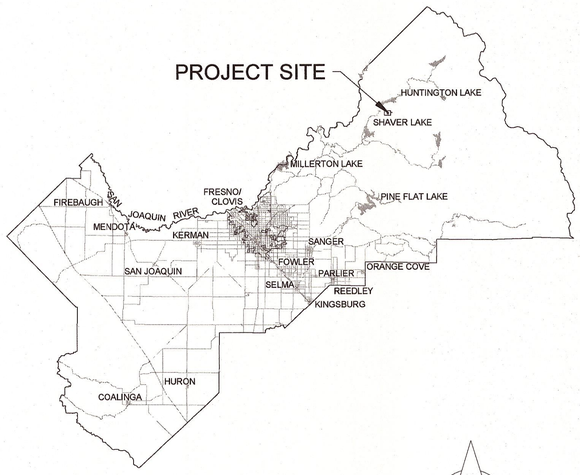
PLANS FOR CONSTRUCTION

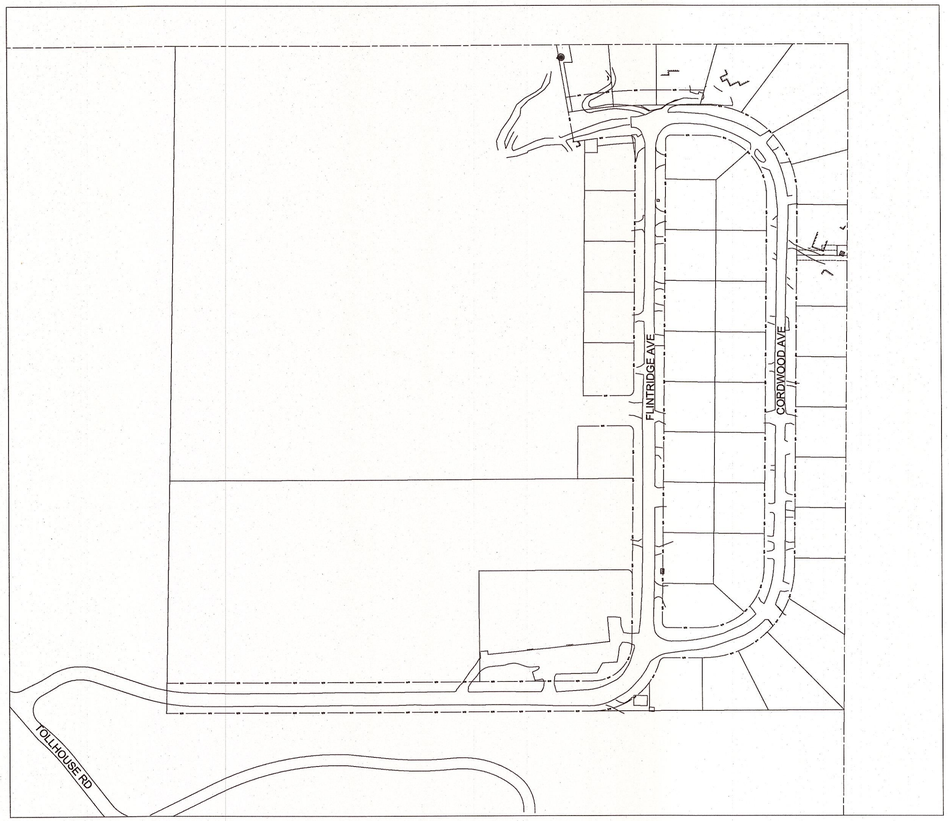
CSA 1 - TAMARACK WATER INFRASTRUCTURE REPLACEMENT PROJECT

FUNDED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES UNDER THE SMALL COMMUNITY DROUGHT RELIEF PROGRAM.

INDEX OF SHEETS



VICINITY MAP
SCALE: N.T.S.



LOCATION MAP
SCALE: 1"=150'

DIVISION	DESIGN	CONST	RMO	RESC
SIGNATURE	M A	Mindy P. Settles	Steven Jones	D A
DATE	3/27/2024	3/28/24	4/4/2024	3/28/24

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

Brian Pacheco		1st	District
Steve Brandau		2nd	District
Sal Quintero		3rd	District
Ernest "Buddy" Mendes	Vice Chairman	4th	District
Nathan Magsig	Chairman	5th	District

Paul Nerland
County Administrative Officer

APPROVED _____

Steven E. White, Director
Department of Public Works and Planning

CALIFORNIA CONTRACTOR'S LICENSES REQUIRED FOR THIS PROJECT					
CLASS A, GENERAL ENGINEERING					
C-34, PIPELINE CONTRACTOR					
DRAWING NO.	ROAD NO.	BRIDGE NO.	FISCAL YR.	SHEET NO.	TOTAL
11334	-	N/A	-	01	23
CONTRACT NO. 23-29-C					

RECORD DRAWING		
CONTRACTOR		
NAME		
ADDRESS		
CITY	STATE	ZIP
PHONE		
DATE AWARDED		
DATE STARTED		
DATE COMPLETED		
RESIDENT ENGINEER		
NAME	SIGNATURE	
NAME	SIGNATURE	

GENERAL LEGEND

REFERENCE NOTES

1. INSTALL 1" WATER SERVICE WITH METER AND METER BOX DITCH CROSSING PER DETAIL 7 SHEET CD-3
2. INSTALL HDPE 22.5° BEND
3. INSTALL HDPE 45° BEND
4. INSTALL HDPE 90° BEND
5. INSTALL HDPE 6" X 6" TEE
6. INSTALL HDPE 2" X 2" TEE
7. INSTALL HDPE 6"X3" TEE
8. CEMENT SLURRY UTILITY CROSSING PER DETAIL 1 ON SHEET CD-4
9. INSTALL 4" PRESSURE REDUCING VALVE W/ 1" MANIFOLD, 1" PRESSURE REDUCING VALVE, AND MISCELLANEOUS FITTINGS PER DETAIL 1 ON SHEET CD-3
10. INSTALL OVER CROSSING PER DETAIL 2 ON SHEET CD-3
11. INSTALL 1" WATER SERVICE, METER PER DETAIL 5 ON SHEET CD-2.
12. PROPOSED WATER STORAGE TANK PER SHEET CD-6 - CD-7
13. REMOVE AND DISPOSE FIRE HYDRANT PER DETAIL 3 SHEET CD-3
14. INSTALL FIRE HYDRANT ASSEMBLY PER DETAIL 1 SHEET CD-2
15. EXISTING WATER SERVICE LOCATION KNOWN.
16. EXISTING SEWER SERVICE LOCATION KNOWN
17. EXISTING WATER SERVICE LOCATION UNKNOWN. CONTRACTOR TO LOCATE
18. EXISTING SEWER SERVICE LOCATION UNKNOWN. CONTRACTOR TO LOCATE
19. TEMPORARY RELOCATION OF EXISTING WATER MAIN PER DETAIL 7 SHEET CD-2
20. INSTALL BLIND FLANGE AT GATE VALVE OUTLET
21. INSTALL 6" GATE VALVE PER DETAIL 3 SHEET CD-2
22. INSTALL 2" GATE VALVE PER DETAIL 3 SHEET CD-2
23. INSTALL HDPE 3" X 3" TEE
24. INSTALL HDPE 3" X 2" REDUCER
25. REMOVE TREE
26. DRAINAGE TRENCH PER DETAIL 8 SHEET CD-3
27. INSTALL HDPE 3" X 6" REDUCER
28. INSTALL 1" WATER SERVICE, METER FOR EMPTY LOT PER DETAIL 4 SHEET CD-4
29. INSTALL 2" WATER SERVICE, METER PER DETAIL 5 SHEET CD-2
30. REMOVE PRESSURE REDUCING VALVE AND VAULT PER DETAIL 5 SHEET CD-4
31. ABANDON WATER VALVE PER DETAIL 4 SHEET CD-3
32. INSTALL BACTERIOLOGICAL SAMPLING STATION PER DETAIL 4 SHEET CD-1
33. COMBINATION AIR RELEASE VALVE PER DETAIL 1 SHEET CD-5. CONNECT AT HIGHEST POINT OF WATER LINE
34. INSTALL FIBER ROLL (STRAW WATTLES) AT 5' VERTICAL SPACING MAX PER CALTRANS STANDARD DETAIL H51
35. INSTALL CONCRETE WATER LINE ANCHOR EVERY 15 FEET OF ELEVATION PER DETAIL 2 SHEET CD-5.
36. CONSTRUCT 1" WATER SERVICE LINE DOWNSTREAM OF METER PER SPECIFICATION SECTION 99-2.02M (1)
37. ADJUST SEWER MANHOLE TO GRADE

UTILITY NOTES

1. LOCATIONS OF EXISTING UNDERGROUND FACILITIES ARE APPROXIMATE EXACT DEPTH AND LOCATIONS ARE UNKNOWN. FIELD LOCATE PRIOR TO THE START OF CONSTRUCTION.

   CALL UNDERGROUND SERVICE ALERT (USA) 811

2. 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.

ABBREVIATIONS

AB	AGGREGATE BASE
ABUT	ABUTMENT(S)
AC	ASPHALT CONCRETE
AHD	AHEAD
ALIGN	ALIGNMENT
ALY	ALLEY
AP	ANGLE POINT
APCH	APPROACH
APPROX	APPROXIMATE ± ( )
AS	AGGREGATE SUBBASE
ASSY	ASSEMBLY
AV	AIR RELEASE VALVE
AVE	AVENUE
BB	BEGINNING OF BRIDGE
BC	BEGIN HORIZONTAL CURVE
BCM	BRASS CAP MONUMENT
BCR	BEGIN CURB RETURN
BEG	BEGIN(ING)
BKF	BACKFILL
BLDG	BUILDING
BLVD	BOULEVARD
BM	BENCH MARK
BR	BRIDGE
BS	BACK OF SIDEWALK
BVC	BEGIN VERTICAL CURVE
BW	BARBED WIRE
CA TV	CABLE TELEVISION
C & G	CURB AND GUTTER
CC	CENTER TO CENTER
CF	CUBIC FOOT (FEET)
CFS	CUBIC FEET PER SECOND
CHNL	CHANNEL
CI	CITY
CIDH	CAST-IN DRILLED HOLE
CIP	CAST IRON PIPE
CIPCP	CAST-IN-PLACE CONCRETE PIPE
C/L (℄)	CENTER LINE
CL	CHAIN LINK
CLR	CLEAR (ING), CLEARANCE
CMP	CORRUGATED METAL PIPE
CMPA	CORRUGATED METAL PIPE ARCH
CNL	CUT NEAT LINE
CNS	COMPACTED NATIVE SOIL
CO	COUNTY
COF	CITY OF FRESNO
COMM	COMMERCIAL
CONC	CONCRETE
CONST	CONSTRUCT (ION)
CONT	CONTINUOUS
CP	CONTROL POINT
CR	CURB RAMP
CS	COTTON SPINDLE
CSP	CORRUGATED STEEL PIPE
CSPA	CORRUGATED STEEL PIPE ARCH
CULV	CULVERT
CY (CU YD)	CUBIC YARD(S)
DI	DRAINAGE INLET
DIA	DIAMETER
DIR	DIRECTION
DIST	DISTANCE
DO	DRAINAGE OUTLET
DRWY	DRIVEWAY
DTL	DETAIL
EA	EACH
EASE	EASEMENT
EB	END OF BRIDGE
E/B	EAST BOUND
EC	END HORIZONTAL CURVE
ECR	END CURB RETURN
ED	END DIKE
ELEV	ELEVATION
(ELEV)	EXISTING ELEVATION
EMB	EMBANKMENT
EP	EDGE OF PAVEMENT
EQ	EQUAL
ES	EDGE OF SHOULDER
ETL	EDGE OF TRAVEL LANE
EVC	END VERTICAL CURVE
EW	ENDWALL
EXC	EXCAVATION
EXIST / (E)	EXISTING
EXP JT	EXPANSION JOINT
FCBCM	FRESNO COUNTY BCM
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FRE	FRESNO
FT	FOOT (FEET)
GAL	GALLON (S)
GALV	GALVANIZED
GB	GRADE BREAK
GP	GRADING PLANE
GRUB	GRUBBING
GL	GUTTER LIP
GW	GUY WIRE
HORIZ	HORIZONTAL
HP	HINGE POINT
HS	HIGH STRENGTH
HW	HEAD WALL
HWM	HIGH WATER MARK
HWY	HIGHWAY
IB	IMPORTED BORROW
ID	INSIDE DIAMETER
IP	IRON PIPE
IRR	IRRIGATION
IV	IRRIGATION VALVE
JP	JOINT POLE
JT	JOINT
LBS	POUNDS
LF	LINEAR FOOT
LOC	LOCATION
LOL	LAYOUT LINE
LP	LIMIT OF PAYMENT
LT	LEFT
MAX	MAXIMUM
MB	METAL BEAM
MBGR	METAL BEAM GUARD RAILING
MH	MANHOLE
MI	MILE (S)
MIN	MINIMUM
MISC	MISCELLANEOUS
MOD	MODIFY (IED)
MON	MONUMENT
MP	MILE POST
MTL	MATERIAL
N/A	NOT APPLICABLE
NBL	NORTH BOUND LANE
NO (#)	NUMBER
NS	NATIVE SOIL
O	OVER
OC	ON CENTER
OD	OUTSIDE DIAMETER
OG	ORIGINAL GROUND
PB	PULL BOX
PBS	PULV BIT SURF
PCC	PORTLAND CEMENT CONCRETE
PE	POLYETHYLENE
PERM	PERMEABLE
PG	PROFILE GRADE
PI	POINT OF INTERSECTION
PL	PLATE
P/L	PROPERTY LINE
PM	POST MILE
PNT	POINT
POC	POINT ON CURVE
POT	POINT ON TANGENT
PP	POWER POLE
PPP	PERFORATED PLASTIC PIPE
PRF	PAVEMENT REINFORCING FABRIC
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PEDESTAL TELEPHONE
PULV	PULVERIZED
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
R	RADIUS
R & R	REMOVE AND REPLACE
R & D	REMOVE AND DISPOSE
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
REINF	REINFORCED (MENT) (ING)
REL	RELOCATE
RES	RESIDENTIAL
RET	RETAINING
RG	RUBBER GASKET
RLG	ROCK LINED GUTTER
RR	RAILROAD
RT	RIGHT
RTE	ROUTE
RW	RETAINING WALL
R/W	RIGHT OF WAY
S	SLOPE
SALV	SALVAGE
SBL	SOUTH BOUND LANE
SDWK	SIDEWALK
SEC	SECTION
SH	STATE HIGHWAY
SHLDR	SHOULDER
SHT	SHEET
S/L	SECTION LINE
SP	STANDPIPE
SQ	SQUARE
SQ FT	SQUARE FOOT (FEET)
SQ IN	SQUARE INCH
SS	SANITARY SEWER
ST	STREET
STA	STATION
STD	STANDARD
STP	STEEL PIPE
STR	STRUCTURE (S)
SURF	SURFACING
SWR	SEWER
TAN OFF	TANGENT OFFSET
TBM	TEMPORARY BM
TBR	TIMBER
TC	TOP OF CURB
TCB	TRAFFIC CONTROL BOX
TCP	TEMPORARY CONST PERMIT
TFC	TOP FACE OF CURB
TFP	TRANSFORMER POLE
TOT	TOTAL
TP	TELEPHONE POLE
TRANS	TRANSITION
TS	TRAFFIC SIGNAL
TYP	TYPICAL
TYP SEC	TYPICAL SECTION
UC	UNDERCROSSING
UD	UNDERDRAIN
UDR	UNDERDRAIN RISER
UG	UNDERGROUND
UP	UNDERPASS
VAR	VARIES (ABLE)
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VG	VALLEY GUTTER
VP	VENT PIPE
W	WATER
W/B	WEST BOUND
WM	WATER METER
WP	WEAKENED PLANE
WR	WHEELCHAIR RAMP
WV	WATER VALVE
WW	WINGWALL

CONSTRUCTION SYMBOLS

- A — TYPE "A" CURB
- B3 — TYPE "B3" CURB
- FA — TYPE "FA" CURB
- CE — FA CURB EXTENSION
- CS — COMMERCIAL SIDEWALK
- RD — RESIDENTIAL SIDEWALK
- AS STA W — ADJACENT RES SIDEWALK
- HW STA D — CONCRETE HOUSEWALK
- VG STA D — VALLEY GUTTER
- MB STA — MAIL BOX
- W STA D — CONCRETE DRIVEWAY
- W STA D S° — AC DRIVEWAY
- W STA D S° — DIRT DRIVEWAY
- W STA D — MODIFY CONC DRIVEWAY
- "W" — DENOTES WIDTH
- "D" — DENOTES MATCH DISTANCE
- "S°" — DENOTES SKEW ANGLE
- DI TC STA — DRAINAGE INLET
- DO TC STA — DRAINAGE OUTLET
- MH STA OFFSET — INSTALL MANHOLE
- WV STA OFFSET — INSTALL WATER VALVE
- MH — ADJUST MANHOLE
- AV STA OFFSET — ADJUST AIR RELEASE VALVE
- WV — ADJUST WATER VALVE
- DD — 2" AC DEPRESSED DIKE
- ID — 4" AC INTERMEDIATE DIKE
- D — 6" AC DIKE
- R — RADIUS
- "R" — DENOTES RADIUS IN FEET
- SM — SURVEY MONUMENT
- CC — CONCRETE COLLAR
- GM — GRADE MATCH
- SC — SAW CUT
- CNL — CUT NEAT LINE
- OD STA L — OVERSIDE DRAIN
- S — MISC TRAFFIC SIGN
- SS — STOP SIGN
- "L" — DENOTES LENGTH IN FEET
- SECTION CORNER
- MA — PLACE AC , MISC AREA
- WO — DRIVEWAY WING OUT
- DIRECTION OF FLOW
- GRADE TO FLOW
- CHAIN LINK FENCE
- WIRE FENCE
- HINGE POINT
- DAYLIGHT LIMIT
- DITCH FLOW LINE
- L — GP AND LP ROADWAY EXC
- X DWG. NO. / X SHEET NO. — REFERENCE TO STATE STANDARD PLAN DETAIL
- X SHEET NO. / X DETAIL NO. — REFERENCE TO DETAIL ON DWG. OR DETAIL TITLE
- X SHEET NO. / X DWG. NO. — SECTION CUT
- X — FLOW DIRECTION
- X — PRESSURE LINE

EXISTING IMPROVEMENTS

- ROCK/BOULDER
- TREE - SIZE VARIES
- BUILDING
- STUB OUT
- TREE STUMP
- SURVEY MONUMENT
- CONTROL POINT
- EDGE OF PAVEMENT

UTILITY SYMBOLS

PROPOSED

- STAND PIPE
- IRR UG PIPE FLOW
- IRR UG PIPE CAPPED
- IRR VALVE SCREWGATE
- IRR TOP GATE VALVE
- IRR PIPE 12" VERTICAL
- VENT PIPE
- IRR VALVE - BUBBLER
- IRR VALVE, DRIP SYSTEM
- IRR PIPE 4" VERT OUTLET
- WATER WELL
- WATER WELL PUMP
- WATER STORAGE TANK
- FIRE HYDRANT
- IRR 2"-4" PIPE RISER
- MH-STORM DRAIN
- MH-ELECTRICAL
- MH-FO/CABLE
- MH-GAS
- MH-SANITARY SWR
- MH-TELEPHONE
- MH-WATER
- ELEC METER
- ELECTRIC VAULT
- CHRISTY BOX
- TELEPHONE VAULT
- GAS METER
- GAS VALVE
- WATER METER
- WATER VALVE
- HOSE BIB
- MH-GASOLINE FILLER
- GASOLINE VENT PIPE
- CLEAN OUT
- BACKFLOW PREVENTER
- SPRINKLER
- C — UG CABLE
- D — UG STORM DRAIN LINE
- E — UG ELECTRIC LINE
- FO — UG FIBER OPTIC
- G — UG GAS LINE
- S — UG SANITARY SEWER
- T — UG TELEPHONE LINE
- W — UG WATER LINE
- OHE — OVERHEAD ELEC LINE
- OHT — OVERHEAD TELE LINE
- STREET LIGHT POLE
- EXISTING SIGNAL POLE
- STORM DRAIN DROP INLET
- STORM DRAIN GRATE
- STEEL DRAIN PIPE
- DOWN DRAIN
- WARNING SIGN
- WARNING SIGN
- WARNING SIGN
- WARNING SIGN
- WARNING SIGN
- WARNING SIGN
- ELECTRIC PULL BOX
- PEDESTAL-TELEPHONE
- SEWER CLEAN OUT
- PEDESTAL-COMMUNICATION
- PEDESTAL-ELECTRICAL

EXISTING

- UTILITY POLE
- SEWER MANHOLE
- SEWER CLEAN OUT
- WATER VALVE
- WATER PUMP
- FIRE HYDRANT
- STORM DRAIN INLET
- ELECTRICAL PEDESTAL
- COMMUNICATION PEDESTAL
- ELECTRICAL METER
- GUY WIRE
- SIGN
- UTILITY POLE
- PRESSURE REDUCING VALVE
- W — UG WATER LINE
- SS — SS — UG SEWER LINE
- SD — SD — STORM DRAIN CULVERT
- OH — OH — OVERHEAD POWER LINE
- T — UG TELEPHONE LINE

	DATE	RECORD DRAWING		DATE
DESIGNED: KCS	4/4/24	RESIDENT ENGINEER		
DRAWN: KCS	4/4/24			
CHECKED: SA	4/4/24			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE

SUPERVISING ENGINEER — 4/4/2024 DATE

REGISTERED PROFESSIONAL ENGINEER SEBASTIAN T. ARNAL No. C76724 Exp.12/31/24 CIVIL STATE OF CALIFORNIA

PROJECT

CSA 1 - TAMARACK WATER INFRASTRUCTURE REPLACEMENT PROJECT

ROAD NO. - BRIDGE NO.

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

LEGEND

LG-1

DRAWING NO. 11334 SHEET NO. 02 TOTAL 23

Y:\PROJECTS - CDBG AND OTHER NON R&B PROJECTS\CSA 1 - TAMARACK WATER PIPE - SC1DWRG\PS&ES - EXHIBITS - MAPS\CURRENT SET\SHEETS\42360T001.DWG 4/4/2024 11:51 AM - SAN, KEVIN

SURVEY CONTROL

HORIZONTAL DATUM
NORTH AMERICAN DATUM OF 1983 (NAD83).

COORDINATE SYSTEM
COORDINATES SHOWN HEREON ARE GROUND AND BASED ON THE CALIFORNIA COORDINATE SYSTEM OF 1983 (CCS83), ZONE IV.

VERTICAL DATUM
NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

PROJECT BENCHMARK (POINT# 15001)
SET MAG NAIL, POINT# 15001, IN ASPHALT, ALONG THE SOUTH SIDE OF FLINTRIDGE DRIVE, LOCATED APPROXIMATELY 360' EAST OF THE FLINTRIDGE DRIVE AND TOLLHOUSE ROAD INTERSECTION, 130' SOUTHWEST OF THE "AHEAD" STENCIL, 100' EAST OF A "NO PARKING" SIGN, AND 2' NORTH OF THE EDGE OF PAVEMENT.
ELEVATION = 7208.59 FEET (NAVD88)

SURVEY NOTES

1. THE FIELD WORK FOR THIS SURVEY WAS CONDUCTED IN JUNE 2023.
2. NO ATTEMPT WAS MADE TO IDENTIFY THE NATURE OF USE OF UNDERLYING LAND SHOWN HEREON. ANY POTENTIAL PAST USES, INCLUDING THOSE WHICH MAY HAVE RESULTED IN SIGNIFICANT ENVIRONMENTAL OR CULTURAL IMPACTS, WERE NOT ASSESSED BY THIS SURVEY.
3. PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ON THIS SITE, IT IS ADVISED THAT ALL INVOLVED PARTIES REVIEW SECTION 8771 AND SECTION 8725 OF THE CALIFORNIA BUSINESS AND PROFESSIONS CODE, AND SECTION 605 OF THE CALIFORNIA PENAL CODE TO ENSURE THAT MONUMENT CONSERVATION HAS BEEN PROPERLY ADDRESSED.
4. NOTHING ON THIS SURVEY SHALL BE INTERPRETED IN A MANNER CONTRARY TO THESE STATEMENTS.
5. PHYSICAL ITEMS SHOWN ON THIS SURVEY ARE LIMITED TO THOSE SURFACE-VISIBLE STRUCTURES, FACILITIES, AND FEATURES OBSERVED AT THE TIME OF THE FIELD SURVEY. SUBSURFACE OBJECTS, IF ANY, WERE NOT LOCATED BY THIS SURVEY.
6. BOUNDARY LINES (STREET CENTERLINES, ROAD RIGHTS-OF-WAY, PARCEL LINES, EASEMENTS, SECTION LINES, ETC.) ARE FOR CONCEPTUAL PURPOSES ONLY AND PLOTTED FROM RECORD INFORMATION ONLY. BOUNDARY SURVEY INFORMATION SHOWN HEREON IS BASED ON A FIELD SURVEY AND RESEARCH OF PUBLICLY AVAILABLE RECORDS AT THE TIME OF THE SURVEY. NO TITLE REPORT WAS PROVIDED OR OBTAINED.

CONSTRUCTION NOTES

1. SEWER, WATER, GAS AND STORM DRAIN UTILITY CROSSINGS:

   A. THE CONTRACTOR SHALL VERIFY THE DEPTH OF THE EXISTING UTILITY PIPES AS THE FIRST ORDER OF WORK AND SHALL NOTIFY THE ENGINEER OF ANY OBSERVED CONFLICTS WITH THE PROPOSED WATER MAIN PROFILES. IN NO CASE WILL LESS THAN 4" CLEARANCE BE ALLOWED BETWEEN EXISTING UTILITIES, EXCEPT EXISTING WATER LINES AND NEW WATER MAINS.

   B. IF THE NEW WATER MAIN IS ABOVE OR BELOW THE EXISTING UTILITY PIPE AND CLEARANCE IS LESS THAN 12", THE CONTRACTOR SHALL CEMENT SLURRY BACKFILL AND INSTALL PIPE AS SHOWN PER DETAIL 1 ON SHEET CD-4.

2. SEWER LATERAL CROSSINGS:

   A. NEW WATER MAINS SHALL BE INSTALLED ABOVE EXISTING SEWER HOUSE BRANCH LATERALS WITH A MINIMUM CLEARANCE OF 4".

   B. WHEREVER NECESSARY, EXISTING SEWER HOUSE BRANCH LATERALS IN CONFLICT WITH THE NEW WATER MAIN PROFILE SHALL BE REMOVED AND REINSTALLED AS SHOWN PER DETAIL 6 ON CD-2.

3. MINIMUM DEPTH OF COVER OVER THE NEW WATER MAINS SHALL BE A MINIMUM OF 3 FEET. ANYWHERE MINIMUM COVER CANNOT BE ACHIEVED, IMPROVED PIPE BEDDING, INCLUDING CONCRETE SLURRY CRADLES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER.

SPECIAL NOTE

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

SITE SAFETY AND PROTECTION NOTES

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

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

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

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

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

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

EXCESS MATERIAL AND DEBRIS SHALL BE REMOVED FROM THE ROAD RIGHT-OF-WAY AND DISPOSED OF BY THE CONTRACTOR AT THE END OF CONSTRUCTION OPERATIONS, NIGHTLY.

WATER FACILITY NOTES

1. THE WORK CONTAINED HEREIN SHALL COMPLY WITH TITLE 22 SECTION 64572 OF THE CALIFORNIA CODE OF REGULATIONS.
2. USED MATERIAL, REJECTS, MISFITS, OR SECONDS, ETC. ARE NOT ACCEPTABLE FOR USE ON COUNTY OF FRESNO FACILITIES.
3. TYPICAL MINIMUM PIPE COVER FOR ALL HDPE PIPE SHALL BE 3.0 FEET (2.5 FEET ALLOWED WHERE APPROVED BY THE ENGINEER.)
4. WATER MAIN SHALL BE INSTALLED WITH BEDDING, PIPE ZONE BACKFILL, MARKER TAPE, AND TRACER WIRE PER DETAIL 3 ON SHEET CD-1. TRENCH BACKFILL SHALL BE COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS AND THE GEOTECHNICAL REPORT CONTAINED IN THE SPECIFICATIONS.
5. PERMANENT TRENCH RESURFACING SHALL BE IN ACCORDANCE WITH DETAIL 3 ON SHEET CD-4.
6. WATER SERVICES SHALL BE INSTALLED BY TRENCH INSTALLATION OR BORED INTO PLACE AS DETERMINED BY THE CONTRACTOR.
7. WATER METERS SHALL BE BADGER COUNTY FURNISHED.
8. NEW WATER FACILITIES SHALL BE TESTED AND DISINFECTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
9. AFTER THE WATER SYSTEM HAS BEEN TESTED AND ACCEPTED, CONNECTIONS TO THE WATER SERVICES AT THE METER WILL BE COMPLETED.
10. PLACE FIRE HYDRANT MINIMUM 5' CLEAR OF DRIVE APPROACHES AND OBSTRUCTIONS IN AREAS PROTECTED FROM SNOW PLOWING MACHINES AS DIRECTED BY ENGINEER.
11. ALL BURIED WATER MAIN SHALL BE OF THE TYPE AND CLASS SPECIFIED ON THE PLANS. ALL BURIED DUCTILE IRON PIPE SHALL BE WRAPPED IN POLYETHYLENE ENCASEMENT.
12. ALL ABOVE GROUND PIPE 4" OR LARGER IN DIAMETER SHALL BE DUCTILE IRON PIPE WITH FLANGED CONNECTIONS PER THE SPECIFICATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
13. AT LOCATIONS WHERE NEW WATER MAIN CONFLICTS WITH EXISTING WATER MAIN, EXISTING ASBESTOS CONCRETE WATER MAINS SHALL BE REMOVED AND DISPOSED OF AS NOTED ON THE PLANS AND PER ALL APPLICABLE REQUIREMENTS.
14. ANY EXISTING WATER SERVICES THAT CONFLICT WITH THE NEW PIPELINE ALIGNMENT SHALL BE REMOVED AND TEMPORARILY REPLACED.
15. ANY EXISTING SEWER SERVICES CONFLICTING WITH NEW WATER LINE SHALL BE RELAID PER DETAIL 6 ON SHEET CD-2.

UTILITY POLE SPECIAL NOTES

1. POLES SHALL BE SUPPORTED AT ALL TIMES WHERE OUTSIDE EDGE OF TRENCH IS WITHIN 5' OF OUTSIDE EDGE OF POLE UNTIL SUCH TIME THAT TRENCH IS BACKFILLED AND COMPACTED. THE CONTRACTOR SHALL SUPPORT EXISTING POLES IN A MANNER APPROVED IN ADVANCE BY UTILITY COMPANY.
2. THE CONTRACTOR SHALL NOTIFY UTILITY IN ADVANCE OF STARTING CONSTRUCTION ACTIVITIES REQUIRING POLE HOLDING AND OBTAIN A POLE HOLDING PERMIT.

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN CONFORMANCE WITH THESE PLANS, PROJECT SPECIFICATIONS, AND ALL OTHER STANDARDS REFERENCED.
2. THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING FACILITIES PRIOR TO COMMENCING WORK. CALL UNDERGROUND SERVICE ALERT (USA) AT 8-1-1. CONTRACTOR SHALL MAKE ENGINEER AWARE OF ANY DISCREPANCIES.
3. THE CONTRACTOR SHALL REPLACE ANY DISTURBED WARNING MARKERS, SIGNS, STRIPING, CROSS BARS AND STOP BARS AS NECESSARY AND AS DIRECTED BY THE COUNTY.
4. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE HEALTH AND SAFETY LAWS OF THE STATE OF CALIFORNIA AND CAL/OSHA STANDARDS.
5. ALL EXCESS MATERIAL AND/OR DEBRIS SHALL BE REMOVED UPON PROJECT COMPLETION.
6. A PRE-CONSTRUCTION MEETING BETWEEN ALL PARTIES INVOLVED IN THE CONSTRUCTION AND INSPECTION OF IMPROVEMENTS SHALL BE ARRANGED BY THE OWNER.
7. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS INCLUDING BUT NOT LIMITED TO: FENCES, GATES, MAILBOXES, CONCRETE, AND LANDSCAPING. ANY EXISTING IMPROVEMENTS DAMAGED SHALL BE REPLACED "IN KIND" AND RESTORED TO THEIR ORIGINAL CONDITION.

EXISTING UTILITY NOTES

1. THE CONTRACTOR SHALL POTHOLE ALL EXISTING FACILITIES IDENTIFIED PRIOR TO THE START OF CONSTRUCTION AS FIRST ORDER OF WORK. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO CONSTRUCTION TO ALLOW ADVANCE DECISIONS TO BE MADE ON NECESSARY RELOCATIONS OR GRADE CHANGES TO PROPOSED FACILITIES. THE COUNTY RESIDENT ENGINEER SHALL APPROVE FIELD CHANGES THAT INCLUDE ANY RELOCATIONS AND GRADE CHANGES ASSOCIATED WITH EXISTING FACILITY CONFLICTS.
2. POTHOLING SHALL EXPOSE THOSE FACILITIES THAT MAY AFFECT THE LOCATION OR DEPTH OF THE WATER MAIN OR THOSE UTILITIES AS SPECIFICALLY NOTED HEREIN.
3. THE EXISTING WATER DISTRIBUTION SYSTEMS AND SEWER COLLECTION SYSTEMS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS BASED ON INFORMATION AVAILABLE. THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY'S REPRESENTATIVE TO IDENTIFY LOCATION OF EXISTING WATER AND SEWER FACILITIES IN THE FIELD. THE CONTRACTOR IS RESPONSIBLE FOR POTHOLING AND PHYSICALLY VERIFYING THE ALIGNMENT AND DEPTH OF THE PROPOSED WATER LINE WILL NOT BE IN CONFLICT WITH ANY UTILITIES AND A MINIMUM SEPARATION WITH SEWER MAINS ARE MAINTAINED.
4. THE DEPTH OF SEWER MAINS SHOWN ARE APPROXIMATE BASED ON FIELD MEASUREMENTS AND FLOW LINES ARE SHOWN ON THE PLANS FOR REFERENCE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE DEPTH ALIGNMENT (ESPECIALLY ALONG THE CURVED AREAS OF THE ROADS) OF EXISTING SEWER MAINS AT WATER MAIN CROSSINGS.
5. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL SEWER SERVICES AND VERIFY ADEQUATE SEPARATION FROM NEW WATER SERVICES (SEE CONSTRUCTION NOTES ON THIS SHEET).

	DATE	RECORD DRAWING		SCALE
DESIGNED: KCS	4/4/24	RESIDENT ENGINEER	DATE	
DRAWN: KCS	4/4/24			
CHECKED: SA	4/4/24			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SUPERVISING ENGINEER — 4/4/2024 DATE

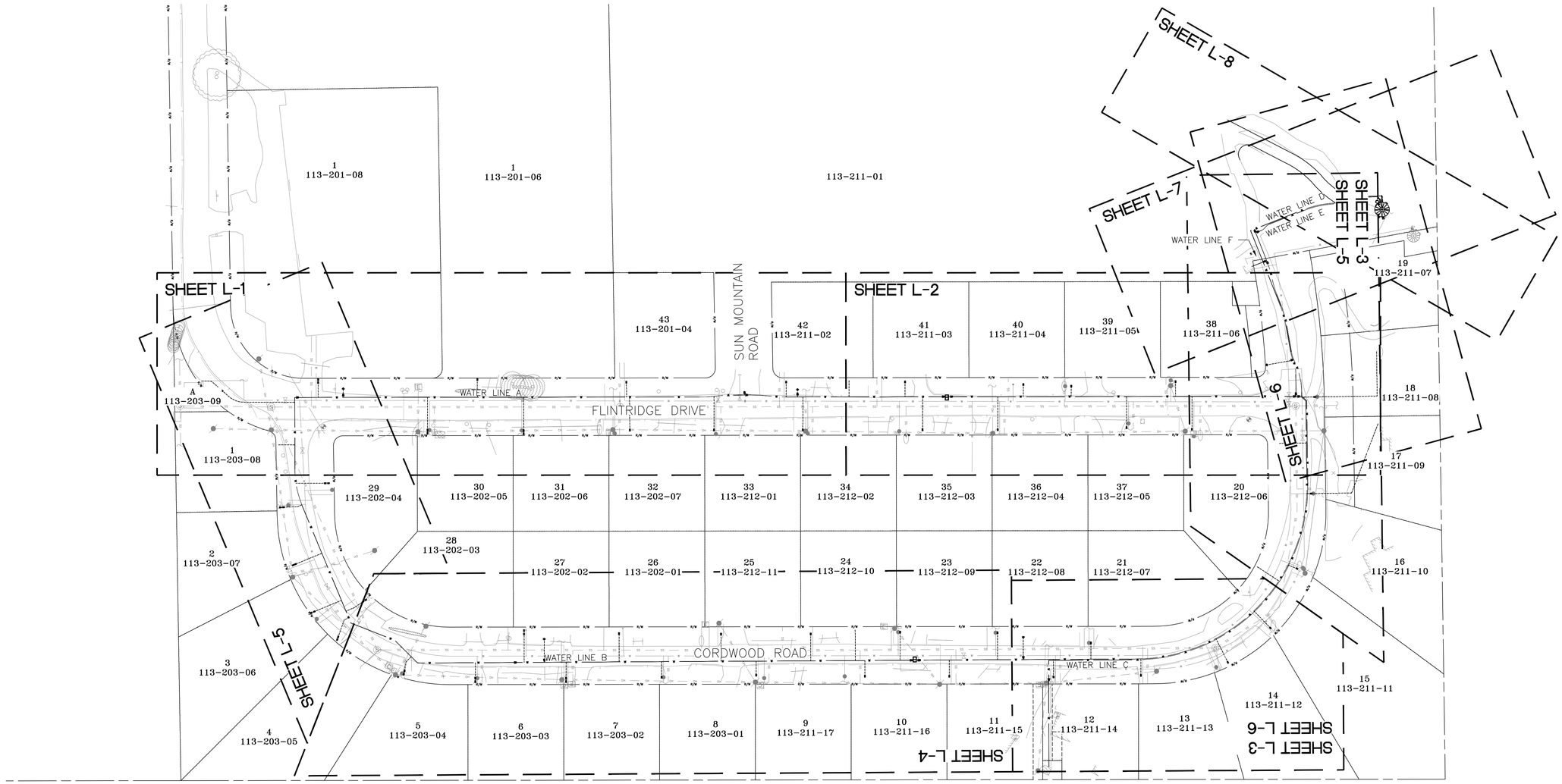
REGISTERED PROFESSIONAL ENGINEER SEBASTIAN T. AMYL No. C76724 Exp.12/31/24 CIVIL STATE OF CALIFORNIA

PROJECT
CSA 1 - TAMARACK WATER INFRASTRUCTURE REPLACEMENT PROJECT

ROAD NO. - BRIDGE NO.

DEPARTMENT OF PUBLIC WORKS AND PLANNING
GENERAL NOTES
GN-1

DRAWING NO. 11334 SHEET NO. 03 TOTAL 23



	DATE	RECORD DRAWING	
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DRAWN: KCS	4/4/24		
CHECKED: SA	4/4/24		

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SCALE

60 30 0 60

GRAPHIC SCALE: 1"=60'

SUPERVISING ENGINEER — 4/4/2024 DATE

REGISTERED PROFESSIONAL ENGINEER SEBASTIAN T. AMYOT No. C76724 Exp.12/31/24 CIVIL STATE OF CALIFORNIA

PROJECT

CSA 1 - TAMARACK WATER INFRASTRUCTURE REPLACEMENT PROJECT

ROAD NO. - BRIDGE NO.

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

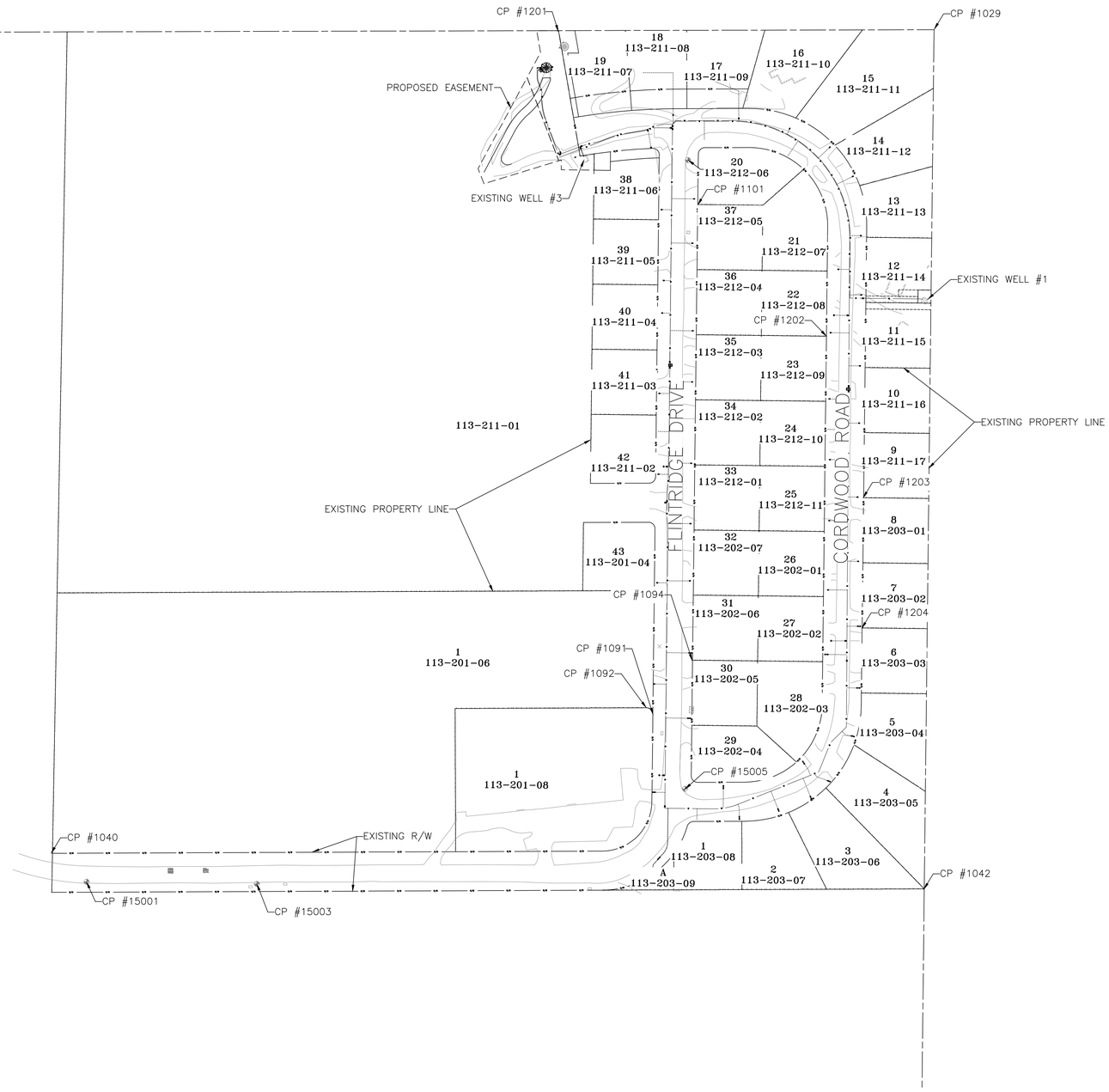
INDEX SHEET

IS-1

DRAWING NO. 11334 SHEET NO. 04 TOTAL 23

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

Y:\PROJECTS - CDBG AND OTHER NON R&B PROJECTS\CSA 1 - TAMARACK WATER PIPE - SC1DWRG\PS&ES - EXHIBITS - MAPS\CURRENT SET\SHEETS\432360KEYMAP001.DWG 4/4/2024 11:51 AM - SAN, KEVIN



SURVEY CONTROL POINT				
POINT NUMBER	DESCRIPTION	ELEVATION	NORTHING	EASTING
15001	SET MAG	7208.59	2318578.13	6502287.48
15003	SET RBR	7219.33	2318574.82	6502549.16
15005	SET RBR	7233.27	2318720.82	6503206.88
15008	SET RBR	7358.87	2319686.68	6503211.45
1040	FD ¾" IP	7207.85	2318621.69	6502233.86
1042	FD 1" IP UP 0.4' LEANING	7234.27	2318566.15	6503574.34
1091	FD ¾" IP	7239.95	2318835.32	6503157.61
1092	FD ¾" UP	7241.02	2318845.52	6503147.61
1094	FD ¾" IP W/GAS CAP; UP 0.5'	7249.76	2318918.58	6503218.52
1204	FD ¾" IP FLUSH;LS 2931	7263.72	2318968.02	6503478.86
1203	FD ¾" IP UP 1.0';LS 2931	7292.81	2319167.22	6503480.07
1202	FD ¾" IP UP 0.5';LS 2931	7331.17	2319416.09	6503424.40
1101	FD ½" ROD	7348.80	2319618.18	6503227.43
1029	FD 1" IP UP 1.0'	7390.75	2319886.86	6503589.60
1201	FD ¾" IP	7441.82	2319883.60	6503012.90

Know what's below. Call before you dig.

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CHECKED: SA	4/4/24		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE

100 50 0 100

GRAPHIC SCALE: 1"=100'

SUPERVISING ENGINEER

4/4/2024
DATE

REGISTERED PROFESSIONAL ENGINEER SEBASTIAN T. ARNAL No. C76724 Exp.12/31/24 CIVIL STATE OF CALIFORNIA

PROJECT

CSA 1 - TAMARACK WATER INFRASTRUCTURE REPLACEMENT PROJECT

ROAD NO. - BRIDGE NO.

DEPARTMENT OF PUBLIC WORKS AND PLANNING

HORIZONTAL CONTROL

HC-1

DRAWING NO. 11334 SHEET NO. 05 TOTAL 23

Y:\PROJECTS – CDBG AND OTHER NON R&B PROJECTS\CSA 1 – TAMARACK WATER PIPE – SC1DWRG\PS&ES – EXHIBITS – MAPS\CURRENT SET\SHEETS\43260HC001.DWG 4/4/2024 11:51 AM – SAN, KEVIN

WATER LINE A									
NUMBER	STATION	LENGTH	RADIUS	DELTA (Δ)	LINE/CHORD DIRECTION	NORTHING	EASTING	PIPE SIZE	PIPE MATERIAL
L1	10+00.00	421.92'			N0° 39' 08.46"E	2318691.08	6503175.92	6 INCH	HDPE
C1	14+21.92	17.90'	160.00'	6°24'35"	N2° 33' 05.31"W	2319112.98	6503180.72	6 INCH	HDPE
C2	14+39.82	17.90'	160.00'	6°24'34"	N2° 33' 05.40"W	2319130.85	6503179.92	6 INCH	HDPE
L2	14+57.72	18.77'			N0° 38' 52.71"E	2319148.72	6503179.13	6 INCH	HDPE
C3	14+76.49	17.91'	160.00'	6°24'43"	N3° 51' 14.16"E	2319167.49	6503179.34	6 INCH	HDPE
C4	14+94.40	17.89'	160.00'	6°24'24"	N3° 51' 23.68"E	2319185.35	6503180.54	6 INCH	HDPE
L3	15+12.29	538.26'			N0° 39' 07.52"E	2319203.19	6503181.75	6 INCH	HDPE
L4	20+50.55	7.04'			N44° 58' 45.29"E	2319741.41	6503187.87	6 INCH	HDPE

WATER LINE B									
NUMBER	STATION	LENGTH	RADIUS	DELTA (Δ)	LINE/CHORD DIRECTION	NORTHING	EASTING	PIPE SIZE	PIPE MATERIAL
L5	10+00.00	87.07'			N89° 58' 45.29"E	2319746.39	6503192.85	6 INCH	HDPE
C5	10+87.07	284.04'	180.00'	90°24'44"	S44° 48' 52.87"E	2319746.42	6503279.92	6 INCH	HDPE
L6	13+71.11	749.49'			S0° 23' 28.98"W	2319565.19	6503459.98	6 INCH	HDPE
L7	21+20.59	33.50'			S45° 46' 40.95"W	2318815.72	6503454.86	6 INCH	HDPE
L8	21+54.09	49.42'			S22° 10' 26.04"W	2318792.36	6503430.85	6 INCH	HDPE
L9	22+03.51	132.69'			S68° 13' 00.19"W	2318746.60	6503412.20	6 INCH	HDPE
C6	23+36.20	39.17'	100.00'	22°26'24"	S79° 26' 12.05"W	2318697.36	6503288.98	6 INCH	HDPE
L10	23+75.37	74.82'			N89° 20' 36.08"W	2318690.22	6503250.73	6 INCH	HDPE

WATER LINE C									
NUMBER	STATION	LENGTH	RADIUS	DELTA (Δ)	LINE/CHORD DIRECTION	NORTHING	EASTING	PIPE SIZE	PIPE MATERIAL
L11	10+00.00	36.95'			N69° 08' 53.06"E	2319694.72	6503012.71	3 INCH	HDPE
C7	10+36.95	17.75'	100.00'	10°10'22"	N74° 14' 03.85"E	2319707.87	6503047.23	2 INCH	HDPE
C8	10+54.70	17.75'	100.00'	10°10'22"	N74° 14' 03.85"E	2319712.69	6503064.30	2 INCH	HDPE
L12	10+72.46	12.52'			N69° 08' 53.06"E	2319717.50	6503081.36	2 INCH	HDPE
C9	10+84.97	20.18'	100.86'	11°27'52"	N74° 52' 49.18"E	2319721.96	6503093.06	2 INCH	HDPE
L13	11+05.15	29.14'			N80° 36' 45.30"E	2319727.21	6503112.51	2 INCH	HDPE
C10	11+34.29	10.61'	39.14'	15°31'56"	N72° 50' 47.06"E	2319731.97	6503141.26	2 INCH	HDPE
C11	11+44.90	33.47'	75.00'	25°34'19"	N77° 51' 58.17"E	2319735.09	6503151.37	2 INCH	HDPE
L14	11+78.38	3.44'			S89° 20' 52.47"E	2319742.06	6503183.82	2 INCH	HDPE
L15	11+81.82	7.40'			N44° 58' 45.29"E	2319742.02	6503187.26	2 INCH	HDPE
L16	11+89.21	87.43'			N89° 58' 45.29"E	2319747.26	6503192.49	2 INCH	HDPE
C12	12+76.64	285.41'	180.87'	90°24'44"	S44° 48' 52.87"E	2319747.29	6503279.92	2 INCH	HDPE
L17	15+62.05	90.56'			S0° 23' 28.98"W	2319565.19	6503460.84	2 INCH	HDPE
L18	16+52.61	111.19'			S89° 20' 36.08"E	2319474.63	6503460.23	2 INCH	HDPE

WATER LINE D									
NUMBER	STATION	LENGTH	RADIUS	DELTA (Δ)	LINE/CHORD DIRECTION	NORTHING	EASTING	PIPE SIZE	PIPE MATERIAL
L19	10+00.00	22.82'			N89° 20' 48.00"W	2319736.03	6503187.81	6 INCH	HDPE
C13	10+22.82	15.65'	40.00'	22°25'08"	S79° 26' 39.37"W	2319736.29	6503164.99	6 INCH	HDPE
C14	10+38.47	8.64'	40.00'	12°22'40"	S74° 25' 25.34"W	2319733.44	6503149.70	6 INCH	HDPE
L20	10+47.11	29.14'			S80° 36' 45.30"W	2319731.12	6503141.40	6 INCH	HDPE
C15	10+76.25	20.01'	100.00'	11°27'52"	S74° 52' 49.18"W	2319726.37	6503112.65	6 INCH	HDPE
L21	10+96.26	84.79'			S69° 08' 53.06"W	2319721.16	6503093.36	6 INCH	HDPE
L22	11+81.05	59.52'			N20° 51' 06.94"W	2319690.98	6503014.13	6 INCH	HDPE
C16	12+40.57	37.13'	100.00'	21°16'25"	N10° 12' 54.21"W	2319746.60	6502992.94	6 INCH	HDPE
L23	12+77.70	6.42'			N0° 25' 18.52"E	2319782.93	6502986.40	6 INCH	HDPE
C17	12+84.11	5.36'	15.00'	20°27'53"	N9° 48' 37.73"W	2319789.35	6502986.44	6 INCH	HDPE
L24	12+89.47	14.58'			N20° 02' 33.99"W	2319794.60	6502985.54	6 INCH	HDPE
C18	13+04.05	5.36'	15.00'	20°27'19"	N9° 48' 54.44"W	2319808.29	6502980.54	6 INCH	HDPE
L25	13+09.40	14.30'			N0° 24' 45.12"E	2319813.54	6502979.63	6 INCH	HDPE

WATER LINE E									
NUMBER	STATION	LENGTH	RADIUS	DELTA (Δ)	LINE/CHORD DIRECTION	NORTHING	EASTING	PIPE SIZE	PIPE MATERIAL
L26	10+00.00	6.18'			N20° 51' 06.94"W	2319696.14	6503016.44	3 INCH	HDPE
C19	10+06.18	5.63'	10.00'	32°16'10"	N36° 59' 01.00"W	2319701.91	6503014.24	3 INCH	HDPE
C20	10+11.81	5.63'	10.00'	32°15'59"	N36° 59' 06.47"W	2319706.35	6503010.90	3 INCH	HDPE
L27	10+17.44	38.66'			N20° 51' 06.94"W	2319710.79	6503007.56	3 INCH	HDPE
C21	10+56.11	36.79'	99.09'	21°16'25"	N10° 12' 54.21"W	2319746.92	6502993.80	3 INCH	HDPE
L28	10+92.90	6.42'			N0° 25' 18.52"E	2319782.92	6502987.31	3 INCH	HDPE
C22	10+99.32	5.68'	15.91'	20°27'53"	N9° 48' 37.73"W	2319789.34	6502987.36	3 INCH	HDPE
L29	11+05.00	14.58'			N20° 02' 33.99"W	2319794.91	6502986.39	3 INCH	HDPE
C23	11+19.57	5.03'	14.09'	20°27'19"	N9° 48' 54.44"W	2319808.61	6502981.40	3 INCH	HDPE
L30	11+24.60	10.08'			N0° 24' 45.97"E	2319813.54	6502980.54	3 INCH	HDPE
L31	11+34.68	1.58'			N45° 21' 45.26"E	2319823.61	6502980.62	3 INCH	HDPE

WATER LINE F							
NUMBER	STATION	LENGTH	LINE/CHORD DIRECTION	NORTHING	EASTING	PIPE SIZE	PIPE MATERIAL
L32	10+00.00	16.64'	N20° 51' 06.94"W	2319691.73	6503051.63	2 INCH	HDPE

ACCESS ROAD WATER TANK							
NUMBER	STATION	LENGTH	RADIUS	DELTA (Δ)	LINE/CHORD DIRECTION	NORTHING	EASTING
L33	9+82.16	2.38'			N19° 57' 54.05"W	2319663.40	6502908.29
C24	9+84.54	8.38'	10.00'	48°01'08"	N4° 02' 40.01"E	2319665.64	6502907.48
L34	10+00.00	60.20'			N28° 03' 14.06"E	2319680.00	6502911.38
C25	10+60.20	35.94'	100.00'	20°35'40"	N38° 21' 04.15"E	2319733.13	6502939.69
L35	10+96.15	1.97'			N48° 38' 54.24"E	2319761.17	6502961.88
C26	10+98.12	46.02'	100.00'	26°22'11"	N35° 27' 48.83"E	2319762.47	6502963.36
L36	11+44.14	11.58'			N22° 16' 43.42"E	2319799.63	6502989.82
L37	11+55.73	38.60'			N0° 57' 31.81"W	2319810.35	6502994.21

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

	DATE	RECORD DRAWING		SCALE
DESIGNED: KCS	4/4/24	RESIDENT ENGINEER	DATE	100 50 0 100
DRAWN: KCS	4/4/24			GRAPHIC SCALE: 1"=100'
CHECKED: SA	4/4/24			

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SUPERVISING ENGINEER — 4/4/2024 DATE

REGISTERED PROFESSIONAL ENGINEER SEBASTIAN T. AMYAL No. C76724 Exp.12/31/24 CIVIL STATE OF CALIFORNIA

PROJECT
CSA 1 - TAMARACK WATER INFRASTRUCTURE REPLACEMENT PROJECT

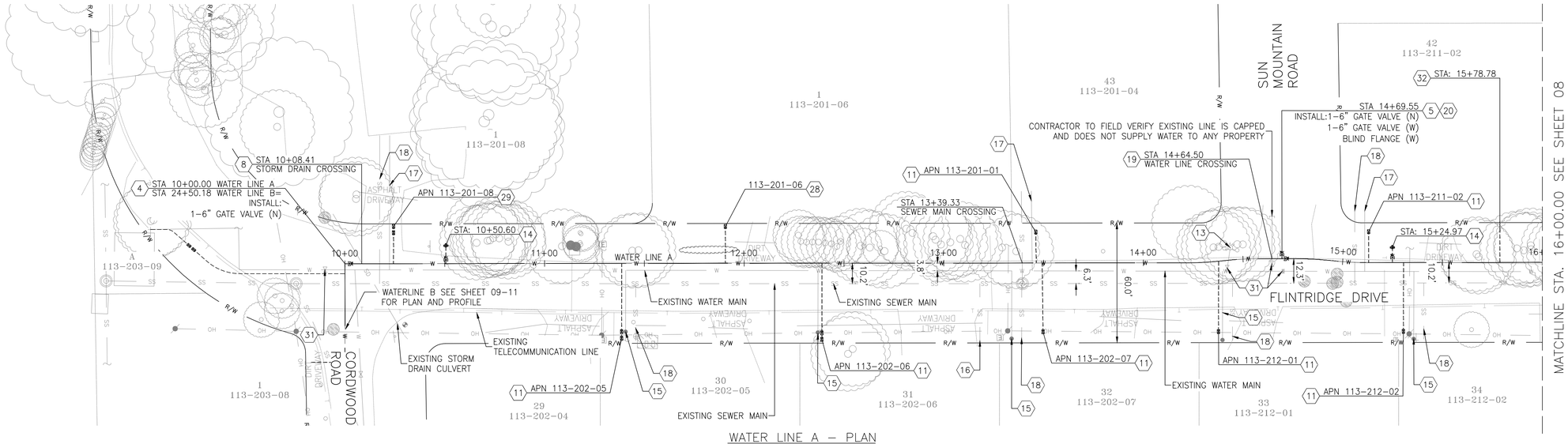
ROAD NO. - BRIDGE NO.

COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING
HORIZONTAL CONTROL
HC-2

DRAWING NO. 11334 SHEET NO. 06 TOTAL 23

Y:\PROJECTS – CDBG AND OTHER NON R&B PROJECTS\CSA 1 – TAMARACK WATER PIPE – SC1DWRG\PS&ES – EXHIBITS – MAPS\CURRENT SET\SHEETS\432360HC002.DWG 4/4/2024 11:51 AM – SAN, KEVIN



WATER LINE A – PLAN

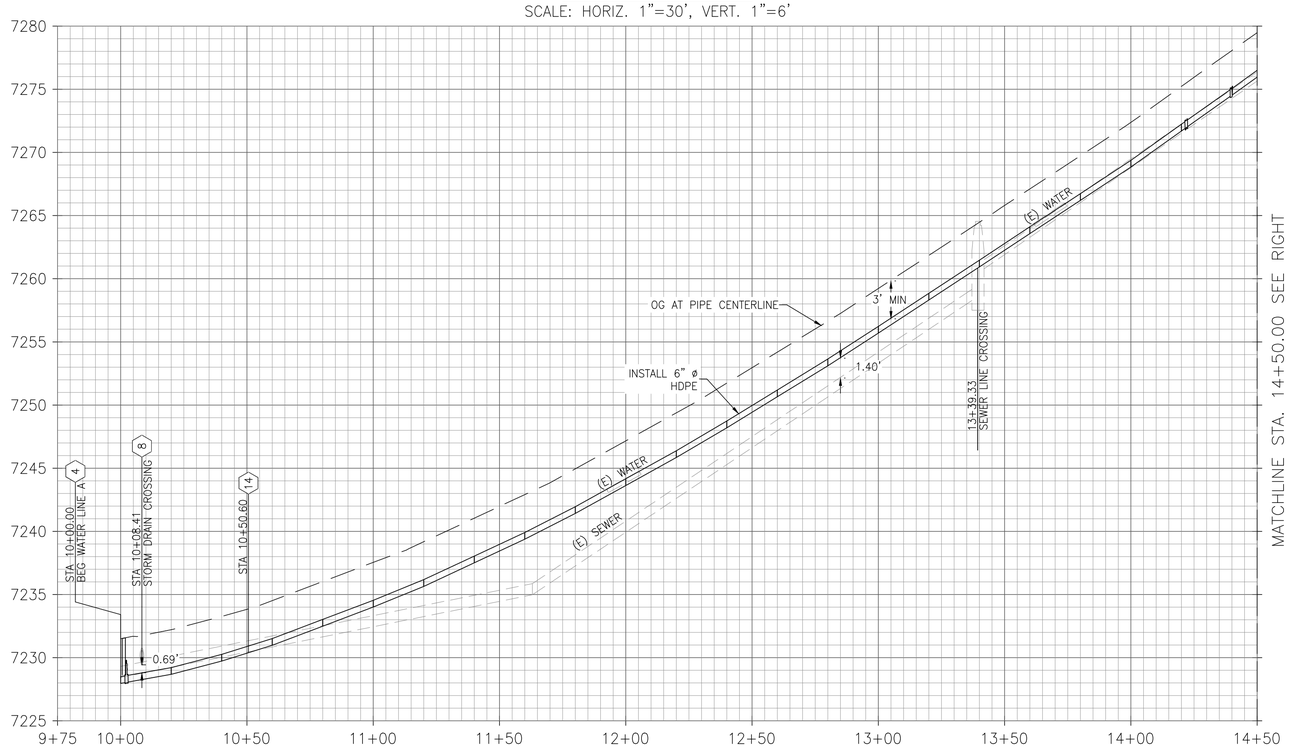
CONSTRUCTION NOTES

1. CONTRACTOR SHALL POTHOLE AND VERIFY SIZE, LOCATION AND DEPTH OF EXISTING UTILITIES AS THE FIRST ORDER OF WORK.
2. EXISTING WATER MAIN SHALL BE ABANDONED IN PLACE AT COMPLETION OF CONSTRUCTION.
3. PIPELINE ALIGNMENT HORIZONTAL DESIGN POINTS AND COORDINATES ARE LISTED ON SHEET 06.
4. HORIZONTAL AND VERTICAL PIPELINE SEPARATION SHALL BE MAINTAINED AS SHOWN ON THE PLANS.
5. PROTECT TREES WITHIN THE PROJECT UNLESS OTHERWISE NOTED ON PLANS.
6. SEPARATION SHOWN ON THE PROFILE OF NEW WATER PIPELINE AND EXISTING WATER PIPELINE AND/OR SEWER PIPELINE HAVE BEEN ASSUMED BASED ON AVAILABLE AND LIMITED INFORMATION ONLY. CONTRACTOR SHALL POTHOLE AND VERIFY LOCATIONS AS INDICATED IN CONSTRUCTION NOTE #1.

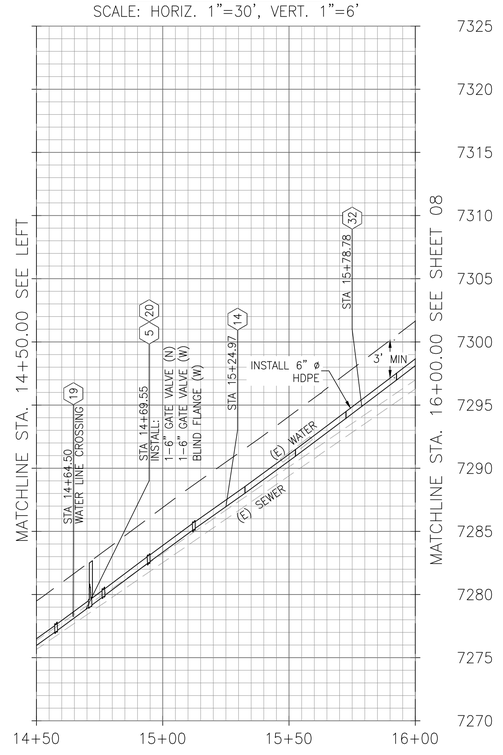
REFERENCE:

(X) REFERENCE NOTE IN SHEET LG-1

WATER LINE A – PROFILE
SCALE: HORIZ. 1"=30', VERT. 1"=6'



WATER LINE A – PROFILE
SCALE: HORIZ. 1"=30', VERT. 1"=6'



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SCALE

30 15 0 30
GRAPHIC SCALE: 1"=30'

SUPERVISING ENGINEER — 4/4/2024 DATE

REGISTERED PROFESSIONAL ENGINEER
SEBASTIAN T. ARPAIA
No. C76724
Exp.12/31/24
CIVIL
STATE OF CALIFORNIA

PROJECT
CSA 1 - TAMARACK WATER INFRASTRUCTURE REPLACEMENT PROJECT

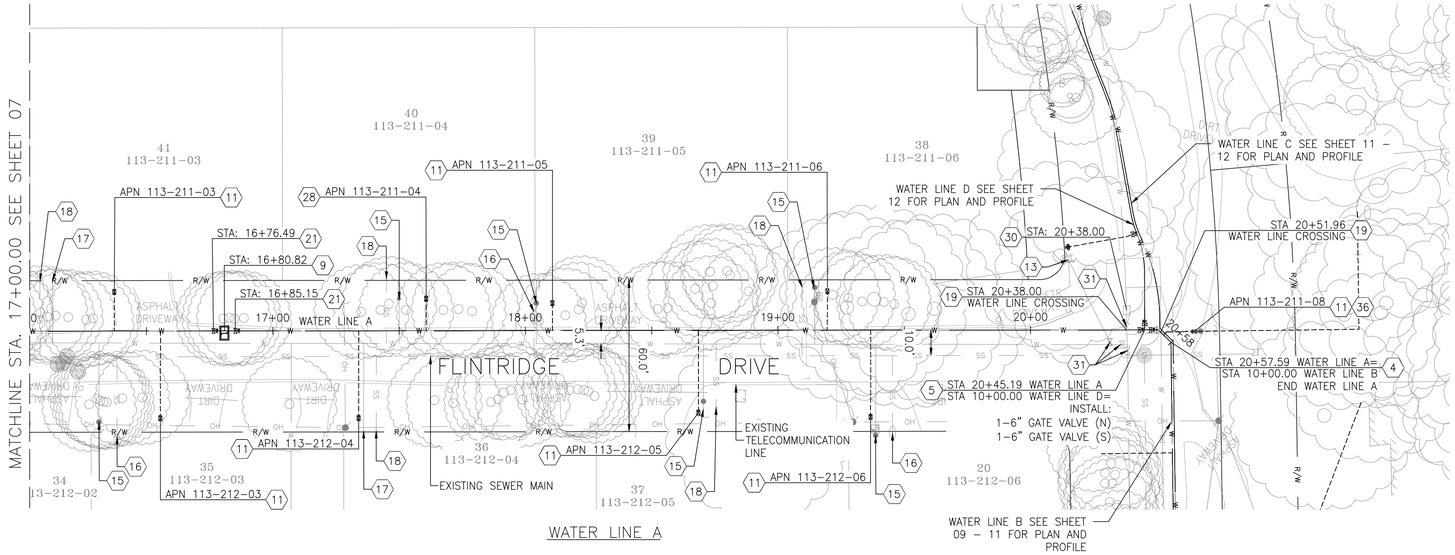
ROAD NO. - BRIDGE NO.

COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING
WATER LINE A
L-1

DRAWING NO. 11334 SHEET NO. 07 TOTAL 23

Y:\PROJECTS – CDBG AND OTHER NON R&B PROJECTS\CSA 1 – TAMARACK WATER PIPE – SC1DWRG\PS&ES – EXHIBITS – MAPS\CURRENT SET\SHEETS\432360L001.DWG 4/4/2024 11:52 AM – SAN, KEVIN



WATER LINE A

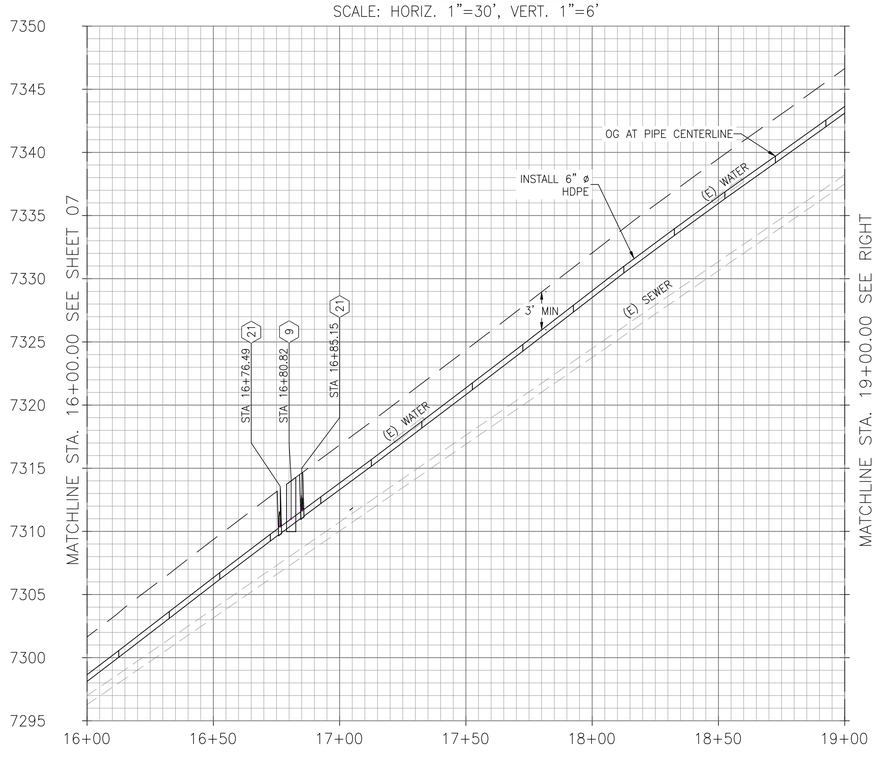
CONSTRUCTION NOTES

1. CONTRACTOR SHALL POTHOLE AND VERIFY SIZE, LOCATION AND DEPTH OF EXISTING UTILITIES AS THE FIRST ORDER OF WORK.
2. EXISTING WATER MAIN SHALL BE ABANDONED IN PLACE AT COMPLETION OF CONSTRUCTION.
3. PIPELINE ALIGNMENT HORIZONTAL DESIGN POINTS AND COORDINATES ARE LISTED ON SHEET 06.
4. HORIZONTAL AND VERTICAL PIPELINE SEPARATION SHALL BE MAINTAINED AS SHOWN ON THE PLANS.
5. PROTECT TREES WITHIN THE PROJECT UNLESS OTHERWISE NOTED ON PLANS.
6. SEPARATION SHOWN ON THE PROFILE OF NEW WATER PIPELINE AND EXISTING WATER PIPELINE AND/OR SEWER PIPELINE HAVE BEEN ASSUMED BASED ON AVAILABLE AND LIMITED INFORMATION ONLY. CONTRACTOR SHALL POTHOLE AND VERIFY LOCATIONS AS INDICATED IN CONSTRUCTION NOTE #1.

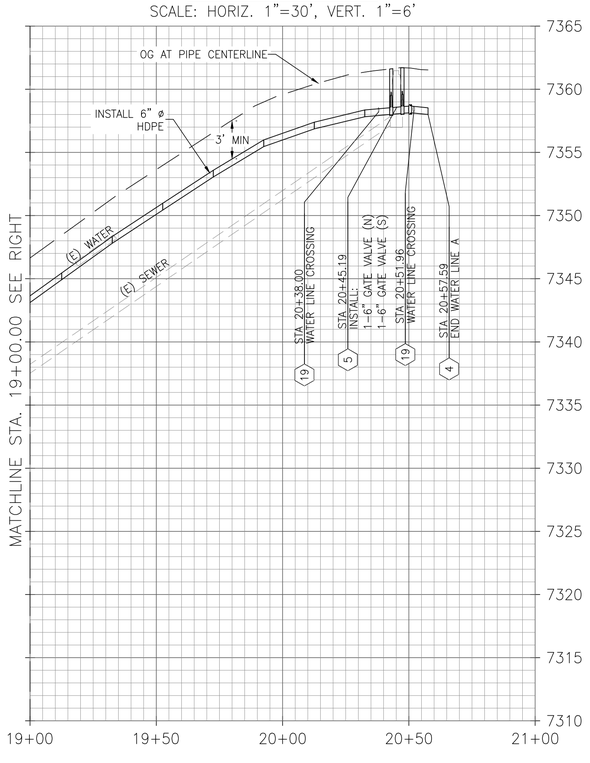
REFERENCE:

(X) REFERENCE NOTE IN SHEET LG-1

WATER LINE A – PROFILE
SCALE: HORIZ. 1"=30', VERT. 1"=6'



WATER LINE A – PROFILE
SCALE: HORIZ. 1"=30', VERT. 1"=6'



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

	DATE	RECORD DRAWING	
DESIGNED: KCS	4/4/24	RESIDENT ENGINEER	DATE
DRAWN: KCS	4/4/24		
CHECKED: SA	4/4/24		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE

30 15 0 30
GRAPHIC SCALE: 1"=30'

SUPERVISING ENGINEER

4/4/2024
DATE

REGISTERED PROFESSIONAL ENGINEER SEBASTIAN T. AMYAL No. C76724 Exp.12/31/24 CIVIL STATE OF CALIFORNIA

PROJECT

CSA 1 - TAMARACK WATER INFRASTRUCTURE REPLACEMENT PROJECT

ROAD NO. - BRIDGE NO.

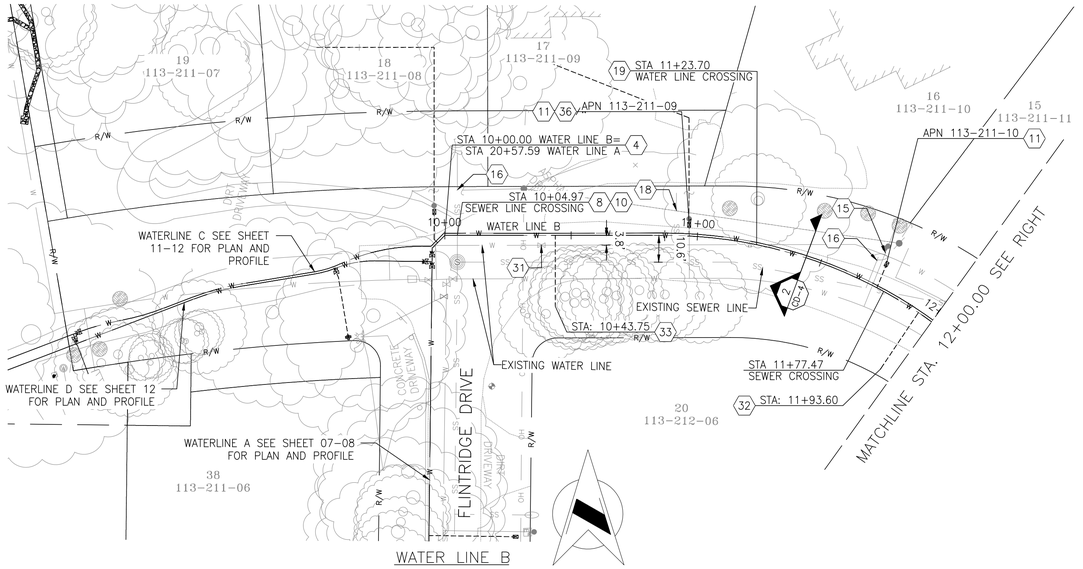
THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

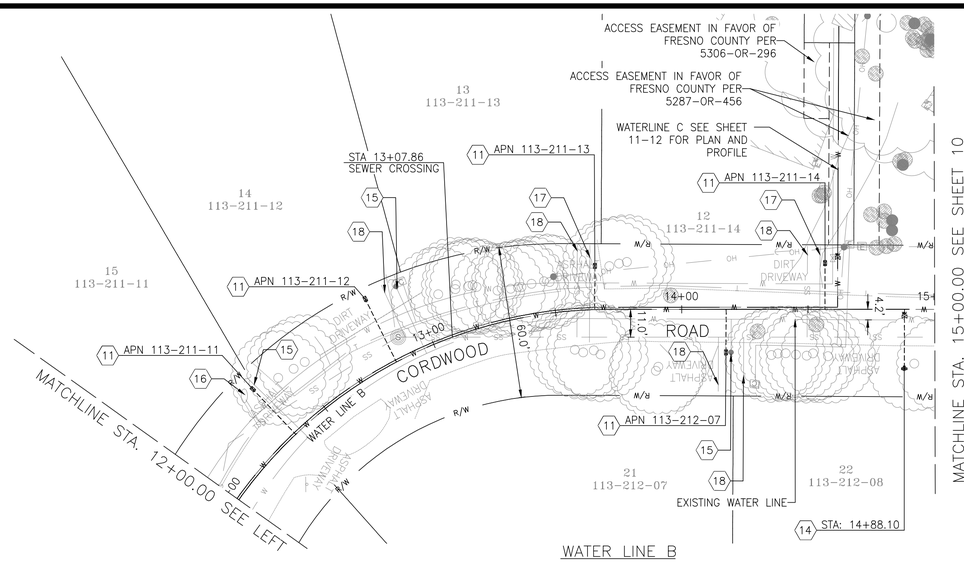
WATER LINE A
L-2

DRAWING NO. 11334 SHEET NO. 08 TOTAL 23

Y:\PROJECTS – CDBG AND OTHER NON R&B PROJECTS\CSA 1 – TAMARACK WATER PIPE – SC1DWRG\PS&ES – EXHIBITS – MAPS\CURRENT SET\SHEETS\432360L001.DWG 4/4/2024 11:52 AM – SAN, KEVIN



WATER LINE B



WATER LINE B

CONSTRUCTION NOTES

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REFERENCE:

(X) REFERENCE NOTE IN SHEET LG-1

WATER LINE B – PROFILE
SCALE: HORIZ. 1"=30', VERT. 1"=6'

WATER LINE B – PROFILE
SCALE: HORIZ. 1"=30', VERT. 1"=6'

Know what's below. Call before you dig.

	DATE	RECORD DRAWING	
DESIGNED: KCS	4/4/24	RESIDENT ENGINEER	DATE
DRAWN: KCS	4/4/24		
CHECKED: SA	4/4/24		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE

30 15 0 30
GRAPHIC SCALE: 1"=30'

SUPERVISING ENGINEER

4/4/2024
DATE

REGISTERED PROFESSIONAL ENGINEER
SEBASTIAN T. AMAYA
No. C76724
Exp.12/31/24
CIVIL
STATE OF CALIFORNIA

PROJECT

CSA 1 - TAMARACK WATER INFRASTRUCTURE REPLACEMENT PROJECT

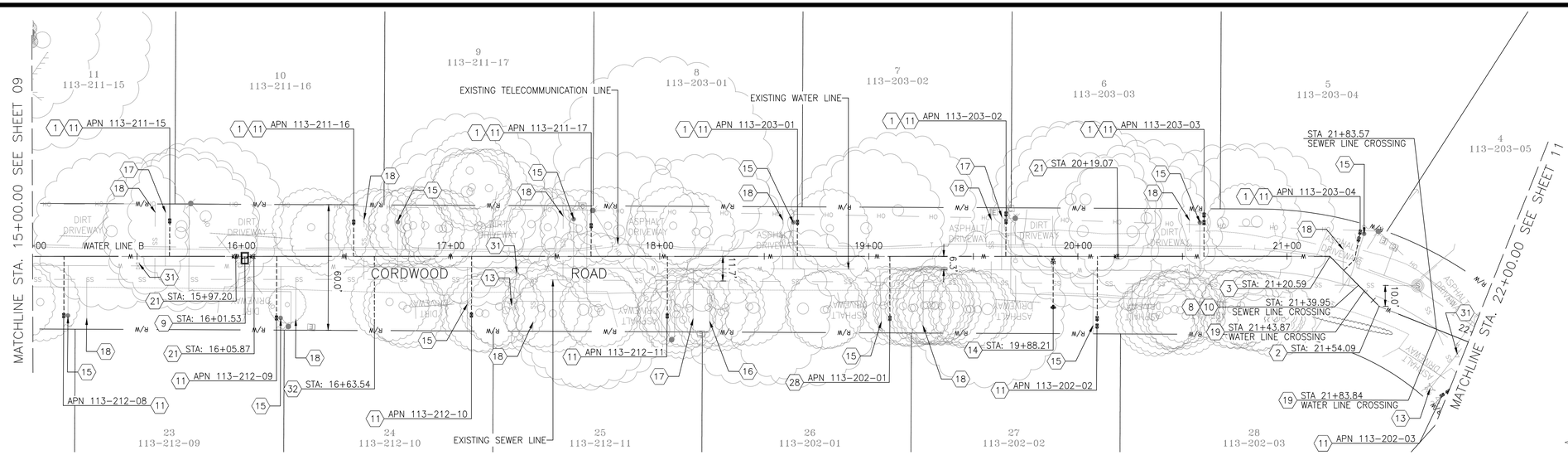
ROAD NO. - BRIDGE NO.

DEPARTMENT OF PUBLIC WORKS AND PLANNING

WATER LINE B
L-3

DRAWING NO. 11334 SHEET NO. 09 TOTAL 23

Y:\PROJECTS – CDBG AND OTHER NON R&B PROJECTS\CSA 1 – TAMARACK WATER PIPE – SC1DWRG\PS&ES – EXHIBITS – MAPS\CURRENT SET\SHEETS\432360L002.DWG 4/4/2024 11:52 AM – SAN, KEVIN



WATER LINE B

CONSTRUCTION NOTES

1. CONTRACTOR SHALL POTHOLE AND VERIFY SIZE, LOCATION AND DEPTH OF EXISTING UTILITIES AS THE FIRST ORDER OF WORK.
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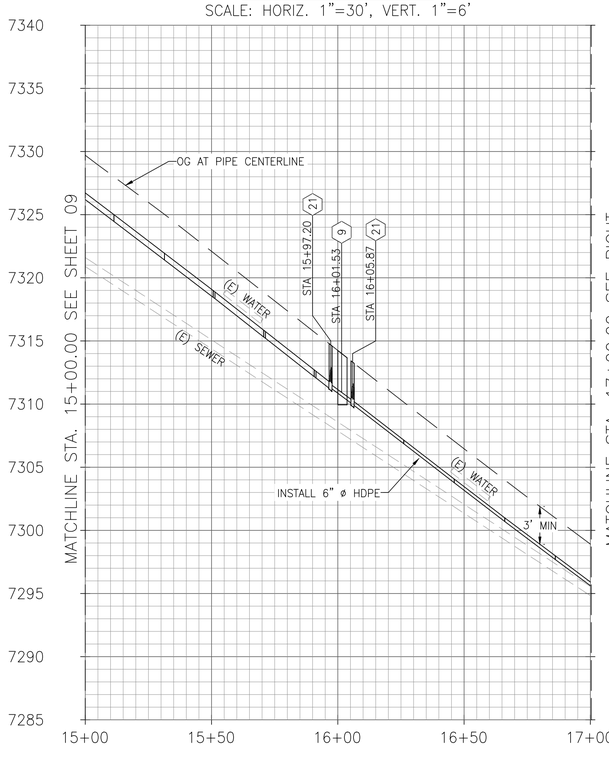
REFERENCE:

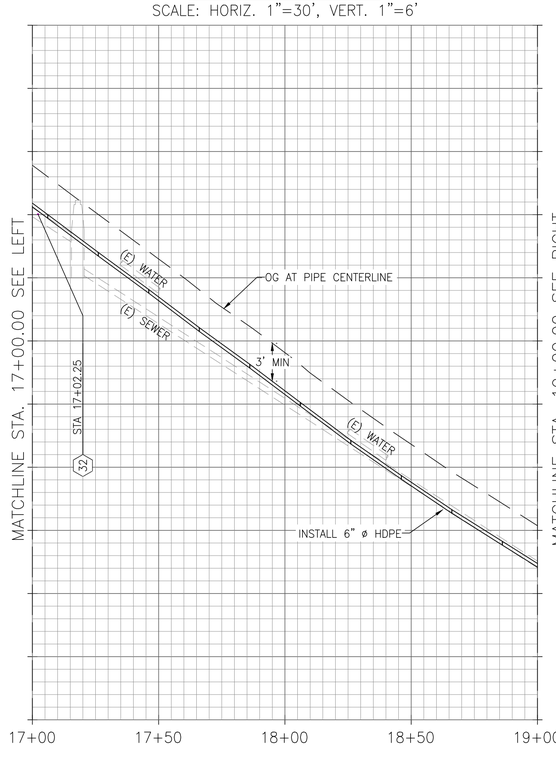
(X) REFERENCE NOTE IN SHEET LG-1

Know what's below. Call before you dig.

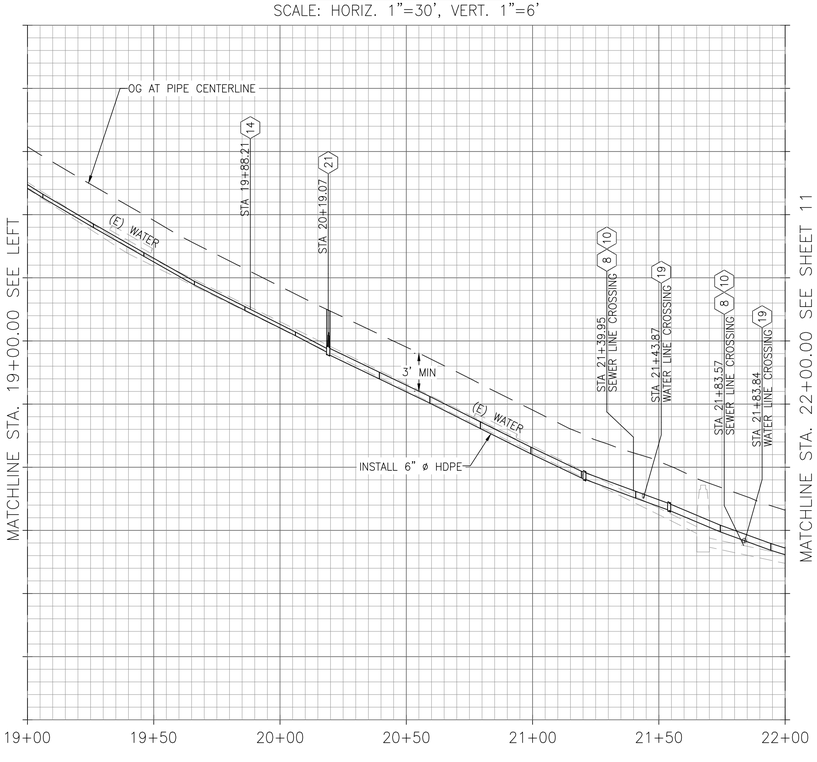
WATER LINE B – PROFILE
SCALE: HORIZ. 1"=30', VERT. 1"=6'



WATER LINE B – PROFILE
SCALE: HORIZ. 1"=30', VERT. 1"=6'



WATER LINE B – PROFILE
SCALE: HORIZ. 1"=30', VERT. 1"=6'



	DATE	RECORD DRAWING	
DESIGNED: KCS	4/4/24	RESIDENT ENGINEER	DATE
DRAWN: KCS	4/4/24		
CHECKED: SA	4/4/24		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE

30 15 0 30
GRAPHIC SCALE: 1"=30'

SUPERVISING ENGINEER — 4/4/2024 DATE

REGISTERED PROFESSIONAL ENGINEER SEBASTIAN T. AMAYA No. C76724 Exp.12/31/24 CIVIL STATE OF CALIFORNIA

PROJECT

CSA 1 - TAMARACK WATER INFRASTRUCTURE REPLACEMENT PROJECT

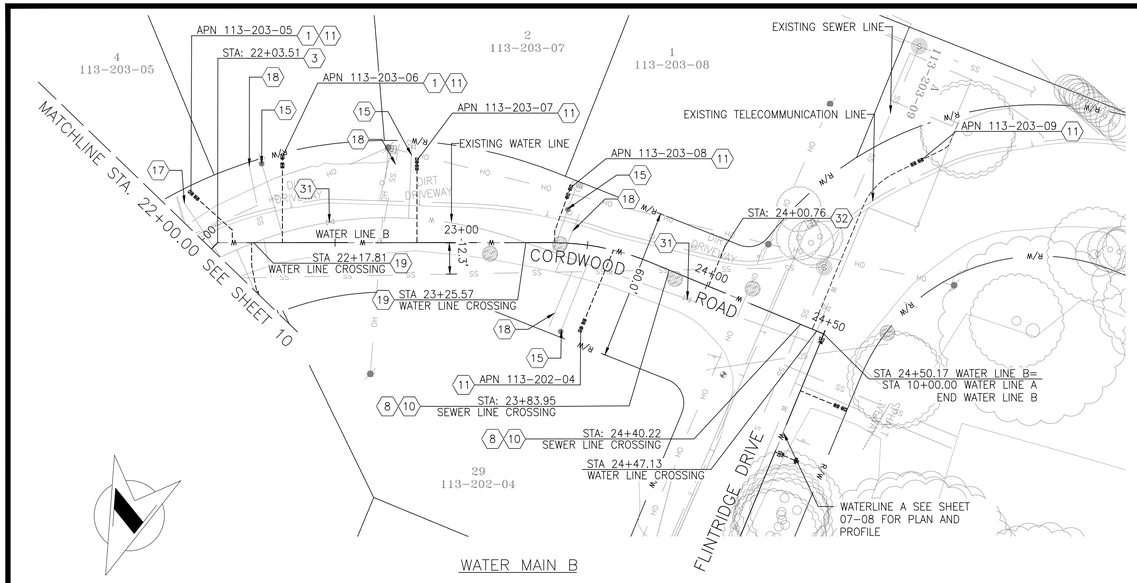
ROAD NO. - BRIDGE NO.

DEPARTMENT OF PUBLIC WORKS AND PLANNING

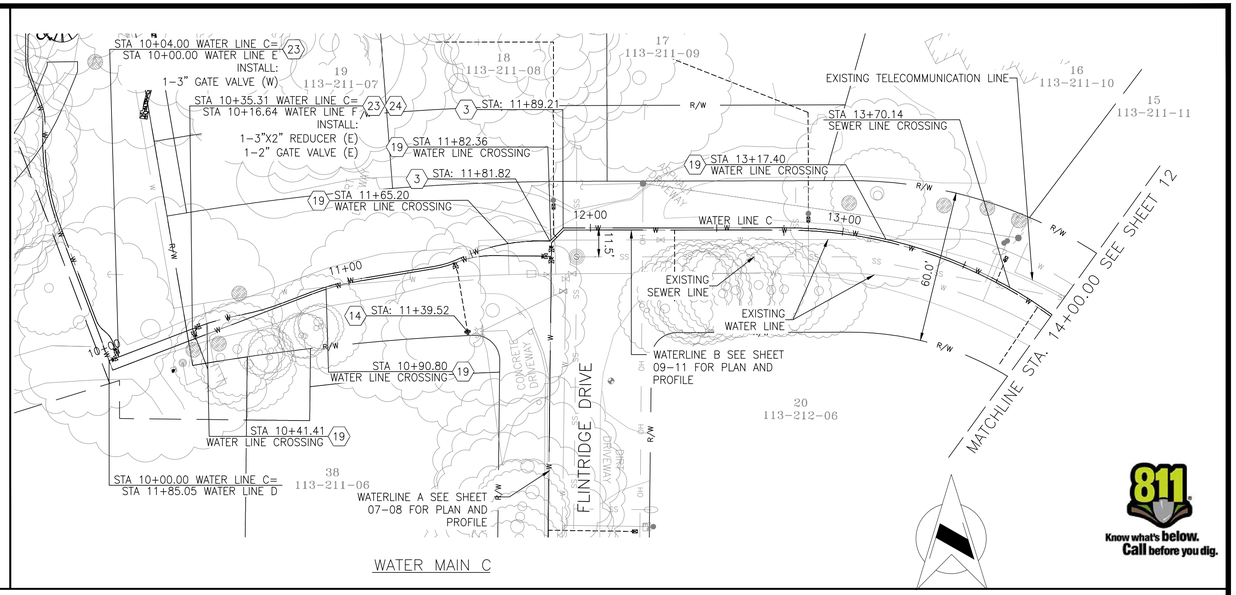
WATER LINE B
L-4

DRAWING NO. 11334 SHEET NO. 10 TOTAL 23

Y:\PROJECTS – CDBG AND OTHER NON R&B PROJECTS\CSA 1 – TAMARACK WATER PIPE – SC1DWRG\PS&ES – EXHIBITS – MAPS\CURRENT SET\SHEETS\432360L002.DWG 4/4/2024 11:52 AM – SAN, KEVIN



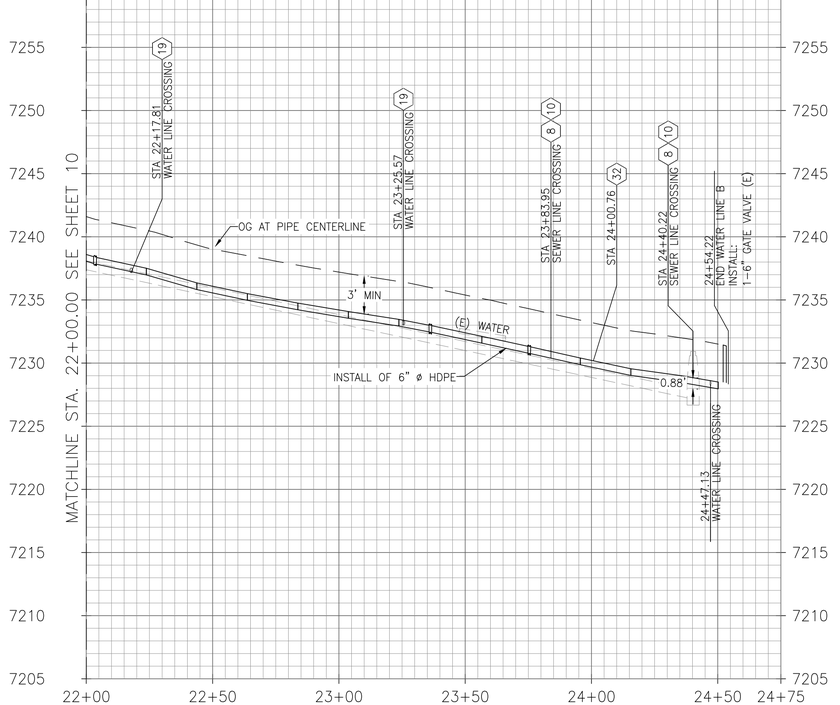
WATER MAIN B



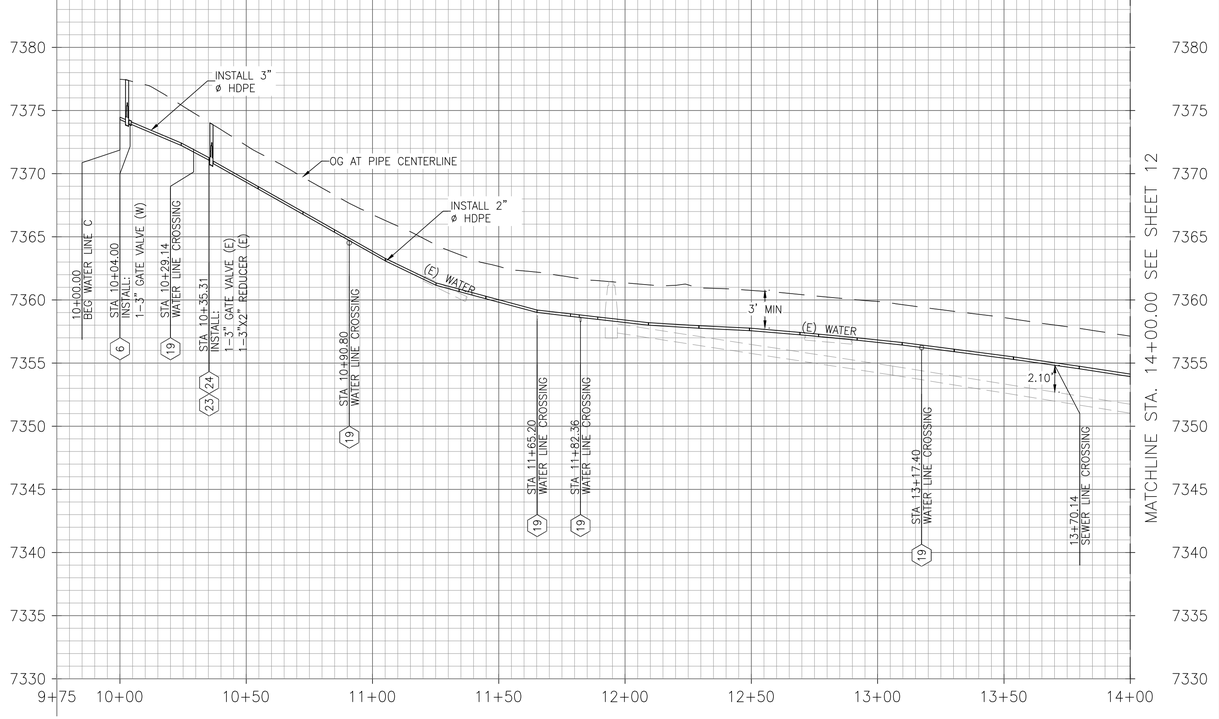
WATER MAIN C

Know what's below. Call before you dig.

WATER LINE B – PROFILE
SCALE: HORIZ. 1"=30', VERT. 1"=6'



WATER LINE C – PROFILE
SCALE: HORIZ. 1"=30', VERT. 1"=6'



CONSTRUCTION NOTES

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REFERENCE:

(X) REFERENCE NOTE IN SHEET LG-1

	DATE	RECORD DRAWING	DATE
DESIGNED: KCS	4/4/24	RESIDENT ENGINEER	
DRAWN: KCS	4/4/24		
CHECKED: SA	4/4/24		

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SCALE

30 15 0 30

GRAPHIC SCALE: 1"=30'

SUPERVISING ENGINEER — 4/4/2024 DATE

REGISTERED PROFESSIONAL ENGINEER SEBASTIAN T. APPAL No. C76724 Exp.12/31/24 CIVIL STATE OF CALIFORNIA

PROJECT

CSA 1 - TAMARACK WATER INFRASTRUCTURE REPLACEMENT PROJECT

ROAD NO. - BRIDGE NO.

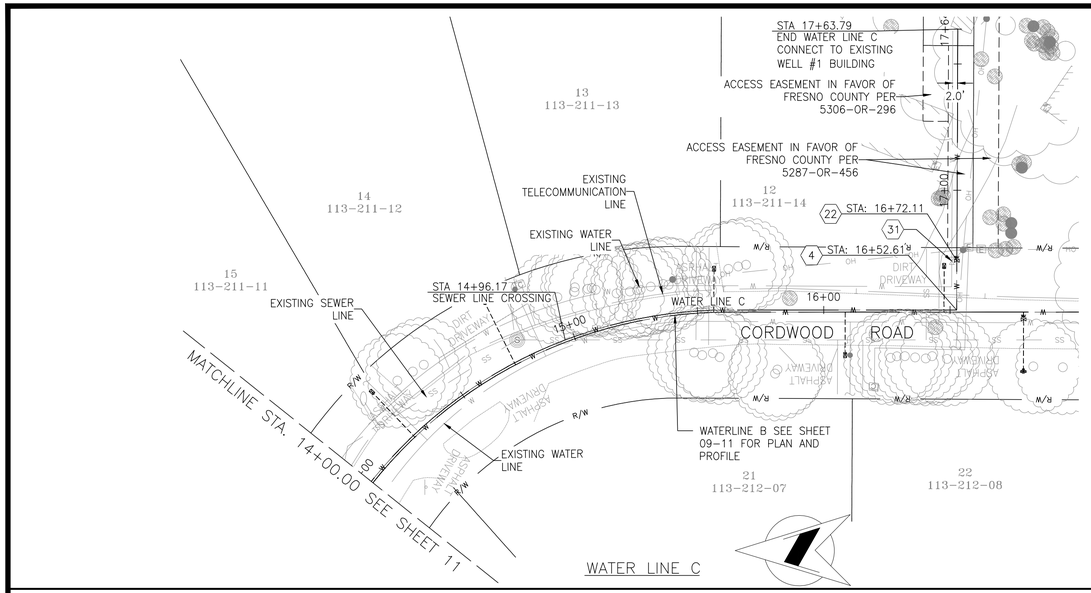
DEPARTMENT OF PUBLIC WORKS AND PLANNING

WATER LINE B AND C

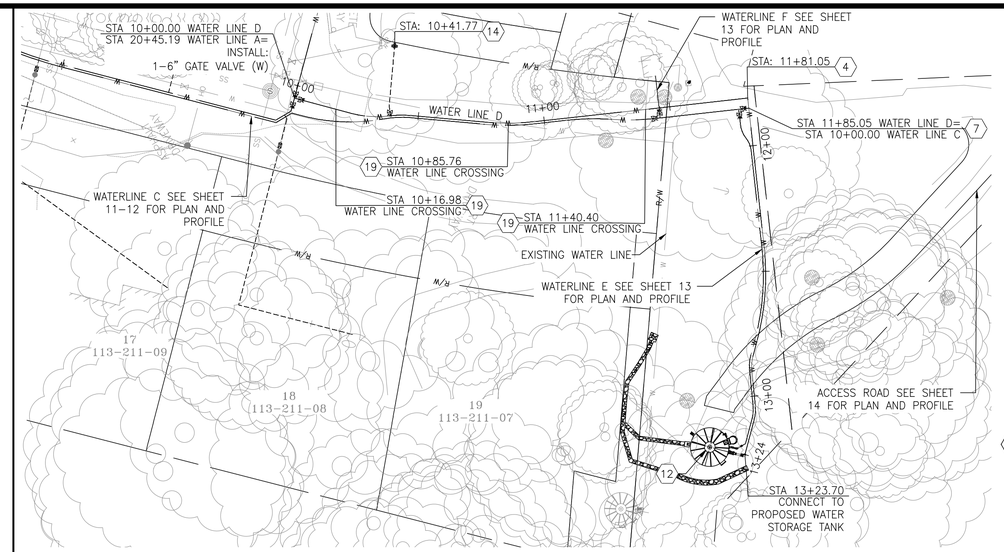
L-5

DRAWING NO. 11334 SHEET NO. 11 TOTAL 23

Y:\PROJECTS – CDBG AND OTHER NON R&B PROJECTS\CSA 1 – TAMARACK WATER PIPE – SC1\DWRG\PS&ES – EXHIBITS – MAPS\CURRENT SET\SHEETS\432360L002.DWG 4/4/2024 11:52 AM – SAN, KEVIN



WATER LINE C



WATER LINE D

CONSTRUCTION NOTES

1. CONTRACTOR SHALL POTHOLE AND VERIFY SIZE, LOCATION AND DEPTH OF EXISTING UTILITIES AS THE FIRST ORDER OF WORK.
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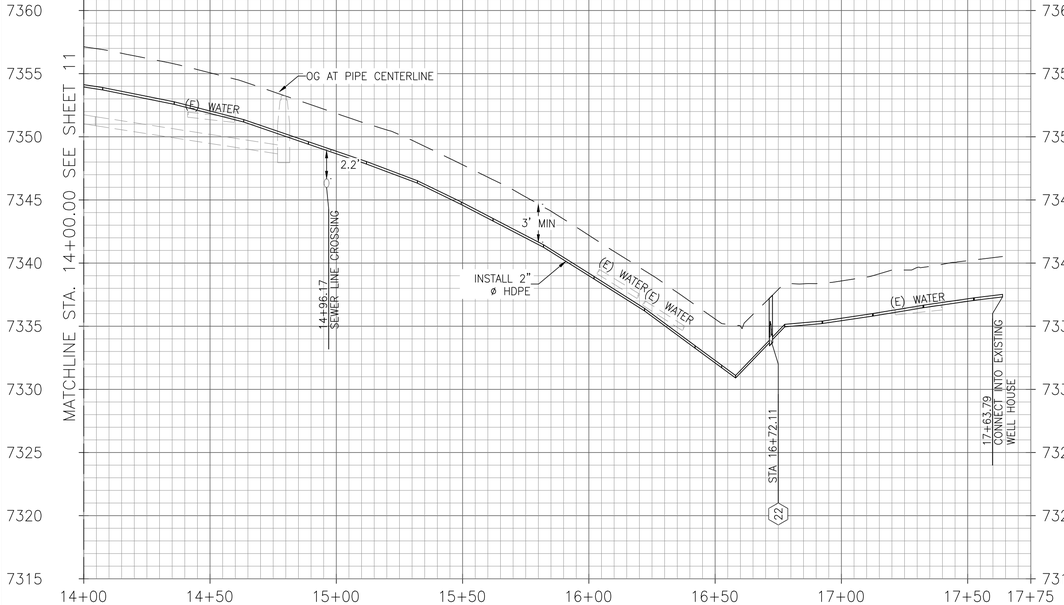
REFERENCE:

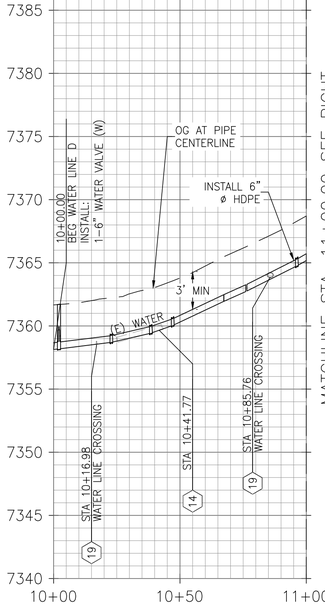
(X) REFERENCE NOTE IN SHEET LG-1

Know what's below. Call before you dig.

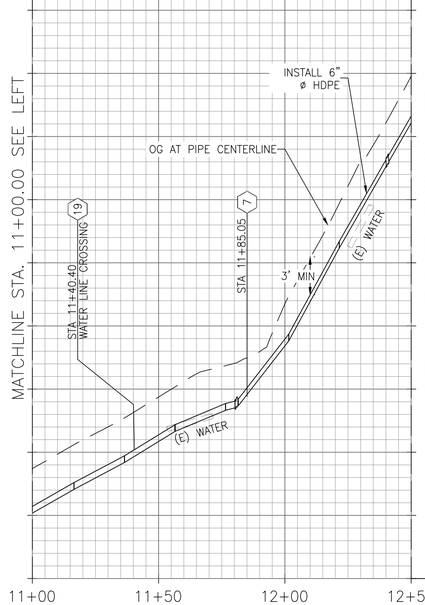
WATER LINE C – PROFILE
SCALE: HORIZ. 1"=30', VERT. 1"=6'



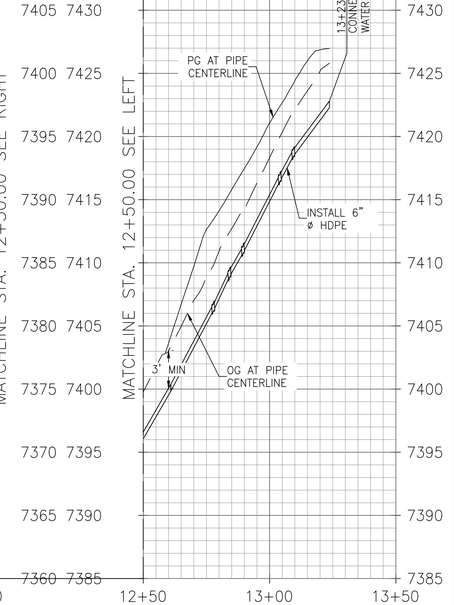
WATER LINE D – PROFILE
SCALE: HORIZ. 1"=30', VERT. 1"=6'



WATER LINE D – PROFILE
SCALE: HORIZ. 1"=30', VERT. 1"=6'



WATER LINE D – PROFILE
SCALE: HORIZ. 1"=30', VERT. 1"=6'



	DATE	RECORD DRAWING		SCALE
DESIGNED: KCS	4/4/24	RESIDENT ENGINEER	DATE	30 15 0 30
DRAWN: KCS	4/4/24			GRAPHIC SCALE: 1"=30'
CHECKED: SA	4/4/24			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SUPERVISING ENGINEER — 4/4/2024 DATE

REGISTERED PROFESSIONAL ENGINEER — ROBERT IAN T. ARMAT — No. C76724 Exp.12/31/24 — CIVIL — STATE OF CALIFORNIA

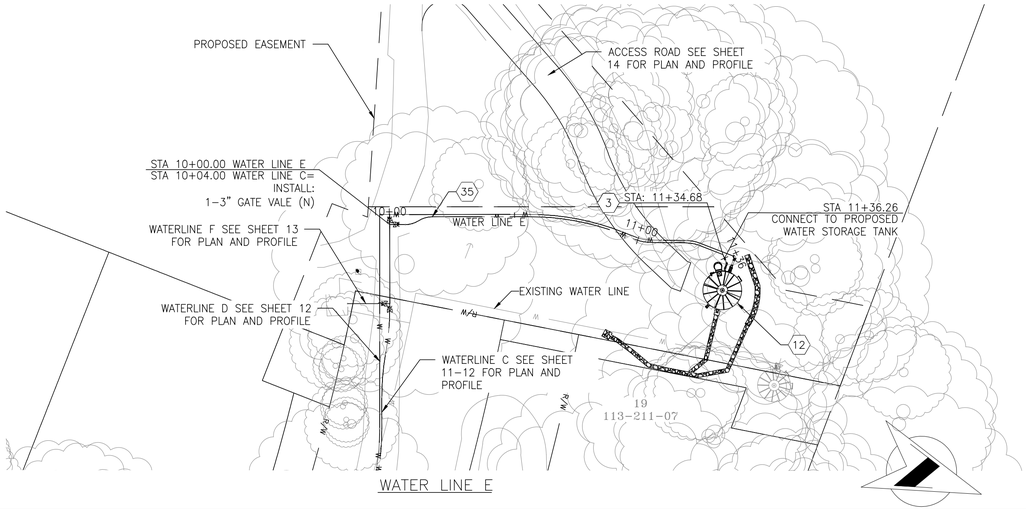
PROJECT
CSA 1 - TAMARACK WATER INFRASTRUCTURE REPLACEMENT PROJECT

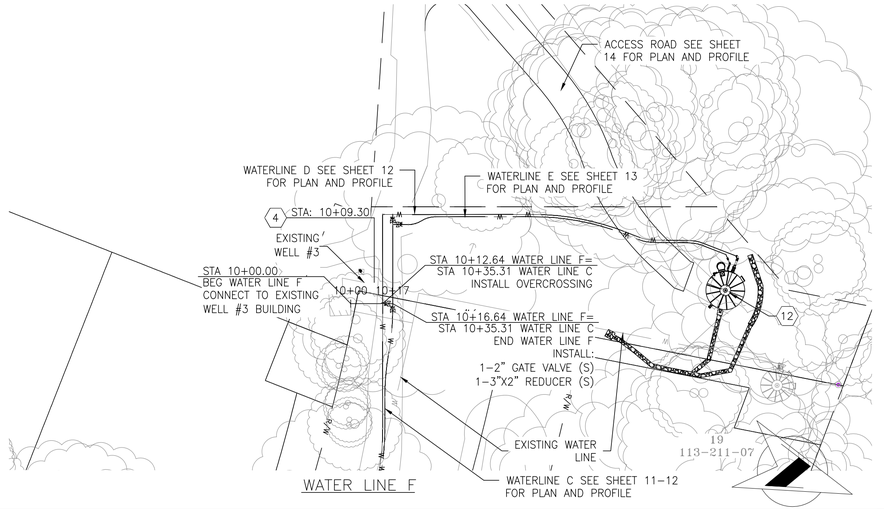
ROAD NO. - BRIDGE NO.

DEPARTMENT OF PUBLIC WORKS AND PLANNING
WATER LINE C AND D
L-6

DRAWING NO. 11334 SHEET NO. 12 TOTAL 23

Y:\PROJECTS – CDBG AND OTHER NON R&B PROJECTS\CSA 1 – TAMARACK WATER PIPE – SC1DWRG\PS&ES – EXHIBITS – MAPS\CURRENT SET\SHEETS\432360L002.DWG 4/4/2024 11:52 AM – SAN, KEVIN





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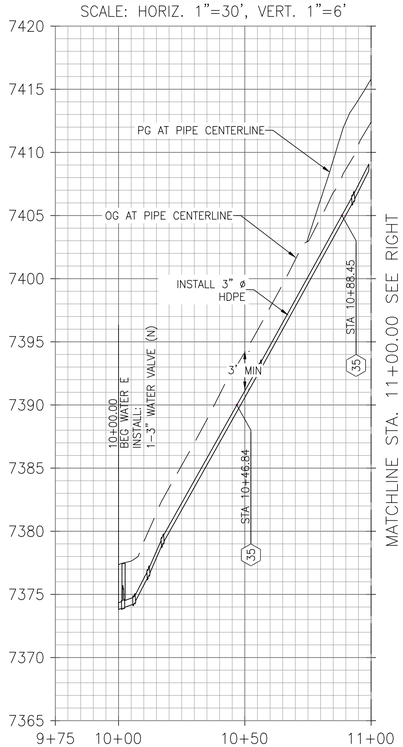
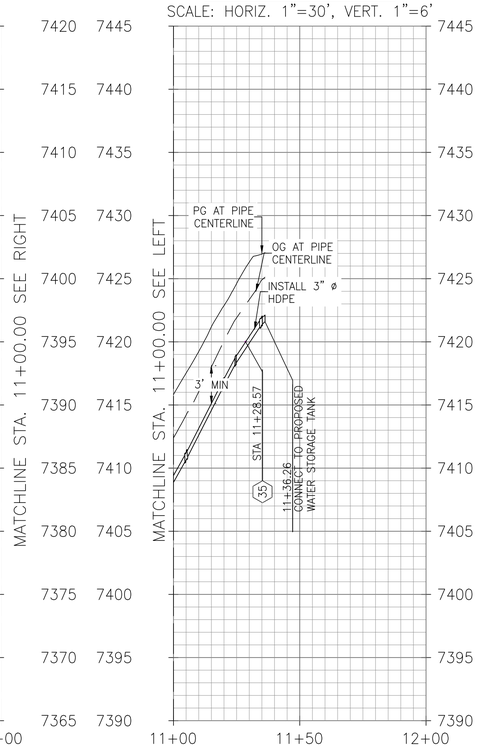
REFERENCE:

(X) REFERENCE NOTE IN SHEET LG-1

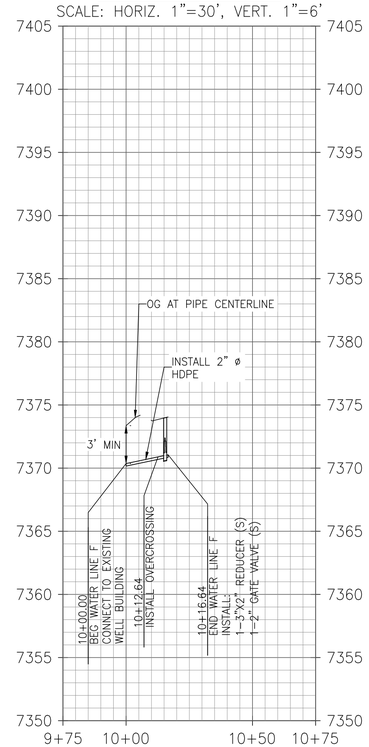
WATER LINE E – PROFILE
SCALE: HORIZ. 1"=30', VERT. 1"=6'



WATER LINE E – PROFILE
SCALE: HORIZ. 1"=30', VERT. 1"=6'



Water Line F – PROFILE
SCALE: HORIZ. 1"=30', VERT. 1"=6'



Know what's below. Call before you dig.

	DATE	RECORD DRAWING		SCALE
DESIGNED: KCS	4/4/24	RESIDENT ENGINEER	DATE	30 15 0 30
DRAWN: KCS	4/4/24			GRAPHIC SCALE: 1"=30'
CHECKED: SA	4/4/24			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SUPERVISING ENGINEER — 4/4/2024 DATE

REGISTERED PROFESSIONAL ENGINEER SEBASTIAN T. ARIAS No. C76724 Exp.12/31/24 CIVIL STATE OF CALIFORNIA

PROJECT
CSA 1 - TAMARACK WATER INFRASTRUCTURE REPLACEMENT PROJECT

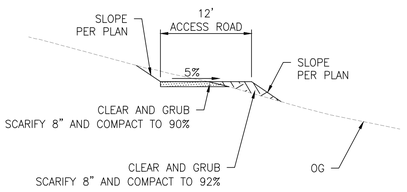
ROAD NO. - BRIDGE NO.

COUNTY OF FRESNO

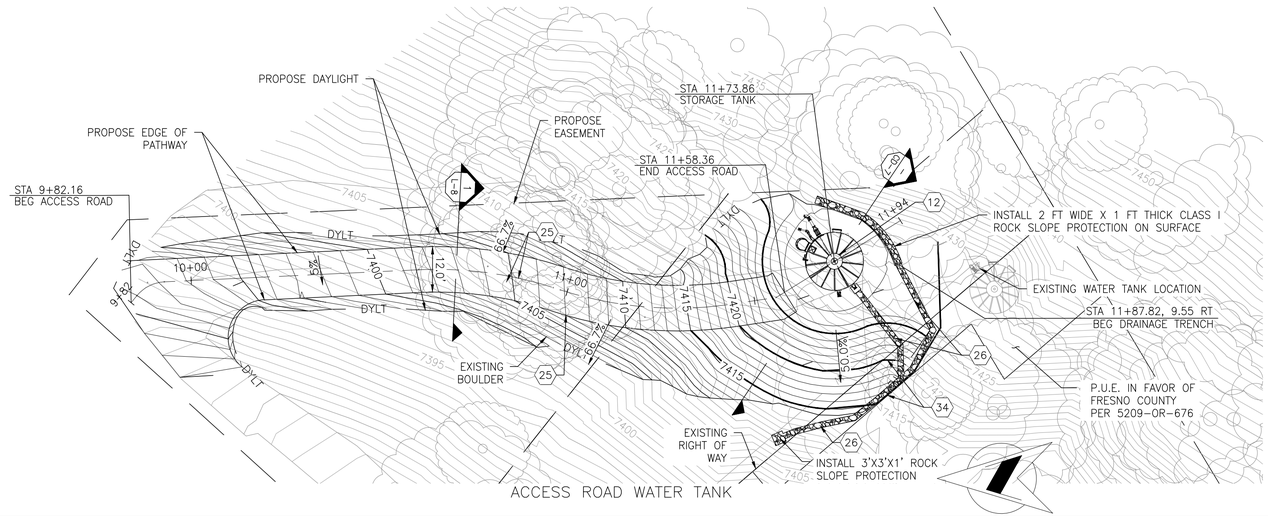
DEPARTMENT OF PUBLIC WORKS AND PLANNING
WATER LINE E AND F
L-7

DRAWING NO. 11334 SHEET NO. 13 TOTAL 23

Y:\PROJECTS – CDBG AND OTHER NON R&B PROJECTS\CSA 1 – TAMARACK WATER PIPE – SC1DWRG\PS&ES – EXHIBITS – MAPS\CURRENT SET\SHEETS\432360L002.DWG 4/4/2024 11:52 AM – SAN, KEVIN



1 / L-8 TYPICAL SECTION
SCALE NTS



ACCESS ROAD WATER TANK

CONSTRUCTION NOTES

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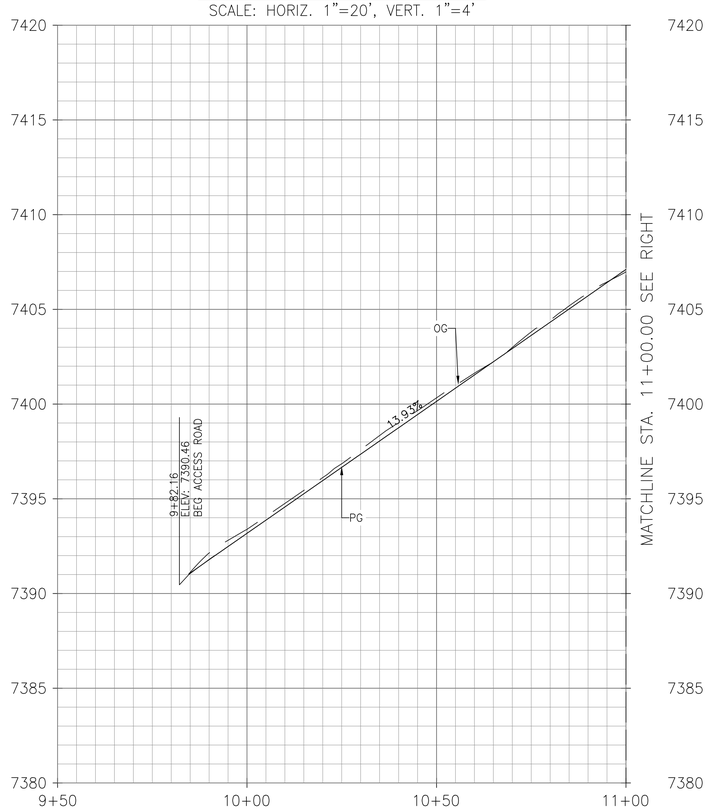
3. ALIGNMENT HORIZONTAL DESIGN POINTS AND COORDINATES ARE LISTED ON SHEET 06.
4. PROTECT TREES WITHIN THE PROJECT UNLESS OTHERWISE NOTED ON PLANS.
5. SEE SHEETS 07-13 FOR PROPOSED PIPELINE PLAN AND PROFILE.
6. HYDROSEED ENTIRE CUT AND FILL AREA PER SPECIFICATIONS.
7. INSTALL EROSION CONTROL BLANKET ON TANK PAD EMBANKMENT PER SECTION ON SHEET CD-7

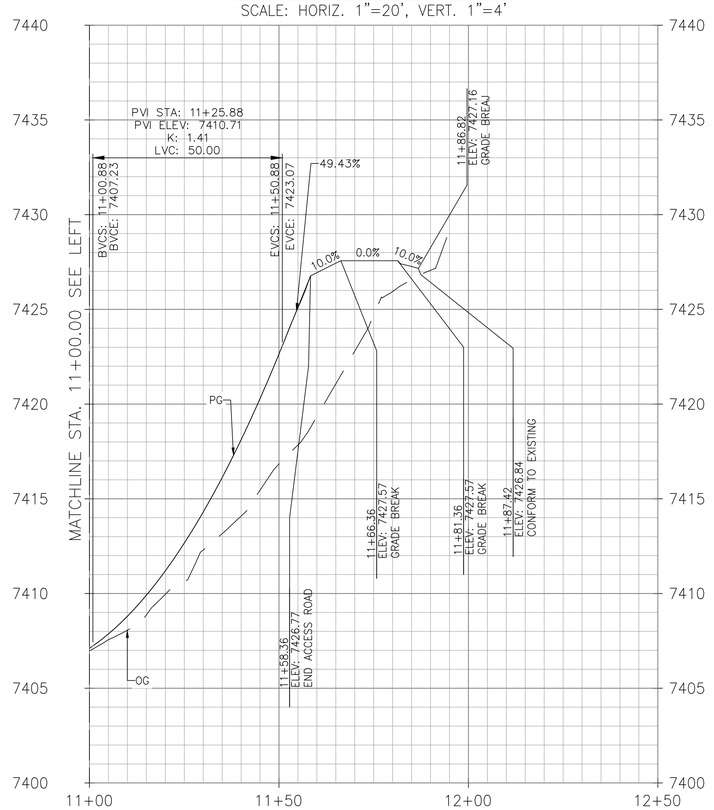
REFERENCE:

(X) REFERENCE NOTE IN SHEET LG-1

ACCESS ROAD WATER TANK – PROFILE
SCALE: HORIZ. 1"=20', VERT. 1"=4'



ACCESS ROAD WATER TANK – PROFILE
SCALE: HORIZ. 1"=20', VERT. 1"=4'



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

	DATE	RECORD DRAWING	
DESIGNED: KCS	4/4/24	RESIDENT ENGINEER	DATE
DRAWN: KCS	4/4/24		
CHECKED: SA	4/4/24		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE
20 10 0 20
GRAPHIC SCALE: 1"=20'

SUPERVISING ENGINEER — 4/4/2024 DATE

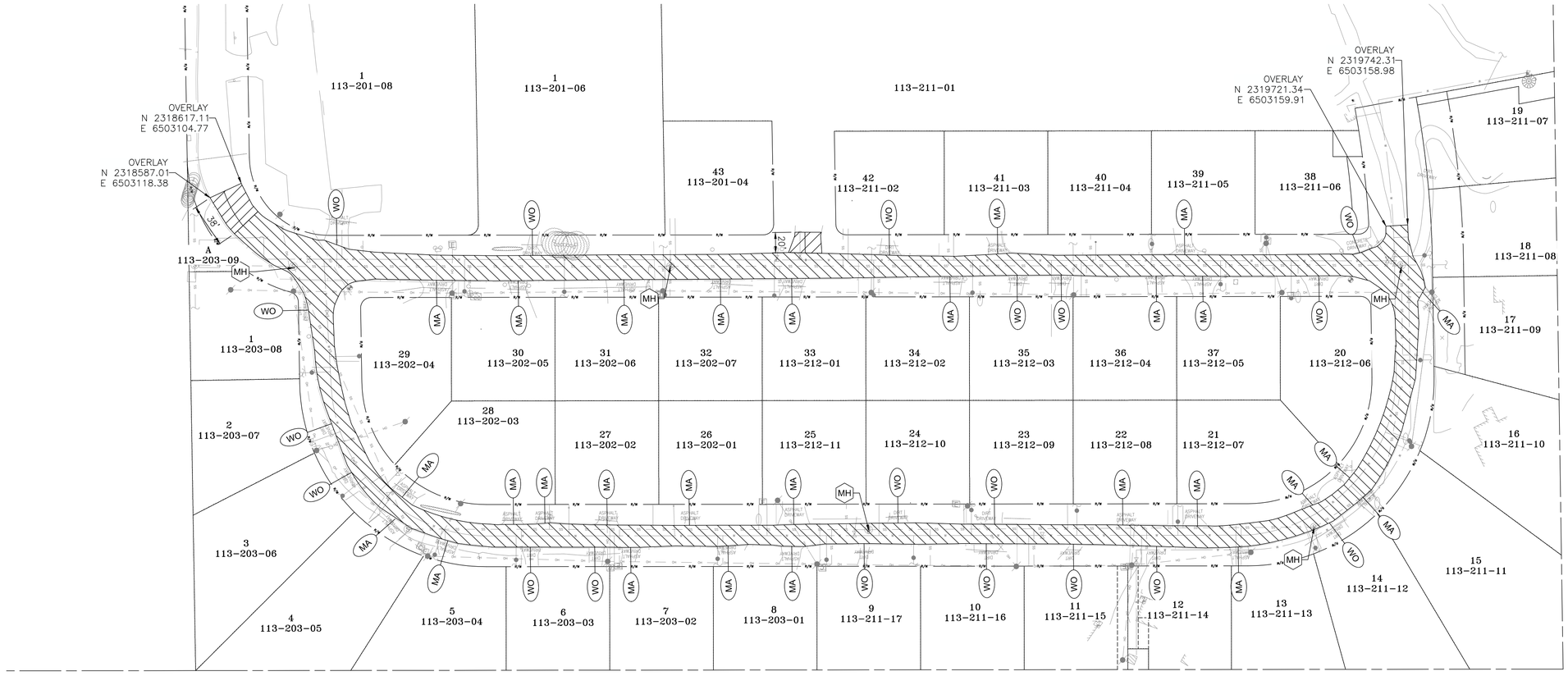
REGISTERED PROFESSIONAL ENGINEER SEBASTIAN T. APPAL No. C76724 Exp.12/31/24 CIVIL STATE OF CALIFORNIA

PROJECT
CSA 1 - TAMARACK WATER INFRASTRUCTURE REPLACEMENT PROJECT
ROAD NO. - BRIDGE NO.

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING
ACCESS ROAD WATER TANK
L-8
DRAWING NO. 11334 SHEET NO. 14 TOTAL 23

Y:\PROJECTS – CDBG AND OTHER NON R&B PROJECTS\CSA 1 – TAMARACK WATER PIPE – SC1DWRG\PS&ES – EXHIBITS – MAPS\CURRENT SET\SHEETS\432360L002.DWG 4/4/2024 11:57 AM – SAN, KEVIN

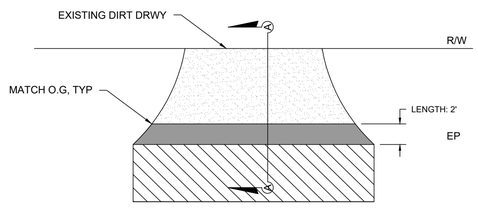


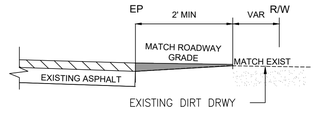
CONSTRUCTION NOTES

1. ALIGNMENT HORIZONTAL DESIGN POINTS AND COORDINATES ARE LISTED ON SHEET 06.
2. SEE SHEETS 07–13 FOR PROPOSED PIPELINE PLAN AND PROFILE
3. OVERLAY THICKNESS PER DETAIL 3 SHEET CD-4
4. WATER INFRASTRUCTURE IMPROVEMENTS NOT SHOWN IN THIS SHEET FOR CLARITY. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ANY NEW WATER VALVE BEING INSTALLED WITH THIS PROJECT WITH THE OVERLAY. COUNTY WILL NOT PAY FOR NEW WATER VALVE ADJUSTMENTS TO GRADE.

REFERENCE:

- WO — DRIVEWAY WINGOUT PER DETAIL 1 THIS SHEET
- MA — TYPICAL ASPHALT DRIVEWAY APPROACH PER DETAIL 2 THIS SHEET
- 0.15' HMA OVERLAY
- OVERLAY TRANSITION PER DETAIL 3 THIS SHEET





SECTION B-B

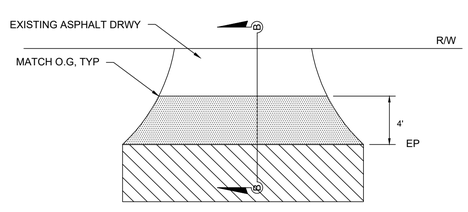
0.15' OVERLAY | PROPOSED WING OUT | EXISTING DIRT DRWY APPROACH

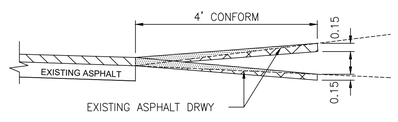
1 TYPICAL "WING OUT" DIRT DRWY ROAD APPROACH DETAIL

SCALE: N.T.S.

NOTES:

1. WING–OUT ARE NOT PAID AS MISCELLANEOUS AREAS.
2. COST OF THE WING–OUT SHALL BE INCLUDED AS PART OF THE HMA BID ITEMS.



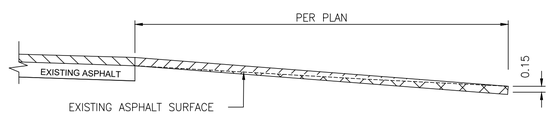


SECTION B-B

0.15' OVERLAY | AREA TO BE COLD PLANED | PROPOSED ASPHALT DRWY

2 TYPICAL MISCELLANEOUS AREA - ASPHALT DRWY APPROACH DETAIL

SCALE: N.T.S.



0.15' OVERLAY | OVERLAY TRANSITION | AREA TO BE COLD PLANED

3 TYPICAL OVERLAY TRANSITION DETAIL

SCALE: N.T.S.

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

	DATE	RECORD DRAWING		SCALE
DESIGNED: KCS	4/4/24	RESIDENT ENGINEER	DATE	60 30 0 60
DRAWN: KCS	4/4/24			GRAPHIC SCALE: 1"=60'
CHECKED: SA	4/4/24			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SUPERVISING ENGINEER — 4/4/2024 DATE

REGISTERED PROFESSIONAL ENGINEER SEBASTIAN T. AMYAL No. C76724 Exp.12/31/24 CIVIL STATE OF CALIFORNIA

PROJECT

CSA 1 - TAMARACK WATER INFRASTRUCTURE REPLACEMENT PROJECT

ROAD NO. - BRIDGE NO.

THE COUNTY OF FRESNO 1856

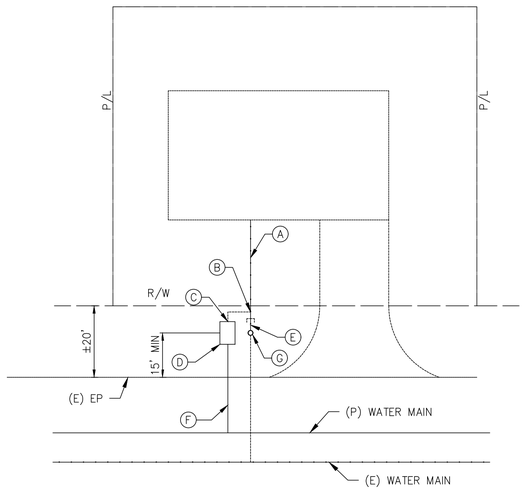
DEPARTMENT OF PUBLIC WORKS AND PLANNING

OVERLAY PLAN

L-9

DRAWING NO. 11334 SHEET NO. 15 TOTAL 23

Y:\PROJECTS – CDBG AND OTHER NON R&B PROJECTS\CSA 1 – TAMARACK WATER PIPE – SC1DWRG\PS&ES – EXHIBITS – MAPS\CURRENT SET\SHEETS\432360OVERLAY001.DWG 4/4/2024 11:52 AM – SAN, KEVIN



CONSTRUCTION NOTES:

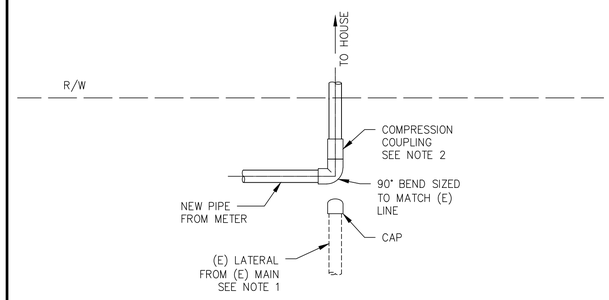
(A) CONNECTION TO (E) LINE PER DETAIL 2 SHEET CD-1.
(B) BORE, TRENCH, HAND DIG LINE.
(C) CONNECTION TO PIPING WITHIN METER BOX.
(E) ABANDON (E) SERVICE PER DETAIL 4 SHEET CD-3.
(D) NEW METER AND METER BOX PER DETAIL 5 ON SHEET CD-2.
(F) NEW WATER SERVICE LINE PER DETAIL 5 ON SHEET CD-2.
(G) EXISTING STEEL CASING TO BE REMOVED. SEE DETAIL 5 SHEET CD-3

NOTES

1. REPLACE ALL SURFACE AND LANDSCAPING TO PRE-CONSTRUCTION CONDITION (IN-KIND).

1 / CD-1

3/4" WATER SERVICE CONNECTION, WATER METER AND METER BOX

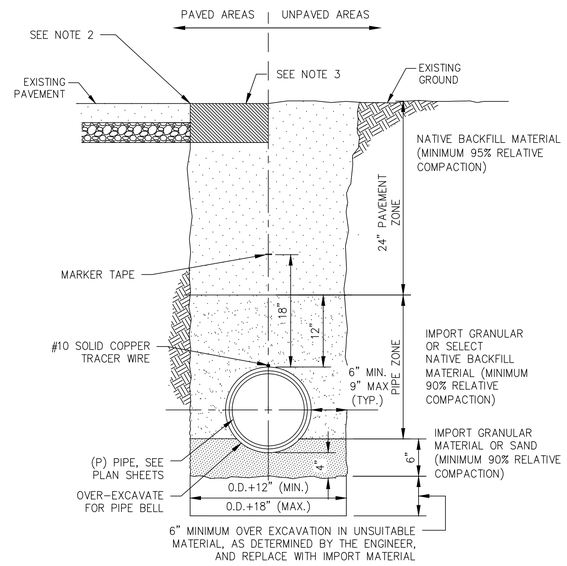


NOTES

1. ABANDON (E) LINE PER DETAIL 5 ON SHEET CD-3.
2. INSTALL INSULATING COUPLING AT CONNECTION BETWEEN TWO DIFFERENT METALS IF NECESSARY.
3. ALL FITTINGS SHALL BE SIZED TO MATCH THE EXISTING LINE.
4. CONTRACTOR RESPONSIBLE FOR ALL WORK ASSOCIATED WITH PROVIDING A FULLY FUNCTIONAL LEAD LINE CONNECTION.
5. NEW PIPE MATERIAL TO BE HDPE.

2 / CD-1

EXISTING SERVICE LINE CONNECTION (SIDE BY SIDE SERVICE)

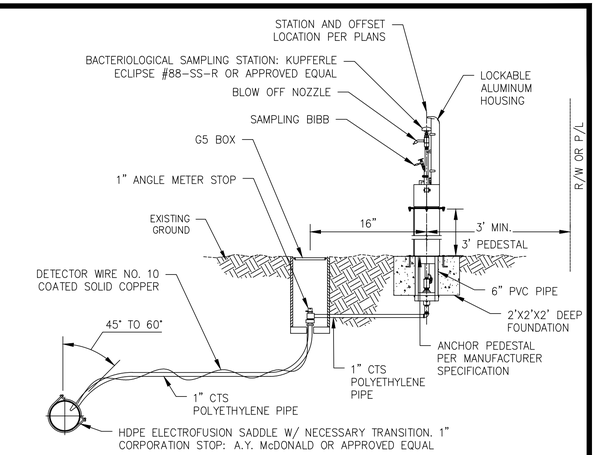


NOTES

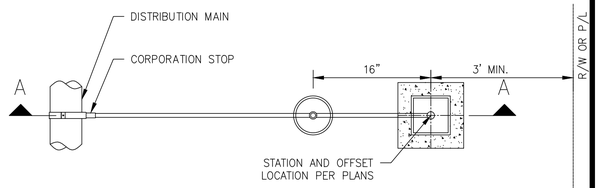
1. NO JETTING IS ALLOWED.
2. CUT NEAT LINE AT EDGES OF PAVEMENT (TYP.)
3. TRENCH RESURFACING SHALL BE PER DETAIL 3 ON DRAWING CD-4.
4. TEMPORARY RESURFACING SHALL CONSIST OF A MINIMUM OF 4" COLD MIX AND SHALL BE REQUIRED WHENEVER THE STREET IS TEMPORARILY OPENED TO TRAFFIC. ALL TEMPORARY MATERIAL SHALL BE COMPLETELY REMOVED PRIOR TO FINAL PAVING. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING IT DURING DURATION OF CONSTRUCTION.

3 / CD-1

PIPE BEDDING AND TRENCH BACKFILL



SECTION A-A



PLAN

NOTES:

1. PIPES SHALL BE POLYETHYLENE.
2. ALL UNDERGROUND STEEL PIPE AND FITTINGS SHALL BE GALVANIZED AND COATED.
3. ALL ABOVE GROUND STEEL PIPE AND FITTINGS SHALL BE GALVANIZED.
4. INSTALL FOUNDATION PER CALTRANS STANDARD SPECIFICATION SECTION 90

4 / CD-1

BACTERIOLOGICAL SAMPLING STATION

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

	DATE	RECORD DRAWING		SCALE
DESIGNED: KCS	4/4/24	RESIDENT ENGINEER	DATE	
DRAWN: KCS	4/4/24			
CHECKED: SA	4/4/24			

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SUPERVISING ENGINEER — 4/4/2024 DATE

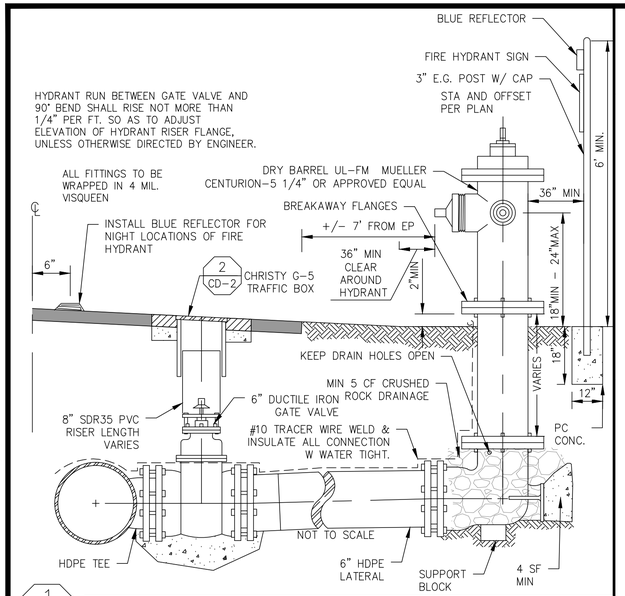
REGISTERED PROFESSIONAL ENGINEER SEBASTIAN T. APPAL No. C76724 Exp.12/31/24 CIVIL STATE OF CALIFORNIA

PROJECT
CSA 1 - TAMARACK WATER INFRASTRUCTURE REPLACEMENT PROJECT
ROAD NO. - BRIDGE NO.

THE COUNTY OF FRESNO

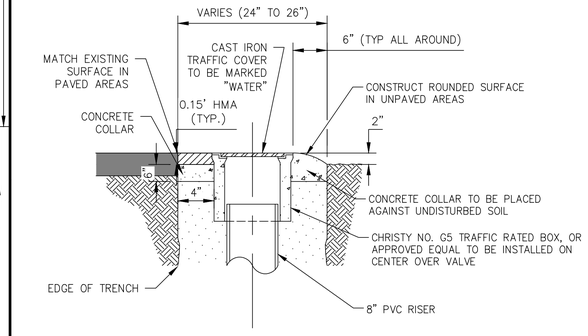
DEPARTMENT OF PUBLIC WORKS AND PLANNING
CONSTRUCTION DETAILS
CD-1
DRAWING NO. 11334 SHEET NO. 16 TOTAL 23

Y:\PROJECTS - CDBG AND OTHER NON R&B PROJECTS\CSA 1 - TAMARACK WATER PIPE - SC1DWRG\PS&ES - EXHIBITS - EXHIBITS - MAPS\CURRENT SET\SHEETS\43236ODTL002.DWG 4/4/2024 11:54 AM - SAN, KEVIN



1 CD-2

FIRE HYDRANT

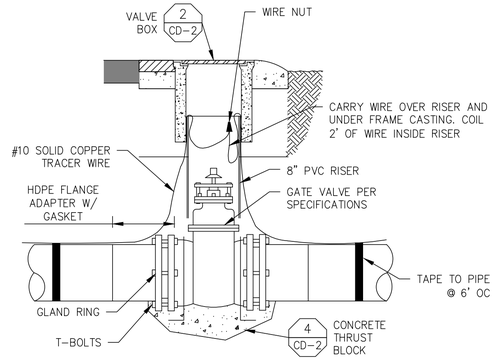


NOTES

1. ADJUST VALVE BOX AND COVER TO FINISHED GRADE.
2. CONCRETE COLLAR SHALL BE CONSTRUCTED USING MINOR CONCRETE PER CALTRANS STANDARD SPECIFICATION SECTION 90.
3. APPLY PAINT BINDER TO EXPOSED SIDE OF VALVE BOX PRIOR TO PAVING.

2 CD-2

WATER VALVE BOX

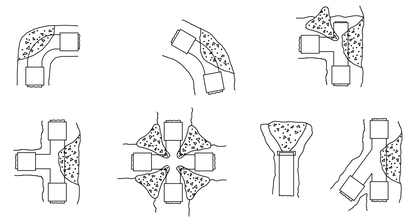


NOTES

1. EXTENSION ROD REQUIRED WHEN DISTANCE FROM FINISHED GRADE IS GREATER THAN 36" CONSTRUCT CONCRETE COLLAR.
2. PROVIDE AT LEAST 6" OF OVERLAP BETWEEN RISER PIPES.
3. THRUST BLOCK ANCHORAGE REQUIRED FOR NON-FLANGED FITTINGS. ASSUME DEAD END CONDITION WITH #4 REBAR.
4. THRUST BLOCK SHALL EXTEND A MINIMUM OF 6" BEYOND THE EDGE OF THE VALVE BODY ON EACH SIDE.

3 CD-2

VALVE & VALVE BOX INSTALLATION



ALL FITTINGS TO BE WRAPPED IN 4 MIL. VISQUEEN

AREA OF CONCRETE BEARING AGAINST UNDISTURBED SOIL SQUARE FEET

PIPE SIZE	DEAD END OR TEE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
6	1.8	2.5	1.4	0.7	0.3
8	3.1	4.4	2.4	1.2	0.6
10	4.9	6.9	3.8	1.9	1.0
12	7.0	10.0	5.4	2.8	1.4
14	9.5	13.6	7.4	3.8	1.9

BASED ON 2000 P.S.F. SOIL BEARING CAPACITY AND 125 P.S.I. STATIC PRESSURE – SPECIAL DESIGN REQUIRED FOR SOIL LESS THAN 2000 P.S.F. CONCRETE TO HAVE ULTIMATE STRENGTH OF 2500 P.S.I. @ 28 DAYS.

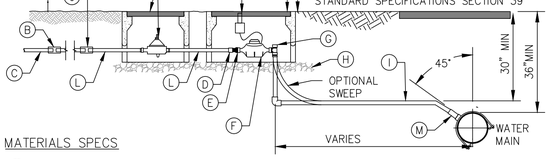
TABLE MUST BE RECALCULATED FOR EACH PROJECT BASED ON ASAE STANDARD S376-1

4 CD-2

THRUST BLOCKS

NOTE: FOR APN: 113-201-08 TAMARACK SIERRA LODGE INSTALL A 2" METER W/ ALL FITTINGS AND PIPES LISTED BELOW BEING 2"

COMPACT ANY DISTURBED SOIL WITHIN 10 FT OF THE PAVEMENT OR DRIVEWAYS TO 95%, OTHERWISE 90%. IF TRENCHING ASPHALT DRIVEWAY PERMANENT SURFACE TRENCHED AREA WITH MIN 2" THICK SECTION OF MINOR HOT ASPHALT PER CALTRANS STANDARD SPECIFICATIONS SECTION 39



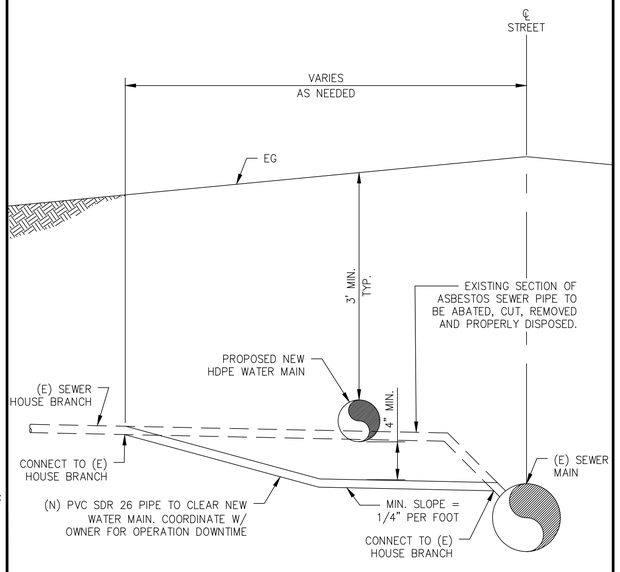
MATERIALS SPECS

- (A) BOX: OLDCASTLE B16 OR N16 BOX WITH CAST-IN-CORNER BRACKETS OR APPROVED EQUAL. LID: NICOR W/ THREAD FOR BADGER ORION OR APPROVED EQUAL. REFER TO SPECS
- (B) CONNECT HDPE PIPE TO EXISTING SERVICE PIPE MATERIAL. DETAIL 2 SHEET CD-1
- (C) EXISTING GALVANIZED OR COPPER PIPE. FIELD VERIFY DIAMETER AND MATERIAL.
- (D) 1" PVC SCH 80 FEMALE ADAPTER SLIP BY THREAD
- (E) 1" METER TAILPIECE PER SPECIFICATION: A.Y. McDONALD "NO LEAD" OR APPROVED EQUAL.
- (F) 1" METER: COUNTY FURNISHED BADGER M70 W/ ENCODER
- (G) 1" ANGLE METER STOP PER SPECIFICATIONS: A.Y. McDONALD "NO LEAD" OR APPROVED EQUAL
- (H) PLACE 3/4" CRUSHED ROCK 6" DEEP. ALL BOXES SHALL BE ORIENTED WITH LONGER SIDE PERPENDICULAR TO THE ROAD/STREET
- (I) 1" CONTINUOUS POLYETHYLENE TUBING
- (J) 1" COMPRESSION DRESSER
- (K) COUNTY FURNISHED BADGER ORION LTE ENDPOINT. MOUNT ENDPOINT TO LID PER SPECIFICATION
- (L) 1" PVC SCH 80 TAIL PIECE
- (M) HDPE ELECTROFUSION SADDLE W/ NECESSARY TRANSITION. 1" CORPORATION STOP PER SPECIFICATIONS: A.Y. McDONALD OR APPROVED EQUAL
- (N) FOR APN: 113-202-06, 113-202-05, 113-202-04, 113-202-03, 113-202-02, 113-201-08, 113-203-09, 113-203-08, 113-203-07, 113-203-06, 113-203-05, 113-203-04, 113-203-03, AND 113-203-02 INSTALL 1" PRESSURE REDUCING VALVE WITHIN:

  BOX: OLDCASTLE B09 BOX WITH CAST-IN-CORNER BRACKETS OR APPROVED EQUAL
  LID: NICOR OR APPROVED EQUAL, REFER TO SPECS

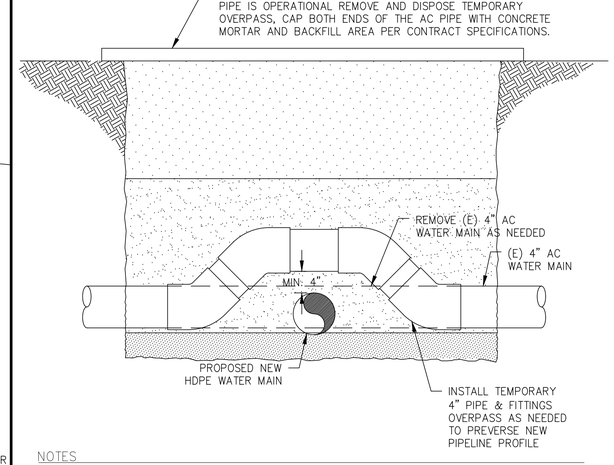
5 CD-2

1" WATER SERVICE INSTALLATION WITH METER AND METER BOX



6 CD-2

SEWER SERVICE BYPASS (IF NECESSARY)

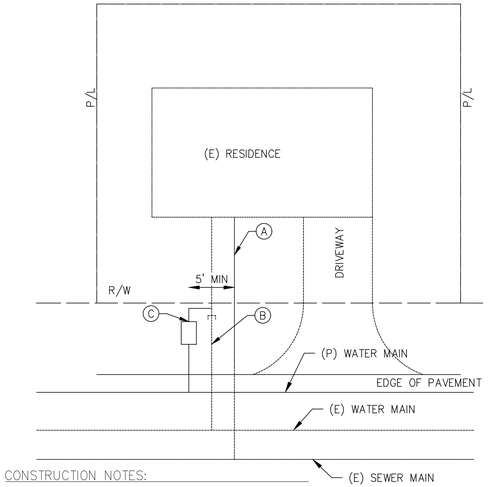


NOTES

1. CONTRACTOR MAY INSTALL NEW PIPELINE OVER OR UNDER EXISTING WATER LINE ONLY IF GOING OVER STILL PROVIDES 36 INCHES OF COVER OR GOING UNDER DOES NOT REQUIRE EXCAVATION INTO GRANITE ROCK, OTHERWISE INSTALL NEW PIPELINE PER THIS DETAIL.

7 CD-2

TEMPORARY RELOCATION OF EXISTING WATER MAIN



CONSTRUCTION NOTES:

- (A) EXISTING SEWER LATERAL.
- (B) EXISTING WATER LATERAL
- (C) PROPOSED WATER LATERAL. SEE DETAIL 5 THIS SHEET

NOTES

1. 5' MINIMUM HORIZONTAL SEPARATION BETWEEN WATER AND SEWER LATERAL.
2. 1' VERTICAL SEPARATION BETWEEN TOP OF SEWER AND BOTTOM OF WATER IF 5' MINIMUM HORIZONTAL SEPARATION CAN NOT BE ACHIEVED.

8 CD-2

SEWER AND WATER SERVICE SEPARATION

	DATE	RECORD DRAWING	DATE
DESIGNED: KCS	4/4/24	RESIDENT ENGINEER	
DRAWN: KCS	4/4/24		
CHECKED: SA	4/4/24		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE

SUPERVISING ENGINEER — 4/4/2024 DATE

REGISTERED PROFESSIONAL ENGINEER SEBASTIAN T. APPAL No. C76724 Exp.12/31/24 CIVIL STATE OF CALIFORNIA

PROJECT

CSA 1 - TAMARACK WATER INFRASTRUCTURE REPLACEMENT PROJECT

ROAD NO. - BRIDGE NO.

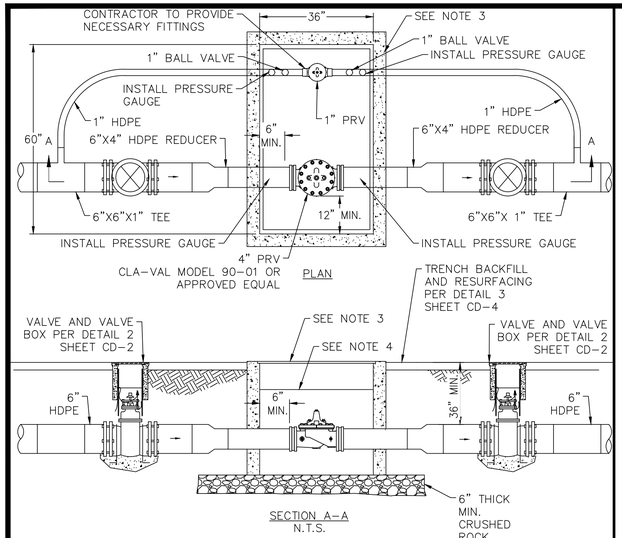
THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

CONSTRUCTION DETAILS CD-2

DRAWING NO. 11334 SHEET NO. 17 TOTAL 23

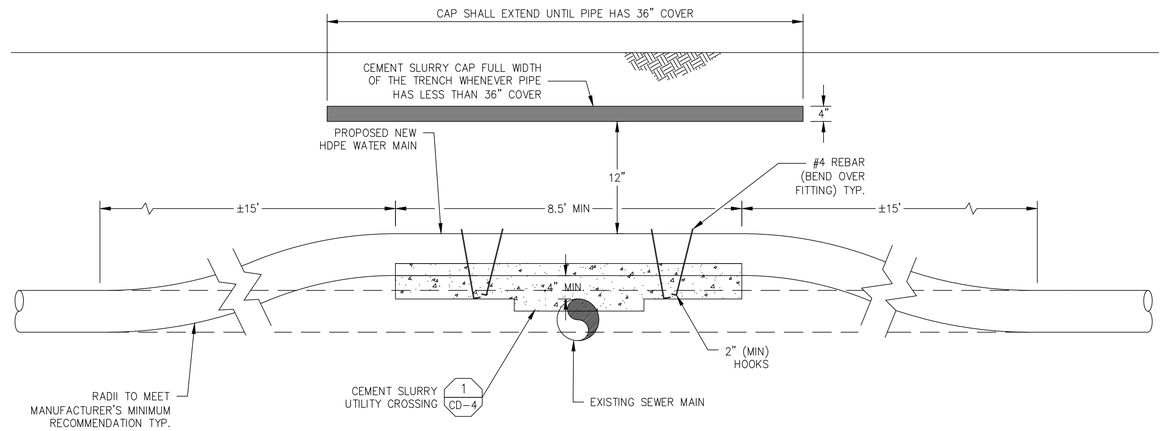
Y:\PROJECTS - CDBG AND OTHER NON R&B PROJECTS\CSA 1 - TAMARACK WATER PIPE - SC1DWRG\PS&ES - EXHIBITS - MAPS\CURRENT SET\SHEETS\432360TL002.DWG 4/4/2024 11:54 AM - SAN, KEVIN



NOTES

1. PRESSURE REDUCING VALVE TO UTILIZE H20 RATE LID AS SHOWN ON THE PLANS.
2. ALL VAULTS SHALL INCLUDE 8" ROUND SELF-CLOSING READING LID.
3. PRESSURE REDUCING VAULT SHALL BE A CHRISTY R SERIES R17P36 WITH EXTENSION WITH R17-52HT LID OR APPROVED EQUAL.
4. INSTALL FOAM INSULATION IN PRESSURE REDUCING VAULT.
5. WRAP AND INSTALL INSULATION ON THE TUBING OF PRESSURE REDUCING VALVE.

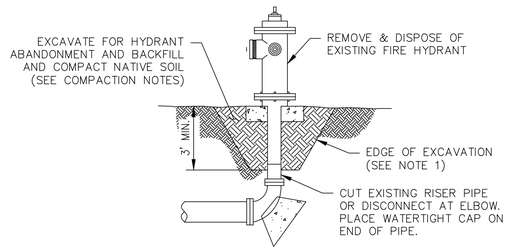
1 CD-3 — 4" PRESSURE REDUCING VALVE



NOTES:

1. BACKFILL WITH CONTROL LOW STRENGTH MATERIAL (CLSM) CEMENT SLURRY PER THIS DETAIL IF WATER LINE CLEARANCE FROM TOP OF PIPE IS LESS THAN 36 INCHES.
2. SEE DETAIL 1 ON SHEET CD-4 FOR CEMENT SLURRY BETWEEN CROSSING PIPES
3. IF RADII OF OVERCROSSING DOES NOT MEET MANUFACTURERS MINIMUM RECOMMENDATIONS, CONTACT THE ENGINEER.

2 CD-3 — SEWER MAIN OVER CROSSING



NOTES:

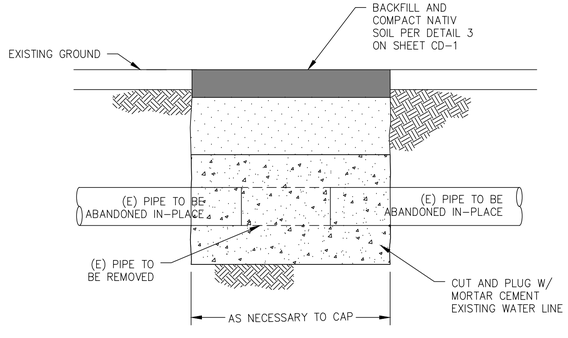
1. EDGE OF EXCAVATION SHOWN FOR ILLUSTRATION PURPOSES ONLY, TRENCH WIDTH MAY VARY.
2. IF THE FIRE HYDRANT HAS PROTECTIVE BOLLARDS THEY ARE TO BE REMOVED AS WELL INCLUDING CONCRETE FOOTING, AND BACKFILLED.

3 CD-3 — FIRE HYDRANT ABANDONMENT

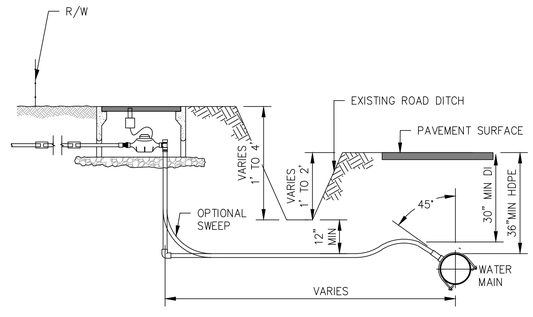
WATER SYSTEM ABANDONMENT NOTES

1. THE CONTRACTOR SHALL CONSTRUCT NEW WATER SYSTEM IMPROVEMENTS. AFTER THE NEW WATER SYSTEM HAS BEEN TESTED AND ACCEPTED BY THE COUNTY OF FRESNO.
2. THE CONTRACTOR SHALL CONNECT ALL NEW WATER SERVICES TO EXISTING LINES PER PLANS AND SPECS.
3. THE CONTRACTOR SHALL ABANDON ALL EXISTING WATER SERVICES PER THIS DETAIL AT THE TIME CONNECTION IS MADE TO THE NEW WATER SYSTEM.

5 CD-3 — WATER SERVICE ABANDONMENT DETAIL



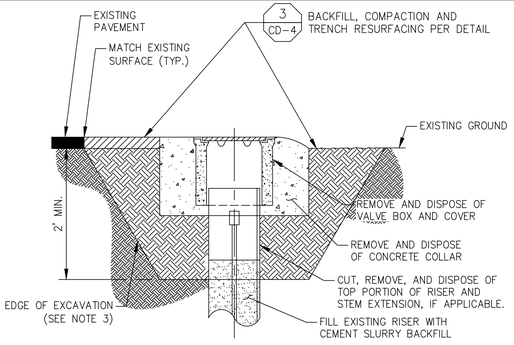
6 CD-3 — PIPE ABANDONMENT DETAIL



NOTES:

1. SEE DETAIL 5 ON SHEET CD-2 FOR MORE INFORMATION ON INSTALLATION.
2. BOULDERS, TREES AND OTHER MISCELLANEOUS FEATURES NOT SHOWN FOR CLARITY.
3. CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY LOCATION WHERE DITCH CROSSING IS NEEDED.

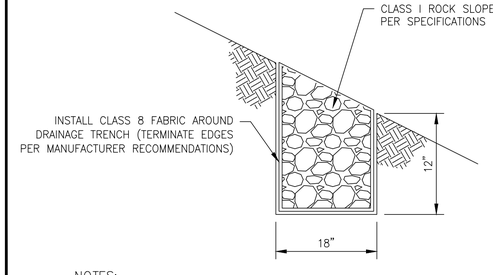
7 CD-3 — 1" WATER SERVICE WITH METER AND METER BOX DITCH CROSSING



NOTES:

1. CONCRETE PLUG SHALL BE PER SPECIFICATIONS.
2. PLUG THICKNESS SHALL BE MINIMUM 2X DIAMETER OF ABANDONED PIPE.
3. EDGE OF EXCAVATION SHOWN FOR ILLUSTRATION PURPOSES ONLY, TRENCH WIDTH MAY VARY.

4 CD-3 — WATER VALVE BOX ABANDONMENT & REMOVAL



NOTES:

1. INSTALL 18"X12" DEEP TRENCH AND FILL WITH CLASS I ROCK SLOPE PROTECTION PER SPECIFICATIONS

8 CD-3 — DRAINAGE TRENCH

	DATE	RECORD DRAWING		SCALE
DESIGNED: KCS	4/4/24	RESIDENT ENGINEER	DATE	
DRAWN: KCS	4/4/24			
CHECKED: SA	4/4/24			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SUPERVISING ENGINEER — 4/4/2024 DATE

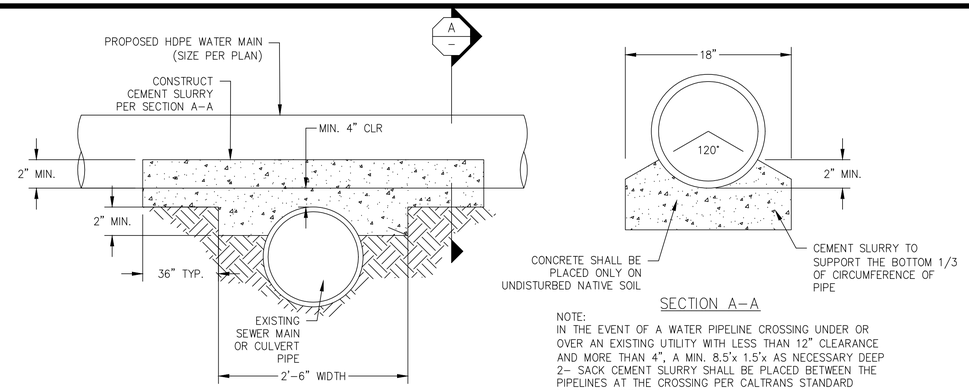
REGISTERED PROFESSIONAL ENGINEER SEBASTIAN T. AMYAY No. C76724 Exp.12/31/24 CIVIL STATE OF CALIFORNIA

PROJECT
CSA 1 - TAMARACK WATER INFRASTRUCTURE REPLACEMENT PROJECT
ROAD NO. - BRIDGE NO.

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING
CONSTRUCTION DETAILS
CD-3
DRAWING NO. 11334 SHEET NO. 18 TOTAL 23

Y:\PROJECTS - CDBG AND OTHER NON R&B PROJECTS\CSA 1 - TAMARACK WATER PIPE - SC1DWRG\PS&ES - EXHIBITS - MAPS\CURRENT SET\SHEETS\432360DTL002.DWG 4/4/2024 11:54 AM - SAN, KEVIN

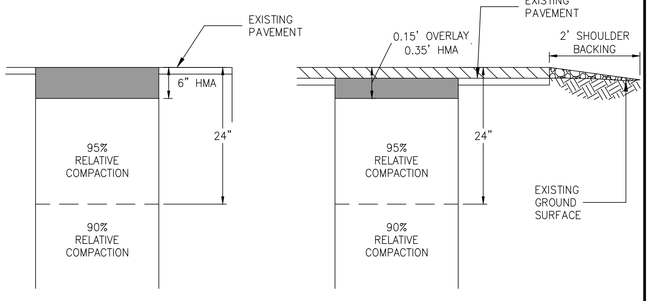


SECTION A–A

NOTE:
IN THE EVENT OF A WATER PIPELINE CROSSING UNDER OR OVER AN EXISTING UTILITY WITH LESS THAN 12" CLEARANCE AND MORE THAN 4", A MIN. 8.5'x 1.5'x AS NECESSARY DEEP 2– SACK CEMENT SLURRY SHALL BE PLACED BETWEEN THE PIPELINES AT THE CROSSING PER CALTRANS STANDARD SPECIFICATIONS SECTION 19.

1 CD–4

CEMENT SLURRY UTILITY CROSSING



A STRUCTURAL SECTION
SCALE: N.T.S.

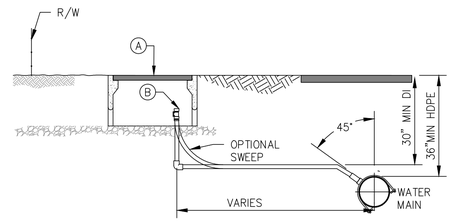
B STRUCTURAL SECTION
SCALE: N.T.S.

NOTE:

1. HMA = HOT MIX ASPHALT PER CONTRACT SPECIFICATION
2. IF THERE IS LESS THAN 2 FEET BETWEEN THE EDGE OF A TRENCH CUT AND A CONCRETE IMPROVEENT, OR EDGE OF PAVING, THEN REMOVE AND REPLACE THE ASPHALT CONCRETE PAVEMENT FROM THE EDGE OF THE TRENCH CUT TO THE CONCRETE IMPROVEMENT, OR EDGE OF PAVING.
3. COMPACT PER CALTRANS STANDARD SPECIFICATIONS SECTION 19. PLACE HMA PER CALTRANS STANDARD SPECIFICATIONS SECTION 39.
4. IF OVERLAY ADDITIVE BID IS AWARDED, STRUCTURAL SECTION B WILL BE INSTALLED. IF NOT AWARDED, STRUCTURAL SECTION A WILL BE INSTALLED.

3 CD–4

TRENCH BACKFILL AND RESURFACING



NOTES:

1. SEE DETAIL 5 ON SHEET CD–2 FOR MORE INFORMATION ON INSTALLATION

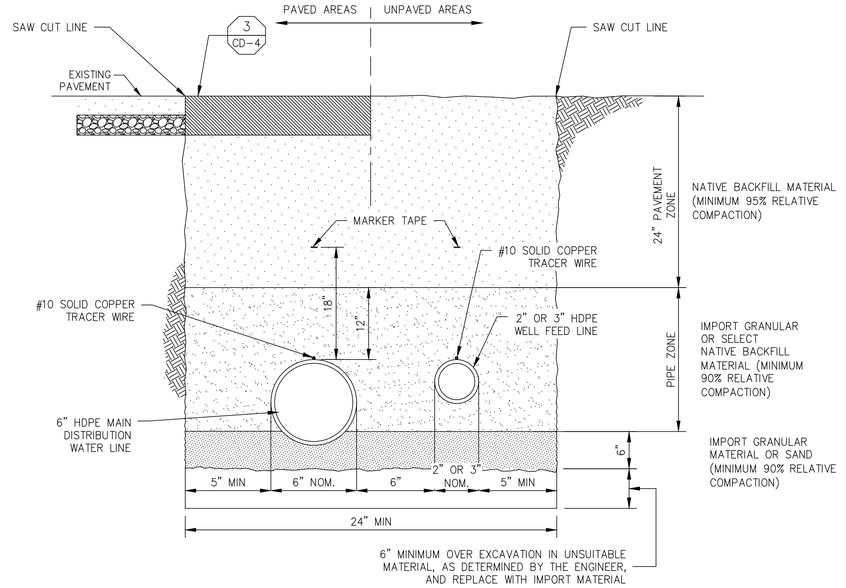
MATERIALS SPECS

(A) BOX: OLDCASTLE B16 OR N16 BOX WITH CAST–IN–CORNER BRACKETS OR APPROVED EQUAL.
LID: NICOR W/ THREAD FOR BADGER ORION OR APPROVED EQUAL. REFER TO SPECS

(B) 1" ANGLE METER STOP: A.Y. McDONALD "NO LEAD" OR APPROVED EQUAL
CAP FOR FUTURE METER CONNECTION

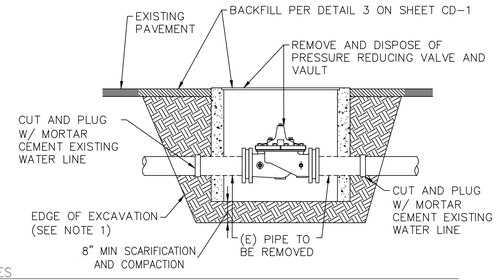
4 CD–4

1" WATER SERVICE INSTALLATION WITH METER BOX FOR EMPTY LOTS



2 CD–4

NEW PIPE DISTRIBUTION MAIN AND WELL # 1 AND 3 FEED LINE



NOTES

1. EDGE OF EXCAVATION SHOWN FOR ILLUSTRATION PURPOSES ONLY, TRENCH WIDTH AND DEPTH MAY VARY.
2. EXISTING PIPE TO BE ABANDONED IN–PLACE.

5 CD–4

PRESSURE REDUCING VALVE AND VAULT REMOVAL

	DATE	RECORD DRAWING		SCALE
DESIGNED: KCS	4/4/24	RESIDENT ENGINEER	DATE	
DRAWN: KCS	4/4/24			
CHECKED: SA	4/4/24			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SUPERVISING ENGINEER — 4/4/2024 DATE

REGISTERED PROFESSIONAL ENGINEER SEBASTIAN T. ARMAT No. C76724 Exp.12/31/24 CIVIL STATE OF CALIFORNIA

PROJECT
CSA 1 - TAMARACK WATER INFRASTRUCTURE REPLACEMENT PROJECT

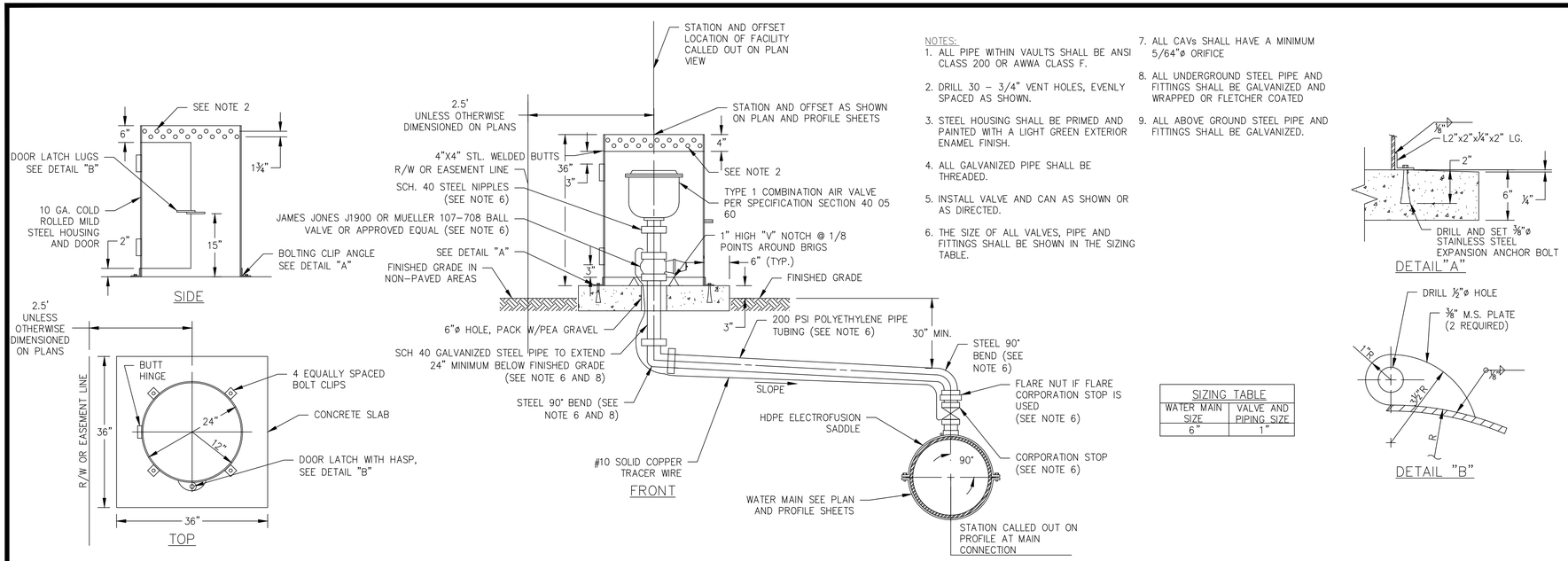
ROAD NO. - BRIDGE NO.

COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING
CONSTRUCTION DETAILS
CD-4

DRAWING NO. 11334 SHEET NO. 19 TOTAL 23

Y:\PROJECTS – CDBG AND OTHER NON R&B PROJECTS\CSA 1 – TAMARACK WATER PIPE – SC1DWRG\PS&ES – EXHIBITS – MAPS\CURRENT SET\SHEETS\432360DTL002.DWG 4/4/2024 11:54 AM – SAN, KEVIN



NOTES:

1. ALL PIPE WITHIN VAULTS SHALL BE ANSI CLASS 200 OR AWWA CLASS F.
2. DRILL 30 – 3/4" VENT HOLES, EVENLY SPACED AS SHOWN.
3. STEEL HOUSING SHALL BE PRIMED AND PAINTED WITH A LIGHT GREEN EXTERIOR ENAMEL FINISH.
4. ALL GALVANIZED PIPE SHALL BE THREADED.
5. INSTALL VALVE AND CAN AS SHOWN OR AS DIRECTED.
6. THE SIZE OF ALL VALVES, PIPE AND FITTINGS SHALL BE SHOWN IN THE SIZING TABLE.
7. ALL CAVs SHALL HAVE A MINIMUM 5/64"ø ORIFICE
8. ALL UNDERGROUND STEEL PIPE AND FITTINGS SHALL BE GALVANIZED AND WRAPPED OR FLETCHER COATED
9. ALL ABOVE GROUND STEEL PIPE AND FITTINGS SHALL BE GALVANIZED.

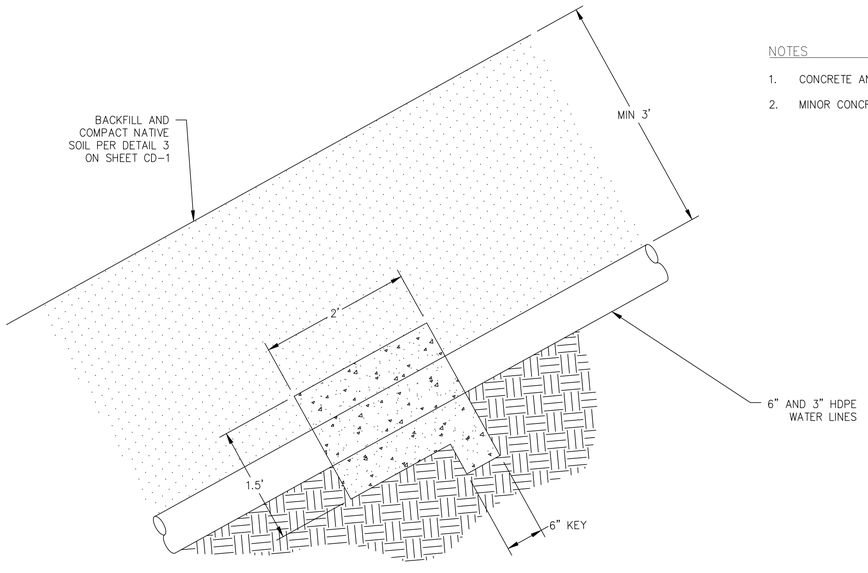
SIZING TABLE	
WATER MAIN SIZE	VALVE AND PIPING SIZE
6"	1"

DETAIL "A"

DETAIL "B"

1 CD-5

COMBINATION AIR VALVE ASSEMBLY



NOTES

1. CONCRETE ANCHOR SHALL BE THE WIDTH OF THE TRENCH (MIN 2 FEET)
2. MINOR CONCRETE SHALL BE INSTALLED PER CALTRANS STANDARD SPECIFICATION SECTION 90

2 CD-5

CONCRETE ANCHOR (WATER LINE D AND E)

Know what's below. Call before you dig.

	DATE	RECORD DRAWING		SCALE
DESIGNED: KCS	4/4/24	RESIDENT ENGINEER	DATE	
DRAWN: KCS	4/4/24			
CHECKED: SA	4/4/24			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SUPERVISING ENGINEER — 4/4/2024 DATE

REGISTERED PROFESSIONAL ENGINEER SEBASTIAN T. ARNTZ No. C76724 Exp.12/31/24 CIVIL STATE OF CALIFORNIA

PROJECT

CSA 1 - TAMARACK WATER INFRASTRUCTURE REPLACEMENT PROJECT

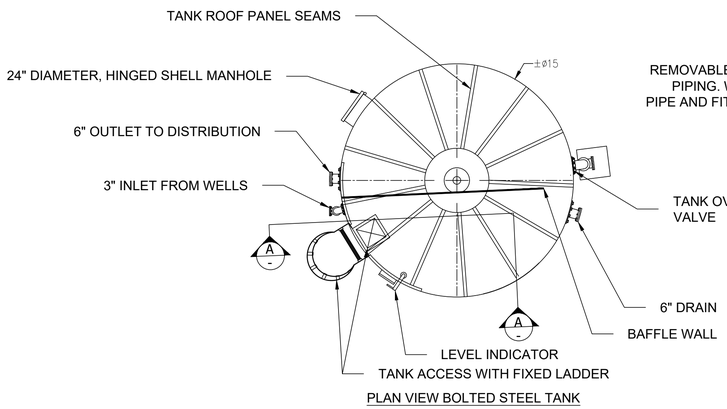
ROAD NO. - BRIDGE NO.

DEPARTMENT OF PUBLIC WORKS AND PLANNING

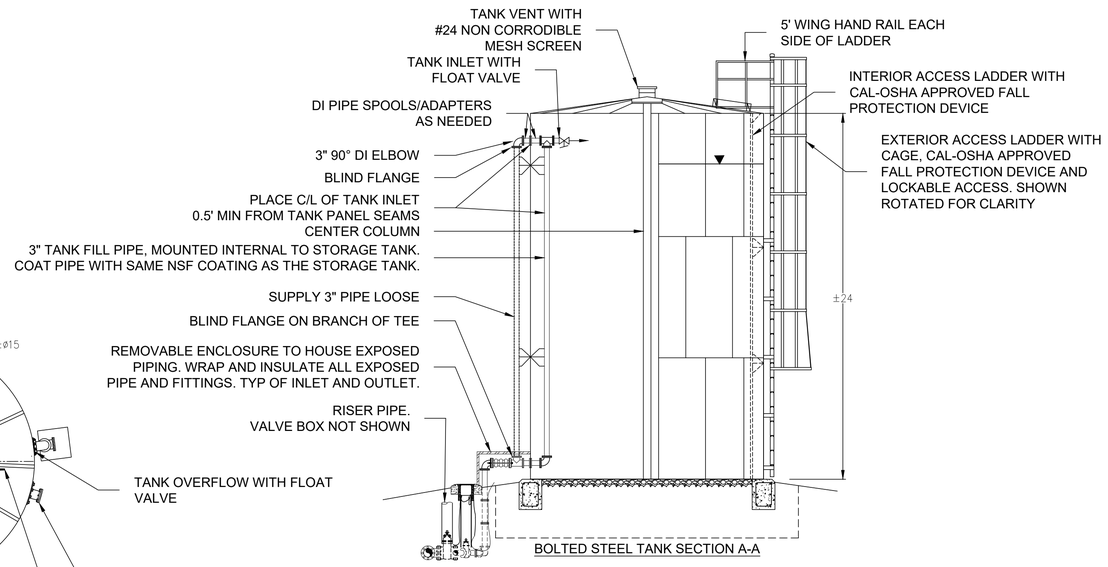
CONSTRUCTION DETAILS
CD-5

DRAWING NO. 11334 SHEET NO. 20 TOTAL 23

Y:\PROJECTS – CDBG AND OTHER NON R&B PROJECTS\CSA 1 – TAMARACK WATER PIPE – SC1DWRG\PS&ES – EXHIBITS – MAPS\CURRENT SET\SHEETS\43236ODTL002.DWG 4/4/2024 11:54 AM – SAN, KEVIN



PLAN VIEW BOLTED STEEL TANK



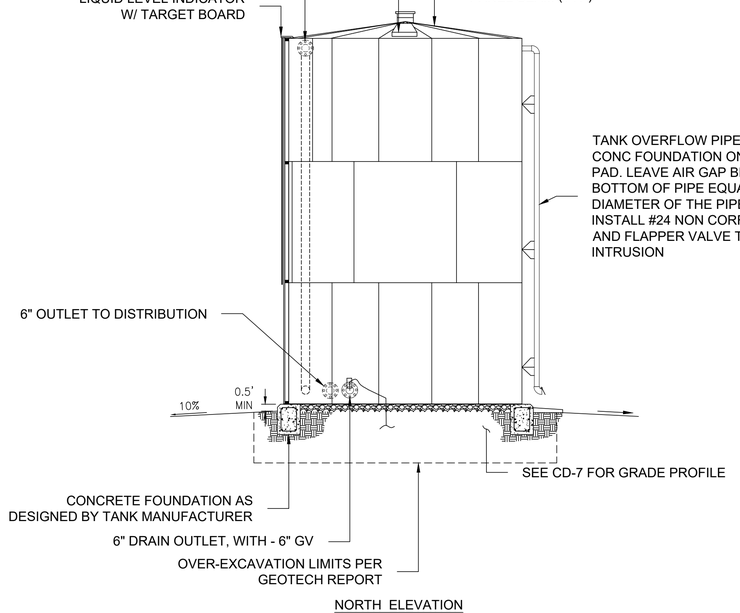
BOLTED STEEL TANK SECTION A-A

REFERENCE NOTES

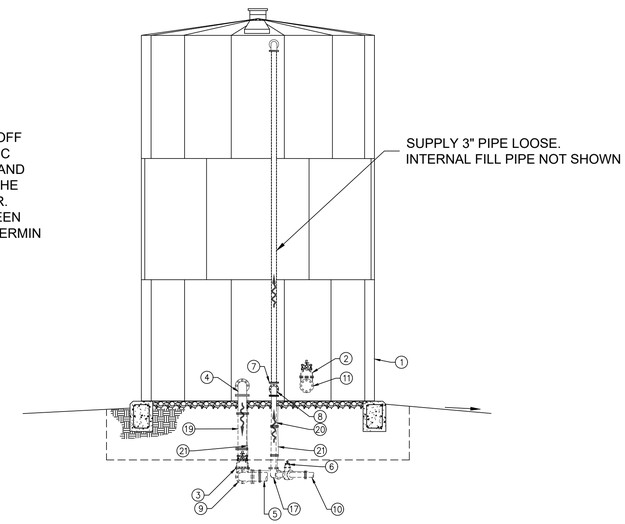
1. INSTALL NEW 30,000 GAL BOLTED WATER STORAGE TANK.
2. (N) 6" DI RESILIENT WEDGE GATE VALVES WITH OPERATOR NUT.
3. (N) UG 6" DI RESILIENT WEDGE GATE VALVE WITH OPERATOR NUT. SEE DETAIL 3/CD-2.
4. (N) 6" DI FLANGED 90° ELBOW.
5. INSTALL NEW UG 6", DR11, C906 HDPE PIPE. SEE SHEET L-6 FOR WATER LINE ALIGNMENT.
6. (N) UG 3" DI RESILIENT WEDGE GATE VALVE WITH OPERATOR NUT. SEE DETAIL 3/CD-2.
7. (N) 3" DI TEE WITH BLIND FLANGE INSTALLED ON BRANCH SIDE.
8. (N) 3" DI FLANGED 90° ELBOW.
9. (N) UG 6" DI MECHANICAL JOINT 90° ELBOW.
10. INSTALL NEW UG 3", DR11, C901 HDPE PIPE. SEE SHEET L-7 FOR WATER LINE ALIGNMENT.
11. (N) 6" DI BLIND FLANGE FOR GATE VALVE.
12. N/A
13. N/A
14. N/A
15. N/A
16. N/A
17. (N) UG 3" DI FLANGED 90° ELBOW.
18. N/A
19. (N) 6" DI PIPE
20. (N) 3" DI PIPE
21. #10 SOLID COPPER TRACER WIRE. TAPE TO PIPE AT 6' OC.

NOTES:

1. ORIENTATION OF TANK ACCESSORIES, INLETS, DRAINS AND OUTLETS ARE DIAGRAMMATIC ONLY. PREFERRED ORIENTATION IS DEPICTED IN CONSTRUCTION DETAILS CD-6.
2. CONNECT BAFFLE WALL TO THE TANK WALL BETWEEN THE TANK INLET AND OUTLET, AND EXTEND A MIN DISTANCE OF ¾ OF THE TANK DIA.
3. EXTEND BAFFLE WALL HEIGHT A MIN OF 0.5' FOOT ABOVE TANK INLET.
4. LOCATE INLET FLOAT VALVE IMMEDIATELY ADJACENT TO THE ACCESS OPENING.
5. SLOPE FG AWAY PER SHEET CD-7.
6. TANK VENT TO BE EQUIPPED WITH #24 MESH, NON-CORRODIBLE SCREEN, PER EPA.
7. ALL CHEMICALS USED IN THE WATER SYSTEM, INCLUDING CHLORINE SHALL BE CERTIFIED UNDER NSF/ANSI STANDARDS 60.
8. ALL MATERIALS THAT COME INTO CONTACT WITH WATER SHALL BE LEAD FREE AND NSF/ANSI STANDARD 61 CERTIFIED TO DEMONSTRATE MATERIAL DOES NOT LEACH ANY CONTAMINANTS INTO THE DRINKING WATER.
9. CONTRACTOR SHALL FOLLOW ALL SITE PREPARATION RECOMMENDATIONS OUTLINED IN THE GEOTECHNICAL REPORT.
10. WRAP AND INSULATE ALL EXPOSED PIPE, FITTINGS, VALVES, DRAINS AND OVERFLOW PIPE.



NORTH ELEVATION



EAST ELEVATION

	DATE	RECORD DRAWING		SCALE
DESIGNED: KCS	4/4/24	RESIDENT ENGINEER	DATE	40 20 0 40
DRAWN: KCS	4/4/24			GRAPHIC SCALE: 1"=40'
CHECKED: SA	4/4/24			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SUPERVISING ENGINEER — 4/4/2024 DATE

REGISTERED PROFESSIONAL ENGINEER SEBASTIAN T. ARNAL No. C76724 Exp.12/31/24 CIVIL STATE OF CALIFORNIA

PROJECT

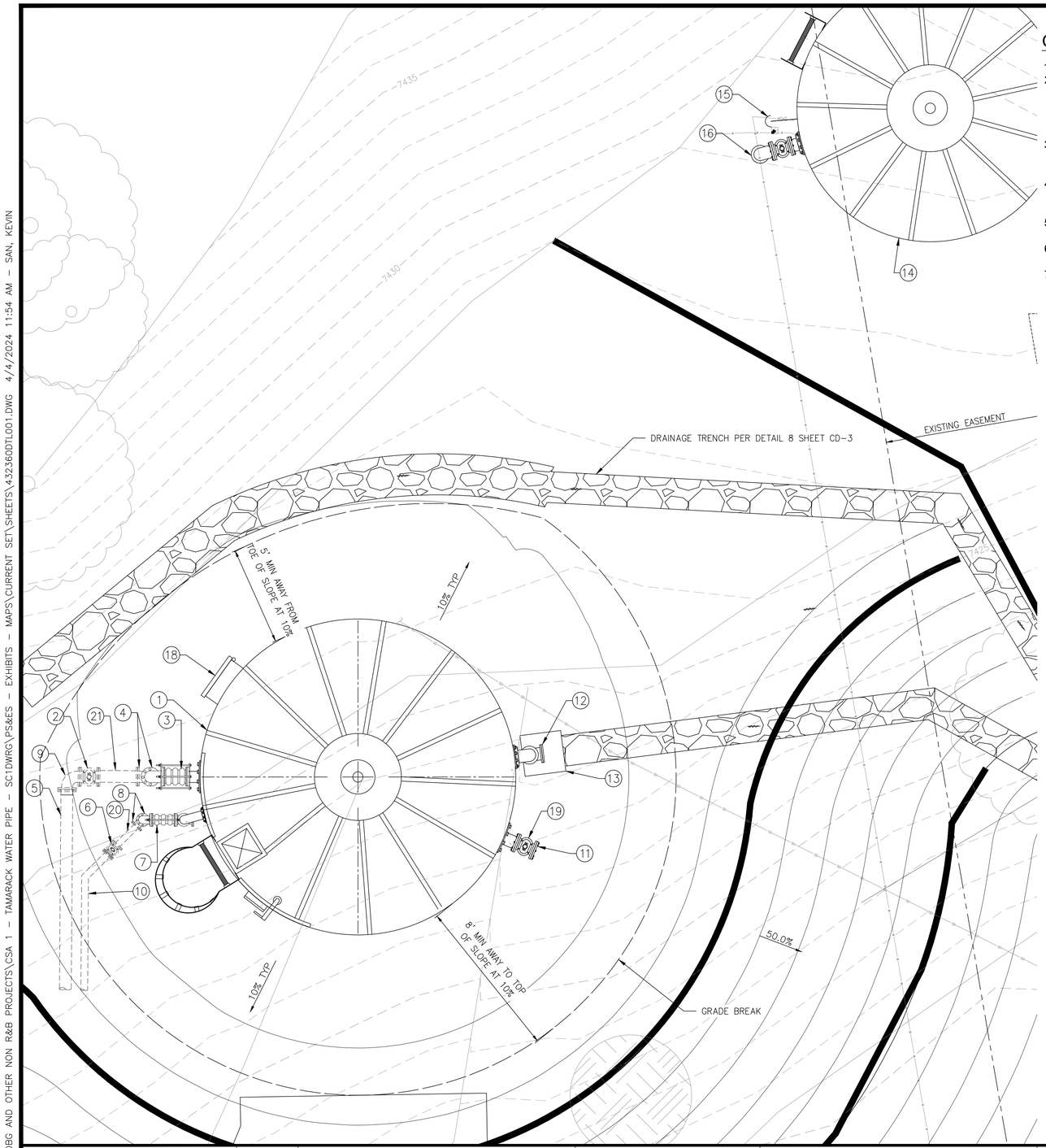
CSA 1 - TAMARACK WATER INFRASTRUCTURE REPLACEMENT PROJECT

ROAD NO. - BRIDGE NO.

DEPARTMENT OF PUBLIC WORKS AND PLANNING

CONSTRUCTION DETAILS CD-6

DRAWING NO. 11334 SHEET NO. 21 TOTAL 23



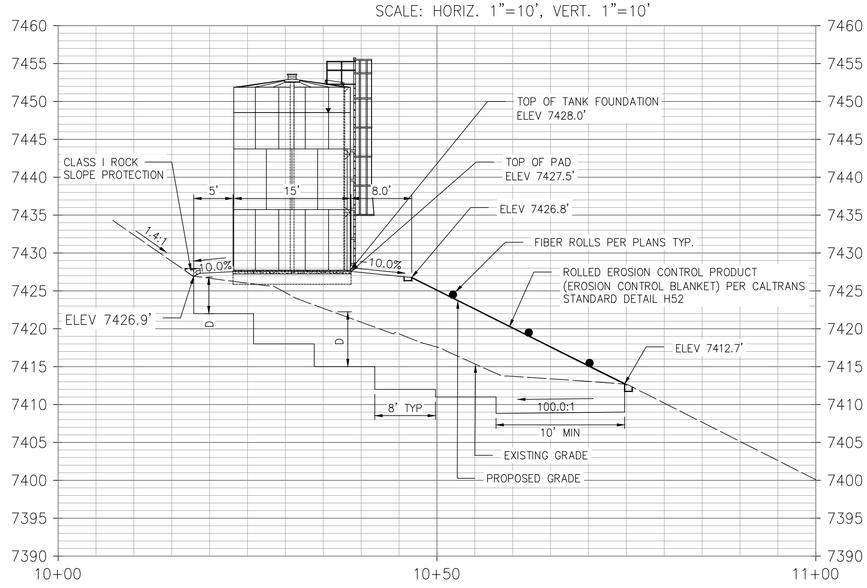
GENERAL NOTES

1. COAT ABOVE GROUND PIPING PER SPECIFICATIONS.
2. CONTRACTOR SHALL VERIFY ACTUAL DIMENSIONS OF PIPING AND EQUIPMENT AND ADJUST PIPING AND EQUIPMENT LAYOUT DIMENSIONS AS NECESSARY. ADJUSTMENTS TO LAYOUT DIMENSIONS SHALL BE APPROVED IN ADVANCE BY THE ENGINEER.
3. CONTRACTOR SHALL TEST THE INSTALLED SYSTEM, INCLUDING STARTUP AND SHUTDOWN, AND STABILITY OF THE WELL PUMPS, MOTORS AND SYSTEM COMPONENTS.
4. CONTRACTOR SHALL FOLLOW ALL SITE PREPARATION RECOMMENDATIONS AS OUTLINED IN THE GEOTECHNICAL REPORT.
5. (N)STORAGE TANK SHALL BE FILLED AND PRELOADED FOR A PERIOD OF THREE (3) WEEKS PER GEOTECHNICAL REPORT.
6. INSULATE ALL EXPOSED PIPE, VALVES, DRAIN LINES, AND OVERFLOW LINES.
7. WRAP ALL UG DI PIPE, VALVES, FITTINGS PER SPECIFICATIONS.

REFERENCE NOTES

1. INSTALL NEW 30,000 GAL BOLTED WATER STORAGE TANK.
2. (N) UG 6" DI RESILIENT WEDGE GATE VALVES WITH OPERATOR NUT. SEE DETAIL 3/CD-2.
3. (N) 6" FLEXIBLE EXPANSION JOINT, NSF61 CERTIFIED THAT ALLOWS 2" LATERAL DEFLECTION.
4. (N) 6" DI FLANGED 90° ELBOW.
5. INSTALL NEW UG 6", DR11, C906 HDPE PIPE. SEE SHEET L-6 FOR WATER LINE ALIGNMENT.
6. (N) UG 3" DI FL X MJ RESILIENT WEDGE GATE VALVE WITH OPERATOR NUT. SEE DETAIL 3/CD-2.
7. (N) 3" FLEXIBLE EXPANSION JOINT, NSF61 CERTIFIED THAT ALLOWS 2" LATERAL DEFLECTION.
8. (N) 3" DI FLANGED 90° ELBOW.
9. (N) UG 6" DI MECHANICAL JOINT 90° ELBOW.
10. INSTALL NEW UG 3", DR11, C901 HDPE PIPE. SEE SHEET L-7 FOR WATER LINE ALIGNMENT.
11. (N) 6" DI BLIND FLANGE FOR GATE VALVE.
12. TANK OVERFLOW WITH #24 MESHED SCREENED OUTLET AND FLAPPER VALVE.
13. TANK OVERFLOW CONCRETE SPLASH PAD. TERMINATES AT DRAIN, SEE DETAIL 8/CD-3.
14. R&D (E) WATER STORAGE TANK; APPROXIMATE 13" DIAMETER.
15. R&D 2" TANK OVERFLOW LINE BETWEEN TANK AND DOWNGRADE TERMINATION POINT.
16. R&D (E) TANK ISOLATION VALVE AND ELBOW. CAP LINE BELOW GRADE AND ABANDON. REMOVE SECTIONS AS NEEDED FOR NEW TANK FOUNDATION AND OVER EXCAVATION LIMITS. REFER TO GEOTECHNICAL REPORT.
17. N/A
18. (N) STORAGE TANK 24" DIAMETER HINGED ACCESS
19. (N) 6" DI RESILIENT WEDGE GATE VALVE WITH OPERATOR NUT.
20. (N) UG 3" DI PIPE SPOOL AS NEEDED.
21. (N) UG 6" DI PIPE SPOOL AS NEEDED.

Water tank cross section – PROFILE
SCALE: HORIZ. 1"=10', VERT. 1"=10'



D = OVER-EXCAVATION FOR TANK TO REMOVE EXISTING FILL SOILS (ENCOUNTERED TO A DEPTH OF 7 FEET BELOW SITE GRADE ON DOWNSLOPE SIDE OF PAD AREA), AND TO AT LEAST 3 FEET BELOW THE BOTTOM OF THE TANK AND FOUNDATIONS, WHICHEVER IS GREATER. ALL AREAS OF EXCAVATION TO BE INSPECTED BY THE GEOTECHNICAL ENGINEER TO VERIFY REMOVAL OF FILLS AND THAT EXCAVATIONS EXTEND INTO SUITABLE UNDISTURBED NATIVE SOILS PRIOR TO SCARIFICATION AND COMPACTION OF THE BOTTOM OF THE EXCAVATIONS.

	DATE	RECORD DRAWING		DATE
DESIGNED: KCS	4/4/24	RESIDENT ENGINEER		
DRAWN: KCS	4/4/24			
CHECKED: SA	4/4/24			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE

40 20 0 40
GRAPHIC SCALE: 1"=40'

SUPERVISING ENGINEER — 4/4/2024 DATE

REGISTERED PROFESSIONAL ENGINEER SEBASTIAN T. ARNAL No. C76724 Exp.12/31/24 CIVIL STATE OF CALIFORNIA

PROJECT

CSA 1 - TAMARACK WATER INFRASTRUCTURE REPLACEMENT PROJECT

ROAD NO. - BRIDGE NO.

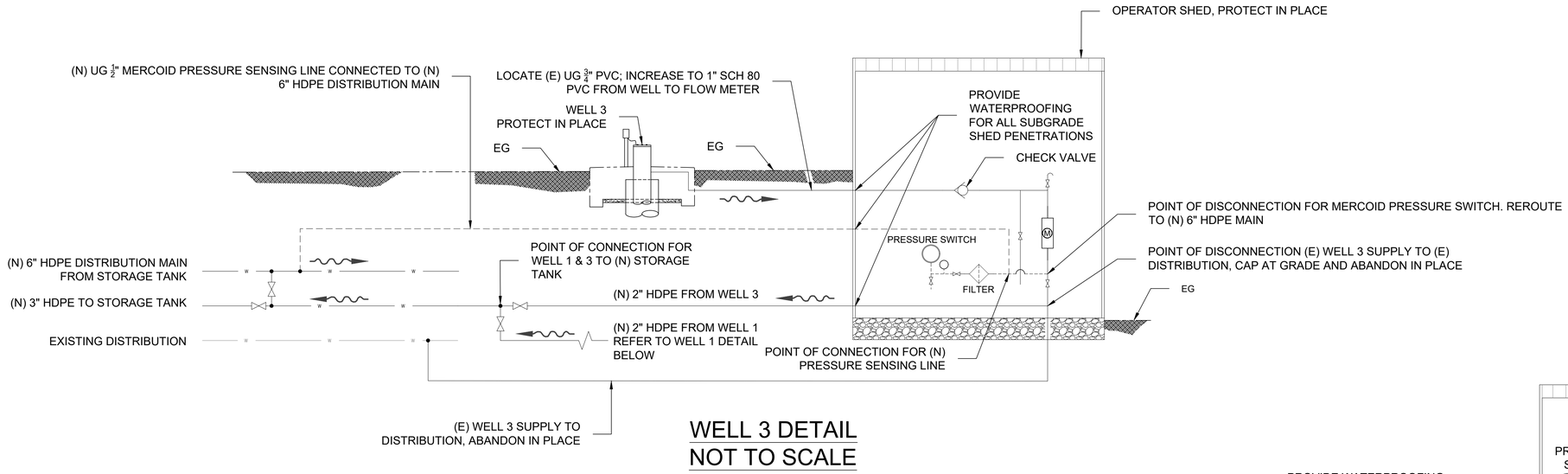
COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

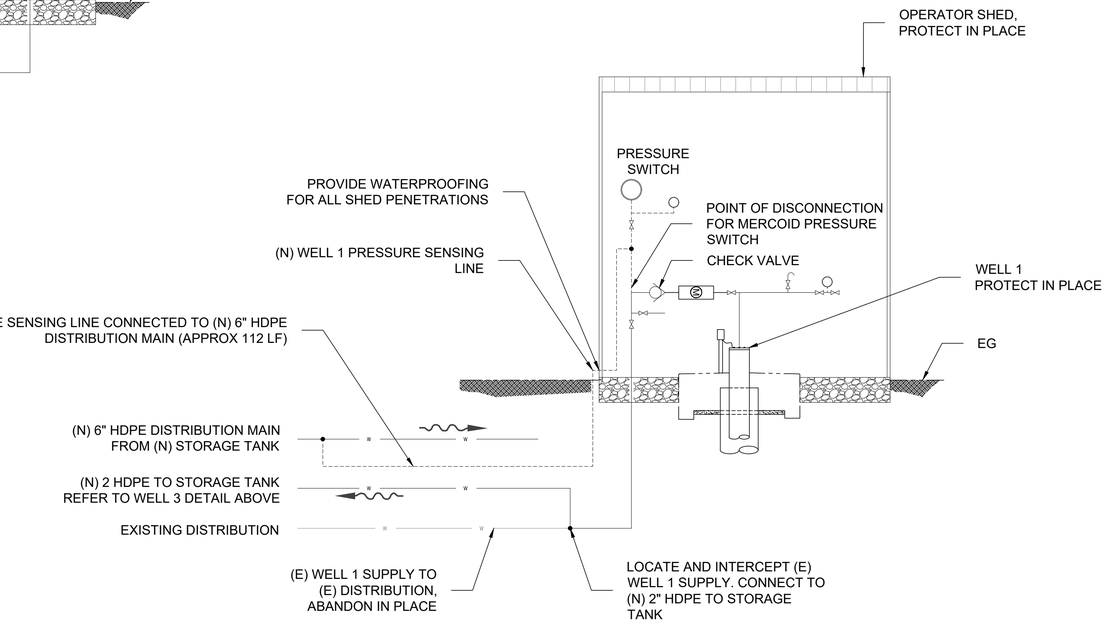
CONSTRUCTION DETAILS
CD-7

DRAWING NO. 11334 SHEET NO. 22 TOTAL 23

Y:\PROJECTS – CDBG AND OTHER NON R&B PROJECTS\CSA 1 – TAMARACK WATER PIPE – SC1DWRG\PS&ES – EXHIBITS – MAPS\CURRENT SET\SHEETS\432360DTL001.DWG 4/4/2024 11:54 AM – SAN, KEVIN



WELL 3 DETAIL
NOT TO SCALE



WELL 1 DETAIL
NOT TO SCALE

GENERAL NOTES

1. DETAILS PROVIDED FOR ILLUSTRATION PURPOSES ONLY. ALL EXISTING CONDITIONS AND IMPROVEMENTS MAY NOT BE SHOWN.
2. CONTRACTOR SHALL VERIFY ACTUAL DIMENSIONS OF PIPING AND EQUIPMENT AND FURNISH PIPING, FITTINGS AND EQUIPMENT AS NECESSARY TO PROVIDE A FULLY OPERATIONAL SYSTEM. CONTRACTOR SHALL SUBMIT PROPOSED EQUIPMENT LAYOUT, INCLUDING MATERIALS PLANNED TO BE USED FOR APPROVAL OF THE ENGINEER.
3. CONTRACTOR SHALL TEST THE INSTALLED SYSTEM, INCLUDING STARTUP AND SHUTDOWN, AND STABILITY OF THE PUMPS, MOTORS AND SYSTEM COMPONENTS.

	DATE	RECORD DRAWING		SCALE
DESIGNED: KCS	4/4/24	RESIDENT ENGINEER	DATE	
DRAWN: KCS	4/4/24			
CHECKED: SA	4/4/24			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SUPERVISING ENGINEER — 4/4/2024 DATE

REGISTERED PROFESSIONAL ENGINEER SEBASTIAN T. ARIAS No. C76724 Exp.12/31/24 CIVIL STATE OF CALIFORNIA

PROJECT
CSA 1 - TAMARACK WATER INFRASTRUCTURE REPLACEMENT PROJECT

ROAD NO. - BRIDGE NO.

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING
CONSTRUCTION DETAILS
CD-8

DRAWING NO. 11334 SHEET NO. 23 TOTAL 23