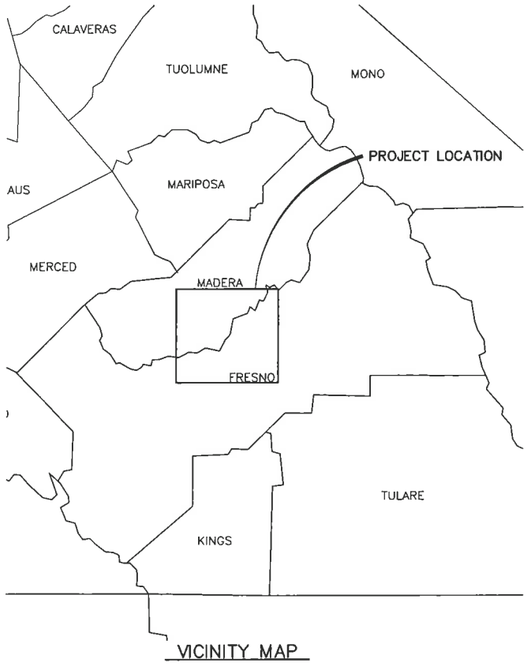
Appendix B
Draft Engineering Designs

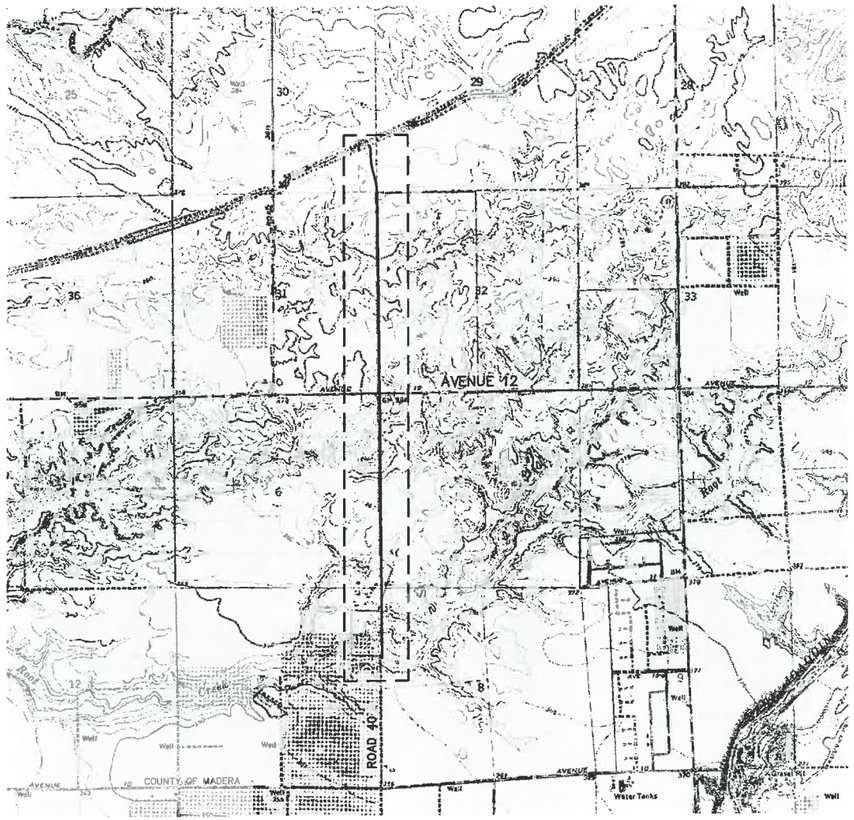
Castle and Cooke, Inc.

Madera County, CA

Gateway Village
In-Lieu Pipeline



VICINITY MAP



SITE MAP

GENERAL NOTES

1. Madera Irrigation District (MID) 559-673-3514 shall be contacted at least 48 hours prior to commencement of work on or near existing District facilities.
2. Used material, rejects, misfits, or seconds, etc. are not acceptable for use on facilities.
3. All construction shall be in conformance with these plans.
4. Contractor shall field verify the horizontal and vertical locations of all existing facilities prior to commencing work. Call Underground Service Alert (USA) at 811. Contractor shall make Engineer aware of any discrepancies.
5. MID shall inspect all work phases on irrigation facilities for conformance to MID specifications. Reinforcing shall not be encased in concrete without prior MID inspections. Likewise, concrete shall not be covered with earth prior to MID inspection.
6. 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 exposed steel shall be painted with a pre-treatment primer, an undercoat and a final coat of paint in accordance with MADERA IRRIGATION DISTRICT specifications.
7. 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 secured with PVC tape.
8. All construction shall be performed in accordance with applicable health and safety laws of the State of California and CAL/OSHA standards.
9. 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 MADERA IRRIGATION DISTRICT and the engineer.
10. All excess material and/or debris shall be removed upon completion of installation.
11. Contractor shall be responsible for providing adequate dust control at all times. A dust control permit form from SJVAPCD is required.
12. Contractor shall prepare, file, and conform with all provisions of a Storm Water Pollution Prevention Plan.

DESIGN NOTES

1. TURNOUT DESIGN FLOW = 50 CFS
2. IRRIGATION LATERAL PIPELINES NOT A PART OF THESE DRAWINGS.

BENCH MARKS

All elevations shown are based on the California Coordinate System, Zone 3, NAD 83, Epoch 1993, as determined by Station HPGN-D-CA-06-RG with an NAVD 88 elevation of 430.00 Feet.

U.S.C. & G.S. MONUMENT

The station is located near the State Highway 41 crossing of the Madera Canal. To reach the station from the junction of State Highways 41 and 145, go south on Highway 41 for 2.3 miles to the bridge over the Madera Canal. Continue south on Highway 41 for 0.1 mile to the station on the left at post mile 6.8. The station is a survey disk encased in PVC pipe with access cover set in concrete flush with the ground. The station is about 500 FT south of the bridge over the Madera Canal, about 215 FT south of a concrete viaduct over the canal, 59.1 FT southwest of a road warning sign, 54.0 FT east of the centerline of Highway 41, 22.5 FT west of the center of the access road on the west side of the canal, 2.3 FT west of a carsonite witness post and about 2 FT higher than Highway 41.

TOPOGRAPHY NOTE

Topography shown is photogrametric data provided by Aerial Photomapping Services August 2003, and supplemented by field surveys conducted March 2006.

BOUNDARY NOTE

The boundary/easement information shown on these plans is based upon record information tied to physical monuments, and was prepared under the direction of Craig E. Baum, PLS 7680.

CONSULTING ENGINEERS AND LAND SURVEYORS OF CALIFORNIA

Construction Contractor agrees that in accordance with generally accepted construction practices, construction Contractor will be required to assume sole and complete responsibility for job site conditions during the course of construction of the project, including safety of all persons and property, that this requirement shall be made to apply continuously and not be limited to normal working hours, and construction Contractor further agrees to defend, indemnify and hold design professional harmless from any and all liability, real and alleged, in connection with the performance of work on this project, excepting liability arising from the sole negligence of design professional.

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

1. 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.
2. THE CONTRACTOR SHALL HAVE AT THE WORK SITE, COPIES OR SUITABLE EXTRACTS OF CONSTRUCTION SAFETY ORDERS, ISSUED BY CAL-OSHA. HE 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.
3. TO PROTECT THE LIVES AND HEALTH OF HIS 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.
4. THE CONTRACTOR ALONE SHALL BE RESPONSIBLE FOR THE SAFETY, EFFICIENCY, AND ADEQUACY OF HIS FACILITIES, APPLIANCES, AND METHODS AND FOR ANY DAMAGE, WHICH MAY RESULT FROM THEIR FAILURE OR THEIR IMPROPER CONSTRUCTION, MAINTENANCE OR OPERATION.
5. 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.

APPROVALS

ROOT CREEK WATER DISTRICT DATE

MADERA IRRIGATION DISTRICT DATE

MADERA COUNTY DATE

SHEET INDEX

PRELIMINARY
FOR REVIEW AND APPROVAL
01/26/2011

No.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RANDY S. HOPKINS No. 63538 Civil STATE OF CALIFORNIA

DATE SIGNED: ____

Gateway Village
In-Lieu Pipeline
Castle and Cooke, Inc.
Madera County, CA

COVER SHEET

ESTD 1968 PROVOST & PRITCHARD ENGINEERING GROUP
An Employee Owned Company
286 WEST CROMWELL AVENUE
FRESNO, CALIFORNIA 93711
559/449-2700 FAX 559/449-2715
www.ppeng.com

DESIGN ENGINEER:	Randy Hopkins
LICENSE NO:	63538
DRAFTED BY:	DVS
CHECKED BY:	VSL
SCALE:	AS SHOWN
DATE:	01/26/2011
JOB NO:	12491101
DWG. NO:	
SHEET	GN1 OF

5/29/2008 8:12:27 AM G:\Clients\Castle_Cooke-1434\1434-Gateway\1434-Expon Phs 1\14340405-Gateway Pipeline LD\dwg\SHEET\14340405-GN-COVER.dwg -aaron

811 Know what's below. Call before you dig.

WARNING
POWER LINES OVERHEAD

LEGEND

EXISTING	PROPOSED	
		RIGHT-OF-WAY
		PROPERTY LINE
-E-	-E-	ELECTRIC LINE (UNDERGROUND)
-E-	-E-	ELECTRIC LINE (AERIAL)
-T-	-T-	TELEPHONE LINE (UNDERGROUND)
		IRRIGATION PIPELINE
		CHAIN LINK FENCE
		EDGE OF A.C. PAVEMENT
		UTILITY POLE AND ANCHOR
E	E	ELECTRIC VAULT
		MANHOLE / STANDPIPE
		CULVERT (SIZE AS NOTED)
		GUARD POST
		CONTROL POINT
		BENCHMARK
		MONUMENT
TEL	TEL	TELEPHONE RISER
T	T	TELEPHONE VAULT
		FLOW METER
		WATER VALVE
		CANAL GATE
		WELL
	XXX	DETAIL NUMBER / SHEET NUMBER
EL=XXX.XX / DESC.		SPOT ELEVATION / DESCRIPTION
		SECTION LINE
		APPROX. EDGE OF VEGETATION
		10 FOOT EXISTING GROUND SURFACE CONTROL
		2 FOOT EXISTING GROUND SURFACE CONTROL
		CONSTRUCTION EASEMENT
		O & M EASEMENT
		DIRECTION OF SLOPE

ABBREVIATIONS

AP	ANTENNA POLE
APN	ASSESSOR'S PARCEL NUMBER
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
BC	BEGIN CURVE
CA	CALIFORNIA
CFS	CUBIC FEET PER SECOND
CIP	CAST IN PLACE
CL	CLASS
CLF	CHAIN LINK FENCE
C/L OR ℄	CENTER LINE
CONC	CONCRETE
CONST	CONSTRUCTION
CY	CUBIC YARD
DIA OR ø	DIAMETER
DIST	DISTRIBUTION
DISTRICT	MADERA IRRIGATION DISTRICT
EC	END OF CURVE
EG	EXISTING GRADE
ELEC	ELECTRICAL
ELEV OR EL	ELEVATION
ELL	ELBOW
EP	EDGE OF PAVEMENT
ESMT	EASEMENT
EW	EACH WAY
EXIST OR (E)	EXISTING
F&I	FURNISH AND INSTALL
FG	FINISHED GRADE
FL OR ℄	FLOW LINE
FT	FEET
FV&C	FRESNO VALVE & CASTINGS
GALV	GALVANIZED
GB	GRADE BREAK
HGL	HYDRAULIC GRADE LINE
HT	HEIGHT
HWL	HIGH WATER LEVEL
ID	INSIDE DIAMETER
INV	INVERT
IRR	IRRIGATION
LF	LINEAR FEET
LT	LEFT
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MID	MADERA IRRIGATION DISTRICT
MIN	MINIMUM
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
O&M	OPERATION & MAINTENANCE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD
PE	PERMANENT EASEMENT
PH	PHASE
P/L OR ℄	PROPERTY LINE
PROD	PRODUCTION
PROP OR (P)	PROPOSED
PSI	POUNDS PER SQUARE INCH
PVC	POLY VINYL CHLORIDE
Q	DESIGN FLOW
RC	RADIUS OF CURVE
RGRCP	RUBBER GASKETED REINFORCED CONCRETE PIPE
ROW OR R/W	RIGHT OF WAY
RT	RIGHT
S=	SLOPE
SEC	SECTION
SF	SQUARE FEET
SGL	STATIC GRADE LINE
SP	SERVICE POLE
STA	STATION
TCE	TEMPORARY CONSTRUCTION EASEMENT
TS	TOP OF STRUCTURE
TW	TOP OF WALL
TWS	TRAVELING WATER SCREEN
TYP	TYPICAL
USBR	UNITED STATES BUREAU OF RECLAMATION

GRADING NOTES

1. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT AND PERFORM ALL GRADING AND EARTHWORK PROCEDURES TO INSTALL STRUCTURES AND PIPELINES AND CONSTRUCT CANAL EMBANKMENTS.
2. OVEREXCAVATE AND RECOMPACT TO A MINIMUM DEPTH OF 12" UNDER AND WITHIN 5' OF ALL CANAL BANKS, STRUCTURES AND STANDPIPES TO A MINIMUM 90% RELATIVE COMPACTION.
3. NATIVE SOIL MATERIALS, EXCLUSIVE OF DEBRIS, LESS THAN 3 INCHES IN MAXIMUM DIMENSION, AT THE PROPER MOISTURE RANGE, AND CONTAINING LESS THAN 0.3% ORGANICS BY WEIGHT MAY BE USED AS ENGINEERED FILL. FINISHED CANAL BANKS SIDES SHALL BE SMOOTH AND FREE OF DEBRIS.
4. ALL AREAS TO RECEIVE ENGINEERED FILL SHOULD BE SCARIFIED TO A MINIMUM DEPTH OF 12 INCHES, UNIFORMLY MOISTURE CONDITIONED, AND COMPACTED TO AT LEAST 90% RELATIVE COMPACTION.
5. ENGINEERED FILL SHOULD BE PLACED IN LOOSE LIFTS NO THICKER THAN 8 INCHES, AND UNIFORMLY MOISTURE CONDITIONED TO AT OR ABOVE OPTIMUM MOISTURE CONTENT AT THE TIME OF COMPACTION, AND RE-COMPACTED TO AT LEAST 90% RELATIVE COMPACTION.
6. ENGINEERED FILL SHALL BE CONSTRUCTED USING METHODS THAT MITIGATE STRATIFICATION AND LAMINATION OF THE FILL AND MUST BE COMPACTED USING KNEADING COMPACTORS (I.E., SHEEPSFOOT) TO PROMOTE BLENDING WITHIN AND BETWEEN INDIVIDUAL CONSTRUCTION LIFTS. TRACK ROLLING, PNEUMATIC WHEEL ROLLING, AND SMOOTH DRUM COMPACTORS SHALL NOT BE USED.
7. THE MAXIMUM LABORATORY DENSITY AT OPTIMUM MOISTURE CONTENT WILL BE DETERMINED BY TEST METHODS IN CONFORMANCE WITH ASTM D1557. A MINIMUM OF 90% OF THE LABORATORY STANDARD MAXIMUM DENSITY WILL BE REQUIRED.
8. WITHIN 2' OF ANY STRUCTURE, HAND TAMPERS OR OTHER ACCEPTABLE MEANS EXCLUDING HEAVY EQUIPMENT SHALL BE USED TO COMPACT BACKFILL. THE SURFACE AREA AROUND ANY STRUCTURE SHALL BE GRADED TO CONVEY SURFACE RUNOFF AWAY FROM THE STRUCTURE. THE EARTHWORK SHALL BE CONSTRUCTED IN A CONTINUOUS MANNER ACROSS PROPOSED STRUCTURE LOCATIONS.
9. MOISTURE CONTENT OF COMPACTED EMBANKMENT MATERIAL AND BACKFILL MATERIAL SHALL NOT BE GREATER THAN 3% ABOVE OPTIMUM MOISTURE CONTENT.
10. PROTECT EXCAVATIONS BY SHORING, BRACING, SHEET PILING, UNDERPINNING, OR OTHER METHODS REQUIRED TO PREVENT CAVE-IN OR LOOSE SOIL FROM FALLING INTO EXCAVATION. GRADE EXCAVATION TOP PERIMETER TO PREVENT SURFACE WATER RUN-OFF INTO EXCAVATIONS.
11. COMPACTED EARTHFILL AND SUBGRADES SHALL MEET MINIMUM 90% RELATIVE DENSITY (ASTM D-1557) AND BE ACCOMPLISHED BY MANUALLY OPERATED COMPACTORS AROUND STRUCTURES AND TO A MINIMUM DEPTH OF 12 INCHES OVER TOP OF PIPE.
12. ALL TRENCH EXCAVATION SHALL COMPLY WITH THE MOST CURRENT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION STANDARDS (OSHA).
13. THE AREA IMMEDIATELY SURROUNDING THE NEW TURNOUT SHALL BE OVER EXCAVATED TWELVE INCHES (12") AND RECOMPACTED TO A RELATIVE DENSITY OF NINETY PERCENT (90%). NATIVE MATERIAL SHALL BE USED FOR THE RECOMPACTED MATERIAL HOWEVER, FILL MATERIAL SHALL BE FREE OF TRASH, ORGANIC MATERIAL AND OTHER DEBRIS. STONES OR COBBLES HAVING A LARGEST DIMENSION GREATER THAN ONE INCH (1") WILL NOT BE USED IN RECOMPACTED MATERIAL. NO OBJECT HAVING A LARGEST DIMENSION GREATER THAN THREE INCHES (3") SHALL BE INCLUDED IN ANY COMPACTED FILL TO BE USED FOR THE NEW TURNOUT.

CONCRETE NOTES

1. CONCRETE 28 DAY COMPRESSIVE STRENGTH TO BE MINIMUM 3,500 PSI. CEMENT SHALL BE ASTM TYPE II PORTLAND CEMENT AND BE FREE OF LUMPS AND PARTIALLY SET MASSES, AND PROPORTIONED TO INCLUDE NOT LESS THAN 6 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE AND HAVE A MAXIMUM WATER-CEMENT RATIO OF 0.50, AND AIR ENTRAINMENT OF 3%-5%. WATER SHALL BE FREE FROM ACID, ALKALI, OILS OR ORGANIC MATTER. AGGREGATE SHALL BE CLEAN, HARD, STRONG AND DURABLE, AND FREE FROM DIRT AND OTHER SUBSTANCES DELETERIOUS TO CONCRETE. THE FINE AND COARSE AGGREGATES SHALL BE A WELL GRADED MIX APPROVED BY THE ENGINEER. THE MAXIMUM SIZE OF AGGREGATE SHALL NOT EXCEED 3/4 INCHES AND CONFORM TO THE REQUIREMENTS OF ASTM C-33.
2. CONSISTENCY OF THE CONCRETE SHALL ALLOW IT TO BE WORKED INTO PLACE WITHOUT SEGREGATION. SLUMP SHALL BE MAXIMUM OF 3 INCHES FOR HORIZONTAL SURFACES AND 4 INCHES FOR VERTICAL WALLS. FORMS SHALL BE BRACED AND/OR TIED TOGETHER SO AS TO MAINTAIN POSITION AND SHAPE AND BE SUFFICIENTLY TIGHT TO PREVENT LEAKAGE OF MORTAR.
3. NO CONCRETE SHALL BE PLACED UNTIL THE SUBGRADE, FORMS, AND REINFORCING STEEL HAVE BEEN INSPECTED BY THE ENGINEER AND, DEPENDING ON LOCATION, THE DISTRICT ENGINEER. HORIZONTAL CONCRETE SURFACES SHALL BE POURED AGAINST OVEREXCAVATED AND RECOMPACTED EARTH. ALL VERTICAL CONCRETE SURFACES SHALL BE POURED AGAINST FORMS IN ALL CASES. CONCRETE SHALL NOT BE DROPPED MORE THAN FIVE FEET VERTICALLY UNLESS SUITABLE EQUIPMENT IS USED TO PREVENT SEGREGATION. CONSOLIDATION OF CONCRETE SHALL BE ACCOMPLISHED BY MEANS OF INTERNAL TYPE MECHANICAL VIBRATORS, OR ENGINEER PRE-APPROVED EQUIVALENT METHOD.
4. CONSTRUCTION JOINTS SHALL BE PLACED AS SHOWN ON THE PLANS OR AS PRE-APPROVED BY THE ENGINEER ONLY. ENTIRE SURFACE UNDER WALL TO BE ROUGHENED WHILE WET. MINIMUM 1/8" AMPLITUDE/DEPTH. JOINTS SHALL BE THOROUGHLY CLEANED AND LAITANCE REMOVED BEFORE A NEW POUR IS MADE. EACH JOINT SHALL BE WETTED IMMEDIATELY BEFORE THE PLACING OF NEW CONCRETE.
5. 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.
6. REINFORCING STEEL SHALL BE IN ACCORDANCE WITH STRUCTURAL DETAILS AND NOTES.
7. SHOTCRETE OR CONCRETE LINING SHALL EITHER BE REINFORCED WITH 6x6x10x10 WELDED WIRE MESH PLACED IN CENTER, OR BY 2 LBS/CY OF SYNTHETIC FIBER & 50 LBS/CY OF STEEL FIBER REINFORCEMENT.
8. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60 STEEL BARS FOR CONCRETE REINFORCEMENT, INTERMEDIATE GRADE, AND SHALL HAVE DEFORMATIONS CONFORMING TO ASTM A615. REINFORCING STEEL SHALL BE CLEANED OF HEAVY FLAKY RUST, LOOSE MILL SCALE, DIRT, GREASE, AND OTHER FOREIGN SUBSTANCES PRIOR TO PLACEMENT. WIRE USED FOR TYING REINFORCEMENT IN PLACE SHALL BE NO.18 AWG BLACK ANNEALED OR HEAVIER.

CONSTRUCTION NOTES

1. CONTRACTOR RESPONSIBLE FOR ALL CLEARING AND GRUBBING.
2. ALL CONCRETE PRESSURE PIPE WITH STEEL JOINT RING SHALL BE HEAD PRESSURE ASTM C361 CLASS AS SHOWN ON PLANS AND INSTALLED PER CONCRETE PIPE MANUFACTURERS SPECIFICATIONS. ALL OTHER CONCRETE IRRIGATION PIPE SHALL BE RGRCP, CL III AS SHOWN ON PLANS.
3. THRUST RESTRAINTS SHALL BE PROVIDED AT ALL PIPELINE BENDS WHETHER OR NOT SHOWN ON THE PLANS.

FLOWMETER INSTALLATION NOTES

1. FLOWMETER SHALL BE A McCROMETER BRAND PROPELLER-TYPE FLOWMETER, MODEL OF12 OR EQUAL. THE NOMINAL SIZE OF THE METER SHALL BE 36 INCHES. CORROSION RESISTANT MATERIALS SHALL BE USED THROUGHOUT THE MECHANICAL ENCLOSURE. EXCEPT FOR THE REGISTER ASSEMBLY, NO ALUMINUM MATERIALS SHALL BE USED AND ALL NON-STAINLESS STEEL SURFACES SHALL BE TREATED WITH A FUSION-BONDED IMPERVIOUS COATING. ALL ROTATING MEMBERS, EXCEPT MEMBERS IN THE REGISTER ASSEMBLY, SHALL BE MOUNTED ON STAINLESS STEEL RADIAL BALL BEARINGS. SLEEVE TYPE OR CERAMIC BEARINGS ARE NOT ACCEPTABLE. FLOWMETER SYSTEM ACCURACY SHALL BE ±2% OF TRUE FLOW RATE WITHIN THE RANGE SPECIFIED.
2. THE REGISTER SHALL BE ON A COMMON AXIS WITH THE IMPELLER SUPPORT AND SHALL BE RIGIDLY SUPPORTED BY THE HOUSING SUPPORT PLATE OR DROP PIPE. THE REGISTER SHALL CONSIST OF AN INSTANTANEOUS INDICATOR AND TOTALIZER WHICH SHALL BE MOUNTED PERPENDICULAR TO THE DIRECTION OF FLOW AND WHICH CAN BE VIEWED THROUGH A TRANSPARENT COVER. THE TOTALIZER SHALL BE SIX-DIGIT, STRAIGHT-READING, DRIVEN BY A POSITIVE DIRECT DRIVE MECHANISM FROM THE IMPELLER COUPLING, AND SHALL REGISTER TOTALIZE VOLUME IN ACRE-FEET (AF). THE FLOW INDICATOR SHALL SHOW FLOWS INSTANTANEOUSLY AND BE DRIVEN BY A MAGNET DRAG MECHANISM FROM A IMPELLER COUPLING. THE FLOW RATE INDICATOR SHALL INDICATE FLOW IN CUBIC FEET PER SECOND (CFS). THE REGISTER SHALL BE FACTORY LUBRICATED AND SEALED WATER-TIGHT FOR INFREQUENT SUBMERSION.
3. FLOWRATE LIMITS OF THE METER SHALL BE AS FOLLOWS:
   MINIMUM FLOW - 1,500 GPM (3.3 CFS) *LOW-VELOCITY CONSTRUCTION
   MAXIMUM FLOW - 20,000 GPM (44.6 CFS)
   INTERMITTENT - 30,000 GPM (66.8 CFS)
4. INSTALLATION SHALL BE ACCORDING TO MANUFACTURER'S SPECIFICATIONS. SEE McCROMETER PROPELLER FLOWMETERS MANUAL FOR INSTALLATION, OPERATION AND MAINTENANCE.

PRELIMINARY
FOR REVIEW AND APPROVAL
01/26/2011

No.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER * RANDY S. HOPKINS * No. 63538 * Civil * STATE OF CALIFORNIA

DATE SIGNED: ____

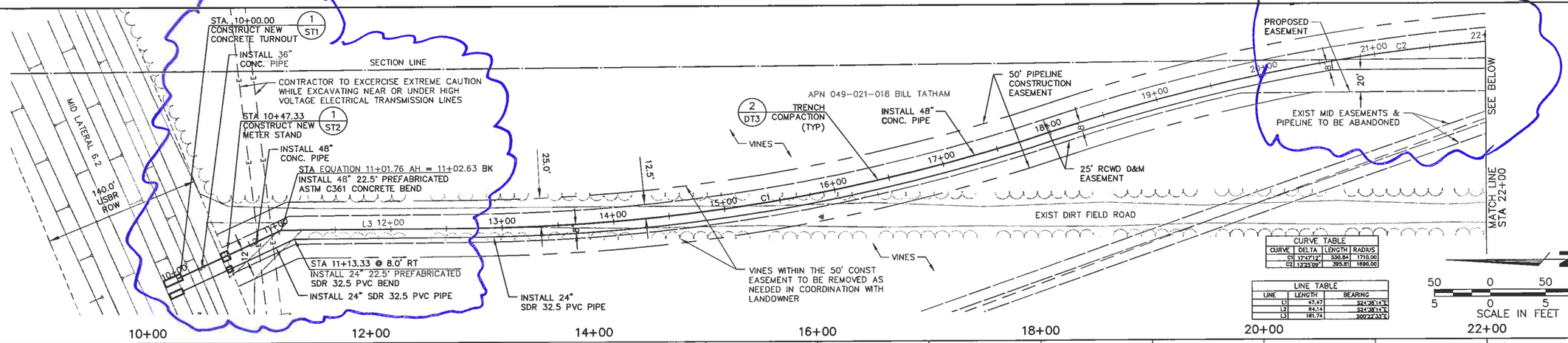
Gateway Village
In-Lieu Pipeline
Castle and Cooke, Inc.
Madera County, CA

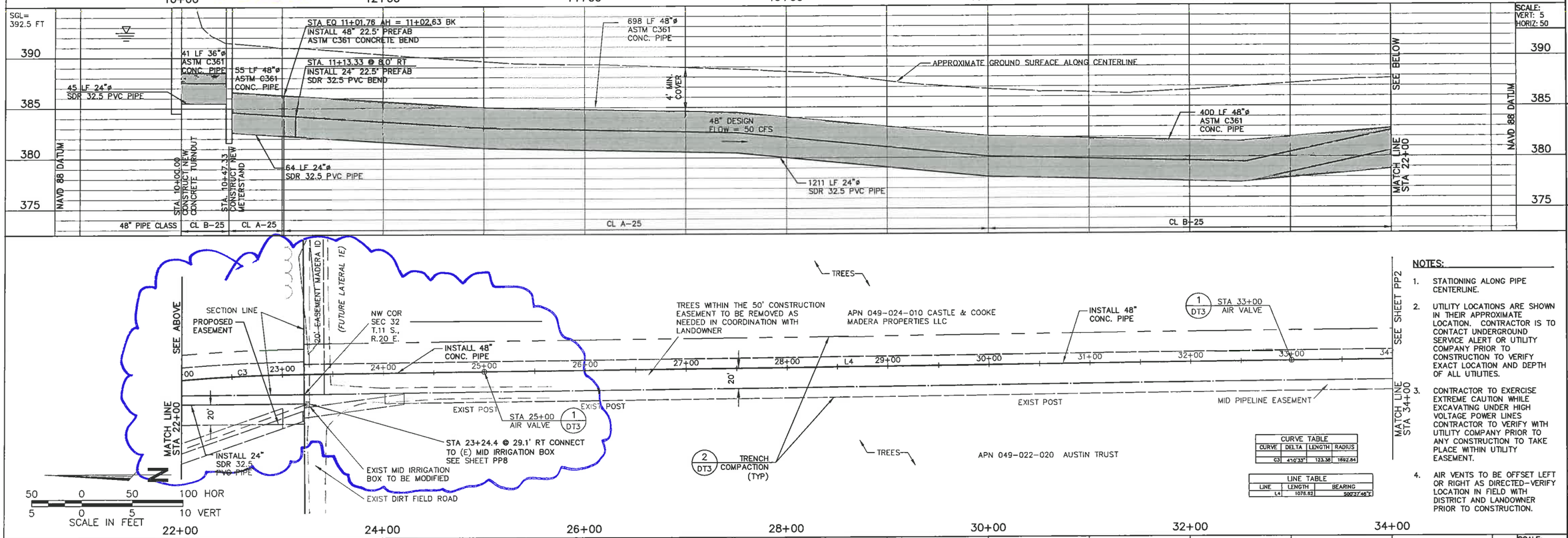
GENERAL NOTES

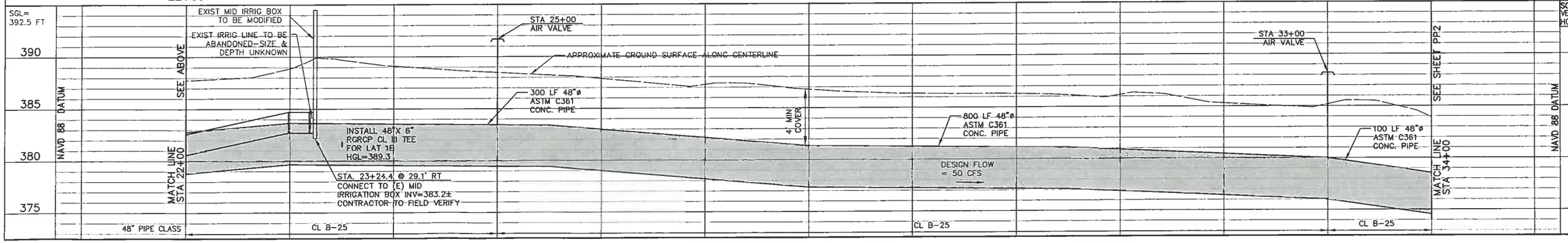
PROVOST & PRITCHARD ENGINEERING GROUP
ESTD 1963
An Employee Owned Company
286 WEST CROMWELL AVENUE
FRESNO, CALIFORNIA 93711-6162
559/449-2700 FAX 559/449-2715
www.ppeng.com

DESIGN ENGINEER: Randy Hopkins	
LICENSE NO: 63538	
DRAFTED BY: DVS	CHECKED BY: VSL
SCALE: AS SHOWN	
DATE: 01/26/2011	
JOB NO: 12491101	
DWG. NO:	
SHEET GN2 OF	

5/29/2008 8:13:03 AM G:\Clients\Castle_Cooke-1434\1434-Gateway\1434-Expan Phs 1\14340405-Gateway Pipeline LD\dwg\SHEET\14340405-GN-NOTES.dwg - aaron







811 Know what's **below.** Call before you dig.

PRELIMINARY
FOR REVIEW AND APPROVAL
01/26/2011

No.	REVISION	BY	DATE

SCALE: VERT: 5 HORIZ: 50

REGISTERED PROFESSIONAL ENGINEER * YINKUNG S. FRANKIE * No. 63538 Civil * STATE OF CALIFORNIA

DATE SIGNED: ____

NOTES:

1. STATIONING ALONG PIPE CENTERLINE.
2. UTILITY LOCATIONS ARE SHOWN IN THEIR APPROXIMATE LOCATION. CONTRACTOR IS TO CONTACT UNDERGROUND SERVICE ALERT OR UTILITY COMPANY PRIOR TO CONSTRUCTION TO VERIFY EXACT LOCATION AND DEPTH OF ALL UTILITIES.
3. CONTRACTOR TO EXERCISE EXTREME CAUTION WHILE EXCAVATING UNDER HIGH VOLTAGE POWER LINES CONTRACTOR TO VERIFY WITH UTILITY COMPANY PRIOR TO ANY CONSTRUCTION TO TAKE PLACE WITHIN UTILITY EASEMENT.
4. AIR VENTS TO BE OFFSET LEFT OR RIGHT AS DIRECTED-VERIFY LOCATION IN FIELD WITH DISTRICT AND LANDOWNER PRIOR TO CONSTRUCTION.

Gateway Village In-Lieu Pipeline
Castle and Cooke, Inc.
Madera County, CA

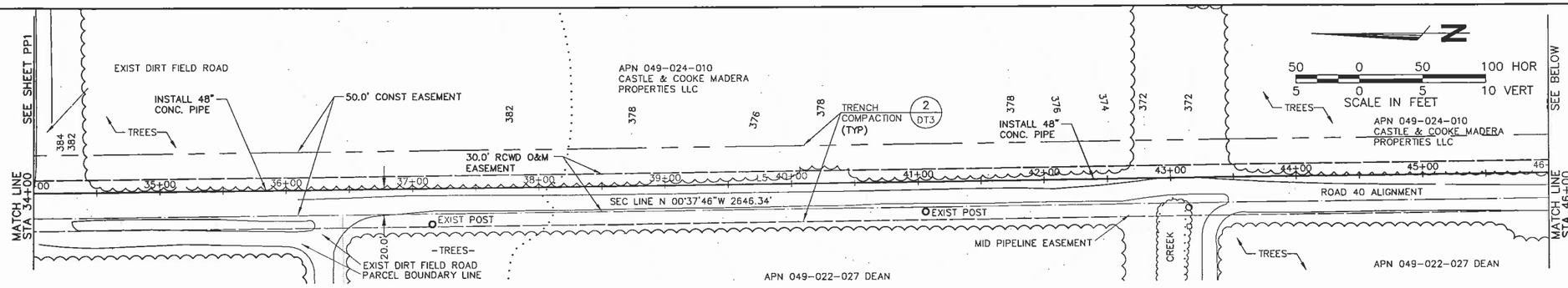
PLAN & PROFILE
STA 10+00 TO 34+00

ESTABLISHED 1950 PROVOST & PRITCHARD ENGINEERING GROUP An Employee Owned Company
286 WEST CROMWELL AVENUE FRESNO, CALIFORNIA 93711-6162
559/449-2700 FAX 559/449-2715 www.ppeng.com

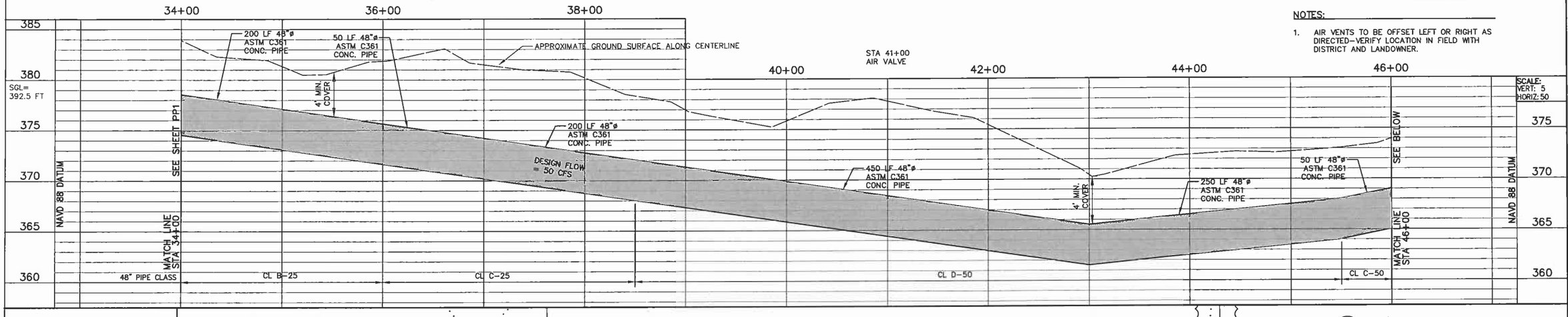
DESIGN ENGINEER: Randy Hopkins
LICENSE NO: 63538
DRAFTED BY: DVS | CHECKED BY: VSL
SCALE: AS SHOWN
DATE: 01/26/2011
JOB NO: 12491101
DWG. NO:
SHEET PP1 OF

5/27/2008 7:51:02 AM G:\Clients\Castle_Cooke-1434\1434-Gateway\1434-Expan Phs 1\14340405-Gateway Pipeline LD\dwg\SHEET\14340405-PP-1.dwg -David

Know what's **below.**
Call before you dig.

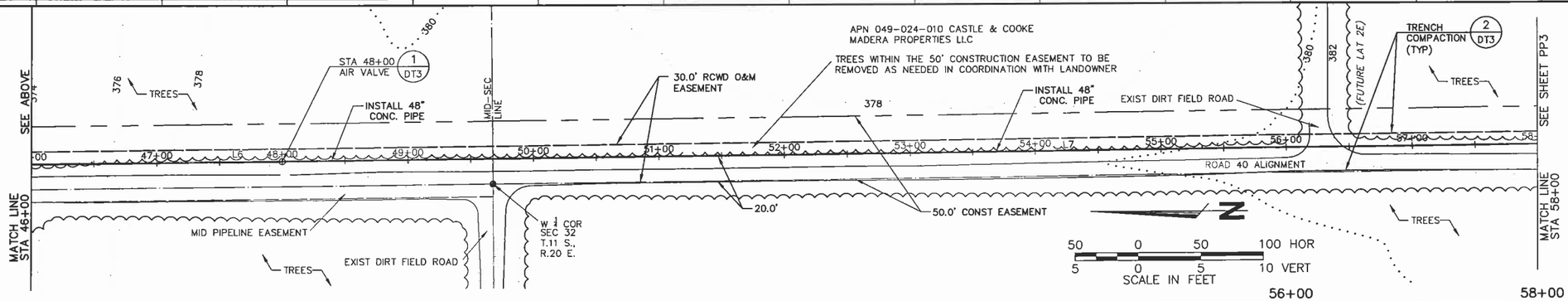


LINE TABLE		
LINE	LENGTH	BEARING
L8	1200.00	S00°37'39"E

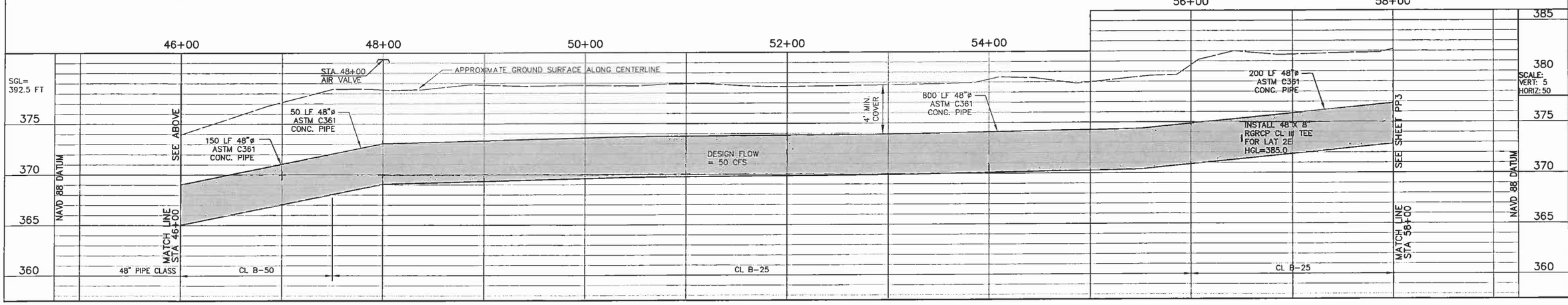


NOTES:

1. AIR VENTS TO BE OFFSET LEFT OR RIGHT AS DIRECTED-VERIFY LOCATION IN FIELD WITH DISTRICT AND LANDOWNER.



LINE TABLE		
LINE	LENGTH	BEARING
L6	367.66	S00°37'46"E
L7	832.32	S00°36'11"E



PRELIMINARY
FOR REVIEW AND APPROVAL
01/26/2011

No.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RANDY S. HOPKINS No. 63538 Civil STATE OF CALIFORNIA

DATE SIGNED: ____

Gateway Village
In-Lieu Pipeline
Castle and Cooke, Inc.
Madera County, CA

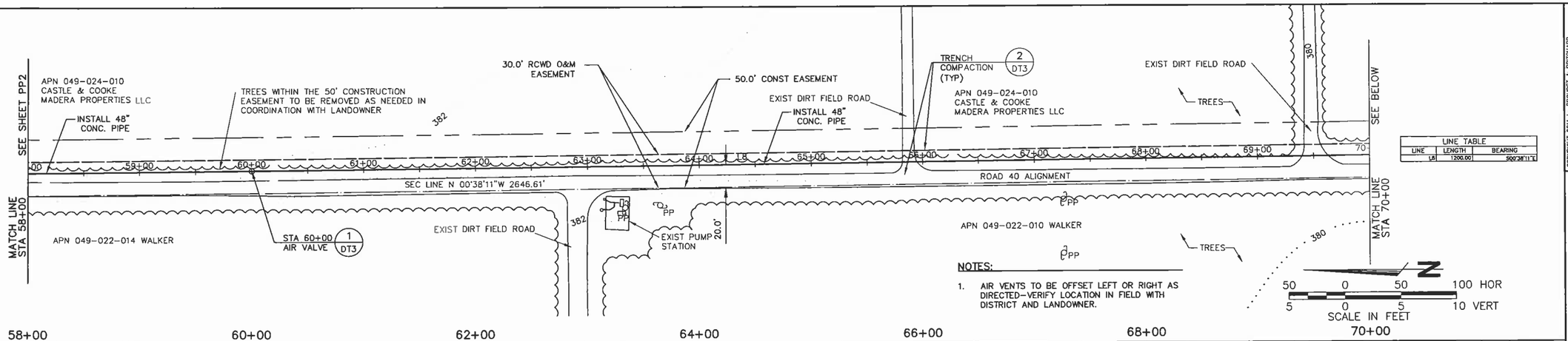
PLAN & PROFILE
STA 34+00 TO 58+00

ESTABLISHED 1968
PROVOST & PRITCHARD
ENGINEERING GROUP
An Employee Owned Company
286 WEST CROMWELL AVENUE
FRESNO, CALIFORNIA 93711
559/449-2700 FAX 559/449-2715
www.ppeng.com

DESIGN ENGINEER: Randy Hopkins	
LICENSE NO: 63538	
DRAFTED BY: DVS	CHECKED BY: VSL
SCALE: AS SHOWN	
DATE: 01/26/2011	
JOB NO: 12491101	
DWG. NO:	
SHEET PP2 OF	

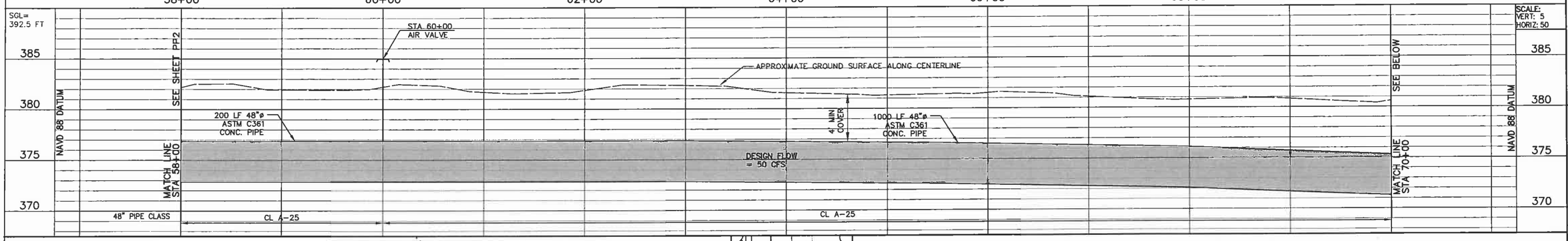
5/29/2008 8:15:55 AM G:\Clients\Castle_Cooke-1434\1434-Gateway\1434-Expan Phs 1\1434040S-Gateway Pipeline LD\dwg\SHEET\1434040S-PP-2.dwg - aaron

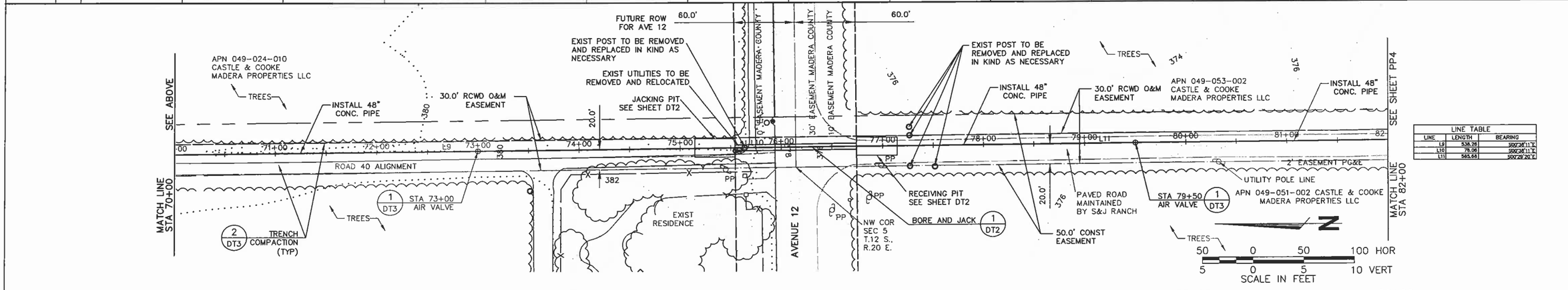
Know what's below. Call before you dig.

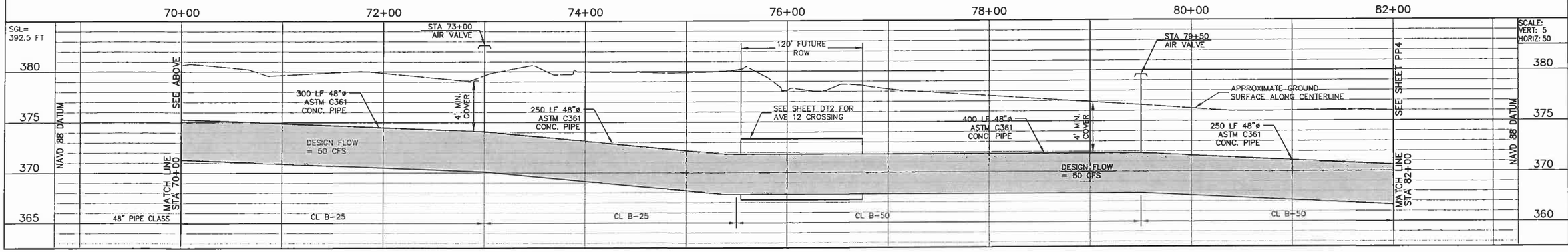


NOTES:

1. AIR VENTS TO BE OFFSET LEFT OR RIGHT AS DIRECTED–VERIFY LOCATION IN FIELD WITH DISTRICT AND LANDOWNER.







PRELIMINARY
FOR REVIEW AND APPROVAL
01/26/2011

No.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RANDY S. HOPKINS No. 63538 Civil STATE OF CALIFORNIA

DATE SIGNED: ____

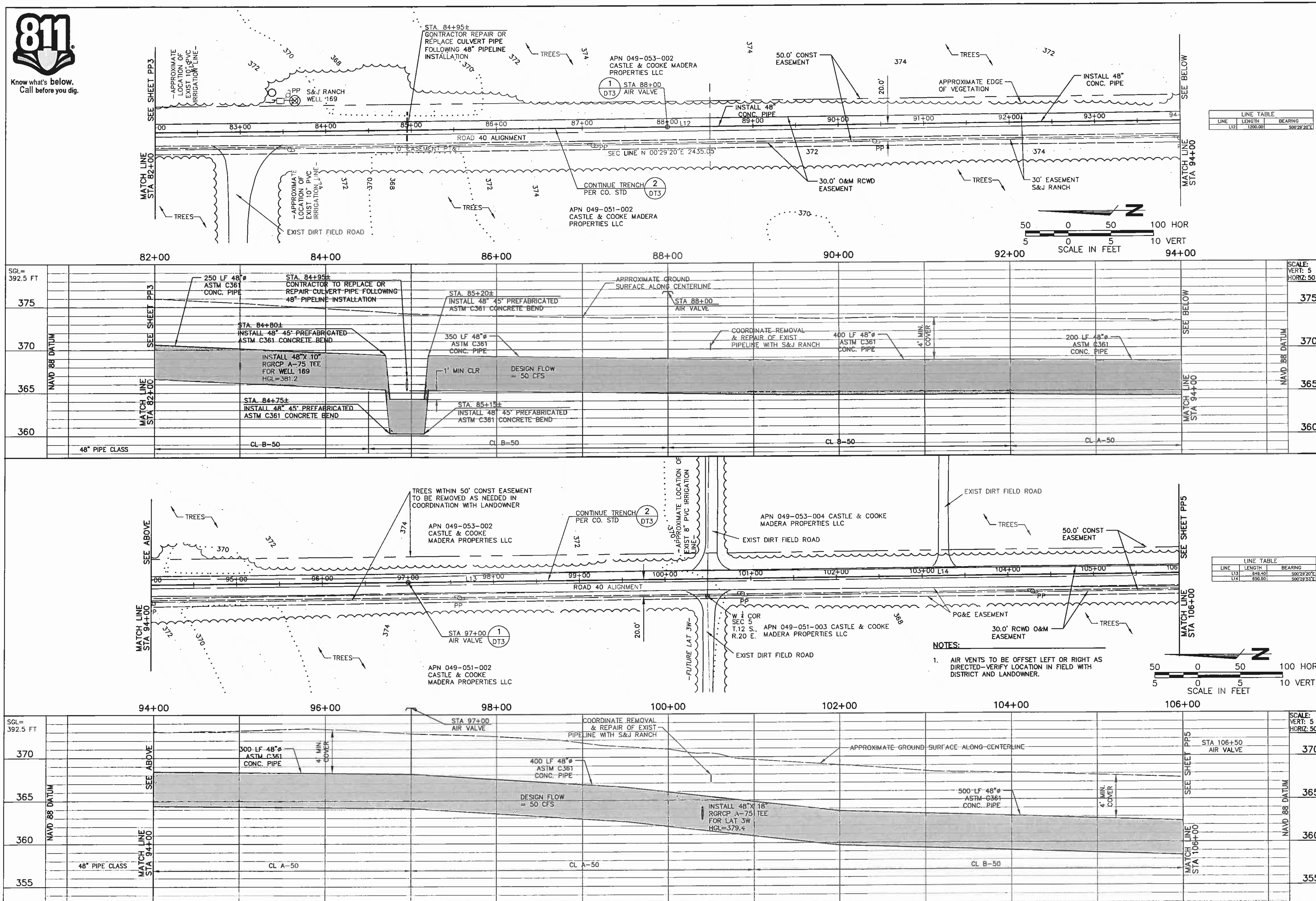
Gateway Village
In-Lieu Pipeline
Castle and Cooke, Inc.
Madera County, CA

PLAN & PROFILE
STA 58+00 to 82+00

ESTABLISHED 1938
PROVOST & PRITCHARD ENGINEERING GROUP
An Employee Owned Company
286 WEST CROMWELL AVENUE
FRESNO, CALIFORNIA 93711
559/449-2700 FAX 559/449-2715
www.ppeng.com

DESIGN ENGINEER: Randy Hopkins
LICENSE NO: 63538
DRAFTED BY: DVS | CHECKED BY: VSL
SCALE: AS SHOWN
DATE: 01/26/2011
JOB NO: 12491101
DWG. NO:
SHEET PP3 OF

5/29/2008 8:18:17 AM C:\Clients\Castle_Cooke-143A\1434-Gateway\1434-Expan Phs 1\1434DWG-Gateway Pipeline LD\dwg\SHEET\1434DWG-PP-3.dwg -aaron



PRELIMINARY FOR REVIEW AND APPROVAL 01/26/2011

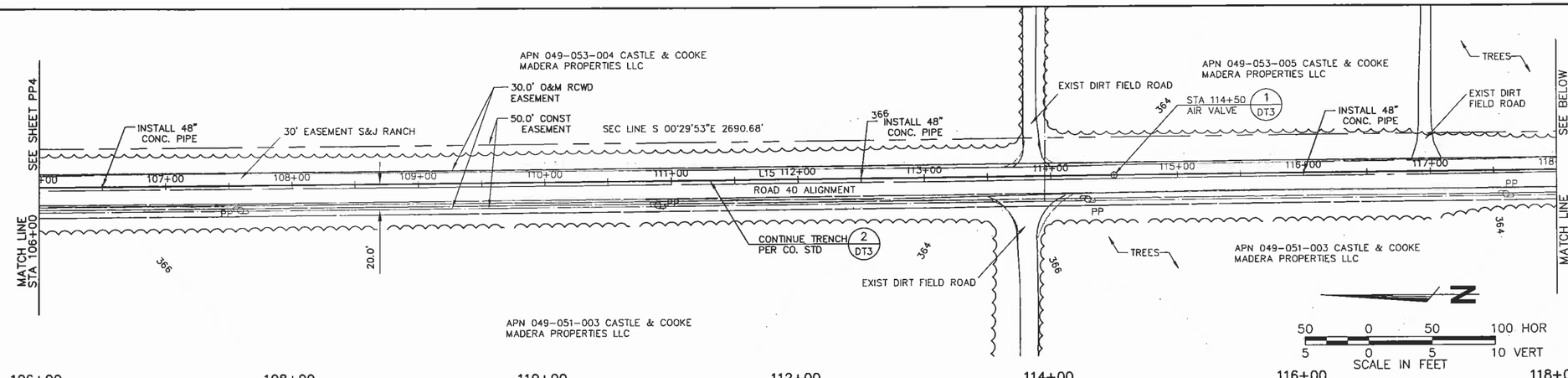
Gateway Village In-Lieu Pipeline
Castle and Cooke, Inc.
Madera County, CA

PLAN & PROFILE STA 82+00 to 106+00

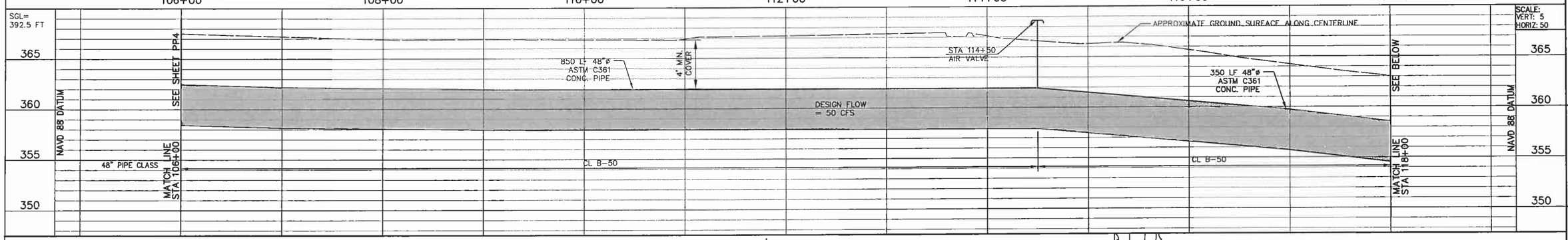
PROVOST & PRITCHARD ENGINEERING GROUP

DESIGN ENGINEER: Randy Hopkins
LICENSE NO: 63538
DRAFTED BY: DVS
CHECKED BY: VSL
SCALE: AS SHOWN
DATE: 01/26/2011
JOB NO: 12491101
SHEET PP4 OF

Know what's **below.**
Call before you dig.

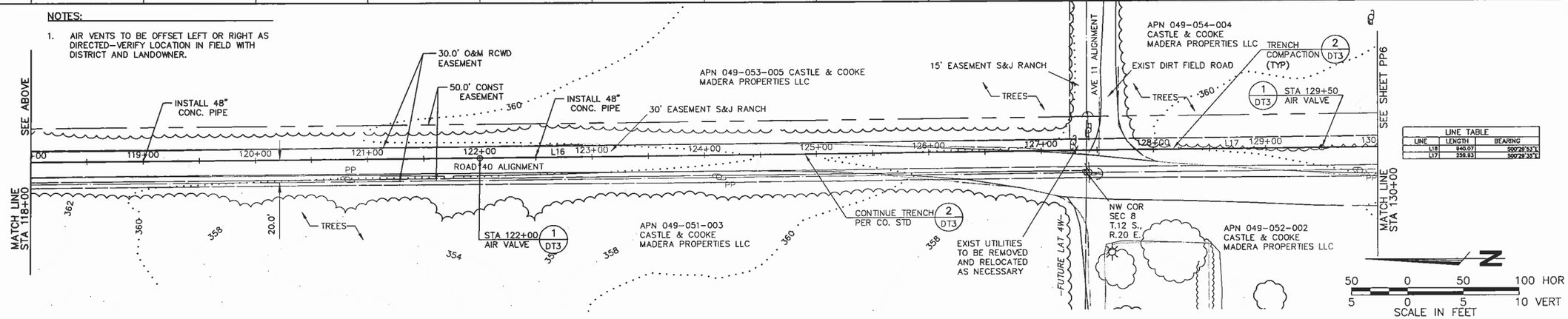


LINE TABLE		
LINE	LENGTH	BEARING
L15	1200.00	S00°29'53"E

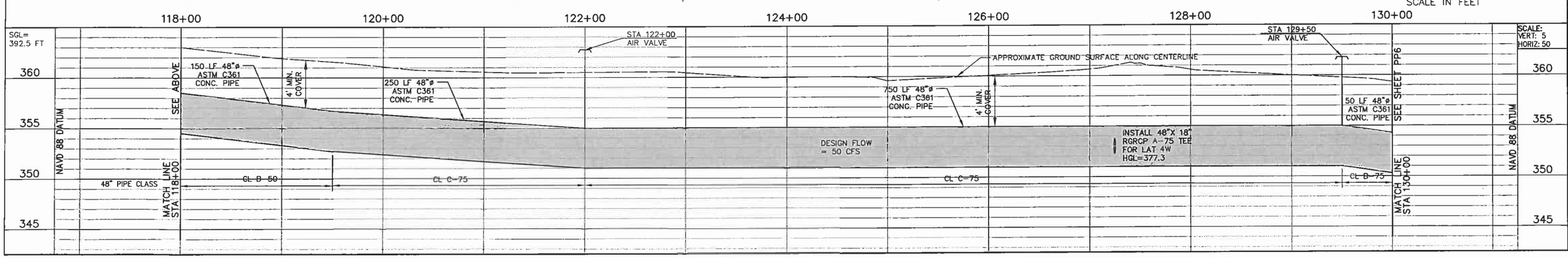


NOTES:

1. AIR VENTS TO BE OFFSET LEFT OR RIGHT AS DIRECTED-VERIFY LOCATION IN FIELD WITH DISTRICT AND LANDOWNER.



LINE TABLE		
LINE	LENGTH	BEARING
L16	940.07	S00°29'53"E
L17	259.83	S00°29'53"E



PRELIMINARY
FOR REVIEW AND APPROVAL
01/26/2011

No.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RANDY S. HOPKINS No. 63538 Civil STATE OF CALIFORNIA

DATE SIGNED: ____

Gateway Village
In-Lieu Pipeline
Castle and Cooke, Inc.
Madera County, CA

PLAN & PROFILE
STA 106+00 TO 130+00

ESTD 1953
PROVOST & PRITCHARD
ENGINEERING GROUP
An Employee Owned Company
286 WEST CROMWELL AVENUE
FRESNO, CALIFORNIA 93711-6162
559/449-2700 FAX 559/449-2715
www.ppeng.com

DESIGN ENGINEER: Randy Hopkins
LICENSE NO: 63538
DRAFTED BY: DVS | CHECKED BY: VSL
SCALE: AS SHOWN
DATE: 01/26/2011
JOB NO: 12491101
DWG. NO:
SHEET PP5 OF

5/29/2008 8:21:01 AM G:\Clients\Castle_Cooke-143A\1434-Gateway\1434-Expon Phs 1\143A0405-Gateway Pipeline LD\dwg\SHEET\143A0405-PP-5.dwg -paron

Know what's below. Call before you dig.

SEE SHEET PP5

MATCH LINE STA 130+00

TREES WITHIN 50' CONST EASEMENT TO BE REMOVED AS NEEDED IN COORDINATION WITH LANDOWNER

FUTURE LAT 4E

30.0' O&M RCWD EASEMENT

50.0' CONST EASEMENT

20.0'

1 DT3 STA 137+79 AIR VALVE

INSTALL 48" CONC. PIPE

SEC LINE S 00°29'35"E 2636.53'

APN 049-054-004 CASTLE & COOKE MADERA PROPERTIES LLC

TREES

SEE SHEET PP7

ROAD 40 ALIGNMENT

INSTALL 48" CONC. PIPE

DRIVEWAY

EXIST DIRT FIELD ROAD

CULVERT

TRENCH COMPACTION (TYP) 2 DT3

APN 049-052-002 CASTLE & COOKE MADERA PROPERTIES LLC

MATCH LINE STA 142+00

LINE TABLE		
LINE	LENGTH	BEARING
L18	1200.00'	S00°29'35"E

NOTES:

1. AIR VENTS TO BE OFFSET LEFT OR RIGHT AS DIRECTED-VERIFY LOCATION IN FIELD WITH DISTRICT AND LANDOWNER.

N

50 0 50 100 HOR

5 0 5 10 VERT

SCALE IN FEET

130+00 132+00 134+00 136+00 138+00 140+00 142+00

SGL= 392.5 FT

NAVD 88 DATUM

360 355 350 345 340 335 330 325 320

SEE SHEET PP5

MATCH LINE STA 130+00

373 LF 48"ø ASTM C361 CONC. PIPE

4' MIN. COVER

STA 133+50 INSTALL 48"x 12" RGRCP CL A-75 TEE FOR LAT 4E HGL=376.9

250 LF 48"ø ASTM C361 CONC. PIPE

DESIGN FLOW = 50 CFS

STA 137+79 AIR VALVE

157 LF 48"ø ASTM C361 CONC. PIPE

4' MIN. COVER

APPROXIMATE GROUND SURFACE ALONG CENTERLINE

SEE SHEET PP7

221 LF 48"ø ASTM C361 CONC. PIPE

4' MIN. COVER

200 LF 48"ø ASTM C361 CONC. PIPE

48" PIPE CLASS

CL B-75 CL B-75 CL B-75 CL B-75 CL C-75

MATCH LINE STA 142+00

SCALE: VERT: 5 HORIZ: 50

PRELIMINARY
FOR REVIEW AND APPROVAL
01/26/2011

No.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RANDY S. HOPKINS No. 63538 Civil STATE OF CALIFORNIA

DATE SIGNED: ____

Gateway Village
In-Lieu Pipeline
Castle and Cooke, Inc.
Madera County, CA

PLAN & PROFILE
STA 130+00 TO 142+00

ESTD 1968 PROVOST & PRITCHARD ENGINEERING GROUP
An Employee Owned Company
286 WEST CROMWELL AVENUE
FRESNO, CALIFORNIA 93711-6162
559/449-2700 FAX 559/449-2715
www.ppeng.com

DESIGN ENGINEER: Randy Hopkins
LICENSE NO: 63538
DRAFTED BY: DVS | CHECKED BY: VSL
SCALE: AS SHOWN
DATE: 01/26/2011
JOB NO: 12491101
DWG. NO:
SHEET PP6 OF

5/29/2008 8:22:32 AM G:\Clients\Castle_Cooke-1434\1434-Gateway\1434-Expan Phs 1\14340405-Gateway Pipeline LD\dwg\SHEET\14340405-PP-6.dwg -aaron

Know what's below. Call before you dig.

NOTES:

1. AIR VENTS TO BE OFFSET LEFT OR RIGHT AS DIRECTED–VERIFY LOCATION IN FIELD WITH DISTRICT AND LANDOWNER.

LINE TABLE		
LINE	LENGTH	BEARING
L19	1153.00	S00°29'35"E

SEE SHEET PP6

MATCH LINE STA 142+00

TRENCH COMPACTION (TYP) 2/DT3

APN 049–054–004 CASTLE & COOKE MADERA PROPERTIES LLC

S00°29'35"E 2636.53'

INSTALL 48" CONC. PIPE

DIRECTIONAL BORE–PIT AREA

DIRECTIONAL BORE–PIT AREA

CREEK

50.0' CONST EASEMENT

INSTALL 48" CONC. PIPE

20.0'

30.0' RCWD O&M EASEMENT

TREES

TREES WITHIN 50' CONST EASEMENT TO BE REMOVED AS NEEDED IN COORDINATION WITH LANDOWNER

APN 049–054–004 CASTLE & COOKE MADERA PROPERTIES LLC

1/DT3 STA 153+00 AIR VALVE

–FUTURE LAT 5E–

–APPROXIMATE LOCATION OF EXIST 8" PVC IRRIGATION LINE–

END TRENCH COMPACTION 2/DT3

ROAD 40 ALIGNMENT

24" LINE TO TURNOUT

ROOT

APN 049–052–002 CASTLE & COOKE MADERA PROPERTIES LLC

TURNOUT TO ROOT CREEK

TREES

APN 049–052–002 CASTLE & COOKE MADERA PROPERTIES LLC

W 1/4 COR SEC 8 T.12 S., R.20 E.

WELL 123

N

50 0 50 100 HOR

5 0 5 10 VERT

SCALE IN FEET

142+00 144+00 146+00 148+00 150+00 152+00 154+00

SGL= 392.5 FT

SEE SHEET PP6

NAVD 88 DATUM

MATCH LINE STA 142+00

5' MIN COVER UNDER ROOT CREEK TO AVOID FUTURE UTILITY CONFLICTS

CONNECT 24"ø FOR DELIVERY TO ROOT CREEK HGL=376.5

DESIGN FLOW = 50 CFS

106 LF 48"ø ASTM C361 CONC. PIPE

SEE SHEET DT2 FOR JACK & BORE DETAILS

253 LF 48"ø ASTM C361 CONC. PIPE

125 LF 48"ø ASTM C361 CONC. PIPE

STA 149+25 AIR VALVE

APPROXIMATE GROUND SURFACE ALONG CENTERLINE

4' MIN. COVER

375 LF 48"ø ASTM C361 CONC. PIPE

53 LF 48"ø ASTM C361 CONC. PIPE

STA 153+00 AIR VALVE

EXISTING PIPELINE WITH S&J RANCH

INSTALL 48"X 12" RGRCP A–75 TEE FOR LAT 5E HGL=376.3

END CAP & CONCRETE THRUST BLOCK

48" PIPE CLASS

CL D–100

CL D–100

CL A–75

CL A–75

CL A–75

CL A–75

360 355 350 345 340 335 330 325 320

SCALE: VERT: 5 HORIZ: 50

PRELIMINARY
FOR REVIEW AND APPROVAL
01/26/2011

No.	REVISION	BY	DATE

PROFESSIONAL ENGINEER * REGISTERED * RANDY S. HOPKINS No. 63538 Civil * STATE OF CALIFORNIA *

DATE SIGNED:

Gateway Village
In–Lieu Pipeline
Castle and Cooke, Inc.
Madera County, CA

PLAN & PROFILE
STA 142+00 TO 154+00 (END)

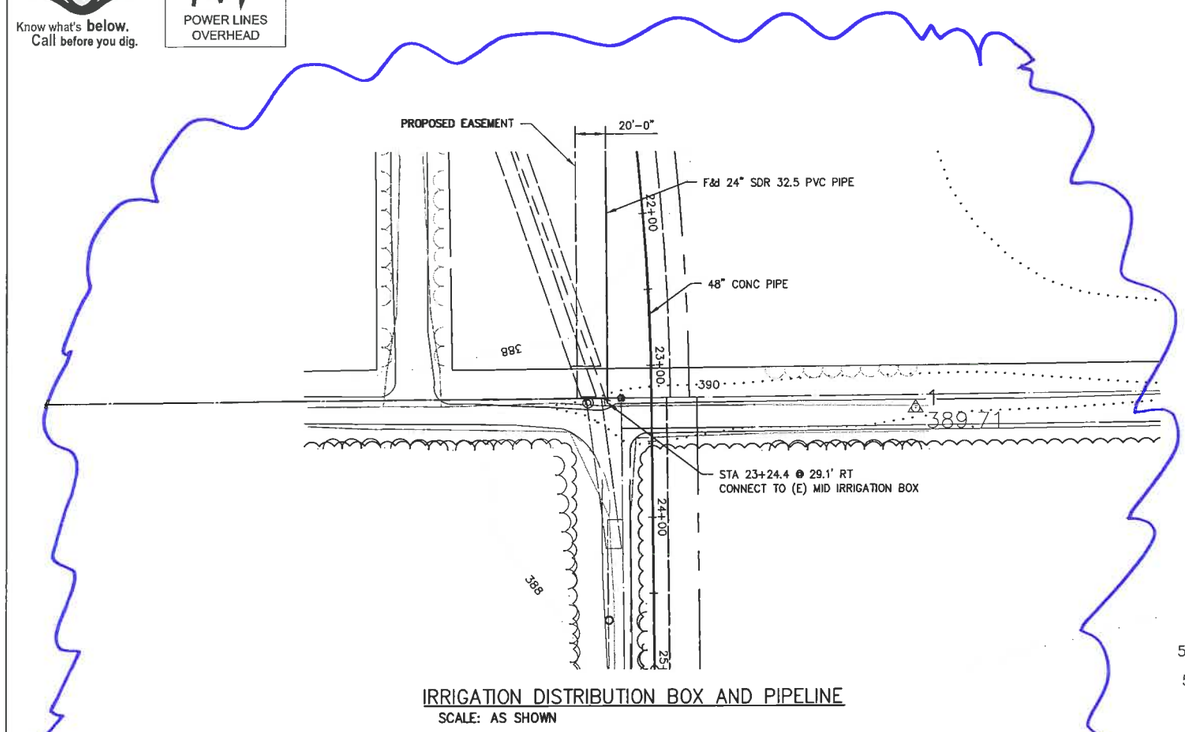
EST. 1959 PROVOST & PRITCHARD ENGINEERING GROUP
An Employee Owned Company
286 W. CROMWELL AVENUE
FRESNO, CALIFORNIA 93711–6162
559/449–2700 FAX 559/449–2715
www.ppeng.com

DESIGN ENGINEER: Randy Hopkins
LICENSE NO: 63538
DRAFTED BY: DVS | CHECKED BY: VSL
SCALE: AS SHOWN
DATE: 01/26/2011
JOB NO: 12491101
DWG. NO:
SHEET PP7 OF

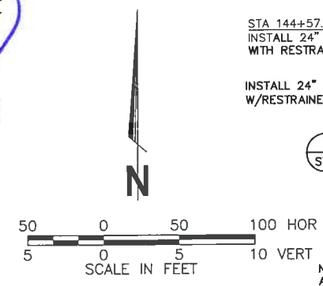
5/29/2008 8:23:48 AM G:\Clients\Castle_Cooke–1434\1434–Gateway\1434–Expan Phs 1\1434040S–Gateway Pipeline LD\dwg\SHEET\1434040S–PP–7.dwg – aaron

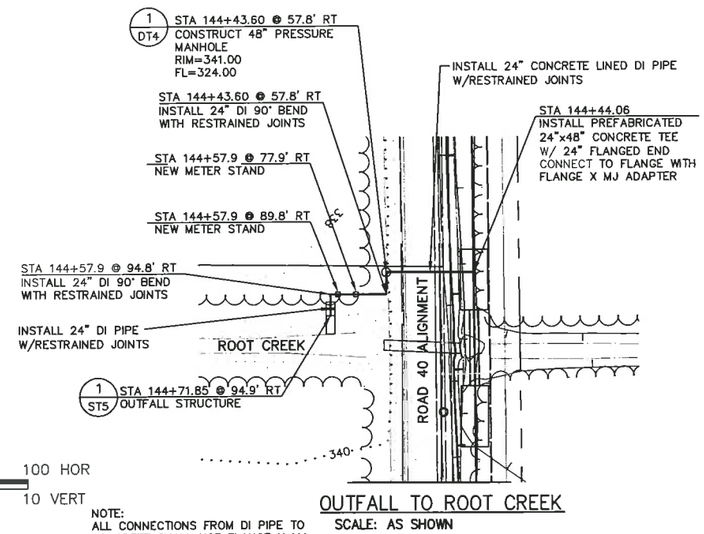
Know what's **below.**
Call before you dig.

WARNING
POWER LINES OVERHEAD



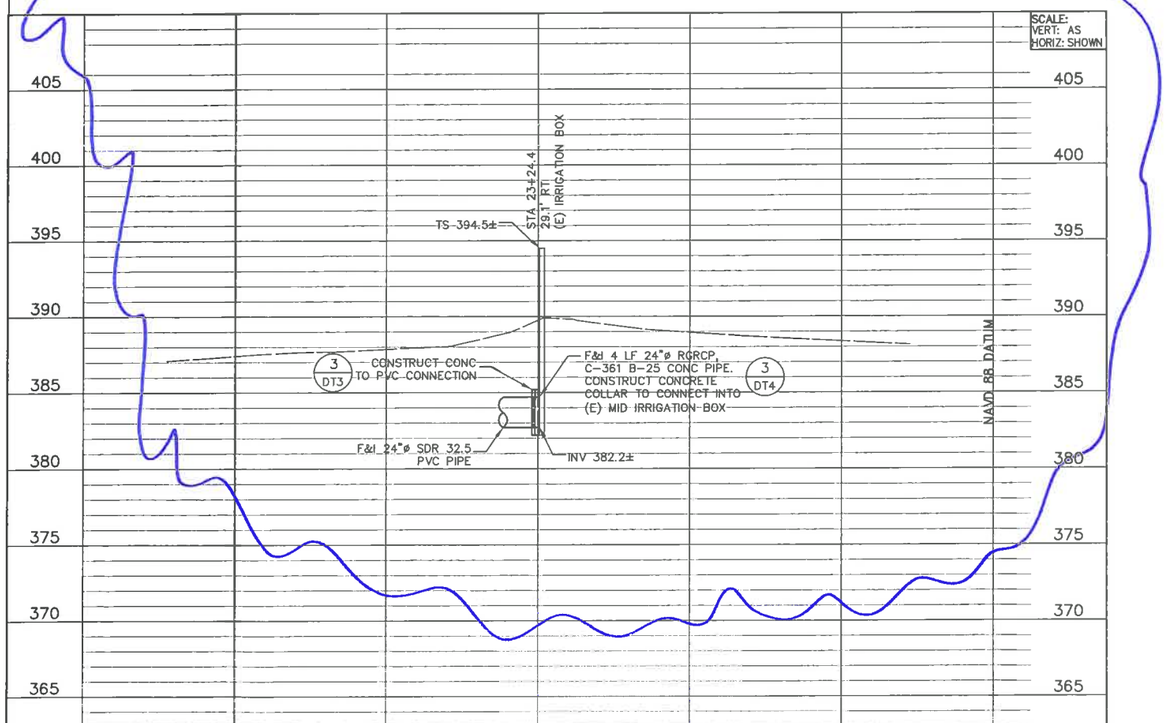
IRRIGATION DISTRIBUTION BOX AND PIPELINE
SCALE: AS SHOWN

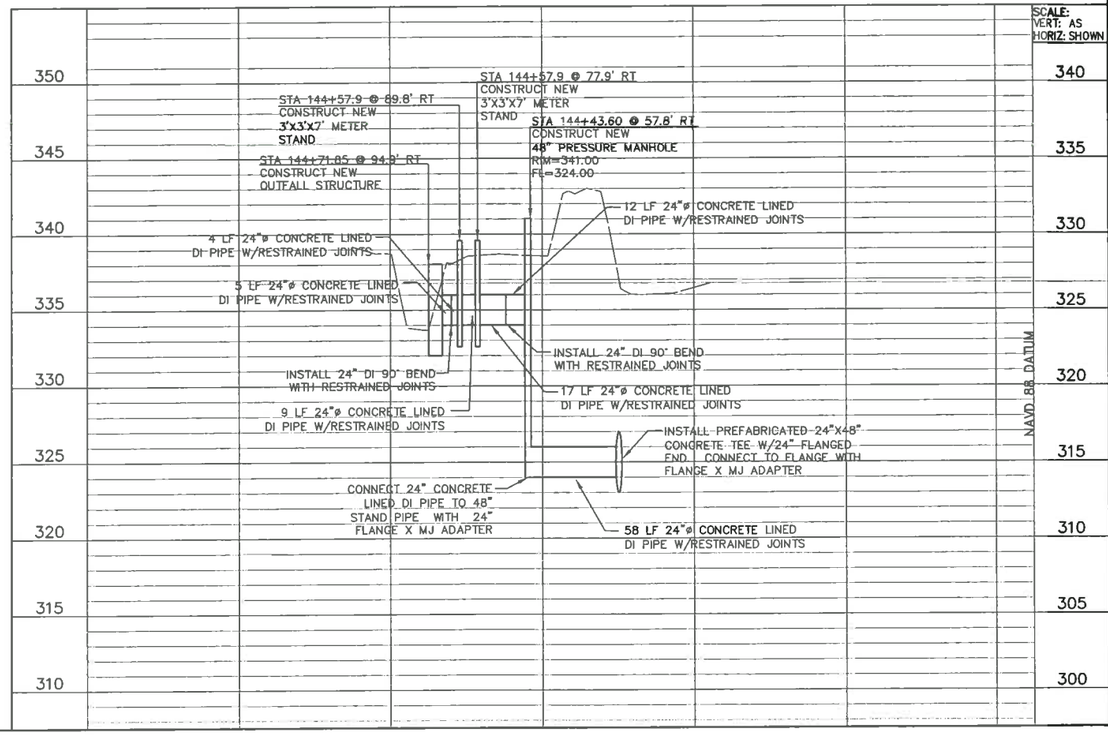




NOTE:
ALL CONNECTIONS FROM DI PIPE TO CONCRETE SHALL USE FLANGE X MJ WITH RESTRAINED JOINTS.

OUTFALL TO ROOT CREEK
SCALE: AS SHOWN





PRELIMINARY
FOR REVIEW AND APPROVAL
01/26/2011

No.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RANDY S. HOPKINS II No. 63538 Civil STATE OF CALIFORNIA

DATE SIGNED: _____

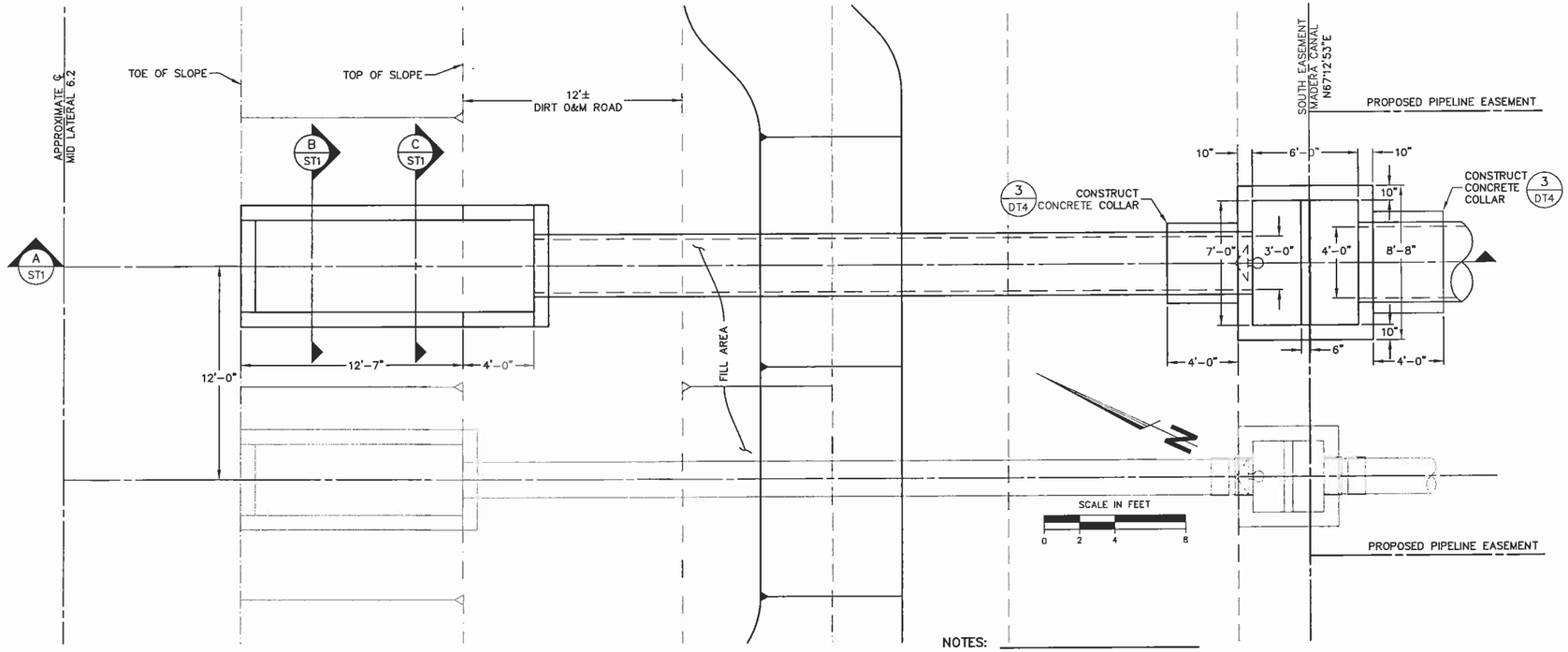
Gateway Village
In-Lieu Pipeline
Castle and Cooke, Inc.
Madera County, CA

PLAN & PROFILE
PIPELINE CONSTRUCTION DETAILS

PROVOST & PRITCHARD ENGINEERING GROUP
ESTABLISHED 1946
An Employee Owned Company
286 WEST CROMWELL AVENUE
FRESNO, CALIFORNIA 93711
559/449-2700 FAX 559/449-2715
www.ppeng.com

DESIGN ENGINEER: Randy Hopkins	
LICENSE NO: 63538	
DRAFTED BY: DVS	CHECKED BY: VSL
SCALE: AS SHOWN	
DATE: 01/26/2011	
JOB NO: 12491101	
DWG. NO:	
SHEET PP8 OF	

1/26/2011 3:40 PM G:\Clients\Castle_Cooke-1434\1434-Gateway\1434-Expan Phs 1\1434045-Gateway Pipeline LD\dwg\SHEET\1434045-PP-DIA18-1.dwg -Keith Mortensen

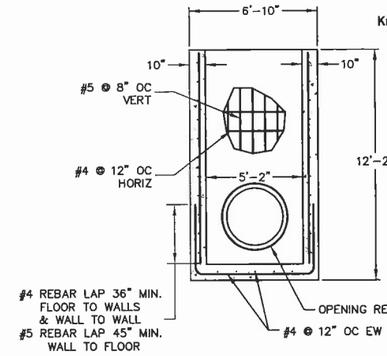


1 ST1 TURNOUT PLAN
SCALE: AS SHOWN

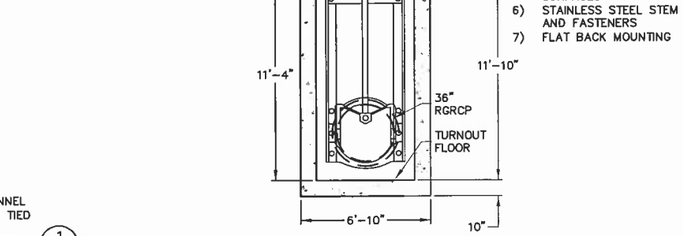
PLAN VIEW OF NEW TURNOUT AND METER BOX FROM MID LATERAL 6.2

NOTES:

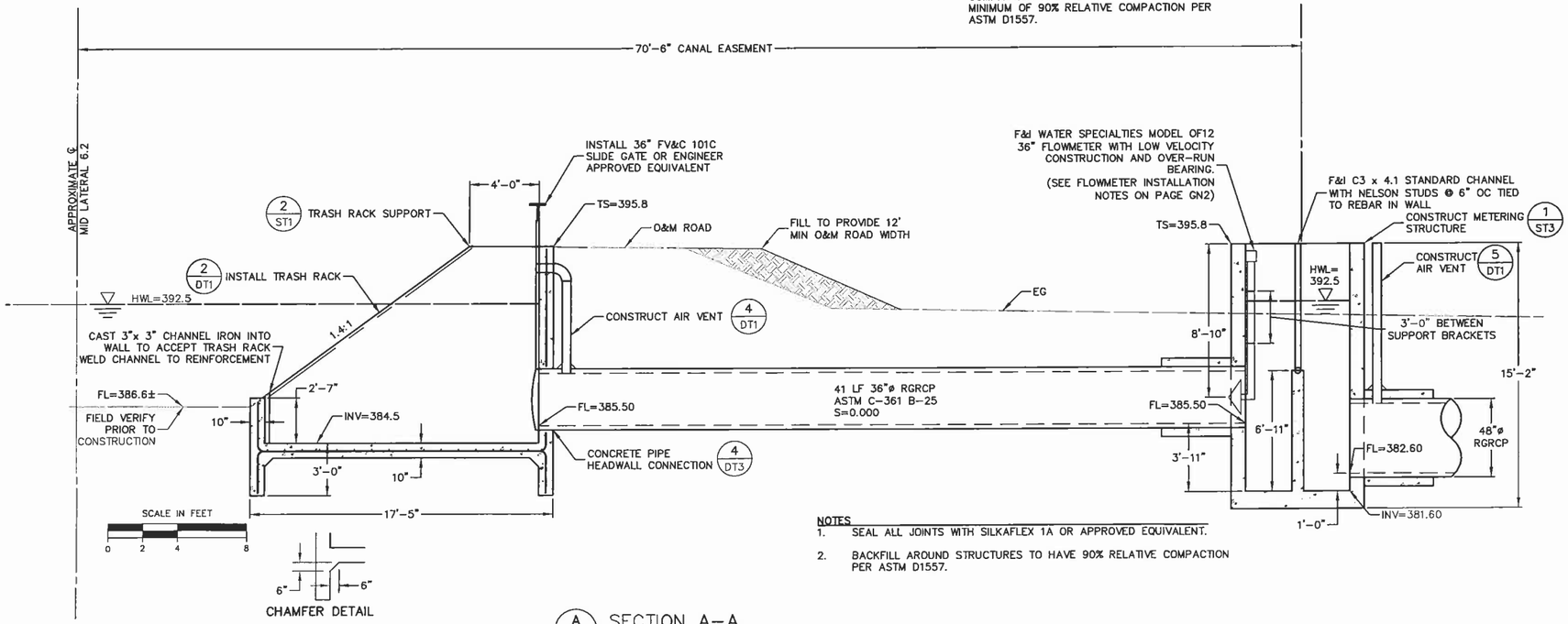
1. RESTORE CANAL BANK AND ROAD TO ORIGINAL GRADE AND CONDITION.
2. BACKFILL SHALL BE PLACED IN LOOSE LIFTS NO THICKER THAN 8 INCHES AND UNIFORMLY MOISTURE CONDITIONED TO AT OR ABOVE OPTIMUM MOISTURE CONTENT AT THE TIME OF COMPACTION AND RE-COMPACTED TO A MINIMUM OF 90% RELATIVE COMPACTION PER ASTM D1557.



B ST1 SECTION B-B
SCALE: NTS



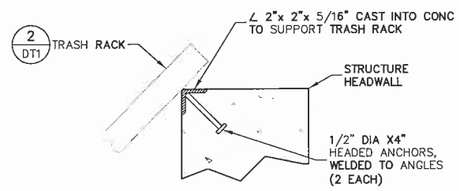
C ST1 SECTION C-C
SCALE: NTS



NOTES
1. SEAL ALL JOINTS WITH SILKAFLEX 1A OR APPROVED EQUIVALENT.
2. BACKFILL AROUND STRUCTURES TO HAVE 90% RELATIVE COMPACTION PER ASTM D1557.

A ST1 SECTION A-A
SCALE: AS SHOWN

PROFILE VIEW OF NEW TURNOUT AND METER BOX FROM MID LATERAL 6.2



2 ST1 TRASH RACK SUPPORT
SCALE: NTS

Know what's below. Call before you dig.

PRELIMINARY
FOR REVIEW AND APPROVAL
01/26/2011

No.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RANDY S. HOPKINS No. 63538 Civil STATE OF CALIFORNIA

DATE SIGNED: _____

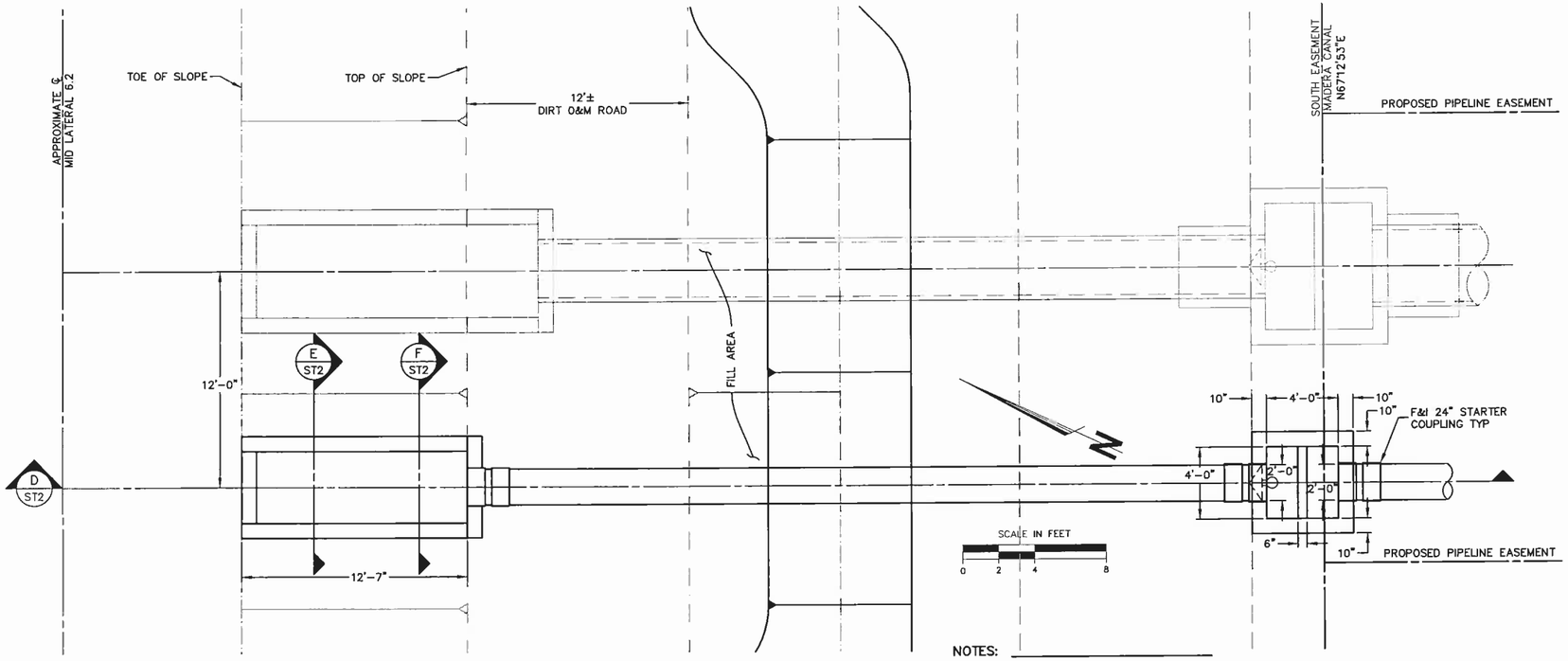
Gateway Village
In-Lieu Pipeline
Castle and Cooke, Inc.
Madera County, CA

36 INCH TURNOUT STRUCTURE

ESTD 1968 PROVOST & PRITCHARD ENGINEERING GROUP, INC.
An Employee Owned Company
286 WEST CROMWELL AVENUE
FRESNO, CALIFORNIA 93711-6162
559/449-2700 FAX 559/449-2715
www.ppeng.com

DESIGN ENGINEER: Randy Hopkins	
LICENSE NO: 63538	
DRAFTED BY: DVS	CHECKED BY: VSL
SCALE: AS SHOWN	
DATE: 01/26/2011	
JOB NO: 12491101	
DWG. NO:	
SHEET ST1 OF	

5/29/2008 3:09:41 PM G:\Clients\Castle_Cooke-143A\1434-Gateway\1434-Expan Phs 1\14340405-Gateway Pipeline LD\dwg\SHEET\14340405-ST-TURNOUT.dwg -agron

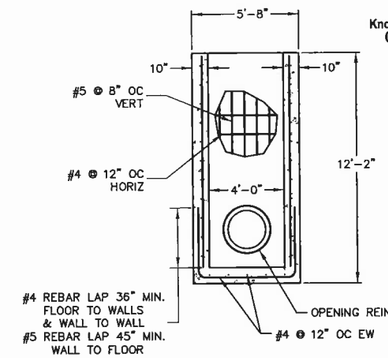


1 ST2 TURNOUT PLAN
SCALE: AS SHOWN

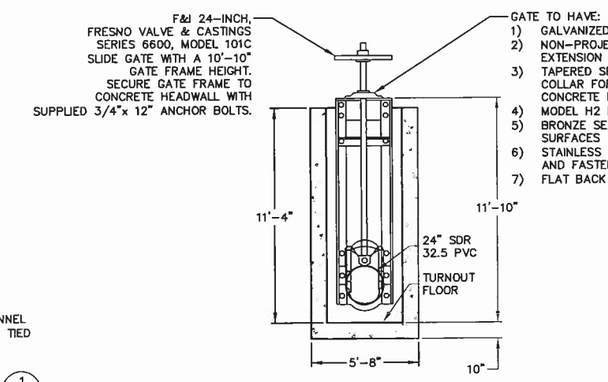
PLAN VIEW OF NEW TURNOUT AND METER BOX FROM MID LATERAL 6.2

NOTES:

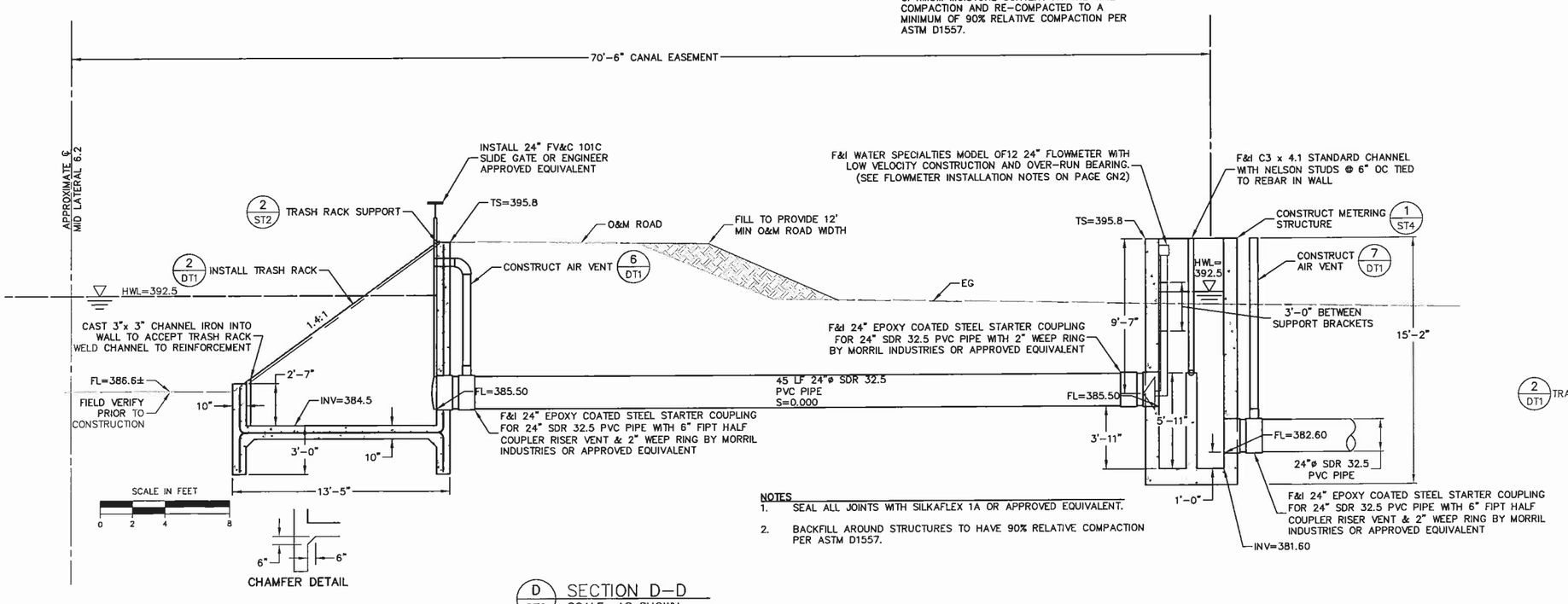
1. RESTORE CANAL BANK AND ROAD TO ORIGINAL GRADE AND CONDITION.
2. BACKFILL SHALL BE PLACED IN LOOSE LIFTS NO THICKER THAN 8 INCHES AND UNIFORMLY MOISTURE CONDITIONED TO AT OR ABOVE OPTIMUM MOISTURE CONTENT AT THE TIME OF COMPACTION AND RE-COMPACTED TO A MINIMUM OF 90% RELATIVE COMPACTION PER ASTM D1557.



E ST2 SECTION E-E
SCALE: NTS



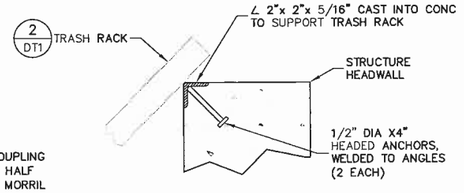
F ST2 SECTION F-F
SCALE: NTS



NOTES
1. SEAL ALL JOINTS WITH SILKAFLEX 1A OR APPROVED EQUIVALENT.
2. BACKFILL AROUND STRUCTURES TO HAVE 90% RELATIVE COMPACTION PER ASTM D1557.

D ST2 SECTION D-D
SCALE: AS SHOWN

PROFILE VIEW OF NEW TURNOUT AND METER BOX FROM MID LATERAL 6.2



2 ST2 TRASH RACK SUPPORT
SCALE: NTS

Know what's below. Call before you dig.

PRELIMINARY
FOR REVIEW AND APPROVAL
01/26/2011

No.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RANDY S. HOPKINS No. 63538 Civil STATE OF CALIFORNIA

DATE SIGNED: ____

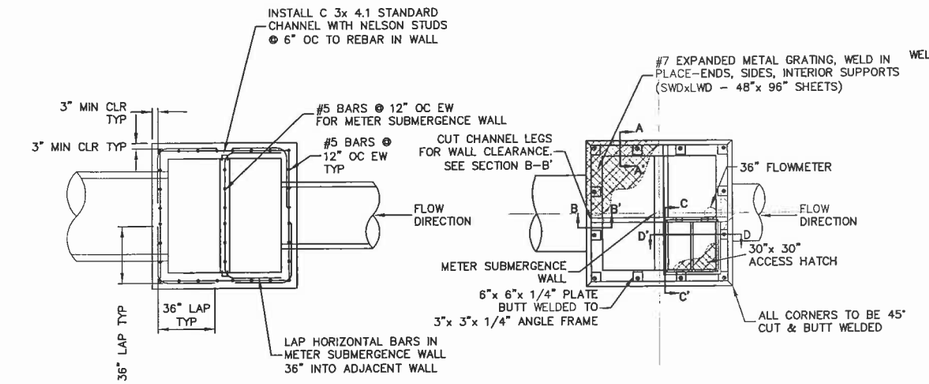
Gateway Village
In-Lieu Pipeline
Castle and Cooke, Inc.
Madera County, CA

24 INCH TURNOUT STRUCTURE

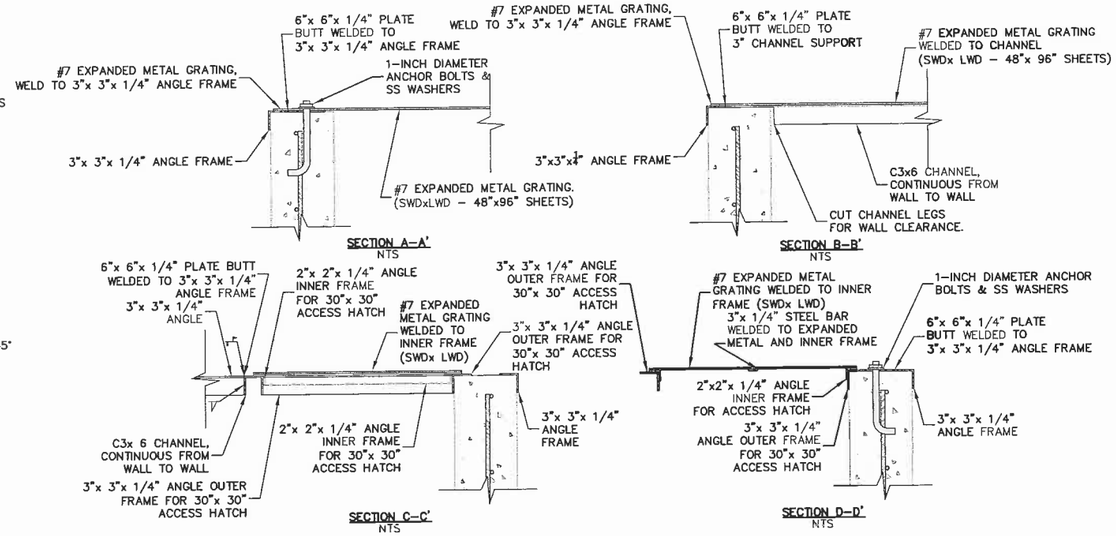
ESTD 1968 PROVOST & PRITCHARD ENGINEERING GROUP
An Employee Owned Company
286 WEST CROMWELL AVENUE
FRESNO, CALIFORNIA 93711-6162
559/449-2700 FAX 559/449-2715
www.ppeng.com

DESIGN ENGINEER: Randy Hopkins	
LICENSE NO: 63538	
DRAFTED BY: DVS	CHECKED BY: VSL
SCALE: AS SHOWN	
DATE: 01/26/2011	
JOB NO: 12491101	
DWG. NO:	
SHEET ST2 OF	

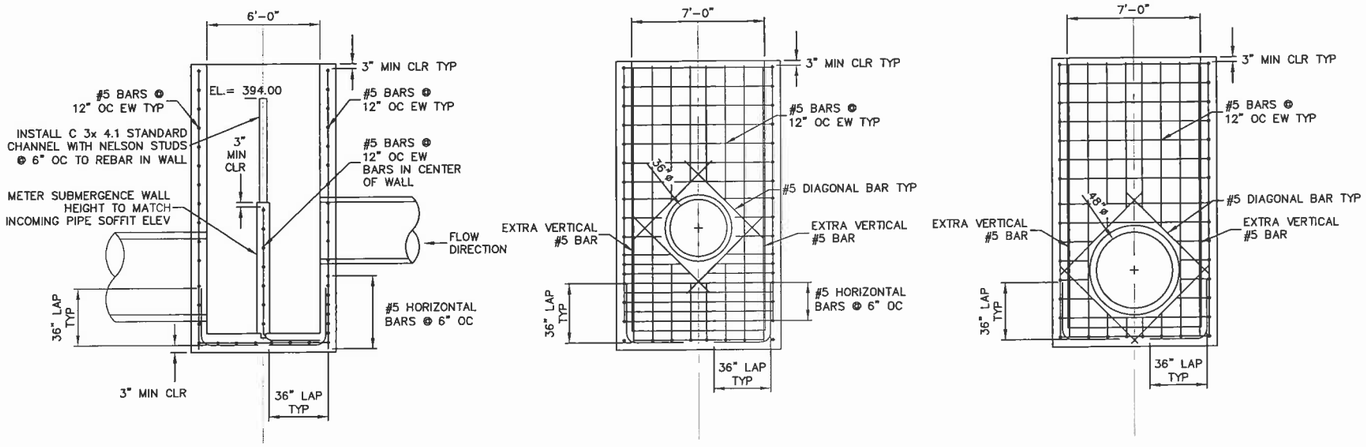
5/29/2008 3:09:41 PM G:\Clients\Castle_Cooke-1434\1434-Gateway\1434-Expan Phs 1\14340405-Gateway Pipeline LD\dwg\SHEET\14340405-ST-TURNOUT2.dwg - aaron



1 ST3 METERING STRUCTURE
SCALE: NTS



2 ST3 EXPANDED METAL COVER
SCALE: NTS



3 ST3 REINFORCING DETAILS
SCALE: NTS

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PRELIMINARY
FOR REVIEW AND APPROVAL
01/26/2011

No.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER — S. TROPHURS II — No. 63538 — Civil — STATE OF CALIFORNIA

DATE SIGNED:

Gateway Village
In-Lieu Pipeline
Castle and Cooke, Inc.
Madera County, CA

36 INCH METERING STRUCTURE

ESTABLISHED 1908
PROVOST & PRITCHARD ENGINEERING GROUP
An Employee Owned Company
286 WEST CROMWELL AVENUE
FRESNO, CALIFORNIA 93711-6162
559/449-2700 FAX 559/449-2715
www.ppeng.com

DESIGN ENGINEER: Randy Hopkins	
LICENSE NO: 63538	
DRAFTED BY: DVS	CHECKED BY: VSL
SCALE: AS SHOWN	
DATE: 01/26/2011	
JOB NO: 12491101	
DWG. NO:	
SHEET ST3 OF	

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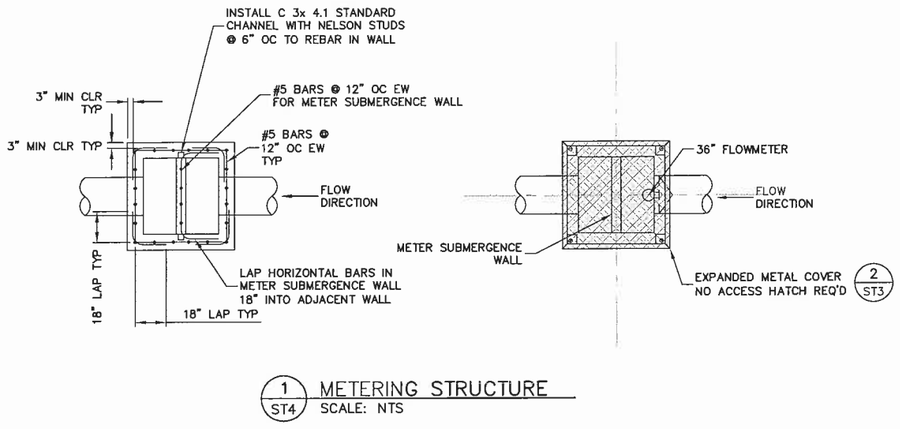
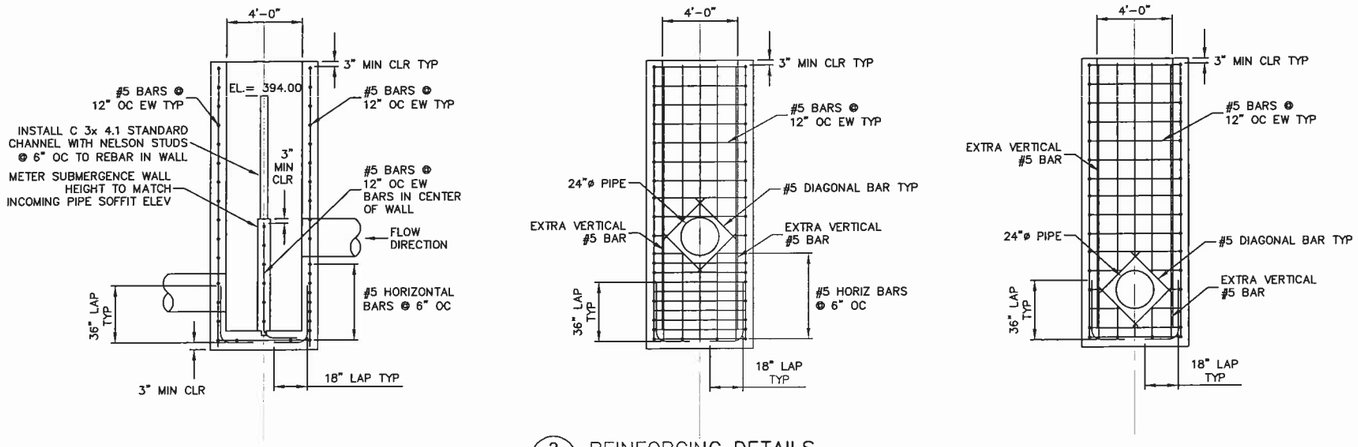


1 / ST4 METERING STRUCTURE
SCALE: NTS



2 / ST4 REINFORCING DETAILS
SCALE: NTS

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PRELIMINARY
FOR REVIEW AND APPROVAL
01/26/2011

No.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RANDY S. HOPKINS No. 63538 Civil STATE OF CALIFORNIA

DATE SIGNED: _____

Gateway Village
In-Lieu Pipeline
Castle and Cooke, Inc.
Madera County, CA

24 INCH METERING STRUCTURE

ESTABLISHED 1953
PROVOST& PRITCHARD ENGINEERING GROUP
An Employee Owned Company
286 WEST CROMWELL AVENUE
FRESNO, CALIFORNIA 93711-6162
559/449-2700 FAX 559/449-2715
www.ppeng.com

DESIGN ENGINEER: Randy Hopkins	
LICENSE NO: 63538	
DRAFTED BY: DVS	CHECKED BY: VSL
SCALE: AS SHOWN	
DATE: 01/26/2011	
JOB NO: 12491101	
DWG. NO:	
SHEET ST4 OF	

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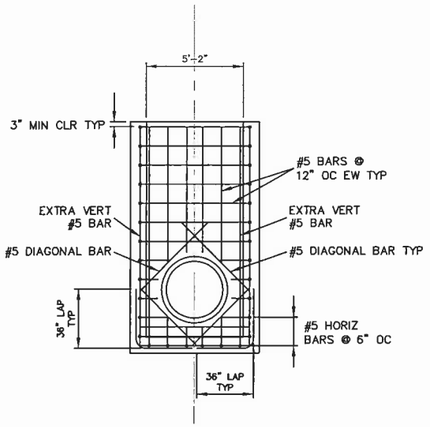
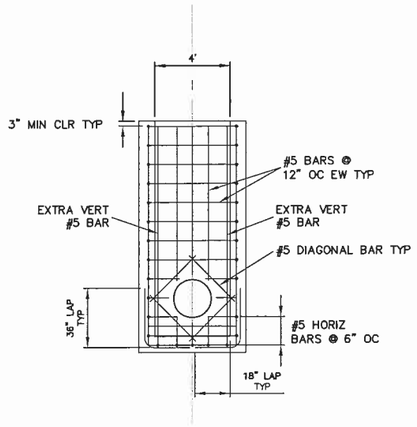
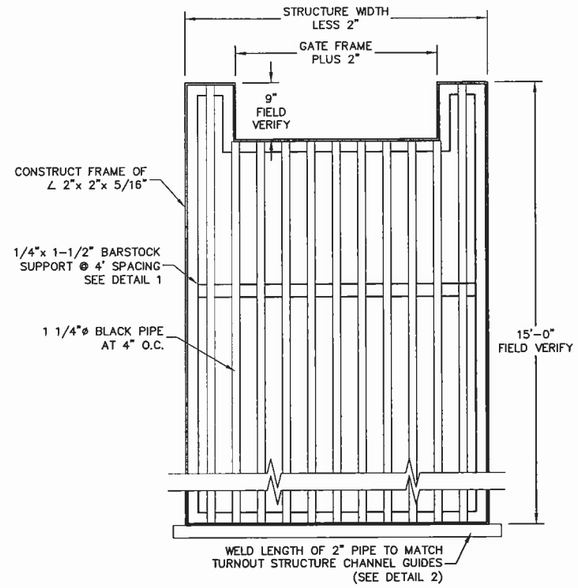


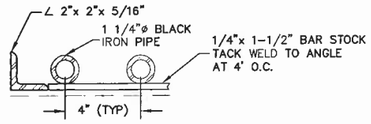
36 INCH TURNOUT



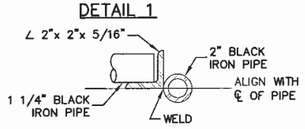
24 INCH TURNOUT

1 DT1 TURNOUT CONCRETE OPENING REINFORCEMENT
SCALE: NTS



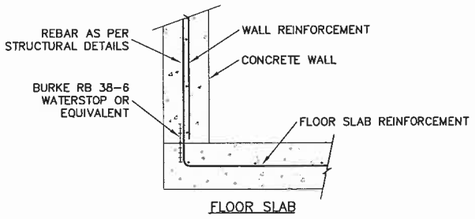


DETAIL 1



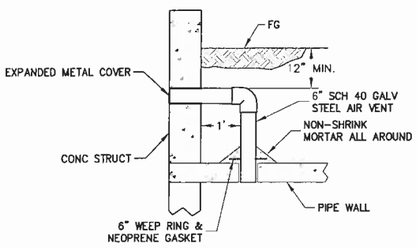
DETAIL 2

2 DT1 TRASH RACK
SCALE: NTS

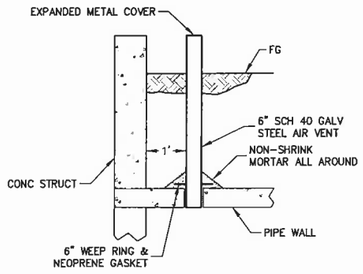


FLOOR SLAB

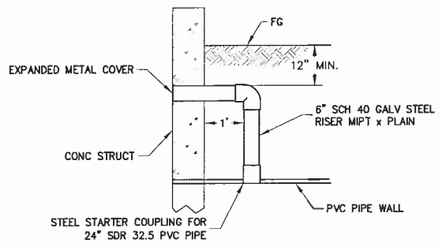
3 DT1 STRUCTURE COLD JOINT
SCALE: NTS



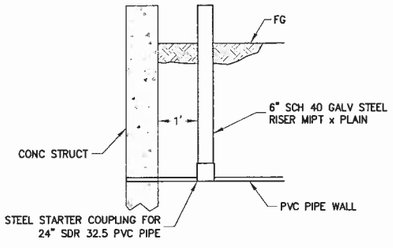
4 DT1 AIR VENT-CONCRETE PIPE
SCALE: NTS



5 DT1 STRAIGHT AIR VENT-CONCRETE PIPE
SCALE: NTS



6 DT1 AIR VENT-PVC PIPE
SCALE: NTS



7 DT1 STRAIGHT AIR VENT-PVC PIPE
SCALE: NTS

Know what's **below.** Call **before you dig.**

PRELIMINARY
FOR REVIEW AND APPROVAL
01/26/2011

No.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER — RANDY S. HOPKINS II — No. 63538 — Civil — STATE OF CALIFORNIA

DATE SIGNED: ____

Gateway Village
In-Lieu Pipeline
Castle and Cooke, Inc.
Madera County, CA

TURNOUT DETAILS

EST. 1946
PROVOST & PRITCHARD ENGINEERING GROUP
An Employee Owned Company
286 WEST CROMWELL AVENUE
FRESNO, CALIFORNIA 93711
559/449-2700 FAX 559/449-2715
www.ppeng.com

DESIGN ENGINEER: Randy Hopkins	
LICENSE NO: 63538	
DRAFTED BY: DVS	CHECKED BY: VSL
SCALE: AS SHOWN	
DATE: 01/26/2011	
JOB NO: 12491101	
DWG. NO:	
SHEET DT1 OF	

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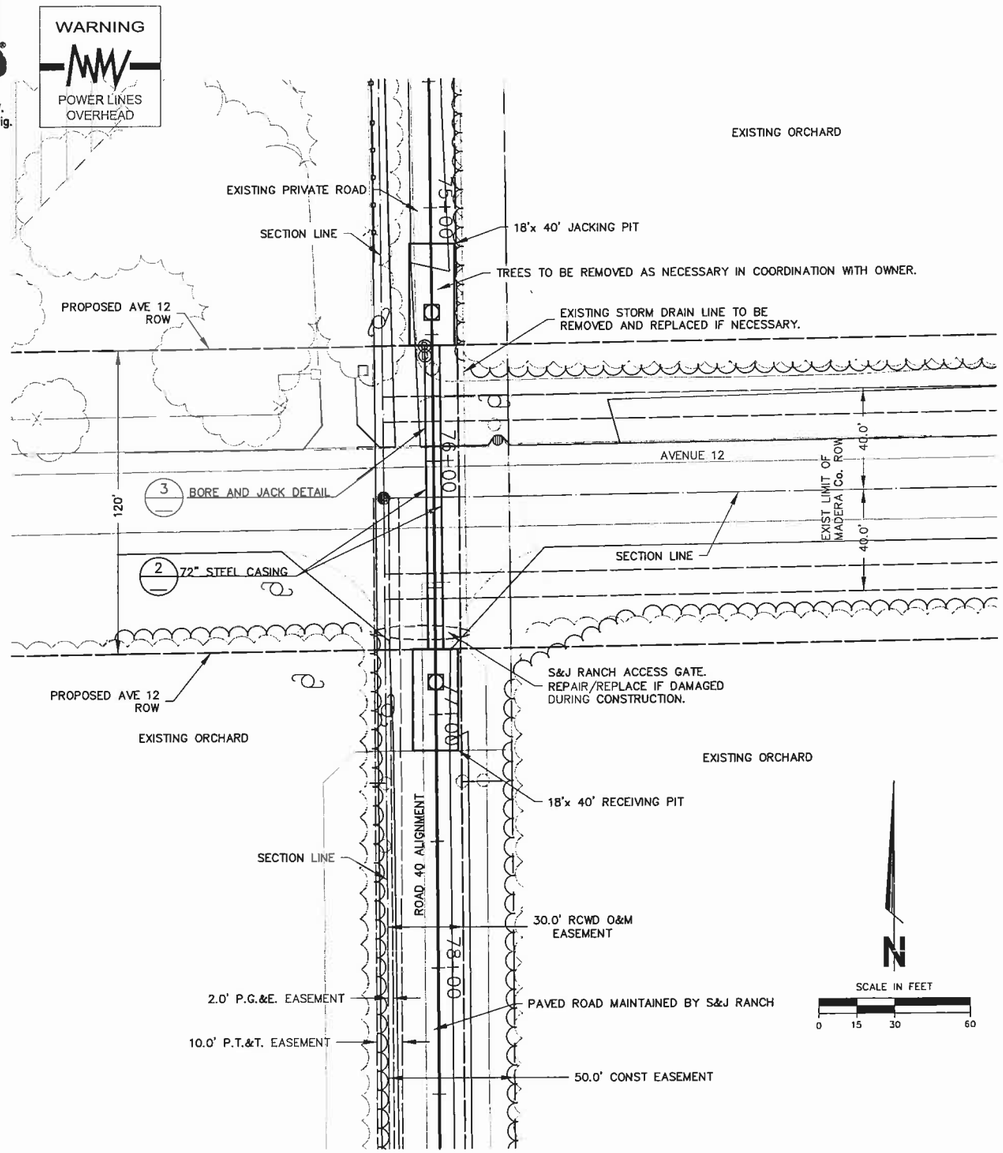
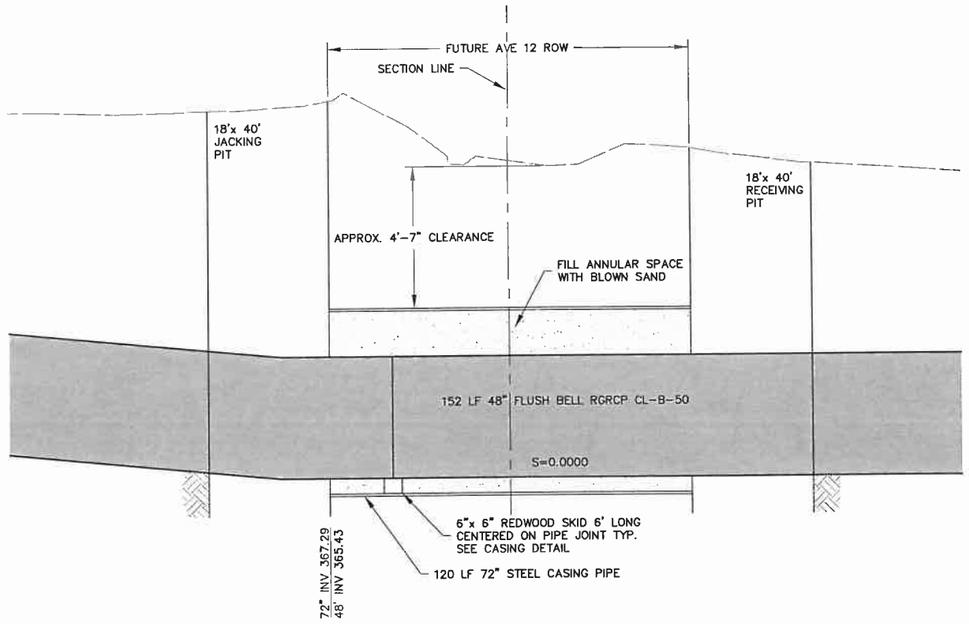
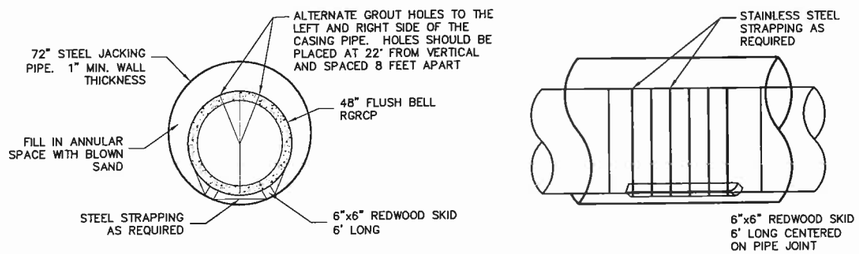


1/DT2 AVE 12 CROSSING
SCALE: AS SHOWN





3/DT2 CASING DETAIL
SCALE: NTS

BORE AND JACKING NOTES:

1. CASING ENDS SHALL BE PLUGGED WITH UNGROUTED BRICKS, OR ANOTHER APPROVED MATERIAL.

2. GROUTING MAY BE REQUIRED BETWEEN THE OUTSIDE OF THE CASING AND THE ROADBED TO FILL VOIDS CAUSED BY THE WORK. GROUT PRESSURE SHALL NOT EXCEED 5 PSI FOR A DURATION SUFFICIENT TO FILL THE VOIDS.

3. IF WING CUTTERS ARE USED, THEY SHALL ONLY ADD A MAXIMUM OF 1 INCH DIAMETER TO THE OUTSIDE DIAMETER OF THE CASING PIPE.

4. A BAND WELDED TO THE LEADING EDGE OF THE CASING SHOULD BE PLACED SQUARE TO THE ALIGNMENT. THE BAND SHOULD NOT BE PLACED ON THE BOTTOM EDGE. FLARING THE LEAD SECTION SHALL NOT BE PERMITTED.

5. CASING LENGTH SHALL EQUAL AUGER LENGTH.

6. FENCING WILL BE REQUIRED AROUND THE JACKING AND RECEIVING PITS.

7. SHORING IF REQUIRED SHALL CONFORM TO OR EXCEED CAL-OSHA MINIMUM REQUIREMENTS.

8. A MINIMUM OF 2 INCHES OF CLEARANCE IS REQUIRED BETWEEN THE INTERIOR OF THE CASING PIPE AND THE EXTERIOR OF THE PIPELINE.

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DATE SIGNED: _____

Gateway Village
In-Lieu Pipeline
Castle and Cooke, Inc.
Madera County, CA

AVE 12 CROSSING

ESTD. 1968
PROVOST& PRITCHARD
ENGINEERING GROUP
An Employee Owned Company
286 WEST CROMWELL AVENUE
FRESNO, CALIFORNIA 93711-6162
559/448-8200 FAX 559/448-8210
www.ppeng.com

DESIGN ENGINEER: Randy Hopkins	
LICENSE NO: 63538	
DRAFTED BY: DVS	CHECKED BY: VSL
SCALE: AS SHOWN	
DATE: 01/26/2011	
JOB NO: 12491101	
DWG. NO:	
SHEET DT2 OF	

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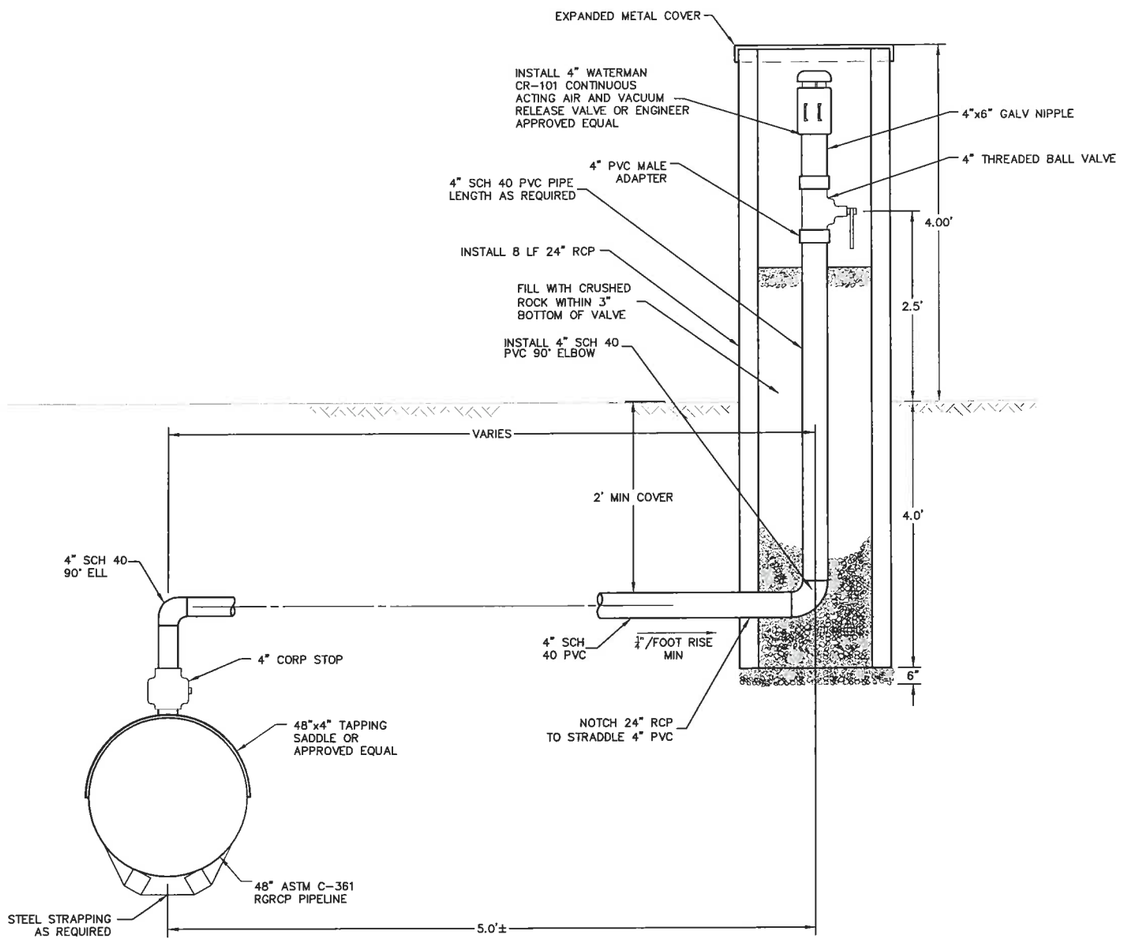
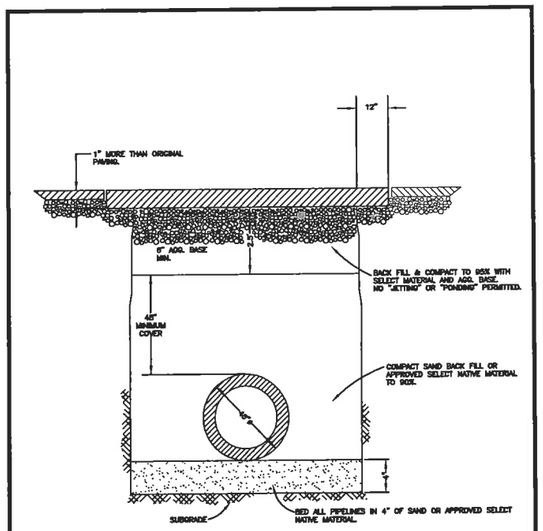


1 DT3 OFFSET AIR VENT
SCALE: NTS

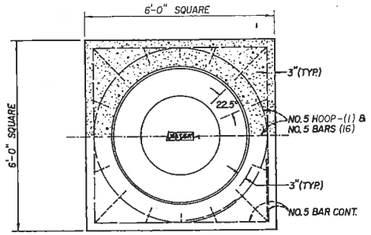


NOTES:

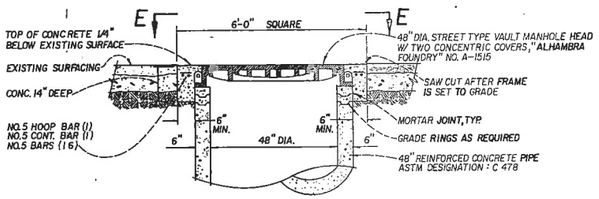
1. Shoring or tapered banks will be required for any trench 5' or more in depth.
2. In all cases a minimum of 3" of paving over 6" Class II A.B. or equivalent is required. Paving material to be the same as that removed. (New pavement to be 1" thicker than original).
3. Decomposed granite may not be used for back fill or pipe bedding.
4. Compaction tests by a certified lab will be required for all trench cuts or other excavation. Contractor to bear full expense of all testing.
5. Upper lift of new A.C. pavement shall contain aggregate of ½" max. size.

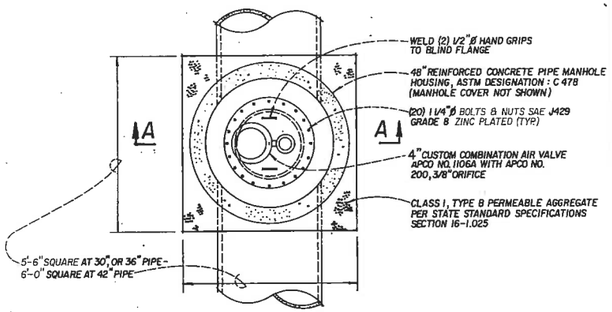
Spec's By	COUNTY OF MADERA	Date 12-24-81
Drawn By J. SHIELDS	STREET EXCAVATION, BACK FILL & SURFACE RESTORATION	Scale NONE
APPROVED BY		Drawing No. ST-28
REVISIONS 8/1/02		

2 DT3 MADERA CO TRENCH DETAILS
SCALE: NTS

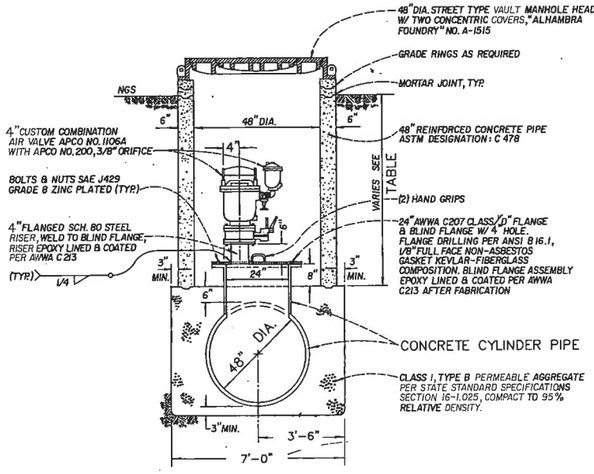


VIEW E-E



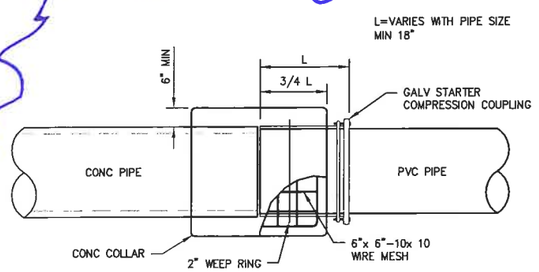


PLAN



SECTION A-A

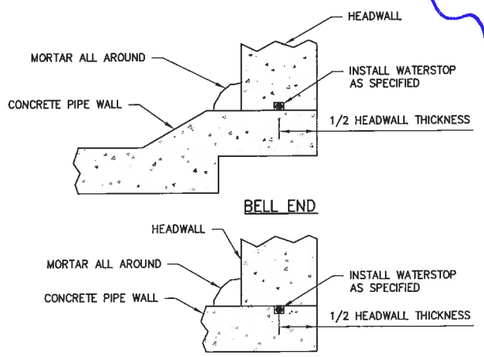
5 DT3 CUSTOM COMBINATION AIR VALVE
SCALE: NTS



NOTE
JOINT TO BE BANDED ON THE INSIDE PRIOR 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 EPOXIED AT MATCHING SURFACES WITH PIPE AND THEN MORTAR AND PLUG HOLE. WHEN IN PLACE AND SET EXTERNAL COLLAR MUST BE WATERED DOWN TO A POINT OF SATURATION THEN COVERED WITH WET 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.

NOT TO SCALE

3 DT3 CONCRETE TO PVC PIPE CONNECTION
SCALE: NTS



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.

NOT TO SCALE

4 DT3 CONCRETE PIPE HEADWALL CONNECTION
SCALE: NTS

811 Know what's below. Call before you dig.

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DATE SIGNED: ____

Gateway Village
In-Lieu Pipeline
Castle and Cooke, Inc.
Madera County, CA

STANDARD DETAILS

ESTABLISHED 1946
PROVOST & PRITCHARD ENGINEERING GROUP
An Employee Owned Company
286 WEST CROMWELL AVENUE
FRESNO, CALIFORNIA 93711
559/449-2700 FAX 559/449-2715
www.ppeng.com

DESIGN ENGINEER: Randy Hopkins	
LICENSE NO: 63538	
DRAFTED BY: DVS	CHECKED BY: VSL
SCALE: AS SHOWN	
DATE: 01/26/2011	
JOB NO: 12491101	
DWG. NO:	
SHEET DT3	OF

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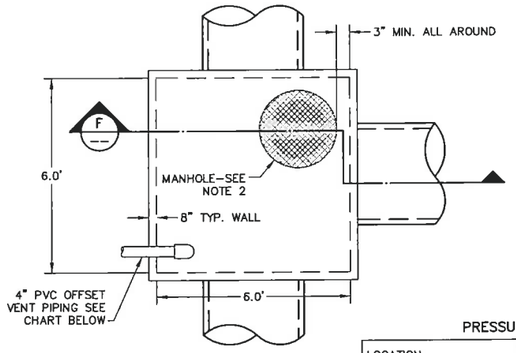
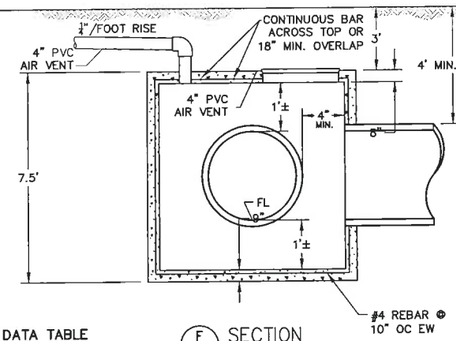
811 Know what's below. Call before you dig.

WARNING
POWER LINES OVERHEAD





F (--) SECTION
SCALE: NTS

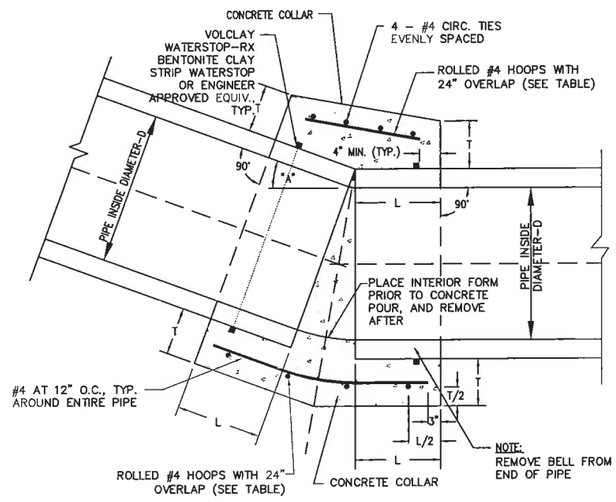
PRESSURE MANHOLE DATA TABLE

LOCATION	STATION	PIPE SIZE	PIPE FL	RIM ELEV.
NORTH OF AVE 12	36+50	48	373.57	383.25
NORTH OF AVE 12	63+00	48	371.85	382.50
NEAR WELL 169	88+00	48	363.87	373.71
ROAD 40 ALIGNMENT	114+50	48	xxx.xx	xxx.xx
NORTH OF ROOT CREEK	141+00	48	333.92	344.21
ROOT CREEK	145+44	48	322.50	337.63
END NEAR LAT 5E	153+00	48	350.10	360.32

PRESSURE MANHOLE CONSTRUCTION NOTES

1. CONCRETE SHALL BE CLASS "A" 3,000psi WITH #4 REBAR 10" O.C.E.W. SEE REINFORCING DETAIL. FURNISH DESIGN CALCULATIONS FOR STRUCTURES 8' OR GREATER AS MEASURED FROM FLOOR TO TOP.
2. MANHOLES SHALL BE STANDARD 30" HD PRESSURE TYPE MANHOLE FRAME & COVER, PHOENIX IRON WORKS, OAKLAND, CA. NO. P-1002 OR APPROVED EQUAL CAPABLE OF OPERATING LEAK FREE AT __ FT. PRESSURE.
3. CEMENT MORTAR ALL EXTERIOR COLD JOINTS, EPOXY GROUT ALL INTERIOR JOINTS.
4. FLOOR & WALLS MUST BE INSTALLED IN SINGLE POUR. SEE DISTRICT STANDARD FOR COLD JOINT.
5. ALL INLETS/OUTLETS SHALL BE FINISHED FLUSH WITH INSIDE WALL AND SHALL CONTAIN A WATER STOP.
6. STEEL PIPE SHALL HAVE WEEP RING CAST INTO STRUCTURE WALL.
7. FINAL OFFSET AIR VENT LOCATION TO BE DETERMINED BY DISTRICT.

1 DT4 PRESSURE MANHOLE
SCALE: NTS



NOTES:

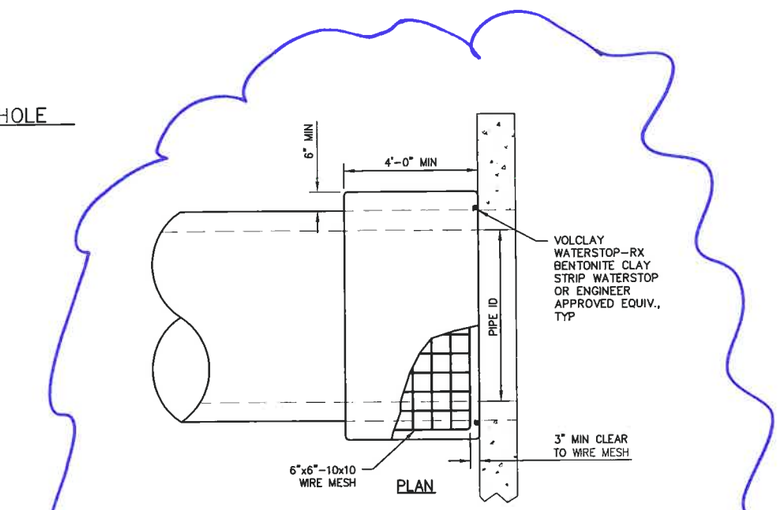
1. ANGLE "A" SHALL BE DETERMINED IN THE FIELD AND REBAR PLACEMENT APPROVED BY THE ENGINEER PRIOR TO CONCRETE PLACEMENT.
2. CONCRETE SHALL BE 3500 PSI @ 28 DAYS OR BETTER AND CONFORM TO CONCRETE SPECIFICATIONS.
3. CONCRETE SHALL BE VIBRATED AROUND PIPE JOINT DURING
4. PLACEMENT.
5. INSIDE JOINT TO BE SMOOTH FINISH (BRUSHED) & FLUSH.
6. DIAMETER OF ROLLED HOOPS SHALL BE D + (2X WALL THICKNESS) + T
7. PREPARE SURFACE OF EXISTING STRUCTURES BY WIRE
8. BRUSHING, WATER BLASTING, OR SANDBLASTING AS REQUIRED BY THE ENGINEER.

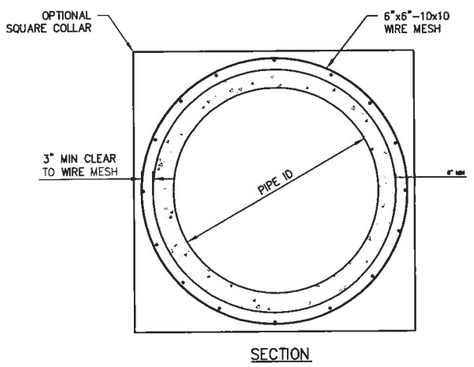
   PROVIDE WATER TIGHT JOINT.
9. CONCRETE PIPE SHALL BE CLEANED AND TREATED WITH AN APPROVED CONCRETE BONDING AGENT PRIOR TO CONCRETE PLACEMENT AS REQUIRED BY THE ENGINEER.

   FORMS USED TO POUR CONCRETE COLLAR TO BE REMOVED PRIOR TO BACKFILL.

PIPE DIAMETER, D	L	T	MIN. NO. HOOPS
LESS THAN OR EQUAL TO 24"	18"	8"	3
LESS THAN OR EQUAL TO 48"	24"	10"	4
LESS THAN OR EQUAL TO 72"	30"	12"	5
GREATER THAN 72"	BY DESIGN	BY DESIGN	BY DESIGN

2 DT4 ANGLED PIPE JOINT COLLAR
SCALE: NTS





SECTION

NOTE
JOINT TO BE BANDED ON THE INSIDE PRIOR 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 EPOXIED AT MATCHING SURFACES WITH PIPE AND THEN MORTAR AND PLUG HOLE. WHEN IN PLACE AND SET EXTERNAL COLLAR MUST BE WATERED DOWN TO A POINT OF SATURATION THEN COVERED WITH WET 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.

3 DT4 CONCRETE PIPE COLLAR
SCALE: NTS

PRELIMINARY
FOR REVIEW AND APPROVAL
01/26/2011

No.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER — RANDY S. HOPKINS — No. 63538 — Civil — STATE OF CALIFORNIA

DATE SIGNED:

Gateway Village
In–Lieu Pipeline
Castle and Cooke, Inc.
Madera County, CA

STANDARD DETAILS

ESTD 1946
PROVOST & PRITCHARD ENGINEERING GROUP
An Employee Owned Company
286 WEST CROMWELL AVENUE
FRESNO, CALIFORNIA 93711-6162
559/449-2700 FAX 559/449-2715
www.ppeng.com

DESIGN ENGINEER: Randy Hopkins	
LICENSE NO: 63538	
DRAFTED BY: DVS	CHECKED BY: VSL
SCALE: AS SHOWN	
DATE: 01/26/2011	
JOB NO: 12491101	
DWG. NO:	
SHEET: DT4 OF 19	

1/26/2011 3:48 PM G:\Clients\Castle_Cooke-143A\1434-Gateway\1434-Expan Phs 1\14340405-Gateway Pipeline LD\dwg\SHEET\14340405-DT-STANDARD DETAILS 3.dwg -Keith Mortensen

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Appendix C – Environmental Protection Measures

1. A biologist shall provide training to construction project workers to familiarize them with listed species before project activities are begun at RCWD. The biologist shall provide images of, and describe the identifying characters, life history characteristics, biology and ecology, of SJKF and CTS. Additionally, the protections afforded for listed species and designated critical habitat and penalties for violations under the ESA shall be described, including the definition of "take" as defined under the ESA (U.S.C. 16 Sect. 1531 et. seq.). The U.S. Code states: "Take is defined as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harass is defined by the Service as an intentional or negligent act or omission which creates the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. Harm is defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by impairing behavioral patterns including breeding, feeding, or sheltering."

2. The work foreman, or person on site in charge of construction (i.e. Responsible Person), shall be the person designated as responsible for contacting USFWS (Service), DFG and Reclamation biologists, should a listed species be encountered during project activities in RCWD. This person also will be the contact person for any biologist working on the project. The name and contact information of this person shall be provided to Service, DFG and Reclamation biologists prior to beginning any construction.

3. If a listed species is observed in the Action Area at RCWD, the Responsible Person shall immediately contact biologists at the Sacramento Fish and Wildlife Office (SFWO), DFG and at Reclamation SCCAO. No further work in RCWD may be taken on the Proposed Action until appropriate consultation with Service and DFG has been completed.

4. A standard survey for San Joaquin kit fox (SJKF; Service 2011) shall be conducted between 14 and 30 days before activities on the project begin and a report on the findings filed with Reclamation and the SFWO. Pending the results of that survey, if no evidence of kit fox, their sign, or other evidence of their presence is detected, work may proceed pending completion of environmental compliance and notification of such by Reclamation.

5. Standard avoidance measures for SJKF (Service 2011) shall be implemented for the project.

6. Rodent burrows shall be avoided and may not be destroyed. At the time when specific locations for facilities are being identified by on the ground personnel, and also prior to beginning earth disturbing work, all burrows that could be affected by construction activities shall be flagged by a biologist (such as with a surveyor flag). Hi-viz barrier fencing at least 3 feet high shall be erected and maintained around burrows or burrow complexes to identify these sensitive areas which shall be avoided during the period of construction.

7. From June until the first rain event occurring on or after October 1, if an open hole or trench in the earth 6 inches deep or greater is created during construction, and it must remain open overnight, the opening to the trench or hole must either be covered to preclude entry by animals, or escape ramps suitable for CTS and SJKF must be placed at least every 50 lineal feet. If construction occurs between October 1 and May 31, for any hole or trench greater than 6 inches deep that must be left open overnight, such hole or trench must be completely covered to prevent access by animals, including CTS, if any work is conducted subsequent to a rain event. A rain event is one where measurable precipitation has been recorded at Fresno Yosemite International Airport, or, if the event is not sufficiently widespread to have been measured at this station, but otherwise is "commonly recognized" as to have occurred over the RCWD project area, the latter condition would be defining. No construction is permitted during periods of rain.

8. Any open pipe within a trench or hole shall have its opening(s) capped. Each day before work activity occurs in such areas (e.g. for laying pipe), the hole or trench shall be inspected for the presence of listed species. If CTS, SJKF or other listed species is present, Reclamation biologists, the CDFG and SFWO shall be contacted immediately and no further action may be taken until further appropriate consultation with the Service and DFG are completed.

9. Any pipe or similar tubular material staged or stored overnight at RCWD in an area which could be accessed by SJKF or CTS, shall be capped or covered to preclude entry. Before it is moved or installed, the openings of these materials and the area surrounding the materials must be examined for the presence of SJKF and CTS or other listed species. If a listed species is present, they must be allowed to leave of their own accord. If the animal does not immediately leave the area or there is risk of take, SFWO, DFG and Reclamation biologists shall be contacted immediately and no further action may be taken until further appropriate consultation with the Service and DFG are completed. Additionally, daily, before equipment is operated, the areas underneath such equipment shall be inspected by the operator for the presence of SJKF or CTS.

10. All "take" of migratory birds associated with the Proposed Action is prohibited and must be avoided. In addition to the pre-activity survey for SJKF, a pre-activity survey prior to construction shall be made for burrowing owls. As applicable, measures for avoidance

(DFG 1995) of "take" under MBTA shall be applied (Attention is directed to the Federal Migratory Bird Treaty Act (16 U.S.C. 703-712) 50 CFR Part 10 and California Fish and Game Code Sections 3503, 3513 and 3800, which protect migratory birds, occupied nests and eggs from disturbance and destruction. With regard to "take" under MBTA, 16 U.S.C. § 703 states that **"**Unless and except as permitted by regulations made as hereinafter provided in this subchapter, it shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, offer for sale, sell, offer to barter, barter, offer to purchase, purchase, deliver for shipment, ship, export, import, cause to be shipped, exported, or imported, deliver for transportation, transport or cause to be transported, carry or cause to be carried, or receive for shipment, transportation, carriage, or export, any migratory bird, any part, nest, or eggs of any such bird, or any product, whether or not manufactured, which consists, or is composed in whole or part, of any such bird or any part, nest, or egg thereof, included in the terms of the conventions between the United States and Great Britain for the protection of migratory birds concluded August 16, 1916 (39 Stat. 1702), the United States and the United Mexican States for the protection of migratory birds and game mammals concluded February 7, 1936, the United States and the Government of Japan for the protection of migratory birds and birds in danger of extinction, and their environment concluded March 4, 1972 http://www.fws.gov/permits/mbpermits/regulations/mbta.html - N_1_#N_1_and the convention between the United States and the Union of Soviet Socialist Republics for the conservation of migratory birds and their environments concluded November 19, 1976."

11. Furthermore, should construction be required in February through August, a biologist shall conduct a survey to locate nesting birds in the Action Area at RCWD. Any migratory birds that may be affected by. Those areas in RCWD, where birds or their nests, etc. that may be subjected to "take", as defined under the MBTA as consequence of the Proposed Action, shall be identified and avoidance measures implemented under the guidance of a biologist.

    No water conveyed in federal facilities and applied to lands in RCWD would be applied to native lands, or to lands fallowed or left untilled for 3 or more years until such lands are first surveyed for listed species. If such lands are determined to be inhabited by listed species, then no water may be applied on them until effects to listed species are consulted upon.

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Appendix D – ITA and Cultural Resources Determinations

Inthavong, Michael T

From: Rivera, Patricia L
Sent: Friday, June 03, 2011 9:12 AM
To: Inthavong, Michael T
Subject: RE: ITA Request Form (EA-06-117)

Michael,

I reviewed the proposed action to approve the following requests made by Madera Irrigation District (MID), Root Creek Water District (RCWD), and Shafter-Wasco Irrigation District (SWID):

- Issuance of an MP-620 permit to MID for two turnouts on Lateral 6.2;
- Approval of long-term annual transfers of up to 10,000 acre-feet (AF) of Central Valley Project (CVP) water from MID to RCWD;
- Execution of a temporary contract for Section 215 water with RCWD for Contract Year 2011; and
- Approval of long-term annual exchanges of up to 7,000 AF of CVP water between MID and SWID for ultimate delivery to RCWD via an agreement with Westside.

The MP-620 permit would be issued to MID and would cover both turnouts and easements for the pipelines within Reclamation easement and right-of-way (ROW) for Lateral 6.2. Each turnout would involve excavation and typical concrete structure on Lateral 6.2. MID's new turnout would include a 24-inch diameter pipeline which would then extend towards MID's existing distribution system approximately 0.25 miles south of Lateral 6.2. Excavation to bury the pipeline would be approximately 5 feet (ft) deep and 10 ft wide. RCWD's new turnout would include a 36-inch diameter pipeline, which would transition to a 48-inch diameter pipeline at the meter vault, and then extend towards RCWD's existing distribution system roughly 2.75 miles south of Lateral 6.2. Excavation would be roughly 10 ft wide and up to 11 ft deep depending on elevation to allow at least 3 ft of cover. At Avenue 12 and Root Creek, excavation would involve jack and boring underneath the road and creek.

The long-term annual transfers between MID and RCWD would occur through Contract Year 2035. More specifically, MID would annually transfer up to 25 cubic-feet per second (cfs) from May 1 to August 31 and up to 50 cfs from September 1 to April 30. When available, MID would deliver a portion of its CVP supplies to RCWD via the Madera Canal, Lateral 6.2, and then through the newly built RCWD turnout and pipeline.

The Section 215 contract for RCWD would be for Contract Year 2011, ending on February 29, 2012. As declared available by Reclamation, the Section 215 water would be conveyed through the Madera Canal, Lateral 6.2, and then the newly built RCWD turnout and pipeline by MID.

The annual exchanges between MID and SWID would occur through Contract year 2035. More specifically, Westside would transfer to SWID up to 3,500 AF for years 1-4, up to 5,000 AF for years 5-9, and up to 7,000 AF for years 10+ of non-CVP. SWID would then exchange and make available a like amount of its CVP supplies to MID, which would in turn make a like amount (minus conveyance losses) of its CVP supplies available to RCWD. When available, the CVP water would be conveyed through the Madera Canal, Lateral 6.2, and then the newly built RCWD turnout and pipeline.

The proposed action does not have a potential to affect Indian Trust Assets. The nearest ITA is Table Mountain Rancheria approximately 10 miles NE of the project location.

Patricia

Inthavong, Michael T

From: Nickels, Adam M
Sent: Wednesday, June 08, 2011 2:08 PM
To: Inthavong, Michael T
Cc: Barnes, Amy J; Bruce, Brandee E; Dunay, Amy L; Fogerty, John A; Goodsell, Joanne E; Overly, Stephen A; Perry, Laureen (Laurie) M; Soule, William E; Williams, Scott A
Subject: RE: Root Creek project (07-SCAO-222)
Attachments: 07-SCAO-222 SHPO Consultation Letter0001.pdf; BUR070809A CONSTRUCT TURNOUT NEW PIPE OFF LATERAL 6 2 MADERA CANAL ROOT CK WATER DIST (3).doc

Project No. 07-SCAO-222

Michael,

I have reviewed Draft EA-06-117 and only one small comment changing the CR determination in the environmental consequences in Section 3.4.2 (correction highlighted). Reclamation consulted on this action in 2007 and retained SHPO concurrence (letters attached). The proposed action will have no adverse effect to historic properties resulting in no impacts to cultural resources. After reviewing the EA in comparison to the consultations, I have determined that the existing consultations are sufficient enough for this EA. You have no further obligation for review under Section 106 of the National historic Preservation Act. Please note that in the event that cultural resources are uncovered during project implementation, Reclamation may have further responsibilities under Section 106 as defined by the regulations at 36 CFR Part 800.6 (Post Review Discovery). Thank you for providing the opportunity to comment.

Sincerely,

Adam Nickels

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov
www.ohp.parks.ca.gov

August 22, 2007

In Reply Refer To: BUR070809A

Susan M. Fry
Regional Environmental Officer
United States Department of the Interior
Bureau of Reclamation
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, CA 95825-1898

Re: Approval of a Section 215 Contract for the Root Creek Water District, Madera County, California (Project No. 07-SCAO-222).

Dear Ms. Fry:

Thank you for seeking consultation with me regarding the above noted undertaking. Pursuant to 36 CFR Part 800 (as amended 8-05-04) regulations implementing Section 106 of the National Historic Preservation Act (NHPA), the Bureau of Reclamation (BUR) is the lead Federal agency for this undertaking and is seeking my comments on the effects that the proposed project will have on historic properties. The BUR is proposing to approve a Section 215 contract to deliver water from the BUR's Central Valley Project, for irrigation and direct ground water recharge, to the Root Creek Water District (RCWD). The BUR has determined that their approval of this contract constitutes an undertaking pursuant to the NHPA.

The project will entail the construction, by the RCWD, of a new turnout on the southeast bank of Lateral 6.2, a component of the Madera Canal distribution system operated by the Madera Irrigation District. From the new turnout, a 48-inch diameter buried pipeline will be installed that will extend approximately 2.75 south of Lateral 6.2. The RCWD will additionally construct nine sub-lateral pipelines of 12-15-inch diameters off this main line. The BUR has determined that the location of the proposed turnout on Lateral 6.2, the main 48-inch RCWD pipeline route, and the routes of the nine sub-laterals comprise the project Area of Potential Effects (APE). This linear APE extends for approximately six miles (9.7 kilometers). In addition to your letter of August 7, 2007, you have submitted the following document as evidence of your efforts to identify historic properties in the project APE:

● *A Cultural Resources Survey for the Root Creek Water District In-Lieu Groundwater Recharge Facilities Project Avenue 12 at Road 40, Madera County, California* (C.K. Roper; Sierra Valley Cultural Planning: February 6, 2007).

The identification efforts by the BUR have concluded that the only historic property located in the APE is Lateral 6.2. Lateral 6.2 receives water from the Madera Canal, a major water distribution element of the Central Valley Project (CVP), and is thus a component of the CVP itself. The BUR has completed a draft National Register of Historic Places nomination for the CVP that is currently under review at my office. Pending the finalization of the CVP NRHP nomination, and the consensus determination of its contributing elements, the BUR is assuming that Lateral 6.2 is eligible for the NRHP as a component of the CVP, for the purposes of this undertaking only. Accordingly, the BUR has concurred with this analysis of the subject undertaking, in an email (dated 8/22/07) from Patrick Welch of the Mid-Pacific Regional Office, and has agreed that a finding of No Adverse Effect is appropriate for this undertaking.

Based on my review of your letter, supporting documentation, and a phone contact of 8/20/07 and subsequent email contacts between William Soule of my Staff and Patrick Welch of your staff, I have the following comments:

1) I concur that the Area of Potential Effects is appropriate pursuant to 36 CFR Parts 800.4(a)(1) and 800.16(d) and that the efforts made to identify historic properties have been appropriate pursuant to 36 CFR Part 800.4(b).

2) I further concur that a finding of No Adverse Effect is appropriate pursuant to 36 CFR Part 800.5(b).

3) Be advised that under certain circumstances, such as unanticipated discovery or a change in project description, the BUR may have additional future responsibilities for this undertaking under 36 CFR Part 800.

Thank you for seeking my comments and for considering historic properties in planning your project. If you require further information, please contact William Soule, Associate State Archeologist, at phone 916-654-4614 or email wsoule@parks.ca.gov.

Sincerely,

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer