

100% DESIGN ISSUED FOR BIDDING
NOT FOR CONSTRUCTION



GENERAL NOTES

- THE PLANS HAVE BEEN PREPARED WITH THE INTENTION THAT THE ENGINEER WILL PERFORM CONSTRUCTION STAKING FOR THE ENTIRE PROJECT INCLUDING SETTING TEMPORARY BENCHMARKS NEAR THE PROPOSED LOCATION OF STRUCTURES TO BE USED BY THE CONTRACTOR FOR LAYOUT AND QUALITY CONTROL. A CONSTRUCTION STAKING SCHEDULE SHALL BE DEFINED AS REQUIRED DURING THE PRE-CONSTRUCTION MEETING. THE CONTRACTOR SHALL PROVIDE THE ENGINEER A MINIMUM OF 2 WORKING DAYS ADVANCE NOTICE OF ANY STAKING NEEDS.
- THE CONTRACTOR SHALL NOT BEGIN ANY WORK SHOWN ON THESE PLANS UNTIL THE SIGNATURE OF APPROVAL OF ENGINEER AND THE OWNER ARE AFFIXED AT THE DESIGNATED LOCATION ON THE TITLE SHEET, ALL APPLICABLE PERMITS HAVE BEEN OBTAINED, AND THE ENGINEER HAS ISSUED A NOTICE TO PROCEED.
- THE CONTRACTOR SHALL BE REQUIRED TO HAVE A PRE-CONSTRUCTION CONFERENCE WITH THE ENGINEER AND OWNER PRIOR TO STARTING THE WORK. THE CONTRACTOR SHALL BE PREPARED TO DISCUSS THEIR PLANS FOR EXECUTING THE WORK PER THE CONTRACT DOCUMENTS.
- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL LOCATE ALL EXISTING AND UNDERGROUND UTILITIES IN AND AROUND THE AREAS OF NEW CONSTRUCTION AND VERIFY THE PROPOSED CONSTRUCTION DOES NOT CONFLICT WITH EXISTING OR PROPOSED UTILITIES OR THAT APPROPRIATE MEANS ARE PROVIDED FOR REROUTING, SUPPORTING, OR PROTECTION, OR OTHERWISE INCORPORATING THE UTILITIES IN THE CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION MEANS AND METHODS. CONTRACTOR SHALL FOLLOW BEST GENERAL PRACTICES IN EXECUTING ALL WORK.
- THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SCHEDULE TO THE OWNER AND ENGINEER FOR APPROVAL PRIOR TO BEGINNING WORK AND IS TO NOTIFY THE OWNER 2 WORKING DAYS IN ADVANCE OF EACH CONSTRUCTION PHASE SO AS TO FACILITATE CONSTRUCTION INSPECTION SCHEDULING.
- MATERIAL SUBMITTALS OR SHOP DRAWINGS REQUIRED BY THE CONTRACT DOCUMENTS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL A MINIMUM OF 2 WEEKS PRIOR TO COMMENCING WORK TO WHICH THE SUBMITTED MATERIALS PERTAINS. MATERIALS REQUIRING SUBMITTALS SHALL NOT BE INCORPORATED INTO THE WORK UNTIL SUBMITTAL APPROVAL IS RECEIVED FROM THE ENGINEER.
- PRODUCTS REFERENCED ON THE DRAWINGS, OR THOSE APPROVED AS EQUAL, SHALL BE CONSTRUCTED, INSTALLED AND/OR APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN RECOMMENDATION UNLESS OTHERWISE SHOWN.
- THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF THE CONSTRUCTION PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR FURTHER AGREES TO INDEMNIFY AND HOLD THE OWNER, ENGINEER, PROJECT MANAGER, AND THEIR OFFICERS, EMPLOYEES, AGENTS AND VOLUNTEERS HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF THE WORK.
- A SET OF APPROVED PLANS SHALL BE ON THE JOB SITE AT ALL TIMES DURING CONSTRUCTION.
- THE CONTRACTOR SHALL MAINTAIN A COPY OF THE PLANS DEDICATED TO DOCUMENTING AS-BUILT CONDITIONS. THESE PLANS SHALL BE PROVIDED TO THE ENGINEER AT THE CONCLUSION OF THE PROJECT.
- DO NOT SCALE DRAWING. CONTACT THE ENGINEER FOR ANY DIMENSIONS OR SPECIFIC DETAIL NOT SHOWN.
- NOTIFY THE OWNER AND/OR ENGINEER WHERE A CONFLICT OR DISCREPANCY OCCURS BETWEEN THESE DRAWINGS AND ANY OTHER PORTION OF THE CONTRACT DOCUMENTS OR EXISTING FIELD CONDITIONS.
- THE CONTRACTOR SHALL LIMIT THE TOTAL WORK AREA SO THAT THE MINIMUM REQUIRED FOR CONSTRUCTION. STAGING AREAS AND OTHER DROP ZONES OR EQUIPMENT STORAGE ZONES BEYOND THE SHOWN EXTENTS OF WORK SHALL BE PRE-APPROVED BY THE OWNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING, USING, AND DISPOSING OF ADDITIONAL WORK AREAS AND FACILITIES TEMPORARILY REQUIRED FOR CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE OWNER HARMLESS FROM ALL CLAIMS FOR DAMAGES OCCASIONED BY SUCH ACTIONS. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION PRIOR TO UTILIZING ANY AND ALL ADDITIONAL WORK AREAS.
- VISITS TO THE JOB SITE BY THE ENGINEER OR THE OWNER TO OBSERVE THE CONSTRUCTION DO NOT IN ANY WAY MEAN THAT THEY ARE GUARANTORS OF THE CONTRACTOR'S WORK, NOR RESPONSIBLE FOR COMPREHENSIVE OR SPECIAL INSPECTIONS, COORDINATION, SUPERVISION, NOR SAFETY AT THE JOB SITE.
- DAVIDS ENGINEERING IS THE ENGINEER FOR THIS PROJECT AND SHALL PERFORM CONSTRUCTION INSPECTION AND SUPERVISION.
- THE CONTRACTOR SHALL PREPARE AND SUBMIT A TRAFFIC CONTROL PLAN FOR REVIEW AND APPROVAL BY THE ENGINEER PRIOR TO COMMENCING WORK AFFECTING PUBLIC TRAFFIC. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING MATERIALS AND LABOR REQUIRED FOR TRAFFIC CONTROL WHERE TEMPORARY ROAD CLOSURES ARE REQUIRED, FOR WORK ADJACENT TO THE ROADWAY, AND AT ALL POINTS OF EGRESS OR INGRESS TO THE PUBLIC TRAVELED WAY. PUBLIC SAFETY AND TRAFFIC CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH THE CALTRANS TRAFFIC MANUAL AND AS MAY BE DIRECTED BY LOCAL OR REGIONAL ROADS OFFICIALS.
- THIS PROJECT IS SUBJECT TO REQUIREMENTS OF PERMITS ISSUED BY VARIOUS REGULATORY AGENCIES, AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THESE REQUIREMENTS AS THEY RELATE TO THE WORK AND CONSTRUCTION-RELATED ACTIVITIES AND TO PERFORM ALL WORK IN ACCORDANCE WITH THOSE REQUIREMENTS.
- IN THE EVENT THAT ARCHEOLOGICAL ARTIFACTS OR OTHER CULTURAL RESOURCES ARE UNCOVERED DURING CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL STOP ALL WORK IMMEDIATELY IN THE AREA OF THE DISCOVERY AND CONTACT THE PROJECT MANAGER. WORK SHALL NOT CONTINUE UNTIL AUTHORIZED BY THE PROJECT MANAGER
- UNLESS NOTED OTHERWISE ON THE PLANS, ALL EXISTING ITEMS CALLED OUT TO BE PROTECTED OR LEFT UNDISTURBED SHALL BE PROTECTED BY THE CONTRACTOR. FACILITIES SHOULD NOT BE DISTURBED UNLESS IT IS SHOWN ON THE DRAWINGS THAT THE CONTRACTOR IS TO MAKE IMPROVEMENTS. IF SUCH ITEMS ARE DAMAGED OR MUST BE REMOVED TO FACILITATE CONSTRUCTION, THE CONTRACTOR SHALL REPLACE THE ITEMS AT NO COST TO THE OWNER TO THE SAME OR BETTER CONDITION THAN THEY WERE BEFORE REMOVAL.

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THEIR ACTIONS AND COOPERATING TO FACILITATE MATERIALS TESTING BY THE CONSTRUCTION INSPECTORS OR THE OWNER'S APPOINTED MATERIALS TESTING SERVICE.
- CONTRACTOR TO VERIFY ALL EXISTING INVERT ELEVATIONS SHOWN HEREIN.

SITE ACCESS AND STAGING

- THE WORK CONTEMPLATED HEREIN REQUIRES CONSTRUCTION AND ACCESS ON PRIVATE LANDS. CONTRACTOR SHALL COORDINATE WITH LANDOWNER(S) TO ENSURE IMPACTS TO CONSTRUCTION AND PRIVATE FARMING OPERATIONS ARE MITIGATED.
- ALL CONSTRUCTION AND MATERIAL DELIVERY TRAFFIC SHALL USE THE DESIGNATED ACCESS AND HAUL ROUTE(S) TO THE CONSTRUCTION SITE AS DIRECTED BY THE LANDOWNER OR ENGINEER.
- ACCESS ROADS USED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE RETURNED TO PRE-PROJECT CONDITIONS PRIOR TO FINAL ACCEPTANCE OF THE PROJECT. PRE-PROJECT CONDITIONS SHALL BE AS DETERMINED THROUGH SITE INSPECTION AND DOCUMENTATION TO BE COMPLETED BY THE ENGINEER AND THE CONTRACTOR PRIOR TO THE START OF WORK.
- THE CONTRACTOR WILL BE REQUIRED TO PROVIDE DUST ABATEMENT ON ACCESS ROADS, STAGING AREAS, AND THE PROJECT SITE FOR THE DURATION OF THE PROJECT.

ENVIRONMENTAL PROTECTION AND EROSION CONTROL

- WATER POLLUTION SHALL COMPLY WITH SECTION 7-1.01G OF THE CURRENT STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL EXERCISE EVERY REASONABLE PRECAUTION TO PROTECT STREAMS, LAKES, RESERVOIRS, BAYS, AND COASTAL WATERS FROM POLLUTION WITH FUELS, OILS, BITUMENS, CALCIUM CHLORIDE AND OTHER HARMFUL MATERIALS AND SHALL CONDUCT AND SCHEDULE OPERATIONS SO AS TO AVOID OR MINIMIZE MUDDYING AND SILTING OF STREAMS, LAKES, RESERVOIRS, BAYS AND COSTAL WATERS. CARE SHALL BE EXERCISED TO PRESERVE ROADSIDE VEGETATION BEYOND THE LIMITS OF CONSTRUCTION.
- WATER POLLUTION CONTROL WORK IS INTENDED TO PROVIDE PREVENTION, CONTROL AND ABATEMENT OF WATER POLLUTION TO STREAMS, WATERWAYS AND OTHER BODIES OF WATER, AND SHALL CONSIST OF CONSTRUCTING THOSE FACILITIES WHICH MAY BE SHOWN ON THE PLANS, SPECIFIED HEREIN OR IN THE SPECIAL PROVISIONS, OR DIRECTED BY THE ENGINEER.
- EROSION CONTROL FACILITIES AND MEASURES ARE TO BE INSTALLED AND OPERABLE PRIOR TO CONSTRUCTION, AND SHALL CONTINUE IN EFFECT UNTIL INSTALLATION OF THE PERMANENT PROJECT LANDSCAPING/EROSION CONTROL BMP'S, IF APPLICABLE.
- ALL PAVED AREAS SHALL BE KEPT CLEAR OF EARTH MATERIALS AND DEBRIS. THE SITE SHALL BE MAINTAINED SO AS TO PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING THE STORM DRAINAGE SYSTEM, BODIES OF WATER OR ADJACENT PROPERTIES.
- ALL EROSION CONTROL FACILITIES SHALL BE INSPECTED BY THE CONTRACTOR AND REPAIRED, AS REQUIRED, AT THE CONCLUSION OF EACH WORKING DAY DURING THE RAINY SEASON. THE CONTRACTOR SHALL INSPECT THE EROSION CONTROL FACILITIES AND MAKE NECESSARY REPAIRS THERETO PRIOR TO ANTICIPATED STORMS, AND SHALL PERIODICALLY INSPECT THE SITE AT REASONABLE INTERVALS DURING STORMS OF EXTENDED DURATION. REPAIRS TO DAMAGED FACILITIES SHALL BE REPAIRED IMMEDIATELY.

REVEGETATION

- ALL DISTURBED AREAS (EXCEPT ROADWAYS) SHALL BE RESEEDDED WITH A SEED MIX APPROVED BY THE OWNER.

SURVEY

- EXISTING TOPOGRAPHIC SURVEY IS BASED ON DATA COLLECTION BY DAVIDS ENGINEERING, INC ON 7/10/2024. HORIZONTAL COORDINATE SYSTEM: NAD83 CALIFORNIA STATE PLANE, ZONE 1. VERTICAL DATUM: NAVD88. THE ENGINEER SHALL PROVIDE CONSTRUCTION STAKING FOR THE PROJECT.
- NO BOUNDARY SURVEY HAS BEEN COMPLETED AT THIS TIME.

PIPE NOTES

- UNLESS OTHERWISE NOTED, ALL PIPE SPECIFIED AS POLYVINYL CHLORIDE (PVC) SHALL BE A SDR OF 41.
- ALL PVC PIPE SHALL CONFORM TO ASTM 2241 AND/OR NRCS 430-DD.
- UNLESS OTHERWISE NOTED, ALL STEEL PIPE SHALL HAVE A WALL THICKNESS OF NOT LESS THAN 0.25".
- UNLESS OTHERWISE NOTED, A MINIMUM OF 30" OF COVER OVER ALL PIPE SIZES AND MATERIAL.

DEMOLITION NOTES

- ALL ITEMS IDENTIFIED FOR DEMOLITION SHALL BE COMPLETELY REMOVED AND DISPOSED OF IN A LAWFUL MANNER.
- EXCAVATIONS OR VOIDS LEFT FOLLOWING THE DEMOLITION AND REMOVAL OF SUBSURFACE OR BURIED ITEMS SHALL BE BACKFILLED AND COMPACTED IN LIFTS TO A DENSITY EQUAL TO OR GREATER THAN THE SURROUNDING SOILS.
- CONTRACTOR SHALL RESTORE ALL FENCING AND GATES REMOVED OR DAMAGED DURING CONSTRUCTION WITH NEW AND SIMILAR MATERIALS.
- CONTRACTOR SHALL RE-GRADE AND RESURFACE THE EXISTING ROADS PROVIDING A SMOOTH TRANSITION TO ACCOMMODATE VEHICLE TRAVEL AND MAINTAIN A MINIMUM OF 30" OF COVER OVER ALL PIPE.

WATER CONTROL AND WATER DIVERSION NOTES

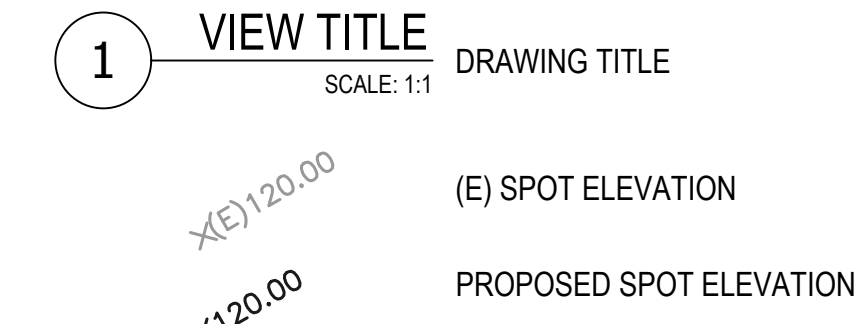
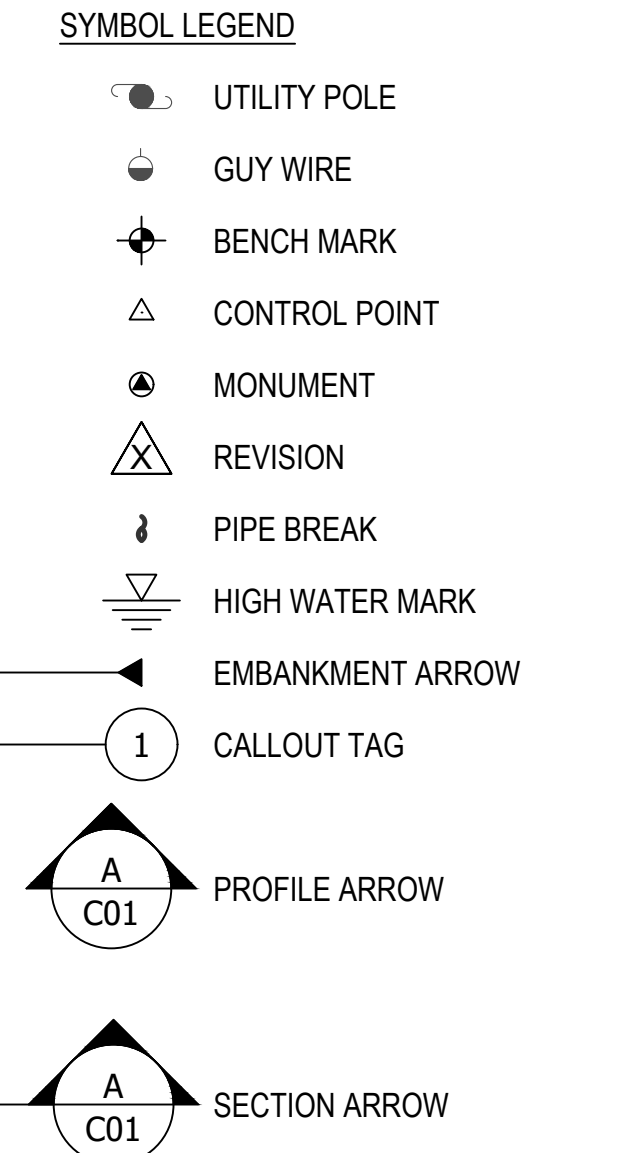
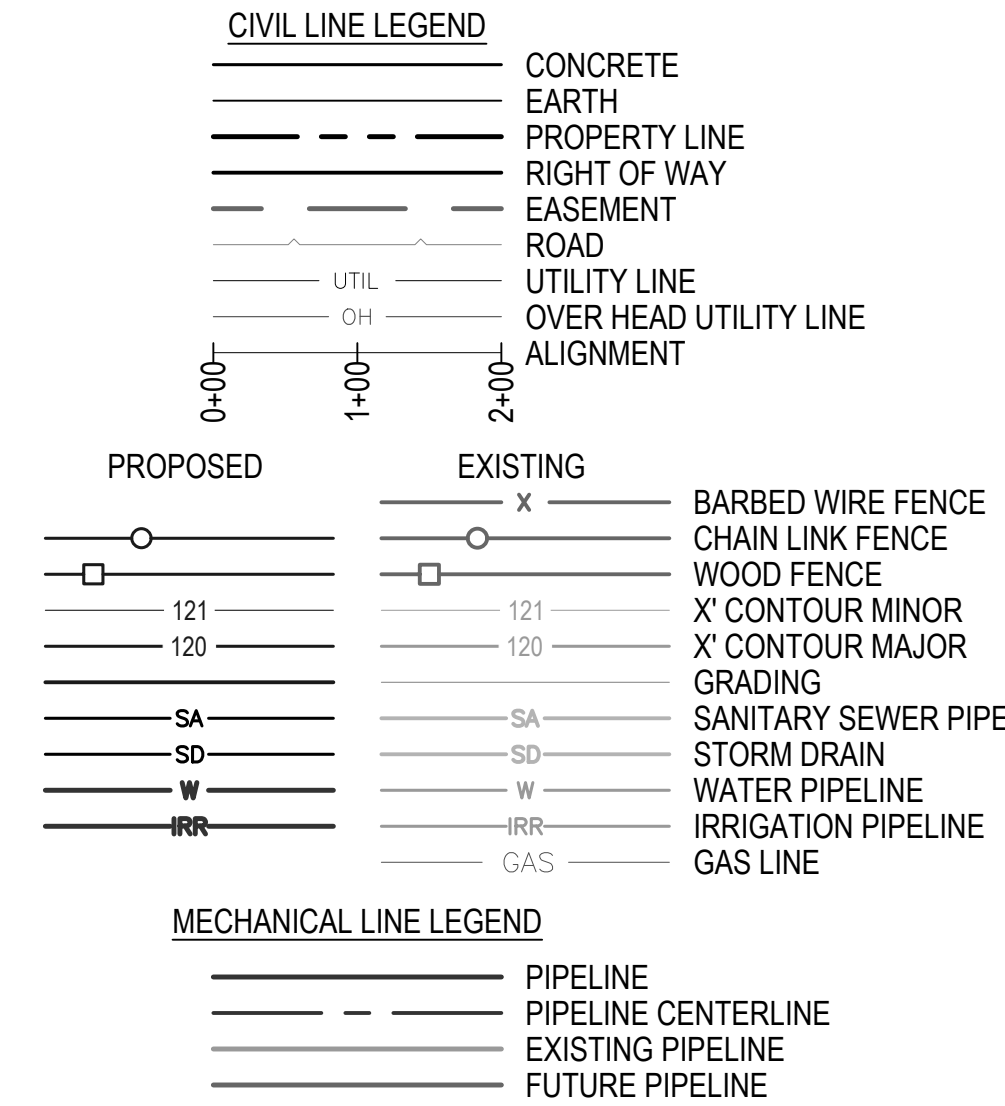
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONTROL OR MANAGEMENT OF STORM WATER RUNOFF, WHETHER OVERLAND RUNOFF OR WITHIN EXISTING DITCHES OR CONVEYANCES.

UNITED STATES BUREAU OF RECLAMATION (USBR) REQUIREMENTS

- THE FOLLOWING REQUIREMENTS APPLY TO ANY AND ALL CONSTRUCTION WITHIN THE USBR RIGHT OF WAY:
 - CANAL EMBANKMENTS SHOULD BE RE-BUILT OR REPAIRED WITH MATERIALS AND STANDARDS EQUAL TO OR BETTER THAN THE EXISTING EMBANKMENTS.
 - RECLAMATION'S ONGOING O&M ACTIVITIES SHOULD NOT BE DISRUPTED DURING CROSSING CONSTRUCTION. THE PRIMARY OR SECONDARY OPERATING ROAD SHOULD BE KEPT AVAILABLE FOR RECLAMATION USE AT ALL TIMES.
 - TRENCH BACKFILL SHOULD BE PLACED IN 4- TO 6-INCH LIFTS WHEN HAND COMPACTED OR NO MORE THAN 8-INCH LIFTS WHEN POWER COMPACTED.
 - TRENCH BACKFILL WITHIN RECLAMATION'S ROW SHOULD BE COMPACTED TO 95 PERCENT COMPACTION (ASTM D 698, STANDARD PROCTOR, OR ASTM D 7382, VIBRATING HAMMER) (OR 90 PERCENT OF ASTM D 1557, MODIFIED PROCTOR).
 - MECHANICAL COMPACTION USING HEAVY EQUIPMENT (GREATER THAN 2,000 POUNDS) SHOULD NOT BE USED WITHIN 18 INCHES OF THE RECLAMATION PIPELINE.
 - EXISTING USBR FACILITIES AND APPURTENANCES SHOULD BE PROTECTED IN PLACE PRIOR TO AND DURING CONSTRUCTION.
 - EXISTING CONCRETE CANAL LINING SHALL NOT BE DISTURBED AND SHALL BE PROTECTED IN PLACE. THE USE OF CONCRETE ANCHORS OR ANY OTHER PENETRATING SYSTEM IS NOT PERMITTED.

PUMP STATION INTAKE PIPELINE

- THE ARRANGEMENT SHOWN ON THE DRAWINGS IS BASED UPON THE BEST INFORMATION AVAILABLE TO THE DEVELOPER'S REPRESENTATIVE AT THE TIME OF DESIGN AND IS NOT INTENDED TO SHOW EXACT DIMENSIONS PARTICULAR TO ANY SPECIFIC EQUIPMENT UNLESS OTHERWISE SHOWN OR SPECIFIED. THEREFORE, IT IS ANTICIPATED THAT THE INTAKE PIPE SHOWN, IN PART OR IN WHOLE, MAY HAVE TO BE CHANGED IN ORDER TO ACCOMMODATE THE PUMPING EQUIPMENT FURNISHED. NO ADDITIONAL PAYMENT WILL BE MADE FOR SUCH CHANGES. ALL NECESSARY CALCULATIONS AND DRAWINGS FOR ANY RELATED REDESIGN SHALL BE SUBMITTED TO THE DEVELOPER'S REPRESENTATIVE FOR THEIR APPROVAL PRIOR TO BEGINNING OF WORK.



DESCRIPTION

DATE:

BY:

REV:

GENERAL NOTES

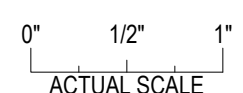
CALIFORNIA OLIVE RANCH 3 PIPELINE TOFCWCD CORNING CALIFORNIA TEHAMA COUNTY

PRELIMINARY NOT FOR CONSTRUCTION

DATE: 03/25/2026
SCALE: AS NOTED
JOB NUMBER: 1139.14
DESIGNED: DRH
DRAWN: GJS
CHECKED: CT

GN01

SHEET 2 OF 13



100% DESIGN ISSUED FOR BIDDING
NOT FOR CONSTRUCTION



- CONCRETE NOTES**
- CONCRETE MATERIALS, QUALITY CONTROL AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318-19.
 - UNLESS OTHERWISE SHOWN OR SPECIFIED, ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI AND CONTAIN NOT LESS THAN 564 POUNDS PER CUBIC YARD OF CONCRETE (SIX (6) SACK) OF PORTLAND CEMENT.
 - PORTLAND CEMENT SHALL BE, ASTM C150, TYPE II.
 - ALL CONCRETE SHALL HAVE A WATER-CEMENT RATIO NOT EXCEEDING 0.53 BY WEIGHT, INCLUDING FREE MOISTURE ON AGGREGATE.
 - SLUMP AT PLACEMENT SHALL BE ONE (1) INCH MINIMUM TO FOUR (4) INCHES MAXIMUM.
 - DO NOT USE RETARDING OR ACCELERATING ADMIXTURES UNLESS APPROVED BY THE ENGINEER.
 - DO NOT USE HIGH RANGE WATER REDUCERS (SUPERPLASTICIZERS) UNLESS APPROVED BY ENGINEER. IF APPROVED, USE IN ACCORDANCE WITH MANUFACTURE'S INSTRUCTIONS, A SLUMP RANGE OF FOUR (4) TO EIGHT (8) INCHES, AND A MAXIMUM WATER-CEMENT RATIO OF 0.40.
 - CONCRETE SHALL BE READY MIXED MEETING THE REQUIREMENTS OF ASTM C94. ALL CONCRETE SHALL BE MIXED UNTIL THERE IS A UNIFORM DISTRIBUTION OF MATERIALS WHICH FOR MOST CONCRETE TRUCKS IS 90 REVOLUTIONS PER MINUTE FOR TWO (2) MINUTES.
 - AGGREGATE SHALL CONFORM TO ASTM C-33 WITH 3/4" MAXIMUM AGGREGATE SIZE.
 - WATER SHALL BE CLEAN AND FREE FROM INJURIOUS AMOUNTS OF ACIDS, ALKALIS, SALTS, OILS, ORGANIC MATERIALS, OR OTHER DELETERIOUS SUBSTANCES.
 - SLURRY CEMENT BACKFILL USED IN LIEU OF COMPACTED SOIL SHALL CONTAIN NOT LESS THAN 188 POUNDS OF TYPE II PORTLAND CEMENT PER CUBIC YARDS OF CONCRETE (TWO (2) SACK) AND SHALL COMPLY WITH SECTION 19 OF THE STATE STANDARD SPECIFICATIONS. SEE SPECIFICATIONS.
 - NON-SHRINK GROUT (OR DRY-PACK) UNDER COLUMN BASES SHALL CONFORM TO ASTM C 1107 AND HAVE A MINIMUM COMPRESSIVE OF 4000 PSI.
 - WHEN DRILLING, CORING OR PENETRATING EXISTING NON-PRESTRESSED REINFORCED CONCRETE MEMBERS (COLUMN, WALLS, BEAM, SLABS, ETC) USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. WHEN DRILLING, CORING OR PENETRATING EXISTING PRESTRESS CONCRETE (PRE- OR POST-TENSIONED) LOCATE THE PRESTRESS TENDONS BY USING A NON-DESTRUCTIVE METHOD PRIOR TO COMMENCING WORK. EXERCISE EXTREME CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE TENDONS DURING THE DRILLING, CORING OR PENETRATING THE EXISTING CONCRETE. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND HOLE CORED.
 - CONDUITS, PIPES AND SLEEVES OF ANY MATERIAL NOT HARMFUL TO CONCRETE AND WITHIN LIMITATIONS OF ACI 318 SECTION 6.3 MAY BE EMBEDDED IN CONCRETE WITH APPROVAL OF THE ENGINEER OF RECORD, PROVIDED THEY ARE NOT CONSIDERED TO REPLACE STRUCTURALLY THE DISPLACED CONCRETE. REINFORCEMENTS, ANCHOR BOLTS, PIPE SLEEVES, AND OTHER INSERTS SHALL BE POSITIVELY SECURED IN PLACE PRIOR TO PLACING CONCRETE.
 - CONDUITS AND PIPES OF ALUMINUM SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE UNLESS EFFECTIVELY COATED OR COVERED TO PREVENT ALUMINUM-CONCRETE REACTION OR ELECTROLYTIC ACTION BETWEEN ALUMINUM AND STEEL.
 - PROVIDE CONTROL OR CONSTRUCTION JOINTS AT 15'-0" ON CENTER EACH WAY, UNLESS OTHERWISE NOTED ON THE PLANS. SUBMIT A LAYOUT TO THE ARCHITECT AND ENGINEER FOR REVIEW. THE SURFACE OF CONCRETE CONSTRUCTION JOINTS SHALL BE CLEANED, FREE OF LAITANCE, AND ROUGHENED TO A 1/4" MINIMUM AMPLITUDE. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, ALL CONSTRUCTION JOINTS SHALL BE WETTED AND STANDING WATER REMOVED. CONSTRUCTION JOINTS SHALL BE SO MADE AND LOCATED AS NOT TO IMPAIR THE STRENGTH OF THE STRUCTURE. PROVISION SHALL BE MADE FOR TRANSFER OF SHEAR AND OTHER FORCES THROUGH CONSTRUCTION JOINTS.

- REINFORCING NOTES:**
- REINFORCEMENT SHALL BE DEFORMED REINFORCEMENT.
 - REINFORCEMENT SHALL CONFORM TO ASTM A615, REINFORCING BARS FOR CONCRETE. ALL WELDED REBAR SHALL BE ASTM A706.
 - REINFORCING BARS SHALL HAVE THE FOLLOWING SPECIFIED YIELD STRENGTHS:
 - NO. 4 AND SMALLER - 60,000 PSI (GRADE 60)
 - NO. 5 AND LARGER - 60,000 PSI (GRADE 60)

- EXCAVATIONS AND FOUNDATIONS**
- SLOPES FOR PERMANENT FILLS SHALL NOT BE STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL. CUT SLOPES FOR PERMANENT EXCAVATIONS SHALL NOT BE STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL UNLESS SUBSTANTIATING DATA JUSTIFYING STEEPER CUT SLOPES IS SUBMITTED.
 - EXISTING FOOTINGS OR FOUNDATIONS WHICH MAY BE EFFECTED BY ANY EXCAVATION SHALL BE UNDERPINNED ADEQUATELY OR OTHERWISE PROTECTED AGAINST SETTLEMENT AND SHALL BE PROTECTED AGAINST LATERAL MOVEMENT.

- EXPANSIVE SOIL UNDER THE BUILDING SLAB SHALL BE SCARIFIED AND RE-COMPACTED TO 90% RELATIVE DENSITY IN ACCORDANCE WITH ASTM D-1557 TO A DEPTH OF 8 INCHES BELOW ROUGH GRADE. THE CONTRACTOR SHALL PROVIDE DIKES AND LONG TERM SPRINKLING TO OBTAIN A MOISTURE CONTENT OF 3% PERCENT ABOVE OPTIMUM PRIOR TO COMPACTION. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A MOISTURE TEST BY AN APPROVED TESTING LABORATORY PRIOR TO COMPACTION. ALL SUB-GRADE SHALL BE NATIVE OR ENGINEERED FILL.
 - FILLS USED TO SUPPORT THE FOUNDATIONS OF ANY BUILDING OR STRUCTURE SHALL BE PLACED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE AND COMPACTION TO 90% RELATIVE DENSITY IN ACCORDANCE WITH ASTM D-1557. A SOIL INVESTIGATION REPORT AND A REPORT OF SATISFACTORY PLACEMENT OF FILL, BOTH ACCEPTABLE TO THE BUILDING OFFICIAL AND THE ENGINEER OF RECORD, SHALL BE SUBMITTED.
 - ALL FOOTINGS SHALL BEAR ON UNDISTURBED SOIL 18 INCHES BELOW NATURAL OR FINISHED GRADE, WHICHEVER IS LOWER.
 - FOUNDATIONS FOR ALL BUILDINGS WHERE THE SURFACE OF THE GROUND SLOPES MORE THAN 1 FOOT IN 10 FEET SHALL BE LEVEL OR SHALL BE STEPPED SO THAT BOTH TOP AND BOTTOM OF SUCH FOUNDATIONS ARE LEVEL.
- THE ALLOWABLE FOUNDATION AND LATERAL PRESSURES:
- CLASS OF MATERIALS: #5 (CLAY, SANDY CLAY, SILTY CLAY, CLAYEY SILT, SILT AND SANDY SILT)
 - ALLOWABLE FOUNDATION PRESSURE: 1500 PSF
 - LATERAL BEARING: 100 PSF PER FOOT OF DEPTH.
 - LATERAL SLIDING RESISTANCE: 130 PSF
- ALL FOOTINGS SHALL BEAR ON UNDISTURBED SOIL 12 INCHES BELOW NATURAL OR FINISHED GRADE, WHICHEVER IS LOWER.

STEEL

- THE DESIGN, FABRICATION AND ERECTION OF STEEL SHALL BE IN ACCORDANCE WITH AISC 360 AND AISC 341 INCLUDING ANY ENFORCEMENT AGENCY AMENDMENTS.
- EXPOSED INTERIOR STEEL SHALL RECEIVE ONE COAT OF PRIMER PAINT, UON. DO NOT PAINT SURFACES IN DIRECT CONTACT WITH CONCRETE OR MASONRY, WHERE FIELD WELDING IS REQUIRED, WHERE FIRE-PROOFING IS REQUIRED OR CONTACT SURFACES OF STEEL-TO-STEEL, AND DECK TO STEEL CONNECTIONS. CONCEALED STEEL DOES NOT REQUIRE PAINT, UON. EXPOSED EXTERIOR STEEL & FASTENERS SHALL BE HOT DIP GALVANIZED, UON.
- ALL WELDING SHALL BE DONE WITH E70 SERIES ELECTRODES
- MINIMUM SIZE OF FILLET WELDS: 1/8" FOR MATERIAL 1/8" TO 1/4" THICK, 3/16" FOR MATERIAL OVER 1/4" TO 1/2" THICK, 1/2" FOR MATERIAL OVER 1/2" TO 3/4" THICK, AND 5/16" FOR MATERIAL OVER 3/4" THICK. MATERIAL THICKNESS IS FOR THINNER PART JOINED. SINGLE PASS WELDS MUST BE USED FOR SIZES SHOWN. SIZE OF WELD IS LEG DIMENSION OF FILLET. MINIMUM EFFECTIVE LENGTH OF FILLET WELDS SHALL BE NOT LESS THAN FOUR TIMES THE FILLET SIZE. MINIMUM EFFECTIVE LENGTH OF INTERMITTENT FILLET WELDS SHALL BE 12".
- GROOVE WELDS SHALL BE COMPLETE JOINT PENETRATION WELDS, UON. GROOVE WELDS SHALL BE TERMINATED AT THE END OF JOINTS IN A MANNER THAT WILL ENSURE SOUND WELDS. USE WELD TABS AND BACKING BARS ALIGNED TO PROVIDE AN EXTENSION OF THE JOINT PREPARATION. REMOVE EXTENSIONS UPON COMPLETION & COOLING OF THE WELD. GRIND ENDS OF THE WELD SMOOTH AND FLUSH WITH THE EDGES OF THE ABUTTING PARTS.
- WHERE "ALL AROUND" FILLET WELDS ARE INDICATED AT CONCEALED/NON-EXPOSED SQUARE OR RECTANGULAR HSS CONNECTIONS TO PLATES, FILLET WELDS ARE NOT REQUIRED AT RADIUS CORNERS, UON.
- FIELD WELDING TO BE DONE BY WELDERS CERTIFIED FOR STRUCTURAL STEEL, REINFORCING STEEL, LIGHT GAUGE STEEL.
- SHOP WELDS MUST BE PERFORMED IN A LICENSED FABRICATOR'S SHOP.
- CONNECTORS SHALL CONFORM TO SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS.
- BOLTS FOR STEEL-TO-STEEL CONNECTIONS SHALL BE PLACED IN STANDARD SIZE HOLES, UON. BOLTS FOR STEEL-TO-CONCRETE/MASONRY CONNECTIONS SHALL BE PLACED IN ANCHOR ROD HOLES, UON. USE STANDARD AISC PITCH & GAUGE FOR BOLTED CONNECTIONS, UON.
- BOLTS AND RODS SHALL BE CUT-THREAD TYPE WITH FULL DIAMETER BODY STYLE MEETING REQUIREMENTS OF ASME B18.2.1. THE BODY DIAMETER SHALL NOT BE LESS THAN THE MINIMUM MAJOR DIAMETER WHEN THREADS ARE CUT. REDUCED DIAMETER BODY STYLE ROLLED THREAD BOLTS OR RODS ARE NOT PERMITTED.
- BOLT HEADS, NUTS OR "DTI'S" OF BOLTED STEEL-TO-STEEL AND STEEL-TO-CONCRETE CONNECTIONS BEARING ON SLOPING SURFACES SHALL USE A BEVELED HARDENED WASHER IN THE BOLT ASSEMBLY AT THAT SURFACE.
- THE CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL TEMPORARY SUPPORTS REQUIRED FOR ERECTION. THIS STRUCTURE MAY NOT BE SELF-SUPPORTING AS DEFINED IN THE AISC CODE OF STANDARD PRACTICE; THEREFORE ERECTION BRACING IS REQUIRED AND IS TO BE PREPARED BY A LICENSED STRUCTURAL ENGINEER.

STRUCTURAL STEEL SHALL CONFORM TO ASTM STANDARDS, MATERIAL SPECIFICATIONS FOR STRUCTURAL STEEL			
	ASTM	Fy (KSI)	
WIDE FLANGE SHAPES (W & WT)	A992	50	
M, MT, S & ST SHAPES	A36	36	
CHANNELS (C & MC)	A36	36	
ANGLES	A36	36	
PLATES & BARS	A572	50	
STEEL PIPE	A53, GRADE B	35	
STRUCTURAL TUBING (HSS SQUARE & RECTANGULAR)	A500, GRADE B	46	
STRUCTURAL TUBING (HSS ROUND)	A500, GRADE B	42	
ZEEES	ASTM A1011 GR.55	55	
HIGH STRENGTH BOLTS	A325, HEAVY HEX, TYPE I	1/2" Ø TO 1" Ø	92
		1 1/8" Ø TO 1 1/2" Ø	81
RODS (PLAIN & ALL-THREAD) ATR	A36	36	
BOLTS	A307, GRADE A, HEX	Fu = 60 KSI	
	F1554, CLASS 2A, S3		
ANCHOR BOLTS & RODS			
	GRADE 36, TYP UON	36	

NOMINAL BOLT HOLE DIMENSIONS				
NOMINAL BOLT DIAMETER, db, INCHES	NOMINAL BOLT HOLE DIMENSIONS, INCHES			
	STANDARD DIAMETER	OVERSIZED DIAMETER	SHORT SLOTTED	LONG SLOTTED
1/2	9/16	5/8	9/16 x 11/16	9/16 x 1 1/4
5/8	11/16	13/16	11/16 x 7/8	11/16 x 1 9/16
3/4	13/16	15/16	13/16 x 1	13/16 x 1 7/8
7/8	15/16	1 1/16	1/16 x 1 1/8	15/16 x 2 3/16
1	1 1/16	1 1/4	1 1/16 x 1 5/16	1 1/16 x 2 1/2
>= 1 1/8	db + 1/16	db + 5/16	(db+1/16) x (db+3/8)	(db+1/16) x (2.5db)

PUMP STATION NOTES

- THE ARRANGEMENT SHOWN ON THE DRAWINGS IS BASED UPON THE BEST INFORMATION AVAILABLE TO THE DEVELOPER'S REPRESENTATIVE AT THE TIME OF DESIGN AND IS NOT INTENDED TO SHOW EXACT DIMENSIONS PARTICULAR TO ANY SPECIFIC EQUIPMENT UNLESS OTHERWISE SHOWN OR SPECIFIED. THEREFORE, IT IS ANTICIPATED THAT THE STRUCTURAL SUPPORTS, FOUNDATIONS, CONNECTED PIPING AND VALVES SHOWN, IN PART OR IN WHOLE, MAY HAVE TO BE CHANGED IN ORDER TO ACCOMMODATE THE PUMPING EQUIPMENT FURNISHED. NO ADDITIONAL PAYMENT WILL BE MADE FOR SUCH CHANGES. ALL NECESSARY CALCULATIONS AND DRAWINGS FOR ANY RELATED REDESIGN SHALL BE SUBMITTED TO THE DEVELOPER'S REPRESENTATIVE FOR THEIR APPROVAL PRIOR TO BEGINNING OF WORK.
- PUMPING UNITS SHALL BE DESIGNED TO OPERATE WITHOUT CAVITATION OR DAMAGING VIBRATION OVER THE ENTIRE SPECIFIED RANGE OF FLOW AND HEAD CONDITIONS. PUMPING UNITS SHALL NOT PRODUCE UNDUE NOISE OR VIBRATIONS DURING REDUCTIONS IN FLOW FROM THE SPECIFIED OPERATING CAPACITY TO ZERO FLOW.
- ALL COMPONENTS SHALL BE DESIGNED TO SAFELY WITHSTAND FORCES RESULTING FROM FLOW REVERSALS UP TO 125 PERCENT OF MAXIMUM SPEED, WITHIN THE PUMP DURING SHUTDOWNS CAUSED BY POWER FAILURE.
- THE PUMP BASE SHALL BE DESIGNED FOR ANCHOR BOLTING TO A STEEL SUPPORT STRUCTURE, ASSUMING THAT THE PUMP, WITHOUT RESTRAINTS AT THE SUCTION AND DISCHARGE CONNECTIONS, IS SUBJECTED TO A DISPLACING FORCE EQUAL TO THAT DEVELOPED BY AN INTERNAL PRESSURE EQUAL TO THREE-TIMES SHUT-OFF HEAD AT MAXIMUM OPERATING SPEED.
- THE COMPLETE PUMPING UNIT SHALL BE DESIGNED TO OPERATE WITHOUT OVERLOAD ON ANY COMPONENT AT ANY POINT ALONG THE PUMP'S ENTIRE FULL-SPEED OPERATING CURVE.
- THE VARIABLE-SPEED CONTROL SYSTEM(S) (WHERE SPECIFIED) SHALL EMPLOY VARIABLE-FREQUENCY DRIVES TO VARY THE RPM OF THE MOTOR. MOTORS SHALL BE SELECTED SUCH THAT ALONG THE PUMP'S FULL-SPEED CURVE THE MOTOR IS NOT LOADED AT MORE THAN 90-PERCENT OF THE MOTOR'S NAMEPLATE RATING AS A RESULT OF THE PUMP'S BRAKE HORSEPOWER REQUIREMENT AND OTHER POWER-ABSORBING ACCESSORIES INCLUDED AS PART OF THE COMPLETE PUMPING UNIT.
- PUMP, MOTORS, AND AUXILIARIES SELECTED SHALL BE DESIGNED FOR A MINIMUM 25-YEAR SERVICE LIFE IN THE CONDITIONS IN WHICH THE PUMPSET IS TO BE INSTALLED.
- PUMP MOTORS SHALL BE EQUIPPED WITH SOFT-START DEVICE.
- THE PUMP SUPPLIER SHALL PROVIDE THE COMPLETE PUMPING SYSTEM AND FACTORY-TRAINED PERSONNEL TO SUPERVISE INSTALLATION AND INITIAL OPERATION OF ALL COMPONENTS. THE PUMPS SHALL BE ALIGNED, CONNECTED, AND INSTALLED AT THE LOCATIONS SHOWN AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. PUMP SUPPLIER SHALL PROVIDE WRITTEN CERTIFICATION THAT THE EQUIPMENT IS INSTALLED IN A MANNER TO ENSURE PROPER OPERATION.
- ALL ELECTRICAL WORK SHALL COMPLY WITH THE REQUIREMENTS OF NFPA 70 (NEC), NFPA 70B, NFPA 70E, OSHA PART 1910 SUBPART J - GENERAL ENVIRONMENTAL CONTROLS, OSHA PART 1910 SUBPART K - MEDICAL AND FIRST AID, AND OSHA PART 1910 SUBPART S - ELECTRICAL, IN ADDITION TO OTHER REFERENCES REQUIRED BY CONTRACT.
- THE DEVELOPER WILL NOT BE RESPONSIBLE FOR ANY COSTS TO THE CONTRACTOR FOR REWORK BECAUSE OF CONTRACTOR FAILURE TO TAKE MEASUREMENTS PRIOR TO FABRICATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COMMISSIONING, TESTING, INTITAL START-UP, TUNING, AND TROUBLESHOOTING OF THE INSTALLED EQUIPMENT.

DESCRIPTION	DATE	BY	REV

GENERAL NOTES

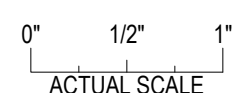
CALIFORNIA OLIVE RANCH 3 PIPELINE
TOFCWCD
CORNING

CALIFORNIA
TEHAMA COUNTY

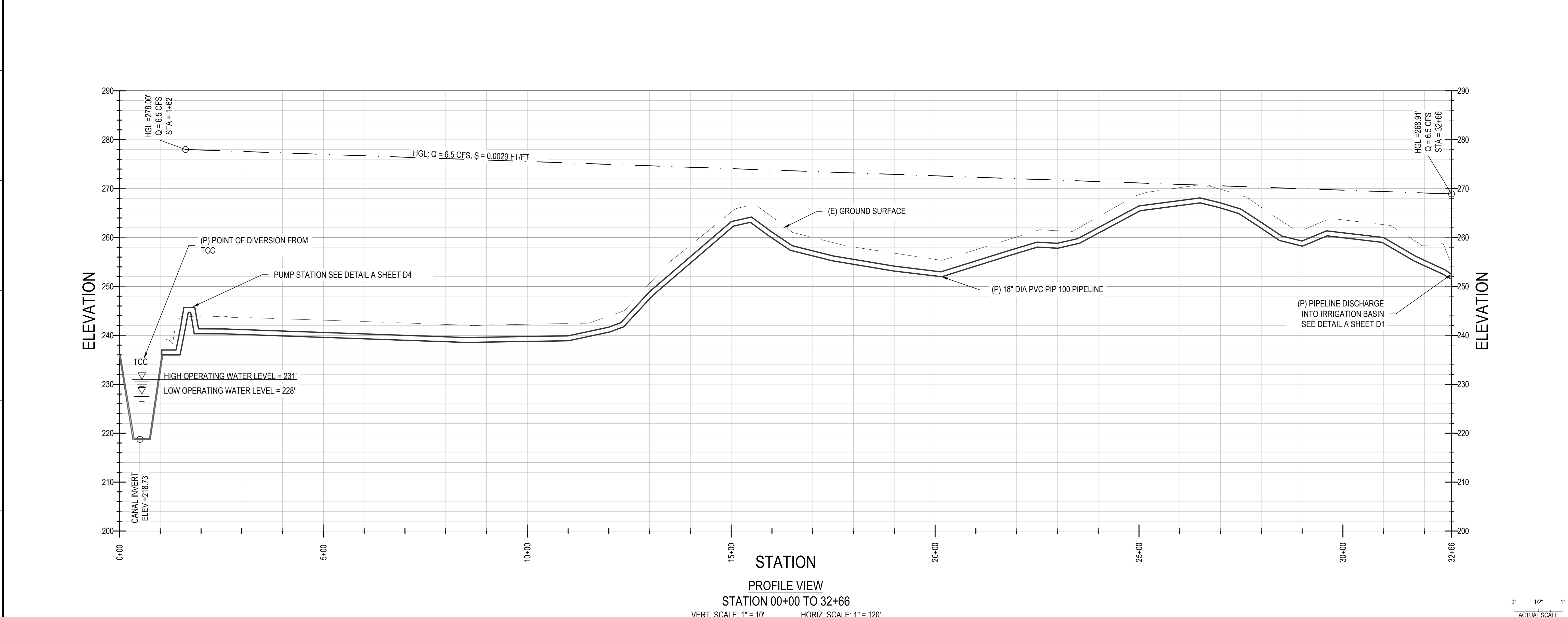


DATE: 03/25/2026
SCALE: AS NOTED
JOB NUMBER: 1139.14
DESIGNED: DRH
DRAWN: GJS
CHECKED: CT

GN02
SHEET 3 OF 13



100% DESIGN ISSUED FOR BIDDING
NOT FOR CONSTRUCTION



REV	DATE	DESCRIPTION

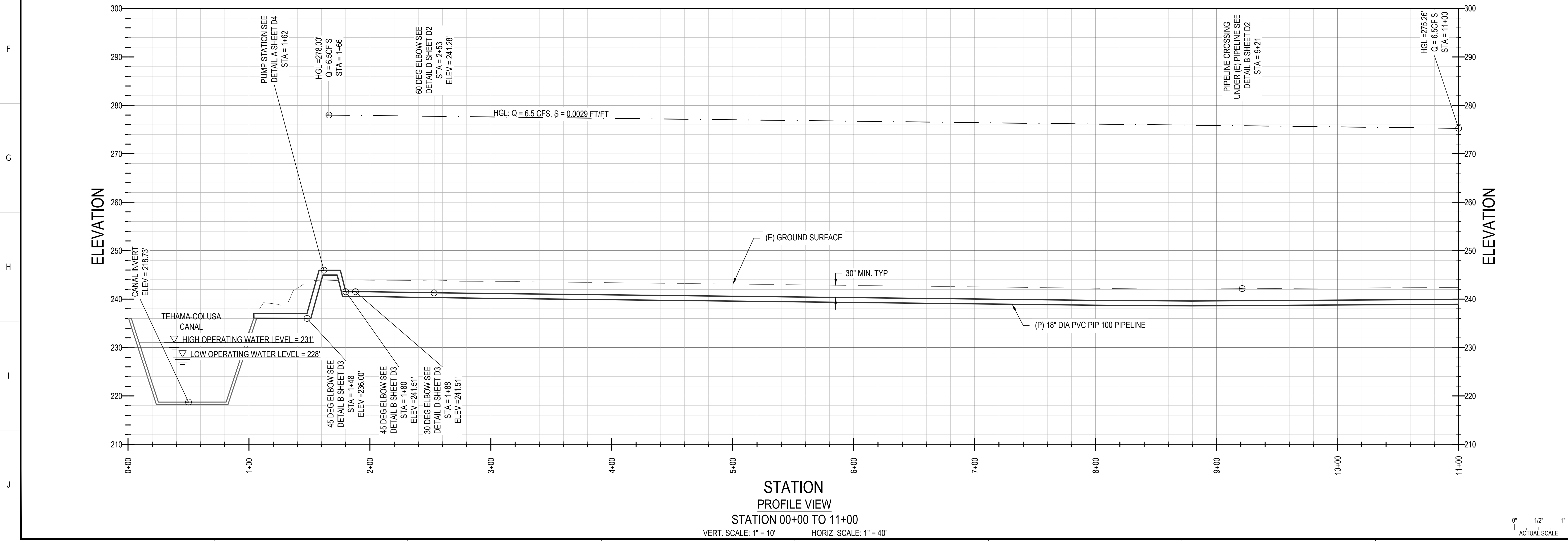
PROJECT OVERVIEW PLAN AND PROFILE STATION 00+00 TO 32+66	CALIFORNIA
CALIFORNIA OLIVE RANCH 3 PIPELINE TFCWCD CORNING	TEHAMA COUNTY

PRELIMINARY NOT FOR CONSTRUCTION	
DATE:	03/25/2026
SCALE:	AS NOTED
JOB NUMBER:	1139.14
DESIGNED:	DRH
DRAWN:	GJS
CHECKED:	CT

PO01
SHEET 4 OF 13

100% DESIGN ISSUED FOR BIDDING
NOT FOR CONSTRUCTION

NOTES:
1. EXISTING WELL PIPELINE LOCATION IS APPROXIMATE.
CONTRACTOR TO POTHOLE EXISTING WELL PIPELINE
PRIOR TO CONSTRUCTION.



DATE:	DESCRIPTION:

REV:	BY:

PLAN AND PROFILE STATION 00+00 TO 11+00	CALIFORNIA
CALIFORNIA OLIVE RANCH 3 PIPELINE	CORNING
TEHAMA COUNTY	CALIFORNIA

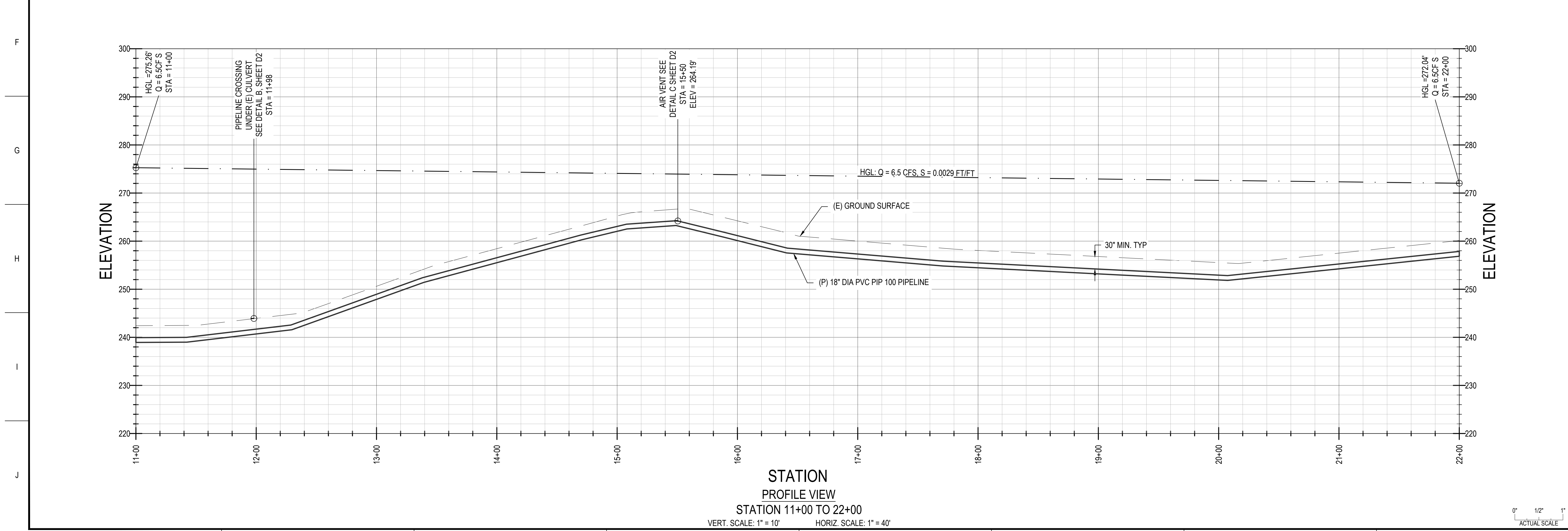


DATE:	03/25/2026
SCALE:	AS NOTED
JOB NUMBER:	1139.14
DESIGNED:	DRH
DRAWN:	GJS
CHECKED:	CT

PP01
SHEET 5 OF 13

100% DESIGN ISSUED FOR BIDDING
NOT FOR CONSTRUCTION

NOTES:
1. EXISTING WELL PIPELINE LOCATION IS APPROXIMATE.
CONTRACTOR TO POTHOLE EXISTING WELL PIPELINE
PRIOR TO CONSTRUCTION.



REV	BY	DATE	DESCRIPTION

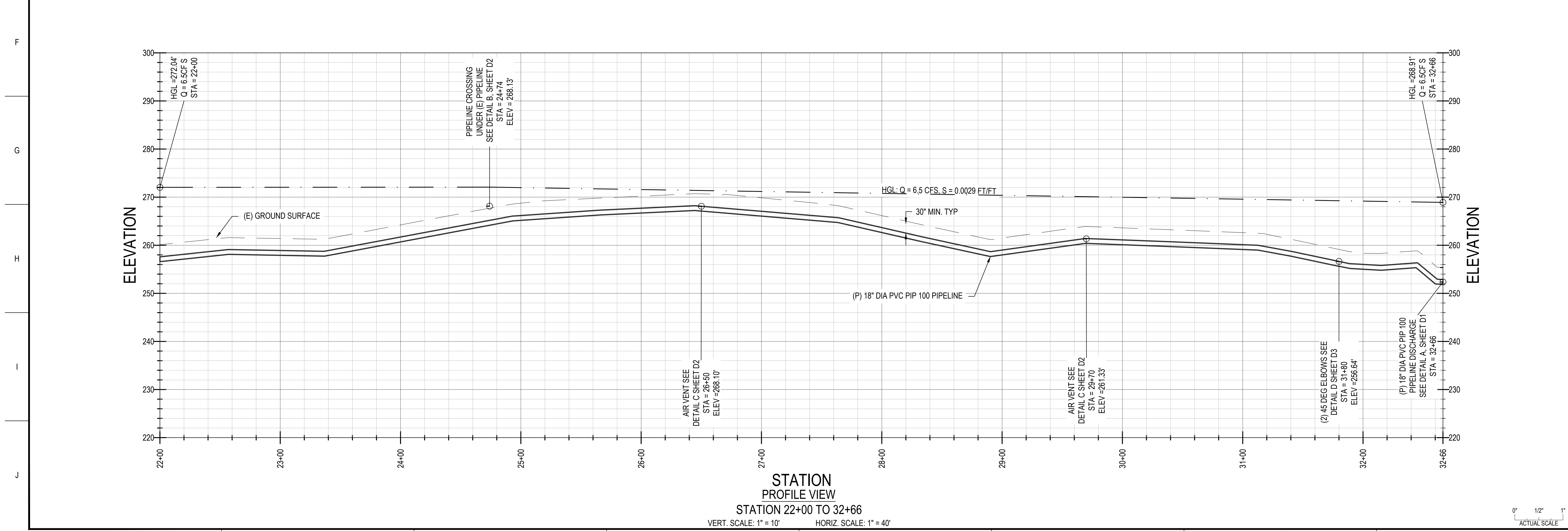
PLAN AND PROFILE STATION 11+00 TO 22+00 CALIFORNIA OLIVE RANCH 3 PIPELINE TFCWCD CORNING CALIFORNIA	TEHAMA COUNTY
--	---------------

PRELIMINARY NOT FOR CONSTRUCTION
DATE: 03/25/2026 SCALE: AS NOTED JOB NUMBER: 1139.14 DESIGNED: DRH DRAWN: GJS CHECKED: CT
PP02
SHEET 6 OF 13

100% DESIGN ISSUED FOR BIDDING
NOT FOR CONSTRUCTION



NOTES:
1. EXISTING WELL PIPELINE LOCATION IS APPROXIMATE.
CONTRACTOR TO POthOLE EXISTING WELL PIPELINE
PRIOR TO CONSTRUCTION.



REV	DATE	DESCRIPTION

DATE:	03/25/2026
SCALE:	AS NOTED
JOB NUMBER:	1139.14
DESIGNED:	DRH
DRAWN:	GJS
CHECKED:	CT

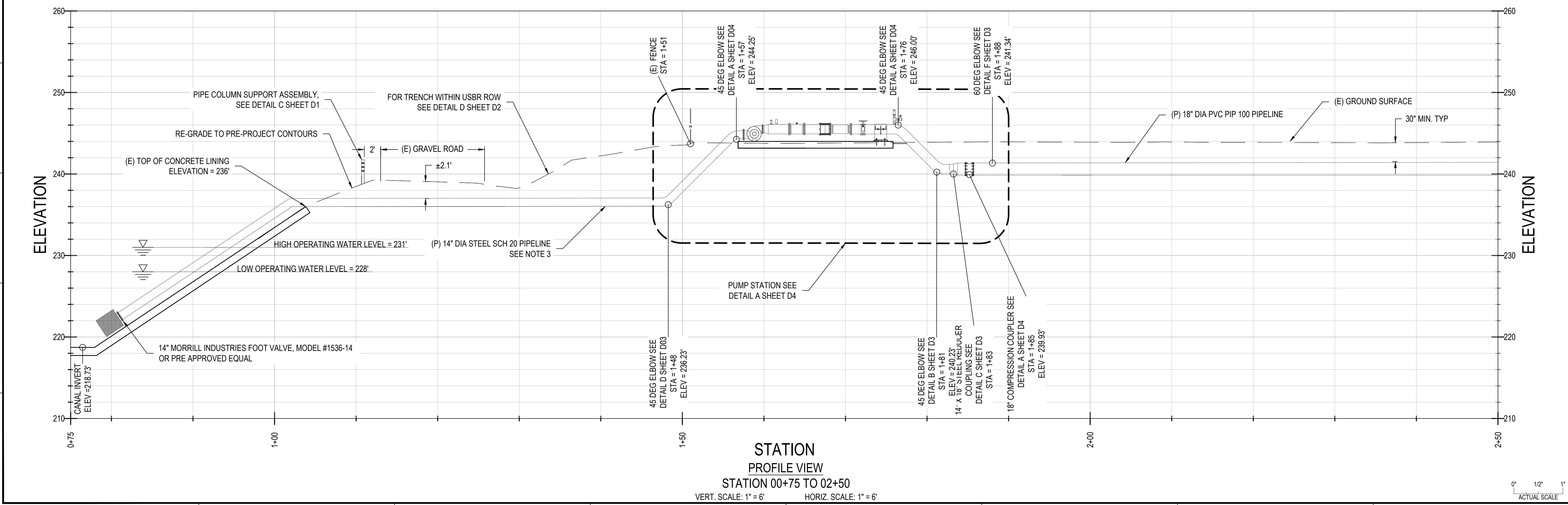
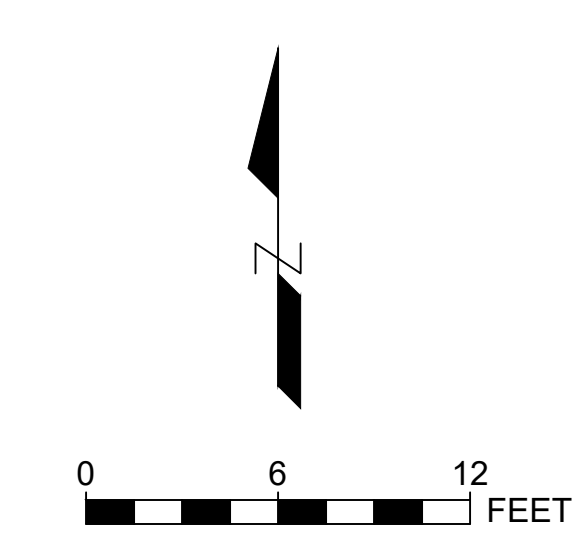
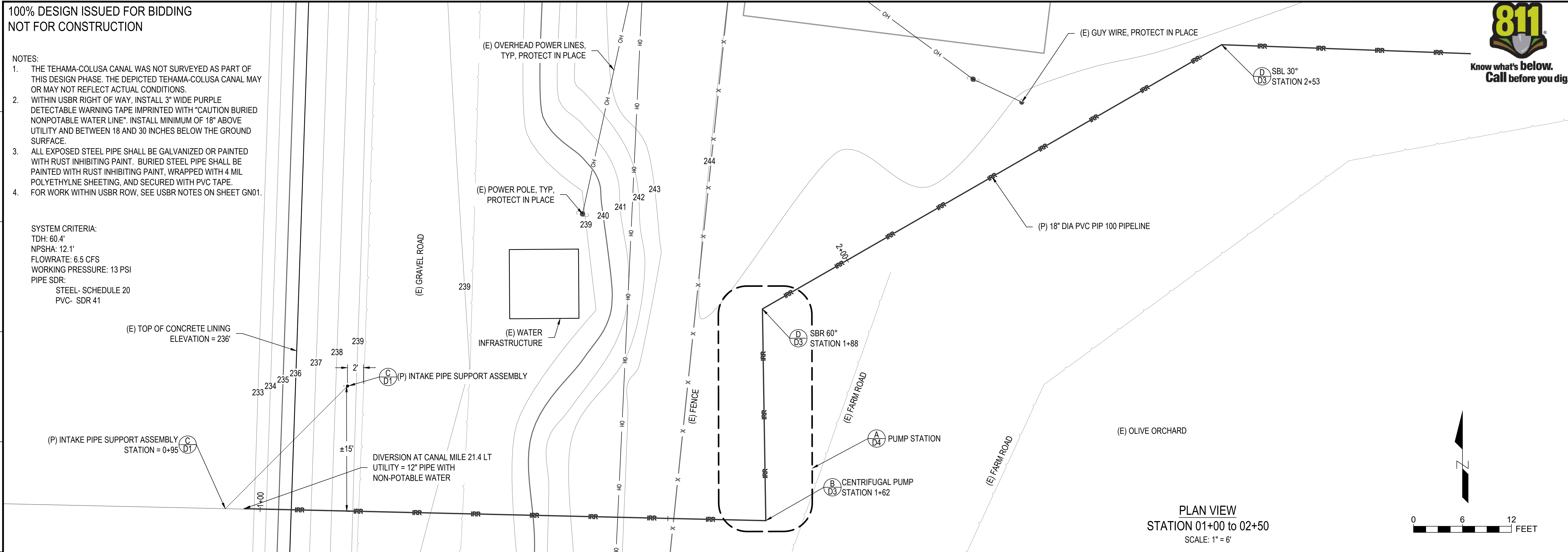
PP03
SHEET 7 OF 13

100% DESIGN ISSUED FOR BIDDING
NOT FOR CONSTRUCTION



- NOTES:
- THE TEHAMA-COLUSA CANAL WAS NOT SURVEYED AS PART OF THIS DESIGN PHASE. THE DEPICTED TEHAMA-COLUSA CANAL MAY OR MAY NOT REFLECT ACTUAL CONDITIONS.
 - WITHIN USBR RIGHT OF WAY, INSTALL 3" WIDE PURPLE DETECTABLE WARNING TAPE IMPRINTED WITH "CAUTION BURIED NONPOTABLE WATER LINE". INSTALL MINIMUM OF 18" ABOVE UTILITY AND BETWEEN 18 AND 30 INCHES BELOW THE GROUND SURFACE.
 - ALL EXPOSED STEEL PIPE SHALL BE GALVANIZED OR PAINTED WITH RUST INHIBITING PAINT. BURIED STEEL PIPE SHALL BE PAINTED WITH RUST INHIBITING PAINT, WRAPPED WITH 4 MIL POLYETHYLENE SHEETING, AND SECURED WITH PVC TAPE.
 - FOR WORK WITHIN USBR ROW, SEE USBR NOTES ON SHEET GN01.

SYSTEM CRITERIA:
TDH: 60.4'
NPSHA: 12.1'
FLOWRATE: 6.5 CFS
WORKING PRESSURE: 13 PSI
PIPE SDR:
STEEL- SCHEDULE 20
PVC- SDR 41



DESCRIPTION	DATE	BY	REV

POINT OF DIVERSION PLAN AND PROFILE
CALIFORNIA OLIVE RANCH 3 PIPELINE
TFCWCD
CORNING
TEHAMA COUNTY
CALIFORNIA

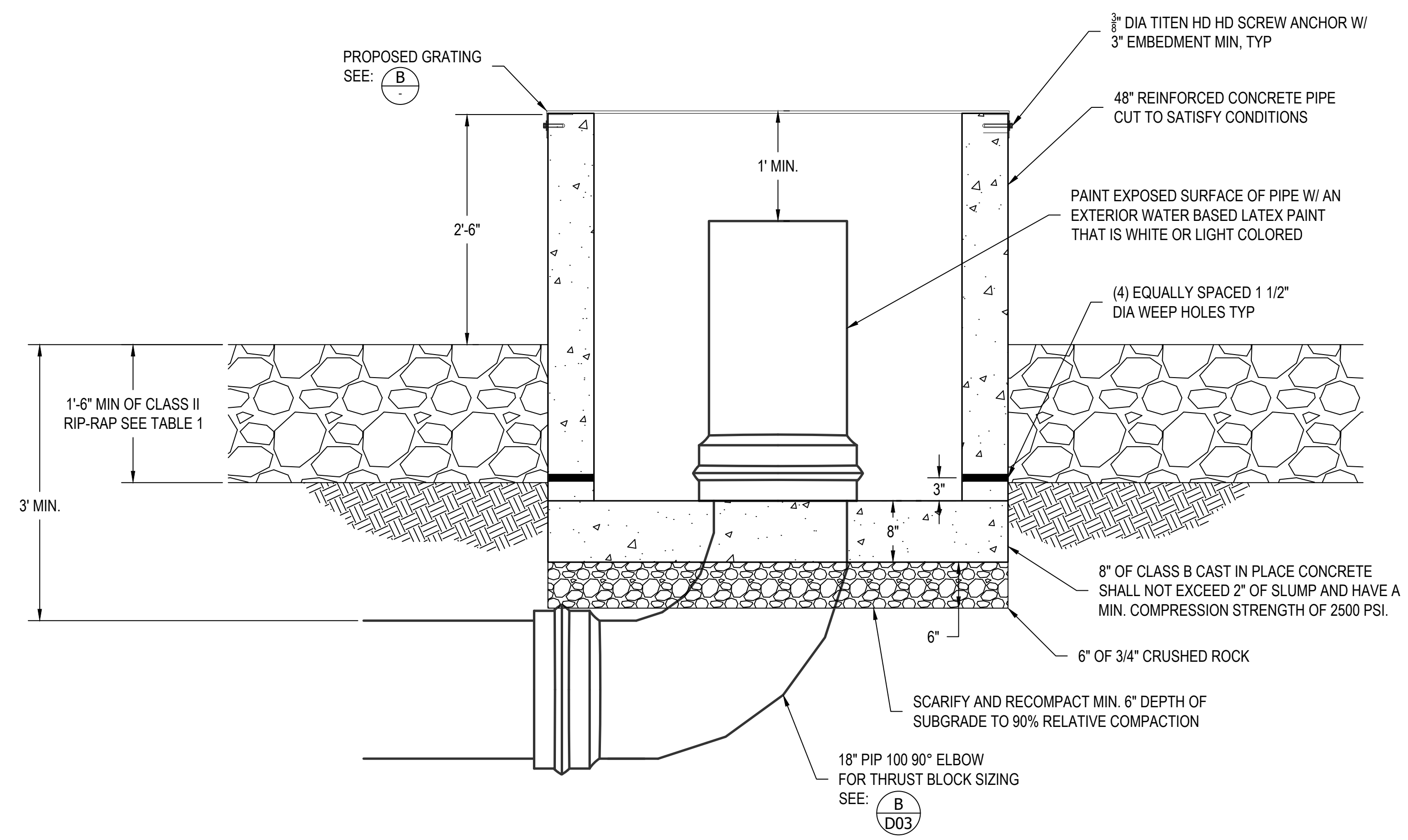


DATE: 03/25/2026
SCALE: AS NOTED
JOB NUMBER: 1139.14
DESIGNED: DRH
DRAWN: GJS
CHECKED: CT

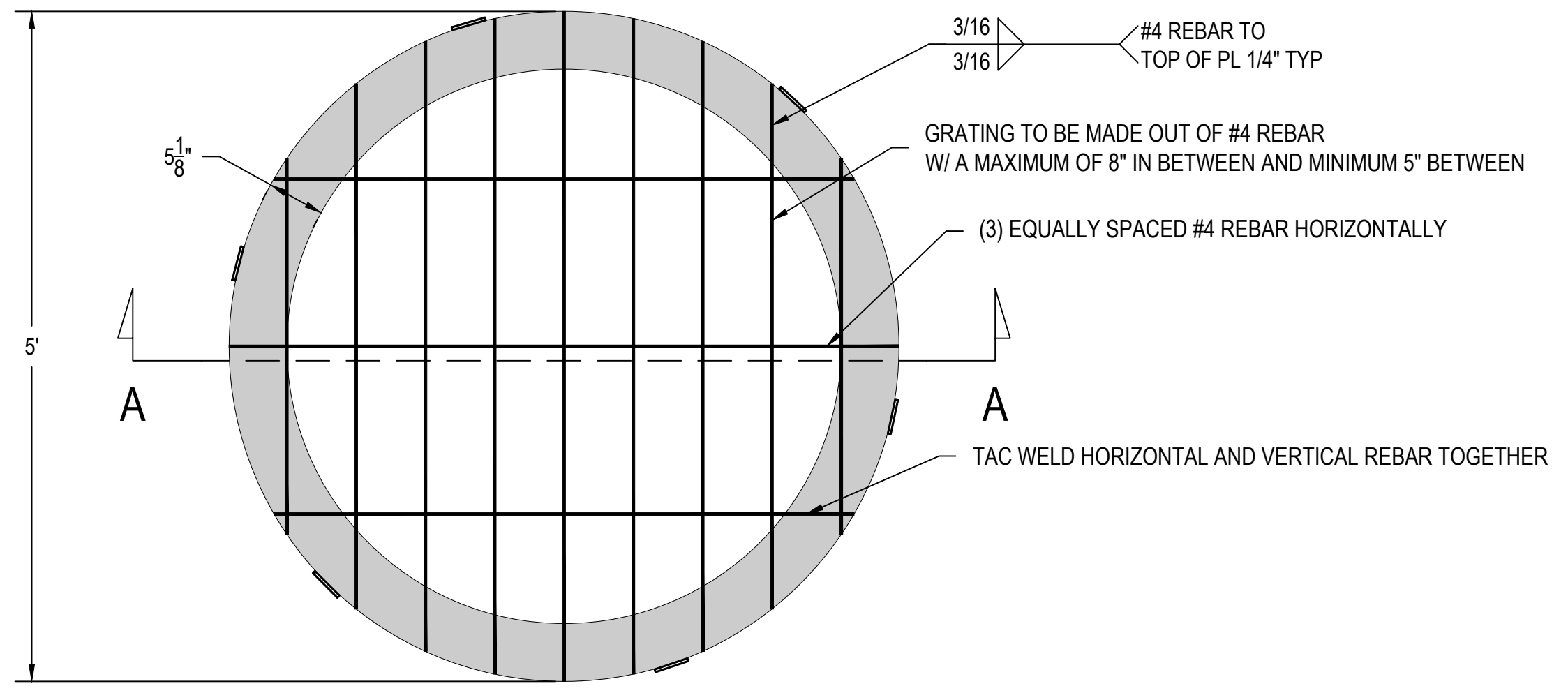
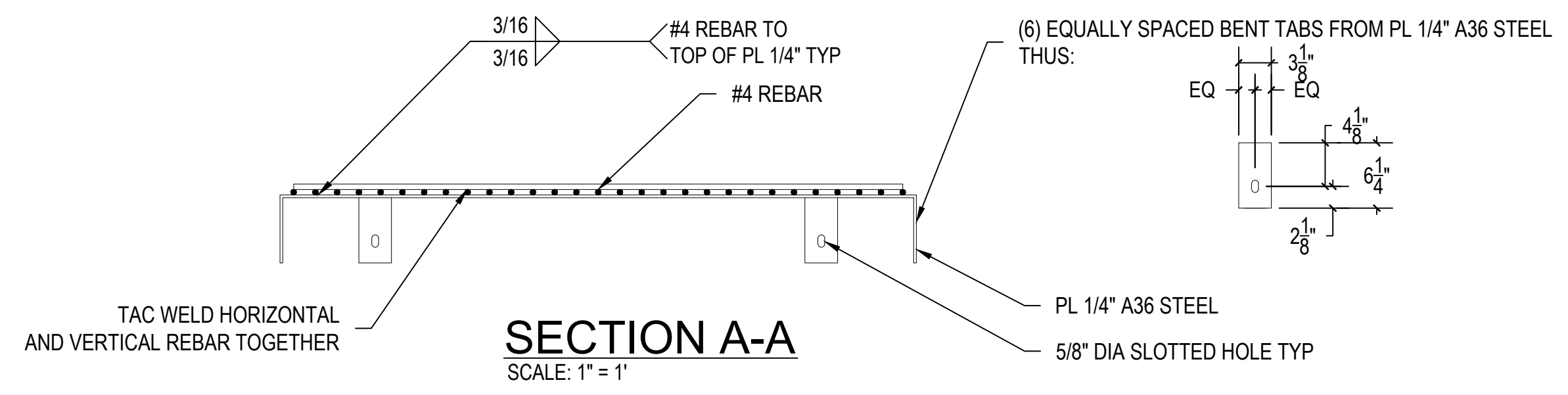
PP04
SHEET 8 OF 13



- NOTES:
- UNLESS OTHERWISE NOTED, ALL ABOVE GROUND STEEL SURFACES SHALL BE HOT DIPPED GALVANIZED.



A TYPICAL PIPE DISCHARGE SCALE: 1" = 1'

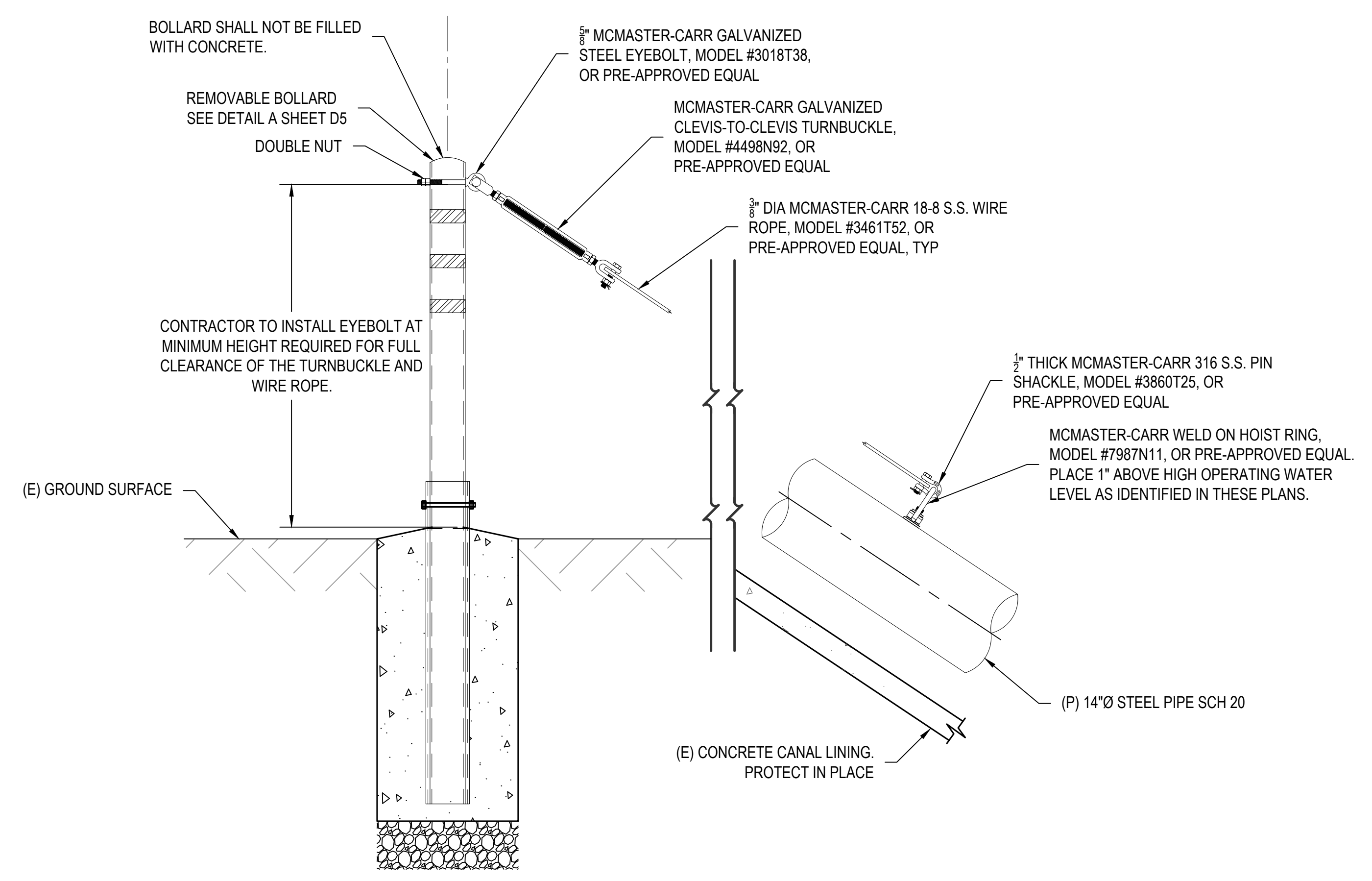


B TYPICAL PIPE DISCHARGE COVER SCALE: 1" = 1'

TABLE 1: RIP-RAP CLASSIFICATIONS

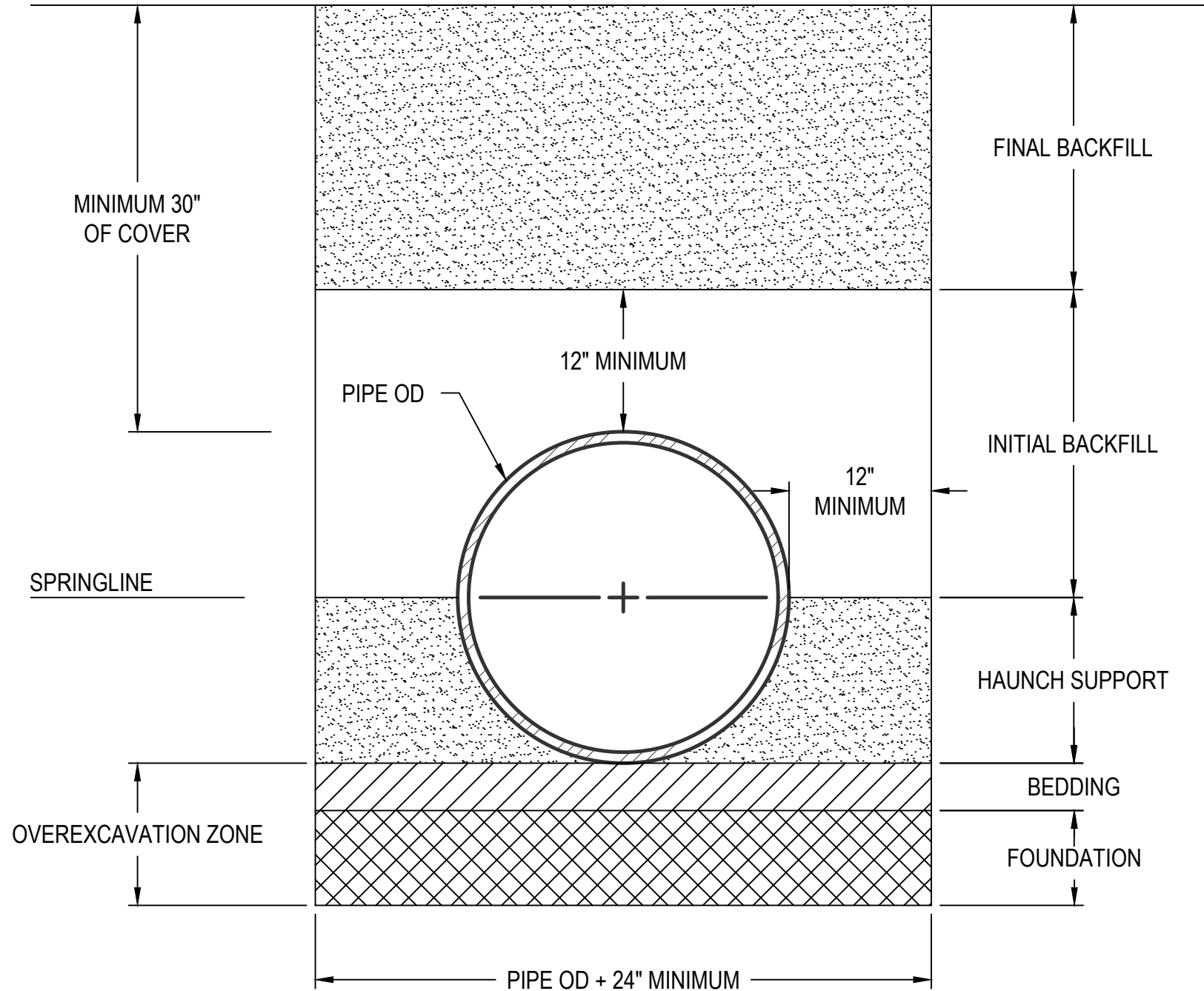
NOMINAL RSP CLASS BY MEDIAN PARTICLE DIAMETER		NOMINAL MEDIAN PARTICLE WEIGHT	D15 (IN)		D50 (IN)		D100 (IN)
CLASS	SIZE		MIN	MAX	MIN	MAX	
CLASS I	6 IN	20 lb	3.7	5.2	5.7	6.9	12
CLASS II	9 IN	60 lb	5.5	7.8	8.5	10.5	18
CLASS III	12 IN	150 lb	7.3	10.5	11.5	14.0	24

- NOTES:
- RIP RAP TRANSITION SHALL BE CONSTRUCTED UPSTREAM AND DOWNSTREAM OF STRUCTURES AND CONCRETE LINING TRANSITIONS IN EARTHEN CHANNELS, AS WELL AS AREAS DISTURBED DURING CONSTRUCTION OR DIRECTED BY THE ENGINEER OF RECORD.
 - RIP RAP THICKNESS SHALL BE 1.5 TIMES THE MAX STONE SIZE OR DIRECTED BY THE ENGINEER OF RECORD.
 - TOP OF RIP RAP SLOPE PROTECTION SHALL BE PLACED AT LEAST 12" ABOVE HIGH WATER LEVEL OR DIRECTED BY THE ENGINEER OF RECORD.
 - ALL RIP RAP SHALL BE ON TOP OF GEOTEXTILE FABRIC (MIRAFI 140 OR APPROVED EQUAL)



C PIPE COLUMN SUPPORT ASSEMBLY SCALE: 1" = 1' ACTUAL SCALE

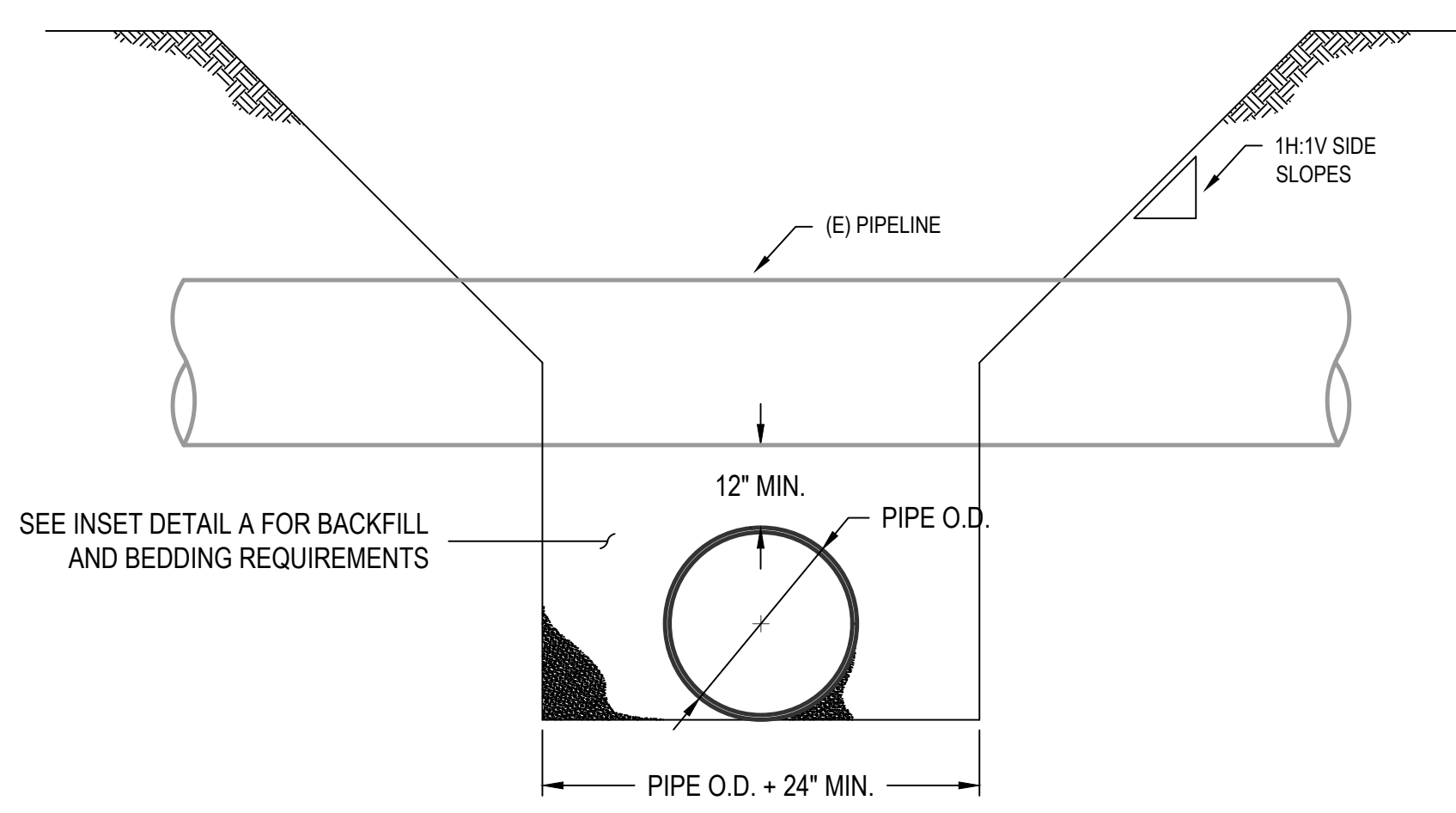
DESCRIPTION				
DATE:				
BY:				
REV:				
DETAILS	CALIFORNIA OLIVE RANCH 3 PIPELINE	CALIFORNIA		
	TOFCWCD	CORNING		
		TEHAMA COUNTY		
DATE:	03/25/2026	SCALE:	AS NOTED	
JOB NUMBER:	1139.14	DESIGNED:	DRH	
DRAWN:	GJS	CHECKED:	CT	
D1				
SHEET 9 OF 13				



A TYPICAL TRENCH OUTSIDE USBR ROW
SCALE: 1" = 2'

TYPICAL PIPELINE NOTES:

- PIPELINE SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND SPECIFICATIONS.
- OVEREXCAVATION ZONE: THE BOTTOM OF TRENCH SHALL BE FIRM, UNIFORM-BEARING SOIL SURFACE. WHEN UNSUITABLE OR DISTURBED THE CONTRACTOR SHALL REMOVE, REPLACE, AND COMPACT MATERIAL AS DIRECTED BY THE ENGINEER. SUBGRADE SHALL MEET 90% MAXIMUM DENSITY (ASTM D-1557).
- BEDDING: PIPE BEDDING SHALL BE UNCOMPACTED GRANULAR SOIL CONTAINING NO MORE THAN 5% MATERIAL PASSING THE NUMBER 200 SIEVE, AND SHALL HAVE A MAXIMUM PARTICLE SIZE OF 3/4 INCH. BEDDING SHALL CONFORM TO SPECIFICATIONS BELOW. SOIL TYPES SHALL BE AS DETERMINED BY THE ENGINEER.
 - ON SANDY SOIL (BEDDING): NATIVE MATERIAL, SUITABLE, OR SAND AS APPROVED BY THE ENGINEER.
 - ON CLAY SOIL (BEDDING): 4 INCH MINIMUM SAND OR ENGINEER APPROVED NATIVE MATERIAL ONLY.
- HAUNCH SUPPORT BACKFILL ZONE: HAUNCH SUPPORT BACKFILL SHALL BE COHESIVE SOIL OR GRANULAR MATERIAL CONTAINING MORE THAN 5% MATERIAL PASSING THE NUMBER 200 SIEVE, SHALL HAVE A MAXIMUM PARTICLE SIZE OF 3/4 INCH, PLACED IN LOOSE LIFTS NOT TO EXCEED 8 INCHES OF THICKNESS, OR 2-SACK CEMENT-SAND SLURRY. TRENCH WIDTH MAY BE REDUCED BY 6 INCHES ON EACH SIDE OF PIPE IF CEMENT-SAND SLURRY IS USED. COMPACTED EARTH/FILL SHALL MEET 90% MAXIMUM DENSITY (ASTM D-1557) AND BE ACCOMPLISHED BY MANUALLY DIRECTED HAND COMPACTORS. THE MAXIMUM LIFT THICKNESS SHALL BE 12 INCHES BEFORE COMPACTION.
- INITIAL BACKFILL ZONE: BACKFILL SHALL BE SOUND EARTHEN MATERIAL FREE OF ROCKS, HARDPAN, ORGANICS, AND DELETERIOUS MATERIAL, SHALL HAVE MAXIMUM PARTICLE SIZE OF 3/4 INCH, PLACED IN LOOSE LIFTS NOT TO EXCEED 8 INCHES OF THICKNESS, AND HAND COMPACTED USING AIR TAMPERS OR PAD FOOT WHACKER TO 90% RELATIVE COMPACTION TO A MINIMUM DEPTH OF 12 INCHES OVER THE TOP OF THE PIPE.
- FINAL BACKFILL ZONE: SHALL BE MINIMUM 90% RELATIVE COMPACTION (ASTM D-1557), UNLESS OTHER LOCAL AGENCY STANDARDS DICTATE HIGHER COMPACTION.



B PIPELINE CROSSING UNDER (E) PIPELINE
SCALE: 1" = 1'

PIPELINE CROSSING UNDER (E) PIPELINE NOTES:

- TRENCH WORK SHALL COMPLY WITH CAL/OSHA CONSTRUCTION SAFETY REQUIREMENTS.
- WHERE DEPTH OF AN (E) PIPELINE IS UNKNOWN, IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE THE PIPELINE. ONLY HAND AUGURING SHALL BE PERMITTED.
- IF LEAKAGE BECOMES APPARENT AFTER THE CROSSING WORK IS PERFORMED AND IT IS DETERMINED, SOLELY BY THE ENGINEER, THAT THE LEAKAGE IS A RESULT OF DAMAGE TO THE FACILITY IN CONNECTION WITH THE CROSSING PROJECT, THEN REPAIR OF THE FACILITY SHALL BE PERFORMED SOLELY AT THE EXPENSE OF THE CONTRACTOR.
- CONTRACTOR SHALL INSTALL A CONTINUOUS FULL SECTION OF PIPE, CENTERED BELOW THE (E) PIPELINE BEING CROSSED TO ENSURE JOINTS WILL NOT AFFECT (E) PIPELINE.
- MAXIMUM 6" CROSSING CUT UNLESS PRE-APPROVED BY ENGINEER.

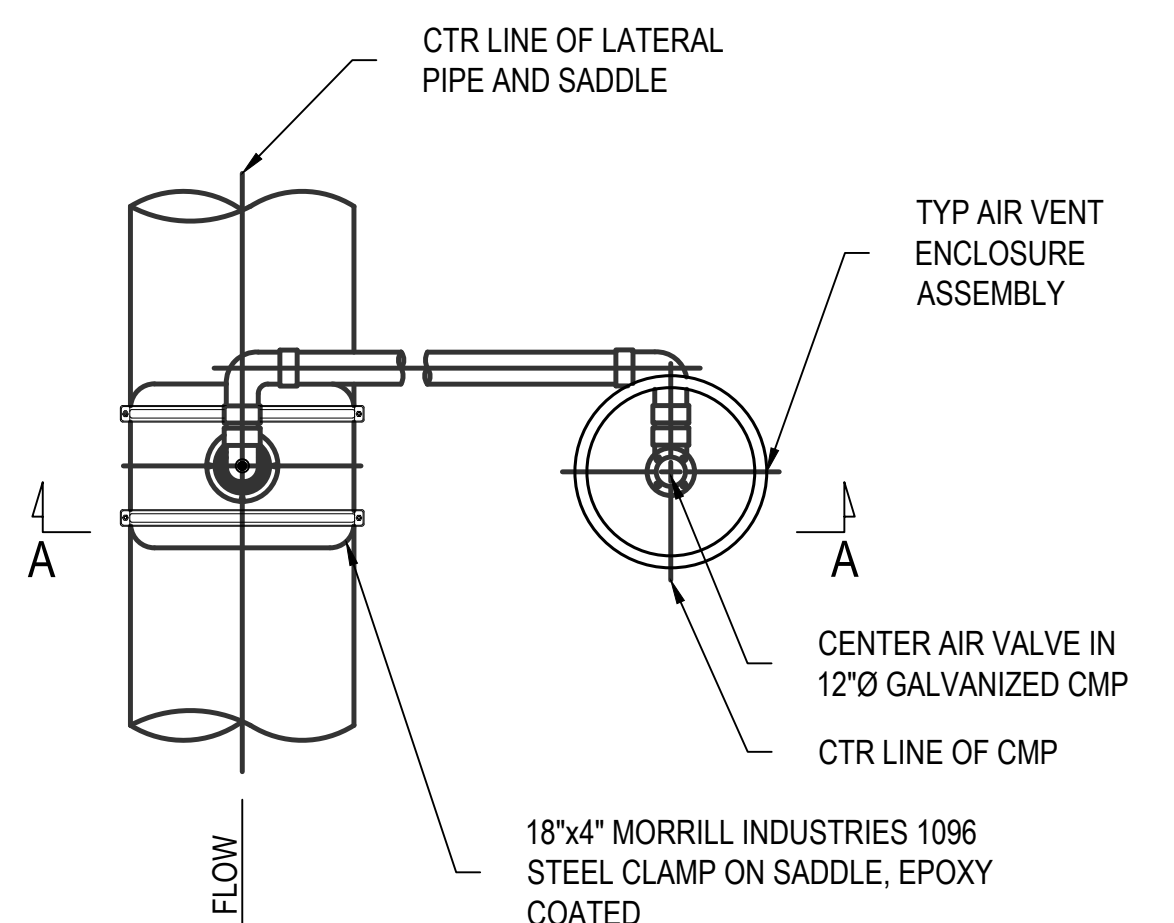
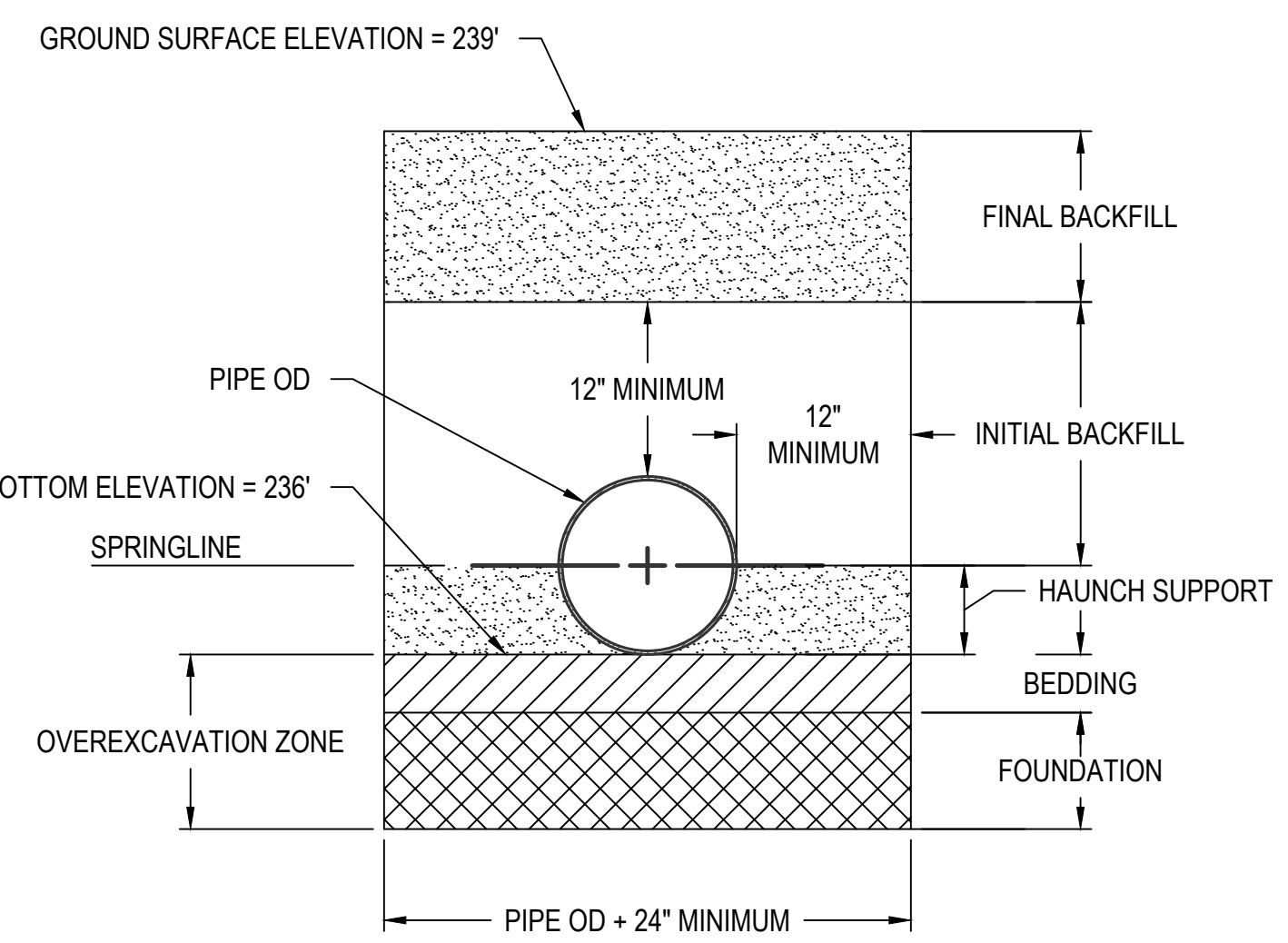


TABLE 1. AIR VENT SCHEDULE

AIR VENT #	STATION	OFFSET*
1	15+50	10'
2	26+50	15'
3	29+70	10'

*OFFSET DISTANCES SUBJECT TO CHANGE BY ENGINEER AND/OR LANDOWNER

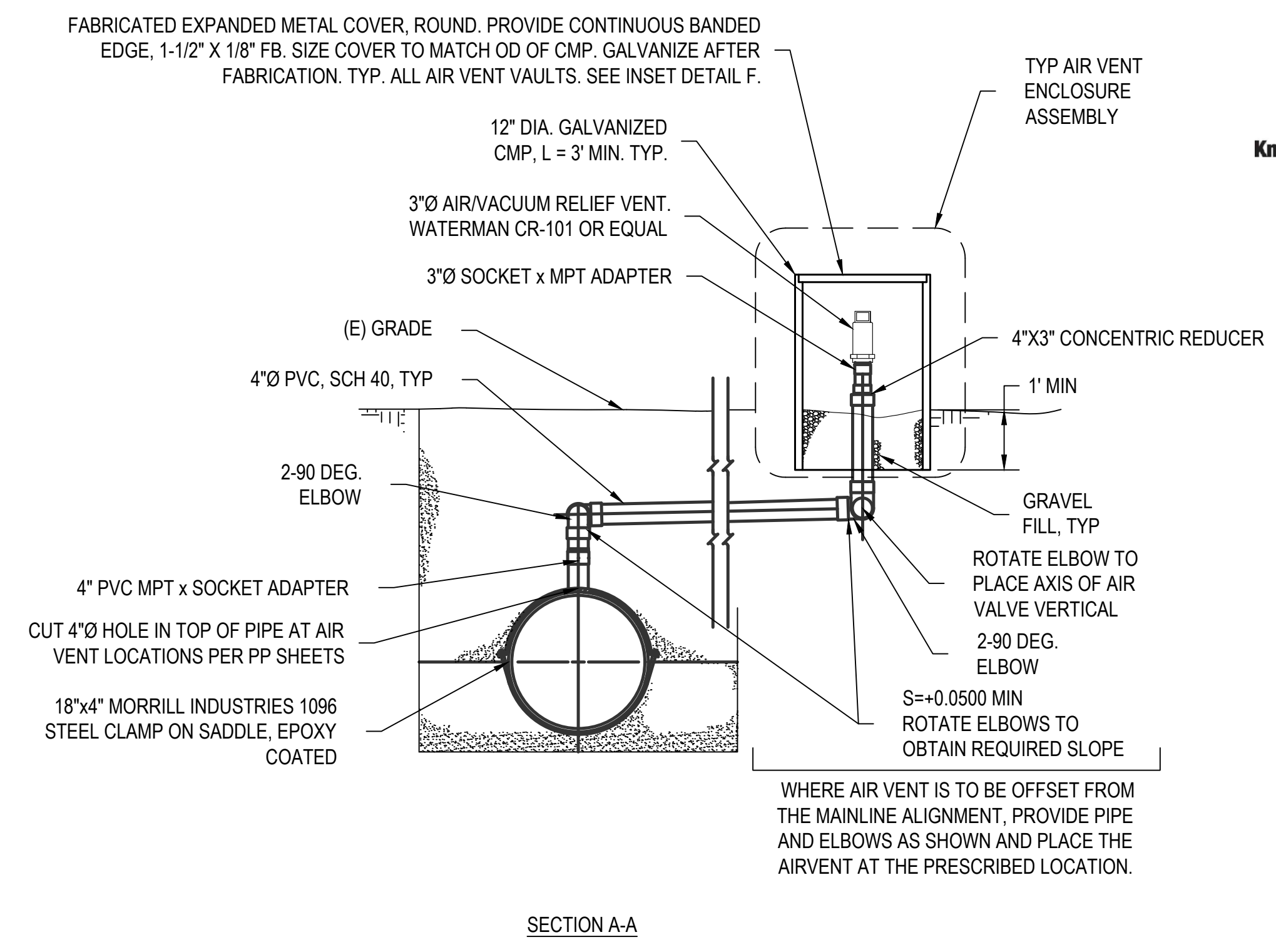
C TYPICAL PIPELINE AIR VENT
SCALE: 1" = 1'



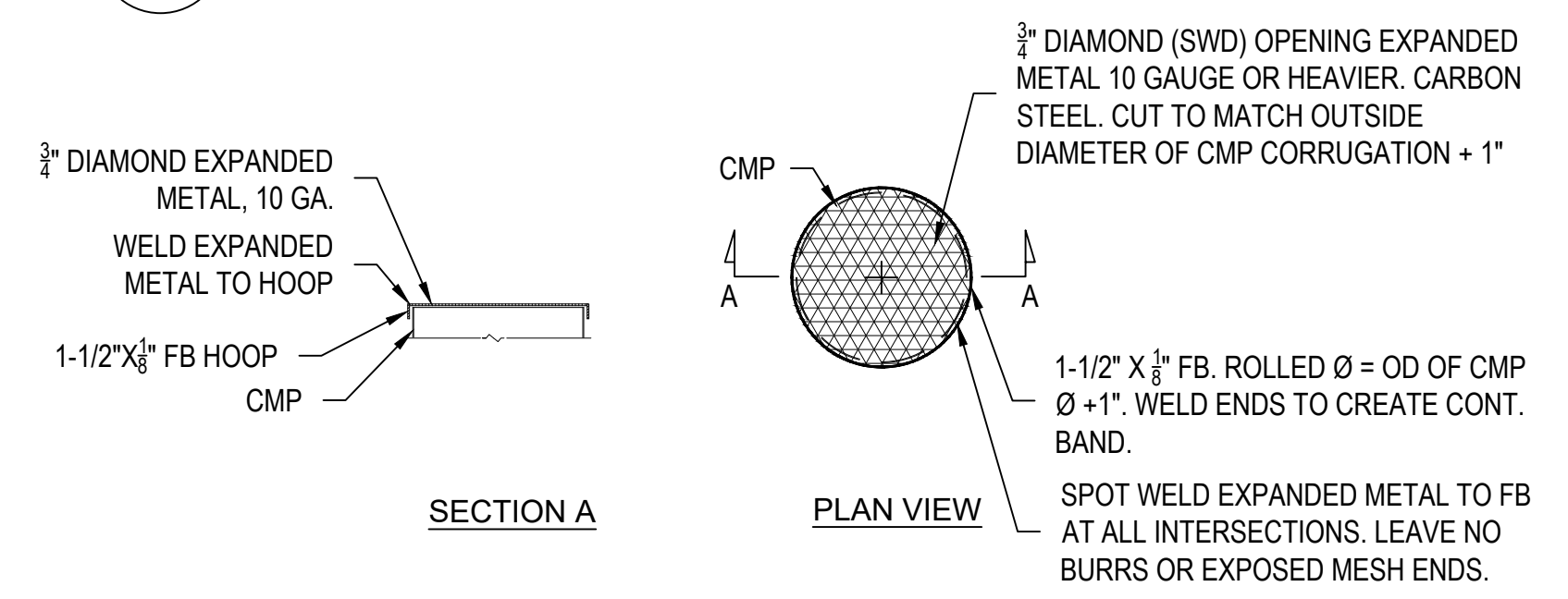
D TYPICAL TRENCH WITHIN USBR ROW
SCALE: 1" = 2'

TYPICAL PIPELINE NOTES:

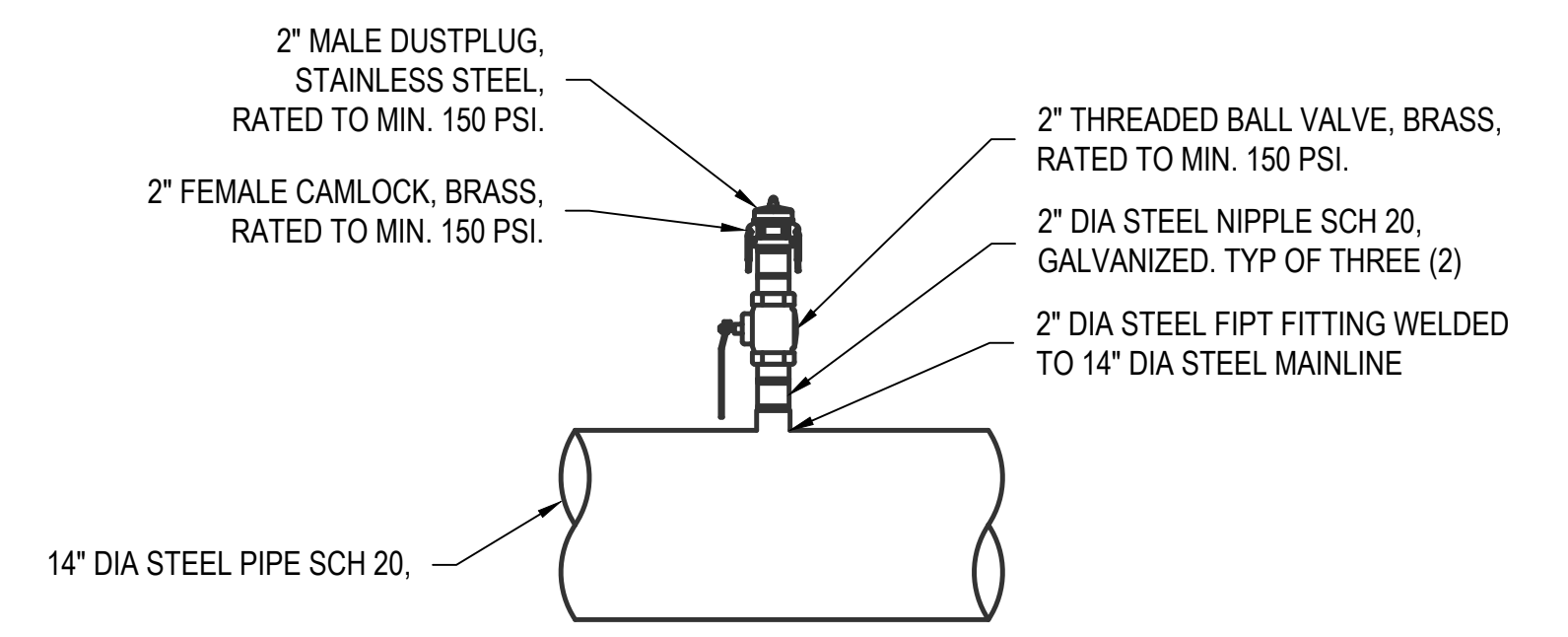
- PIPELINE SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND SPECIFICATIONS.
- OVEREXCAVATION ZONE: THE BOTTOM OF TRENCH SHALL BE FIRM, UNIFORM-BEARING SOIL SURFACE. WHEN UNSUITABLE OR DISTURBED THE CONTRACTOR SHALL REMOVE, REPLACE, AND COMPACT MATERIAL AS DIRECTED BY THE ENGINEER. SUBGRADE SHALL MEET 95% MAXIMUM DENSITY (ASTM D-698).
- BEDDING: PIPE BEDDING SHALL BE UNCOMPACTED GRANULAR SOIL CONTAINING NO MORE THAN 5% MATERIAL PASSING THE NUMBER 200 SIEVE, AND SHALL HAVE A MAXIMUM PARTICLE SIZE OF 3/4 INCH. BEDDING SHALL CONFORM TO SPECIFICATIONS BELOW. SOIL TYPES SHALL BE AS DETERMINED BY THE ENGINEER.
 - ON SANDY SOIL (BEDDING): NATIVE MATERIAL, SUITABLE, OR SAND AS APPROVED BY THE ENGINEER.
 - ON CLAY SOIL (BEDDING): 4 INCH MINIMUM SAND OR ENGINEER APPROVED NATIVE MATERIAL ONLY.
- HAUNCH SUPPORT BACKFILL ZONE: HAUNCH SUPPORT BACKFILL SHALL BE COHESIVE SOIL OR GRANULAR MATERIAL CONTAINING MORE THAN 5% MATERIAL PASSING THE NUMBER 200 SIEVE, SHALL HAVE A MAXIMUM PARTICLE SIZE OF 3/4 INCH, PLACED IN LOOSE LIFTS NOT TO EXCEED 4- TO 6-INCH LIFTS WHEN HAND COMPACTED OR NO MORE THAN 8-INCH LIFTS WHEN POWER COMPACTED. COMPACTED EARTH/FILL SHALL MEET 95% MAXIMUM DENSITY (ASTM D-698) AND BE ACCOMPLISHED BY MANUALLY DIRECTED HAND COMPACTORS.
- INITIAL BACKFILL ZONE: BACKFILL SHALL BE SOUND EARTHEN MATERIAL FREE OF ROCKS, HARDPAN, ORGANICS, AND DELETERIOUS MATERIAL, SHALL HAVE MAXIMUM PARTICLE SIZE OF 3/4 INCH, PLACED IN LOOSE LIFTS NOT TO EXCEED 4- TO 6-INCHES, AND HAND COMPACTED USING AIR TAMPERS OR PAD FOOT WHACKER TO 95% RELATIVE COMPACTION TO A MINIMUM DEPTH OF 12 INCHES OVER THE TOP OF THE PIPE.
- FINAL BACKFILL ZONE: SHALL BE MINIMUM 95% RELATIVE COMPACTION (ASTM D-698), UNLESS OTHER LOCAL AGENCY STANDARDS DICTATE HIGHER COMPACTION.
- MECHANICAL COMPACTION USING HEAVY EQUIPMENT SHOULD NOT BE USED WITHIN 18-INCHES OF THE PIPELINE.



E PUMP MANIFOLD - AIR VENT ASSEMBLY
SCALE: NTS



F TYPICAL AIR VENT ENCLOSURE LID
SCALE: NTS



G PUMP MANIFOLD - CAMLOCK ASSEMBLY
SCALE: NTS

DESCRIPTION	DATE	BY	REV

DETAILS

CALIFORNIA OLIVE RANCH 3 PIPELINE TOFCWCD CORNING

CALIFORNIA

TEHAMA COUNTY

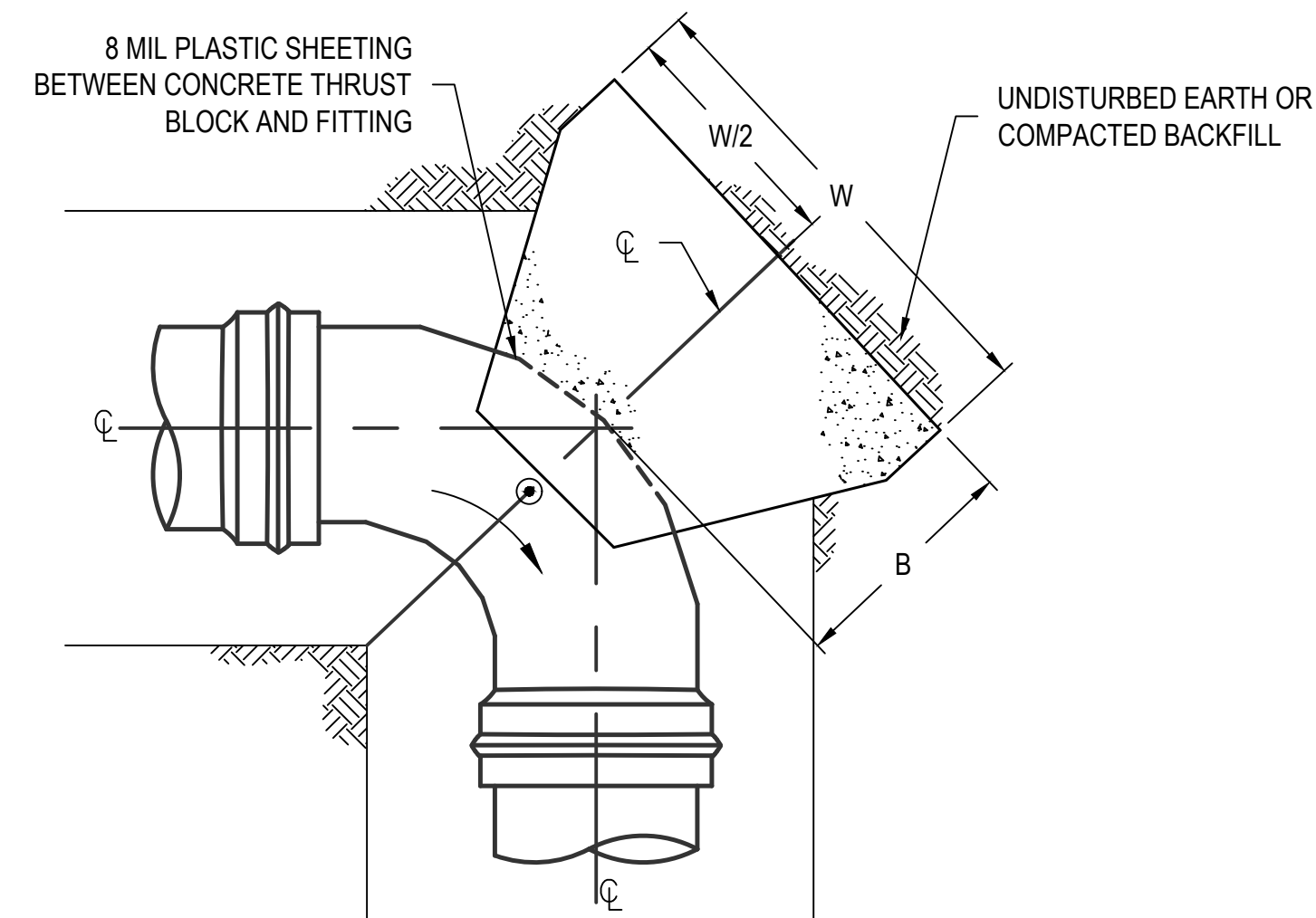
PRELIMINARY NOT FOR CONSTRUCTION

DATE: 03/25/2026
SCALE: AS NOTED
JOB NUMBER: 1139.14
DESIGNED: DRH
DRAWN: GJS
CHECKED: CT

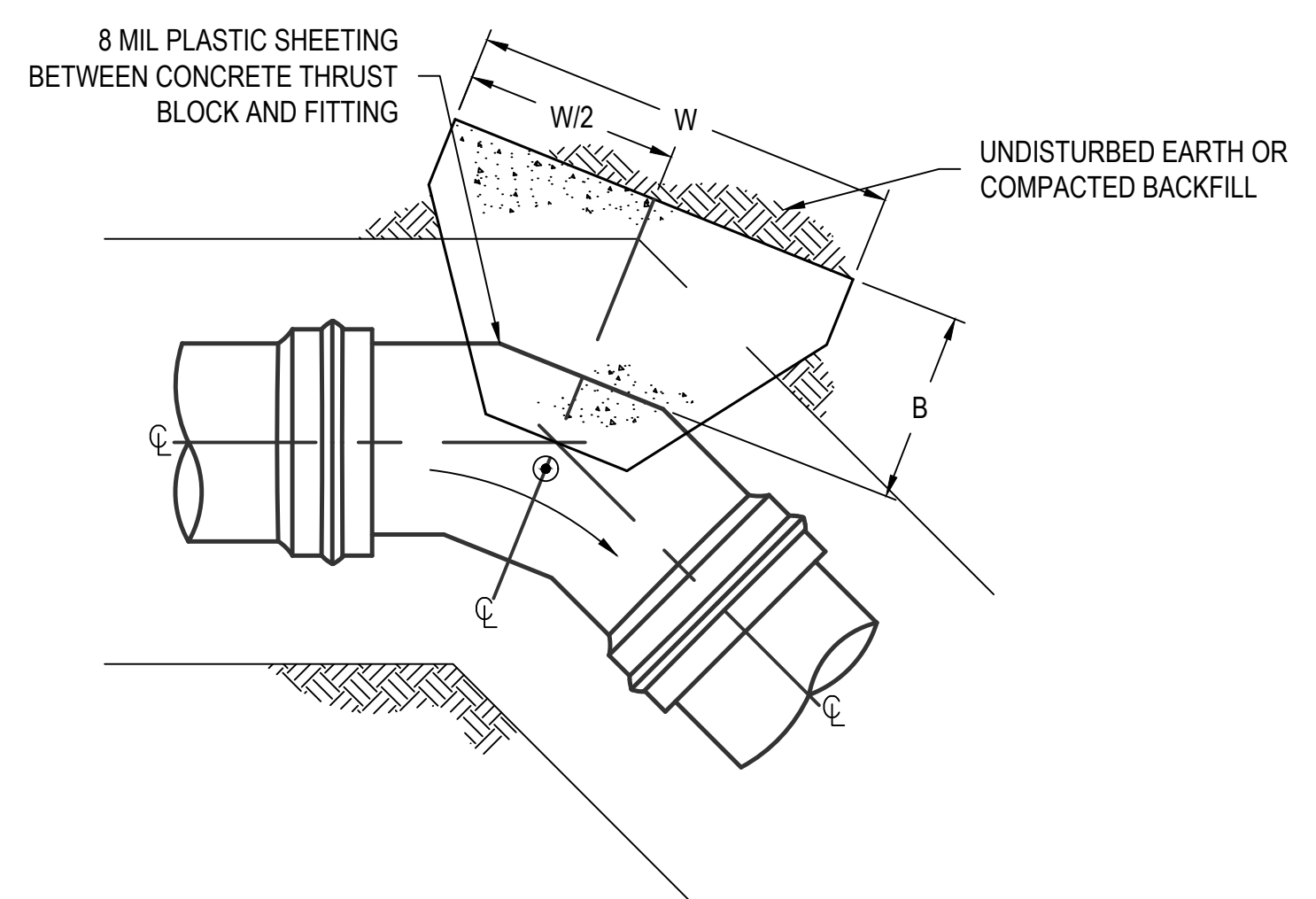
D2

SHEET 10 OF 13

100% DESIGN ISSUED FOR BIDDING
NOT FOR CONSTRUCTION



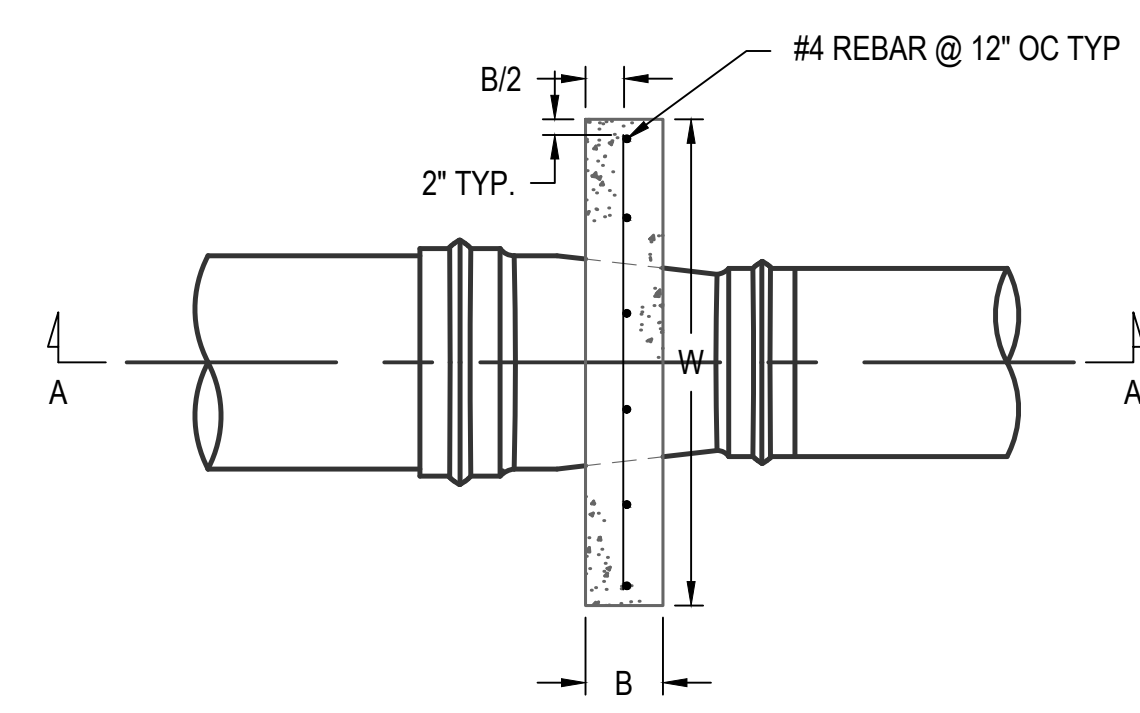
A TYPICAL BLOCKING FOR 90° BENDS
SCALE: NTS



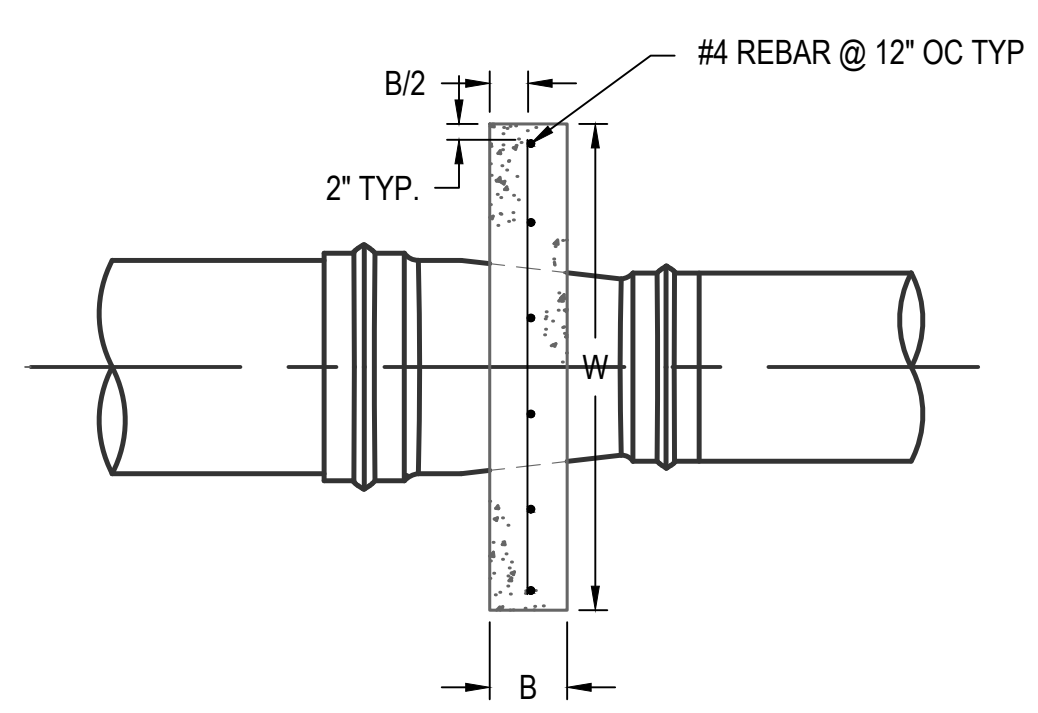
B TYPICAL BLOCKING FOR 45° BENDS
SCALE: NTS

TABLE 1. HORIZONTAL THRUST BLOCK DIMENSIONS				
FITTING TYPE	THRUST, LBS	MINIMUM DIMENSIONS, FT		
		B	W	H
18"X18" 90° ELBOW	11,700	2.5	5	1.75
18"X18" 45° ELBOW	6,300	1.5	4	2
18"X18" 30° ELBOW	4,300	1.5	3	1.5
18"X18" 22.5° ELBOW	3,200	1.5	3	1.5
14"X14" 45° ELBOW	3,600	1.5	3	1
14"X14" 22.5° ELBOW	1,800	1	2	1
14"X18" REDUCER	4,700	1	3	1.75

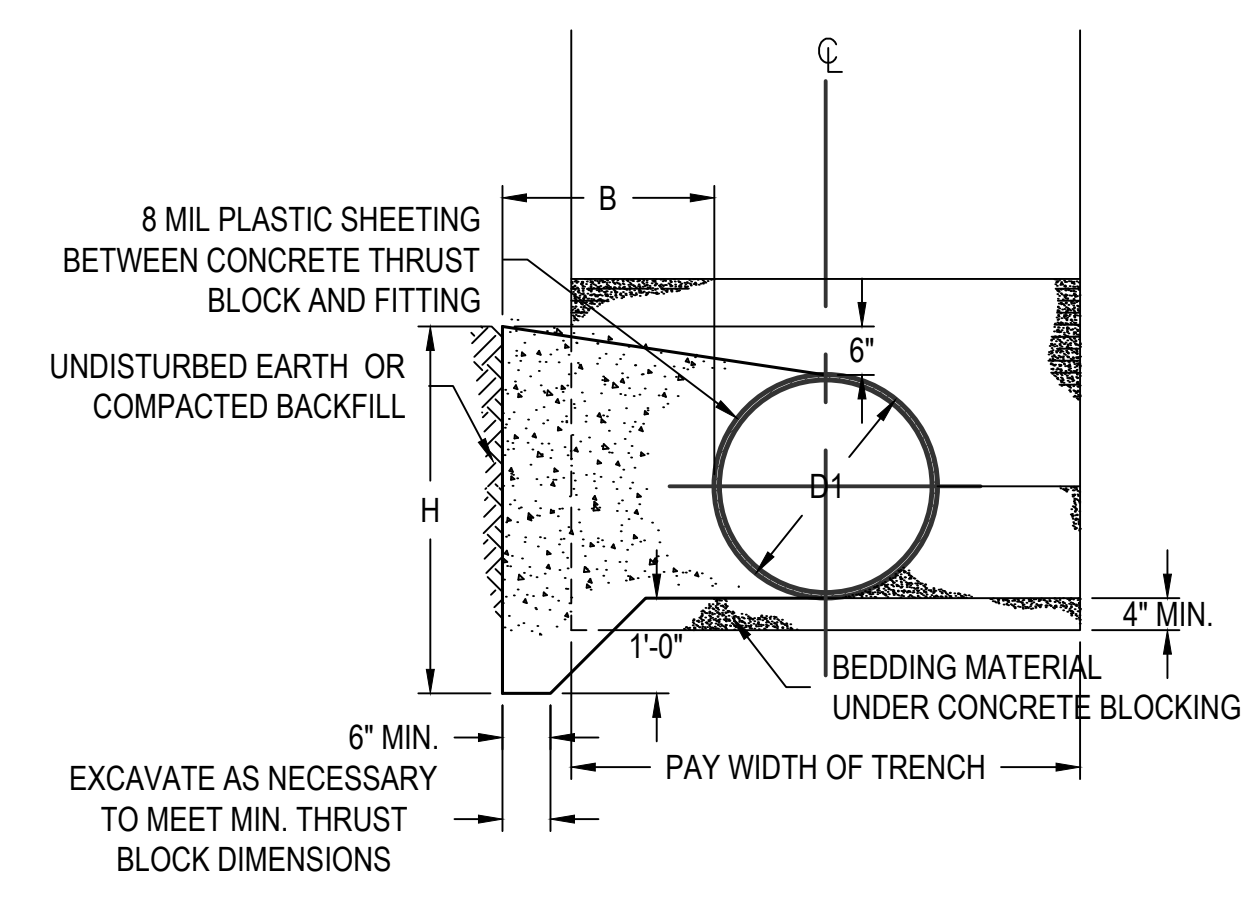
- NOTES:
- THRUST BLOCK MAY EXTEND BEYOND TRENCH WALL.
 - OD = OUTSIDE DIAMETER OF PIPE IN INCHES.
 - THRUST BLOCKS TO BE CONSTRUCTED TO AVOID ALL PIPE AND FITTING JOINTS.
 - THE WIDTH OF THE CONTACT AREA OF EACH THRUST BLOCK WITH THE FITTING RESTRAINED SHALL BE EQUAL TO THE DISTANCE BETWEEN THE BELLS OR WHICHEVER IS LESS.
 - ONLY USE THOSE DETAILS WHICH REFER TO PIPE, TRENCH, OR OTHER PIPELINE CONSTRUCTION OPTIONS AS ALLOWED AND REQUIRED IN THIS CONTRACT OR AS SHOWN ON THE PLAN AND PROFILE.
 - CONTRACTOR SHALL ROUGH FORM THRUST BLOCK TO AVOID EXCESSIVE ENCASEMENT OF FITTINGS.



C TYPICAL BLOCKING FOR REDUCERS
SCALE: NTS



SECTION A-A
SCALE: NTS



D TYPICAL BLOCKING FOR BENDS - SECTION
SCALE: NTS

DESCRIPTION

DATE:

BY:

REV:

THRUST BLOCK DETAILS

CALIFORNIA OLIVE RANCH 3 PIPELINE
TFCWCD
CORNING

TEHAMA COUNTY CALIFORNIA



DATE: 03/25/2026
SCALE: AS NOTED
JOB NUMBER: 1139.14
DESIGNED: DRH
DRAWN: GJS
CHECKED: CT

D3

0" 1/2" 1"
ACTUAL SCALE

SHEET 11 OF 13

100% DESIGN ISSUED FOR BIDDING
NOT FOR CONSTRUCTION



PIPE NOTES

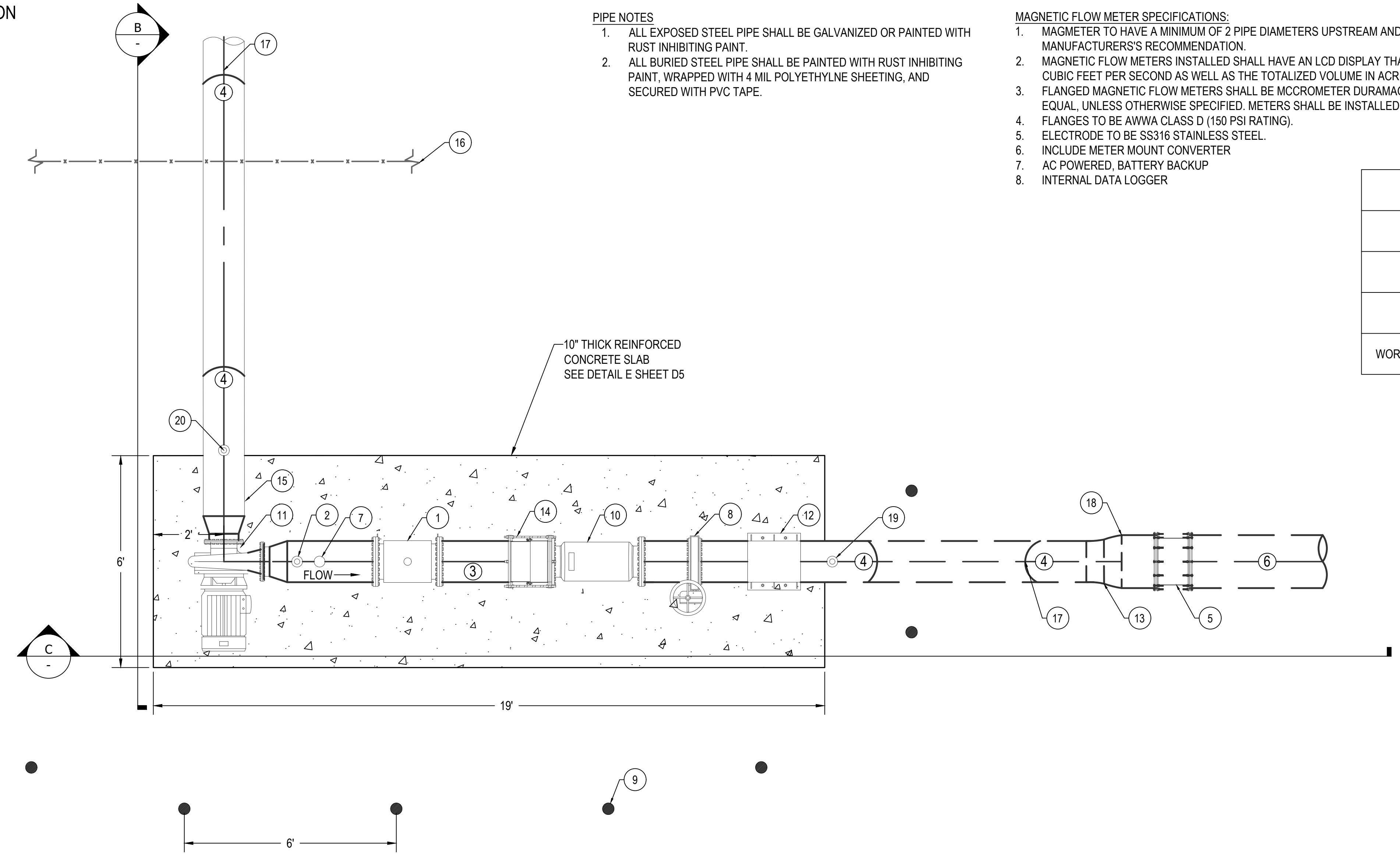
1. ALL EXPOSED STEEL PIPE SHALL BE GALVANIZED OR PAINTED WITH RUST INHIBITING PAINT.
2. ALL BURIED STEEL PIPE SHALL BE PAINTED WITH RUST INHIBITING PAINT, WRAPPED WITH 4 MIL POLYETHYLENE SHEETING, AND SECURED WITH PVC TAPE.

MAGNETIC FLOW METER SPECIFICATIONS:

1. MAGMETER TO HAVE A MINIMUM OF 2 PIPE DIAMETERS UPSTREAM AND 1 PIPE DIAMETER DOWNSTREAM OR PER MANUFACTURER'S RECOMMENDATION.
2. MAGNETIC FLOW METERS INSTALLED SHALL HAVE AN LCD DISPLAY THAT DISPLAYS INSTANTANEOUS FLOW RATE IN CUBIC FEET PER SECOND AS WELL AS THE TOTALIZED VOLUME IN ACRE-FEET.
3. FLANGED MAGNETIC FLOW METERS SHALL BE MCCROMETER DURAMAG, SEAMETRICS AG3000 OR PRE-APPROVED EQUAL, UNLESS OTHERWISE SPECIFIED. METERS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
4. FLANGES TO BE AWWA CLASS D (150 PSI RATING).
5. ELECTRODE TO BE SS316 STAINLESS STEEL.
6. INCLUDE METER MOUNT CONVERTER
7. AC POWERED, BATTERY BACKUP
8. INTERNAL DATA LOGGER

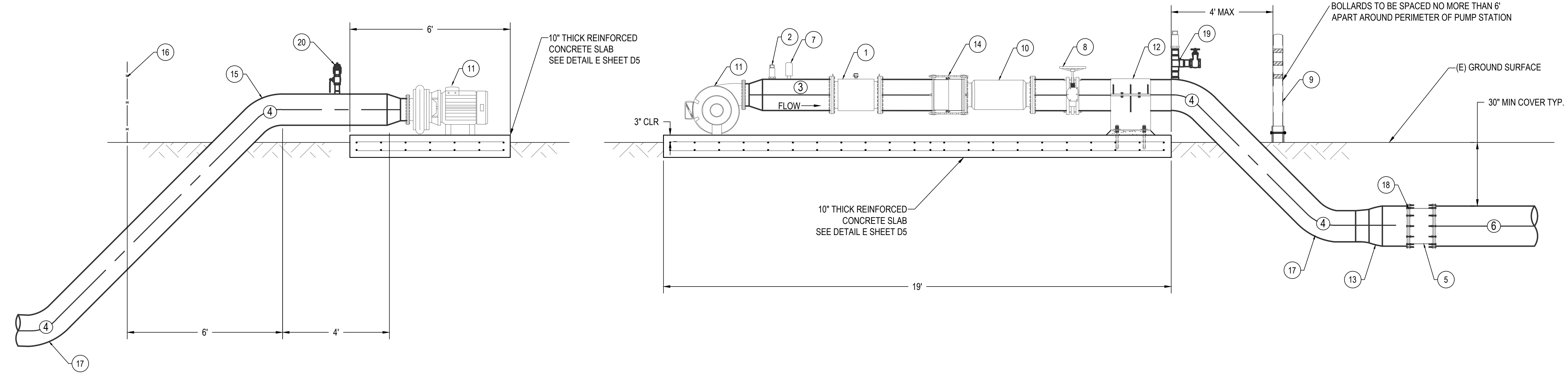
TABLE 1: PUMP REQUIREMENTS	
TDH	60.4'
NPSHA	12.1'
FLOWRATE	6.5 CFS
WORKING PRESSURE	13 PSI

FEATURE ID	FEATURE
1	14"Ø FLANGED MAGNETIC FLOW METER.
2	3" WATERMAN AV-150.
3	14" FABRICATED AWWA CLASS D 150# FLANGED SPOOL, SCH20. SEE PIPE NOTES.
4	14" FABRICATED AWWA CLASS D 150# FLANGED 45 DEG ELBOW, SCH 20, PER DRAWING. SEE PIPE NOTES
5	18" MORRILL INDUSTRIES 1035 PIP M&M COUPLER OR APPROVED EQUAL.
6	18" PVC PIPE 100 PIP.
7	3" WATERMAN AA-9 W/ CRACKING PRESSURE SET TO 30 PSI.
8	14" BRAY SERIES 31 LUG STYLE BUTTERFLY VALVE GEAR OPERATED WITH HANDWHEEL, OR APPROVED EQUAL.
9	BOLLARD ASSEMBLY. SEE DETAIL A SHEET D5.
10	14" MORRILL 1530 FLANGED CHECK VALVE WITH AWWA CLASS D 150# FLANGES OR APPROVED EQUAL.
11	PUMP SIZED PER TABLE 1. SEE GN02 FOR DETAILS.
12	THRUST RESTRAINT SYSTEM. SEE DETAIL B SHEET D5.
13	14"x18" STEEL REDUCING COUPLING SCH. 20.
14	14" ROMAC STYLE DJ400 CLASS D DISMANTLING JOINT OR APPROVED EQUAL.
15	14"Ø STEEL PIPE SCH 20. SEE PIPE NOTES.
16	EXISTING CHAIN LINK FENCE.
17	THRUST BLOCK FOR 45 DEG ELBOW. SEE DETAIL D SHEET D3.
18	THRUST BLOCK FOR 14" x 18" REDUCER COUPLING. SEE DETAIL E SHEET D3.
19	3" WATERMAN AV-150 W/ DRAIN PORT ASSEMBLY. SEE DETAIL E SHEET D2.
20	2" CAMLOCK ASSEMBLY. SEE DETAIL G SHEET D2.



A PUMP CONNECTION

Scale: 1" = 2'



B SECTION

Scale: 1" = 2'

C SECTION

Scale: 1" = 2'

DESCRIPTION

DATE:

BY:

REV:

PUMP STATION DETAILS

CALIFORNIA OLIVE RANCH 3 PIPELINE
TFCWCD
CORNING

CALIFORNIA
TEHAMA COUNTY

PRELIMINARY
NOT FOR
CONSTRUCTION

DATE: 03/25/2026
SCALE: AS NOTED
JOB NUMBER: 1139.14
DESIGNED: DRH
DRAWN: GJS
CHECKED: CT

D4

SHEET 12 OF 13

