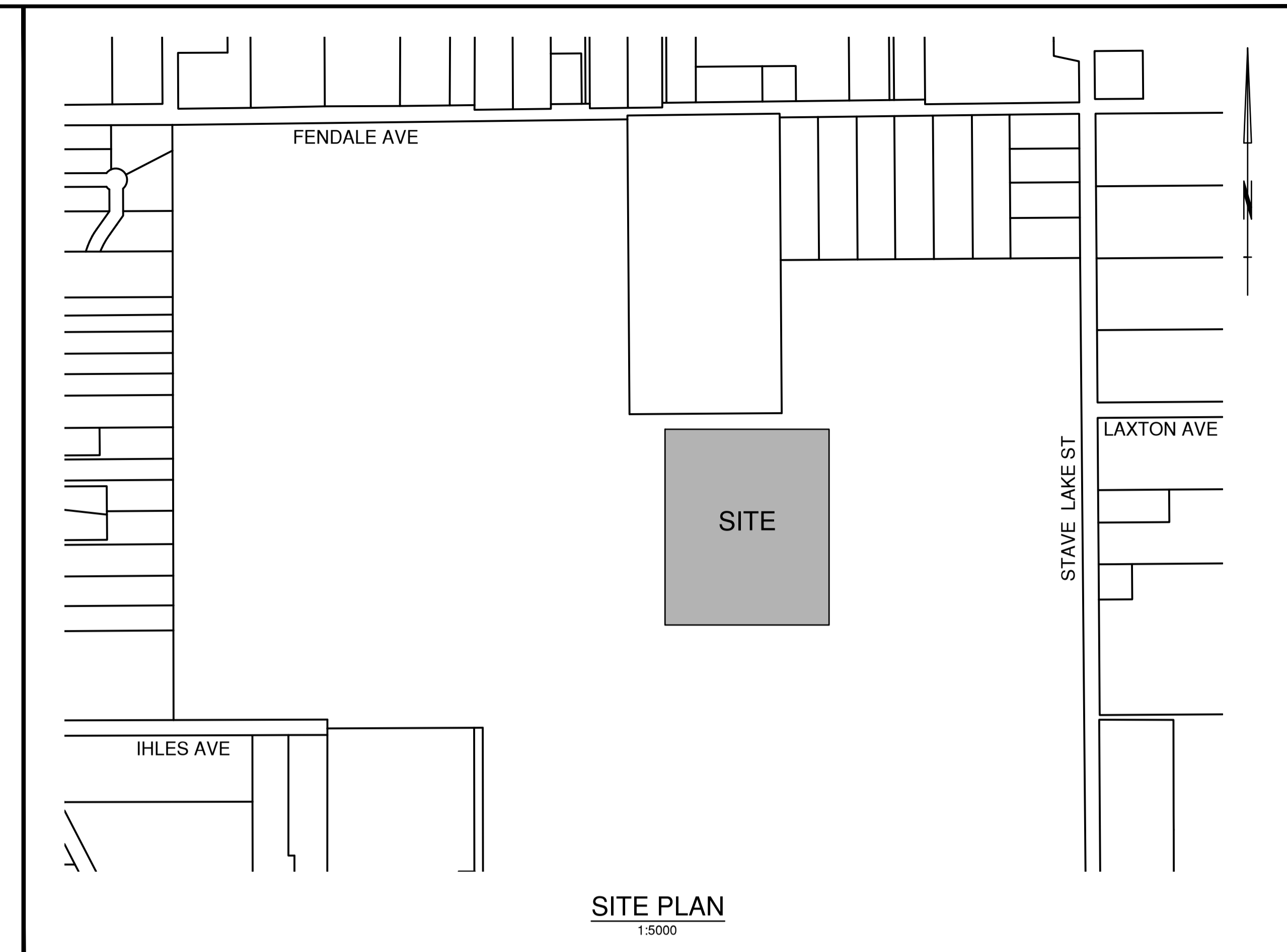


CORRECTIONAL SERVICES OF CANADA

8751 STAVE LAKE ST.
MISSION B.C.

MISSION MEDIUM INSTITUTION WATERMAIN REPLACEMENT



WSP CANADA INC.
#300 - 65 RICHMOND STREET
NEW WESTMINSTER, B.C.
CANADA V3L 5P5
TEL. 604-525-4651 | FAX. 604-525-5715
www.wsp.com

**JOB NUMBER
161-11296-01**

DRAWING No. INDEX

- C-01 COVER
- C-02 EXISTING CONDITIONS
- C-03 KEY PLAN
- C-04 PHASING PLAN
- C-05 WATERMAIN - FIRE
- C-06 WATERMAIN - FIRE
- C-07 WATERMAIN - FIRE & DOMESTIC
- C-08 WATERMAIN - FIRE & DOMESTIC
- C-09 WATERMAIN - DOMESTIC SERVICES PROFILES
- C-10 WATERMAIN - DETAILS



Engineers & Geoscientists BC Permit #1000020



7	RE-ISSUED FOR TENDER	21/11/23
6	ISSUED FOR TENDER	21/05/21
5	RE-ISSUED FOR REVIEW	21/03/05
4	ISSUED FOR TENDER	19/02/06
3	100% DESIGN SUBMISSION	18/12/07
2	99% DESIGN SUBMISSION	18/08/31
1	66% DESIGN REVIEW	18/06/21
0	30% DESIGN REVIEW	17/11/17

Revision/Revision Description/Description Date/Date

Client/client
CORRECTIONAL SERVICES OF CANADA

8751 STAVE LAKE ST.
MISSION, B.C.

Project title/Titre du projet
**8751 STAVE LAKE ST.
MISSION, B.C.**

**MISSION MEDIUM INSTITUTION
WATERMAIN REPLACEMENT**

Consultant Signature Only

Designed by/Concept par
G.R.

Drawn by/Dessiné par
B.D.

PWGSC Project Manager/Administrateur de Projets TPSGC
TONY TANG

Regional Manager, Architectural and Engineering Services
Gestionnaire régionale, Services d'architecture et de génie, TPSGC

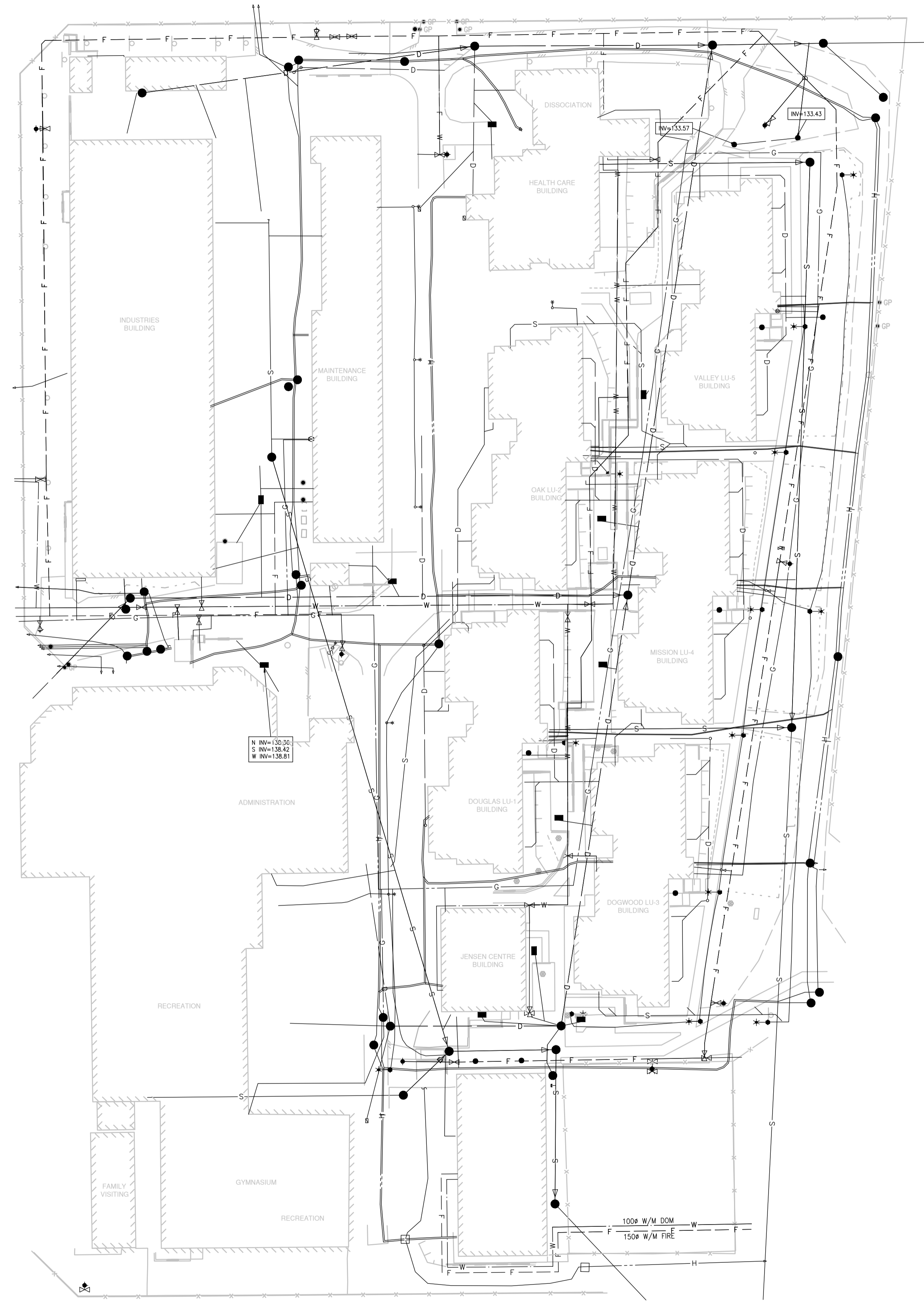
Drawing title/Titre du dessin
EXISTING CONDITIONS

SCALE 1:500

Project No./No. du projet R.089147.001	Sheet/Fauille C-02 OF 10	Revision no./ La Révision no. 7
--	---------------------------------------	--

LEGEND OF SYMBOLS

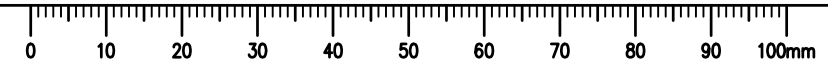
EXISTING	PROPOSED	DESCRIPTION
⊙	⊙	IRON PROPERTY PIN
⋯	⋯	REMOVED PROPERTY LINE
⊙	⊙	BENCH MARK (GEODETIC)
⊙	⊙	TEMPORARY BENCH MARK (GEODETIC)
▬	▬	PAVEMENT & CURBS
▬	▬	GRAVEL
▬	▬	SIDEWALK
▬	▬	ASPHALT SIDEWALK
⊙	⊙	SAN. SEWER, MH. & INSPECTION CHAMBER
⊙	⊙	STM SEWER, MH., INSPECTION CHAMBER, & SLOTTED LID MH.
⊙	⊙	CATCH BASIN - SIDE INLET & TOP INLET
⊙	⊙	LAWN BASIN
⊙	⊙	DITCH
⊙	⊙	SWALE
⊙	⊙	WATERMAIN (DOMESTIC); SERVICE CONN.
⊙	⊙	WATERMAIN (FIRE); SERVICE CONN.
⊙	⊙	HYDRANT
⊙	⊙	WATER METER
⊙	⊙	WATER VALVE; AIR VALVE
⊙	⊙	PERMANENT BLOW OFF; TEMPORARY BLOW OFF
⊙	⊙	UNDERGROUND TELEPHONE
⊙	⊙	UNDERGROUND B.C. HYDRO
⊙	⊙	STREET LIGHT & TRAFFIC SIGNAL U/G DUCTS
⊙	⊙	GAS MAIN
⊙	⊙	UTILITY POLE; UTILITY POLE WITH LIGHT
⊙	⊙	ORNAMENTAL STREET LIGHT - POST TOP
⊙	⊙	ORNAMENTAL STREET LIGHT - DAVIT
⊙	⊙	JUNCTION BOX
⊙	⊙	CONTOURS
⊙	⊙	TREE TO BE REMOVED
⊙	⊙	FINISHED GRADES (M = MEET EXISTING GRADE)
⊙	⊙	DIRECTION OF GRADING
⊙	⊙	MIN. SLAB ELEV. FOR SLAB ON GRADE OR MIN. ELEV. OF UNDERSIDE OF FLOOR JOISTS
⊙	⊙	STORM AND/OR SANITARY INVERT AT PL (PLAN)
⊙	⊙	DEPTH OF CONNECTION INVERT
⊙	⊙	STORM AND/OR SANITARY INVERT AT PL (PROFILE)
⊙	⊙	OVERHEAD HYDRO/TEL.
⊙	⊙	UNDERGROUND HYDRO/TEL.



NOTES

- ALL ELEVATIONS ARE GEODETIC AND REFERENCED TO EXISTING INTEGRATED SURVEY MONUMENTS.
- FIGURED DIMENSIONS SHALL GOVERN OVER SCALED DIMENSIONS.

LEGAL DESCRIPTION
LOT 13, SECTIONS 27, 33 & 34, TOWNSHIP 17,
N.W.D., PLAN NWP 64228





Engineers & Geoscientists BC Permit #1000200



Revision/Revision	Description/Description	Date/Date
7	RE-ISSUED FOR TENDER	21/11/23
6	ISSUED FOR TENDER	21/05/21
5	RE-ISSUED FOR REVIEW	21/03/05
4	ISSUED FOR TENDER	19/02/06
3	100% DESIGN SUBMISSION	18/12/07
2	99% DESIGN SUBMISSION	18/08/31
1	66% DESIGN REVIEW	18/06/21
0	30% DESIGN REVIEW	17/11/17

CORRECTIONAL SERVICES OF CANADA

8751 STAVE LAKE ST. MISSION, B.C.

Project Title/Titre du projet
8751 STAVE LAKE ST. MISSION, B.C.

MISSION MEDIUM INSTITUTION WATERMAIN REPLACEMENT

Consultant Signature Only

Designed by/Concept par G.R.

Drawn by/Dessiné par B.D.

PWGSC Project Manager/Administrateur de Projets TPSPG TONY TANG

Regional Manager, Architectural and Engineering Services / Gestionnaire régionale, Services d'architecture et de génie, TPSPG

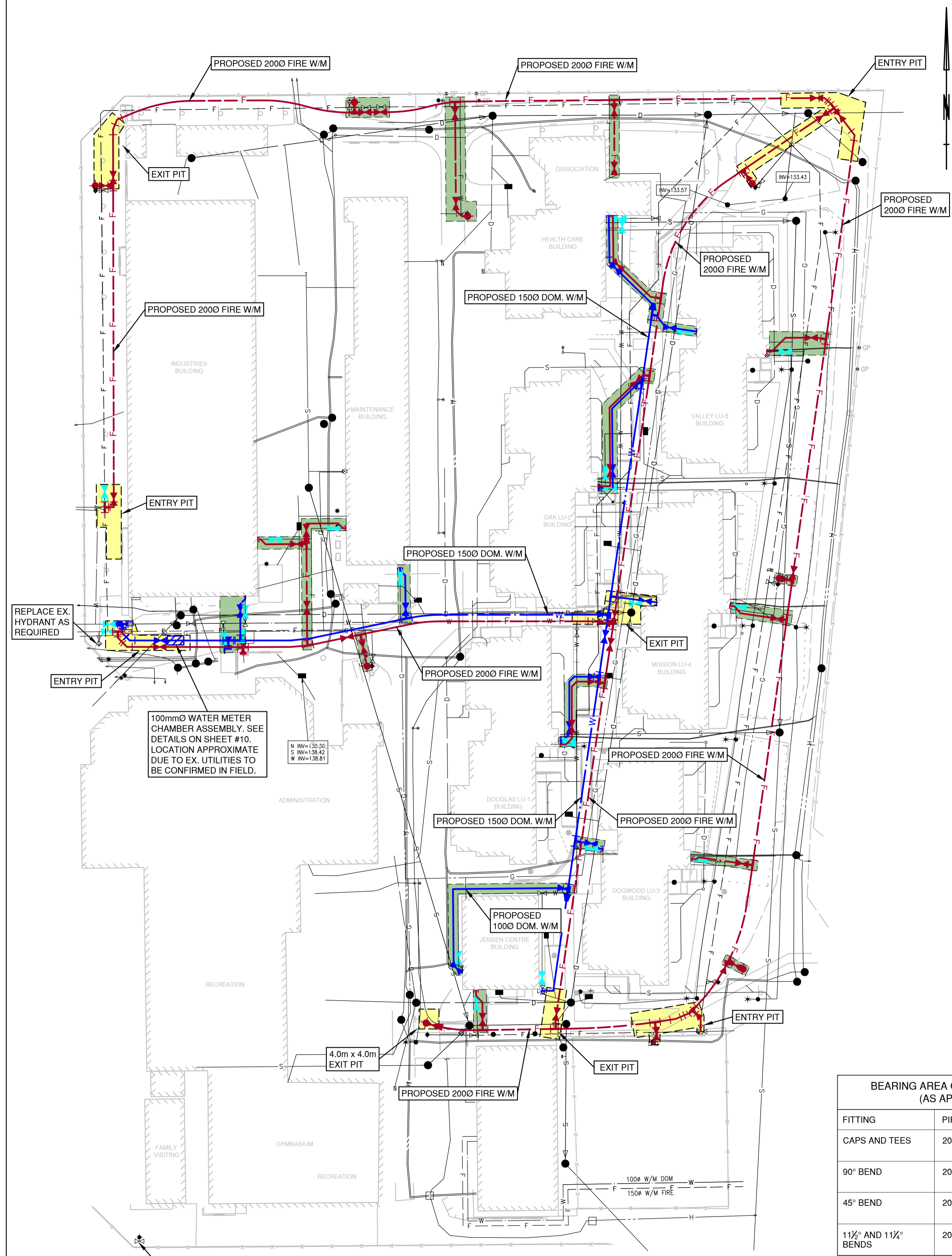
Drawing Title/Titre du dessin

KEY PLAN

SCALE 1:500

Project No./No. du projet R.089147.001	Sheet/Fauille C-03	Revision no./La Révision no. 7
--	------------------------------	--

OF 10



ENTRY / EXIT PITS (TRENCHLESS INSTALLATION)

OPEN CUT TRENCHES INSTALLATION

NOTE:
LOCATIONS AND DIMENSIONS OF ENTRY AND EXIT PITS SHOWN ARE APPROXIMATE. CONTRACTOR TO CONFIRM EXACT LOCATION AND DIMENSIONS PRIOR TO CONSTRUCTION

BEARING AREA OF THRUST BLOCKS (AS APPLICABLE)

FITTING	PIPE Ø	BEARING AREA
CAPS AND TEES	200	1.9m ²
90° BEND	200	2.6m ²
45° BEND	200	1.4m ²
11 1/2° AND 11 1/4° BENDS	200	0.3m ²

THE ABOVE TABLE IS BASED ON A SOIL BEARING STRENGTH OF 140 kPa AT 1380 kPa WORKING PRESSURE. SAFETY FACTOR = 1.5

- NOTES**
- THRUST BLOCKS OF 20MPa CONCRETE TO BE PLACED AGAINST UNDISTURBED GROUND.
 - CONCRETE SHALL NOT COVER FITTINGS, BELLS OR FLANGES.

JOINT RESTRAINT TABLE - VERTICAL BENDS (AS APPLICABLE)

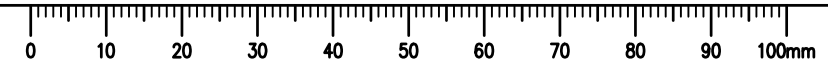
FITTING TYPE	MAINLINE DIAMETER (mm)	MINIMUM BURY DEPTH (m)		RESTRAINED LENGTH	
		HIGH SIDE	LOW SIDE	HIGH SIDE (m)	LOW SIDE (m)
45° BEND	200	1.0	1.2	7.5	2.0
22.5° BEND	200	1.0	1.2	4.0	1.0
11.25° BEND	200	1.0	1.2	2.0	1.0
90° BEND	200	1.0	1.2	18.5	5.0
45° BEND	100	1.0	1.2	4.0	1.0
22.5° BEND	100	1.0	1.2	2.0	1.0
11.25° BEND	100	1.0	1.2	1.0	1.0
90° BEND	100	1.0	1.2	10.0	3.0

JOINT RESTRAINT TABLE - HORIZONTAL BENDS (AS APPLICABLE)

FITTING TYPE	MAINLINE DIAMETER (mm)	BRANCH DIAMETER (mm)	MINIMUM DEPTH OF BURY (m)	MINIMUM RESTRAINED LENGTH PAST FITTING (m)
CROSS AND TEE	200	200	1.00	1.0
HIDRANT TEE	200	150	0.75	1.0
90° BEND	200	-	0.75	3.5
45° BEND	200	-	0.75	1.5
22.5° BEND	200	-	0.75	1.0
11.25° BEND	200	-	0.75	1.0
DEAD END	200	-	0.75	18.0
DEAD END	100	-	0.76	10.0

- NOTES**
- ALL ELEVATIONS ARE GEODETIC AND REFERENCED TO EXISTING INTEGRATED SURVEY MONUMENTS.
 - FIGURED DIMENSIONS SHALL GOVERN OVER SCALED DIMENSIONS.

LEGAL DESCRIPTION
LOT 13, SECTIONS 27, 33 & 34, TOWNSHIP 17, N.W.D., PLAN NWP 64228





Engineers & Geoscientists BC Permit #1000200



Revision/Revision	Description/Description	Date/Date
5	RE-ISSUED FOR TENDER	21/11/23
4	ISSUED FOR TENDER	21/05/21
3	RE-ISSUED FOR REVIEW	21/03/05
2	ISSUED FOR TENDER	19/02/06
1	100% DESIGN SUBMISSION	18/12/07
0	99% DESIGN REVIEW	18/08/31

Client/client

CORRECTIONAL SERVICES OF CANADA

8751 STAVE LAKE ST. MISSION, B.C.

Project title/Titre du projet
8751 STAVE LAKE ST. MISSION, B.C.

MISSION MEDIUM INSTITUTION WATERMAIN REPLACEMENT

Consultant Signature Only

Designed by/Concept par
G.R.

Drawn by/Dessiné par
B.D.

PWSC Project Manager/Administrateur de Projets TPSGC
TONY TANG

Regional Manager, Architectural and Engineering Services
Gestionnaire régionale, Services d'architecture et de génie, TPSGC

Drawing title/Titre du dessin

PHASING PLAN

SCALE 1:500

Project No./No. du projet
R.089147.001

Sheet/Fauille
C-04

Revision no./La Révision no.
5

OF 10

1. OVERVIEW:

1.1 GENERAL REQUIREMENTS

- ALL BUILDINGS LOCATED WITHIN MISSION MEDIUM INSTITUTION COMPLEX WILL REMAIN OPERATIONAL THROUGHOUT CONSTRUCTION. THIS WILL MEAN THAT ALL LIFE SAFETY AND SECURITY SYSTEMS MUST BE OPERATIONAL AT ALL TIMES. BEFORE ANY EQUIPMENT IS REMOVED FROM OPERATION, THE REPLACEMENT EQUIPMENT MUST BE OPERATIONAL, SO THAT THERE IS A SEAMLESS TRANSITION. IF THERE WILL BE A SHUT DOWN OF ANY LIFE SAFETY OR SECURITY EQUIPMENT, THE CONTRACTOR TO NOTIFY THE DEPARTMENTAL REPRESENTATIVE 6 WEEKS IN ADVANCE, SO THAT ALTERNATIVE MEASURES CAN BE MADE FOR TEMPORARILY RELOCATING THE OCCUPANTS OF THE UNIT. FOR THE TEMPORARY SHUTDOWN OF NON-LIFE SAFETY SYSTEMS, SUCH AS THE HVAC SYSTEM, THE CONTRACTOR TO NOTIFY THE DEPARTMENTAL REPRESENTATIVE 2 WEEKS IN ADVANCE.
- ALL HOARDING TO BE CONSTRUCTED FROM FLOOR TO CEILING AS REQUIRED.

1.2 PHASES OF CONSTRUCTION

- THE CONSTRUCTION TO FOLLOW THE PHASES OF CONSTRUCTION. EACH PHASE HAS BEEN BROKEN DOWN INTO WORK TO BE DONE FOR EACH DISCIPLINE. IT IS THE CONTRACTORS' RESPONSIBILITY TO REVIEW EACH PHASE AND BRING ANY ISSUES THAT MIGHT COMPROMISE THE CONTINUOUS OPERATION OF THE BUILDINGS WITHIN THE INSTITUTION TO THE ATTENTION OF THE DEPARTMENTAL REPRESENTATIVE SO THAT CHANGES CAN BE MADE.
- IT IS THE CONTRACTORS RESPONSIBILITY TO IMPLEMENT THE INTENTION OF THE PHASES AND DO THE WORK IN AN ORDER THAT BRINGS THE LEAST AMOUNT OF DISRUPTION TO THE OCCUPANTS OF THE INSTITUTION.
- ANY WORK THAT MUST BE DONE TO ALLOW FOR THE WORK LISTED IN THE PHASES TO BE DONE, IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE DEPARTMENTAL REPRESENTATIVE. THE CONTRACTOR TO NOTIFY THE DEPARTMENTAL REPRESENTATIVE OF HIS/HER EXPECTATIONS AND SCHEDULE FOR THE REMOVAL OF SECURITY FENCING, FURNITURE AND EQUIPMENT ETC. FROM THE SPACES THAT WILL BE UNDER CONSTRUCTION.

1.3 MECHANICAL GENERAL COMMENTS:

- THE MECHANICAL SYSTEMS MUST REMAIN OPERATIONAL IN ALL AREAS OF BUILDINGS WITHIN MISSION MEDIUM INSTITUTION COMPLEX UNAFFECTED BY THE CONSTRUCTION.

1.4 ELECTRICAL GENERAL COMMENTS:

- THE ELECTRICAL SYSTEMS MUST REMAIN OPERATIONAL IN ALL AREAS OF THE OF BUILDINGS WITHIN MISSION MEDIUM INSTITUTION COMPLEX UNAFFECTED BY THE CONSTRUCTION.

1.5 TECHNOLOGY GENERAL COMMENTS:

- THE TECHNOLOGY SYSTEMS MUST REMAIN OPERATIONAL IN ALL AREAS OF BUILDINGS WITHIN MISSION MEDIUM INSTITUTION COMPLEX UNAFFECTED BY THE CONSTRUCTION.

2. CONSTRUCTION PHASES - (CIVIL)

2.1 PHASE 01

- INSTALL "IN-LINE VALVES INSERT" ON EXISTING 100mm DIA. PVC DOMESTIC AND 200mm DIA. PVC FIRE LINES
- INSTALL DOMESTIC WATERMANS C/W ALL VALVES AND FITTINGS
- INSTALL ALL DOMESTIC WATER SERVICE CONNECTIONS C/W VALVES AND TEMPORARY CAPS AT 1.50m FROM BUILDINGS
- INSTALL FIRE MAINS C/W ALL HYDRANTS, VALVES AND FITTINGS
- INSTALL FIRE SERVICE CONNECTIONS C/W VALVES AND TEMP CAPS AT 1.50M FROM BUILDINGS
- ALL FIRE AND DOMESTIC WATERMANS INSTALLED TO BE PRESSURE TESTED, FLUSHED, AND BACTERIAL TESTED. ALL WATER TEST RESULTS MUST BE REVIEWED AND APPROVED BY THE DEPARTMENTAL REPRESENTATIVE PRIOR TO TIE-INS.

2.2 PHASE 02

- TIE NEW 200mm DIAMETER HDPE FIRE WATERMAIN INTO EXISTING 200mm DIAMETER PVC FIRE WATERMAIN.

2.3 PHASE 03

- TIE NEW 150mm DIAMETER HDPE DOMESTIC WATERMAIN INTO EXISTING 100mm DIAMETER PVC DOMESTIC WATERMAIN.
- TIE NEW 200mm DIAMETER HDPE FIRE WATERMAIN INTO EXISTING 200mm DIAMETER PVC FIRE WATERMAIN.

2.4 PHASE 04

PHASE 04 INCLUDES ALL DOMESTIC AND FIRE SERVICE CONNECTIONS TIE-INS TO BUILDINGS WATER SERVICES AT MECHANICAL ROOMS

ADMINISTRATION BUILDING:

- INSTALL "IN-LINE VALVE INSERT" ON EXISTING 100mm DIA. AC DOMESTIC SERVICE TO ISOLATE BUILDING. CUT AND REMOVE EXISTING 100mm DIA. AC SERVICE THEN TIE NEW 100mm DIA. PVC SERVICE INTO BUILDING WATER SERVICE.
- INSTALL "IN-LINE VALVE INSERT" ON EXISTING 200mm DIA. AC FIRE SERVICE TO ISOLATE BUILDING. CUT AND REMOVE EXISTING 200mm DIA. AC SERVICE THEN TIE NEW 200mm DIA. PVC SERVICE INTO BUILDING WATER SERVICE.

INDUSTRIES BUILDING:

- INSTALL "IN-LINE VALVE INSERT" ON EXISTING 100mm DIA. AC DOMESTIC SERVICE TO ISOLATE BUILDING. CUT AND REMOVE EXISTING 100mm DIA. AC SERVICE THEN TIE NEW 100mm DIA. PVC SERVICE INTO BUILDING WATER SERVICE AT MECHANICAL ROOM.
- INSTALL "IN-LINE VALVE INSERT" ON EXISTING 200mm DIA. AC FIRE SERVICE TO ISOLATE BUILDING. CUT AND REMOVE EXISTING 200mm DIA. AC SERVICE THEN TIE NEW 200mm DIA. PVC SERVICE INTO BUILDING WATER SERVICE.

MAINTENANCE BUILDING:

- INSTALL "IN-LINE VALVE INSERT" ON EXISTING 100mm DIA. AC DOMESTIC SERVICE TO ISOLATE BUILDING. CUT AND REMOVE EXISTING 100mm DIA. AC SERVICE THEN TIE NEW 100mm DIA. PVC SERVICE INTO BUILDING WATER SERVICE AT MECHANICAL ROOM.
- INSTALL "IN-LINE VALVE INSERT" ON EXISTING 200mm DIA. AC FIRE SERVICE TO ISOLATE BUILDING. CUT AND REMOVE EXISTING 200mm DIA. AC SERVICE THEN TIE NEW 200mm DIA. PVC SERVICE INTO BUILDING WATER SERVICE.

OAK LU-2 BUILDING:

- INSTALL "IN-LINE VALVE INSERT" ON EXISTING 100mm DIA. AC DOMESTIC SERVICE TO ISOLATE BUILDING. CUT AND REMOVE EXISTING 100mm DIA. AC SERVICE THEN TIE NEW 100mm DIA. PVC SERVICE INTO BUILDING WATER SERVICE AT MECHANICAL ROOM.
- INSTALL "IN-LINE VALVE INSERT" ON EXISTING 200mm DIA. AC FIRE SERVICE TO ISOLATE BUILDING. CUT AND REMOVE EXISTING 200mm DIA. AC SERVICE THEN TIE NEW 200mm DIA. PVC SERVICE INTO BUILDING WATER SERVICE.

DISSOCIATION BUILDING:

- INSTALL "IN-LINE VALVE INSERT" ON EXISTING 100mm DIA. AC DOMESTIC SERVICE TO ISOLATE BUILDING. CUT AND REMOVE EXISTING 100mm DIA. AC SERVICE THEN TIE NEW 100mm DIA. PVC SERVICE INTO BUILDING WATER SERVICE AT MECHANICAL ROOM.
- INSTALL "IN-LINE VALVE INSERT" ON EXISTING 200mm DIA. AC FIRE SERVICE TO ISOLATE BUILDING. CUT AND REMOVE EXISTING 200mm DIA. AC SERVICE THEN TIE NEW 200mm DIA. PVC SERVICE INTO BUILDING WATER SERVICE.

VALLEY LU-5 BUILDING:

- INSTALL "IN-LINE VALVE INSERT" ON EXISTING 100mm DIA. AC DOMESTIC SERVICE TO ISOLATE BUILDING. CUT AND REMOVE EXISTING 100mm DIA. AC SERVICE THEN TIE NEW 100mm DIA. PVC SERVICE INTO BUILDING WATER SERVICE AT MECHANICAL ROOM.
- INSTALL "IN-LINE VALVE INSERT" ON EXISTING 200mm DIA. AC FIRE SERVICE TO ISOLATE BUILDING. CUT AND REMOVE EXISTING 200mm DIA. AC SERVICE THEN TIE NEW 200mm DIA. PVC SERVICE INTO BUILDING WATER SERVICE.

MISSION LU-4 BUILDING:

- INSTALL "IN-LINE VALVE INSERT" ON EXISTING 100mm DIA. AC DOMESTIC SERVICE TO ISOLATE BUILDING. CUT AND REMOVE EXISTING 100mm DIA. AC SERVICE THEN TIE NEW 100mm DIA. PVC SERVICE INTO BUILDING WATER SERVICE AT MECHANICAL ROOM.
- INSTALL "IN-LINE VALVE INSERT" ON EXISTING 200mm DIA. AC FIRE SERVICE TO ISOLATE BUILDING. CUT AND REMOVE EXISTING 200mm DIA. AC SERVICE THEN TIE NEW 200mm DIA. PVC SERVICE INTO BUILDING WATER SERVICE.

DOGWOOD LU-3 BUILDING:

- INSTALL "IN-LINE VALVE INSERT" ON EXISTING 100mm DIA. AC DOMESTIC SERVICE TO ISOLATE BUILDING. CUT AND REMOVE EXISTING 100mm DIA. AC SERVICE THEN TIE NEW 100mm DIA. PVC SERVICE INTO BUILDING WATER SERVICE AT MECHANICAL ROOM.
- INSTALL "IN-LINE VALVE INSERT" ON EXISTING 200mm DIA. AC FIRE SERVICE TO ISOLATE BUILDING. CUT AND REMOVE EXISTING 200mm DIA. AC SERVICE THEN TIE NEW 200mm DIA. PVC SERVICE INTO BUILDING WATER SERVICE.

DOUGLAS LU-1 BUILDING:

- INSTALL "IN-LINE VALVE INSERT" ON EXISTING 100mm DIA. AC DOMESTIC SERVICE TO ISOLATE BUILDING. CUT AND REMOVE EXISTING 100mm DIA. AC SERVICE THEN TIE NEW 100mm DIA. PVC SERVICE INTO BUILDING WATER SERVICE AT MECHANICAL ROOM.
- INSTALL "IN-LINE VALVE INSERT" ON EXISTING 200mm DIA. AC FIRE SERVICE TO ISOLATE BUILDING. CUT AND REMOVE EXISTING 200mm DIA. AC SERVICE THEN TIE NEW 200mm DIA. PVC SERVICE INTO BUILDING WATER SERVICE.

JENSEN CENTRE BUILDING:

- INSTALL "TWO IN-LINE VALVES INSERT" ON EXISTING 100mm DIA. AC DOMESTIC SERVICE TO ISOLATE BUILDING. CUT AND REMOVE EXISTING 100mm DIA. AC SERVICE THEN TIE NEW 100mm DIA. PVC SERVICE INTO BUILDING WATER SERVICE AT MECHANICAL ROOM.
- INSTALL "IN-LINE VALVE INSERT" ON EXISTING 200mm DIA. AC FIRE SERVICE TO ISOLATE BUILDING. CUT AND REMOVE EXISTING 200mm DIA. AC SERVICE THEN TIE NEW 200mm DIA. PVC SERVICE INTO BUILDING WATER SERVICE.

2.5 PHASE 05

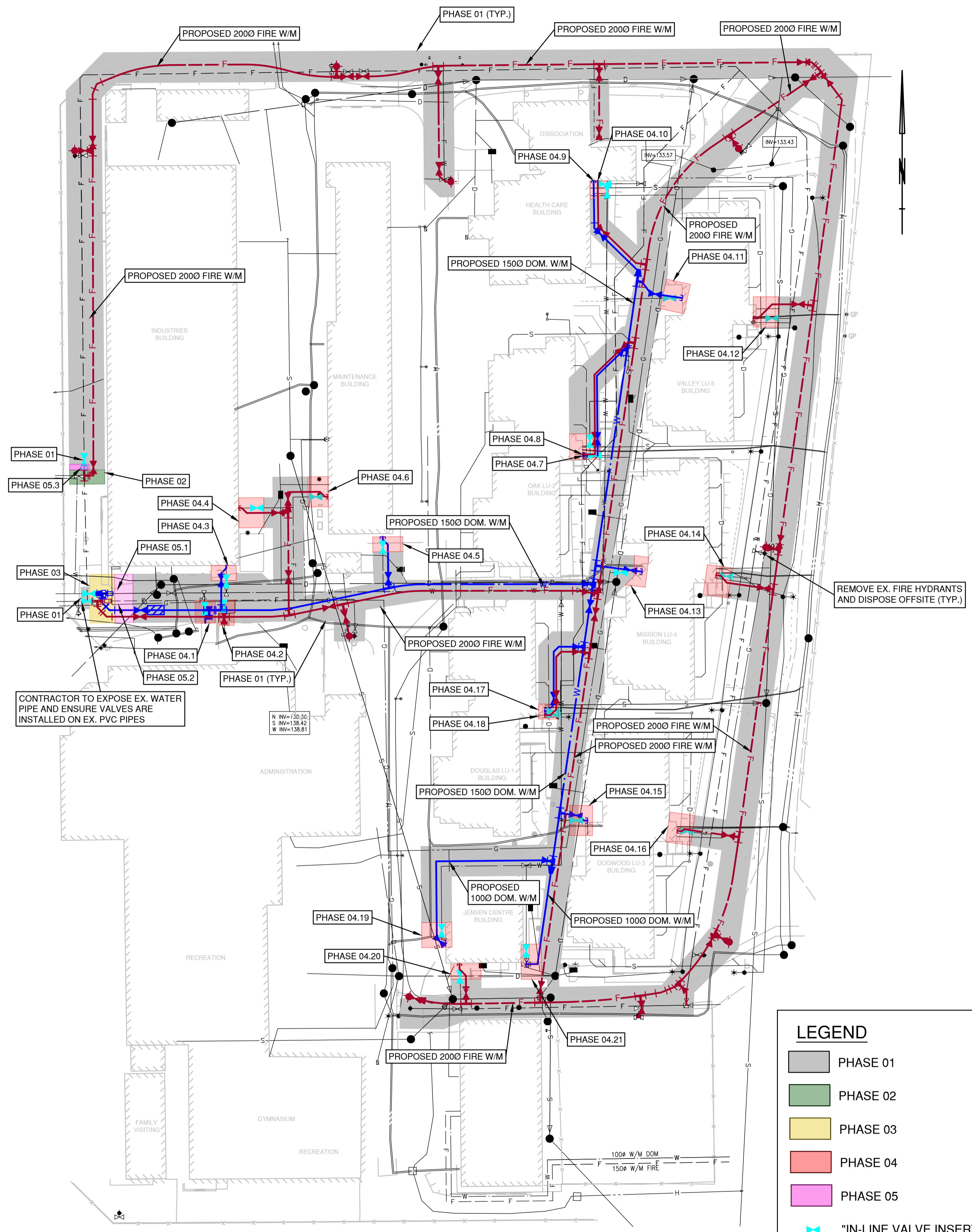
- CUT AND CAP EXISTING 100m DIA. AC DOMESTIC WATERMAIN. EXISTING AC WATERMAIN TO BE ABANDONED.
- CUT AND CAP EXISTING 200m DIA. AC FIRE WATERMAIN. EXISTING AC WATERMAIN TO BE ABANDONED. EXISTING FIRE HYDRANTS TO BE REMOVED AND DISPOSED OFFSITE.
- CUT AND CAP EXISTING 200m DIA. AC FIRE WATERMAIN. EXISTING AC WATERMAIN TO BE ABANDONED. EXISTING FIRE HYDRANTS TO BE REMOVED AND DISPOSED OFFSITE.

3.0 CONSTRUCTION PHASES - (MECHANICAL)

- PLEASE REFER TO MECHANICAL DRAWING M0-02 FOR PHASING INSTRUCTIONS.

4.0 CONSTRUCTION PHASES - (ELECTRICAL)

- PLEASE REFER TO ELECTRICAL DRAWING E001 FOR PHASING INSTRUCTIONS.



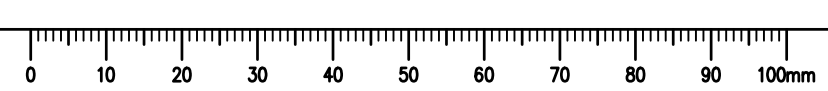
LEGEND

- PHASE 01
- PHASE 02
- PHASE 03
- PHASE 04
- PHASE 05
- "IN-LINE VALVE INSERT"
- DOMESTIC VALVE
- FIRE VALVE

NOTES

- ALL ELEVATIONS ARE GEODETIC AND REFERENCED TO EXISTING INTEGRATED SURVEY MONUMENTS.
- FIGURED DIMENSIONS SHALL GOVERN OVER SCALED DIMENSIONS.

LEGAL DESCRIPTION
LOT 13, SECTIONS 27, 33 & 34, TOWNSHIP 17, N.W.D., PLAN NWP 64228





Engineers & Geoscientists BC Permit #1000020



Revision/Revision	Description/Description	Date/Date
7	RE-ISSUED FOR TENDER	21/11/23
6	ISSUED FOR TENDER	21/05/21
5	RE-ISSUED FOR REVIEW	21/03/05
4	ISSUED FOR TENDER	19/02/06
3	100% DESIGN SUBMISSION	18/12/07
2	99% DESIGN SUBMISSION	18/08/31
1	66% DESIGN REVIEW	18/06/21
0	30% DESIGN REVIEW	17/11/17

CORRECTIONAL SERVICES OF CANADA

8751 STAVE LAKE ST. MISSION, B.C.

Project Title/Titre du projet
8751 STAVE LAKE ST. MISSION, B.C.

MISSION MEDIUM INSTITUTION WATERMAIN REPLACEMENT

Consultant Signature Only

Designed by/Concept par
G.R.

Drawn by/Dessiné par
B.D.

PWGCSC Project Manager/Administrateur de Projets TPSGC
TONY TANG

Regional Manager, Architectural and Engineering Services
Gestionnaire régionale, Services d'architecture et de génie, TPSGC

Drawing Title/Titre du dessin

WATERMAIN FIRE

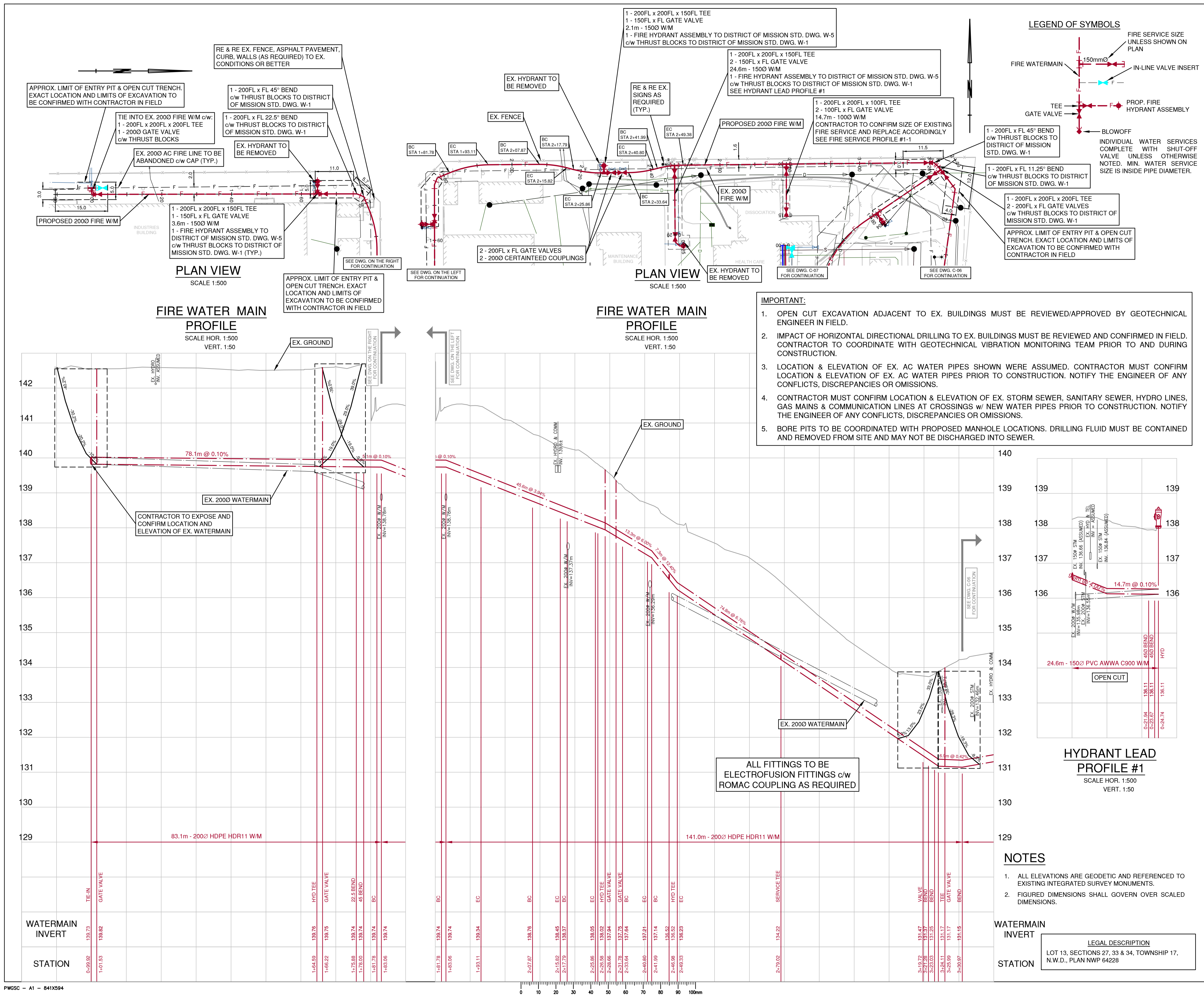
SCALE 1:500

Project No./No. du projet
R.089147.001

Sheet/Fauille
C-05

Revision no./Révision no.
7

OF 10





Engineers & Geoscientists BC Permit #1000200



Revision/	Description/Description	Date/Date
7	RE-ISSUED FOR TENDER	21/11/23
6	ISSUED FOR TENDER	21/05/21
5	RE-ISSUED FOR REVIEW	21/03/05
4	ISSUED FOR TENDER	19/02/06
3	100% DESIGN SUBMISSION	18/12/07
2	99% DESIGN SUBMISSION	18/08/31
1	66% DESIGN REVIEW	18/06/21
0	30% DESIGN REVIEW	17/11/17

CORRECTIONAL SERVICES OF CANADA

8751 STAVE LAKE ST.
MISSION, B.C.

Project Title/Titre du projet
8751 STAVE LAKE ST.
MISSION, B.C.

MISSION MEDIUM INSTITUTION WATERMAIN REPLACEMENT

Consultant Signature Only

Designed by/Concept par
G.R.

Drawn by/Dessiné par
B.D.

PWSC Project Manager/Administrateur de Projets TPSGC
TONY TANG

Regional Manager, Architectural and Engineering Services
Gestionnaire régionale, Services d'architectural et de génie, TPSGC

Drawing Title/Titre du dessin

WATERMAIN FIRE

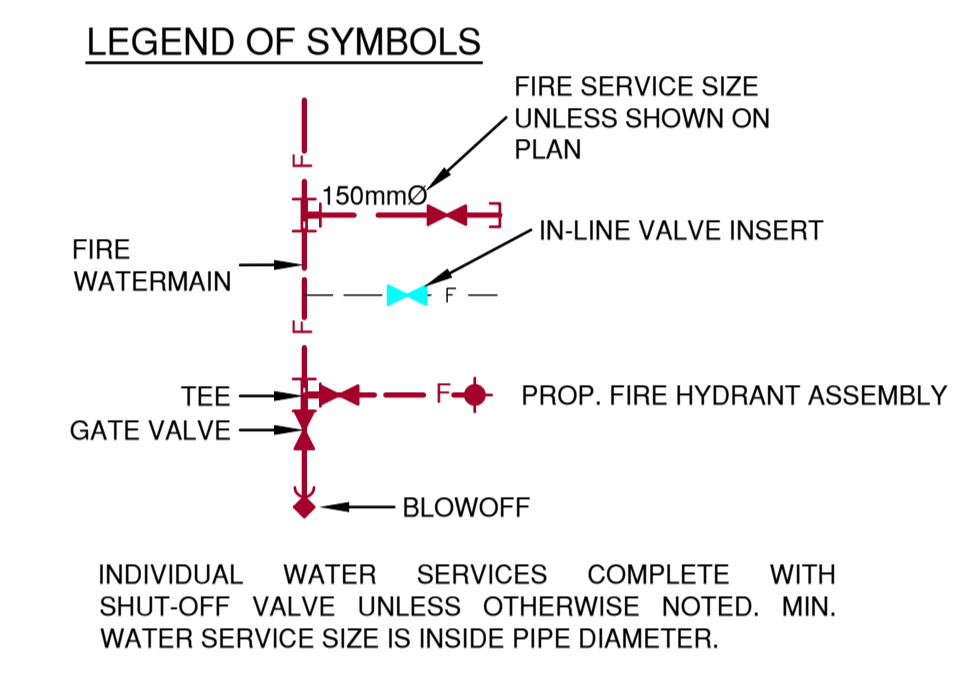
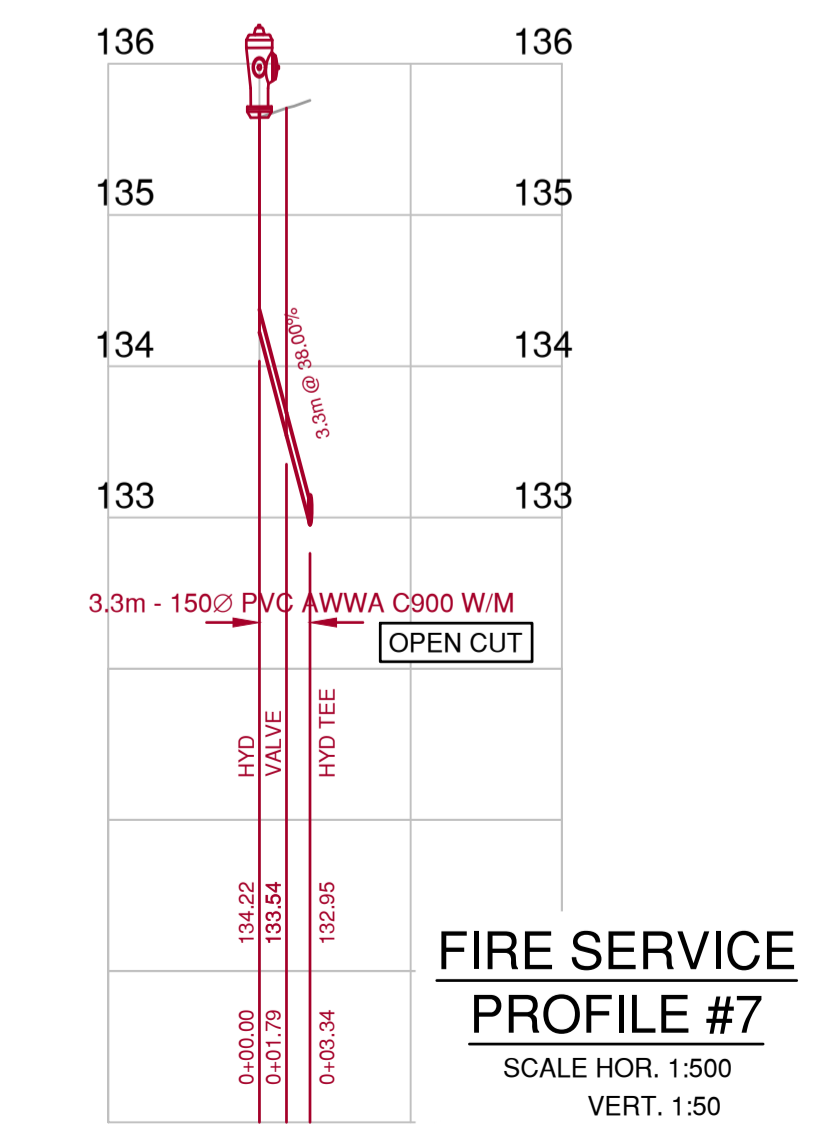
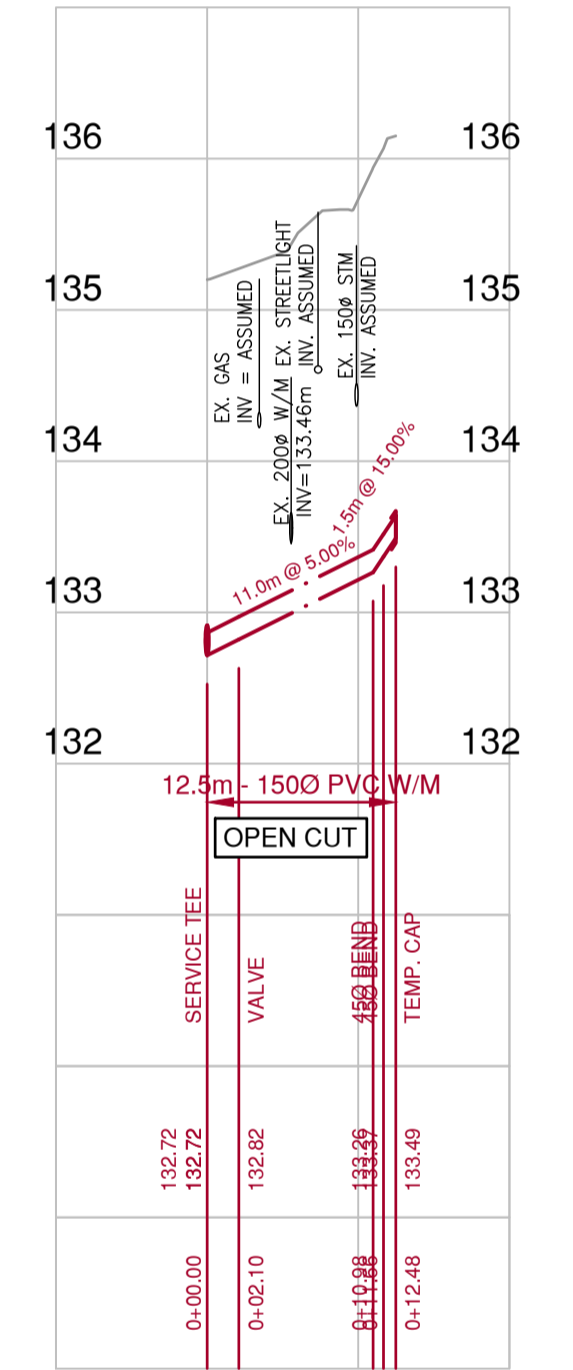
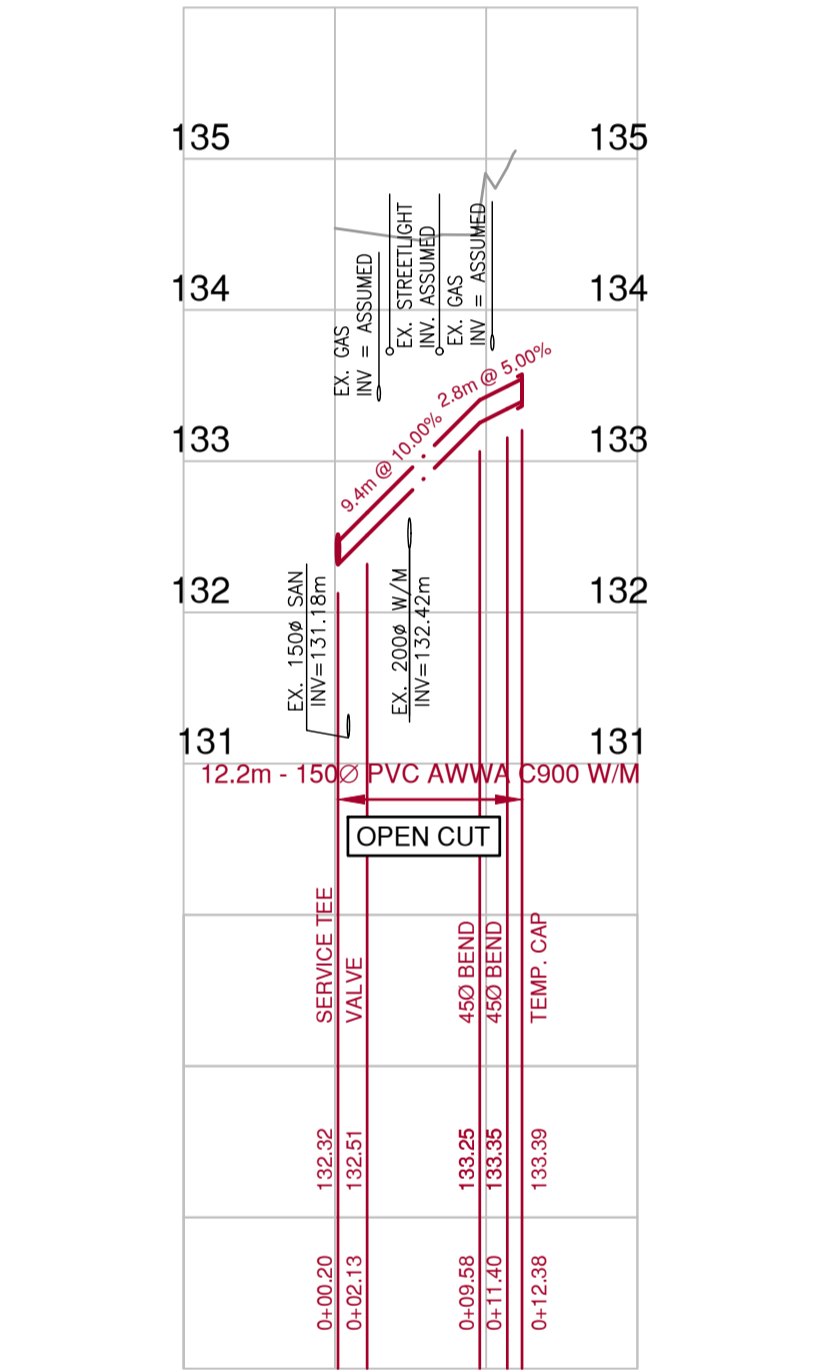
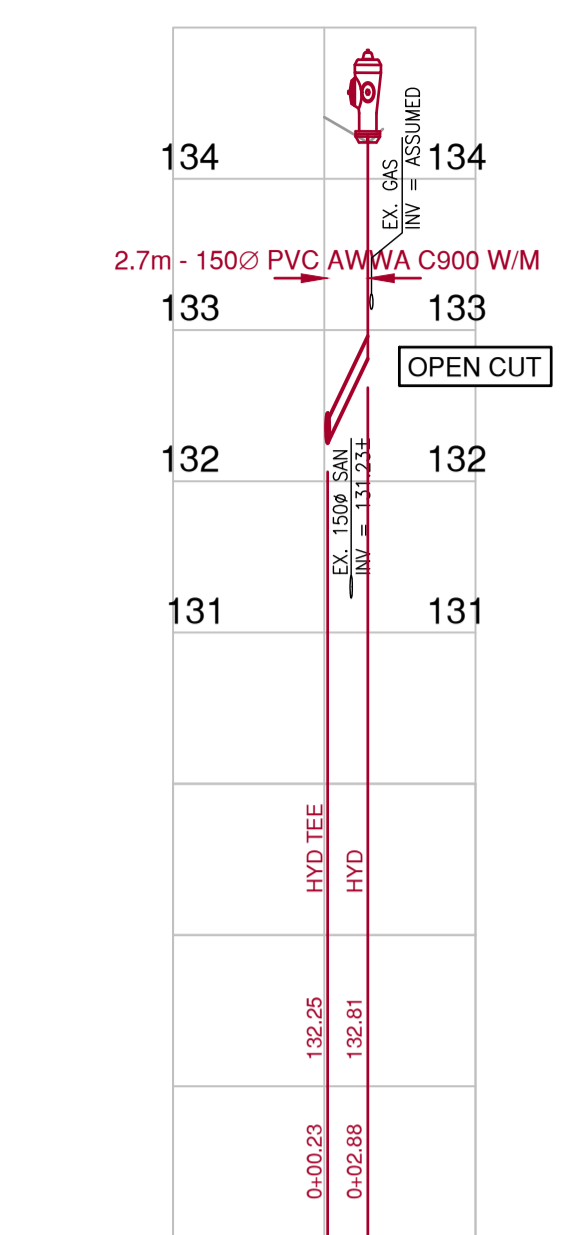
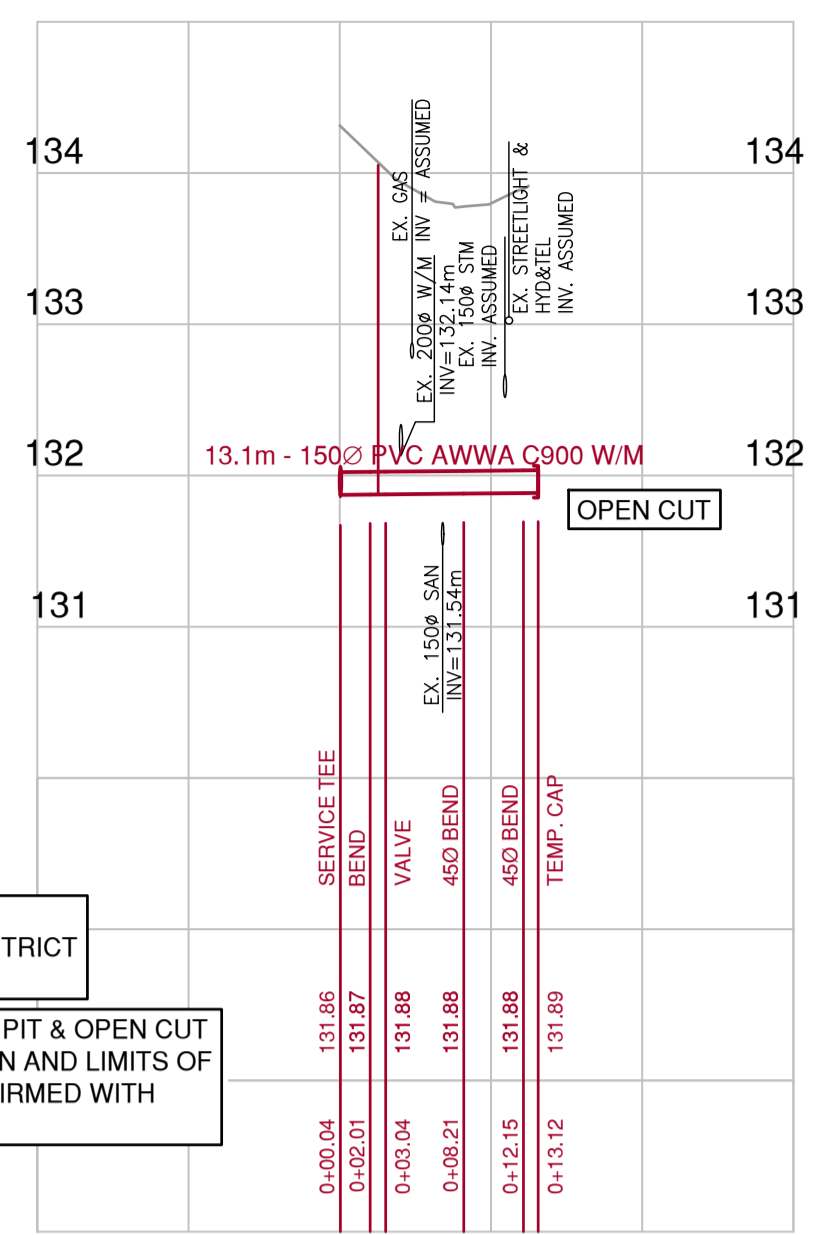
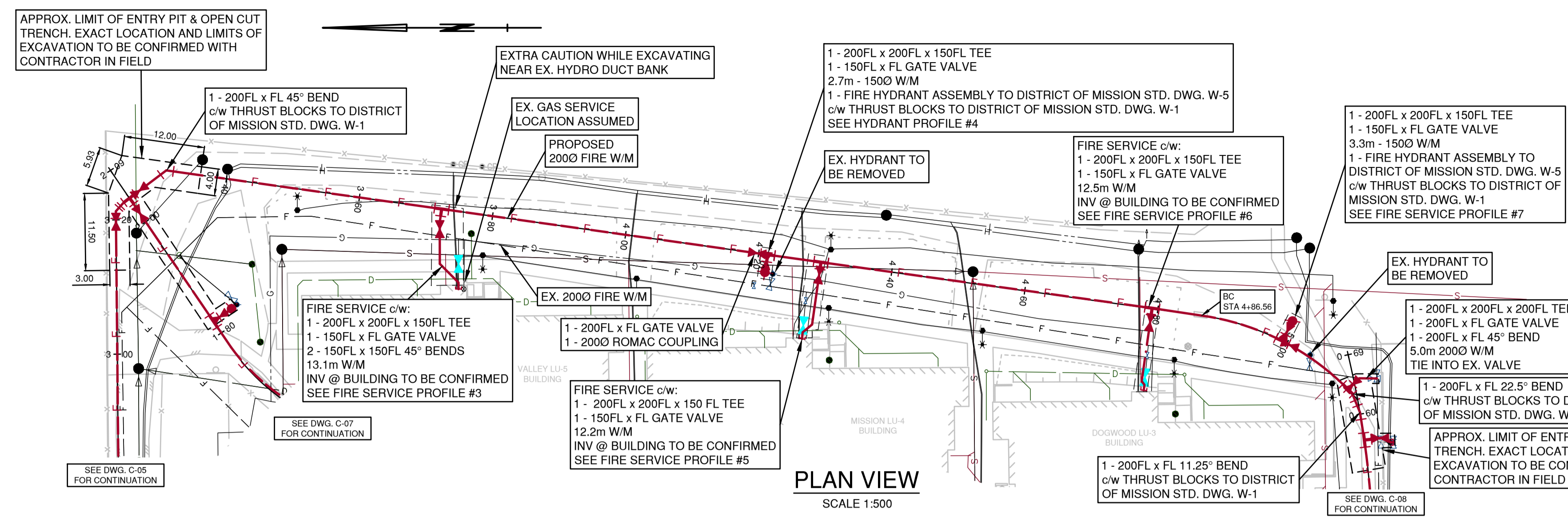
SCALE 1:500

Project No./No. du projet
R.089147.001

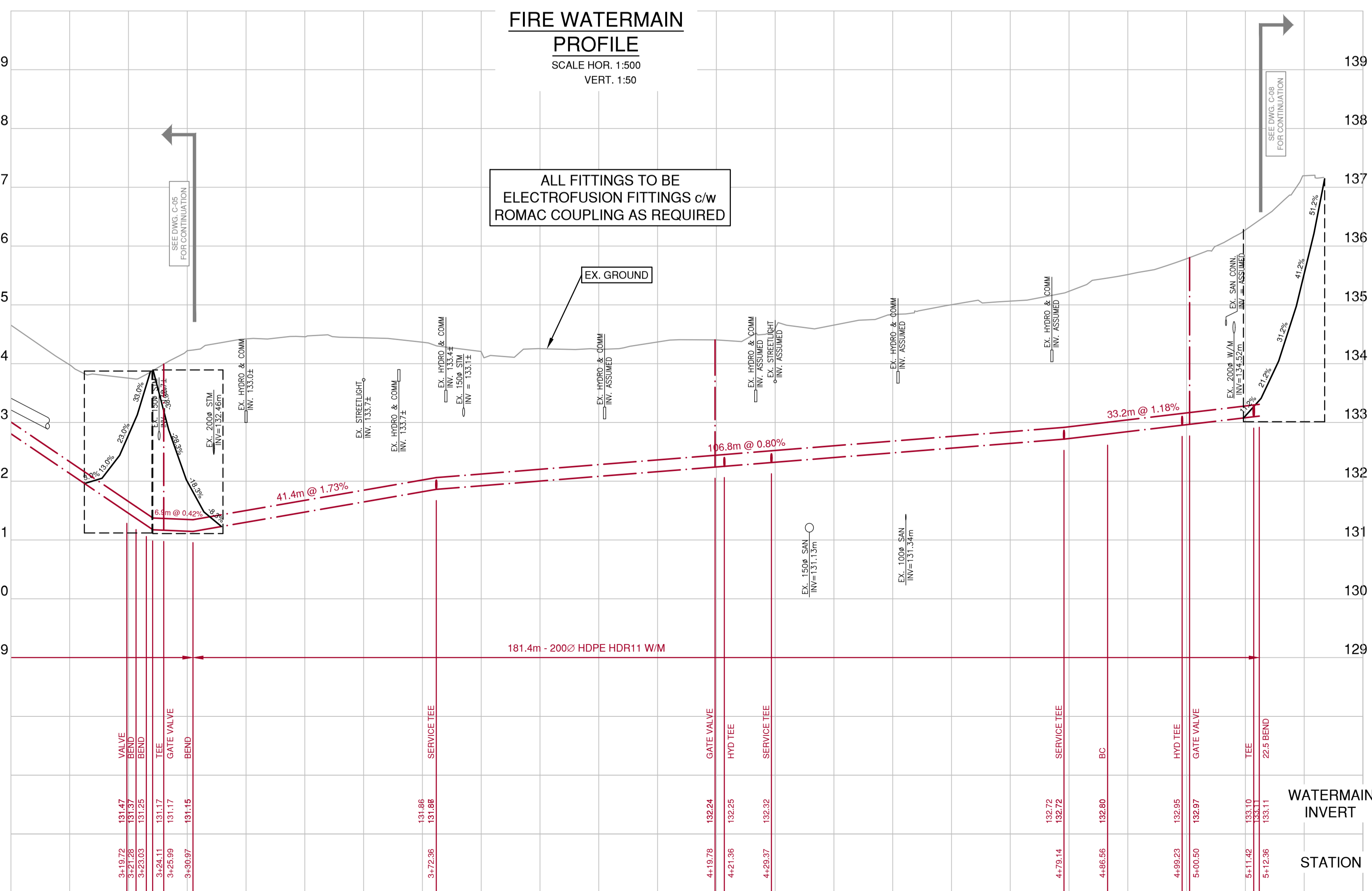
Sheet/Fauille
C-06

OF 10

Revision no./
La Révision no.
7



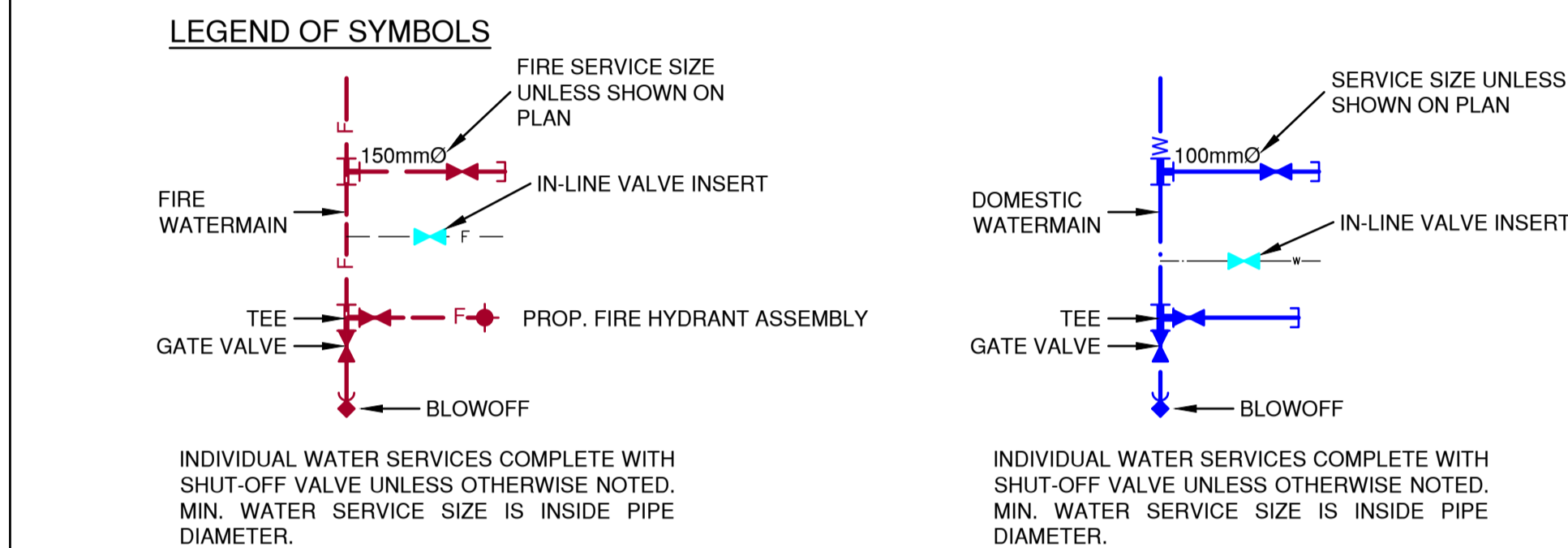
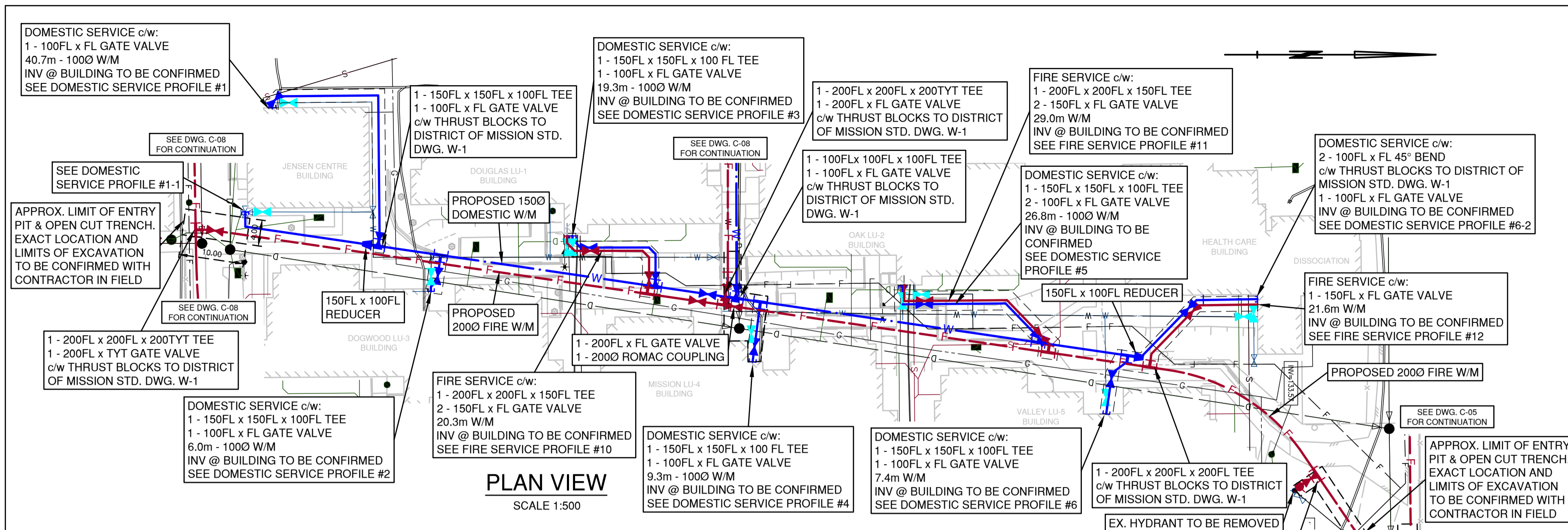
- IMPORTANT:**
1. OPEN CUT EXCAVATION ADJACENT TO EX. BUILDINGS MUST BE REVIEWED/APPROVED BY GEOTECHNICAL ENGINEER IN FIELD.
 2. IMPACT OF HORIZONTAL DIRECTIONAL DRILLING TO EX. BUILDINGS MUST BE REVIEWED AND CONFIRMED IN FIELD. CONTRACTOR TO COORDINATE WITH GEOTECHNICAL VIBRATION MONITORING TEAM PRIOR TO AND DURING CONSTRUCTION.
 3. LOCATION & ELEVATION OF EX. AC WATER PIPES SHOWN WERE ASSUMED. CONTRACTOR MUST CONFIRM LOCATION & ELEVATION OF EX. AC WATER PIPES PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS, DISCREPANCIES OR OMISSIONS.
 4. CONTRACTOR MUST CONFIRM LOCATION & ELEVATION OF EX. STORM SEWER, SANITARY SEWER, HYDRO LINES, GAS MAINS & COMMUNICATION LINES AT CROSSINGS w/ NEW WATER PIPES PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS, DISCREPANCIES OR OMISSIONS.
 5. BORE PITS TO BE COORDINATED WITH PROPOSED MANHOLE LOCATIONS. DRILLING FLUID MUST BE CONTAINED AND REMOVED FROM SITE AND MAY NOT BE DISCHARGED INTO SEWER.



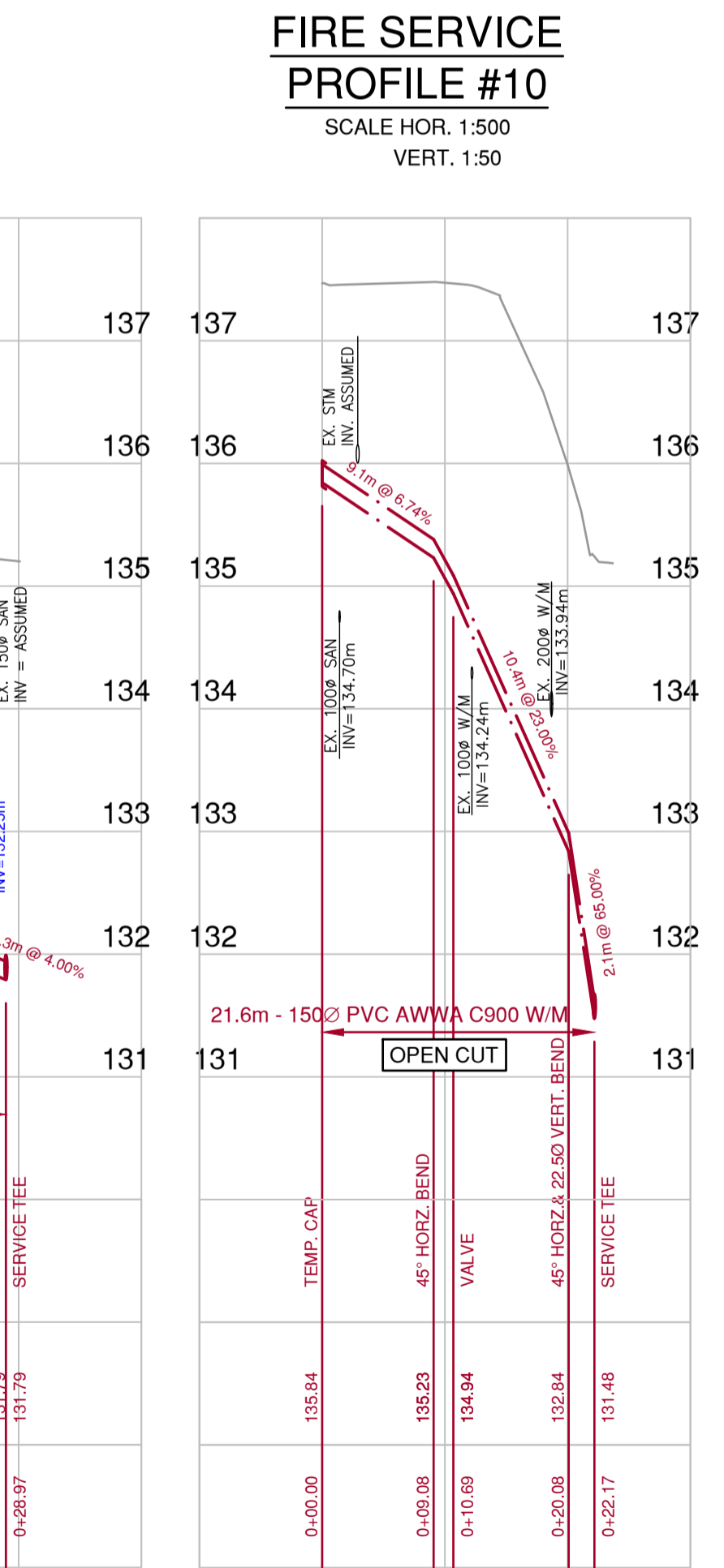
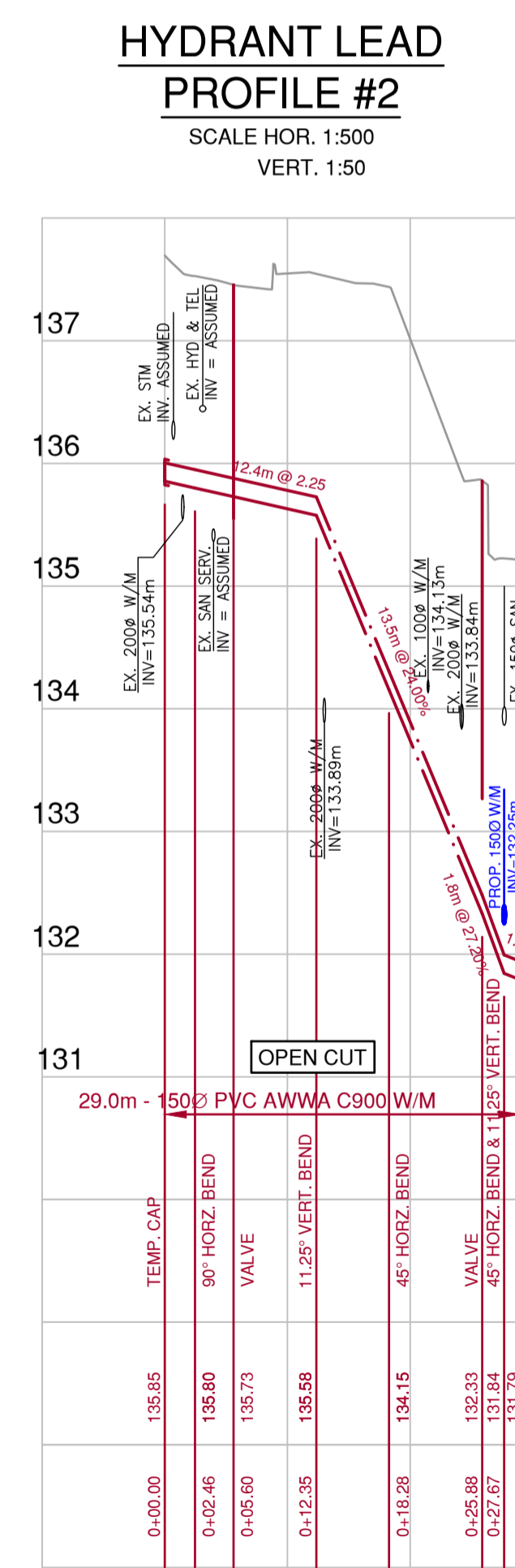
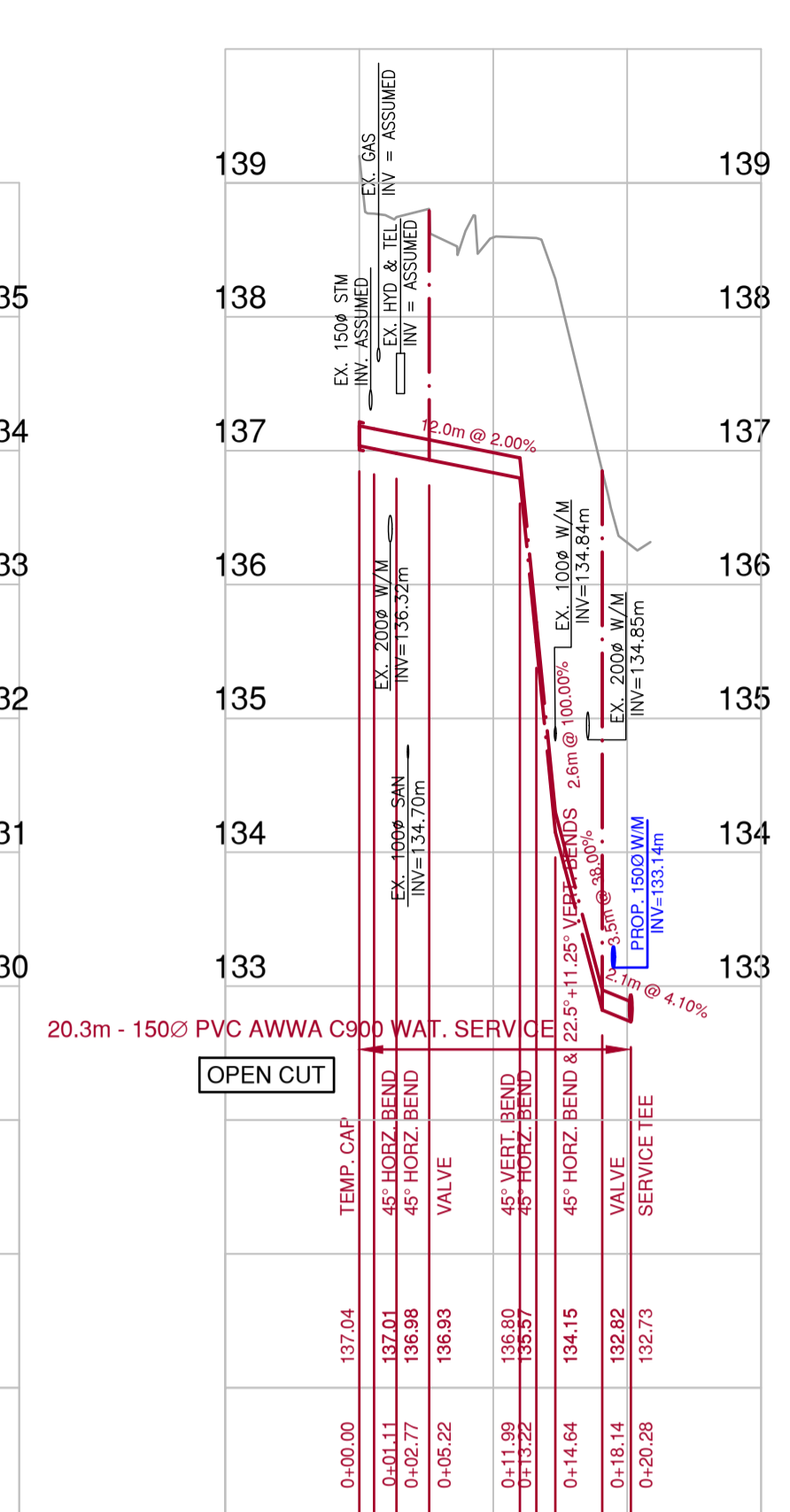
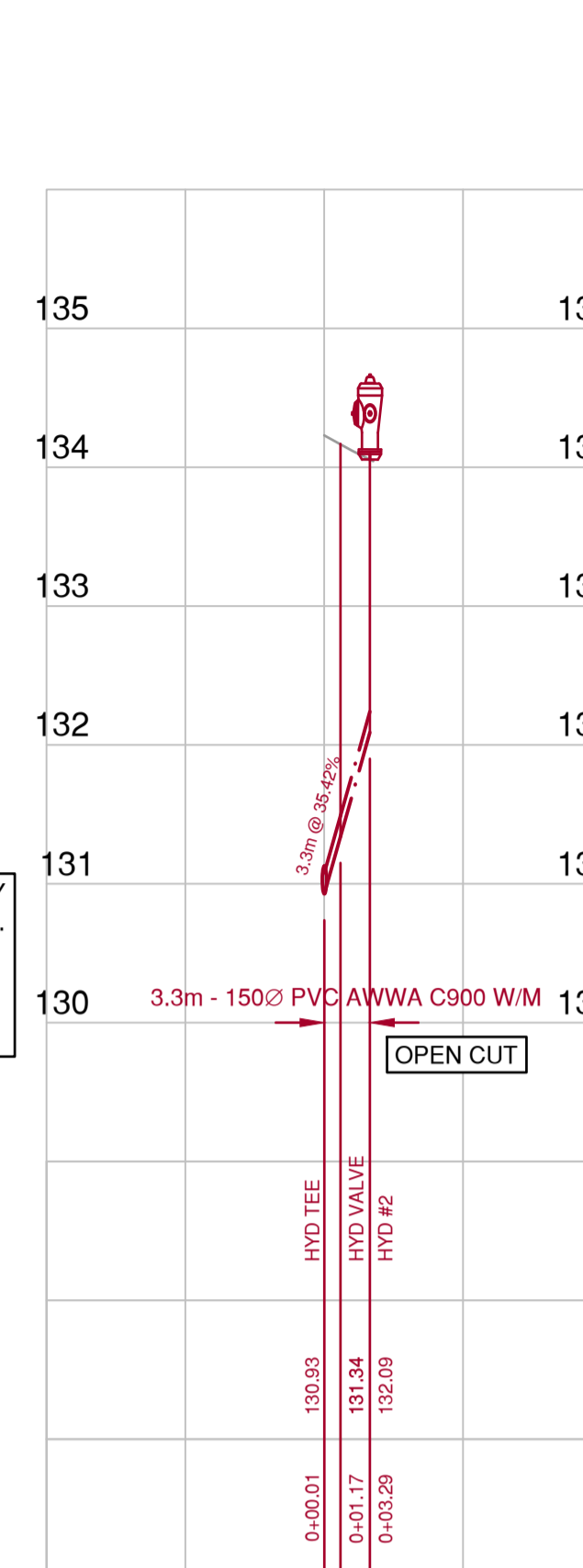
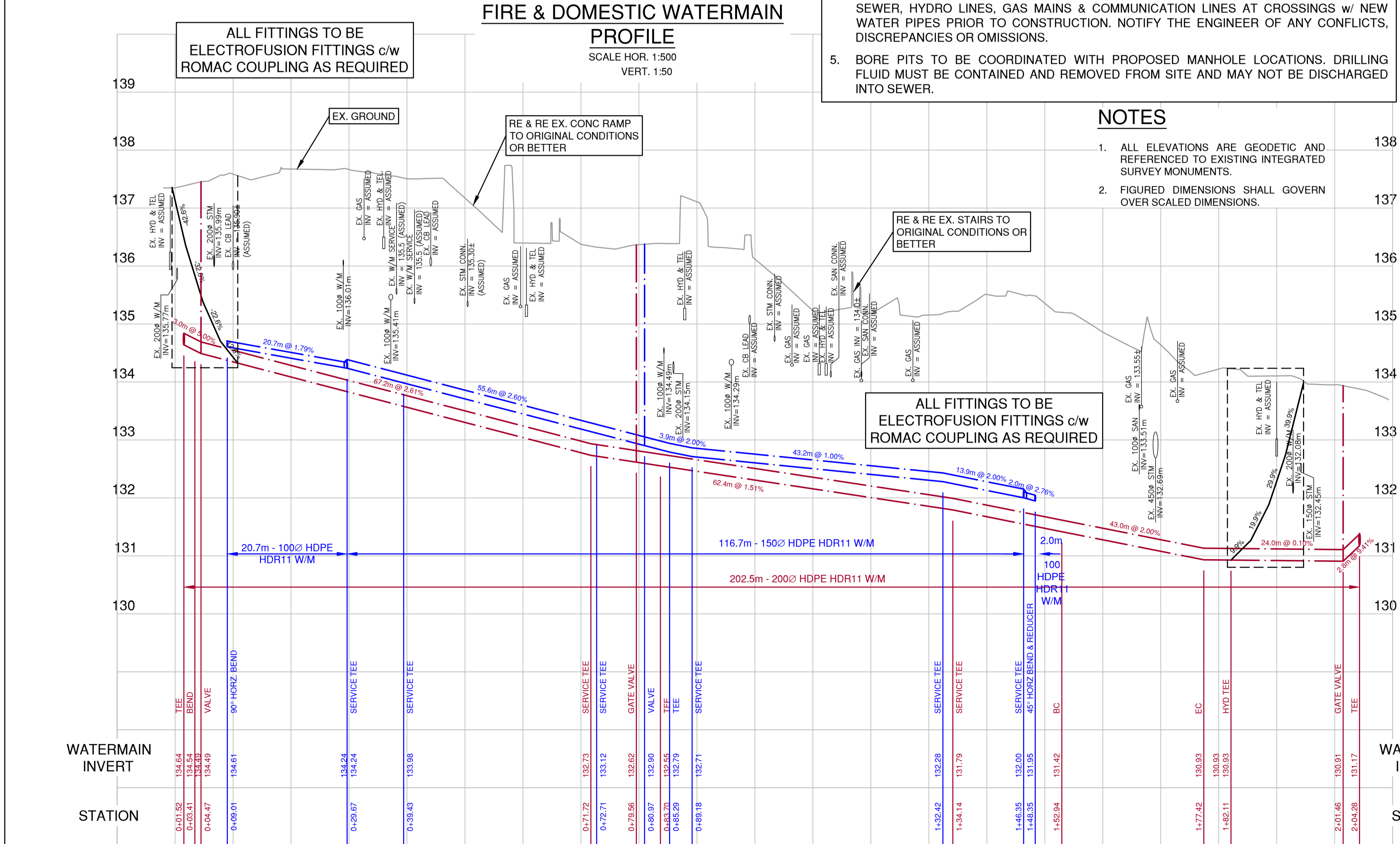
- NOTES**
1. ALL ELEVATIONS ARE GEODETIC AND REFERENCED TO EXISTING INTEGRATED SURVEY MONUMENTS.
 2. FIGURED DIMENSIONS SHALL GOVERN OVER SCALED DIMENSIONS.

LEGAL DESCRIPTION

LOT 13, SECTIONS 27, 33 & 34, TOWNSHIP 17, N.W.D., PLAN NWP 64228



- IMPORTANT:**
- OPEN CUT EXCAVATION ADJACENT TO EX. BUILDINGS MUST BE REVIEWED/APPROVED BY GEOTECHNICAL ENGINEER IN FIELD.
 - IMPACT OF HORIZONTAL DIRECTIONAL DRILLING TO EX. BUILDINGS MUST BE REVIEWED AND CONFIRMED IN FIELD. CONTRACTOR TO COORDINATE WITH GEOTECHNICAL VIBRATION MONITORING TEAM PRIOR TO AND DURING CONSTRUCTION.
 - LOCATION & ELEVATION OF EX. AC WATER PIPES SHOWN WERE ASSUMED. CONTRACTOR MUST CONFIRM LOCATION & ELEVATION OF EX. AC WATER PIPES PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS, DISCREPANCIES OR OMISSIONS.
 - CONTRACTOR MUST CONFIRM LOCATION & ELEVATION OF EX. STORM SEWER, SANITARY SEWER, HYDRO LINES, GAS MAINS & COMMUNICATION LINES AT CROSSINGS w/ NEW WATER PIPES PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS, DISCREPANCIES OR OMISSIONS.
 - BORE PITS TO BE COORDINATED WITH PROPOSED MANHOLE LOCATIONS. DRILLING FLUID MUST BE CONTAINED AND REMOVED FROM SITE AND MAY NOT BE DISCHARGED INTO SEWER.



Public Works and Government Services Canada / Travaux publics et Services gouvernementaux Canada

REAL PROPERTY SERVICES
Pacific Region
SERVICES IMMOBILIERS
Région de Pacifique

PROFESSIONAL ENGINEER
G.A. R. M. R. LAM
21745
2021-11-25
Engineers & Geoscientists BC Permit #1000000

WSP CANADA INC.

Revision/Client	Description/Description	Date/Date
7	RE-ISSUED FOR TENDER	21/11/23
6	ISSUED FOR TENDER	21/05/21
5	RE-ISSUED FOR REVIEW	21/03/05
4	ISSUED FOR TENDER	19/02/06
3	100% DESIGN SUBMISSION	18/12/07
2	99% DESIGN SUBMISSION	18/08/31
1	66% DESIGN REVIEW	18/06/21
0	30% DESIGN REVIEW	17/11/17

CORRECTIONAL SERVICES OF CANADA

8751 STAVE LAKE ST.
MISSION, B.C.

Project title/Titre du projet
8751 STAVE LAKE ST.
MISSION, B.C.

MISSION MEDIUM INSTITUTION WATERMAIN REPLACEMENT

Consultant Signature Only

Designed by/Concept par
G.R.

Drawn by/Dessiné par
B.D.

PWOSC Project Manager/Administrateur de Projets TPSGC
TONY TANG

Regional Manager, Architectural and Engineering Services
Gestionnaire régionale, Services d'architectural et de génie, TPSGC

Drawing title/Titre du dessin
WATERMAIN FIRE & DOMESTIC

SCALE 1:500

Project No./No. du projet
R.089147.001

Sheet/Fauille
C-07

Revision no./Révision no.
7

OF 10

LEGAL DESCRIPTION
LOT 13, SECTIONS 27, 33 & 34, TOWNSHIP 17, N.W.D., PLAN NWP 64228



Engineers & Geoscientists BC Permit #1000200



Revision/	Description/Description	Date/Date
7	RE-ISSUED FOR TENDER	21/11/23
6	ISSUED FOR TENDER	21/05/21
5	RE-ISSUED FOR REVIEW	21/03/05
4	ISSUED FOR TENDER	19/02/06
3	100% DESIGN SUBMISSION	18/12/07
2	99% DESIGN SUBMISSION	18/08/31
1	66% DESIGN REVIEW	18/06/21
0	30% DESIGN REVIEW	17/11/17

CORRECTIONAL SERVICES OF CANADA

8751 STAVE LAKE ST.
MISSION, B.C.

Project Title/Titre du projet
8751 STAVE LAKE ST.
MISSION, B.C.

MISSION MEDIUM INSTITUTION WATERMAIN REPLACEMENT

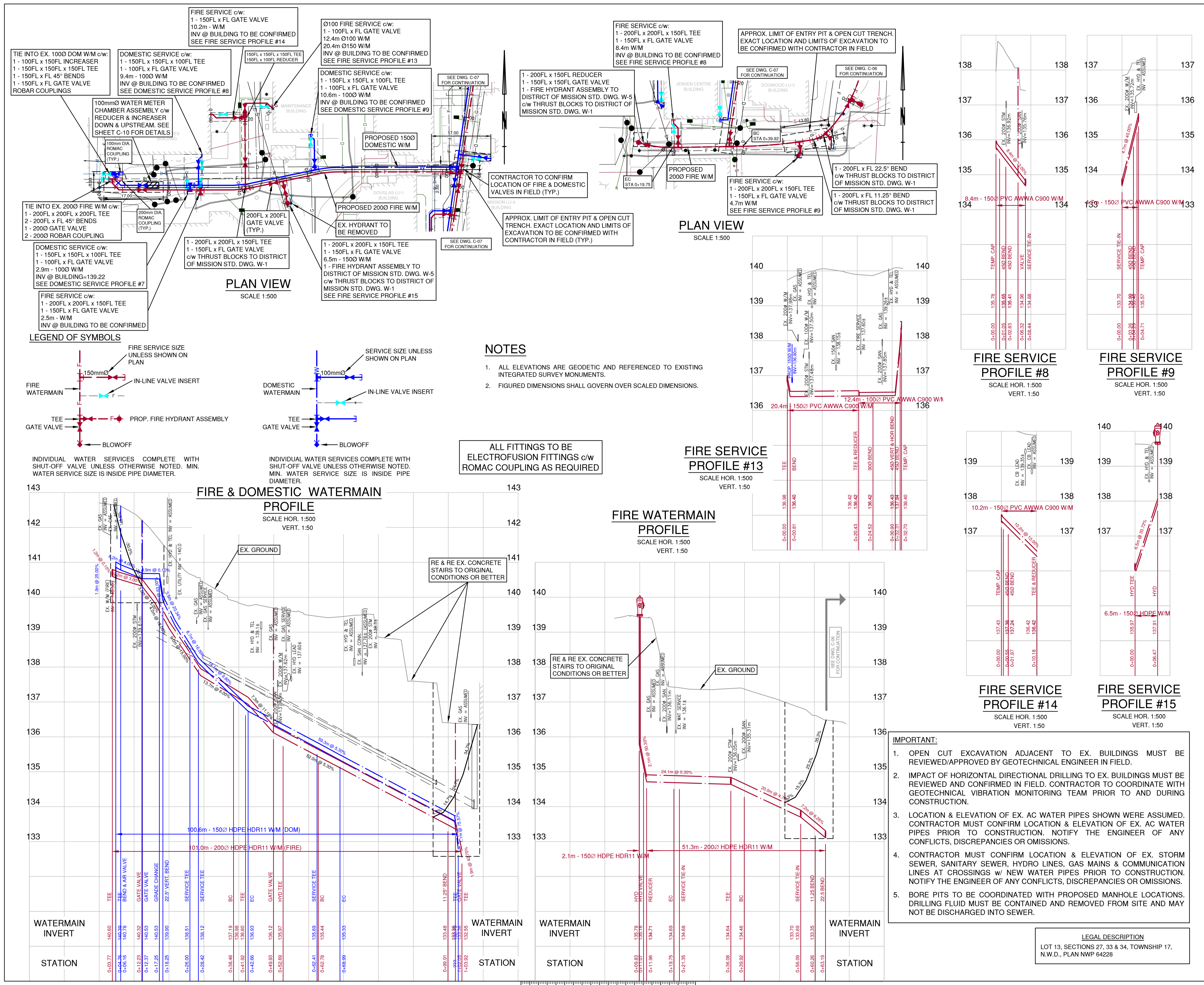
Consultant Signature Only
Designed by/Concept par
G.R.
Drawn by/Dessiné par
B.D.
PWGSC Project Manager/Administrateur de Projets TPSGC
TONY TANG
Regional Manager, Architectural and Engineering Services
Gestionnaire régionale, Services d'architecture et de génie, TPSGC

Drawing Title/Titre du dessin
WATERMAIN FIRE & DOMESTIC

SCALE 1:500

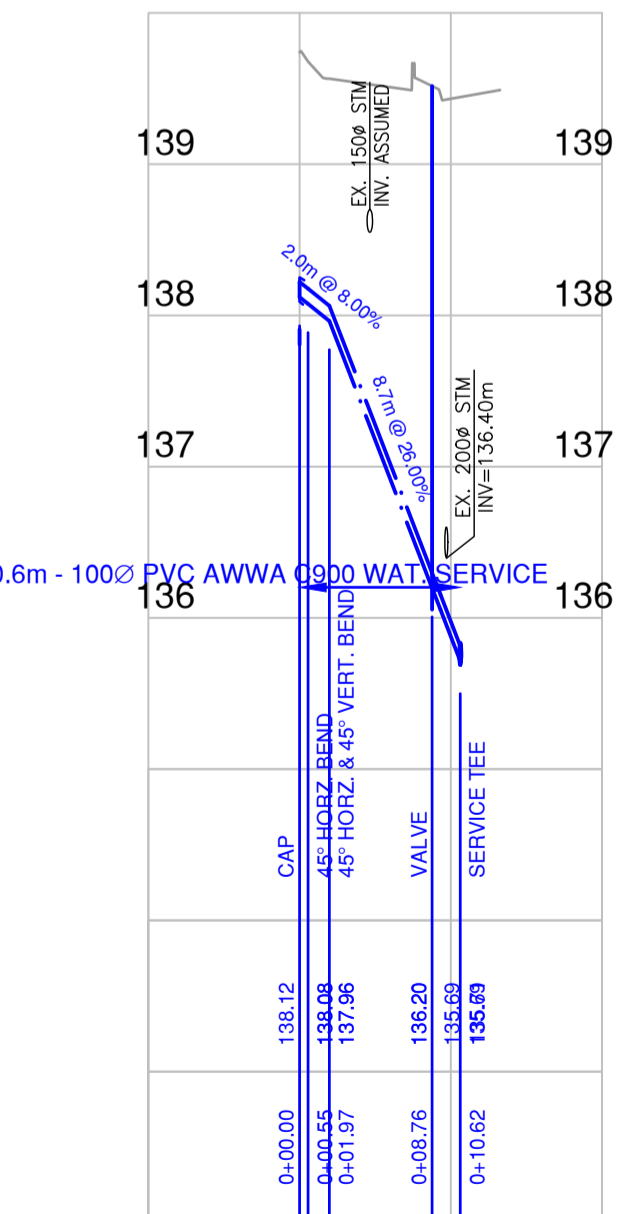
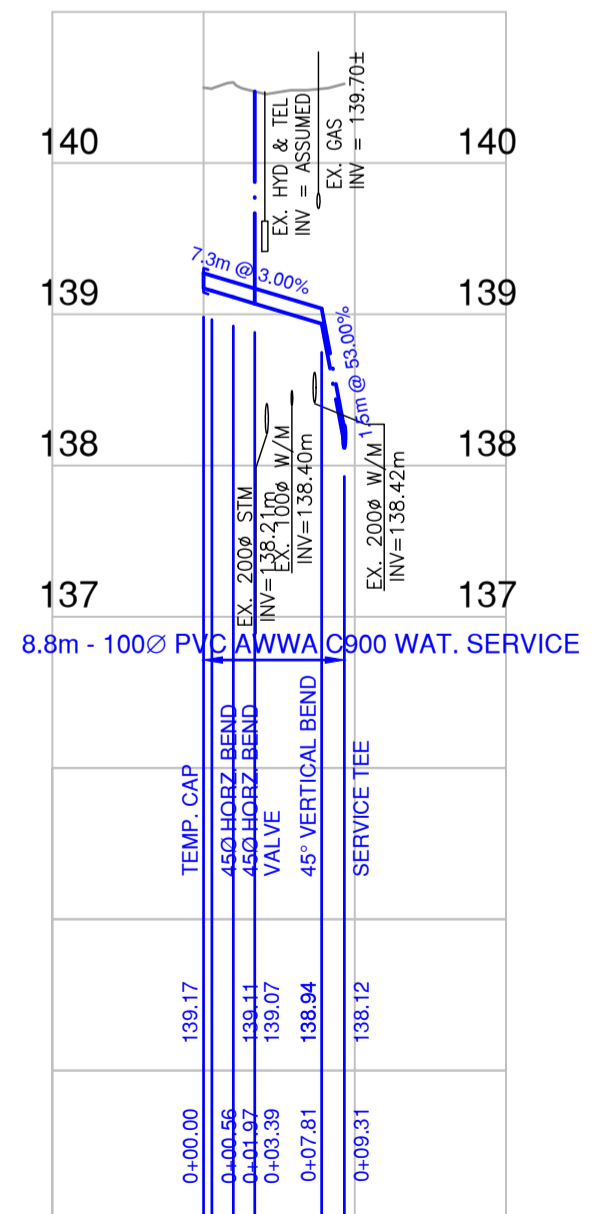
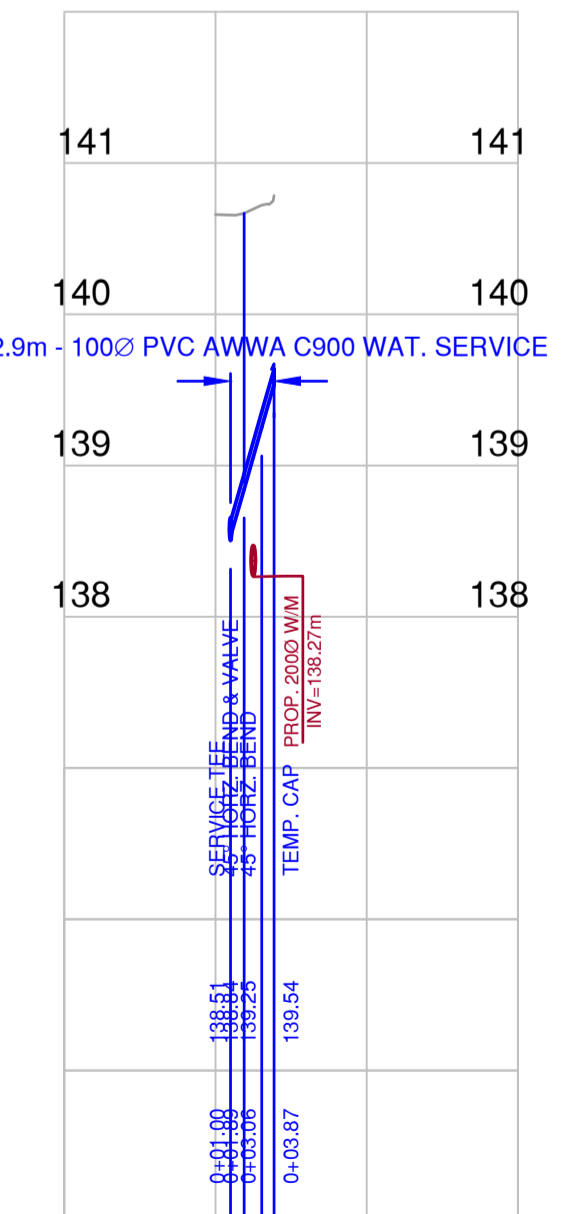
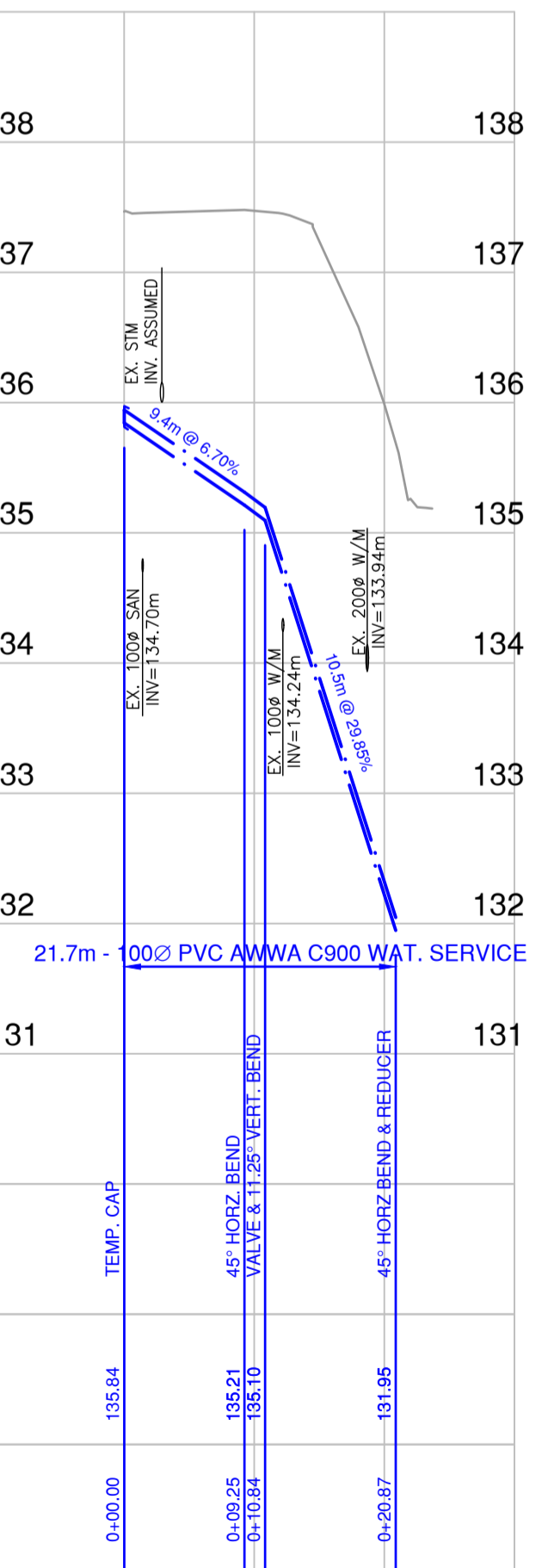
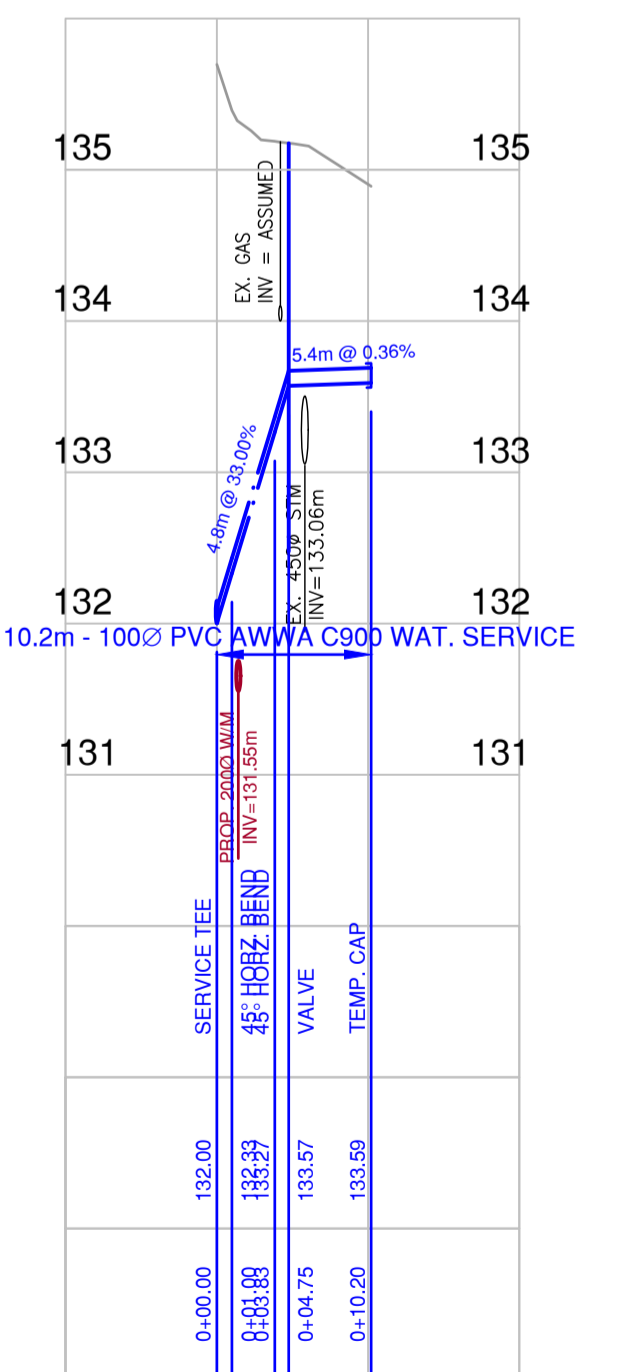
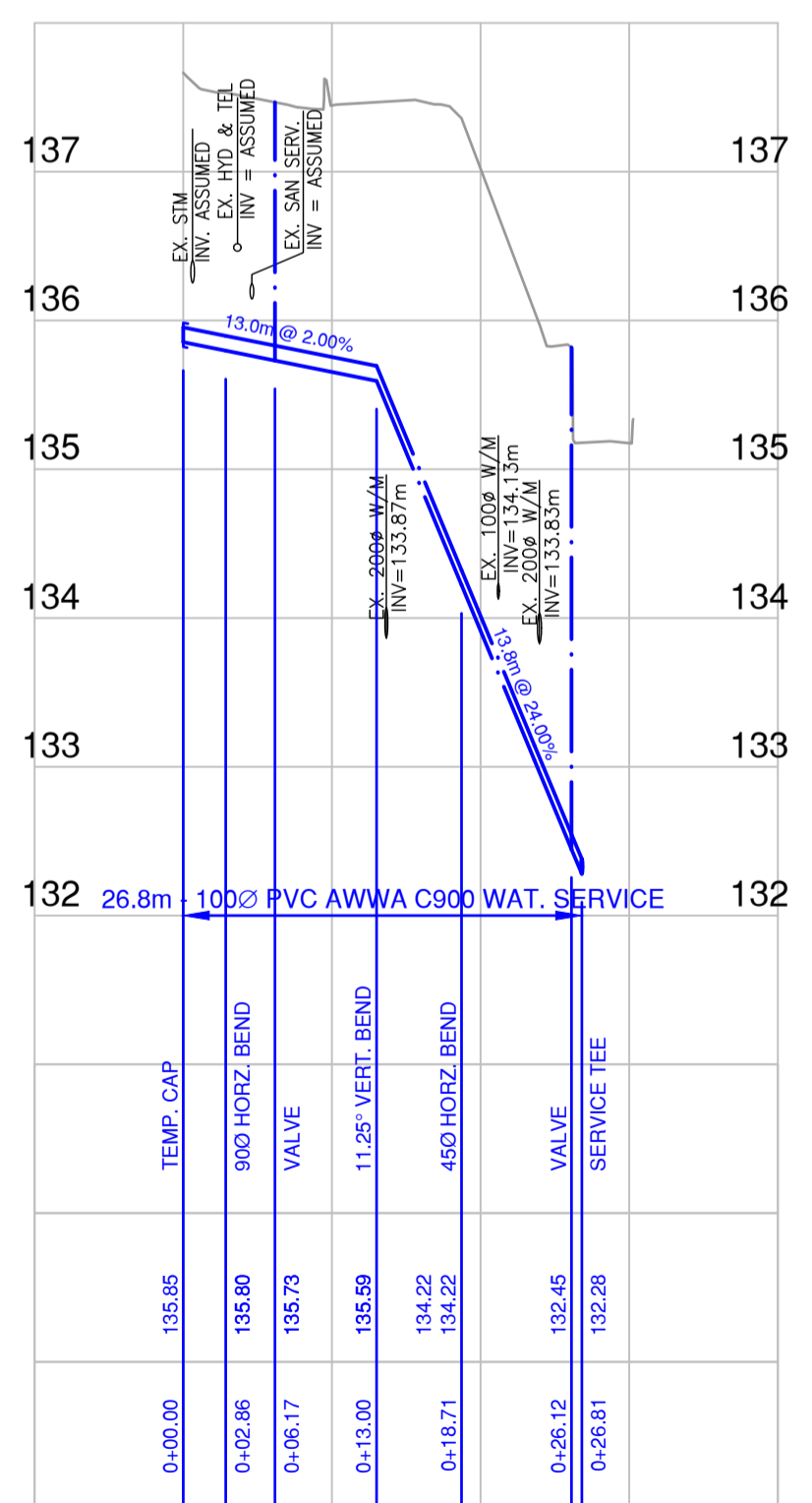
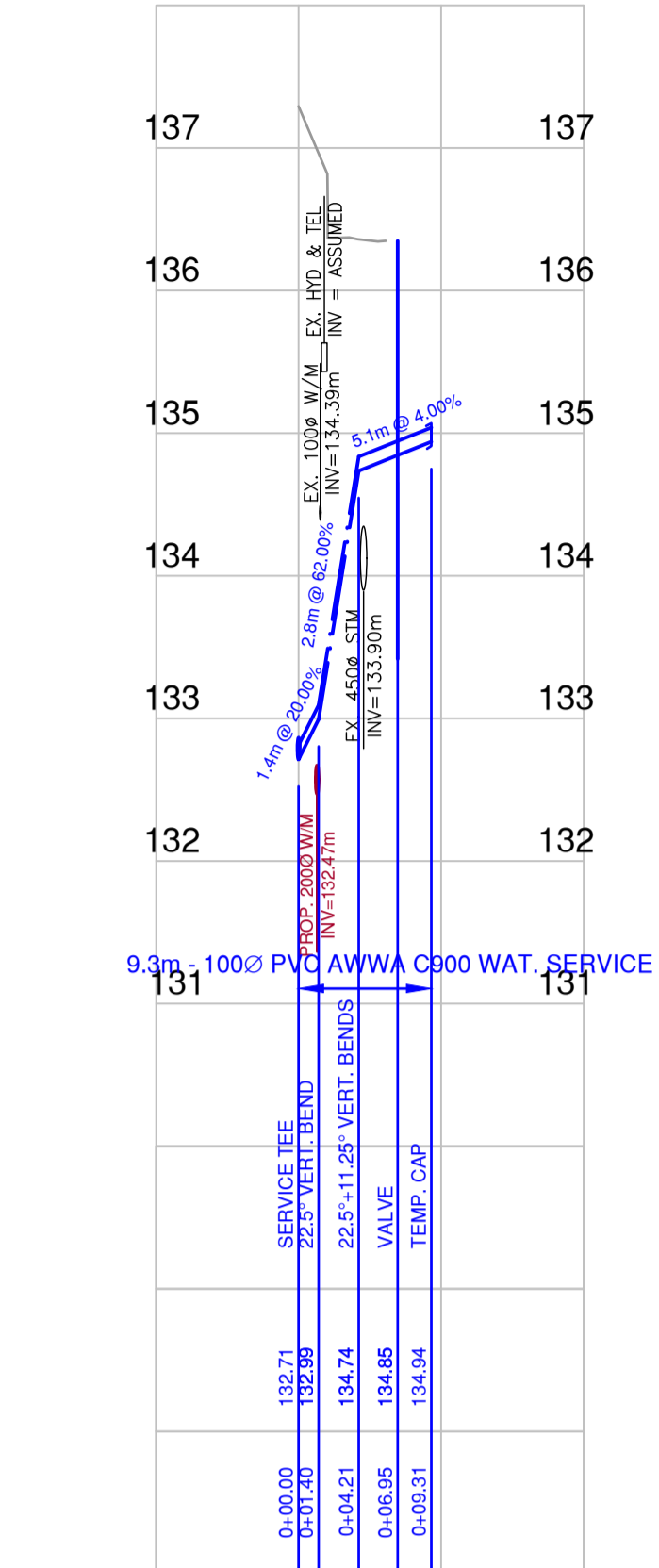
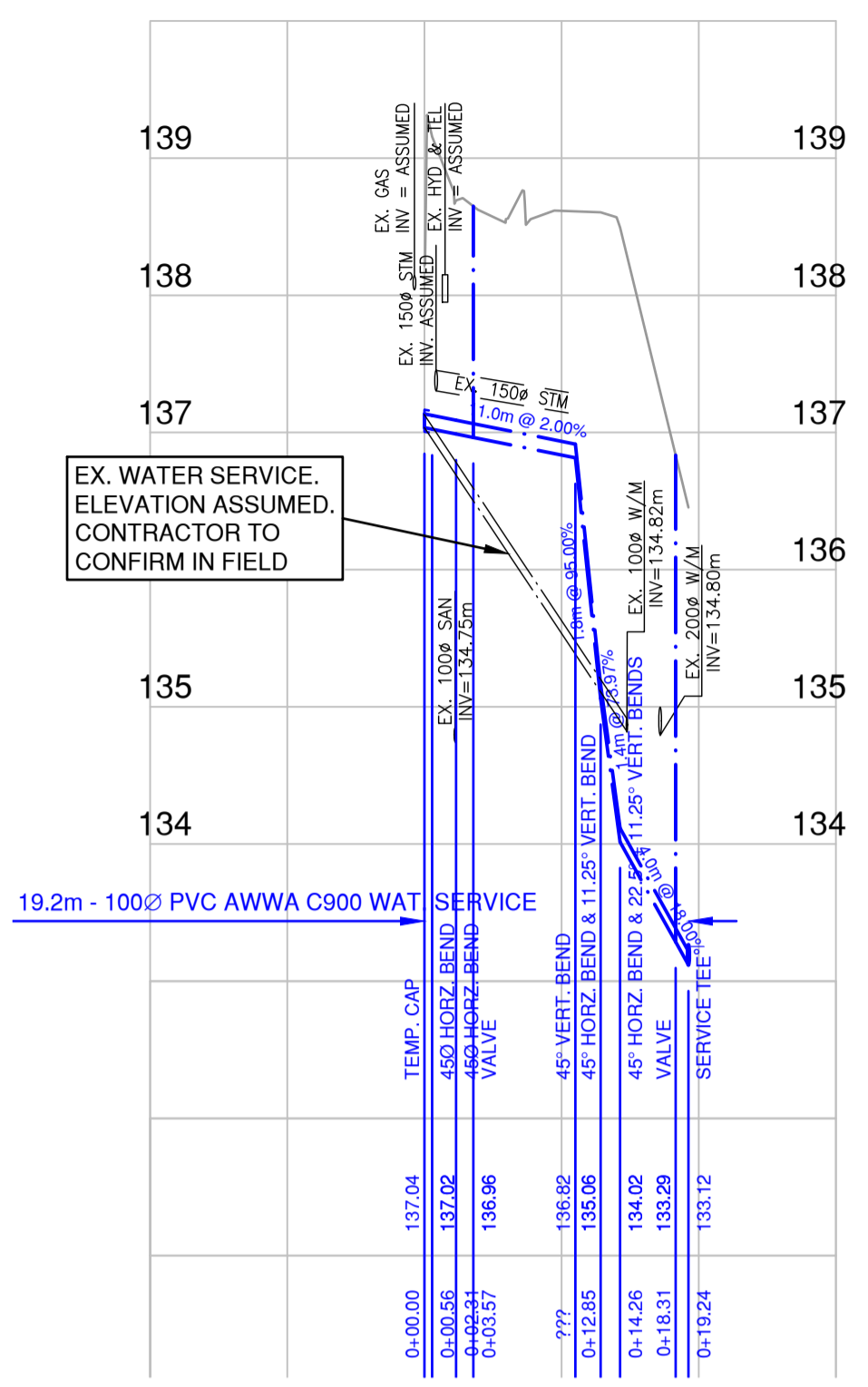
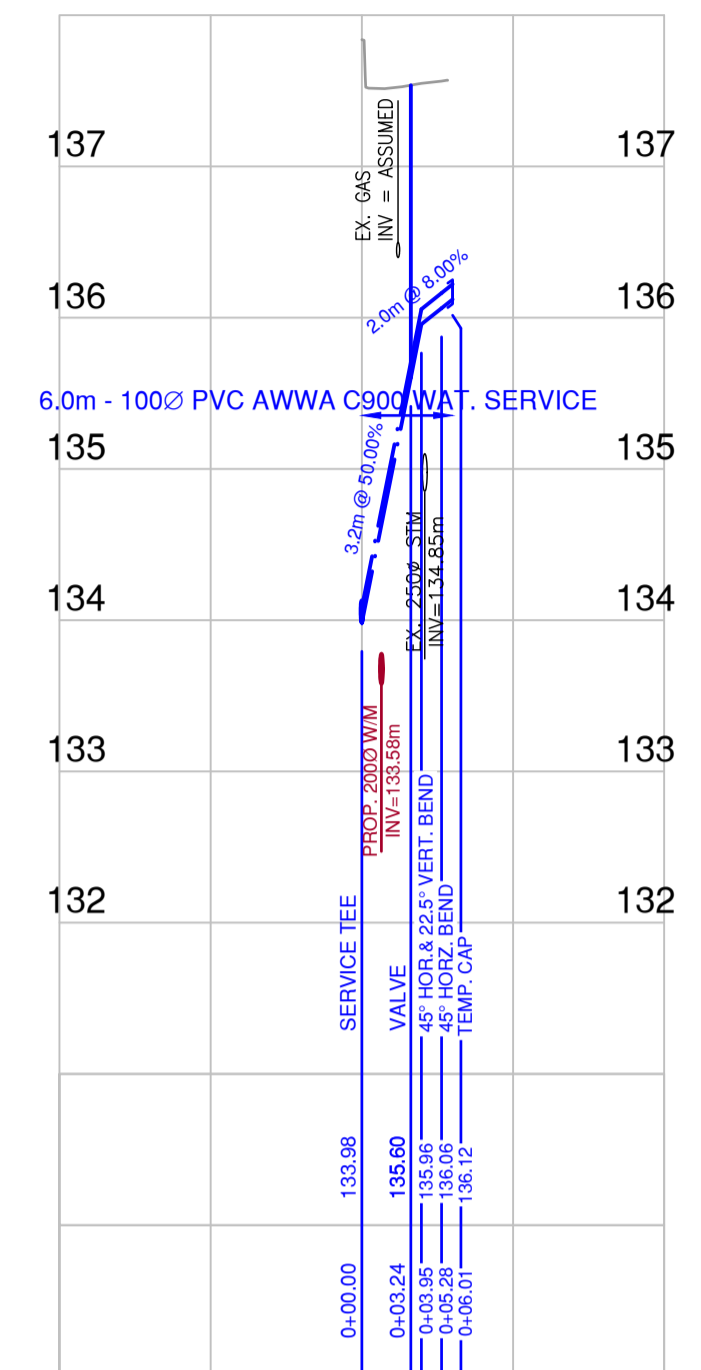
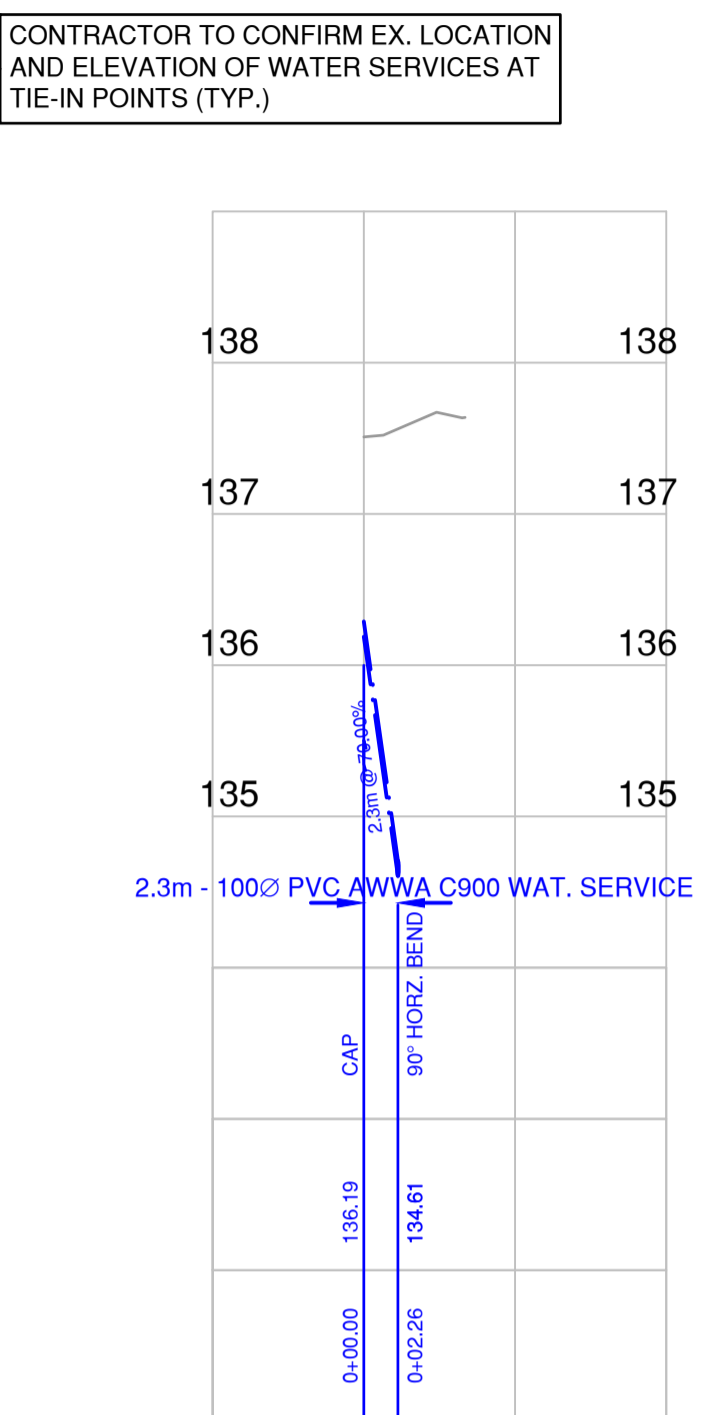
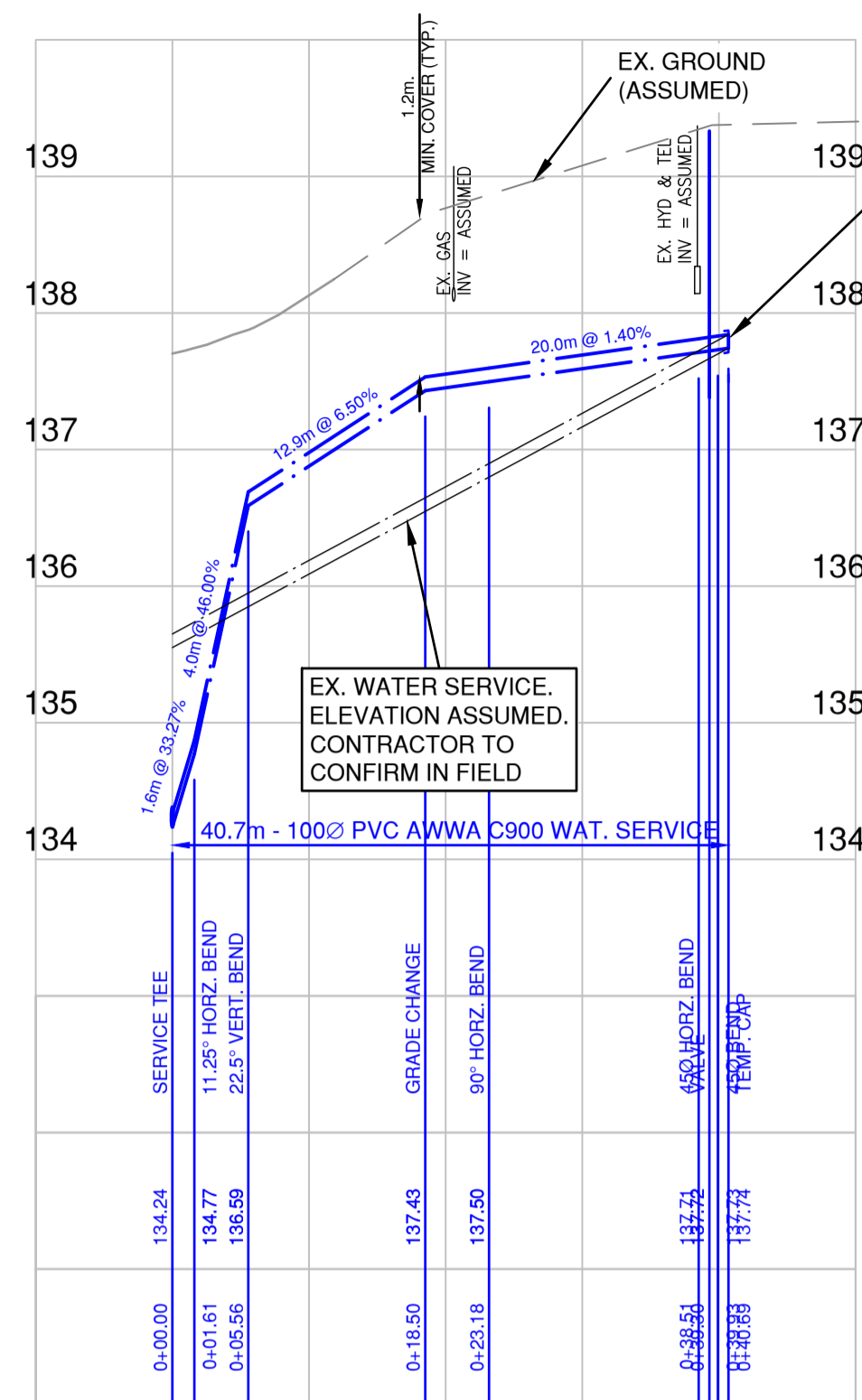
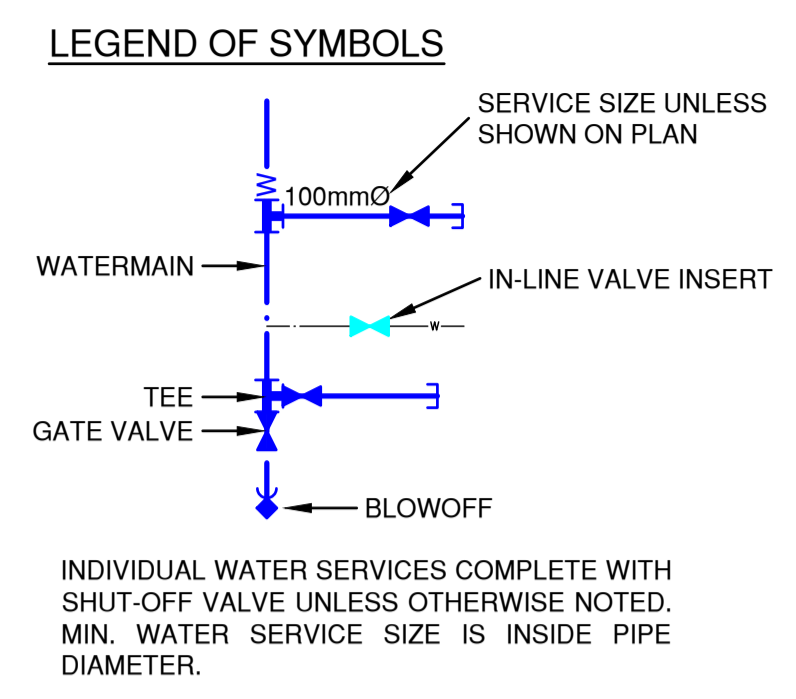
Project No./No. du projet R.089147.001	Sheet/Fauille C-08	Revision no./Révision no. 7
--	------------------------------	---------------------------------------

OF 10





Engineers & Geoscientists BC Permit #100020



- IMPORTANT:**
- OPEN CUT EXCAVATION ADJACENT TO EX. BUILDINGS MUST BE REVIEWED/APPROVED BY GEOTECHNICAL ENGINEER IN FIELD.
 - IMPACT OF HORIZONTAL DIRECTIONAL DRILLING TO EX. BUILDINGS MUST BE REVIEWED AND CONFIRMED IN FIELD. CONTRACTOR TO COORDINATE WITH GEOTECHNICAL VIBRATION MONITORING TEAM PRIOR TO AND DURING CONSTRUCTION.
 - LOCATION & ELEVATION OF EX. AC WATER PIPES SHOWN WERE ASSUMED. CONTRACTOR MUST CONFIRM LOCATION & ELEVATION OF EX. AC WATER PIPES PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS, DISCREPANCIES OR OMISSIONS.
 - CONTRACTOR MUST CONFIRM LOCATION & ELEVATION OF EX. STORM SEWER, SANITARY SEWER, HYDRO LINES, GAS MAINS & COMMUNICATION LINES AT CROSSINGS w/ NEW WATER PIPES PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS, DISCREPANCIES OR OMISSIONS.
 - BORE PITS TO BE COORDINATED WITH PROPOSED MANHOLE LOCATIONS. DRILLING FLUID MUST BE CONTAINED AND REMOVED FROM SITE AND MAY NOT BE DISCHARGED INTO SEWER.

- NOTES**
- ALL ELEVATIONS ARE GEODETIC AND REFERENCED TO EXISTING INTEGRATED SURVEY MONUMENTS.
 - FIGURED DIMENSIONS SHALL GOVERN OVER SCALED DIMENSIONS.

LEGAL DESCRIPTION
LOT 13, SECTIONS 27, 33 & 34, TOWNSHIP 17, N.W.D., PLAN NWP 64228

Revision/Revision	Description/Description	Date/Date
7	RE-ISSUED FOR TENDER	21/11/23
6	ISSUED FOR TENDER	21/05/21
5	RE-ISSUED FOR REVIEW	21/03/05
4	ISSUED FOR TENDER	19/02/06
3	100% DESIGN SUBMISSION	18/12/07
2	99% DESIGN SUBMISSION	18/08/31
1	66% DESIGN REVIEW	18/06/21
0	30% DESIGN REVIEW	17/11/17

Client/client
CORRECTIONAL SERVICES OF CANADA

8751 STAVE LAKE ST.
MISSION, B.C.

Project title/Titre du projet
8751 STAVE LAKE ST.
MISSION, B.C.

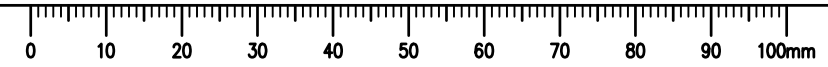
MISSION MEDIUM INSTITUTION WATERMAIN REPLACEMENT

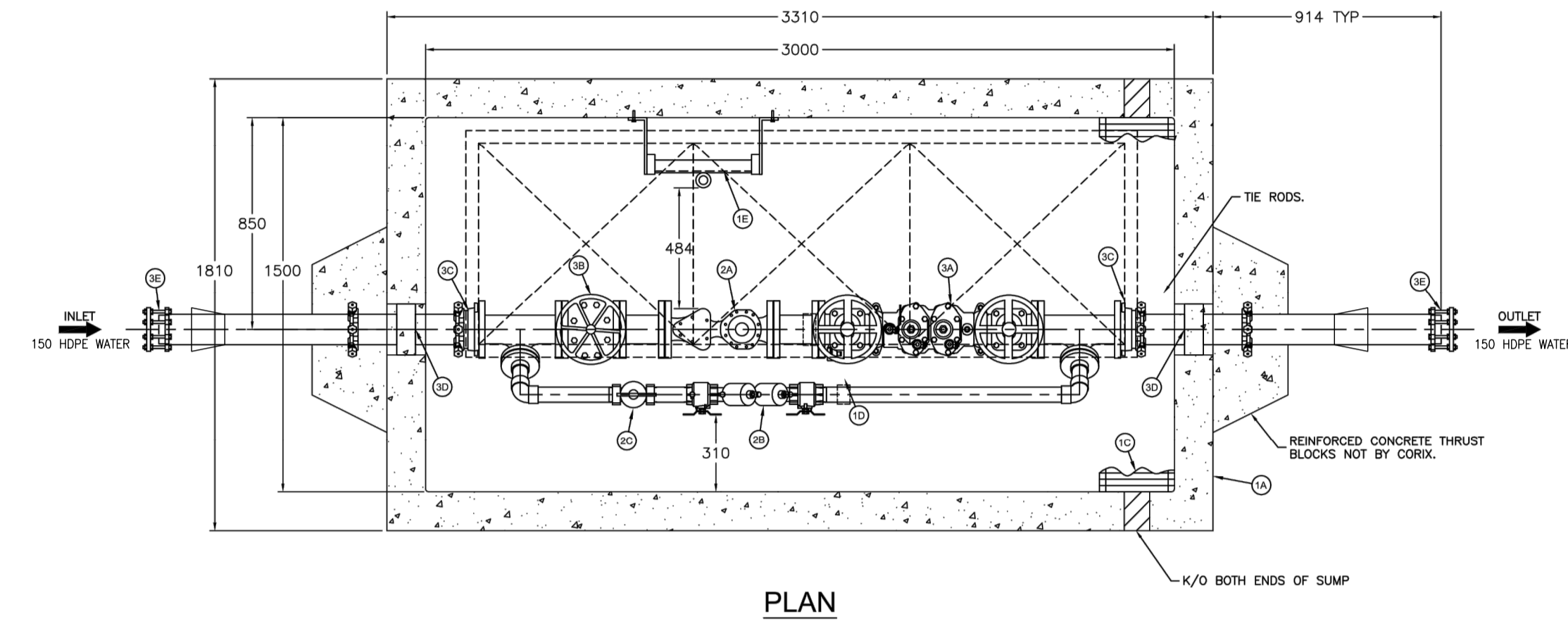
Consultant Signature Only

Designed by/Concept par
G.R.
Drawn by/Dessiné par
B.D.
PWGSC Project Manager/Administrateur de Projets TPSPG
TONY TANG
Regional Manager, Architectural and Engineering Services
Gestionnaire régionale, Services d'architectural et de génie, TPSPG

Drawing title/Titre du dessin
WATERMAIN DOMESTIC

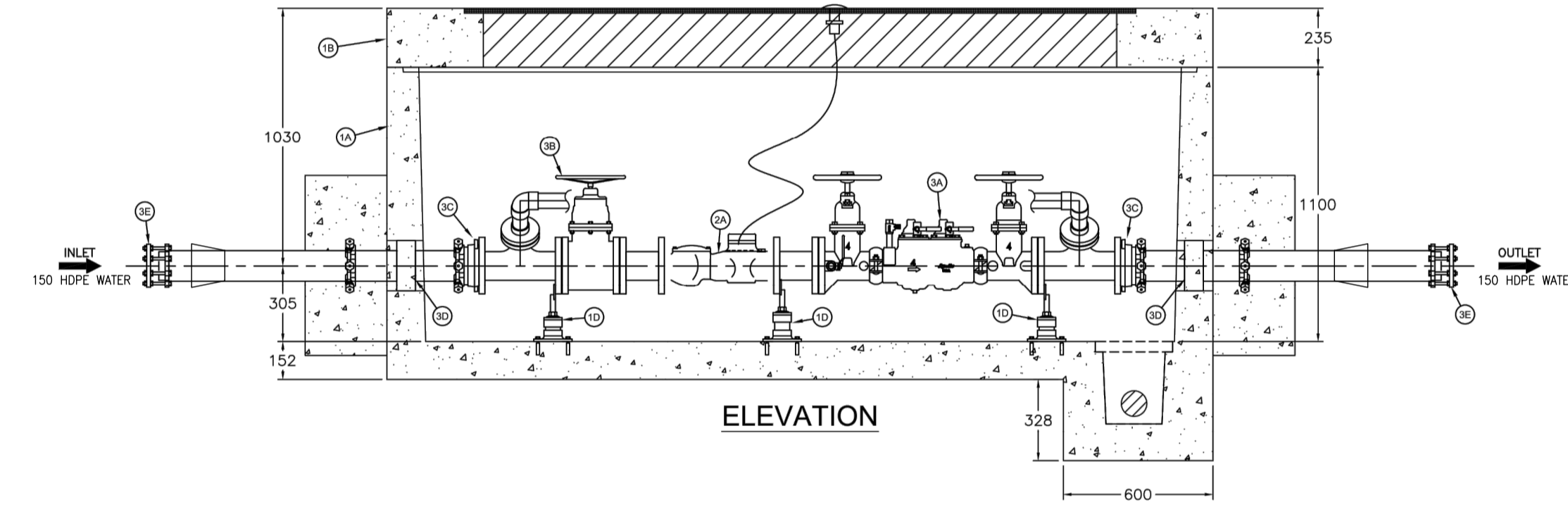
SCALE 1:500
Project No./No. du projet: R.089147.001
Sheet/Fauille: C-09
Revision no./La Révision no.: 7
OF 10



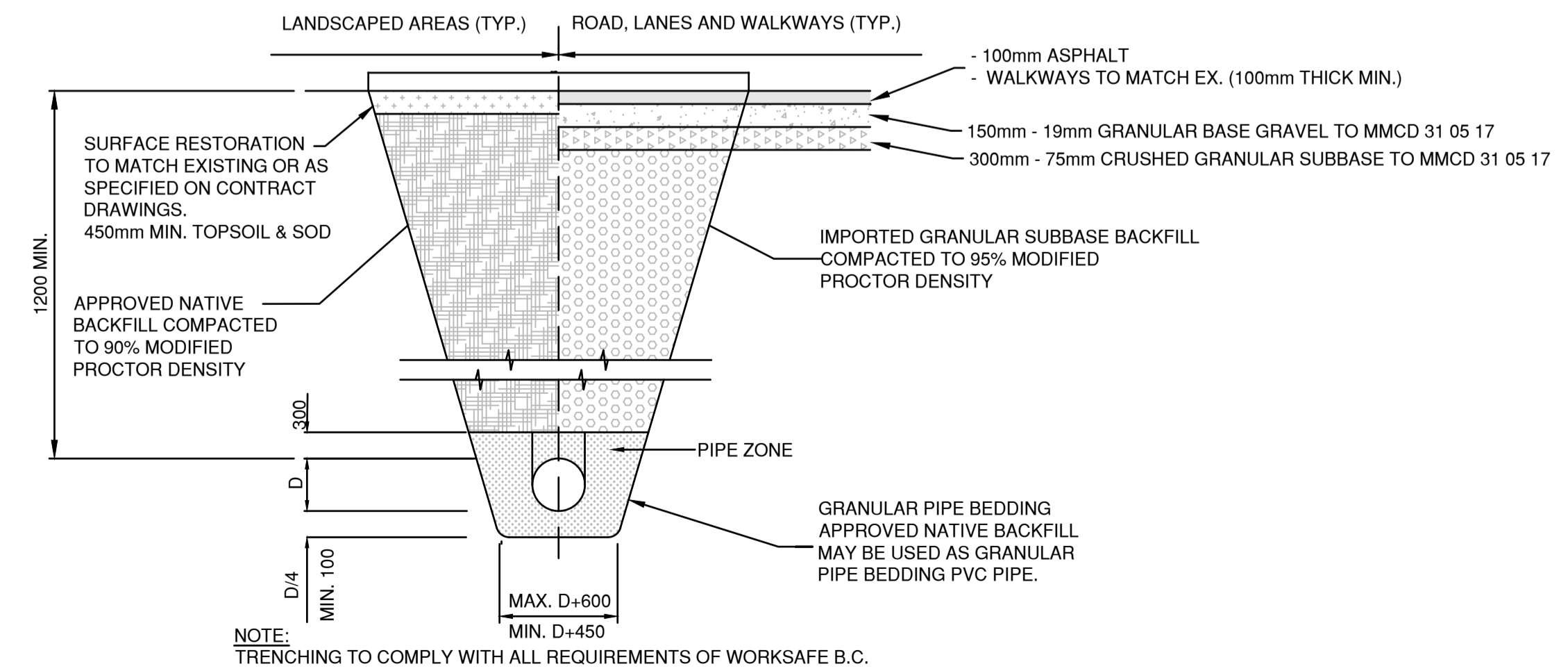


ITEM	QTY	DESCRIPTION
1A	1	LCG 3151 PRECAST CONCRETE CHAMBER
1B	1	LCG 3 DOOR GALVANIZED LID CAST INTO 3151 ROOF SLAB C/W 45# HOLE FOR TR/PL & PARALOCK RECESS
1C	1	ALUMINUM SUMP GRATING ACROSS WIDTH OF CHAMBER
1D	4	ADJUSTABLE GALVANIZED PIPE STAND (VARIOUS STYLES)
1E	1	ALUMINUM LADDER C/W RETRACTABLE SAFETY POST (SHIPPED LOOSE)
2A	1	100# SENSUS C ² WATER METER (M ³ MEASUREMENT)
2B	1	50# APOLLO 4A-10B-14 DCVA
2C	1	50# BRASS CURB STOP C/W LOCKING LEVER
3A	1	100# APOLLO 45G-10A-02 DCVA
3B	1	100# MUELLER GATE VALVE
3C	2	100# EBMA 2104 MEGAFLANGE RESTRAINED ADAPTER
3D	2	LINK SEAL ASSEMBLY FOR 100# DI PIPE
3E	2	ELECTROFUSION FITTINGS c/w ROMAC COUPLING AS REQUIRED
3F	2	100# EBMA 1104 MID-SPAN RESTRAINT

NOTES:
FABRICATED PIPE & FITTINGS 75# & UP TO BE PC 350 DUCTILE IRON. ALL 50# & SMALLER TO BE SCH. 40 RED BRASS (ASTM B43). FLANGES ARE ANSI 125/150. FASTENERS ARE 18.8 STAINLESS STEEL.



WATER METER CHAMBER DETAIL
N.T.S.



TRENCH DETAIL
N.T.S.

- NOTES
- ALL ELEVATIONS ARE GEODETIC AND REFERENCED TO EXISTING INTEGRATED SURVEY MONUMENTS.
 - FIGURED DIMENSIONS SHALL GOVERN OVER SCALED DIMENSIONS.

LEGAL DESCRIPTION
LOT 13, SECTIONS 27, 33 & 34, TOWNSHIP 17, N.W.D., PLAN NWP 64228



Revision/	Description/	Date/
7	RE-ISSUED FOR TENDER	21/11/23
6	ISSUED FOR TENDER	21/05/21
5	RE-ISSUED FOR REVIEW	21/03/05
4	ISSUED FOR TENDER	19/02/06
3	100% DESIGN SUBMISSION	18/12/07
2	99% DESIGN SUBMISSION	18/08/31
1	66% DESIGN REVIEW	18/06/21
0	30% DESIGN REVIEW	17/11/17

CORRECTIONAL SERVICES OF CANADA

8751 STAVE LAKE ST.
MISSION, B.C.

Project title/Titre du projet
8751 STAVE LAKE ST.
MISSION, B.C.

MISSION MEDIUM INSTITUTION WATERMAIN REPLACEMENT

Consultant Signature Only
Designed by/Concept par G.R.
Drawn by/Dessiné par B.D.
PWGSC Project Manager/Administrateur de Projets TPSGC TONY TANG
Regional Manager, Architectural and Engineering Services / Gestionnaire régionale, Services d'architecture et de génie, TPSGC

Drawing title/Titre du dessin
WATERMAIN DETAILS

SCALE 1:500

Project No./No. du projet R.089147.001	Sheet/Fauille C-10 OF 10	Revision no./La Révision no. 7
---	--------------------------------	-----------------------------------