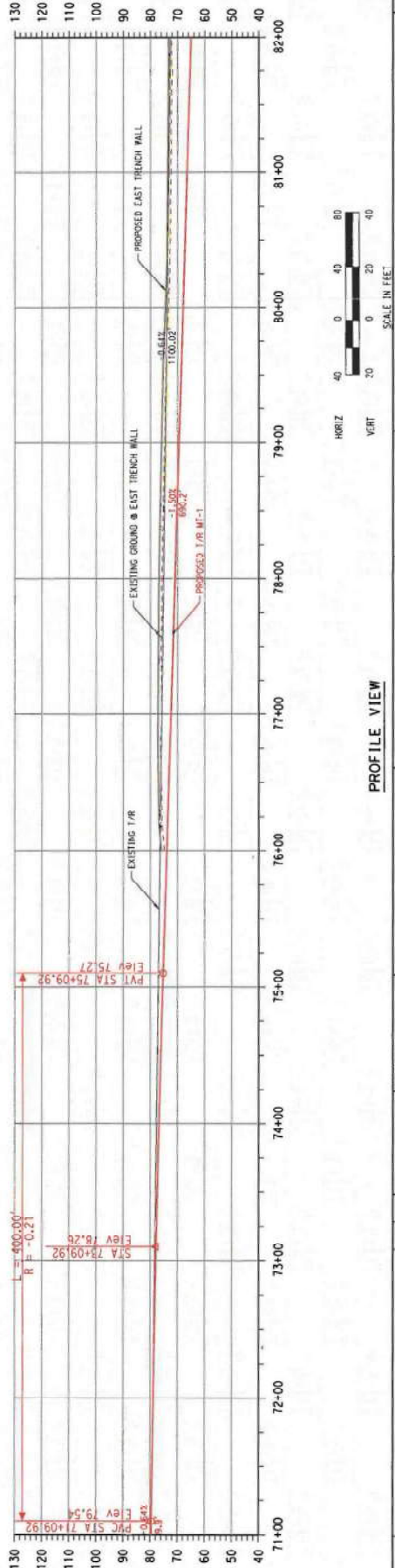
DESIGNED BY: MFG
CHECKED BY: JFC
DIRECTED BY: G. ROSCA
DATE: MONTH 2013



SEE DWG. SEL-TRO1
MATCH LINE MT-1 STA 71+00

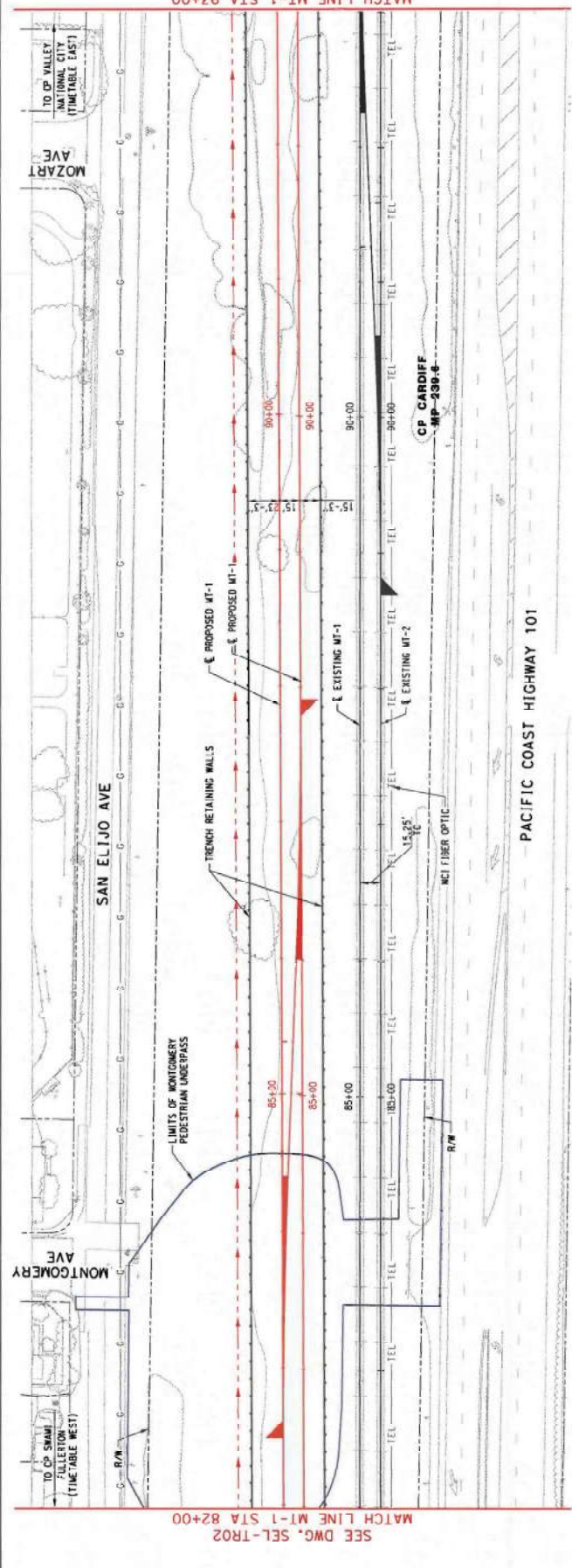
SEE DWG. SEL-TRO3
MATCH LINE MT-1 STA 82+00

PLAN VIEW



PROFILE VIEW

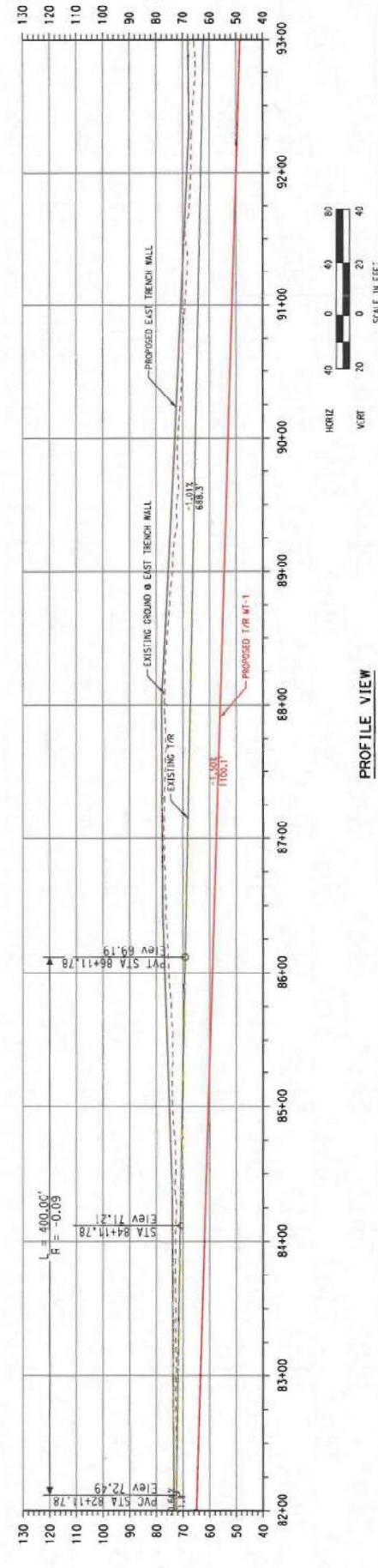
REV.	DATE	DESCRIPTION	APPROVED:	DATE:
<p>DESIGNED BY: ACR CHECKED BY: MRG DATE: MONTH 2013</p>			<p>APPROVED: _____ DATE: _____</p>	
<p>Information contained herein is the property of HDR Engineering, Inc. and is intended for the use of the client only. It is not to be distributed, copied, or otherwise used in any way without the prior written consent of HDR Engineering, Inc. The client agrees to hold HDR Engineering, Inc. harmless from and against any and all claims, damages, and expenses, including reasonable attorneys' fees, that may be asserted against or incurred by HDR Engineering, Inc. or its employees, agents, or subcontractors in connection with the performance of the services described herein.</p>			<p>HDR HDR Engineering, Inc. 10000 E. Harvard Ave., Suite 200 Denver, CO 80231</p>	
<p>CONTRACT NO. _____ DRAWING NO. _____ REV. STATION SHEET NO. _____ OF _____ SCALE _____ AS NOTED</p>			<p>SANDAG San Diego's Regional Planning Agency</p>	
<p>BIRMINGHAM DRIVE GRADE SEPARATION TRACK PLAN AND PROFILE MT-1 STA 71+00 TO STA 82+00</p>				



SEE DWG. SEL-TR02
MATCH LINE MT-1 STA 82+00

SEE DWG. SEL-TR04
MATCH LINE MT-1 STA 93+00

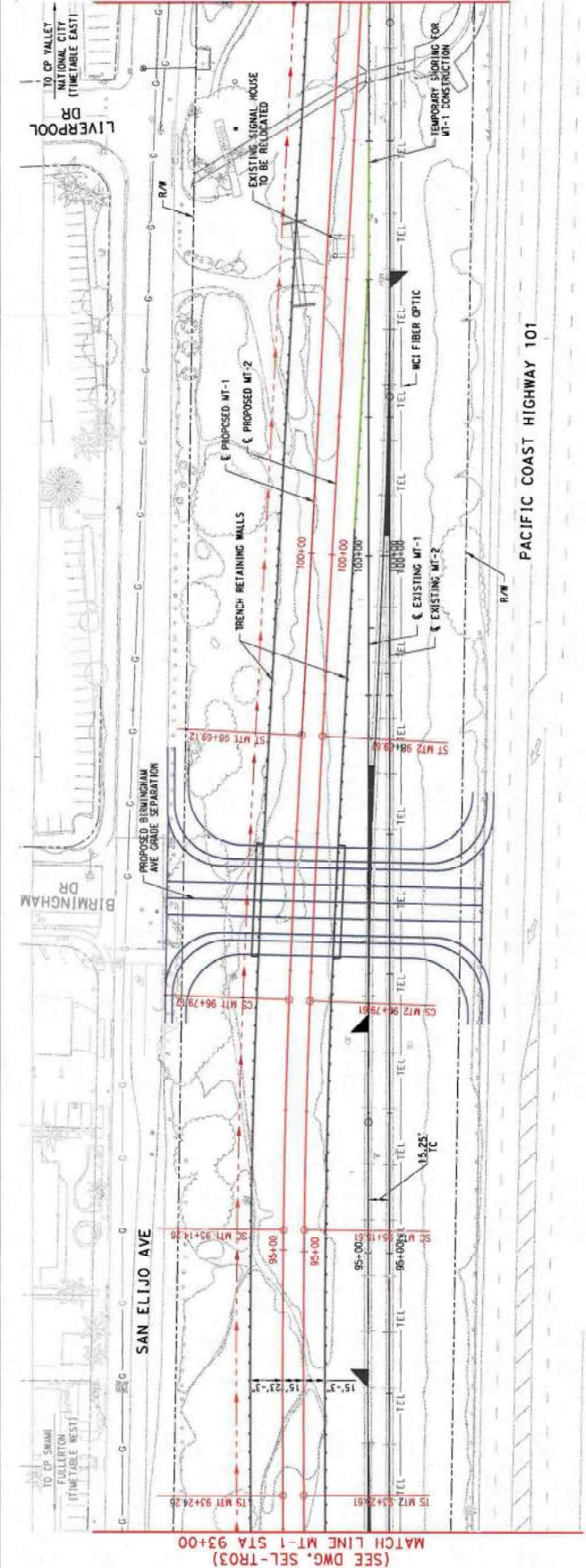
PLAN VIEW



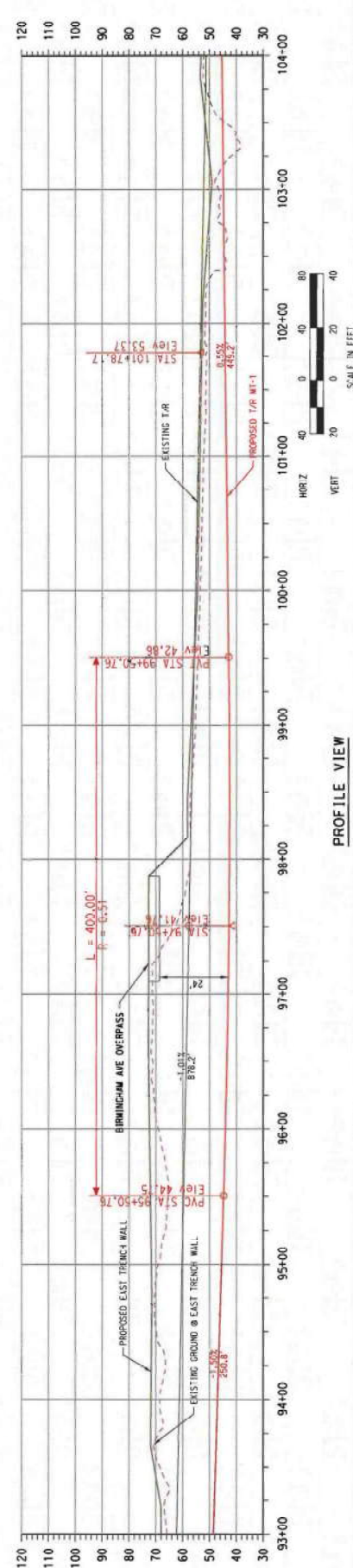
PROFILE VIEW



REV.	DATE	DESCRIPTION	APPROVED:	DATE:
<p>DESIGNED BY: ACR CHECKED BY: MRG DRAWN BY: JRC IN CHARGE: G. ROSCA DATE: MONTH 2013</p>			<p>HDR HDR Engineering, Inc. 10000 North Tenth Street Suite 200 San Diego, CA 92121 Phone: 619.594.8800</p>	
<p>CONTRACT NO.: SEL-TR03 DRAWING NO.: SEL-TR03 SHEET NO.: CF SCALE: AS NOTED</p>			<p>SANDAG San Diego's Regional Planning Agency</p>	
<p>BIRMINGHAM DRIVE GRADE SEPARATION TRACK PLAN AND PROFILE MT-1 STA 82+00 TO STA 93+00</p>				



PLAN VIEW



PROFILE VIEW

REV.	DATE	DESCRIPTION	APP'D	DATE	DESCRIPTION

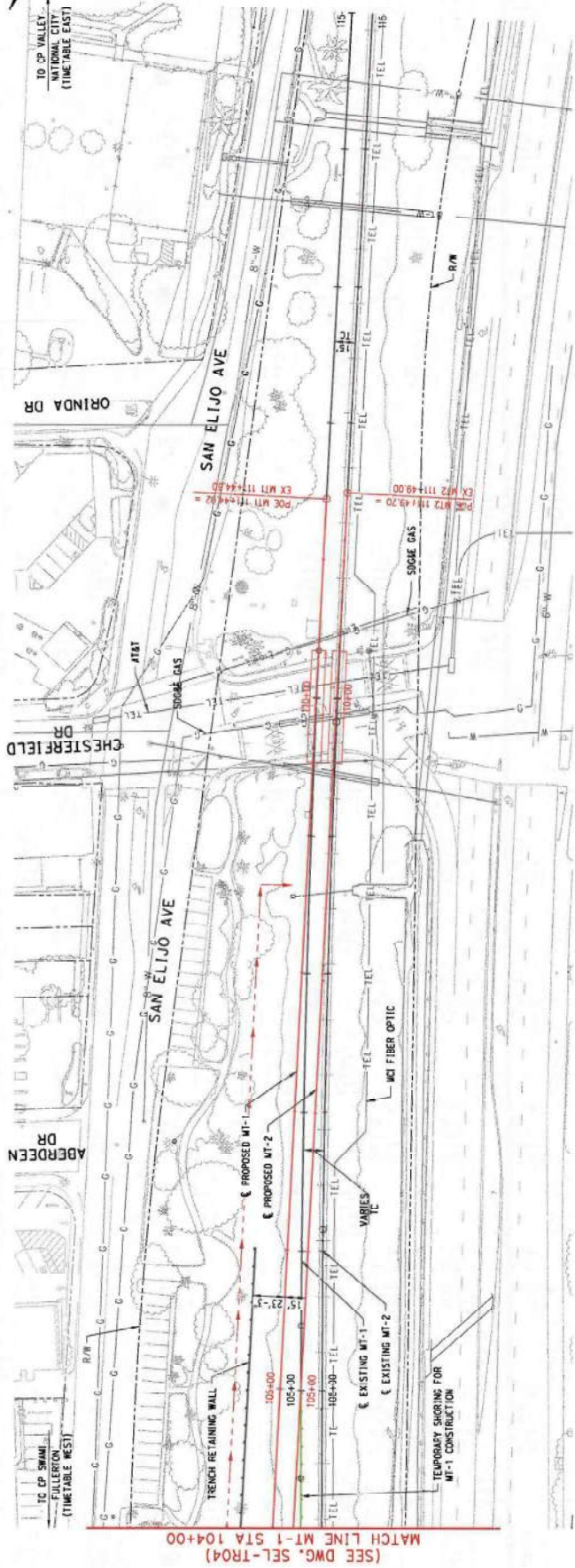
DESIGNED BY	
DRAWN BY	
CHECKED BY	
DATE	

APPROVED		DATE	
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CONTRACT NO.	
DRAWING NO.	
REV'S	
SHEET NO.	
OF	
SCALE	
AS NOTED	

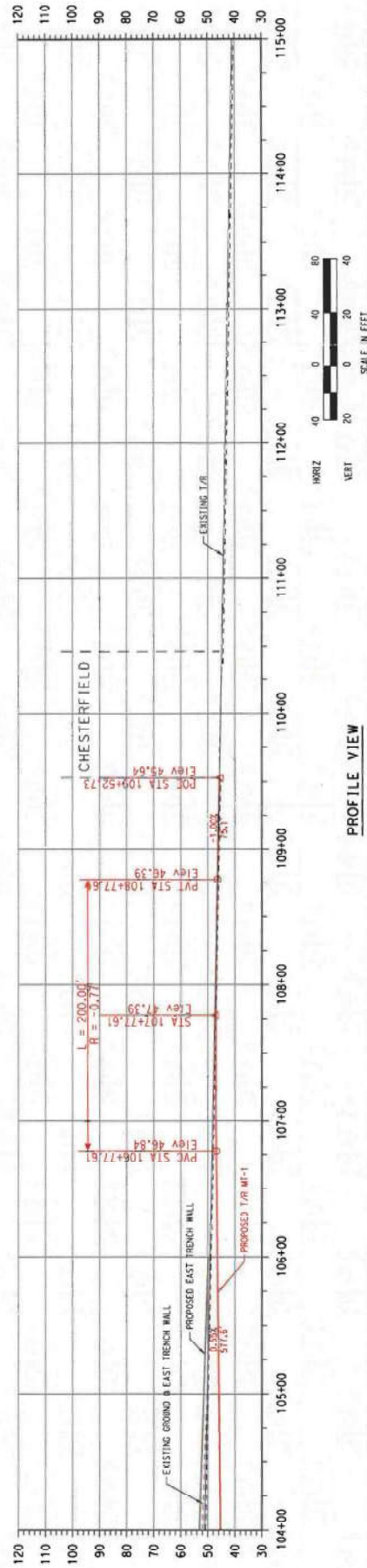
BIRMINGHAM DRIVE GRADE SEPARATION
TRACK PLAN AND PROFILE
MT-1 STA 93-00 TO STA 104+00





(SEE DWG. SEL-TRO4)
MATCH LINE MT-1 STA 104+00

PLAN VIEW



PROFILE VIEW

REV.	DATE	DESCRIPTION

RECEIVED BY: _____ DRAWN BY: MFG CHECKED BY: JMC DESIGNED BY: C. ROSCA DATE: MONTH 2013 SCALE: APP.	 <small>HDR Engineering Inc. 3000 Holliston Road, Suite 200 Irvine, California 92618</small>	 <small>San Diego's Regional Planning Agency</small>	CONTRACT NO.: SEL-TRO5 DRAWING NO.: _____ REVISION: _____ SHEET NO.: _____ OF _____ SCALE: _____ AS NOTED
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BIRMINGHAM DRIVE GRADE SEPARATION

**TRACK PLAN AND PROFILE
MT-1 STA 104+00 TO STA 115+00**

Birmingham Drive Grade Separation PSR

PROJECT COST ESTIMATE

Revised: February 27, 2014

Design Level: Conceptual Design

Estimated By: HDR

Item	Quantity	Unit	Unit Price	Amount	Subtotal
DESIGN					
Agency Design Admin. (SANDAG)	3.11%	x	CCE	\$ 2,100,400	
Agency Program Management (SANDAG)	1.85%	x	CCE	\$ 1,248,700	
Agency Design Admin.(NCTD/MTS)	0.55%	x	CCE	\$ 368,200	
Alternative Analysis & Environmental	2.77%	x	CCE	\$ 1,870,500	
Design - Preliminary to 30%	2.77%	x	CCE	\$ 1,870,500	
Design - 30% to 60% and Permits	3.00%	x	CCE	\$ 2,027,000	
Design - 60% to Final PS&E	3.00%	x	CCE	\$ 2,027,000	
Independent Peer Reviews	0.67%	x	CCE	\$ 453,200	
DESIGN TOTAL					\$ 11,965,500
RIGHT OF WAY					
Temporary R/W, Easements	1	Acre	\$25,000	\$ 25,000	
Slope Easements	0	Acre	\$6,250	\$ -	
Footing/Utility Easements	0	Acre	\$25,000	\$ -	
Property Acquisition	0	Acre	\$100,000	\$ -	
Appraisals & ROW Consultant	25	%	R.O.W Costs	\$ 6,300	
Right-of-way Contingency (10% to 35%)	30	%	R.O.W Costs	\$ 7,500	
RIGHT OF WAY TOTAL					\$ 38,800
CONSTRUCTION CONTRACT ESTIMATE					
CONSTRUCTION CONTRACT ESTIMATE (CCE)					\$ 67,542,544
ANCILLARY CONSTRUCTION COSTS					
Agency Construction Admin. (SANDAG)	1.83%	x	CCE	\$ 1,237,200	
Agency Construction Prog. Mgmt. (SANDAG)	0.83%	x	CCE	\$ 563,900	
Agency Construction Admin. (NCTD/MTS)	0.34%	x	CCE	\$ 230,100	
Design Support During Construction	2.77%	x	CCE	\$ 1,870,500	
Construction Management	10.95%	x	CCE	\$ 7,397,500	
NCTD Signal & Maintenance Support & Testing	1.37%	x	CCE	\$ 923,600	
Flagging Services	2,000	Hr	\$65	\$ 130,000	
Busing Passengers	2	AWW	\$75,000	\$ 150,000	
ANCILLARY CONSTRUCTION COSTS					\$12,502,800
OFF-SITE ENVIRONMENTAL MITIGATION					
Tidal Wetlands Permanent Impact Mitigation	0	Acre	\$610,000	\$ -	
Tidal Wetlands Temporary Impact Mitigation	0	Acre	\$310,000	\$ -	
Other Wetlands Permanent Impact Mitigation	0.15	Acre	\$185,000	\$ 27,750	
Other Wetlands Temporary Impact Mitigation	0	Acre	\$135,000	\$ -	
Uplands Permanent Impact Mitigation	0.14	Acre	\$125,000	\$ 17,500	
Uplands Temporary Impact Mitigation	0	Acre	\$65,000	\$ -	
Other	0	Acre		\$ -	
Subtotal					\$45,250
TOTAL PROJECT COST ESTIMATE					\$92,094,894
COST ESCALATION					
Year of Expenditure	Annual %	Cumulative	Estimated	Escalation	
2012 (7/11 through 6/12)	0.0%	0.0%	\$ -	\$ -	-
2013 (7/12 through 6/13)	0.0%	0.0%	\$ -	\$ -	-
2014 (7/13 through 6/14)	0.0%	0.0%	\$ -	\$ -	-

Birmingham Drive Grade Separation PSR

PROJECT COST ESTIMATE

Revised: February 27, 2014

Design Level: Conceptual Design

Estimated By: HDR

Item	Quantity	Unit	Unit Price	Amount	Subtotal
2015 (7/14 through 6/15)	1.0%		1.0%	\$ -	\$ -
2016 (7/15 through 6/16)	2.0%		3.0%	\$ -	\$ -
2017 (7/16 through 6/17)	2.8%		5.8%	\$ -	\$ -
2018 (7/17 through 6/18)	2.8%		8.6%	\$ 46,047,447	\$ 3,960,080
2019 (7/18 through 6/19)	2.8%		11.4%	\$ 46,047,447	\$ 5,249,409
2020 (7/19 through 6/20)	2.8%		14.2%	\$ -	\$ -
TOTAL EXPENDITURES IN 2011 DOLLARS				\$92,094,894	
TOTAL COST ESCALATION					\$ 9,209,489
PROJECT COST IN YEAR OF EXPENDITURE DOLLARS					\$101,304,383

Note: Project Risk Category based upon the SANDAG Design Procedures Manual is: Medium Risk

Birmingham Drive Grade Separation PSR

Construction Cost Estimate

Revised: February 27, 2014

Design Level: Conceptual Design

Estimated By: HDR

Item	Quantity	Unit	Unit Price	Amount	Subtotal
CONSTRUCTION					
1. Site Civil					
Clearing and Grubbing	6	AC	\$9,000	\$ 54,000	
Earth Embankment (FILL)	5,624	CY	\$9.00	\$ 50,616	
Excavation (CUT)	81,861	CY	\$12.00	\$ 982,332	
Construct pavement section	10,498	SF	\$5.00	\$ 52,490	
Minor Concrete (Sidewalk)	4,470	SF	\$5.00	\$ 22,350	
Minor Concrete (Curb and Gutter)	406	LF	\$20.00	\$ 8,120	
Removals	1	LS	\$100,000.00	\$ 100,000	
Subtotal					\$1,269,908
2. Track					
New Track	6,320	TF	\$260	\$ 1,643,200	
Remove Track	6,320	TF	\$40	\$ 252,800	
Shift Track	2,214	TF	\$80	\$ 177,120	
Crossover - No. 24	2	EA	\$575,000	\$ 1,150,000	
Turnout Removal	4	EA	\$30,000	\$ 120,000	
Subtotal					\$3,343,120
3. Signal					
Permanent / Temporary Signal Work	1	LS	\$4,000,000	\$ 4,000,000	
Subtotal					\$4,000,000
4. Structures					
Birmingham Overpass Bridge	1,000	SF	\$4,954	\$ 4,954,000	
Soldier Pile Retaining Wall (Trench)	91,400	SF	\$260	\$ 23,764,000	
Cable Railing for Retaining Walls	5,600	LF	\$14	\$ 78,400	
Temporary Shoring Wall	4,000	LF	\$150	\$ 600,000	
Subtotal					\$29,396,400
5. Culverts and Drainage					
Pump Station	1	LS	\$2,000,000	\$ 2,000,000	
Concrete Lined Ditch	3,265	LF	\$672	\$ 2,194,080	
72" Storm Drain	510	LF	\$285	\$ 145,350	
Subtotal					\$4,339,430
6. Site Mitigation					
SWPPP	1	LS	\$60,000.00	\$ 60,000	
On-site Uplands	2.00	Acre	\$65,000	\$ 130,000	
Subtotal					\$190,000
7. Utilities					
Misc Utilities Protection and Relocation	1	LS	\$500,000	\$ 500,000	
Subtotal					\$500,000
8. Traffic					
Traffic Management Plan	1	LS	\$50,000	\$ 50,000	
Traffic Delineation Items	1	LS	\$100,000	\$ 100,000	
Traffic Signal Modification	2	EA	\$150,000	\$ 300,000	
Traffic Signal	1	EA	\$200,000	\$ 200,000	
Traffic Signal Removal	1	EA	\$50,000	\$ 50,000	
Temporary Traffic Control	1	LS	\$100,000	\$ 100,000	
Roadside Signs/Overhead Signs	1	LS	\$20,000	\$ 20,000	

Birmingham Drive Grade Separation PSR

Construction Cost Estimate

Design Level: **Conceptual Design**

Revised: February 27, 2014

Estimated By: **HDR**

Item	Quantity	Unit	Unit Price	Amount	Subtotal
Subtotal					\$820,000
9. Minor Items (10% of 1-8)					\$4,385,886
Base Construction Estimate (BCE)				\$ 48,244,744	
Contractor Mobilization	7.50%	x	BCE	\$ 3,618,300	
Contractor Demobilization	2.50%	x	BCE	\$ 1,206,100	
Contingency	30%	x	BCE	\$ 14,473,400	
Subtotal					\$19,297,800
CONSTRUCTION COST ESTIMATE (CCE)					\$ 67,542,544