CITY OF PLEASANTON

PUBLIC WORKS DEPARTMENT, ENGINEERING DIVISION

NEAR-TERM WATER IMPROVEMENTS, CIP NO 24171 & 24173

BID OPENING FEBRUARY 22, 2024

PROJECT IS COMPRISED OF TWO PLAN SETS

TURNOUT #4 - BOOSTER PUMP STATION AND DISCHARGE PIPELINE (F-1 LINE), CIP 24171

BY WOODARD & CURRAN DATED JANUARY 26, 2024

SHEETS 1 THRU 40

SUNOL PIPELINE IMPROVEMENTS, 20-INCH WATER MAIN (F-7 LINE), CIP 24173

BY MARK THOMAS DATED JANUARY 26, 2024

SHEETS 1 THRU 15

CITY ENGINEER



DESCRIPTION

CITY OF PLEASANTON

PUBLIC WORKS DEPARTMENT



NEAR-TERM WATER IMPROVEMENTS	DESIGN:	AN	SCALE: NTS	DWG NO
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CIP 24172 & CIP 24173	TRAFFIC ENGINEER:	МТ	DATE: JAN 27, 2024	

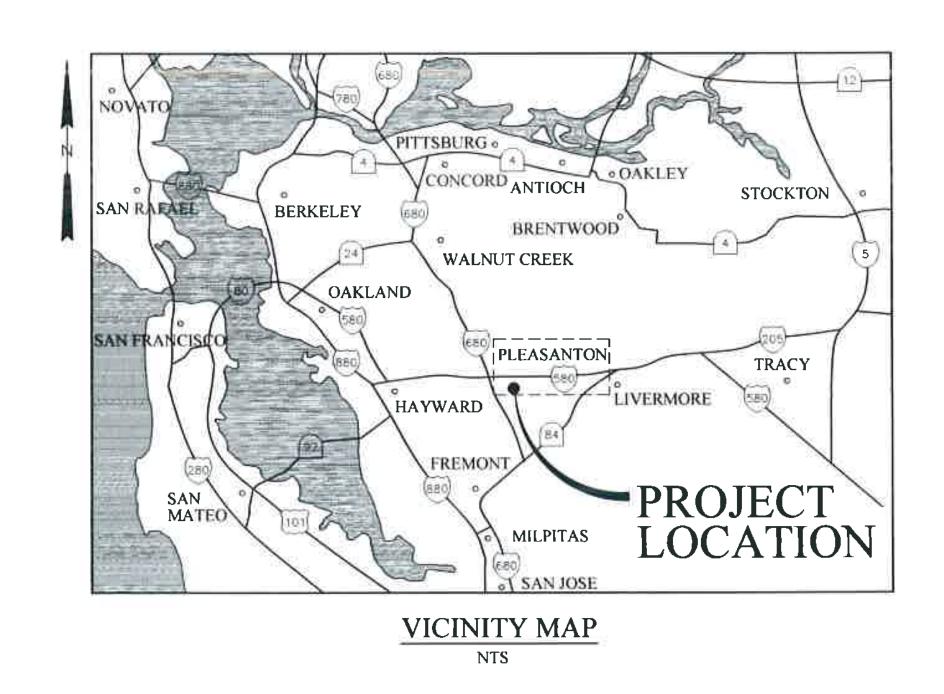
CITY OF PLEASANTON

PUBLIC WORKS DEPARTMENT, ENGINEERING DIVISION

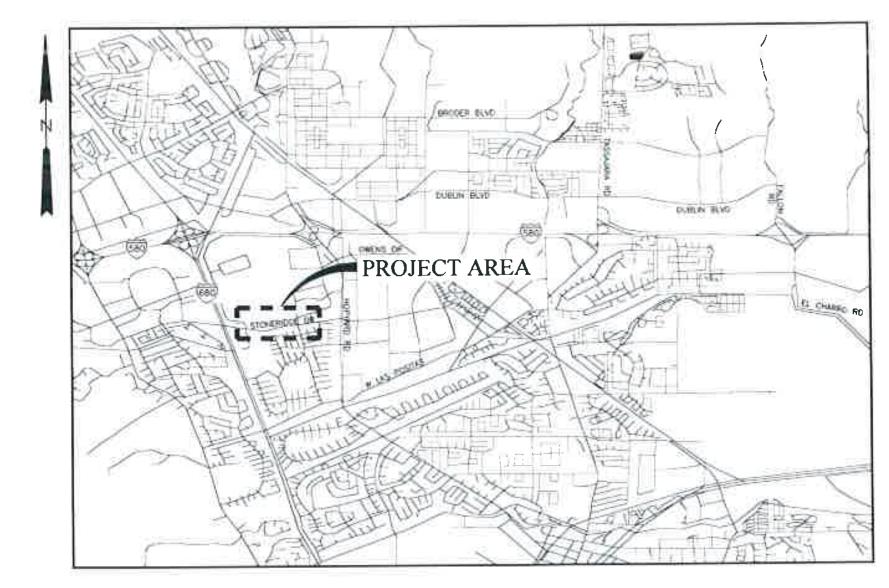
TURNOUT #4 - BOOSTER PUMP STATION AND DISCHARGE PIPELINE (F-1 LINE) JANUARY 2024

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SHEET INDEX

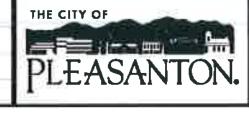


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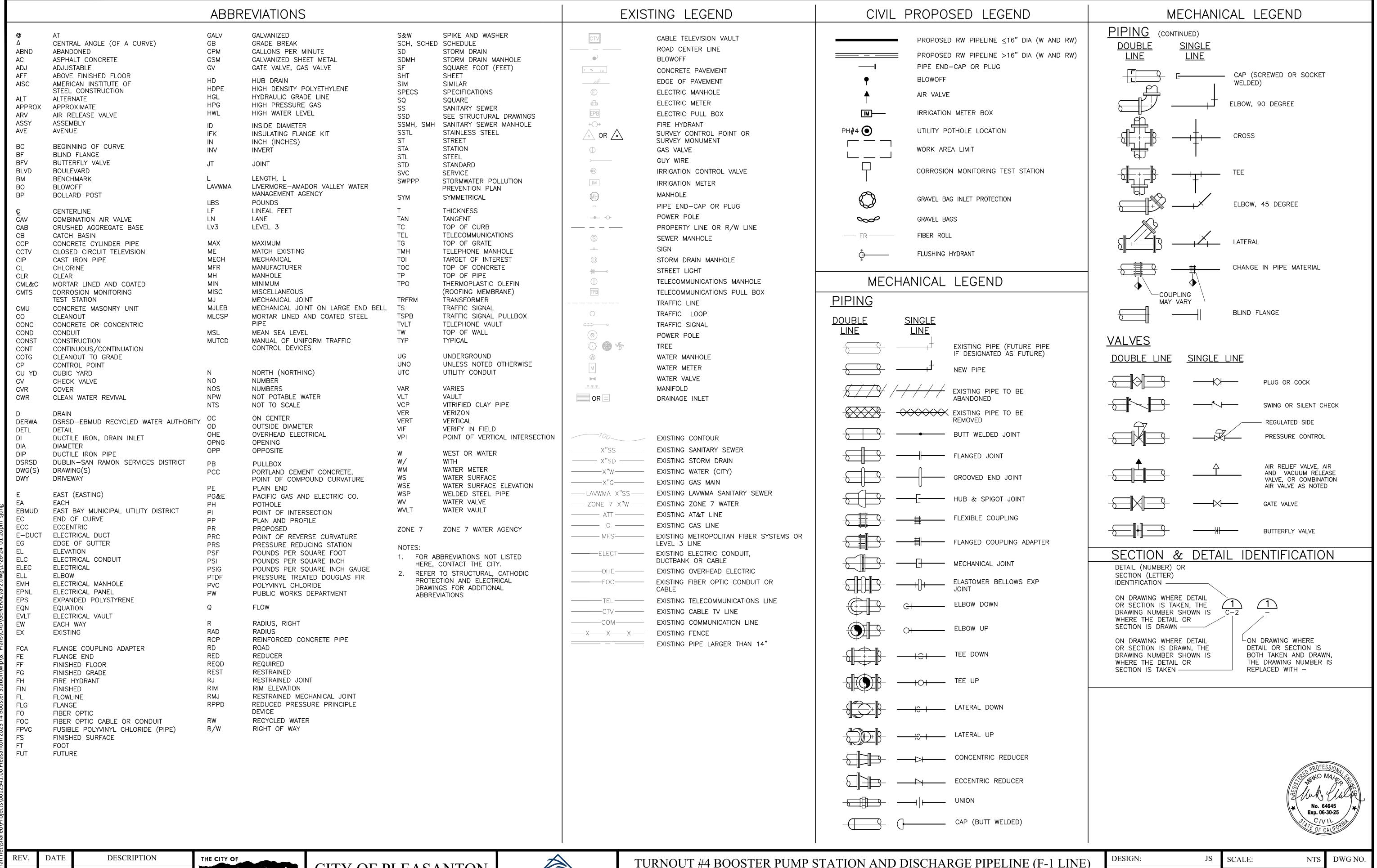
CITY OF PLEASANTON PLEASANTON. PUBLIC WORKS DEPARTMENT

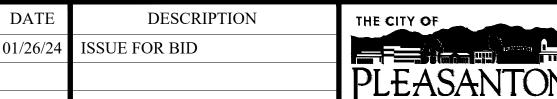


TURNOUT #4 BOOSTER PUMP STATION AND DISCHARGE PIPELINE (F-1 LINE) TITLE SHEET, VICINITY MAP, LOCATION MAP AND SHEET INDEX

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DWG NO CIP-24171 JANUARY 2024











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G-2

GENERAL (SEE G-4 FOR CONTINUATION)

- MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE CONTRACT DOCUMENTS, INCLUDING THE CITY OF PLEASANTON STANDARD SPECIFICATIONS, WHICH ARE AVAILABLE IN THE OFFICE OF THE CITY ENGINEER. THE CITY STANDARD SPECIFICATIONS ARE BASED ON THE 2015 STATE OF CALIFORNIA STANDARD SPECIFICATIONS
- THE CITY ENGINEER'S OFFICE (925-931-5650) SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO SURVEY STAKING ACTIVITIES.
- THE LOCATION AND, WHERE SHOWN, DEPTHS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON AVAILABLE RECORD INFORMATION. THE CONTRACTOR SHALL DETERMINE THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES CROSSING OR WITHIN 5 FEET OF THE PROPOSED PIPELINE ALIGNMENTS. THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION, SEE SPECIAL PROVISIONS FOR ALIGNMENT AND PROFILE VERIFICATION PROCESS.
- AERIAL IMAGERY USED IN THE PLAN DRAWINGS IS PROVIDED FOR REFERENCE AND THE CONVENIENCE OF THE CONTRACTOR. LOCATIONS AND ELEVATIONS OF THE CONSTRUCTED WORK SHALL BE AS INDICATED IN THE CONTRACT DOCUMENTS AND SHALL BE VERIFIED BY THE CONTRACTOR
- FIELD CHANGES SHALL BE APPROVED BY THE CITY PRIOR TO IMPLEMENTING OR AS ORDERED BY THE CITY. NO PAYMENT WILL BE MADE FOR FIELD CHANGES NOT AUTHORIZED BY THE CITY AND THAT UNAUTHORIZED WORK IS SUBJECT TO REMOVAL AS DIRECTED BY THE CITY.
- CONTRACTOR SHALL NOTIFY THE CITY OF INCOMPLETE, INCONSISTENT OR INCORRECT REQUIREMENTS IN THE CONTRACT DOCUMENTS AND SHALL REQUEST CLARIFICATION IN WRITING FROM THE CITY PRIOR TO COMMENCING WORK.
- THE CONTRACTOR SHALL PROVIDE STORM WATER POLLUTION AND CONTROL IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND SPECIAL PROVISIONS.

SAFETY

- THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE THROUGH THE DURATION OF CONSTRUCTION INCLUDING SAFETY OF PERSONS AND PROPERTY, AND FOR OBTAINING NECESSARY CITY REVIEWS OF THE CONDITIONS. THE CITY'S JOB SITE REVIEW DOES NOT RELIEVE CONTRACTOR OF RESPONSIBILITY FOR THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE OR INJURIES RESULTING FROM CONTRACTOR'S OPERATIONS AND/OR MATERIALS AND EQUIPMENT STORED IN STAGING AREAS. THE CITY IS NOT RESPONSIBLE FOR SECURING THE CONTRACTOR'S EQUIPMENT AND WORK SITES.
- NOT ALL UTILITY SERVICE LATERALS ARE SHOWN ON PLANS. THOSE THAT ARE SHOWN MAY NOT BE SHOWN AT THEIR TRUE LOCATIONS. CONTRACTOR SHALL COORDINATE WITH USA TO FIELD LOCATE SERVICE LATERALS AND USE EXTREME CAUTION WHEN WORKING IN THE VICINITY OF GAS, TELECOMMUNICATION AND ELECTRIC SERVICE LINES.
- THE WORK MAY INCLUDE CONFINED SPACE ENTRY, CONTRACTOR SHALL IMPLEMENT OSHA AND OTHER PERTINENT SAFETY AND HEALTH REQUIREMENTS.

EXISTING UTILITIES, BURIED STRUCTURES AND FEATURES

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF EXISTING UTILITIES VIA UNDERGROUND SERVICE ALERT AND TO COMMUNICATE WITH THE APPROPRIATE UTILITY AGENCIES AND POTHOLING PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.



- EXISTING UTILITIES SHOWN ARE SHOWN BASED UPON AVAILABLE RECORD INFORMATION AND ARE APPROXIMATE IN LOCATION AND DEPTH, CONTRACTOR SHALL SUPPORT CROSSING AND PARALLEL EXISTING UTILITIES EXPOSED DURING CONSTRUCTION.
- NOT ALL UTILITY SERVICE LATERALS ARE SHOWN ON THE PLANS. THOSE THAT ARE SHOWN MAY NOT BE SHOWN AT THEIR TRUE LOCATIONS.
- 4. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING ADJACENT TO OVERHEAD AND UNDERGROUND UTILITIES. DAMAGE TO UTILITIES, INCLUDING SERVICES AND LATERALS, RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPORTED IMMEDIATELY TO THE CITY AND UTILITY OWNER, AND SHALL BE IMMEDIATELY REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CITY. COSTS INCURRED BY UTILITY SERVICE INTERRUPTION RESULTING FROM THE CONTRACTOR'S OPERATION SHALL ALSO BE ENTIRELY REIMBURSED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL REMOVE ALL USA MARKINGS BY CLEANING WITH PRESSURE WASHER OR OTHER APPROVED METHOD AT THE COMPLETION OF WORK IN ANY STREET BLOCK.
- CONTRACTOR SHALL COORDINATE WITH OWNERS OF EXISTING UTILITIES WHEN WORKING IN THE VICINITY OF THOSE UTILITIES. SEE THE UTILITY CONTACT TABLE FOR CONTACT PERSONS AND INFORMATION.
- CONTRACTOR SHALL PERFORM WORK IN THE VICINITY OF EXISTING UTILITIES AS SHOWN AND SPECIFIED AND IN CONFORMANCE WITH UTILITY OWNER REQUIREMENTS. EARLY COORDINATION WITH UTILITY OWNERS IS REQUIRED.

POTHOLING

- THE CONTRACTOR SHALL POTHOLE EXISTING UTILITIES THAT MAY BE AFFECTED BY CONSTRUCTION UNDER THIS CONTRACT PRIOR TO SUBMITTING PIPE LAY DRAWINGS TO CITY AND IN ACCORDANCE WITH SPECIAL PROVISIONS. UTILITIES TO BE POTHOLED INCLUDE THOSE THAT CROSS THE PIPELINE ALIGNMENTS TO CONFIRM CLEARANCE BETWEEN THE EXIST UTILITY AND THE PROPOSED WATER LINES AND PARALLEL UTILITIES WITHIN 5 FEET OF THE PROPOSED PIPELINE ALIGNMENT CENTERLINES. THE CONTRACTOR SHALL CLEARLY MARK THE DEPTHS AND HORIZONTAL POSITIONS OF POTHOLED UTILITIES ON THE RECORD DRAWING MARKUP SET, REGARDLESS OF WHETHER THE POTHOLE DATA AGREES OR DISAGREES WITH THE DRAWINGS. THE CONTRACTOR SHALL REPORT POTENTIAL UTILITY CONFLICTS TO THE CITY IMMEDIATELY AFTER THEY ARE DISCOVERED. NO DELAY CLAIMS WILL BE ACCEPTED IF THE APPARENT CONFLICT IS RESOLVED BY THE CITY WITHIN 30 DAYS AFTER IT IS REPORTED.
- NOT ALL EXISTING ELECTRIC UTILITY POLES AND OVERHEAD WIRES ARE SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL LOCATE THESE FACILITIES IN THE FIELD AND MAKE PROVISIONS AS NEEDED TO PERFORM CONSTRUCTION WORK WITHOUT DAMAGE TO EXISTING FACILITIES. SEE SPECIAL PROVISIONS.

PUBLIC AGENCIES & UTILITIES

	CONTACTS LIST		
ORGANIZATION	CONTACT	Phone	Email
AT&T	DAMAGE PREVENTION	(510) 645-2929	pb1419@att.com
COMCAST	STEVE BELLUZZI	(925) 232-3413	steven_belluzzi@comcast.com
DERWA	CORINNE FERREYA	(925) 875-2298	ferreya@dsrsd.com
DUBLIN SAN RAMON SERVICES DISTRICT	CLINT BYRUM	(925) 570-8916	byrum@dsrsd.com
HACIENDA OWNERS ASSOCIATION	JAMES PAXSON	(925) 734-6510	james@hacienda.org
LIVERMORE AMADOR VALLEY WATER MANAGEMENT	JUSTIN LANKFORD	(925) 570-4071	lankford@dsrsd.com
MCI-VERIZON	VICTORWOOD	(800) 624-9675	victor.s.wood@one.verizon.com
PG&E	DOUG COLE	(510) 363-6482	D9CJ@pge.com
ZONE 7 WATER AGENCY (FLOOD)	ALFONZO YASONIA	(925) 454-9509	ayasonia@zone7water.com

COORDINATION

- 1. WORK AREA LIMITS: THE CONTRACTOR SHALL CONTAIN ITS OPERATIONS WITHIN THE PUBLIC RIGHT-OF-WAY AND SITE WORK AREA LIMITS SHOWN AND IN ACCORDANCE WITH THE CONDITIONS OF ITS ENCROACHMENT PERMIT(S).
- 2. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO EACH CITY AFFECTED BY THE WORK AND SHALL IMPLEMENT TRAFFIC CONTROL COORDINATED WITH TRAFFIC CONTROL PLAN AND IN ACCORDANCE WITH THE SPECIFICATIONS AND EACH CITY'S ENCROACHMENT PERMIT REQUIREMENTS.
- 3. OVERNIGHT PARKING OF CONSTRUCTION EQUIPMENT IN THE PUBLIC RIGHT-OF-WAY SHALL NOT BE PERMITTED, EXCEPT AT LOCATION(S) APPROVED BY THE CITY.
- 4. THE CONTRACTOR SHALL NOTIFY, BY CIRCULAR, ALL BUSINESS ESTABLISHMENTS AND RESIDENCES LOCATED IN AREAS AFFECTED BY THE WORK AT LEAST 2 WEEKS, FORTY-EIGHT (48) HOURS, AND IMMEDIATELY PRIOR TO START OF CONSTRUCTION IN A PARTICULAR AREA. THE CIRCULAR SHALL INCLUDE EXPECTED DATES OF THE WORK AFFECTING THAT PROPERTY, CONTACT INFORMATION FOR THE GENERAL CONTRACTOR, AND A BRIEF DESCRIPTION OF THE WORK. CIRCULAR SHALL BE SUBJECT TO THE APPROVAL OF THE CITY.
- 5. THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING FOR REQUIRED INSPECTIONS. THE PRESENCE OR ABSENCE OF THE INSPECTOR WILL NOT RELIEVE THE CONTRACTOR OF FULL RESPONSIBILITY FOR THE PROPER PERFORMANCE
- 6. CONTRACTOR SHALL COORDINATE ITS WORK PLANS AND SCHEDULE WITH POLICE DEPARTMENT, FIRE DEPARTMENT, SCHOOL DISTRICT AND TRANSIT AGENCIES.

EXCAVATION AND PAVEMENT RESTORATION

- 1. CONTRACTOR SHALL REFER TO THE PROJECT GEOTECHNICAL ENGINEERING REPORT BY BSK ASSOCIATES DATED MONTH 20XX FOR INFORMATION ON PROJECT AREA SUBSURFACE CONDITIONS. A COPY OF THIS REPORT IS INCLUDED AS AN APPENDIX TO THE SPECIFICATIONS.
- 2. CONSTRUCTION VEHICLES AND EQUIPMENT USED ON THIS PROJECT SHALL BE SELECTED TO MINIMIZE DAMAGE TO THE EXISTING PAVEMENT ALONG THE PROJECT SITE AND TO ROADS USED AS TRUCK ROUTES TO BRING MATERIAL AND EQUIPMENT TO THE PROJECT. THE CONTRACTOR SHALL REPLACE A.C. PAVEMENT THAT IS DAMAGED BY THE CONTRACTOR'S ACTIVITIES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AT NO ADDITIONAL COST TO THE CITY.
- 3. PAVEMENT SHALL BE SAW CUT PRIOR TO INSTALLATION OF PAVEMENT PATCH. ROUGH EDGES THAT DEVELOP DURING CONSTRUCTION SHALL BE SAW CUT BACK TO UNDAMAGED PAVEMENT PRIOR TO INSTALLATION OF PAVEMENT PATCH. ADDITIONAL TRENCH WIDTH BEYOND THE MAXIMUM SHOWN ON THE PLANS (SEE TRENCH STANDARD DETAIL) SHALL BE BACKFILLED AND PAVED AT NO ADDITIONAL COST TO THE CITY.
- 4. TRENCHES AND EXCAVATIONS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE APPLICABLE SECTIONS OF CALIFORNIA AND FEDERAL OSHA REQUIREMENTS AND OTHER APPLICABLE SAFETY ORDINANCES. CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR TRENCH AND EXCAVATION SHORING DESIGN AND INSTALLATION.
- 5. CONTRACTOR SHALL PERFORM ITS CONSTRUCTION AND OPERATIONS IN A MANNER THAT WILL NOT ALLOW HARMFUL POLLUTANTS TO ENTER THE STORM DRAIN SYSTEM AND CREEKS. TO ENSURE COMPLIANCE, THE CONTRACTOR SHALL IMPLEMENT THE APPROPRIATE BEST MANAGEMENT PRACTICES (BMP) AS OUTLINED IN STORM WATER BEST MANAGEMENT PRACTICES HANDBOOK, ISSUED BY THE CALIFORNIA STORM WATER QUALITY ASSOCIATION (CASQA). EROSION CONTROL METHODS SHALL BE IMPLEMENTED BY THE CONTRACTOR AT DISTURBED UNPAVED AREAS.
- 6. SURPLUS AND UNSUITABLE MATERIAL SHALL BE REMOVED FROM PUBLIC RIGHT-OF-WAY AND PROJECT SITE, AND PROPERLY DISPOSED OF BY THE CONTRACTOR.
- 7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REPLACE STREET MONUMENTS OR LOT CORNER PIPES DISTURBED DURING THE PROCESS OF CONSTRUCTION. IF A STREET MONUMENT HAS THE POTENTIAL OF BEING DISTURBED THE MONUMENT SHALL BE SURVEYED TO LOCATE PRECISELY PRIOR TO WORK AND A CORNER RECORD SHALL BE FILED WITH THE COUNTY SURVEYOR (PER SECTION 8773.2 OF THE PUBLIC LAND SURVEYORS ACT) AS REQUIRED BY THE SUBDIVISION MAP ACT TO PRESERVE THE LOCATION OF SAID STREET MONUMENT OR CORNER PIPE. CONTRACTOR SHALL, AT ITS EXPENSE, HIRE A CALIFORNIA LICENSED PROFESSIONAL LAND SURVEYOR TO PERFORM THE WORK.
- DIMENSIONS FOR EXISTING STRUCTURES ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND CONDITIONS AND REPORT DISCREPANCIES TO THE AND ENGINEER AT LEAST 5 DAYS IN ADVANCE OF CONSTRUCTION IN THE AREA. SPOT ELEVATIONS IN THE PLAN VIEW SHALL TAKE PRECEDENCE OVER A GRADE LINE SHOWN IN A PROFILE, THOUGH BOTH ARE APPROXIMATE.
- THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS NOT DESIGNATED FOR DEMOLITION OR REMOVAL AND REPLACEMENT. DAMAGED EXISTING IMPROVEMENTS AND THOSE IMPROVEMENTS THAT HAVE BEEN REMOVED OR TEMPORARILY RELOCATED SHALL BE RESTORED BY THE CONTRACTOR TO A CONDITION EQUAL TO OR BETTER THAN ITS CONDITION PRIOR TO CONSTRUCTION. IMPROVEMENTS DESIGNATED FOR DEMOLITION SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. DURING THE CONSTRUCTION PERIOD, DAMAGE TO THE ADJACENT IMPROVEMENTS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CITY AND TO THE SATISFACTION OF THE CITY.
- 10. MAINTENANCE OF WORK SITE: THE CONTRACTOR SHALL KEEP THE STREET AND WORK SITE CLEAN AND FREE FROM RUBBISH AND DEBRIS. THIS REQUIRES PREVENTING SPILLAGE ON HAUL ROUTES, CLEANING UP SPILLAGE, SWEEPING STREETS OF MUD, DIRT AND DEBRIS THAT ARE A RESULT OF THE CONTRACTOR'S WORK, AND KEEPING THE WORK SITE IN A CLEAN AND NEAT APPEARANCE. SPILLAGE ON HAUL ROUTES SHALL BE IMMEDIATELY REMOVED AND CLEANED UP. WHEN ORDERED BY THE CITY, THE CONTRACTOR SHALL CLEAN UP THE WORK SITE IMMEDIATELY AFTER RECEIVING NOTICE.
- 11. CONTRACTOR SHALL BACKFILL TRENCHES TO GRADE AND/OR COVER TRENCHES WITH TRAFFIC PLATES AT THE END OF EACH DAY. TRAFFIC PLATES SHALL HAVE NON-SKID COATING. TRENCH PLATES SHALL ALSO BE ANCHORED TO PREVENT SHIFTING AND WEDGED TO MINIMIZE RATTLING AND NOISE. CUTBACK SHALL BE PROVIDED AROUND THE TRENCH PLATES AS NEEDED TO PREVENT TIRE DAMAGE.
- 12. NO MORE THAN 200 FEET OF TRENCH MAY BE COVERED WITH TRENCH PLATES AT ANY ONE LOCATION UNLESS APPROVED BY CITY OR NOTED OTHERWISE.
- 13. CONTRACTOR SHALL PROVIDE K-RAIL AND CHAINLINK FENCING AROUND JACKING AND RECEIVING SHAFTS. K-RAIL AND FENCE SHALL CONFORM TO THE STATE STANDARD PLANS AND SPECIFICATIONS. 24-HOUR FLASHING TRAFFIC BARRICADE LIGHTS SHALL BE PLACED AT THE ENDS OF ALL K-RAILS. FENCE FACING THE PUBLIC SHALL HAVE A SIGN STATING "DANGER-KEEP OUT". SIGNAGE SHALL BE COORDINATED WITH PREPARED TRAFFIC PLANS AS NEEDED. BARRICADES AND FENCING AROUND JACKING AND RECEIVING PITS MAY BE LEFT IN PLACE OVERNIGHT.
- 14. CONTRACTOR SHALL PROVIDE DUST CONTROL DURING CONSTRUCTION. DUST CONTROL SHALL BE AS REQUIRED IN THE CONTRACT SPECIFICATIONS. DUST CONTROL OPERATIONS SHALL NOT RESULT IN DUST DEPOSITION ON ADJACENT PROPERTIES. ANY DAMAGE TO EXISTING PROPERTIES IS RESPONSIBILITY OF CONTRACTOR.
- 15. CONTRACTOR SHALL REPLACE PAVEMENT MARKERS, MARKINGS AND STRIPES DAMAGED OR DISTURBED DURING CONSTRUCTION. SEE SPECS.
- 16. CONTRACTOR SHALL REPLACE DETECTOR LOOPS DAMAGED DURING CONSTRUCTION OR AS SHOWN.

TRAFFIC CONTROL

- CONTRACTOR SHALL IMPLEMENT TRAFFIC CONTROL AS DESCRIBED IN THE SPECIAL PROVISIONS AND MEETING THE REQUIREMENTS OF THE MUTCD AND THE CITY ENCROACHMENT PERMIT. SEE SPECIAL
- CONTRACTOR SHALL CONDUCT ITS OPERATIONS TO ALLOW TRAFFIC TO PASS IN BOTH DIRECTIONS AS SPECIFIED AND REQUIRED IN THE ENCROACHMENT PERMIT. AT INTERSECTIONS, TRAFFIC CONTROL PLANS SHALL PROVIDE FOR THROUGH, LEFT AND RIGHT TURNS MOVEMENTS IN EACH DIRECTION.
- TRAFFIC CONTROL PLANS SHALL INCLUDE PROVISIONS FOR DRIVEWAY ACCESS, PEDESTRIANS, BICYCLISTS AND AMERICANS WITH DISABILITIES ACT REQUIREMENTS.

ACCESS AND STAGING

- 1. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION HAUL ROUTE PLAN TO THE CITY FOR REVIEW AND APPROVAL PRIOR TO COMMENCING CONSTRUCTION.
- 2. THE CONTRACTOR SHALL RESTORE ALL AREAS AFFECTED BY CONSTRUCTION TO THEIR ORIGINAL OR BETTER CONDITION AS DETERMINED BY THE CITY EXCEPT WHERE SHOWN OTHERWISE. LANDSCAPE PLANTINGS AND IRRIGATION COMPONENTS DISTURBED OR DAMAGED BY CONTRACTOR ACTIVITY, SHALL BE REPAIRED OR REPLACED IN ACCORDANCE WITH CITY STANDARD SPECIFICATIONS. TO THE SATISFACTION OF THE CITY WITHIN 24 HOURS.

PIPELINE INSTALLATION

- 1. PIPE SHALL BE INSTALLED WITH A MINIMUM COVER OF 42" AND UP TO 54" FROM THE FINISHED GROUND SURFACE, UNLESS NOTED OTHERWISE.
- 2. THE CONTRACTOR SHALL INSTALL THRUST RESTRAINT COMPONENTS AT ALL FITTINGS AND BENDS. REFER TO SPECIAL PROVISIONS.
- HORIZONTAL ANGLES AND CURVES: WHERE THE PIPELINE HAS HORIZONTAL CURVES, CURVE DATA IS PROVIDED. THE CONTRACTOR SHALL DEFLECT JOINTS TO THE EXTEND ALLOWED OR PROVIDE FITTINGS AND/OR SHORTEN PIPE SEGMENTS SO THAT PIPELINE ALIGNMENT AND TRENCHING T-CUT IS WITHIN THE EXISTING TRAFFIC LANE WHEN THE PIPELINE LOCATED WITHIN THE STREET, OR NO MORE THAN 3.5 FEET FROM THE SPECIFIED ALIGNMENT IF LOCATED OUTSIDE OF A STREET. WHERE THE CONTRACTOR SHORTENS INDIVIDUAL PIPE SEGMENTS TO ACHIEVE CURVES OF A SMALLER RADIUS THAN WHAT STANDARD PIPE SEGMENT LENGTHS AND ALLOWABLE JOINT DEFLECTIONS ALLOW, THE LENGTHS OF SHORTENED PIPE SEGMENTS THROUGHOUT THE CURVE SHALL BE EQUAL. WHERE CURVES OR ANGLES MUST BE ACCOMPLISHED WITH FITTINGS TO STAY WITHIN EXISTING TRAFFIC LANE WIDTH OR 3.5 FEET OF THE SPECIFIED PIPELINE ALIGNMENT OUTSIDE OF STREETS, THE CONTRACTOR SHALL USE RESTRAINED JOINTS FOR PIPE ON BOTH SIDES OF THE FITTING.
- UTILITY CLEARANCE: UNLESS OTHERWISE INDICATED, ADJUST PIPELINE PROFILE TO PROVIDE MIN 12" VERTICAL CLEARANCE AT UNDERGROUND UTILITY CROSSINGS. PROVIDE MINIMUM 4' HORIZONTAL CLEARANCE FROM POTABLE WATER LINES.
- LOCATIONS OF ANGLE POINTS, VALVES, SERVICES, COMBINATION AIR VALVE TAP AND VALVE BOXES, BLIND FLANGES, AND SIMILAR FEATURES ALONG THE RECYCLED WATER PIPELINE SHALL BE DOCUMENTED BY THEIR NORTHING AND EASTING COORDINATES TO THE SAME LEVEL OF ACCURACY AS PROVIDED IN THESE CONTRACT DRAWINGS IN THE CONTRACTOR'S RECORD DRAWINGS TO FACILITATE LOCATING THESE FEATURES IN THE FUTURE.
- RECORD DRAWINGS: THE CONTRACTOR SHALL KEEP COMPLETE AND ACCURATE RECORD DRAWINGS OF THE WORK, UTILITY POTHOLE DATA AND EXISTING CONDITIONS THAT HAVE CHANGED OR ARE DIFFERENT THAN SHOWN ON THE PLANS. UPON COMPLETION OF THE WORK, THE CONTRACTOR'S RECORD DRAWINGS SHALL BE SUBMITTED TO THE AND ENGINEER MANAGER FOR REVIEW AND COMMENT.
- 7. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT IN PLACE EXISTING IMPROVEMENTS DURING CONSTRUCTION. IF THESE IMPROVEMENTS ARE DISTURBED, CONTRACTOR SHALL REPLACE AND/OR RESTORE TO PRE-CONSTRUCTION CONDITION OR BETTER TO THE CITY'S SATISFACTION.
- 8. CONTRACTOR SHALL PROVIDE TEMPORARY BUS STOP FACILITIES WHEN BLOCKING ACCESS TO EXISTING STOPS.
- CONTRACTOR SHALL PLACE UTILITY BOXES AND ASSOCIATED PIPING AT LOCATIONS AS INDICATED ON DRAWINGS. IF A CONFLICT EXISTS, CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CITY AND WORK TO RELOCATE UTILITY BOX AND ASSOCIATED PIPING IN THE GENERAL VICINITY AS SHOWN ON THE DRAWINGS.
- 10. THERE ARE LARGE TREES LOCATED ALONG ROADWAYS WHERE THE PIPELINE IS TO BE INSTALLED. CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION MEDIANS WALK WITH THE CITY AND ITS ARBORIST TO DETERMINE WHICH TREES AND WHICH SPECIFIC TREE BRANCHES MAY BE TRIMMED IN ORDER TO PERFORM THE WORK.
- 11. TRACER WIRE AND LOCATOR STATIONS SHALL BE PROVIDED FOR ALL NON METAL PIPELINES AND SERVICES/LATERALS.
- 12. PRIOR TO STAKING AND INITIAL SAWCUT FOR PIPE TRENCH, CONTRACTOR SHALL VALIDATE THE ALIGNMENT AND PROFILE AS REQUIRED IN THE SPECIAL PROVISIONS.
- 13. CONTRACTOR SHALL PROVIDE CATHODIC PROTECTION TO ALL FERROUS PIPE MATERIAL IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND CITY STANDARDS.
- 14. GROUNDWATER MAY BE ENCOUNTERED WITHIN 5 FEET OF SURFACE, AND DEPTH MAY VARY. THE CONTRACTOR IS RESPONSIBLE FOR DEWATERING ALL EXCAVATIONS TO DEPTHS 2 FEET BELOW PIPE INVERT. REFER TO GEOTECHNICAL REPORT AND PROJECT SPECIAL PROVISIONS AND SPECIFICATIONS.



G-3

REV.	DATE	DESCRIPTION	THE CITY OF
A	01/26/24	ISSUE FOR BID	
			PLEASANTO







DESIGN: DRAWN: CHECKED: GENERAL NOTES, BENCH MARK, BASIS OF BEARINGS AND PUBLIC AGENCIES & UTILITIES

SCALE NTS **DWG NO** PROJECT NO.: CIP-2417 DATE:

JANUARY 2024 3 OF 40



PROJECT CONTROL

BASIS OF BEARINGS:
THE PROJECT GRID COORDINATES ARE BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD83). CALIFORNIA COORDINATE SYSTEM ZONE 3.

BASIS OF ELEVATIONS:
THE PROJECT ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAD88 (GEOID 12B).

CONTROL POINT LIST

POINT#	NORTHIN	EASTING	ELEVATIO	DESCRIPT	NOT			
10000	2077021	6153473	326.97	CTL BASE	X ON WA	LKN. SIDE	STONERID	GE
10001	2077352	6155466	329.5	CTLXON	ISLAND N	.W.COR ST	TONERIDGE	E&HOPYAR
10002	2077336	6154800	328.82	CTL H&TI	N PLNTR	BO'EASTOF	TM BURN.N	I.STONERD
10003	2077013	6153976	326.78	CTLXON	WALKS.V	V.COR DEN	IKER&STO	NERIDGE
10004	2077224	6155432	329.89	CTLXON	WALKS.V	V.COR HOP	PYARD&STO	NERIDGE
10005	2077182	6155473	329.2	CTLXON	WALKS.V	V.COR HOP	PYARD & ST	ONERIDGE
10006	2076842	6152969	330.46	CTL H&T	MEDIANIS	SLD BTVVN J	OHNSON&	DENKER
10007	2076865	6152392	331.35	CTLXON	NOSE OF	MED.NOSE	EASTSIDE	JOHNSON
10008	2076619	6152296	329.6	CTL MAG	W.SIDE JC	KNSON@7	7399 JOHNS	SON
11001	2077370	6152134	330.99	ATMAG &	GSI WASH	HER		
11002	2076118	6152481	324.86	ATX ON D	WY APRO	N TO CREE	KACCESS	
11003	2076598	6153099	325.36	ATMAG &	GSI WASI	HER@S.W.C	CORHERRI	N & MASON
11004	2077514	6153997	327.06	ATMAG &	GSI W. @	INTX OF FR	ANKLIN & J	OHNSON
11005	2076811	6154988	324.92	ATMAG&0	GSI W.ON	ALVRD BTV	VN ADDSN 8	& ALLBRK
11006	2077866	6155620	328.63	ATX ON D	WY APRO	N TO EDDIE	PAPAS	
11007	2076836	6155591	328.81	ATX ON D	WY APRO	N TO CHAS	E&WELLS	FARGO

GENERAL NOTES (CONTINUATION FROM G-3)

- 8. TREE PRUNING SHALL BE PERFORMED BY A QUALIFIED ARBORIST AT THE CONTRACTOR'S EXPENSE PER CITY STANDARD SPECIFICATION
- CONTRACTOR SHALL COORDINATE WITH LIVERMORE AMADOR VALLEY TRANSPORTATION AUTHORITY 48 HOURS PRIOR TO CONSTRUCTION WITHIN 200 FEET OF A BUS STOP. RESTORE BUS STOP TO ORIGINAL CONDITION AFTER WL LINE INSTALLATION. REPAIR DAMAGE CAUSED BY CONSTRUCTION OR REPLACE IN KIND AND AS DIRECTED BY CITY.
- 10. INSTALL STORM DRAIN PROTECTION AT ALL INLETS ALONG THE PROPOSED WL ALIGNMENT.
- 11. WHERE TRAFFIC DETECTOR LOOPS ARE SHOWN, THE CONTRACTOR SHALL ASSUME THERE MAY BE ADDITIONAL CONDUIT AND WIRING FROM THE LOOPS TO A SIGNAL BOX. TRAFFIC DETECTOR LOOPS SHOWN THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AS SPECIFIED IN THE SPECIAL PROVISIONS. WHERE NO TRAFFIC DETECTOR LOOPS ARE SHOWN AT SIGNALIZED INTERSECTIONS, THE SIGNAL CONTROL IS A VIDEO DETECTION SYSTEM. CUT LOOPS WILL BE REPLACED BY OTHERS AT NO COST TO CONTRACTOR. ANY OTHER DAMAGES WILL BE REPAIRED AT CONTRACTORS COST.
- 12. REPLACE MEDIAN CURB, CURB AND GUTTER, SIDEWALK, LANDSCAPING AND IRRIGATION SYSTEM COMPONENTS DAMAGED BY CONSTRUCTION IN ACCORDANCE WITH THE CITY STANDARD SPECIFICATIONS AND DETAILS AND HACIENDA BUSINESS PARK DESIGN GUIDELINES.
- 13. INSTALL THRUST RESTRAINT COMPONENTS AT ALL FITTINGS AND BENDS PER CITY STANDARD SPECIFICATIONS AND DETAILS 7 & 8 ON C-6 AND DETAIL 4 ON C-8.
- 14. CONTRACTOR SHALL ANTICIPATE 6.5-INCHES OF ASPHALT CONCRETE AND SHALL REPLACE WITH 6.5-INCHES ON STONERIDGE DRIVE.
- 15. CONTRACTOR TO PROVIDE 12-INCH TEMPORARY BACKFLOW DEVICE FOR LOADING PIPE.



SCALE IN FEET

DESCRIPTION REV. DATE THE CITY OF 01/26/24 ISSUE FOR BID

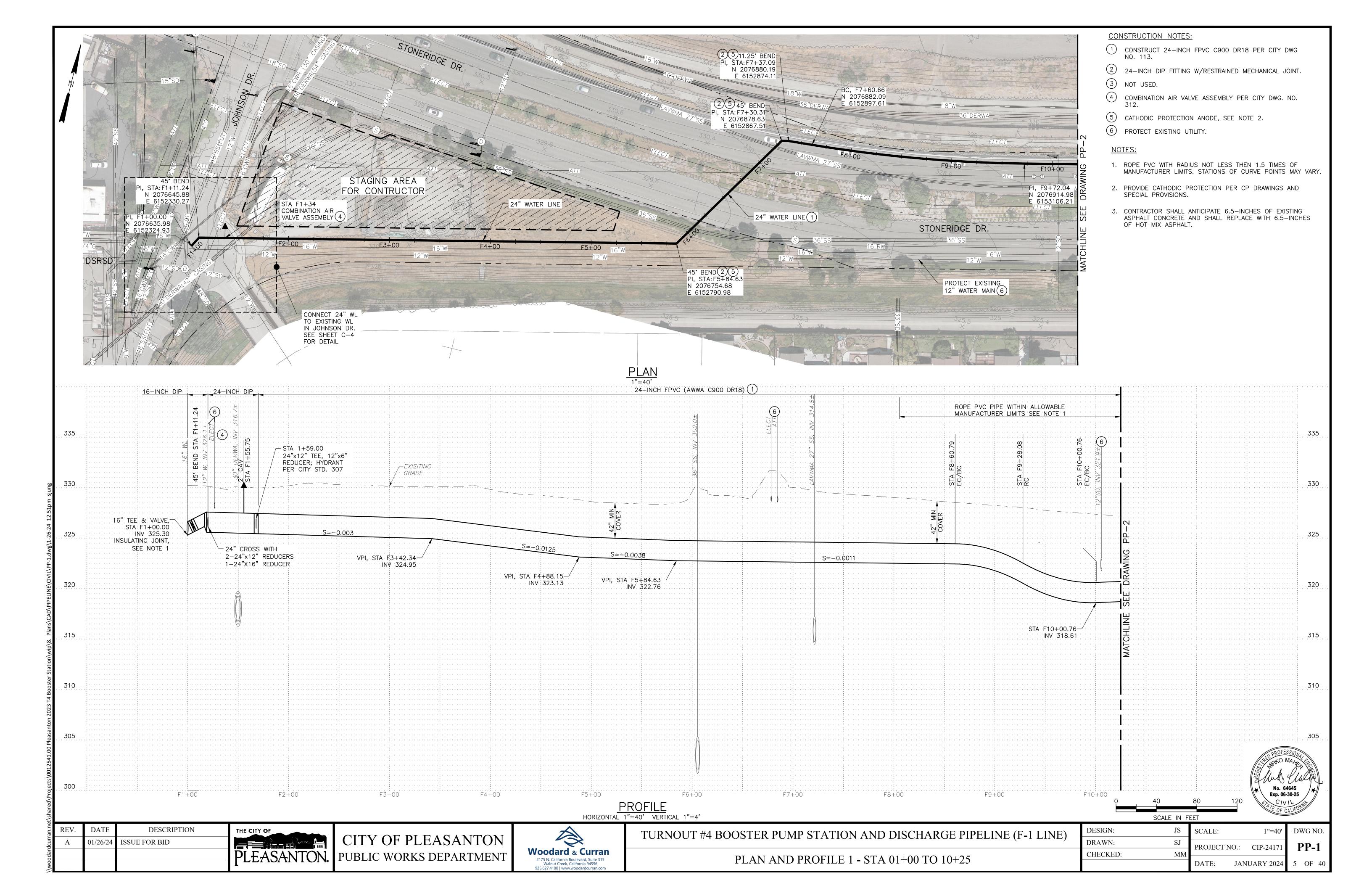
CITY OF PLEASANTON PLEASANTON. PUBLIC WORKS DEPARTMENT

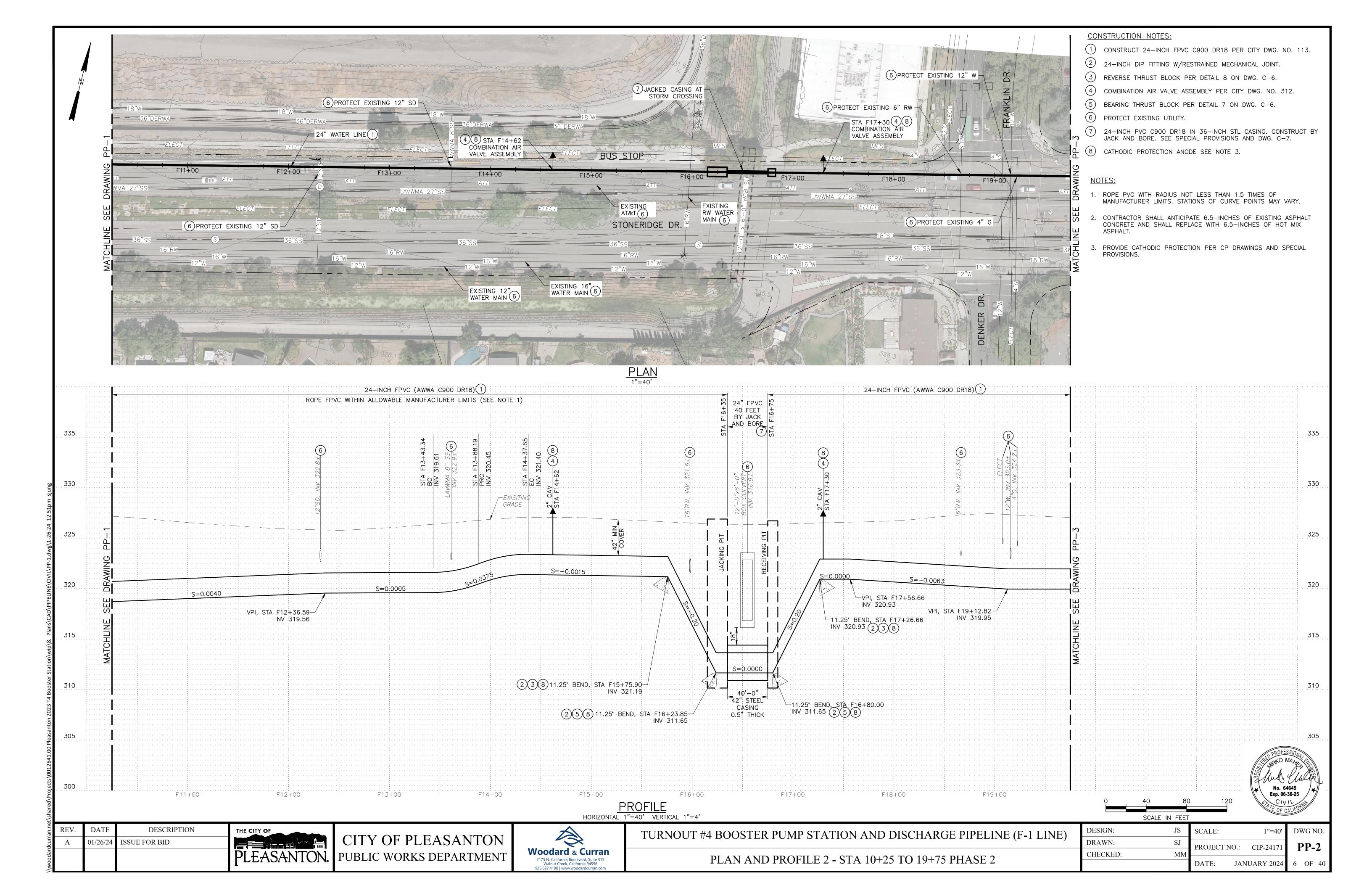


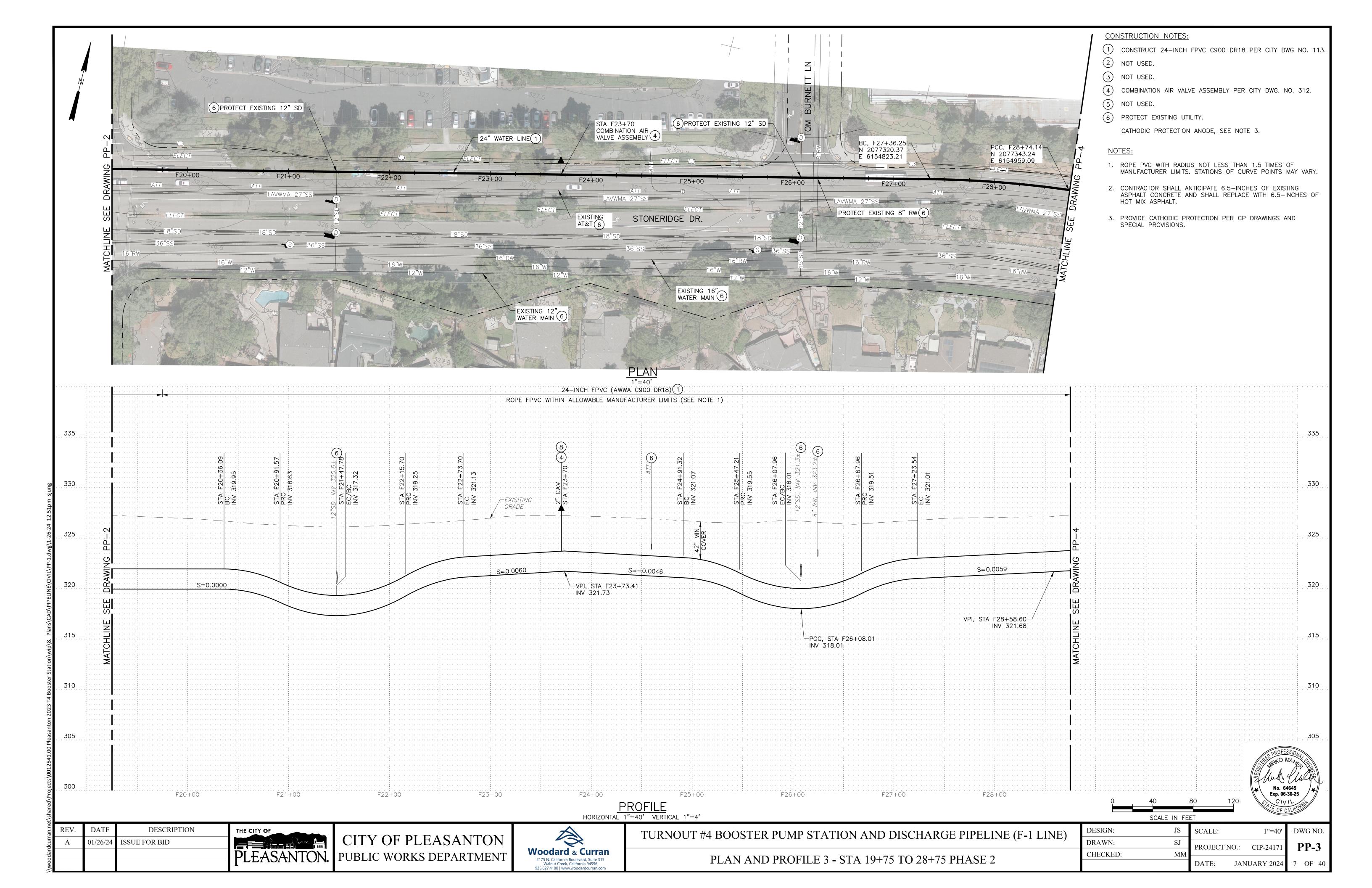
TURNOUT #4 BOOSTER PUMP STATION AND DISCHARGE PIPELINE (F-1 LINE) BASIS OF BEARING BENCHMARK AND PIPELINE KEY PLAN

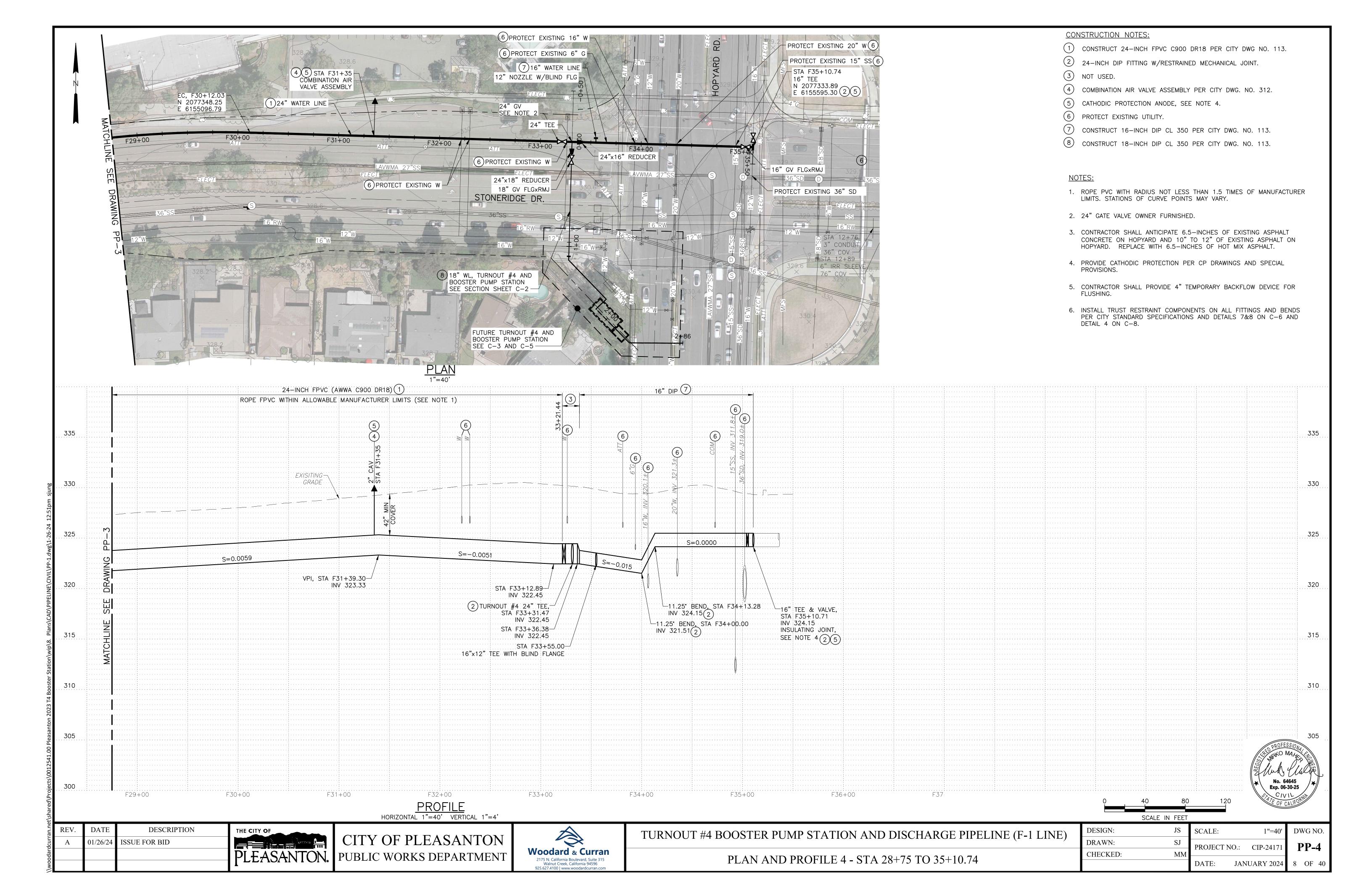
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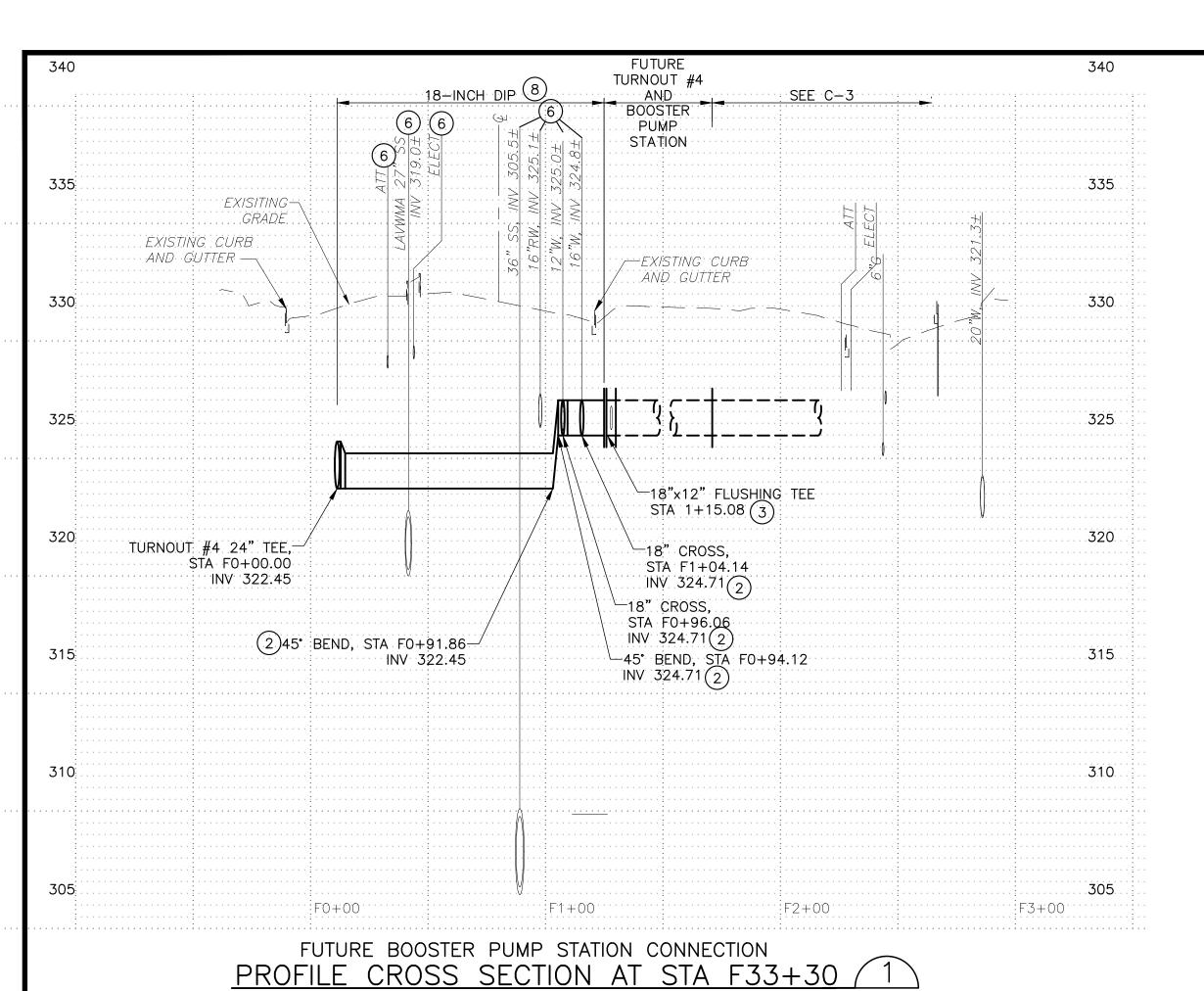
DWG NO. 1"=400' CIP-24171 JANUARY 2024 4 OF 40











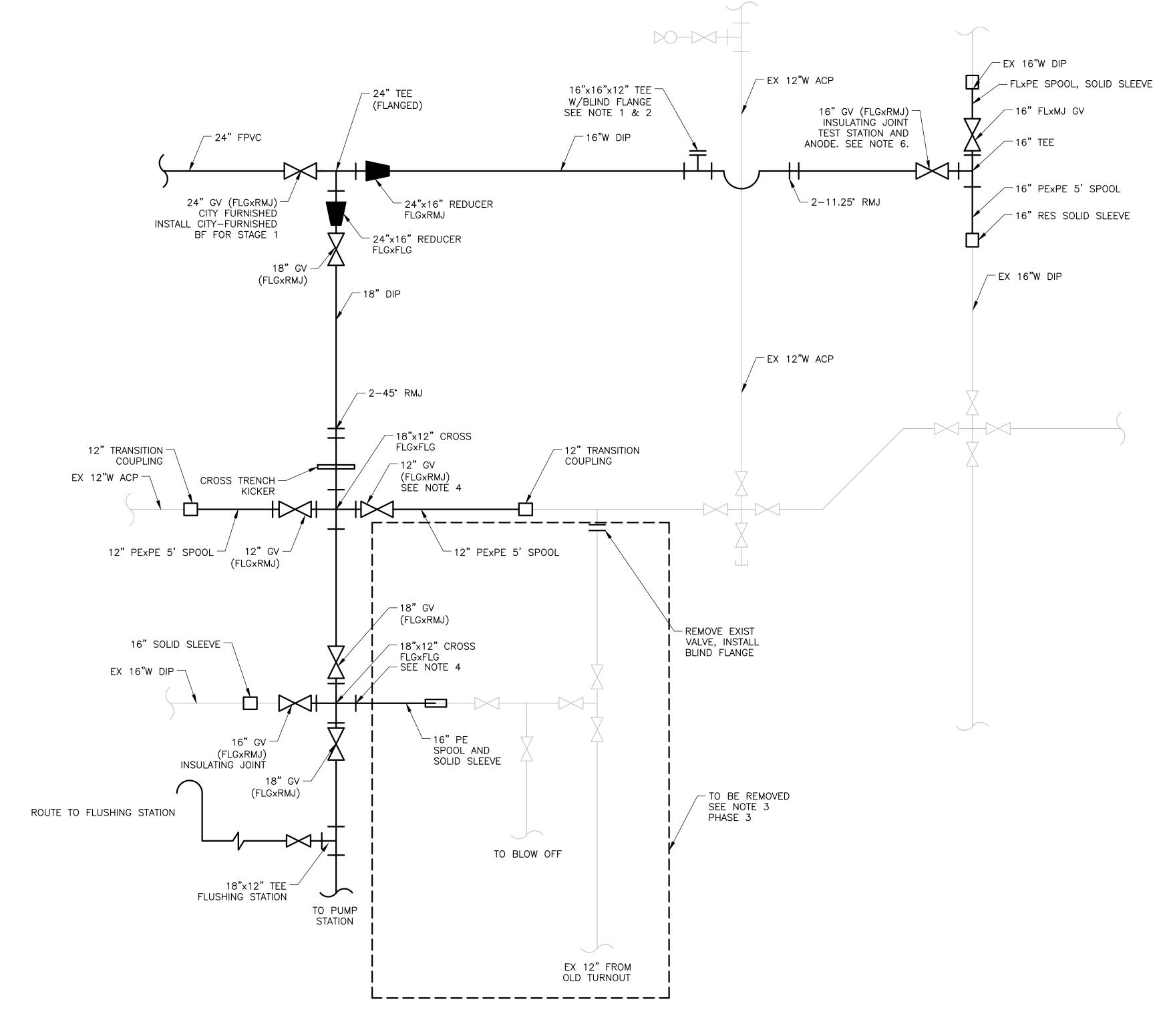
HORIZ: 1"=40' VERT: 1"=4'

CONSTRUCTION NOTES:

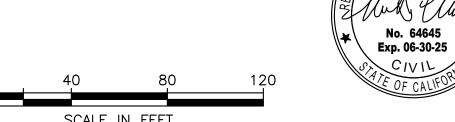
- 2 18-INCH DIP FITTING.
- 3 FLUSHING TEE AND ASSEMBLY PER C-3.
- (4) COMBINATION AIR VALVE ASSEMBLY PER CITY DWG. NO. 312.
- 6 PROTECT EXISTING UTILITY.
- (8) CONSTRUCT 18-INCH DIP PER CITY DWG. NO. 113 (MODIFIED).

NOTES:

- 1. CONTRACTOR SHALL PROVIDE A TESTING, FLUSHING AND DISINFECTION PLAN TO ENGINEER FOR APPROVAL AND SUBMIT PLAN IN ACCORDANCE WITH SPECIAL PROVISIONS. TEMPORARY FLUSHING STATIONS SHALL BE USED TO FLUSH LINES.
- 2. NOT USED.
- 3. REMOVE VALVES AND PIPING AFTER SWITCH OVER TO NEW WATER SYSTEM IS COMPLETED. INCLUDING ALL VAULTS AND PIPING SHOWN ON THE PUMP STATION SITE PLANS AS INDICATED ON C-1.
- 4. BLIND FLANGE AFTER NEW WATERMAIN IS TESTED, DISINFECTED, IN SERVICE AND OPERATIONAL. ABANDON EXIST 12-INCH WATER IN PLACE.
- 5. INSTALL THRUST RESTRAINT COMPONENTS ON ALL FITTINGS AND BENDS PER CITY STANDARD SPECIFICATIONS AND DETAILS 7 & 8 ON DWG. C-6 AND DETAIL 4 ON DWG. C-8.
- 6. CATHODIC PROTECTION PER CP DRAWINGS AND SPECIAL PROVISIONS.



PHASE 1 STONERIDGE DRIVE AND HOPYARD SYSTEM SCHEMATIC



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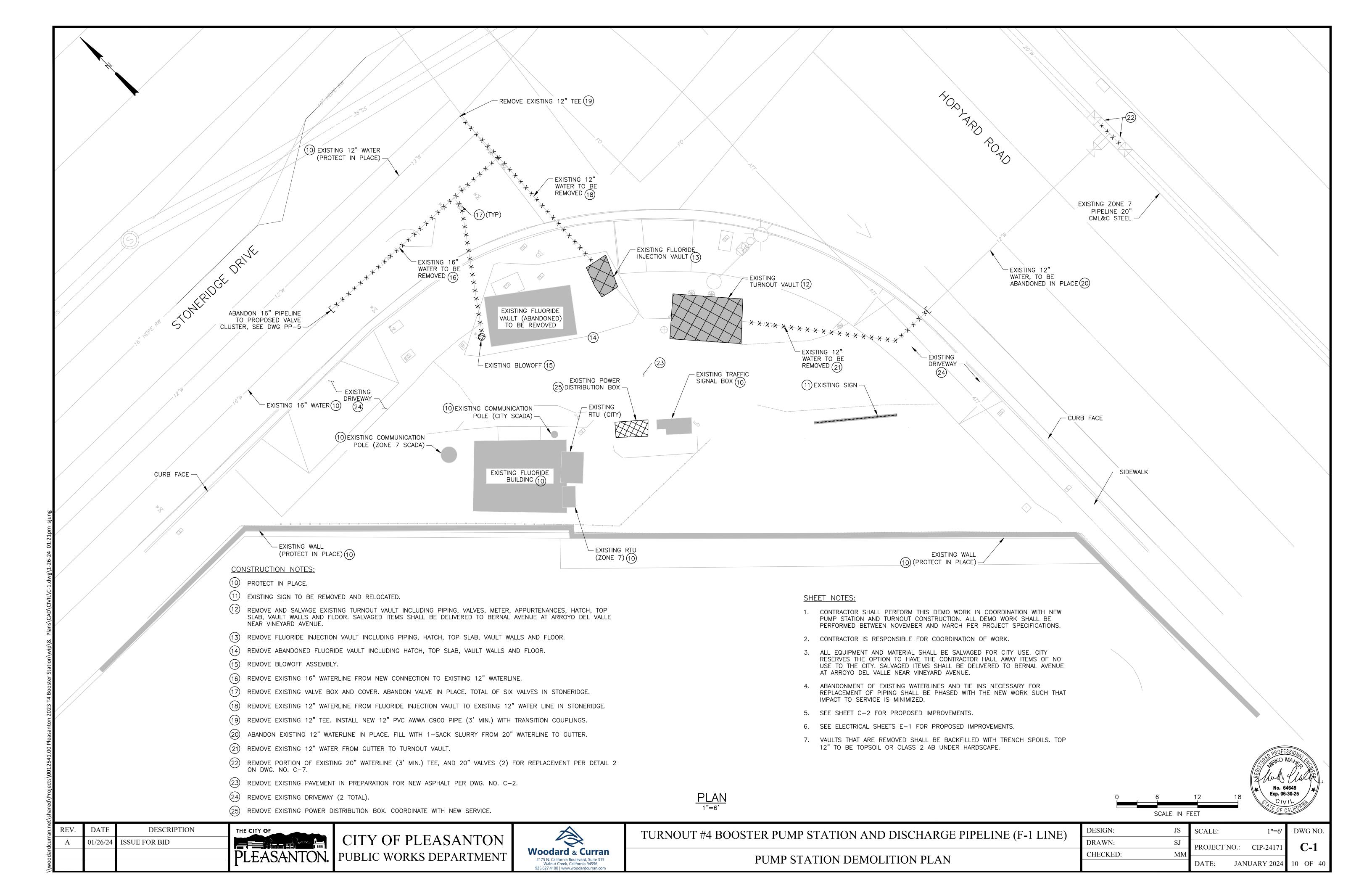
CITY OF PLEASANTON PLEASANTON. PUBLIC WORKS DEPARTMENT

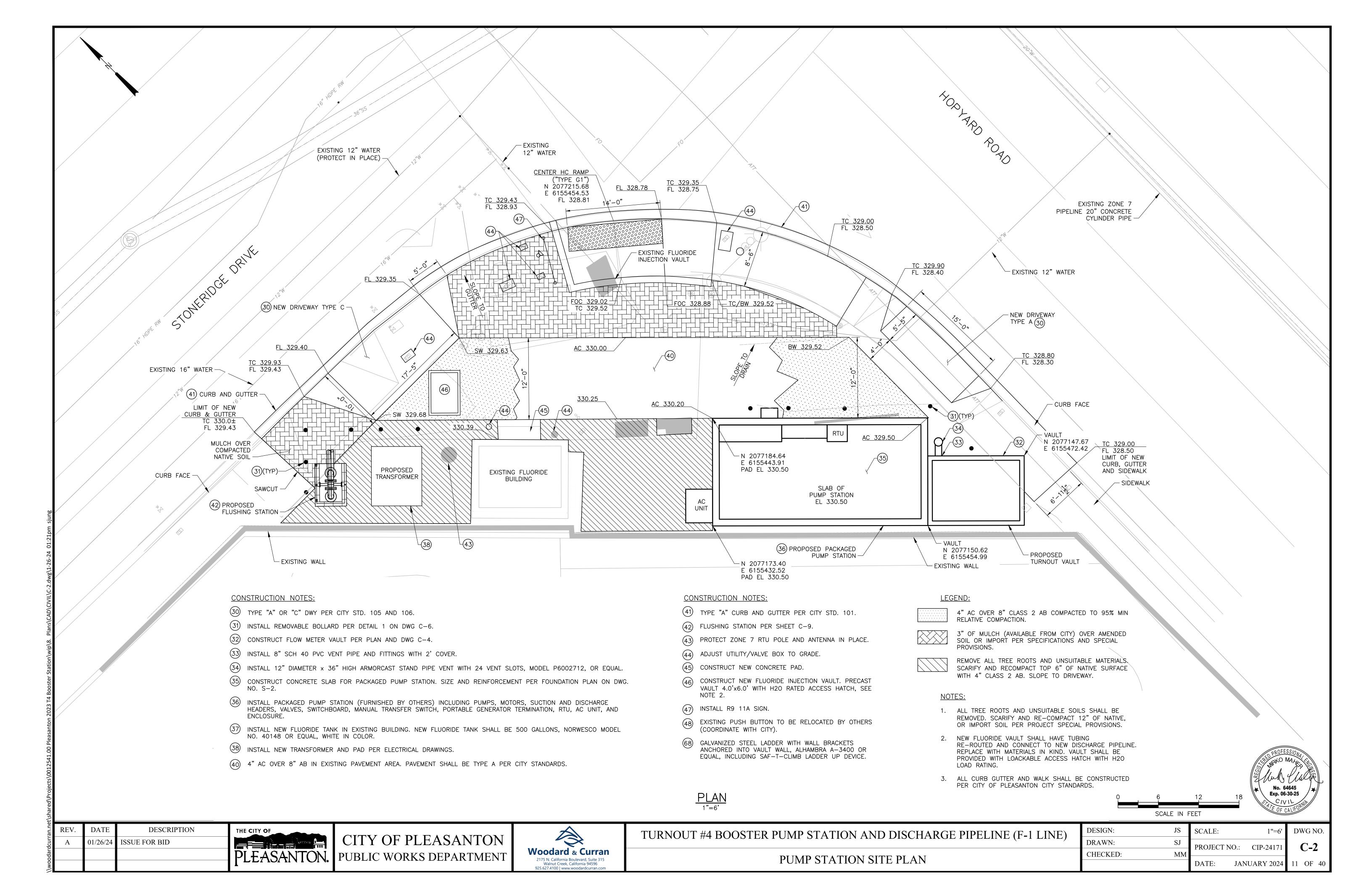


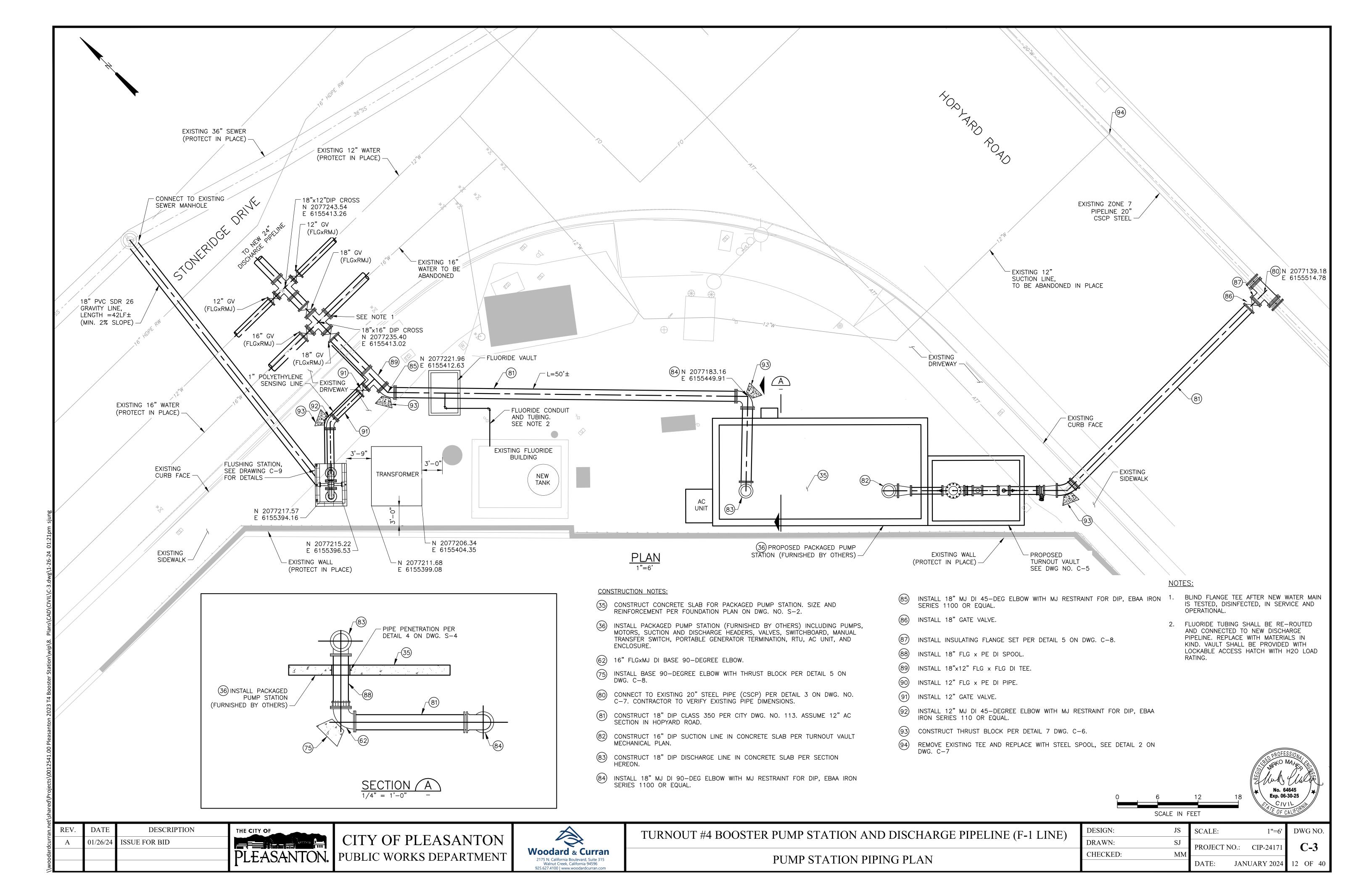
TURNOUT #4 BOOSTER PUMP STATION AND DISCHARGE PIPELINE (F-1 LINE)
PLAN AND PROFILE - 5 CROSSING STONERIDGE AT PS

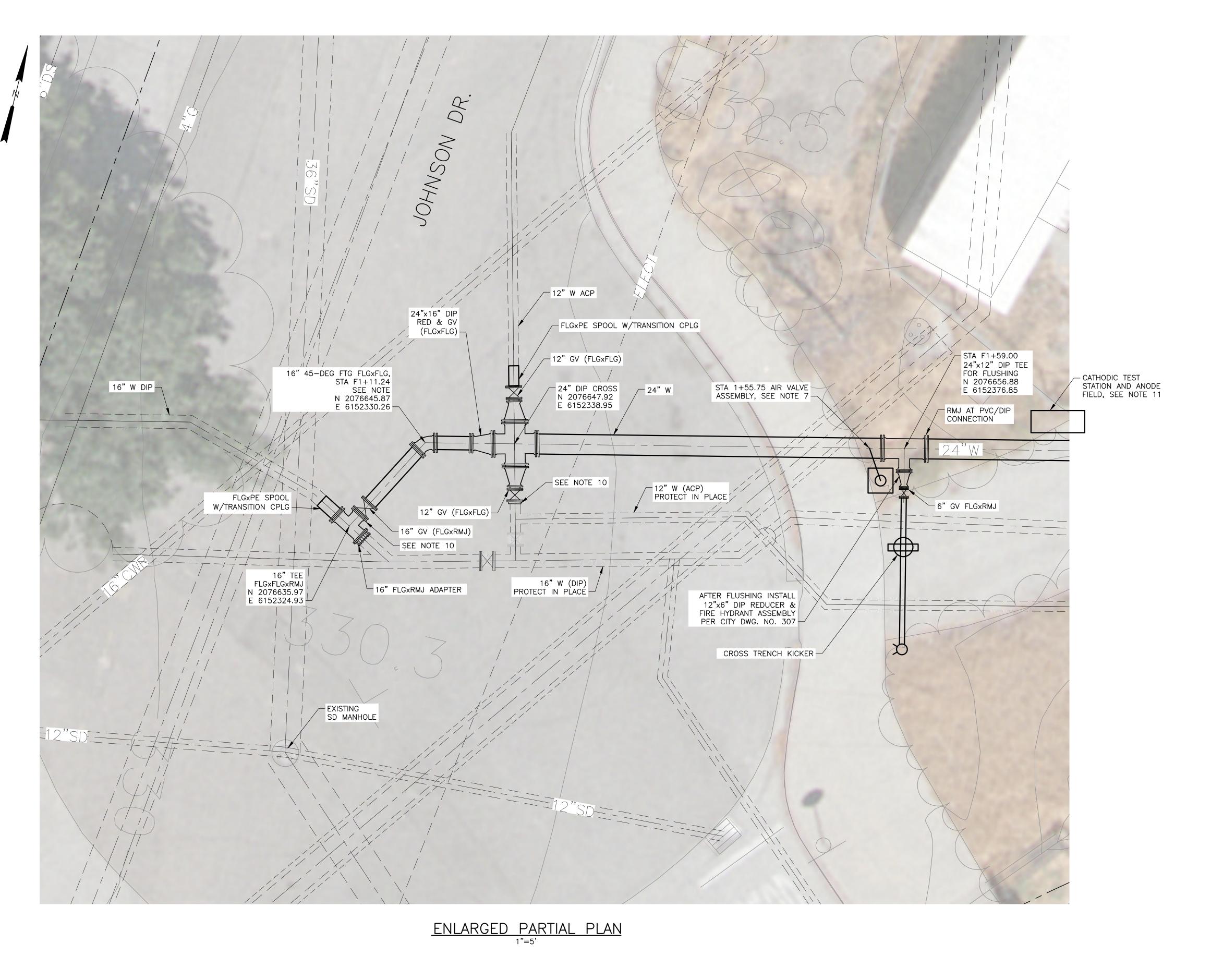
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DWG NO. P-24171 Y 2024 9 OF 40









NOTES:

- 1. CONTRACTOR SHALL POTHOLE AND LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION OF NEW WATER MAIN.
- 2. FIELD CONDITIONS AND LOCATIONS OF UTILITIES DEPICTED ON PLAN MAY VARY. CONTRACTOR SHALL CONTACT ENGINEER FOR ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
- 3. NOT USED.
- 4. ALL DUCTILE IRON PIPE SHALL BE ELECTRICALLY ISOLATED FROM EXISTING METALLIC PIPE MATERIAL AT ALL LOCATIONS WHERE CONNECTIONS TO EXISTING PIPE IS MADE. CONTRACTOR SHALL PROVIDE CATHODIC PROTECTION TO ALL FERROUS PIPE MATERIAL IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND CITY STANDARDS PER DETAIL 5 ON DWG C-8.
- 5. CONTRACTOR SHALL RESTORE ALL PAVEMENT AND CONCRETE SURFACES TO ORIGINAL CONDITIONS PER CITY STANDARDS.
- 6. TRENCHING AND BACKFILL SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND SPECIAL PROVISIONS.
 BACKFILL AND RESTORATION OF EXCAVATIONS SHALL BE IN ACCORDANCE WITH CITY DWG NO. 113.
- 7. AIR VALVE ASSEMBLY PER CITY STANDARD DWG NO. 312.
- 8. ALL FITTINGS INCLUDING CROSSES AND TEES SHALL BE PROVIDED WITH CONCRETE THRUST RESTRAINTS PER DETAIL 7 SHEET C-6. THRUST BLOCKS NOT SHOWN FOR CLARITY.
- 9. CONTRACTOR TO PROVIDE 12" TEMPORARY BACKFLOW DEVICE FOR LOADING PIPE.
- 10. PROVIDE INSULATING FLANGE COUPLING ADAPTER JOINT WITH ANODE. SEE CATHODIC PROTECTION SHEET FOR DETAILS.
- 11. PROVIDE CATHODIC TEST STATION AND ANODES PER SCHEDULE AND LOCATIONS SHOWN ON SHEETS CP1 TO CP6.

5 10 15
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 1"=5'
 DWG NO.

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 JANUARY 2024
 13 OF 40

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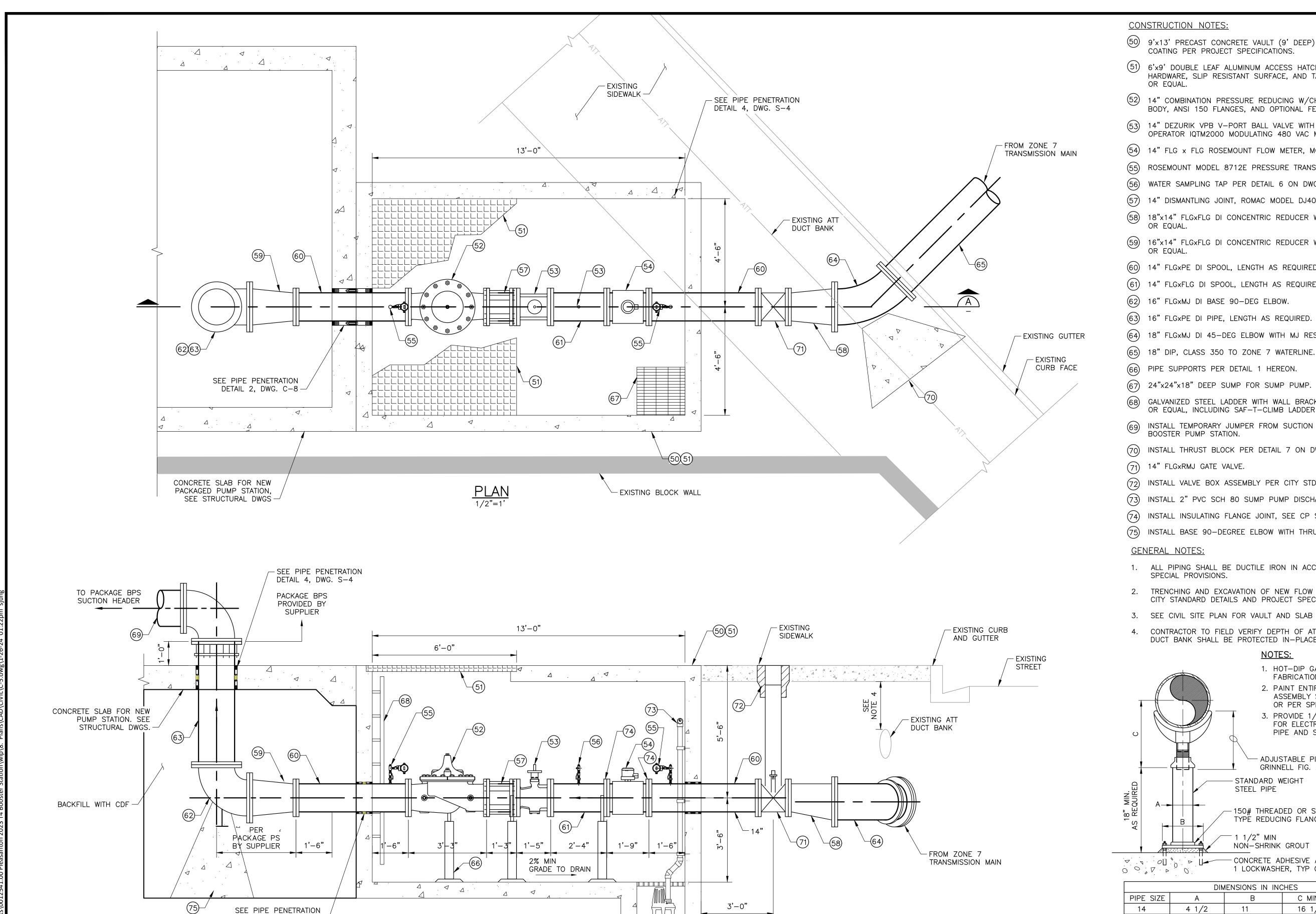
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TURNOUT #4 BOOSTER PUMP STATION AND DISCHARGE PIPELINE (F-1 LINE)

CONNECTION PLAN VIEW & CONNECTION DETAILS STA 1+00 PHASE 1



CONSTRUCTION NOTES:

- 9'x13' PRECAST CONCRETE VAULT (9' DEEP) WITH ACCESS HATCH, NO LINING, AND EXTERIOR COATING PER PROJECT SPECIFICATIONS.
- (51) 6'x9' DOUBLE LEAF ALUMINUM ACCESS HATCH WITH AASHTO H-20 REINFORCEMENT, SS 316 HARDWARE, SLIP RESISTANT SURFACE, AND TAMPER PROOF HASP AND LOCK, U.S.F. FABRICATION
- 52) 14" COMBINATION PRESSURE REDUCING W/CHECK, CLA VAL MODEL NO. 94-01 WITH DUCTILE BODY, ANSI 150 FLANGES, AND OPTIONAL FEATURES BCPCVY.
- 14" DEZURIK VPB V-PORT BALL VALVE WITH ANSI 150 FLANGES, ROTORK ELECTRIC MOTOR, AND OPERATOR IQTM2000 MODULATING 480 VAC MAIN VOLTAGE.
- (54) 14" FLG x FLG ROSEMOUNT FLOW METER, MODEL 8705.
- (55) ROSEMOUNT MODEL 8712E PRESSURE TRANSMITTER WITH 125/150 FLG DRILLING OR EQUAL.
- (56) WATER SAMPLING TAP PER DETAIL 6 ON DWG C-6.
- (57) 14" DISMANTLING JOINT, ROMAC MODEL DJ400 OR EQUAL WITH TIE RODS.
- (58) 18"x14" FLGxFLG DI CONCENTRIC REDUCER WITH MJ RESTRAINT FOR DIP, EBAA IRON SERIES 1100
- (59) 16"x14" FLGxFLG DI CONCENTRIC REDUCER WITH MJ RESTRAINT FOR DIP, EBAA IRON SERIES 1100
- (60) 14" FLGxPE DI SPOOL, LENGTH AS REQUIRED.
- (61) 14" FLGxFLG DI SPOOL, LENGTH AS REQUIRED.
- 62) 16" FLGxMJ DI BASE 90-DEG ELBOW.
- (63) 16" FLGxPE DI PIPE, LENGTH AS REQUIRED.
- (64) 18" FLGxMJ DI 45-DEG ELBOW WITH MJ RESTRAINT FOR DIP EBAA IRON SERIES 1100 OR EQUAL
- 66) PIPE SUPPORTS PER DETAIL 1 HEREON
- (67) 24"x24"x18" DEEP SUMP FOR SUMP PUMP.
- 68 GALVANIZED STEEL LADDER WITH WALL BRACKETS ANCHORED INTO VAULT WALL, ALHAMBRA A-3400 OR EQUAL, INCLUDING SAF-T-CLIMB LADDER UP DEVICE.
- 69 INSTALL TEMPORARY JUMPER FROM SUCTION TO DISCHARGE LINE UNTIL INSTALL OF PACKAGE BOOSTER PUMP STATION.
- (70) INSTALL THRUST BLOCK PER DETAIL 7 ON DWG. C-6.
- (71) 14" FLGxRMJ GATE VALVE.
- (72) INSTALL VALVE BOX ASSEMBLY PER CITY STD. DWG. 316.
- (73) INSTALL 2" PVC SCH 80 SUMP PUMP DISCHARGE PIPE.
- (74) INSTALL INSULATING FLANGE JOINT, SEE CP SHEETS.
- 75) INSTALL BASE 90-DEGREE ELBOW WITH THRUST BLOCK PER DETAIL 5 ON DWG. C-8.

- 1. ALL PIPING SHALL BE DUCTILE IRON IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND SPECIAL PROVISIONS.
- TRENCHING AND EXCAVATION OF NEW FLOW CONTROL VAULT SHALL BE IN ACCORDANCE WITH CITY STANDARD DETAILS AND PROJECT SPECIFICATIONS.
- SEE CIVIL SITE PLAN FOR VAULT AND SLAB ELEVATIONS AND COORDINATES.
- CONTRACTOR TO FIELD VERIFY DEPTH OF ATT DUCT BANK PRIOR TO CONSTRUCTION. ATT DUCT BANK SHALL BE PROTECTED IN-PLACE.

-150# THREADED OR SLIP-ON

TYPE REDUCING FLANGE

NOTES:

1. HOT-DIP GALVANIZE ALL PARTS AFTER

FABRICATION.

2. PAINT ENTIRE PIPE SUPPORT ASSEMBLY SAME AS SUPPORTED PIPE OR PER SPECIFICATIONS AFTER GALVANIZING. 3. PROVIDE 1/4" MIN THICK NEOPRENE RING

FOR ELECTRICAL ISOLATION BETWEEN PIPE AND SUPPORT FOR METALLIC PIPE.

- ADJUSTABLE PIPE SADDLE SUPPORT GRINNELL FIG. 264, ELCEN FIG. 50, OR EQUAL STANDARD WEIGHT STEEL PIPE

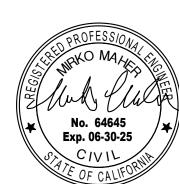
CONCRETE ADHESIVE ANCHORS WITH 2 NUTS AND

1 LOCKWASHER, TYP OF 4 AT 90° MIN. 6" EMBED

1 1/2" MIN NON-SHRINK GROUT

DIMENSIONS IN INCHES C MIN C MAX 11 16 1/4 20 3/4





DWG NO.

C-5

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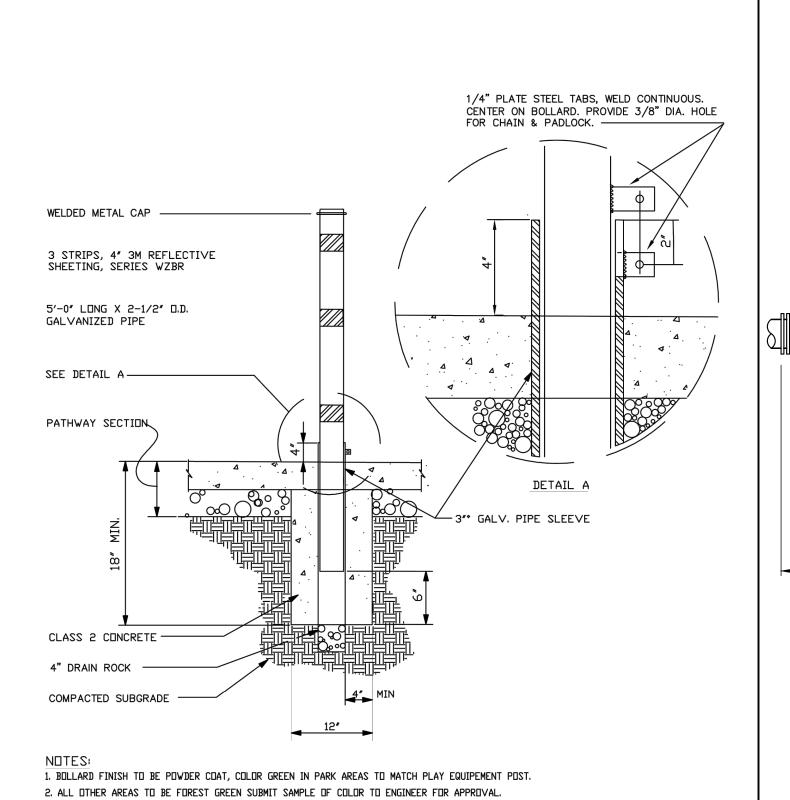
DETAIL 2, DWG. C-8-

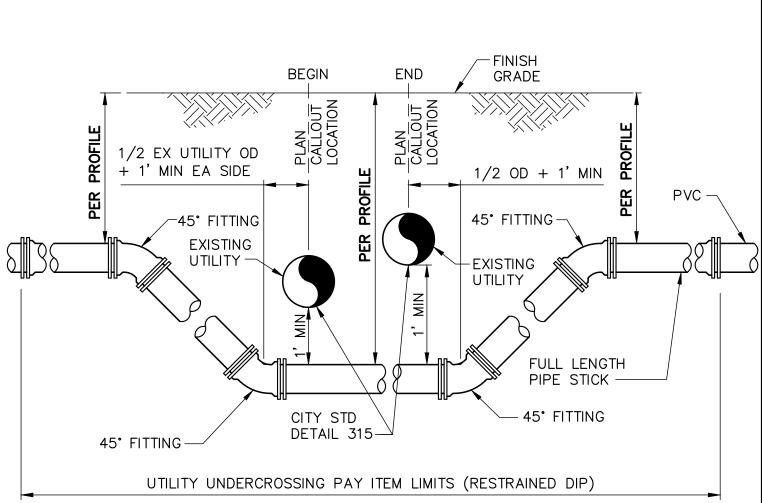
CITY OF PLEASANTON PLEASANTON. PUBLIC WORKS DEPARTMENT



TURNOUT #4 BOOSTER PUMP STATION AND DISCHARGE PIPELINE (F-1 LINE) CIVILIDE DATASLIS-1 FIEOWWCCONTROL WAYUULTIPAM ANANSDISHONION

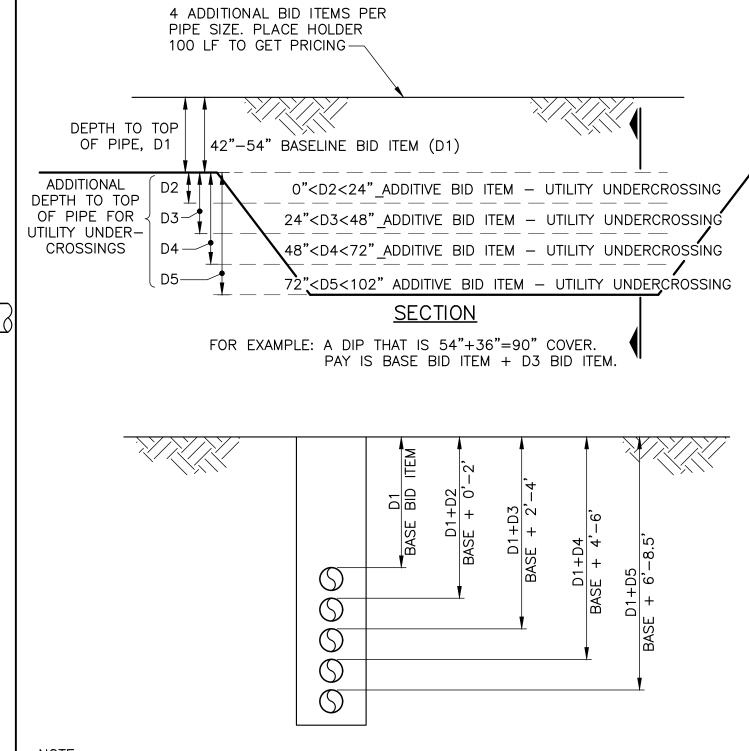
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- 1. CONTRACTOR MAY SUBSTITUTE DIFFERENT FITTING DEFLECTION ANGLES, OFFSET FITTINGS OR MAY PULL JOINTS TO ACHIEVE THE CONFIGURATION. PULLED JOINTS SHALL BE LIMITED TO 75% OF PIPE MANUFACTURER'S RECOMMENDED ALLOWABLE JOINT DEFLECTION
- 2. CONTRACTOR SHALL MEET ALL PIPE SEPARATION, UTILITY CROSSING CLEARANCE AND MINIMUM COVER REQUIREMENTS INDICATED.
- 3. METALLIC FITTINGS AND JOINT RESTRAINT HARDWARE, INCLUDING RMJ GLANDS, SHALL BE CATHODICALLY PROTECTED.

UTILITY UNDERCROSSING DETAIL (3)



SEE BID ITEM DESCRIPTION IN THE

COMPLETE LIST OF COST COMPONENTS.

PAY ITEM SCHEMATIC FOR

UTILITY UNDERCROSSINGS

SPECIAL PROVISIONS FOR THE

CROSS-SECTION

A | B | C | D | E | 10 | 5 | 3 | 11 | 15 | 8 | 4 | | 15 | 22 | 12 | 6 | 21 | 29 | 16 | 8 16" | 27 | 38 | 21 | 12 | 19 46 | 25 | 13 | 24 36 | 57 | 31 | 16 | 30 24" | 49 | 81 | 44 | 22 | 42 NOTE: VALVES SHOWN ARE BASED ON 1500 PSF SOIL GOVERNS)

=|//=|//=|//=|//

⊢ AREA "A"

BEARING PRESSURE AND 200 PSI TEST PRESSURE AREAS.

- THRUST BLOCK SHALL BE CLASS 2 P.C.C.
 - CONCRETE SHALL NOT EXTEND BEYOND FACE OF BELL FOR SLIP-ON JOINTS NOR
- INTERFERE WITH FLANGES, NUTS OR BOLTS ON FLANGED JOINTS. A MINIMUM OF 24 HOURS CURING TIME REQUIRED BEFORE WATER INTRODUCED INTO LINE.
- A MINIMUM OF 7 DAYS CURING TIME REQUIRED BEFORE PRESSURE TEST. BACK AND BOTTOM OF THRUST BLOCKS TO BE POURED AGAINST UNDISTURBED EARTH.
- KEEP BOLT UP AREAS FREE OF CONCRETE FOR EASE OF ACCESS.

√ 90 ° BEND-AREA "B"

HORIZONTAL AND VERTICAL

TYPICAL SECTION

MINIMUM THRUST BLOCK BEARING

AREAS SHOWN IN SQUARE FEET

DOWNTHRUST BENDS

EXCAVATION

THRUST BLOCK FOR VERTICAL

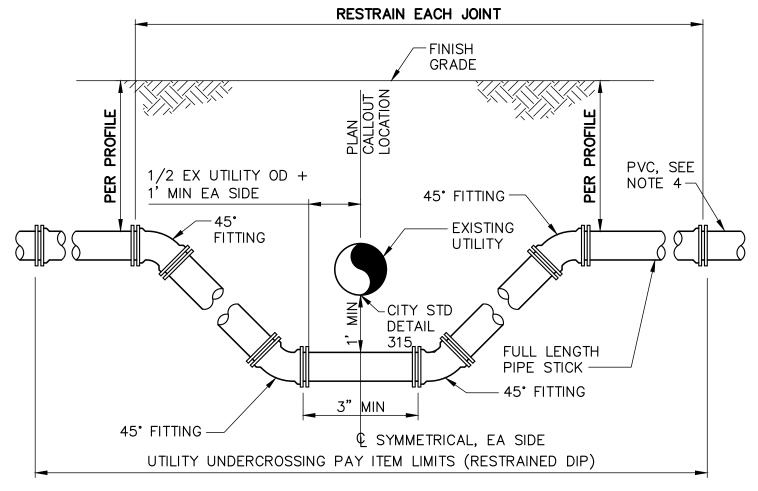
45° BEND-AREA "C"

■ BELL HOLE

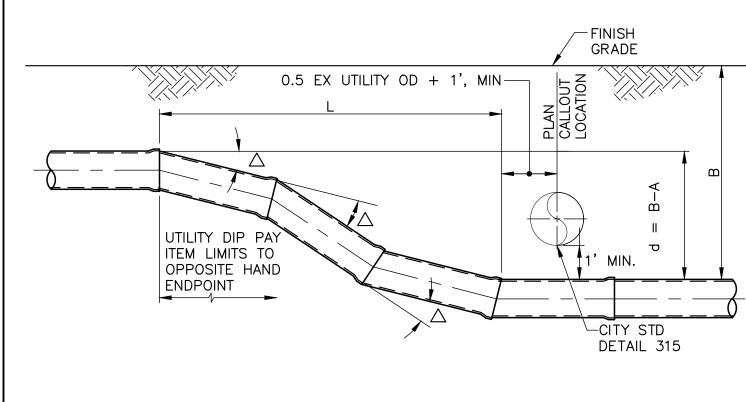
^{//}— 6" MIN.

CONTRACTOR IS RESPONSIBLE FOR ALL THRUST BLOCK LOCATIONS. THIS DETAIL IS TO BE USED AS A DESIGN GUIDE ONLY. ACTUAL SIZE OF THRUST BLOCK TO BE DETERMINED BY THE ENGINEER

TYPICAL THRUST BLOCKS DETAIL



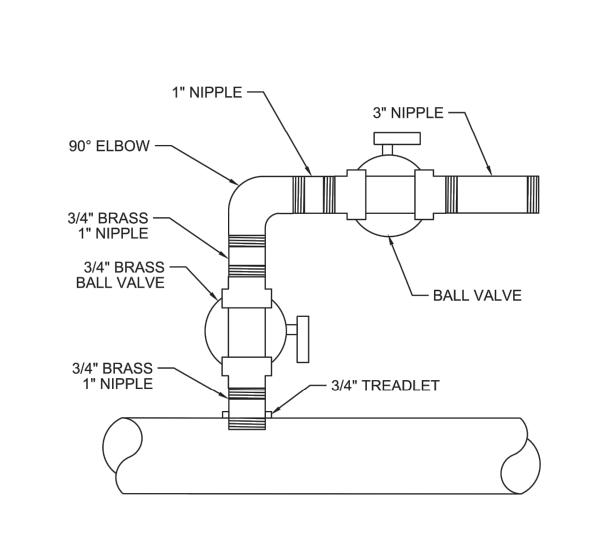
- 1. CONTRACTOR MAY SUBSTITUTE DIFFERENT FITTING DEFLECTION ANGLES, OFFSET FITTINGS OR MAY PULL JOINTS TO ACHIEVE THE CONFIGURATION. PULLED JOINTS SHALL BE LIMITED TO 75% OF PIPE MANUFACTURER'S RECOMMENDED ALLOWABLE JOINT DEFLECTION.
- 2. CONTRACTOR SHALL MEET ALL PIPE SEPARATION, UTILITY CROSSING CLEARANCE AND MINIMUM COVER REQUIREMENTS INDICATED.
- 3. METALLIC FITTINGS AND JOINT RESTRAINT HARDWARE, INCLUDING RMJ GLANDS, SHALL BE CATHODICALLY PROTECTED.



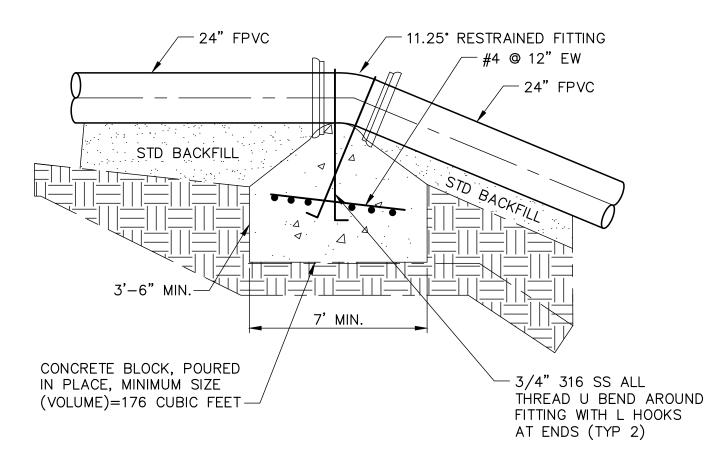
- 1. SEE PLANS FOR INVERT ELEVATIONS.
- 2. CONTRACTOR SHALL MEET ALL PIPE SEPARATION, UTILITY CROSSING CLEARANCE AND MINIMUM COVER REQUIREMENTS INDICATED.
- 3. PULLED JOINTS SHALL BE LIMITED TO 75% OF PIPE MANUFACTURER'S RECOMMENDED ALLOWABLE JOINT DEFLECTION.
- 4. ASSUMES MAXIMUM JOINT DEFLECTION SHOWN. VERIFY WITH PIPE MANUFACTURER. 5. ASSUMES FULL 20 FT PVC OR DIP PIPE SECTION LENGTHS.

UTILITY UNDERCROSSING DETAIL

NTS



3/4" WATER SAMPLING TAP DETAIL 6



MIN. 4" COVER FOR ALL REINFORCEMENT

REVERSE THRUST BLOCK (GRAVITY THRUST BLOCK) (8



DWG NO.

C-6

15 OF 40

UTILITY UNDERCROSSING DETAIL

CITY OF PLEASANTON PLEASANTON. PUBLIC WORKS DEPARTMENT



TURNOUT #4 BOOSTER PUMP STATION AND DISCHARGE PIPELINE (F-1 LINE) CIVIL DETAILS 2 - UTILITY CROSSING AND THRUST BLOCK DETAILS

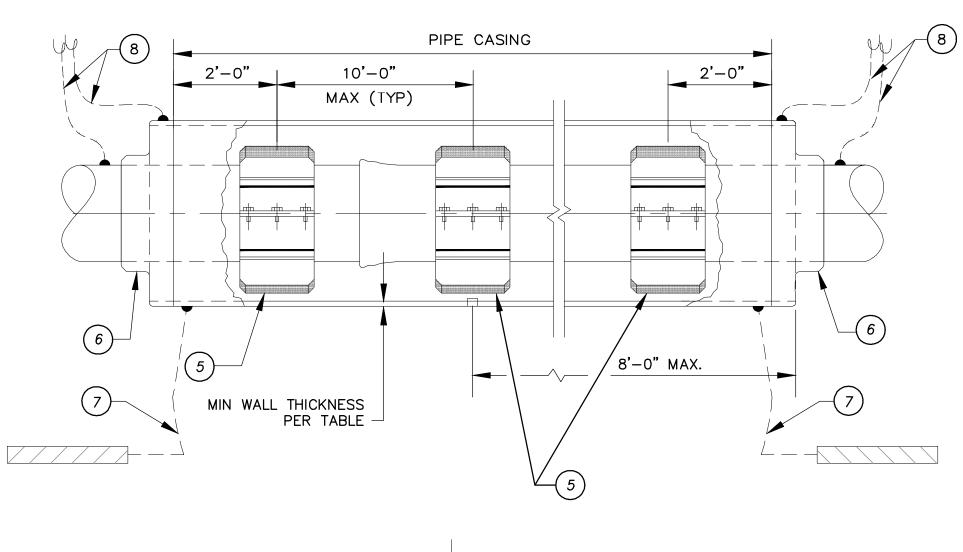
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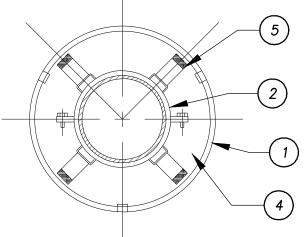
3. LABEL OLD REMOVED BOLLARD 'NOT FOR DRIVEWAY USE'.

CITY STANDARD DWG 126

REMOVABLE BOLLARD

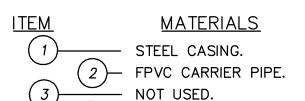
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STEEL	CASING SCH	EDULE
NOMINAL CARRIER PIPE SIZE	MINIMUM CASING SIZE	MINIMUM WALL THICKNESS
24"	42" O.D.	1/2"

<u>CROSS-SECTION</u>

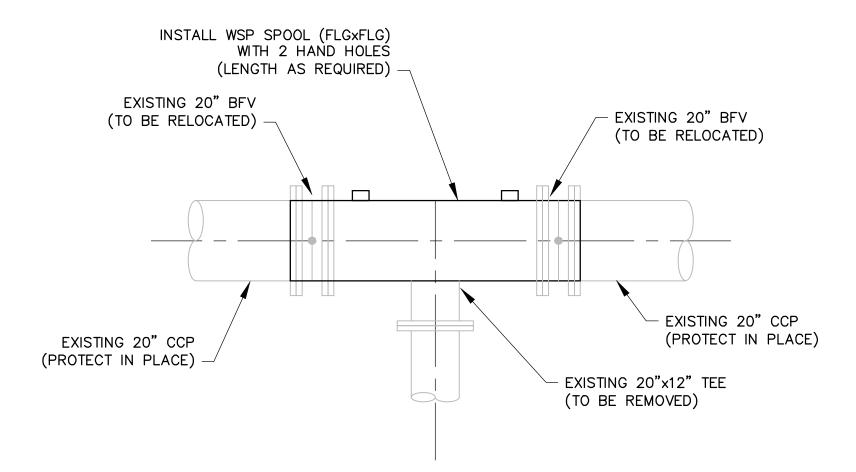


4 - INSTALL SAND IN CASING PIPE AFTER CARRIER PIPE IS INSTALLED. - STAINLESS STEEL CASING SPACERS WITH UHMW POLYETHYLENE RUNNERS AS MANUFACTURED BY CASCADE WATERWORKS, PSI OR EQUAL. 6 EPDM CASING END SEAL PER IRWD SPECIFICATIONS. INSTALL WITH STAINLESS STEEL WORM-SCREW BAND CLAMPS.

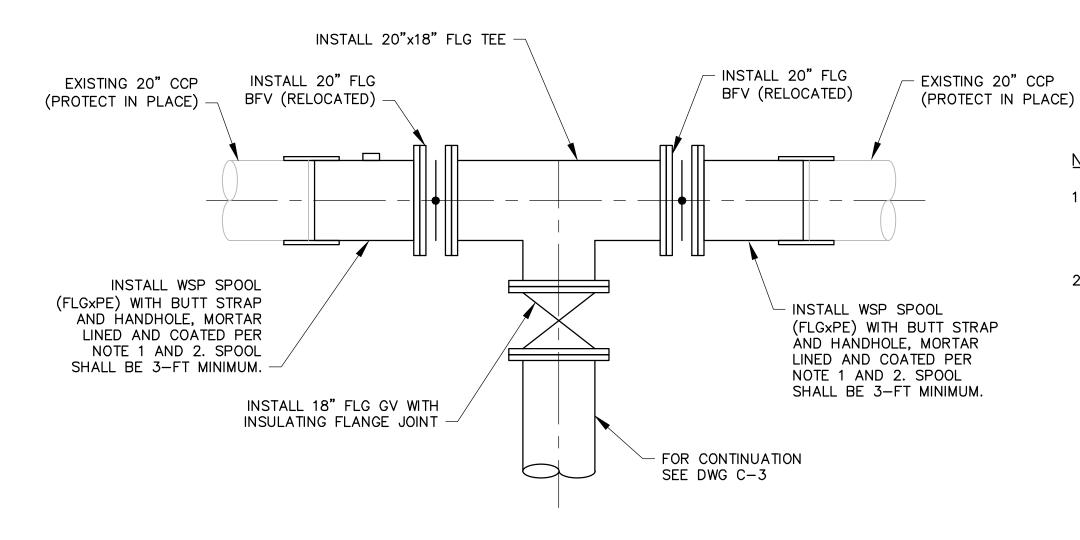
— INSTALL ANODES PER CATHODIC PROTECTION DRAWINGS. (8)— INSTALL CASING TEST STATIONS PER CATHODIC PROTECTION DRAWINGS.

NOTES:

- 1. CASING SHALL BE INSTALLED BY THE BORE, JACK AND/OR TUNNEL METHOD.
- 2. SIZE AND THICKNESS OF CASING SHALL BE AS SHOWN IN SCHEDULE. FOR LONG BORES OR SPECIAL SITUATIONS GREATER WALL THICKNESS THAN SHOWN IN SCHEDULE MAY BE REQUIRED.
- 3. ALL STEEL CASING PIPE FIELD JOINTS SHALL BE WELDED FULL-CIRCUMFERENCE.
- 4. CARRIER PIPE SHALL BE PRESSURE TESTED PRIOR TO SEALING ENDS OF CASING.
- 5. EACH END OF CASING SHALL BE SEALED WITH APPROVED RUBBER CASING END SEALS.
- 6. BACKFILL FOR CASING IN OPEN CUT SHALL BE PER CITY STANDARD NO. 113.
- 7. NUMBER AND PLACEMENT OF SPACERS ON CARRIER PIPE PER MANUFACTURER'S



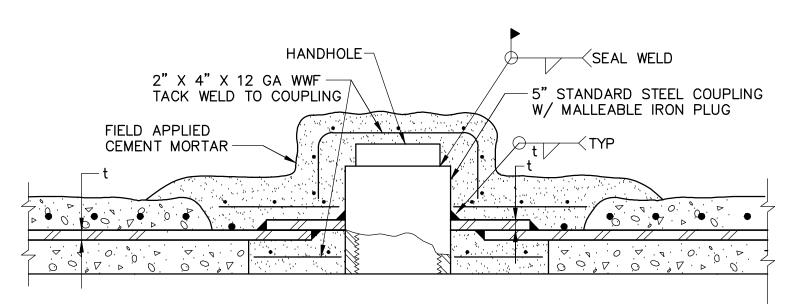
EXISTING STEEL PIPE CUT IN NEW SPOOL DETAIL



NOTES:

- 1. CONTRACTOR SHALL PROVIDE CML&C STEEL SPOOL, WHICH IS RATED AT 300 PSI. CONTRACTOR SHALL SUBMIT MATERIAL FOR APPROVAL PRIOR TO CONSTRUCTION.
- 2. REFER TO DETAIL 4 HEREON FOR BUTT STRAP AND HAND HOLE.

EXISTING STEEL PIPE CUT IN NEW TEE DETAIL



TYPICAL HANDHOLE FOR BUTT STRAP JOINT

BUTT STRAP AND

NOTES:

- 1. HAND HOLE REQUIRED ON PIPE SMALLER THAN 24" DIAMETER.
- 2. PROVIDE ADEQUATE HOLDBACK OF CEMENT MORTAR LINING AND COATING FOR WELDING AND TESTING OF WELDS.

STEEL CASING DETAIL

CITY OF PLEASANTON



HAND HOLE DETAIL TURNOUT #4 BOOSTER PUMP STATION AND DISCHARGE PIPELINE (F-1 LINE)

CIVIL DETAILS 3 - CASING, STEEL PIPE CUT IN, AND BUTTSTRAP DETAILS

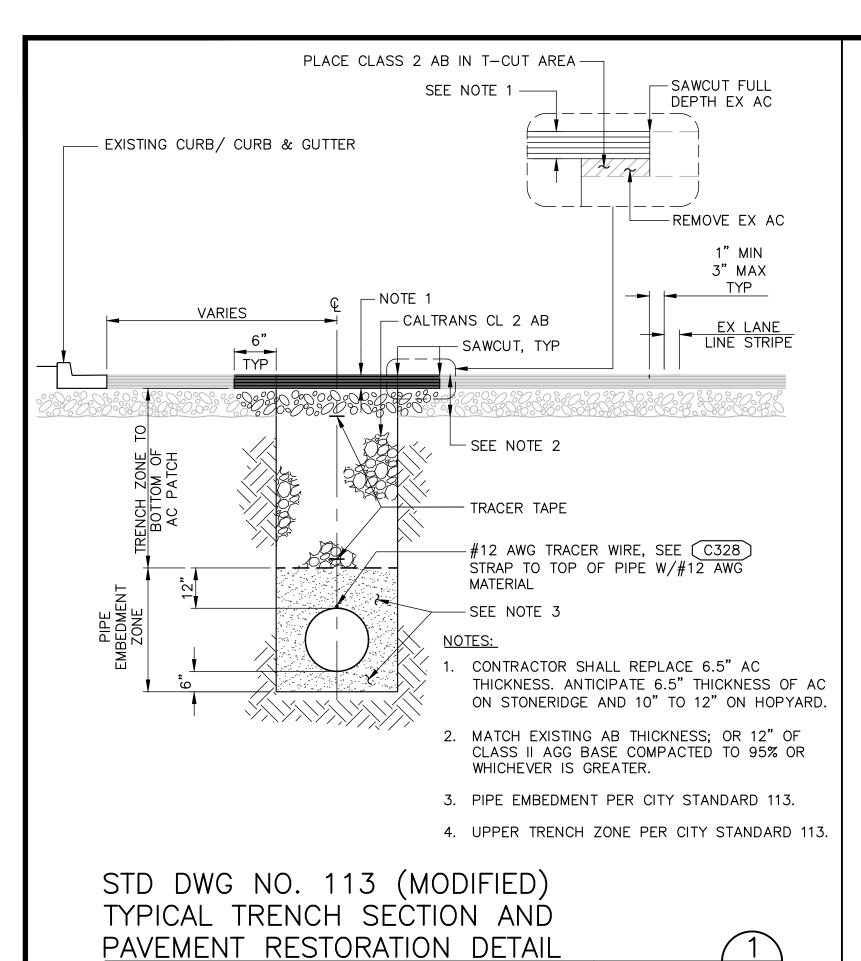
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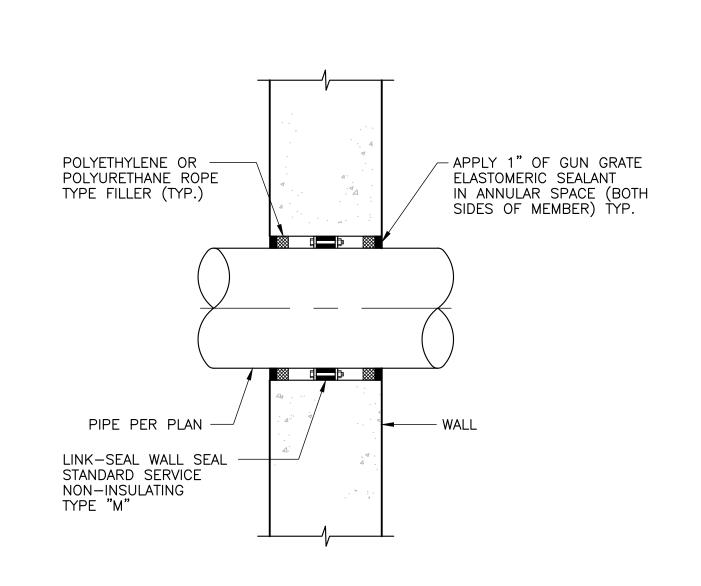
DWG NO. NTS CIP-2417 JANUARY 2024 16 OF 40

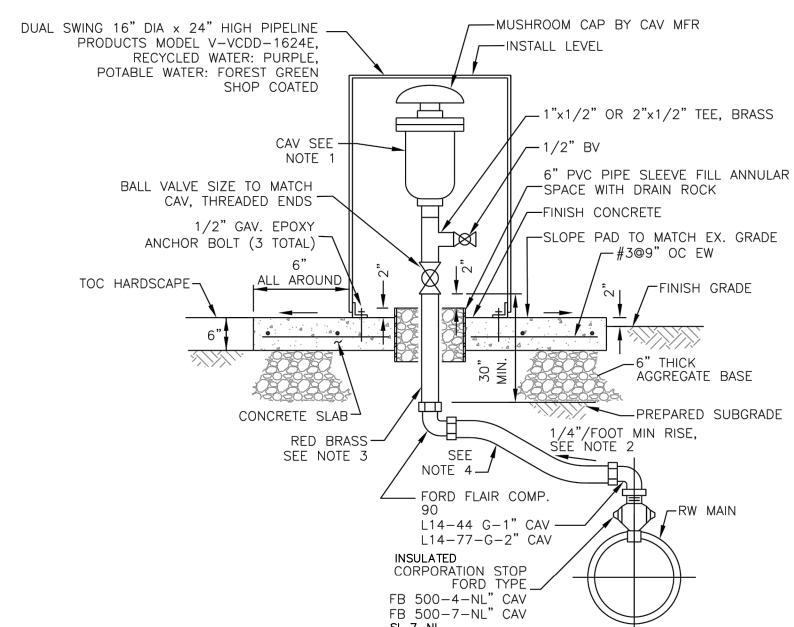
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DESCRIPTION DATE 01/26/24 | ISSUE FOR BID

THE CITY OF PLEASANTON. PUBLIC WORKS DEPARTMENT







SECTION (ABOVE GROUND CAV)

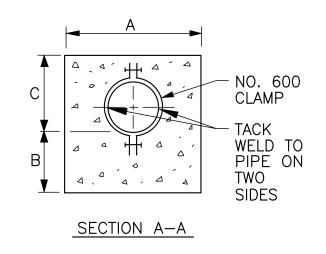
1. CAV SHALL BE APCO 143C FOR 1"TUBING AND APCO 145C FOR 2" TUBING, OR APPROVED EQUAL.

- 2. SERVICE LINE SHALL BE RUN IN A STRAIGHT LINE PERPENDICULAR TO PROPERTY LINE FROM MAIN TO PROPERTY LINE AND HAVE POSITIVE SLOPE.
- 3. 1" RED BRASS FOR 1" CAV. 2" RED BRASS FOR 2" CAV.
- 4. COPPER TUBING.
- 5. WARNING TAPE MARKED "CAUTION WATER LINE BURIED BELOW" SHALL BE INSTALLED 12" ABOVE THE WATER SERVICE.
- 6. TAPS FOR 2" REQUIRE A SADDLE. A. ACP - REQUIRES BRONZE DOUBLE STRAP B. DIP - REQUIRES D.I. STRAP C. PVC - REQUIRES BRONZE STRAP DESIGNED FOR C900 PVC PIPE.
- 7. 4" BEHIND CURB WHERE PLANTER AREA EXISTS BETWEEN CURB AND SIDEWALK, 4" BEHIND SIDEWALK - WHERE SIDEWALK IS MONOLITHIC TO CURB.
- 8. FIELD COAT CAV AND ENCLOSURE W/12 MILS DFT AMINE CURED EPOXY, AMERCOAT 395 OR EQUAL. COLOR: PURPLE PANTONE 512. POTABLE WATER COLOR: FOREST
- 9. SEE PLANS FOR GENERAL PLACEMENT LOCATIONS.

STD DWG NO. 312 (MODIFIED) COMBINATION AIR VALVE



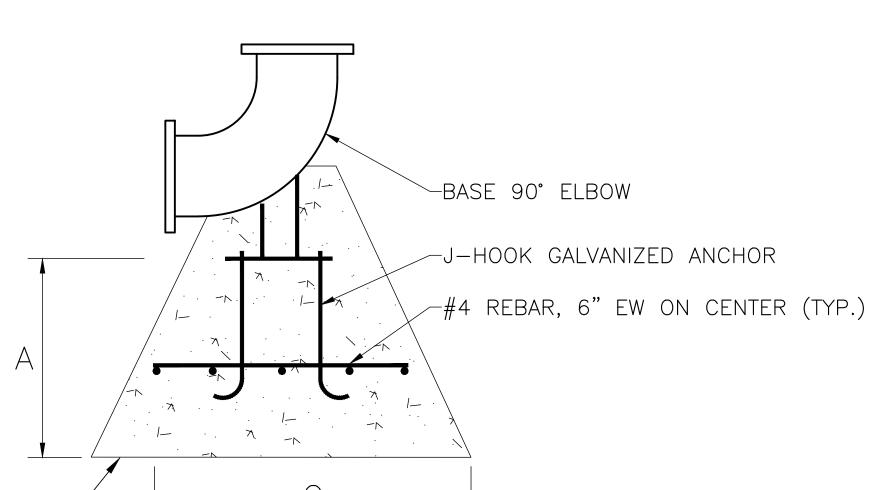
ADJUST SIZE FOR SOIL CONDITIONS							
PIPE-SIZE	Α	В	С	D	CU.YDS.		
6"	18"	12"	12"	6"	0.1		
8"	24"	16"	14"	8"	0.1		
10"	30"	21"	18"	10"	0.2		
12"	36"	24"	20"	12"	0.4		
16"	48"	36"	48"	12"	0.9		
18"	60"	36"	48"	12"	1.23		
20"	72"	48"	48"	12"	1.69		
24"	84"	48"	48"	12"	1.95		



NOTES.

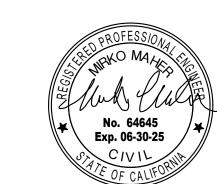
- 1. EXTENSION REQUIRED FOR GATE VALVE IF DEPTH IS OVER 60".
- 2. TEE WITH 4" OR 6" FLANGED OUTLET. ELBOW, FLANGED, STD. 4" OR 6" X 4" REDUCING.
- 3. TERMINATE BLOWOFF WITH 4" W/SQ. HEAD, SCREWED PLUG.
- 4. 4" DUCTILE IRON PIPE FLANGED X FLANGED

STD DWG NO. 309 BLOW OFF ASSEMBLY



				A۱	NCHOR
	Α	В	С	SIZE	LENGTH
12"	30"	60"	60"	5/8"	24"
16"	36"	76"	76"	3/4"	30"
18"	48"	84"	84"	3/4"	42"

BASE 90-DEGREE ELBOW WITH THRUST BLOCK 5



DESCRIPTION DATE THE CITY OF 01/26/24 ISSUE FOR BID

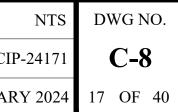
WALL PENETRATION DETAIL

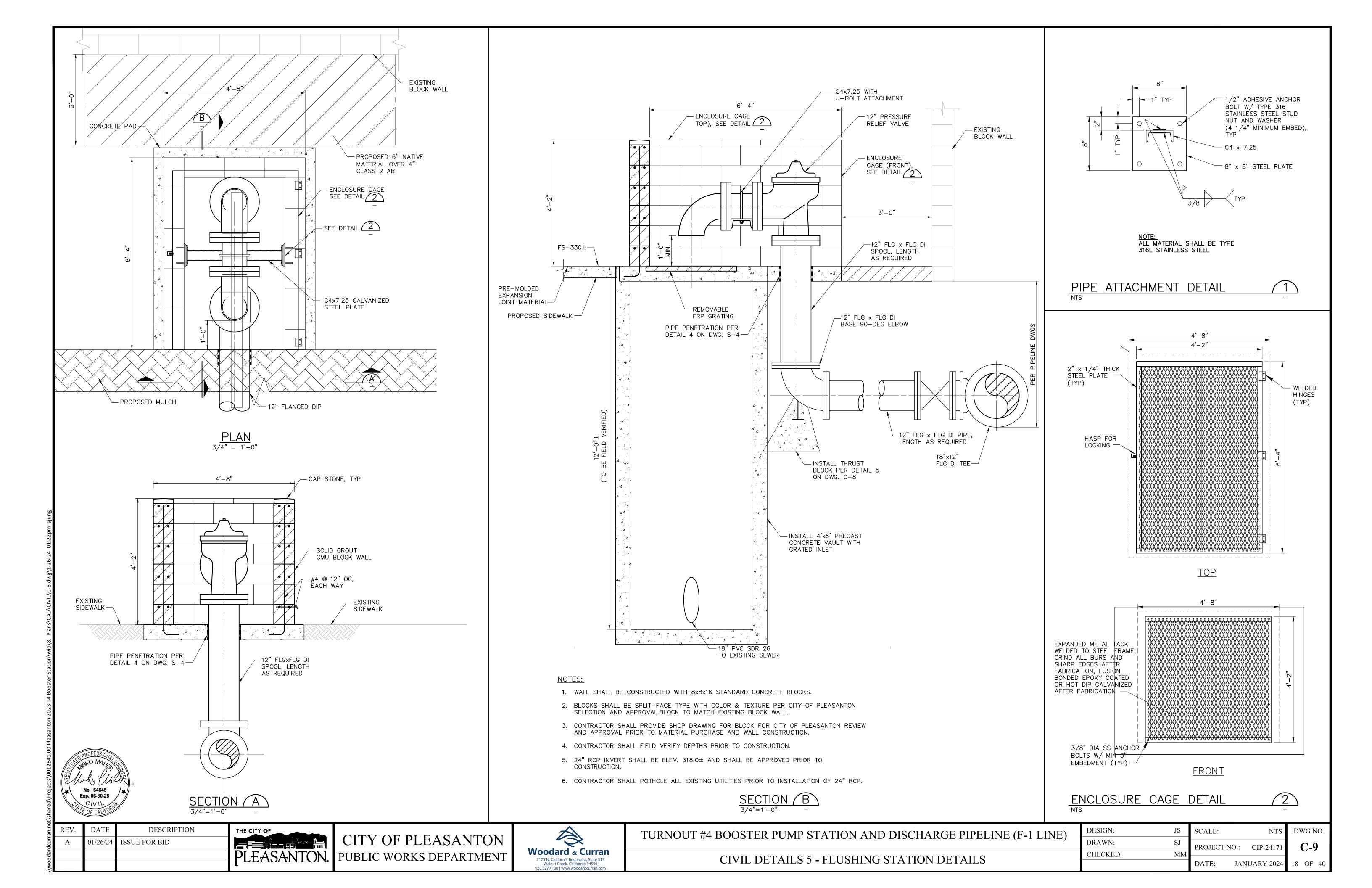
CITY OF PLEASANTON PLEASANTON. PUBLIC WORKS DEPARTMENT





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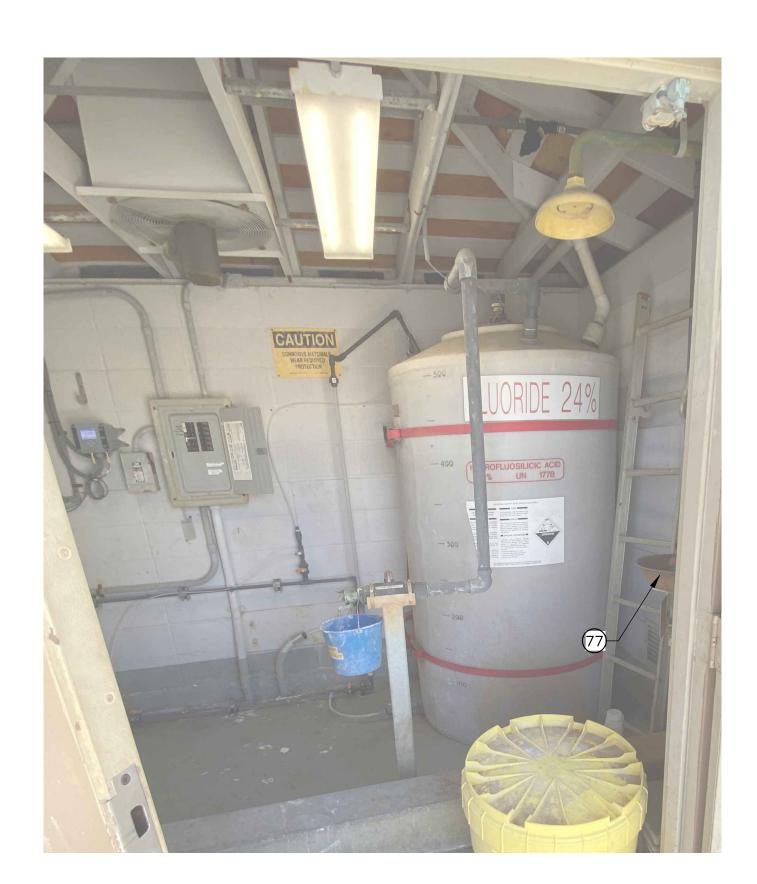


PHOTO 2

CONSTRUCTION NOTES:

- 74) REMOVE EXISTING CIRCUIT BREAKER AND ELECTRONICS. KEEP EXISTING LIGHTING, PUMP CONTROLS, AND SECURITY ALARM IN PLACE.
- 75) FURNISH AND INSTALL NEW 500-GALLON FLUORIDE CHEMICAL TANK, NORWESCO MODEL OR
- MODIFY CURB HEIGHT AN ADDITIONAL 6-INCHES. PLACE HYDROPHILLIC JOINT STRIP BETWEEN NEW AND EXISTING CONCRETE SURFACES TO ENSURE WATER TIGHT CONTAINMENT AREA.
- 77) EYE WASH STATION TO BE LOCATED OUTSIDE FLUORIDE BUILDING, SEE NOTE 1.
- REMOVE EXISTING VENTS AND PATCH. REPLACE WITH NEW VENTS TO ACCOMMODATE BOTH TANKS. GROUT EXISTING VENT OPENINGS CLOSED, AND CORE NEW VENT OPENINGS, SEE NOTE 2.
- 79 PLUMB EXISTING AND PROPOSED CHEMICAL FEED TANKS TOGETHER. KEEP EXISTING LEVEL INDICATOR TO FUNCTION IN PLACE.
- 80 EXISTING LIGHTING, PUMP CONTROL AND SECURITY ALARM CIRCUIT TO REMAIN.
- (81) CONTRACTOR SHALL PLUMB NEW TANK WITH EXISTING. FLUORIDE LINE SHALL CONNECT TO DISCHARGE PIPELINE IN NEW FLUORIDE VAULT (SEE C-2). CONTRACTOR SHALL USE MATERIALS IN
- 82) EPOXY COAT CONTAINMENT SURFACES

- 1. CONTRACTOR SHALL DISCONNECT REMOVE AND DISPOSE EXISTING EYEWASH STATION. CONTRACTOR SHALL INSTALL NEW STAINLESS STEEL EYEWASH STATION ULINE MODEL H-10735 OR EQUAL; OUTSIDE AND ADJACENT TO EXISTING FLUORIDE BUILDING. PROVIDE 3x3 CONCRETE PAD, AND PLUMB TO EXISTING WATER SERVICE.
- 2. NEW VENT OPENING SHALL BE LOCATED ABOVE SECONDARY CONTAINMENT LEVEL.
- 3. CONTRACTOR SHALL INSTALL NEW LOCKABLE DOOR WITH MATERIALS IN KIND. GRADE AND LEVEL ENTRY WAY TO DOOR AND INSTALL NEW CONCRETE SURFACES. ADJUST VALVE CANS TO GRADE PER DRAWING C-2.

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DESCRIPTION







TURNOUT #4 BOOSTER PUMP STATION AND DISCHARGE PIPELINE (F-1 LINE)
FLUORIDE BUILDING IMPROVEMENTS

▶ Sand, dirt, and similar materials must be stored at least 10 feet from catch basins, and covered with a tarp during wet weather or when rain is forecast.

✓ Use (but don't overuse) reclaimed water for dust control as needed.

▶ Sweep or vacuum streets and other paved areas daily. Do not wash down streets or work areas with water!

✓ Recycle all asphalt, concrete, and aggregate base material from demolition activities.

Comply with City Ordinance for recycling construction materials, wood, gyp board, pipe, etc.

Contact Pleasanton Garbage Service at 925-846-2042 for both recycling and debris

▶ Check dumpsters regularly for leaks and to make sure they don't overflow. Repair or replace leaking dumpsters promptly.

Hazardous materials management

✓ Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with city, state, and

✓ Store hazardous materials and wastes in secondary containment and cover

Follow manufacturer's application instructions for hazardous materials and be careful not to use more than necessary. Do not apply chemicals outdoors when rain is forecast within 24 hours.

▶ Be sure to arrange for appropriate disposal of all hazardous wastes.

Spill prevention and control

✓ Keep a stockpile of spill cleanup materials (rags, absorbents, etc.) available at the construction site at all times.

✓ When spills or leaks occur, contain them immediately and be particularly careful to prevent leaks and spills from reaching the gutter, street, or storm drain.

Never wash spilled material into a gutter, street, storm drain, or creek!

Report any hazardous materials spills immediately! Dial 911 or the Livermore/Pleasanton Fire Department at 925-454-2330.

Pollution Prevention - It's Part of the Plan

Make sure your crews and subs do the job right!

Runoff from streets and other paved areas are a major source of pollution in San Francisco Bay. Construction activities can directly affect the health of the Bay unless contractors and crews plan ahead to keep dirt, debris, and other construction waste away from strom drains and local creeks. Following these guidelines will ensure your compliance with the City of Pleasanton requirements. Contact the City of Pleasanton, Department of Public Works at (925) 931-5650, or for private onsite work, please contact the Building and Safety Division at (925) 931-5300.

Vehicle and equipment maintenance & cleaning

✓ Inspect vehicles and equipment for leaks frequently. Use drip pans to catch leaks

until repairs are made; repair leaks promptly. ✓ Fuel and maintain vehicles on site only

in a bermed area or over a drip pan that is big enough to prevent runoff. ✓ If you must clean vehicles or equipment

on site, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets,

storm drains, or creeks. ✓ Do not clean vehicles or equipment on—site using soaps, solvents, degreasers, steam cleaning equipment, etc.



Earthwork & contaminated soils

✓ Keep excavated soil on the site where it is least likely to collect in the street. Transfer to dump trucks should take place on the site, not in the street. ✓ Use fiber rolls, silt fences, or other control measures to minimize the flow of silt off the site. See the approved erosion control plan for this site.



✓ Earth moving activities are only allowed during dry weather by permit and as approved by the City Inspector in the Field. ✓ Mature vegetation is the best form of erosion control. Minimize disturbance to existing vegetation whenever possible. ✓ If you disturb a slope during construction,

prevent erosion by securing the soil with erosion control fabric, or seed with fastgrowing grasses as soon as possible. Place fiber rolls down-slope until soil is secure.

✓ If you suspect contamination (from site history, discoloration, odor, texture, abandoned underground tanks or pipes, or buried debris), call Pleasanton/Livermore Fire Department at 925-454-2330 or the Regional Water Quality Control Board for help in determining what should be done, and manage disposal of contaminated soil according

Dewatering operations

✓ Reuse water for dust control, irrigation,

or another on-site purpose to the greatest extent possible.

▶ Be sure to call Pleasanton's storm drain source c inspector, Brian Lorimer, before discharging water to a

street, gutter, or storm drain (925-931-5511). Filtration or diversion through a basin, tank, or sediment trap may be required.

✓ In areas of known contamination, testing is required prior to reuse or discharge of groundwater. Consult with the city inspector to determine what testing is required and how to interpret results. Contaminated groundwater must be treated or hauled off—site for proper disposal.

Saw cutting

✓ Always completely cover or barricade storm drain inlets when saw cutting. Use

filter fabric, catch basin inlet filters, or sand/gravel bags to keep slurry out of the storm drain system.

▶ Shovel, absorb, or vacuum saw—cut slurry and pick up all waste as soon as you are finished in one location or at the end of each work day (whichever is

✓ If saw cut slurry enters a catch basin, clean it up immediately.

Paving/asphalt work

 ▶ Do not pave during wet weather or when rain is forecast.

✓ Always cover storm drain inlets and manholes when paving or applying seal coat, tack coat, slurry seal, or fog seal. ✓ Place drip pans or absorbent material under paving equipment when not in use.

✓ Protect gutters, ditches, and drainage courses with sand/gravel bags, or earthen

✓ Do not sweep or wash down excess sand from sand sealing into gutters, storm drains, or creeks. Collect sand and return it to the stockpile, or dispose of it as trash.

✓ Do not use water to wash down fresh asphalt concrete pavement.

Concrete, grout, and mortar storage & waste disposal

▶Be sure to store concrete, grout, and mortar under cover and away from drainage areas. These materials must never reach a storm drain.

✓ Wash out concrete equipment/trucks off—site or designate an on-site area for washing where water will flow onto dirt or into temporary pit in a dirt area. Let the water seep into the soil an dispose of hardened concrete with trash.



✓ Divert water from washing exposed aggregate concrete to a dirt area where it will not run into a gutter, street, or storm drain.

✓ If a suitable dirt area is no available, collect the wash water and remove it for appropriate disposal off site.

Painting

✓ Never rinse paint brushes o materials in a gutter or street! ✓ Paint out excess water-based paint before rinsing brushes, rollers, or containers in a sink. If you can't use a sink, direct wash water to a dirt area and



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C-11

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spade it in. ✓ Paint out excess oil—based paint before cleaning brushes

Filter paint thinners and solvents for reuse whenever possible. Dispose of oil—based paint sludge and unusable thinner as hazardous waste.

Storm drain polluters maybe liable for fines of \$10,000 or more per day!



For more detailed information: Get a copy of the "Field Manual" -- (510) 622-2465 or www.abag.ca.gov/bayarea/sfep/reports/construction.html

Bay Area Stormwater Management Agencies Association (BASMAA)

DESCRIPTION

DATE

01/26/24 | ISSUE FOR BID

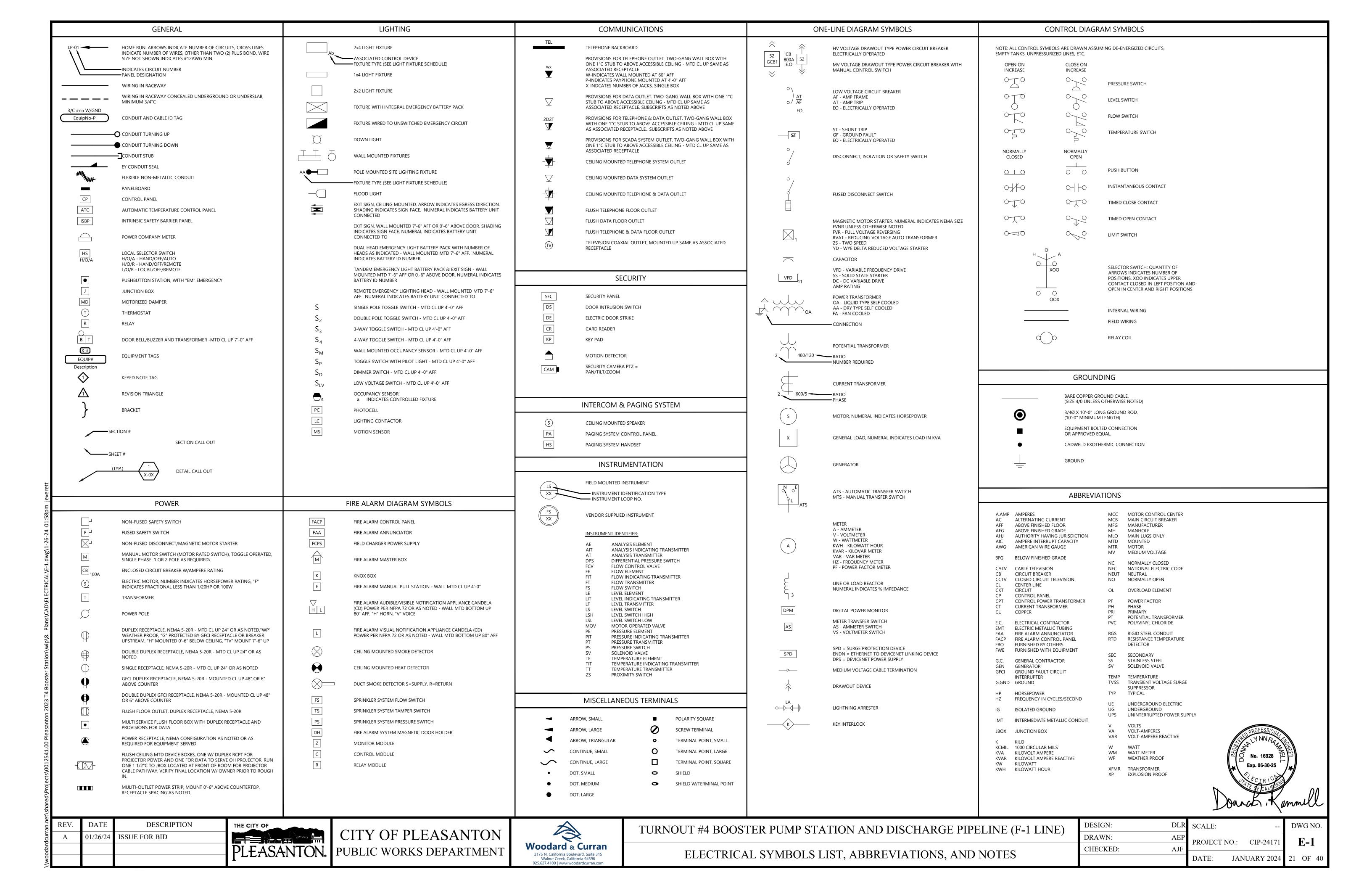


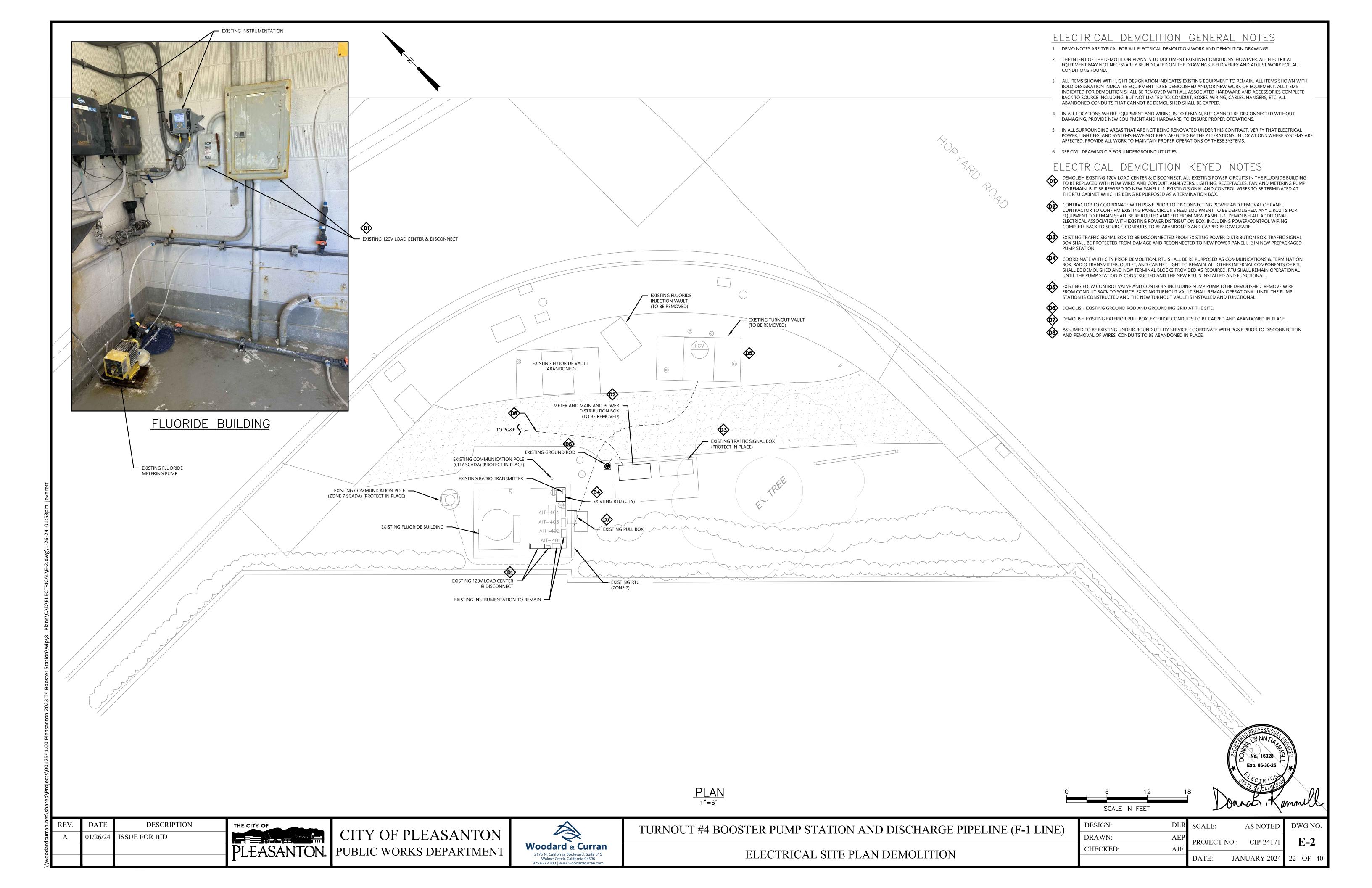
CITY OF PLEASANTON PLEASANTON. PUBLIC WORKS DEPARTMENT

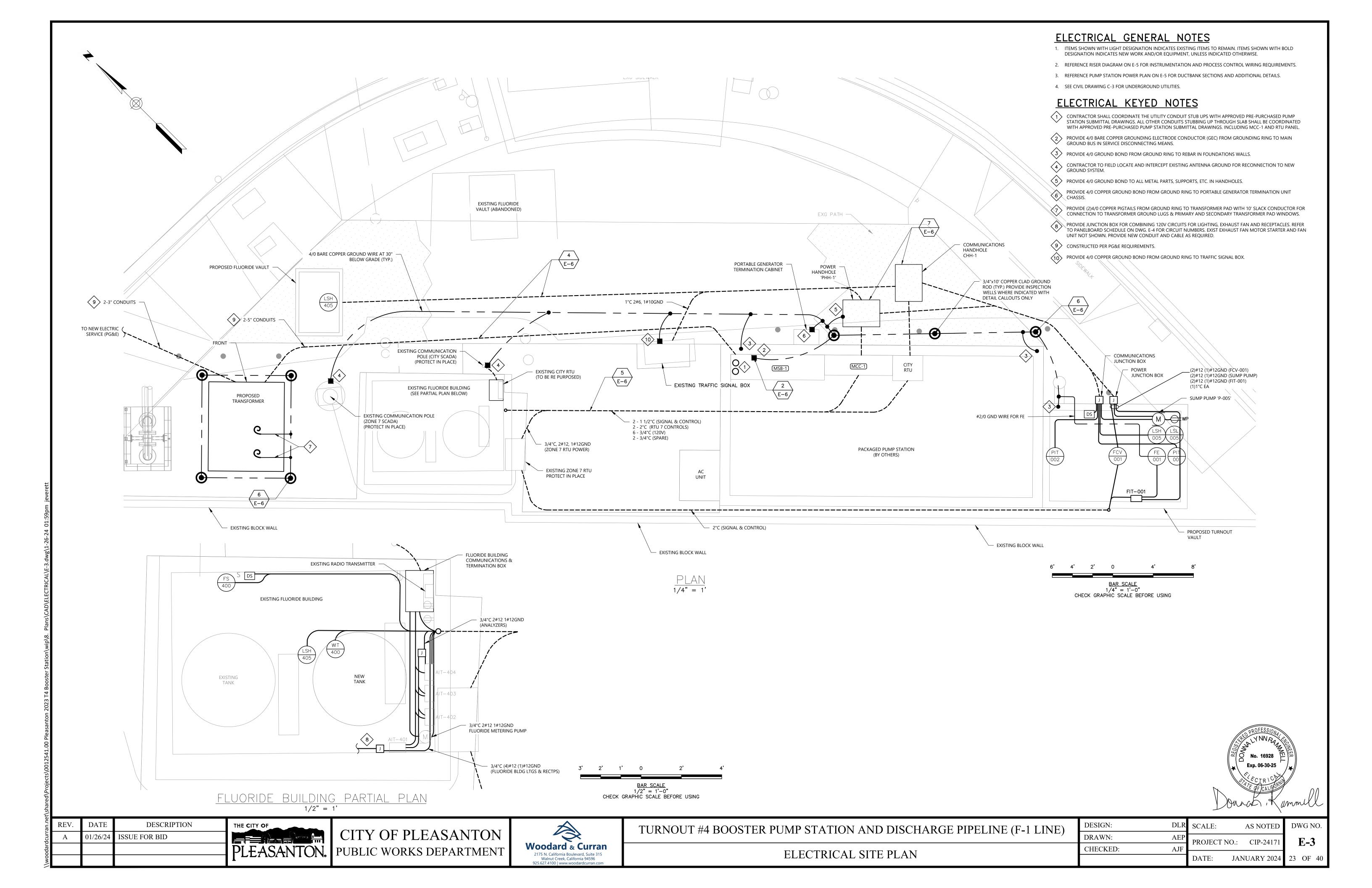


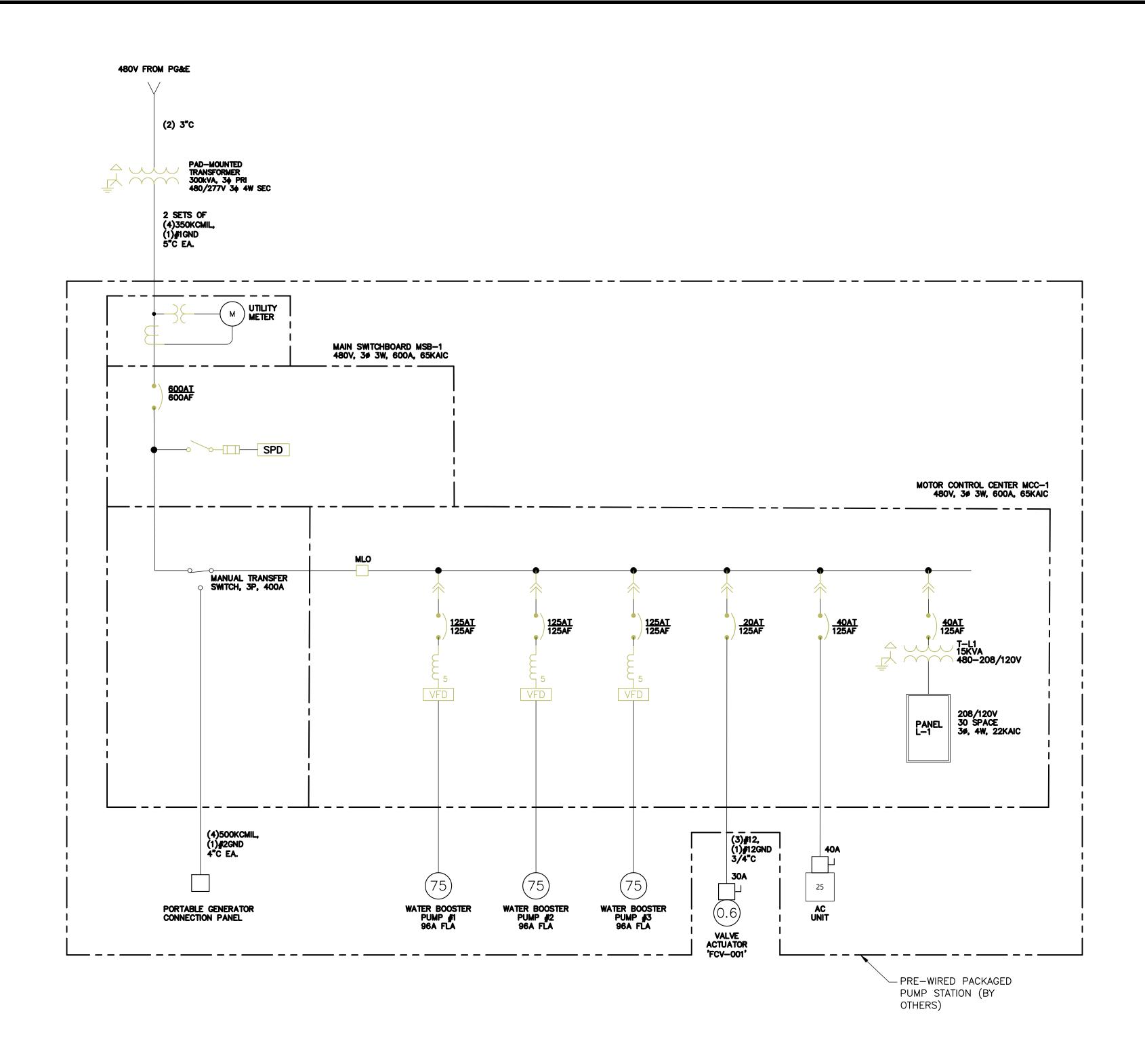
TURNOUT #4 BOOSTER PUMP STATION AND DISCHARGE PIPELINE (F-1 LINE)

DESIGN:	SCALE: NTS
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					K	VA LOAD	S					
DIRECTORY	BRKR	POLE	CKT#	KVA	Α	В	С	KVA	CKT#	POLE	BRKR	DIRECTORY
FLUORIDE METERING PUMP	20	1	1	0.50	0.50				2	1	20	SPARE
FLUORIDE BLDG RECEPTACLES	20	1	3	0.72		1.22		0.50	4	1	20	ZONE 7 RTU
PUMP STATION EXTERIOR LIGHTING	20	1	5	0.50			1.50	1.00	6	1	20	BOOSTER INTERIOR LIGHTING
FLOURIDE COMMUNICATIONS & TERMINATION BOX LGT	20	1	7	0.50	0.86			0.36	8	1	20	FLOURIDE COMMUNICATIONS & TERMINATION BOX RCPT
PUMP STATION RECEPTACLES	20	1	9	0.72		1.72		1.00	10	1	20	FLUORIDE BLDG LIGHTING
FLUORIDE BLDG EXHAUST FAN	20	1	11	0.75			1.88	1.13	12	1	20	TURNOUT VAULT SUMP PUMP RECE
TRAFFIC CONTROLLER	60	1	13	5.50	5.50				14	1	20	SPARE
FLUORIDE BLDG ANALYZERS	20	1	15	0.50		1.00		0.50	16	1	20	CITY RTU
TRAFFIC LIGHTING	20	1	17	0.50			0.50		18			SPACE
SPACE			19		0.00				20			SPACE
SPACE			21			0.00			22			SPACE
SPACE			23				0.00		24			SPACE
SPACE			25		0.00				26			SPACE
SPACE			27			0.00			28			SPACE
SPACE			29				0.00		30			SPACE
			SI	JBTOTAL	6.86	3.94	3.88	SUBTOTA	AL			
VOLTAGE:	120/208		TC	OTAL kVA	14.68			PANEL N	AME:	L-1		
MAIN BREAKER:	50		тот	AL AMPS	41				LOCATIO	N:	PLEASANTON BOOSTER T4	
BUSES:	100									MOUNTIN	IG:	FLUSH
PH & WIRES:	3PH 4W									AIC RATII	NG:	22 kAIC

PANEL 'L-1'

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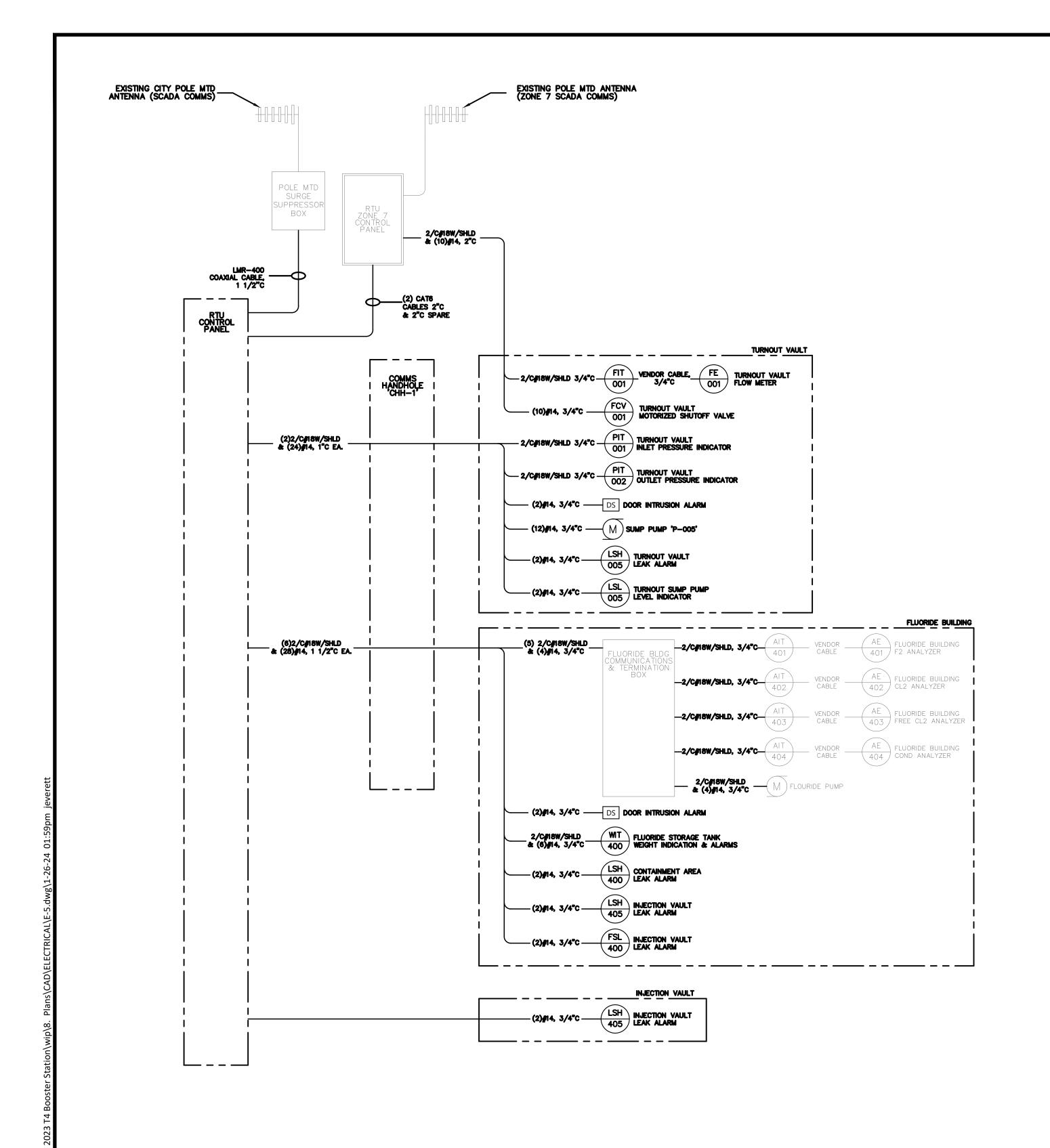
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PUBLIC WORKS DEPARTMENT







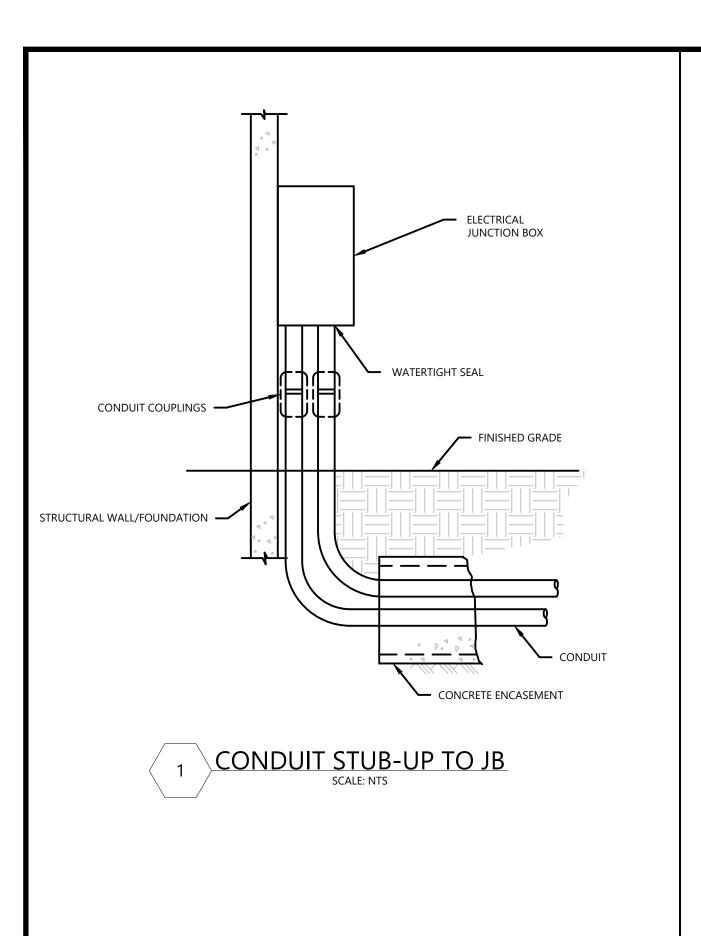
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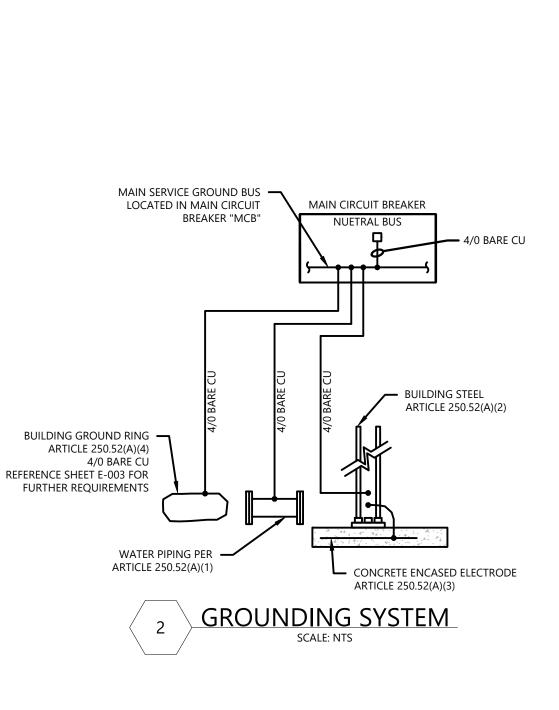


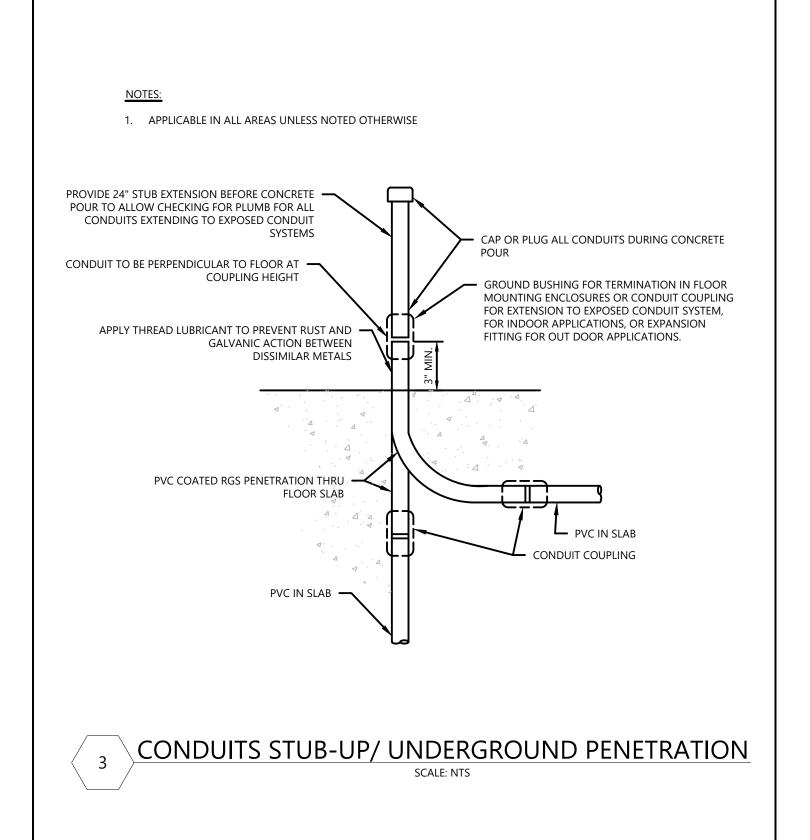


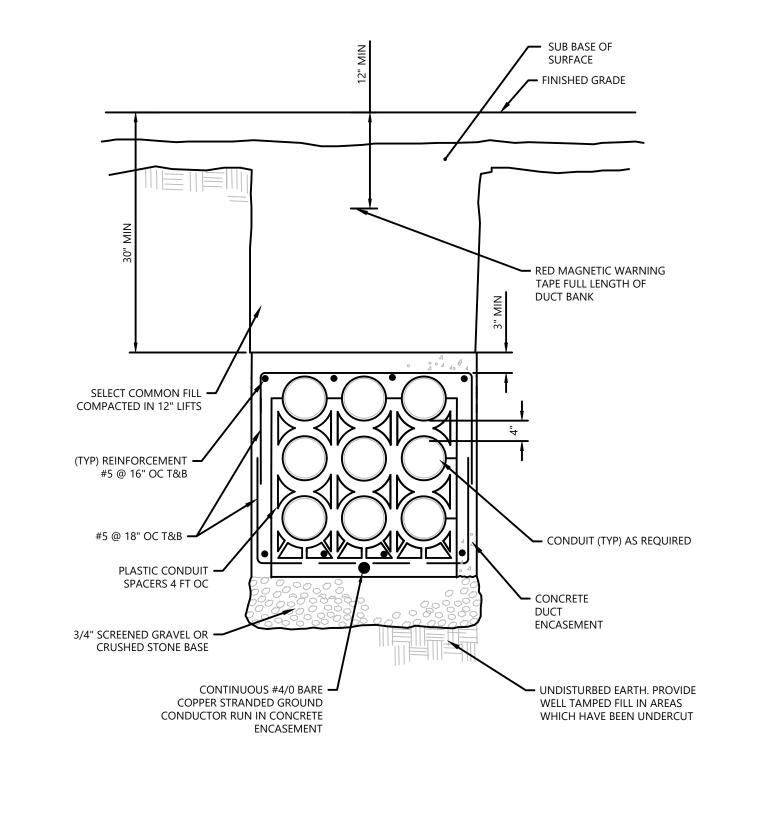
URNOUT #4 BOOSTER PUMP STATION AND DISCHARGE PIPELINE (F-1 LINE)
ELECTRICAL RISER DIAGRAM

DESIGN:	DLR	SCALE:			DV	WG NO.
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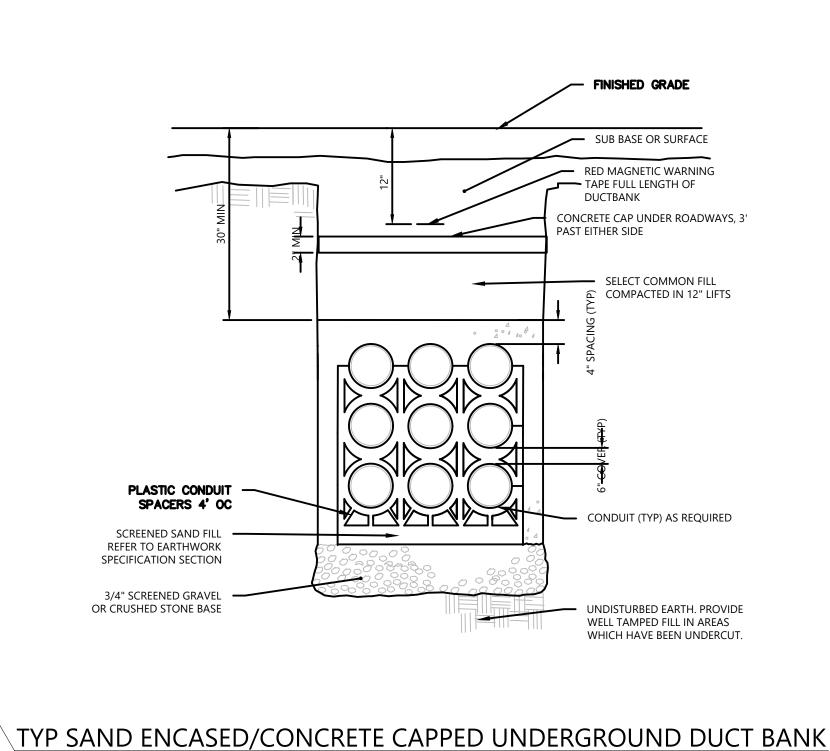


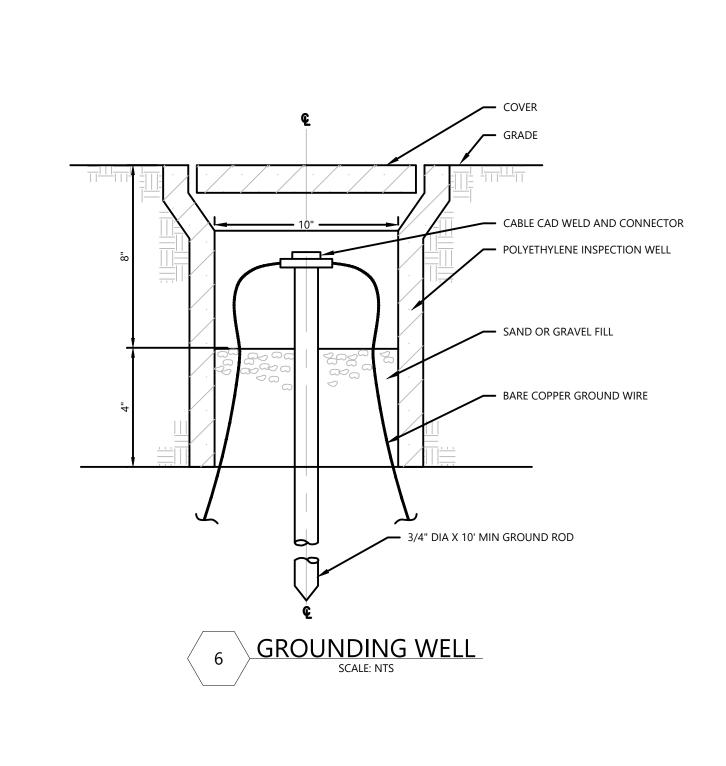


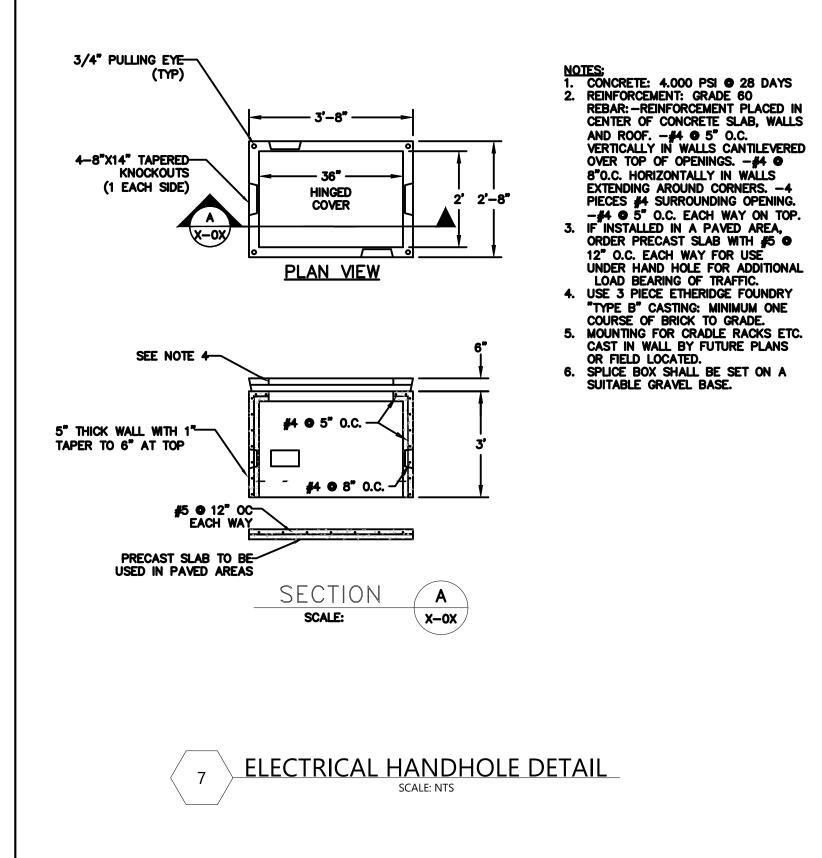


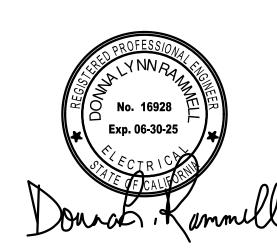
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CITY OF PLEASANTON
PUBLIC WORKS DEPARTMENT



TURNOUT #4 BOOSTER PUMP STATION AND DISCHARGE PIPELINE (F-1 LINE)

ELECTRICAL DETAILS

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2175 N. California Boulevard, Suite 315

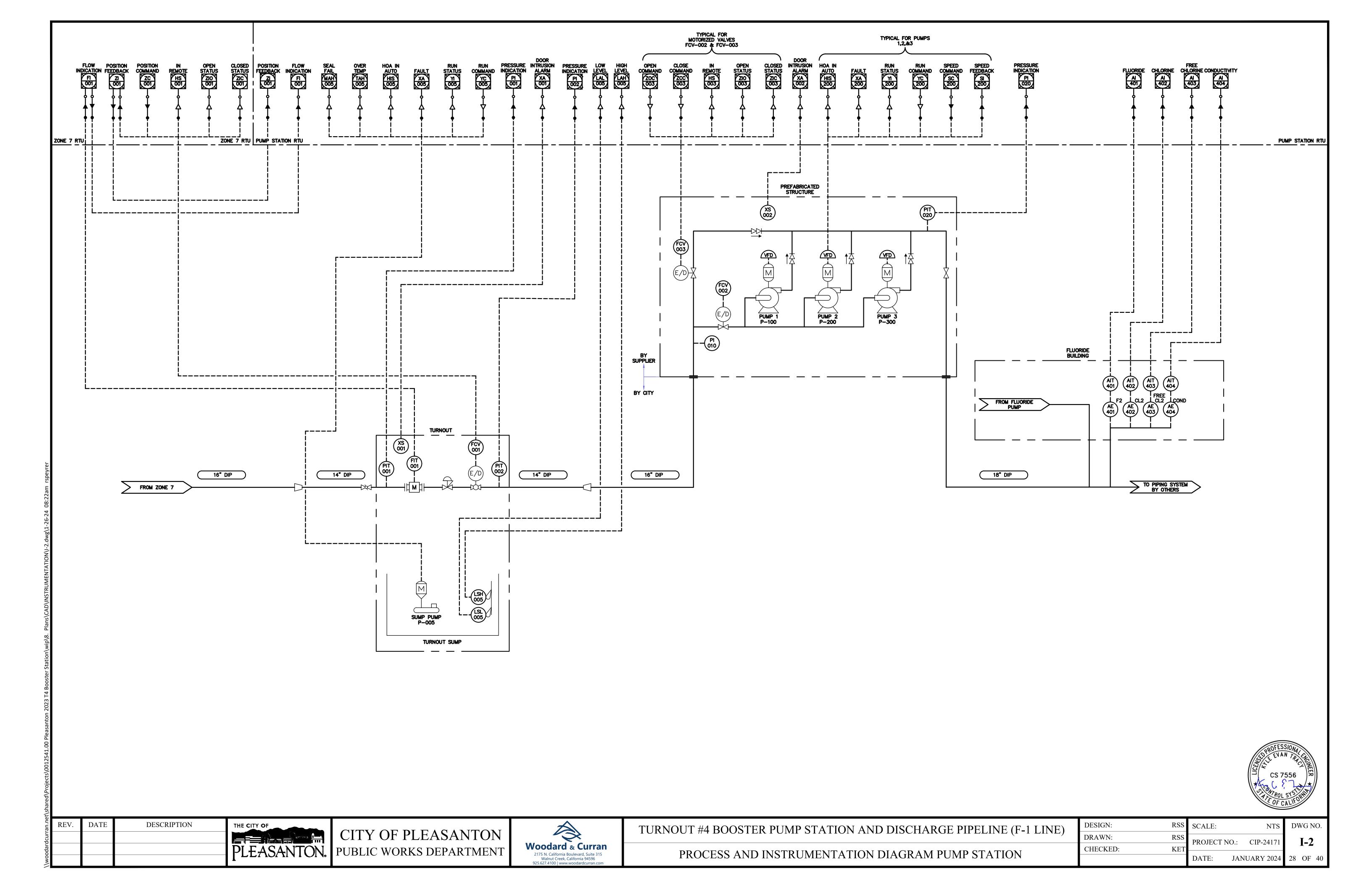
Walnut Creek, California 94596

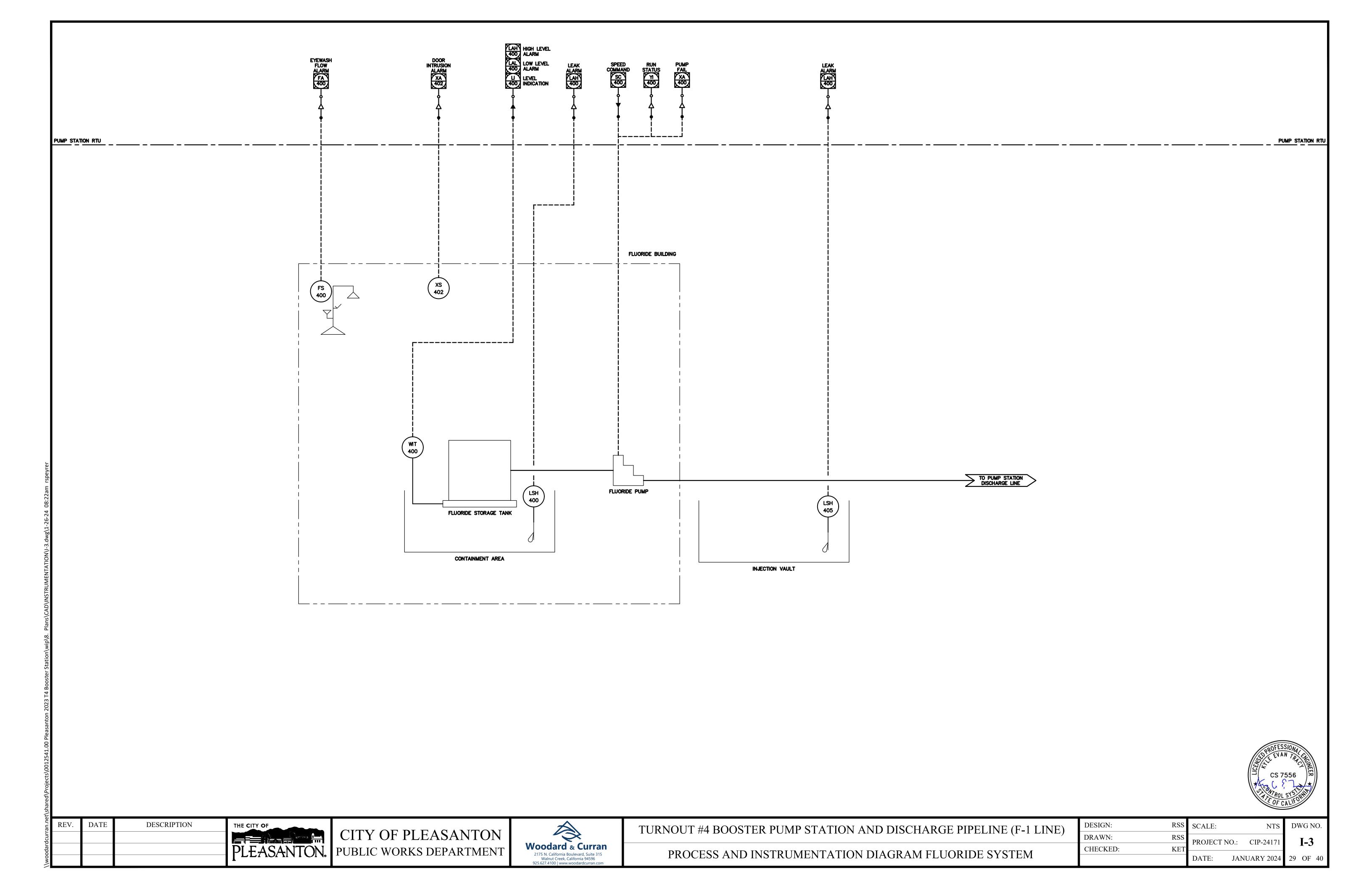
PROCESS AND INSTRUMENTATION DIAGRAM LEGEND

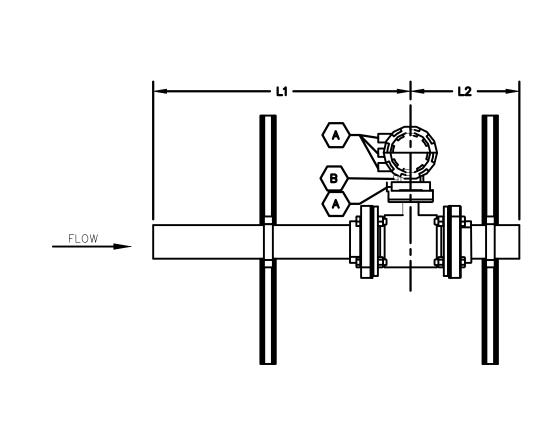
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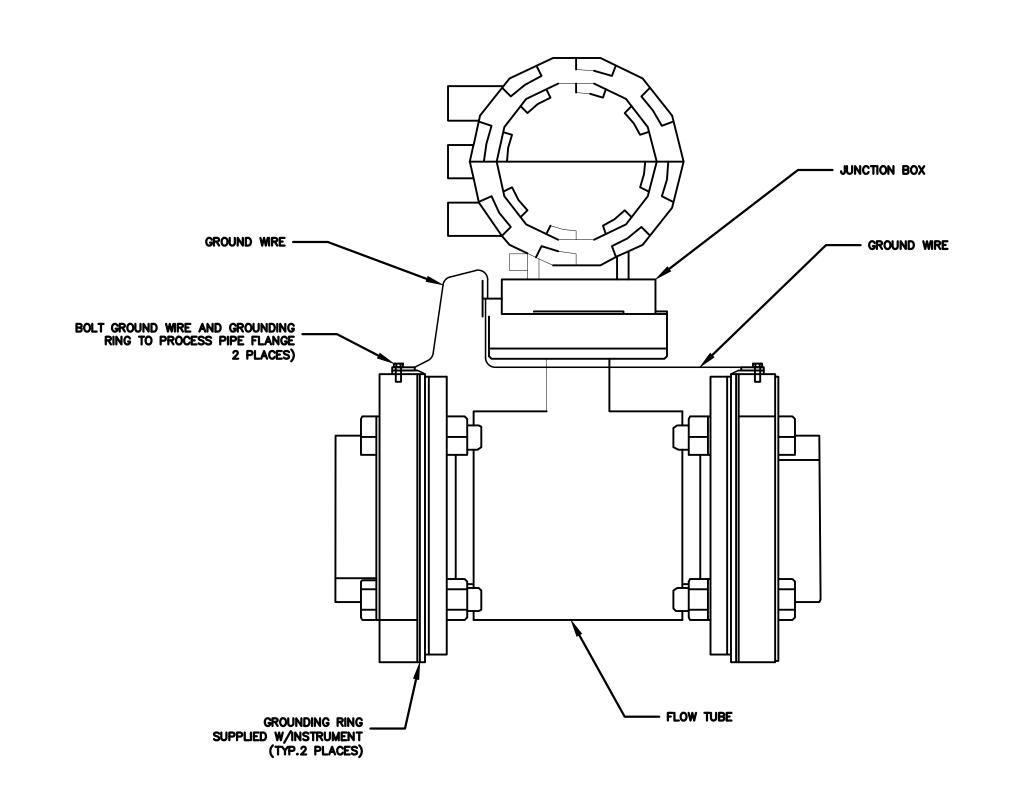
JANUARY 2024 27 OF 40











GROUNDING DETAIL

scale: N.T.S.

<u>LEGEND</u>

L1 = 5 X PIPE DIAMETER

L2 = 2 X PIPE DIAMETER

A - CONDUIT ENTRY

B - GROUND LUG



REV.	DATE	DESCRIPTION	THE CITY OF
			PLEASANTON.







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CHECKED:	KET	TROJEC
		DATE:

SCALE: NTS DWG NO.

PROJECT NO.: CIP-24171 I-4DATE: JANUARY 2024 30 OF 40

ABBREVIATIONS GENERAL STRUCTURAL NOTES: AND A. GENERAL STRUCTURAL NOTES: ANGLE NUMBER 1. DESIGN IS IN ACCORDANCE WITH THE 2022 CALIFORNIA BUILDING CODE. AMERICAN CONCRETE INSTITUTE 2. THESE NOTES SHALL APPLY TO ALL WORK, EXCEPT AS NOTED OTHERWISE. ADDITIONAL ASCE AMERICAN SOCIETY OF CIVIL 3. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE DRAWINGS AND SPECIFICATIONS OF ALL ENGINEERING DISCIPLINES WHICH SHALL BE REFERRED TO FOR SIZES AND LOCATIONS OF ALL OPENINGS, PENETRATIONS, ASTM ASTM INTERNATIONAL DRAINS, PADS, CONDUIT, EQUIPMENT, AND PIPE SUPPORTS, ETC. BLDG BUILDING 4. GEOTECHNICAL CONDITIONS AND DESIGN PARAMETERS ARE BASED ON OBSERVATIONS AND RECOMMENDATIONS FOUND IN GEOTECHNICAL ENGINEERING REPORT BY BSK ASSOCIATES, DATED JANUARY 22, 2024. BOTTOM OF CONCRETE BOTTOM OF PIPE B. SITE CONDITIONS, EXCAVATION, SHORING, AND DEWATERING: BOT BOTTOM 1. GEOTECHNICAL RECOMMENDATIONS AND DETAILS ARE PROVIDED IN THE GEOTECHNICAL REPORT TITLED CENTERLINE "GEOTECHNICAL INVESTIGATION REPORT, CITY OF PLEASANTON EMERGENCY WATERLINE PROJECT, STONERIDGE CIRCULAR/CIRCUMFERENCE DRIVE, PLEASANTON, CALIFORNIA" BY BSK ASSOCIATES, DATED JANUARY 22, 2024; PROJECT NUMBER CONSTRUCTION JOINT G00001782. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE GEOTECHNICAL REPORT AND ADHERING TO CLEAR THE RECOMMENDATIONS WITHIN. GEOTECHNICAL INFORMATION CONTAINED WITHIN THIS DRAWING PACKAGE IS ONLY CONC CONCRETE INTENDED TO HIGHLIGHT CERTAIN PORTIONS OF THE GEOTECHNICAL REPORT. CONT CONTINUOUS/CONTINUE 2. SITE CONDITIONS: THE SITE IS GENERALLY UNDERLAIN BY SOFT TO FIRM FAT CLAY FOR THE FULL BORING DEPTH. DOWEL BAR SPLICES AND DOWEL INSÉRTS 3. GROUNDWATER: GROUNDWATER WAS NOT ENCOUNTERED IN THE BORINGS, LIKELY DUE TO HIGH PLASTICITY CLAY DEGREE AND TIME CONSTRAINTS. HISTORICAL RECORDS OF SITE SHOW HIGH GROUNDWATER AT LESS THAN 10 FEET, AND DEG DET DETAIL NEARBY SITES BEING ABOUT 5 FEET BELOW EXISTING GROUND SURFACE. GROUNDWATER ELEVATIONS CAN DIAMETER FLUCTUATE DUE TO SEASONAL VARIATIONS. DE-WATERING OF PROPOSED EXCAVATIONS IS THE RESPONSIBILITY OF **DIRECTION** DOWN 4. EXCAVATION AND SHORING: IT IS ANTICIPATED THAT EXCAVATIONS CAN BE MADE WITH STANDARD EARTHWORK DWG(S) DRAWING(S) EQUIPMENT, WITH SIDEWALLS REMAINING RELATIVELY VERTICAL FOR A PERIOD OF SEVERAL DAYS. ALL EAST-WEST EXCAVATIONS SHOULD BE EVALUATED TO MONITOR STABILITY PRIOR TO PERSONNEL ENTERING. ALL TRENCHES AND EXCAVATIONS SHOULD CONFORM TO CURRENT CALOSHA REQUIREMENTS FOR WORK SAFETY. WHERE STABILITY OF ADJOINING STRUCTURES COULD BE ENDANGERED BY EXCAVATION OPERATIONS, SUPPORT SYSTEMS SUCH AS EACH FACE **ELEVATION** SHORING, BRACING, OR UNDERPINNING MAY BE REQUIRED. **ELECTRICA EMBEDDED** 5. MONITORING OF SURROUNDING UTILITIES AND STRUCTURES IS RECOMMENDED FOR ALL IMPROVEMENTS WITHIN 50 EMBED FEET OF A PROPOSED EXCAVATION. EQUAL(LY EQUIPMEN' C. SUBGRADE PREPARATION, BACKFILL, AND COMPACTION: EACH WAY **EXISTING** 1. SUBGRADE PREPARATION: MAT STYLE FOUNDATIONS & SLABS-ON-GRADE SHALL BE SUPPORTED ON A MINIMUM EXPANSION OR EXPOSED OF 12 INCHES OF COMPACTED CALTRANS CLASS 2 AGGREGATE BASE. SUBGRADE PREPARATIONS SHALL BE EXT **EXTERIOR** INSPECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO THE PLACEMENT OF ENGINEERED FILL. FINISHED FLOOR ELEVATION 2. COMPACTION REQUIREMENTS BELOW FOUNDATIONS & SLABS-ON-GRADE SHALL BE A MINIMUM OF 90% **FOUNDATION** COMPACTION AT LEAST 2% OVER THE OPTIMUM MOISTURE CONTENT FOR CLAYEY SOILS AND NEAR OPTIMUM FOOT, FEET MOISTURE CONTENT FOR GRANULAR SOILS BASED ON ASTM D1557. HOT-DIP GALVANIZED 3. ENGINEERED FILL SHALL MEET THE FOLLOWING CRITERIA. THE CONTRACTOR SHALL TEST ALL MATERIAL (ON-SITE GENERAL CONTRACTOR & IMPORTED) USED FOR ENGINEERED FILLED AT THEIR EXPENSE. HORIZONTA HIGH POINT a. PLASTICITY INDICES 20 OR LESS ISOLATION JOINT b. LIQUID LIMIT LESS THAN 35% INTERIOR c. CONTAINING NO ORGANIC MATERIAL, DEBRIS, OR OTHER NON-SOIL MATERIALS JOINT d. GRADATION PERCENT PASSING BY WEIGHT 3-INCH 1-INCH POUNDS No. 200 LONG LEG VERTICAL LOW POINT D. FOUNDATION AND SLAB DESIGN CRITERIA: MAXIMUM 1. ALLOWABLE SOIL BEARING CAPACITY = 1,500 PSF MECH **MECHANICAI** MFR MANUFACTURER 2. MODULUS OF SUBGRADE REACTION = 40 PCI/IN MIDDLE **MINIMUM** MISC MISCELLANEOUS 3. COEFFICIENT OF FRICTION: 0.30 E. EXISTING CONDITIONS: NUMBER NOT-TO-SCALE 1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AS THEY RELATE TO NEW CONSTRUCTION. REPORT TO THE ENGINEER OF RECORD ALL OBSERVATIONS AND ANY ON-CENTER OCEF ON-CENTER EACH FACE DISCREPANCIES BEFORE PROCEEDING WITH WORK. ON-CENTER EACH WAY OCEW 2. WHERE DETAILS FOR SPECIFIC CONDITIONS ARE NOT SHOWN ON THESE PLANS, USE DETAILS FOR THE MOST OUTSIDE DIAMETER OPEN END NEARLY SIMILAR CONDITIONS SHOWN ON THE STRUCTURAL DRAWINGS AS DETERMINED BY THE STRUCTURAL ENGINEER. REPORT ANY COORDINATION ISSUES IMMEDIATELY TO THE ENGINEER. OPENING OSHA OCCUPATIONAL SAFETY AND 3 IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE FOR A SAFE AND FEFICIENT METHOD OF SHORING AND/OR BRACING THE STRUCTURE DURING ALL CONSTRUCTION PHASES. SUBMIT AN OUTLINE OF PROPOSED **PENETRATION** PROCEDURES BEFORE CONSTRUCTION COMMENCES. 4. STRUCTURAL MEMBERS SHALL NOT BE MODIFIED IN THE FIELD WITHOUT WRITTEN APPROVAL FROM THE POUNDS PER LINEAR FOOT STRUCTURAL ENGINEER. IN THE EVENT OF A CONSTRUCTION OR FABRICATION ERROR, THE CONTRACTOR SHALL POUNDS PER SQUARE FOOT PREPARE A SKETCH WITH A PROPOSED REPAIR. AND SUBMIT IT TO THE ENGINEER FOR APPROVAL PRIOR TO POUNDS PER SQUARE INCH PAINTED PERFORMING ANY CORRECTIVE WORK. 5. VERIFY ALL FIELD DIMENSIONS, LOCATIONS, AND GEOMETRY OF EXISTING STRUCTURES PRIOR TO CONSTRUCTION. RAD **RADIUS** ALL EXISTING DIMENSIONS ARE APPROXIMATE. NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCY BETWEEN REFERENCE REINFORCE, REINFORCING THE FIELD CONDITIONS AND THE CONTRACT DRAWINGS. REQD REQUIRED 6. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PROTECT THE EXISTING BUILDING ELEMENTS TO **SCHEDULE** REMAIN DURING DEMOLITION. DO NOT CUT OR ALTER ANY OF THE EXISTING STRUCTURAL OR ARCHITECTURAL SHEET ELEMENTS TO REMAIN WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER. PROVIDE PROTECTION FOR SAWED JOINT EXISTING WALLS, COLUMNS, BRACES, AND OTHER BUILDING ELEMENTS TO REMAIN FROM FALLING DEBRIS. ANY DAMAGE TO EXISTING ELEMENTS TO REMAIN SHALL BE REPAIRED BY THE CONTRACTOR AT THEIR OWN EXPENSE. **SEALER** SPEC SPECIFICATION, SPECIFIED F. <u>DESIGN LOADS AND BUILDING CODES:</u> SQUARE STAINLESS STEEL STANDARD 6. DESIGN LOADS ARE PER THE 2022 CALIFORNIA BUILDING CODE. STEEL STRU **STRUCTURAL** 7. RISK CATEGORY OF BUILDING: TERRAIN CATEGORY: TOP AND BOTTOM 8. SOIL LOADS PER ASCE 7-16: TOP OF CONCRETE **TYPICAL** REFER TO FOUNDATION AND SLAB DESIGN CRITERIA, THIS SHEET. UNO UNLESS NOTED OTHERWISE 9. WIND LOADS PER ASCE 7-16: DESIGN WIND SPEED (V)= **VERT VERTICAL** EXPOSURE CATEGORY EXPOSURE COEFFICIENT Kz= TOPOGRAPHIC FACTOR Kzt= WITH DIRECTIONALITY FACTOR Kd= 0.85 IMPORTANCE FACTOR Iw= VELOCITY PRESSURE qz= 10.5 PSF PARTIALLY ENCLOSED, GCpi= +/-0.55 NOTE: THIS IS A GENERAL LIST OF SYMBOLS AND ABBREVIATIONS. NOT 10.SEISMIC LOAD PER ASCE 7-16: SHORT SPECTRAL RESP ACC (Ss)= ALL ITEMS SHOWN HERE APPEAR 1-SEC SPECTRAL RESP ACC (S1)= ON THE CONTRACT DOCUMENTS D, ASSUMED SITE CLASS SEISMIC IMPORTANCE FACTOR (Ie)= SPECTRAL RESP COEF (Sds)= 1.45 SPECTRAL RESP COEF (Sd1)= 1.15 SEISMIC DESIGN CATEGORY (SDC)= 11. LIVE LOADS: BOOSTER STATION SLAB = 300 PSF H. SUBMITTALS: 1. SEE REQUIRED SUBMITTALS TABLE, SHEET S-2, FOR THE REQUIRED SUBMITTALS THAT THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING TO THE EOR. REV DATE

GENERAL CONCRETE NOTES:

A. GENERAL REQUIREMENTS

- 1. DESIGN AND CONSTRUCTION SHALL CONFORM TO AMERICAN CONCRETE INSTITUTE (ACI) "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY" (ACI 318-14), AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE" (ACI 301), LATEST
- 2. GROUT SHALL BE A NON-SHRINK, NON-CORROSIVE, NON-STAINING, NATURAL AGGREGATE (NONMETALLIC) GROUT AND SHALL BE A PREMIXED, PACKAGED TYPE, INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS. GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI AT 7 DAYS.
- 3. REBAR SHALL BE INSTALLED WITHIN THE TOLERANCES SET FORTH IN ACI 117 STANDARD SPECIFICATION FOR TOLERANCES FOR CONCRETE CONSTRUCTION.
- 4. PROVIDE 3/4-INCH, 45 DEGREE CHAMFER ON ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE.
- 5. UNLESS A GREATER COVER IS INDICATED, COVER FOR REINFORCEMENT SHALL NOT BE LESS THAN THE FOLLOWING (IN INCHES):
- b. CONCRETE EXPOSED TO EARTH OR WEATHER:

a. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH

- NO 6 THROUGH NO 18 BARS . NO 5 BAR; W31 OR D31 WIRE, AND SMALLER..
- c. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: SLABS, WALLS, JOISTS: NO 14 AND NO 18 BARS NO 11 BAR AND SMALLER
- 6. REFERENCE APPROVED CONTRACT DRAWINGS FOR FOUNDATION LOCATIONS AND ORIENTATIONS ON THE SITE.
- 7. ALL CAST-IN-PLACE ANCHOR BOLTS AND EMBEDDED STRUCTURAL ANCHORAGES AND SUPPORTS SHALL BE SUPPLIED BY THE STEEL CONTRACTOR AND INSTALLED BY THE CONCRETE CONTRACTOR, UNLESS OTHERWISE SPECIFIED.
- 8. PERMANENTLY EXPOSED EMBEDDED PLATES AND ANGLES SHALL BE HOT-DIPPED, GALVANIZED PER ASTM A153 AFTER FABRICATION, UNO. NO LOADS OR WELDS SHALL BE PLACED ON EMBEDDED PLATES OR ANGLES FOR A MINIMUM OF 7 DAYS AFTER CASTING.
- 9. COORDINATE OPENINGS AND EMBEDS IN CONCRETE WITH ALL OTHER TRADES.
- 10. NOTIFY ENGINEER OF ANY DISCREPANCIES DISCOVERED WITH OTHER TRADES.
- 11. ALL PLAN DIMENSIONS ARE INDICATED ON A HORIZONTAL PLANE.
- 12. TESTS SHALL BE PERFORMED FOR ALL CONCRETE WORK WITH A COMPRESSIVE STRENGTH GREATER THAN 2000 PSI.
- 13. ALL CONCRETE TESTING FOR TEMPERATURE, ENTRAINED AIR, SLUMP, AND COMPRESSIVE STRENGTH TEST CYLINDERS SHALL BE PAID FOR BY CONTRACTOR. CONTRACTOR SHALL COORDINATE AND SCHEDULE ALL CONCRETE PLACEMENTS WITH TESTING AGENCY AS REQUIRED TO PROVIDE FIELD TESTING SERVICES FOR EVERY CONCRETE PLACEMENT. QUANTITY OF TESTING CYLINDERS SHALL BE PERFORMED AND COLLECTED PER CONCRETE SPECIAL INSPECTIONS ON SHEET S-005. FOR EACH SET OF FOUR CYLINDERS TAKEN: ONE SPECIMEN SHALL BE TESTED AT 7 DAYS, ONE SPECIMEN TESTED AT 28 DAYS, AND TWO SPECIMENS HELD IN RESERVE.

B. CONCRETE ANCHORS

- 1. SEE CONCRETE ANCHOR NOTES, SHEET S-2
- 2. ANCHOR BOLTS SHALL BE SET AND PLUMBED WITH TEMPLATES. ALL EMBEDDED ITEMS SHALL BE ACCURATELY SECURED IN PLACE. FOR ANCHOR BOLT DETAILS, SEE SHEET S-2 FOR TOLERANCES.
- 3. ADHESIVE ANCHOR BOLTS SHALL NOT BE INSTALLED PRIOR TO A MINIMUM OF 21 DAYS AFTER CONCRETE IS POURED.
- C. NATIONAL SPECIFICATIONS INCORPORATED THROUGH REFERENCE
- I. DESIGN, MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE FOLLOWING CODES AND STANDARDS CONTAINED THEREIN, UNLESS OTHERWISE NOTED ON THE DRAWINGS.

SPECIFICATION FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS AND COMMENTARY. ACI 117 ACI 304 GUIDE FOR MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE

ACI 305R GUIDE TO HOT WEATHER CONCRETING ACI 306R GUIDE TO COLD WEATHER CONCRETING

ACI 347R GUIDE TO FORMWORK FOR CONCRETE

STANDARD PRACTICE FOR SELECTING PROPORTIONS FOR NORMAL, HEAVYWEIGHT, AND MASS CONCRETE ACI 211.1 ACI 302.1R GUIDE TO CONCRETE FLOOR AND SLAB CONSTRUCTION

SPECIFICATION FOR CURING CONCRETE ACI 308.1

FORMWORK FOR CONCRETE ACI SP-4 ACL SP-66 DETAILING MANUAL

STRUCTURAL WELDING CODE-REINFORCING STEEL AWS D1.4 CRSI MSP MANUAL OF STANDARD PRACTICE CRSI 10-PLACE CRSI RECOMMENDED PRACTICE FOR "PLACING REINFORCING BARS"

D. <u>CONCRETE MIX</u>

- 1. MATERIALS FOR CONCRETE AND PROPORTIONING SHALL CONFORM TO THE REQUIREMENTS OF ACI 211.1. ACI 301. AND ACI 318
- 2. CONCRETE SHALL BE SUPPLIED FROM A SINGLE COMMERCIAL READY—MIX PLANT AND DELIVERED ACCORDING TO ASTM C94.
- 3. PORTLAND CEMENT SHALL CONFORM TO ASTM C150, TYPE II. CEMENTS WITH EQUIVALENT SALKALI CONTENT GREATER THAN 0.6% MUST BE SUPPLIED WITH AGGREGATE REACTIVITY TESTING.
- 4. REINFORCED CONCRETE FOUNDATIONS, PADS, AND WALLS MIX DESIGN:
- a. REINFORCED CONCRETE FOUNDATIONS, PADS, AND WALLS: 1. 4500 PSI CONCRETE COMPRESSIVE STRENGTH @ 28 DAYS
- 2 AIR CONTENT MAX 4%
- 3. W/C RATIO 0.42
- 4. SLUMP 4" MAXIMUM AFTER ALL WATER HAS BEEN ADDED
- b. LEAN CONCRETE (MUD MAT, STRUCTURAL FILL, DUCT BANKS): 500 PSI COMPRESSIVE STRENGTH @ 28 DAYS
- 5. REFERENCE ASTM C33 FOR GRADATION. PROPORTIONS OF AGGREGATE TO CEMENT FOR ANY CONCRETE MIX SHALL BE SUCH AS TO PRODUCE A MIXTURE WHICH, CONSISTENT WITH THE METHOD OF PLACING, WILL WORK READILY INTO CORNERS AND ANGLES OF THE FORMS AND AROUND REINFORCEMENT WITHOUT PERMITTING THE MATERIALS TO SEGREGATE OR EXCESS WATER TO COLLECT ON THE
- a. NOMINAL MAX AGGREGATE SIZE FOR SLABS POURED ON GROUND, 15 INCH THICK MINIMUM WITH CLEAR SPACING BETWEEN REINFORCING BARS GREATER THAN 2 INCH: 1-1/2" MINUS
- b. OTHER LOCATIONS: 3/4" MINUS
- 6. ADMIXTURES TO BE USED IN CONCRETE SHALL BE SUBJECT TO PRIOR APPROVAL BY THE ENGINEER.

E. <u>REINFORCEMENT</u>

- . REINFORCEMENT SHALL BE ASTM 615 GRADE 60 DEFORMED BAR. WELDED WIRE FABRIC AND SPIRAL REINFORCEMENT SHALL CONFORM
- 2. CONTINUOUS REINFORCING #11 AND SMALLER SHALL BE LAPPED AT SPLICES. LAP LENGTH OF SPLICES SHALL NOT BE LESS THAN CLASS B SPLICE. MINIMUM SPLICE LENGTHS SHALL BE AS SPECIFIED ON SHEET S-2.
- 3. DO NOT SPLICE MORE THAN 50% OF BARS AT ONE LOCATION.
- 4. REBAR SHALL BE INSTALLED WITHIN THE TOLERANCES SET FORTH IN ACI 117 STANDARD SPECIFICATION FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS. EXCEPT THAT FOR FOOTINGS, SLABS, MATS, AND WALLS SHOWN ON THESE DRAWINGS THE FOLLOWING TOLERANCES AND PROVISIONS MAY BE USED WHERE PENETRATIONS FROM NON-STRUCTURAL ITEMS SUCH AS ELECTRICAL DUCTS, PIPES OR OTHER ITEMS EMBEDDED INTO THE CONCRETE OCCUR;
- a. IN A LAYER OF REGULARLY SPACED BARS, AN INDIVIDUAL REBAR MAY BE RELOCATED WITHIN THE SAME PLANE AS THE LAYER, UP TO 3 INCHES FROM THE LOCATION SPECIFIED ON THE DRAWINGS.
- b. WHERE A REBAR IS INTERRUPTED BY A NON-STRUCTURAL EMBEDDED ITEM, THE REBAR SHALL BE CUT 2 INCHES CLEAR FROM THE ITEM. FOR EACH REBAR THAT IS INTERRUPTED BY A NON-STRUCTURAL EMBEDDED ITEM, AN ADDITIONAL REBAR SHALL BE ADDED ADJACENT TO THE NON-STRUCTURAL ITEM AND IN THE SAME LAYER AS THE INTERRUPTED REBAR, AND SHALL EXTEND BEYOND THE ITEM A DISTANCE EQUAL TO THE CLASS A SPLICE SHOWN IN ON SHEET S-2. WHERE THIS LENGTH CANNOT BE ACHIEVED DUE TO EDGE OF CONCRETE, TERMINATE REBAR WITH A STANDARD HOOK. WHERE THE ADDED REBAR RESULTS IN ON CENTER SPACING LESS THAN 3 INCHES WITHIN THE LAYER, THE CONTRACTOR SHALL NOTIFY THE ENGINEER FOR REVIEW AND REVISION PRIOR TO FINAL INSTALLATION OF REBAR.

- 5. ALL REINFORCING STEEL THAT IS TO BE WELDED, WHERE INDICATED ON THE CONTRACT DRAWINGS, SHALL BE DEFORMED BARS CONFORMING TO ASTM A706 AND WELDED IN ACCORDANCE WITH AWS D1.4.
- 6. FIELD BENDING OF REINFORCING STEEL SHALL NOT BE DONE WITHOUT PRIOR AUTHORIZATION OF THE STRUCTURAL ENGINEER. ALL REINFORCEMENT SHALL BE BENT COLD, UNLESS OTHERWISE PERMITTED BY THE ENGINEER. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT, UNLESS PERMITTED BY THE ENGINEER IN ACCORDANCE WITH ACI 318.
- 7. REINFORCING STEEL SHALL NOT BE BENT OR DISPLACED FOR THE CONVENIENCE OF OTHER TRADES UNLESS APPROVED BY THE STRUCTURAL ENGINEER.
- 8. THE PROPER TYPE AND QUANTITIES OF ACCESSORIES SHALL BE FURNISHED TO HOLD THE REINFORCING STEEL IN PLACE WHILE THE CONCRETE IS BEING PLACED. REINFORCEMENT SHALL BE TIED OFF AT A MINIMUM OF 50% OF THE INTERSECTIONS.
- 9. PRIOR TO SHIPPING OF REINFORCING STEEL TO THE FIELD, SHOP DRAWINGS SHALL BE SUPPLIED TO THE ENGINEER FOR REVIEW.
- 10. FOR MINIMUM REINFORCING REQUIREMENTS AT CONCRETE OPENINGS AND RE-ENTRANT CORNERS, SEE TYPICAL CONCRETE DETAIL
- 11. ADHESIVE FOR REBAR DOWELS SHALL BE HILTI-HIT RE 500 V3 ADHESIVE.

F. CONCRETE SPECIALTIES AND ACCESSORIES

- 1. ISOLATION JOINT MATERIAL SHALL BE 1/2" ASPHALT IMPREGNATED FIBERBOARD, OR AN OPEN CELL FOAM MATERIAL APPROVED FOR CONCRETE EXPANSION JOINT.
- 2. GROUT BASEPLATES, EQUIPMENT, ETC.
- a. GROUT SHALL BE A NONSHRINK, NONCORROSIVE, NONSTAINING, NATURAL AGGREGATE (NONMETALLIC) GROUT AND SHALL BE A PREMIXED, PACKAGED TYPE, INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS. GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI AT 7 DAYS.
- b. ACCEPTABLE GROUTS: SEALTIGHT 588 GROUT BY R.W. MEADOWS, INC. FIVE STAR GROUT BY FIVE STAR PRODUCTS SIKAGROUT 212 BY SIKA CORPORATION

3. EPOXY BONDING COMPOUND

- a. EPOXY BONDING COMPOUND: CONFORM TO ASTM C881, CONTAIN 100 PERCENT SOLIDS, AND BE MOISTURE TOLERANT. SIKADUR 32 HI-MOD OR SIKADUR 32 HI-MOD LPL, BY SIKA CORPORATION; SURE-BOND (J-58, OR J-58 LPL), BY DAYTON SUPERIOR; OR APPROVED EQUAL SHALL BE PROVIDED.
- b. WHERE LARGER PLACEMENTS REQUIRE OPEN TIMES GREATER THAN 2 HOURS: SIKA ARMATEC 110 EPOCEM OR APPROVED EQUAL FOR LARGER PLACEMENTS.
- 4. CURE AND SEAL COMPOUND
- CLEAR SILANE COATING EQUAL TO "CERTI-VEX GUARD CLEAR" BY CHEMMASTERS, A ONE-STEP CURE AND PENETRATING WATER REPELLENT SEALER MEETING ASTM C1315, TYPE 1, CLASS B, NCHRP-224.

G. <u>FORMWORK</u>

- 1. FORMWORK SHALL BE IN ACCORDANCE WITH ACI 301 AND ACI 347R.
- 2. ACI SPECIAL PUBLICATION 4 SHALL BE USED AS A GUIDE.
- 3. WHERE WOOD FORMS ARE USED, THEY SHALL BE PLY FORM OR GRADED EXTERIOR TYPE PLYWOOD, GRADE BB OR BETTER.
- 4. FORMS OR SHORES SHALL NOT BE REMOVED WITHOUT THE APPROVAL OF THE CONSTRUCTION MANAGER. ALL REMOVAL SHALL BE ACCOMPLISHED IN A MANNER TO PREVENT DAMAGE TO THE CONCRETE. FORMS SHALL GENERALLY NOT BE REMOVED PRIOR TO THE MINIMUM NUMBER OF DAYS INDICATED BELOW:
- WALLS, FOOTINGS AND SLAB-ON-GRADE DAYS
- STRUCTURES SHALL NOT BE LOADED UNTIL CONCRETE HAS CURED TO A MINIMUM COMPRESSIVE STRENGTH OF 75 PERCENT OF THE DESIGN COMPRESSIVE STRENGTH AT 28 DAYS.

H. EMBEDDED CONDUITS AND PIPES

- 1. ALL ELECTRICAL AND INSTRUMENTATION CONDUIT EMBEDDED IN CONCRETE SHALL BE INSTALLED, ARRANGED, AND SPACED AS
- 2. OUTSIDE DIAMETER OF CONDUIT SHALL NOT EXCEED 1/3 OF CONCRETE THICKNESS.
- 3. CONDUITS SHALL NOT BE PLACED CLOSER THAN 3 OUTSIDE DIAMETERS ON CENTER.
- 4. CONDUITS SHALL NOT BE EMBEDDED IN CONCRETE SLABS LESS THAN 4 INCHES THICK.
- 5. ONLY 2 CONDUITS MAY CROSS AT ANY POINT AND THE SUM OF THE OUTSIDE DIAMETER OF THE CROSSING CONDUITS SHALL NOT
- EXCEED 1/3 OF THE CONCRETE THICKNESS.
- 6. PROVIDE A MINIMUM 1-1/2 INCH CONCRETE COVER OVER CONDUITS.
- CONDUITS SHALL NOT BE LOCATED BETWEEN BOTTOM OF REINFORCING STEEL AND BOTTOM OF SLAB.
- 8. ALUMINUM CONDUIT SHALL NOT BE EMBEDDED IN CONCRETE AND NO CONDUIT IS PERMITTED IN BEAMS, COLUMNS OR GIRDERS.

J. CONSTRUCTION

- 1. PLACING OF CONCRETE SHALL BE IN ACCORDANCE WITH ACI 301 AND ACI 304.
- 2. PUMPING OR PNEUMATIC CONVEYING EQUIPMENT SHALL BE OF SUITABLE KIND WITH ADEQUATE PUMPING CAPACITY. PNEUMATIC PLACEMENT SHALL BE CONTROLLED SO THAT SEGREGATION IS NOT APPARENT IN THE DISCHARGED CONCRETE. THE LOSS OF SLUMP IN PUMPING OR PNEUMATIC CONVEYING EQUIPMENT SHALL NOT EXCEED 2". CONCRETE SHALL NOT BE CONVEYED THROUGH PIPE MADE OF ALUMINUM OR ALUMINUM ALLOY. SLUMP SPECIFIED IN CONCRETE MIX NOTE 2 SHALL BE AT CONVEYING DISCHARGE.
- 3. REFER TO MECHANICAL, PIPING, ELECTRICAL & VENDOR DRAWINGS FOR NON-STRUCTURAL EMBEDDED ITEMS.
- 4. ALL CONCRETE PLACED IN COLD WEATHER SHALL CONFORM TO REQUIREMENTS OF ACI 306R.
- 5. ALL CONCRETE PLACED IN HOT WEATHER SHALL CONFORM TO REQUIREMENTS OF ACI 305R.
- 6. CONCRETE CURE AND SEAL IS REQUIRED FOR ALL EXPOSED SURFACES (HORIZONTAL AND VERTICAL). APPLY 2 COATES IN STRICT ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS.
- 7. APPLY BONDING AGENT AT ALL CONSTRUCTION JOINT SURFACES.

K. CONCRETE FINISH

1. FLOOR/SLAB FINISH

- a. EXTERIOR FOUNDATIONS, SLABS, SIDEWALKS, FLOORS AND RAMPS SUBJECT TO VEHICULAR TRAFFIC, SHALL RECEIVE A BROOM FINISH. FLOOR SURFACE TOLERANCE SHALL SHALL BE LEVEL WITH A TOLERANCE OF 1/8 INCH IN 10 FEET. SLOPED SLABS SHALL BE TRUE TO THE GRADIENT SHOWN WITHIN A TOLERANCE OF 1/8 INCH IN 10FT.
- b. EQUIPMENT PADS SHALL BE HAVE A SURFACE FLATNESS TOLERANCE PER THE APPLICABLE STANDARD DETAIL.
- 2. FORMED SURFACES
- a. AFTER THE REMOVAL OF FORMS, SURFACES OF CONCRETE SHALL BE FINISHED IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 301. UNO. NO SURFACE MOCK-UPS ARE REQUIRED UNO.
- b. SURFACE DEFECTS AND TIE HOLES SHALL BE REPAIRED IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 301.
- c. UNLESS STAINLESS STEEL, NONCORROSIVE, OR COATED TIES ARE USED, TIE HOLES IN SURFACES NOT TO BE EXPOSED IN THE FINISHED WORK SHALL BE CLEANED, THOROUGHLY DAMPENED, AND FILLED SOLID WITH PATCHING MORTAR.



REV.	DATE	DESCRIPTION	THE CITY OF	
A	01/26/24	ISSUE FOR BID		
			PLEASANTON	ΡĮ

CITY OF PLEASANTON UBLIC WORKS DEPARTMENT





TURNOUT #4 BOOSTER PUMP STATION AND DISCHARGE PIPELINE (F-1 LINE) STRUCTURAL ABBREVIATIONS, GENERAL NOTES & CONCRETE NOTES

DESIGN:	MMM
DRAWN:	MMM
CHECKED:	CSB

DWG NO SCALE: **S**-1 PROJECT NO.: CIP-2417 31 OF 40 JANUARY 2024

- 1. CONCRETE ANCHOR MATERIAL, GRADE, LENGTH, SLEEVES (IF REQUIRED), AND EMBEDMENT ARE SPECIFIED ON THE FOUNDATION DRAWINGS.
- 2. WHERE NO ANCHOR BOLT SPECIFICATION IS INDICATED ON THE CONTRACT DRAWINGS, ANCHOR BOLTS SHALL CONFORM TO THE FOLLOWING:
- A. POST INSTALLED EXPANSION ANCHORS HILTI KWIK BOLT-TZ (316 SS) OR APPROVED EQUAL POST INSTALLED ADHESIVE ANCHORS HILTI HAS-E-B HDG OR ASTM F1554, GR 36, GALV WITH HILTI-HIT RE 500 V3 ADHESIVE
- NUTS ASTM A563 GRADE A, HEAVY HEX, GALV D. PLATE WASHER (PLW) ASTM A36, GALV
- 4. REINFORCING BARS SHALL BE SPACED TO CLEAR ANCHORS.

CONFORMING TO ASTM F436, TYPE 1, CIRCULAR.

POST INSTALLED

ADHESIVE ANCHOR (PAA)

- 5. ALL ANCHOR BOLTS SHALL BE TAGGED WITH MARK NUMBER.
- 6. ALL ASTM 1554 ANCHOR BOLT ENDS SHALL BE PAINTED. GRADE 36 PAINTED BLUE; GRADE 105 PAINTED RED.
- 7. GALVANIZING SHALL BE IN ACCORDANCE WITH ASTM A153 FOR BOLTS WHICH ARE REQUIRED TO BE GALVANIZED. GALVANIZING SHALL BE PERFORMED AFTER BOLTS ARE FABRICATED.

3. ADHESIVE ANCHORS SHALL BE SUPPLIED WITH STRUCTURAL ANCHOR WASHERS PER THE SCHEDULE. MECHANICAL ANCHORS SHALL BE SUPPLIED WITH WASHERS

8. ANCHOR BOLTS SHALL BE SET AND PLUMBED WITH TEMPLATES, ALL EMBEDDED ITEMS SHALL BE ACCURATELY SECURED IN PLACE, AND ANCHORS SHALL MAINTAIN A MINIMUM OF 2" CLEAR FROM BOTTOM OF CONCRETE. SEE CONCRETE NOTES, SHEET S-1.

POST INSTALLED EXPANSION

ANCHORS (PEA)

- 9. ADHESIVE ANCHOR BOLTS SHALL NOT BE INSTALLED PRIOR TO A MINIMUM OF 21 DAYS AFTER CONCRETE IS POURED.
- 10. ADHESIVE & MECHANICAL ANCHORS SHALL BE INSTALLED IN STRICT ACCORDANCE W/ MANUFACTURERS RECOMMENDATIONS.

POST INSTALL ANCHORS

STR		ANCHOR ANCHOR BOLT INSTALLATION TOLERANCES			
ANCHOR ROD DIAMETER, IN	HOLE DIAMETER, IN	MIN WASHER DIMENSION, IN	MIN WASHER THICKNESS, IN	FOR ALL FOUNDATIONS, UNLESS NOTED OTHERWISH HORIZONTAL TOLERANCE:	E ON DRAWINGS
3/4	1 5/16	2	1/4	-SPECIFIED DIMENSION BETWEEN ANY TWO BOLTS:	+1/8 INCH; -1/8 INCH
7/8	1 9/16	2 1/2	5/16	-SPECIFIED DIMENSION BETWEEN ADJACENT BOLT GROUPS:	+1/4 INCH; -1/4 INCH
1	1 13/16	3	3/8	-SPECIFIED DIMENSION FROM CENTER OF BOLT GROUP TO COLUMN LINE OR EQUIPMENT CENTERLINE:	+1/4 INCH; -1/4 INCH
1 1/4	2 1/16	3	1/2	VERTICAL TOLERANCE:	
1 1/2	2 5/16	3 1/2	1/2	-PLUMBNESS:	NOT TO EXCEED 5 DEGREES FROM TRUE VERTICAL POSITION
1 3/4	2 3/4	4	5/8	-PROJECTION ABOVE REQUIRED ELEVATION:	+1/2 INCH; -0 INCH
2	3 1/4	5	3/4	NOTES:	
2 1/2	3 3/4	5 1/2	7/8	1. SUPPORT FROM REINFORCING STEEL IS NOT ALLOWED.	

	REQUIRED SUBM	MITTALS
SUBMITTAL #	TITLE	SHEET #/NOTE SECTION
1	CONCRETE REINFORCEMENT SHOP DRAWINGS	S-4
2	FORM TIES AND RELEASE AGENT PRODUCT DATA	S-4
3	CONCRETE MIX DESIGN	S-4
4	PRECAST CONCRETE VAULT DESIGN DRAWINGS	S-4
5	PRECAST CONCRETE VAULT DESIGN CALCULATIONS	S-4, SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF CALIFORNIA AND SUBMITTED A MINIMUM OF 4 WEEKS PRIOR TO SCHEDULED MANUFACTURE.

MINIMUM DEVELOPMENT/SPLICE LENGTHS (IN)

fy=60,000 psi f'c:4,500 psi

BAR SIZE	DEVELOPME	ENT LENGTH	CLASS B	SPLICE
	TOP	OTHER	TOP	OTHER
#3	12	12	16	16
#4	15	12	20	16
# 5	18	14	25	19
#6	22	17	29	23
# 7	32	25	43	33
#8	37	28	49	37
# 9	46	35	60	46
#10	57	44	74	57
#11	68	52	89	68
	•		•	•

NOTES:

- 1. TOP = HORIZONTAL SLAB BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS IN ONE LIFT.
- 2. UNLESS OTHERWISE INDICATED ALL LAP SPLICES SHALL BE TENSION LAP CLASS B SPLICES.
- 3. WHERE POSSIBLE, NO MORE THAN 50% OF THE SPLICES SHALL OCCUR WITHIN THE REQUIRED LAP LENGTH.
- 4. BARS SPLICED BY NON-CONTACT LAP SPLICES SHALL NOT BE SPACED FARTHER APART THAN ONE-FIFTH THE REQUIRED LAP SPLICE LENGTH NOR 6 INCHES.
- 5. FOR CONCRETE COMPRESSIVE STRENGTHS, f'c, OTHER THAN 4,500 PSI, MULTIPLY THE VALUES BY THE SQUARE ROOT OF 4,500 DIVIDED BY THE SQUARE ROOT OF f'c.

	STATEMENT OF SPECIAL INSPECTIONS		
LOCATION	PLEASANTON, CA		
OWNER	CITY OF PLEASANTON PUBLIC WORKS DEPARTMENT		
REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE (RDP)	CALEB STEPHEN BROWN, PE		
APPLICABLE BUILDING CODE	CALIFORNIA BUILDING CODE 2022		

THIS STATEMENT OF SPECIAL INSPECTIONS IS SUBMITTED AS A CONDITION FOR PERMIT ISSUANCE IN ACCORDANCE WITH THE SPECIAL INSPECTION AND STRUCTURAL TESTING REQUIREMENTS OF THE BUILDING CODE. IT INCLUDES A SCHEDULE OF SPECIAL INSPECTION SERVICES APPLICABLE TO THIS PROJECT AS WELL AS THE NAME OF THE SPECIAL INSPECTION COORDINATOR AND THE IDENTITY OF OTHER APPROVED AGENCIES TO BE RETAINED FOR CONDUCTING THESE INSPECTIONS AND TESTS. THIS STATEMENT OF SPECIAL INSTRUCTIONS ENCOMPASSES THE FOLLOWING DISCIPLINES: STRUCTURAL. THE SPECIAL INSPECTION COORDINATOR SHALL KEEP RECORDS OF ALL INSPECTIONS AND SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL AND THE RDP. DISCOVERED DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF SUCH DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND THE RDP. THE SPECIAL INSPECTION PROGRAM DOES NOT RELIEVE THE CONTRACTOR OF HIS OR HER RESPONSIBILITIES FOR QUALITY ASSURANCE.

INTERIM REPORTS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND THE RDP.

A FINAL REPORT OF SPECIAL INSPECTIONS DOCUMENTING COMPLETION OF ALL REQUIRED SPECIAL INSPECTIONS, TESTING, AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED BY THE SPECIAL INSPECTION COORDINATOR PRIOR TO ISSUANCE OF A CERTIFICATE OF USE AND OCCUPANCY.

JOB SITE SAFETY AND MEANS AND METHODS OF CONSTRUCTION ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.

INTERIM REPORTS SHALL BE SUBMITTED MONTHLY.

AMERICAN SOCIETY FOR NONDESTRUCTIVE TESTING

ACCP LEVELS II & III

ASNT-ACCP

STATEMENT OF CONTRACTOR'S RESPONSIBILITY

IN ACCORDANCE WITH THE APPLICABLE BUILDING CODE, EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OR FABRICATION OF A MAIN WIND-FORCE RESISTING SYSTEM OR A SEISMIC-FORCE-RESISTING SYSTEM OR A WIND - OR SEISMIC-RESISTING COMPONENT LISTED IN THE SCHEDULE OF SPECIAL INSPECTIONS ABOVE MUST SUBMIT A STATEMENT OF RESPONSIBILITY TO THE STRUCTURAL ENGINEER OF RECORD, THE BUILDING OFFICIAL AND THE OWNER PRIOR TO COMMENCEMENT OF WORK ON THE SYSTEM. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL CONTAIN ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS.

SCHEDULE OF INSPECTION AND TESTING AGENCIES				
SPECIAL INSPECTION AGENCIES	FIRM	ADDRESS	CONTACT NAME/PHONE #	SCOPE
SPECIAL INSPECTION COORDINATOR	TBD	TBD	TBD	TBD
INSPECTOR	TBD	TBD	TBD	TBD
GEOTECHNICAL ENGINEER	TBD	TBD	TBD	GEOTECHNICAL ENGINEER

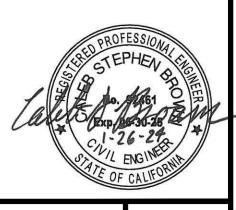
NOTE: THE INSPECTORS AND TESTING AGENCIES SHALL BE ENGAGED BY THE OWNER OR THE OWNER'S AGENT IN ACCORDANCE WITH SECTION 1704.4 THE 2015 INTERNATIONAL BUILDING CODE (IBC 2015), AS REFERENCED IN THE BUILDING CODE AND NOT BY THE CONTRACTOR OR SUBCONTRACTOR WHOSE WORK IS TO BE INSPECTED OR TESTED. ANY CONFLICT OF INTEREST MUST BE DISCLOSED TO THE BUILDING OFFICIAL PRIOR TO COMMENCING WORK.

KEY FOR MINIMUM QUALIFICATIONS OF INSPECTORS AND TESTING TECHNICIANS

THE QUALIFICATIONS OF ALL PERSONNEL PERFORMING SPECIAL INSPECTION AND TESTING ACTIVITIES ARE SUBJECT TO THE APPROVAL OF THE BUILDING OFFICIAL. THE CREDENTIALS OF ALL INSPECTORS AND TESTING TECHNICIANS SHALL BE PROVIDED. WHEN THE REGISTERED DESIGN PROFESSIONAL (RDP) IN RESPONSIBLE CHARGE DEEMS IT APPROPRIATE THAT THE INDIVIDUAL PERFORMING A STIPULATED TEST OR INSPECTION HAVE A SPECIFIC CERTIFICATION OR LICENSE AS INDICATED BELOW, SUCH DESIGNATION SHALL APPEAR IN THE QUALIFICATION COLUMN ON THE SCHEDULE AS

A MINIMUM REQUIRE	MENT.				
PE/SE	STRUCTURAL ENGINEER - A LICENSED PE OR SE SPECIALIZING IN	STRUCTURAL ENGINEER - A LICENSED PE OR SE SPECIALIZING IN THE DESIGN OF BUILDINGS AND STRUCTURES			
PE/GE	GEOTECHNICAL ENGINEER - A LICENSED PE SPECIALIZING IN SOIL	GEOTECHNICAL ENGINEER - A LICENSED PE SPECIALIZING IN SOIL MECHANICS AND FOUNDATIONS			
EIT	EIT ENGINEER-IN-TRAINING - A GRADUATE ENGINEER WHO HAS PASSES THE FUNDAMENTALS OF ENGINEERING EXAMINATION				
AMERICAN CONCRETE INSTITUTION (ACI) CERTIFICATION		NATIONAL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLOGIES (
ACI-CFTT	CONCRETE FIELD TESTING TECHNICIAN — GRADE 1	NICET-CT	CONCRETE TECHNICIAN - LEVELS I, II, III & IV		
ACI-CCSI	CONCRETE CONSTRUCTION SPECIAL INSPECTOR	NICET-GET	GEOTECHNICAL ENGINEERING TECHNICIAN — LEVELS I, II, III & IV		
ACI-LTT	CONCRETE LABORATORY TESTING TECHNICIAN — GRADE 1 OR 2	NICET-ST	SOILS TECHNICIAN - LEVELS I, II, III & IV		
ACI-STT	CONCRETE STRENGTH TESTING TECHNICIAN	INTERNATIONAL CODE COUNCIL (ICC) CERTIFICATION			
ACI/CRSI-AAII	ADHESIVE ANCHOR INSTALLATION INSPECTOR	ICC-SSI	SOILS SPECIAL INSPECTOR		

		SOILS AND FOUNDATIONS - 2022 CBC SECTION 1705.6	
ITEM	INSPECTION FREQUENCY	SCOPE	QUALIFICATIONS
EXCAVATION DEPTH	PERIODIC	VERIFY THAT EXCAVATIONS ARE EXTENDED TO THE PROPER DEPTH AND HAVE REACHED THE PROPER MATERIAL	N/A
SUBGRADE AND SUBBASE FOR	PERIODIC	INSPECT SUBBASE FOR ADEQUATE BEARING CAPACITY AND CONSISTENCY WITH GEOTECHNICAL REPORT, STRUCTURAL DRAWINGS, AND SPECIFICATIONS.	
FOUNDATIONS	PERIODIC	INSPECT REMOVAL OF UNSUITABLE MATERIAL AND INSPECT SUBGRADE TO VERIFY IT HAS BEEN PREPARED PROPERLY.	
	PERIODIC	PERFORM SIEVE TESTS (ASTM D422 AND D1140) AND MODIFIED PROCTOR TESTS (ASTM D1557) OF EACH SOURCE OF FILL MATERIAL FOR CONFORMANCE TO THE PROJECT DOCUMENTS.	PE/GE
STRUCTURAL FILL MATERIALS	CONTINUOUS	VERIFY USE OF PROPER MATERIALS AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILLS.	
	CONTINUOUS	TEST DENSITY OF EACH LIFT BY NUCLEAR METHODS (ASTM D2922)	



REV.	DATE	DESCRIPTION	THE CITY OF
A	01/26/24	ISSUE FOR BID	
			PLEASANTON







TURNOUT #4 BOOSTER PUMP STATION AND DISCHARGE PIPELINE (F-1 LINE)	
1 OKNOUT #4 BOOSTEKTOWI STATION AND DISCHARGETH LEINE (1-1 EINE)	DRAWN:
NOTES & SPECIAL INSPECTIONS	CHECKED:
NOIES & SPECIAL INSPECTIONS	

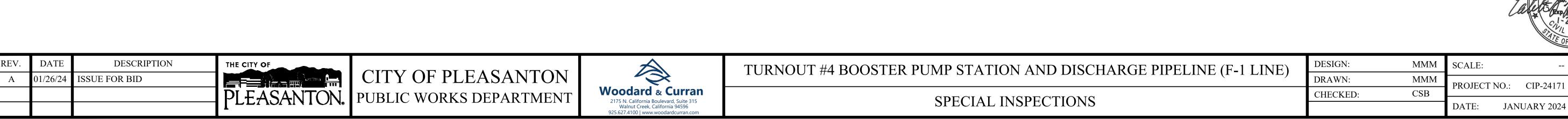
REINFORCED CONCRETE SPECIAL INSPECTOR

REFERENCES			
CODE/STANDARD	TITLE		
CODE/STANDARD	ITTLE		
APPLICABLE BUILDING CODE	CALIFORNIA BUILDING CODE 2022		
ACI 301-16	STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE		
ACI 318-14	BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE		
ASTM C31-12	PRACTICE FOR MAKING AND CURING CONCRETE TEST SPECIMENS IN THE FIELD		
ASTM C94-14b	SPECIFICATION FOR READY-MIXED CONCRETE		
ASTM C109-13	TEST METHOD FOR COMPRESSIVE STRENGTH OF HYDRAULIC CEMENT MORTARS (USING 2 IN OR 50 MM CUBE SPECIMENS)		
ASTM C138-14	TEST METHOD FOR UNIT WEIGHT, YIELD AND AIR CONTENT (GRAVIMETRIC) OF CONCRETE		
ASTM C143-12	TEST METHOD FOR SLUMP OF HYDRAULIC CEMENT CONCRETE		
ASTM C172-14a	PRACTICE FOR SAMPLING FRESHLY MIXED CONCRETE		
ASTM C173-14	TEST METHOD FOR AIR CONTENT OF FRESHLY MIXED CONCRETE BY THE VOLUMETRIC METHOD		
ASTM C231-14	TEST METHOD FOR AIR CONTENT OF FRESHLY MIXED CONCRETE BY THE PRESSURE METHOD		
ASTM C567-14	TEST METHOD FOR UNIT WEIGHT OF STRUCTURAL LIGHTWEIGHT CONCRETE		
ASTM C1064-12	TEST METHOD FOR TEMPERATURE OF FRESHLY MIXED PORTLAND CEMENT CONCRETE		
ASTM C1090-10	TEST METHOD FOR MEASURING CHANGES IN HEIGHT OF CYLINDRICAL SPECIMENS FROM HYDRAULIC CEMENT GROUT		
RCSC-2014	SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS		

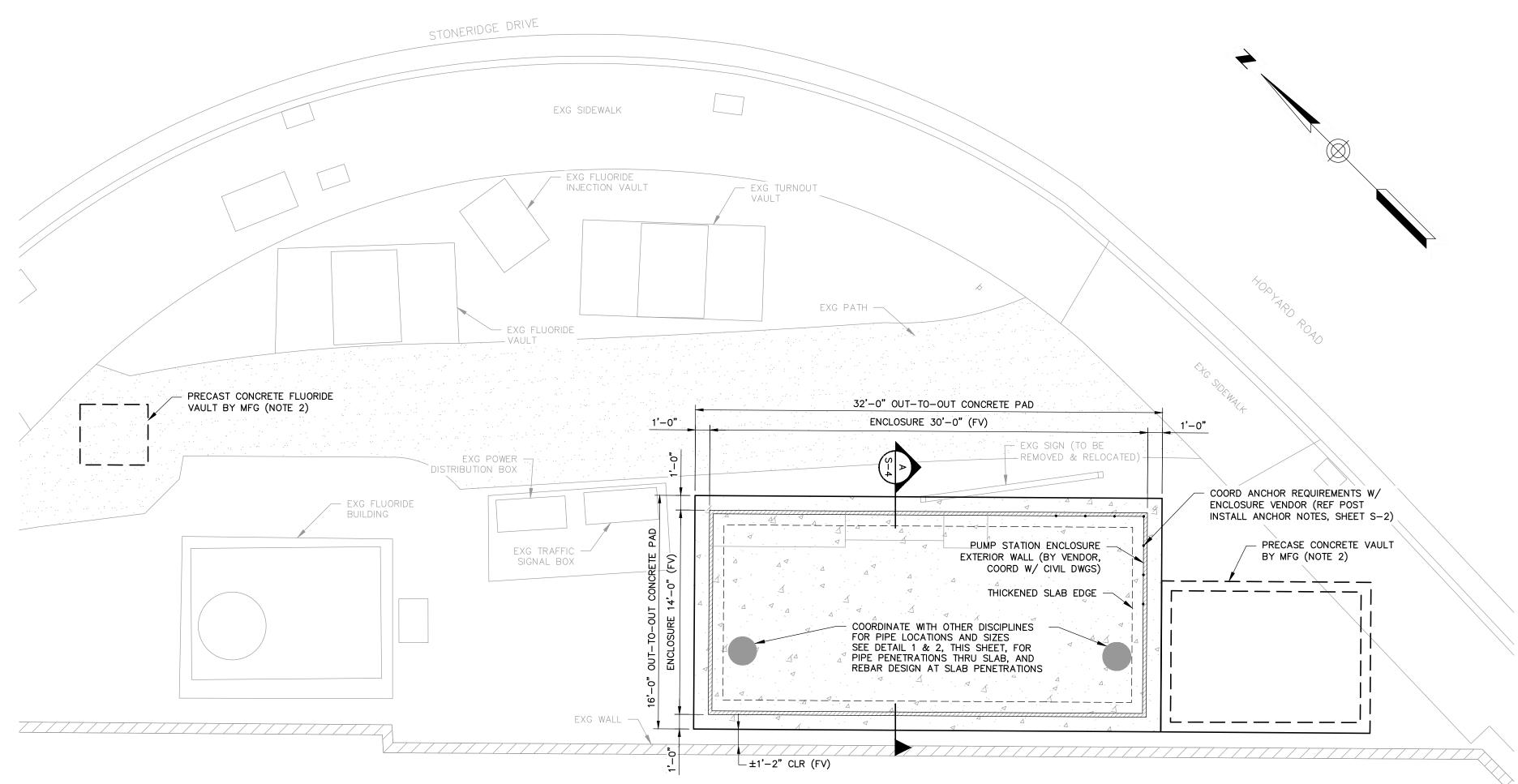
ITEM	INSPECTION FREQUENCY	SCOPE	QUALIFICATIONS	
INSTALLER QUALIFICATIONS	PERIODIC	REVIEW INSTALLER'S QUALIFICATIONS. INSTALLATION OF ADHESIVE ANCHORS INSTALLED HORIZONTALLY OR UPWARDLY INCLINED ORIENTATION AND SUPPORTING SUSTAINED TENSION LOADS SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM OR EQUIVALENT FOR SEISMIC DESIGN CATEGORIES C, D, E OR F.	ACI-CCSI/ICC-RCSI OR -SMSI	
BASE MATERIAL	PERIODIC	VERIFY DRILLING IS PERFORMED ONLY AFTER MINIMUM CONCRETE/GROUT STRENGTH FOR ANCHOR/DOWEL INSTALLATION IS REACHED AS PER MPII. (FOR ATTACHMENTS TO NEW WORK ONLY. NO SPECIAL INSPECTION REQUIRED FOR ATTACHMENT TO EXISTING CONSTRUCTION.)	ACI-CCSI/ICC-RCSI OR -SMSI	
	PERIODIC	VERIFY THAT EXISTING REINFORCING STEEL IS NOT CUT WHEN DRILLING HOLES FOR ANCHORS.		
		VERIFY DRILLED HOLES ARE THE PROPER DIAMETER AND DEPTH IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII)		
		VERIFY DRILLED HOLES ARE CLEANED IN ACCORDANCE WITH MPII AND THAT THE HOLES ARE PROTECTED FROM CONTAMINATION UNTIL ADHESIVE IN INSTALLED. A DRILLED ANCHOR HOLE SHALL BE RE-CLEANED ASSUMING THE HOLE WAS JUST DRILLED. IF IN THE OPINION OF THE RDP, SPECIAL INSPECTOR, OR OWNER'S REPRESENTATIVE THE HOLE HAS BECOME CONTAMINATED AFTER INITIAL CLEANING.	ACI/CRSI—AAII WHERE INSTALLER IS REQUIRED TO BE CERTIFIED BY ACI/CRSI	
ADHESIVE ANCHOR OR DOWEL	CONTINUOUS WHERE	VERIFY THAT ADHESIVE MATERIAL IS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. VERIFY THAT THE MATERIAL IS STORED, MIXED, AND INJECTED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.		
INSTALLATION	INSTALLER IS REQUIRED TO BE CERTIFIED BY ACI/CRSI ADHESIVE ANCHOR PROGRAM, OTHERWISE PERIODIC	VERIFY ANCHORS TO BE INSTALLED ARE CLEAN, OIL-FREE, AND FREE OF LOOSE RUST, PAINT, OR OTHER COATINGS	ADHESIVE ANCHOR PROGRAM, OTHERWISE ACI—CCSI/ICC—RCSI OR —SMSI	
		VERIFY THAT INSTALLED ADHESIVE ANCHORS ARE SECURELY FIXED IN PLACE TO PREVENT DISPLACEMENT WHILE THE ADHESIVE CURES. UNLESS OTHERWISE SHOWN ON THE CONTRACT DRAWINGS, ANCHORS SHOULD BE INSTALLED PERPENDICULAR TO THE CONCRETE SURFACE. ANCHORS DISPLACED BEFORE FULL ADHESIVE CURE SHALL BE CONSIDERED DAMAGED AND REPLACED AT THE CONTRACTOR'S EXPENSE. INSTALLED REINFORCING BARS/THREADED BARS SHALL NOT BE BENT AFTER BEING ADHESIVELY EMBEDDED IN HARDENED, SOUND CONCRETE, UNLESS PERMITTED BY THE RDP.		
		VERIFY THAT THE ANCHOR TYPE, MATERIALS, DIMENSIONS, ANCHOR SPACING, EDGE DISTANCES, EMBEDMENTS, AND FINISHES ARE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.		
	CONTINUOUS	ADHESIVE ANCHORS SHALL BE PROOF—TESTED AS REQUIRED IN THE CONTRACT DOCUMENTS. A MINIMUM OF 5% OF EACH TYPE AND SIZE OF AN ADHESIVE ANCHOR ASSEMBLY SHALL BE PROOF TESTED IN TENSION BY AN INDEPENDENT TESTING LABORATORY. TENSION TESTING SHALL BE PERFORMED IN ACCORDANCE WITH ASTM E488. THE INDEPENDENT TESTING LABORATORY SHALL SUBMIT AN ANCHORAGE TESTING PLAN TO THE RDP TO ENSURE THE TESTING REQUIREMENTS ARE FULFILLED	ACI-CCSI/ICC-RCSI OR -SMSI	
ADHESIVE ANCHOR PROOF TESTING	CONTINUOUS	THE ADHESIVE ANCHORS SHALL BE TENSION PROOF LOADED TO LOADS INDICATED IN THE CONTRACT DOCUMENTS FOR A SPECIFIC ANCHOR TYPE. PROOF LOADING SHALL BE PERFORMED AFTER A MINIMUM CURING PERIOD SPECIFIED BY THE MANUFACTURER. ANCHORS SHALL HAVE NO VISIBLE INDICATIONS OF DISPLACEMENT OR DAMAGE DURING OR AFTER PROOF LOAD APPLICATION. CONCRETE CRACKING IN THE VICINITY OF THE ANCHOR AFTER LOADING SHALL BE CONSIDERED A FAILURE.	ACI-CCSI/ICC-RCSI OR	
		IF ANY OF THE TESTED ADHESIVE ANCHORS FAIL TO ACHIEVE THE SPECIFIED PROOF LOAD WITHIN THE LIMITS DEFINED ON THE CONTRACT DOCUMENTS, 25% OF THE ANCHORS OF THE SAME DIAMETER AND TYPE AS THE FAILED ANCHOR SHALL BE PROOF TESTED, UNLESS OTHERWISE DIRECTED BY THE RDP.	-SMSI	
	PERIODIC	VERIFY THAT EXISTING REINFORCING STEEL IS NOT CUT WHEN DRILLING HOLES FOR ANCHORS.		
EXPANSION ANCHORS	PERIODIC	VERIFY ANCHOR TYPE, MATERIAL, DIMENSIONS, ANCHOR SPACING, EDGE DISTANCES, HOLE DIAMETER, TIGHTENING TORQUE, EMBEDMENT AND INSTALLATION PROCEDURE IN CONFORMANCE WITH CONTRACT DOCUMENTS AND MANUFACTURER INSTRUCTIONS.	ACI-CCSI/ICC-RCSI OR -SMSI	

		STRUCTURAL CONCRETE CONSTRUCTION - 2022 CBC SECTION 1705.3		
ITEM	INSPECTION FREQUENCY	SCOPE	QUALIFICATIONS	
FORMWORK GEOMETRY	PERIODIC	INSPECT FORMWORK FOR SHAPE, LOCATION, DIMENSIONS, AND FINISHES OF THE CONCRETE MEMBER BEING FORMED AND FOR CONFORMANCE TO THE CONTRACT DOCUMENTS AND IN ACCORDANCE WITH ACI 301 SECTION 2 & ACI 318 SECTION 26.11	ACI-CCSI/ICC-RCSI	
MIX DESIGN	CONTINUOUS	REVIEW CONCRETE BATCH TICKETS AND VERIFY CONFORMANCE WITH APPROVED MIX DESIGN. VERIFY THAT WATER ADDED AT THE SITE DOES NOT EXCEED THAT ALLOWED BY THE MIX DESIGN.	ACI-CCSI/ICC-RCSI	
MATERIAL OFFICIOATION	DEDIODIO	REVIEW IN-PLANT ALL MATERIALS, MANUFACTURER'S CERTIFICATIONS, AND MILL REPORTS FOR CONFORMANCE TO CONTRACT DOCUMENTS AND APPROVED SUBMITTALS.	ACL COC	
MATERIAL CERTIFICATION	PERIODIC	MAINTAIN RECORDS OF ALL MATERIAL CERTIFICATES AND MILL REPORTS OF ALL CONCRETE MIX CONSTITUENT MATERIALS AND STEEL REINFORCEMENT.	ACI-CCSI	
	INSPECT SIZE, SPACING, COVE BARS ARE ADEQUATELY TIED	REINFORCEMENT FOR CONFORMANCE WITH ACI 318 CH 20, SECTIONS 25.2, 25.3 AND 26.6 AND ACI 301 SECTION 3.3. R, POSITIONING, AND GRADE OF REINFORCING STEEL FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS. VERIFY THAT AND SUPPORTED ON CHAIRS OR BOLSTERS. INSPECT BAR LAPS AND MECHANICAL SPLICES. VERIFY THAT REINFORCING BARS THER DELETERIOUS MATERIALS. INSPECTION FREQUENCY AS NOTED:		
REINFORCEMENT INSTALLATION	PERIODIC	FOR SLABS-ON-GRADE, FOUNDATIONS, WALLS AND ALL OTHER STRUCTURAL ELEMENTS.	ACI-CCSI/ICC-RCSI	
	PERIODIC	INSPECT INSERTS AND ACCESSORIES.		
WELDING OF REINFORCING	PERIODIC	SINGLE PASS FILLET WELDS UP TO 5/16": VISUALLY INSPECT ALL REINFORCING STEEL WELDS. INSPECT PREHEATING OF STEEL WHEN REQUIRED. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706. INSPECT FOR CONFORMANCE WITH AWS D1.4 AND ACI 318 SECTION 26.6.4.	ACI-CCSI/ICC-RCSI	
	CONTINUOUS	ALL OTHER WELDS: SAME SCOPE AS ABOVE.		
		REVIEW PLANT QUALITY CONTROL PROCEDURES FOR MATERIAL STORAGE AND HANDLING TO ENSURE CONFORMANCE WITH ACI 301 SECTIONS 4.1.3, 7.1, & 7.2.		
	PERIODIC	REVIEW THAT PLANT PROCEDURES FOR ESTABLISHING MIX DESIGN STRENGTH TO ENSURE CONFORMANCE WITH ACI 301 SECTIONS 4.1 AND 4.2 AND WITH ACI 318 SECTIONS 26.4 AND 26.12.		
BATCHING PLANT		INSPECT PLANT TO ENSURE COMPLIANCE OF MIX CONSTITUENTS WITH THE REQUIREMENTS OF ACI 318 CHAPTER 19 AND ACI 301 SECTIONS 4.2 AND 7.2.	ACI-CCSI/ICC-RCSI	
		INSPECT THAT MIXING AND READY-MIX EQUIPMENT AND VEHICLES CONFORM TO ACI 318 SECTIONS 26.12 AND WITH ASTM C 94.		
		MAINTAIN RECORDS OF ALL READY-MIX TRUCK CONTENTS AND DISPATCH TIMES.		
CAST-IN ANCHOR RODS	CONTINUOUS INSPECT SIZE, GRADE, POSITIONING, AND EMBEDMENT OF ANCHOR RODS FOR CONFORMANCE TO CONTRACT DOCUMENTS AND ACI 318 SECTION 17.8.2 PRIOR TO CONCRETE PLACEMENT.		ACI-CCSI/ICC-RCSI	
one in this in the	PERIODIC	INSPECT CONCRETE PLACEMENT AND CONSOLIDATION AROUND ANCHORS.		
		INSPECT PLACEMENT OF CONCRETE. VERIFY THAT CONCRETE CONVEYANCE AND DEPOSITING AVOIDS SEGREGATION OR CONTAMINATION. VERIFY THAT CONCRETE IS PROPERLY CONSOLIDATED		
CONCRETE PLACEMENT	CONTINUOUS	PRIOR TO ALLOWING READY—MIX TRUCKS TO DEPOSIT CONCRETE, REVIEW BATCH—PLANT TICKET TO VERIFY CONCRETE MIX COMPLIANCE WITH PROJECT SPECIFICATIONS, TEMPERATURE, BATCHING TIME, AND NUMBER OF MIXING DRUM REVOLUTIONS. REJECT CONCRETE THAT HAS BEEN MIXED FOR MORE THAN 90 MIN OR 300 DRUM REVOLUTIONS.	ACI-CCSI/ICC-RCSI	
		MAINTAIN RECORDS CORRELATING CONCRETE BATCHING INFORMATION WITH LOCATION OF PLACEMENT IN THE FINISHED WORK. INSPECT ALL CONCRETE PLACEMENTS FOR COMPLIANCE WITH ACI 318 SECTION 26.5.2, AND ACI 301 SECTIONS 5 AND 7.3.		
		INSPECT FOR CONFORMANCE TO ALL APPROVED HOT- AND COLD-WEATHER CONCRETE PLACEMENT PROCEDURES.		
SAMPLING AND TESTING OF CONCRETE	CONTINUOUS	COLLECT AND TEST CONCRETE SAMPLES IN ACCORDANCE WITH ASTM C31, ASTM C172 AND ACI 318 SECTION 26.12.2 (MINIMUM OF FOUR CYLINDERS FOR EACH 150 CU YD OF CONCRETE OR 5,000 SQ FT OF SLAB OR WALL AREA PLACED), BUT NOT FEWER THAN FOUR CYLINDERS FOR EACH DAY'S POUR.	ACI-CFTT/ACI-STT	
SOMONETE		MEASURE SLUMP (ASTM C143), TEMPERATURE (ASTM C1064), WEIGHT (ASTM C138), AND AIR CONTENT (ASTM C173) FOR ALL CONCRETE SAMPLED FOR STRENGTH. FOR PUMPED CONCRETE, MEASURE AT POINT OF DEPOSIT.		
CURING AND PROTECTION	PERIODIC	INSPECT ALL PLACEMENTS FOR CONFORMANCE TO CONTRACT DOCUMENTS AND ACI 318 SECTIONS 26.5.3-26.5.5.	ACI-CCSI/ICC-RCSI	
IN-SITU CONCRETE STRENGTH	PERIODIC	VERIFY IN SITU CONCRETE STRENGTH PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS IN ACCORDANCE WITH ACI 318 SECTION 26.10.2.	ACI-CCSI/ICC-RCSI	
LABORATORY EVALUATION OF CONCRETE STRENGTH	CONTINUOUS	TEST FOR CONFORMANCE TO SPECIFICATIONS IN ACCORDANCE WITH ACI 318 SECTION 26.12.3. AS A MINIMUM, PERFORM COMPRESSION TESTS ON ONE CYLINDER AT SEVEN DAYS AND TWO CYLINDERS AT TWENTY-EIGHT DAYS.	ACI-LTT	

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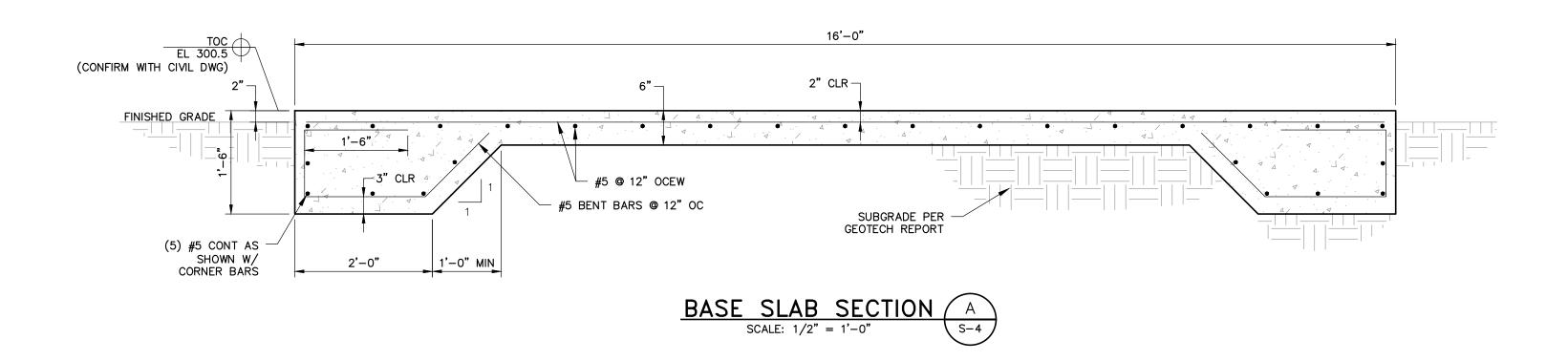


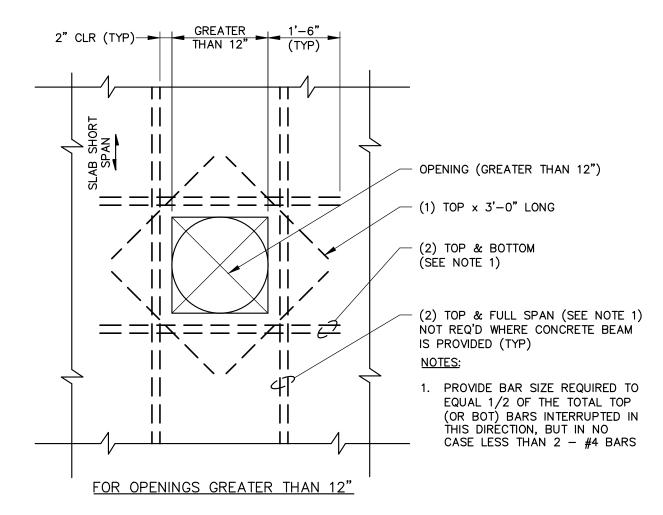
PUMP STATION PAD PLAN

SCALE: 3/16" = 1'-0"

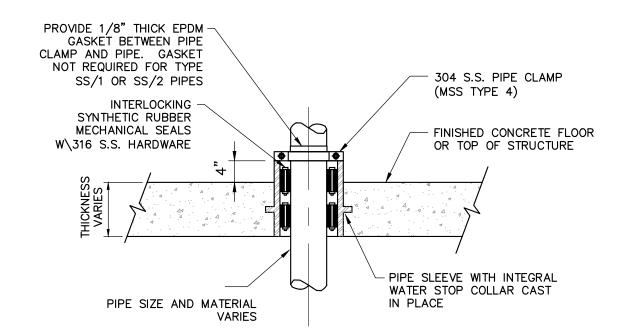
NOTES:

- 1. COORDINATE PLAN WITH CIVIL & PROCESS DRAWINGS.
- 2. SEE SPECIFICATION CSI SECTION 03480 FOR PRECAST CONCRETE VAULT REQUIREMENTS. COORDINATE LOCATION WITH CIVIL & PROCESS DRAWINGS.





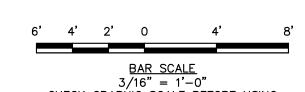




NOTES:

- FOR PIPE PENETRATIONS WITH INSULATION, THE ANCILLARY SPACE BETWEEN THE TOP OF THE SLEEVE AND THE SEAL SHALL BE FILLED WITH BACKER ROD AND SEALANT TO THE TOP SURFACE OF THE SLEEVE.
- PIPE SLEEVE MATERIAL FOR USE WITH BACKER ROD AND SEALANT (INSULATED PIPE CONDITIONS) SHALL BE SCHEDULE 10S 304L STAINLESS STEEL OR HDPE, WITH I.D. EQUAL TO THE PIPE O.D. PLUS ONE INCH.
- 3. FLOOR SLEEVES FOR UNINSULATED PIPE SHALL BE SCH. 10S 304L SS OR HDPE WITH CONTINUOUS A WATERSTOP COLLAR AS FOLLOWS:
 PIPE DIA 10" OR LESS: 1/4" x 2"
 PIPE DIA > 10": 3/8" x 2"
- 4. PROVIDE SCH. 10S 304L SS PIPE SLEEVES FOR PIPING LARGER THAN 24".
- 5. REFER TO THE DRAWINGS FOR PIPE SIZES AND MATERIALS.
- 6. ALL HARDWARE SHALL BE 316 SS.
- 7. ALL PIPE SLEEVES SHALL BE SUPPLIED BY A SINGLE MANUFACTURER. ALL WALL PIPE SLEEVES SHALL BE A PRODUCT OF THE FOLLOWING MANUFACTURERS: PIPELINE SEAL & INSULATOR, INC., ADVANCED PRODUCTS & SYSTEMS, INC. INFINITY SERIES, OR APPROVED EQUAL.
- 8. PROVIDE SLEEVE AND MECHANICAL SEALS FOR ALL PLUMBING PIPING THROUGH SLABS ON GRADE IN ACCORDANCE WITH STATE PLUMBING CODE REQUIREMENTS. SEALS SHALL BE A PRODUCT OF THE FOLLOWING MANUFACTURERS: PIPELINE SEAL & INSULATOR, INC LINK—SEAL, ADVANCED PRODUCTS & SYSTEMS, INC INNERLYNX, OR APPROVED EQUAL.
- 9. FOR INSULATED PIPING, INSTALL INSULATION CONTINUOUS THROUGH PENETRATIONS AND PROVIDE 304 S.S. PROTECTION SHIELDS WITH 360° COVERAGE BETWEEN SEALS AND INSULATION.





CHECK GRAPHIC SCALE BEFORE USING



CHECK GRAPHIC SCALE BEFORE USING



REV.	DATE	DESCRIPTION	THE CITY OF
A	01/26/24	ISSUE FOR BID	
			PIFASANTON

CITY OF PLEASANTON PUBLIC WORKS DEPARTMENT



TURNOUT #4 BOOSTER PUMP STATION AND DISCHARGE PIPELINE (F-1 LINE)

FOUNDATION PLAN - PUMP STATION

DESIGN: MMM SO
DRAWN: MMM
CHECKED: CSB

A SCALE: AS NOTED

PROJECT NO.: CIP-24171

DATE: JANUARY 2024

24 34 OF 4

DWG NO.

2. CORROSION MONITORING AND CORROSION CONTROL SYSTEMS FOR THE VARIOUS PIPE OPTIONS SHALL CONSIST OF THE FOLLOWING:

DUCTILE IRON PIPE/FITTINGS

- 3. ALL CONTINUOUS SECTIONS OF BURIED DUCTILE IRON PIPE, VALVES & FITTINGS, FIRE HYDRANTS AND TURNOUTS SHALL HAVE BOND CABLES INSTALLED ACROSS ALL METALLIC JOINTS (EXCEPT INSULATING JOINTS) PER DETAIL 2/CP-5. THE DUCTILE IRON PIPE/FITTINGS AND/OR VALVES SHALL BE POLYETHYLENE ENCASED AND CATHODICALLY PROTECTED WITH PREPACKAGE ZINC ANODES IN ACCORDANCE WITH TABLE 1 ON THIS SHEET. ALL BURIED DUCTILE IRON FITTINGS SHALL BE WRAPPED IN 8-MIL POLYETHYLENE PER AWWA C-105. ALL BURIED BOLTS & NUTS SHALL BE STAINLESS STEEL AND SHALL BE COATED WITH BITUMASTIC AFTER INSTALLATION PER SPECIFICATIONS.
- 4. THE DUCTILE IRON PIPE OR VALVES AND SHALL BE ELECTRICALLY ISOLATED AT CONNECTIONS TO EXISTING METALLIC PIPE BY MEANS OF AN INSULATING FLANGE AND WAX TAPE COATING PER DETAIL 1/CP-6. INSTALL INSULATING JOINT TEST STATIONS (IJTS), INSULATING JOINT TEST STATIONS WITH ANODES (IJTSA), PER DETAILS 2/CP-2 & 4/CP-2.
- 5. FOR ANY THRUST RESTRAINT HARNESSES, CONTRACTOR SHALL INCLUDE FULL CATHODIC PROTECTION PER DETAIL 2/CP-6 WITH AN 18 POUND ZINC ANODE.
- 6. ALL BURIED INSULATING JOINTS SHALL NOT BE BACKFILLED UNTIL FIELD TESTING BY CITY OF INSULATING FLANGE VERIFIES ELECTRICAL ISOLATION.
- 7. THE ANODE SIZES LISTED IN TABLE '1' ARE THE MINIMUM SIZES THAT ARE REQUIRED. THE CONTRACTOR MAY AT THEIR CONVENIENCE INSTALL LARGER SIZED ANODES THAN THOSE LISTED IN THE TABLES.
- 8. ALL ANODES INSTALLED BEYOND TABLE '1' SHALL BE DOCUMENTED AND REPORT PROVIDED TO THE CITY.

GATE VALVES & BUTTERFLY VALVES

9. CONNECTED TO DUCTILE IRON PIPE OR FITTINGS:

ALL BURIED STEEL OR DUCTILE IRON PIPE, VALVES AND FITTINGS ASSOCIATED WITH THE GATE VALVES & BUTTERFLY VALVES THAT ARE CONNECTED TO DUCTILE IRON PIPE SHALL BE ENCASED IN POLYETHYLENE. ALL BURIED, NON—WELDED, NON—INSULATING DUCTILE IRON PIPE JOINTS OF THE BUTTERFLY VALVES CONNECTED TO DUCTILE IRON PIPE SHALL BE BONDED PER DETAIL 2/CP—5.

10. COPPER PIPE AND BRASS PIPE OF 1" ARV

ALL BURIED COPPER AND/OR BRASS PIPE CONNECTED TO THE DUCTILE IRON TRANSMISSION MAIN OR ITS LATERALS SHALL BE ELECTRICALLY ISOLATED FROM THE MAIN/LATERAL BY MEANS OF A NYLON BUSHING OR AN INSULATING CORPORATION STOP INSTALLED, AND SHALL BE ENCASED IN A 6-MIL POLYETHYLENE SLEEVE.

11. 30" STEEL CASING

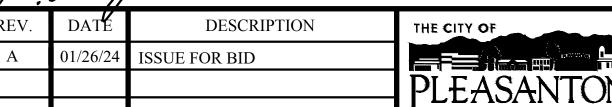
THE JACK-AND-BORE STEEL CASING SHALL BE COATED WITH AN ABRASION RESISTANT COATING AS INDICATED IN THE SPECIFICATIONS 134713. THE STEEL CASING SHALL BE CATHODICALLY PROTECTED UTILIZING CASING ANODE TEST STATIONS PER DETAIL 1/CP-3. THE NUMBER AND SIZE OF ANODES SHALL AS INDICATED IN TABLE 1 ON SHEET CP-1.

TABLE 1 ANODE & TEST STATION SCHEDULE DOMESTIC WATER DUCTILE IRON & C900 PIPE & FITTINGS

STATION	DWG #	ITEM/TEST STATION TYPE	DETAIL	PIPELINE	ANODE QUANTITY & SIZE (LB)	FOREIGN PIPELINE
F1+00.00±	PP-1/C-4	VEC COAT TEE & COUPLING	1/CP-6	16" DIP TEE & COUPLING	-	-
F1+00.00±	PP-1/C-4	IJTSA	2/CP-2 & 4/CP-2	12" DIP (TEE NOZZLE)	(3)-30#	_
F1+12.86	PP-1	ATS	1/CP-2	4" DIP BO	(1)-30#	_
F1+20	PP-1/C-4	IJTS	3/CP-2	SOUTH 12" VALVE & E. TEE	-	_
F1+34	PP-1	ICS & ANODE	1/CP-4	2" CAV	(1)-18#	_
F1+50	PP-1	DOUBLE PE ENCASEMENT	4/CP-3	24" DIP	-	_
F1+70	PP-1	ATS	1/CP-2	24" DIP	(3)-30#	-
F5+84.63	PP-1	ANODE	5/CP-3	24" BEND	(1)-30#	-
F7+37.09	PP-1	ANODE	5/CP-3	24" BEND	(1)-30#	-
F10+03.62	PP-1	ATS	1/CP-2	4" DIP BO	(1)-30#	-
F14+62	PP-2	ICS & ANODE	1/CP-4	2" CAV	(1)-18#	-
F15+75	PP-2	ANODE	5/CP-3	24" BEND	(1)-30#	-
F16+30	PP-2	ANODE	5/CP-3	24" BEND	(1)-30#	-
F16+42±	PP-2	CATS	1/CP-3	42" CASING	(6)-30#	-
F16+82	PP-2	ANODE	5/CP-3	24" BEND	(1)-30#	_
F17+04.78	PP-2	ANODE	5/CP-3	24" BEND	(1)-30#	-
F17+10	PP-2	ICS & ANODE	1/CP-4	2" CAV	(1)-18#	-
F23+70	PP-3	ICS & ANODE	1/CP-4	2" CAV	(1)-18#	-
F31+35	PP-4	ICS & ANODE	1/CP-4	2" CAV	(1)-18#	-
F32+60	PP-4	ATS	1/CP-2	24" DIP	(5)-30#	-
F33+94±	PP-4	FPTS	2/CP-3	24" DIP	(2)-30#	4" GAS
F34+06.5±	PP-4	DOUBLE PE ENCASEMENT	4/CP-3	24" DIP	-	12" W
F34+35±	PP-4	DOUBLE PE ENCASEMENT	4/CP-3	24" DIP	_	20" W
F35+10±	PP-4	IJTSA	2/CP-2 & 4/CP-2	16" TEE NOZZLE	(5)-30#	-
_	PP-5	VEC COATING TEE, V & COUPLING	1/CP-6	16" TEE, V & COUPLING	_	-
_	PP-4/C-3	IJTS	1/CP-4	BETWEEN VALVE & 16" E. DIP	_	-
_	PP-4/C-3	VEC COATING TEE, V & COUPLING	1/CP-6	16" TEE, V & COUPLING	_	-
_	PP-4/C-3	ATS	1/CP-1	18" DIP NEXT TO PS	(2)-30#	-
_	PP-4/C-3	AG IF IN PS	1/CP-4	18" DISCHARGE RISER	-	-
_	PP-4/C-3	AG IF IN PS	1/CP-4	16" SUCTION RISER	-	-
_	PP-4/C-3	CDF/CLSM BACKFILL	_	16" SUCTION UNDER SLAB	-	-
_	PP-4/C-3	AG AFTER MAG METER *	1/CP-4	16"	-	_
_	PP-4/C-3	AG BEFORE MAG METER *	1/CP-4	16"	-	_
_	PP-4/C-3	IJTSA	2/CP-4	18" TEE OUTLET	(2)-30#	_

^{*} CONSULT MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION OF GROUNDING AND ELECTRICAL ISOLATION OF FLOW METER.











DESIGN:	TDH	SCALE:	NOT TO SCALE	D
DRAWN:	DJA	PR () IF (T	NO.: CIP-24171	
CHECKED:	JDH	TROJECT	NO CII -241/1	
		DATE:	JANUARY 2024	35

ABBREVIATIONS

AG	ABOVE GRADE
AMP	AMPERE
AN	ANODE
AWG	AMERICAN WIRE GAUGE
AWWA	AMERICAN WATER WORKS ASSOCIATION
BO	BLOW OFF
BV	BUTTERFLY VALVE
CAV	COMBINATION AIR VALVE
CC	CORROSION CONTROL
CDF	CONTROLLED DENSITY FILL
CL	
CP	CENTERLINE
	CATHODIC PROTECTION
DC	DRAIN CABLE
DIA	DIAMETER
DIJTS	DOUBLE INSULATING JOINT TEST STATION
DIJTSA	
DIP	DUCTILE IRON PIPE
EX.	EXISTING
FCS	FLOW CONTROL STATION
FG	FINISHED GRADE
FH	FIRE HYDRANT
FT	FEET
GV	GATE VALVE
HMWPE	
ICS	INSULATING CORPORATION STOP
ID	IDENTIFICATION
IJ	INSULATING JOINT
IJTS	INSULATING JOINT TEST STATION
IJTSA	INSULATING JOINT TEST STATION WITH ANODE
L	LENGTH
LB	POUND
LF	LINEAR FEET
LFT	LEFT
MAX	MAXIMUM
MIN	MINIMUM
MRJ	MECHANICALLY RESTRAINED JOINT
N	NORTH
NW	NORTHWEST
O.D.	OUTER DIAMETER
PE	POLYETHYLENE
PS	PUMP STATION
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
RED	REDUCER
RT	RIGHT
S	SOUTH
SCH	SCHEDULE
SD	STORM DRAIN PIPE
SS	SANITARY SEWER PIPE
0.7.4	CTATION

TYP TYPICAL
V VALVE
VEC VISCO—ELASTIC COATING

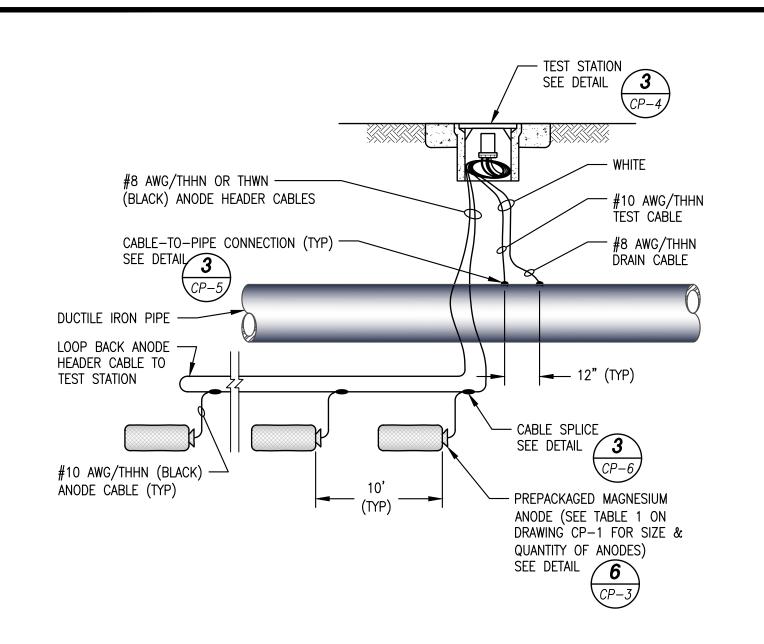
TEST CABLE

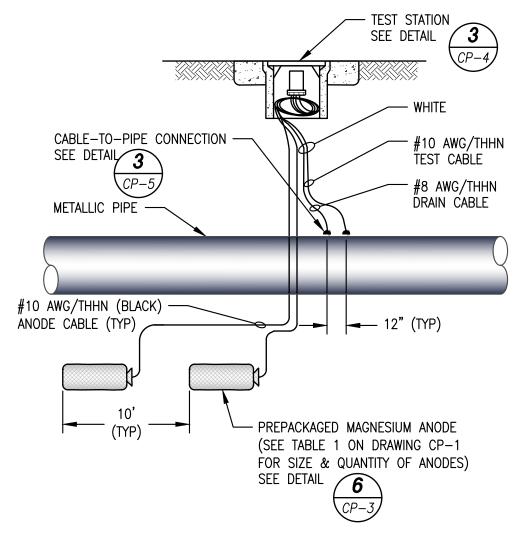
STATION

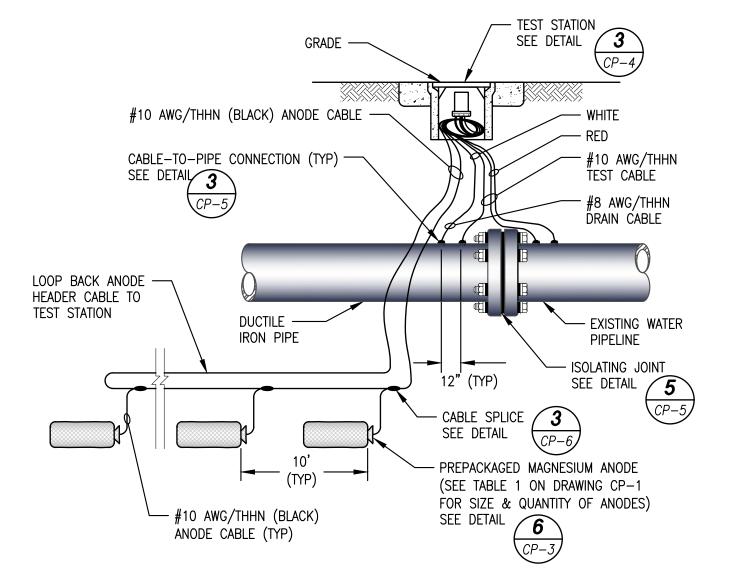
THERMOPLASTIC HIGH HEAT RESISTANT NYLON COATED

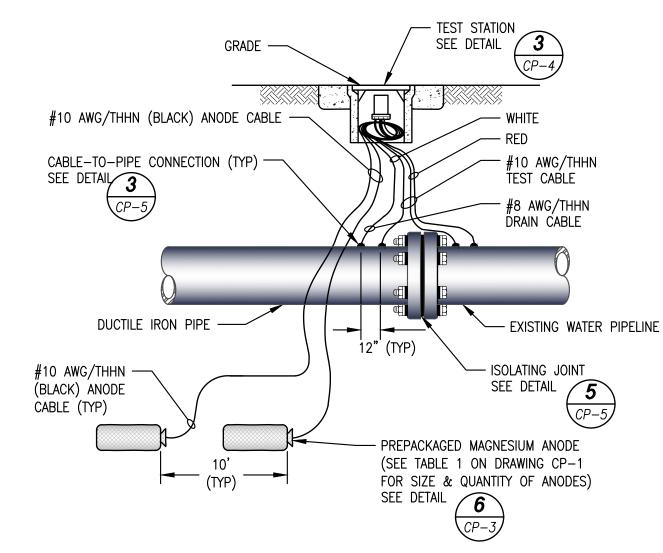
WITH DIAMETER INCH(ES)

STA









3 OR MORE ANODES

1 OR 2 ANODES

NEW DUCTILE IRON VALVE ----

#4 AWG HMWPE BOND CABLE-

CP-5

#8 AWG HMWPE-

INSULATING JOINT

SEE DETAIL

ENCASEMENT

CP-2 NOT TO SCALE

SEE DETAIL 5

8-MIL POLYETHYLENE

NEW DUCTILE IRON VALVE -

#8 AWG HMWPE BOND CABLES

BOND CABLE SEE DETAIL 2

CP-5

\CP-5/

\CP-5_/

SEE DETAIL

IRON PIPE

EXISTING DUCTILE —

3 OR MORE ANODES

1 OR 2 ANODES

INSTALL BOND CABLES ON ALL BURIED JOINTS (EXCEPT ISOLATING JOINTS) PER TO DETAIL 2/CP-5.

COAT ALL BURIED BOLTS & NUTS WITH BITUMASTIC, AND ENCASE ALL DUCTILE IRON PIPE AND FITTINGS IN POLYETHYLENE PER CATHODIC PROTECTION GENERAL NOTE 1. ON SHEET CP-1. 3. IF ONLY ONE ANODE IS INSTALLED OMIT ANODE HEADER CABLE AND ROUTE ANODE CABLE TO TERMINAL BOX.

1 ATS - ANODE TEST STATION

- NEW DUCTILE IRON VALVE

#4 AWG HMWPE BOND CABLE

-#8 AWG HMWPE BOND CABLES

CP-5

SEE DETAIL 3

#10 AWG/THHN TEST CABLE

#4 AWG/THHN BOND CABLE

SEE DETAIL 2

#10 AWG/THHN TEST

#4 AWG/THHN BOND

CABLE (RED)

CABLE (RED)

(WHITE)

(WHITE)

CABLE-TO-PIPE CONNECTION (TYP)

CP-5

2

#8 AWG/THHN ANODE HEADER CABLE (BLACK)

SEE DETAIL 3

NEW DUCTILE IRON PIPE

TO ANODES. SEE DETAIL

SEE DETAIL 2

- NEW DUCTILE IRON TEE

1. INSTALL BOND CABLES ON ALL BURIED JOINTS (EXCEPT ISOLATING JOINTS) PER TO DETAIL 2/CP-5. FOR BONDING OF FLEXIBLE EXPANSION JOINT SEE DETAIL 2/CP-5. COAT ALL BURIED BOLTS & NUTS WITH BITUMASTIC, AND ENCASE ALL DUCTILE IRON PIPE AND FITTINGS IN POLYETHYLENE PER CATHODIC PROTECTION GENERAL NOTE 1. ON SHEET CP1. 3. BELOW GRADE ISOLATING JOINT COATING NOT SHOWN FOR CLARITY. SEE DETAIL 1/CP-6 FOR COATING OF DIRECT BURIED INSULATING JOINTS.

2 IJTSA - ISOLATING JOINT TEST STATION W/ANODES

- EXISTING DUCTILE

IRON PIPE

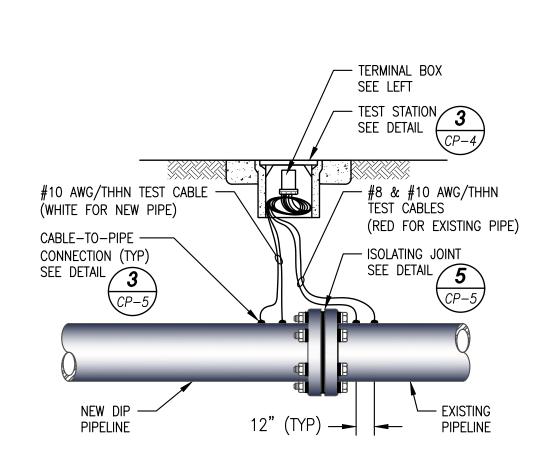
\CP-2/ NOT TO SCALE

CP-TEST

 \bigcirc

1. INSULATING JOINT SHALL NOT BE BACKFILLED UNTIL FIELD TESTING BY CITY OF PLEASANTON VERIFIES ELECTRICAL ISOLATION.
2. ENCASE ALL DUCTILE IRON PIPE & FITTINGS, INCLUDING THRUST RESTRAINTS, IN 8 MIL THICK POLYETHYLENE PER AWWA C-105.

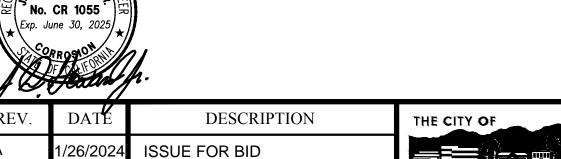
12" MIN





- 1. INSTALL BOND CABLES ON ALL BURIED JOINTS (EXCEPT ISOLATING JOINTS) PER TO DETAIL 2/CP-5.
- FOR BONDING OF FLEXIBLE EXPANSION JOINT SEE DETAIL 2/CP-5. 2. COAT ALL BURIED BOLTS & NUTS WITH BITUMASTIC, AND ENCASE ALL DUCTILE IRON PIPE AND
- FITTINGS IN POLYETHYLENE PER CATHODIC PROTECTION GENERAL NOTE 1. ON SHEET CP-1. 3. BELOW GRADE ISOLATING JOINT COATING NOT SHOWN FOR CLARITY. SEE DETAIL 1/CP-6 FOR COATING OF DIRECT BURIED INSULATING JOINTS.





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TEE - ELECTRICAL ISOLATION & BONDING

- NEW DUCTILE IRON TEE NEW DUCTILE IRON VALVE ---- NEW DUCTILE IRON VALVE INSULATING JOINT -SEE DETAIL 5 #4 AWG HMWPE BOND CABLE SEE DETAIL 2 *CP*−5, EXISTING 16" DUCTILE IRON PIPE - EXISTING DUCTILE IRON PIPE - NEW BLIND FLANGE #8 AWG HMWPE BOND CABLES SEE DETAIL 2 CP-5 #8 AWG HMWPE BOND CABLE SEE DETAIL 2 - #10 AWG/THHN TEST CP-5CABLE (RED) \bigcirc #4 AWG/THHN BOND CABLE (RED) CP-TEST TEST STATION NEW DUCTILE IRON VALVE -SEE DETAIL 3 12" MIN #8 AWG HMWPE BOND CABLES -#10 AWG/THHN TEST CABLE SEE DETAIL (WHITE) CP-5#4 AWG/THHN BOND CABLE 8-MIL POLYETHYLENE ENCASEMENT CABLE-TO-PIPE CONNECTION (TYP) SEE DETAIL 3 NEW DUCTILE IRON PIPE

1. INSULATING JOINT SHALL NOT BE BACKFILLED UNTIL FIELD TESTING BY CITY OF PLEASANTON VERIFIES ELECTRICAL ISOLATION.
2. ENCASE ALL DUCTILE IRON PIPE & FITTINGS, INCLUDING THRUST RESTRAINTS, IN 8 MIL THICK POLYETHYLENE PER AWWA C-105.

5 CROSS - ELECTRICAL ISOLATION & BONDING

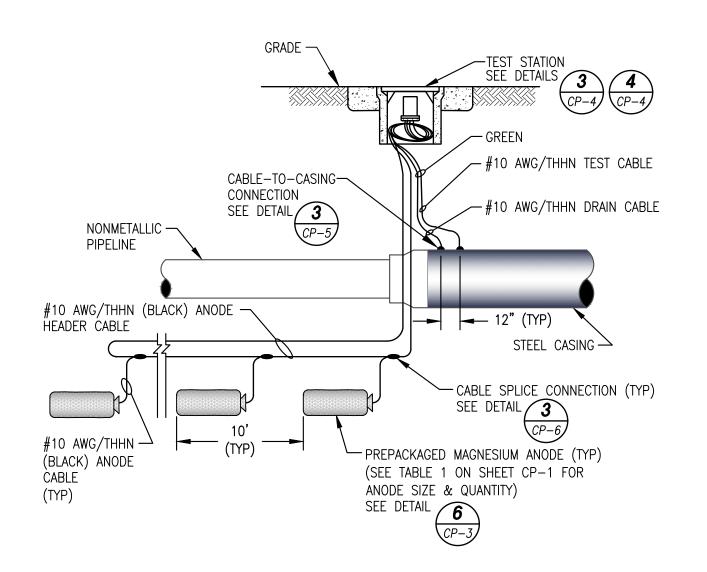
CP-2 NOT TO SCALE

TURNOUT #4 BOOSTER PUMP STATION AND DISCHARGE PIPELINE (F-1 LINE)

DESIGN: SCALE: NOT TO SCALE DRAWN: DJA PROJECT NO.: CIP-2417 CHECKED: JDH JANUARY 2024 DATE:

DWG NO. 36 OF 40

CITY OF PLEASANTON PLEASANTON. PUBLIC WORKS DEPARTMENT



- 1. THE ANODES SHALL BE INSTALLED A MINIMUM OF 5 FEET OFF THE EDGE OF THE CASING. LOOP BACK ANODE HEADER CABLE TO TEST STATION. 3. CONDUIT OMITTED FOR CLARITY. INSTALL ANODE HEADER CABLES AND TEST CABLES IN 1" Ø
- SCH 80 PVC CONDUIT. 4. CASING SHALL BE COATED PER CATHODIC PROTECTION GENERAL NOTE I.C.1. ON SHEET CP-1.

CATS - CASING ANODE TEST STATION W/ANODES CP-3 NOT TO SCALE

TEST STATION SEE DETAILS 3 4 GRADE — #10 AWG/THHN ANODE #14 AWG/THHN REF. — CABLES (BLACK) CELL CABLE (YELLOW) INSULATING BLANKET SEE DETAIL 3 #10 AWG/THHN CABLES (WHITE) -PROTECTED PIPELINE CABLE-TO-PIPE-— FOREIGN PIPELINE CONNECTION SEE DETAIL 3 COPPER SULFATE REFERENCE CELL CP-5 PREPACKAGED MAGNESIUM ANODE (SEE TABLE 1 ON SHEET CP-1 FOR SIZE & QUANTITY OF ANODES) SEE DETAIL 7

1. IF THE NATURAL GAS PIPELINE IS NONMETALLIC, OR IS METALLIC & NOT PROTECTED WITH IMPRESSED CURRENT CATHODIC PROTECTION, OR METALLIC & LESS THAN 8" IN DIAMETER, THEN OMIT FPTS. FOR CROSSINGS WITH METALLIC NATURAL GAS PIPELINES LESS THAN 8" IN DIAMETER SEE DETAIL 4/CP-3.

CABLE SPLICE (TYP)

INSTALL THE REFERENCE CELL BETWEEN THE INSULATING BLANKET & THE PROJECT PIPELINE. 3. FOR SIZE & POSITION OF DIELECTRIC INSULATING BLANKET, SEE DETAIL 3/CP-3. 2 FPTS - FOREIGN PIPE CROSSING TEST STATION

-FOREIGN PIPELINE (8" OR GREATER) INSULATING BLANKET LENGTH & WIDTH OF BLANKET SHALL BE 2' LARGER THAN THE LARGEST DIAMETER OF THE CROSSING PIPELINE. NEW DUCTILE IRON WATER PIPE

- FOREIGN PIPELINE (SMALLER THAN 8"ø) -10' OF SECOND LAYER OF POLYETHYLENE ENCASEMENT CENTERED ON THE FOREIGN PIPE CROSSING -NEW DUCTILE IRON OR COPPER WATER PIPE POLYETHYLENE ENCASEMENT

- 1. INSTALL INSULATING BLANKETS ON ALL PIPE CROSSINGS EXCEPT WHEN THE FOREIGN PIPELINE IS NONMETALLIC.
- 2. DIELECTRIC BLANKET SHALL BE 1/8" THICK SHEET OF BUTYL RUBBER, PVC, HDPE, MICARTA OR NEOPRENE.
- 3. DIELECTRIC BLANKET SHALL BE INSTALLED AS CLOSE TO THE MIDPOINT BETWEEN THE TWO LINES AS POSSIBLE.
- 4. AT LOCATIONS WHERE A REFERENCE ELECTRODE IS INSTALLED BETWEEN THE TWO PIPES, POSITION THE REFERENCE ELECTRODE MIDWAY BETWEEN THE INSULATING BLANKET AND THE PROJECT PIPE.

3 INSULATING BLANKET NOT TO SCALE

— ANODE HEADER CABLE

DOUBLE POLYETHYLENE 4 ENCASEMENT AT CROSSING

NOT TO SCALE

PREPACKAGED MAGNESIUM -ANODE. SEE TABLE 1 ON DRAWING CP-1 FOR SIZE 8-MIL POLYETHYLENE-& SEE DETAIL 7 ENCASEMENT (SEE NOTE 3.) NONMETALLIC PIPE #10 AWG THHN (BLACK) ANODE CABLE FERROUS METAL ELBOW --POLYETHYLENE **ENCASEMENT** CABLE-TO-PIPE CONNECTION (TYP) (SEE NOTE 3.) SEE DETAIL 3 NONMETALLIC PIPE

(SEE NOTE 3.) SEE DETAIL *XX\X\X\X\X\X\X\X\X* CABLE WARNING TAPE — TO ADJACENT ANODES TO TEST STATION NATIVE BACKFILL FREE OF ANODE ROCKS & DEBRIS HEADER (SEE NOTE 4.) CABLE 10' (TYP) BOTTOM OF TRENCH PREPACKAGED MAGNESIUM, (SEE NOTE 1.)

∕— GRADE (\/\\/\\ — TO PIPE/FITTING (SEE NOTE 5.) 2.) -#10 AWG/THHN MIN ANODE CABLE (BLACK) /-- NATIVE BACKFILL FREE OF ROCKS & DEBRIS -PREPACKAGED ANODE

/\\/\\/ --- TO PIPE/FITTING (SEE NOTE 5.) -#10 AWG/THHN ANODE CABLE (BLACK) -NATIVE BACKFILL FREE OF ROCKS & DEBRIS -PREPACKAGED ANODE

VERTICAL INSTALLATION

HORIZONTAL INSTALLATION

- THIS DETAIL IS TYPICAL OF ELBOWS, REDUCERS & OTHER ISOLATED FITTINGS. . NO TEST STATION IS REQUIRED FOR THESE FITTINGS, HOWEVER A RECORD OF
- ALL INSTALLATIONS SHALL BE PROVIDED TO THE PROJECT ENGINEER. 3. COAT ALL BURIED BOLTS & NUTS WITH BITUMASTIC, AND ENCASE ALL DUCTILE IRON PIPE AND FITTINGS IN POLYETHYLENE PER CATHODIC PROTECTION GENERAL NOTE 1. ON SHEET CP-1.

5 FITTING - ANODE INSTALLATION CP-3 NOT TO SCALE

No. CR 1055

- 1. IF THE PIPE IS NOT INSTALLED YET, INSTALL THE ANODES 20 INCHES BELOW THE PIPE INVERT AT THE EDGE OF THE TRENCH IN NATIVE SOIL. IF THE PIPE IS ALREADY INSTALLED, INSTALL THE ANODES AT THE PIPE INVERT ON THE EDGE OF THE TRENCH AND BACKFILL IN NATIVE SOIL.
- MAINTAIN A MINIMUM DISTANCE OF 10 FT FROM FRONT TO FRONT OF ANODES. LOOP BACK ANODE HEADER CABLE FROM LAST ANODE TO TEST STATION.
- AFTER BACKFILL REACHES ONE FOOT ABOVE THE ANODE, FLOOD THE ANODE HOLE WITH 5 GALLONS OF FRESH WATER.

5. IF ANODES ARE INSTALLED NEAR A METALLIC NATURAL GAS PIPELINE, MAINTAIN A MINIMUM 5 FOOT DISTANCE FROM THE NATURAL GAS PIPELINE.

\ MULTIPLE ANODE INSTALLATION

.CP-3/ NOT TO SCALE

NOTES: INSTALL ANODES 3 FEET OFF THE PIPE/FITTING IN NATIVE SOIL.

- THE ANODES MAY BE INSTALLED HORIZONTALLY OR VERTICALLY UPON DISCRETION OF THE CONTRACTOR.
- MAINTAIN A MIN. DISTANCE OF 10 FEET BETWEEN ANODES IF MULTIPLE ANODES ARE INSTALLED. CONNECT ANODE CABLE TO TEST STATION OR DIRECTLY TO PIPE OR FITTING AS SHOWN IN THE

\PROFILE - ANODE INSTALLATION

CP-3/ NOT TO SCALE

DATE DESCRIPTION 1/26/2024 **ISSUE FOR BID**

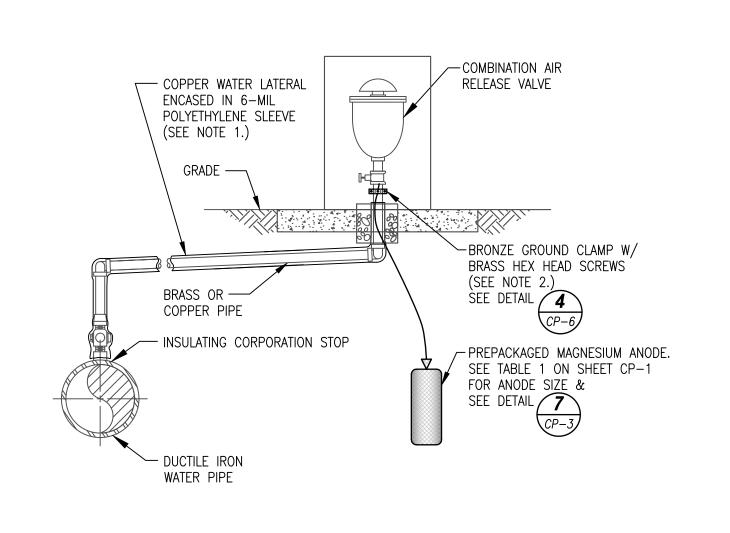
CP-3) NOT TO SCALE

idh corrosion 1100 Willow Pass Court

SCALE: NOT TO SCALE DJA PROJECT NO.: CIP-24171 JDH JANUARY 2024

DWG NO. 37 OF 40

DESIGN: TURNOUT #4 BOOSTER PUMP STATION AND DISCHARGE PIPELINE (F-1 LINE) CITY OF PLEASANTON DRAWN: PLEASANTON. PUBLIC WORKS DEPARTMENT CHECKED: CATHODIC PROTECTION DETAILS 2 Concord, CA 94520 925.927.6630 | www.jdhcorrosion.com



1. IF WATER MAIN IS METALLIC, PLACE INSULATING CORPORATION STOP BETWEEN COPPER WATER LATERAL AND WATER MAIN.

- 2. ENCASE ALL BURIER WAIN.

 2. ENCASE ALL BURIER COPPER TUBE/BRASS PIPE IN 6 MIL THICK POLYETHYLENE SLEEVE PER
- CATHODIC PROTECTION GENERAL NÓTE 10. ON SHEET CP-1.

 3. DO NOT BURY BRASS GROUND CLAMP. AFTER INSTALLATION COAT GROUND CLAMP WITH BITUMASTIC COATING.

1 CAV - ANODE INSTALLATION

CP-4 NOT TO SCALE

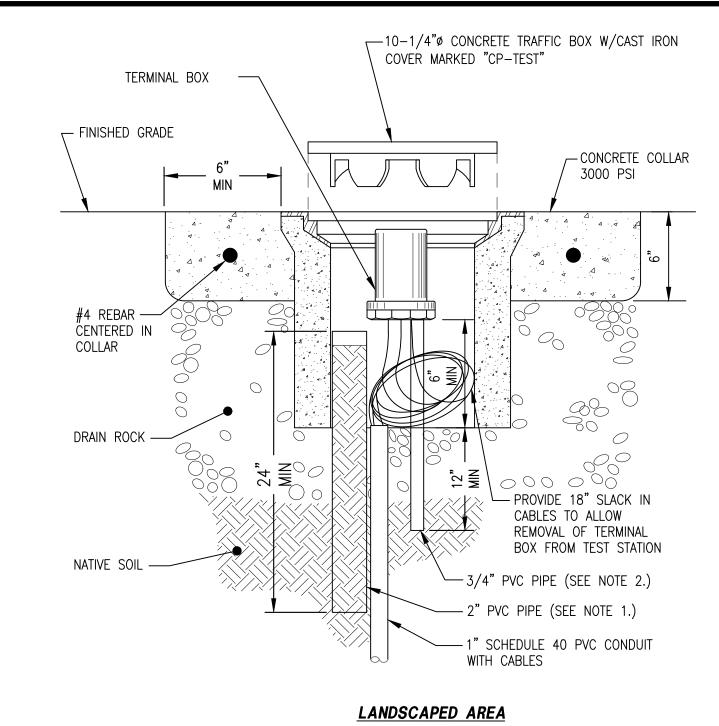
FLUSH MOUNTED TEST STATION CONCRETE BOX — SEE DETAIL 3 LANDSCAPED -AREA $\backslash CP-4$ CONCRETE & CURB-ASPHALT STREET -1" SCH 40 PVC CONDUIT W/PIPE & ANODE CABLES OR ANODE HEADER CABLES - #10 AWG/THHN TEST & DRAIN CABLES (WHITE) - CABLE SPLICE SEE DETAIL 3 \CP-6 CABLE-TO-PIPE CONNECTION (TYP) SEE DETAIL 3 - DUCTILE IRON PIPELINE - #10 AWG/THHN (BLACK) ANODE CABLE - PREPACKAGED MAGNESIUM ANODE SEE DETAIL CP-3/

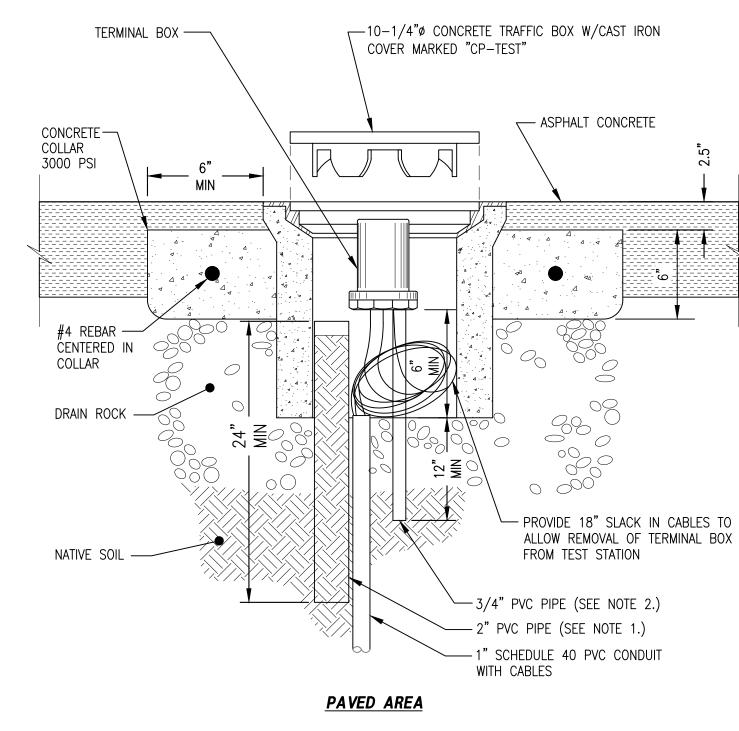
NOTES:

1. INSTALL TEST STATION IN LANDSCAPED STRIP OF CENTER ISLAND OR OTHER NON-TRAFFIC AREAS, ACCESSIBLE FOR FUTURE TESTING. PROVIDE A CONCRETE COLLAR AND SET COLLAR 2 INCHES ABOVE GRADE. WHERE DIRECTED BY THE CITY ENGINEER TO INSTALL THE TEST STATION IN PAVED OR CONCRETED AREA, SET COLLAR LEVEL FLUSH WITH FINISH GRADE.

2. WHERE POSSIBLE INSTALL ANODE TEST STATION NEXT TO FIRE HYDRANT.
3. DO NOT INSTALL TEST STATIONS IN DRIVEWAYS.

2 TEST STATION INSTALLATION IN LANDSCAPING



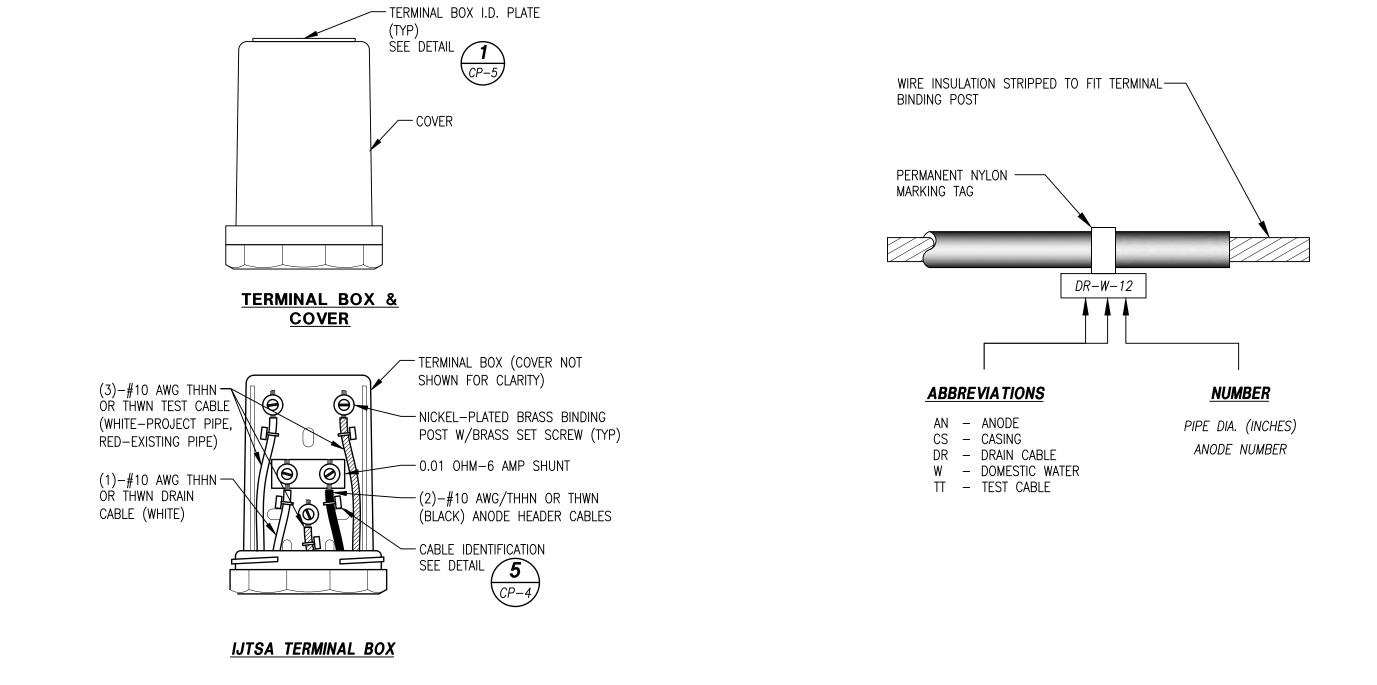


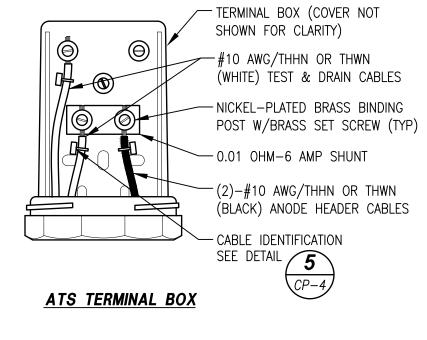
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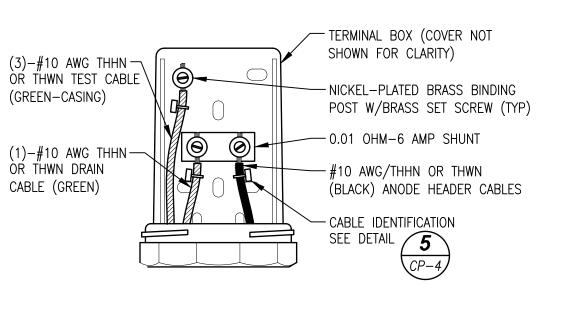
- 1. INSTALL 2" PVC PIPE IN CLEAN NATIVE SOIL. FILL PIPE WITH CLEAN SOIL, FREE FROM ROCKS & DEBRIS.
- 2. INSTALL 18" LENGTH OF 3/4" PVC PIPE TO ENSURE THAT THE TERMINAL BOX WILL REMAIN IN THE UPRIGHT POSITION. POSITION THE PIPE SO THAT THE TERMINAL BOX WILL BE AS HIGH AS POSSIBLE WITH THE CAST IRON LID STILL CLOSING PROPERLY.

3 FLUSH MOUNTED TEST STATION

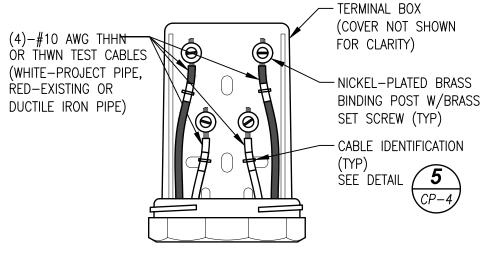
CP-4 NOT TO SCALE







CASING TERMINAL BOX



IJTS - TERMINAL BOX



TERMINAL BOX

5 CABLE IDENTIFICATION

CP-4 NOT TO SCALE

// •			
REV.	DATE	DESCRIPTION	THE CITY OF
А	1/26/2024	ISSUE FOR BID	
			PIFASANTON

	CITY OF PLEASANTON
9	PUBLIC WORKS DEPARTMENT

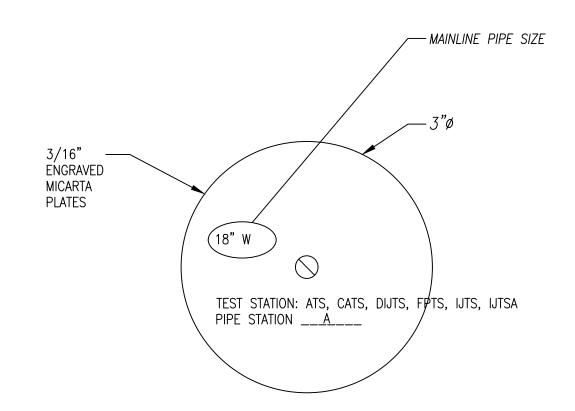
Ţ	J jdh	CORPOSION Sultants, inc.
_	1100 W	Villow Pass Court
1	Cond	cord, CA 94520
	925.927.6630	www.jdhcorrosion.com

TURNOUT #4 BOOSTER PUMP STATION AND DISCHARGE PIPELINE (F-1 LI	NE)
CATHODIC PROTECTION DETAILS 3	

ESIGN:	TDH	SCALE:	NOT	TO SCALE
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		DATE:	JAN	UARY 2024

DWG NO.

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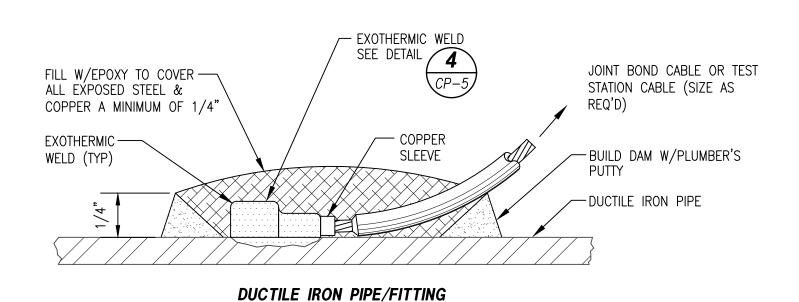
TERMINAL BOX TEST STATION I.D. PLATE

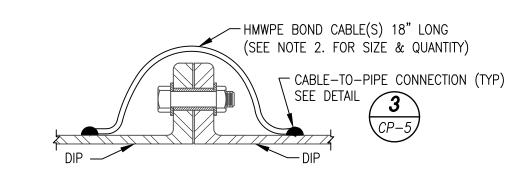
LEGEND A – INDICATES PIPE STATIONING XXX + XX

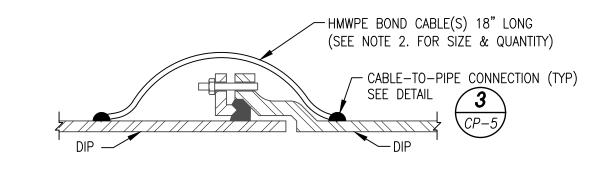
1. THE ENGRAVED LETTERING SHALL BE 3/8" HIGH, WHITE ON BLACK.

2. THE PLATES SHALL BE BOLTED TO THE TEST STATION TERMINAL BOX LID WITH 1/8"

IDENTIFICATION PLATE CP-5/ NOT TO SCALE



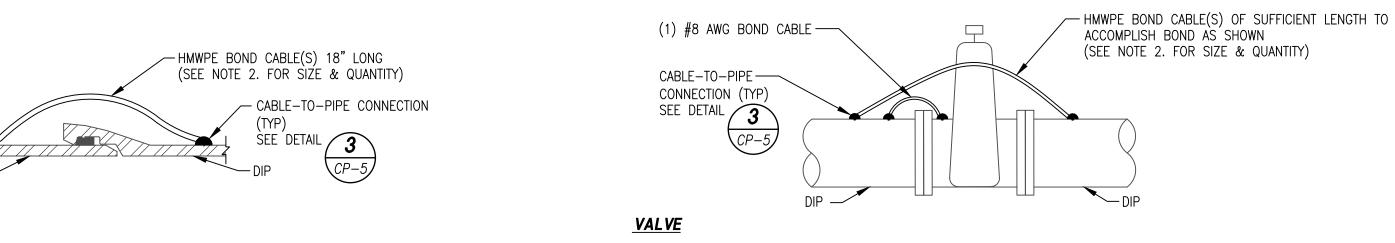




CAST IRON OR STEEL COUPLING EPOXY HMWPE BOND CABLE(S) 24" LONG — COATED (SEE NOTE 2. FOR SIZE & QUANTITY) #8 AWG BOND CABLE (1) #8 AWG BOND CABLE CONNECTION (TYP) SEE DETAIL 3

MECHANICAL JOINT

FLEXIBLE COUPLING

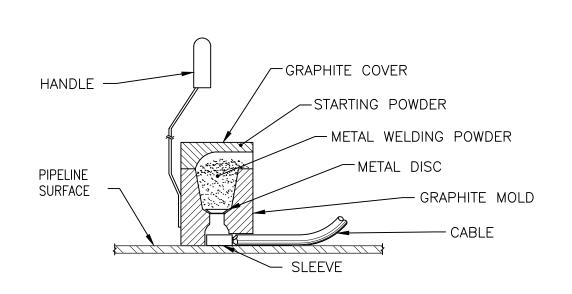


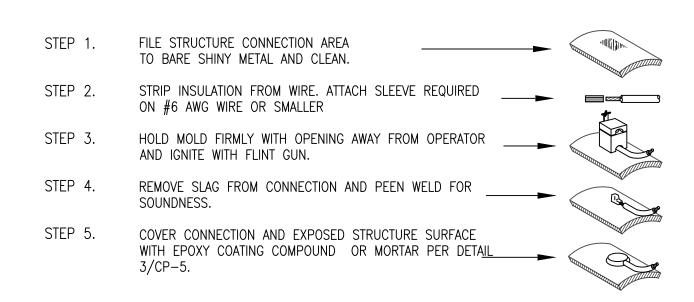
FLANGED JOINT

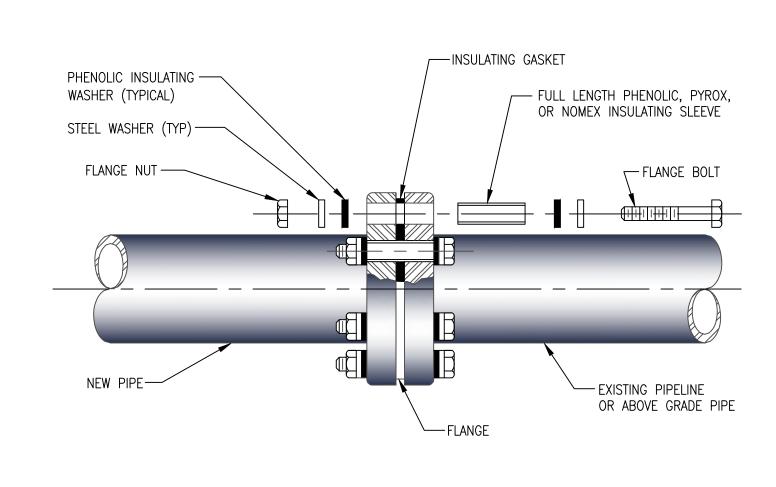
PUSH-ON JOINT

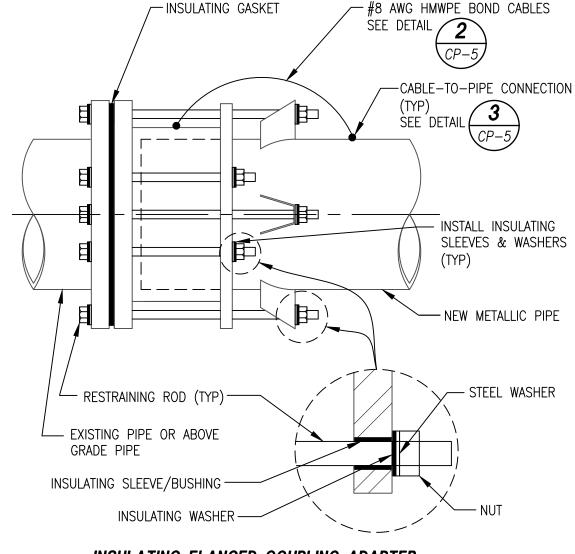
- INSTALL BOND CABLES ACROSS ALL BURIED, NON-WELDED, METALLIC PIPE FERROUS METAL PIPE JOINTS (EXCEPT FOR INSULATING JOINTS).
- INSTALL ONE #4 AWG BOND CABLES ACROSS 14-INCH THROUGH 24-INCH Ø PIPE JOINTS.
- INSTALL ONE #8 AWG BOND CABLES ACROSS 4-INCH THROUGH 12-INCH Ø PIPE JOINTS. 3. PROVIDE ENOUGH SLACK IN THE BOND "CABLES SHALL BE OF SUFFICIENT LENGTH TO ALLOW FOR SIGNIFICANT SOIL SUBSIDENCE AND PIPE JOINT MOVEMENT.

2 BOND CABLES - METALLIC PIPE JOINTS CP-5) NOT TO SCALE









INSULATING FLANGE

THE ALLOY OF THE STEEL WASHERS SHALL BE THE SAME AS IS SPECIFIED FOR THE FLANGE BOLTS.

4. ALL INSULATING JOINTS SHALL BE TESTED AND APPROVED PRIOR TO BACKFILL.

THE INSULATING FLANGE KIT SHALL BE FOR WATER SERVICE, SUITABLE FOR WET & DRY LOCATIONS, AND BE OF SAME PRESSURE RATING AS THE FLANGE.

THIS DETAIL IS TYPICAL FOR STEEL AND DUCTILE IRON PIPE FLANGES, AND ALSO FOR STEEL PIPE INSULATING FLEXIBLE COUPLINGS AND INSULATED RESTRAINED FLEXIBLE COUPLINGS.

INSULATING FLANGED COUPLING ADAPTER

PROCEDURE SHOWN ABOVE IS TO BE USED AS A GENERAL GUIDE ONLY. CONSULT MANUFACTURER'S LITERATURE FOR SPECIFIC INSTALLATION INSTRUCTIONS.

5 INSULATING JOINT 4 EXOTHERMIC WELD PROCEDURE

3 CABLE IDENTIFICATION

DESCRIPTION

ISSUE FOR BID

DATE

1/26/2024

CITY OF PLEASANTON PLEASANTON. PUBLIC WORKS DEPARTMENT

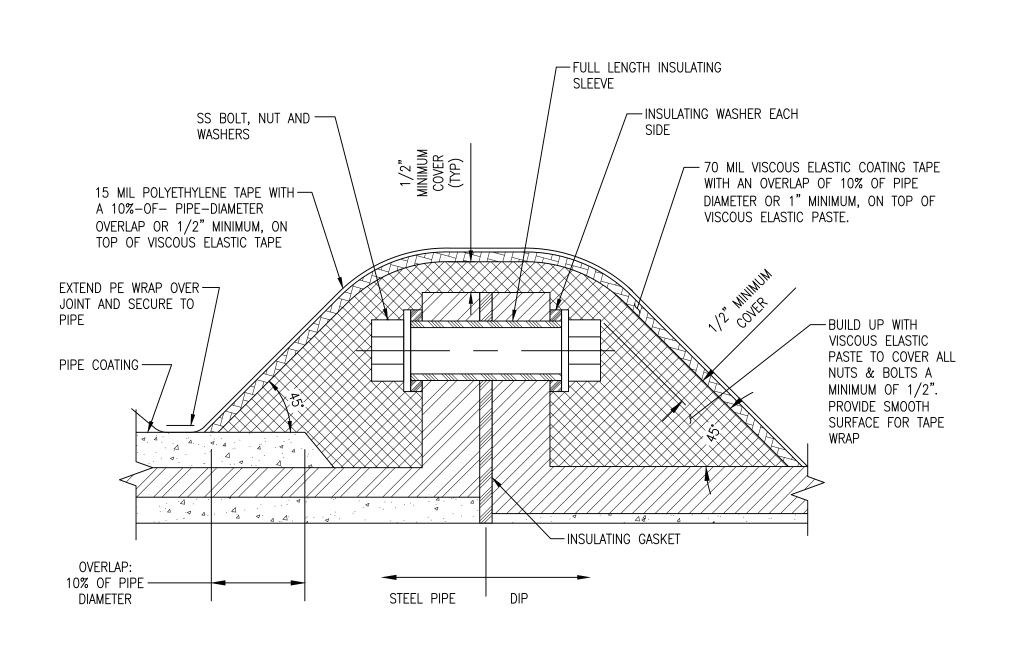
CP-5) NOT TO SCALE

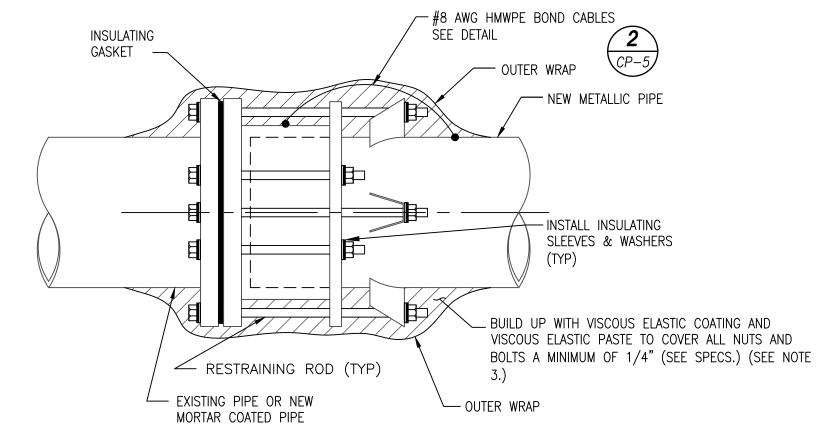


TURNOUT #4 BOOSTER PUMP STATION AND DISCHARGE PIPELINE (F-1 LINE)

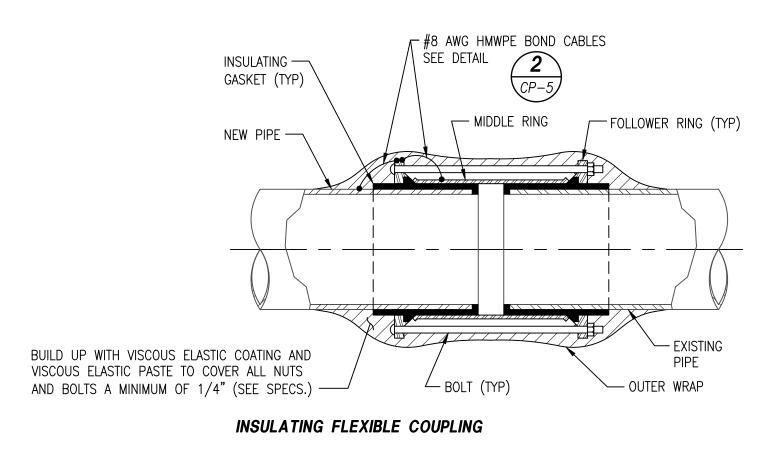
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CHECKED:	JDH	TROJECT	· · · · · ·	CII -2-171
		DATE:	JAN	UARY 2024

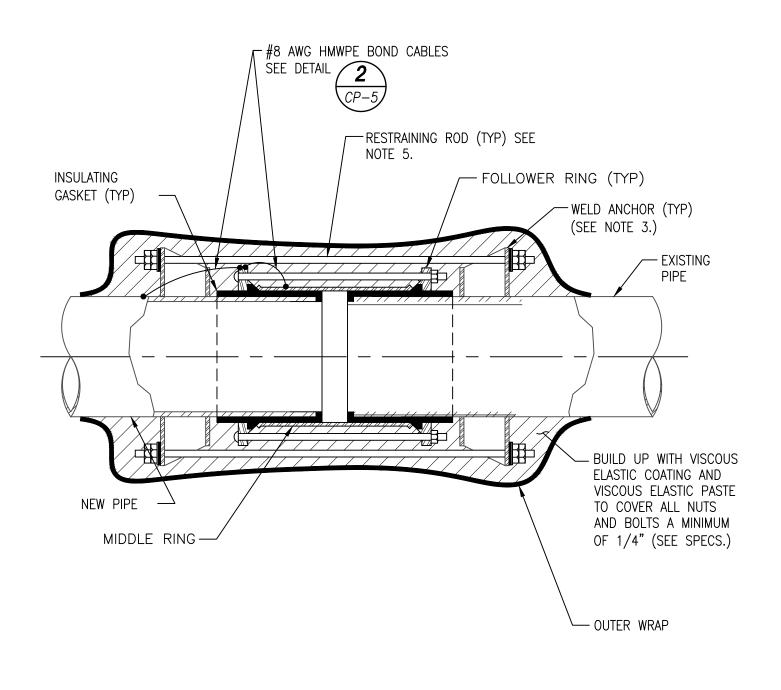
DWG NO. CP-5 39 OF 40





INSULATING FLANGED COUPLING ADAPTER





RESTRAINED INSULATING FLEXIBLE COUPLING

COPPER PIPE —

CLAMP

HEX HEAD -BRASS BOLTS (TYP OF 3)

ISOLATED ANODE

COPPER CONDUCTOR -

W/ISOLATOR REMOVED

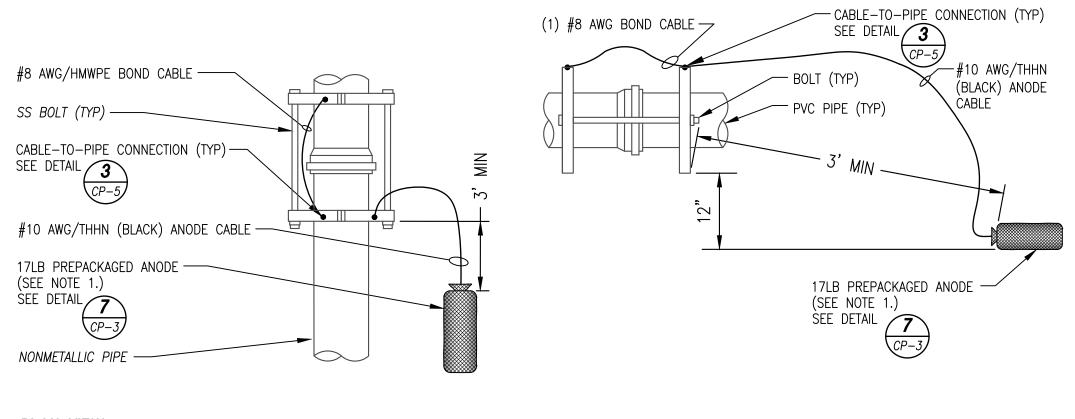
BRONZE GROUNDING -

INSULATING FLANGE

- OMIT COATING IF INSULATING JOINT IS LOCATED ABOVE GRADE OR IN VAULTS. THIS DETAIL IS TYPICAL FOR STEEL AND DUCTILE IRON PIPE FLANGES, AND ALSO FOR STEEL PIPE INSULATING FLEXIBLE COUPLINGS AND INSULATED RESTRAINED FLEXIBLE COUPLINGS. THE INSULATING FLANGE IS SHOWN FOR STEEL/DIP JOINT; DIP/DIP JOINT IS SIMILAR.
- ENSURE APPLICATION OF VISCOUS ELASTIC COATING AND VISCOUS ELASTIC PASTE TO COVER ALL RESTRAINING ROD ASSEMBLIES.
- 4. ALL INSULATING JOINTS SHALL BE TESTED AND APPROVED PRIOR TO BACKFILL. 5. INSTALL STAINLESS STEEL RODS, BOLTS, NUTS, AND WASHERS.

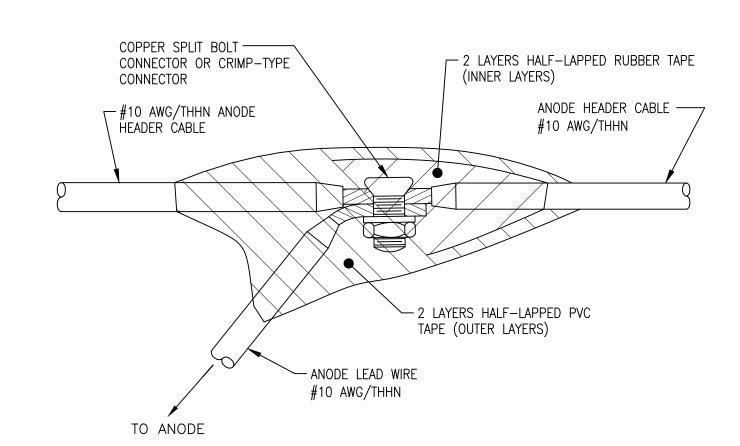
BELOW GRADE, DIELECTRIC INSULATING JOINT COATING

CP-6 NOT TO SCALE



PLAN VIEW **ELEVATION VIEW**

2 MECHANICALLY RESTRAINED JOINT-ANODE INSTALLATION



1. CLEAN PIPE WITH A WIRE BRUSH AND STRIP WIRE ISOLATION AT THE GROUNDING CLAMP TO ENSURE ELECTRICAL CONTINUITY.

2. ALL BOLTS SHALL BE BRASS WITH HEX HEADS.







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INSTALL THE ANODE 1'-0" BELOW BOTTOM OF TRENCH IN 1 FOOT OF NATIVE BACKFILL. ATTACH ANODE CABLE DIRECTLY TO THRUST RESTRAINT FITTING.

3. COAT ALL NUTS AND BOLTS WITH BITUMASTIC AND ENCASE ALL DUCTILE IRON PIPE AND FITTINGS IN POLYETHYLENE PER CATHODIC PROTECTION GENERAL NOTE 3. ON SHEET CP-1.

NO TEST STATION IS REQUIRED FOR THESE FITTINGS, HOWEVER A RECORD OF ALL INSTALLATIONS SHALL BE PROVIDED TO THE PROJECT ENGINEER.



TURNOUT #4 BOOSTER PUMP STATION AND DISCHARGE PIPELINE (F-1 LINE)

DESIGN:	TDH	SCALE:	NOT	TO SCALE
DRAWN:	DJA	PROJECT.	NO ·	CIP-24171
CHECKED:	JDH	TROJECT		C11 -241/1
		DATE:	JAN	UARY 2024

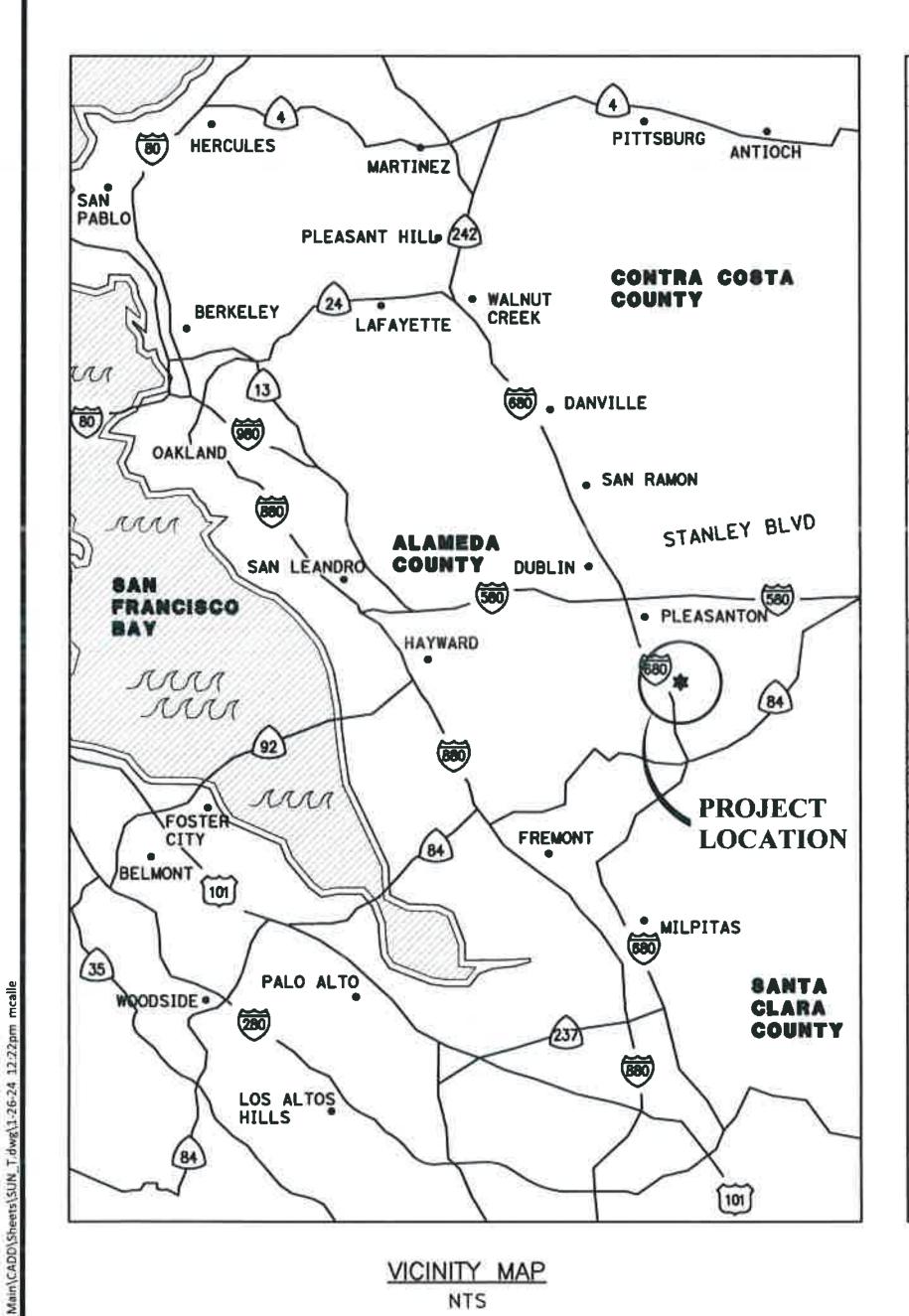
DWG NO.

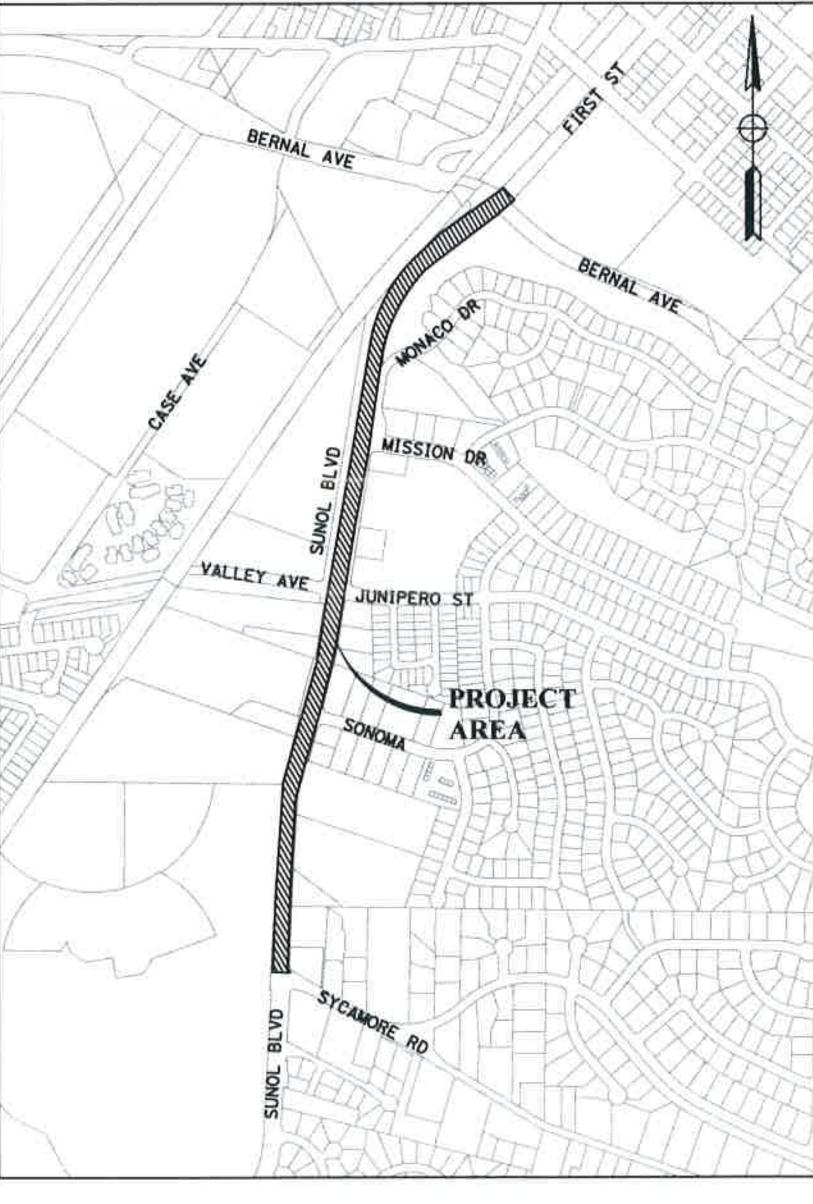
No. CR 1055

CITY OF PLEASANTON

PUBLIC WORKS DEPARTMENT, ENGINEERING DIVISION

SUNOL PIPELINE IMPROVEMENTS, 20-INCH WATER MAIN (F-7 LINE) CIP NO. 24173 JANUARY 2024





LOCATION MAP SCALE: 1" = 500'

		SHEET INDEX
SHEET NO.	GWG NO.	DESCRIPTION
1	T-1	TITLE SHEET, LOCATION MAP AND SHEET INDEX
2	GN-1	GENERAL NOTES AND ABBREVIATIONS
3	K-1	KEY MAP
4-7	L-1 TO L-4	PLAN AND PROFILE
8-15	CD-1 TO CD-8	CONSTRUCTION DETAILS

SURVEY INFORMATION

BASIS OF BEARING

THE BEARING SHOWN HEREON WERE DERIVED FROM THE TRIMBLE VSN RTK NETWORK AND ARE BASED ON THE NAD 83 CALIFORNIA COORDINATE SYSTEM.

BOUNDARY NOTE

THE BOUNDARY LINES SHOWN HEREON ARE BASED ON RECORD DATA FROM VARIOUS RECORDED MAPS IN THE SURVEY VICINITY AND DOES NOT REFLECT A RESOLVED BOUNDARY.

JOE STREEPER, PE CA 64445, EXP 06/30/2025 MARK THOMAS

01/26/24 DATE



ACCEPTANCE OF PLANS

ADAM M. NELKIE, PE CA 78830, EXP 09/30/2025 CITY ENGINEER CITY OF PLEASANTON

DATE



ŒV	DATE	DESCRIPTION	THE CITY OF
			_ PLEASANTON

CITY OF PLEASANTON PUBLIC WORKS DEPARTMENT



CITY OF PLEASANTON - SUNOL PIPELINE IMPROVEMENTS
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	DESIGN:	JLS	SCALE:
	DRAWN:	MC	PROJEC
	CHECKED:		ROJEC
П	TRAFFIC ENGINEER:		DATE:

TITLE

ClP-2417 01/26/2024 I KAFFIC ENGINEER

GENERAL:

- 1. MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE CONTRACT DOCUMENTS, INCLUDING THE CITY OF PLEASANTON STANDARD SPECIFICATIONS, WHICH ARE AVAILABLE IN THE OFFICE OF THE CITY ENGINEER. THE CITY STANDARD SPECIFICATIONS ARE BASED ON THE 2015 STATE OF CALIFORNIA STANDARD SPECIFICATIONS.
- 2. THE CITY ENGINEERS OFFICE (PHONE 925-931-5650) SHALL BE NOTIFIED 48 HOURS PRIOR TO SURVEY STAKING ACTIVITIES.
- 3. EXISTING GROUND SURFACE SHOWN IN PROFILES (LAYOUT SHEETS) ARE APPROXIMATE AND BASED ON AVAILABLE RECORD INFORMATION. CONTRACTOR SHALL VERIFY ELEVATIONS ON FIELD AND REPORT DISCREPANCIES TO THE CITY.
- 4. THE LOCATION, WERE SHOWN, AND DEPTH OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON AVAILABLE RECORD INFORMATION. THE CONTRACTOR SHALL DETERMINE THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES CROSSINGS OR WITHIN 5 FEET OF THE PROPOSED ALIGNMENTS. THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION.
- 5. FIELD CHANGES SHALL BE APPROVED BY THE CITY PRIOR TO IMPLEMENTING OR AS ORDERED BY THE CITY. NO PAYMENT WILL BE MADE FOR FIELD CHANGES NOT AUTHORIZED BY THE CITY AND UNAUTHORIZED WORK IS SUBJECT TO REMOVAL AS DIRECTED BY THE CITY.
- 6. CONTRACTOR SHOULD NOTIFY THE CITY OF INCOMPLETE, INCONSISTENT, OR INCORRECT REQUIREMENTS IN THE CONTRACT DOCUMENTS AND SHALL REQUEST CLARIFICATION IN WRITING FROM THE CITY PRIOR TO COMMENCING WORK.

SAFETY:

- 1. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE THROUGH THE CONSTRUCTION DURATION INCLUDING SAFETY OR PERSONS AND PROPERTY, AND FOR OBTAINING NECESSARY CITY REVIEWS OF THE CONDITIONS. THE CITY'S JOB SITE REVIEW DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE OR INJURIES RESULTING FROM THE CONTRACTOR'S OPERATIONS AND/OR MATERIALS AND EQUIPMENT STORED IN STAGING AREAS. THE CITY IS NOT RESPONSIBLE FOR SECURING THE CONTRACTOR'S EQUIPMENT AND WORK SITES.
- 3. NOT ALL UTILITY SERVICE LATERALS ARE SHOWN ON THE PLANS. THOSE THAT ARE SHOWN MAY NOT BE SHOWN IN THEIR TRUE LOCATIONS. CONTRACTOR SHALL COORDINATE WITH USA TO FIELD LOCATE SERVICE LATERALS AND USE EXTREME CAUTION WHEN WORKING IN THE VICINITY OF GAS, TELECOMMUNICATION, AND ELECTRIC SERVICE LINES.
- 4. THE WORK MAY INCLUDE CONFINED SPACE ENTRY. CONTRACTOR SHALL IMPLEMENT OSHA AND OTHER PERTINENT SAFETY AND HEALTH REQUIREMENTS.

EXISTING UTILITIES, BURIED STRUCTURES AND FEATURES:

- 1. THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF EXISTING UTILITIES VIA UNDERGROUND SERVICE ALERT AND TO COMMUNICATE WITH THE APPROPRIATE UTILITY AGENCIES AND POTHOLING PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- 2. EXISTING UTILITIES SHOWN ARE SHOWN BASED ON AVAILABLE RECORD INFORMATION AND ARE APPROXIMATE IN LOCATION AND DEPTH. THE CONTRACTOR SHALL SUPPORT CROSSING AND PARALLEL EXISTING UTILITIES EXPOSED DURING CONSTRUCTION.
- 3. NOT ALL UTILITY SERVICE LATERALS ARE SHOWN ON THE PLANS. THOSE THAT ARE SHOWN MAY NOT BE SHOWN AT THEIR TRUE LOCATIONS.
- 4. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING ADJACENT TO OVERHEAD AND UNDERGROUND UTILITIES. DAMAGE TO UTILITIES, INCLUDING SERVICES AND LATERALS, RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPORTED IMMEDIATELY TO THE CITY AND UTILITY OWNER, AND SHALL BE IMMEDIATELY REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CITY. COSTS INCURRED BY UTILITY SERVICE INTERRUPTION RESULTING FROM THE CONTRACTOR'S OPERATION SHALL ALSO BE ENTIRELY REIMBURSED BY THE CONTRACTOR.
- 5. THE CONTRACTOR SHALL REMOVE ALL USA AND CONSTRUCTION MARKINGS BY CLEANING WITH A PRESSURE WASHER OR OTHER APPROVED METHOD AT THE COMPLETION OF WORK ON ANY STREET BLOCK.
- 6. THE CONTRACTOR SHALL COORDINATE WITH OWNERS OF EXISTING UTILITIES WHEN WORKING IN THE VICINITY OF THOSE UTILITIES.
- 7. THE CONTRACTOR SHALL PERFORM WORK IN THE VICINITY OF EXISTING UTILITIES AS SHOWN AND SPECIFIED AND IN CONFORMANCE WITH UTILITY OWNER REQUIREMENTS. EARLY COORDINATION WITH UTILITY OWNERS IS REQUIRED.
- 8. OVERHEAD UILITIES/WIRES ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL OBSERVE, USE CAUTION, AND MAKE PROVISIONS AS NEEDED TO PERFORM CONSTRUCTION WORK WITHOUT DAMAGE TO THE UTILITIES.

COORDINATION:

- 1. THE CONTRACTOR SHALL CONTAIN ITS OPERATIONS WITHIN THE PUBLIC RIGHT-OF-WAY AND SITE WORK AREA LIMITS SHOWN AND IN ACCORDANCE WITH THE CONDITIONS OF ITS ENCROACHMENT PERMIT
- 2. OVERNIGHT PARKING OF CONSTRUCTION EQUIPMENT IN THE PUBLIC RIGHT-OF-WAY SHALL NOT BE PERMITTED UNLESS COORDINATED AND APPROVED BY THE CITY.
- 3. THE CONTRACTOR SHALL NOTIFY ALL RESIDENTS AND BUSINESSES ADJACENT TO THE PROJECT SITE AT LEAST 2 WEEKS, FORTY-EIGHT (48) HOURS, AND IMMEDIATELY PRIOR TO THE START OF CONSTRUCTION IN A PARTICULAR AREA. THE NOTIFICATION SHALL INCLUDE EXPECTED DATES OF THE WORK, CONTACT INFORMATION FOR THE GENERAL CONTRACTOR, AND A BRIEF DESCRIPTION OF THE WORK. THE NOTIFICATION SHALL BE SUBMITTED TO THE CITY FOR REVIEW.
- 4. THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING THE REQUIRED INSPECTIONS. THE PRESENCE OR ABSENCE OF THE INSPECTOR WILL NOT RELIEVE THE CONTRACTOR OF FULL RESPONSIBILITY FOR THE PROPER PERFORMANCE OF THE WORK.
- 5. THE CONTRACTOR SHALL COORDINATE ITS WORK PLANS AND SCHEDULE WITH THE POLICE DEPARTMENT, FIRE DEPARTMENT, SCHOOL DISTRICT, TRANSIT/GARBAGE AGENCIES, POST OFFICE.

TRAFFIC CONTROL:

- 1. THE CONTRACTOR SHALL IMPLEMENT TRAFFIC CONTROL AS SPECIFIED IN THE SPECIAL PROVISIONS
- AND MEETING THE REQUIREMENTS OF THE CITY ENCROACHMENT PERMIT.

 2. THE CONTRACTOR SHALL CONDUCT ITS OPERATIONS TO ALLOW TRAFFIC TO PASS IN BOTH DIRECTIONS AS SPECIFIED AND REQUIRED IN THE ENCROACHMENT PERMIT. AT INTERSECTIONS, TRAFFIC CONTROL PLANS SHALL PROVIDE FOR THROUGH, LEFT AND RIGHT TURN MOVEMENTS IN EACH DIRECTION.
- 3. TRAFFIC CONTROL PLANS SHALL INCLUDE PROVISIONS FOR DRIVEWAY ACCESS, PEDESTRIANS, BICYCLISTS AND AMERICANS WITH DISABILITIES ACT REQUIREMENTS.
- 4. SIDEWALKS TO REMAIN OPEN AT ALL TIMES UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

ACCESS AND STAGING:

1. THE CONTRACTOR SHALL RESTORE ALL AREAS AFFECTED BY CONSTRUCTION TO THEIR ORIGINAL OR BETTER CONDITION AS DETERMINED BY THE CITY EXCEPT WHERE SHOWN OTHERWISE. LANDSCAPE AND IRRIGATION COMPONENTS DAMAGED BY CONTRACTOR ACTIVITY SHALL BE REPAIRED OR REPLACED IN ACCORDANCE WITH CITY STANDARD SPECIFICATIONS, TO THE SATISFACTION OF THE CITY WITHIN 24 HOURS.

EXCAVATION AND PAVEMENT RESTORATION:

- 1. THE CONTRACTOR SHALL SELECT VEHICLES AND EQUIPMENT THAT MINIMIZE DAMAGE TO THE EXISTING PAVEMENT ALONG THE PROJECT SITE AND TO ROADS USED AS TRUCK ROUTES TO BRING MATERIAL AND EQUIPMENT TO THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR REPLACING PAVEMENTS DAMACED BY THE CONTRACTOR'S ACTIVITIES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AT NO ADDITIONAL COST TO THE CITY.
- 2. PAVEMENT SHALL BE SAW CUT PRIOR TO THE INSTALLATION OF THE PAVEMENT PATCH. ROUGH EDGES THAT DEVELOP DURING CONSTRUCTION SHALL BE SAW CUT BACK TO UNDAMAGED PAVEMENT PRIOR TO INSTALLATON OF PAVEMENT PATCH. ADDITIONAL TRENCH WIDTH BEYOND THE MAXIMUM SHOWN IN THE STANDARD TRENCH DETAIL SHALL BE BACKFILLED AND PAVED AT NO ADDITIONAL COST TO THE CITY.
- 3. TRENCHES AND EXCAVATIONS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE APPLICABLE SECTIONS OF CALIFORNIA AND FEDERAL OSHA REQUIREMENTS AND OTHER APPLICABLE SAFETY ORDINANCES. CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR TRENCH AND EXCAVATION SHORING DESIGN AND APPLICATION.
- 4. SURPLUS AND UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE PUBLIC RIGHT- OF- WAY AND PROJECT SITE, AND PROPERLY DISPOSED OF BY THE CONTRACTOR BEFORE THE END OF DAY.
- 5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REPLACE STREET MONUMENTS OR A LOT OF CORNER PIPES DISTURBED DURING CONSTRUCTION. IF A STREET MONUMENT HAS THE POTENTIAL OF BEING DISTURBED, THE MONUMENT SHALL BE SURVEYED TO LOCATE PRECISELY PRIOR TO WORK AND A CORNER RECORD FILED WITH THE COUNTY SURVEYOR (PER SECTION B773.2 OF THE PUBLIC LAND SURVEYORS ACT) AS REQUIRED BY THE SUBDIVISION MAP ACT TO PRESERVE THE LOCATION OF STREET MONUMENTS OR CORNER PIPE. THE CONTRACTOR, AT ITS EXPENSE, SHALL HIRE A CALIFORNIA LICENSED PROFESSIONAL LAND SURVEYOR TO PERFORM THE WORK.
- 6. DIMENSIONS FOR EXISTING STRUCTURES ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND CONDITIONS AND REPORT DISCREPANCIES TO THE CITY AT LEAST 5 DAYS IN ADVANCE OF CONSTRUCTION IN THE AREA.
- 7. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS NOT DESIGNATED FOR DEMOLITION OR REMOVAL AND REPLACEMENT. DAMAGED EXISTING IMPROVEMENTS AND THOSE IMPROVEMENTS THAT HAVE BEEN REMOVED OR TEMPORARILY RELOCATED SHALL BE RESTORED BY THE CONTRACTOR TO A CONDITION EQUAL TO OR BETTER THAN ITS CONDITION PRIOR TO CONSTRUCTION. IMPROVEMENTS DESIGNATED FOR DEMOLITION SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. DAMAGE TO THE ADJACENT IMPROVEMENTS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NOT ADDITIONAL COST TO THE CITY AND TO THE SATISFACTION OF THE CITY.
- 8. THE CONTRACTOR SHALL KEEP THE STREET AND WORK SITE CLEAN AND FREE FROM RUBBISH AND DEBRIS. THIS REQUIRES PREVENTING SPILLAGE ON HAUL ROUTES, CLEANING UP SPILLAGE, SWEEPING STREETS OF MUD, DIRT AND DEBRIS THAT ARE A RESULT OF THE CONTRACTOR'S WORK, AND KEEPING THE WORK SITE IN A CLEAN AND NEAT APPEARANCE. SPILLAGE ON HAUL ROUTES SHALL BE IMMEDIATELY REMOVED AND CLEANED UP. WHEN ORDERED BY THE CITY, THE CONTRACTOR SHALL CLEAN UP THE WORK SITE IMMEDIATELY AFTER RECEIVING NOTICE.
- 9. THE CONTRACTOR SHALL BACKFILL TRENCHES WITH SPECIFIED BACKFILL MATERIALS AND PAVE BACK THE TRENCH EACH DAY. TRENCH PLATES SHALL HAVE A NON--SKID COATING. TRENCH PLATES SHALL ALSO BE ANCHORED TO PREVENT SHIFTING AND WEDGED TO MINIMIZE RATTLING AND NOISE. CUTBACK SHALL BE PROVIDED AROUND THE TRENCH PLATES AS NEEDED TO PREVENT TIRE DAMAGE.
- 10.NO MORE THAN 50 FEET OF TRENCH MAY BE COVERED WITH TRENCH PLATES AT ANY ONE LOCATION UNLESS APPROVED BY THE CITY OR NOTED OTHERWISE. ALL TRENCH PLATES TO REMAIN AT THE END OF THE DAY IN PEDESTRIAN AREAS OR IN PLACE FOR MORE THAN 48 HOURS SHALL BE FLUSH WITH THE PAVEMENT SURFACE.
- 11. THE CONTRACTOR SHALL LIMIT TRENCH PLATES ON SIDEWALKS TO NO MORE THAN 4 CALENDAR DAYS AND RESTORE SIDEWALKS BY FRIDAY OF EACH WEEK, WHICHEVER COMES FIRST.
- 12. THE CONTRACTOR SHALL PROVIDE DUST CONTROL DURINC CONSTRUCTION. DUST CONTROL SHALL BE AS REQUIRED IN THE CONTRACT SPECIFICATIONS. DUST CONTROL OPERATIONS SHALL NOT RESULT IN DUST DEPOSITS ON ADJACENT PROPERTIES. ANY DAMAGE TO EXISTING PROPERTIES IS THE CONTRACTOR'S RESPONSIBILITY.
- 13. THE CONTRACTOR SHALL REPLACE PAVEMENT MARKERS, MARKINGS AND STRIPES DAMAGED OR DISTURBED BY CONSTRUCTION ACTIVITIES.
- 14. THE CONTRACTOR SHALL PERFORM ITS CONSTRUCTION AND OPERATIONS IN A MANNER THAT WILL NOT ALLOW HARMFUL POLLUTANTS TO ENTER THE STORM DRAIN SYSTEM AND CREEKS. TO ENSURE COMPLIANCE, THE CONTRACTOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES AS OUTLINED IN THE STORM WATER BEST MANAGEMENT PRACTICES HANDBOOK, ISSUED BY THE CALIFORNIA STORM WATER QUALITY ASSOCIATION. EROSION CONTROL METHODS SHALL BE IMPLEMENTED BY THE CONTRACTOR AT DISTURBED UNPAVED AREAS

PIPELINE INSTALLATION:

- 1. PIPE SHALL BE INSTALLED WITH A MINIMUM COVER OF 42" FROM THE FINISHED GROUND SURFACE UNLESS OTHERWISE SHOWN.
- 2. THE CONTRACTOR SHALL INSTALL THRUST RESTRAINT COMPONENTS AT ALL FITTINGS AND BENDS. ENTIRE PIPE IS RESTRAINED WITH INTERNAL LOCKING RESTRAINTS.
- 3. UTILITY CLEARANCE: UNLESS OTHERWISE NOTED, ADJUST PIPELINE PROFILE TO PROVIDE A MINIMUM 12" VERTICAL CLEARANCE AT UNDERGROUND UTILITY CROSSINGS.
- 4. THE CONTRACTOR SHALL KEEP COMPLETE AND ACCURATE RECORD DRAWINGS OF THE WORK, UTILITY POTHOLE DATA, AND EXISTING CONDITIONS THAT CHANGED OR ARE DIFFERENT THAN SHOWN ON THE PLANS. UPON COMPLETION OF THE WORK, THE CONTRACTOR'S RECORD DRAWINGS SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND COMMENT.
- 5. CONTRACTOR SHALL PLACE UTILITY BOXES AND ASSOCIATED PIPING AT LOCATIONS AS INDICATED ON THE DRAWINGS. IF A CONFLICT EXISTS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CITY AND WORK TO RELOCATE UTILITY BOX AND PIPING IN THE GENERAL VICINITY AS SHOWN ON THE DRAWINGS.
- 6. THERE ARE LARGE TREES LOCATED ALONG THE ROADWAYS WHERE THE PIPELINE IS TO BE INSTALLED. THE CONTRACTOR SHALL CONDUCT A PRE-- CONSTRUCTION WALK WITH THE CITY AND ITS ARBORIST TO DETERMINE WHICH TREES AND WHICH SPECIFIC TREE BRANCHES MAY BE TRIMMED IN ORDER TO FACILITATE THE WORK.
- 7. PRIOR TO STAKING AND INITIAL SAWCUT FOR THE PIPE TRENCH, THE CONTRACTOR SHALL VALIDATE THE ALIGNMENT AND PROFILE AS REQUIRED BY THE SPECIAL PROVISIONS.

- 8. PIPE DEFLECTIONS ARE CALLED OUT TO THE NEAREST 11.25" BEND. WHEN BENDS ARE NOT CALLED OUT, THE CONTRACTOR SHALL UTILIZE JOINT DEFLECTIONS BOTH IN THE VERTICAL AND HORIZONTAL DIRECTION PER MCSD 317.
- 9. ALL FITTINGS ARE RESTRAINED MECHANICAL JOINT TYPE UNLESS OTHERWISE NOTED.
- 10.RESTRAINED FITTINGS SHALL BE USED AT ALL TIE-IN WORK TO FACILITATE LIMITED SHUTDOWNS.
 11.THRUST BLOCKS ONLY SHOWN IN DETAILS AND IDENTIFIED IN PLAN VIEW FOR CLARITY. THE
 CONTRACTOR SHALL INSTALL CONCRETE THRUST BLOCKS AT ALL FITTINGS GREATER THAN OR EQUAL
 TO 22.5' PER MCSD 311. THIS ALSO INCLUDES TEES AND CROSSES.
- 12. THE CONTRACTOR SHALL PROVIDE TEMPORARY BLOWOFFS FOR PIPELINE FLUSHING OPERATIONS MEETING AWWA STANDARDS FOR SCOUR VELOCITIES. THE CONTRACTOR SHALL SUBMIT SIZING DETAILS AS PART OF THEIR FLUSHING / DISINFECTION PLAN.

HAUL ROUTE:

1. I-680 TO SUNOL BOULEVARD

2. I-680 TO BERNAL AVENUE TO SUNOL BOULEVARD

3. SUNOL BOULEVARD TO VALLEY AVENUE TO PLEASANTON AVE FOR SPOILS DISPOSAL.

ABBREVIATIONS:

CAV COMBINATION AIR VALVE CB CATCH BASIN CBX COMMUNICATION BOX CC&C CONCRETE CURB & GUTTER CL CENTER LINE CL CENTER LINE CCM COMMUNICATION CCMC COMMUNICATION COMMUNICATION COMMUNICATION COMM COMMUNICATION COMM COMMUNICATION COMM COMMUNICATION CONC CONCRETE COMM COMMUNICATION COMC CONCRETE COMC CONCRETE COMC CONCRETE CR COPPER COPPER CR COPPER CR COPPER CR COPPER CR COPPER CR COVER CSD CITY STANDARD DETAIL CTK CROSS TRENCH KICKER CVR COVER CVR COVER CVR COVER CVR COVER CVP COVER CVP COVER COMC COMCRETE CVR COVER CVC CVR CONCRETE CVC	ASEMENT	ENT
GB GRADE BREAK UTIL UTILITY GRD GROUND VAR VARIES GRVL GRAVEL VC VERTICAL CURVE GV GATE VALVE W WATER HDPE HIGH DENSITY POLYETHYLENE WM WATER METER		
HMA HOT MIXED ASPHALT WV WATER VALVE HORZ HORIZONTAL Z ZONE		

<u>LEGEND:</u>

EXISTING <u>PROPOSED</u> STREET LIGHT MANHOLE WATER VALVE + WATER VALVE SIGNAL LIGHT 🔆 DRAIN INLET UTILITY POLE COMBINATION AIR VALVE → ♂ FIRE HYDRANT +O+ SOLID SLEEVE CROSS TRENCH KICKER SANITARY SEWER STORM DRAIN WATER MAIN GAS MAIN ELECTRICAL TELECOMMUNICATION FIBER OPTIC — fo — — —

REV. DATE DESCRIPTION

THE CITY OF

PLEASANTON





CITY OF PLEASANTON - SUNOL PIPELINE IMPROVEMENTS

GENERAL NOTES, ABBREVIATIONS, AND LEGENDS

DESIGN: JLS SCALE: NTS

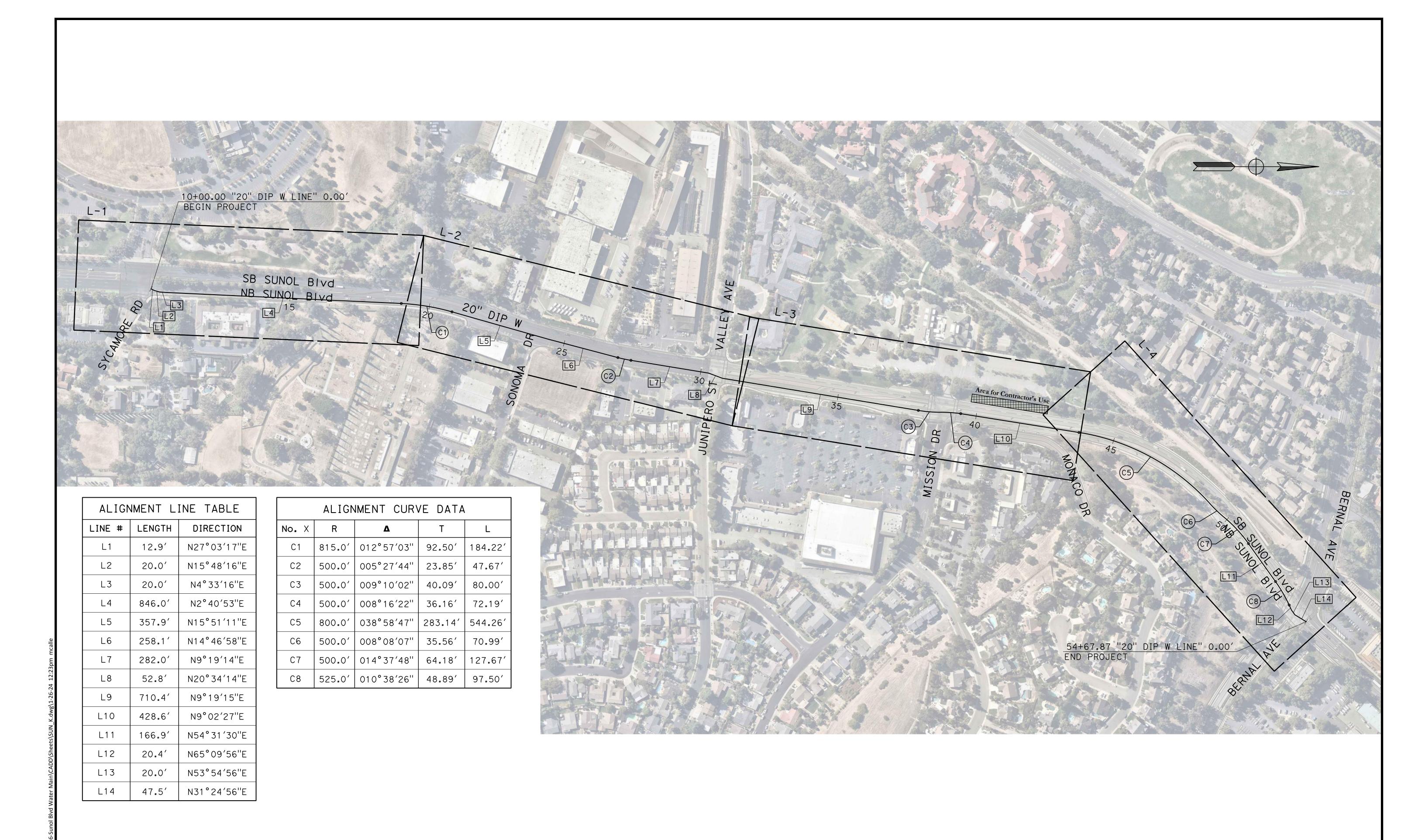
DRAWN: MC

CHECKED: PROJECT NO.: CIP-24173

TRAFFIC ENGINEER: DATE: 01/26/2024

CIP-24173 **GN-1**01/26/2024 2 OF 15

DWG NO.



DATE DESCRIPTION REV. PLEASANTON. PUBLIC WORKS DEPARTMENT

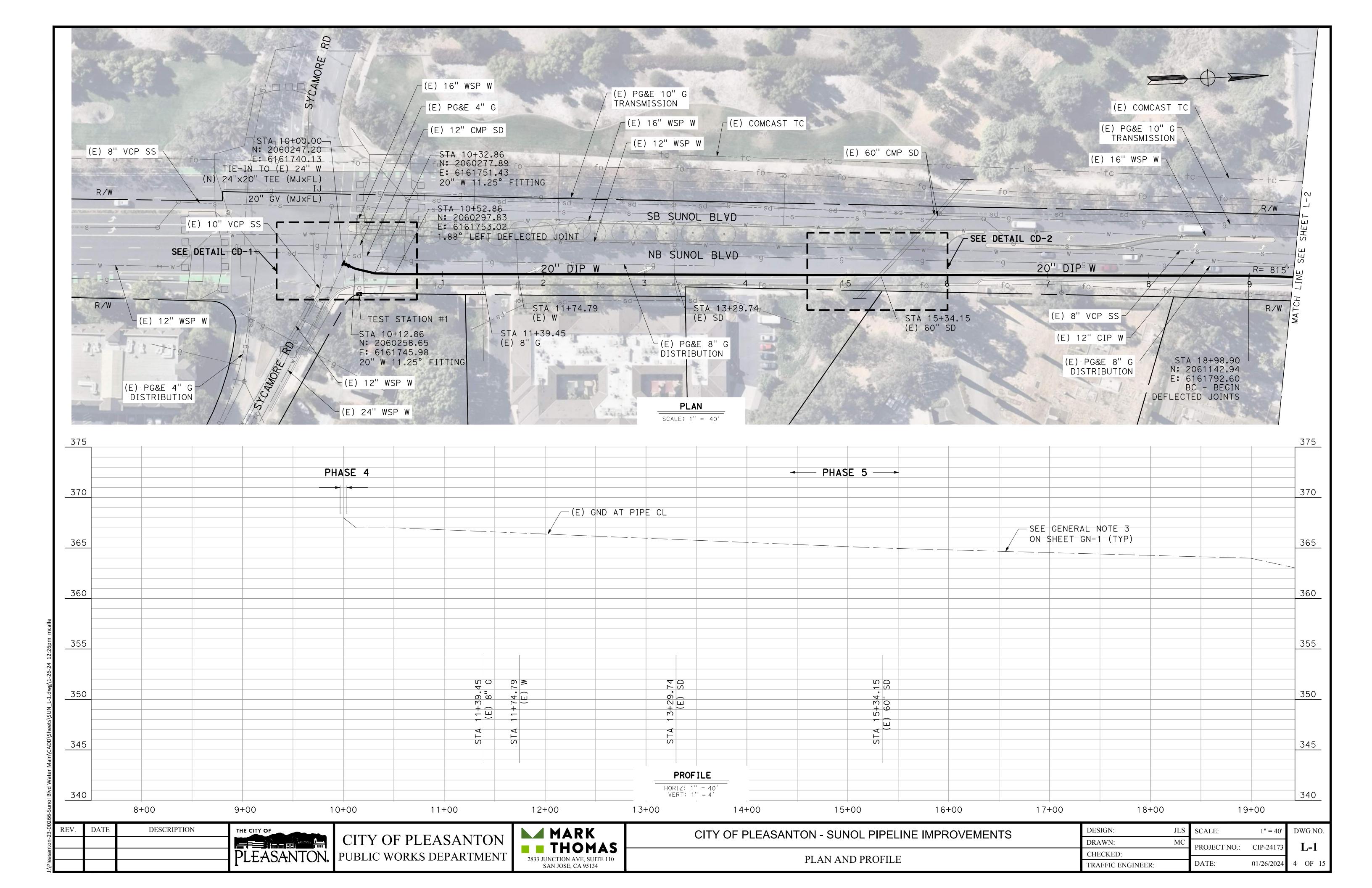


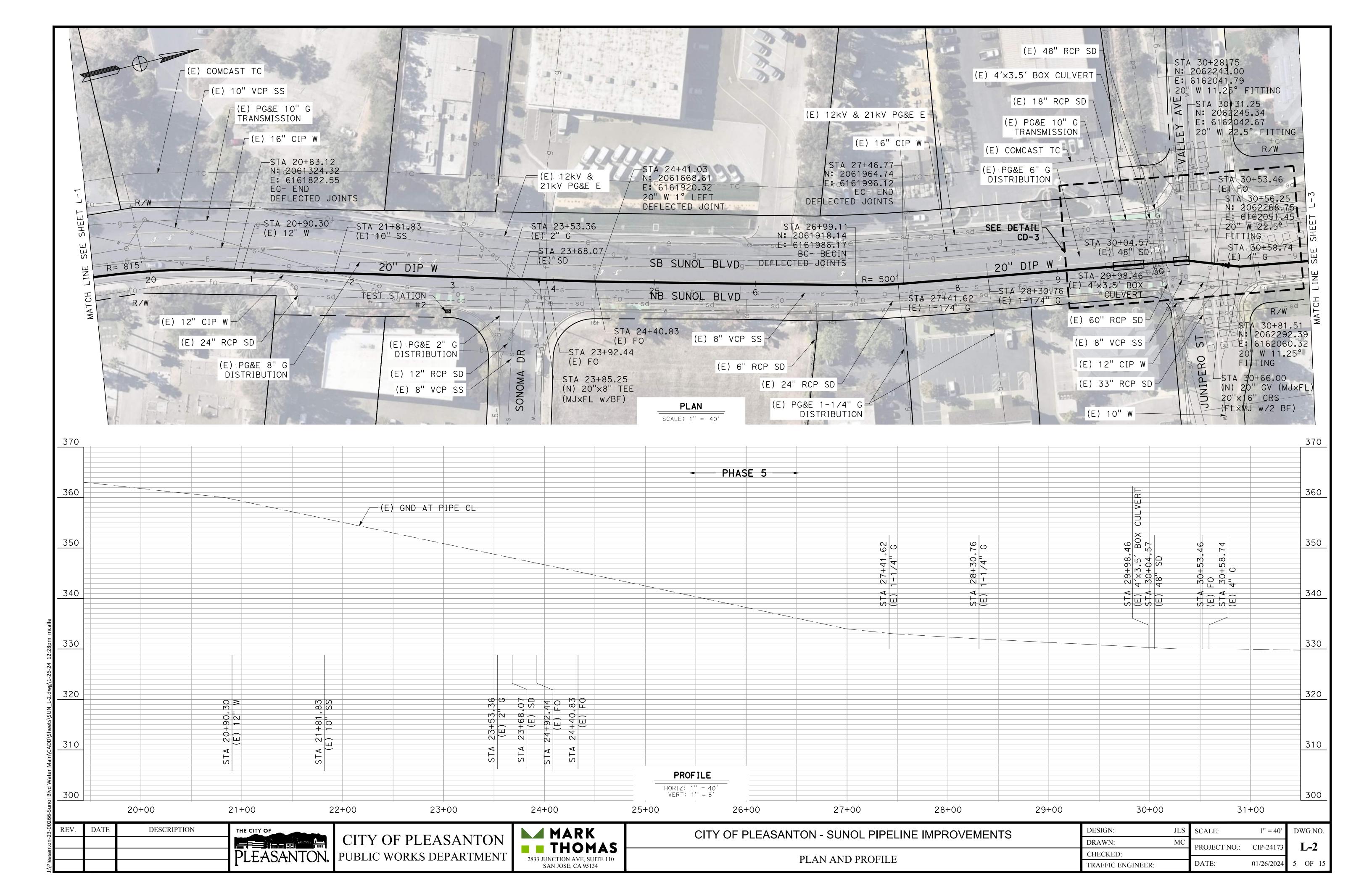
CITY OF PLEASANTON - SUNOL PIPELINE IMPROVEMENTS KEY MAP

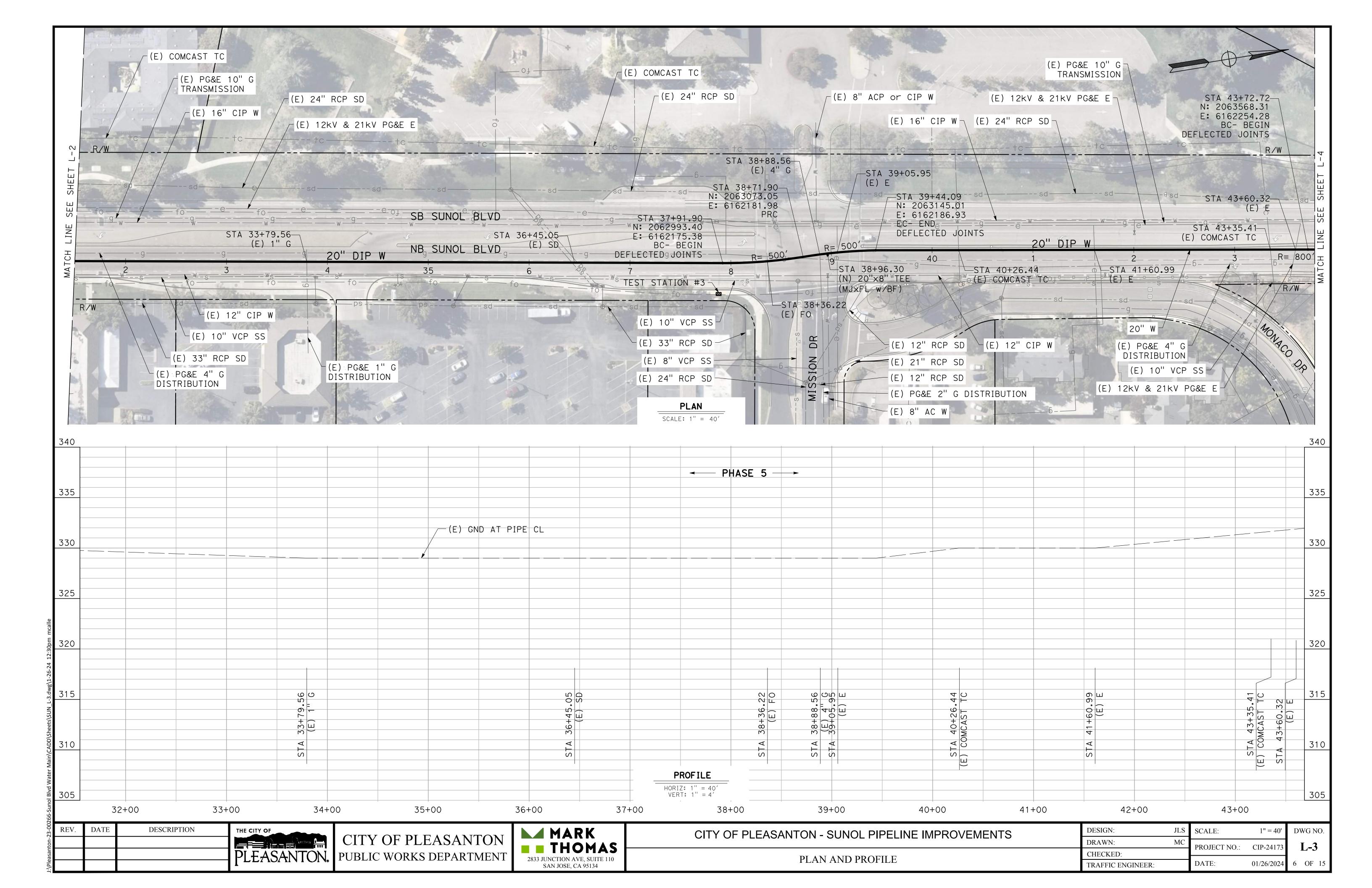
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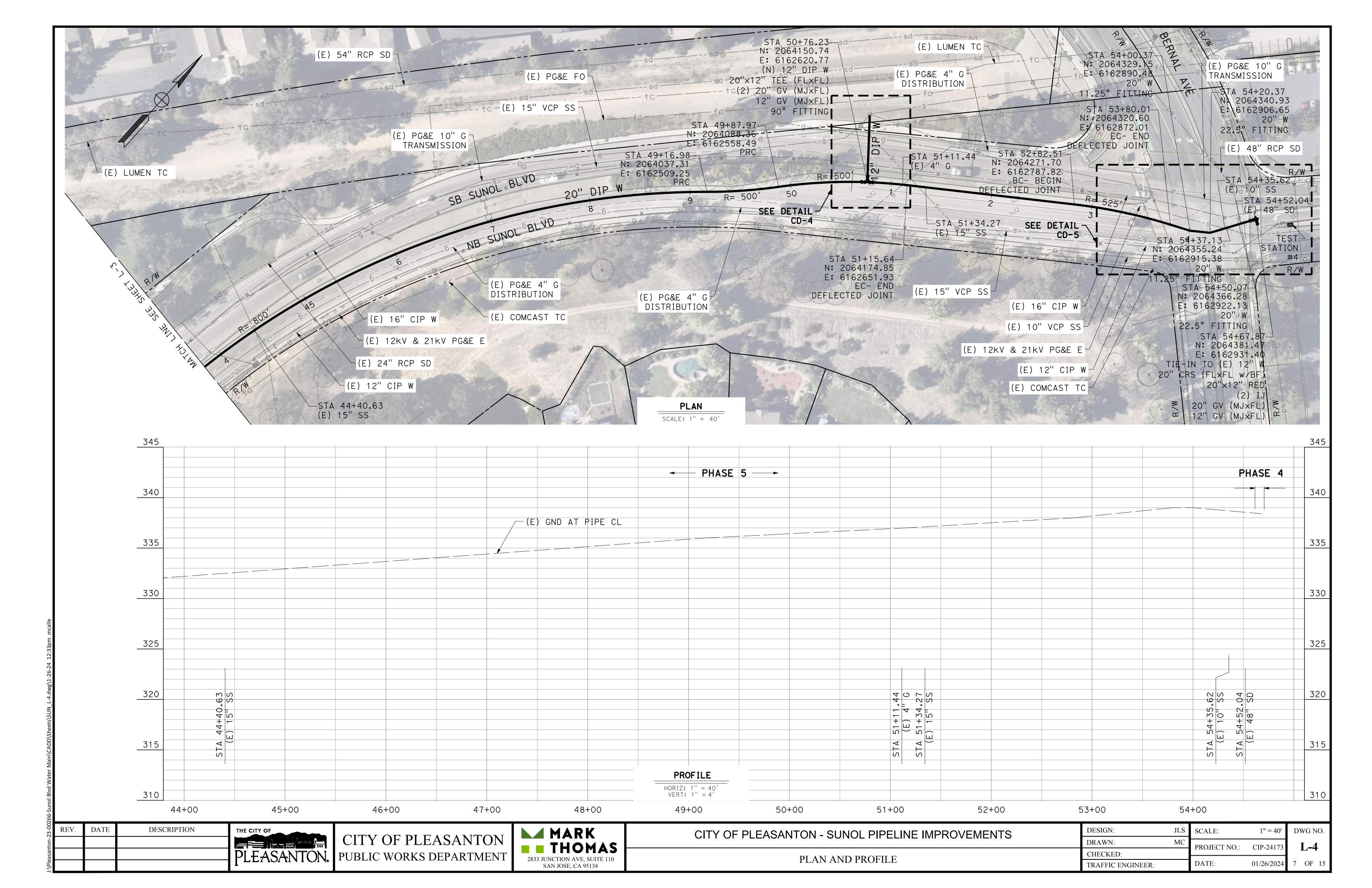
K-1

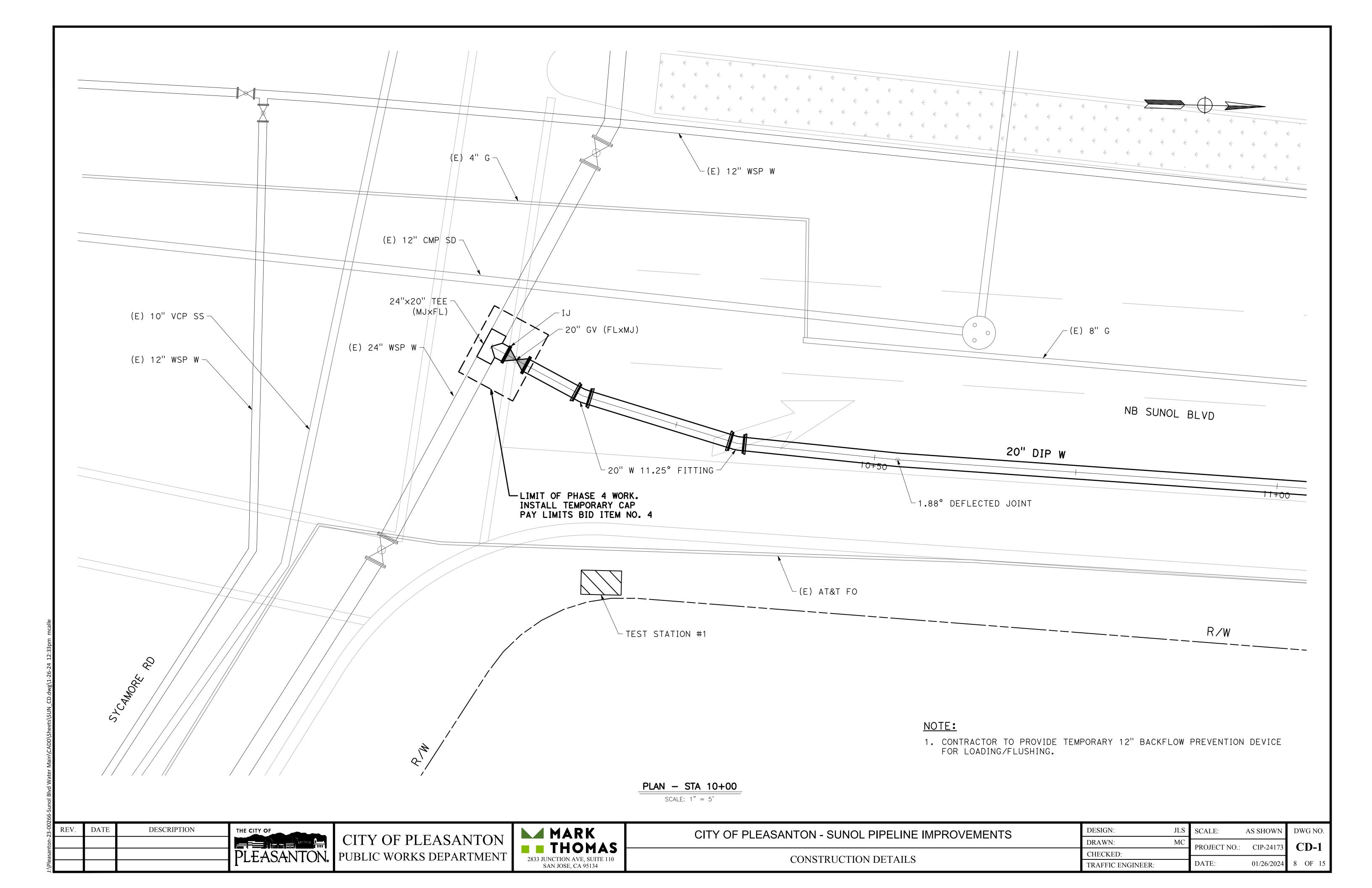
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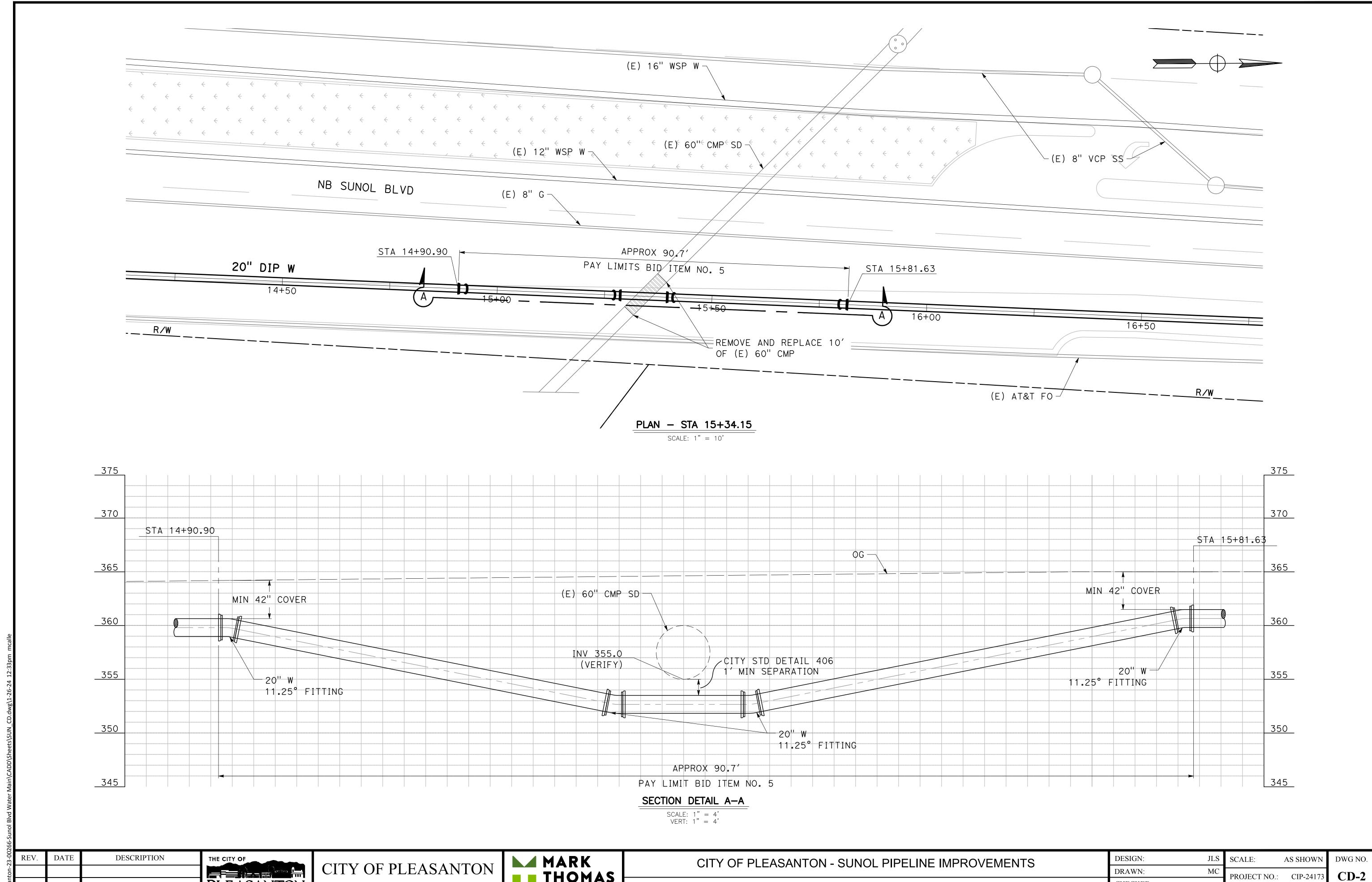










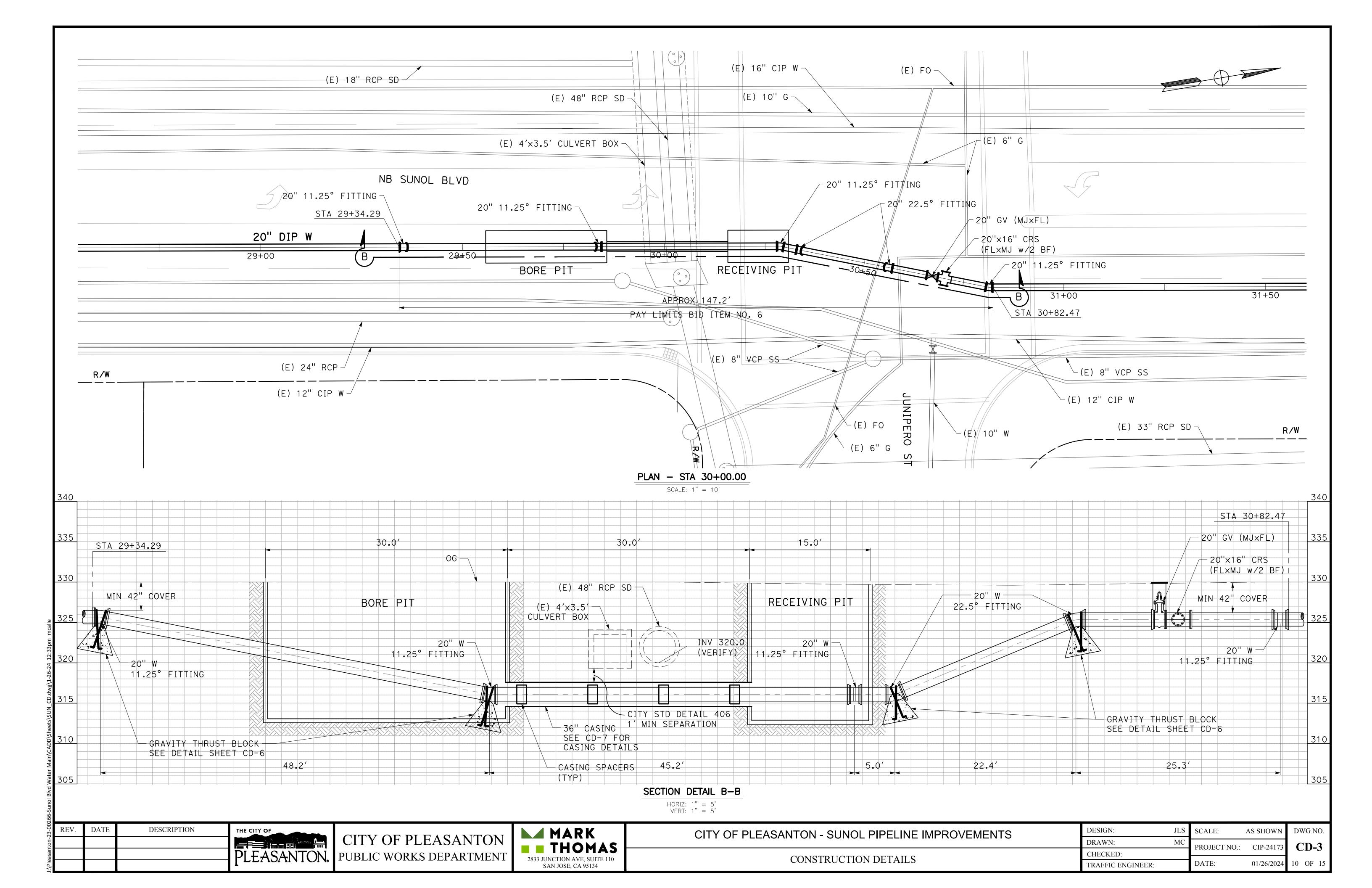


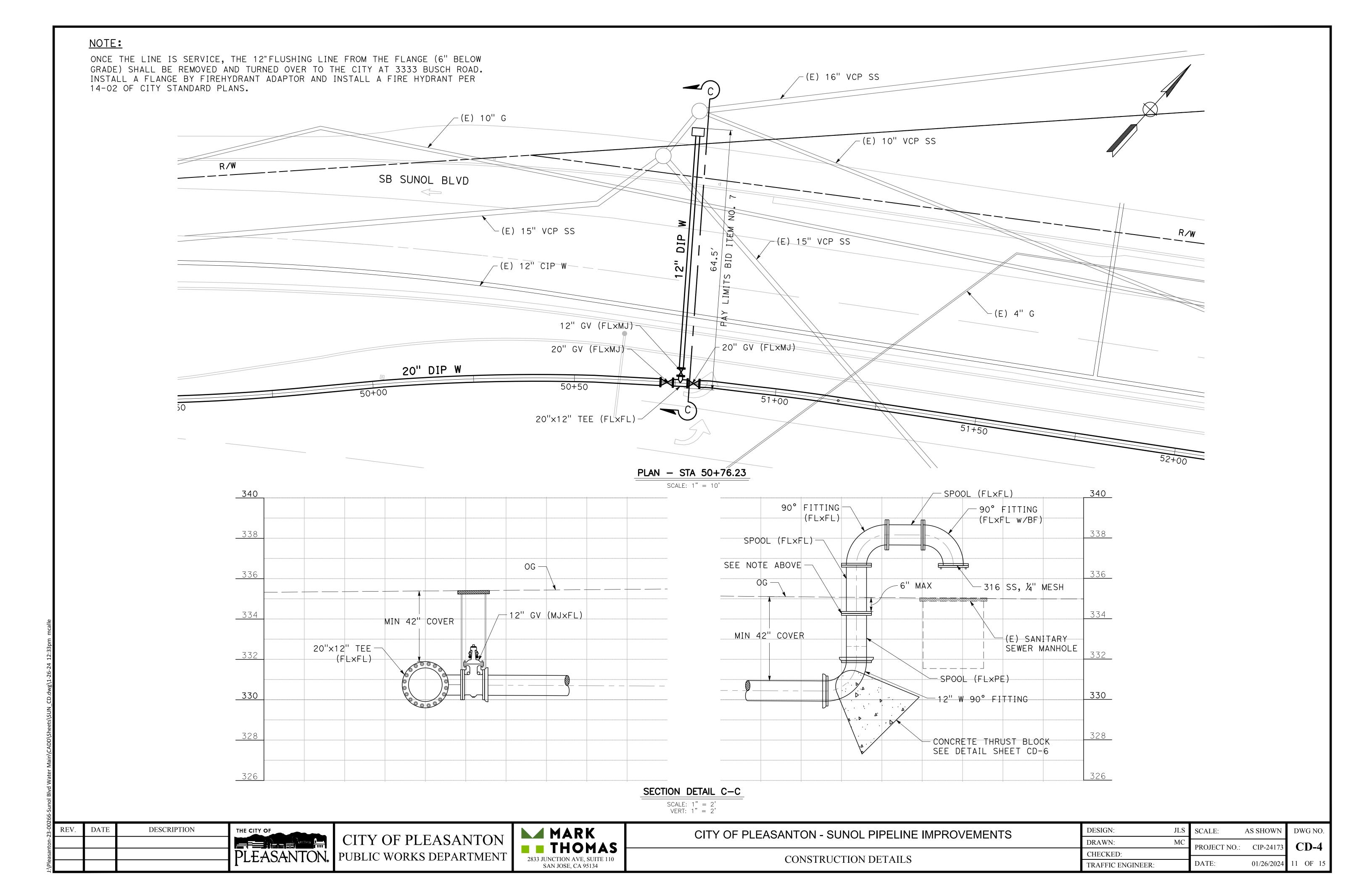
PLEASANTON. PUBLIC WORKS DEPARTMENT

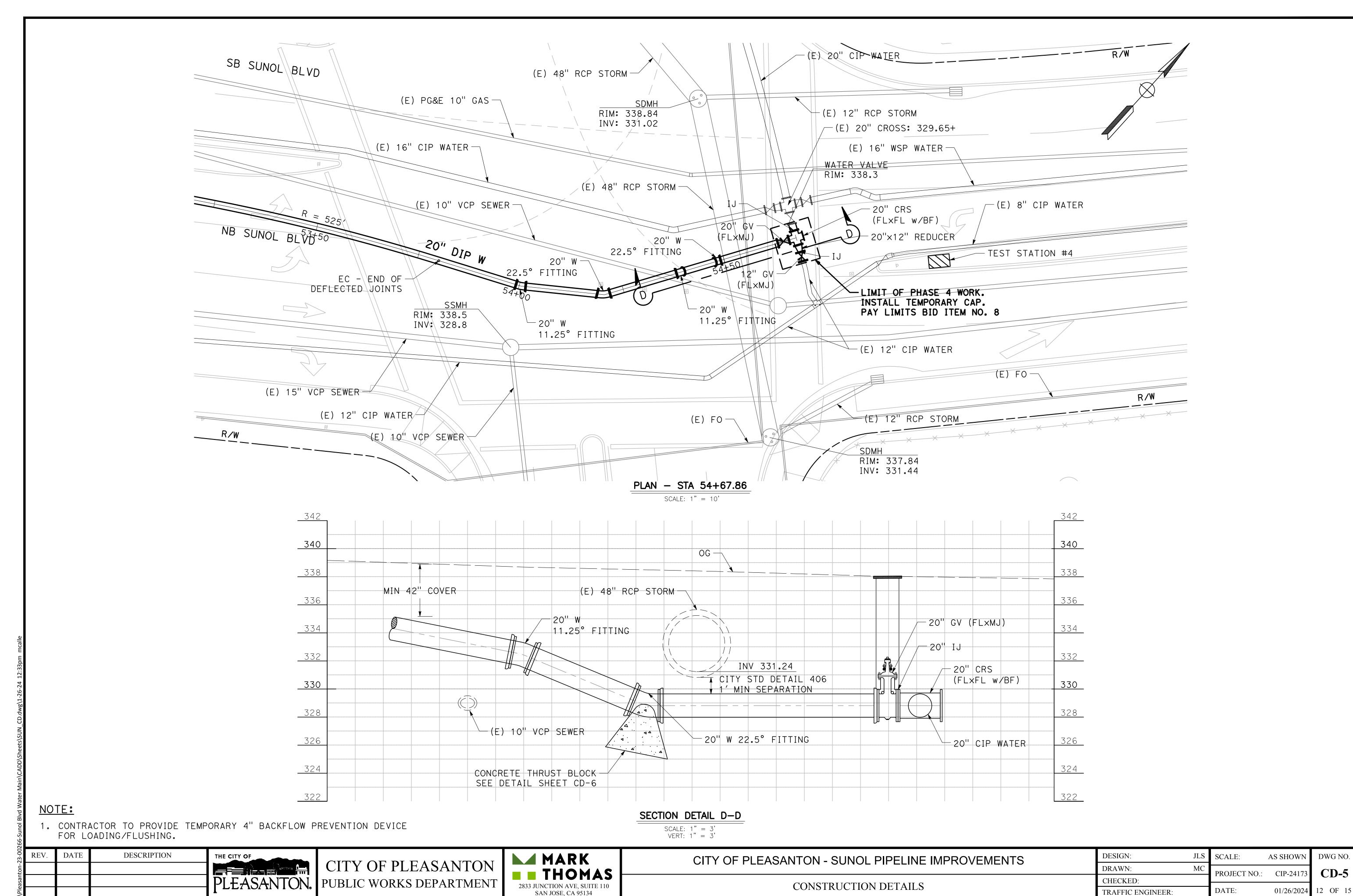


CONSTRUCTION DETAILS

PROJECT NO.: CIP-24173 CHECKED: 01/26/2024 9 OF 15 DATE: TRAFFIC ENGINEER:

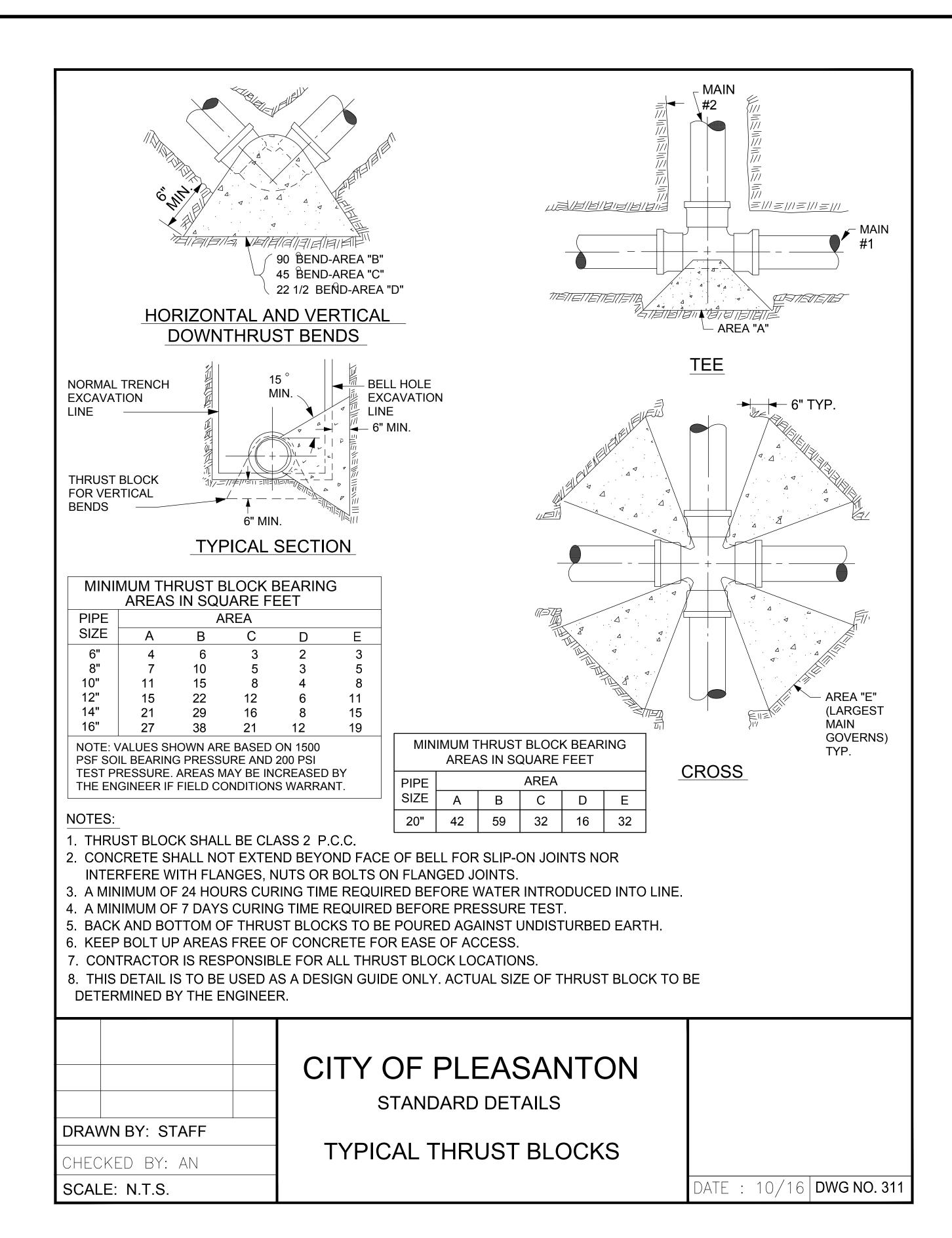


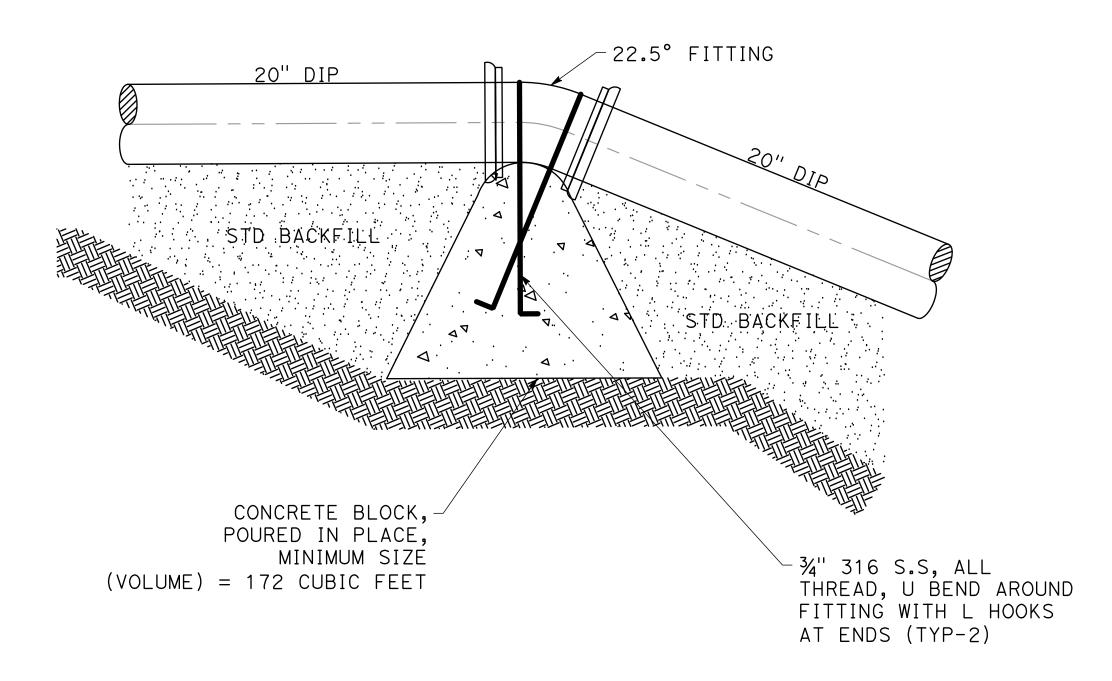




CD-5

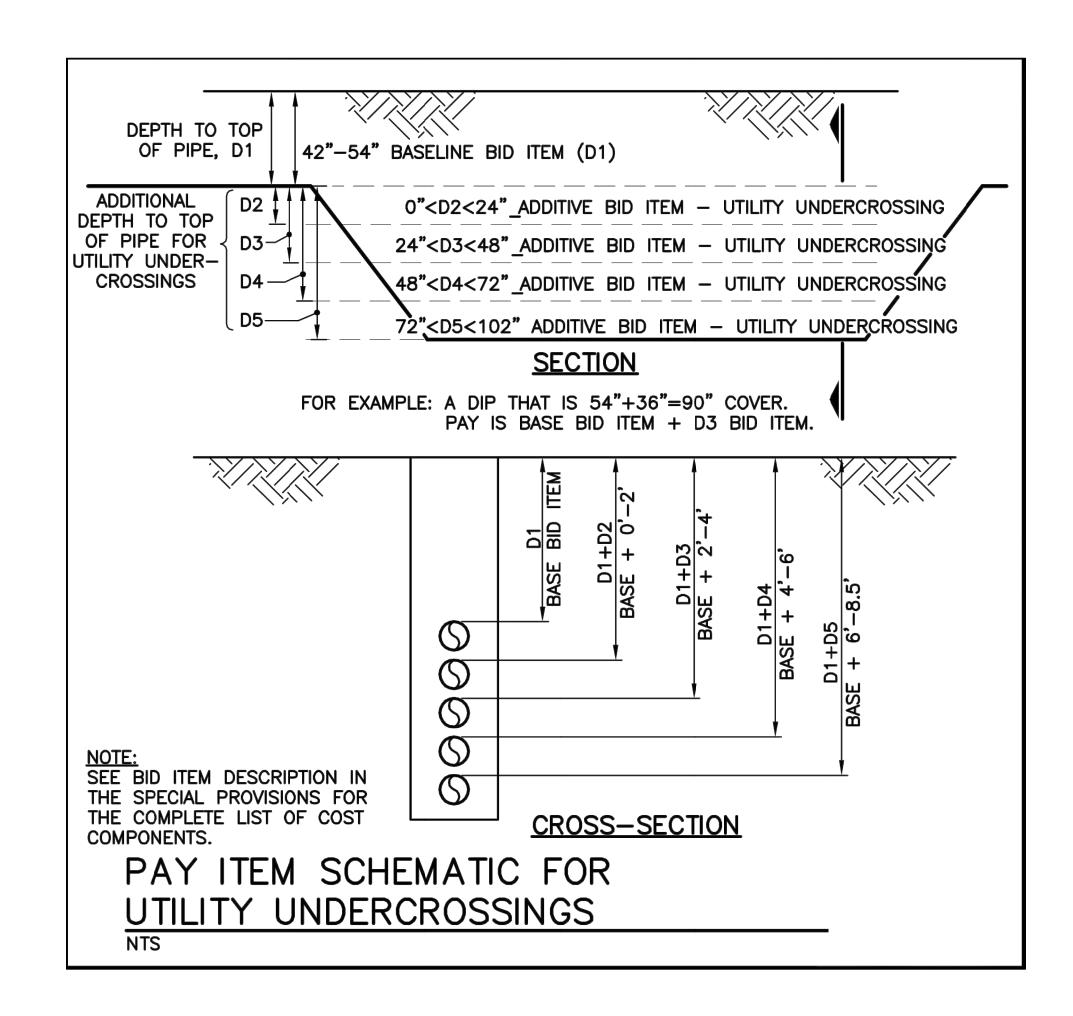
DWG NO.





GRAVITY THRUST BLOCK

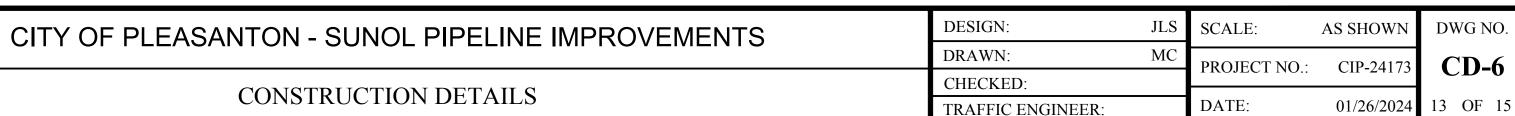
SCALE: 1" = 2'

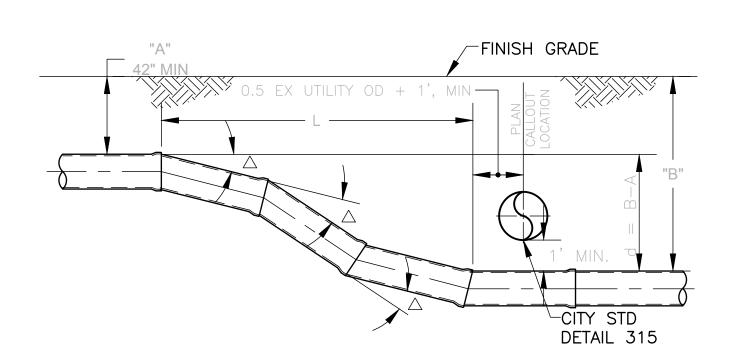


THE CITY OF	DESCRIPTION	DATE	REV.
PIFASANTO			

CITY OF PLEASANTON PUBLIC WORKS DEPARTMENT







- 1. CONTRACTOR SHALL MEET ALL PIPE SEPARATION, UTILITY CROSSING CLEARANCE AND MINIMUM COVER REQUIREMENTS
- 2. PULLED JOINTS SHALL BE LIMITED TO 75% OF PIPE MANUFACTURER'S RECOMMENDED ALLOWABLE JOINT DEFLECTION.
- 3. ASSUMES MAXIMUM JOINT DEFLECTION SHOWN. VERIFY WITH PIPE MANUFACTURER.
- 4. ASSUMES FULL 20 FT PVC OR DIP PIPE SECTION LENGTHS.

UTILITY UNDERCROSSING DETAIL 1

Ductile Iron				
Pipe Size Maximum Vertical Min				
(inches)	Allowable	Offset, d	Allowable	
	Deflection	(ft)	Transition	
	Angle, ∆		Length, L	
	(degrees)		(ft)	
6	3.75	1	20	
		2	40	
		3	60	
		4	60	
		5	80	
8	3.75	1	20	
		2	40	
		3	60	
		4	60	
		5	80	
12	3.75	1	20	
		2	40	
		3	60	
		4	60	
		5	80	
>12	3.75	1	20	
		2	40	
		3	60	
		4	60	
		5	80	

TR Flex					
Pipe Size Maximum Vertical Minim					
(inches)	Allowable	Offset, d	Allowable		
	Deflection	(ft)	Transition		
	Angle, Δ		Length, L		
	(degrees)		(ft)		
6	3.75	1	20		
		2	40		
		3	60		
		4	60		
		5	80		
8	3.75	1	20		
		2	40		
		3	60		
		4	60		
		5	80		
12	3.75	1	20		
		2	40		
		3	60		
		4	60		
		5	80		
16	2.4	1	40		
		2	60		
		3	80		
		4	100		
		5	120		

PVC				
Pipe Size	Maximum	Vertical	Minimum	
(inches)	Allowable	Offset, d	Allowable	
	Deflection	(ft)	Transition	
	Angle, ∆		Length, L	
	(degrees)		(ft)	
6	1.0	1	60	
		2	80	
		3	100	
		4	120	
		5	140	
8	1.0	1	60	
		2	80	
		3	100	
		4	120	
		5	140	
12	1.0	1	60	
		2	80	
		3	100	
		4	120	
		5	140	
16	0.5	1	40	
		2	80	
		3	120	
		4	160	
		5	200	
20	0.5	1	40	
		2	80	
		3	120	
		4	160	
		5	200	

DRAWN BY: STAFF

CHECKED BY: AN

SCALE: N.T.S.

- 1. Assumes maximum allowable joint deflection shown. Verify with pipe manufacturer
- 2. Assumes full 20 ft PVC or DIP pipe section lengths

STANDARD DETAILS

UTILITY UNDERCROSSING DETAIL 1

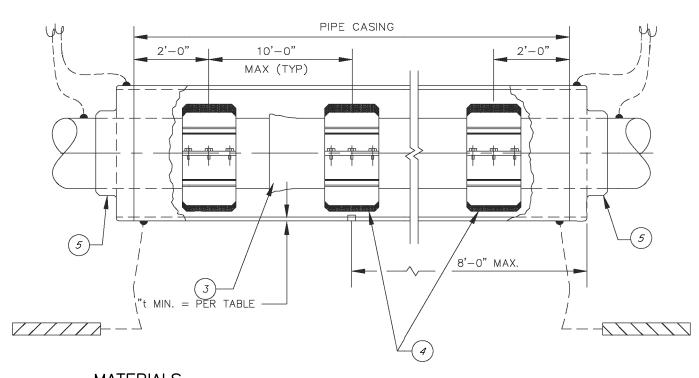
DATE: 10/16 DWG NO. 317

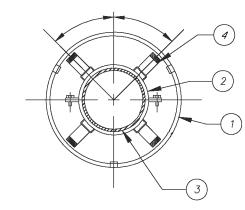
	TRI	Flex	
Pipe Size (inches)	Maximum Allowable Deflection Angle, Δ (degrees)	Vertical Offset, d (ft)	Minimum Allowable Transition Length, <i>L</i> (ft)
20	1.88	1	40
	2	2	60
		3	80
		4	100
		5	120
24	1.69	1	40
		2	60
		3	80
		4	100
		5	120

Pipe Size	Minimum		
(inches)	Maximum Allowable	Vertical Offset, d	Allowable
,	Deflection	(ft)	Transition
	Angle, ∆		Length, L
	(degrees)		(ft)
6	3.75	1	20
		2	40
		3	60
		4	60
		5	80
8	3.75	1	20
		2	40
		3	60
		4	60
		5	80
12	3.75	1	20
		2	40
		3	60
		4	60
		5	80
16	3.00	1	20
		2	40
		3	60
		4	60
		5	80
20	1.88	1	40
		2	60
		3	80
		4	100
		5	120
24	1.88	1	40
		2	60
		3	80
		4	100
		5	120

PUSH ON JOINT Field Lok 350

HIGH PRESSURE RESTRAINED (HDSS)			
Pipe Size	Minimum		
(inches)	Allowable	Offset, d	Allowable
	Deflection	(ft)	Transition
	Angle, ∆		Length, L
	(degrees)	1	(ft)
6	3.75	1	20
		2	40
	-	3	60
		4	60
		5	80
8	3.75	1	20
		2	40
		3	60
		4	60
	21	5	80
12	3.75	1	20
	())	2	40
		2	60
		4	60
		5	80
16	3.00	1	20
		2	40
		3	60
		4	60
		5	80
20	3.00	1	20
		2	40
		3	60
	A .	4	60
		5	80
24	3.00	1	20
		2	40
		3	60
		4	60
		5	80





<u>CROSS-SECTION</u>

<u>ITEM</u> **MATERIALS**

— STEEL CASING

2 — CARRIER PIPE JOINT BELL, BEYOND.

- CARRIER PIPE WITH ALL JOINTS RESTRAINED PER CITY STANDARDS 4 STAINLESS STEEL CASING WITH UHMW POLYETHYLENE RUNNERS

AS MANUFACTURED BY CASCADE WATERWORKS, PSI OR EQUAL. — EPDM CASING END SEAL PER IRWD SPECIFICATIONS. INSTALL WITH STAINLESS STEEL WORM-SCREW BAND CLAMPS.

NOTES:

- 1. CASING SHALL BE INSTALLED BY THE BORE, JACK/OR TUNNEL METHOD
- 2. SIZE AND THICKNESS OF CASING SHALL BE AS SHOWN IN SCHEDULE, FOR LONG BORES OR SPECIAL SITUATIONS GREATER WALL THICKNESS THAN SHOWN IN SCHEDULE MAY BE REQUIRED.
- 3. ALL STEEL CASING PIPE FIELD JOINTS SHALL BE WELDED FULL-CIRCUMFERENCE.
- 4. CARRIER PIPE SHALL BE PRESSURE TESTED PRIOR TO SEALING ENDS OF CASING. 5. EACH END OF CASING SHALL BE SEALED WITH APPROVED RUBBER CASING END SEALS.
- 6. BACKFILL FOR CASING IN OPEN CUT SHALL BE PER CITY STANDARD NO. 113.
- 7. NUMBER AND PLACEMENT OF SPACERS ON CARRIER PIPE PER MANUFACTURER'S SPECIFICATION.

STEEL CASING SCHEDULE NOMINAL MINIMUM MINIMUM CARRIER CASING WALL SIZE SIZE THICKNESS 4" 12" O.D. 16" O.D. 16" O.D. 10" 18" O.D. 12" 20" O.D. 24" O.D. 16" 18" 30" O.D. 20" 36" O.D. 24" 42" O.D.

JACK AND BORE CASING DETAILS

ON THE CITY OF	DESCRIPTION	DATE	EV.
PI FASANTON			



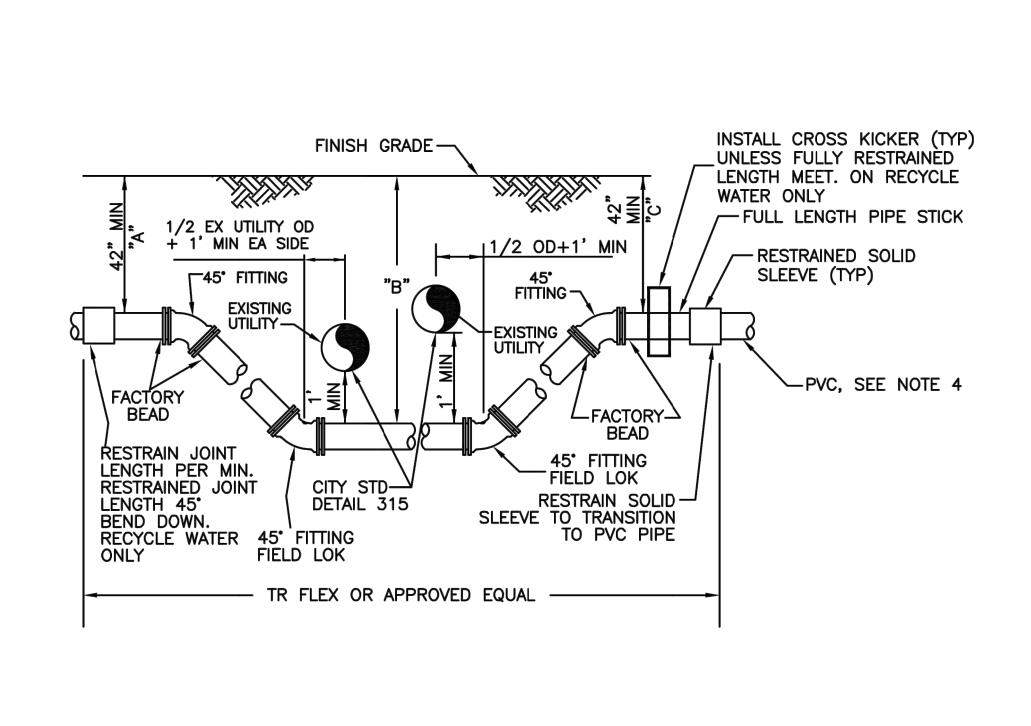




CONSTRUCTION DETAILS

DESIGN:	JLS	SCALE:	AS SHOWN
DRAWN:	MC	PROJECT NO.:	CID 2417
CHECKED:		TROJECT NO	C11 -241 /
TRAFFIC ENGINEER:		DATE:	01/26/202

DWG NO. **CD-7**



- 1. CONTRACTOR MAY SUBSTITUTE DIFFERENT FITTING DEFLECTION ANGLES, OFFSET FITTINGS OR MAY PULL JOINTS TO ACHIEVE THE CONFIGURATION. PULLED JOINTS SHALL BE LIMITED TO 75% OF PIPE MANUFACTURER'S RECOMMENDED ALLOWABLE JOINT DEFLECTION.
- 2. CONTRACTOR SHALL MEET ALL PIPE SEPARATION, UTILITY CROSSING CLEARANCE AND MINIMUM COVER REQUIREMENTS INDICATED.
- RESTRAIN PER RESTRAINT JOINT LENGTH TABLE VERTICAL DOWN BEND, OR INSTALL CROSS TRENCH KICKER PER DETAIL 309.
- 4. THRUST BLOCKS DO NOT SHOWN FOR CLARITY.

UTILITY UNDERCROSSING DETAIL 2

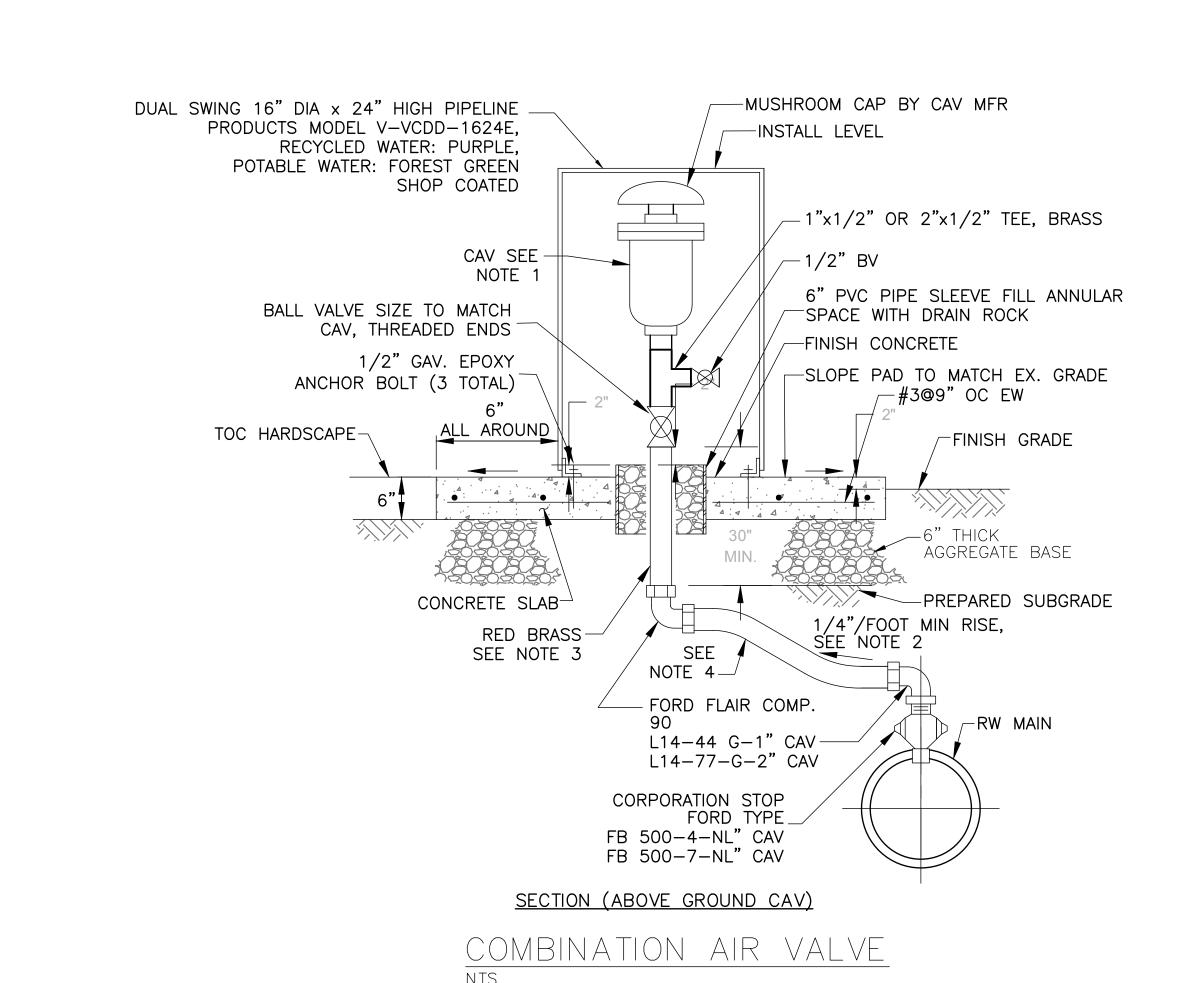
DRAWN BY: STAFF CHECKED BY: AN SCALE: N.T.S.

CITY OF PLEASANTON

STANDARD DETAILS

UTILITY UNDERCROSSING DETAIL 2

DATE: 10/16 **DWG NO. 318**



- 1. CAV SHALL BE APCO 143C FOR 1"TUBING AND APCO 145C FOR 2" TUBING, OR APPROVED EQUAL.
- 2. SERVICE LINE SHALL BE RUN IN A STRAIGHT LINE PERPENDICULAR TO PROPERTY LINE FROM MAIN TO PROPERTY LINE AND HAVE POSITIVE SLOPE.
- 3. 1" RED BRASS FOR 1" CAV. 2" RED BRASS FOR 2" CAV.
- 4. POLYETHYLENE TUBING SHALL CONFORM TO A.S.T.M. D-2737 & AWWAC-901 WITH A PRESSURE RATING OF 200 PSI AND SHALL BE "INTERSTATE POLY TUBING" OR APPROVED EQUAL. PURPLE TUBING FOR RECYCLE WATER.
- 5. WARNING TAPE MARKED "CAUTION RECYCLED WATER LINE BURIED BELOW" OR "PORTABLE WATER" SHALL BE INSTALLED 12" ABOVE THE WATER SERVICE.
- 6. TAPS FOR 2" REQUIRE A SADDLE.
- 7. 4" BEHIND CURB WHERE PLANTER AREA EXISTS BETWEEN CURB AND SIDEWALK,
- 4" BEHIND SIDEWALK WHERE SIDEWALK IS MONOLITHIC TO CURB.
- 8. FIELD COAT CAV AND ENCLOSURE W/12 MILS DFT AMINE CURED EPOXY, AMERCOAT 395 OR EQUAL. RECYCLED WATER COLOR: PURPLE PANTONE 512. POTABLE WATER COLOR: FOREST GREEN.
- 9. SEE PLANS FOR GENERAL PLACEMENT LOCATIONS.

REVISED 1/24			
DRAWN BY: STAFF			
CHECKED BY: AN			
SCALE: N.T.S.			

CITY OF PLEASANTON

MODIFIED STANDARD DETAIL

COMBINATION AIR - VACUUM RELEASE VALVE ASSEMBLY

DATE: 1/24

DWG NO. 312

DWG NO.

CD-8

DESCRIPTION REV. DATE



CITY OF PLEASANTON PLEASANTON. PUBLIC WORKS DEPARTMENT



CITY OF PLEASANTON - SUNOL PIPELINE IMPROVEMENT	TS
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CONSTRUCTION DETAILS

DESIGN:	JLS	SCALE:	AS SHOWN	
DRAWN:	MC	PROJECT NO.:	CIP_2/1173	
CHECKED:		TROJECT NO	——————————————————————————————————————	
TRAFFIC ENGINEER:		DATE:	01/26/2024	