

Tehama-Colusa Canal Authority

Red Bluff Pumping Plant and Fish Screen – October 29, 2009

RECLAMATION
Managing Water in the West



CH2MHILL

2525 AIRPARK DRIVE
REDDING, CA 96001



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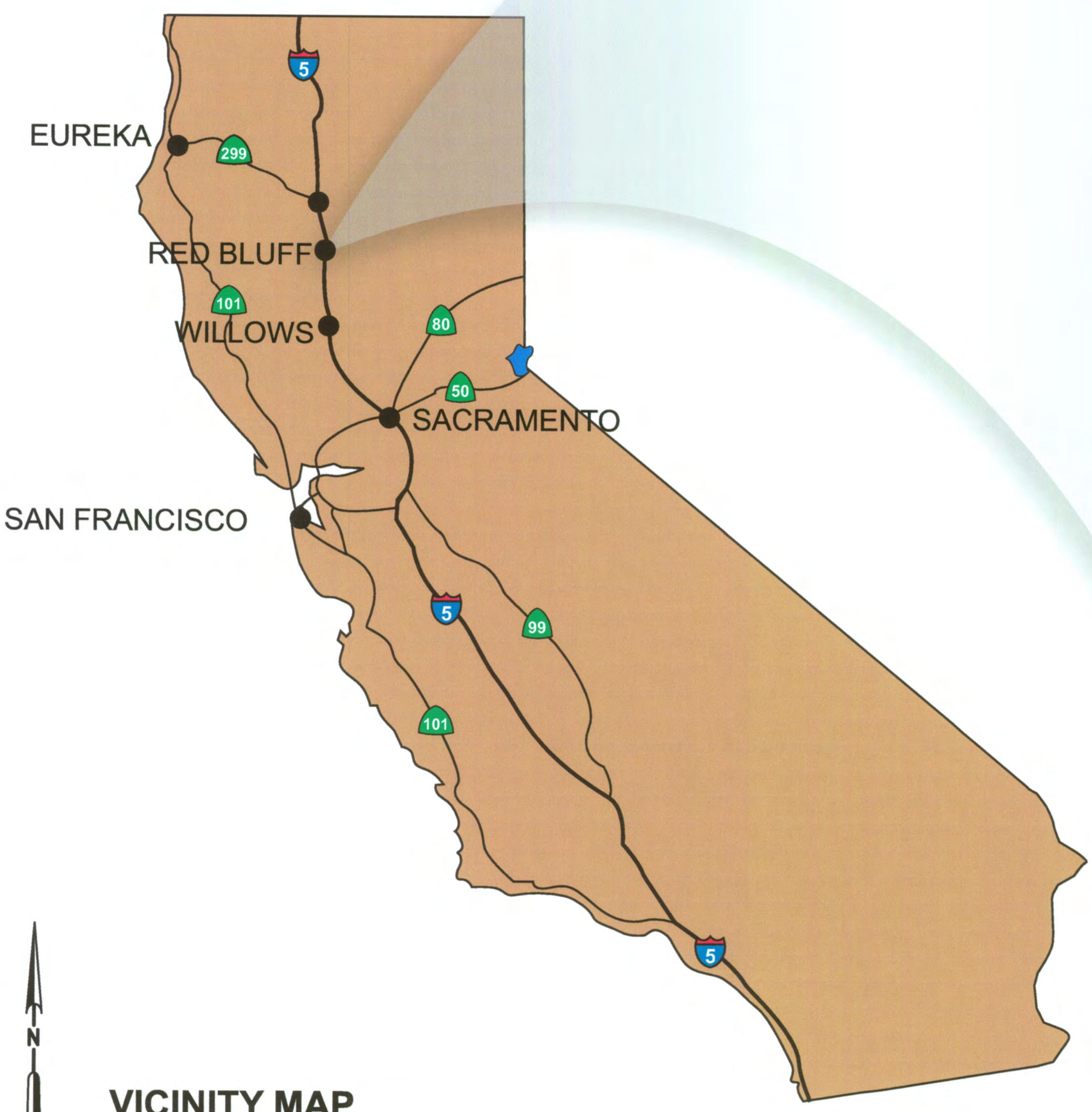
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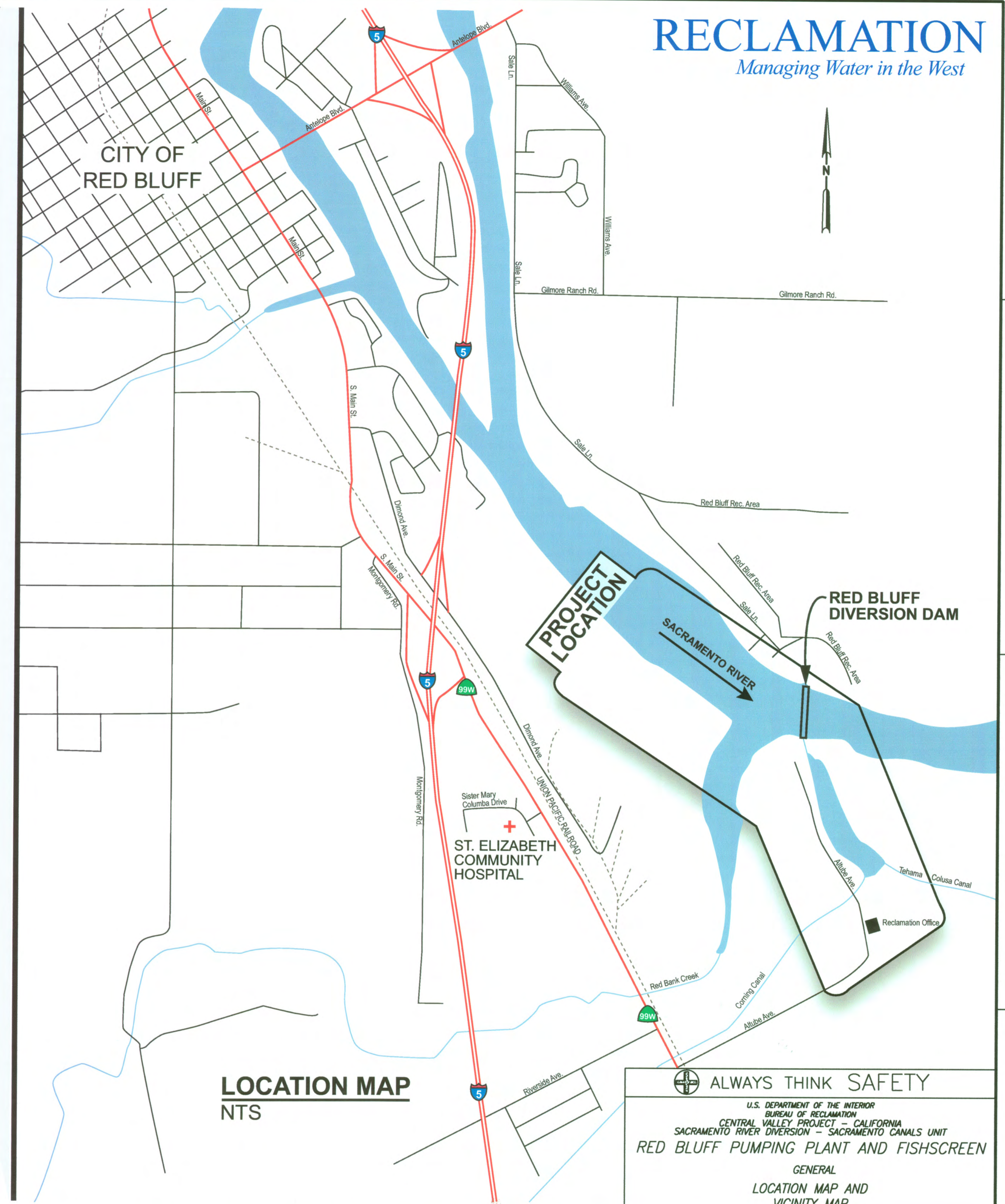
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RECLAMATION

Managing Water in the West



VICINITY MAP
NTS



LOCATION MAP
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U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
CENTRAL VALLEY PROJECT - CALIFORNIA
SACRAMENTO RIVER DIVERSION - SACRAMENTO CANALS UNIT
RED BLUFF PUMPING PLANT AND FISHSCREEN
GENERAL
LOCATION MAP AND
VICINITY MAP



DSGN	P. RUDE						
DR	L. KERR						
CHK	M. COOPER						
APVD	P. RUDE	NO.	DATE	REVISION	BY	APVD	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
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CH2MHILL
2525 AIRPARK DRIVE
REDDING, CA 96001-2443
Tel 530-243-5886

PROJECT 380710.FD
SHEET OF
ACCEPTED
DATE OCTOBER 29, 2009

DESIGNED _____ CHECKED _____
DRAWN _____ CONTRACTOR _____ TECH. APPR. _____
ACCEPTED ALIA B... P.E.
Denver Colorado SHEET 1 OF 1 10-29-2009 602-D-4293

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INDEX TO DRAWINGS

Table with columns: SHEET No., DRAWING No., TITLE. Contains three main sections: GENERAL, SITE CIVIL, and FISH SCREEN MECHANICAL/ELECTRICAL/STRUCTURAL.

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Project information block including: ALWAYS THINK SAFETY, U.S. DEPARTMENT OF THE INTERIOR, BUREAU OF RECLAMATION, CENTRAL VALLEY PROJECT - CALIFORNIA, SACRAMENTO RIVER DIVISION - SACRAMENTO CANALS UNIT, RED BLUFF PUMPING PLANT AND FISH SCREEN GENERAL, INDEX TO DRAWINGS, PROJECT 380710.FD, SHEET OF, ACCEPTED, DATENOVEMBER 20, 2009, SHEET 1 OF 3, 602-D-4295.

INDEX TO DRAWINGS



Table with columns: SHEET No., DRAWING No., TITLE. Rows are categorized by drawing type: GENERAL, MISCELLANEOUS METAL, WATERWAY AND MARINE CONSTRUCTION, GENERAL ARRANGEMENTS, W-BEAM GUARDRAIL, SWITCHYARDS - FOUNDATIONS, CONCRETE OUTLINE, SWITCHYARDS - STEEL STRUCTURES, STEEL PIPE, HEATING, VENTILATING, AND AIR CONDITIONING, ELECTRICAL, UTILITIES, ARCHITECTURAL, and SWITCHYARD - ELECTRICAL.

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Revision table with columns: DSGN, DR, CHK, APVD, NO., DATE, REVISION, BY, APVD. Includes a note: 'CHANGED TITLE FOR DRAWING 602-D-4677'.



Project information table including PROJECT (380710.FD), SHEET OF, ACCEPTED, DATENOVEMBER 20, 2009, and DRAWING INDEX.

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CAD SYSTEM: MICROSTATION
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DR	L KERR							BAR IS ONE INCH ON ORIGINAL DRAWING.
CHK	D HARRIS							0 [redacted] 1"
APVD	P RUDE	NO.	DATE	REVISION	BY	APVD		IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

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Tel 530-243-5886

PROJECT	380710.FD	DESIGNED	-----	CHECKED	-----
SHEET	OF	DRAWN	-----	CONTRACTOR	-----
ACCEPTED				TECH. APPR.	-----
DATE	OCTOBER 29, 2009	ACCEPTED	<i>[Signature]</i>		<i>P. E.</i>
		DATE	OCTOBER 29, 2009	SHEET 3 OF 3	602-D-4297

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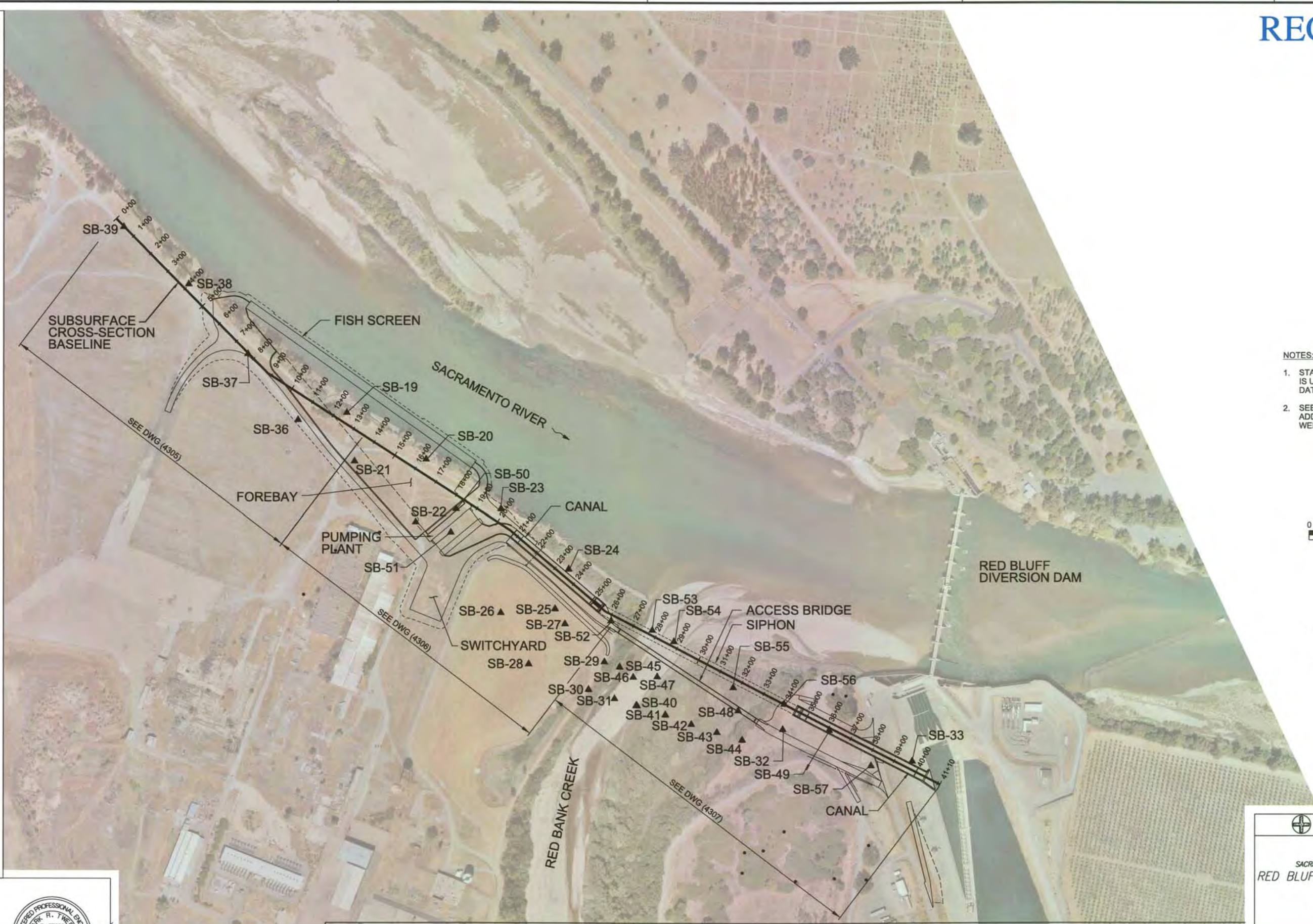
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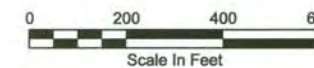
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FILENAME: 01ING0150_380710.DGN



NOTES:

1. STATIONING SHOWN ON THIS DRAWING IS UNIQUE TO THE GEOTECHNICAL BORING DATA SUBSURFACE CROSS SECTIONS.
2. SEE GEOTECHNICAL DATA REPORT FOR ADDITIONAL BORINGS AND MONITORING WELLS.



LEGEND:

- ▲ BORING NO. AND LOCATION FOR NEW FACILITY

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 U.S. DEPARTMENT OF THE INTERIOR
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 CENTRAL VALLEY PROJECT - CALIFORNIA
 SACRAMENTO RIVER DIVISION - SACRAMENTO CANALS UNIT
RED BLUFF PUMPING PLANT AND FISH SCREEN
 GENERAL
 GEOTECHNICAL LOG PLAN MAP



DSGN	M TWEDE								
DR	M TWEDE								
CHK	J LIVINGSTON								
APVD	P RUDE	NO	DATE	DESCRIPTION	APVR	N	BY	APVD	
		NO	DATE	REVISION					

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PROJECT 380710.FD
 SHEET OF
 ACCEPTED
 DATE OCTOBER 29, 2009

DESIGNED _____ CHECKED _____
 DRAWN _____ CONTRACTOR _____ TECH. APPR. _____
 ACCEPTED _____
 DENVER, COLORADO 10-29-2009
 SHEET 1 OF 1
602-D-4303

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RECLAMATION

Managing Water in the West

BORING KEY

BORING IDENTIFICATION NO.
 Station along baseline:
 Perpendicular Offset Distance from Baseline to Boring
 (Rt. = Right or South, Lt. = Left or North)

USCS PATTERN
 STANDARD PENETRATION TEST (SPT) N-VALUES
 (UNCORRECTED FIELD MEASURED VALUES)
 NUMBER REPRESENTS NUMBER OF BLOWS PER FOOT;
 (PORTION OF A FOOT NOTED AS FOLLOWS -
 50/0.3 = 50 BLOWS FOR 0.3 FEET OF PENETRATION)
 † CALIFORNIA MODIFIED 2.5" I.D. SAMPLER USED
 WHERE INDICATED

SURFACE LEGEND

- EXISTING GROUND SURFACE
- - - ? - - - APPROXIMATE BOUNDARY BETWEEN GEOLOGIC SUBUNITS
- - - ? - - - ESTIMATED TOP OF TEHAMA FORMATION
- - - - - APPROXIMATE BASE OF EXCAVATION OR STRUCTURE

NOTES:

- 1) ALL SURFACES ARE APPROXIMATE AND ARE INTERPOLATED BETWEEN BOREHOLES WHERE SUBSURFACE DATA DOES NOT EXIST.
- 2) SOIL THAT IS CLASSIFIED AS GRAVEL GENERALLY CONTAINS COBBLES ALSO.
- 3) SOIL MATERIALS ARE CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM (USCS) (ASTM D2487).
- 4) GROUNDWATER LEVELS ARE NOT SHOWN ON SUBSURFACE CROSS SECTIONS. REFER TO THE GEOTECHNICAL DATA REPORT AND SPECIFICATIONS SECTION 53 10 00 FOR GROUNDWATER INFORMATION.
- 5) DETAILED BORING LOGS OF ALL BORINGS ARE PRESENTED IN THE GEOTECHNICAL DATA REPORT.

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RED BLUFF PUMPING PLANT AND FISH SCREEN
 GENERAL

KEY TO SUBSURFACE CROSS SECTIONS

GRAVELS (MAY CONTAIN COBBLES)		
PATTERN	USCS SYMBOLS	DESCRIPTION
	(GW) (GP)	WELL-GRADED OR POORLY-GRADED GRAVEL, LESS THAN 5% FINES, LESS THAN 15% SAND
	(GW)s (GP)s	WELL-GRADED OR POORLY-GRADED GRAVEL WITH SAND, LESS THAN 5% FINES, MORE THAN 15% SAND
	(GW-GM) (GP-GM)	WELL-GRADED OR POORLY-GRADED GRAVEL WITH SILT, 5% TO 12% SILT, LESS THAN 15% SAND
	(GW-GM)s (GP-GM)s	WELL-GRADED OR POORLY-GRADED GRAVEL WITH SAND AND SILT, 5% TO 12% SILT, MORE THAN 15% SAND
	(GW-GC) (GP-GC)	WELL-GRADED OR POORLY-GRADED GRAVEL WITH CLAY, 5% TO 12% FINES, LESS THAN 15% SAND
	(GW-GC)s (GP-GC)s	WELL-GRADED OR POORLY-GRADED GRAVEL WITH SAND AND CLAY, 5% TO 12% FINES, MORE THAN 15% SAND
	(GM)	SILTY GRAVEL, GREATER THAN 12% FINES, LESS THAN 15% SAND
	(GC)	CLAYEY GRAVEL, GREATER THAN 12% FINES, LESS THAN 15% SAND
	(GM)s	SILTY GRAVEL WITH SAND, GREATER THAN 12% FINES, MORE THAN 15% SAND
	(GC)s	CLAYEY GRAVEL WITH SAND, GREATER THAN 12% FINES, MORE THAN 15% SAND
	(GC-GM)	SILTY, CLAYEY GRAVEL, GREATER THAN 12% FINES, LESS THAN 15% SAND
	(GC-GM)s	SILTY, CLAYEY GRAVEL WITH SAND, GREATER THAN 12% FINES, MORE THAN 15% SAND

SANDS		
PATTERN	USCS SYMBOLS	DESCRIPTION
	(SW) (SP)	WELL-GRADED OR POORLY-GRADED SAND, LESS THAN 5% FINES, LESS THAN 15% GRAVEL
	(SW)g (SP)g	WELL-GRADED OR POORLY-GRADED SAND WITH GRAVEL, LESS THAN 5% FINES, MORE THAN 15% GRAVEL
	(SW-SM) (SP-SM)	WELL-GRADED OR POORLY-GRADED SAND WITH SILT, 5% TO 12% SILT, LESS THAN 15% GRAVEL
	(SW-SM)g (SP-SM)g	WELL-GRADED OR POORLY-GRADED SAND WITH GRAVEL AND SILT, 5% TO 12% SILT, MORE THAN 15% GRAVEL
	(SW-SC) (SP-SC)	WELL-GRADED OR POORLY-GRADED SAND WITH CLAY, 5% TO 12% FINES, LESS THAN 15% GRAVEL
	(SW-SC)g (SP-SC)g	WELL-GRADED OR POORLY-GRADED SAND WITH GRAVEL AND CLAY, 5% TO 12% FINES, MORE THAN 15% GRAVEL
	(SM)	SILTY SAND, GREATER THAN 12% FINES, LESS THAN 15% GRAVEL
	(SC)	CLAYEY SAND, GREATER THAN 12% FINES, LESS THAN 15% GRAVEL
	(SM)g	SILTY SAND WITH GRAVEL, GREATER THAN 12% FINES, MORE THAN 15% GRAVEL
	(SC)g	CLAYEY SAND WITH GRAVEL, GREATER THAN 12% FINES, MORE THAN 15% GRAVEL
	(SC-SM)	SILTY, CLAYEY SAND, GREATER THAN 12% FINES, LESS THAN 15% GRAVEL
	(SC-SM)g	SILTY, CLAYEY SAND WITH GRAVEL, GREATER THAN 12% FINES, MORE THAN 15% GRAVEL

FINE-GRAINED SILT AND CLAY		
PATTERN	USCS SYMBOLS	DESCRIPTION
	(CL)	CLAY OF LOW TO MEDIUM PLASTICITY, LEAN CLAY
	(CL)s (CL)g	CLAY WITH SAND OR GRAVEL, BETWEEN 15% TO 29% RETAINED ON THE #200 SIEVE
	s(CL) g(CL)	SANDY OR GRAVELLY CLAY, MORE THAN 30 PERCENT RETAINED ON THE #200 SIEVE
	(ML)	INORGANIC SILT
	(ML)s (ML)g	SILT WITH SAND OR GRAVEL, BETWEEN 15% TO 29% RETAINED ON THE #200 SIEVE
	s(ML) g(ML)	SANDY OR GRAVELLY SILT, MORE THAN 30 PERCENT RETAINED ON THE #200 SIEVE
	(CL-ML)	SILTY CLAY, LOW PLASTICITY
	(CL-ML)s (CL-ML)g	SILTY CLAY WITH SAND OR GRAVEL, BETWEEN 15% TO 29% RETAINED ON THE #200 SIEVE
	s(CL-ML) g(CL-ML)	SANDY OR GRAVELLY SILTY CLAY, MORE THAN 30 PERCENT RETAINED ON THE #200 SIEVE
	(CH)	CLAY WITH HIGH PLASTICITY, FAT CLAY

FILL		
	N/A	LANDFILL MATERIAL (COVER SOIL AND UNCATEGORIZED WASTE MATERIALS)
	PER USCS	GENERAL SOIL FILL

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PLOT TIME: 18:25 PM
 PLOT DATE: 10/19/2009

CAD SYSTEM QWT
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10-21-09

DSGN	M TWEDE				
DR	M TWEDE				
CHK	J LIVINGSTON				
APVD	P RUDE	NO.	DATE	REVISION	BY

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 2525 AIRPARK DRIVE
 REDDING, CA 96001-2443
 Tel 530-243-5886

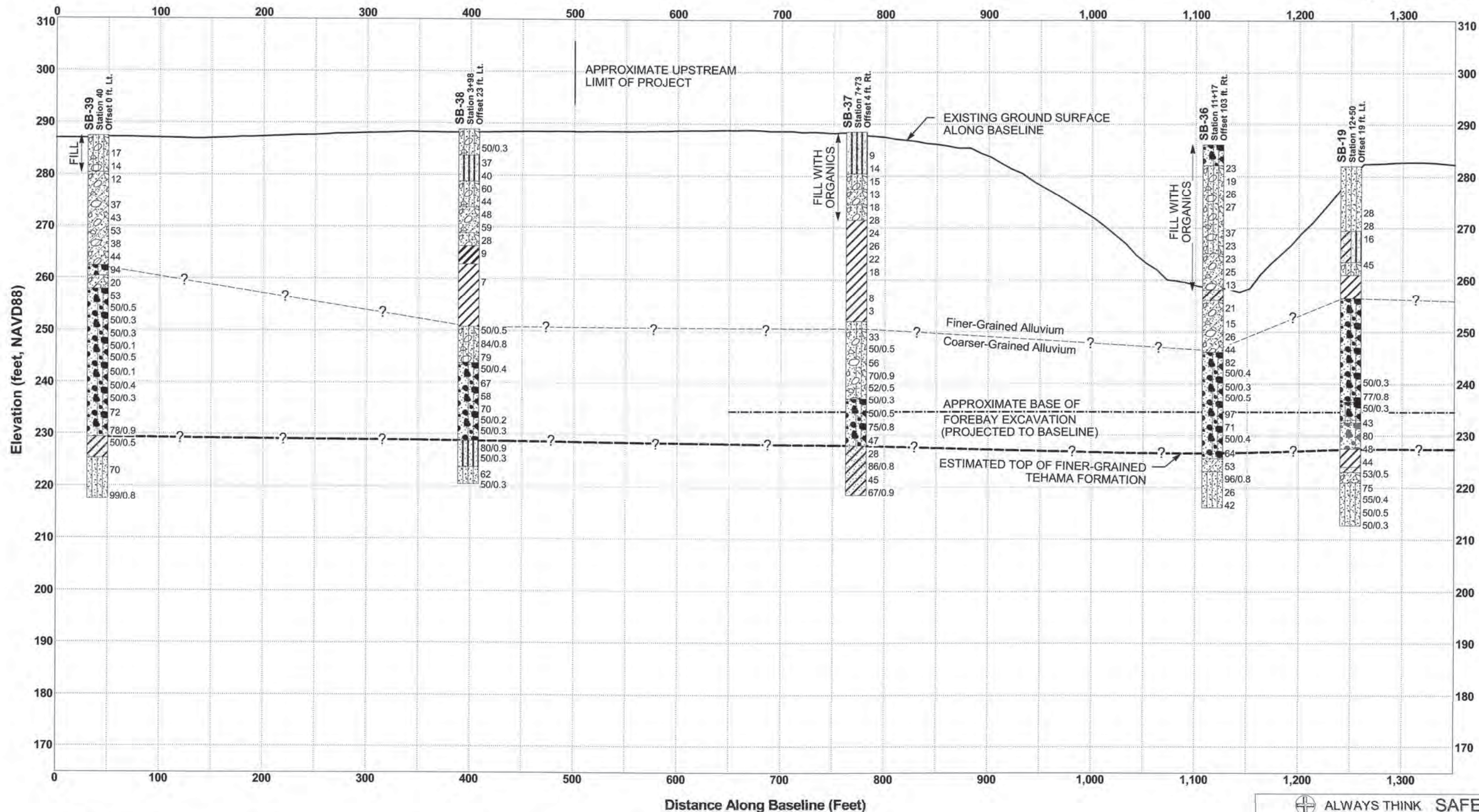
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SHEET	OF	DRAWN	_____	CONTRACTOR	_____
ACCEPTED	_____	ACCEPTED	_____	TECH APPR.	_____
DATE	OCTOBER 29, 2009	DATE	OCTOBER 29, 2009	SHEET	1 OF 1

602-D-4304

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RECLAMATION

Managing Water in the West



NOTES:

- 1) Boreholes are projected from their location perpendicular to the baseline shown on Sheet 602-D-4303, up to a maximum distance of about 372 feet.
- 2) Geologic formation boundaries are approximate and subject to varied interpretations. The depth and thickness of the subsurface strata indicated on these cross sections were interpolated between exploration locations on the basis of field observations and physical testing. Therefore, subsurface conditions at other locations may differ from those shown in cross sections. Shallow alluvium in or near existing stream channels may be loose and non-cohesive, whereas at higher elevations, away from the stream channels, older alluvial deposits in the form of terraces may be very dense and moderately cemented or cohesive. Water level information is provided in the Geotechnical Data Report.

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PLOT DATE: 10/19/2009

CAD SYSTEM: JNT
FILENAME: 602-D-4305.dwg



10-21-09

DSGN	M.TWEDE						
DR	M.TWEDE						
CHK	J.LIVINGSTON						
APVD	P.RUDE	NO.	DATE	REVISION	BY	APVD	

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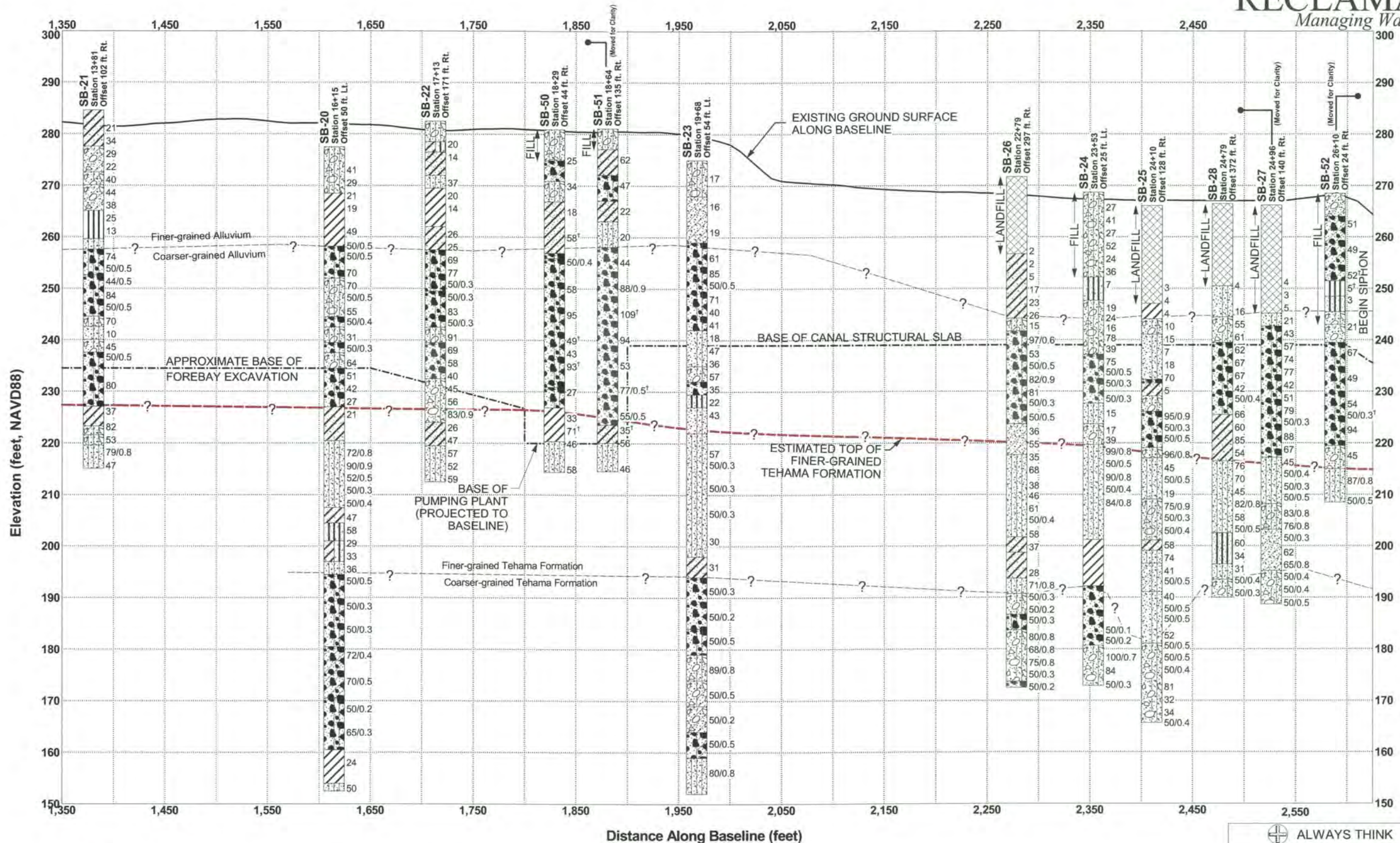
CH2MHILL
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 REDDING, CA 96001-2443
 Tel 530-243-5886

PROJECT 380710.FD
 SHEET OF
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 DATE OCTOBER 29, 2009

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 BUREAU OF RECLAMATION
 CENTRAL VALLEY PROJECT - CALIFORNIA
 SACRAMENTO RIVER DIVERSION - SACRAMENTO CANALS UNIT
RED BLUFF PUMPING PLANT AND FISH SCREEN
 GENERAL
GEOTECHNICAL BORING DATA

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 DRAWN _____ CONTRACTOR _____ TECH APPR _____
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 SHEET 1 OF 3
602-D-4305

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NOTES:

- 1) Boreholes are projected from their location perpendicular to the baseline shown on Sheet 602-D-4303, up to a maximum distance of about 372 feet.
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DSGN	M. TWEDE				
DR	M. TWEDE				
CHK	J. LIVINGSTON				
APVD	P. RUDE	NO.	DATE	REVISION	BY

VERIFY SCALE
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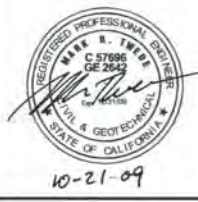
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 DATE OCTOBER 29, 2009

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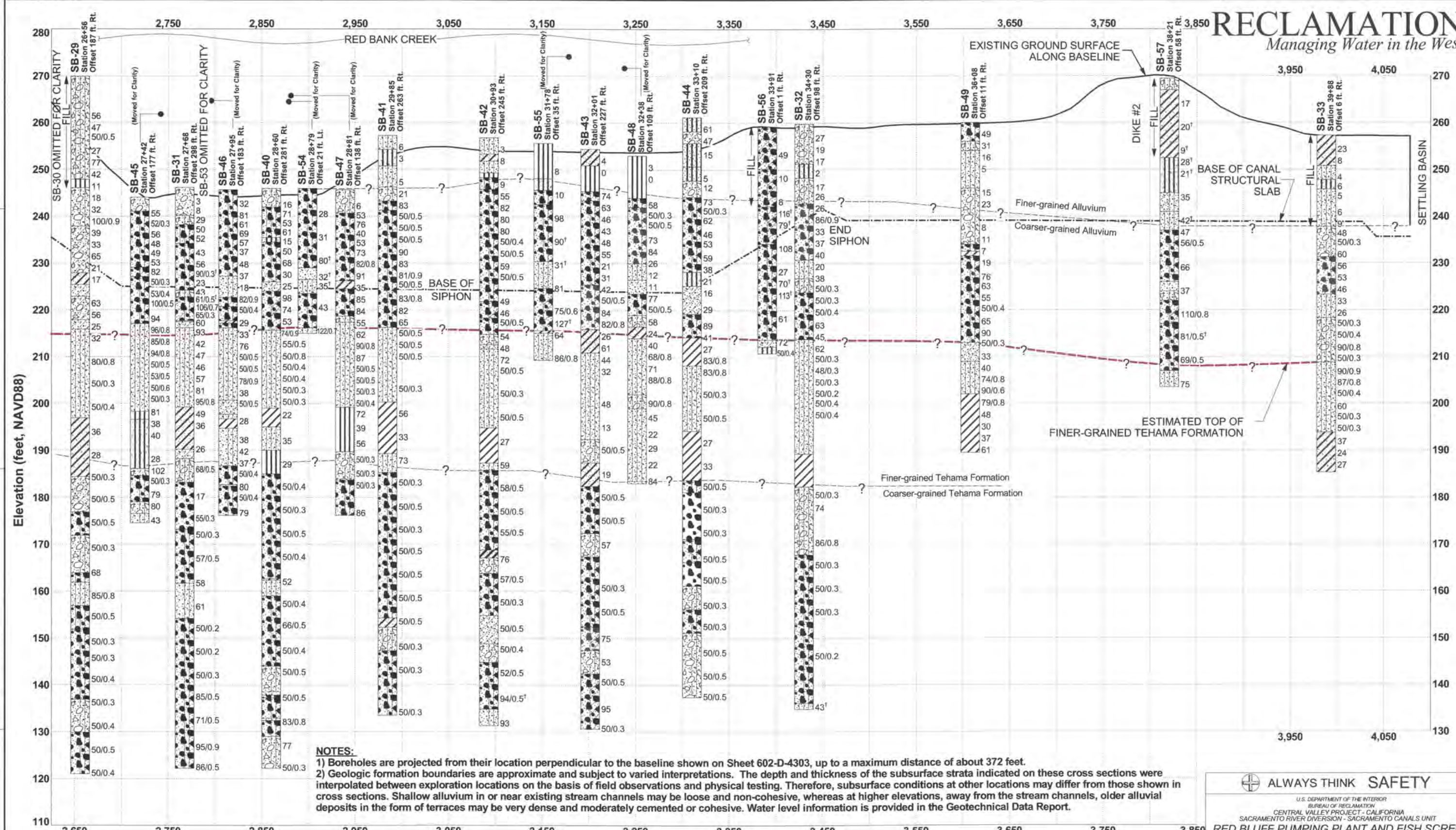
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 CENTRAL VALLEY PROJECT - CALIFORNIA
 SACRAMENTO RIVER DIVERSION - SACRAMENTO CANALS UNIT
RED BLUFF PUMPING PLANT AND FISH SCREEN
 GENERAL
 GEOTECHNICAL BORING DATA

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 DRAWN _____ CONTRACTOR _____ TECH APPR _____
 ACCEPTED *[Signature]* PE
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 SHEET 2 OF 3
602-D-4306

FILED SYSTEM: 602-D-4306
 FILENAME: 10-21-09



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CAD SYSTEM: INY
 FILENAME: 602-D-4307.dwg
 PLOT DATE: 10/19/2009
 PLOT TIME: 7:01 PM



DSGN	M TWEDE				
DR	M TWEDE				
CHK	J LIVINGSTON				
APVD	P RUDE	NO.	DATE	REVISION	BY

VERIFY SCALE
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CH2MHILL
 2525 AIRPARK DRIVE
 REDDING, CA 96001-2443
 Tel 530-243-5886

PROJECT	380710.FD
SHEET	OF
ACCEPTED	
DATE	OCTOBER 29, 2009

ALWAYS THINK SAFETY

U.S. DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 CENTRAL VALLEY PROJECT - CALIFORNIA
 SACRAMENTO RIVER DIVERSION - SACRAMENTO CANALS UNIT

RED BLUFF PUMPING PLANT AND FISH SCREEN

GENERAL

GEOTECHNICAL BORING DATA

DESIGNED _____ CHECKED _____
 DRAWN _____ CONTRACTOR _____ TECH APPR. _____
 ACCEPTED _____
 SHEET 3 OF 3

602-D-4307

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PROJECT DIVERSION CAPACITY AS FUNCTION OF RIVER STAGE				
UPSTREAM WORK POINT		DOWNSTREAM WORK POINT		FISH SCREEN DIVERSION CAPACITY ^A
FLOW, CFS	STAGE, FT (NAVD88)	FLOW, CFS	STAGE, FT (NAVD88)	FLOW, CFS
220,000	266.3	217,500	265.7	2,500 ^B
194,000	265.1	191,500	264.6	2,500 ^B
141,000	260.9	138,500	260.3	2,500 ^B
77,450	255.6	74,950	255.0	2,500 ^B
12,600	245.2	10,100	244.4	2,500
11,677	245.0	9,297	244.2	2,380
9,898	244.5	7,658	243.7	2,240
8,319	244.0	6,189	243.3	2,130
6,900	243.5	4,900	242.8	2,000
5,600	242.9	3,700	242.4	1,900
N/A	N/A	N/A	237.0 ^C	250 ^D

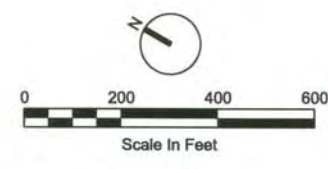
A = INITIAL PUMPING PLANT CAPACITY IS 2,000 CFS
 B = LIMITED BY SCREEN CLEANER AVAILABILITY
 C = BELOW CREST OF RED BLUFF DIVERSION DAM
 D = LIMITED BY PUMPING PLANT CAPABILITY



DATE OF PHOTOGRAPHY 09-09-08

4:49:11 PM 10/19/2009
 CD PLOT TIME: PLOT DATE:
 A CAD SYSTEM: MICROSTATION FILENAME: 01160240_380710.DGN

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DR	M BISHOP						
CHK	R GATTON						
APVD	P RUDE	NO.	DATE	REVISION	BY	APVD	

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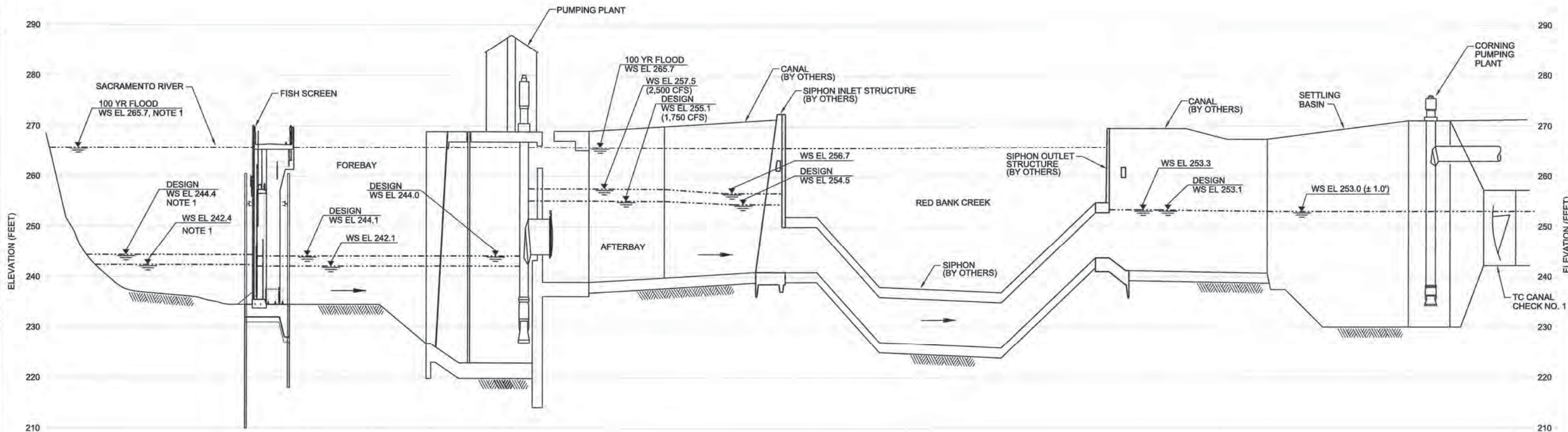
CH2MHILL
 2525 AIRPARK DRIVE
 REDDING, CA 96001-2443
 Tel 530-243-5886

PROJECT 380710.FD
 SHEET OF
 ACCEPTED
 DATE OCTOBER 29, 2009

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 BUREAU OF RECLAMATION
 CENTRAL VALLEY PROJECT - CALIFORNIA
 SACRAMENTO RIVER DIVISION - SACRAMENTO CANALS UNIT
RED BLUFF PUMPING PLANT AND FISH SCREEN
 GENERAL
 PROCESS FLOW DIAGRAM

DESIGNED	CHECKED
DRAWN	CONTRACTOR
	TECH. APPR.
	ACCEPTED <i>[Signature]</i> P.E.

SHEET 1 OF 1
 602-D-4308



HYDRAULIC PROFILE

NTS

NOTE:
1. WATER SURFACE ELEVATION SHOWN AT
DOWNSTREAM WORK POINT,
SEE DRAWING (4308).

CAD SYSTEM: MICROSTATION
PLOT DATE: 10/19/2009
4:51:15 PM

CAD SYSTEM: MICROSTATION
FILENAME: 01NG0250_380710.DGN



NO.	DATE	DESCRIPTION	APVR	N
DSGN				
DR				
CHK				
APVD				
	NO.	DATE	BY	APVD
		REVISION		

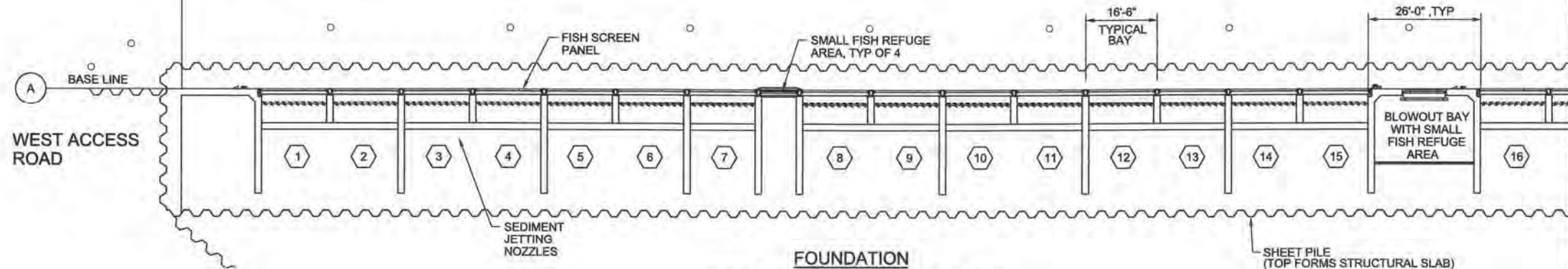
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REDDING, CA 96001-2443
Tel 530-243-5886

PROJECT	380710.FD	DESIGNED	CHECKED
SHEET	OF	DRAWN	CONTRACTOR
ACCEPTED		ACCEPTED	TECH. APPR.
DATE	OCTOBER 29, 2009	DATE	10-29-2009
		SHEET	1 OF 1
			602-D-4309

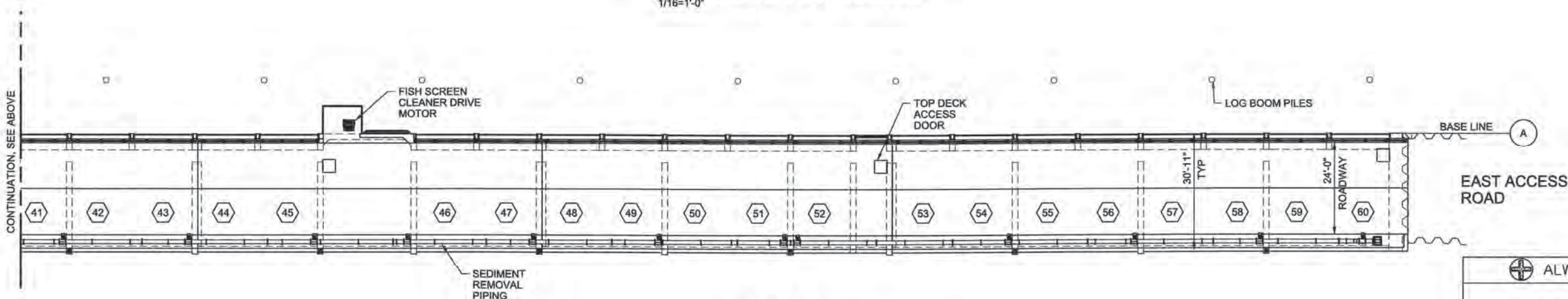
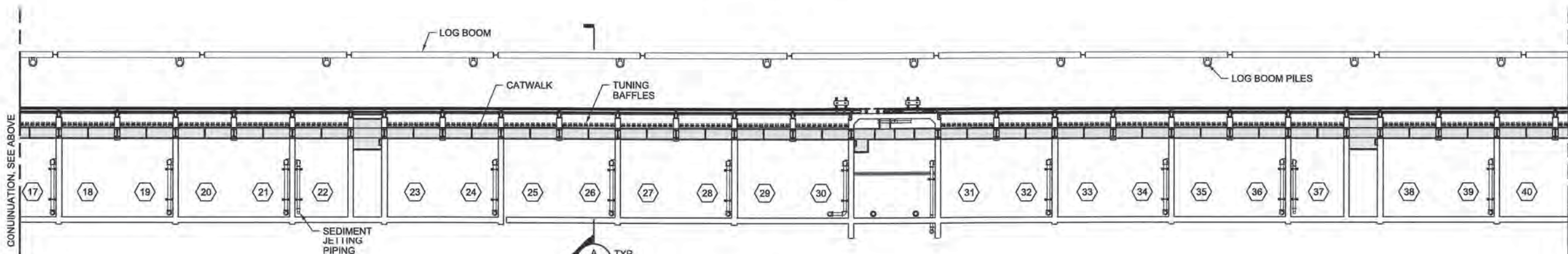
SACRAMENTO RIVER

OVERALL LENGTH 1118'-6"



LEGEND

⊗ = SCREEN BAY NUMBER



D3 PLOT TIME: 10/20/2009 2:31:04 PM

A CAD SYSTEM: MICROSTATION FILENAME: 01NCG2200_380710.DGN



10/22/09

DSGN	M RANDALL						
DR	E McClelland						
CHK	W BENNETT						
APVD	P RUDE	NO.	DATE	REVISION	BY	APVD	

VERIFY SCALE
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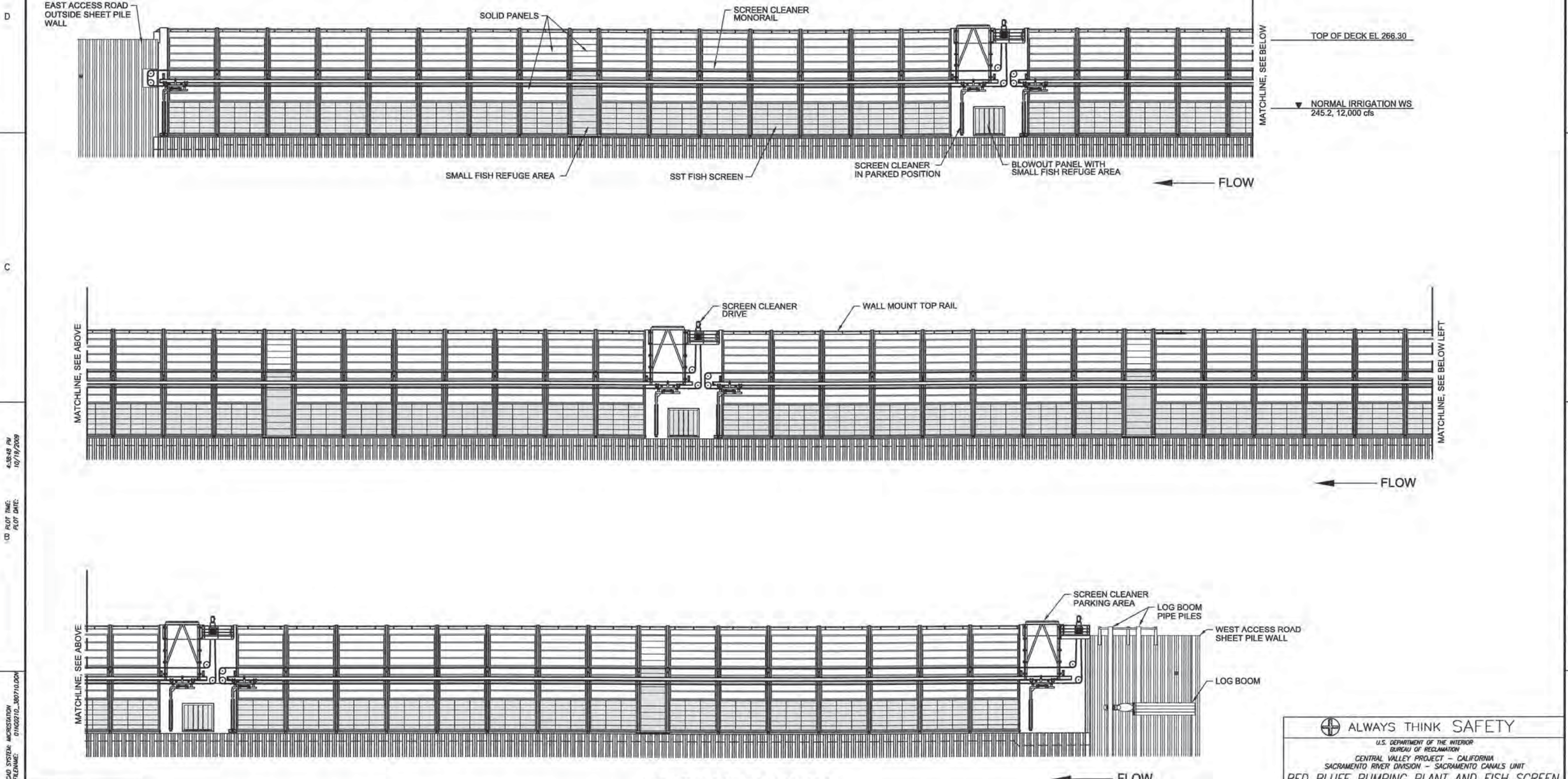
CH2MHILL
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REDDING, CA 96001-2443
Tel 530-243-5886

PROJECT 380710.FD
SHEET OF
ACCEPTED
DATE OCTOBER 29, 2009

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SACRAMENTO RIVER DIVISION - SACRAMENTO CANALS UNIT
RED BLUFF PUMPING PLANT AND FISH SCREEN
GENERAL ARRANGEMENT FISH SCREEN STRUCTURE
PARTIAL PLANS

DESIGNED _____ CHECKED _____
DRAWN _____ CONTRACTOR _____ TECH. APPR. _____
ACCEPTED *Jerry A. Randall P.E.*
GENERAL CONTRACTOR _____ SHEET 1 OF 1
602-D-4310

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RIVER SIDE ELEVATION
1/16"=1'-0"

4:38:48 PM
10/19/2009
C:\PLOT TIME:
PLOT DATE:

CAD SYSTEM: MICROSTATION
FILENAME: 01NG021D_380710.DGN



DSGN	M RANDALL								
DR	E McClelland								
CHK	W BENNETT	NO.	DATE	DESCRIPTION	APVR	N			
APVD	P RUDE	NO.	DATE	REVISION	BY	APVD			

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Tel 530-243-5886

PROJECT	380710.FD
SHEET	OF
ACCEPTED	
DATE	OCTOBER 29, 2009

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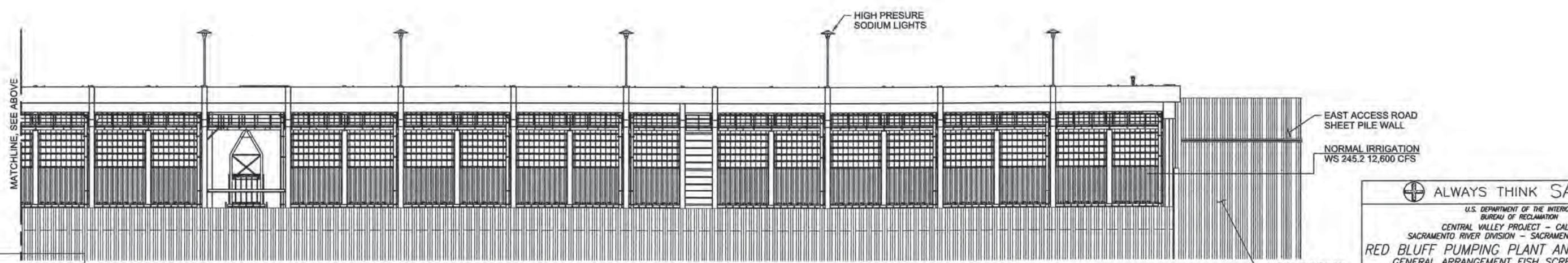
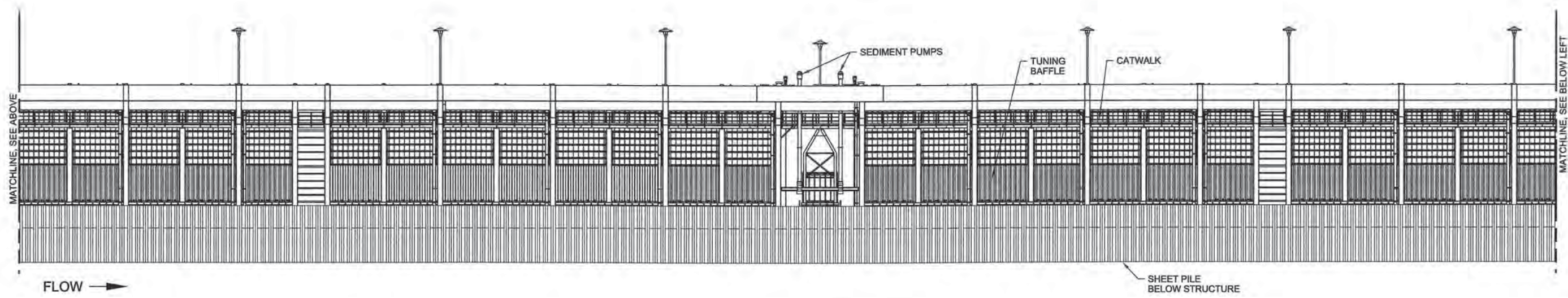
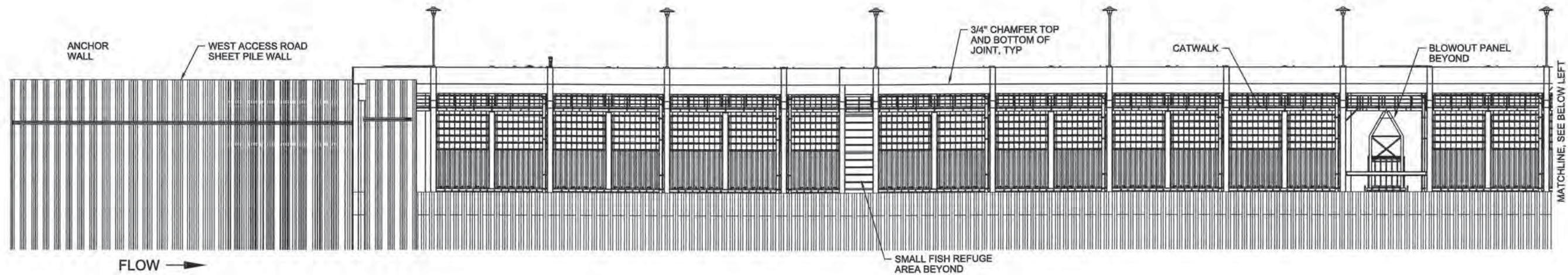
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SACRAMENTO RIVER DIVISION - SACRAMENTO CANALS UNIT

RED BLUFF PUMPING PLANT AND FISH SCREEN
GENERAL ARRANGEMENT FISH SCREEN STRUCTURE

RIVER SIDE ELEVATION

DESIGNED	-----	CHECKED	-----
DRAWN	CONTRACTOR	TECH. APPR.	-----
ACCEPTED		ACCEPTED <i>James D. P.E.</i>	
GENERAL CONTRACTOR		10-29-2009	
SHEET 1 OF 1		602-D-4311	

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FOREBAY SIDE ELEVATION
1/16"=1'-0"

DSGN	M RANDALL	NO.	DATE	REVISION	BY	APVD
DR	F McLELLAND					
CHK	W BENNETT					
APVD	P RUDE					

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REDDING, CA 96001-2443
Tel 530-243-5886

PROJECT	380710.FD
SHEET	OF
ACCEPTED	
DATE	OCTOBER 29, 2009

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CENTRAL VALLEY PROJECT - CALIFORNIA
SACRAMENTO RIVER DIVISION - SACRAMENTO CANALS UNIT
RED BLUFF PUMPING PLANT AND FISH SCREEN
GENERAL ARRANGEMENT FISH SCREEN STRUCTURE
FISH SCREEN FOREBAY ELEVATION

DESIGNED	CHECKED
DRAWN	CONTRACTOR
ACCEPTED	TECH. APPR.
REMARKS	DATE

10-29-2009
SHEET 1 OF 1
602-D-4312

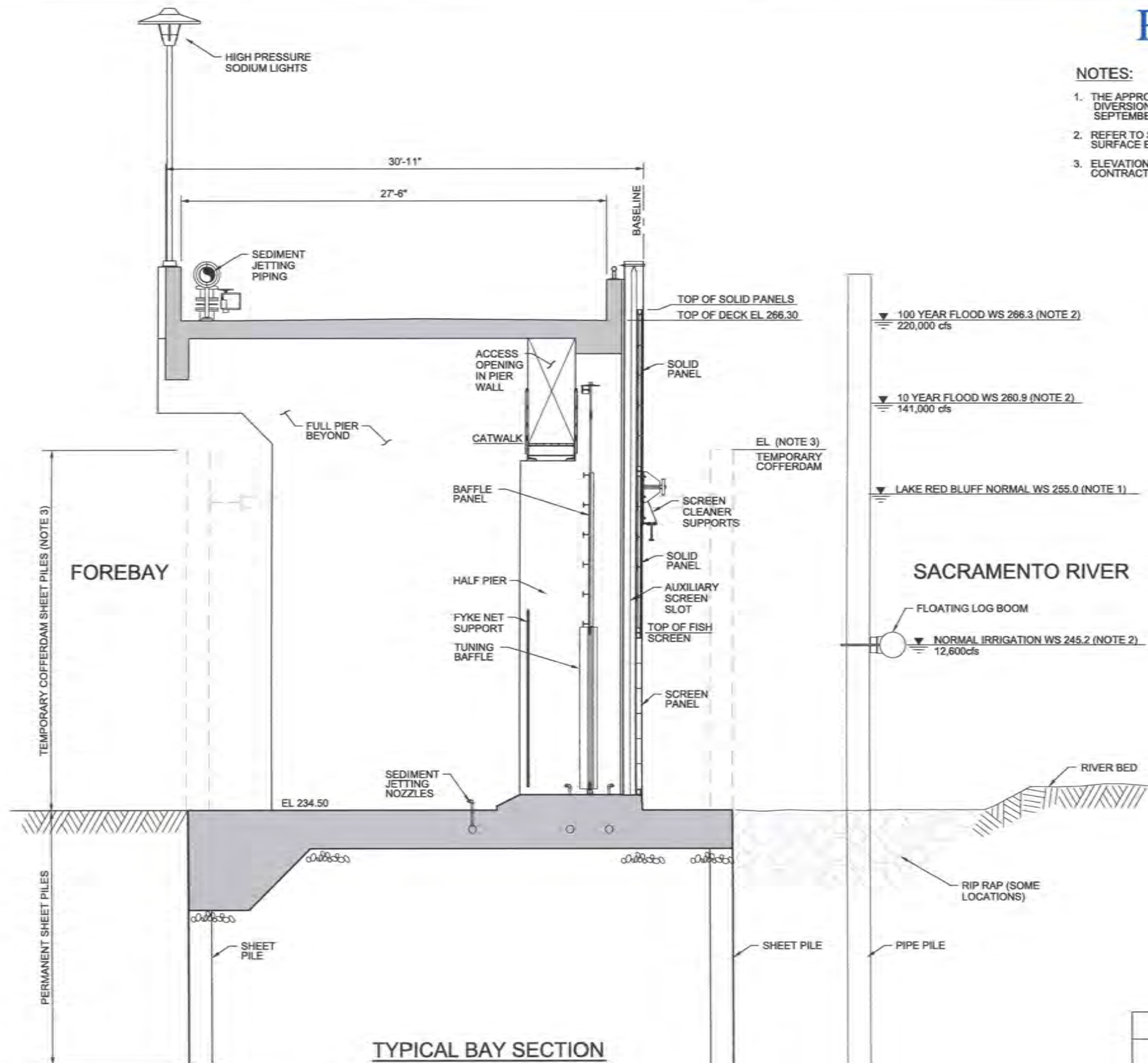


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 PLOT DATE:

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NOTES:

1. THE APPROXIMATE WATER SURFACE ELEVATION WITH RED BLUFF DIVERSION DAM GATES DOWN (CLOSED) FROM JUNE 15 THROUGH SEPTEMBER 1, 2010 AND 2011.
2. REFER TO SPECIFICATIONS 51 10 00 FOR NORMAL AND FLOOD WATER SURFACE ELEVATIONS.
3. ELEVATIONS OF TEMPORARY COFFERDAM TO BE DETERMINED BY CONTRACTOR.



TYPICAL BAY SECTION
1/4"=1'-0"

CD PLOT TIME: 2:50:50 AM
PLOT DATE: 10/29/2009

A CAD SYSTEM: MICROSTATION
FILENAME: 01162230_380710.DGN



10/22/09

DSGN	M RANDALL						
DR	E McClelland						
CHK	W BENNETT	NO	DATE	DESCRIPTION	APVR	N	
APVD	P RUDE	NO.	DATE	REVISION	BY	APVD	

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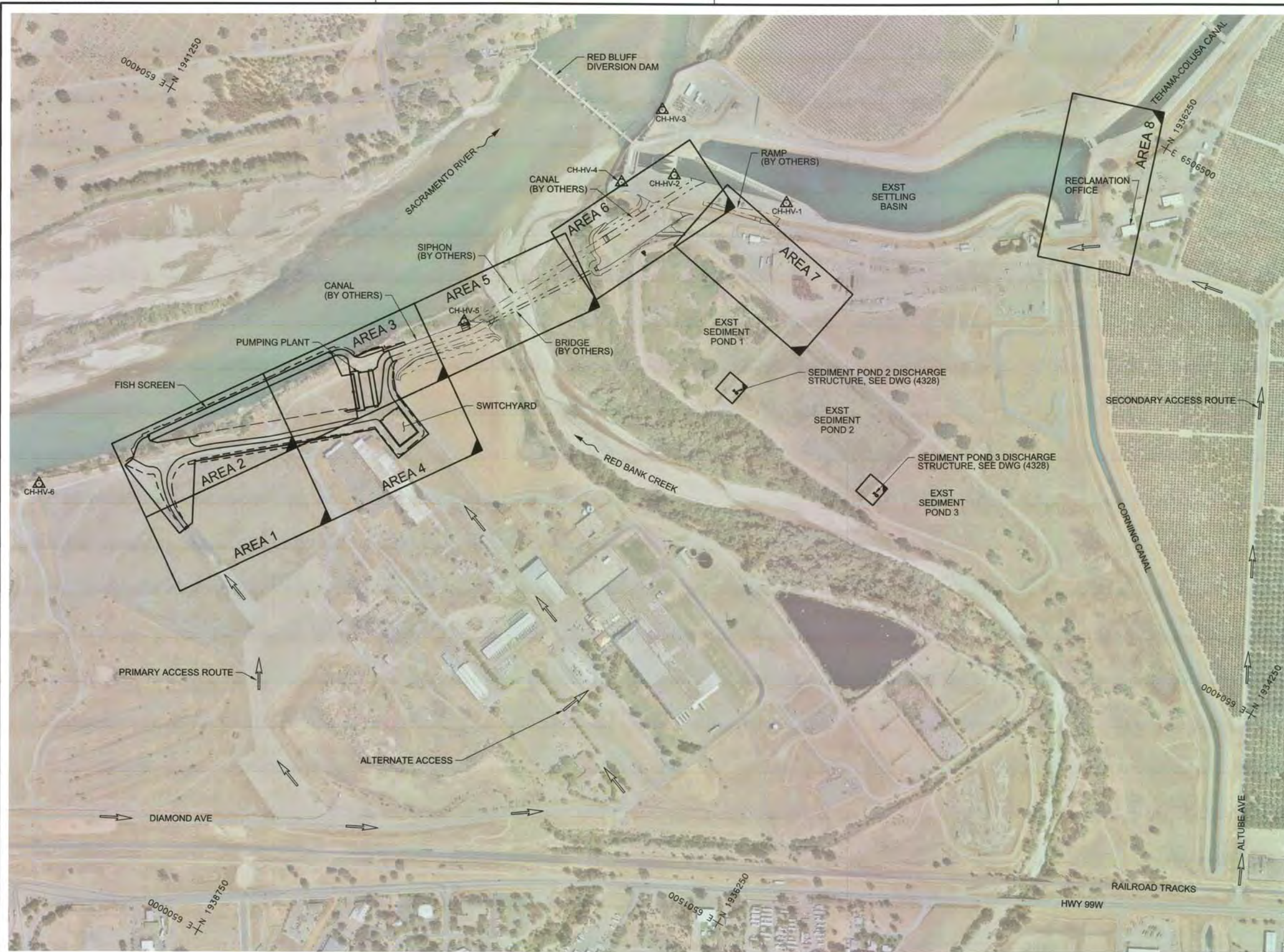
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 REDDING, CA 96001-2443
 Tel 530-243-5886

PROJECT 380710.FD
 SHEET OF
 ACCEPTED
 DATE OCTOBER 29, 2009

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RED BLUFF PUMPING PLANT AND FISH SCREEN
 GENERAL ARRANGEMENT FISH SCREEN STRUCTURE
 TYPICAL BAY SECTION

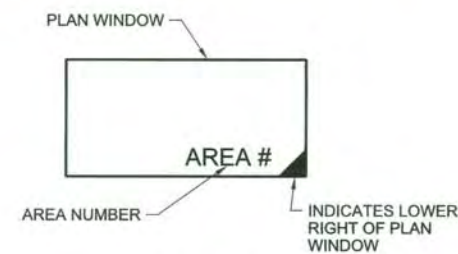
DESIGNED _____ CHECKED _____
 DRAWN _____ CONTRACTOR _____ TECH APPR _____
 ACCEPTED *Garrett Bonino P.E.*
 SHEET 1 OF 1
602-D-4313

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RECLAMATION

Managing Water in the West



LEGEND

HORIZONTAL AND VERTICAL SURVEY CONTROL POINT DATA

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
CH-HV-1	1937940.37	6505174.92	257.42	2.5" BRASS DISK
CH-HV-2	1938561.41	6504993.66	257.16	2.5" BRASS DISK
CH-HV-3	1938803.01	6505275.51	269.97	2.5" BRASS DISK
CH-HV-4	1938796.40	6504809.80	269.95	3.0" BRASS DISK
CH-HV-5	1939167.48	6503690.85	268.25	2.5" BRASS DISK
CH-HV-6	1940771.29	6501711.97	287.54	2.5" BRASS DISK

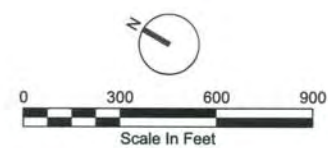
NOTES:

- COORDINATES SHOWN ARE BASED ON THE CALIFORNIA STATE PLANE, ZONE 1, NORTH AMERICAN DATUM OF 1983 (NAD83), 2007 EPOCH, SURVEY FEET.
- ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
- MAPPING SHOWN ON DRAWINGS WAS PREPARED BY PHOTOGRAMMETRIC METHODS FROM AERIAL PHOTOGRAPHY DATED 9-9-2008 AND WAS PREPARED BY CH2MHILL. CONTOUR INTERVAL SHOWN IS ONE FOOT. DASHED CONTOURS AND UNDERLINED SPOT ELEVATIONS IN AREAS OF DENSE VEGETATION MAY DEVIATE FROM TRUE ELEVATION BY ONE HALF THE HEIGHT OF THE VEGETATION.
- GATES AT RED BLUFF DIVERSION DAM WERE OUT IN THIS PHOTO.

AREA DRAWING INDEX

	DEMOLITION	SITE CIVIL	ELECTRICAL
AREA 1	-	(4323)	-
AREA 2	(4319)	(4324)	-
AREA 3	(4320)	(4325)	(4442)
AREA 4	(4321)	(4326)	(4443)
AREA 5	-	-	(4444)
AREA 6	-	(4327)	(4445)
AREA 7	-	-	(4446)
AREA 8	-	-	(4447)

CAD SYSTEM: MICROSTATION
 FILENAME: 05nc100d_380710.dgn
 PLOT DATE: 10/21/2009
 PLOT TIME: 5:40:09 PM



NO.	DATE	DESCRIPTION	APVR	N

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 Tel 530-243-5886

PROJECT 380710.FD
 SHEET OF
 ACCEPTED
 DATE OCTOBER 29, 2009

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 SACRAMENTO RIVER DIVISION - SACRAMENTO CANALS UNIT
RED BLUFF PUMPING PLANT AND FISH SCREEN
 SITE CIVIL
OVERALL SITE PLAN AND SURVEY CONTROL

DESIGNED _____ CHECKED _____
 DRAWN _____ CONTRACTOR _____ TECH. APPR. _____
 ACCEPTED *[Signature]* P.E.
 DENVER, COLORADO 10-29-2009
 SHEET 1 OF 1

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