

ATTACHMENT NO. 003

SOLICITATION NO. 1425-98-SP-20-20028
DRAWINGS FOR SPECIFICATIONS NO. 20-C0476

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
MID-PACIFIC REGION

FISH SCREEN STRUCTURE EXTENSION
FISH SCREEN STRUCTURE IMPROVEMENT PROJECT
GLENN-COLUSA IRRIGATION DISTRICT
CENTRAL VALLEY PROJECT IMPROVEMENT ACT,
CALIFORNIA

VOLUME III OF III

To Redding

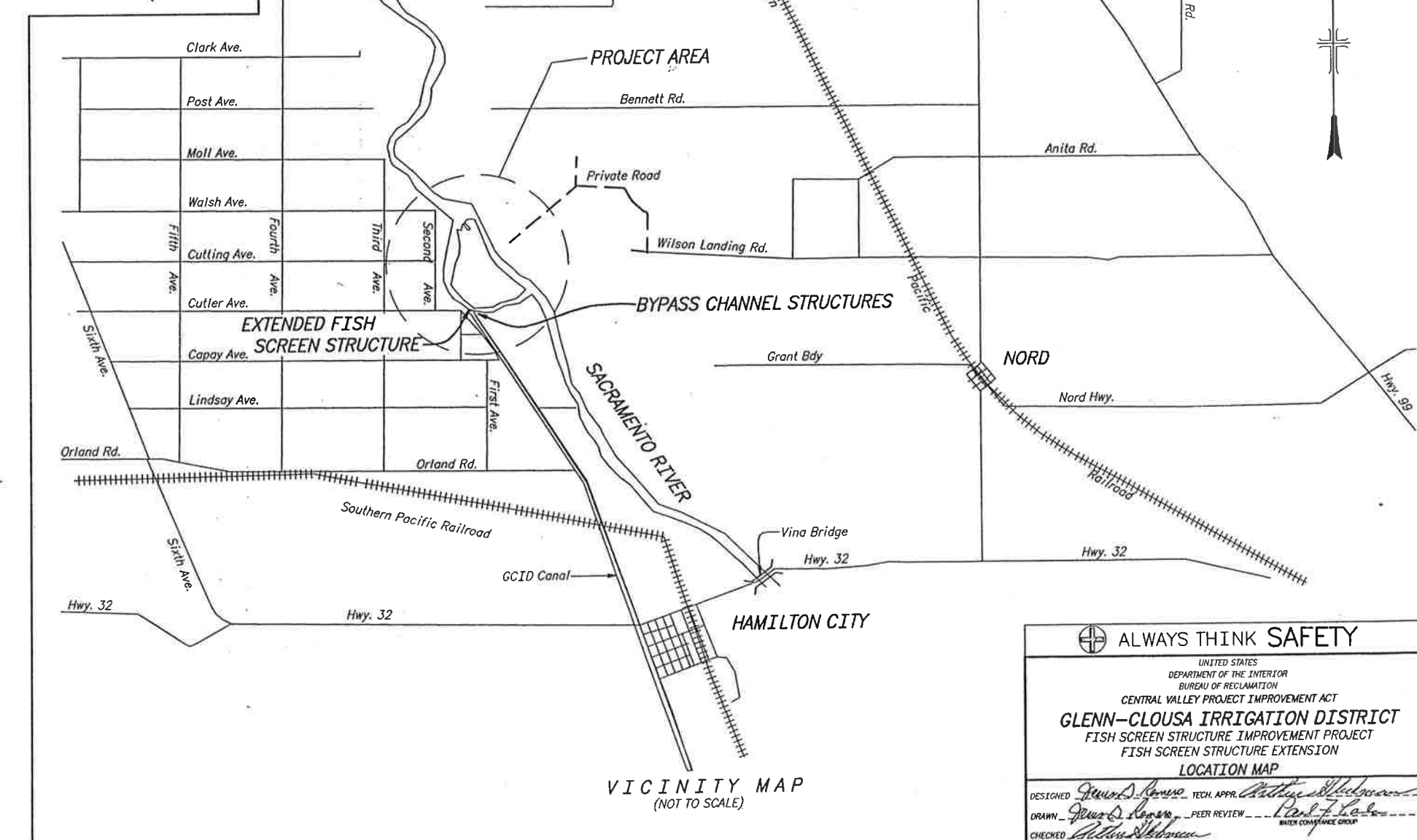
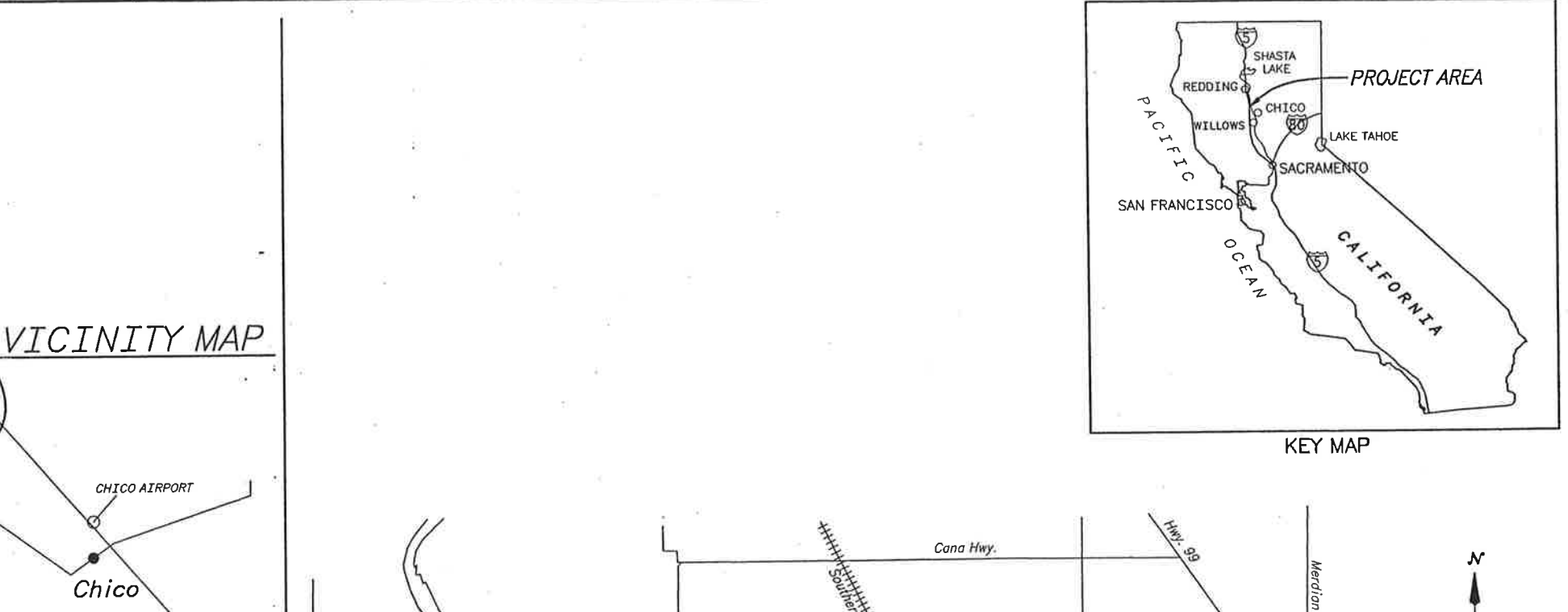
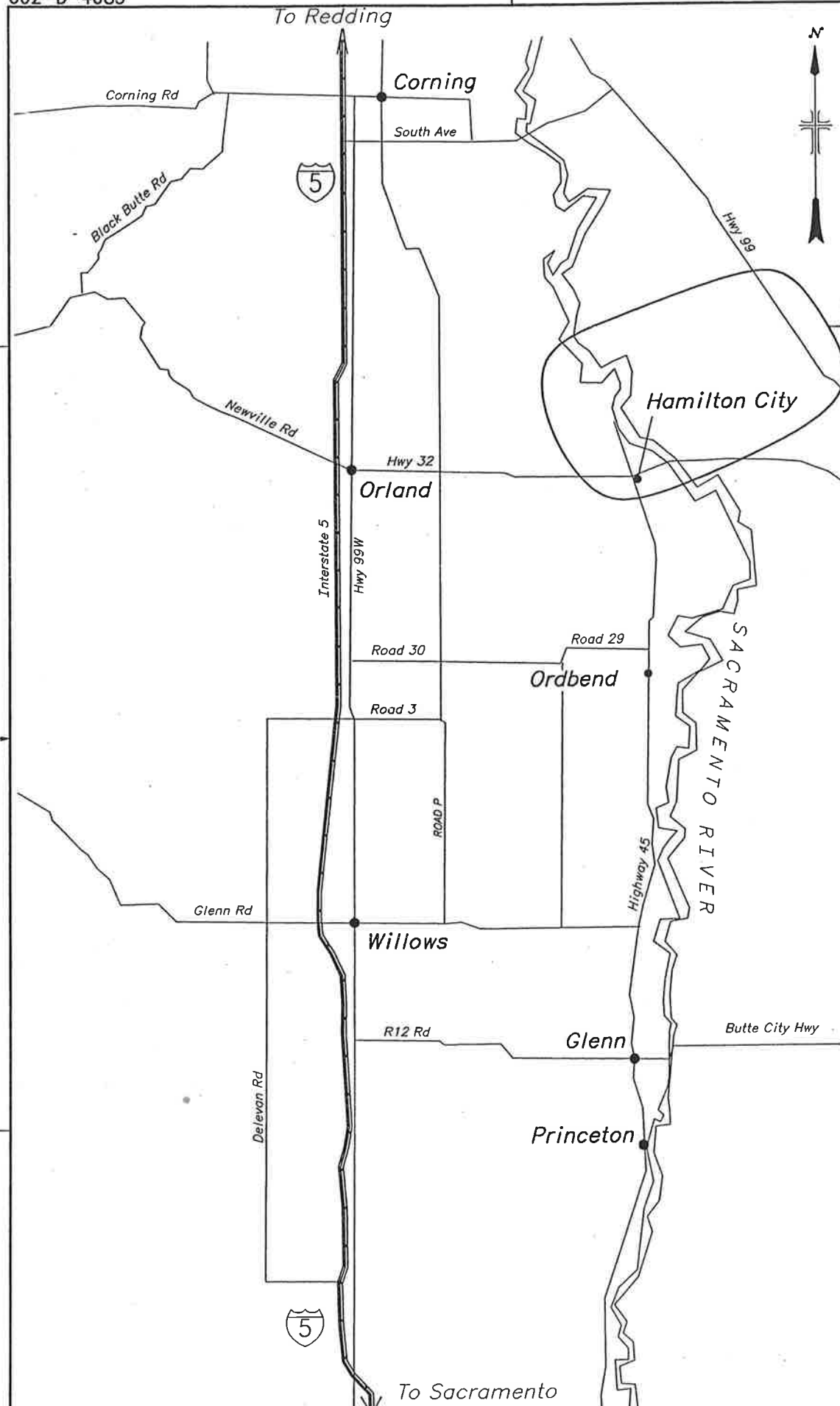
To Sacramento

VICINITY MAP

KEY MAP

VICINITY MAP
(NOT TO SCALE)

LOCATION MAP
(NOT TO SCALE)

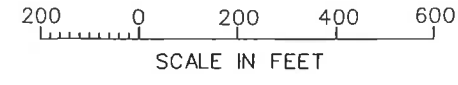
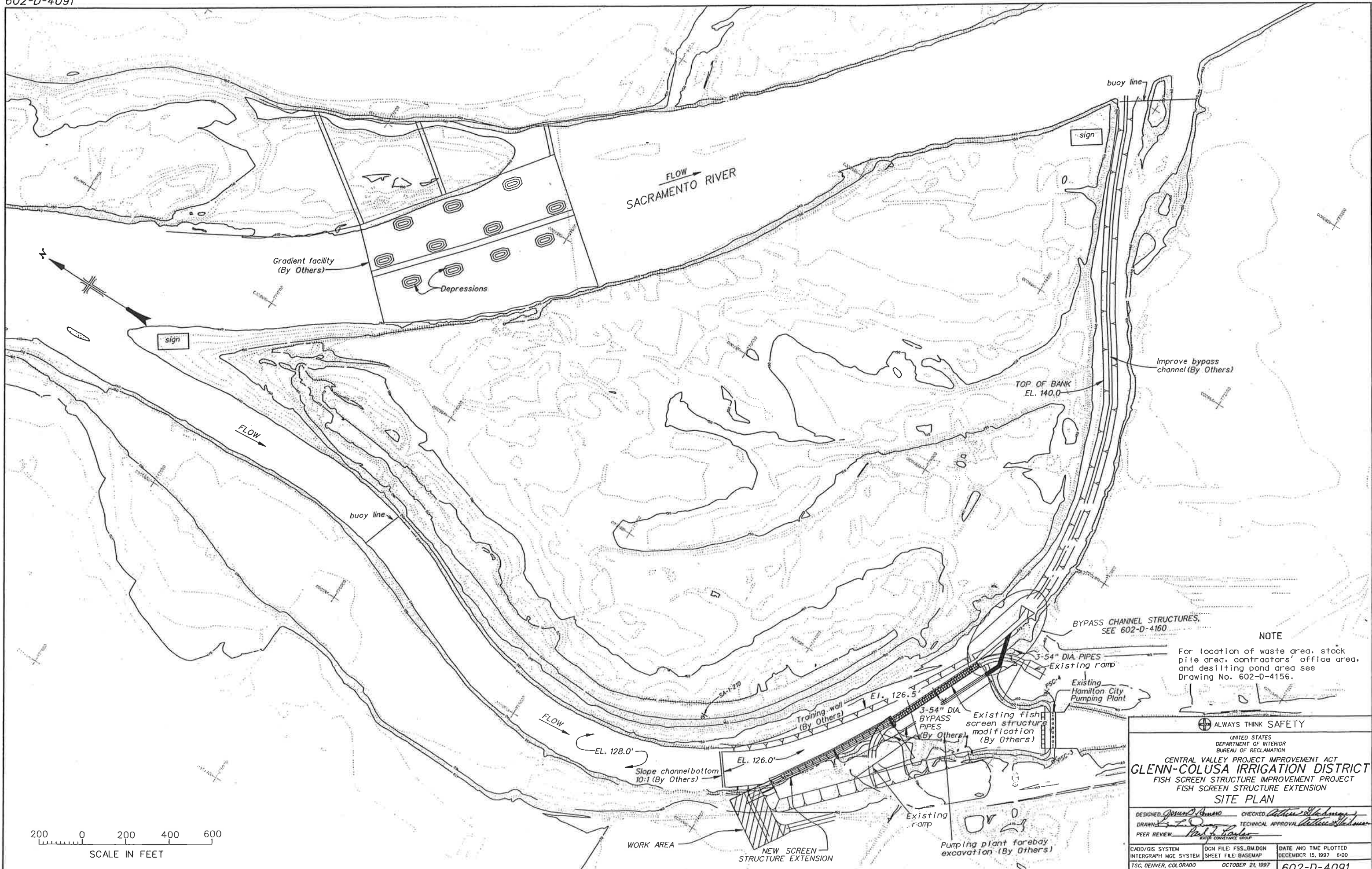


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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
CENTRAL VALLEY PROJECT IMPROVEMENT ACT
GLENN-CLOUSA IRRIGATION DISTRICT
FISH SCREEN STRUCTURE IMPROVEMENT PROJECT
FISH SCREEN STRUCTURE EXTENSION
LOCATION MAP

DESIGNED *James D. Rogers* TECH. APPR. *William J. Johnson*
DRAWN *James D. Rogers* PEER REVIEW *Paul J. Latta*
CHECKED *William J. Johnson* WATER COMPLIANCE GROUP

CADD SYSTEM AutoCAD Rel. 11 cd CADD FILENAME 602D4083.DWG DATE AND TIME PLOTTED DECEMBER 4, 1997 12:22
TSC, DENVER, COLORADO OCTOBER 21, 1997 602-D-4083



NOTE
 For location of waste area, stock pile area, contractors' office area, and desilting pond area see Drawing No. 602-D-4156.

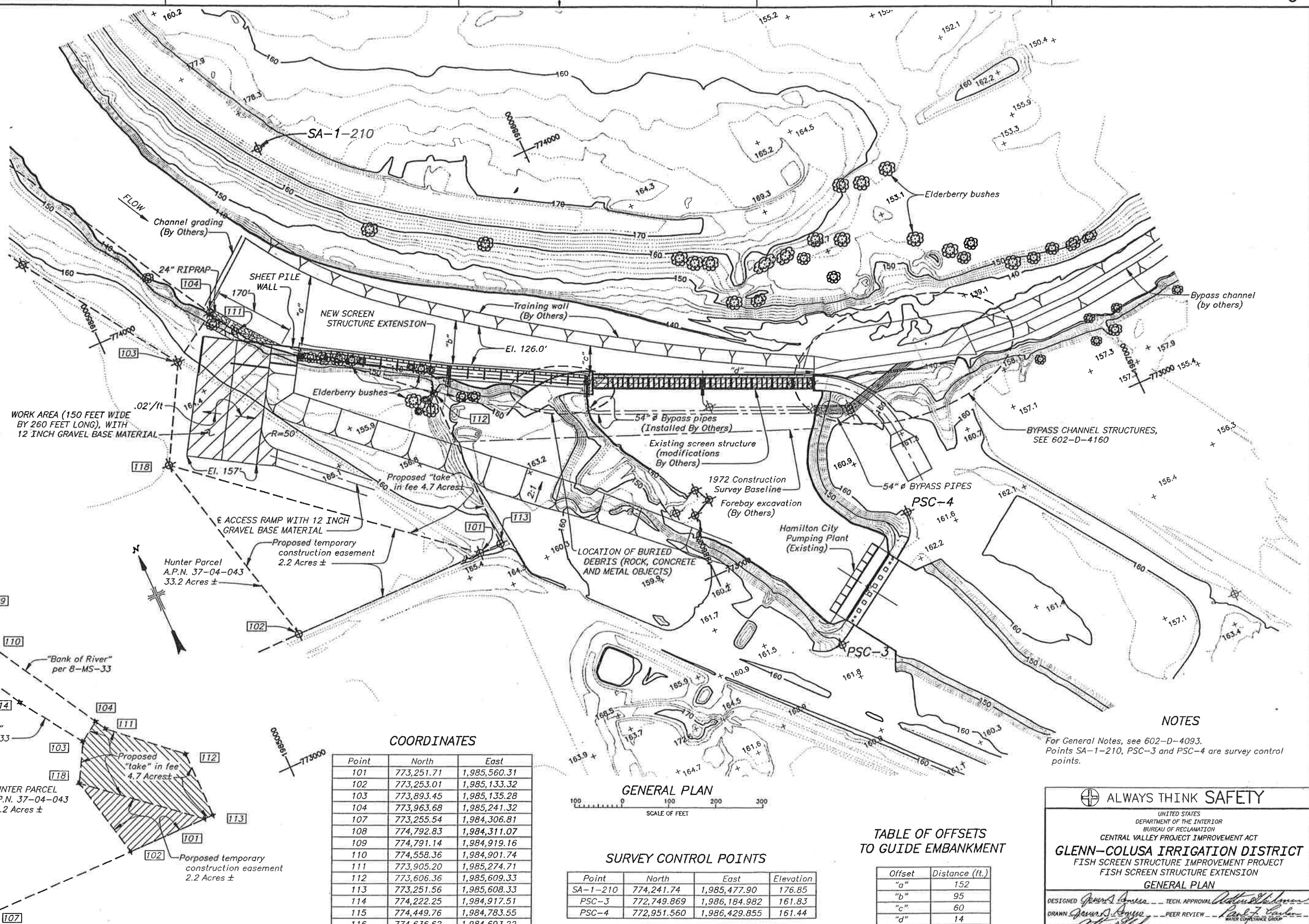
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UNITED STATES
 DEPARTMENT OF INTERIOR
 BUREAU OF RECLAMATION

**CENTRAL VALLEY PROJECT IMPROVEMENT ACT
 GLENN-COLUSA IRRIGATION DISTRICT
 FISH SCREEN STRUCTURE IMPROVEMENT PROJECT
 FISH SCREEN STRUCTURE EXTENSION
 SITE PLAN**

DESIGNED: <i>Josun D. Amato</i>	CHECKED: <i>Arthur J. Hedman</i>
DRAWN: <i>[Signature]</i>	TECHNICAL APPROVAL: <i>[Signature]</i>
PEER REVIEW: <i>[Signature]</i>	DATE AND TIME PLOTTED: DECEMBER 15, 1997 6:00
CADD/CIS SYSTEM INTERGRAPH MGE SYSTEM	DGN FILE: FSS_BM.DGN SHEET FILE: BASEMAP
TSC, DENVER, COLORADO	OCTOBER 21, 1997

602-D-4091



WORK AREA (150 FEET WIDE BY 260 FEET LONG), WITH 12 INCH GRAVEL BASE MATERIAL

ACCESS RAMP WITH 12 INCH GRAVEL BASE MATERIAL

Hunter Parcel A.P.N. 37-04-043 33.2 Acres ±

Proposed temporary construction easement 2.2 Acres ±

"Bank of River" per 8-MS-33

"Top of Bank" per 8-MS-33

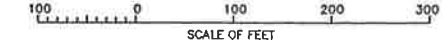
HUNTER PARCEL A.P.N. 37-04-043 33.2 Acres ±

Proposed temporary construction easement 2.2 Acres ±

COORDINATES

Point	North	East
101	773,251.71	1,985,560.31
102	773,253.01	1,985,133.32
103	773,893.45	1,985,135.28
104	773,963.68	1,985,241.32
107	773,255.54	1,984,306.81
108	774,792.83	1,984,311.07
109	774,791.14	1,984,919.16
110	774,558.36	1,984,901.74
111	773,905.20	1,985,274.71
112	773,606.36	1,985,609.33
113	773,251.56	1,985,608.33
114	774,222.25	1,984,917.51
115	774,449.76	1,984,783.55
116	774,636.62	1,984,693.22
117	774,791.83	1,984,670.30
118	773,698.21	1,985,028.01

GENERAL PLAN



SURVEY CONTROL POINTS

Point	North	East	Elevation
SA-1-210	774,241.74	1,985,477.90	176.85
PSC-3	772,749.869	1,986,184.982	161.83
PSC-4	772,951.560	1,986,429.855	161.44

TABLE OF OFFSETS TO GUIDE EMBANKMENT

Offset	Distance (ft.)
"a"	152
"b"	95
"c"	60
"d"	14

Offset distances are measured from edge of structure footing to toe of training wall.

NOTES

For General Notes, see 602-D-4093. Points SA-1-210, PSC-3 and PSC-4 are survey control points.

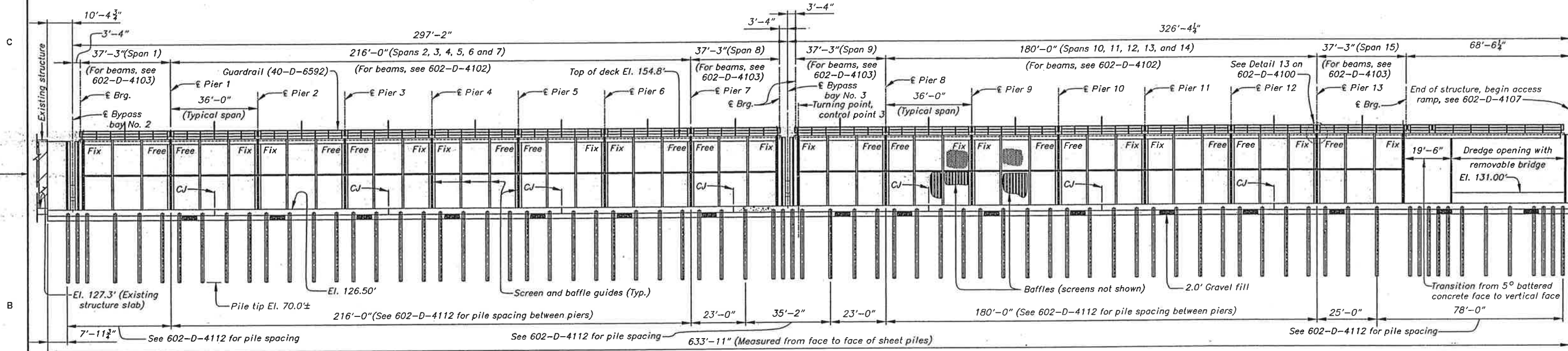
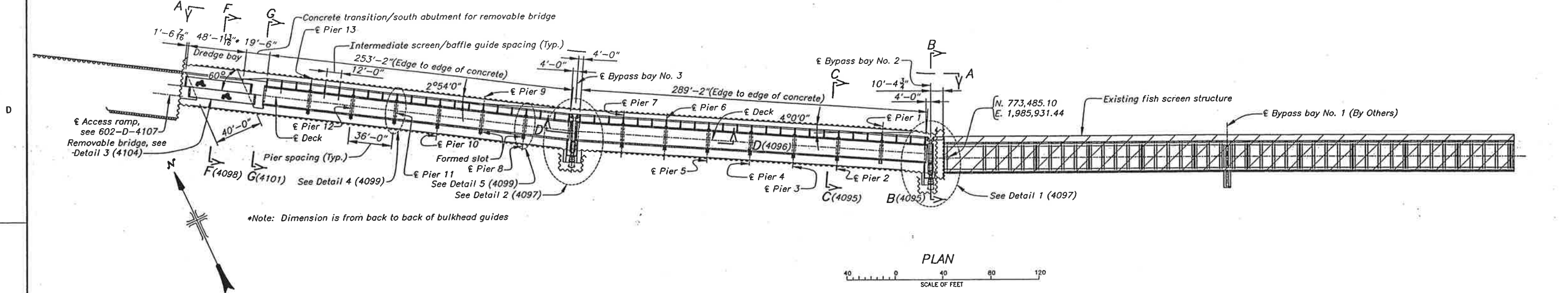
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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
CENTRAL VALLEY PROJECT IMPROVEMENT ACT
GLENN-COLUSA IRRIGATION DISTRICT
FISH SCREEN STRUCTURE IMPROVEMENT PROJECT
FISH SCREEN STRUCTURE EXTENSION
GENERAL PLAN

DESIGNED *James S. Amos* TECH. APPROVAL *Arthur D. Johnson*
DRAWN *James S. Amos* PEER REVIEW *Paul F. Taylor*
CHECKED *Arthur D. Johnson* WATER CONTRACTOR GROUP

CADD SYSTEM AutoCAD R13 s4 CADD FILENAME 602D4092.DWG DATE AND TIME PLOTTED DECEMBER 15, 1997 08:17
TSC, DENVER, COLORADO OCTOBER 21, 1997 602 D 4092

PLAN - HUNTER PROPERTY WITH PROPOSED ACQUISITIONS



Note: Fix and Free relate to precast deck joint details. Fix indicates that the end of the precast beam does not expand or contract and Free indicates that the end of the precast beam is free to expand and contract. For Fix and Free precast beam joint details, see 602-D-4099 and -4100.

NOTES

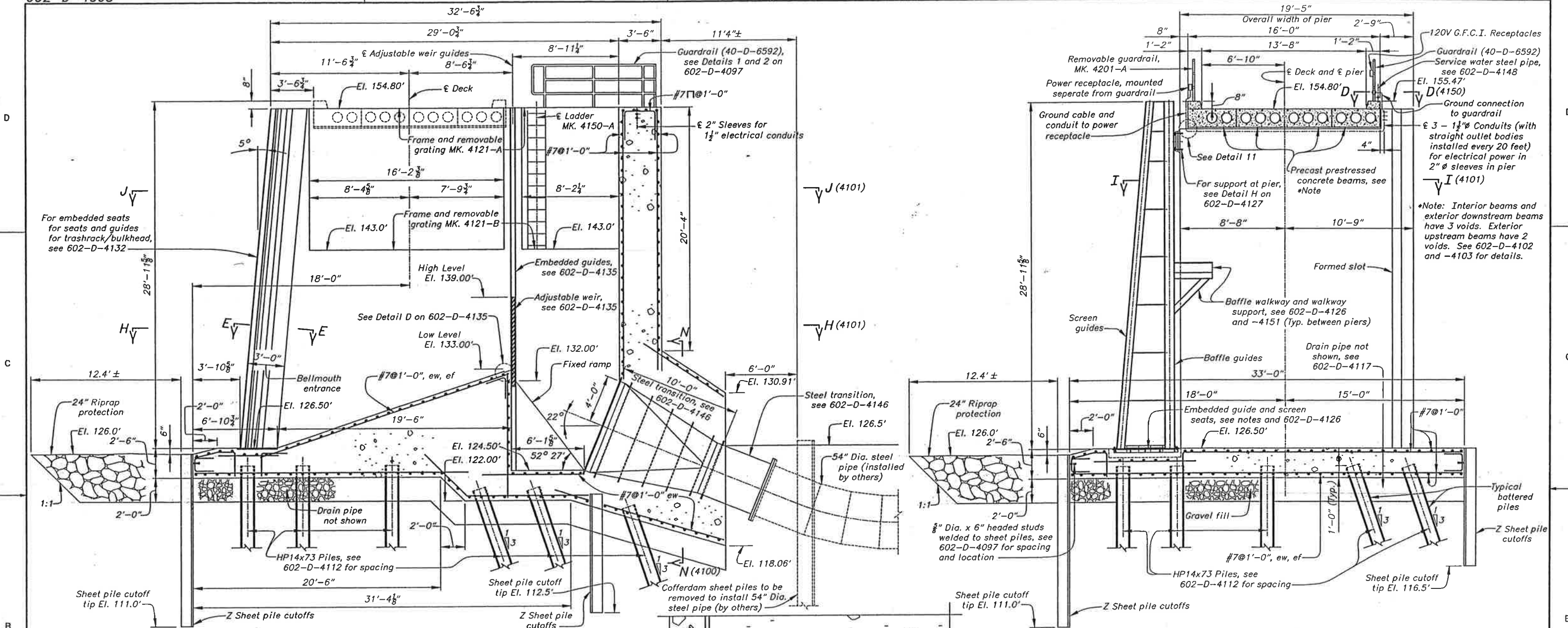
For General Notes, see 602-D-4093.
 For precast, prestressed concrete voided slab beams for deck see 602-D-4102 and -4103.
 Guardrail shown on View A-A is the downstream guardrail to show the light post location.
 For foundation pile spacing and layout pattern, see 602-D-4112.

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 CENTRAL VALLEY PROJECT IMPROVEMENT ACT
GLENN-COLUSA IRRIGATION DISTRICT
 FISH SCREEN STRUCTURE IMPROVEMENT PROJECT
 FISH SCREEN STRUCTURE EXTENSION
FISH SCREEN STRUCTURE
PLAN AND VIEW A-A

DESIGNED: *James S. Jones* TECH. APPROVAL: *Arthur S. Johnson*
 DRAWN: *James S. Jones* PEER REVIEW: *Paul J. Taylor*
 CHECKED: *James S. Jones* WATER COOPERATION GROUP

CADD SYSTEM: AutoCAD Ver. 13.0 C4 CADD FILENAME: 602D4094.DWG DATE AND TIME PLOTTED: DECEMBER 13, 1997 10:45
 TSC, DENVER, COLORADO SHEET 1 OF 8 OCTOBER 21, 1997 **602-D-4094**



For embedded seats for seats and guides for trashrack/bulkhead, see 602-D-4132

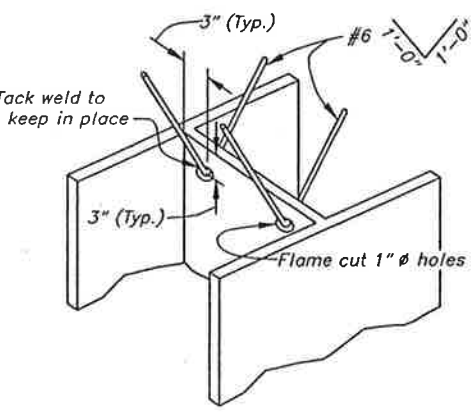
*Note: Interior beams and exterior downstream beams have 3 voids. Exterior upstream beams have 2 voids. See 602-D-4102 and -4103 for details.

SECTION B-B (4094)
(Bypass No. 2 shown, Bypass No. 3 similar)
SCALE OF FEET

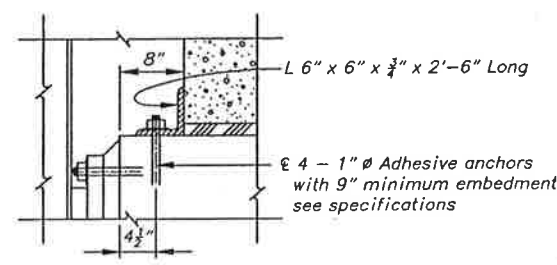
SECTION C-C (4094)

NOTES

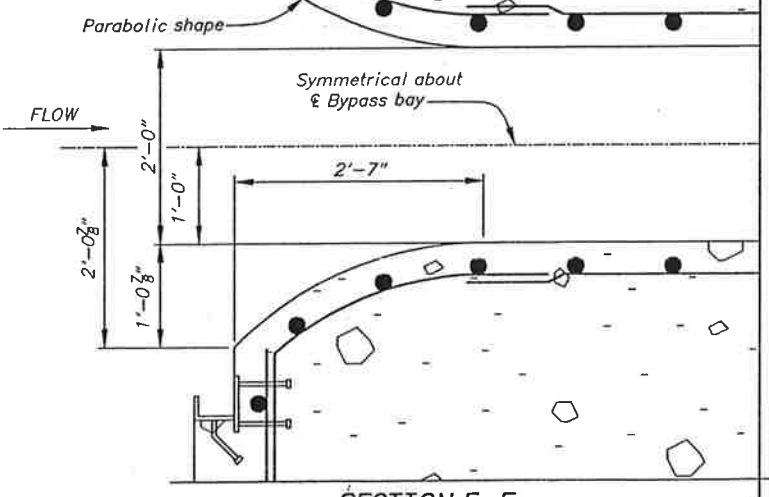
For General Notes, see 602-D-4093.
For expansion anchors to fasten baffle guides to piers and precast prestressed beams, see Detail H and Detail F of 602-D-4127.
For floor breakout for fish screen and guide seat details, see 602-D-4098.



PILE ANCHOR DETAIL
(Required on all piles)



DETAIL 11
(Typical at every pier)



SECTION E-E
(Bellmouth entrance)

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CENTRAL VALLEY PROJECT IMPROVEMENT ACT

GLENN-COLUSA IRRIGATION DISTRICT

FISH SCREEN STRUCTURE IMPROVEMENT PROJECT

FISH SCREEN STRUCTURE EXTENSION

FISH SCREEN STRUCTURE SECTIONS B-B, C-C, E-E AND DETAILS

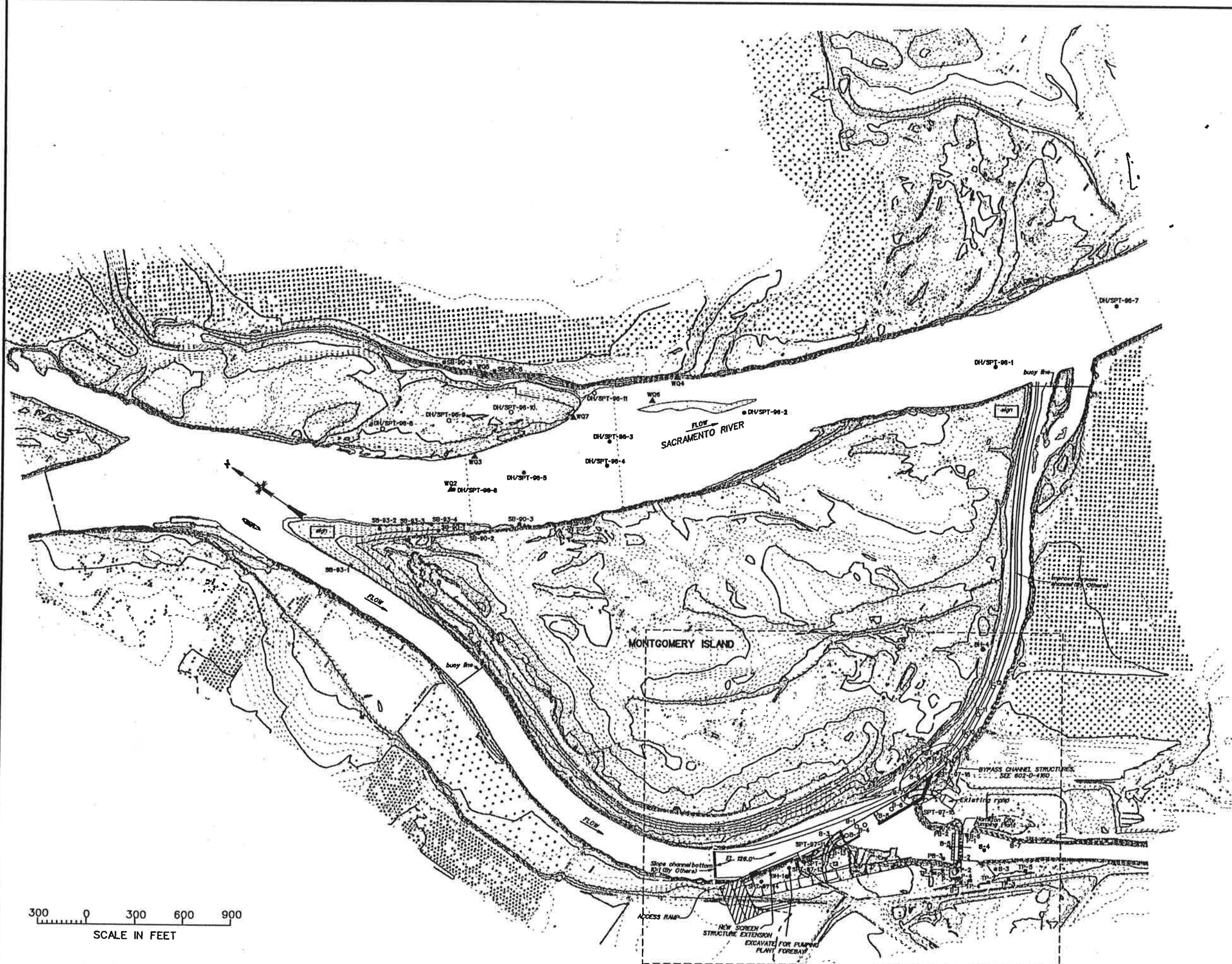
DESIGNED: [Signature] TECH. APPROVAL: [Signature]

DRAWN: [Signature] PEER REVIEW: [Signature]

CHECKED: [Signature] WATER CONFORMANCE GROUP

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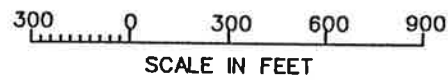
TSC, DENVER, COLORADO OCTOBER 21, 1997 602-D-4095



GEOLOGIC NOTES

For detail of dashed area and the location of sections see Drawing 602-D-4193.

For Geologic Legend, Explanation, and Notes see Drawing 602-D-4194.



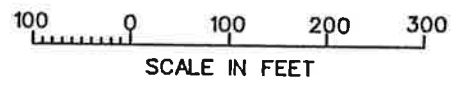
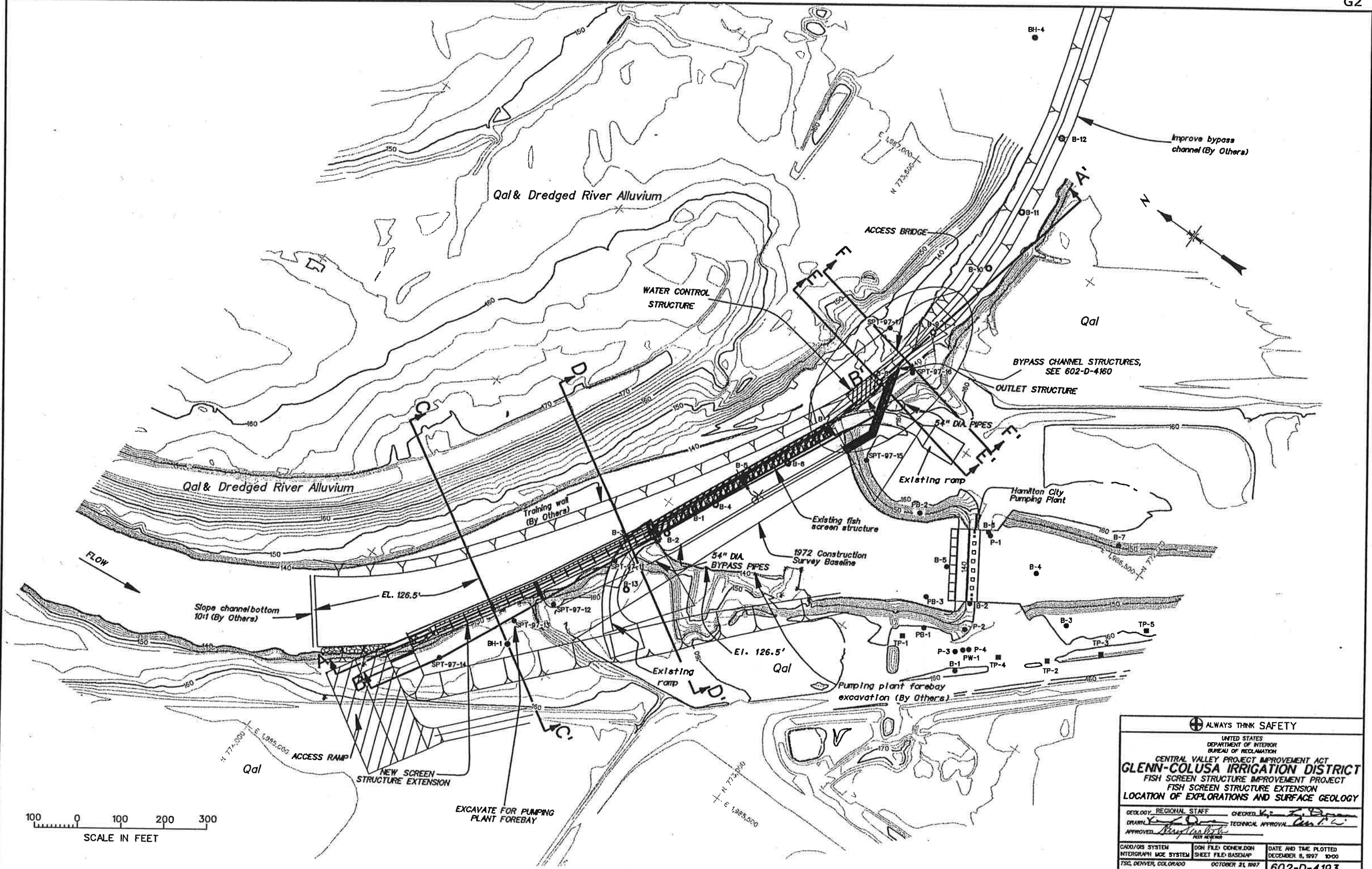
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CENTRAL VALLEY PROJECT IMPROVEMENT ACT
GLENN-COLUSA IRRIGATION DISTRICT
FISH SCREEN STRUCTURE IMPROVEMENT PROJECT
FISH SCREEN STRUCTURE EXTENSION
SITE PLAN WITH DRILL HOLES

GEOLOGY REGIONAL STAFF CHECKED: *[Signature]*
 DRAWN BY: *[Signature]* TECHNICAL APPROVAL: *[Signature]*
 APPROVED: *[Signature]* PEER REVIEWER

CADD/GIS SYSTEM	DGN FILE: DMSITE.DGN	DATE AND TIME PLOTTED
INTERGRAPH MGE SYSTEM	SHEET FILE: BASEMAP	DECEMBER 6, 1997 10:00
TSC, DENVER, COLORADO	OCTOBER 21, 1997	602-D-4192



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CENTRAL VALLEY PROJECT IMPROVEMENT ACT
GLENN-COLUSA IRRIGATION DISTRICT
FISH SCREEN STRUCTURE IMPROVEMENT PROJECT
FISH SCREEN STRUCTURE EXTENSION
LOCATION OF EXPLORATIONS AND SURFACE GEOLOGY

GEOLOGY REGIONAL STAFF	CHECKED: <i>[Signature]</i>
DRAWN: <i>[Signature]</i>	TECHNICAL APPROVAL: <i>[Signature]</i>
APPROVED: <i>[Signature]</i>	FOR REVISION

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INTERGRAPH MGE SYSTEM	SHEET FILE: BASEMAP	DECEMBER 6, 1997 10:00
TSC, DENVER, COLORADO	OCTOBER 21, 1997	602-D-4193

GEOLOGIC LEGEND

QUATERNARY

- Qd** River Alluvium - Holocene; uncemented, coarse-grained sediments consisting chiefly of poorly- to well-graded sand and gravel containing less than 10 percent nonplastic fines. This unit ranges in thickness from 20 to 40 feet.
- Qm** Modesto Formation - Pleistocene; uncemented, soft to firm sedimentary deposit consisting of a wide range of soil types. At the GCID facilities these deposits are chiefly clayey to silty gravel with some cobbles. This unit ranges in thickness from not encountered to 19 feet.
- Qrb** Riverbank Formation - Pleistocene; Compact to indurated sedimentary deposit consisting of two units. The major unit is chiefly coarse-grained, ranging in composition from a clayey gravel with sand to a well-graded sand with silt and gravel. The minor unit consists chiefly of lean to fat clay. This formation underlies River Alluvium at depths greater than 20 feet.

GEOLOGIC EXPLANATION

- DH/SPT-96-8 ● Standard penetration resistance test hole completed by USBR in 1996.
- DH-97-1 ● Standard penetration resistance test hole completed by USBR in 1997.
- SB-90-2 ● Soil Boring hole drilled in 1990 by CH2MHILL. Soil samples collected with standard penetration test sampler.
- SB-93-3 ● Standard penetration resistance test soil boring completed by CH2MHILL in 1993
- WQ3 ▲ Shallow soil samples site completed by USBR in 1996.
- PB-1 ● Drill hole completed by CH2MHILL in 1975.
- P-2 ● Drill hole Piezometer installed by CH2MHILL in 1980.
- PW-1 ● Pump well completed by CH2MHILL in 1980.
- TP-5 ■ Test Pit excavated by CH2MHILL in 1980.
- B-6 ● Drill hole completed by CH2MHILL in 1980.
- B-3 ● Drill hole completed by Moore and Taber in 1969.
- BH-1 ● Drill hole completed by Geo/Resource Consultants in 1993 for HDR Engineering.
- Qm / Qrb ? — Geologic contact. Dashed where approximate, queried where inferred.

GEOLOGIC NOTES

Only selected logs of exploration holes located near the geologic cross sections are projected to the sections. All geologic cross sections are based on interpretations from subsurface investigations and geologic surface mapping. For a complete description of the material, difficulties during drilling, intervals of caving, core and water loss, etc., see complete log.

For overall site plan and location of explorations, and surface geology see Drawings 602-D-4192 and 602-D-4193.

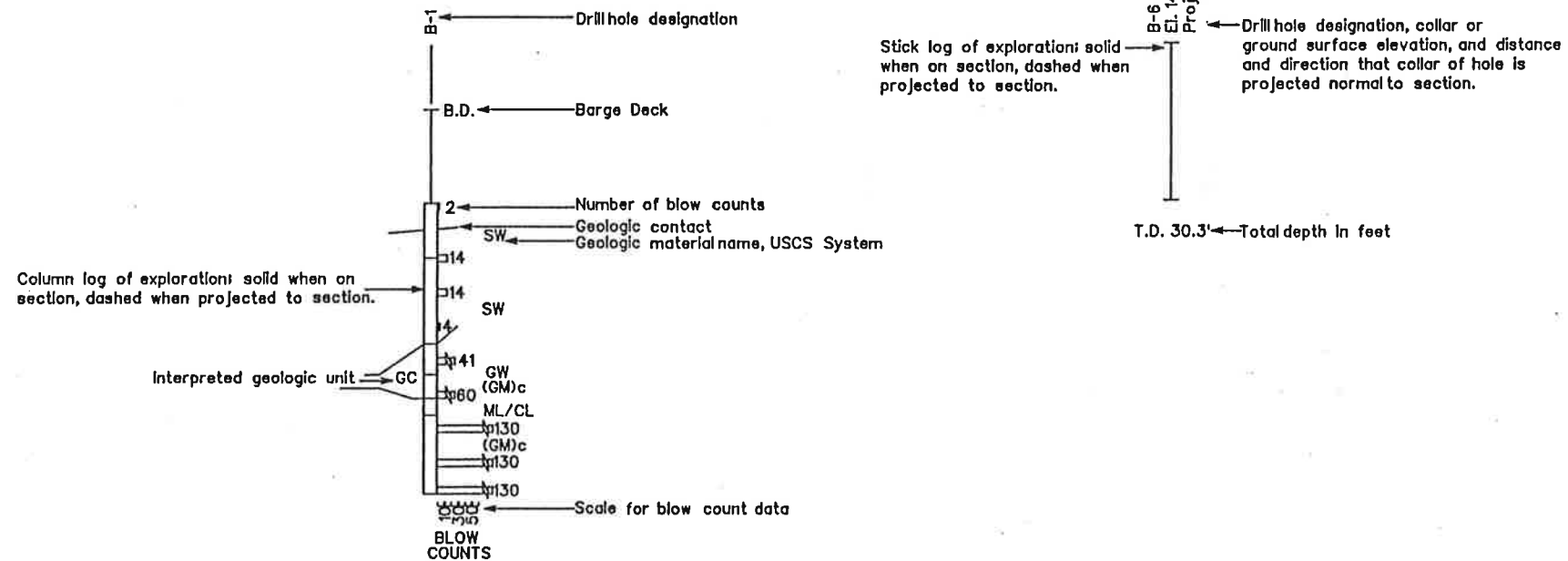
For the detailed plan showing location of geologic cross sections, explorations, and surface geology see Drawing 602-D-4193.

For Geologic Cross Section A-A' see Drawing 602-D-4195.

For Geologic Cross Sections B-B' and C-C' see Drawing 602-D-4196.

For Geologic Cross Sections D-D', E-E', and F-F' see Drawing 602-D-4197.

Soil classifications and descriptions are based on procedures described in Designations USBR 5000 (laboratory classification) and USBR 5005 (visual classification). These procedures are similar to ASTM D 2487 and D 2488, respectively. Copies of the USBR designations are available from the Earth Sciences Group, Code D-8340, Denver, CO, phone (303) 236-3730 ext. 438.

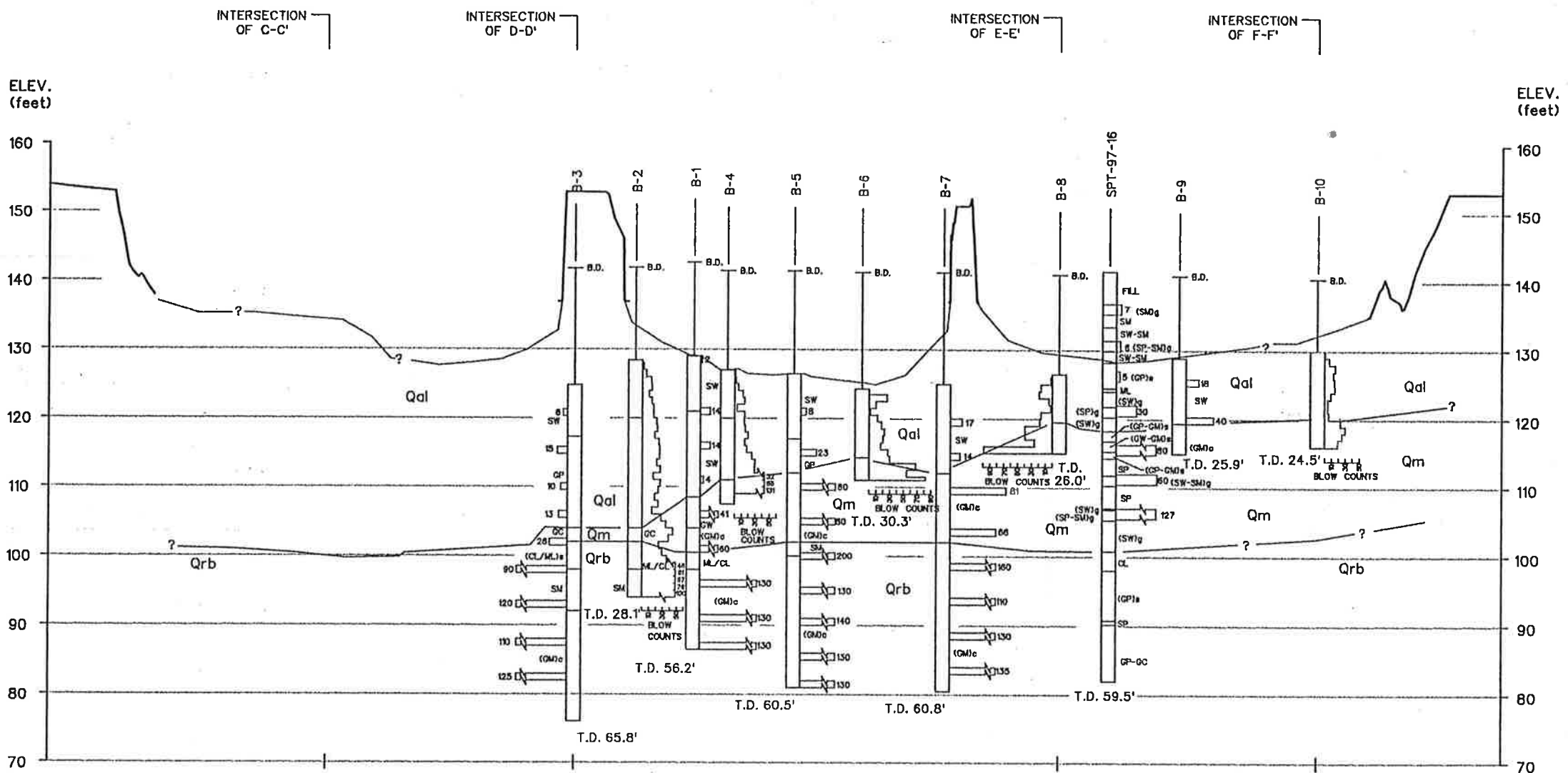
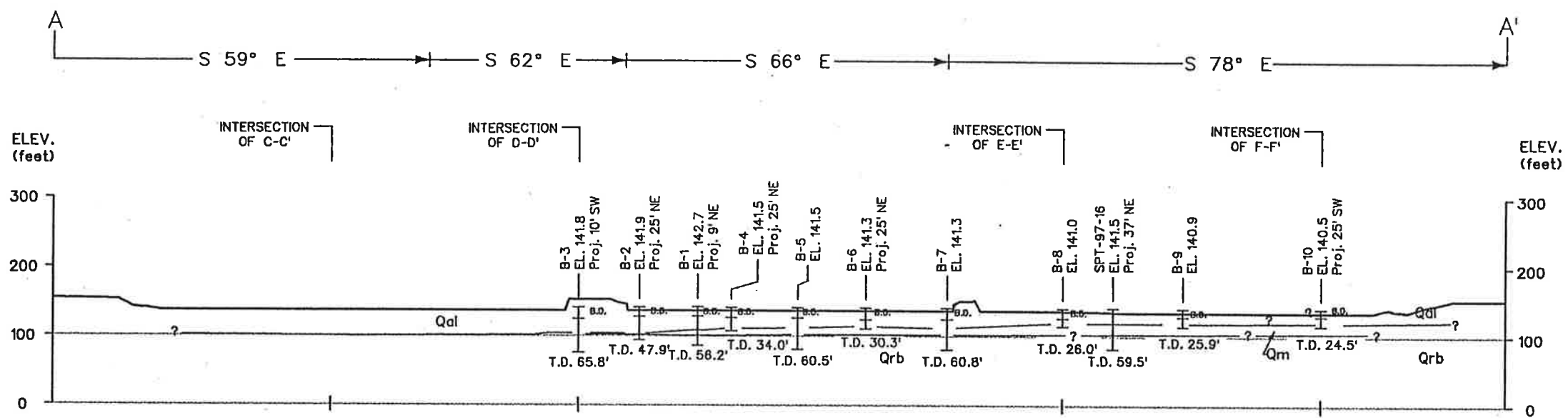


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CENTRAL VALLEY PROJECT IMPROVEMENT ACT
GLEN-COLUSA IRRIGATION DISTRICT
FISH SCREEN STRUCTURE IMPROVEMENT PROJECT
FISH SCREEN STRUCTURE EXTENSION
GEOLOGIC LEGEND, EXPLANATION, AND NOTES

GEOLOGY REGIONAL STAFF CHECKED *Kim Z. Fero*
DRAWN *[Signature]* TECHNICAL APPROVAL *[Signature]*
APPROVED *[Signature]*

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DENVER, COLORADO OCTOBER 21, 1997 602-D-4194
DECEMBER 6, 1997 9:00



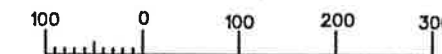
GEOLOGIC NOTES

For the Geologic Legend, Explanation, and Notes, see Drawing 602-D-4194.

For the location of Section A-A' see Drawing 602-D-4193.

For Sections B-B' and C-C' see Drawing 602-D-4196.

For Sections D-D', E-E', and F-F' see Drawing 602-D-4197.



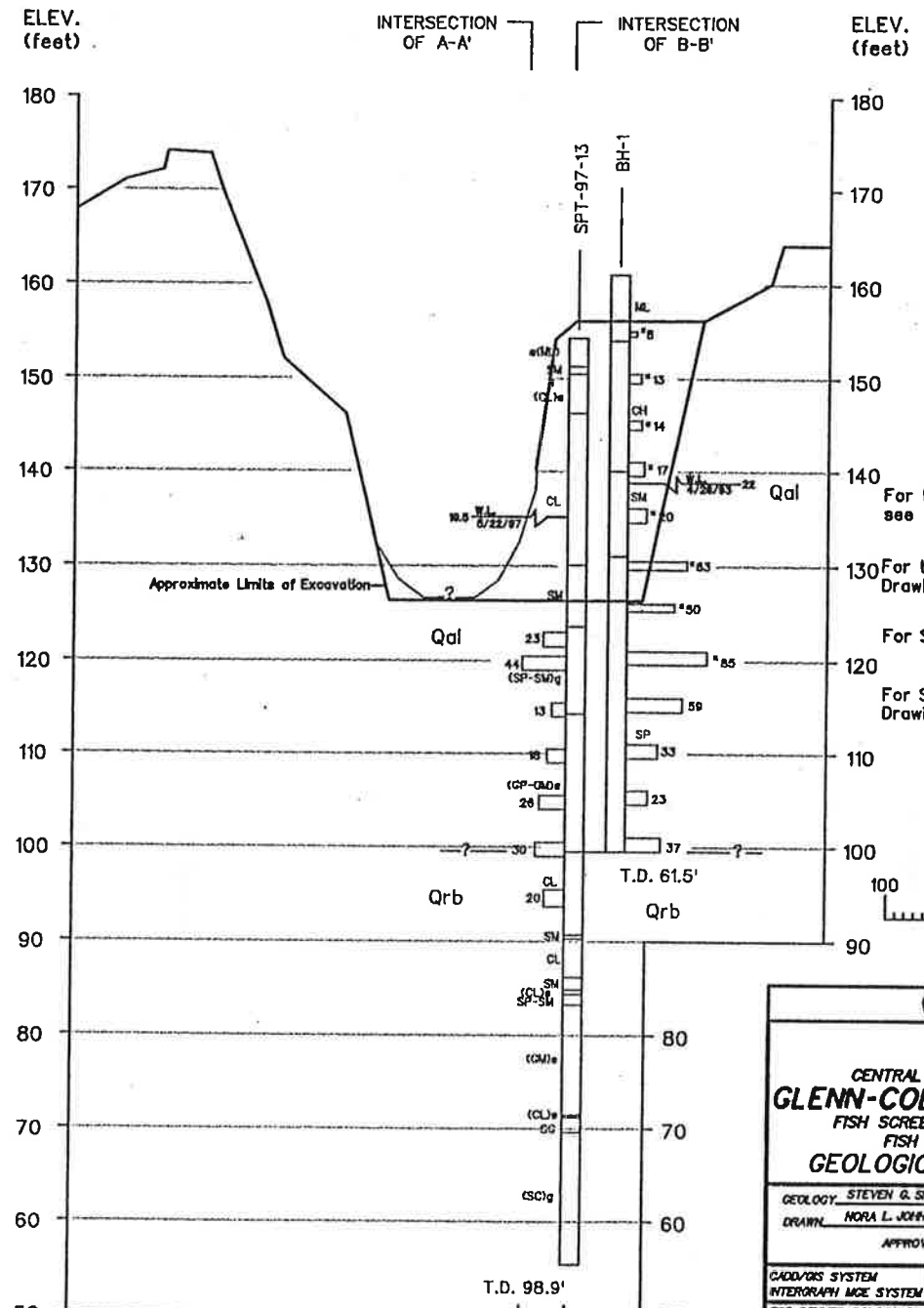
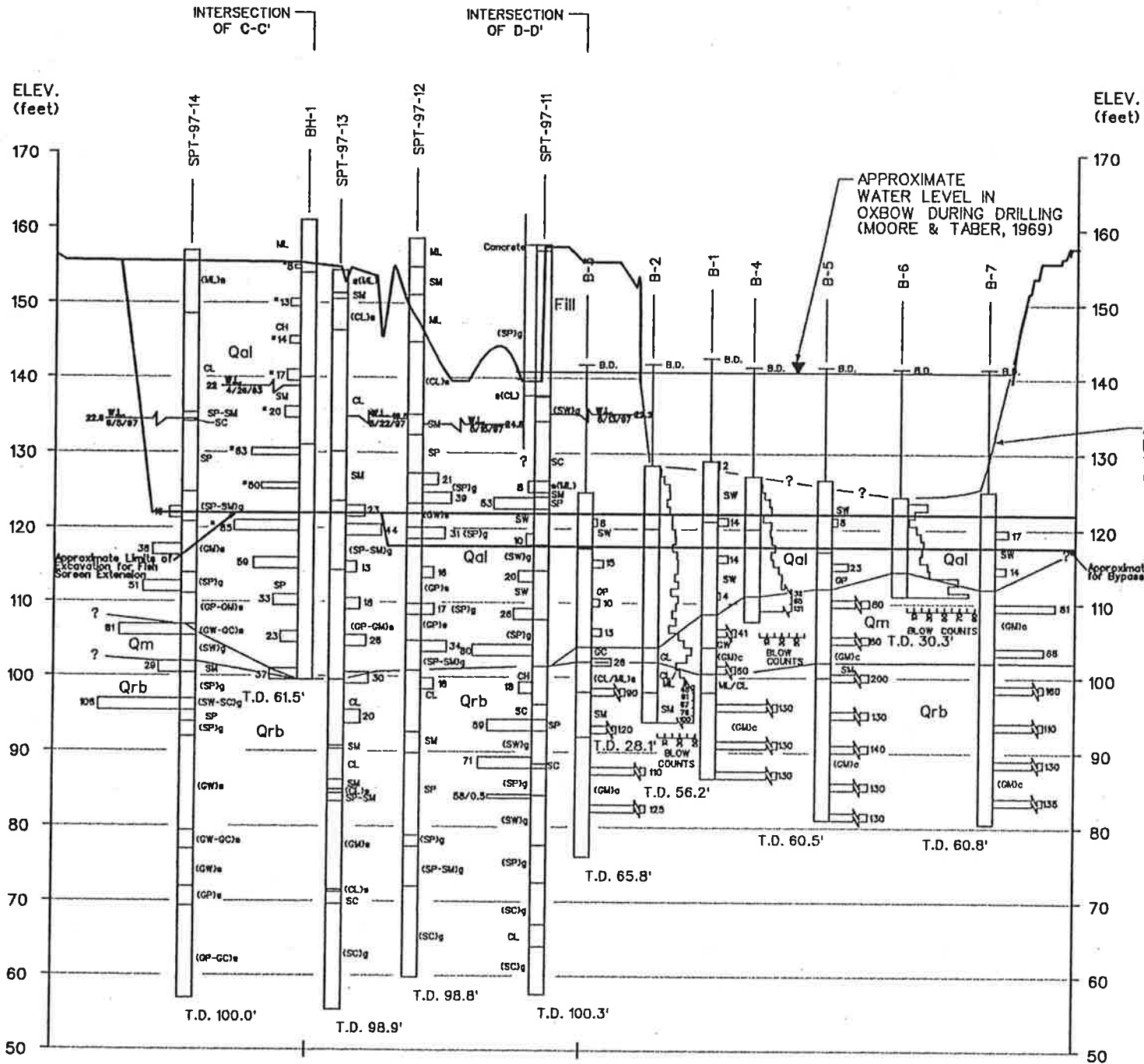
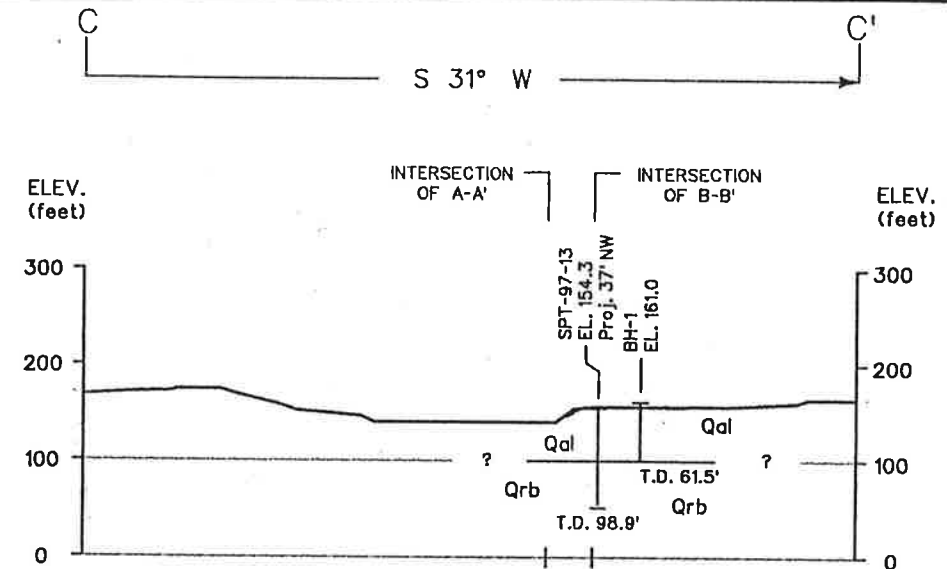
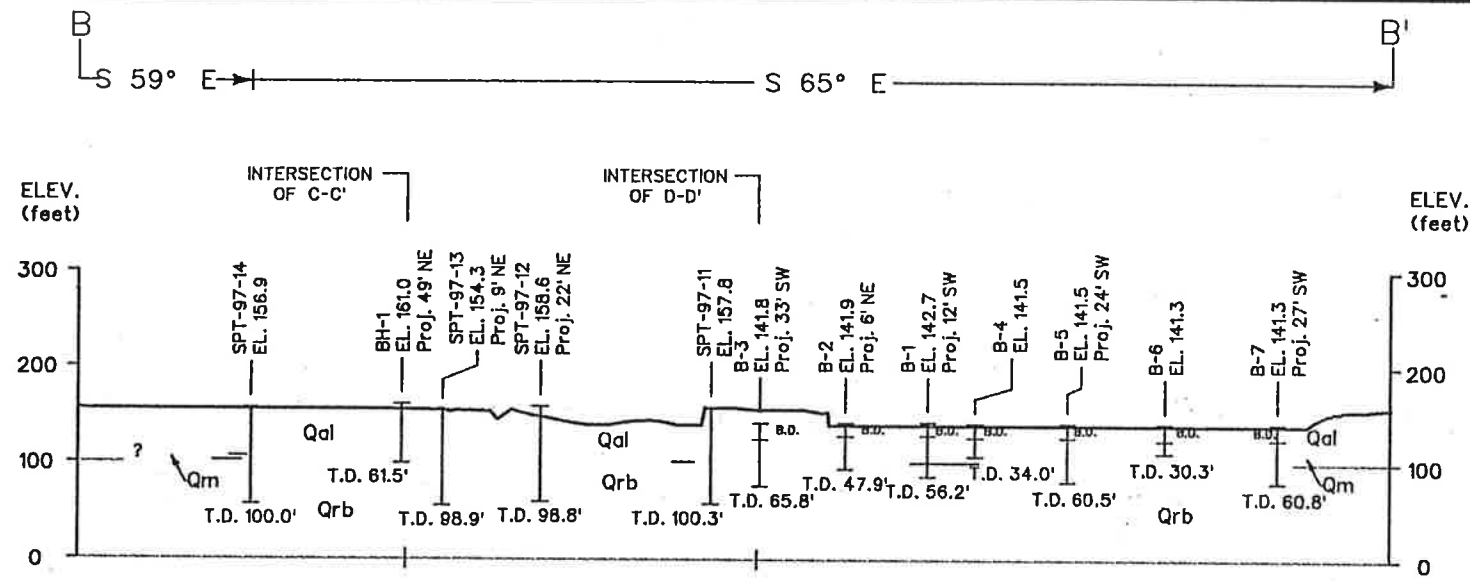
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CENTRAL VALLEY PROJECT IMPROVEMENT ACT
GLENN-COLUSA IRRIGATION DISTRICT
FISH SCREEN STRUCTURE IMPROVEMENT PROJECT
FISH SCREEN STRUCTURE EXTENSION
GEOLOGIC SECTION A-A'

GEOLOGY: STEVEN G. SHENOR CHECKED: *[Signature]*
 DRAWN: NORA L. JOHNSON TECHNICAL APPROVAL: *[Signature]*
 APPROVED: *[Signature]*

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 INTERGRAPH MGE SYSTEM SHEET FILE: SECTION DECEMBER 6, 1997 10:00 AM
 TSO, DENVER, COLORADO OCTOBER 28, 1997 602-D-4195



GEOLOGIC NOTES

- For the Geologic Legend, Explanation, and Notes, see Drawing 602-D-4194.
- For the location of Sections B-B' and C-C' see Drawing 602-D-4193.
- For Section A-A' see Drawing 602-D-4195.
- For Sections D-D', E-E', and F-F' see Drawing 602-D-4197.

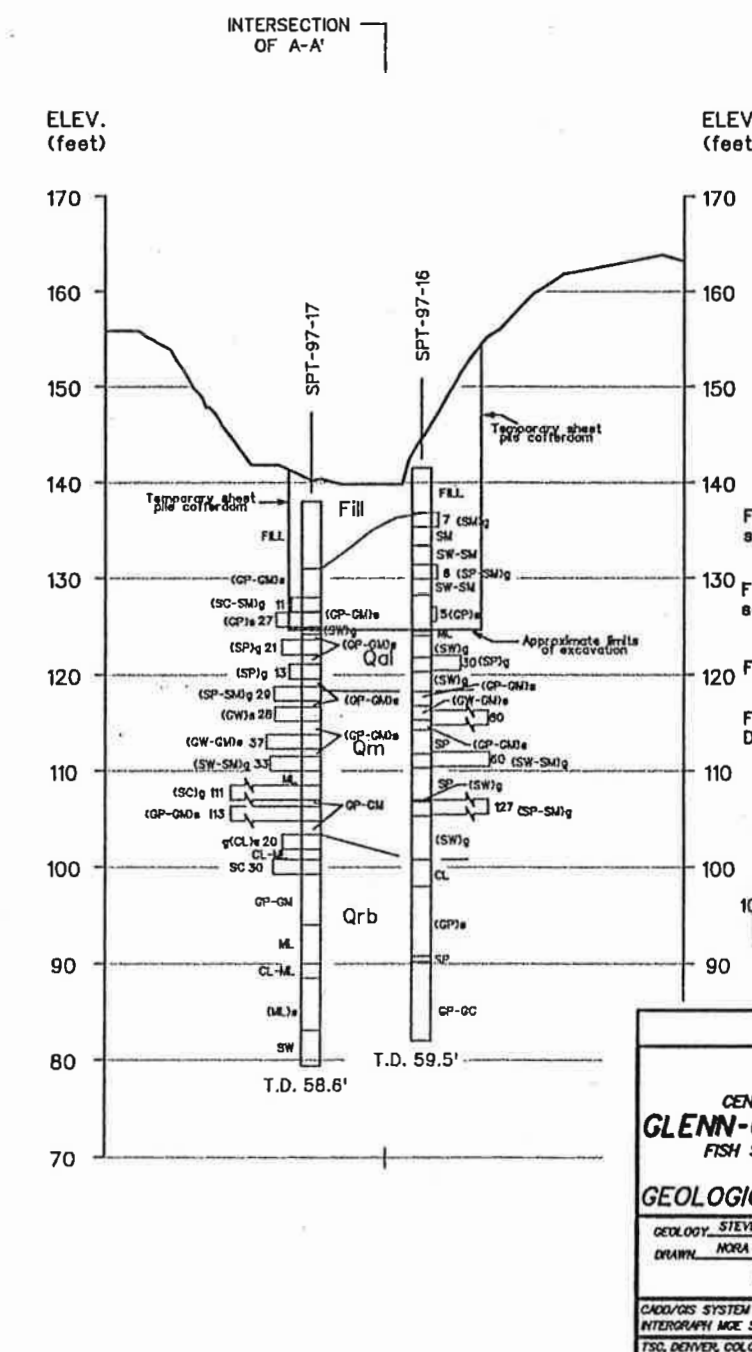
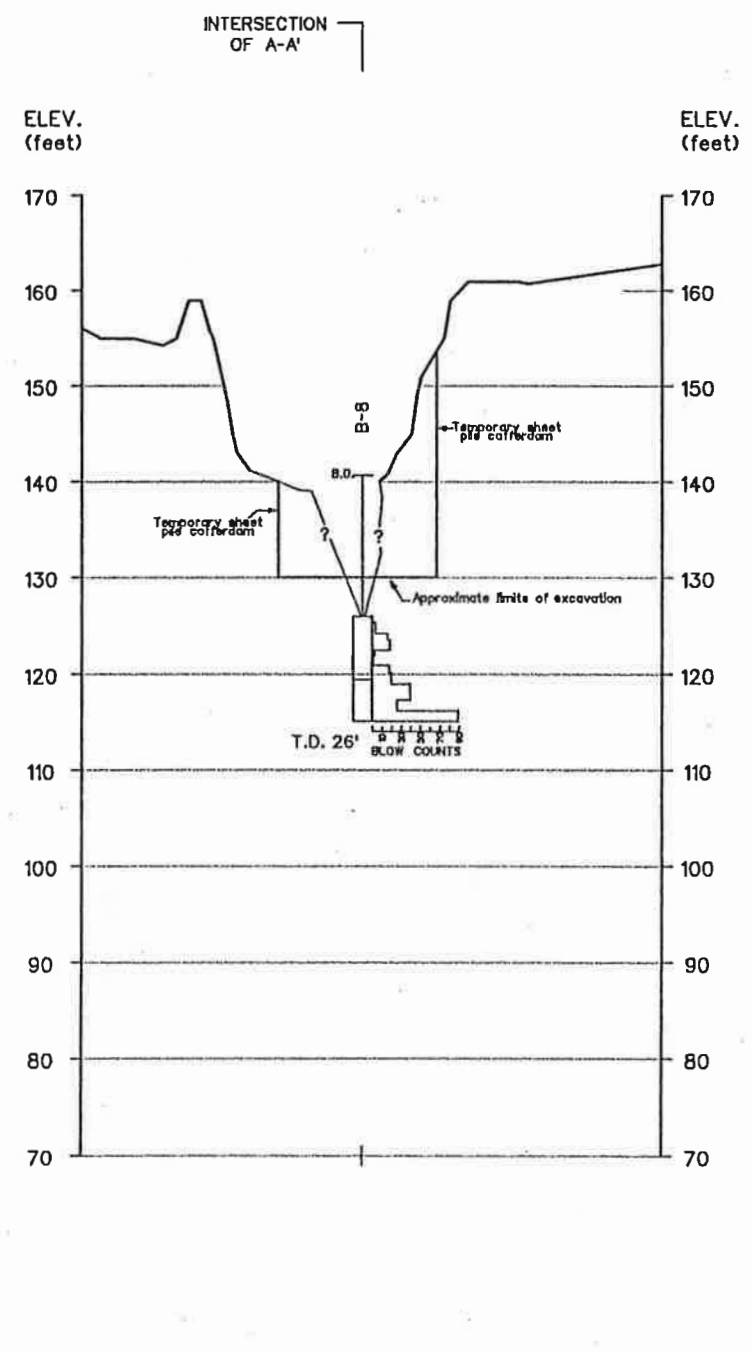
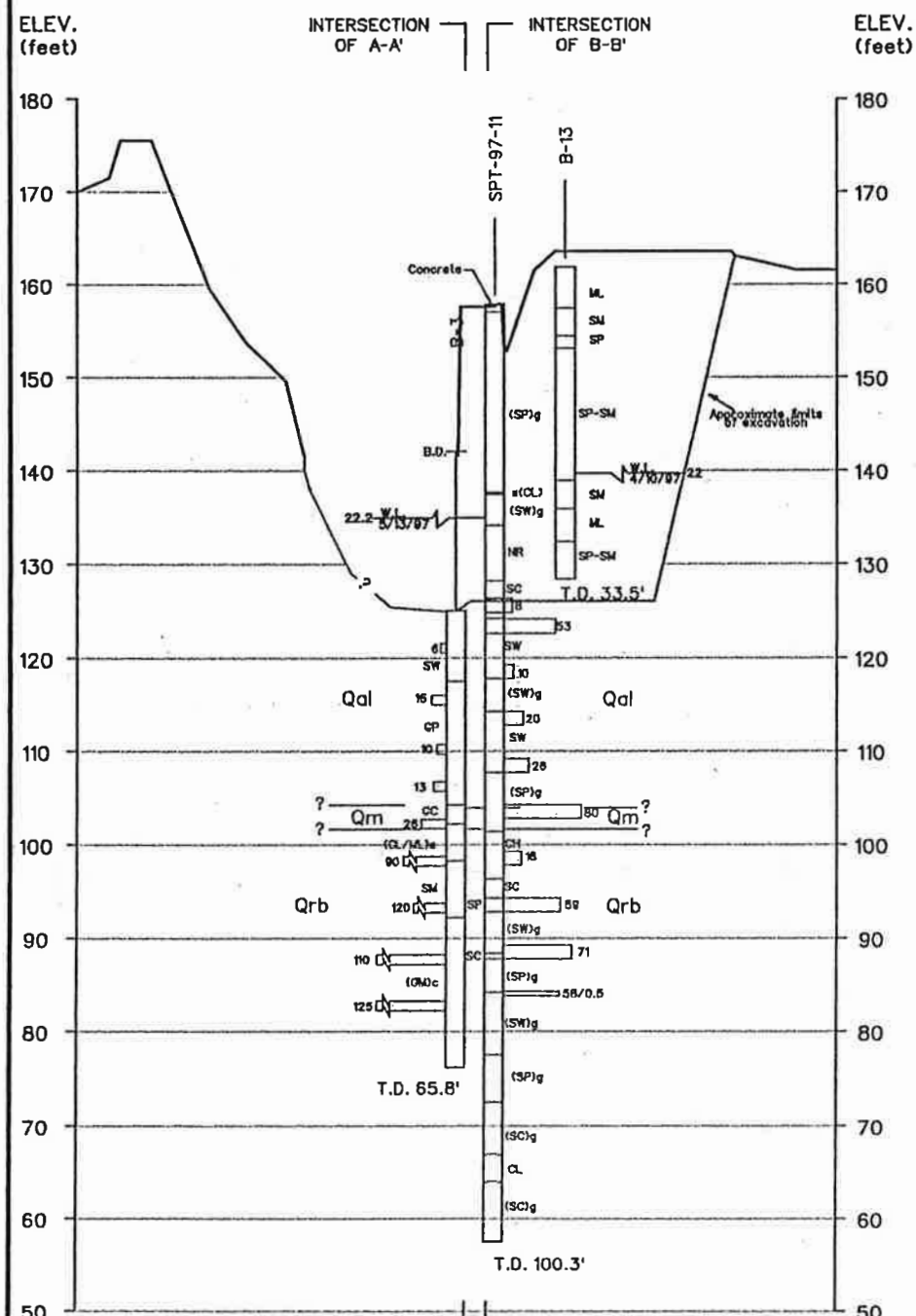
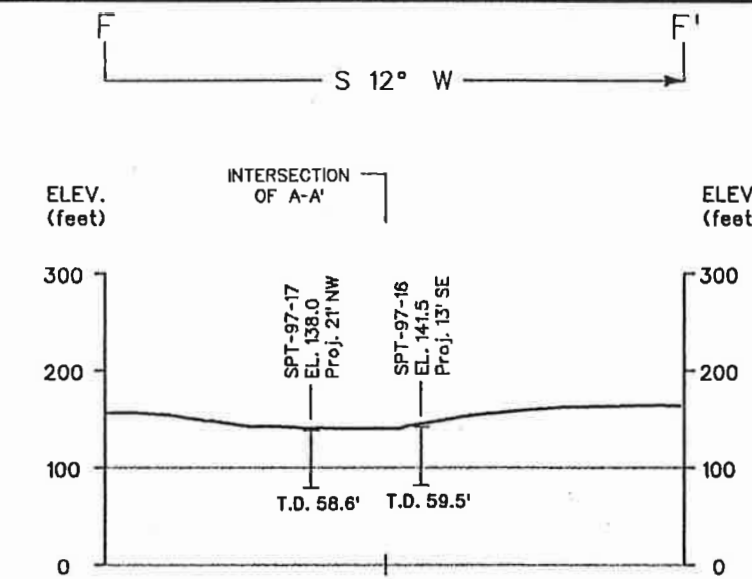
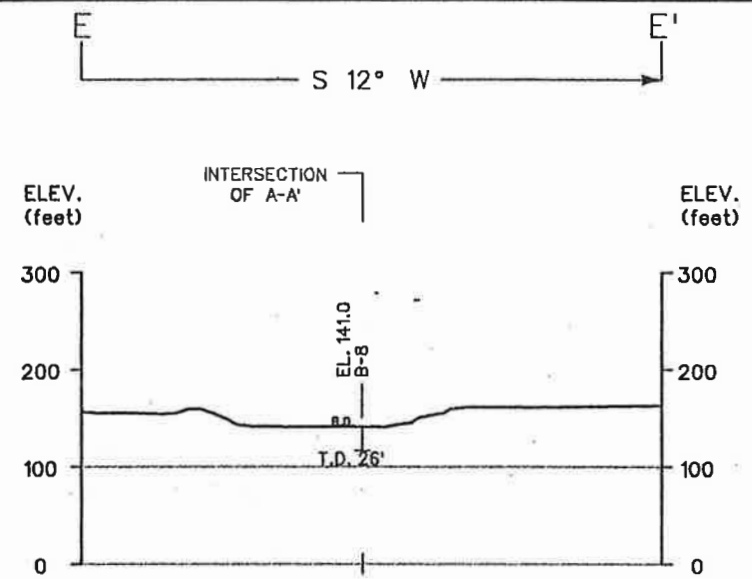
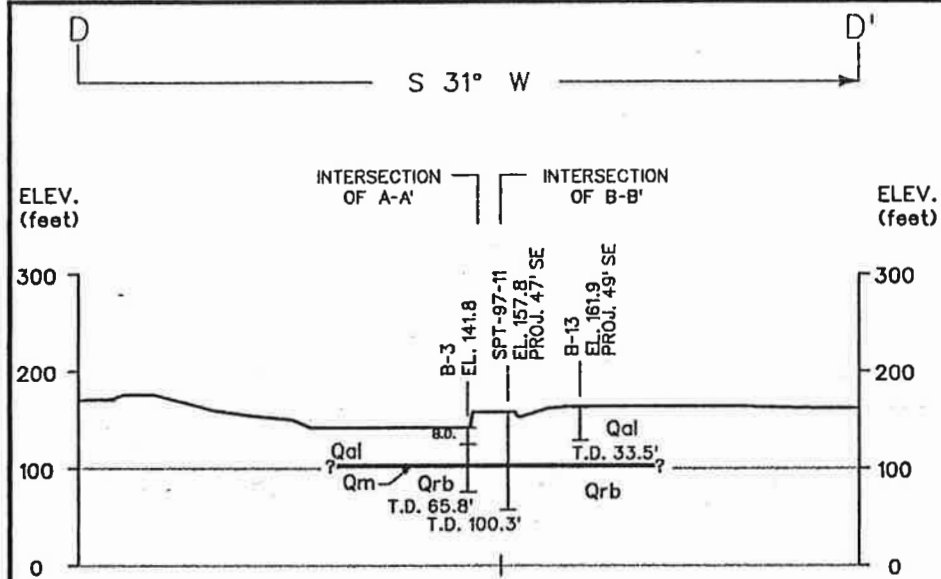
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**CENTRAL VALLEY PROJECT IMPROVEMENT ACT
 GLENN-COLUSA IRRIGATION DISTRICT
 FISH SCREEN STRUCTURE IMPROVEMENT PROJECT
 FISH SCREEN STRUCTURE EXTENSION
 GEOLOGIC SECTIONS B-B' AND C-C'**

GEOLOGY: STEVEN G. SHERER CHECKED: [Signature]
 DRAWN: NORA L. JOHNSON TECHNICAL APPROVAL: [Signature]
 APPROVED: [Signature]

CADD/GIS SYSTEM: DGN FILE: SECT05.DGN DATE AND TIME PLOTTED: DECEMBER 6, 1997 10:00 AM
 INTERGRAPH MGE SYSTEM SHEET FILE: SECTION TSC, DENVER, COLORADO OCTOBER 26, 1997 602-D-4196



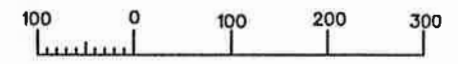
GEOLOGIC NOTES

For the Geologic Legend, Explanation, and Notes, see Drawing 602-D-4194.

For the location of Sections D-D', E-E', and F-F' see Drawing 602-D-4193.

For Section A-A' see Drawing 602-D-4195.

For Sections B-B' and C-C' see Drawing 602-D-4196.



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**CENTRAL VALLEY PROJECT IMPROVEMENT ACT
GLENN-COLUSA IRRIGATION DISTRICT
FISH SCREEN STRUCTURE IMPROVEMENT PROJECT
FISH SCREEN STRUCTURE EXTENSION
GEOLOGIC SECTIONS D-D', E-E', AND F-F'**

GEOLOGY: STEVEN G. SHERER CHECKED: *[Signature]*
 DRAWN: NORA L. JOHNSON TECHNICAL APPROVAL: *[Signature]*
 APPROVED: *[Signature]*

CADD/GIS SYSTEM DGN FILE: SECTDEF.DGN DATE AND TIME PLOTTED: DECEMBER 6, 1997 10:00 AM
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