








GENERAL NOTES:












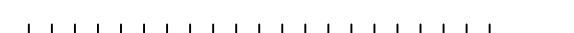








- ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE PROJECT PLANS AND SPECIFICATIONS AND SHALL BE IN ACCORDANCE WITH THE MOST CURRENT VERSION OF THE OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION AT THE DATE PROJECT WAS FIRST ADVERTISED FOR BID. THE CITY OF ST. HELENS OREGON ENGINEERING STANDARDS MANUAL, OREGON DEQ, OREGON STATE HEALTH DEPARTMENT, AND AWWA STANDARD PLANS AND SPECIFICATIONS, SHALL APPLY AS APPLICABLE.
- ORGANIC AND UNDESIRABLE MATERIAL SHALL BE REMOVED FROM THE CONSTRUCTION AREA AS DIRECTED BY THE CITY ENGINEER.
- THE CONTRACTOR SHALL LEAVE ALL AREAS OF PROJECT FREE OF DEBRIS AND UNUSED CONSTRUCTION MATERIAL.
- ALL FILL AREAS SHALL BE STRIPPED OF ORGANIC MATERIAL. FILL WILL BE PLACED IN SPECIFIED LIFTS AND COMPACTED TO 95% RELATIVE MAXIMUM DENSITY ACCORDING TO AASHTO T-99 STANDARDS. BASE ROCK IN THE STREET WILL BE COMPACTED TO 95% AASHTO T-180. LANDSCAPED AREAS WILL BE COMPACTED TO 90%. THE CONTRACTOR SHALL PROVIDE DENSITY TESTING A MAXIMUM OF ONE FOR EVERY 10,000 SQUARE FEET OF AREA AND 2 FEET OF FILL PLACED. ADDITIONAL COMPACTION TESTS MAY BE REQUIRED BY THE CITY OF POOR COMPACTION EFFORTS ARE OBSERVED DURING CONSTRUCTION. COMPACTION REPORTS FROM A REPUTABLE TESTING LAB WILL BE SUPPLIED TO THE CITY.
- ANY CHANGES FROM APPROVED PLANS SHALL BE APPROVED IN WRITING BY THE CITY AND THE APPROPRIATE AGENCIES. COMPLEXITY OF MODIFICATIONS WILL DETERMINE IF REVISED PLANS ARE REQUIRED.
- CITY ENGINEERING STAFF SHALL BE SUPPLIED WITH MATERIAL CERTIFICATIONS FOR ALL MATERIALS USED ON PUBLIC INFRASTRUCTURE.
- BEDDING AND PIPE ZONE BACKFILL REQUIREMENTS WILL BE IN ACCORDANCE WITH APPLICABLE SPECIFICATIONS AND DETAILS.
- MINIMUM COVER OVER WATERLINES IS 30 INCHES AS MEASURED FROM FINISHED GRADE TO TOP OF PIPE. MINIMUM VERTICAL SEPARATION BETWEEN WATERLINE AND SANITARY SEWER AT A CROSSING SHALL BE 18 INCHES. SANITARY SEWERS SHALL BE LOCATED 18 INCHES OR MORE BELOW WATER MAINS. WATERLINE CROSSINGS AT SANITARY SEWERS WITH LESS THAN THE MINIMUM VERTICAL SEPARATION SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE OR C-900 WITH WATER TIGHT JOINTS. IN SUCH CASES THE LENGTH OF SANITARY SEWER SHALL BE CENTERED AT THE CROSSING. MAINTAIN 10FT MINIMUM HORIZONTAL SEPARATION BETWEEN SANITARY SEWER AND WATERLINE.
- ALL WATER PIPE AND FITTINGS SHALL BE CEMENT-LINED DUCTILE IRON PIPE, CLASS 50 OR CLASS 52 WITH TYTON JOINTS OR APPROVED EQUAL.
- WATERLINES SHALL BE PRESSURE TESTED FOLLOWING COMPLETION. TEST PRESSURE SHALL BE 150 PSI (AT LOWEST POINT IN TEST SECTION) TO BE HELD FOR A PERIOD OF 1 HOUR AND SHALL NOT VARY BY MORE THAN 5 PSI. SAID TEST SHALL BE WITNESSED BY THE CITY ENGINEER AND/OR HIS/HER DESIGNATE.
- PRIOR TO BEING PLACED IN SERVICE, THE WATERLINE AND SERVICES SHALL BE FLUSHED, STERILIZED, AND RE-FLUSHED, ALL IN ACCORDANCE WITH STANDARD METHODS OF THE STATE OF OREGON DEPARTMENT OF HUMAN SERVICES HEALTH DIVISION. CITY CREWS WILL TAKE BACTERIOLOGICAL TESTS WHEN SO REQUESTED BY THE CONTRACTOR INSTALLING WATER MAINS. BACTERIOLOGICAL TESTS SHALL NOT BE PERFORMED UNTIL THE WATERLINE HAS PASSED THE REQUIRED PRESSURE TESTING.
- CONCRETE THRUST BLOCKS ARE TO BE CONSTRUCTED AT ALL WATER MAIN FITTINGS AS REQUIRED BY OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION AND WHERE INDICATED ON PLANS. STRADDLE BLOCKS TO BE INSTALLED ON DEAD END LINES. HYDRANTS SHALL HAVE MEGA-LUG RETAINER GLAND THRUST BLOCKS AT MAIN LINE. THE BLOCK MINIMUM BEARING SURFACE AGAINST UNDISTURBED SOIL IS SHOWN ON THE DETAIL SHEET. THRUST BLOCKS SHALL BE ALLOWED TO CURE 14 DAYS BEFORE PIPELINE PRESSURE TESTING.
- ONE SET OF PLANS SHALL BE KEPT ON SITE DURING ALL CONSTRUCTION. ANY CHANGES OR MODIFICATIONS SHALL BE NOTED AND KEPT AS REDLINE DRAWINGS TO BE SUBMITTED TO THE CITY WHEN THE PROJECT IS COMPLETED.
- A PRE-CONSTRUCTION MEETING WITH THE CITY AND THE CONTRACTOR IS REQUIRED PRIOR TO THE START OF CONSTRUCTION.
- CONTRACTOR SHALL MAINTAIN ACCESS TO ALL HOMES AND BUSINESSES AT ALL TIMES AND PROVIDE WRITTEN NOTICE TO ALL PROPERTY OWNERS AND/OR RESIDENTS AT LEAST TWO BUSINESS DAYS IN ADVANCE OF WORK IN AND/OR CROSSING DRIVEWAYS.
- NO UNDERGROUND WORK SHALL BE BURIED UNTIL INSPECTED AND APPROVED BY THE CITY CONSTRUCTION INSPECTOR.
- LOCATIONS, SIZES, OR DEPTHS ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE. PRIOR TO ANY CONSTRUCTION, EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR, INCLUDING ELEVATIONS, TYPE, AND SIZES OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL ADJUST NEW PIPING AS REQUIRED. CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY CONFLICTS NOT SHOWN ON THE PLANS AND SHALL KEEP EXISTING UTILITIES ON SERVICE AND PROTECT THEM DURING CONSTRUCTION. WHERE INTERRUPTION OF EXISTING FACILITIES IS REQUIRED, CONTRACTOR SHALL PROVIDE 72 HOUR NOTICE TO ENGINEER AND THE AFFECTED UTILITY. CONTRACTOR SHALL ARRANGE FOR THE RELOCATION OF ANY UTILITIES IN CONFLICT WITH THE PROPOSED CONSTRUCTION.
- CONTRACTOR SHALL DISPOSE OF ALL REMOVED OR REPLACED MATERIAL AND EQUIPMENT IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS, EXCEPT THOSE ITEMS DESIGNATED BY THE OWNER FOR SALVAGING. SALVAGED ITEMS SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE CAREFULLY REMOVED AND STORED AS DIRECTED.
- CONTRACTOR SHALL OBTAIN ALL NECESSARY CITY, COUNTY, STATE, AND UTILITY CONSTRUCTION PERMITS AND SHALL CONTACT EACH PERMITTING AGENCY AT LEAST TWO (2) BUSINESS DAYS PRIOR TO STARTING WORK. CONTRACTOR SHALL OBTAIN ALL REQUIRED LICENSES BEFORE STARTING CONSTRUCTION.
- CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF ORS 757.541 TO 757.571, AND SHALL NOTIFY EACH UNDERGROUND UTILITY AT LEAST 2 BUSINESS DAYS, BUT NOT MORE THAN 10 BUSINESS DAYS, PRIOR TO EXCAVATING, BORING, OR POTHOLING.
- NO ADDITIONAL PAYMENT SHALL BE MADE FOR UTILITY RELOCATION COORDINATION OR DELAYS CAUSED BY UTILITY CONFLICTS. ALL COSTS RELATED TO UTILITY COORDINATION AND RELOCATION, INCLUDING ADDITIONAL POTHOLING, SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION AND INCLUDED IN THE UNIT PRICES OF THE BID.
- UTILITIES OR INTERFERING PORTIONS OF UTILITIES THAT ARE ABANDONED SHALL BE REMOVED BY THE CONTRACTOR TO THE EXTENT NECESSARY TO ACCOMPLISH THE WORK. THE CONTRACTOR SHALL PLUG THE REMAINING EXPOSED ENDS OF ABANDONED UTILITIES LESS THAN SIX INCHES IN DIAMETER, UNLESS OTHERWISE REQUIRED BY THE ENGINEER. UTILITIES SIX INCHES IN DIAMETER OR GREATER SHALL BE FILLED WITH APPROVED CLSM.
- CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION AND SEDIMENTATION CONTROL DEVICES AS REQUIRED DURING CONSTRUCTION PER THE REQUIREMENTS OF THE CITY OF ST. HELENS, COLUMBIA COUNTY, AND OREGON DEQ.
- CONTRACTOR SHALL NOTIFY THE ENGINEER AND OWNER 48 HOURS BEFORE STARTING CONSTRUCTION, AND 24 HOURS BEFORE RESUMING WORK AFTER SHUTDOWNS EXCEPT FOR NORMAL RESUMPTION OF WORK FOLLOWING SATURDAYS, SUNDAYS, OR HOLIDAYS. CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR A MINIMUM OF 48 HOURS PRIOR TO ANY TESTING OR REQUIRED INSPECTION.
- CONTRACTOR SHALL PROTECT ALL PROPERTY CORNERS, SURVEY MONUMENTS AND CONTROL POINTS. ANY SUCH ITEMS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE, WITH APPROPRIATE SURVEYS FILED WITH THE COUNTY SURVEYOR.
- ALL EXISTING FEATURES, STRUCTURES, FENCES, GATES, LOTS, SWALES, DITCHES, CURBS, WALLS, MAILBOXES, SIGNS, POLES, GUY WIRES, PIPING, AND UTILITIES DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO EQUAL OR BETTER CONDITION UNLESS OTHERWISE SPECIFIED. RESTORATION SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.
- CONTRACTOR SHALL PROTECT TRAFFIC AT ALL TIMES DURING CONSTRUCTION. TRAFFIC CONTROL MEASURES SHALL BE APPROVED BY THE ENGINEER. TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO ANY CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL PLANS TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCING WORK.
- ALL FLANGE CONNECTIONS SHALL HAVE FULL-FACE GASKETS.
- NO VALVES SHALL BE OPENED OR CLOSED WITHOUT APPROVAL OF THE CITY WATER DEPT. VALVES TO BE EXERCISED ONLY BY CITY PERSONNEL. PUBLIC WORKS SUPERVISOR. DAVE ELDER (503) 397-3532. MUST BE NOTIFIED 48 HOURS IN ADVANCE TO COORDINATE ANY TAPS OR WATER VALVE OPERATION. THE CONTRACTOR IS NOT ALLOWED TO OPERATE ANY WATER VALVES CONTROLLING FLOW TO NEW PIPING FROM THE CITY'S POTABLE WATER SYSTEM.
- AT THE END OF EACH WORK DAY ALL OPEN TRENCHES SHALL BE BACKFILLED AND ALL TRENCHES WITHIN STREETS SHALL BE TEMPORARILY PAVED OR COVERED TO THE SATISFACTION OF THE OWNER. EXCAVATIONS ON PRIVATE PROPERTIES MAY REMAIN OPEN FOR NO LONGER THAN ONE WEEK. 3/4-INCH PLYWOOD CLEARLY MARKED WITH THE WORD "HOLE" MUST BE PLACED OVER ALL OPEN EXCAVATIONS AT THE END OF THE WORK SHIFT.
- STEEL SHEETS OVER TRENCHES ARE ALLOWED TO REMAIN IN PLACE FOR NO LONGER THAN FIVE DAYS UNLESS OTHERWISE APPROVED BY THE CITY. STEEL SHEETS MUST OVERLAP TRENCH EDGES A MINIMUM OF ONE FOOT AND ALL EDGES ARE TO HAVE ASPHALT RAMPS TO FACILITATE TRANSITIONS. STEEL SHEETS MUST BE PROPERLY ANCHORED TO PREVENT MOVEMENT.
- STREETS AND ROADS MAY REMAIN IN A DISTURBED STATE FOR NO LONGER THAN ONE WEEK. ALL CRUSHED ROCK AND CONSTRUCTION DEBRIS MUST BE CLEANED FROM EXISTING SURFACES DAILY.
- ANY INSPECTIONS BY THE ENGINEER OR INSPECTOR SHALL NOT IN ANYWAY RELIEVE THE CONTRACTOR FROM ANY OBLIGATION TO PERFORM THE WORK IN STRICT COMPLIANCE WITH THE CONTRACT DOCUMENTS, APPLICABLE, CODES, AND AGENCY REQUIREMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MANAGING CONSTRUCTION ACTIVITIES TO ENSURE PUBLIC RIGHTS-OF-WAY ARE KEPT CLEAN OF MUD, DUST, AND DEBRIS. DUST ABATEMENT SHALL BE MAINTAINED BY ADEQUATE WATERING OF THE SITE BY THE CONTRACTOR.
- UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A CLEAN SET OF FIELD RECORD DRAWINGS CONTAINING ALL AS-BUILT INFORMATION TO THE ENGINEER.
- WATER SERVICE LINE TUBING TO BE 1" COPPER TYPE K.
- EACH HYDRANT TO HAVE 5'X5' CONCRETE PAD INSTALLED AROUND HYDRANT.

LEGEND:






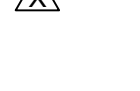
PROPOSED

	WATER MAIN
	WATER SERVICE
	FIRE HYDRANT
	WATER METER
	GATE VALVE
	BLOWOFF VALVE
	CUT AND CAP (PLUG) EXIST. WATER LINE

EXISTING

	WATER MAIN
	WATER SERVICE
	FIRE HYDRANT
	WATER METER
	GATE VALVE
	BLOWOFF VALVE
	VALVE (MISCEL)
	EDGE OF PAVEMENT
	STORM SEWER
	SANITARY SEWER
	SANITARY SEWER SERVICE LATERAL
	RAIL ROAD
	FENCE
	SANITARY MANHOLE
	SANITARY CLEANOUT
	STORM DRAIN MANHOLE
	STORM DRAIN CATCH BASIN
	STREET LIGHT
	POWER POLE
	PUBLIC RIGHT-OF-WAY


REFERENCE SYMBOLS

	DETAIL DESIGNATION
	DWG NO. LOCATION
	SECTION DESIGNATION
	DWG NO. LOCATION
	CALLOUT BUBBLE
	REVISION TRIANGLE

ABBREVIATIONS:

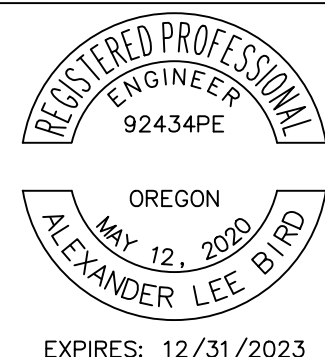
ABAN	ABANDON, ABANONED	OD	OUTSIDE DIAMETER
AC, A/C, HMAC	ASPHALT CONCRETE	ODOT	OREGON DEPARTMENT OF TRANSPORTATION
AGG	AGGREGATE	OHW	OVERHEAD WIRE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	PERF	PERFORATED
APPROX	APPROXIMATELY	PERM	PERMANENT
ASSY	ASSEMBLY	PK	PARKING
AWWA	AMERICAN WATER WORKS ASSOCIATION	P/L	PROPERTY LINE
BLDG	BUILDING	PROP	PROPOSED
BM	BENCHMARK	PS	PUMP STATION
CB	CATCH BASIN	PSI	POUNDS PER SQUARE INCH
CCTV	CLOSED CIRCUIT TELEVISION	PVC	POLYVINYL CHLORIDE
CDF	CONTROLLED DENSITY FILL	PVMT	PAVEMENT
CI	CAST IRON	RCP	REINFORCED CONCRETE PIPE
CIPP	CURED IN PLACE PIPE	RD	ROAD
CL, ϵ	CENTERLINE	REHAB	REHABILITATION
CL	CLASS	R-O-W, R/W	RIGHT OF WAY
CLSM	CONTROLLED LOW STRENGTH MATERIAL	REQ'D	REQUIRED
CO, C/O	CLEANOUT	SS, SAN	SANITARY SEWER
CONC	CONCRETE	SSCO	SANITARY SEWER CLEANOUT
CONST	CONSTRUCTION	SPECS	SPECIFICATIONS
CP	CONCRETE PIPE	SQ	SQUARE
CR	CRUSHED ROCK	SQFT	SQUARE FOOT/FEET
CY, CYD	CUBIC YARD	ST	STREET
D	DRAIN	STA	STATION
DET	DETAIL	STD	STANDARD
DI, DIP	DUCTILE IRON PIPE	SD, STM	STORM DRAIN
DIA, \varnothing	DIAMETER	SDWK, S/W	SIDEWALK
DR	DRIVE	TEL	TELEPHONE
DWG	DRAWING	TEMP	TEMPORARY
DWY	DRIVEWAY	THRU	THROUGH
EA	EACH	TYP	TYPICAL
EG	EXISTING GRADE	VCP	VITRIFIED CLAY PIPE
EL, ELEV.	ELEVATION	VERT	VERTICAL
EOP	EDGE OF PAVEMENT	W, WL, WAT, WTR	WATER
EQUIP	EQUIPMENT	W/	WITH
ESC	EROSION AND SEDIMENTATION CONTROL	W/IN	WITHIN
ESMT	EASEMENT	W/O	WITHOUT
EXIST.	EXISTING		
FL	FLOWLINE		
FT	FEET, FOOT		
FTG	FITTING		
GAS	NATURAL GAS		
GAL, GALV	GALVANIZED		
GRVL	GRAVEL		
GV	GATE VALVE		
HDPE	HIGH DENSITY POLYETHELENE		
HORIZ	HORIZONTAL		
HWY	HIGHWAY		
ID	INSIDE DIAMETER		
IE	INVERT ELEVATION		
LF	LINEAR FEET		
LN	LANE		
MATL(S)	MATERIAL(S)		
MFR	MANUFACTURER		
MAX	MAXIMUM		
MH, MHL	MANHOLE		
MIN	MINIMUM		
MJ	MECHANICAL JOINT		
NO	NUMBER		
NTS	NOT TO SCALE		
OC	ON CENTER		

NO.	REV. DATE	DESCRIPTION	REVISED BY	CHECKED BY	APPROVED BY



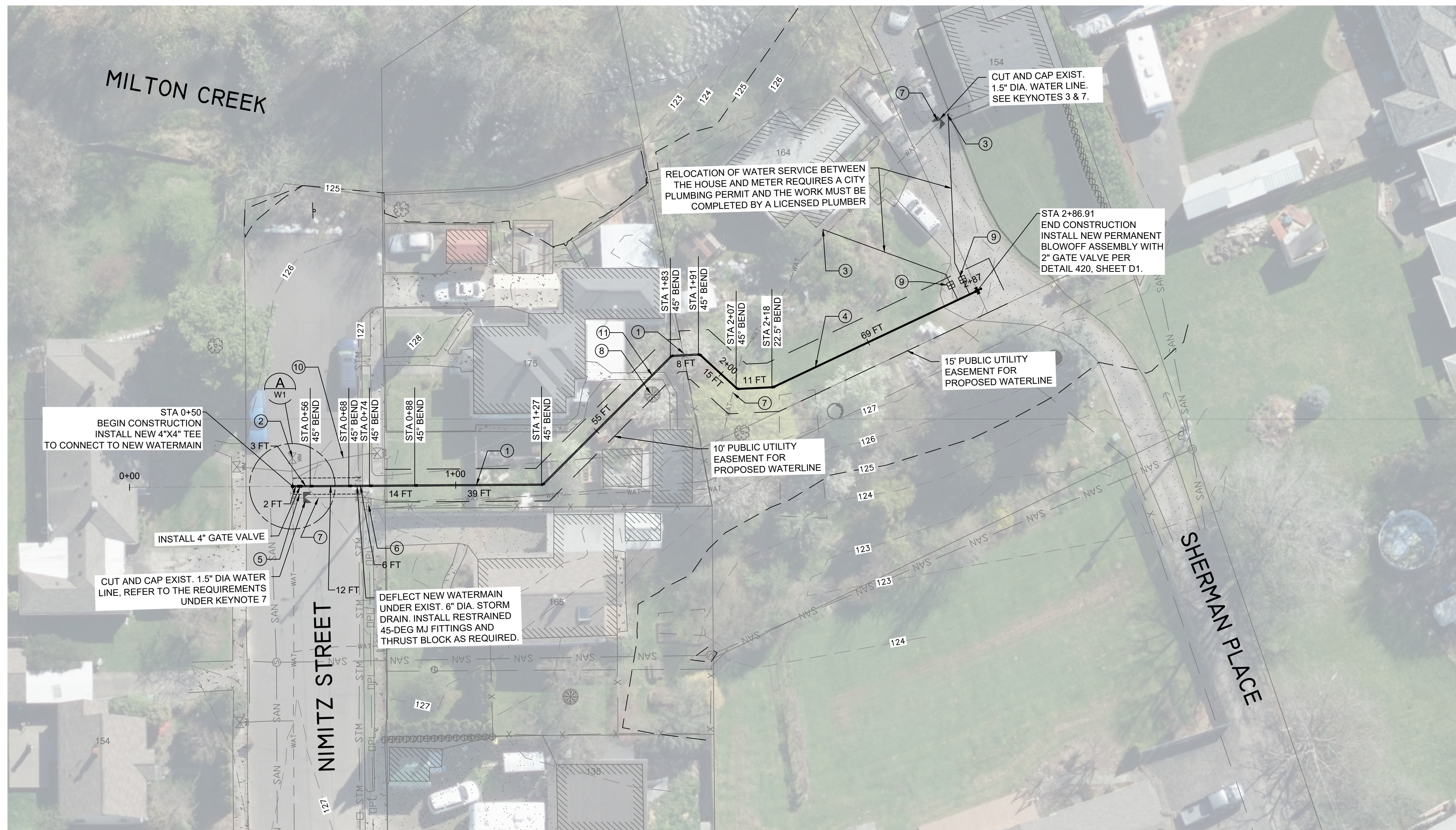
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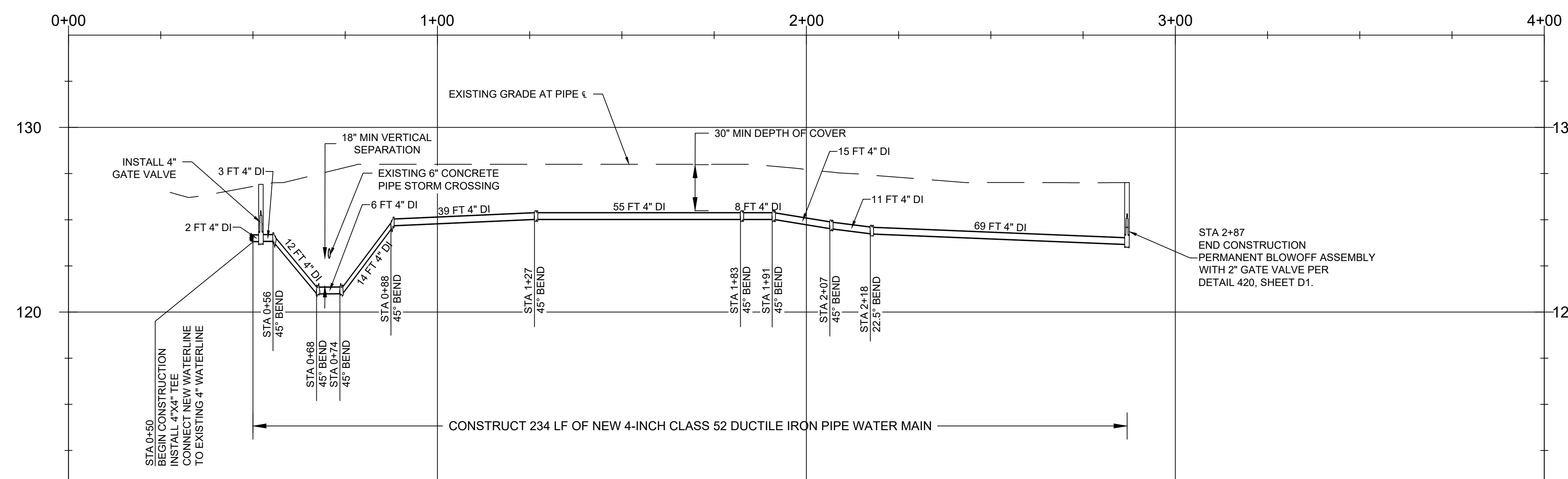


REGISTERED PROFESSIONAL ENGINEER
92434PE
OREGON
MAY 12, 2020
ALEXANDER LEE BYRD
EXPIRES: 12/31/2023

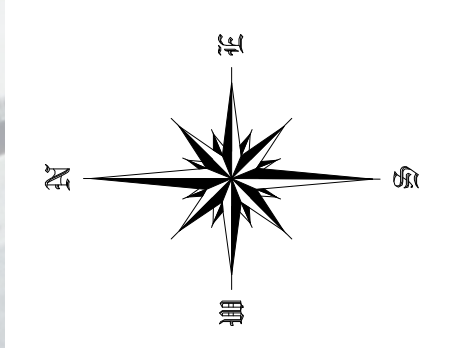
DESIGN BY: AB	SHEET TITLE: GENERAL NOTES, LEGEND, & ABBREVIATIONS	PROJECT NO: W-478
DRAWN BY: AB	PROJECT NAME: SHERMAN PLACE WATERLINE REPLACEMENT	DRAWING NO: G2
CHECKED BY: SD	ISSUED FOR: CONSTRUCTION	SHEET NO: 2
<small>LINE MEASURES 1 INCH AT FULL SCALE ADJUST SCALE ACCORDINGLY IF LINE DOES NOT MEASURE 1 INCH.</small>		DATE: OCTOBER 2022



PLAN VIEW
SCALE: HORZ. 1" = 20'



PROFILE VIEW
SCALE: HORZ. 1" = 20' VERT. 1" = 4'

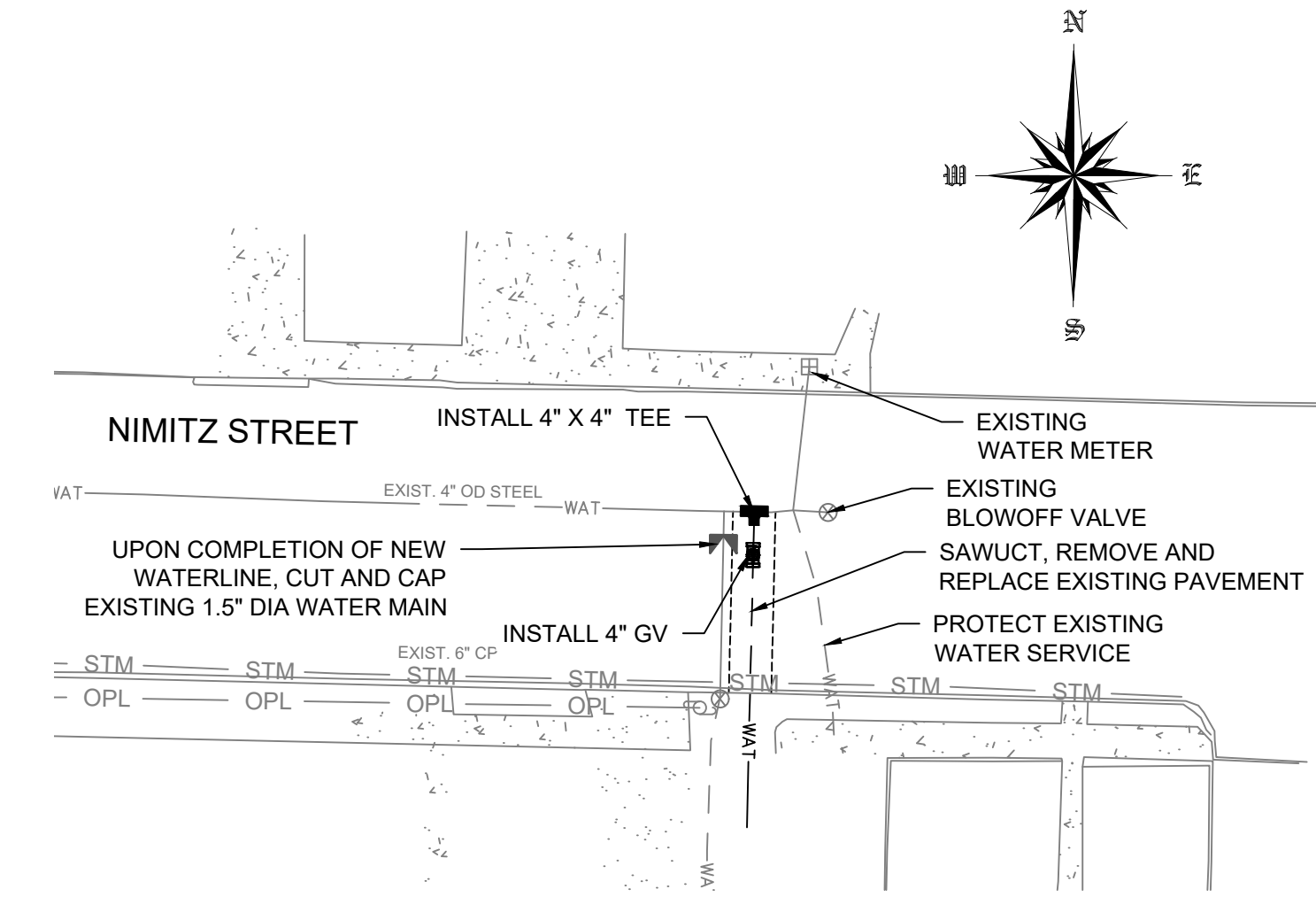


GENERAL NOTES:

- SUBMIT TO THE ENGINEER PLANS TO CHARGE, DISINFECT, TEST, AND CONNECT THE NEW WATERLINE.
- CONTRACTOR SHALL KEEP EXISTING WATERLINE IN SERVICE UNTIL ALL WATER SERVICES ARE MOVED OVER TO THE NEW WATERLINE
- EXISTING UTILITIES SHOWN ARE TAKEN FROM GIS MAPS, SURVEY, AND AS-BUILTS AND MAY VARY WITH ACTUAL LOCATIONS, LENGTH, DEPTH, AND DIAMETERS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO POTHOLE AND VERIFY ALL LOCATIONS, DEPTHS, AND DIAMETERS OF EXISTING UTILITIES PRIOR TO START OF WORK.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGES TO EXISTING UTILITIES. DAMAGES SHALL BE REPAIRED IN ACCORDANCE WITH THE REQUIREMENTS OF THE OWNER OF THE UTILITY AND AT NO ADDITIONAL COST TO THE OWNER
- ALL VERTICAL AND HORIZONTAL WATERLINE BENDS SHALL BE RESTRAINED USING MECHANICAL JOINT RESTRAINT DEVICES SUCH AS MEGA-LUG OR APPROVED EQUAL. SEE THRUST BLOCKING DETAILS ON SHEET D1.
- PIPE JOINT DEFLECTION SHALL NOT EXCEED THE MANUFACTURER'S MAXIMUM ALLOWABLE JOINT DEFLECTION. DEFLECTION SHALL BE DISPERSED OVER MULTIPLE JOINTS.
- CONTRACTOR SHALL MAINTAIN 30" MIN. COVER OVER WATERLINE CONTINUOUSLY
- CONTRACTOR SHALL POTHOLE EXISTING UTILITIES SUFFICIENTLY AHEAD OF THE WORK TO PLAN FOR ANY POSSIBLE DEFLECTIONS. WHEN THERE IS A CONFLICT BETWEEN THE PROPOSED WATERLINE AND AN EXISTING SEWER SERVICE, CONTRACTOR SHALL DEFLECT WATERLINE UNDER THE DIRECTION OF THE ENGINEER.
- ALL BEND FITTINGS SHALL BE FURNISHED WITH MJ RESTRAINT AND THRUST BLOCK PER STANDARD DETAILS.
- IF DEFLECTION WILL EXCEED MANUFACTURER'S MAX. ALLOWABLE PIPE JOINT DEFLECTION AND CANNOT BE DISPERSED OVER MULTIPLE JOINTS, CONTRACTOR SHALL INSTALL APPROPRIATE BEND FITTINGS WITH MJ RESTRAINT AND THRUST BLOCKS PER STANDARD DETAILS.
- ALL CONCRETE SHALL BE A MINIMUM OF 3,000 PSI COMPRESSIVE STRENGTH.
- CALL 811 BEFORE DIGGING. UTILITY LOCATE TICKET NUMBERS 22175686 & 22175701.
- CONTRACTOR SHALL COORDINATE ALL WATER SHUTDOWNS AND NOTIFICATIONS WITH PUBLIC WORKS AND CITY ENGINEERING STAFF.

CONSTRUCTION SHEET NOTES:

- REMOVE AND REPLACE EXISTING FENCE.
- PROTECT EXISTING BLOWOFF VALVE.
- UPON COMPLETION OF NEW WATER MAIN AND LATERALS, DISCONNECT WATER SERVICES FROM EXISTING WATERLINE.
- INSTALL APPROXIMATELY 234 LF CLASS 52 4" DI WATER PIPE.
- SAWCUT, REMOVE AND REPLACE EXISTING PAVEMENT. SEE DETAILS 256 AND 300, SHEET D1.
- PROTECT EXISTING POWER POLE.
- EXIST. 1.5" GALV WATERLINE SHALL BE ABANDONED PER SPECIFICATIONS AFTER NEW WATERLINE HAS BEEN CHARGED, DISINFECTED, HAS PASSED BACTERIOLOGICAL SAMPLING, AND ALL SERVICES HAVE BEEN CONNECTED TO THE NEW WATERLINE.
- REMOVE EXISTING TREE.
- INSTALL SINGLE WATER SERVICE INSTALLATION PER DETAIL 405, SHEET D1.
- PROTECT EXISTING WATER SERVICE LINE.
- REMOVE AND REPLACE EXISTING CONCRETE SIDEWALK



STA 0+50 CONNECTION, SHEET W1
NTS

NO.	REV. DATE	DESCRIPTION	REVISED BY	CHECKED BY	APPROVED BY



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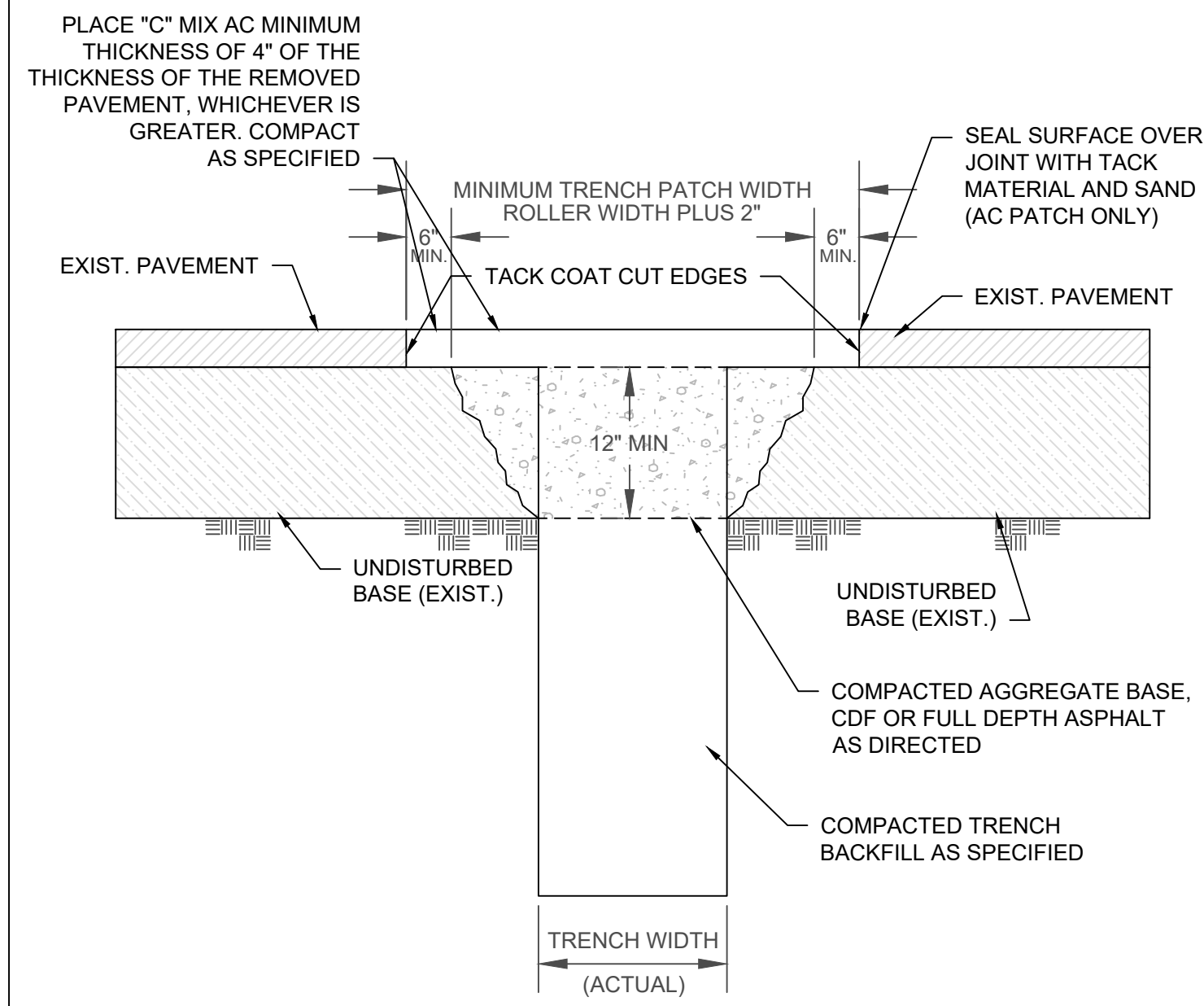
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DESIGN BY: AB
DRAWN BY: AB
CHECKED BY: SD

NOTE: ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CURRENT VERSION OF THE OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION UNLESS NOTED OTHERWISE.

PROJECT NO:	W-478
DRAWING NO:	W1
SHEET NO:	3
DESIGN TITLE:	NIMITZ STREET WATERLINE REPLACEMENT
PROJECT NAME:	SHERMAN PLACE WATERLINE REPLACEMENT
ISSUED FOR:	CONSTRUCTION
DATE:	OCTOBER 2022



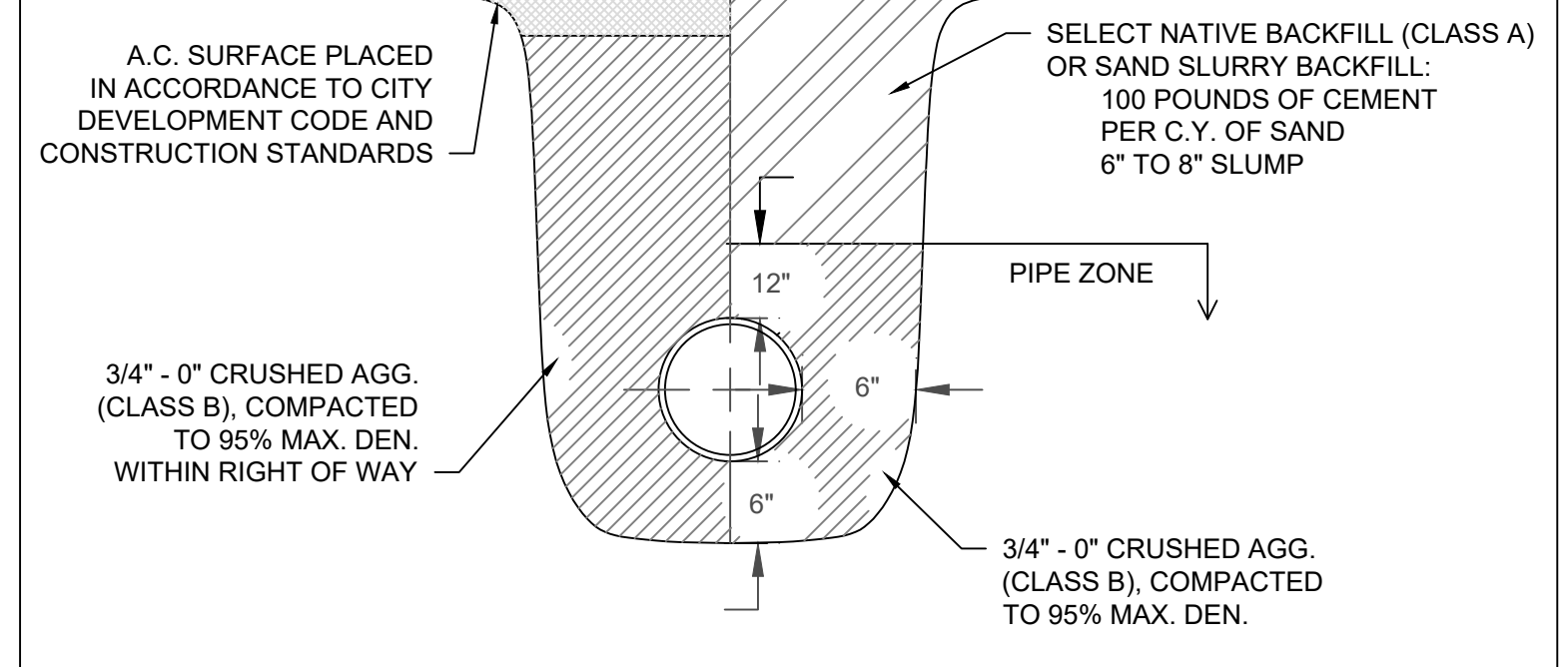
- NOTES:**
- ALL EXISTING AC OR PCC PAVEMENT SHALL BE SAWCUT PRIOR TO REPAVING
 - CONCRETE PAVEMENT SHALL BE REPLACED WITH CONCRETE TO A MINIMUM THICKNESS OF 6" OR TO THE THICKNESS OF REMOVED PAVEMENT, WHICHEVER IS GREATER
 - IF EXISTING BASE MATERIAL IS CTB OR ATB, THEN REPLACEMENT BASE MATERIAL SHALL MATCH EXISTING
 - CONCRETE SHALL BE 3300 PSI AT 28 DAYS

DRAWN BY: T. KOLLN
 CHECKED BY:
 DATE:
 SCALE: NTS

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REVISION: 1. NC
 2. SD, 08-2015

TITLE: STREET UTILITY PATCH
 DRAWING NO: 256



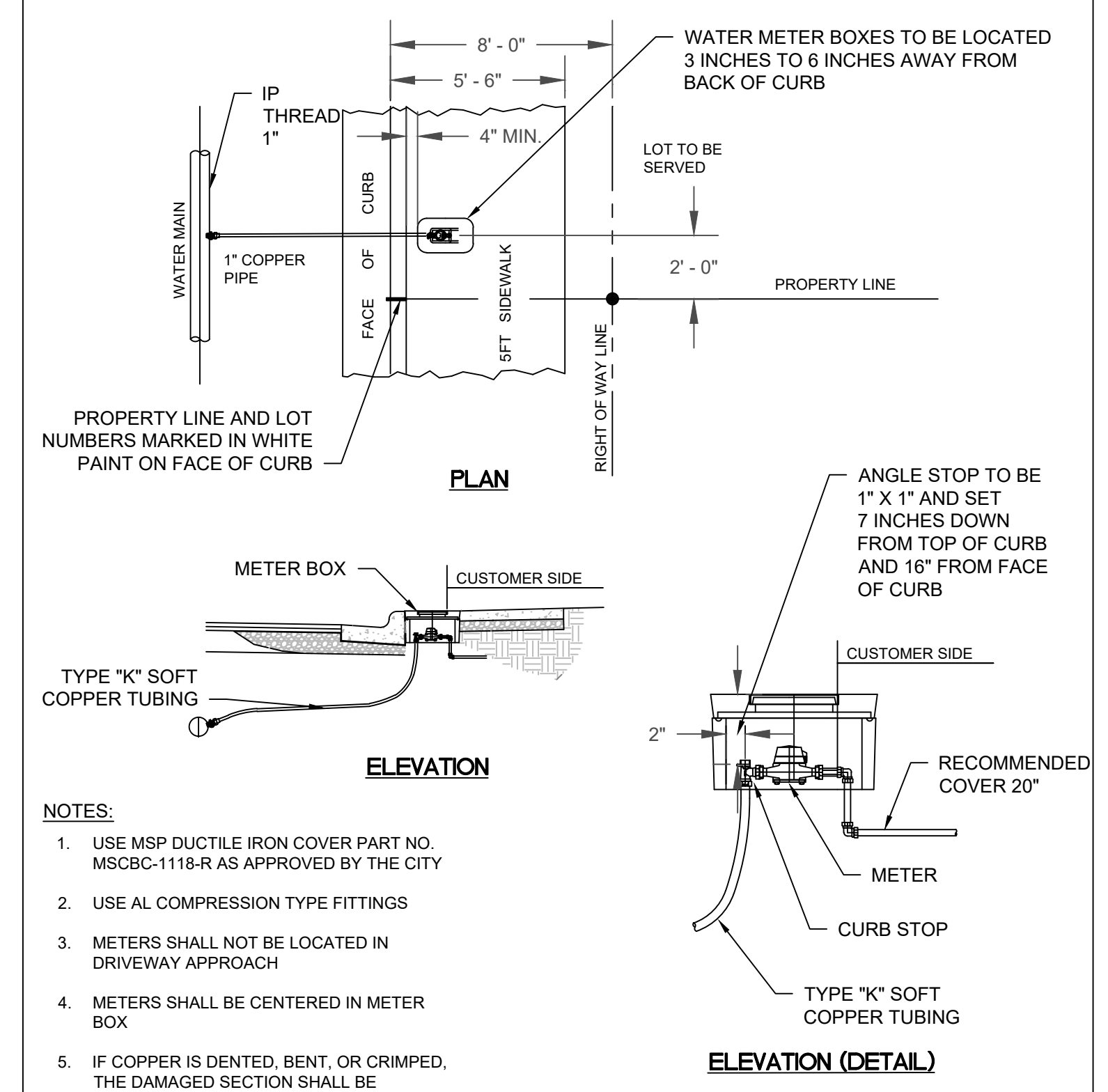
- NOTES:**
- MINIMUM TRENCH WIDTH IS 24 INCHES (SEE OSSC 405.40-C)

DRAWN BY: T. KOLLN
 CHECKED BY:
 DATE:
 SCALE:

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REVISION: 1. SD, 08-2015; UPDATED SPECIFICATION REFERENCE

TITLE: TYPICAL TRENCH DETAIL
 DRAWING NO: 300

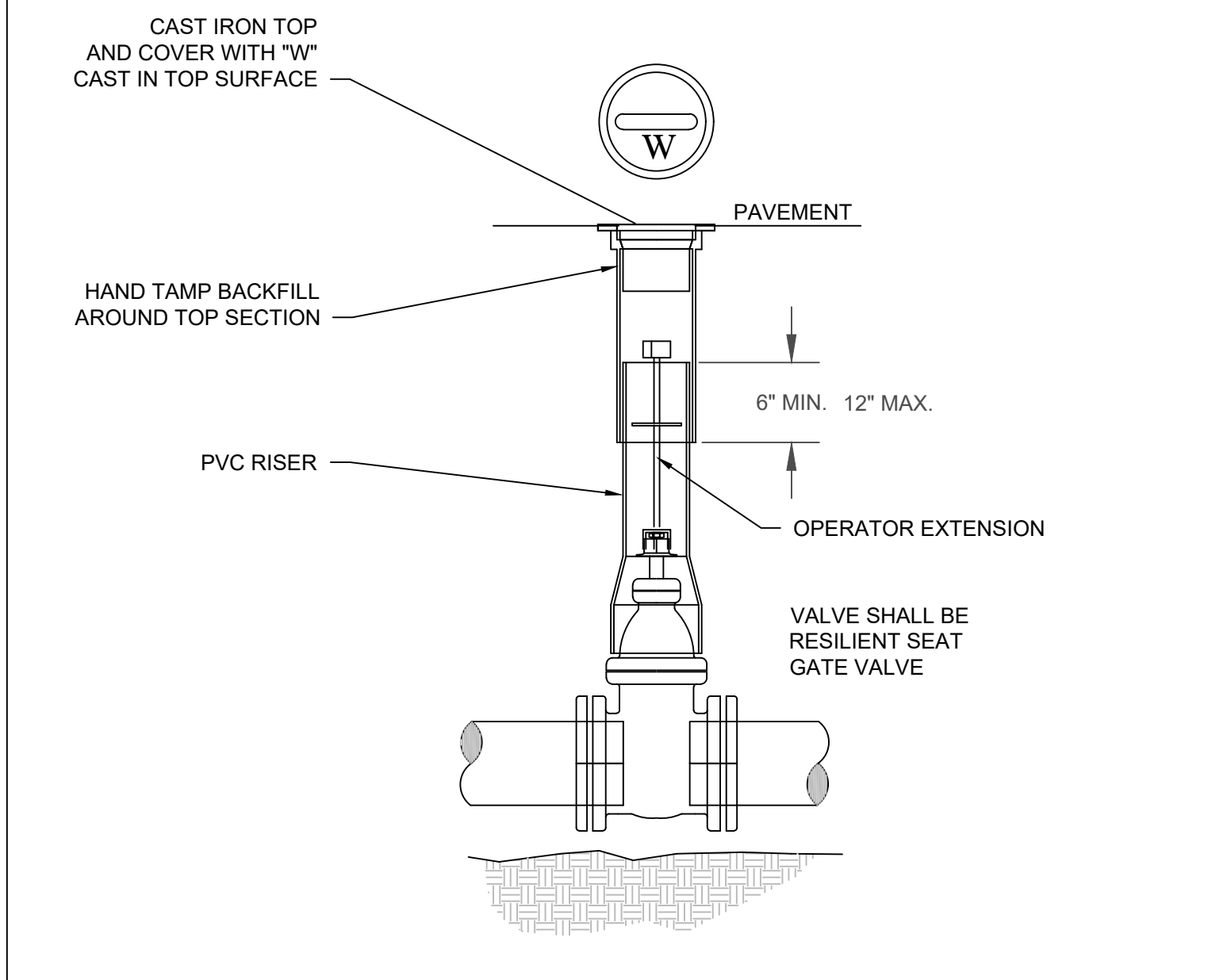


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REVISION: 1. NC
 2. SD, 06/2018

TITLE: SINGLE WATER SERVICE INSTALLATION
 DRAWING NO: 405



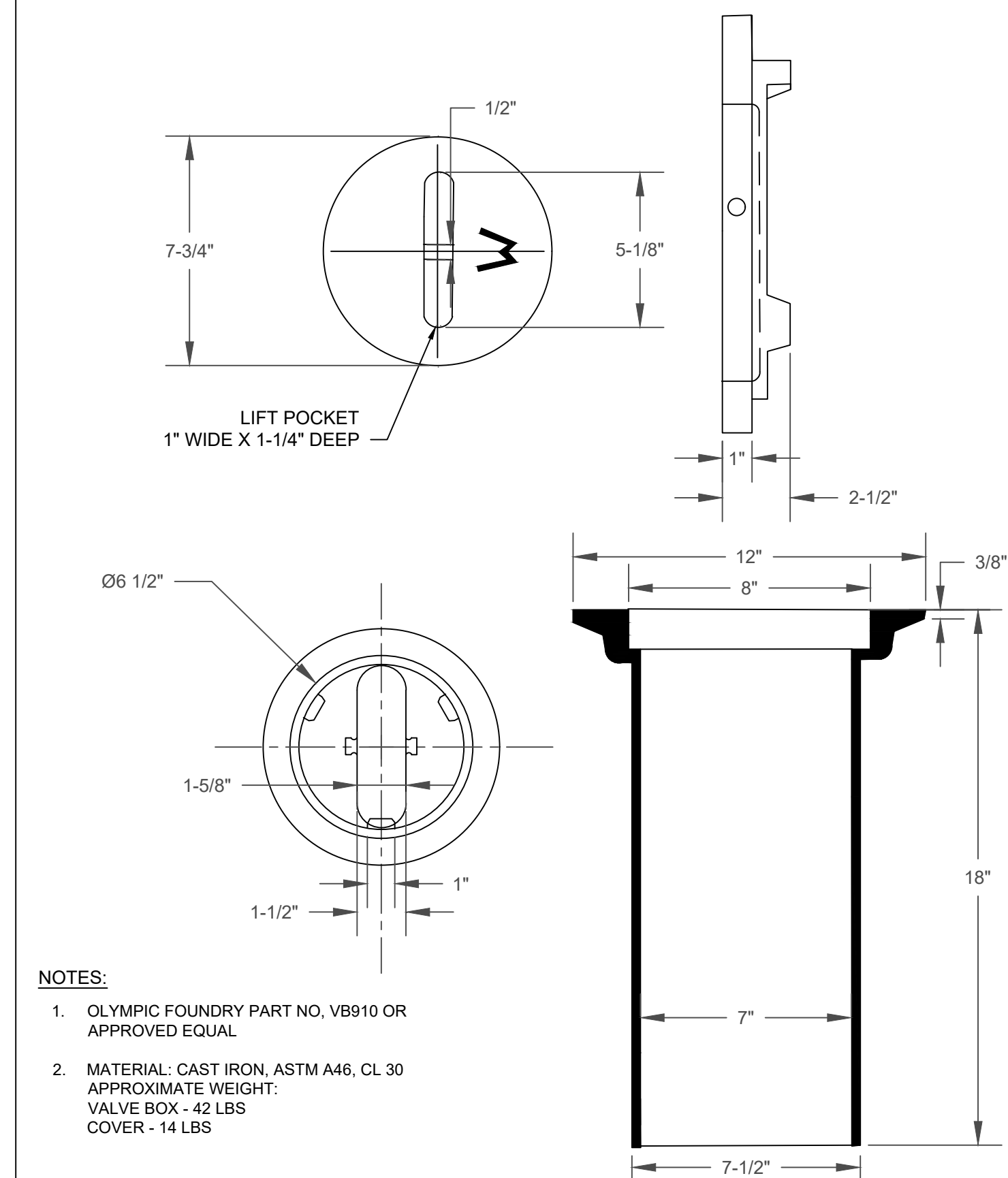
- NOTES:**
- VALVE BOX NOT TO REST ON OPERATING ASSEMBLY
 - OPERATOR EXTENSION REQUIRED WHEN VALVE NUT IS DEEPER THAN 3 FEET FROM FINISHED GRADE
 - CENTER VALVE BOX ON CENTER OF OPERATOR NUT
 - PROVIDE 24" SQUARE BY 4" THICK CONCRETE PAD AROUND VALVE BOX OUTSIDE OF PAVED AREAS
 - ALL VALVES AND FITTINGS SHALL BE MECHANICAL JOINT
 - SEE STANDARD DETAIL FOR FLANGE UP VALVE BOX AND COVER

DRAWN BY: T. KOLLN
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 SCALE:

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REVISION: 1. NC
 2. SD, 05/2018

TITLE: GATE VALVE SETTING DETAIL
 DRAWING NO: 410

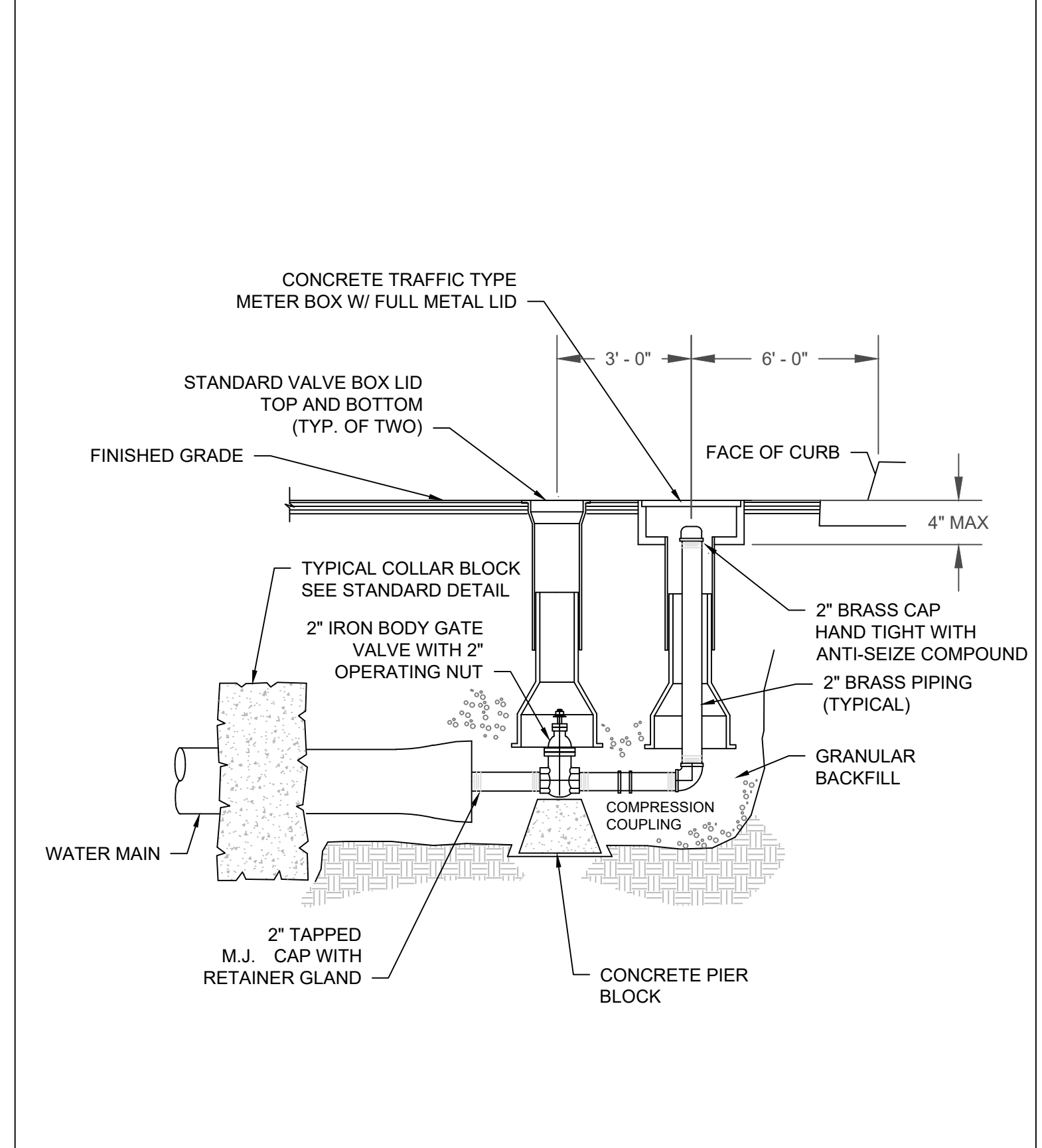


DRAWN BY: T. U.
 CHECKED BY:
 DATE:
 SCALE:

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REVISION: NC

TITLE: 18" FLANGE UP VALVE BOX AND COVER
 DRAWING NO: 411

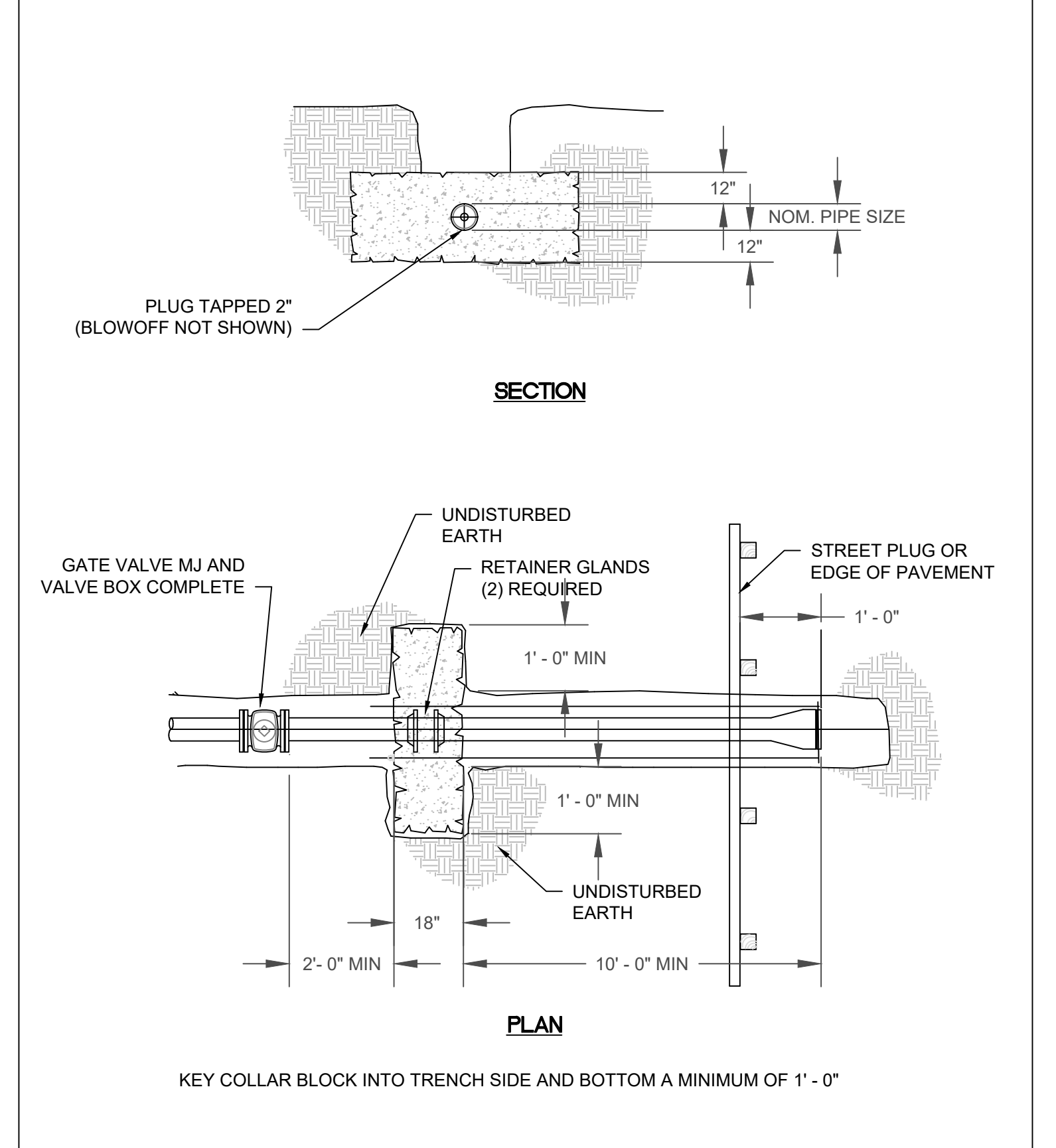


DRAWN BY: T. KOLLN
 CHECKED BY:
 DATE:
 SCALE:

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 265 THE STRAND, ST. HELENS, OR 97051
 PH (503)397-6272 FAX (503)397-4016

REVISION: NC

TITLE: PERMANENT 2" BLOWOFF
 DRAWING NO: 420



DRAWN BY: T. KOLLN
 CHECKED BY:
 DATE:
 SCALE:

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REVISION: NC

TITLE: COLLAR THRUST BLOCK
 DRAWING NO: 425

(HORIZONTAL) BEARING AREA OF THRUST BLOCKS IN SQ. FT.

FITTING SIZE	TEE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
4	1.3	1.9	1.3		
6	2.8	4.0	2.1	1.3	
8	5.1	7.1	3.9	2.0	1.3
12	11.3	16.0	8.8	4.5	2.3

(VERTICAL) VOLUME OF THRUST BLOCK IN CU. YDS.

FITTING SIZE	BEND ANGLE		
	45°	22 1/2°	11 1/4°
4	1.1	0.4	0.2
6	2.7	1.0	1.4
8	4.0	1.5	0.6
12	8.5	3.2	1.3

VALUES BASED ON 150 PSI WATER PRESSURE AND 1500 PSF SOIL BEARING CAPACITY

BEND

TEE

VERTICAL BEND

FITTING SIZE	ROD SIZE	EMBEDMENT
4" - 12"	#6	30"
4" - 16"	#8	36"

NOTES:

- CONCRETE BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH
- ALL CONCRETE TO BE CLASS 3000
- INSTALL 12 MIL TOTAL THICKNESS POLYETHYLENE SHEET AROUND FITTING. SECURE SHEET ENDS TO PREVENT INFILTRATION OF DIRT BETWEEN SHEET AND PIPE FITTING PRIOR TO POURING THRUST BLOCK
- PROTECT MECHANICAL JOINT FOLLOWERS AND BOLTS FROM CONCRETE WITH TEMPORARY FORMS AND POLYETHYLENE SHEETING. SEE NOTE NO. 3

DRAWN BY: T. KOLLN
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 DATE:
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REVISION: NC

TITLE: THRUST BLOCKING DETAILS
 DRAWING NO: 430

NO.	REV. DATE	DESCRIPTION	REVISED BY	CHECKED BY	APPROVED BY

CITY OF ST. HELENS
 DEPARTMENT OF PUBLIC WORKS

265 Strand Street
 St. Helens, Oregon 97051
 (503) 397-6272
 www.sthelensoregon.gov

REGISTERED PROFESSIONAL ENGINEER
 92434PE
 OREGON
 MAY 12, 2020
 ALEXANDER LEE BIRD
 EXPIRES: 12/31/2023

DESIGN BY: AB
 DRAWN BY: AB
 CHECKED BY: SD

SHEET TITLE: STANDARD DETAILS
 PROJECT NAME: SHERMAN PLACE WATERLINE REPLACEMENT

PROJECT NO: W-478
 DRAWING NO: D1

ISSUED FOR: CONSTRUCTION

LINE MEASURES 1 INCH AT FULL SCALE
 ADJUST SCALE ACCORDINGLY IF LINE DOES NOT MEASURE 1 INCH

DATE: OCTOBER 2022

SHEET NO: 4