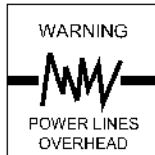


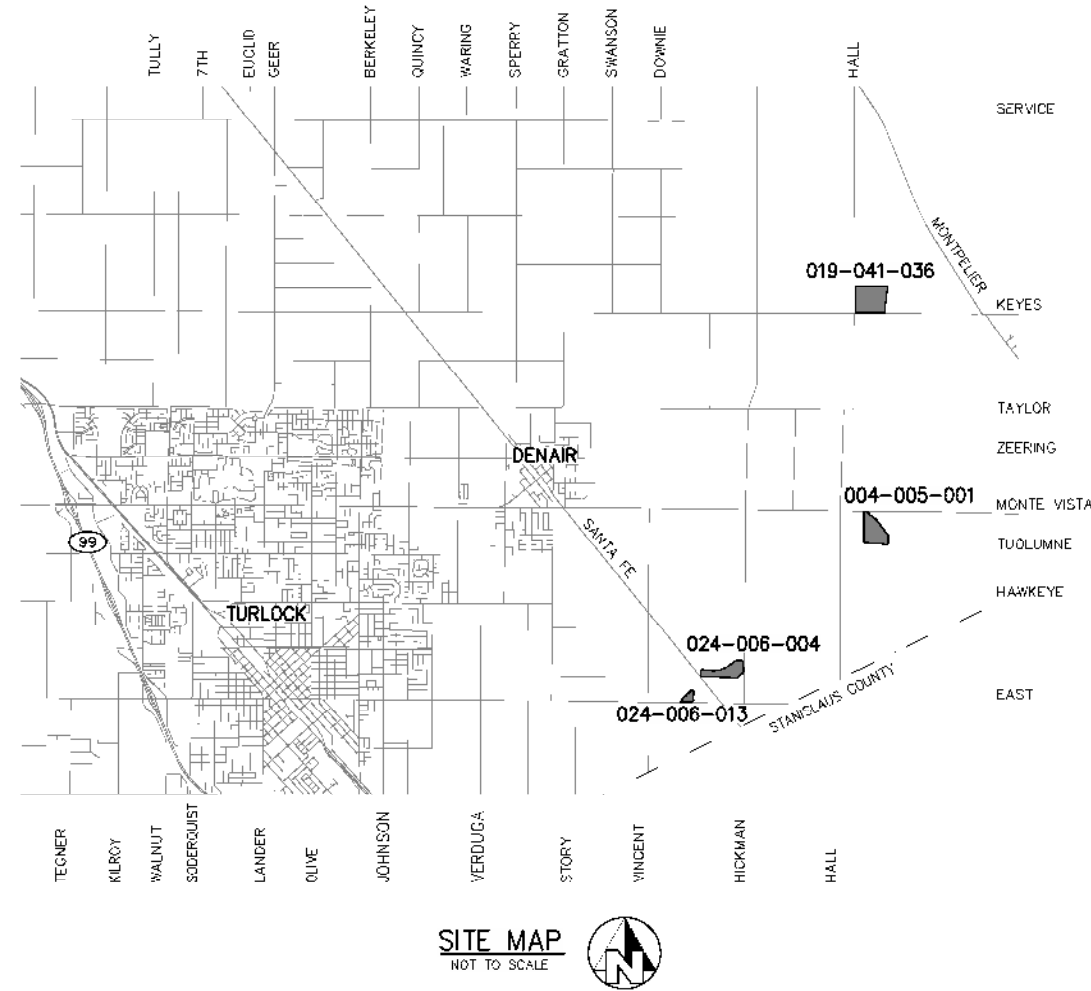
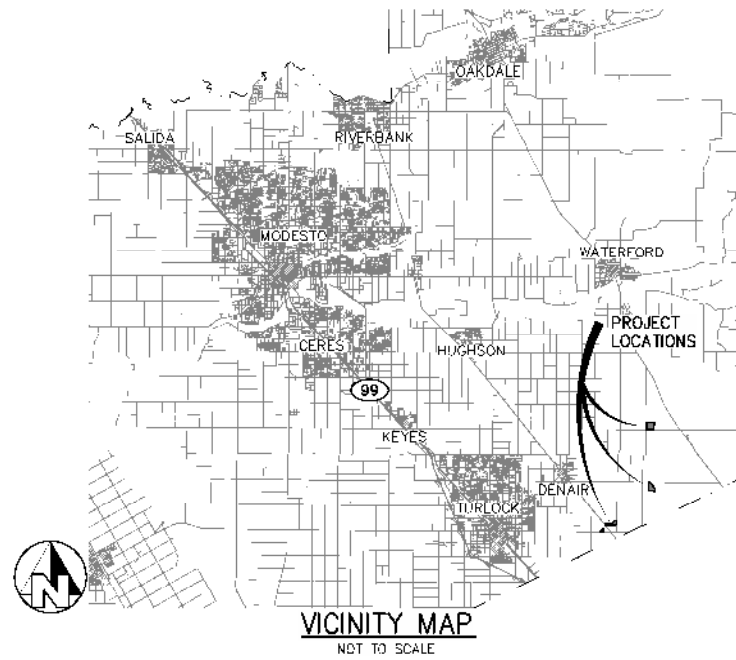


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# EASTSIDE WATER DISTRICT STANISLAUS COUNTY, CALIFORNIA

## DIFFUSED SURFACE WATER PROJECT



### GENERAL NOTES

- EASTSIDE WATER DISTRICT (209-589-0689) SHALL BE CONTACTED AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF WORK ON OR NEAR EXISTING DISTRICT FACILITIES.
- USED MATERIAL, REJECTS, MISFITS, OR SECONDS, ETC. ARE NOT ACCEPTABLE FOR USE ON EASTSIDE WATER DISTRICT FACILITIES.
- ALL CONSTRUCTION SHALL BE IN CONFORMANCE WITH THESE PLANS, PROJECT SPECIFICATIONS AND EASTSIDE WATER DISTRICT SPECIFICATIONS.
- CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING FACILITIES PRIOR TO COMMENCING WORK. CALL UNDERGROUND SERVICE ALERT (USA) AT 8-1-1. CONTRACTOR SHALL MAKE ENGINEER AWARE OF ANY DISCREPANCIES.
- ALL CAST-IN-PLACE CONCRETE STRUCTURES SHALL BE FORMED INSIDE AND OUT AND CONCRETE VIBRATED SUFFICIENTLY TO PROVIDE FOR SMOOTH SURFACED WALLS/FLOORS WITHOUT VOIDS AND HONEYCOMBS.
- EASTSIDE WATER DISTRICT SHALL INSPECT ALL WORK PHASES ON CONCRETE FACILITIES FOR CONFORMANCE TO EASTSIDE WATER DISTRICT SPECIFICATIONS. REINFORCING SHALL NOT BE ENCASED IN CONCRETE WITHOUT PRIOR EASTSIDE WATER DISTRICT INSPECTIONS. LIKEWISE, CONCRETE SHALL NOT BE COVERED WITH EARTH PRIOR TO EASTSIDE WATER DISTRICT INSPECTION.
- CONCRETE DESIGN MIX SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL. ALL CONCRETE SHALL HAVE A 28-DAY MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI UNLESS OTHERWISE SPECIFIED.
- ALL STEEL PIPE AND FITTINGS SHALL BE FURNISHED WITH A SHOP APPLIED HIGH SOLIDS EPOXY COATING ON THE INTERIOR AND EXTERIOR, UNLESS OTHERWISE INDICATED. ALL OTHER EXPOSED STEEL SHALL BE PAINTED WITH A PRE-TREATMENT PRIMER, AN UNDERCOAT AND A FINAL COAT OF PAINT IN ACCORDANCE WITH EASTSIDE WATER DISTRICT SPECIFICATIONS.
- ALL NUTS, BOLTS, AND WASHERS USED TO SECURE UNDERGROUND FITTINGS SHALL BE STAINLESS STEEL. AFTER INSTALLATION, ALL STEEL HARDWARE SHALL BE COATED WITH A RUST PREVENTATIVE, WRAPPED WITH 4 MIL POLYETHYLENE SHEETING, AND SECURE WITH PVC TAPE.
- THRUST RESTRAINTS TO BE PROVIDED AT ALL PIPELINE BENDS, WHETHER OR NOT SHOWN ON THE PLANS.
- ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE HEALTH AND SAFETY LAWS OF THE STATE OF CALIFORNIA AND CAL/OSHA STANDARDS.
- TRENCH BACKFILL AND RESERVOIR EMBANKMENTS SHALL BE COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS AND THE GEOTECHNICAL REPORT CONTAINED IN THE SPECIFICATIONS.
- CONTRACTOR WILL BE RESPONSIBLE FOR THE REPAIR OF ALL PIPELINE CRACKS, WHICH DEVELOP DURING CONSTRUCTION OF IMPROVEMENTS AFFECTING EXISTING FACILITIES.
- CONCRETE VAULTS AND BOXES MAY BE PURCHASED FROM A PRECAST MANUFACTURER OR CONTRACTOR MAY CONSTRUCT THE STRUCTURES IF STRUCTURAL CALCULATIONS AND DESIGN IS APPROVED BY THE EASTSIDE WATER DISTRICT AND THE ENGINEER.
- ALL EXCESS MATERIAL AND/OR DEBRIS SHALL BE REMOVED UPON COMPLETION OF INSTALLATION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE DUST CONTROL AT ALL TIMES.

### SPECIAL NOTE

WHERE UNDERGROUND AND SURFACE STRUCTURES ARE SHOWN ON THE PLANS, THE LOCATIONS, DEPTH AND DIMENSIONS OF STRUCTURES ARE BELIEVED TO BE REASONABLY CORRECT, BUT ARE NOT GUARANTEED. SUCH STRUCTURES ARE SHOWN FOR THE INFORMATION OF THE CONTRACTOR, BUT INFORMATION SO GIVEN IS NOT TO BE CONSTRUED AS A REPRESENTATION THAT SUCH STRUCTURES WILL, IN ALL CASES, BE FOUND WHERE SHOWN, OR THAT THEY REPRESENT ALL OF THE STRUCTURES WHICH MAY BE ENCOUNTERED.

### SITE SAFETY AND PROTECTION NOTES

THE DUTY OF THE ENGINEER, OWNER OR ITS AGENTS TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE AND THE UNDERTAKING OF INSPECTIONS OR THE GIVING OF INSTRUCTIONS AS AUTHORIZED HEREIN IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, ON, OR NEAR THE CONSTRUCTION SITE AND SHALL NOT BE CONSTRUED AS SUPERVISION OF THE ACTUAL CONSTRUCTION NOR MAKE THE ENGINEER, OWNER OR ITS AGENTS RESPONSIBLE FOR PROVIDING A SAFE PLACE FOR THE PERFORMANCE OF WORK BY THE CONTRACTOR, SUBCONTRACTORS, OR SUPPLIERS, OR FOR ACCESS, VISITS, USE, WORK, TRAVEL OR OCCUPANCY BY ANY PERSON.

THE CONTRACTOR SHALL HAVE AT THE WORK SITE, COPIES OR SUITABLE EXTRACTS OF CONSTRUCTION SAFETY ORDERS, ISSUED BY CAL-OSHA. CONTRACTOR SHALL COMPLY WITH PROVISIONS OF THESE AND ALL OTHER APPLICABLE LAWS, ORDINANCES AND REGULATIONS. THE CONTRACTOR MUST COMPLY WITH PROVISIONS OF THE SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION, PROMULGATED BY THE SECRETARY OF LABOR UNDER SECTION 107 OF THE CONTRACT WORK HOURS AND SAFETY STANDARDS ACT, AS SET FORTH IN TITLE 29 C.F.R.

TO PROTECT THE LIVES AND HEALTH OF CONTRACTOR'S EMPLOYEES UNDER THE CONTRACT, THE CONTRACTOR SHALL COMPLY WITH ALL PERTINENT PROVISIONS OF THE "MANUAL OF ACCIDENT PREVENTION IN CONSTRUCTION" ISSUED BY THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA, INC. AND SHALL MAINTAIN AN ACCURATE RECORD OF ALL CASES OF DEATH, OCCUPATIONAL DISEASE, AND INJURY REQUIRING MEDICAL ATTENTION OR CAUSING LOSS OF TIME FROM WORK, ARISING OUT OF AND IN THE COURSE OF EMPLOYMENT OR WORK UNDER THE CONTRACT.

THE CONTRACTOR ALONE SHALL BE RESPONSIBLE FOR THE SAFETY, EFFICIENCY, AND ADEQUACY OF CONTRACTOR'S FACILITIES, APPLIANCES, AND METHODS AND FOR ANY DAMAGE, WHICH MAY RESULT FROM THEIR FAILURE OR THEIR IMPROPER CONSTRUCTION, MAINTENANCE OR OPERATION.

THE CONTRACTOR AGREES THAT IT SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER, PROVOST & PRITCHARD CONSULTING GROUP, AND THEIR RESPECTIVE AGENTS HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF OWNER, ENGINEER, OR THEIR RESPECTIVE AGENTS.

THE OWNER AND ITS AGENTS' SITE RESPONSIBILITIES ARE LIMITED SOLELY TO THE ACTIVITIES OF THEIR EMPLOYEES ON SITE. THESE RESPONSIBILITIES SHALL NOT BE INFERRED BY ANY PARTY TO MEAN THAT THE OWNER OR ITS AGENTS HAVE RESPONSIBILITY FOR SITE SAFETY, SAFETY IN, ON, OR ABOUT THE SITE IS THE SOLE AND EXCLUSIVE RESPONSIBILITY OF THE CONTRACTOR ALONE. THE CONTRACTOR'S METHODS OF WORK PERFORMANCE, SUPERINTENDENCE AND THE CONTRACTOR'S EMPLOYEES, AND SEQUENCING OF CONSTRUCTION ARE ALSO THE SOLE AND EXCLUSIVE RESPONSIBILITIES OF THE CONTRACTOR ALONE.

SHEET INDEX	
SHEET	DESCRIPTION
1	COVER
2	SITE PLAN - APN 019-041-036
3	SITE PLAN - APN 024-005-001
4	SITE PLAN - APN 024-006-004
5	SITE PLAN - APN 024-006-013
6	CHECK STRUCTURE
7	CANAL TURNOUT
8	INTERBASIN STRUCTURE
9	CANAL LINING & RIP RAP
10	PIPE DETAILS
11	CONSTRUCTION DETAILS
12	CONCRETE DETAILS
13	IN-LIEU TURNOUT DETAIL

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6/3/2015

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DIFFUSED SURFACE WATER PROJECT  
EASTSIDE WATER DISTRICT  
STANISLAUS COUNTY, CALIFORNIA  
PRELIMINARY RECHARGE BASIN  
COMPARISON  
COVER

EST. 1968  
**PROVOST & PRITCHARD**  
CONSULTING GROUP  
An Employee Owned Company  
2705 4TH ST., SUITE 100  
TURLOCK, CA 95257  
TEL: 209-666-4311 FAX: 209-666-4311  
WWW.P&P.COM

DESIGN ENGINEER:  
READY S. FORTIS

LICENSE NO:  
65738

DRAFTED BY: STC CHECKED BY: VS

DATE: 6/3/2015

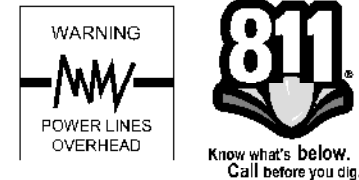
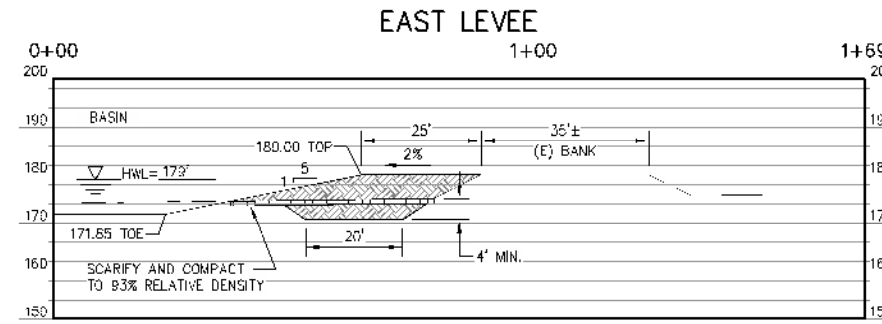
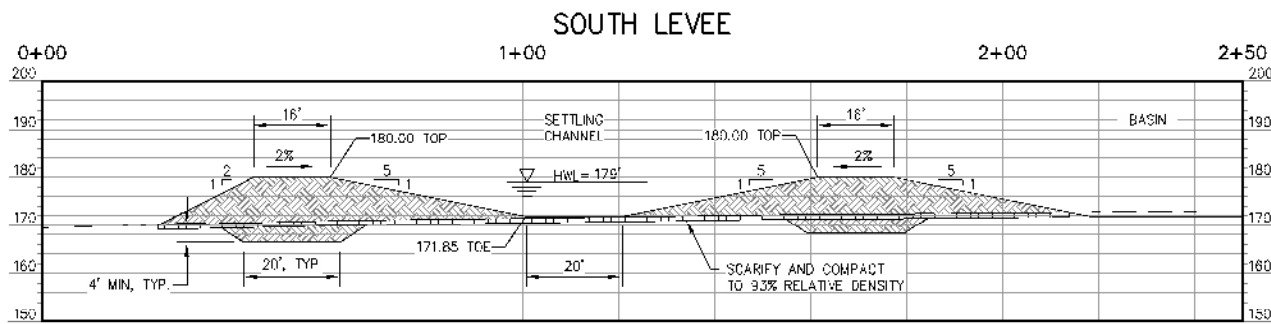
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GRAPHIC SCALE: 1" = 100'

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1 of 13

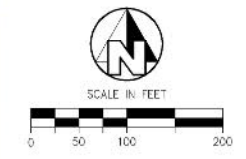
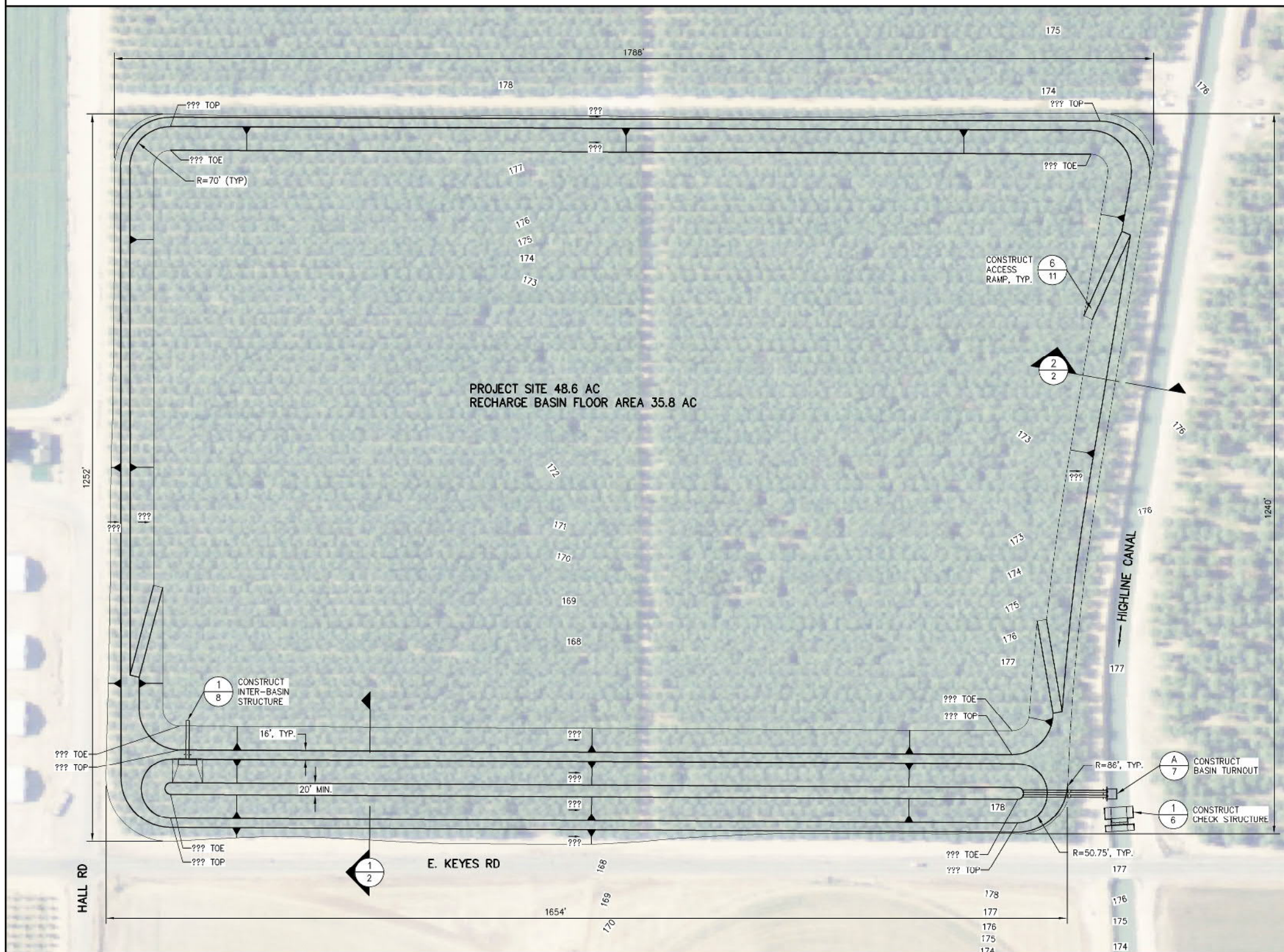
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2  
2



- NOTES**
- ALL EXISTING CONTOUR ELEVATIONS ARE BASED ON USGS DIGITAL ELEVATION MODELS FROM: USGS NATIONAL ELEVATION DATASET, NAD 83 ZONE 3 FOOT, NAVD 88.
  - EXISTING BANK ELEVATIONS ARE BASED OFF OBSERVATIONS FROM PHOTOGRAPHS.

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CLONIS, CALIFORNIA 95111-9166  
559/226-1100 FAX 559/226-1090  
www.ppg.com

DESIGN ENGINEER:  
RANDY S. HOPKINS

LICENSE NO:  
63538

DRAFTED BY: STG CHECKED BY: VSL

DATE: 6/3/2015

JOB NO: 234414C1

ORIGINAL SCALE SHOWN IS IN INCHES. ADJUST SCALE FOR REDUCED OR ENLARGED PLANS.

SHEET

2 OF 13

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DIFFUSED SURFACE WATER PROJECT  
EASTSIDE WATER DISTRICT  
STANISLAUS COUNTY, CALIFORNIA  
PRELIMINARY RECHARGE BASIN  
COMPARISON  
SITE PLAN - APN 019-041-036

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6/3/2015

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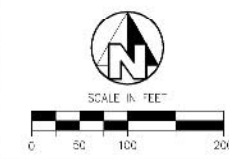
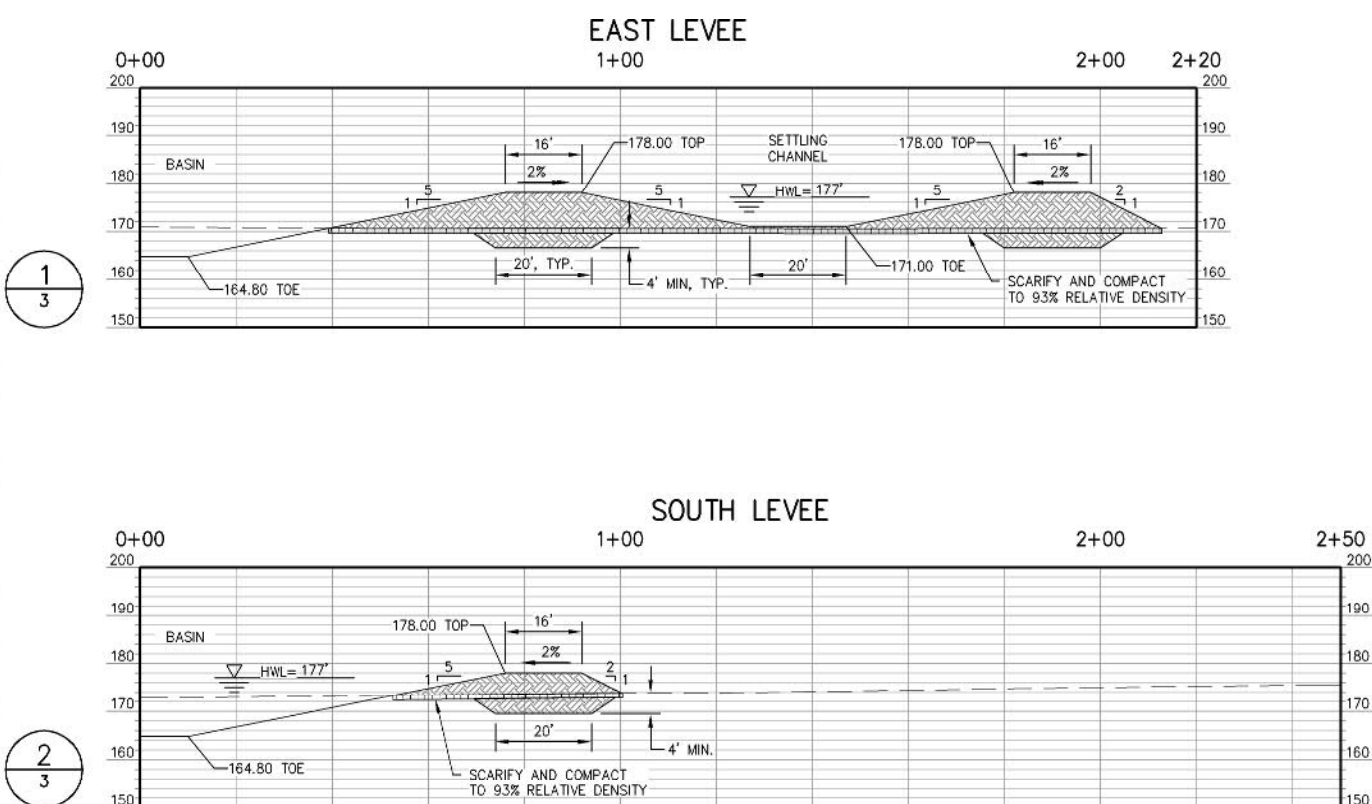
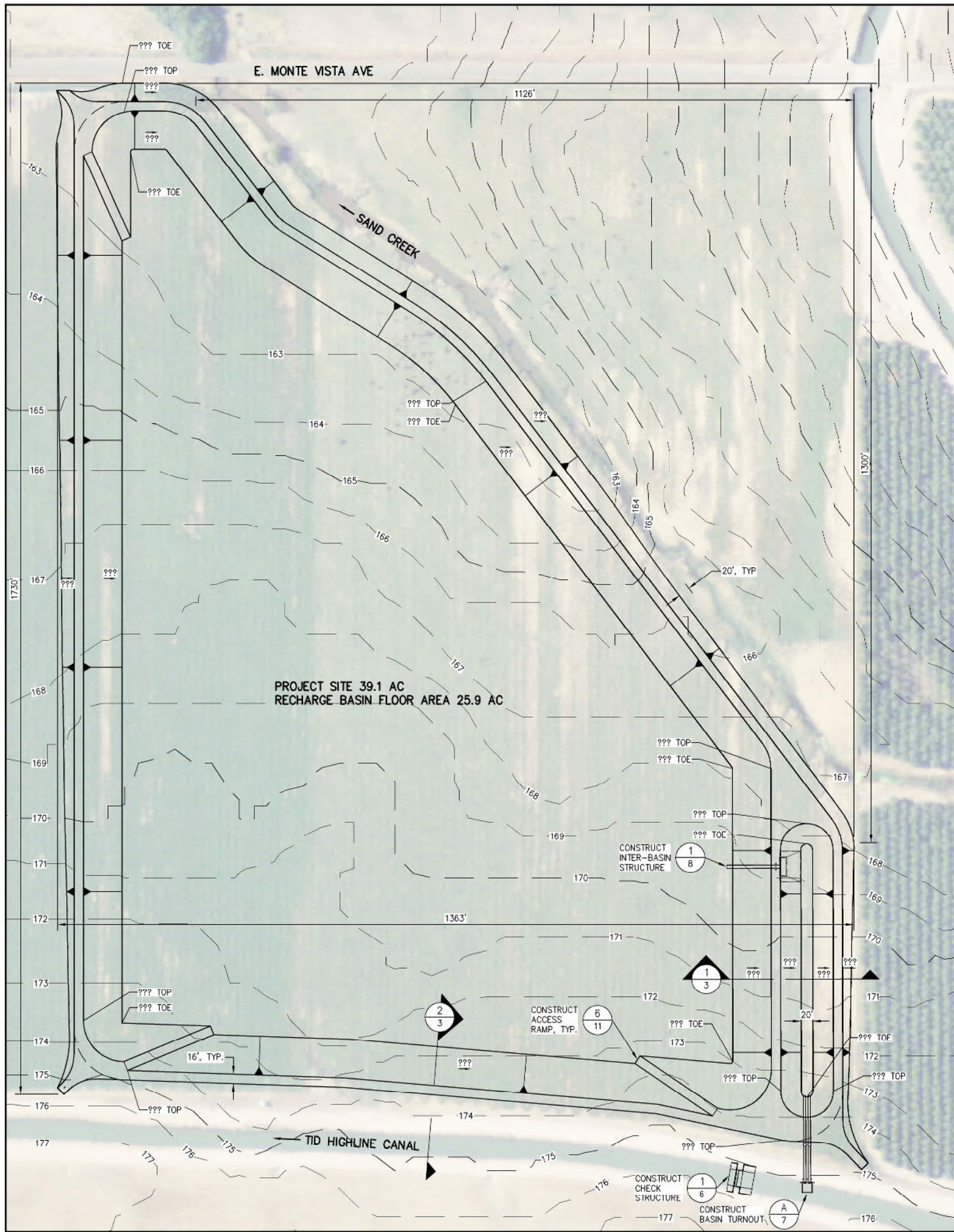
WARNING  
POWER LINES  
OVERHEAD

811  
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APN 019-041-036 PLAN - APN 019-041-036.dwg - Trevor Samblin

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REVISION





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**WARNING**  
  
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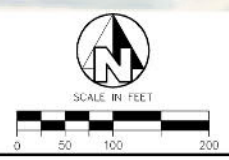
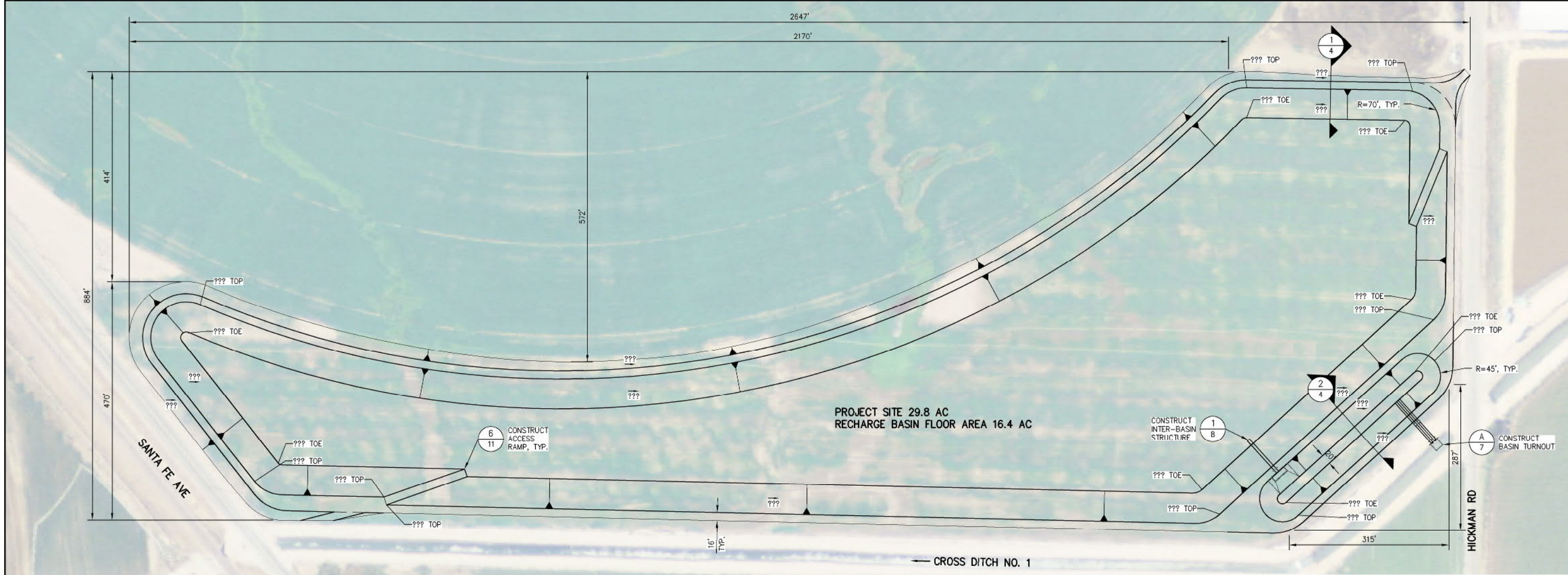
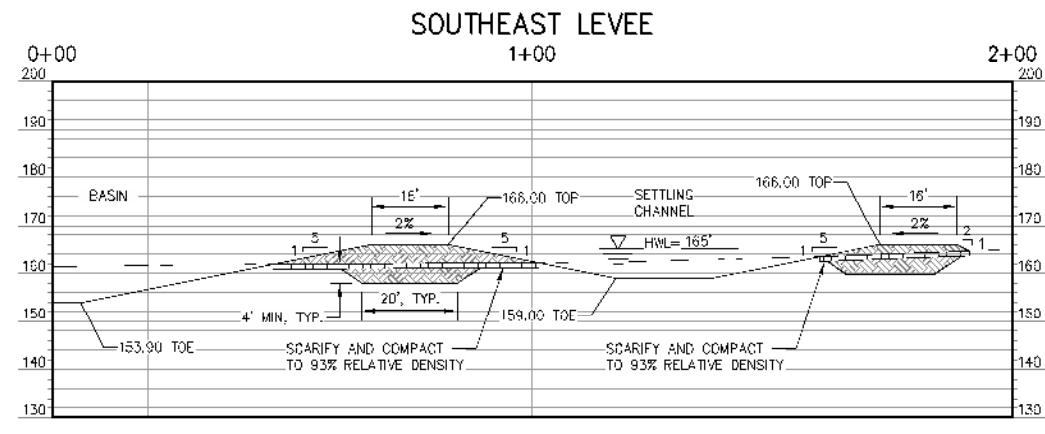
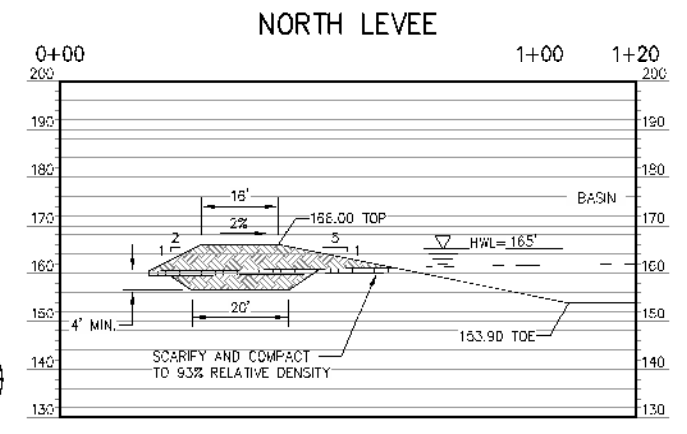
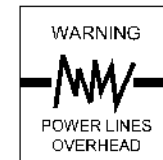
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 EASTSIDE WATER DISTRICT  
 STANISLAUS COUNTY, CALIFORNIA  
 PRELIMINARY RECHARGE BASIN  
 COMPARISON  
 SITE PLAN - APN-024-005-001

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 CLONING, CALIFORNIA 95611-9166  
 559/226-1100 FAX 559/226-1090  
 www.ppg.com

DESIGN ENGINEER:  
 RANDY S. HOPKINS  
 LICENSE NO:  
 63538  
 DRAFTED BY: STG CHECKED BY: VSL  
 DATE: 6/3/2015  
 JOB NO: 234414C1  
 ORIGINAL SCALE SHOWN IS IN INCHES. ADJUST SCALE FOR REDUCED OR ENLARGED PLANS.  
 SHEET  
**3** OF 13

6/8/2015 10:29 AM c:\ventside\wfr-2344\234414c1-diffused surface water project\DWG\SitePlan.rvt - Provost & Pritchard





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DIFFUSED SURFACE WATER PROJECT  
 EASTSIDE WATER DISTRICT  
 STANISLAUS COUNTY, CALIFORNIA  
 PRELIMINARY RECHARGE BASIN  
 COMPARISON  
 SITE PLAN - APN 024-006-004

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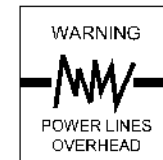
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 RANDY S. HOPKINS  
 LICENSE NO:  
 63538  
 DRAFTED BY: STG  
 CHECKED BY: VSL  
 DATE: 6/3/2015  
 JOB NO: 234414C1

ORIGINAL SCALE SHOWN IS IN INCHES. ADJUST SCALE FOR REDUCED OR ENLARGED PLANS. SHEET

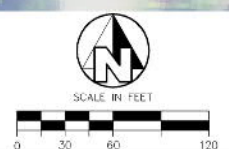
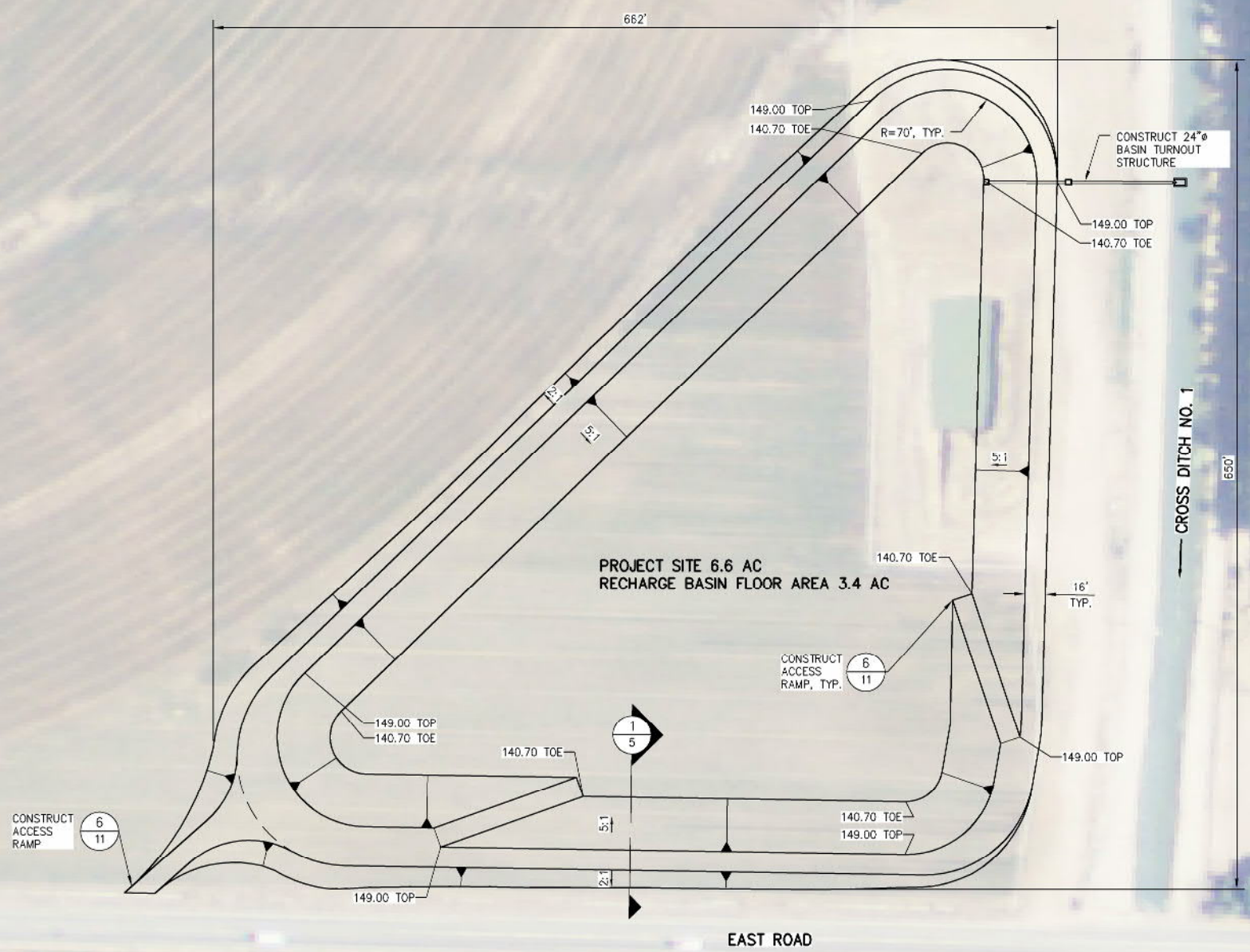
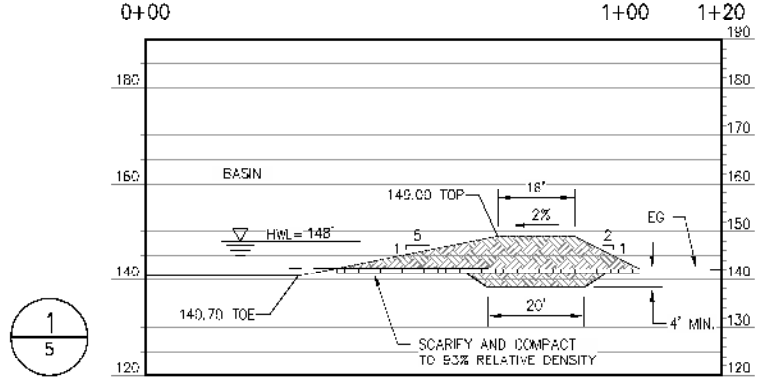
4 OF 13

REVISION: BY DATE  
 No.





TYPICAL LEVEL SECTION



- NOTES**
1. ALL EXISTING CONTOUR ELEVATIONS ARE BASED ON USGS DIGITAL ELEVATION MODELS FROM: USGS NATIONAL ELEVATION DATASET, NAD 83 ZONE 3 FOOT, NAVD 88.
  2. EXISTING BANK ELEVATIONS ARE BASED OFF OBSERVATIONS FROM PHOTOGRAPHS.

CONTRACT SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS, 2013 EDITION, AS AMENDED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AGENCIES.

PRELIMINARY NOT FOR CONSTRUCTION 6/3/2015	REVISION	BY	DATE

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DIFFUSED SURFACE WATER PROJECT  
EASTSIDE WATER DISTRICT  
STANISLAUS COUNTY, CALIFORNIA  
PRELIMINARY RECHARGE BASIN  
COMPARISON  
SITE PLAN - APN 024-006-013

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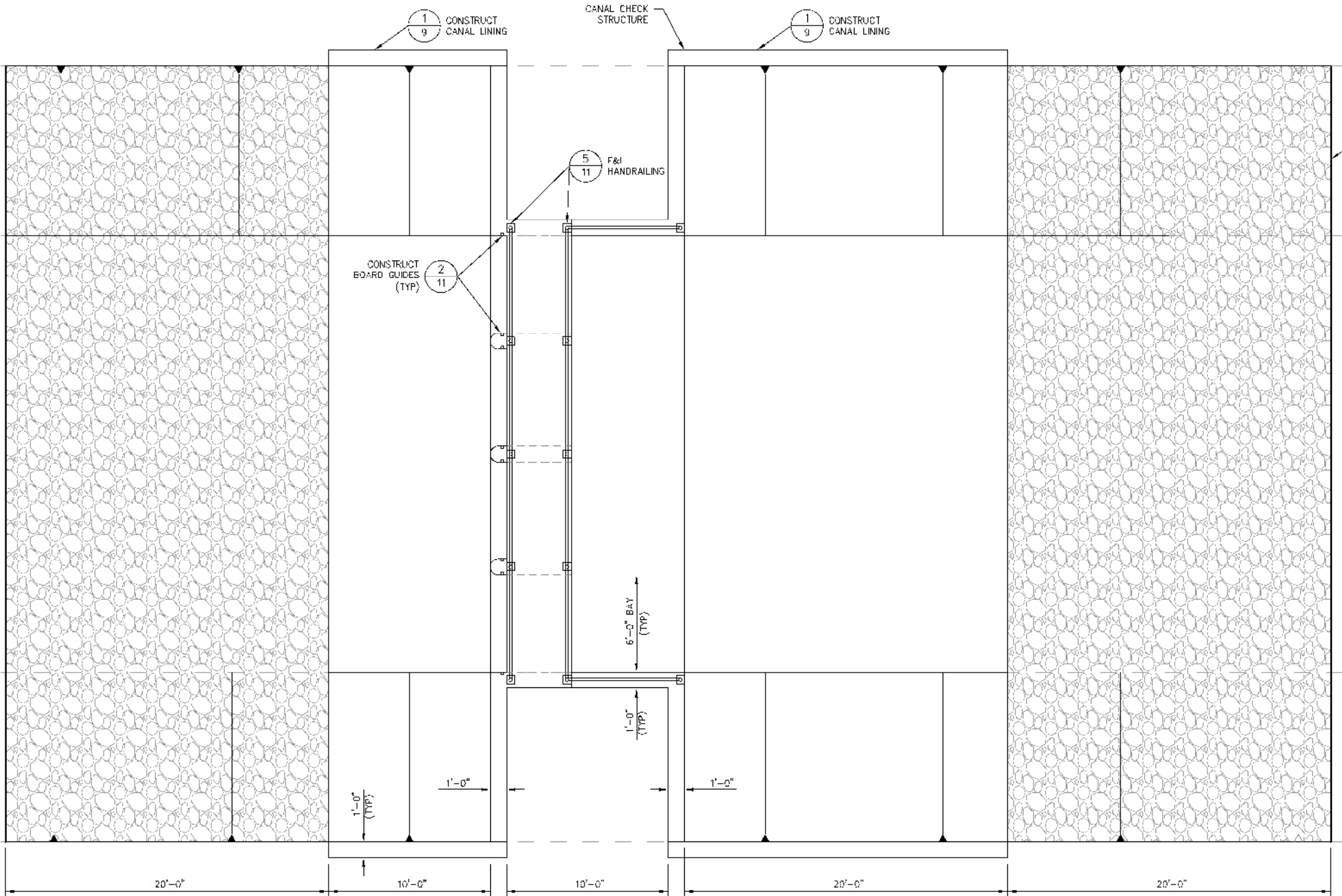
DESIGN ENGINEER: RANDY S. HOPKINS	
LICENSE NO: 63538	
DRAFTED BY: STG	CHECKED BY: VSL
DATE: 6/3/2015	
JOB NO: 234414C1	
ORIGINAL SCALE SHOWN IS IN INCHES. ADJUST SCALE FOR REDUCED OR ENLARGED PLANS. SHEET	
5 OF 13	



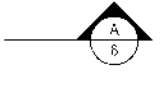
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WARNING  
POWER LINES  
OVERHEAD

(E) TOP  
(E) TOE

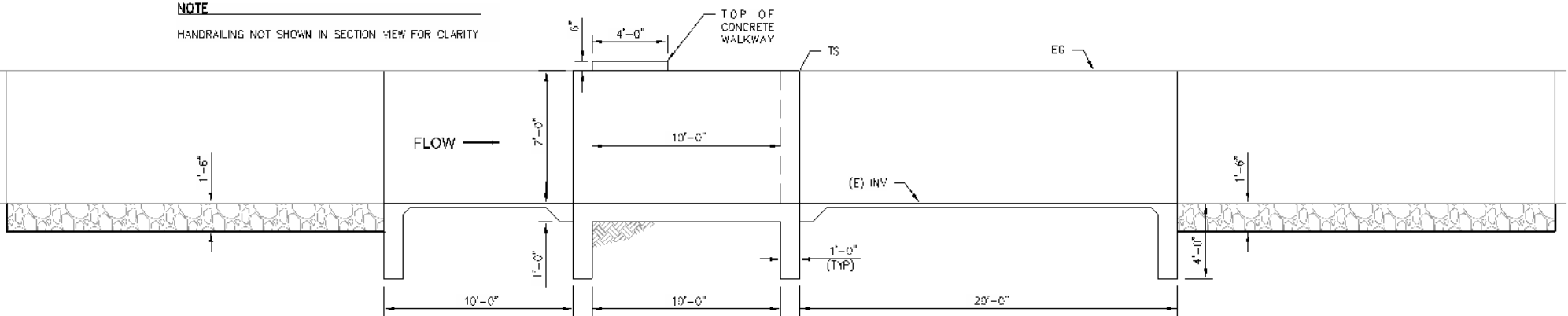


(E) TOP  
(E) TOE



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6

NOTE  
HANDRAILING NOT SHOWN IN SECTION VIEW FOR CLARITY



ELEVATION

A  
6

CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS, 2013 EDITION, AS AMENDED BY THE CALIFORNIA DEPARTMENT OF TRANSPORTATION, 2013 EDITION, AND THE STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGE, 2013 EDITION, AS AMENDED BY THE CALIFORNIA DEPARTMENT OF TRANSPORTATION, 2013 EDITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

PRELIMINARY  
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6/3/2015

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DIFFUSED SURFACE WATER PROJECT  
EASTSIDE WATER DISTRICT  
STANISLAUS COUNTY, CALIFORNIA  
PRELIMINARY RECHARGE BASIN  
COMPARISON  
CHECK STRUCTURE

EST. 1968  
PROVOST &  
PRITCHARD  
CONSULTING GROUP  
An Employee Owned Company  
2505 41st AVE. #3111  
CLACKAMAS, OR 97015  
503/252-1100 FAX 503/252-1000  
www.ppcgroup.com

DESIGN ENGINEER:  
RANDY S. FORTIN MS

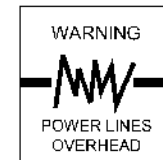
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65738

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CHECKED BY: VS

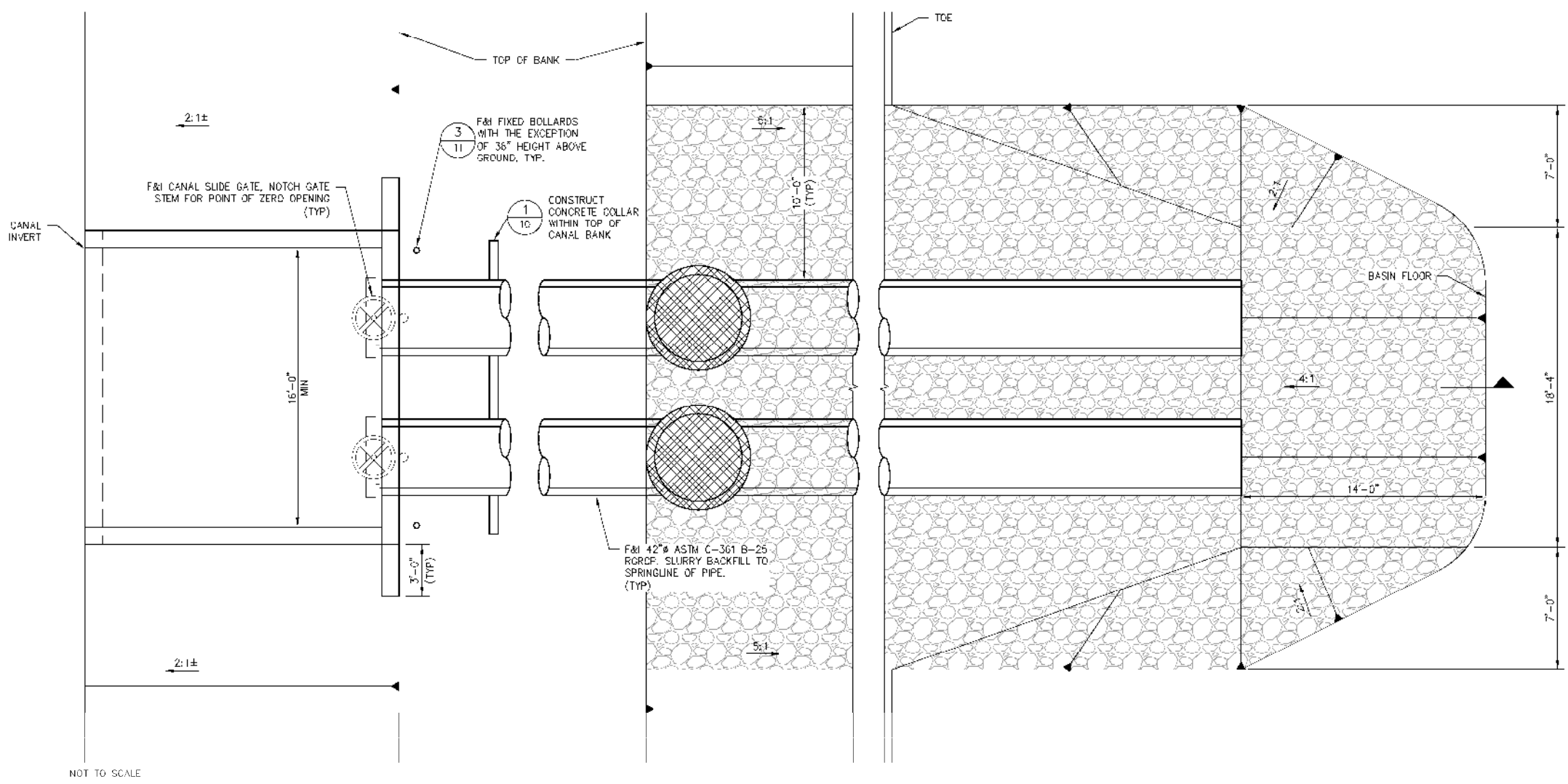
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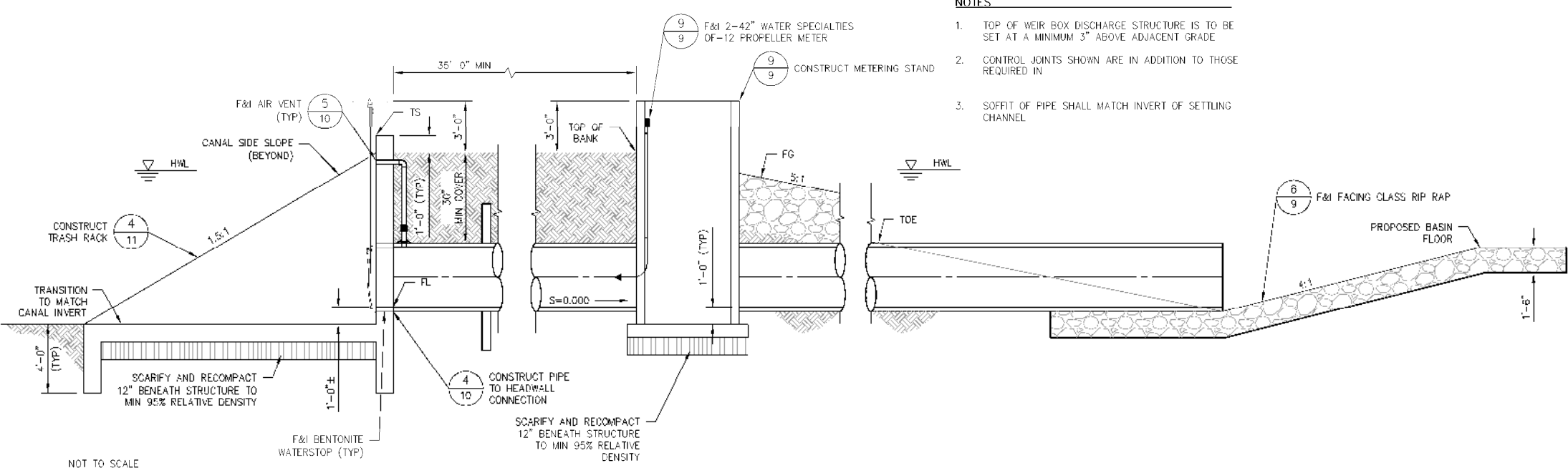




CONTRACT SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS, 2013 EDITION, AS AMENDED, AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS, 2013 EDITION, AS AMENDED, WITH THE EXCEPTIONS LISTED HEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL AFFECTED AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL AFFECTED AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL AFFECTED AGENCIES.



WEIR BOX TURNOUT: PLAN VIEW



SECTION A

NOTES

- TOP OF WEIR BOX DISCHARGE STRUCTURE IS TO BE SET AT A MINIMUM 3" ABOVE ADJACENT GRADE
- CONTROL JOINTS SHOWN ARE IN ADDITION TO THOSE REQUIRED IN
- SOFFIT OF PIPE SHALL MATCH INVERT OF SETTLING CHANNEL

ESTIMATED BASIN HIGH WATER ELEVATIONS	
SITE	ESTIMATED HIGH WATER ELEVATION (FT)
019-04-1-036	178.00
024-005-001	177.00
024-036-004	165.00

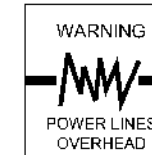
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FOR REVIEW ONLY

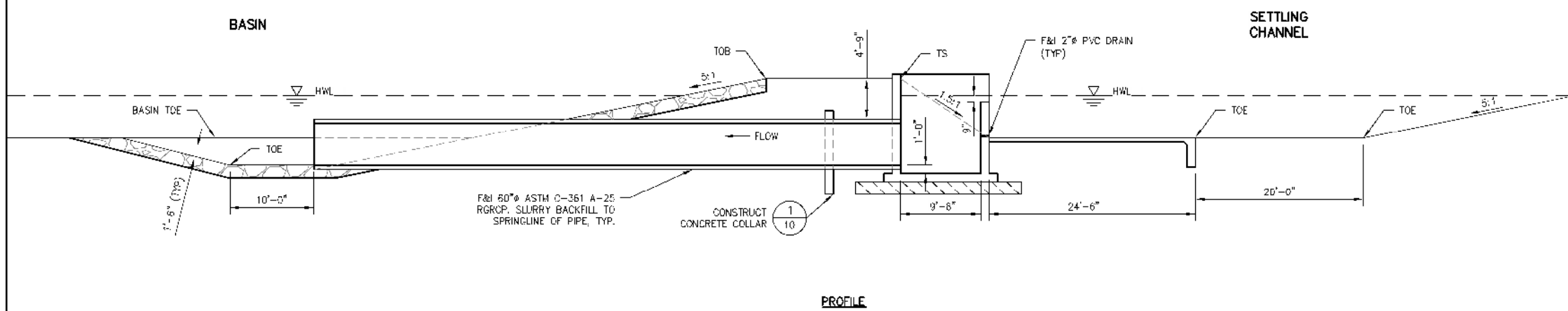
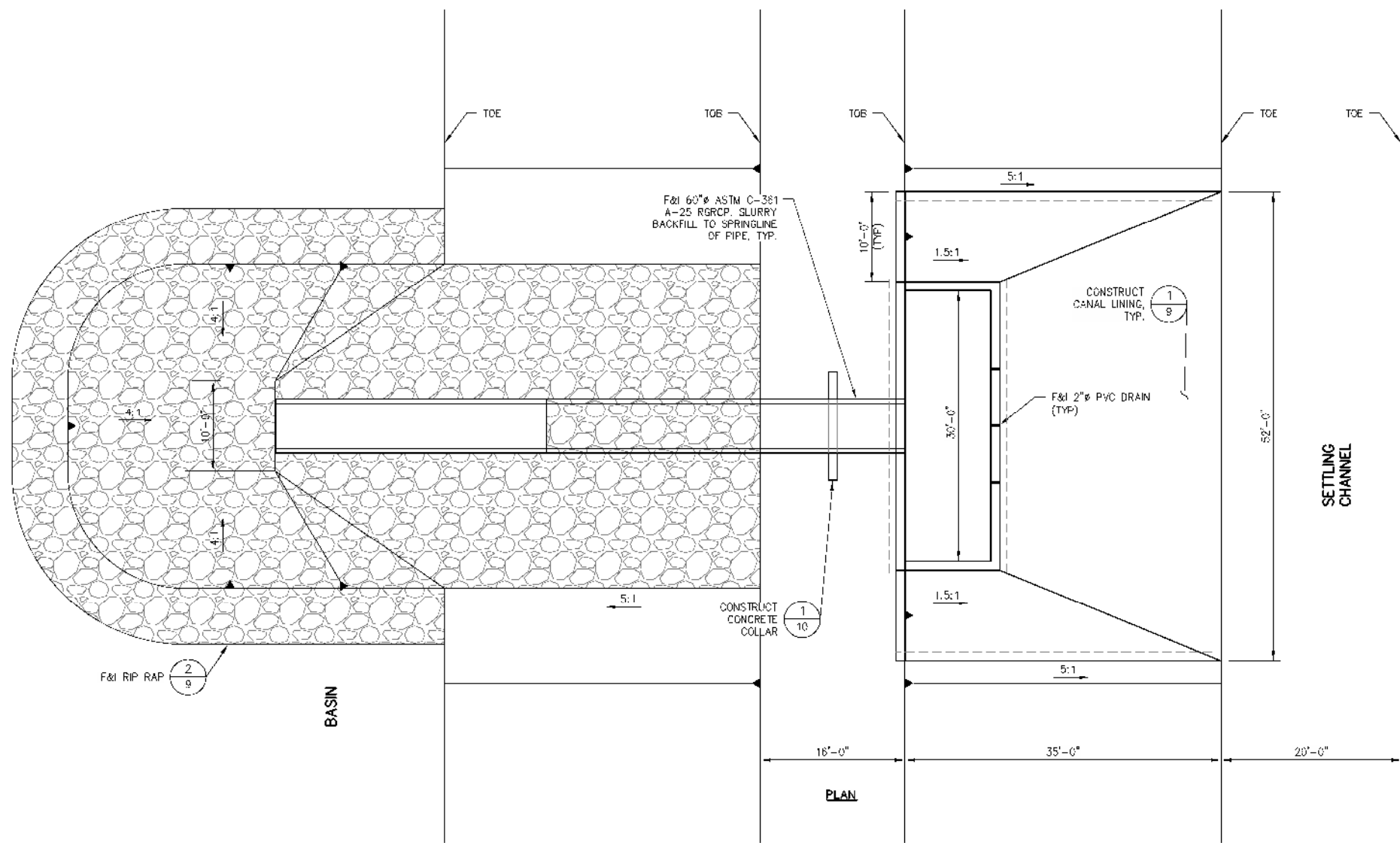
DIFFUSED SURFACE WATER PROJECT  
EASTSIDE WATER DISTRICT  
STANISLAUS COUNTY, CALIFORNIA  
PRELIMINARY RECHARGE BASIN  
COMPARISON  
CANAL TURNOUT

EST. 1968  
**PROVOST & PRITCHARD**  
CONSULTING GROUP  
An Employee Owned Company  
2505 411 JAVELIN AVE. SUITE 100  
OAKLAND, CALIFORNIA 94612-1000  
907/252-1100 FAX 907/252-1000  
www.ppgroup.com

DESIGN ENGINEER:  
READY S. FORTIN MS  
LICENSE NO:  
65738  
DRAFTED BY: STC  
CHECKED BY: VS  
DATE: 6/3/2015  
JOB NO: 03-11-001  
SHEET



CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS, 2013 EDITION, AS AMENDED BY THE 2014 SUPPLEMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ACCESS TO ALL ADJACENT PROPERTIES AND PUBLIC AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ALL AREAS TO ORIGINAL OR BETTER CONDITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ACCESS TO ALL ADJACENT PROPERTIES AND PUBLIC AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ALL AREAS TO ORIGINAL OR BETTER CONDITION.



ESTIMATED BASIN HIGH WATER ELEVATIONS	
SITE	ESTIMATED HIGH WATER ELEVATION (FT)
019-041-03R	179.00
024-035-031	177.00
024-006-004	165.00

1/8

SCALE: 1/8"=1'-0"

TYPICAL RECHARGE BASIN INTERBASIN SPILL STRUCTURE

PRELIMINARY  
NOT FOR CONSTRUCTION  
6/3/2015

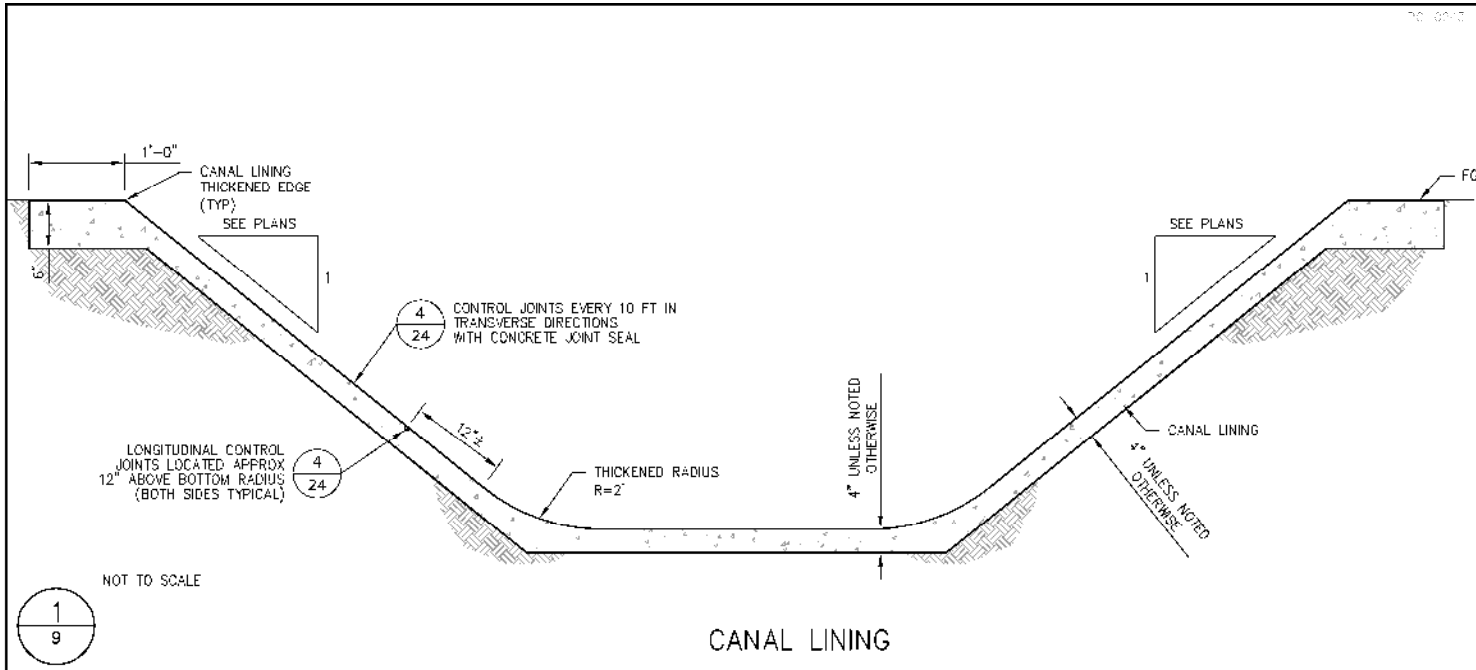
FOR REVIEW ONLY

DIFFUSED SURFACE WATER PROJECT  
EASTSIDE WATER DISTRICT  
STANISLAUS COUNTY, CALIFORNIA  
PRELIMINARY RECHARGE BASIN  
COMPARISON  
INTERBASIN STRUCTURE

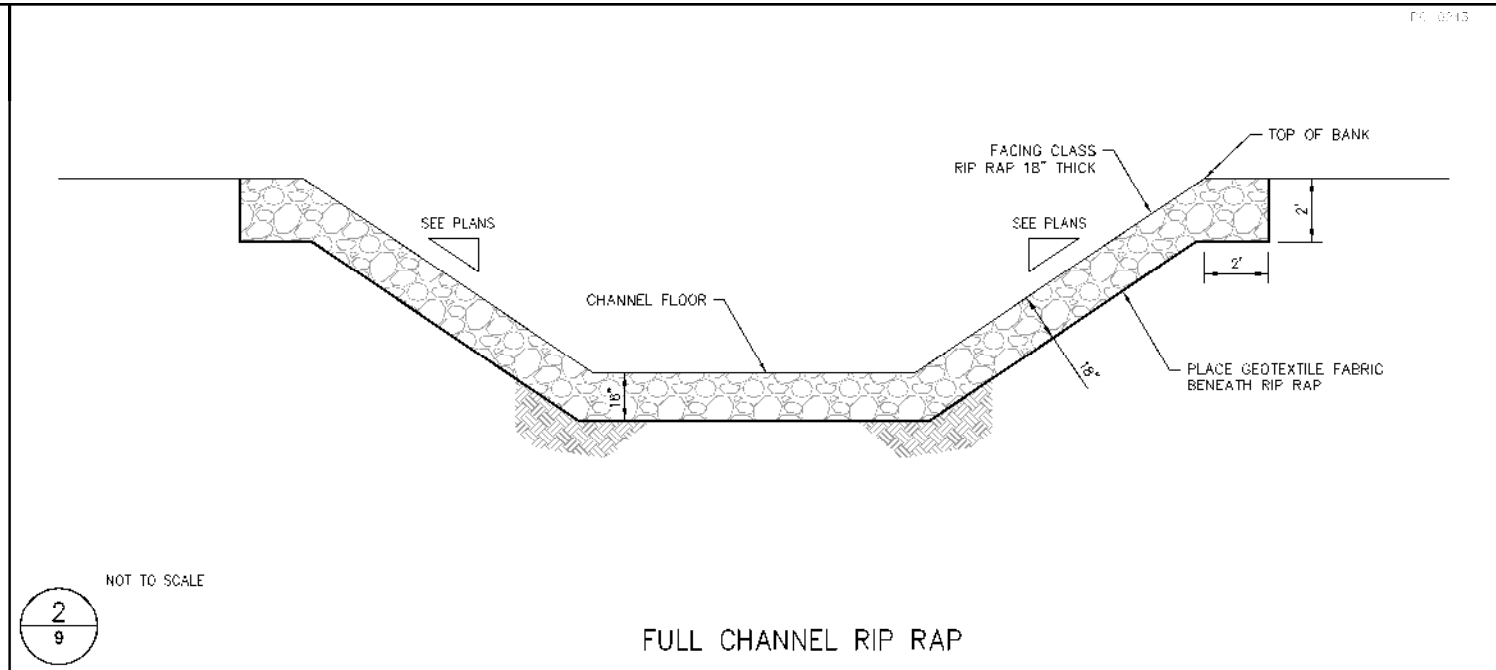
EST. 1968  
**PROVOST & PRITCHARD**  
CONSULTING GROUP  
An Employee Owned Company  
2425 41st AVE. SUITE 100  
OAKLAND, CA 94612-1000  
949.253.1100 FAX 949.253.1000  
www.ppgroup.com

DESIGN ENGINEER:  
READY S. FORTIN  
LICENSE NO:  
65738  
DRAFTED BY: CHECKED BY:  
STC VS  
DATE: 6/3/2015  
JOB NO: 03-11-01  
SHEET  
8 OF 13

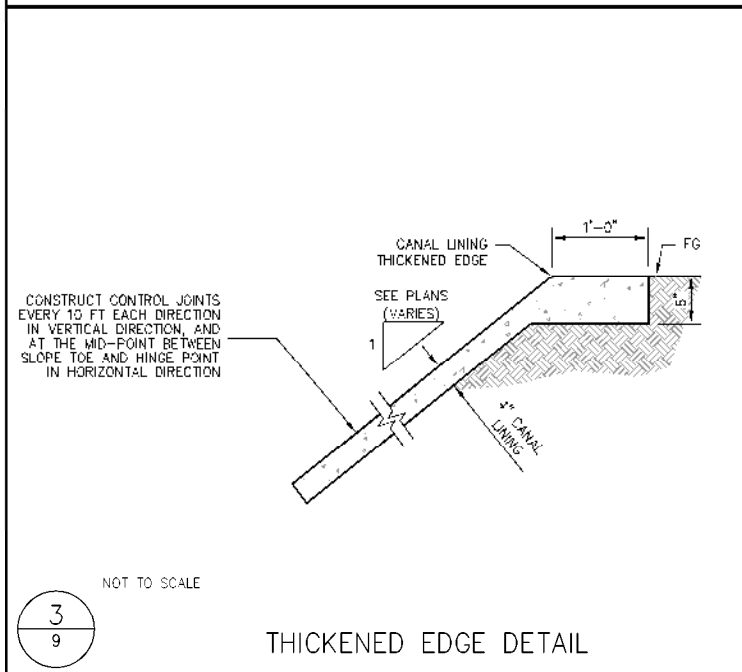




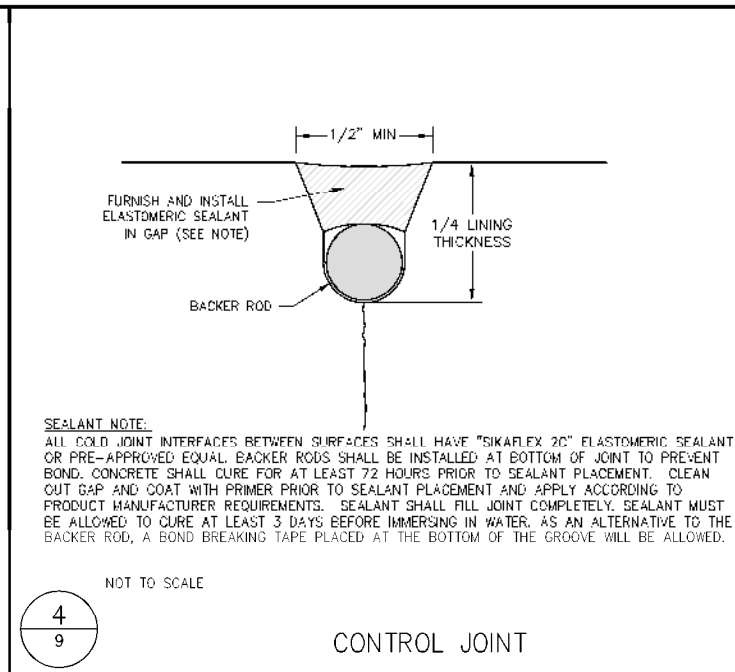
CANAL LINING



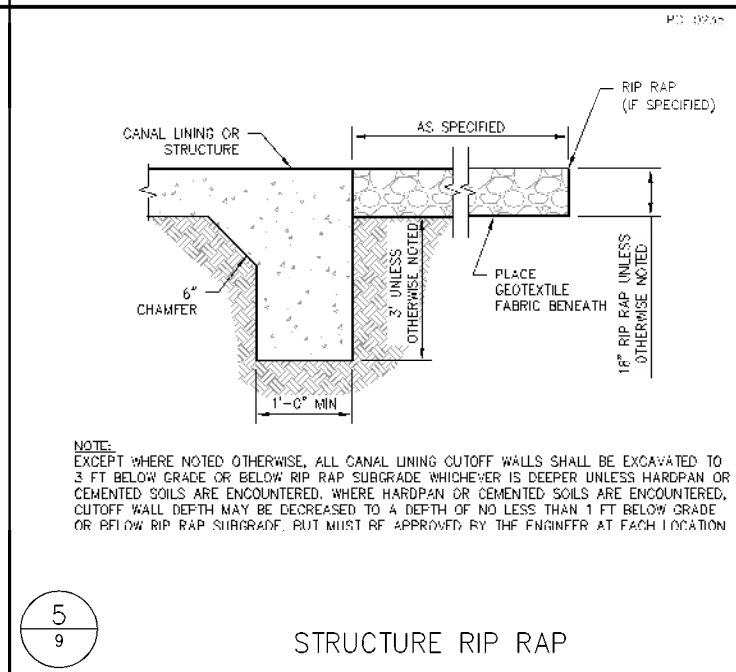
FULL CHANNEL RIP RAP



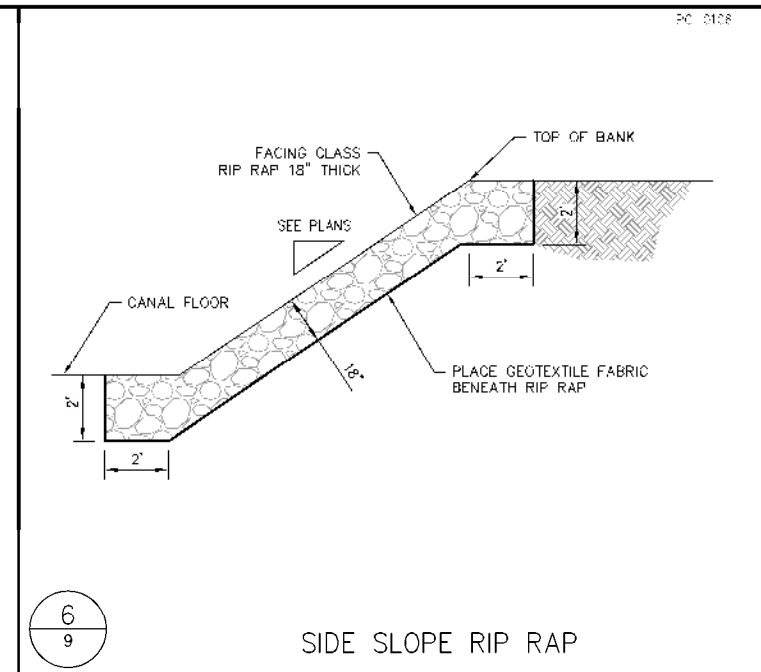
THICKENED EDGE DETAIL



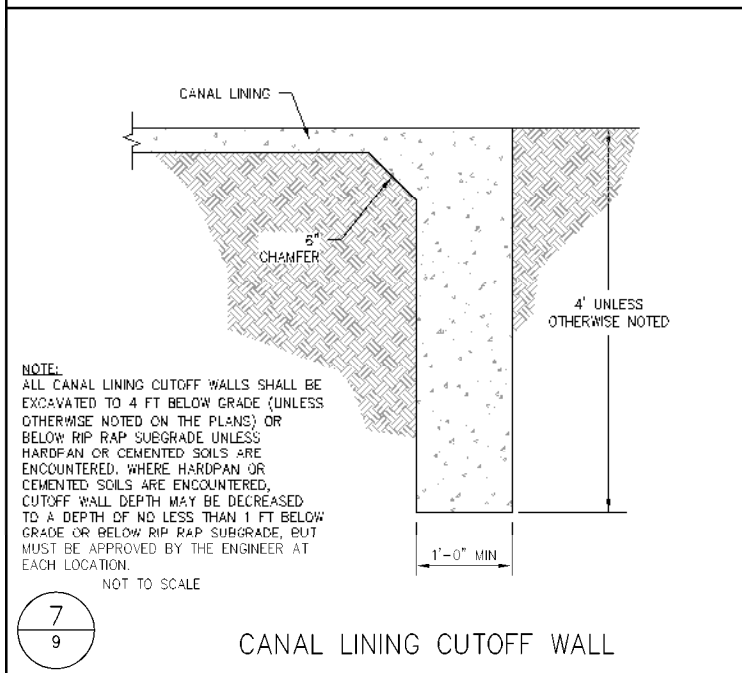
CONTROL JOINT



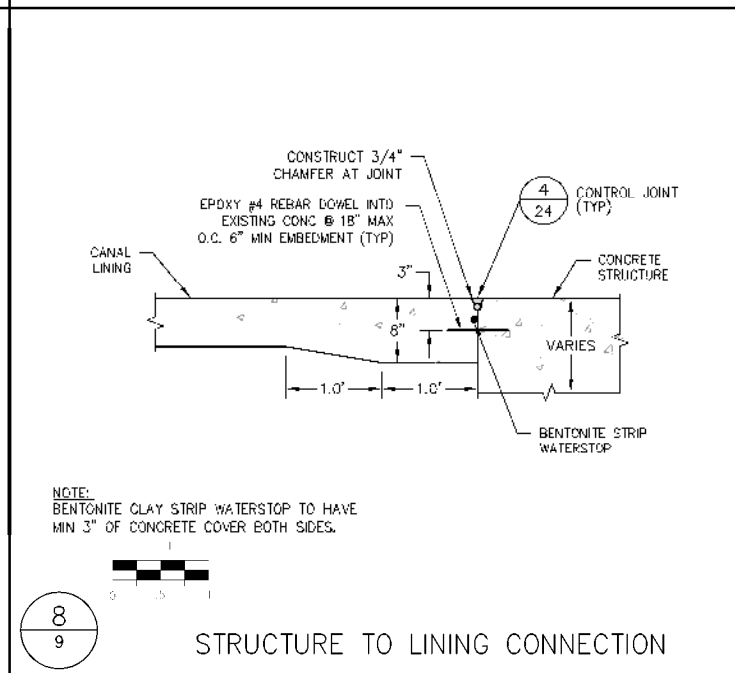
STRUCTURE RIP RAP



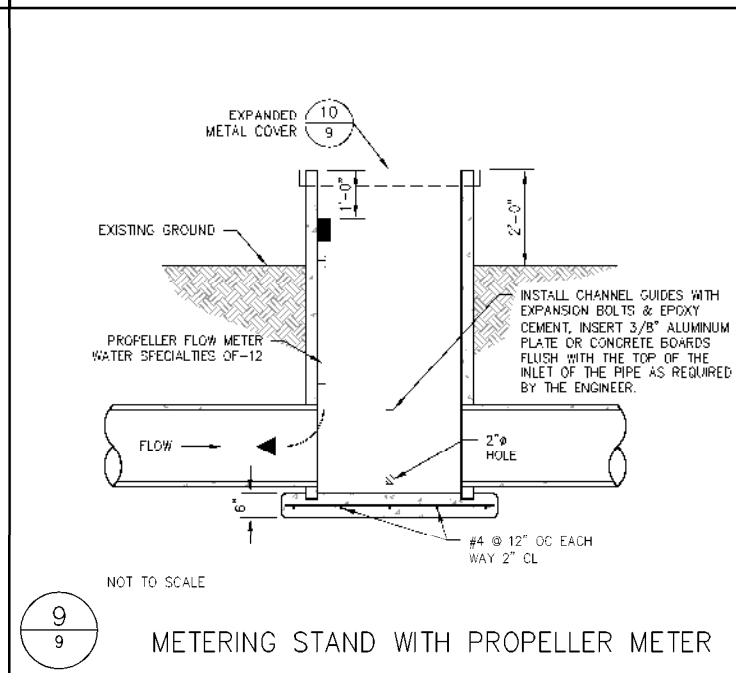
SIDE SLOPE RIP RAP



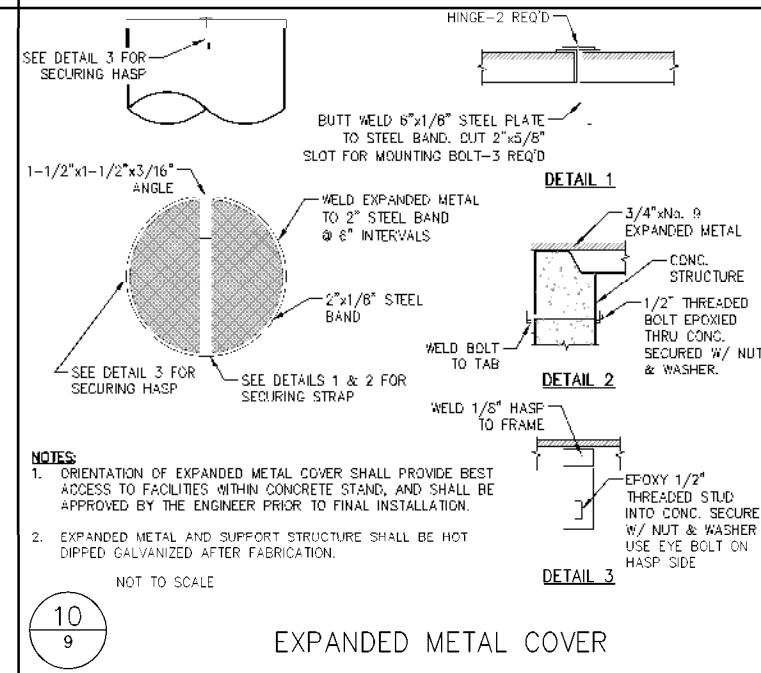
CANAL LINING CUTOFF WALL



STRUCTURE TO LINING CONNECTION



METERING STAND WITH PROPELLER METER



EXPANDED METAL COVER

CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS, LATEST EDITION, AS ADOPTED BY THE BOARD OF SUPERVISORS OF STANISLAUS COUNTY, CALIFORNIA, AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS, LATEST EDITION, AS ADOPTED BY THE BOARD OF SUPERVISORS OF STANISLAUS COUNTY, CALIFORNIA, AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS, LATEST EDITION, AS ADOPTED BY THE BOARD OF SUPERVISORS OF STANISLAUS COUNTY, CALIFORNIA.

PRELIMINARY  
NOT FOR CONSTRUCTION  
6/3/2015

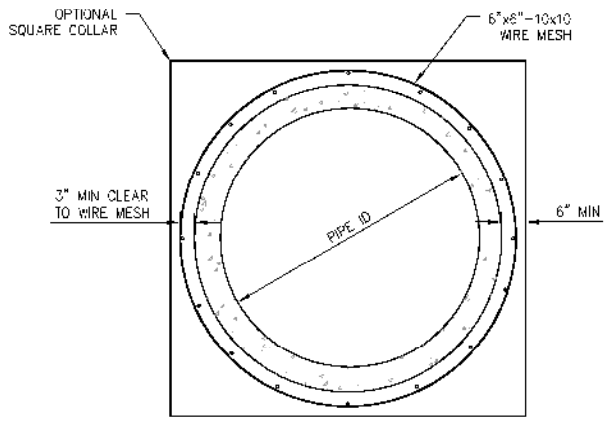
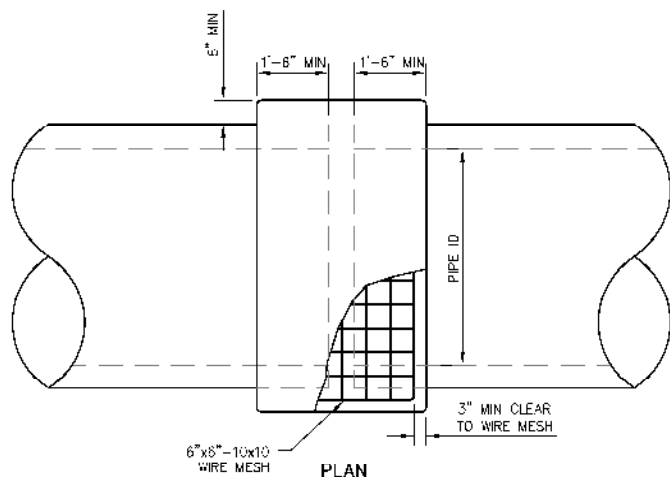
FOR REVIEW ONLY

DIFFUSED SURFACE WATER PROJECT  
EASTSIDE WATER DISTRICT  
STANISLAUS COUNTY, CALIFORNIA  
PRELIMINARY RECHARGE BASIN  
COMPARISON  
CANAL LINING & RIP RAP

EST. 1968  
**PROVOST & PRITCHARD**  
CONSULTING GROUP  
An Employee Owned Company  
2505 41st Avenue, Suite 100  
Oakland, CA 94612-1000  
949.252-1100 FAX 949.252-1000  
www.ppv.com

DESIGN ENGINEER:  
RANDY S. FORTIN MS  
LICENSE NO:  
6573R  
DRAFTED BY: STC  
CHECKED BY: VS  
DATE: 6/3/2015  
JOB NO: 07-1151  
SHEET 9 OF 13

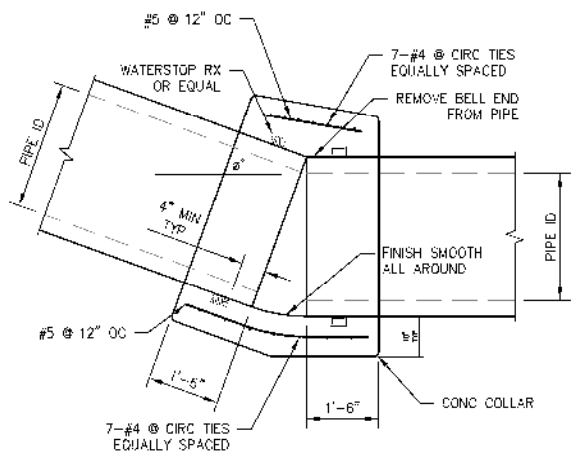




**NOTE:**  
JOINT IS TO BE Banded ON THE INSIDE AFTER TO PLACING OF COLLAR (HAND HOLE IN EXISTING PIPE IS ALLOWED TO MAKE INSIDE BAND). TWENTY-FOUR HOURS AFTER INSIDE BAND IS MADE, COAT WITH EPOXY OVER BANDED AREA, HAND HOLE PLUG TO BE EPOXYED AT MATCHING SURFACES WITH PIPE AND THEN MORTAR AND PLUG HOLE WHEN IN PLACE AND SET EXTERNAL COLLAR MUST BE WATERED DOWN TO 4 POINT OF SATURATION THEN COVERED WITH NET BURLAP AND SHADED WITH SIX INCHES OF SOIL OVER ENTIRE AREA. SAID SOIL MUST BE KEPT MOIST FOR A PERIOD OF FIVE CONTINUOUS DAYS. THE ENTIRE SURFACE OF THE PIPE IN THE COLLAR AREA IS TO BE COATED WITH EPOXY PRIOR TO POURING THE COLLAR.

1/10

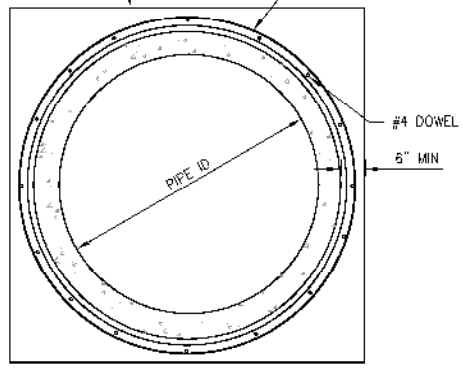
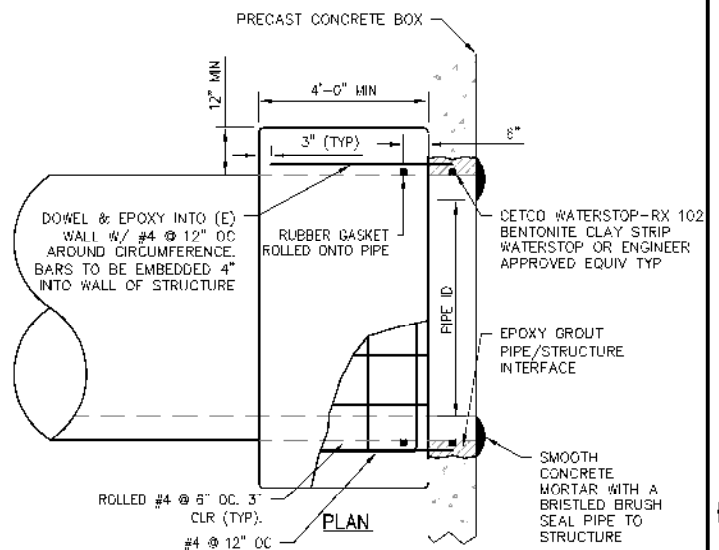
CONCRETE PIPE COLLAR



**NOTE:**  
1. ANGLE  $\theta$  SHALL BE DETERMINED IN THE FIELD AND REBAR PLACEMENT APPROVED BY DISTRICT OR CONSTRUCTION INSPECTOR PRIOR TO CONCRETE PLACEMENT.  
2. CONCRETE SHALL BE VIBRATED AROUND PIPE JOINT DURING PLACEMENT.  
3. INSIDE JOINT TO BE SMOOTH FINISH (BRUSHED) & FLUSH.  
4. THE ENTIRE SURFACE OF THE PIPE IN THE COLLAR AREA IS TO BE COATED WITH EPOXY PRIOR TO POURING THE COLLAR.

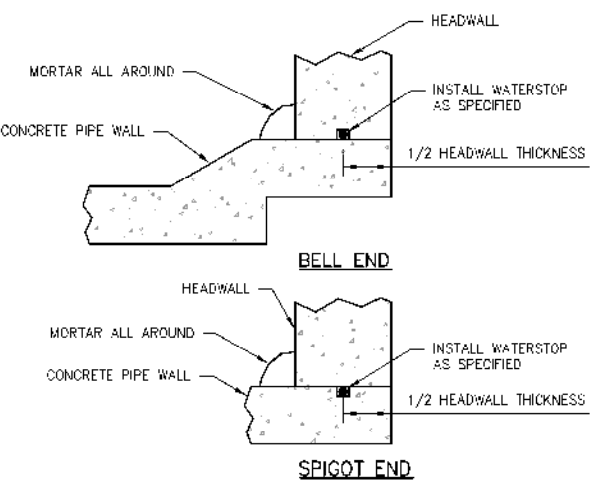
2/10

CONCRETE PIPE COLLAR - ANGLED JOINT



3/10

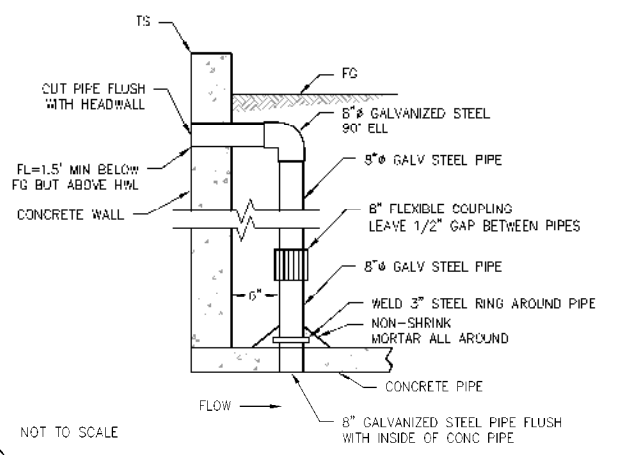
PIPE HEADWALL COLLAR TO PRECAST WALL



**NOTES:**  
1. ALL CONNECTIONS TO BE WATERTIGHT.  
2. IF GATE IS TO BE MOUNTED AT THE CONNECTION, USE SPIGOT END OF PIPE OR CUT OFF PIPE BELL.

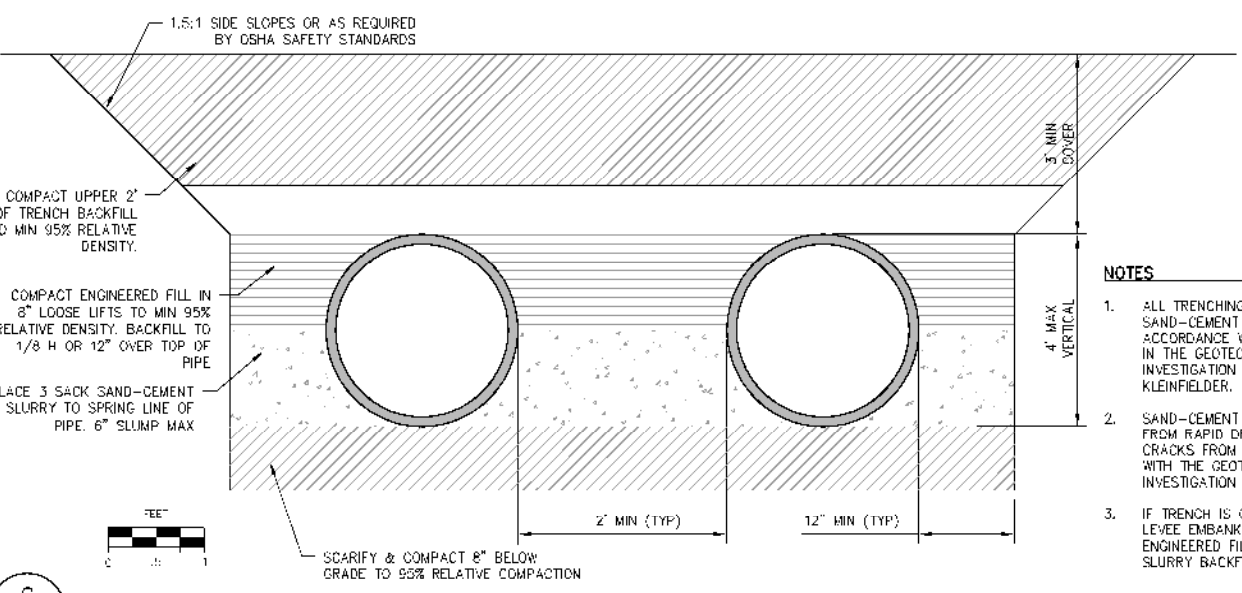
4/10

CONCRETE PIPE TO HEADWALL CONNECTION



5/10

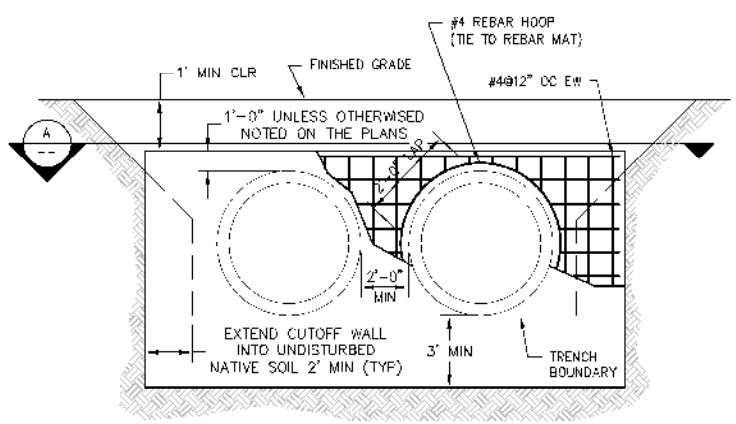
AIR VENT



**NOTES**  
1. ALL TRENCHING AND BACKFILL WHETHER SAND-CEMENT OR SOIL SHALL BE IN ACCORDANCE WITH SPECIFICATIONS OUTLINED IN THE GEOTECHNICAL ENGINEERING INVESTIGATION REPORT PROVIDED BY KLEINFELDER.  
2. SAND-CEMENT SLURRY SHALL BE PROTECTED FROM RAPID DRYING TO PREVENT SHRINKAGE CRACKS FROM DEVELOPING IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEERING INVESTIGATION REPORT BY KLEINFELDER.  
3. IF TRENCH IS OUTSIDE OF COUNTY EASEMENT, LEVEE EMBANKMENT CANAL BANK OR CANAL, ENGINEERED FILL IS SUITABLE IN PLACE OF SLURRY BACKFILL.

6/10

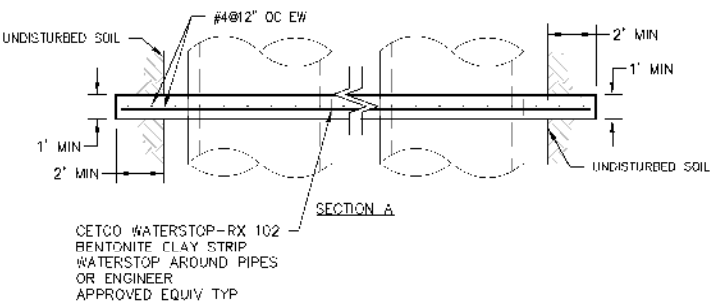
TYPICAL TRENCH DETAIL



FRONT VIEW

7/10

CUTOFF COLLAR



SECTION A

CONCRETE SHALL BE PLACED IN 3\"/>

**PRELIMINARY NOT FOR CONSTRUCTION 6/3/2015**

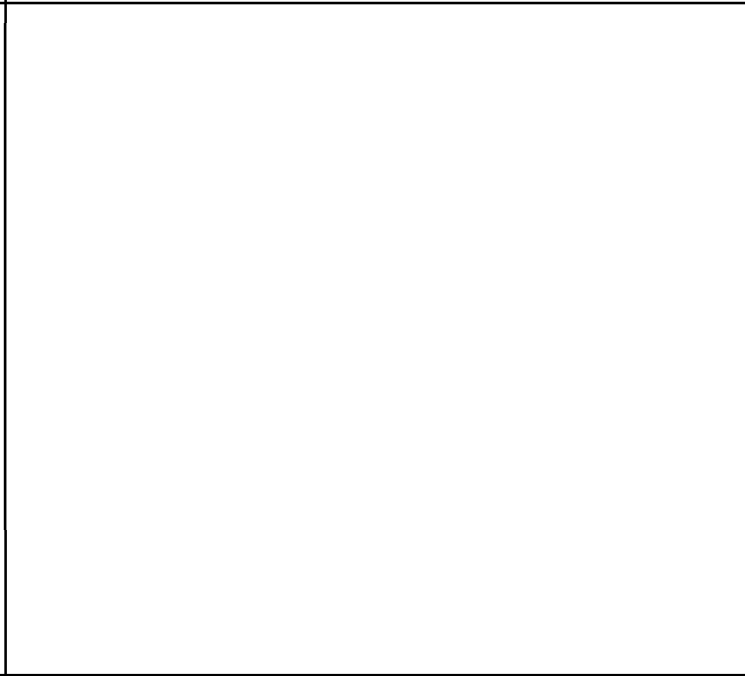
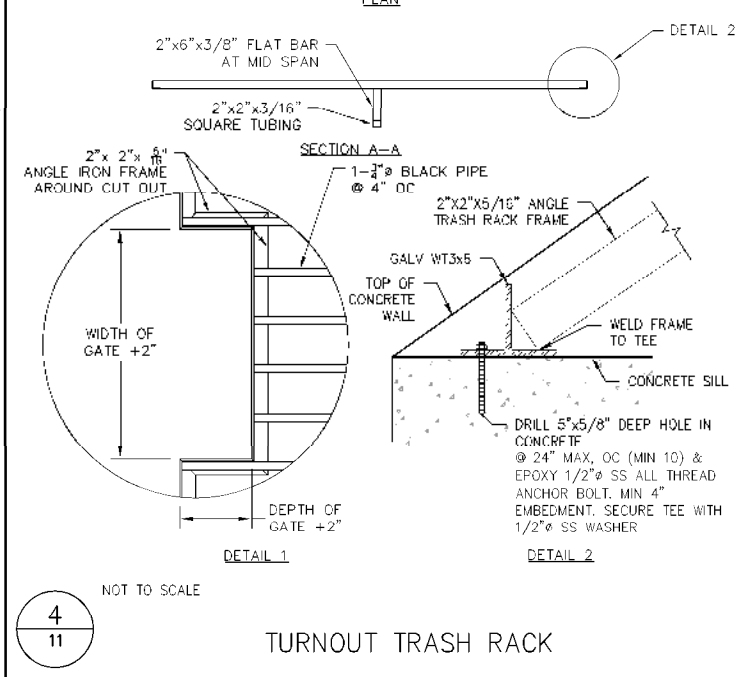
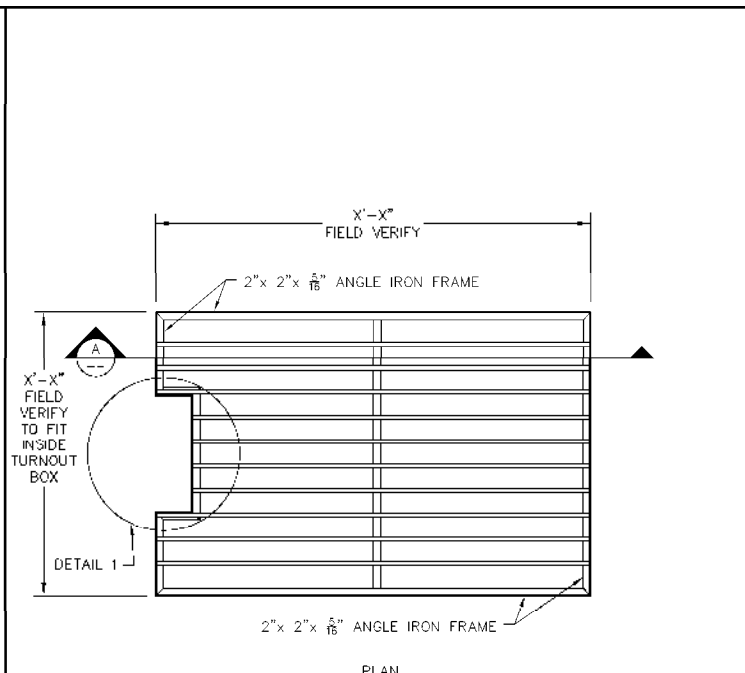
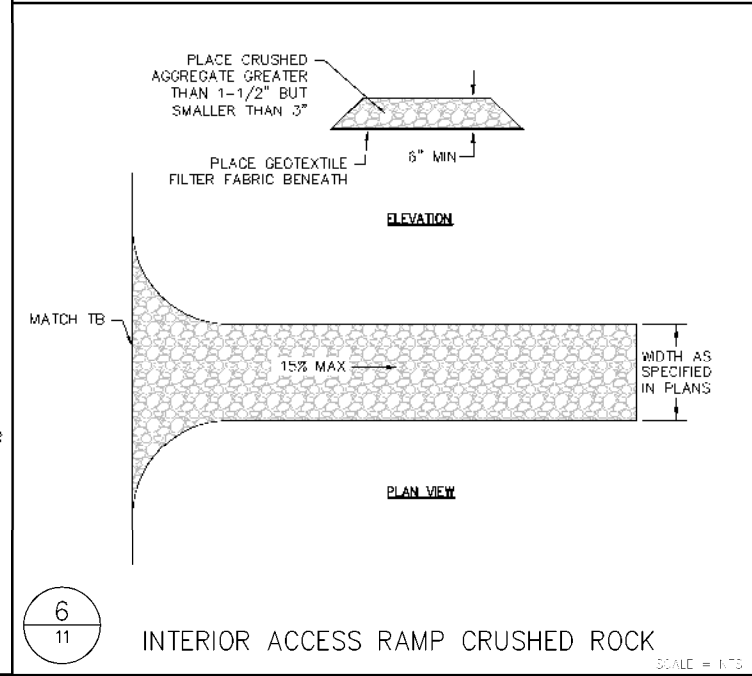
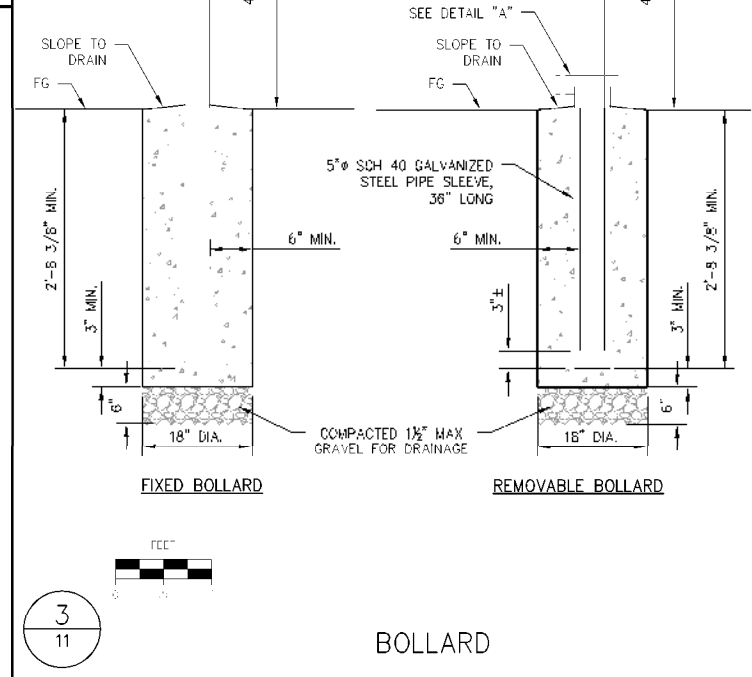
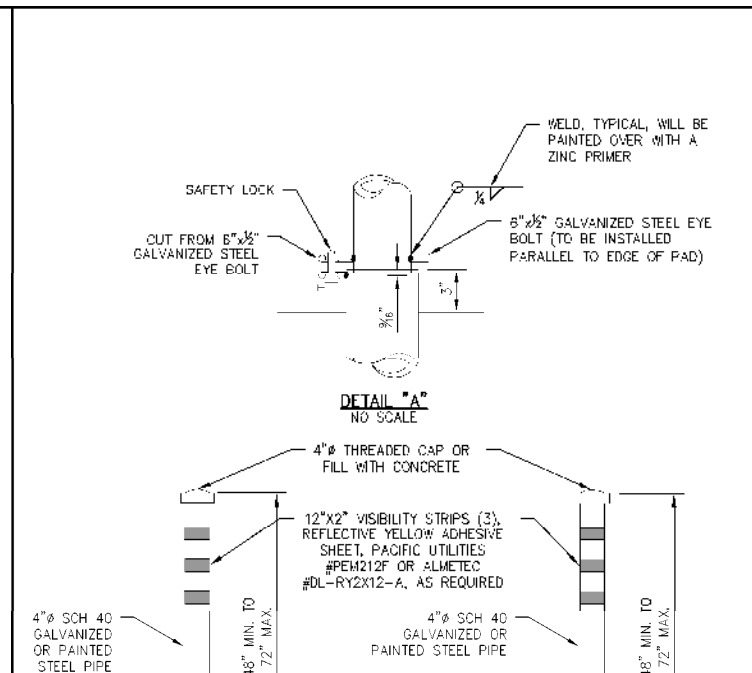
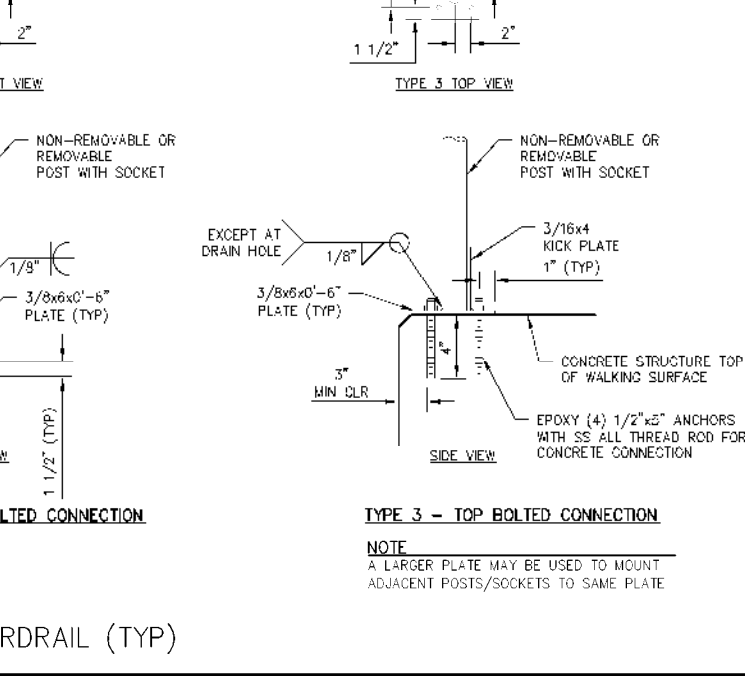
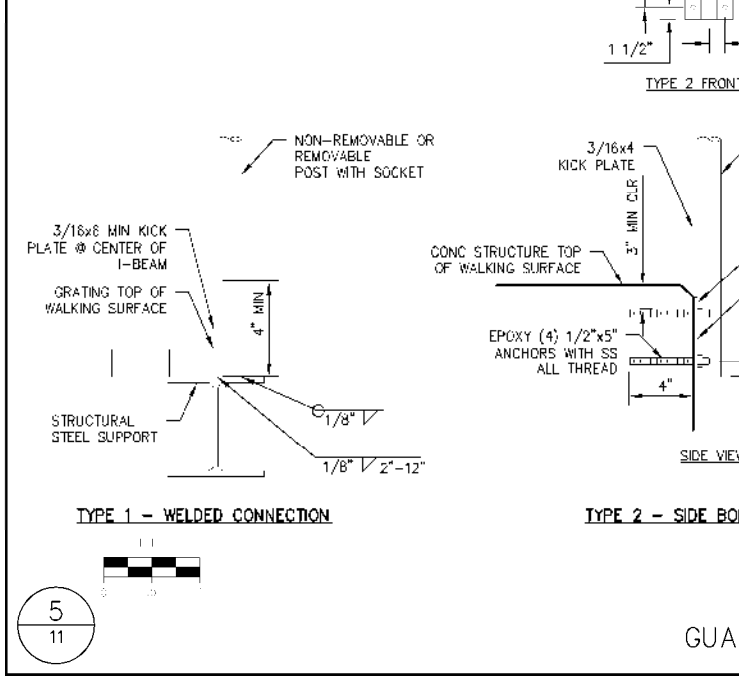
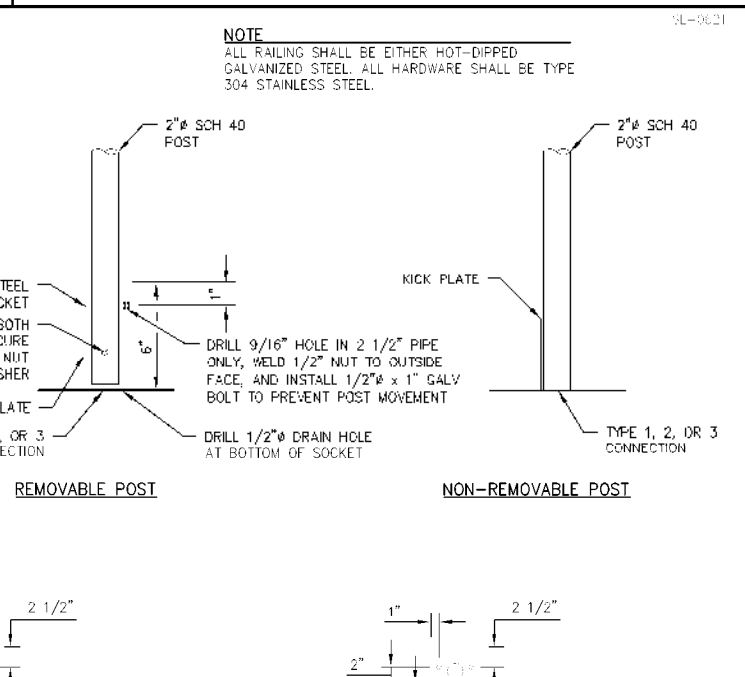
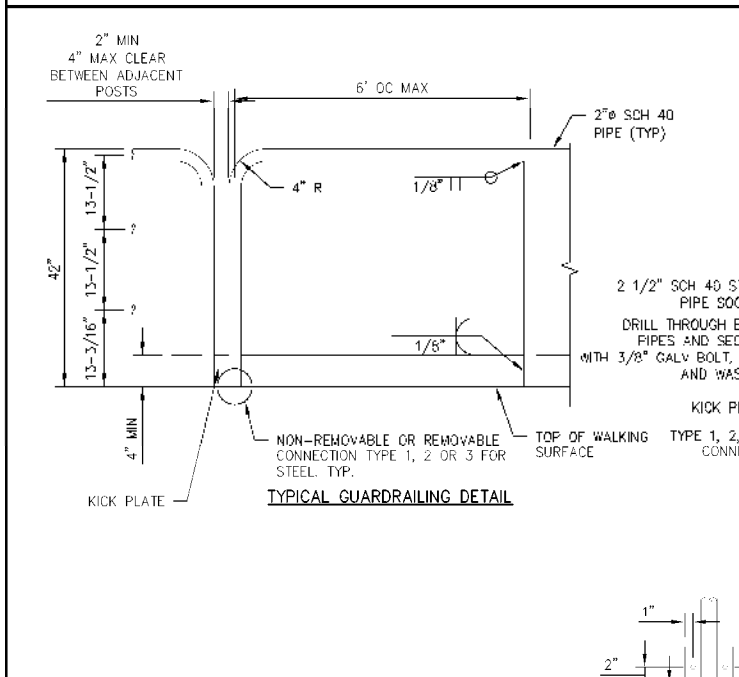
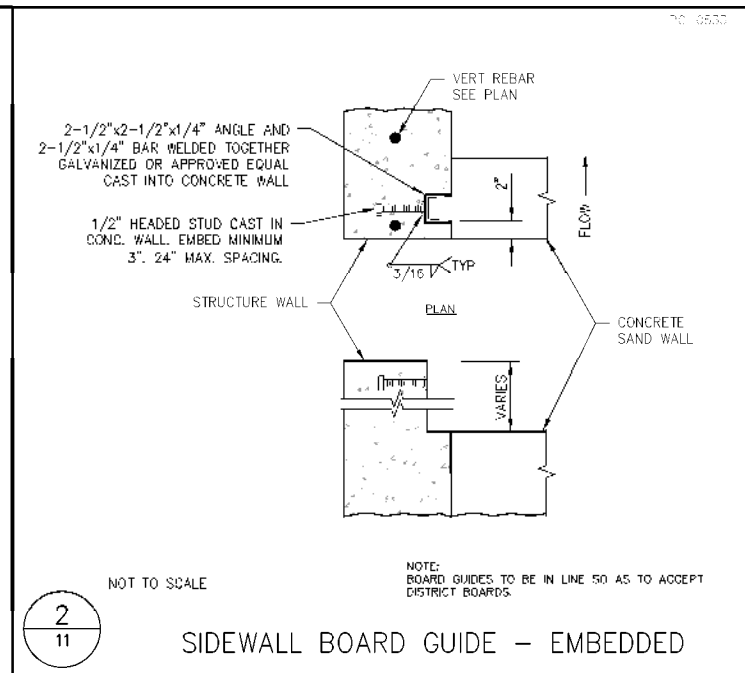
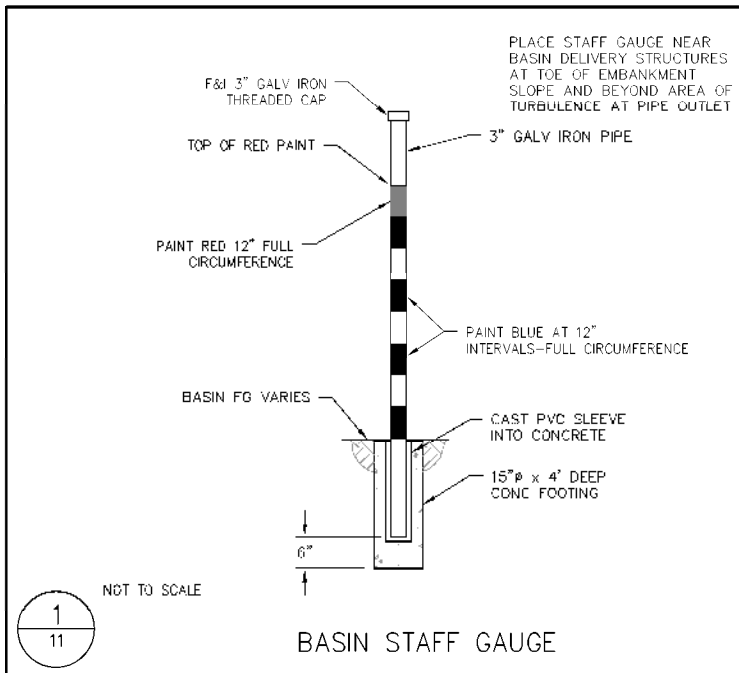
**FOR REVIEW ONLY**

DIFFUSED SURFACE WATER PROJECT  
EASTSIDE WATER DISTRICT  
STANISLAUS COUNTY, CALIFORNIA  
PRELIMINARY RECHARGE BASIN  
COMPARISON  
PIPE DETAILS

EST. 1968  
**PROVOST & PRITCHARD**  
CONSULTING GROUP  
An Employee Owned Company  
2505 41st AVE. #3111  
CLAYTON, CA 94520  
925/232-1100 FAX 925/232-1000  
www.ppv.com

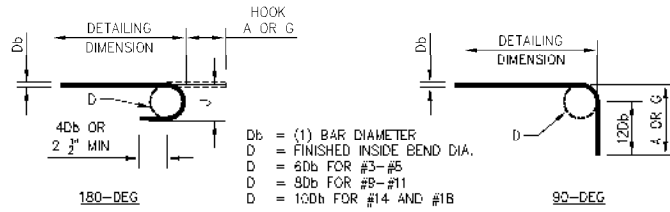
DESIGN ENGINEER:  
READY S. FORTIN  
LICENSE NO: 65738  
DRAFTED BY: STC  
CHECKED BY: VS  
DATE: 6/3/2015  
JOB NO: 0311451  
SHEET 10 OF 13



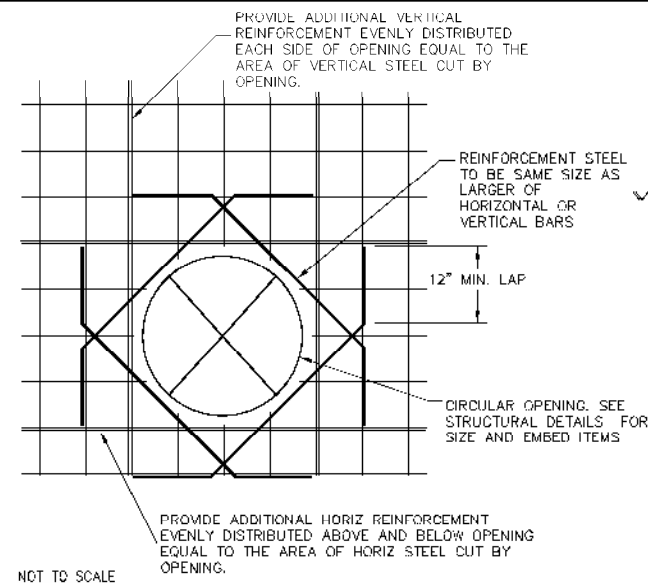
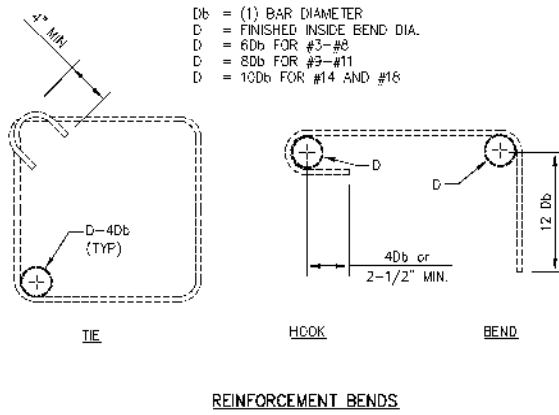


PRELIMINARY NOT FOR CONSTRUCTION 6/3/2015		REVISION NO. BY DATE
<b>FOR REVIEW ONLY</b>		
DIFFUSED SURFACE WATER PROJECT EASTSIDE WATER DISTRICT STANISLAUS COUNTY, CALIFORNIA PRELIMINARY RECHARGE BASIN COMPARISON		
<b>CONSTRUCTION DETAILS</b>		
EST. 1968 <b>PROVOST &amp; PRITCHARD</b> CONSULTING GROUP An Employee Owned Company 2505 41st AVE. #3111 COLTON, CALIFORNIA 95713-9998 957/323-1100 FAX 957/323-1000 provost@pg.com		
DESIGN ENGINEER: RICHARD S. FORTIN MS LICENSE NO: 65738 DRAFTED BY: STC CHECKED BY: VS DATE: 6/3/2015 JOB NO: 07-11-01 ORIGINAL SCALE: 3/8" = 1'-0" REVISIONS: AS NOTED FOR APPROVAL OF REVISIONS:		
11 OF 13		



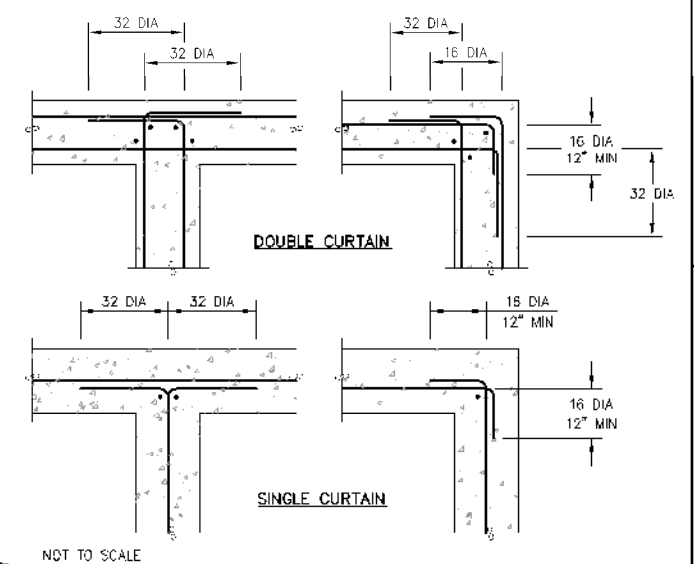


DIMENSION OF STANDARD 180° HOOKS, ALL GRADES			DIMENSION OF STANDARD 90° HOOKS, ALL GRADES		
SIZE	D	J	A OR G	D	A OR G
#3	2 1/4"	3"	5"	2 1/4"	8"
#4	3"	4"	6"	3"	8"
#5	3 3/4"	5"	7"	3 3/4"	10"
#6	4 1/2"	6"	8"	4 1/2"	12"
#7	5 1/4"	7"	10"	5 1/4"	14"
#8	6"	8"	11"	6"	16"
#9	9 1/2"	11 3/4"	15"	9 1/2"	19"
#10	10 3/4"	13 1/4"	17"	10 3/4"	22"
#11	12"	14 3/4"	19"	12"	24"
#14	18 1/4"	21 3/4"	27"	18 1/4"	31"
#18	24"	28 1/2"	36"	24"	41"



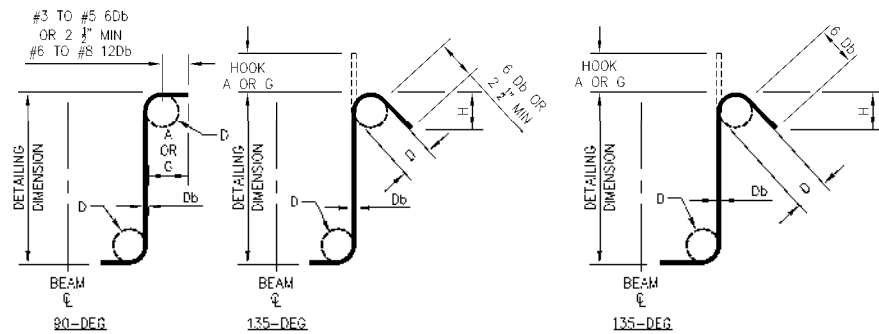
2  
12

REINFORCEMENT AT OPENINGS



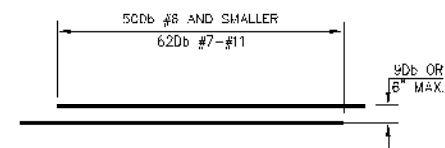
3  
12

REINFORCED CONCRETE CORNERS



SIZE	90°		135°	
	D	A OR G	A OR G	ARROX. H
#3	1 1/2"	4"	4"	2 1/2"
#4	2"	4 1/2"	4 1/2"	3"
#5	2 1/2"	6"	5 1/2"	3 3/4"
#6	4 1/2"	12"	8"	4 1/2"
#7	5 1/4"	14"	9"	5 1/4"
#8	6"	16"	10 1/2"	6"

135° SEISMIC HOOK				
SIZE	D	A OR G	ARROX. H	
#3	1 1/2"	4"	2 1/2"	
#4	2"	4 1/2"	3"	
#5	2 1/2"	5 1/2"	3 3/4"	
#6	4 1/2"	8"	4 1/2"	
#7	5 1/4"	9"	5 1/4"	
#8	6"	10 1/2"	6"	

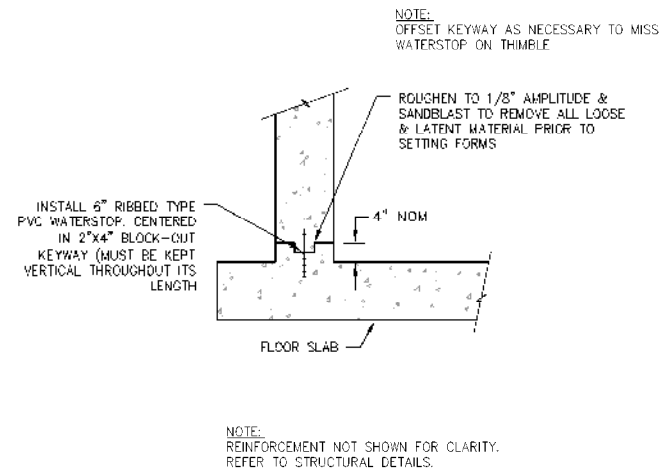


SIZE	SPLICE LENGTH / Db				
	CONCRETE STRENGTH (PSI)				
	2500	3000	3500	4000	5000
#6 AND SMALLER	39	43	46	50	55
#7-#11	49	53	58	62	69

NOTE  
 CLASS C SPLICE  $f_y=60ksi, f'_c=4ksi$   
 SEE CHART FOR DIFFERENT CONCRETE STRENGTHS

4  
12

CONSTRUCTION JOINT



1  
12

REINFORCEMENT BENDS & SPLICES

EST. 1968  
**PROVOST & PRITCHARD**  
 CONSULTING GROUP  
 An Employee Owned Company  
 2505 ALI JAVI AVE. SUITE 100  
 OAKLAND, CALIF. 94612-1000  
 909/252-1100 FAX 909/252-1000  
 www.ppr.com

DESIGN ENGINEER:  
 RANDY S. THOMPSON

LICENSE NO:  
 62138

DRAFTED BY: CHECKED BY:  
 STC VS

DATE: 6/3/2015

JOB NO: 15441401

CREATED WITH: REVISED IN: 12 OF 13

DIFFUSED SURFACE WATER PROJECT  
 EASTSIDE WATER DISTRICT  
 STANISLAUS COUNTY, CALIFORNIA  
 PRELIMINARY RECHARGE BASIN  
 COMPARISON  
 CONCRETE DETAILS

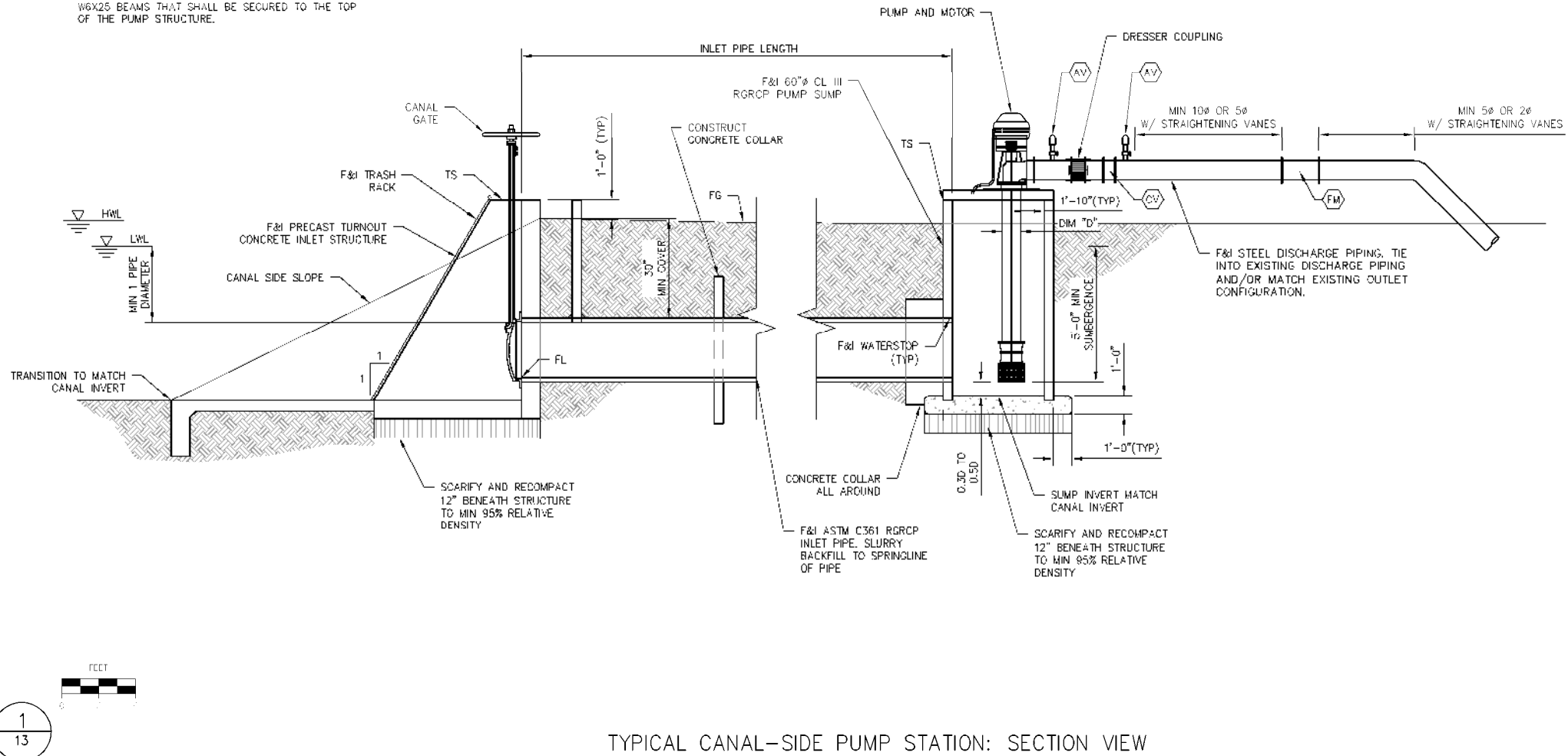
PRELIMINARY  
 NOT FOR CONSTRUCTION  
 6/3/2015

REVISION BY DATE

**PUMP STATION NOTES**

- ALL PUMP STATIONS SHALL HAVE A SUBMERGENCE OF NO LESS THAN 5'-0".
- ALL PUMP COLUMN CENTER LINES SHALL BE APPROXIMATELY 1'-10" FROM THE INSIDE WALL OF THE PUMP STRUCTURE.
- THE SUCTION BELL OF THE PUMP BOWL ASSEMBLY SHALL BE A MINIMUM OF 6" FROM THE SUMP INVERT.
- PUMP STRUCTURE BAY WIDTHS SHALL BE 3'-0".
- THE PUMPS SHALL BE SET UPON TWO PARALLEL W6X25 BEAMS THAT SHALL BE SECURED TO THE TOP OF THE PUMP STRUCTURE.

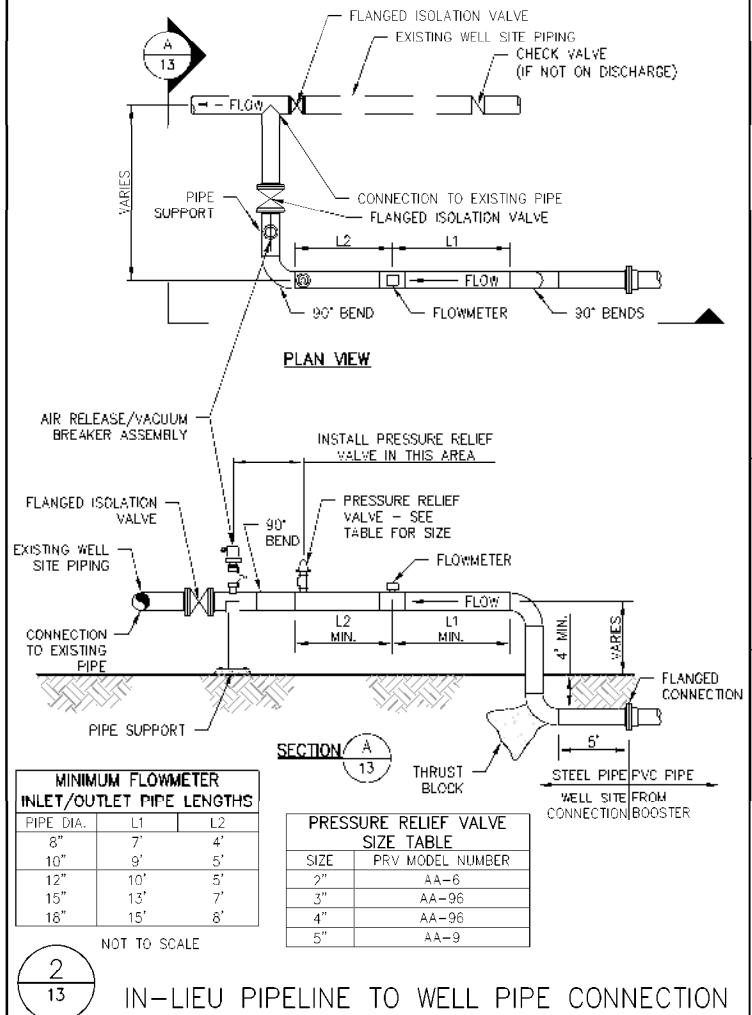
- (AV) AIR RELEASE AND VACUUM RELIEF VALVE
- (CV) CHECK VALVE
- (FM) PROPELLER FLOW METER



TYPICAL CANAL-SIDE PUMP STATION: SECTION VIEW

**NOTES**

- CONTRACTOR SHALL PROVIDE ALL NECESSARY FITTINGS, REDUCERS, AND/OR OTHER FACILITIES IN CONFORMANCE WITH THE PROJECT SPECIFICATIONS, TO CONSTRUCT A FULLY COMPLETE AND FUNCTIONING WELL SITE CONNECTION.
- FLOWMETER MAY HAVE FLANGED OR SADDLE TYPE CONNECTION.
- LOCATION OF ISOLATION VALVE, AIR RELEASE/VACUUM BREAKER ASSEMBLY, AND FLOW METER SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.



**MINIMUM FLOWMETER INLET/OUTLET PIPE LENGTHS**

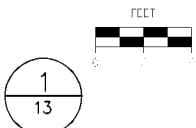
PIPE DIA.	L1	L2
8"	7'	4'
10"	9'	5'
12"	10'	5'
15"	13'	7'
18"	15'	8'

**PRESSURE RELIEF VALVE SIZE TABLE**

SIZE	PRV MODEL NUMBER
2"	AA-6
3"	AA-96
4"	AA-96
5"	AA-9

NOT TO SCALE

IN-LIEU PIPELINE TO WELL PIPE CONNECTION



EST. 1968  
**PROVOST & PRITCHARD**  
 CONSULTING GROUP  
 An Employee Owned Company  
 2505 ALI JAVI AVE. #111-111R  
 CLACKAMAS, OR 97015  
 503/252-1100 FAX 503/252-1000  
 www.ppg.com

DESIGN ENGINEER:  
 RANDY S. THOMPSON  
 LICENSE NO:  
 62238  
 DRAFTED BY: CHECKED BY:  
 STC VS  
 DATE: 6/3/2015  
 JOB NO: 15441401  
 ORIGINAL SHEET SHOWN WITH  
 REVISIONS AND DATE FOR  
 IDENTIFICATION OF REVISIONS  
 SHEET

PRELIMINARY  
 NOT FOR CONSTRUCTION  
 6/3/2015

FOR REVIEW ONLY

DIFFUSED SURFACE WATER PROJECT  
 EASTSIDE WATER DISTRICT  
 STANISLAUS COUNTY, CALIFORNIA  
 PRELIMINARY RECHARGE BASIN  
 COMPARISON  
 IN-LIEU TURNOUT DETAIL

No. BY DATE  
 REVISION

13 OF 13