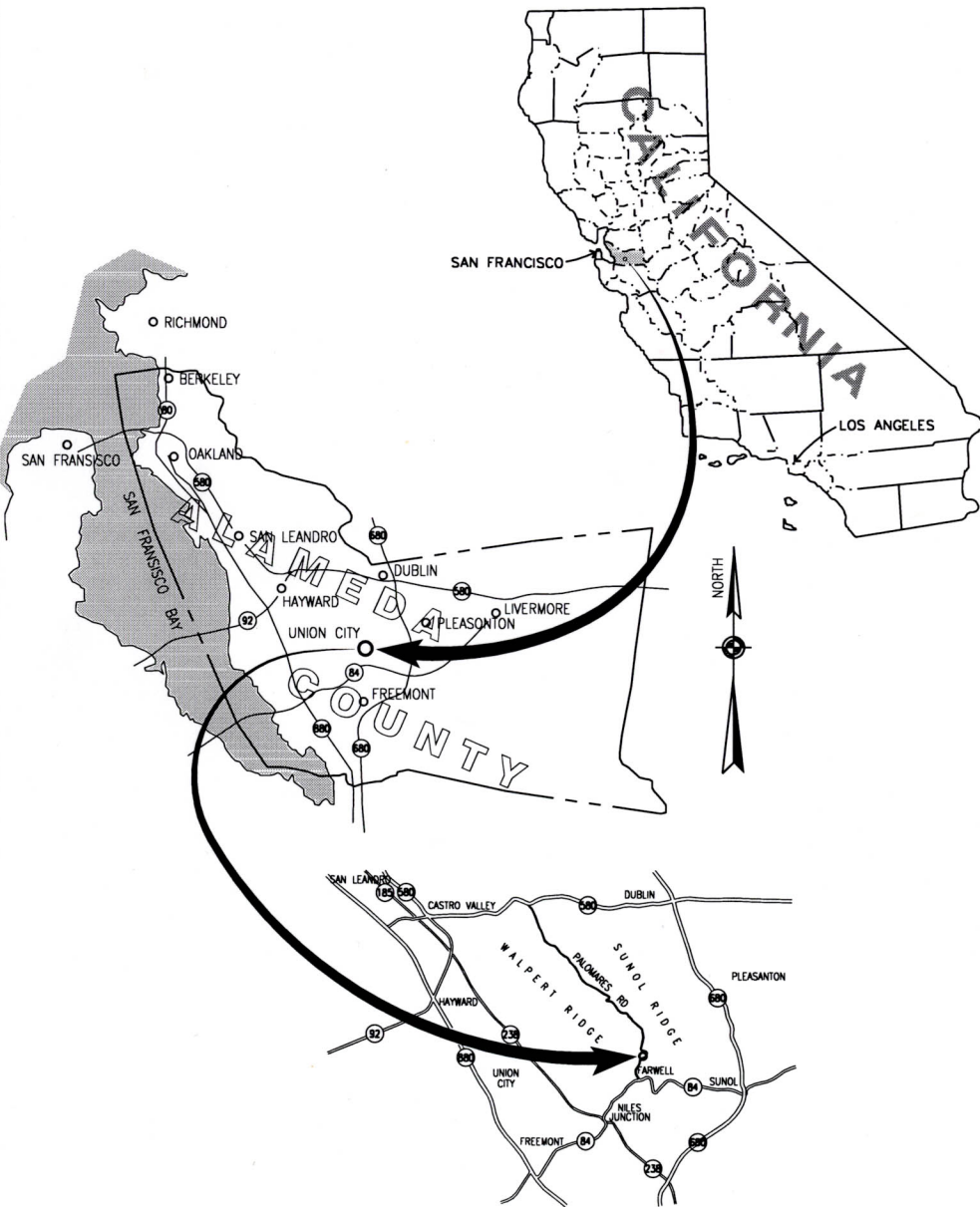


CONCEPTUAL DESIGNS FOR TWO STONYBROOK CREEK SALMONID MIGRATION BARRIER REMOVAL PROJECTS

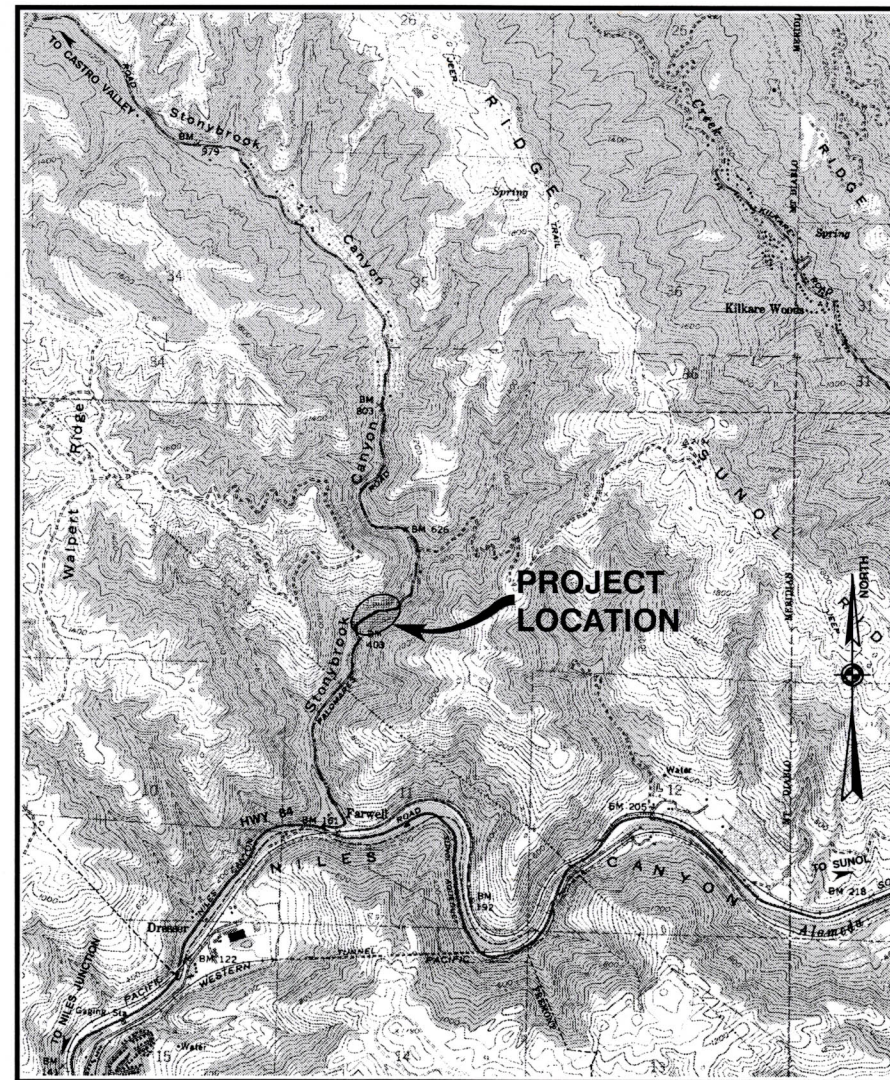
(PALOMARES ROAD AT POSTMILES 8.60 AND 8.75)

OCTOBER 2005

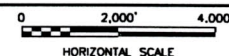


LOCATION MAP

N.T.S.



VICINITY MAP



HORIZONTAL SCALE

SHEET INDEX

- G-1.0 COVER SHEET
- C-1.0 GENERAL NOTES, SYMBOLS, ABBREVIATIONS, & INDEX SHEET
- C-2.0 OVERALL CREEK PROFILE
- C-3.0 POST MILE 8.60 PLAN VIEW
- C-4.0 POST MILE 8.60 PROFILE
- C-5.0 POST MILE 8.60 SECTIONS
- C-6.0 POST MILE 8.75 PLAN VIEW
- C-7.0 POST MILE 8.75 PROFILE
- C-8.0 POST MILE 8.75 SECTIONS

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|---|----------|--|
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| DES. SA/ML | DRN. SJD | AC |
| SKUP. SA | CHK. AC | APPROVED |
| DRAWING SCALE: AS SHOWN ON PLAN | | DATE |
| REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA No. 62821 Exp. | | |
| Center for Ecosystem Mgmt & Restoration Conceptual Designs For TWO STONYBROOK CREEK SALMONID MIGRATION BARRIER REMOVAL PROJECTS CIVIL COVER SHEET | | |
| JOB NUMBER 04101601 SHEET 1 of 9 | | |
| SCHEMATIC SUBMITTAL NOT FOR CONSTRUCTION OCTOBER 2005 | | |
| G-1.0 | | |

SURVEY:

1. SITE TOPOGRAPHY SURVEY CONDUCTED BY MARVIN SMITHERMAN ON NOVEMBER 3, 2004. HORIZONTAL AND VERTICAL DATUM FROM ALAMEDA COUNTY BENCHMARK "PAL-23".

BENCHMARK:

ALAMEDA COUNTY BENCHMARK "PAL-23" ELEVATION 562.066

STD ALA CO DISC IN TOP E'LY COR 3'X3' +/- CONC FOOTING FOR 8" CMP POLE W/ NO PARKING SIGN, 10' +/- W'LY OF WEST E.P. @ S'LY END TURNOUT @ MILE 8.55 +/- ALONG PALOMARES ROAD.

GENERAL NOTES:

1. CONTRACTOR RESPONSIBLE FOR COMPLIANCE WITH ALL PROJECT PERMITS.
2. SEE PLAN SHEETS C-3 AND C-6 FOR CONSTRUCTION WORK PHASING FOR THE POST MILE 8.60 AND POST MILE 8.75 SITES RESPECTIVELY.

DEMOLITION NOTES:

1. PRIOR TO COMMENCING ANY EXCAVATION OR DEMOLITION WORK, THE FISH SCREENS AND COFFER DAMS MUST BE INSTALLED AND FISH REMOVED FROM THE PROJECT AREA BY A QUALIFIED BIOLOGIST.
2. NATIVE STREAMBED MATERIAL THAT IS EXCAVATED TO BE SEGREGATED AND STOCKPILED ON SITE FOR RE-USE IN CHANNEL REGRADING.
3. ANY PUMPS USED ON-SITE (DEWATERING ETC) SHALL BE PLACED ON ABSORBANT PADS. THE CONTRACTOR SHALL HAVE SPILL CONTAINMENT MATERIALS LOCATED AT THE SITE, WITH OPERATORS TRAINED IN SPILL CONTROL PROCEDURES.

TRAFFIC CONTROL NOTES:

1. TEMPORARY LANE CLOSURE TRAFFIC CONTROL TO BE CONSISTENT W/ LANE CLOSURE FOR LOW VOLUME, TWO-LANE ROADS PER CALTRANS MANUAL OF TRAFFIC CONTROLS - CURRENT EDITION

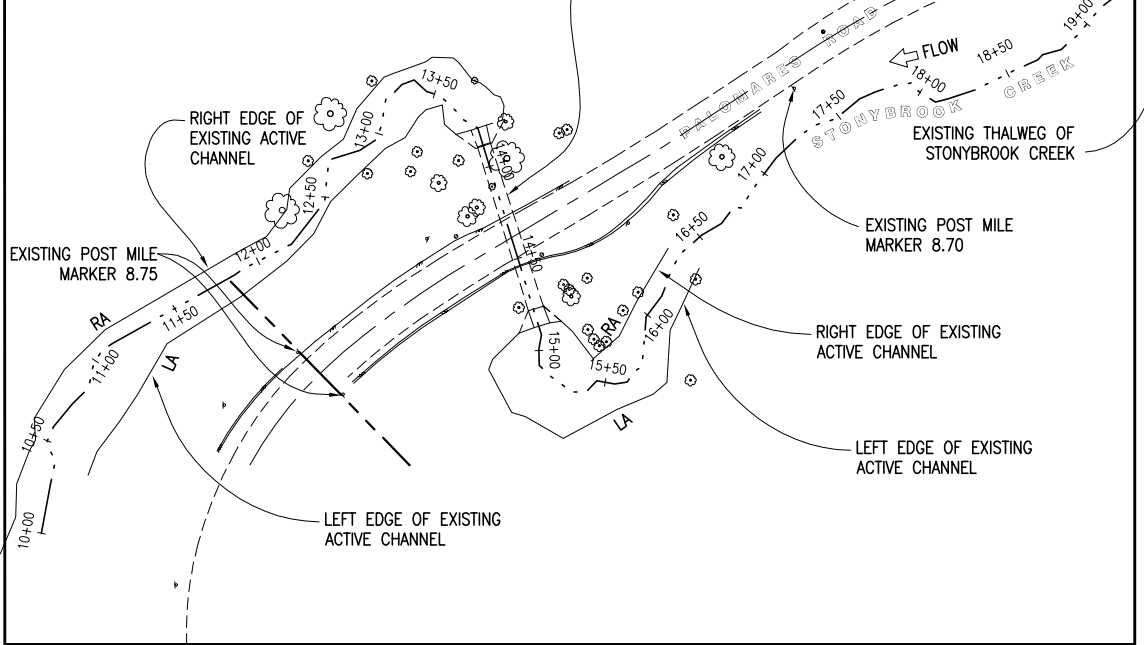
SYMBOLS:

| DESCRIPTION: | EXISTING: |
|----------------------|--------------|
| MONUMENT LINE | ----- |
| CENTER LINE | ----- |
| INDEX CONTOUR LINE | -----10----- |
| CONTOUR LINE | ----- |
| THALWEG | -----Th----- |
| RIGHT ACTIVE CHANNEL | -----RA----- |
| LEFT ACTIVE CHANNEL | -----LA----- |
| FENCE LINE | -----x----- |
| GUARD RAIL | -----□----- |
| EDGE STRIPE | -----~----- |
| PAVEMENT GRADE BREAK | -----~----- |
| GRADE | + 100.00 |
| SIGN | ⊙ |
| SURVEY MONUMENT | ⊙ |
| TREE WITH SIZE | ⊙ |
| UTILITY POLE | ⊙ |
| UTILITY VAULT | ⊙ |

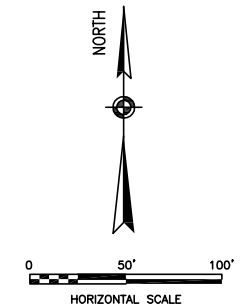
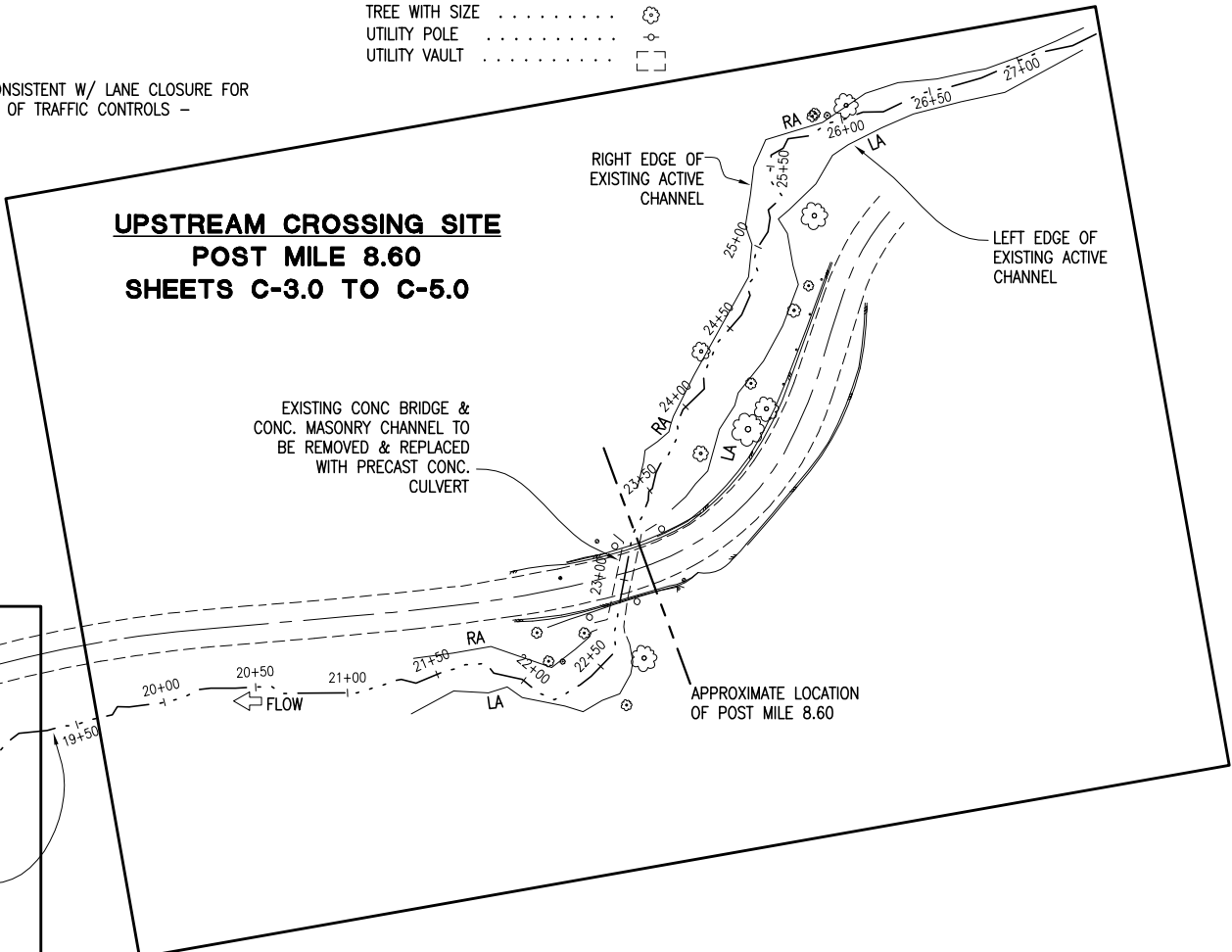
ABBREVIATIONS:

| | |
|--------|------------------|
| AC | ASPHALT CONCRETE |
| ALA | ALAMEDA |
| APPROX | APPROXIMATE |
| AVE | AVERAGE |
| C | CENTERLINE |
| CH | CHANNEL |
| CONC | CONCRETE |
| (E) | EXISTING |
| ELEV | ELEVATION |
| E'LY | EASTERLY |
| INV | INVERT |
| (N) | NEW |
| (P) | PROPOSED |
| PM | POST MILE |
| W'LY | WESTERLY |

**DOWNSTREAM CROSSING SITE
POST MILE 8.75
SHEETS C-6.0 TO C-8.0**



**UPSTREAM CROSSING SITE
POST MILE 8.60
SHEETS C-3.0 TO C-5.0**



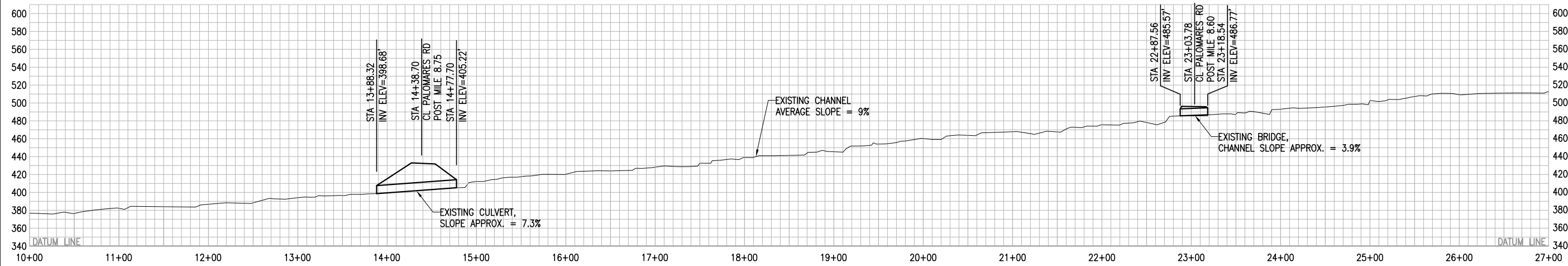
PALOMARES ROAD & STONYBROOK CREEK

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| | | | |
|--|----|--|-----|
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| DES | SA | DRN | SJD |
| SUPV | SA | CHK | ML |
| DRAWING SCALE: | | DRAWING SCALE AS SHOWN ON PLAN | |
| | | | |
| Center for Ecosystem Mgmt & Restoration Conceptual Designs For TWO STONYBROOK CREEK SALMONID MIGRATION BARRIER REMOVAL PROJECTS | | | |
| CIVIL GENERAL NOTES, SYMBOLS, ABBREVIATIONS, & INDEX SHEET | | | |
| JOB NUMBER | | 04101601 | |
| SHEET | | 2 OF 9 | |
| C-1.0 | | | |

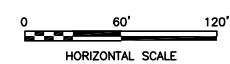
DOWNSTREAM CROSSING SITE
POST MILE 8.75
SHEETS C-6.0 TO C-8.0

UPSTREAM CROSSING SITE
POST MILE 8.60
SHEETS C-3.0 TO C-5.0



STONYBROOK CREEK THALWEG PROFILE

SCALE: SEE SCALE BAR



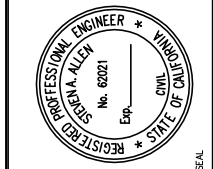
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| DES. | SA/ML | DRN | S/D |
| SUPV. | SA | CHK | ML |

DRAWING SCALE:
 DRAWING SCALE AS SHOWN ON PLAN



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 SALMONID MIGRATION BARRIER REMOVAL PROJECTS
 CIVIL
OVERALL CREEK PROFILE

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OCTOBER 2005

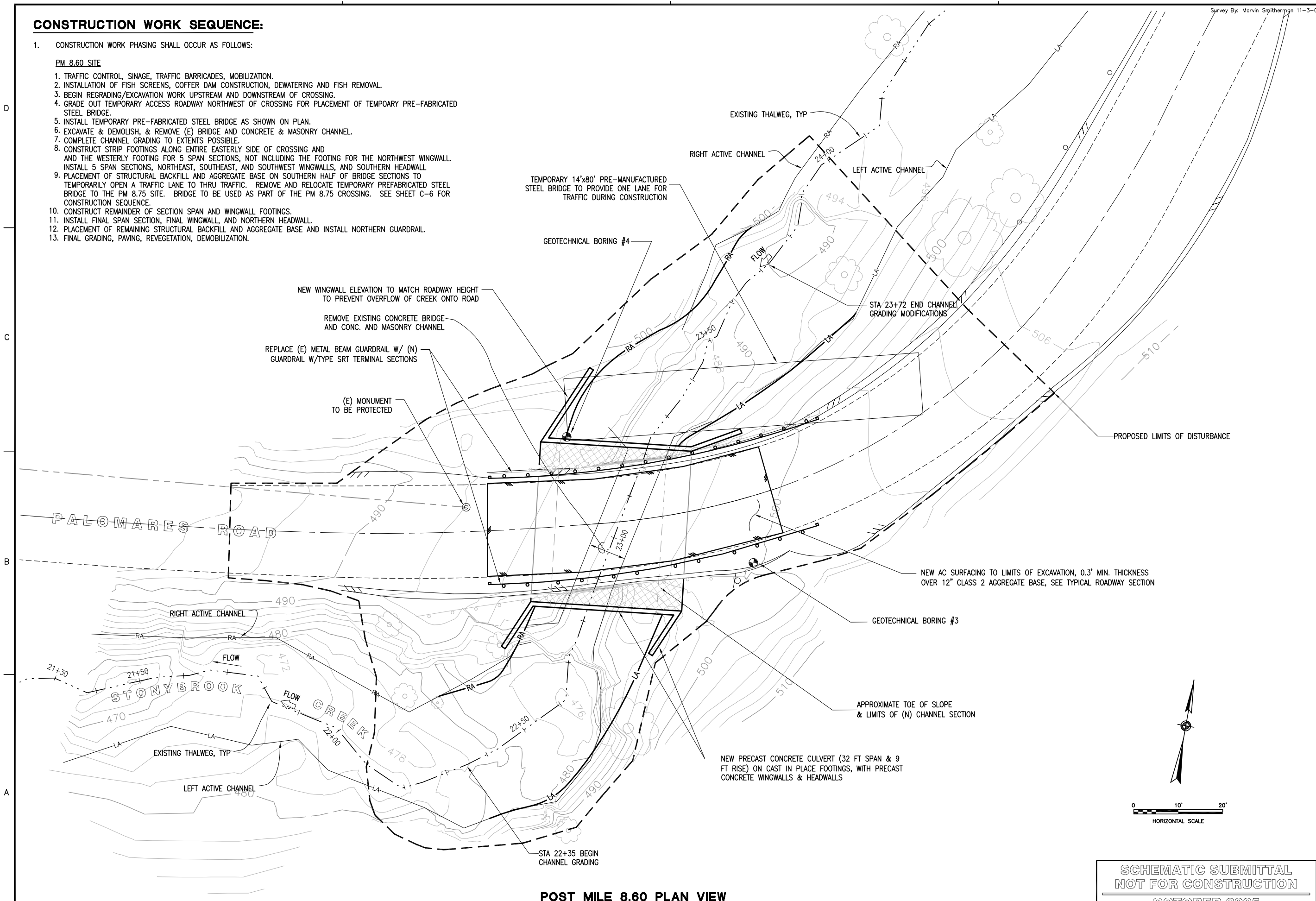
JOB NUMBER: 04101601
 SHEET 3 OF 9
C-2.0

CONSTRUCTION WORK SEQUENCE:

1. CONSTRUCTION WORK PHASING SHALL OCCUR AS FOLLOWS:

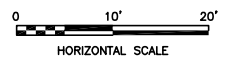
PM 8.60 SITE

1. TRAFFIC CONTROL, SINAGE, TRAFFIC BARRICADES, MOBILIZATION.
2. INSTALLATION OF FISH SCREENS, COFFER DAM CONSTRUCTION, DEWATERING AND FISH REMOVAL.
3. BEGIN REGRADING/EXCAVATION WORK UPSTREAM AND DOWNSTREAM OF CROSSING.
4. GRADE OUT TEMPORARY ACCESS ROADWAY NORTHWEST OF CROSSING FOR PLACEMENT OF TEMPORARY PRE-FABRICATED STEEL BRIDGE.
5. INSTALL TEMPORARY PRE-FABRICATED STEEL BRIDGE AS SHOWN ON PLAN.
6. EXCAVATE & DEMOLISH, & REMOVE (E) BRIDGE AND CONCRETE & MASONRY CHANNEL.
7. COMPLETE CHANNEL GRADING TO EXTENTS POSSIBLE.
8. CONSTRUCT STRIP FOOTINGS ALONG ENTIRE EASTERLY SIDE OF CROSSING AND AND THE WESTERLY FOOTING FOR 5 SPAN SECTIONS, NOT INCLUDING THE FOOTING FOR THE NORTHWEST WINGWALL. INSTALL 5 SPAN SECTIONS, NORTHEAST, SOUTHEAST, AND SOUTHWEST WINGWALLS, AND SOUTHERN HEADWALL.
9. PLACEMENT OF STRUCTURAL BACKFILL AND AGGREGATE BASE ON SOUTHERN HALF OF BRIDGE SECTIONS TO TEMPORARILY OPEN A TRAFFIC LANE TO THRU TRAFFIC. REMOVE AND RELOCATE TEMPORARY PREFABRICATED STEEL BRIDGE TO THE PM 8.75 SITE. BRIDGE TO BE USED AS PART OF THE PM 8.75 CROSSING. SEE SHEET C-6 FOR CONSTRUCTION SEQUENCE.
10. CONSTRUCT REMAINDER OF SECTION SPAN AND WINGWALL FOOTINGS.
11. INSTALL FINAL SPAN SECTION, FINAL WINGWALL, AND NORTHERN HEADWALL.
12. PLACEMENT OF REMAINING STRUCTURAL BACKFILL AND AGGREGATE BASE AND INSTALL NORTHERN GUARDRAIL.
13. FINAL GRADING, PAVING, REVEGETATION, DEMOBILIZATION.

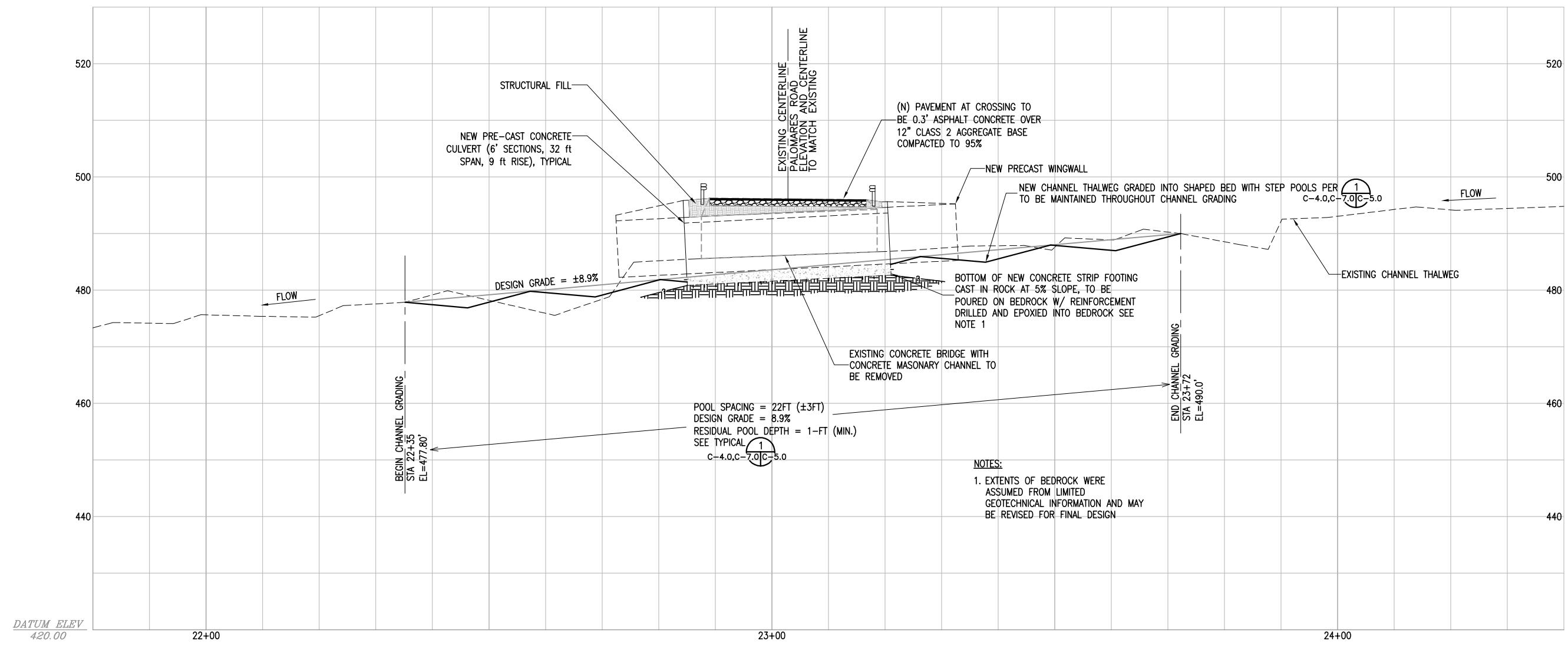


POST MILE 8.60 PLAN VIEW

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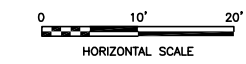
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| DES. SA/ML | DRN. S/D | CHK. AC | APPROVED DATE |
| SUPV. SA | DRK. AC | DRAWING SCALE AS SHOWN ON PLAN | REVISIONS |
| <p>REGISTERED PROFESSIONAL ENGINEER * WINZLER & KELLY STEPHAN ALLEN No. 62021 Exp. 12/31/05</p> | | <p>REVISIONS</p> | |
| <p>Center for Ecosystem Mgmt & Restoration Conceptual Designs For TWO STONYBROOK CREEK SALMONID MIGRATION BARRIER REMOVAL PROJECTS</p> | | | |
| <p>CIVIL POST MILE 8.60 PLAN VIEW</p> | | | |
| <p>J:\CAD\JOBS\2004\04101601\dwg\C-3.0.dwg</p> | | <p>JOB NUMBER 04101601</p> | |
| <p>10/25/2005</p> | | <p>SHEET 4 OF 9</p> | |
| <p>C-3.0</p> | | | |



DATUM ELEV
420.00

STONYBROOK CREEK THALWEG PROFILE AT POST MILE 8.60

SCALE: SEE SCALE BAR



NOTES:
1. EXTENTS OF BEDROCK WERE ASSUMED FROM LIMITED GEOTECHNICAL INFORMATION AND MAY BE REVISED FOR FINAL DESIGN

POOL SPACING = 22FT (±3FT)
DESIGN GRADE = 8.9%
RESIDUAL POOL DEPTH = 1-FT (MIN.)
SEE TYPICAL

BEGIN CHANNEL GRADING
STA 22+35
EL=477.80

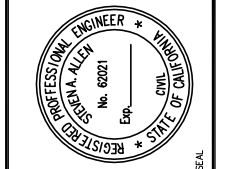
END CHANNEL GRADING
STA 23+72
EL=490.0'

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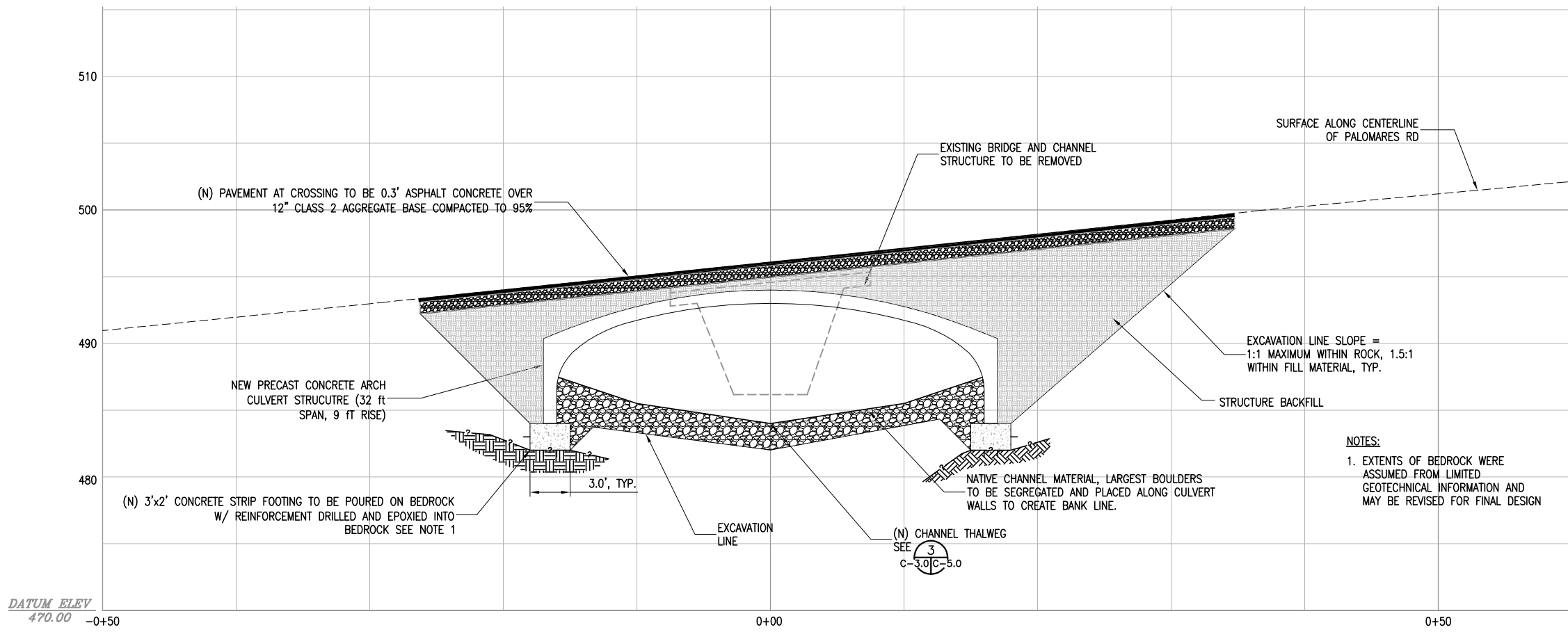
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| DES. SA/ML | DRN. S/D | CHK. AC | DRAWING SCALE AS SHOWN ON PLAN |
| SUPV. SA | | | |



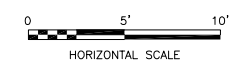
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CIVIL
POST MILE 8.60 PROFILE

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OCTOBER 2005**

JOB NUMBER 04101601
SHEET 5 OF 9
C-4.0

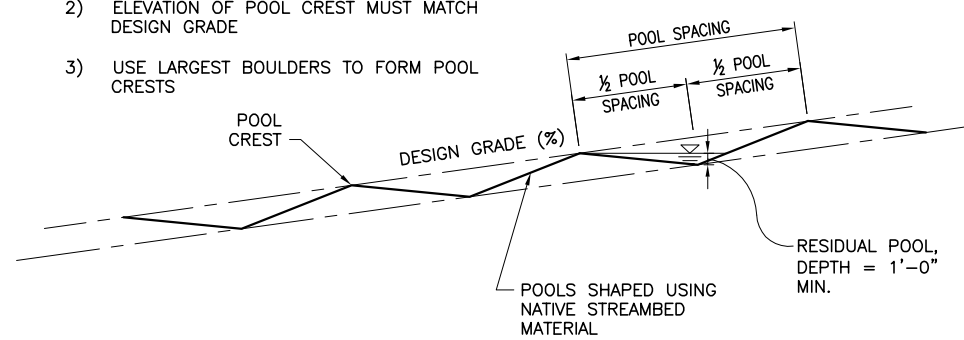


2
C-3.0 | C-5.0 **TYPICAL SECTION AT CULVERT**
SCALE: SEE SCALE BAR

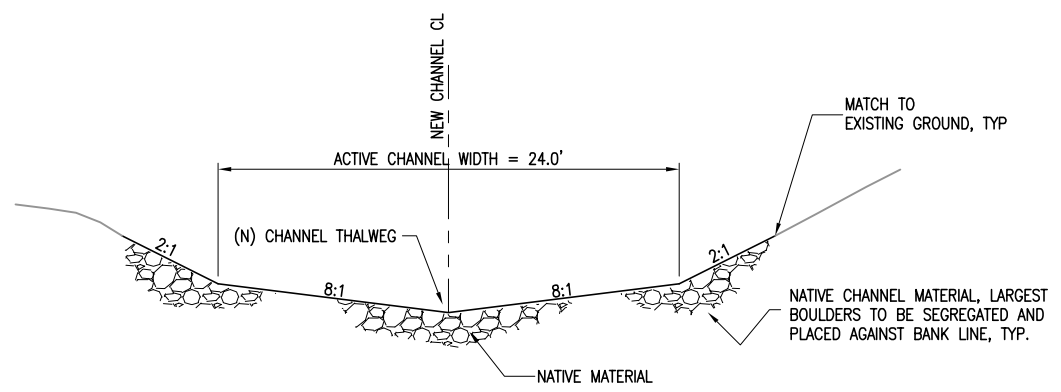


CONSTRUCTION NOTES FOR (N) CHANNEL BEDS

- 1) BEDS FORMED BY MOVING NATIVE MATERIAL TO MATCH DIMENSIONS ON PLANS
- 2) ELEVATION OF POOL CREST MUST MATCH DESIGN GRADE
- 3) USE LARGEST BOULDERS TO FORM POOL CRESTS



1
C-4.0, C-7.0 | C-5.0 **TYPICAL BED SHAPE**
SCALE: NTS



3
C-3.0 | C-5.0 **TYPICAL CHANNEL SECTION**
SCALE: SEE SCALE BAR

NOTES:
1. EXTENTS OF BEDROCK WERE ASSUMED FROM LIMITED GEOTECHNICAL INFORMATION AND MAY BE REVISED FOR FINAL DESIGN

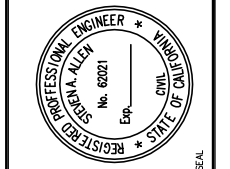
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| DES. SA/ML | SUPV. SA | DRN. SJD | CHK. AC |
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DRAWING SCALE: AS SHOWN ON PLAN



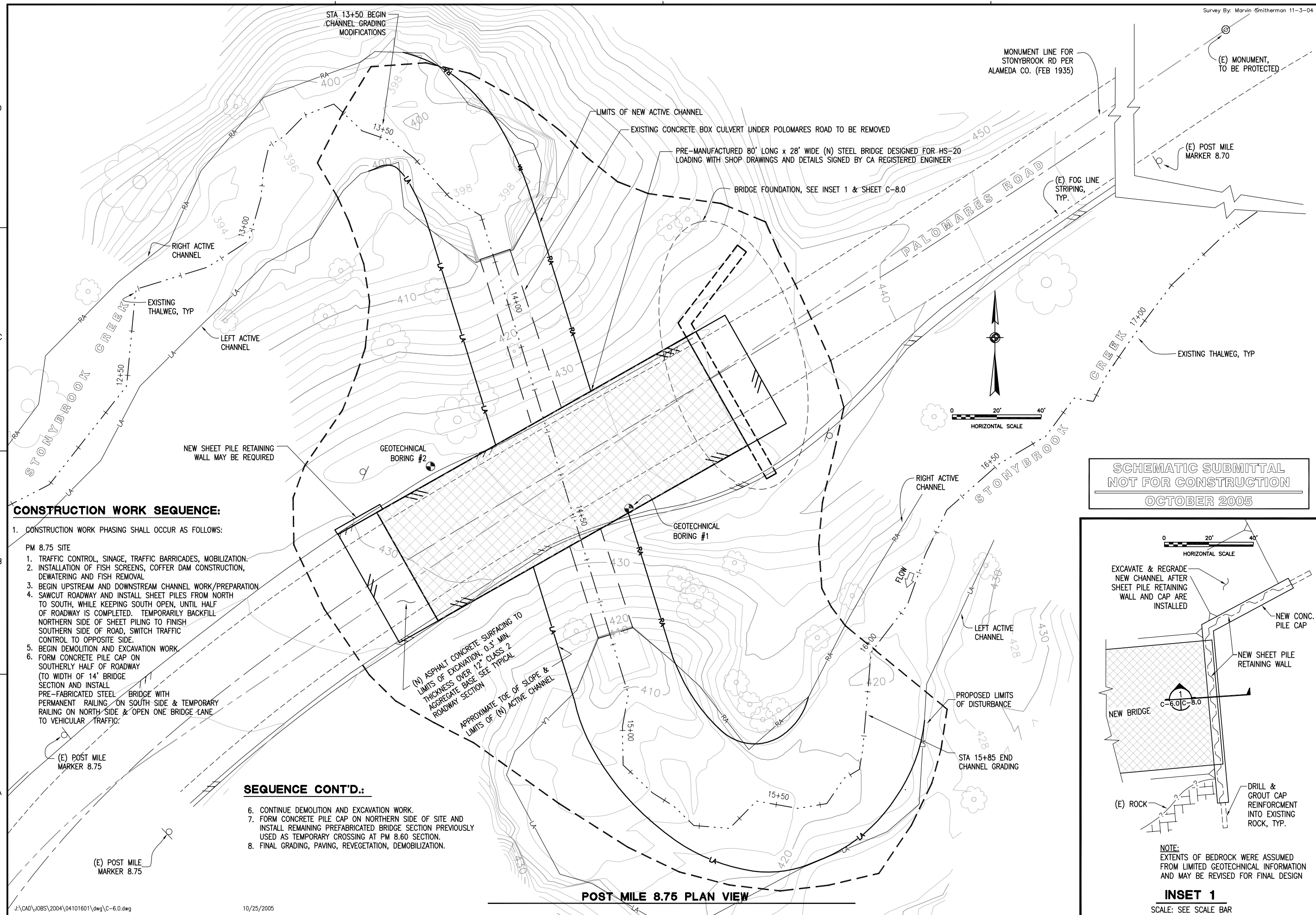
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Conceptual Designs For TWO STONYBROOK CREEK
SALMONID MIGRATION BARRIER REMOVAL PROJECTS

CIVIL

POST MILE 8.60 SECTION

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OCTOBER 2005

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| JOB NUMBER | 04101601 |
| SHEET | 6 OF 9 |
| C-5.0 | |



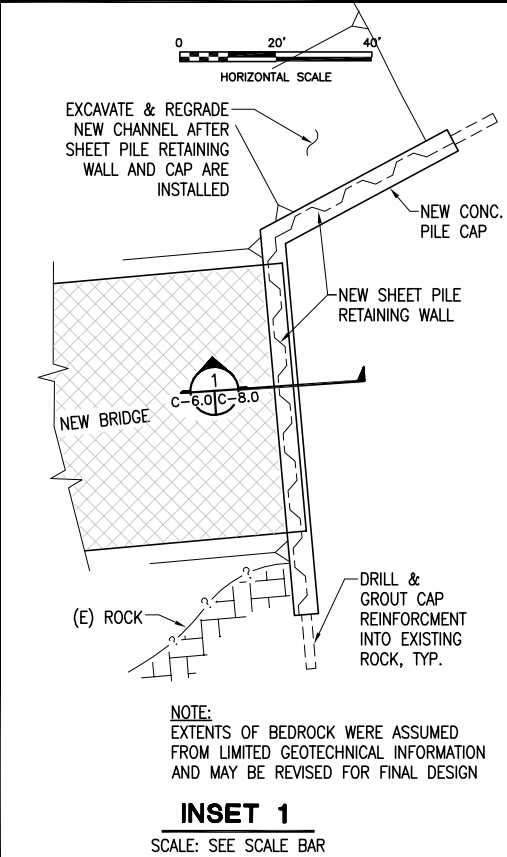
Survey By: Marvin Smitherman 11-3-04

| NO. | DATE | DESCRIPTION | BY | APPROVED |
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| DES. | SA/ML | DRN | S/D |
| SUPV. | SA | CHK | AC |

DRAWING SCALE: AS SHOWN ON PLAN

SCALE

REGISTERED PROFESSIONAL ENGINEER
 MICHAEL ALLEN
 No. 62021
 CIVIL
 STATE OF CALIFORNIA

Center for Ecosystem Mgmt & Restoration
 Conceptual Designs For TWO STONYBROOK CREEK
 SALMONID MIGRATION BARRIER REMOVAL PROJECTS
 CIVIL

POST MILE 8.75 PLAN VIEW

JOB NUMBER: 04101601
 SHEET 7 OF 9

C-6.0

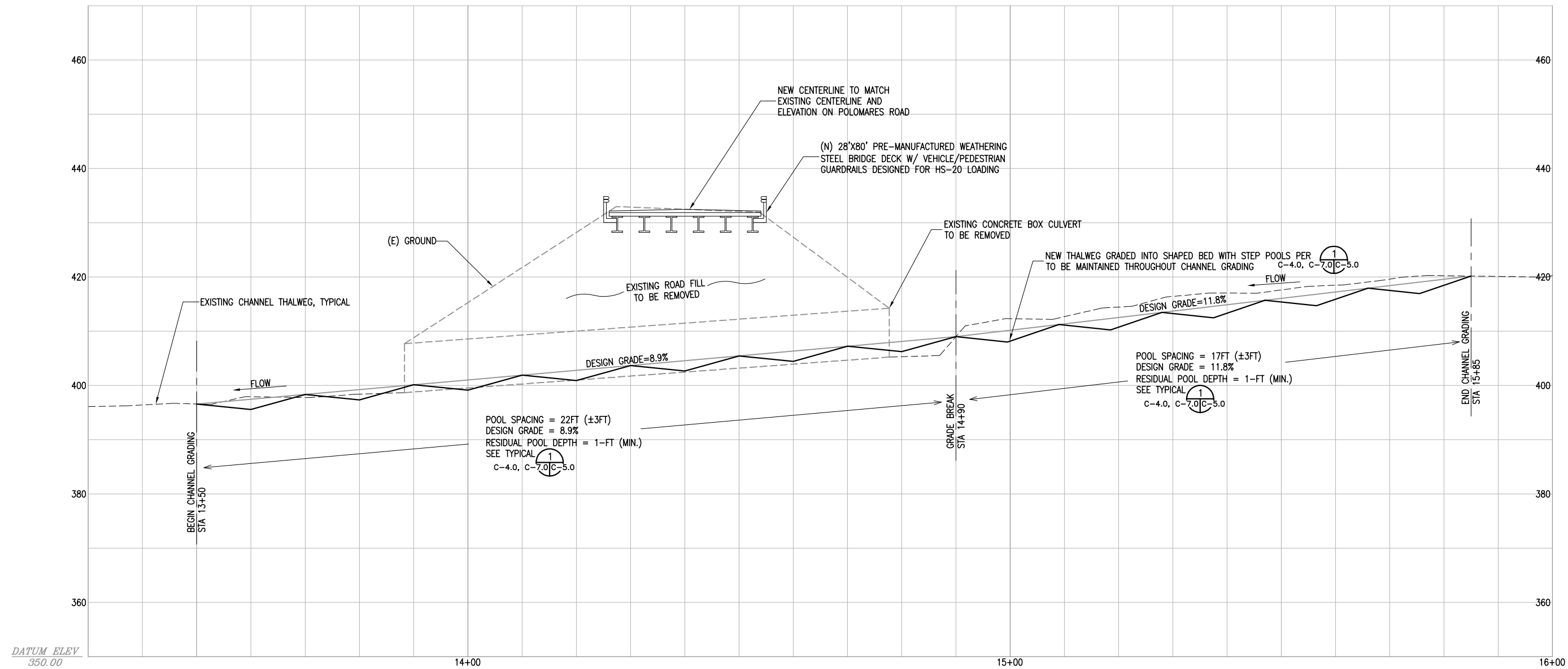
CONSTRUCTION WORK SEQUENCE:

- CONSTRUCTION WORK PHASING SHALL OCCUR AS FOLLOWS:
 PM 8.75 SITE
 1. TRAFFIC CONTROL, SINAGE, TRAFFIC BARRICADES, MOBILIZATION.
 2. INSTALLATION OF FISH SCREENS, COFFER DAM CONSTRUCTION, DEWATERING AND FISH REMOVAL.
 3. BEGIN UPSTREAM AND DOWNSTREAM CHANNEL WORK/PREPARATION.
 4. SAWCUT ROADWAY AND INSTALL SHEET PILES FROM NORTH TO SOUTH, WHILE KEEPING SOUTH OPEN, UNTIL HALF OF ROADWAY IS COMPLETED. TEMPORARILY BACKFILL NORTHERN SIDE OF SHEET PILING TO FINISH SOUTHERN SIDE OF ROAD, SWITCH TRAFFIC CONTROL TO OPPOSITE SIDE.
 5. BEGIN DEMOLITION AND EXCAVATION WORK.
 6. FORM CONCRETE PILE CAP ON SOUTHERLY HALF OF ROADWAY (TO WIDTH OF 14' BRIDGE SECTION AND INSTALL PRE-FABRICATED STEEL BRIDGE WITH PERMANENT RAILING ON SOUTH SIDE & TEMPORARY RAILING ON NORTH SIDE & OPEN ONE BRIDGE LANE TO VEHICULAR TRAFFIC.

SEQUENCE CONT'D.:

- CONTINUE DEMOLITION AND EXCAVATION WORK.
- FORM CONCRETE PILE CAP ON NORTHERN SIDE OF SITE AND INSTALL REMAINING PREFABRICATED BRIDGE SECTION PREVIOUSLY USED AS TEMPORARY CROSSING AT PM 8.60 SECTION.
- FINAL GRADING, PAVING, REVEGETATION, DEMOBILIZATION.

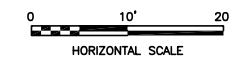
POST MILE 8.75 PLAN VIEW



DATUM ELEV
350.00

STONYBROOK CREEK THALWEG PROFILE AT POST MILE 8.75

SCALE: SEE SCALE BAR

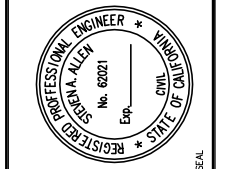


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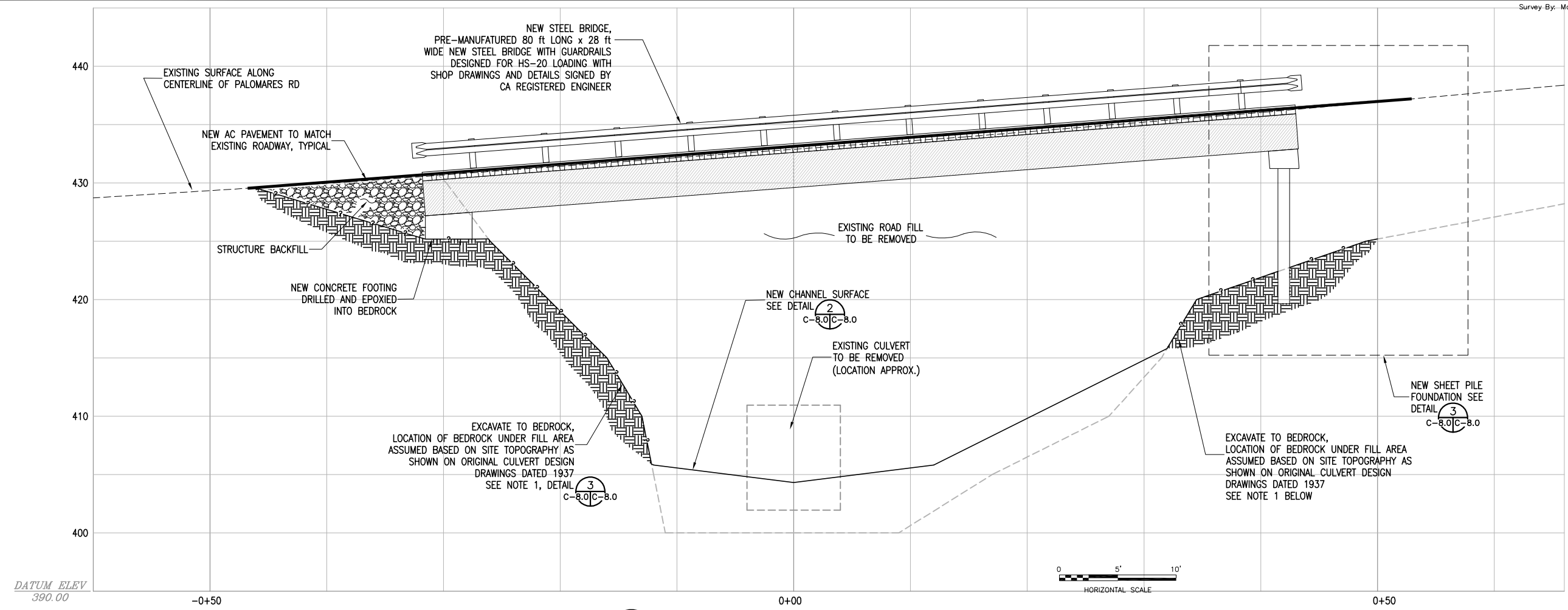
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| DES. SA/ML | DRN. S/D | CHK. AC | DRAWING SCALE AS SHOWN ON PLAN |
| SUPV. SA | | | |



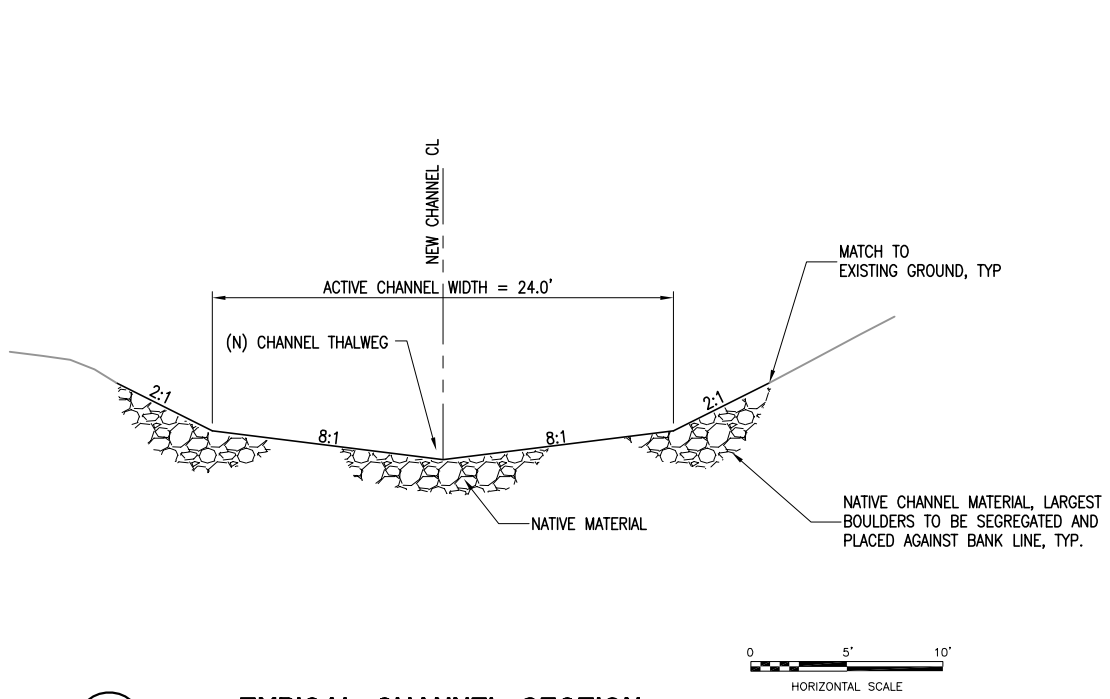
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 CIVIL
POST MILE 8.75 PROFILE

| | |
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| JOB NUMBER | 04101601 |
| SHEET | 8 OF 9 |
| C-7.0 | |

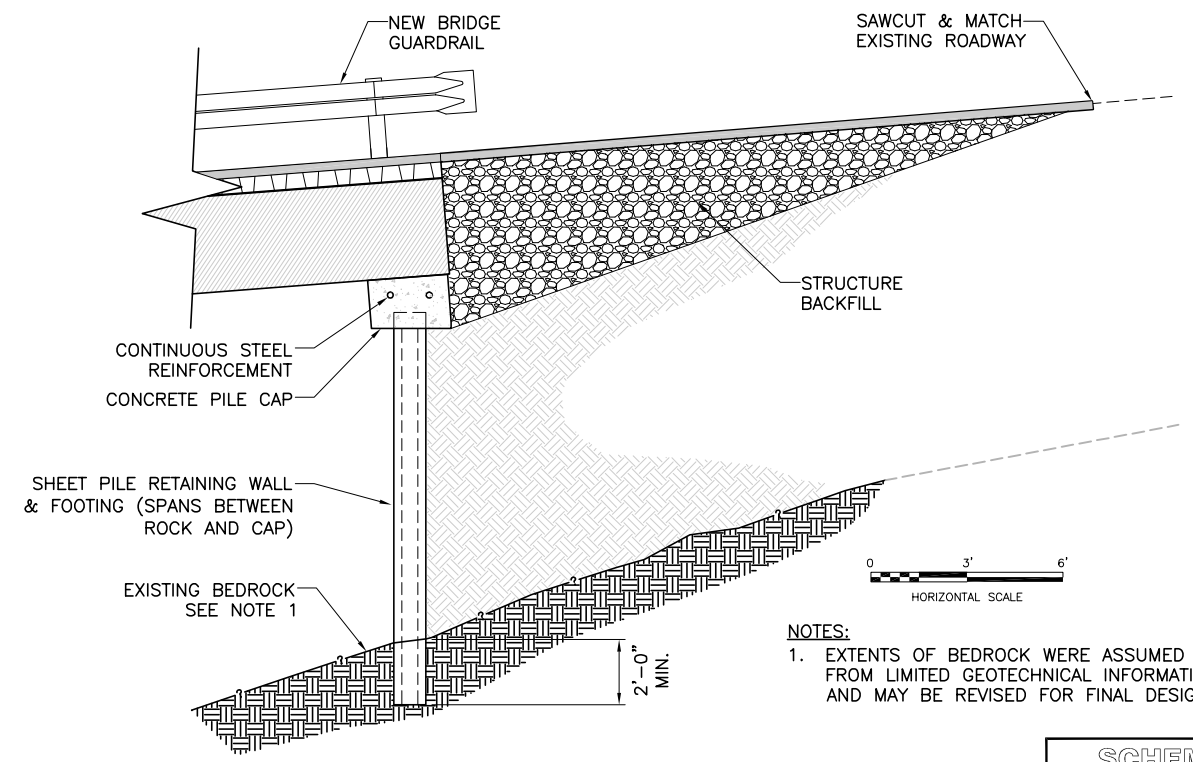
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1 TYPICAL SECTION AT CULVERT
C-06|C-08 SCALE: SEE SCALE BAR



2 TYPICAL CHANNEL SECTION
C-8.0|C-8.0 SCALE: SEE SCALE BAR



3 SHEET PILE FOUNDATION
C-8.0|C-8.0 SCALE: SEE SCALE BAR

NOTES:
1. EXTENTS OF BEDROCK WERE ASSUMED FROM LIMITED GEOTECHNICAL INFORMATION AND MAY BE REVISED FOR FINAL DESIGN

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| DES | SA/ML | DRN | S/D | AC | APPROVED |
| SUPV | SA | CHK | AC | DATE | APPROVED |
| DRAWING SCALE: AS SHOWN ON PLAN | | | | | REVISIONS |
| | | | | | |
| Center for Ecosystem Mgmt & Restoration Conceptual Designs For TWO STONYBROOK CREEK SALMONID MIGRATION BARRIER REMOVAL PROJECTS CIVIL POST MILE 8.75 SECTION | | | | | |
| WINZLER & KELLY CONSULTING ENGINEERS 633 THIRD STREET EUREKA, CA 95501-0417 PH (707) 443-8326 FAX (707) 444-8330 SUBCONSULTANT Michael Love & Associates Hydrologic Solutions PO Box 4477 Arcata, CA 95518 (707) #6-8938 | | | | | |
| JOB NUMBER 04101601 | | | | | |
| SHEET 9 OF 9 | | | | | |
| C-8.0 | | | | | |