

MEMORANDUM

DATE: May 8, 2013

TO: Joanna Devers – Big Sur Land Trust

FROM: Richard Weber, P.E.

Cc:

SUBJECT: Carmel River and Lagoon Floodplain Restoration and Enhancement Projects

The Carmel River and Lagoon Floodplain Restoration and Enhancement Projects are made up of two parts; the restoration of the southern flood plain of the Carmel River over the Odello East Property and construction of a new causeway along State Route 1 allowing for connectivity between the flood plain and the south arm of the Carmel River Lagoon. The two parts of the project have different permitting requirements and are currently anticipated to be pursued as separate plan sets and projects. The Whitson Engineers team worked together to come up with a preliminary project cost estimate for both elements of the project. The costs were adjusted for inflation anticipating construction in 2018. Below is a summary of our findings. A more detailed cost breakdown can be found in the attached enclosures.

Odello East Agricultural Grading Improvements

Whitson Engineers has completed a construction cost estimate for creation of agricultural preserve and lowering of the Carmel River floodplain on the Odello property. The estimate is based upon the 60% Lower Carmel River and Lagoon Floodplain Restoration and Enhancement Project – Odello East Agricultural Grading Improvement plans dated April 18, 2011. The estimated construction cost for this portion of work is approximately \$2.2 MM. (2013 dollars). Anticipating a construction schedule for the year 2018, we have included a 3% annual construction cost inflation rate. As a result, the estimated construction cost is approximately **\$2.5 MM** (2018 dollars).

Highway 1 Causeway

Whitson Engineers and Cornerstone have completed an updated construction cost estimate for Highway 1 improvements at the Carmel River causeway. The work proposes the construction of a 520 foot overflow bridge and associated road improvements per the approved Project Study Report concept plans dated 4/13/2009. The estimated construction cost is approximately \$11.8 MM (2013 dollars).

The anticipated construction date for this project is the year 2018. Utilizing a 3% annual inflation rate, the estimated construction cost is estimated at **\$13.7 MM** (2018 dollars).

The above estimate for the Highway 1 Causeway also includes the costs for utility relocation and ground improvements (stone columns) to address liquefaction. We have included the preliminary estimated cost worksheet of the ground improvements prepared by Kleinfelder in 2009 and adjusted for inflation.

Total Construction Costs and Soft Costs

The total construction cost for the two projects is estimated to be **\$16.2 MM** (2018 dollars). Total soft costs are estimated to be 32% of the total construction cost and include project administration, environmental permitting, engineering, biological monitoring, SWPPP and monitoring, construction staking, and post-construction mitigation monitoring. The estimated soft costs are approximately \$5.2 MM which brings the total estimated project cost to **\$21.4 MM** (2018 dollars).

Assumptions

The Estimate of Probable Costs is based upon the following assumptions:

1. Right of way costs are not included in the estimate project costs
2. Utility relocation assume 100% of costs to be the responsibility of the project proponent
3. Bridge costs assume ground remediation will be provided for the full length of the causeway and the improved resistance provided by the ground remediation will be sufficient to develop the selected pile
4. No mitigations have been identified and therefore no mitigation costs have been included in these estimates.
5. See assumptions in Cornerstone Memo for additional qualifiers

Attachments

1. Summary of Engineer's Preliminary Estimate of Probable Construction Costs
2. Engineer's Preliminary Estimate of Probable Construction Costs – Odello East Floodplain Restoration
3. Engineer's Preliminary Estimate of Probable Construction Costs – State Route 1, Causeway
4. Cornerstone Bridge Construction Cost Estimate Review Memo dated April 2013
5. 2009 Kleinfelder Ground Improvement (Stone Columns) Cost Estimate
6. 60% Design Drawings - Lower Carmel River and Lagoon Floodplain Restoration and Enhancement Project – Odello East Agricultural Grading Improvement
7. State Route 1 – Preliminary Concept Plans per the 2009 Project Study Report

Summary of Engineer's Preliminary Estimate of Probable Construction Costs

Client: Big Sur Land Trust

Project Name: Carmel River and Lagoon Floodplain Restoration and Enhancement Projects

Project Location: Highway 1, in Monterey County Near Carmel, 0.4 miles south of the Carmel River Bridge

Date of Estimate: May 6, 2013

Prepared by: Whitson Engineers by: DR checked: RPW

PROJECT COST SUMMARY

Odello East Floodplain Restoration	\$	2,176,900
State Route 1, Causeway	\$	11,813,336
Construction Subtotal (2013 dollars):	\$	13,990,236
Escalation 2013 to 2018 dollars (at 3% per year):		116%
Total Construction Cost Estimate, Rounded (2018 Dollars):	\$	16,230,000

SOFT COSTS:

Project Administration:	3.0%	\$	486,900
Environmental and Permitting:	4.0%	\$	649,200
Surveying, Geotechnical, and Engineering Design :	7.5%	\$	1,217,250
Construction Biological Monitoring:	2.0%	\$	324,600
SWPPP and Construction Stormwater Monitoring:	1.0%	\$	162,300
Construction Staking, Management and Testing:	12.5%	\$	2,028,750
Post-Construction Mitigation Monitoring:	<u>2.0%</u>	\$	<u>324,600</u>
Total Soft Costs:	32.0%	\$	5,193,600

Total Estimated Project Cost, Rounded (2018 Dollars): \$ 21,400,000

Engineer's Preliminary Estimate of Probable Construction Cost

Client: Big Sur Land Trust

Project Name: Odello East Floodplain Restoration

Project Location: Highway 1, in Monterey County Near Carmel, 0.4 miles south of the Carmel River Bridge

Date of Estimate: May 6, 2013

Prepared by: Whitson Engineers by: NDM checked: RPW

Item No.	Item Code	Item	UOM	Quantity	Unit Cost	Total
1	71325	Mobilization (5% of total)	LS	1	\$ 100,000.00	\$ 100,000
2	74016	Water Pollution Control (SWPPP)	LS	1	\$ 100,000.00	\$ 100,000
3	74016	Construction Site Management	LS	1	\$ 10,000.00	\$ 10,000
4	130680	Temporary Silt Fence / ESA Fencing	LF	7,000	\$ 5.00	\$ 35,000
5	130640	Temporary Fiber Roll	LF	2,000	\$ 4.00	\$ 8,000
6	130710	Temporary Construction Entrance	EA	1	\$ 3,000.00	\$ 3,000
8		Relocate Concrete Rubble	CY	23,000	\$ 10.00	\$ 230,000
9		Grading (F)	CY	160,000	\$ 4.00	\$ 640,000
10		Select Material (Certified Organic Topsoil)	CY	48,000	\$ 3.50	\$ 168,000
11		8" C-900 PVC Pipe Class 150	LF	650	\$ 50.00	\$ 32,500
12	665010	12" Corrugated Steel Pipe	LF	500	\$ 40.00	\$ 20,000
13	650026	36" Reinforced Concrete Pipe (Class III)	LF	300	\$ 200.00	\$ 60,000
14	720120	Rock Slope Protection (1/2 Ton, Method A)	CY	200	\$ 150.00	\$ 30,000
15		Imported Material (Clayey Topsoil)	CY	2,300	\$ 70.00	\$ 161,000
16	800001	Fence (Type BW, Metal Post)	LF	3,500	\$ 7.00	\$ 24,500
17		Disc Ag Field	AC	30	\$ 100.00	\$ 3,000
18		Disc Floodplain	AC	50	\$ 100.00	\$ 5,000
19		Erosion Control Seeding (Type A-1)	AC	30	\$ 2,000.00	\$ 60,000
20		Erosion Control Seeding (Type R-1)	AC	24	\$ 2,000.00	\$ 48,000
21		Erosion Control Seeding (Type R-2)	AC	35	\$ 5,000.00	\$ 175,000
22		Erosion Control Seeding (Type R-3)	AC	4	\$ 7,000.00	\$ 28,000
23		Erosion Control Seeding (Type R-4)	AC	1	\$ 10,000.00	\$ 10,000
24		Floodplain Micro-Contouring using Bulldozer	Hr	40	\$ 500.00	\$ 20,000
25		Cuttings "Potholing" using Backhoe	Hr	40	\$ 200.00	\$ 8,000

SUBTOTAL: \$ 1,979,000

10% CONTINGENCY: \$ 197,900

TOTAL ESTIMATED CONSTRUCTION COST: \$ 2,176,900

Preliminary Construction Cost Estimate is based upon 60% Lower Carmel River and Lagoon Floodplain Restoration and Enhancement Project – Odello East Agricultural Grading Improvement

Engineer's Preliminary Estimate of Probable Construction Cost

Client: Big Sur Land Trust

Project Name: State Route 1, Causeway

Project Location: Highway 1, in Monterey County Near Carmel, 0.4 miles south of the Carmel River Bridge

Date of Estimate: May 6, 2013

Prepared by: Whitson Engineers by: NDM checked: RPW

Item No.	Code	Item	UOM	Quantity	Unit Cost	Total
1		Water Pollution Control (SWPPP)	LS	1	\$ 100,000.00	\$ 100,000
2	74028	Temporary Fiber Roll	LF	1,000	\$ 6.00	\$ 6,000
3	74029	Temporary Silt Fence / ESA Fencing	LF	2,000	\$ 6.00	\$ 12,000
4	74032	Temporary Concrete Washout	EA	1	\$ 5,000.00	\$ 5,000
5	74033	Temporary Construction Entrance	EA	1	\$ 3,000.00	\$ 3,000
6		Temporary Bypass Road	LS	1	\$ 750,000.00	\$ 750,000
7	120090	Construction Area Signs	LS	1	\$ 5,000.00	\$ 5,000
8	120100	Traffic Control System	LS	1	\$ 50,000.00	\$ 50,000
9	120149	Temporary Pavement Marking (Paint)	SY	15	\$ 20.00	\$ 300
10	120159	Temporary Pavement Stripe (Paint)	LF	4,000	\$ 1.00	\$ 4,000
11	153103	Cold Plane AC	SY	364	\$ 30.00	\$ 10,920
12		Remove 36" CMP Culvert	LF	90	\$ 20.00	\$ 1,800
13	160101	Clearing & Grubbing	AC	3	\$ 10,000.00	\$ 30,000
14	190101	Roadway Excavation	CY	11,400	\$ 50.00	\$ 570,000
15	190185	Shoulder Backing	CY	60	\$ 100.00	\$ 6,000
16	150860	Remove Base and Surfacing	CY	550	\$ 20.00	\$ 11,000
17		Imported Borrow	CY	4,000	\$ 40.00	\$ 160,000
18	203032	Erosion Control (Hydroseed)	AC	4	\$ 3,000.00	\$ 12,000
19	260201	Class 2 Aggregate Base	CY	1,701	\$ 60.00	\$ 102,060
20	390132	HMA (Type A)	TON	1,370	\$ 120.00	\$ 164,400
21		Miscellaneous Paving	SY	400	\$ 15.00	\$ 6,000
22	720110	Rock Slope Protection	CY	1,250	\$ 150.00	\$ 187,500
23		Transitional Railing (Type WB)	EA	4	\$ 4,000.00	\$ 16,000
24	839565	Terminal System (Type SRT)	EA	4	\$ 3,000.00	\$ 12,000
25		Pavement Delineation (Budget)	LS	1	\$ 10,000.00	\$ 10,000
26		Roadside Signs (Budget)	LS	1	\$ 10,000.00	\$ 10,000
27	999990	Mobilization (10% of total)	LS	1	\$ 275,000.00	\$ 275,000

TOTAL ROADWAY ITEMS: \$ 2,519,980
UTILITY RELOCATIONS ¹: \$ 1,579,894
STRUCTURES (VARIABLE-WIDTH CIP FLAT SLAB BRIDGE) ²: \$ 3,325,795
GROUND IMPROVEMENT (STONE COLUMNS) ³: \$ 2,025,000
SUBTOTAL: \$ 9,450,669

25% CONTINGENCY: \$ 2,362,667

TOTAL ESTIMATED CONSTRUCTION COST: \$ 11,813,336

¹ Per PSR Utility Relocation Cost Estimate (2009); escalated to 2013 dollars (12.5%): Assumes full cost of relocation to be the responsibility of the project proponent

² Per Cornerstone Bridge Construction Cost Estimate Review Memo dated April 2013


³ Per 2009 Kleinfelder Preliminary Stone Column Cost Estimate; escalated to 2013 dollars (12.5%)

Preliminary Construction Cost Estimate is based upon Preliminary Plans as submitted with the 2010 Project Study Report

MEMORANDUM

TO: Rich Weber, PE
Whitson Engineers

Date: 4/12/2013
Job No: 2012007

FROM: Shawn M. Cullers, SE 
Cornerstone Structural Engineering Group, Inc

PROJECT: Carmel River Overflow Bridge
Bridge Construction Cost Estimate Review

Cornerstone Structural Engineering Group has completed its review of the bridge construction cost estimate for the preferred bridge alternative included in the Project Study Report (PSR) dated November 1, 2010. According to the PSR, the preferred bridge alternative consists of an approximately 522 foot long by 43 foot wide concrete flat slab bridge supported on 18 inch diameter pipe piles with a structure construction cost estimate of \$4.24 million (2010 dollars). Due to the presence of deep liquefiable soil and lateral spreading at the project site, the preferred alternative also assumed extensive ground remediation with a construction cost estimate of \$1.8 million (2010 dollars). This memo includes a brief summary of our findings and recommendations for the preferred bridge alternative construction cost estimates. In addition, we have included a construction cost estimate for a varying width flat slab bridge to accommodate a left turn lane for Palo Corona Ranch Regional Park and the Odello East Property.

Flat Slab – Constant Width Bridge Construction Cost Estimate

Cornerstone Structural Engineering Group has reviewed the preliminary cost estimate for the 522 ft. long by 43.33 ft. wide flat slab bridge in the PSR. Based on our review, we believe the construction cost for the bridge, in 2013 dollars, is approximately \$3.98 million, approximately 6% less than that assumed in the PSR.

To account for escalation in construction costs between now and the time that the bridge is constructed, we have used an annual inflation rate of 3%. With an assumed construction start date of 2018, the bridge construction cost is estimated to be **\$4.61 million**.

Flat Slab – Varying Width Bridge Construction Cost Estimate

Cornerstone Structural Engineering Group has completed a preliminary construction estimate for a varying width bridge to accommodate a left turn lane into Palo Corona Ranch Regional Park and the Odello East Property. Based on the layout drawings by Whitson Engineers, the 300 ft. taper for the left turn lane begins approximately half way on the proposed bridge structure. To accommodate the left turn lane, the flat slab bridge will widen from 43'-4" to 55'-4" between Station 476+66 to 479+66. To accommodate the widening, additional piles will be required at Piers 2 through 5. Cornerstone has determined that the construction estimate for the varying width bridge is \$4.16 million.

To account for escalation in construction costs between now and the time that the bridge is constructed, we have used an annual inflation rate of 3%. With an assumed construction start date of 2018, the bridge construction cost is estimated to be **\$4.82 million**.

Assumptions

Cornerstone's bridge construction cost estimates are based on the following assumptions:

1. The construction cost estimates only include hard structure costs and do not include soft costs such as construction management, inspection, environmental permitting, etc.
2. A 10% mobilization has been included in the cost estimates.
3. The cost estimates do not include roadway approach work and right-of-way acquisition.
4. Ground remediation will be provided for the full length of the bridge and is not included in these estimates. Based on our conversations with Kleinfelder, the ground remediation would include installing dry, bottom-feed vibro-replacement stone columns on an 8 to 9 foot grid to densify the upper 40 feet of potentially liquefiable soil over a plan area of 620 foot by 50 foot around and below the bridge foot print. It is assumed that the ground improvement will eliminate all potential liquefaction downdrag and lateral spreading forces on bridge piles within the improved area. Kleinfelder believes the improved resistance provided by the ground remediation will be sufficient to develop a 45 ton pile within the 40 feet of densified soil. Based on this, the bridge piles are assumed to be 40 ft. long in the cost estimates.
5. No detailed information was provided to verify the costs of the utilities through the bridge and the bridge lighting. Cornerstone's cost estimates assume that the costs associated with utilities and bridge lighting remain unchanged from previous estimates.
6. No bridge aesthetics have been included in the construction cost estimates. The cost estimates assume plain concrete finishes only.
7. No construction staging of the bridge is required. It is assumed that traffic will be diverted from the existing alignment with a temporary bypass and construction of the bridge will be completed in one stage. These estimates do not include the cost of the temporary bypass or any required traffic staging.

DATE: 04/12/13
 CONTRACT NO:

CARMEL RIVER CAUSEWAY - CONSTANT WIDTH BRIDGE PLANNING ESTIMATE

DS-D-0016 (REV 5/93)

ESTIMATING GROUP

STRUCTURE: Carmel River Causeway	BR. NO:	RCVD. BY:	IN
TYPE: CIP Reinforced Flat Slab Bridge	DIST:	CO:	RTE:
LENGTH 522 x WIDTH 43.33 = AREA 22,618 SQ. FT.	P.M:	OUT	

DESIGN SECTION CORNERSTONE QUANTITIES BY JPJ DATE 4/10/2013 ESTIMATE NO 1
 PROJECT INCLUDES 1 STRUCTURE(S) QUANTITIES CHECKED BY _____ DATE _____ PRICED BY SMC
 AND \$ _____ ROADWORK CHARGE UNIT AND EA _____ COST INDEX 2011/2012

CONTRACT ITEMS	UNIT	QUANTITY	PRICE	AMOUNT
1 192003 STRUCTURE EXCAVATION (BRIDGE)	CY	266	\$50.00	\$13,300
2 193003 STRUCTURE BACKFILL (BRIDGE)	CY	131	\$100.00	\$13,100
3 490736 FURNISH PILING (CLASS 90 - ALT Y)	LF	8,240	\$30.00	\$247,200
4 490737 DRIVE PILE (CLASS 90 - ALT Y)	EA	166	\$2,500.00	\$415,000
5 510051 STRUCTURAL CONCRETE, BRIDGE FOOTING	CY	39	\$450.00	\$17,550
5 510053 STRUCTURAL CONCRETE, BRIDGE	CY	1,446	\$675.00	\$976,050
6 510086 STRUCTURAL CONCRETE, APPROACH SLAB (N30D)	CY	98	\$700.00	\$68,600
7 519144 JOINT SEAL (TYPE B)	LF	177	\$90.00	\$15,930
8 520110 BAR REINFORCING STEEL (EPOXY COATED) (BRIDGE)	LB	200,800	\$1.40	\$281,120
9 703450 UTILITY CASINGS*	LS	1	\$400,000.00	\$400,000
10 833140 CALIFORNIA BRIDGE RAIL (ST-10)*	LF	1,124	\$325.00	\$365,300
11 860403 BRIDGE LIGHTING*	LS	1	\$80,000.00	\$80,000
* QUANTITY AND PRICE PER PREVIOUS ESTIMATE BY BRENTON BRIDGE ENGINEERING				
NOT INCLUDED				
SOIL REMEDIATION				
BRIDGE AESTHETICS TREATMENTS				
APPROACH ROADWAY WORK				
ELECTRICAL WORK (IF REQUIRED)				
RIGHT OF WAY COSTS (IF REQUIRED)				
ENVIRONMENTAL MITIGATION (IF REQUIRED)				
CONTAMINATED/ HAZARDOUS MATERIAL DISPOSAL (IF REQUIRED)				
METAL BEAM GUARD RAILINGS				



SUBTOTAL	\$2,893,150
MOBILIZATION (10%)	\$289,315
SUBTOTAL STRUCTURE ITEMS	\$3,182,465
CONTINGENCIES (25%)	\$795,616
BRIDGE TOTAL (\$ / sq ft) \$176	\$3,978,081
BRIDGE REMOVAL (cont. incl.) (AREA= sq ft)	\$0
GRAND TOTAL (2013 DOLLARS)	\$3,978,081
ESCALATION TO 2018 DOLLARS (3% ANNUAL INFLATION) = 1.16	\$4,611,686
FOR BUDGET PURPOSES - SAY	\$4,612,000
BRIDGE TOTAL (\$ / sq ft) \$204	

DATE: 04/12/13
 CONTRACT NO:

CARMEL RIVER CAUSEWAY - VARYING WIDTH BRIDGE PLANNING ESTIMATE

DS-D-0016 (REV 5/93)

ESTIMATING GROUP

STRUCTURE: Carmel River Causeway	BR. NO:	RCVD. BY:	IN
TYPE: CIP Reinforced Flat Slab Bridge	DIST:	CO:	RTE:
LENGTH 522 x WIDTH Varies 44'-4" to 55'-4" = AREA 24,808 SQ. FT.	P.M:	OUT	

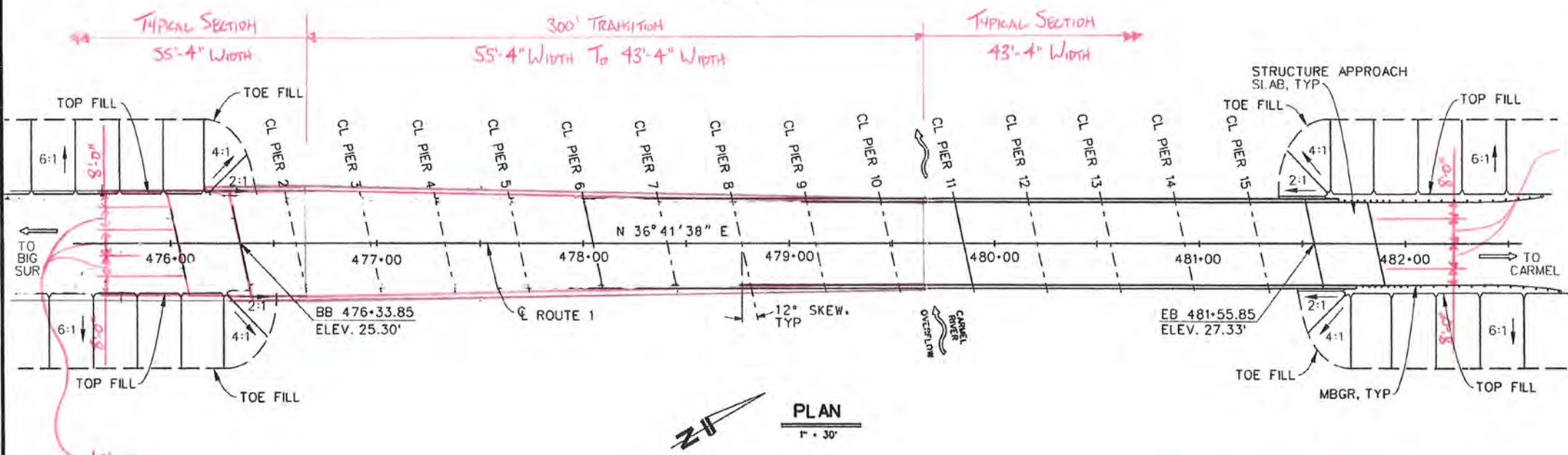
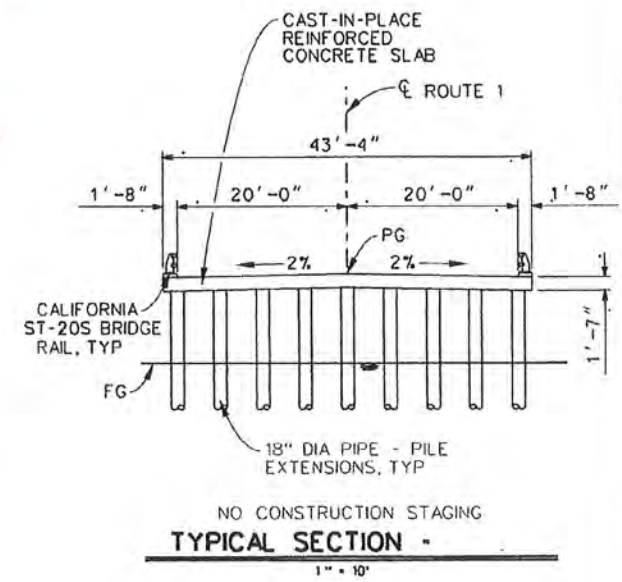
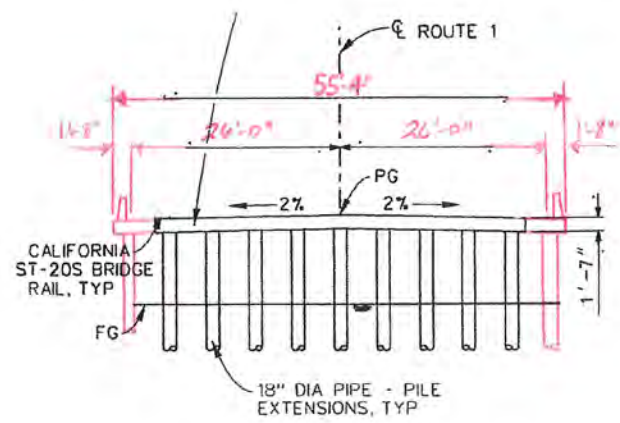
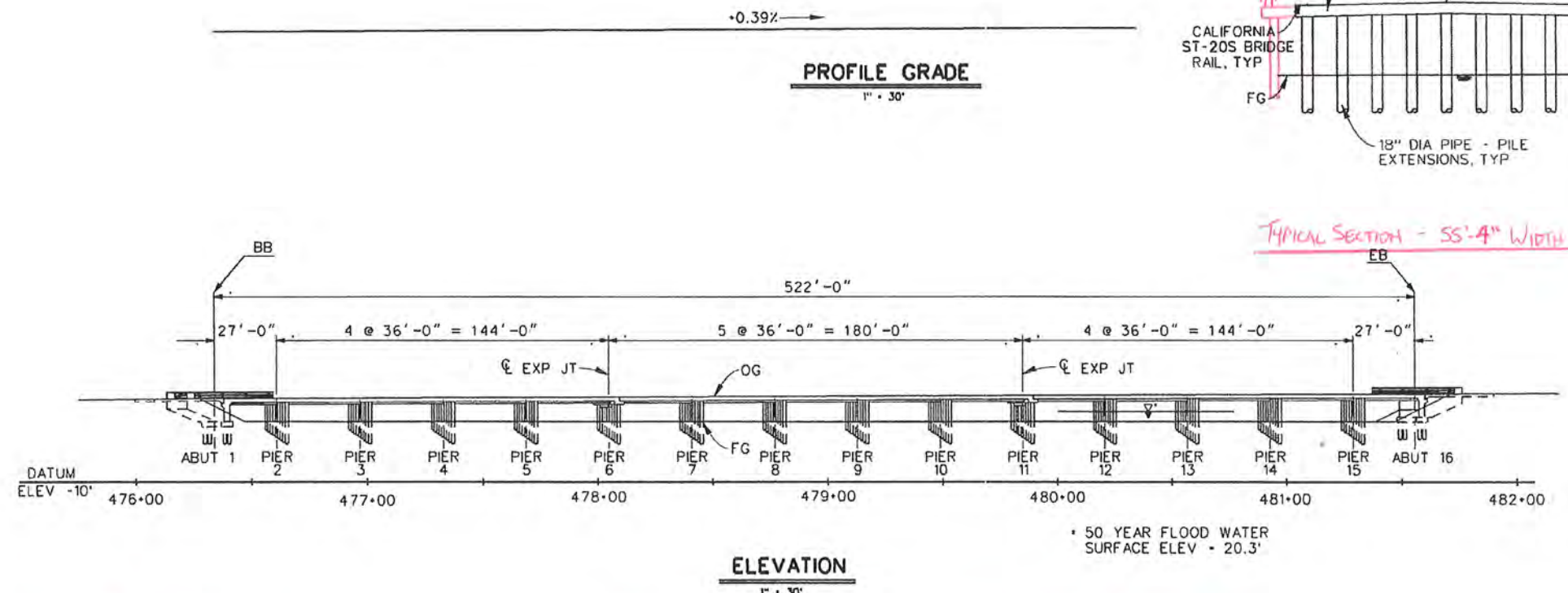
DESIGN SECTION CORNERSTONE QUANTITIES BY JPJ DATE 4/10/2013 ESTIMATE NO 1
 PROJECT INCLUDES 1 STRUCTURE(S) QUANTITIES CHECKED BY _____ DATE _____ PRICED BY SMC
 AND \$ _____ ROADWORK CHARGE UNIT AND EA _____ COST INDEX 2011/2012

CONTRACT ITEMS	UNIT	QUANTITY	PRICE	AMOUNT
1 192003 STRUCTURE EXCAVATION (BRIDGE)	CY	296	\$50.00	\$14,800
2 193003 STRUCTURE BACKFILL (BRIDGE)	CY	146	\$100.00	\$14,600
3 490736 FURNISH PILING (CLASS 90 - ALT Y)	LF	8,637	\$30.00	\$259,110
4 490737 DRIVE PILE (CLASS 90 - ALT Y)	EA	174	\$2,500.00	\$435,000
5 510051 STRUCTURAL CONCRETE, BRIDGE FOOTING	CY	44	\$450.00	\$19,800
6 510053 STRUCTURAL CONCRETE, BRIDGE	CY	1,540	\$675.00	\$1,039,500
7 510080 STRUCTURAL CONCRETE, APPROACH SLAB (N30D)	CY	112	\$700.00	\$78,400
8 519144 JOINT SEAL (TYPE B)	LF	195	\$90.00	\$17,550
9 520110 BAR REINFORCING STEEL (EPOXY COATED) (BRIDGE)	LB	213,850	\$1.40	\$299,390
10 703450 UTILITY CASINGS*	LS	1	\$400,000.00	\$400,000
11 833140 CALIFORNIA BRIDGE RAIL (ST-10)*	LF	1,124	\$325.00	\$365,300
12 860403 BRIDGE LIGHTING*	LS	1	\$80,000.00	\$80,000
* QUANTITY AND PRICE PER PREVIOUS ESTIMATE BY BRENTON BRIDGE ENGINEERING				
NOT INCLUDED				
SOIL REMEDIATION				
BRIDGE AESTHETICS TREATMENTS				
APPROACH ROADWAY WORK				
ELECTRICAL WORK (IF REQUIRED)				
RIGHT OF WAY COSTS (IF REQUIRED)				
ENVIRONMENTAL MITIGATION (IF REQUIRED)				
CONTAMINATED/ HAZARDOUS MATERIAL DISPOSAL (IF REQUIRED)				
METAL BEAM GUARD RAILINGS				



SUBTOTAL	\$3,023,450
MOBILIZATION (10%)	\$302,345
SUBTOTAL STRUCTURE ITEMS	\$3,325,795
CONTINGENCIES (25%)	\$831,449
BRIDGE TOTAL (\$ / sq ft)	\$168 \$4,157,244
BRIDGE REMOVAL (cont. incl.) (AREA= sq ft)	\$0
GRAND TOTAL (2013 DOLLARS)	\$4,157,244
ESCALATION TO 2018 DOLLARS (3% ANNUAL INFLATION) =	1.16 \$4,819,385
FOR BUDGET PURPOSES - SAY	\$4,820,000
BRIDGE TOTAL (\$ / sq ft)	\$194

STATE OF CALIFORNIA	DEPARTMENT OF TRANSPORTATION	DATE	REVISOR
		DATE	DATE
		DATE	DATE
		DATE	DATE
CALCULATED/DESIGNED BY	CHECKED BY	JPG	RPW



DATE OF ESTIMATE	• 11/07/08
STRUCTURE DEPTH	• 1'-7"
LENGTH	• 522'-0"
WIDTH	• 43'-4"
AREA	• 22618 sf
COST \$/sf INCLUDING 10% MOBILITY 25% CONTINGENCY	• \$190.11
TOTAL COST	• \$4,300,000

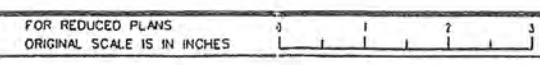
CAST-IN-PLACE REINFORCED CONCRETE SLAB BRIDGE

DEAD LOADS: 35 PSF FUTURE WEARING SURFACE
1500 PLF UTILITIES
300 PLF FUTURE UTILITY

LIVE LOADS: HL93 AND PERMIT DESIGN LOAD

ALTERNATIVE 1
ADVANCE PLANNING STUDY
CARMEL RIVER
OVERFLOW BRIDGE
VARYING WIDTH SHEET #

MARKERS BY: SMC
DATE: 4/10/13



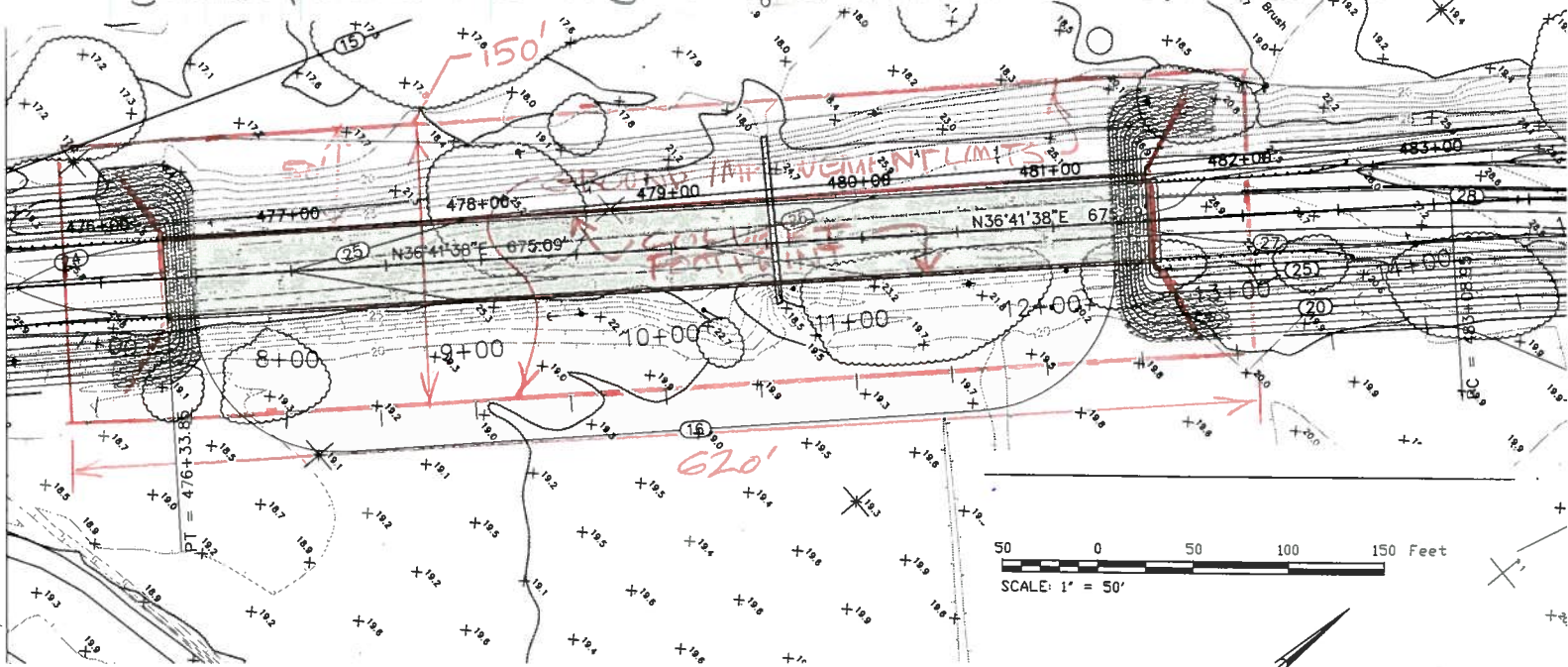
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TIME PLOTTED -> 10:00 AM

Ground Improvement (Stone Columns) Cost Estimate

2009 Kleinfelder

PROJECT CARMEL CAUSEWAY PROJECT NO. 96313
 SUBJECT ROUGH PRELIMINARY BY J. GINGERY DATE 10/2/09
STONE COLUMN COST ESTIMATE REVIEWED BY JFM DATE 10/02/09

OBJECTIVE: Make a preliminary cost estimate of stone column groundimprovement to mitigate liquefaction & lateral spreading hazard.



TREATMENT AREA:

$$A_{tr} = 150' \times 620' = 93,000 \text{ ft}^2$$

TREATMENT DEPTH:

$$D_{tr} \approx 40' \text{ (PRELIM. ESTIMATE)}$$

TREATMENT VOLUME

$$V_{tr} = A_{tr} \cdot D_{tr} = (93000 \text{ ft}^2)(40') \frac{1 \text{ cyd}}{27 \text{ ft}^3}$$

$$V_{tr} = 137800 \text{ cyd}$$

$$\text{cost/cyd} = \$8/\text{cyd} \text{ to } \$12/\text{cyd}$$

(Based on previous estimates from Hayward Baker for Costco National City and SR79 bridge in San Marcos.)

$$\text{Cost} = V_{tr} \cdot \frac{\text{cost}}{\text{cyd}} =$$

$$\text{est. cost} = \$1.102 \text{ to } \$1.654 \text{ M}$$

This is a preliminary cost estimate only. Further design and cost estimating is necessary as the project proceeds.

**Lower Carmel River and Lagoon
Floodplain Restoration and
Enhancement Project**

**Odello East Agricultural Grading
Improvement**

60% Design Drawings

GENERAL NOTES

- CONSTRUCTION CONTRACTOR AGREES THAT, IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY: THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL(S) HARMLESS FROM ANY AND ALL LIABILITY, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL(S).
- ALL WORK SHALL PERFORMED BE IN CONFORMANCE WITH:
 - THE PROJECT PLANS AND SPECIFICATIONS
 - MONTEREY COUNTY GRADING ORDINANCE #2535 AND EROSION CONTROL ORDINANCE #2806
 - THE MAY, 2006 EDITION OF "STANDARD SPECIFICATIONS," STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION (CALTRANS)
 - THE MAY, 2006 EDITION OF "STANDARD PLANS," STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION (CALTRANS)
 - REFERENCED "REVISED STANDARD PLANS" AND "NEW STANDARD PLANS," STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION (CALTRANS)
 - CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ACT STANDARDS (CAL-OSHA)
- CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL CURRENTLY APPLICABLE SAFETY LAWS OF ALL APPLICABLE JURISDICTIONAL BODIES. FOR INFORMATION REGARDING THIS PROVISION, THE CONTRACTOR IS DIRECTED TO CONTACT STATE OF CALIFORNIA, DIVISION OF OCCUPATIONAL SAFETY AND HEALTH, SALINAS, CALIFORNIA AT PHONE (831) 443-3050.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL BARRICADES, SAFETY DEVICES AND CONTROL OF TRAFFIC WITHIN THE CONSTRUCTION AREA.
- INTENTION OF GRADING: CREATION OF AN AGRICULTURAL PRESERVE AND LOWERING OF THE CARMEL RIVER FLOODPLAIN.
- ARCHAEOLOGY:
 - THE CONTRACTOR SHALL HALT WORK WITHIN 150 FEET OF A FIND IF ARCHAEOLOGICAL RESOURCES OR HUMAN REMAINS ARE ACCIDENTALLY DISCOVERED DURING CONSTRUCTION UNTIL IT CAN BE EVALUATED BY A QUALIFIED PROFESSIONAL ARCHAEOLOGIST.
 - IF HUMAN REMAINS ARE DISCOVERED, THE COUNTY CORONER SHALL BE NOTIFIED. THE CORONER SHALL DETERMINE WHETHER THE REMAINS ARE NATIVE AMERICAN. IF THE CORONER DETERMINES THAT THE REMAINS ARE NOT SUBJECT TO HIS/HER AUTHORITY, THE CORONER SHALL NOTIFY THE NATIVE AMERICAN HERITAGE COMMISSION TO IDENTIFY ANY DESCENDANTS OF THE DECEASED NATIVE AMERICAN.
 - IF IT IS DETERMINED THAT THE ARCHAEOLOGICAL FIND IS SIGNIFICANT, A MITIGATION PROGRAM SHALL BE PREPARED IN CONFORMANCE WITH THE PROTOCOL SET FORTH IN APPENDIX K OF THE CEQA GUIDELINES. A FINAL REPORT WILL BE PREPARED WHEN A FIND IS DETERMINED TO BE A SIGNIFICANT ARCHAEOLOGICAL SITE, AND/OR WHEN NATIVE AMERICAN REMAINS ARE FOUND ON THE SITE. THE FINAL REPORT SHALL INCLUDE BACKGROUND INFORMATION ON THE COMPLETED WORK, A DESCRIPTION AND LIST OF IDENTIFIED RESOURCES, THE DISPOSITION AND CURATION OF THE RESOURCES, ANY TESTING, OTHER RECOVERED INFORMATION AND CONCLUSIONS.
- ESTIMATED START AND COMPLETION DATES OF PROJECT (OF WORK COVERED BY THIS PERMIT): SPRING - SUMMER 2012.

LOWER CARMEL RIVER AND LAGOON FLOODPLAIN RESTORATION AND ENHANCEMENT PROJECT ODELLO EAST AGRICULTURAL GRADING IMPROVEMENTS

GRADING NOTES

- ONSITE GRADING AND EARTHWORK, SITE PREPARATION, EXCAVATION, TRENCHING AND COMPACTION SHALL BE OBSERVED AND TESTED BY THE GEOTECHNICAL ENGINEER DESIGNATED BY THE OWNER. ALL GRADING AND EARTHWORK SHALL BE DONE TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER.
- RELATIVE COMPACTION SHALL BE MEASURED IN ACCORDANCE WITH ASTM TEST D-1557. WHERE NOT OTHERWISE SPECIFIED, ALL FILL SHALL BE COMPACTED TO A MINIMUM OF 90% RELATIVE COMPACTION.
- ALL GRADING SHALL CONFORM WITH MONTEREY COUNTY GRADING ORDINANCE #2535 AND EROSION CONTROL ORDINANCE #2806.
- ALL SURFACES EXPOSED OR EXPECTED TO BE EXPOSED DURING GRADING ACTIVITIES SHALL BE PREPARED AND MAINTAINED THROUGH THE DURATION OF THE CONSTRUCTION TO PROTECT AGAINST EROSION. EROSION CONTROL MEASURES SHALL BE IN PLACE AT THE END OF EACH WORKING DAY.
- AT ALL TIMES DURING CONSTRUCTION AND UNTIL FINAL COMPLETION, THE CONTRACTOR, WHEN HE OR HIS SUBCONTRACTORS ARE OPERATING EQUIPMENT ON THE SITE, SHALL PREVENT THE FORMATION OF AN AIRBORNE DUST NUISANCE BY WATERING AND/OR TREATING THE SITE OF THE WORK IN SUCH A MANNER THAT WILL CONFINE DUST PARTICLES TO THE IMMEDIATE SURFACE OF THE WORK. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGE DONE BY DUST FROM HIS OR HER SUBCONTRACTOR.
- THE FOLLOWING PROVISIONS APPLY BETWEEN OCTOBER 15 AND APRIL 15 (MON. CO. ORD. #2806):
 - DISTURBED SURFACES NOT INVOLVED IN THE IMMEDIATE OPERATIONS MUST BE PROTECTED BY MULCHING AND/OR OTHER EFFECTIVE MEANS OF SOIL PROTECTION.
 - ALL ROADS AND DRIVEWAYS SHALL HAVE DRAINAGE FACILITIES SUFFICIENT TO PREVENT EROSION ON OR ADJACENT TO THE ROADWAY OR ON DOWNHILL PROPERTIES. EROSION-PROOF SURFACING MAY BE REQUIRED IN AREAS OF HIGH EROSION HAZARD.
 - RUNOFF FROM THE SITE SHALL BE DETAINED OR FILTERED BY BERMS, VEGETATED FILTER STRIPS, AND/OR CATCH BASINS TO PREVENT THE ESCAPE OF SEDIMENT FROM THE SITE. THESE DRAINAGE CONTROLS MUST BE MAINTAINED AS NECESSARY TO ACHIEVE THEIR PURPOSE THROUGHOUT THE LIFE OF THE PROJECT.
 - EROSION CONTROL MEASURES SHALL BE IN PLACE AT THE END OF EACH DAYS WORK.
 - THE DIRECTOR OF BUILDING INSPECTION SHALL STOP OPERATIONS DURING PERIODS OF INCLEMENT WEATHER IF HE DETERMINES THAT EROSION PROBLEMS ARE NOT BEING CONTROLLED ADEQUATELY.
- REFER TO THE PROJECT SWPPP AND WATER POLLUTION CONTROL DRAWINGS FOR SPECIFIC WATER POLLUTION CONTROL REQUIREMENTS.
- ANY SURPLUS CLEAN SOIL WILL BE STOCKPILED ON-SITE WHERE DIRECTED BY THE ENGINEER.

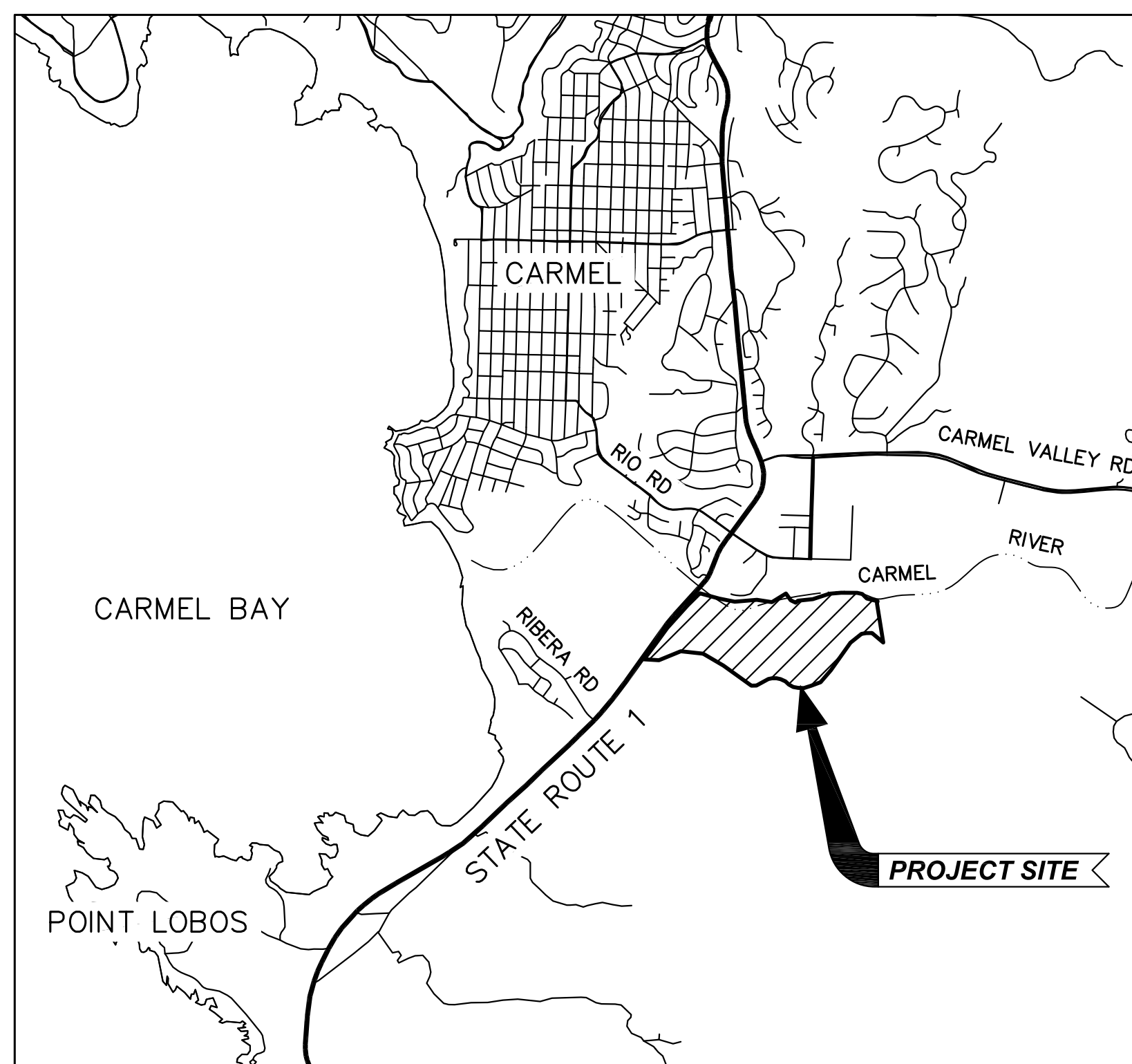
EARTHWORK SUMMARY

CUT = 180,000 CY FILL = 180,000 CY

NO SOIL IMPORT OR EXPORT IS ANTICIPATED.

THE QUANTITIES PRESENTED ARE ESTIMATES ONLY AND WERE NOT ADJUSTED FOR CHANGES IN VOLUME DUE TO CHANGES IN SOIL DENSITY. STRIPPING VOLUME IS NOT INCLUDED IN THE ABOVE ESTIMATES. BULKING AND SHRINKAGE ARE ANTICIPATED. SITE SPOILS SUCH AS UTILITY TRENCHING, FOUNDATIONS, ETC. ARE NOT ACCOUNTED FOR IN ABOVE VOLUMES.

VALUES SHOULD BE REEVALUATED DURING THE EARLY STAGES OF SITE GRADING. CONTRACTOR SHALL BE RESPONSIBLE FOR CALCULATING FINAL EARTHWORK QUANTITIES TO HIS/HER SATISFACTION PRIOR TO START OF GRADING OPERATIONS.



LOCATION MAP

SCALE: 1 INCH = 1/2 MILE

PROJECT DIRECTORY

OWNER / CONTACT

BIG SUR LAND TRUST
CONTACT: DONNA MEYERS
P.O. BOX 4071
MONTEREY, CA 93942

PHONE: (831) 625-5523
FAX: (831) 625-0716

SITE ADDRESS & APN

27215 - 27225 HIGHWAY ONE
NEAR CARMEL-BY-THE-SEA
MONTEREY COUNTY

APN: 243-071-003, -004, -005 AND -006

CIVIL ENGINEERS

BALANCE HYDROLOGICS, INC.
800 BANCROFT WAY, SUITE 101
BERKELEY, CA 94710

PHONE: (510) 704-1000
FAX: (510) 704-1001

WHITSON ENGINEERS
9699 BLUE LARKSPUR LANE
SUITE 105
MONTEREY, CA 93940

PHONE: (831) 649-5225
FAX: (831) 373-5065

SHEET INDEX

- | | |
|-------|--|
| T-1 | TITLE SHEET |
| X-1 | TYPICAL SECTIONS |
| S-1 | OVERALL SITE PLAN |
| G-1 | GRADING PLAN |
| G-2 | GRADING PLAN |
| P-1 | PROFILE |
| CD-1 | GRADING NOTES AND DETAILS |
| WPC-1 | WATER POLLUTION CONTROL DRAWING - COVER |
| WPC-2 | WATER POLLUTION CONTROL DRAWING - ACTIVE SITE GRADING |
| WPC-3 | WATER POLLUTION CONTROL DRAWING - ACTIVE SITE GRADING |
| WPC-4 | WATER POLLUTION CONTROL DRAWING - FINAL SITE STABILIZATION |
| WPC-5 | WATER POLLUTION CONTROL DRAWING - FINAL SITE STABILIZATION |

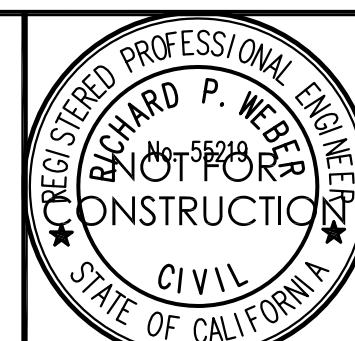
ABBREVIATIONS

- | | |
|--------|-------------------------|
| AB | AGGREGATE BASE |
| AC | ASPHALT CONCRETE |
| CLR | CLEAR |
| CO | CLEANOUT |
| CONC | CONCRETE |
| CONST. | CONSTRUCT |
| DEMO | DEMOLISH AND DISPOSE OF |
| (E) | EXISTING |
| ELEV | ELEVATION |
| FG | FINISH GRADE |
| FL | FLOW LINE |
| GB | GRADE BREAK |
| GRT | GRATE |
| MATCH | MATCH EXISTING GRADE |
| OG | ORIGINAL GRADE |
| PT | PRESSURE TREATED WOOD |
| SD | STORM DRAIN |

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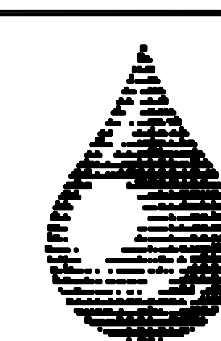


**LOWER CARMEL RIVER AND LAGOON
FLOODPLAIN RESTORATION AND ENHANCEMENT PROJECT
ODELLO EAST AGRICULTURAL GRADING IMPROVEMENTS**



REVISIONS:		
BY:	DATE:	DESCRIPTION:

DATE: APRIL 12, 2011
SCALE: AS NOTED
DRAWN BY: NDM
JOB #: WE: 2172.02 BH: 210145



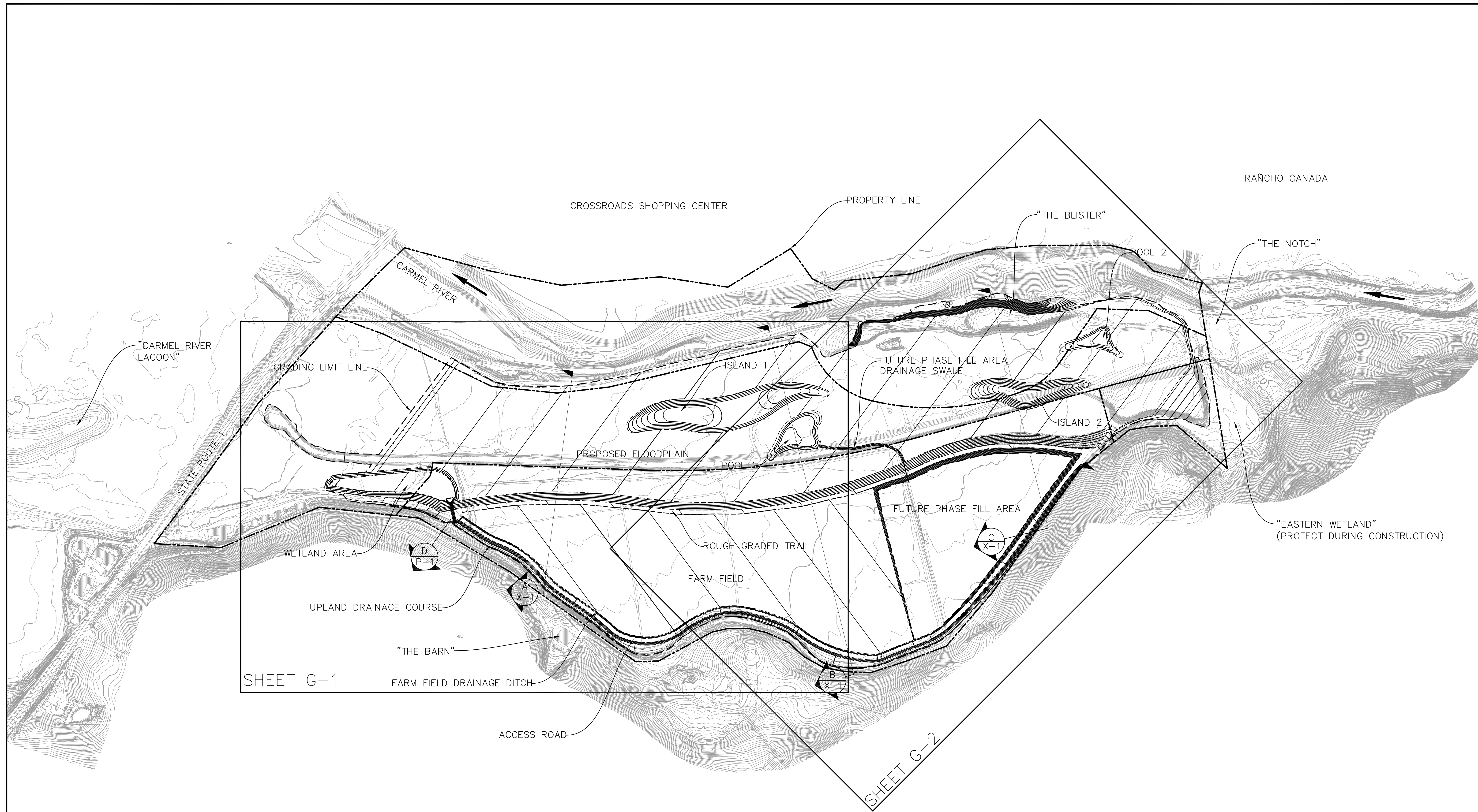
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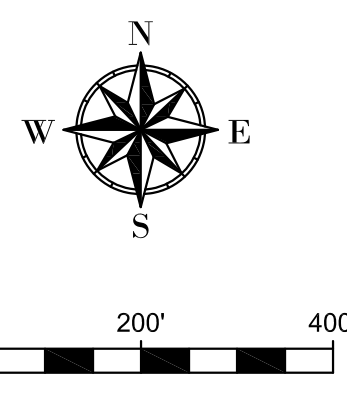
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SHEET
T-1
1 OF N

60% PLANS -- NOT FOR CONSTRUCTION

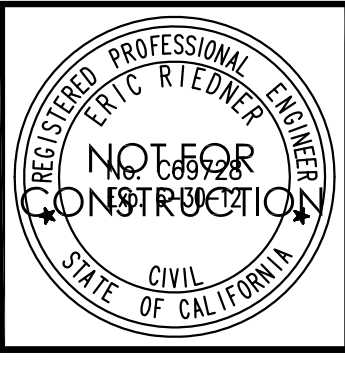


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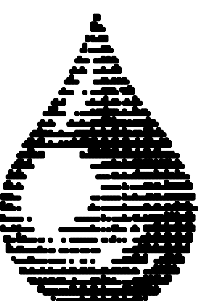
OVERALL SITE PLAN
SCALE: 1" = 200'


LOWER CARMEL RIVER AND LAGOON FLOODPLAIN RESTORATION AND ENHANCEMENT PROJECT
ODELLO EAST AGRICULTURAL GRADING IMPROVEMENTS



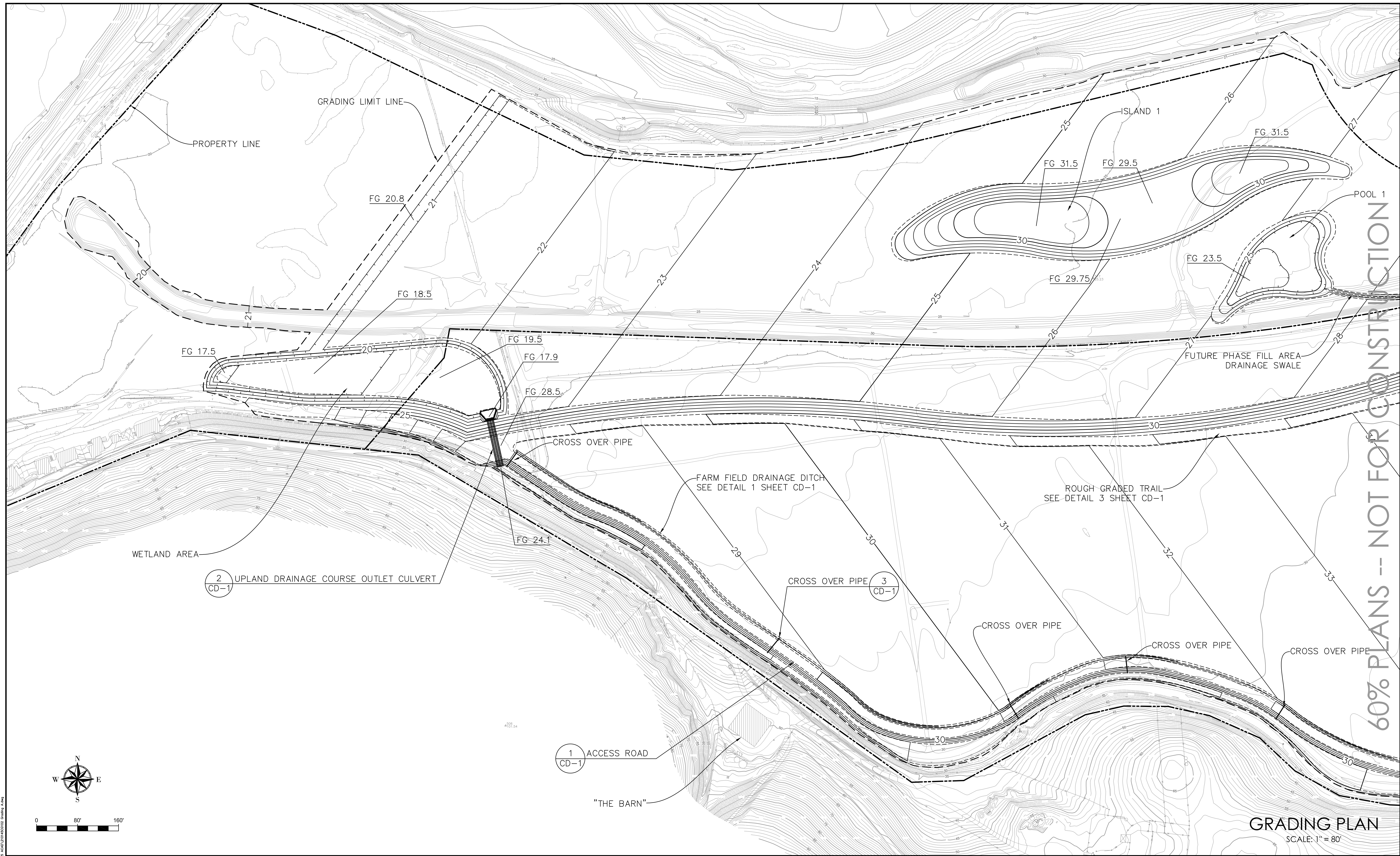
REVISIONS:		
BY:	DATE:	DESCRIPTION:

DATE: **APRIL 19, 2011**
 SCALE: **1" = 200'**
 DRAWN BY: **EM**
 JOB #: **WE: 2172.02 BH: 210145**


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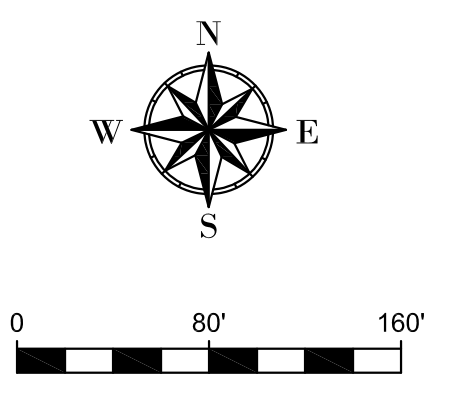

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SHEET
S-1
 XX OF XX



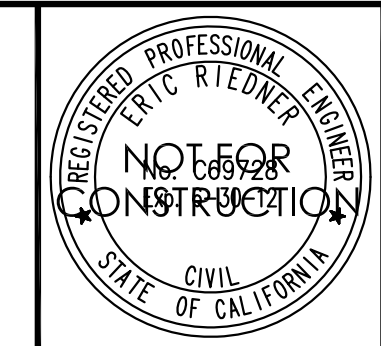
60% PLANS -- NOT FOR CONSTRUCTION

GRADING PLAN
SCALE: 1" = 80'



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FLOODPLAIN RESTORATION AND ENHANCEMENT PROJECT
ODELLO EAST AGRICULTURAL GRADING IMPROVEMENTS**



REVISIONS:		
BY:	DATE:	DESCRIPTION:

DATE: **APRIL 19, 2011**
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DRAWN BY: **EM**
JOB #: **WE: 2172.02 BH: 210145**

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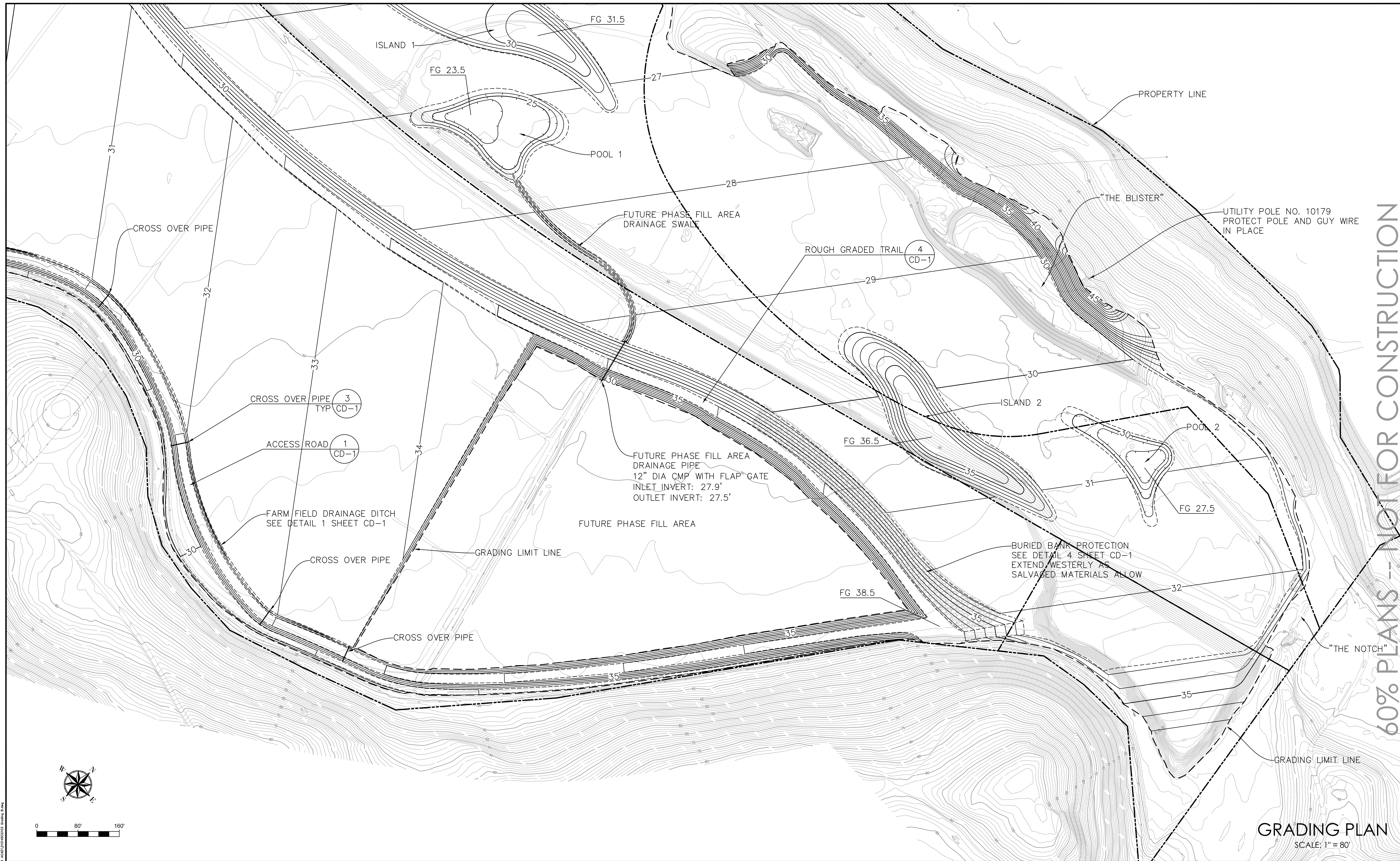
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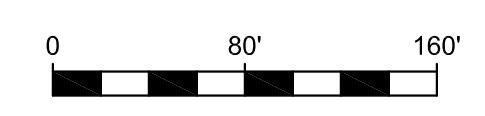
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SHEET
G-1
XX OF XX



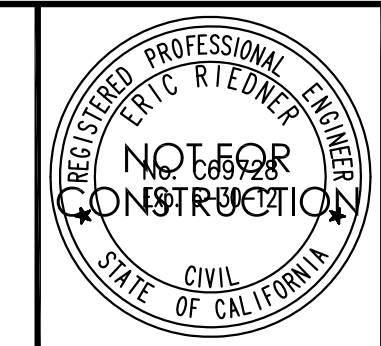
60% PLANS -- NOT FOR CONSTRUCTION



GRADING PLAN
SCALE: 1" = 80'

BIG SUR LAND TRUST

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ODELLO EAST AGRICULTURAL GRADING IMPROVEMENTS



REVISIONS:		
BY:	DATE:	DESCRIPTION:

DATE: **APRIL 19, 2011**
SCALE: **1" = 80'**
DRAWN BY: **EM**
JOB #: **WE 2172.02 BH: 210145**

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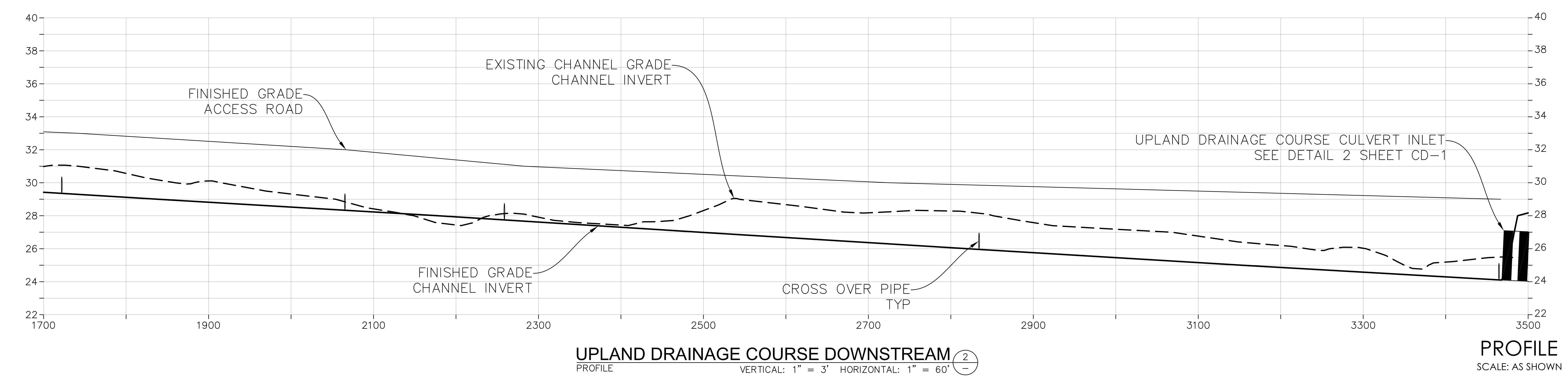
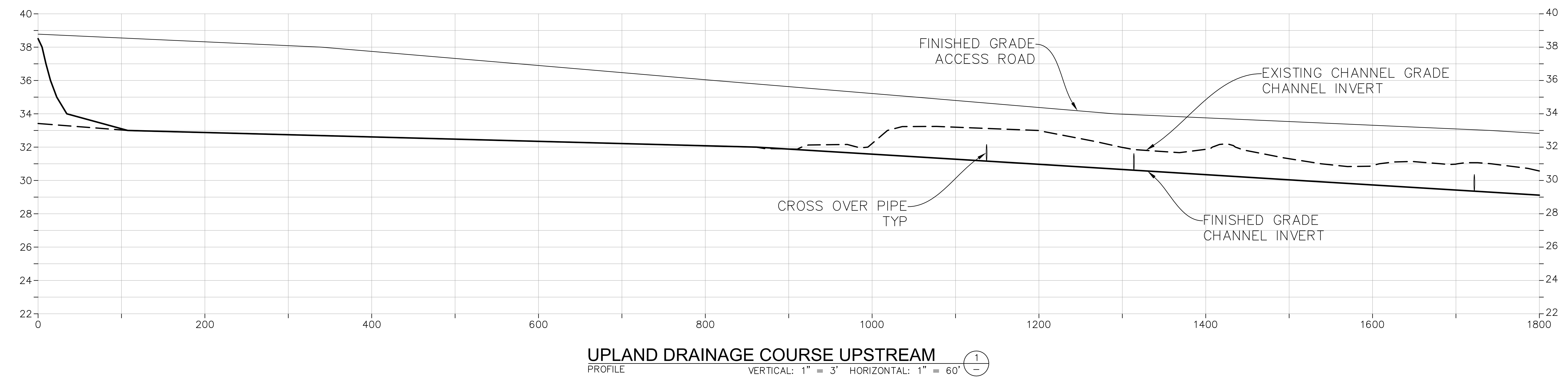
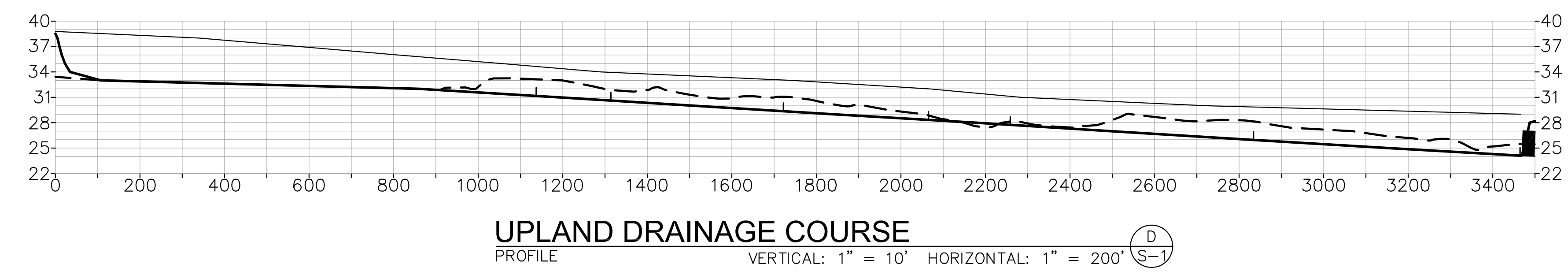
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SHEET
G-2
XX OF XX

NOTE:
EXISTING CHANNEL GRADE AND ACCESS ROAD
ELEVATIONS ARE PROJECTED ONTO THE PROFILE
LINE.

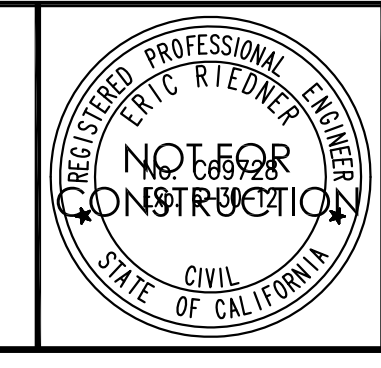


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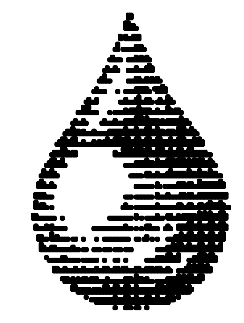


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FLOODPLAIN RESTORATION AND ENHANCEMENT PROJECT
ODELLO EAST AGRICULTURAL GRADING IMPROVEMENTS**



REVISIONS:		
BY:	DATE:	DESCRIPTION:

DATE: **APRIL 19, 2011**
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JOB #: **WE: 2172.02 BH: 210145**



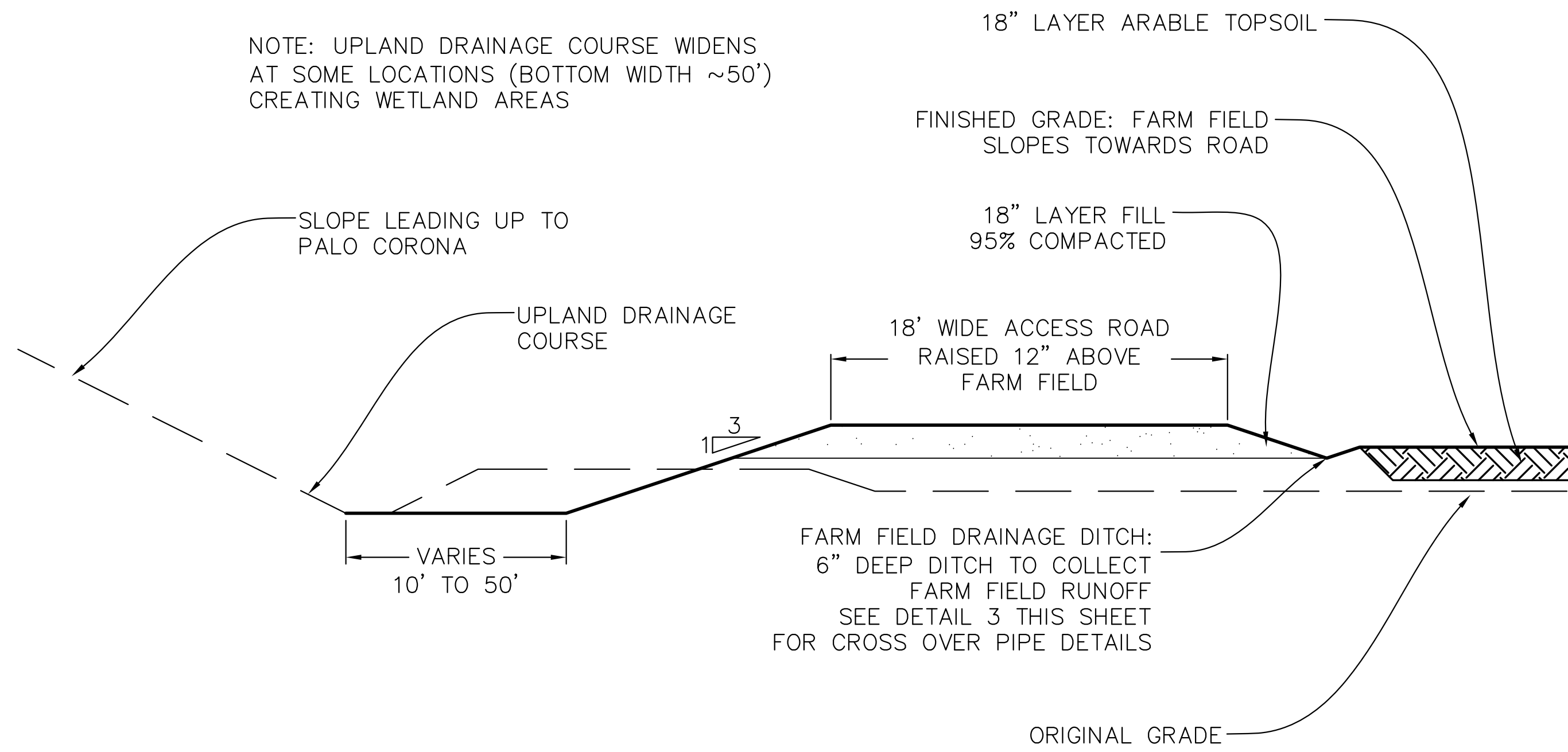
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P-1
XX OF XX

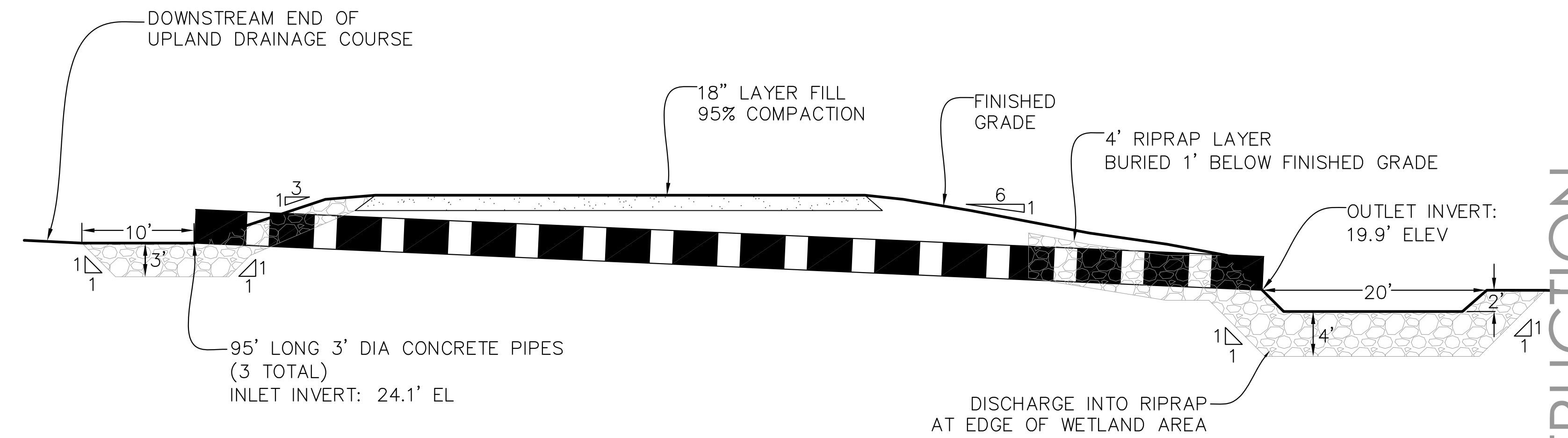
NOTE: UPLAND DRAINAGE COURSE WIDENS AT SOME LOCATIONS (BOTTOM WIDTH ~50') CREATING WETLAND AREAS



ACCESS ROAD

TYPICAL SECTION

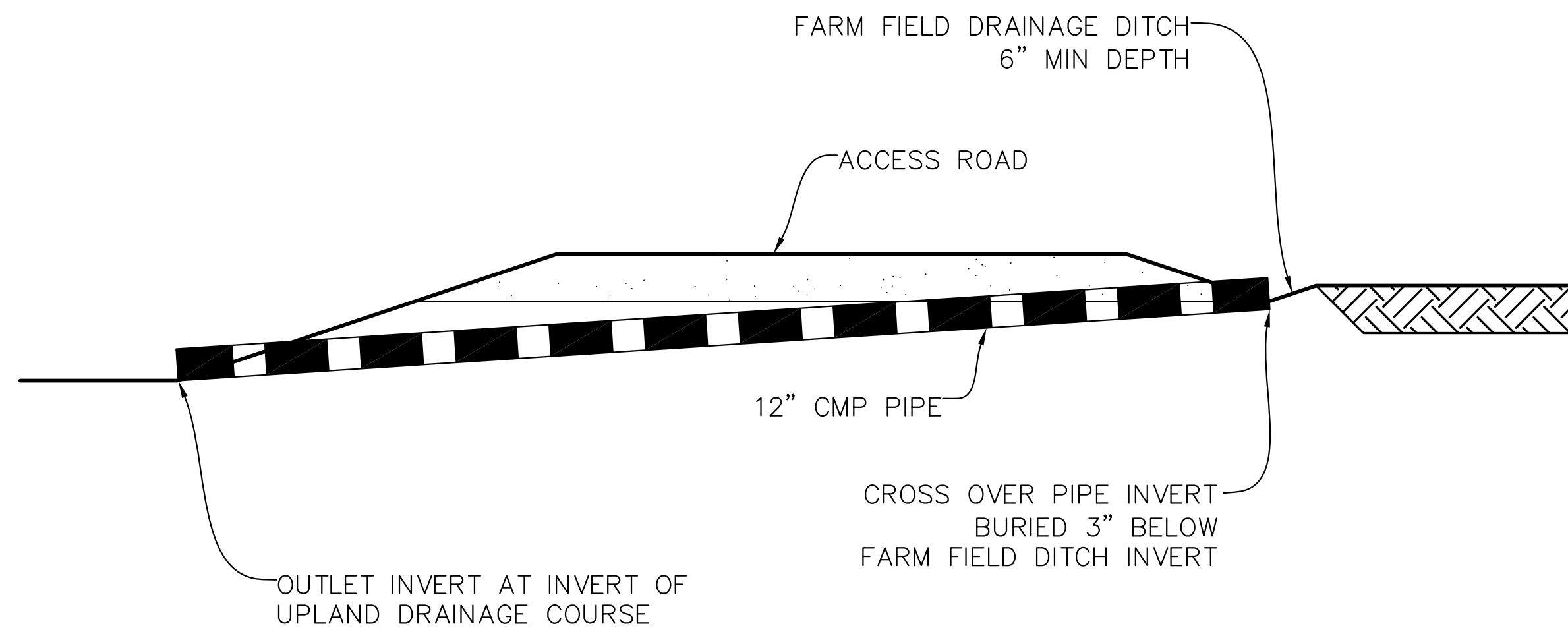
SCALE: 1" = 5' $\frac{1}{G-1}$ G-2



UPLAND DRAINAGE COURSE OUTLET CULVERT

TYPICAL PROFILE

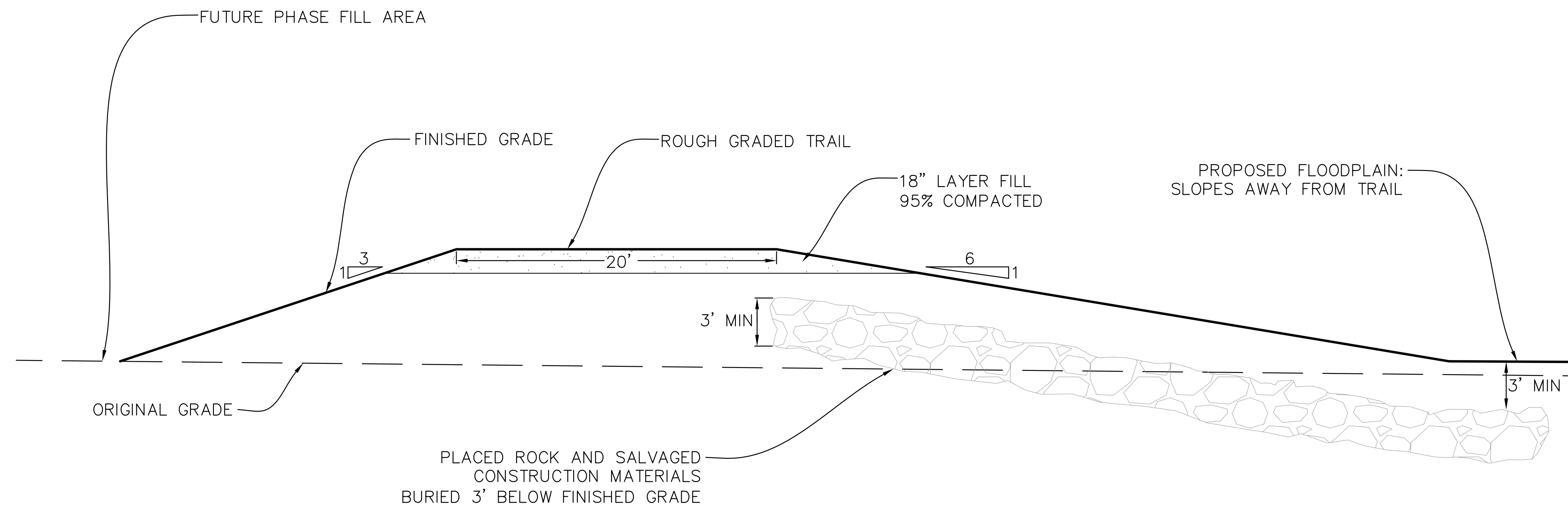
SCALE: 1" = 8' $\frac{2}{G-1}$



CROSS OVER PIPE

TYPICAL SECTION

SCALE: 1" = 4' $\frac{3}{G-1}$ G-2



ROUGH GRADED TRAIL

TYPICAL SECTION

SCALE: 1" = 5' $\frac{4}{G-1}$ G-2

GRADING NOTES AND DETAILS

SCALE: AS SHOWN

60% PLANS -- NOT FOR CONSTRUCTION

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LOWER CARMEL RIVER AND LAGOON
FLOODPLAIN RESTORATION AND ENHANCEMENT PROJECT
ODELLO EAST AGRICULTURAL GRADING IMPROVEMENTS



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BY:	DATE:	DESCRIPTION:

DATE: APRIL 19, 2011
SCALE: AS SHOWN
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JOB #: 210145



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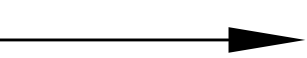
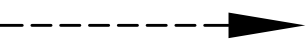


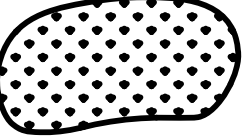

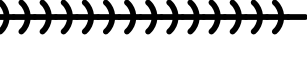




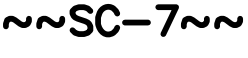

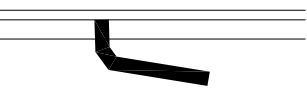





WATER POLLUTION CONTROL DRAWINGS

FOR

ODELLO EAST AGRICULTURAL GRADING IMPROVEMENTS

-- A RISK LEVEL 2 PROJECT --

LEGEND

-  SURFACE WATER FLOW DIRECTION
-  STORM DRAIN FLOW DIRECTION
-  SS-2 PRESERVATION OF EXISTING VEGETATION
-  TEMPORARY ESA FLAGGING (POST WITH SIGN EVERY 200')
-  SS-3, SS-4, SS-5, SS-6, OR SS-8 SOIL COVER (HYDRAULIC MULCH, HYDROSEED, SOIL BINDERS, STRAW MULCH, DUFF, COMPOST, OR MULCH)
-  SS-7 ROLLED EROSION CONTROL PRODUCT PER STANDARD PLANS T54 AND T55 OR NEW STANDARD PLAN NSP H53
-  SS-9 EARTH DIKES AND DRAINAGE SWALES
-  SC-1 SILT FENCE PER STANDARD PLAN T51
-  SC-3 SEDIMENT TRAP
-  SC-4 CHECK DAM PER STANDARD PLAN T57
-  SC-5 FIBER ROLL PER REVISED STANDARD PLAN RSP T56
-  SC-7 STREET SWEEPING AND VACUUMING
-  SC-10 STORM DRAIN INLET PROTECTION PER NEW STANDARD PLANS NSP T61, T62, T63, T64
-  SC-10 STORM DRAIN INLET PROTECTION (TYPE 3A OR 4B) PER NEW STANDARD PLANS NSP T62 OR T63
-  TC-1 STABILIZED CONSTRUCTION ENTRANCE PER STANDARD PLAN T58
-  WM-1 MATERIALS STORAGE AND WASTE MANAGEMENT AREA
-  WM-8 CONCRETE WASHOUT PER STANDARD PLAN T59
-  WM-9 SANITARY FACILITIES
-  DISCHARGE LOCATION WITH SAMPLE LOCATION NUMBER

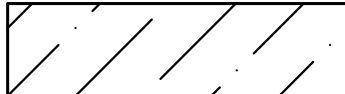

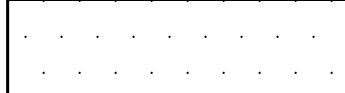
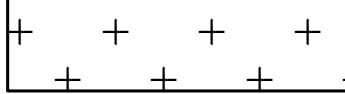

KEY NOTES - TEMPORARY BMPs

- 1. PROVIDE AND MAINTAIN DITCH ALONG SOUTHERN CONSTRUCTION BOUNDARY TO PREVENT RUN-ON FROM OFF-SITE AREAS FROM ENTERING DISTURBED SOIL AREAS (BMP SS-9).
- 2. MAINTAIN VEGETATED BUFFER AREA UPSTREAM OF EXISTING CULVERT. PROVIDE MINIMUM 200 FOOT SHEET FLOW LENGTH. PROVIDE LARGE DIAMETER SEDIMENT BARRIERS (18" TO 22" DIA. FIBER ROLLS) WITHIN VEGETATED BUFFER AREA AT 50 FEET ON CENTER.
- 3. PROVIDE OUTLET PROTECTION/VELOCITY DISSIPATION DEVICE AT CULVERT OUTLET (BMP SS-10).

KEY NOTES - PERMANENT BMPs

- 4. THE MOW ZONE AND RIPARIAN AREAS SHALL BE LIGHTLY DISKED, SEEDED WITH EROSION CONTROL MIX, AND MULCHED WITH STRAW IN ACCORDANCE WITH THE SPECIAL PROVISIONS. (SUBSEQUENT PLANTINGS WILL BE DONE BY OTHERS.)
- 5. THE AGRICULTURAL PRESERVE SHALL BE LIGHTLY DISKED, SEEDED WITH EROSION CONTROL MIX (COVER CROP), AND MULCHED WITH STRAW IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
- ALL OTHER DISTURBED AREAS SHALL BE SEEDED WITH EROSION CONTROL MIX IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

EROSION CONTROL SEEDING LEGEND

-  EROSION CONTROL SEEDING (TYPE A-1) (AGRICULTURAL PRESERVE)
-  EROSION CONTROL SEEDING (TYPE R-1) (MOW ZONE)
-  EROSION CONTROL SEEDING (TYPE R-2) (RIPARIAN)
-  EROSION CONTROL SEEDING (TYPE R-3) (ISLANDS IN RIPARIAN AREA)
-  EROSION CONTROL SEEDING (TYPE R-4) (BASINS IN RIPARIAN AREA)

GENERAL NOTES

1. THIS PLAN IS INTENDED TO BE USED FOR INTERIM WATER POLLUTION CONTROL ONLY AND IS NOT TO BE USED FOR FINAL ELEVATIONS OR PERMANENT IMPROVEMENTS.
2. IMPLEMENT WATER POLLUTION CONTROL PRACTICES CONCURRENT WITH THE BEGINNING OF CONSTRUCTION AND CONTINUE THROUGHOUT CONSTRUCTION, UNTIL FINAL SITE STABILIZATION IS REACHED.
3. IF IT IS DETERMINED THAT A PARTICULAR BMP IS NOT PROVIDING ADEQUATE PROTECTION, IMPLEMENT ALTERNATIVE OR ADDITIONAL BMPs.
4. THIS WATER POLLUTION CONTROL PLAN MAY NOT COVER ALL THE SITUATIONS THAT MAY ARISE DURING CONSTRUCTION. THE QUALIFIED SWPPP PRACTITIONER (QSP) SHALL MODIFY THIS PLAN AS REQUIRED TO PROTECT WATER QUALITY.
5. THIS WATER POLLUTION CONTROL PLAN MAY NOT DEPICT THE BMPs REQUIRED DURING ALL STAGES OF CONSTRUCTION. THE QSP SHALL MODIFY THIS PLAN REGULARLY TO REFLECT THE CURRENT CONSTRUCTION PHASE AND BMP DEPLOYMENT.
6. ALL TEMPORARY BMPs (E.G., SILT FENCE) SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN NO LONGER REQUIRED.
7. THE BMPs SHOWN ON THIS PLAN ARE SHOWN SCHEMATICALLY. THE QUALIFIED SWPPP PRACTITIONER SHALL DETERMINE ACTUAL BMP LOCATIONS AND DETAILS.
8. LOCATIONS FOR WM-1, WM-8 AND WM-9 WERE NOT KNOWN AT THE TIME OF THE DRAFTING OF THESE PLANS. THE QSP SHALL DRAW IN THE LOCATIONS FOR THESE FACILITIES ONCE THEY HAVE BEEN CHOSEN. THESE FACILITIES SHALL BE LOCATED AT LEAST 50 FEET FROM INLETS AND WATER COURSES.
9. UPON COMPLETION OF CONSTRUCTION ACTIVITIES AND ESTABLISHMENT OF PERMANENT EROSION CONTROL MEASURES, ALL TEMPORARY BMP MATERIALS SHALL BE REMOVED FROM THE SITE, AS DIRECTED BY THE ENGINEER.

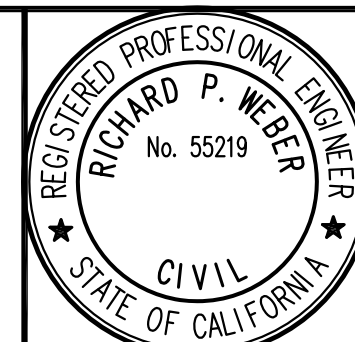
CONSTRUCTION GENERAL PERMIT NARRATIVE BMP REQUIREMENTS

1. IMPLEMENT GOOD SITE MANAGEMENT "HOUSEKEEPING" PRACTICES.
2. NON-STORM WATER MANAGEMENT
 - A. IMPLEMENT MEASURES TO CONTROL ALL NON-STORM WATER DISCHARGES DURING CONSTRUCTION
 - B. WASH VEHICLES IN SUCH A MANNER AS TO PREVENT NON-STORM WATER DISCHARGES TO SURFACE WATERS OR MS4 DRAINAGE SYSTEMS.
 - C. CLEAN STREETS IN SUCH A MANNER AS TO PREVENT UNAUTHORIZED NON-STORM WATER DISCHARGES FROM EACH SURFACE WATERS OR MS4 DRAINAGE SYSTEMS.
3. EROSION CONTROL
 - A. IMPLEMENT EFFECTIVE WIND EROSION CONTROL.
 - B. PROVIDE EFFECTIVE SOIL COVER FOR INACTIVE AREAS AND ALL FINISHED SLOPES, OPEN SPACE, UTILITY BACKFILL, AND COMPLETED LOTS.
 - C. LIMIT THE USE OF PLASTIC MATERIALS WHEN MORE SUSTAINABLE, ENVIRONMENTALLY FRIENDLY ALTERNATIVES EXIST. WHERE PLASTIC MATERIALS ARE DEEMED NECESSARY, CONSIDER THE USE OF PLASTIC MATERIALS RESISTANT TO SOLAR DEGRADATION.
4. SEDIMENT CONTROLS
 - A. ESTABLISH AND MAINTAIN EFFECTIVE PERIMETER CONTROLS AND STABILIZE ALL CONSTRUCTION ENTRANCES AND EXITS TO SUFFICIENTLY CONTROL EROSION AND SEDIMENT DISCHARGES FROM THE SITE.
 - B. IMPLEMENT APPROPRIATE EROSION CONTROL BMPs (RUNOFF CONTROL AND SOIL STABILIZATION) IN CONJUNCTION WITH SEDIMENT CONTROL BMPs FOR AREAS UNDER ACTIVE CONSTRUCTION.
 - C. APPLY LINEAR SEDIMENT CONTROLS ALONG THE TOE OF THE SLOPE, FACE OF THE SLOPE, AND AT THE GRADE BREAKS OF EXPOSED SLOPES TO COMPLY WITH SHEET FLOW LENGTHS IN ACCORDANCE WITH TABLE 1.

TABLE 1	
SLOPE	MAX. SHEET FLOW LENGTH
0 - 25%	20 FT
25% - 50%	15 FT
OVER 50%	10 FT

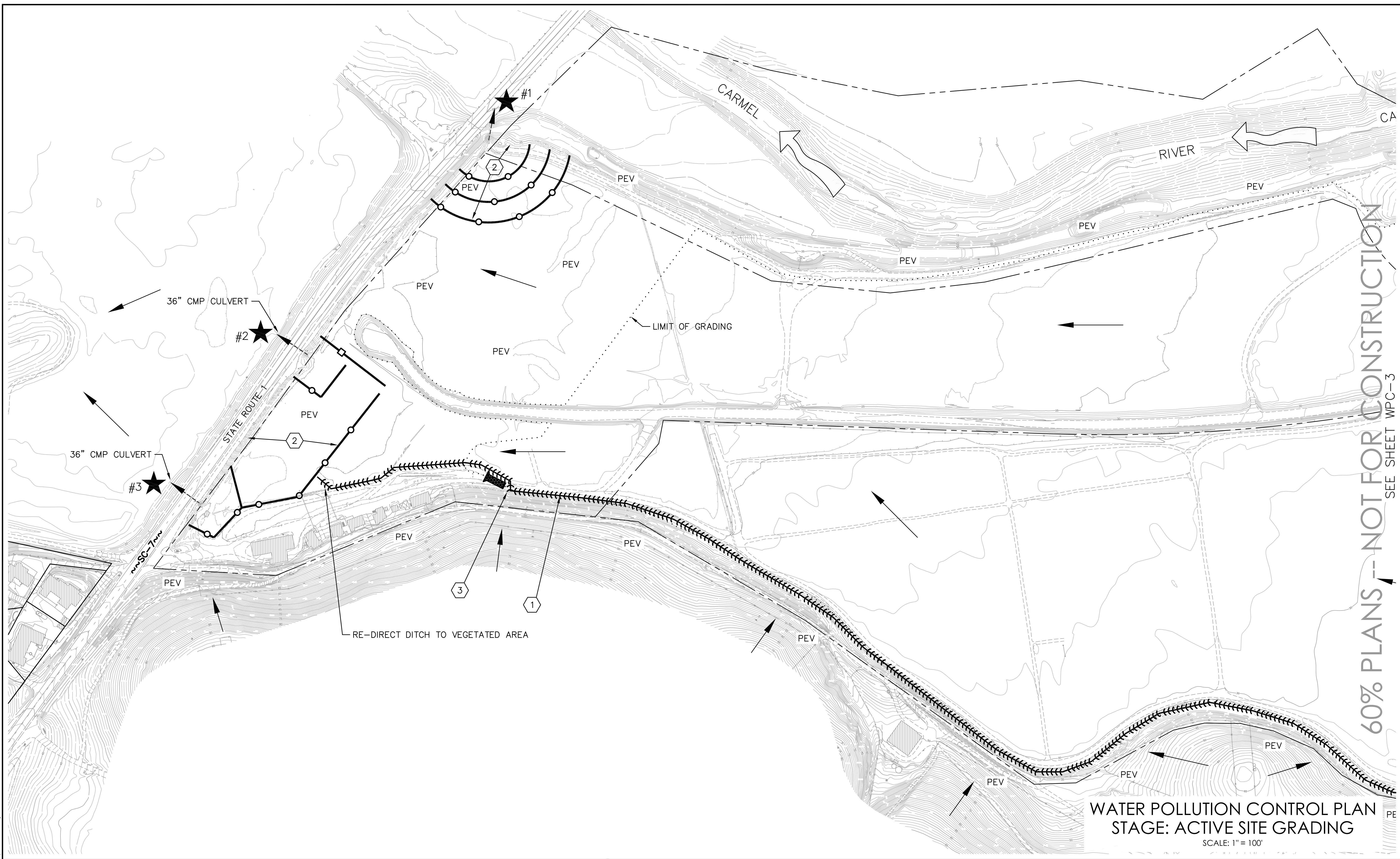
- D. LIMIT CONSTRUCTION TRAFFIC TO AND FROM THE PROJECT TO ENTRANCES AND EXITS THAT EMPLOY EFFECTIVE CONTROLS TO PREVENT OFFSITE TRACKING OF SEDIMENT.
- E. ENSURE THAT ALL STORM DRAIN INLETS AND PERIMETER CONTROLS, RUNOFF CONTROL BMPs, AND POLLUTANT CONTROLS AT ENTRANCES AND EXITS (E.G., TIRE WASHOFF LOCATIONS) ARE MAINTAINED AND PROTECTED FROM ACTIVITIES THAT REDUCE THEIR EFFECTIVENESS.
- F. INSPECT ALL IMMEDIATE ACCESS ROADS DAILY. AT A MINIMUM DAILY (WHEN NECESSARY) AND PRIOR TO ANY RAIN EVENT, REMOVE ANY SEDIMENT OR OTHER CONSTRUCTION RELATED MATERIALS THAT ARE DEPOSITED ON THE ROADS (BY VACUUMING OR SWEEPING).
5. RUN-ON AND RUN-OFF CONTROLS
 - A. EFFECTIVELY MANAGE ALL RUN-ON, ALL RUNOFF WITHIN THE SITE, AND ALL RUNOFF THAT DISCHARGES OFF THE SITE. RUN-ON FROM OFF-SITE SHALL BE DIRECTED AWAY FROM ALL DISTURBED AREAS OR SHALL COLLECTIVELY BE IN COMPLIANCE WITH THE EFFLUENT LIMITATIONS OF THE PERMIT.

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REVISIONS:		
BY:	DATE:	DESCRIPTION:

DATE: 1/2011
SCALE: 1" = 100'
DRAWN BY: NDM
JOB #: /2172.02



60% PLANS -- NOT FOR CONSTRUCTION
SEE SHEET WPC-3

WATER POLLUTION CONTROL PLAN
STAGE: ACTIVE SITE GRADING
 SCALE: 1" = 100'

BIG SUR LAND TRUST

LOWER CARMEL RIVER AND LAGOON FLOODPLAIN RESTORATION AND ENHANCEMENT PROJECT
ODELLO EAST AGRICULTURAL GRADING IMPROVEMENTS



REVISIONS:		
BY:	DATE:	DESCRIPTION:

DATE: 1/2011
 SCALE: 1" = 100'
 DRAWN BY: NDM
 JOB #: /2172.02

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 800 Bancroft Way - Suite 101
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 tel (510) 704-1000 · fax (510) 704-1001
 www.balancehydro.com

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SHEET
WPC-2
 M OF N



60% PLANS -- NOT FOR CONSTRUCTION

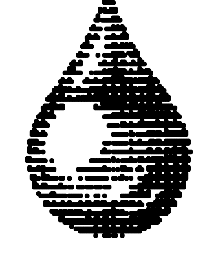
WATER POLLUTION CONTROL PLAN
STAGE: SITE GRADING
 SCALE: 1" = 100'

 **LOWER CARMEL RIVER AND LAGOON FLOODPLAIN RESTORATION AND ENHANCEMENT PROJECT**
ODELLO EAST AGRICULTURAL GRADING IMPROVEMENTS



REVISIONS:		
BY:	DATE:	DESCRIPTION:

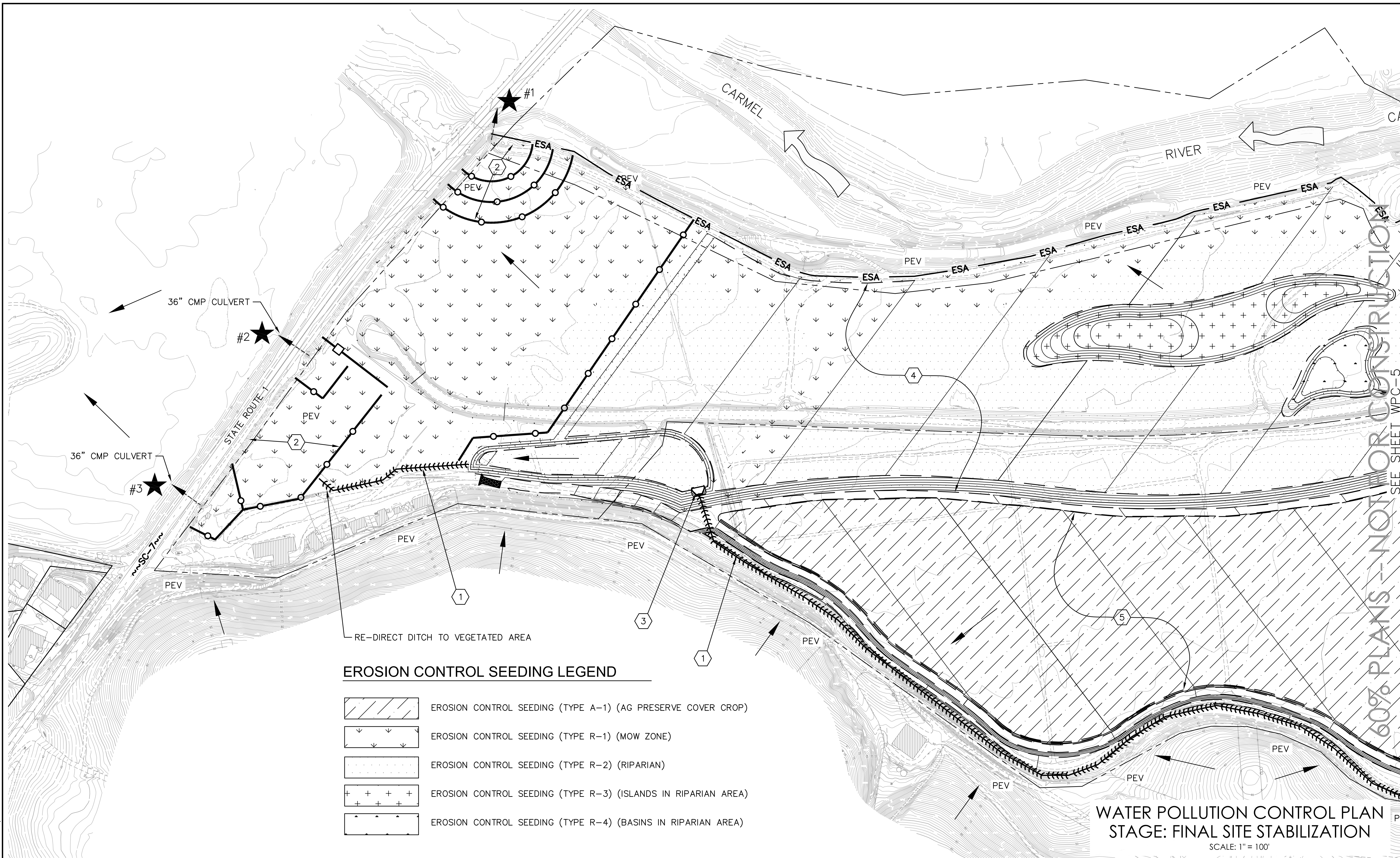
DATE: 1/2011
 SCALE: 1" = 100'
 DRAWN BY: NDM
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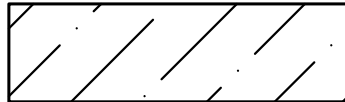
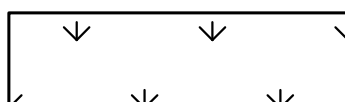
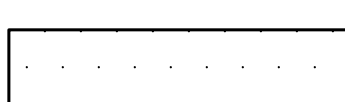
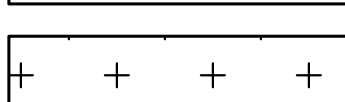
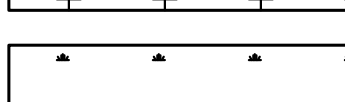
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SHEET **WPC-3**
 M OF N

Apr 18, 2011 - 11:28am
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EROSION CONTROL SEEDING LEGEND

-  EROSION CONTROL SEEDING (TYPE A-1) (AG PRESERVE COVER CROP)
-  EROSION CONTROL SEEDING (TYPE R-1) (MOW ZONE)
-  EROSION CONTROL SEEDING (TYPE R-2) (RIPARIAN)
-  EROSION CONTROL SEEDING (TYPE R-3) (ISLANDS IN RIPARIAN AREA)
-  EROSION CONTROL SEEDING (TYPE R-4) (BASINS IN RIPARIAN AREA)

WATER POLLUTION CONTROL PLAN
STAGE: FINAL SITE STABILIZATION
 SCALE: 1" = 100'

60% PLANS - NOT FOR CONSTRUCTION - SEE SHEET WPC-5

LOWER CARMEL RIVER AND LAGOON FLOODPLAIN RESTORATION AND ENHANCEMENT PROJECT
ODELLO EAST AGRICULTURAL GRADING IMPROVEMENTS



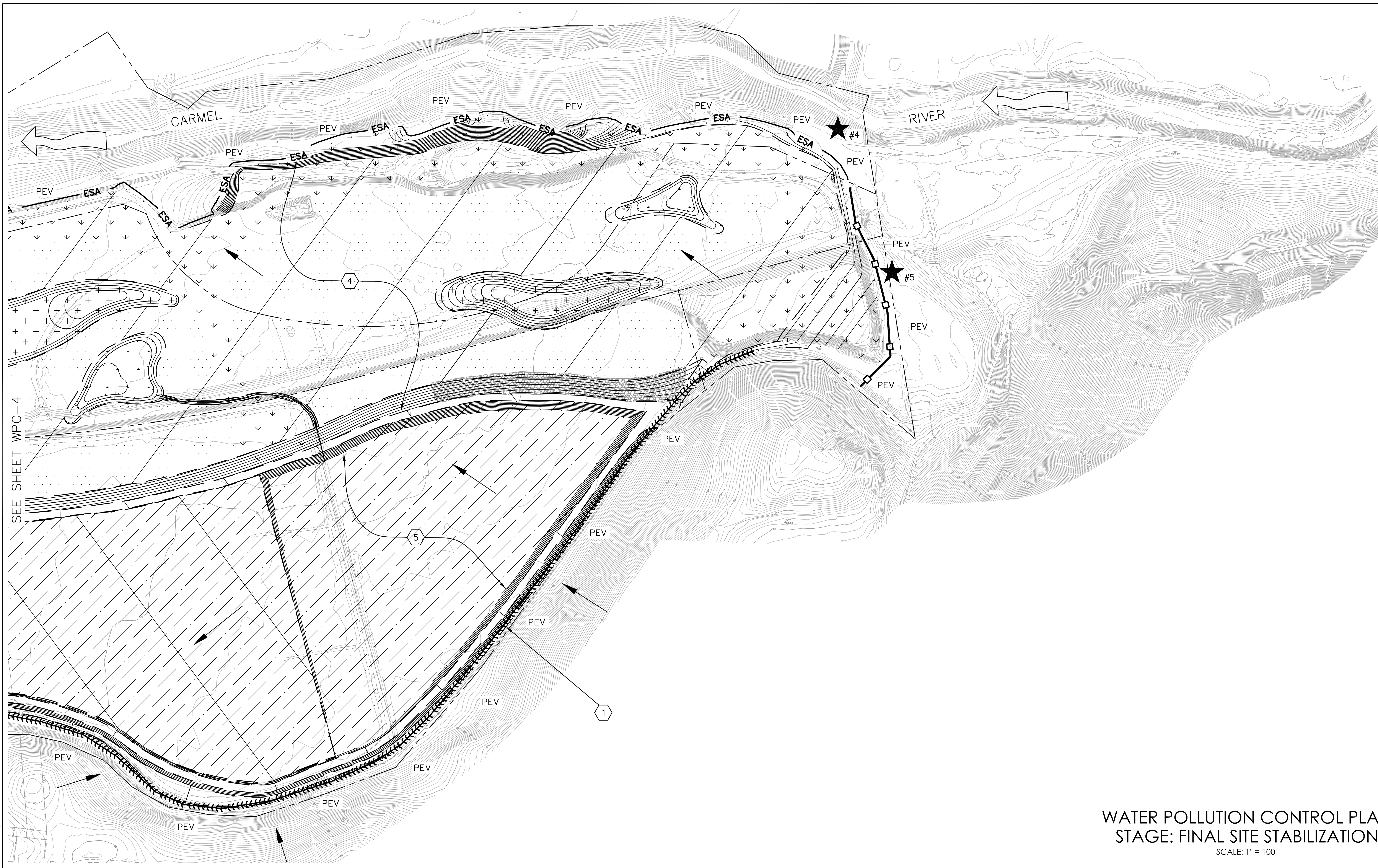
REVISIONS:		
BY:	DATE:	DESCRIPTION:

DATE: 1/2011
 SCALE: 1" = 100'
 DRAWN BY: NDM
 JOB #: /2172.02

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WPC-4
 SHEET
 M OF N



SEE SHEET WPC-4

60% PLANS -- NOT FOR CONSTRUCTION

WATER POLLUTION CONTROL PLAN
 STAGE: FINAL SITE STABILIZATION
 SCALE: 1" = 100'

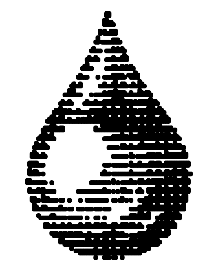


**LOWER CARMEL RIVER AND LAGOON
 FLOODPLAIN RESTORATION AND ENHANCEMENT PROJECT
 ODELLO EAST AGRICULTURAL GRADING IMPROVEMENTS**



REVISIONS:		
BY:	DATE:	DESCRIPTION:

DATE: 1/2011
 SCALE: 1" = 100'
 DRAWN BY: NDM
 JOB #: /2172.02



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SHEET
WPC-5
 M OF N

State Route 1 Preliminary Concept Plans

2009 Project Study Report

DIST	COUNTY	ROUTE	POST MILE TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	Mon	1	71.9\72.3	1	



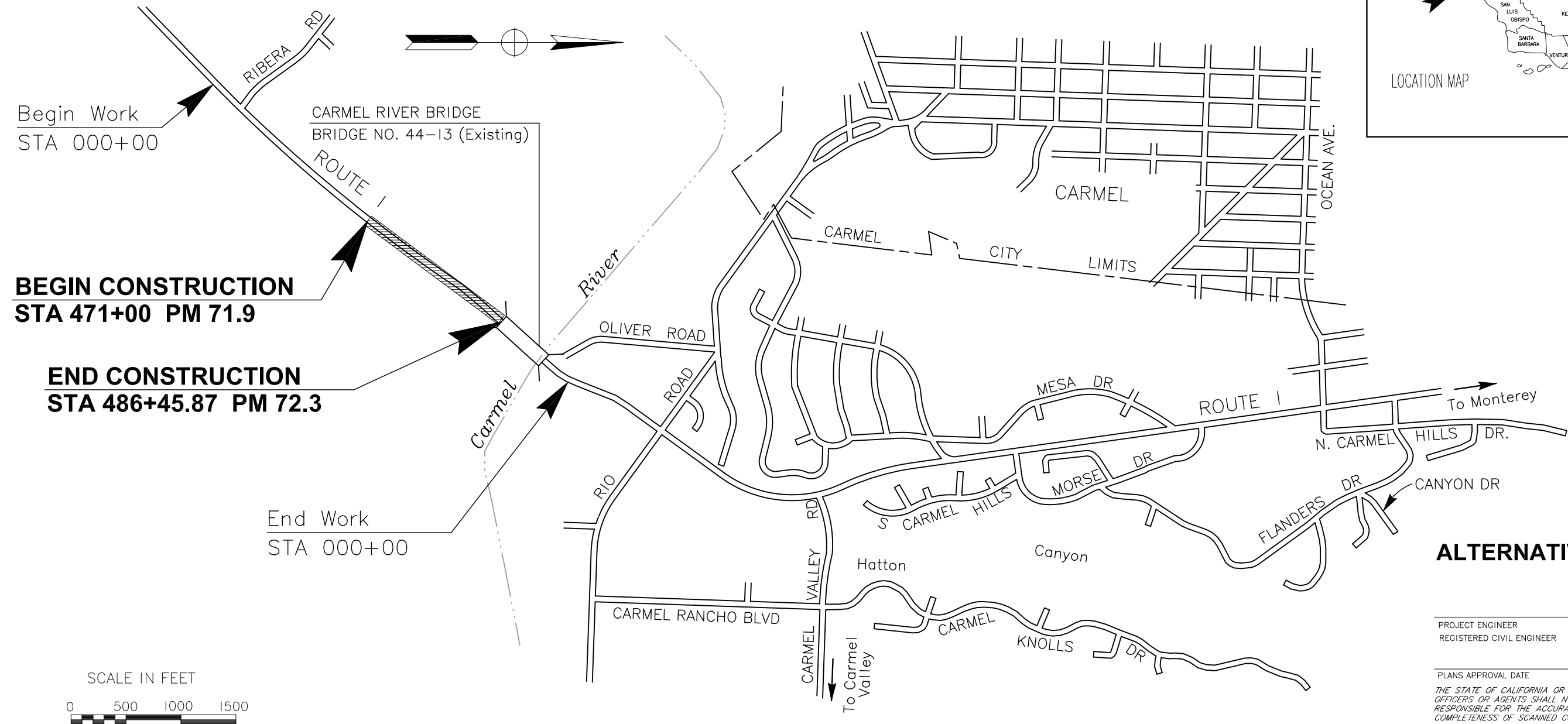
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN MONTEREY COUNTY
NEAR CARMEL
FROM 0.4 MILE SOUTH OF CARMEL RIVER BRIDGE
TO CARMEL RIVER BRIDGE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

Sheet No. INDEX OF PLANS

1	Title Sheet and Location Map
2	Typical Cross Sections
3-4	Layouts
5-6	Profiles and Superelevations
x-x	Construction Details
x-x	Water Pollution Control Details
x-x	Contour Grading Plans
x-x	Drainage Profiles and Details
x-x	Utility Plans
x-x	Stage Construction & Traffic Handling Plan
x-x	Construction Area Signs
x-x	Pavement Delineation and Sign Plan
x	Pavement Delineation and Sign Quantities
x-x	Plant List, Planting Plan, etc.

THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO CONTRACTORS AND SPECIAL PROVISIONS.



ALTERNATIVES 1 AND 2

PROJECT ENGINEER DATE
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 SCANNED COPIES OF THIS PLAN SHEET

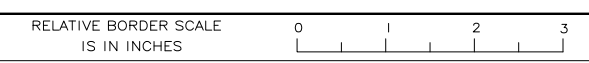
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c/o WHITSON ENGINEERS
MONTEREY, CALIFORNIA 93940

WHITSON ENGINEERS
9699 BLUE LARKSPUR LANE, SUITE 105
MONTEREY, CALIFORNIA 93940

CONTRACT No.

APPROVED AS TO IMPACT ON STATE FACILITIES AND CONFORMANCE WITH APPLICABLE STATE STANDARDS AND PRACTICES AND THAT TECHNICAL OVERSIGHT WAS PERFORMED
 REGISTRATION NO. LICENSE EXP. DATE DATE SIGNED
 CAL TRANS DESIGN OVERSITE APPROVAL KEN DOSTALEK
 CONSULTANT DESIGN ENGINEER RICHARD P. WEBER

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO CONTRACTORS"



DATE PLOTTED => 10-JUL-2009
 TIME PLOTTED => 9:21
 LAST REVISION 4/13/09

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	Mon	1	71.9/72.3	.	.



REGISTERED CIVIL ENGINEER _____ DATE _____

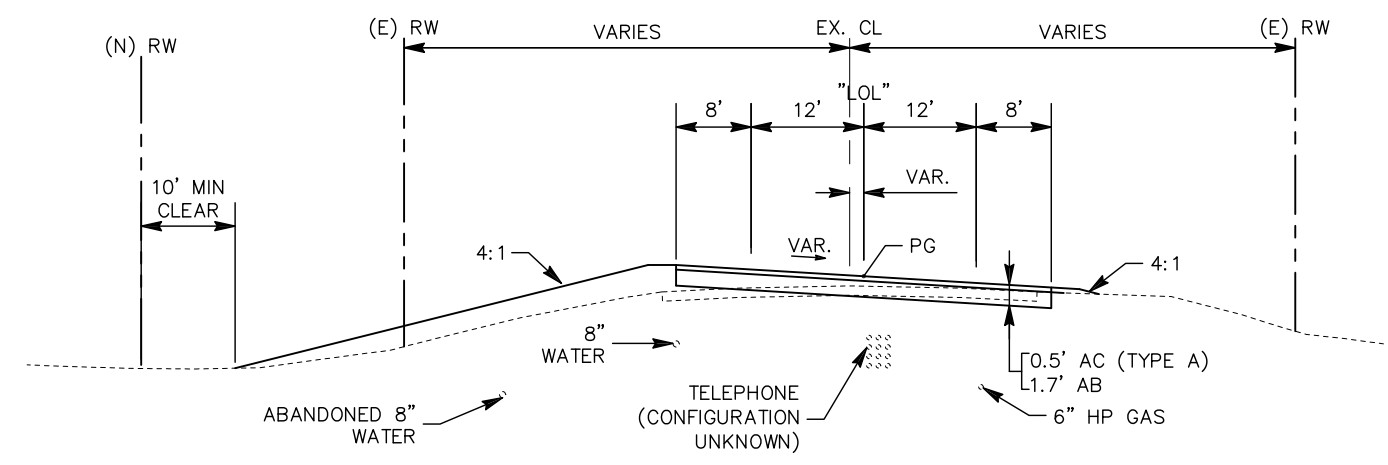
PLANS APPROVAL DATE _____

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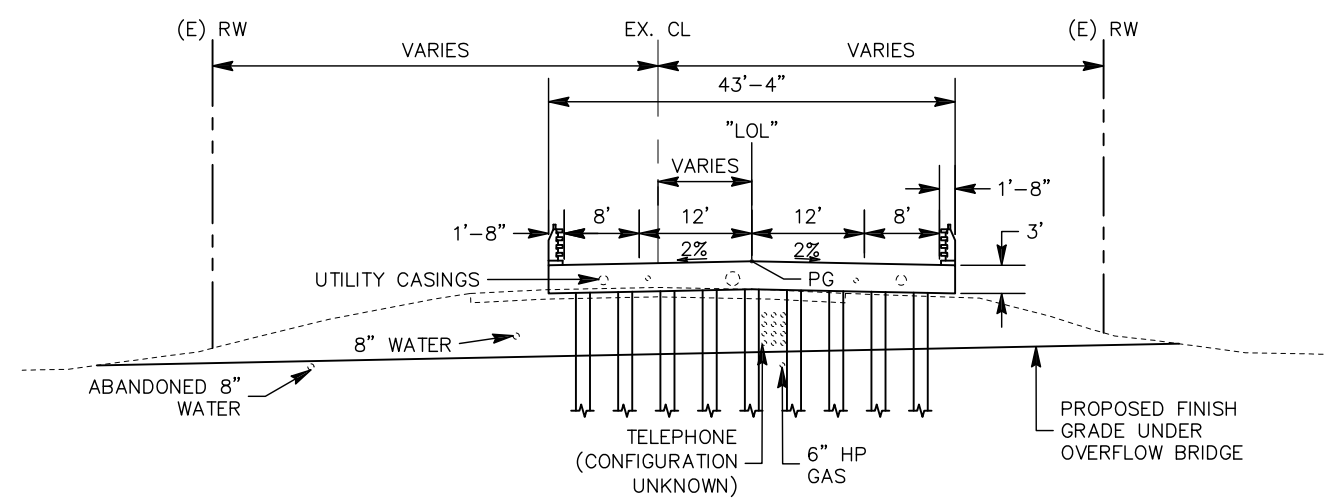
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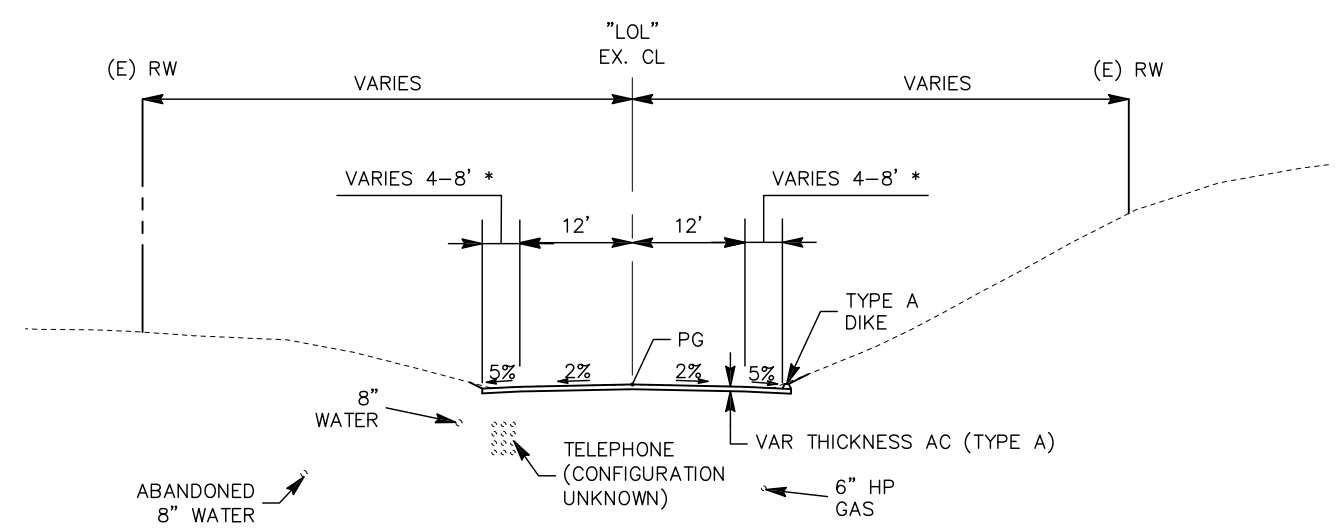
- NOTES:
- DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
 - FILL SLOPES SHALL BE 4:1 (H:V) EXCEPT WHERE SHOWN ON PLANS OR AS APPROVED BY THE ENGINEER.
 - SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER
 - SHOULDER WIDTH VARIES FROM 4' TO 8' FROM STA 471+00 TO 473+00.



(SUPERELEVATION TRANSITION)
"LOL" 481+58.85 TO 486+44.05



(OVERFLOW BRIDGE)
"LOL" 476+33.85 TO 481+55.85



* SEE NOTE 4

"LOL" 471+00.00 TO 476+33.85

DESIGN DESIGNATION:

ADT (2012) = 12,100 D = 60%
ADT (2032) = 12,400 T = 2%

DHV = 1300 V = 55 mph
ESAL = 1,700,000 TI₂₀ = 10.0

**PRELIMINARY
NOT FOR CONSTRUCTION
PLANS SUBJECT TO CHANGE**

**ALTERNATIVES 1 AND 2
TYPICAL SECTIONS**

SCALE: NO SCALE

X-1

REVISOR: RICHARD P. WEBER
DESIGNER: RICHARD P. WEBER
CHECKER: KEN DOSTALEK
SUPERVISOR: KEN DOSTALEK
DEPARTMENT OF TRANSPORTATION
STATE OF CALIFORNIA
Caltrans

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR: KEN DOSTALEK
 CALCULATED/DESIGNED BY: RICHARD P. WEBER
 REVISIONS: REVISOR: DATE

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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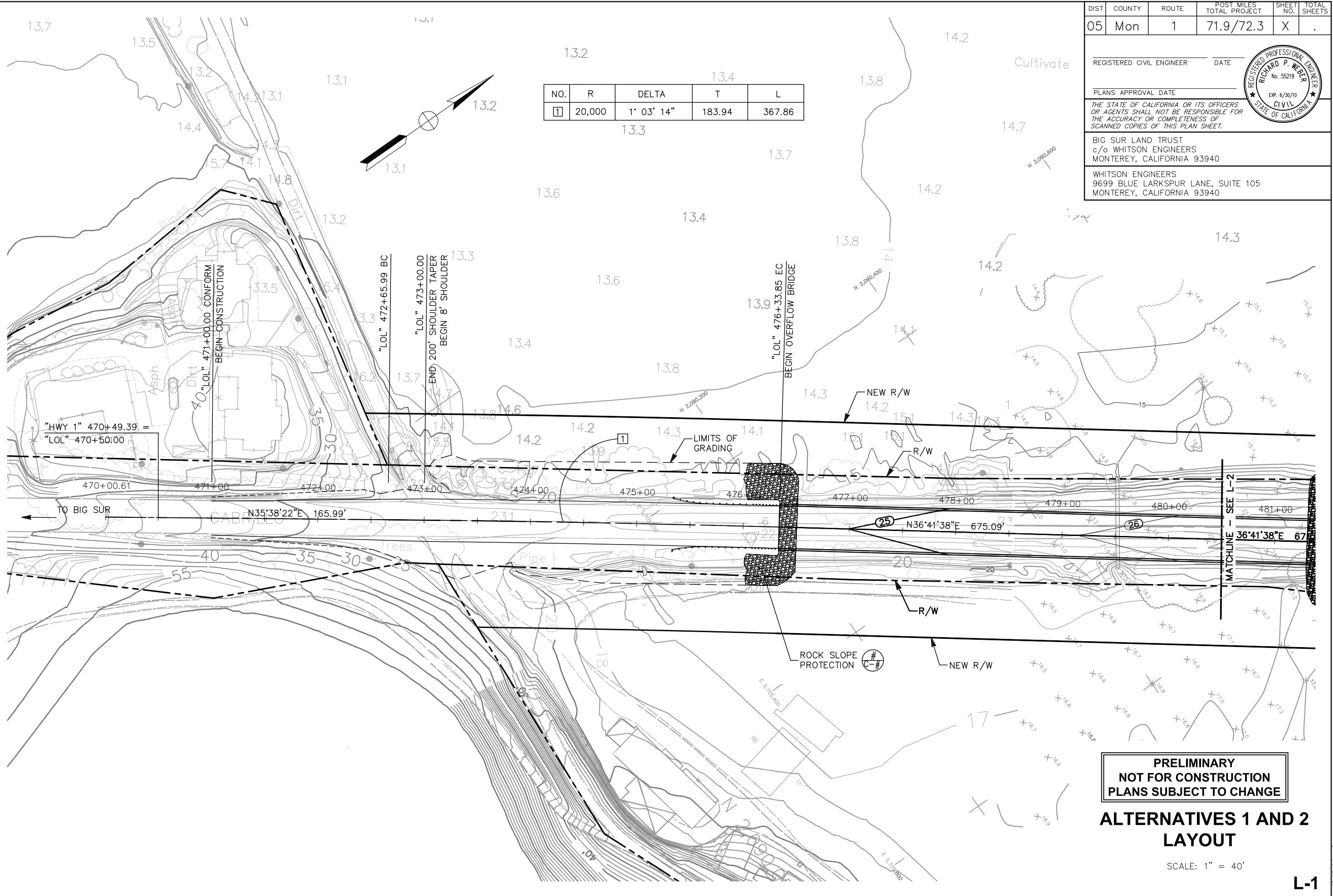
REGISTERED CIVIL ENGINEER: RICHARD P. WEBER
 No. 55219
 EXP. 6/30/10
 CIVIL ENGINEER
 STATE OF CALIFORNIA

PLANS APPROVAL DATE: _____ DATE: _____

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NO.	R	DELTA	T	L
1	20,000	1' 03' 14"	183.94	367.86

**PRELIMINARY
 NOT FOR CONSTRUCTION
 PLANS SUBJECT TO CHANGE**

**ALTERNATIVES 1 AND 2
 LAYOUT**

SCALE: 1" = 40'

L-1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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REGISTERED CIVIL ENGINEER _____ DATE _____

PLANS APPROVAL DATE _____

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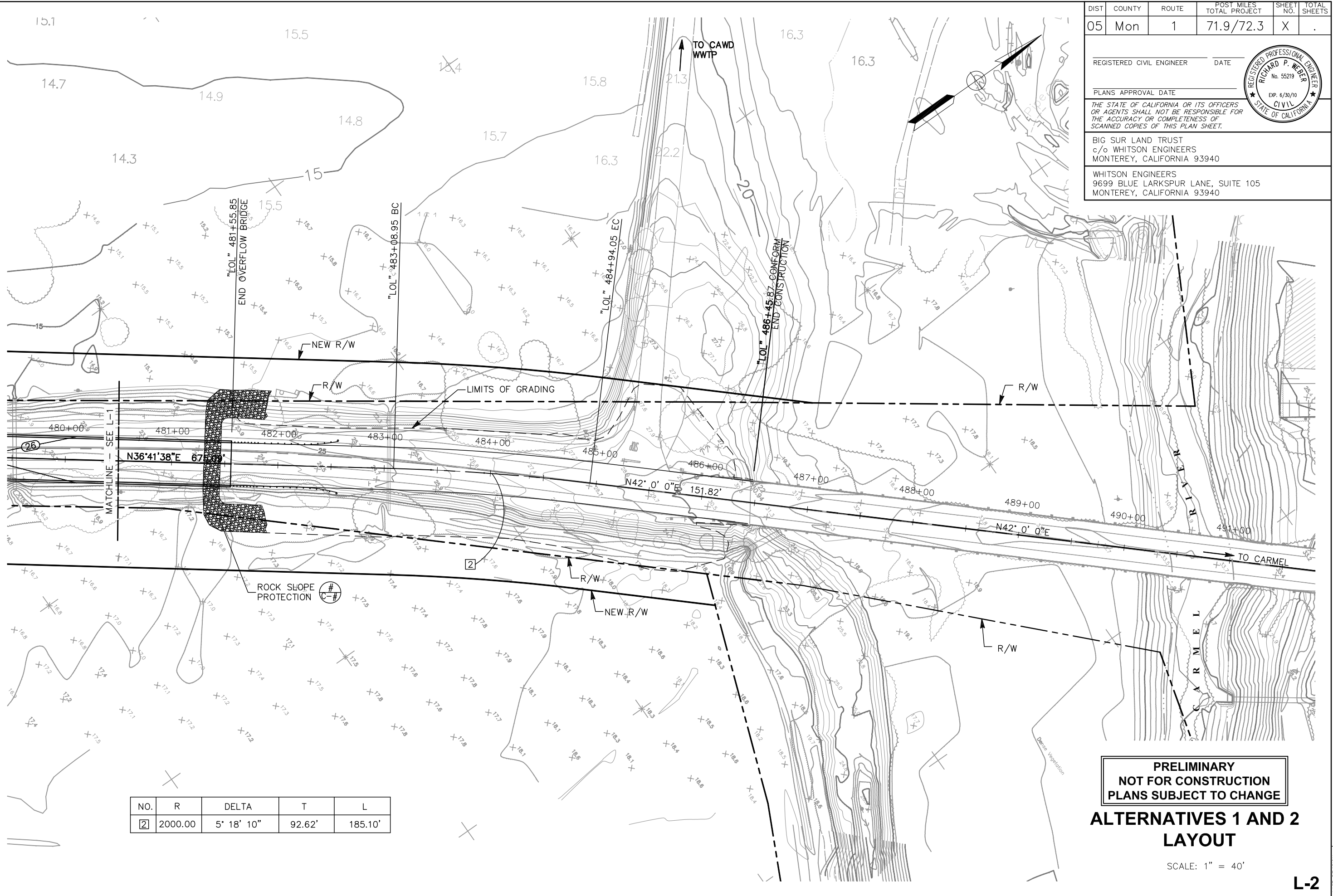
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

FUNCTIONAL SUPERVISOR KEN DOSTALEK	CALCULATED/DESIGNED BY RICHARD P. WEBER	REVISOR BY RICHARD P. WEBER
CHECKED BY	DATE	REVISOR DATE



NO.	R	DELTA	T	L
2	2000.00	5' 18' 10"	92.62'	185.10'

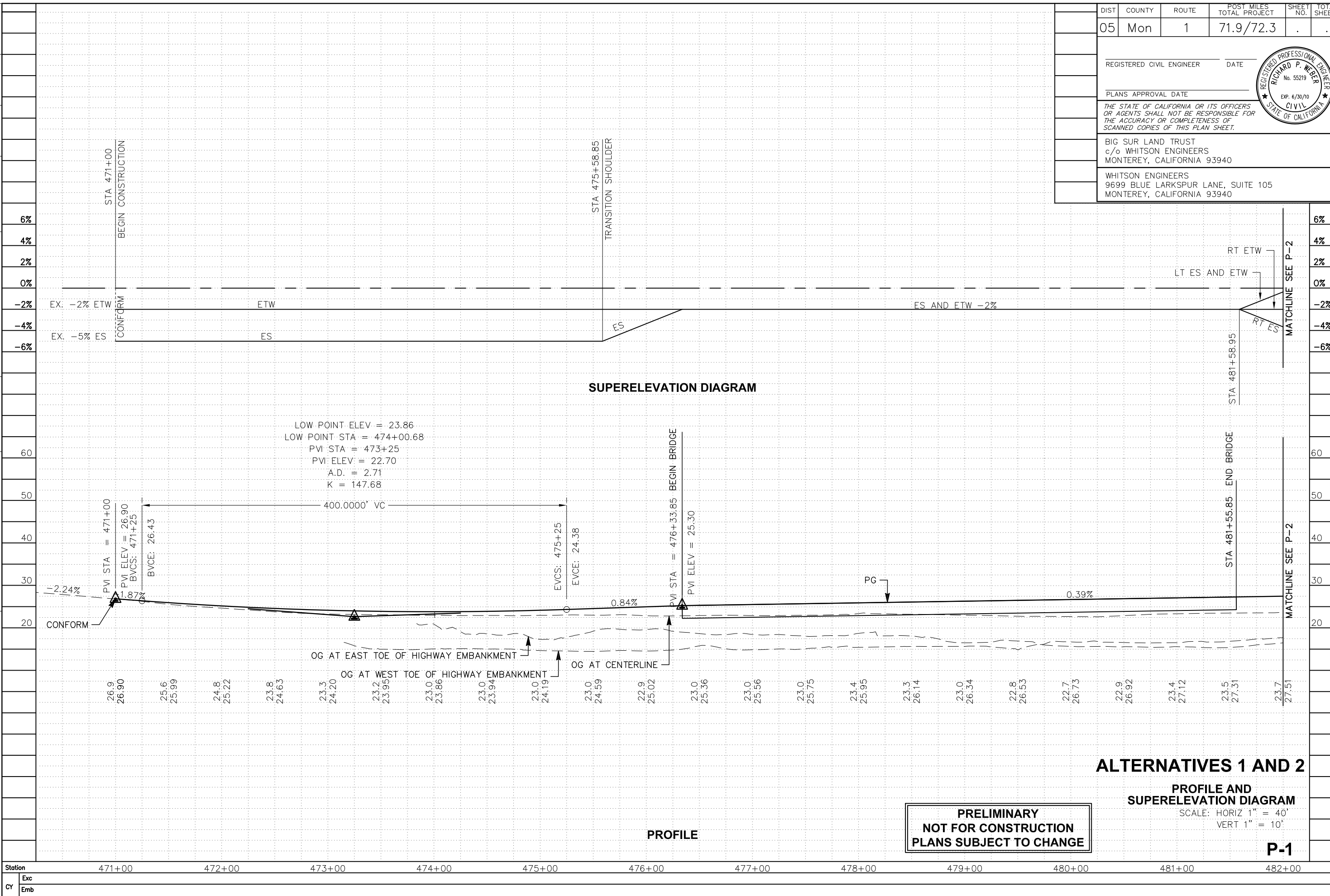
**PRELIMINARY
NOT FOR CONSTRUCTION
PLANS SUBJECT TO CHANGE**

**ALTERNATIVES 1 AND 2
LAYOUT**

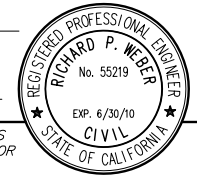
SCALE: 1" = 40'

L-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR: KEN DOSTALEK
 REVISIONS: 1. DATE: 7/23/09
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	Mon	1	71.9/72.3	.	.
REGISTERED CIVIL ENGINEER		DATE			
PLANS APPROVAL DATE					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					
BIG SUR LAND TRUST c/o WHITSON ENGINEERS MONTEREY, CALIFORNIA 93940					
WHITSON ENGINEERS 9699 BLUE LARKSPUR LANE, SUITE 105 MONTEREY, CALIFORNIA 93940					



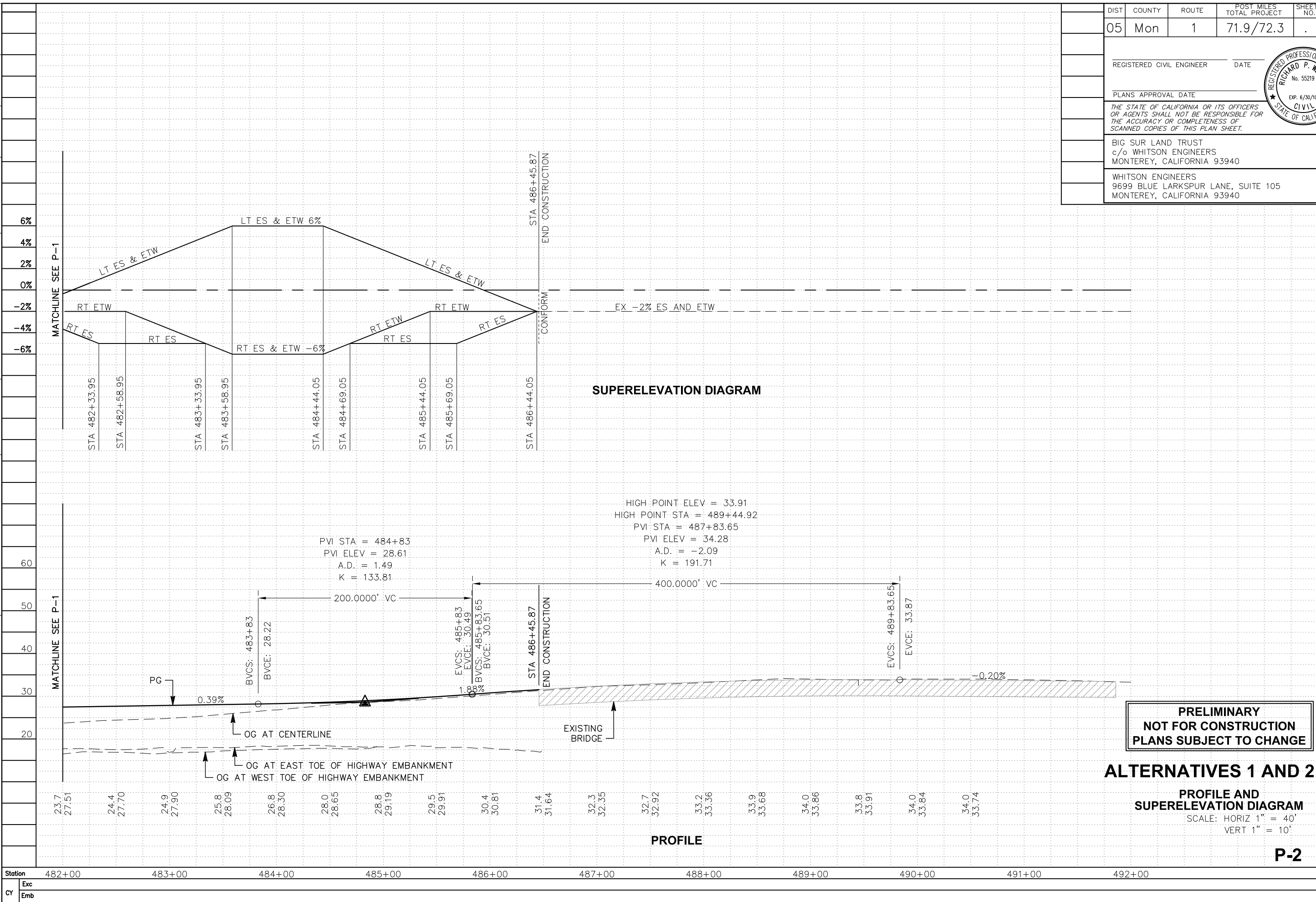
**PRELIMINARY
 NOT FOR CONSTRUCTION
 PLANS SUBJECT TO CHANGE**

ALTERNATIVES 1 AND 2

PROFILE AND SUPERELEVATION DIAGRAM

SCALE: HORIZ 1" = 40'
 VERT 1" = 10'

P-1



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	Mon	1	71.9/72.3	.	.

REGISTERED CIVIL ENGINEER: RICHARD P. WEBER, No. 55219, EXP. 6/30/10
 DATE: _____
 PLANS APPROVAL DATE: _____
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
 BIG SUR LAND TRUST
 c/o WHITSON ENGINEERS
 MONTEREY, CALIFORNIA 93940
 WHITSON ENGINEERS
 9699 BLUE LARKSPUR LANE, SUITE 105
 MONTEREY, CALIFORNIA 93940

**PRELIMINARY
 NOT FOR CONSTRUCTION
 PLANS SUBJECT TO CHANGE**

ALTERNATIVES 1 AND 2

PROFILE AND SUPERELEVATION DIAGRAM
 SCALE: HORIZ 1" = 40'
 VERT 1" = 10'

P-2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	Mon	1	71.9/72.3	X	.

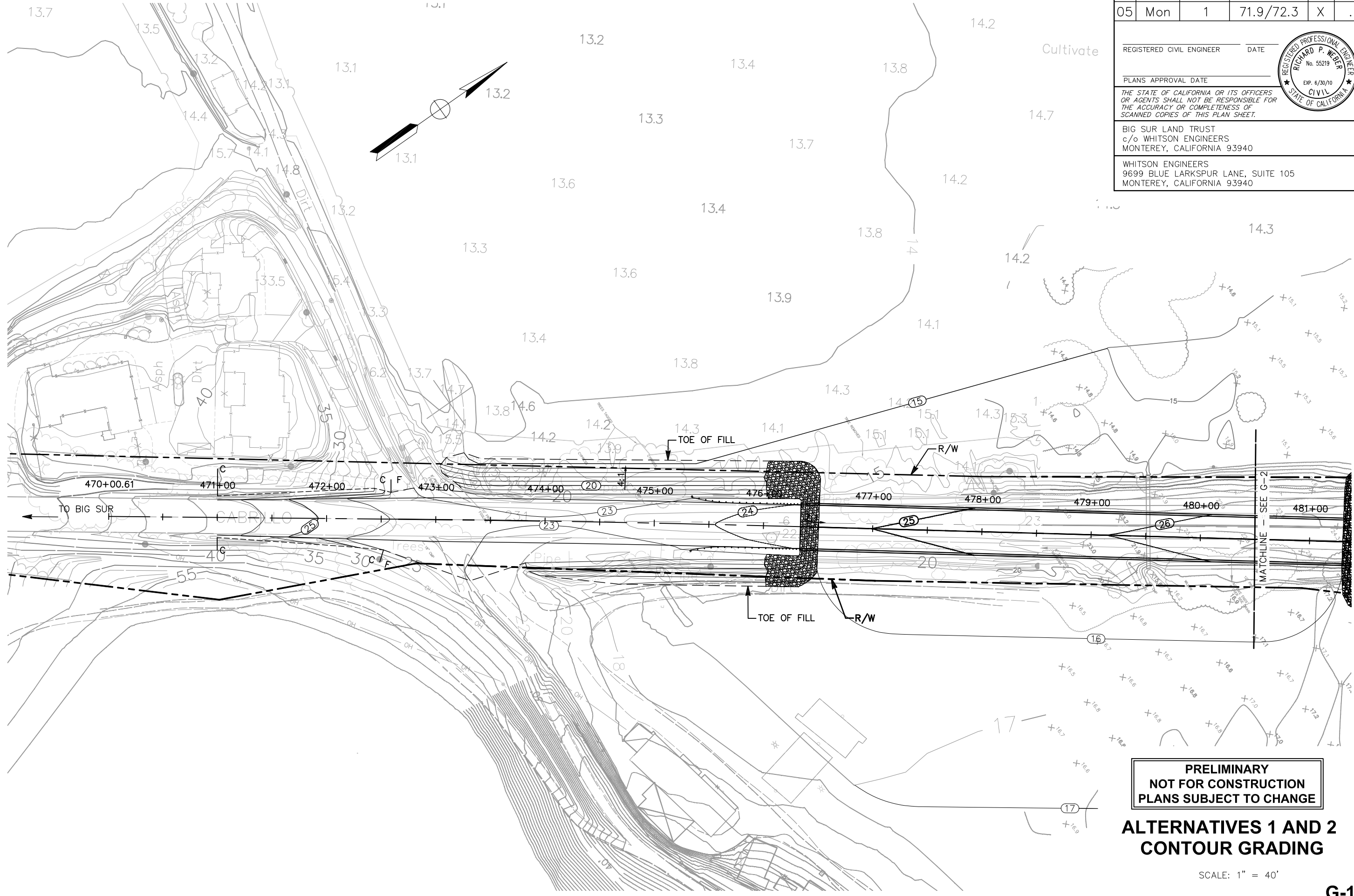
REGISTERED CIVIL ENGINEER _____ DATE _____

PLANS APPROVAL DATE _____

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MONTEREY, CALIFORNIA 93940

WHITSON ENGINEERS
9699 BLUE LARKSPUR LANE, SUITE 105
MONTEREY, CALIFORNIA 93940



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NOT FOR CONSTRUCTION
PLANS SUBJECT TO CHANGE**

**ALTERNATIVES 1 AND 2
CONTOUR GRADING**

SCALE: 1" = 40'

G-1

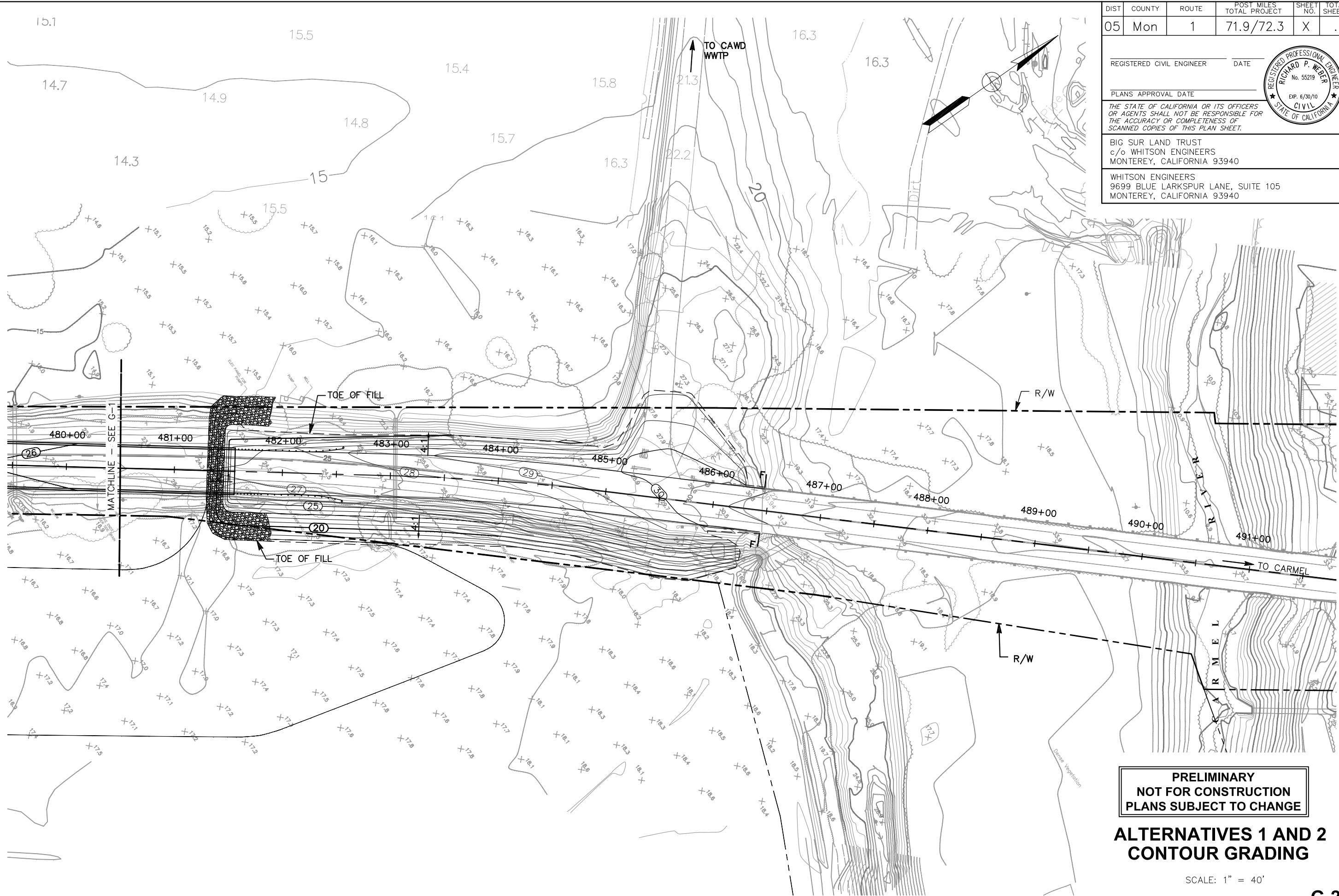
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

FUNCTIONAL SUPERVISOR: KEN DOSTALEK
CALCULATED/DESIGNED BY: RICHARD P. WEBER
REVISOR: RICHARD P. WEBER
DATE REVISOR: _____

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR: KEN DOSTALEK
 CALCULATED/DESIGNED BY: RICHARD P. WEBER
 REVISIONS: REVISED BY: DATE REVISIONS: DATE REVISIONS:
 CHECKED BY:

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	Mon	1	71.9/72.3	X	.

REGISTERED CIVIL ENGINEER: RICHARD P. WEBER
 DATE: _____
 PLANS APPROVAL DATE: _____
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
 BIG SUR LAND TRUST
 c/o WHITSON ENGINEERS
 MONTEREY, CALIFORNIA 93940
 WHITSON ENGINEERS
 9699 BLUE LARKSPUR LANE, SUITE 105
 MONTEREY, CALIFORNIA 93940



**PRELIMINARY
 NOT FOR CONSTRUCTION
 PLANS SUBJECT TO CHANGE**

**ALTERNATIVES 1 AND 2
 CONTOUR GRADING**

SCALE: 1" = 40'

G-2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	Mon	1	71.9/72.3	.	.

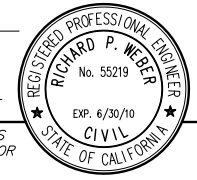
REGISTERED CIVIL ENGINEER _____ DATE _____

PLANS APPROVAL DATE _____

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

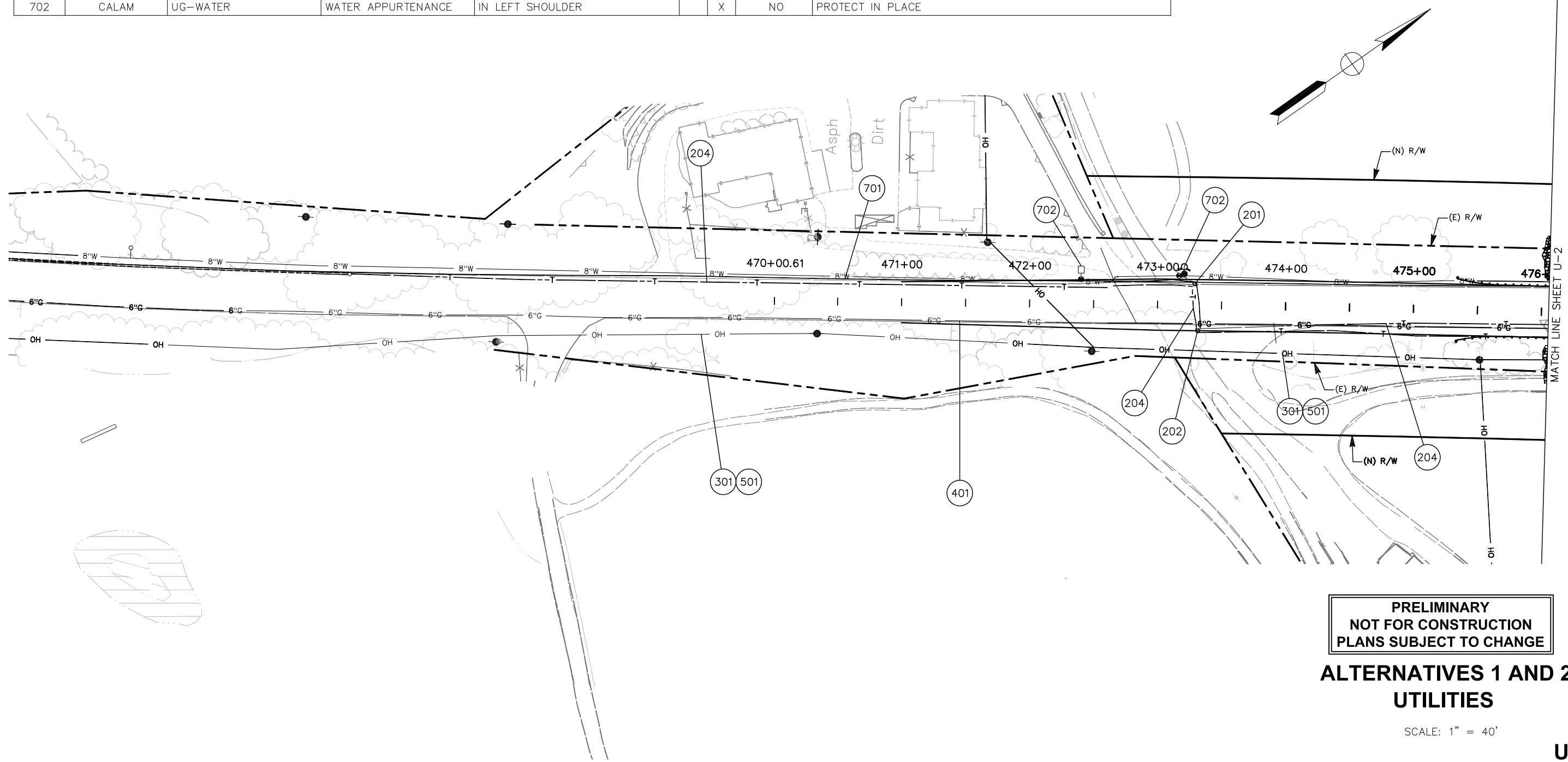
BIG SUR LAND TRUST
c/o WHITSON ENGINEERS
MONTEREY, CALIFORNIA 93940

WHITSON ENGINEERS
9699 BLUE LARKSPUR LANE, SUITE 105
MONTEREY, CALIFORNIA 93940



No.	OWNER	TYPE OF UTILITY	DESCRIPTION	LOCATION	RISK		RELOCATE/MODIFY	COMMENTS
					HIGH	LOW		
101	CALTRANS	UG-CULVERT	36" CMP CULVERT	STA 479+52		X	YES	REMOVE
102	CALTRANS	UG-CULVERT	36" CMP CULVERT	STA 483+05		X	YES	REMOVE
201	AT&T	UG-TELECOMM.	TELECOMM. MANHOLE	IN SHOULDER, 473+28 LT 16.5'		X	NO	PROTECT IN PLACE
202	AT&T	UG-TELECOMM.	TELECOMM. MANHOLE	IN SHOULDER, 473+31 RT 20.1'		X	NO	PROTECT IN PLACE
203	AT&T	UG-TELECOMM.	TELECOMM. MANHOLE	IN SHOULDER, 476+32 RT 22.3'		X	YES	PROTECT IN PLACE
204	AT&T	UG-TELECOMM.	TELECOMM. DUCT BANK	IN EMBANKMENT		X	YES	TO BE RELOCATED STA 475+00 TO 483+00
301	PG&E	OH-ELECTRIC	12KV TRANSMISSION	RIGHT SIDE OF HWY	X		YES	TO BE PLACED UNDERGROUND STA 472+50 TO 486+04 AND 5 POLES TO BE REMOVED
303	PG&E	OH-ELECTRIC	ELECTRIC SERVICE	LEFT SIDE OF HWY		X	YES	TO BE PLACED UNDERGROUND AND 3 POLES TO BE REMOVED
401	PG&E	UG-GAS	6" HP GAS	IN EMBANKMENT	X		YES	TO BE RELOCATED STA 475+00 TO 483+00
501	COMCAST	OH-CATV	CABLE TV	RIGHT SIDE OF HWY		X	YES	TO BE UNDERGROUNDED STA 472+50 TO 486+04
601	CA ST. PARKS	OH-ELECTRIC	ELECTRIC SERVICE PANEL	STA 481+56 LT 50'		X	YES	TO BE RELOCATED
602	CA ST. PARKS	OH-ELECTRIC	IRR. WELL & PUMP	STA 482+07 LT 56'		X	NO	PROTECT IN PLACE
701	CALAM	UG-WATER	8" WATER	IN EMBANKMENT		X	YES	TO BE RELOCATED STA 475+00 TO 483+00
702	CALAM	UG-WATER	WATER APPURTENANCE	IN LEFT SHOULDER		X	NO	PROTECT IN PLACE

REVISOR: RICHARD P. WEBER
 CHECKED BY: KEN DOSTALEK
 SUPERVISOR: KEN DOSTALEK
 DESIGNED BY: RICHARD P. WEBER
 CALCULATED BY: RICHARD P. WEBER
 DATE: 4/17/09



**PRELIMINARY
NOT FOR CONSTRUCTION
PLANS SUBJECT TO CHANGE**

**ALTERNATIVES 1 AND 2
UTILITIES**

SCALE: 1" = 40'

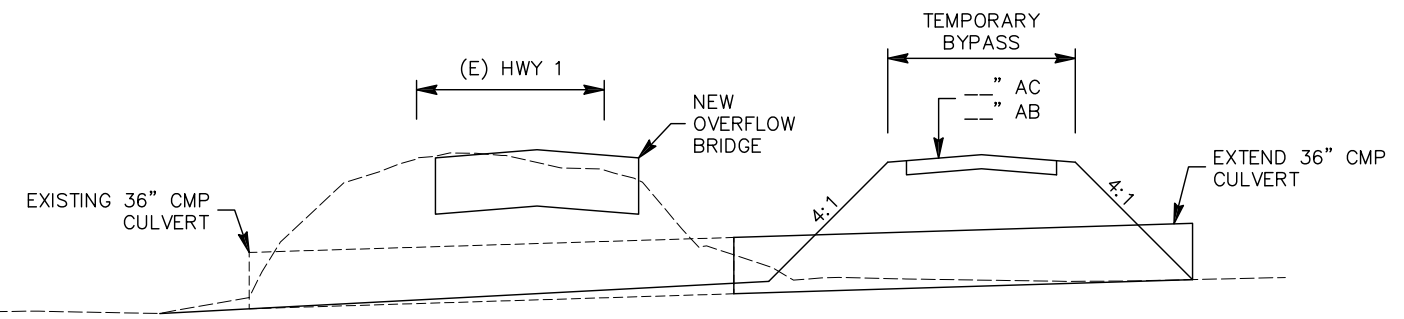
U-1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	Mon	1	71.9/72.3	.	.

REGISTERED CIVIL ENGINEER _____ DATE _____
 PLANS APPROVAL DATE _____
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BIG SUR LAND TRUST
 c/o WHITSON ENGINEERS
 MONTEREY, CALIFORNIA 93940
 WHITSON ENGINEERS
 9699 BLUE LARKSPUR LANE, SUITE 105
 MONTEREY, CALIFORNIA 93940

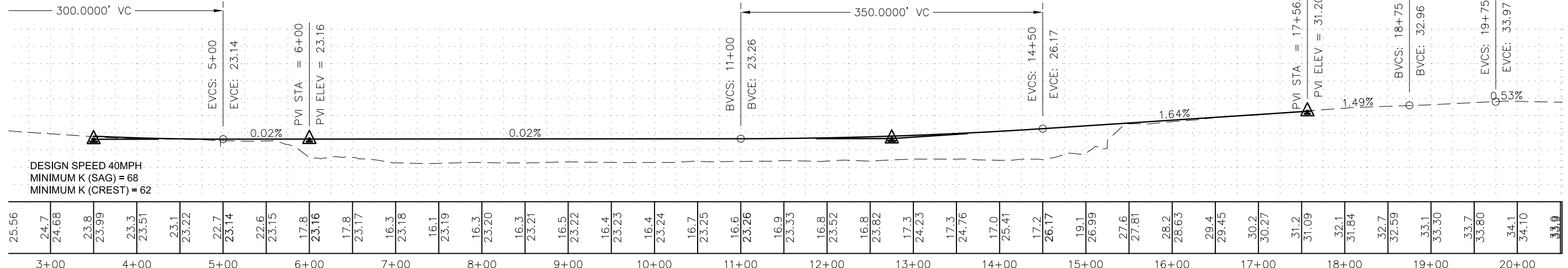


SECTION
NO SCALE

LOW POINT ELEV = 23.14
 LOW POINT STA = 4+96.98
 PVI STA = 3+50
 PVI ELEV = 23.10
 A.D. = 2.38
 K = 125.84

PVI STA = 12+75
 PVI ELEV = 23.30
 A.D. = 1.62
 K = 216.12

PVI STA = 19+25
 PVI ELEV = 33.70
 A.D. = -0.95
 K = 105.08



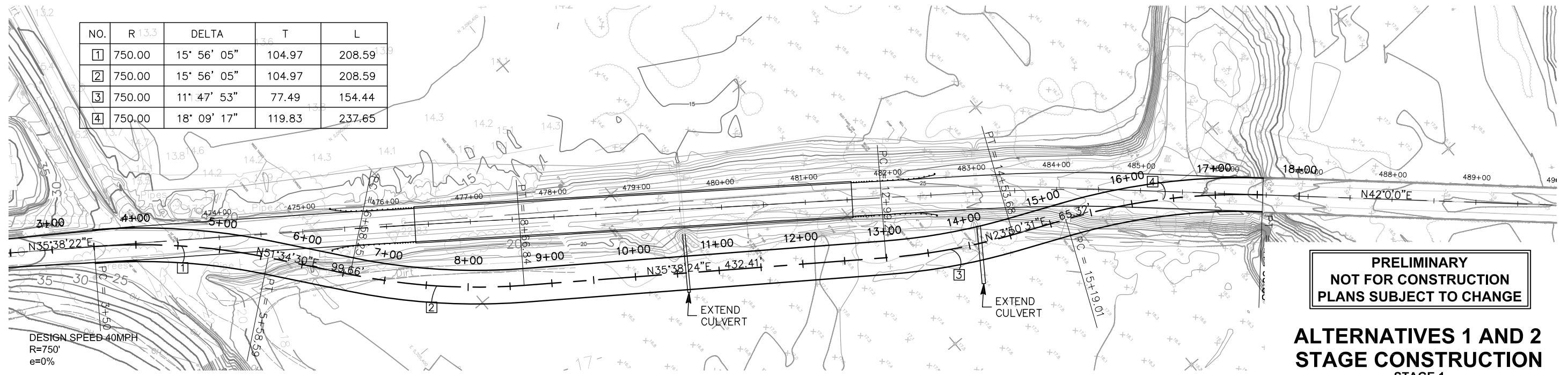
DESIGN SPEED 40MPH
 MINIMUM K (SAG) = 68
 MINIMUM K (CREST) = 62

25.56	24.7	24.68	23.8	23.99	23.3	23.51	23.1	23.22	22.7	23.14	22.6	23.15	17.8	23.16	17.8	23.17	16.3	23.18	16.1	23.19	16.3	23.20	16.3	23.21	16.5	23.22	16.4	23.23	16.4	23.24	16.7	23.25	16.6	23.26	16.9	23.33	16.8	23.32	17.3	24.23	17.3	24.76	17.0	25.41	17.2	26.17	19.1	26.99	27.6	27.81	28.2	28.63	29.4	29.45	30.2	30.27	31.2	31.09	32.1	31.84	32.7	32.59	33.1	33.30	33.7	33.80	34.1	34.10	33.9
3+00	4+00	5+00	6+00	7+00	8+00	9+00	10+00	11+00	12+00	13+00	14+00	15+00	16+00	17+00	18+00	19+00	20+00																																																				

PROFILE

SCALE: HORIZ 1" = 60', VERT 1" = 15'

NO.	R 133	DELTA	T	L
1	750.00	15' 56' 05"	104.97	208.59
2	750.00	15' 56' 05"	104.97	208.59
3	750.00	11' 47' 53"	77.49	154.44
4	750.00	18' 09' 17"	119.83	237.65



DESIGN SPEED 40MPH
 R=750'
 e=0%

PLAN

SCALE: 1" = 60'

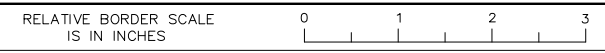
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 PLANS SUBJECT TO CHANGE**

**ALTERNATIVES 1 AND 2
 STAGE CONSTRUCTION**

STAGE 1
 SCALE: AS NOTED

SC-1

REVISIONS: 4/13/09 9:03 AM
 4/13/09 9:03 AM
 DATE PLOTTED => 10-Jul-2008
 TIME PLOTTED => 9:03
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 FUNCTIONAL SUPERVISOR: KEN DOSTALEK
 CALCULATED/DESIGNED BY: RICHARD P. WEBER
 CHECKED BY:
 REVISED BY: RICHARD P. WEBER
 DATE REVISED:
 BORDER LAST REVISED 4/11/2008

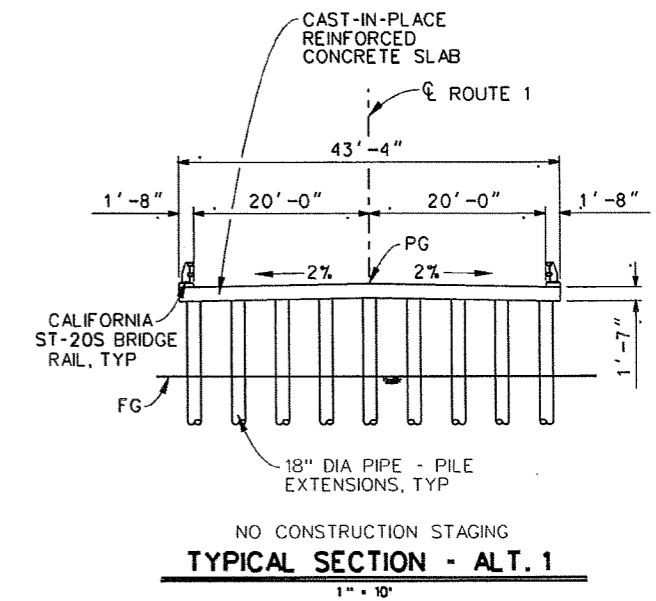
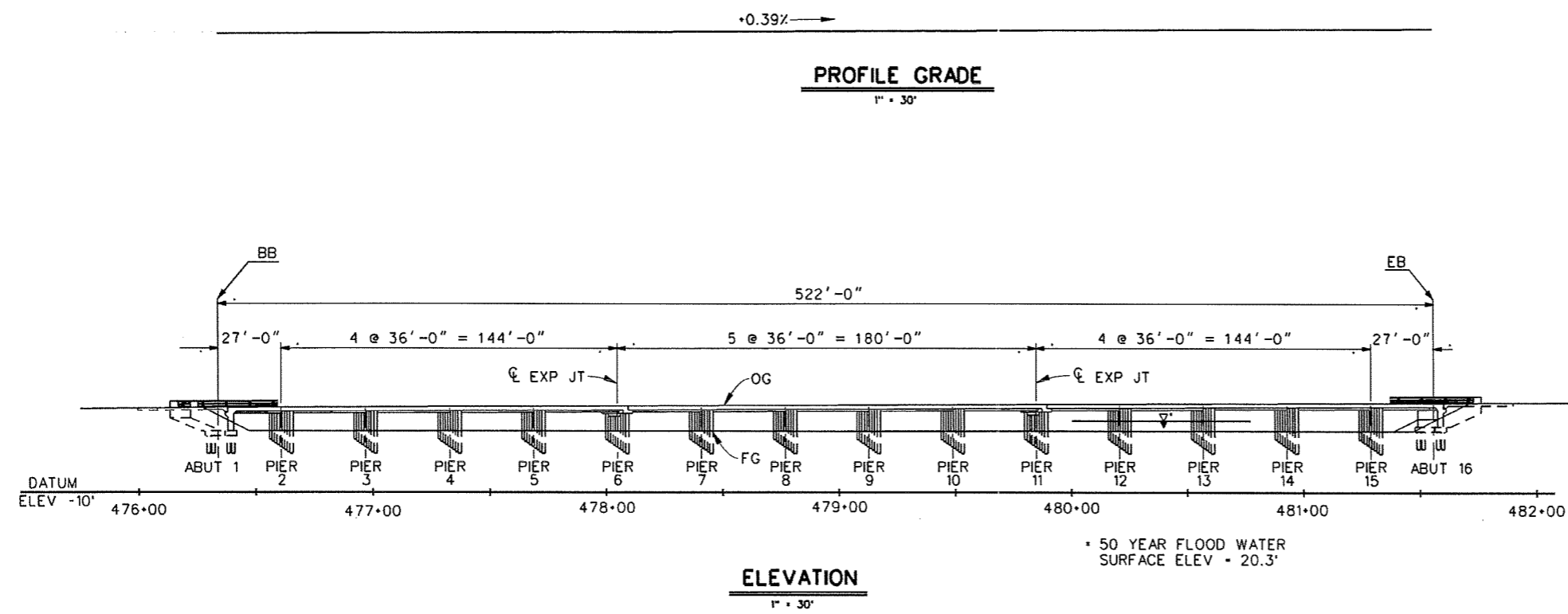


DWG FILE => SC-.dwg

CU EA 05-0S1100

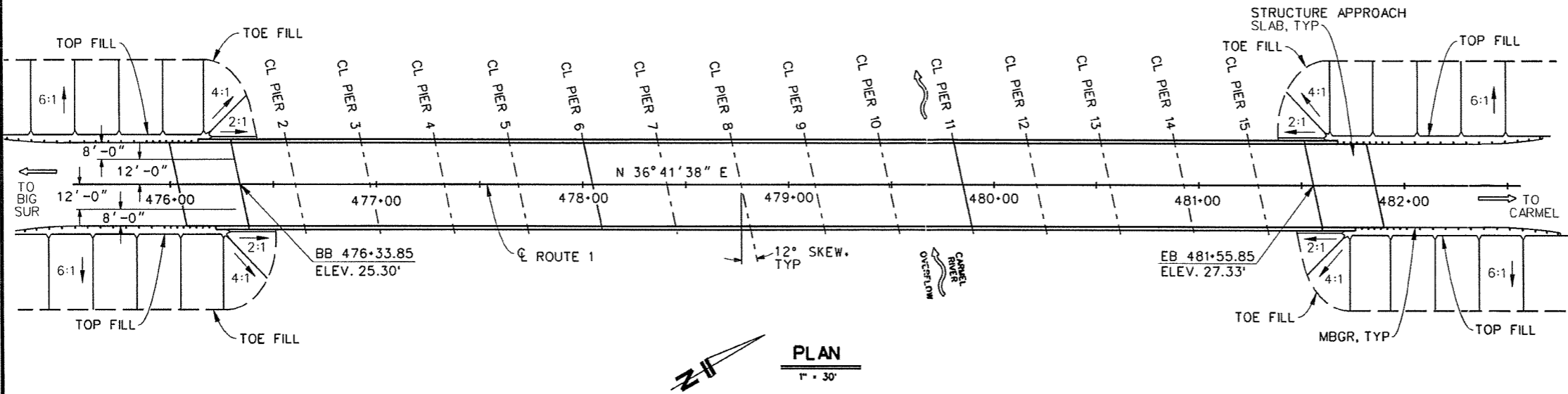
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
5	MON	1	71.9 - 72.3	1	1

REGISTERED CIVIL ENGINEER
 PLANS APPROVAL DATE
 BIG SUR LAND TRUST
 c/o WHITSON ENGINEERS
 MONTEREY, CALIFORNIA 93940
 BRENTON BRIDGE ENGINEERING INC.
 117 ALLEGRO DRIVE
 SANTA CRUZ, CALIFORNIA 95060



DATE OF ESTIMATE = 11/07/08
 STRUCTURE DEPTH = 1'-7"
 LENGTH = 522'-0"
 WIDTH = 43'-4"
 AREA = 22618 sf
 COST \$/sf INCLUDING 10% MOBILITY 25% CONTINGENCY = \$190.11
 TOTAL COST = \$4,300,000

CAST-IN-PLACE REINFORCED CONCRETE SLAB BRIDGE
 DEAD LOADS: 35 PSF FUTURE WEARING SURFACE
 1500 PLF UTILITIES
 300 PLF FUTURE UTILITY
 LIVE LOADS: HL93 AND PERMIT DESIGN LOAD



ALTERNATIVE 1
ADVANCE PLANNING STUDY
CARMEL RIVER
OVERFLOW BRIDGE
SHEET #

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DATE	REVISION BY	DATE	REVISION BY
2/13/09	JPG	2/13/09	RPW
	DESIGNED BY		CHECKED BY

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES

DATE PLOTTED -> 11/08/08 10:00 AM
 TIME PLOTTED -> 11:00 AM
 LAST REVISION
 LASTREV

CU EA

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DATE	REVISOR	DATE	REVISOR
7/13/09	JPG	7/13/09	RPW
CALCULATED/DESIGNED BY	CHECKED BY		

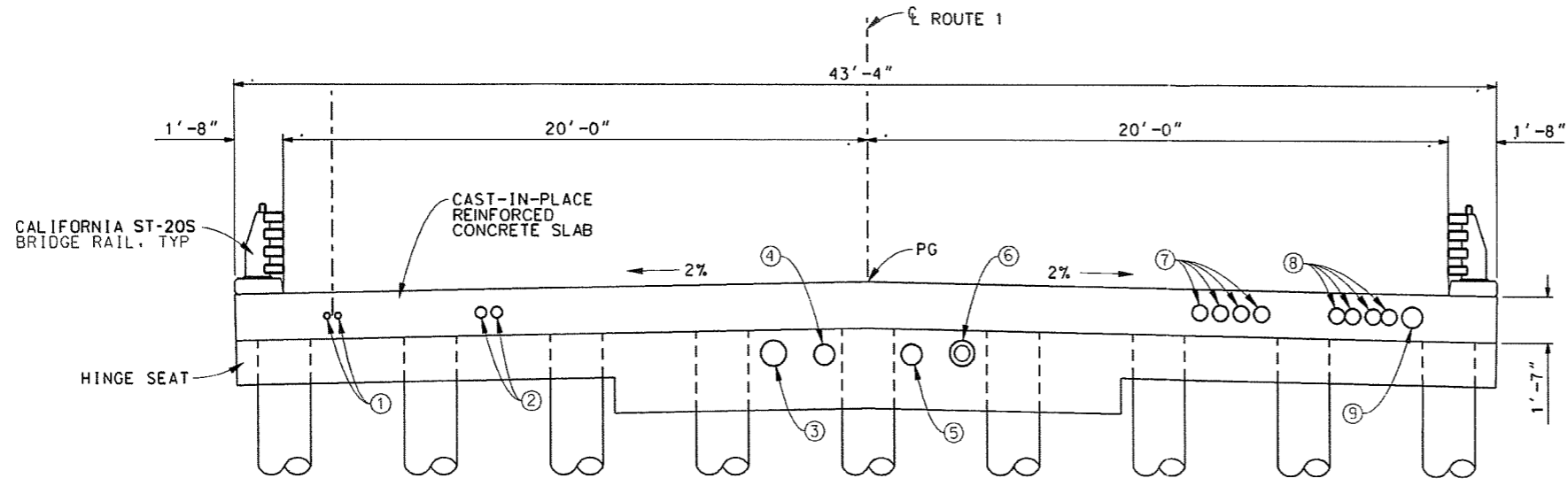
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
5	MON	1	71.9 - 72.3	1	1

REGISTERED CIVIL ENGINEER

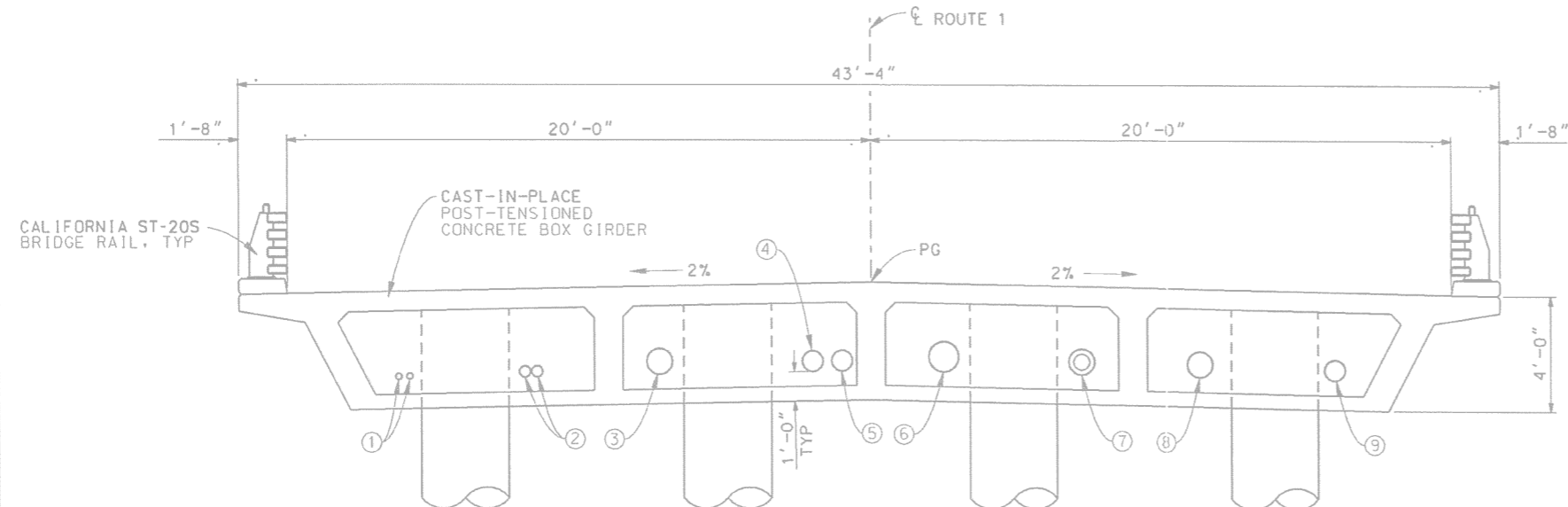
PLANS APPROVAL DATE

BIG SUR LAND TRUST
 c/o WHITSON ENGINEERS
 MONTEREY, CALIFORNIA 93940

BRENTON BRIDGE ENGINEERING INC.
 117 ALLEGRO DRIVE
 SANTA CRUZ, CALIFORNIA 95060



TYPICAL SECTION - ALTERNATE 1
 3/8" = 1'-0"



TYPICAL SECTION - ALTERNATE 2
 3/8" = 1'-0"

UTILITY TABLE - ALTERNATIVE 1

NO.	OWNER	UTILITY	CASING	LOCATION FROM ROUTE 1
1	CALTRANS	ELECT	2 TOT 2" DIA	18'-4" LEFT
2	MONTEREY PENINSULA CABLE	CABLE	2 TOT 4" DIA	13'-0" LEFT
3	FUTURE		10" DIA x 1/4" STEEL ON HANGERS	3'-3" LEFT
4	CAL AM	WATER	8" DIA PIPE ON HANGERS	1'-6" LEFT
5	CALTRANS	WATER	8" DIA x 1/4" STEEL ON HANGERS	1'-6" RIGHT
6	PG&E	6" GAS	10" DIA x 1/4" STEEL ON HANGERS	3'-3" RIGHT
7	AT&T	TELEPHONE COPPER	4 TOT 6" DIA	12'-6" RIGHT
8	AT&T	TELEPHONE F-0	4 TOT 6" DIA	17'-1" RIGHT
9	PG&E	POWER	8" DIA x 1/4" STEEL	18'-9" RIGHT

UTILITY TABLE - ALTERNATIVE 2

NO.	OWNER	UTILITY	CASING	LOCATION FROM ROUTE 1
1	CALTRANS	ELECT	2 TOT 2" DIA	16'-0" LEFT
2	MONTEREY PENINSULA CABLE	CABLE	2 TOT 4" DIA	11'-8" LEFT
3	FUTURE		10" DIA x 1/4" STEEL	7'-3" LEFT
4	CAL AM	WATER	8" DIA PIPE	2'-0" LEFT
5	CALTRANS	WATER	8" DIA x 1/4" STEEL	1'-0" LEFT
6	AT&T	TELEPHONE COPPER	12" DIA x 1/4" STEEL	2'-6" RIGHT
7	PG&E	6" GAS	10" DIA x 1/4" STEEL	7'-3" RIGHT
8	AT&T	TELEPHONE F-0	10" DIA x 1/4" STEEL	11'-4" RIGHT
9	PG&E	POWER	8" DIA x 1/4" STEEL	16'-0" RIGHT

**TYPICAL SECTIONS
 ALTERNATIVES 1 & 2
 CARMEL RIVER
 OVERFLOW BRIDGE**

SHEET #

FOR REDUCED PLANS
 ORIGINAL SCALE IS IN INCHES

CU EA

DATE PLOTTED -> 8/13/09 10:00 AM
 TIME PLOTTED -> 10:00 AM
 L.ASTREY