

DATE November 16, 2020

INVITATION TO TENDER "ITT" PS20201112
CONTRACTOR FOR ANDERSON STREET UTILITY UPGRADE

ADDENDUM NO. 6

RE: REPLACE DRAWINGS

REPLACE DRAWINGS ATTACHED WITH THE FOLLOWING:

Entire PDF document (**latest version**). Please disregard previous versions.

See following for details:

DRAWINGS:

- ASU-Dwg_Rev1

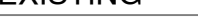
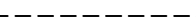
This addendum must be completed, and attached to your Application form.

NAME OF VENDOR

SIGNATURE OF AUTHORIZED SIGNATORY

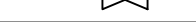
DATE

Jason Lo
Contracting Specialist

WATER		
EXISTING		PROPOSED
	MAIN	
	SERVICE	
	AIR VALVE	
	BLOWOFF	
	CAP	
	CHAMBER	
	FLUSH POINT	
	HYDRANT	
	IRRIGATION CONTROL VALVE	
	MANHOLE	
	METER	
	SERVICE	
	SPRINKLER HEAD	
	VALVE	
	COUPLING	
	REDUCER	
	TEE	
	VENT	
	THRUST BLOCK	
	FITTINGS	
	CROSS	

EXISTING		PROPOSED
	CURB/GUTTER/SIDEWALK	
	PAVED ROAD/DRIVEWAY	
	GRAVEL ROAD/DRIVEWAY	
	TOE OF BANK	
	TOP OF BANK	
	DITCH EDGE	
	ROAD MARKINGS	

EXISTING		PROPOSED
	IRON PIPE	
	LEAD PLUG	
	MONUMENT	
	OLD IRON PIN	
	PK NAIL	
	WITNESS POST	
	CONTROL POINT/BENCHMARK	

EXISTING		PROPOSED
	FORCEMAIN	
	MAIN	
	SERVICE	
	CAP	
	CLEANOUT	
	MANHOLE	
	SERVICE BOX	
	VALVE	
	HOUSE CONNECTION	
	INSPECTION CHAMBER	

EXISTING		PROPOSED
	VEGETATION	
	GARDEN	
	TREE LINE	
	TREE (CONIFEROUS)	
	TREE (DECIDUOUS)	
	TREE (ORNAMENTAL)	
	SHRUB	
	STUMP	
	SWAMP	

EXISTING		PROPOSED
	ELECTRICITY / LIGHTING	
	ANCHOR POLE	
	HYDRO GUY WIRE	
	JUNCTION BOX	
	HYDRO KIOSK	
	HYDRO MANHOLE	
	HYDRO POLE	
	HYDRO POLE DIP	
	HYDRO POLE LUMINAIRE	
	HYDRO POLE LUMINAIRE DIP	
	HYDRO SPLICE BOX	
	TEL POLE	
	TEL POLE DIP	
	TEL POLE LUMINAIRE	
	TEL POLE LUMINAIRE DIP	
	HYDRO VAULT	

EXISTING		PROPOSED
	FENCE	
	WALL	

EXISTING		PROPOSED
	CULVERT	
	DITCH	
	MAIN	
	SERVICE	
	SWALE/FLOW PATH	
	BOX/CHAMBER	
	CAP	
	CATCH BASIN MANHOLE	
	CATCH BASIN (ROUND)	
	CATCH BASIN (TOP INLET)	
	CLEANOUT	
	CULVERT/HEADWALL	
	SERVICE	
	INSPECTION CHAMBER	
	LAWN BASIN	
	MANHOLE	
	DITCH	

EXISTING		PROPOSED
	ELECTRICITY / LIGHTING	
	LUMINAIRE POLE	
	GROUND LIGHT	
	TRAFFIC SIGNAL POLE	
	TOP LUMINAIRE POLE	
	CONTROLLER CABINET	
	TRAFFIC FLASHER	
	TRAFFIC OVERHEAD SIGN	
	PEDESTRIAN POLE	
	SIGNAL POLE	

EXISTING		PROPOSED
	MAIN	
	GAS CAP	
	GAS METER	
	GAS VALVE	

EXISTING		PROPOSED
	COMM MAIN	
	TEL MAIN	
	COMM KIOSK	
	COMM MANHOLE	
	TEL BOOTH	
	TEL GUY WIRE	
	TEL JUNCTION BOX	
	TEL MANHOLE	
	TEL POLE	
	TEL POLE DIP	
	TEL POLE LUMINAIRE	
	TEL POLE LUMINAIRE DIP	
	TEL SAC PAD	
	TEL VAULT	

EXISTING		PROPOSED
	PROPERTY LINE	
	ARCHAEOLOGICAL SITE BOUNDARY	

- NOTES:
- GENERAL
 - ALL WORK SHALL BE IN ACCORDANCE WITH THE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (MMCD) PLATINUM EDITION, CITY OF VANCOUVER CONSTRUCTION SPECIFICATIONS AND STANDARD DETAIL DRAWINGS, AND PROJECT CONTRACT DOCUMENTS
 - CONTRACTOR SHALL FIELD VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. NOTIFY THE CONTRACT ADMINISTRATOR A MINIMUM OF 15 DAYS PRIOR TO CONSTRUCTION OF ANY CONFLICTS. RESTORATION OF ANY DAMAGE TO EXISTING UTILITIES WILL BE AT THE CONTRACTOR'S EXPENSE
 - CONTRACTOR SHALL LOCATE AND EXPOSE THE EXISTING WATERMAIN AND FORCEMAIN AT PROPOSED TIE-IN LOCATIONS PRIOR TO CONSTRUCTION. LOCATION AND ELEVATION SHALL BE RECORDED AND SUBMITTED TO THE CONTRACT ADMINISTRATOR FOR REVIEW
 - ALL WATERMAIN TIE-INS SHALL BE COMPLETED BY THE CONTRACTOR WITH THE CITY'S INSPECTOR ON SITE. EXISTING VALVE OPERATION SHALL BE COMPLETED BY CITY OF VANCOUVER WATERWORKS OPERATIONS. CONTRACTOR TO CONTACT THE COV WATERWORKS INSPECTOR ROGER DE VILLA AT 604-353-6937 A MINIMUM OF 5 WORKING DAYS PRIOR TO THE START OF WATER MAIN TIE-IN CONSTRUCTION.
 - ALL FORCEMAIN TIE-INS AND VALVE OPERATION SHALL BE COMPLETED BY THE CONTRACTOR
 - WATERMAIN AND FORCEMAIN
 - PIPE
 - WATERMAIN AND FORCEMAIN PIPING SHALL BE TR FLEX DUCTILE IRON (DI), THICKNESS CLASS 52, DOUBLE CEMENT MORTAR LINED IN ACCORDANCE WITH COV SPECIFICATIONS.
 - PIPE SHALL BE WRAPPED WITH POLYETHYLENE (POLY BAGGED) IN ACCORDANCE WITH AWWA C105-10
 - FITTINGS AND RESTRAINTS
 - FITTINGS SHALL BE TR FLEX DUCTILE IRON, DOUBLE CEMENT MORTAR LINED TO AWWA C153 OR AWWA C110.
 - WRAP ALL BOLTS, RODS AND NUTS WITH DENSO TAPE
 - FITTINGS SHALL BE RATED FOR A WORKING PRESSURE OF 350 PSI
 - RESTRAINT OF FIELD CUTS SHALL BE PROVIDED BY TR FLEX GRIPPER RINGS
 - RESTRAINT OF PIPING WITH MJ FITTINGS OR VALVES SHALL BE COMPLETED USING TANDEM WEDGE ACTION JOINT RESTRAINTS (EBAA 1100TDM OR APPROVED EQUAL)
 - RESTRAINED COUPLINGS SHALL BE EBAA 3800 OR APPROVED EQUAL
 - GATE VALVES:
 - GATE VALVES SHALL MEET AWWA C-509 IN ACCORDANCE WITH COV SPECIFICATION 33 11 01 2.3
 - VALVE BOXES AND LIDS SHALL BE IN ACCORDANCE WITH COV SPECIFICATION 33 11 01 2.3. CONTRACTOR TO PAY AND OBTAIN MATERIAL FROM COV CENTRAL STORES
 - THRUST BLOCKS
 - THRUST BLOCKS SHALL BE INSTALLED IN ACCORDANCE WITH COV STANDARD DETAIL DRAWINGS W1.1 AND W1.2 OR AS NOTED ON THE CONTRACT DRAWINGS.
 - EXISTING SOIL CONDITIONS TO BE REVIEWED BY ENGINEER PRIOR TO POURING FORMING THRUST BLOCKS TO CONFIRM THRUST BLOCK BEARING AREAS
 - CONCRETE MIX SHALL MEET COV SPECIFICATION FOR MIX DESIGN 1528B. CEMENT TYPE SHALL BE HIGH EARLY STRENGTH (HE)
 - TELESCOPING SLEEVE
 - TELESCOPING SLEEVES SHALL BE RATED FOR A WORKING PRESSURE OF 350 PSI AND PROVIDED WITH TR-FLEX JOINTS
 - PROVIDE US PIPE TELESCOPING SLEEVE OR APPROVED EQUAL
 - WATERMAIN PRESSURE TEST SHALL BE COMPLETED AT 225 PSI (1550 kPa)
 - FORCEMAIN PRESSURE TEST SHALL BE COMPLETED AT 75 PSI (517 kPa)
 - CLEARANCES AND CROSSINGS
 - WATERMAIN AND FORCEMAIN JOINTS SHALL BE WRAPPED IN ACCORDANCE WITH THE CITY'S SPECIFICATIONS WHERE MINIMUM CLEARANCES TO STORM, SANITARY, OR SANITARY FORCEMAIN CANNOT BE ACHIEVED.
 - WHERE A WATERMAIN CROSSES A STORM OR SANITARY SEWER OR SANITARY FORCEMAIN, LAY THE WATERMAIN PIPE WITH THE MIDDLE OF THE PIPE LENGTH AT THE CROSSING
 - WHERE A SANITARY FORCEMAIN CROSSES AND EXISTING WATERMAIN, WRAP ANY EXPOSED JOINTS OF EACH PIPE IN ACCORDANCE WITH THE CITY OF VANCOUVER SPECIFICATIONS
 - MAXIMUM JOINT DEFLECTIONS SHALL NOT EXCEED ONE-HALF OF THE MANUFACTURER'S RECOMMENDED SPECIFICATION
 - ENVIRONMENTAL PROTECTION NOTES:
 - REFER TO COV SPECIFICATION 01 57 01
 - EXCAVATION AROUND TREE ROOTS SHALL BE COMPLETED BY HYDRO EXCAVATION. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO RETAIN EXISTING TREES
 - OPERATION OF HYDRO-VAC AROUND ROOTS REQUIREMENTS:
 - ALL MEASURES MUST BE TAKEN TO PRESERVE BARK ON TREE ROOTS
 - MAXIMUM OPERATING PRESSURE 300-400 psi IN THE FIRST 600mm OF DEPTH
 - WATER NOZZLE SHALL NOT BE AIMED DIRECTLY AT ROOTS - KEEP 150mm CLEARANCE

THE FOLLOWING ARE NOT PERMITTED IN THE TREE PROTECTION ZONE:

 - EXCAVATION USING A MACHINE OR BUCKET
 - STOCKPILING OF BUILDING MATERIALS, DEBRIS, OR SOIL
 - VEHICULAR AND MACHINE TRAFFIC (UNLESS ON EXISTING PAVED STRUCTURES)
 - UNAUTHORIZED ALTERATION OF GRADE OR SOIL STRUCTURE

NONCOMPLIANCE WILL RESULT IN MANDATORY REMEDIATION OF SITE CONDITIONS.

IF ROOTS OVER 2" DIAMETER ARE IMPEDING CONSTRUCTION, CALL THE PARKS DEPARTMENT AT 250-257-8587

NOTES / SURVEY INFORMATION

REV	BY	DATE	DESCRIPTION	DES	CHK
0	SP	14-OCT-2020	ISSUED FOR TENDER	SF	AB
1	SF	06-NOV-2020	REVISED NOTES	SF	-

WATER STREET ENGINEERING LTD.
INFRASTRUCTURE PLANNING & DESIGN
T: 1.604.681.6409
waterstreeteng.com

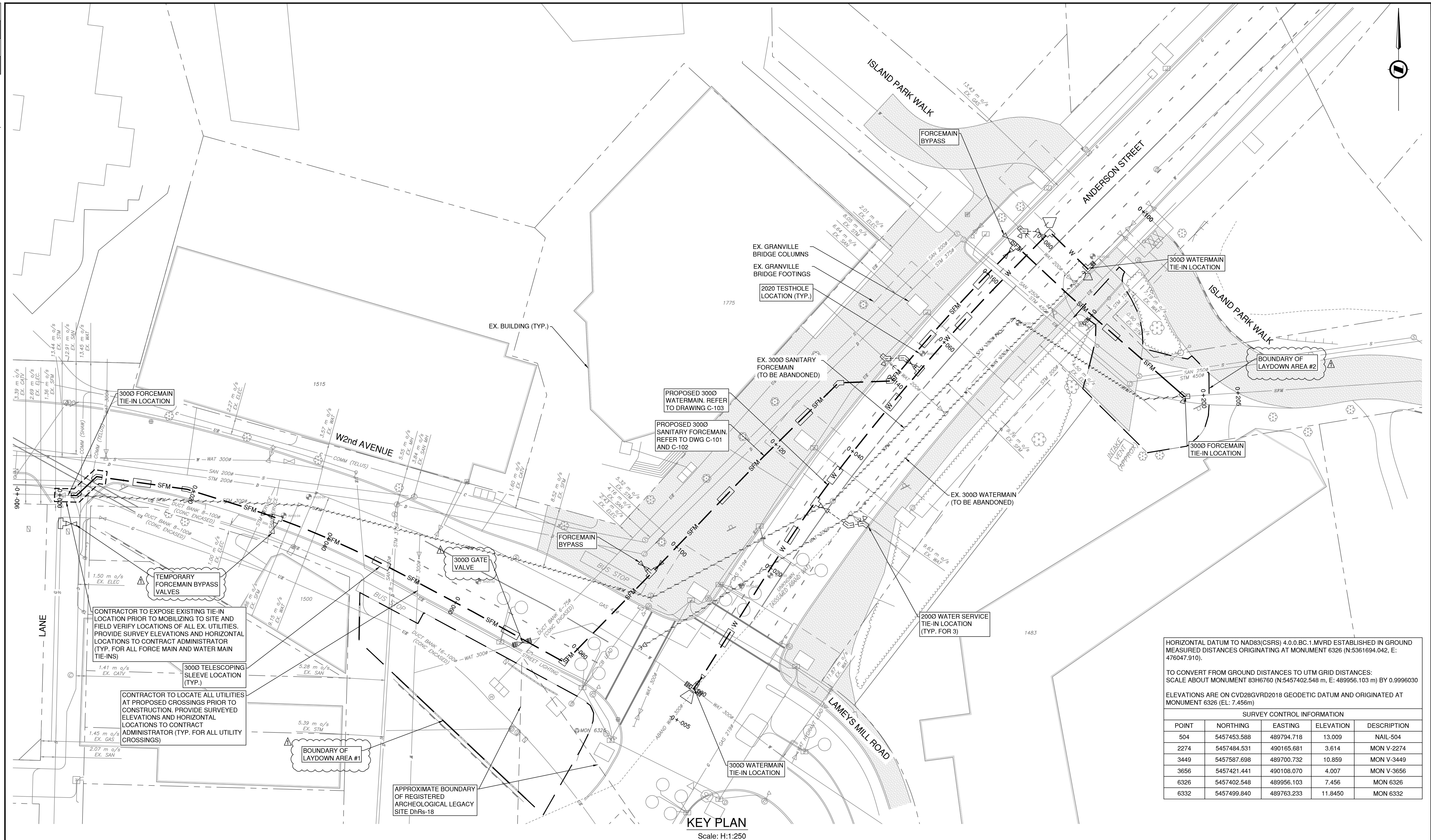


SEAL

PROJECT				CITY OF VANCOUVER	
				ANDERSON STREET UTILITY UPGRADES	
TITLE					
LEGEND AND GENERAL NOTES					
CLIENT PROJECT No.		WSE PROJECT No.		DRAWING No.	
-		234		G-002	
				REV.	
				1	

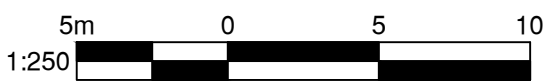
millimeters plotted at ANSI D size

November 16, 2020 1:14 PM D:\Dropbox (WSE)\001-Projects\234-Cov Anderson\500-drawings\1-Production Drawings\234 G-003 Key Plan.dwg



HORIZONTAL DATUM TO NAD83(CSRS) 4.0.0.BC.1.MVRD ESTABLISHED IN GROUND MEASURED DISTANCES ORIGINATING AT MONUMENT 6326 (N:5361694.042, E: 476047.910).				
TO CONVERT FROM GROUND DISTANCES TO UTM GRID DISTANCES: SCALE ABOUT MONUMENT 83H6760 (N:5457402.548 m, E: 489956.103 m) BY 0.9996030				
ELEVATIONS ARE ON CVD28GVRD2018 GEODETIC DATUM AND ORIGINATED AT MONUMENT 6326 (EL: 7.456m)				
SURVEY CONTROL INFORMATION				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
504	5457453.588	489794.718	13.009	NAIL-504
2274	5457484.531	490165.681	3.614	MON V-2274
3449	5457587.698	489700.732	10.859	MON V-3449
3656	5457421.441	490108.070	4.007	MON V-3656
6326	5457402.548	489956.103	7.456	MON 6326
6332	5457499.840	489763.233	11.8450	MON 6332

NOTES / SURVEY INFORMATION



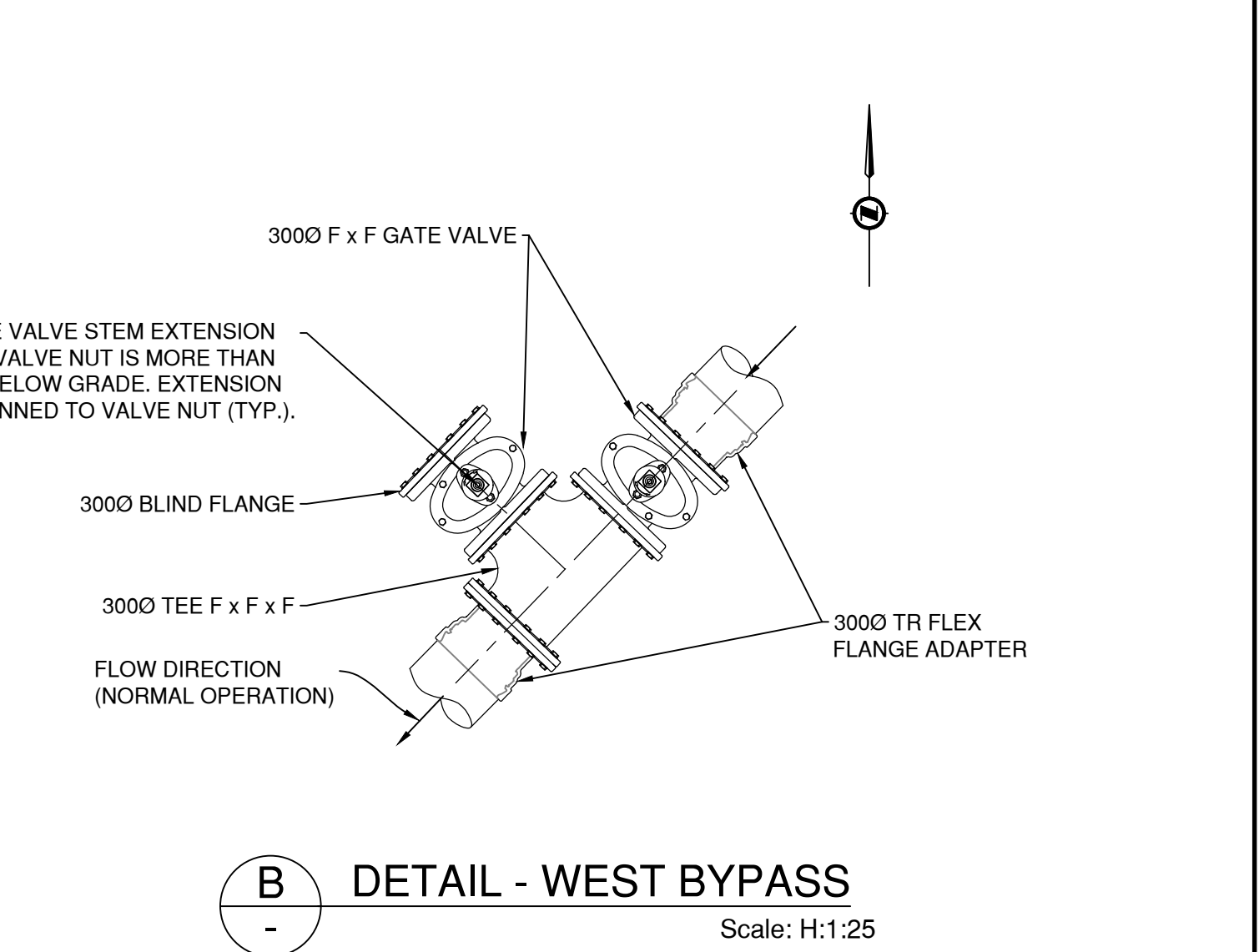
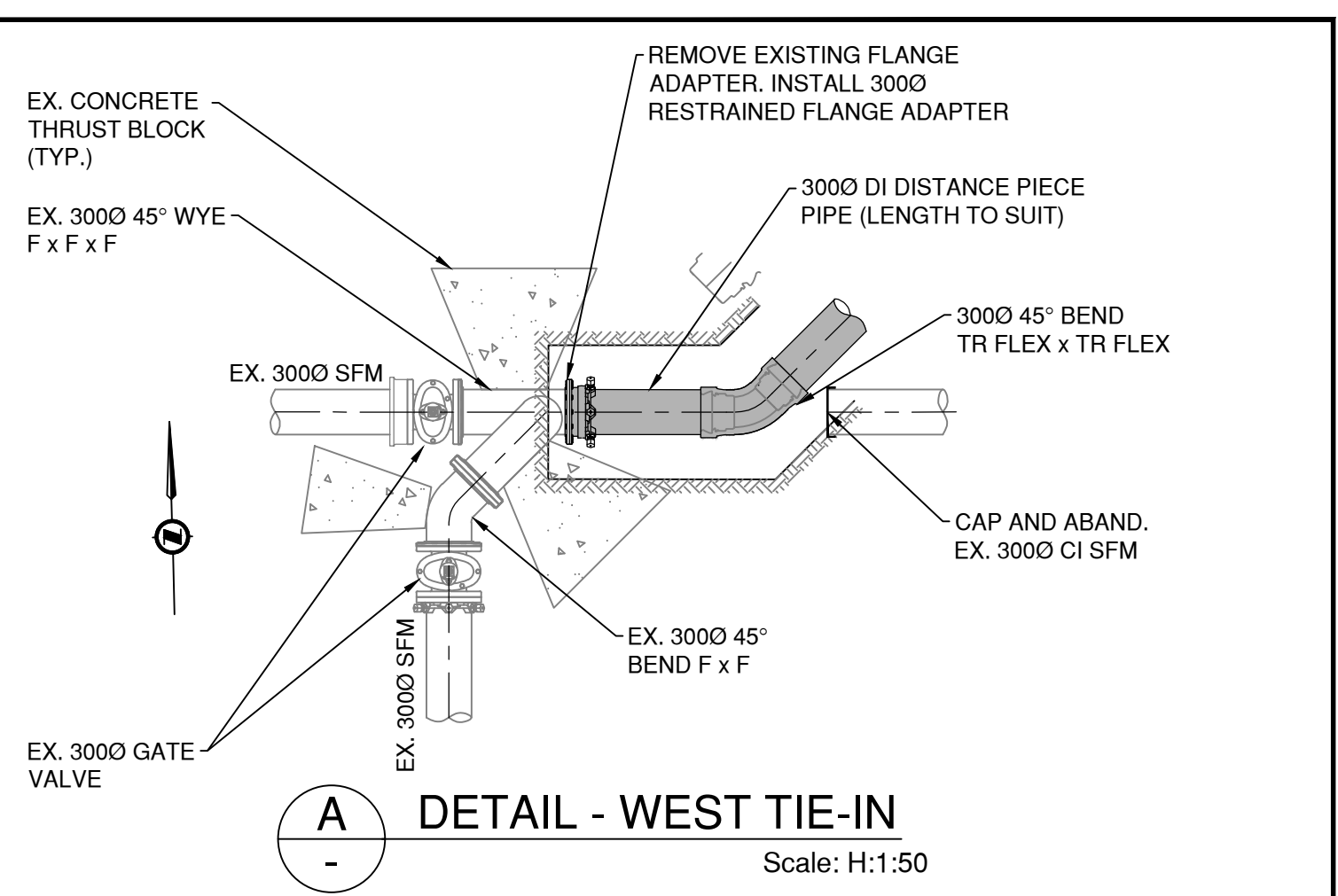
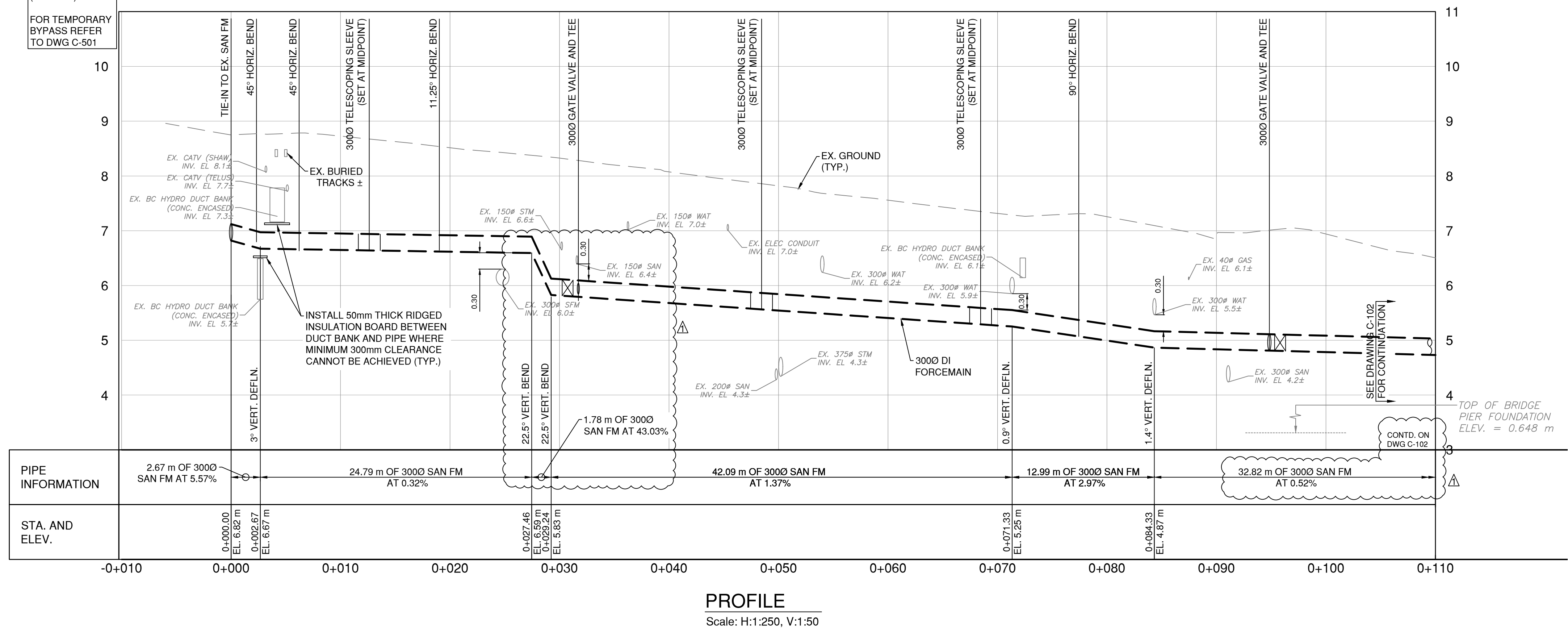
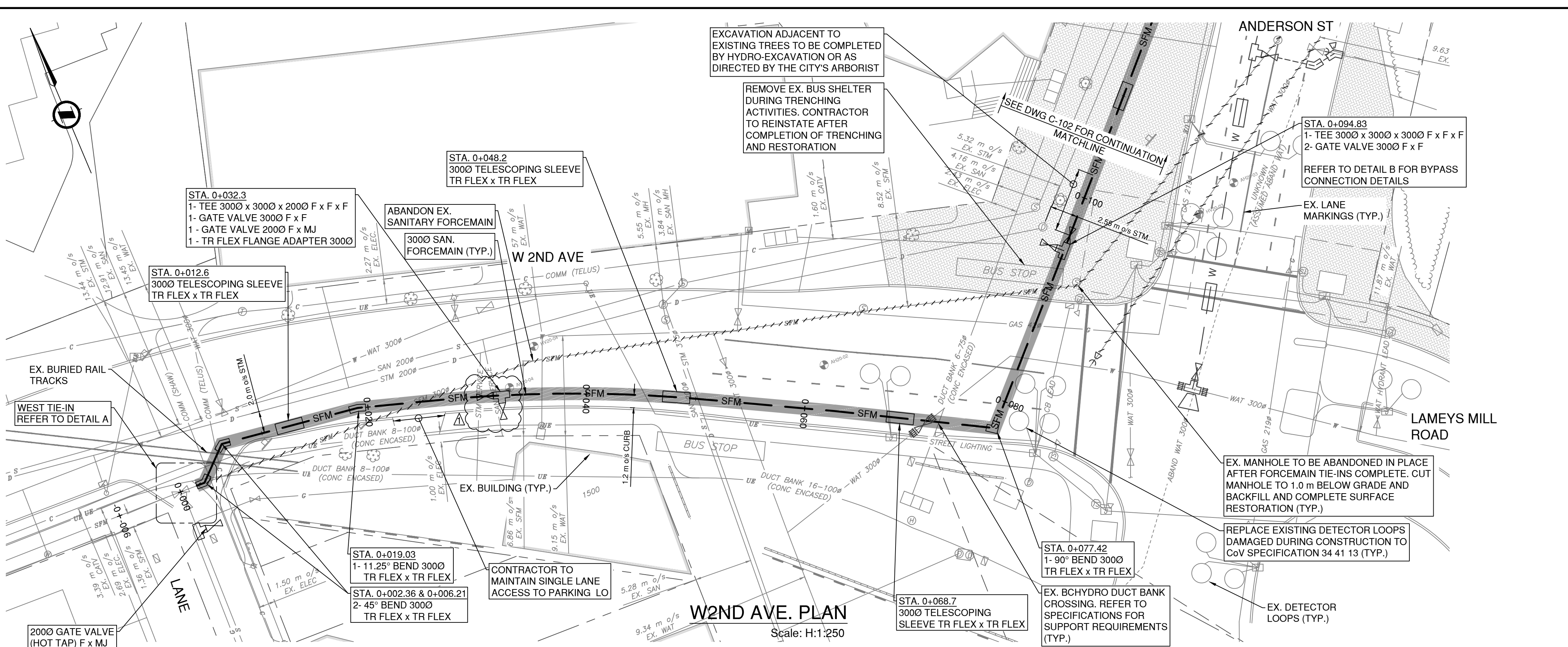
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0	SP	14-OCT-2020	ISSUED FOR TENDER	SF	AB
1	SF	06-NOV-2020	LAYDOWN AREA BOUNDARIES ADDED	SF	AB

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SEAL

PROJECT CITY OF VANCOUVER ANDERSON STREET UTILITY UPGRADES			
TITLE KEY PLAN AND SURVEY CONTROL			
CLIENT PROJECT No.	WSE PROJECT No.	DRAWING No.	REV.
-	234	G-003	1



NOTES / SURVEY INFORMATION

ELEVATIONS DERIVED FROM MONUMENT GCM#475392
EL. 7.456m

REV	BY	DATE	DESCRIPTION	DES	CHK
0	SP	14 OCT 2020	ISSUED FOR TENDER	SF	AB
1	SF	06 NOV 2020	GENERAL REVISIONS	SF	-

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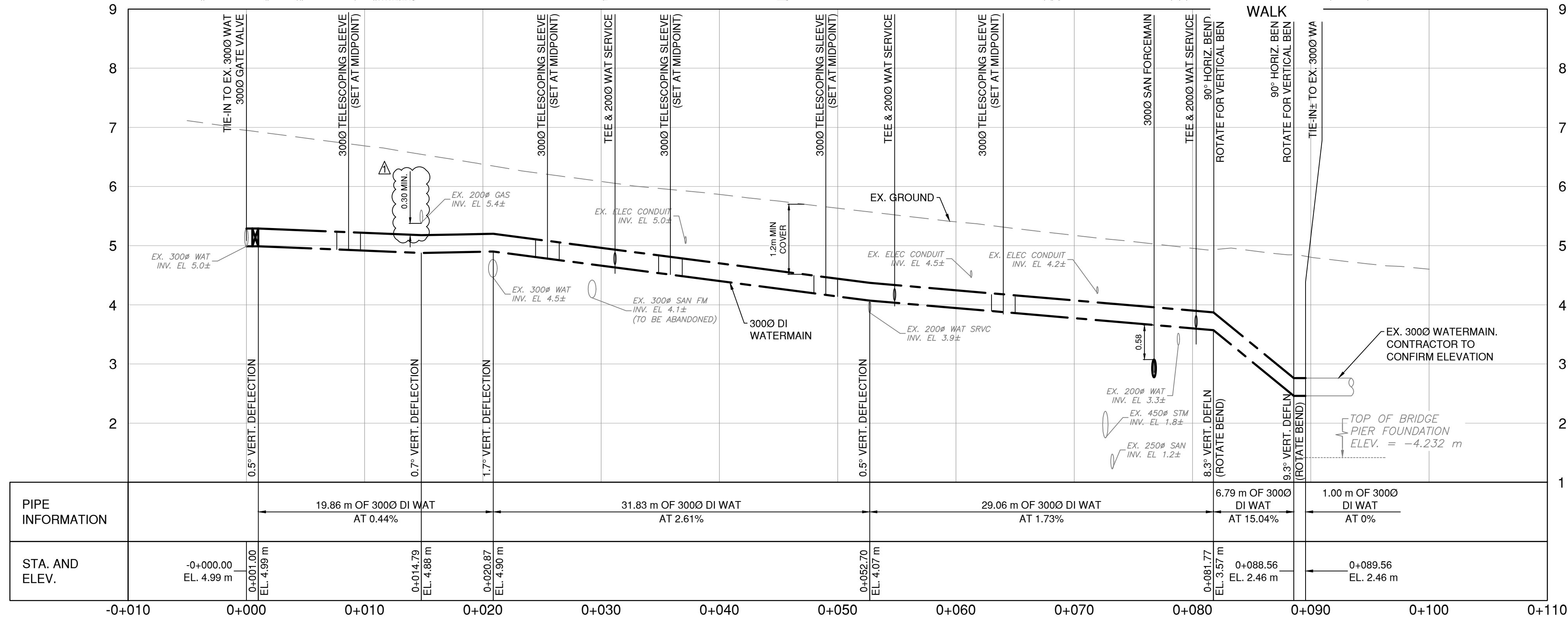
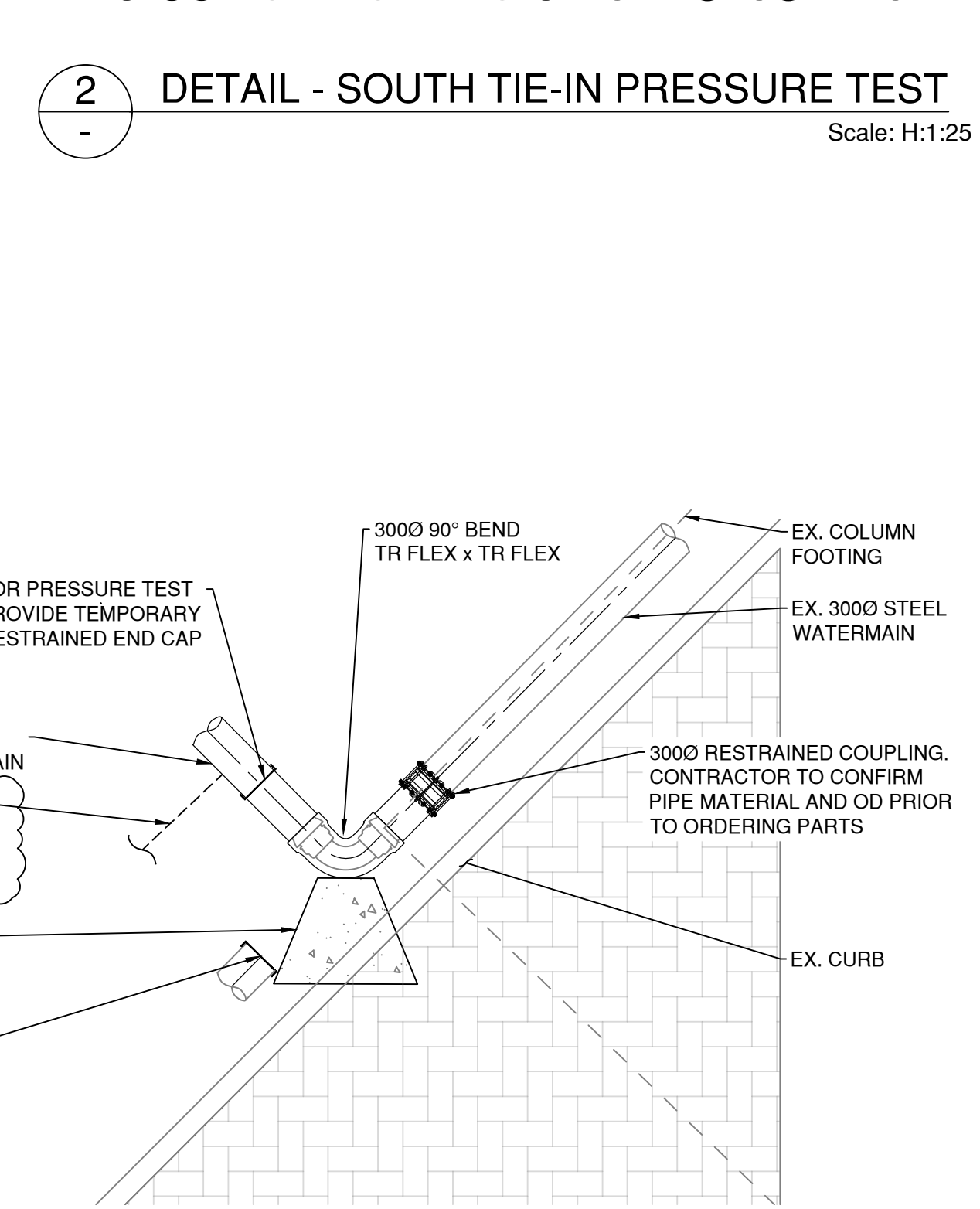
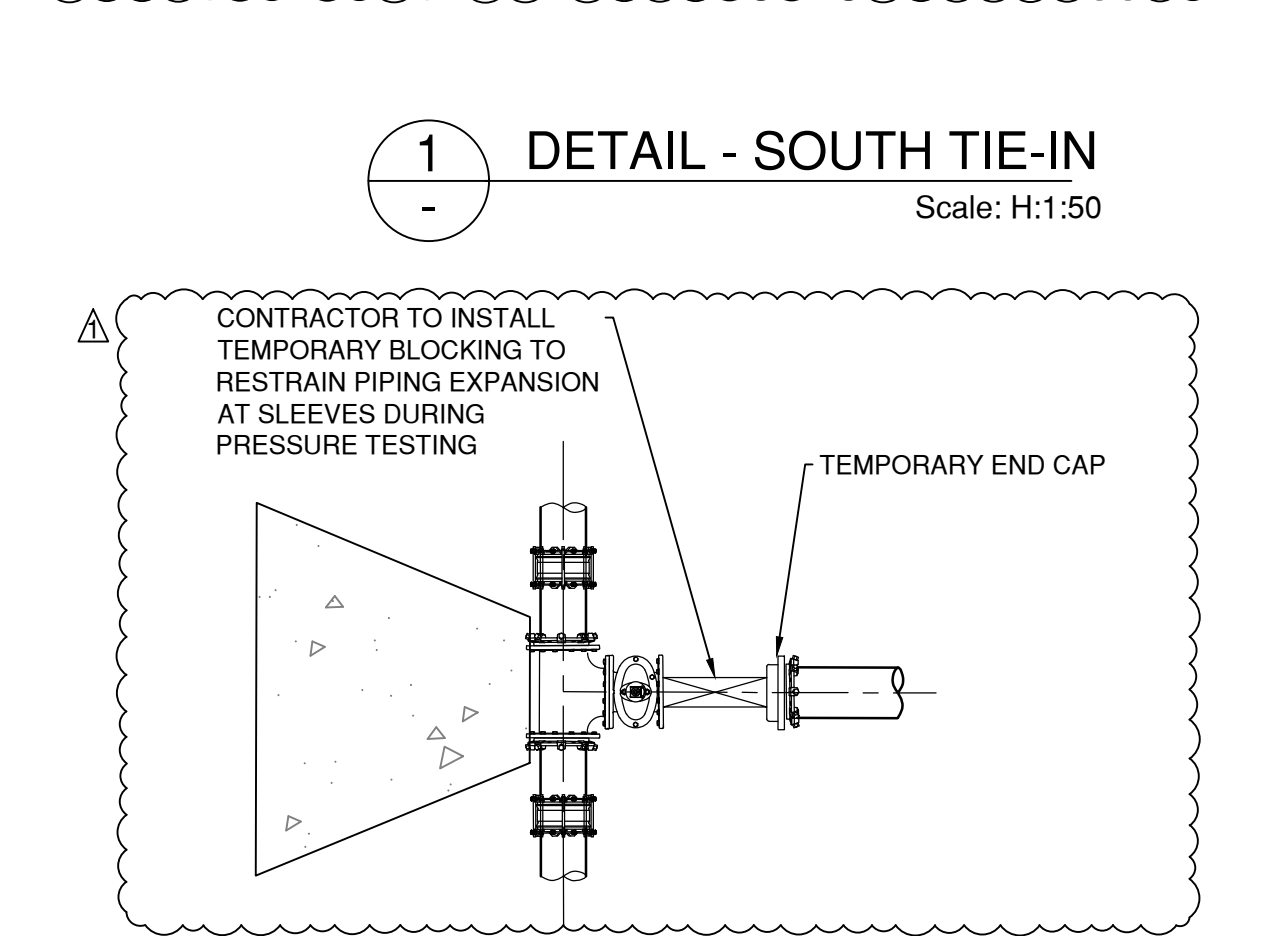
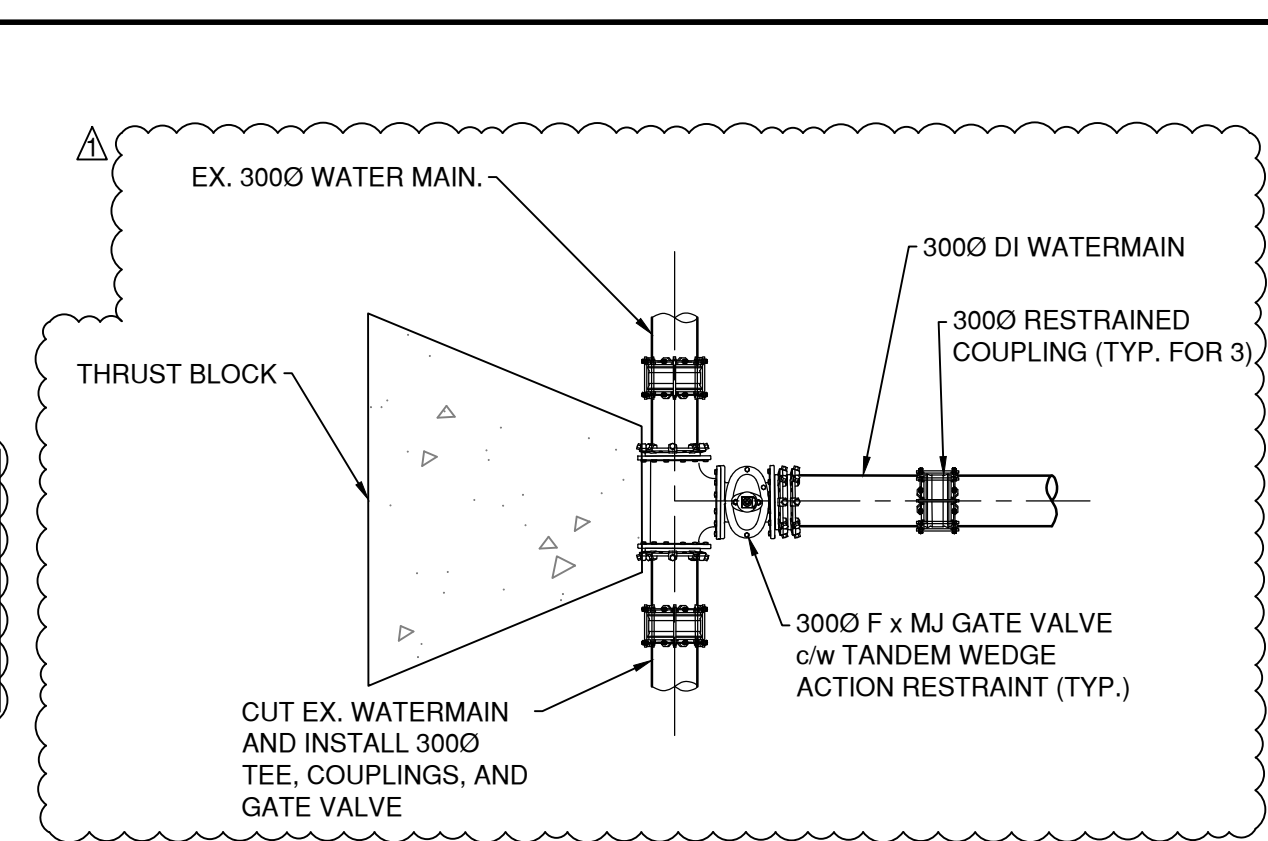
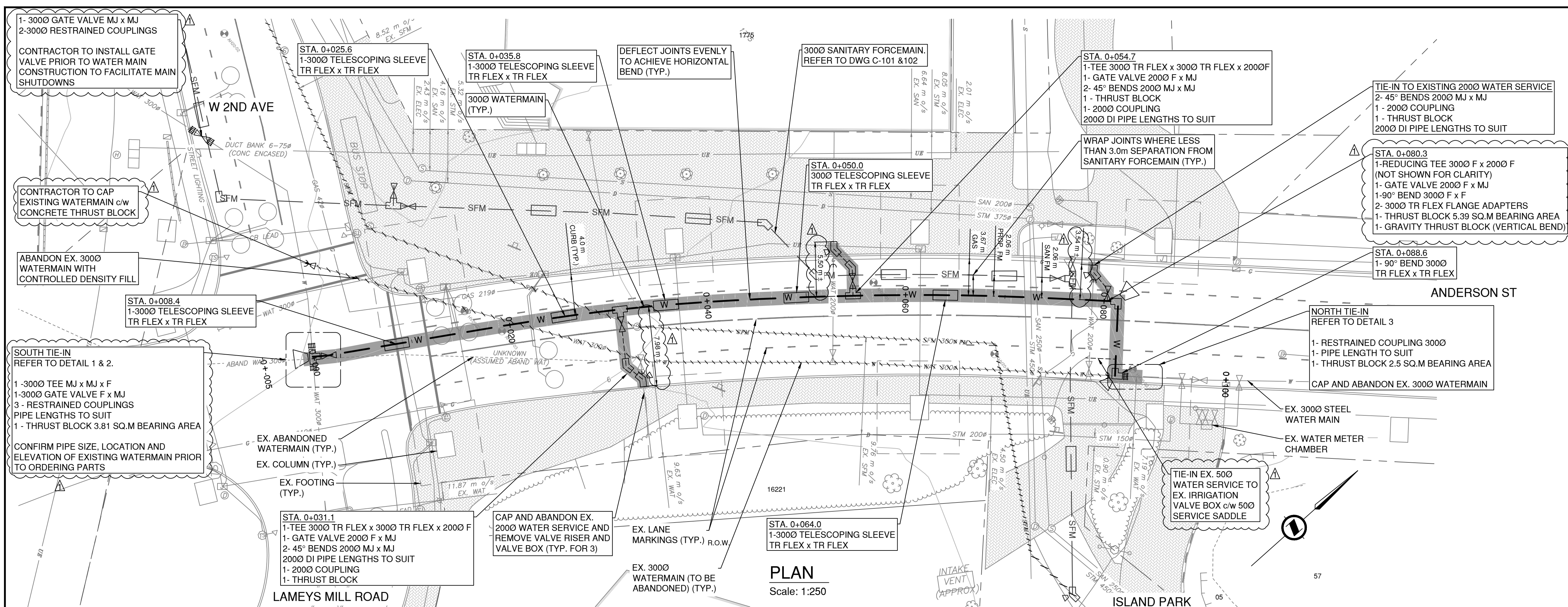
SEAL

PROJECT
CITY OF VANCOUVER
ANDERSON STREET UTILITY UPGRADES

TITLE
SANITARY FORCEMAIN
PLAN, PROFILE AND DETAILS
STA. 0+000 TO 0+100

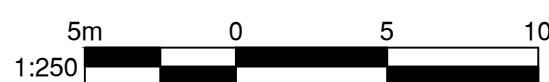
CLIENT PROJECT No.	WSE PROJECT No.	DRAWING No.	REV.
-	234	C-101	1

millimeters plotted at ANSI D size



NOTES / SURVEY INFORMATION

ELEVATIONS DERIVED FROM MONUMENT GCM#475392
EL. 7.456



REV	BY	DATE	DESCRIPTION	DES	CHK
0	SP	14-OCT-2020	ISSUED FOR TENDER	SF	AB
1	SF	06-NOV-2020	HOT-TAP & VALVE INSERTION REMOVED, GENERAL REVISIONS	SF	-

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PROJECT
CITY OF VANCOUVER
ANDERSON STREET UTILITY UPGRADES

TITLE
WATERMAIN
PLAN, PROFILE AND DETAILS

CLIENT PROJECT No.	WSE PROJECT No.	DRAWING No.	REV.
-	234	C-103	1

SEAL

millimeters plotted at ANSI D size

November 16, 2020 8:44 AM D:\Dropbox (WSE)\001-Projects\234-Cov Anderson\500-drawings\1_Production Drawings\234 C-501 Details.dwg

SURFACE RESTORATION TO MATCH EXISTING. UNIT PAVING AND BASE PREPARATION TO BE IN ACCORDANCE WITH COV SPECIFICATION 32 14 01. SURFACE PATTERN TO MATCH EXISTING

PIPE ZONE. APPROVED SAND FILL (COV #17) COMPACTED TO 95% MPD

POLYETHYLENE ENCASED DI PIPE

APPROVED 19mm MINUS COMBINED CRUSHED AGGREGATE FILL (COV #9) COMPACTED TO 98% MPD.

LIGHT WEIGHT FILL CELLULAR CONCRETE. PLACED (WET) DENSITY = 475 kg/m³ CURED (DRY) DENSITY = 360 kg/m³

COV MATERIAL #7 19 mm CLEAR DRAIN ROCK COMPACTED

NILEX TX130 GEOGRID OR EQUIVALENT AT BASE OF TRENCH INSIDE GEOTEXTILE. INSTALL WHERE SPECIFIED BY ENGINEER

300Ø POLYETHYLENE ENCASED DI PIPE

PIPE ZONE. APPROVED SAND FILL (COV #17) COMPACTED TO 95% MPD

COV MATERIAL #7 19 mm CLEAR DRAIN ROCK COMPACTED

TEMPORARY RESTORATION PERMANENT RESTORATION

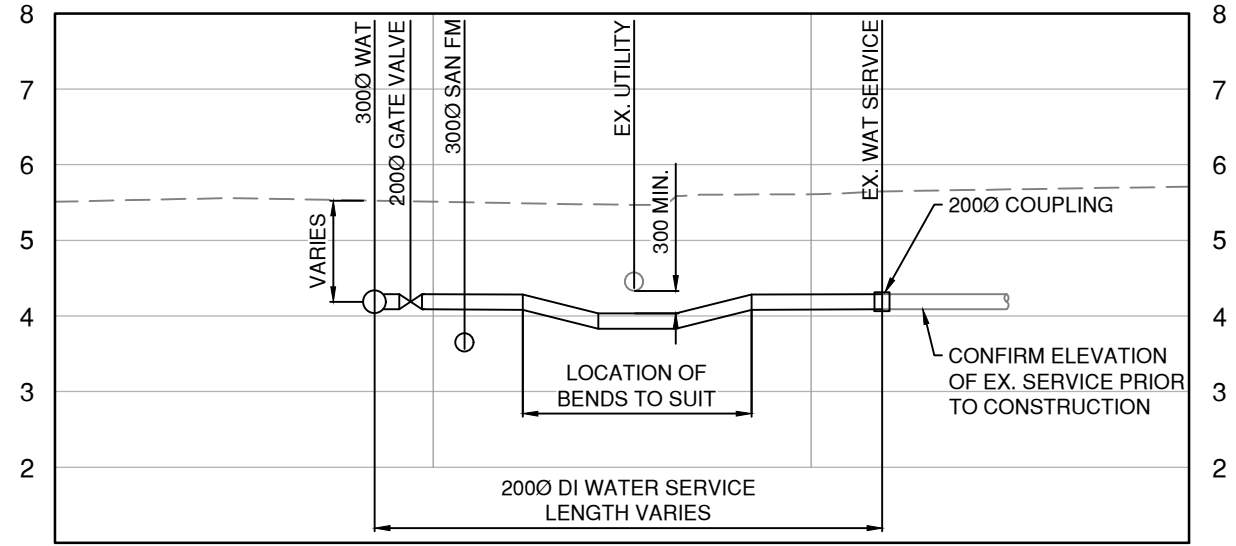
APPROVED SUPERPAVE SURFACE MIX AS PER SECTION 32 12 17 - 50mm MIN THICKNESS

APPROVED SUPERPAVE BASE MIX AS PER SECTION 32 12 17 (MAX LIFT THICKNESS 90mm) - 180mm MIN THICKNESS

19mm MINUS COMBINED CRUSHED AGGREGATE FILL (COV #9) COMPACTED TO 95% MPD. 150 mm THICKNESS MIN.

75mm MINUS CRUSHED GRANULAR SUBBASE (COV #13) COMPACTED TO 95% MPD.

OVER- EXCAVATION IN POOR SOILS AS DIRECTED BY GEOTECHNICAL ENGINEER. 500 mm THICKNESS MAX.



TYPICAL WATER SERVICE CONNECTION PROFILE

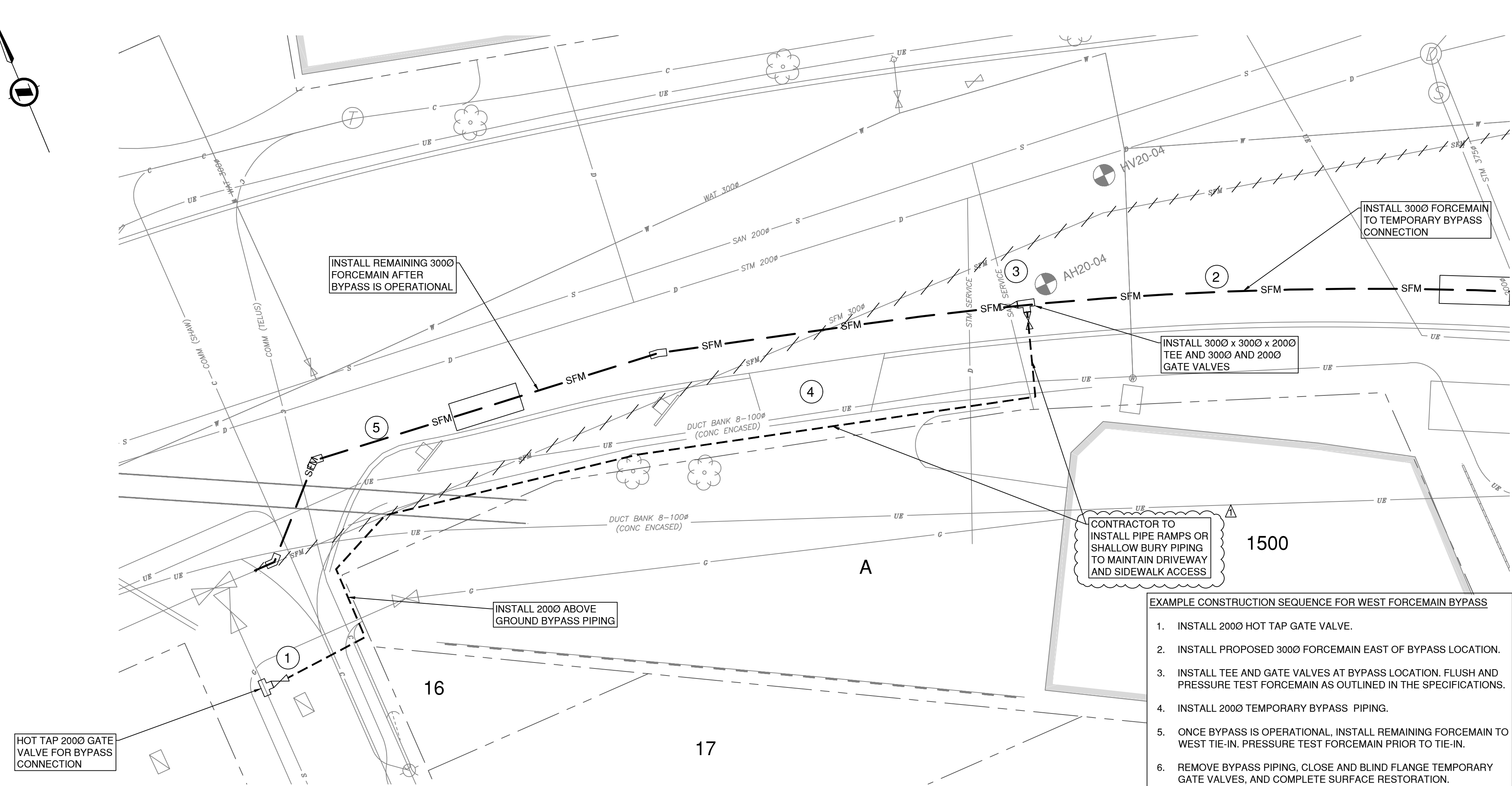
Scale: H:1:100

TYPICAL TRENCH SECTION-BOULEVARD

Scale: H:1:25

TYPICAL TRENCH SECTION-ROAD

Scale: H:1:25



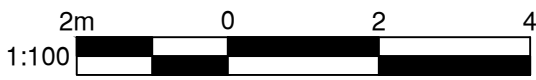
FORCEMAIN - WEST BYPASS PLAN

Scale: H:1:100

- EXAMPLE CONSTRUCTION SEQUENCE FOR WEST FORCEMAIN BYPASS
1. INSTALL 200Ø HOT TAP GATE VALVE.
 2. INSTALL PROPOSED 300Ø FORCEMAIN EAST OF BYPASS LOCATION.
 3. INSTALL TEE AND GATE VALVES AT BYPASS LOCATION. FLUSH AND PRESSURE TEST FORCEMAIN AS OUTLINED IN THE SPECIFICATIONS.
 4. INSTALL 200Ø TEMPORARY BYPASS PIPING.
 5. ONCE BYPASS IS OPERATIONAL, INSTALL REMAINING FORCEMAIN TO WEST TIE-IN. PRESSURE TEST FORCEMAIN PRIOR TO TIE-IN.
 6. REMOVE BYPASS PIPING, CLOSE AND BLIND FLANGE TEMPORARY GATE VALVES, AND COMPLETE SURFACE RESTORATION.

- NOTES
1. CONSTRUCTION SEQUENCING ON THIS DRAWING IN NO WAY LIMITS THE CONTRACTOR'S SCOPE OR RESPONSIBILITY TO PROVIDE A COMPLETE PROJECT.
 2. SEQUENCE IS SUGGESTED FOR GUIDANCE ONLY. PROVIDE DETAILED BYPASS PLAN AS OUTLINED IN THE SPECIFICATIONS.
 3. NUMBERING OF ITEMS DOES NOT PRECLUDE CONCURRENT WORK.

NOTES / SURVEY INFORMATION



REV	BY	DATE	DESCRIPTION	DES	CHK
0	SP	14 OCT 2020	ISSUED FOR TENDER	SF	AB
1	SF	13 NOV 2020	TRENCH SECTION REVISED	SF	-

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SEAL

PROJECT CITY OF VANCOUVER
ANDERSON STREET UTILITY UPGRADES

TITLE TYPICAL DETAILS

CLIENT PROJECT No.	WSE PROJECT No.	DRAWING No.	REV.
-	234	C-501	1