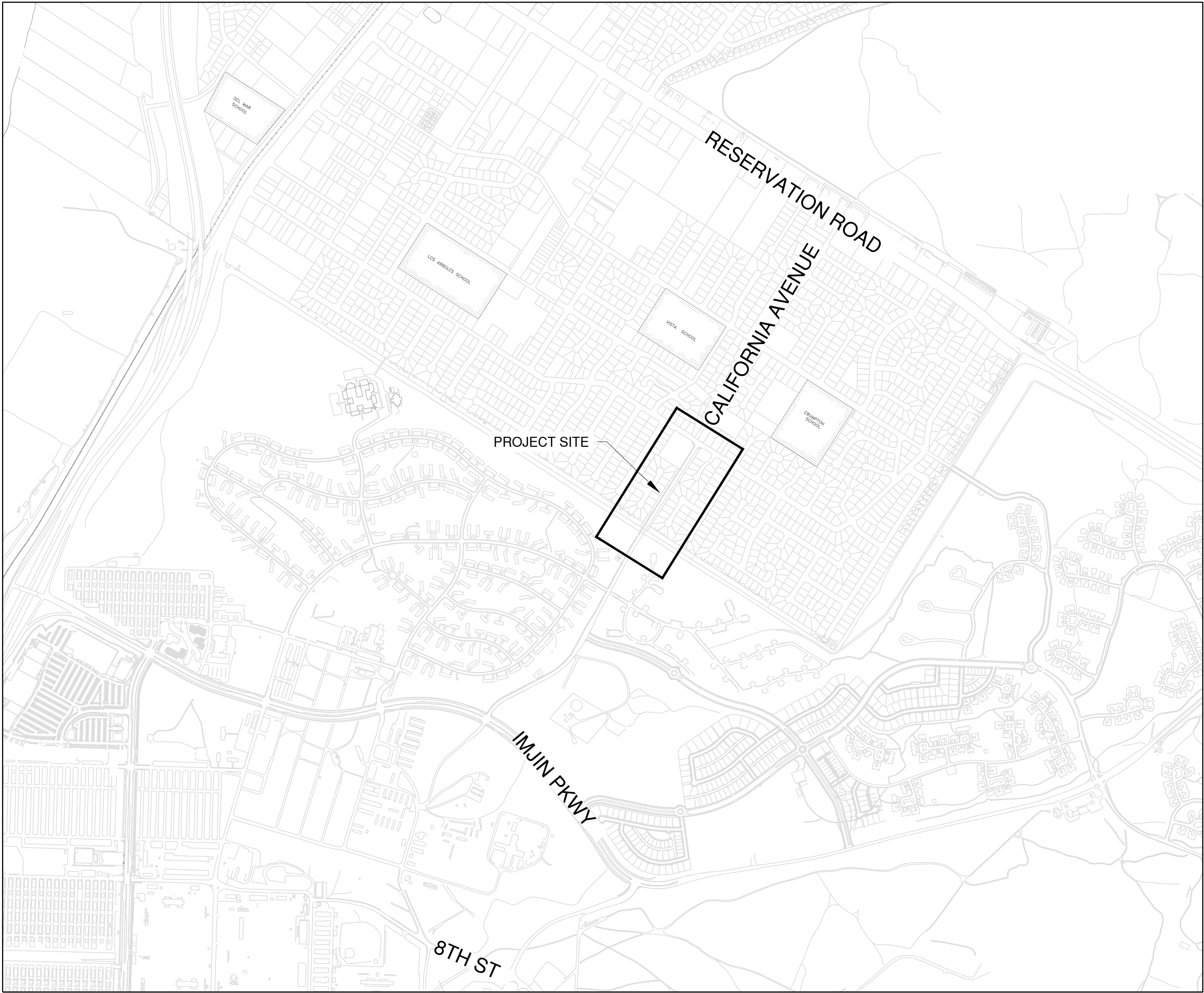



PLANS FOR THE
CALIFORNIA AVENUE WATERMAIN
MARINA COAST WATER DISTRICT
CIP NO. MW- 0321



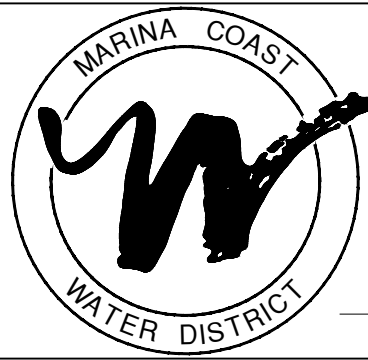
VICINITY MAP



PROJECT LOCATION

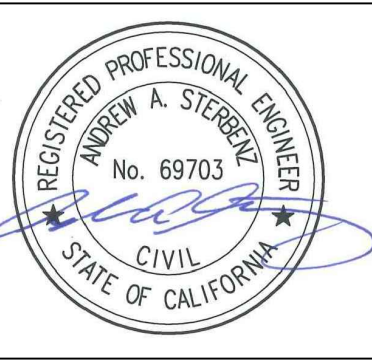
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| SUBMITTED: |  | 7/29/2025 |
| | ANDREW A. STERBENZ, PE | DATE |
| | SCHAAF & WHEELER | |
| APPROVED: | | |
| | GARRETT HAERTEL, PE | DATE |
| | MARINA COAST WATER DISTRICT | |

| NO. | REVISION DESCRIPTION | DATE | APPR |
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MARINA COAST WATER DISTRICT
11 RESERVATION ROAD
MARINA, CA 93933
(831) 384-6131

SCHAAF & WHEELER
CONSULTING CIVIL ENGINEERS
3 QUAIL RUN CIRCLE, SUITE #101
SALINAS, CA 93907
(831) 883-4848



CALIFORNIA AVENUE WATERMAIN
COVER SHEET

DATE: JULY 2025
SCALE: AS SHOWN
DESIGN: JCT
DRAWN: JCT
CHECK: AAS

SHEET
G1.0
1 of 10

GENERAL NOTES

1.

SHOULD IT APPEAR THAT THE WORK TO BE PERFORMED OR ANY MATTER RELATIVE THERETO, IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, THE CONTRACTOR SHALL CONTACT THE OWNER AT (831) 384-6131 WITH ANY QUESTIONS OR DISCREPANCIES. ANY REVISIONS REQUIRE OWNER'S APPROVAL BEFORE PROCEEDING WITH REVISED PLANS.
2.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONSTRUCTION CONTRACTOR SHALL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY OF THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD THE CIVIL ENGINEER AND THE OWNER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF THE WORK ON THE PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE CIVIL ENGINEER.
3.

CONTRACTOR SHALL POSSESS A VALID CLASS A - GENERAL ENGINEERING CONTRACTOR LICENSE AT THE TIME THE CONTRACT IS AWARDED AND SHALL MAINTAIN THROUGHOUT THE LENGTH OF CONTRACT.
4.

CONTRACTOR SHALL POST EMERGENCY TELEPHONE NUMBERS AT THE JOB SITE FOR PUBLIC WORKS, AMBULANCE, POLICE AND FIRE DEPARTMENTS.
5.

CONTRACTOR SHALL CONFORM TO THE RULES AND REGULATIONS OF THE STATE CONSTRUCTION SAFETY ORDERS PERTAINING TO EXCAVATION AND TRENCHING. CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR TRENCH SHORING DESIGN AND INSTALLATION.
6.

EXCAVATIONS SHALL BE ADEQUATELY SHORED, BRACED AND SHEETED SO THAT THE EARTH WILL NOT SLIDE OR SETTLE AND SO THAT ALL EXISTING IMPROVEMENTS OF ANY KIND WILL BE FULLY PROTECTED FROM DAMAGE. ANY DAMAGE RESULTING FROM A LACK OF ADEQUATE SHORING, BRACING AND SHEETING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND HE SHALL EFFECT NECESSARY REPAIRS OR RECONSTRUCTION AT HIS OWN EXPENSE. WHERE THE EXCAVATION FOR A CONDUIT TRENCH, STRUCTURE AND/OR BORING AND JACKING PIT IS REQUIRED, THE CONTRACTOR SHALL CONFORM TO THE APPLICABLE CONSTRUCTION SAFETY ORDERS OF THE DIVISION OF INDUSTRIAL SAFETY OF THE STATE OF CALIFORNIA. THE CONTRACTOR SHALL ALWAYS COMPLY WITH OSHA REQUIREMENTS.
7.

INFORMATION CONCERNING EXISTING UTILITIES IS NOT GUARANTEED; LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. DISTRICT DOES NOT GUARANTEE THE ACCURACY, COMPLETENESS, LOCATION, OR THE EXISTENCE OR NONEXISTENCE OF ANY UTILITY PIPE OR STRUCTURE WITHIN THE LIMITS OF THIS PROJECT. THE CONTRACTOR IS REQUIRED TO TAKE ALL DUE PRECAUTIONARY MEANS NECESSARY TO PROTECT UTILITY LINES, PIPES, OR STRUCTURES.
8.

CONTRACTOR SHALL REQUEST THAT UNDERGROUND FACILITIES BE LOCATED AND MARKED IN THE FIELD A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION BY CALLING UNDERGROUND SERVICE ALERT (USA) 411.
9.

CONTRACTOR SHALL POT HOLE, EXCAVATE, AND EXPOSE ALL UTILITY CROSSINGS OR CONNECTIONS AFFECTED BY THE WORK. ALL EXISTING UTILITIES SHALL BE ADEQUATELY SUPPORTED AND PROTECTED TO THE SATISFACTION OF THE DISTRICT. IN THE EVENT OF DAMAGE TO ANY UTILITY OCCASIONED BY THE CONTRACTOR OPERATIONS, THE CONTRACTOR, AT HIS SOLE COST AND EXPENSE, WILL IMMEDIATELY CAUSE REPAIRS TO BE MADE TO THE SATISFACTION OF THE AFFECTED UTILITY. NOTIFY THE PROJECT ENGINEER OF ANY ADJUSTMENTS NECESSITATED BY WAY OF CONFLICT WITH EXISTING UTILITIES.
10.

CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAG MEN, CONES OR OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY IN ACCORDANCE WITH THE SPECIFICATIONS.
11.

MAINTAIN ONE-WAY TRAFFIC ON PUBLIC AND PRIVATE ROADS, PAVED OR UNPAVED, ON WHICH WORK IS BEING PERFORMED DURING WORKING HOURS, OR COORDINATE WITH OWNER TO PROVIDE AN ACCEPTABLE DETOUR ROUTE AROUND THE WORKING AREA. MAINTAIN NORMAL TRAFFIC TRAVEL WIDTH DURING NON-WORKING HOURS. REFER TO ENCROACHMENT PERMITS, LICENSES, EASEMENT CONDITIONS AND TRAFFIC PLANS, WHERE APPLICABLE, AS INCLUDED IN THE SPECIFICATIONS.
12.

THE CONTRACTOR SHALL PROVIDE FOR INGRESS AND EGRESS FOR ANY PRIVATE PROPERTY ADJACENT TO THE WORK AREA THROUGHOUT THE PERIOD OF CONSTRUCTION.
13.

CONTRACTOR SHALL REPLACE, AT HIS EXPENSE, ALL TREES, SHRUBS, LAWNS, FENCES, IRRIGATION SYSTEMS AND IMPROVEMENTS WHICH ARE TO REMAIN INTACT BUT HAVE BEEN REMOVED OR DAMAGED DURING CONSTRUCTION.
14.

ALL PERMANENT IMPROVEMENTS REMOVED OR DAMAGED BY THE CONTRACTOR SHALL BE RESTORED TO THEIR ORIGINAL LOCATION AND CONDITION BY THE CONTRACTOR USING NEW MATERIALS AS DIRECTED BY THE ENGINEER.
15.

ALL SURPLUS AND UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE SITE AND PUBLIC RIGHT-OF-WAY.
16.

THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO KEEP PUBLIC STREETS FREE FROM DIRT AND DEBRIS. SHOULD ANY DIRT OR DEBRIS BE DEPOSITED IN PUBLIC RIGHT-OF-WAY, THE CONTRACTOR SHALL REMOVE IT IMMEDIATELY.
17.

OVERNIGHT PARKING OF CONSTRUCTION EQUIPMENT ON SITE OR IN THE STREET RIGHT-OF-WAY SHALL NOT BE PERMITTED, EXCEPT AT LOCATION(S) APPROVED BY THE DISTRICT.
18.

CONTRACTOR SHALL OBTAIN CITY OF MARINA ENCROACHMENT PERMITS FOR WORK WITHIN PUBLIC RIGHT-OF-WAY AND EASEMENTS. CONTRACTOR IS RESPONSIBLE FOR ANY/ALL PERMITS AND ASSOCIATED FEES FOR ENTRY OR USE OF PRIVATE PROPERTY.
19.

THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE REQUIREMENTS OF THE DIVISION OF INDUSTRIAL SAFETY PERTAINING TO "CONFINED SPACES": ANY MANHOLE, CULVERT, DROP INLET OR TRENCH (WHICH COULD CONTAIN AIR) THAT IS NOT READILY VENTILATED MAY BE CONSIDERED A "CONFINED SPACE".
20.

THE CONTRACTOR SHALL NOT DESTROY ANY PERMANENT SURVEY POINTS. ANY PERMANENT MONUMENTS OR POINTS DESTROYED SHALL BE REPLACED BY A LICENSED ENGINEER OR LICENSED SURVEYOR AT THE CONTRACTOR'S EXPENSE.
21.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING AN AIRBORNE DUST NUISANCE FROM THE CONSTRUCTION SITE BY WATERING AND/OR TREATING THE SITE IN SUCH A MANNER TO LIMIT THE EXTENT OF AIRBORNE DUST PARTICLES.
22.

SITE WORK HOURS ARE 8:00 A.M. TO 5:00 P.M. MONDAY THRU FRIDAY. NO GRADING WORK SHALL BE PERFORMED ON SATURDAYS, SUNDAYS OR OBSERVED NATIONAL HOLIDAYS.
23.

CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION SITE STORM WATER POLLUTION PREVENTION AND IMPLEMENTING NECESSARY BEST MANAGEMENT PRACTICES. EROSION CONTROL MEASURES SHALL BE IN PLACE AT THE END OF EACH WORKING DAY. WET SEASON CONTROLS ARE REQUIRED (MINIMUM) BETWEEN OCTOBER 15 AND APRIL 15.
24.

THE CONTRACTOR SHALL COMPLY WITH ALL RULES, REGULATIONS AND PROCEDURES OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) FOR MUNICIPAL, CONSTRUCTION AND INDUSTRIAL ACTIVITIES AS PROMULGATED BY THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD OR ANY OF ITS' REGIONAL WATER QUALITY CONTROL BOARDS. REFER TO THE FOLLOWING GENERAL PERMITS
a. WQO 2022-0057-DWQ, GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION AND LAND DISTURBANCE ACTIVITIES, WITH AMENDMENTS
b. WQO 2014-0194-DWQ, GENERAL ORDER NO. CAG140001, STATEWIDE NPDES PERMIT FOR DRINKING WATER SYSTEM DISCHARGES TO WATERS OF THE UNITED STATES
c. WQO 2013-0001-DWQ, GENERAL PERMIT FOR STORM WATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SYSTEMS (MS4S)
25.

ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS. THE FOLLOWING LIST OF STANDARDS ARE/OR SPECIFICATIONS ARE INCORPORATED INTO THESE PLANS BY REFERENCE. DESIGN AND CONSTRUCTION OF ALL IMPROVEMENTS SHALL COMPLY WITH ALL APPLICABLE STANDARDS INCLUDING:
a. MCWD STANDARD DETAILS AND SPECIFICATIONS
b. STANDARD SPECIFICATIONS, STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION, 2023 EDITION
c. STANDARD PLANS, STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS), 2023 EDITION
d. CITY OF MARINA STANDARD PLANS AND SPECIFICATIONS
26.

IF ARCHAEOLOGICAL RESOURCES OR HUMAN REMAINS ARE DISCOVERED DURING CONSTRUCTION, THE COUNTY CORONER SHALL BE NOTIFIED AND WORK SHALL BE HALTED TO WITHIN 150- FEET OF THE FIND UNTIL IT CAN BE EVALUATED BY A QUALIFIED PROFESSIONAL ARCHAEOLOGIST. IF THE FIND IS SIGNIFICANT, APPROPRIATE MITIGATION MEASURES SHALL BE FORMULATED AND IMPLEMENTED.
27.

REPLACE STREET PAVEMENTS PER CITY OF MARINA STANDARD PLAN, STREET STRUCTURAL SECTIONS. MATCH EXISTING THICKNESS OF ASPHALT CONCRETE AND AGGREGATE BASE. TYPICAL THICKNESS IS 10 INCH ASPHALT CONCRETE AND 12 INCH AGGREGATE BASE.
28.

WHEN REPLACING THE PAVEMENT ON AN EXISTING ROAD, THE EXISTING PAVEMENT SHALL BE CUT TO A NEAT LINE AND REMOVED BACK TO AN EXISTING ADEQUATE STRUCTURAL SECTION. AN EXPLORATORY TRENCH OR POT HOLING MAY BE REQUIRED TO DETERMINE THE LIMITS OF PAVEMENT REMOVAL.
29.

THE CONTRACTOR IS RESPONSIBLE FOR MATCHING EXISTING STREETS AND OTHER IMPROVEMENTS WITH A SMOOTH TRANSITION IN PAVING, CURBS, GUTTERS, SIDEWALKS, GRADING, ETC., AND TO AVOID THE CREATION OF ANY LOW SPOTS OR HAZARDOUS CONDITIONS OR ANY ABRUPT OR APPARENT CHANGES IN APPEARANCE, GRADES, OR CROSS SLOPES.
30.

INSTALL PIPELINES AT UNIFORM LINE AND GRADE BETWEEN CONTROL ELEVATIONS NOTED ON DRAWINGS. NOMINAL COVER IS 48 INCHES.
31.

WATERMAIN AND FITTINGS SHALL BE RESTRAINED BY THRUST BLOCKS OR MECHANICAL RESTRAINTS. SEE CONCRETE THRUST BLOCK DETAIL AND RESTRAINED LENGTH TABLE.
32.

DISTURBED (E) THRUST BLOCKS TO BE REPLACED IN-KIND.
34.

PRESSURE TEST WATERMAIN TO 150 PSI, PER MCWD STANDARD SPECIFICATION 15042.
35.

CONTRACTOR SHALL NOT OPERATE EXISTING VALVES. ALL SYSTEM OPERATIONS TO BE PERFORMED BY MCWD. COORDINATE WITH MCWD FOR SHUTDOWN.
36.

THE CONTRACTOR SHALL SUBMIT TWO SETS OF 'RED-LINE' AS-BUILT PLANS TO THE OWNER PRIOR TO FINAL ACCEPTANCE OF THE IMPROVEMENTS.

STANDARD WATER NOTES:

1.

THE WATER SYSTEM AS SHOWN ON THESE PLANS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD PLANS AND SPECIFICATIONS OF THE MARINA COAST WATER DISTRICT. CONTRACTOR SHALL KEEP A COPY OF THE STANDARD SPECIFICATIONS AND DRAWINGS ON THE JOBSITE AT ALL TIMES.
2.

THE MARINA COAST WATER DISTRICT SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO COMMENCING WORK ON THE WATER SYSTEM. PHONE (831) 384-6131 FOR INSPECTION. A PRECONSTRUCTION MEETING SHALL BE HELD AT LEAST 24 HOURS BEFORE STARTING CONSTRUCTION.
3.

DOMESTIC WATER MAINS SHALL BE INSTALLED AFTER THE INSTALLATION OF CURB AND GUTTER AT SIX FEET OFF OF CURB FACE, OR AS STAKED BY THE SURVEYOR AT A MINIMUM 50-FOOT STATIONING, IF THERE ARE NO EXISTING CURBS.
4.

ALL NUTS AND BOLTS, SHALL BE GRADE 316 STAINLESS STEEL. ALL BURIED FLANGES, VALVES AND FITTINGS SHALL BE WRAPPED WITH 10-MIL POLYETHYLENE SHEET.
5.

ALL MAIN LINE VALVES SHALL BE MAINTAINED SO AS TO BE ACCESSIBLE DURING TRACT DEVELOPMENT, AND ALL VALVE STEM TOPS HAVING OVER 48 INCHES OF COVER MAY REQUIRE AN EXTENSION AS PER MCWD STANDARD PLAN W-7.
6.

THE TOP OF THE PIPE SHALL BE A MINIMUM OF 42 INCHES OF COVER FROM THE FINISHED GRADE IN PAVED SECTIONS, UNLESS INDICATED OTHERWISE ON THE JOB PLANS OR DIRECTED OTHERWISE BY THE DISTRICT BECAUSE OF UNUSUAL CONDITIONS. PIPE SHALL BE BEDDED AND BACKFILLED PER MCWD STANDARD PLAN W-12.
7.

FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPROPRIATE DETAILS HEREIN AND INSTALLED BEHIND CURBS AND SIDEWALKS WHERE THE SIDEWALKS ARE ADJACENT TO THE CURBS. FIRE HYDRANTS SHALL BE PER THE DISTRICT'S SPECIFICATIONS AND SHALL HAVE A CONCRETE PAD POURED AROUND THEM. ALL FIRE HYDRANTS SHALL BE SET WITH THE BOTTOM FLANGE 4 INCHES ABOVE THE CONCRETE PAD OR SIDEWALK.
8.

NO FACILITY IS TO BE BACKFILLED UNTIL INSPECTED BY THE DISTRICT.
9.

SHUT DOWN OR TAPPING OF EXISTING DOMESTIC WATERLINES TO FACILITATE CONNECTION TO EXISTING FACILITIES SHALL BE COORDINATED WITH THE DISTRICT AT LEAST 24 HOURS IN ADVANCE. ANY RELOCATION OF EXISTING FACILITIES IS SUBJECT TO APPROVAL OF THE DISTRICT ENGINEER.
10.

NO TAPS OR OTHER CONNECTIONS SHALL BE MADE TO EXISTING DISTRICT WATER MAINS PRIOR TO CONDUCTING AN APPROVED PRESSURE AND BACTERIOLOGICAL TEST ON THE NEW WATER DISTRIBUTION SYSTEM. TAPPING SLEEVES SHALL BE PRESSURE TESTED IN AN APPROVED MANNER IN THE FIELD IN THE PRESENCE OF THE DISTRICT INSPECTOR, PRIOR TO TAPPING THE MAIN LINE. TAPPING OF THE MAIN LINE SHALL NOT PROCEED UNLESS A DISTRICT INSPECTOR IS PRESENT.
11.

ALL WATER SERVICES SHALL BE INSTALLED PER THE DISTRICT'S STANDARD SPECIFICATIONS. ALL METERS SHALL BE INSTALLED IN GRASS OR PLANTER AREAS AND ACCESSIBLE BY VEHICLE. ANY SERVICES LOCATED IN SIDEWALKS ARE SUBJECT TO THE APPROPRIATE GOVERNING AGENCY AND DISTRICT APPROVAL. ANY METERS LOCATED IN BANKS OF 4 SHALL BE MANIFOLDED PER MCWD STANDARD PLAN W-3. ALL METER REGISTERS AND LIDS SHALL BE MARKED WITH ADDRESS IDENTIFICATION.
12.

WHERE METERS AND METER BOXES ARE LOCATED WITHIN SLOPES, THE ANGLE METER STOPS SHALL BE SO LOCATED THAT THE METERS AND BOXES WILL BE PARALLEL AND FLUSH, RESPECTIVELY, WITH THE FINISHED STREET SURFACE. A RETAINING WALL MAY BE REQUIRED AROUND THE METER BOX.
13.

THE APPLICANT SHALL FURNISH AND INSTALL THE SERVICE CONNECTIONS BETWEEN WATER MAINS AND METERS AND METER BOXES. WATER SERVICES SHALL BE INSTALLED TO THE PROPERTY LINE PRIOR TO PAVING OF THE STREET.
14.

CURB FACE SHALL BE INSCRIBED WITH " W" INDICATING LOCATIONS OF ALL DOMESTIC WATER SERVICES.
15.

WATER LOW-FLOW DEVICES SHALL BE PROVIDED FOR ALL UNITS WITHIN THIS DEVELOPMENT IN ACCORDANCE WITH RULES AND REGULATIONS OF THE DISTRICT.
16.

ALL VALVES SHALL BE LOCATED OFF THE TEE UNLESS OTHERWISE APPROVED BY THE DISTRICT. AT INTERSECTIONS AND BUS STOPS WITH CONCRETE PADS, THE MAIN LINE SHALL BE ROPED TO AVOID CROSS GUTTER CONFLICT.
17.

INDIVIDUAL PRESSURE REGULATORS WILL BE REQUIRED BY THE PLUMBING CODES OF THE CITY HAVING JURISDICTION IF STATIC PRESSURE REACHES 80 PSI OR MORE.
18.

ALL WATER METERS WILL BE FURNISHED BY THE MARINA COAST WATER DISTRICT FOLLOWING RECEIPT OF APPLICATION AND DEPOSIT. THE DISTRICT WILL INSTALL WATER METERS UP TO 2 INCHES. THE CONTRACTOR SHALL INSTALL WATER METERS 3 INCHES AND GREATER. THE CONTRACTOR SHALL PLACE ALL PIPING PER DISTRICT PLANS AND PROPERLY LOCATE THE METER BOXES TO GRADE PRIOR TO INSTALLATION OF THE METERS BY THE DISTRICT.
19.

ANY DISTRICT WATER USED FOR CONSTRUCTION SHALL BE METERED WITH A CONSTRUCTION METER OBTAINED FROM THE DISTRICT.
20.

AN ENCROACHMENT PERMIT FROM THE COUNTY OR CITY HAVING JURISDICTION IS REQUIRED PRIOR TO ANY WORK WITHIN PUBLIC RIGHT-OF-WAY OR EASEMENT.
21.

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. APPROVAL OF THESE PLANS BY THE DISTRICT DOES NOT GUARANTEE THE ACCURACY, COMPLETENESS, LOCATION, OR THE EXISTENCE OR NON-EXISTENCE OF ANY UTILITY PIPE OR STRUCTURE WITHIN THE LIMITS OF THIS PROJECT. THE CONTRACTOR IS REQUIRED TO TAKE ALL DUE PRECAUTIONARY MEANS NECESSARY TO PROTECT THOSE UTILITY LINES NOT SHOWN ON THESE PLANS.
22.

THE APPLICANT SHALL REMOVE TO THE SATISFACTION OF THE MCWD INSPECTOR ALL UNUSED WATER STUBS AND/OR SERVICES THAT WAS PROVIDED TO THE PROJECT SITE

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MARINA COAST WATER DISTRICT
11 RESERVATION ROAD
MARINA, CA 93903
(831) 384-6131

SCHAAF & WHEELER
CONSULTING CIVIL ENGINEERS
3 QUAIL RUN CIRCLE, SUITE #101
SALINAS, CA 93907
(831) 883-4848

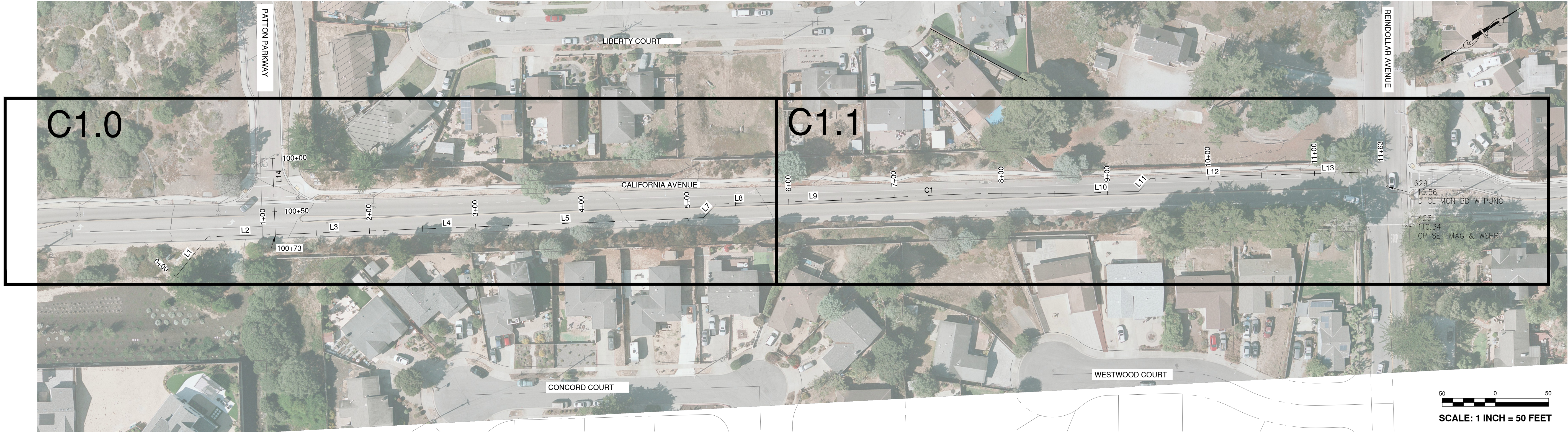


CALIFORNIA AVENUE WATERMAIN
GENERAL NOTES

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| SCALE: | AS SHOWN |
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| DRAWN: | JCT |
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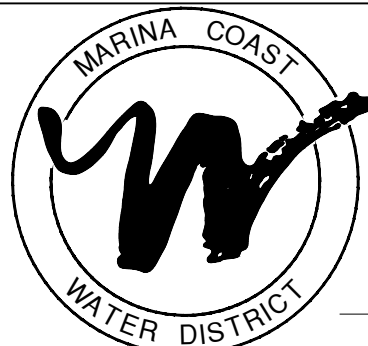
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| STATION CENTERLINE & CURVE DATA | | | | | | | |
| NUMBER | STARTING STATION | START NORTHING | START EASTING | ENDING STATION | END NORTHING | END EASTING | LENGTH (FT) |
| L1 | 0+00 | 2139430.95 | 5743134.50 | 0+48 | 2139476.69 | 5743120.25 | 47.9 |
| L2 | 0+48 | 2139476.69 | 5743120.25 | 1+19 | 2139536.80 | 5743157.93 | 70.9 |
| L3 | 1+19 | 2139536.80 | 5743157.93 | 2+15 | 2139618.41 | 5743208.53 | 96.0 |
| L4 | 2+15 | 2139618.41 | 5743208.53 | 3+31 | 2139717.12 | 5743269.73 | 116.1 |
| L5 | 3+31 | 2139717.12 | 5743269.73 | 4+38 | 2139808.30 | 5743326.26 | 107.3 |
| L7 | 5+15 | 2139873.46 | 5743365.95 | 5+32 | 2139890.43 | 5743362.16 | 17.4 |
| L8 | 5+32 | 2139890.43 | 5743362.16 | 5+75 | 2139926.51 | 5743384.97 | 42.7 |
| L9 | 5+75 | 2139926.51 | 5743384.97 | 6+72 | 2140008.69 | 5743436.83 | 97.2 |
| C1 | 6+72 | 2140008.69 | 5743436.83 | 8+59 | 2140166.74 | 5743536.69 | 187.0 |
| L10 | 8+59 | 2140166.74 | 5743536.69 | 9+29 | 2140226.25 | 5743574.26 | 70.4 |
| L11 | 9+29 | 2140226.25 | 5743574.26 | 9+46 | 2140242.20 | 5743570.69 | 16.3 |
| L12 | 9+46 | 2140242.20 | 5743570.69 | 10+63 | 2140341.85 | 5743633.32 | 117.7 |
| L13 | 10+63 | 2140341.85 | 5743633.32 | 11+63 | 2140425.65 | 5743686.45 | 99.2 |

| PATTON PARKWAY | | | | | | | |
|---------------------------------|------------------|----------------|---------------|----------------|--------------|-------------|-------------|
| STATION CENTERLINE & CURVE DATA | | | | | | | |
| NUMBER | STARTING STATION | START NORTHING | START EASTING | ENDING STATION | END NORTHING | END EASTING | LENGTH (FT) |
| L14 | 100+00 | 2139568.19 | 5743093.26 | 100+73 | 2139529.72 | 5743155.29 | 73.0 |

BASIS OF BEARINGS
THE BASIS OF BEARINGS FOR THIS SURVEY ARE RELATIVE
TO A GROUND-BASED APPROXIMATION OF THE
CALIFORNIA COORDINATE SYSTEM NAD83, ZONE 4.

ELEVATIONS ARE RELATIVE TO THE NAVD88 DATUM.

| LOCAL CONTROL POINTS | | | |
|----------------------|-------------|---------------------------|-----------|
| CONTROL POINT | DESCRIPTION | NORTHING/EASTING | ELEVATION |
| MON 629 | MONUMENT | 2140422.36, 5743700.97 | 110.56 |
| CP 423 | MAG NAIL | 2140417.07, 5743742.06 | 110.34 |



MARINA COAST WATER DISTRICT
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SALINAS, CA 93907
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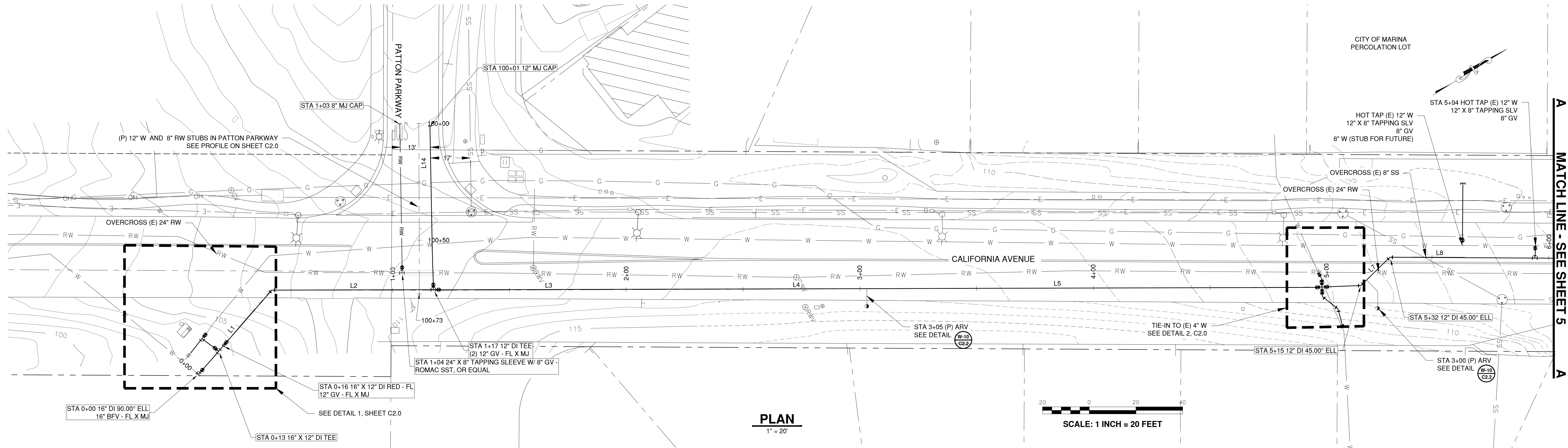


**CALIFORNIA AVENUE WATERMAIN
PROJECT OVERVIEW & KEY SHEET**

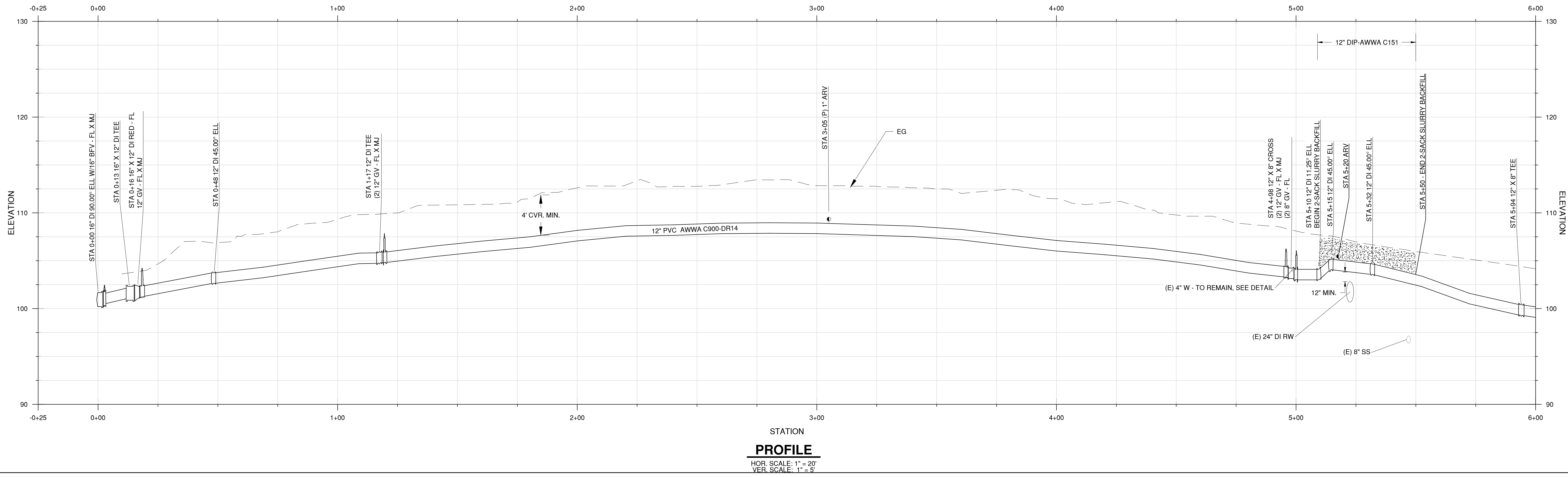
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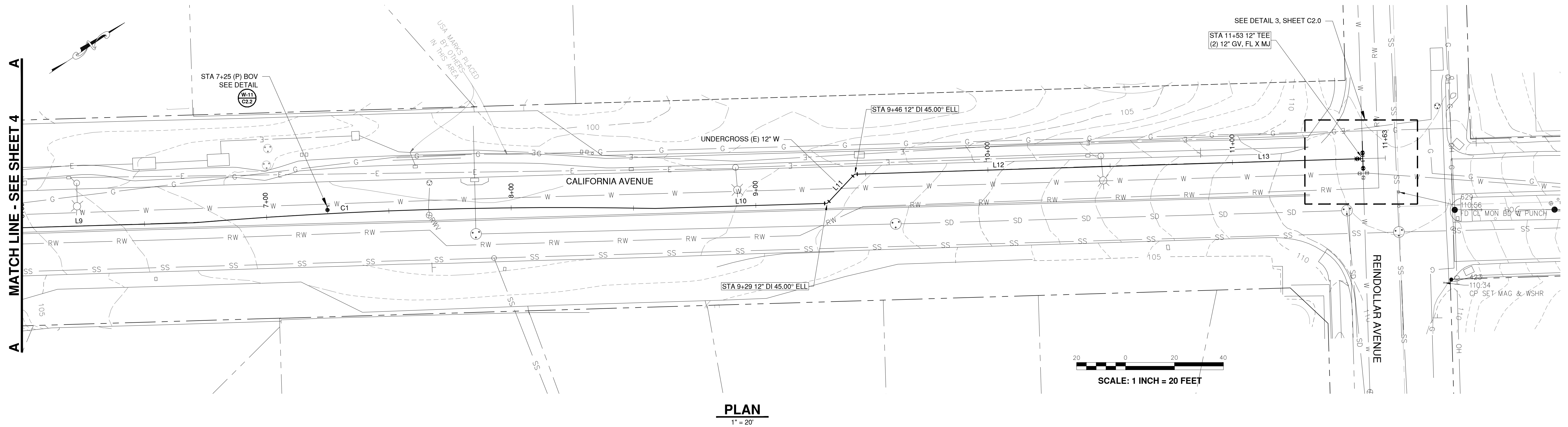
CALIFORNIA AVE PIPELINE
-0+25 TO 6+00



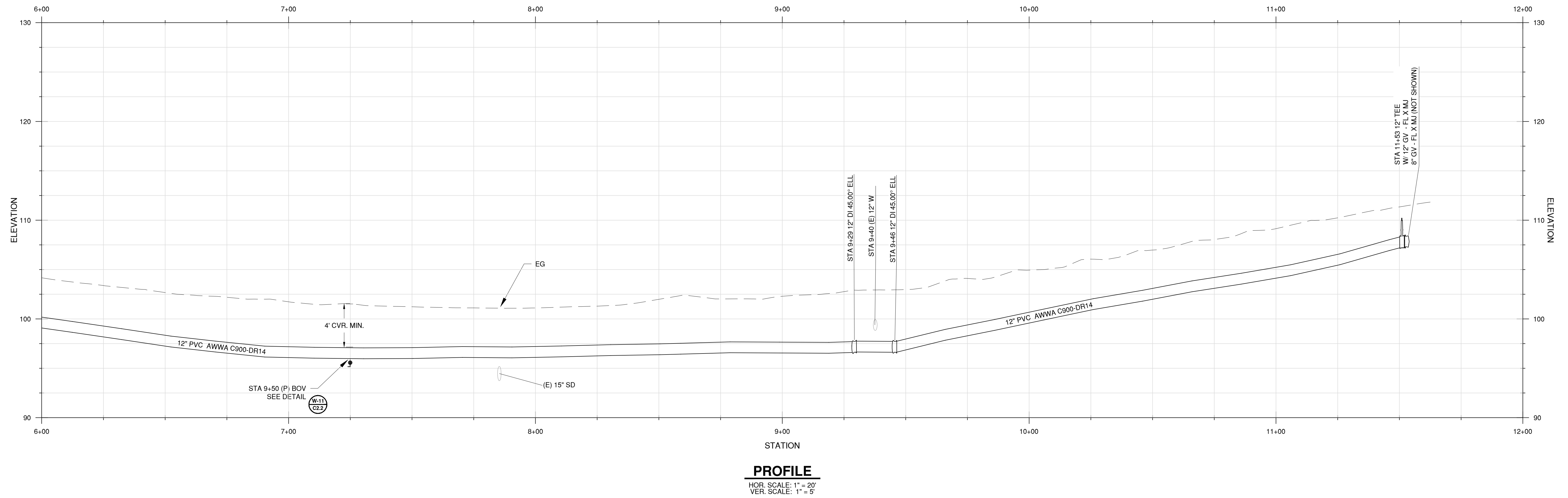
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| <table border="1"><thead><tr><th>NO.</th><th>REVISION DESCRIPTION</th><th>DATE</th><th>APPR</th></tr></thead><tbody><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr></tbody></table> | NO. | REVISION DESCRIPTION | DATE | APPR | | | | | | | | | | | | |  <div>MARINA COAST WATER DISTRICT 11 RESERVATION ROAD MARINA, CA 93933 (831) 384-6131</div> | <div>SCHAAF & WHEELER CONSULTING CIVIL ENGINEERS 3 QUAIL RUN CIRCLE, SUITE #101 SALINAS, CA 93907 (831) 883-4848</div>  | <div>CALIFORNIA AVENUE WATERMAIN PLAN AND PROFILE</div> | <table border="1"><tr><td>DATE:</td><td>JULY 2025</td></tr><tr><td>SCALE:</td><td>AS SHOWN</td></tr><tr><td>DESIGN:</td><td>JCT</td></tr><tr><td>DRAWN:</td><td>JCT</td></tr><tr><td>CHECK:</td><td>AAS</td></tr></table> | DATE: | JULY 2025 | SCALE: | AS SHOWN | DESIGN: | JCT | DRAWN: | JCT | CHECK: | AAS | <div>SHEET C1.0 5 of 10</div> |
|---|-----------|----------------------|------|------|--|--|--|--|--|--|--|--|--|--|--|--|---|---|--|---|-------|-----------|--------|----------|---------|-----|--------|-----|--------|-----|--|
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| DATE: | JULY 2025 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SCALE: | AS SHOWN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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CALIFORNIA AVE PIPELINE
6+00 TO 12+00



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MARINA COAST WATER DISTRICT
11 RESERVATION ROAD
MARINA, CA 93933
(831) 384-6131

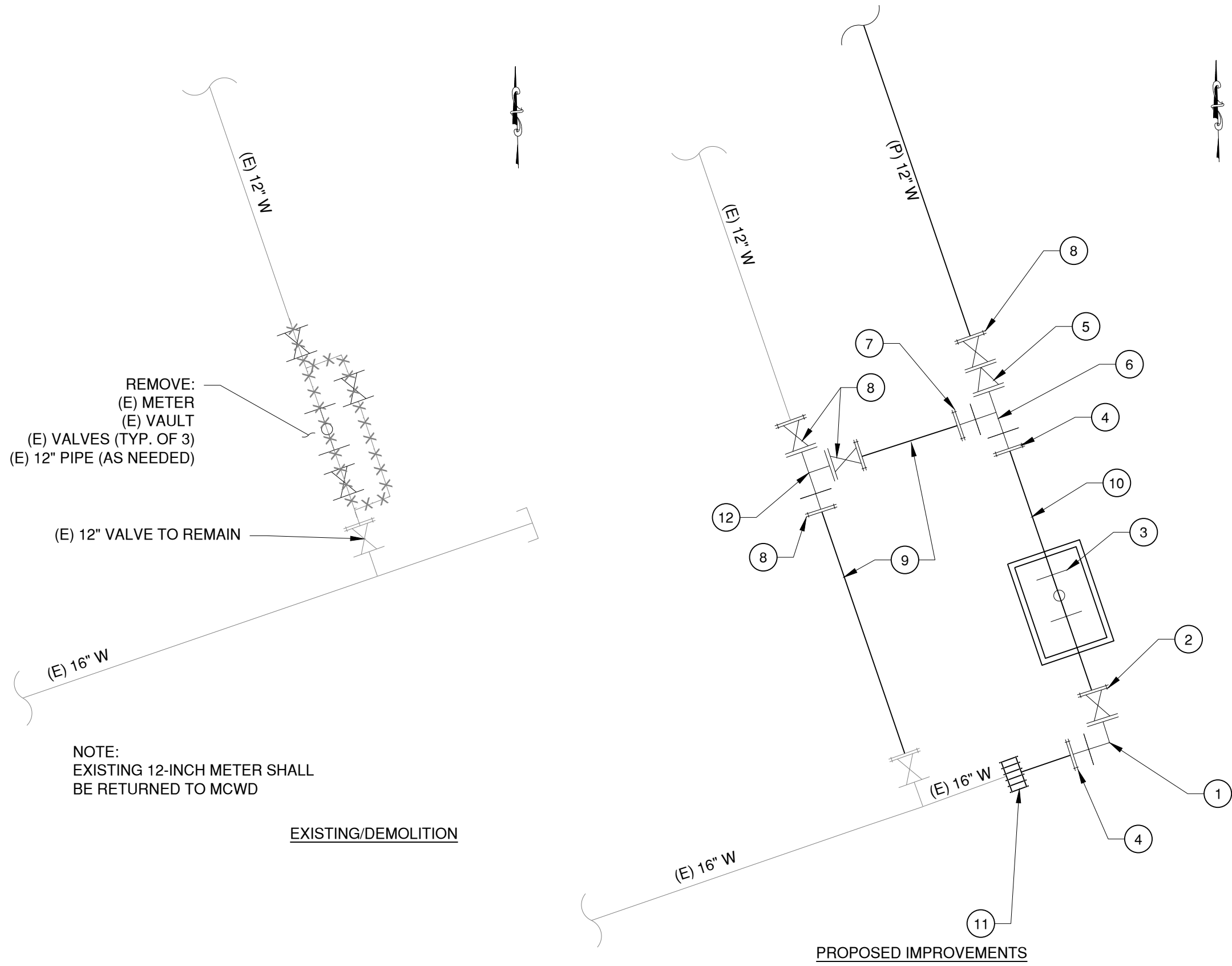
SCHAAF & WHEELER
CONSULTING CIVIL ENGINEERS
3 QUAIL RUN CIRCLE, SUITE #101
SALINAS, CA 93907
(831) 883-4848



**CALIFORNIA AVENUE WATERMAIN
PLAN AND PROFILE**

DATE: JULY 2025
SCALE: AS SHOWN
DESIGN: JCT
DRAWN: JCT
CHECK: AAS

SHEET
C1.1
6 of 10



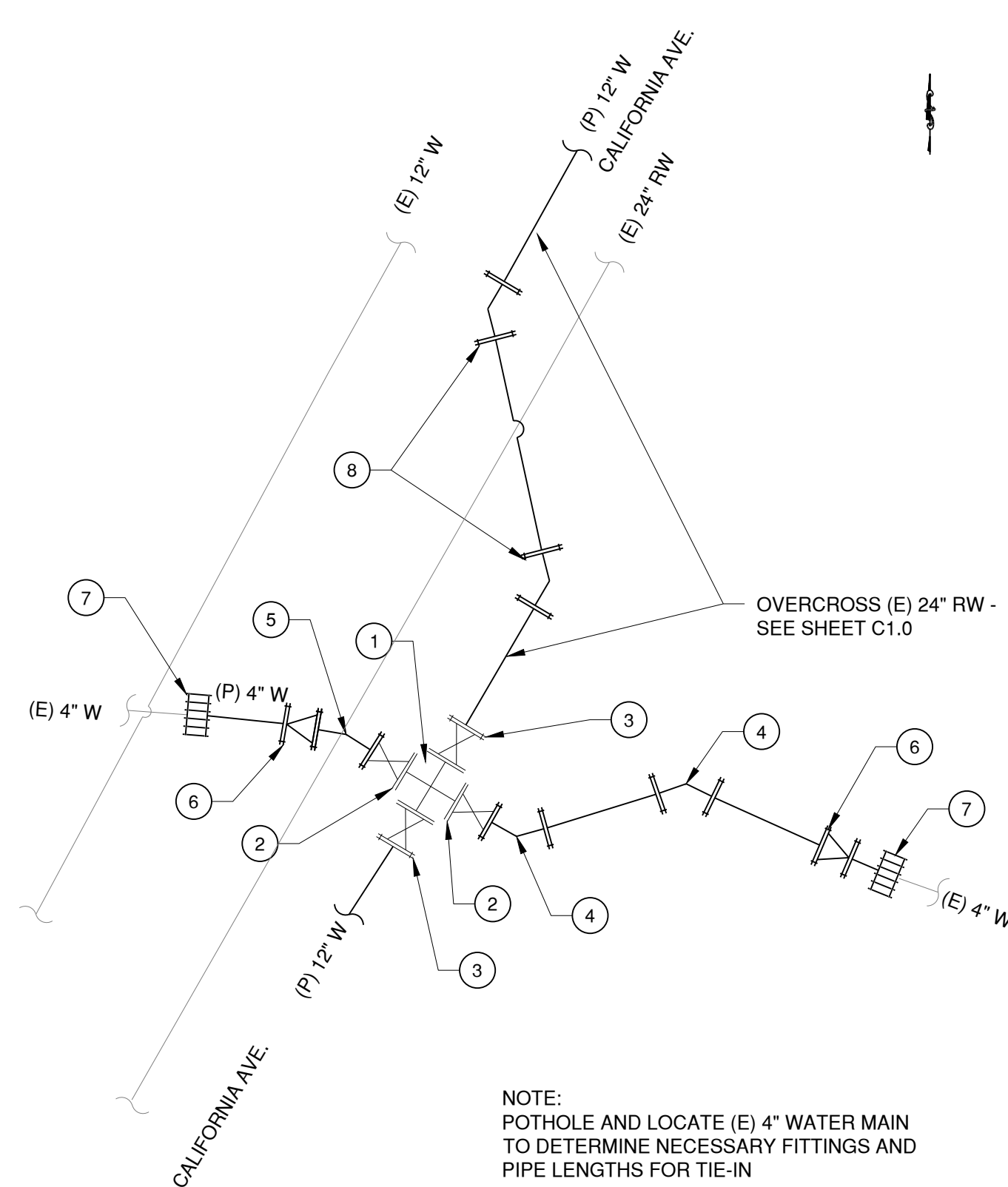
KEY NOTES

- 16" 90° ELL, FL
- 16" BFV, FL X MJ
- 16" MAGNETIC METER W/ VAULT - SEE DETAIL C2.1
- 16" RESTRAINED FLANGE ADAPTER
- 16" X 12" REDUCER, FL
- 16" X 12" TEE, FL
- 12" RESTRAINED FLANGE ADAPTER
- 12" GATE VALVE, FL X MJ
- 12" PVC C900 DR 14 (LENGTHS AS NEEDED)
- 16" DIP PC 350 (LENGTHS AS NEEDED)
- 16" COUPLING
- 12" TEE, FL

A-ZONE 16-INCH METER & TIE-IN

1
-

NTS



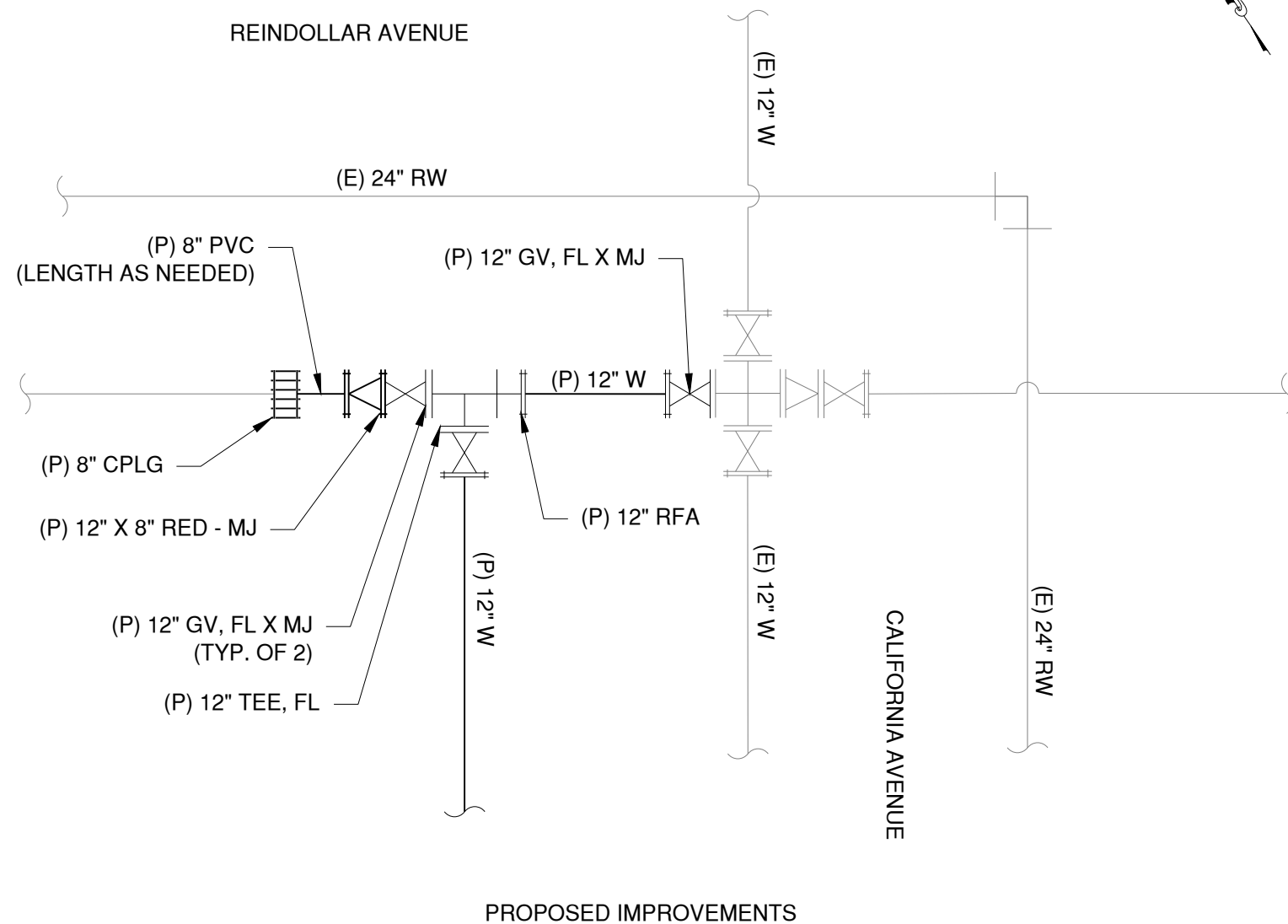
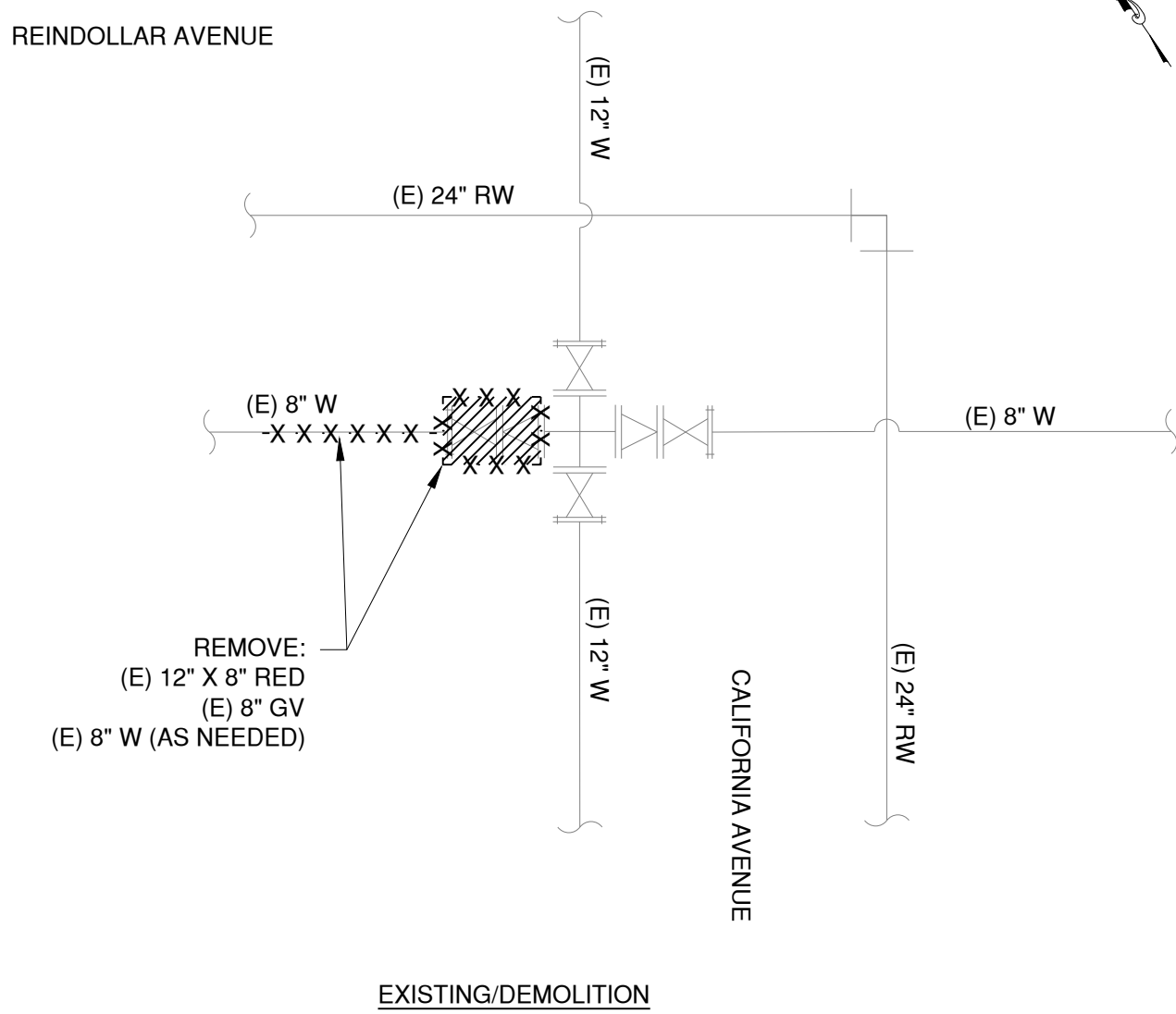
KEY NOTES

- 12" X 8" CROSS
- 8" GV - FL X MJ
- 12" GV - FL X MJ
- 8" 45° ELL - MJ
- 8" 22.5° ELL - MJ
- 8" X 4" RED - MJ
- 4" RESTRAINED COUPLING
- 12" 45° ELL - MJ

STA 4+98 TIE-IN TO (E) 4" WATER LINE

2
-

NTS



TIE-IN AT REINDOLLAR AVENUE

3
-

NTS

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11 RESERVATION ROAD
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(831) 384-6131

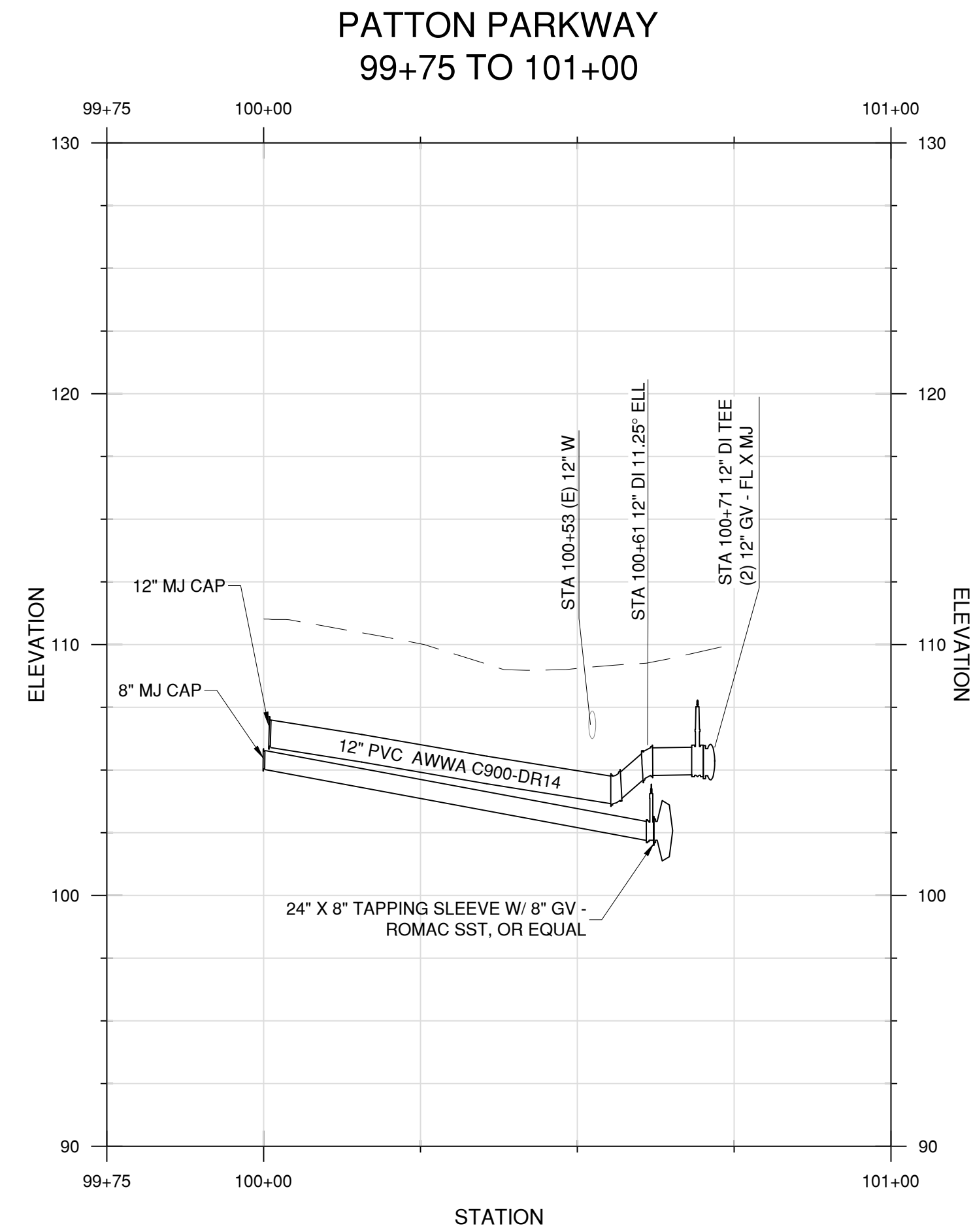
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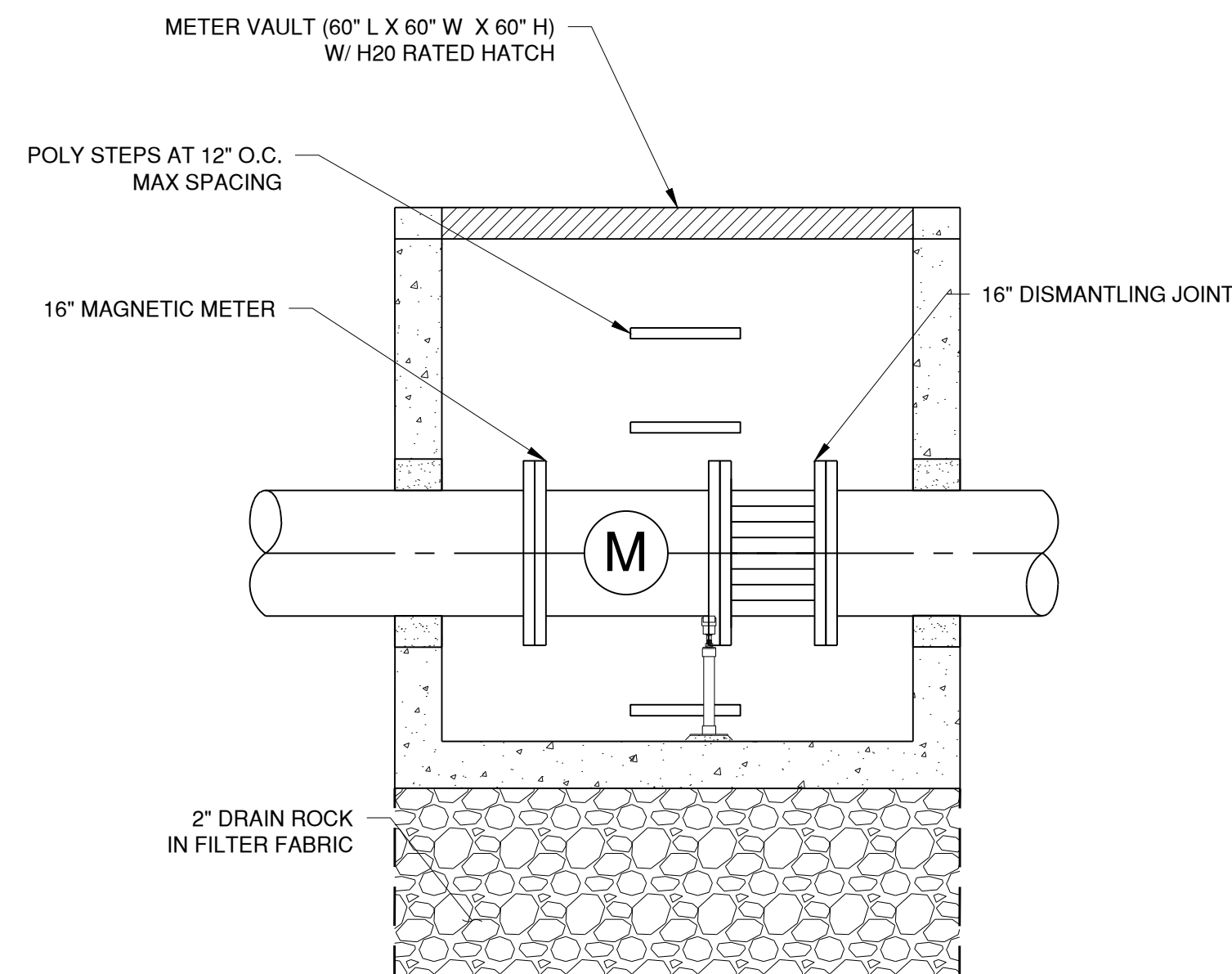
**CALIFORNIA AVENUE WATERMAIN
CONNECTION DETAILS**

DATE: JULY 2025
SCALE: AS SHOWN
DESIGN: JCT
DRAWN: JCT
CHECK: AAS

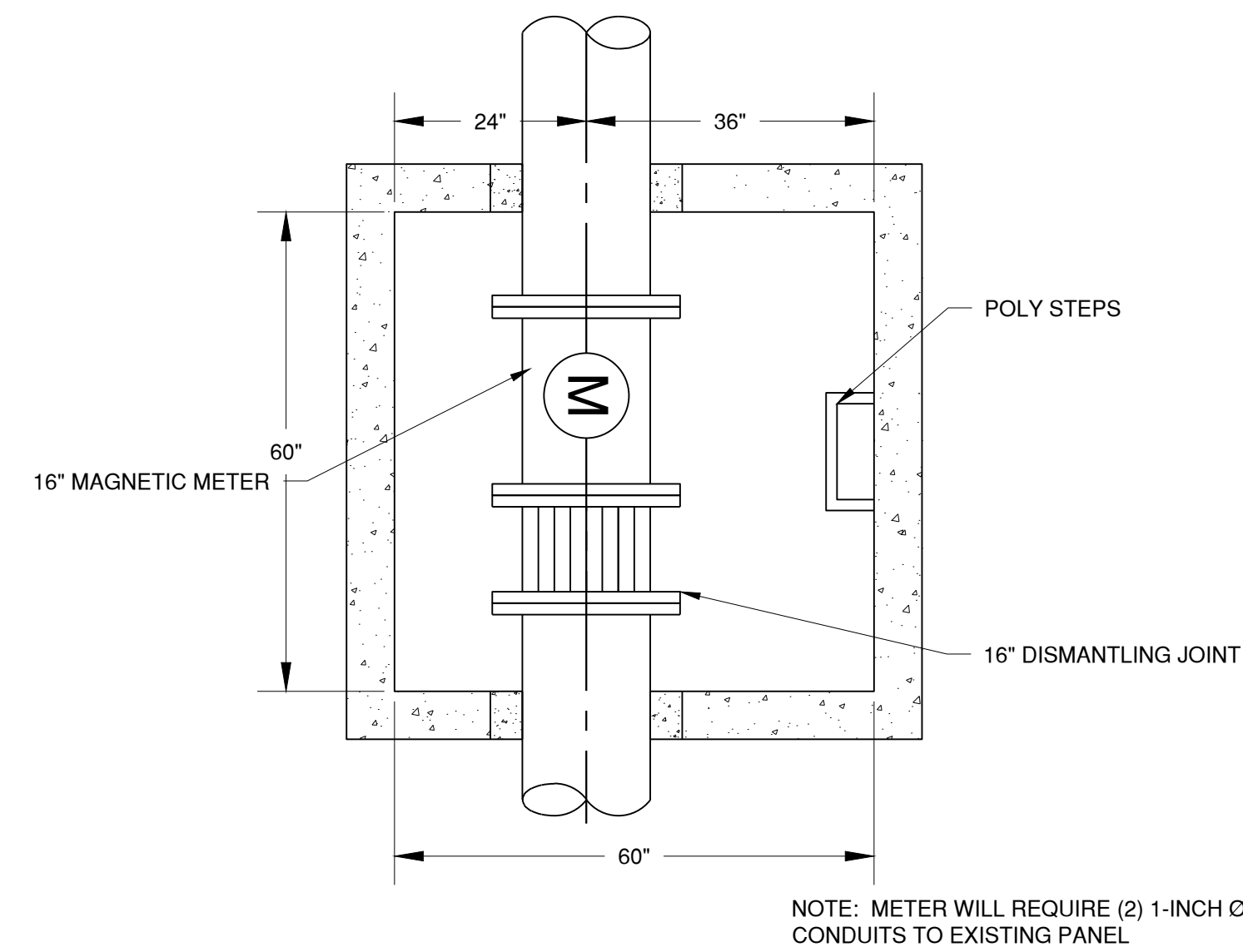
SHEET
C2.0
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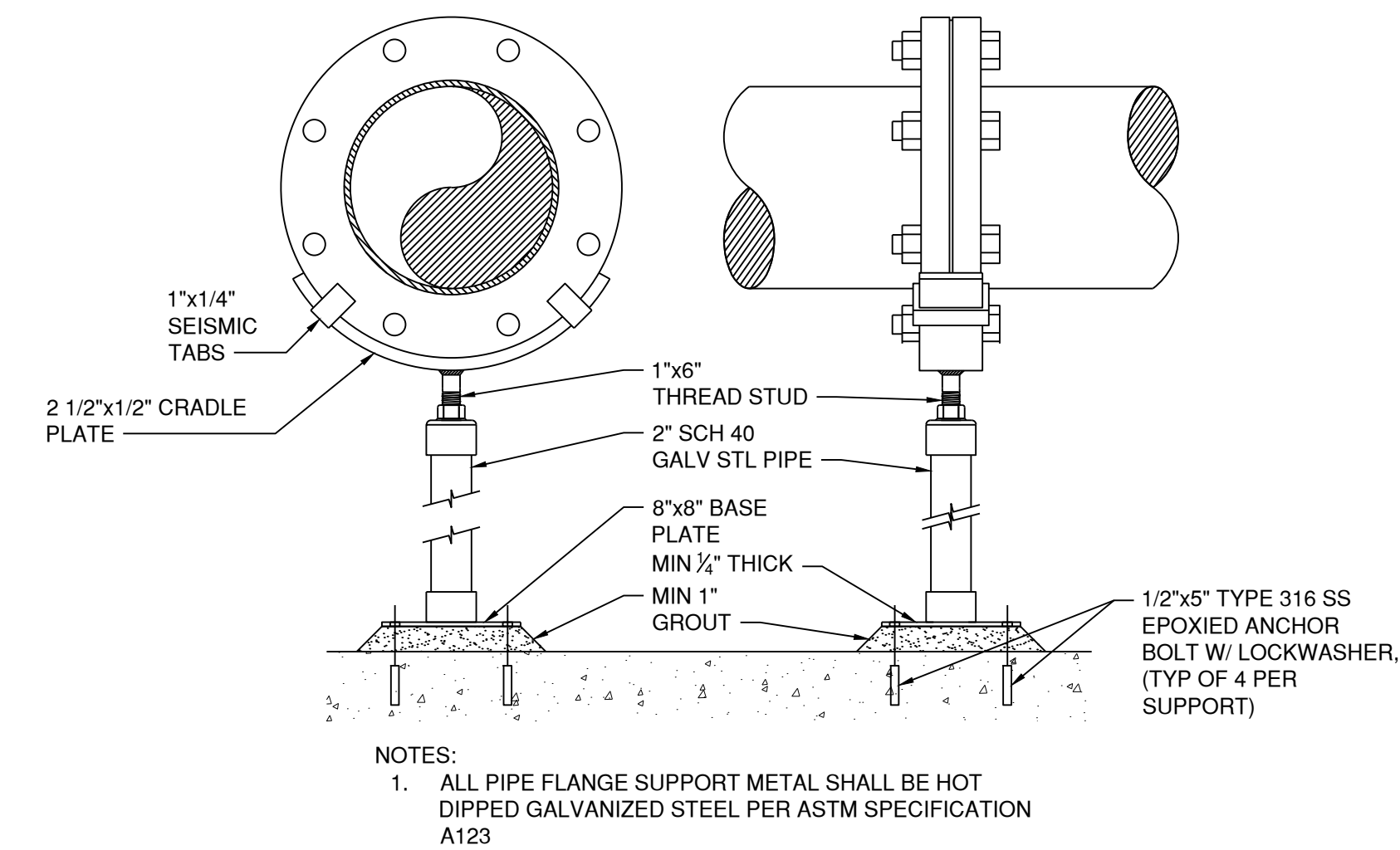
NOTE: EXISTING RECYCLED WATER MAIN LINE PRESSURE = 150 PSI



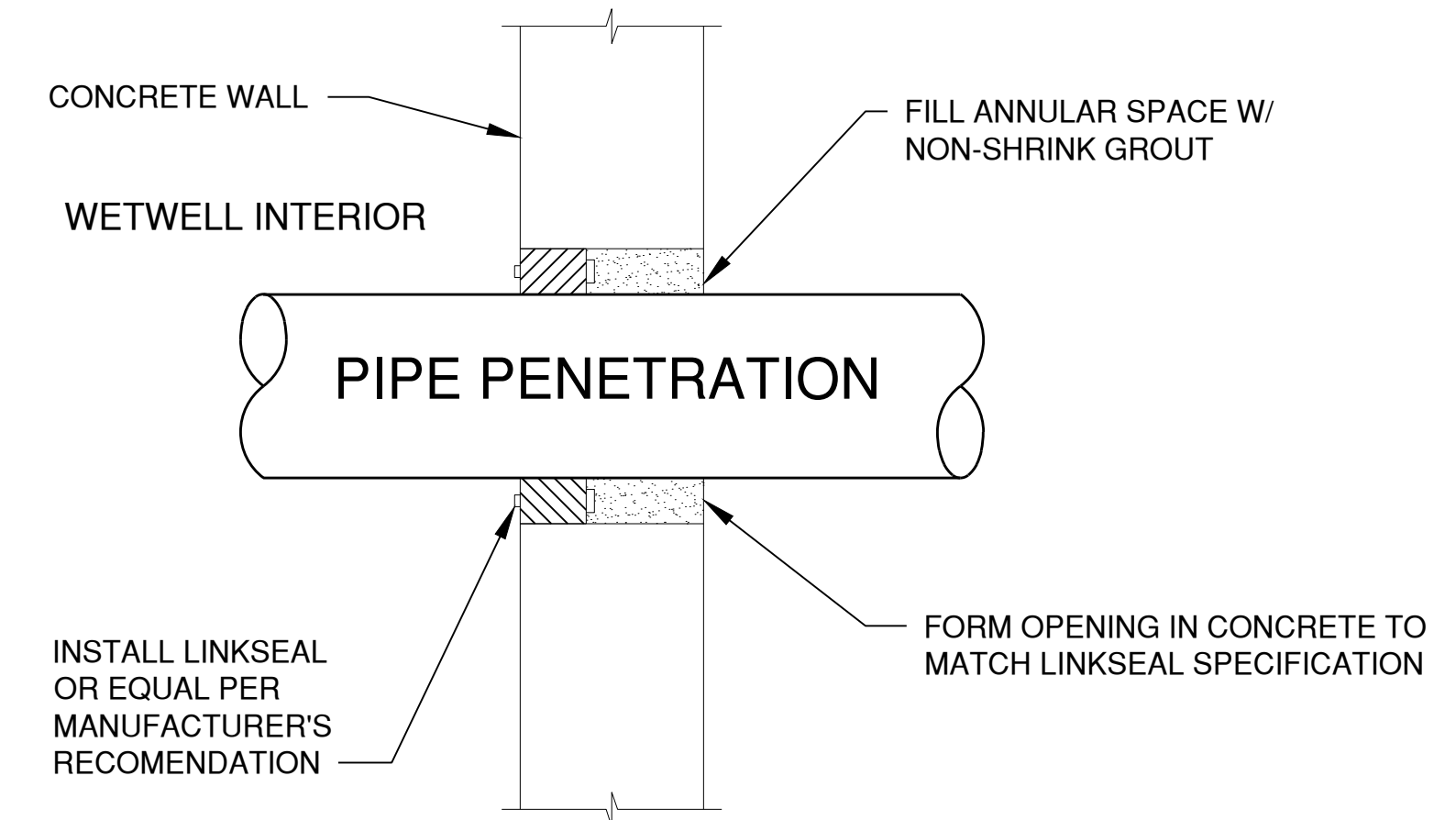
METER VAULT DETAIL 4
NTS



NOTE: METER WILL REQUIRE (2) 1-INCH Ø CONDUITS TO EXISTING PANEL



PIPE SUPPORT X
NO SCALE X



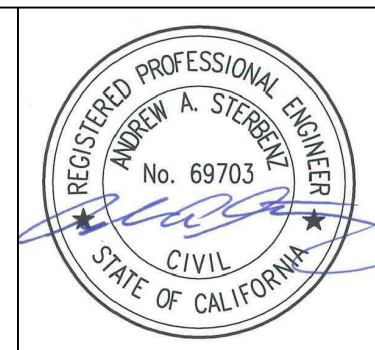
PIPE PENETRATION X
NO SCALE X

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11 RESERVATION ROAD
MARINA, CA 93933
(831) 384-6131

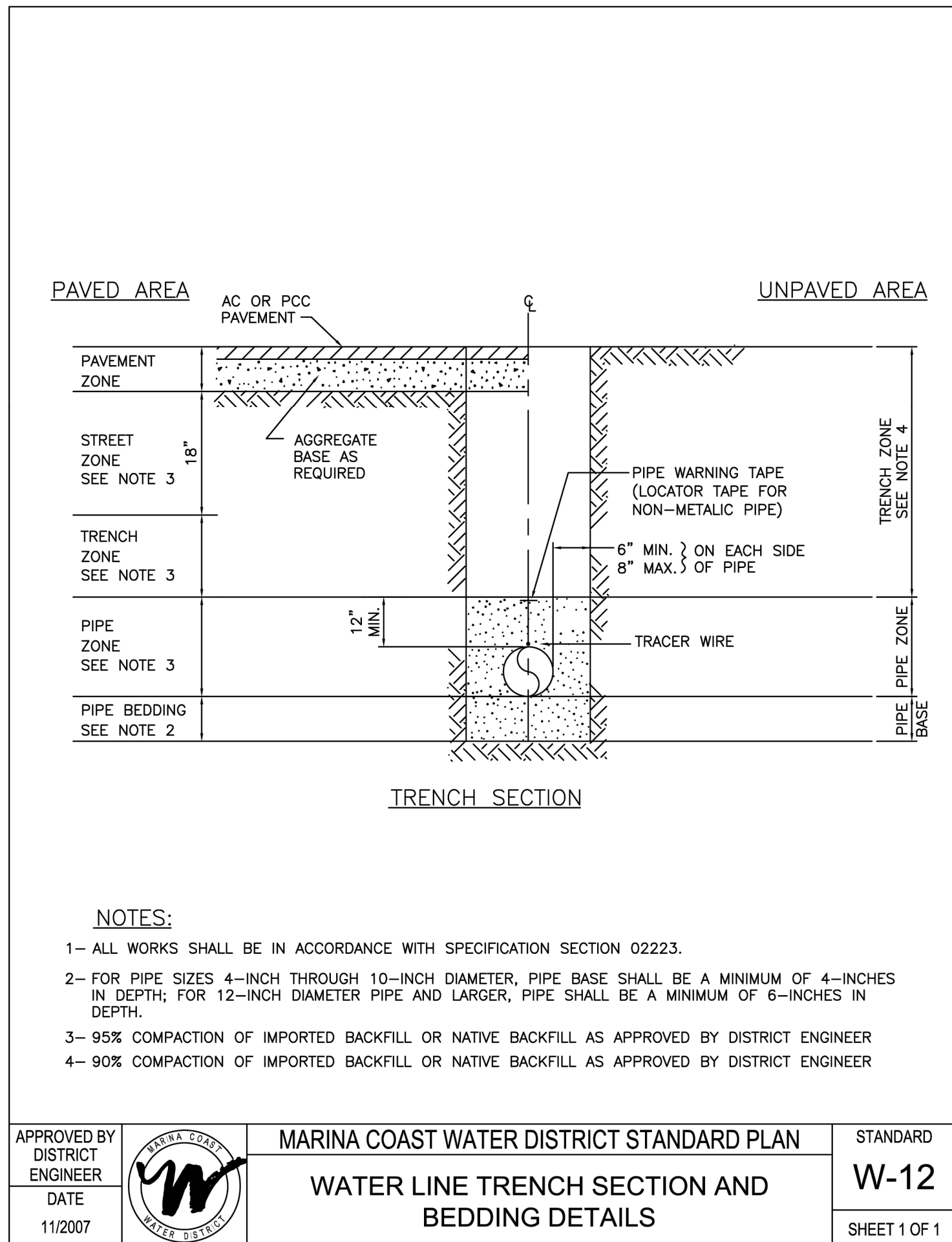
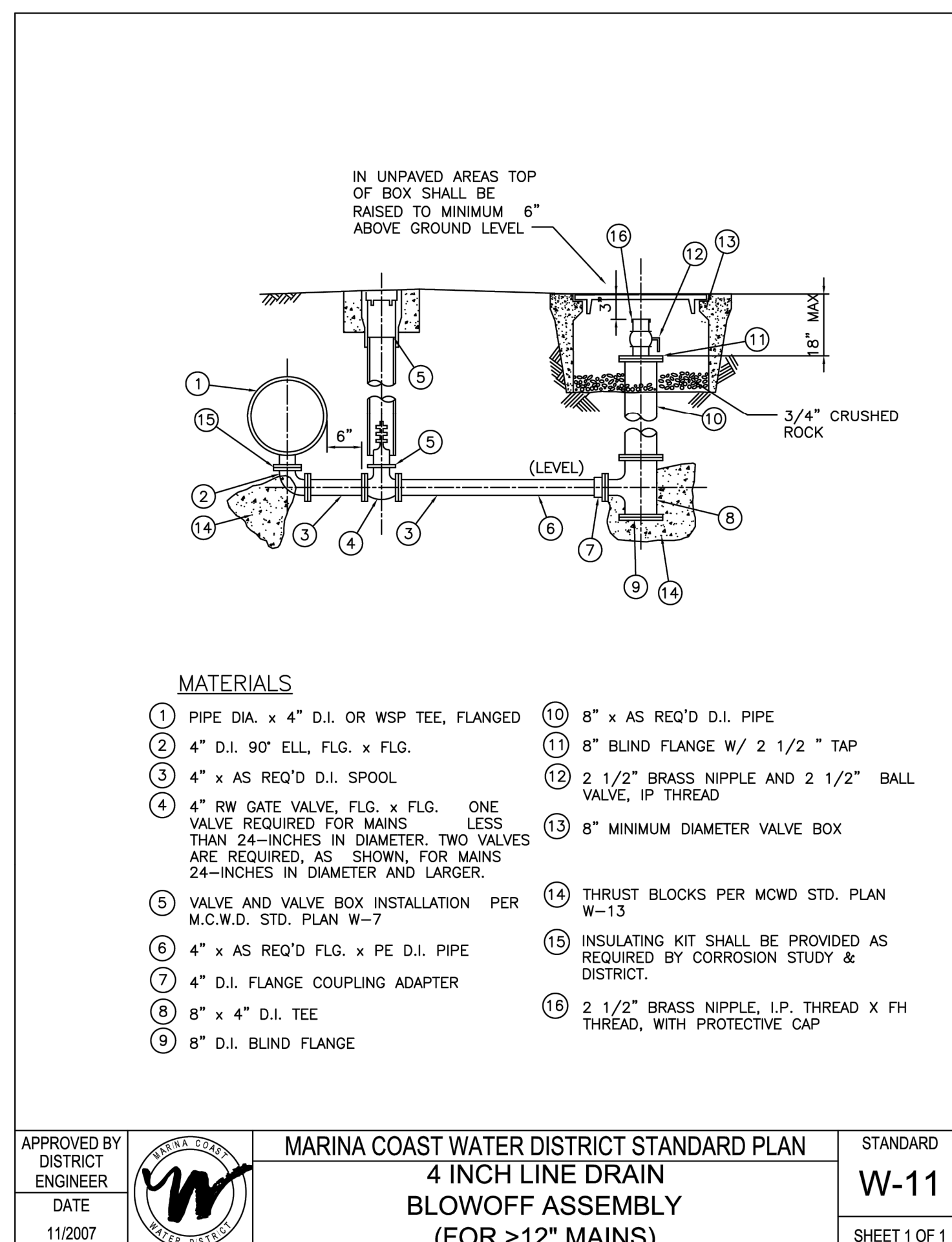
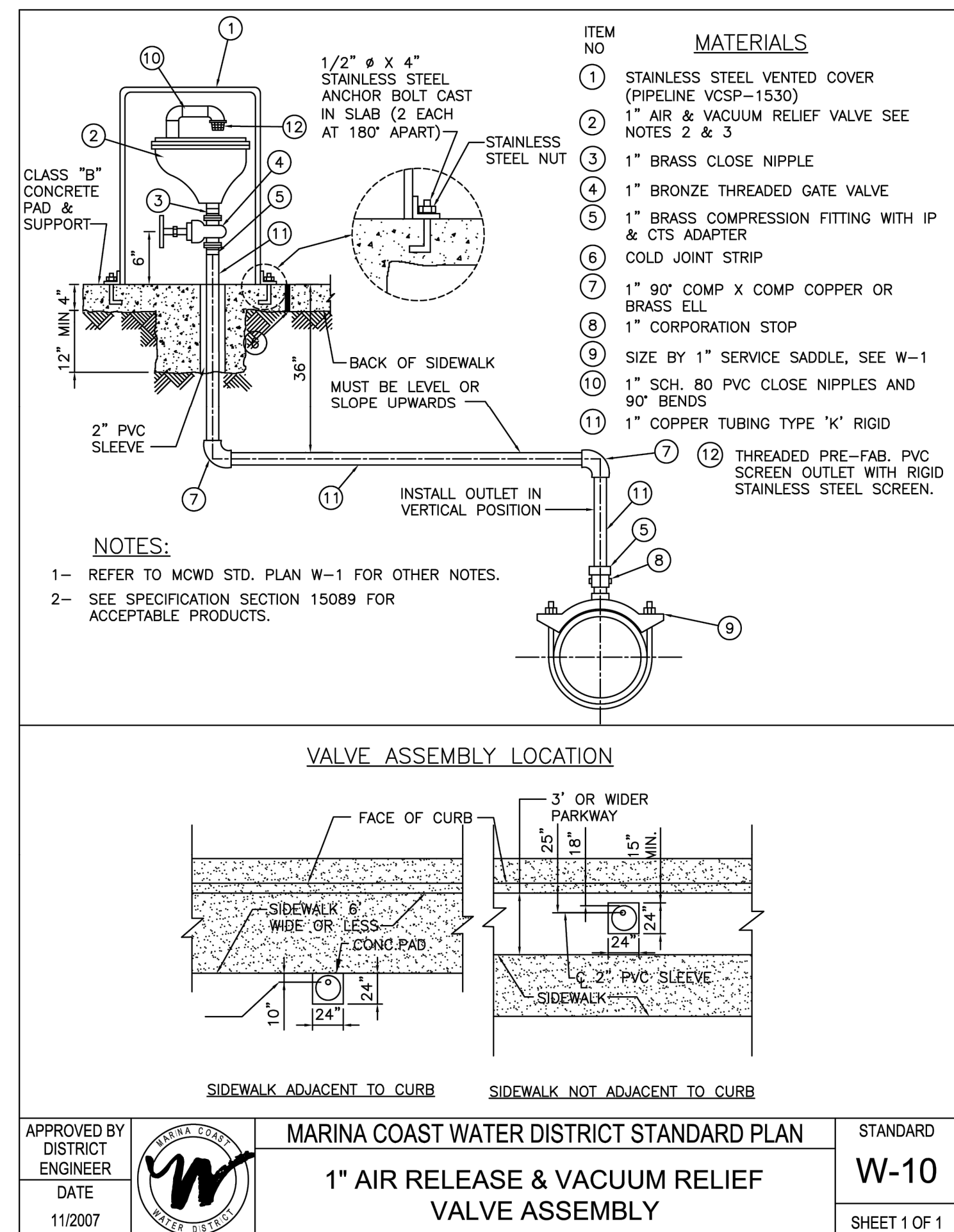
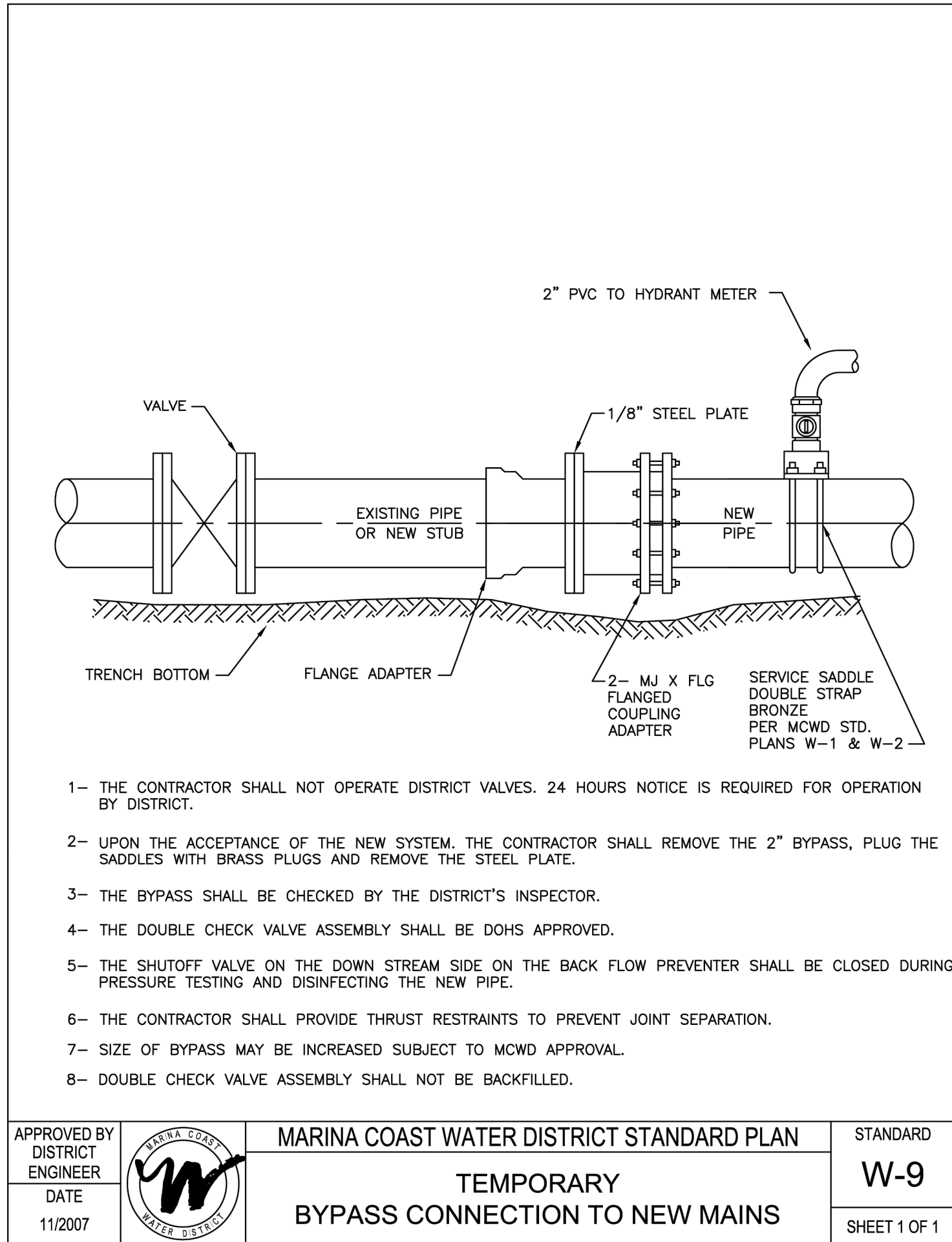
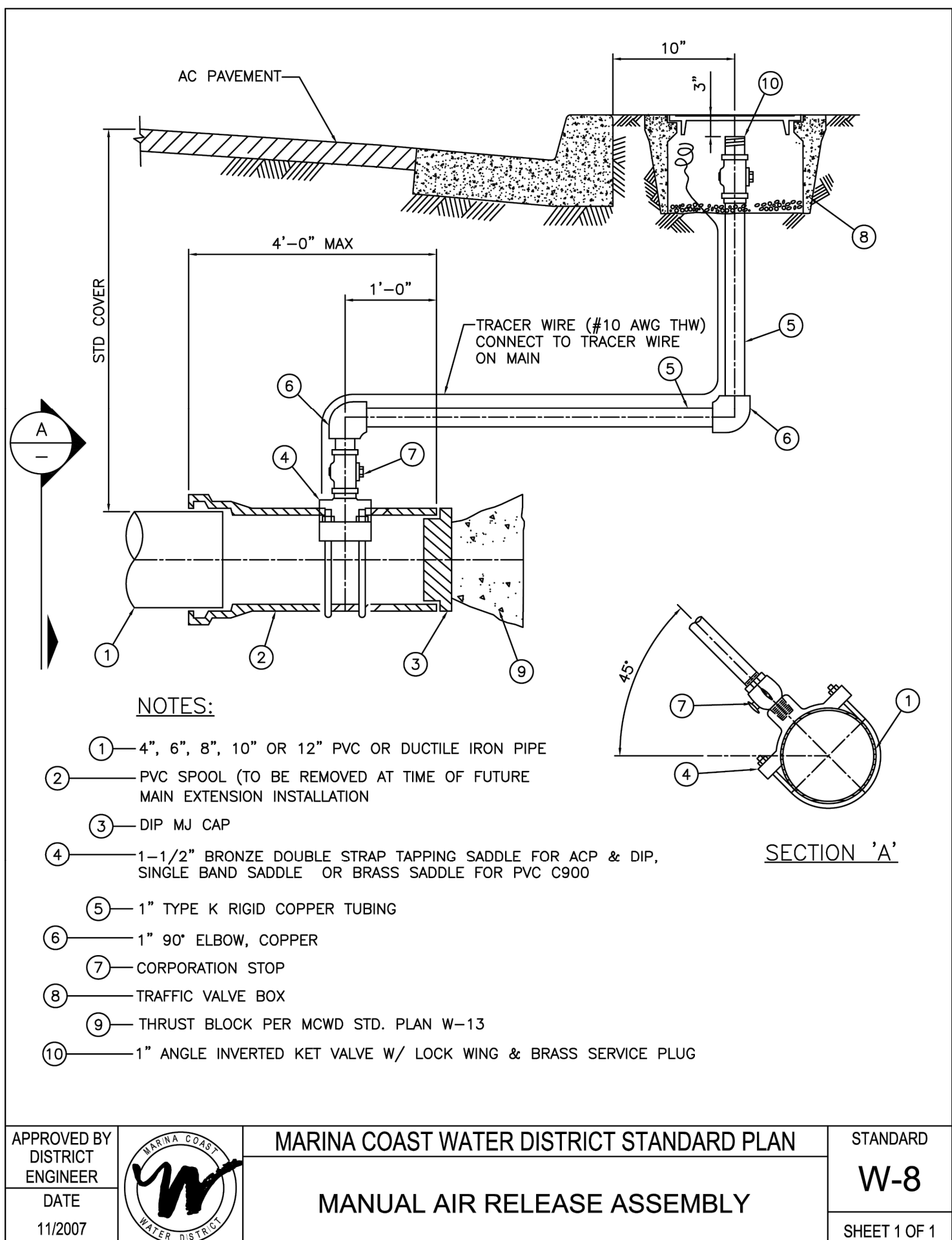
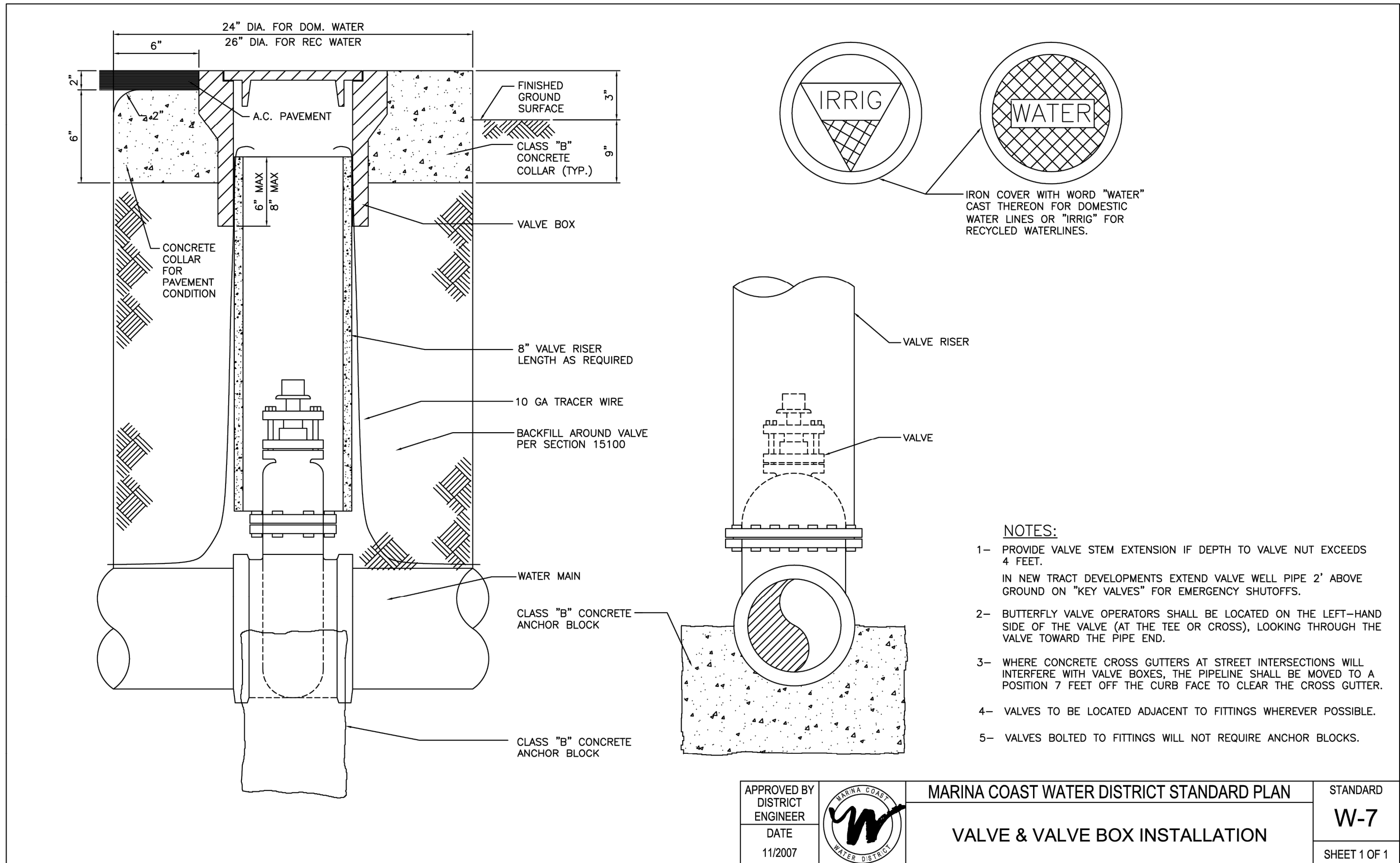
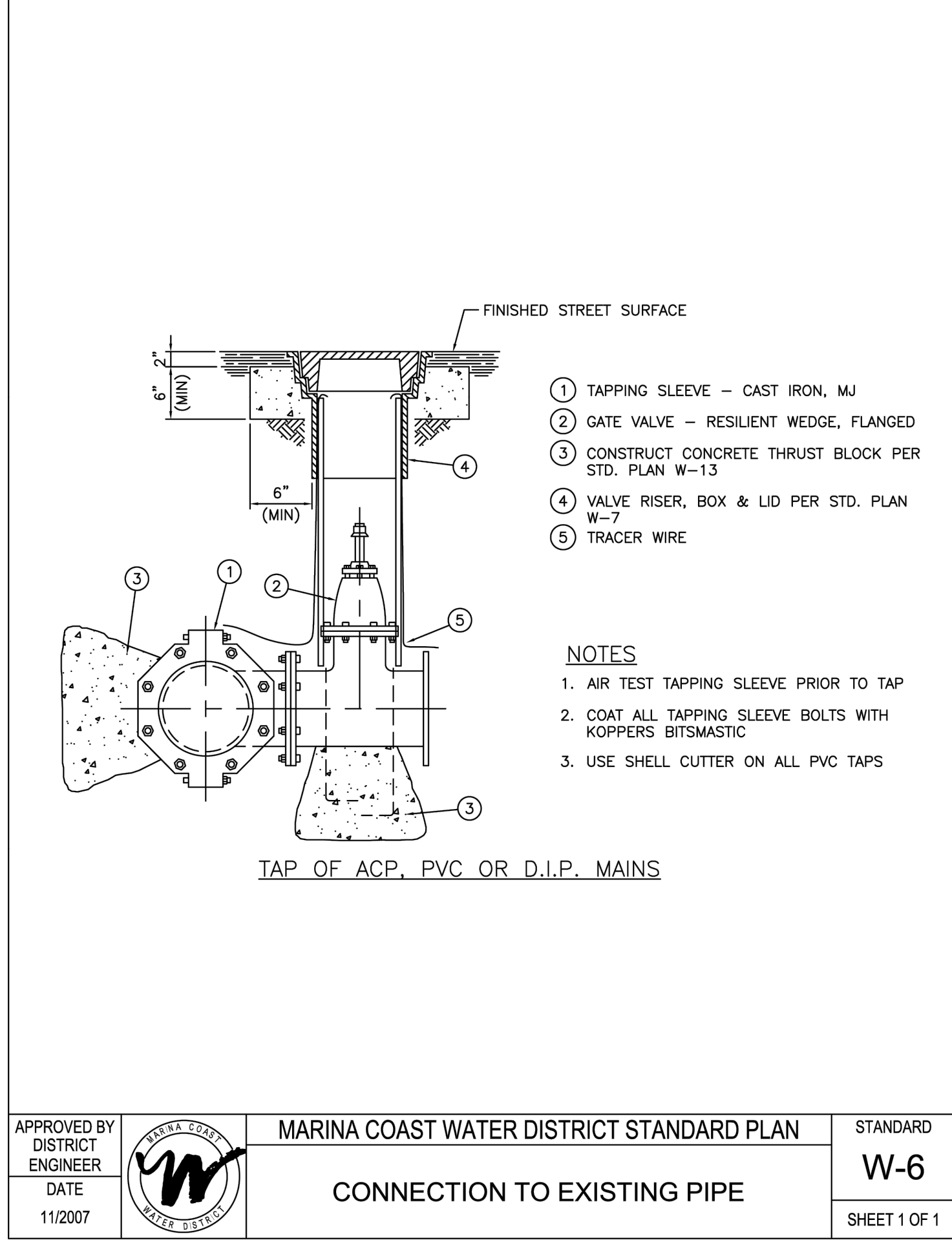
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SALINAS, CA 93907
(831) 883-4848



CALIFORNIA AVENUE WATERMAIN
CONSTRUCTION DETAILS

DATE: JULY 2025
SCALE: AS SHOWN
DESIGN: JCT
DRAWN: JCT
CHECK: AAS

SHEET
C2.1
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| NO. | REVISION DESCRIPTION | DATE | APPR |
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MARINA COAST WATER DISTRICT
11 RESERVATION ROAD
MARINA, CA 93933
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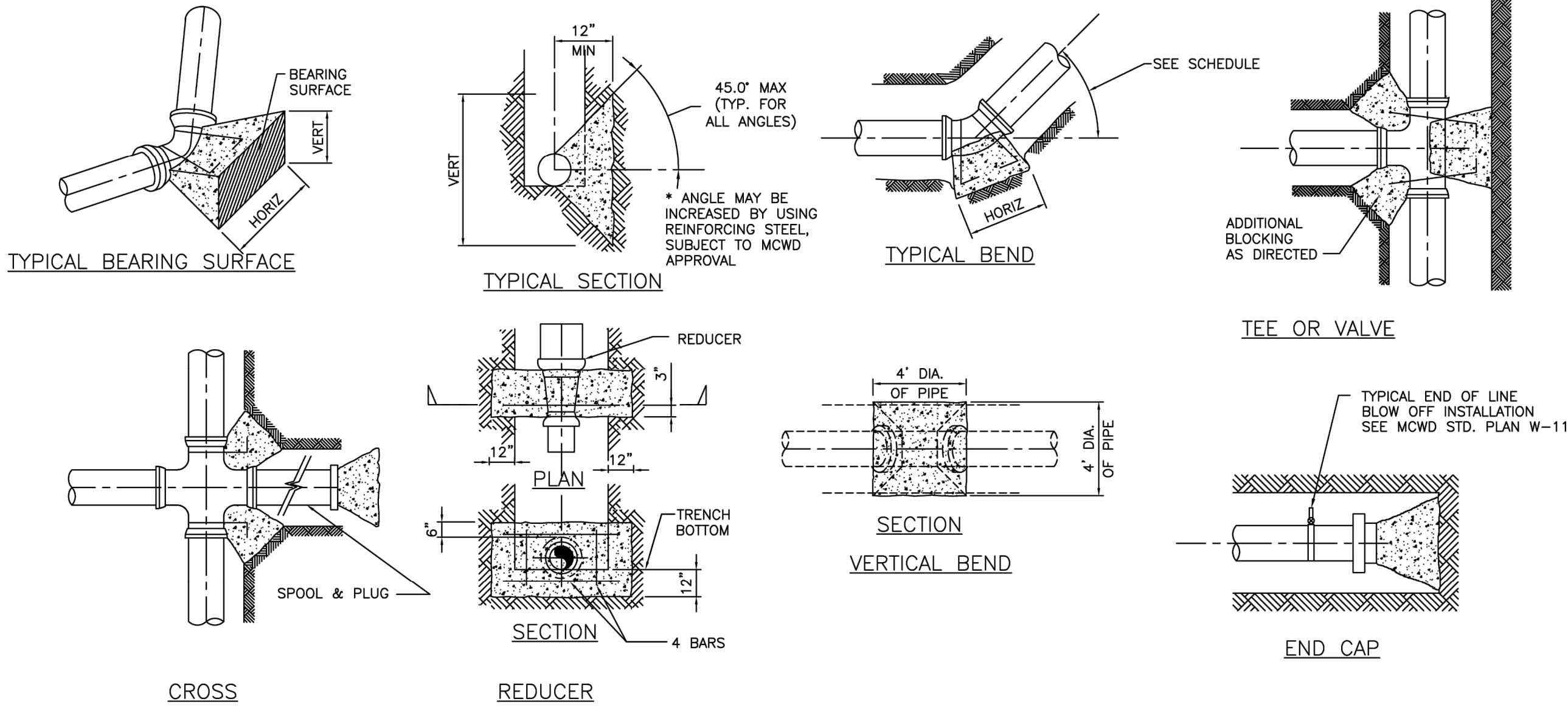
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**CALIFORNIA AVENUE WATERMAIN
STANDARD DETAILS I**


DATE: JULY 2025
SCALE: AS SHOWN
DESIGN: JCT
DRAWN: JCT
CHECK: AAS

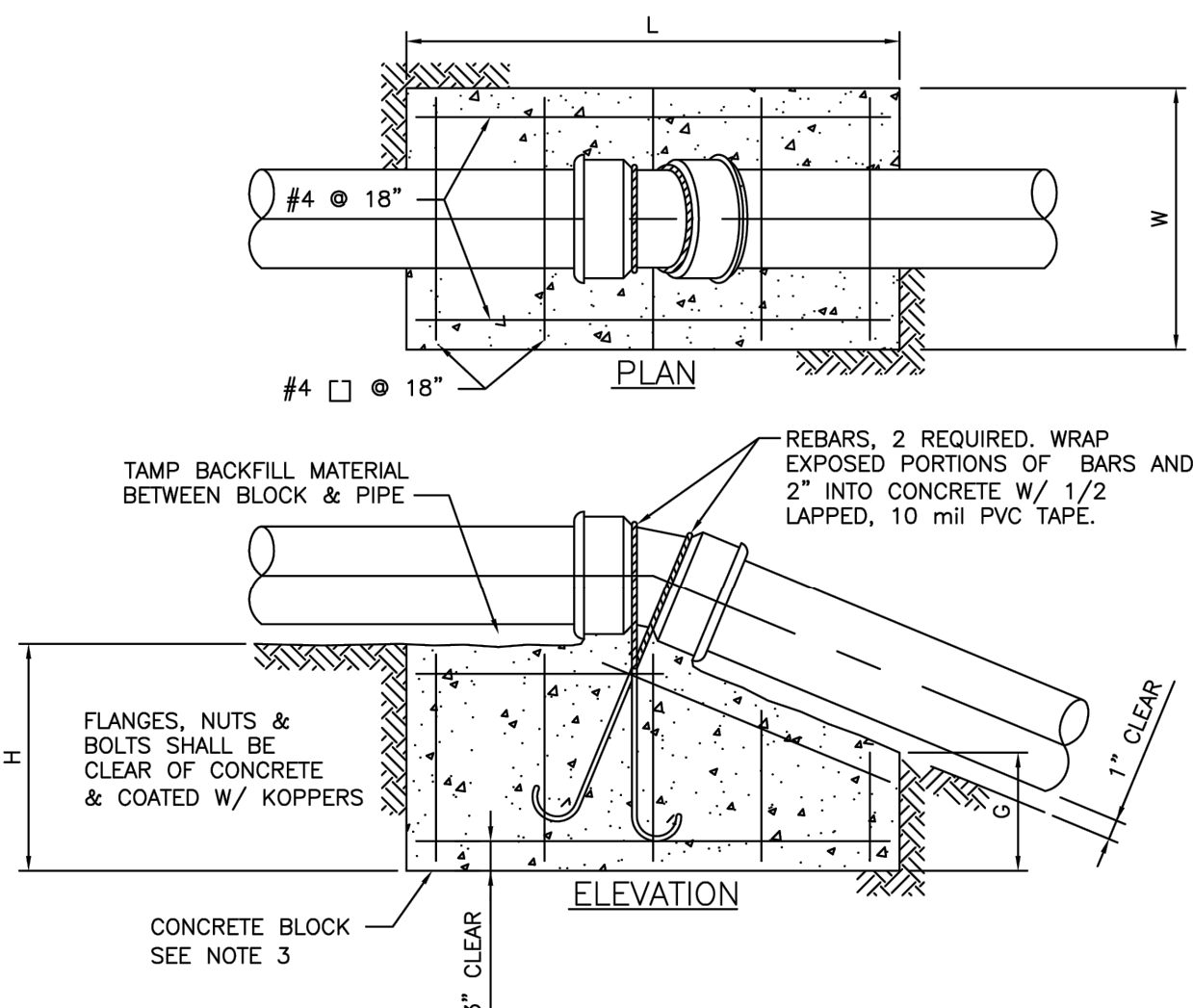
**SHEET
C2.2
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- NOTES:
- THRUST BLOCK BEARING AREA BASED ON ALLOWABLE SOIL BEARING VALUE OF 1500 psf PRESSURE AND 225 psi LINE PRESSURE WITH 3'-0" COVER MINIMUM.
FOR BEARING = 1000 psf, 1.5 X AREA SHOWN
FOR BEARING = 500 psf, 3.0 X AREA SHOWN
 - ALL THRUST BLOCKS SHALL BE 2,000 PSI CONCRETE AND PLACED AGAINST UNDISTURBED SOIL. DESIGN ENGINEER SHALL DETERMINE SIZES NOT SHOWN.
 - STRAPS TO BE #4 REBARS EMBEDDED IN THRUST BLOCK TO A DEPTH EQUAL TO 3/4 OF PIPE DIAMETER. STRAP BEND EQUALS 1/2 PIPE DIAMETER
 - CONCRETE SHALL NOT EXTEND ONTO FLANGE OR ADJOINING PIPE.
 - JOINTS AND FACE OF PLUGS TO BE KEPT CLEAR OF CONCRETE
 - WRAP EXPOSED PORTION OF BARS AND 2" INTO CONCRETE WITH HALF LAPPED, 10 MIL PVC TAPE
 - WHEN CLEARANCES TO OTHER FACILITIES OR UTILITIES DO NOT ALLOW THE USE OF THRUST BLOCK, RESTRAINED PIPE SHALL BE USED.
 - THRUST BLOCKS ON CROSSES SHALL BE USED ONLY WHEN THERE IS A STUB-OUT ON ONE OR MORE SIDES, OR WHEN THERE IS ADJOINING UNRESTRAINED LENGTHS OF VALVES.
 - PIPE DIAMETERS GREATER THAN 12" SHALL BE CALCULATED BY THE ENGINEER & SUBMITTED TO DISTRICT ENGINEER FOR APPROVAL.
 - DISTRICT ALLOWS RESTRAINED JOINTS AS AN ALTERNATIVE TO THRUST BLOCKS.


| MINIMUM SIZE OF THRUST BLOCK BEARING SURFACE | | | | | | | | | | | |
|--|--------------|-------|--------------|-------|----------|-------|----------|-------|--------|-------|---------|
| PIPE SIZE | 11-1/4" BEND | | 22-1/2" BEND | | 45° BEND | | 90° BEND | | TEE | | END CAP |
| | HORIZ. | VERT. | HORIZ. | VERT. | HORIZ. | VERT. | HORIZ. | VERT. | HORIZ. | VERT. | |
| 4" | 1'-6" | 0'-9" | 1'-6" | 0'-9" | 1'-6" | 1'-0" | 2'-3" | 1'-3" | 1'-6" | 1'-0" | 1'-6" |
| 6" | 2'-6" | 1'-0" | 2'-6" | 1'-0" | 3'-6" | 1'-6" | 4'-6" | 2'-3" | 4'-0" | 2'-0" | 2'-6" |
| 8" | 3'-0" | 1'-6" | 3'-0" | 1'-6" | 4'-3" | 2'-3" | 5'-6" | 3'-0" | 5'-0" | 2'-6" | 3'-9" |
| 10" | 3'-9" | 1'-9" | 3'-9" | 1'-9" | 5'-0" | 2'-9" | 7'-0" | 3'-6" | 5'-6" | 3'-3" | 4'-6" |
| 12" | 4'-3" | 2'-3" | 4'-3" | 2'-3" | 5'-6" | 3'-6" | 8'-3" | 4'-0" | 7'-0" | 3'-6" | 5'-3" |

| | | | |
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| APPROVED BY DISTRICT ENGINEER |  | MARINA COAST WATER DISTRICT STANDARD PLAN | STANDARD |
| DATE 11/2007 | | THRUST BLOCK DETAILS | W-13 |
| | | | SHEET 1 OF 1 |

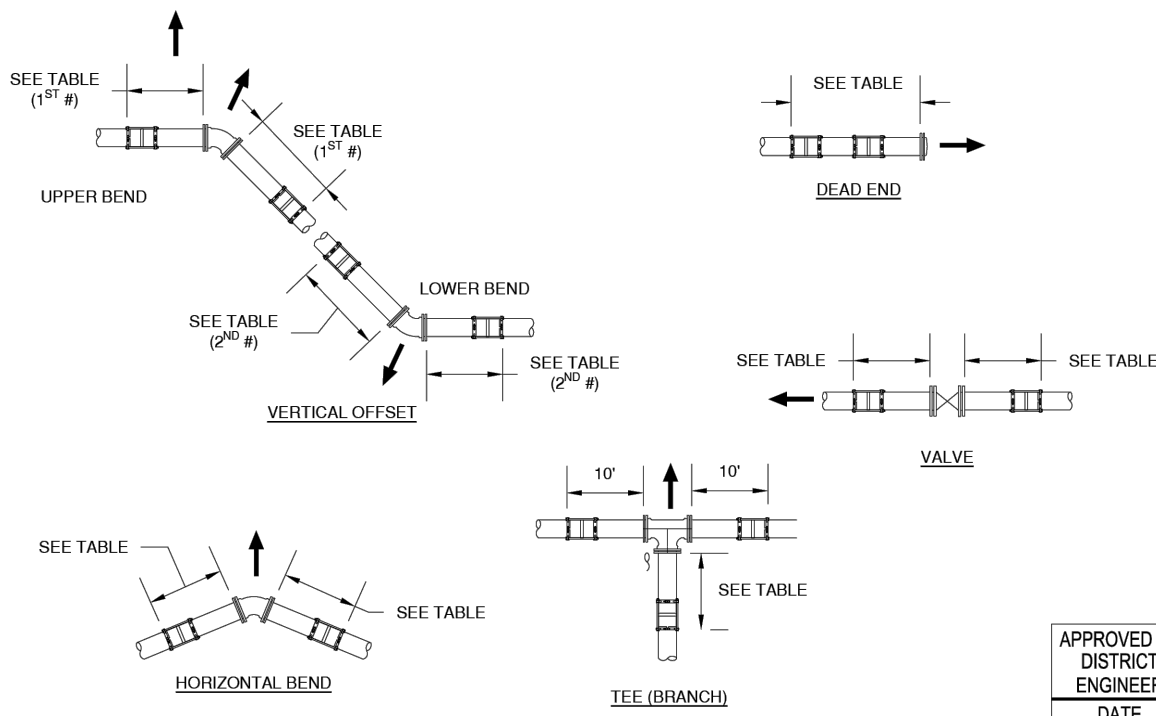


| THRUST BLOCK DIMENSION — UPWARD THRUST | | | | | | | | | | | | | | | |
|--|--------------|-----|-----|-----|-----|--------------|-----|-----|-----|-----|----------|-----|-----|-----|-----|
| PIPE SIZE | 11—1/4" BEND | | | | | 22—1/2" BEND | | | | | 45° BEND | | | | |
| | L | W | H | G | BAR | L | W | H | G | BAR | L | W | H | G | BAR |
| 6" | 3.5 | 2.0 | 2.0 | 1.0 | 4 | 4.5 | 2.0 | 3.0 | 1.0 | 4 | 4.5 | 4.0 | 3.0 | 1.0 | 4 |
| 8" | 3.5 | 3.0 | 2.0 | 1.0 | 4 | 4.5 | 4.0 | 3.0 | 2.0 | 4 | 5.5 | 5.0 | 4.0 | 1.5 | 5 |
| 10" | 4.0 | 3.5 | 2.5 | 1.0 | 4 | 5.0 | 4.0 | 3.5 | 1.5 | 5 | 6.0 | 5.0 | 4.5 | 1.5 | 6 |
| 12" | 4.0 | 3.5 | 3.5 | 1.0 | 4 | 5.0 | 4.0 | 4.0 | 2.0 | 5 | 6.5 | 5.0 | 5.0 | 2.5 | 7 |
| 16" | 6.0 | 4.0 | 4.0 | 1.0 | 5 | 6.5 | 5.0 | 5.0 | 2.5 | 7 | 10.0 | 5.0 | 6.0 | 3.0 | 10 |

- NOTES:
- ENCASE ALL BURIED METALIC SURFACES WITH POLYETHYLENE WRAP AS SPECIFIED IN AWWA C105.
 - RESTRAINED JOINT DUCTILE IRON PIPE MAY BE USED IN PLACE OF THRUST BLOCK. CONTACT MCWD FOR APPROVAL AND DETAILS.
 - DIMENSIONS L, W, H, G ARE IN FEET.
 - THRUST BLOCK DIMENSIONS BASED ON 150 PSI TEST PRESSURE AND CONCRETE SHALL BE 2000 PSI MIN, 28 DAY COMPRESSIVE STRENGTH.

| | | | |
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| APPROVED BY DISTRICT ENGINEER |  | MARINA COAST WATER DISTRICT STANDARD PLAN | STANDARD |
| DATE 11/2007 | | UPWARD THRUST BLOCK DETAILS | W-14 |
| | | | SHEET 1 OF 1 |

| DUCTILE IRON PIPE (POLY-WRAP) | | | | | | | | | | | |
|--|------------------------|----------|----------|------------|-------------|-------------------|---------------|-----------------|-----------------------------------|--|--|
| REQUIRED LENGTH (FT): 150 PSI (200 PSI) PRESSURE | | | | | | | | | | | |
| NOMINAL PIPE SIZE | HORIZONTAL RESTRAINING | | | | | | | | VERTICAL RESTRAINING (SEE NOTE 4) | | |
| | TEE BRANCH | BEND 90° | BEND 45° | BEND 22.5° | BEND 11.25° | VALVE OR DEAD END | BEND 11.25° | BEND 22.5° | BEND 45° | | |
| 6 | 34 (85) | 20 (27) | 9 (11) | 4 (6) | 2 (3) | 82 (109) | 9, 2 (11, 2) | 17, 3 (22, 4) | 34, 7 (46, 9) | | |
| 8 | 59 (85) | 26 (34) | 11 (15) | 6 (7) | 3 (4) | 107 (143) | 11, 2 (15, 3) | 22, 4 (29, 6) | 45, 9 (60, 11) | | |
| 10 | 80 (125) | 31 (41) | 13 (17) | 6 (8) | 3 (4) | 129 (172) | 13, 3 (17, 4) | 26, 5 (35, 7) | 54, 10 (71, 13) | | |
| 12 | 102 (152) | 36 (47) | 15 (20) | 7 (10) | 4 (6) | 151 (202) | 15, 3 (20, 4) | 31, 6 (41, 6) | 63, 12 (84, 16) | | |
| 16 | 120 (178) | 40 (53) | 17 (22) | 8 (11) | 4 (6) | 170 (226) | 17, 4 (23, 5) | 34, 7 (46, 10) | 71, 15 (94, 20) | | |
| 18 | 137 (200) | 43 (56) | 18 (24) | 9 (12) | 5 (6) | 188 (255) | 19, 4 (25, 6) | 38, 8 (50, 11) | 78, 16 (104, 22) | | |
| 20 | 155 (223) | 47 (63) | 20 (26) | 10 (13) | 5 (7) | 206 (274) | 21, 5 (27, 6) | 41, 9 (55, 12) | 86, 18 (114, 24) | | |
| 24 | 189 (268) | 54 (72) | 23 (30) | 11 (15) | 6 (8) | 241 (321) | 24, 5 (32, 7) | 48, 10 (64, 13) | 100, 21 (133, 27) | | |



| PVC | | | | | | | | | | | |
|--|------------------------|----------|----------|------------|-------------|-------------------|---------------|---------------|-----------------------------------|--|--|
| REQUIRED LENGTH (FT): 150 PSI (200 PSI) PRESSURE | | | | | | | | | | | |
| NOMINAL PIPE SIZE | HORIZONTAL RESTRAINING | | | | | | | | VERTICAL RESTRAINING (SEE NOTE 4) | | |
| | TEE BRANCH | BEND 90° | BEND 45° | BEND 22.5° | BEND 11.25° | VALVE OR DEAD END | BEND 11.25° | BEND 22.5° | BEND 45° | | |
| 4 | 8 (20) | 13 (17) | 6 (7) | 3 (4) | 2 (2) | 38 (51) | 4, 1 (5, 2) | 8, 2 (10, 3) | 16, 4 (21, 6) | | |
| 6 | 22 (40) | 18 (24) | 8 (10) | 4 (5) | 2 (3) | 53 (71) | 6, 2 (7, 2) | 11, 3 (15, 4) | 22, 6 (30, 8) | | |
| 8 | 36 (82) | 23 (30) | 10 (13) | 5 (6) | 3 (3) | 70 (93) | 7, 2 (10, 3) | 14, 4 (19, 5) | 29, 8 (39, 10) | | |
| 10 | 52 (88) | 27 (36) | 12 (15) | 6 (8) | 3 (4) | 84 (111) | 8, 3 (11, 3) | 17, 5 (23, 6) | 35, 9 (46, 12) | | |
| 12 | 67 (99) | 32 (42) | 13 (18) | 7 (9) | 4 (5) | 99 (131) | 10, 3 (13, 4) | 20, 5 (27, 7) | 41, 11 (56, 14) | | |


- NOTES:
- RESTRAINT LENGTHS IN TABLE ARE TO BE APPLIED IN BOTH DIRECTIONS OF FEATURE.
 - RESTRAINT LENGTH CALCULATION CRITERIA:
 - SOIL TYPE: SP
 - SAFETY FACTOR: 1.5
 - TRENCH TYPE: TYPE 5
 - DEPTH OF BURY: 3 FT (UP TO 12-IN Ø), 3.5 FT (GREATER THAN 12-IN Ø)
 - TEST PRESSURE: 150 PSI (200 PSI)
 - TEE BRANCH: 1/2 FEET LENGTH TO FIRST JOINT ON RUN
 - CONTRACTOR SHALL OBTAIN MCWD APPROVAL FOR JOINT FITTINGS AND LENGTHS NOT LISTED IN THIS TABLE, OR FOR MODIFICATIONS TO CALCULATION CRITERIA.
 - FOR VERTICAL OFFSETS, THE FIRST NUMBER USED IS THE RESTRAINING LENGTH AT THE UPPER BEND, AND THE SECOND NUMBER IS THE RESTRAINING LENGTH AT LOWER BEND.
 - LENGTH OF RESTRAINED JOINTS ALONG A BRANCH OF A TEE IS BASED ON A UNIFORM TEE FITTING SIZE. CONTRACTOR SHALL OBTAIN MCWD APPROVAL FOR LENGTH OF RESTRAINED JOINTS AT BRIDGING TEES.
 - RESTRAINT LENGTHS CALCULATED FROM EBAA IRON RESTRAINT LENGTH CALCULATOR.

MATERIALS

- FOR DUCTILE IRON PIPE
- FITTINGS: MJ RESTRAINT, EBAA MEGALUG SERIES 1100 OR EQUAL.
 - JOINTS:
 - BELL RESTRAINT HARNESS, EBAA SERIES 1700 OR EQUAL.
 - LOCKING GASKETS, FIELD-LOK 350 OR EQUAL.

FOR PVC PIPE

- FITTINGS: MJ RESTRAINT, EBAA MEGALUG SERIES 2000 OR EQUAL.
- JOINTS: BELL RESTRAINT HARNESS, EBAA SERIES 1600 OR EQUAL.

| | | | |
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| APPROVED BY DISTRICT ENGINEER |  | MARINA COAST WATER DISTRICT STANDARD PLAN | STANDARD |
| DATE 10/2024 | | MECHANICAL JOINT THRUST RESTRAINT TABLE & DETAILS | W-22 |
| | | | SHEET 1 OF 1 |

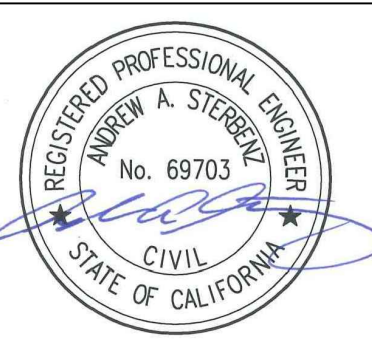
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| NO. | REVISION DESCRIPTION | DATE | APPR |
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MARINA COAST WATER DISTRICT
11 RESERVATION ROAD
MARINA, CA 93933
(831) 384-6131

SCHAAF & WHEELER
CONSULTING CIVIL ENGINEERS
3 QUAIL RUN CIRCLE, SUITE #101
SALINAS, CA 93907
(831) 883-4848



**CALIFORNIA AVENUE WATERMAIN
STANDARD DETAILS II**

DATE: JULY 2025
SCALE: AS SHOWN
DESIGN: JCT
DRAWN: JCT
CHECK: AAS

SHEET
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