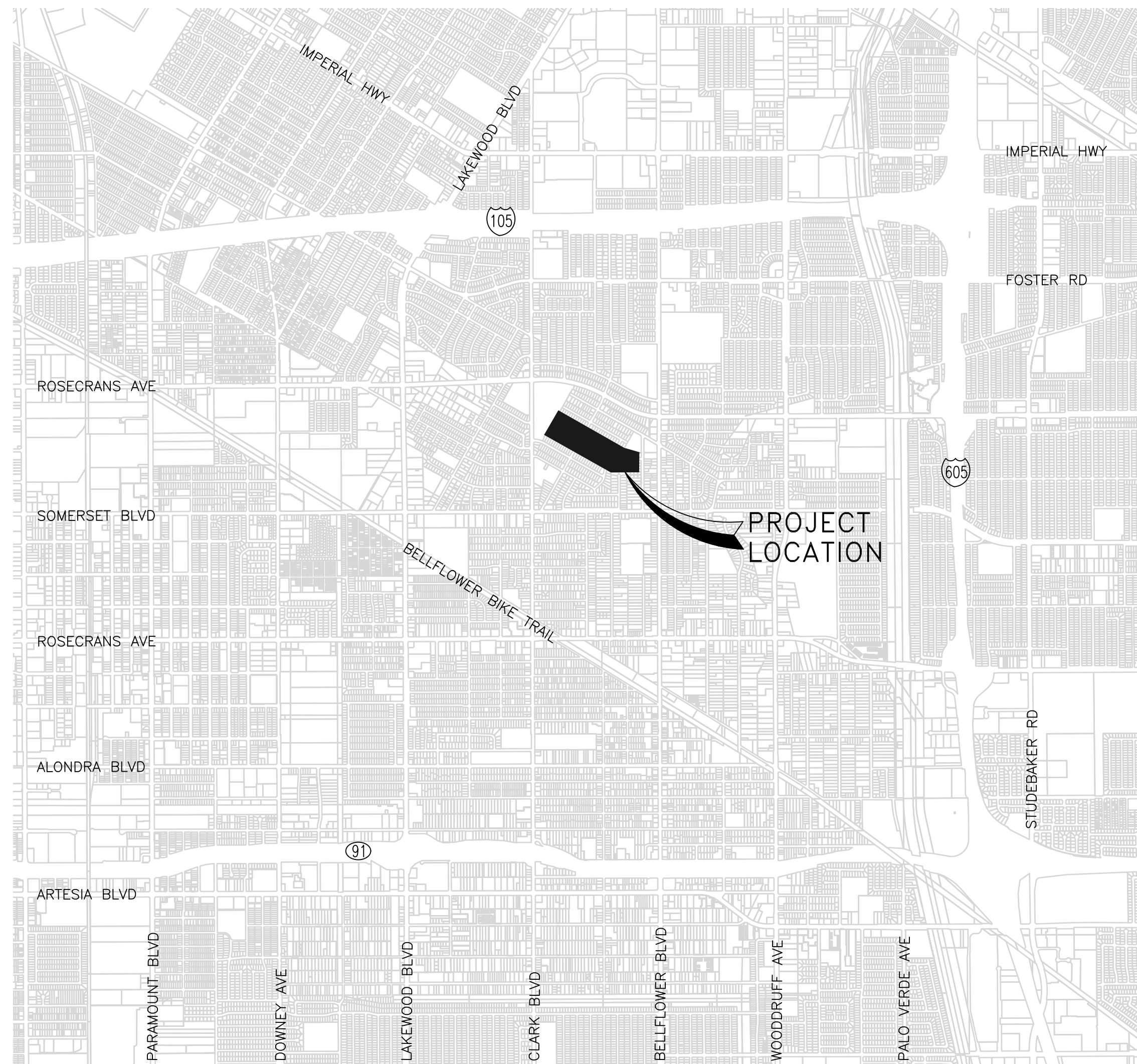


CALIFORNIA AMERICAN WATER

PRICHARD STREET WATER MAIN REPLACEMENT  
CITY OF BELLFLOWER  
PRICHARD ST AND ARDIS AVE  
WATER MAIN REPLACEMENT PROJECT



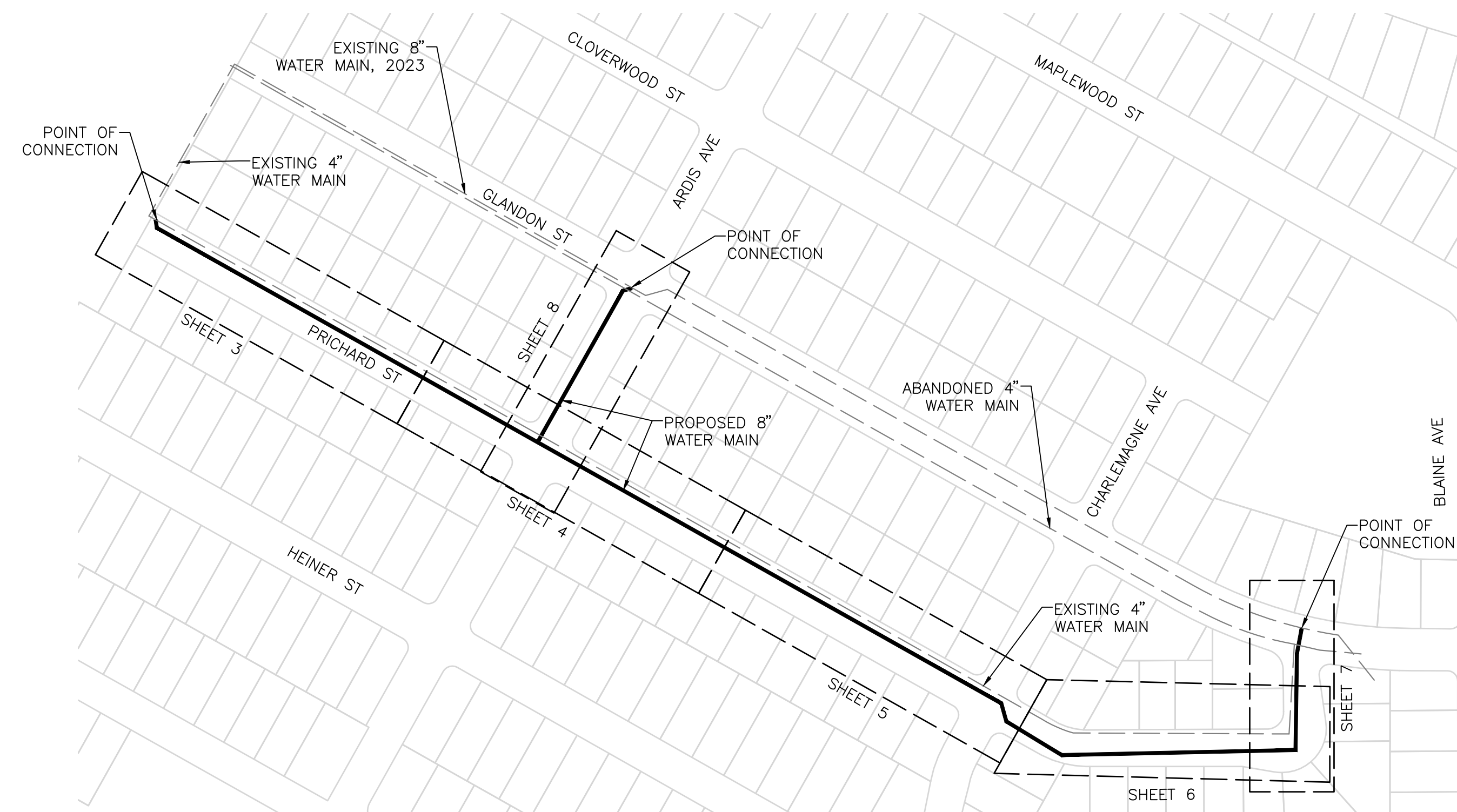
VICINITY AND LOCATION MAP  
NOT TO SCALE

**SURFACE NOTE:**

SURFACE DATA OBTAINED FROM NEARMAP LIDAR POINT CLOUD, CAPTURE DATE 9/22/20. VERTICAL SPATIAL REFERENCE: NAVD88

**UTILITIES:**

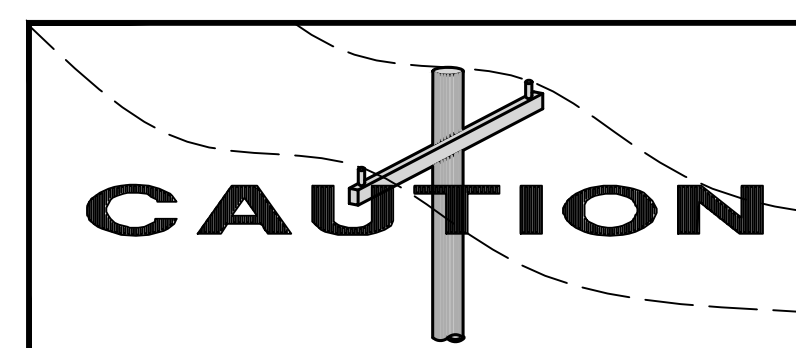
SOUTHERN CALIFORNIA EDISON	(800) 655-4555
CITY OF BELLFLOWER	(562) 804-1424
SOUTHERN CALIFORNIA GAS COMPANY	(877) 238-0092
CALIFORNIA AMERICAN WATER COMPANY	(626) 614-2533
CRIMSON PIPELINE LP	(866) 351-7473
LOS ANGELES COUNTY SANITATION DISTRICT	(562) 908-4288



**SHEET INDEX MAP**  
NOT TO SCALE

**SHEET INDEX MAP LEGEND:**

-----	EXISTING WATER MAIN, SIZE AS NOTED
—————	PROPOSED WATER MAIN, SIZE AS NOTED
- - - - -	SHEET LIMITS
—————	PARCEL LINE



WATCH FOR OVERHEAD POWER LINES



Know what's below.  
Call before you dig.

SHEET LIST TABLE	
SHEET	SHEET TITLE
GENERAL	
1	COVER SHEET AND INDEX MAP
2	LEGEND AND NOTES
PLAN AND PROFILE	
3	STA 149+50 TO STA 154+50 - PRICHARD ST
4	STA 154+50 TO STA 159+50 - PRICHARD ST
5	STA 159+50 TO STA 164+50 - PRICHARD ST
6	STA 164+50 TO STA 169+00 - PRICHARD ST
7	STA 175+00 TO STA 177+00 - PRICHARD ST
8	STA 77+00 TO STA 80+00 - ARDIS AVE
DETAILS	
9	STANDARD DETAILS
10	STANDARD DETAILS
11	STANDARD DRAWING AND CONNECTION DETAILS



REVISIONS	REVISIONS
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△	△



AMERICAN WATER COMPANY  
3906 CHURCH ROAD  
MT. LAUREL, NJ 08054

DRAWN BY JRA  
PROJECT ENG'R JLS

DATE 2024-07-09

PROJECT

PRICHARD STREET WATER MAIN REPLACEMENT  
CITY OF BELLFLOWER

COVER SHEET AND INDEX MAP

USE APPROVED DRAWINGS ONLY  
FOR CONSTRUCTION PURPOSES

BID SET

USE DIMENSIONS ONLY  
SCALE AS SHOWN  
1 / 11

**TOPO LEGEND:**

	BACKFLOW ASSEMBLY
	COMMUNICATION PULLBOX
	COMMUNICATION VAULT
	ELECTRICAL CABINET
	ELECTRICAL PULL BOX
	ELECTRICAL CONDUIT
	FIRE HYDRANT
	GAS METER
	GAS VALVE
	GUY WIRE ANCHOR
	IRRIGATION VALVE
	JOINT UTILITY POLE
	LIGHT POLE
	POWER POLE
	STREET LIGHT
	SEWER MANHOLE
	SERVICE POLE
	SIGN
	STORM DRAIN INLET
	STORM DRAIN MANHOLE
	SURVEY CONTROL POINT
	TELEPHONE MANHOLE
	TRAFFIC SIGNAL PULLBOX
	TRAFFIC SIGNAL W/ MAST ARM
	TRAFFIC PEDESTRIAN POLE
	TRAFFIC SIGNAL
	UNIDENTIFIED BOX
	UNIDENTIFIED MANHOLE
	UNIDENTIFIED VAULT
	WATER METER
	WATER VALVE
	COMMUNICATION LINE
	ELECTRICAL LINE
	GAS LINE; SIZE AS NOTED
	SEWER LINE; SIZE AS NOTED
	SEWER HOUSE BRANCHES, DEPTH UNKNOWN
	SEWER HOUSE BRANCHES, LOCATION AND DEPTH UNKNOWN
	STORM DRAIN LINE; SIZE AS NOTED
	TRAFFIC SIGNAL LINE
	WATER LINE; SIZE AS NOTED
	WATER LINE TO BE ABANDONED; SIZE AS NOTED
	CENTERLINE
	PROPERTY LINE, PER GIS DATA

**ABBREVIATIONS AND SYMBOLS:**

AC	ASBESTOS CEMENT
ACP, CA	ASBESTOS CEMENT PIPE
AP	ANGLE POINT
BC	BEGIN CURVE
BVC	BEGIN VERTICAL CURVE
C	COMMUNICATION
CI	CAST IRON
CL	CENTERLINE
DIP	DUCTILE IRON PIPE
E	EAST OR ELECTRICAL
EC	END CURVE
EVC	END VERTICAL CURVE
FL	FLOWLINE
FLG	FLANGE
G	GAS
GV	GATE VALVE
HORIZ	HORIZONTAL
L	LEFT OR LENGTH
LF	LINEAR FEET
MJ	MECHANICAL JOINT
MIN	MINIMUM
MISC	MISCELLANEOUS
N	NORTH
R	RIGHT OR RADIUS
RVC	REVERSE VERTICAL CURVE
S	SOUTH OR SEWER
SD	STORM DRAIN
SDDC	STORM DRAIN CROSS DRAIN
SDFL	STORM DRAIN FLOWLINE
SS	SANITARY SEWER HOUSE BRANCH
SSFL	SANITARY SEWER FLOWLINE
STD	STANDARD
STD DWG	STANDARD DRAWING
TYP	TYPICAL
VERT	VERTICAL
W	WEST OR WATER
WS	WATER SERVICE
	PROPOSED FIRE HYDRANT PER CAW-SD-W207 ON SHEET 10
	PROPOSED WATER VALVE BOX AND RISER PER CAW-SD-W105 ON SHEET 9
	PROPOSED 1" WATER SERVICE PER CAW-SD-201 OR CAW-SD-202 ON SHEET 10, AND CAW-SD-W206 ON SHEET 10
	PROPOSED 2" BLOW-OFF ASSEMBLY PER CA-SD-W301A ON SHEET 10
	PROPOSED WATER MAIN, SIZE AS NOTED ON PLANS, PER STD DWG CAW-SD-W102, CAW-SD-W103 & CAW-SD-W104 ON SHEET 9
PH	PROPOSED POTHOLE LOCATION
	DETAIL DESIGNATION SHEET NUMBER

**WATER NOTES**

- ALL WORK SHALL BE IN ACCORDANCE WITH THE CALIFORNIA AMERICAN WATER COMPANY STANDARD DRAWINGS AND SPECIFICATIONS AND THE LOS ANGELES COUNTY PUBLIC WORKS STANDARDS. WHERE CONFLICTS EXIST BETWEEN THESE TWO STANDARDS THE MORE STRINGENT OF THE TWO, IN THE OPINION OF THE ENGINEER, SHALL GOVERN.
- CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS SET FORTH BY THE CITY OF BELLFLOWER SHALL SECURE ALL PERMITS REQUIRED FOR THIS WORK. PROVIDE CONSTRUCTION SCHEDULE TO THE CITY OF BELLFLOWER AT LEAST 2 WEEKS AHEAD OF CONSTRUCTION START DATE. INVITE CITY STAFF TO ATTEND PRE-CONSTRUCTION MEETING.
- CONTRACTOR SHALL SCHEDULE THE WORK IN A MANNER TO MINIMIZE WATER SERVICE OUTAGES TO EXISTING WATER CUSTOMERS AND SHALL NOTIFY THE CALIFORNIA AMERICAN WATER COMPANY AND USERS A MINIMUM OF 5 WORKING DAYS PRIOR TO ANY PLANNED WATER SERVICE DISRUPTIONS.
- CONTRACTOR SHALL RESTORE AREAS DAMAGED DURING CONSTRUCTION TO THEIR PRE-CONSTRUCTION CONDITION, OR BETTER.
- CONTRACTOR SHALL BACKFILL ALL PIPELINE TRENCHES OR COVER TRENCHES WITH STEEL PLATES AT THE END OF EACH WORKDAY. STEEL PLATES SHALL ALSO BE INSTALLED OVER OPEN TRENCHES TO ALLOW DRIVEWAY ACCESS.
- OPEN TRENCHES LEFT OVERNIGHT MUST HAVE TWO SHORING WALLS IN PLACE.
- CONTRACTOR SHALL REMOVE AND REPLACE DAMAGED CONCRETE IMPROVEMENTS TO NEAREST JOINT.
- EXISTING IN-LINE MAIN VALVES SHALL BE ABANDONED IN PLACE, AND EXISTING VALVES AT TEE CONNECTIONS SHALL BE REMOVED. VALVE CANS SHALL BE FILLED WITH CEMENT-SAND SLURRY.
- WHERE WATER MAIN CROSSES BELOW SEWER MAIN OR SEWER SERVICE LATERAL, NO WATER MAIN JOINTS ALLOWED WITHIN 10' OF CROSSING. SEE SPECIFICATIONS.
- WHERE WATER MAIN CROSSES ABOVE SEWER MAIN OR SEWER LATERAL WITH LESS THAN 1' CLEARANCE, NO WATER MAIN JOINTS ALLOWED WITHIN 4' OF CROSSING. SEE SPECIFICATIONS.
- AS FIRST ORDER OF WORK, CONTRACTOR SHALL POTHOLE UTILITIES AS SHOWN ON PLANS TO VERIFY THEIR VERTICAL AND HORIZONTAL LOCATIONS.
- WET TIE AND TIE-IN LOCATION MUST BE POTHOLED BY CONTRACTOR AND NEW MAIN MUST BE ADJUSTED TO MEET ELEVATION OF EXISTING MAIN LINES. CONTACT CALIFORNIA AMERICAN WATER PRIOR TO POTHOLE WORK.
- CONTRACTOR SHALL PREPARE AND MAINTAIN AS-BUILT DRAWINGS AND UPDATE SAID DRAWINGS ON A WEEKLY BASIS. A COPY OF FINAL AS-BUILT PLAN SET SHALL BE SUBMITTED TO THE CITY OF BELLFLOWER.
- CONSTRUCTION STAKING SHALL BE PROVIDED BY THE CONTRACTOR.
- BMPs SHALL BE INSTALLED AND MAINTAINED AT ALL NEARBY DRAIN INLETS, IN ACCORDANCE WITH THE CITY OF BELLFLOWER REQUIREMENTS.
- DISCHARGE OF WATER INTO SEWER IS NOT ALLOWED. CONTRACTOR SHALL DISPOSE OF WATER USED FOR FLUSHING, TESTING & ANCILLARY ACTIVITIES OFF-SITE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH AND OBTAIN ALL NECESSARY PERMITS FROM CITY.
- PRIOR TO SITE MOBILIZATION, CONTRACTOR SHALL RECORD A PRE-CONSTRUCTION VIDEO OF THE SITE TO DOCUMENT EXISTING CONDITIONS, AND PROVIDE A COPY OF THE VIDEO TO CALIFORNIA AMERICAN WATER COMPANY, IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
- CONTRACTOR SHALL COORDINATE WITH CITY OF BELLFLOWER ENGINEERING DIVISION TO DESIGNATE DIMENSIONS FOR MATERIALS AND EQUIPMENT STORAGE IN THE PUBLIC RIGHT-OF-WAY.
- CONTRACTOR SHALL BACKFILL TRENCH PER CITY OF BELLFLOWER STANDARDS AND CAW-SD-W102 ON SHEET 9.
- CONTRACTOR SHALL PROVIDE THRUST BLOCKS AT ALL FITTINGS AND VALVES, AND SHALL RESTRAIN DIP MECHANICAL JOINTS WITH SERIES 1100 MEGALUG, OR APPROVED EQUAL.
- CONTRACTOR SHALL INSTALL NO. 10 COPPER TRACING WIRE AND METALLIC DETECTOR TAPE IN ACCORDANCE WITH CAW-SD-W103 ON SHEET 9.
- REMOVE AND REPLACE ALL DAMAGED PAVEMENT STRIPING, CURB, GUTTER, SIDEWALK, DRIVEWAY APPROACH, CONCRETE SPANDREL IN KIND, PER CITY STANDARDS, TO THE NEAREST JOINT.
- EXISTING PIPE TO BE ABANDONED SHALL BE CUT, CAPPED, GROUTED, AND ABANDONED IN PLACE.
- NO SOIL STOCKPILES ARE ALLOWED WITHIN RIGHT-OF-WAY OUTSIDE OF WORKING HOURS, UNLESS GIVEN SPECIFIC PERMISSION BY CITY. STOCKPILES THAT ALLOWED TO REMAIN WITHIN RIGHT-OF-WAY SHALL BE COVERED IN ACCORDANCE WITH LOS ANGELES COUNTY STANDARDS.
- CONTRACTOR SHALL MAINTAIN CLEAN RESTROOM ON-SITE DURING WORKING HOURS, AND REMOVE RESTROOM AT END OF WORKDAY.
- CUT-OFF SAWS ARE NOT ALLOWED.
- AT END OF EVERY WORKDAY, NEW PIPE MUST BE PLUGGED WITH WATER TIGHT SEAL.
- WHEN USING WATER, CONTRACTOR MUST USE CERTIFIED BACKFLOW PREVENTER WITH CALIFORNIA AMERICAN WATER METER.
- CONTRACTOR SHALL CLEAN AND SWEEP STREETS DAILY.
- CONTRACTOR SHALL ADJUST AND REALIGN EXISTING IRRIGATION SYSTEM AS NECESSARY TO INSTALL WATER FACILITIES.
- CONTRACTOR SHALL RESURFACE WATER MAIN AND WATER SERVICE TRENCH PER THE REQUIREMENTS OF THE ENCROACHMENT PERMIT, BUT NOT LESS THAN THE REQUIREMENTS OF THE CITY OF BELLFLOWER PUBLIC WORKS STANDARDS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING TRAFFIC CONTROL DRAWINGS AND GAINING APPROVAL FROM CITY.
- CONTRACTOR SHALL FURNISH AND INSTALL TEMPORARY AIR RELEASE VALVES AS NECESSARY DURING PRESSURE TESTING.
- CONTRACTOR SHALL INSTALL TEMPORARY SAMPLE PORTS AS NECESSARY FOR BACTI TESTING.

**WATER SERVICE NOTES:**

- CONTRACTOR SHALL CONNECT ON-SITE WATER SERVICE LINE TO NEW METER BOX, SEE STD DWGS ON SHEET 10. EXISTING WATER METER SHALL BE TRANSFERRED TO NEW METER BOX.
- CONTRACTOR SHALL RESURFACE WATER MAIN AND WATER SERVICE TRENCH PER CITY OF BELLFLOWER STANDARD DRAWINGS.
- ALL RESIDENTIAL WATER SERVICES SHALL BE 1", UNLESS OTHERWISE NOTED OR OTHERWISE INDICATED IN THE SPECIFICATIONS. EXISTING WATER METERS SHALL BE REUSED.
- CONTRACTOR SHALL EVALUATE EXISTING CONDITIONS AT PROPOSED METER BOX AND WATER SERVICE AREA, AND WORK WITH CALIFORNIA AMERICAN WATER TO DETERMINE APPROPRIATE LOCATION FOR NEW SERVICE.
- CONTRACTOR SHALL REMOVE AND LAWFULLY DISPOSE OF EXISTING METER BOXES, UNLESS OTHERWISE NOTED.

**STAGING NOTES:**

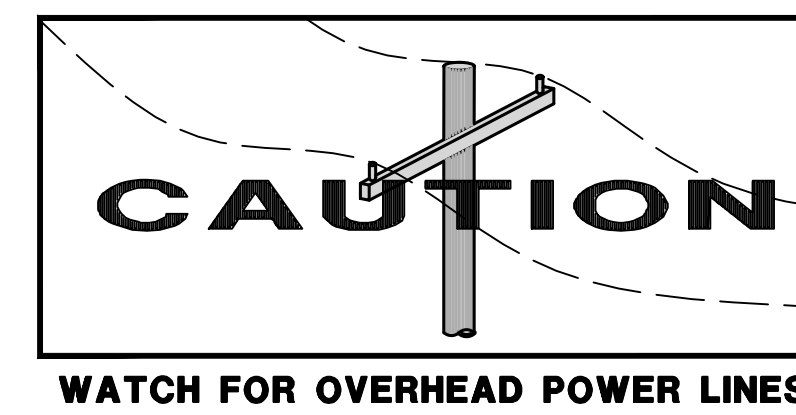
- CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING STAGING AREA.
- IF CONTRACTOR CHOOSES A PRIVATE PROPERTY FOR STAGING, CONTRACTOR SHALL OBTAIN AN AGREEMENT CONTRACTOR SHALL OBTAIN AN AGREEMENT WITH THE PROPERTY OWNER AND PROVIDE A COPY TO CALIFORNIA AMERICAN WATER COMPANY.

**SEWER LATERAL NOTES:**

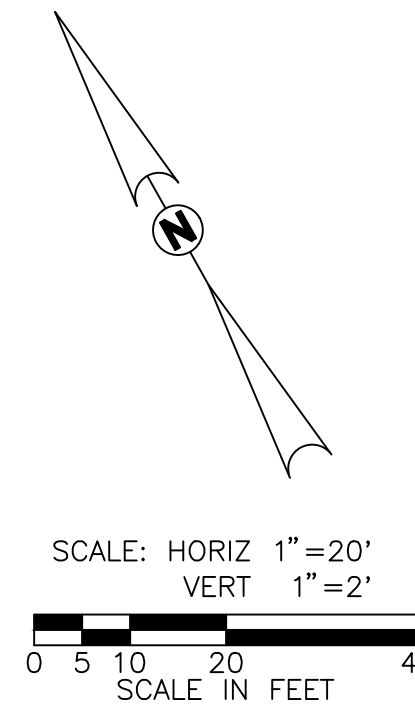
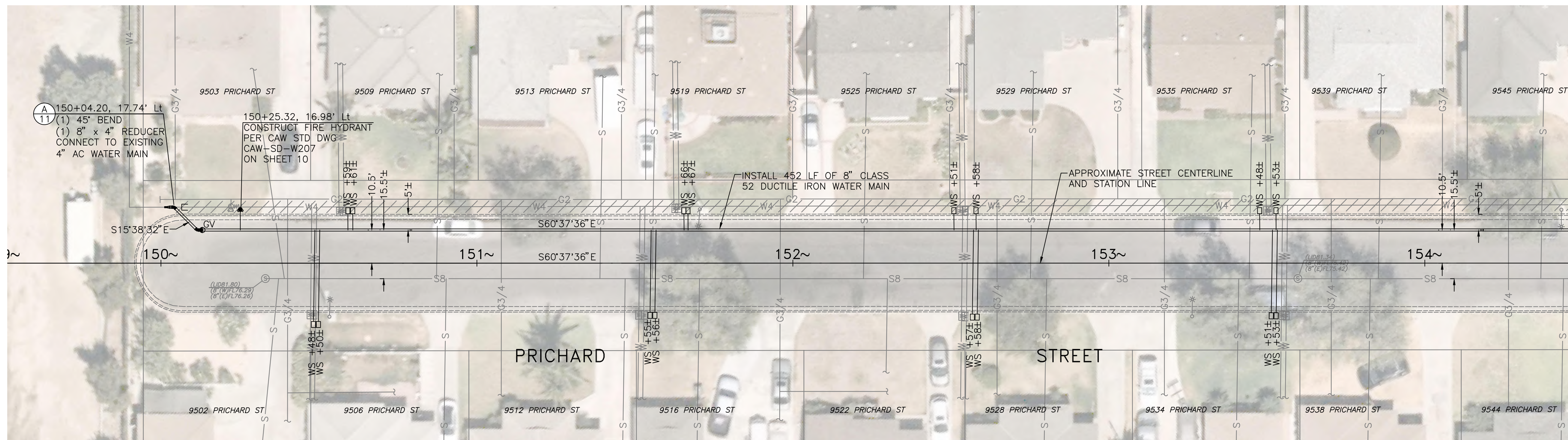
- UNLESS OTHERWISE NOTED, HORIZONTAL LOCATION OF SEWER LATERALS WAS OBTAINED FROM AS-BUILT SEWER MAIN PLANS. ALL LATERAL ELEVATIONS ARE UNKNOWN AND ARE DRAWN IN PROFILE AT A STANDARD DEPTH OF 2 FEET COVER.
- FOR SEWER LATERALS THAT WERE NOT PROVIDED ON AS-BUILT PLANS, LATERALS WERE DRAWN DIAGRAMMATICALLY IN CENTER OF PROPERTY.
- CONTRACTOR SHALL TAKE EXTRA CARE WHILE TRENCHING IN FRONT OF HOUSES TO AVOID DAMAGING SEWER LATERALS. COSTS TO LOCATE UNKNOWN SEWER LATERALS SHALL BE INCLUDED IN PROPOSED PIPELINE COSTS.

**STREET RESURFACING NOTES:**

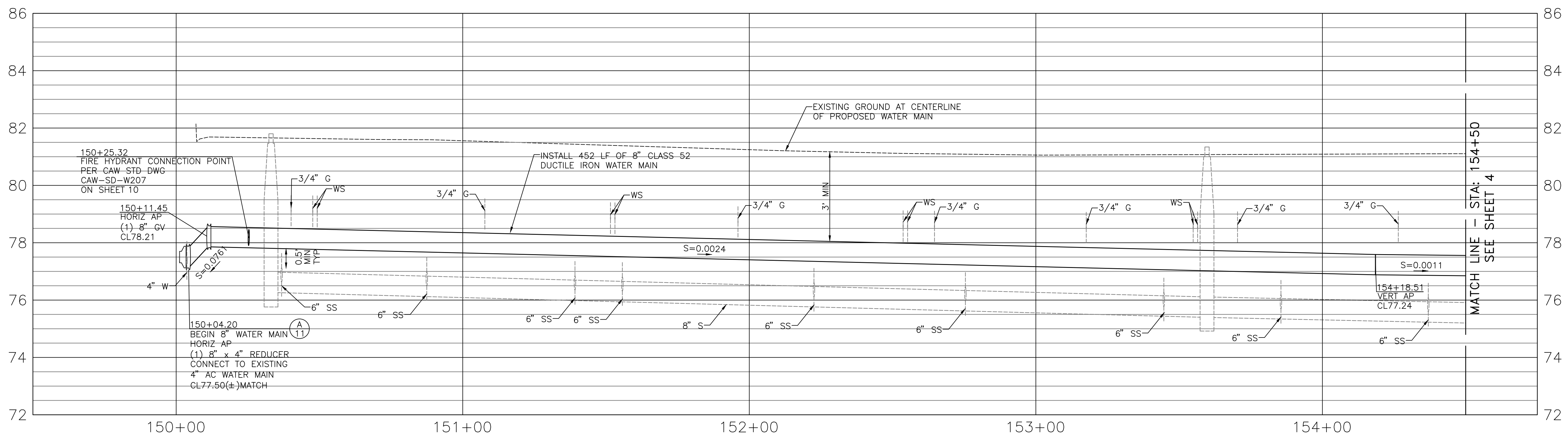
- CONTRACTOR SHALL RESURFACE WATER MAIN AND WATER SERVICE TRENCH PER CITY STANDARDS, LISTED BELOW.
- TRENCH RESURFACING SHALL MATCH EXISTING STRUCTURAL SECTION, PLUS 1" THICKNESS FOR BASE AND ASPHALT CONCRETE. EXPECTED AC PAVEMENT THICKNESS IS 4"
- FINAL RESTORATION SHALL INCLUDE A 2" GRIND & CAP AT LEAST 10' FROM EDGE OF GUTTER PLATE AND NO LESS THAN FULL LANE WIDTH FOR CUTS EXCEEDING 10' FROM EDGE OF GUTTER PLATE. RESTORATION LIMITS PARALLEL TO CURB AND GUTTER SHALL BE AT LEAST 10' IN LENGTH (IN DIRECTION OF VEHICULAR TRAVEL). WIDTH OF GRIND & CAP LIMITS SHALL EXTEND AT LEAST 1' PAST WIDTH OF TRENCH ON EACH SIDE.
- FOR ANY TRENCH REPAIRS OR POTHOLE WITHIN 30' OF ANOTHER, FINAL RESTORATION PATCHES SHALL BE JOINED TOGETHER.
- DIAGONAL TRENCH CUTS ACROSS MULTIPLE LANES SHALL BE SLURRY SEALED CURB TO CURB AFTER FINAL RESTORATION
- REFER TO DETAIL (A) AND APPENDIX B OF THE STANDARD SPECIFICATIONS FOR ADDITIONAL PROVISIONS REQUIRED BY THE CITY OF BELLFLOWER



	REVISIONS	REVISIONS			AMERICAN WATER COMPANY 3906 CHURCH ROAD MT. LAUREL, NJ 08054	PRICHARD STREET WATER MAIN REPLACEMENT CITY OF BELLFLOWER		
	△	△			DRAWN BY JRA PROJECT ENG'R JLS	LEGEND AND NOTES		
	△	△			DATE 2024-07-09	----	----	USE DIMENSIONS ONLY SCALE AS SHOWN
	△	△			PROJECT	USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	BID SET	2 / 11
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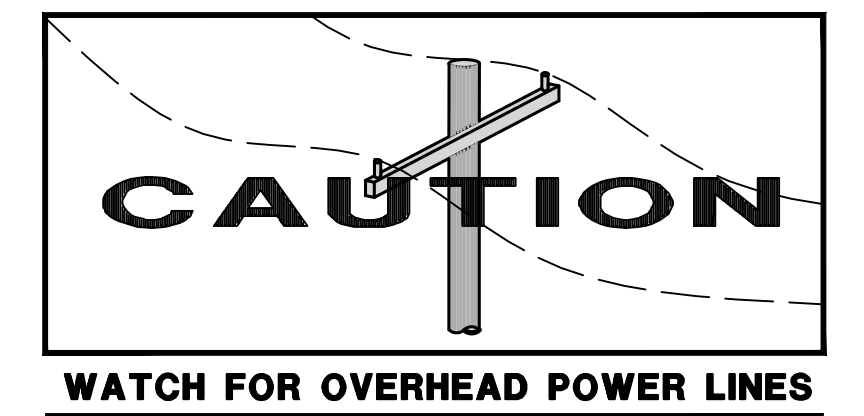


MATCH LINE - STA: 154+50  
SEE SHEET 4



SEE WATER NOTES  
AND WATER SERVICE  
NOTES ON SHEET 2

- POTHOLE AND LOCATION NOTES:**
1. AS FIRST ORDER OF WORK, CONTRACTOR SHALL POTHOLE ALL CROSSING UTILITIES TO VERIFY HORIZONTAL AND VERTICAL LOCATIONS.
  2. CONTRACTOR SHALL FIELD VERIFY EXISTING WATER VALVE DEPTHS VIA MEASUREMENTS FROM FINISHED GRADE TO VALVE NUT.



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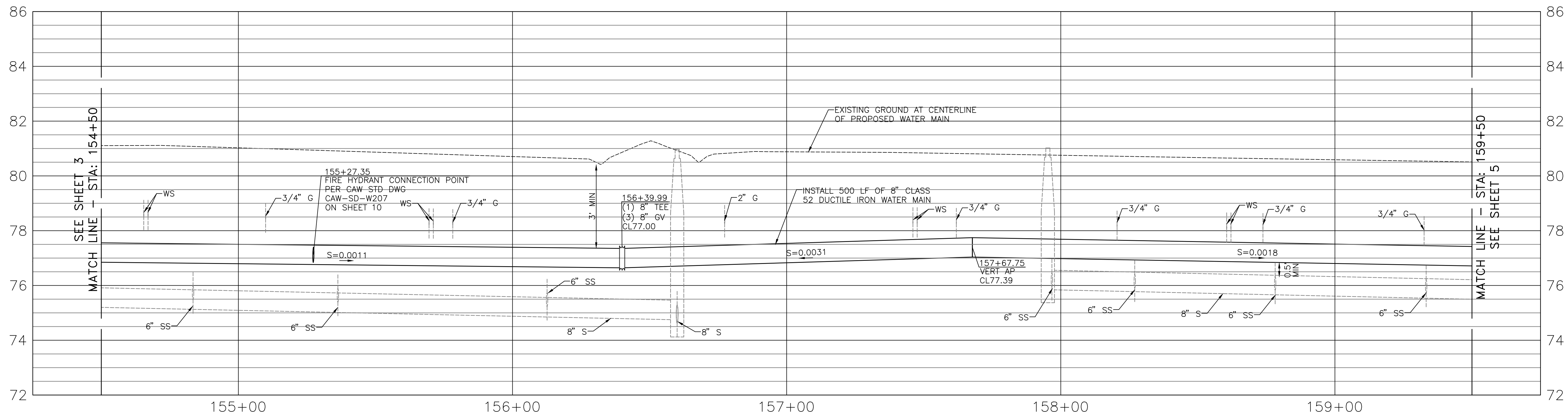
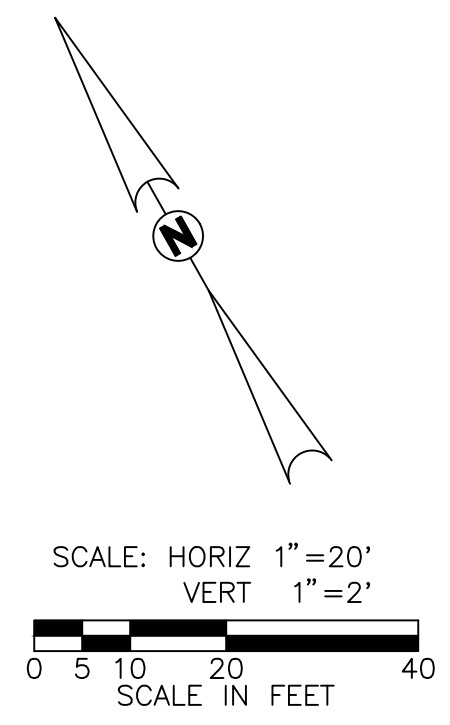
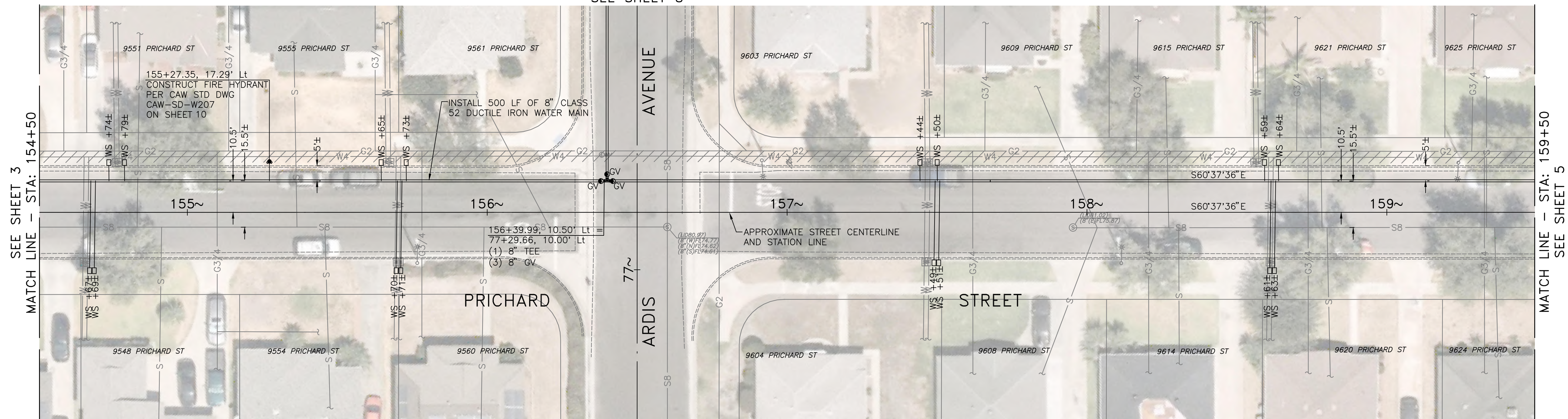
**Blair,  
Church  
& Flynn**  
CONSULTING ENGINEERS  
481 Civic Avenue, Suite 200  
Clovis, California 93612  
Tel: (509) 538-6400  
Fax: (509) 538-6900



AMERICAN WATER COMPANY  
3906 CHURCH ROAD  
MT. LAUREL, NJ 08054  
**AMERICAN WATER**  
DRAWN BY JRA  
PROJECT ENG'R JLS  
DATE 2024-07-09  
PROJECT

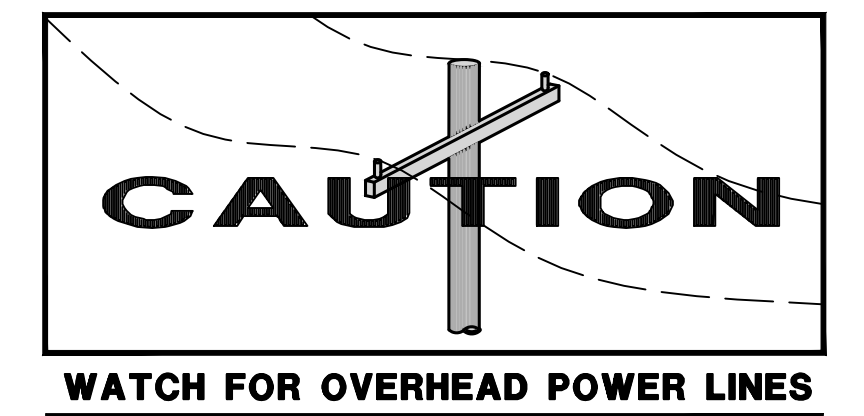
PRICHARD STREET WATER MAIN REPLACEMENT  
CITY OF BELLFLOWER  
PLAN AND PROFILE  
STA 149+50 TO STA 154+50 - PRICHARD ST  
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SCALE AS SHOWN  
3 / 11

SEE SHEET 8



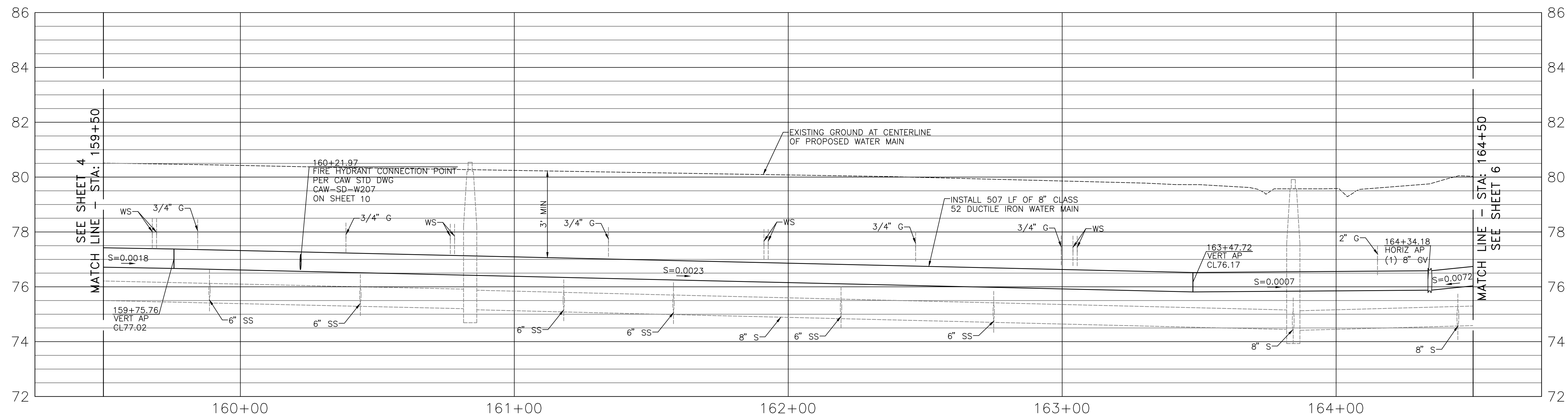
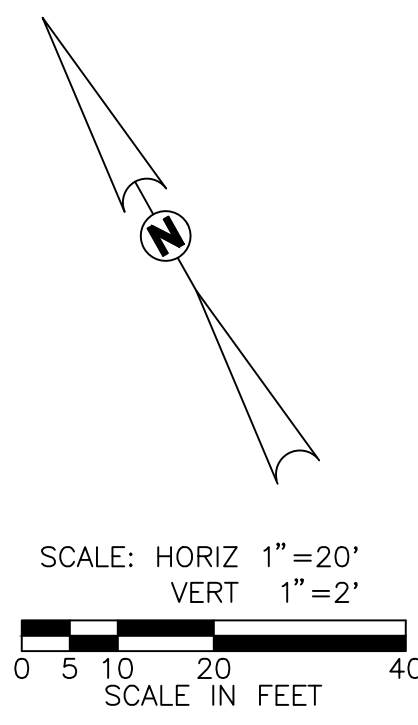
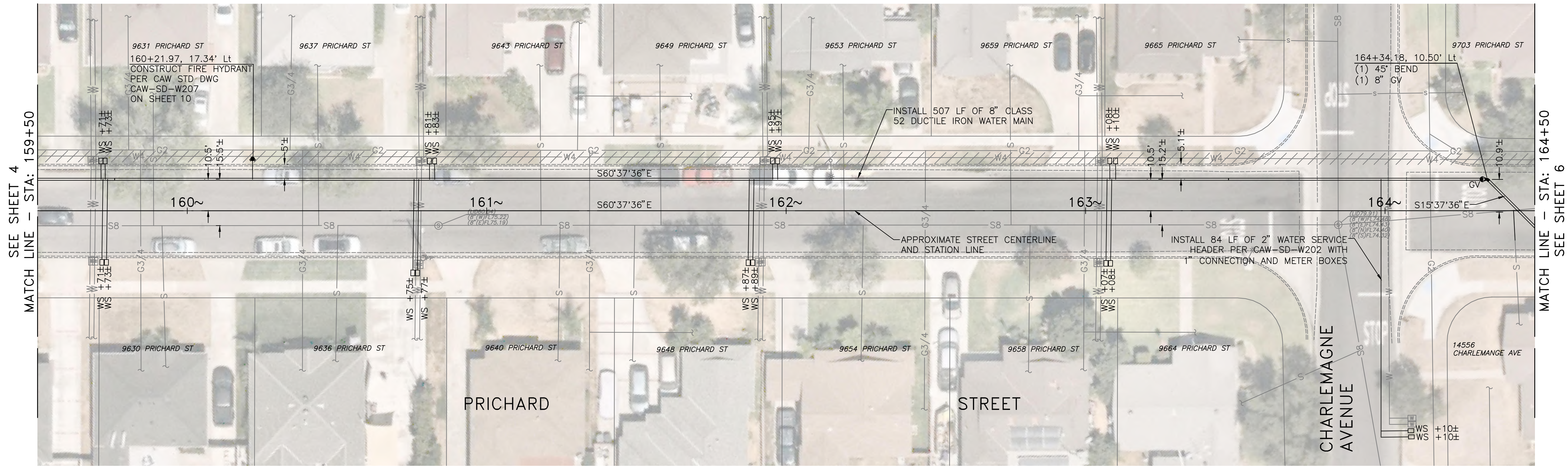
SEE WATER NOTES AND WATER SERVICE NOTES ON SHEET 2

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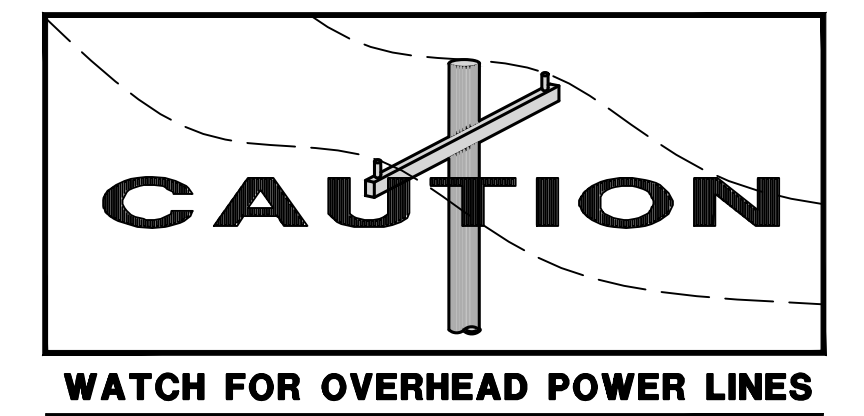
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	REVISIONS	REVISIONS				PRICHARD STREET WATER MAIN REPLACEMENT CITY OF BELLFLOWER PLAN AND PROFILE STA 149+50 TO STA 154+50 - PRICHARD ST			USE DIMENSIONS ONLY SCALE AS SHOWN																
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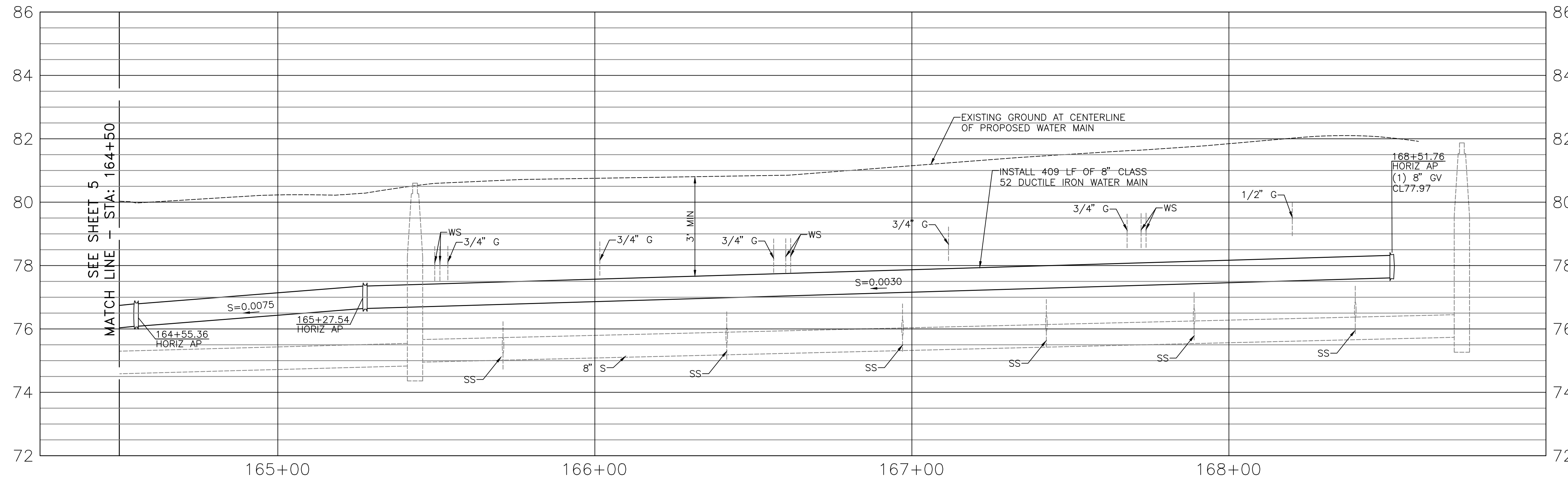
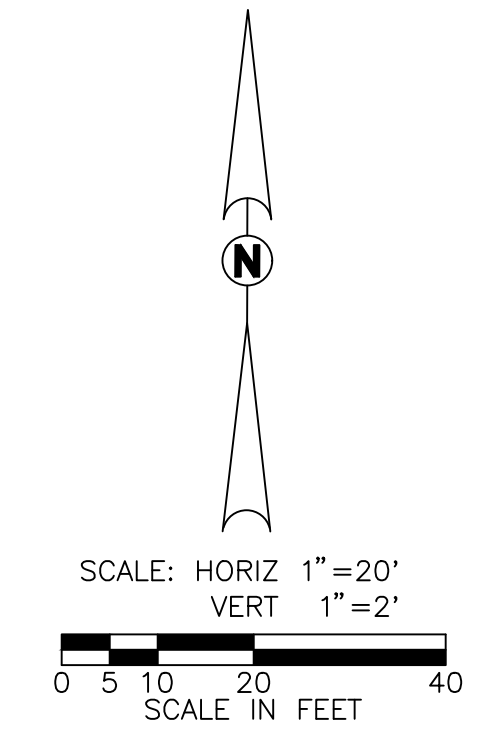
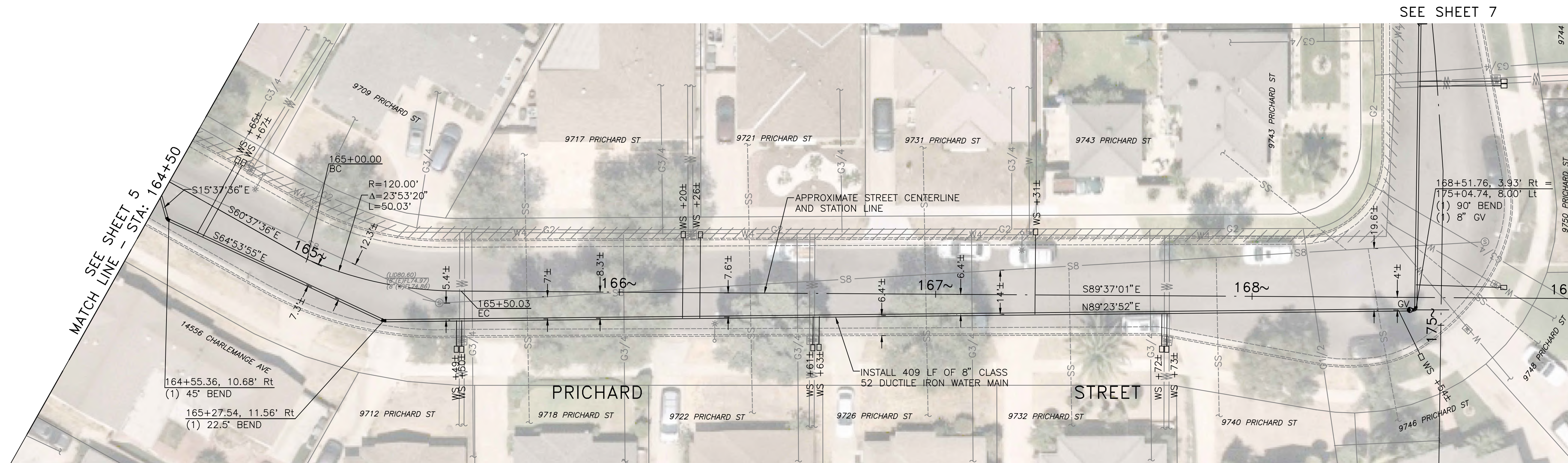
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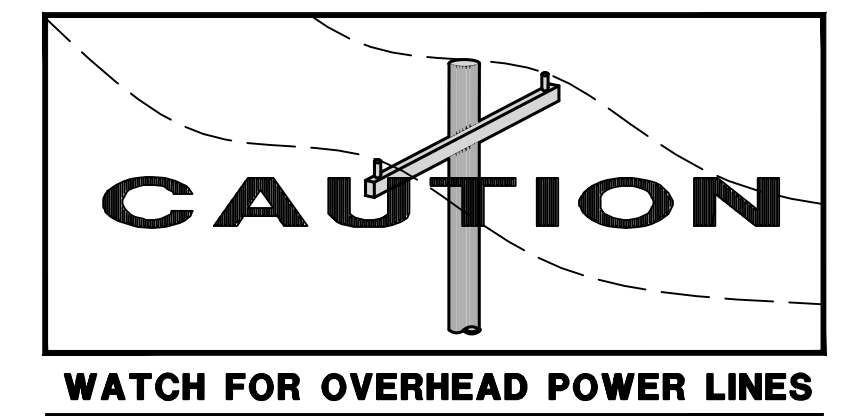
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	REVISIONS	REVISIONS	 481 Civic Avenue, Suite 200 Clovis, California 93612 Tel: (509) 536-6400 Fax: (509) 536-6900		AMERICAN WATER COMPANY 3906 CHURCH ROAD MT. LAUREL, NJ 08054 	PRICHARD STREET WATER MAIN REPLACEMENT CITY OF BELLFLOWER PLAN AND PROFILE STA 149+50 TO STA 154+50 - PRICHARD ST		
	△	△			DRAWN BY JRA PROJECT ENG'R JLS	---	---	USE DIMENSIONS ONLY SCALE AS SHOWN
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	△	△			PROJECT	USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	BID SET	
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SEE WATER NOTES  
AND WATER SERVICE  
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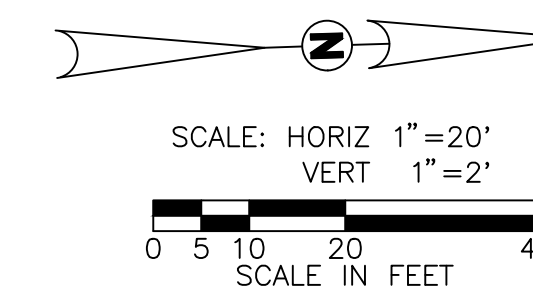
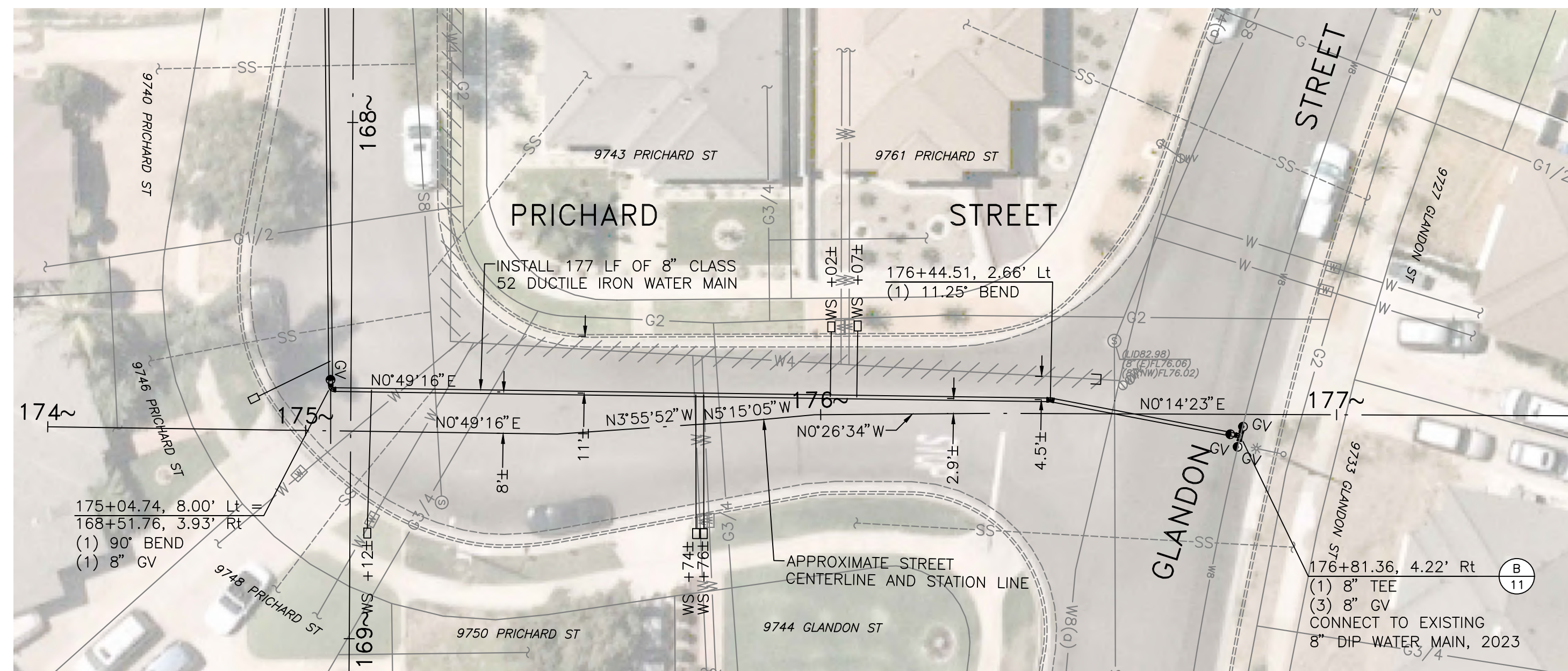
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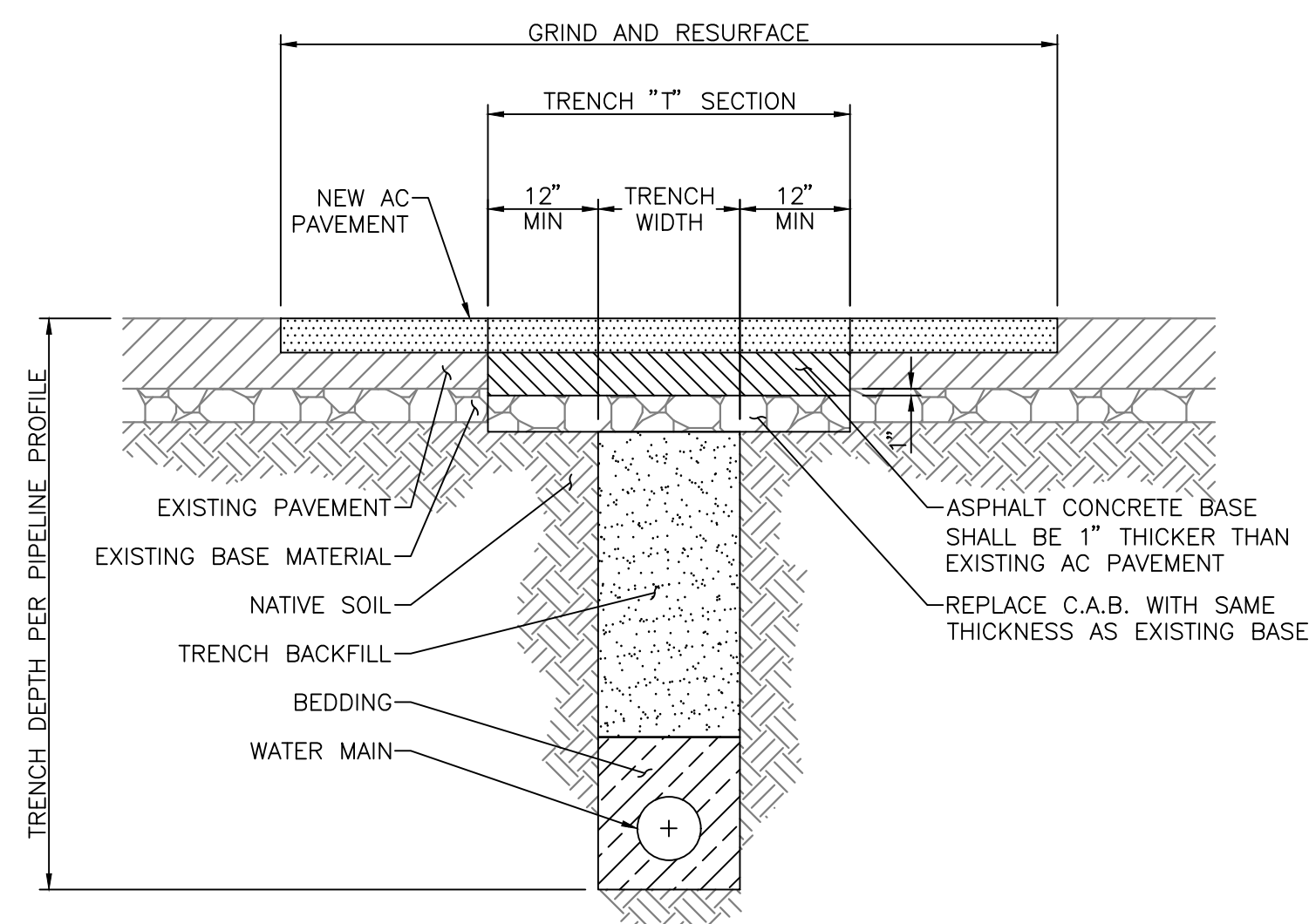
	REVISIONS	REVISIONS				<b>PRICHARD STREET WATER MAIN REPLACEMENT</b> CITY OF BELLFLOWER <b>PLAN AND PROFILE</b> STA 149+50 TO STA 154+50 - PRICHARD ST																			
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SEE SHEET 6

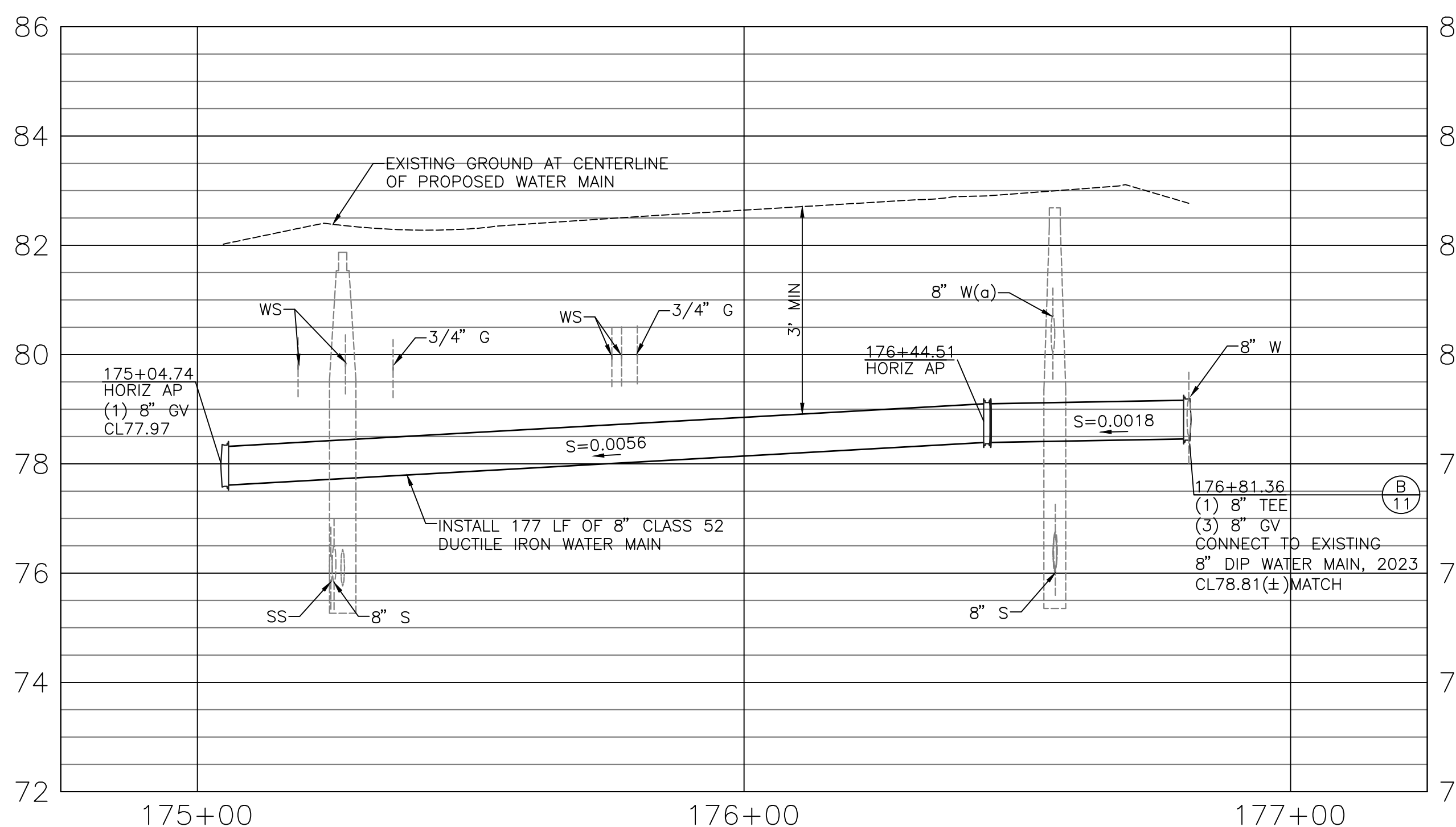


**RESURFACING NOTES:**

1. ALL A.C. REPAIRS SHALL CONSIST OF BASE PAVED SECTIONS ONE (1) INCH THICKER THAN THE EXISTING A.C. SECTION WITH THE SAME THICKNESS BASE COURSE.
2. RESTORATION FINISH METHODS FOR ALL VERTICAL STREET EXCAVATIONS WILL BE DONE WITH A TWO (2) INCH GRIND AND CAP APPLICATION NO LESS THAN TEN (10) FEET FROM EDGE OF GUTTER PLATE AND NO LESS THAN FULL LANE WIDTH FOR CUTS EXCEEDING TEN (10) FEET FROM EDGE OF GUTTER PLATE. THE RESTORATION LIMITS PARALLEL TO CURB AND GUTTER SHALL BE NO LESS THAN TEN (10) FEET IN LENGTH (IN THE DIRECTION OF VEHICULAR TRAFFIC) AND EXTEND NO LESS THAN ONE (1) FOOT OUTSIDE OF ALL VERTICAL CUTS OR THE WIDTH REQUIRED TO REPAIR DAMAGED PAVEMENT.
3. ALL STREET CUTS WITHIN THIRTY (30) FEET OF EACH OTHER SHALL BE JOINED TOGETHER AS ONE SOLID, TWO (2) INCH GRIND AND CAP PATCH, FOLLOWING FLUSH BASE PAVING OPERATIONS.
4. A.C. REPAIRS WITHIN ONE HUNDRED (100) FEET OF ANY MAJOR BOULEVARD INTERSECTION SHALL BE GROUND AND CAPPED THE FULL WIDTH OF THE BOULEVARD AT TWO (2) INCHES IN DEPTH, ONE (1) FOOT BEYOND THE FURTHEST VERTICAL TRENCHED EDGE UP TO THE PROLONGATION OF THE INTERSECTING BOULEVARD.
5. A.C. REPAIRS MADE TO STREETS WHICH HAVE BEEN OVERLAID WITH ASPHALT RUBBER HOT MIX SHALL BE DONE WITH ASPHALT RUBBER HOT MIX.



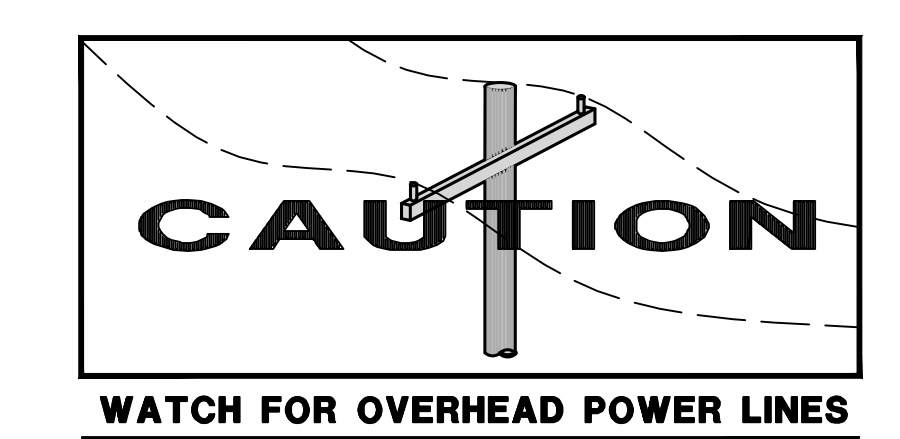
**A** TRENCH RESURFACING REQUIREMENTS  
NOT TO SCALE



SEE WATER NOTES AND WATER SERVICE NOTES ON SHEET 2

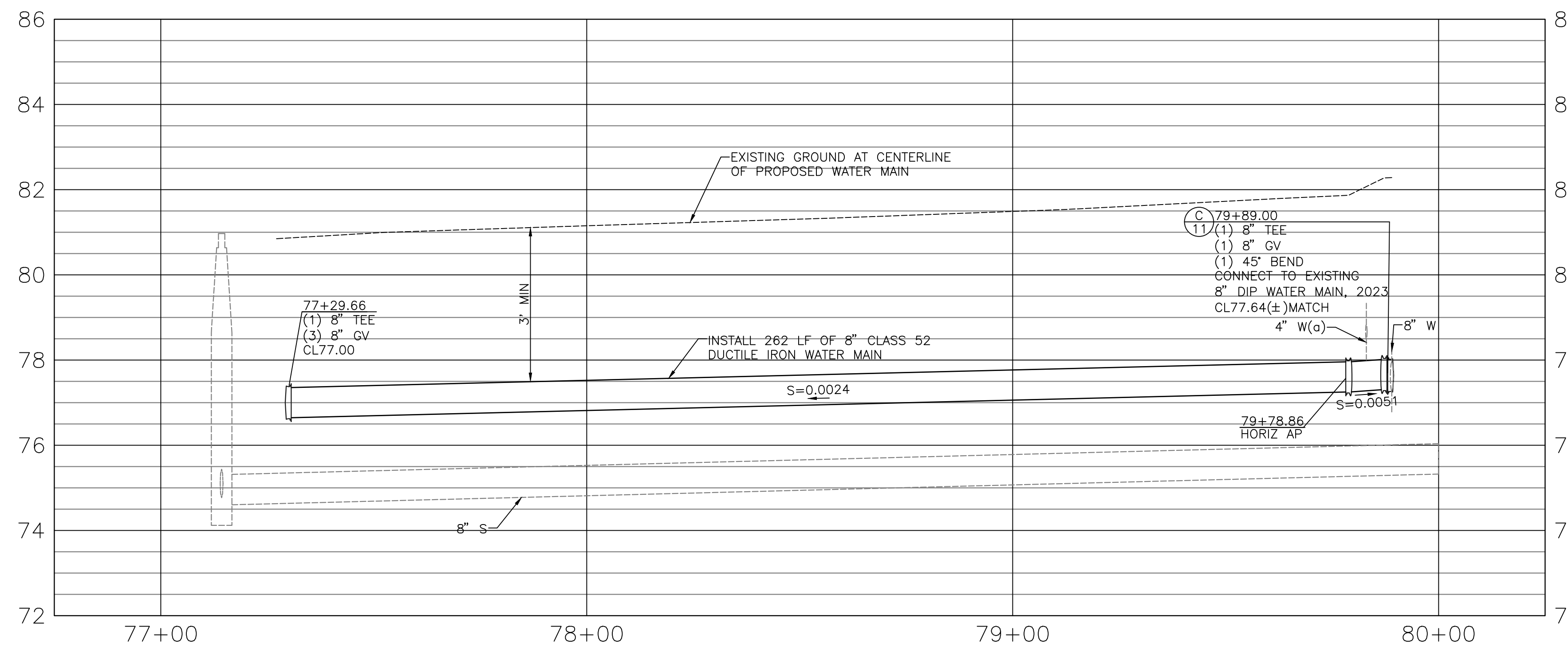
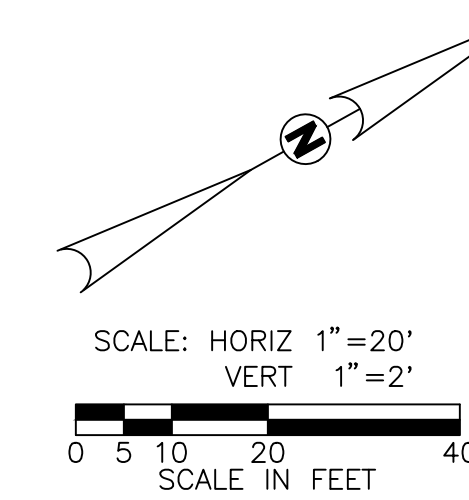
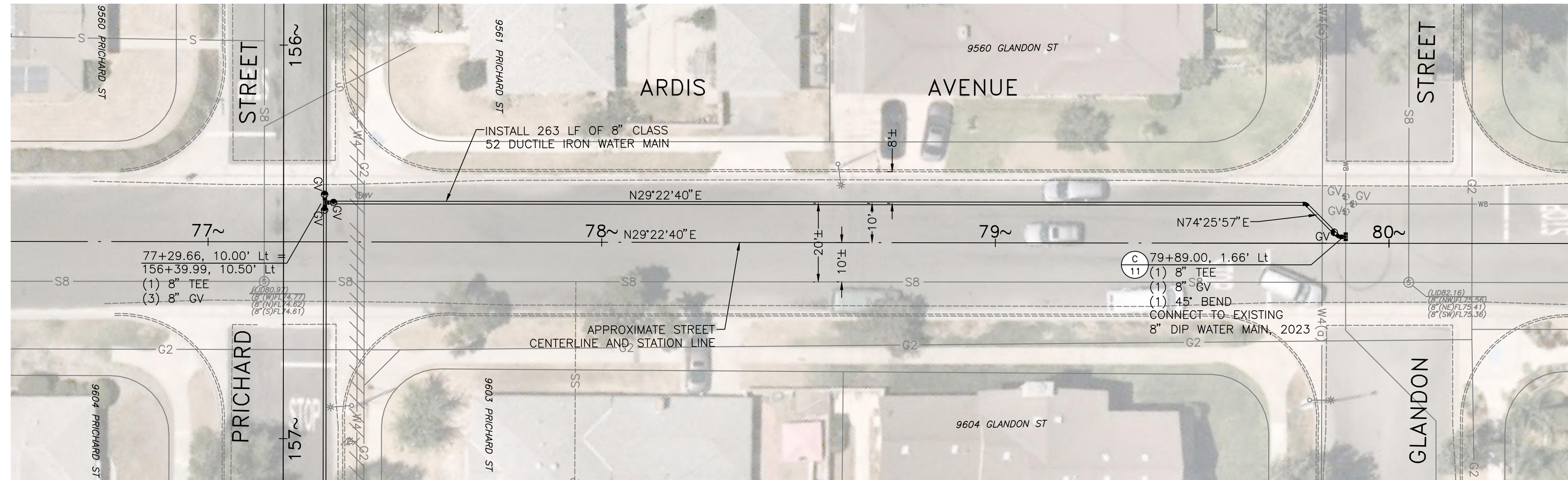
**POTHOLE AND LOCATION NOTES:**

1. AS FIRST ORDER OF WORK, CONTRACTOR SHALL POTHOLE ALL CROSSING UTILITIES TO VERIFY HORIZONTAL AND VERTICAL LOCATIONS.
2. CONTRACTOR SHALL FIELD VERIFY EXISTING WATER VALVE DEPTHS VIA MEASUREMENTS FROM FINISHED GRADE TO VALVE NUT.



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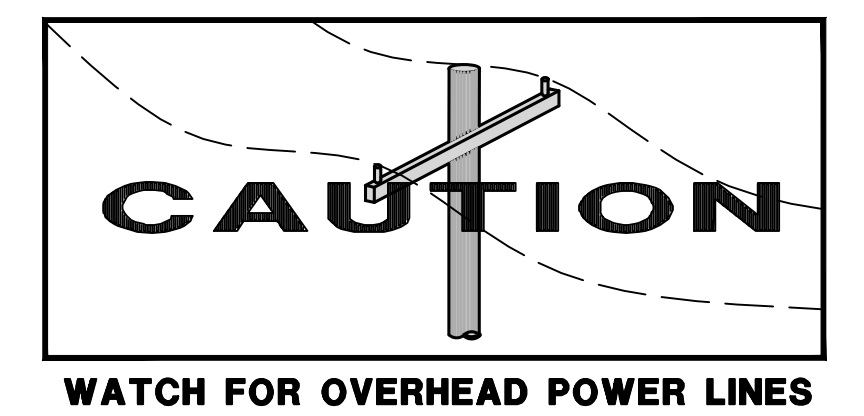
SEE SHEET 4



SEE WATER NOTES  
AND WATER SERVICE  
NOTES ON SHEET 2

**POTHOLE AND LOCATION NOTES:**

1. AS FIRST ORDER OF WORK, CONTRACTOR SHALL POTHOLE ALL CROSSING UTILITIES TO VERIFY HORIZONTAL AND VERTICAL LOCATIONS.
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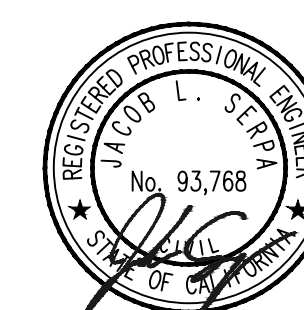


**Know what's below.  
Call before you dig.**



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**Blair,  
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Fax: (949) 338-6800



AMERICAN WATER COMPANY  
3906 CHURCH ROAD  
MT. LAUREL, NJ 08054

**AMERICAN WATER**

DRAWN BY JRA  
PROJECT ENG'R JLS

DATE 2024-07-09

PROJECT

PRICHARD STREET WATER MAIN REPLACEMENT  
CITY OF BELLFLOWER  
PLAN AND PROFILE  
STA 149+50 TO STA 154+50 - PRICHARD ST

----	----	USE DIMENSIONS ONLY SCALE AS SHOWN
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	BID SET	8 / 11





FITTING		VALVE	
PIPE DIAMETER	RESTRAINED LENGTH - FEET	RESTRAINED LENGTH	RESTRAINED VALVE
4"	85	SEE TABLE	SEE TABLE
6"	120	SEE TABLE	SEE TABLE
8"	160	SEE TABLE	SEE TABLE
10"	190	SEE TABLE	SEE TABLE
12"	220	SEE TABLE	SEE TABLE

FITTING		DEAD END / END OF LINE	
PIPE DIAMETER	RESTRAINED LENGTH - FEET	RESTRAINED LENGTH	RESTRAINED END
4"	85	SEE TABLE	SEE TABLE
6"	120	SEE TABLE	SEE TABLE
8"	160	SEE TABLE	SEE TABLE
10"	190	SEE TABLE	SEE TABLE
12"	220	SEE TABLE	SEE TABLE

FITTING		REDUCER	
PIPE DIAMETER	RESTRAINED LENGTH - FEET	RESTRAINED LENGTH	RESTRAINED REDUCER
4"	85	SEE TABLE	SEE TABLE
6"	120	SEE TABLE	SEE TABLE
8"	160	SEE TABLE	SEE TABLE
10"	190	SEE TABLE	SEE TABLE
12"	220	SEE TABLE	SEE TABLE

FITTING		HORIZONTAL BENDS	
PIPE DIAMETER	RESTRAINED LENGTH - FEET	RESTRAINED FITTING (VARIES)	RESTRAINED LENGTH (SEE TABLE)
4"	85	SEE TABLE	SEE TABLE
6"	120	SEE TABLE	SEE TABLE
8"	160	SEE TABLE	SEE TABLE
10"	190	SEE TABLE	SEE TABLE
12"	220	SEE TABLE	SEE TABLE

**NOTES:**

- RESTRAINED LENGTHS BASED ON A TEST PRESSURE OF 150 PSI, SAFETY FACTOR OF 2:1, DEPTH OF BURY OF 3 FEET.
- IF RESTRAINED JOINT LENGTH CANNOT BE ACHIEVED DUE TO PROJECT CONSTRAINTS OR IMPRACTICAL, THEN CONTRACTOR SHALL USE CONCRETE THRUST BLOCKS.
- IF THE DISTANCE BETWEEN FITTINGS IS LESS THAN OR EQUAL TO THE CALCULATED RESTRAINT LENGTH, RESTRAIN ALL JOINTS BETWEEN THOSE FITTINGS.

SEE CAL-AM SOUTHERN DIVISION SPECIFICATIONS FOR APPROVED MATERIALS LIST

**PIPE AND JOINT THRUST RESTRAINT**  
**CALIFORNIA AMERICAN WATER**  
**SOUTHERN DIVISION**

STANDARD DRAWING NUMBER: **CAW-SD-W107A**  
 COMMITTEE APPROVAL: 09/28/2022

FITTING		TEE	
PIPE DIAMETER	RESTRAINED LENGTH - FEET	RESTRAINED LENGTH	RESTRAINED TEE
4"	85	SEE TABLE	SEE TABLE
6"	120	SEE TABLE	SEE TABLE
8"	160	SEE TABLE	SEE TABLE
10"	190	SEE TABLE	SEE TABLE
12"	220	SEE TABLE	SEE TABLE

FITTING		VERTICAL BENDS	
PIPE DIAMETER	RESTRAINED LENGTH - FEET	RESTRAINED LENGTH	RESTRAINED BEND
4"	85	SEE TABLE	SEE TABLE
6"	120	SEE TABLE	SEE TABLE
8"	160	SEE TABLE	SEE TABLE
10"	190	SEE TABLE	SEE TABLE
12"	220	SEE TABLE	SEE TABLE

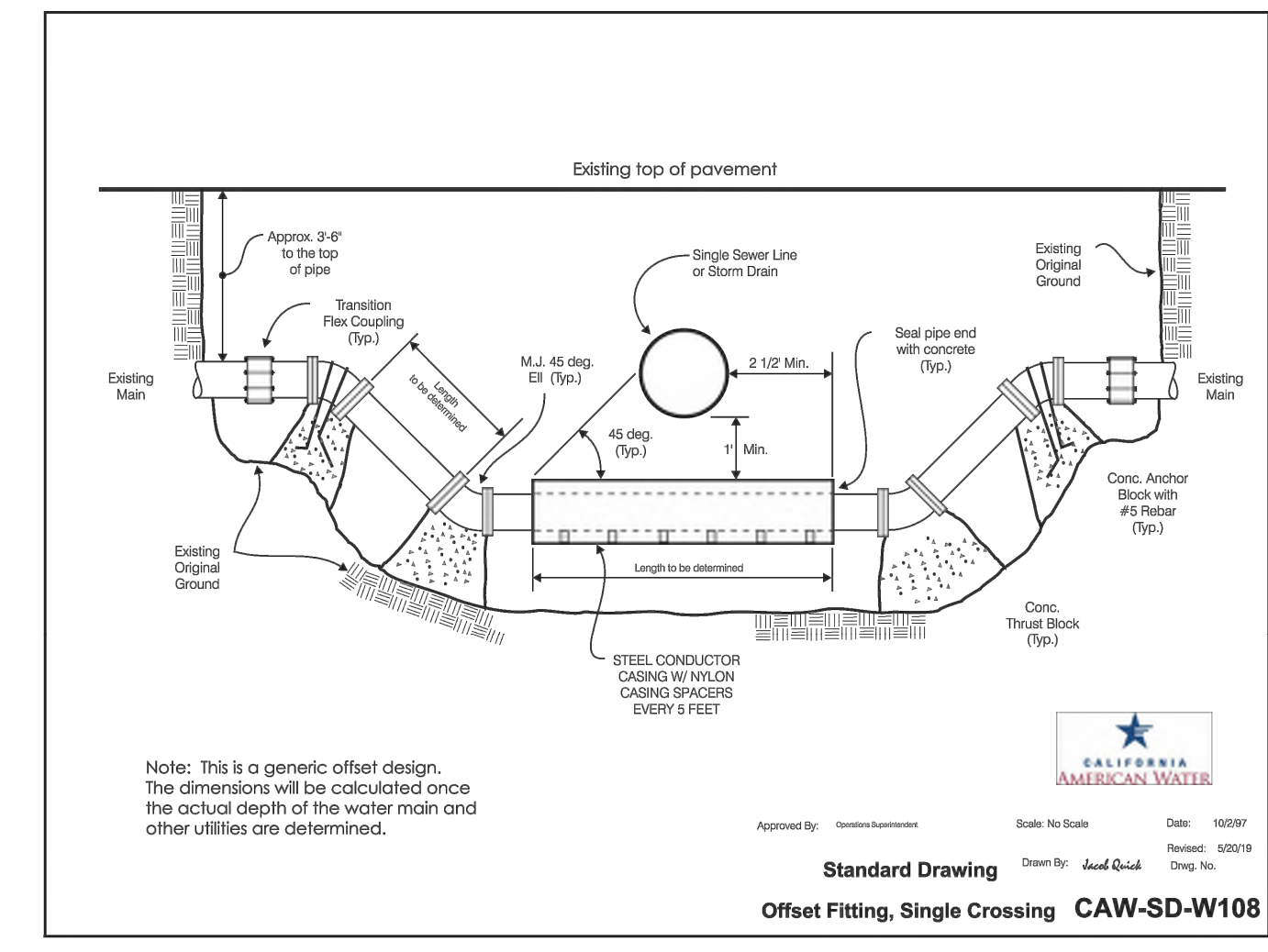
**NOTES:**

- RESTRAINED LENGTHS BASED ON A TEST PRESSURE OF 150 PSI, SAFETY FACTOR OF 2:1, DEPTH OF BURY OF 3 FEET.
- IF RESTRAINED JOINT LENGTH CANNOT BE ACHIEVED DUE TO PROJECT CONSTRAINTS OR IMPRACTICAL, THEN CONTRACTOR SHALL USE CONCRETE THRUST BLOCKS.
- IF THE DISTANCE BETWEEN FITTINGS IS LESS THAN OR EQUAL TO THE CALCULATED RESTRAINT LENGTH, RESTRAIN ALL JOINTS BETWEEN THOSE FITTINGS.

SEE CAL-AM SOUTHERN DIVISION SPECIFICATIONS FOR APPROVED MATERIALS LIST

**PIPE AND JOINT THRUST RESTRAINT**  
**CALIFORNIA AMERICAN WATER**  
**SOUTHERN DIVISION**

STANDARD DRAWING NUMBER: **CAW-SD-W107B**  
 COMMITTEE APPROVAL: 09/28/2022



**1-INCH AND LESS SERVICE**  
**CALIFORNIA AMERICAN WATER**  
**SOUTHERN DIVISION**

STANDARD DRAWING NUMBER: **CAW-SD-W201**  
 COMMITTEE APPROVAL: 09/28/2022

**NOTES:**

- METER BOXES SHALL NOT BE LOCATED IN DRIVEWAYS AND SHALL BE 2-FOOT MINIMUM OUTSIDE CURB RETURNS AND/OR ACCESSIBLE WALKS. LOCATE NEW WATER METER BOX AS SHOWN ON DRAWING OR AS DIRECTED BY CAL-AM REPRESENTATIVE. TYPICAL LOCATION IS 6' BEHIND BACK OF SIDEWALK OR 6' BEHIND BACK OF CURB IF SIDEWALK IS NOT PROPOSED.
- METER BOX SHALL BE LEVEL AND FLUSH WITH FINISHED GRADE.
- CONTRACTOR TO PROVIDE METER SPACER AND SPUD: 5/8" SERVICE 7-1/2" METER SPACER AND SPUD 3/4" SERVICE 9" METER SPACER AND SPUD 1" SERVICE 11" METER SPACER AND SPUD
- CAL-AM WILL PROVIDE AND INSTALL METER.
- WHEN REPLACING COMPOUND METERS, ANY BYPASS PIPING SHALL BE REMOVED AT CAL-AM DISCRETION.
- INSTALL BRONZE DOUBLE STRAP SERVICE SADDLE ON ALL ACP AND DIP MAINS.
- INSTALL BRONZE SINGLE STRAP SERVICE SADDLE ON ALL PVC MAINS.
- SEE PIPE TRENCH AND BACKFILL STANDARD DRAWING CAW-SD-W102.
- SERVICE SHALL BE INSTALLED AT 45 DEGREES (HORIZONTAL). SERVICE INSTALLATION AT 45 DEGREES UPON DISCRETION OF CAL-AM.
- SEE WARNING / IDENTIFICATION TAPE AND TRACER WIRE STANDARD DRAWING CAW-SD-W103.
- SEE REDUCED PRESSURE (RP) PRINCIPLE BACKFLOW ASSEMBLY STANDARD DRAWING CAW-SD-W204.
- SEE WATER SERVICE MINIMUM SEPARATION STANDARD DRAWING CAW-SD-W105.

SEE CAL-AM SOUTHERN DIVISION SPECIFICATIONS FOR APPROVED MATERIALS LIST

**1.5-INCH AND 2-INCH SERVICE**  
**CALIFORNIA AMERICAN WATER**  
**SOUTHERN DIVISION**

STANDARD DRAWING NUMBER: **CAW-SD-W202**  
 COMMITTEE APPROVAL: 09/28/2022

**NOTES:**

- METER BOXES SHALL NOT BE LOCATED IN DRIVEWAYS, AND SHALL BE 2-FOOT MINIMUM OUTSIDE CURB RETURNS AND ACCESSIBLE WALKS. LOCATE NEW WATER METER BOX AS SHOWN ON DRAWING OR AS DIRECTED BY CAL-AM REPRESENTATIVE. TYPICAL LOCATION IS 6' BEHIND BACK OF SIDEWALK OR 6' BEHIND BACK OF CURB IF SIDEWALK IS NOT PROPOSED.
- METER BOX SHALL BE LEVEL AND FLUSH WITH FINISHED GRADE.
- CONTRACTOR TO PROVIDE A FLANGED METER SPACER: 1-1/2" SERVICE 13" METER SPACER 2" SERVICE 17-1/4" METER SPACER
- CAL-AM WILL PROVIDE AND INSTALL METER.
- WHEN REPLACING COMPOUND METERS, ANY BYPASS PIPING SHALL BE REMOVED AT CAL-AM DISCRETION.
- INSTALL BRONZE DOUBLE STRAP SERVICE SADDLE ON ALL ACP AND DIP MAINS.
- INSTALL BRONZE SINGLE STRAP SERVICE SADDLE ON ALL PVC MAINS.
- NO GALVANIZED PIPING MATERIALS SHALL BE ALLOWED.
- SERVICE SHALL BE INSTALLED AT 45 DEGREES (HORIZONTAL). SERVICE INSTALLATION AT 45 DEGREES UPON DISCRETION OF CAL-AM.
- SEE PIPE TRENCH AND BACKFILL STANDARD DRAWING CAW-SD-W102.
- SEE WARNING / IDENTIFICATION TAPE AND TRACER WIRE STANDARD DRAWING CAW-SD-W103.
- SEE REDUCED PRESSURE (RP) PRINCIPLE BACKFLOW ASSEMBLY STANDARD DRAWING CAW-SD-W204.
- SEE WATER SERVICE MINIMUM SEPARATION STANDARD DRAWING CAW-SD-W105.

SEE CAL-AM SOUTHERN DIVISION SPECIFICATIONS FOR APPROVED MATERIALS LIST

**WATER SERVICE MINIMUM SEPARATION**  
**CALIFORNIA AMERICAN WATER**  
**SOUTHERN DIVISION**

STANDARD DRAWING NUMBER: **CAW-SD-W206**  
 COMMITTEE APPROVAL: 09/28/2022

**NOTES:**

- WATER SERVICES LINES AND METER BOXES ARE NOT ALLOWED IN DRIVEWAYS.
- WATER METER BOXES ARE NOT ALLOWED IN SIDEWALKS.
- ALL WATER SERVICE LATERALS SHALL BE A MINIMUM OF 2 FEET FROM ALL UNDERGROUND OR ABOVE GROUND STRUCTURES, DRIVEWAYS, ACCESSIBLE RAMPS, AND CURB RETURNS.

SEE CAL-AM SOUTHERN DIVISION SPECIFICATIONS FOR APPROVED MATERIALS LIST

**FIRE HYDRANT**  
**CALIFORNIA AMERICAN WATER**  
**SOUTHERN DIVISION**

STANDARD DRAWING NUMBER: **CAW-SD-W207**  
 COMMITTEE APPROVAL: 09/28/2022

**Los Angeles County District:**  
 All Fire Hydrants installed in industrial areas must be three-outlet Fire Hydrants. Only DI Pipe is allowed in the district.

**NOTES:**

- HYDRANTS SHALL BE WET BARREL FOR ALL NORTHERN DISTRICTS WITH THE EXCEPTION OF RAYMOND, CONRSOLED, OAKHURST, AND GOLDSIDE. THESE FOUR DISTRICTS SHALL HAVE DRY BARREL HYDRANTS.
- HYDRANT TO BE INSTALLED WITH 4-1/2" OUTLET FACING THE ROAD UNLESS OTHERWISE DIRECTED BY THE FIRE DEPARTMENT.
- HYDRANT SHALL BE LOCATED 2-FOOT MINIMUM OUTSIDE OF CURB RADIUS AND 2-FOOT MINIMUM OUTSIDE OF ACCESSIBLE RAMPS AND IN ACCORDANCE WITH LOCAL FIRE DEPARTMENT.
- COVER HYDRANT WITH PLASTIC WRAP UNTIL PLACED INTO SERVICE.
- CONCRETE PLACEMENT FOR THRUST BLOCKS AND COLLAR SHALL BE SCHEDULED SEPARATELY (TWO SEPARATE POURS REQUIRED).
- CONCRETE SPLASH PAD SHALL BE 4000 PSI MINIMUM.
- A 6" X 6" REDUCER IS REQUIRED FOR 8" HYDRANT BRANCH.
- ALL DUCTILE IRON PIPING, FITTINGS, AND VALVES SHALL BE POLYWRAPPED AND TAPED WITH 10 MIL TAPE.
- ALL JOINTS SHALL BE RESTRAINED.
- INSTALL THRUST BLOCKS AS SHOWN ON STANDARD DRAWING CAW-SD-W105.
- INSTALL GUARD POST (WHEN REQUIRED) AS SHOWN ON STANDARD DRAWING CAW-SD-W403.
- INSTALL WARNING / IDENTIFICATION TAPE AND TRACER WIRE AS SHOWN ON STANDARD DRAWING CAW-SD-W103.
- INSTALL VALVE BOX AND RISER AS SHOWN ON STANDARD DRAWING CAW-SD-W105.
- INSTALL VALVE BOX AND RISER AS SHOWN ON STANDARD DRAWING CAW-SD-W105.

SEE CAL-AM SOUTHERN DIVISION SPECIFICATIONS FOR APPROVED MATERIALS LIST

**2-INCH BLOW-OFF (END OF MAIN)**  
**CALIFORNIA AMERICAN WATER**  
**SOUTHERN DIVISION**

STANDARD DRAWING NUMBER: **CA-SD-W301A**  
 COMMITTEE APPROVAL: 09/28/2022

**NOTES:**

- SET METER BOX FLUSH WITH SIDEWALK, CURB OR FINISHED GRADE.
- LOCATE BLOW-OFF AS SHOWN ON DRAWING.
- SEE PIPE TRENCH AND BACKFILL STANDARD DRAWING CAW-SD-W102.
- SEE WARNING / IDENTIFICATION TAPE AND TRACER WIRE STANDARD DRAWING CAW-SD-W103.
- SEE VALVE BOX AND RISER STANDARD DRAWING CAW-SD-W105.
- SEE CONCRETE THRUST RESTRAINT STANDARD DRAWING CAW-SD-W105.
- SEE PIPE AND JOINT RESTRAINT STANDARD DRAWING CAW-SD-W107.

SEE CAL-AM SOUTHERN DIVISION SPECIFICATIONS FOR APPROVED MATERIALS LIST



REVISIONS	REVISIONS

REVISIONS	REVISIONS

**Blair, Church & Flynn**  
 CONSULTING ENGINEERS

481 Clovis Avenue, Suite 200  
 Clovis, California 93212  
 Tel: (509) 528-4400  
 Fax: (509) 528-4800

**REGISTERED PROFESSIONAL ENGINEER**  
 JAMES L. STUBBS  
 No. 93,766  
 State of California

**AMERICAN WATER COMPANY**  
 3906 CHURCH ROAD  
 MT. LAUREL, NJ 08054

**AMERICAN WATER**

**DRAWN BY** JRA  
**PROJECT ENGR** JLS

**DATE** 2024-07-09

**PROJECT**

**PRICHARD STREET WATER MAIN REPLACEMENT**  
**CITY OF BELLFLOWER**

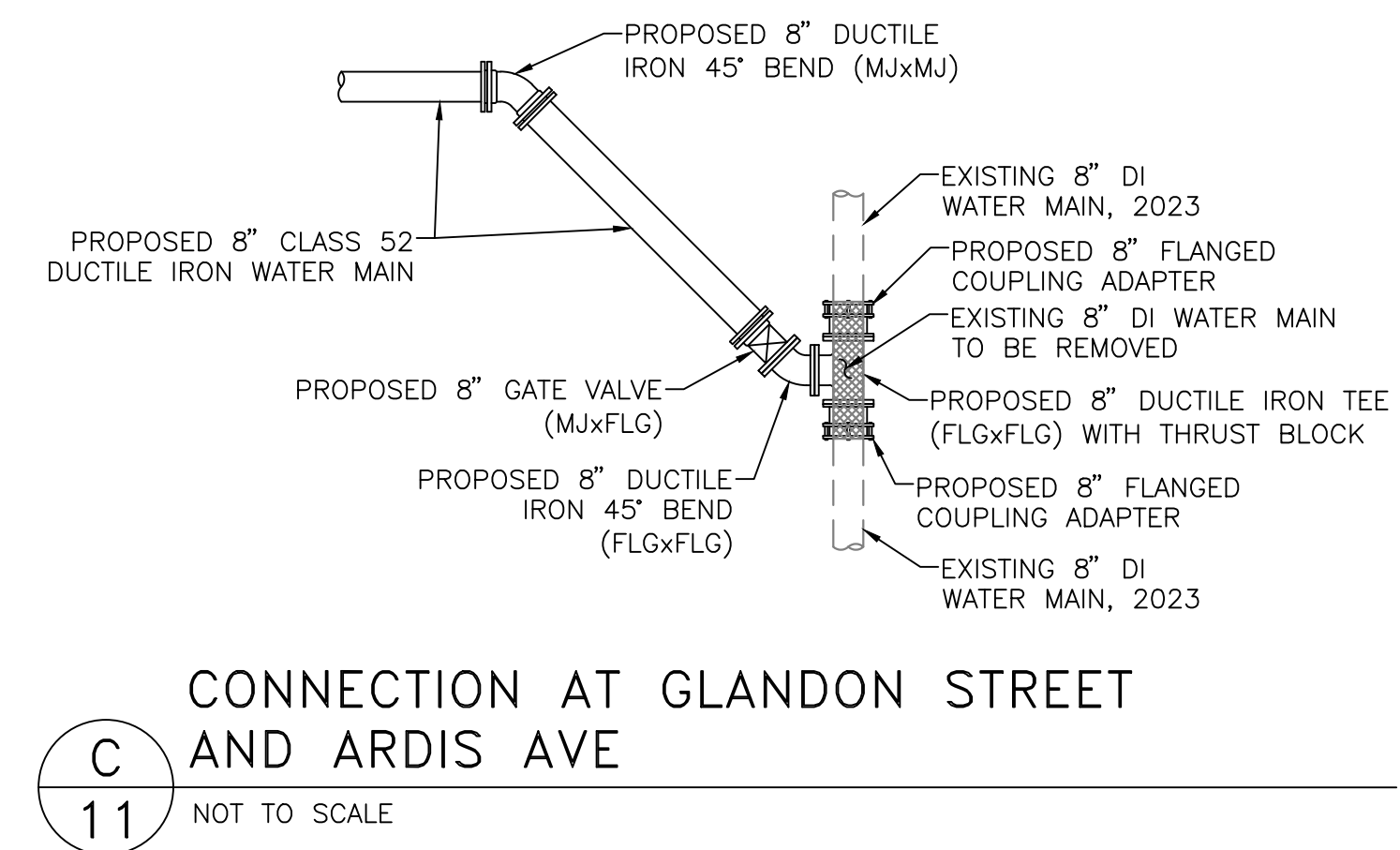
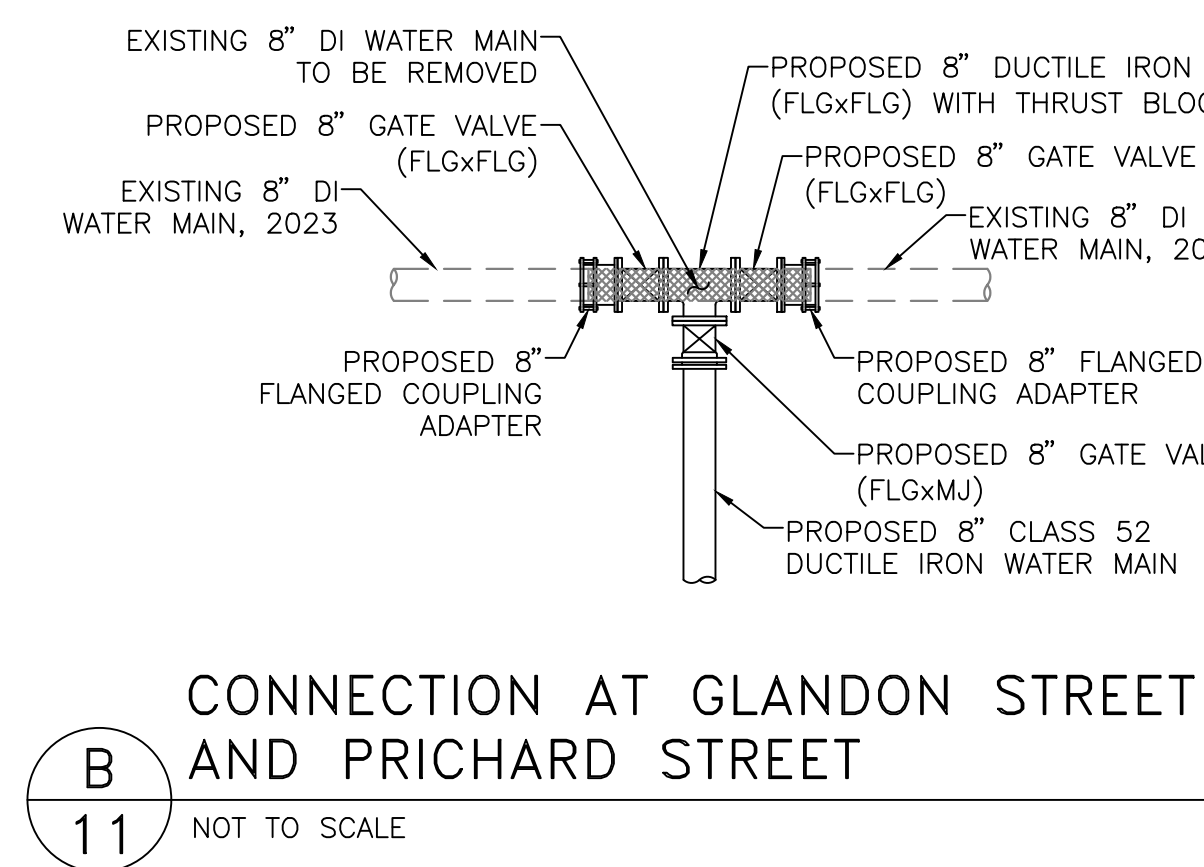
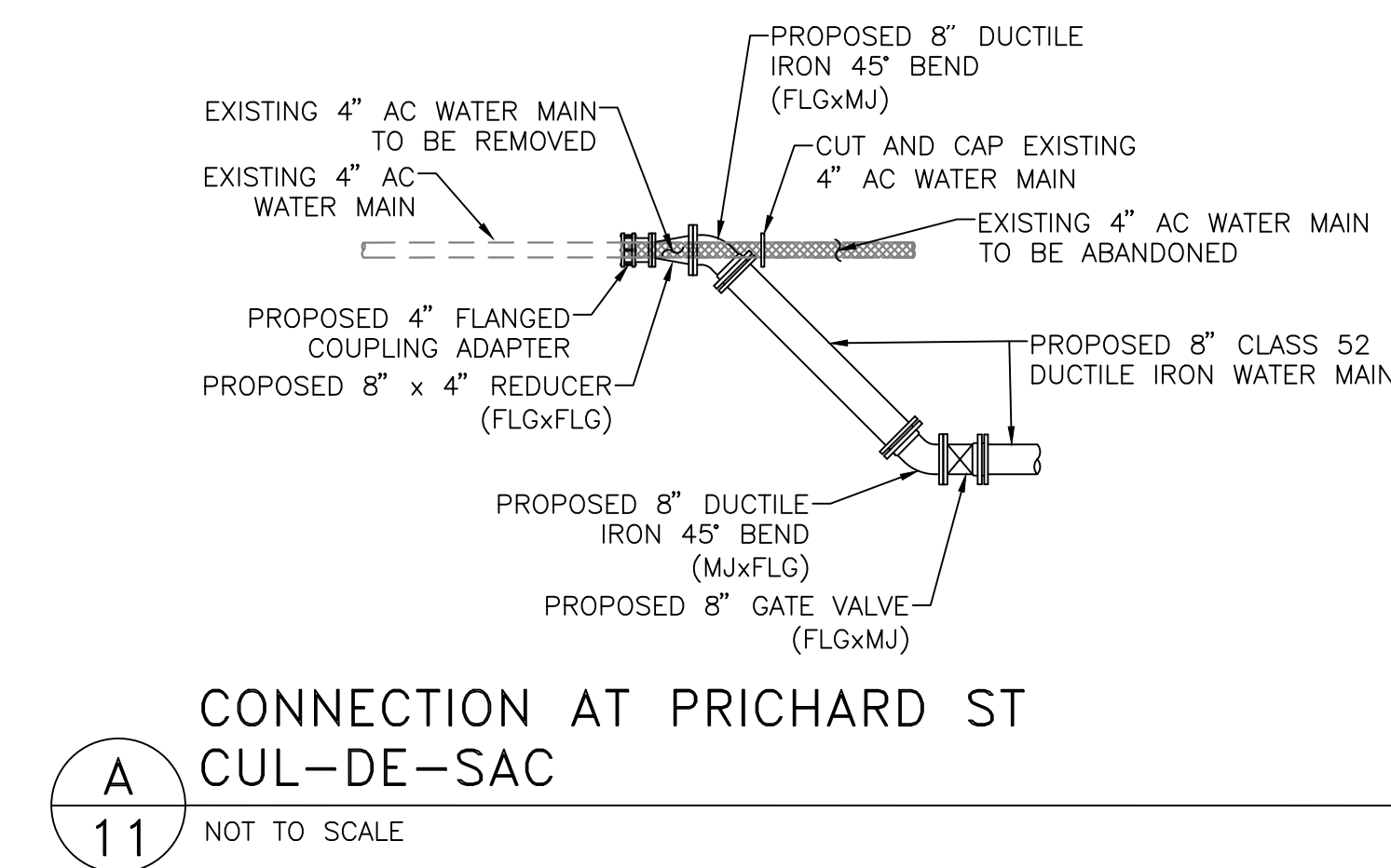
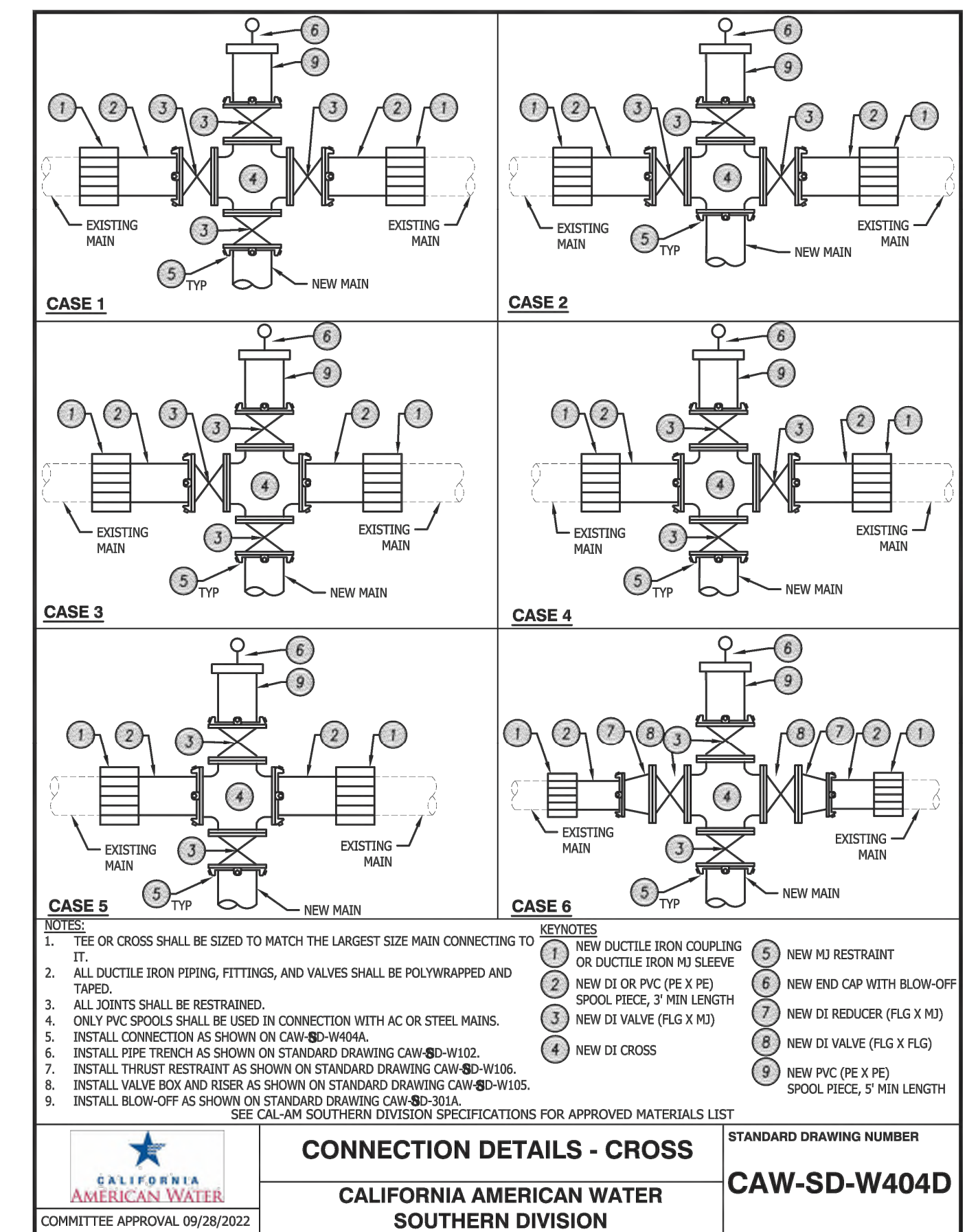
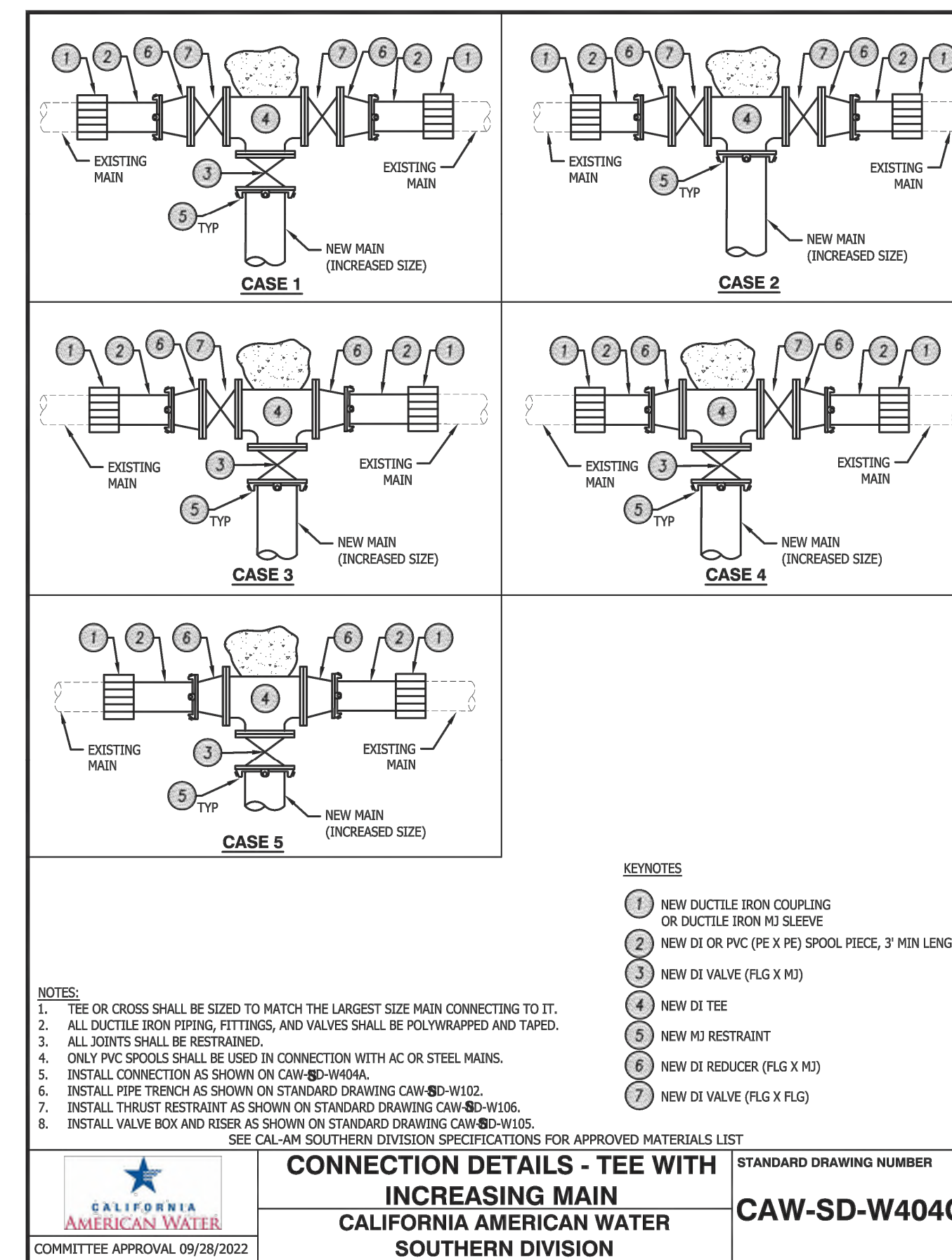
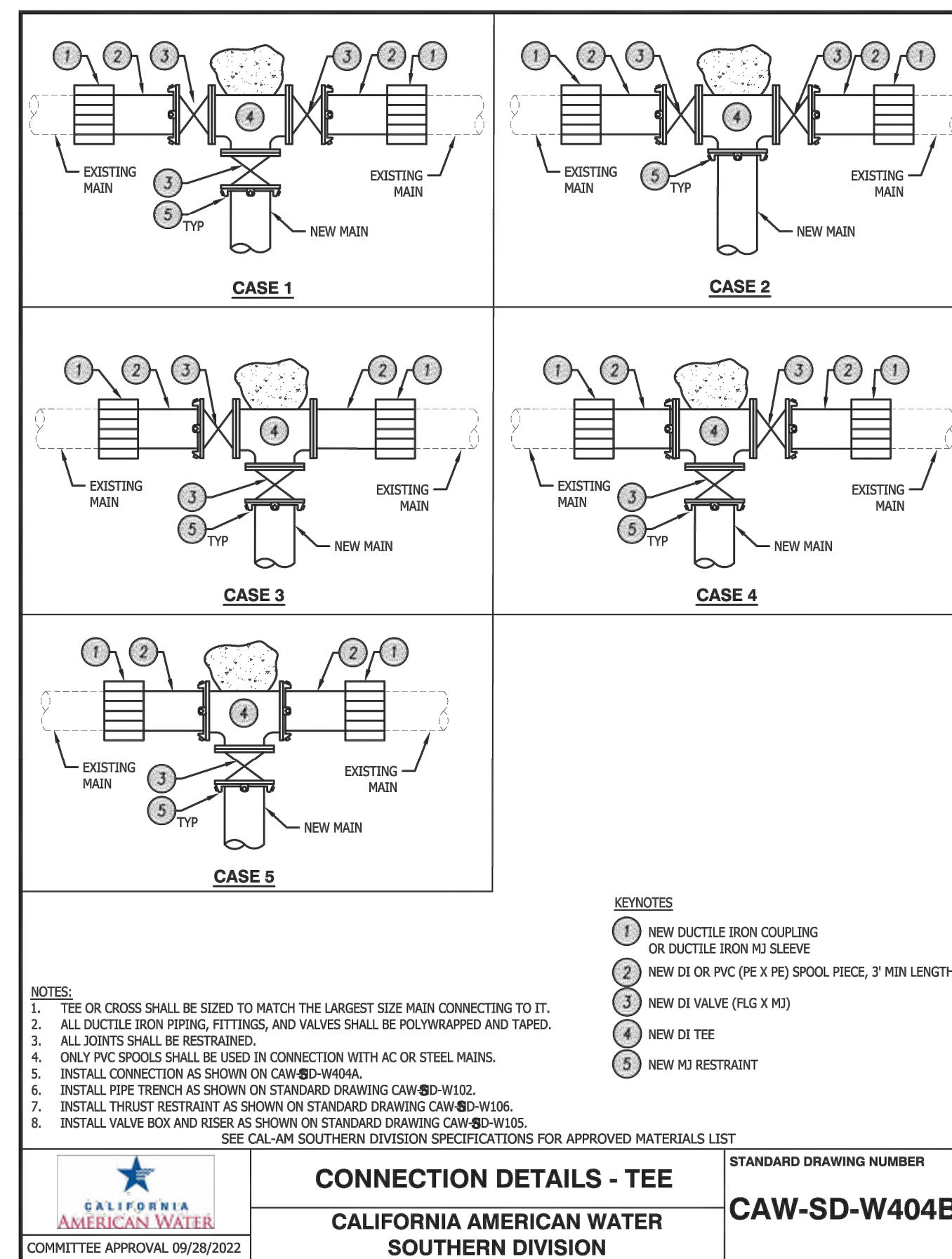
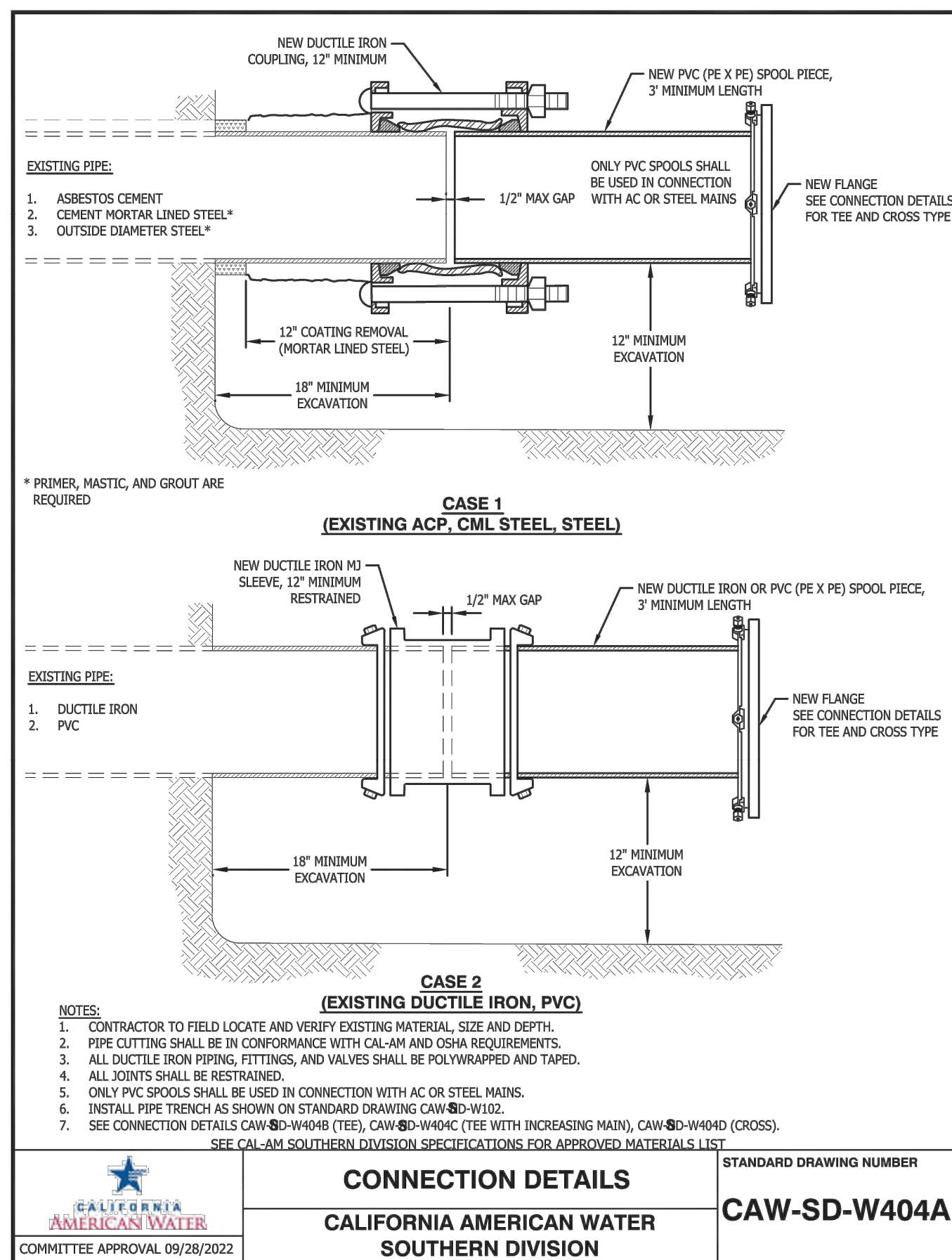
**STANDARD DETAILS**

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AMERICAN WATER COMPANY  
3906 CHURCH ROAD  
MT. LAUREL, NJ 08054

**AMERICAN WATER**

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PROJECT ENGR' JLS

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PRICHARD STREET WATER MAIN REPLACEMENT  
CITY OF BELLFLOWER

STANDARD DRAWING AND CONNECTION DETAILS

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