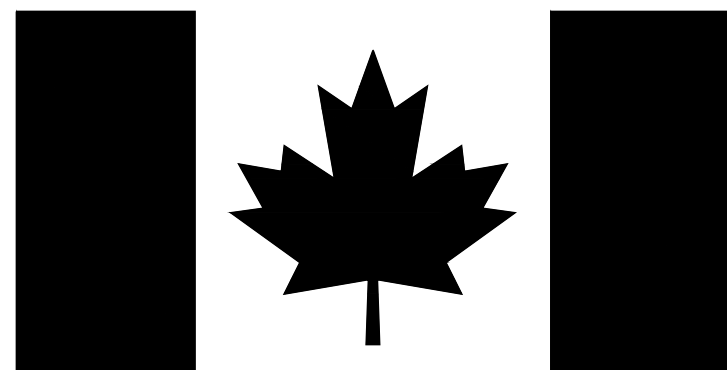
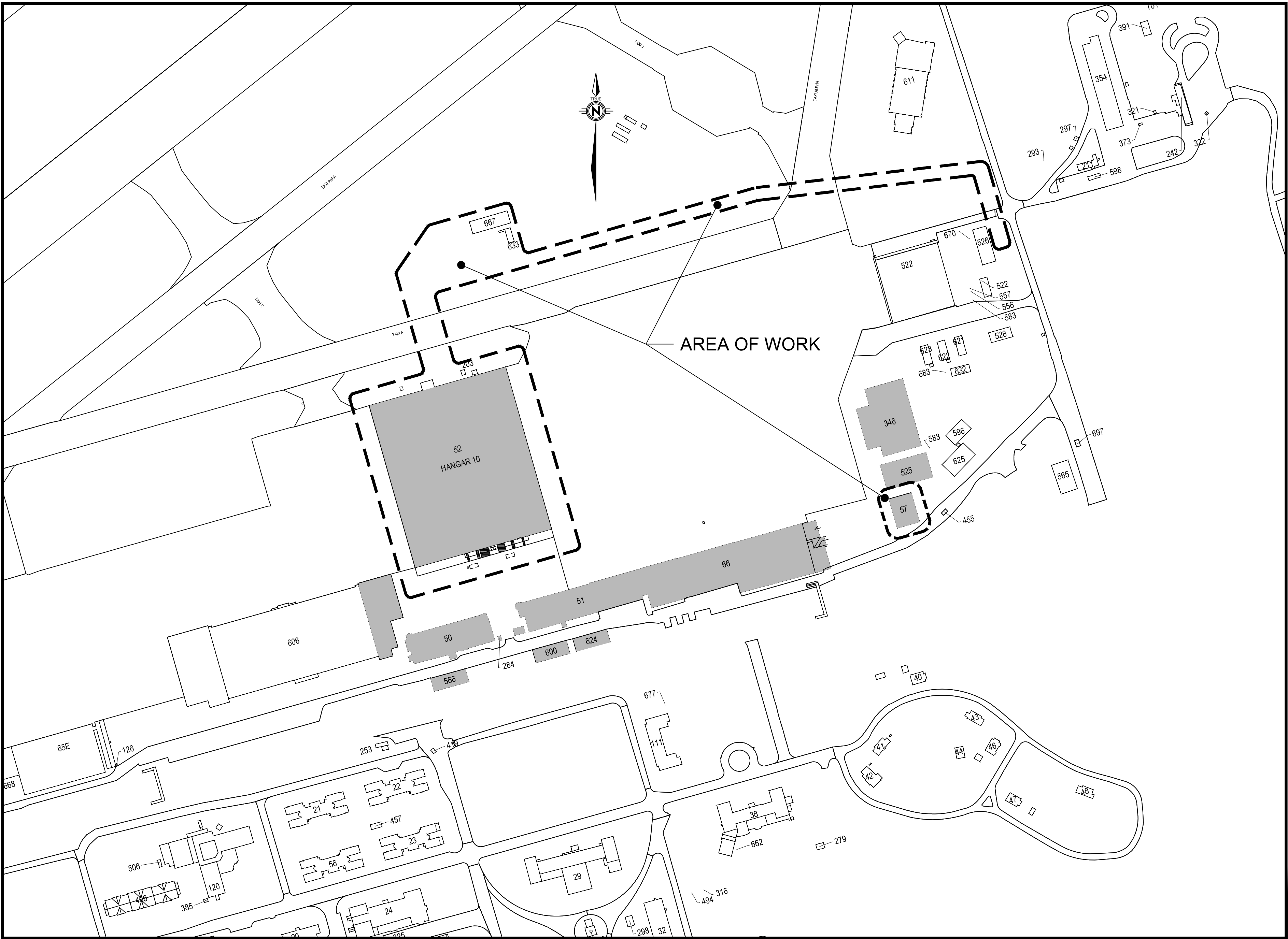




National
Defence

Défense
nationale



TRE-UPG B052 (HGR 10)
FIRE PUMPHOUSE
ISSUED FOR TENDER

8 WING CFB TRENTON, ONTARIO

SET NO. - SÉRIE NO.

LIST OF DRAWINGS

STRUCTURAL

- 200 - GENERAL NOTES
- 201 - RESERVOIR PLAN VIEW
- 202 - SUMP PIT PLAN
- 203 - SLAB REINFORCEMENT PLAN
- 206 - BUILDING SECTIONS
- 209 - DETAILS
- 210 - DETAILS CONT.

ARCHITECTURAL

- 301 - PRE-ENGINEERED BUILDING PLAN
- 302 - ELEVATIONS

MECHANICAL

- 401 - LEGENDS, SCHEDULES AND DRAWING LIST
- 402 - FIRE PROTECTION PLANS
- 403 - SPRINKLER, DOMESTIC WATER & SANITARY PLANS
- 404 - (NOT USED)
- 405 - HANGAR 10 WATER MAIN TIE-IN
- 406 - HANGAR 10 EXISTING WATER MAIN VALVE OFF
- 407 - FIRE PROTECTION SYSTEM SCHEMATICS AND DETAILS

ELECTRICAL

- 501 - ELECTRICAL LEGENDS & DRAWING LIST
- 502 - ELECTRICAL SITE PLAN & DETAILS
- 503 - ELECTRICAL PUMPHOUSE LAYOUT - POWER LAYOUT
- 504 - ELECTRICAL PUMPHOUSE LAYOUT - LIGHTING LAYOUT
- 505 - ELECTRICAL PUMPHOUSE FIRE ALARM LAYOUT

CIVIL

- 601 - SITE PLAN
- 602 - PROFILE AND DETAILS
- 603 - COMMUNICATION NEW WORK

COMMUNICATION

- 701 - COMMUNICATIONS DETAILS
- 702 - SITE PLAN - COMMUNICATIONS - NEW WORK

WBS NO. - NO. OTP

N.002108.03

PROJECT NO. - PROJET NO.

L-T81-3006/68

PF NO. - NO. DP

500006750

GENERAL STRUCTURAL NOTES

- STRUCTURAL DESIGN IS IN ACCORDANCE WITH 2020 NATIONAL BUILDING CODE OF CANADA (NBCC), PART 4 (STRUCTURAL DESIGN).
- THIS IS A METRIC PROJECT. UNLESS OTHERWISE NOTED, ALL LENGTHS ARE IN MILLIMETERS.
- REVIEW STRUCTURAL DRAWINGS IN CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS. REPORT DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.
- VERIFY EXISTING DIMENSIONS AND CONDITIONS ON SITE PRIOR TO CONSTRUCTION.
- THE REVISION COLUMN INDICATES THE INTENDED USE OF THESE DRAWINGS. DO NOT CONSTRUCT FROM THESE DRAWINGS UNLESS MARKED 'ISSUED FOR CONSTRUCTION'.
- DO NOT USE INFORMATION ON THESE DRAWINGS FOR ANY OTHER PROJECTS.
- DO NOT SCALE THESE DRAWINGS.
- FOLLOW TYPICAL DETAILS SHOWN ON DRAWINGS, UNLESS OTHERWISE NOTED. TYPICAL DETAILS SHOW STRUCTURAL INTENT RATHER THAN ACTUAL PROJECT CONDITIONS. (NOTE THAT TYPICAL DETAILS ARE NOT ALWAYS REFERENCED ON PLAN.)
- SECTIONS, DETAILS, AND STATEMENTS NOTED AS "TYPICAL" SHALL CONVEY THAT CONDITIONS ARE LIKE OR SIMILAR IN THE STRUCTURE.
- PROVIDE REASONABLE NOTICE (NOT LESS THAN 24 HOURS) PRIOR TO CONCEALING ANY WORK THAT REQUIRES INSPECTION, REVIEW, OR TESTING. SCHEDULE THIS WORK TO OCCUR DURING NORMAL BUSINESS HOURS.
- PERIODIC FIELD REVIEW OF A REPRESENTATIVE SAMPLE OF THE STRUCTURAL WORK DESIGNED BY JP2G WILL BE UNDERTAKEN TO AS CERTAIN GENERAL CONFORMANCE WITH THE STRUCTURAL DRAWINGS AND SPECIFICATIONS. THESE REVIEWS DO NOT REPLACE THE CONTRACTOR'S RESPONSIBILITY FOR QUALITY CONTROL AND QUALITY ASSURANCE.
- FOR ALL REINSTATED ROOFING, MATCH EXISTING COLOR, STYLE, AND TEXTURE. CONTRACTOR TO PROVIDE CLIENT WITH SAMPLES FOR REVIEW AND APPROVAL.

TEMPORARY SHORING

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW DRAWINGS, CONTRACT DOCUMENTS, AND SITE CONDITIONS TO DETERMINE TEMPORARY SHORING REQUIREMENTS PRIOR TO START OF WORK.
- CONTRACTOR TO ASSUME ALL COSTS ASSOCIATED WITH TEMPORARY SHORING: DESIGN TO BE DESIGNED BY OTHERS, WHERE APPLICABLE), PERMITTING / APPROVALS, AND EXECUTION
- ALL TEMPORARY WORKS SHALL BE DESIGNED AND REVIEWED BY A PROFESSIONAL ENGINEER RETAINED BY THE CONTRACTOR, LICENSED IN ONTARIO
- THESE DRAWINGS SHOW THE COMPLETED STRUCTURE ONLY. TEMPORARY WORKS AND AREAS OF ADJACENT STRUCTURE WHICH MAY REQUIRE SHORING, FOR WHICH THE CONTRACTOR IS RESPONSIBLE AND WHICH MAY BE REQUIRED FOR EXECUTION OF THE PROJECT MAY NOT BE INDICATED ON DRAWINGS.
- CONSTRUCTION LOADS ON THE PERMANENT STRUCTURE SHALL NOT EXCEED DESIGN LOADS ON DRAWINGS.
- TEMPORARY SHORING MUST KEEP ALL PARTS OF THE STRUCTURE DESIGNATED TO REMAIN STRUCTURALLY STABLE (PLUMB, LEVEL, ALIGNED WHERE APPLICABLE) DURING CONSTRUCTION

WATERPROOFING INTERIOR RESERVOIR

- INTERIOR OF RESERVOIR CONCRETE TO BE 100% COATED WITH ONE OF THE FOLLOWING 3 SYSTEMS (ALL SYSTEMS TO FOLLOW MANUFACTURER INSTRUCTIONS FOR INSTALLATION INCLUDING CLEANING AND PRIMING):

HYDRALASTIC 836 BY WR MEADOWS
SIKAGUARD EWL BY SIKI
CARBOGUARD 691 BY CARBOLINE
- ALL EXTERIOR FOUNDATION WALLS TO RECEIVE BITUMINOUS DAMPROOF COATING (SEE SPECIFICATION)

DESIGN LOADS

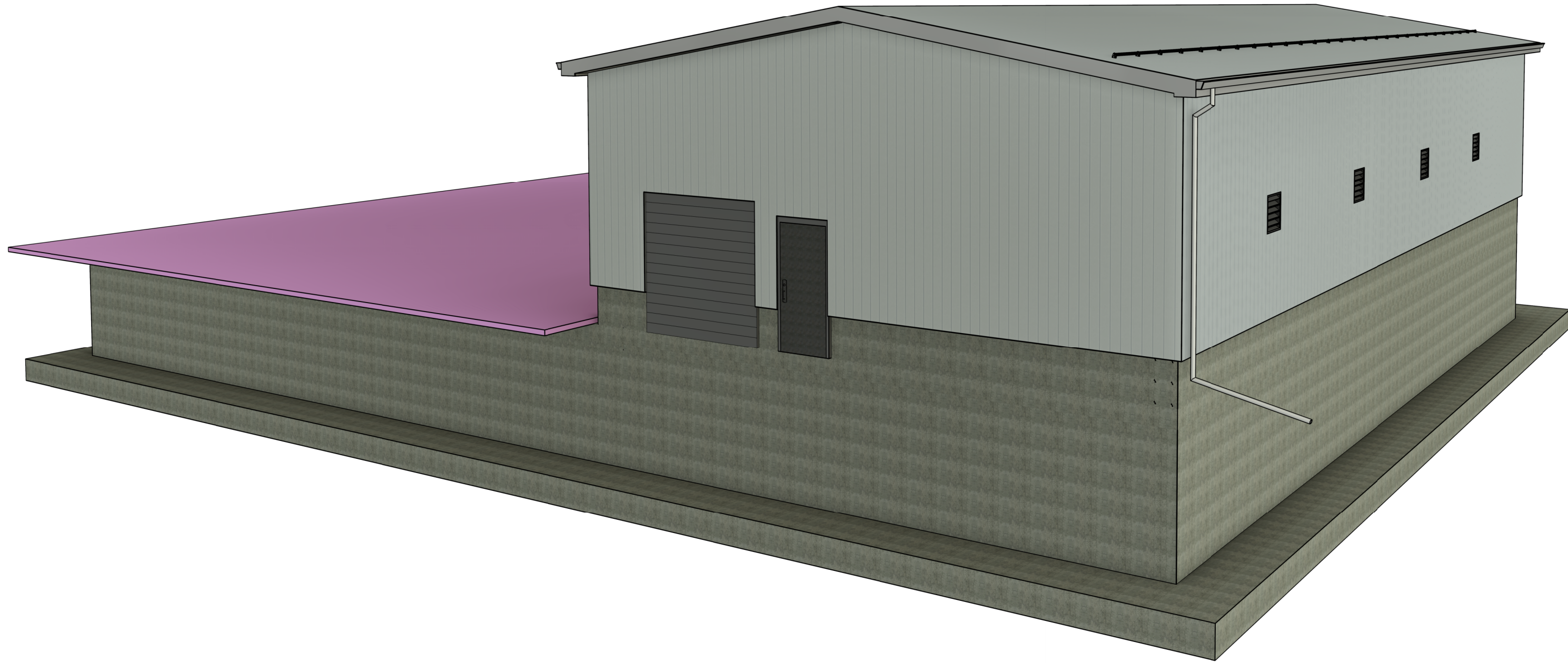
- THE VALUES FOR CLIMATIC DATA USED IN THE DETERMINATION OF DESIGN LOADS HAVE BEEN OBTAINED FROM THE 2020 NBCC FOR THE SPECIFIC LOCATION OF TRENTON, ON
- SELF WEIGHT (SWT) IS DUE TO THE WEIGHT OF THE STRUCTURE ITSELF. IT VARIES WITH THE STRUCTURAL SYSTEM.
- SUPERIMPOSED DEAD LOADS (SDL) ARE NON-STRUCTURAL DEAD LOADS DUE TO NON-STRUCTURAL TOPPINGS, FINISHES, PARTITIONS, ROOFING MATERIALS, SUSPENDED EQUIPMENT, PAVERS, SOIL, ETC.
- BUILDING IMPORTANCE CATEGORY: **NORMAL**
- DEAD LOAD (DL) IS THE SELF WEIGHT OF THE STRUCTURE PLUS THE SUPERIMPOSED DEAD LOAD.
- LIVE:
PUMPHOUSE FLOOR: 6.0 kPa
RESERVOIR ROOF: 12 kPa
- WIND:
 $w(1.5) = 1.25$ $w(SLS) = 0.75$
 $q = 0.50$ kPa (TRENTON, ONT)
 $C_e = C_{ef} = 0.9$ (OPEN TERRAIN)
 $C_t = 1.0$ (OPEN TERRAIN)
 $C_g = C_{gt} = 2.0$
INTERNAL PRESSURE CATEGORY: WIND RESISTANT OPENINGS OR THOSE LIKELY TO REMAIN CLOSED DURING STORMS ($-0.45 < C_{pi} < 0.30$)
- SNOW:
 $s(ULS) = 1.25$, $s(SLS) = 1.0$
 $S_e = 1.8$ kPa, $S_i = 0.4$ kPa
 $Y = 3.3$ kN/m³

DESIGN SNOW LOAD ON NEW ROOF (UPPER ROOF): **2.40**
- SEISMIC:
SEISMIC SITE CLASS: **CLASS C**
 $I_e = 1.5$
LOCATION: TRENTON, ON
 $S_{a(0.2)} = 0.307$, $S_{a(0.5)} = 0.203$, $S_a(1.0) = 0.112$, $S_a(2.0) = 0.054$, $S_{a(5.0)} = 0.014$, $S_{a(10.0)} = 0.005$
 $T_a = 0.1$ s
SEISMIC FORCE RESISTING SYSTEM: STEEL BRACED FRAME
BRACED FRAME $R_d = 3.0$, $R_o = 1.3$
SEISMIC CATEGORY: **SC3**
- SOILS
SOIL CAPACITY OF 3000kPa ULS
- REFERENCE GEOTECHNICAL REPORT BY GEMTEC "GEOTECHNICAL INVESTIGATION HANGAR 10 FIRE PUMP HOUSE" DATED NOVEMBER 28 2024.

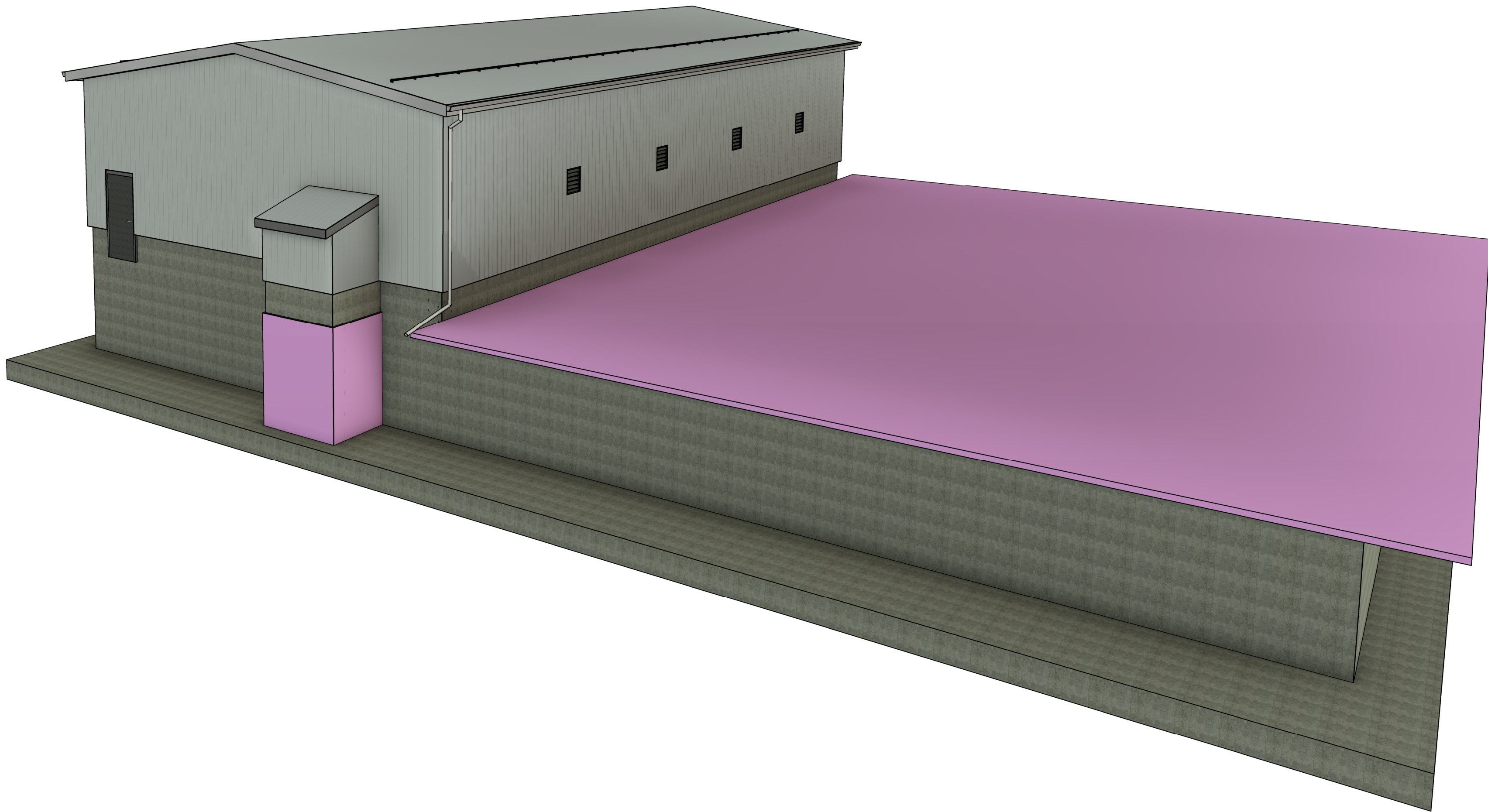
DEMOLITION/DECONSTRUCTION OF STRUCTURES

- PRIOR TO START OF DEMOLITION/DECONSTRUCTION WORK SUBMIT:

a) A SURVEY OF ADJACENT BUILDING ELEMENTS DESIGNATED TO REMAIN WHICH DOCUMENTS PRE-EXISTING DEFECTS.
b) DEMOLITION/DECONSTRUCTION PLAN IDENTIFYING MEANS AND METHODS OF DECONSTRUCTION WORK AND SPECIFICALLY ADDRESSING THE STRUCTURAL INTEGRITY AND STABILITY OF THE BUILDING COMPONENTS TO REMAIN.
- DEMOLITION/DECONSTRUCTION OF STRUCTURAL ELEMENTS TO BE UNDERTAKEN BY A QUALIFIED CONTRACTOR IN ACCORDANCE WITH ALL PREVAILING LEGISLATION, CODES AND STANDARDS.
- IF MATERIALS RESEMBLING HAZARDOUS SUBSTANCES ARE ENCOUNTERED, STOP WORK, TAKE PREVENTATIVE MEASURES AND NOTIFY THE DCC REPRESENTATIVE. DO NOT PROCEED UNTIL WRITTEN INSTRUCTIONS HAVE BEEN RECEIVED.
- PROVIDE TEMPORARY WORKS REQUIRED IN ORDER TO MAINTAIN THE STABILITY OF THE BUILDING ELEMENTS AND STRUCTURES DESIGNATED TO REMAIN.
- PREVENT DEBRIS AND MATER FROM BLOCKING MEANS OF EGRESS.
- STOCKPILING OF THE MATERIAL ON SITE IS NOT PERMITTED.
- DISPOSE OF MATERIAL IN ACCORDANCE WITH PREVAILING CODES AT LICENSED FACILITIES.
- DEMOLITION MAY UTILIZE ANY LEGAL MEANS OR METHODS PERMITTED INCLUDING MECHANICAL TECHNIQUES, HOWEVER IMPLSION USING EXPLOSIVES IS NOT PERMITTED.
- UPON COMPLETION OF THE PROJECT LEAVE THE WORK SITE CLEAN AND FREE OF DEBRIS.
- MAKE GOOD ALL EXISTING WORK DISTURBED BY DEMOLITION OR DECONSTRUCTION PROCEDURE



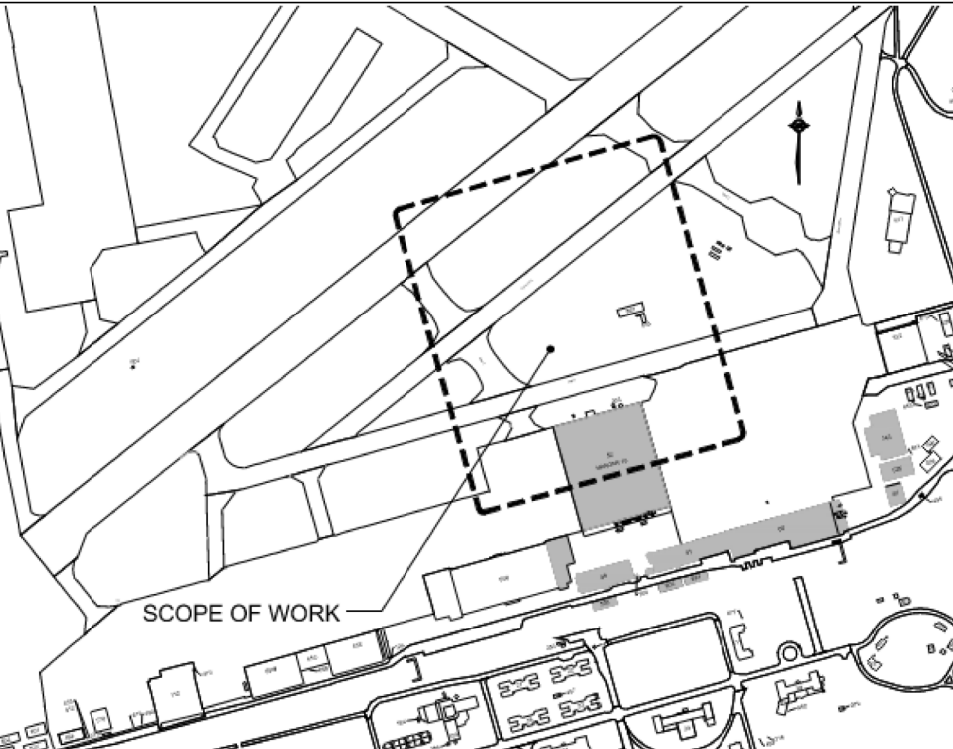
1 200 3D VIEW A
SCALE: N.T.S



2 200 3D VIEW B
SCALE: N.T.S

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KEYPLAN



6	2025-10-21	RE-ISSUED FOR 100% SUBMISSION	I./J.C.S
5	2025-03-07	ISSUED FOR 100% SUBMISSION	I./J.C.S
4	2025-01-16	ISSUED FOR 90% SUBMISSION REV02	I./J.C.S
3	2024-12-13	ISSED FOR 90% SUBMISSION REV01	I./J.C.S
2	2024-07-31	ISSUED FOR 90% SUBMISSION	I./J.C.S
1	2024-03-31	ISSUED FOR 60% SUBMISSION	I./J.C.S

NO.	DATE	REVISION	APPR.
SCALE ÉCHELLE			

LOCATION | EMPLACEMENT
8 WING TRENTON
CFB TRENTON, ONTARIO

PROJECT | PROJET

TRE-UPG B052 (HGR 10) FIRE
PUMPHOUSE

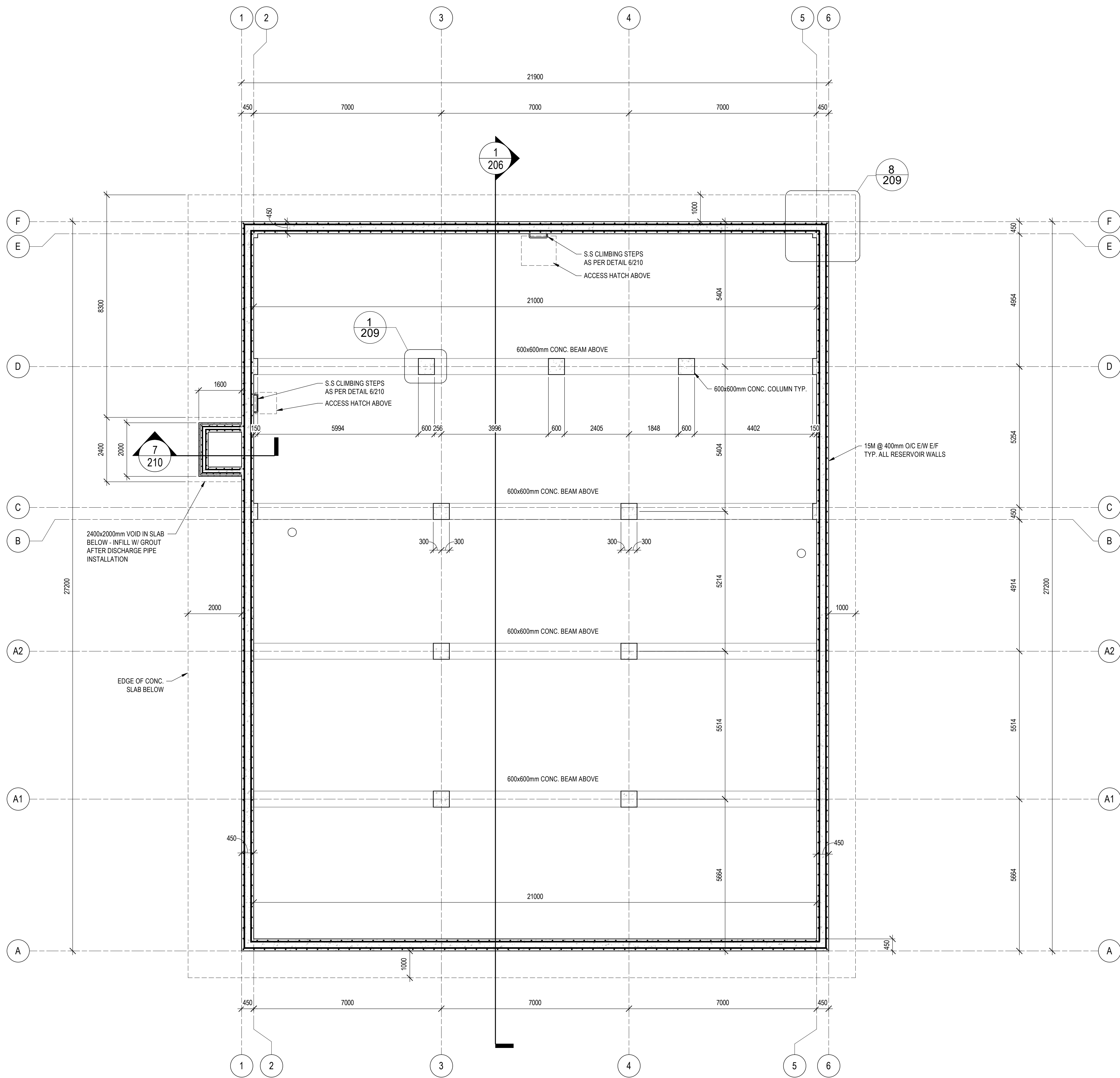
TRADE MÉTIER	DATE
STRUCTURAL	2024/03/31

SUBJECT | SUJET

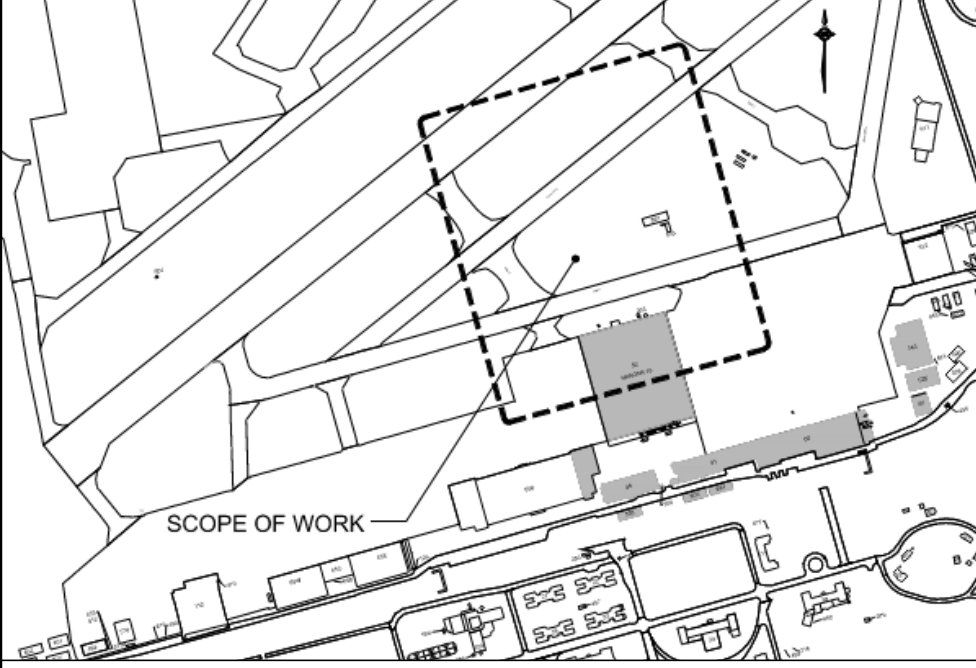
GENERAL NOTES

PRODUCTION	REVIEWED REVU
DESIGNED ÉTUDIÉ	DES O AGENT CONC
I. JOHNSON	S.C
DRAWN DESSINÉ	PRO MGR GÉST PROJ
C. SIMPSON	P.O
CHECKED VÉRIFIÉ	DES MGR GÉST CONC
D. HARMER	S.C
COORDINATION	FIRE INCENDIE

WBS NUMBER NO. SRT	PF NUMBER NO. DP
N.002108.03	500006750
DWG. NO. NO. DESSIN	L-T81-3006/68 - 200



1 201 FOUNDATION PLAN
SCALE: 1:75



KEYPLAN



6	2025-10-21	RE-ISSUED FOR 100% SUBMISSION	I.J.C.S
5	2025-03-07	ISSUED FOR 100% SUBMISSION	I.J.C.S
4	2025-01-16	ISSUED FOR 90% SUBMISSION REV02	I.J.C.S
3	2024-12-13	ISSUED FOR 90% SUBMISSION REV01	I.J.C.S
2	2024-07-31	ISSUED FOR 90% SUBMISSION	I.J.C.S
1	2024-03-31	ISSUED FOR 60% SUBMISSION	I.J.C.S

NO.	DATE	REVISION	APPR.
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SCALE | ÉCHELLE
1 : 75

LOCATION | EMPLACEMENT
8 WING TRENTON
CFB TRENTON, ONTARIO

PROJECT | PROJET

TRE-UPG B052 (HGR 10) FIRE
PUMPHOUSE

TRADE | MÉTIER
STRUCTURAL

SUBJECT | SUJET

DATE
2024/03/31

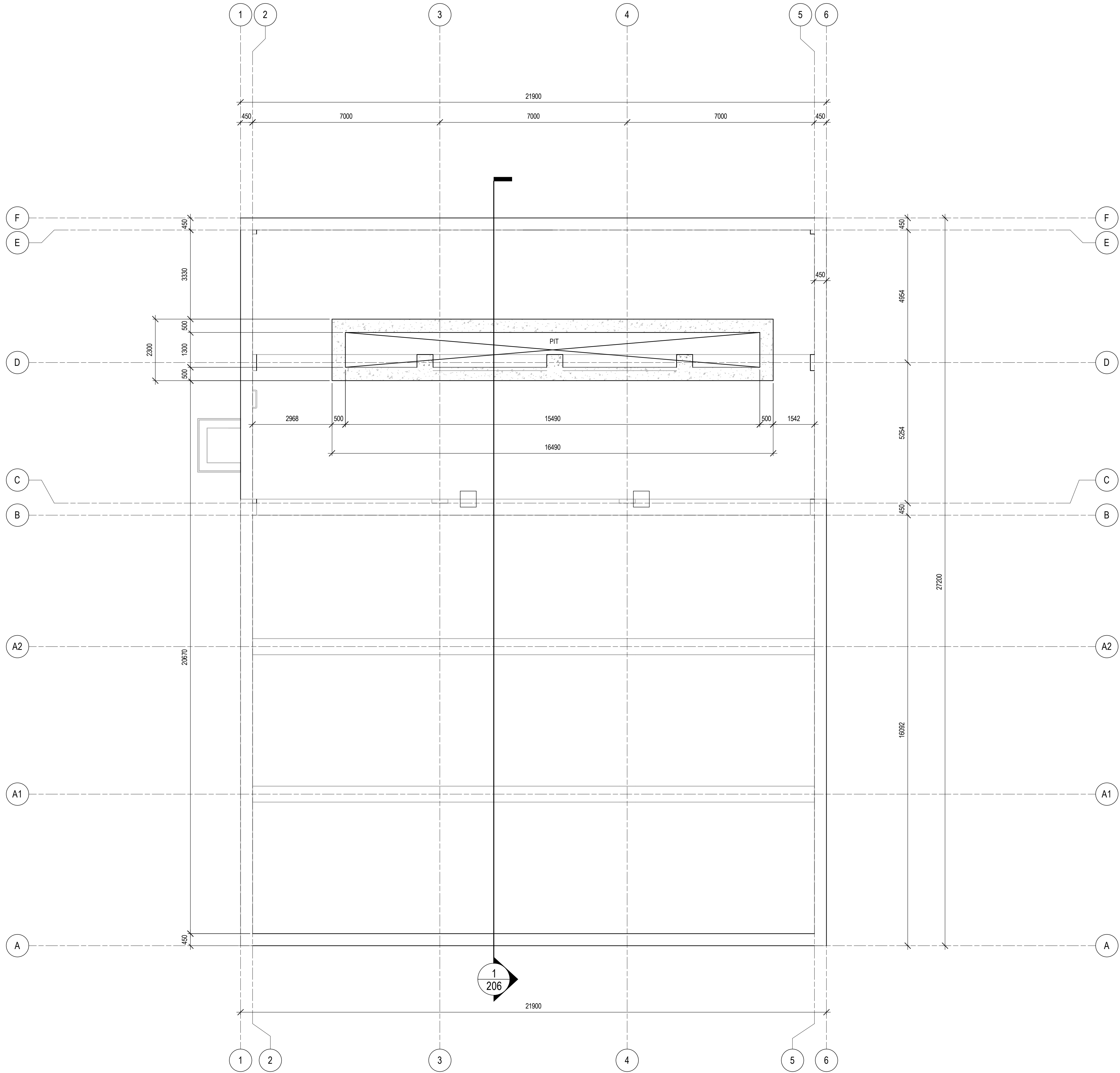
PRODUCTION	REVIEWED REVU
DESIGNED ÉTUDIÉ I. JOHNSON	DES O AGENT CONC S.C
DRAWN DESSINÉ C. SIMPSON	PRO MGR GÉST PROJ P.O
CHECKED VÉRIFIÉ D. HARMER	DES MGR GÉST CONC S.C
COORDINATION	FIRE INCENDIE

WBS NUMBER | NO. SRT
N.002108.03

PF NUMBER | NO. DP
500006750

DWG. NO. | NO. DESSIN

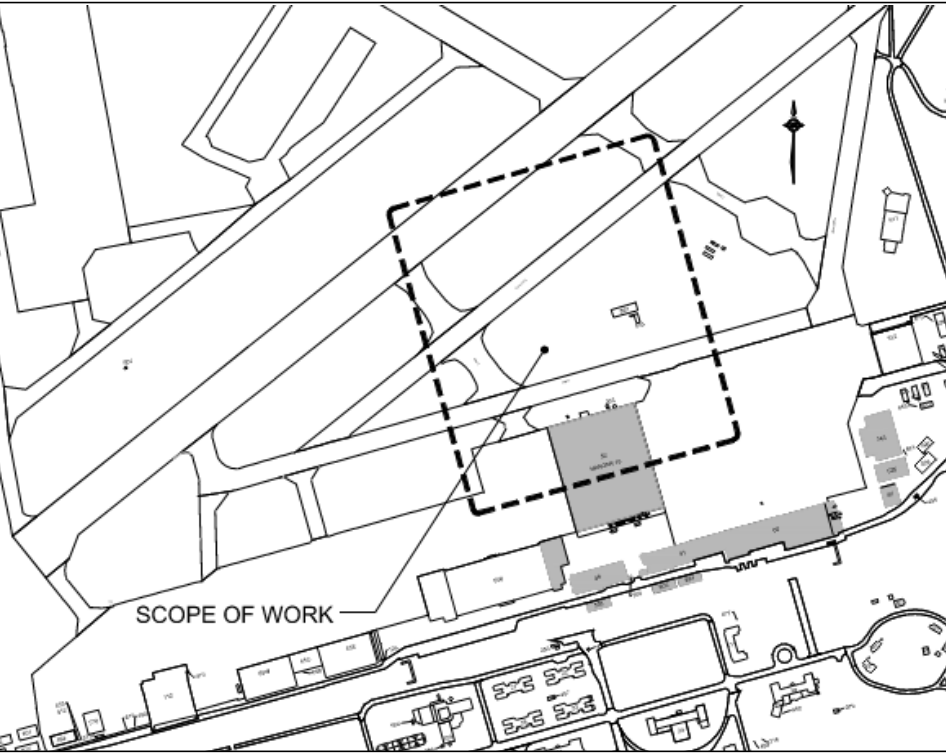
L-T81-3006/68 - 201



1
202 SUMP PIT PLAN
SCALE: 1:75

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KEYPLAN



6	2025-10-21	RE-ISSUED FOR 100% SUBMISSION	I.J.C.S
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3	2024-12-13	ISSUED FOR 90% SUBMISSION REV01	I.J.C.S
2	2024-07-31	ISSUED FOR 90% SUBMISSION	I.J.C.S
1	2024-03-31	ISSUED FOR 60% SUBMISSION	I.J.C.S

NO.	DATE	REVISION	APPR.
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SCALE | ÉCHELLE
1 : 75

LOCATION | EMPLACEMENT
8 WING TRENTON
CFB TRENTON, ONTARIO

PROJECT | PROJET

TRE-UPG B052 (HGR 10) FIRE
PUMPHOUSE

TRADE MÉTIER STRUCTURAL	DATE 2024/03/31
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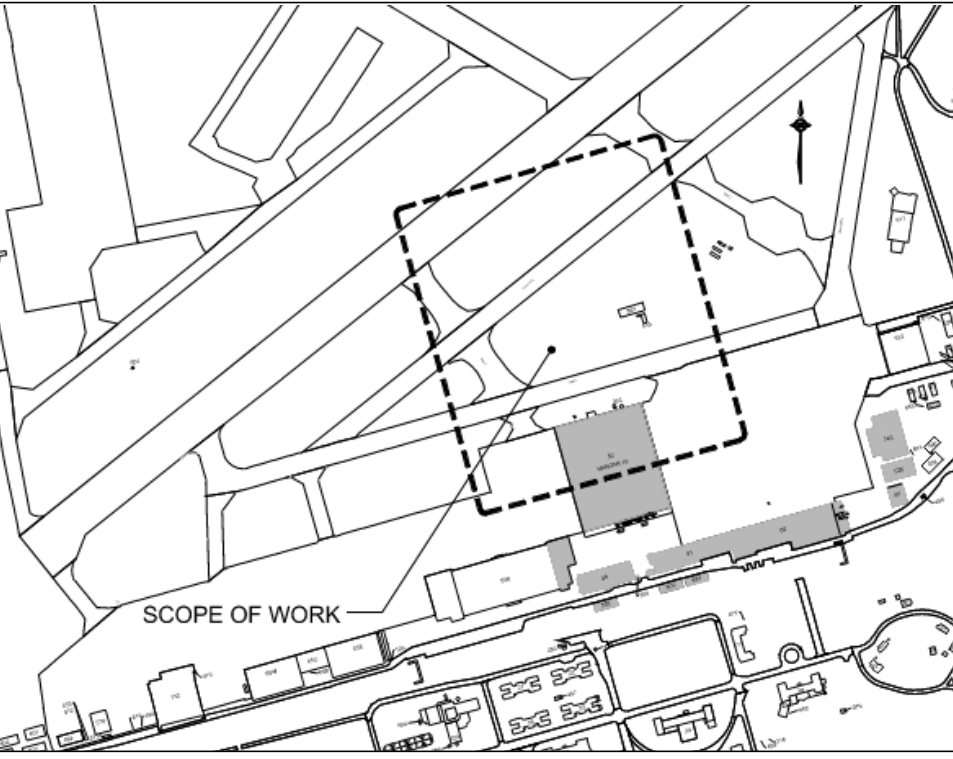
SUBJECT | SUJET

SUMP PIT PLAN

PRODUCTION	REVIEWED REVU
DESIGNED ÉTUDIÉ I. JOHNSON	DES O AGENT CONC S.C
DRAWN DESSINÉ C. SIMPSON	PRO MGR GÉST PROJ P.O
CHECKED VÉRIFIÉ D. HARMER	DES MGR GÉST CONC S.C
COORDINATION	FIRE INCENDIE

WBS NUMBER NO. SRT N.002108.03	PF NUMBER NO. DP 500006750
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DWG. NO. | NO. DESSIN
L-T81-3006/68 - 202



KEYPLAN



6	2025-10-21	RE-ISSUED FOR 100% SUBMISSION	I./J.C.S
5	2025-03-07	ISSUED FOR 100% SUBMISSION	I./J.C.S
4	2025-01-16	ISSUED FOR 90% SUBMISSION REV02	I./J.C.S
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1	2024-03-31	ISSUED FOR 60% SUBMISSION	I./J.C.S

NO.	DATE	REVISION	APPR.
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SCALE | ÉCHELLE

As indicated

LOCATION | EMPLACEMENT

8 WING TRENTON
CFB TRENTON, ONTARIO

PROJECT | PROJET

TRE-UPG B052 (HGR 10) FIRE
PUMPHOUSE

TRADE MÉTIER	DATE
STRUCTURAL	2024/03/31

SUBJECT | SUJET

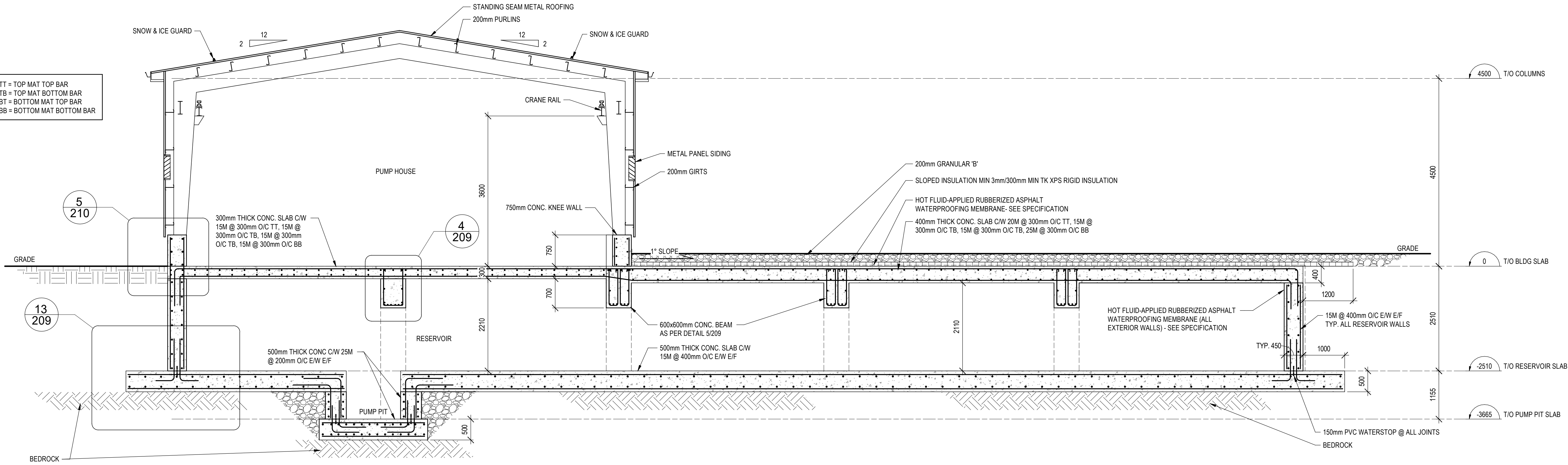
BUILDING SECTIONS

PRODUCTION	REVIEWED REVU	
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I. JOHNSON		S.C
DRAWN DESSINÉ		PRO MGR GÉST PROJ
C. SIMPSON		P.O
CHECKED VÉRIFIÉ		DES MGR GÉST CONC
D. HARMER		S.C
COORDINATION		FIRE INCENDIE

WBS NUMBER NO. SRT	PF NUMBER NO. DP
N.002108.03	500006750

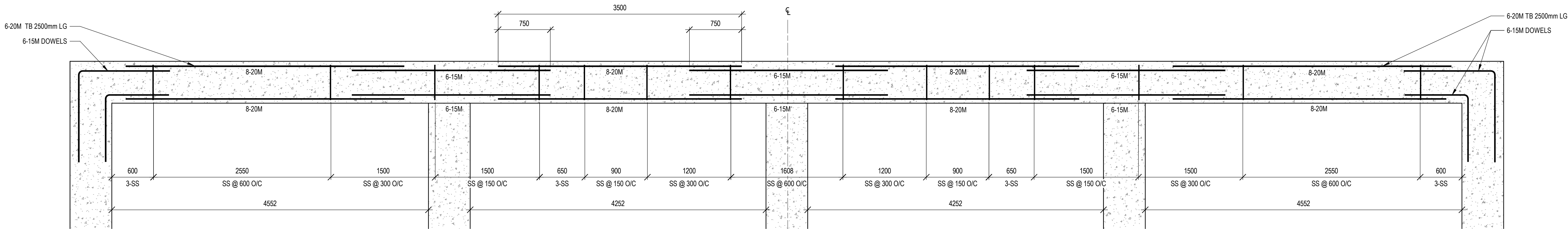
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L-T81-3006/68 - 206

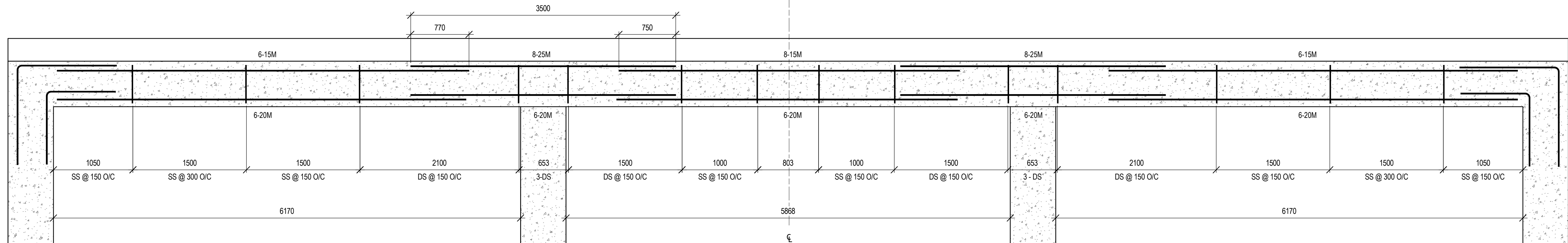


1 BUILDING SECTION

SCALE: 1 : 50



BEAM REINFORCING ALONG GRIDLINE D

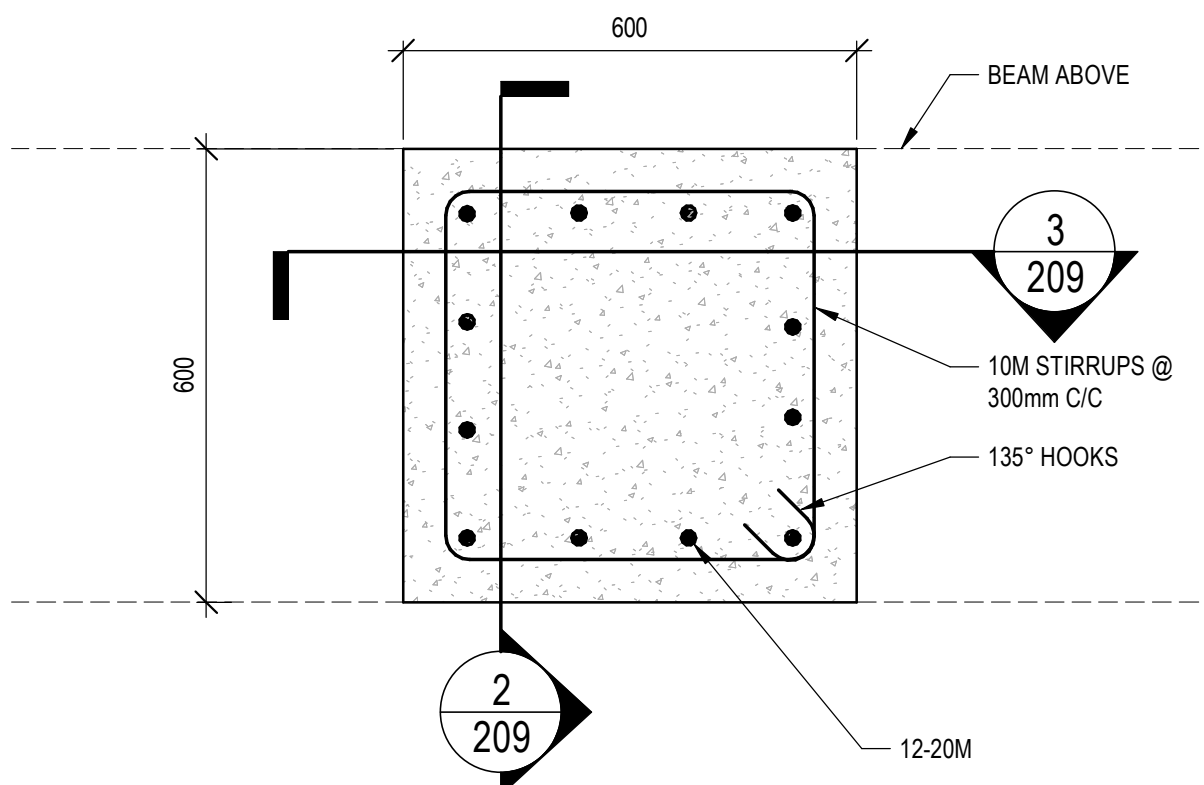


BEAM REINFORCING ALONG GRIDLINE A1/A2/C/B

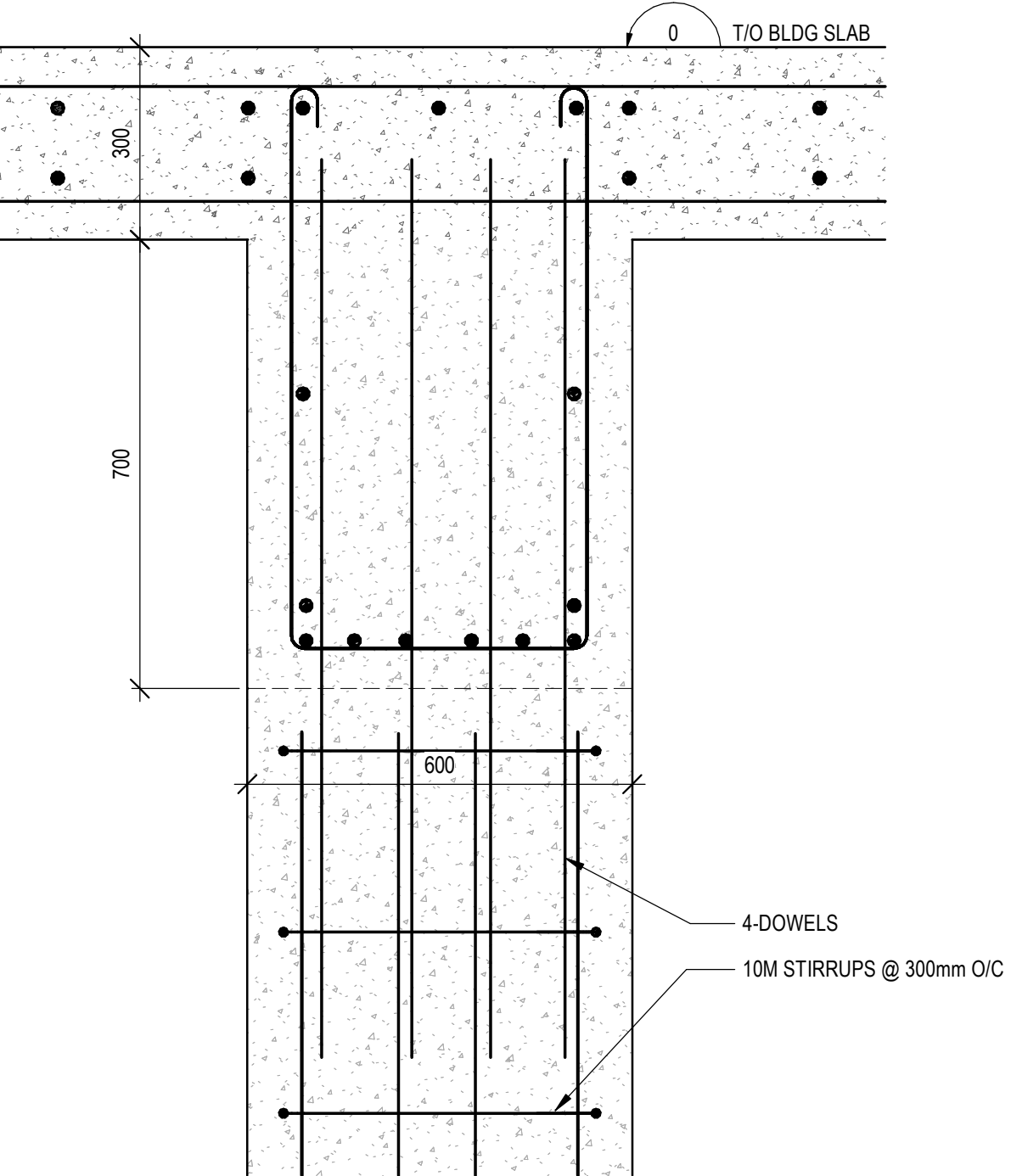
SS = SINGLE STIRRUP
DS = DOUBLE STIRRUP

2 BEAM REINFORCING DETAILS

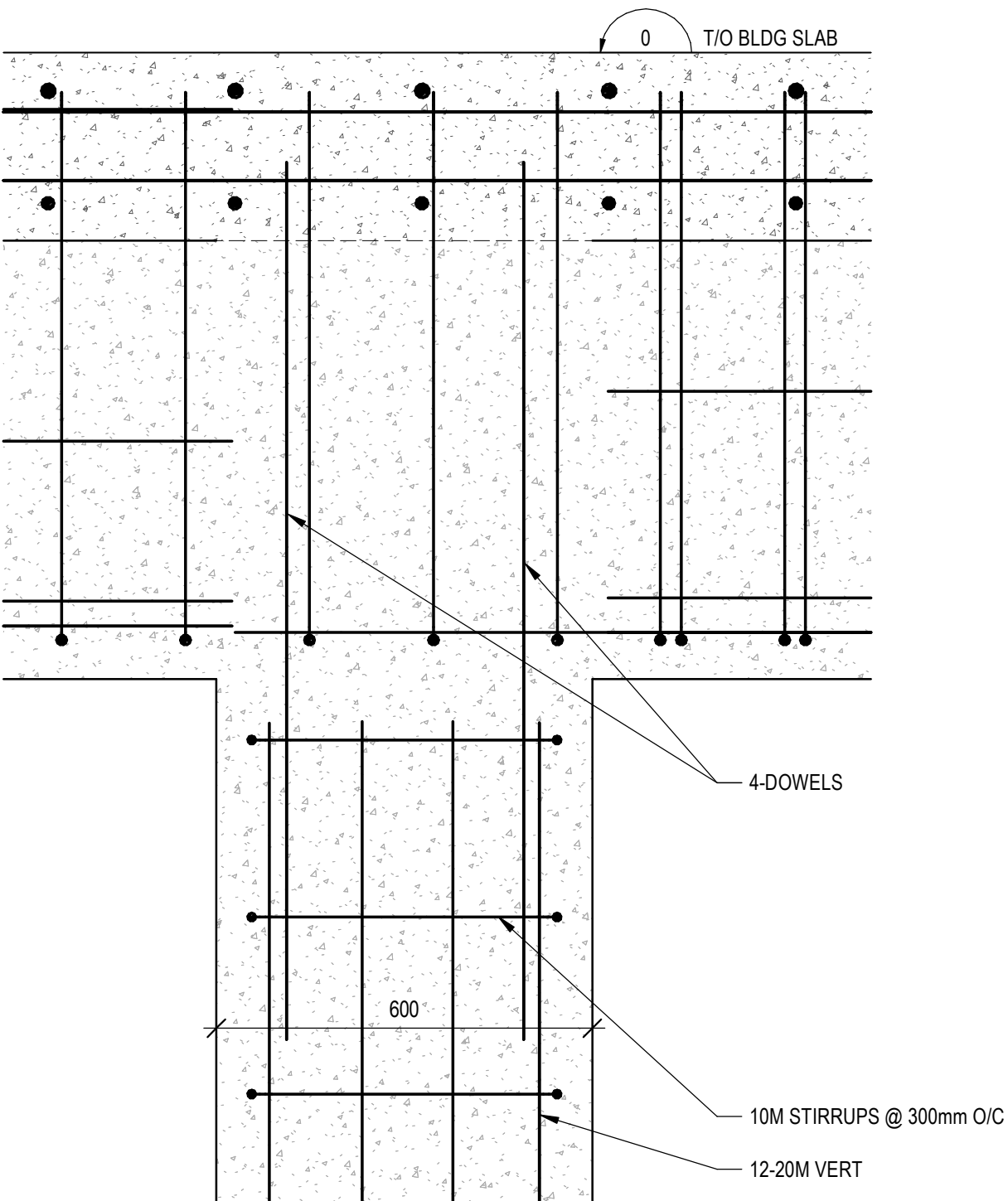
SCALE: 1 : 30



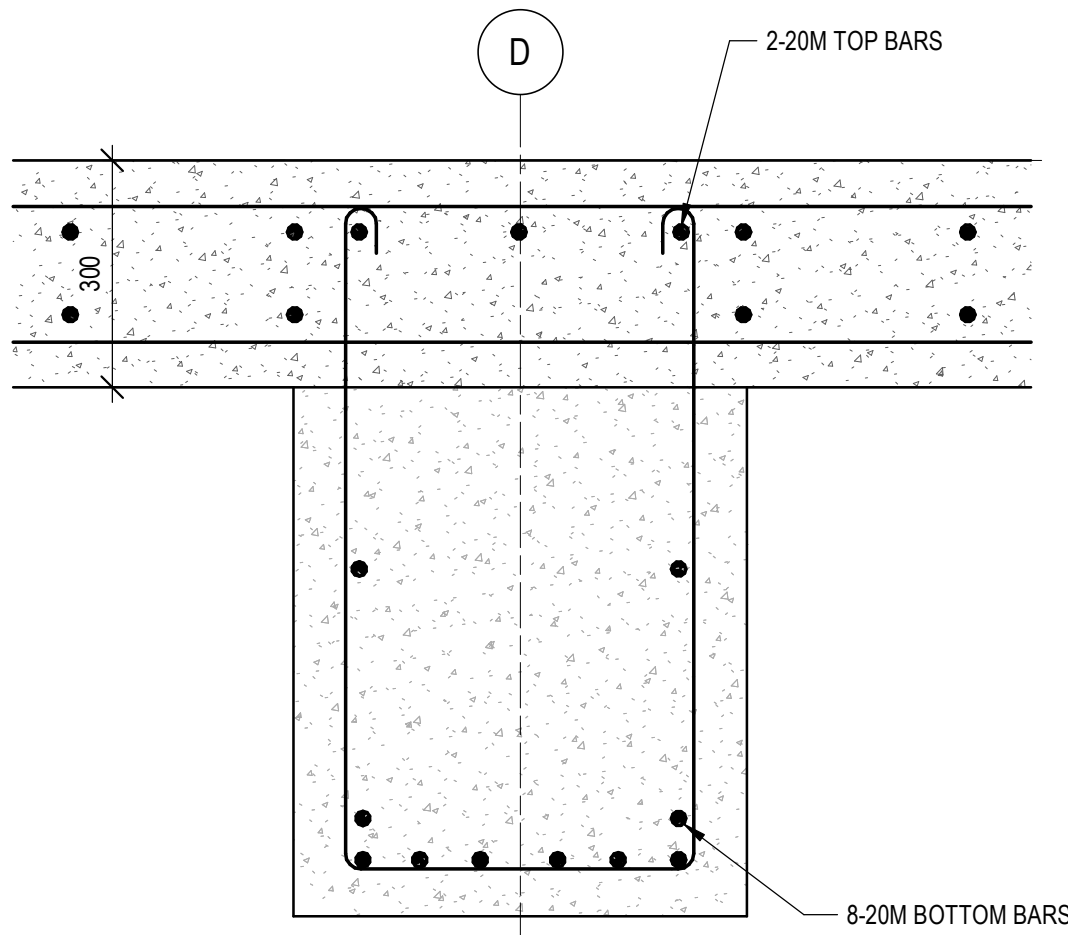
1 COLUMN REINFORCING DETAIL
SCALE: 1:10



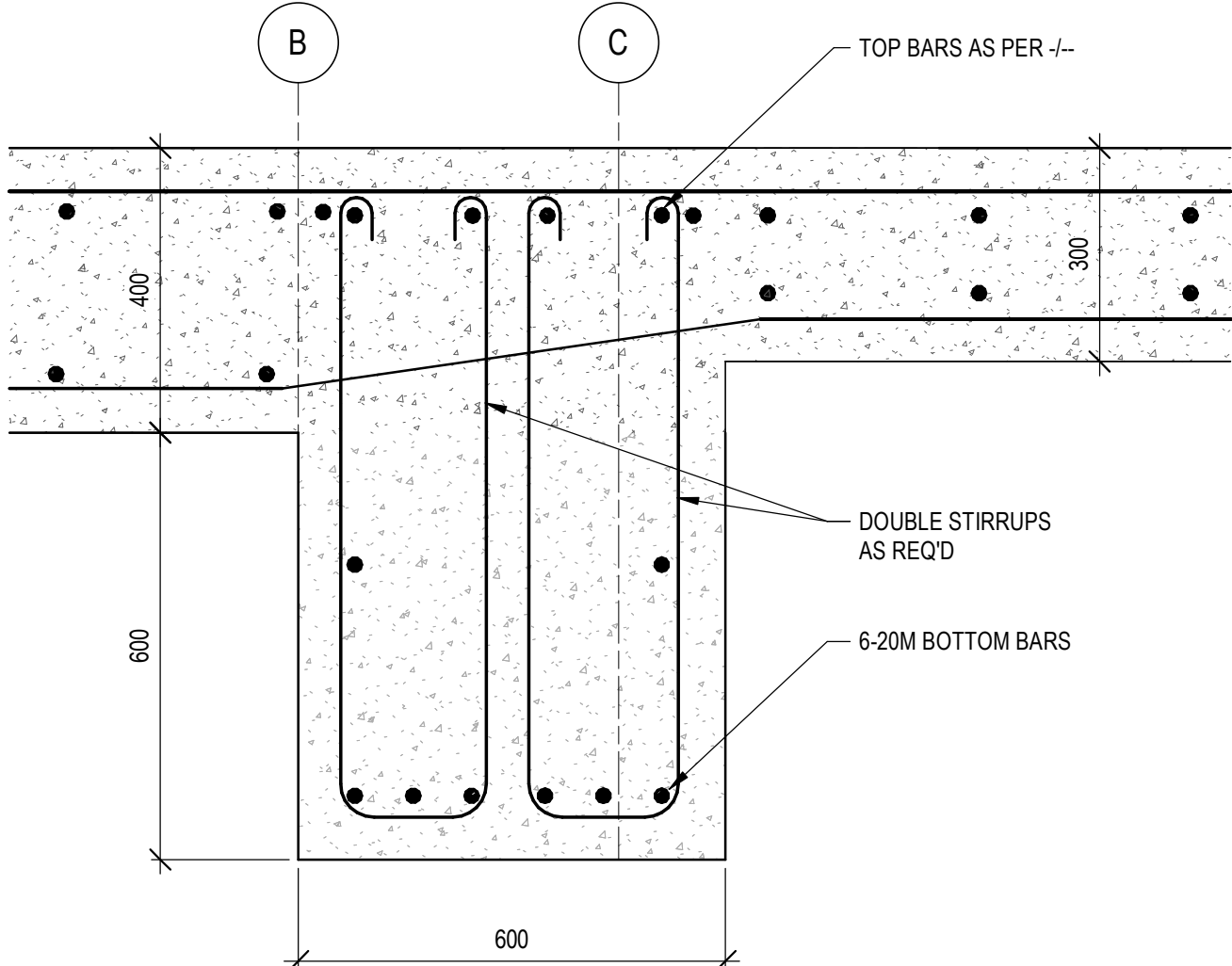
2 COLUMN SECTION DETAIL A
SCALE: 1:10



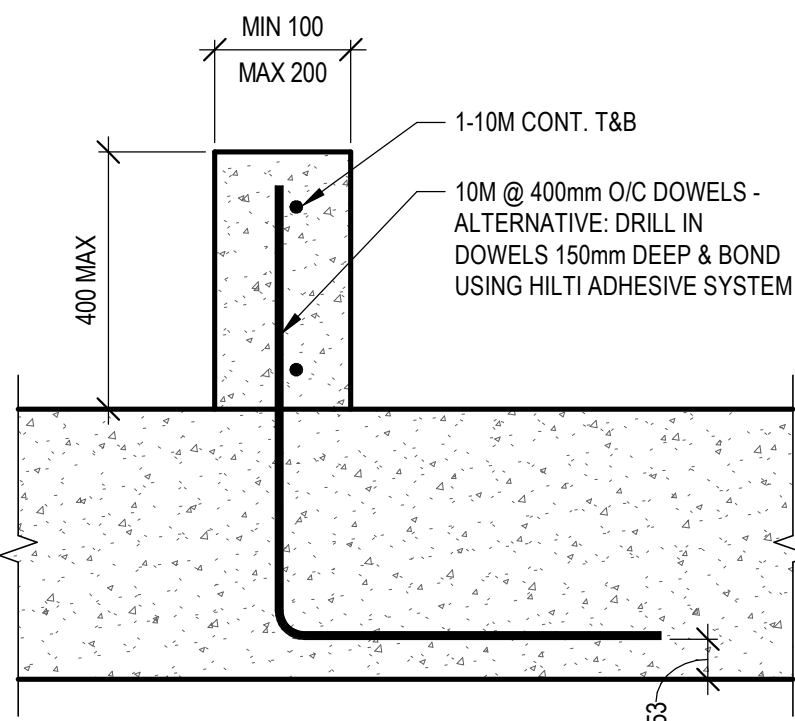
3 COLUMN SECTION DETAIL B
SCALE: 1:10



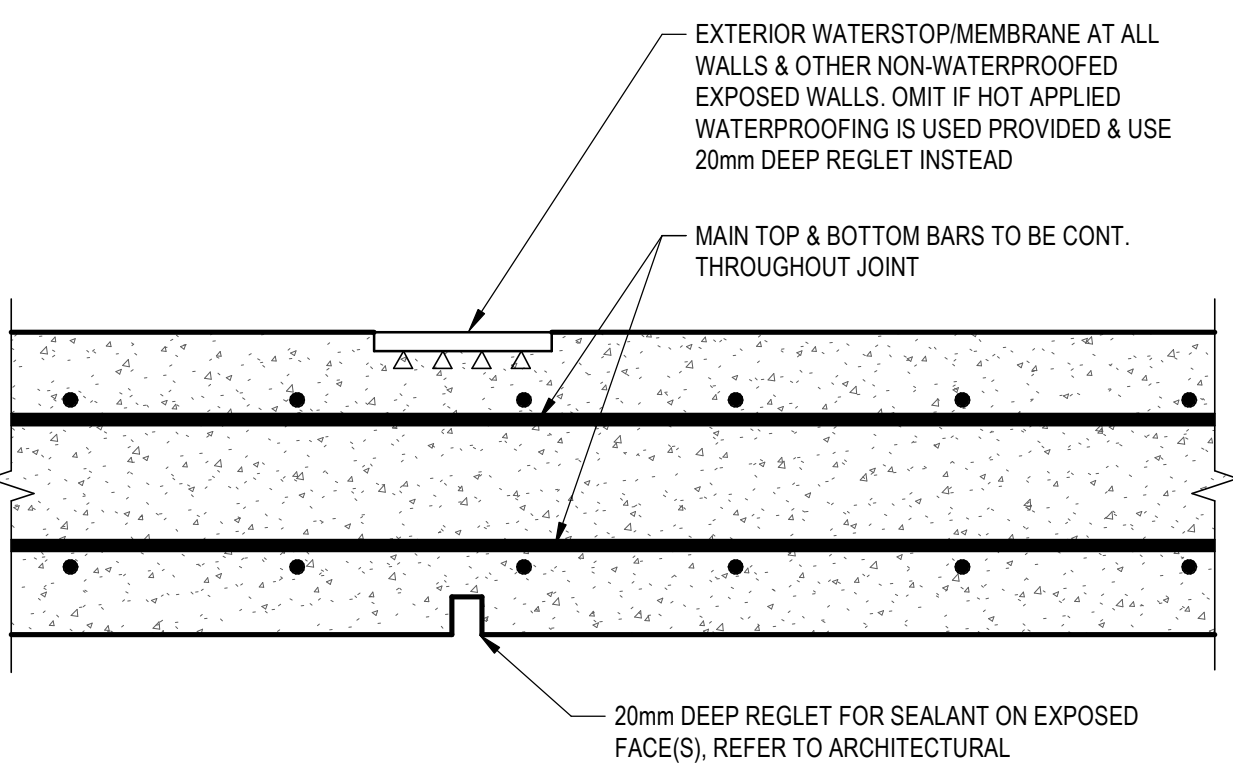
4 SINGLE STIRRUP BEAM SECTION DETAIL
SCALE: 1:10



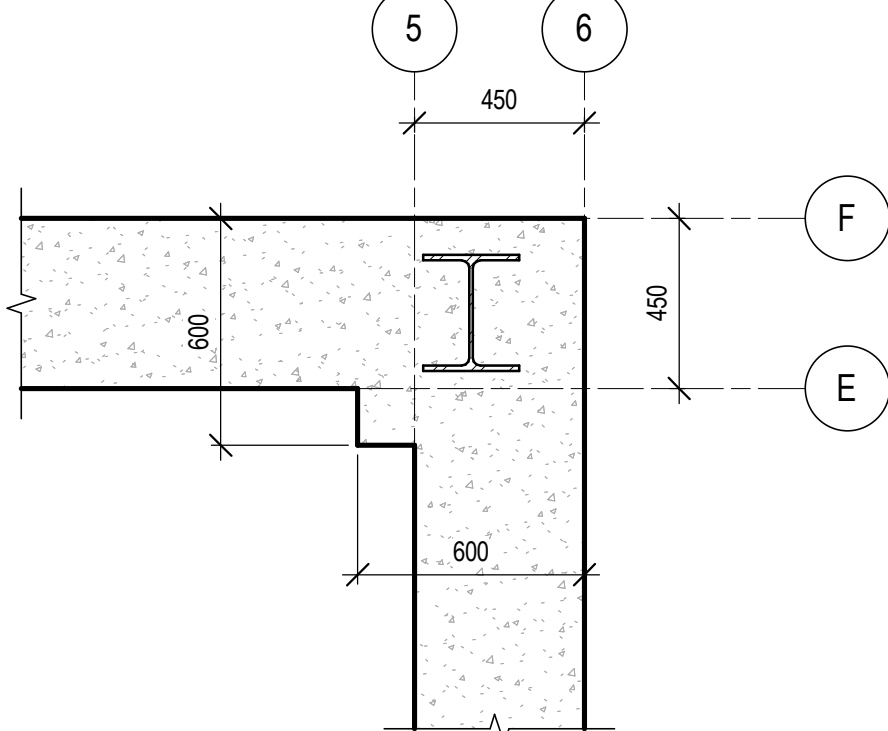
5 DOUBLE STIRRUP BEAM SECTION DETAIL
SCALE: 1:10



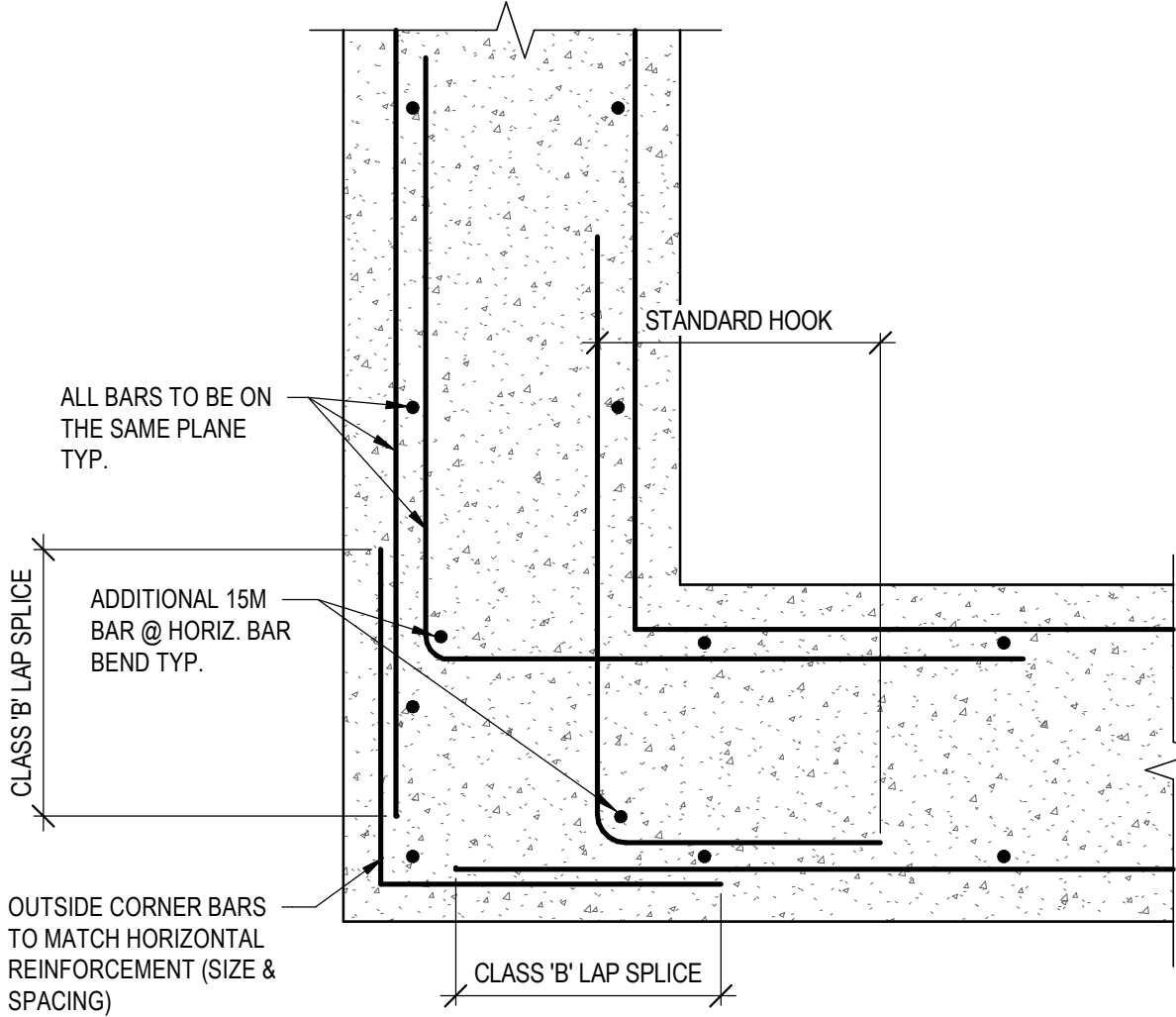
6 TYPICAL CURB DETAIL
SCALE: 1:10



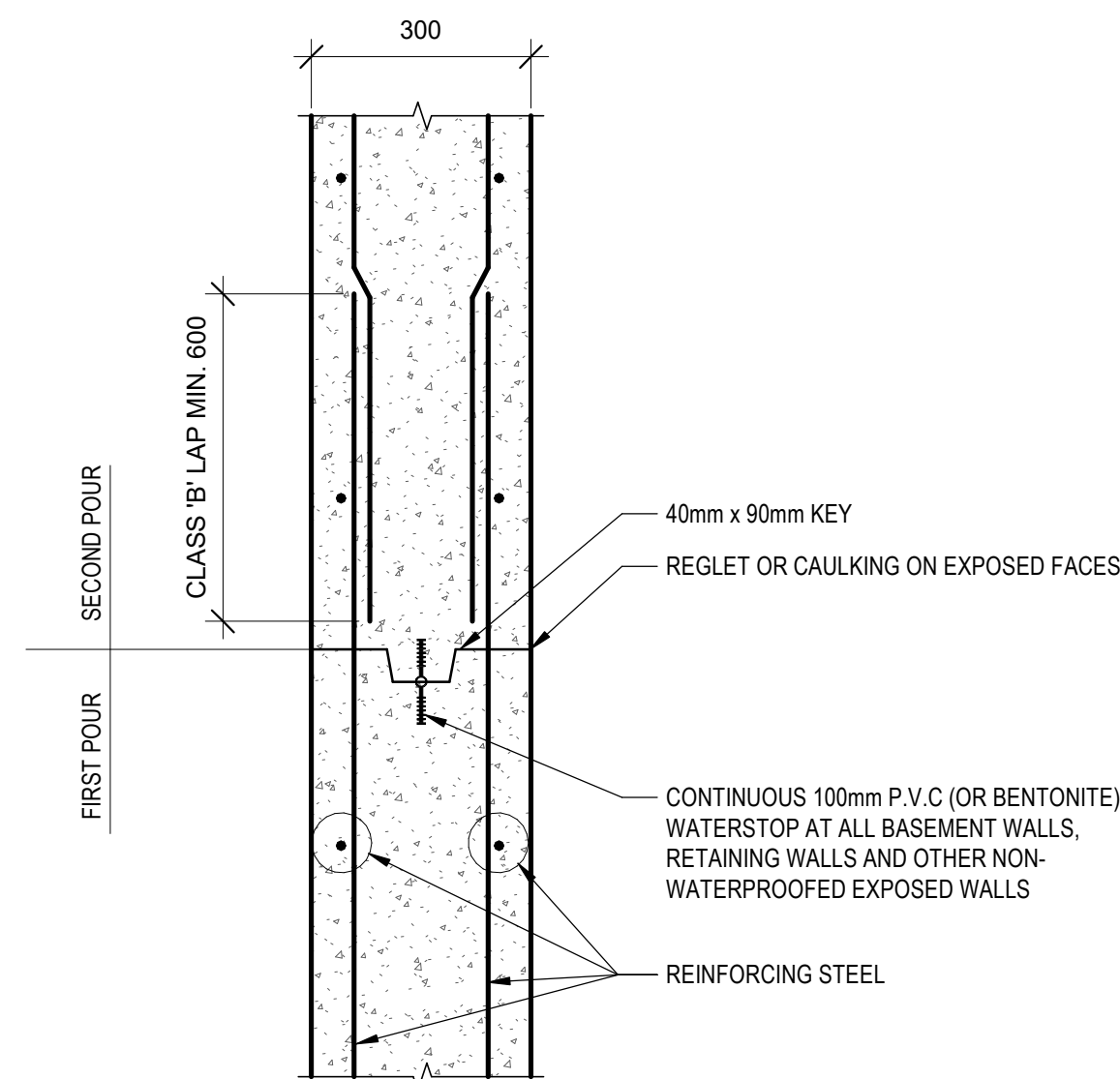
7 TYPICAL CONCRETE JOINTS IN FOUNDATIONS
SCALE: 1:10



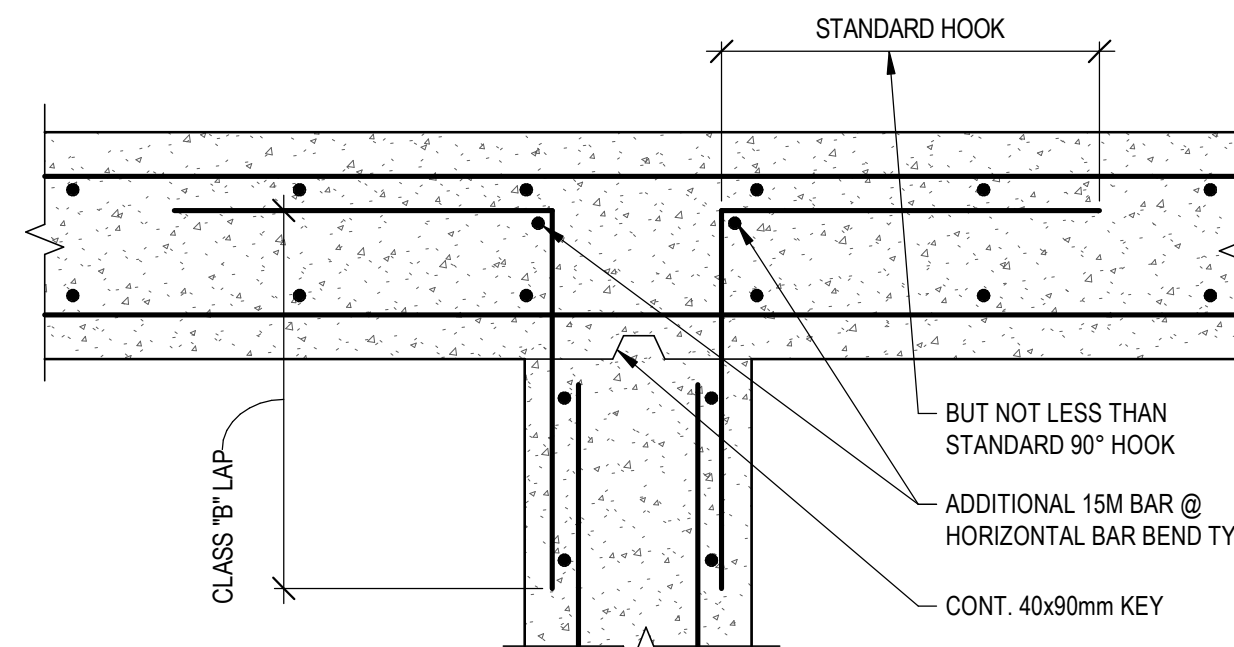
8 TYPICAL CORNER PIER PLAN DETAIL
SCALE: 1:20



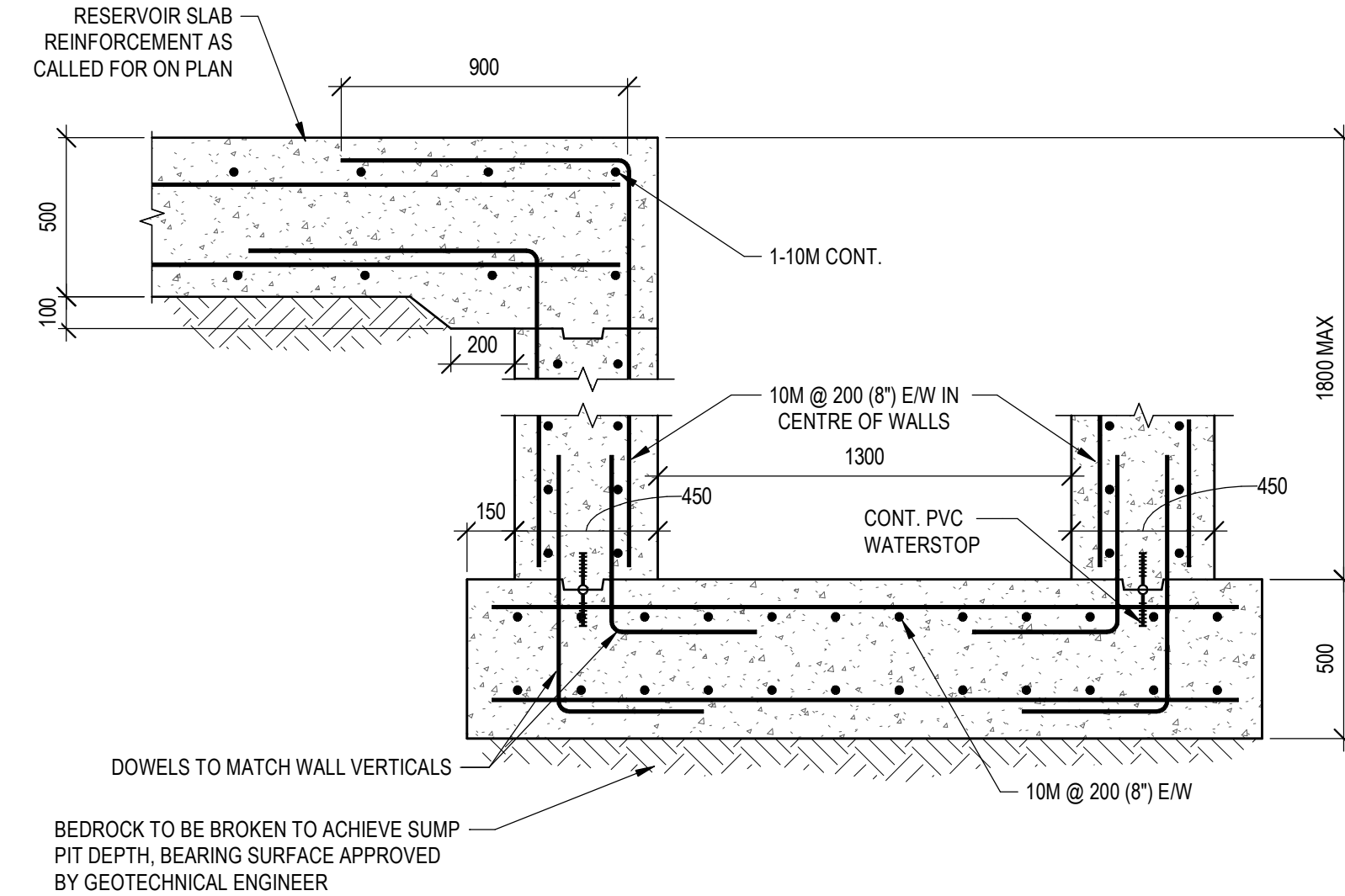
9 TYPICAL RESERVOIR WALL CORNER
SCALE: 1:10



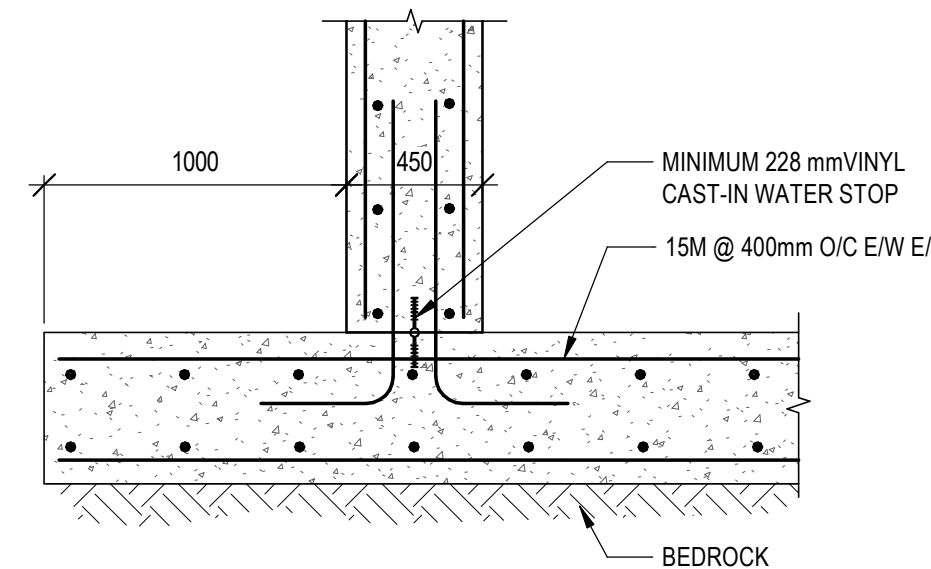
10 TYPICAL CONSTRUCTION JOINT IN WALL
SCALE: 1:20



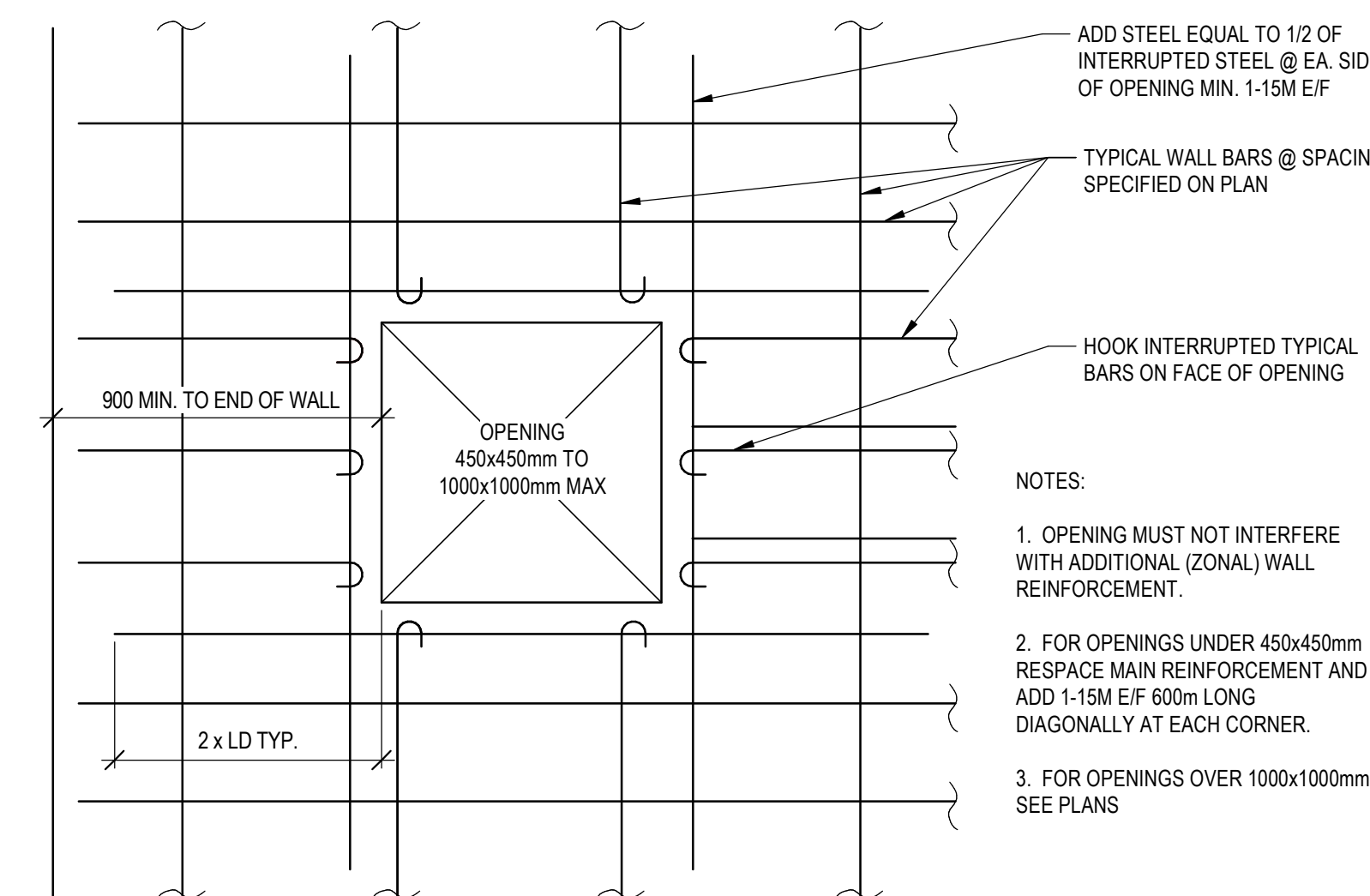
11 TYPICAL WALL INTERSECTION
SCALE: 1:10



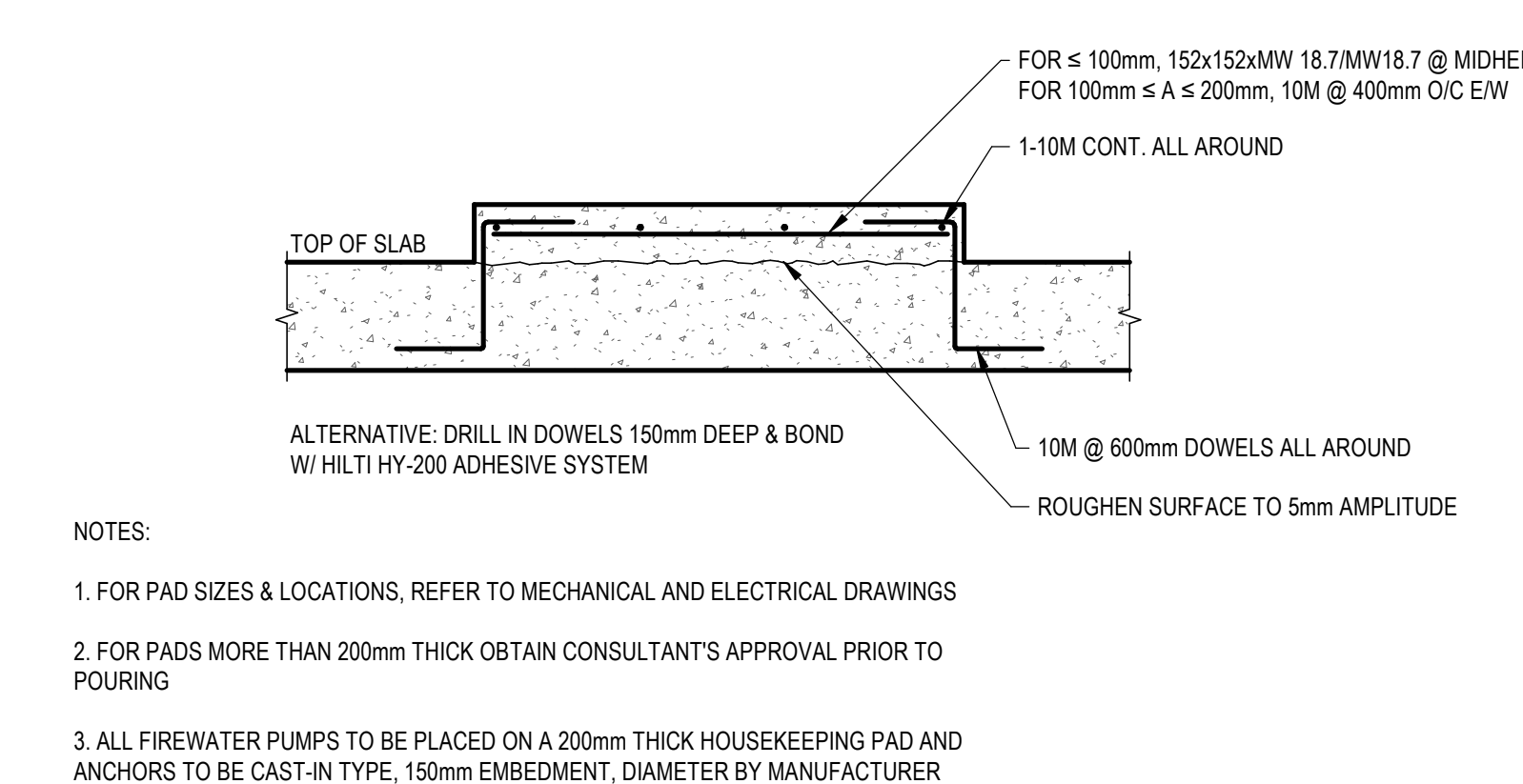
12 SUMP PIT
SCALE: 1:20



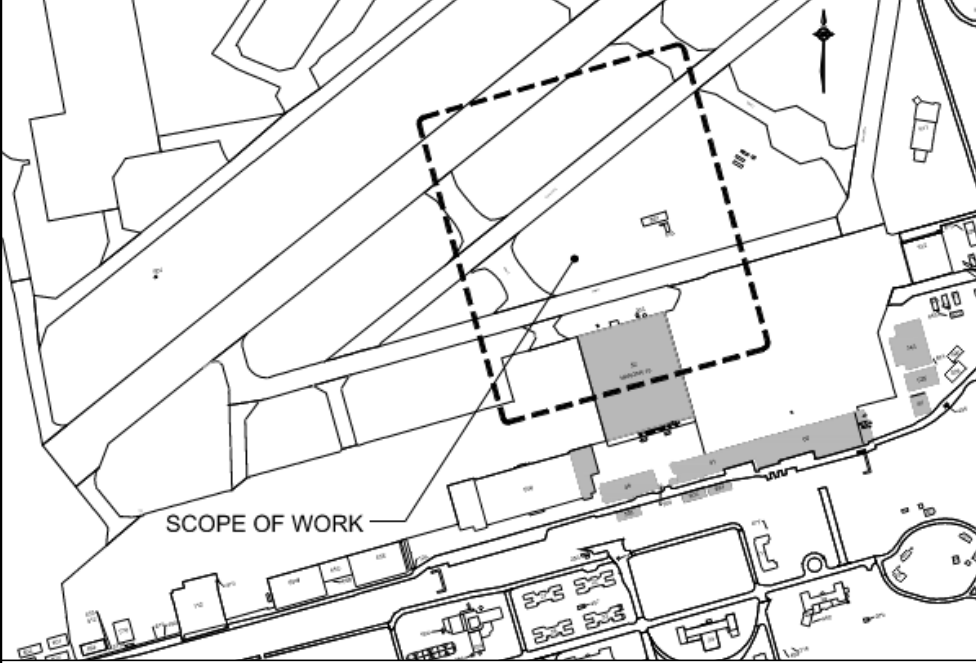
13 WATER STOP DETAIL
SCALE: 1:25



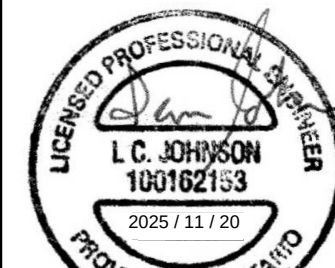
14 OPENING REINFORCEMENT DETAIL
SCALE: 1:30



15 TYPICAL HOUSEKEEPING PAD ON NEW SLAB
SCALE: 1:20



KEYPLAN



6	2025-10-21	RE-ISSUED FOR 100% SUBMISSION	I.J.C.S
5	2025-03-07	ISSUED FOR 100% SUBMISSION	I.J.C.S
4	2025-01-16	ISSUED FOR 90% SUBMISSION REV02	I.J.C.S
3	2024-12-13	ISSUED FOR 90% SUBMISSION REV01	I.J.C.S
2	2024-07-31	ISSUED FOR 90% SUBMISSION	I.J.C.S
1	2024-03-31	ISSUED FOR 60% SUBMISSION	I.J.C.S

NO.	DATE	REVISION	APPR.
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SCALE | ÉCHELLE

As indicated

LOCATION | EMPLACEMENT
8 WING TRENTON
CFB TRENTON, ONTARIO

PROJECT | PROJET

TRE-UPG B052 (HGR 10) FIRE
PUMPHOUSE

TRADE MÉTIER STRUCTURAL	DATE 2024/03/31
------------------------------	--------------------

SUBJECT | SUJET

DETAILS

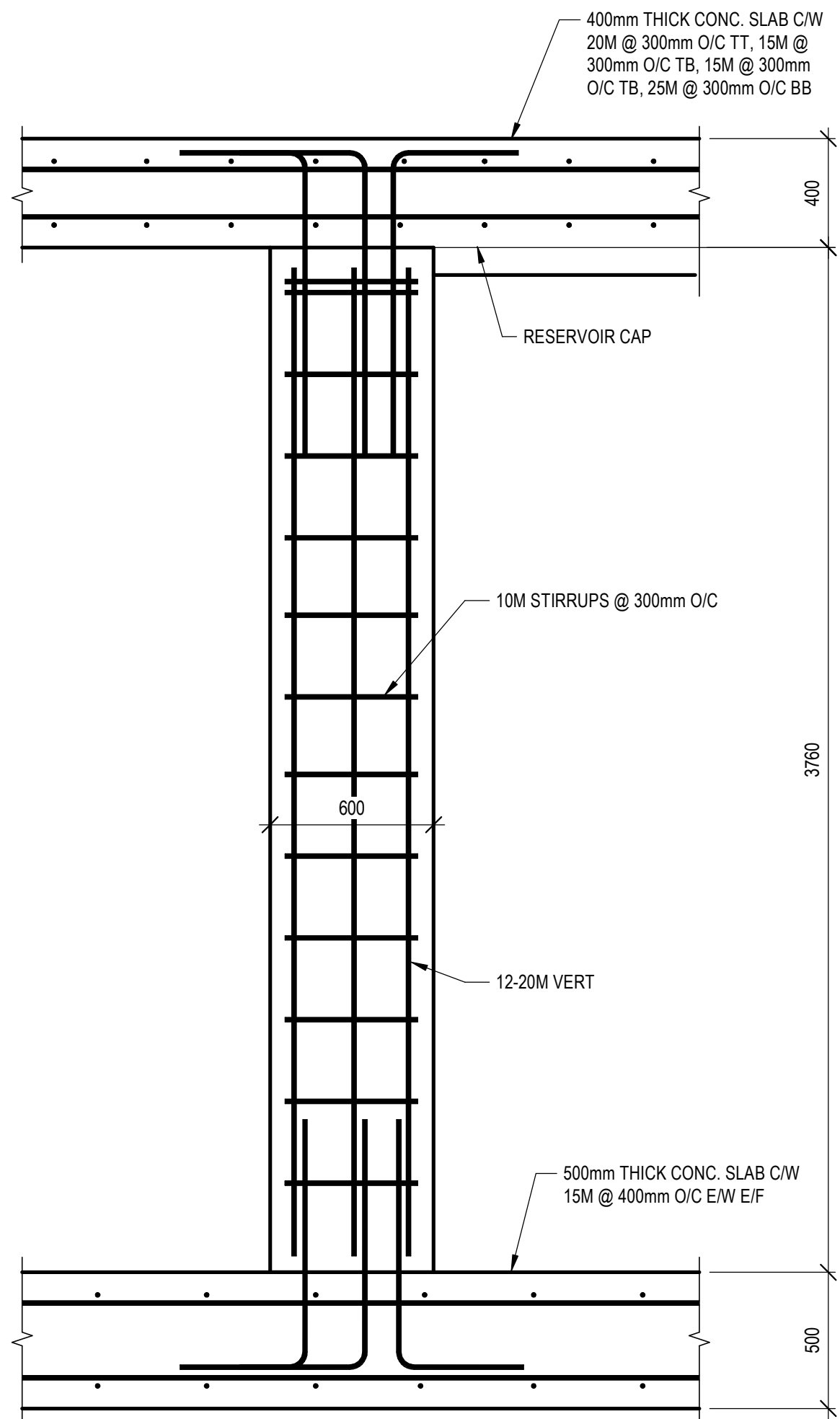
PRODUCTION	REVIEWED REVU	DES O AGENT CONC
DESIGNED ÉTUDIÉ I. JOHNSON		S.C
DRAWN DESSINÉ C. SIMPSON		PRO MGR GÉST PROJ P.O
CHECKED VÉRIFIÉ D. HARMER		DES MGR GÉST CONC S.C
COORDINATION		FIRE INCENDIE

WBS NUMBER NO. SRT N.002108.03	PF NUMBER NO. DP 500006750
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DWG. NO. | NO. DESSIN

L-T81-3006/68 - 209

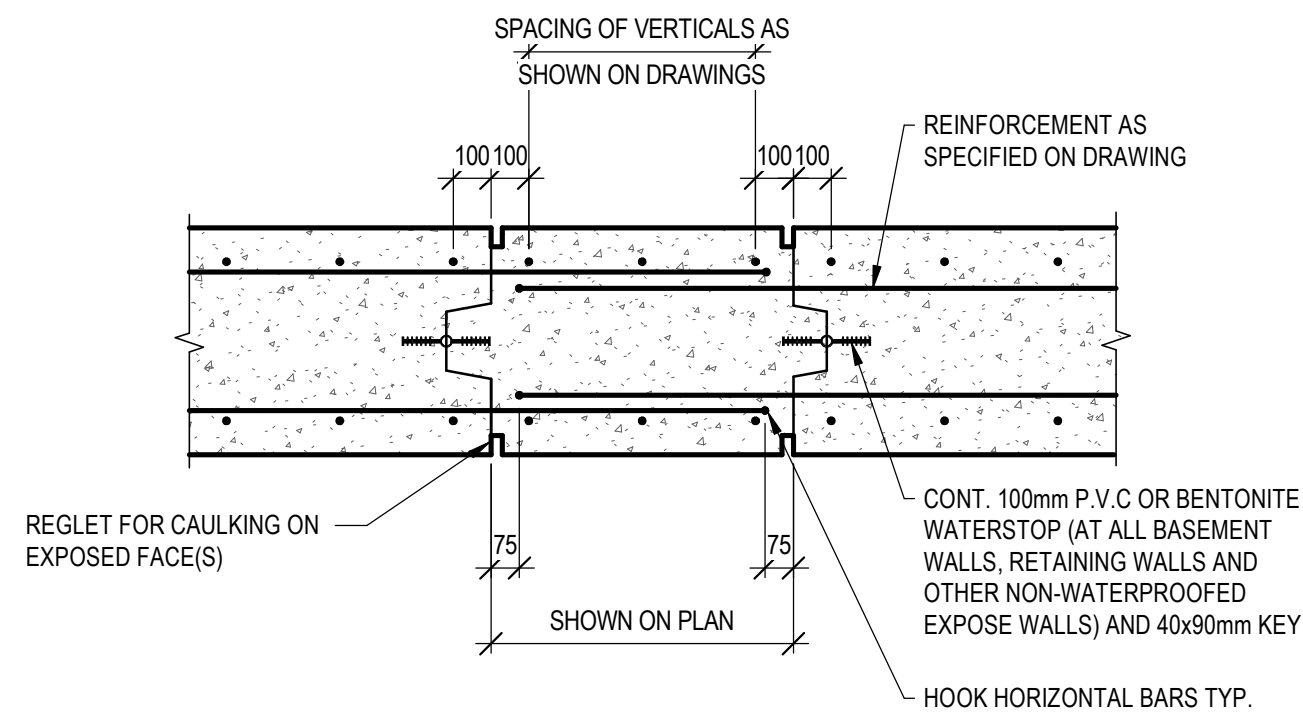
Canada



1
210

TYPICAL COLUMN SECTION

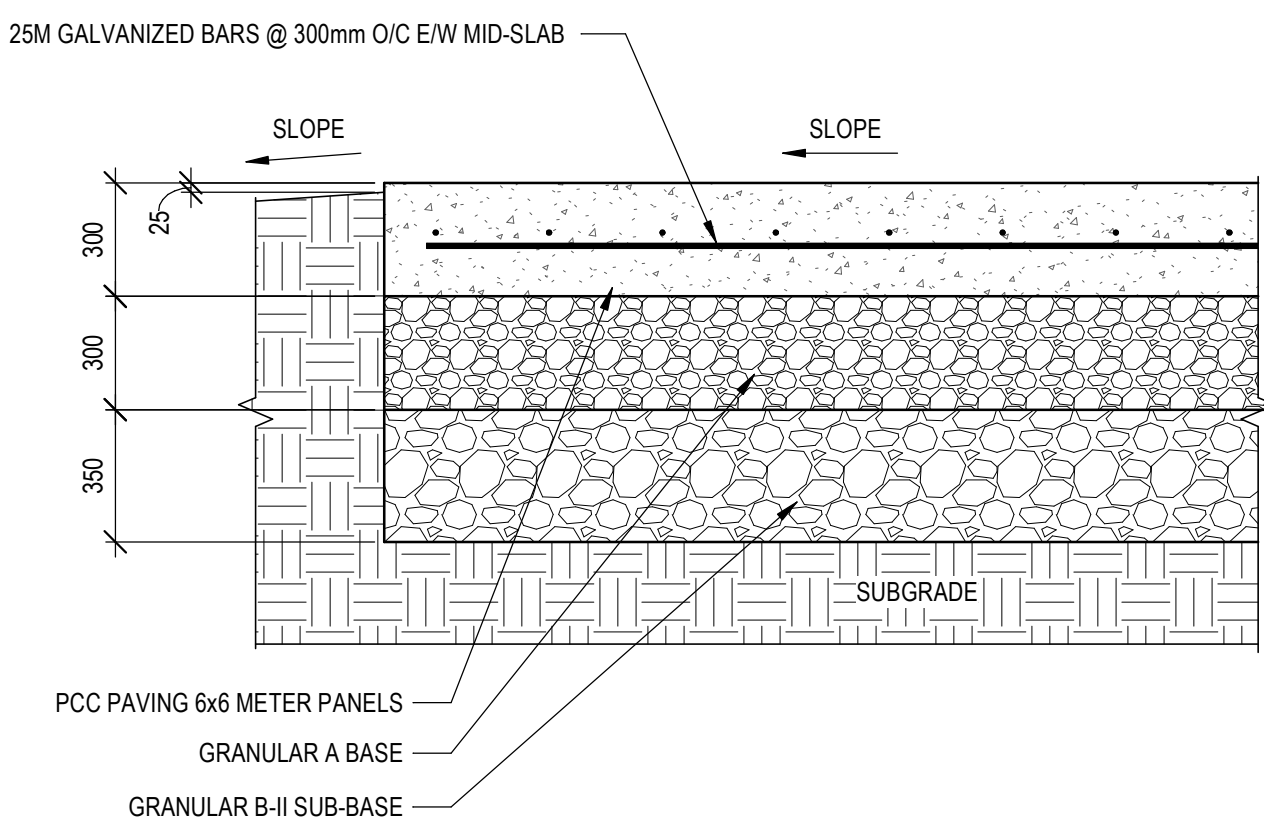
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2
210

TYPICAL CONSTRUCTION GAP IN WALL

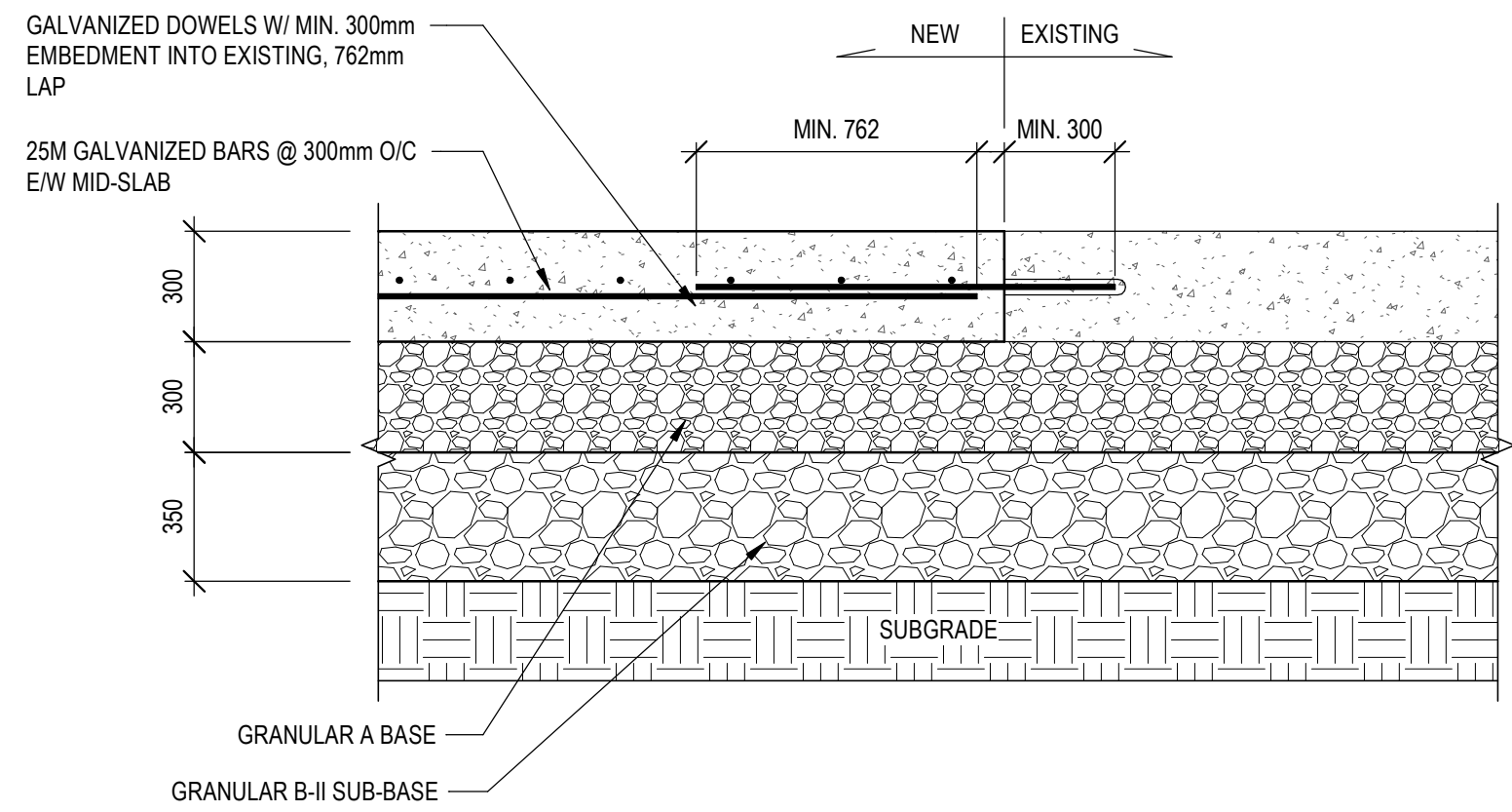
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3
210

EXISTING TAXIWAY CONCRETE PAVING

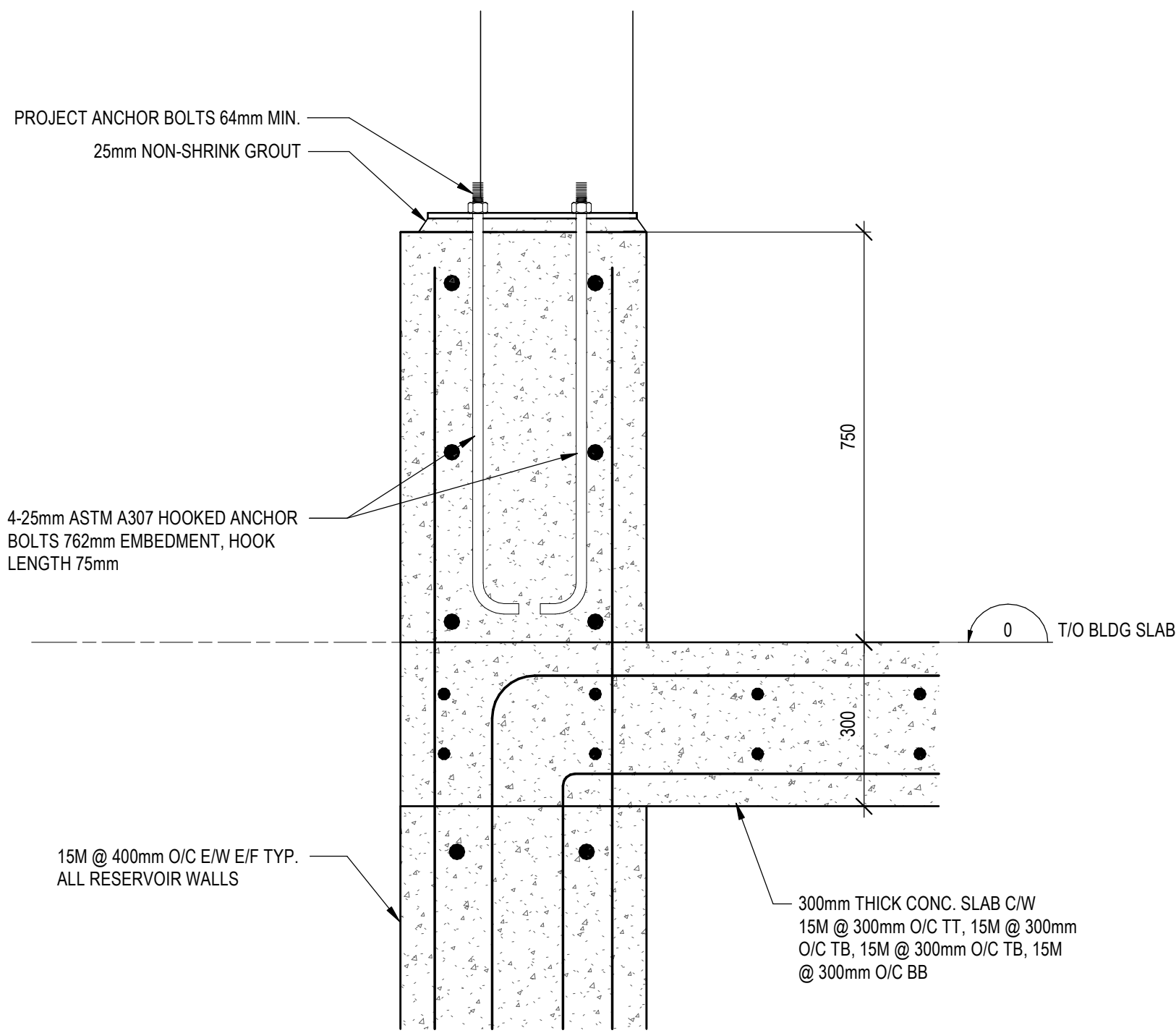
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4
210

TAXIWAY PAVING REPAIR DETAIL

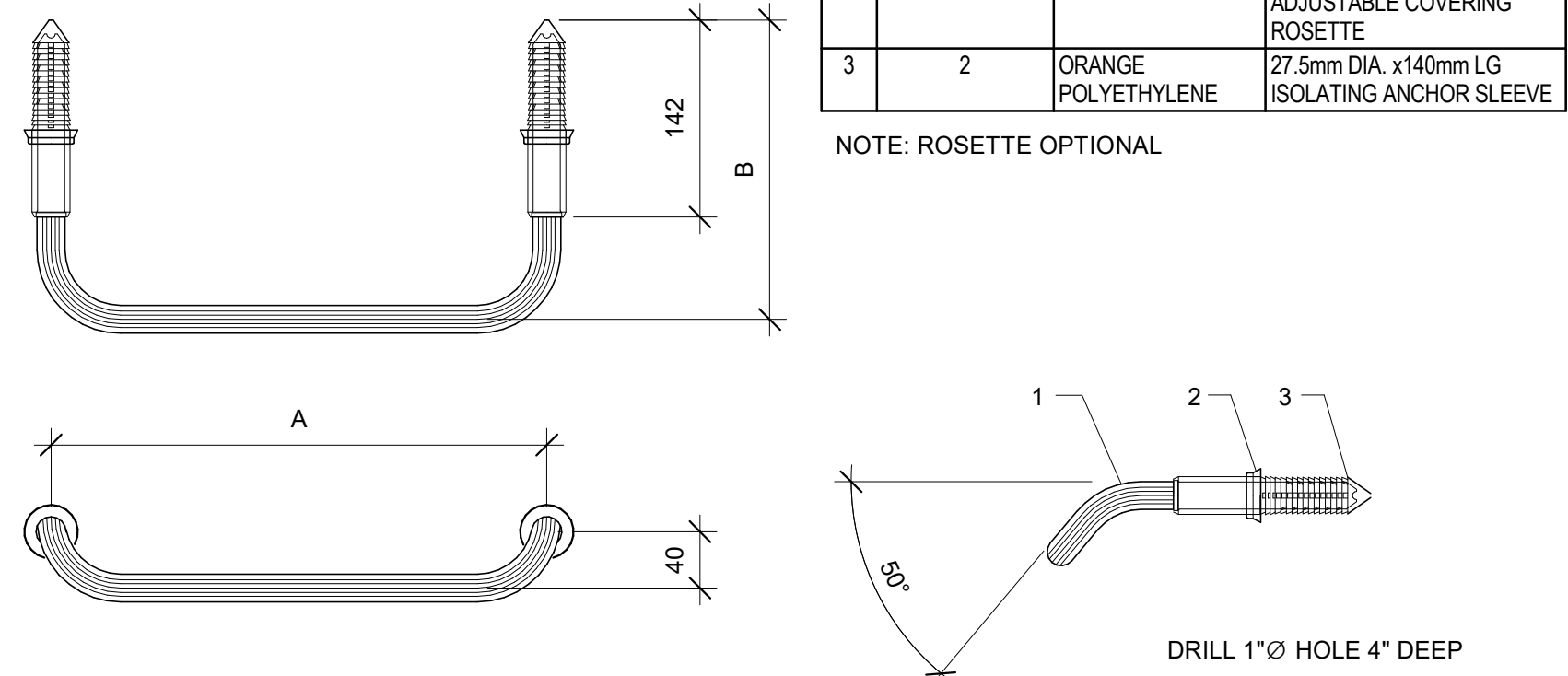
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5
210

BUILDING CONNECTION DETAIL

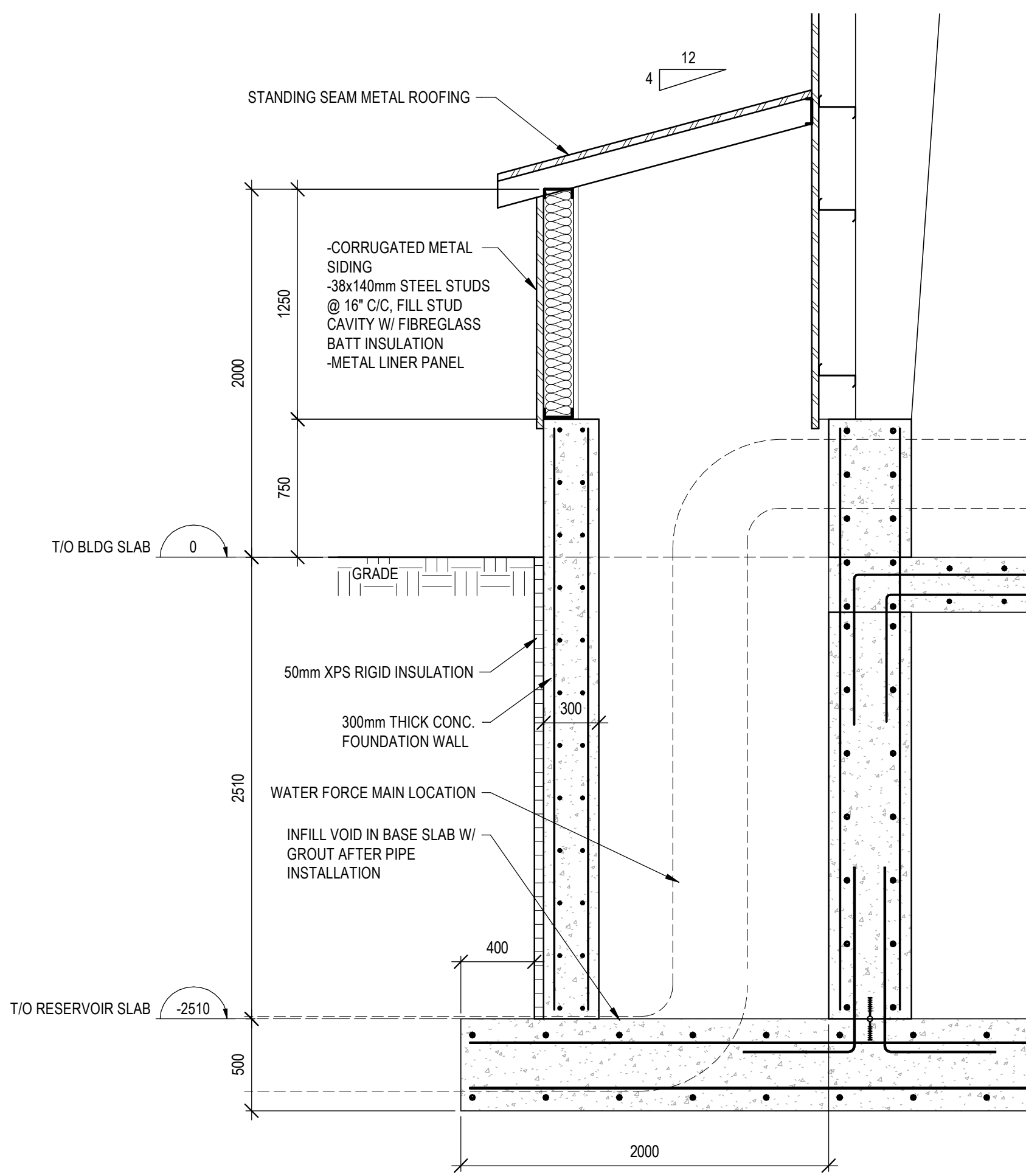
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6
210

TYPICAL CLIMBING STEP

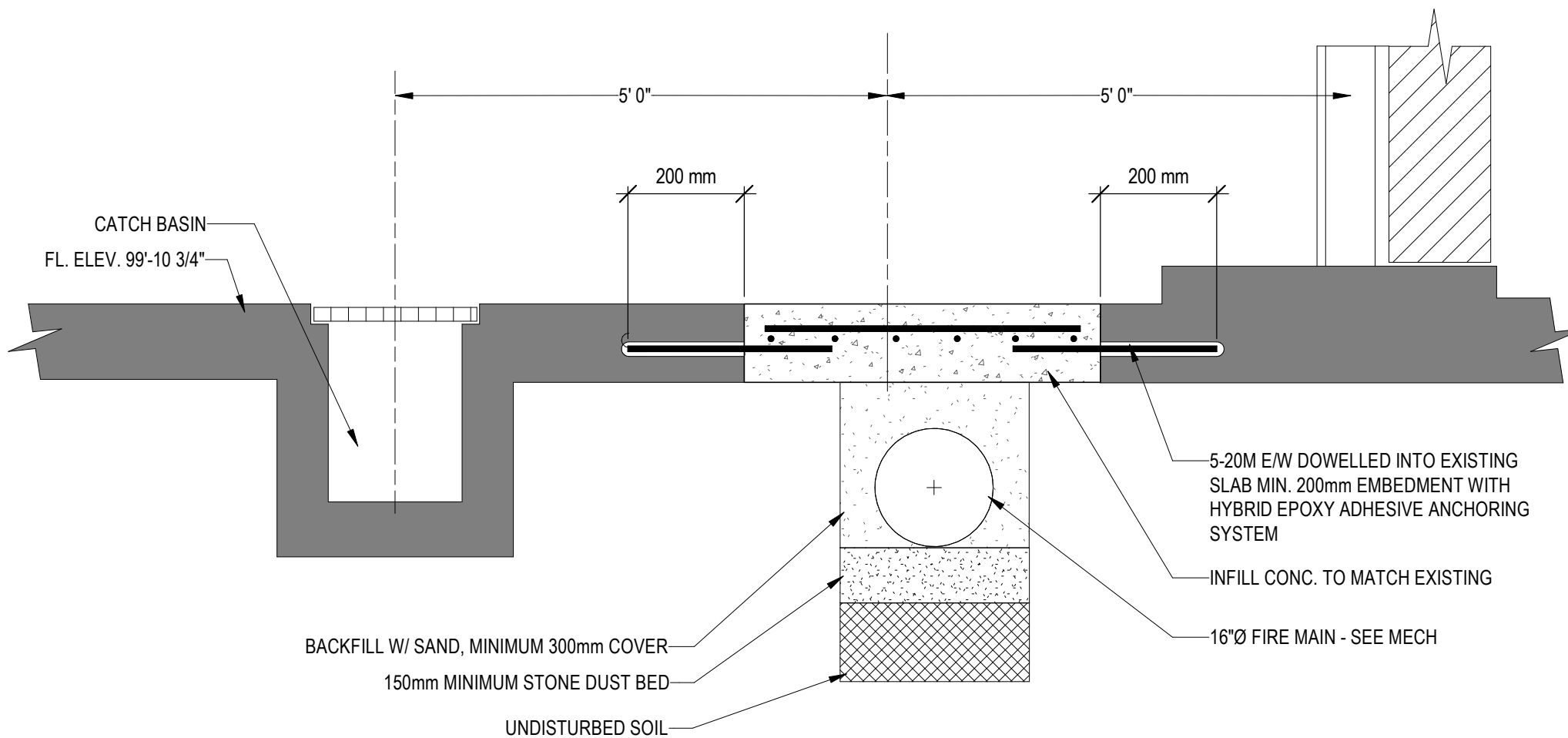
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7
210

DOGHOUSE SECTION DETAIL

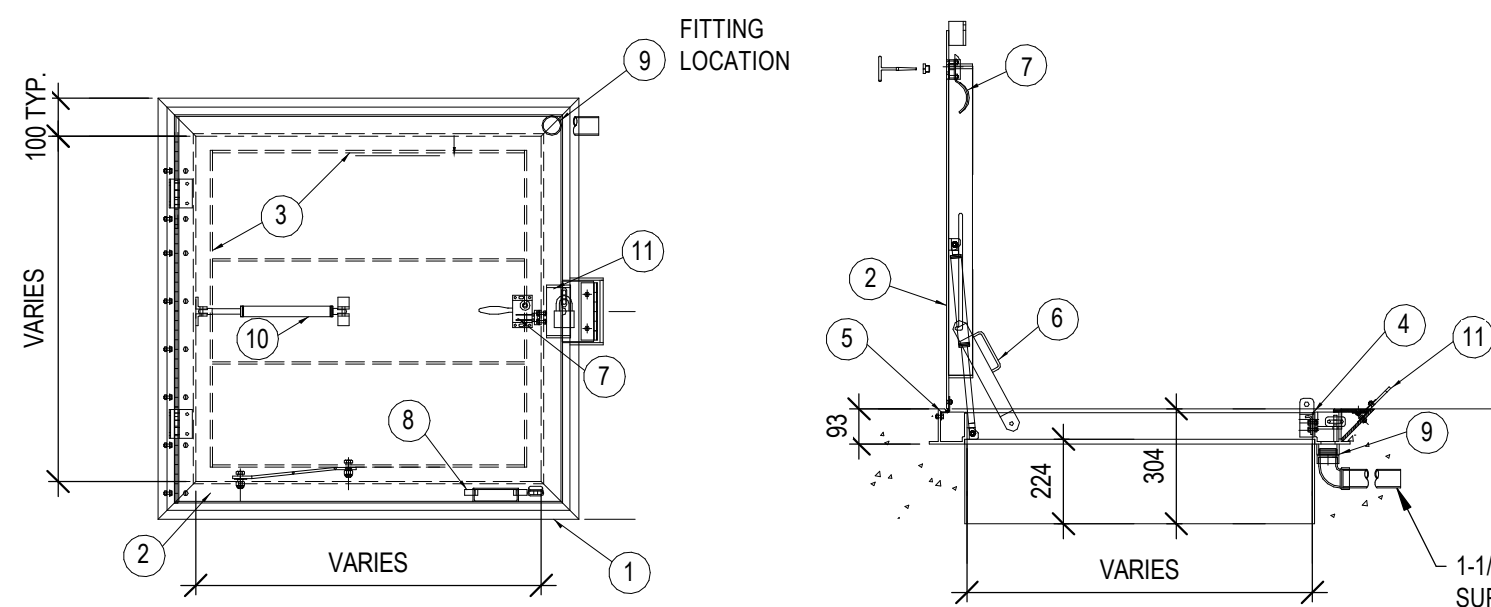
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8
210

SLAB INFILL DETAIL

SCALE: 1:10

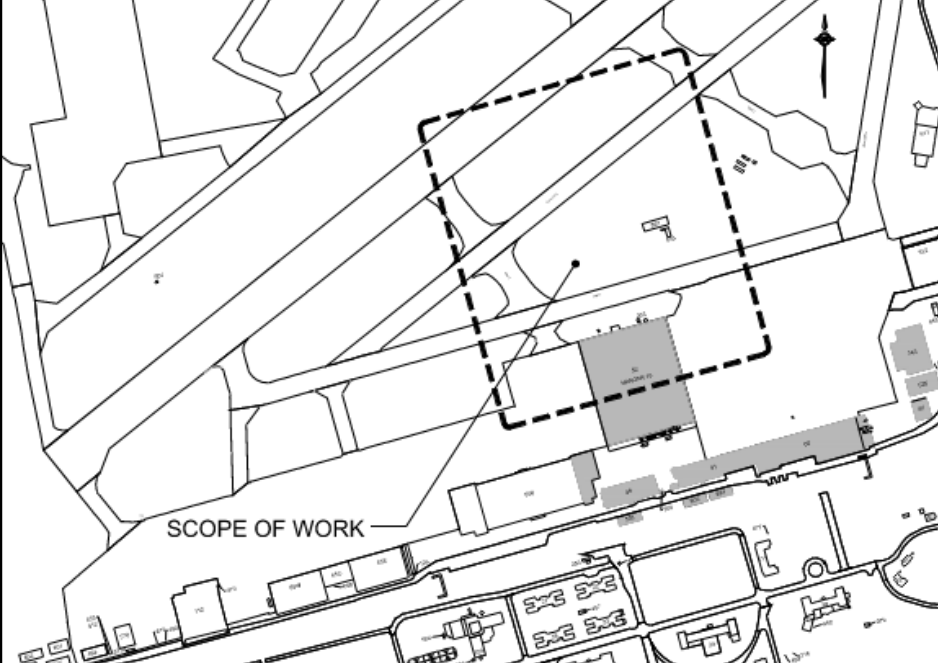


#	QUANTITY	MATERIAL	DESCRIPTION
1	1	ALUMINUM 6351-T6	FRAME EXTRUSION
2	1	ALUMINUM 6061-T6	6.4mm TREAD PLATE
3	6	ALUMINUM 6061-T6	76x6.4 FLAT BAR REINFORCING
4	1	BLACK CORD NEOPRENE	PERIMETER GASKET
5	2	STAINLESS STEEL 316	S.S 316 BUTT HINGES C/W TAMPERPROOF FASTENERS
6	1	STAINLESS STEEL 316	90° HOLD OPEN ARM
7	1	STAINLESS STEEL 316	SLAM LOCK W/ ALUMINUM REMOVEABLE SEALING PLUG AND OPENING TOOL
8	1	ALUMINUM 6061-T6	FLUSH LIFT HANDLE
9	1	ALUMINUM 6061-T6	38mm DIA. PIPE HALF-COUPLING W/ ABS ADAPTOR/ELBOW
10	1	STAINLESS STEEL 316	GAS SPRING ASSIST CYLINDER C/W ALUMINUM MOUNTING BRACKETS
11	1	ALUMINUM 6061-T6	FLUSH LOCK

9
210

TYPICAL ACCESS HATCH

SCALE: 1:20



KEYPLAN



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NO.	DATE	REVISION	APPR.
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SCALE | ÉCHELLE

As indicated

LOCATION | EMPLACEMENT
8 WING TRENTON
CFB TRENTON, ONTARIO

PROJECT | PROJET

TRE-UPG B052 (HGR 10) FIRE
PUMPHOUSE

TRADE | MÉTIER
STRUCTURAL

DATE
03/31/24

SUBJECT | SUJET

DETAILS CONT.

PRODUCTION	DESIGNED ETUDIÉ	REVIEWED REVU
I. JOHNSON	DES O AGENT CONC S.C	
C. SIMPSON	DRAWN DESSINÉ	PRO MGR GÉST PROJ P.O
D. HARMER	CHECKED VÉRIFIÉ	DES MGR GÉST CONC S.C
COORDINATION		FIRE INCENDIE

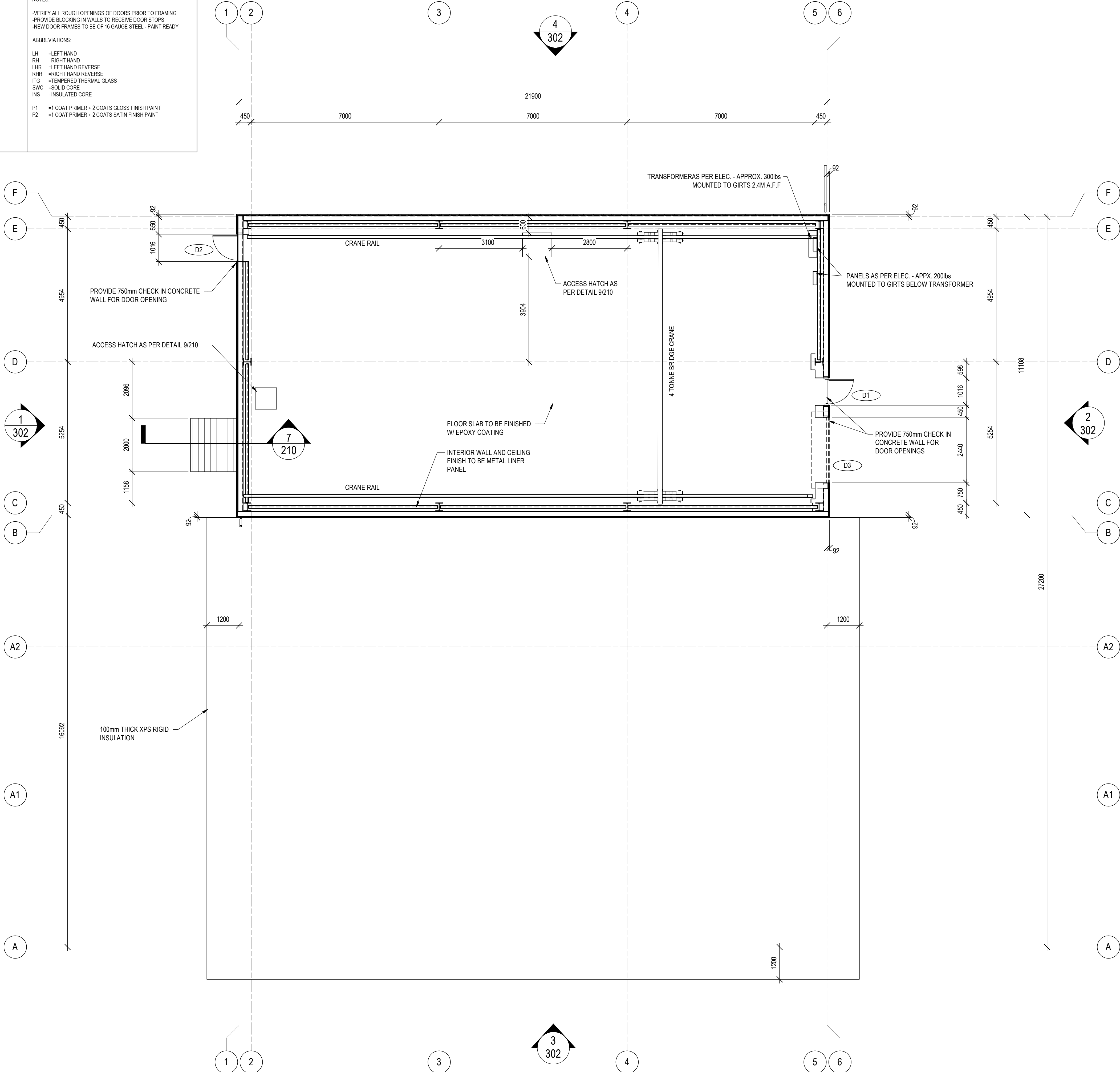
WBS NUMBER | NO. SRT
N.002108.03

PF NUMBER | NO. DP
500006750

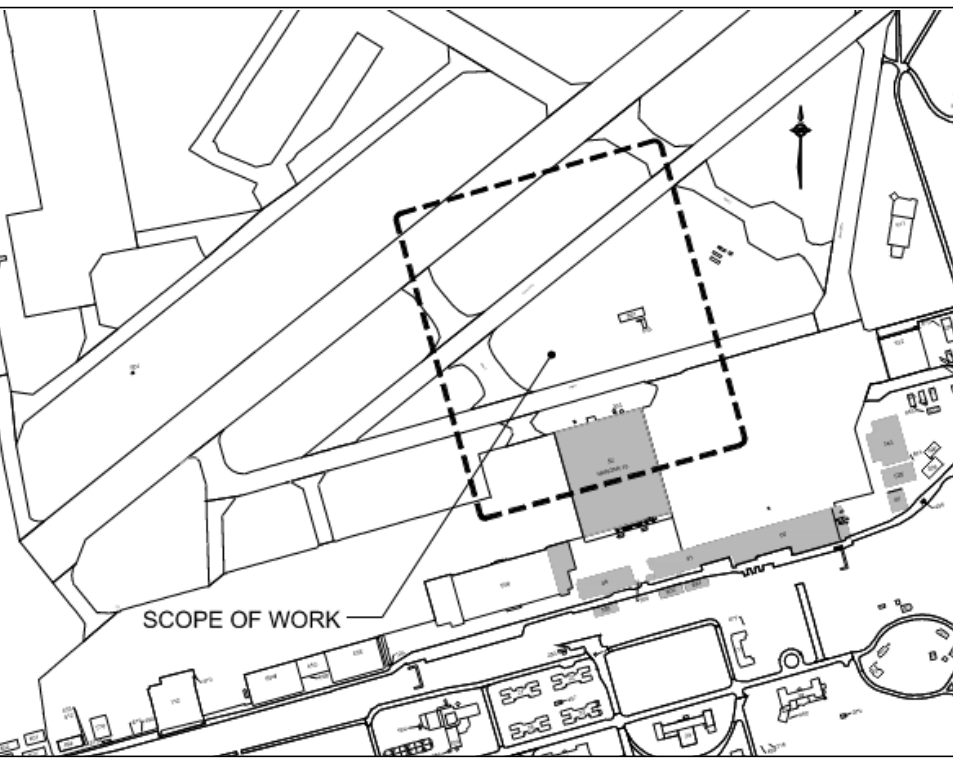
DWG. NO. | NO. DESSIN
L-T81-3006/68 - 210

Canada

DOOR SCHEDULE													
DOOR #	SIZE			DOOR TYPE	GLASS TYPE	FIRE RATING (MIN)	DOOR SWING	MATERIAL			FRAME		REMARKS
	WIDTH	HEIGHT	THICKNESS					CORE	DESCRIPTION	FINISH	TYPE	STEEL KNOCKDOWN WELDED	
D1	914	2130	45	A	ITO	-	RHR	INS	HOLLOW METAL	P1	1	WELDED	FULL MORTISE HINGES, DEAD BOLT, PANIC HARDWARE, OVERHEAD STOP AND HOLD OPEN DEVICE, WEATHER STRIPPING, DOOR SWEEP, LOW PROFILE ALUMINUM THRESHOLD, KICK PLATE
D2	914	2130	45	A	ITO	-	LHR	INS	HOLLOW METAL	P1	1	WELDED	FULL MORTISE HINGES, DEAD BOLT, PANIC HARDWARE, OVERHEAD STOP AND HOLD OPEN DEVICE, WEATHER STRIPPING, DOOR SWEEP, LOW PROFILE ALUMINUM THRESHOLD, KICK PLATE
D3	2400	2400	45	B	-	-	-	INS	HOLLOW METAL	P1	-	-	INSULATED ROLL UP DOOR CURTAIN, BOTTOM BAR, GUIDES, BRACKETS, BARREL ASSEMBLY, HOOD, BAR SLIDE LOCKS, ELECTRIC OPERATOR KIT, WEATHERSTRIPPING
DOOR TYPES													
								FRAME TYPES				NOTES	
												-VERIFY ALL ROUGH OPENINGS OF DOORS PRIOR TO FRAMING -PROVIDE BLOCKING IN WALLS TO RECEIVE DOOR STOPS -NEW DOOR FRAMES TO BE OF 16 GAUGE STEEL - PAINT READY	
												ABBREVIATIONS:	
												LH =LEFT HAND	
												RH =RIGHT HAND	
												LHR =LEFT HAND REVERSE	
												RHR =RIGHT HAND REVERSE	
												ITO =TEMPERED THERMAL GLASS	
												SWC =SOLID CORE	
												INS =INSULATED CORE	
												P1 =+1 COAT PRIMER + 2 COATS GLOSS FINISH PAINT	
												P2 =+1 COAT PRIMER + 2 COATS SATIN FINISH PAINT	



1 PRE-ENGINEERED BUILDING PLAN
SCALE: 1:75



KEYPLAN



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NO.	DATE	REVISION	APPR.
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SCALE | ÉCHELLE
1 : 75

LOCATION | EMPLACEMENT
8 WING TRENTON
CFB TRENTON, ONTARIO

PROJECT | PROJET

TRE-UPG B052 (HGR 10) FIRE
PUMPHOUSE

TRADE MÉTIER ARCHITECTURAL	DATE 2024/03/31
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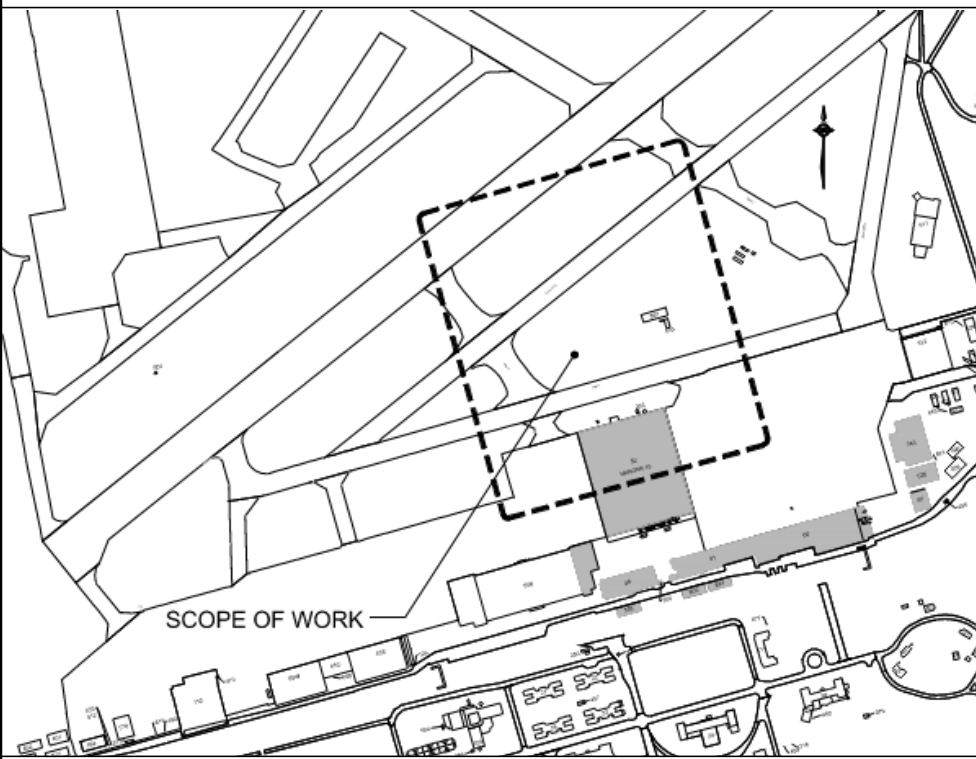
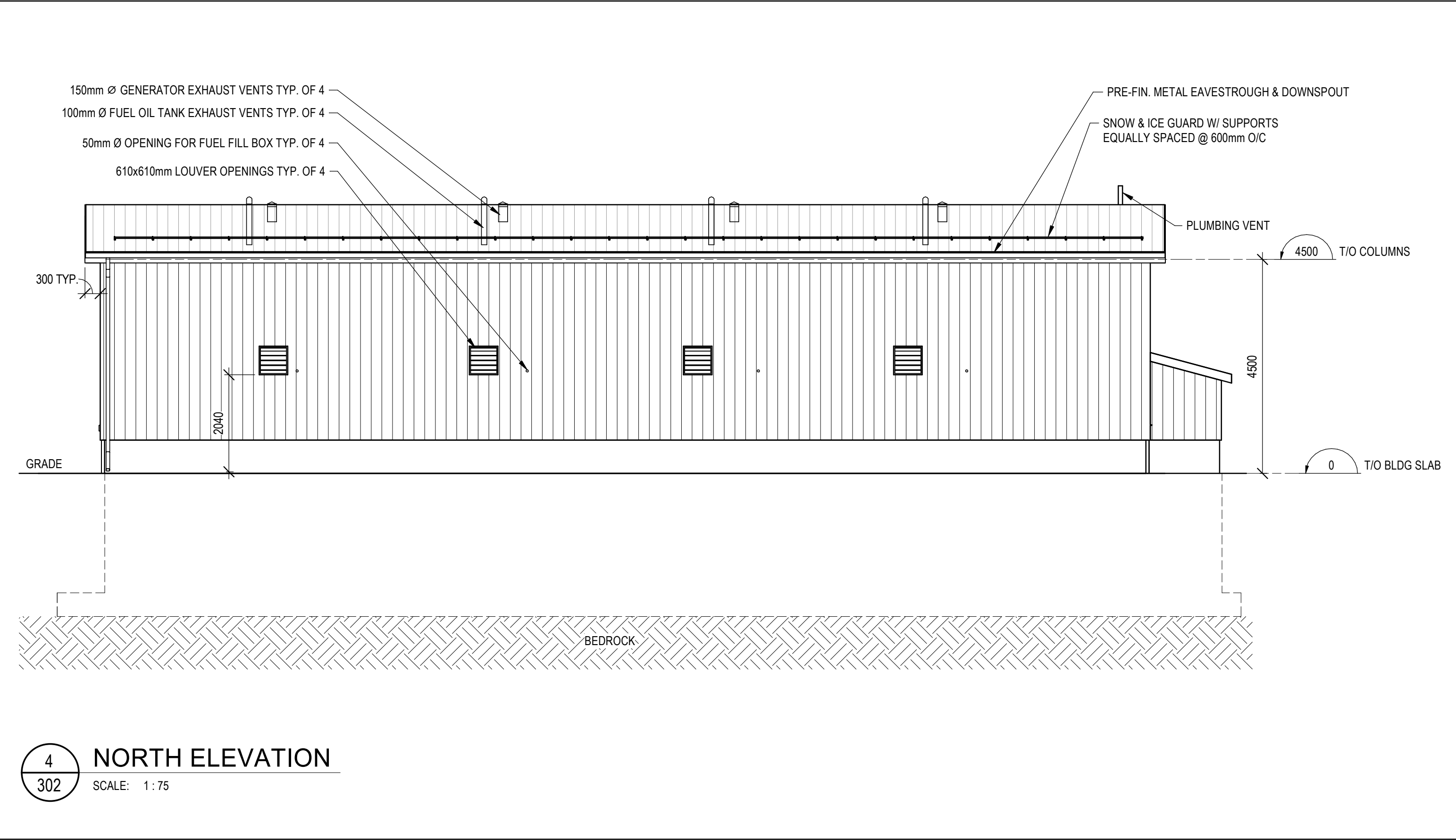
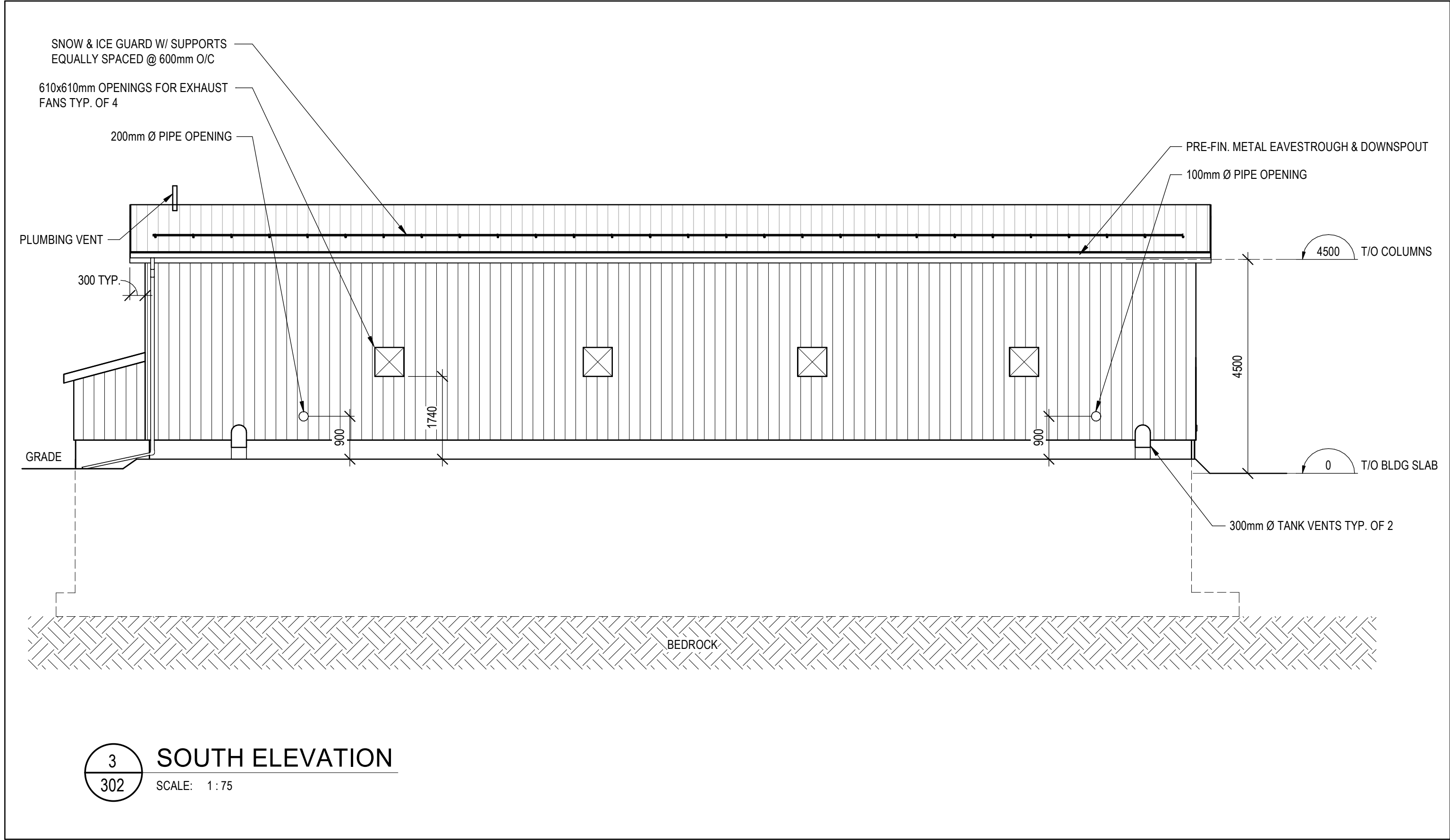
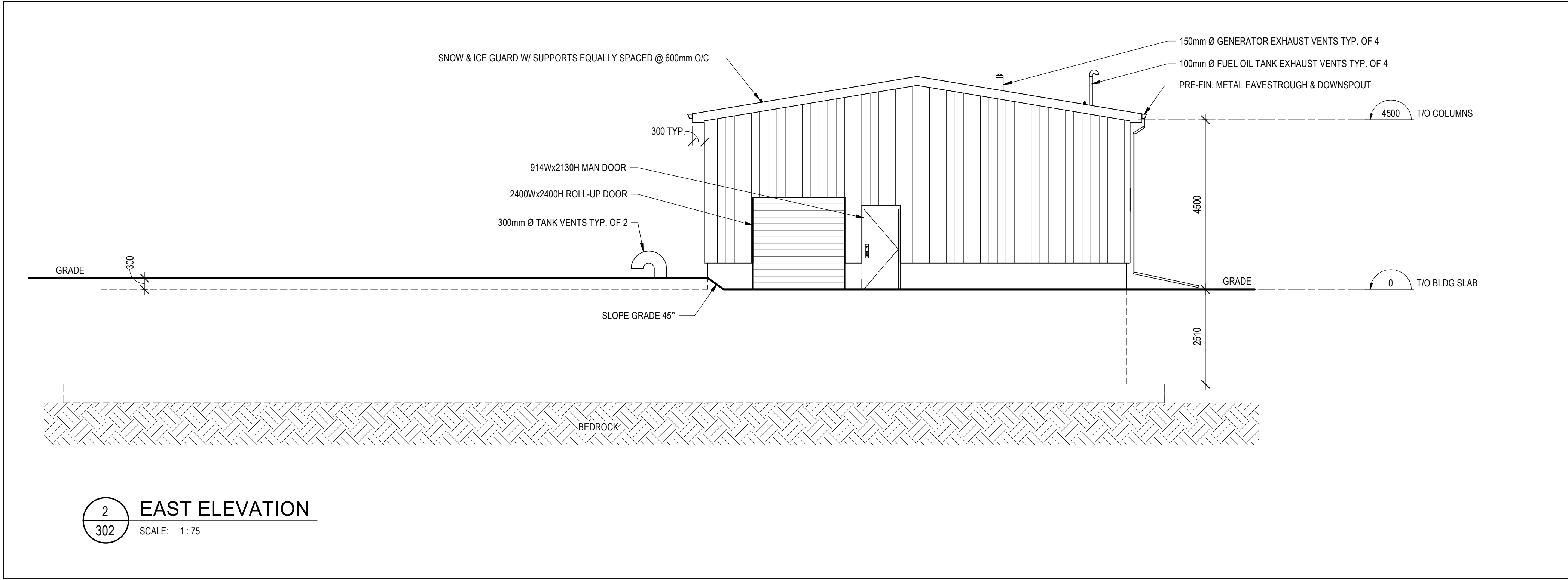
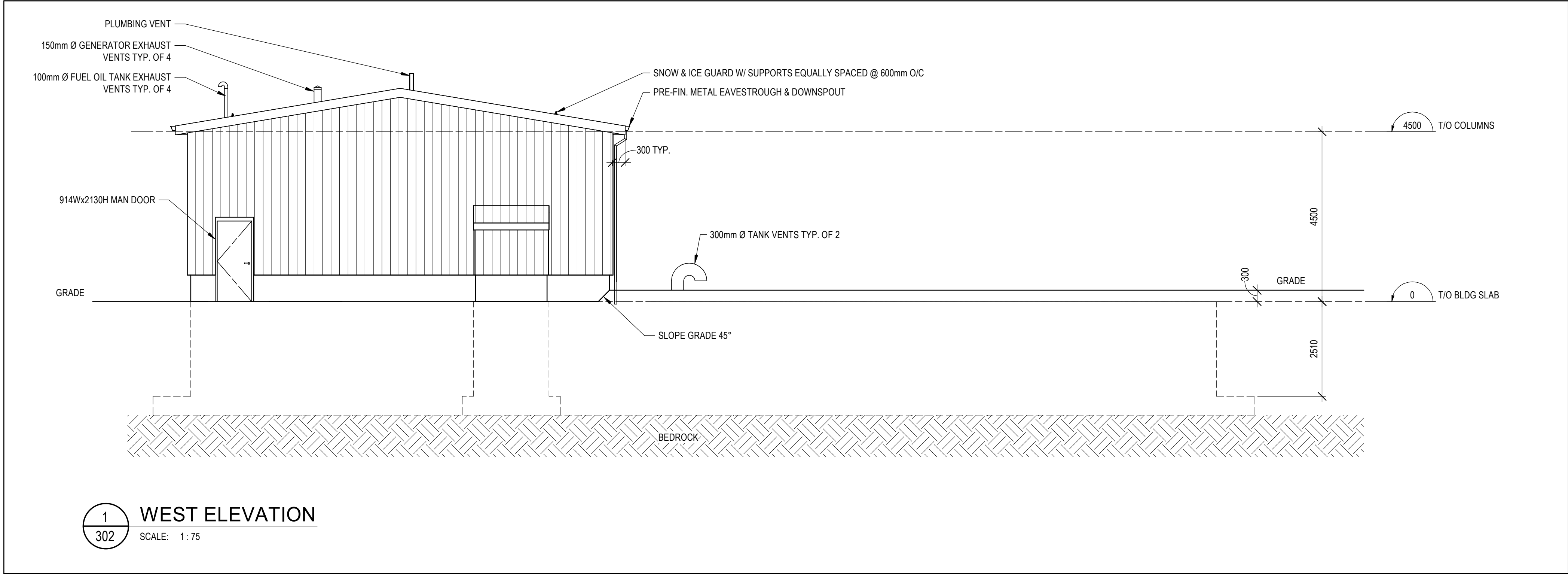
SUBJECT | SUJET

PRE-ENGINEERED BUILDING PLAN

PRODUCTION		REVIEWED REVU	
DESIGNED ÉTUDIÉ I. JOHNSON		DES O AGENT CONC S.C	
DRAWN DESSINÉ C. SIMPSON		PRO MGR GÉST PROJ P.O	
CHECKED VÉRIFIÉ D. HARMER		DES MGR GÉST CONC S.C	
COORDINATION		FIRE INCENDIE	

WBS NUMBER NO. SRT N.002108.03	PF NUMBER NO. DP 500006750
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DWG. NO. | NO. DESSIN
L-T81-3006/68 - 301



KEYPLAN



6	2025-10-21	RE-ISSUED FOR 100% SUBMISSION	I.J.C.S
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NO.	DATE	REVISION	APPR.
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SCALE | ÉCHELLE
1 : 75

LOCATION | EMPLACEMENT
8 WING TRENTON
CFB TRENTON, ONTARIO

PROJECT | PROJET

TRE-UPG B052 (HGR 10) FIRE PUMPHOUSE

TRADE | MÉTIER
ARCHITECTURAL
DATE
2024/03/31

SUBJECT | SUJET

ELEVATIONS

PRODUCTION	DESIGNED ÉTUDIÉ	REVIEWED REVU	DES O AGENT CONC S.C
I. JOHNSON			PRO MGR GÉST PROJ
DRAWN DESSINÉ			P.O
C. SIMPSON			DES MGR GÉST CONC S.C
CHECKED VÉRIFIÉ			FIRE INCENDIE
D. HARMER			
COORDINATION			

WBS NUMBER | NO. SRT
N.002108.03
PF NUMBER | NO. DP
500006750

DWG. NO. | NO. DESSIN
L-T81-3006/68 - 302

DIESEL ENGINE SCHEDULE																
TAG	COUNT	TYPE	MOTOR POWER	RPM	FUEL CONSUMPTION	INTAKE AIRFLOW	EXHAUST AIRFLOW	HEAT EXCHANGER MIN FLOW @100°F H2O	MAX. WATER INLET PRESSURE	HEAT LOSS H2O	HEAT LOSS RADIATED	MAX. FUEL PUMP SUCTION	FUEL SUPPLY SIZE	FUEL RETURN SIZE	WATTS	V/ΦHz
E-1	1	DIESEL ENGINE C/W BATTERY STARTER, ELECTRIC HEATER & RAW WATER COOLING SYSTEM	216 kW	1770	45 L/h	0.285 CMS	0.770 CMS	64.3 L/min	853.2 kPa	130 kW	16.7 kW		21.5 mm	17.1 mm		
E-2	1	DIESEL ENGINE C/W BATTERY STARTER, ELECTRIC HEATER & RAW WATER COOLING SYSTEM	216 kW	1770	45 L/h	0.285 CMS	0.770 CMS	64.3 L/min	853.2 kPa	130 kW	16.7 kW		21.5 mm	17.1 mm		
E-3	1	DIESEL ENGINE C/W BATTERY STARTER, ELECTRIC HEATER & RAW WATER COOLING SYSTEM	216 kW	1770	45 L/h	0.285 CMS	0.770 CMS	64.3 L/min	853.2 kPa	130 kW	16.7 kW		21.5 mm	17.1 mm		
E-4	1	DIESEL ENGINE C/W BATTERY STARTER, ELECTRIC HEATER & RAW WATER COOLING SYSTEM	216 kW	1770	45 L/h	0.285 CMS	0.770 CMS	64.3 L/min	853.2 kPa	130 kW	16.7 kW		21.5 mm	17.1 mm		

FIRE PUMP SCHEDULE											
TAG	COUNT	TYPE	BHP	STAGES	FLOW	DISCHARGE SIZE	RATED PRESSURE	RPM	LENGTH	WIDTH	HEIGHT
P-1	1	VERTICAL TURBINE, DIESEL DRIVEN	153.72 kW	3	125 L/s	76 mm	87 mH2O	1770	4830 mm	635 mm	1410 mm
P-2	1	VERTICAL TURBINE, DIESEL DRIVEN	153.72 kW	3	125 L/s	76 mm	87 mH2O	1770	4830 mm	635 mm	1410 mm
P-3	1	VERTICAL TURBINE, DIESEL DRIVEN	153.72 kW	3	125 L/s	76 mm	87 mH2O	1770	4830 mm	635 mm	1410 mm
P-4	1	VERTICAL TURBINE, DIESEL DRIVEN	153.72 kW	3	125 L/s	76 mm	87 mH2O	1770	4830 mm	635 mm	1410 mm

JOCKEY PUMP SCHEDULE											
TAG	COUNT	TYPE	BHP	RPM	FLOW	DISCHARGE SIZE	RATED PRESSURE	V/ΦHz	DIMENSIONS	WEIGHT	
JP-1	1	SUBMERSIBLE JOCKEY PUMP, ELECTRIC	1.77 kW	3530	1.26 L/s	34.00 mm	87 mH2O	208/3/60	251 mm	685 mm	46.72 kg

ELECTRIC UNIT HEATER SCHEDULE											
TAG	COUNT	TYPE	AIR FLOW	BHP	HEATING OUTPUT	V/ΦHz	DIMENSIONS	WEIGHT			
UH-1	1	ELECTRIC	179 L/s	1/40	5 kW	600/3/60	438 mm	327 mm	445 mm	15 kg	
UH-2	1	ELECTRIC	179 L/s	1/40	5 kW	600/3/60	438 mm	327 mm	445 mm	15 kg	

EXHAUST FAN SCHEDULE											
TAG	COUNT	TYPE	AIR FLOW	ESP	SONES	WATTS	V/ΦHz	HEIGHT	WIDTH	LENGTH	WEIGHT
EF-1	1	SIDEWALL DIRECT DRIVE	188.8 L/s	145 Pa	7.9	50 W	115/1/60	533 mm	340 mm	533 mm	13 kg
EF-2	1	SIDEWALL DIRECT DRIVE	188.8 L/s	145 Pa	7.9	50 W	115/1/60	533 mm	340 mm	533 mm	13 kg
EF-3	1	SIDEWALL DIRECT DRIVE	188.8 L/s	145 Pa	7.9	50 W	115/1/60	533 mm	340 mm	533 mm	13 kg
EF-4	1	SIDEWALL DIRECT DRIVE	188.8 L/s	145 Pa	7.9	50 W	115/1/60	533 mm	340 mm	533 mm	13 kg

VALVE SCHEDULE				
TAG	DESCRIPTION	NOMINAL SIZE (mm)	BASIS OF DESIGN	NOTES
RV-1	PUMP DISCHARGE RELIEF VALVE C/W FLOW INDICATOR	250 mm	VICTAULIC SERIES 867-7UF DN300 PRESSURE RELIEF VALVE C/W VALVE POSITION-FLOW INDICATOR	1
CV-1	PUMP DISCHARGE CHECK VALVE	250 mm	VICTAULIC SERIES 717 CHECK VALVE	
CV-2	FIRE DEPARTMENT CONNECTION CHECK VALVE	100 mm	VICTAULIC SERIES 717 CHECK VALVE	
BV-1	FIRE MAIN / FD CONNECTION	250 mm	VICTAULIC SERIES 705 FIRELOCK BUTTERFLY VALVE	
BV-2	TEST HEADER BUTTERFLY VALVE	200 mm	VICTAULIC SERIES 705 FIRELOCK BUTTERFLY VALVE	

NOTES: 1. SET RELIEF VALVE PRESSURE TO 150PSI (105m)

LEGEND - GENERAL	
SYMBOL	DESCRIPTION
-----	ITEM TO BE DEMOUSHED
=====	EXISTING ITEM TO REMAIN
-----	NEW ITEM TO BE PROVIDED
(E)	DENOTES EXISTING ITEM TO REMAIN
(X)	DENOTES EXISTING ITEM TO BE REMOVED
(R)	DENOTES EXISTING ITEM TO BE RELOCATED
	SECTION 1 ON DRAWING 401
	DETAIL 1 ON DRAWING 401

LEGEND - PIPING SPECIALTIES	
SYMBOL	DESCRIPTION
	PIPE DROPS DOWN
	PIPE RISES UP
	BRANCH OFF BOTTOM OF PIPE
	BRANCH OFF TOP OF PIPE
	CONTINUOUS PIPE
	PIPING PITCH (DN. OR UP: INDICATE)
	DIRECTION OF FLOW
	CAPPED PIPE
	UNION
	FLANGE CONNECTION
	HEAT TRACED PIPING
	METER
	AUTOMATIC AIR VENT WITH MANUAL RELEASE, SHUTOFF COCK, AND DISCHARGE PIPING
	AUTOMATIC AIR VENT
	PIPE GUIDE
	PIPE ANCHOR
	EXPANSION JOINT
	EXPANSION LOOP
	FLEXIBLE CONNECTION
	STRAINER
	SEISMIC SUPPORT (PRE-MANUFACTURED)
	THERMOMETER
	PRESSURE GAUGE

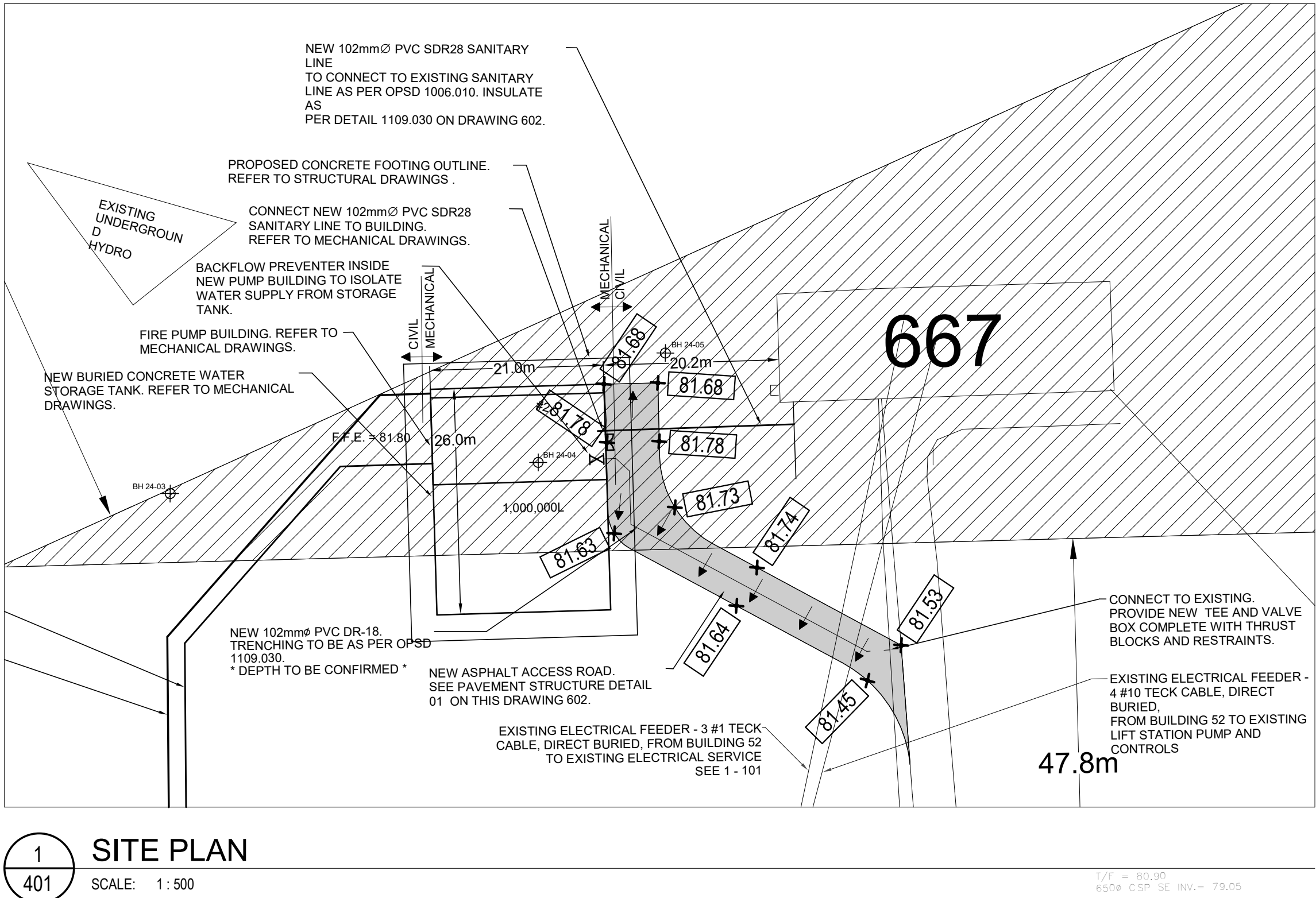
LEGEND - VALVES	
SYMBOL	DESCRIPTION
	GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	GLOBE VALVE
	CHECK VALVE
	BALANCING VALVE
	PLUG VALVE
	PRESSURE REGULATING VALVE
	RELIEF VALVE
	DOUBLE CHECK VALVE ASSEMBLY

LEGEND - PLUMBING	
SYMBOL	DESCRIPTION
	SANITARY DRAIN ABOVE GROUND
	SANITARY DRAIN BELOW GROUND
	VENT
	STORM DRAIN ABOVE GROUND
	STORM DRAIN BELOW GROUND
	DOMESTIC COLD WATER
	FUEL OIL SUPPLY
	FUEL OIL RETURN
	HOSE BIBB/WALL HYDRANT
	NON-FREEZE HOSE BIBB/WALL HYDRANT
	DRAIN PIPE WITH CLEANOUT
	DRAIN PIPE WITH CLEANOUT UP TO FLOOR
	DRAINAGE TRAP
	ROUND FLOOR DRAIN
	ROOF DRAIN

LEGEND - EQUIPMENT	
SYMBOL	DESCRIPTION
	PUMP
	UNIT HEATER, HORIZONTAL DISCHARGE
	OPPOSED BLADE DAMPER
	PARALLEL BLADE DAMPER
	LOUVER
	WALL MOUNTED CENTRIFUGAL FAN
	MOTORIZED OPPOSED BLADE DAMPER

LEGEND - CONTROLS	
SYMBOL	DESCRIPTION
	TEMPERATURE SENSOR
	THERMOSTAT
	CARBON MONOXIDE SENSOR
	CARBON DIOXIDE SENSOR
	STATIC PRESSURE SENSOR
	SMOKE DETECTOR
-----	CONTROL WIRING
	SOLENOID VALVE
	2 WAY ELECTRONIC CONTROL VALVE (2 POSITION)
	2 WAY ELECTRONIC CONTROL VALVE (MODULATING)
	3 WAY ELECTRONIC CONTROL VALVE (2 POSITION)
	3 WAY ELECTRONIC CONTROL VALVE (MODULATING)
	MOTORIZED DAMPER (SINGLE BLADE OR BUTTERFLY)
	MOTORIZED DAMPER (PARALLEL BLADE)
	MOTORIZED DAMPER (OPPOSED BLADE)
	LEVEL SENSOR

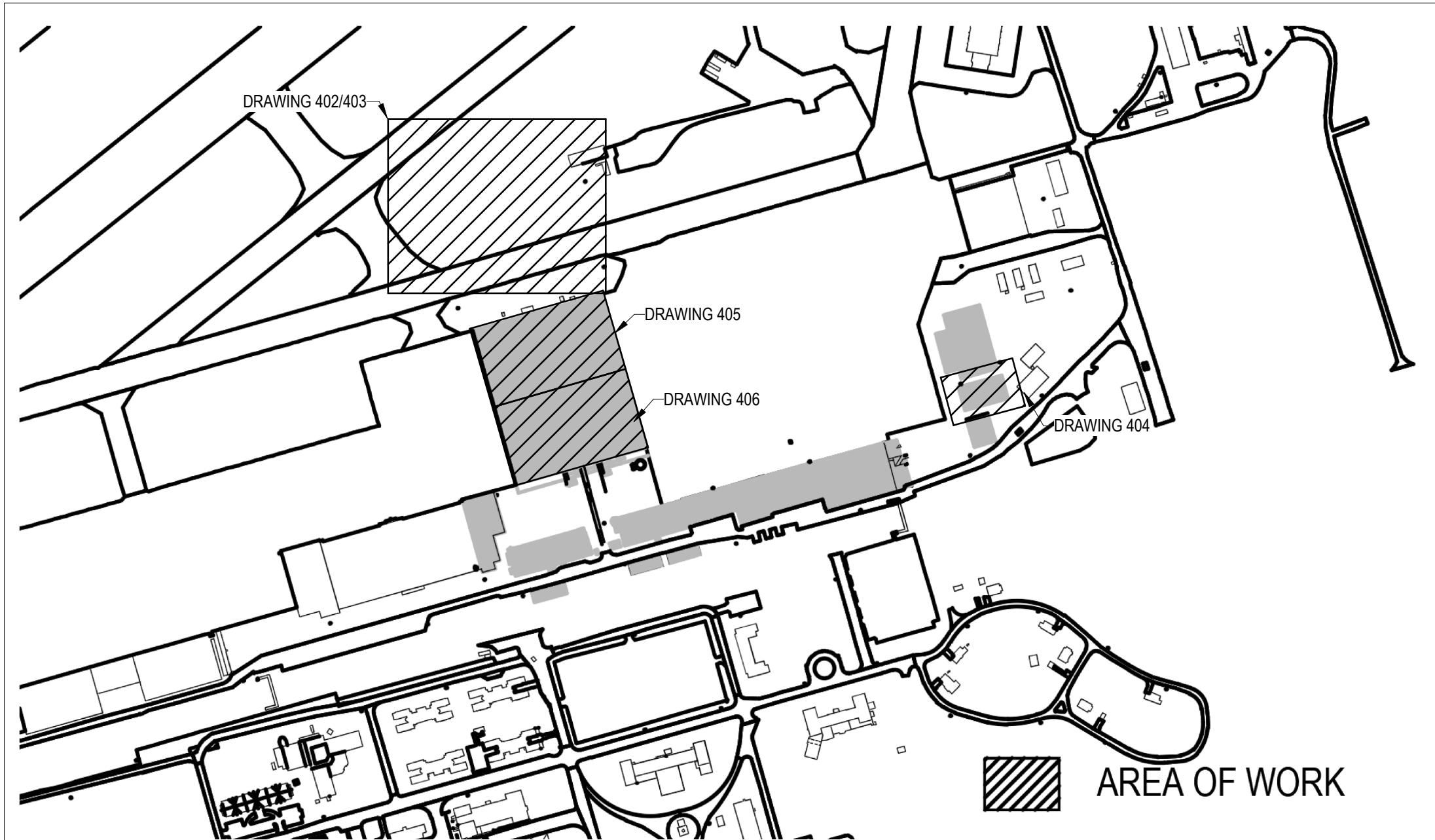
LEGEND - FIRE PROTECTION	
SYMBOL	DESCRIPTION
	SPRINKLER LINE (WET)
	SPRINKLER LINE (DRY)
	SPRINKLER LINE (GLYCOL)
	SPRINKLER FOAM COMBINED
	STANDPIPE LINE
	UPRIGHT SPRINKLER HEAD - EXISTING
	UPRIGHT SPRINKLER HEAD - NEW
	SIDEWALL SPRINKLER HEAD - EXISTING
	SIDEWALL SPRINKLER HEAD - NEW
	CONCEALED SPRINKLER HEAD - EXISTING
	CONCEALED SPRINKLER HEAD - NEW
	PENDANT SPRINKLER HEAD - EXISTING
	PENDANT SPRINKLER HEAD - NEW
	FIRE HOSE CABINET
	PORTABLE FIRE EXTINGUISHER
	PIPE-MOUNT FLOW SWITCH
	SUPERVISED ISOLATION VALVE
	WET ALARM CHECK VALVE
	DRY ALARM CHECK VALVE
	FIRE DEPARTMENT CONNECTION



1 SITE PLAN
401 SCALE: 1: 500

DRAWING LIST	
DRAWING NUMBER	DESCRIPTION
401	LEGENDS, SCHEDULES & DRAWING LIST
402	FIRE PROTECTION PLANS
403	SPRINKLER, DOMESTIC WATER & SANITARY PLANS
405	HANGAR 10 WATER MAIN TIE-IN
406	HANGAR 10 EXISTING WATER MAIN VALVE OFF
407	FIRE PROTECTION SYSTEM SCHEMATICS AND DETAILS

GENERAL NOTES	
01	DRAWINGS ARE NOT TO BE READ IN ISOLATION. REQUIREMENTS CALLED FOR ON ONE DRAWING ARE TO BE CONSIDERED TO BE CALLED FOR ON ALL DRAWINGS.
02	NOT ALL EQUIPMENT IS IDENTIFIED IN EQUIPMENT SCHEDULES. REFER TO ALL DRAWING NOTES AND SPECIFICATIONS TO UNDERSTAND ALL REQUIRED EQUIPMENT, ACCESSORIES, AND INTERCONNECTIONS TO OTHER TRADES AND SYSTEMS. EQUIPMENT SCHEDULES PROVIDED ARE NOT TO BE USED AS A BILL OF MATERIALS. SOME EQUIPMENT TAGS MAY BE TYPICAL TAGS REPEATED IN MULTIPLE LOCATIONS. REVIEW DRAWINGS COMPLETELY TO UNDERSTAND REQUIRED QUANTITIES OF MATERIALS. QUANTITIES OF FIXTURES SHOWN ON ARCHITECTURAL DRAWINGS TO GOVERN.
03	ITEMS NOTED "PROVIDE" SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR.



2 KEY PLAN
401 SCALE: 1: 5000

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Jp2g Consultants Inc.
ENGINEERS • PLANNERS • PROJECT MANAGERS

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JP2g PROJECT No.: 19-5022A



PROFESSIONAL ENGINEER
AL L. MacDonald
100069306
Nov 20 2025
PROVINCE OF ONTARIO

6	2025/11/20	ISSUED FOR TENDER	AM/BH
5	2025/10/21	ISSUED FOR 100% RESUBMISSION	AM/BH
4	2025/03/07	ISSUED FOR 100% SUBMISSION	AM/BH
3	2024/12/16	ISSUED FOR 90% REVIEW REV. 1	AM/BH
2	2024/03/31	ISSUED FOR 60% REVIEW REV. 2	AM/CK
NO.	DATE	REVISION	APPR.
SCALE ÉCHELLE			

LOCATION | EMPLACEMENT
8 WING TRENTON
CFB TRENTON, ONTARIO

PROJECT | PROJET
TRE-UPG B052 (HGR 10) FIRE PUMPHOUSE

TRADE MÉTIER MECHANICAL	DATE 2025/03/07
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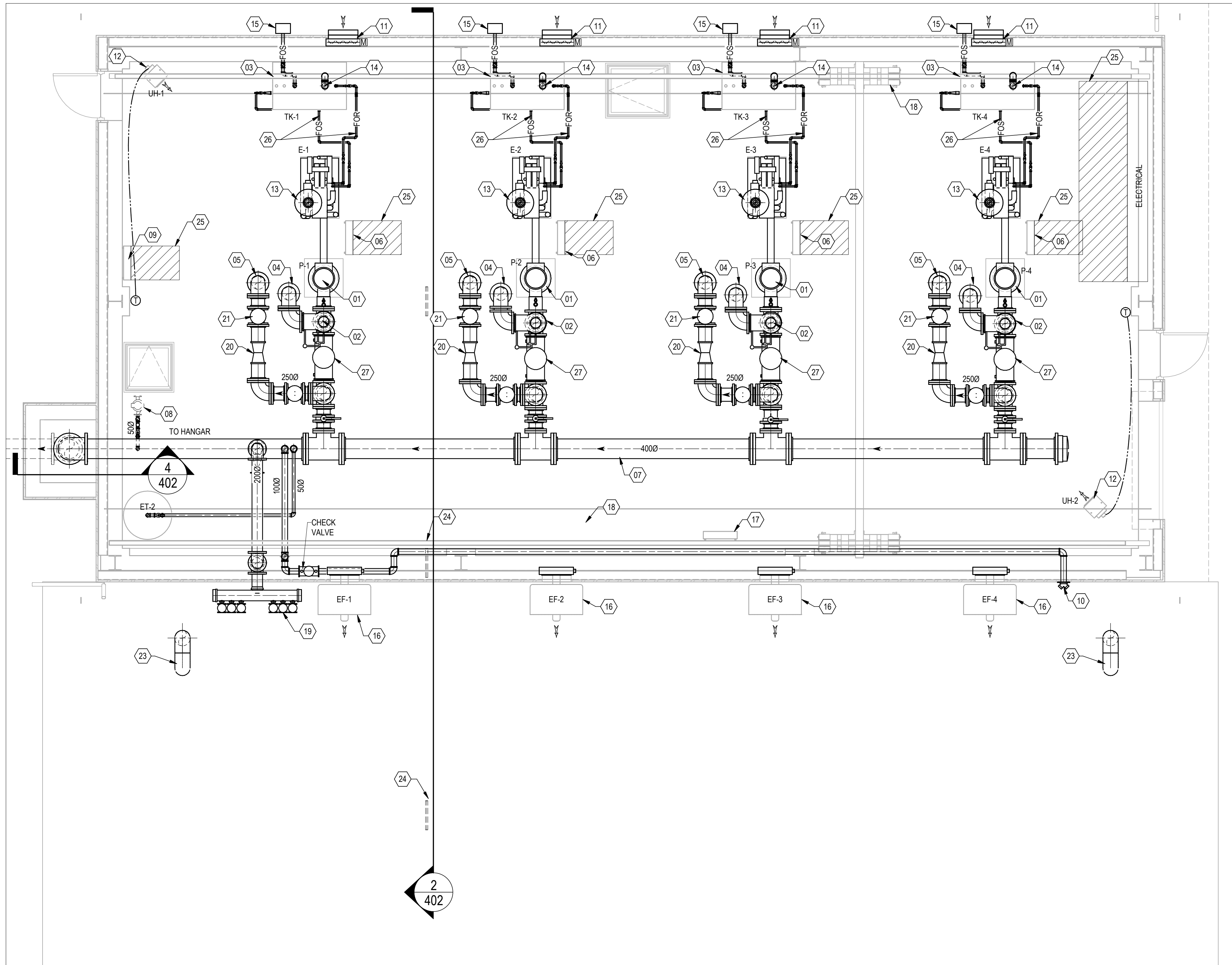
SUBJECT | SUJET
LEGENDS, SCHEDULES & DRAWING LIST

PRODUCTION	DESIGNED ÉTUDIÉ A.MACDONALD	REVIEWED REVU DES O AGENT CONC S.C.
	DRAWN DESSINÉ C.KUEHL	PRO MGR GÉST PROJ P.O.
	CHECKED VÉRIFIÉ M.MA	DES MGR GÉST CONC S.C.
	COORDINATION	FIRE INCENDIE

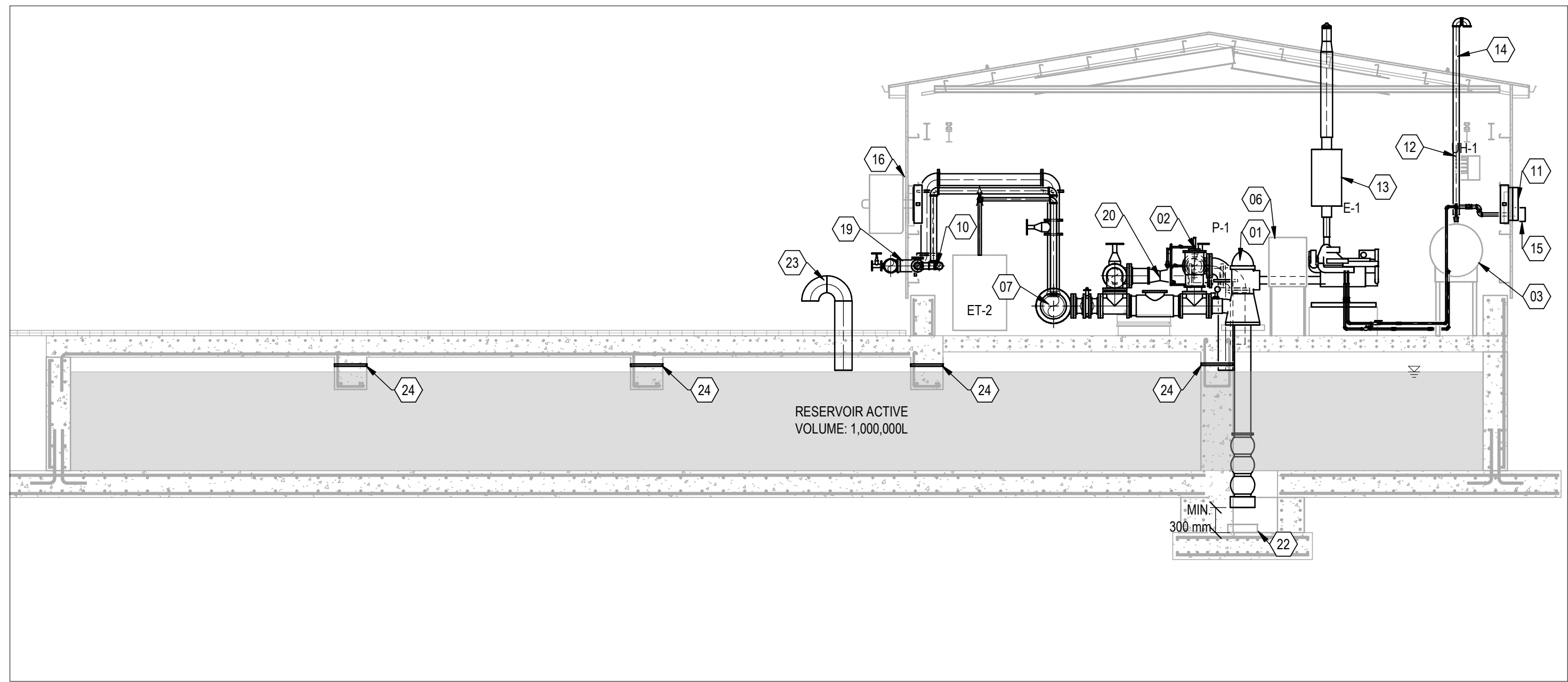
WBS NUMBER NO. SRT N.002108.03	PF NUMBER NO. DP 500006750
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DWG. NO. | NO. DESSIN
L-T81-3006/68 - 401

Canada



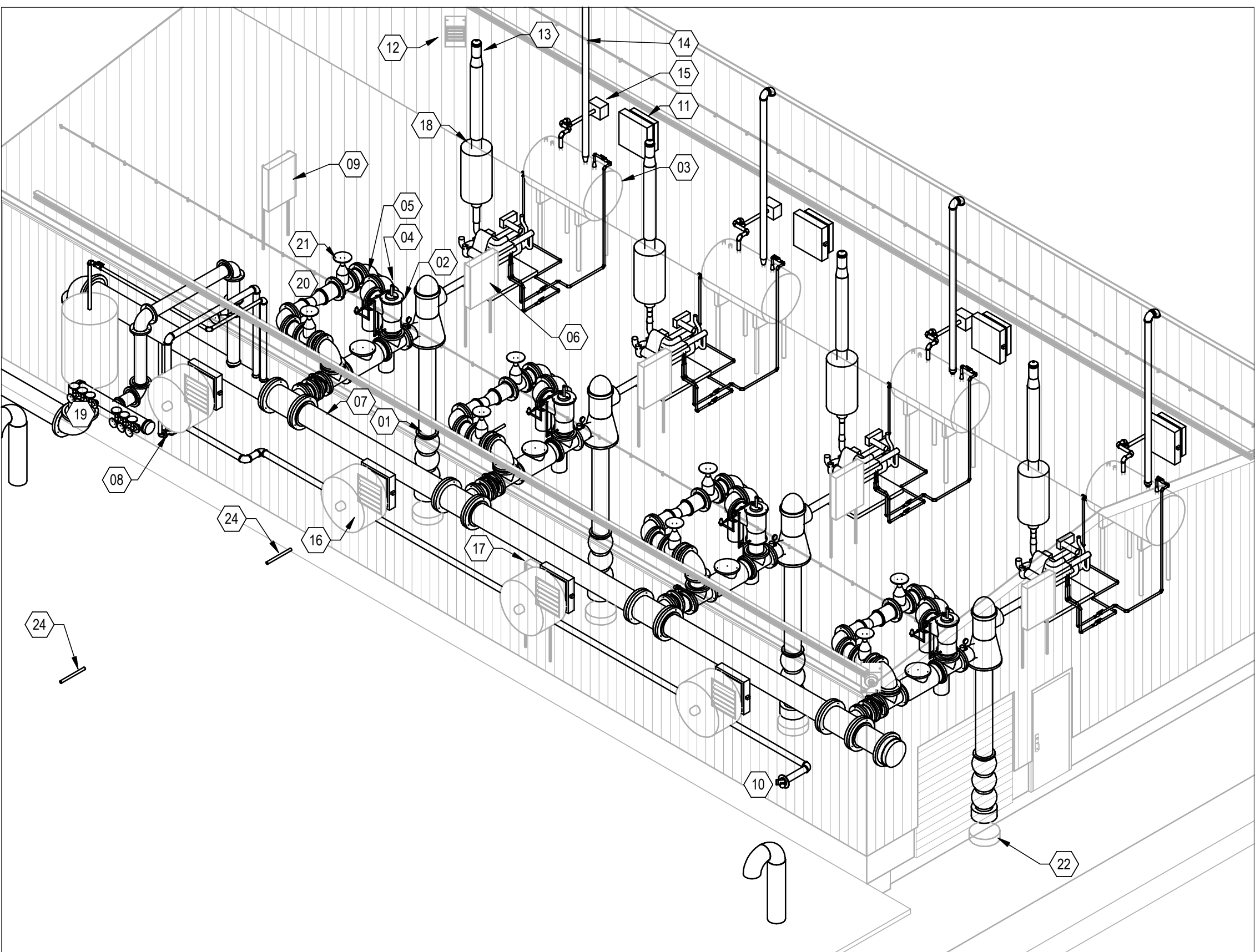
1 FLOOR PLAN - FIRE PROTECTION
SCALE: 1:50



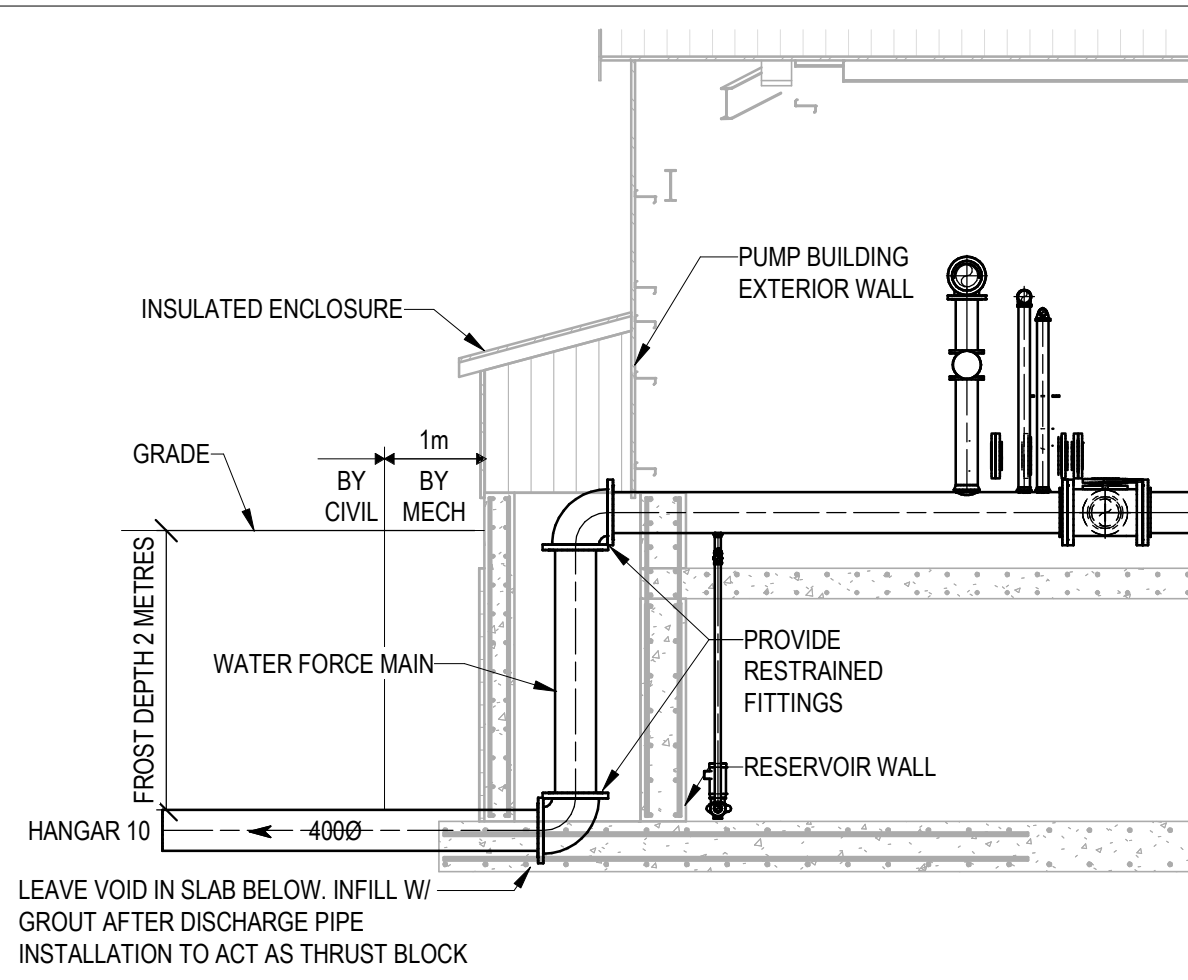
2 BUILDING SECTION - FIRE PROTECTION
SCALE: 1:75

- ### DRAWING NOTES
- 01 PROVIDE FIRE PUMP.
 - 02 PROVIDE PRESSURE RELIEF VALVE.
 - 03 PROVIDE FUEL TANK, LOW LEVEL SWITCH, LEVEL GAUGE, FILL, VENT, FUEL SUPPLY CONNECTIONS.
 - 04 PROVIDE RELIEF DISCHARGE DOWN THROUGH FLOOR SLAB TO RESERVOIR.
 - 05 PROVIDE TEST LOOP DISCHARGE DOWN THROUGH FLOOR SLAB TO RESERVOIR.
 - 06 PROVIDE FIRE PUMP CONTROLLER.
 - 07 PROVIDE PUMP DISCHARGE HEADER AT LOW LEVEL.
 - 08 PROVIDE JOCKEY PUMP.
 - 09 PROVIDE JOCKEY PUMP CONTROLLER.
 - 10 PROVIDE FIRE DEPARTMENT CONNECTION.
 - 11 PROVIDE 100mm EXTRUDED ALUMINUM STORMROOF LOUVER WITH INSULATED OPPOSED BLADE MOTORIZED DAMPER. FREE AREA = 5.5cm²/KW PER CSA B139. SPRING RETURN DAMPERS TO FAIL OPEN. MINIMUM 600x600.
 - 12 PROVIDE ELECTRIC UNIT HEATER.
 - 13 PROVIDE FIRE PUMP ENGINE EXHAUST UP THROUGH ROOF.
 - 14 PROVIDE FUEL TANK VENT UP THROUGH ROOF.
 - 15 PROVIDE FUEL TANK FILL CONNECTION WITH LOCKABLE SPILL CONTAINMENT BOX.
 - 16 PROVIDE WALL-MOUNTED EXHAUST FAN AND INTERLOCKED INSULATED ISOLATION DAMPER.
 - 17 PROVIDE BAS PANEL.
 - 18 BRIDGE CRANE.
 - 19 PROVIDE 200mm TEST HEADER WITH SIX (6) 65mm HOSE CONNECTIONS.
 - 20 PROVIDE VENTURI TEST FLOW METER.
 - 21 PROVIDE TEST FLOW CONTROL VALVE.
 - 22 PROVIDE ANTI-VORTEX PLATE.
 - 23 PROVIDE 300mm DIAMETER RESERVOIR VENT COMPLETE WITH BIRD AND INSECT SCREEN.
 - 24 PROVIDE 38mm STAINLESS STEEL VENT SLEEVES THROUGH BEAMS AT 4M SPACING.
 - 25 MAINTAIN 1M CLEARANCE IN FRONT OF ELECTRICAL EQUIPMENT.
 - 26 PROVIDE CHECKPLATE STEP OVER LOW LEVEL FUEL OIL PIPING.
 - 27 PROVIDE CHECK VALVE.

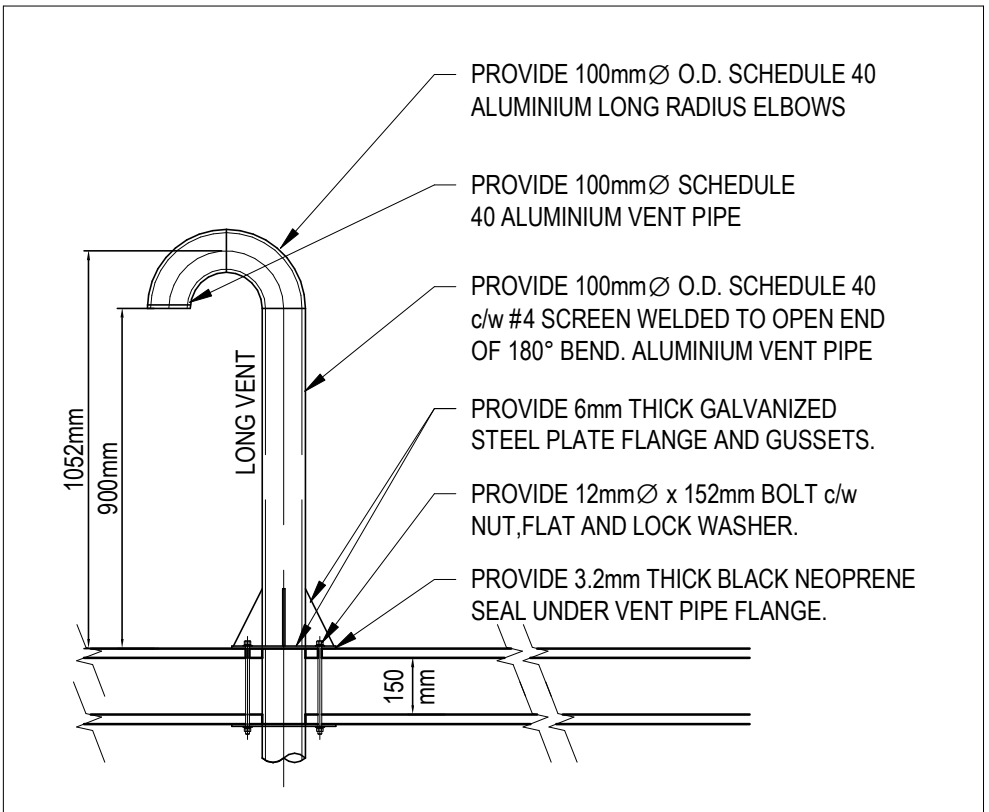
- ### GENERAL NOTES
- 01 PROVIDE HYDRAULIC CALCULATIONS STAMPED BY FIRE PROTECTION ENGINEER LICENSED IN ONTARIO FOR SYSTEM PRESSURE LOSS BETWEEN RESERVOIR AND CONNECTION TO HANGAR 10 PIPING USING EQUIPMENT PROVIDED IN SHOP DRAWINGS.
 - 02 FIRE PUMPS, WATER STORAGE SYSTEM AND INTERCONNECTED PIPING SIZING TO BE VERIFIED BY HYDRAULIC CALCULATIONS PERFORMED BY FIRE PROTECTION ENGINEER LICENSED IN ONTARIO. PROVIDE STAMPED HYDRAULIC CALCULATIONS AND EQUIPMENT LAYOUT DRAWINGS.
 - 03 PROVIDE UPRIGHT SPRINKLER HEADS INSIDE PUMP BUILDING. DESIGN COVERAGE FOR ORDINARY HAZARD OCCUPANCY PER NFPA 13. PROVIDE HYDRAULIC CALCULATIONS STAMPED BY FIRE PROTECTION ENGINEER LICENSED IN ONTARIO. PROVISIONAL PIPE SIZING SHOWN FOR COSTING PURPOSES ONLY.
 - 04 INSTALL DIESEL ENGINE ON ELEVATED CONCRETE BASE. CONTRACTOR TO MEASURE AND LINE UP CONCRETE BASE HEIGHT ENSURE PROPER ANGLE OF THE INSTALLED DRIVESHAFT ACCORDING TO MANUFACTURER. SEE STRUCTURAL DRAWINGS.
 - 05 PROVIDE GUARDING AROUND DRIVE SHAFT AND COUPLINGS.
 - 06 ALL PUMP DISCHARGE PIPE SHALL BE HYDROSTATICALLY TESTED IN ACCORDANCE WITH NFPA 13 (NFPA 20 4.17.5).
 - 07 HOLES IN WALL FOR PIPE PASSAGE TO BE SIZED IN ACCORDANCE WITH NFPA 20 4.19.1.
 - 08 PROVIDE DIESEL TANK ON STAND TO ENSURE FUEL SUPPLY CONNECTION IS NO LOWER THAN THE ENGINE FUEL TRANSFER PUMP ACCORDING TO NFPA 20 11.4.3.3. SEE STRUCTURAL DRAWINGS.
 - 09 PRESSURE SENSING LINES TO BE BRASS, RIGID COPPER (TYPES K, L, OR M), OR SERIES 300 STAINLESS STEEL PIPE OR TUBE, WITH 130 FITTINGS (NFPA 20 4.32.2).
 - 10 THREADED PIPING TO BE USED FOR ENGINE RAW WATER SYSTEM (NFPA 20 11.2.8.5.3.1).
 - 11 DIESEL TANK FUEL LEVEL INDICATOR SHALL ACTIVATE AT THE 2/3 TANK LEVEL AND WHEN ACTIVATED SHALL INITIATE A SUPERVISORY SIGNAL (NFPA 20 11.4.2.2.9).
 - 12 PROVIDE MEANS OF PREVENTING OVERFLOW OF DIESEL TANK AS PER NFPA 20 11.4.2.4.
 - 13 FLOOR AROUND PUMP AND ENGINE TO BE PITCHED FOR ADEQUATE DRAINAGE (NFPA 20 11.4.3.1).
 - 14 DIESEL TANK TO BE ELEVATED SUCH THAT THE FUEL SUPPLY CONNECTION IS NO LOWER THAN THE LEVEL OF THE ENGINE FUEL TRANSFER PUMP ACCORDING TO NFPA 20 11.4.3.3.
 - 15 CONNECT FUEL PIPING TO DIESEL ENGINE USING REINFORCED FLEXIBLE HOSE AS SPECIFIED IN NFPA 20 11.4.4.1.
 - 16 PROVIDE PROTECTION FOR FUEL LINES EXPOSED TO TRAFFIC OR POSSIBLE DAMAGE (NFPA 20 11.4.4.6).
 - 17 PROVIDE REINFORCED FLEXIBLE HOSE CONNECTIONS ON WATER PIPING CONNECTIONS TO ENGINE.
 - 18 PAY FOR FUEL OIL SYSTEM TSSA REGISTRATION AND INSPECTIONS. PAY FOR INITIAL FILLING OF TANKS AND REPLACE FUEL USED FOR TESTING.
 - 19 ALL FIRE PROTECTION PIPING TO BE SCHEDULE 40 STEEL. FUEL OIL SYSTEM PIPING TO BE SCHEDULE 40 STEEL WITH THREADED FITTINGS.
 - 20 PROVIDE MUD PUDDLE FLANGES AT ALL PIPE PENETRATIONS THROUGH SLAB TO RESERVOIR AND AT FOUNDATION WALL.
 - 21 PROVIDE 150mm HIGH ANTI-VORTEX PLATE AT EACH PUMP INTAKE.



3 FIRE PROTECTION ISOMETRIC
SCALE: N.T.S.



4 FIRE PUMP BUILDING WATER MAIN EXIT
SCALE: 1:75



5 VENT PIPE DETAIL
SCALE: N.T.S.



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NO.	DATE	REVISION	APPR.
SCALE ÉCHELLE			

LOCATION | EMPLACEMENT
8 WING TRENTON
CFB TRENTON, ONTARIO

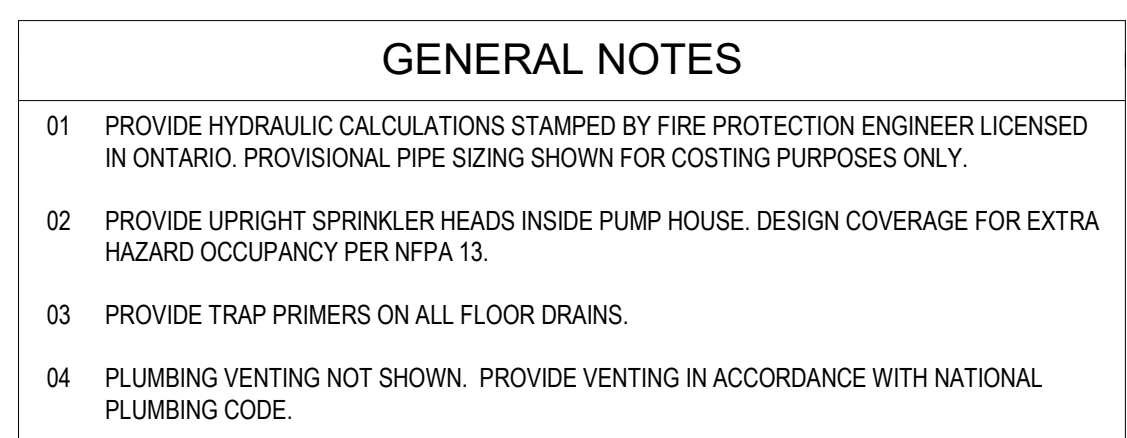
PROJECT | PROJET
TRE-UPG B052 (HGR 10) FIRE PUMPHOUSE

TRADE | MÉTIER
MECHANICAL
SUBJECT | SUJET

PRODUCTION	DESIGNED ÉTUDIÉ	REVIEWED REVU
DESIGNED ÉTUDIÉ	A.MACDONALD	DES O AGENT CONC S.C.
DRAWN DESSINÉ	C.KUEHL	PRO MGR GÉST PROJ P.O.
CHECKED VÉRIFIÉ	M.MA	DES MGR GÉST CONC S.C.
COORDINATION		FIRE INCENDIE

WBS NUMBER | NO. SRT
N.002108.03
DWG. NO. | NO. DESSIN

PF NUMBER | NO. DP
500006750
L-T81-3006/68 - 402



Meters	Upstream	Downstream
F-1100	20D	5D
F-1200	10D	5D
F-3500	10D	5D
F-3500 Bi-Directional	10D	10D



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LEVEL OF SECURITY / NIVEAU DE SÛRETÉ

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Jp2g PROJECT NO. 19-50022A



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NO.	DATE	REVISION	APPR.

SCALE | ECHÉLLE

LOCATION | EMPLACEMENT
8 WING TRENTON
CFB TRENTON, ONTARIO

PROJECT | PROJECT

TRE-UPG B052 (HGR 10) FIRE
PUMPHOUSE

TRADE MÉTIER	DATE
MECHANICAL	2025/03/07

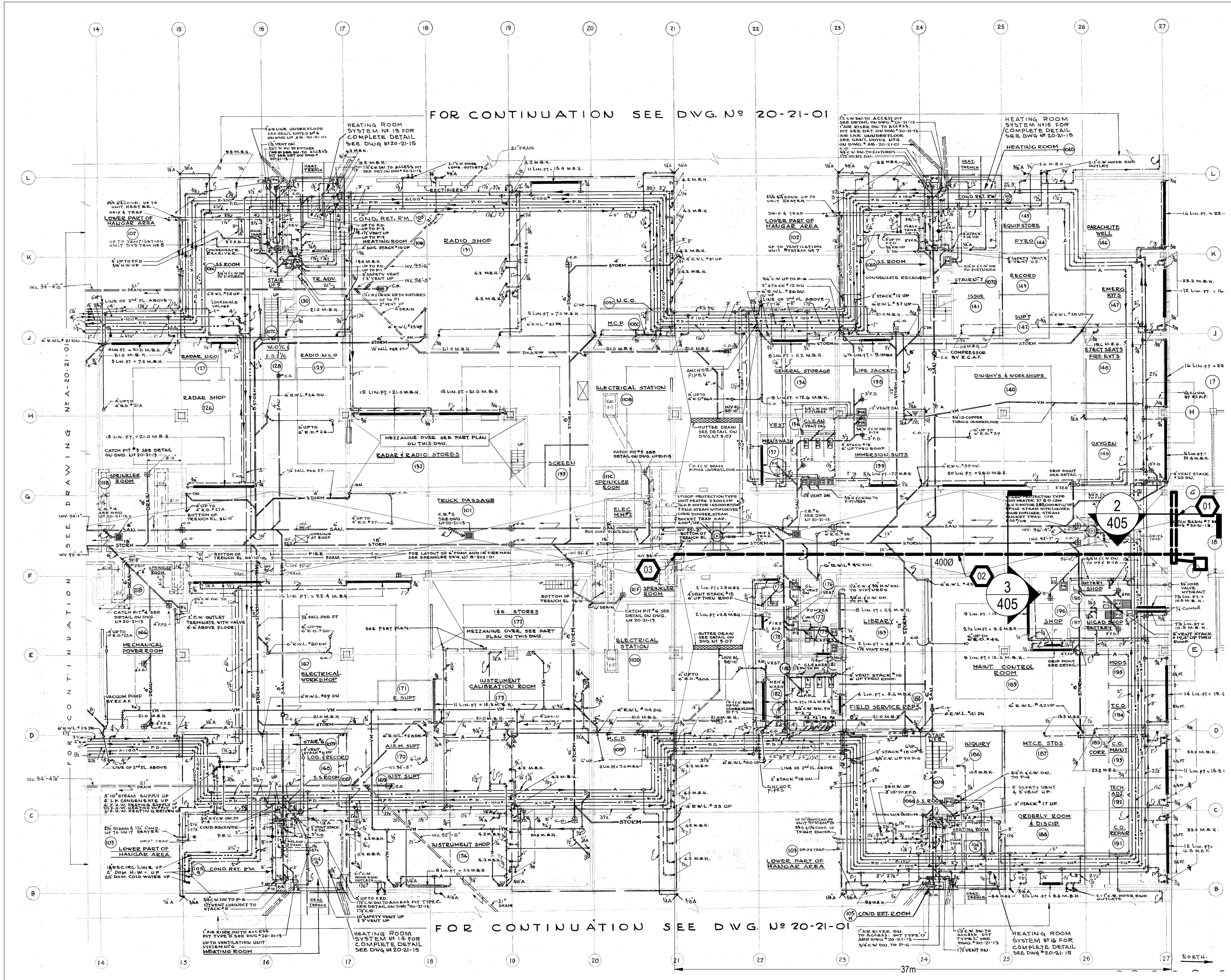
SPRINKLER, DOMESTIC WATER & SANITARY PLANS

PRODUCTION	REVIEWED REVU
DESIGNED ÉTUDIÉ A.MACDONALD	DES O AGENT CONC S.C.
DRAWN DESSINÉ C.KUEHL	PRO MGR GÉST PROJ P.O.
CHECKED VÉRIFIÉ M.MA	DES MGR GÉST CONC S.C.
COORDINATION	FIRE INCENDIE

WBS NUMBER NO. SRT	PF NUMBER NO. DP
N.002108.03	500006750

L-T81-3006/68 - 403

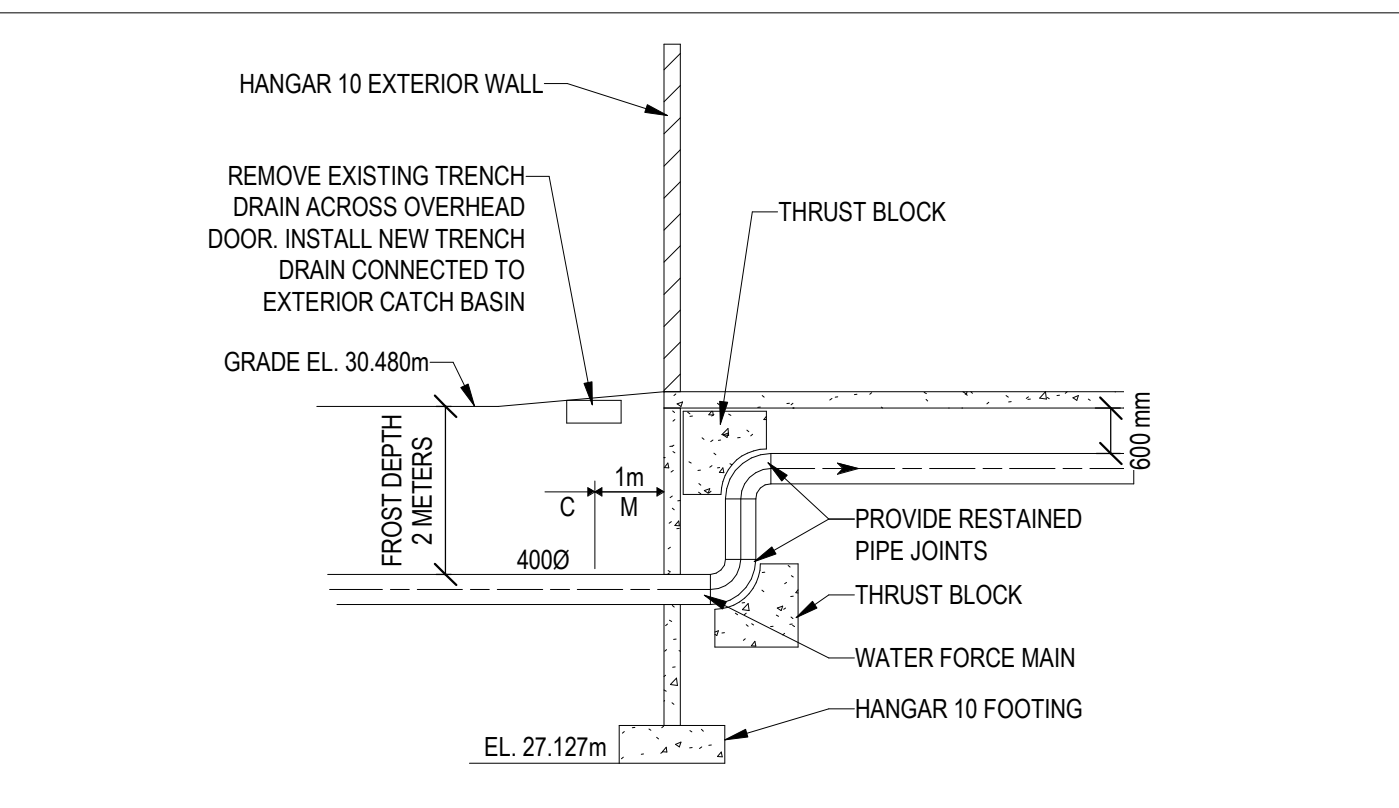
Canada 



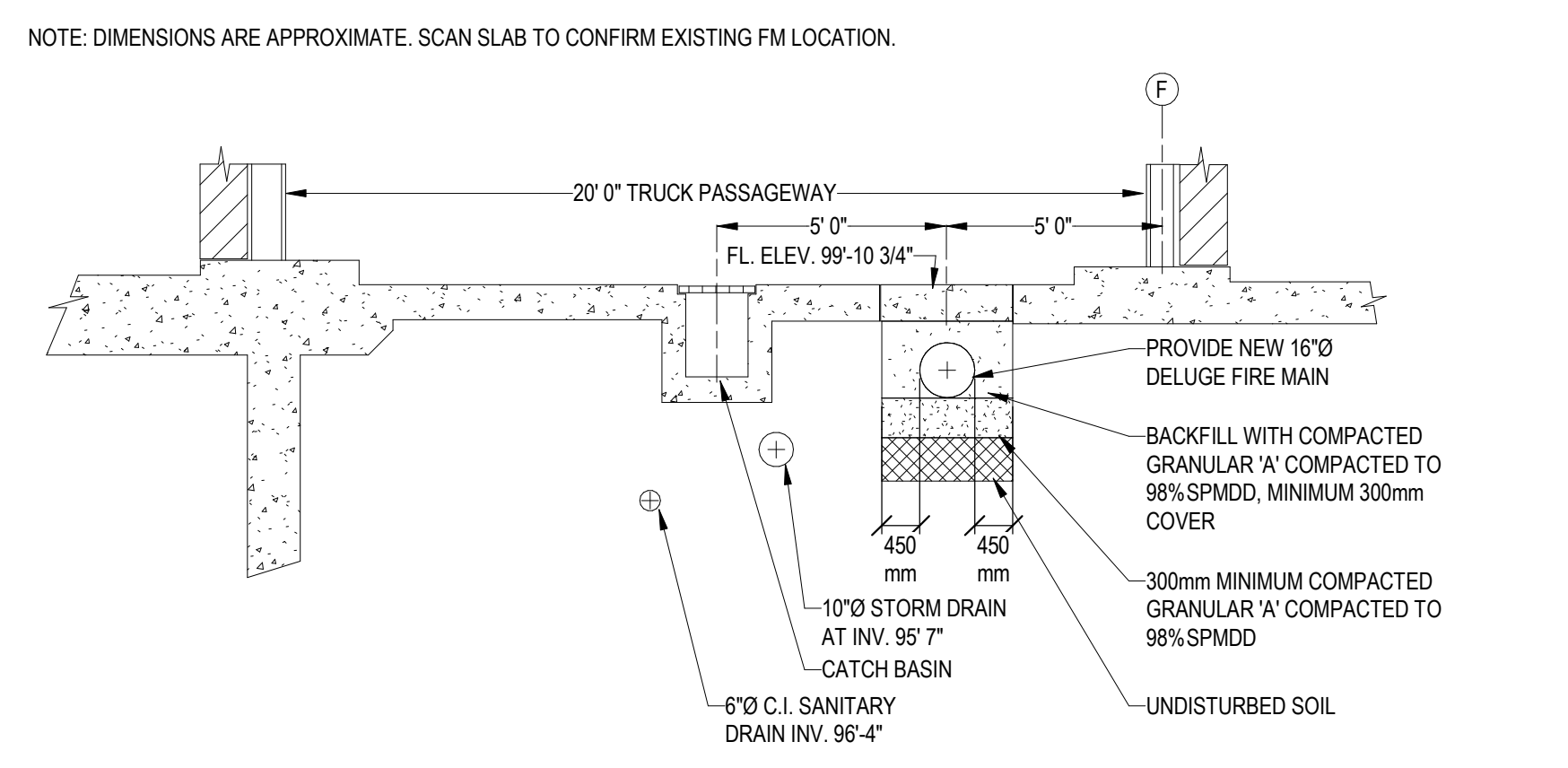
1
405 GROUND FLOOR SECTION "A" PLAN - DEMOLITION
SCALE: N.T.S.

DRAWING NOTES

- 01 REMOVE EXISTING TRENCH DRAIN FOR INSTALLATION OF NEW WATER MAIN. PROVIDE NEW TRENCH DRAIN WITH HEAVY DUTY GRATING FOR TRUCK TRAFFIC. CONNECT TRENCH DRAIN OUTLET TO ADJACENT CATCH BASIN.
- 02 PROVIDE NEW 400MM WATER MAIN UNDERNEATH EXISTING FLOOR SLAB TO CONNECT TO EXISTING BURIED WATER MAIN. SAWCUT FLOOR SLAB. PROVIDE COMPACTED SAND BEDDING, AND REINSTATE SLAB AFTER WATER MAIN INSTALLATION. SCAN SLAB BEFORE CUTTING. OBTAIN STRUCTURAL ENGINEER'S APPROVAL BEFORE CUTTING SLAB.
- 03 CONNECT TO END OF EXISTING WATER MAIN.



2
405 HANGAR 10 WATER MAIN ENTRY - SECTION
SCALE: N.T.S.



3
405 SECTION THRU TRUCK PASSAGE WAY ALONG COL. LINE 25
SCALE: N.T.S.

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NO.	DATE	REVISION	APPR.
SCALE ÉCHELLE			

LOCATION | EMPLACEMENT
8 WING TRENTON
CFB TRENTON, ONTARIO

PROJECT | PROJET
TRE-UPG B052 (HGR 10) FIRE
PUMPHOUSE

TRADE | MÉTIER
MECHANICAL

DATE
2025/03/07

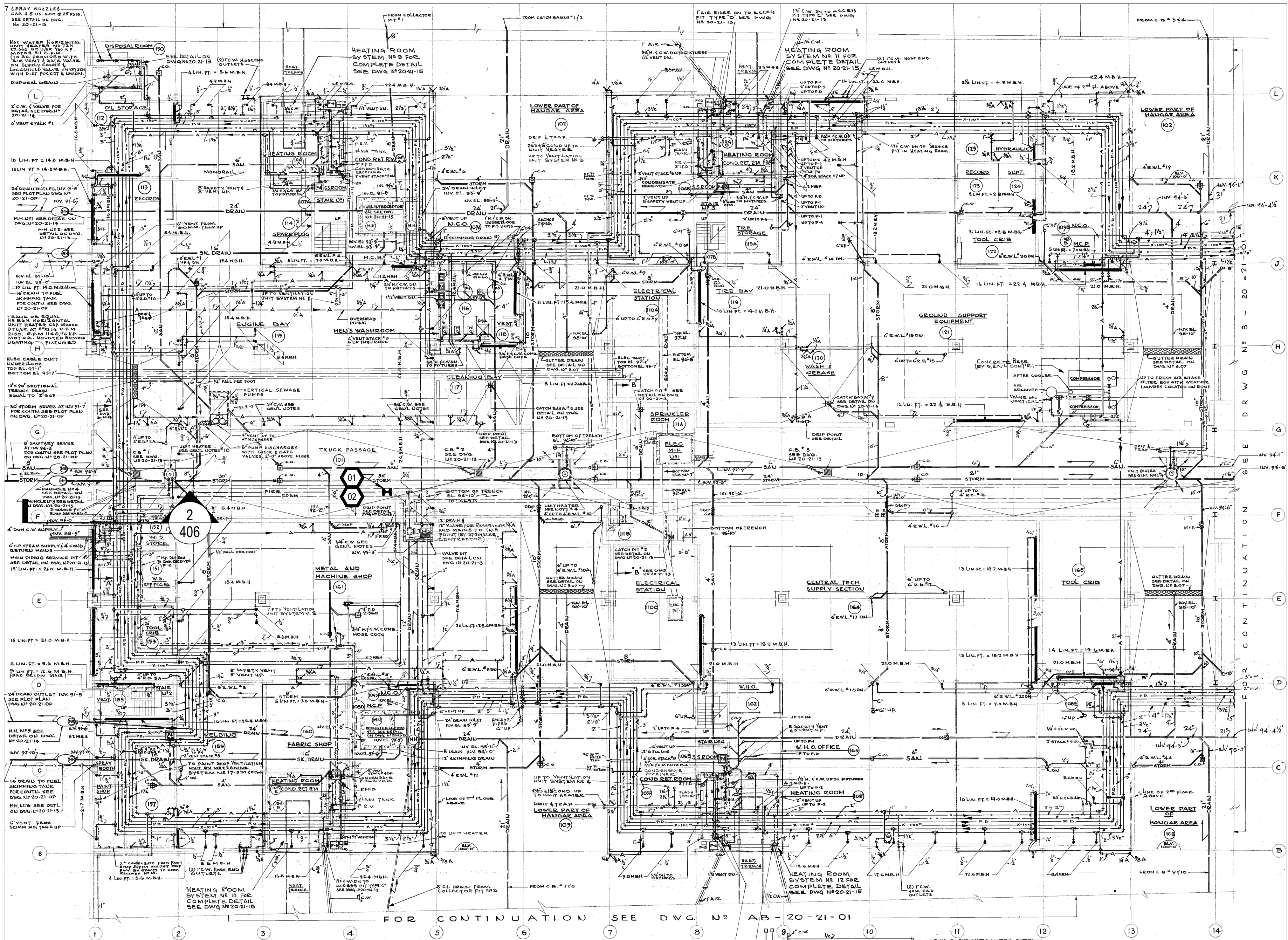
SUBJECT | SUJET
HANGAR 10 WATER MAIN TIE-IN

PRODUCTION	REVIEWED REVU
DESIGNED ÉTUDIÉ A.MACDONALD	DES O AGENT CONC S.C.
DRAWN DESSINÉ C.KUEHL	PRO MGR GÉST PROJ P.O.
CHECKED VÉRIFIÉ M.MA	DES MGR GÉST CONC S.C.
COORDINATION	FIRE INCENDIE

WBS NUMBER | NO. SRT
N.002108.03

PF NUMBER | NO. DP
500006750

DWG. NO. | NO. DESSIN
L-T81-3006/68 - 405

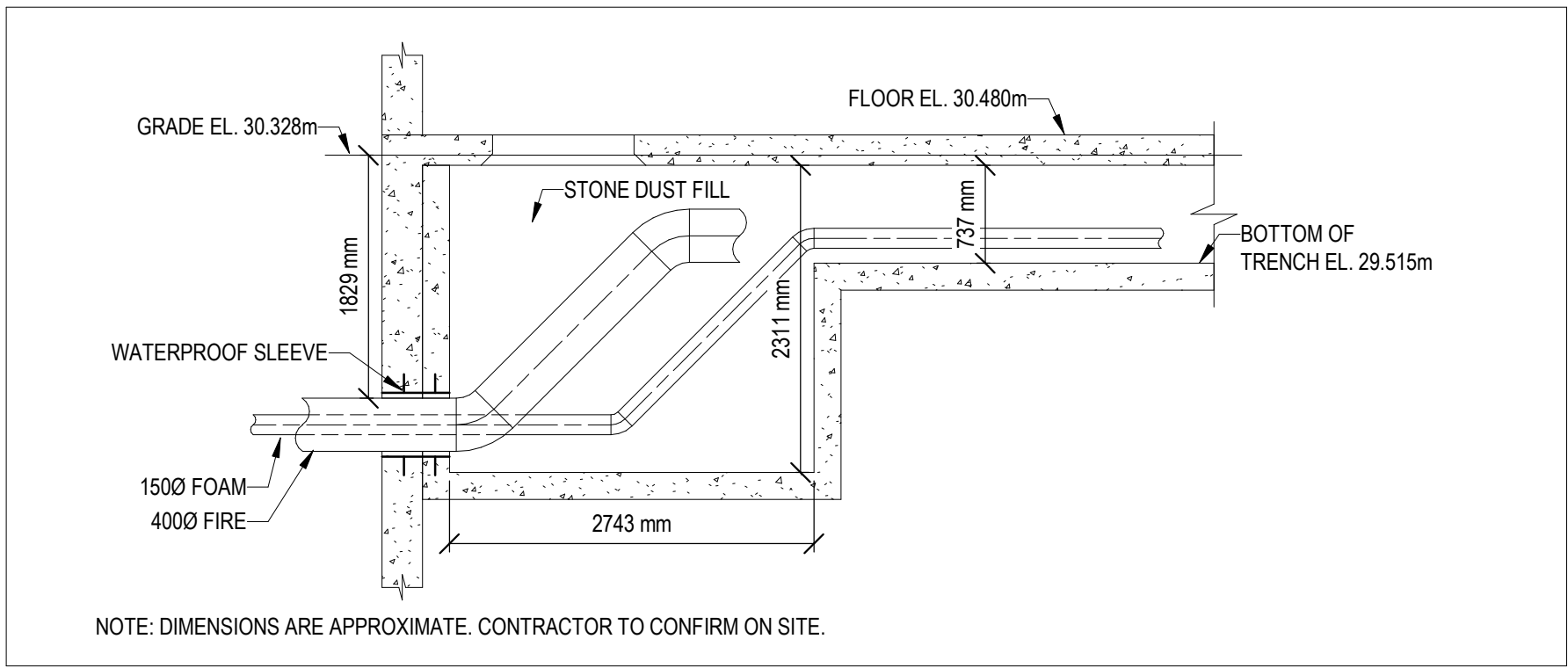


1 GROUND FLOOR SECTION "B" PLAN - DEMOLITION
406 SCALE: N.T.S.

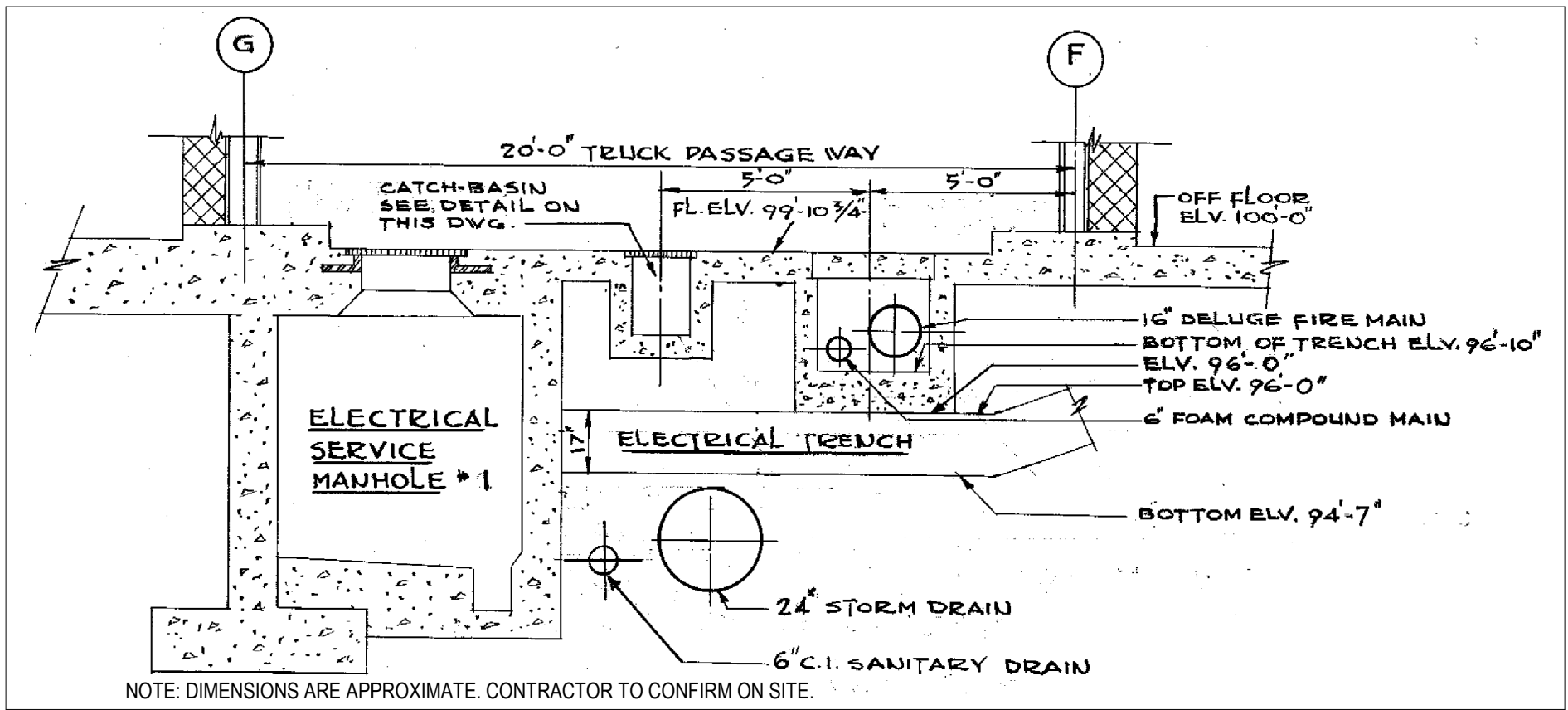
DRAWING NOTES

01 SAWCUT FLOOR AND PROVIDE NEW VALVE ON EXISTING BURIED WATER MAIN. VALVE TO BE USED FOR ISOLATING OLD PUMP BUILDING SUPPLY ONCE NEW BUILDING IS IN OPERATION.

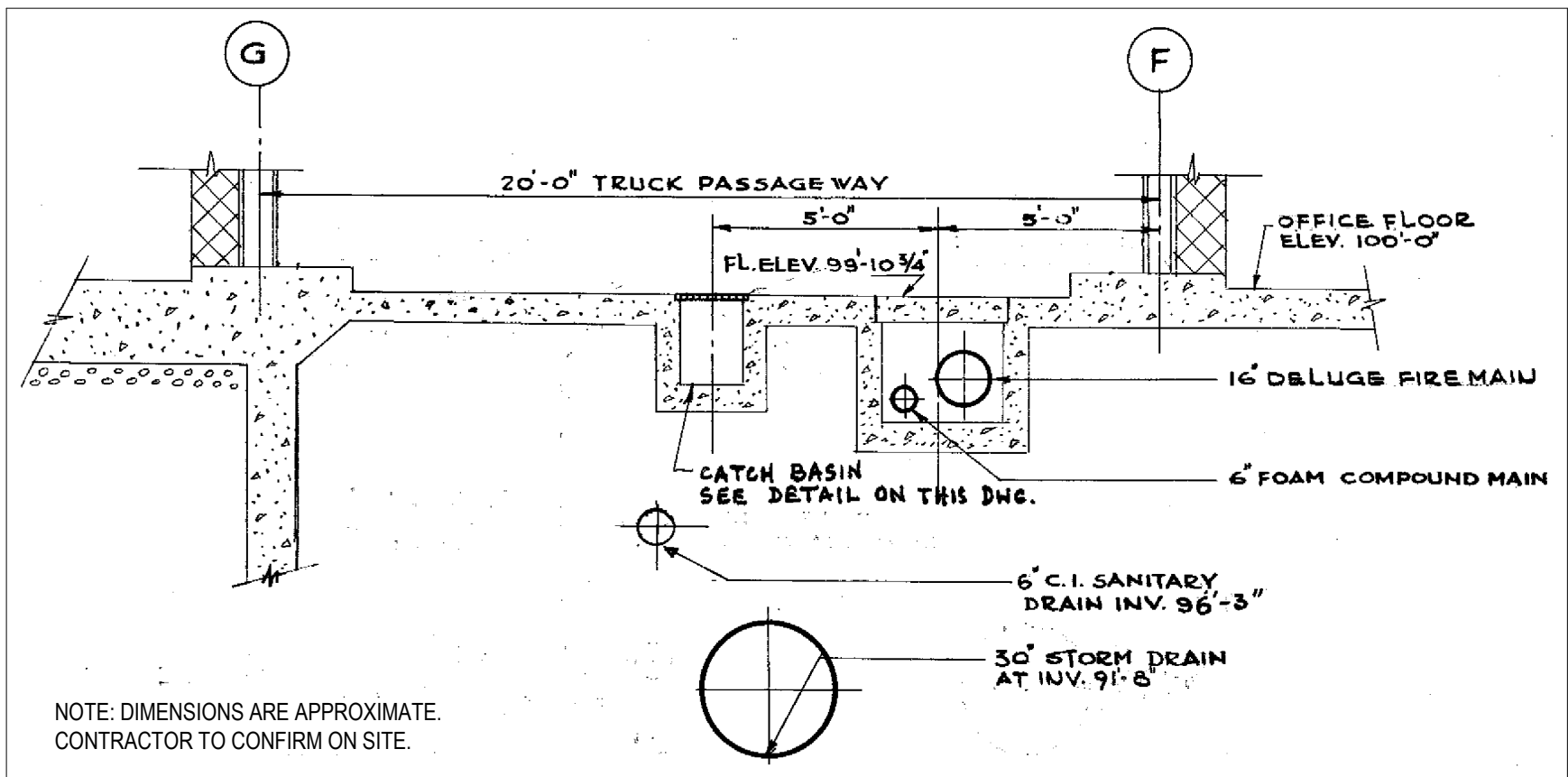
02 WHEN THE NEW PUMP HOUSE IS FULLY COMMISSIONED, CAP THE PIPE TO THE OLD PUMP HOUSE.



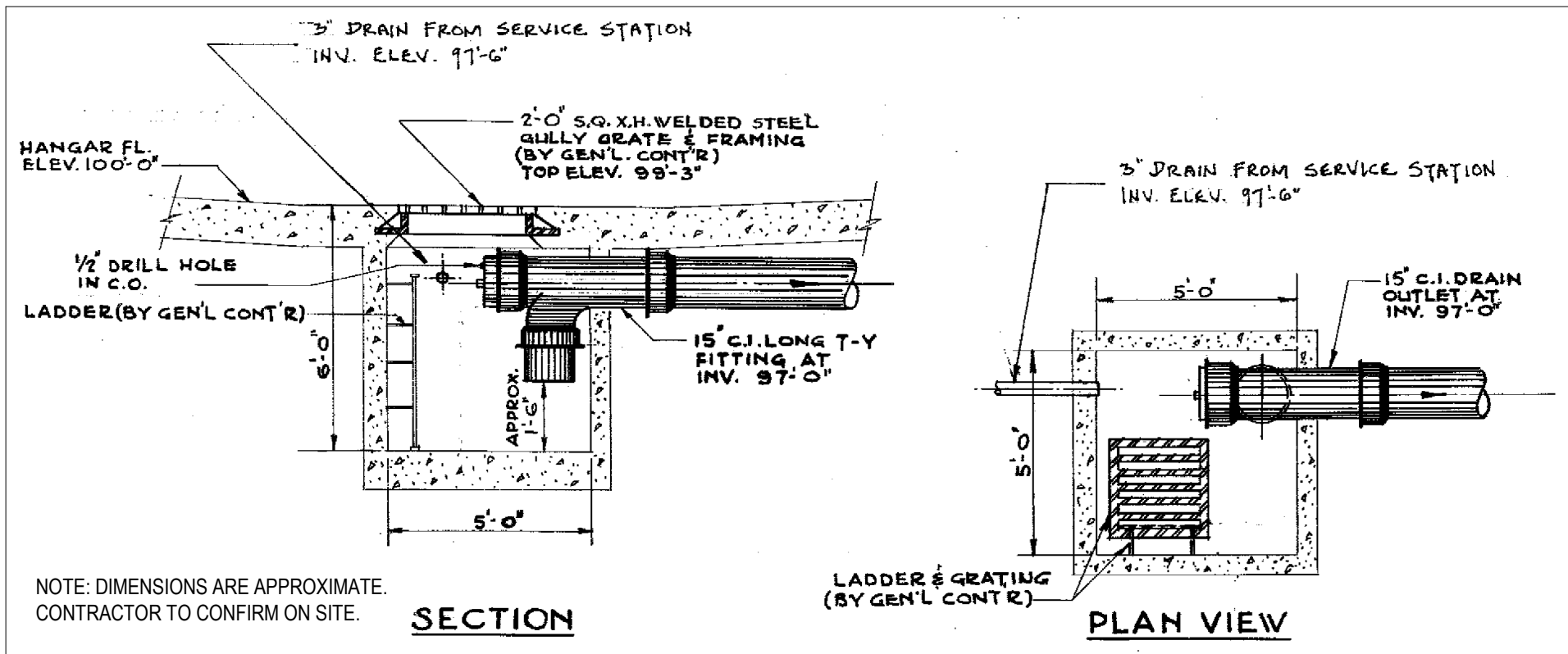
2 SECTION THRU TRUCK PASSAGEWAY - EXISTING SERVICES
406 SCALE: N.T.S.



3 SECTION "B-B" THRU TRUCK PASSAGE BETWEEN COL. LINE 7&8
406 SCALE: N.T.S.



4 SECTION "A-A" THRU TRUCK PASSAGE ALONG COL. LINE 1
406 SCALE: N.T.S.



5 TYPICAL DETAIL OF CATCH BASIN NO. 1 TO 12 IN HANGAR AREA
406 SCALE: N.T.S.

LEVEL OF SECURITY | NIVEAU DE SÉCURITÉ

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JP2g PROJECT No.: 19-5022A



PROFESSIONAL ENGINEER
A. MacDonald
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Nov 20 2025
PROVINCE OF ONTARIO

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NO.	DATE	REVISION	APPR.
1			

SCALE | ÉCHELLE

LOCATION | EMPLACEMENT
8 WING TRENTON
CFB TRENTON, ONTARIO

PROJECT | PROJET
TRE-UPG B052 (HGR 10) FIRE
PUMPHOUSE

TRADE | MÉTIER
MECHANICAL

DATE
2025/03/07

SUBJECT | SUJET

HANGAR 10 EXISTING WATER MAIN
VALVE OFF

PRODUCTION	REVIEWED REVU	
DESIGNED ETUDIÉ A.MACDONALD		DES O AGENT CONC S.C.
DRAWN DESSINÉ C.KUEHL		PRO MGR GÉST PROJ P.O.
CHECKED VÉRIFIÉ M.MA		DES MGR GÉST CONC S.C.
COORDINATION		FIRE INCENDIE

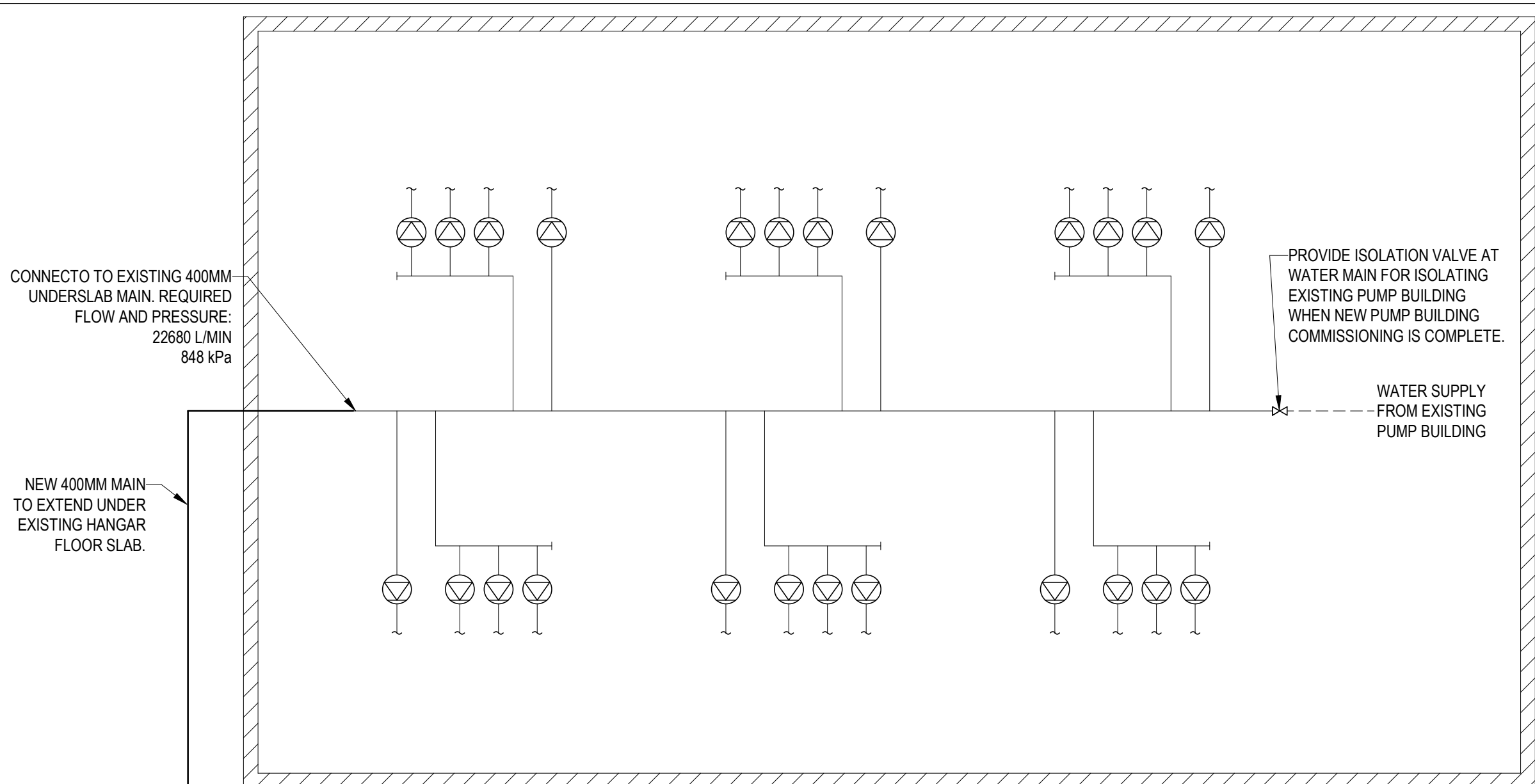
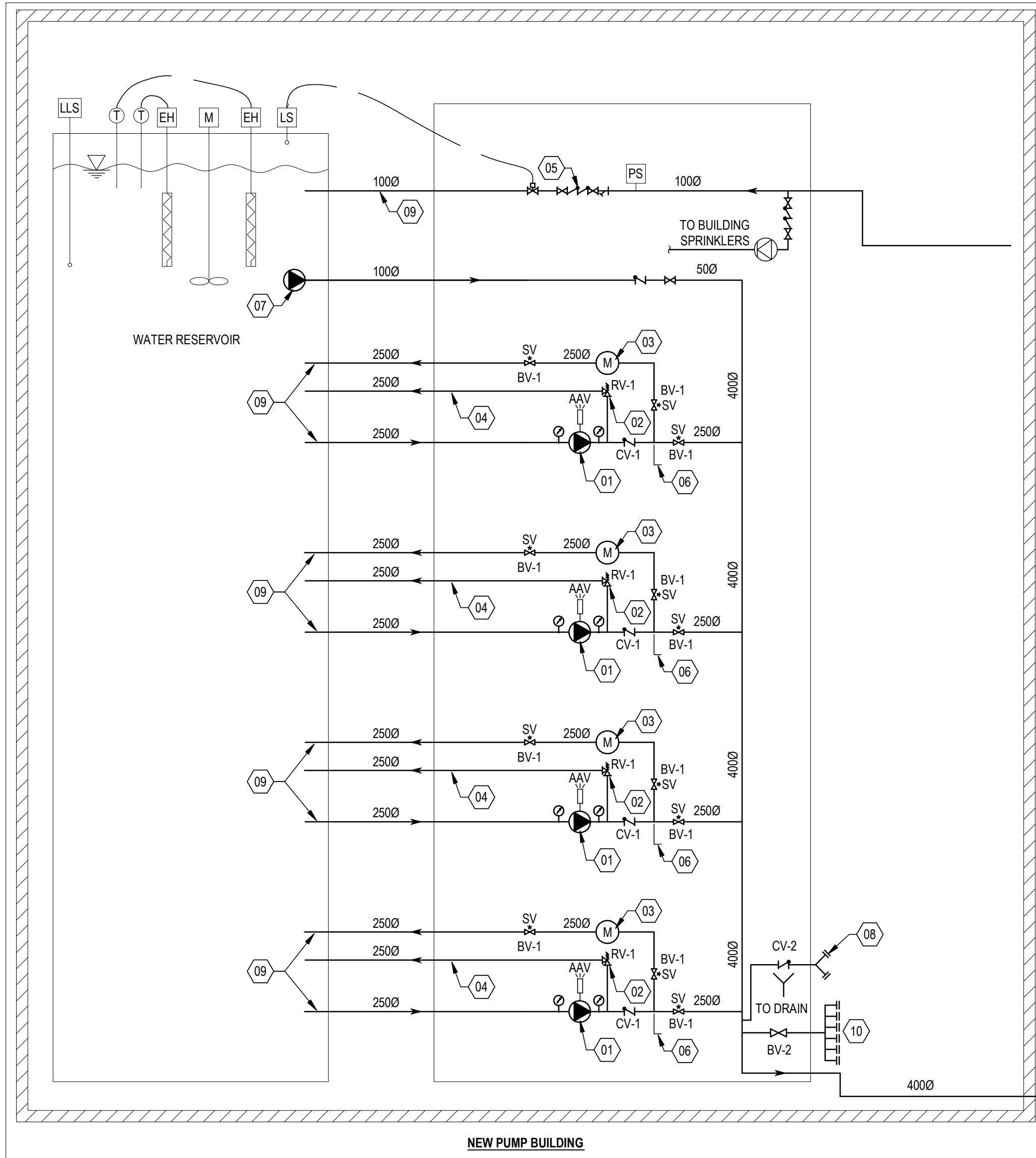
WBS NUMBER | NO. SRT
N.002108.03

PF NUMBER | NO. DP
500006750

DWG. NO. | NO. DESSIN

L-T81-3006/68 - 406

Canada



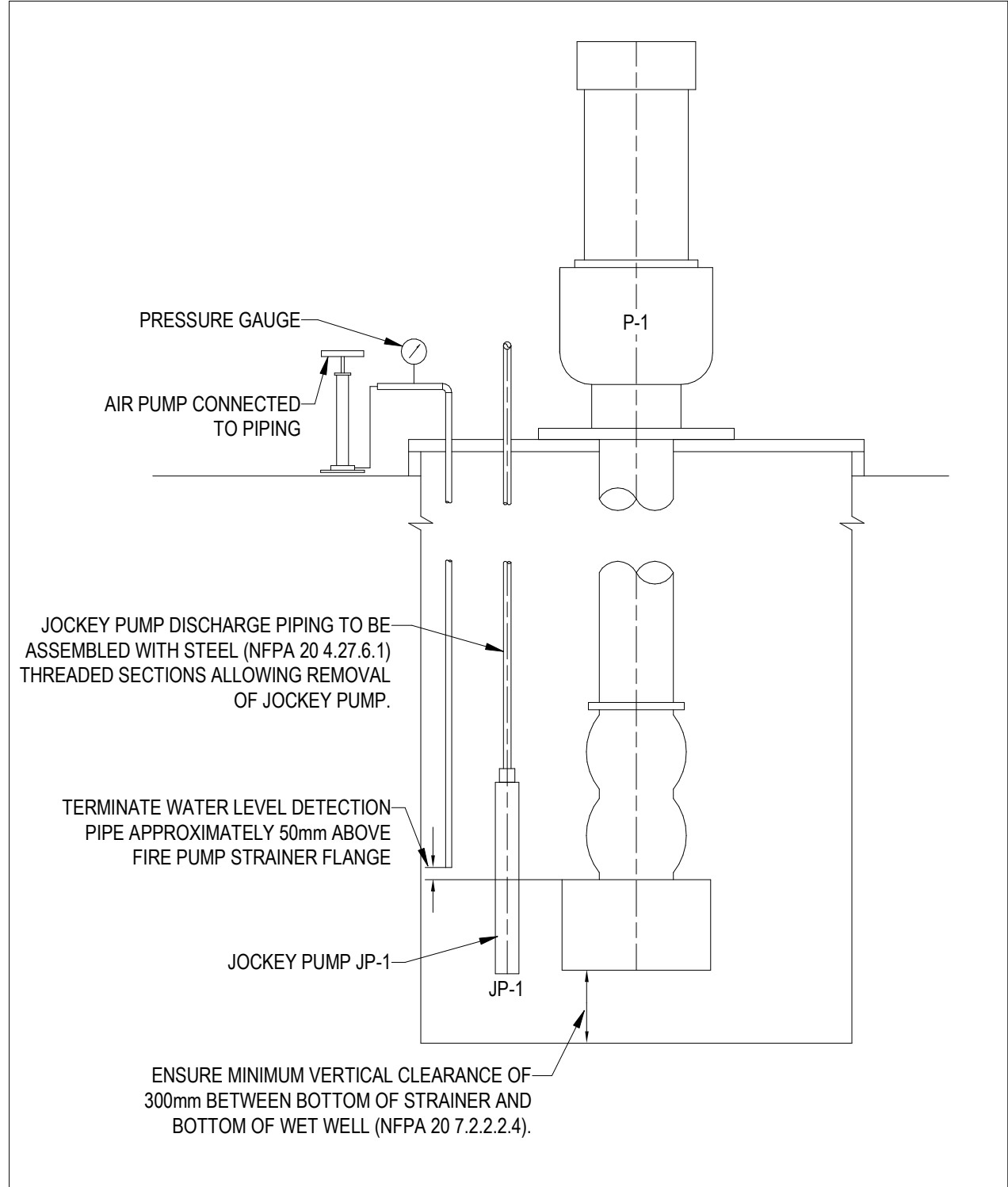
FIRE ALARM POINTS	
SUPERVISED VALVES	
TYPICAL FOR EACH ENGINE:	
LOW FUEL LEVEL	
RELIEF VALVE DISCHARGE	
LOW PRESSURE IN LUBRICATION SYSTEM	
HIGH ENGINE JACKET COOLANT TEMPERATURE	
FAILURE OF ENGINE TO START	
SHUTDOWN FROM OVERSPEED	
BATTERY FAILURE OR MISSING BATTERY	
BATTERY CHARGER FAILURE	
CONTROL VALVE CLOSURE	
SYSTEM OVERPRESSURE	
ENGINE RUNNING	
CONTROLLER MAIN SWITCH OFF	
ENGINE TROUBLE	
WATER RESERVOIR POINTS:	
LOW RESERVOIR LEVEL	
RESERVOIR WATER TEMP BELOW 4.4°C	
PUMP ROOM POINTS:	
LOW PUMP ROOM TEMP	
LOW CITY WATER PRESSURE	
SPRINKLER SYSTEM FLOW SWITCH	

LEGEND	
SYMBOL	DESCRIPTION
	PUMP
	PRESSURE GAUGE
	SUPERVISED ISOLATION VALVE
	CHECK VALVE
	RELIEF VALVE
	FLOW METER
	STRAINER
	GATE VALVE
	ELECTRIC IMMERSION HEATER
	MIXER

LEGEND	
SYMBOL	DESCRIPTION
	SOLENOID VALVE
	BACKFLOW PREVENTER ASSEMBLY
	PRESSURE SWITCH
	THERMOSTAT
	LEVEL SWITCH
	SPRINKLER ALARM CHECK VALVE
	AUTOMATIC AIR VENT

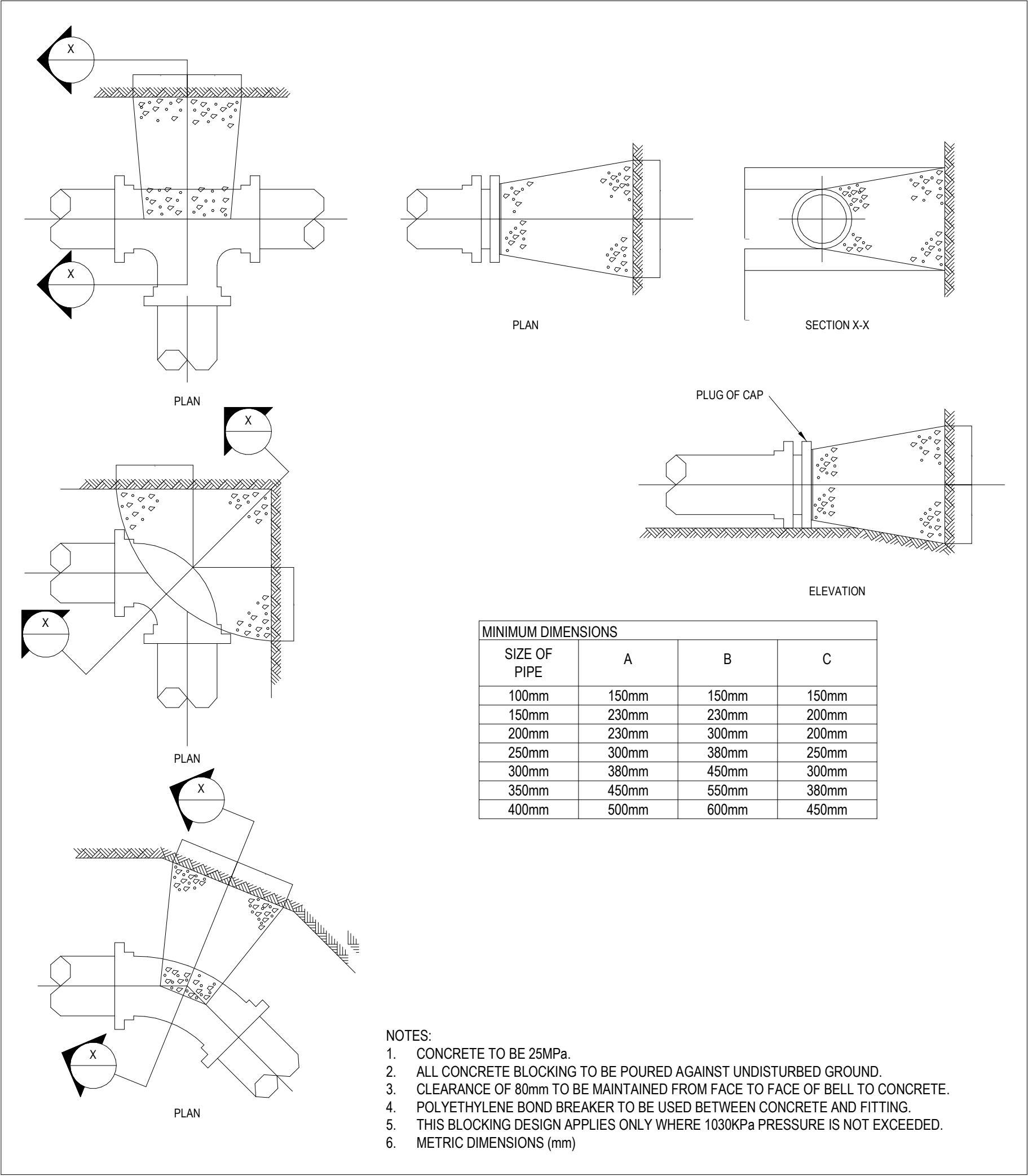
1 PUMP HOUSE FIRE PROTECTION SCHEMATIC

SCALE: N.T.S.



2 LEVEL DETECTION & JOCKEY PUMP DETAIL

SCALE: N.T.S.

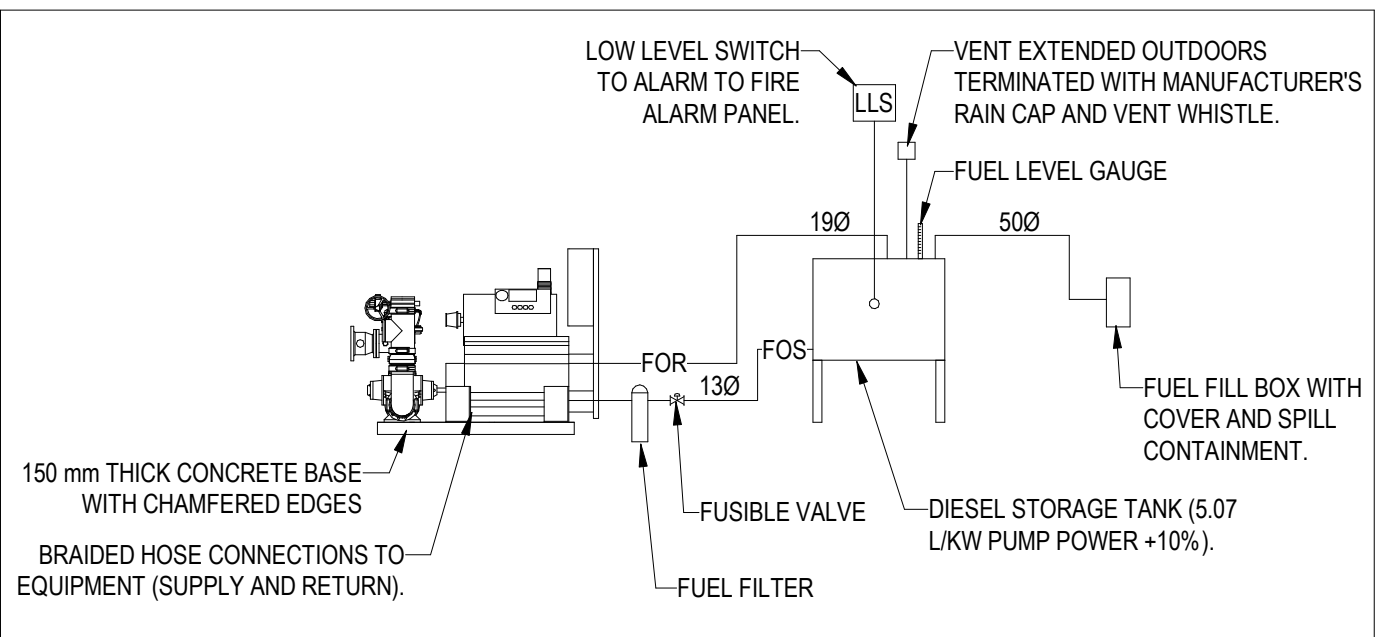


3 WATER MAIN CONCRETE THRUST BLOCKS

SCALE: N.T.S.

4 FIRE PUMP CONTROLS

SCALE: N.T.S.

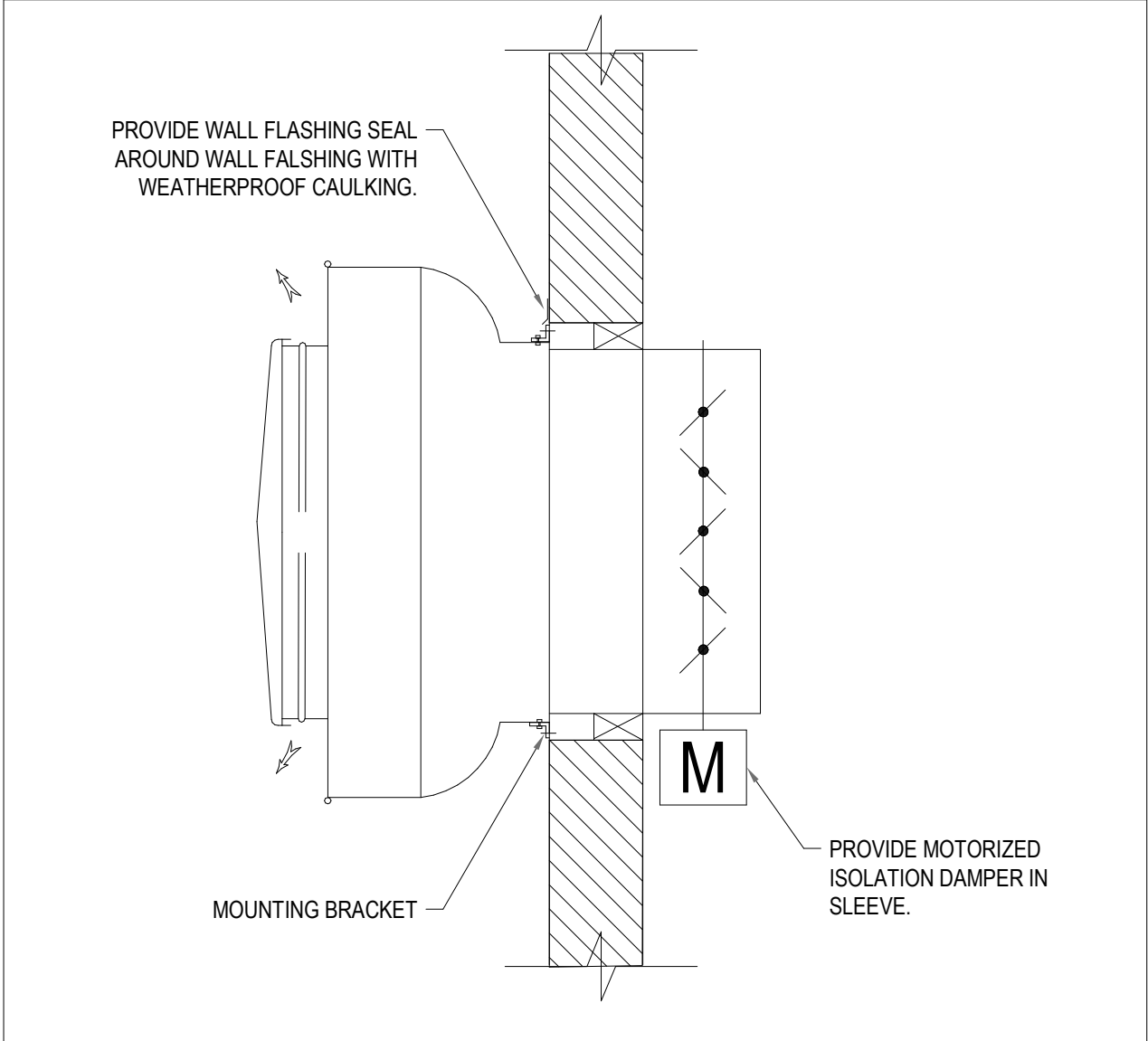
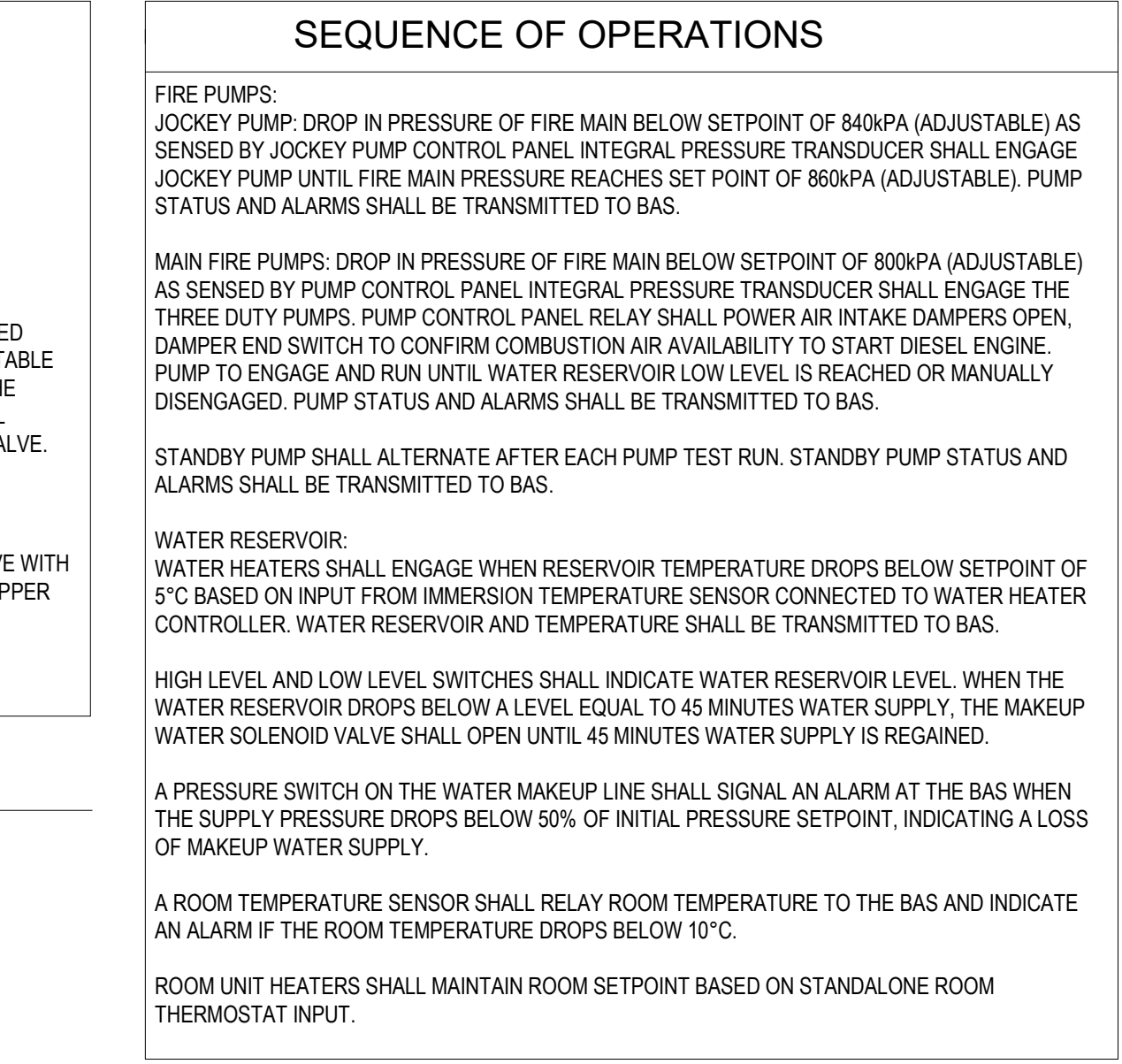


5 FUEL OIL SCHEMATIC

SCALE: N.T.S.

6 DIESEL ENGINE EXHAUST THROUGH ROOF

SCALE: N.T.S.



7 FAN INSTALLATION DETAIL

SCALE: N.T.S.

LEVEL OF SECURITY | NIVEAU DE SÉCURITÉ

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JP2g PROJECT No.: 19-5022A



8 WING TRENTON CFB TRENTON, ONTARIO

6	2025/11/20	ISSUED FOR TENDER	AM/BH
5	2025/10/21	ISSUED FOR 100% RESUBMISSION	AM/BH
4	2025/03/07	ISSUED FOR 100% SUBMISSION	AM/BH
3	2024/12/16	ISSUED FOR 90% REVIEW REV. 1	AM/BH
2	2024/03/31	ISSUED FOR 60% REVIEW REV. 2	AM/CK
NO.	DATE	REVISION	APPR.
SCALE ÉCHELLE			

LOCATION | EMPLACEMENT
8 WING TRENTON
CFB TRENTON, ONTARIO

PROJECT | PROJET
TRE-UPG B052 (HGR 10) FIRE PUMPHOUSE

TRADE | MÉTIER
MECHANICAL

DATE
2025/03/07

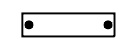
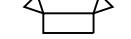
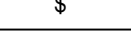
SUBJECT | SUJET
FIRE PROTECTION SYSTEM SCHEMATICS AND DETAILS

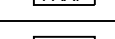
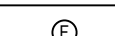
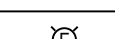
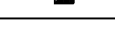
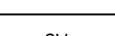
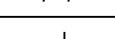
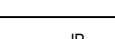
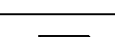
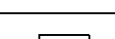
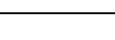
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DRAWN DESSINÉ C.KUEHL	PRO MGR GÉST PROJ P.O.
CHECKED VÉRIFIÉ M.MA	DES MGR GÉST CONC S.C.
COORDINATION	FIRE INCENDIE

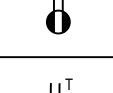
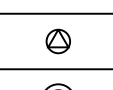
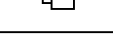
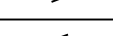
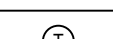
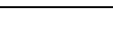
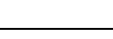
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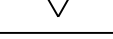
PF NUMBER | NO. DP
500006750

DWG. NO. | NO. DESSIN
L-T81-3006/68 - 407

ELECTRICAL LEGEND - LIGHTING	
SYMBOL	DESCRIPTION
	SUSPENDED MOUNTED LINEAR LUMINAIRE - SIZE AND TYPE AS PER LUMINAIRE SCHEDULE
	WALL MOUNTED LUMINAIRE - SIZE AND TYPE AS PER LUMINAIRE SCHEDULE
	CEILING MOUNTED EXIT SIGN C/W DIRECTIONAL ARROW
	WALL MOUNTED EXIT SIGN
	EMERGENCY LIGHTING BATTERY PACK C/W TWO REMOTE HEADS
	WALL MOUNTED EMERGENCY LIGHTING REMOTE HEAD
	120V WALL MOUNTED SWITCH
	120V WALL MOUNTED SWITCH - 3-WAY
	120V WALL WEATHERPROOF SWITCH

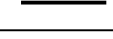
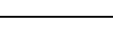
ELECTRICAL LEGEND - FIRE ALARM	
SYMBOL	DESCRIPTION
	FIRE ALARM CONTROL PANEL
	FIRE ALARM ANNUNCIATOR PANEL
	FIRE ALARM PASSIVE GRAPHIC
	FIRE ALARM HORN
	FIRE ALARM COMBINATION HORN / STROBE
	FIRE ALARM MANUAL PULL STATION
	FIRE ALARM SUPERVISED VALVE
	FIRE ALARM FLOW SWITCH
	FIRE ALARM PRESSURE SWITCH
	JOCKEY PUMP
	MONITORING MODULE
	RELAY SWITCH

ELECTRICAL LEGEND - POWER DISTRIBUTION	
SYMBOL	DESCRIPTION
	120V, 15A, 1U GROUND DUPLEX RECEPTACLE WITH INTEGRAL GFI PROTECTION MOUNTED IN WEATHERPROOF ENCLOSURE C/W WHILE-IN-USE COVER
	DUPLEX RECEPTACLE WITH INTEGRAL GFI PROTECTION, 120V, 20A, 1U GROUND
	DUPLEX RECEPTACLE WITH INTEGRAL TAMPER RESISTANT SHUTTER AND TWO USB CHARGING PORTS
	120V SINGLE PHASE DIRECT CONNECTION
	208V SINGLE PHASE DIRECT CONNECTION
	208V THREE PHASE DIRECT CONNECTION
	347V SINGLE PHASE DIRECT CONNECTION
	600V SINGLE PHASE DIRECT CONNECTION
	600V THREE PHASE DIRECT CONNECTION
	347/600V PANELBOARD, SURFACE MOUNTED
	120/208V PANELBOARD, SURFACE MOUNTED
	EMERGENCY LIGHT
	UNFUSED DISCONNECT SWITCH
	DRY TYPE TRANSFORMER
	SINGLE PHASE MOTOR
	THREE PHASE MOTOR
	THERMOSTAT
	MANHOLE

ELECTRICAL LEGEND - SYSTEMS	
SYMBOL	DESCRIPTION
	DATA OUTLET

DRAWING LIST	
501	ELECTRICAL LEGENDS & DRAWING LIST
502	ELECTRICAL SITE PLAN & DETAILS
503	ELECTRICAL PUMPHOUSE LAYOUT - POWER LAYOUT
504	ELECTRICAL PUMPHOUSE LAYOUT - LIGHTING LAYOUT
505	ELECTRICAL PUMPHOUSE FIRE ALARM LAYOUT
701	COMMUNICATIONS DETAILS
702	SITE PLAN - COMMUNICATIONS - NEW WORK

ELECTRICAL LEGEND - NOTATION	
SYMBOL	DESCRIPTION
CL	CEILING MOUNTED
EF	EXHAUST FAN
HWT	HOT WATER TANK
JP	JOCKEY PUMP
MD	MOTORIZED DAMPER
GND	GROUND
TX	TRANSFORMER
WP	WEATHER-PROOF
XX-YY-ZZ	'XX' DENOTES PANEL; 'YY' DENOTES CIRCUIT NUMBER; 'ZZ' DENOTES SWITCH NUMBER

ELECTRICAL LEGEND - LINE TYPES	
SYMBOL	DESCRIPTION
	NEW ITEM TO BE PROVIDED
	EXISTING ITEM TO REMAIN

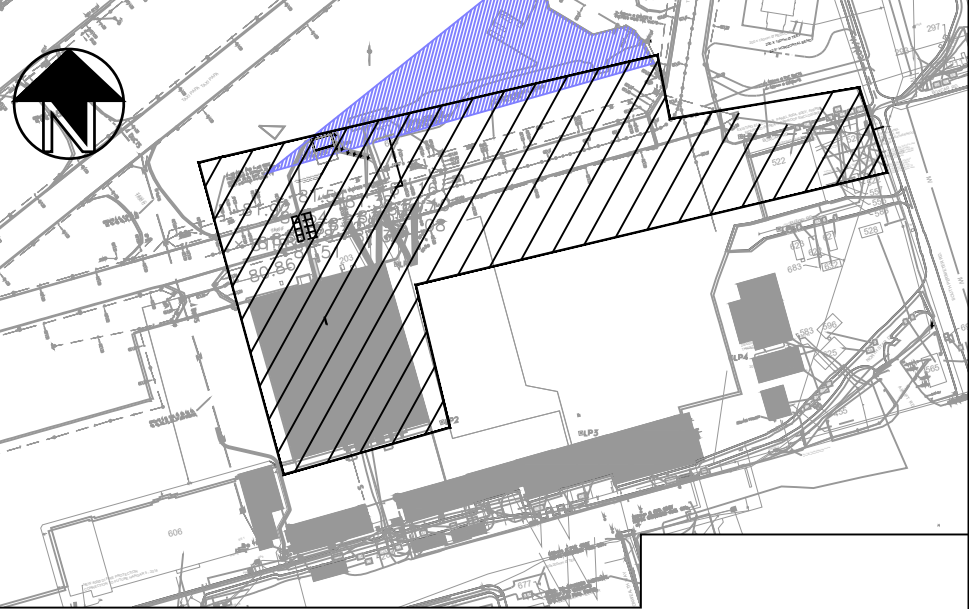
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7	2025/11/20	ISSUED FOR TENDER	RK
6	2025/10/21	RE-ISSUED FOR 100%	RK
5	2025/03/07	100% SUBMISSION	RK
4	2024/12/13	90% SUBMISSION REV01	RK
3	2024/07/31	90% SUBMISSION	RK
2	2024/03/31	60% RE-SUBMISSION	RK
1	2022/03/25	60% SUBMISSION	PS
DATE		REVISION	APPR.

SCALE | ÉCHELLE

SCALE AS SHOWN

LOCATION | EMPRKCEMENT

8 WING TRENTON
CFB TRENTON
ONTARIO

PROJECT | PROJET

TRE-UPG B052 (HGR 10) FIRE
PUMPHOUSE

TRADE | MÉTIER

ELECTRICAL

DATE

2025/11/20

ELECTRICAL LEGENDS & DRAWING LIST		
PRODUCTION	REVIEWED REVU	
DESIGNED ÉTUDIÉ	XX XX	DES O AGENT CORK
RK/PS		S.C.
DRAWN DESSINÉ		PROJ MGR GEST PROJ
HB		P.O.
CHECKED VÉRIFIÉ		DES MGR GEST CORK
RK		S.C.
COORDINATION		FIRE IRKENDIE

WBS NO. | NO. OTP

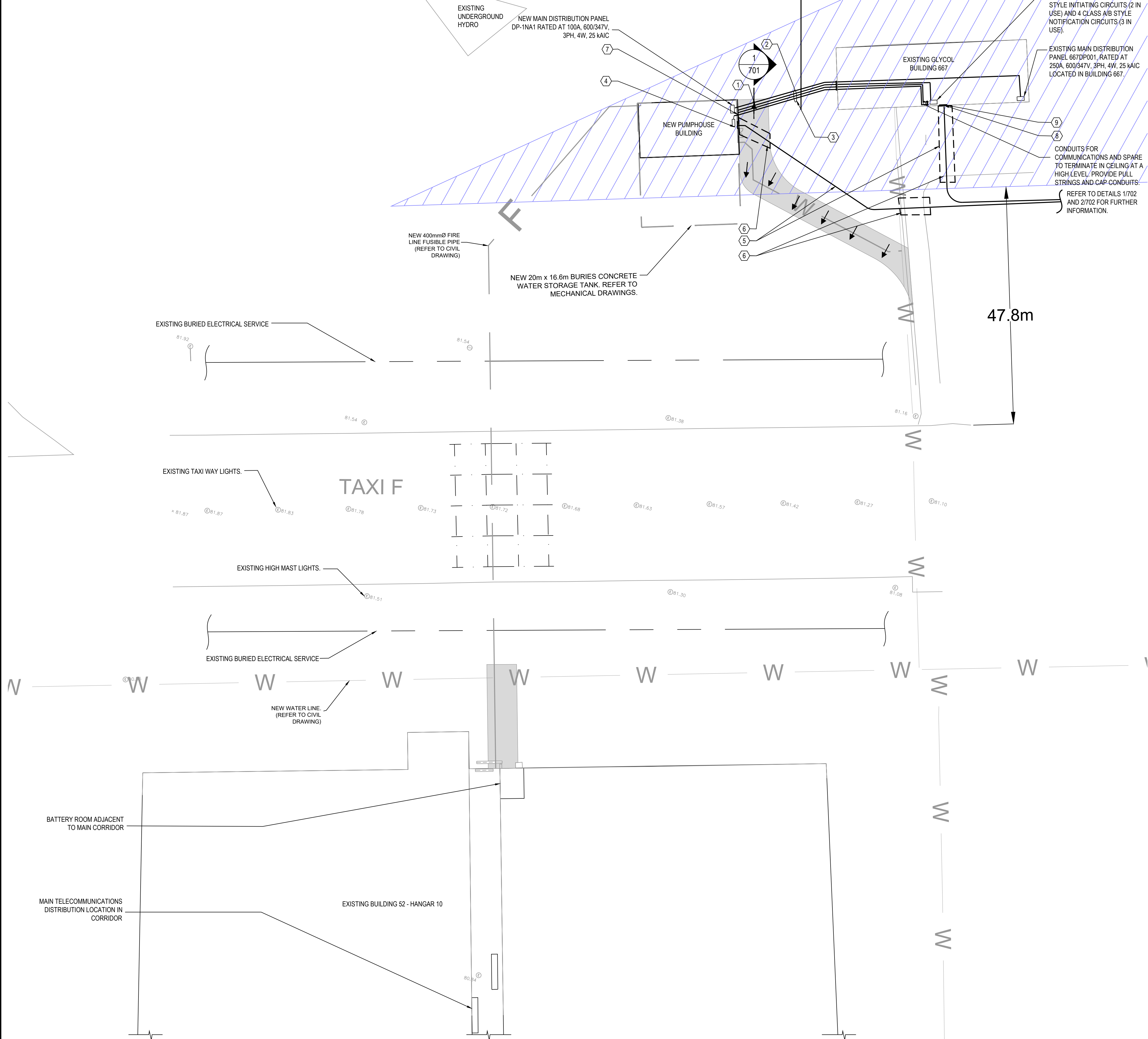
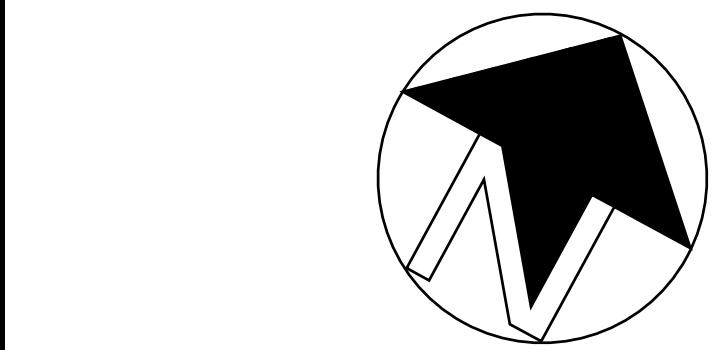
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PF NO. | NO. DP

500006750

DWG. NO. | NO. DESSIN

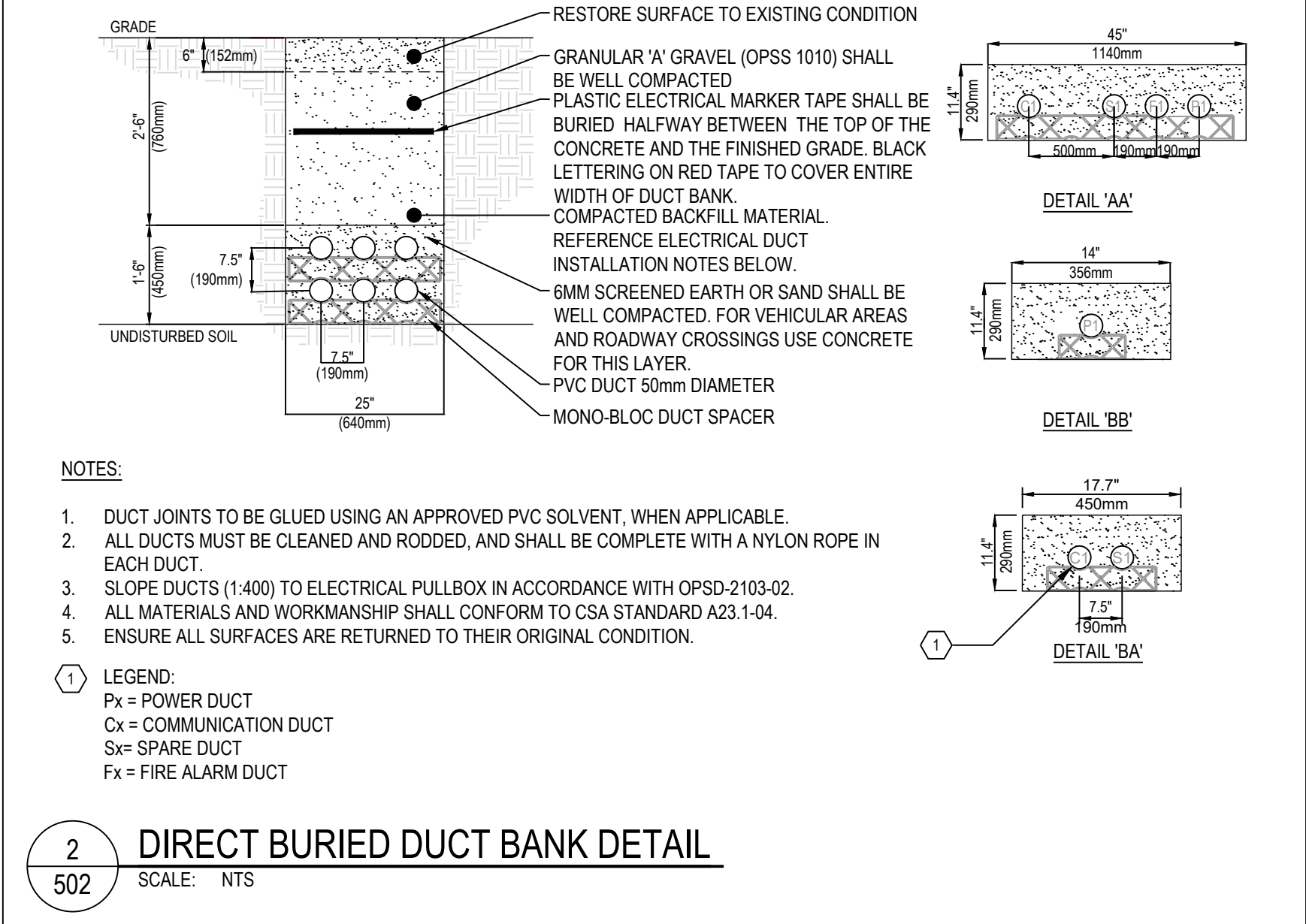
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1
502
ELECTRICAL - SITE PLAN
SCALE: 1:400

- ### GENERAL NOTES
- ALL EXISTING UNDERGROUND SERVICES ARE NOT SHOWN ON THIS DRAWING FOR CLARITY. COORDINATE EXACT UNDERGROUND ROUTING ONSITE WITH OTHER TRADES AND WITH EXISTING UNDERGROUND SERVICES (GAS, WATER, SEWER ETC.). REFER TO RELATED SITE SERVICES DRAWINGS. ALTERNATE ROUTING PROPOSALS SHALL RECEIVE APPROVAL SIGN-OFF FROM DCC REPRESENTATIVE.
 - ELECTRICAL DUCT BANK SHALL BE INSTALLED WITH A MINIMUM 1 METER CLEARANCE FROM ALL EXISTING SERVICES, UNLESS INDICATED OTHERWISE. WHERE THIS SEPARATION CANNOT BE ACHIEVED ADVISE OWNER AND JP2G REPRESENTATIVE. WHEN ELECTRICAL DUCT BANK IS ROUTED WITHIN 1 METER OF ENBRIDGE NATURAL GAS LINE THE CONTRACTOR SHALL FOLLOW ENBRIDGE'S REQUIREMENTS. MECHANICAL EXCAVATION IS NOT PERMITTED WITHIN 3M OF PIPELINE UNLESS VERIFIED AND EXACT LOCATION HAS BEEN DETERMINED. VERTICAL AND HORIZONTAL CLEARANCES SHALL BE AS PER ENBRIDGE'S REQUIREMENTS AS IT RELATES TO THE GAS PIPE SIZE AND PRESSURE.
 - ALL NECESSARY ESA INSPECTIONS TO BE COORDINATED BY THIS CONTRACTOR AS REQUIRED.
 - EXCAVATION, BACKFILL, CONCRETE AND REINFORCEMENT WORK ASSOCIATED WITH THE ELECTRICAL INSTALLATION TO BE BY GENERAL CONTRACTOR.
 - PROVIDE RISES AND DROPS IN CONDUIT RUN AS REQUIRED TO ACCOMMODATE CHANGES IN ELEVATION AND EXISTING UNDERGROUND SERVICES. REPORT ALL CHANGES IN DIRECTION TO DCC REPRESENTATIVE PRIOR TO INSTALLATION. LOW SPOTS AND SUDDEN CHANGES IN DIRECTION WILL NOT BE ACCEPTED.
 - COORDINATE ELECTRICAL SHUTDOWN WITH OWNER AND UTILITY REPRESENTATIVE.
 - ROAD CUT WORK SHALL BE PERFORMED ON THE WEEKEND TO LIMIT TRAFFIC DISRUPTION. COORDINATE EXACT DATES AND TIMES WITH OWNER REPRESENTATIVE.
 - RESTORATION: UPON COMPLETION OF CLEANUP, GRADE SURFACE AS INDICATED OR RESTORE TO ORIGINAL CONDITIONS. REPLACE TOPSOIL AND PREPARE FOR RESTORATION OF LAWNS. REFER TO CIVIL DRAWINGS AND SPECIFICATIONS FOR FURTHER DETAILS. IF RETAINING WALL IS ALTERED THEN RESTORE TO MATCH EXISTING.
 - POWER SHALL BE ROUTED IN CONDUIT AND SHALL BE SEPARATE FROM ANY FIRE ALARM, COMMUNICATIONS OR SECURITY CABLING.
 - WHEN POWER AND TELECOM DUCTBANKS CROSS, POWER SHALL BE MAINTAINED AT STANDARD 760MM DEPTH OR OTHER DEPTH AS INDICATED. ADJUST TELECOM DUCTBANK DEPTH AS REQUIRED.
 - ALL DUCT BANKS AT ROAD CROSSINGS AND VEHICULAR AREAS SHALL BE CONCRETE ENCASED.
 - CONTRACTOR SHALL PROVIDE TEMPORARY SERVICES FOR DURATION OF OUTAGES, INCLUDING GENERATOR RENTALS AND FIRE WATCHES, WHEN INTERRUPTING SERVICES TO EXISTING BUILDINGS. COORDINATE REQUIREMENTS WITH DCC REPRESENTATIVE.
 - CONTRACTOR SHALL COMPLETE AS MUCH AS PRACTICALLY POSSIBLE OF THE NEW UNDERGROUND DUCT BANK(S) INSTALLATION PRIOR TO DISCONNECT AND REMOVAL OF EXISTING SERVICES/ POWER FEEDS TO MITIGATE THE DISRUPTION DURATION.
 - PROVIDE ADDITIONAL GROUND RODS AND/OR PLATES AS REQUIRED TO OBTAIN A SATISFACTORY GROUNDING RESISTANCE AS PER OESC REQUIREMENTS.
 - ALL FOUNDATION DUCT ENTRIES SHALL SLOPE AWAY FROM THE BUILDING AND BE C/W WATERTIGHT SEALS. FOUNDATION SHALL BE PROPERLY SEALED WHERE AT ALL DUCT ENTRY LOCATIONS.

- ### CONSTRUCTION NOTES
- 4-50MM DIAMETER CONCRETE ENCASED DUCTS:
1-50MM DIA. DUCT FOR POWER
1-50MM DIA. DUCT FOR FIRE ALARM
1-50MM DIA. DUCT FOR SPARE
1-50MM DIA. FOR COMMUNICATIONS
REFER TO FORMATION 'AA' ON DUCT BANK DETAIL 2/502 AND 2/701 FOR DUCT GRADING DETAIL.
MAINTAIN MINIMUM SEPARATION OF 150MM CONCRETE OR 450MM EARTH BETWEEN COMMUNICATIONS CONDUITS AND POWER CONDUITS INSTALLED WITHIN THE SAME DUCT BANK
 - 4-50MM DIAMETER DIRECT BURIED DUCTS:
1-50MM DIA. DUCT FOR POWER
1-50MM DIA. DUCT FOR FIRE ALARM
1-50MM DIA. DUCT FOR SPARE
1-50MM DIA. FOR COMMUNICATIONS
REFER TO FORMATION 'AA' ON DUCT BANK DETAIL 2/502 AND 2/701 FOR DUCT GRADING DETAIL.
 - UG DUCTS RISE UP EXTERIOR BUILDING STRUCTURE AT THESE LOCATIONS AND TERMINATE AT ELBOW JUNCTIONS. CONDUITS TO BE ROUTED FROM ELBOW JUNCTIONS TO INTERIOR OF BUILDING AT A HIGH LEVEL.
 - COMMUNICATIONS CONDUITS WITH PULL STRINGS TO TERMINATE AT PLYWOOD BACKBOARD. SPARE CONDUIT TO BE CAPPED FOR FUTURE USE. PROVIDE TERMINAL STRIP AND PATCH PANEL AT BACKBOARD.
 - PROVIDE 1 X 103mmØ DIRECT BURIED DUCT BANK AS PER DETAIL 2/502 FORMATION 'BB' AND DETAIL 2/701 FOR GRADING. CONTRACTOR TO TRACE EXISTING BURIED SERVICES ON SITE PRIOR TO EXCAVATING AND COORDINATE NEW COMMUNICATIONS DUCT BANK WITH EXISTING SERVICES. INSTALLATION SHALL BE IN ACCORDANCE WITH SHARED SERVICE CANADA/TCNDE STATEMENT OF REQUIREMENT PATHWAYS AND SPACES OUTSIDE CABLE PLANTS SECTION 7.
 - PROVIDE 1 X 103mmØ CONCRETE ENCASED DUCT BANK AS PER DETAIL 1/701 FORMATION 'CH' AND DETAIL 2/701 FOR GRADING. CONTRACTOR TO TRACE EXISTING BURIED SERVICES ON SITE PRIOR TO EXCAVATING AND COORDINATE NEW COMMUNICATIONS DUCT BANK WITH EXISTING SERVICES. INSTALLATION SHALL BE IN ACCORDANCE WITH CANADA/TCNDE STATEMENT OF REQUIREMENT PATHWAYS AND SPACES OUTSIDE CABLE PLANTS SECTION 7.
 - SCAN AND CORE HOLES IN EXTERIOR WALL. TRANSITION COMMUNICATIONS CONDUIT UP FROM UNDERGROUND DUCT BANK AND INTO WALL WITH ELBOW FITTING AND TERMINATE AT PLYWOOD BACKBOARD. REFER TO DETAIL #3 ON DRAWING 503.
 - SCAN AND CORE HOLES IN EXTERIOR WALL. TRANSITION COMMUNICATIONS CONDUIT UP FROM UNDERGROUND DUCT BANK AND INTO WALL WITH ELBOW FITTING AND TERMINATE AT NEW PLYWOOD BACKBOARD LOCATION. REFER TO DETAIL #3 ON DRAWING 503.
 - PROVIDE 1220mm(L) X 2440mm (W) X 20mm (D) PLYWOOD BACKBOARD FOR TELECOM WITH TWO COATS OF FIRE RESISTANT PAINT C/W INSULATED BONDING BUS BAR MOUNTED TO THE CORNER OF THE BACKBOARD AT 150mm AFF. COPPER GROUND BUS MOUNTED ON INSULATED SUPPORTS AND CONNECTED TO MAIN BUILDING GROUND. REFER TO DETAIL #4/503.



2
502
DIRECT BURIED DUCT BANK DETAIL
SCALE: NTS

Government of Canada

Gouvernement du Canada

LEVEL OF SECURITY | NIVEAU DE SÉCURITÉ

UNCLASS | NON CLASSIFIÉ

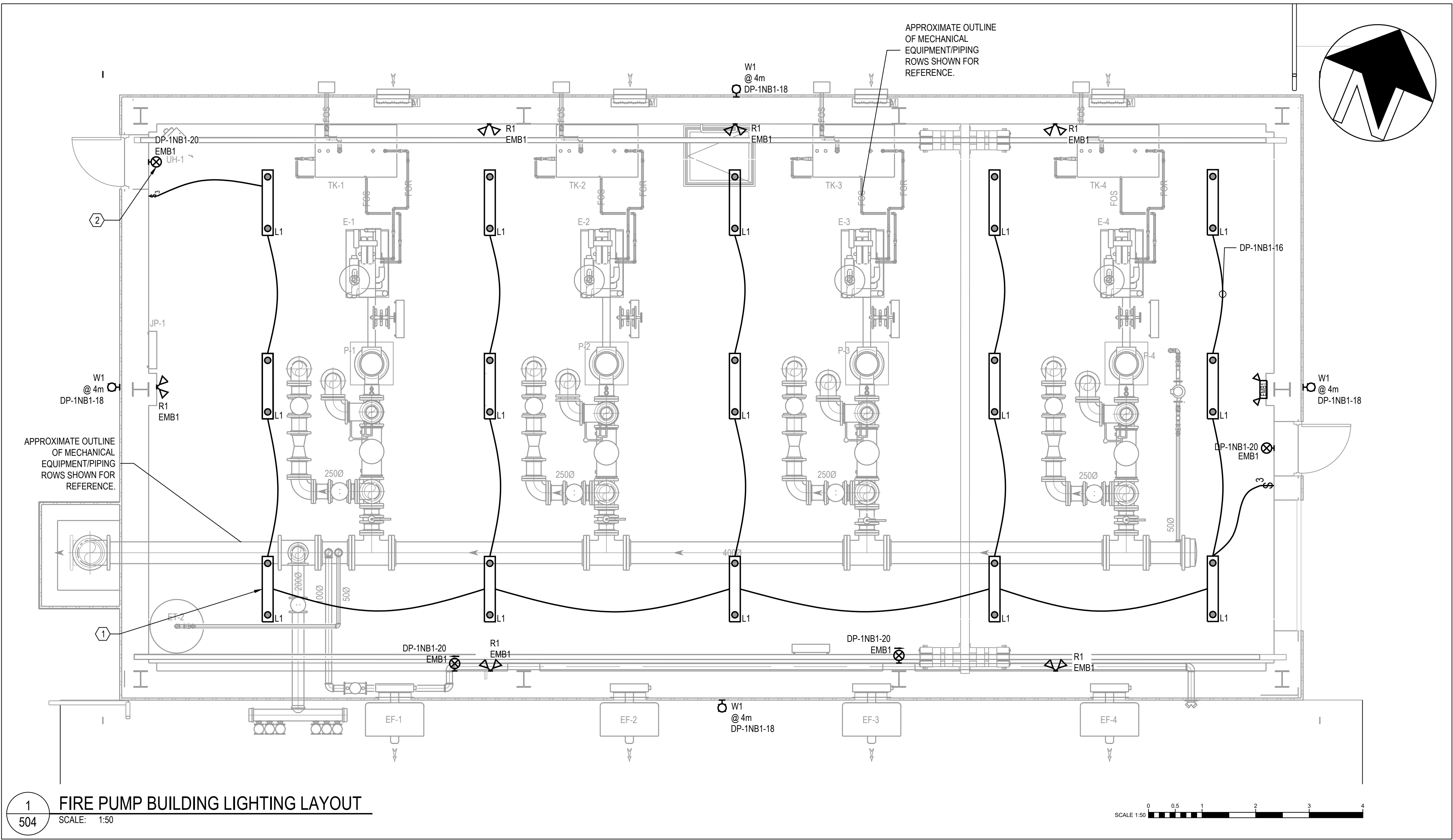
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1 FIRE PUMP BUILDING LIGHTING LAYOUT

LUMINAIRE SCHEDULE									
TAG	DESCRIPTION	CATALOGUE NUMBER	LUMENS	TYPE	WATTS	COLOUR	VOLTS	MOUNTING	REMARKS
L1	4FT LED STRIP LIGHT	LITHONIA LIGHTING # CSV1-L48-AL03-MVOLT-SWW3-80CRI METALUX# 4VT3-SL3C3-W-UNV COLUMBIA# CVT4-LSC3-MV	3019-5206	LED	38-46W	4000K	120V	SUSPENDED	4FT SUSPENDED LED, SELECTABLE LUMEN OUTPUT, 118LPW, -40°C TO 45°C, 0-10V DIMMING, DLC LISTED, CSA CERTIFIED TO UL & CUL STANDARDS FOR WET LOCATIONS, IP65, IP66 RATED, 5 YEAR WARRANTY.
W1	WALL PACK	LITHONIA LIGHTING # WIDGE2 LED-P4-40K-80CRI-VW-MVOLT-PE LUMARK# AXCS4A-PC BEACON# VPW2-48L-30-4K8-4F-UNV	4000-5520	LED	35-44W	4000K	120V	SURFACE	DIE CAST ALUMINUM HOUSING, ELECTRONIC DRIVER, FORWARD THROW DISTRIBUTION, C/W INTEGRATED PHOTOCELL, 80CRI, B1 U0 G1, 129LPW, 100,000 HOURS PROJECTED LIFE TO 90% (TESTED AS PER IESNA LM-80-08 AND PROJECTED AS PER IESNA TM-21-11), DLC LISTED, IP66 RATED, CSA CERTIFIED, -40C RATES, 5 YEAR WARRANTY, COLOR TO BE COORDINATED WITH FINAL APPROVED BUILDING SHOP DRAWINGS.
EMERGENCY LIGHTING SCHEDULE									
TYPE	DESCRIPTION	CATALOGUE NUMBER	REMARKS						
	WALL MOUNTED EXIT SIGN	AIMLITE RPALW-1-M-WHT-UNVDC EMERGI-LITE EA3WU READY-LITE RA3WU	120VAC SINGLE FACED WALL MOUNTED C/W ONE PIECE ALUMINUM HOUSING. PROVIDE PICTOGRAM AS NOTES ON DRAWINGS.						
	EMERGENCY BATTERY PACK C/W TWO INTEGRAL HEADS	AIMLITE # EBST-12-250-2MB-6WLA-WHT EMER-LITE 12ESL250/2LJ READY-LITE LDX12-25-2-1D10	120VAC INPUT, 12VDC OUTPUT, 250W WALL MOUNT EMERGENCY BATTERY PACK C/W TWO 6W LED MR16 LAMPS AND AUTO TEST SELF-DIAGNOSTIC.						
	REMOTE DOUBLE HEAD	AIMLITE # RMMB-2-12-24V-6W-LA-WHT EMERGI-LITE EF9DM-LJ RM-2-LD10	CAST METAL HOUSING WITH WHITE POWDERCOAT FINISH C/W STANDARD CANOPY AND 12V MR16 STYLE 6W LED LAMPS.						

GENERAL NOTES

1.

PROVIDE ALL REQUIRED HARDWARE AND MOUNTING ACCESSORIES FOR COMPLETE LIGHT FIXTURE INSTALLATION.

2.

CONTRACTOR SHALL DEMONSTRATE THE OPERATION OF THE EMERGENCY LIGHTING TO THE DCC REPRESENTATIVE.

3.

FIXTURES SHALL BE STEM/SUSPENDED MOUNTED ON GALVANIZED THREADED ROD DUE TO AIRFLOW THROUGH FACILITY. CHAIN SUSPENSION WILL NOT BE ACCEPTED.

CONSTRUCTION NOTES

1

PROVIDE VAPOUR-TIGHT LED STRIP LIGHT SUSPENDED ON AIRCRAFT CABLES. FIXTURE SHALL BE SUSPENDED AT SAME HEIGHT AS CRANE RAIL TO FACILITATE UNOBSTRUCTED MOVEMENT OF THE OVERHEAD CRANE. TYPICAL.

2

EXIT SIGN TO BE WALL MOUNTED. TYPICAL OF 4.

LEVEL OF SECURITY | NIVEAU DE SÉCURITÉ

UNCLASS | NON CLASSIFIÉ

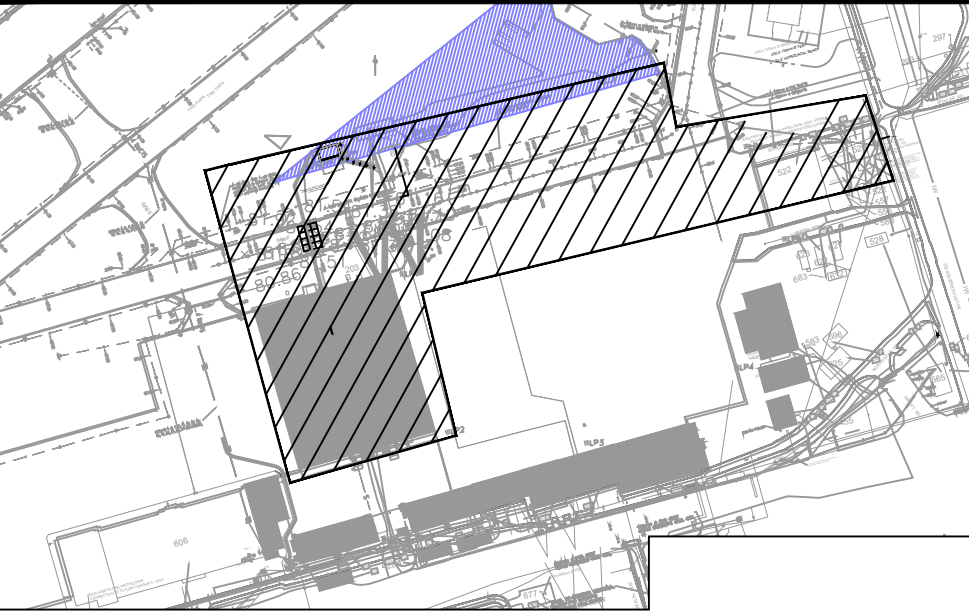
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7	2025/11/20	ISSUED FOR TENDER	RK
6	2025/10/21	RE-ISSUED FOR 100%	RK
5	2025/03/07	100% SUBMISSION	RK
4	2024/12/13	90% SUBMISSION REV01	RK
3	2024/07/31	90% SUBMISSION	RK
2	2024/03/31	60% RE-SUBMISSION	RK
1	2022/03/25	60% SUBMISSION	PS
DATE		REVISION	APPR.

SCALE | ÉCHELLE

SCALE AS SHOWN

LOCATION | EMPRKCEMENT

8 WING TRENTON

CFB TRENTON

ONTARIO

PROJECT | PROJET

TRE-UPG B052 (HGR 10) FIRE PUMPHOUSE

TRADE | MÉTIER

ELECTRICAL

DATE

2025/11/20

SUBJECT | SUJET

ELECTRICAL PUMPHOUSE - LIGHTING LAYOUT

PRODUCTION

DESIGNED | ÉTUDIÉ

RK/PS

DRAWN | DESSINÉ

HB

CHECKED | VÉRIFIÉ

RK

COORDINATION

REVIEWED | REVU

XX | XX

DES O | AGENT CORK

S.C.

PROJ MGR | GEST PROJ

P.O.

DES MGR | GEST CORK

S.C.

FIRE | IRKENDIE

WBS NO. | NO. OTP

N.002108.03

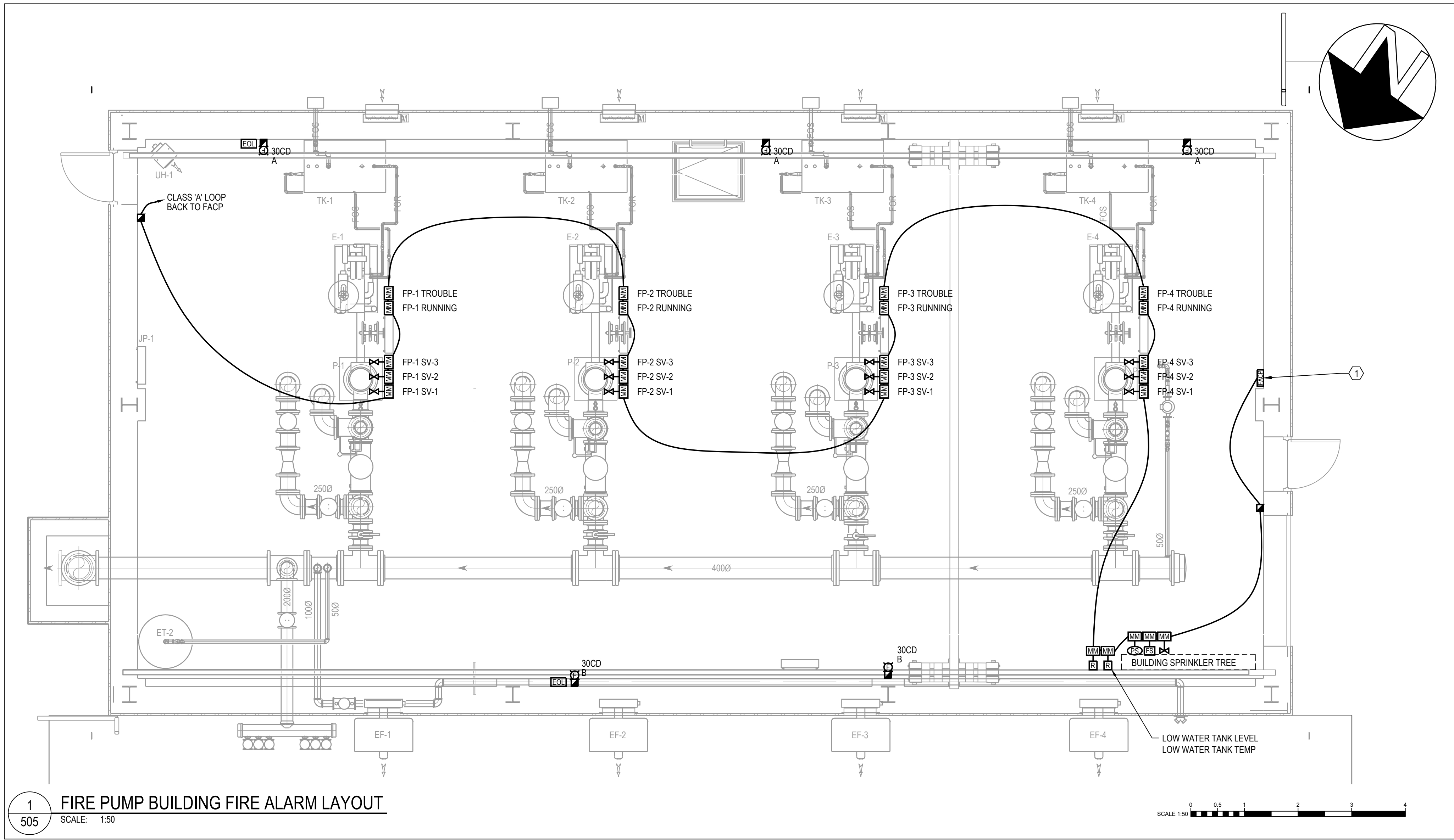
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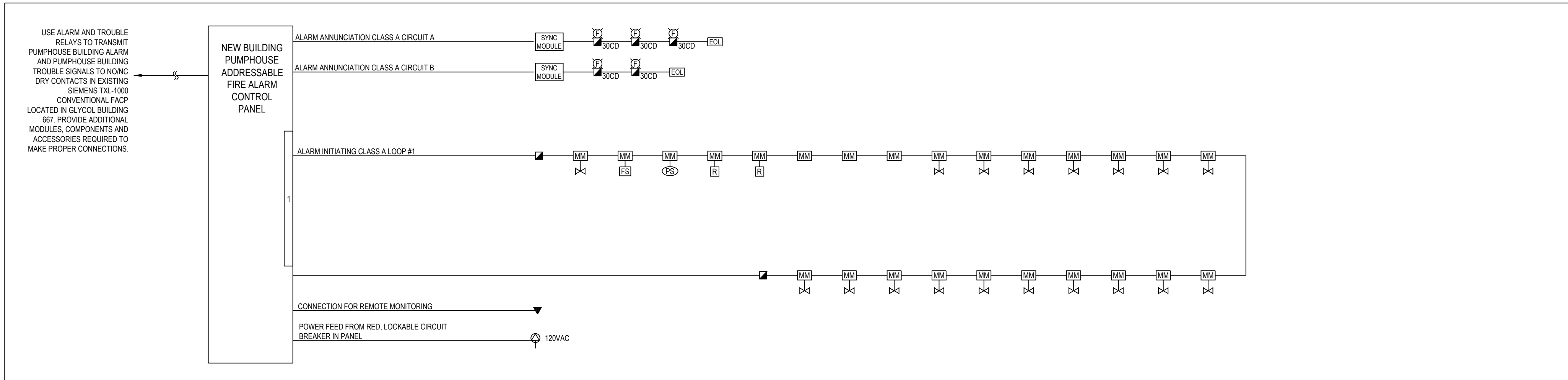
DWG. NO. | NO. DESSIN

L-T81-3006/68- 504

Canada



1
505 FIRE PUMP BUILDING FIRE ALARM LAYOUT
SCALE: 1:50



- NOTES:
- THIS RISER DIAGRAM IS FOR INFORMATION PURPOSES ONLY. THIS INTENT OF THIS RISER DIAGRAM IS TO SHOW THE ZONING OF THE FIRE ALARM DEVICES. REFER TO FLOOR PLANS FOR EXACT QUANTITIES OF FIRE ALARM DEVICES.
 - NOT ALL FIRE ALARM SYSTEM COMPONENTS HAVE BEEN INCLUDED ON THE RISER DIAGRAM. THE CONTRACTOR SHALL DETERMINE BY REVIEW OF PLANS, SITE REVIEW AND CONSULTATION WITH THE MANUFACTURER EXACT SYSTEM COMPONENT AND ACCESSORY REQUIREMENTS FOR THE DEVICES. INSTALLATION OF ALL DEVICES SHALL BE PERFORMED IN ACCORDANCE WITH CANULC S524.
 - THIS CONTRACTOR SHALL HIRE A CERTIFIED FIRE ALARM CONTRACTOR TO TEST AND VERIFY THE PROPER OPERATION OF THE FIRE ALARM SYSTEM(S) AND ALL COMPONENTS. TEST AND VERIFICATION ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH CANULC-S533, CANULC-S537. REPROGRAM EXISTING CONVENTIONAL SIEMENS TXL-1000 SYSTEM AS REQUIRED.
 - THE CONTRACTOR SHALL PROVIDE AN AS-BUILT RISER DIAGRAM AND PASSIVE GRAPHIC FOR THE PUMPHOUSE BUILDING UPON COMPLETION OF THE WORK. THE CONTRACTOR SHALL UPDATE THE EXISTING RISER DIAGRAM AND PASSIVE GRAPHIC IN GLYCOL BUILDING 667.
 - THIS CONTRACTOR SHALL PERFORM AND AUDIBILITY TEST TO ENSURE REQUIREMENTS OF ALL APPLICABLE CODES AND STANDARDS, AS WELL AS THE AUTHORITIES HAVING JURISDICTION HAVE BEEN MET.

2
506 FIRE ALARM RISER DIAGRAM - PUMPHOUSE BUILDING
SCALE: N.T.S.

INITIATION SUPERVISORY CIRCUIT													OTHER CONNECTED DEVICES						FIRE ALARM LOAD SUMMARY				
SMOKE DETECTOR			DUCT SMOKE			PULL STATION		ADDRESSABLE MODULE		FAULT ISOLATOR			RELAY MODULE		RELAY BASE		MAGLOCK		TOTAL SUPERVISORY CURRENT (mA)	TOTAL ALARM CURRENT (mA)			
QTY	DRAW (6mA)	STANDBY(0.6mA)	QTY	DRAW (17mA)	STANDBY(0.3mA)	QTY	DRAW (4.8mA)	STANDBY(4.8mA)	QTY	DRAW (10.8mA)	STANDBY(10.8mA)	QTY	DRAW (6mA)	STANDBY(9mA)	QTY	DRAW (6.5mA)	QTY	DRAW (0.2mA)	QTY	DRAW (260mA)			
LOOP 1	0	0.0	0.0	0	0.0	0.0	2	9.6	9.6	25	270.0	270.0	0	0.0	0.0	0	0.0	0	0.0	0	0.0	549.0	0.0
NOTES: 1. CURRENT DRAW BASED OFF 24VDC OPERATION. 2. REFER TO CNL STANDARD ORL-60000-STD-002 - CNL MIRCOM FIRE PROTECTION EQUIPMENT AND DEVICE LIST. DESIGN BASIS DEVICES: ADDRESSABLE MODULE - SYSTEM SENSOR MODEL # M000SA RELAY MODULE - SYSTEM SENSOR MODEL #M000RA ELECTROMAGNETIC DOOR HOLDER (MDH) - MIRCOM MODEL #DH2412SPC ISOLATOR MODULE - SYSTEM SENSOR MODEL #M000IA BELL/STROBE - MIRCOM MODEL #BL-6B SYSTEM SENSOR MODEL # SRA STROBE - SYSTEM SENSOR MODEL # SRA P BELL - MIRCOM MODEL #BL-6B SMOKE DETECTOR - SYSTEM SENSOR MODEL # 2251BA RELAY BASE - SYSTEM SENSOR MODEL # 5051BA PULL STATION - MIRCOM MODEL # M000T00ADU BATTERY SIZE CALCULATION: REFER TO FIRE ALARM BATTERY SIZE CALCULATION SUBMITTED WITH EIC REVIEW PACKAGE. THIS CALCULATION DOES NOT FACTOR IN VOLTAGE DROP. PROVIDE MINIMUM OF 42AH BATTERY CAPACITY. FINAL BATTERY SIZE TO BE DETERMINED BY FIRE ALARM EQUIPMENT PROVIDER (MIRCOM).																							

GENERAL NOTES

- ALL FIRE ALARM WORKS SHALL BE COMPLETED AND VERIFIED, COMMISSIONED/TESTED IN ACCORDANCE WITH APPLICABLE CODES/STANDARDS, INCLUDING BUT NOT LIMITED TO CANULC-S524 AND CANULC-S537.
- PROVIDE AND INSTALL STROBES IN ACCORDANCE WITH CANULC-S524. AMBIENT DECIBEL LEVELS WILL BE HIGH DURING FIRE PUMP OPERATION. STROBES TO BE PLACES VISIBLE BETWEEN EQUIPMENT ROWS.
- THIS RISER DIAGRAM IS FOR INFORMATION PURPOSES ONLY. NUMBER OF DEVICES IS DIAGRAMMATIC ONLY. REFER TO FIRE ALARM DRAWINGS FOR EXACT QUANTITIES AND LOCATIONS OF DEVICES.
- THE FIRE ALARM CONTROL PANEL IS TO BE LOCATED IN THE MAIN ENTRANCE.
- THIS CONTRACTOR TO PROVIDE FIRE ALARM PANEL AND DEVICES. THIS CONTRACTOR TO INSTALL AND CONNECT ALL DEVICES.
- SYNCHRONIZATION MODULES TO BE PROVIDED AS INDICATED FOR STROBE SYNCHRONIZATION.
- EXACT SYSTEM AND COMPONENT REQUIREMENTS TO BE COORDINATED WITH APPROVED SPRINKLER SHOP DRAWINGS.
- DATA COMMUNICATION LINK BETWEEN FIRE ALARM PANEL AND FIELD INITIATION DEVICES TO BE CLASS 'A' CIRCUIT WITH ONE SUPPLY PATH AND RETURNING THROUGH AN ALTERNATE PATH TO THE FIRE ALARM PANEL. CONDUIT RUNS TO HAVE MINIMUM 1.2M SEPARATION HORIZONTALLY AND 300MM VERTICALLY.
- PROVIDE ZONE ISOLATION MODULES SO THAT A FAULT IN ONE FIRE ALARM ZONE WILL NOT AFFECT THE NORMAL OPERATION OF INPUT/FIELD DEVICES IN ANOTHER ZONE.
- THIS CONTRACTOR SHALL PROVIDE ALL REQUIRED ADDRESSABLE MODULES AND WIRING FOR CONNECTION OF NON-ADDRESSABLE EQUIPMENT (E.G. SPRINKLER MONITORING DEVICES).
- THE CONTRACTOR SHALL PROVIDE AN AS-BUILT RISER DIAGRAM UPON COMPLETION OF THE WORK.
- FIRE ALARM SYSTEM SHALL BE CONNECTED TO CAMPUS WIDE FIRE ALARM MONITORING NETWORK.
- PROVIDE CLASS A INITIATION CIRCUITS AND NOTIFICATION CIRCUITS.
- WIRING SHALL BE SOLID TINNED COPPER, ANNEALED CONDUCTORS WITH CODED PVC INSULATION, AND WITH OVERALL RED PVC JACKET. CABLES SHALL BE CSA CERTIFIED, ULG LISTED, 300 VOLT, 105°C. ALL CABLES SHALL BE MINIMUM 1HR RATED. INITIATING CIRCUITS SHALL BE 18 AWG MINIMUM AND IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS. SIGNAL CIRCUITS SHALL BE 12 AWG MINIMUM AND IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS. CONTROL CIRCUITS SHALL BE 14 AWG MINIMUM AND IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.

CONSTRUCTION NOTES

- PROVIDE NEW ADDRESSABLE FIRE ALARM CONTROL PANEL, DETECTORS, MANUAL PULL STATION, MOTORIZED BELLS AND STROBES. NEW FIRE ALARM CONTROL PANEL SHALL BE LINKED BACK TO EXISTING FIRE ALARM CONTROL PANEL IN GLYCOL BUILDING 667 FOR NOTIFICATION OF ALARM AND TROUBLE CONDITIONS. REFER TO RISER DIAGRAM ON DRAWING 504 FOR FURTHER DETAILS.

MAXIMUM WIRE LENGTH FOR NACS					
TOTAL SIGNAL LOAD (mA)	18 AWG	16 AWG	14 AWG	12 AWG	MAXIMUM LOOP RESISTANCE
60.0	716	1143	1829	2591	30.0
120.0	360	567	915	1296	15.0
300.0	143	229	366	579	6.0
600.0	71	114	183	259	3.0
900.0	47	76	122	174	2.0
1200.0	36	56	91	129	1.5
1500.0	29	46	73	105	1.2
1700.0	24	38	61	87	1.0

- NOTES:
- MAXIMUM VOLTAGE DROP SHALL NOT EXCEED 1.8 VOLTS.
 - DESIGN BASIS NAC ARE RATED FOR 1700mA EACH.

WIRE SIZE (AWG)		LENGTH (m)	
12		3049	
14		2429	
16		1518	
18		955	

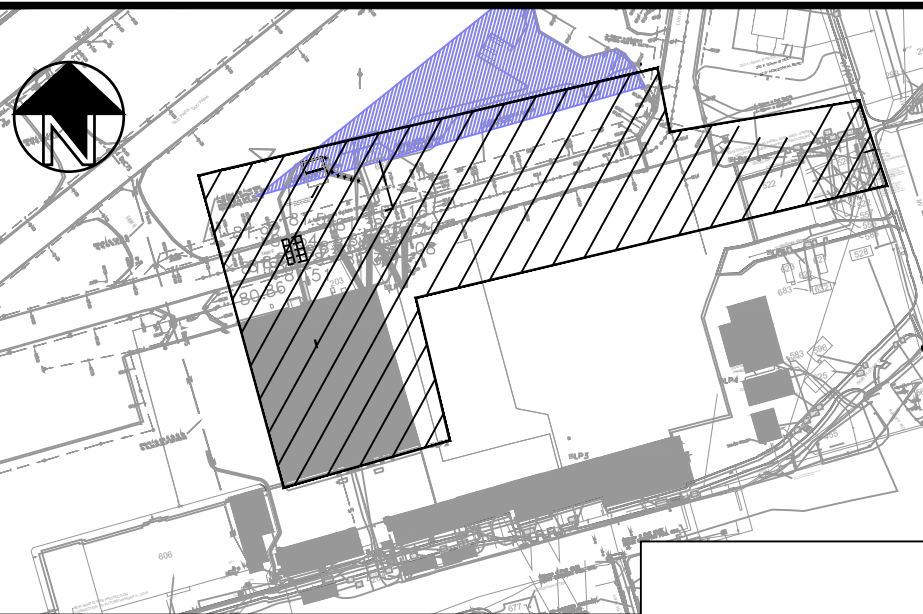
- NOTES:
- REFER TO RISER DIAGRAM FOR WIRE SIZE. 16 AWG TO BE USED UNLESS INDICATED OTHERWISE.
 - WIRING SHALL BE TWISTED NON-SHIELDED PAIR WIRE.
 - MAXIMUM CIRCUIT RESISTANCE IS 40Q.

ANNUNCIATING CIRCUIT LOADING							
CIRCUIT	HORN/BELL		EXPLOSION PROOF BELL		STROBE (30cd)		TOTAL
	QTY	DRAW (20mA)	QTY	DRAW (200mA)	QTY	DRAW (84mA)	
A	3	60.0	0	0.0	3	282.0	342.0
B	2	40.0	0	0.0	2	168.0	228.0
TOTAL	5	100.0	0	0.0	5	470.0	570.0

- NOTES:
- MAX VOLTAGE DROP SHOULD NOT EXCEED 1.8 VOLTS
 - NACS ARE RATED FOR 1700mA MAX.
 - REFER TO TABLES ON THIS DRAWING FOR WIRING AND EOL SIZING.

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1	2022/03/25	60% SUBMISSION	PS
	DATE	REVISION	APPR.

SCALE | ÉCHELLE
SCALE AS SHOWN

LOCATION | EMPLACEMENT
8 WING TRENTON
CFB TRENTON
ONTARIO

PROJECT | PROJET

TRE-UPG B052 (HGR 10) FIRE
PUMPHOUSE

TRADE | MÉTIER
ELECTRICAL

DATE
2025/11/20

SUBJECT | SUJET

ELECTRICAL PUMPHOUSE
FIRE ALARM LAYOUT

PRODUCTION	REVIEWED REVU	DES O AGENT CORK
DESIGNED ÉTUDIÉ	XX XX	S.C.
RK/PS		PROJ MGR GEST PROJ
DRAWN DESSINÉ		P.O.
HB		DES MGR GEST CORK
CHECKED VÉRIFIÉ		S.C.
RK		FIRE IRKENDIE
COORDINATION		

WBS NO. | NO. OTP
N.002108.03

PF NO. | NO. DP
500006750

DWG. NO. | NO. DESSIN
L-T81-3006/68-505

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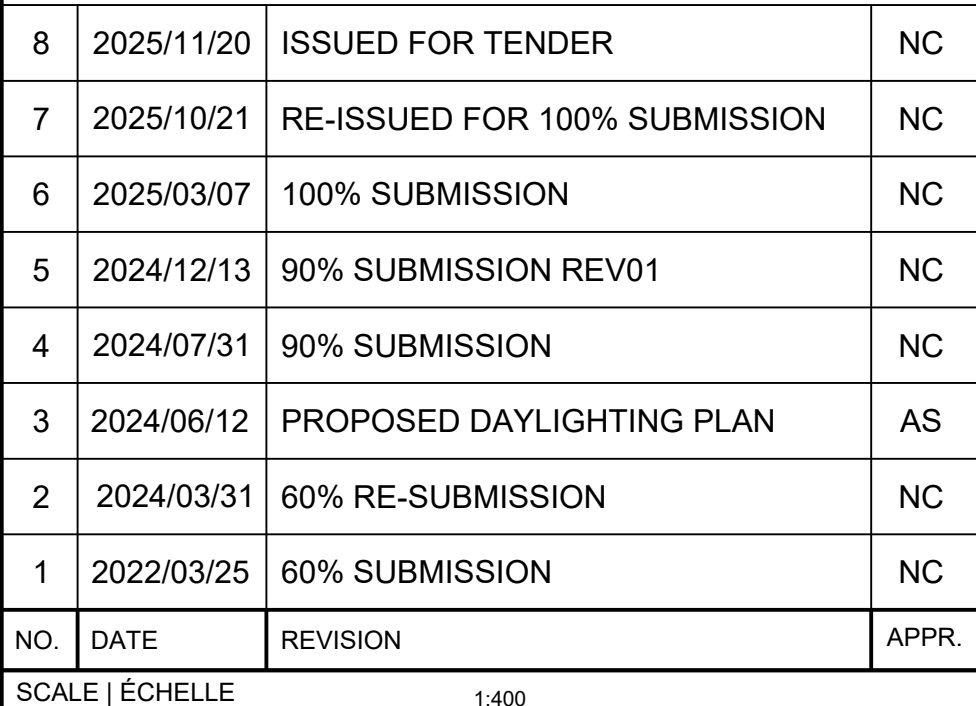
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REF # 19-5022A

	EXISTING STORM LINE
	NEW SANITARY LINE
	NEW WATER LINE
	NEW FIRE LINE
	NEW COMMUNICATION LINE
	NEW PAVEMENT STRUCTURE AS PER DETAIL 1 ON DRAWING 602
	NEW TAXIWAY CONCRETE CUT
	NEW SOD COMPLETE WITH 100mm TOPSOIL

● 9H 24-XX (SLR) BOREHOLE LOCATION AS PER
SUBSURFACE INVESTIGATION
PREPARED BY SLR, DATED
OCTOBER 18, 2024
(209.40881.00003)



PROJECT | PROJET

TRADE MÉTIER	DATE
CIVIL	2024/03/31

SUBJECT SUJET

SITE PLAN

PRODUCTION	REVIEWED REVU	
DESIGNED ÉTUDIÉ LA	XX XX	DES O AGENT CONC S.C.
DRAWN DESSINÉ LA		PROJ MGR GEST PROJ P.O.
CHECKED VÉRIFIÉ NC		DES MGR GEST CONC S.C.
COORDINATION AS		FIRE INCENDIE

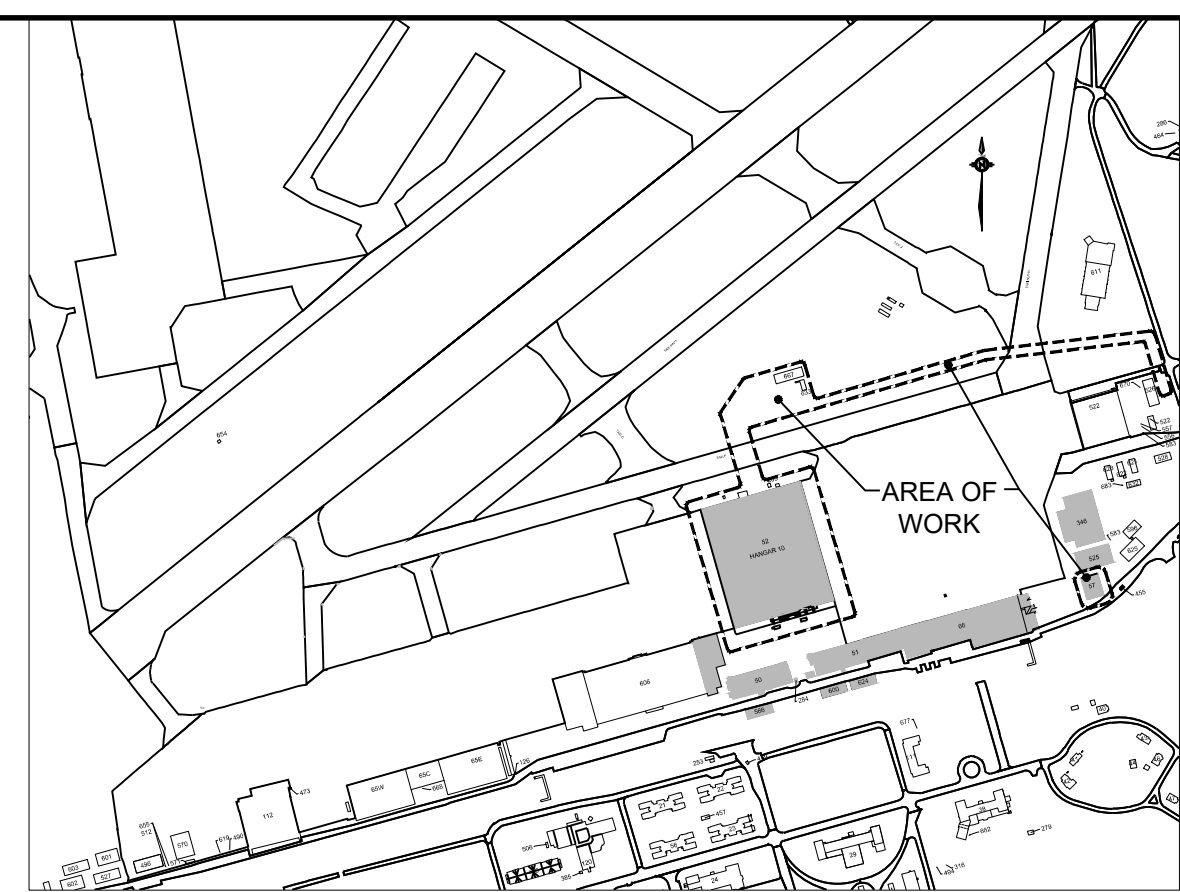
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DWG. NO. | NO. DESSIN | T01 0000/00 001

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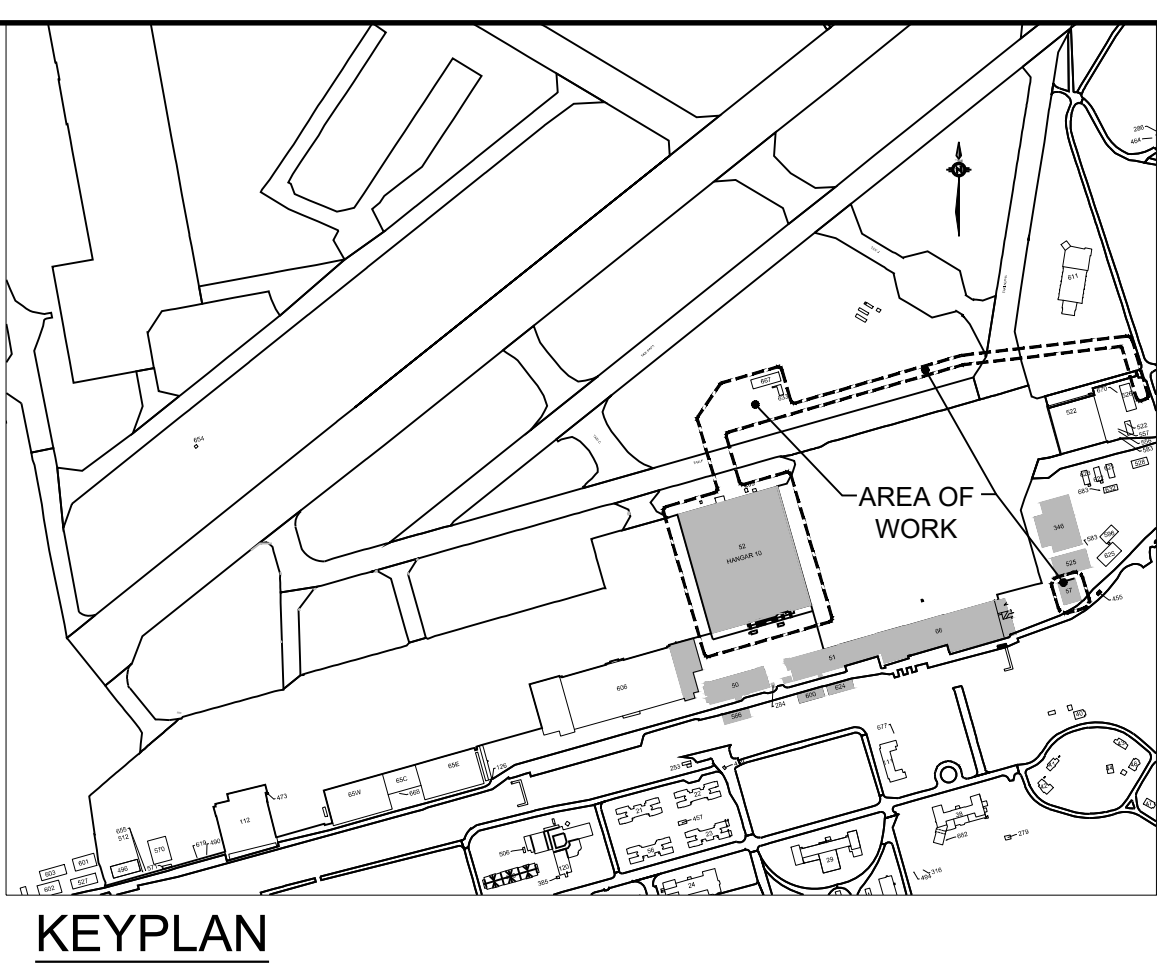
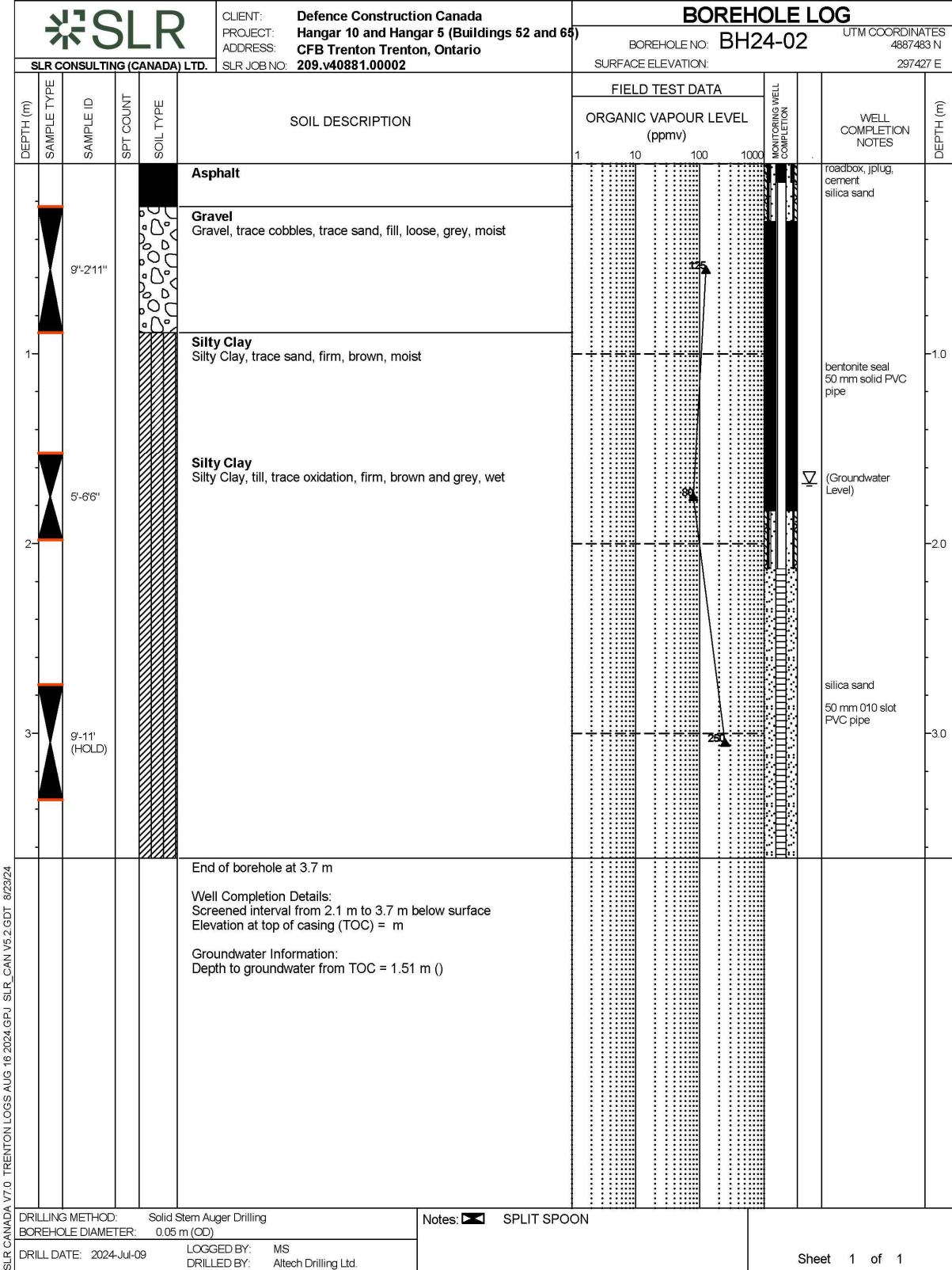
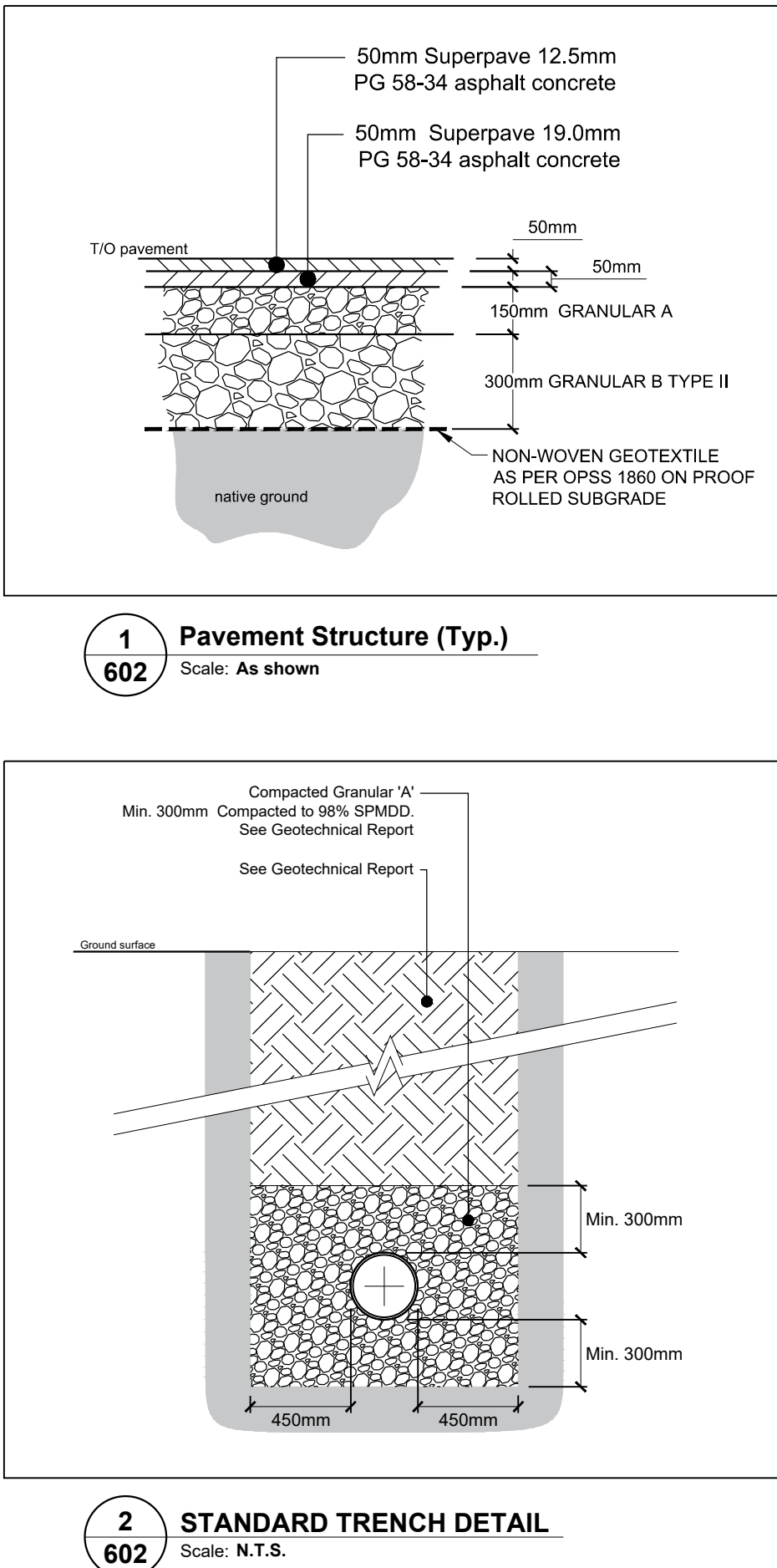
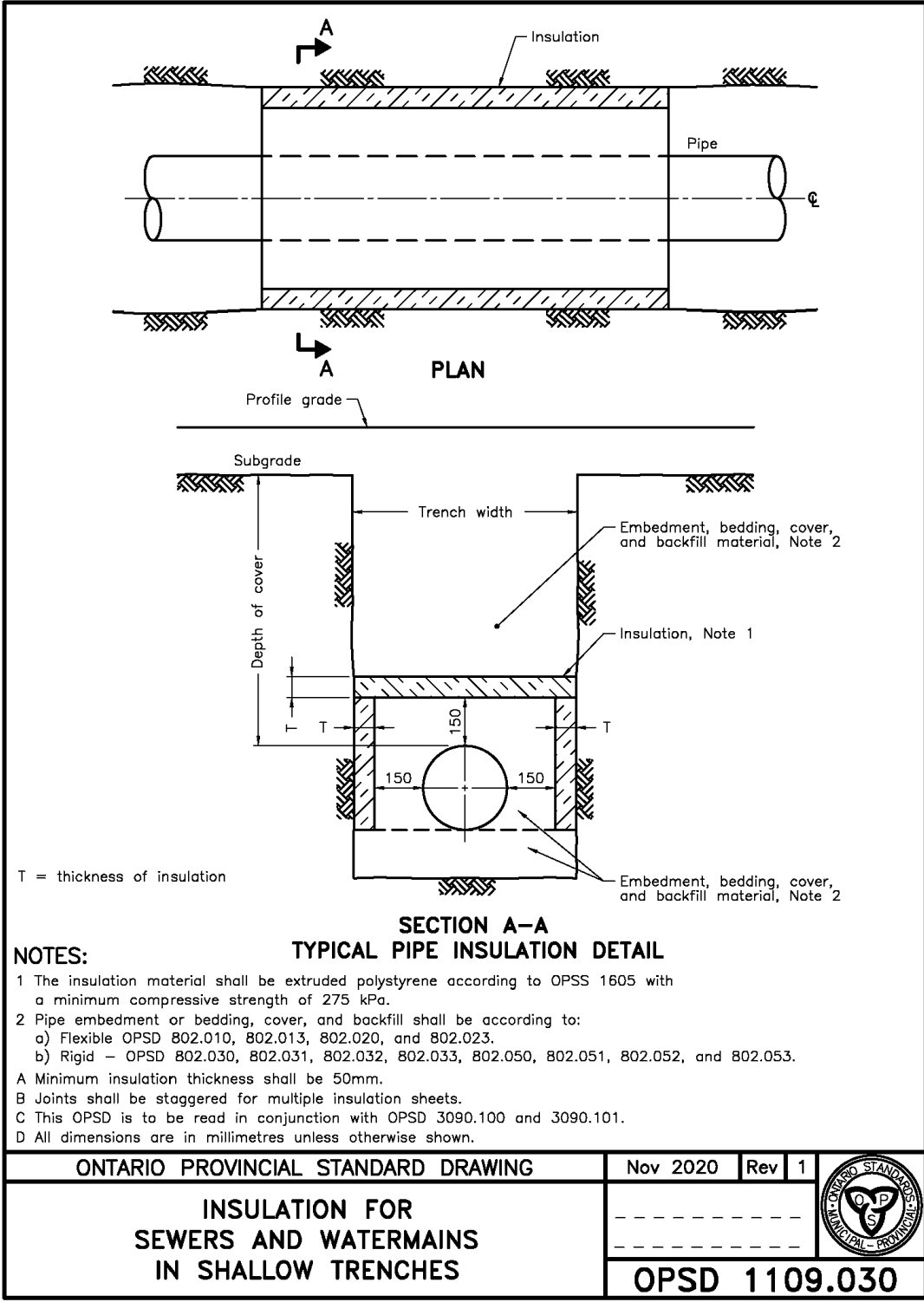
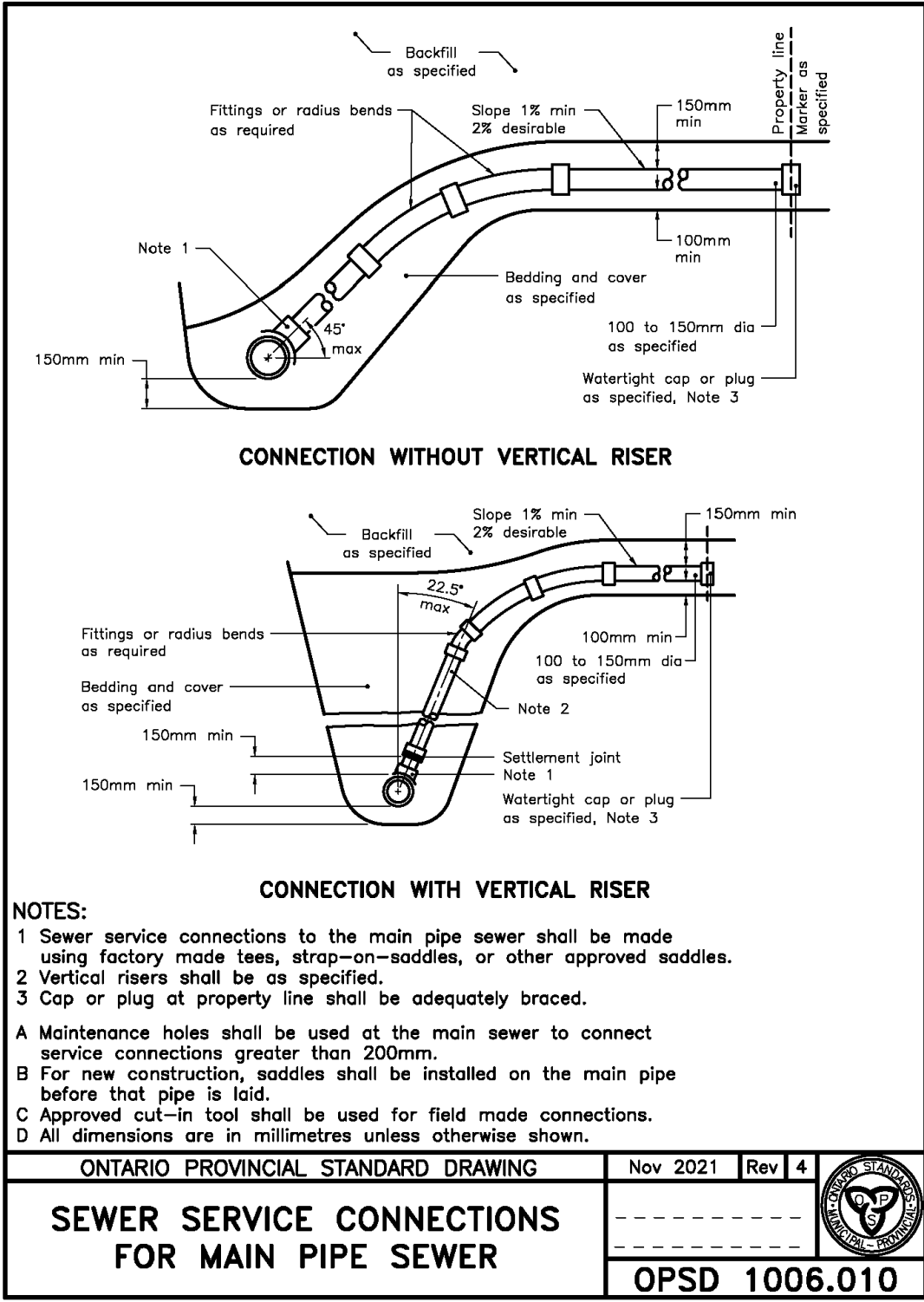


KEYPLAN

- 01 THE CONTRACTOR IS RESPONSIBLE FOR CHECKING AND VERIFYING ALL DIMENSIONS WITH RESPECT TO SITE CONDITIONS AND ALL MATERIALS TO THE PROJECT. ANY DISCREPANCY SHALL BE REPORTED TO THE DCC REPRESENTATIVE.
- 02 THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL MATERIAL RELEVANT TO THE PROJECT.
- 03 ADDITIONAL DRAWINGS MAY BE ISSUED FOR CLARIFICATION TO ASSIST PROPER EXECUTION OF WORK. SUCH DRAWINGS WILL HAVE THE SAME MEANING AND INTENT AS IF THEY WERE INCLUDED WITH THE CONTRACT DOCUMENTS.
- 04 CONTRACTOR MUST COMPLY WITH LOCAL BY-LAWS, CURRENT CONSTRUCTION SAFETY CODE AND ALL REGULATIONS SET BY AUTHORITIES HAVING JURISDICTION. IN CASE OF CONFLICT OR DISCREPANCY, THE MORE STRINGENT REQUIREMENTS SHALL APPLY.
- 05 CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED UTILITY LOCATES, INSPECTIONS, PERMITS, AND APPROVALS, INCLUDING ALL NECESSARY COSTS. THE LOCATION OF ALL EXISTING UTILITIES ARE APPROXIMATE ONLY AND BASED ON BEST AVAILABLE INFORMATION.
- 06 CONTRACTOR IS RESPONSIBLE FOR MAINTAINING FIRE ACCESS / CONTROL AT ALL TIMES. FIRE LANE WIDTH OF 6M MINIMUM DURING CONSTRUCTION.
- 07 EXISTING STORM AND WATERMAIN SYSTEM TO REMAIN IN CURRENT OPERATION UNTIL NEW SYSTEMS ARE COMPLETED AND COMMISSIONED TO THE SATISFACTION OF DCC REPRESENTATIVE REQUIREMENTS. TEMPORARY SHUT DOWNS REQUIRED FOR GROSSINGS SHALL BE COORDINATED AND APPROVED BY DCC REPRESENTATIVE PRIOR TO CONSTRUCTION.
- 08 CONTRACTOR TO CONTACT GAS COMPANY REPRESENTATIVE WHEN WORKING AROUND ANY GAS LINES INCLUDING REMOVALS, CONSTRUCTION AND REINSTATEMENT WORK.
- 09 WATERMAIN AND SEWER MAINS INSTALLED UNDER EXISTING ELECTRICAL / COMM. / GAS PLANTS SHALL BE SUPPORTED AS PER ELECTRICAL / COMM. / GAS REQUIREMENTS. IF A CROSSING IS UNDER AN EXISTING CONCRETE DUCT BANK, FILL BETWEEN EXISTING WATERMAIN / SEWER AND DUCT BANK WITH UNSHRINKABLE CONCRETE.

WATERMAIN	
1.	NEW WATERMAIN TO BE 102mmØ PVC DR18.
2.	NEW FIRE LINE TO BE 406mmØ FUSIBLE PIPE.
3.	CONTRACTOR TO INSTALL TRACER WIRE ON ALL NEW WATERMAIN AND FIRE LINE INSTALLATIONS AND BRING UP ALONG NEW ISOLATION VALVE.
4.	ALL WATERMAIN FITTINGS AND CONNECTIONS REQUIRE RISING GLAND AND RINGS TO BE CONSTRUCTED ON SOLID GROUND.
5.	MINIMUM COVER ON THE WATERMAIN AND WATER SERVICE SHALL BE 2.0m FROM PROPOSED FINISH GRADE TO THE TOP OF PIPE UNLESS OTHERWISE IDENTIFIED.
6.	BEDDING AND COVER FOR WATERMAIN TO BE GRANULAR 'A' AS PER OPSD 802.010 TYPE 3 EARTH EXCAVATION, CLASS B.
7.	THE CONTRACTOR SHALL CONFIRM THE ELEVATION OF THE EXISTING WATERMAIN AT ALL CONNECTION POINT AND REPORT ANY DISCREPANCIES TO THE CONSULTANT
8.	ALL WATERMAIN TESTING INCLUDING CHLORINATION,

LOCATION	POINT	DESCRIPTION	COORDINATES		ELEVATIONS
			NORTHING	EASTING	
S/W CORNER OD DE-ICING BUILDING	TSP#2	SPIKE IN GRASS	4887600.009	297391.319	81.652
N/E CORNER OF HANGER 10 BUILDING	TSP#5	MAGNAIL IN ASPHALT	4887500.706	297419.531	81.063
N SIDE OF HANGER 10 BUILDING	TSP#6	MAGNAIL IN ASPHALT	4887482.196	297350.789	81.278
N/W CORNER OF HANGER 10 BUILDING	TSP#7	MAGNAIL IN ASPHALT	4887467.665	297294.546	81.481
DE-ICING BUILDING	BM#1	FIRE HYDRANT - TOP OF SPINDLE	4887594.XXX	297406.XXX	82.196
N/E CORNER OF HANGER 10 BUILDING	BM#3	FIRE HYDRANT - TOP OF SPINDLE	4887507.XXX	297423.XXX	82.039
N/W CORNER OF HANGER 10 BUILDING	BM#4	FIRE HYDRANT - TOP OF SPINDLE	4887468.XXX	297276.XXX	82.446
UTM, ZONE 18, NAD 83 (CSRS)					
VERTICAL REFERENCE SYSTEM : CGVD28 HT2_0					
DIMENSIONS SHOWN ARE GROUND DISTANCES					



GENERAL NOTES

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- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING FIRE ACCESS / CONTROL AT ALL TIMES. FIRE LANE WIDTH OF 6M MINIMUM DURING CONSTRUCTION.
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- CONTRACTOR TO CONTACT GAS COMPANY REPRESENTATIVE WHEN WORKING AROUND ANY GAS LINES INCLUDING REMOVALS, CONSTRUCTION AND REINSTATEMENT WORK.
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Government of Canada / Gouvernement du Canada

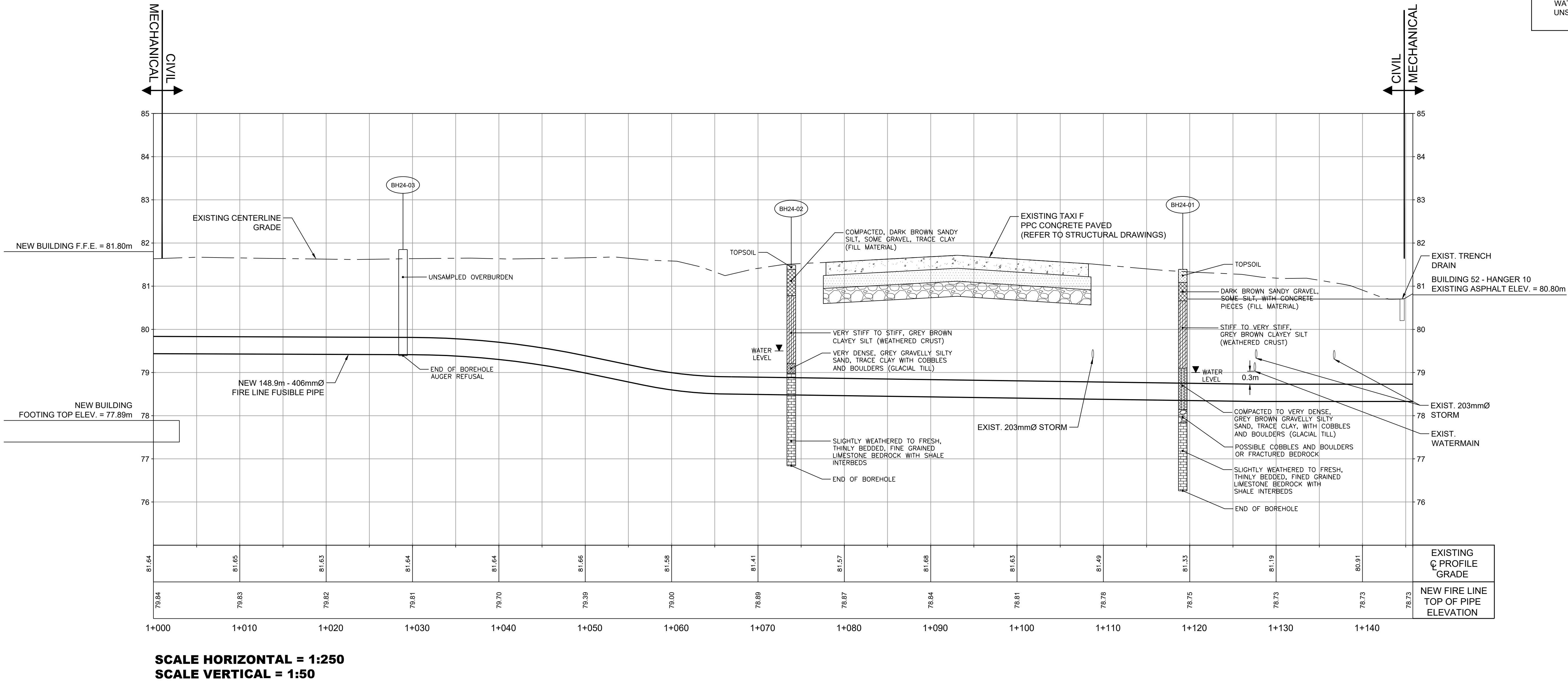
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1150 MORRISON DRIVE, SUITE 410, OTTAWA, ON
Phone: (613)828-7800, Fax: (613)828-2600
REF # 19-5022A



Signature of M. S. CALDWELL, November 20, 2025

5	2025/11/20	ISSUED FOR 1TENDER	NC
4	2025/10/21	RE-ISSUED FOR 100% SUBMISSION	NC
3	2025/03/07	100% SUBMISSION	NC
2	2024/12/13	90% SUBMISSION REV01	NC
1	2024/07/31	90% SUBMISSION	NC

NO.	DATE	REVISION	APPR.
SCALE ÉCHELLE			
SCALE AS SHOWN			

LOCATION | EMPLACEMENT
8 WING TRENTON CFB TRENTON ONTARIO

PROJECT | PROJET
TRE-UPG B052 (HGR 10) FIRE PUMPHOUSE

TRADE MÉTIER CIVIL	DATE 2024/03/31
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SUBJECT | SUJET

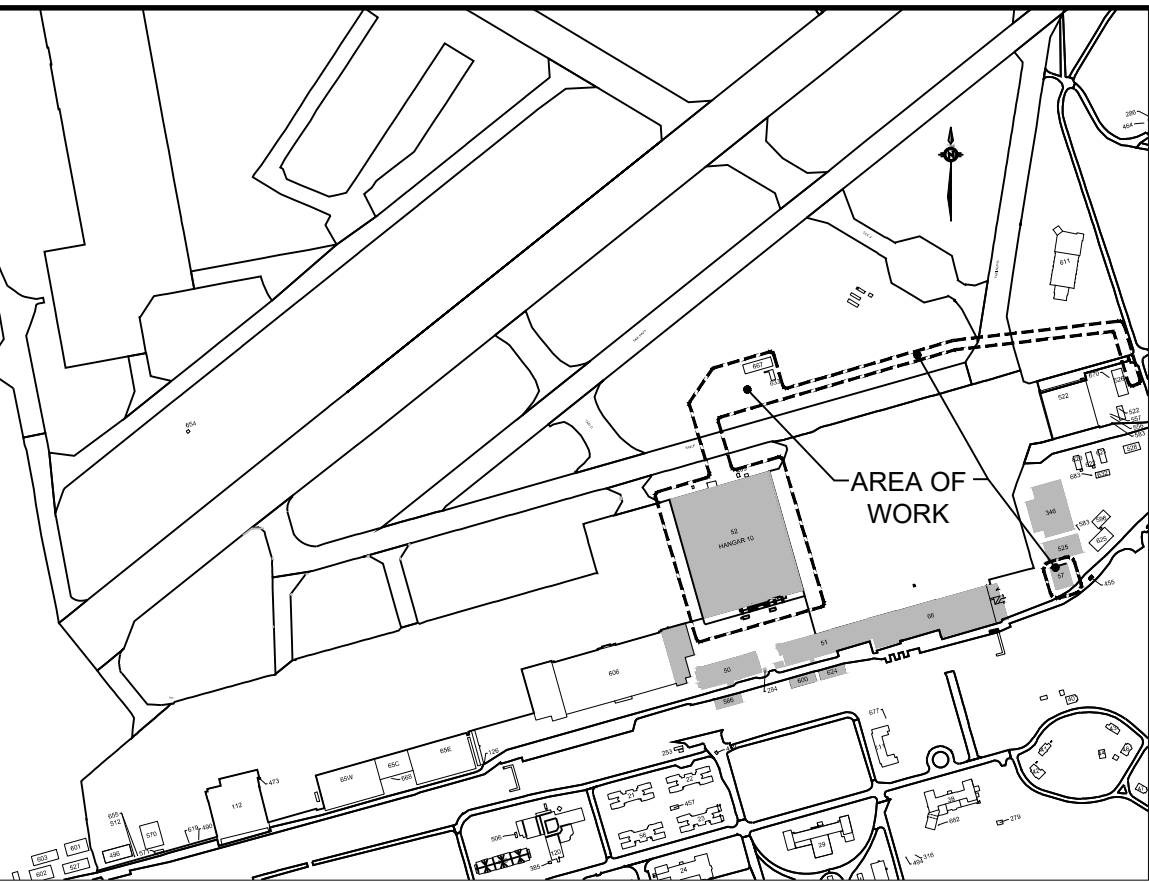
PROFILE AND DETAILS

PRODUCTION	DESIGNED ÉTUDIÉ	REVIEWED REVU
LA	XX XX	DES O AGENT CONC S.C.
DRAWN DESSINÉ		PROJ MGR GEST PROJ P.O.
CHECKED VÉRIFIÉ		DES MGR GEST CONC S.C.
COORDINATION		FIRE INCENDIE
AS		

WBS NO. NO. OTP N.002108.03	PF NO. NO. DP 500006750
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DWG. NO. | NO. DESSIN
L-T81-3006/68- 602

Canada



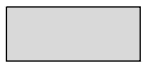
KEYPLAN

GENERAL NOTES

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- 09 WATERMAIN AND SEWER MAINS INSTALLED UNDER EXISTING ELECTRICAL / COMM. / GAS PLANTS SHALL BE SUPPORTED AS PER ELECTRICAL / COMM. / GAS REQUIREMENTS. IF A CROSSING IS UNDER AN EXISTING CONCRETE DUCT BANK, FILL BETWEEN WATERMAIN / SEWER AND DUCT BANK WITH UNSHRINKABLE CONCRETE.

LEGEND

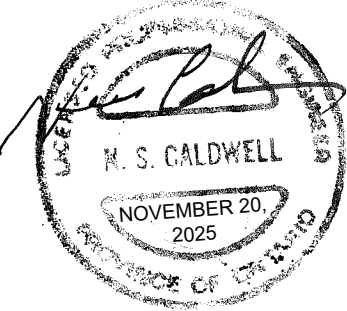
- COM

NEW COMMUNICATION LINE
- 

NEW PAVEMENT STRUCTURE AS PER DETAIL 1 ON DRAWING 602
- 

NEW TAXIWAY CONCRETE CUT
- 

NEW SOD COMPLETE WITH 100mm TOPSOIL



2	2025/11/20	ISSUED FOR TENDER	NC
1	2025/10/21	RE-ISSUED FOR 100% SUBMISSION	NC
NO.	DATE	REVISION	APPR.

SCALE | ÉCHELLE

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20 m

LOCATION | EMPLACEMENT

8 WING TRENTON
CFB TRENTON
ONTARIO

PROJECT | PROJET

TRE-UPG B052 (HGR 10) FIRE
PUMPHOUSE

TRADE | MÉTIER

CIVIL

DATE

2024/03/31

SUBJECT | SUJET

COMMUNICATION
NEW WORK

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DRAWN DESSINÉ		PROJ MGR GEST PROJ
LA		P.O.
CHECKED VÉRIFIÉ		DES MGR GEST CONC
NC		S.C.
COORDINATION		FIRE INCENDIE
AS		

WBS NO. | NO. OTP

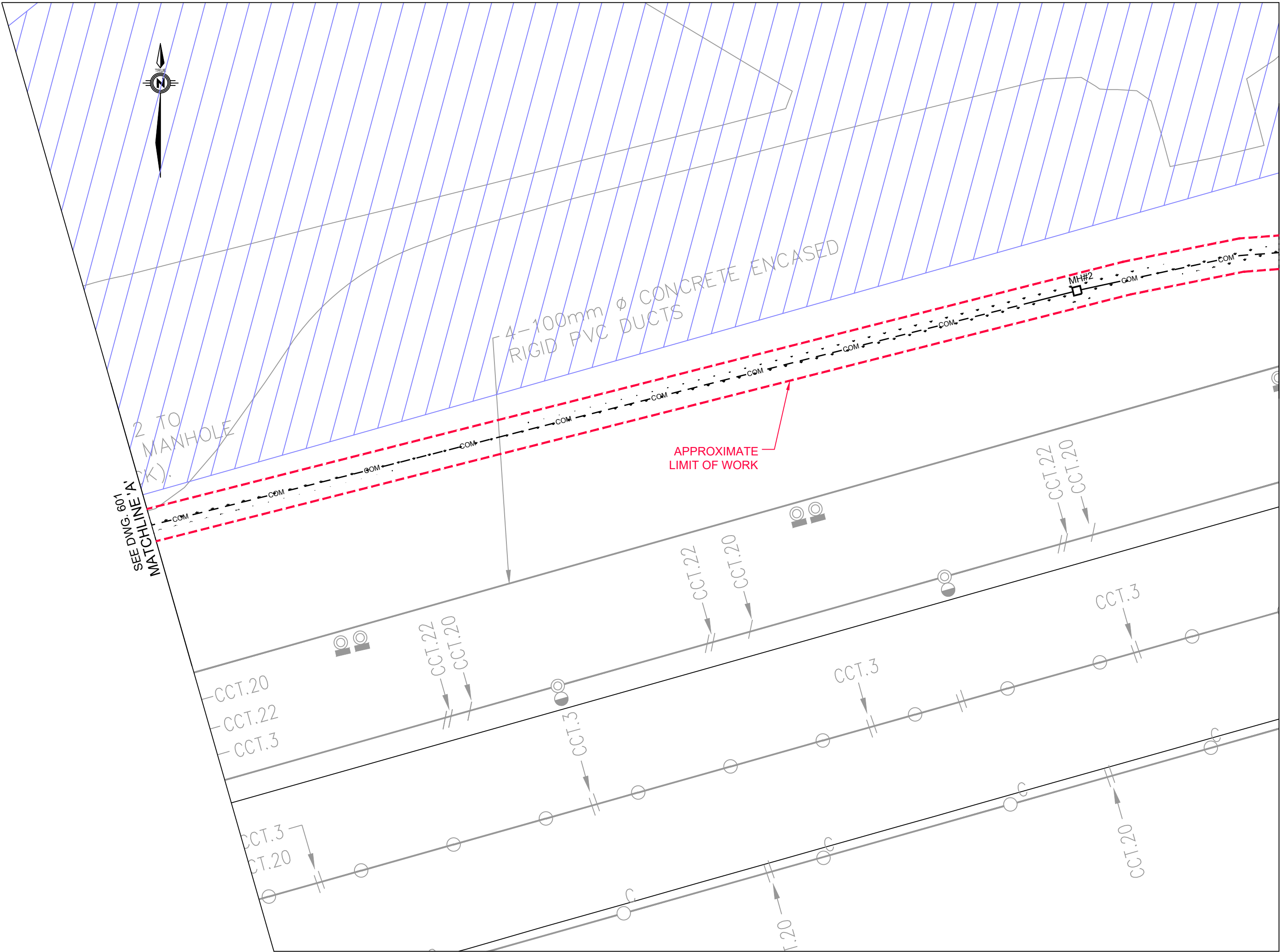
N.002108.03

PF NO. | NO. DP

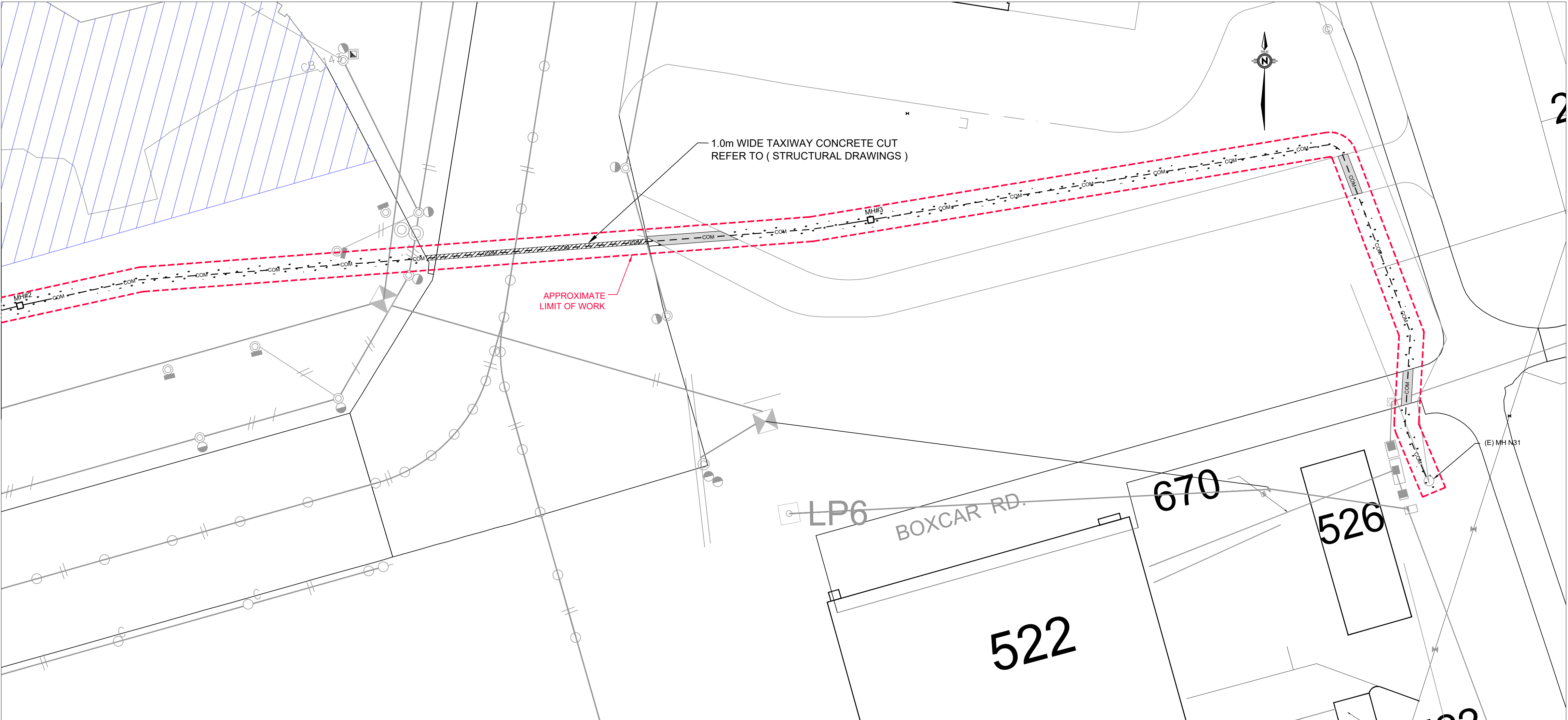
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DWG. NO. | NO. DESSIN

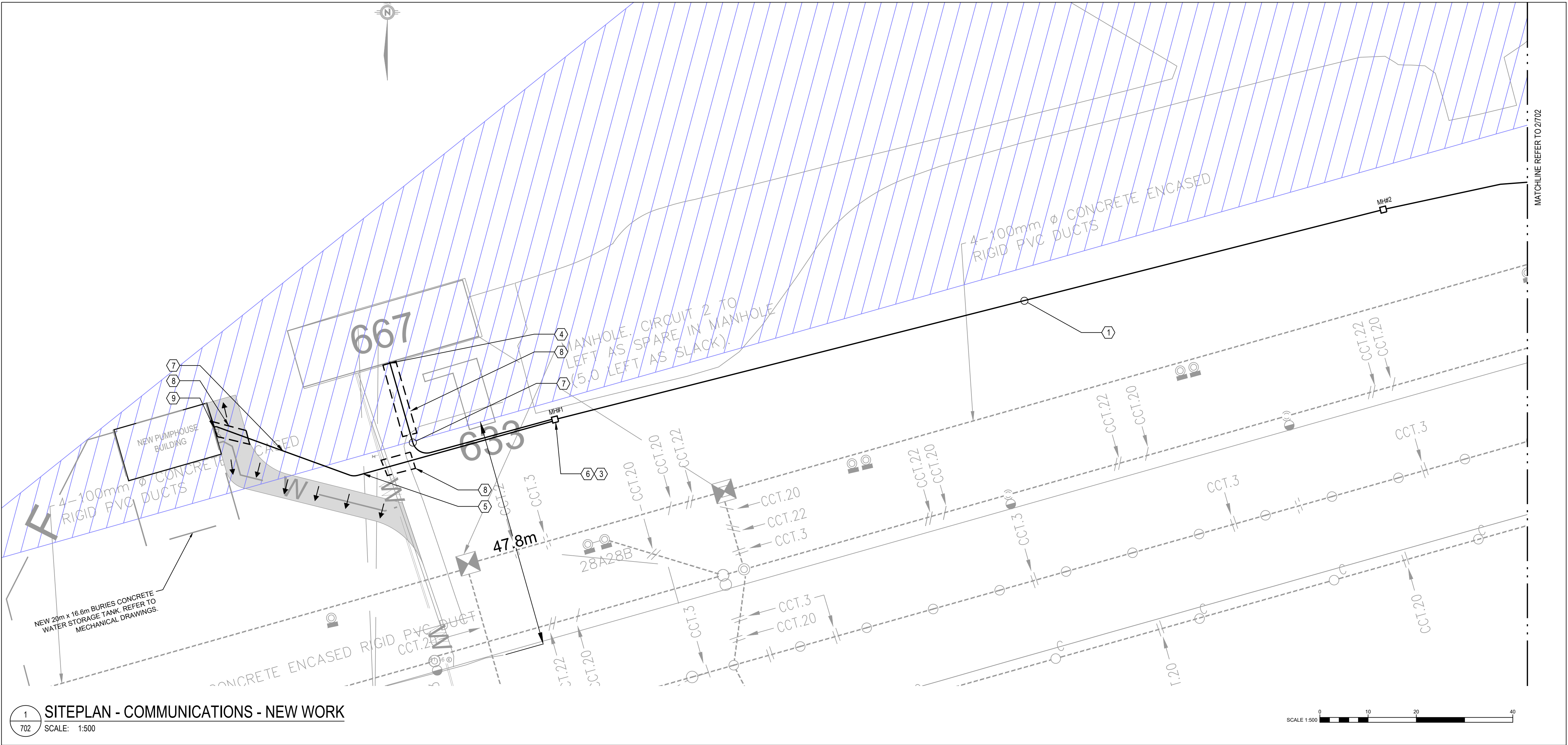
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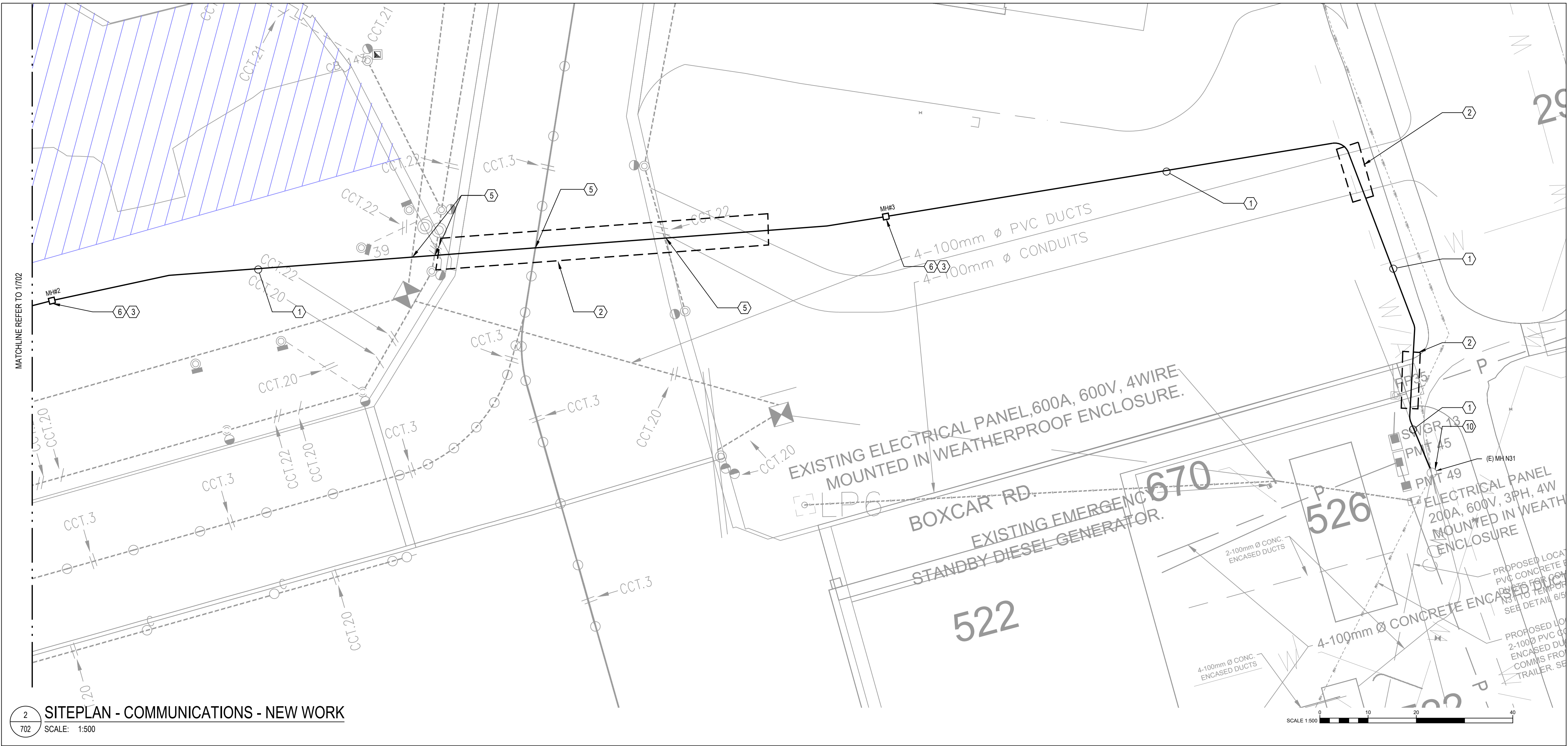
1 SITEPLAN - COMMUNICATIONS - NEW WORK
803 SCALE: 1:500



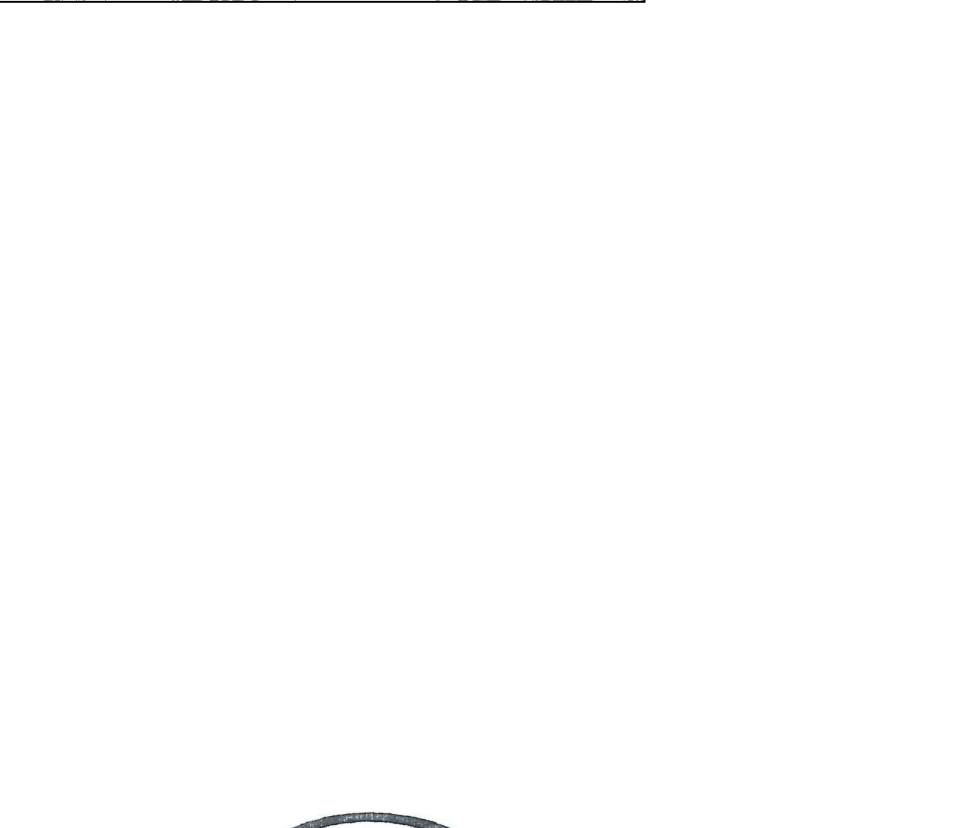
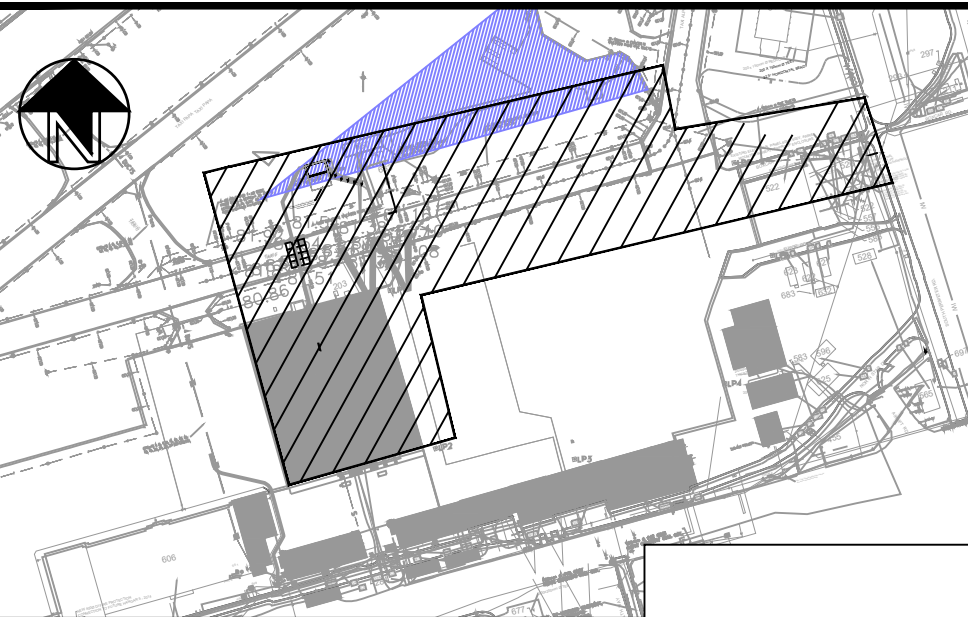
2 SITEPLAN - COMMUNICATIONS - NEW WORK
803 SCALE: 1:500



- ### GENERAL NOTES
- ALL EXISTING UNDERGROUND SERVICES ARE NOT SHOWN ON THIS DRAWING FOR CLARITY. COORDINATE EXACT UNDERGROUND ROUTING ON SITE WITH OTHER TRADES AND WITH EXISTING UNDERGROUND SERVICES (GAS, WATER, SEWER ETC.). REFER TO RELATED SITE SERVICES DRAWINGS. ALTERNATE ROUTING PROPOSALS SHALL RECEIVE APPROVAL SIGN-OFF FROM DCC REPRESENTATIVE.
 - COMMUNICATION DUCTS SHALL BE SEPARATED FROM POWER OR OTHER CONDUITS AND UTILITIES BY 100MM (MINIMUM) OF BRICK OR CONCRETE OR 300MM (MINIMUM) OF TAMPED EARTH IN ACCORDANCE WITH CANADA-TONDE STATEMENT OF REQUIREMENT PATHWAYS AND SPACES OUTSIDE CABLE PLANTS, UNLESS INDICATED OTHERWISE. WHERE THIS SEPARATION CANNOT BE ACHIEVED ADVISE OWNER AND JP2G REPRESENTATIVE. WHEN ELECTRICAL DUCT BANK IS ROUTED WITHIN 1 METER OF ENBRIDGE NATURAL GAS LINE THE CONTRACTOR SHALL FOLLOW ENBRIDGE'S REQUIREMENTS. MECHANICAL EXCAVATION IS NOT PERMITTED WITHIN 3M OF PIPELINE UNLESS VERIFIED AND EXACT LOCATION HAS BEEN DETERMINED. VERTICAL AND HORIZONTAL CLEARANCES SHALL BE AS PER ENBRIDGE'S REQUIREMENTS AS IT RELATES TO THE GAS PIPE SIZE AND PRESSURE.
 - ALL NECESSARY ESA INSPECTIONS TO BE COORDINATED BY THIS CONTRACTOR AS REQUIRED.
 - EXCAVATION, BACKFILL, CONCRETE AND REINFORCEMENT WORK ASSOCIATED WITH THE ELECTRICAL INSTALLATION TO BE BY GENERAL CONTRACTOR.
 - PROVIDE RISES AND DROPS IN CONDUIT RUN AS REQUIRED TO ACCOMMODATE CHANGES IN ELEVATION AND EXISTING UNDERGROUND SERVICES. REPORT ALL CHANGES IN DIRECTION TO DCC REPRESENTATIVE PRIOR TO INSTALLATION. LOW SPOTS AND SUDDEN CHANGES IN DIRECTION WILL NOT BE ACCEPTED.
 - COORDINATE EXACT DATES AND TIMES FOR ROAD CUT WORK WITH OWNER REPRESENTATIVE TO LIMIT TRAFFIC DISRUPTION.
 - RESTORATION: UPON COMPLETION OF CLEANUP, GRADE SURFACE AS INDICATED OR RESTORE TO ORIGINAL CONDITIONS. REPLACE TOPSOIL AND PREPARE FOR RESTORATION OF LAWNS. REFER TO CIVIL DRAWINGS AND SPECIFICATIONS FOR FURTHER DETAILS. IF RETAINING WALL IS ALTERED THEN RESTORE TO MATCH EXISTING.
 - AS PER CANADA-TONDE STATEMENT OF REQUIREMENT PATHWAYS AND SPACES OUTSIDE CABLE PLANTS, ALL CABLE DUCTS SHALL HAVE A MINIMUM COVER OF 600MM UNDER ROADWAYS AND 450MM AT OTHER LOCATIONS UNLESS INDICATED OTHERWISE ON DRAWINGS. WHEN POWER AND TELECOM DUCTBANKS CROSS, POWER SHALL BE MAINTAINED AT STANDARD DEPTH OR OTHER DEPTH AS INDICATED. ADJUST TELECOM DUCTBANK DEPTH AS REQUIRED.
 - ALL DUCT BANKS AT ROAD CROSSINGS, VEHICULAR AREAS AND AIRCRAFT RUNWAYS/TAXIWAYS SHALL BE CONCRETE ENCASED.
 - ALL FOUNDATION DUCT ENTRIES SHALL SLOPE AWAY FROM THE BUILDING AND BE CW WATER TIGHT SEALS. FOUNDATION SHALL BE PROPERLY SEALED WHERE AT ALL DUCT ENTRY LOCATIONS.
 - COMMUNICATION DUCT BANK INSTALLATIONS SHALL BE IN ACCORDANCE WITH CANADA-TONDE STATEMENT OF REQUIREMENT PATHWAYS AND SPACES OUTSIDE CABLE PLANTS.



- ### CONSTRUCTION NOTES
- PROVIDE NEW 2 X 103MM C DIRECT BURIED DUCT BANK AS PER DETAIL #2/502 FORMATION 'B' AS SHOWN ON SITEPLAN AND DETAIL #2/701 FOR GRADING. DUCT BANK TO BE ROUTED FROM EXISTING MANHOLE N31 TO MH#1 NEAR TO BUILDING 667 AND NEW PUMPHOUSE BUILDING AS SHOWN ON SITEPLAN. CONTRACTOR TO TRACE EXISTING BURIED SERVICES ON SITE PRIOR TO EXCAVATING AND COORDINATE NEW COMMUNICATIONS DUCT BANK WITH EXISTING SERVICES. INSTALLATION SHALL BE IN ACCORDANCE WITH CANADA-TONDE STATEMENT OF REQUIREMENT PATHWAYS AND SPACES OUTSIDE CABLE PLANTS SECTION 7. SHARED SERVICES CANADA TO SUPPLY AND INSTALL ALL CABLING.
 - PROVIDE NEW 2 X 103MM C CONCRETE ENCASED DUCT BANK AS PER DETAIL 1/701 FORMATION 'CH' AS SHOWN ON SITEPLAN AND DETAIL #2/701. CONTRACTOR TO TRACE EXISTING BURIED SERVICES ON SITE PRIOR TO EXCAVATING AND COORDINATE NEW COMMUNICATIONS DUCT BANK WITH EXISTING SERVICES. INSTALLATION SHALL BE IN ACCORDANCE WITH CANADA-TONDE STATEMENT OF REQUIREMENT PATHWAYS AND SPACES OUTSIDE CABLE PLANTS SECTION 7. SHARED SERVICES CANADA TO SUPPLY AND INSTALL ALL CABLING.
 - PROVIDE 1220MM(W) X 1220MM(L) X 1130MM (D) PRECAST VAULT C/W STEEL PLATE LIDS AND CABLE BACK TO BE INSTALLED FLUSH WITH FINISHED GRADE. REFER TO DETAIL #3/701. INSTALLATION SHALL BE IN ACCORDANCE WITH CANADA-TONDE STATEMENT OF REQUIREMENT PATHWAYS AND SPACES OUTSIDE CABLE PLANTS SECTION 6. TYPICAL OF 3.
 - COMMUNICATIONS CONDUIT WITH PULL STRING TO ENTER BUILDING AND TERMINATE AT FIRE ALARM PANEL LOCATION.
 - COORDINATE TRENCH LOCATION WITH EXISTING SERVICES AND ADJUST TRENCH LOCATIONS AS REQUIRED TO MINIMIZE CONFLICT. SUPPORT AND PROTECT EXISTING CONDUITS AND CABLES DURING TRENCHING, BACKFILLING AND RE-INSTALLMENT. WHEN POWER AND TELECOM DUCTBANKS CROSS, POWER SHALL BE MAINTAINED AT STANDARD 760MM DEPTH OR OTHER DEPTH AS INDICATED. ADJUST TELECOM DUCTBANK DEPTH AS REQUIRED.
 - DISTANCE BETWEEN MANHOLES SHALL NOT EXCEED 180 METERS AND CONDUIT SECTIONS BETWEEN MANHOLES SHALL NOT EXCEED A TOTAL OF 180 DEGREE BENDS. OWNER AND JP2G REPRESENTATIVE ARE TO BE NOTIFIED IF PROPOSED VAULT PLACEMENT CANNOT BE ATTAINED DUE TO OBSTRUCTIONS.
 - PROVIDE NEW 1 X 103MM C DIRECT BURIED DUCT BANK AS PER DETAIL #2/502 FORMATION 'B' AS SHOWN ON SITEPLAN AND DETAIL #2/701 FOR GRADING. DUCT BANK TO BE AS SHOWN ON SITEPLAN. CONTRACTOR TO TRACE EXISTING BURIED SERVICES ON SITE PRIOR TO EXCAVATING AND COORDINATE NEW COMMUNICATIONS DUCT BANK WITH EXISTING SERVICES. INSTALLATION SHALL BE IN ACCORDANCE WITH CANADA-TONDE STATEMENT OF REQUIREMENT PATHWAYS AND SPACES OUTSIDE CABLE PLANTS SECTION 7. SHARED SERVICES CANADA TO SUPPLY AND INSTALL ALL CABLING.
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 - COMMUNICATIONS CONDUIT WITH PULL STRING TO ENTER BUILDING, ROUTE BELOW SLAB AND TERMINATE AT PLYWOOD BACKBOARD.
 - BREAK INTO AND CONNECT TO EXISTING MAINTENANCE N31. PARGE OPENING AND MAKE CONNECTION WATER TIGHT.



7	2025/11/20	ISSUED FOR TENDER	RK
6	2025/10/21	RE-ISSUED FOR 100%	RK
5	2025/03/07	100% SUBMISSION	RK
4	2024/12/13	90% SUBMISSION REV01	RK
3	2024/07/31	90% SUBMISSION	RK
2	2024/03/31	60% RE-SUBMISSION	RK
1	2022/03/25	60% SUBMISSION	PS
	DATE	REVISION	APPR.

SCALE | ÉCHELLE
SCALE AS SHOWN

LOCATION | EMPRCKMENT
8 WING TRENTON
CFB TRENTON
ONTARIO

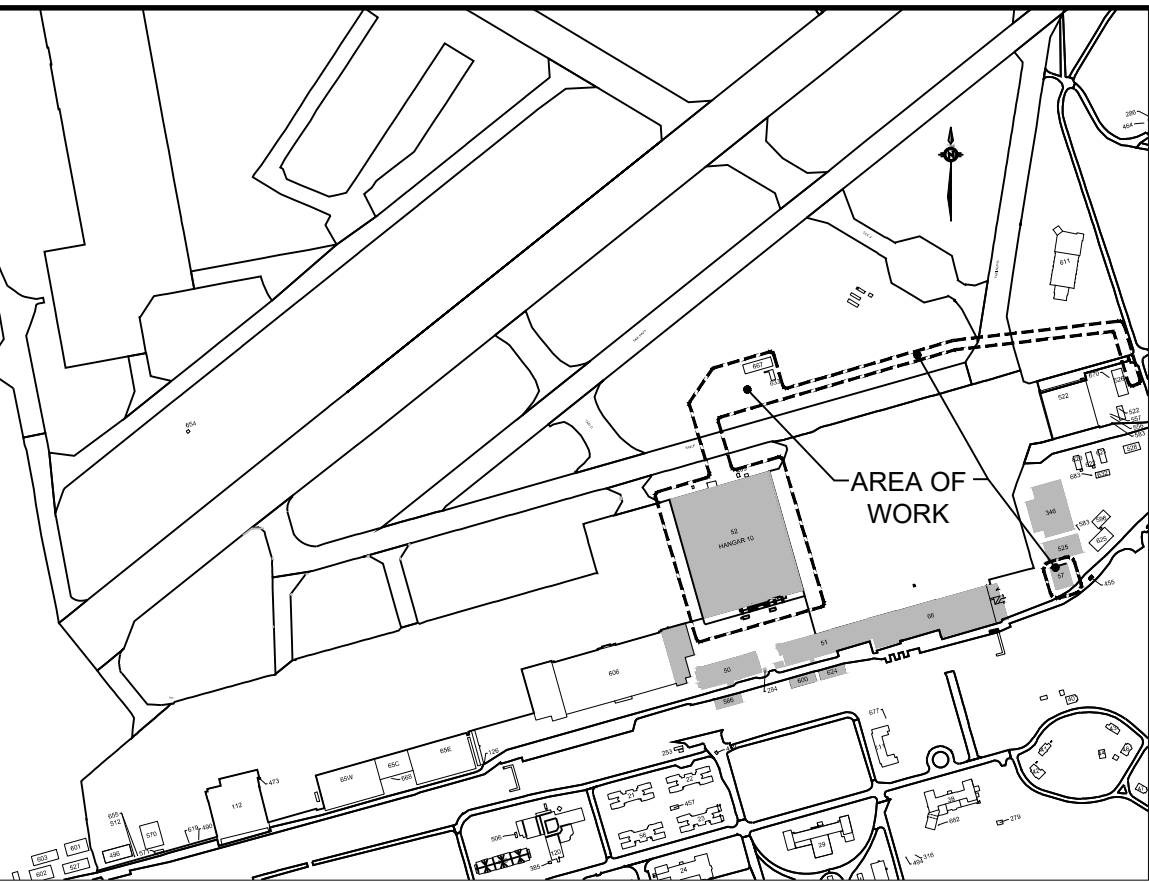
PROJECT | PROJET
TRE-UPG B052 (HGR 10) FIRE
PUMPHOUSE

TRADE | MÉTIER
COMMUNICATIONS
DATE
2025/11/20

SUBJECT | SUJET
SITE PLAN - COMMUNICATIONS - NEW
WORK

PRODUCTION	DESIGNED ETUDIÉ	REVIEWED REVU	DES O AGENT CORK
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DRAWN DESSINÉ			PROJ MGR GEST PROJ
HB			P.O.
CHECKED VÉRIFIÉ			DES MGR GEST CORK
RK			S.C.
COORDINATION			FIRE IRKENDIE

WBS NO. | NO. OTP
N.002108.03
FF NO. | NO. DP
500006750
DWG. NO. | NO. DESSIN
L-T81-3006/68- 702



KEYPLAN

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LEGEND

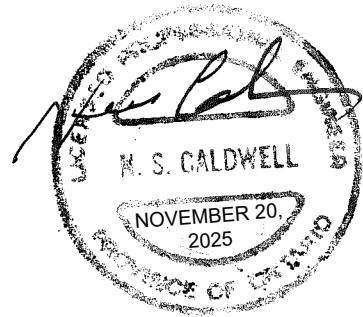
- COM

NEW COMMUNICATION LINE
- 

NEW PAVEMENT STRUCTURE AS PER DETAIL 1 ON DRAWING 602
- 

NEW TAXIWAY CONCRETE CUT
- 

NEW SOD COMPLETE WITH 100mm TOPSOIL



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NO.	DATE	REVISION	APPR.

SCALE | ÉCHELLE
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LOCATION | EMPLACEMENT
**8 WING TRENTON
CFB TRENTON
ONTARIO**

PROJECT | PROJET
**TRE-UPG B052 (HGR 10) FIRE
PUMPHOUSE**

TRADE | MÉTIER
CIVIL

DATE
2024/03/31

SUBJECT | SUJET
**COMMUNICATION
NEW WORK**

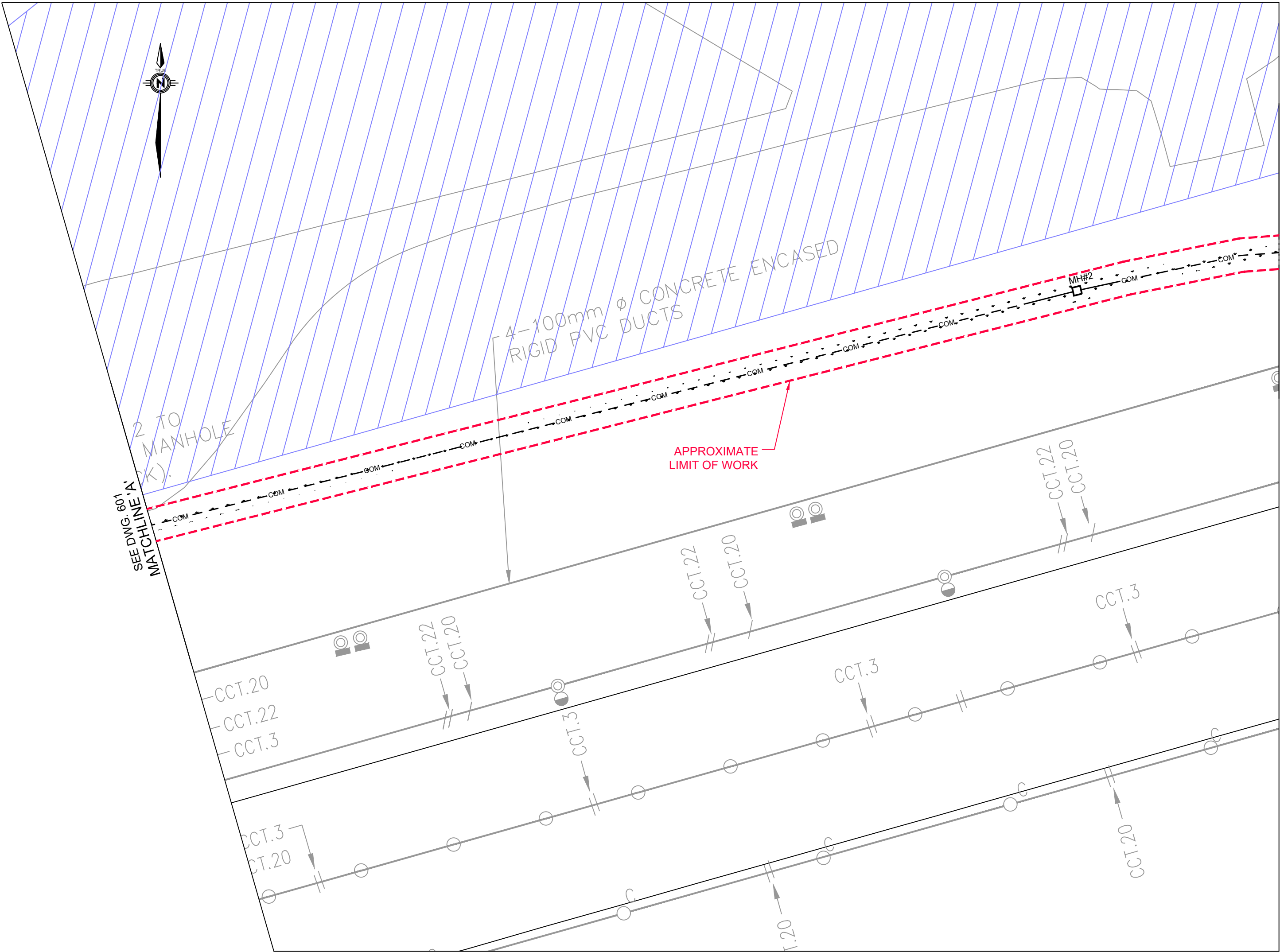
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CHECKED VÉRIFIÉ		DES MGR GEST CONC
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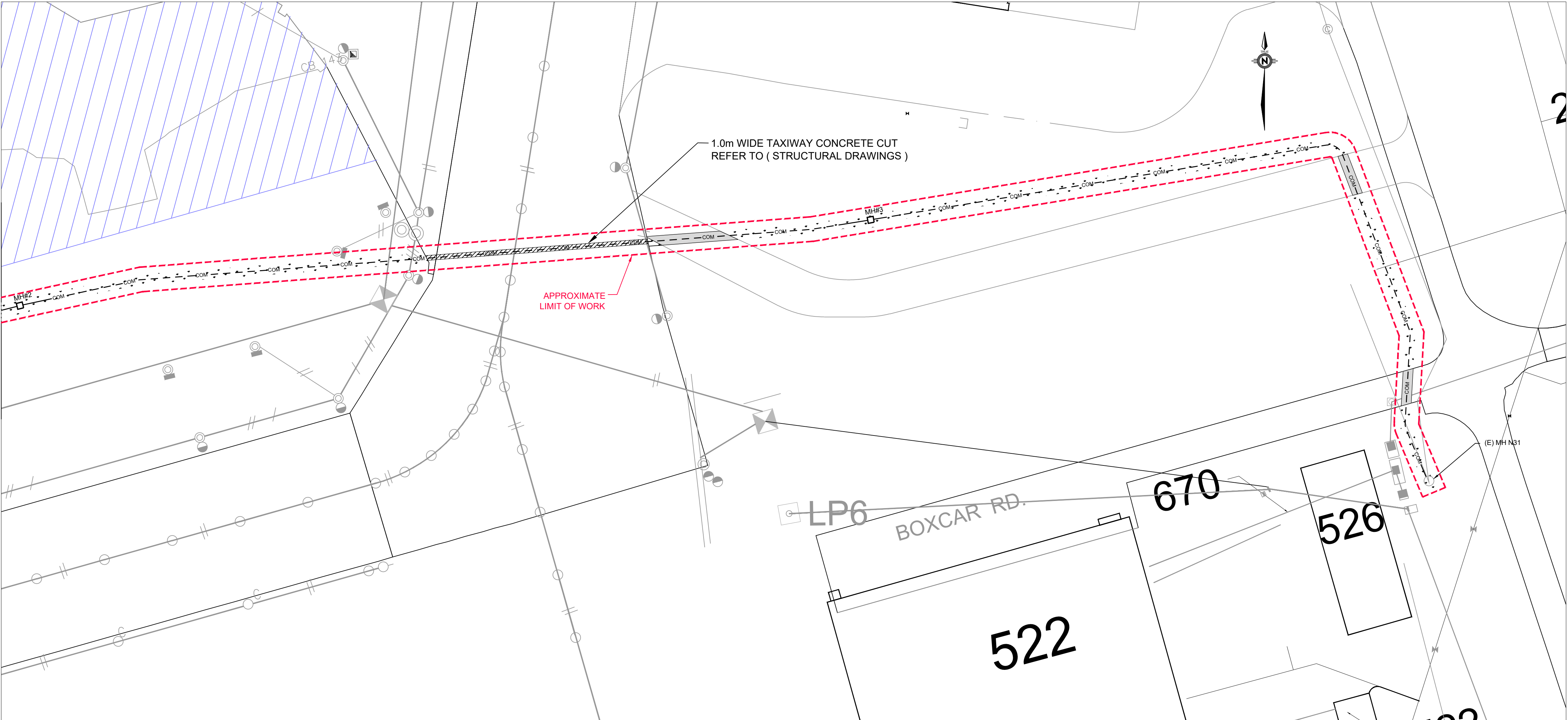
PF NO. | NO. DP
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DWG. NO. | NO. DESSIN
L-T81-3006/68- 603

Canada



1 SITEPLAN - COMMUNICATIONS - NEW WORK
803 SCALE: 1:500



2 SITEPLAN - COMMUNICATIONS - NEW WORK
803 SCALE: 1:500