

# NEW POLICE BUILDING

## MAIDSTONE, SASKATCHEWAN

**SEPW Architecture Inc.**

101-3725 Paskapoo Street, Regina, SK, S4S 0R8 ph: (306) 569-2255  
 101-2718 Memorial Park, Saskatoon, SK, S7P 0M6 ph: (306) 652-6457  
 website: www.sepw.ca

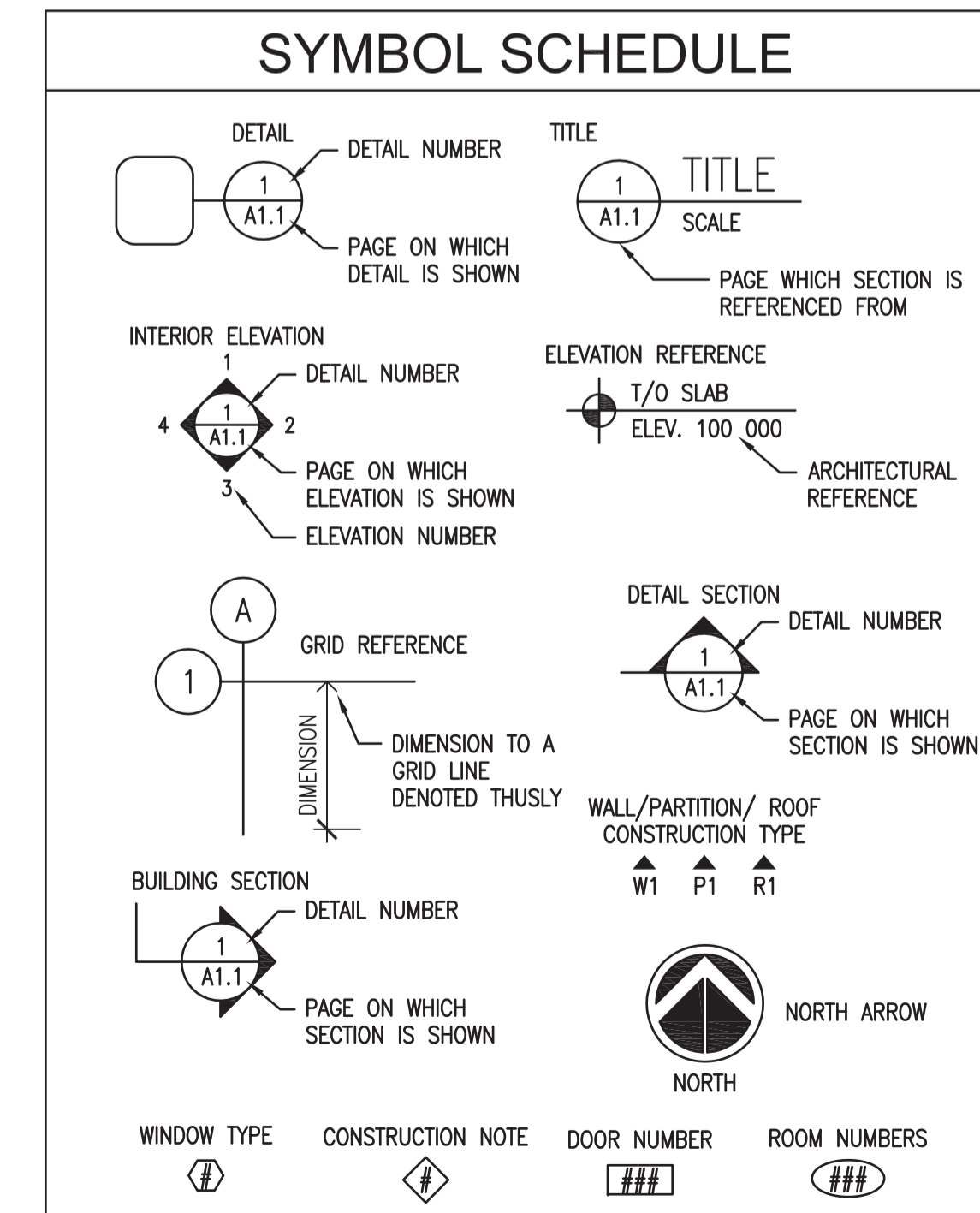


BUILDING ANALYSIS				
BUILDING ADDRESS:	308 4th AVENUE EAST, MAIDSTONE, SASKATCHEWAN			
BUILDING OWNER:	GOVERNMENT OF CANADA			
BUILDING AREA:	904.6 M2 (MAIN BUILDING) 67.5 M2 (OUT BUILDING)			
STOREYS ABOVE GRADE =	1	STOREYS BELOW GRADE = 0		
NUMBER OF STREETS (as defined by 3.2.2.10) =	ONE			
USE(S) OF THE BUILDING:	POLICE BUILDING STORAGE OUT-BUILDING			
MAJOR OCCUPANCY CLASSIFICATION(S):	MAIN BUILDING: PART 3: GROUP B DIV 1, GROUP D, GROUP F DIV 3 OUT-BUILDING: PART 9: GROUP F DIV 3			
BUILDING CODE CLASSIFICATIONS:	MAIN BUILDING: 3.2.2.37 GROUP B, DIVISION 1, UP TO 3 STOREYS, SPRINKLERED OUT-BUILDING: 9.10.2.1 GROUP F, DIVISION 3			
BUILDING CONSTRUCTION:	MAIN BUILDING: NON-COMBUSTIBLE, HEAVY TIMBER ROOF PERMITTED AS PER ARTICLE 3.2.2.16 OUT-BUILDING: COMBUSTIBLE CONSTRUCTION PERMITTED			
<b>LIMITING DISTANCE</b> CLEAR DISTANCE BETWEEN BUILDINGS: 13.06m				
<b>MAIN BUILDING</b> LIMITING DISTANCE: 5m LARGEST EXPOSING FACE OF A FIRE COMPARTMENT: 28.3m <sup>2</sup>				
<b>OUT-BUILDING</b> LIMITING DISTANCE: 8.06m LARGEST EXPOSING FACE OF A FIRE COMPARTMENT: 27.0m <sup>2</sup>				
<b>OPENINGS AND CONSTRUCTION BOTH BUILDINGS:</b>				
% OF ALLOWABLE UNPROTECTED OPENINGS:	NORTH WALL 100%	SOUTH WALL 100%	EAST WALL 100%	WEST WALL 100%
REQUIRED EXTERIOR WALL FIRE RESISTANCE RATING:	NORTH WALL N/A	SOUTH WALL N/A	EAST WALL N/A	WEST WALL N/A
<b>OCCUPANT LOAD:</b>				
ROOM NO.:	TYPE OF USE:	AREA:	OCCUPANT LOAD:	
104	NON-FIXED TABLES AND CHAIRS (0.95 M <sup>2</sup> /PERSON)	27.4 M <sup>2</sup>	29	
105, 106, 113, 114, 115, 126, 130, 149, 150	OFFICES (9.30 M <sup>2</sup> /PERSON)	209.3 M <sup>2</sup>	23	
134, 136, 137, 138, 145	PROCESS ROOM (4.6 M <sup>2</sup> /PERSON)	65.8 M <sup>2</sup>	14	
143, 144, 146, 147	DETENTION QUARTERS (BASED ON USE)	33.8 M <sup>2</sup>	6	
	<b>TOTAL:</b>		<b>72</b>	
<b>NUMBER OF EXITS REQUIRED:</b> FLOOR AREA REQUIRES 2 EXITS SERVICES SPACE OVER CELL AREA REQUIRES ONLY 1 POINT OF EGRESS AS IT IS LESS THAN 200M <sup>2</sup> AND TRAVEL DISTANCE IS LESS THAN 25M TO POINT OF EGRESS [NBC 3.3.1.3 7]]				
<b>REQUIRED OCCUPANCY FIRE SEPARATIONS FOR THE MAIN BUILDING BUILDING IN HOURS:</b>				
GROUP D / GROUP B DIV 1 = 2 HR.	GROUP D / GROUP F DIV 3 = 0 HR.	GROUP B DIV 1 / GROUP F DIV 3 = 2 HR.		
<b>REQUIRED BUILDING CLASSIFICATION FIRE SEPARATIONS FOR THE MAIN BUILDING IN HOURS:</b>				
FLOORS = 1 HR.	MEZZANINE = 1 HR.	ROOF = N/A		
* SUPPORTING WALLS AND COLUMNS TO HAVE THE SAME FIRE RESISTANCE RATING AS THE SUPPORTED ASSEMBLY				
<b>REQUIRED SPECIAL USE FIRE SEPARATIONS FOR THE MAIN BUILDING IN HOURS:</b>				
MECHANICAL ROOM = 1 HR.	SERVICE ROOM = 1 HR.	LAN ROOM = 1 HR.	ROOM 127 = 1 HR.	STORAGE GARAGES = 1.5 HR.
CONTAINED USE AREA SEPARATIONS= 1 HR.	GROUP D SUITE SEPARATIONS= 0 HR.	JANITORIAL = 0 HR.	SPECIAL USE ROOM SEPARATIONS= 1 HR.	
EXIT SIGNS -- REQUIRED?	YES	EMERGENCY LIGHTING -- REQUIRED?	YES	
STANDPIPE & HOSE SYSTEM -- REQUIRED?	NO	SMOKE DETECTORS -- REQUIRED?	YES	
FIRE ALARM SYSTEM -- REQUIRED?	YES	BARRIER FREE ACCESS --REQUIRED?	YES	
SPRINKLER SYSTEM -- REQUIRED?	YES	FIRE DAMPERS -- REQUIRED?	YES	
ATTIC FIRE STOPS -- REQUIRED?	NO	PIPING FIRE STOPS -- REQUIRED?	YES	
<b>WASHROOM REQUIREMENTS:</b> WASHROOM REQUIREMENT FOR CELLS IS BASED ON NEED AS PER NBC 3.7.2.2 9) WASHROOM REQUIREMENT FOR REMAINDER OF BUILDING IS BASED ON AN OCCUPANT LOAD OF 66 FOR BUSINESS AND PERSONAL SERVICES OCCUPANCY WHICH REQUIRES 2 FIXTURES PER SEX.				

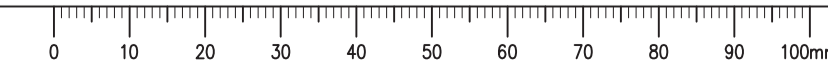


ABBREVIATIONS		
A.F.F. ABOVE FINISHED FLOOR	E.W. EACH WAY	PT. PAINT
ALUM. ALUMINUM	EQ. EQUAL	R.D. ROOF DRAIN
BD. BOARD	GYP.BD. GYPSUM BOARD	REV. REVERSE
COL. COLUMN	H.S.S. HOLLOW STRUCTURAL STEEL	R.F. RESILIENT FLOORING
CONC. CONCRETE	HORIZ.HORIZONTAL	S.A.P. SOUND ABSORPTIVE PANEL
CORR. CORRIDOR	INSUL.INSULATION	SIM. SIMILAR
C/W COMPLETE WITH	MAX MAXIMUM	TB TACKBOARD
DEMO. DEMOLITION	MECH. MECHANICAL	TYP. TYPICAL
DEPT. DEPARTMENT	MIN. MINIMUM	VERT. VERTICAL
D.F. DRINKING FOUNTAIN	N.I.C. NOT IN CONTRACT	VEST. VESTIBULE
DTL. DETAIL	N.T.S. NOT TO SCALE	WASH. WASHROOM
ELEC. ELECTRICAL	O.C. ON CENTER	WB WHITE BOARD
	O.S.B. ORIENTED STRAND BOARD	W.C. WATER CLOSET

LIST OF DRAWINGS:	
<b>ARCHITECTURAL</b>	<b>MECHANICAL</b>
A0 COVERPAGE	M1.1 EQUIPMENT SCHEDULE
A1.1 SITE PLAN	M1.2 EQUIPMENT SCHEDULE
A1.2 DETAIL SITE PLAN	M1.2 SITE PLAN
A1.3 SITE DETAILS	M2.1 MAIN FLOOR PLAN - PLUMBING
A2.1 MAIN FLOOR PLAN	M3.1 MAIN FLOOR PLAN - IN FLOOR HEATING
A2.2 SERVICE SPACE PLAN	M3.2 MAIN FLOOR PLAN - HEATING
A2.3 DOOR, FRAME, & WINDOW TYPES	M4.1 MAIN FLOOR PLAN - VENTILATION
A2.4 LARGE SCALE PLANS	M4.2 MAIN FLOOR PLAN - FIRE PROTECTION
A2.5 CEILING PLAN	M5.1 2ND FLOOR & MAIN FLOOR - HIGH LEVEL FIRE PROTECTION, DETAILS
A3.1 BUILDING ELEVATIONS	M6.1 MECHANICAL ROOM PLAN
A3.2 BUILDING ELEVATIONS	M6.2 ROOM 201 PLAN
A3.3 BUILDING SECTIONS	M6.3 ROOM 201 VENTILATION PLAN
A4.1 PLAN DETAILS	M6.4 BUILDING SECTION DETAILS
A4.2 SECTION DETAILS	M6.5 MECHANICAL SCHEMATICS
A4.3 SECTION DETAILS	M6.6 MECHANICAL SCHEMATICS
A4.4 SECTION DETAILS	<b>STRUCTURAL</b>
A4.5 SECTION DETAILS	S0 TYPICAL DETAILS
A4.6 WINDOW DETAILS	S0.1 TYPICAL DETAILS
A4.7 WINDOW & DOOR DETAILS	S1.1 PILING PLAN
A4.8 DOOR DETAILS	S1.2 FOUNDATION PLAN
A4.9 DOOR DETAILS	S2.1 LOWER ROOF PLAN/SERVICE PLAN
A4.10 DOOR DETAILS	S2.2 UPPER ROOF PLAN
A4.11 CELL DETAILS	S2.3 FRAMING ELEVATIONS
A4.12 DETAILS	S2.4 FRAMING ELEVATIONS
A5.1 INTERIOR ELEVATIONS	S3.1 TYPICAL DETAILS
A5.2 INTERIOR ELEVATIONS	S3.2 SECTIONS AND DETAILS
A5.3 INTERIOR ELEVATIONS	S3.3 SECTIONS AND DETAILS
A5.4 INTERIOR ELEVATIONS	S3.4 SECTIONS AND DETAILS
A5.5 INTERIOR ELEVATIONS	S3.5 SECTIONS AND DETAILS
	<b>LANDSCAPE</b>
	L1 LANDSCAPE PLAN
	L2 LANDSCAPE PLAN
	L3 LANDSCAPE PLAN
	L4 DETAILS
	<b>CIVIL</b>
	C1 SITE GRADING
	C2 CIVIL DETAILS
	C3 CIVIL DETAILS



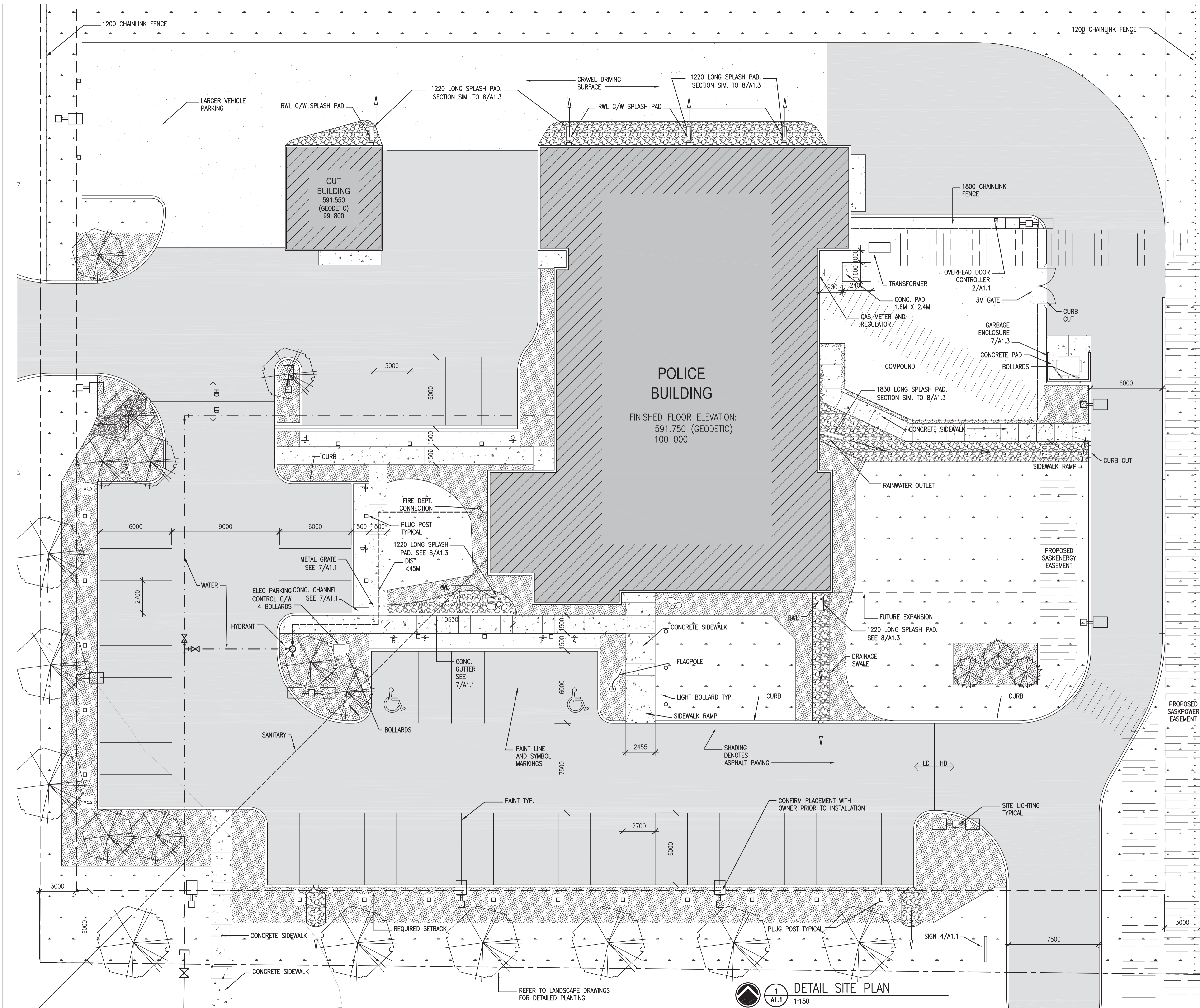
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 109-3725 Poyas Street, Regina, SK, S4S 0R8, ph: (306) 949-2255  
 1101-2718 Kanan Road, Saskatoon, SK, S7P 0A6, ph: (306) 952-6457  
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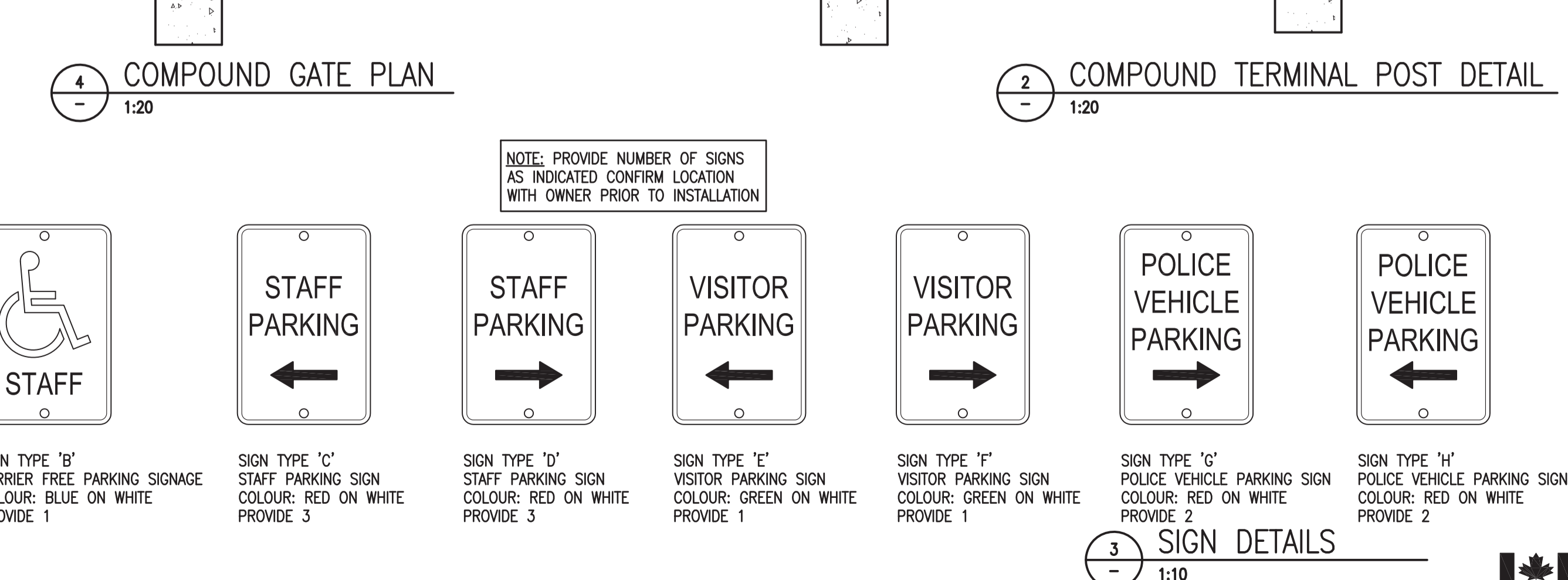
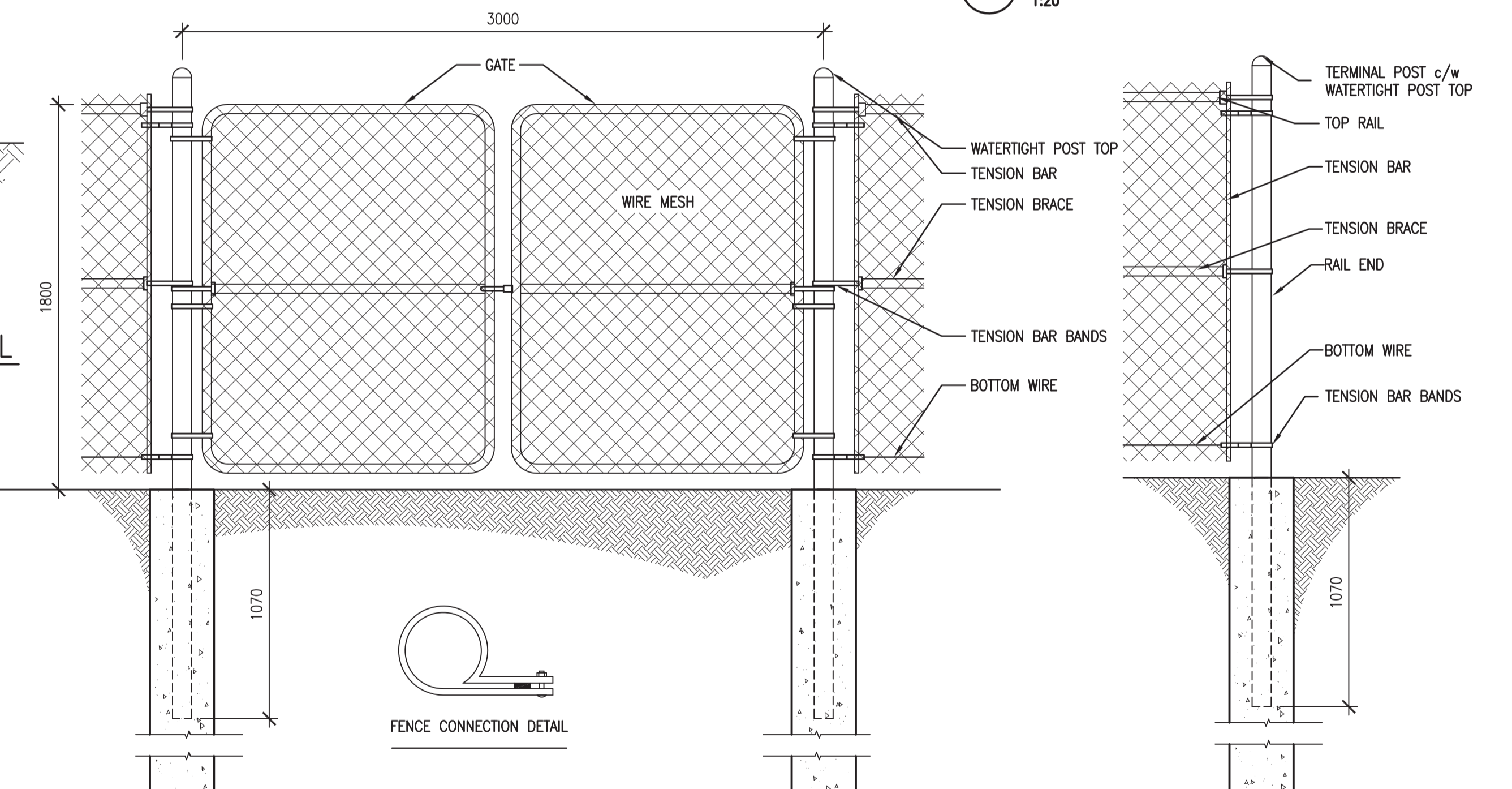
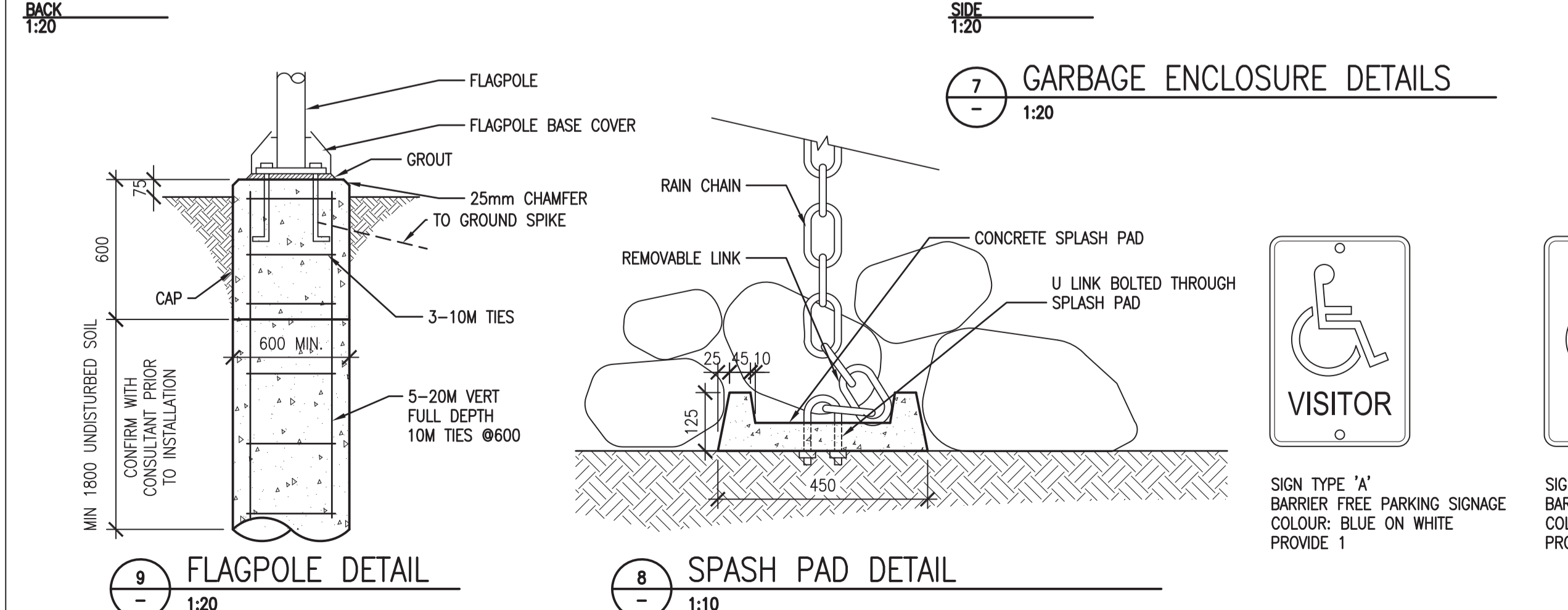
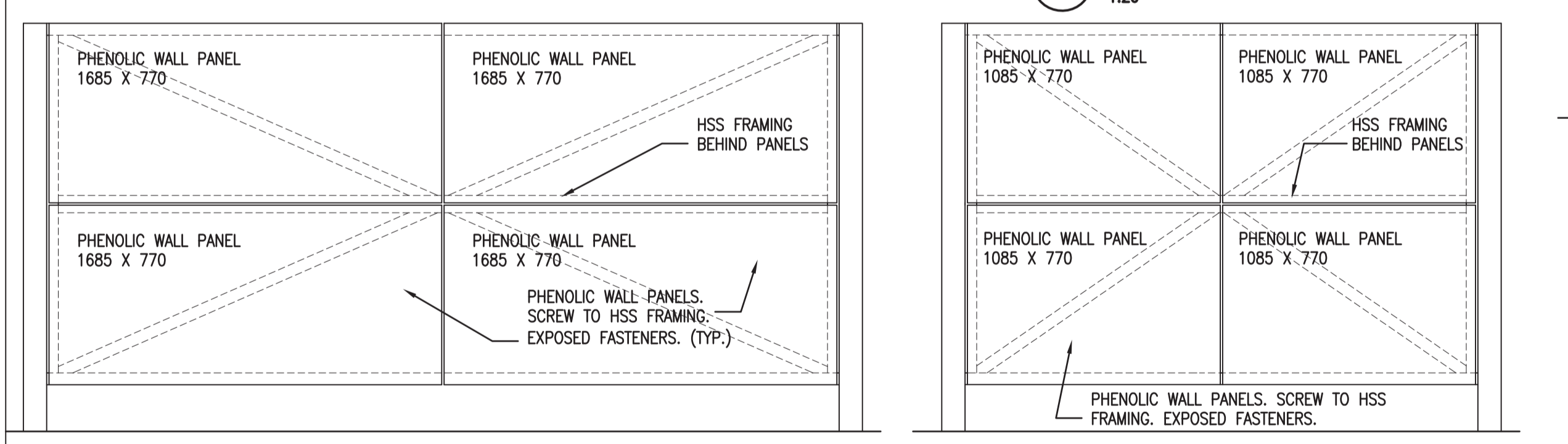
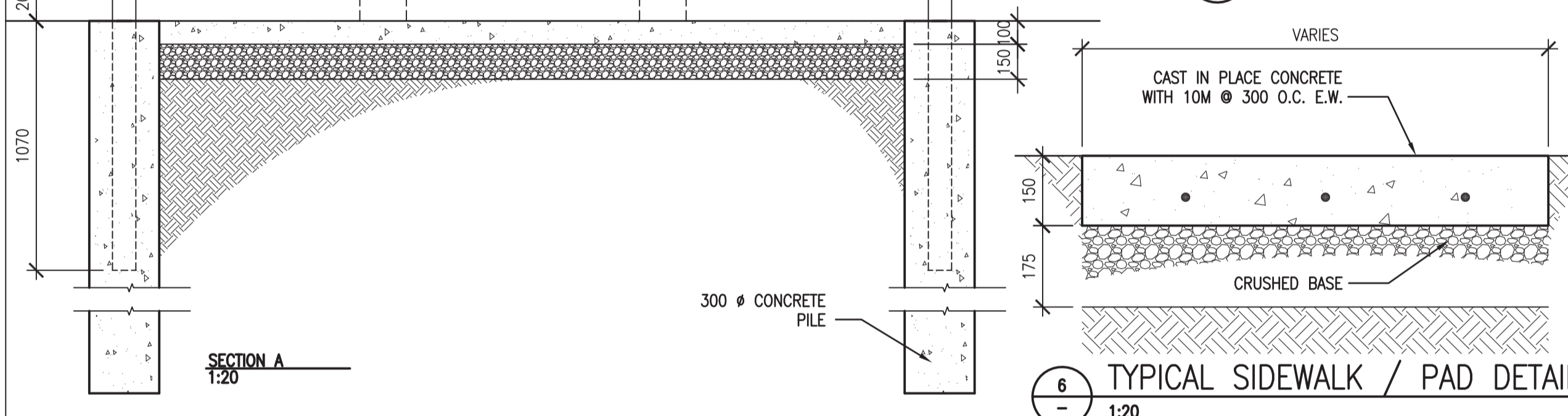
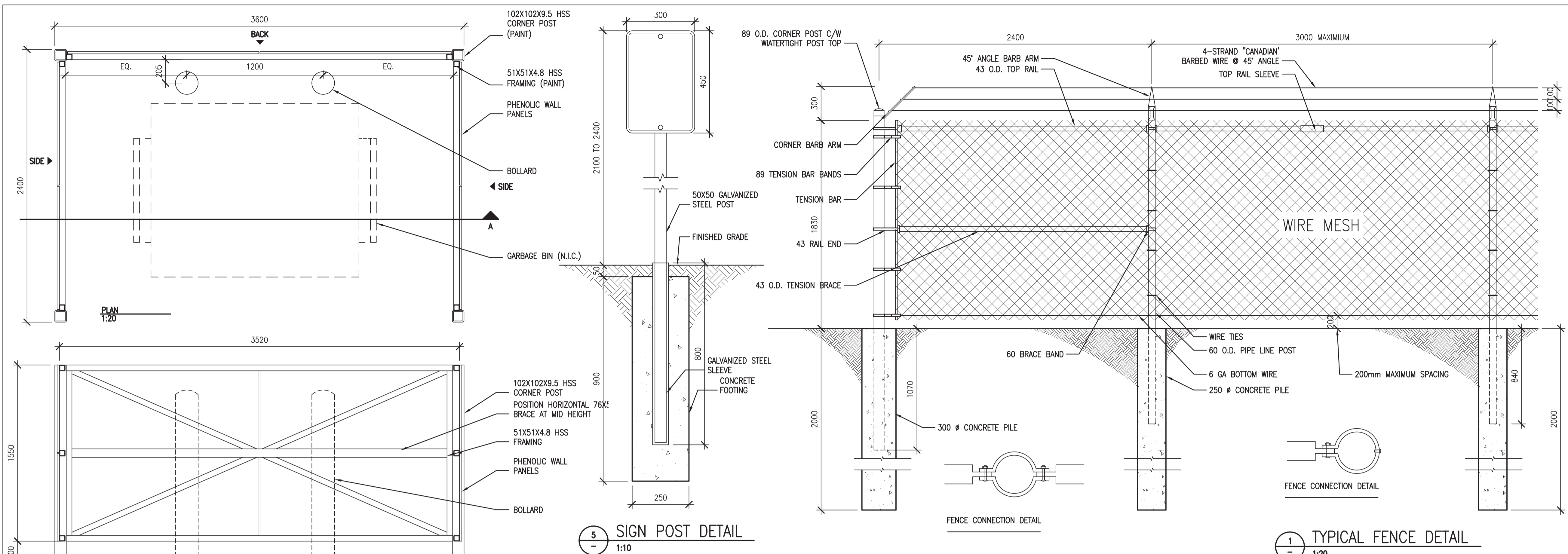
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**DETAIL SITE PLAN**

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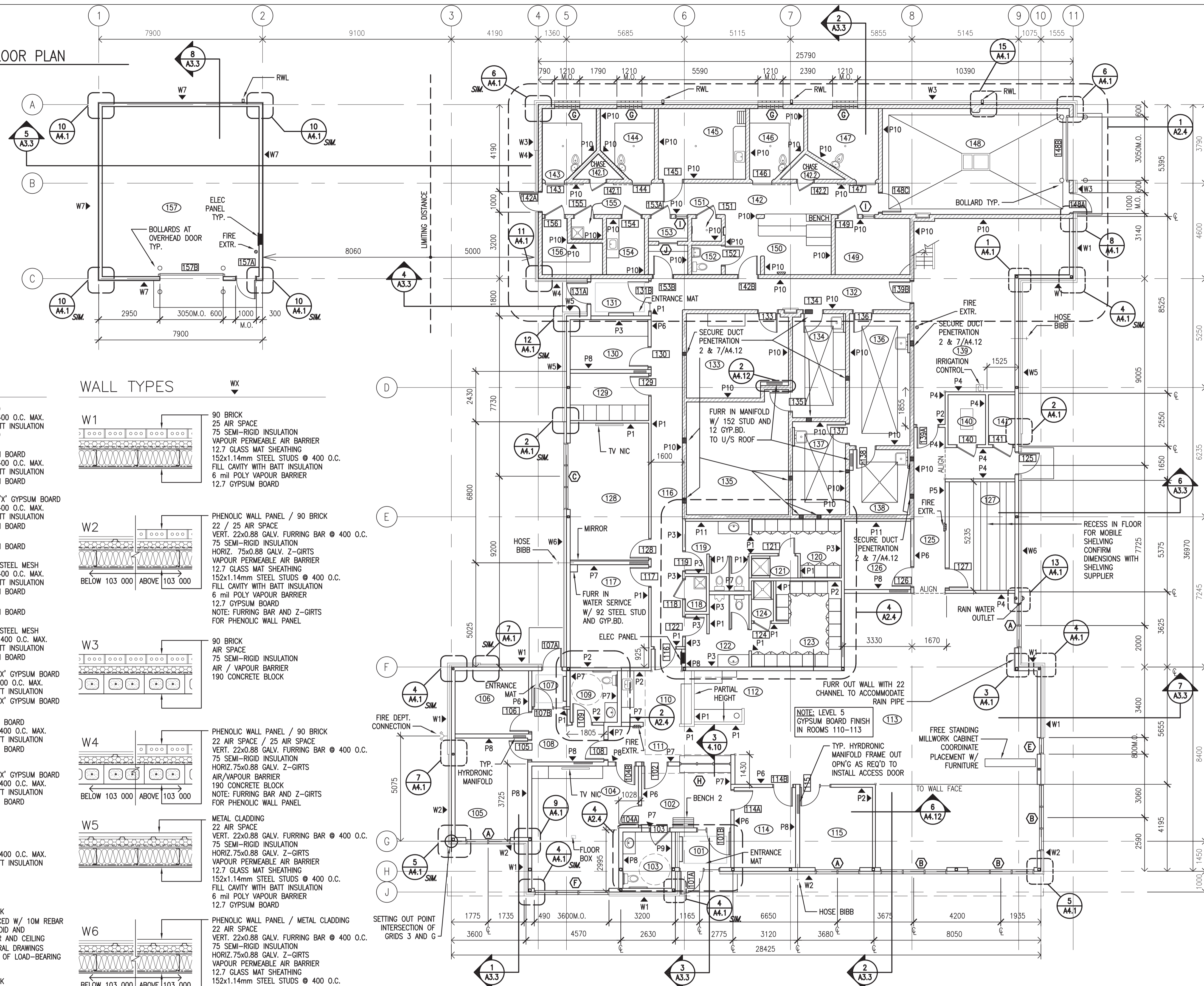
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**SITE DETAILS**

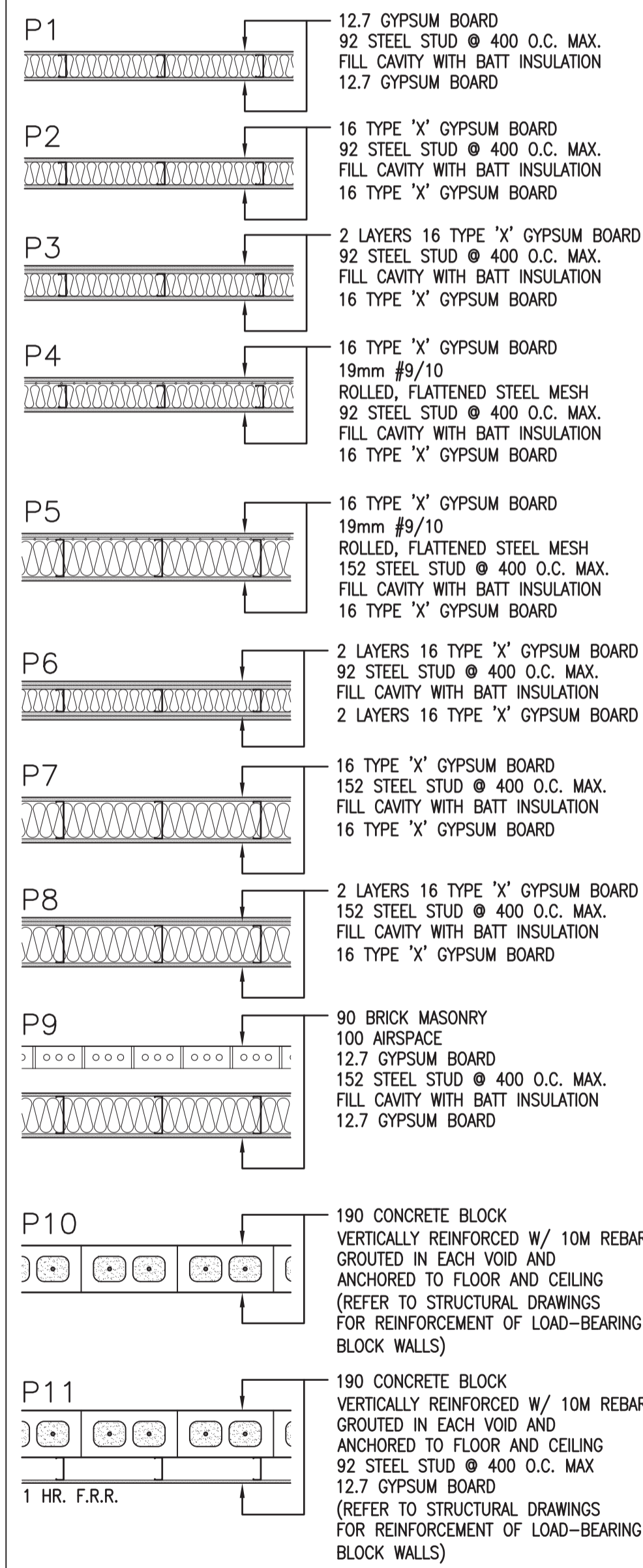
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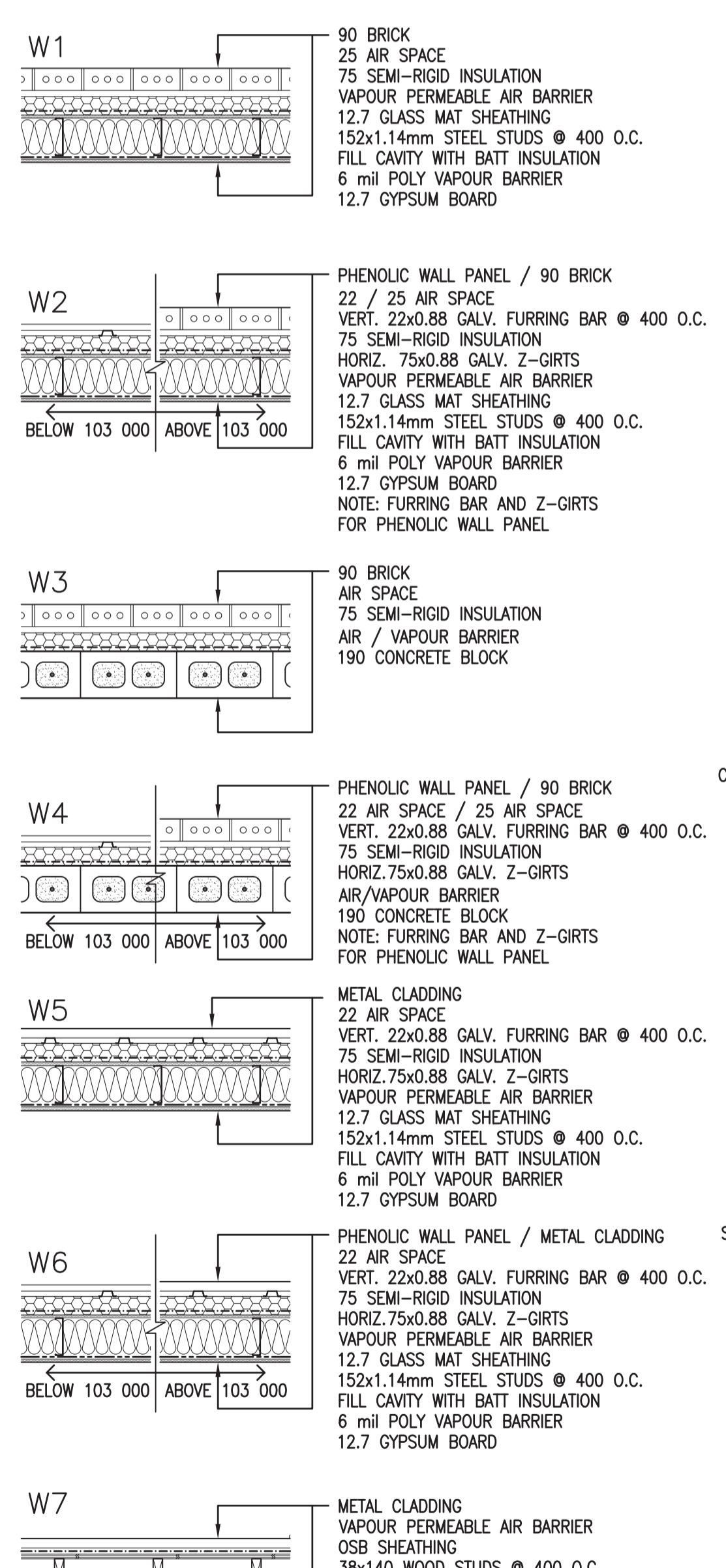
**MAIN FLOOR PLAN**  
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**PARTITION TYPES**



**WALL TYPES**



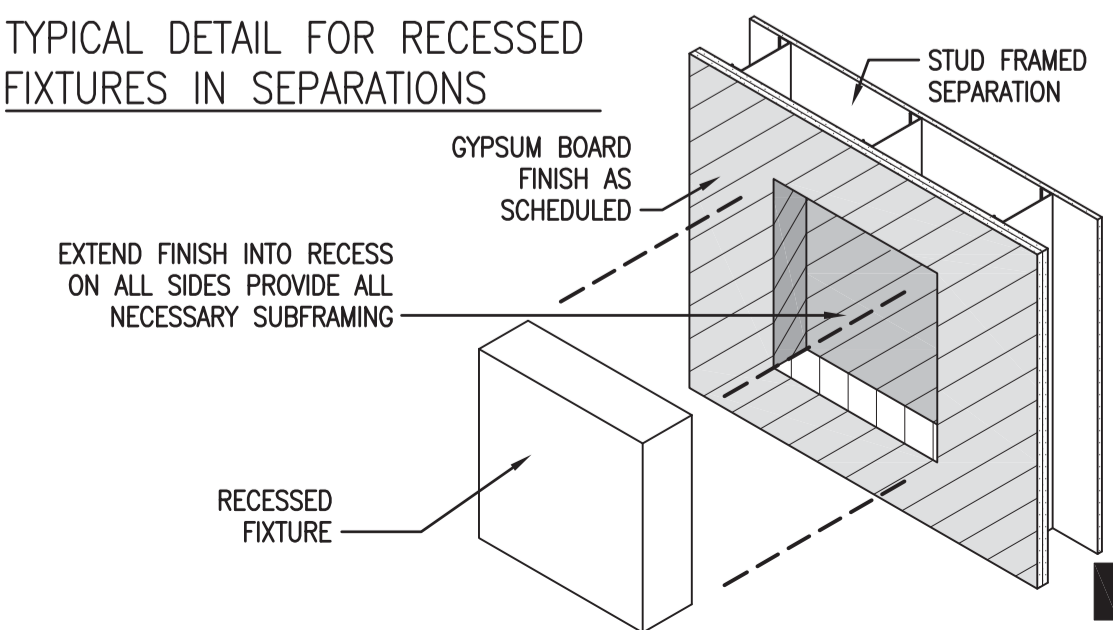
**NOTES:**

- REFER TO CEILING PLAN AND SERVICE SPACE PLAN FOR THE LOCATION OF FIRE AND ACOUSTIC SEPARATIONS.
- PROVIDE SOLID WOOD BLOCKING IN WALLS AND PARTITIONS FOR THE ATTACHMENT OF MILLWORK AND EQUIPMENT SEE INTERIOR ELEVATIONS AND EQUIPMENT PLAN
- CONFIRM SIZE, NUMBER, AND LOCATIONS OF ALL SECURE DUCT PENETRATIONS WITH MECH.
- PROVIDE STUD FRAMING AROUND ALL SIDES OF HYDRONIC MANIFOLDS FOR MOUNTING ACCESS DOORS. T/O R.O. FOR MANIFOLDS TO BE 820mm A.F.F.

**PARTITION NOTES:**

- ALL STEEL STUD SEPARATIONS TO HAVE MINERAL FIBRE BLANKET INSULATION
- FOR ALL SEPARATIONS WRAP GYPSUM BOARD FINISH INSIDE ANY RECESSES
- SEAL AROUND PERIMETER AND ANY PENETRATIONS OF ACOUSTIC SEPARATIONS WITH ACOUSTICAL SEALANT
- FIRESTOP AROUND PERIMETER AND ANY PENETRATIONS OF FIRE-RATED SEPARATIONS.
- ALL PARTITIONS TO EXTEND TO THE UNDERSIDE OF ROOF DECK, FILL METAL DECK FLUTES AND SEAL, UNLESS NOTED OTHERWISE.
- PROVIDE MOISTURE-RESISTANT GYPSUM BOARD IN WASHROOMS, JANITOR ROOMS, MECHANICAL ROOMS, AND SERVICE ROOMS (TYPICAL).
- FINISH GYPSUM BOARD TO MINIMUM LEVEL 3 FINISH UNLESS NOTED OTHERWISE.
- REFER TO SCHEDULE FOR WALL FINISHES.
- REFER TO SPECIFICATION FOR LEVEL OF INTERIOR GYPSUM BOARD FINISHES.
- PROVIDE TILE BACKER AT ALL TILE LOCATIONS. BACKER THICKNESS TO MATCH GYPSUM BOARD INDICATED IN PARTITION TYPE. REFER TO INTERIOR ELEVATIONS FOR TILE LOCATIONS.

**TYPICAL DETAIL FOR RECESSED FIXTURES IN SEPARATIONS**



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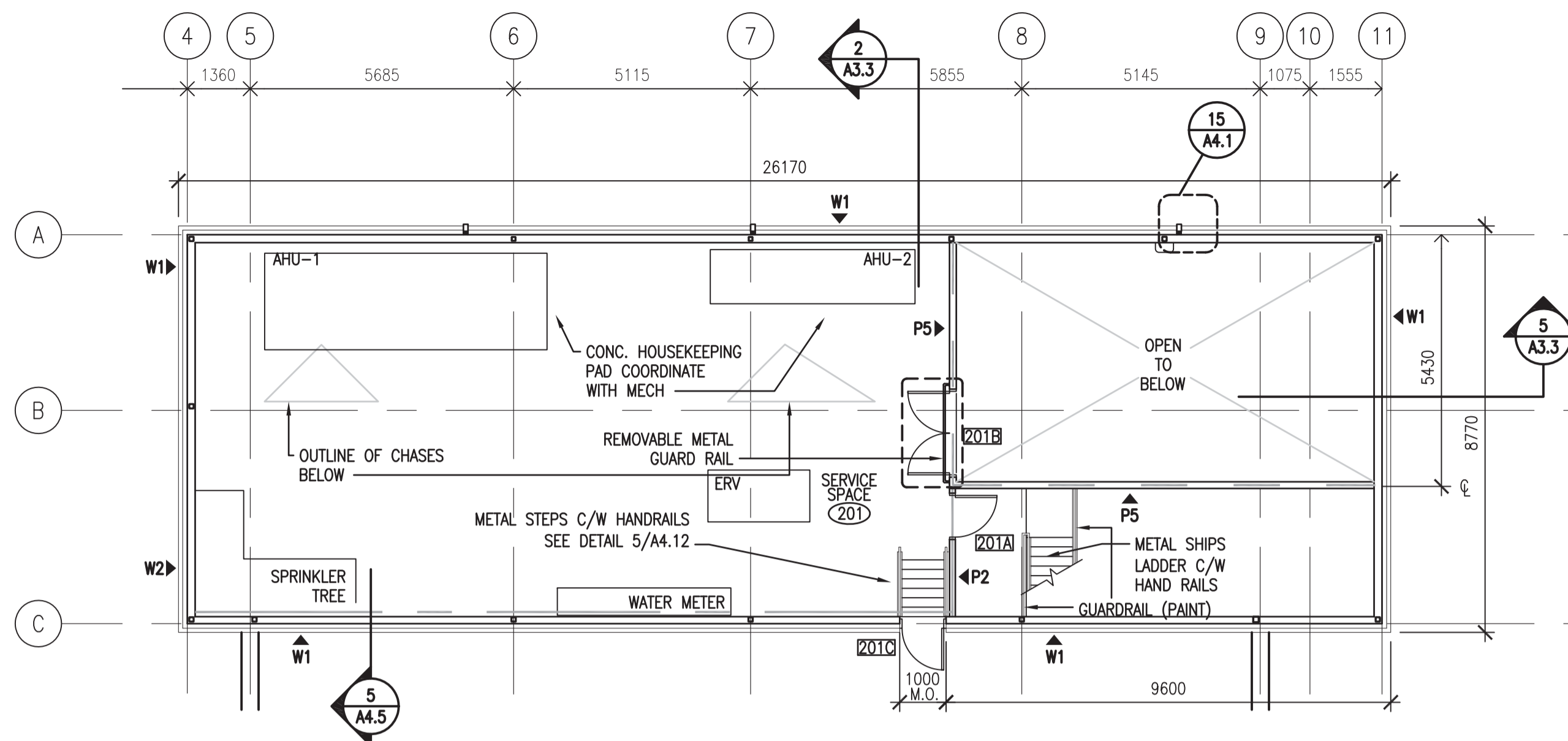
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**MAIN FLOOR PLAN  
WALL TYPES  
PARTITION TYPES**

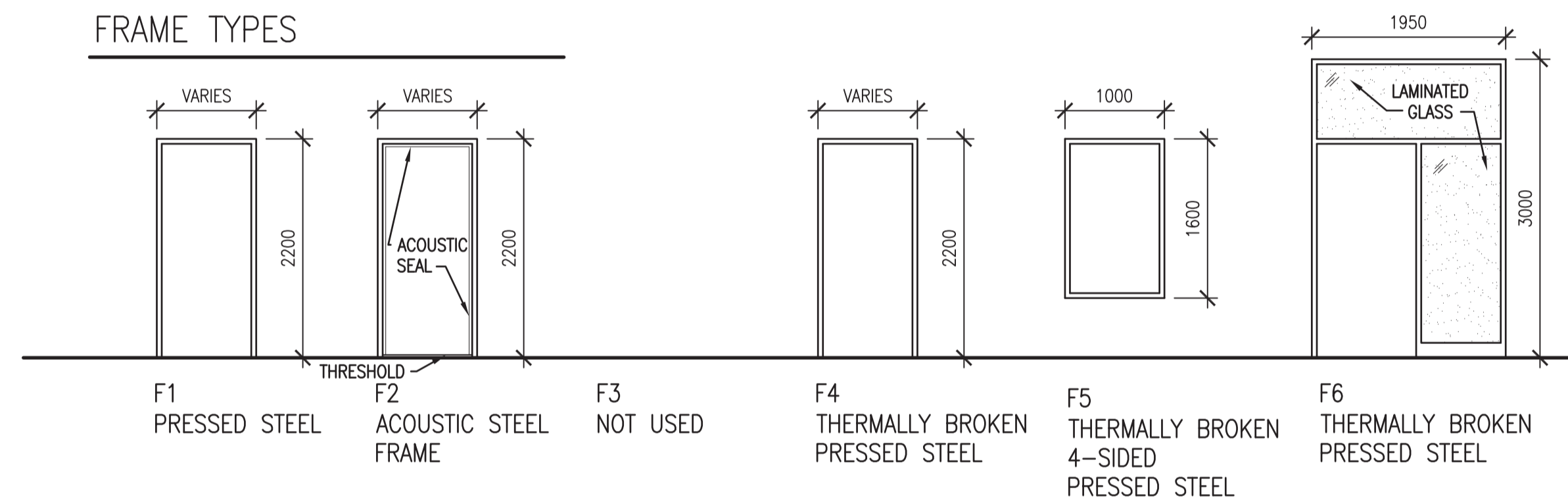
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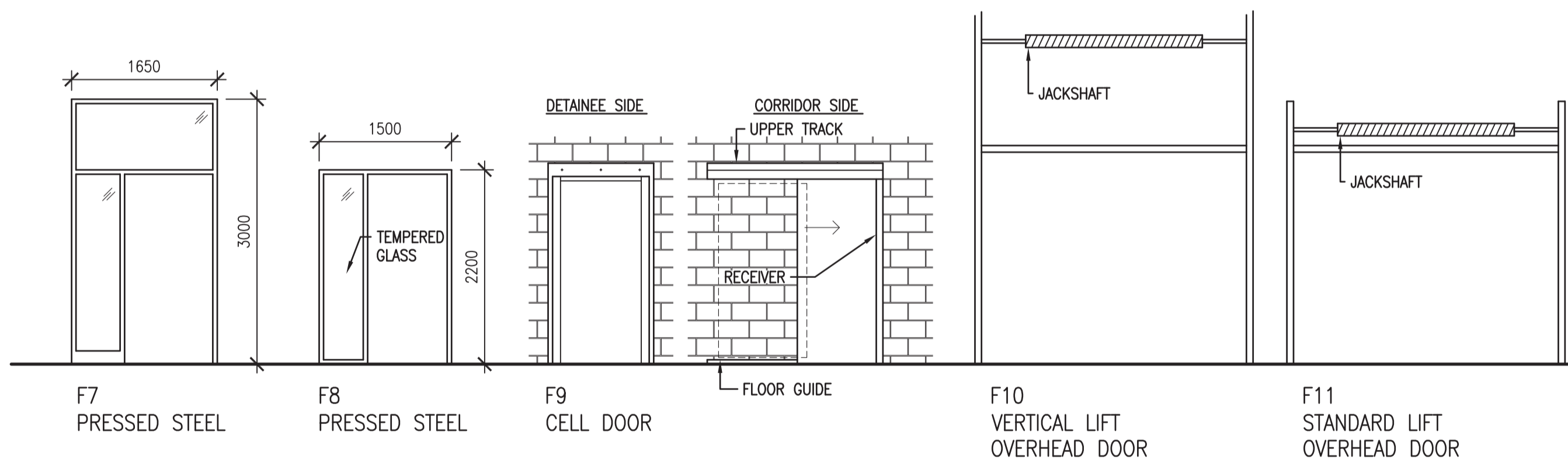


1 SERVICE SPACE PLAN  
1:100

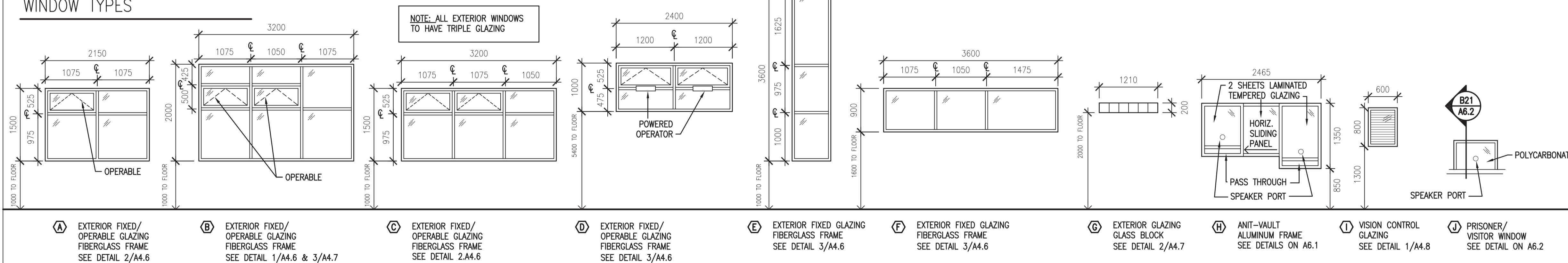
FRAME TYPES



DOOR TYPES



WINDOW TYPES



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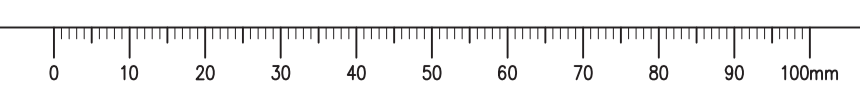
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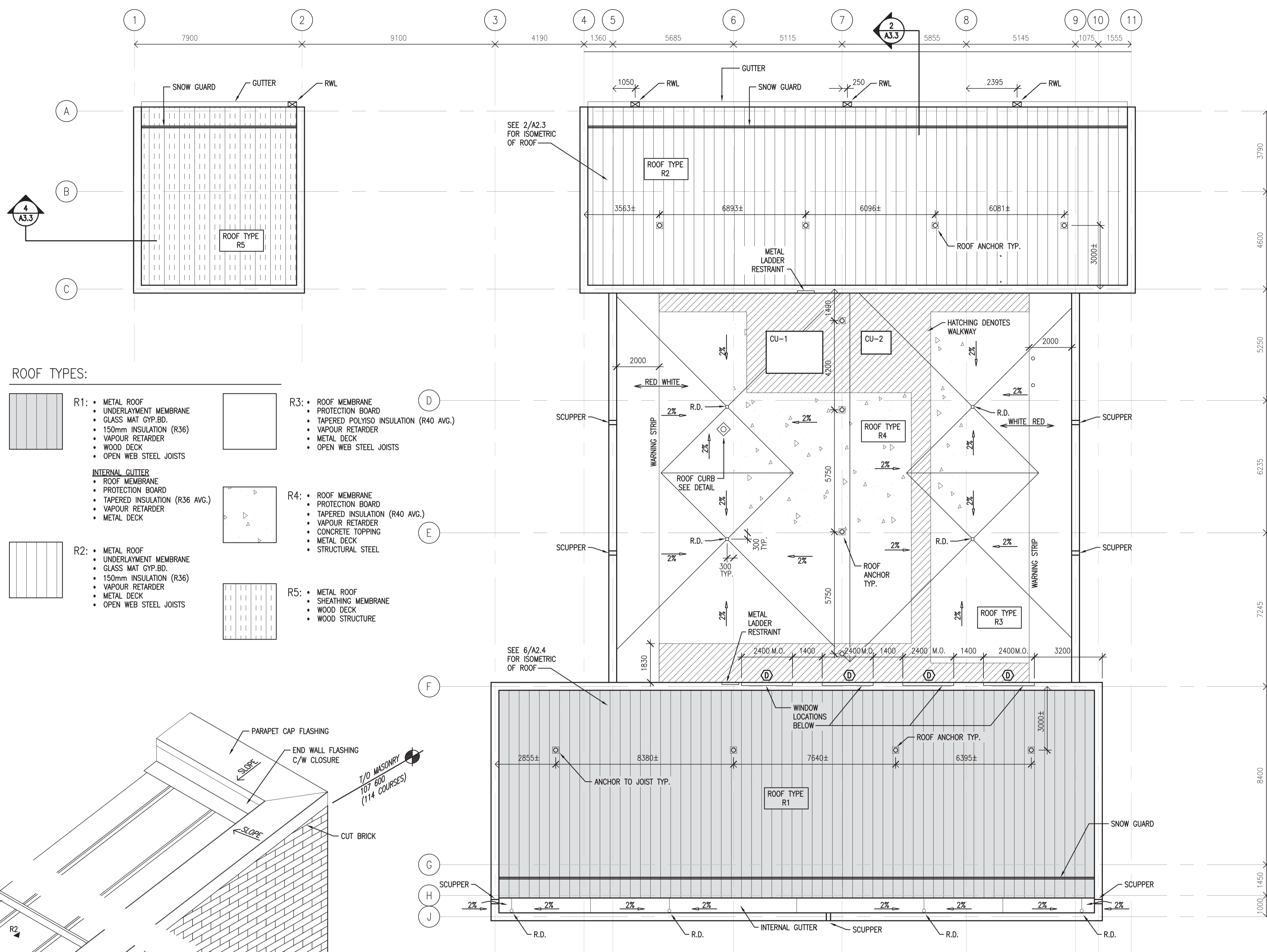
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**SERVICE SPACE PLAN  
DOOR, FRAME, & WINDOW TYPES**

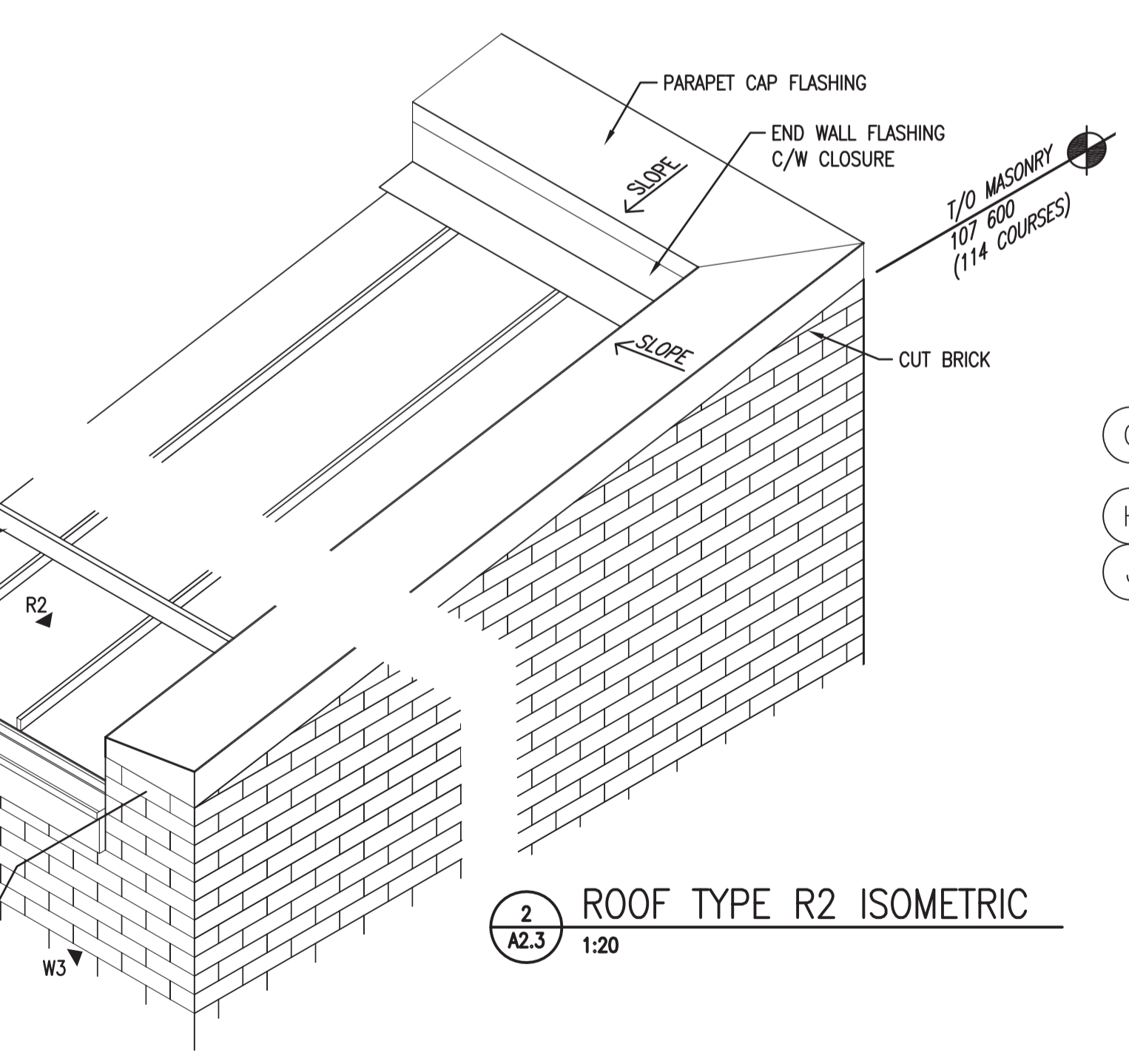
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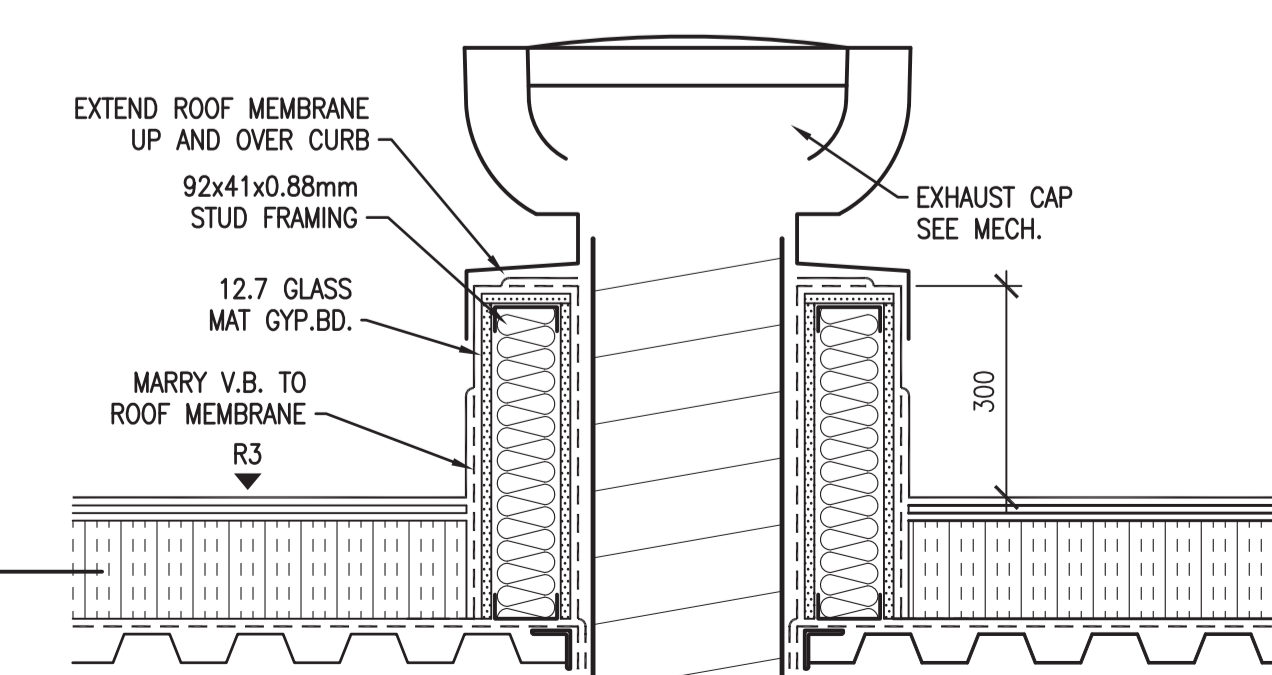


- ROOF TYPES:**
- R1:**
    - METAL ROOF
    - UNDERLAYMENT MEMBRANE
    - GLASS MAT GYP.BD.
    - 150mm INSULATION (R36)
    - VAPOUR RETARDER
    - WOOD DECK
    - OPEN WEB STEEL JOISTS
  - R2:**
    - METAL ROOF
    - UNDERLAYMENT MEMBRANE
    - GLASS MAT GYP.BD.
    - 150mm INSULATION (R36)
    - VAPOUR RETARDER
    - METAL DECK
    - OPEN WEB STEEL JOISTS
  - R3:**
    - ROOF MEMBRANE
    - PROTECTION BOARD
    - TAPERED POLYISO INSULATION (R40 AVG.)
    - VAPOUR RETARDER
    - METAL DECK
    - OPEN WEB STEEL JOISTS
  - R4:**
    - ROOF MEMBRANE
    - PROTECTION BOARD
    - TAPERED INSULATION (R40 AVG.)
    - VAPOUR RETARDER
    - CONCRETE TOPPING
    - METAL DECK
    - STRUCTURAL STEEL
  - R5:**
    - METAL ROOF
    - SHEATHING MEMBRANE
    - WOOD DECK
    - WOOD STRUCTURE

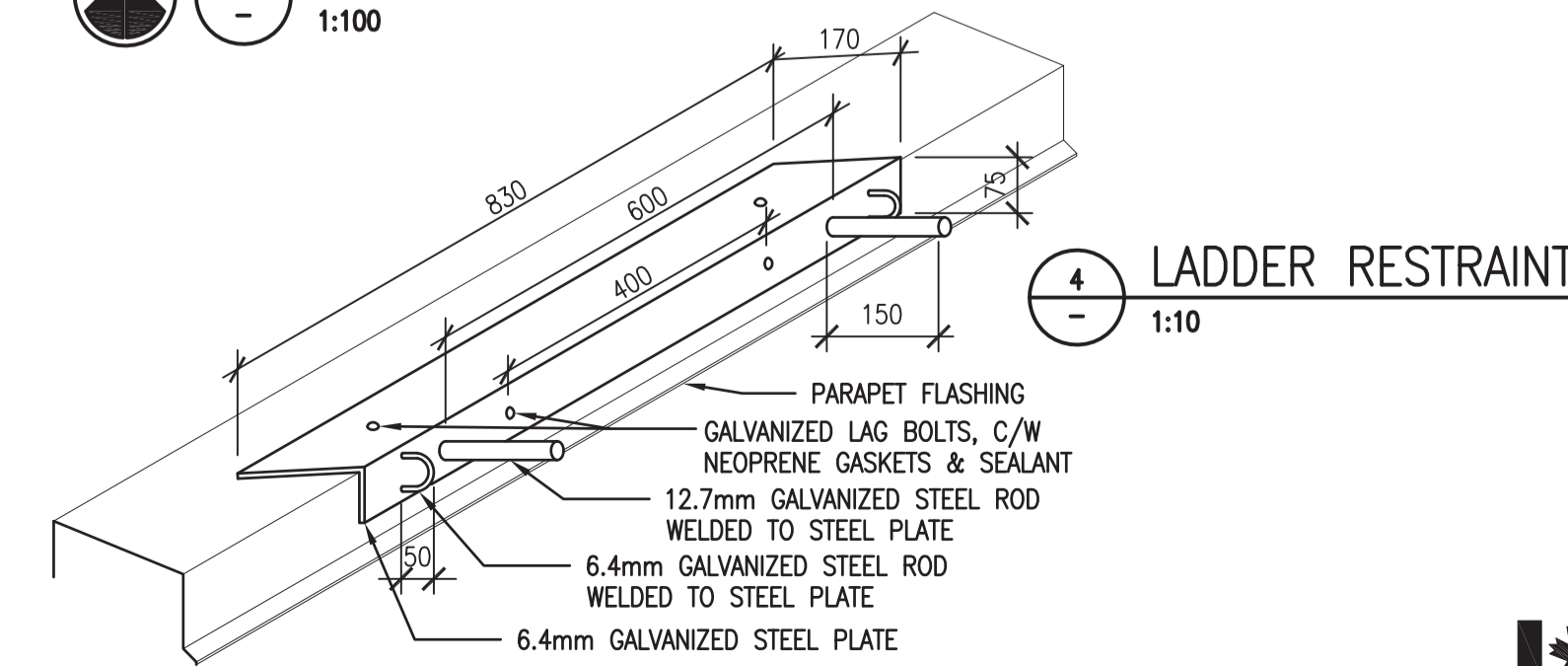


2 A2.3 ROOF TYPE R2 ISOMETRIC  
1:20

3 TYP. ROOF CURB  
1:10



1 ROOF PLAN  
1:100



4 LADDER RESTRAINT  
1:10



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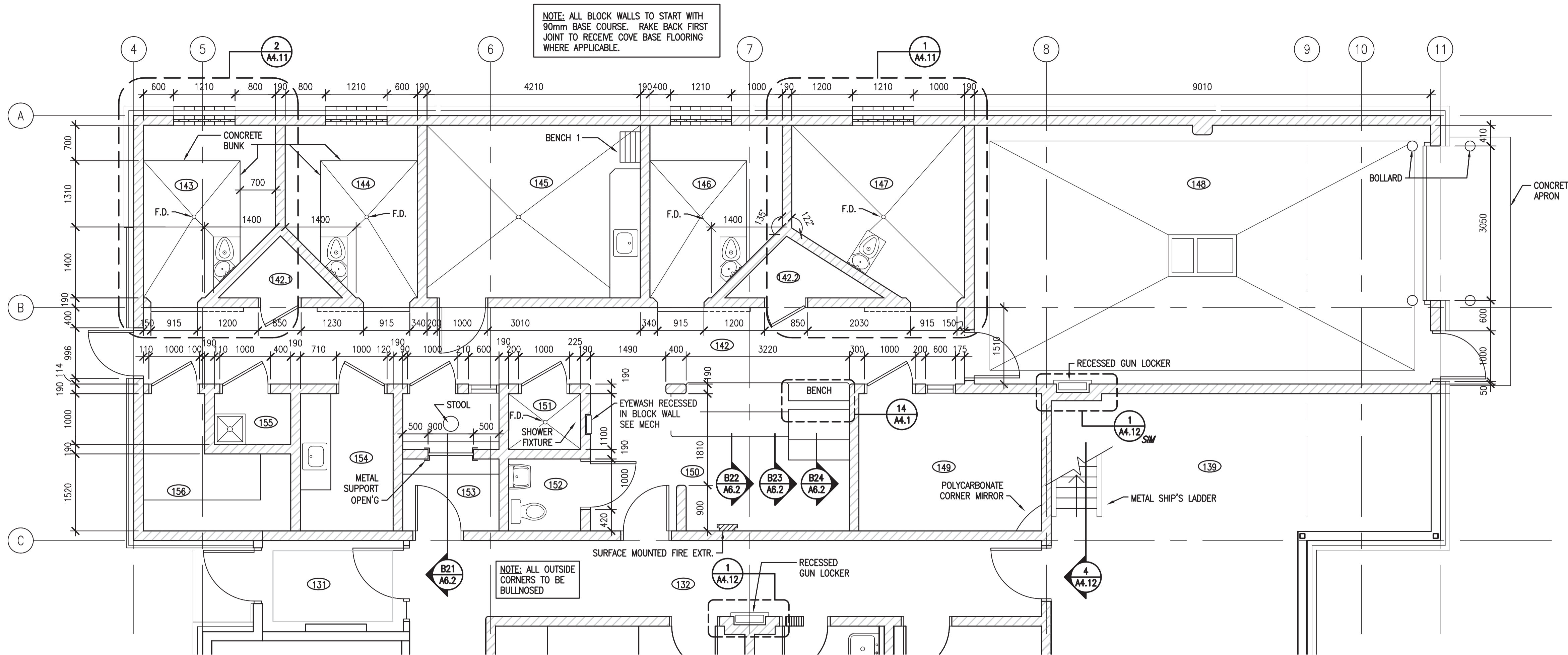
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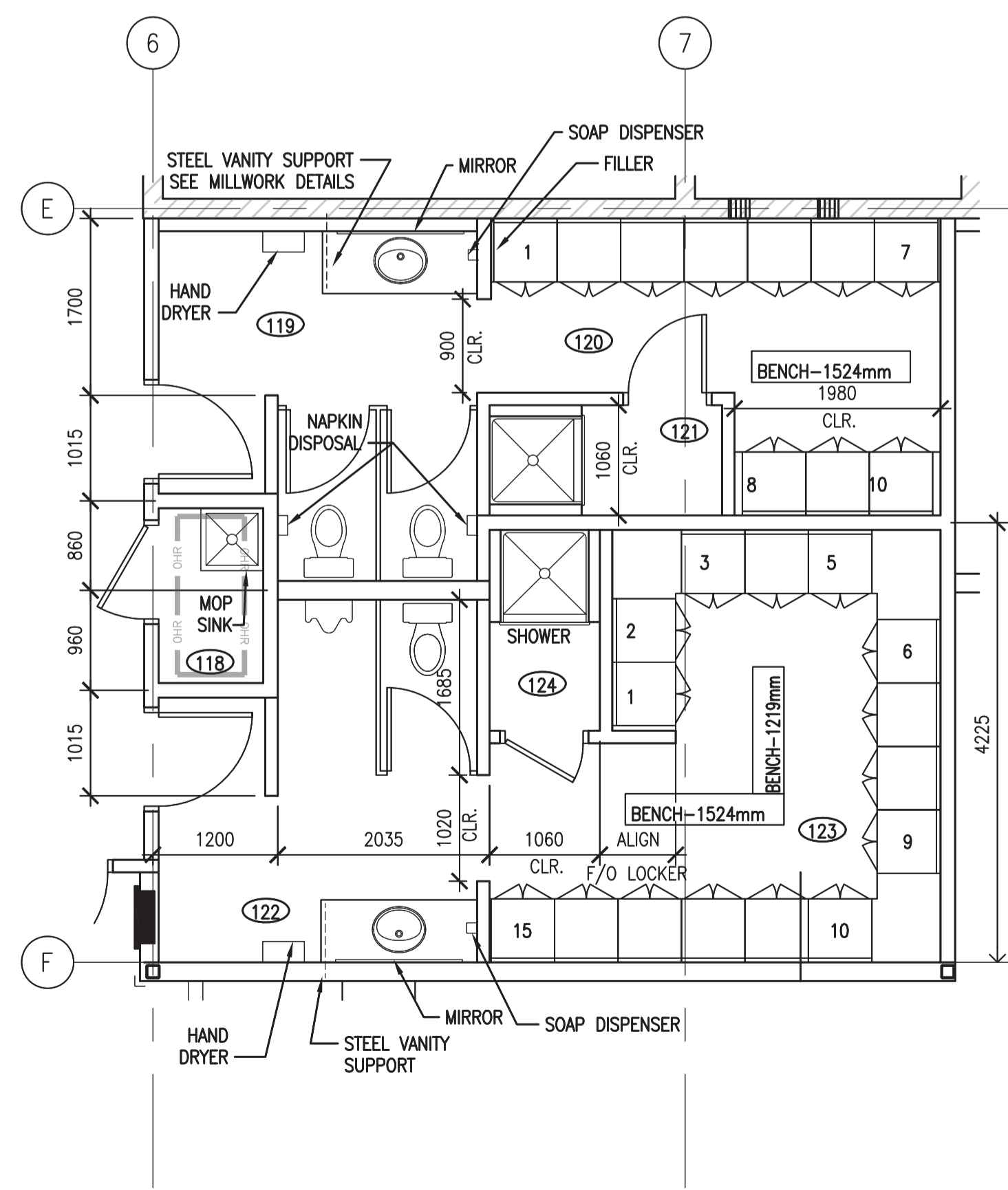
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**ROOF PLAN**

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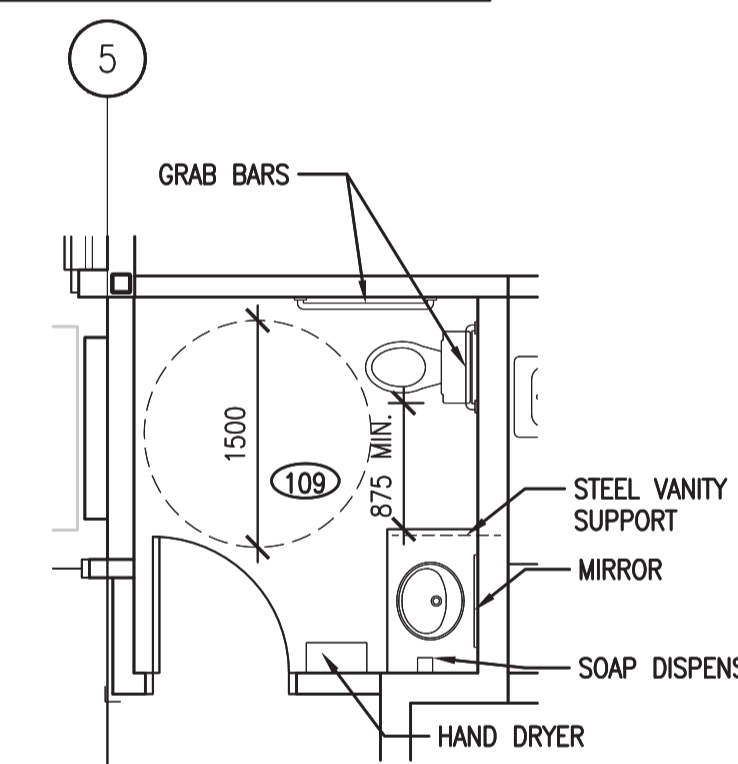




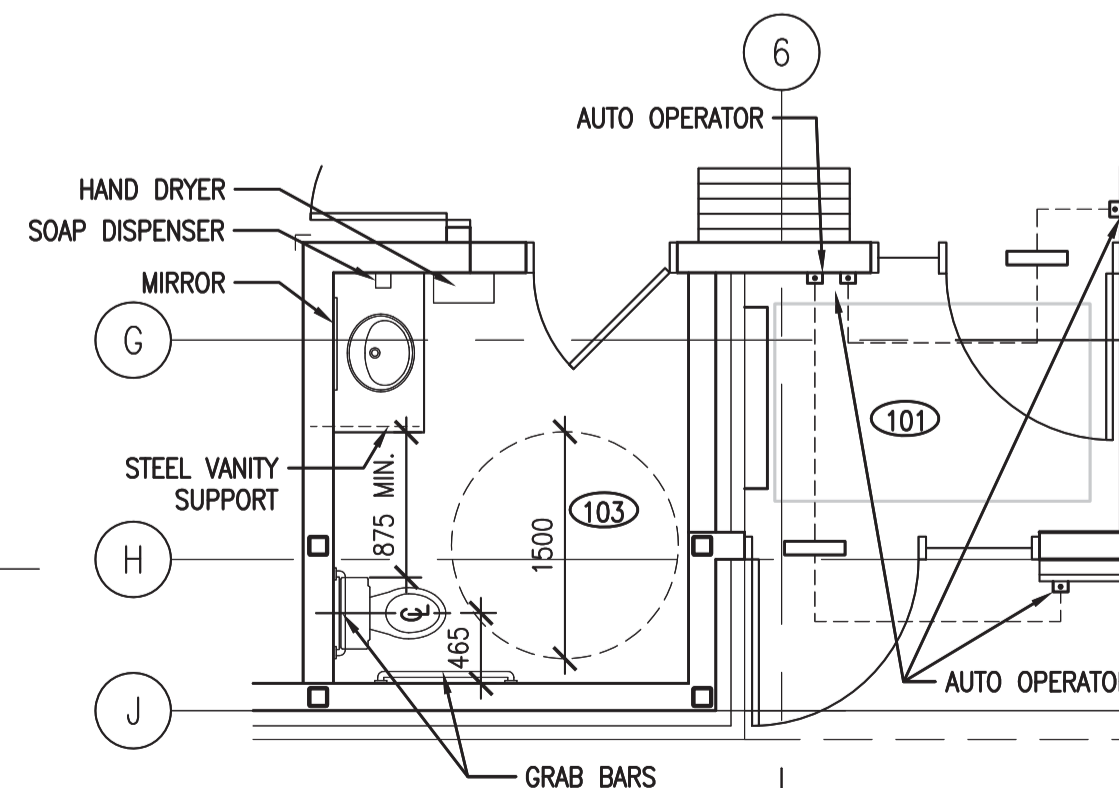
1 LARGE SCALE CELL AREA PLAN  
A2.1 1:50



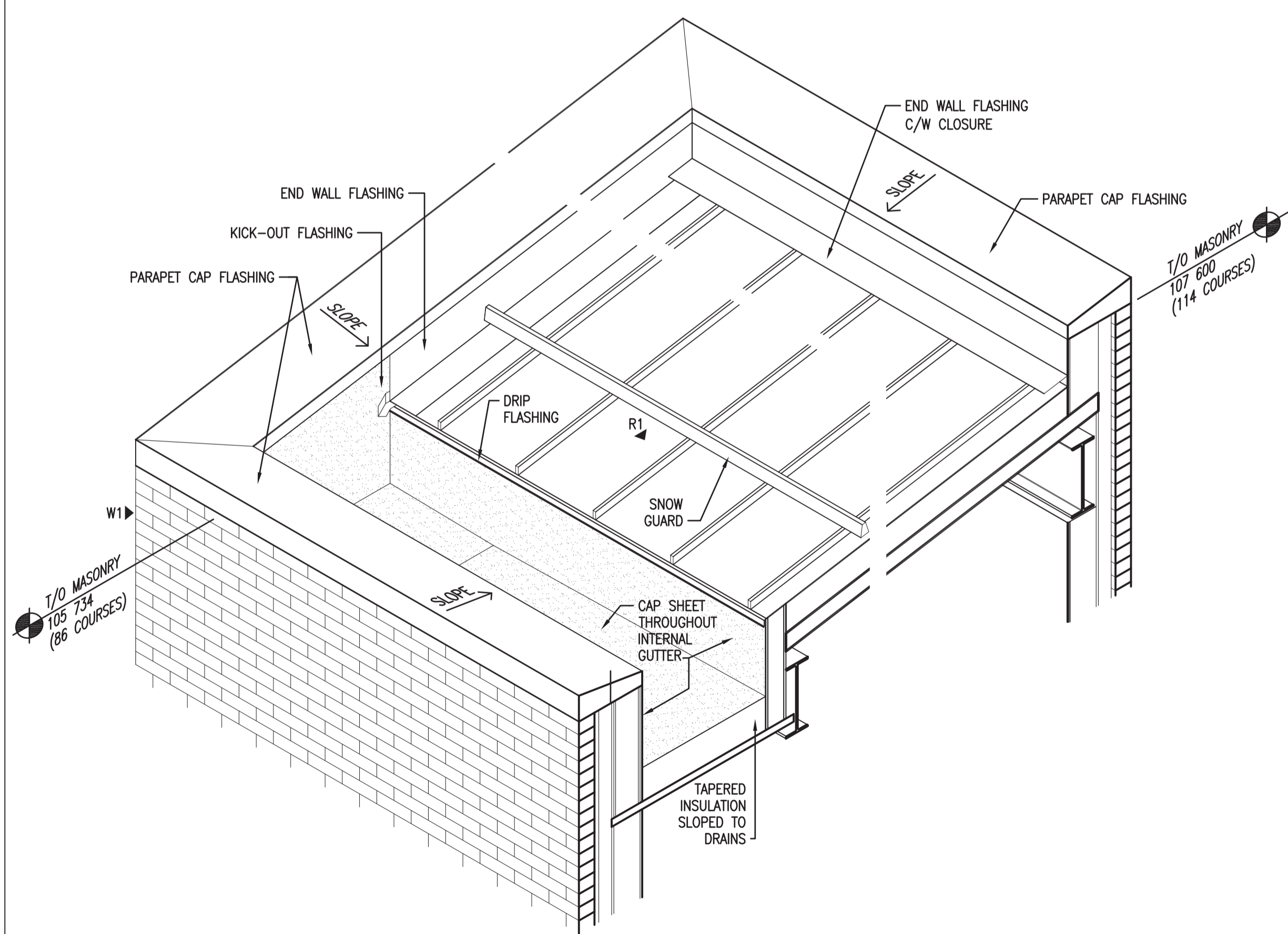
4 LARGE SCALE WASHROOM/LOCKER/SHOWER ROOM PLAN  
A2.1 1:50



2 LARGE SCALE WASHROOM PLAN  
A2.1 1:50



3 LARGE SCALE VESTIBULE/WC PLAN  
A2.1 1:50



5 ROOF TYPE R1 ISOMETRIC  
A2.3 1:20



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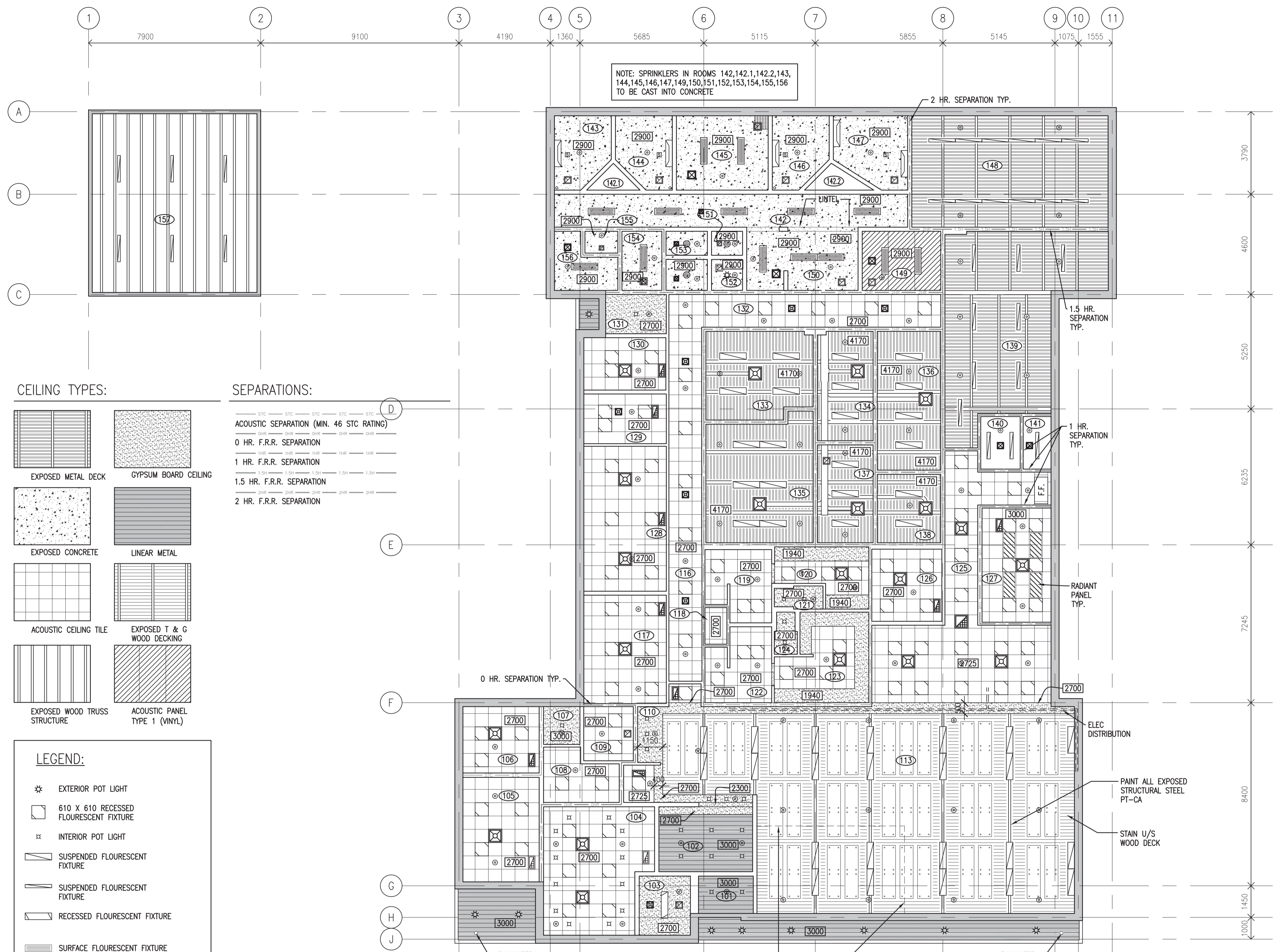
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Drawing title/Titre du dessin  
**LARGE SCALE PLANS**

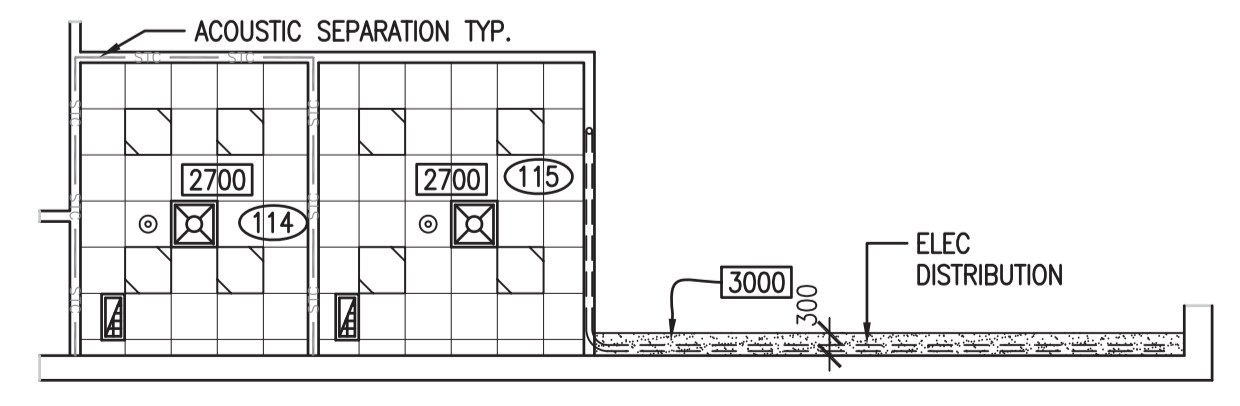
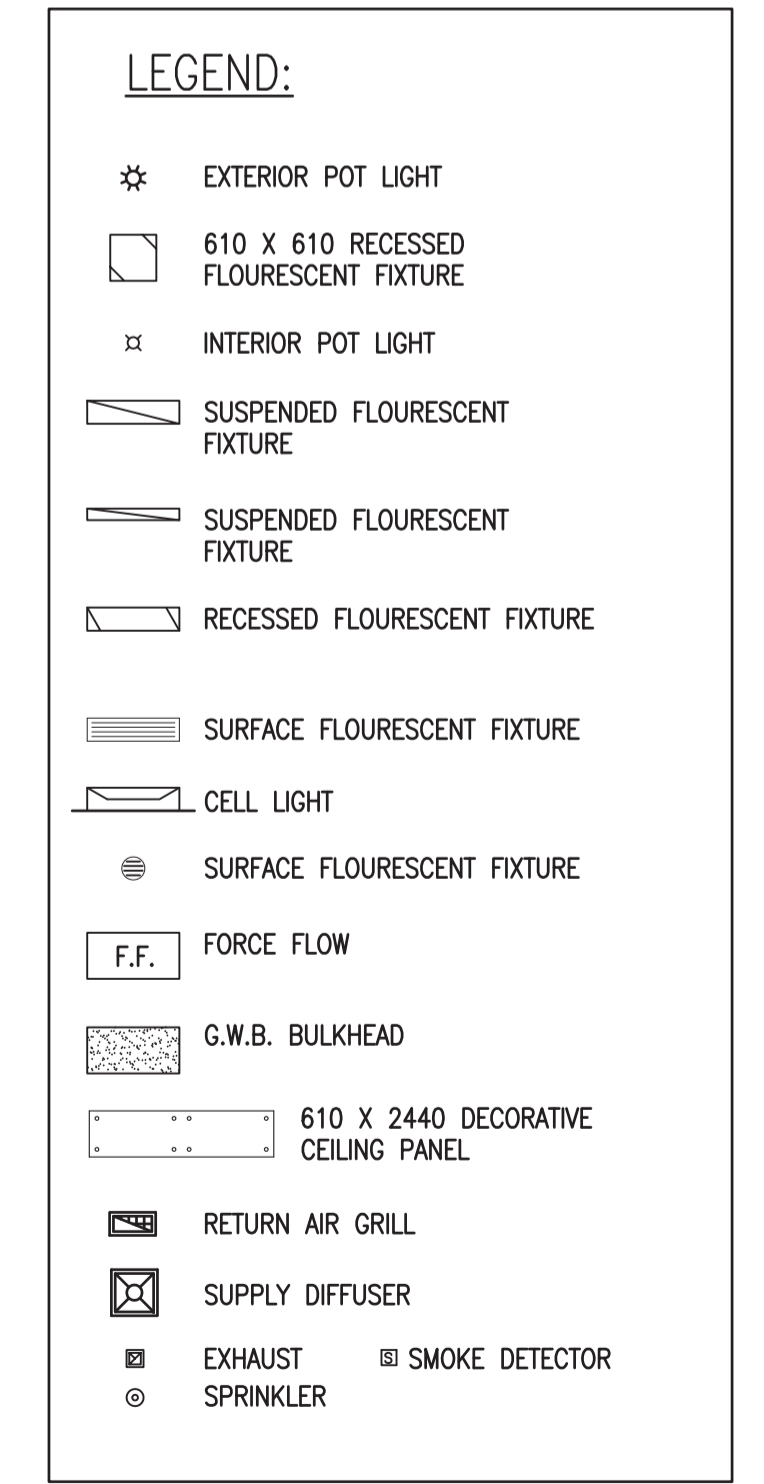
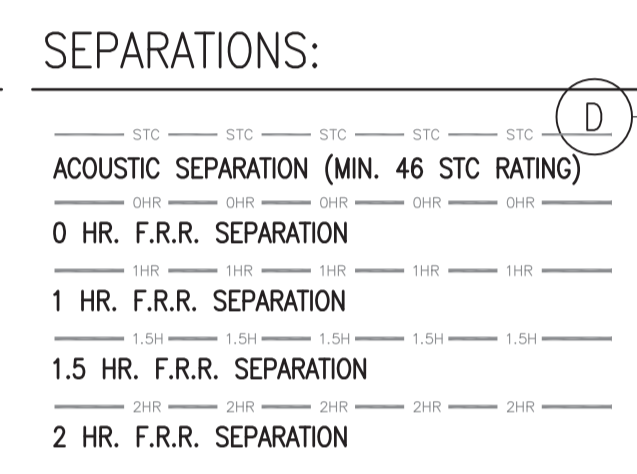
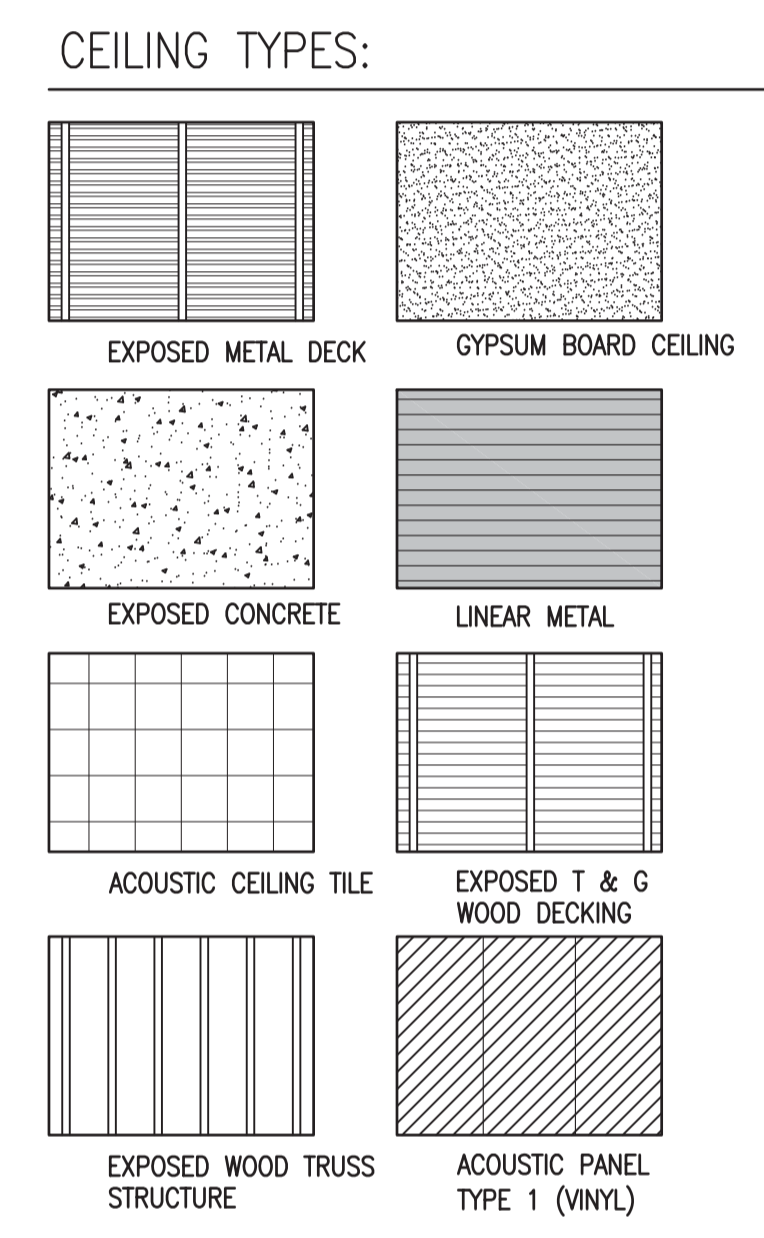
Project No./No. du projet 29/2013	Sheet/Feuille <b>A2.4</b>	Revision no./La Révision no. <b>0</b>
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NOTE: SPRINKLERS IN ROOMS 142,142.1,142.2,143, 144,145,146,147,149,150,151,152,153,154,155,156 TO BE CAST INTO CONCRETE

NOTE: ABOVE ROOMS 101, 102, 103, 104, 105, 106, 107, 108, 109; LAMINATE 12.7GB TO U/S OF WOOD ROOF DESK. FINISH TO LEVEL 2.



**SEPW Architecture Inc.**

101-3725 Paskia Street, Regina, SK, S4S 0R8 ph: (306) 948-2255  
 1101-2118 Kiewit Place, Saskatoon, SK, S7N 0A6 ph: (306) 952-9457  
 website: www.sepw.ca



**DO NOT SCALE DRAWINGS**

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0	ISSUED FOR TENDER	2014-12-08
Revision/Revision	Description/Description	Date/Date

Client/client

Project title/Titre du projet

**NEW POLICE BUILDING  
MAIDSTONE, SASKATCHEWAN**

Approved by/Approve par

Designed by/Concept par  
DE

Drawn by/Designe par  
DE / NO

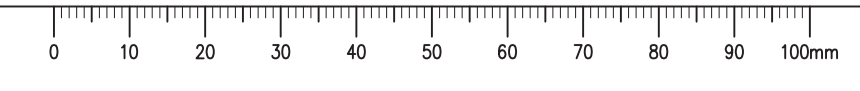
Project Manager/Administrateur de Projets  
CS

Architectural and Engineering Resources Manager/  
Ressources Architectural et de Directeur d'ingénierie

Client/client

Drawing title/Titre du dessin  
**CEILING PLAN**

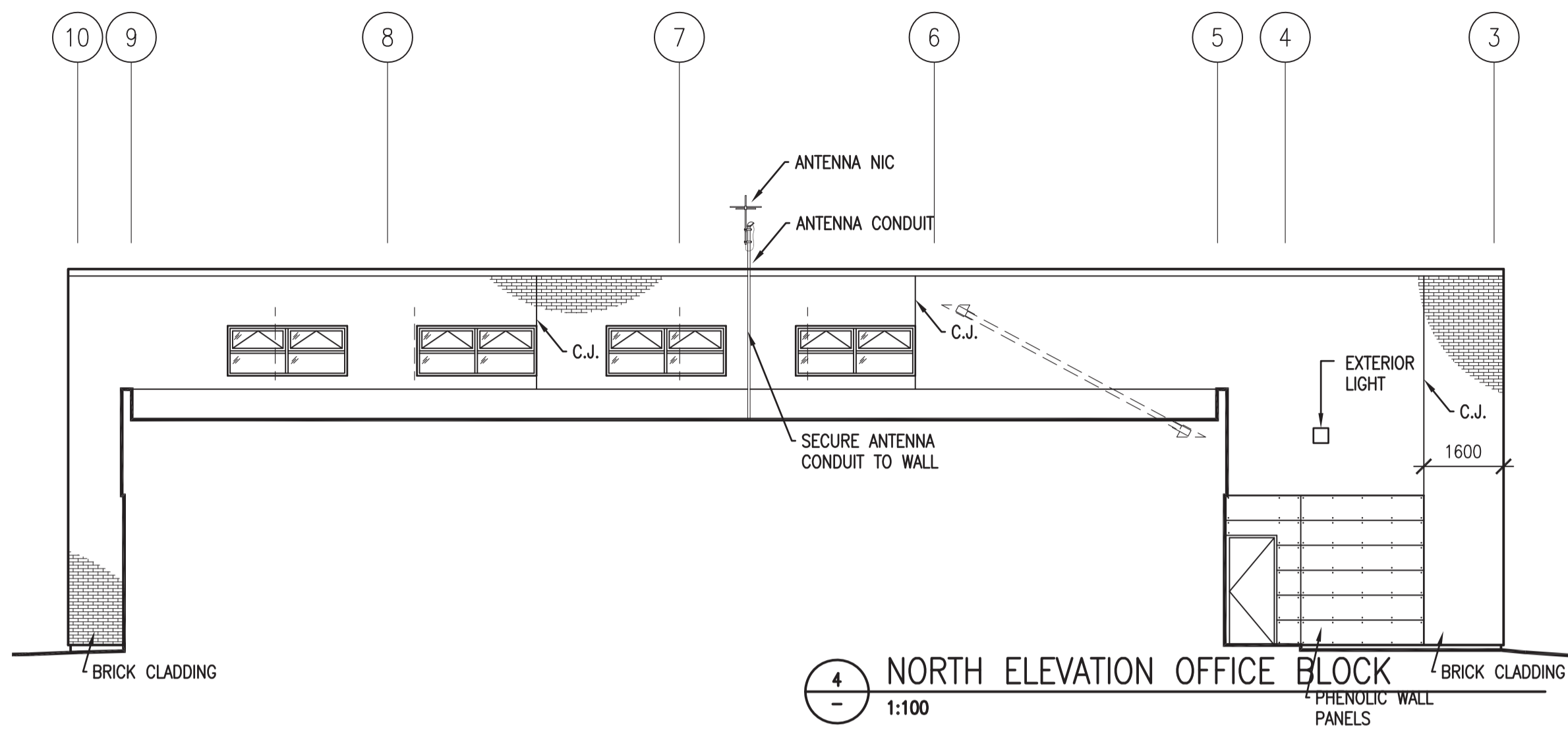
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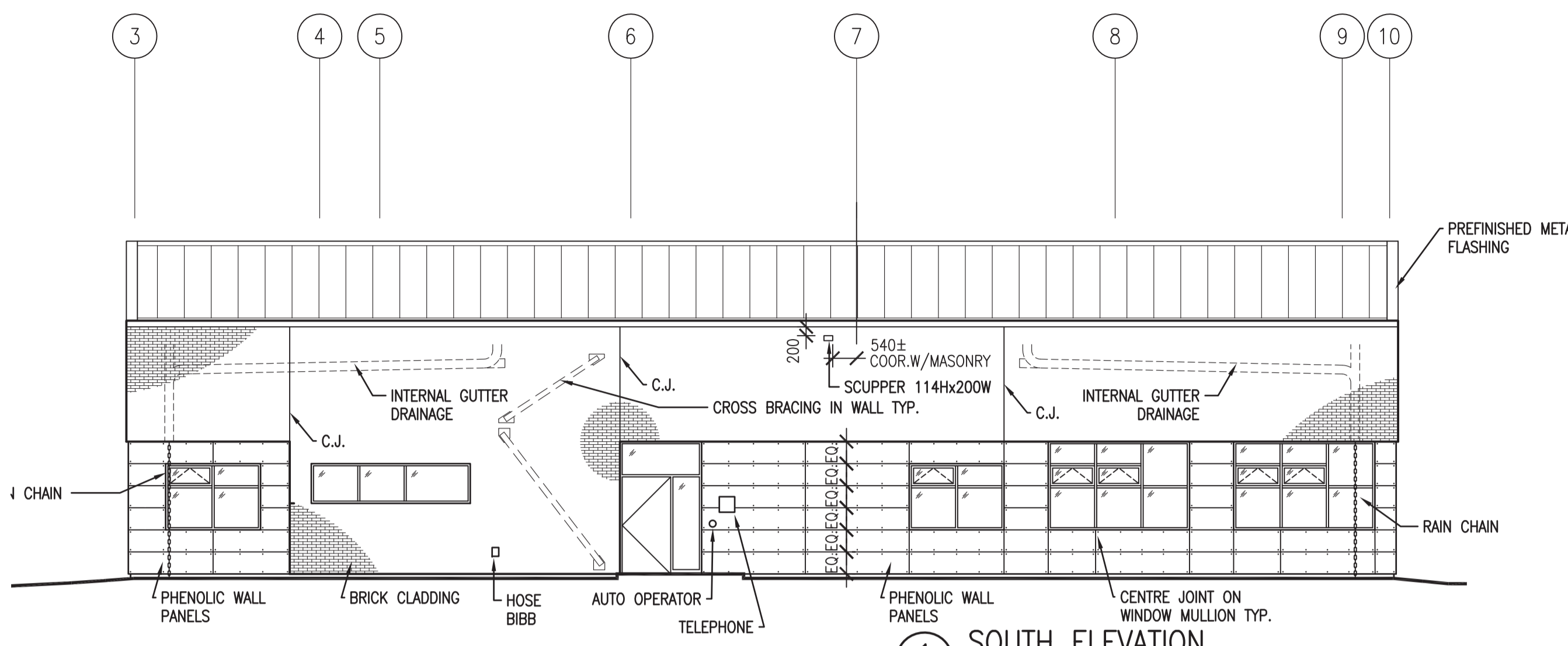
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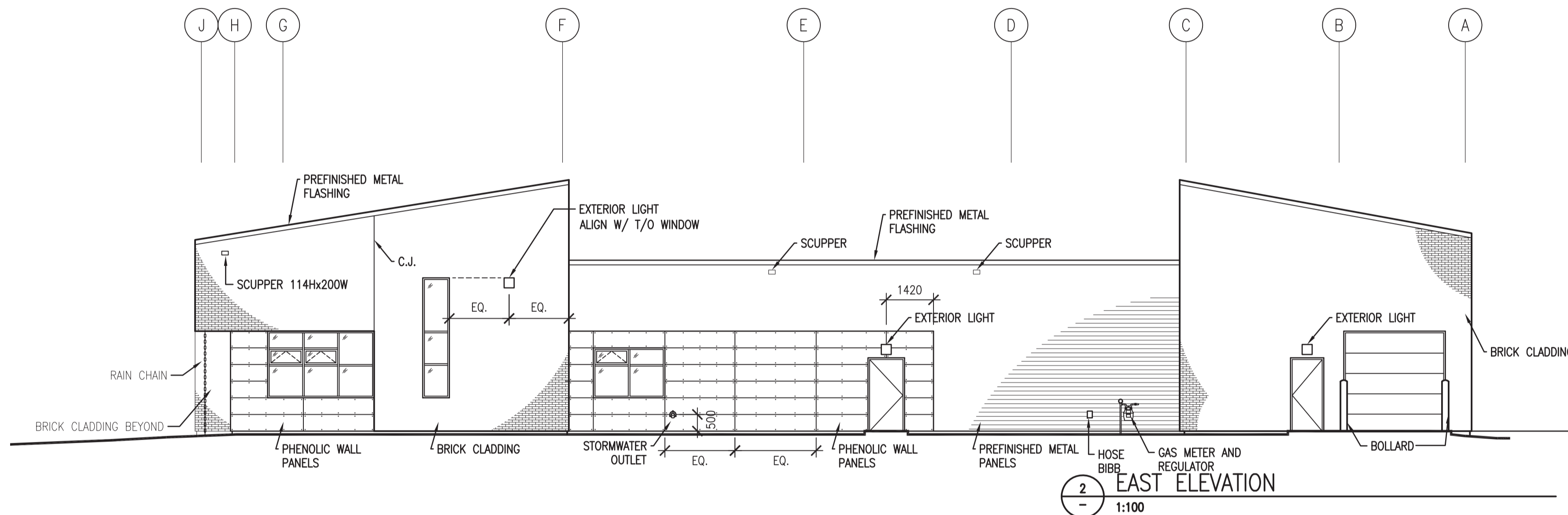




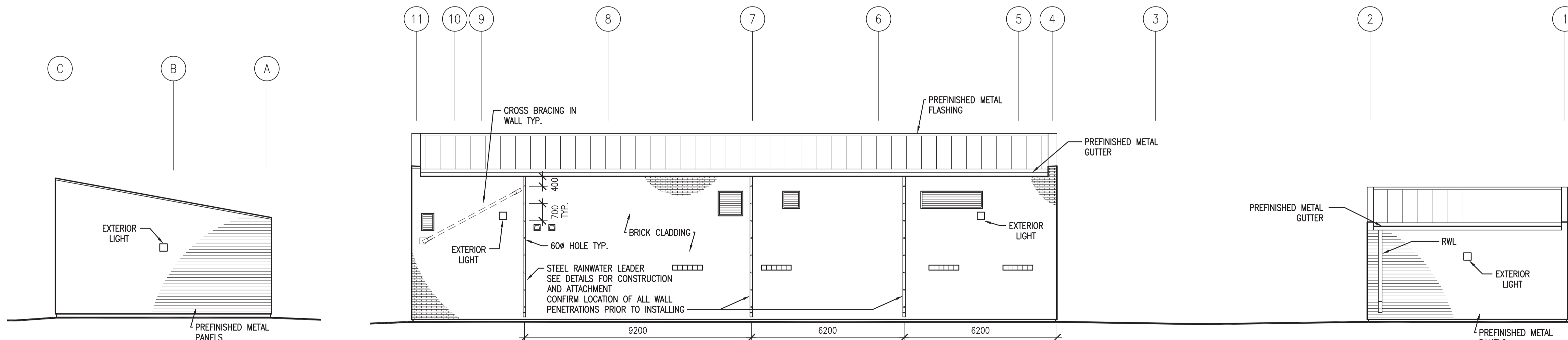
4 NORTH ELEVATION OFFICE BLOCK  
1:100



1 SOUTH ELEVATION  
1:100



2 EAST ELEVATION  
1:100



5 WEST ELEVATION OUT-BUILDING  
1:100

3 NORTH ELEVATION  
1:100

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 1101-2718 Kiewit Place, Saskatoon, SK, S7P 0A6 ph: (306) 952-9457  
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MAIDSTONE, SASKATCHEWAN**

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DE

Drawn by/Designe par  
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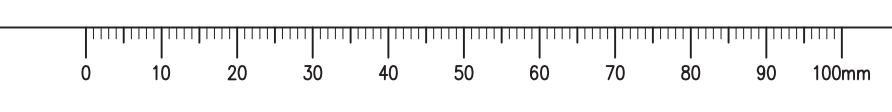
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Architectural and Engineering Resources Manager/  
Ressources Architectural et de Directeur d'ingénierie

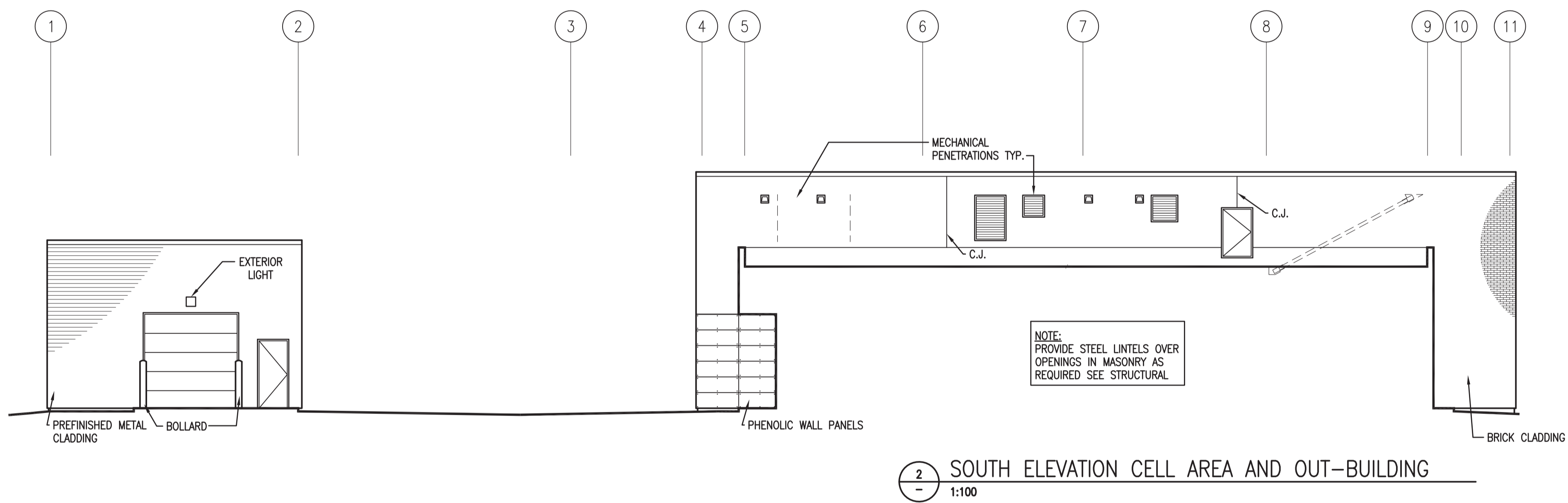
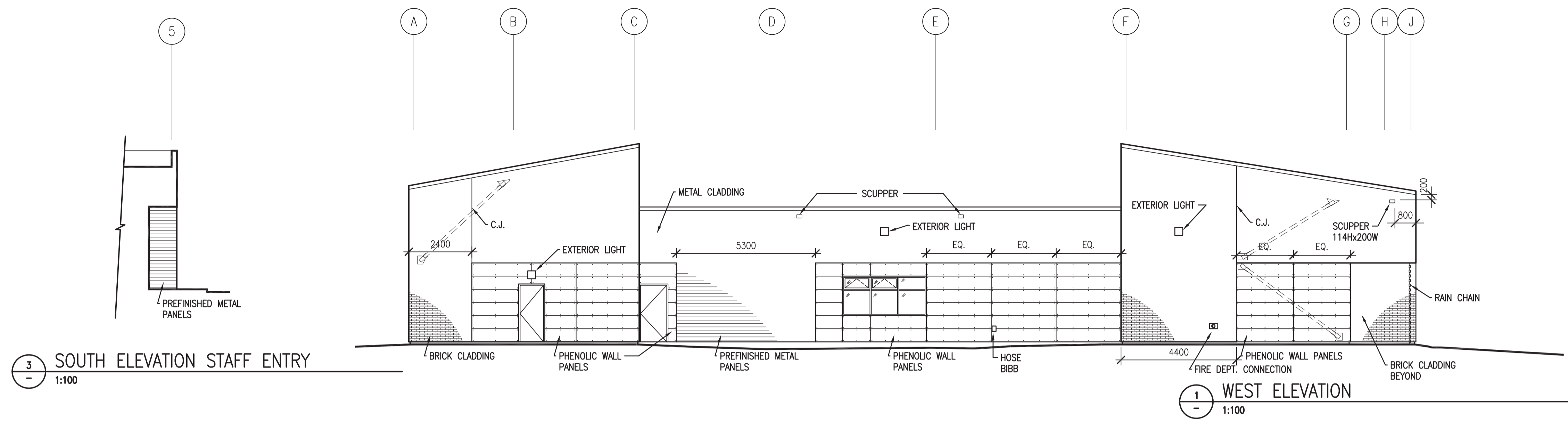
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Drawing title/Titre du dessin  
**BUILDING ELEVATIONS**

Project No./No. du projet 29/2013	Sheet/Feuille <b>A3.1</b>	Revision no./La Révision no. <b>0</b>
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Revision/	Description/Description	Date/Date

Project title/Titre du projet

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MAIDSTONE, SASKATCHEWAN**

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DE

Drawn by/Dessine par  
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Project Manager/Administrateur de Projets  
CS

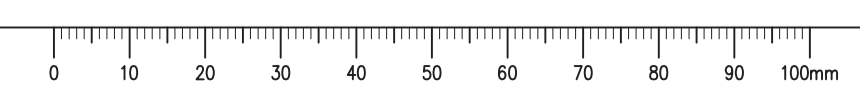
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Ressources Architectural et de Directeur d'ingénierie

Client/client

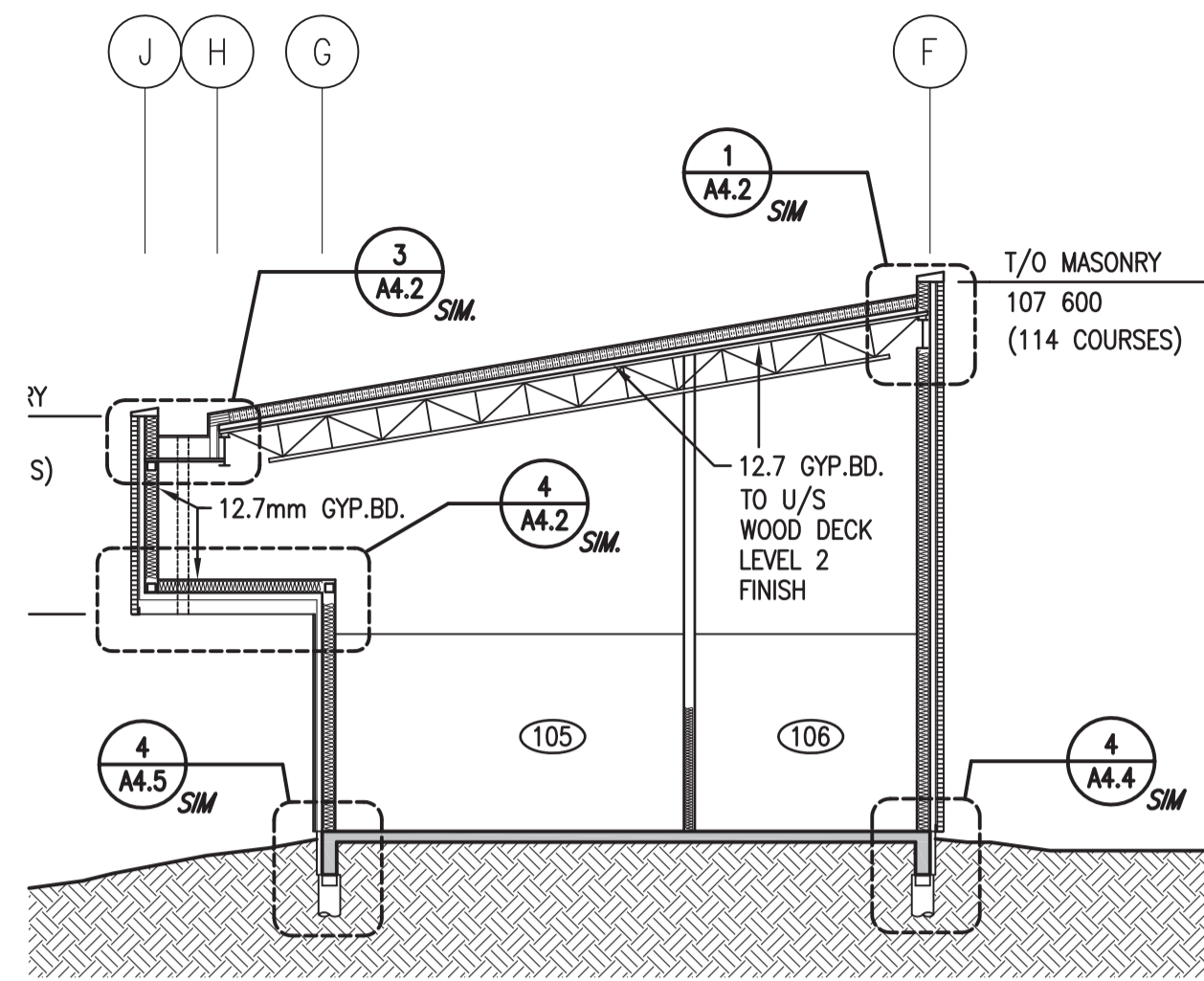
Drawing title/Titre du dessin

**BUILDING ELEVATIONS**

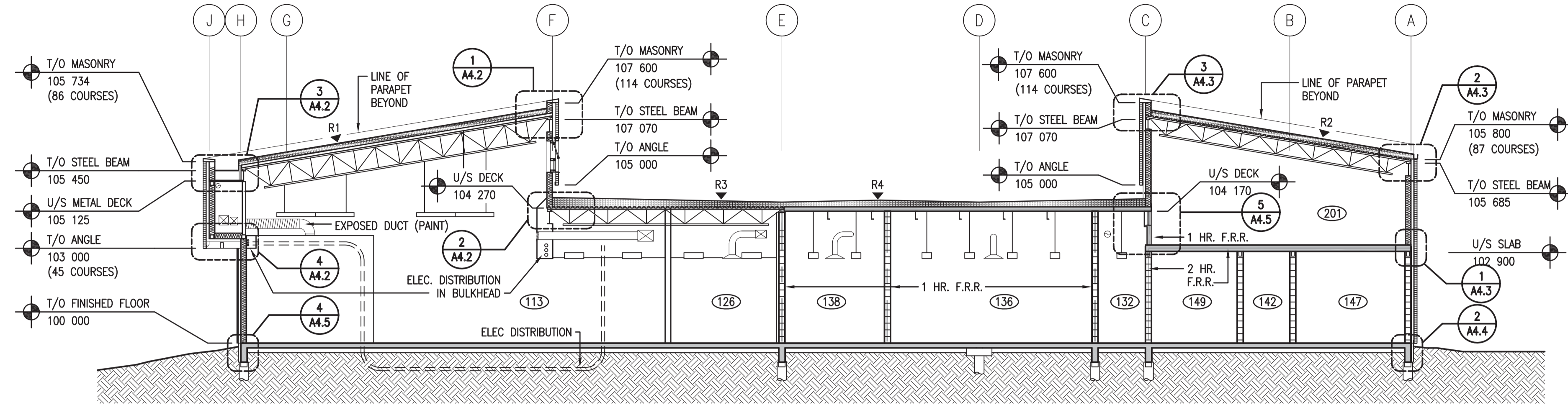
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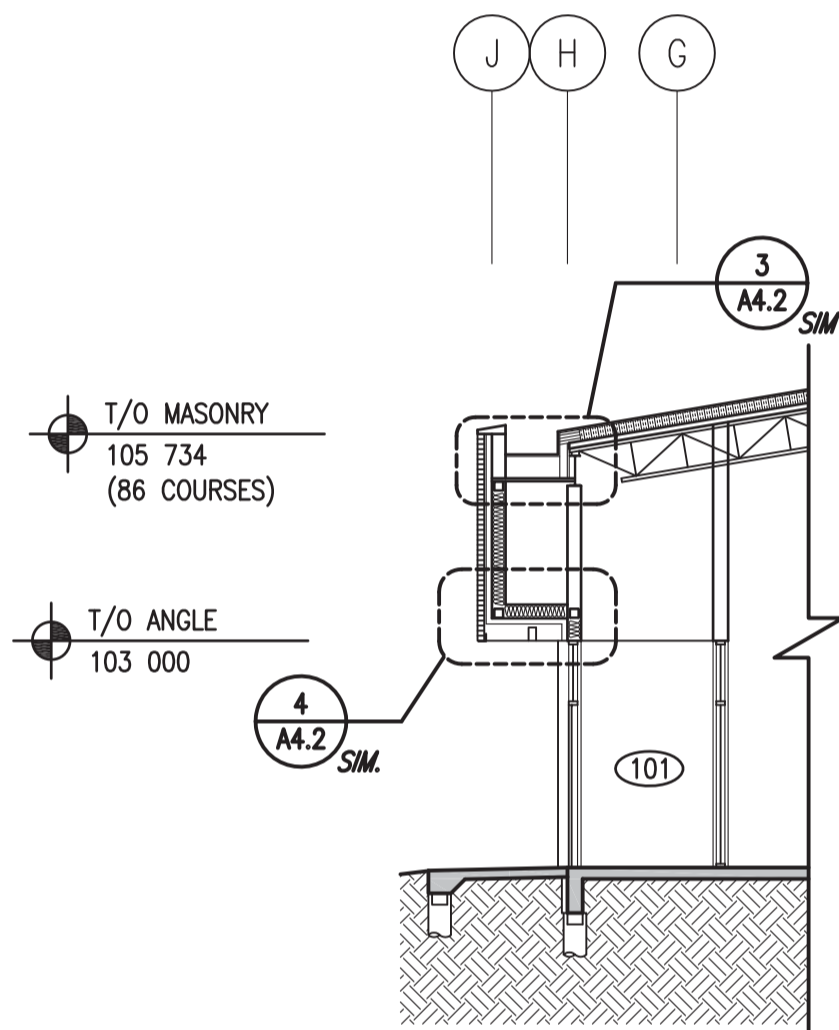




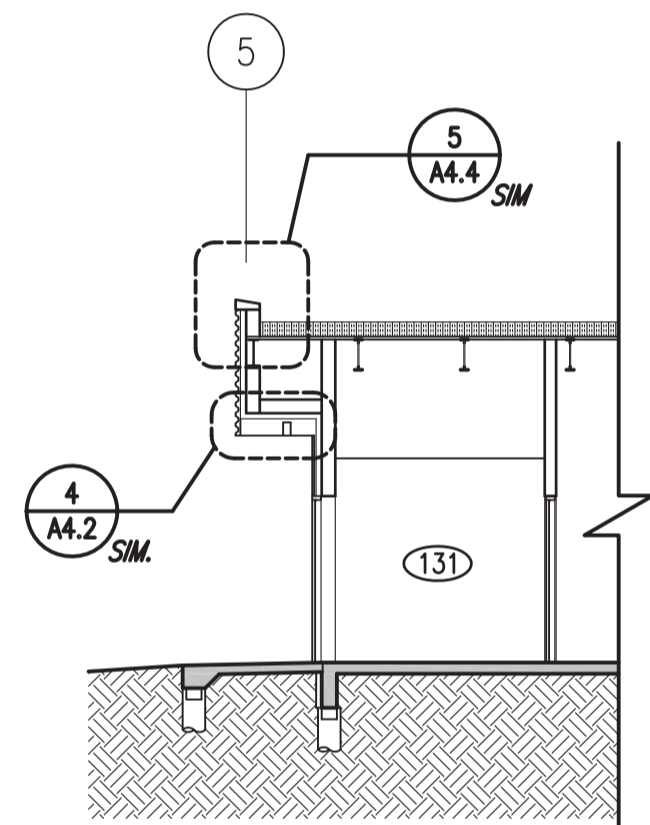
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A2.1 1:100



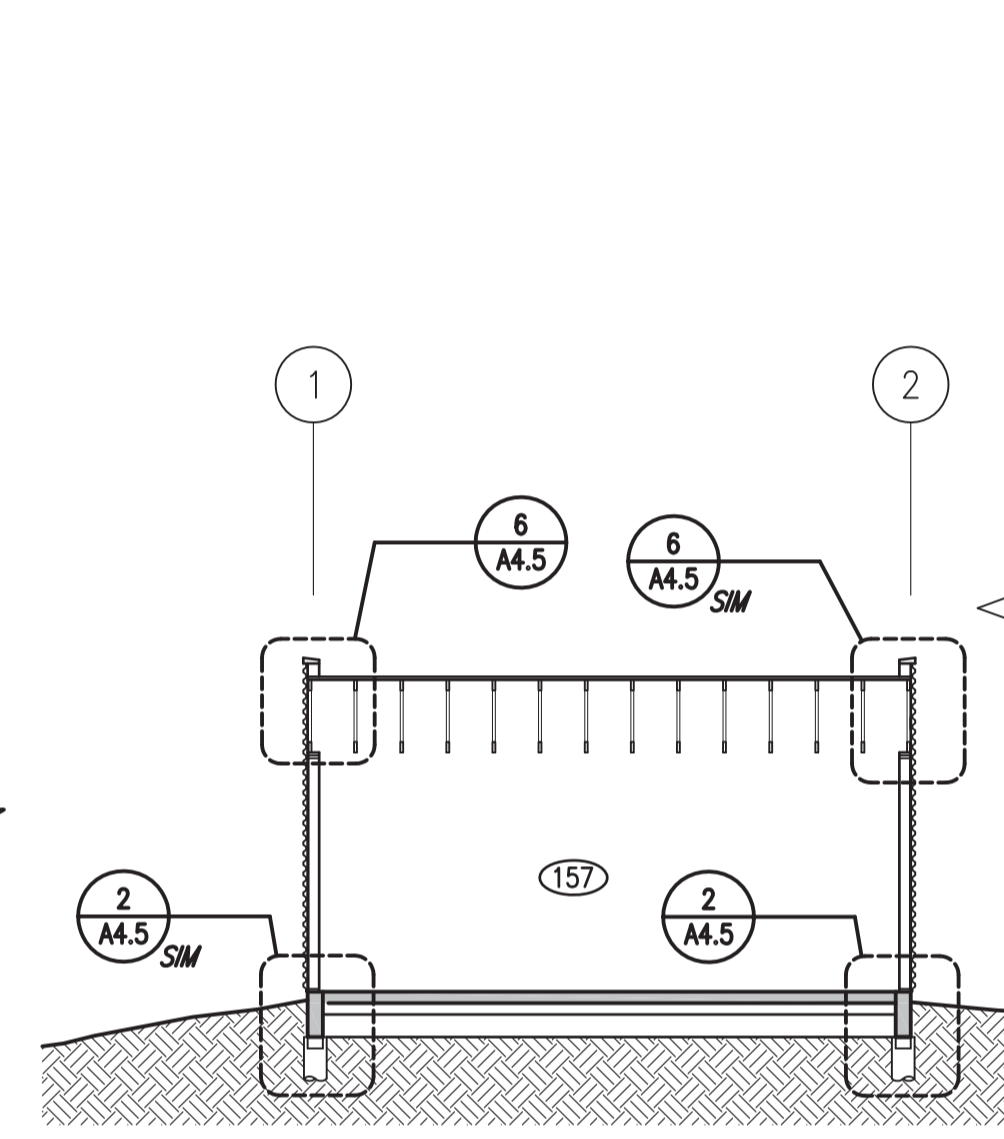
2 NORTH-SOUTH BUILDING SECTION  
A2.1 1:100



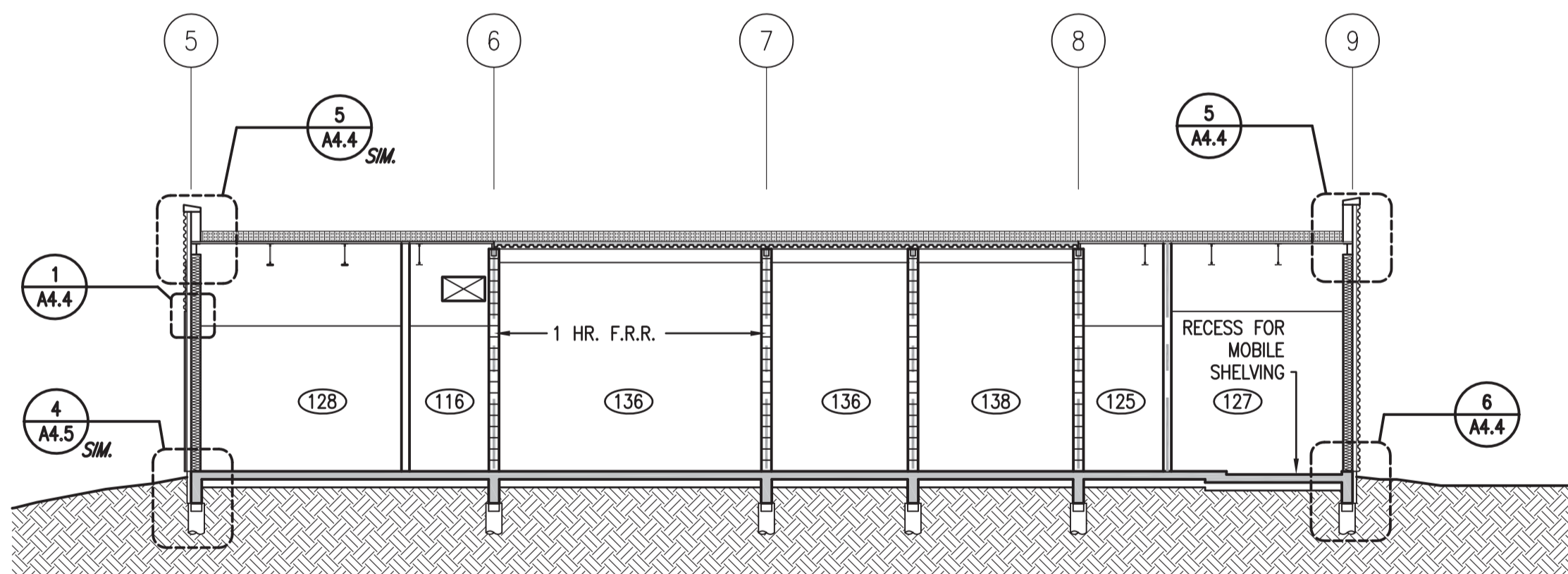
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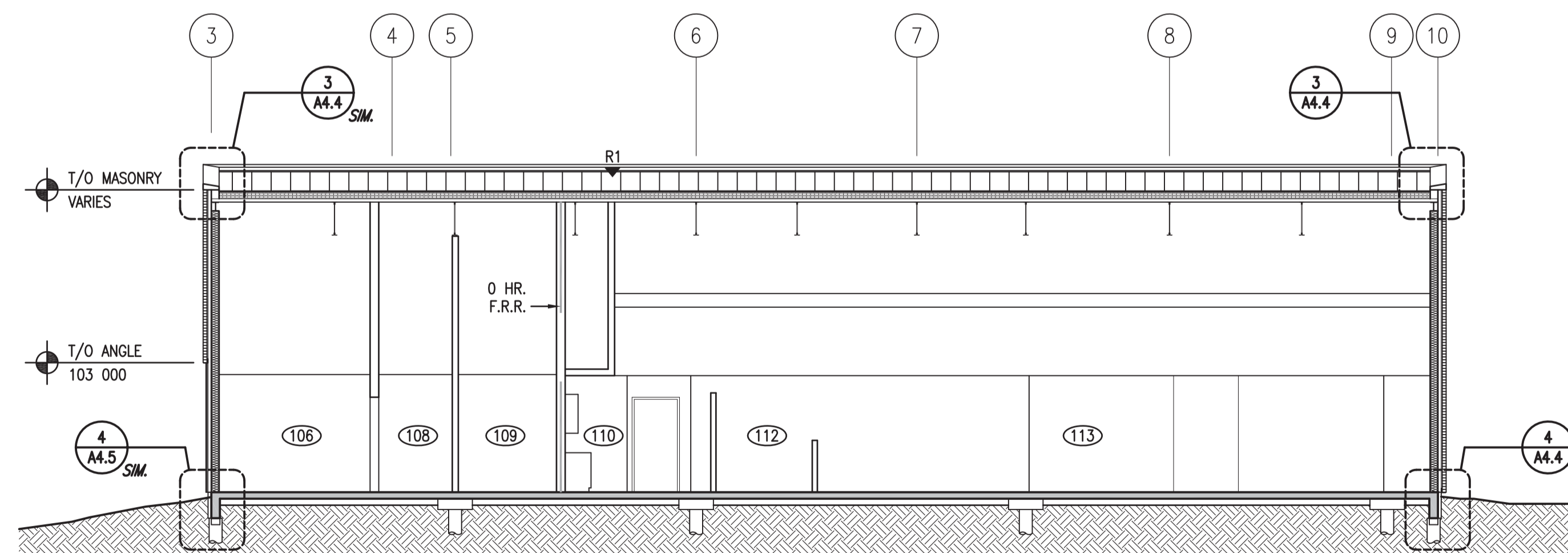
4 E-W SECTION  
A2.1 1:100



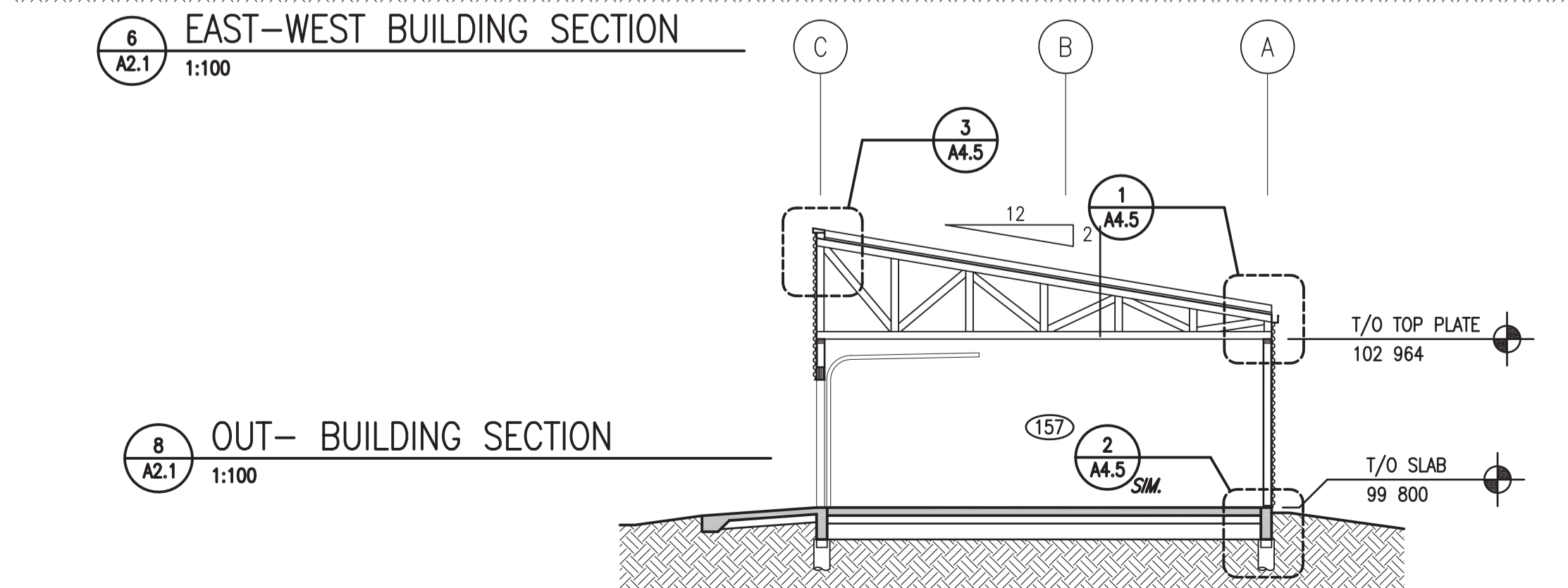
5 EAST-WEST BUILDING SECTION  
A2.1 1:100



6 EAST-WEST BUILDING SECTION  
A2.1 1:100



7 EAST-WEST BUILDING SECTION  
A2.1 1:100



8 OUT-BUILDING SECTION  
A2.1 1:100



DO NOT SCALE DRAWINGS

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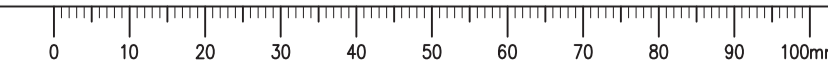
Client/client  
  
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**NEW POLICE BUILDING  
 MAIDSTONE, SASKATCHEWAN**

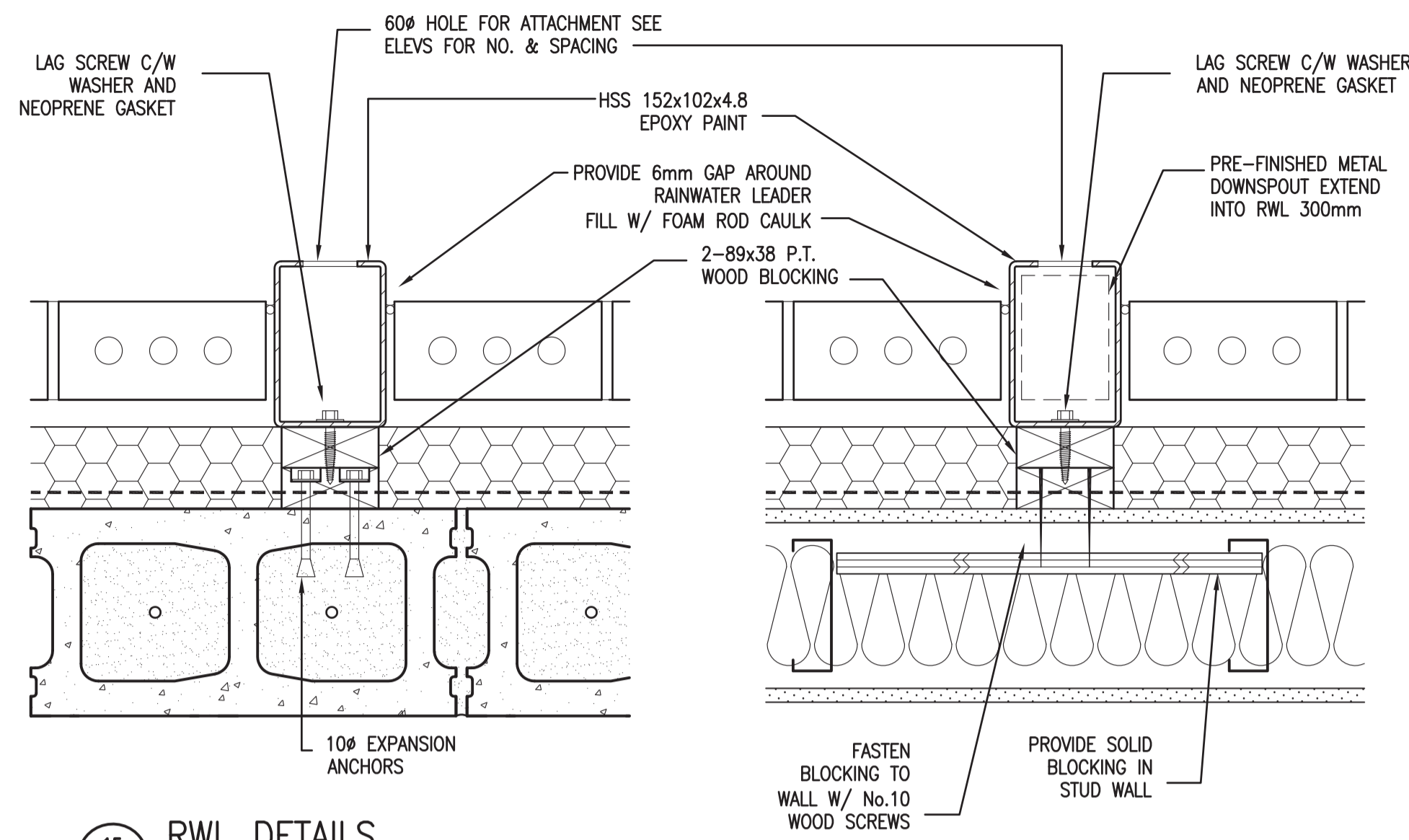
Approved by/Approve par  
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 Drawing title/Titre du dessin  
**BUILDING SECTIONS**

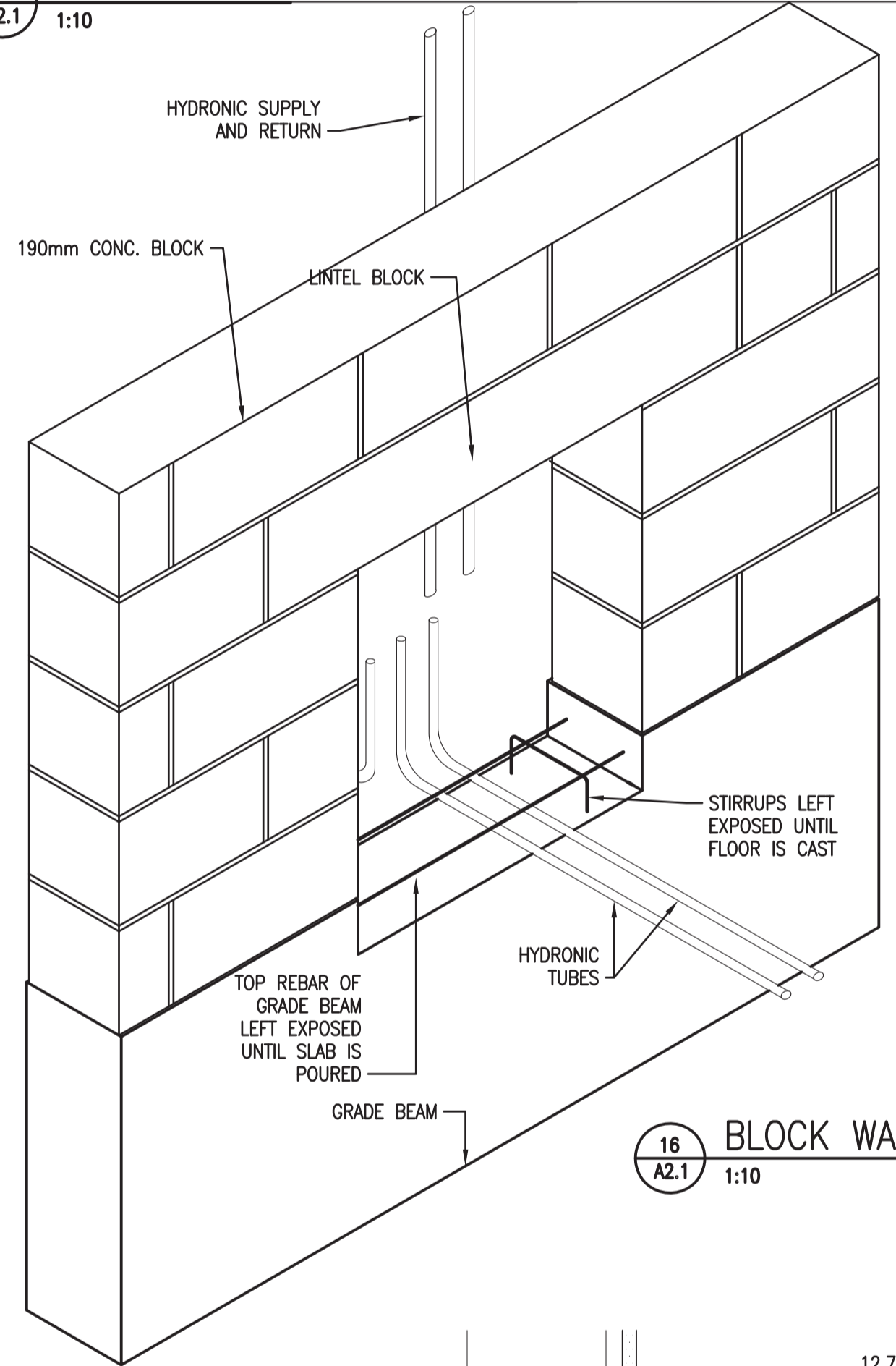
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29/2013	<b>A3.3</b>	<b>0</b>



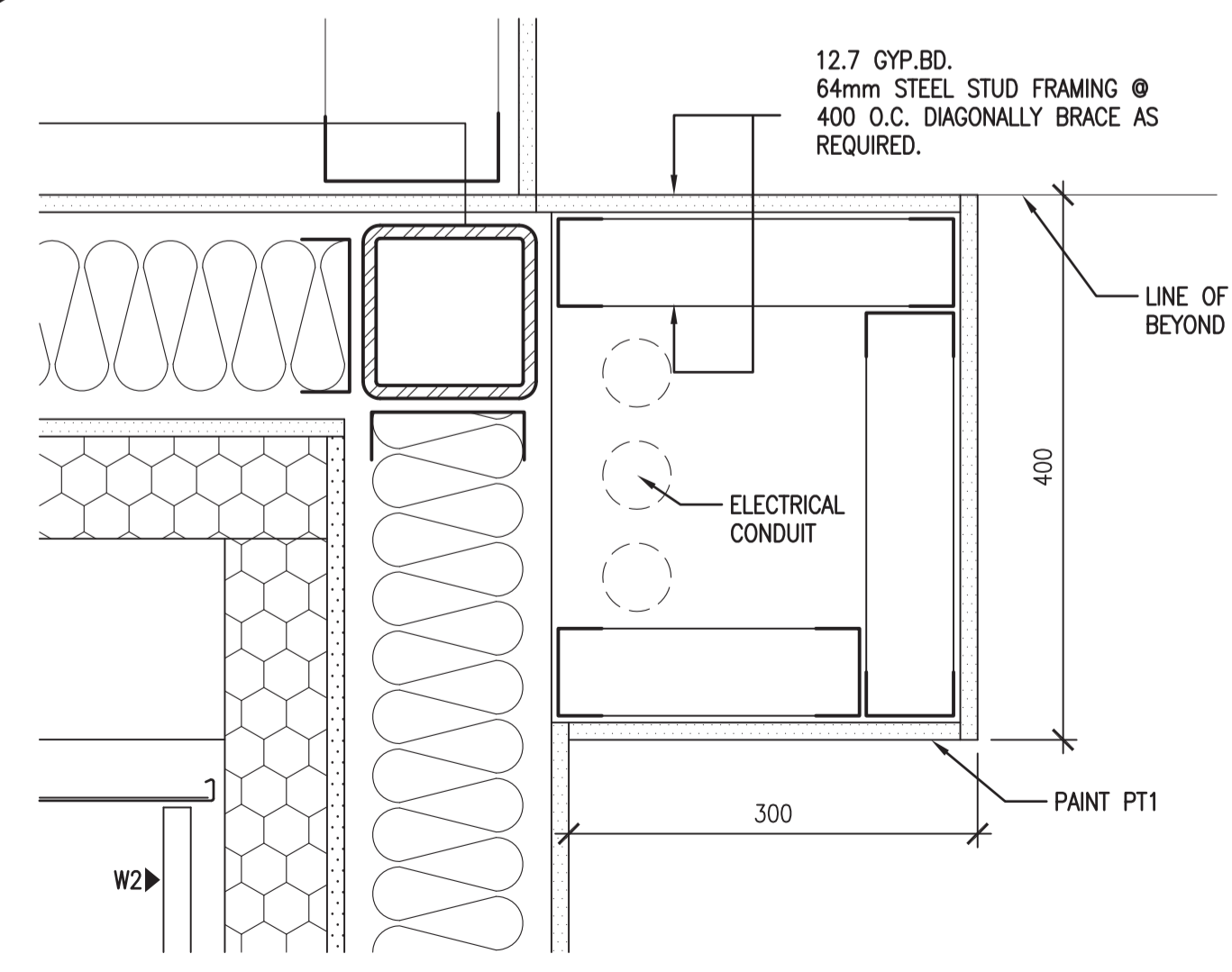




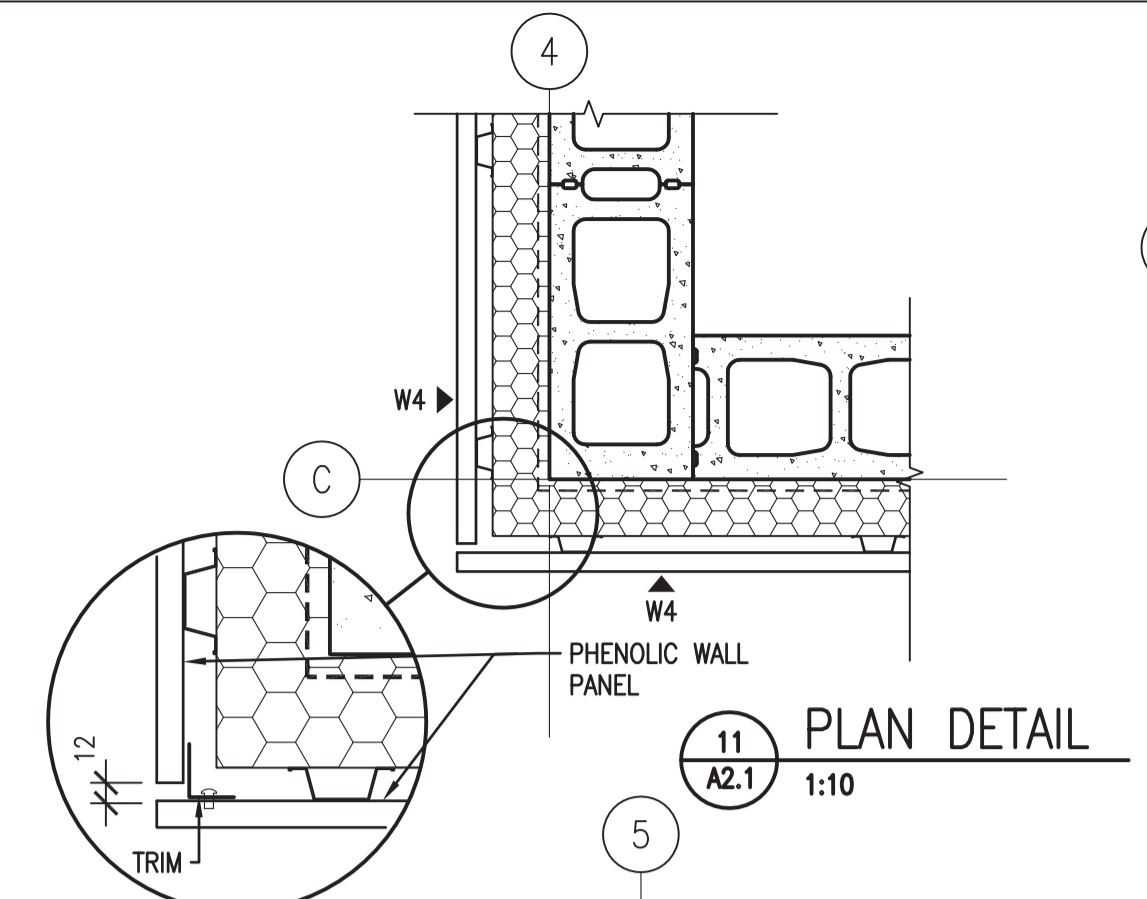
15 RWL DETAILS  
A2.1 1:10



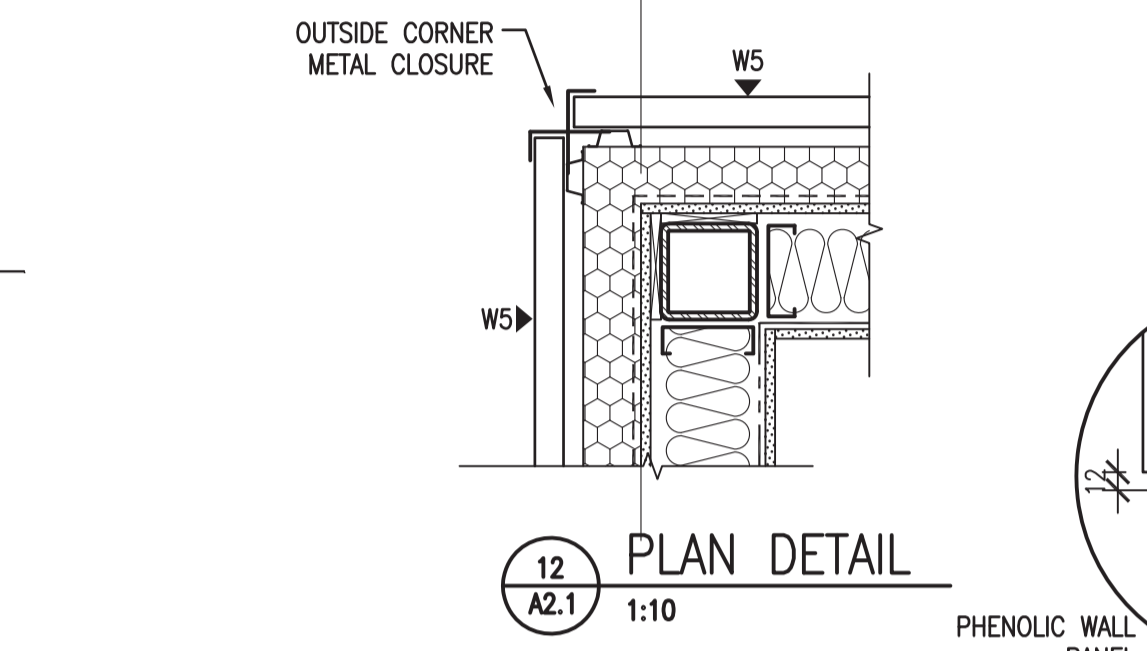
16 BLOCK WALL OPENING FOR MANIFOLD  
A2.1 1:10



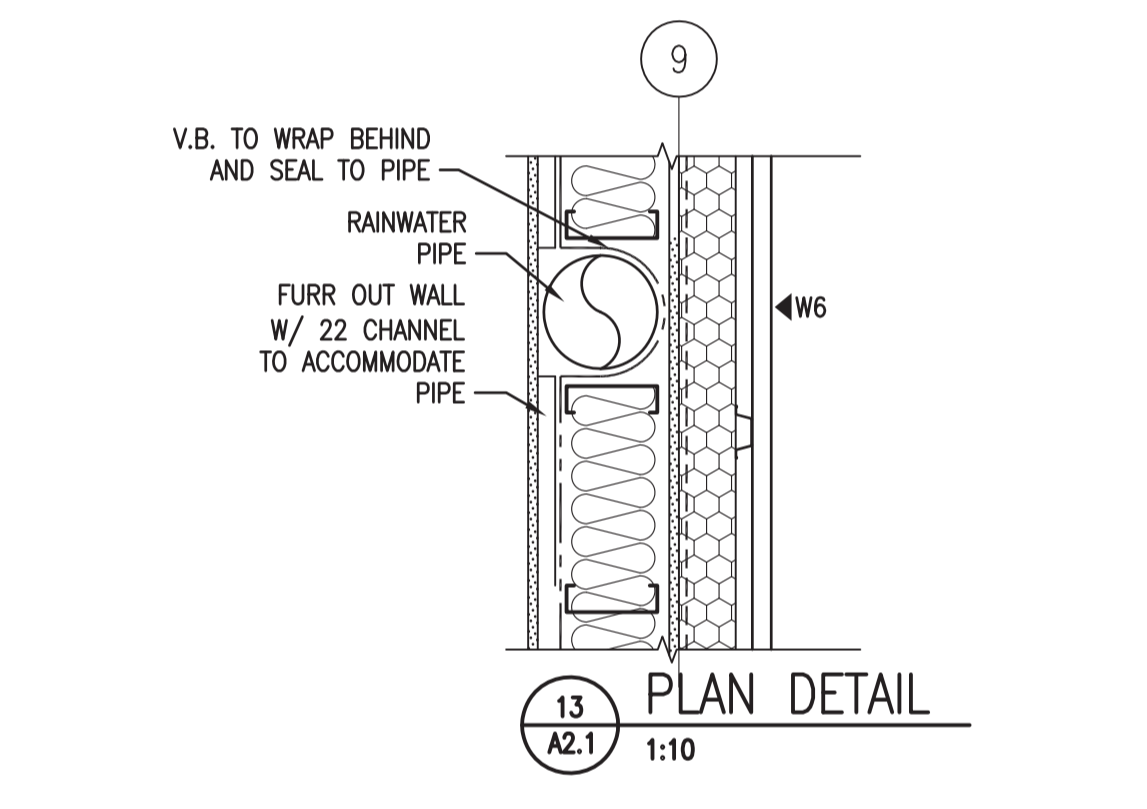
17 BULKHEAD DETAIL  
A2.5 1:5



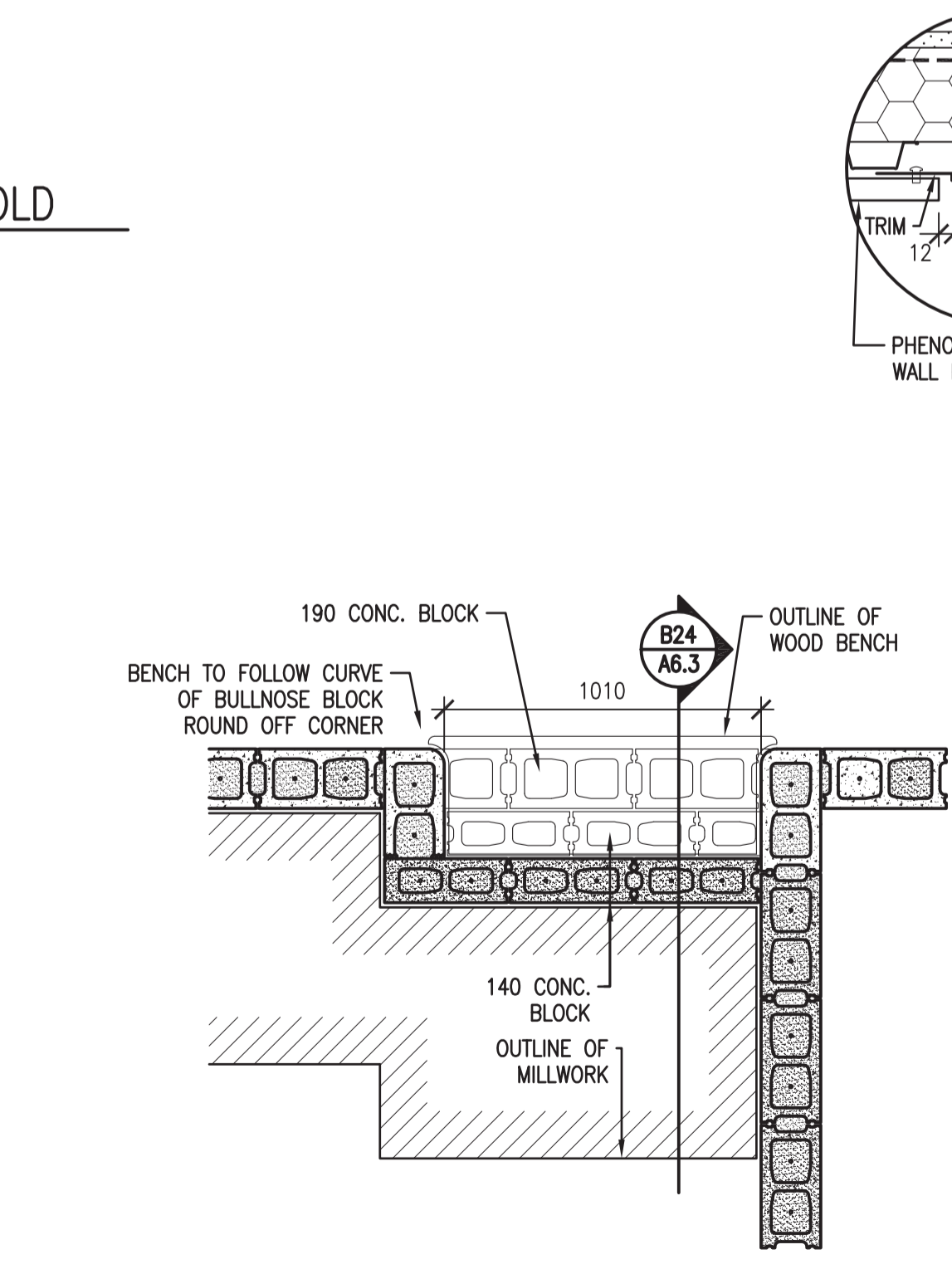
11 PLAN DETAIL  
A2.1 1:10



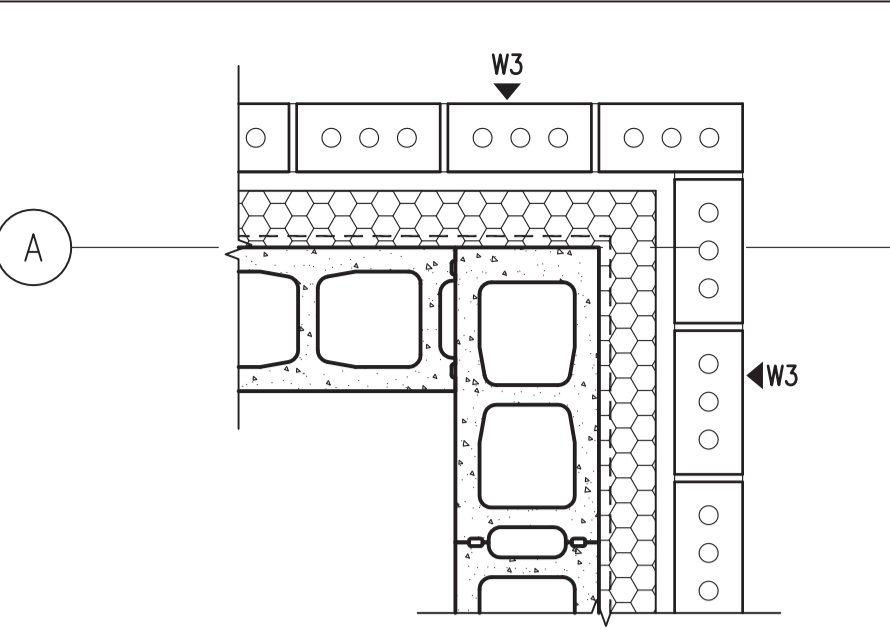
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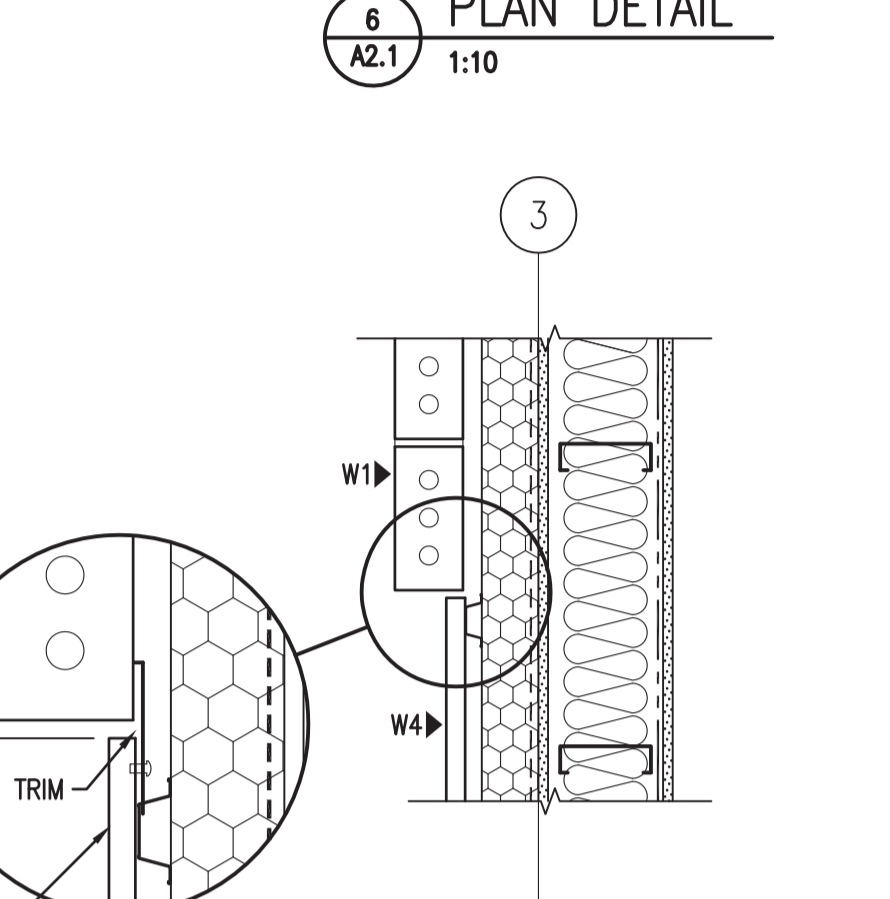
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A2.1 1:10



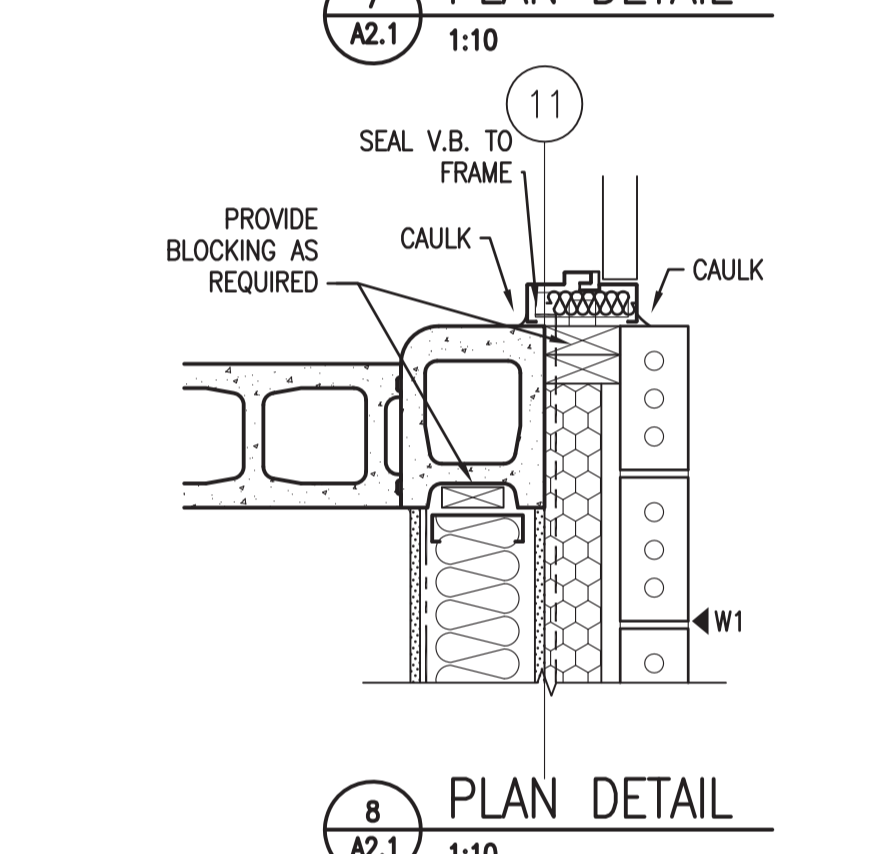
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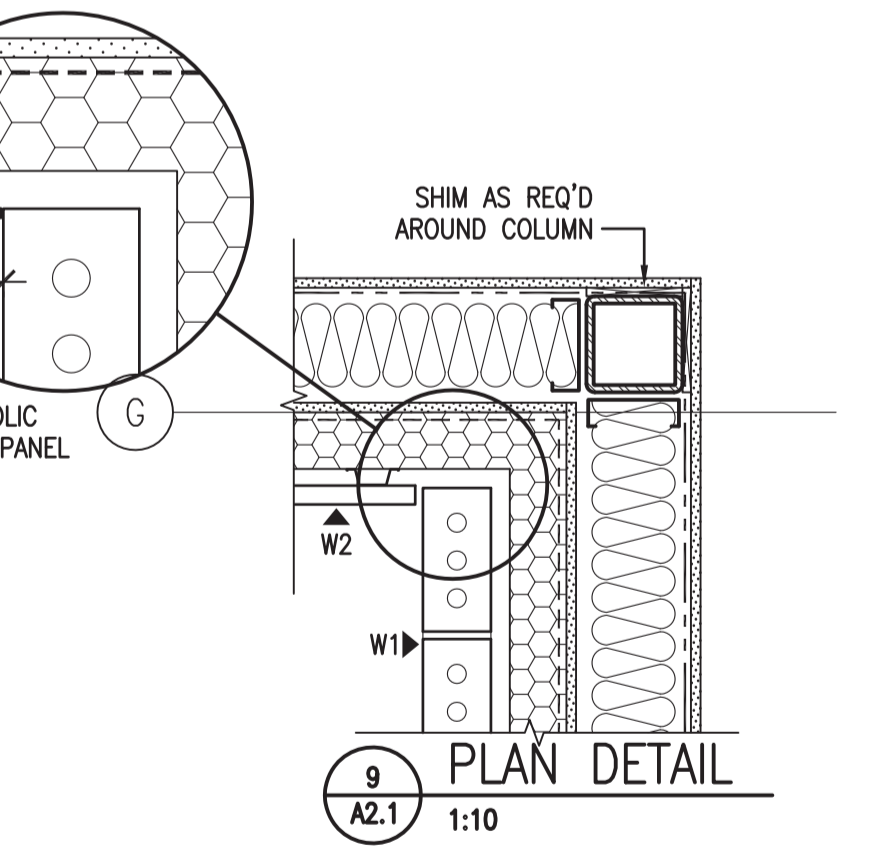
6 PLAN DETAIL  
A2.1 1:10



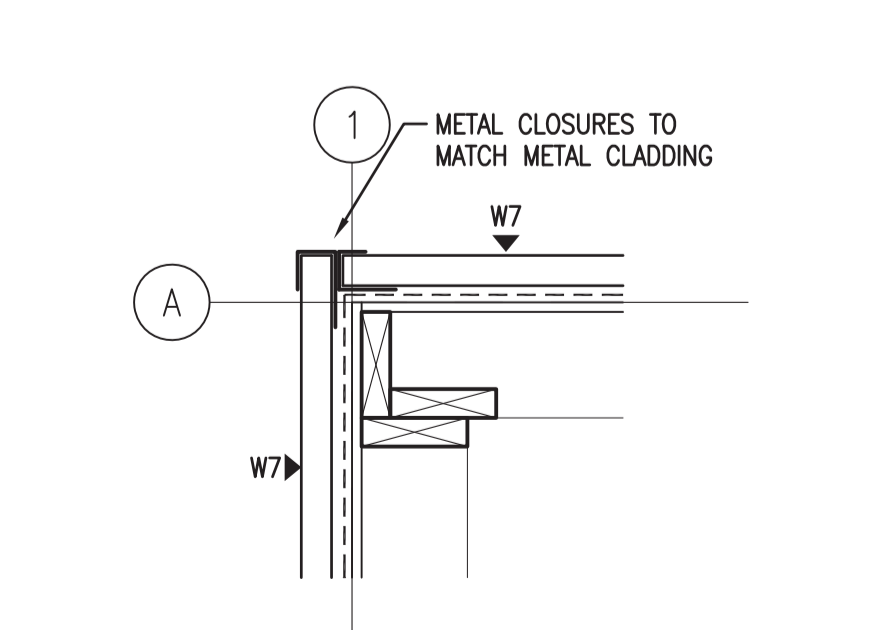
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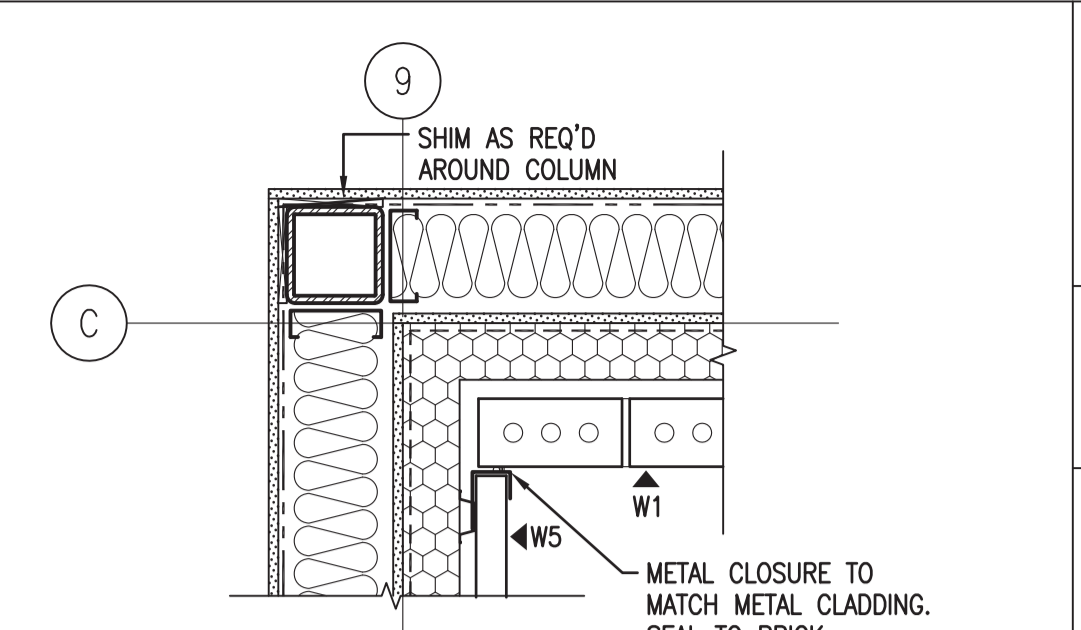
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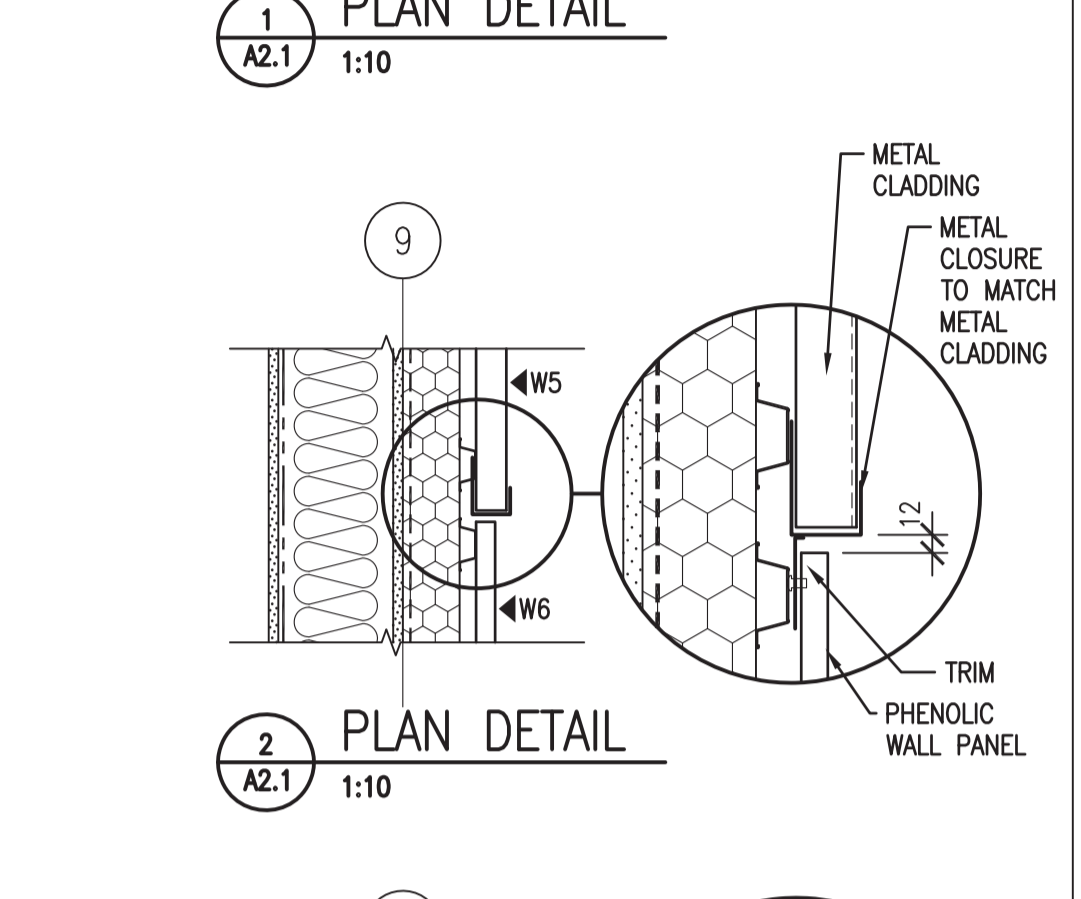
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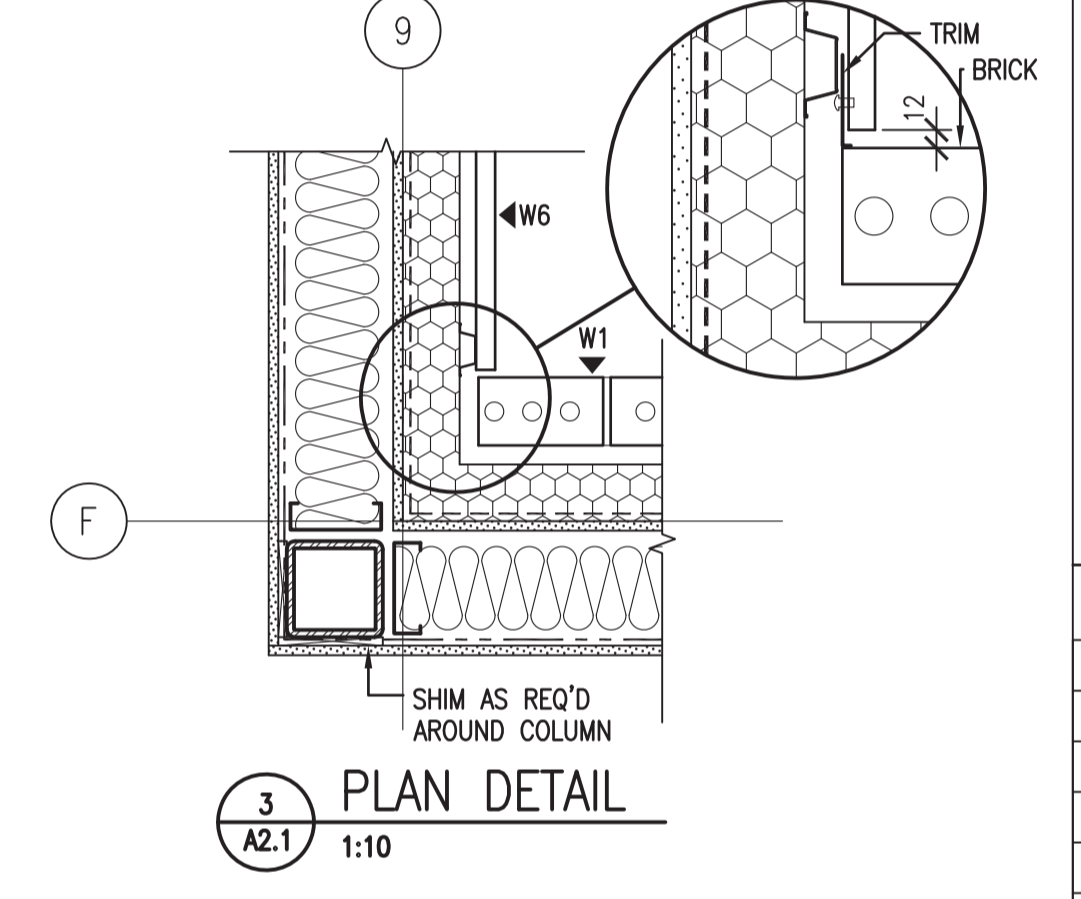
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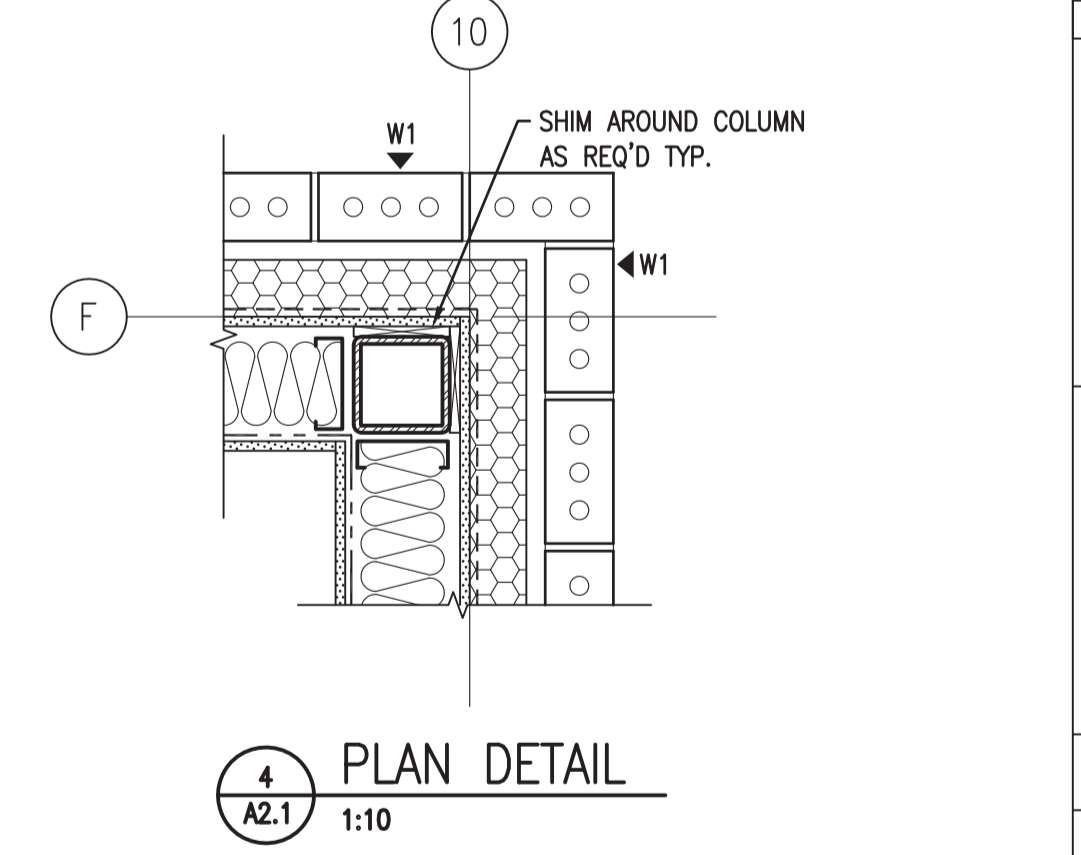
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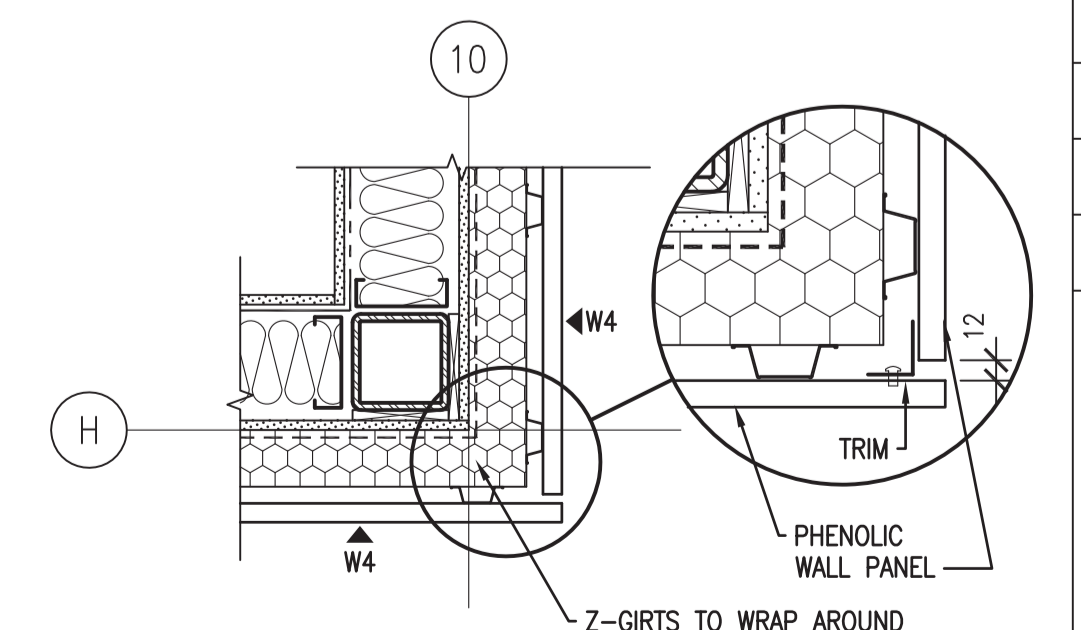
2 PLAN DETAIL  
A2.1 1:10



3 PLAN DETAIL  
A2.1 1:10



4 PLAN DETAIL  
A2.1 1:10



5 PLAN DETAIL  
A2.1 1:10

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0	ISSUED FOR TENDER	2014-12-08

Project title/Titre du projet

**NEW POLICE BUILDING  
MAIDSTONE, SASKATCHEWAN**

Approved by/Approve par

Designed by/Concept par

Drawn by/Designe par

Project Manager/Administrateur de Projets

Architectural and Engineering Resources Manager/Ressources Architectural et de Directeur d'ingénierie

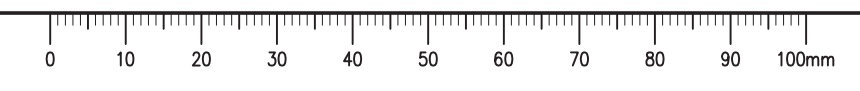
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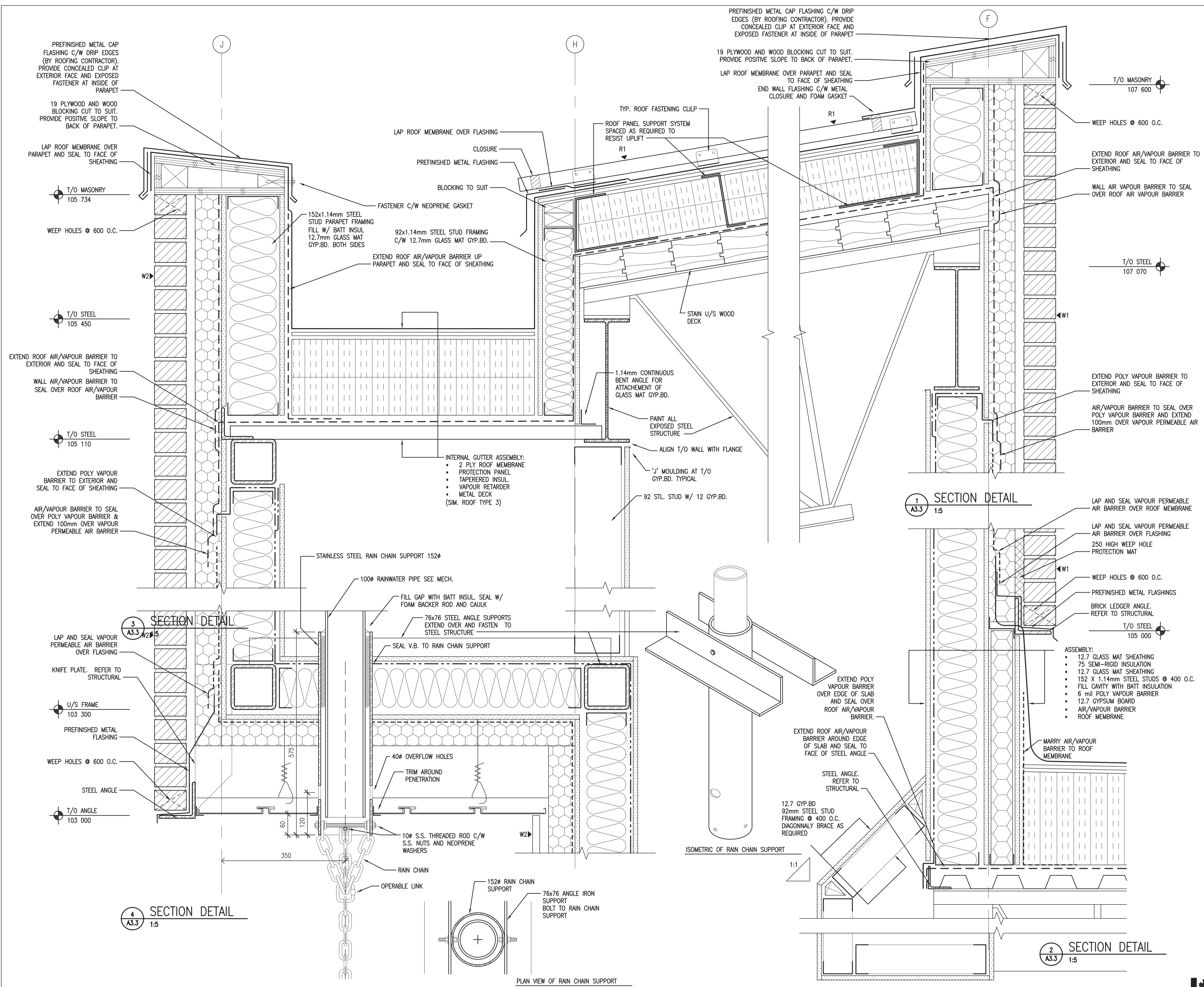
Project No./No. du projet  
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Revision/Revision	Description/Description	Date/Date
Client/client		

Project title/Titre du projet  
**NEW POLICE BUILDING  
 MAIDSTONE, SASKATCHEWAN**

Approved by/Approve par  
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 Drawn by/Designe par  
 DE / NO  
 Project Manager/Administrateur de Projets  
 CS  
 Architectural and Engineering Resources Manager/  
 Ressources Architectural et de Directeur d'ingénierie

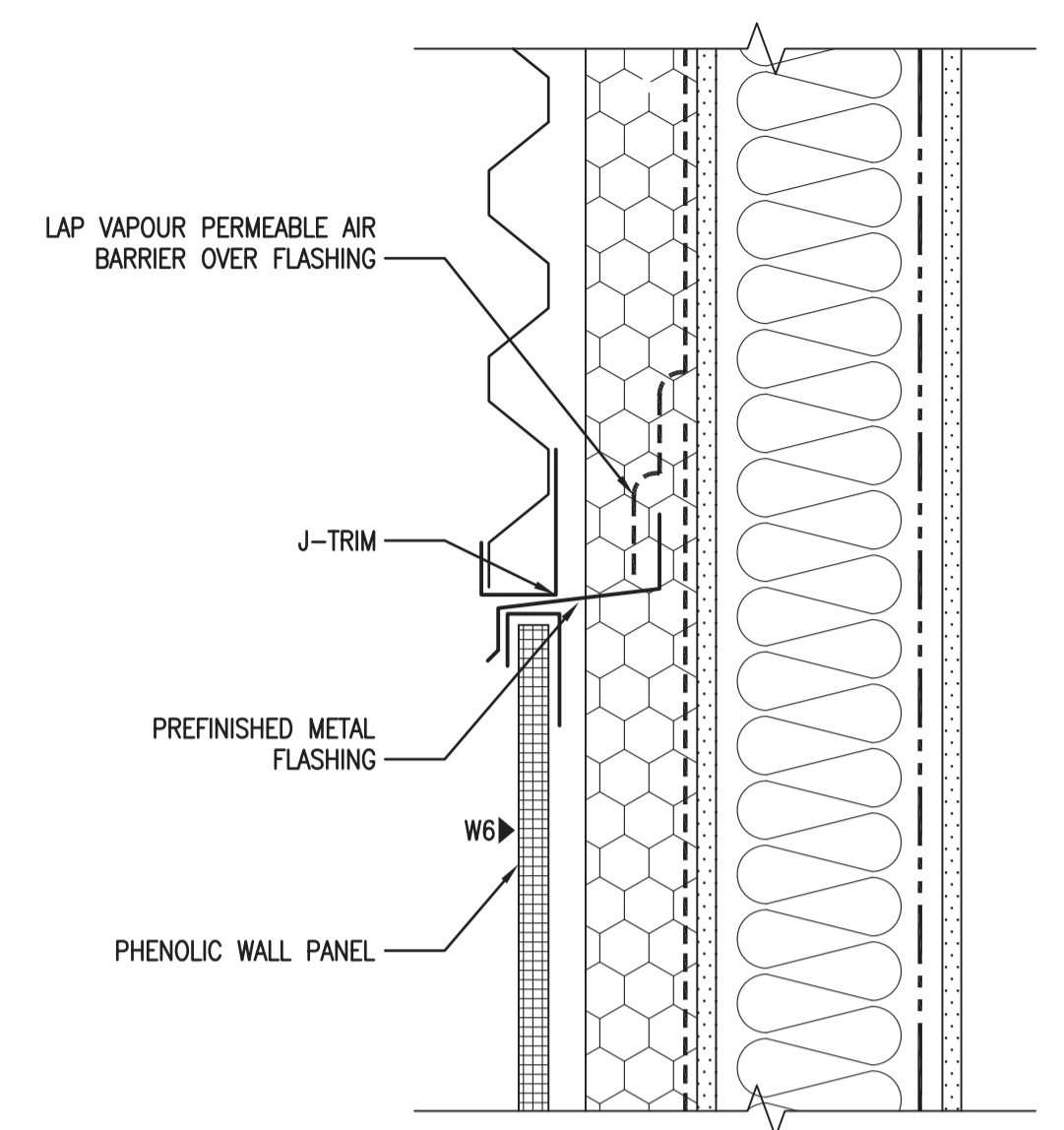
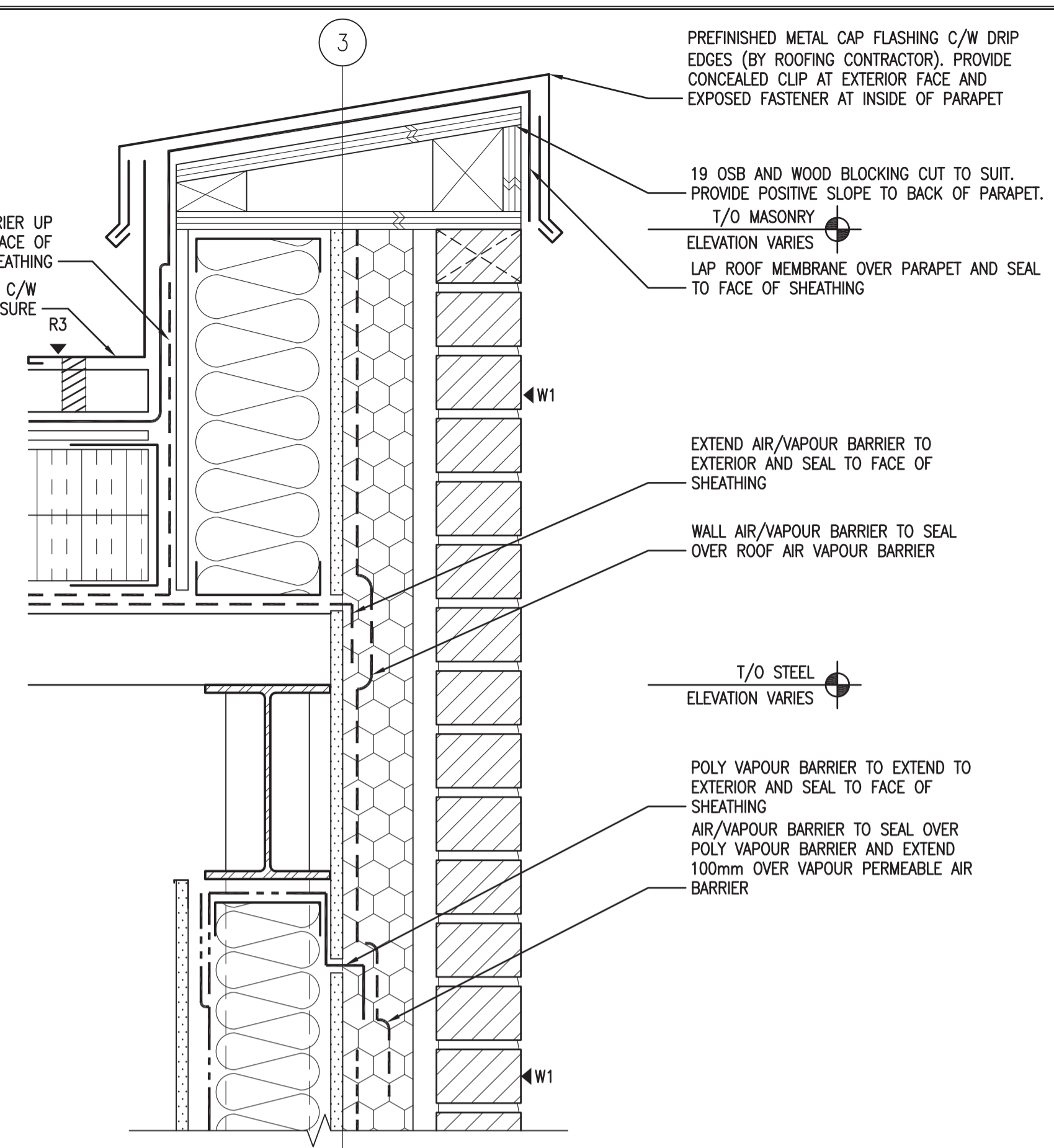
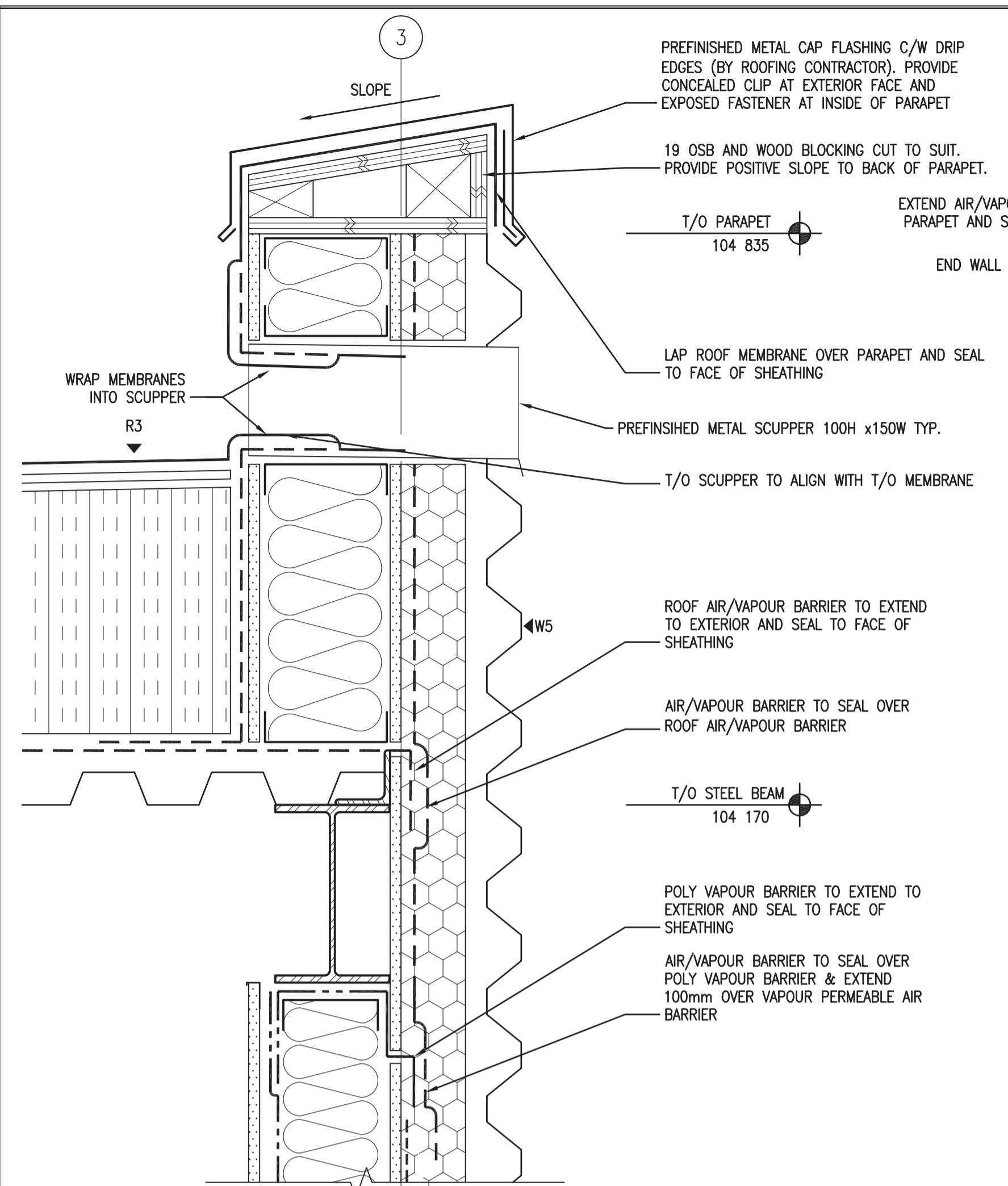
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29/2013	<b>A4.2</b>	<b>0</b>



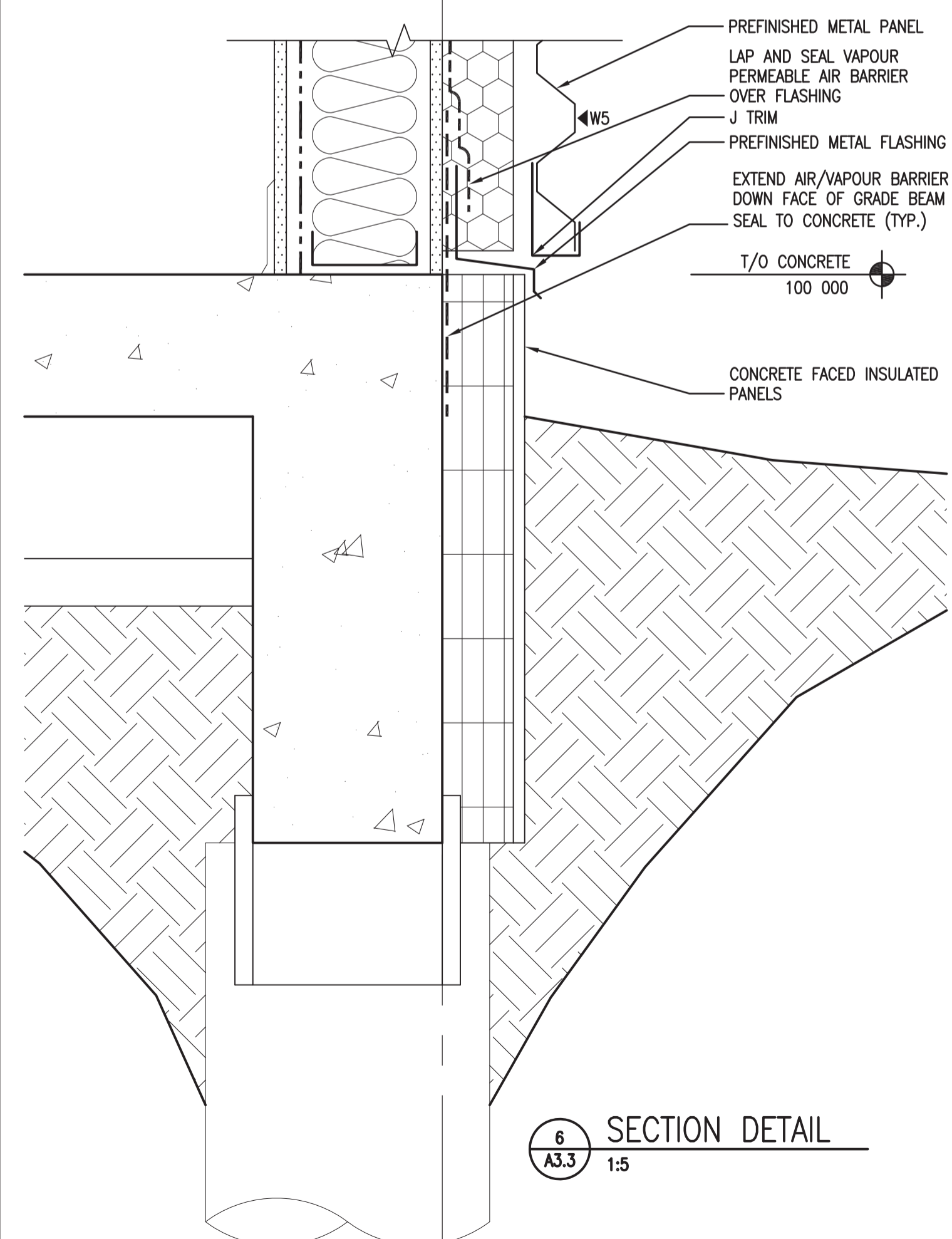




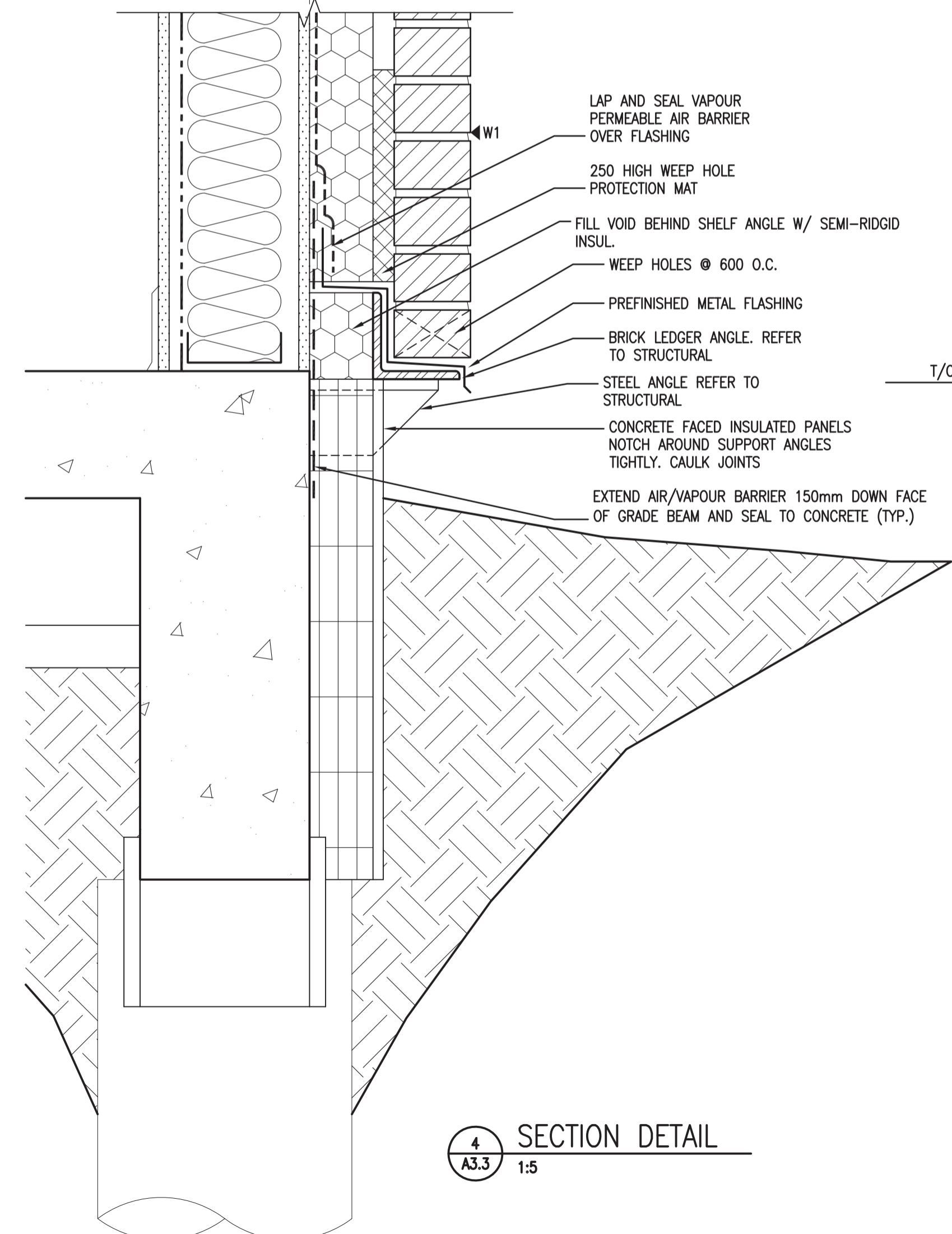


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A3.3 1:5

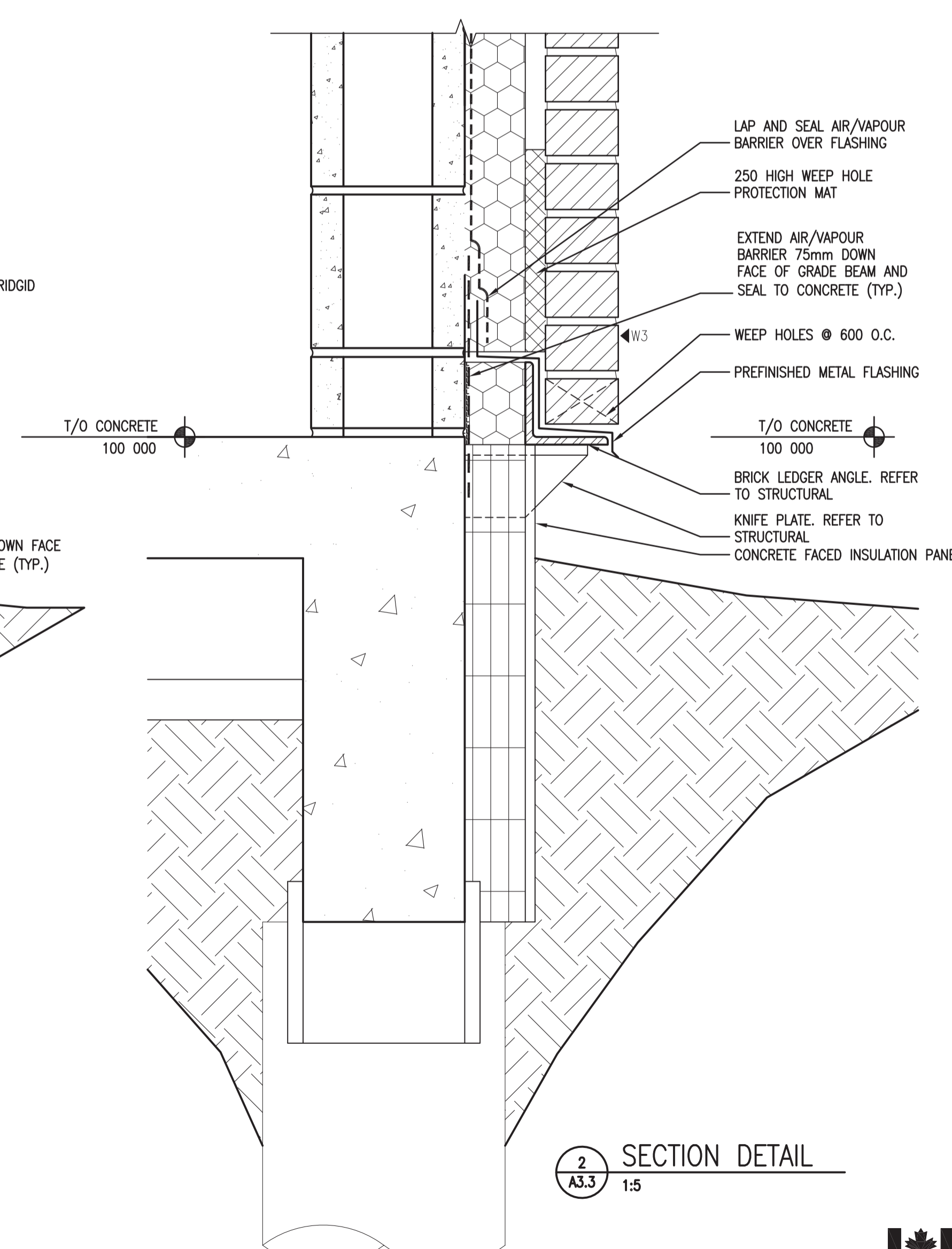


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A3.3 1:5



4 SECTION DETAIL  
A3.3 1:5

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A3.3 1:5



DO NOT SCALE DRAWINGS

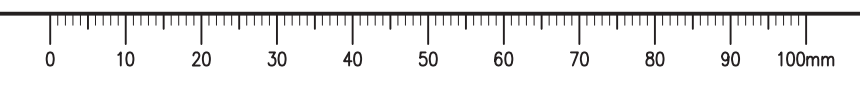
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Project title/Titre du projet  
**NEW POLICE BUILDING  
MAIDSTONE, SASKATCHEWAN**

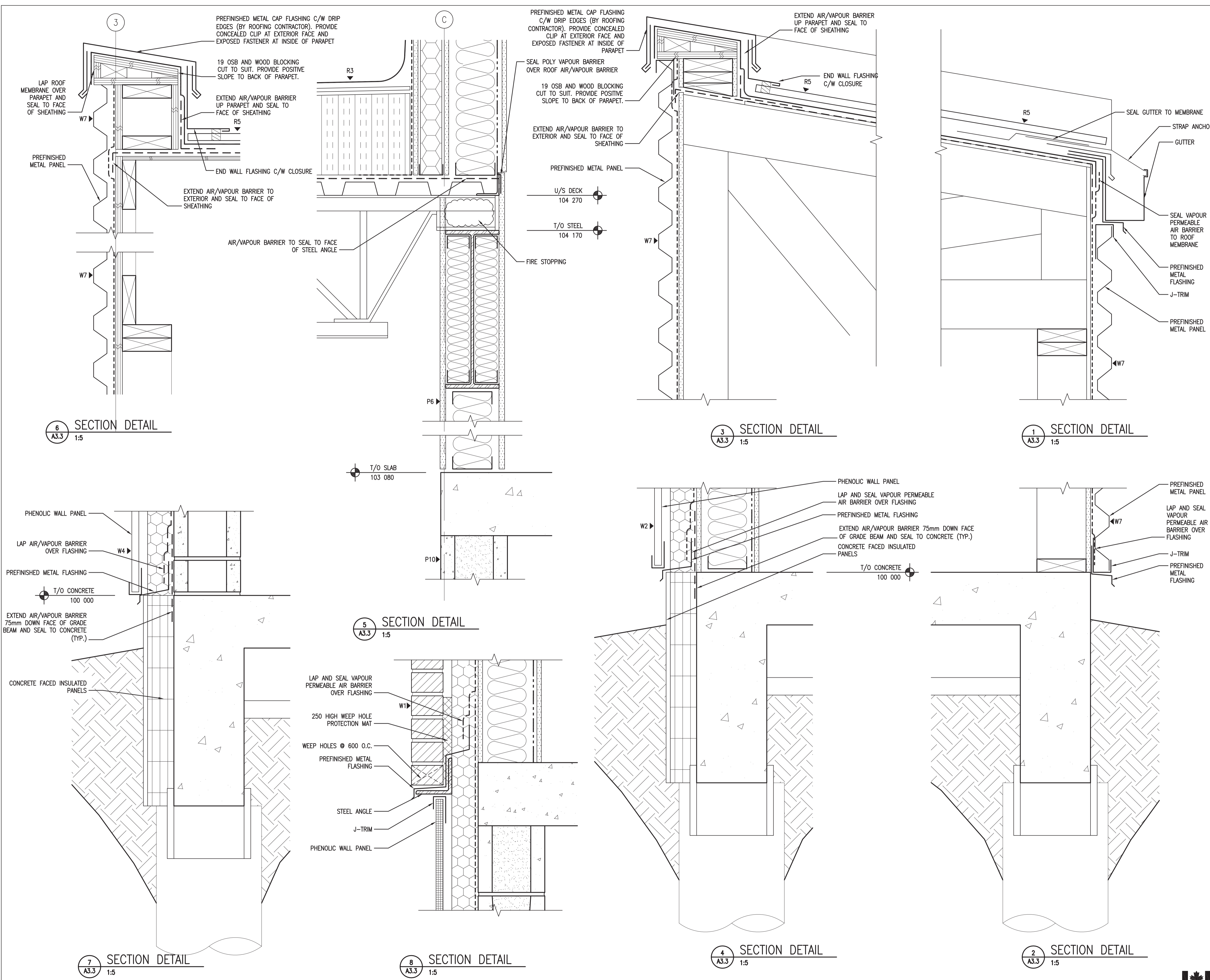
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Project Manager/Administrateur de Projets  
CS  
Architectural and Engineering Resources Manager/  
Ressources Architectural et de Directeur d'ingénierie

Drawing title/Titre du dessin  
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Project No./No. du projet  
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Revision no./La Révision  
no.  
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Revision/Revision	Description/Description	Date/Date
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MIDSTONE, SASKATCHEWAN**

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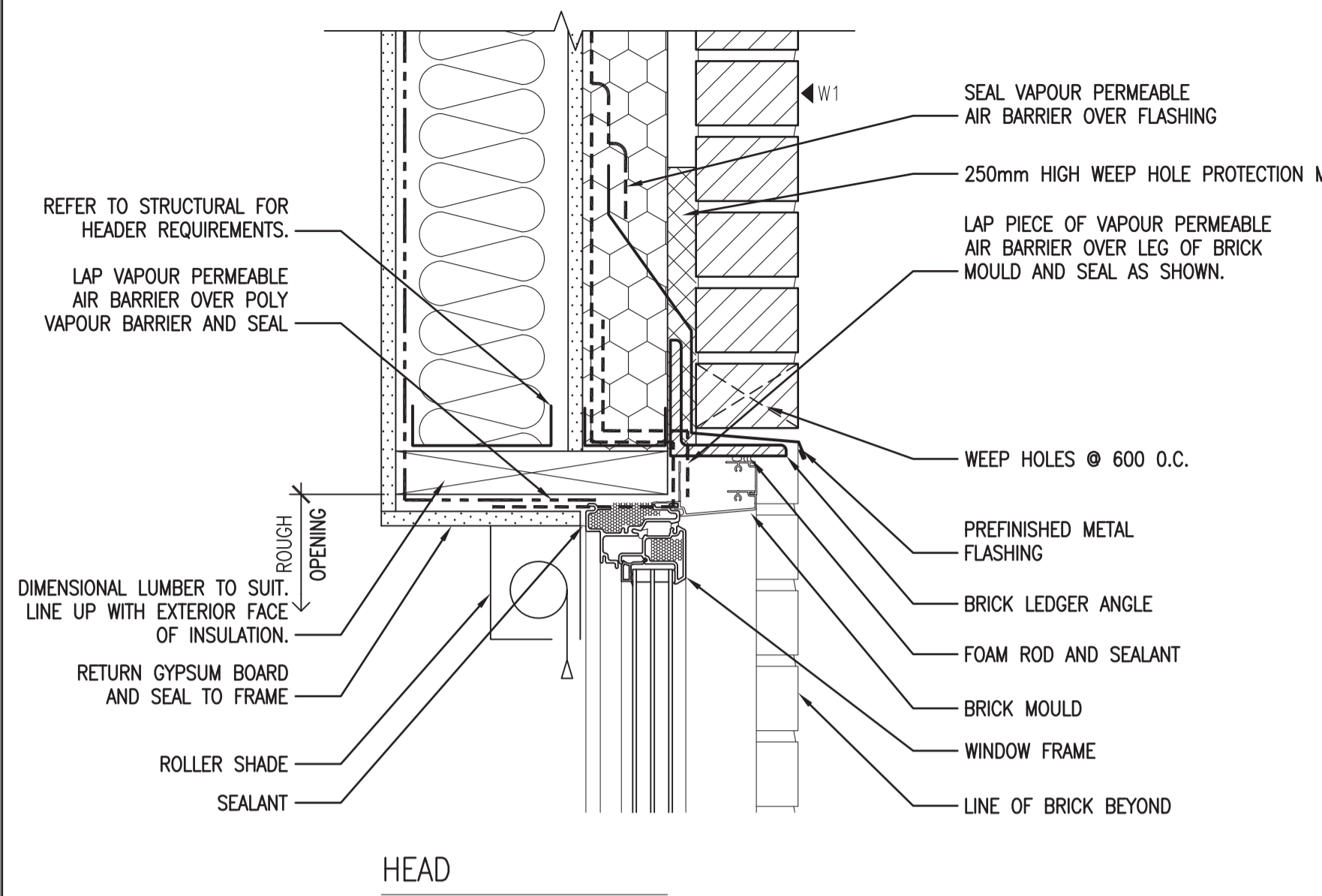
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Client/client

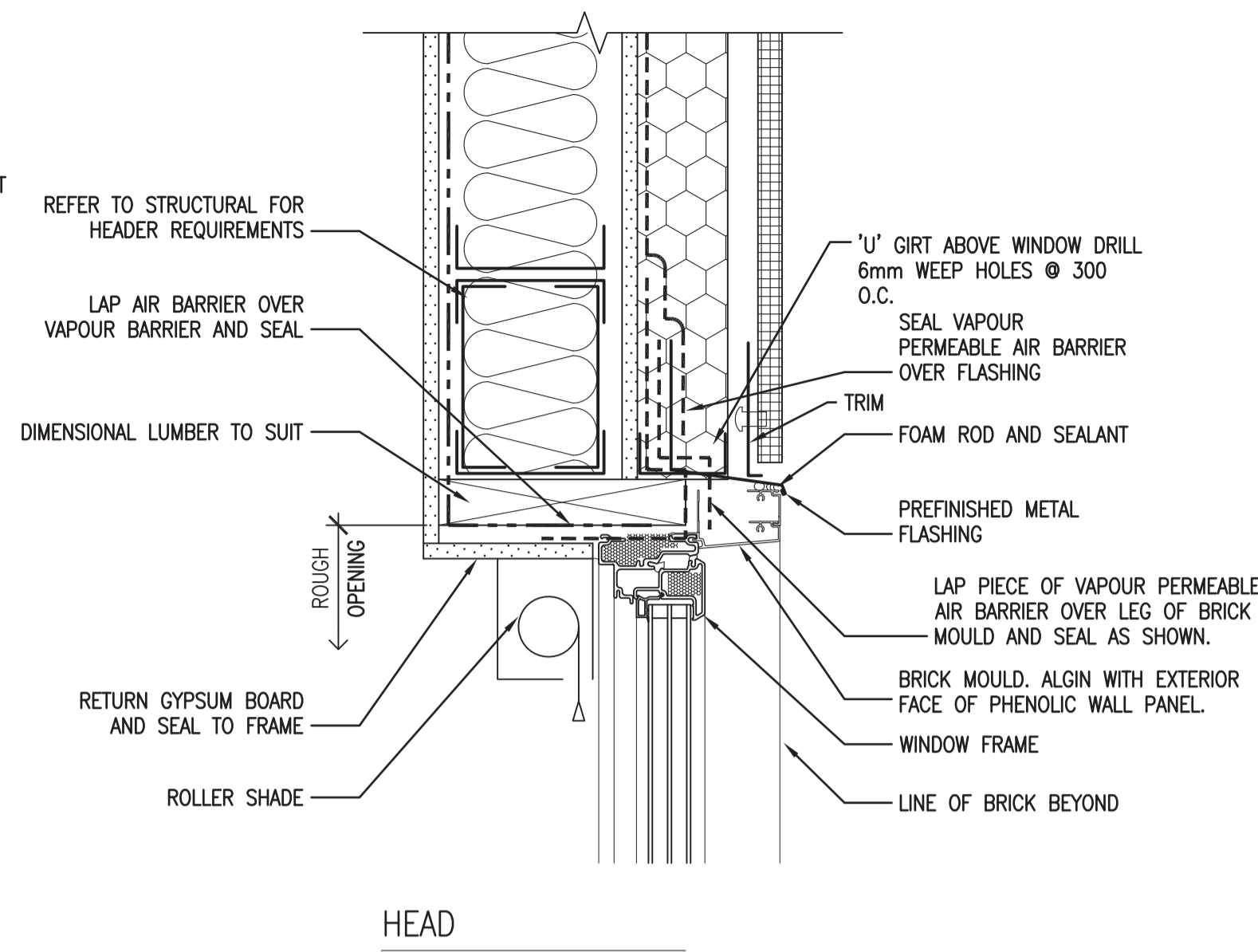
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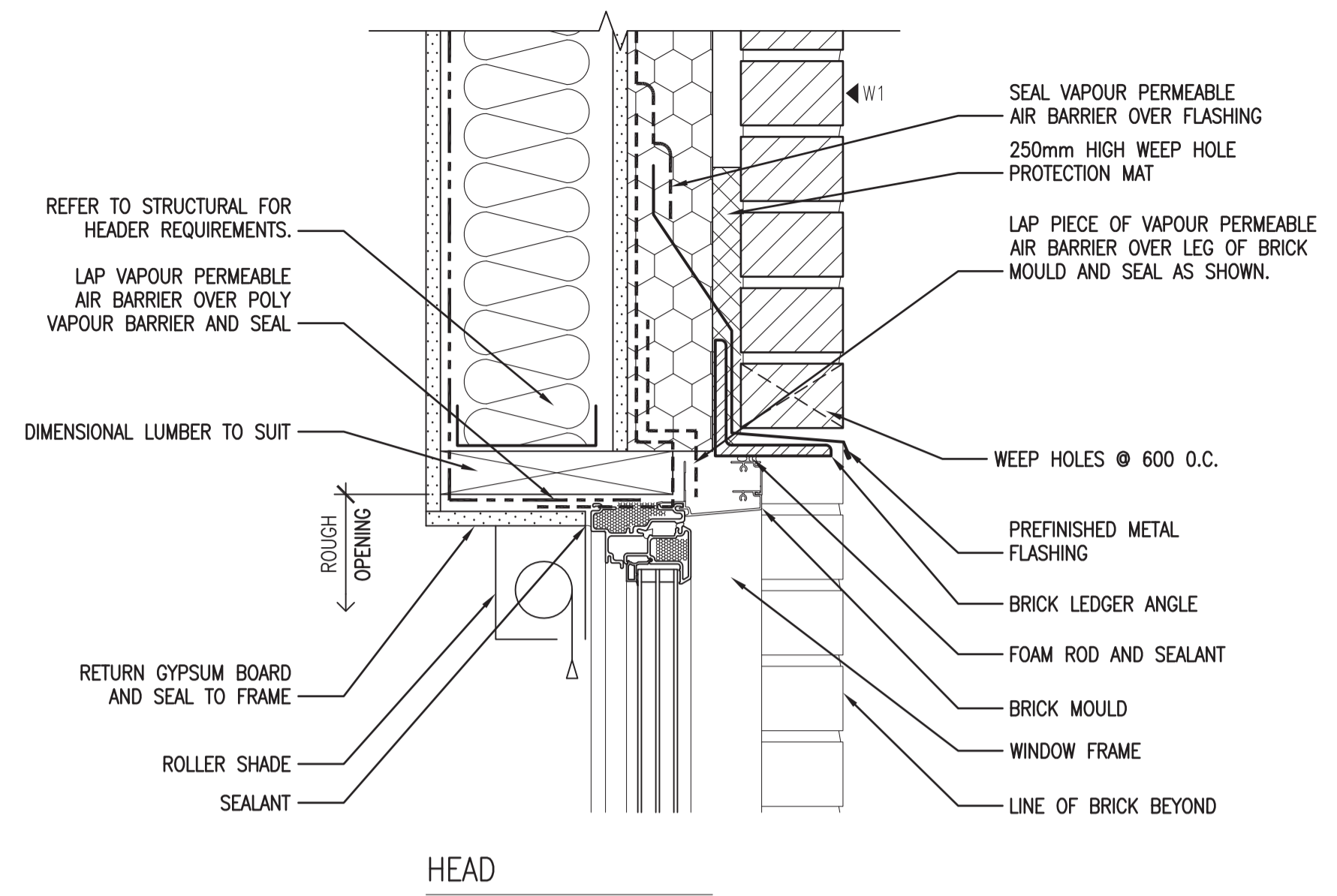




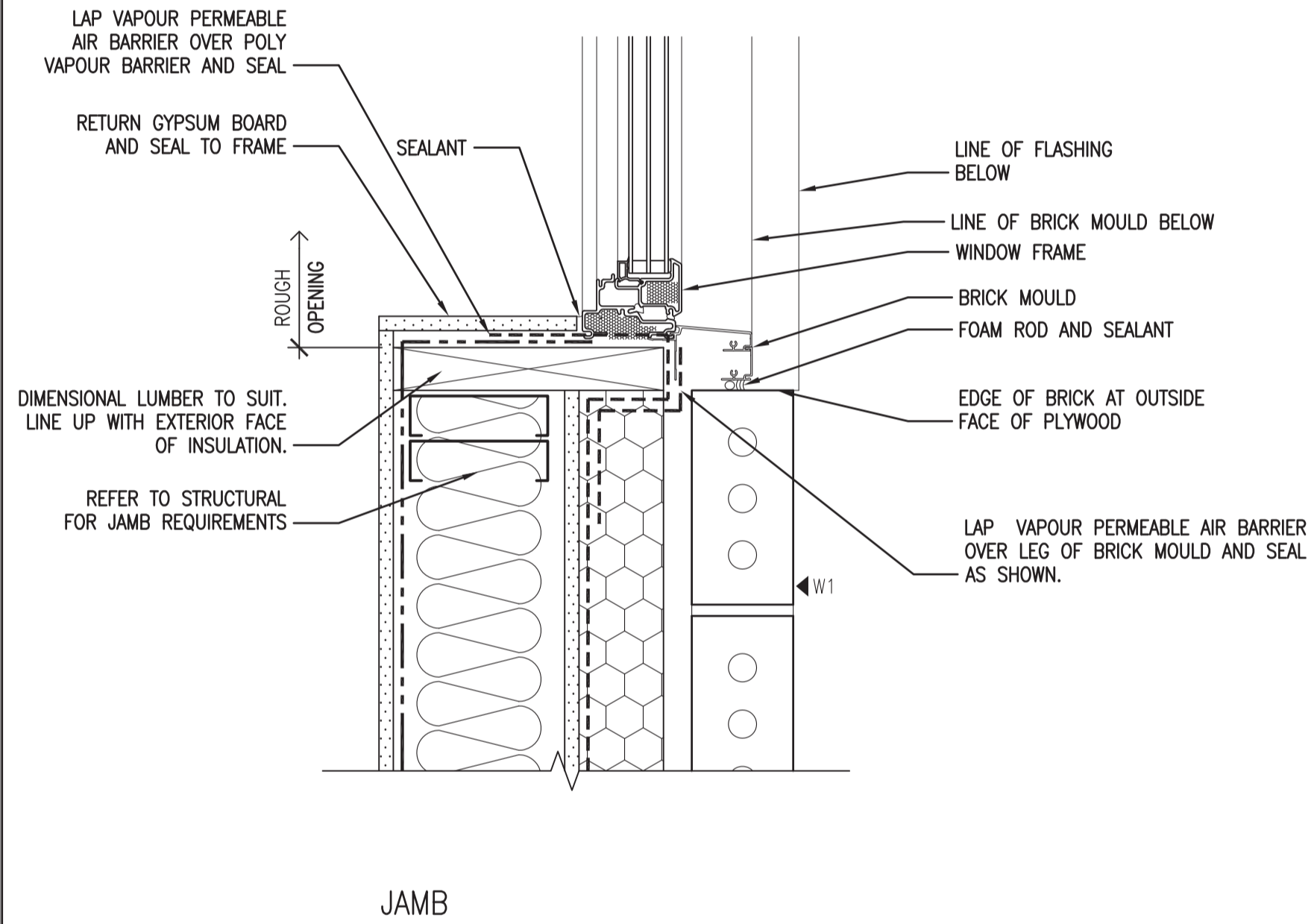
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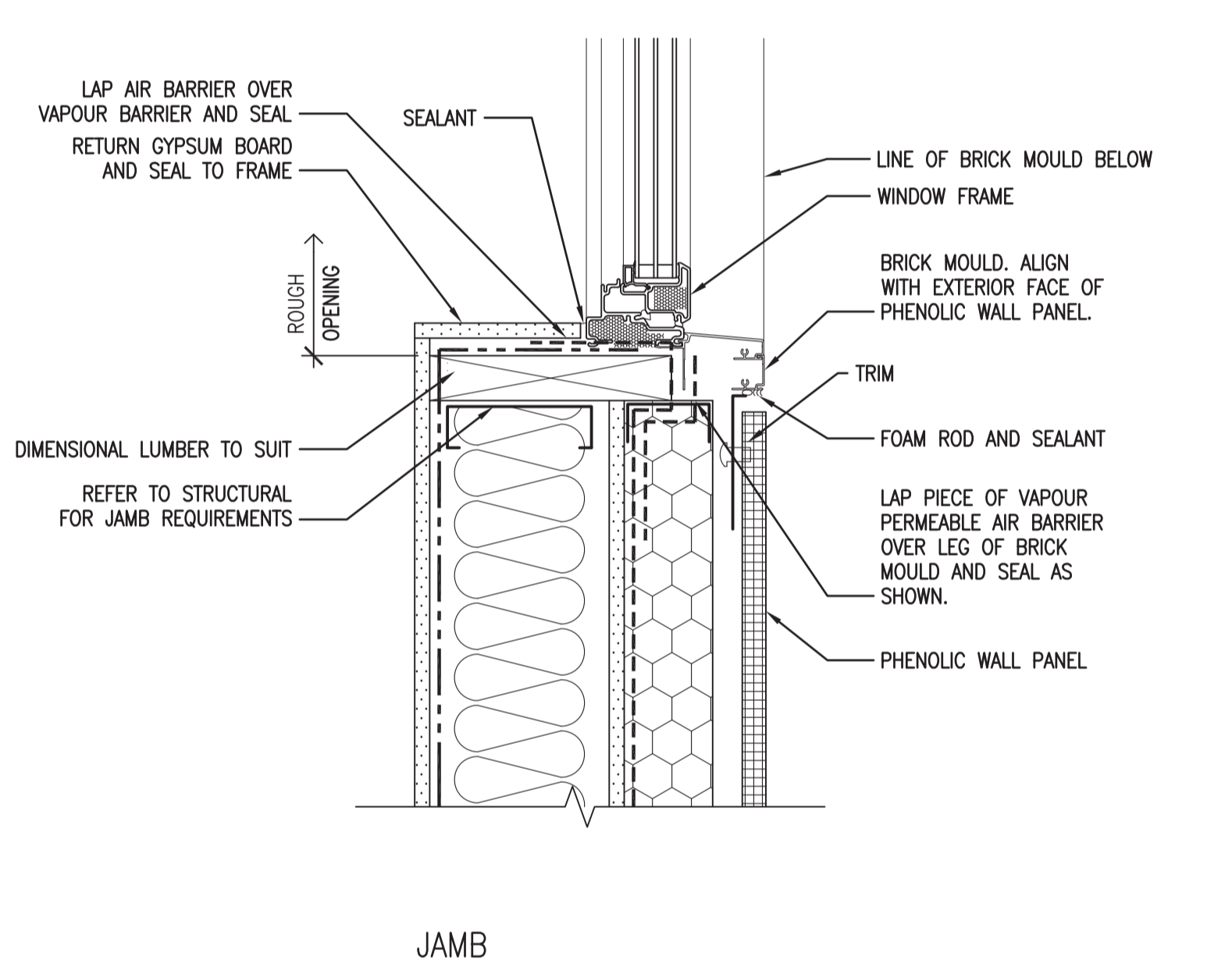
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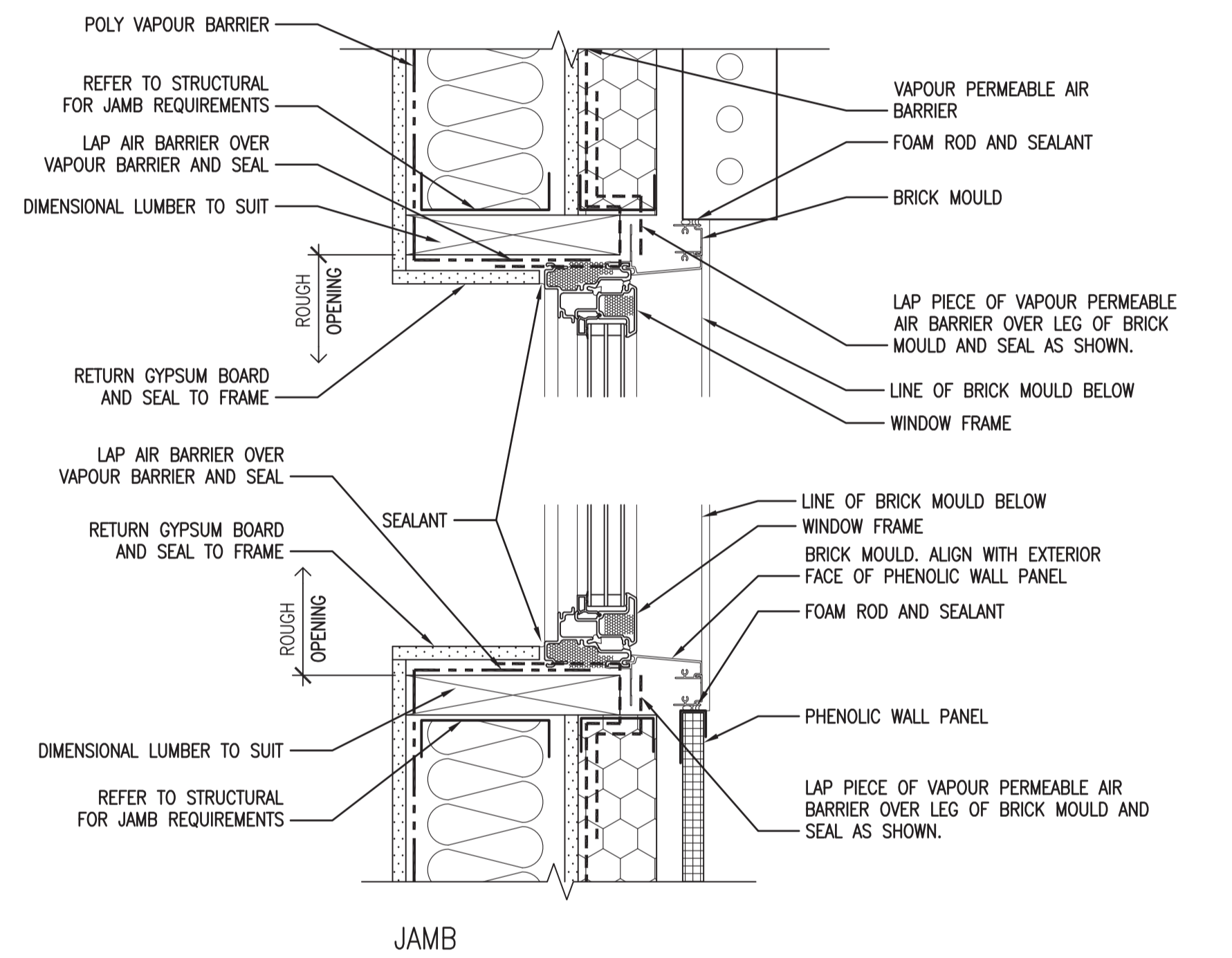
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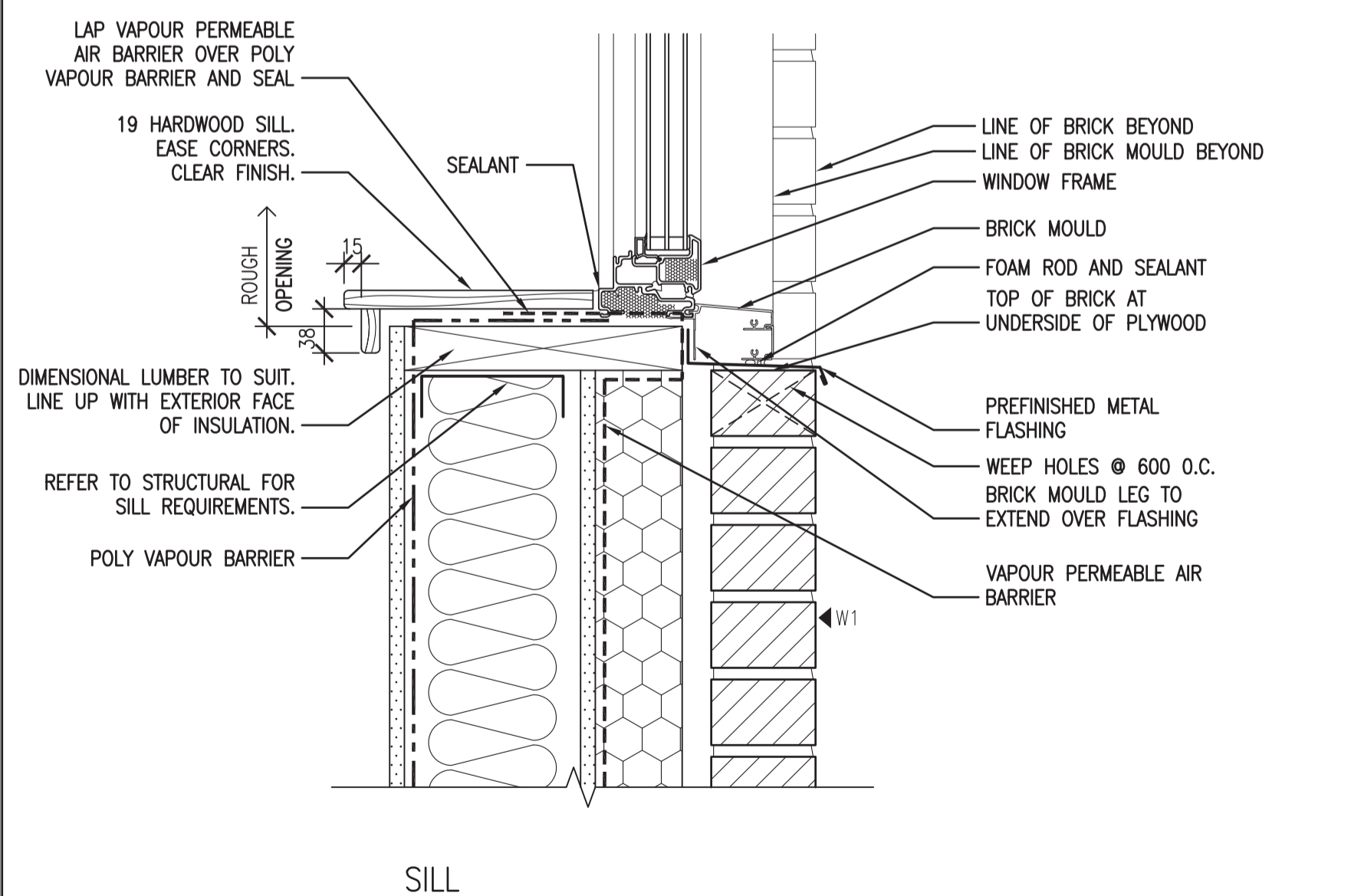
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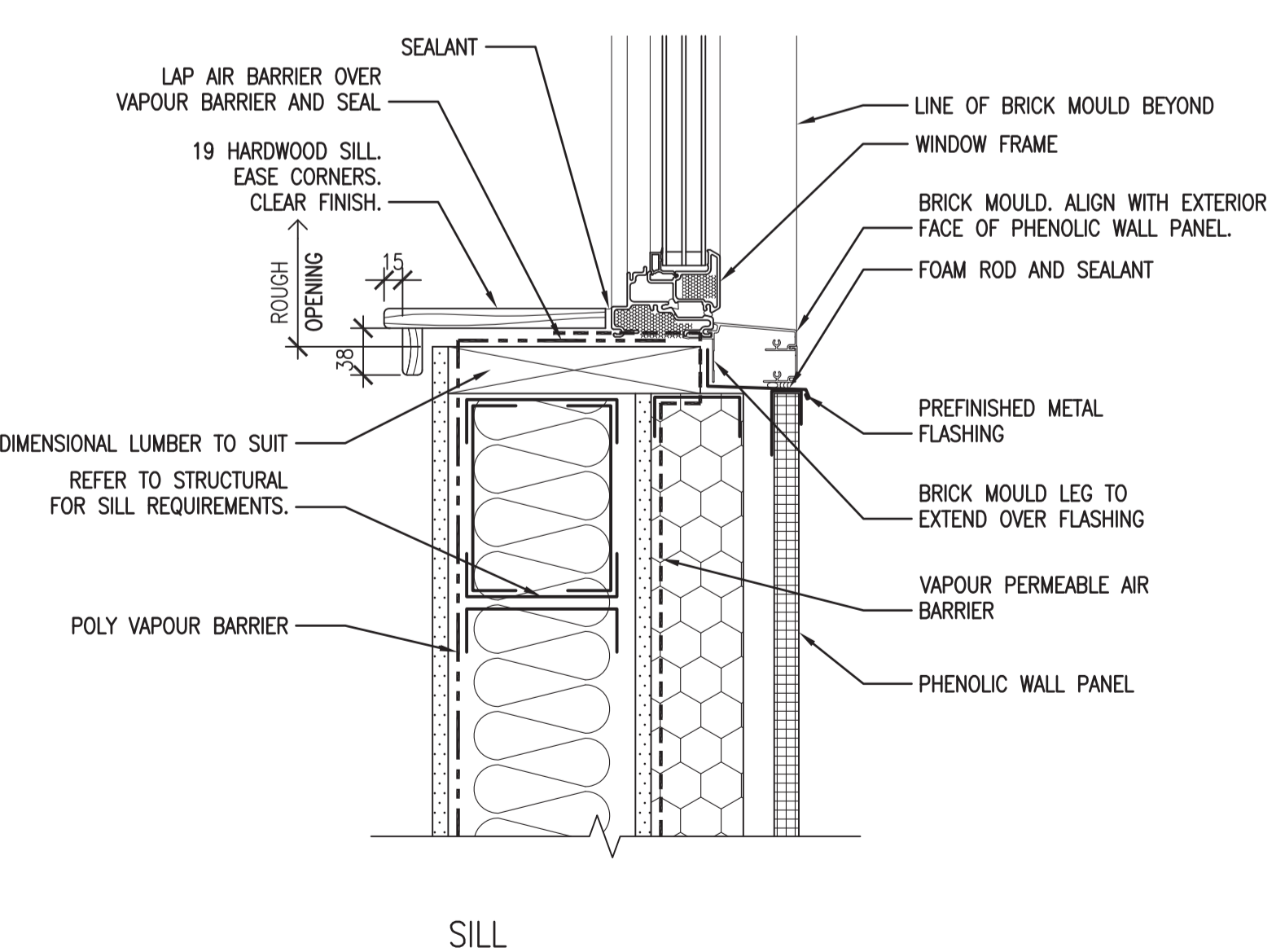
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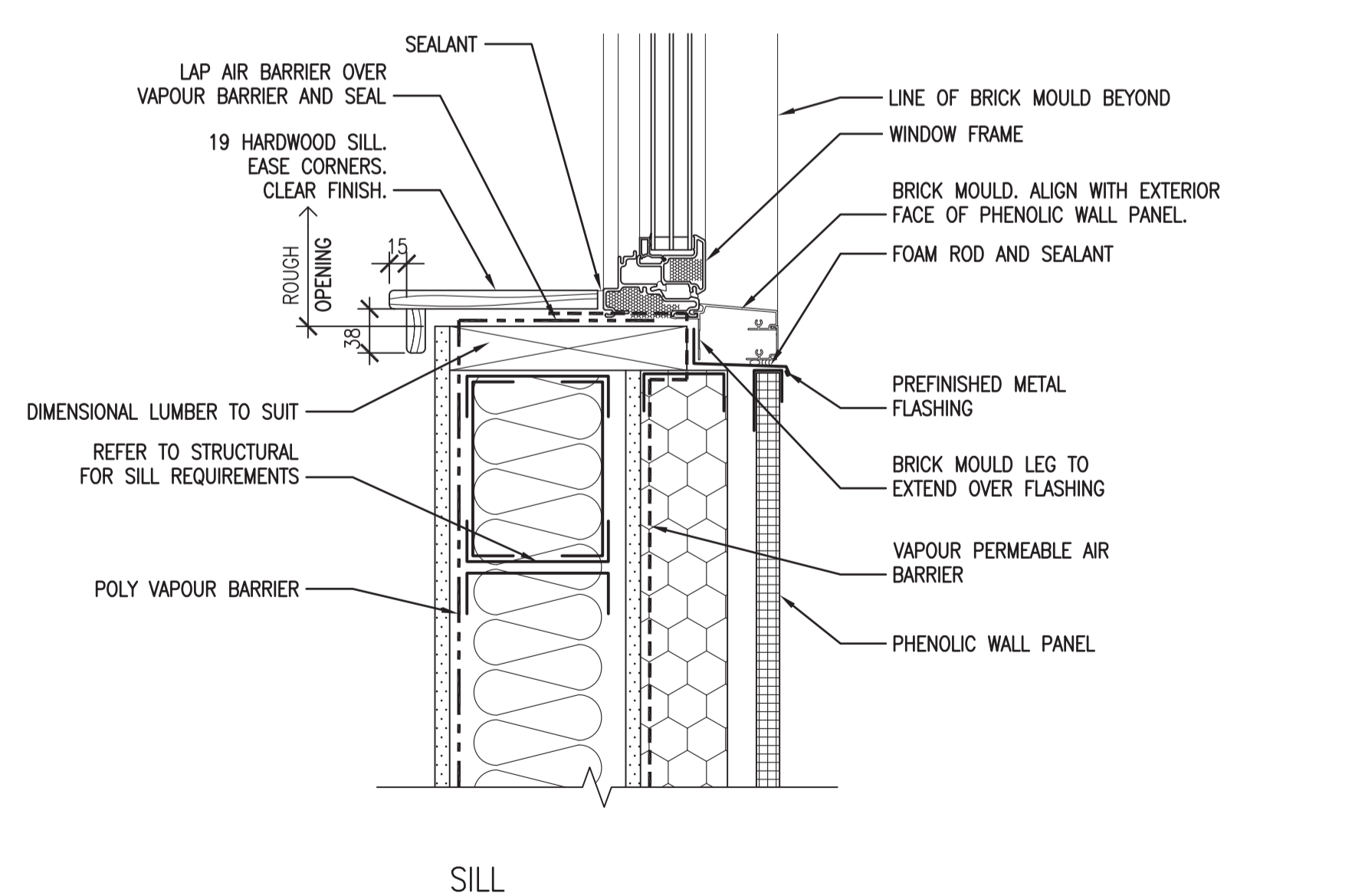
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SILL



SILL



SILL

3 WINDOW TYPE 'D', 'E', 'F' DETAILS  
A2.2 1:5

2 WINDOW TYPE 'A', 'C' DETAILS  
A2.2 1:5

1 WINDOW TYPE 'B' DETAILS  
A2.2 1:5

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 100 - 3725 Praeger Street, Regina, SK S4S 0R8 ph: (306) 569-2255  
 102 - 2718 Kilarney Place, Saskatoon, SK S7P 0A6 ph: (306) 652-6457  
 website: www.sepw.ca

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 Distinguished  
 SAA # 718 Regina SK  
 REGISTERED  
 ARCHITECTS  
 2014.12.16

**DO NOT SCALE DRAWINGS**

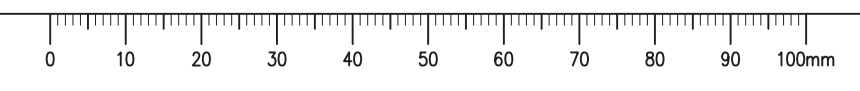
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Revision/Revision	Description/Description	Date/Date
Client/client		

Project title/Titre du projet  
**NEW POLICE BUILDING  
 MILDSTONE, SASKATCHEWAN**

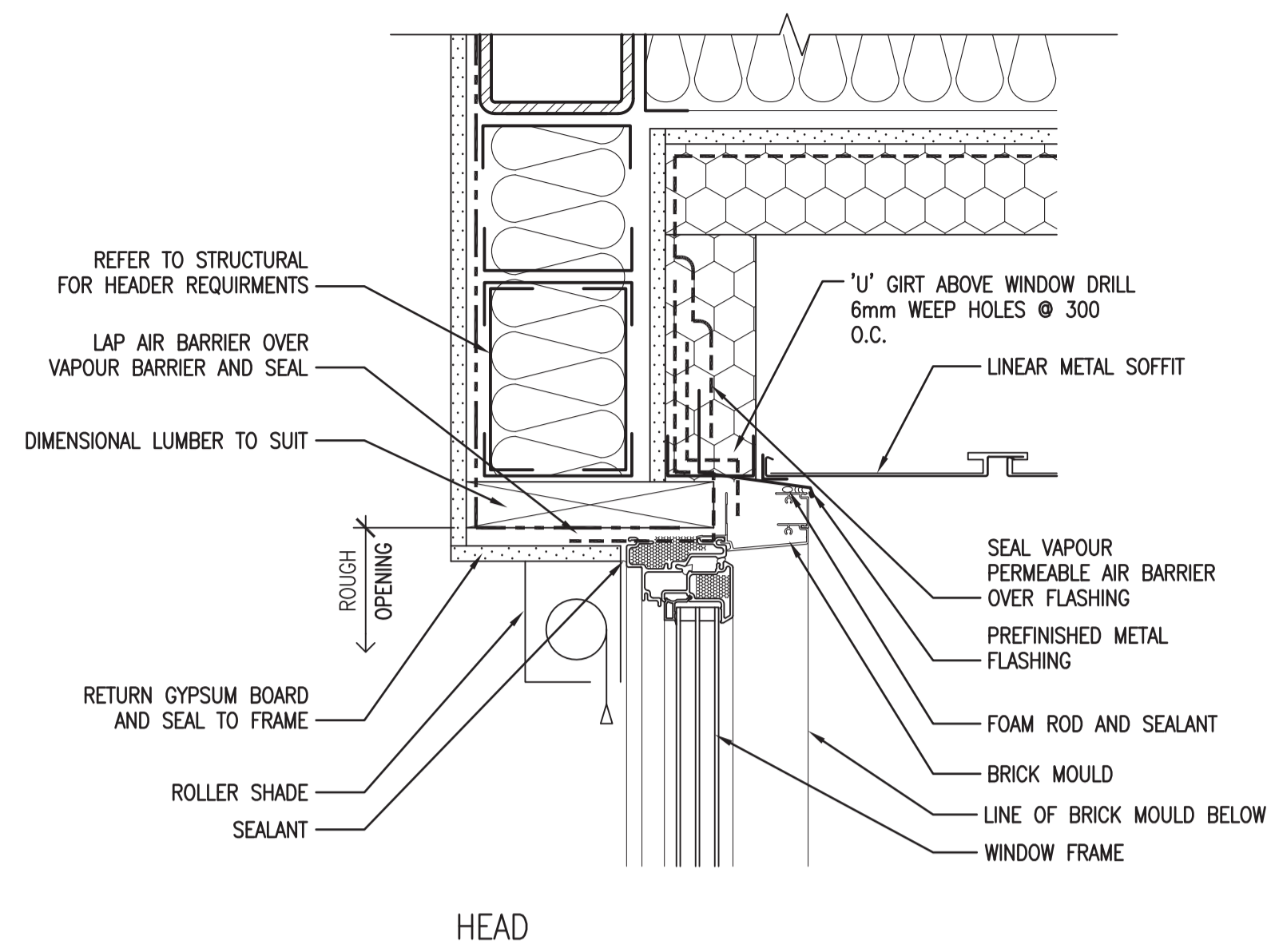
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 Drawn by/Designe par  
 DE / NO  
 Project Manager/Administrateur de Projets  
 CS  
 Architectural and Engineering Resources Manager/  
 Ressources Architectural et de Directeur d'ingénierie

Client/client  
 Drawing title/Titre du dessin  
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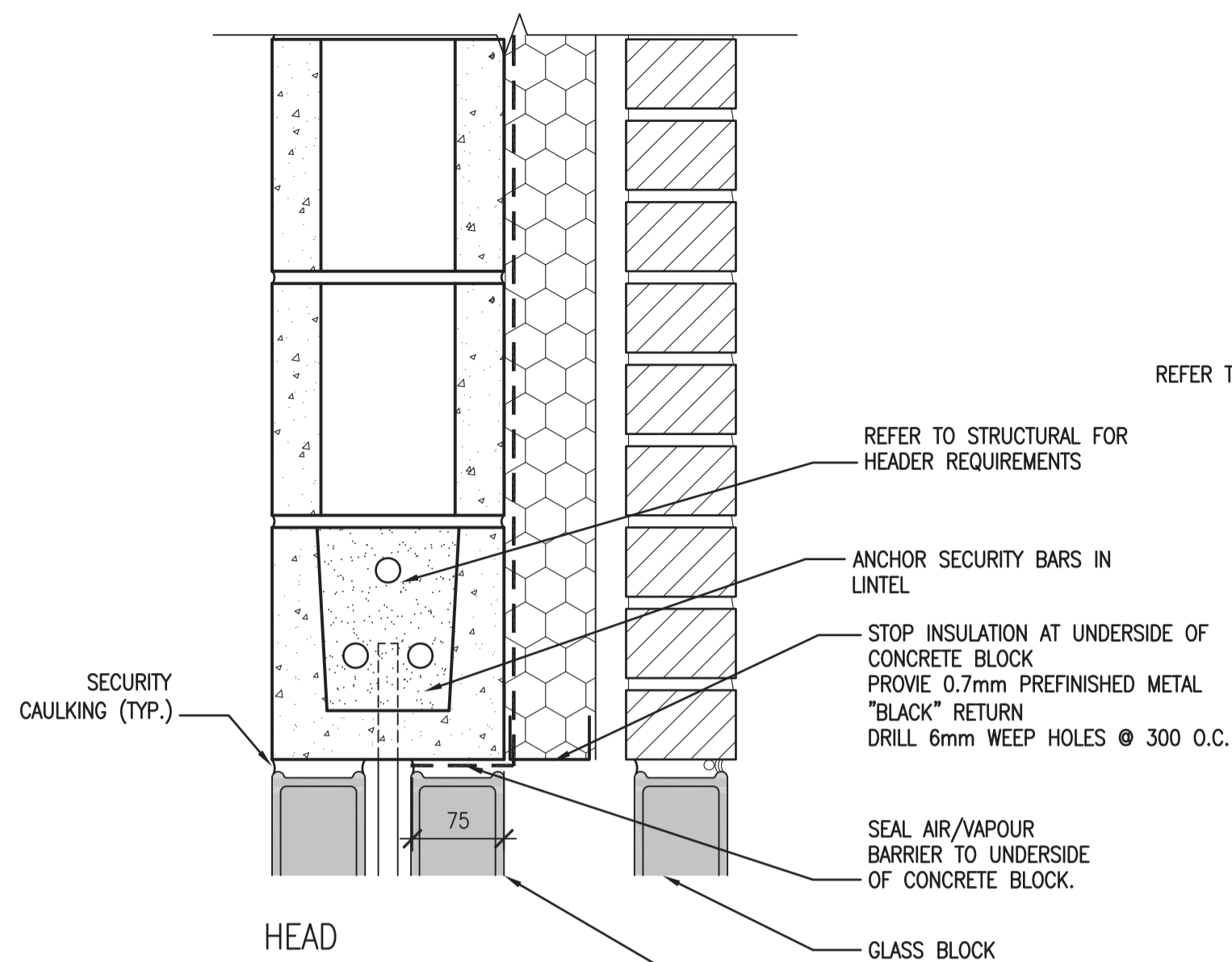
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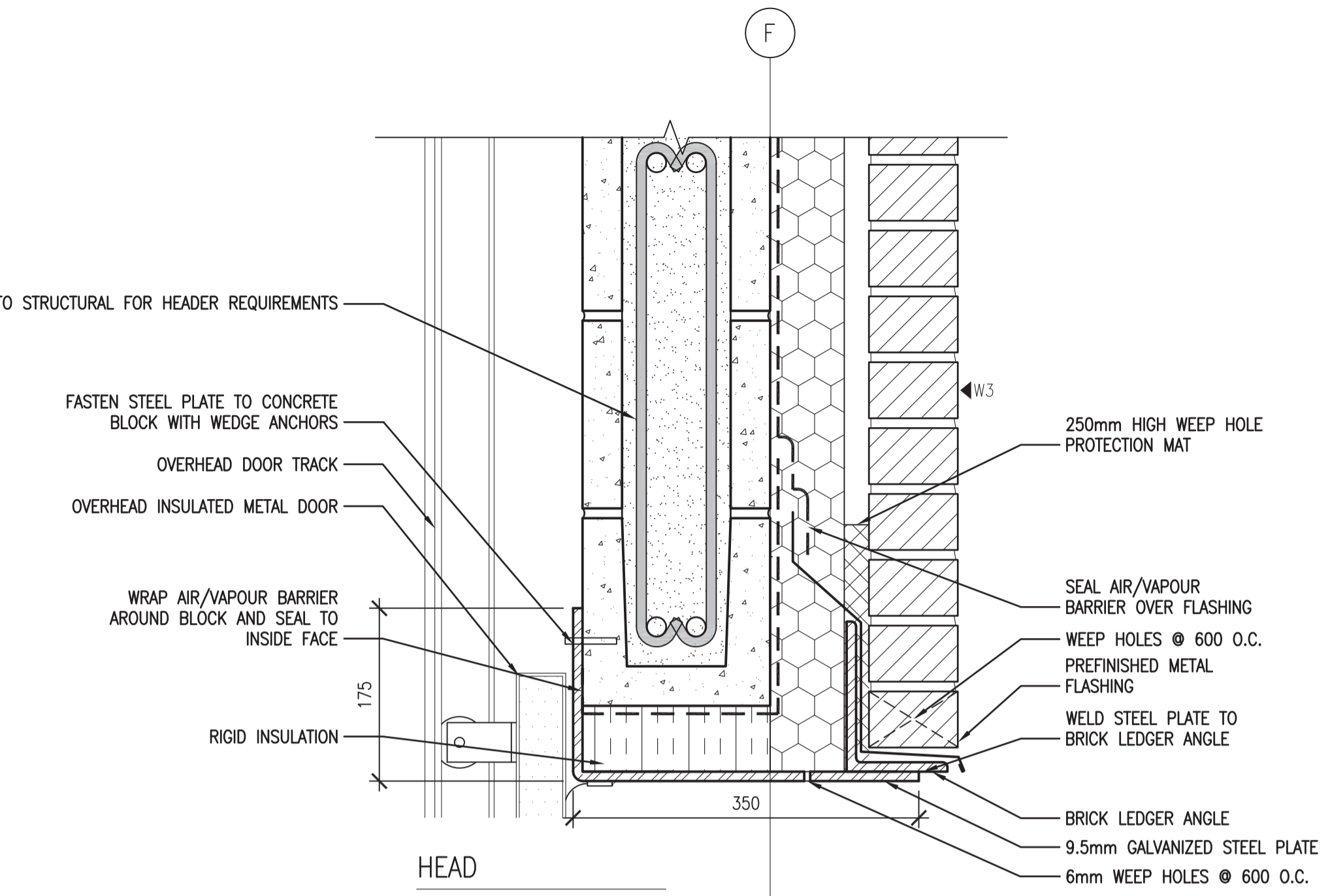




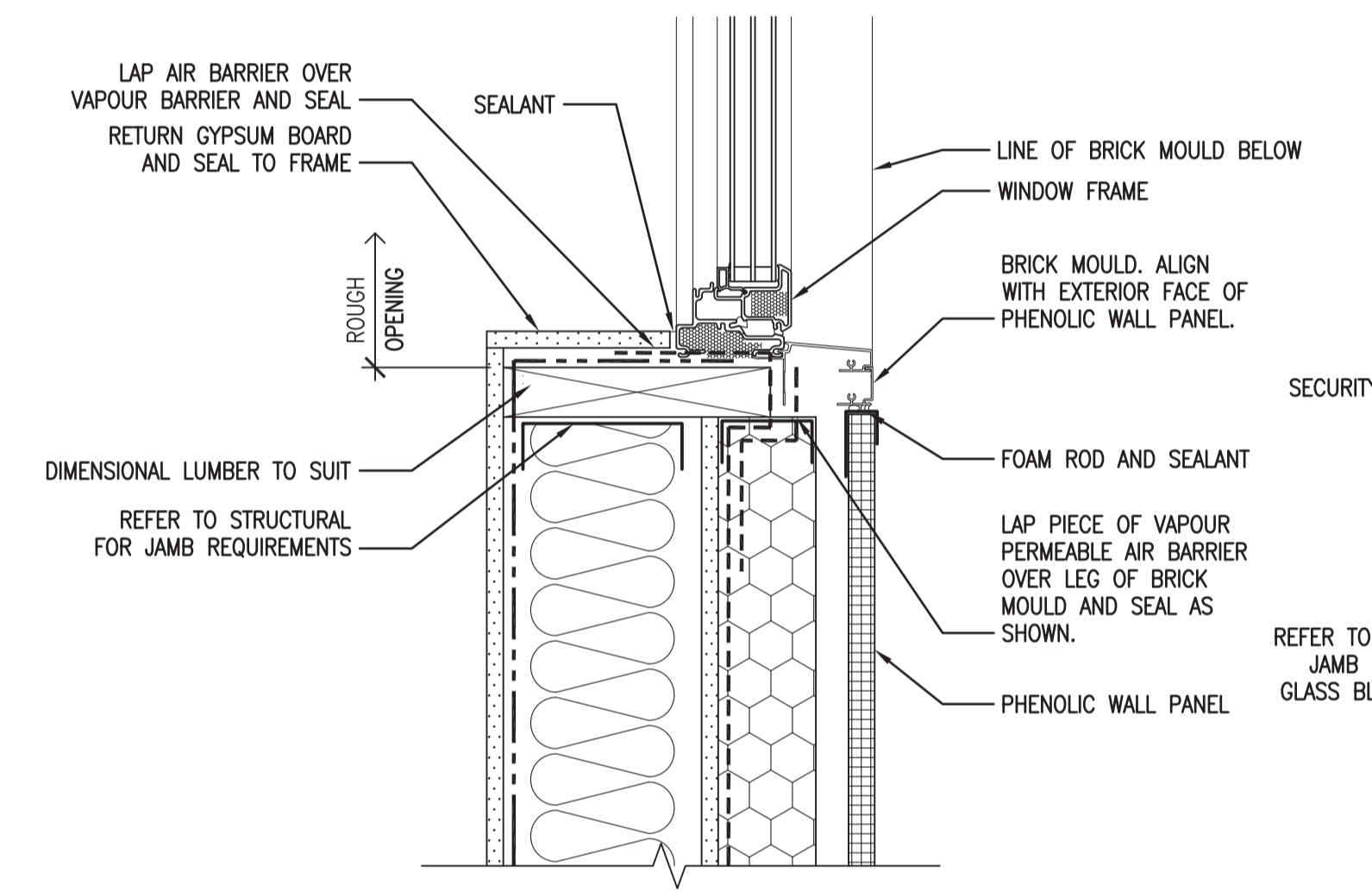
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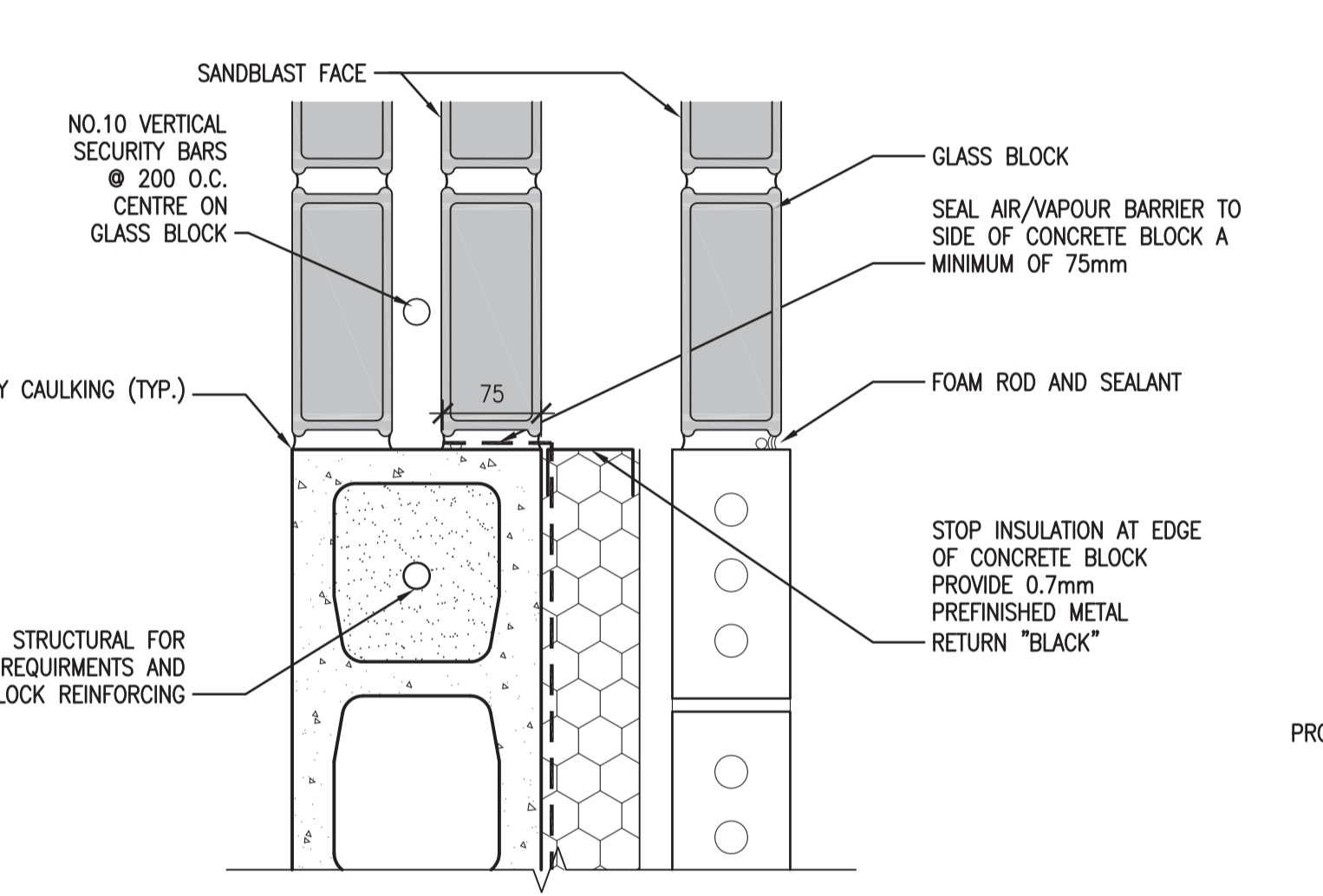
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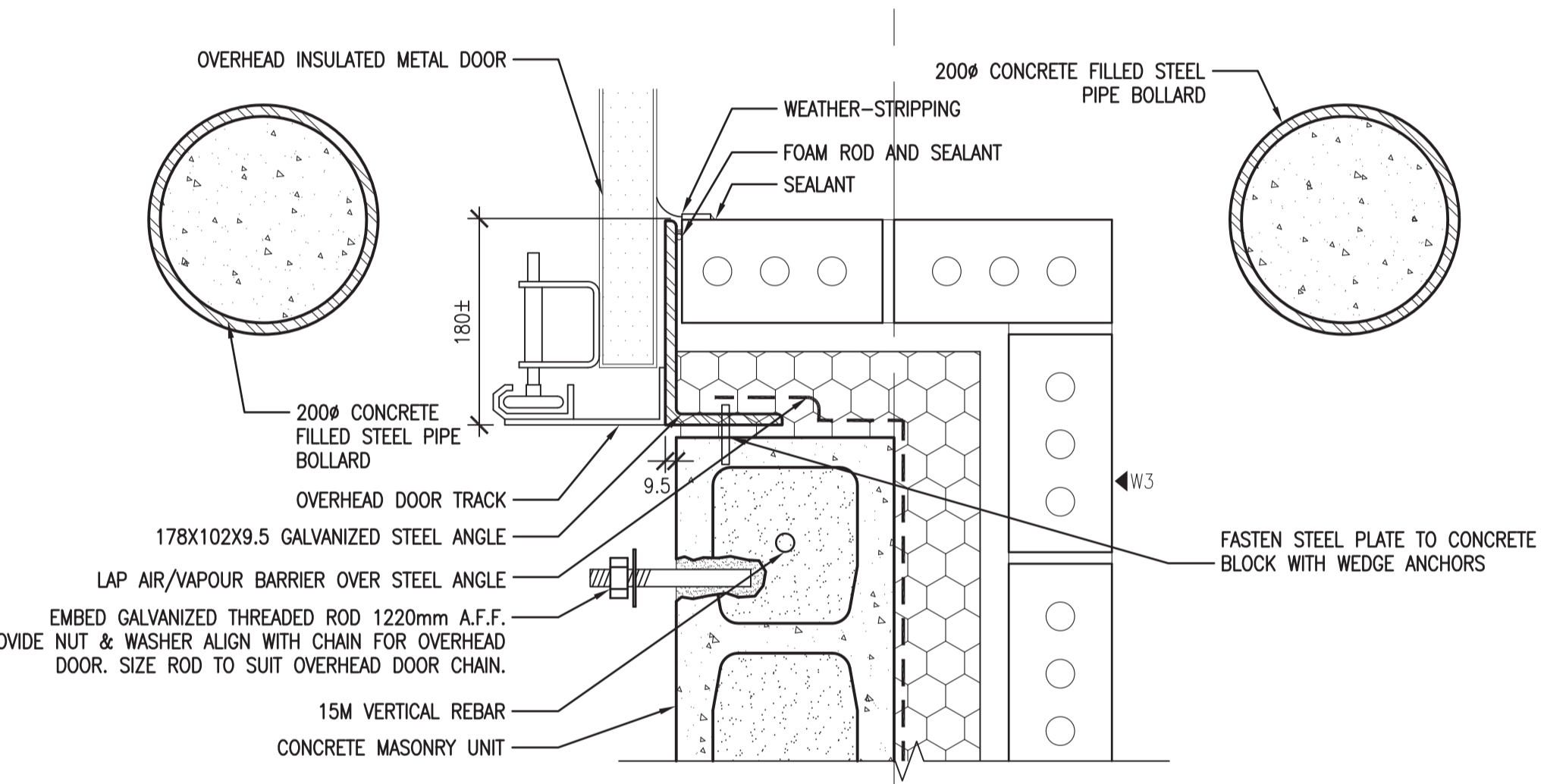
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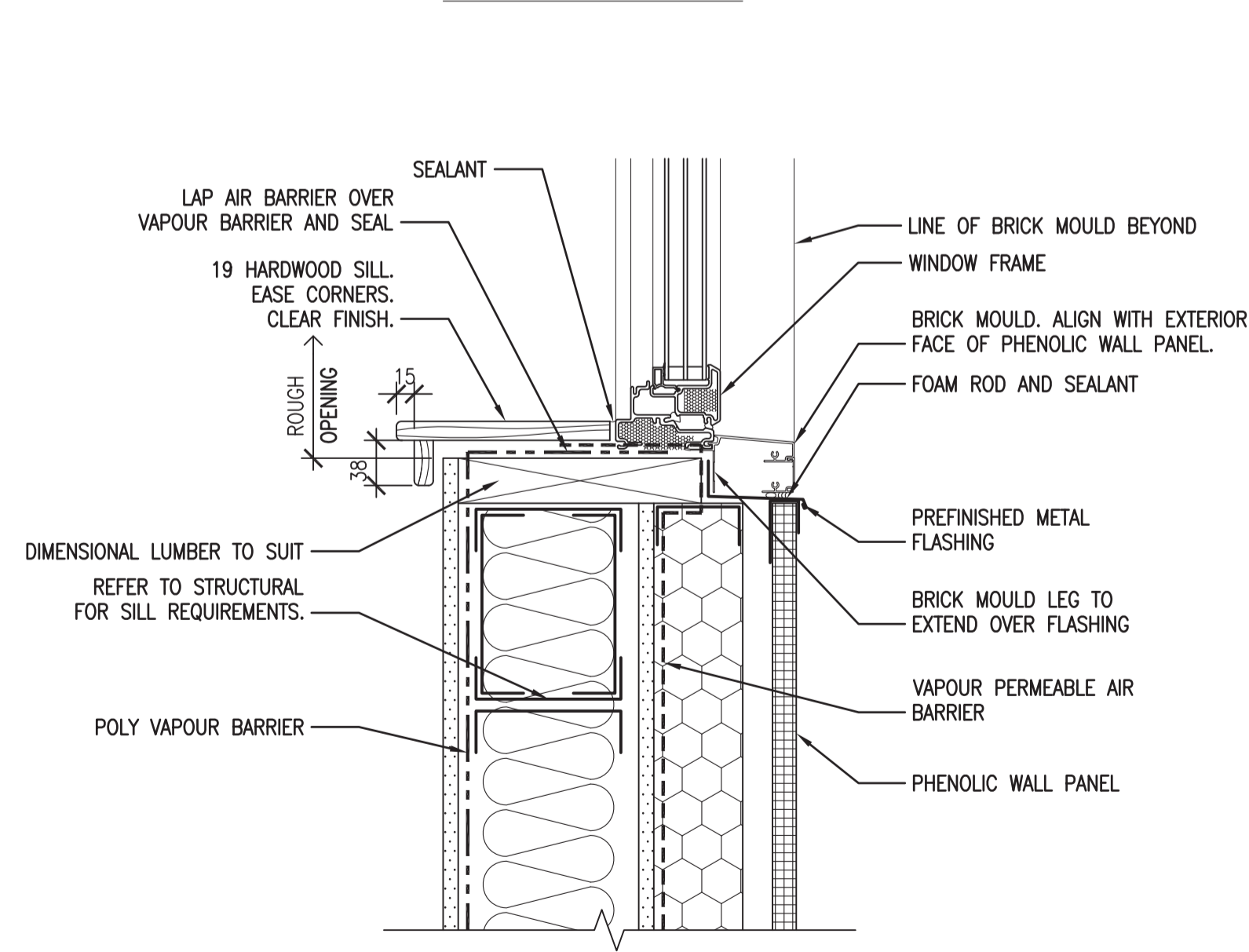
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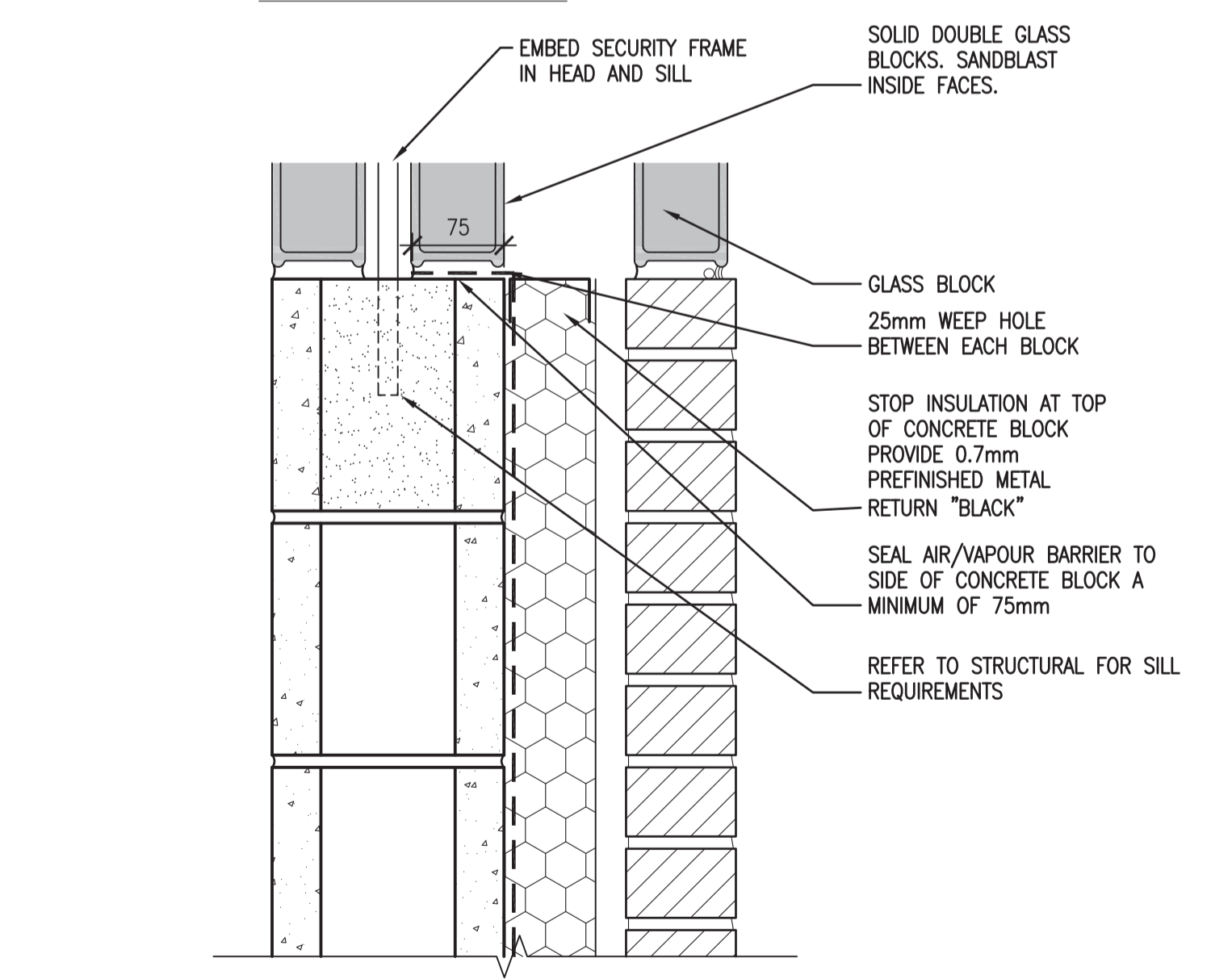
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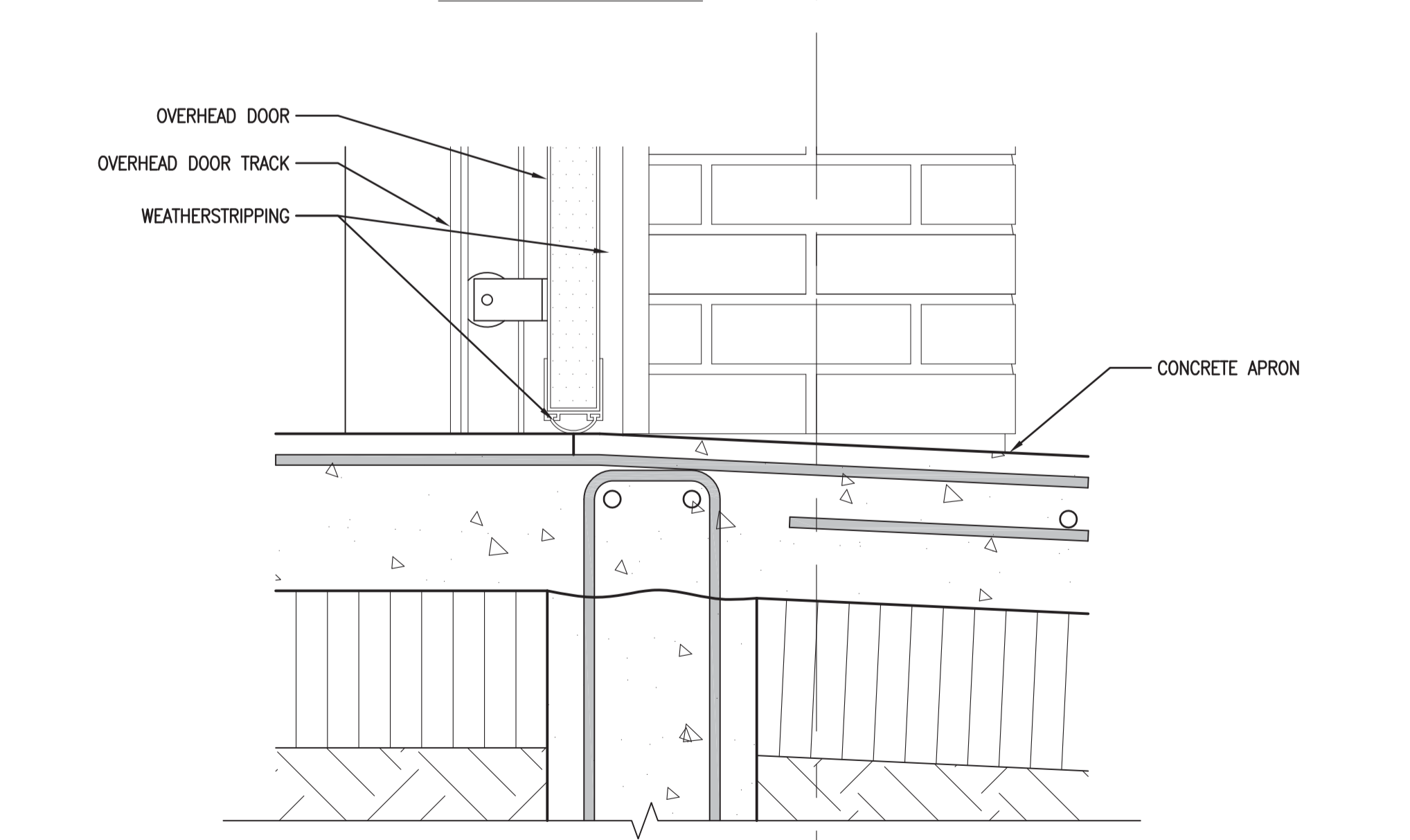
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SILL



SILL



THRESHOLD

3 WINDOW TYPE 'B' DETAILS  
A2.2 1:5

2 WINDOW TYPE 'G' DETAILS  
A2.2 1:5

1 DOOR 148B DETAILS  
A2.2 1:5



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0	ISSUED FOR TENDER	2014-12-08

Revision/Revision	Description/Description	Date/Date
Client/client		

Project title/Titre du projet

**NEW POLICE BUILDING  
MAIDSTONE, SASKATCHEWAN**

Approved by/Approve par

Designed by/Concept par  
DE

Drawn by/Designe par  
DE / NO

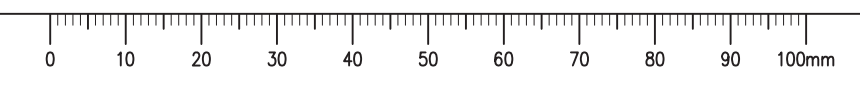
Project Manager/Administrateur de Projets  
CS

Architectural and Engineering Resources Manager/  
Ressources Architectural et de Directeur d'ingénierie

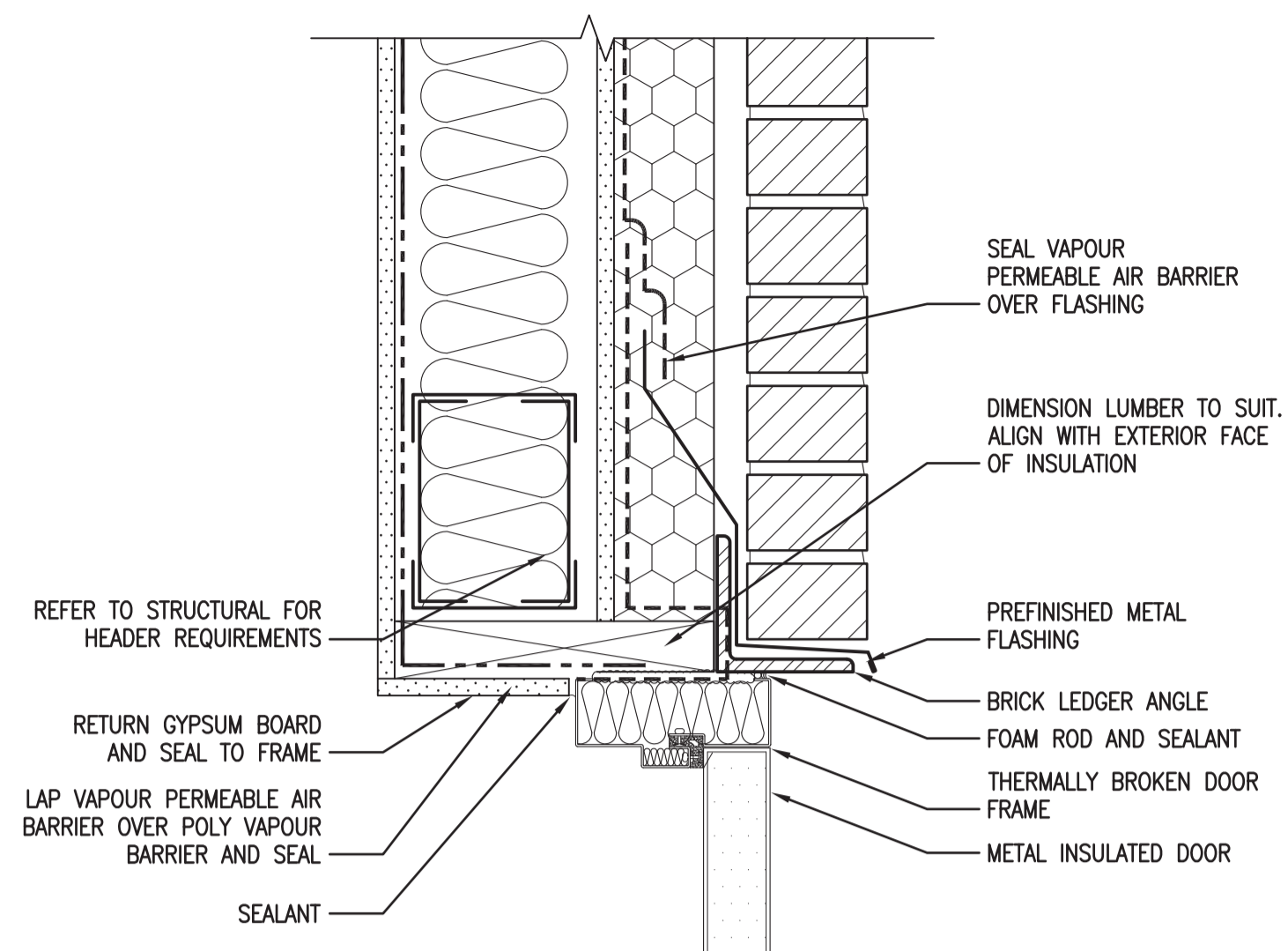
Client/client

Drawing title/Titre de dessin  
**WINDOW DETAILS  
DOOR DETAILS**

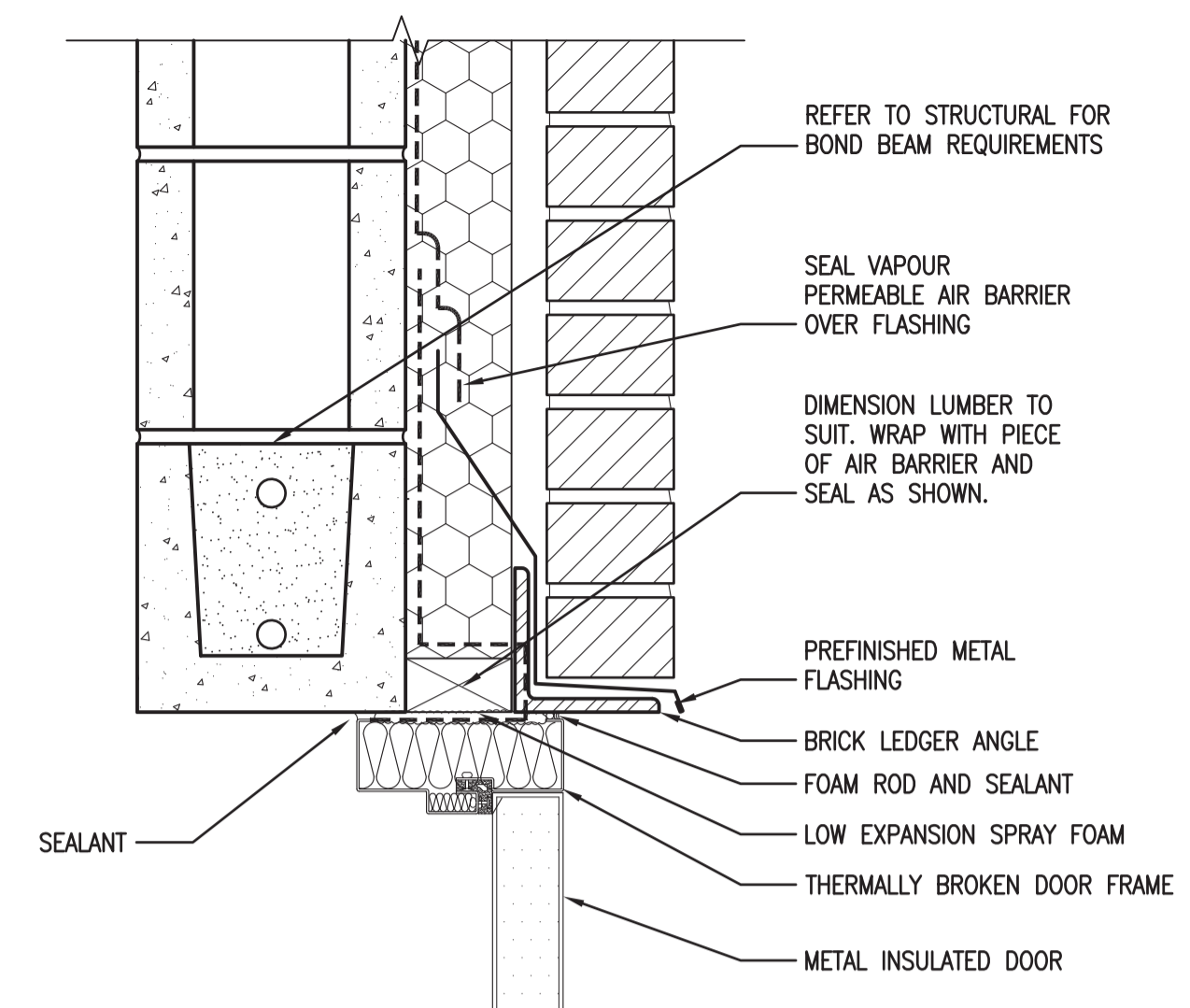
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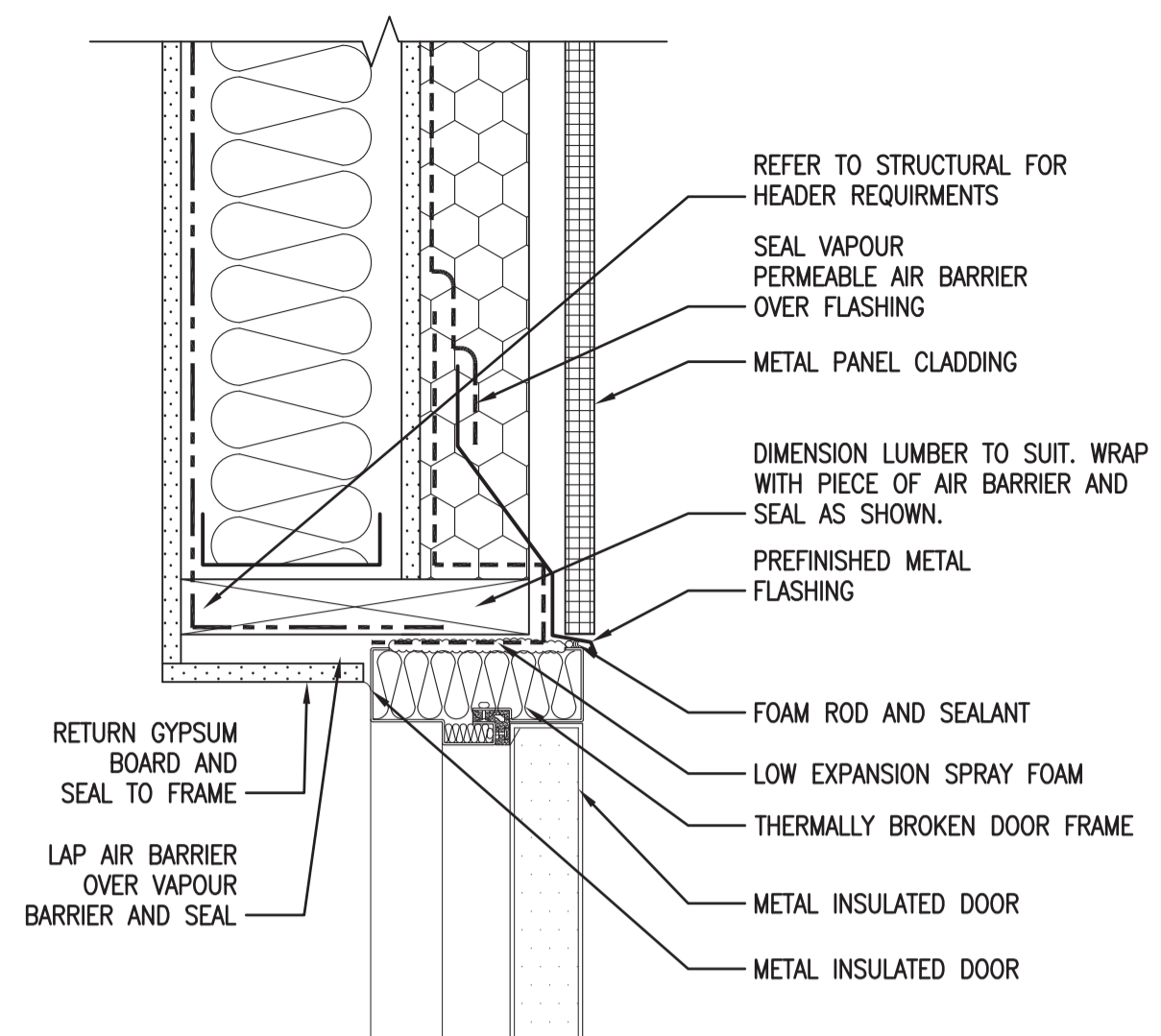




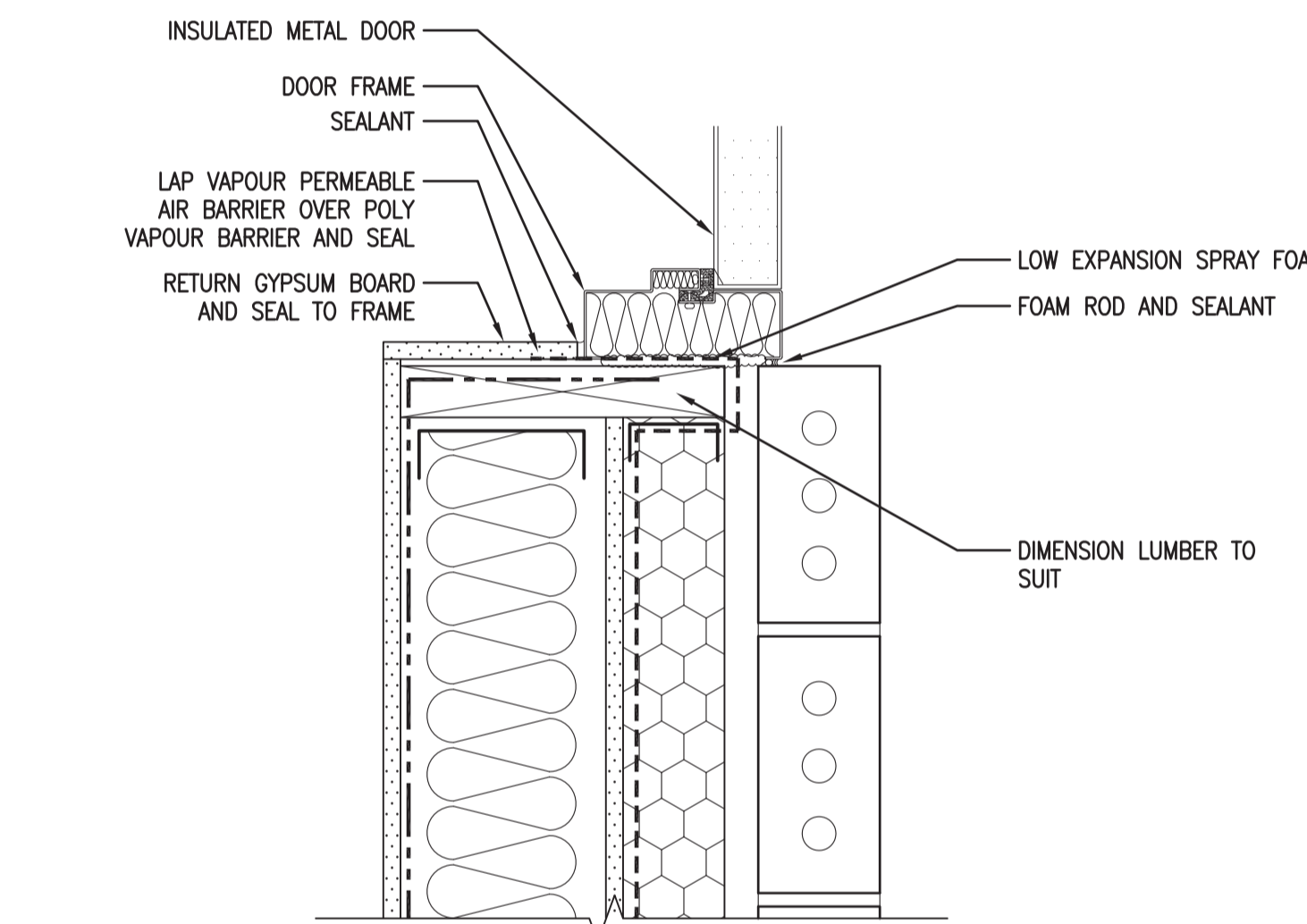
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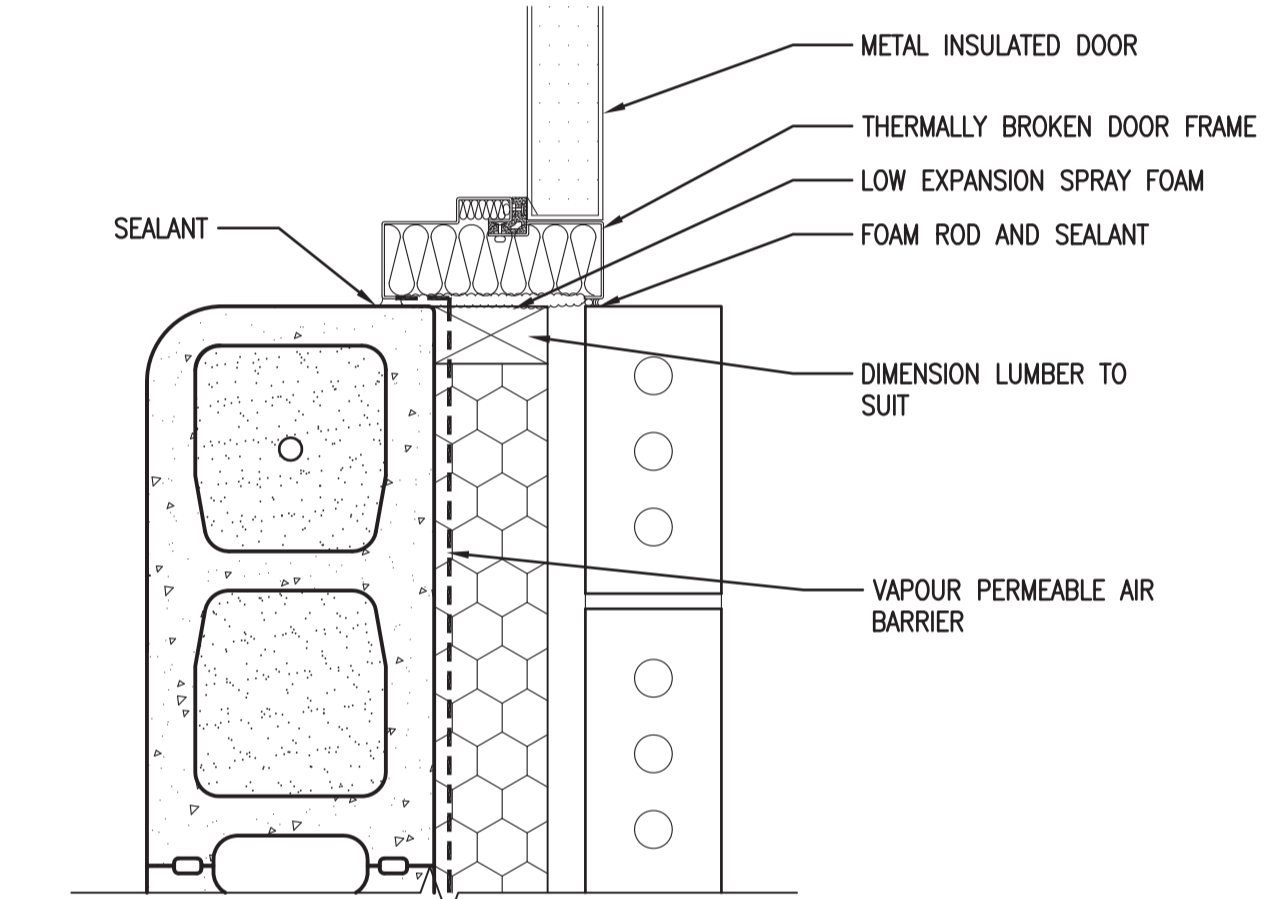
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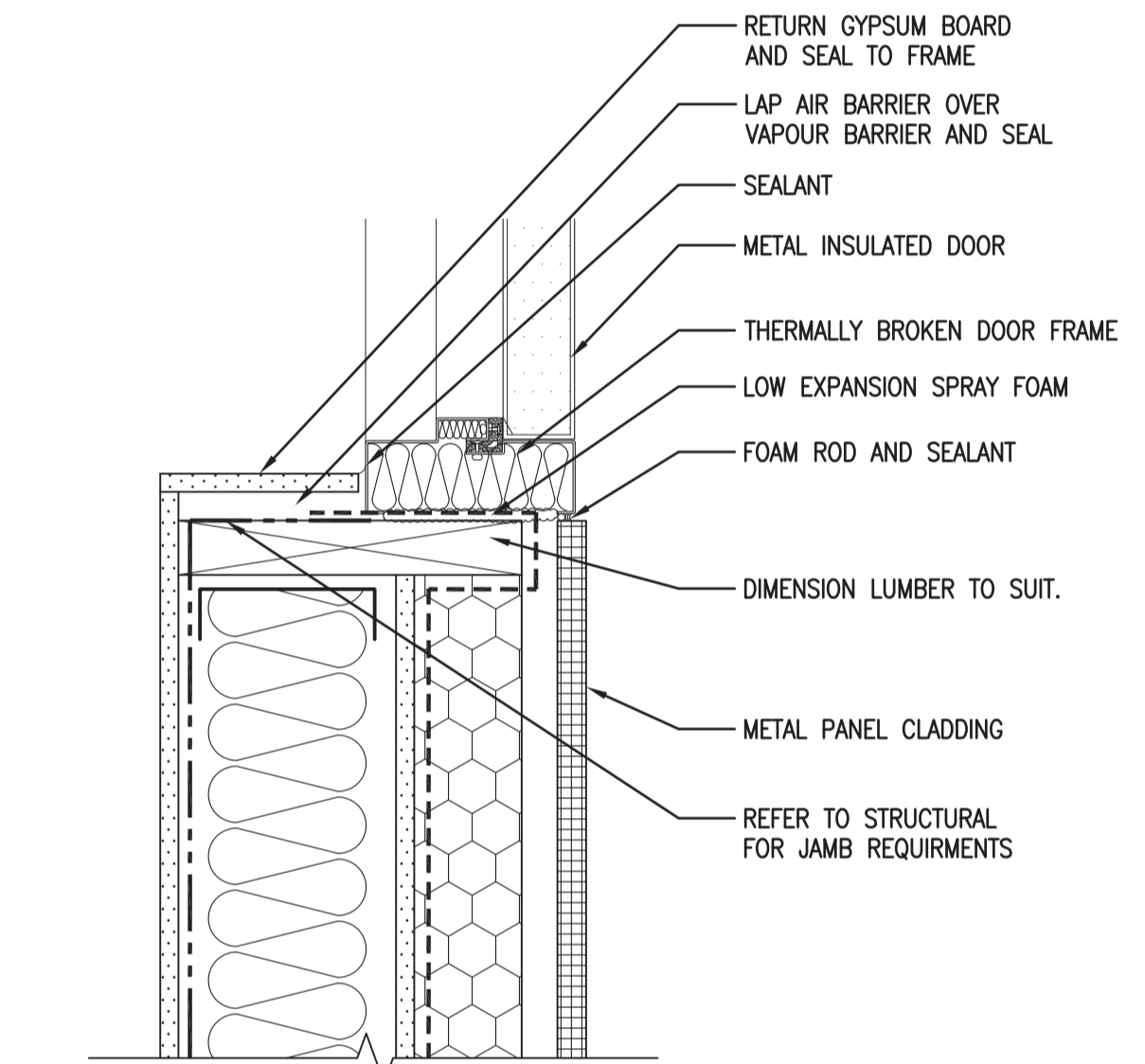
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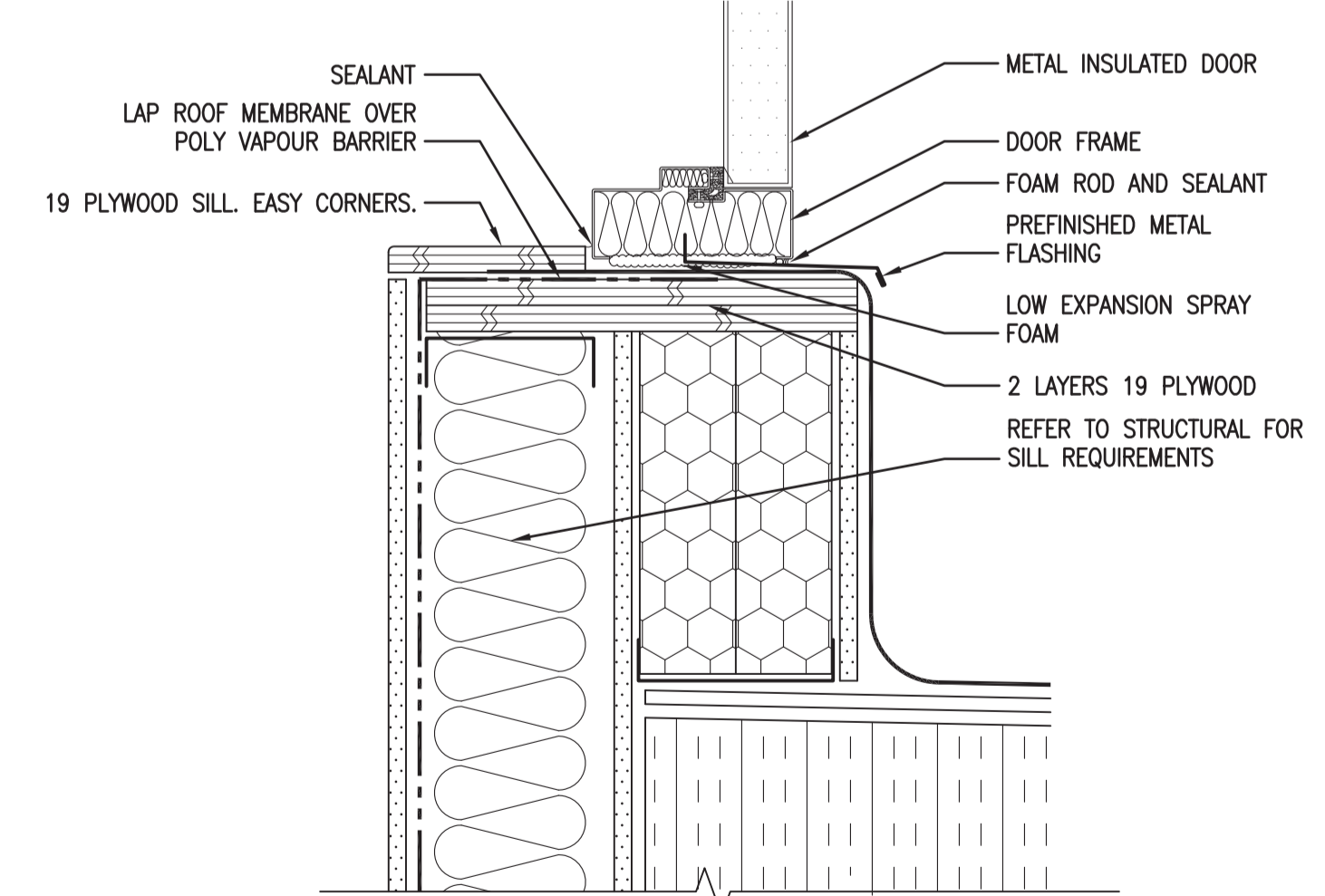
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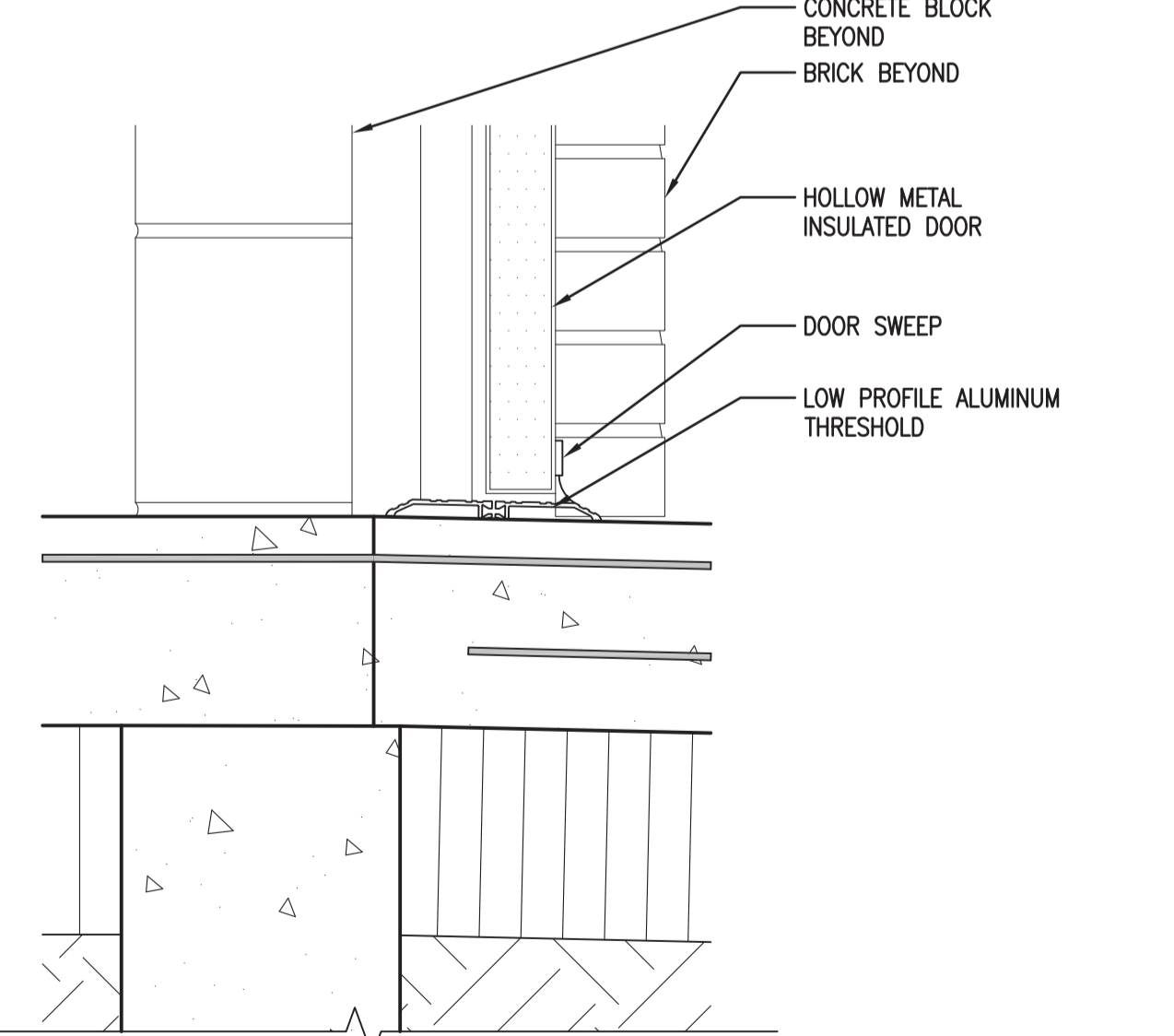
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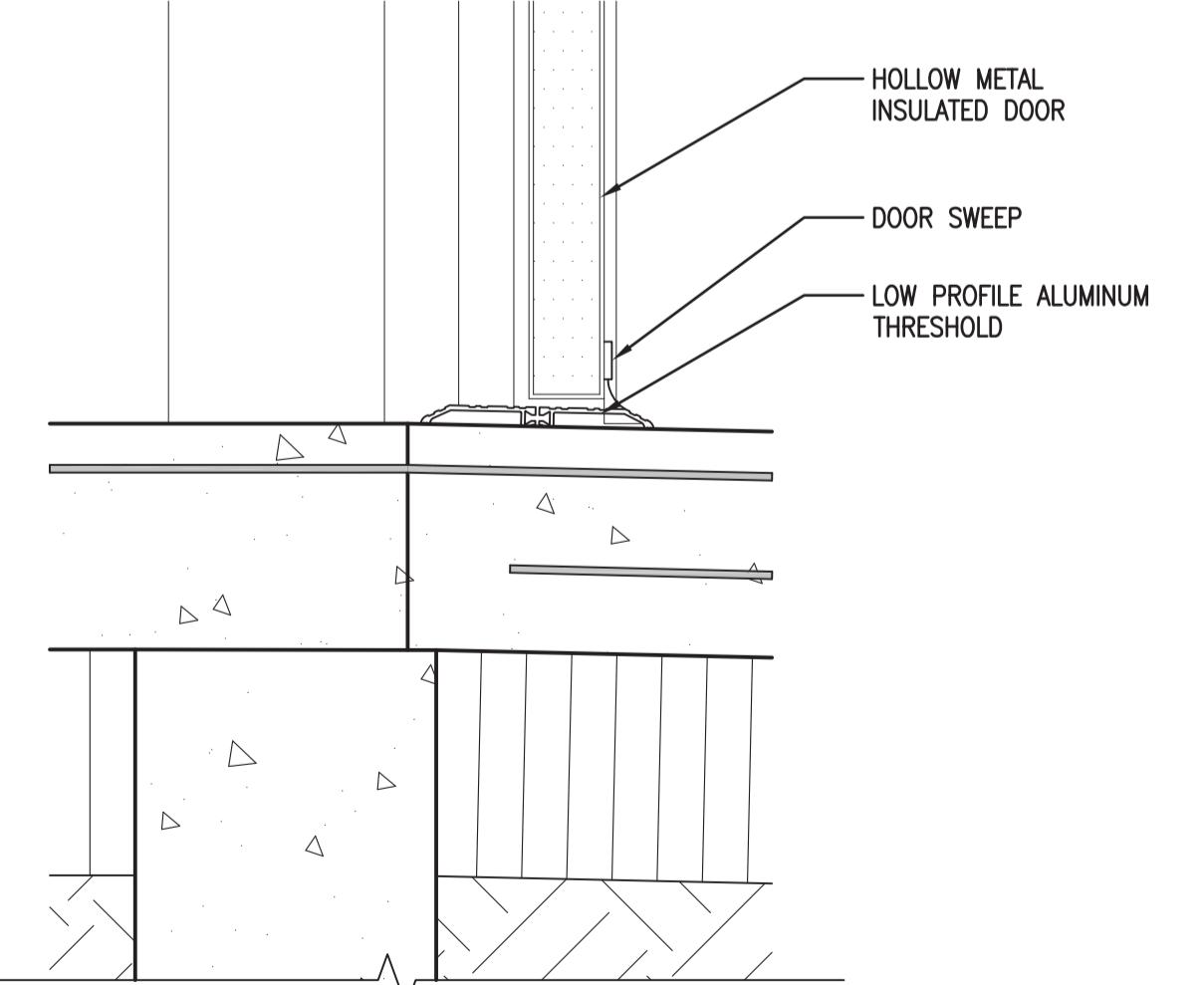
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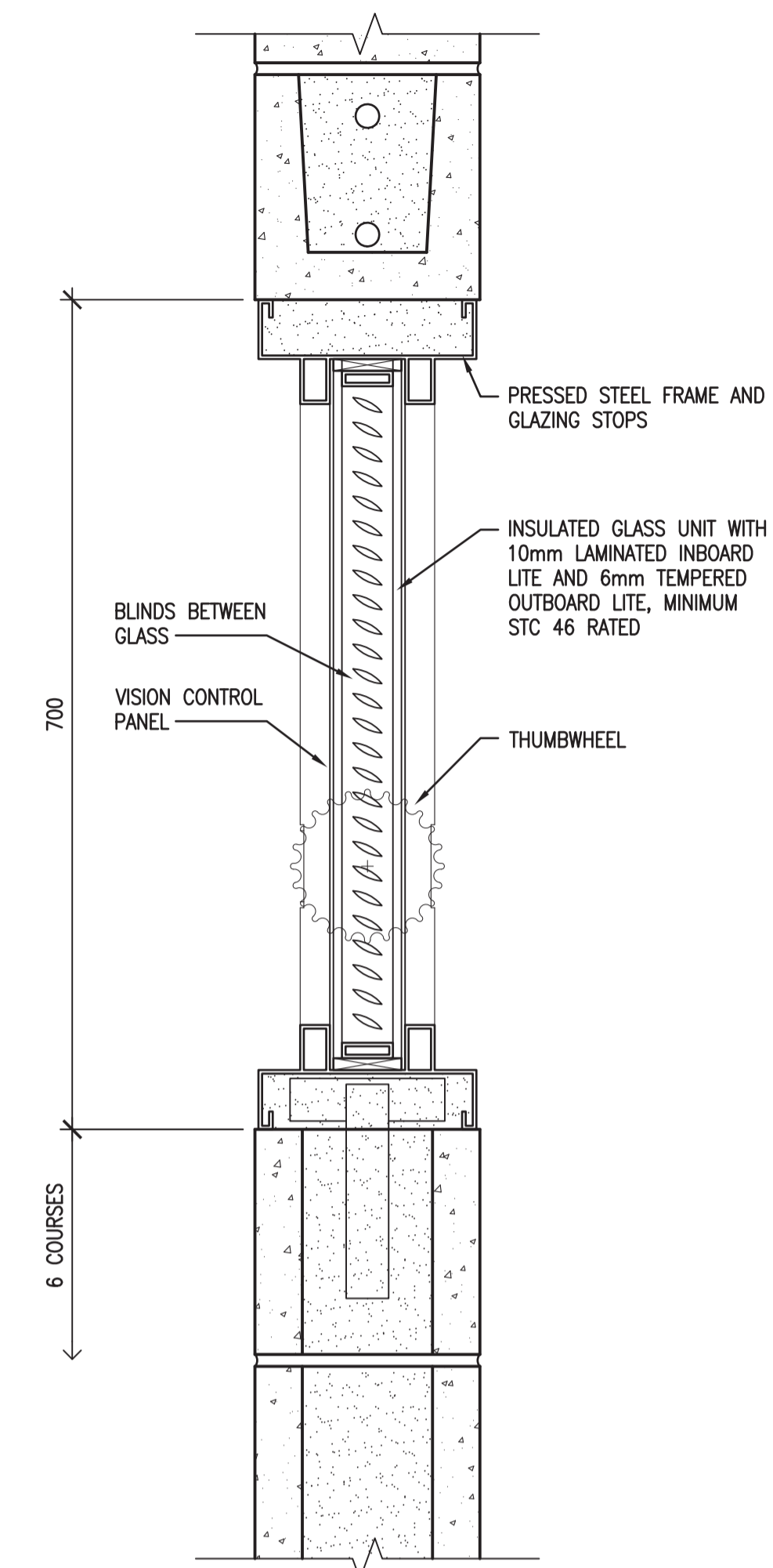
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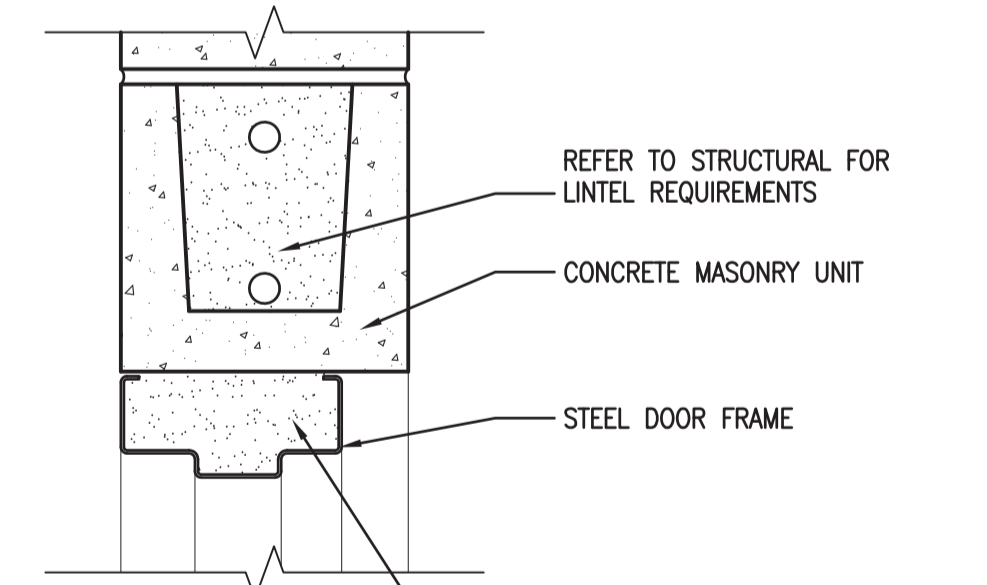
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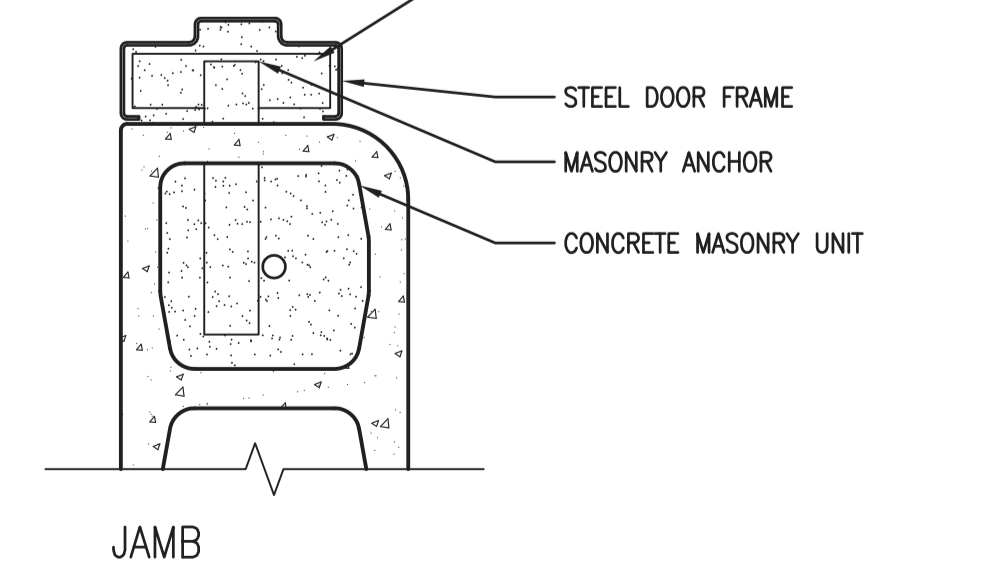
THRESHOLD



1 WINDOW TYPE 'I' DETAIL  
1:5



HEAD



JAMB

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Client/client		

Project title/Titre du projet

**NEW POLICE BUILDING  
MIDSTONE, SASKATCHEWAN**

Approved by/Approve par

Designed by/Concept par  
DE

Drawn by/Designe par  
DE / NO

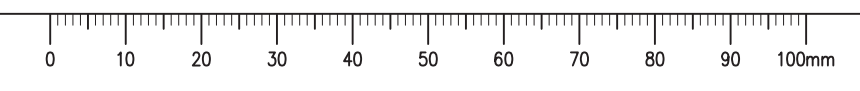
Project Manager/Administrateur de Projets  
CS

Architectural and Engineering Resources Manager/  
Ressources Architectural et de Directeur d'ingénierie

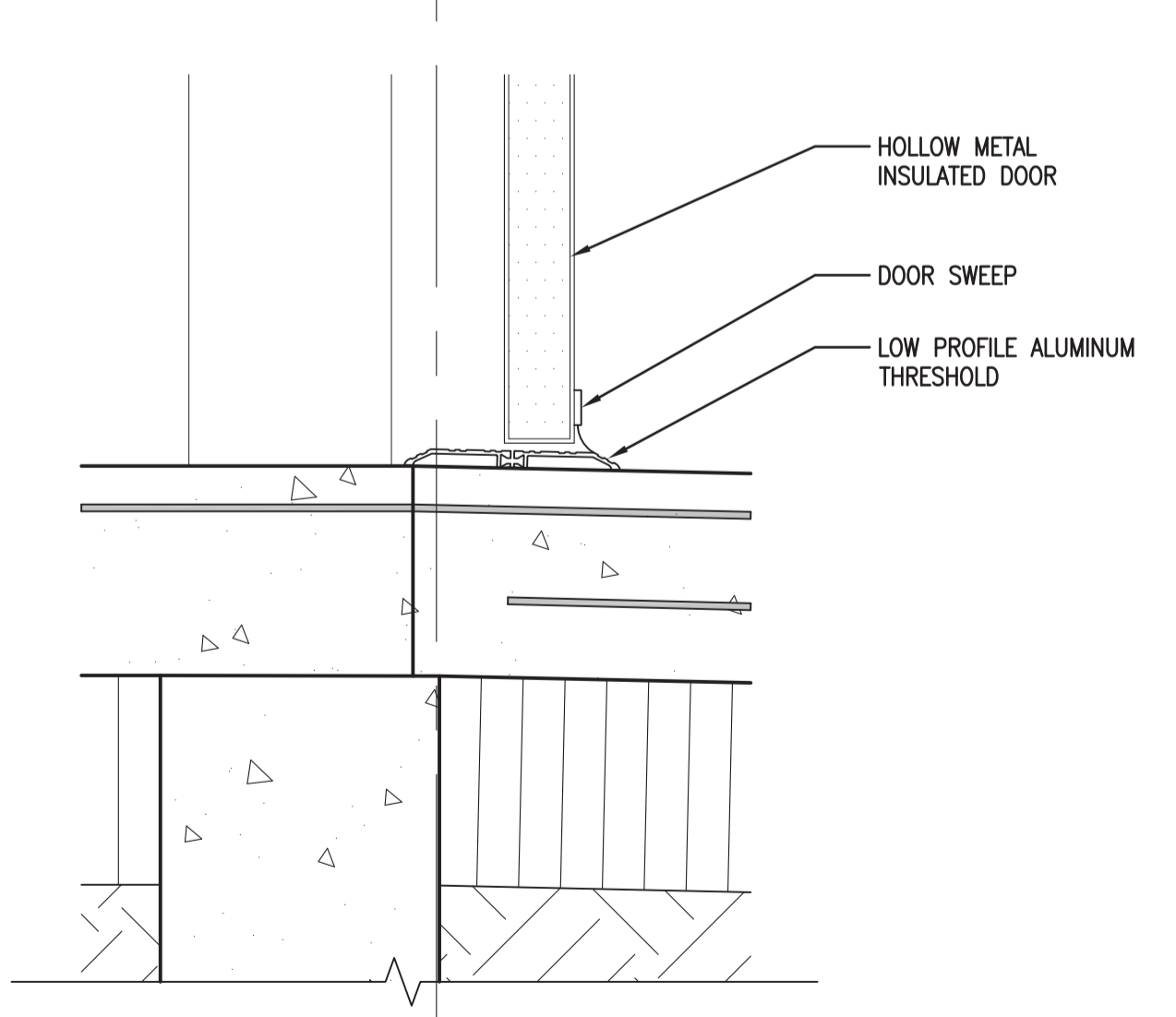
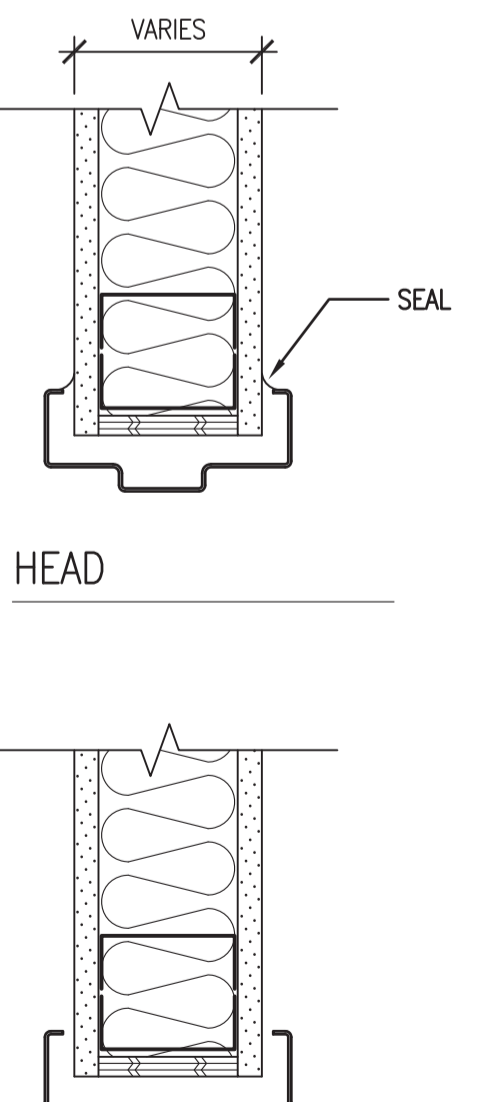
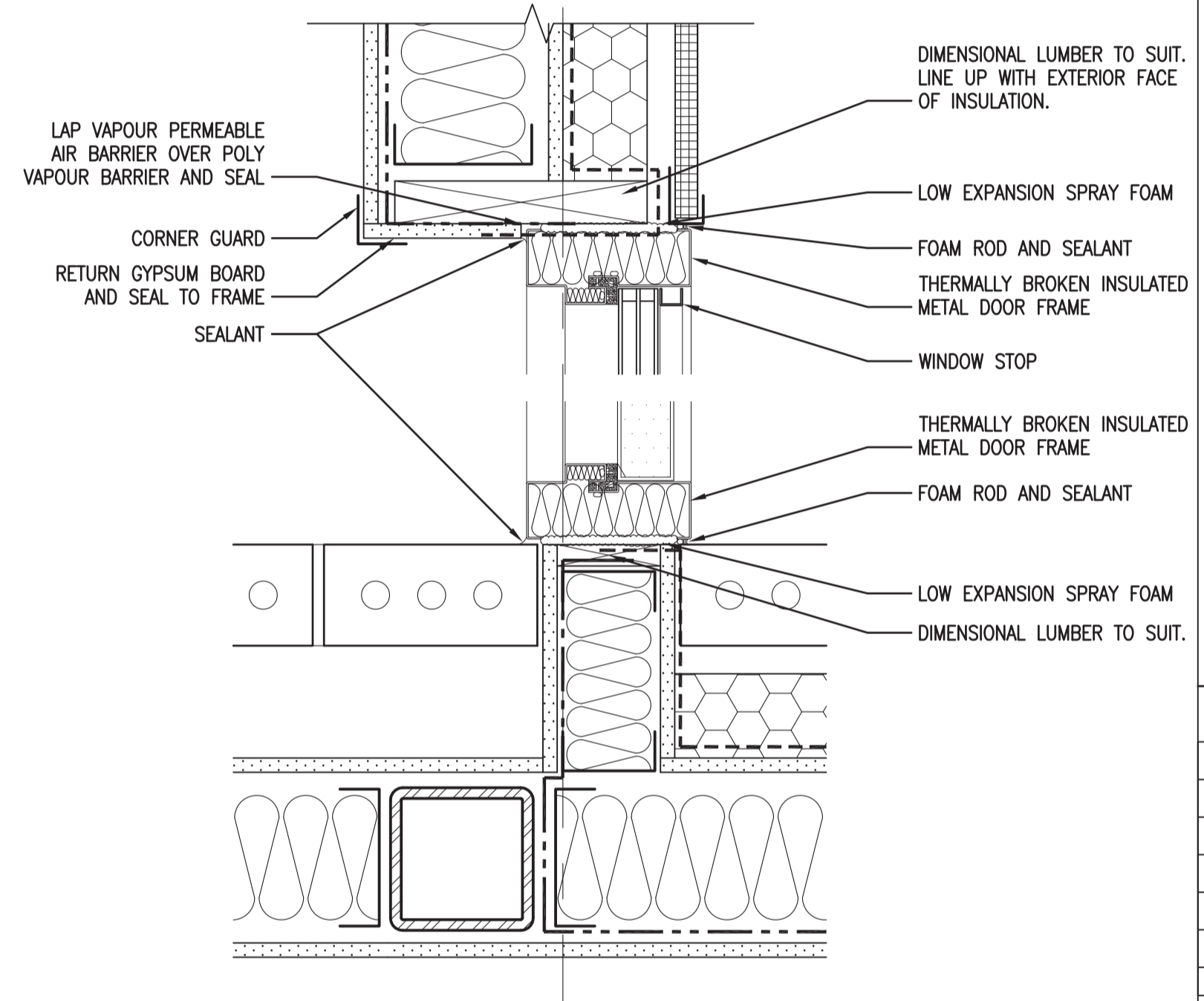
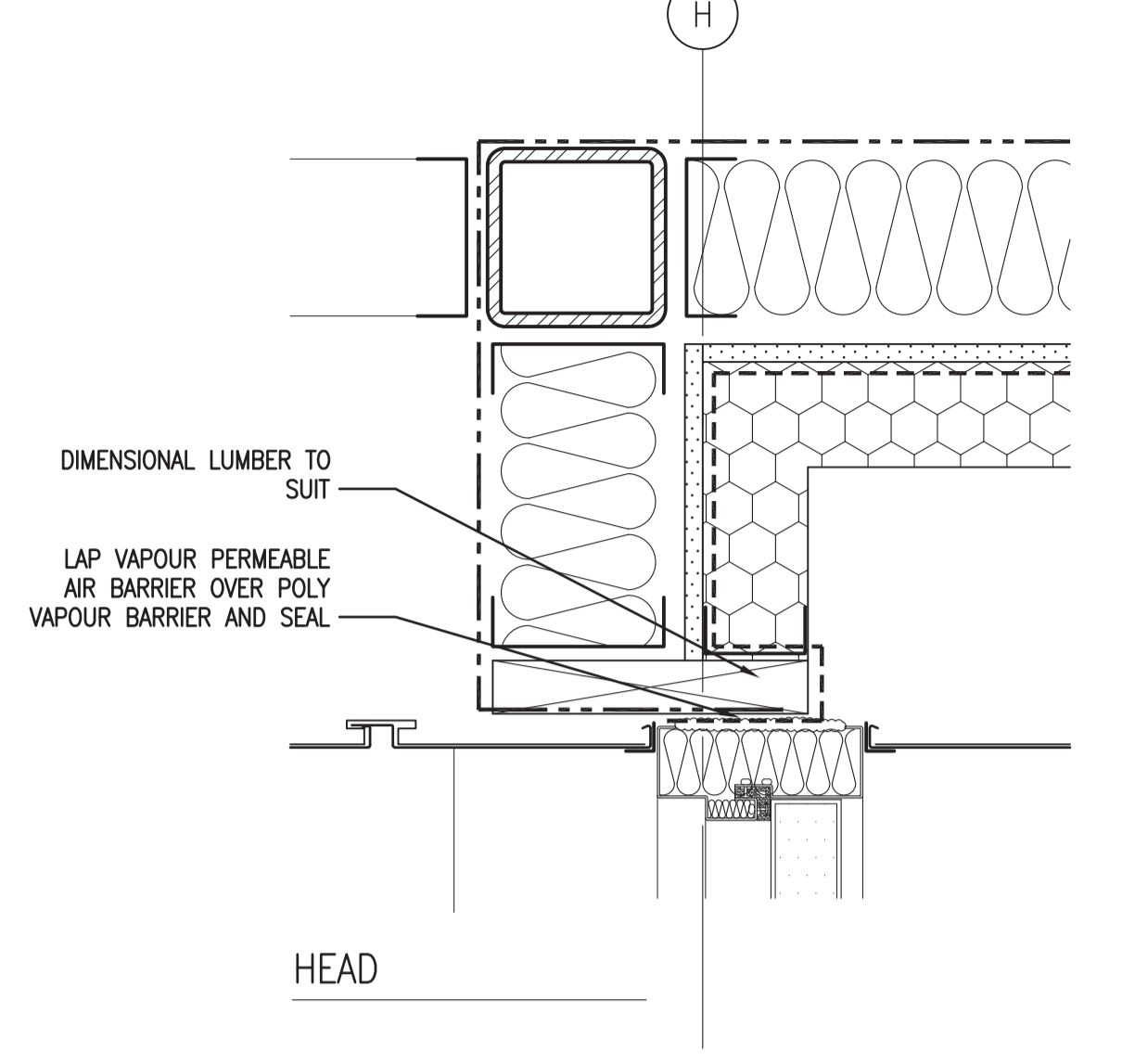
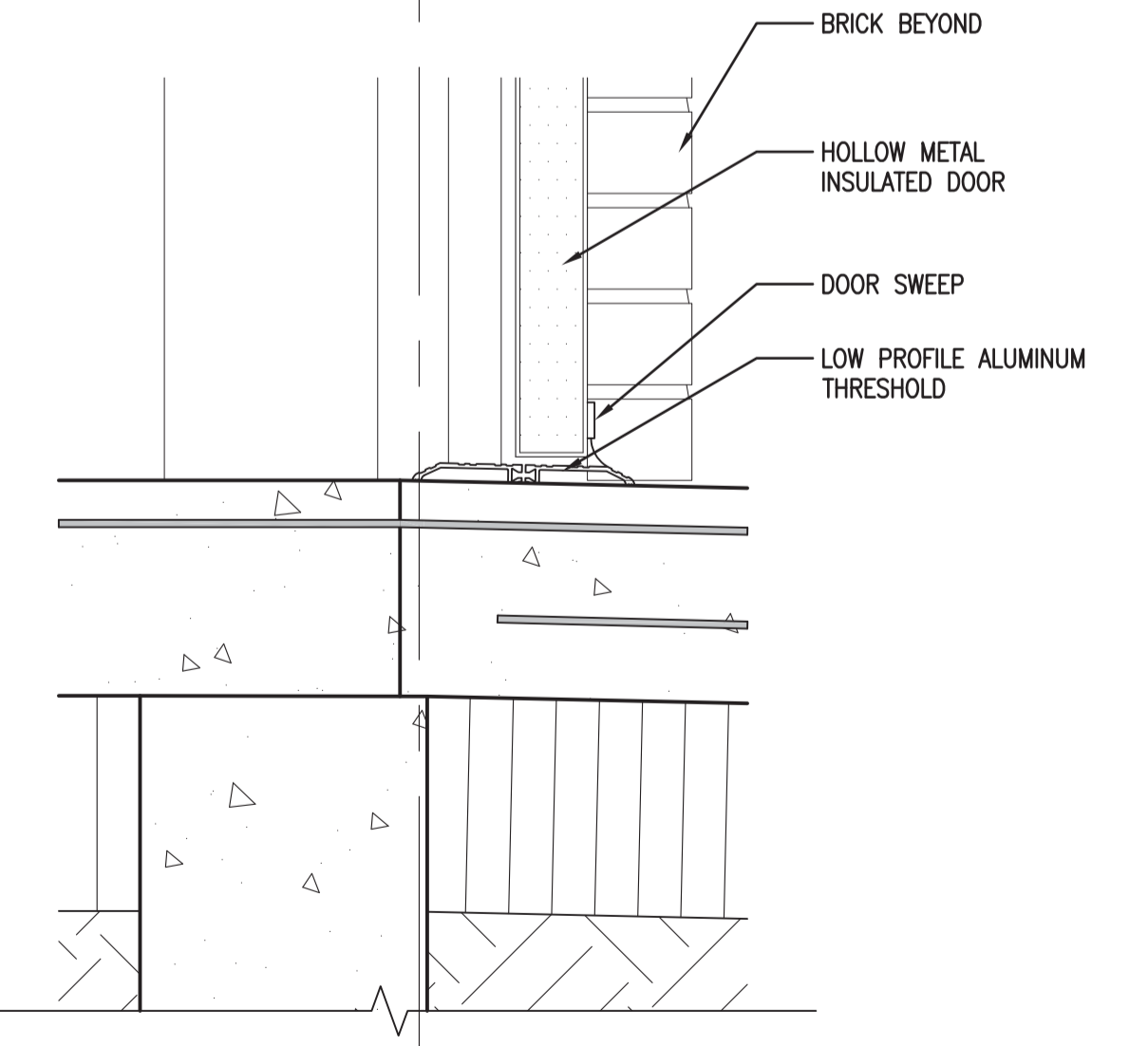
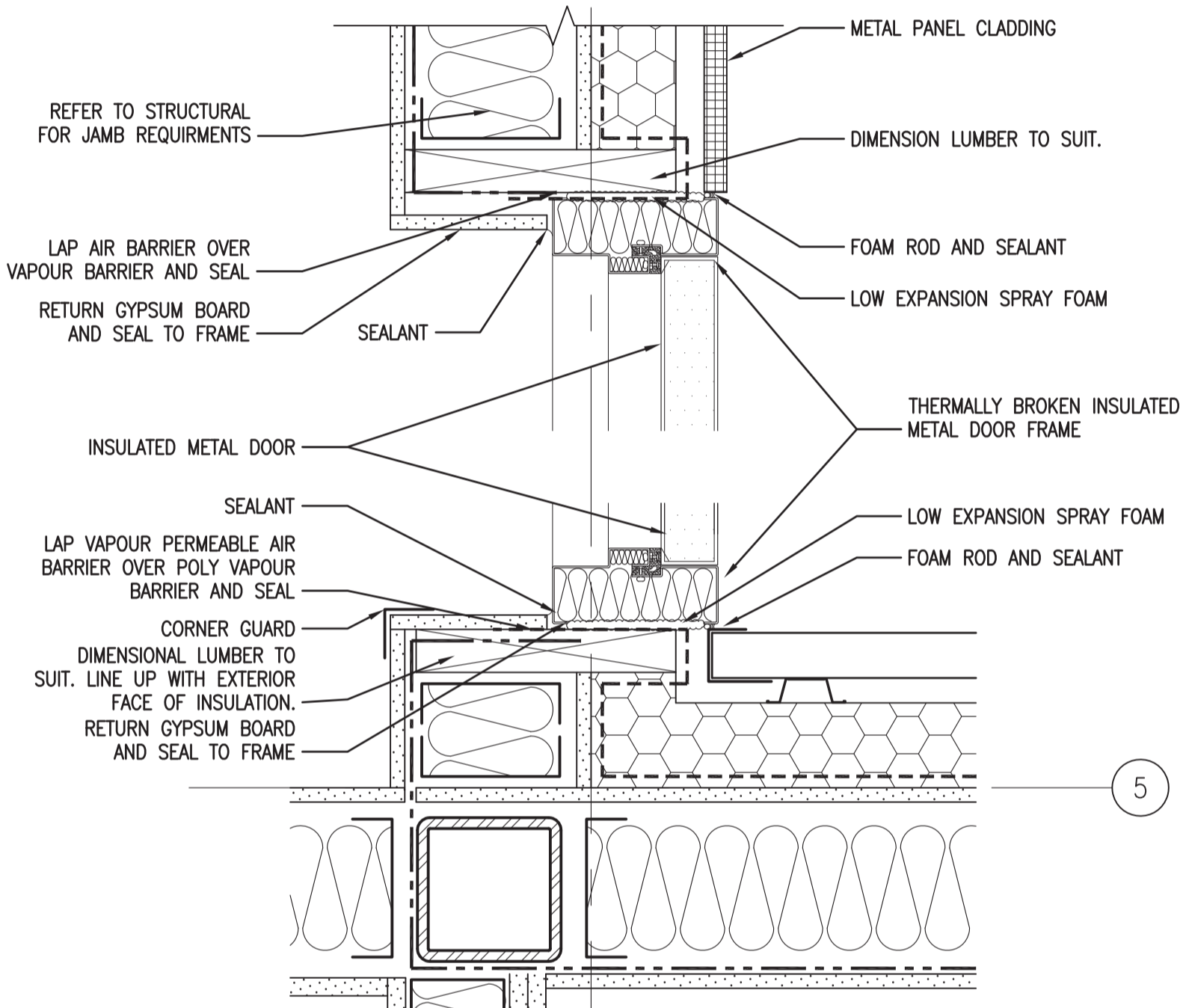
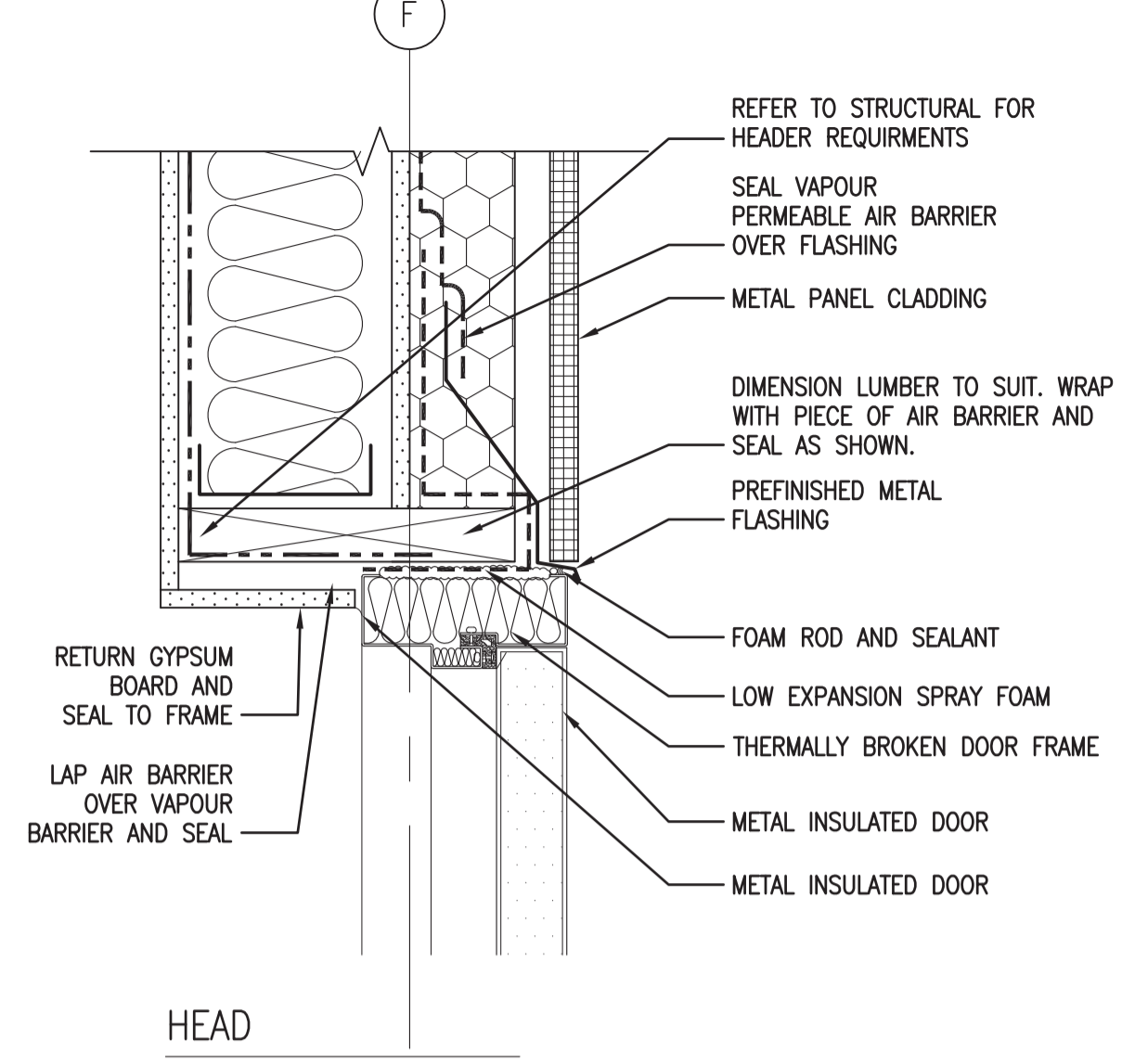
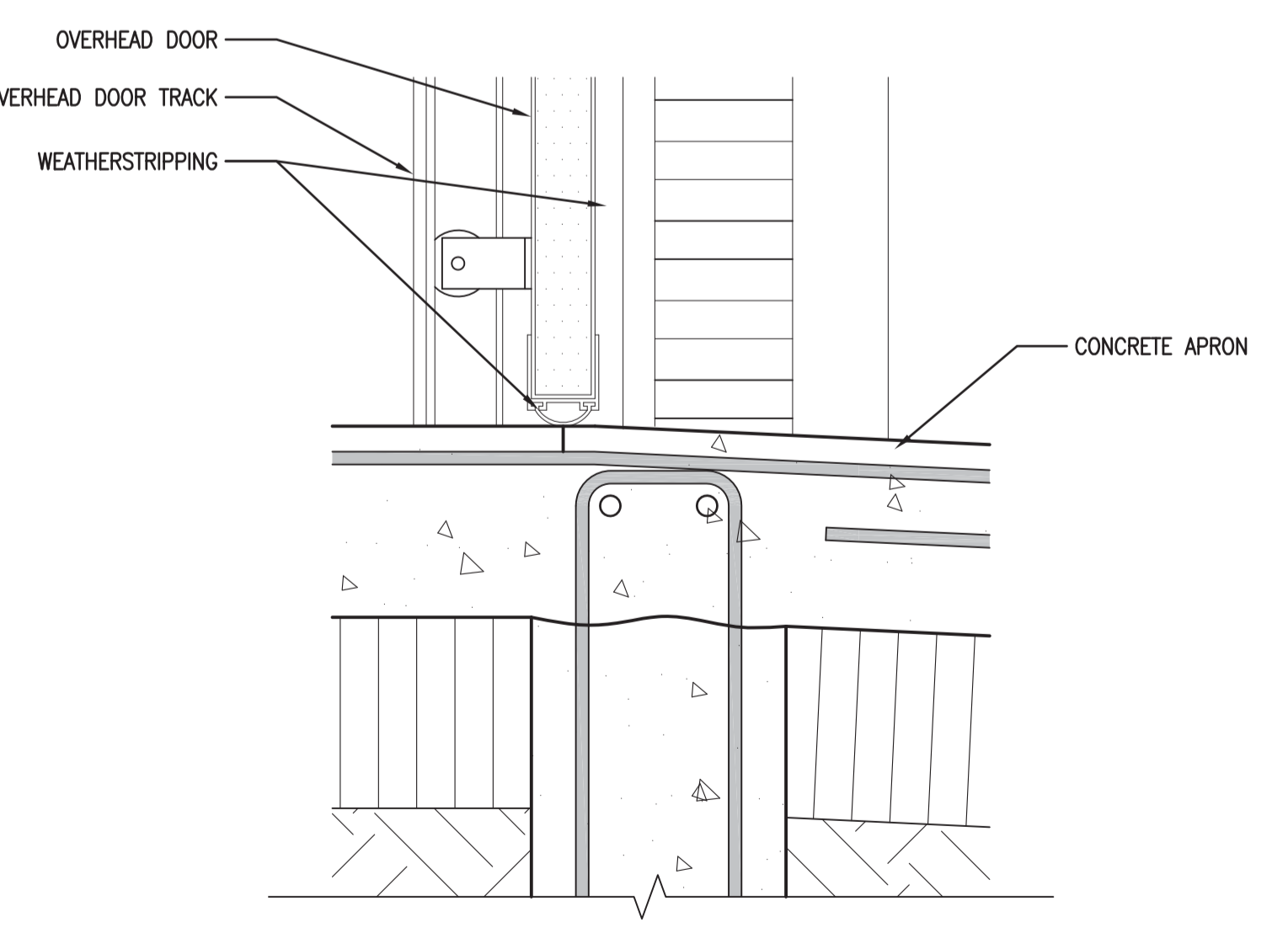
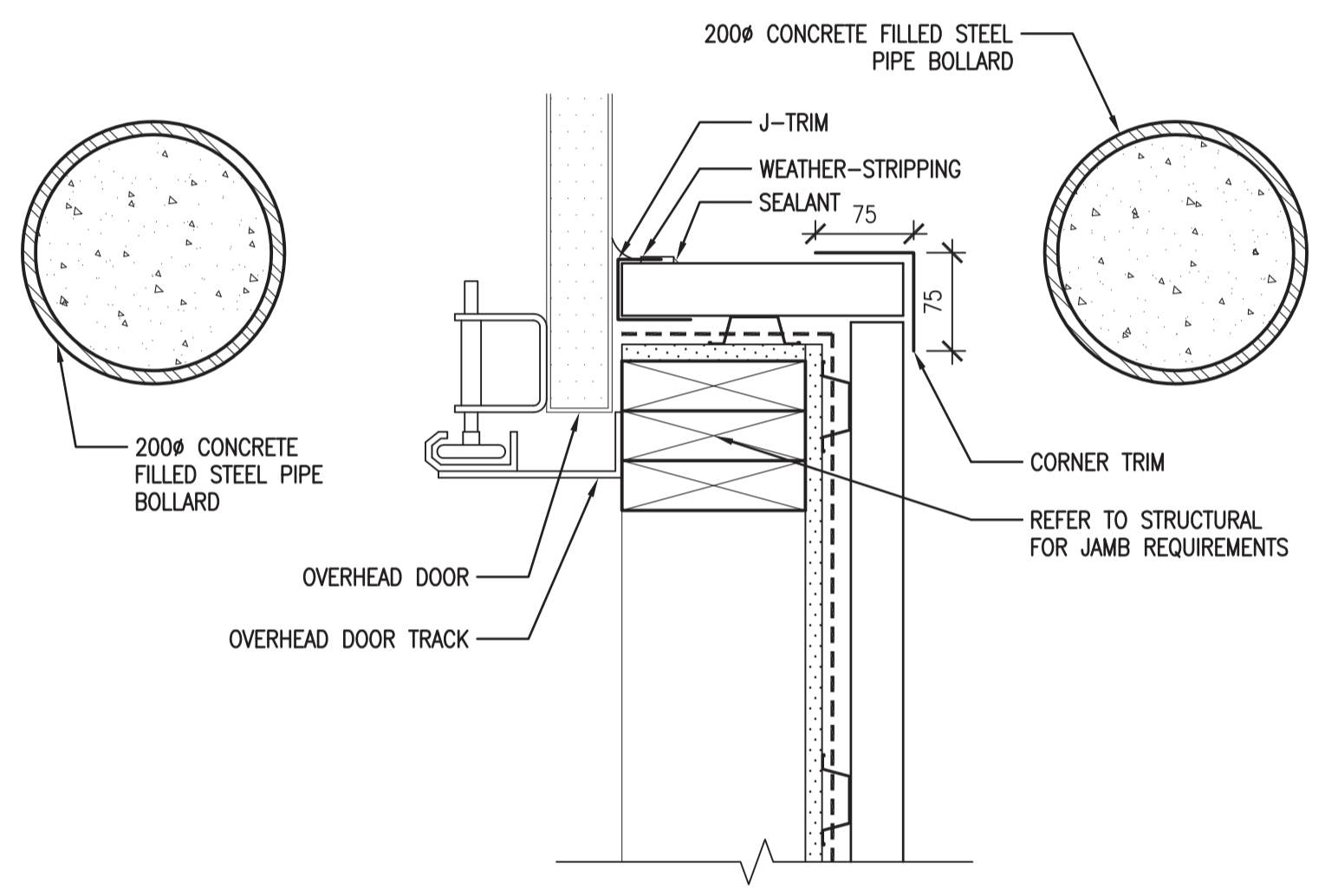
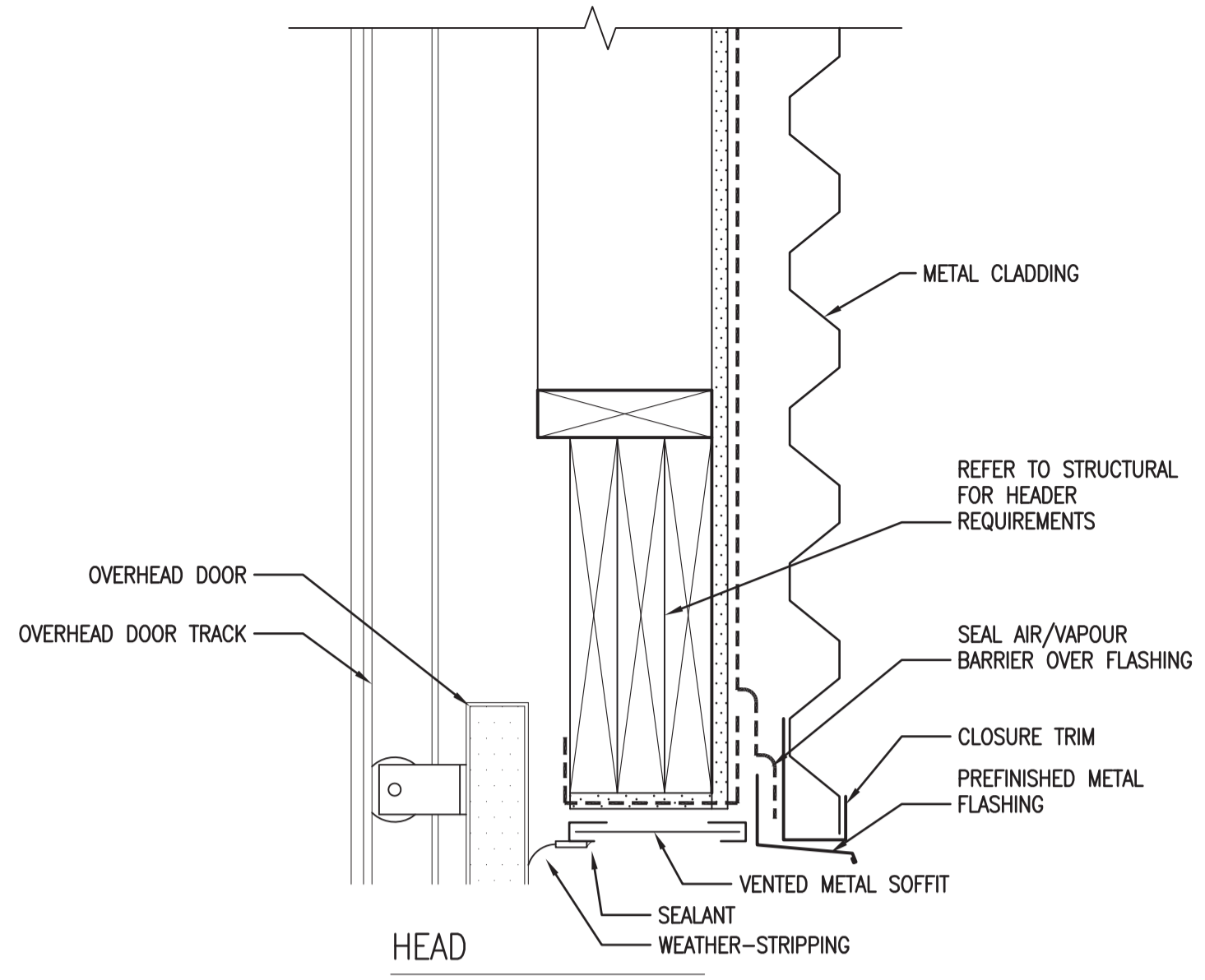
Client/client

Drawing title/Titre du dessin  
**DOOR DETAILS**

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Revision/Revision Client/client	Description/Description	Date/Date

Project title/Titre du projet

**NEW POLICE BUILDING  
MIDSTONE, SASKATCHEWAN**

Approved by/Approve par

Designed by/Concept par  
DE

Drawn by/Dessine par  
DE / NO

Project Manager/Administrateur de Projets  
CS

Architectural and Engineering Resources Manager/  
Ressources Architectural et de Directeur d'ingénierie

Client/client

Drawing title/Titre du dessin  
**DOOR DETAILS**

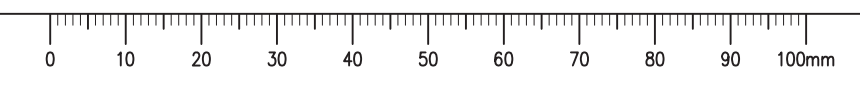
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**4** DOOR 157B DETAILS  
A2.2 1:5

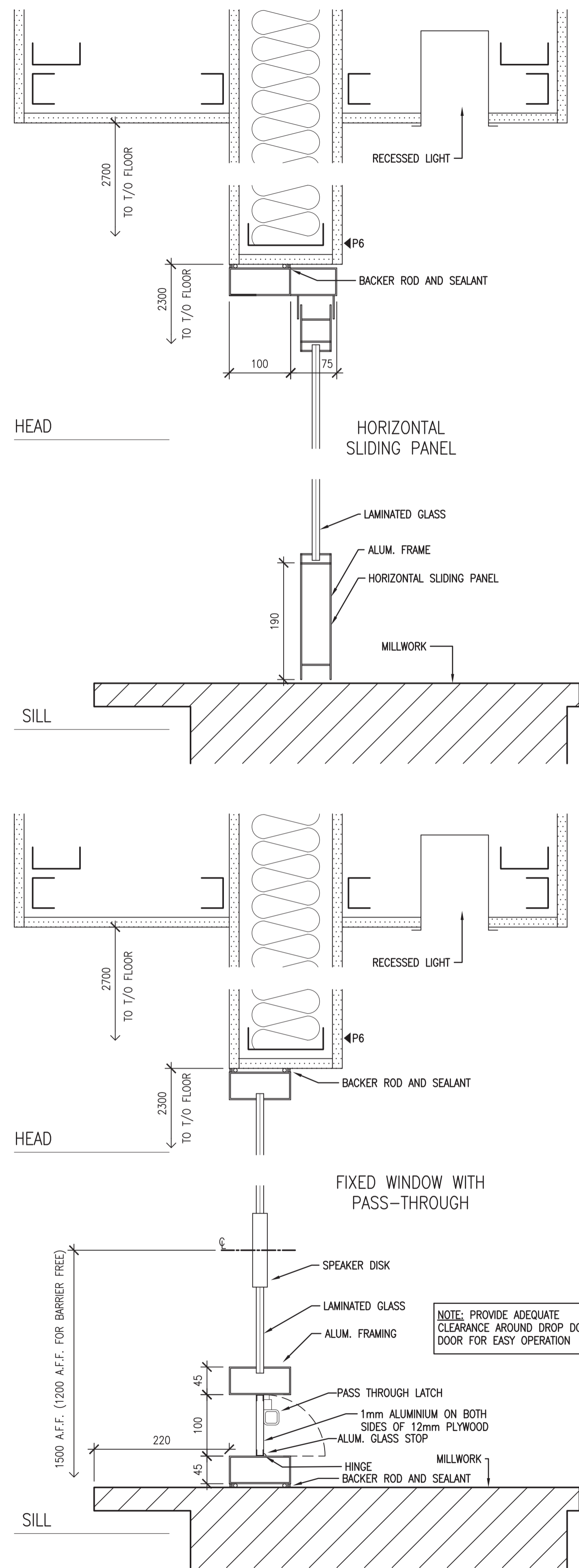
**3** DOOR 107A DETAILS  
A2.2 1:5

**2** DOOR DETAILS - P1 TO P7 WALL  
A2.2 1:5

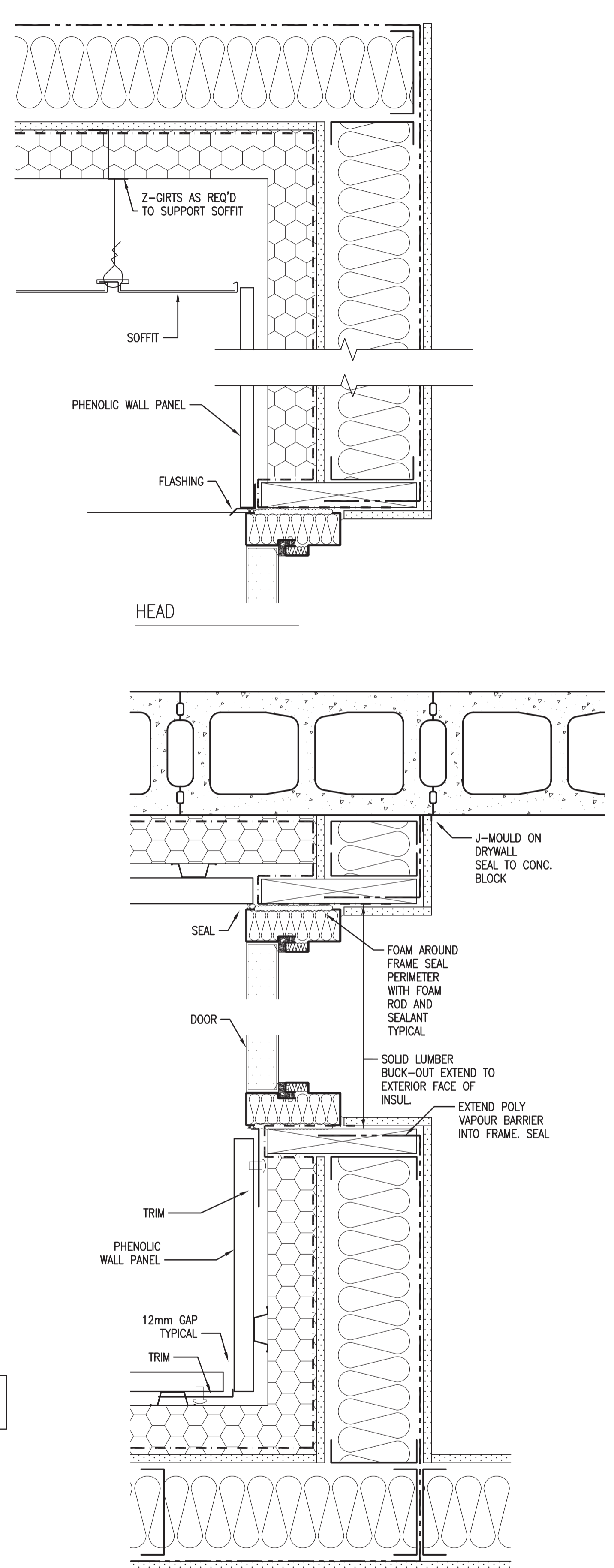
**1** DOOR 101A DETAILS  
A2.2 1:5



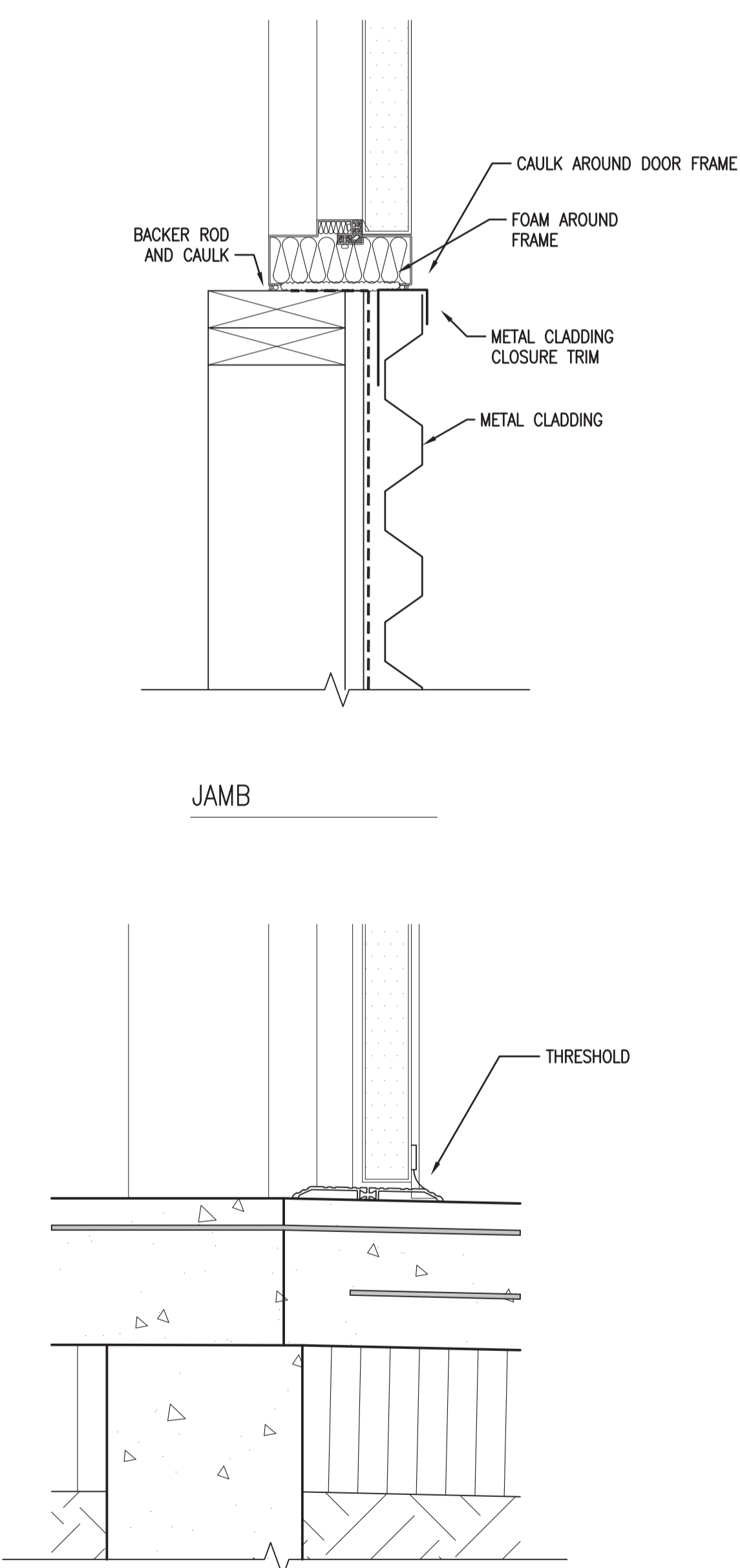




3 WINDOW TYPE H DETAILS  
A2.2 1:5



2 DOOR 131A DETAILS  
A2.2 1:5



1 DOOR 157A DETAILS  
A2.2 1:5

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**SASKATCHEWAN ASSOCIATION OF ARCHITECTS**

Dylan Elliott  
 SAA # 719 Regina SK

2014.12.16

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Revision/Revision	Description/Description	Date/Date
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**NEW POLICE BUILDING  
MIDSTONE, SASKATCHEWAN**

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Drawn by/Dessine par  
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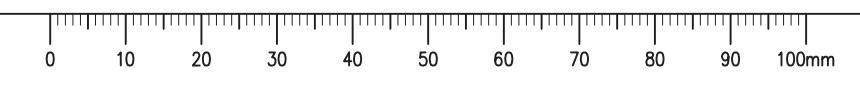
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CS

Architectural and Engineering Resources Manager/  
Ressources Architectural et de Directeur d'ingénierie

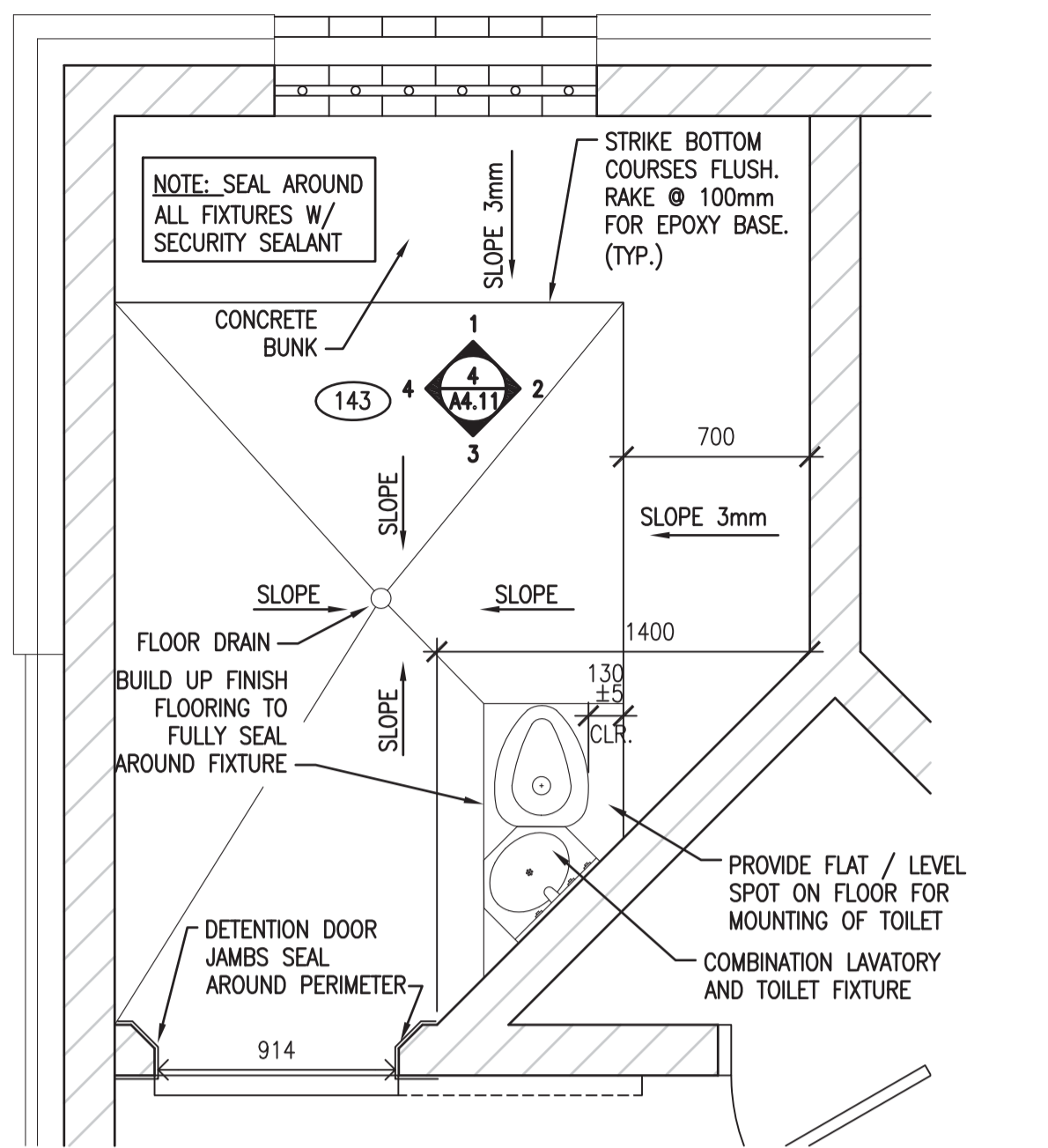
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Drawing title/Titre du dessin  
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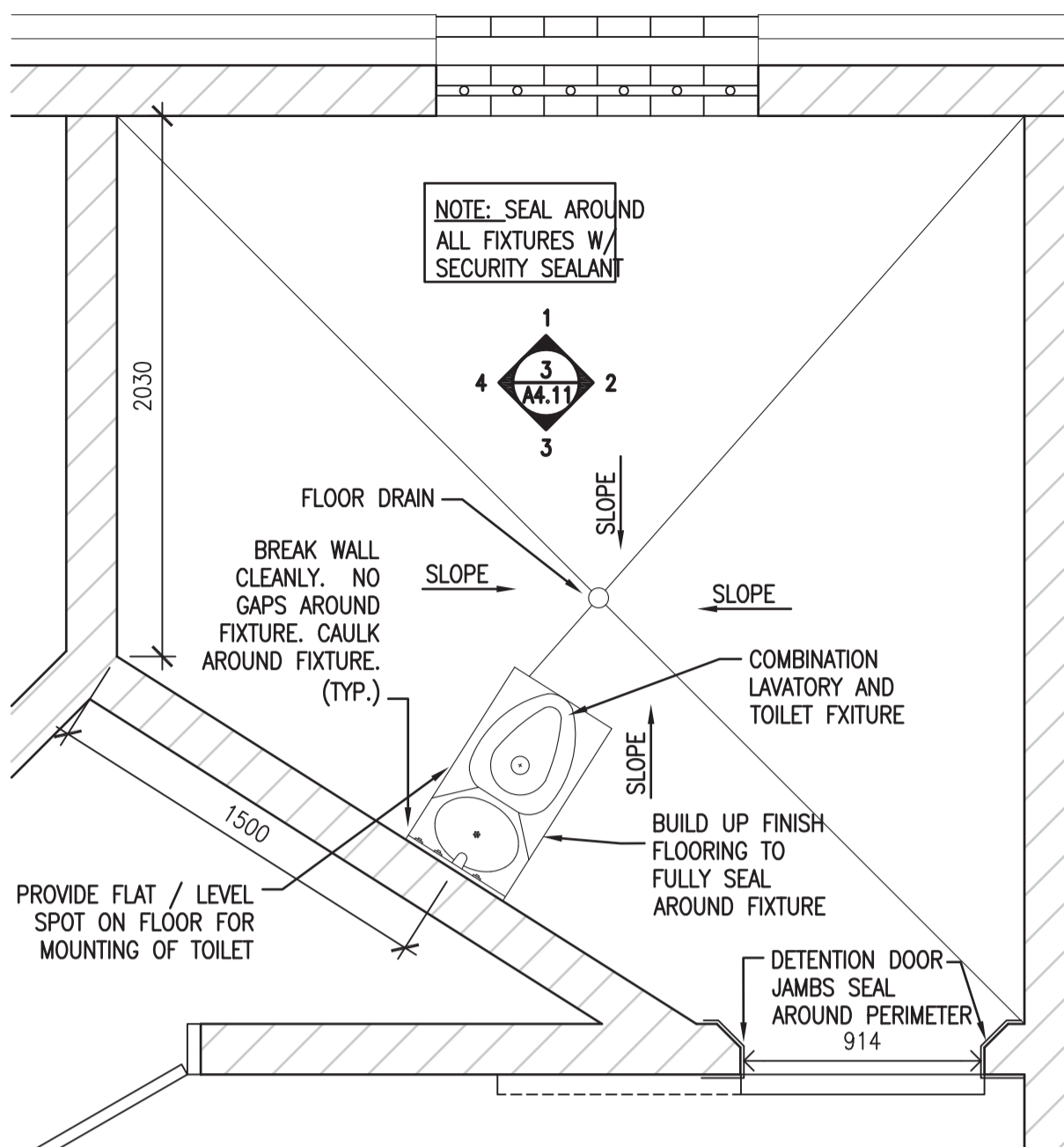
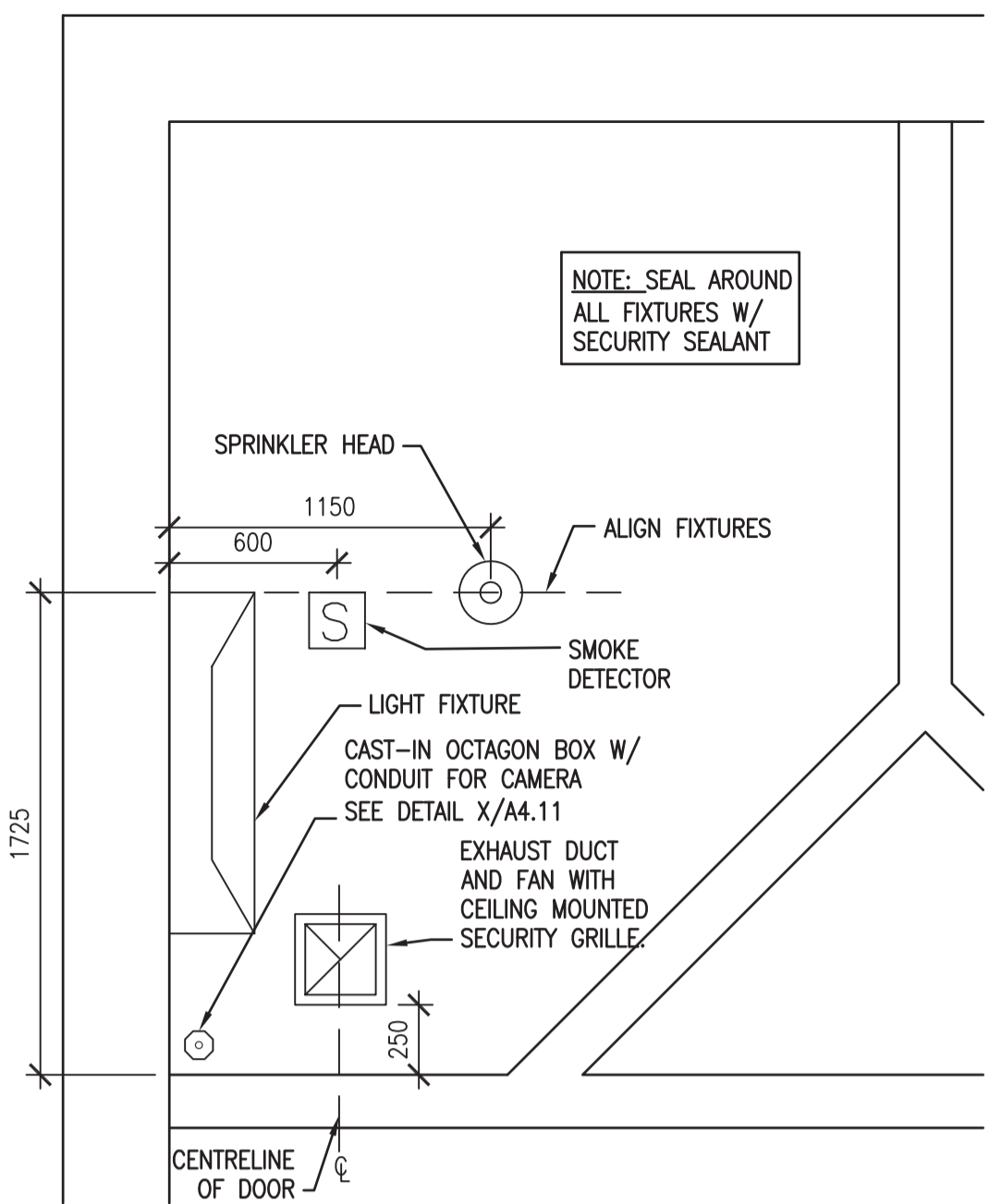
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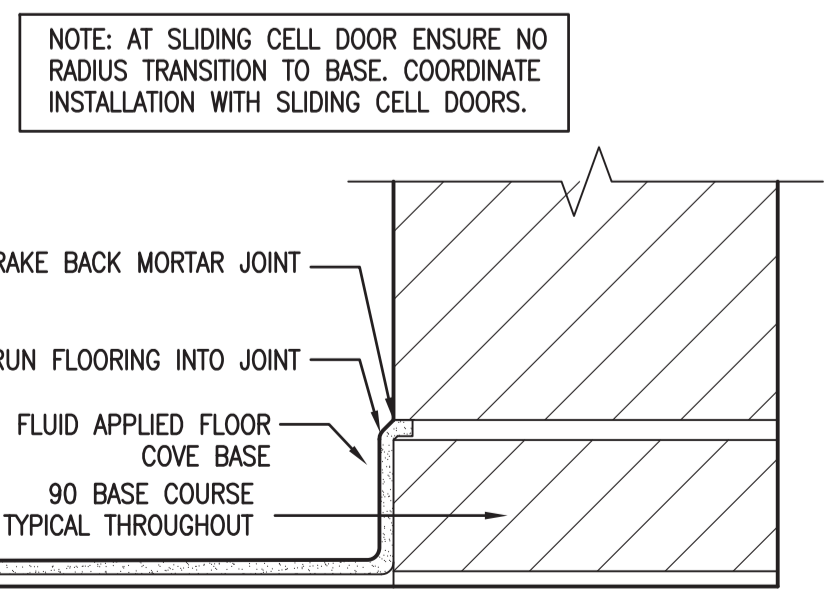
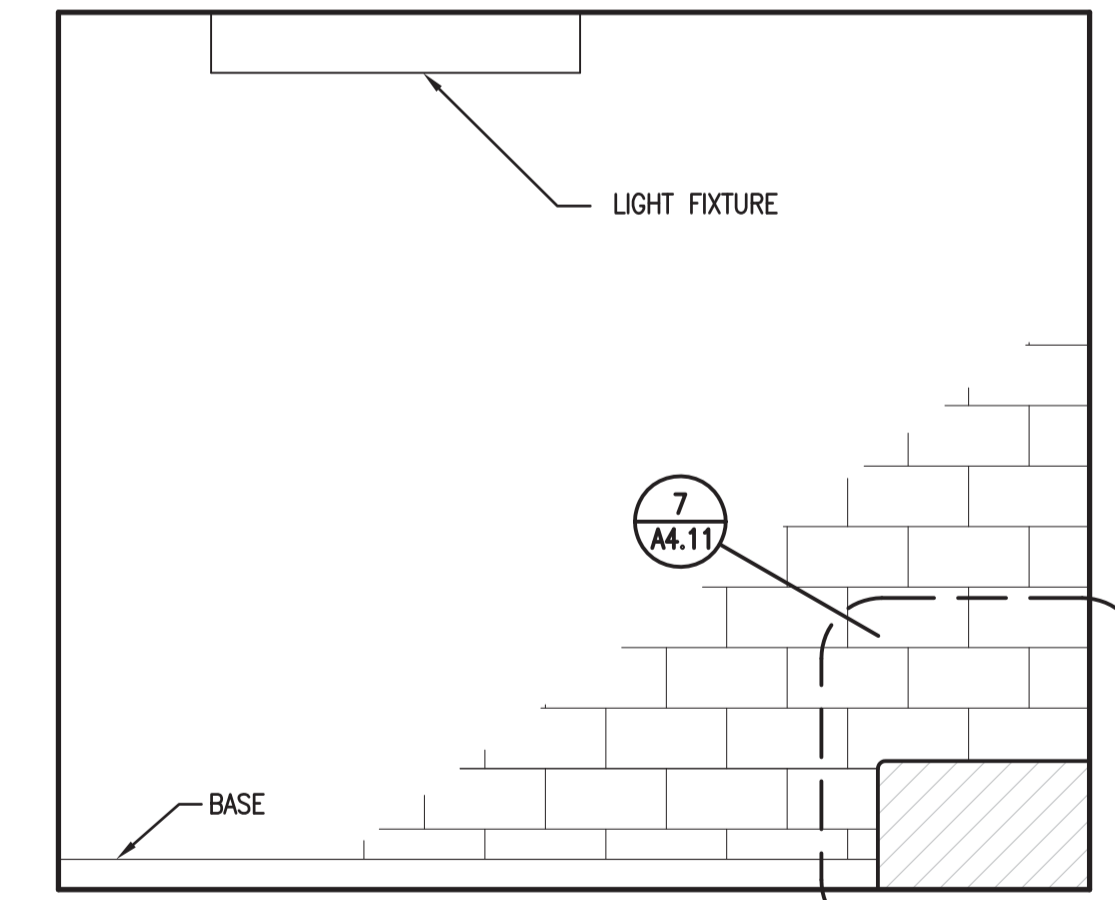
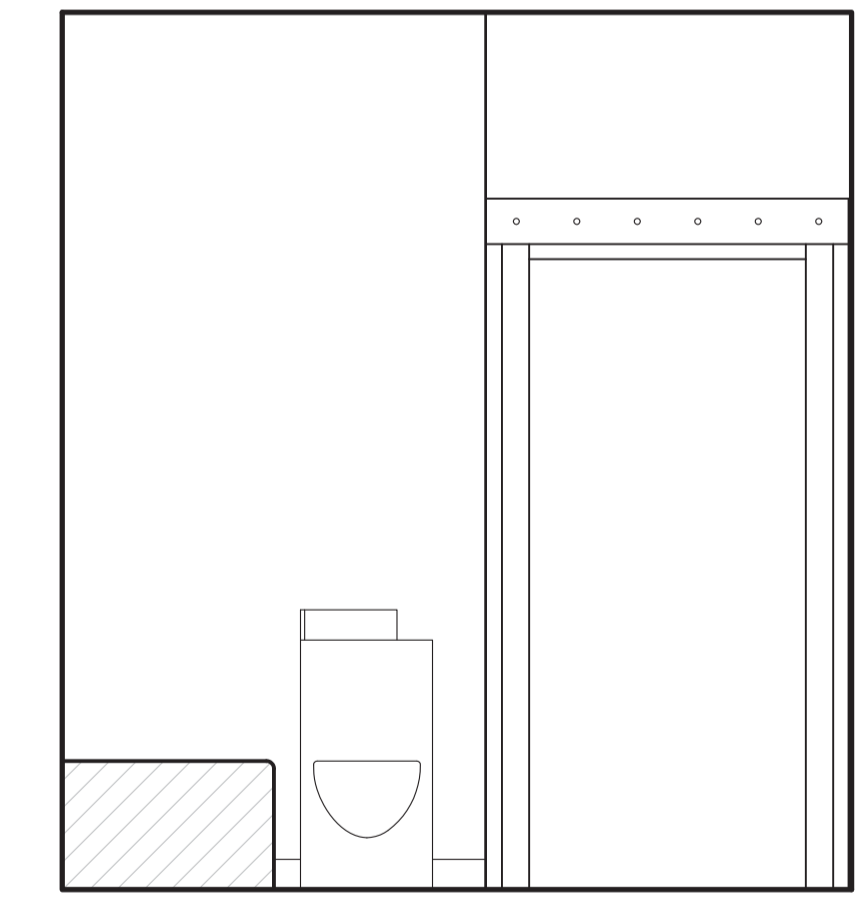
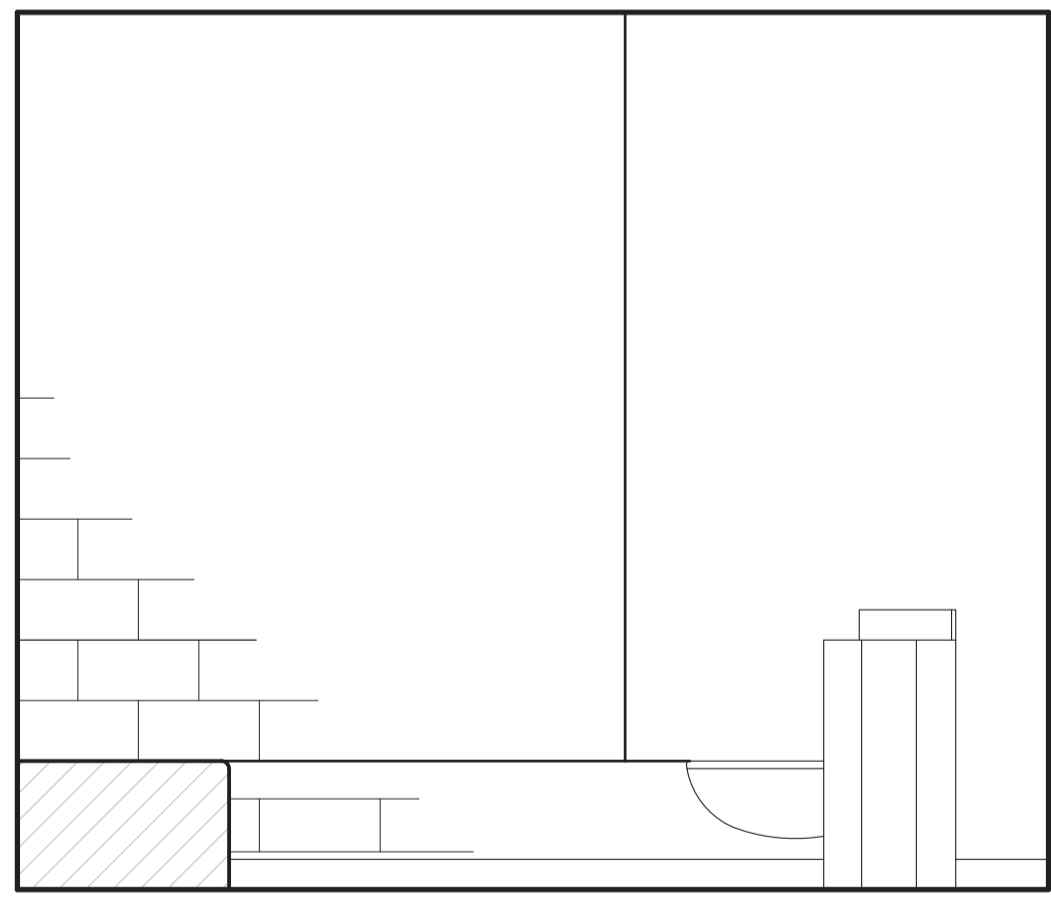
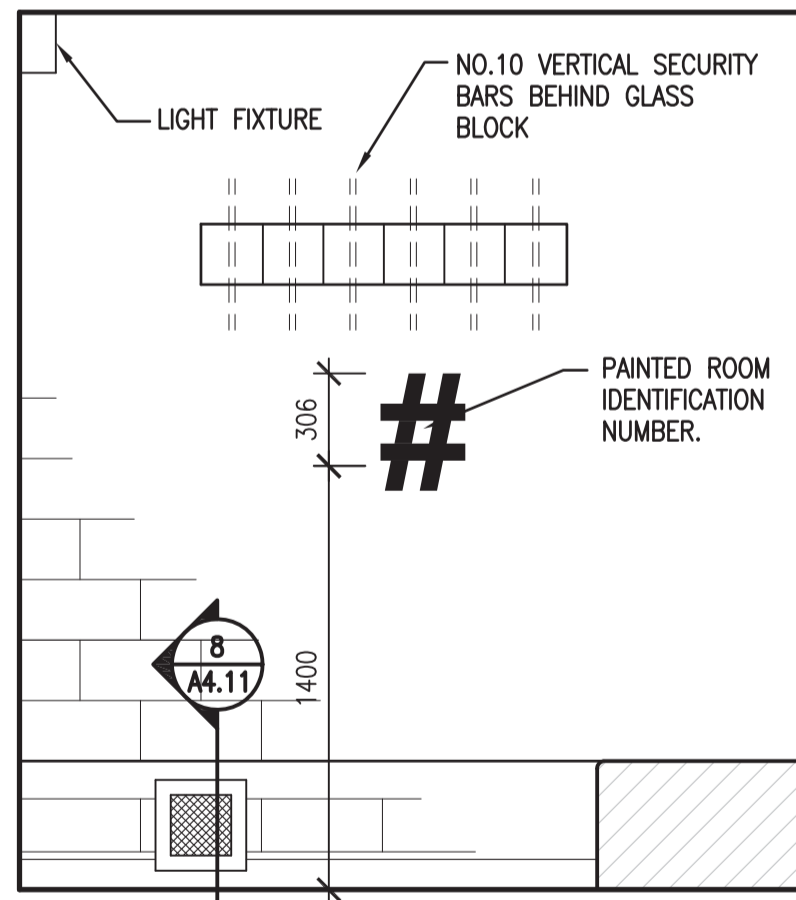
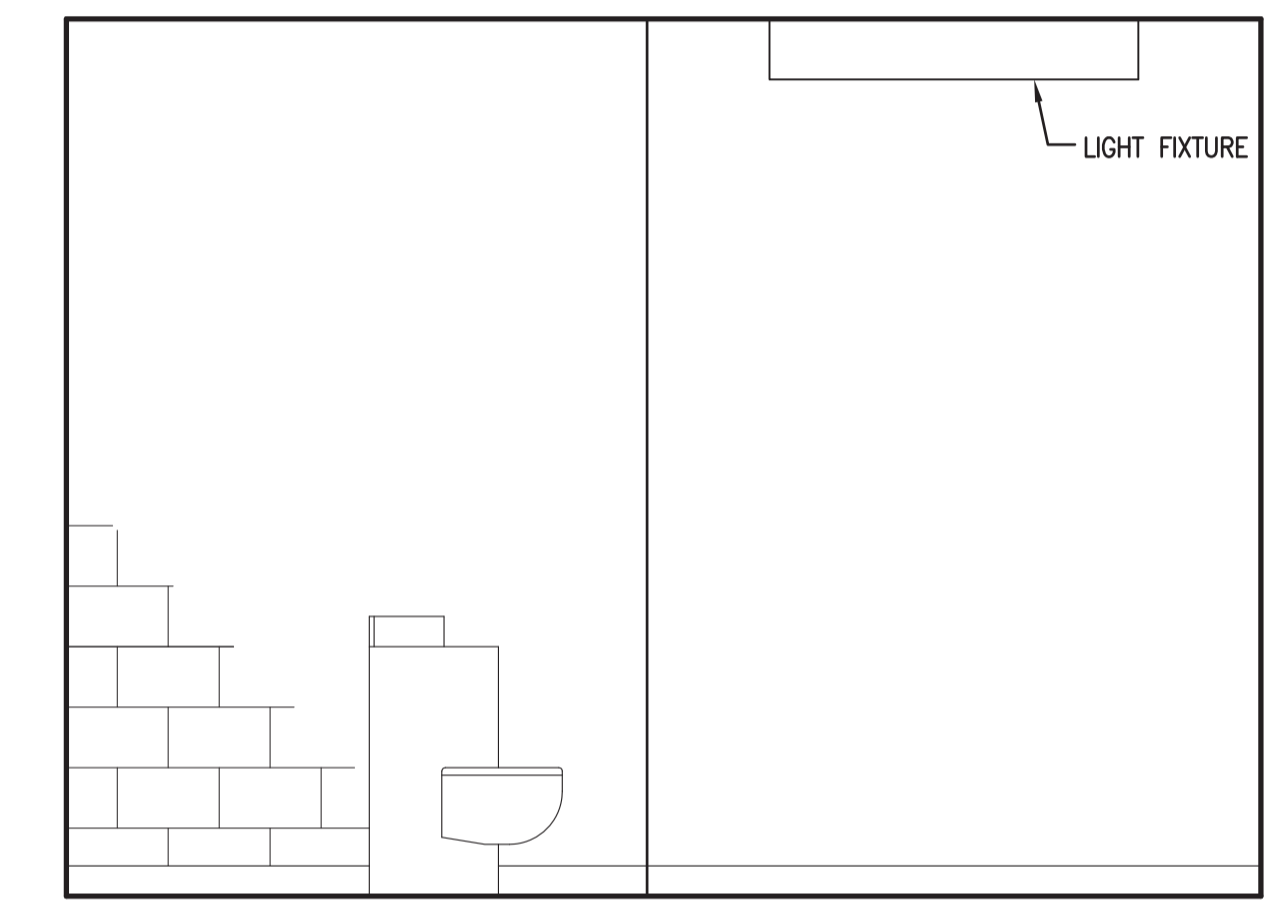
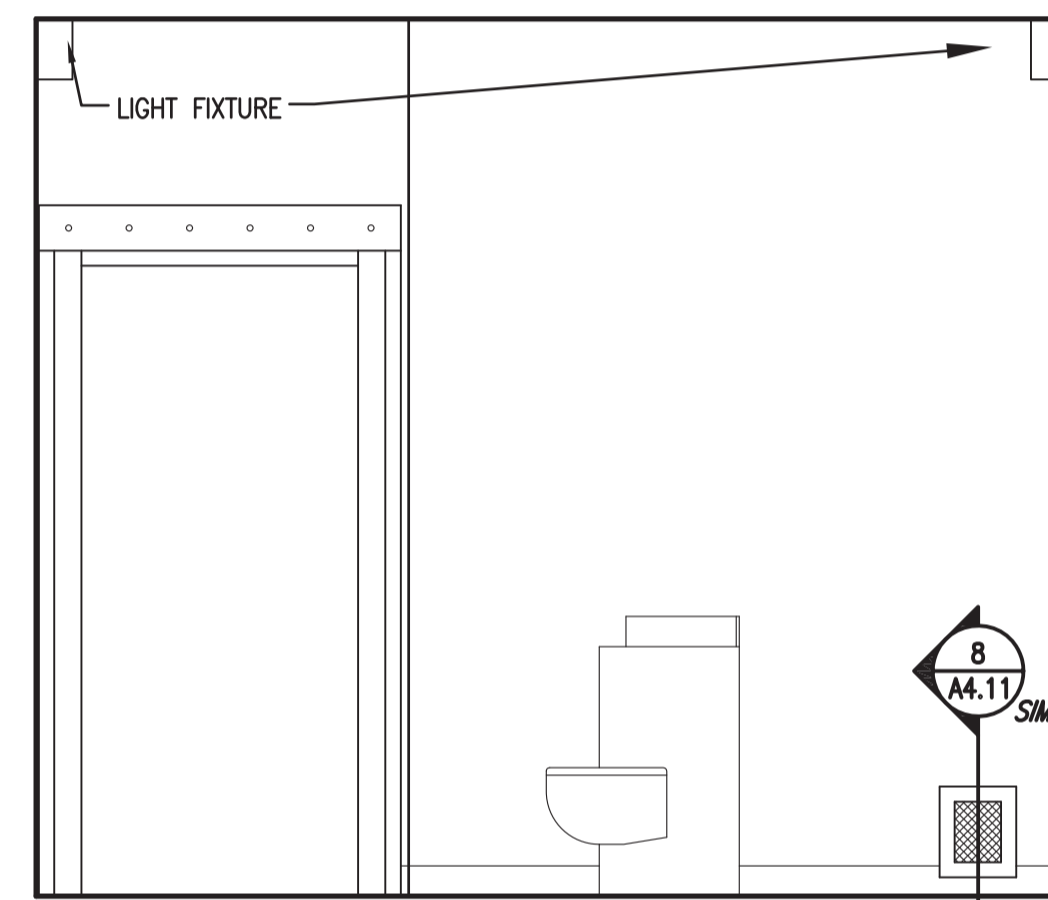
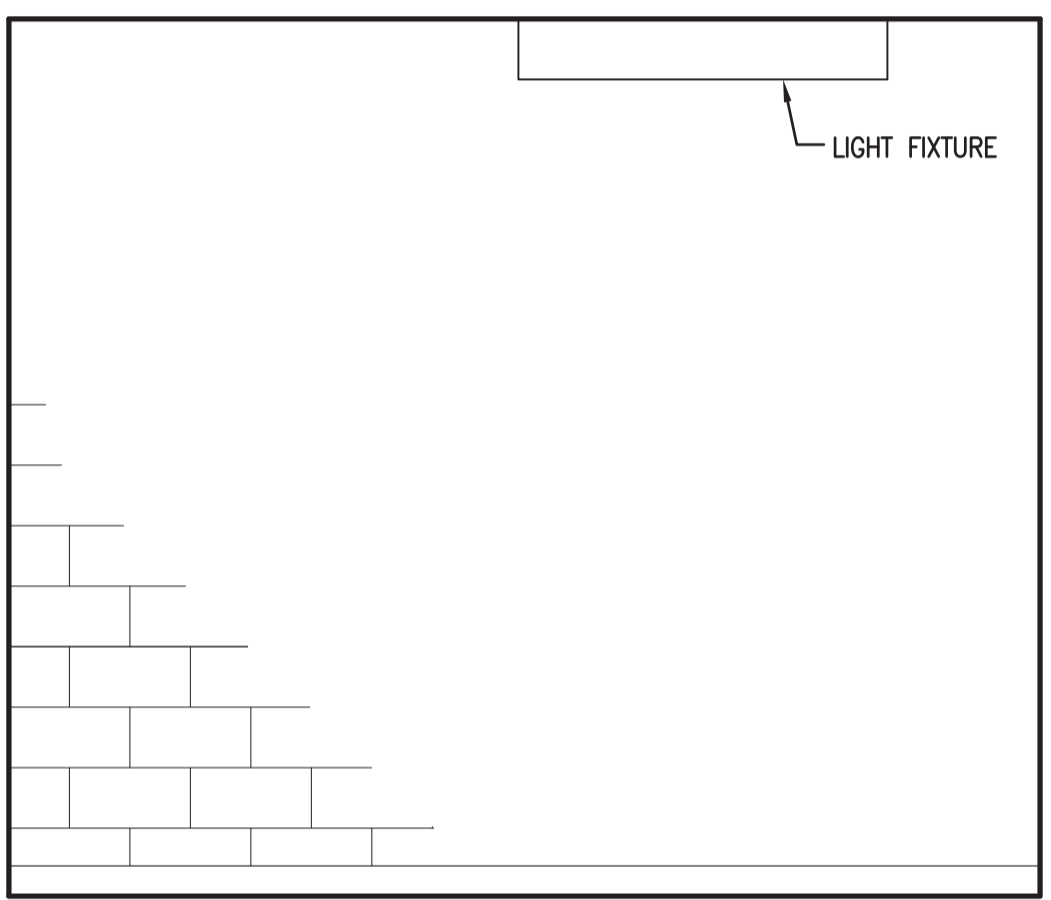
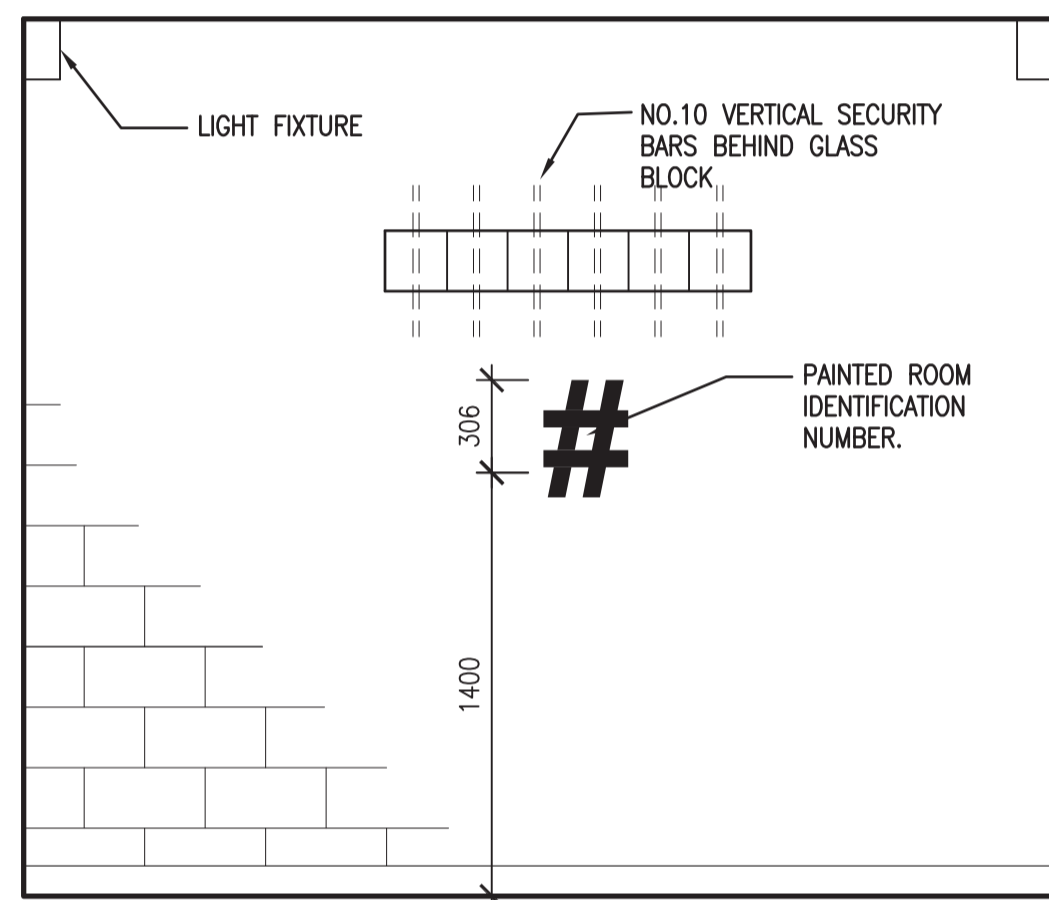
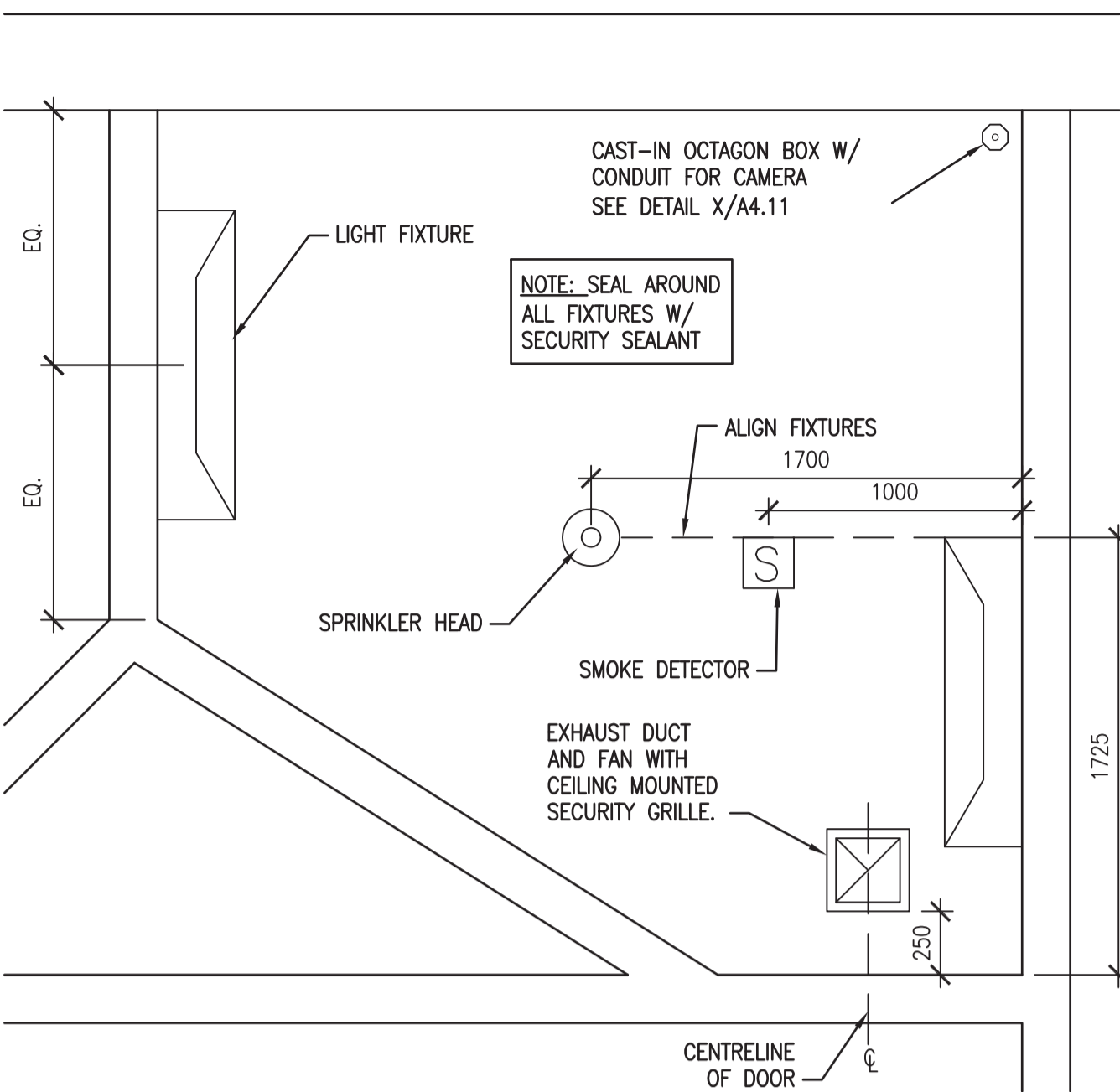




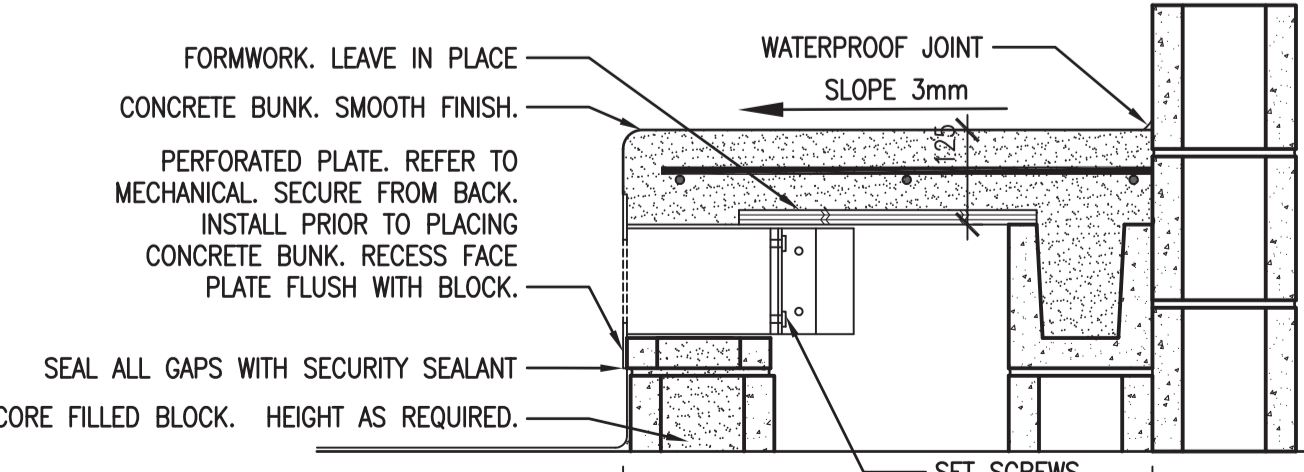
2 ROOM 143 FLOOR AND CEILING PLAN  
1:25  
ROOMS 144 AND 146 SIMILAR



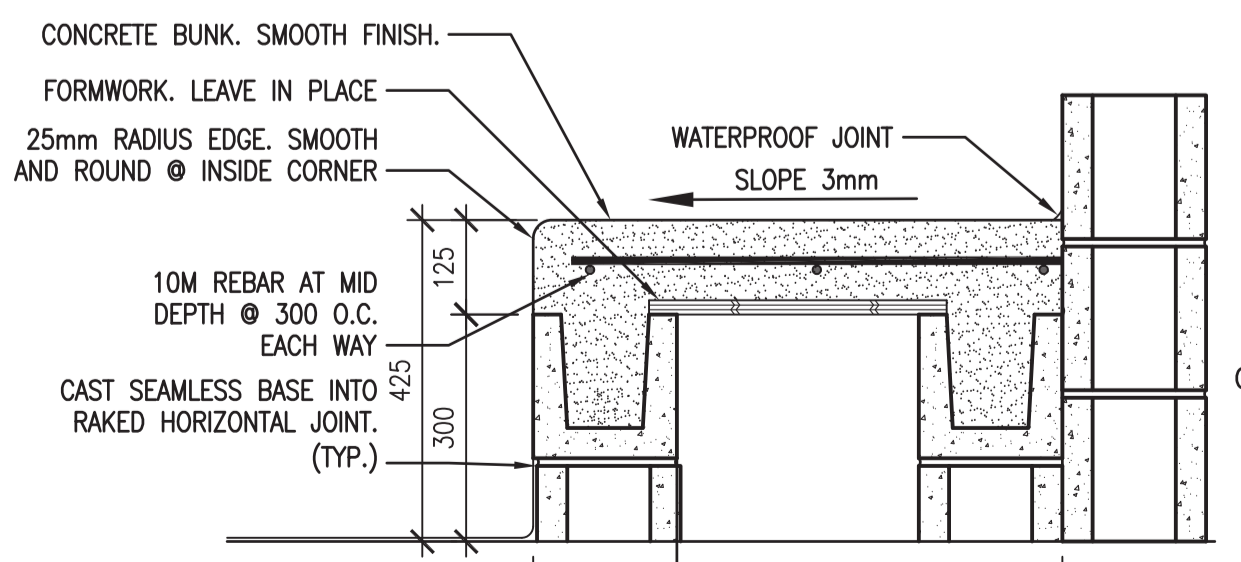
1 ROOM 147 FLOOR AND CEILING PLAN  
1:25



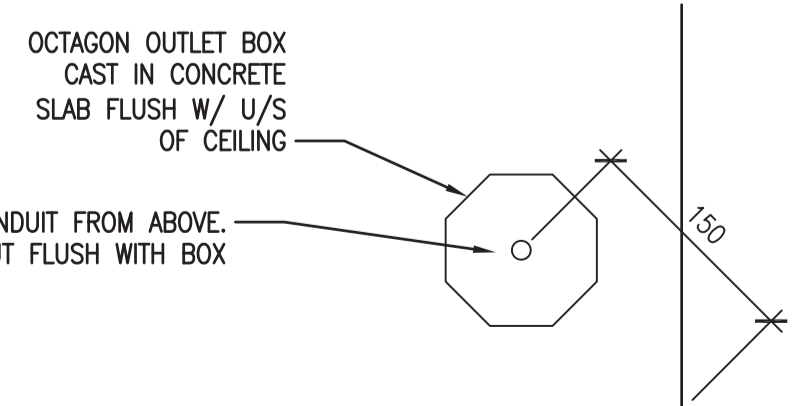
9 TYPICAL COVE BASE DETAIL  
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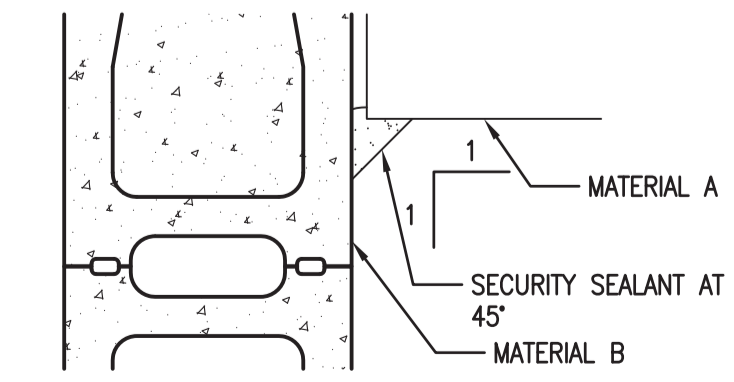
8 CONCRETE BUNK WITH RETURN AIR DETAIL  
1:10



7 CONCRETE BUNK DETAIL  
1:10



6 CEILING DEVICE DETAIL  
1:5



5 TYP. SECURITY SEALANT  
1:5



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Client/client		

Project title/Titre du projet

**NEW POLICE BUILDING  
MAIDSTONE, SASKATCHEWAN**

Approved by/Approve par

Designed by/Concept par  
DE

Drawn by/Designe par  
DE / NO

Project Manager/Administrateur de Projets  
CS

Architectural and Engineering Resources Manager/  
Ressources Architectural et de Directeur d'ingénierie

Client/client

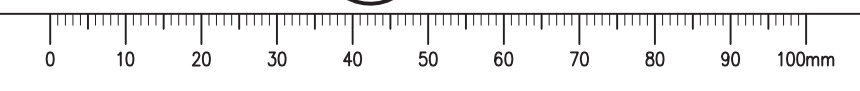
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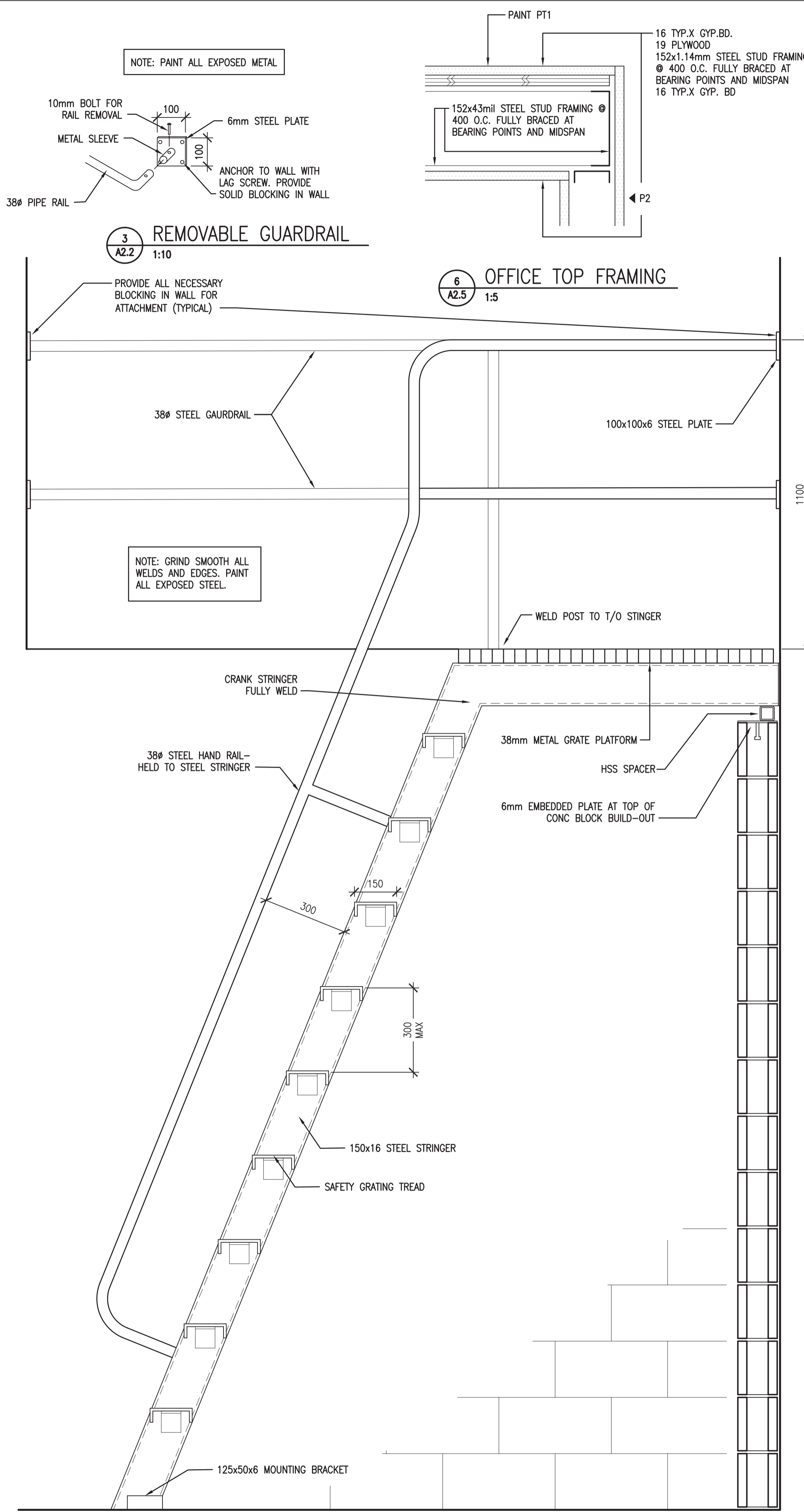
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**A4.11**

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La Révision  
no.  
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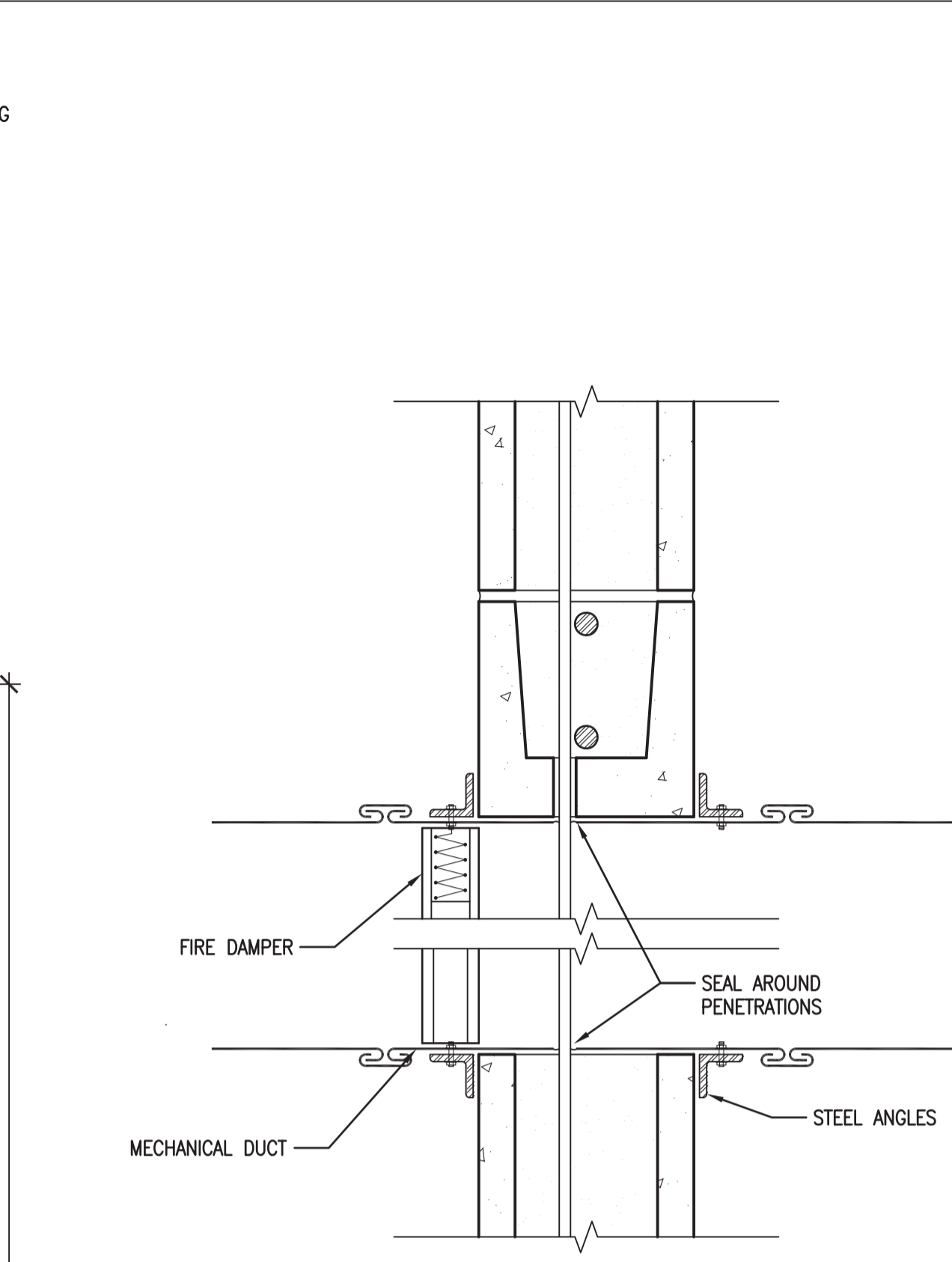




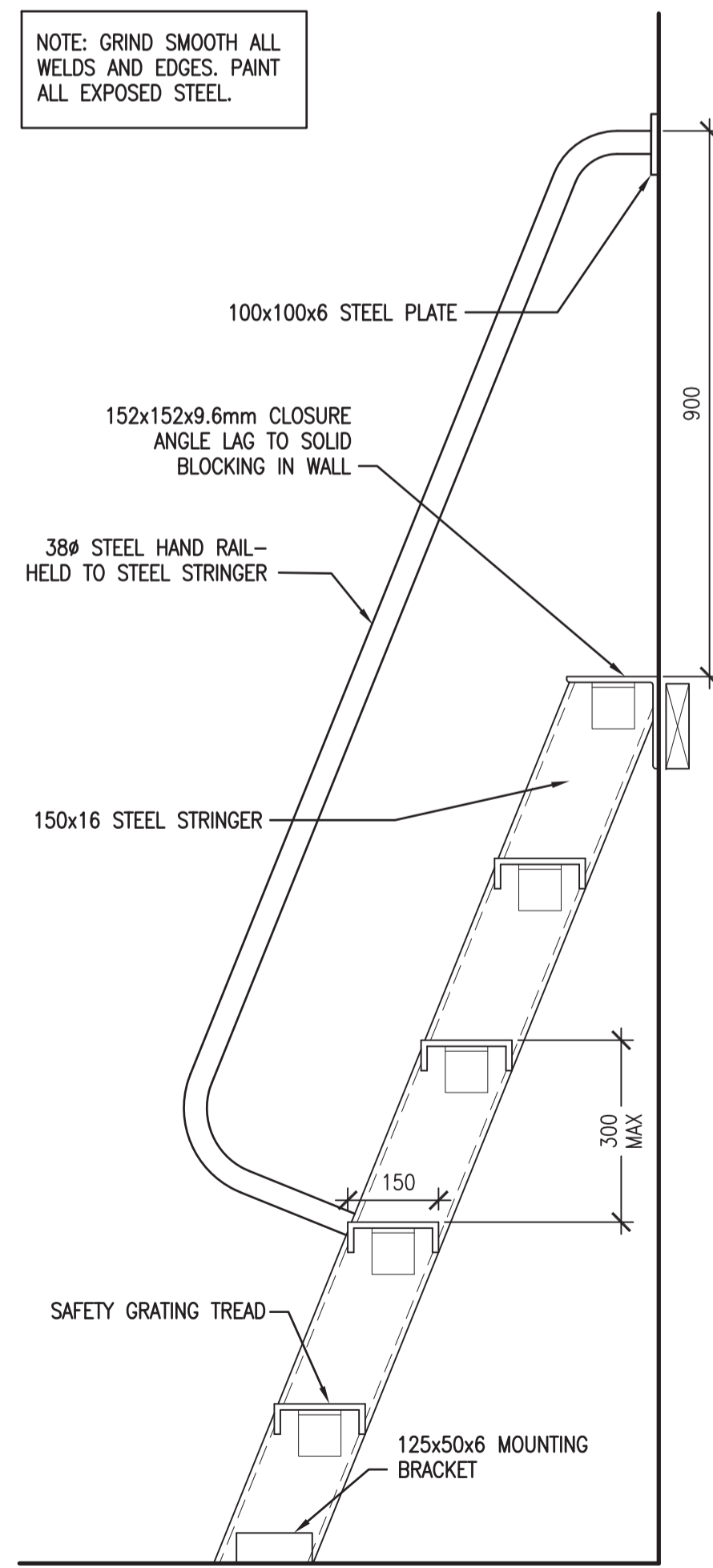
**3 REMOVABLE GUARDRAIL**  
A2.2 1:10

**6 OFFICE TOP FRAMING**  
A2.5 1:5

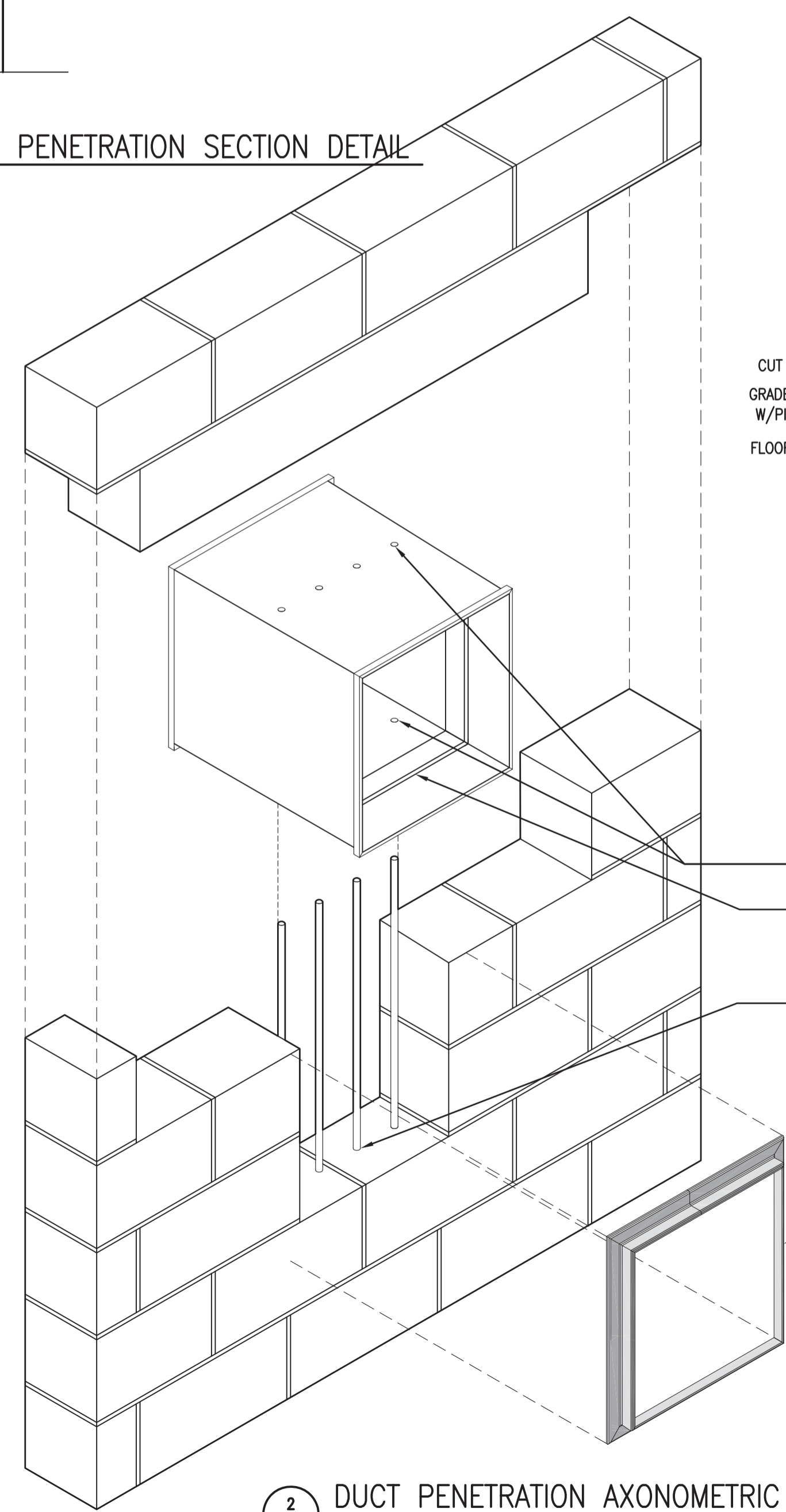
**4 SHIPS LADDER**  
A2.4 1:10



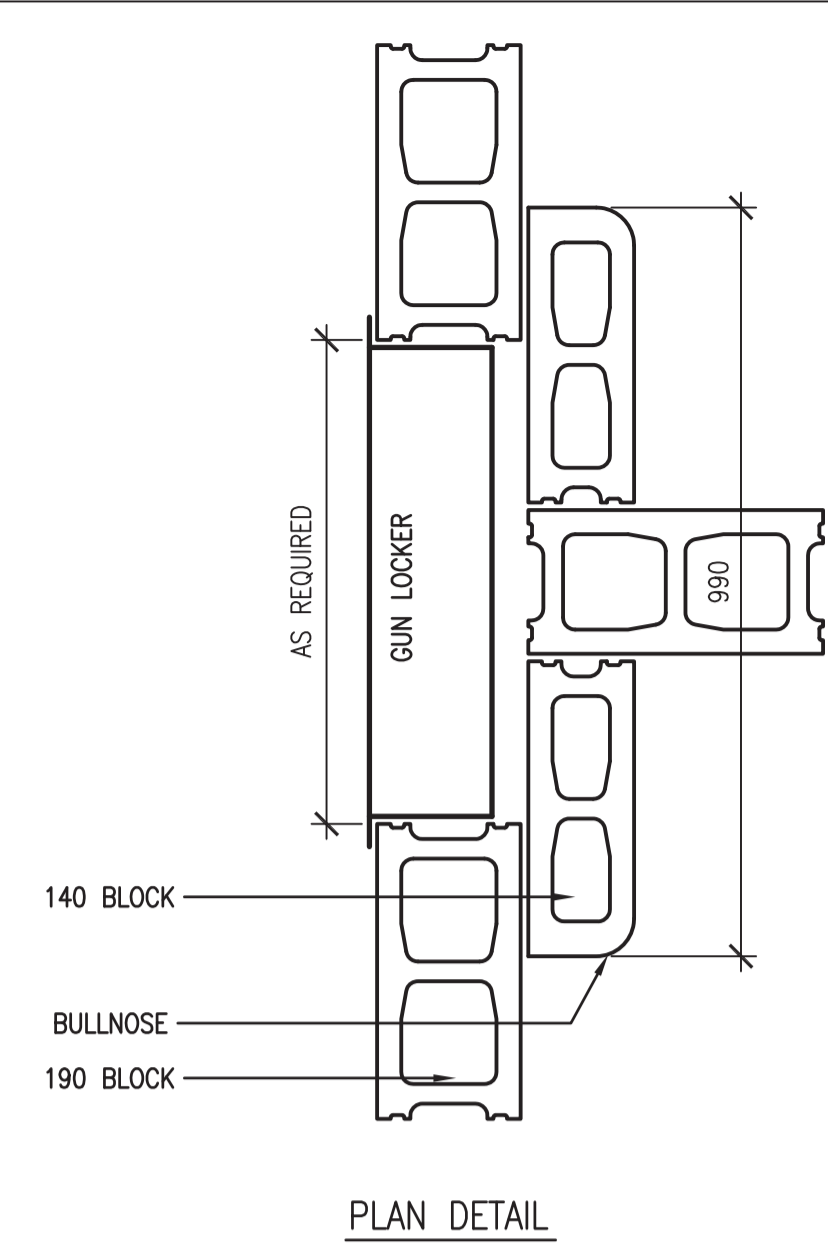
**7 DUCT PENETRATION SECTION DETAIL**  
A2.1 1:5



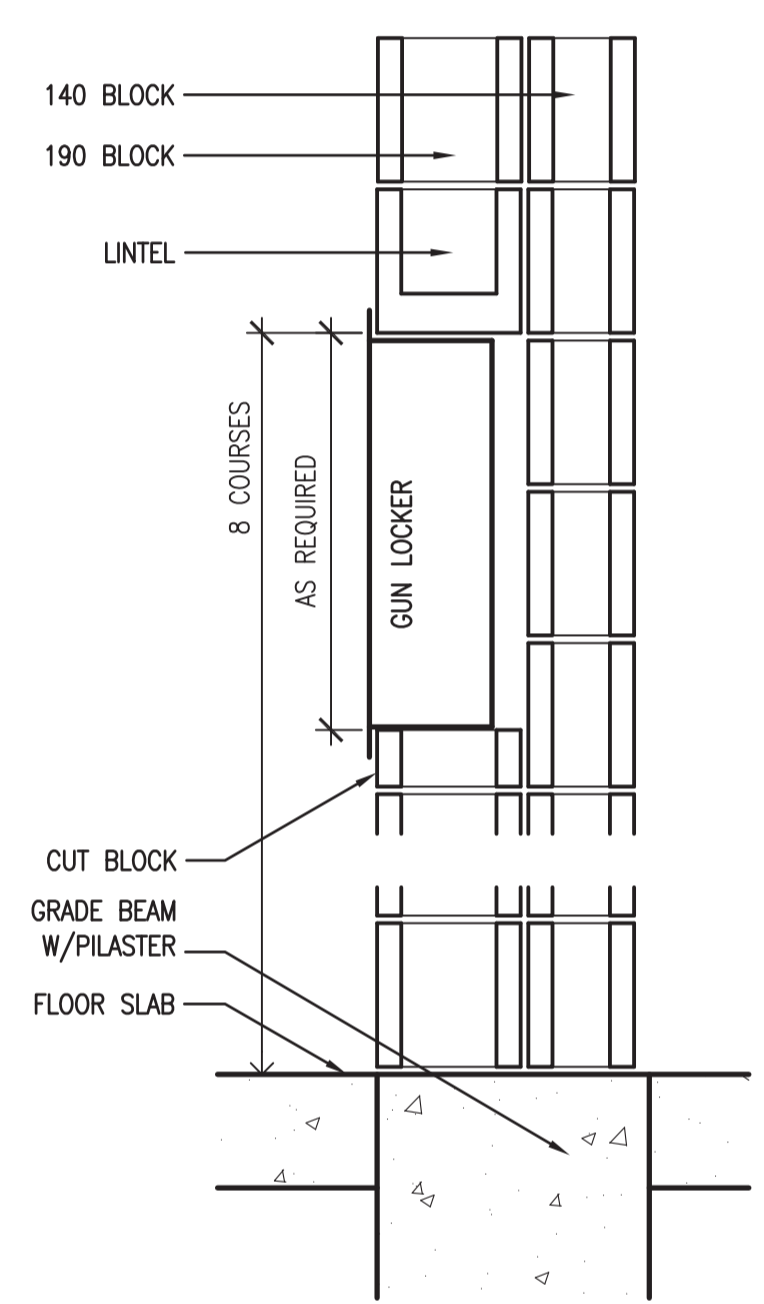
**5 SHIPS LADDER**  
A2.1 1:10



**2 DUCT PENETRATION AXONOMETRIC**  
A2.1 1:10



PLAN DETAIL



SECTION

**1 GUN LOCKER DETAIL**  
A2.4 1:10

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Revision/Revision	Description/Description	Date/Date
Client/client		

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**NEW POLICE BUILDING  
MAIDSTONE, SASKATCHEWAN**

Approved by/Approve par

Designed by/Concept par  
DE

Drawn by/Designe par  
DE / NO

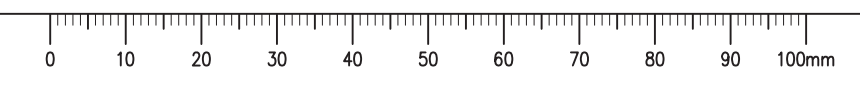
Project Manager/Administrateur de Projets  
CS

Architectural and Engineering Resources Manager/  
Ressources Architectural et de Directeur d'ingénierie

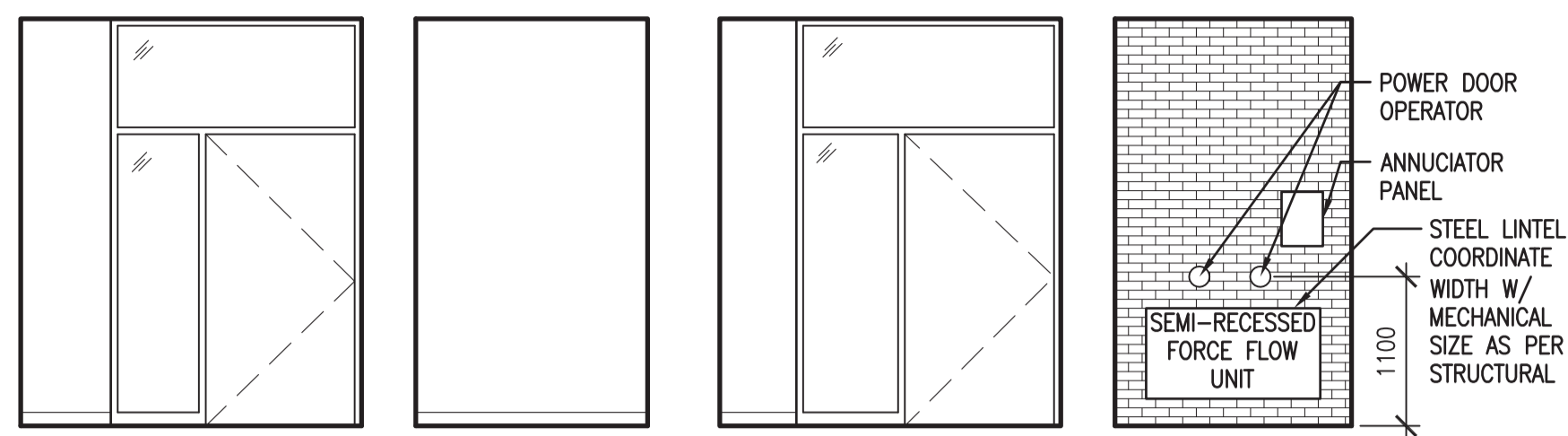
Client/client

Drawing title/Titre du dessin  
**DETAILS**

Project No./No. du projet 29/2013	Sheet/Feuille <b>A4.12</b>	Revision no./La Révision no. <b>0</b>
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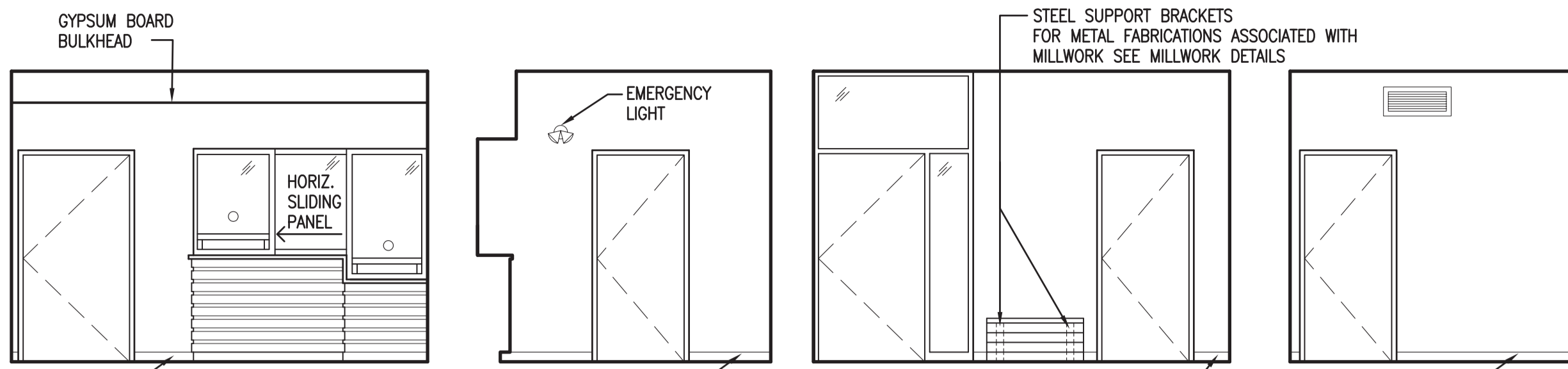






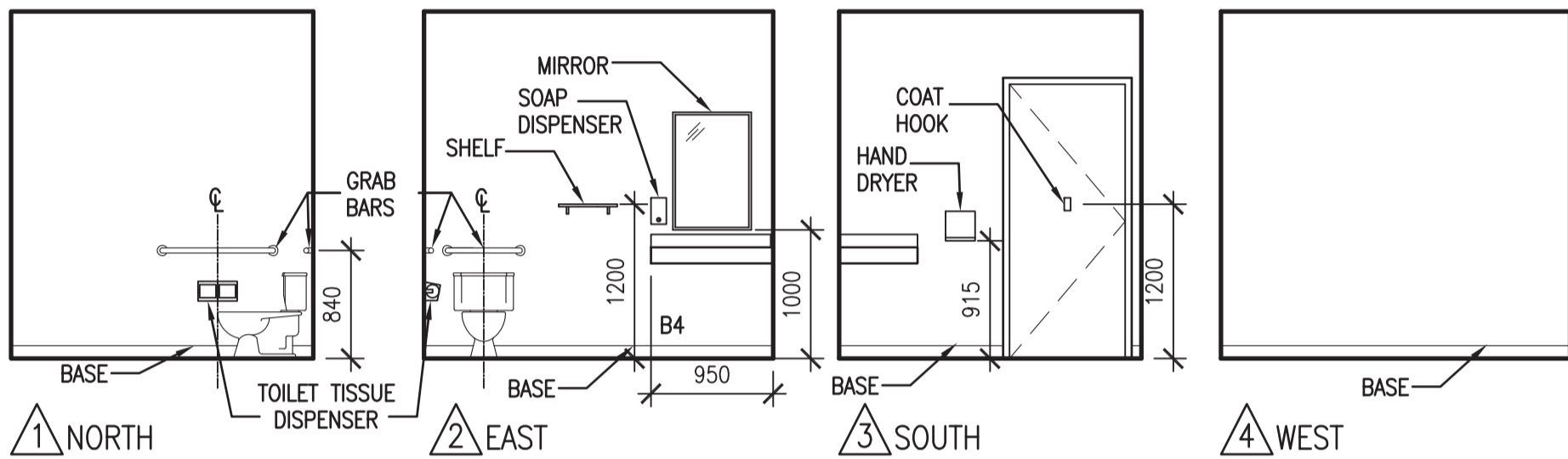
1 NORTH 2 EAST 3 SOUTH 4 WEST

1 ROOM 101  
A5.1 1:50



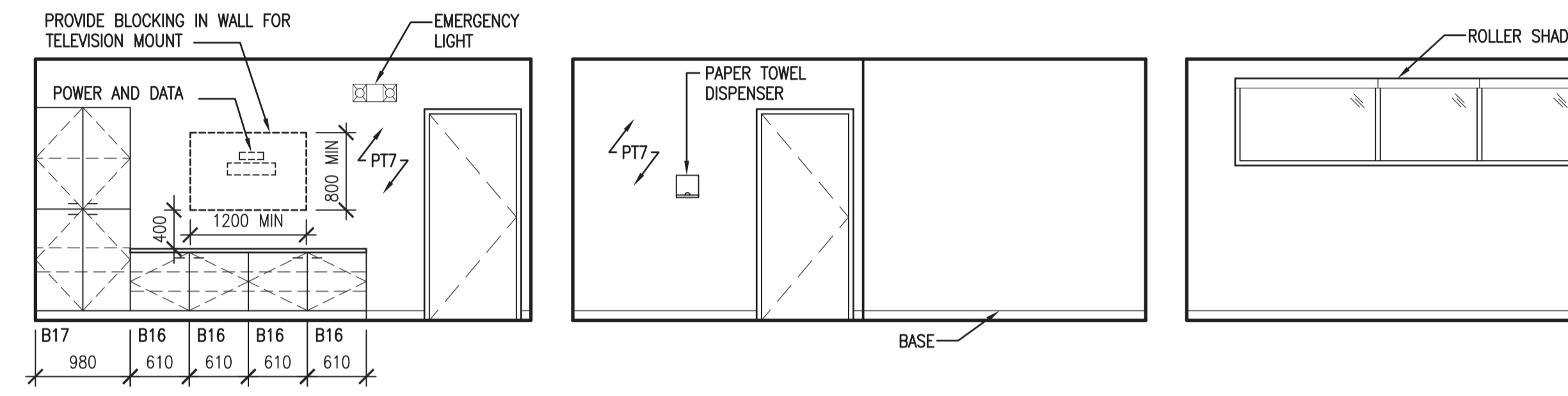
1 NORTH 2 EAST 3 SOUTH 4 WEST

2 ROOM 102  
5.1 1:50



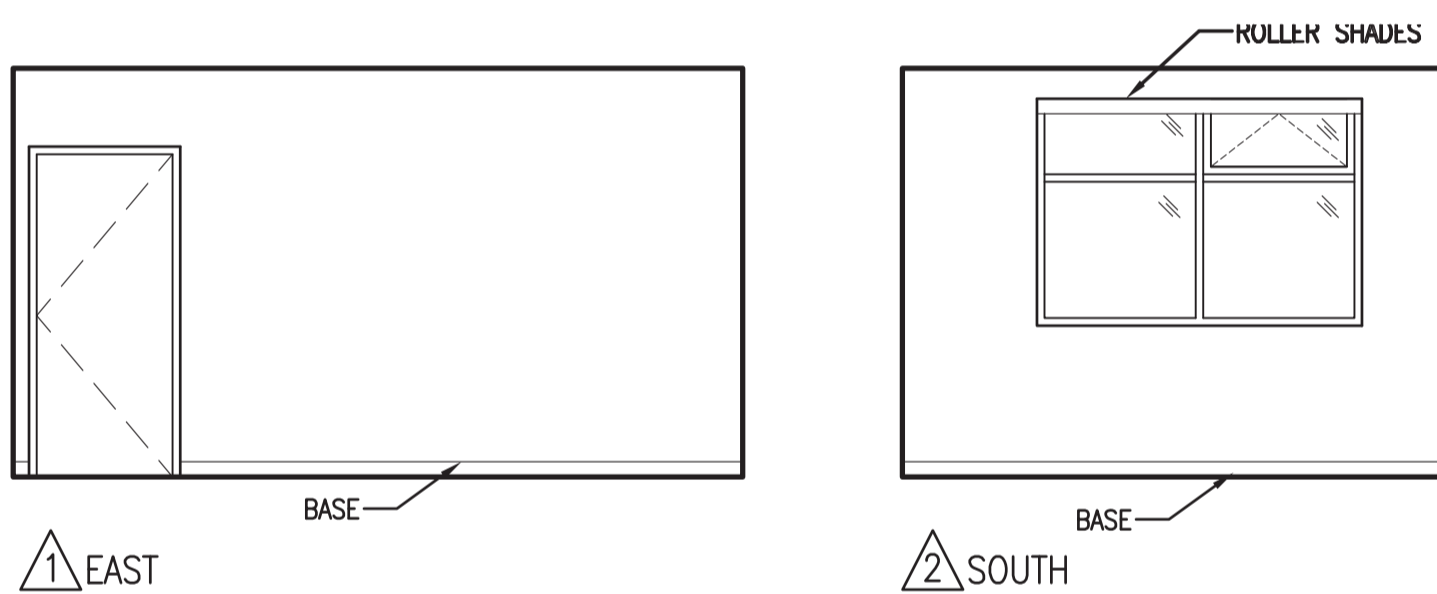
1 NORTH 2 EAST 3 SOUTH 4 WEST

3 ROOM 103  
A5.1 1:50



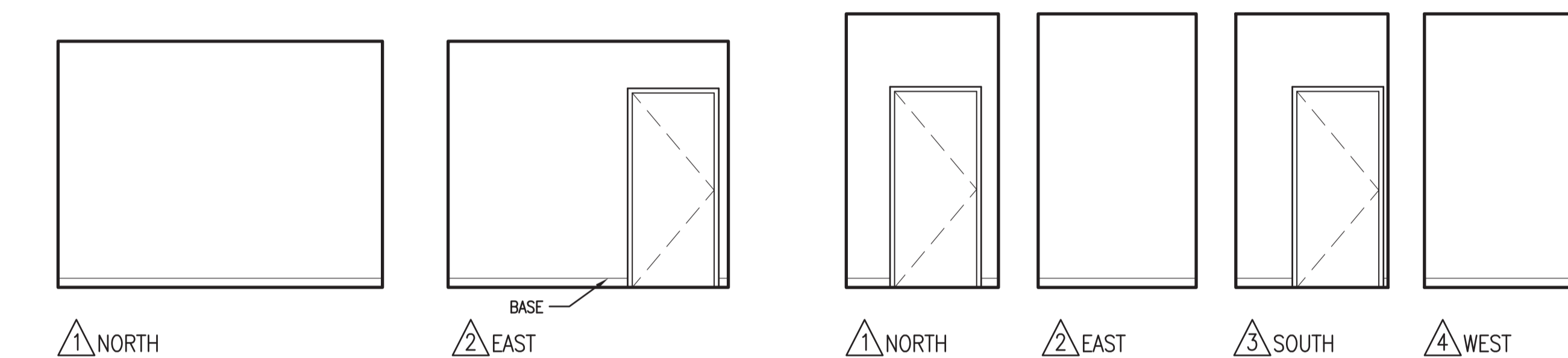
1 NORTH 2 EAST 3 SOUTH

4 ROOM 104  
A5.1 1:50



1 EAST 2 SOUTH

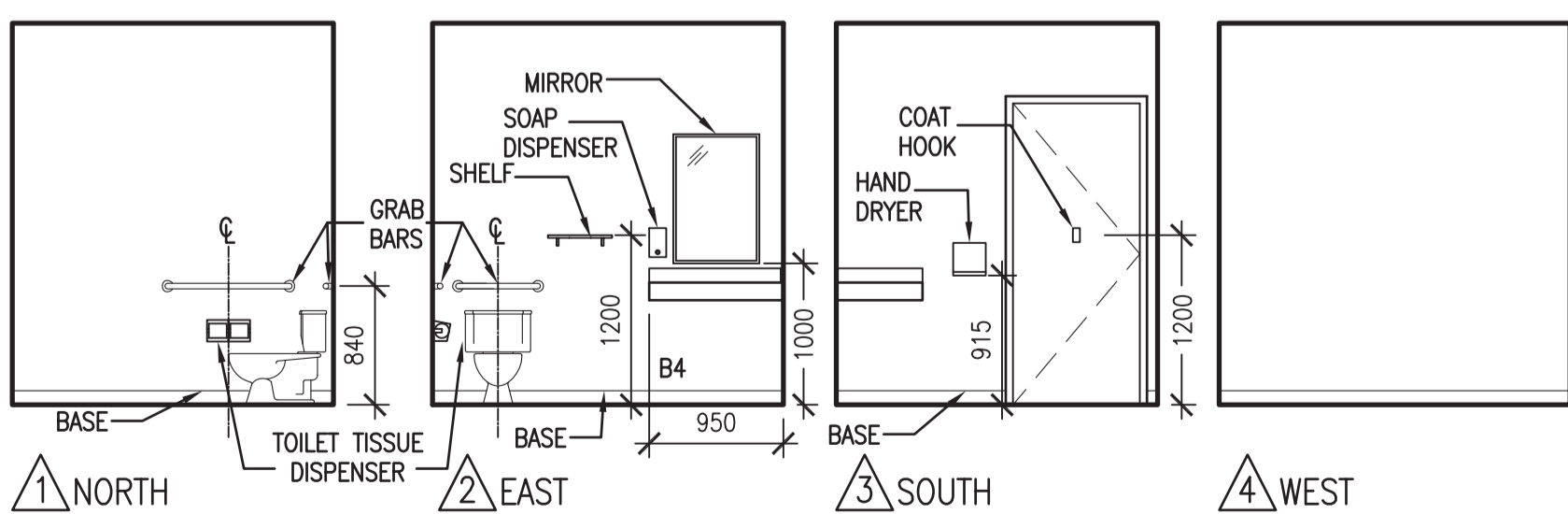
5 ROOM 105  
A5.1 1:50



1 NORTH 2 EAST 3 NORTH 4 EAST 5 SOUTH 6 WEST

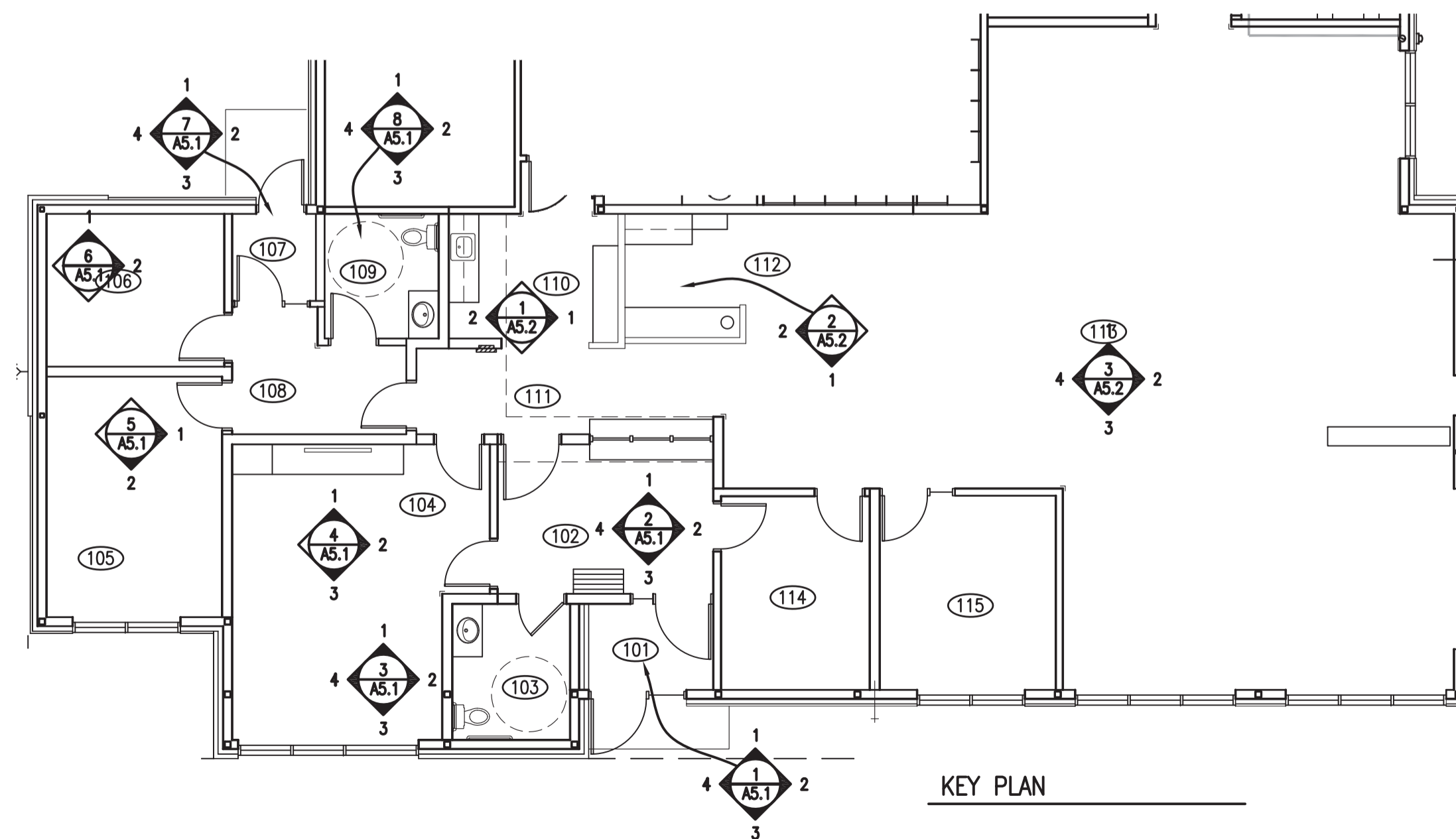
6 ROOM 106  
A5.1 1:50

7 ROOM 107  
A5.1 1:50



1 NORTH 2 EAST 3 SOUTH 4 WEST

8 ROOM 109  
A5.1 1:50



KEY PLAN

**SEPW Architecture Inc.**

109-2725 Patricia Street, Regina, SK, S4S 0R8 ph: (306) 948-2255  
1101-2718 Memorial Park, Saskatoon, SK, S7P 0A6 ph: (306) 952-6457  
website: www.sepw.ca



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0	ISSUED FOR TENDER	2014-12-08
Revision/Revision	Description/Description	Date/Date

Project title/Titre du projet

**NEW POLICE BUILDING  
MAIDSTONE, SASKATCHEWAN**

Approved by/Approve par

Designed by/Concept par  
DE

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CS

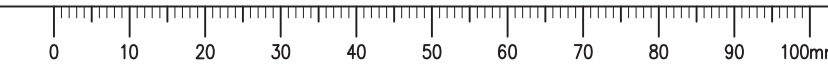
Architectural and Engineering Resources Manager/  
Ressources Architectural et de Directeur d'ingénierie

Client/client

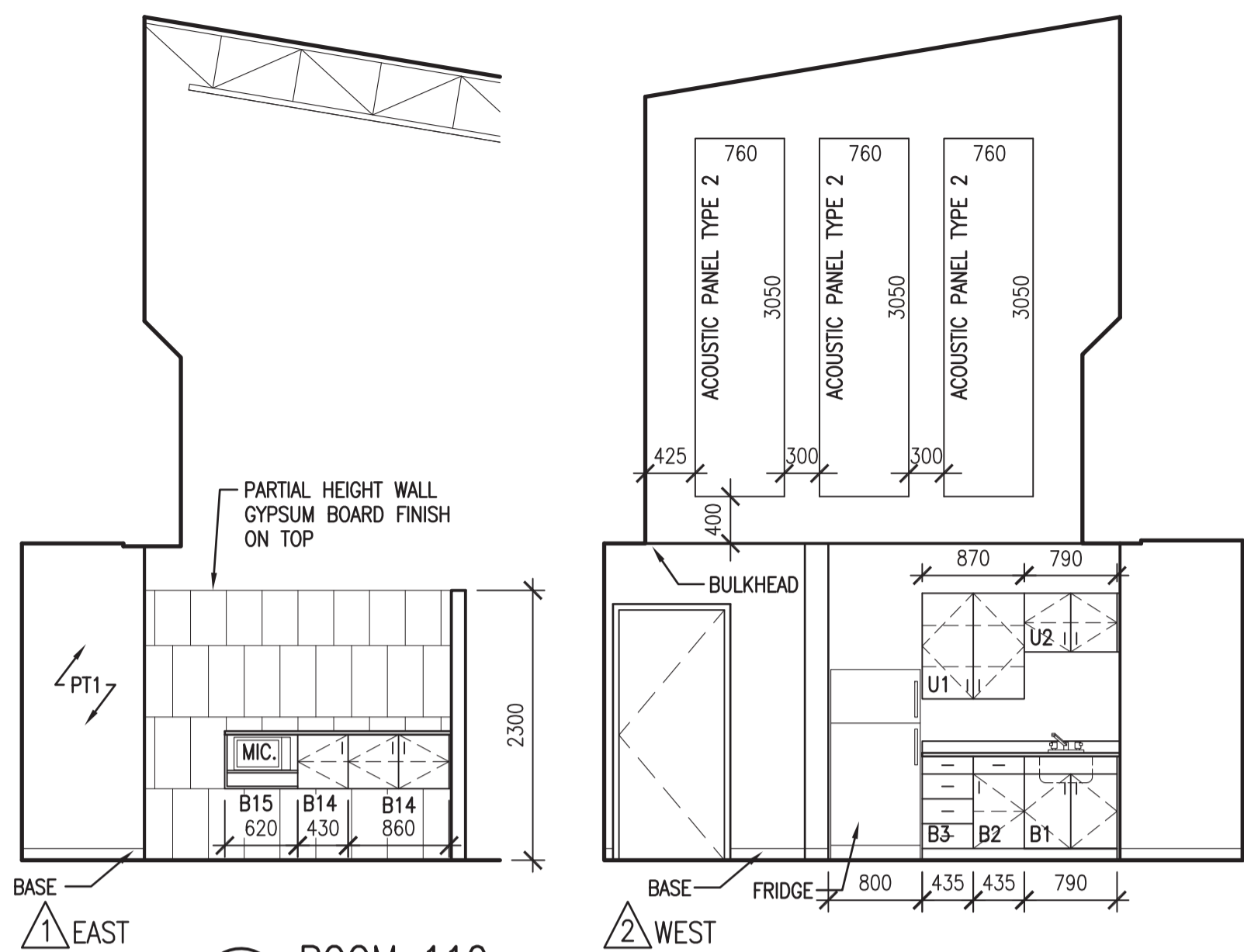
Drawing title/Titre du dessin

**INTERIOR ELEVATIONS**

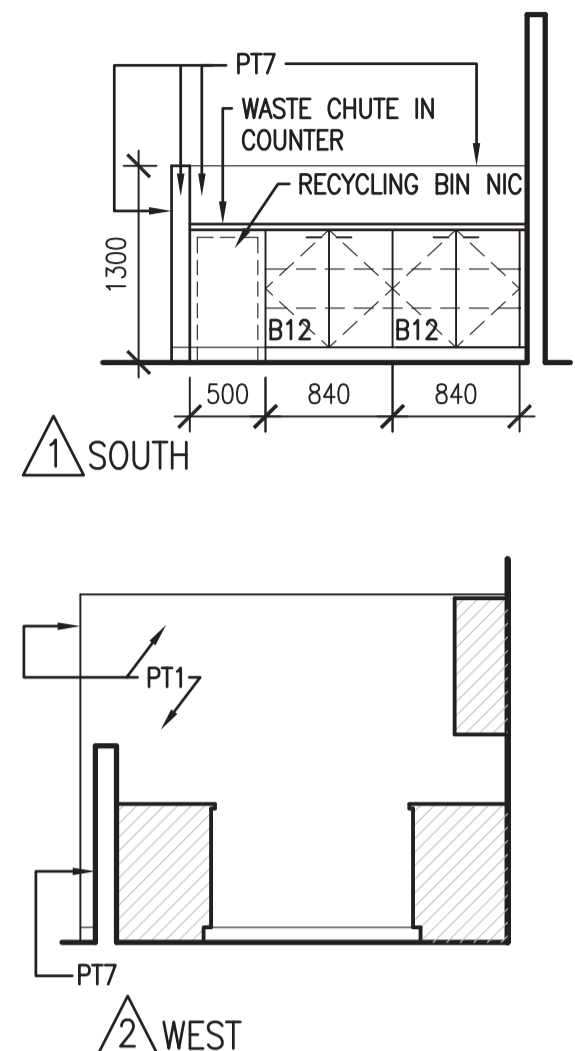
Project No./No. du projet	Sheet/Feuille	Revision no./La Révision no.
29/2013	<b>A5.1</b>	<b>0</b>



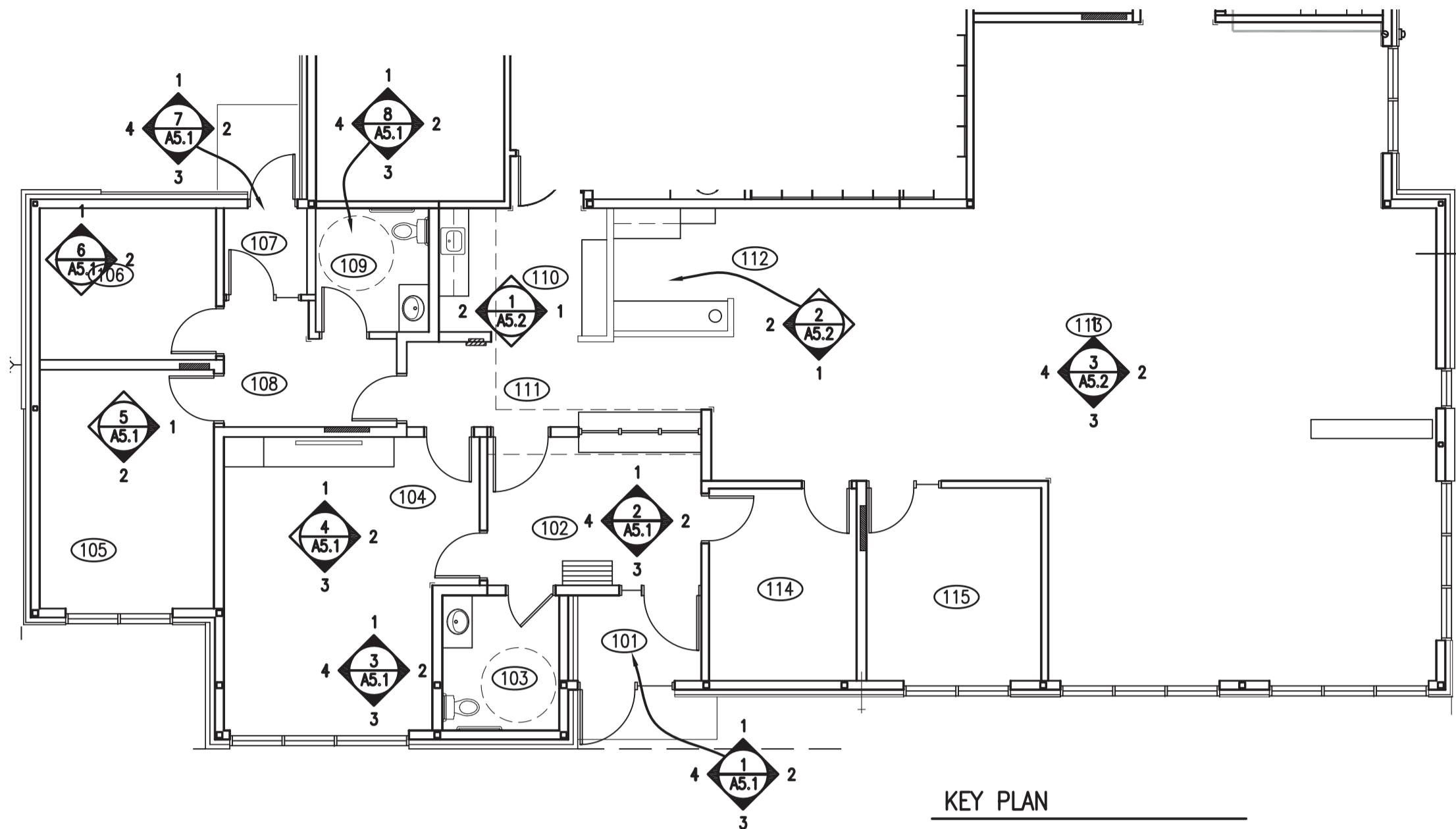




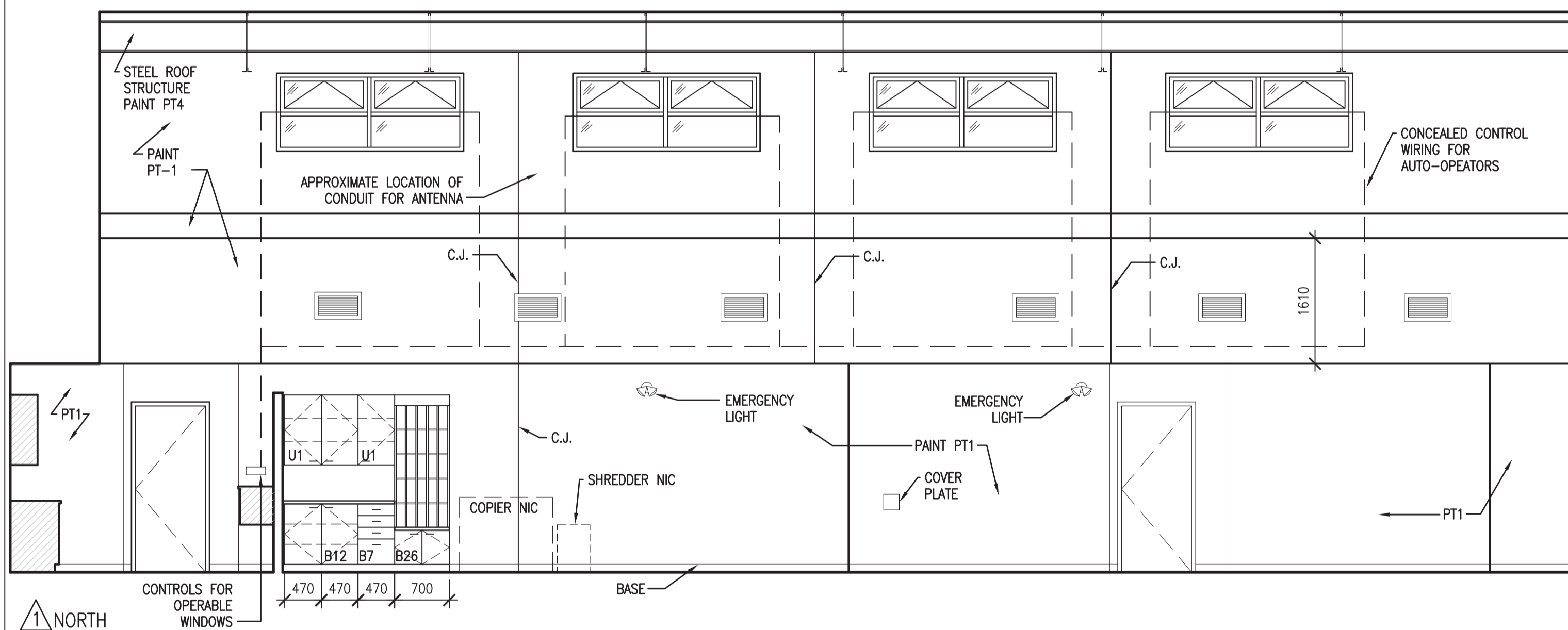
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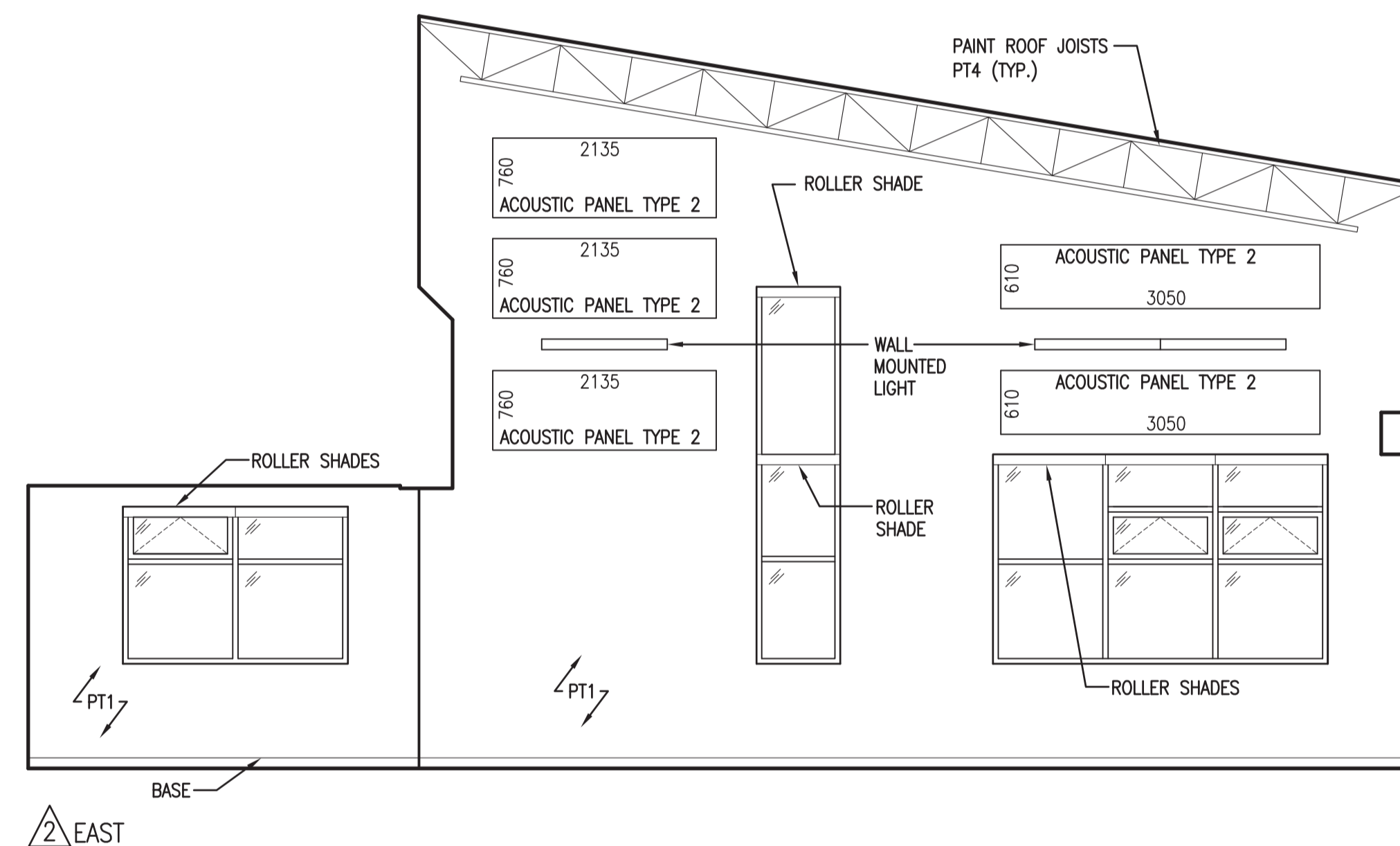
2 ROOM 112  
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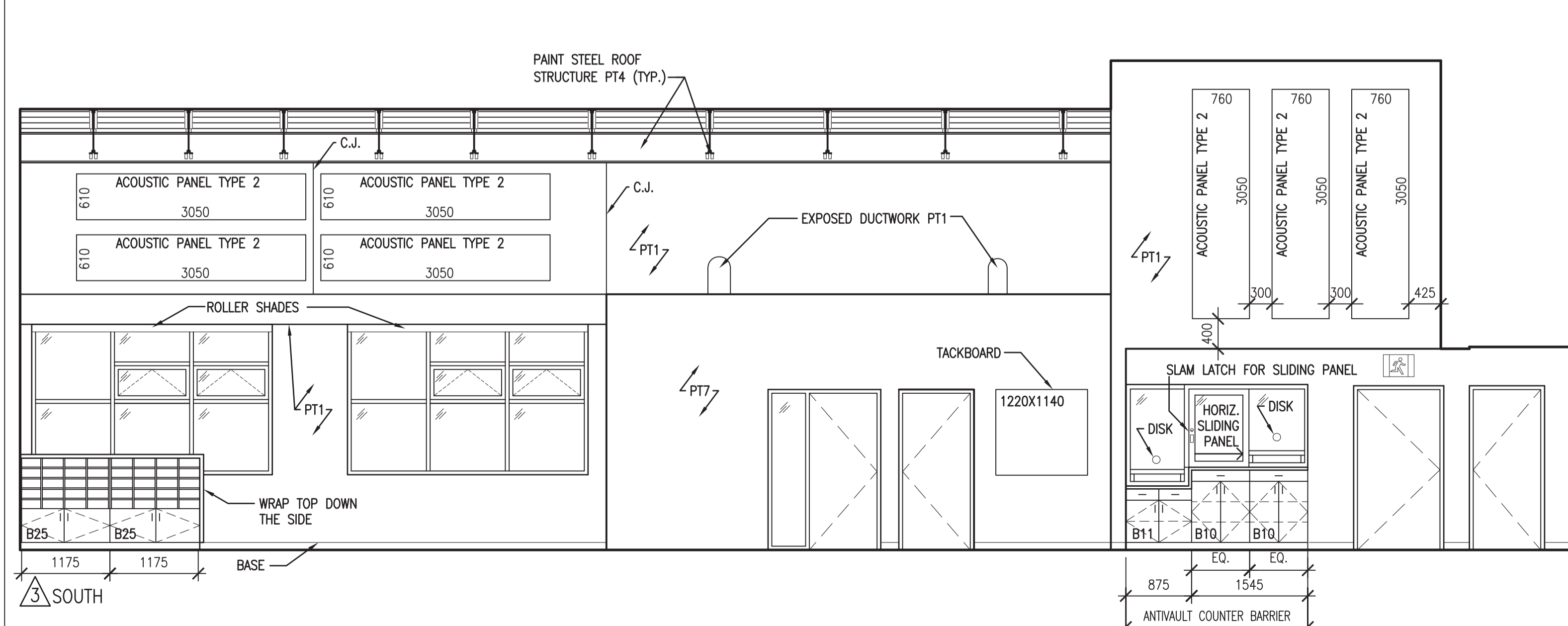
KEY PLAN



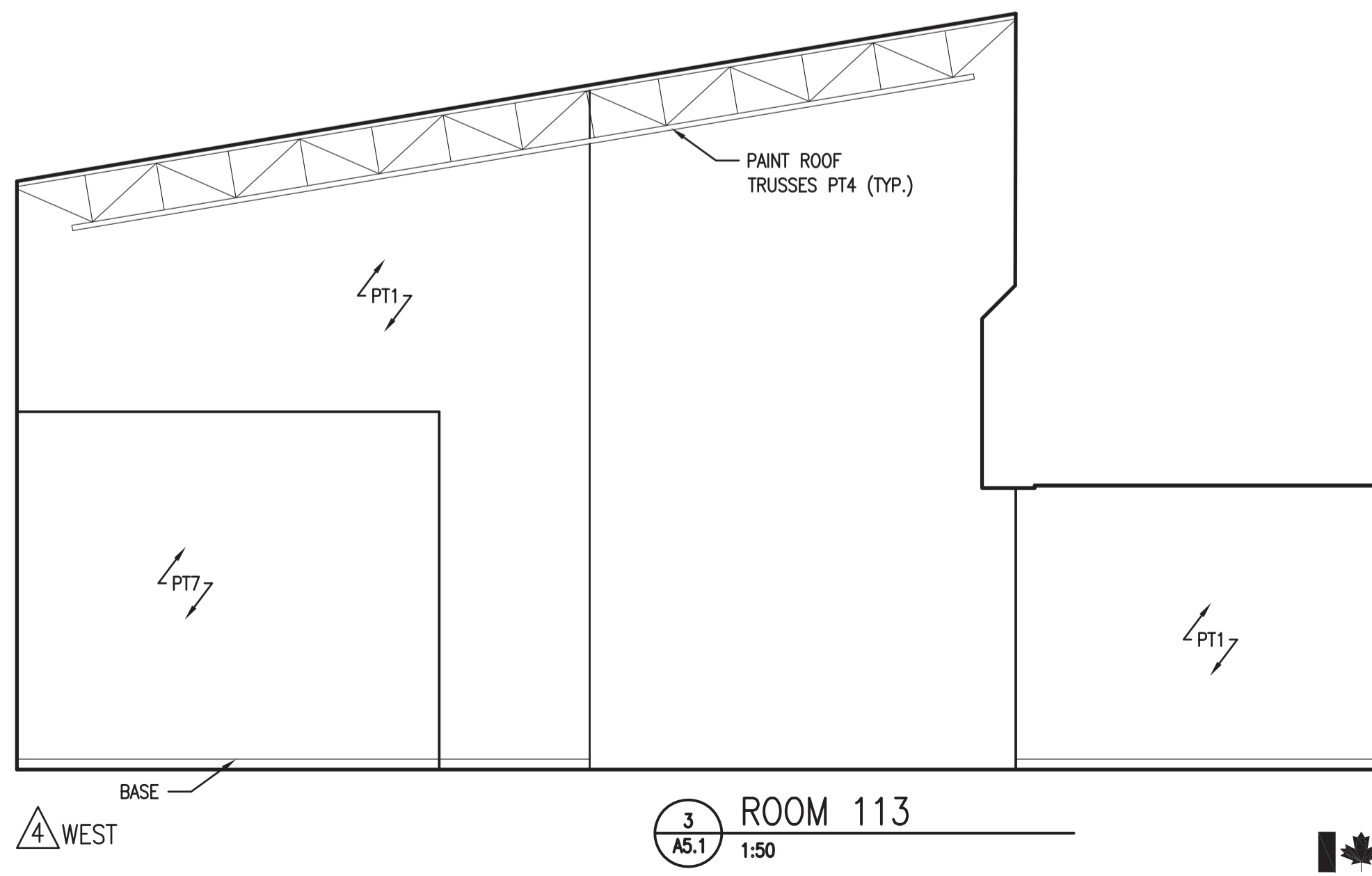
1 NORTH



2 EAST



3 SOUTH



4 WEST

3 ROOM 113  
A5.1 1:50



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Revision/	Description/Description	Date/Date
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Project title/Titre du projet

**NEW POLICE BUILDING  
MAIDSTONE, SASKATCHEWAN**

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Ressources Architectural et de Directeur d'ingénierie

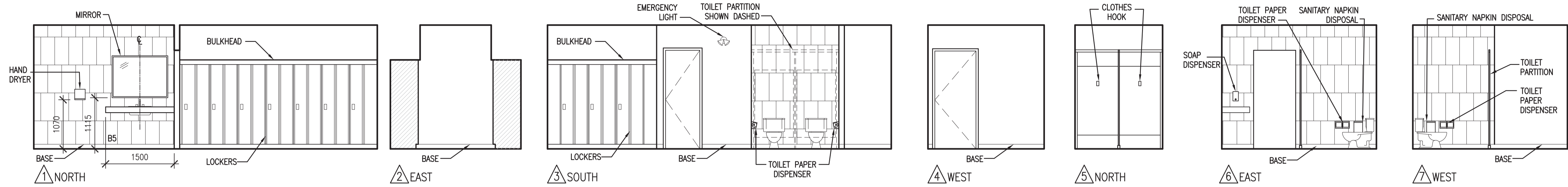
Client/client

Drawing title/Titre du dessin

**INTERIOR ELEVATIONS**

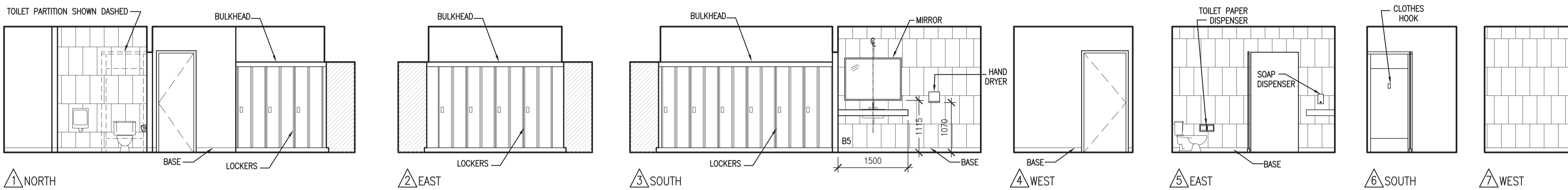
Project No./No. du projet	Sheet/Feuille	Revision no./La Révision no.
29/2013	<b>A5.2</b>	<b>0</b>





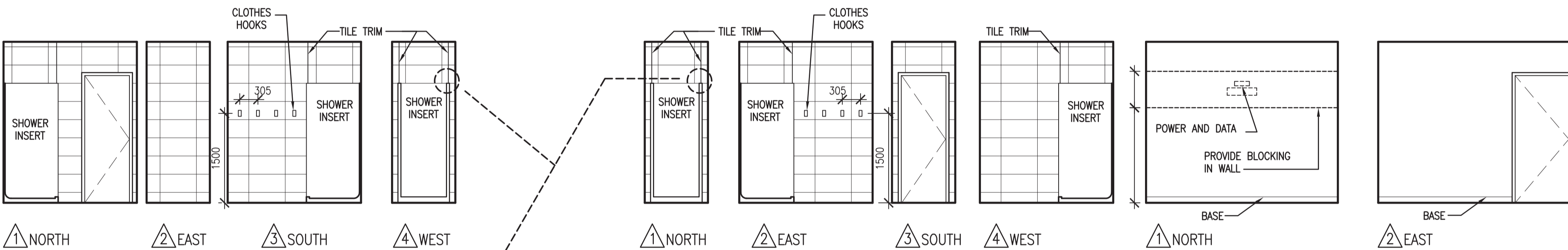
1 ROOMS 119 & 120

A5.3 1:50



2 ROOMS 122 & 123

A5.3 1:50



3 ROOM 121

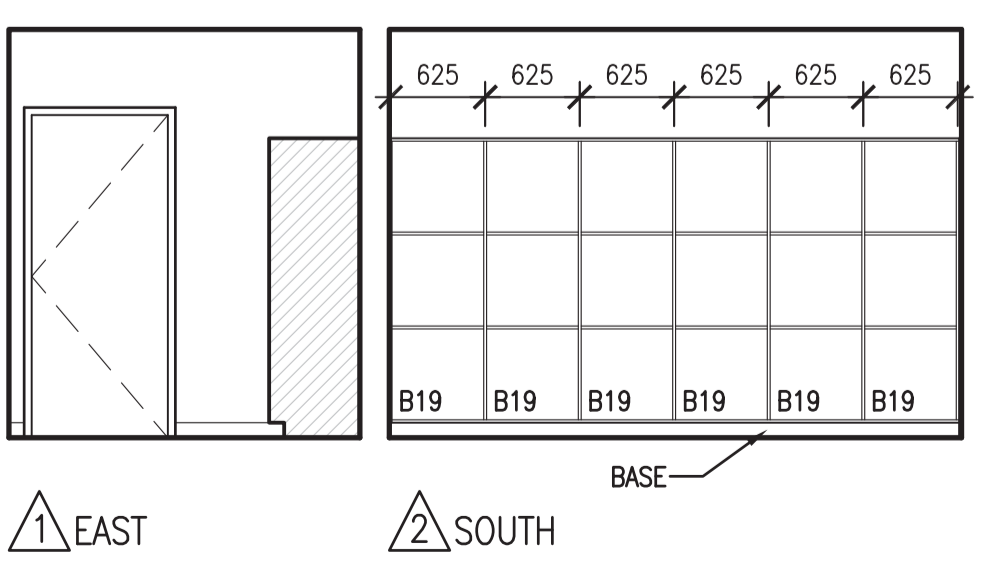
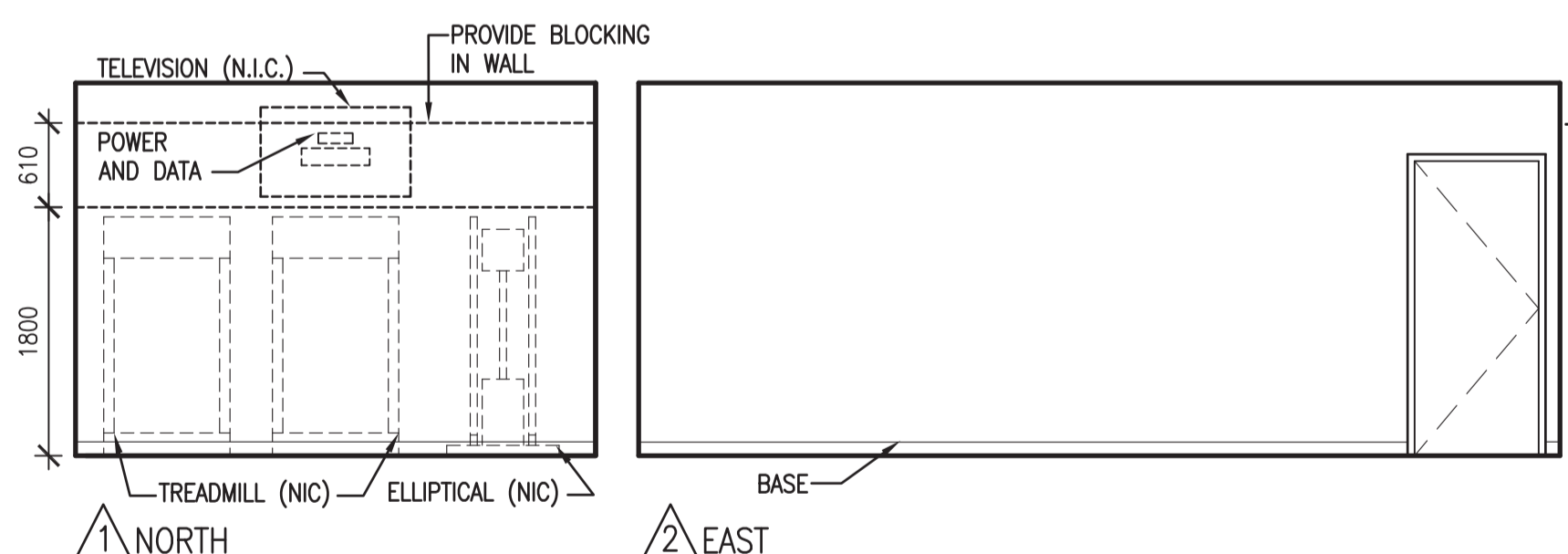
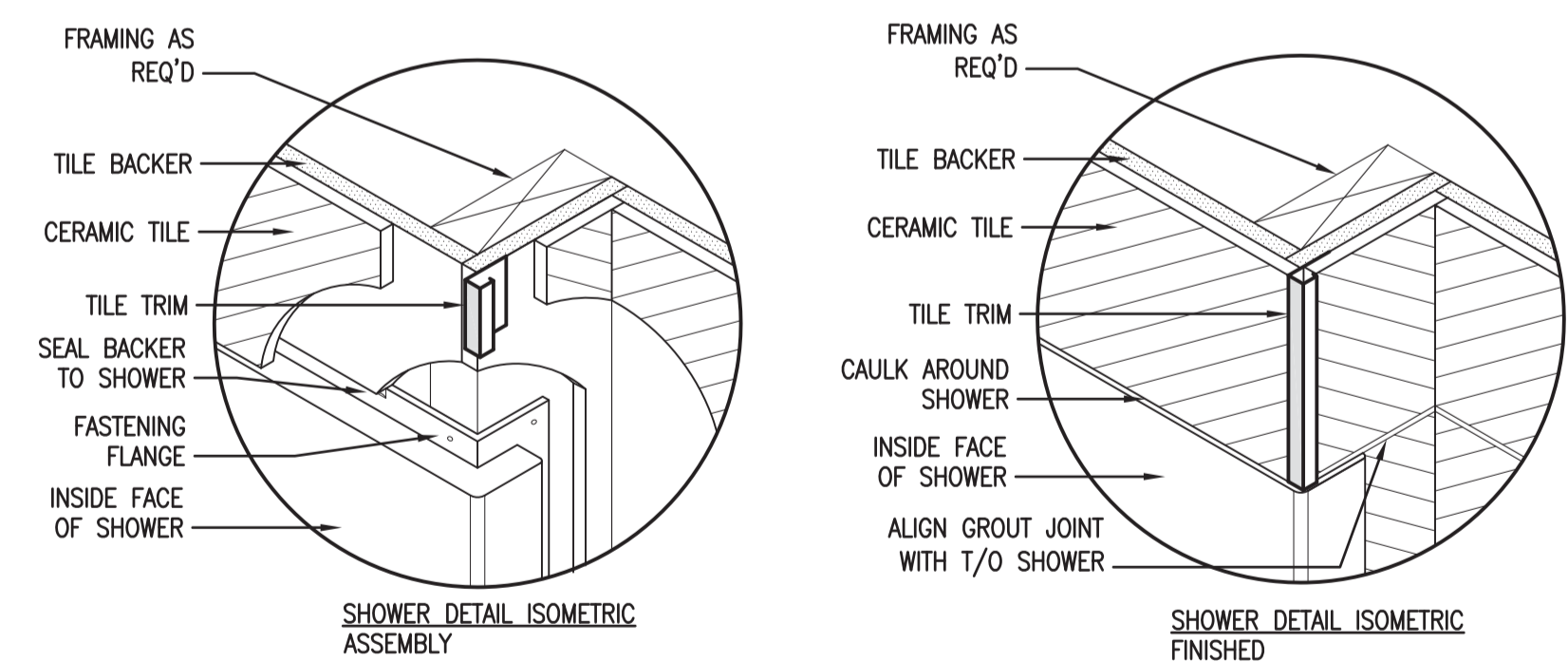
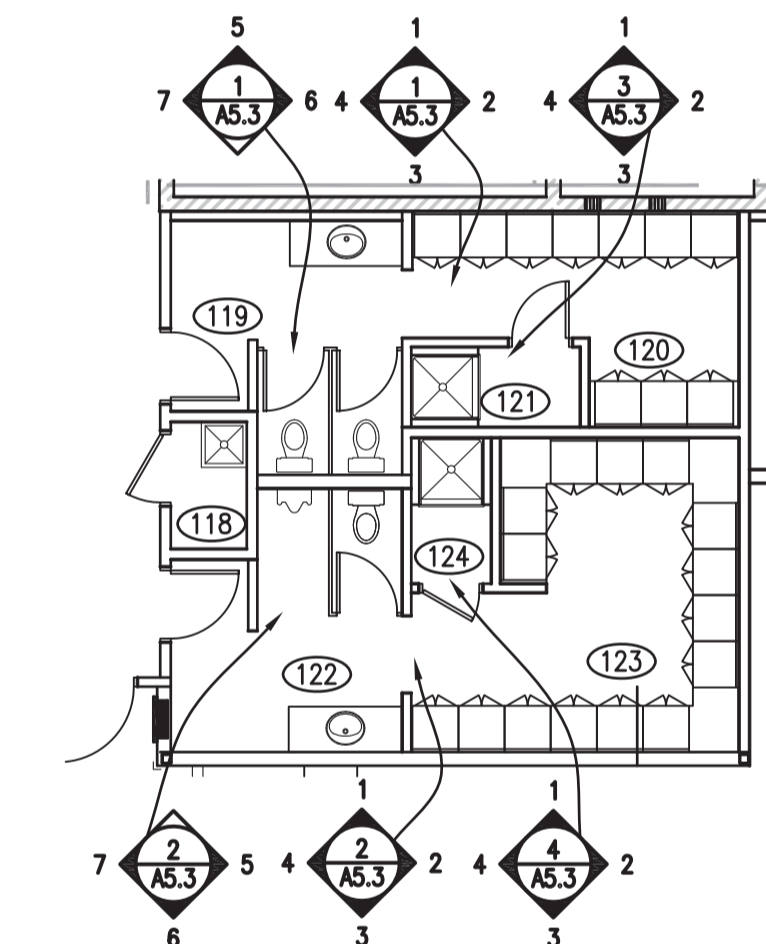
A5.3 1:50

4 ROOM 124

A5.3 1:50

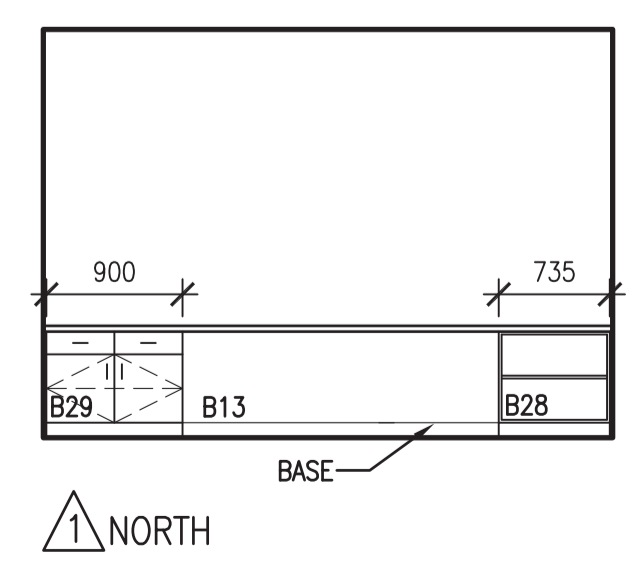
5 ROOM 126

A5.3 1:50



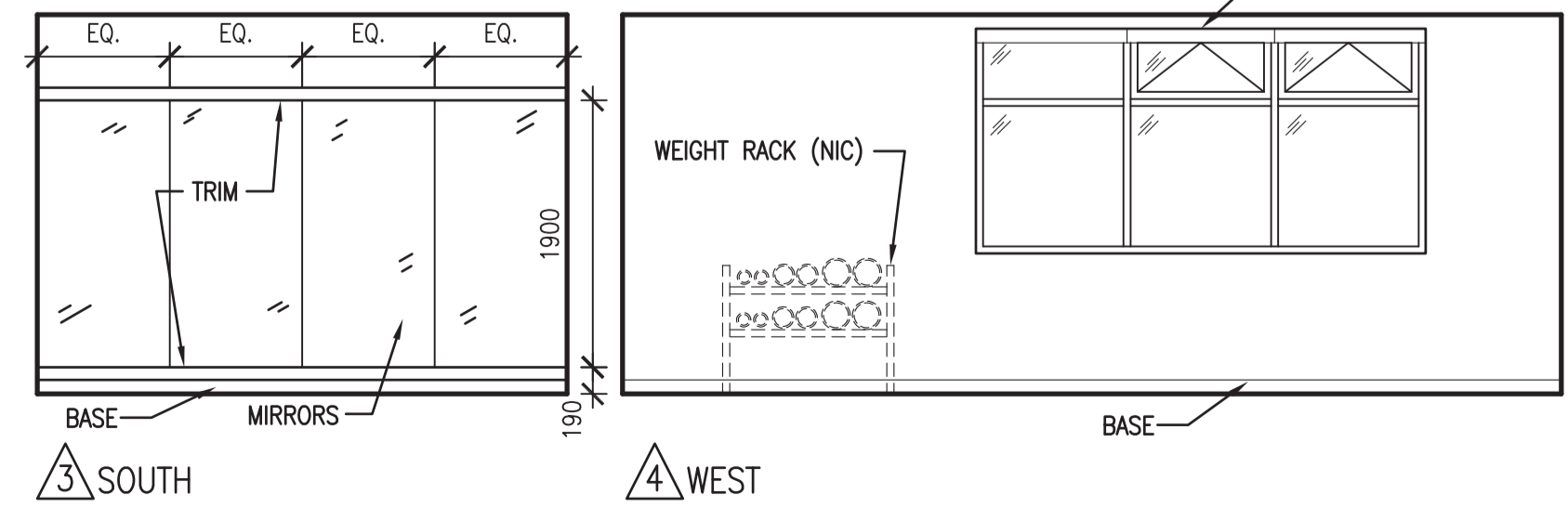
7 ROOM 129

A5.3 1:50



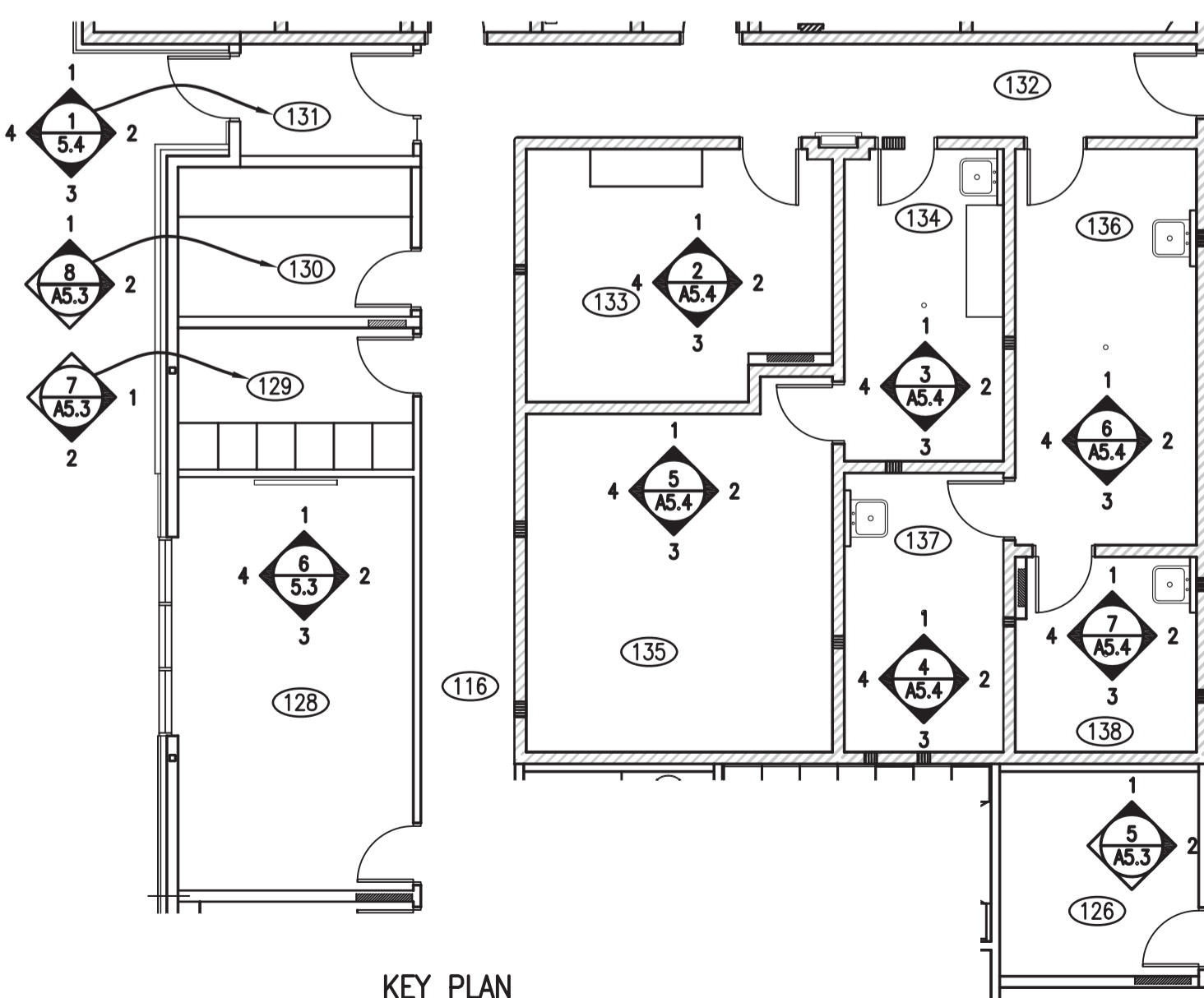
8 ROOM 130

A5.3 1:50



6 ROOM 128

A5.3 1:50



KEY PLAN



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Revision/Revision	Description/Description	Date/Date
5		
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Project title/Titre du projet

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MAIDSTONE, SASKATCHEWAN**

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Drawn by/Deessine par

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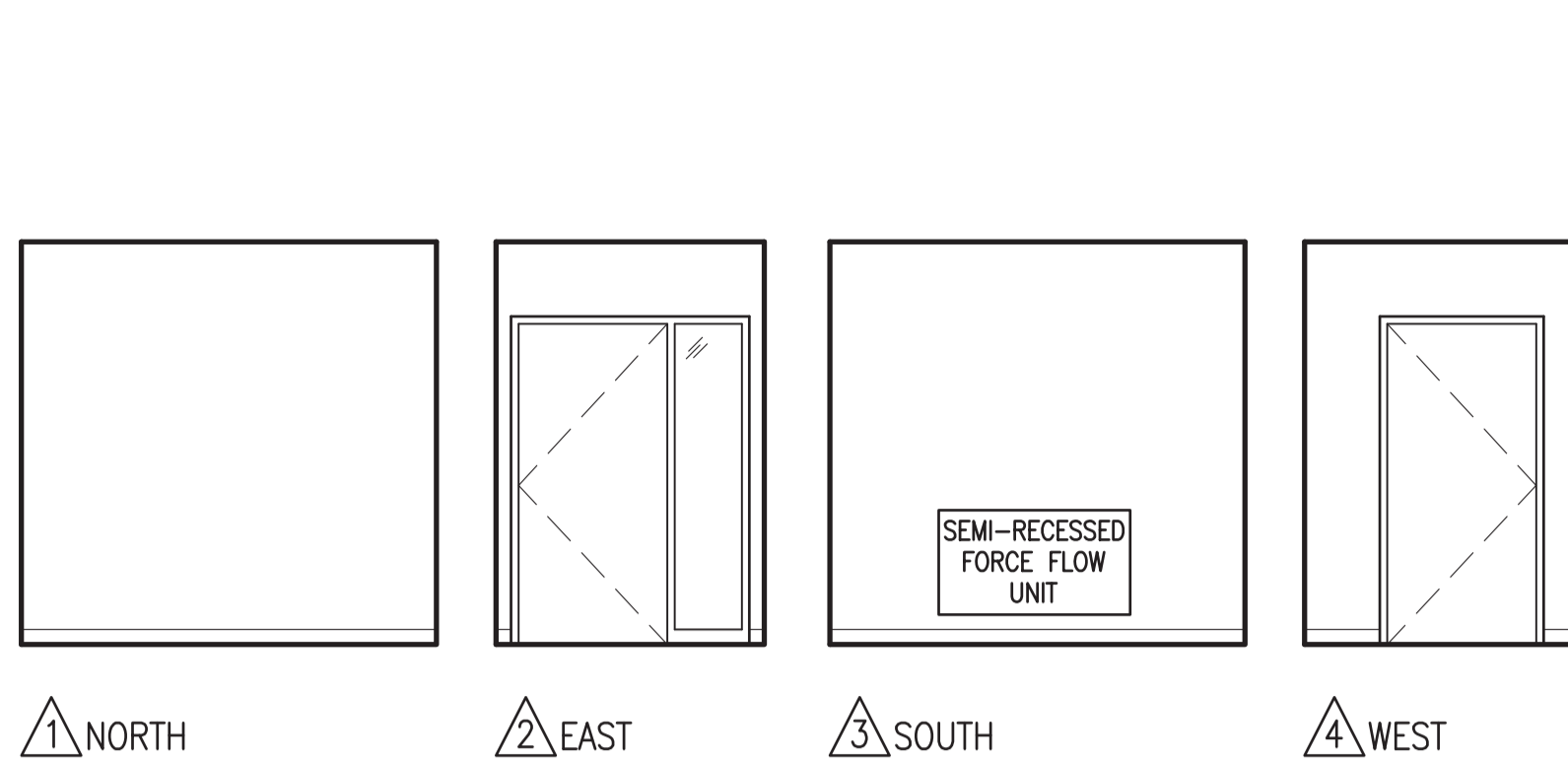
Client/client

Drawing title/Titre du dessin

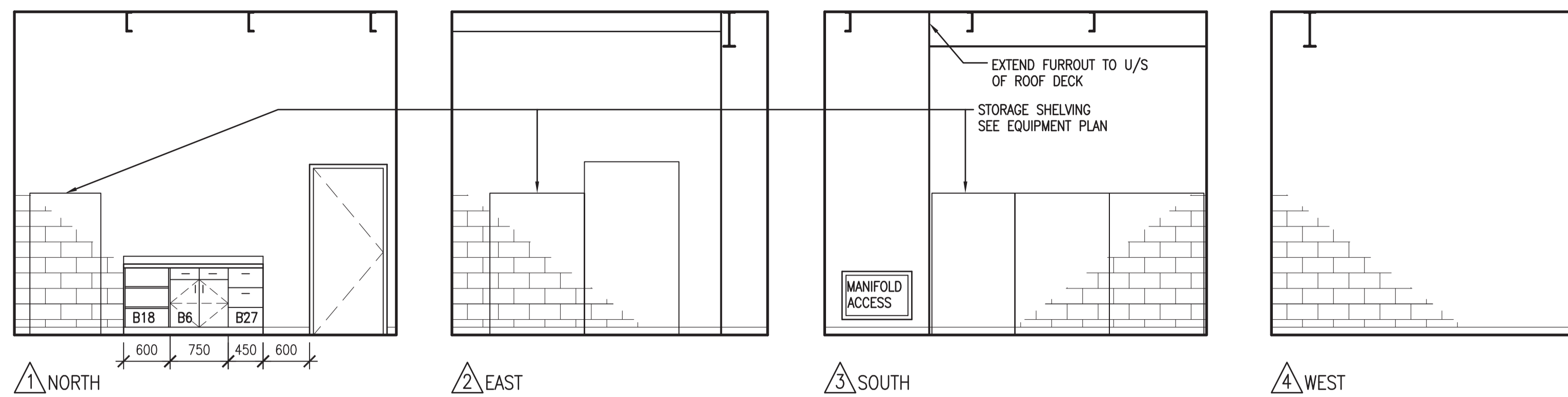
**INTERIOR ELEVATIONS**

Project No./No. du projet	Sheet/Feuille	Revision no./La Révision no.
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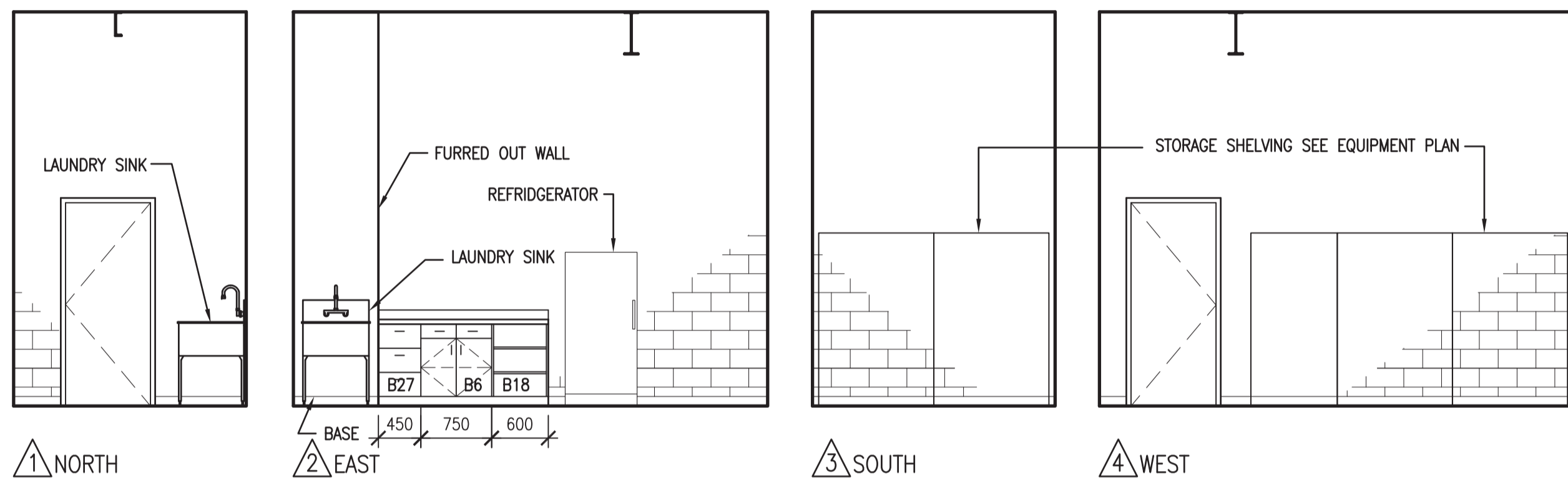




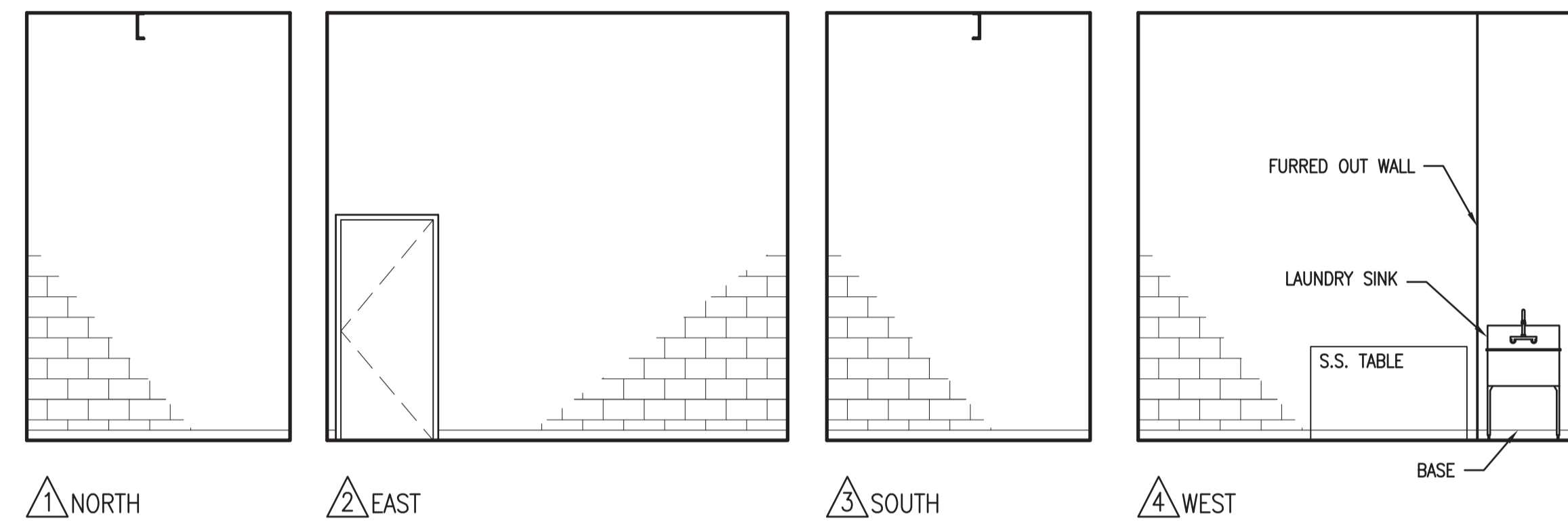
1 ROOM 131  
A5.3 1:50



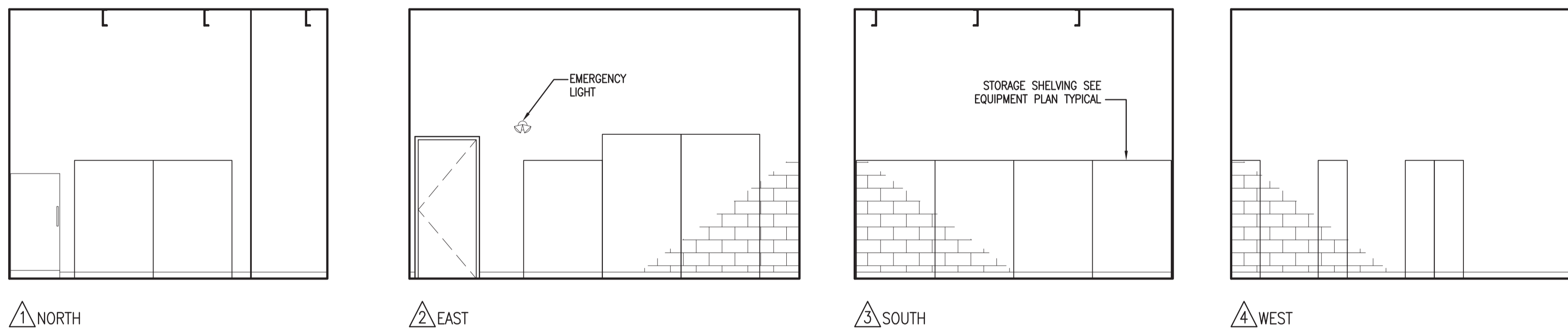
2 ROOM 133  
A5.3 1:50



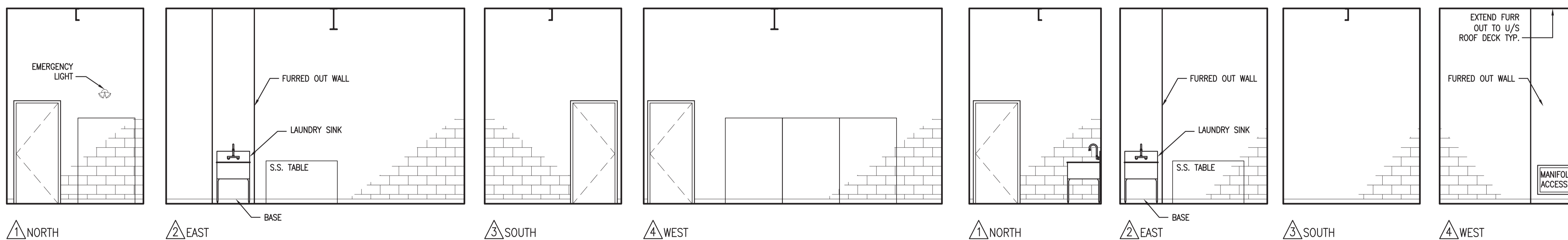
3 ROOM 134  
A5.3 1:50



4 ROOM 137  
A5.3 1:50



5 ROOM 135  
A5.3 1:50



6 ROOM 136  
A5.3 1:50

7 ROOM 138  
A5.3 1:50



**DO NOT SCALE DRAWINGS**

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0	ISSUED FOR TENDER	2014-12-08
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MAIDSTONE, SASKATCHEWAN**

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DE

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DE / NO

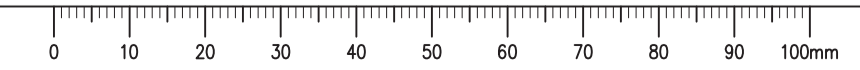
Project Manager/Administrateur de Projets  
CS

Architectural and Engineering Resources Manager/  
Ressources Architectural et de Directeur d'ingénierie

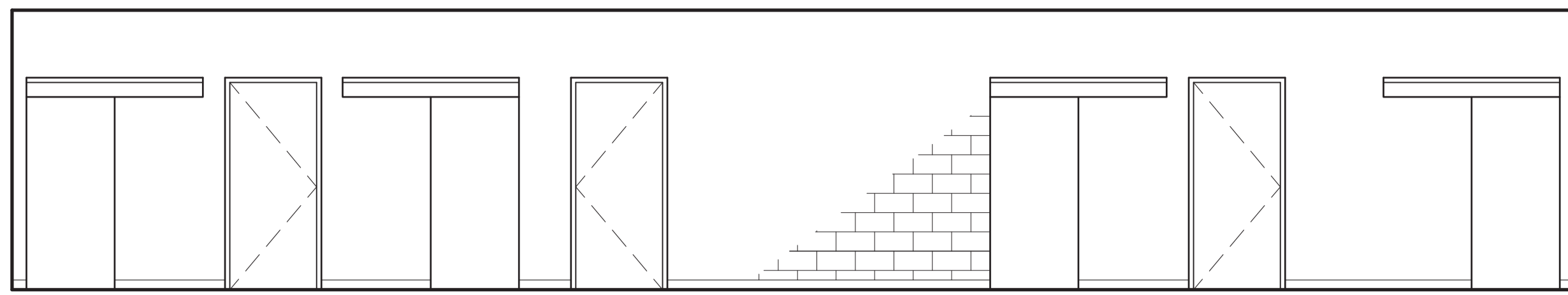
Client/client

Drawing title/Titre du dessin  
**INTERIOR ELEVATIONS**

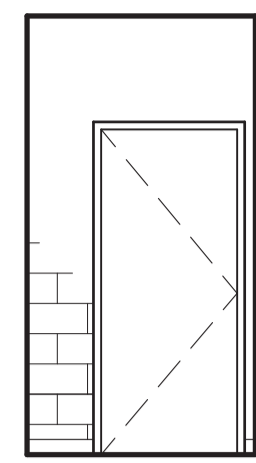
Project No./No. du projet	Sheet/Feuille	Revision no./La Révision no.
29/2013	<b>A5.4</b>	<b>0</b>



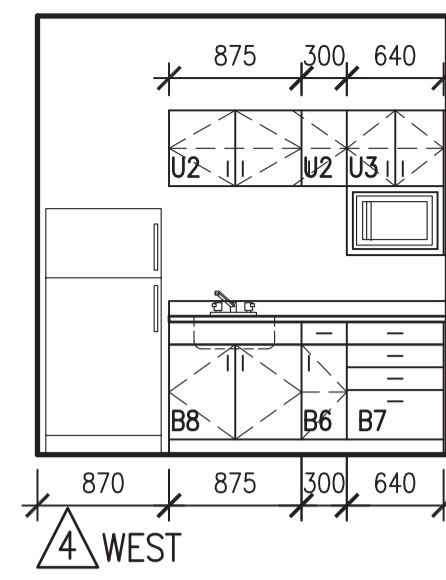




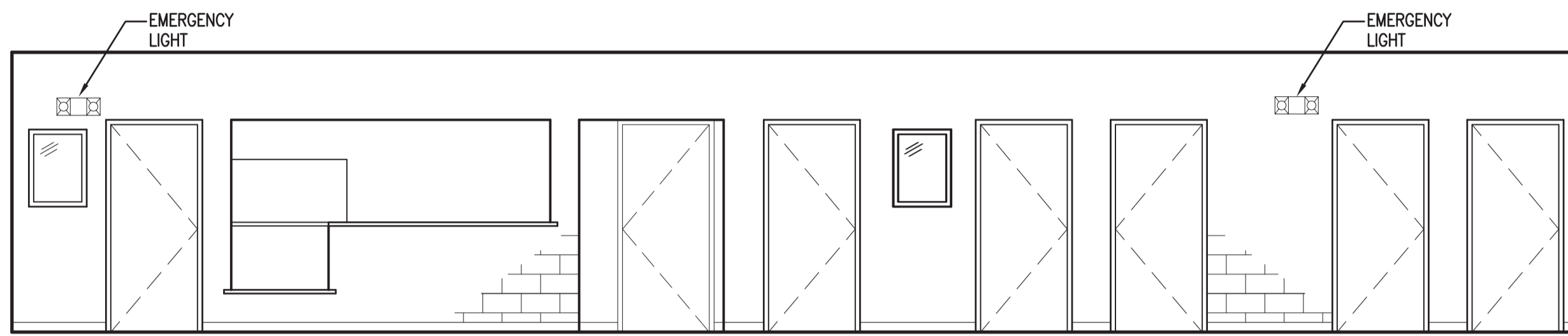
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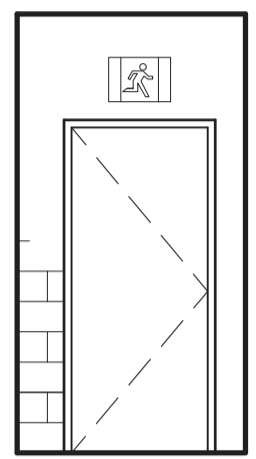
2 EAST



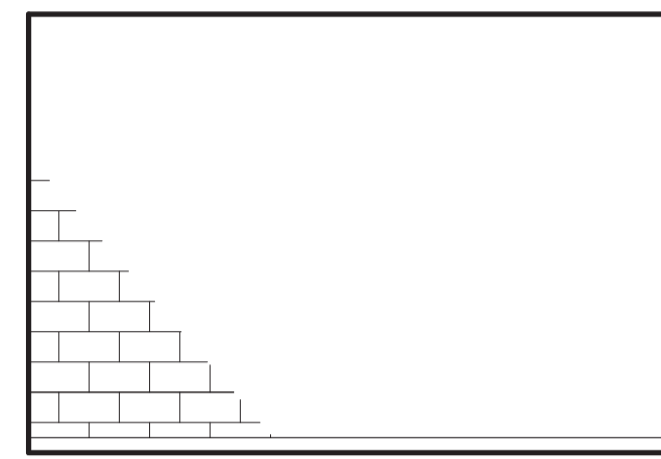
3 WEST



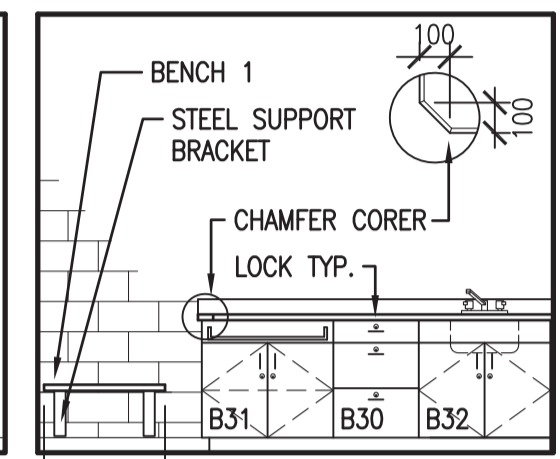
3 SOUTH



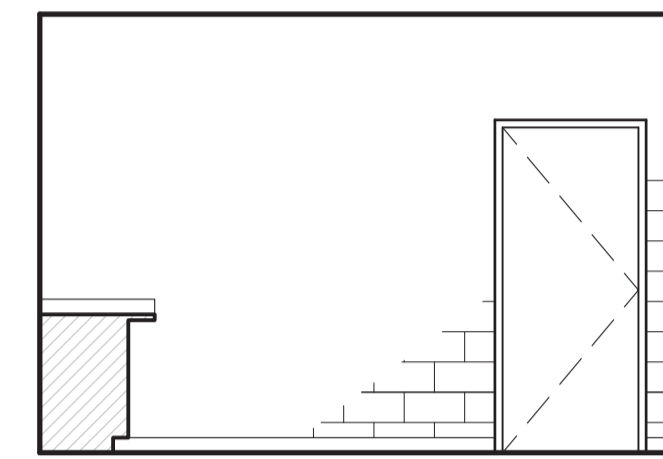
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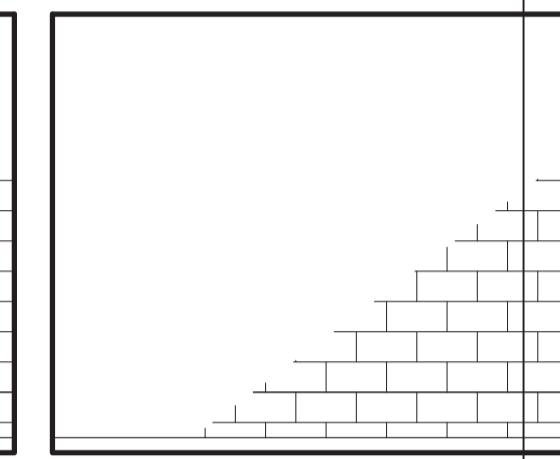
1 NORTH



2 EAST

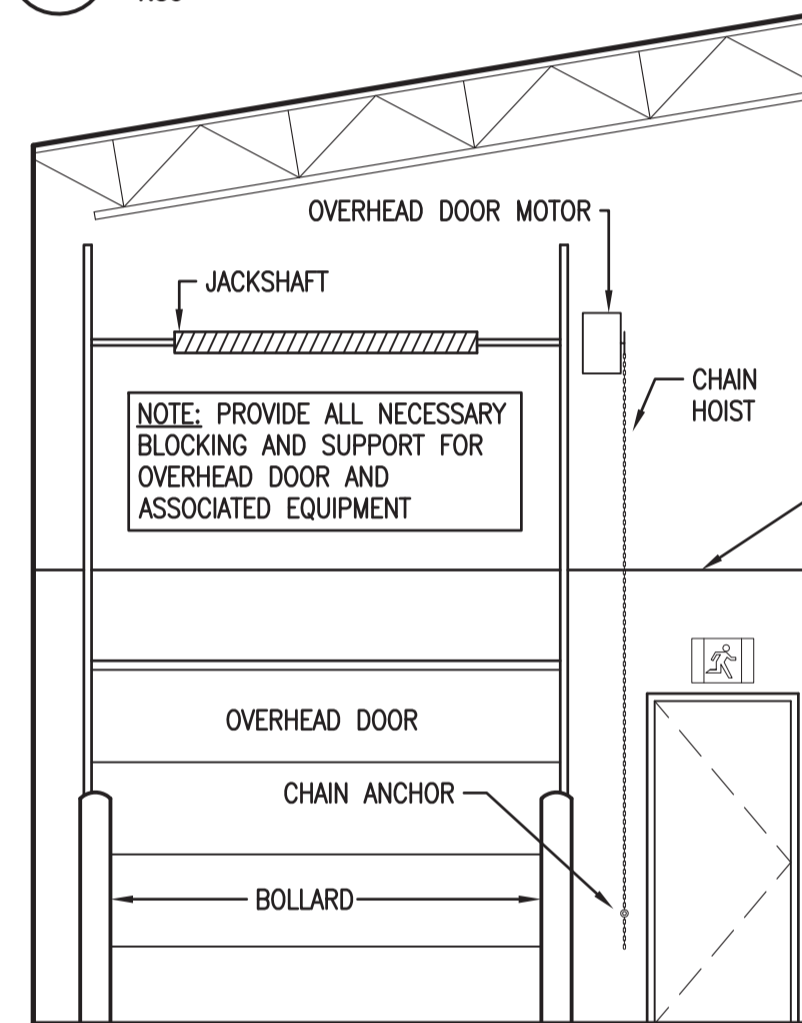


3 SOUTH

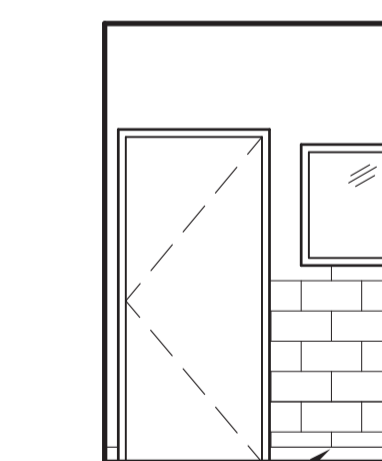


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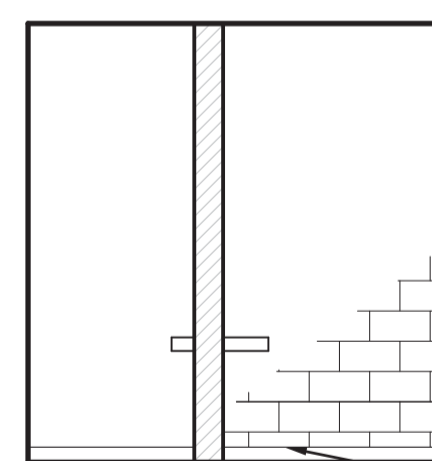
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A5.5 1:50



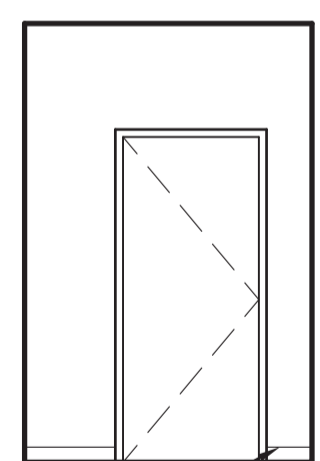
1 EAST ROOM 148  
A5.5 1:50



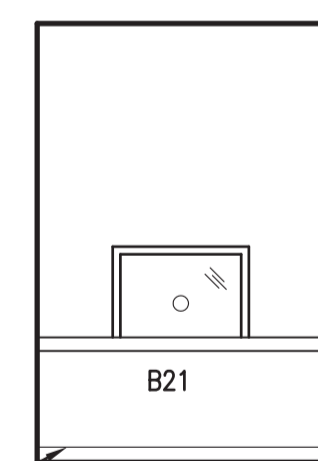
1 NORTH



2 EAST

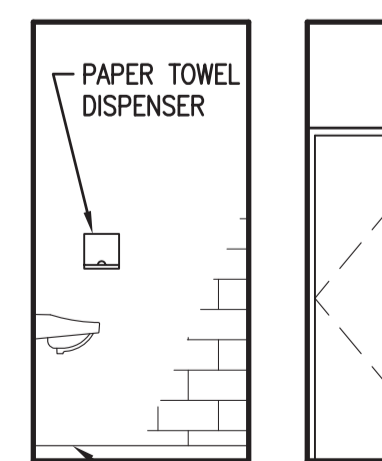


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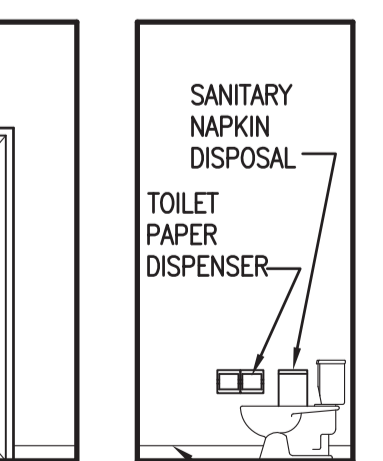


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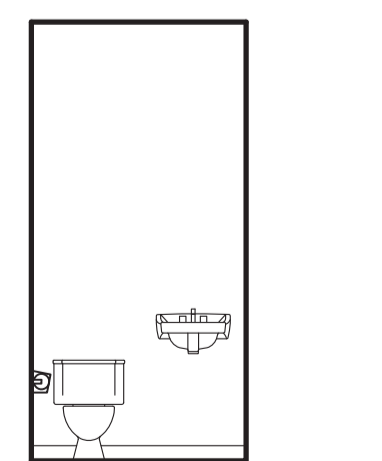
7 ROOM 151  
A5.5 1:50



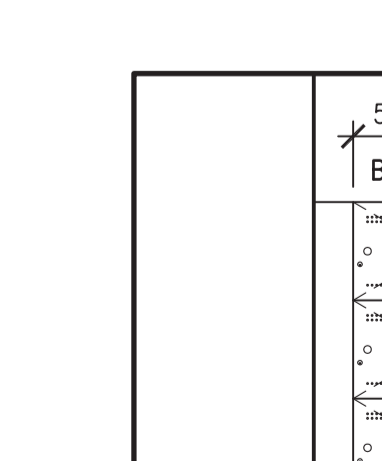
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2 EAST



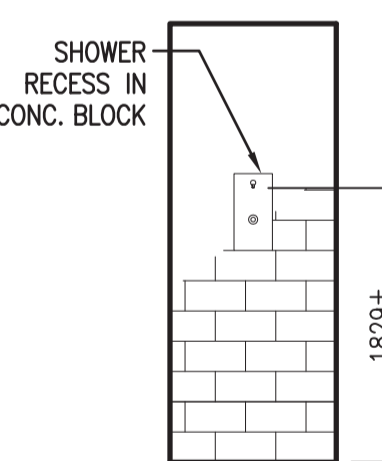
3 SOUTH



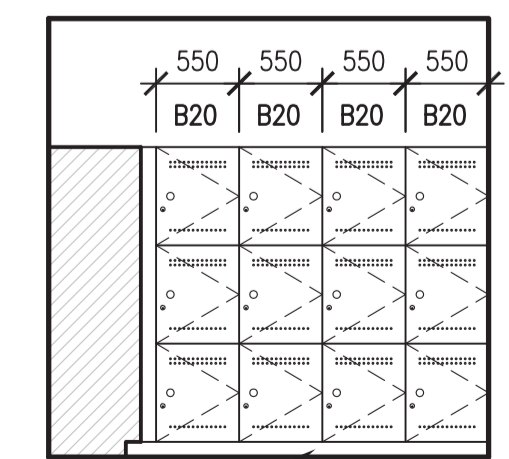
4 WEST

9 ROOM 152  
A5.5 1:50

2 EAST ROOM 153  
A5.5 1:50

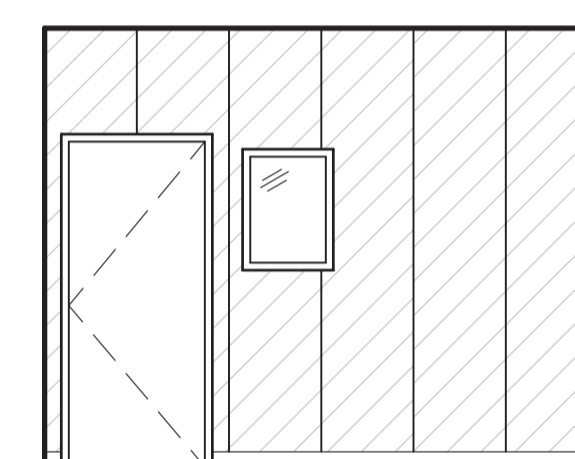


8 ROOM 151  
A5.5 1:50

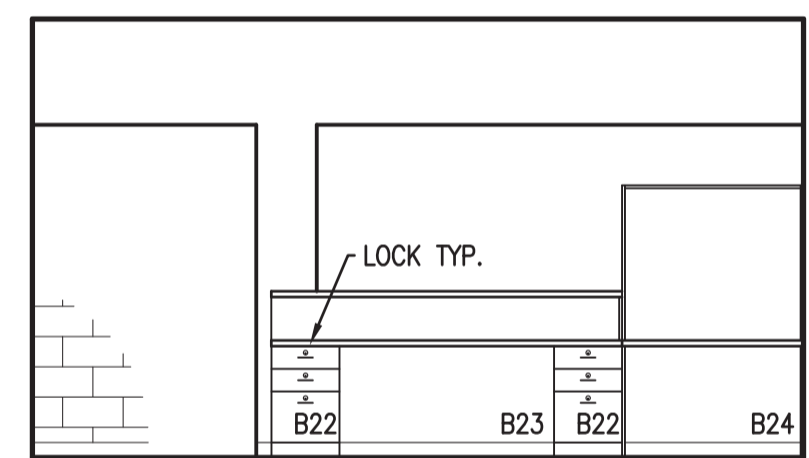


3 SOUTH

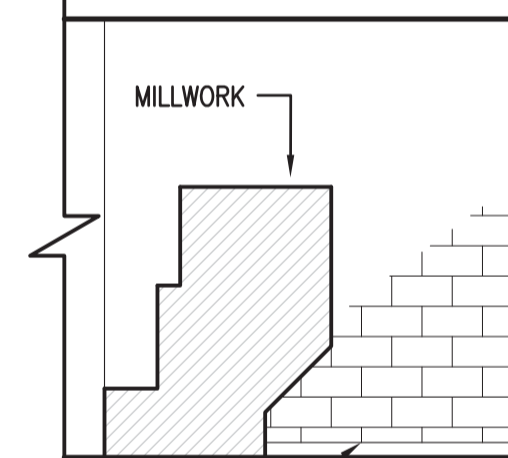
3 ROOM 145  
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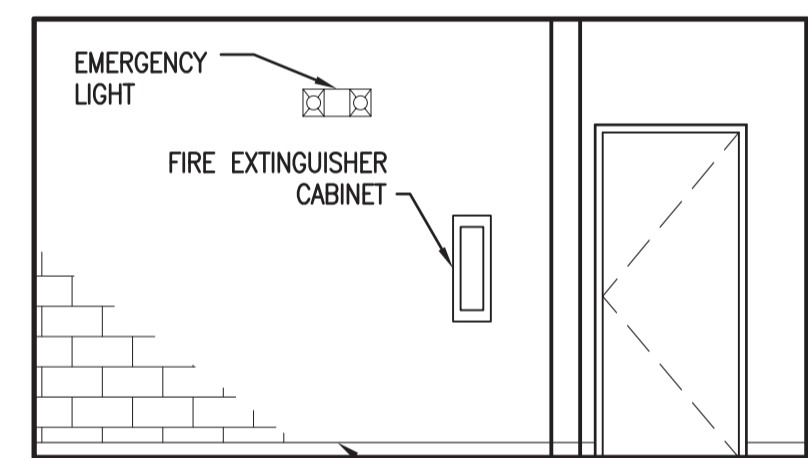
5 ROOM 149  
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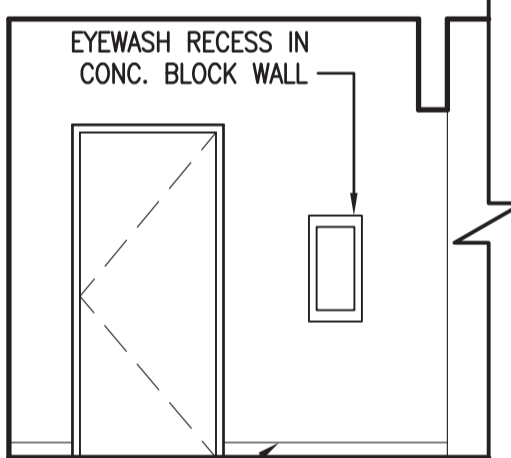
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2 EAST

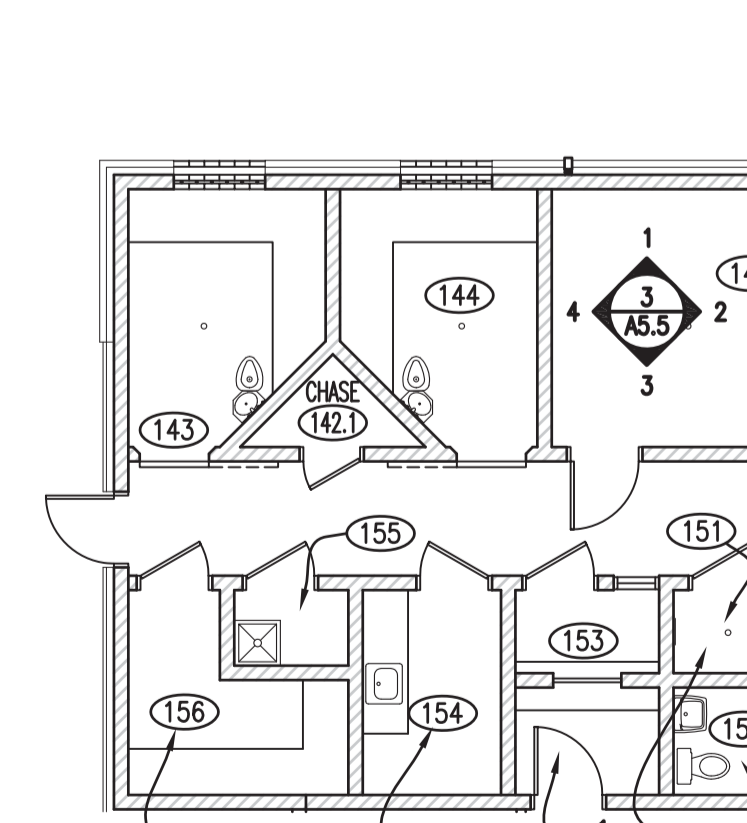


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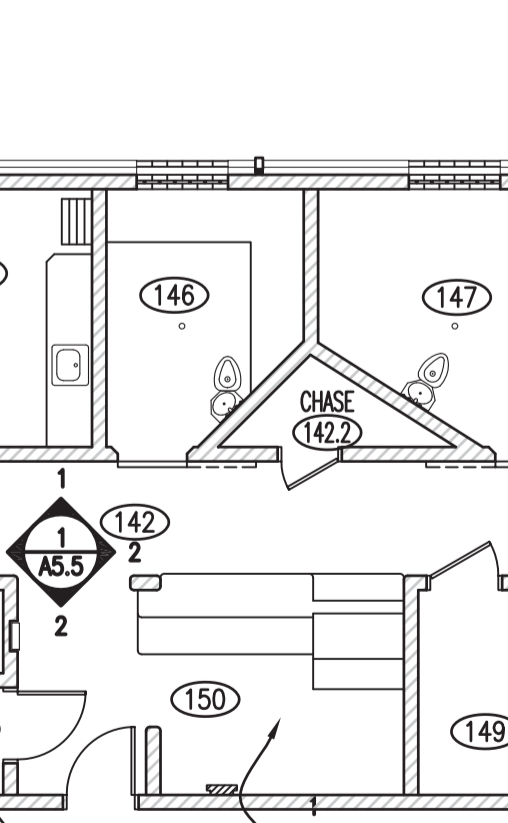


4 WEST

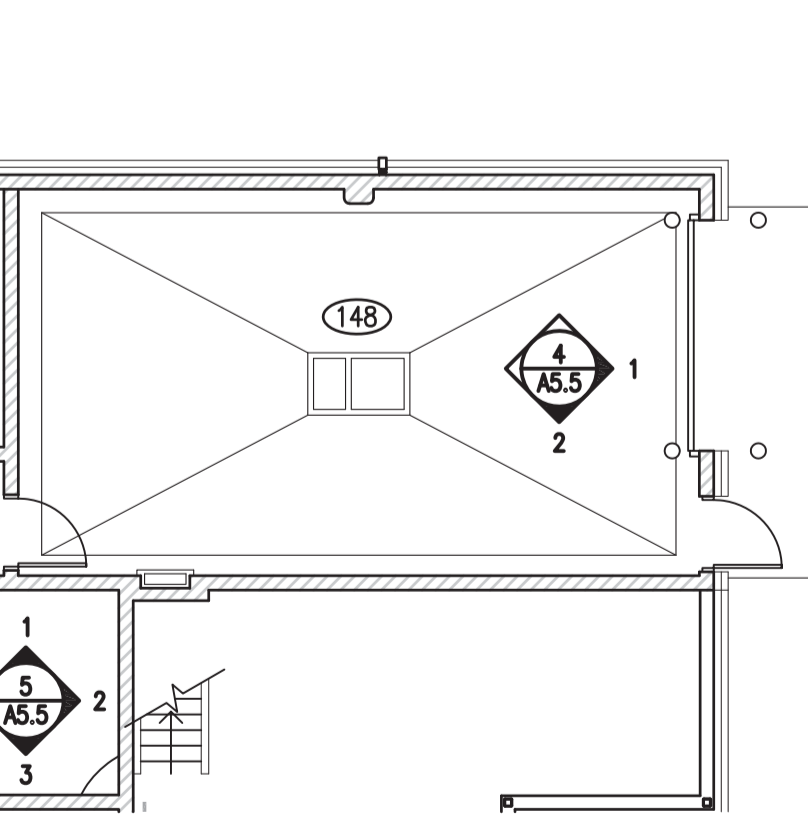
6 ROOM 150  
A5.5 1:50



10 ROOM 153  
A5.5 1:50



2 EAST



3 SOUTH



4 WEST

10 ROOM 153  
A5.5 1:50



KEY PLAN



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MAIDSTONE, SASKATCHEWAN**

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**INTERIOR ELEVATIONS**

Project No./No. du projet

29/2013

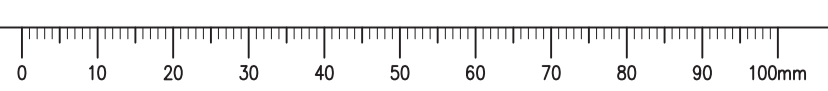
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**A5.5**

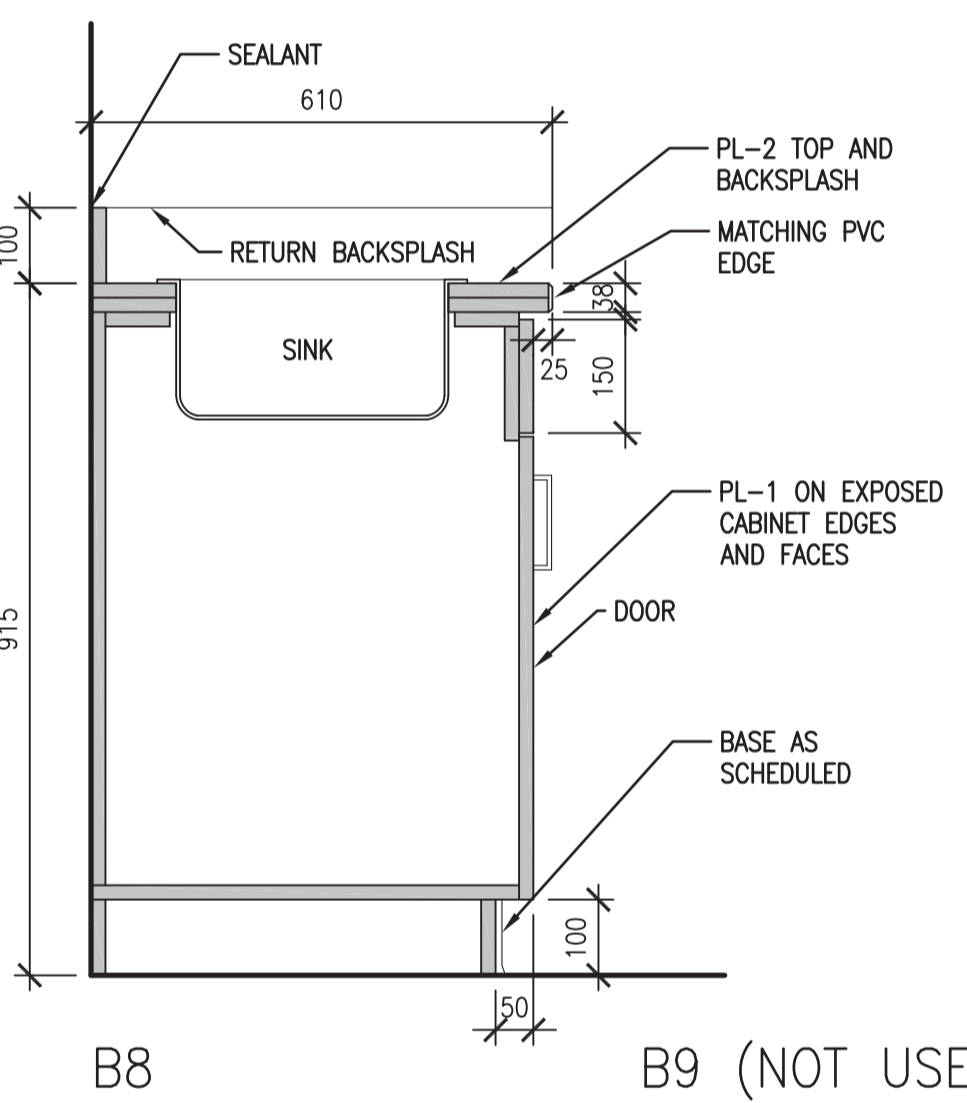
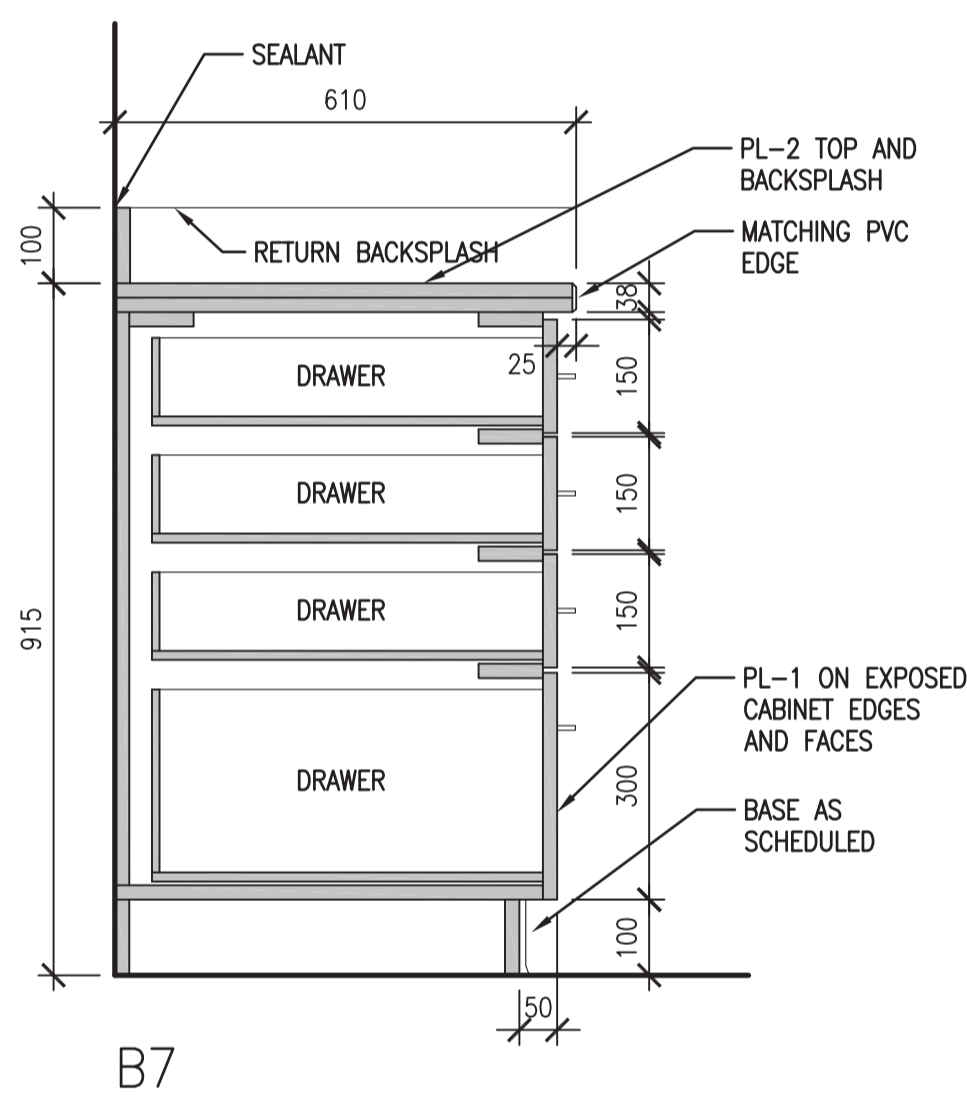
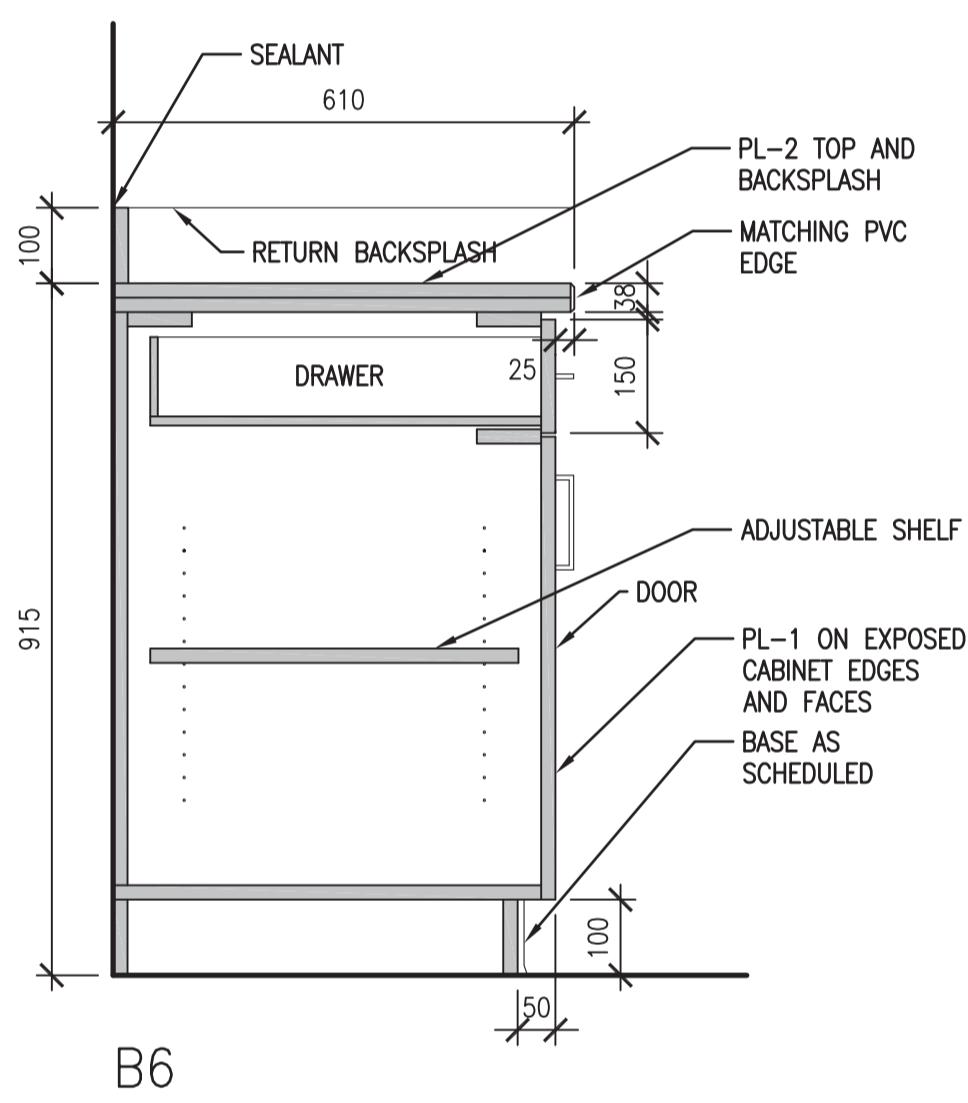
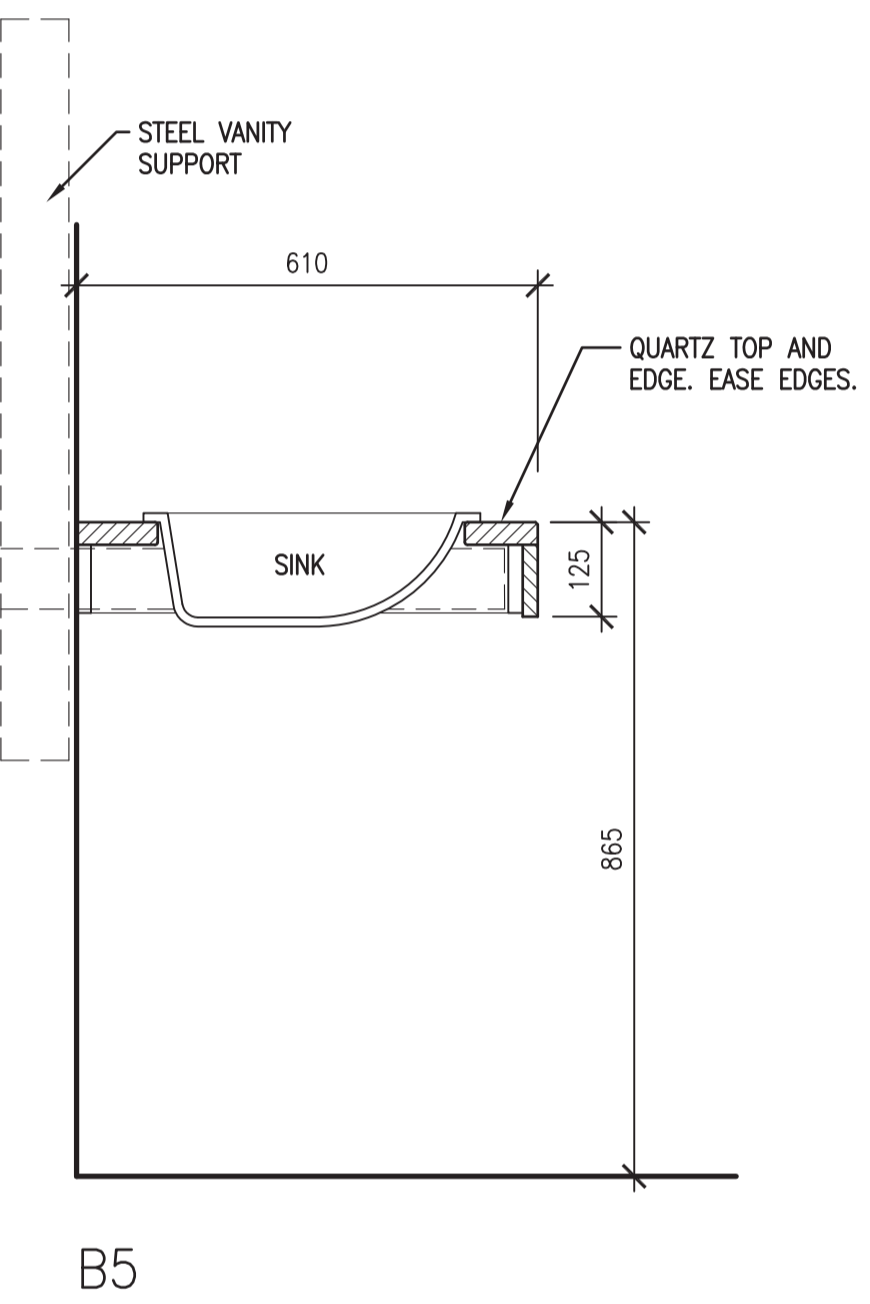
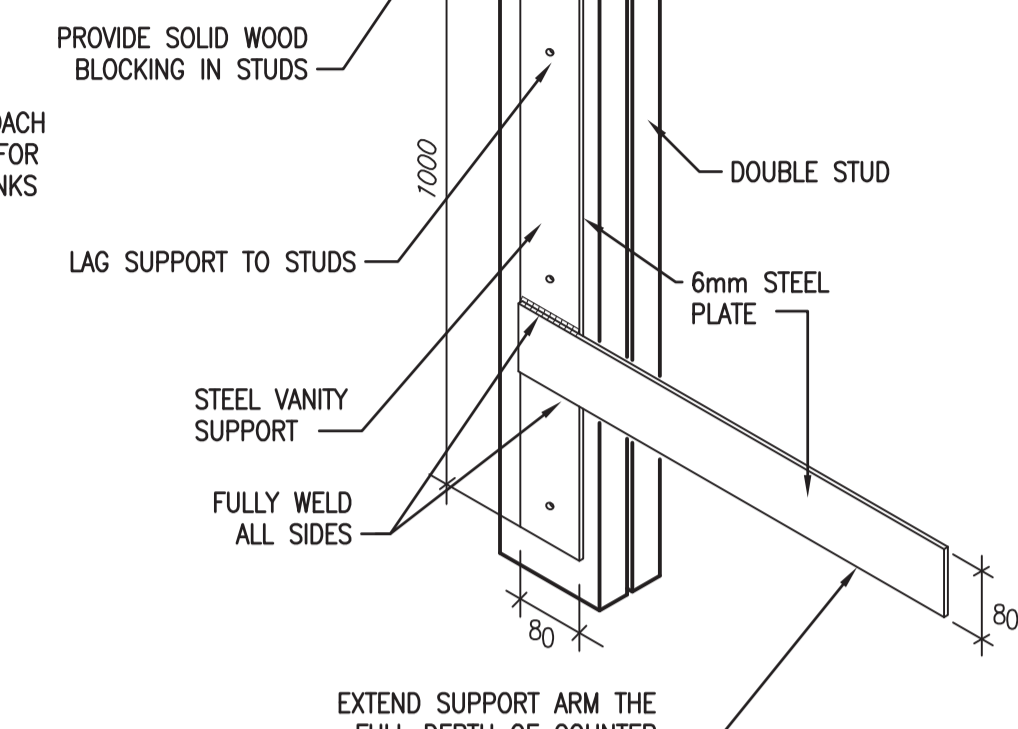
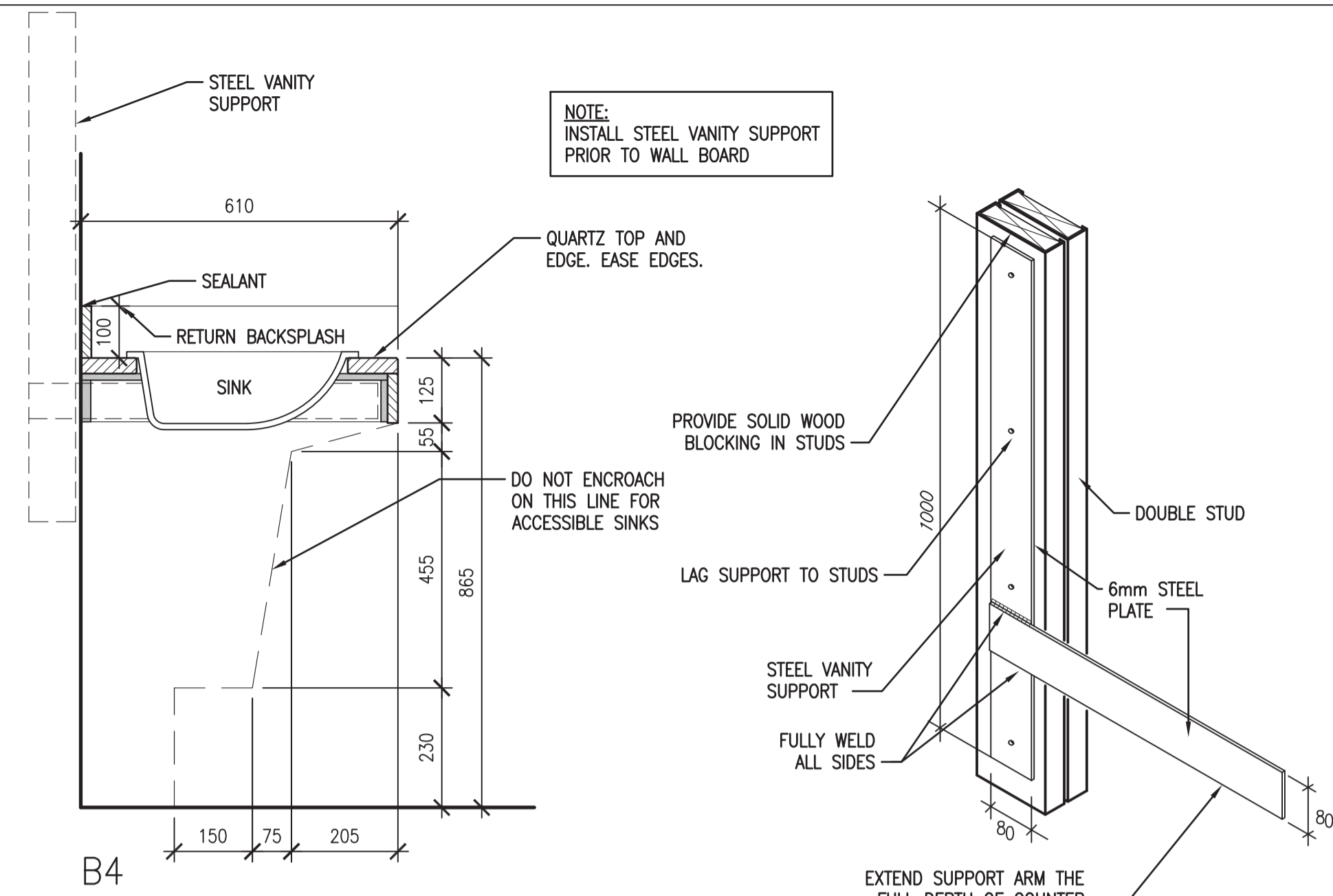
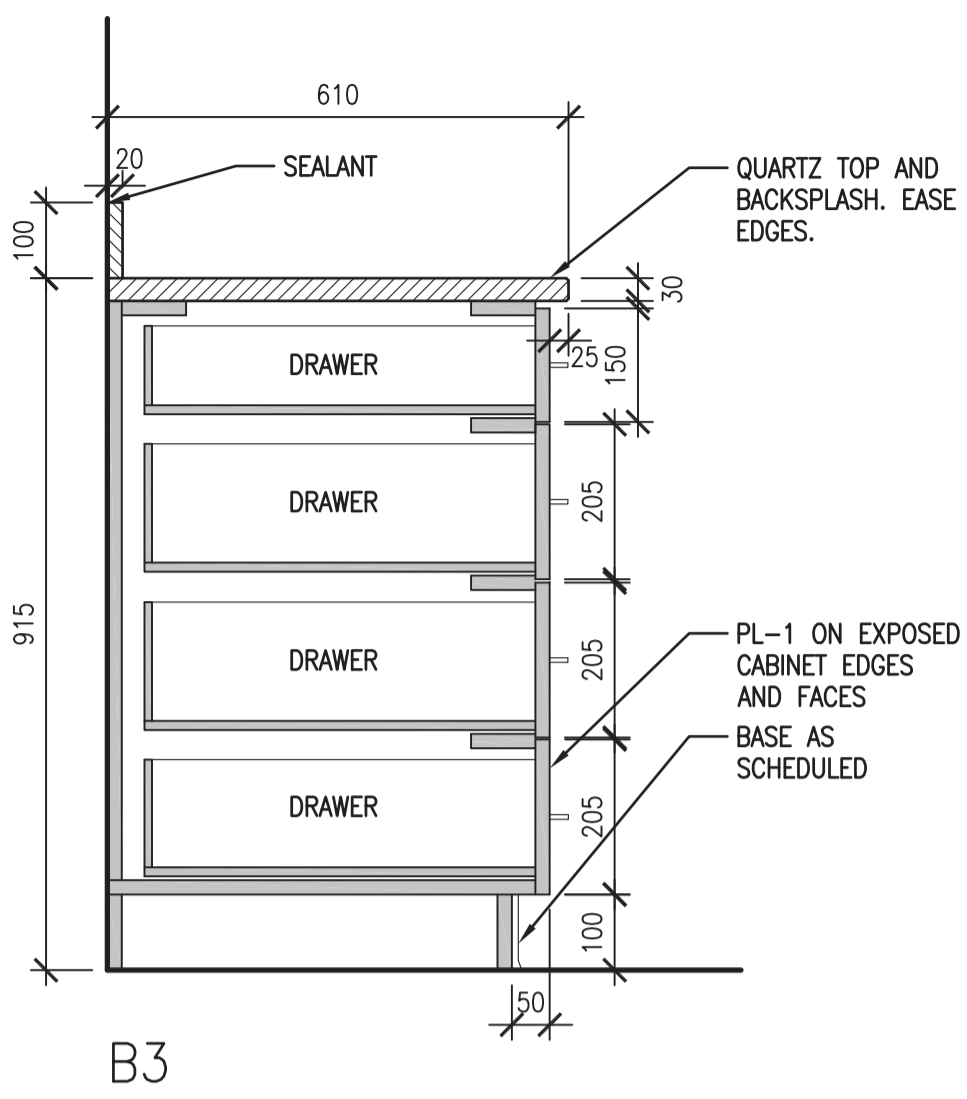
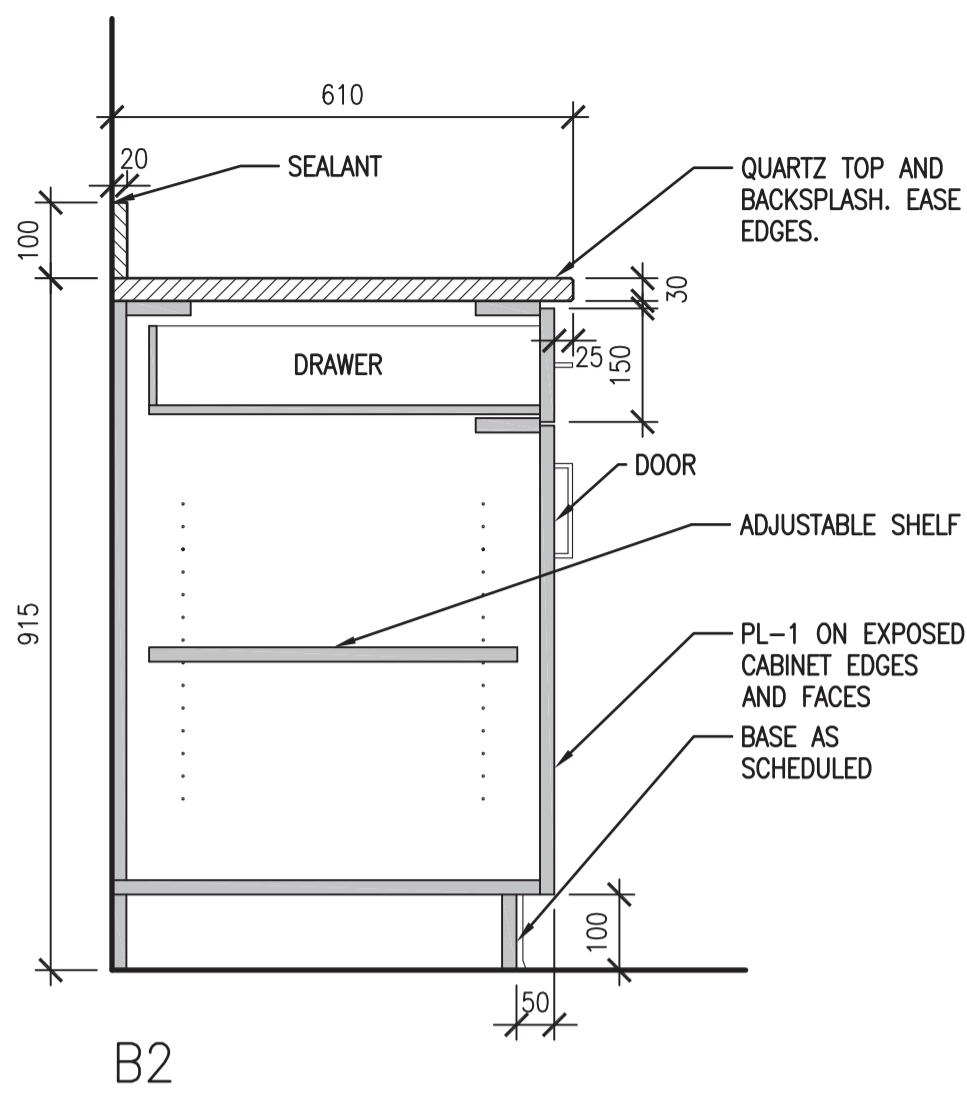
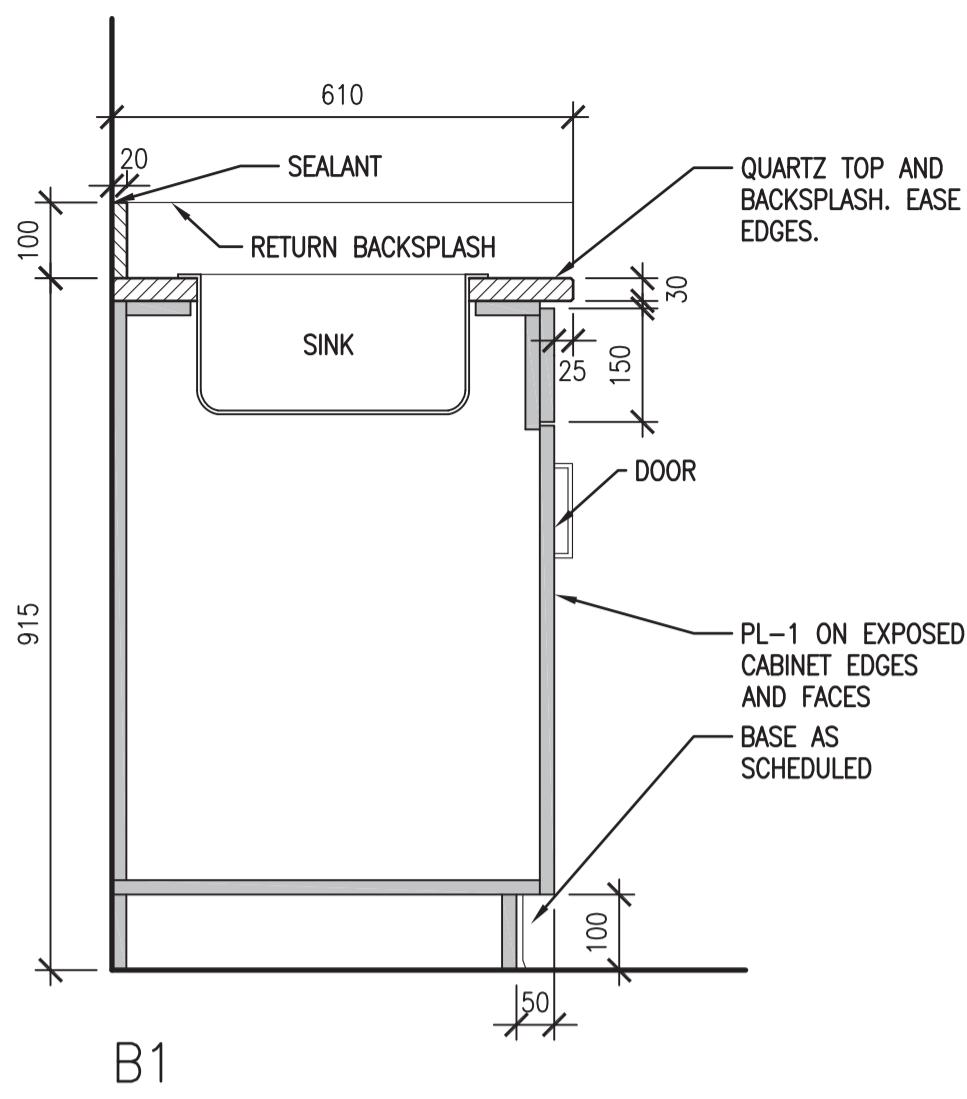
Revision no./

La Révision no.

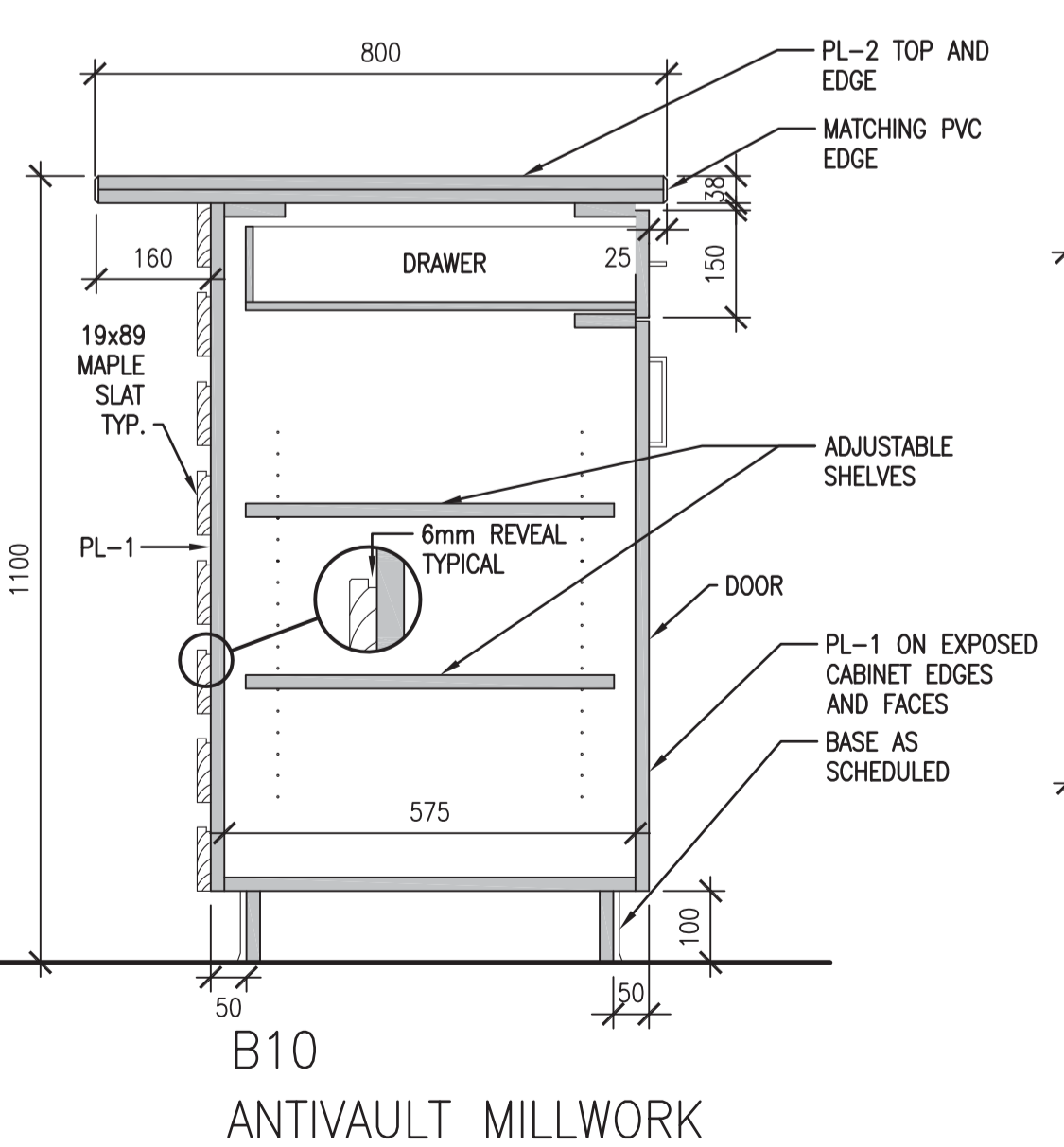
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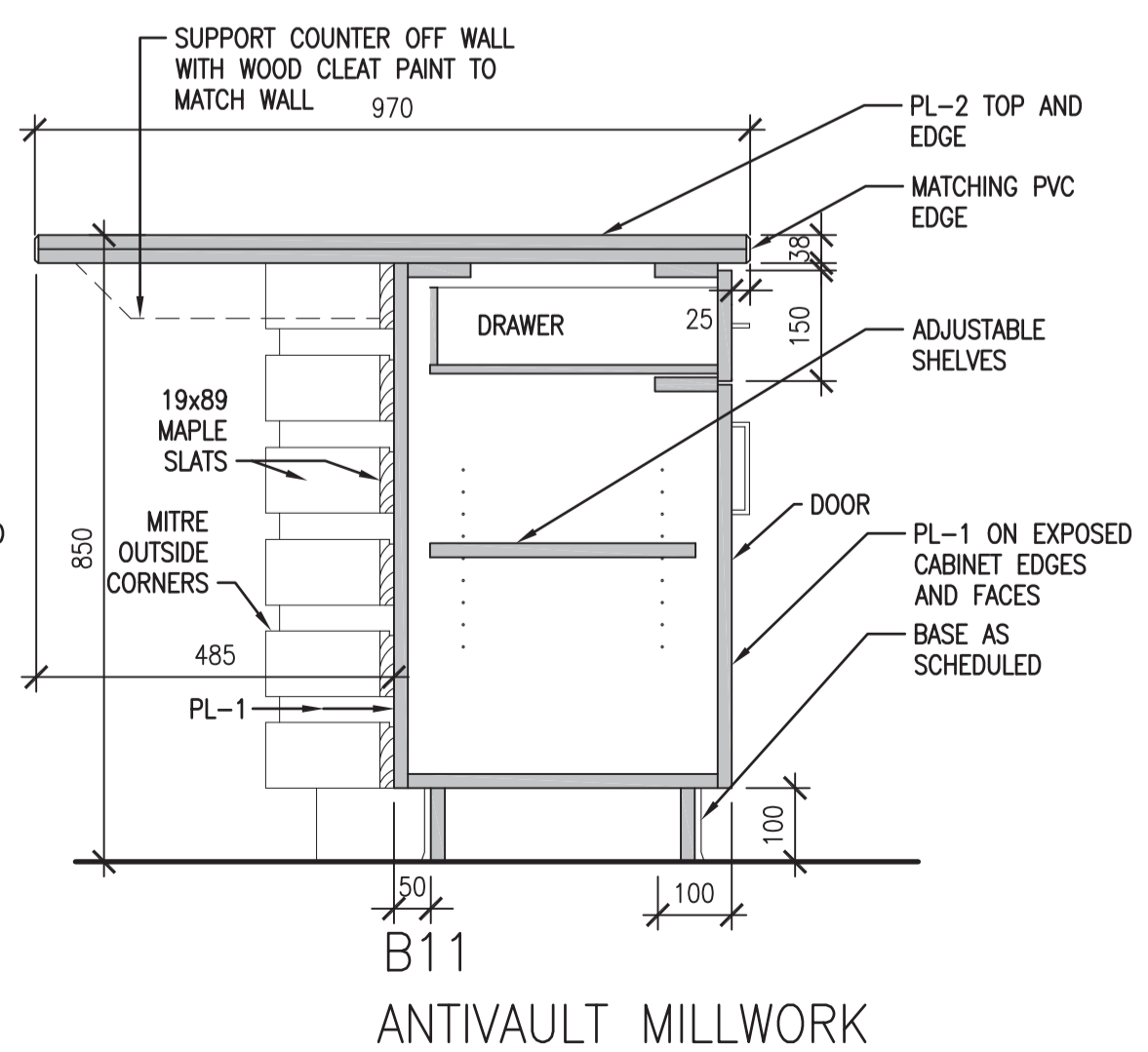




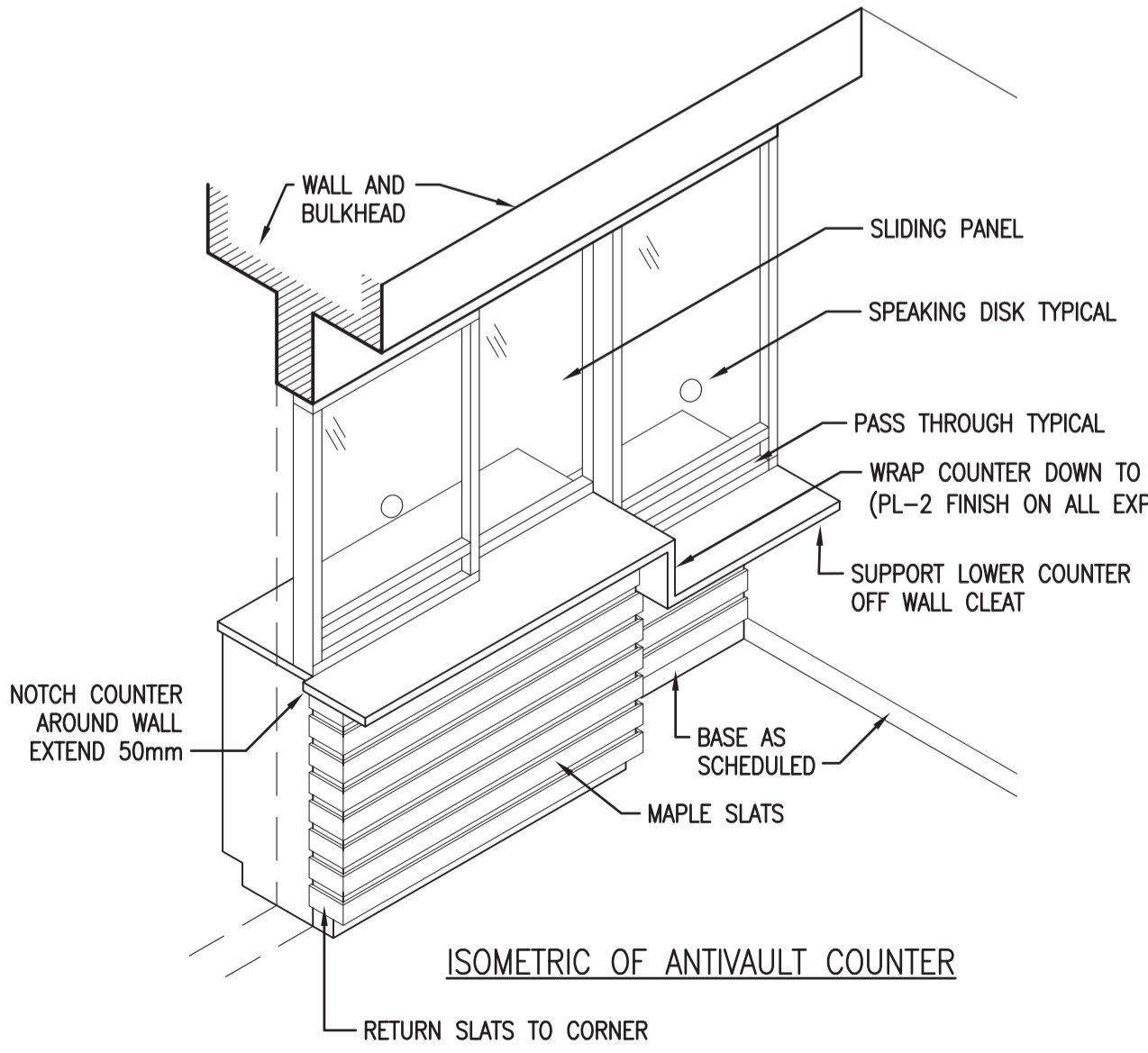
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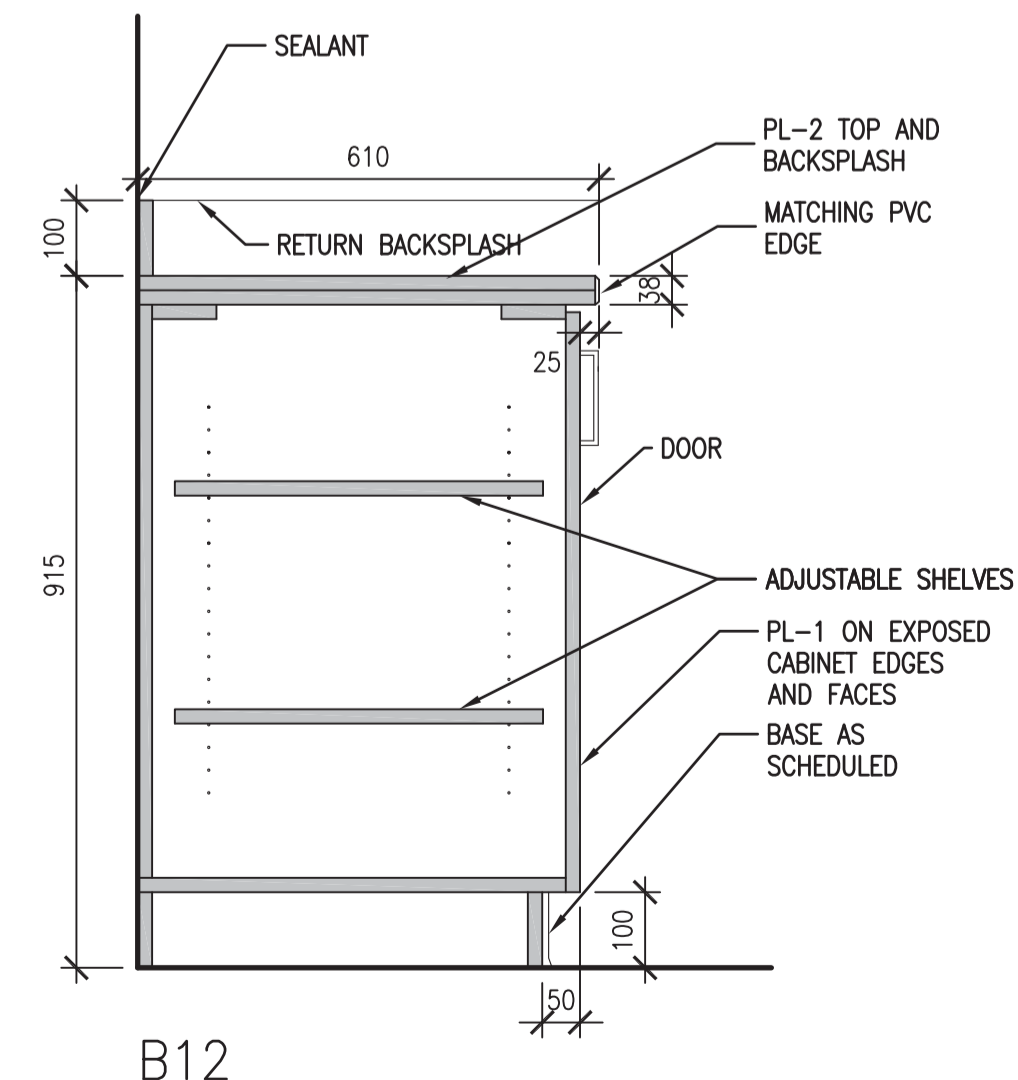
B10  
ANTIVALT MILLWORK



B11  
ANTIVALT MILLWORK



ISOMETRIC OF ANTIVALT COUNTER



B12



**DO NOT SCALE DRAWINGS**

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Revision/Revision	Description/Description	Date/Date
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Client/client

Project title/Titre du projet

**NEW POLICE BUILDING  
MAIDSTONE, SASKATCHEWAN**

Approved by/Approve par

Designed by/Concept par  
DE

Drawn by/Designe par  
DE / NO

Project Manager/Administrateur de Projets  
CS

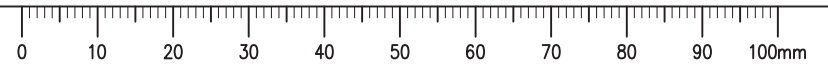
Architectural and Engineering Resources Manager/  
Ressources Architectural et de Directeur d'ingénierie

Client/client

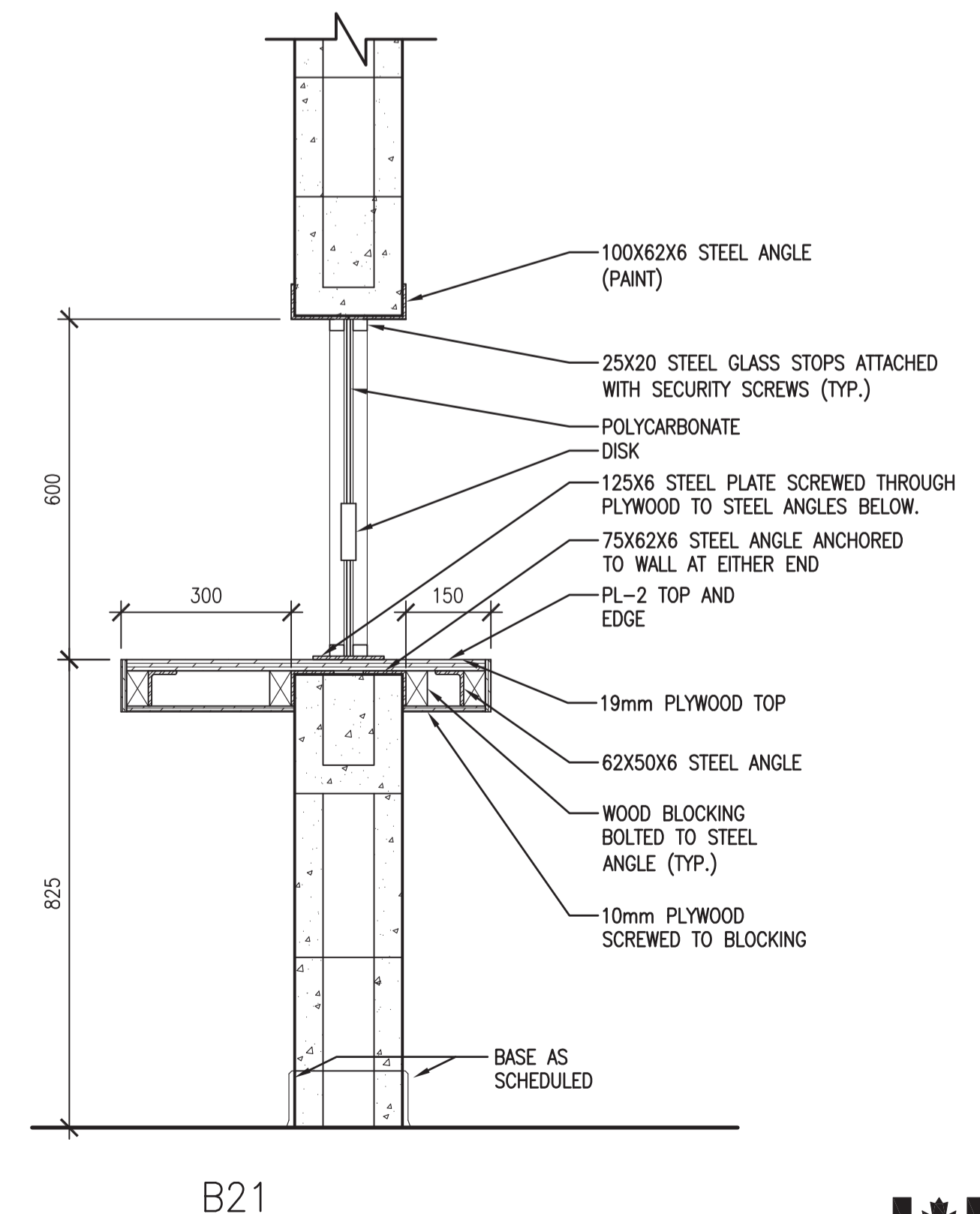
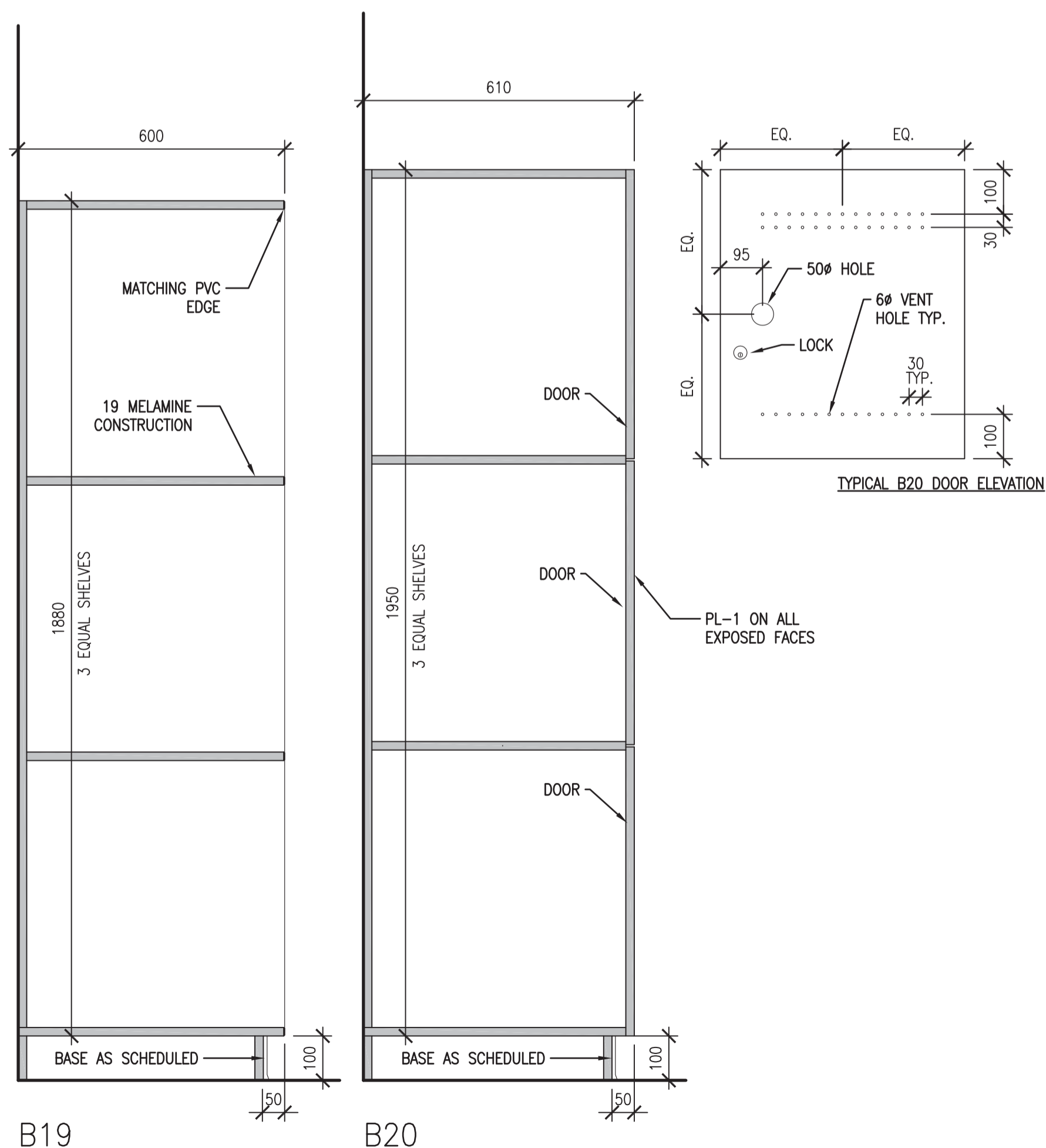
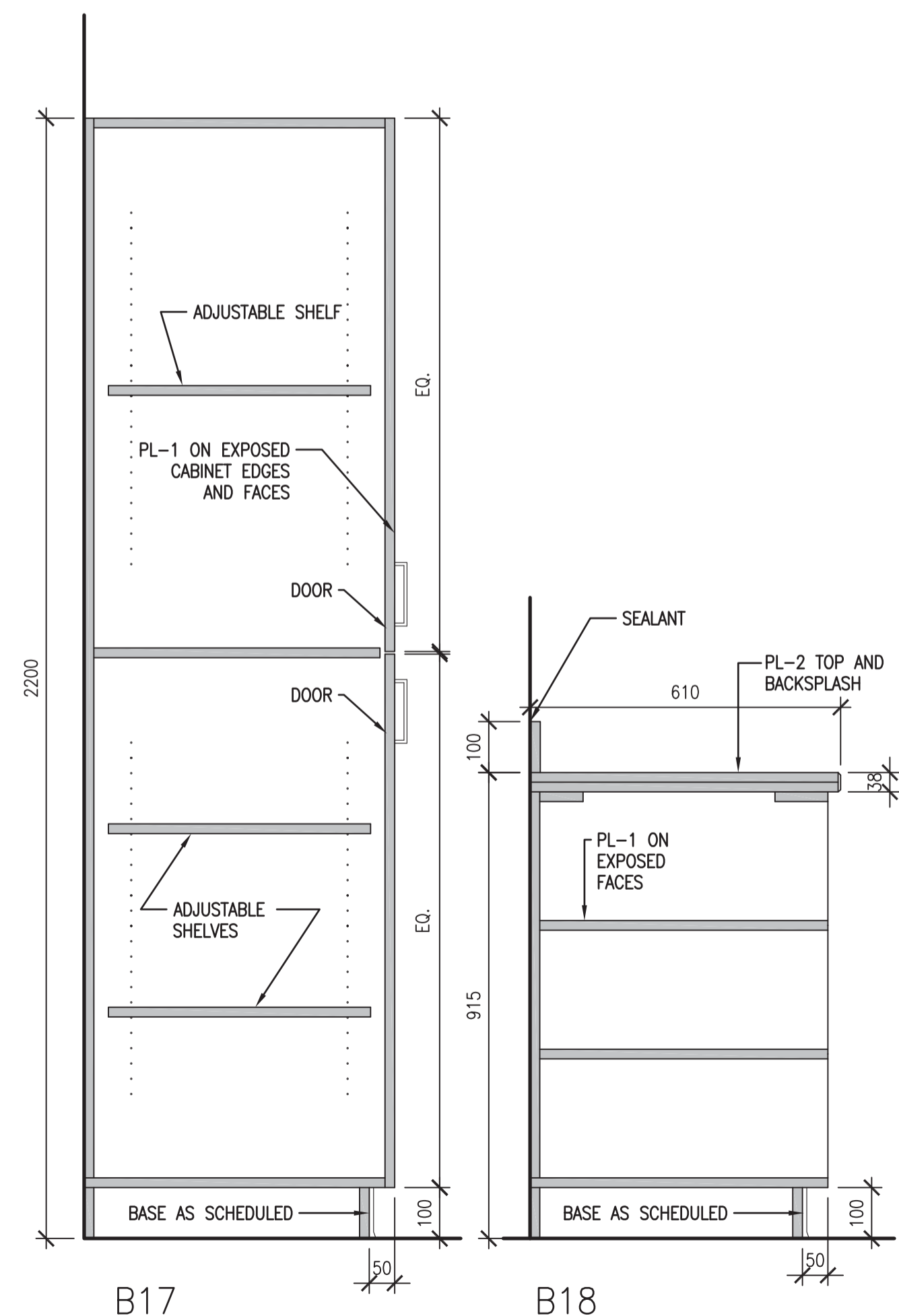
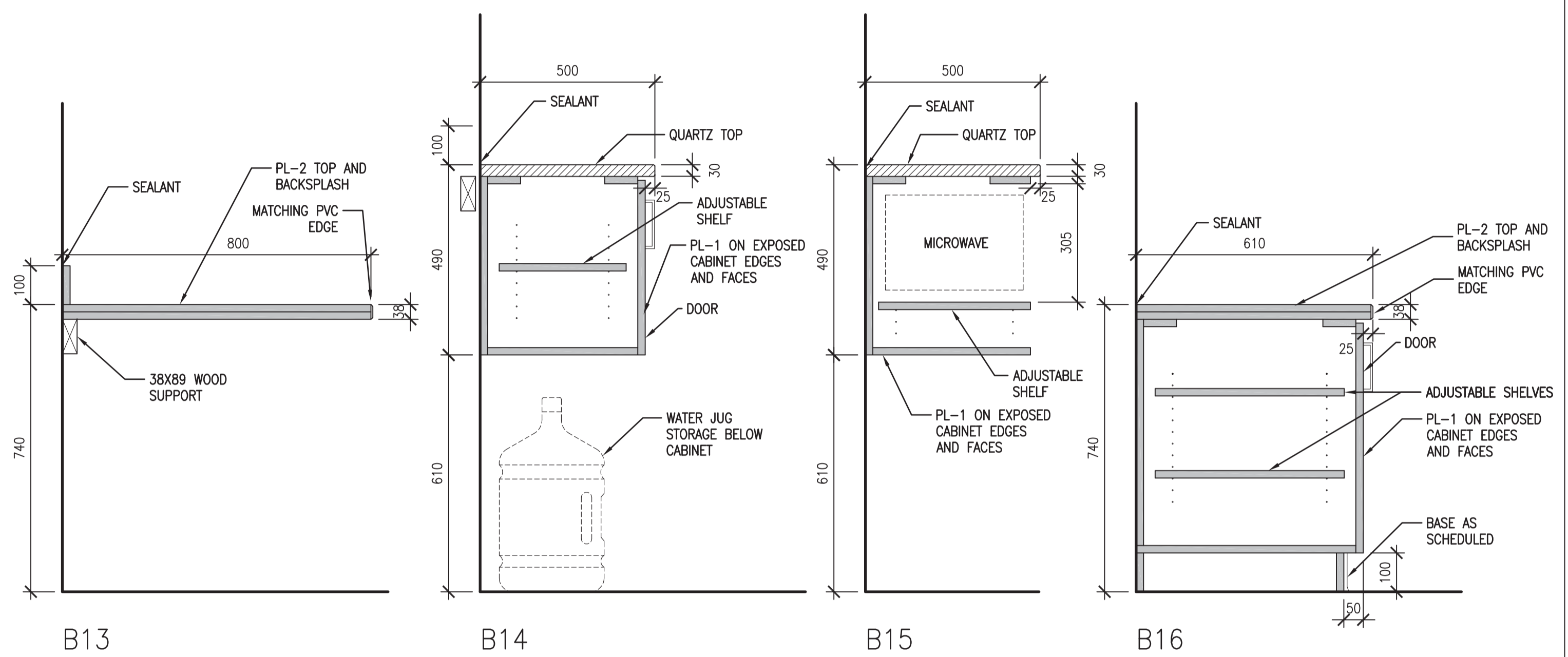
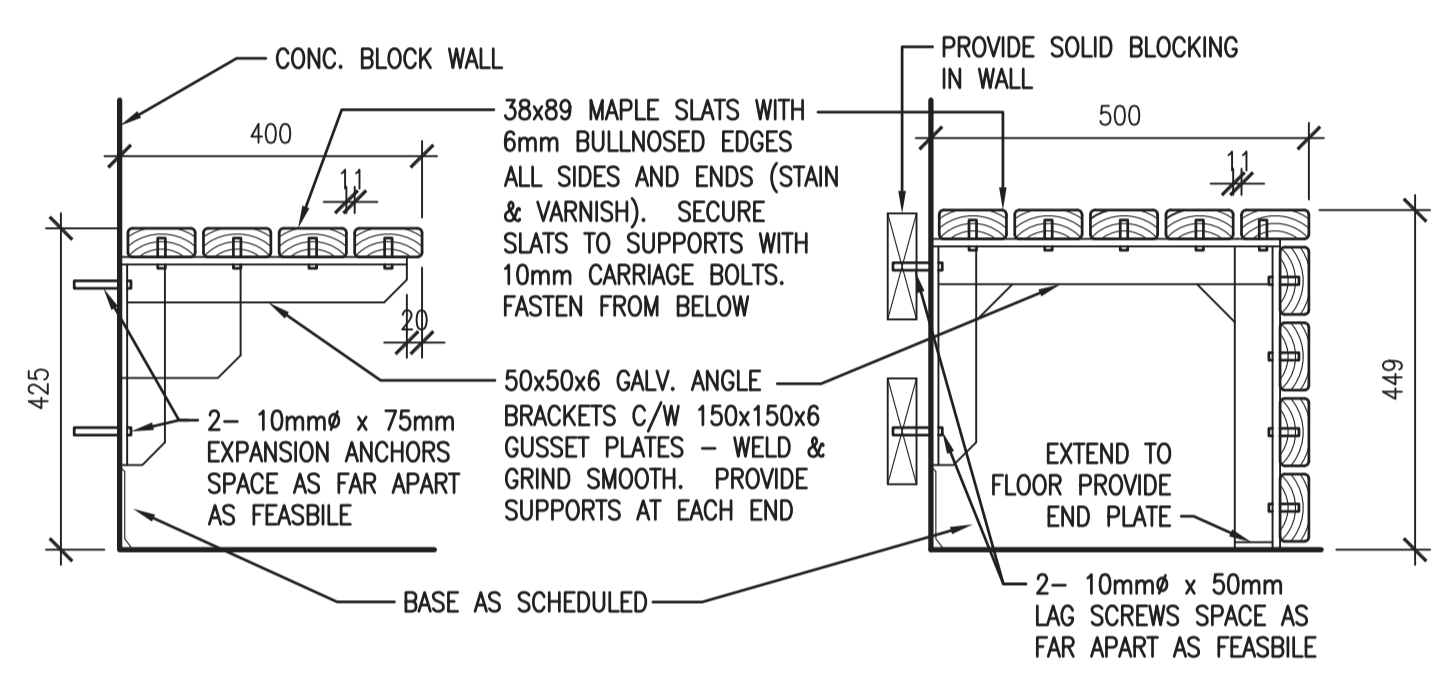
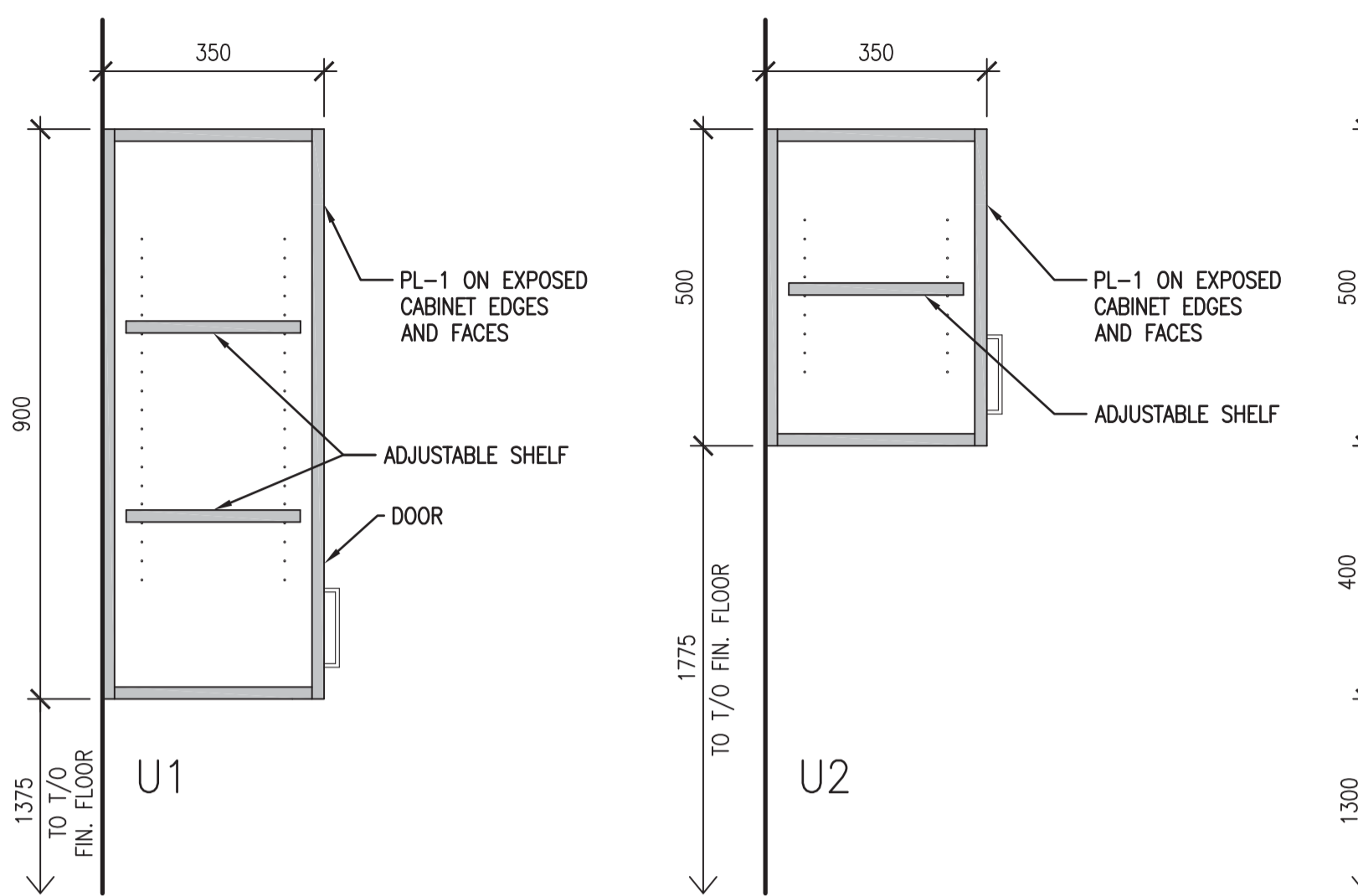
Drawing title/Titre du dessin

**MILLWORK DETAILS**

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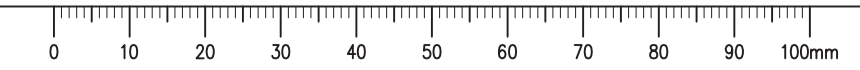






**DO NOT SCALE DRAWINGS**

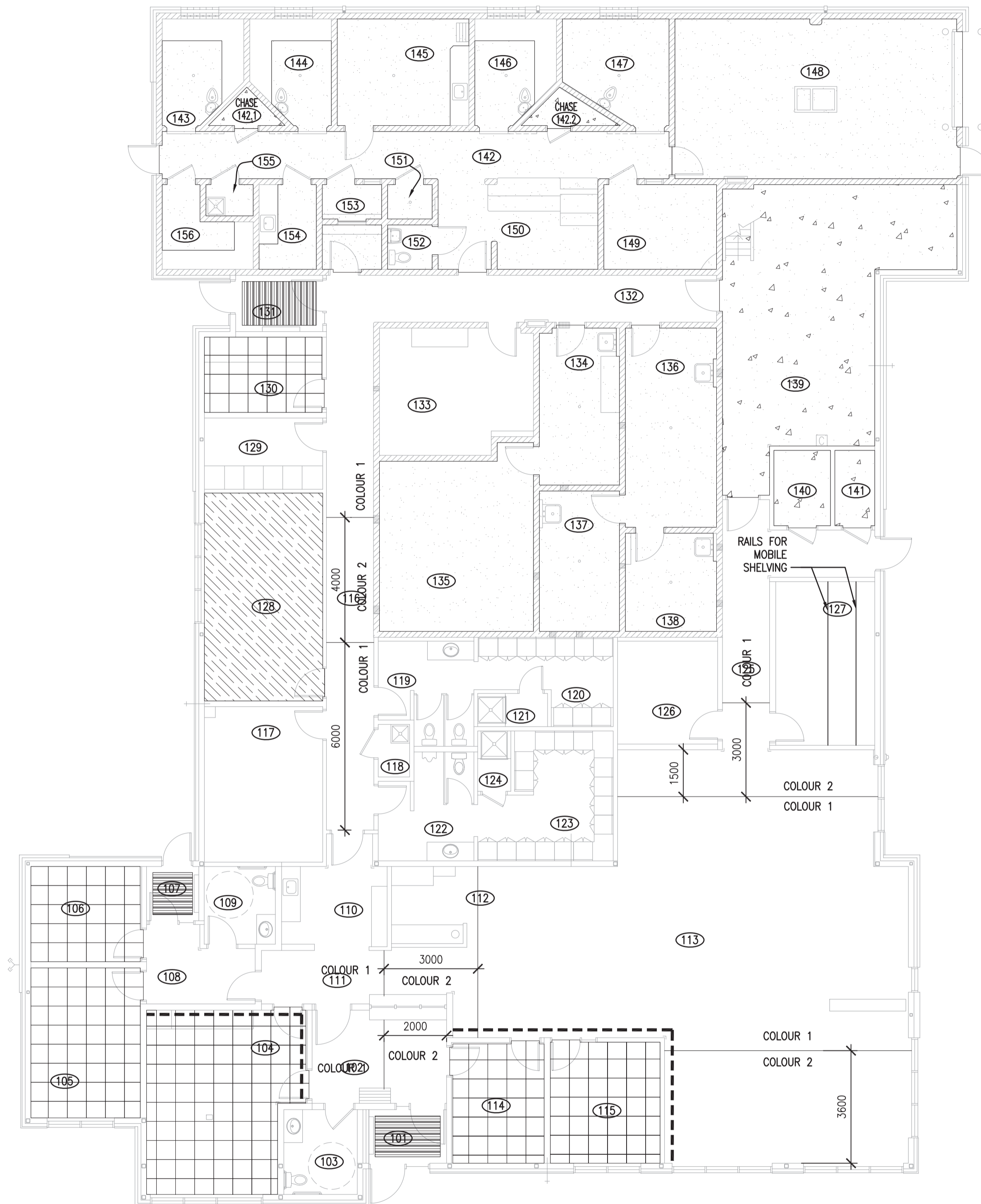
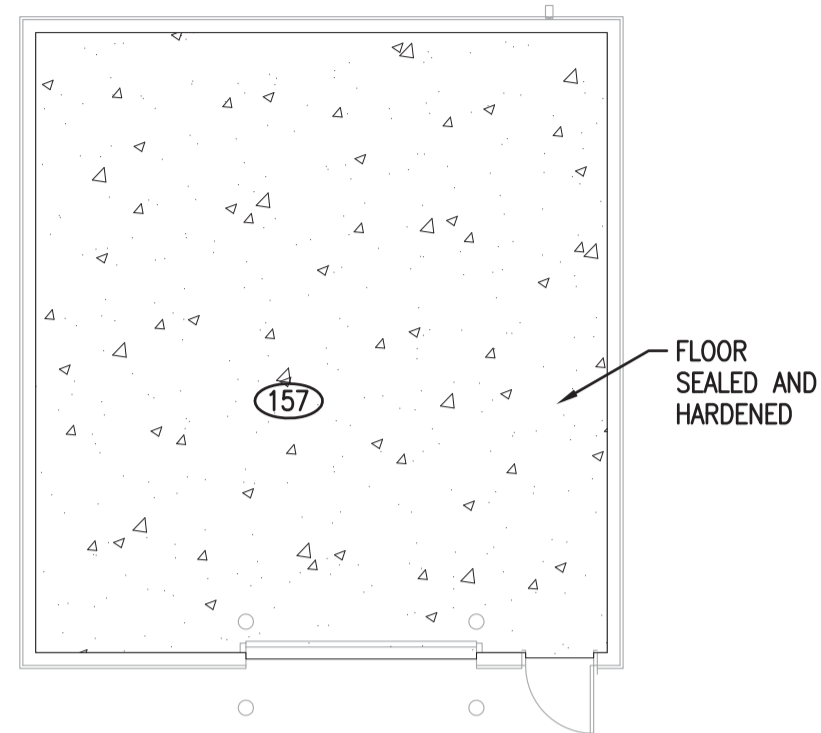
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Revision/Revision	Description/Description	Date/Date
Client/client		
Project title/Titre du projet		
<b>NEW POLICE BUILDING MAIDSTONE, SASKATCHEWAN</b>		
Approved by/Approve par		
Designed by/Concept par DE		
Drawn by/Desainé par DE / NO		
Project Manager/Administrateur de Projets CS		
Architectural and Engineering Resources Manager/ Ressources Architectural et de Directeur d'ingénierie		
Client/client		
Drawing title/Titre du dessin <b>MILLWORK DETAILS</b>		
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LEGEND	
	FLUID APPLIED FLOORING
	SEALED CONCRETE
	POLISHED CONCRETE
	CARPET TILE
	RUBBER SPORT FLOORING
	ENTRANCE FLOOR MAT
	ACCENT WALL COLOR

1 FINISHES PLAN  
1:100

**SEPW Architecture Inc.**

101-2725 Pampa Street, Regina, SK S4S 0R8 ph: (306) 949-2255  
101-2718 Kiewit Place, Saskatoon, SK S7P 0A6 ph: (306) 952-9457  
website: www.sepw.ca



**DO NOT SCALE DRAWINGS**

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0	ISSUED FOR TENDER	2014-12-08

Revision/	Description/Description	Date/Date
Client/client		

Project title/Titre du projet

**NEW POLICE BUILDING  
MAIDSTONE, SASKATCHEWAN**

Approved by/Approve par

Designed by/Concept par

DE

Drawn by/Dessine par

DE / NO

Project Manager/Administrateur de Projets

CS

Architectural and Engineering Resources Manager/  
Ressources Architectural et de Directeur d'ingénierie

Client/client

Drawing title/Titre du dessin

**FINISHES PLAN**

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projet  
29/2013

Sheet/Feuille  
**A7.1**

Revision no./  
La Révision  
no.  
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**DRAWING SPECIFICATIONS**

**DIVISION 1 – GENERAL REQUIREMENTS**

**1.1 General Notes**

1. General Specifications – National Building Code of Canada 2010. Contractor shall read Structural drawings in conjunction with Architectural, Mechanical and Electrical drawings. Unless noted otherwise, typical details apply throughout. All dimensions in millimetres.

**1.2 Discrepancies**

1. Report any discrepancies to the Consultant before proceeding with the work.

**1.3 Mechanical Openings**

1. Refer to mechanical drawings to confirm size and locations of all openings. Notify Consultant prior to proceeding if conditions differ significantly between drawings.

**1.4 Shop Drawings**

1. Contractor to submit paper or pdf copies of premanufactured structural materials to the Consultant for review prior to fabrication.

**1.5 Temporary Works**

1. Contractor is responsible for the design, construction and maintenance of all temporary works as may be required during the course of construction. Temporary works include, but are not limited to, shoring, scaffolding and bracing required to stabilize the structure until permanent structure is in place. Contractor to engage professional design services where required to comply with applicable Code requirements.

**DIVISION 2 – SITEWORK**

**2.1 Bored Piles**

1. Excavate pile shaft to minimum dimensions indicated. Refer to specifications for Continuous Flight Augered requirements. Vibrate concrete as placing proceeds.

**DIVISION 3 – CONCRETE**

**3.1 Concrete Reinforcement**

- All reinforcing steel, unless noted otherwise, shall be deformed bars of high strength new billet steel conforming to CSA G30.18–09, Grade 400.
- Minimum lap splice for 10M bars to be 450 mm. Minimum lap splice for 15M bars and larger to be 36 bar diameters or 675 mm, whichever is greater.
- All reinforcing bars to be continuous, unless noted otherwise.
- Lap reinforcing where noted on drawings. Otherwise, lap top bars at midspan; bottom bars at supports as required for length.
- Pile ties and beam stirrups shall conform to CSA G30.18–09, Grade 300.
- Welded wire mesh to G30.5–M1983. Minimum lap splice 200 mm. Provide in flat sheets only.
- Perform concrete reinforcing in accordance with CSA–A23.1–09

**3.2 Cast-in-Place Concrete**

- Perform cast-in-place concrete work in accordance with CSA A23.1–09, "Concrete Materials and Methods of Concrete Construction".
- Cement to CSA A3000–08, "Portland Cements", and aggregates to CSA–A23.1–04, "Concrete Materials and Methods of Concrete Construction".
- Submit concrete mix designs to Consultant for review.
- Proportion normal density concrete in accordance with CSA A23.1–09 Alternative 1, to give the properties in accordance with the following table:

Type	Location	Exposure Class	Strength f <sub>c</sub> (MPa)	Aggreg. max(mm)	Slump mm	Total Air %
1.	Piling	S-1	35 Ø56d	40	80±30	3 to 6
2.	Grade Beams, Pilecaps	S-1	35 Ø56d	20	80±30	4 to 7
3.	Interior Structural Slabs	N	25 Ø28d	20	80±30	nil
4.	Interior Slab on Metal Deck	N	25 Ø28d	20	80±30	nil
5.	Interior Slab on Grade	N	25 Ø28d	20	80±30	nil
6.	Exterior Grade Supported Sidewalks, Landing Pads, Slabs	C-2	32 Ø28d	20	80±30	5 to 8

**3.3 Concrete Testing**

- Contractor to arrange and pay for concrete tests. Take 1 set of tests for each 50 cubic metres of concrete cast or each days casting. Tests to include:
  - 3 test cylinders plus 1 additional cylinder for cold weather concreting. Additional cylinder to be cured under job conditions.
  - 1 slump test.
  - 1 air content test.
- Submit test results to Consultant.
- Tests to be performed by CSA approved agency.
- Concrete testing to CSA A23.2–09.

**3.4 Concrete Formwork**

1. To conform to applicable requirements of CAN/CSA–A23.1 Concrete Materials and Methods of Construction and CAN/CSA S269.3–M92 (R2008) Falsework for Construction Purposes.

**3.5 Concrete Floor Finishing**

- All interior slabs to be steel trowel finished to flatness of 5 mm in 3000.
- All non-hardened concrete floors to have minimum 2 applications of acrylic sealant (CPD Acryl Cure & Seal or equivalent).
- All floors noted as receiving hardener to be finished with coloured (light grey) non-metallic dry shake hardener applied at rate of 3.0 kg/sm (60 lb/100sf) and compatible sealer.
- All exterior slabs to have medium broom finish.

**3.6 Concrete Accessories**

- Concrete Anchors : Sizes as detailed on drawings, Standard embedment and installation as per Manufacturers Specifications.
  - Expansion Wedge Anchors to be Hilti Kwik Bolt 3 or approved alternate.
  - Drop In Anchors to be Hilti HDI Anchors or approved alternate.
  - Heavy Duty Sleeve Anchors to be Hilti HSL 3 or approved alternate.
  - Undercut Anchors to be Hilti HDA or approved alternate
  - Hollow Masonry Adhesive Anchors to be Hilti HIT HY 20 or approved alternate.
- Adhesive Anchors to be Hilti HIT HY 150 Max (fast set, hammer drilled holes), Hilti HIT RE 500 (slow set, core holes), Hilti HIT ICE (cold weather below –10C) or approved alternate complete with specified rod (HAS–E, HAS Super, SS304/316), washer and nut.
- Concrete Patching Material
 

Pre-packaged, polymer modified, cementitious product containing graded natural aggregate. EMACO R300 – Rapid Setting Mortar as manufactured by Master Builders or approved equal.
- Cement Grout Capsules
 

Reinforcing steel detailed to be installed in pre-placed concrete to be anchored using Lafarge Fondu Cement Grout Capsules M3RR or approved equal.

**3.7 Void Form:** to comply with either of the following.

- Biodegradable Void Form
 

150 mm deep, structurally sufficient to support weight of wet concrete and other superimposed loads without collapsing until concrete has gained sufficient strength to support these loads after which time the form must promptly degrade. Do not wrap void form. Do not install void form over poly ground sheet. The onus is entirely on the Contractor and Supplier to ensure that the void form is installed to perform as intended.
- Compressible Void Form
 

GeoVoid (below slabs) or GeoSpan (below walls & grade beams) compressible void form by Plast-Fab designed by supplier for 150mm soil heave, installed to suppliers specifications.

**3.8 Grout**

- Premixed, non-shrink, non-metallic grout with minimum strength at 3 days of 20 MPa, and capable of developing a minimum strength at 28 days of 50 MPa.

**3.9 Grade Supported Slabs, Walks and Pads**

- Cast over 150 compacted granular fill. All grade supported concrete slabs, sidewalks and landing pads, unless noted otherwise, to be 125 thick and reinforced with 15 M at 400 on centre each way at middepth. Refer to Architect for exact size and location of all sidewalks and pads.

**DIVISION 4 – MASONRY**

**4.1 Loadbearing Masonry**

- Design and construction to CAN3–S304.1–04. Concrete block to CSA Standard A165 Series–04 (R2009), Type H/15/C/M. Mortar to CSA Standard A179–04 (R2009), Type S. Masonry grout for all corefilling, bond beams and lintels to be coarse grout to CSA Standard A179–04 (R2009), Table 3.

**4.2 Masonry Ledgers**

- All masonry ledgers supported from structural steel or cast-in-place concrete shall be fabricated and erected to provide for full site adjustment of ledgers. Position ledgers accurately to correct elevation and plan location and field weld in place prior to laying up masonry. Refer to Specifications for fabrication and erection tolerances of exposed masonry lintels.

**DIVISION 5 – METALS**

**5.1 Structural Steel**

- Structural size shapes, bar size shapes and welded shapes to CAN/CSA G40.21–04 (R2009)M, 350 MPa Weldable Grade.
- Hollow structural sections to CAN/CSA G40.21–04 (R2009), 350 MPa Weldable Grade.
- Plates and bars to CAN/CSA G40.21–04 (R2009), 260 MPa Weldable Grade.
- Hot dipped galvanizing zinc coating. 600 grams/square meter to CAN/CSA–G164–M92.
- Welding material to CSA W59–03 (R2008). Welding to CSA W59–03 (R2008) and CSA W55.3–08. Fabricators and erectors responsible for welding of structures shall be certified by the Canadian Welding Bureau (CWB) to the requirements of CSA Standard W47.1 (Division 1 or Division 2), of CSA Standard W55.3–08, or both, as applicable. Contractor to submit proof of certification with CWB with shop drawings.
- Bolts, nuts and washers to ASTM A325.
- Anchor bolts to ASTM A307.
- Threaded Rod to ASTM A193 B7.
- Paint for primer as per C688 L–GP–40d, or CISC/CPMA Standard 1073a. All primer to be grey unless approved otherwise.
- Fabrication and erection to CAN/CSA S16–01 and CISC Code of Standard Practice.
- All bolted connections to be "Bearing" type except where subject to stress reversal, which are to be "Slip-Resistant" type connections.
- All beams to be connected for the greater of the following conditions:
  - Loads shown on drawings.
  - 50% of total uniformly distributed load resistance of the member.
  - 1/2 depth of the connected member using M20 bolts (minimum 2 bolts) in double shear.
- After erection, prime all welds not shop primed except surfaces to be in contact with concrete.

**5.2 Steel Joists**

- Premanufactured open web steel joists designed, fabricated and erected in accordance with CSA–S16–01 to suit spans, profiles and loads detailed on drawings. Unless noted otherwise, all joists to be designed for maximum live load deflection of L/360. Bridging and bracing to be designed and installed in accordance with CSA–S16–01. All joists to be primed with grey primer unless approved otherwise.

**5.3 Metal Decking**

- Decking to be three span continuous where possible. Nominal core thicknesses as detailed on drawings. Decking supplier to cut and frame all openings unless noted otherwise. Unless noted otherwise, all openings 150 to 450 mm in size to be framed on two sides by decking supplier with angle L55x55x5 perpendicular to flutes, extended minimum two flutes each side of openings and welded to deck. Unless noted otherwise all openings larger than 450 mm to be framed each side with angle L75x75x6. Decking supplier to provide closure supports throughout to ensure a complete and continuous membrane. Roof deck designed as structural diaphragm. Contractor to ensure all side lap fastening and welding complies with drawings.

**5.4 Steel Column to Masonry Anchor Straps**

- Provide steel column to masonry anchor straps at 400 o.c. to each face of steel columns that abut masonry.

**5.5 Windbearing Steel Studs**

- Reference standard CSA S136–07 cold formed steel structural members.
- All studs shall be of type, size, spacing and gauge indicated in details on drawings. All 1.22 mm or lighter studs shall be formed from Grade A steel to ASTM A446. Minimum yield strength of 228 MPa. Minimum flange width to be 41mm for 1.22 mm and 0.91 mm studs and 32mm for 0.76 mm studs.
- All stud components shall be L.S.C. Galvanized.
- Supply and install steel studs in continuous lengths between supports, splicing will not be permitted.
- Top and Bottom tracks shall be of the same gauge as the studs. Tracks and studs shall be anchored to the adjacent structure to properly transfer all imposed design loads.
- Provide confirmation by way of section properties and load tables that studs being supplied can resist wind pressure of 1.0 kPa for applicable spans with maximum deflection of L/360.
- All studs supporting masonry must be designed to withstand wind pressure of 1.0 kPa for applicable spans with maximum deflection of L/600.
  - Design for maximum building sway of 1/500 of building or storey height.
  - Allow for indicated loads of mechanical equipment.
  - Location and elevations of rigid frames and columns to be as shown on structural drawings.
  - Location and spacing of secondary framing (purlins and girts) to be assigned by contractor to suit loads and support of exterior envelope.
- Co-Ordination
  - Co-ordinate and verify sizes and locations of all wall openings with Architectural drawings.
  - Refer to Architectural drawings for details of building envelope including roof and wall systems.

**.6 Erection**

- Erect building framing in accordance with CSA S16–01 and shop drawings. Touch-up shop primer to bolts, welds and other surfaces at completion of erection.
  - Erection error not to exceed 1 in 500.
  - Erect door frames, plumb, level, square and at correct elevation.
- .7 Inspection and Certification**
- Metal building supplier is responsible within this Contract for conducting sufficient on-site inspections of erected structure to ensure that the structure has been erected in compliance with building supplier's drawings and issuing letter of certification in this regard upon satisfactory completion of the work.

**DIVISION 6 – WOOD & PLASTICS**

**6.1 Timber**

- Joists, rafters, headers, all structural framing; D. Fir or S.P.F. No. 1/No. 2. Studs; kiln dried Spruce or Douglas Fir, stud grade. Plywood to CSA 0121–08; Douglas Fir or Spruce, sheathing grade. Oriented Strand Board (OSB) to CSA 0437 Series 93 (R2006).

**6.2 Wood Roof Decking**

- Wood decking to be Cedar of species Group E. Select grade in accordance with the National Lumber Grades Authority – Standard Grading Rules. Nominally 150 wide by 89 thick, double tongue and grooved with predrilled lateral holes 6 mm diameter at 760 mm on centre for lateral anchorage, maximum moisture content 15%. Lay deck in controlled random pattern and nail to support as per CSA–086–09.

**6.3 Structural Composite Lumber**

- To conform to the requirements of the CSA–086–09 and to the performance requirements of ASTM D–5456. Acceptable product Gang-Lam LVL Lumber or approved equivalent. Waterproof adhesive to comply with CSA 0112 Series M1977 (R2006). Acceptable product Paralam PST Lumber by Trus Joist or approved equivalent.

**6.4 Timber Trusses and Joists**

- Prefabricated wood trusses and joists to profiles, dimensions and loads shown on drawings. Supplier to design trusses with due consideration of transportation, fabrication and erection, under Part 4 of the National Building Code. Unless noted otherwise, all joists to be designed for maximum live load deflection of L/360. Shop drawings to bear the seal of a Professional Engineer registered in the Province of Saskatchewan.

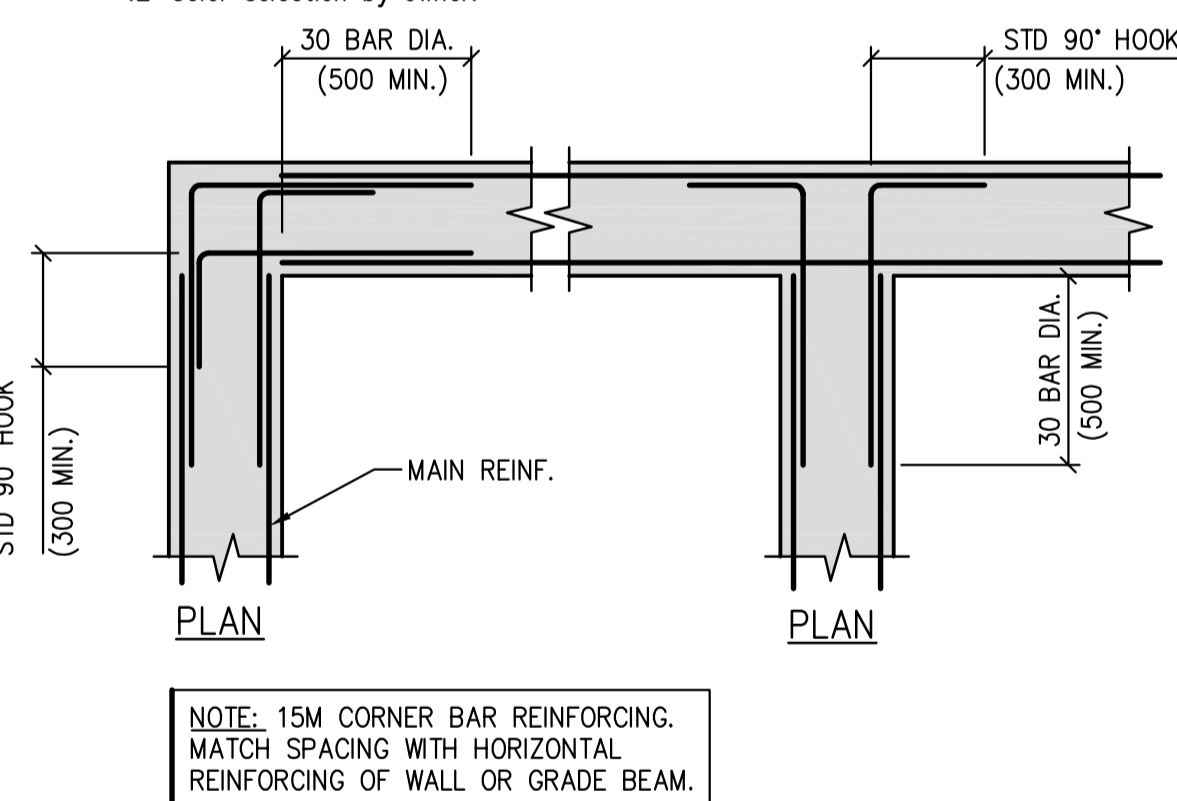
**DIVISION 9 – PAINTING**

**9.1 Painting Specification**

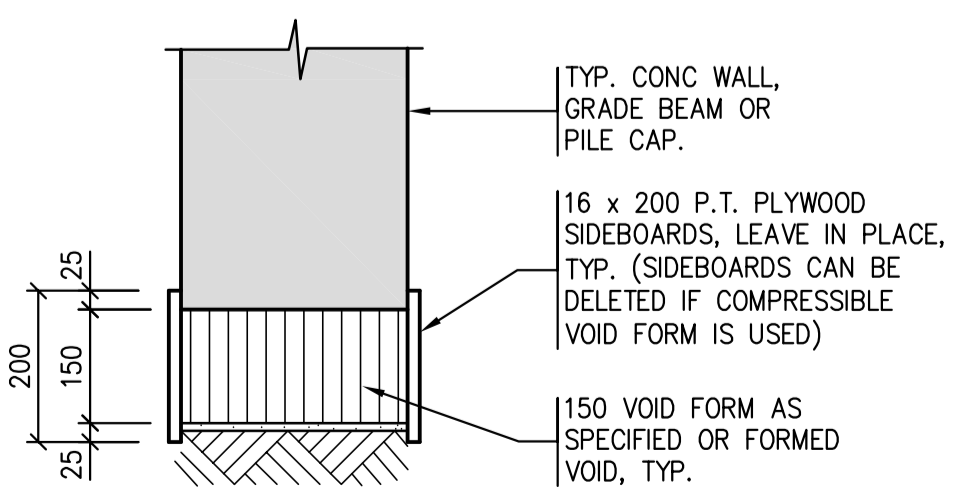
- Surface defects shall be removed by suitable methods. Sharp edges shall be adequately rounded by grinding.
- Surfaces to be coated shall be free from contamination.
- All exposed steel and related bridging shall be blast cleaned to Structural Steel Painting Council (SSPC) Standard SP 3–power tool cleaned.
- Coating materials shall be applied in a uniform thickness in accordance with the manufacturers recommendations.
- Dry film thickness shall be measured after adequate hardening or curing of each successive coating. Thickness shall be measured by means of a permanent-magnet, or an electro magnet test set. Thickness shall be determined by taking a set of 12 measurements in an area of approximately 0.5 square meters. The lowest and highest values shall be disregarded and the mean value as determined by the remaining 10 measurements shall be considered the dry film thickness. The specific dry film thickness shall also be attained at corners, edges and bolt heads.
- All surface damage, welds and cuts shall be cleaned by thorough power tool cleaning to SSPC Standard SP 3 prior to being touched up.

**9.2 Paint System**

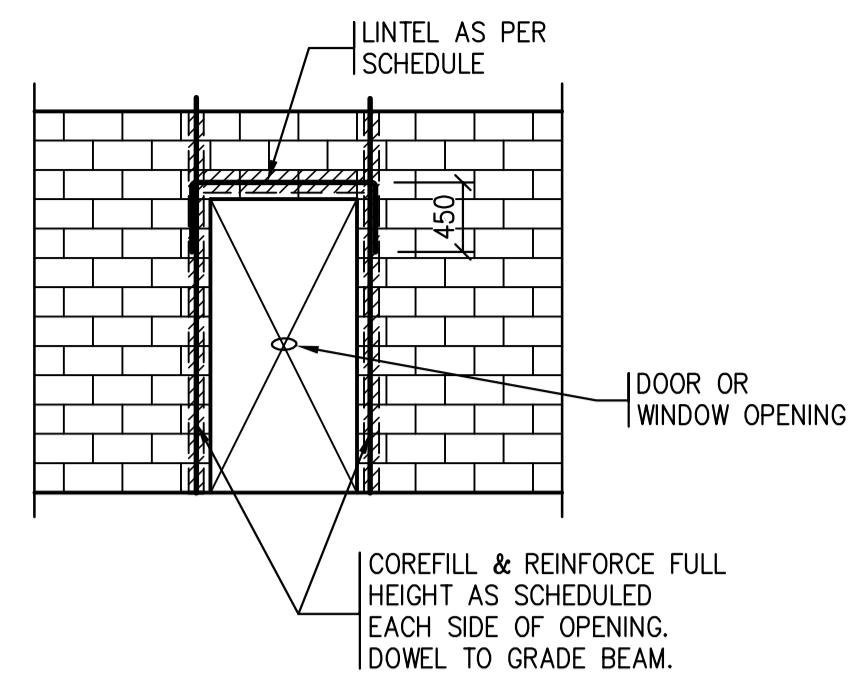
- Paint for steel system to ISO Standard 12944:
  - Environment Classification: C3
  - Durability Range: Medium
  - Isocyanate Free
- Color selection by owner.



**A TYP. WALL OR GRADE BEAM INTERSECTION**



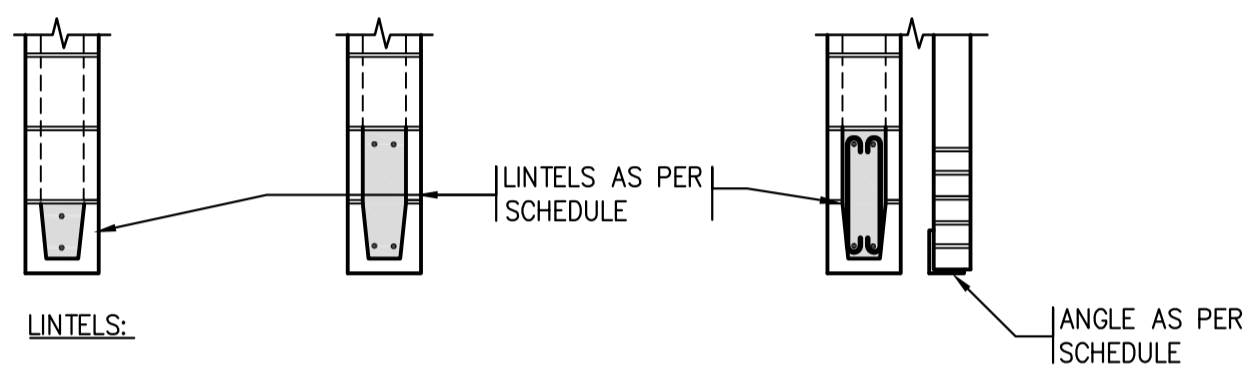
**B TYP. VOID FORM DETAIL**



**OPENINGS IN NEW MASONRY**

OPENING WIDTH	JAMB REINFORCING
0 TO 1200	1–15M IN 1 CORE EACH SIDE
1201 TO 1800	1–20M IN 1 CORE EACH SIDE
1801 & GREATER	2–15M IN 2 CORES EACH SIDE

**C TYPICAL REINFORCING AROUND ALL OPENINGS IN LOADBEARING CONCRETE BLOCK WALLS**



- TYPICAL LINTELS FOR OPENINGS UP TO 2400mm WIDE IN LOADBEARING WALLS AS SHOWN UNLESS DETAILED OTHERWISE. FOR LARGER OPENINGS SEE DETAILS.
- ALL LINTELS TO BEAR MIN. 200 EACH END.

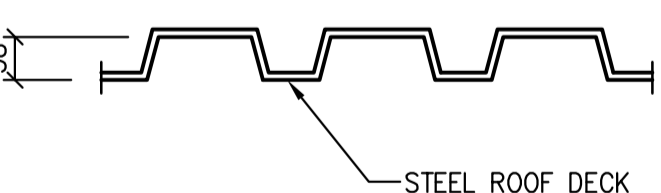
OPENING WIDTH	200 CONC BLOCK	100 MASONRY
0 TO 1200	200 HIGH c/w 2–20M BOT	L100x90x10
1201 TO 2400	400 HIGH c/w 2–20M TOP & BOT.	L125x90x10
2401 TO 3600	600 HIGH c/w 2–20M TOP & BOT. 10M TIES @ 4009/c	L152x90x10

**D TYPICAL LINTEL DETAILS FOR CONCRETE BLOCK & BRICK VENEER**

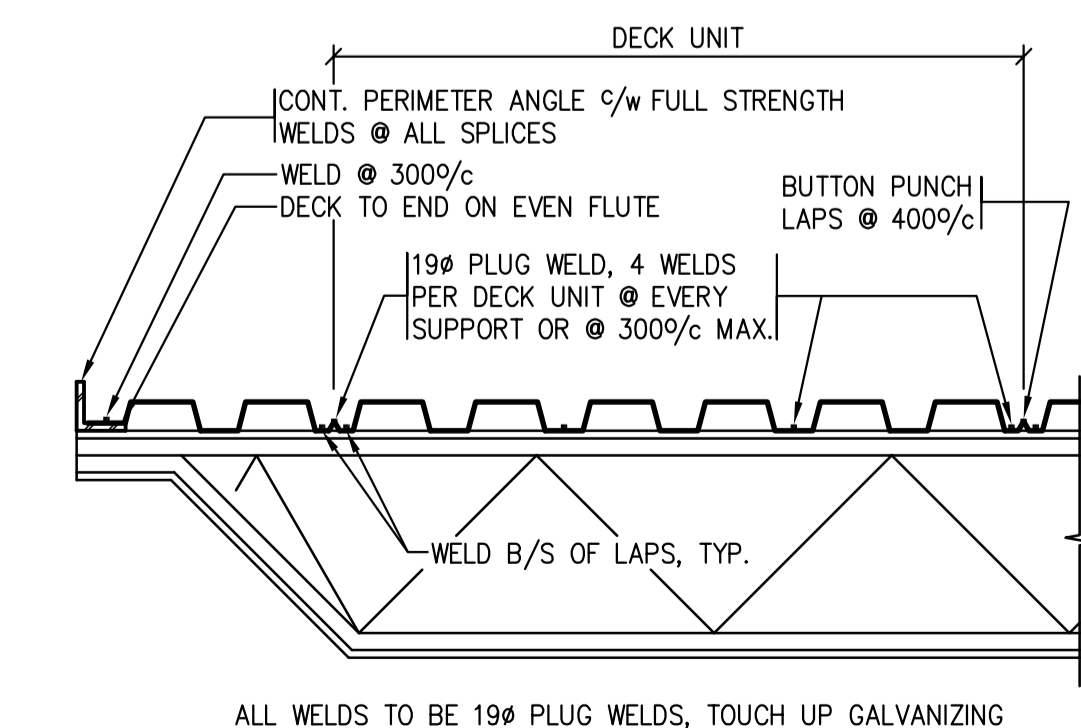
- NOTES:**
- ALL CONCRETE BLOCK WALLS TO BE REINFORCED WITH 1–10M c/w CORE FILLING EACH CORE UNLESS NOTED OTHERWISE. EXTEND VERTICAL REINFORCING THRU BOND BEAMS. DOWEL TO FOUNDATION WITH 15Mx1200g DOWELS TO MATCH.
  - CO-ORDINATE CORE FILLING WITH PLACEMENT OF MECH/ELEC SERVICES TO BE PLACE IN CORES.
  - STRUCTURAL DRAWINGS DETAIL EXTENT OF STRUCTURAL WALL REINFORCING ONLY. THESE REQUIREMENTS TO BE READ WITH AND CO-ORDINATED WITH ARCHITECTURAL DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR TYPES OF CONCRETE BLOCK AND EXTENT OF COREFILLING FOR SECURITY AND SOUND REQUIREMENTS.

**E TYPICAL CONCRETE BLOCK WALL REINFORCING DETAILS**

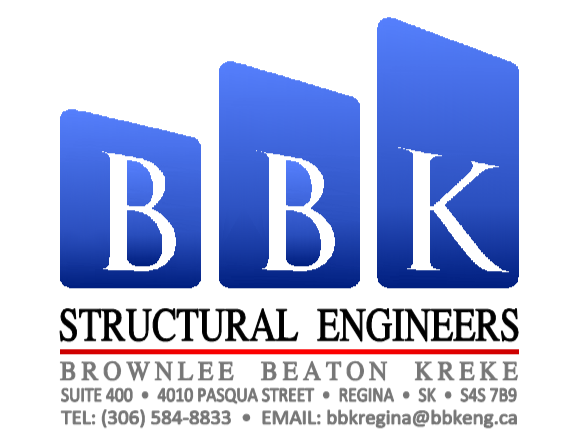
- TYPICAL ROOF DECK**
- U/S DECK ELEVATION AS DETAILED
- 38mm x 0.91mm STEEL ROOF DECK MINIMUM. (SIZED TO SUIT LOADS ON PLANS)
- ZF075 STANDARD (ZINC WPE COAT GALVANIZED) U.N.O.
- NOTE:** ROOF DECK NOTED IN ARCHITECTURAL ROOM SCHEDULE AS RECEIVING PAINT TO BE PRIME PAINTED RATHER THAN ZINC WPE COAT GALVANIZED.



**F METAL ROOF DECK DETAIL**



**G TYP. DECK WELDING DETAILS**



**DO NOT SCALE DRAWINGS**

Revision/	Description/Description	Date/Date
0	ISSUED FOR TENDER	2014-12-08

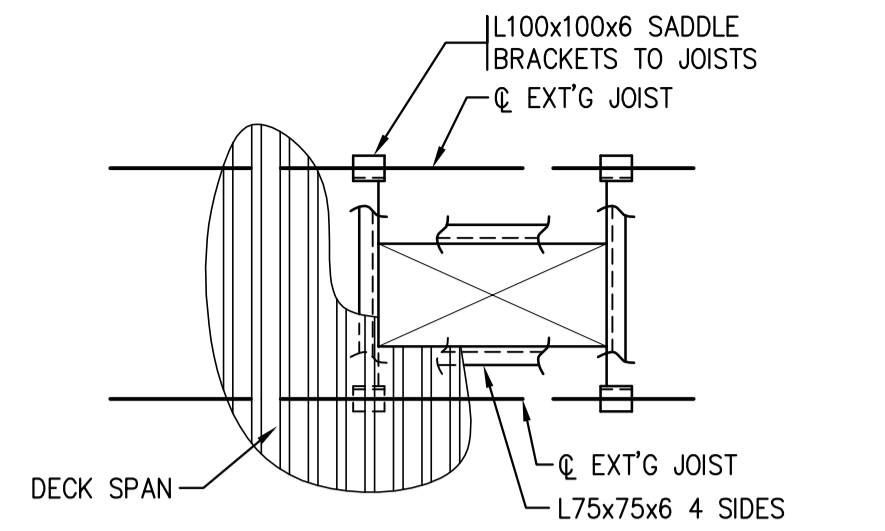
**NEW POLICE BUILDING MAIDSTONE, SASKATCHEWAN**

Approved by/Approve par	B.R.
Designed by/Concept par	S.K.
Drawn by/Dessine par	CS
Project Manager/Administrateur de Projets	CS
Architectural and Engineering Resources Manager/Ressources Architectural et de Directeur d'Ingénierie	

**DRAWING SPECIFICATIONS TYPICAL DETAILS**

Project No./No. du projet	Sheet/Fauille	Revision no./La Révision no.
29/2013	S0	0

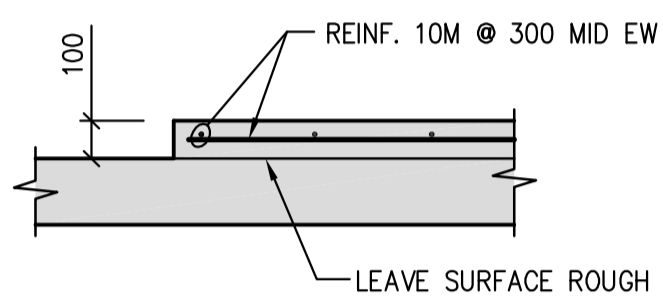




REFER TO MECHANICAL DRAWINGS FOR EXACT SIZE AND LOCATION OF NEW OPENINGS.

1. OPENINGS LESS THAN 150 TO BE UNREINFORCED.
2. OPENINGS 150 TO 450 TO BE REINFORCED AS PER SPEC.
3. OPENINGS GREATER THAN 450 REINFORCE AS DETAILED.
4. PROVIDE DECK SUPPORT PLANKS BELOW WOOD DECKING.

**A** PLAN AT TYPICAL FRAMING AROUND NEW ROOF OPENINGS  
NTS

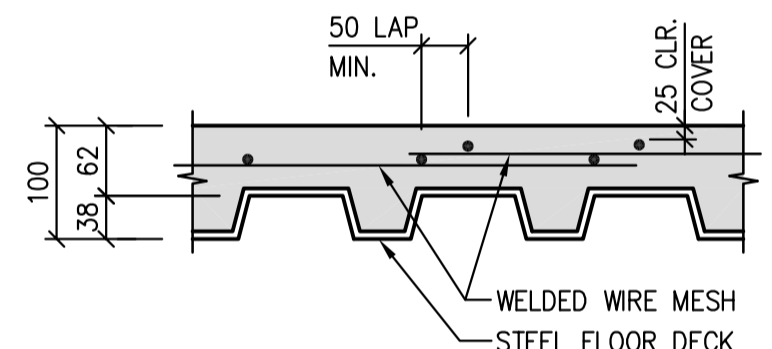


HOUSEKEEPING PAD DETAIL

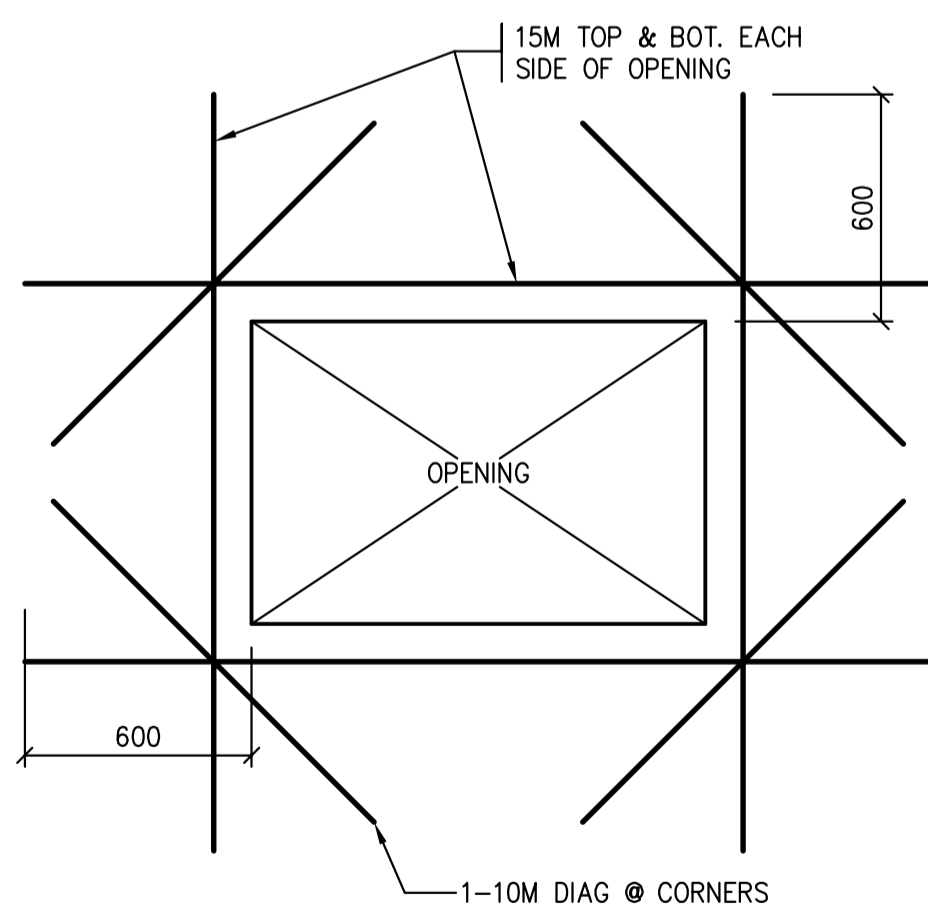
REFER TO MECH. DWGS FOR EXACT SIZE & LOCATION

**B** TYPICAL MECHANICAL HOUSEKEEPING PADS  
NTS

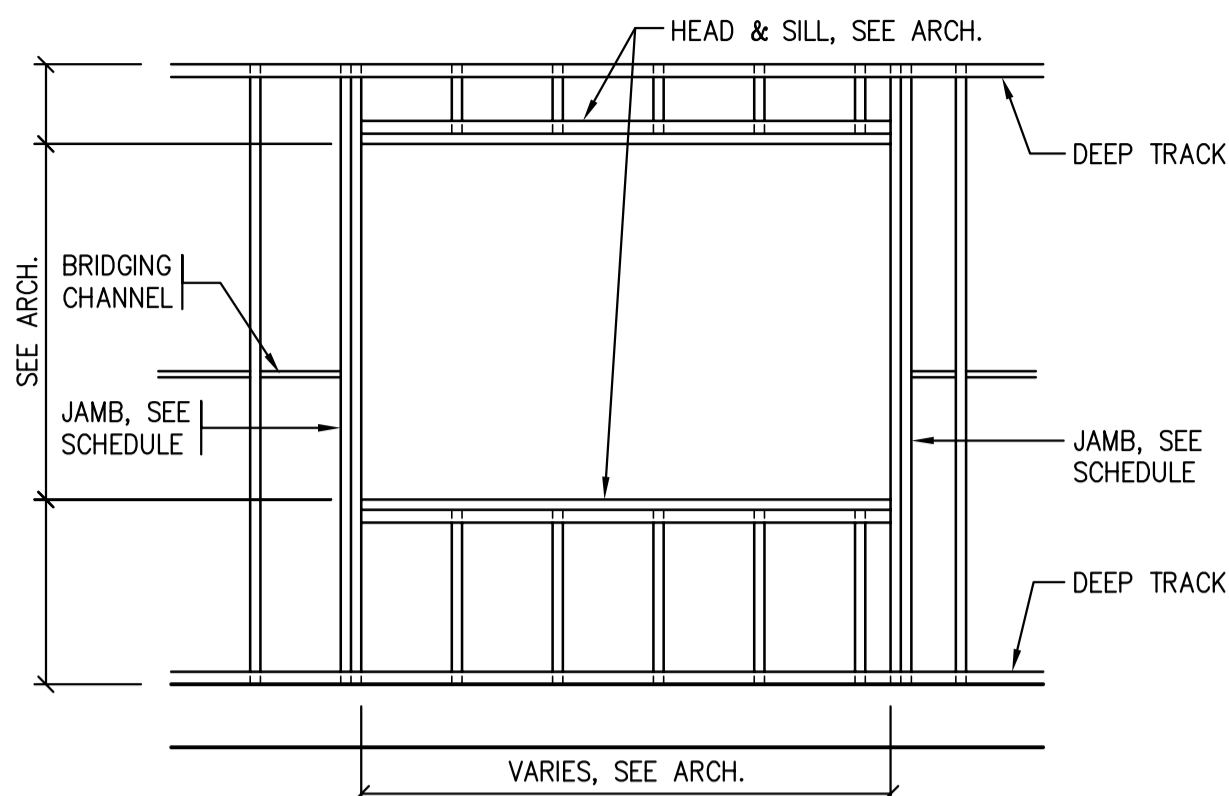
**TYPICAL CONCRETE SLAB-ON-DECK**  
TOP OF CONCRETE SLAB @ ELEV. 103 350 U.O.  
100 CONCRETE SLAB-ON-DECK  
38mm x 0.76mm HI-BOND STEEL FLOOR DECK TO BE ZF075 STANDARD (ZINC WIPE COAT GALVANIZED) U.O.  
REINF. CONC. WITH 152x152xMW25.8xMW25.8WWF



**C** 100 CONC. SLAB ON DECK DETAIL  
NTS



**D** OPENING IN SLAB ON VOID  
NTS



ELEVATION

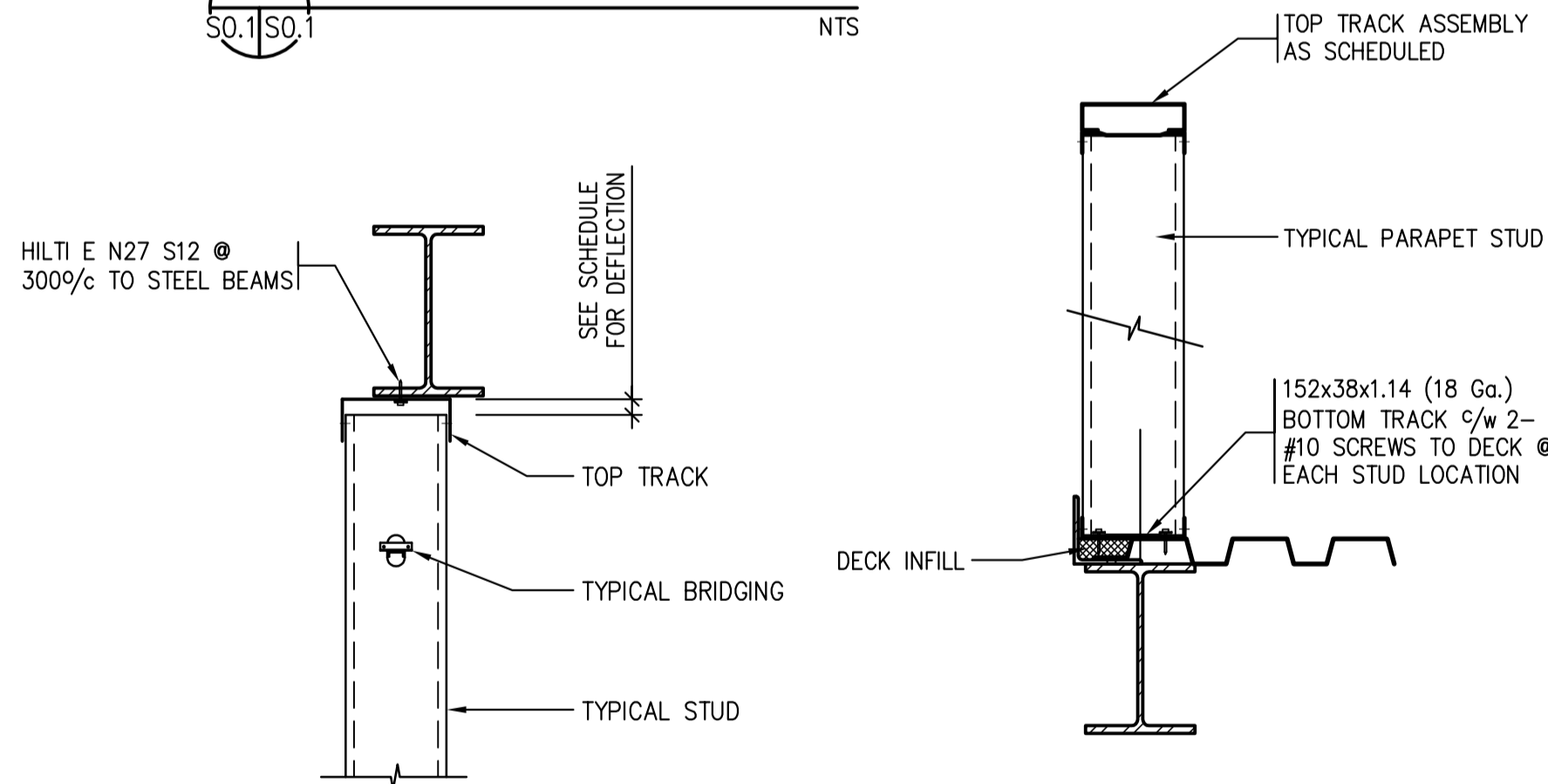
WIND BEARING STEEL STUD SCHEDULE				
Component	Location	Size (D x W x t)	Spacing (mm)	Note
BOTTOM TRACK	TYPICAL	152x38x1.14 (18ga)	N/A	
OUTSIDE TOP TRACK	TYPICAL	152x51x1.14 (18ga)	N/A	
INSIDE TOP TRACK	TYPICAL	152x76x1.14 (18ga)	N/A	25mm DEFLECTION
SLOTTED TOP TRACK (ALT)	TYPICAL	152x76x1.14 (18ga)	N/A	25mm DEFLECTION
WALL STUDS	TYPICAL	152x41x1.14 (18ga)	400 %c	BRIDGING @ 1200 %c
PARAPET STUDS	TYPICAL	152x41x0.88 (20ga)	400 %c	BRIDGING @ 1200 %c

STEEL STUD LINTEL SCHEDULE			
	OPENING WIDTHS		
	0 to 1200	1201 to 2400	2401 to 3600
JAMBS	2 STUDS	2 STUDS	3 STUDS
HEAD	1 TRACK	1 TRACK	3 TRACK & 2 STUDS
SILL	1 TRACK	1 STUD	3 TRACK & 2 STUDS

NOTE:

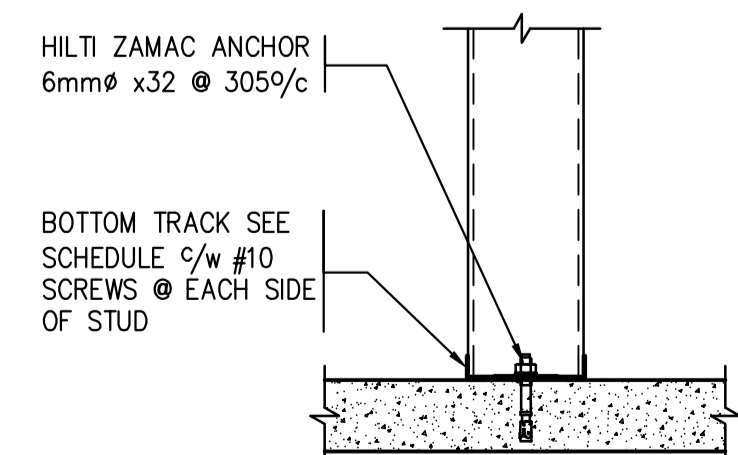
1. STEEL STUD LINTEL SCHEDULE
2. ALL MULTI-PLY JAMBS TO BE SCREWED TOGETHER @ MIN. 610%/c.
3. STUDS TO BE SCREWED TO TRACKS AT SILL AND HEADS.
4. TRACK THICKNESS 1.81mm FOR OPENINGS > 2400mm.
5. CONFIRM OPENING SIZES WITH ARCHITECTURAL PLANS AND ELEVATIONS.

**E** STEEL STUD SCHEDULES  
NTS

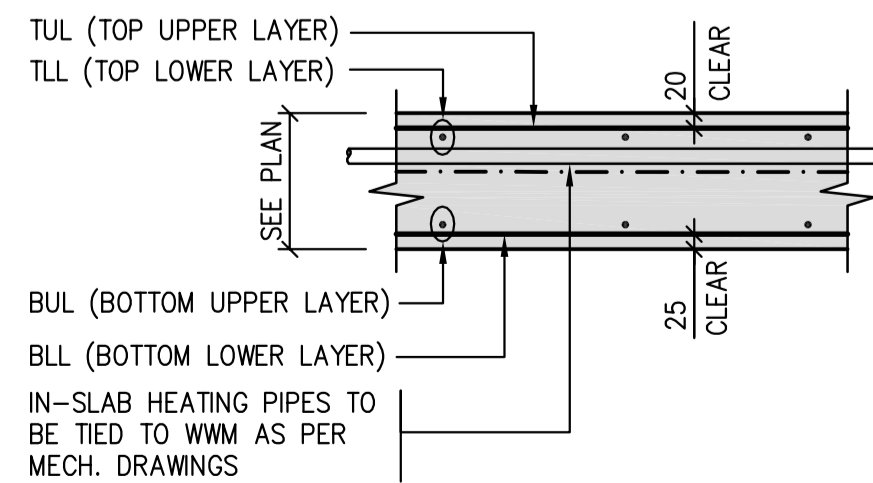


**F** TOP TRACK TO STEEL BEAM DETAIL  
NTS

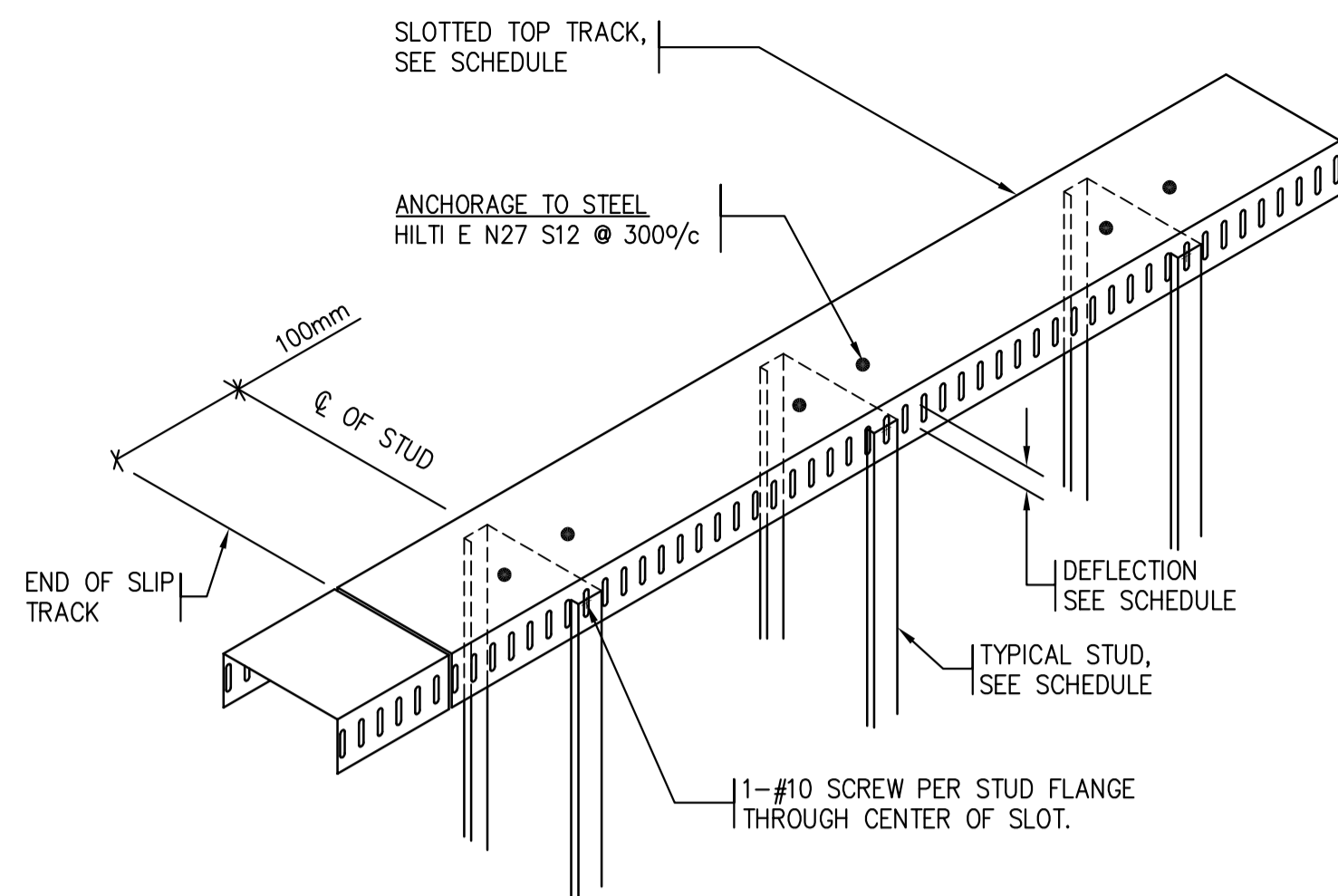
**K** PARAPET DETAIL  
NTS



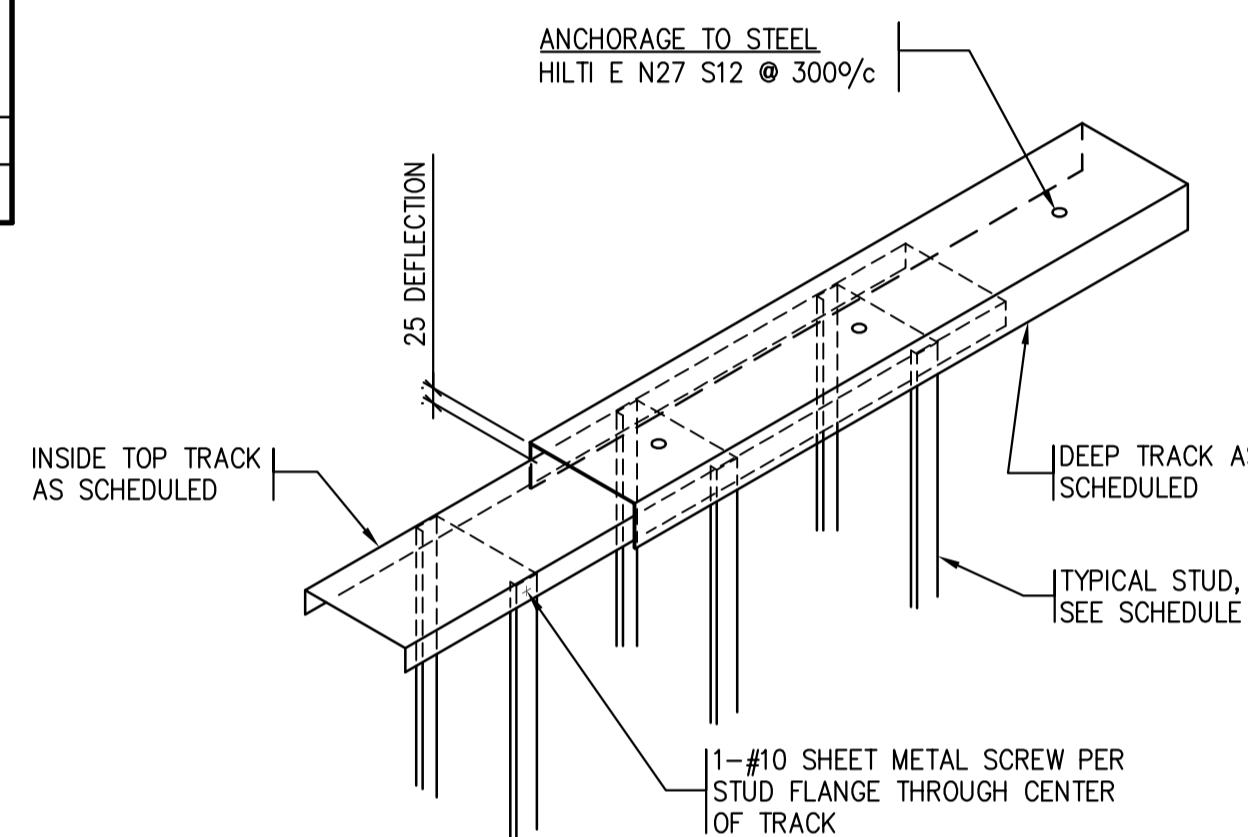
**G** TYPICAL DETAIL @ BOTTOM TRACK  
NTS



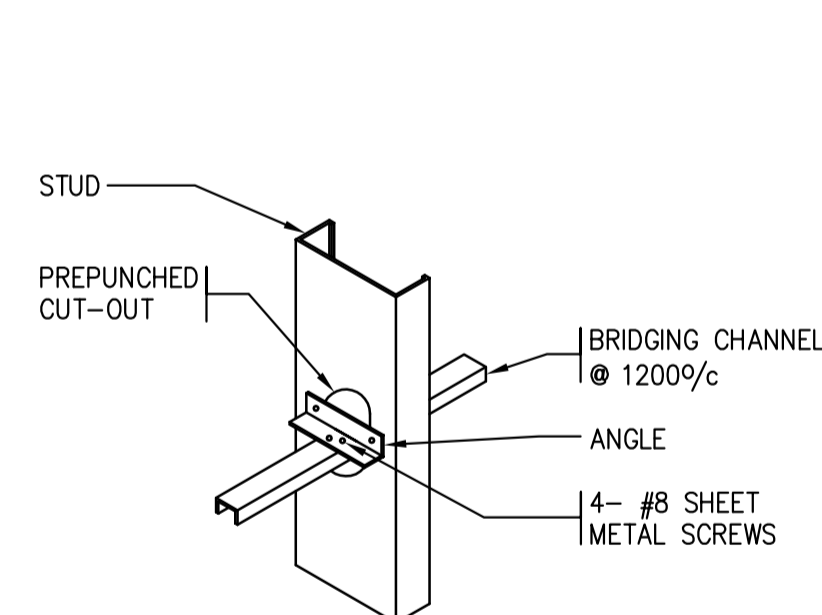
**P** IN-SLAB HEATING PLACEMENT FOR STRUCT. SLABS  
SCALE 1:10



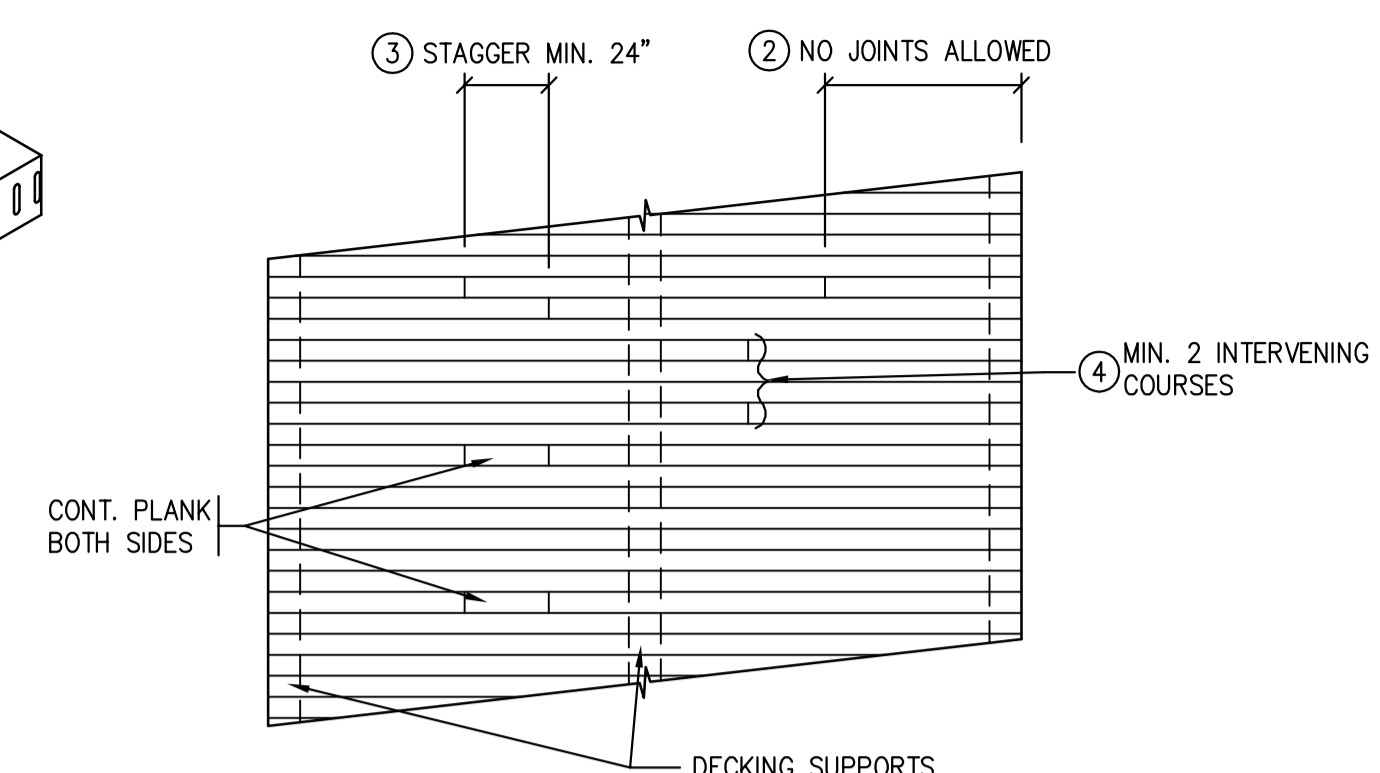
**H** SLOTTED TOP TRACK DETAIL (ALTERNATE)  
NTS



**J** DOUBLE TOP TRACK DETAIL OPTION  
NTS



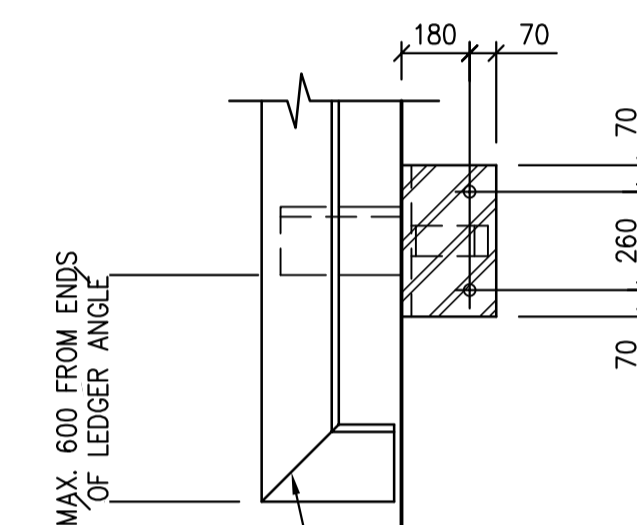
**L** TYPICAL BRIDGING DETAIL  
NTS



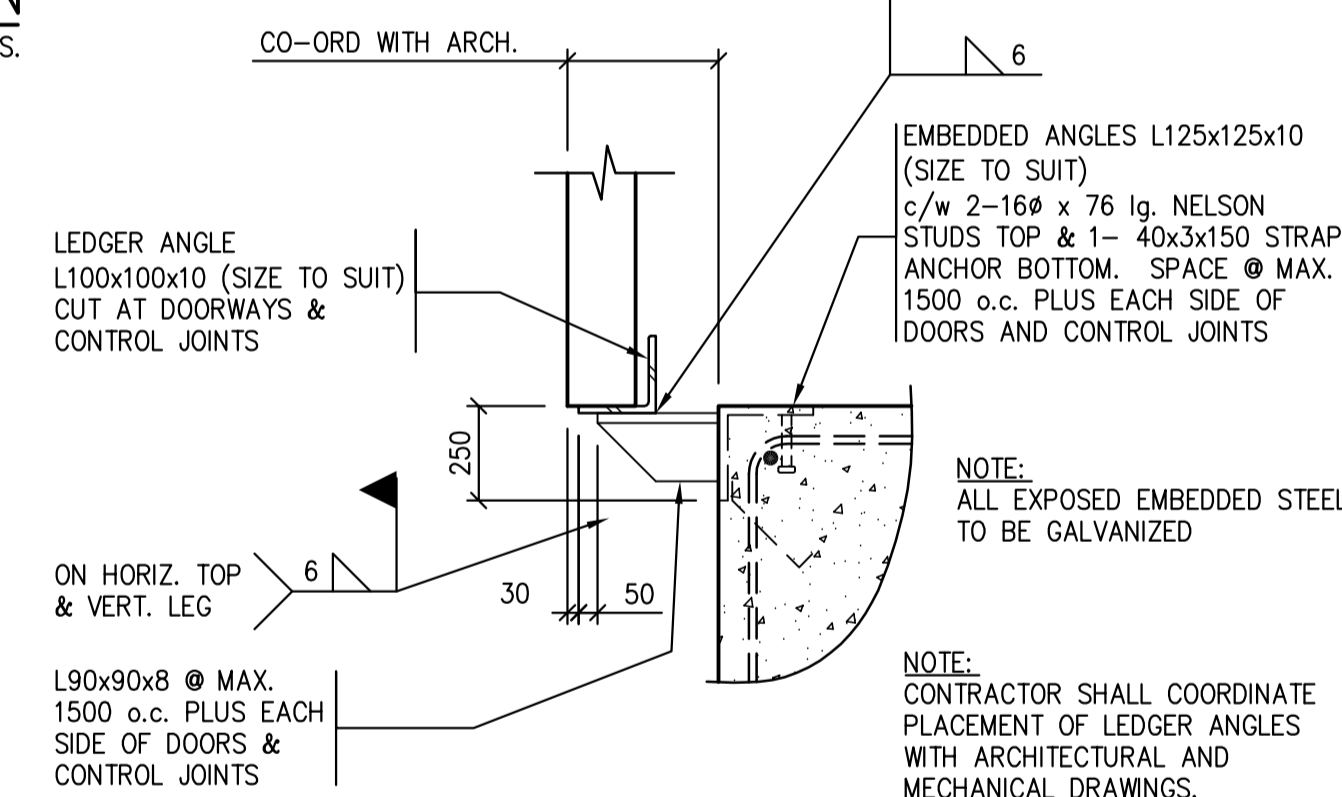
**M** WOOD DECK PLACEMENT  
NTS

CONTROLLED RANDOM

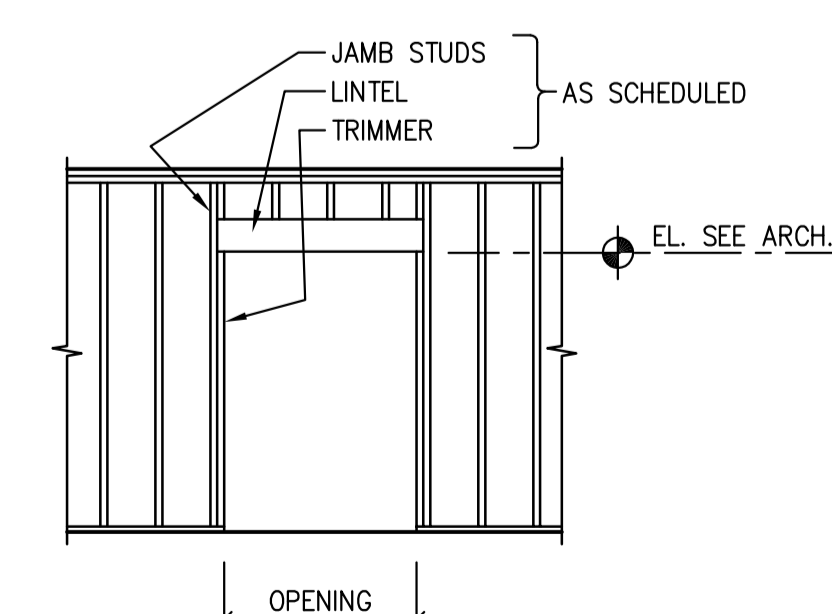
1. MINIMUM DECK SUPPORT - 2 SPAN.
2. END JOINTS NOT PERMITTED IN OUTERHALF OF END SPANS.
3. END JOINTS IN ADJACENT COURSED, STAGGER MINIMUM 2'-0".
4. END JOINTS IN THE SAME GENERAL LINE MUST BE SEPARATED BY MINIMUM 2 INTERVENING COURSES.
5. PLANKS THAT DO NOT SPAN OVER SUPPORT MUST BE FLANKED BY CONTINUOUS PLANKS BOTH SIDES AND SEPARATED BY 6 PLANKS.
6. SECURE PLANKS TO STEEL BEAMS WITH 1/2" BOLTS @ 16" STAGGERED LATERALLY. SPIKE PLANKS TOGETHER WITH 10" SPIKES @ 2'-6" IN PRE-DRILLED HOLES.



PLAN DETAIL

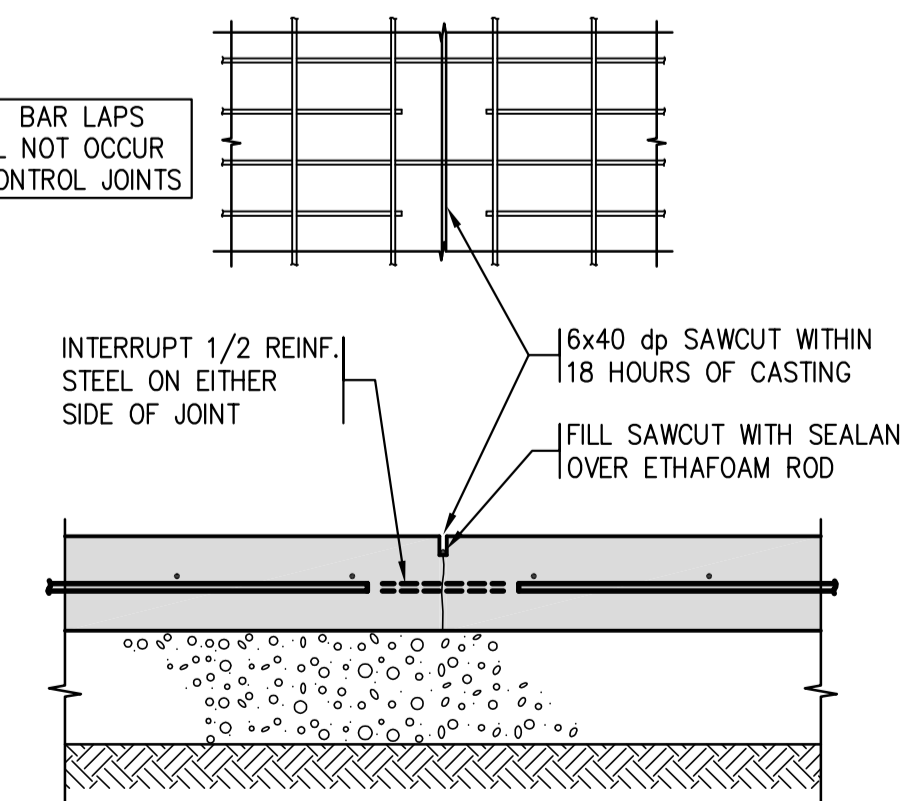


**N** STEEL LEDGER ANGLE DETAIL  
1:20

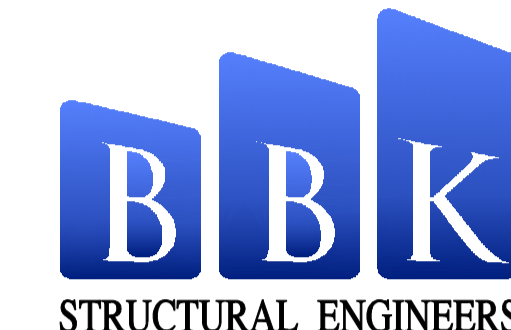


OPENING WIDTH	LINTEL	TRIMMER	JAMB
0 - 1200	2-38x184	1	1
1200 - 3050	2-44x241 GANGLAM LVL	2	3

**Q** WOOD LINTEL SCHEDULE  
NTS  
LINTEL AS PER SCHEDULE UNLESS NOTED OTHERWISE



**R** TYP. CONTROL JOINT DETAIL @ 125 SLAB-ON-GRADE  
NTS



BROWNLEE BEATON KREKE  
SUITE 400 - 4030 PACIFIC STREET - REGINA - SK - S4S 0T5  
TEL: (306) 584-8833 • EMAIL: bbkregina@bbkeng.ca



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CERTIFICATE OF AUTHORIZATION  
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SASK. REG. NO. 12171  
SIGNATURE: SKK

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Revision/Description/Date

Client/client

Project title/Titre du projet

NEW POLICE BUILDING  
MAIDSTONE, SASKATCHEWAN

Approved by/Approve par

Designed by/Concept par  
S.K.

Drawn by/Dessine par  
B.R.

Project Manager/Administrateur de Projets  
CS

Architectural and Engineering Resources Manager/  
Ressources Architectural et de Directeur d'Ingénierie

Client/client

Drawing title/Titre du dessin

TYPICAL DETAILS

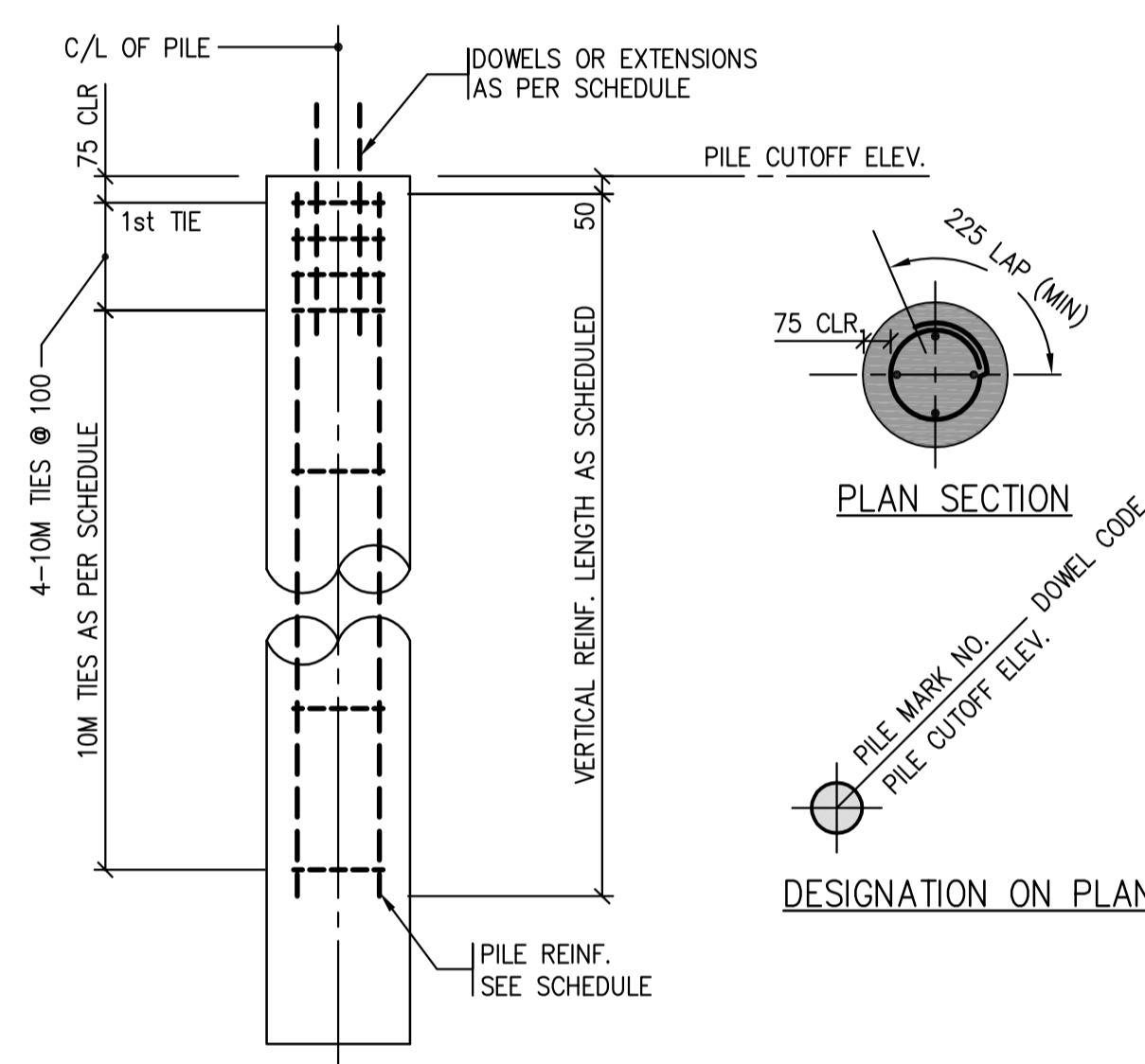
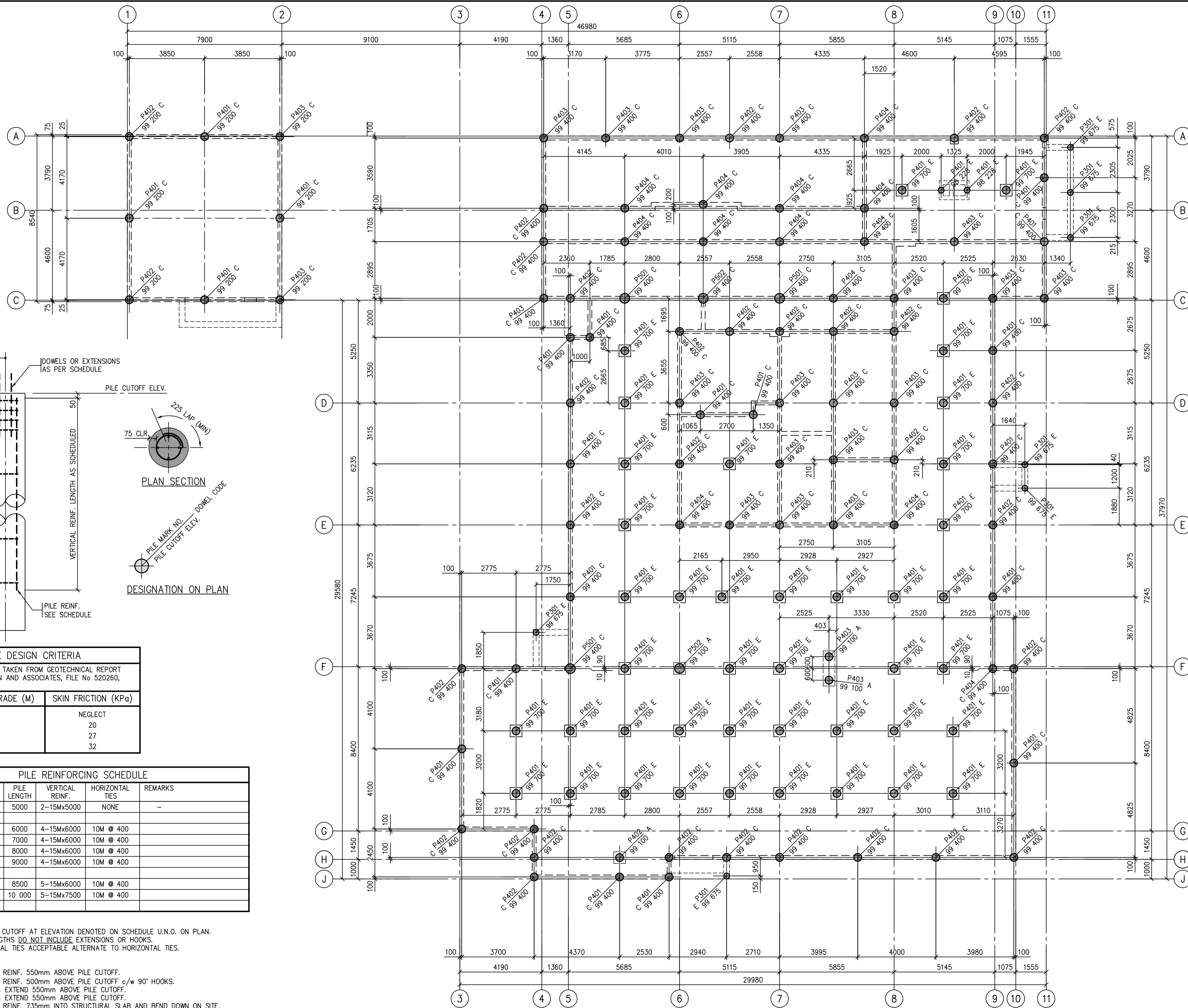
Project No./No. du projet

29/2013

Sheet/Fauille  
S0.1

Revision no./  
La Révision  
no. 0





PILE DESIGN CRITERIA	
PILE DESIGN CRITERIA TAKEN FROM GEOTECHNICAL REPORT PREPARED BY CLIFTON AND ASSOCIATES, FILE No 520260, DATED JUNE 6, 2014.	
DEPTH BELOW GRADE (M)	SKIN FRICTION (KPa)
0 - 2	NEGLECT
2 - 2.5	20
2.5 - 7	27
BELOW 7	32

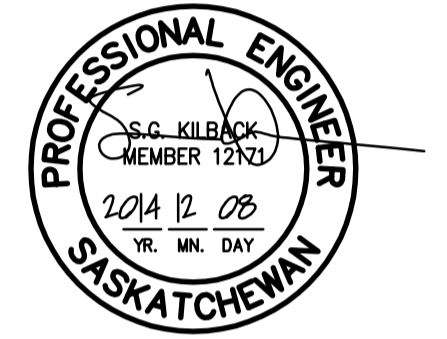
PILE REINFORCING SCHEDULE					
PILE MARK No.	PILE SHAFT DIA.	PILE LENGTH	VERTICAL REINF.	HORIZONTAL TIES	REMARKS
P301	300	5000	2-15Mx5000	NONE	-
P401	400	6000	4-15Mx6000	10M @ 400	
P402	400	7000	4-15Mx6000	10M @ 400	
P403	400	8000	4-15Mx6000	10M @ 400	
P404	400	9000	4-15Mx6000	10M @ 400	
P501	500	8500	5-15Mx6000	10M @ 400	
P502	500	10 000	5-15Mx7500	10M @ 400	

- NOTES:**
- ALL PILES TO BE CUTOFF AT ELEVATION DENOTED ON SCHEDULE U.N.O. ON PLAN.
  - REINFORCING LENGTHS DO NOT INCLUDE EXTENSIONS OR HOOKS.
  - CONTINUOUS SPIRAL TIES ACCEPTABLE ALTERNATE TO HORIZONTAL TIES.

- DOWEL NOTES:**
- EXTEND VERTICAL REINF. 550mm ABOVE PILE CUTOFF.
  - EXTEND VERTICAL REINF. 500mm ABOVE PILE CUTOFF c/w 90° HOOKS.
  - 2-20M x 1100 lg. EXTEND 550mm ABOVE PILE CUTOFF.
  - 4-20M x 1100 lg. EXTEND 550mm ABOVE PILE CUTOFF.
  - EXTEND VERTICAL REINF. 735mm INTO STRUCTURAL SLAB AND BEND DOWN ON SITE.

2 TYPICAL FRICTION PILE DETAIL  
S1.1S1.1 NTS

1 PILING PLAN  
S1.1S1.1 1:100



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MAIDSTONE, SASKATCHEWAN**

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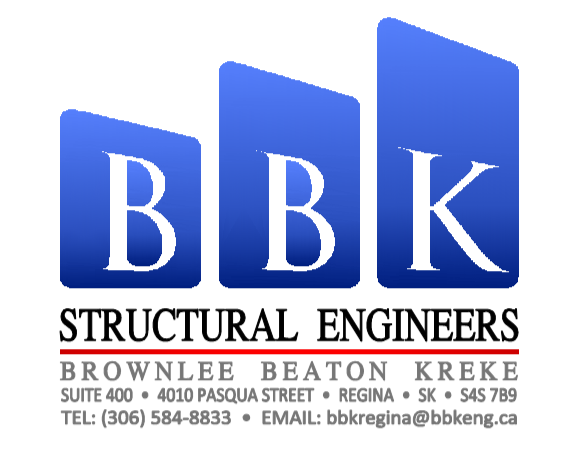
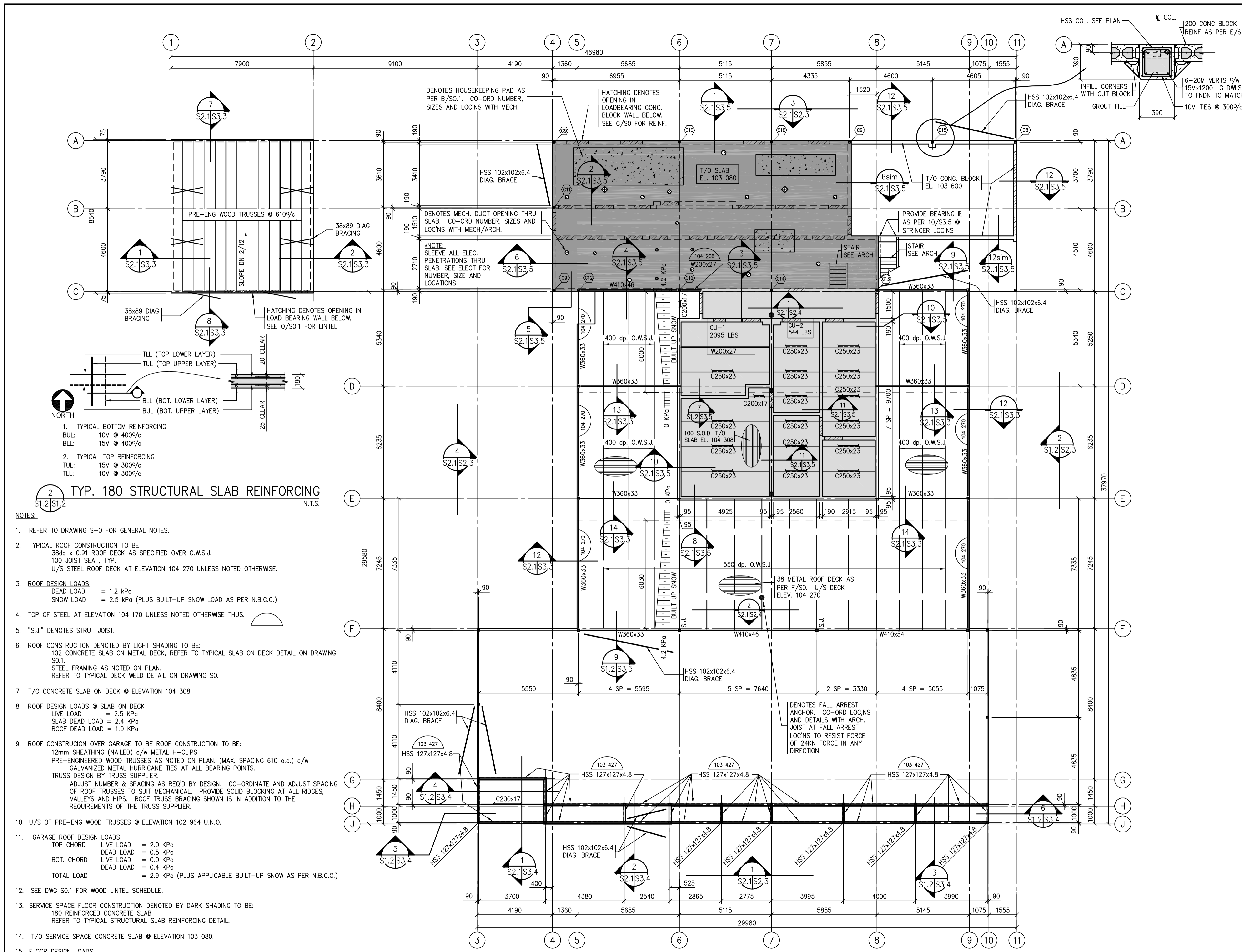
**PILING PLAN**

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**NEW POLICE BUILDING  
 MAIDSTONE, SASKATCHEWAN**

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 B.R.  
 Project Manager/Administrateur de Projets  
 CS  
 Architectural and Engineering Resources Manager/  
 Ressources Architectural et de Directeur d'Ingénierie

Drawing Title/Titre du dessin  
**LOWER ROOF PLAN/SERVICE SPACE  
 FLOOR PLAN**

Project No./No. du projet 29/2013	Sheet/Fauille S2.1	Revision no./La Révision no. 0
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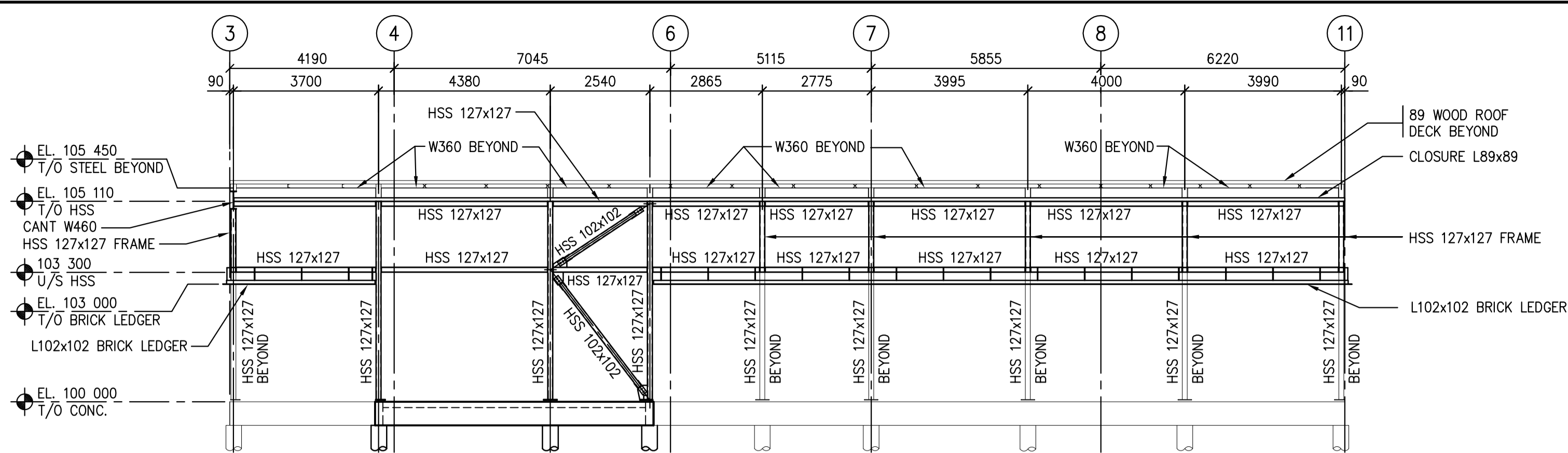
- 2 TYP. 180 STRUCTURAL SLAB REINFORCING**  
 S1.2/S1.2 N.T.S.
- NOTES:**
- REFER TO DRAWING S-0 FOR GENERAL NOTES.
  - TYPICAL ROOF CONSTRUCTION TO BE:  
 38dp x 0.91 ROOF DECK AS SPECIFIED OVER O.W.S.J.  
 100 JOIST SEAT, TYP.  
 U/S STEEL ROOF DECK AT ELEVATION 104 270 UNLESS NOTED OTHERWISE.
  - ROOF DESIGN LOADS**  
 DEAD LOAD = 1.2 kPa  
 SNOW LOAD = 2.5 kPa (PLUS BUILT-UP SNOW AS PER N.B.C.C.)
  - TOP OF STEEL AT ELEVATION 104 170 UNLESS NOTED OTHERWISE THUS.
  - "S.J." DENOTES STRUT JOIST.
  - ROOF CONSTRUCTION DENOTED BY LIGHT SHADING TO BE:  
 102 CONCRETE SLAB ON METAL DECK, REFER TO TYPICAL SLAB ON DECK DETAIL ON DRAWING S0.1.  
 STEEL FRAMING AS NOTED ON PLAN.  
 REFER TO TYPICAL DECK WELD DETAIL ON DRAWING S0.
  - T/O CONCRETE SLAB ON DECK @ ELEVATION 104 308.
  - ROOF DESIGN LOADS @ SLAB ON DECK  
 LIVE LOAD = 2.5 kPa  
 SLAB DEAD LOAD = 2.4 kPa  
 ROOF DEAD LOAD = 1.0 kPa
  - ROOF CONSTRUCTION OVER GARAGE TO BE ROOF CONSTRUCTION TO BE:  
 12mm SHEATHING (NAILED) c/w METAL H-CLIPS  
 PRE-ENGINEERED WOOD TRUSSES AS NOTED ON PLAN. (MAX. SPACING 610 o.c.) c/w  
 GALVANIZED METAL HURRICANE TIES AT ALL BEARING POINTS.  
 TRUSS DESIGN BY TRUSS SUPPLIER.  
 ADJUST NUMBER & SPACING AS REQ'D BY DESIGN. CO-ORDINATE AND ADJUST SPACING  
 OF ROOF TRUSSES TO SUIT MECHANICAL. PROVIDE SOLID BLOCKING AT ALL RIDGES,  
 VALLEYS AND HIPS. ROOF TRUSS BRACING SHOWN IS IN ADDITION TO THE  
 REQUIREMENTS OF THE TRUSS SUPPLIER.
  - U/S OF PRE-ENG WOOD TRUSSES @ ELEVATION 102 964 U.N.O.
  - GARAGE ROOF DESIGN LOADS**  
 TOP CHORD LIVE LOAD = 2.0 kPa  
 DEAD LOAD = 0.5 kPa  
 BOT. CHORD LIVE LOAD = 0.0 kPa  
 DEAD LOAD = 0.4 kPa  
 TOTAL LOAD = 2.9 kPa (PLUS APPLICABLE BUILT-UP SNOW AS PER N.B.C.C.)
  - SEE DWG S0.1 FOR WOOD LINTEL SCHEDULE.
  - SERVICE SPACE FLOOR CONSTRUCTION DENOTED BY DARK SHADING TO BE:  
 180 REINFORCED CONCRETE SLAB  
 REFER TO TYPICAL STRUCTURAL SLAB REINFORCING DETAIL.
  - T/O SERVICE SPACE CONCRETE SLAB @ ELEVATION 103 080.
  - FLOOR DESIGN LOADS**  
 LIVE LOAD = 4.8 kPa  
 DEAD LOAD = 4.2 kPa
  - COLUMNS DENOTED ON PLAN THUS SEE TYPICAL COLUMN & BASE PLATE SCHEDULE ON DRAWING S2.2
  - REFER TO DRAWING S-0 FOR MASONRY LINTEL SCHEDULE.

**LOWER ROOF PLAN/SERVICE SPACE FLOOR PLAN**  
 1 : 100

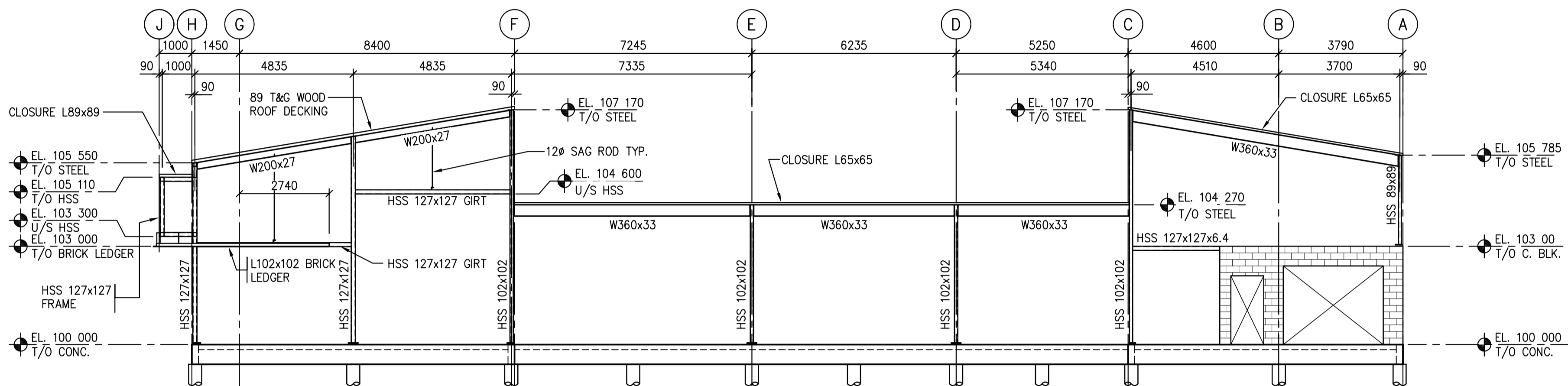




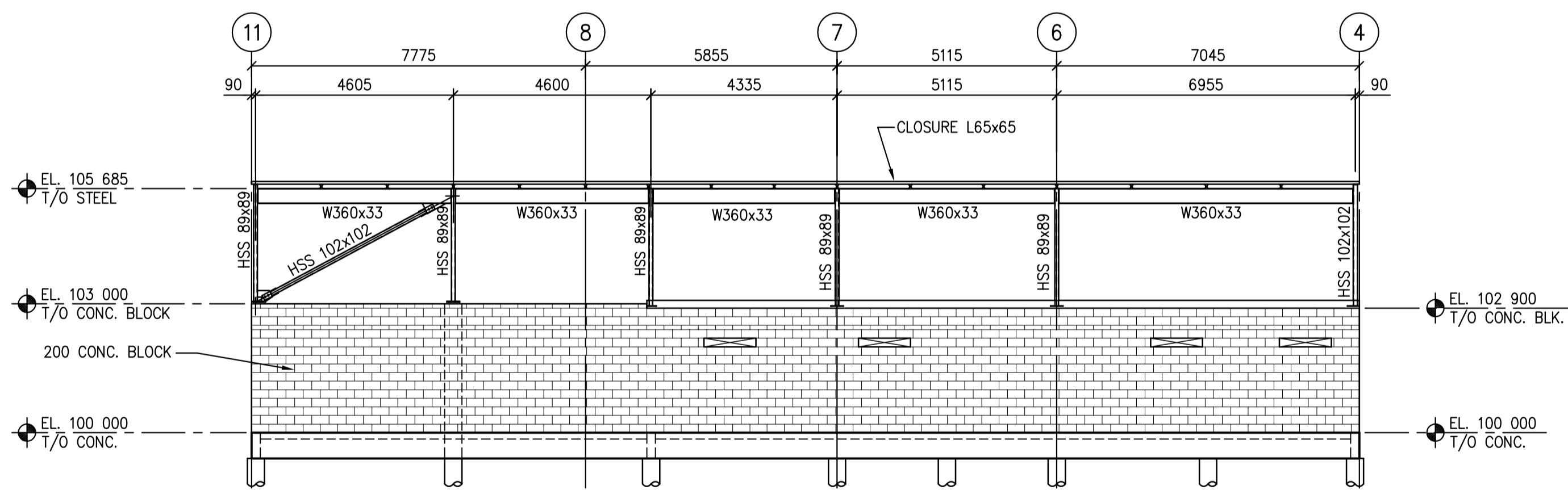




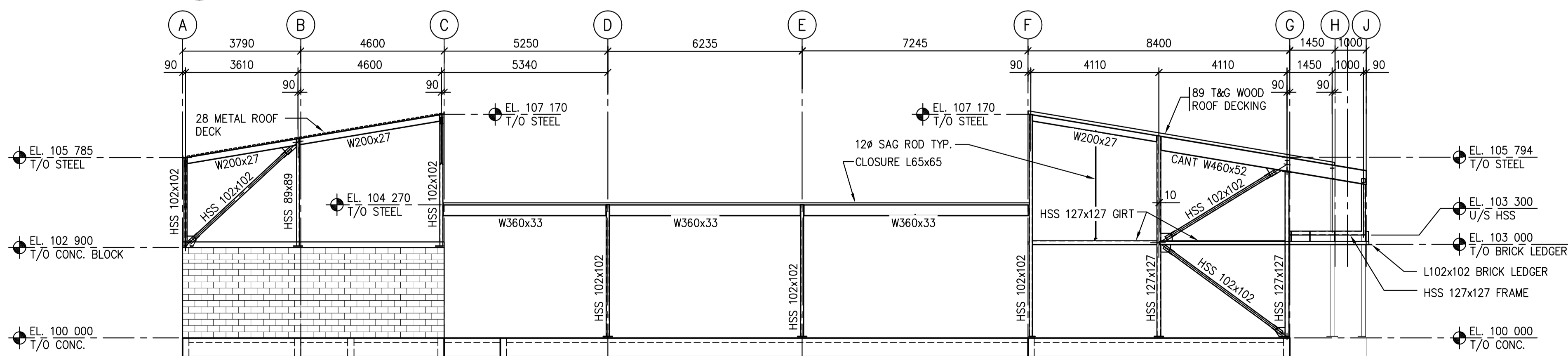
1 SOUTH FRAMING ELEVATION  
S2.3/S2.3 1 : 100



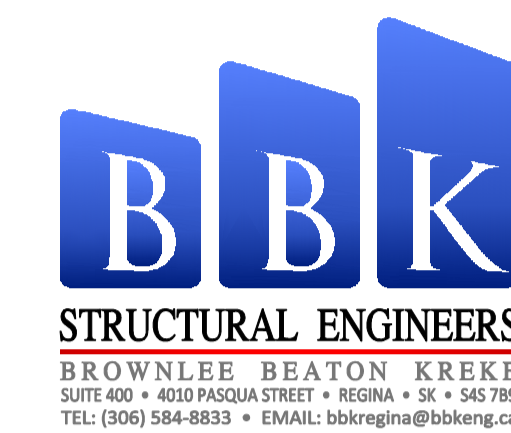
2 EAST FRAMING ELEVATION  
S2.3/S2.3 1 : 100



3 NORTH FRAMING ELEVATION  
S2.3/S2.3 1 : 100



4 WEST FRAMING ELEVATION  
S2.3/S2.3 1 : 100



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**NEW POLICE BUILDING  
MAIDSTONE, SASKATCHEWAN**

Approved by/Approve par

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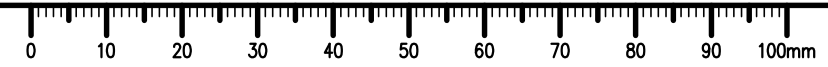
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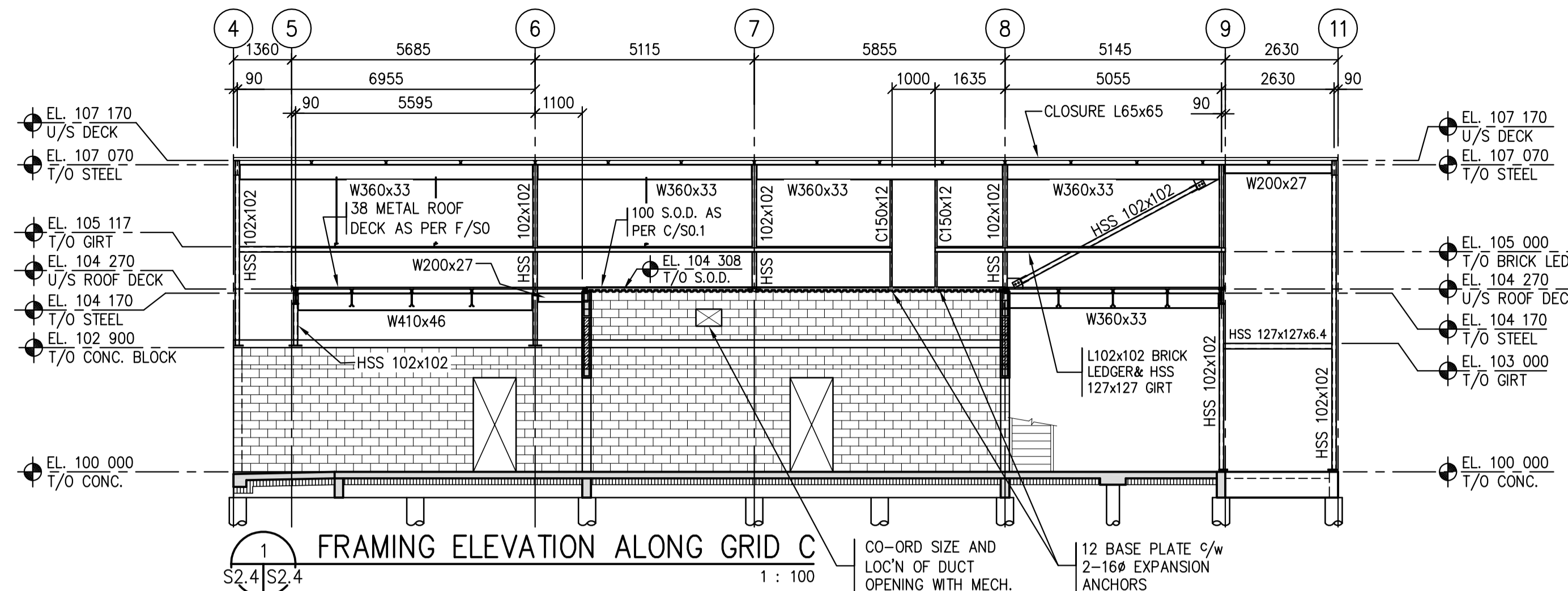
Client/client

Drawing title/Titre du dessin  
**FRAMING ELEVATIONS**

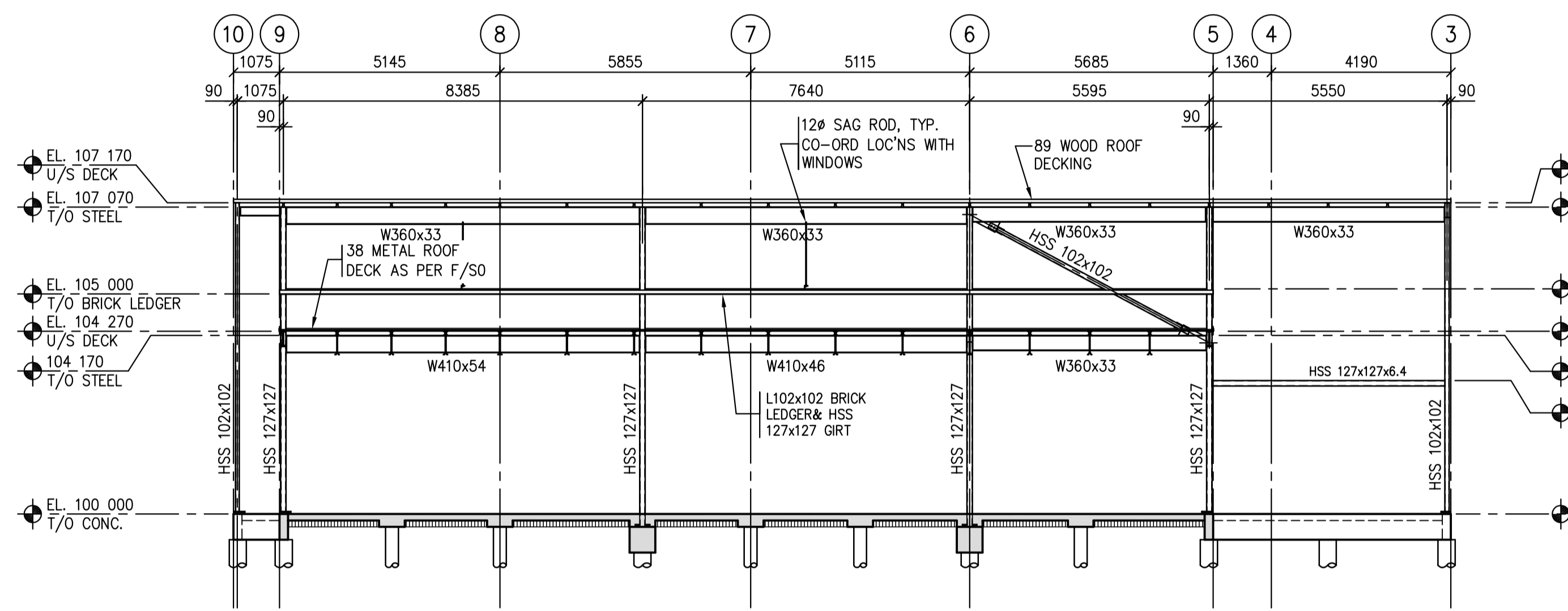
Project No./No. du projet 29/2013	Sheet/Fauille S2.3	Revision no./La Révision no. 0
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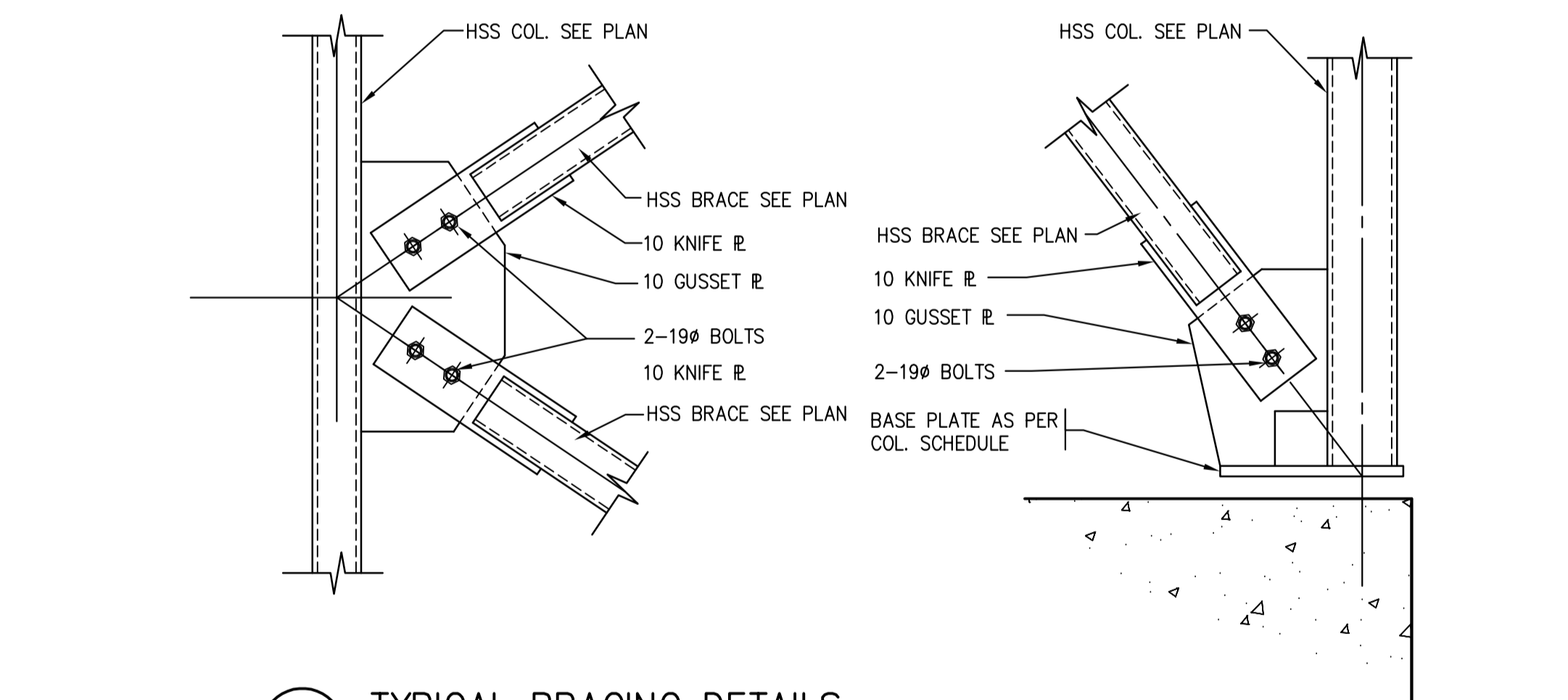
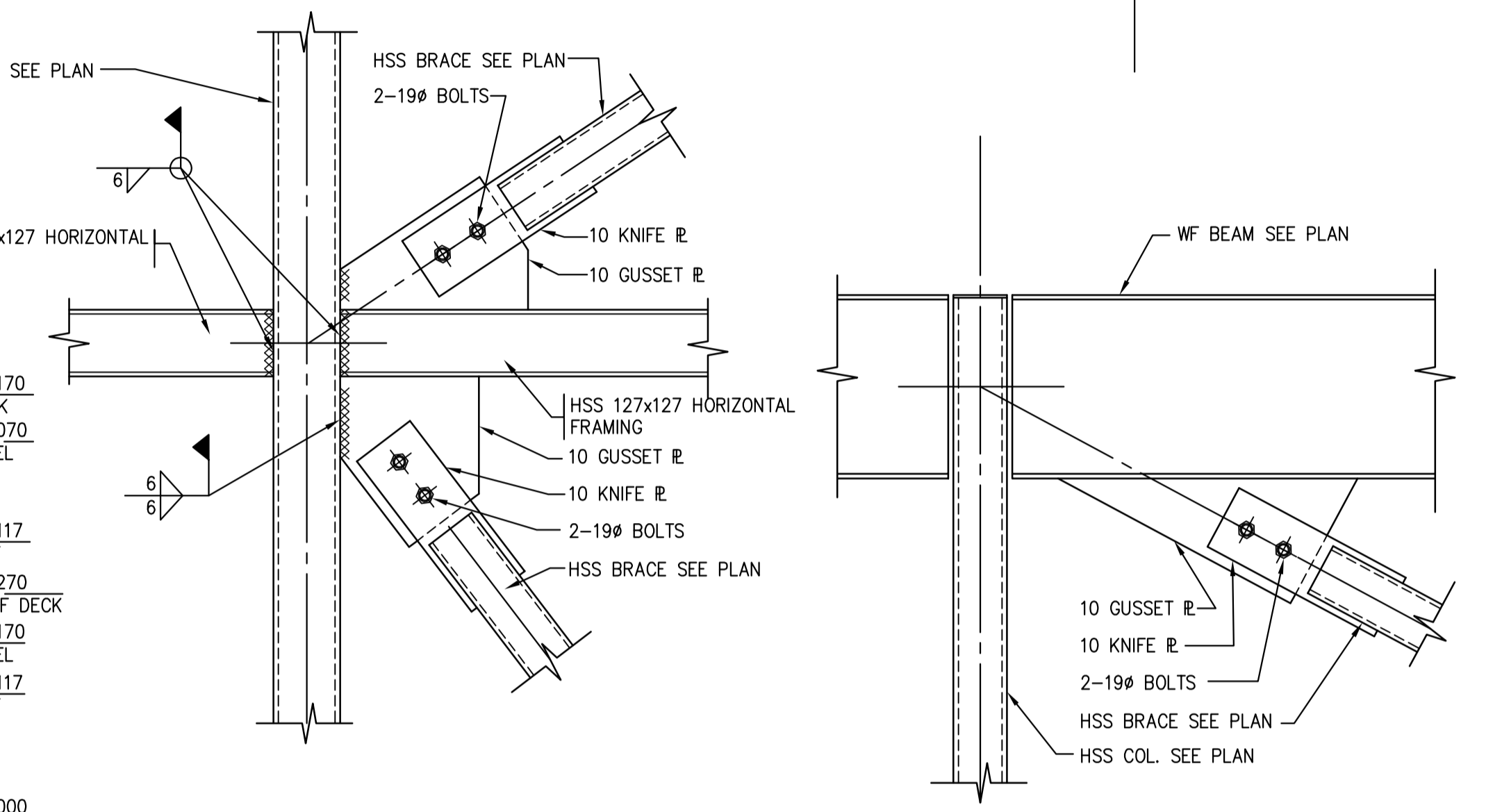
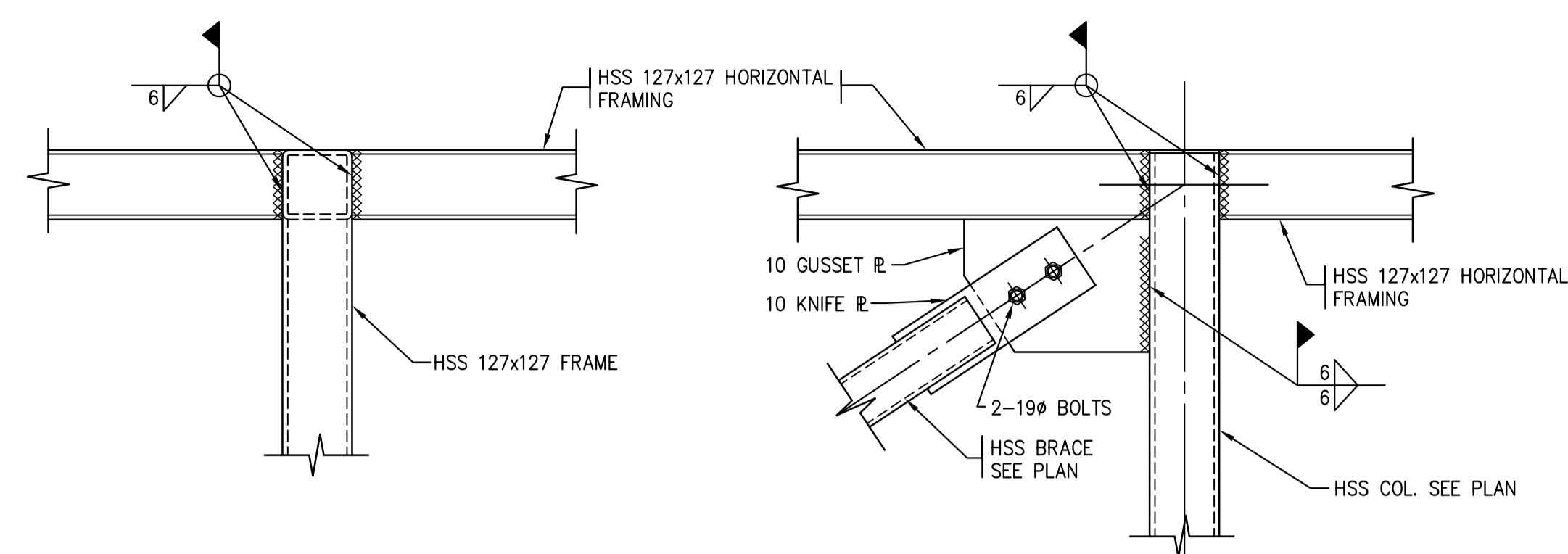




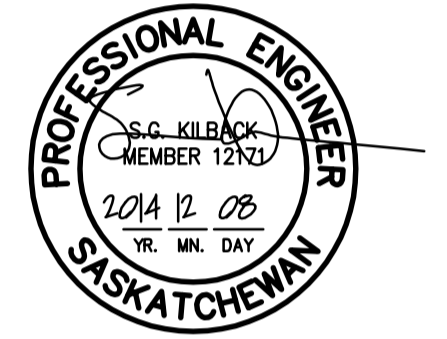
1 FRAMING ELEVATION ALONG GRID C  
S2.4/S2.4 1 : 100



2 FRAMING ELEVATION ALONG GRID F  
S2.4/S2.4 1 : 100



3 TYPICAL BRACING DETAILS  
S2.4/S2.4 1 : 10



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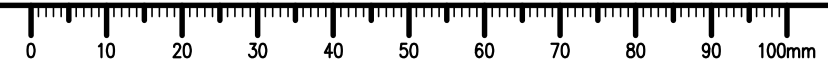
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**NEW POLICE BUILDING  
MAIDSTONE, SASKATCHEWAN**

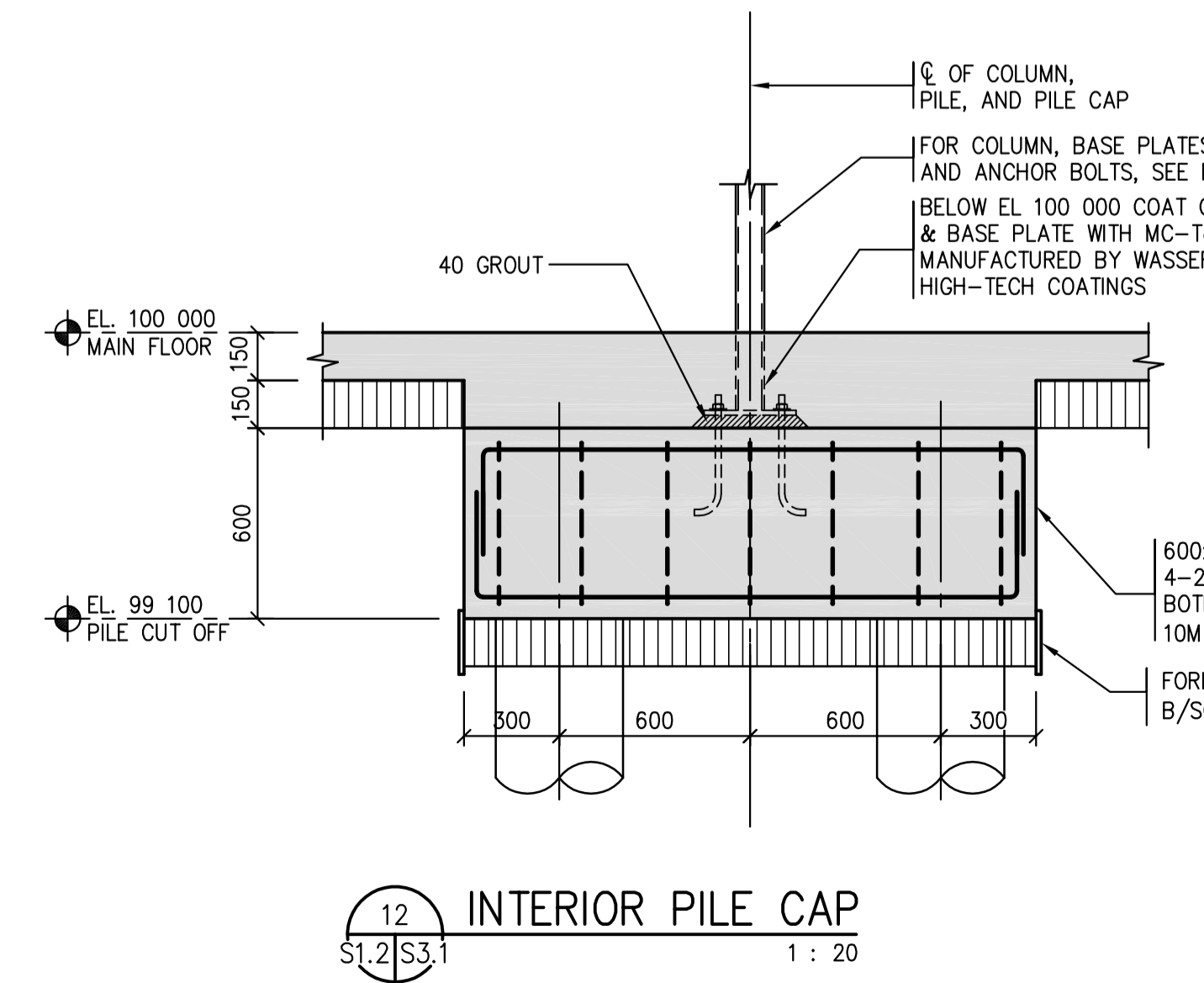
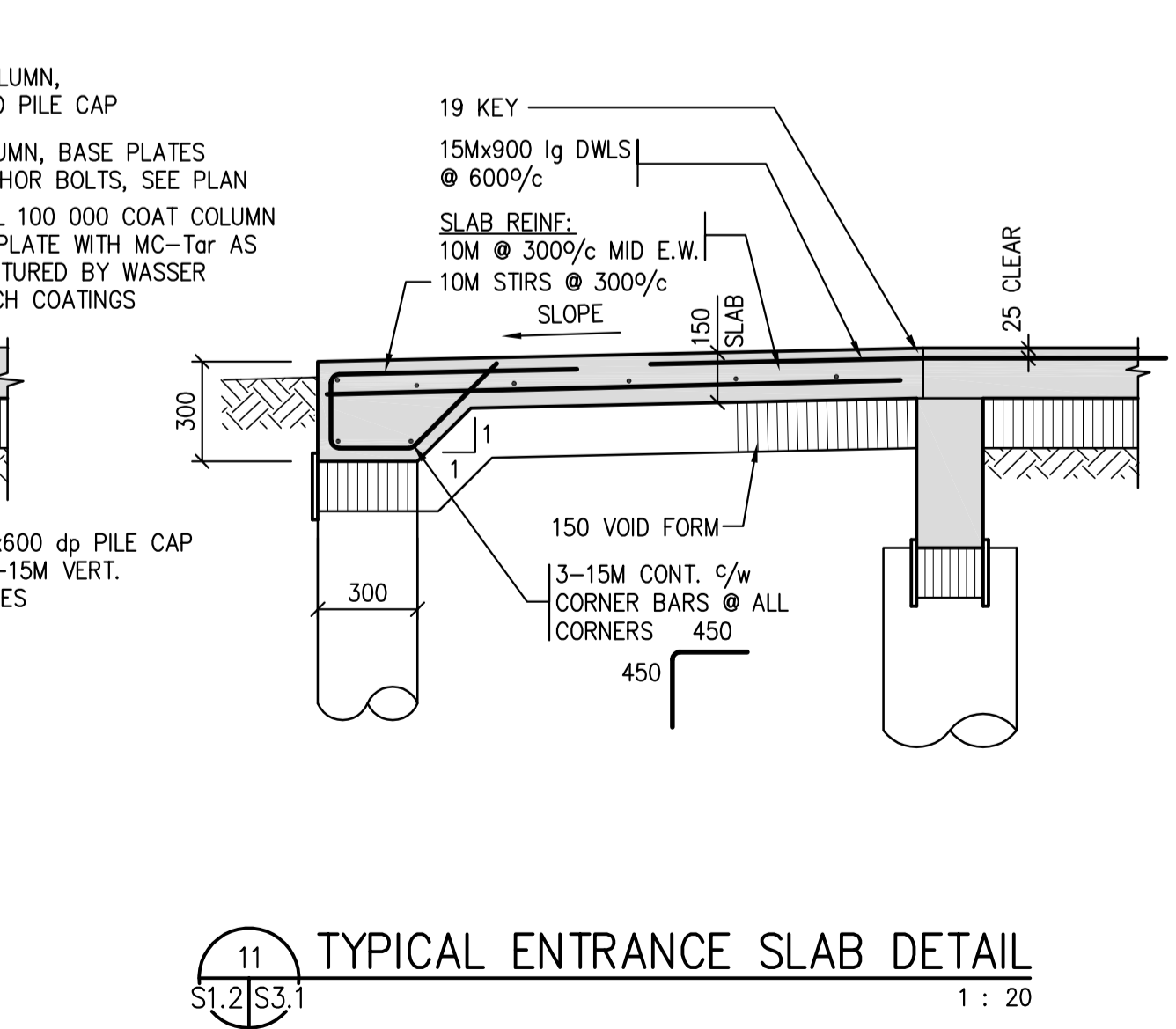
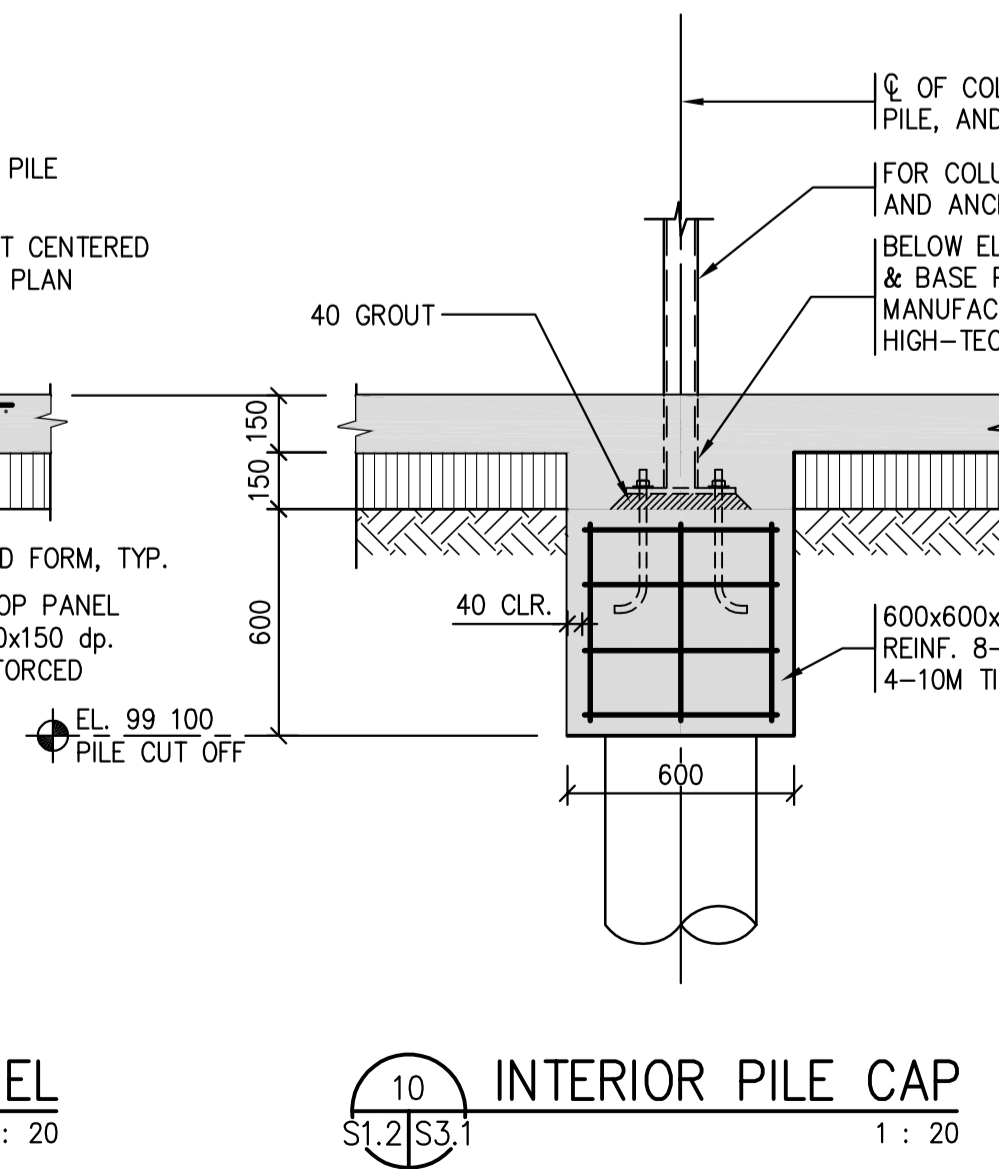
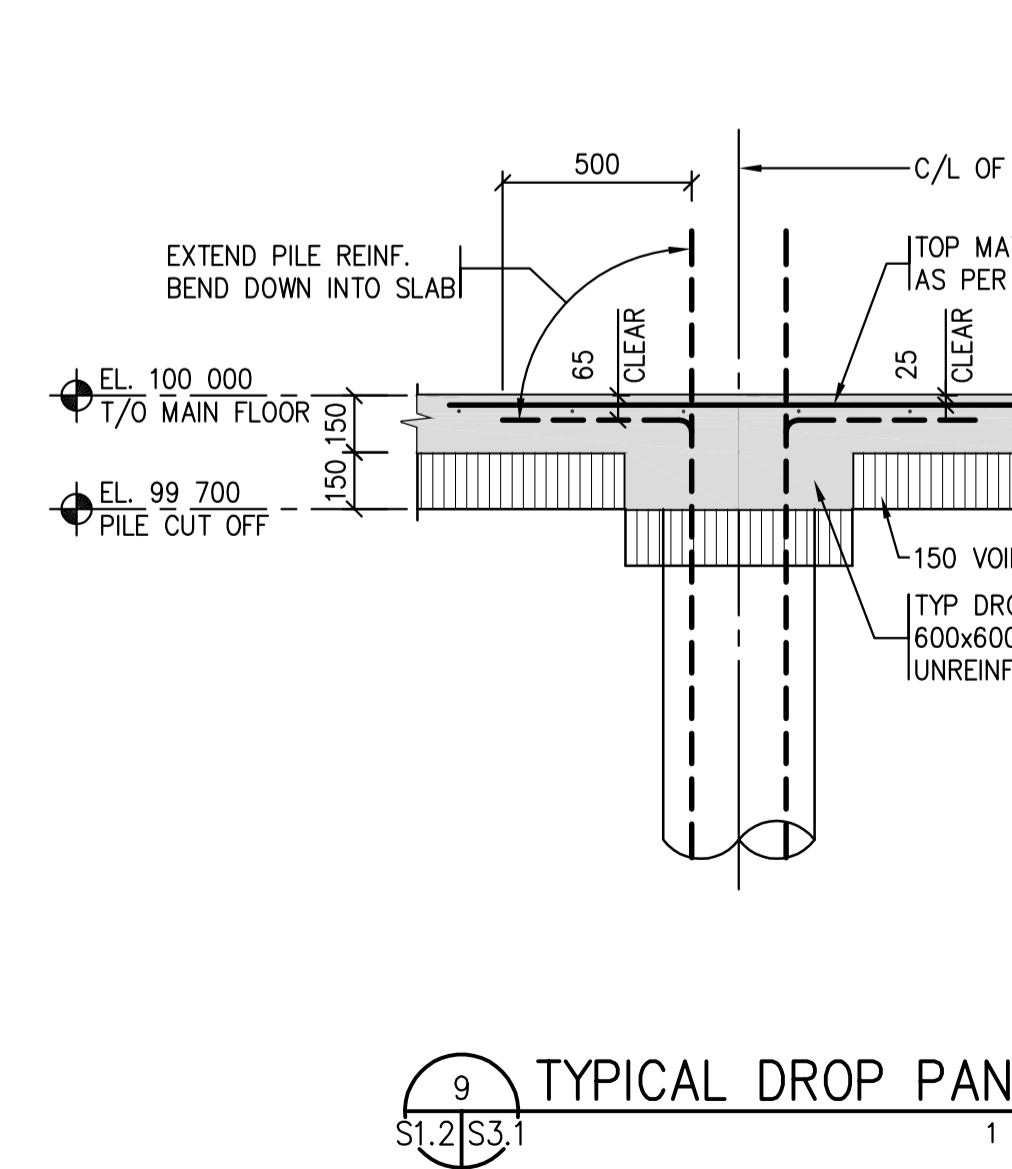
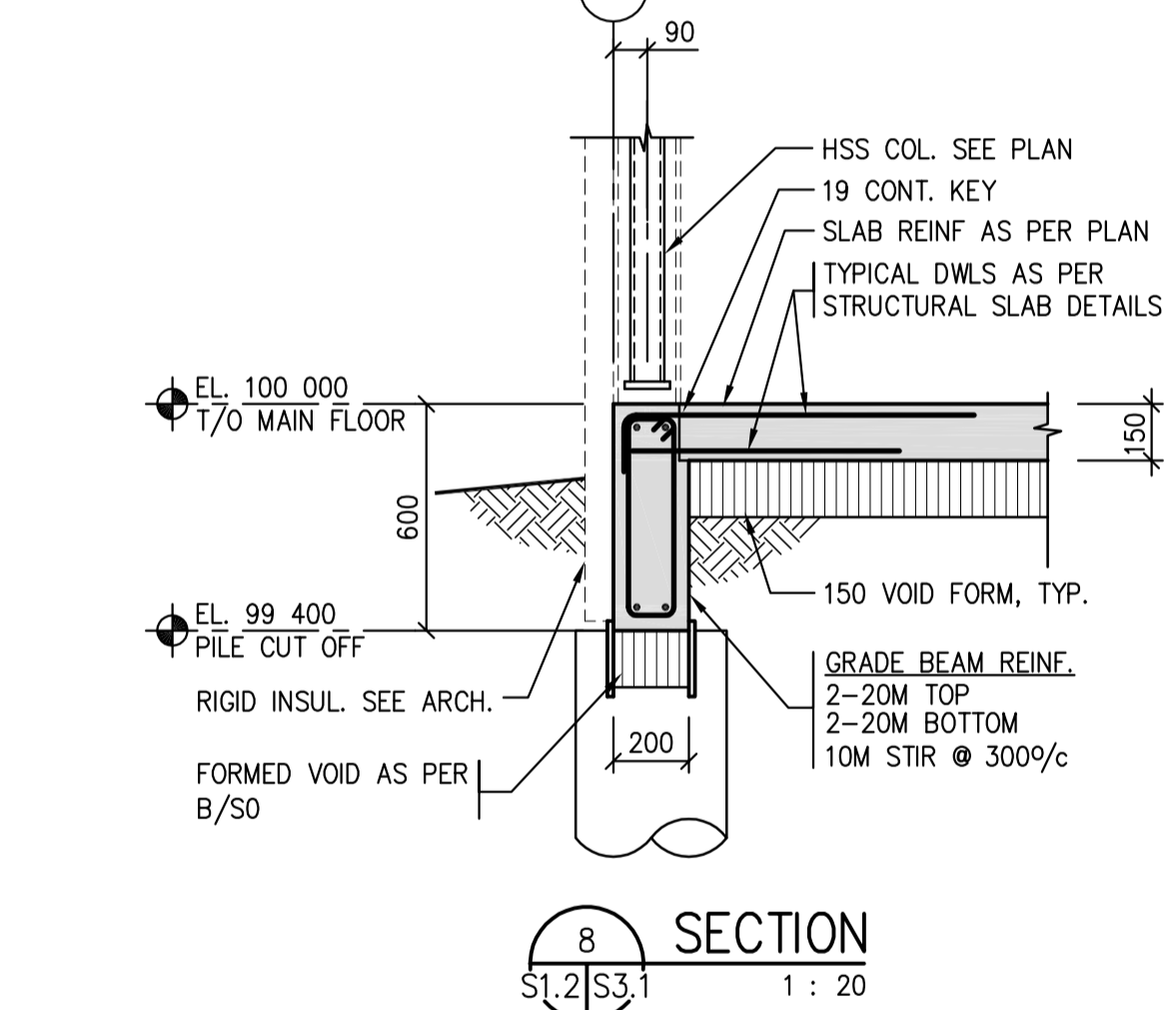
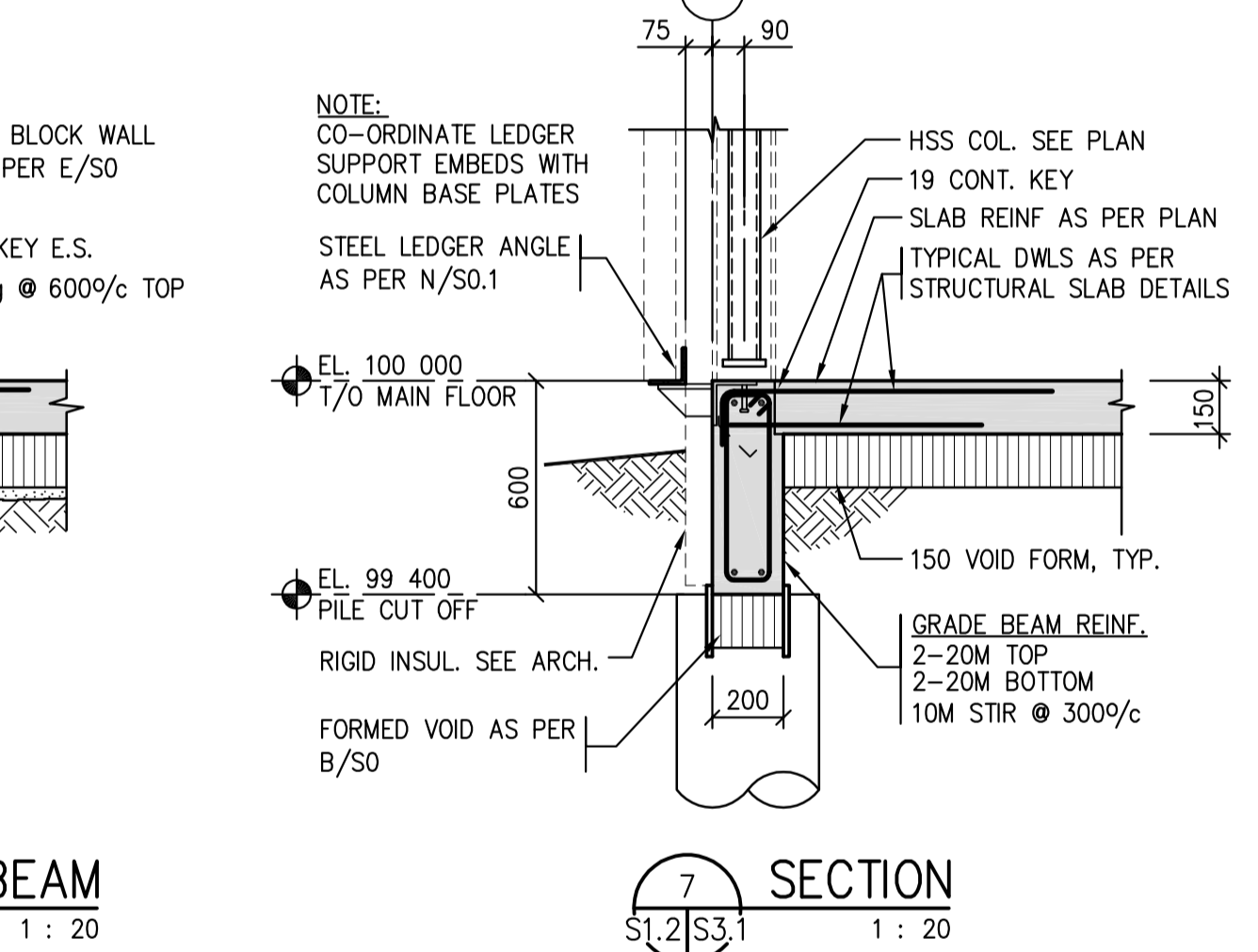
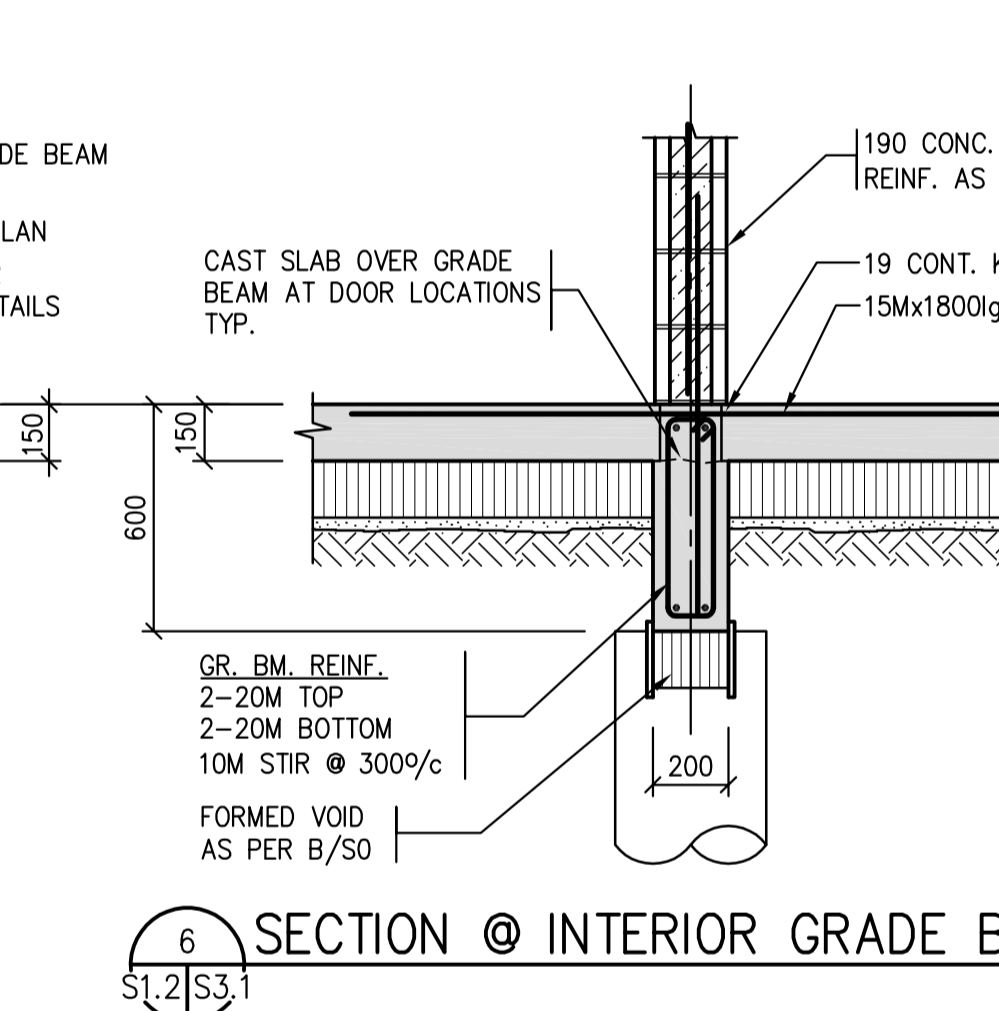
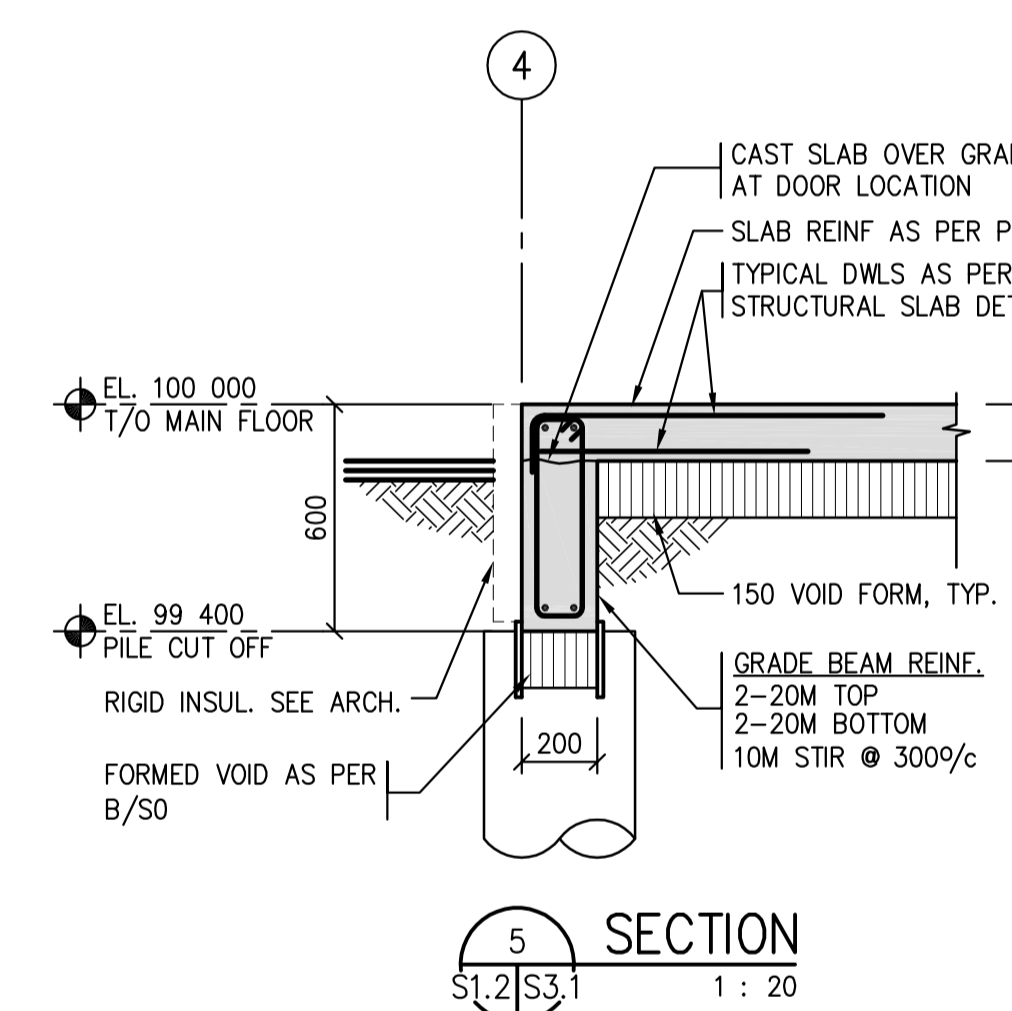
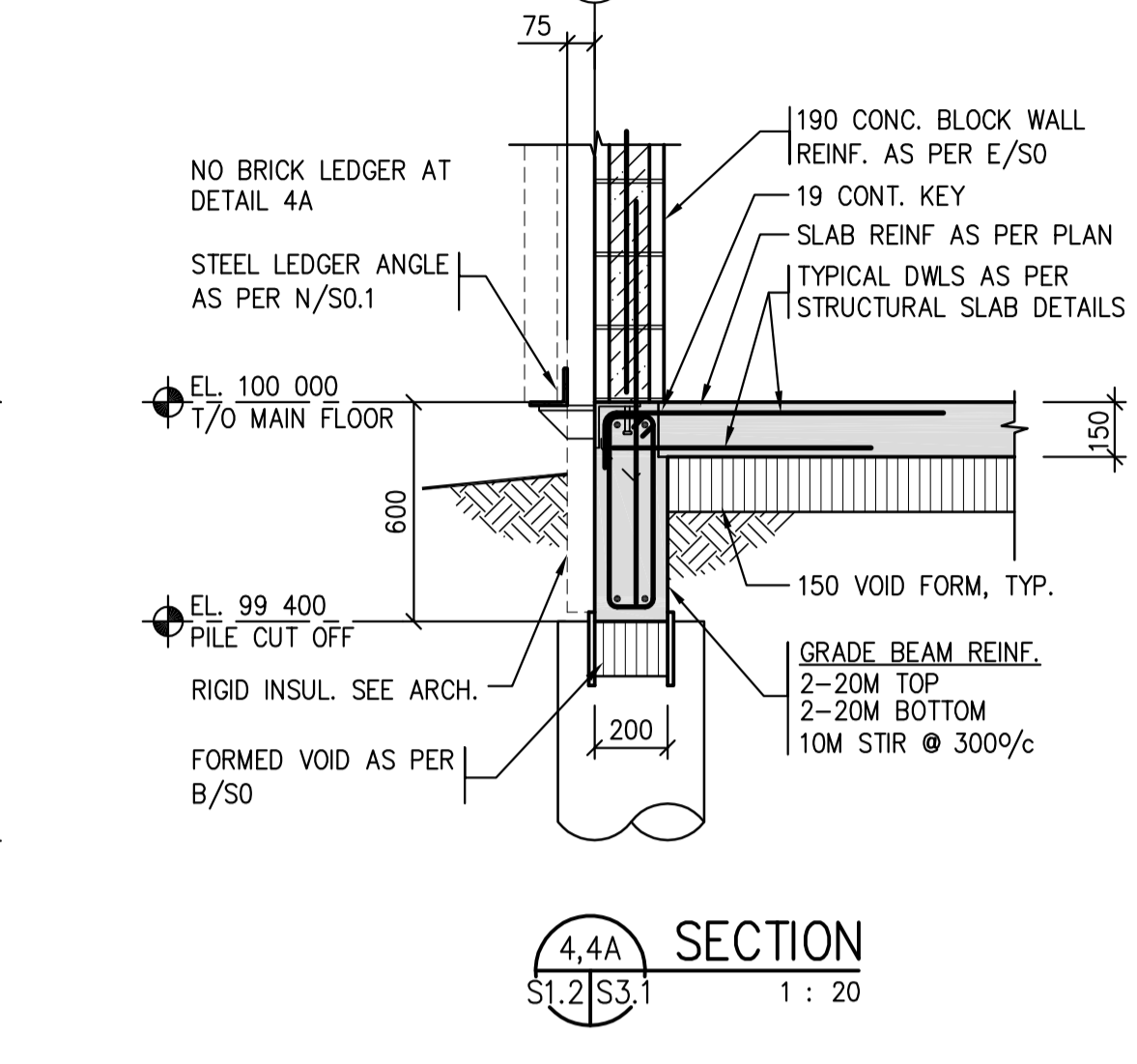
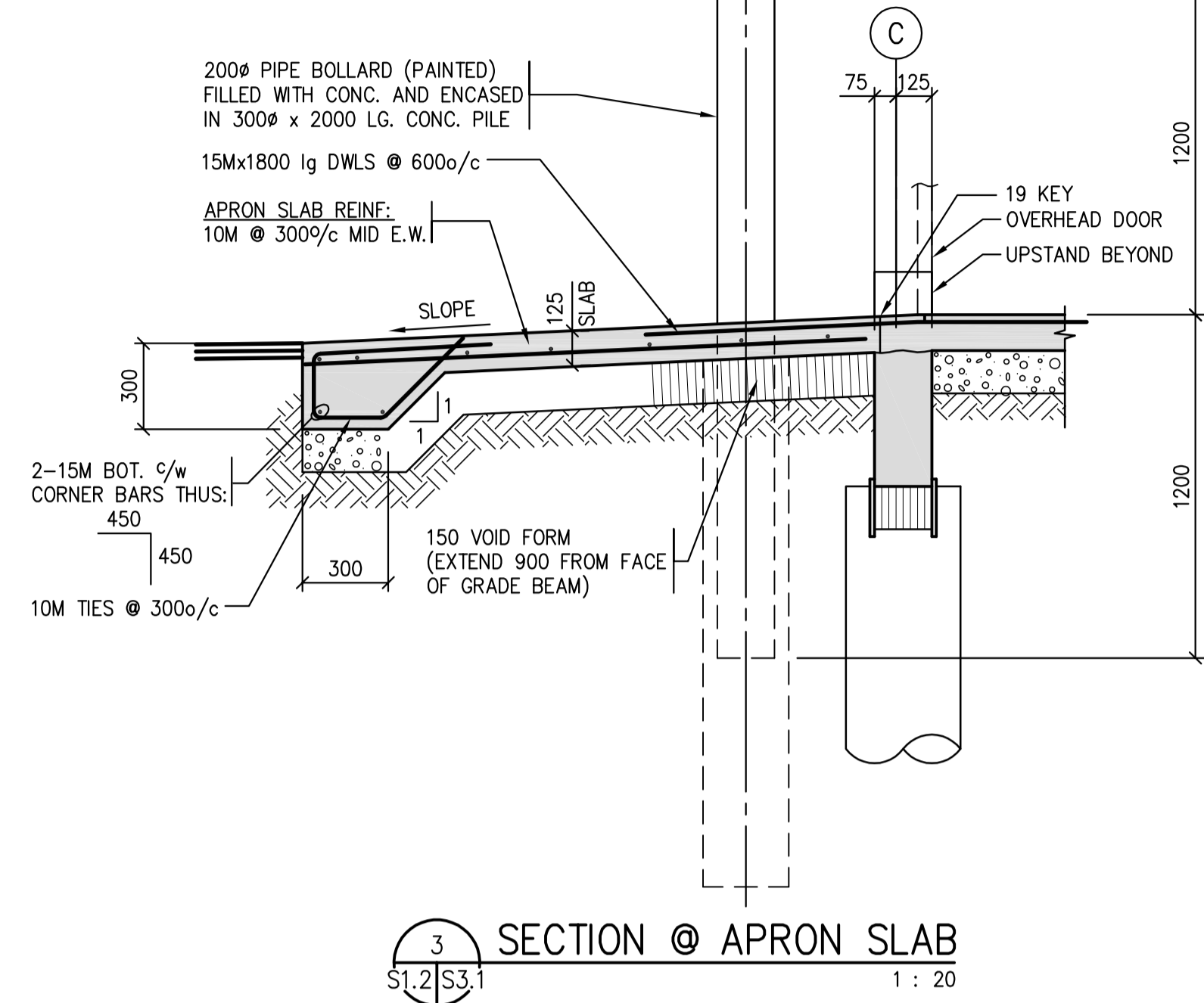
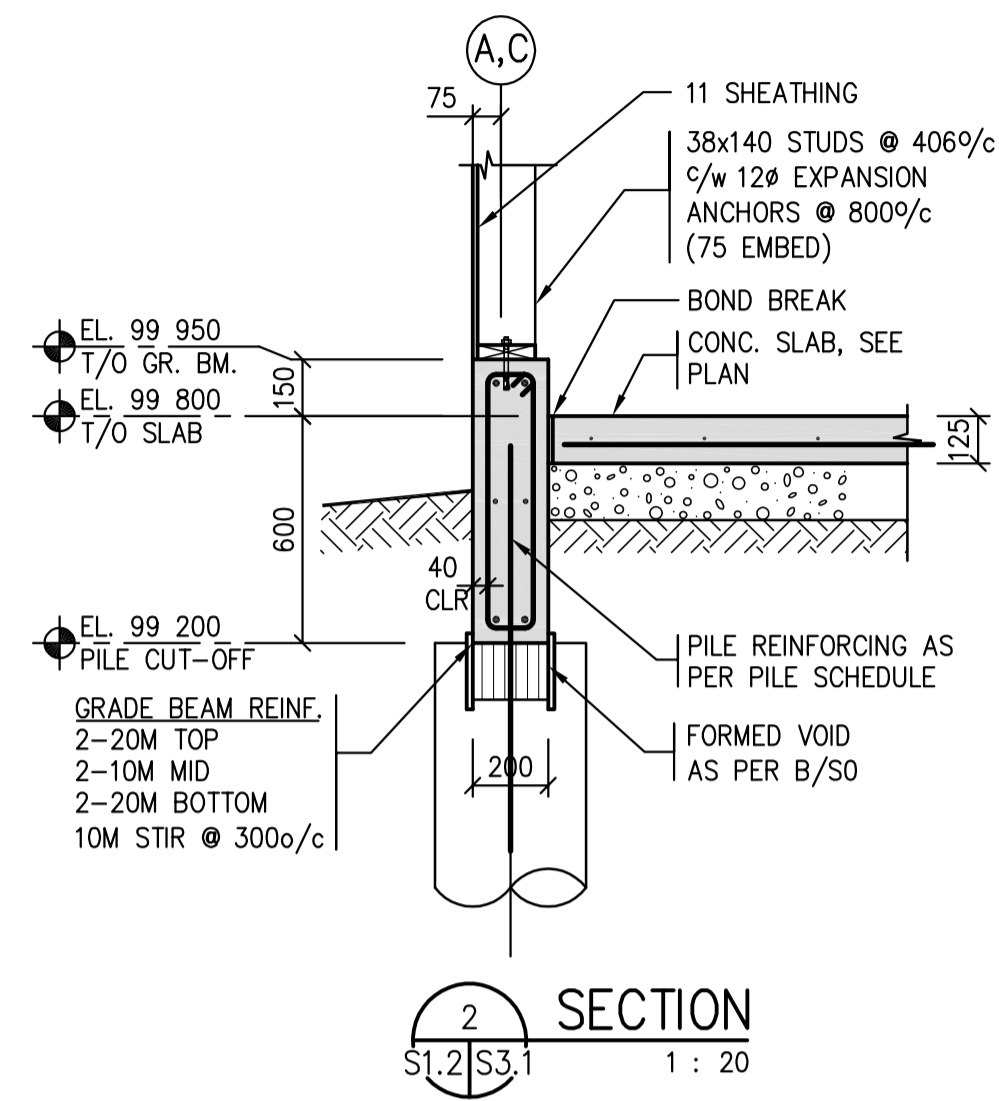
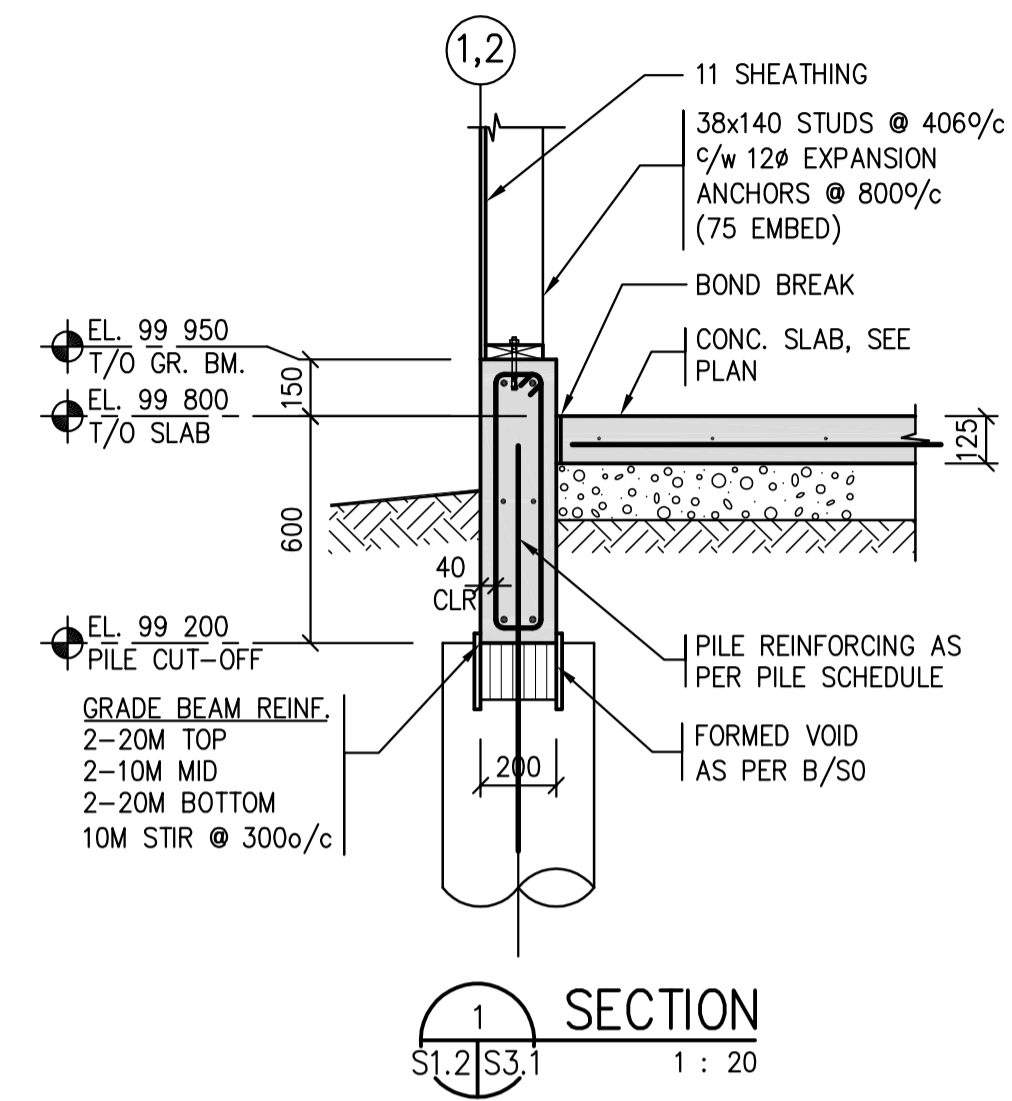
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**FRAMING ELEVATIONS**

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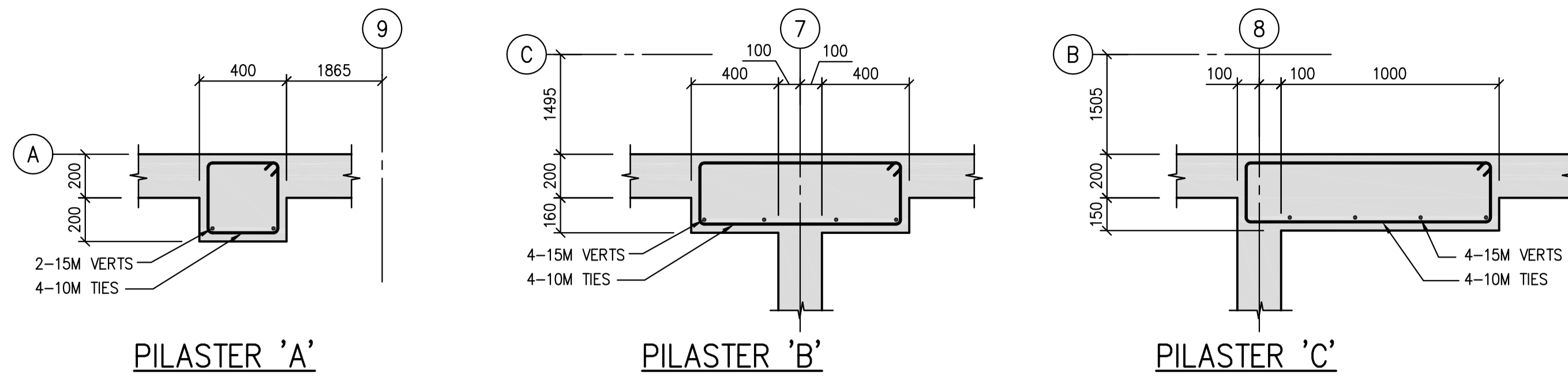
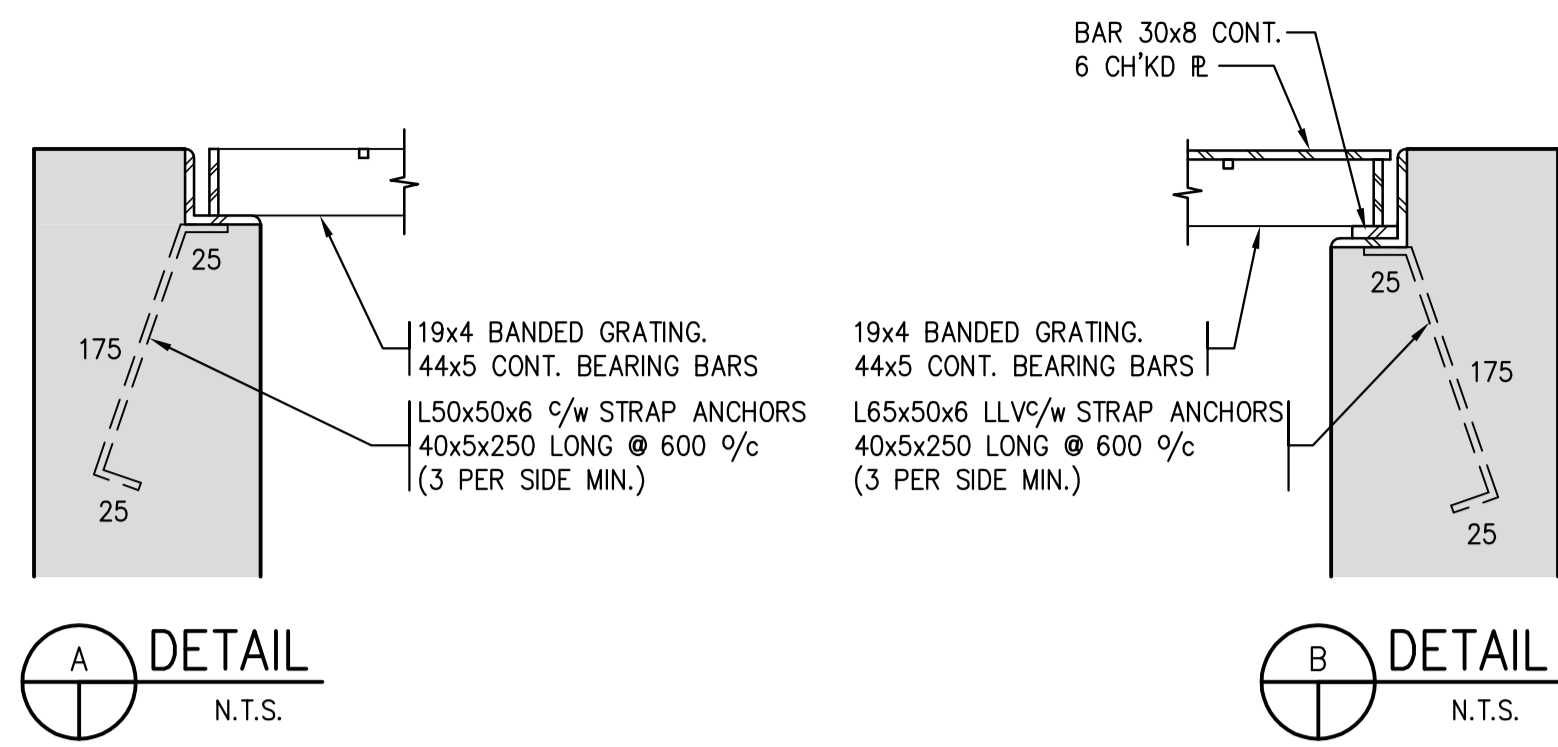
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Project Title/Titre du projet  
**NEW POLICE BUILDING**  
**MAIDSTONE, SASKATCHEWAN**

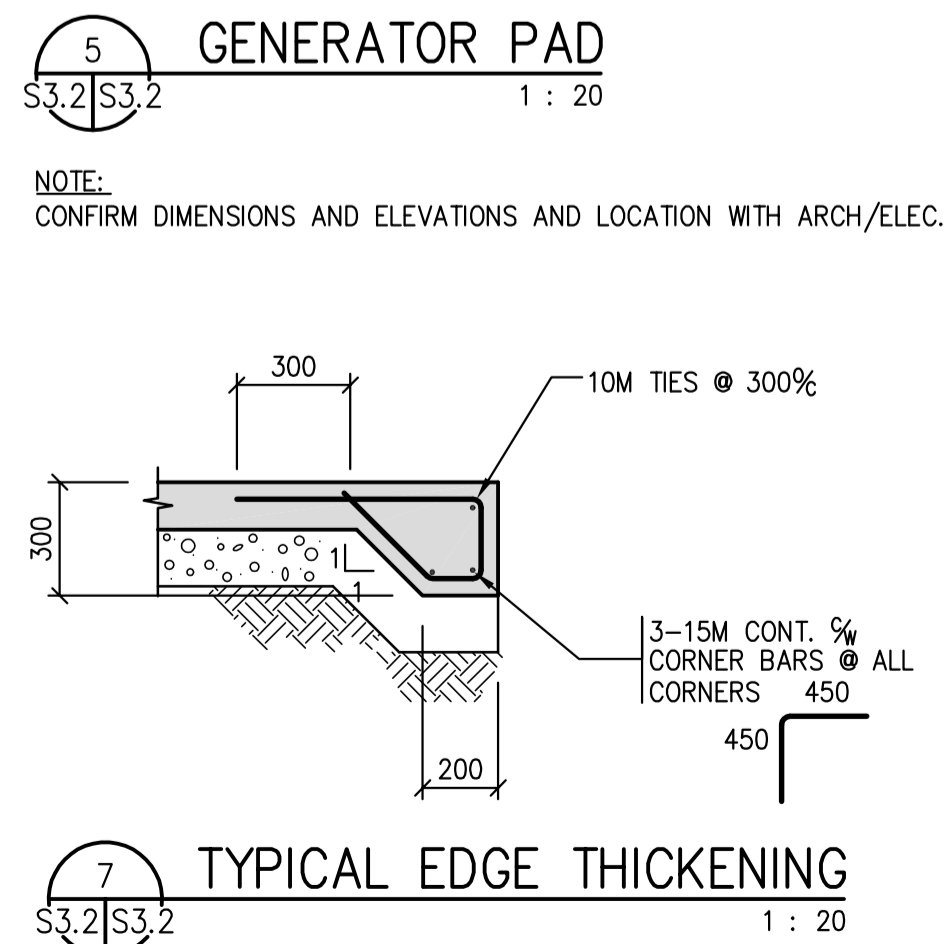
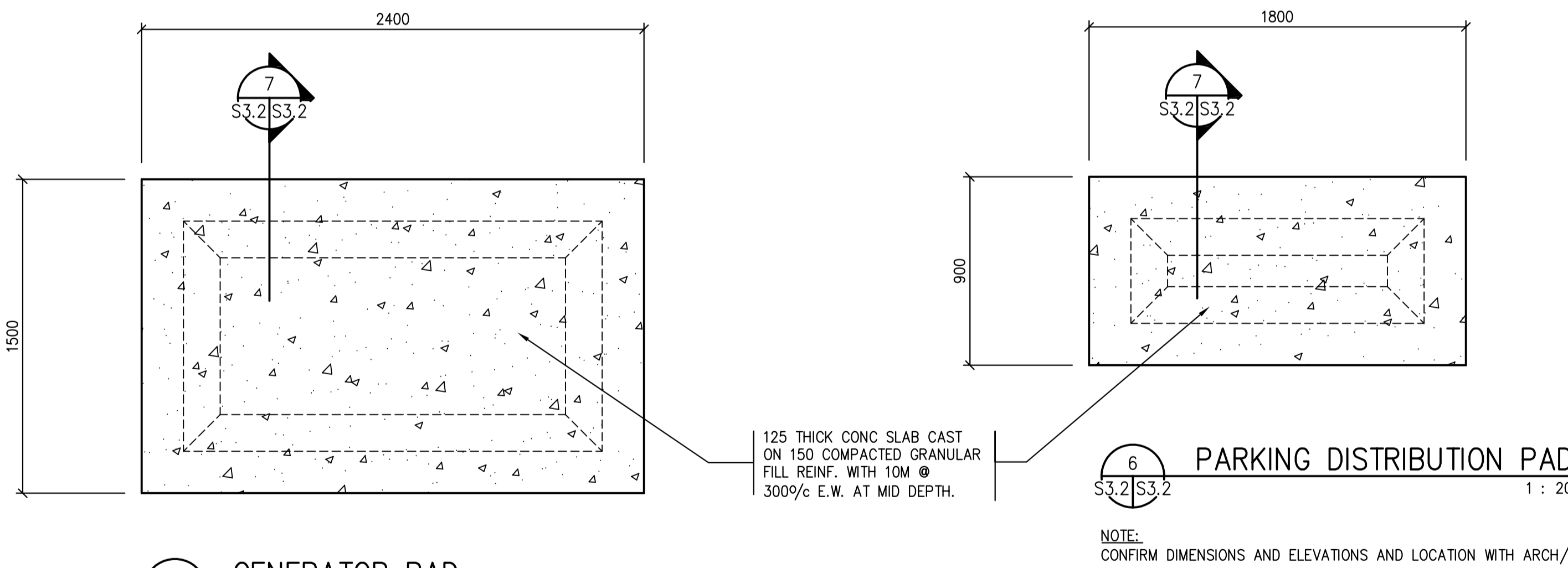
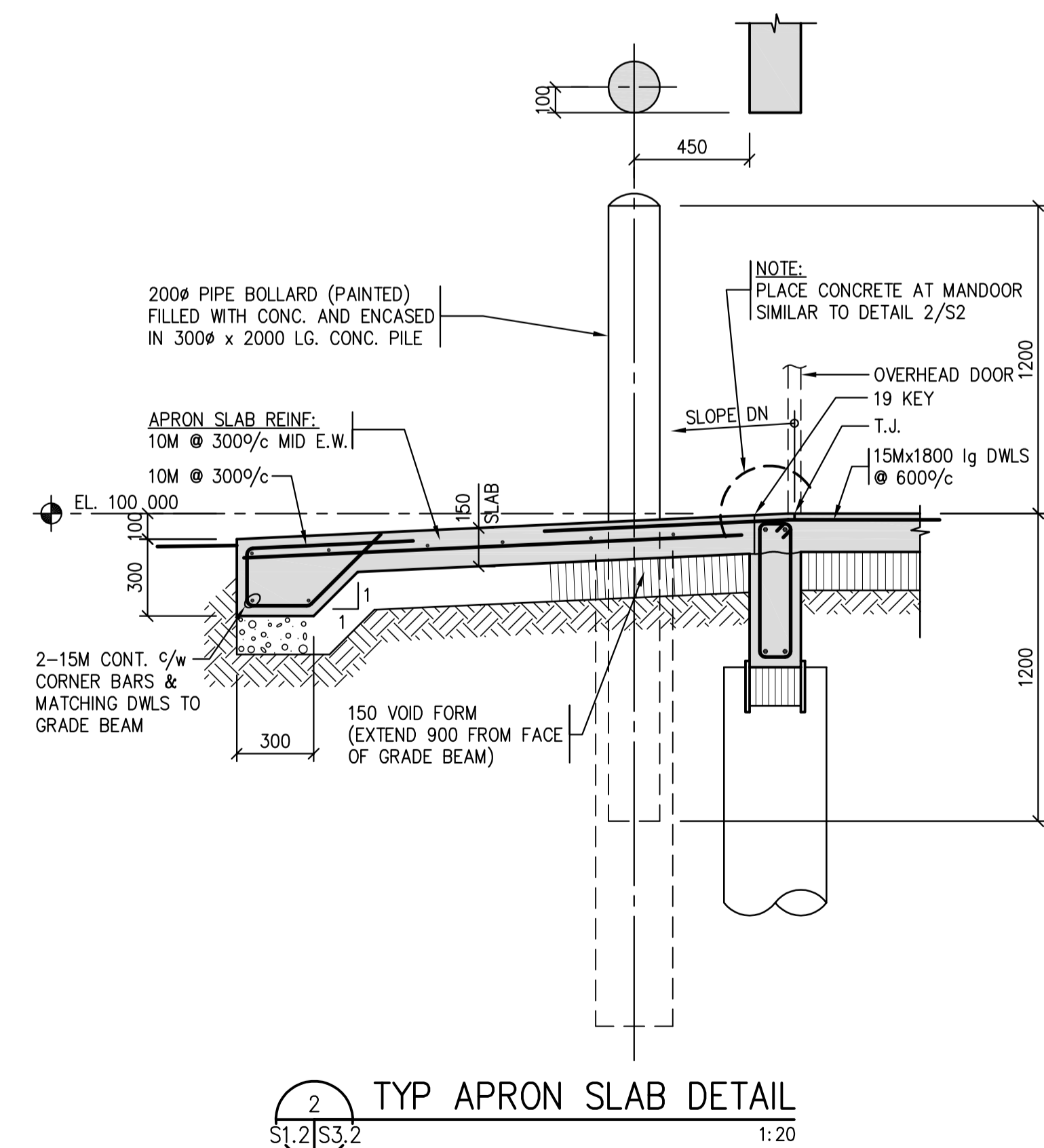
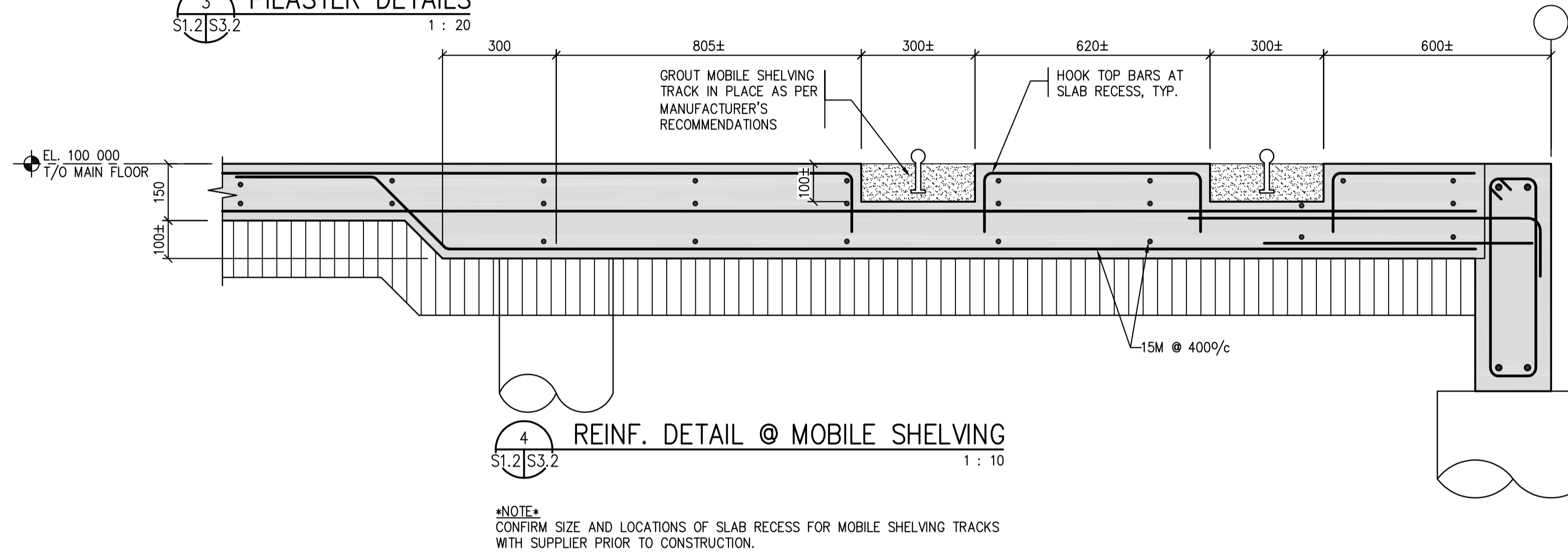
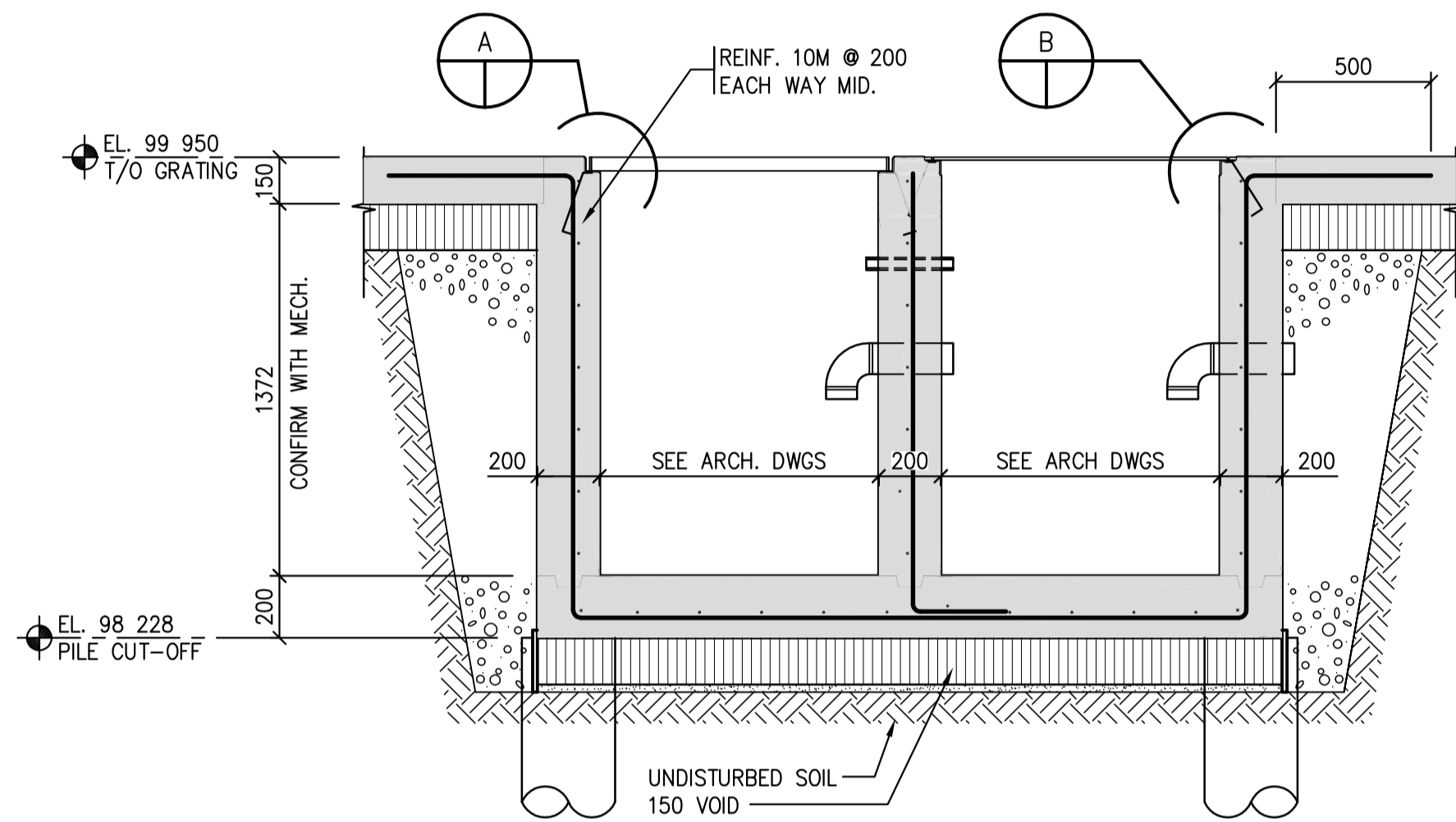
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**SECTIONS AND DETAILS**





**3 PILASTER DETAILS**  
S1.2|S3.2 1:20



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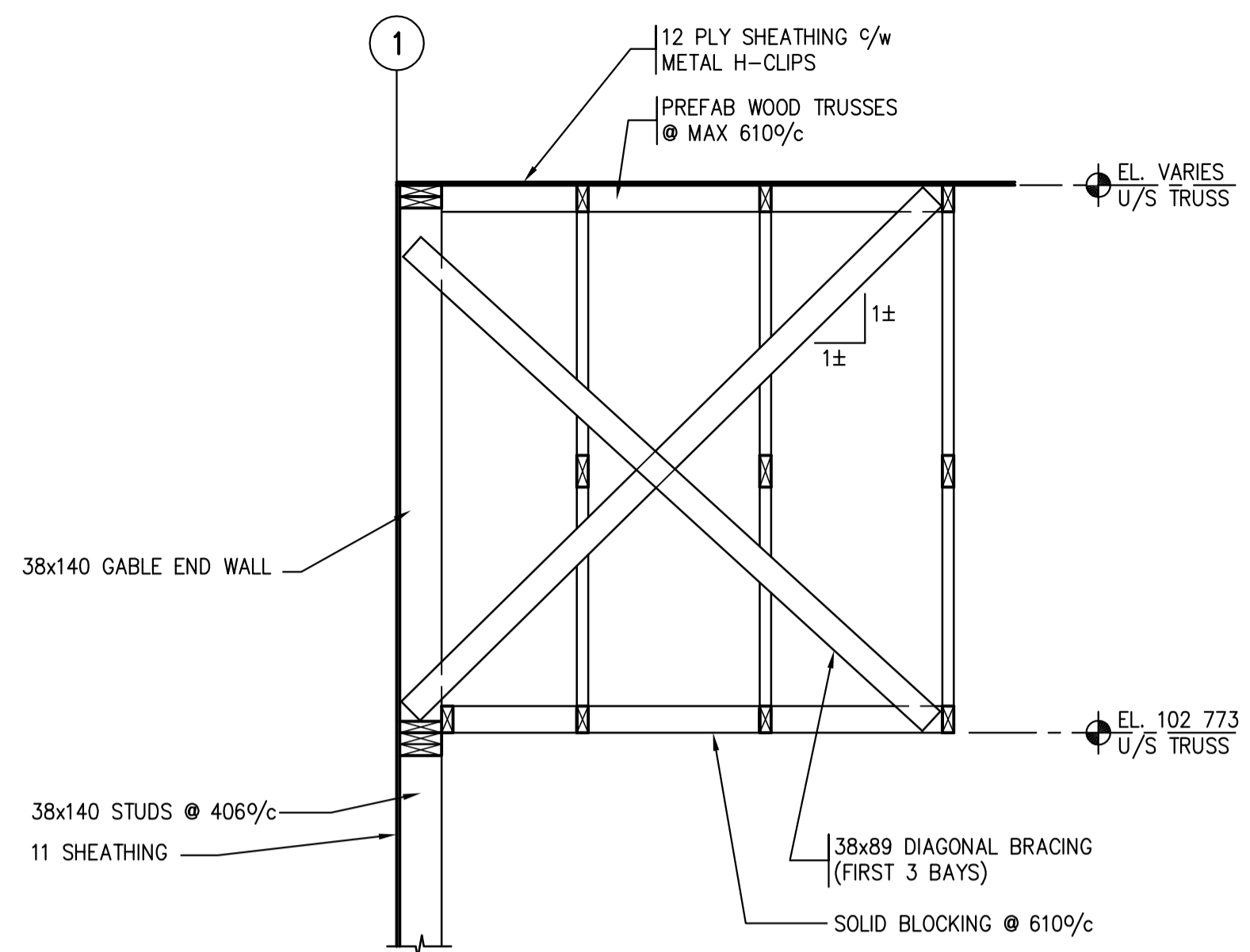
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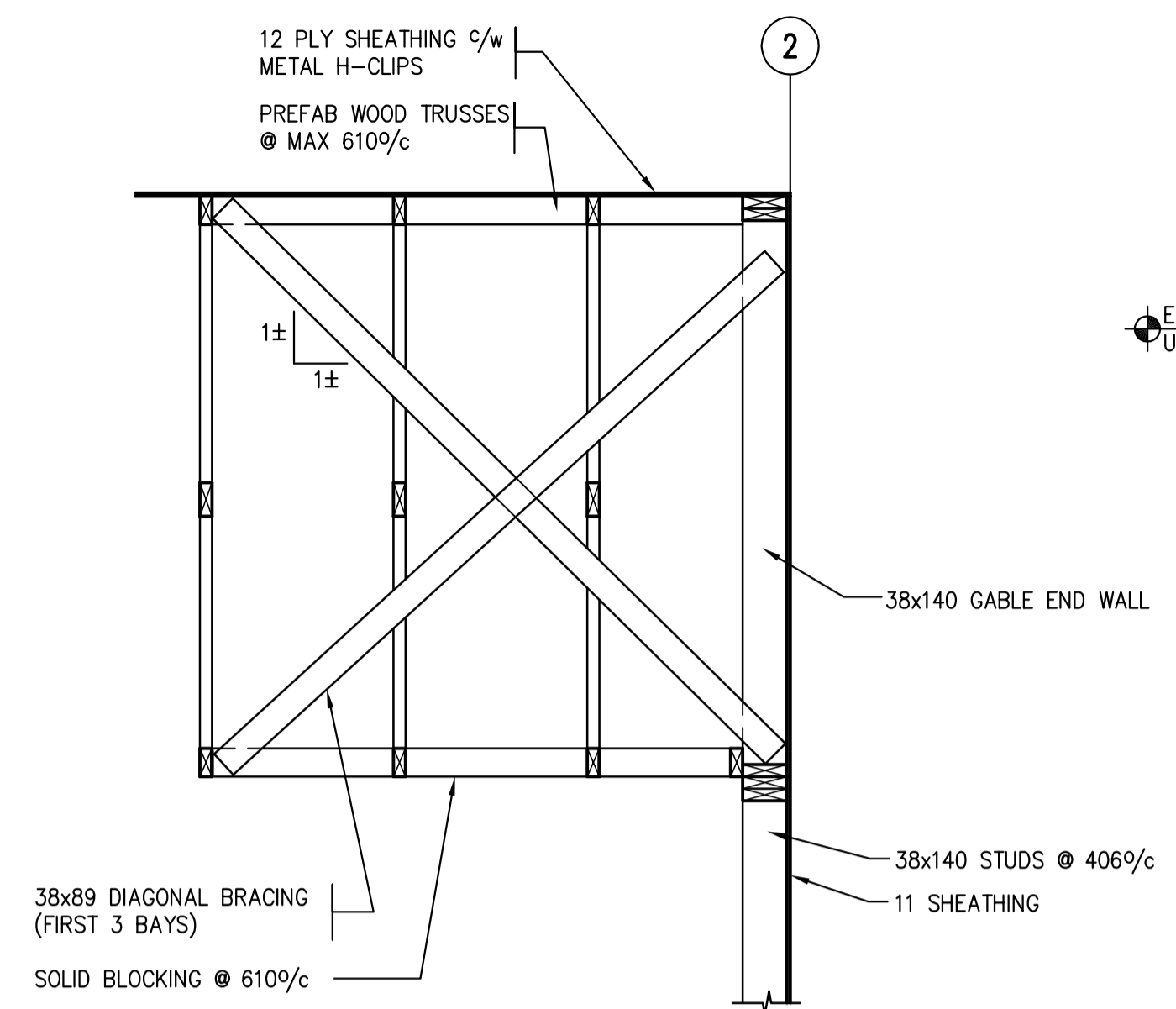
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**SECTIONS AND DETAILS**

Project No./No. du projet	Sheet/Fauille	Revision no./La Révision no.
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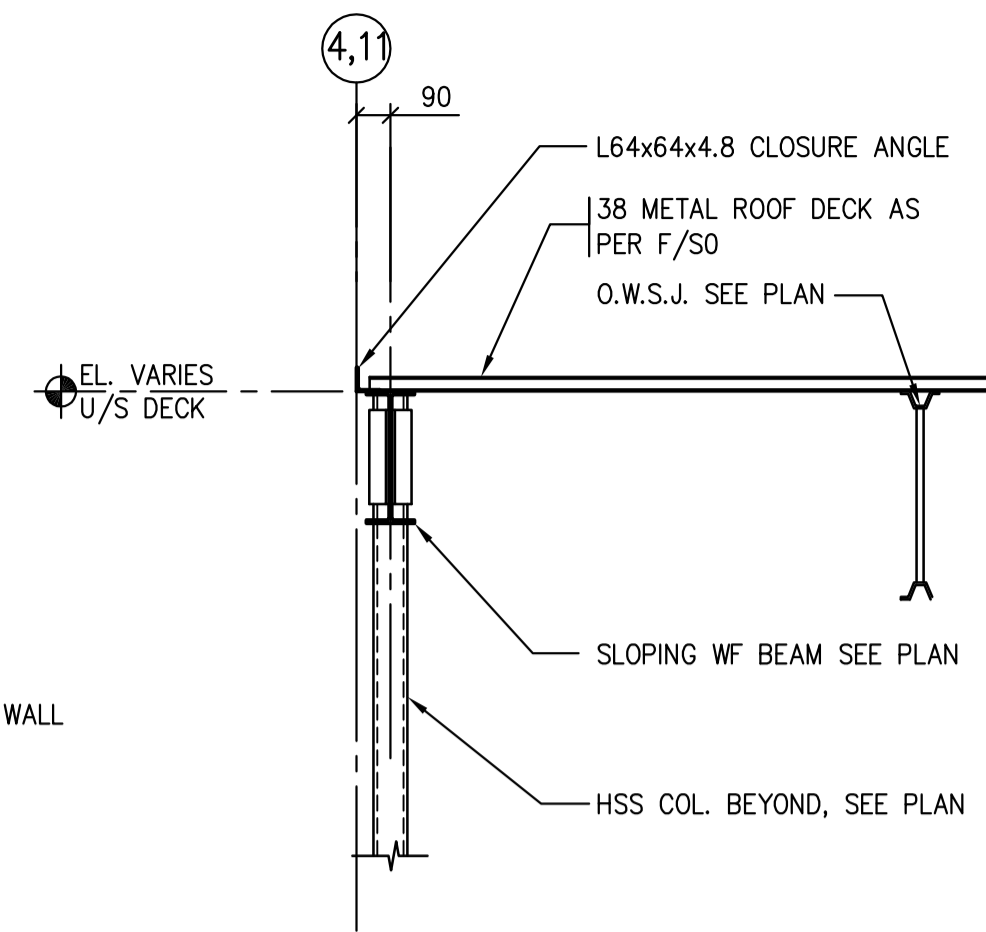




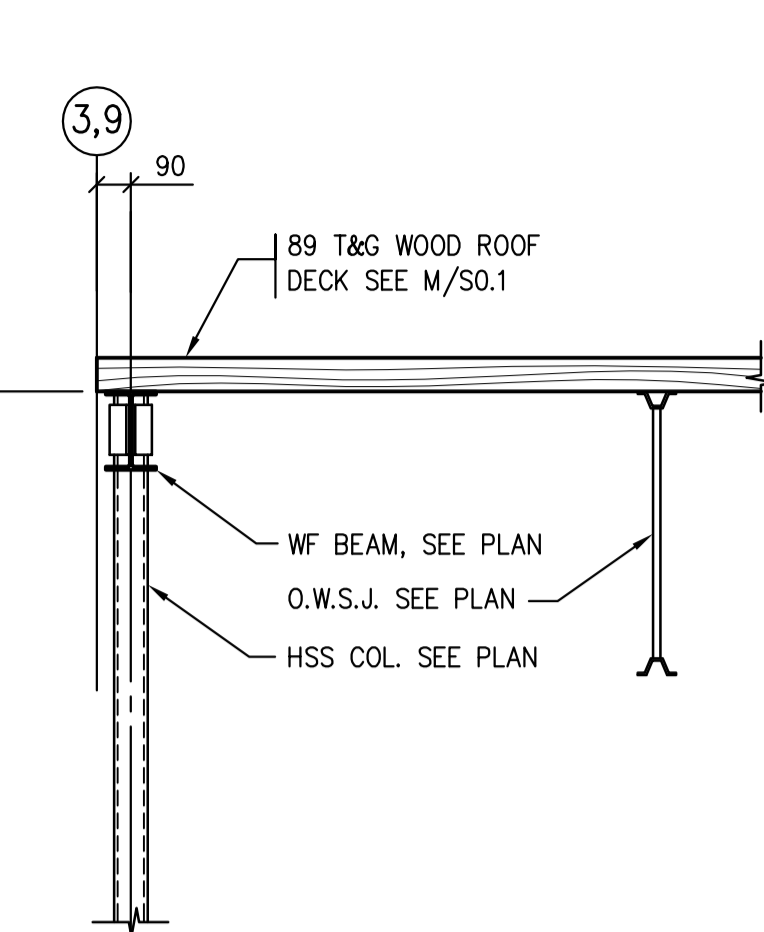
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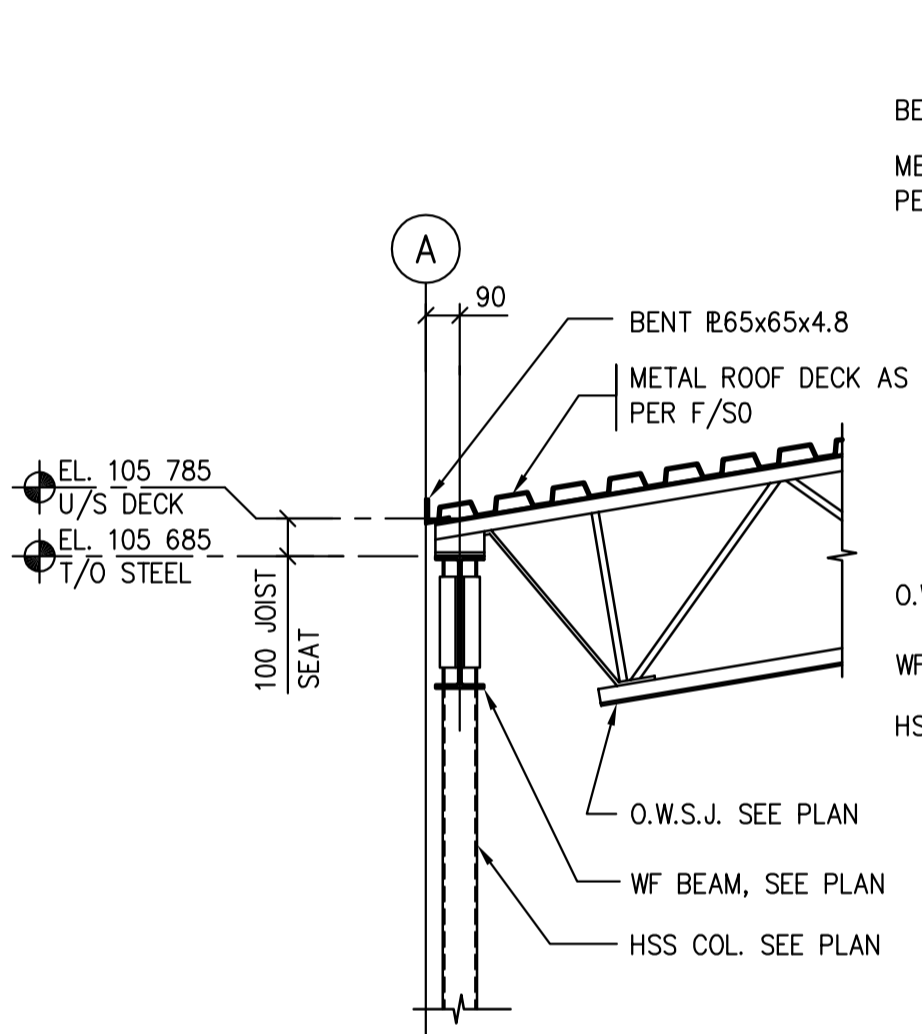
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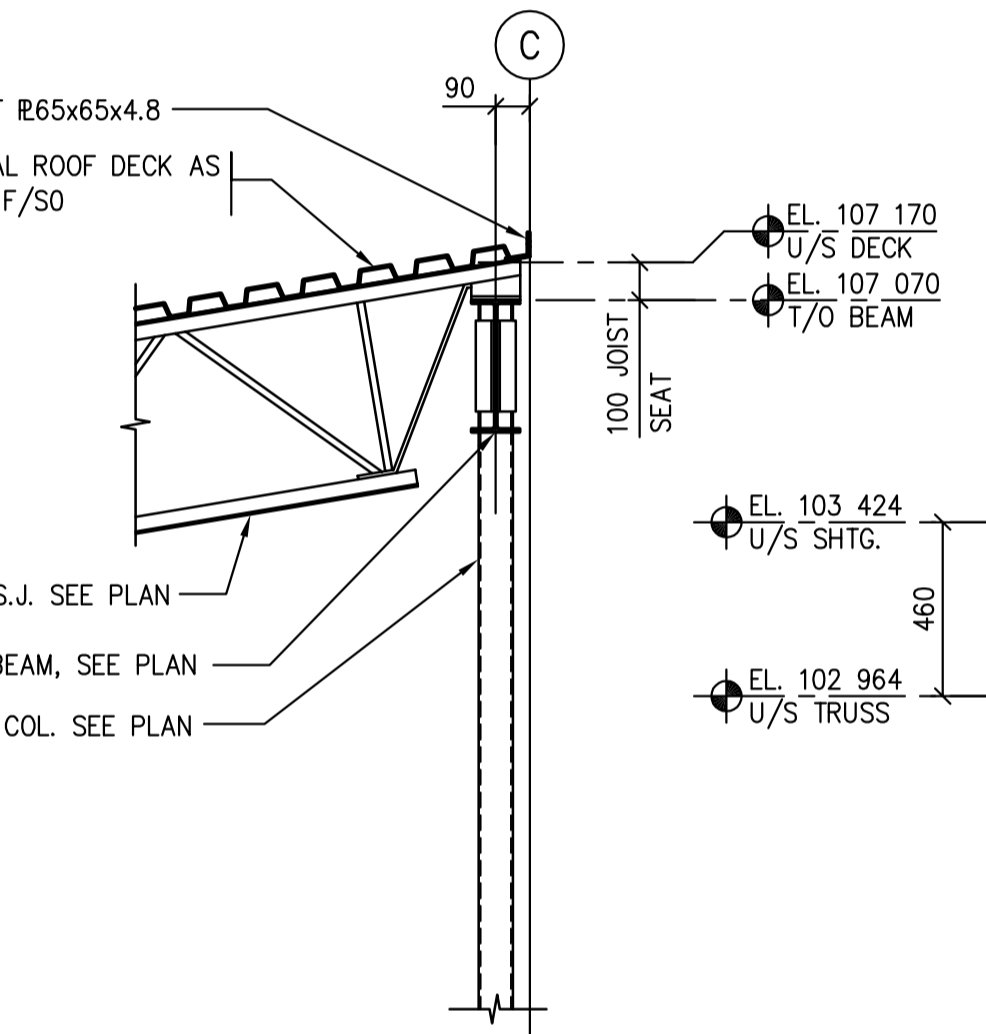
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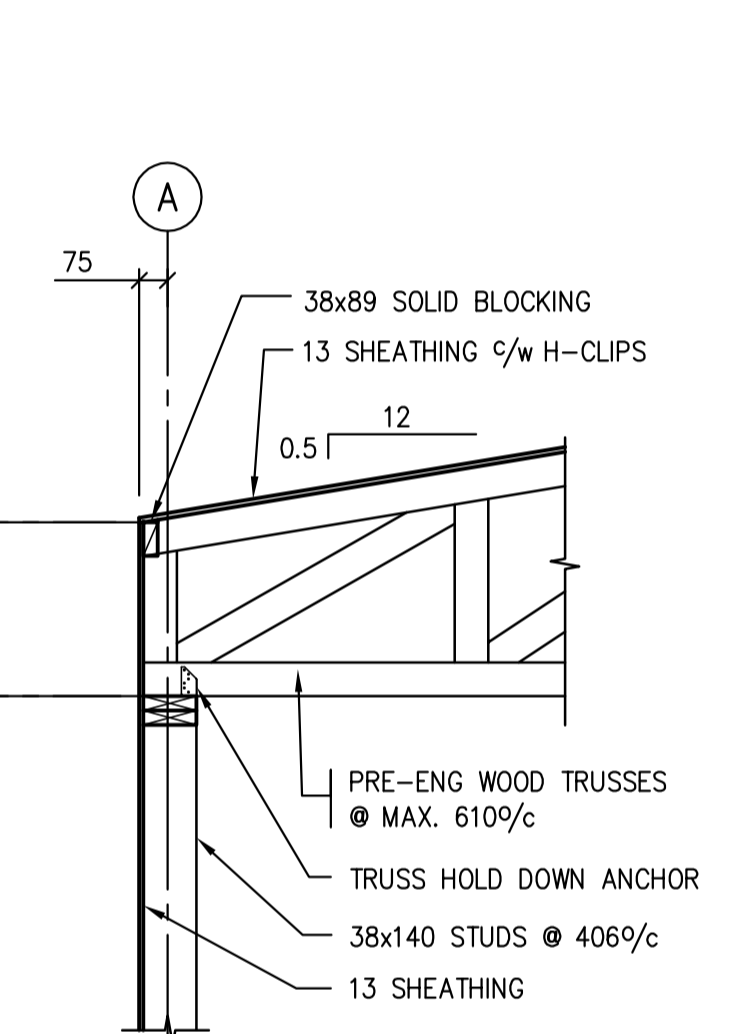
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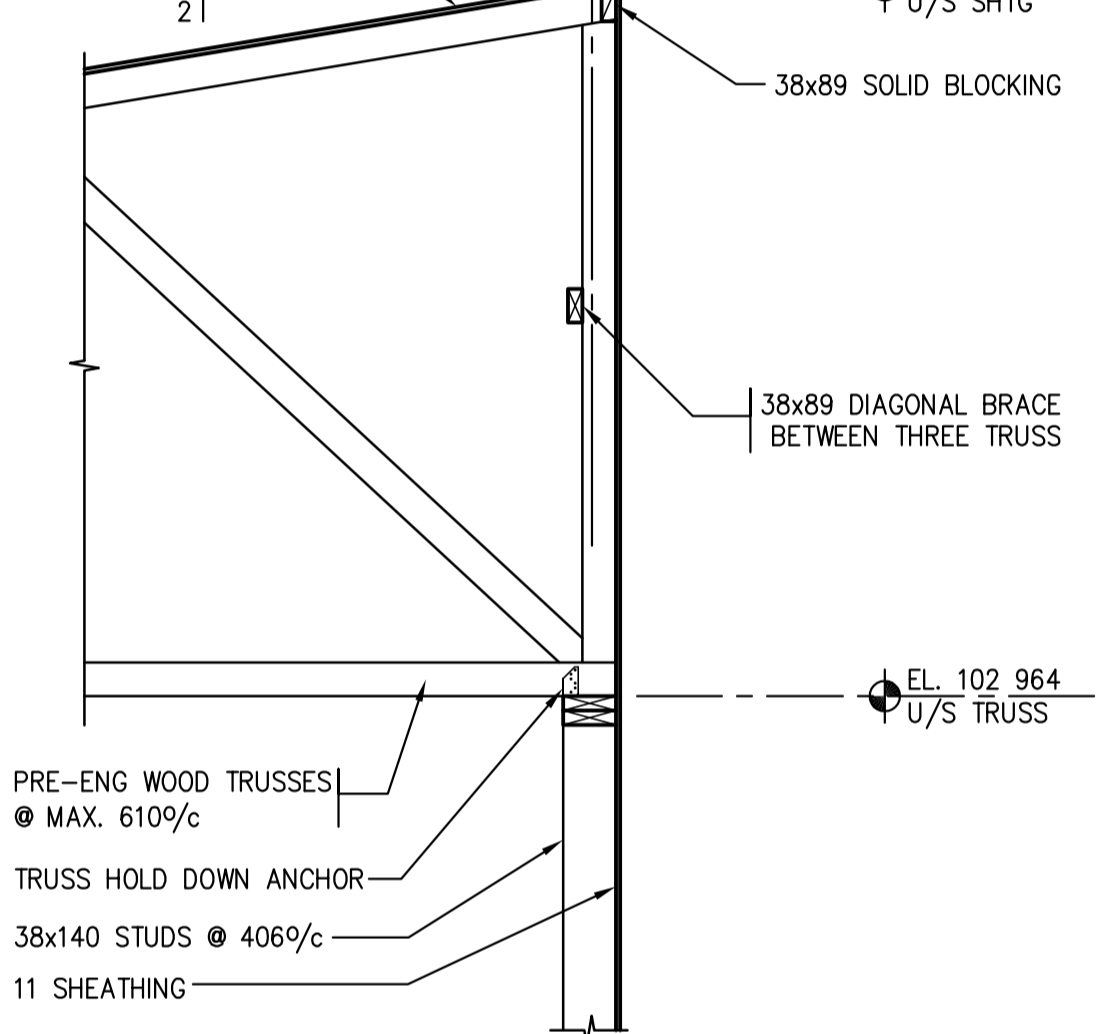
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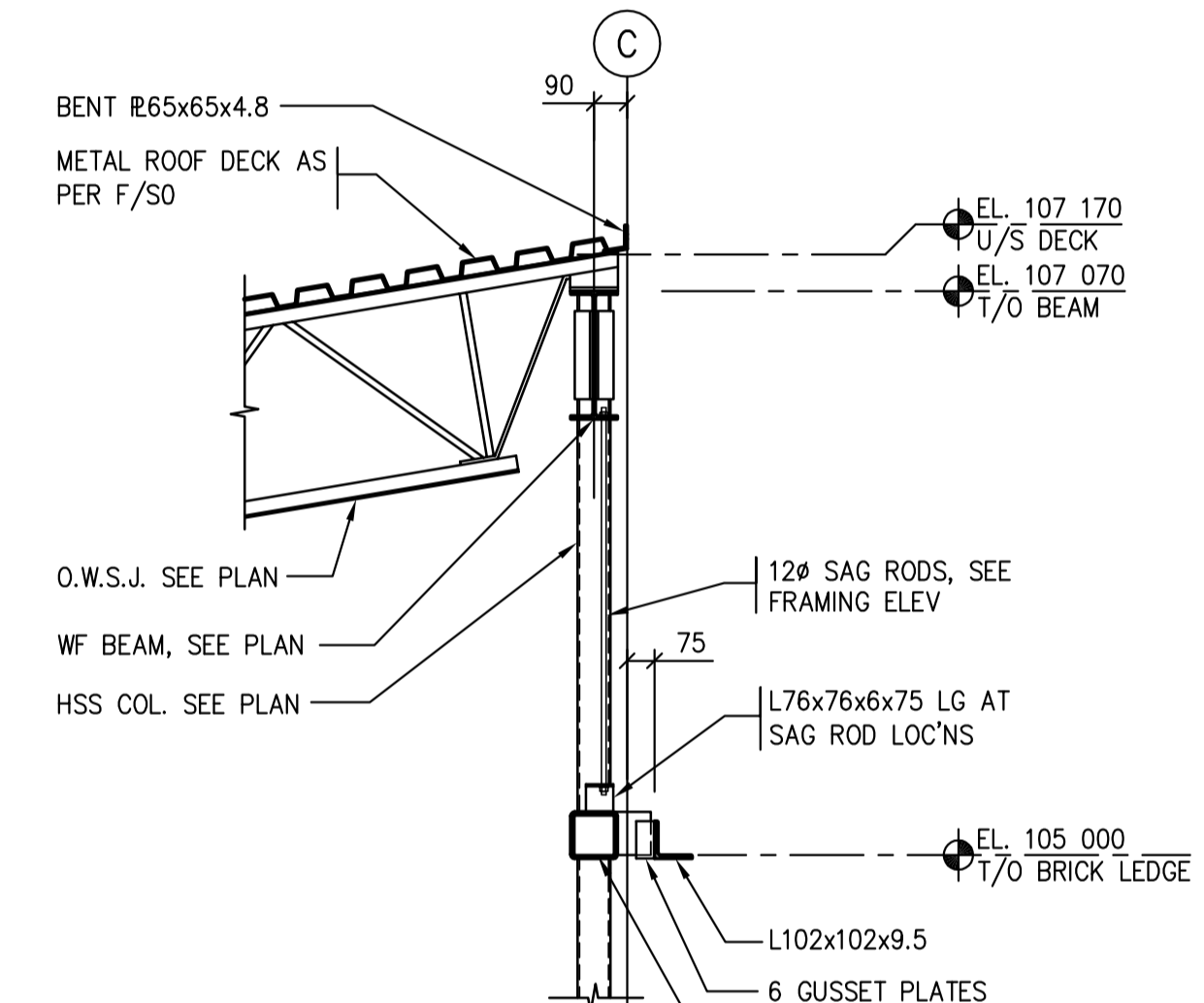
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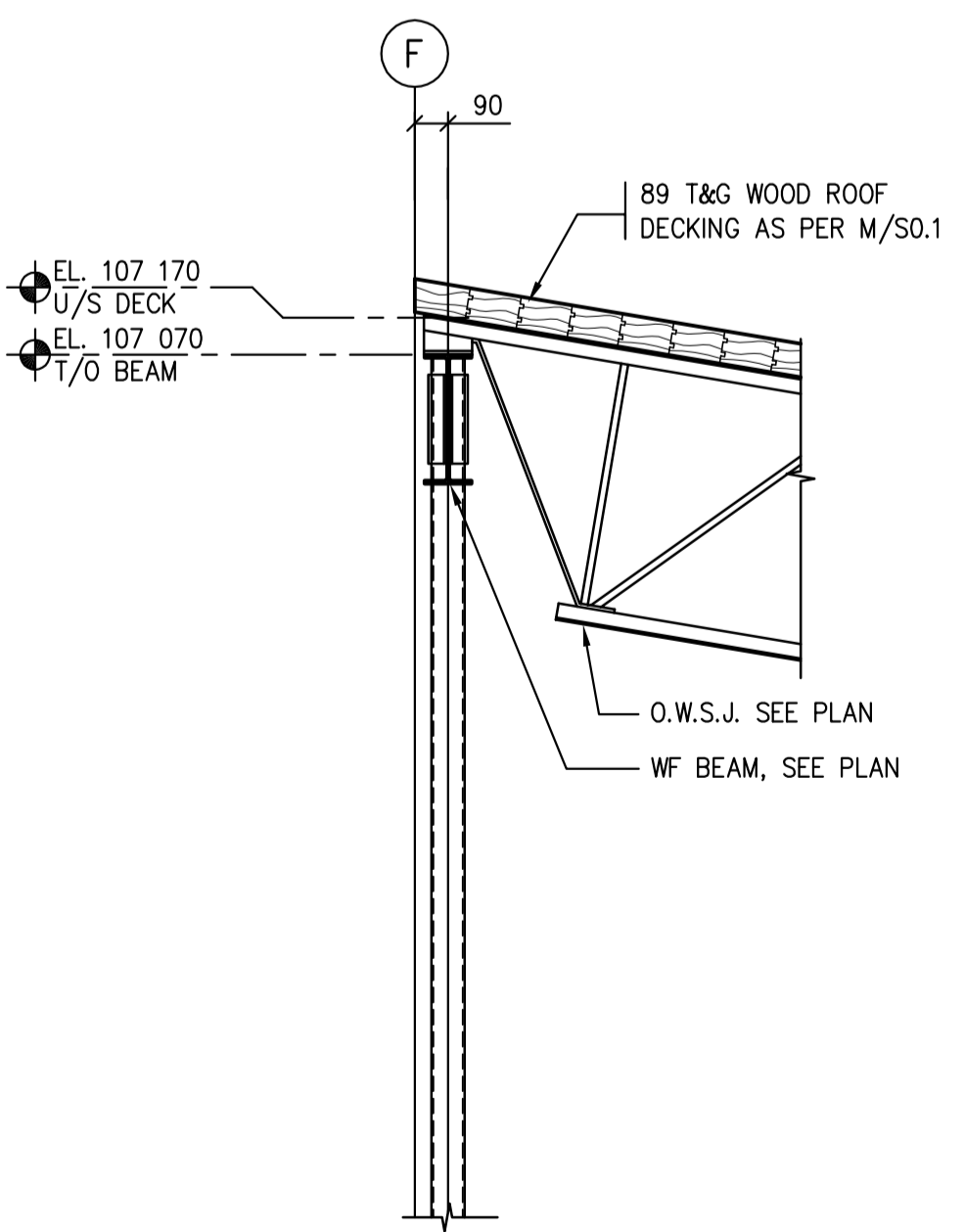
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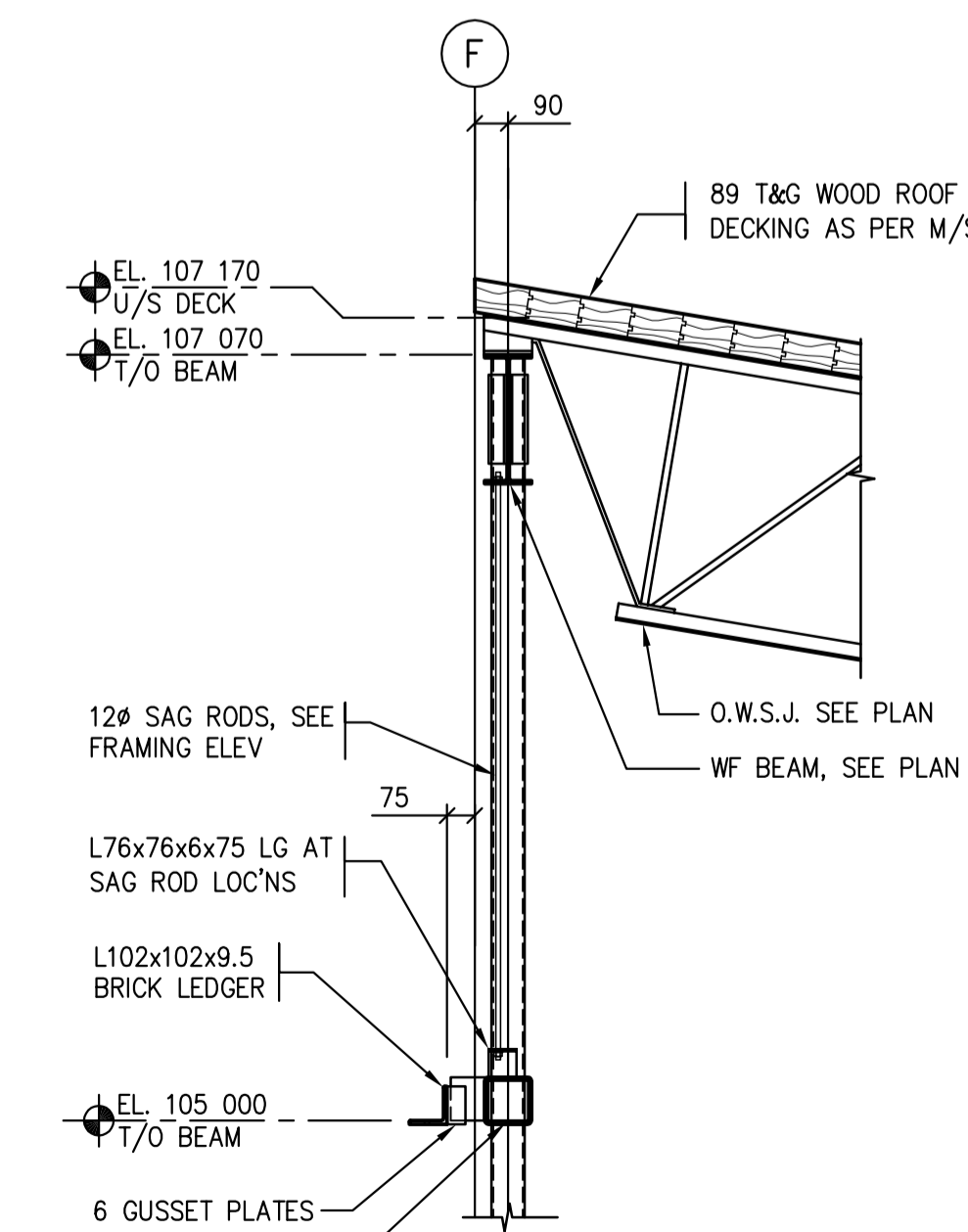
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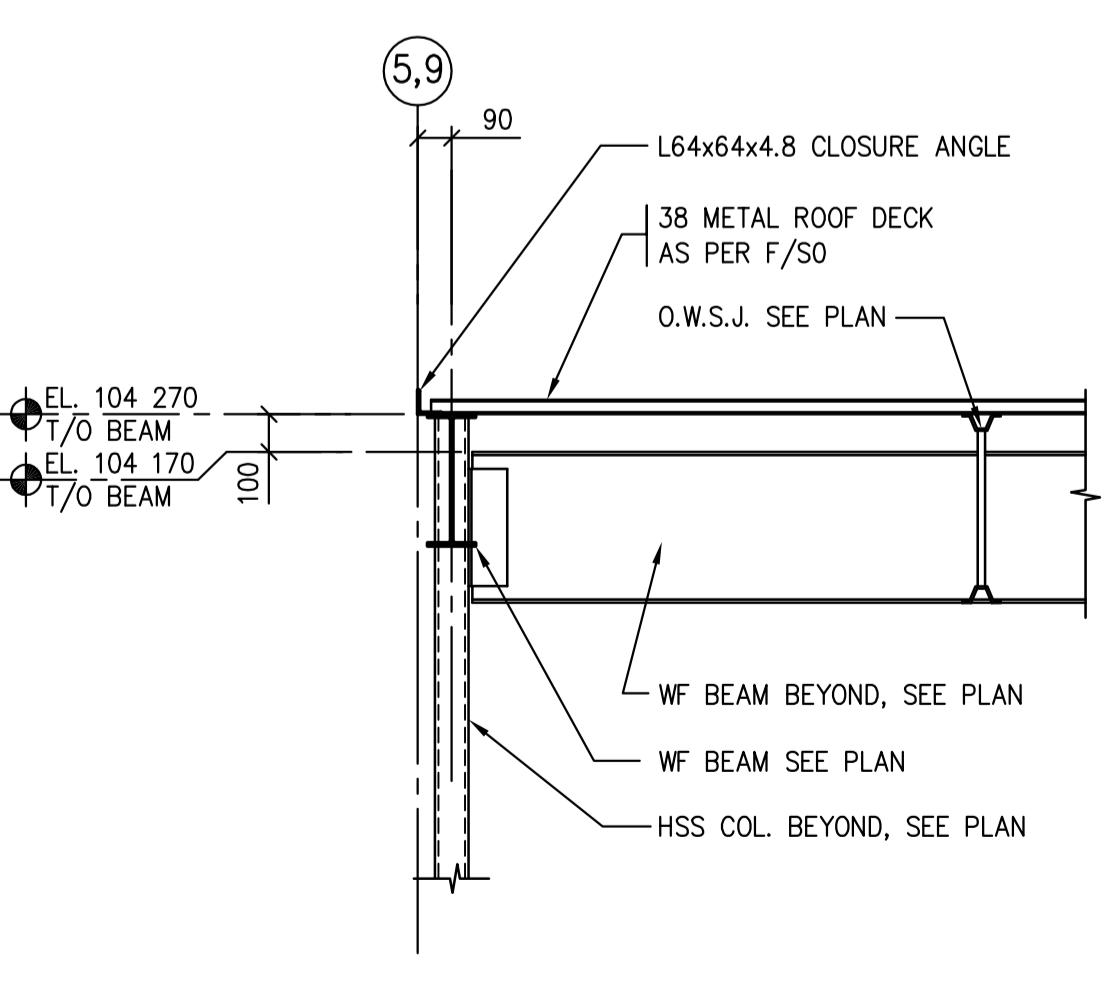
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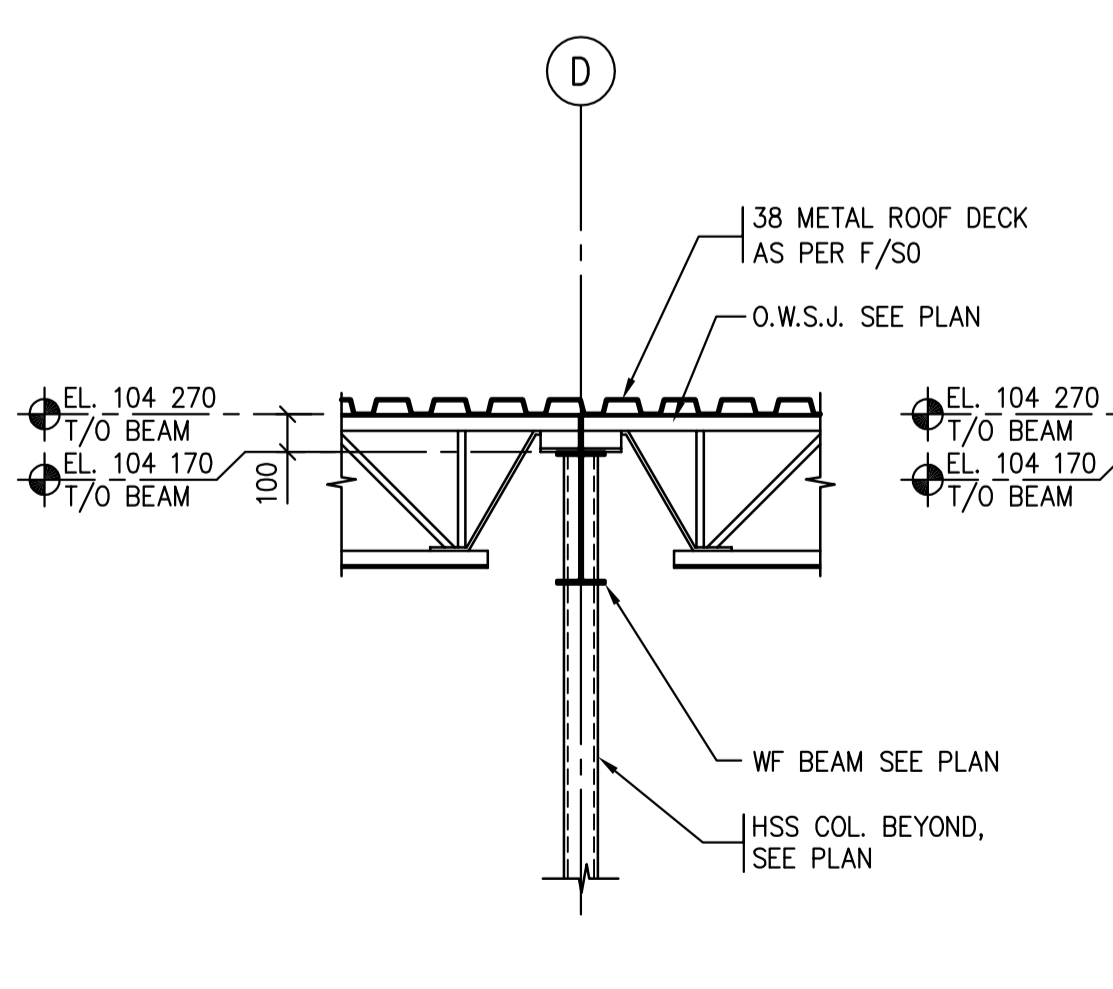
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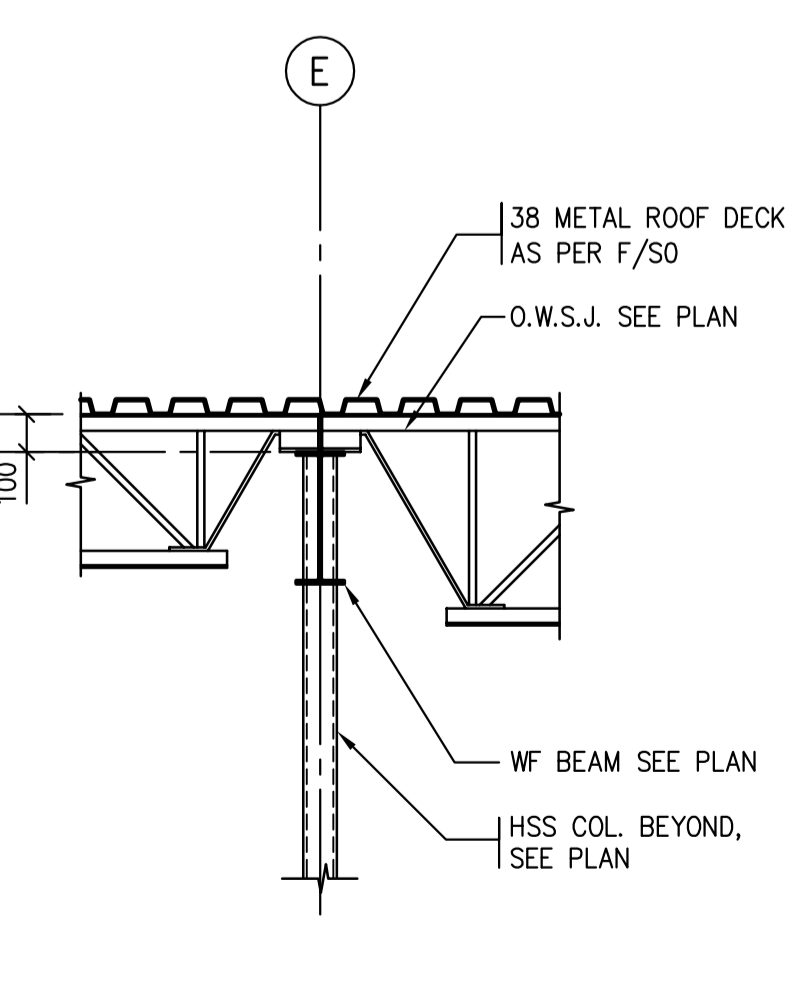
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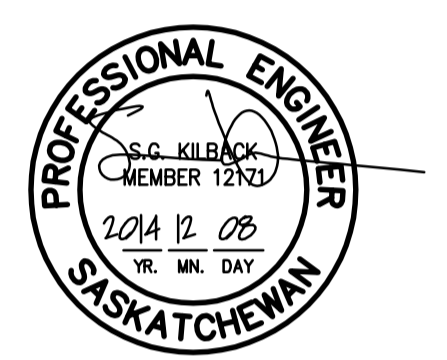
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13 SECTION  
S2.1|S3.3 1:20



14 SECTION  
S2.1|S3.3 1:20



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Project Title/Titre du projet

**NEW POLICE BUILDING  
 MAIDSTONE, SASKATCHEWAN**

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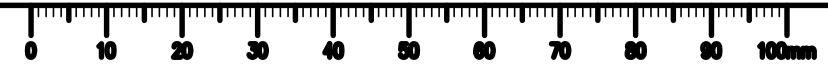
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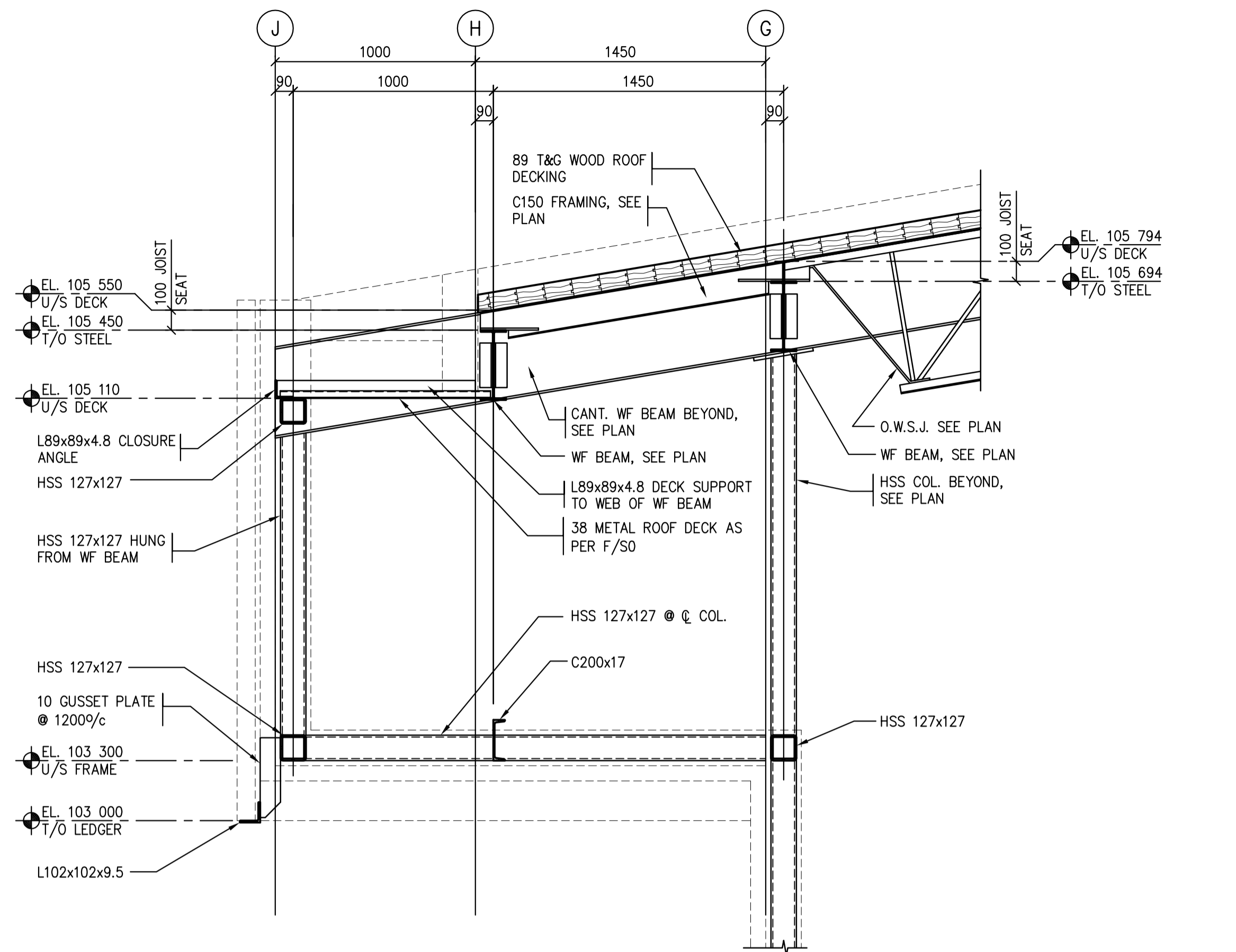
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**SECTIONS AND DETAILS**

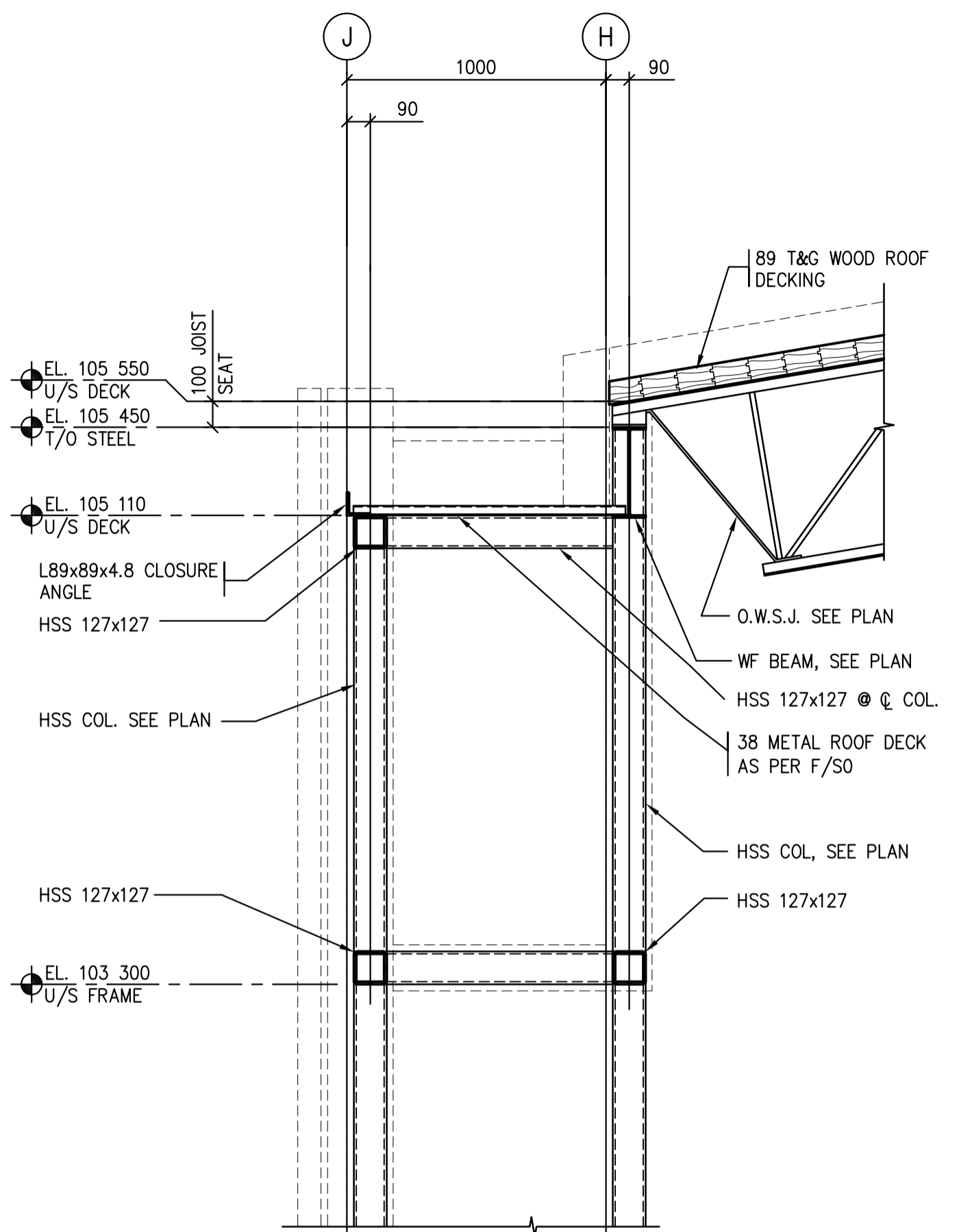
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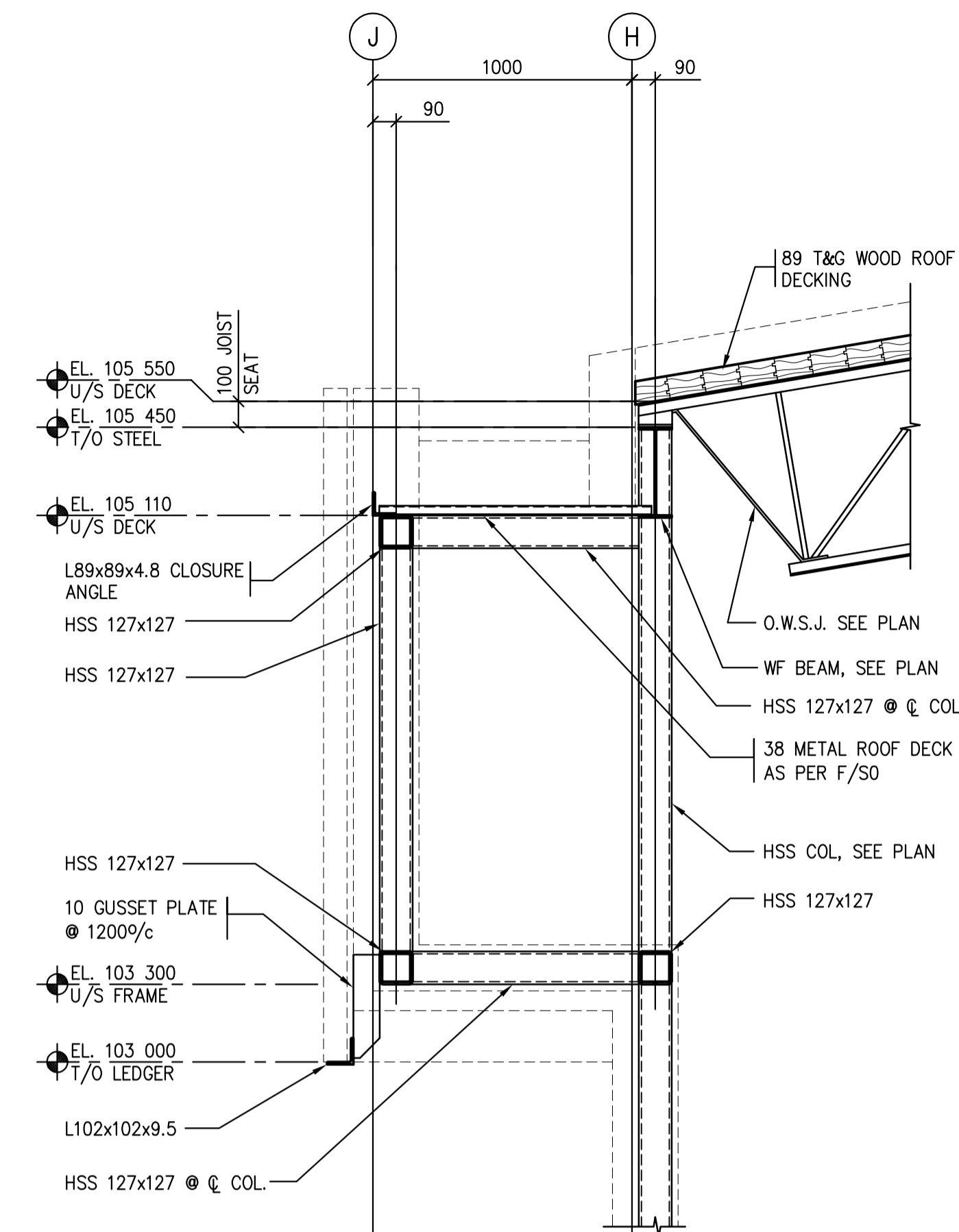




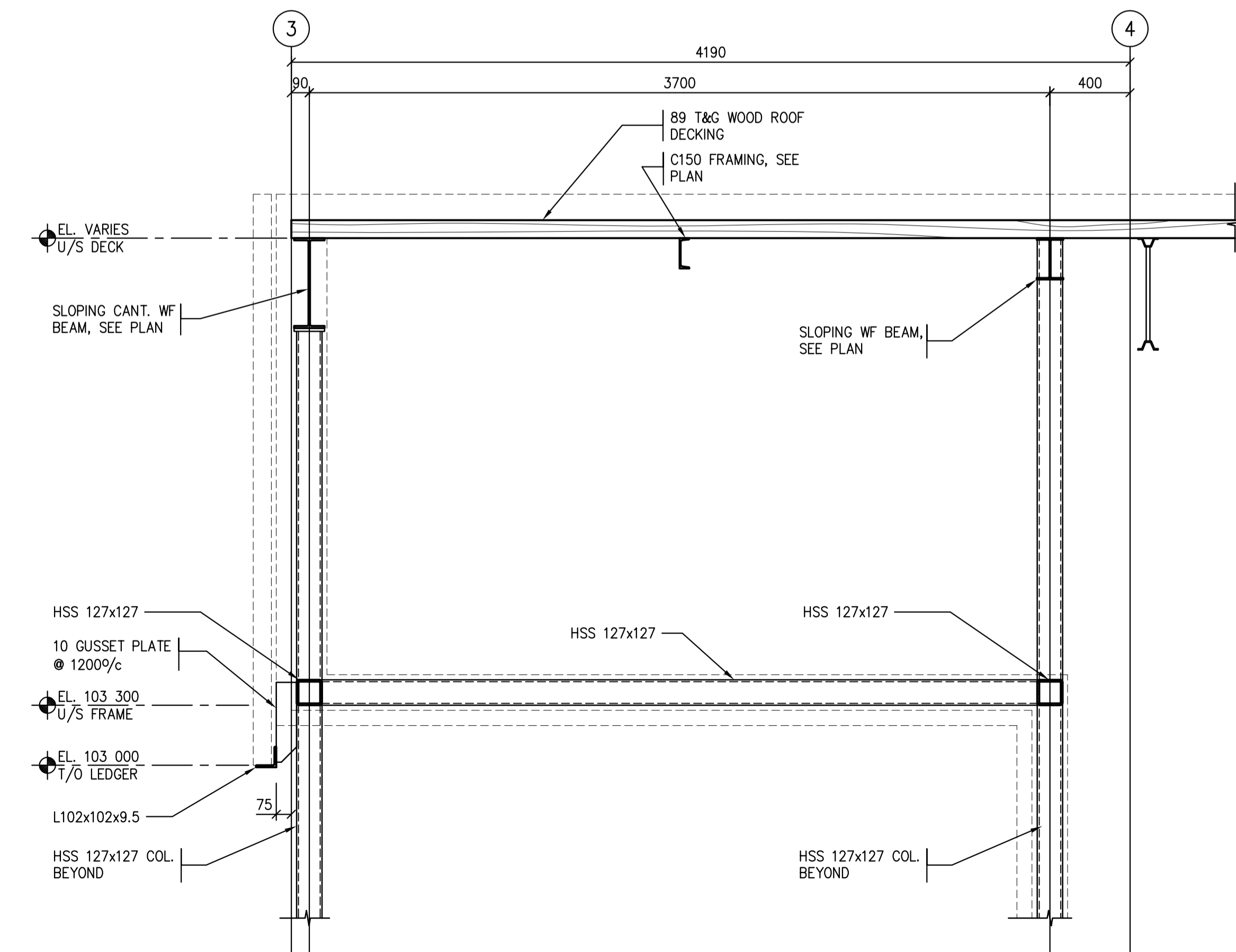
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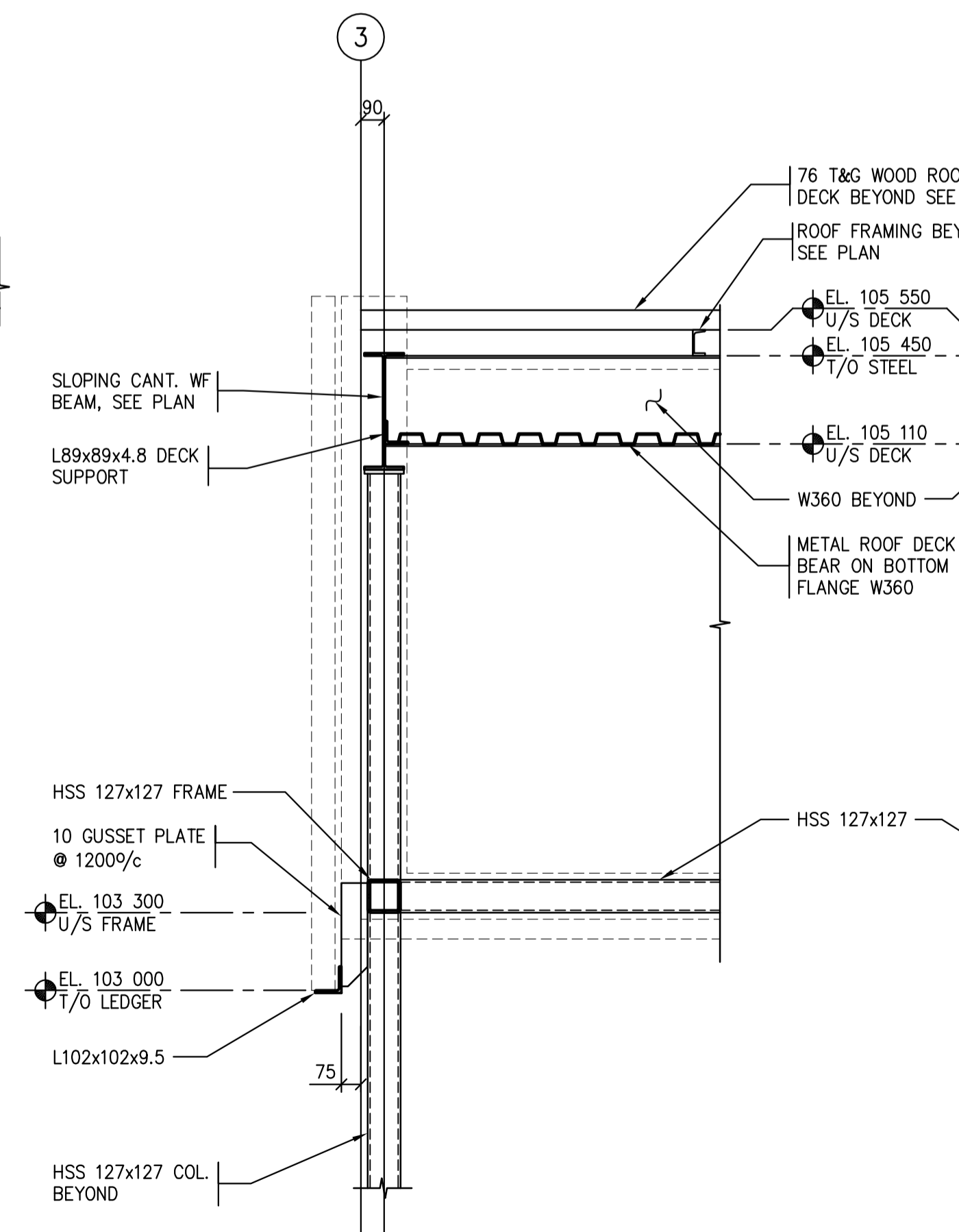
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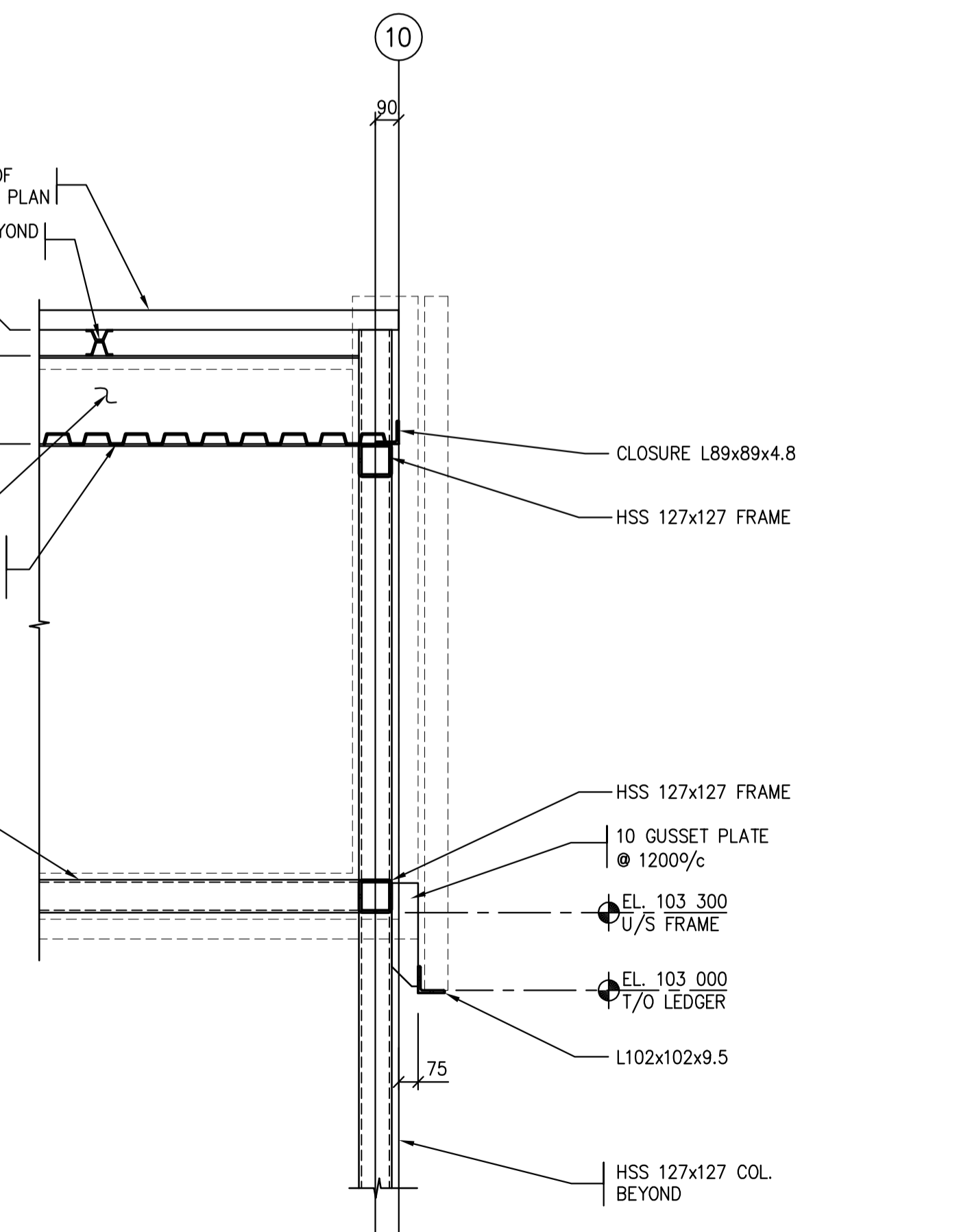
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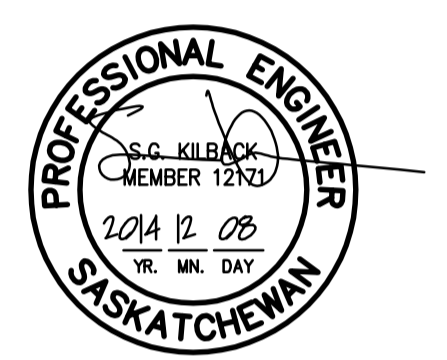
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5 SECTION  
S2.2|S3.4 1 : 20



6 SECTION  
S2.2|S3.4 1 : 20



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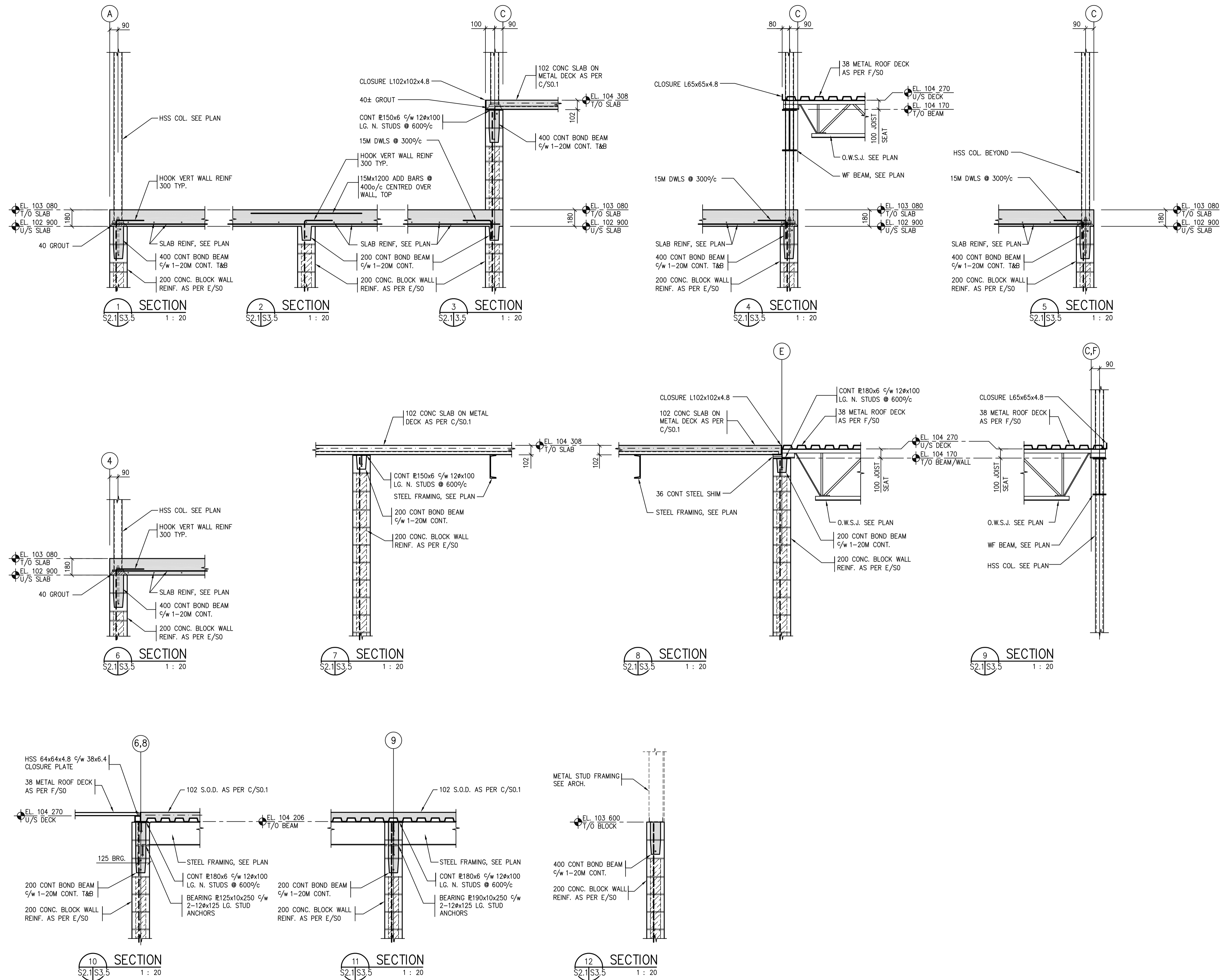
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**NEW POLICE BUILDING  
MAIDSTONE, SASKATCHEWAN**

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 MAIDSTONE, SASKATCHEWAN**

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**EQUIPMENT SCHEDULE:**

The design is based on the equipment listed here and noted in Equipment Schedule Tables. Refer to Section 23 05 00 for list of approved equivalent manufacturers, responsibilities when utilizing alternate equipment and process to apply for equivalent status.

**HEATING BOILERS B-1 AND B-2:** Aerco Benchmark Model BMK 1000. Natural gas fired, condensing fire tube design with modulating forced draft power burners and positive pressure vent discharge. 293 kW (1,000 MBH) input, 252-443 kW (860-939 MBH) heat output (based on return water temperature). Thermal efficiency shall increase as firing rate decreases. Each boiler to be complete with auto reset low water cutoff, circuit breaker, high limit, flow switch, tridicator and relief valves piped to floor. Mount boilers on 100-mm high concrete housekeeping pads. Boilers shall be controlled through EMCS. Electrical (each boiler): 120V/60/1 phase, 20 Amp. Boiler shall be complete with 5 year manufacturer warranty on all parts and 10 year manufacturer warranty on heat exchanger. Boiler to be capable of operating with variable flow from 3.8 L/s (60 GPM) to 1.58 L/s (25 GPM) at a design entering water temperature of 48.9 Deg.C. (120 Deg.F.) and a 22.2 Deg.C. (40 Deg.F.) temperature rise.

**DOMESTIC HOT WATER HEATERS DWH-1 AND DWH-2:** A.O. Smith Cyclone HE, Model BTX-80, powervent, high efficiency commercial gas water heater, fully condensing up to 90% thermal efficiency. 50 gallons (189 litres) tank size, 76.0 MBH (22.3 kW) gas input, 83 U.S. gallon/hour recovery at 100 deg.F (314 litres/hour recovery at 56 deg.C) temperature rise. Electrical 120V/60/1 phase plug-in connection. Unit to be mounted on concrete housekeeping pad by structural.

**EXPANSION TANKS ET-1 (Heating Water System):** Amtrol AX-Series Model AX-60V, 33.6 US Gallons (127 litres) total volume, 11.3 US Gallons (43 litres) Max Acceptance, diaphragm design, 406 mm diameter x 1143 mm tall (16" x 45"). Unit to be mounted on concrete housekeeping pad with free standing integral floor stand. Installation to be complete with isolation valve, drain, and drain isolation valve.

**EXPANSION TANK ET-2 (Domestic Hot Water System):** Amtrol Model ST-12, 4.4 gallon total volume, 11" diameter x 15" high. Installation shall be complete with isolation valve and drain valve.

**AIR SEPARATOR:** Bell & Gossett Model R tangential type air separator complete with strainer. Unit to be line size, WPT connectors, complete with blow down connection and drain valve, and Amtrol Model 720 automatic air eliminator. Provide and install complete with pressure relief valve piped to floor, in accordance with requirements of TSASK.

**HEATING SYSTEM ANTIFREEZE:** Supply and install 30% inhibited propylene glycol and 70% water solution. Glycol shall be coordinated with requirements of boiler system being supplied.

**WATER METER:** New water meter to approval of Maidstone Municipal Authority complete with bypass valve.

**DOMESTIC WATER SERVICE DOUBLE CHECK VALVE ASSEMBLY:** Watts Series 957 lead free line size reduced pressure testable double check valve assembly complete with quarter turn shut-off valves and bronze wye strainer.

**IRRIGATION SERVICE DOUBLE CHECK VALVE ASSEMBLY:** Watts Series 957 lead free line size reduced pressure testable double check valve assembly complete with quarter turn shut-off valves and bronze wye strainer.

**FIRE PROTECTION DOUBLE CHECK VALVE ASSEMBLY:** Watts Model 757 line size testable double check valve assembly complete with OSY shut-off valves.

**TRIPLE DUTY VALVE:** Shall not be permitted, provide individual valves as indicated on Schematic.

**CIRCUIT BALANCE VALVES:** Armstrong sized for flow required, installed in accordance with manufacturer's recommendations.

**FLOW LIMITING VALVE:** Automatic flow limiting valve complete with isolation valve, and gauge ports. If valve is to be installed on supply side (depends on valve purchased), valve may include wye strainer indicated in schematics. If flow limiting valve is to be installed on Return Side (depends on valve purchased), separate wye strainer must be purchased for system. Units to be sized based on flow requirements and installed as per manufacturer's recommendations.

**SIDE STREAM FILTERS:** Filterite Model LM010 replaceable media side stream filter, complete with sight glass and one case of thirty 20 micron cartridges and one case of thirty 5 micron cartridges.

**SYSTEM FILL SF-1:** Hydronic system feeder shall be AXIOM INDUSTRIES LTD. Model SF100. System shall include 208 litres (55 US gallon) storage/mixing tank with cover; pump suction hose with inlet strainer; pressure pump with thermal cut-out; integral pressure switch; integral check valve; cord and plug; pre-charged accumulator tank with EPDM diaphragm; manual diverter valve for purging air and agitating contents of storage tank; pressure regulating valve adjustable (35 - 380 kPa; 5 - 55 psig) complete with pressure gauge; integral replaceable strainer; built-in check valve; union connection; 12 mm (1/2") x 900 mm (36") long flexible connection hose with check valve; low level pump cut-out. Pressure pump shall be capable of running dry without damage. Power supply 115/60/1, 0.7 Amps. Unit shall be completely pre-assembled and certified by a recognized testing agency to CSA standard C22.2 No 68. Unit to be complete with Low Level Alarm Panel c/w Remote Monitoring Dry Contacts and Selectable Audible Alarm.

**CONDENSATE NEUTRALIZATION TANK:** Axiom Model NT25 Condensate Neutralization Tank complete with 25mm (1") side inlet, 25mm (1") side outlet, constructed of one piece seamless polypropylene (corrosion resistant material), 18 Litres (4.8 gallon) tank capacity and complete with an initial charge of 40 lbs of neutralizing media.

**MOTORIZED DAMPERS:** Tamco Series 9000 BF, thermally broken extruded aluminum dampers. Damper frame shall be no less than 4" deep and insulated with polystyrene on all four sides. Entire frame shall be thermally broken. Blades shall be extruded aluminum less than 8" width, internally insulated with expanded polyurethane foam, thermally broken, and mounted in opposed blade action. Blade and frame seals to be extruded silicone secured in an integral slot. Dampers to be rated to operate in temperatures between -72 deg.F and 185 deg.F. Pressure drop of dampers, when fully open, to not exceed 0.03" at 1000 fpm. Dampers to be flanged to duct and installed in strict accordance with manufacturer's installation guidelines. Intermediate or tubular steel structural support is required for all dampers that consist of two or more sections in either height or width or both. Actuators to be supplied and installed by the controls contractor.

**AIR COOLED CONDENSING UNIT:** AAON operating on R-410a refrigerant complete with scroll compressors, factory mounted and wired, air cooled condenser with protective grilles, hail guards, protective wire base guards, architectural sheet metal enclosure, liquid line solenoid valves, filter driers, sight glasses, expansion valves, insulated suction lines, weather tight lockable control panel, control power transformer, low limit lockout starter and terminal strip for control by EMCS. Unit shall have capacity modulation in response to load. Installation to be complete with, field mounted and wired flow switch, spring isolation and non fused disconnect. Each unit to be complete with factory start-up by factory trained technicians.

**CU-1:** Model CC-C-006-8-D-2:BA00000. Unit cooling capacity 6 tons nominal at 35 deg.C (95 deg.F) Ambient air, (12.8 EER) and 7.22 deg.C (45 deg.F) suction temperature. Single point power connection, 208V/60/3 phase, 136 FLA, 31 MCA, 200 Maximum Overcurrent. Maximum casing radiated sound power to be 0dB at 63Hz, 91dB at 125Hz, 88dB at 250Hz, 86dB at 500Hz, 86dB at 1000Hz, 82dB at 2000Hz, 80dB at 4000Hz, 79dB at 8000Hz. Unit has two step compressors and two refrigerant circuits with hot gas bypass for load modulation on lead circuit.

**CU-2:** Model CC-C-034-8-D-2:BA00000. Unit cooling capacity 34 tons nominal at 35 deg.C (95 deg.F) Ambient air, (9.9 EER) and 7.22 deg.C (45 deg.F) suction temperature. Single point power connection, 208V/60/3 phase, 136 FLA, 150 MCA, 200 Maximum Overcurrent. Maximum casing radiated sound power to be 0dB at 63Hz, 91dB at 125Hz, 88dB at 250Hz, 86dB at 500Hz, 86dB at 1000Hz, 82dB at 2000Hz, 80dB at 4000Hz, 79dB at 8000Hz. Unit has two step compressors and two refrigerant circuits with hot gas bypass for load modulation on lead circuit.

**LOUVRES:** Price Model DE635, stationary extruded 152mm (6") deep aluminum drainable blades positioned at 35 degrees, extruded aluminum frame and supports, all welded construction, integral perimeter caulking stop, 12mm x 12mm (1/2" x 1/2") 16 gauge expanded aluminum bird screen without frame, finish to be baked enamel with colour as selected by Architect.

**FIRE DAMPERS:** ULC listed types as noted on drawings. Dampers to be installed in strict accordance with manufacturer's recommendations and authority having jurisdiction.

**SMOKE DAMPERS:** ULC listed types as noted on drawings. Dampers to be installed in strict accordance with manufacturer's recommendations and authority having jurisdiction. Damper to be complete with motorized low voltage actuator and smoke detection system, supplied with damper. Actuator and detector to be factory wired complete with alarm contact for connection to fire alarm.

**FIRE EXTINGUISHER CABINET FEC-1:** National Fire Equipment Ltd. Model 102RS-SS semi-recessed stainless steel cabinet with glass in door, complete with ABC dry chemical fire extinguisher with 2-A: 10-B-C rating.

**FIRE EXTINGUISHER CABINET FEC-2:** National Fire Equipment Ltd. Model 102RS-SUR-SS surface mounted stainless steel cabinet with glass in door, complete with ABC dry chemical fire extinguisher with 2-A: 10-B-C rating.

**WALL HUNG FIRE EXTINGUISHER:** 4.5 kg (10 lb) ABC dry chemical fire extinguisher with 4-A: 60-B-C rating c/w wall bracket.

**CARBON DIOXIDE FIRE EXTINGUISHER:** 4.5 kg (10 lb) Carbon dioxide fire extinguisher with 10BC rating c/w wall bracket.

**FIRE DEPARTMENT CONNECTION:** National Fire Equipment Ltd., Model 229 flush mounted, siamese double clapper, bronze finish with caps, chains, and bronze base plate. Installation to be complete with ball drop check valve piped to drain.

**FP-1 (Fire Pump):** The pump shall provide rated capacity equal to or greater than the calculated fire protection flow requirements, estimated at this time to be 31.5 L/s (500 GPM) and a differential pressure of 40 PSI. Pump to be single, Motor - 15 HP, 208V/60/3 phase. Specification based on Aurora Series 911UL/FM Vertical Inline Fire Pump. Pump on dedicated service, refer to Fire Pump Controller.

**FIRE PUMP CONTROLLER:** Tornatech UL listed FM approved GPS Series soft start soft stop fire pump controller. Electrical: horse power to be matched to fire pump with 208 Volt/ 3 phase power.

**SPRINKLER JOCKEY PUMP:** As part of the main sprinkler tree located in the Service Space 201. Motor: 250 Watt, 115V/60/1 phase, complete with auto and manual control.

**GAS DETECTORS:** Armstrong, AMC-1AD1 single zone gas monitor complete with one AMC-1222 Series combination carbon monoxide sensors and nitrogen dioxide sensors. Monitor to have a minimum coverage area of 50' radius and to be complete with low, high, and fail indicators, two 10 Amp relays, selectable time delay, audible alarm with silencer. Electrical: 120V/60/1 phase.

**AIR CONDITIONING UNIT AC-1 (LAN 140):** Mitsubishi Electric Model PKA-A24FA, wall mounted room air conditioner. SEER: 13.5. Unit shall provide 1.76-3.52 Kw (12.0-24.0 MBH) of cooling. Power shall be 208V/60/1 phase. Power to A/C unit is supplied from the outdoor condensing unit on terminals S1 & S2. Power Input 2,650 Watts, Maximum Breaker: 25 Amps. MCA: 1.0 Unit fan shall supply 250 L/s (530 CFM) on low speed and 333 L/s (705 CFM) on high speed. Unit shall be complete with R-410A refrigerant, all mounting hardware, auto vane and swing mode, super quiet operation, filter, pre-charged refrigerant line set and microprocessor controls including Slim Smart Remote. Unit shall be complete with Mini Aqua condensate pump mounted within drain pan of unit. Pump to be wired with unit.

**OUTDOOR CONDENSING UNIT CU-3 (Roof):** Mitsubishi Electric Model PUY-A24NHA. Power shall be 208V/60/1 phase. MCOP: 30 Amps. MCA: 18. Unit shall carry a 6-year compressor warranty. Compressor shall be variable speed scroll. Unit shall be complete with optional controls and equipment for low ambient operation to -40 deg. C (-40 deg. F) including wind guards. Mount unit on rubber isolating pads on concrete pad, see structural.

**LINEAR/MODULAR RADIANT PANELS:** TWA Linear/Modular Panels consisting of extruded aluminum planks with integral tube saddles and tongue and groove connections. Panels shall be held together with aluminum cross channels and spring clips installed at factory. Circulation tubing to be 5/8" diameter copper, mechanically fastened to the aluminum panels and complete with a non-hardening heat transfer paste between the tubing and the aluminum saddle. All piping return bends to be factory installed. Finish shall be electrostatically applied epoxy powder paint. Capacities, flow rates, lengths and arrangements shall be as noted in schedule below. Installation of radiant panels to be done in strict accordance with manufacturer's recommendations. Lengths and widths to be confirmed by the mechanical contractor prior to delivery. All panels to be installed to allow for expansion and contraction of panels. Based on an entering temperature of 71.1 deg.C (160 deg. F), and a temperature drop of 16.7 deg.C (30 deg.F). Output derated 9% for 30% glycol solution. Mechanical contractor to install all necessary hangers, insulation, and trim pieces.

**Type 'A':** 600x1200, six pass modular panel, installed in T-Bar ceiling. Total output to be 288 watts/panels.

Unit Heater Schedule table with columns for Tag, Location, Arrangement, Model, Airflow, Capacity, EAT, EWT, LWT, Water Flow, Pressure Drop, Control, H.P., V / Hz / P. Includes Cabinet Unit Heaters and Horizontal or Vertical Unit Heaters.

Air Handling Unit Schedule table with columns for AHU, TAG, Size, Fan, Class, Airflow, TSP, ESP, Control, H.P., V / Hz / P, Heat Wheel Motor. Includes design based on DAIKIN Vision AHU.

Air Handling Unit AHU-1: Supply Air (in order of airflow), 50mm MERV 8A prefilter, energy recovery wheel, hot water heating coil, 50mm MERV 8A prefilter and 100mm MERV 14A final filter section c/w mag gauge, DX cooling coil, plenum supply fan c/w zero pressure drop piezoelectric factory ring airflow measuring system. Exhaust Air (in order of airflow), 50mm MERV 8A filter, energy recovery wheel, plenum exhaust fan c/w zero pressure drop piezoelectric factory ring airflow measuring system. Refer to Drawings for unit configurations.

Fan Data table with columns for AHU, TAG, Size, Fan, Class, Airflow, TSP, ESP, Control, H.P., V / Hz / P, Heat Wheel Motor.

Hydronic Heating Coils table with columns for AHU, Tag, Airflow, EAT, LAT, APD, Coil Capacity, Medium, Derate, EWT, LWT, Flow, Water PD.

Direct Expansion Cooling Coils table with columns for AHU, Tag, Airflow, EAT (DB), EAT (WB), LAT, APD, Total Capacity, Sens. Capacity, Suction Temp, Controls.

Summer Energy Recovery table with columns for AHU, Tag, Airflow, EAT DB, EAT WB, APD, Capacity, Sens. Eff., Lat. Eff., Supply Air (after energy exchange).

Winter Energy Recovery table with columns for AHU, Tag, Airflow, EAT DB, EAT WB, APD, Capacity, Sens. Eff., Lat. Eff., Supply Air (after energy exchange).

Air Handling Unit AHU-2: Supply Air (in order of airflow), plenum return fan c/w zero pressure drop piezoelectric factory ring airflow measuring system, economizer, 50mm MERV 8A prefilter, hot water heating coil, 50mm MERV 8A prefilter and 100mm MERV 14A final filter section c/w mag gauge, plenum supply fan c/w zero pressure drop piezoelectric factory ring airflow measuring system, DX cooling coil.

Fan Data table with columns for AHU, TAG, Size, Fan, Class, Airflow, TSP, ESP, Control, H.P., V / Hz / P.

Hydronic Heating Coils table with columns for AHU, Tag, Airflow, EAT, LAT, APD, Coil Capacity, Medium, Derate, EWT, LWT, Flow, Water PD.

Direct Expansion Cooling Coils table with columns for AHU, Tag, Airflow, EAT (DB), EAT (WB), LAT, APD, Total Capacity, Sens. Capacity, Suction Temp, Controls.



**DO NOT SCALE DRAWINGS**

Revision/Client table with columns for Revision/Client, Description/Description, Date/Date. Includes Project title/Titre du projet: NEW POLICE BUILDING MAIDSTONE, SASKATCHEWAN.

**NEW POLICE BUILDING MAIDSTONE, SASKATCHEWAN**

Approved by/Approve par: NFH. Designed by/Concept par: TKC. Drawn by/Dessine par: JMM. Project Manager/Administrateur de Projets: CS.

**EQUIPMENT SCHEDULE**

Project No./No. du projet: 29/2013. Sheet/Feuille: M1.1. Revision no./La Revision no.: 0.





Infloor Schedule														
Manifold design based on Uponor cast bronze manifold complete with integral circuit balance valves, individual circuit control valves, actuators, support brackets, bushings, gaskets, end caps, pipe connectors, bend support, drains and vents. All in-slab heating piping to be Uponor Hepex cross-linked polyethylene pipe, 16 mm (5/8") nominal inside diameter. Circuits serving the same space to be equal length and flow. Capacity based on floor covering R-value of 0.5 with 51.6 deg.C (125 deg.F) EWT, 5.6 deg.C water temperature drop. Piping to be complete with oxygen diffusion barrier and to be installed in strict accordance with manufacturer's requirements.														
General Information			Manifold Data					Circuit Data						
Manifold Tag	Service	Access Location	Space Heat Loss kW	MBH	Total Pipe Length m	ft	Required BTU/sqft	Total Flow L/S (GPM)	Circuit #	Pressure Drop kPa ft. w.c.	Circuit Flow L/S (GPM)			
MF-1	102	108	0.24	0.8	43	141	7.1	0.03	0.5	1	3.1	1.0	0.03	0.5
MF-1	103	108	0.66	2.3	36	118	40.0	0.05	0.7	1	4.3	1.4	0.05	0.7
MF-1	104	108	2.35	8.0	90	295	36.2	0.11	1.7	2	6.6	2.2	0.05	0.9
MF-1	110	108	0.64	2.2	39	128	17.1	0.03	0.5	1	2.0	0.7	0.03	0.5
MF-1	111, 112	108	1.09	3.7	50	164	22.7	0.05	0.8	1	5.9	2.0	0.05	0.8
MF-2	105	105	2.05	7.0	71	233	40.0	0.09	1.5	2	4.2	1.4	0.05	0.7
MF-2	106	105	1.24	4.2	43	141	40.0	0.06	0.9	1	6.3	2.1	0.06	0.9
MF-2	108, 109	105	0.48	1.6	35	115	14.3	0.03	0.5	1	2.5	0.8	0.03	0.5
MF-3	113	115	6.92	23.6	232	761	31.0	0.32	5.1	4	16.4	5.5	0.08	1.3
MF-3	114	115	0.91	3.1	33	108	28.7	0.04	0.7	1	0.0	0.0	0.04	0.7
MF-3	115	115	1.40	4.8	52	171	37.3	0.06	1.0	1	10.9	3.7	0.06	1.0
MF-4	113	126	4.71	16.0	210	689	31.1	0.22	3.5	4	7.7	2.6	0.06	0.9
MF-4	125, 141	126	1.28	4.4	57	187	23.3	0.06	0.9	1	10.1	3.4	0.06	0.9
MF-4	126	126	0.22	0.8	34	112	6.7	0.03	0.5	1	2.4	0.8	0.03	0.5
MF-5	117	117	1.27	4.3	40	131	33.0	0.06	0.9	1	7.1	2.4	0.06	0.9
MF-5	119, 120	117	0.43	1.5	43	141	11.8	0.03	0.5	1	3.1	1.0	0.03	0.5
MF-5	122, 123	117	0.54	1.8	51	167	14.0	0.03	0.5	1	2.6	0.9	0.03	0.5
MF-5	128	117	2.21	7.5	78	256	29.5	0.10	1.6	2	5.7	1.9	0.05	0.8
MF-6	116	129	0.56	1.9	56	184	10.4	0.03	0.5	1	4.0	1.3	0.03	0.5
MF-6	129	129	0.60	2.0	23	75	36.2	0.03	0.5	1	1.6	0.5	0.03	0.5
MF-6	130	130	0.75	2.6	26	85	40.0	0.03	0.5	1	1.9	0.6	0.03	0.5
MF-7	132	135	0.28	1.0	51	167	7.7	0.03	0.5	1	3.6	1.2	0.03	0.5
MF-7	133	135	0.80	2.7	52	171	16.0	0.04	0.6	1	3.7	1.2	0.04	0.6
MF-7	134	135	0.25	0.9	29	95	9.0	0.03	0.5	1	2.1	0.7	0.03	0.5
MF-7	135	135	0.53	1.8	56	184	9.8	0.03	0.5	1	4.0	1.3	0.03	0.5
MF-8	136	138	0.36	1.2	40	131	9.4	0.02	0.3	1	0.8	0.3	0.02	0.3
MF-8	137	138	0.23	0.8	31	102	7.7	0.02	0.3	1	1.1	0.4	0.02	0.3
MF-8	138	138	0.18	0.6	24	79	7.8	0.02	0.3	1	0.8	0.3	0.02	0.3

**DIFFUSERS AND GRILLES:**

S-1: All registers located in the cell area to be laminate face assembly consisting of 3mm steel sheet for the body and 3.2mm steel sheet for the face. Face complete with 3mm staggered round holes and reinforced with solid steel at 150mm o.c. Face sheet shall be spot welded to the reinforcing bars at 3 locations for each bar. Cover to overlap opening by 50mm on all sides. Grille face frame and compressed frames to be manufactured from steel angle, 32mm x 32mm x 6mm, welded to plenum body. Edge of face frame to be beveled 2mm and all exposed welds and joints to be dresses invisible. Finish to be factory powder coat, off-white colour. Grilles to be fastened to construction with minimum 4-10mm diameter X 50mm long stainless steel bolts with tamperproof heads. Acceptable product: Simpson Installations Ltd. Model V2, Chubb OP-20V, Eneround or Virtucom.

S-2: E.H. Price, Model 300x300/SPD/31/B12, square plaque diffuser. t-bar lay-in, white powder coat finish.

S-3: E.H. Price, Model 600x600/SPD/31/B12, square plaque diffuser. t-bar lay-in, white powder coat finish.

S-4: E.H. Price, Model 600x600/SPD/B12, square plaque diffuser, duct mounted complete with safety cable, white powder coat finish.

S-5: E.H. Price, Model 300x300/SPD/B12, square plaque diffuser, duct mounted complete with safety cable, white powder coat finish.

S-6: E.H. Price, Model 520/F/L/A/B12, louvered supply grille, surface mounted, front blades parallel to long dimension, countersunk screwholes, white powder coat finish.

S-7: E.H. Price, Model 520/TB/L/A/B12, louvered supply grille, t-bar lay in, front blades parallel to long dimension, countersunk screwholes, white powder coat finish.

E-1: All registers located in the cell area to be laminate face assembly consisting of 3mm steel sheet for the body and 3.2mm steel sheet for the face. Face complete with 3mm staggered round holes and reinforced with solid steel at 150mm o.c. Face sheet shall be spot welded to the reinforcing bars at 3 locations for each bar. Cover to overlap opening by 50mm on all sides. Grille face frame and compressed frames to be manufactured from steel angle, 32mm x 32mm x 6mm, welded to plenum body. Edge of face frame to be beveled 2mm and all exposed welds and joints to be dresses invisible. Finish to be factory powder coat, off-white colour. Grilles to be fastened to construction with minimum 4-10mm diameter X 50mm long stainless steel bolts with tamperproof heads. Acceptable product: Simpson Installations Ltd. Model V2, Chubb OP-20V, Eneround or Virtucom.

E-2: E.H. Price, Model 530/F/L/A/B12, louvered return grille, surface mounted, front blades parallel to long dimension, countersunk screwholes, white powder coat finish.

E-3: E.H. Price, Model 530/F/L/A/B12, louvered return grille, duct mounted complete with safety cable, front blades parallel to long dimension, countersunk screwholes, white powder coat finish.

E-4: E.H. Price, Model 510ZD/F/L/A/B12, louvered return grille complete with steel damper, duct mounted, front blades parallel to long dimension, countersunk screwholes, white powder coat finish.

E-5: E.H. Price, Model 90/L/A/B12, heavy gauge steel grille, duct mounted, front blades parallel to long dimension, countersunk screwholes, white powder coat finish.

R-1: E.H. Price, Model 80/TB/B12, eggcrate face return, t-bar lay-in, white powder coat finish.

R-2: E.H. Price, Model 80/F/A/B12, eggcrate face return, surface mounted, countersunk screwholes, white powder coat finish.

R-3: E.H. Price, Model 530/F/L/A/B12, deflection louvered return grille, surface mounted, front blades parallel to long dimension, countersunk screwholes, white powder coat finish.

T-1: E.H. Price, Model 80/TB/B12, eggcrate face return, t-bar lay-in, white powder coat finish.

T-2: E.H. Price, Model 80/F/A/B12, eggcrate face return, surface mounted, countersunk screwholes, white powder coat finish.

T-3: E.H. Price, Model 530/F/L/A/B12, deflection louvered return grille, surface mounted, front blades parallel to long dimension, countersunk screwholes, white powder coat finish.

T-4: All registers located in the cell area to be laminate face assembly consisting of 3mm steel sheet for the body and 3.2mm steel sheet for the face. Face complete with 3mm staggered round holes and reinforced with solid steel at 150mm o.c. Face sheet shall be spot welded to the reinforcing bars at 3 locations for each bar. Cover to overlap opening by 50mm on all sides. Grille face frame and compressed frames to be manufactured from steel angle, 32mm x 32mm x 6mm, welded to plenum body. Edge of face frame to be beveled 2mm and all exposed welds and joints to be dresses invisible. Finish to be factory powder coat, off-white colour. Grilles to be fastened to construction with minimum 4-10mm diameter X 50mm long stainless steel bolts with tamperproof heads. Acceptable product: Simpson Installations Ltd. Model V2, Chubb OP-20V, Eneround or Virtucom.

Fan Schedule													
Cabinet: Design based on Loren Cook GEMC, SQN-B, and SQN-D Models. Housings to be lined with 13 mm thick acoustic insulation. Motor to be mounted on resilient elastic grommets. Fan shall have forward curved wheel AMCA rated for air and sound performance. Units shall be installed complete with flexible duct connections. Units shall be complete with factory wired and installed solid state speed control for air balancing (this is not a disconnect). Suspend fans from structure with spring isolation hangers. SQN-D models to be complete with electronically commutated motors.													
General Information						Airflow				Motor			
Tag	Location	Wheel	Model	Wheel RPM	Sound Sones	Flow L/S (CFM)	Pa	S.P. in. w.c.	Control	Drive Loss %	H.P. kW	hp	V / Hz / P
EF-1	157	Centrifugal	100SQN17DEC	1469	6.4	228 (484.0)	125	(0.50)	LS - EMCS	Direct	0.19	( 1/4 )	120/60/1
EF-2	148	Centrifugal	100SQN17DEC	1389	6.7	175 (370.0)	125	(0.50)	CV - EMCS	Direct	0.19	( 1/4 )	120/60/1
EF-3	148	Centrifugal	100SQN17DEC	1360	6.9	142 (300.0)	125	(0.50)	CV - EMCS	Direct	0.19	( 1/4 )	120/60/1
EF-4	135	Centrifugal	GC-640	1075	3.8	166 (352.0)	125	(0.50)	CV - EMCS	Direct	0.12	( 1/6 )	120/60/1
EF-5	201	Centrifugal	60SQN-B	1572	7.0	37 (79.0)	125	(0.50)	LS - EMCS	19	0.12	( 1/6 )	120/60/1
EF-6	201	Centrifugal	60SQN-B	1479	6.1	26 (55.0)	125	(0.50)	LS - EMCS	19	0.12	( 1/6 )	120/60/1
EF-7	201	Centrifugal	60SQN-B	1479	6.1	26 (55.0)	125	(0.50)	LS - EMCS	19	0.12	( 1/6 )	120/60/1
EF-8	201	Centrifugal	60SQN-B	1518	6.5	31 (65.0)	125	(0.50)	LS - EMCS	19	0.12	( 1/6 )	120/60/1

Definitions  
VFD- Variable Frequency Drive CV- Constant Volume LS- Local Switch EMCS- Division 25

Variable Volume Terminal Unit Schedule															
Design based on E. H. Price Model SDV-5000. Box to be pressure independent and shall reset to any air flow between 0 and the maximum catalogued air volume. Air flow shall be measured with a multi-point sensor complete with gauge tapings and an accuracy within 5% with a 90° elbow at the inlet. Casing shall be 22 gauge zinc-coated steel internally lined with 12 mm fiberglass insulation that complies with UL-181, ASTM C 1071, and NFPA-90A. leakage rate shall not exceed 1.4 L/s (3CFM) at an inlet static of 249 Pa (1 in. w.g.). Controllers to be supplied by Controls Contractor and factory mounted onto each box complete with calibration at factory. Box performance shall be ARI certified. Units shall be complete with a copper tube / aluminum fin hot water heating coil in a galvanized steel casing tested and certified to ARI Standard 410. Heating Coils Sizing based on EDB 12.8 Deg.C., LDB 23.9 Deg.C., EWT 51.7 Deg.C., 11.1 Deg.C. Delta T.															
General Information						Airflow			Heating Coils						
Tag	Location	Room Served	Neck Size mm (in)	Unoccupied Air Flow L/S (CFM)	Cooling Air Flow L/S (CFM)	Heating Airflow L/S (CFM)	Tag	Coil Capacity kW (MBH)	Flow L/S (GPM)						
VAV-101	104	115	175	7	63	133	209	443	105	222	HC-101	1.40	4.8	0.04	0.56
VAV-102	104	114	125	5	33	70	110	233	55	117	HC-102	0.74	2.5	0.02	0.29
VAV-103	104	102, 104	250	10	167	354	557	1181	279	590	HC-103	3.74	12.8	0.09	1.49
VAV-104	108	105	200	8	78	165	260	551	130	276	HC-104	2.53	8.6	0.06	1.01
VAV-105	108	106	125	5	28	60	94	199	47	199	HC-105	2.37	8.1	0.06	0.94
VAV-106	116	113, 119, 122	300	12	235	499	784	1662	392	831	HC-106	5.26	18.0	0.13	2.09
VAV-107	123	113, 127	300	12	260	552	868	1840	434	920	HC-107	5.83	19.9	0.15	2.32
VAV-108	120	125, 126, 140, 141	150	6	51	109	171	363	86	181	HC-108	1.15	3.9	0.03	0.46
VAV-109	116	116, 117, 128	250	10	136	288	453	960	227	480	HC-109	3.04	10.4	0.08	1.21
VAV-110	116	116, 129, 130, 133	200	8	84	179	281	596	141	298	HC-110	1.89	6.4	0.05	0.75
VAV-111	116	132, 134, 135, 136, 137, 138	225	9	98	208	327	693	164	347	HC-111	2.20	7.5	0.06	0.87

Packaged Energy Recovery Ventilator Unit Schedule (ERV-1)															
Design is based on Venmar CES ERV3000. Exhaust air tunnel: MERV 8A filter, heat wheel c/w by-pass dampers and exhaust fan. Supply air tunnel: MERV 8A filter, heat wheel c/w by-pass dampers and supply fan. ERV to have double wall construction with minimum R value of R-13. Fan and drive to be internally spring isolated, complete with flexible duct connections, 50 mm deflection spring isolators and factory installed concrete inertia bases under fan. Access to be hinged doors complete with 1/4 turn fasteners, all access and fan sections to be complete with lights. Provide Stainless Steel drain pans under energy recovery wheel. All remote dampers and associated actuators shall be by controls, internal by-pass dampers and actuators shall be supplied and mounted by manufacturer. backdraft damper on exhaust duct to be shipped loose and field installed. Unit to be mounted on 100 mm high housekeeping pad. Fan Performance based on the following filter APDs: 50mm (2") Winter or Summer Prefilter Based on a Mean APD of 158 Pa (63"). Energy recovery is based on summer outside air of 23.9 Deg.C. DB (75 Deg.F.) / 17.2 Deg.C. WB (63 Deg.F.) and winter exhaust air of 21.7 Deg.C. DB (72 Deg.F.) / 9.4 Deg.C. WB (48.9 Deg.F.). Energy recovery is based on summer outside air of 29.2 Deg.C. DB (84.6 Deg.F.) / 19 Deg.C. WB (66 Deg.F.) and winter outside air of -40 Deg.C. DB (-40 Deg.F.). Packaged ERV to be complete with packaged controls with interface to DDC EMCS, either BacNet or LonWorks to match EMCS system. Refer to sequence of operation in Section 25 90 00.															
Fan Data						Single Point Connection									
Tag	Size mm	in	Fan Type	Class	Airflow L/S (CFM)	TSP Pa (in. w.c.)	ESP Pa (in. w.c.)	Control	H.P. kW	hp	V / Hz / P	Control	Current MCA	MOP	V / Hz / P
SF-3	610	(24.0)	APF SW	II	1400 (3000)	665 (2.67)	249 (1.00)	VFD - PKGD	3.73	(5)	208/60/3	DDC	34.1	45	208/60/3
EF-9	610	(24.0)	APF SW	II	1400 (3000)	665 (2.67)	249 (1.00)	VFD - PKGD	3.73	(5)	208/60/3				
Summer Energy Recovery															
Outside Air (Before Energy Exchange)					Energy Exchanged					Outside Air (After Energy Exchange)					
Airflow L/S (CFM)	EAT DB Deg. C.	EAT WB Deg. F.	Pa	in. w.c.	Capacity kW (MBH)	Sens. Eff. %	Lat. Eff. %	Airflow L/S (CFM)	LAT DB Deg. C.	LAT WB Deg. F.	Pa	in. w.c.	ESP Pa (in. w.c.)		
1400 (3000)	29.2 (85)	18.9 (66)	249 (1.000)		6.6 (22.4)	66	65.6	1400 (3000)	25.8 (78)	17.7 (64)	249 (1.000)				
Winter Energy Recovery															
Outside Air (Before Energy Exchange)					Energy Exchanged					Supply Air (after energy exchange)					
Airflow L/S (CFM)	EAT DB Deg. C.	EAT WB Deg. F.	Pa	in. w.c.	Capacity kW (MBH)	Sens. Eff. %	Lat. Eff. %	Airflow L/S (CFM)	LAT DB Deg. C.	LAT WB Deg. F.	Pa	in. w.c.	ESP Pa (in. w.c.)		
1400 (3000)	-40.0 (-40)	-40.0 (-40)	249 (1.000)		83.1 (283.6)	67.6	67	1400 (3000)	2.1 (35.7)	-2.1 (28.3)	249 (1.000)				
Outdoor Air Energy Recovery - During Defrost															
Outside Air (After Energy Exchange)					Energy Exchanged					Exhaust Air (after energy exchange)					
Airflow L/S (CFM)	EAT DB Deg. C.	LAT DB Deg. F.	Pa	in. w.c.	Capacity kW (MBH)	Sens. Eff. %	Lat. Eff. %	Airflow L/S (CFM)	EAT DB Deg. C.	LAT DB Deg. F.	Pa	in. w.c.	ESP Pa (in. w.c.)		
1400 (3000)	-40.0 (-40)	-18.2 (-1)	249 (1.000)		37.2 (127.0)	35	n/a	1400 (3000)	22.2 (72.0)	0.4 (32.8)	249 (1.000)				

Pump Schedule													
Design based on Taco centrifugal type with mechanical seals compatible with glycol. Cast iron construction for space heating, all bronze construction for domestic water use. Base mounted pumps shall be set on inertia pads complete with spring isolators and flexible pump connections. In-line pumps shall be supported from the floor with pipe stands or supported from structure with hangers. Frequency drives to be supplied and mounted by mechanical. Electrical to provide power wiring to VFD and from VFD to motor.													
Pump Data						Fluid Flow			Motor				
Tag	Service	Location	Type	Model	Size	RPM	Medium	Flow L/S (GPM)	S.P. kPa ft. w.c.	Control	H.P. kW	hp	V / Hz / P
P-1A and P-1B	Main heating pumps	139	Vertical Inline	1919	2 (54%)	1750	30% PG	3.78 (60.0)	172.1 (57.6)	VFD - EMCS	1.49	( 2 )	208/60/3
P-2A and P-2B	Low temp heating pumps	139	Vertical Inline	1919	2 (54% Eff)	1750</							



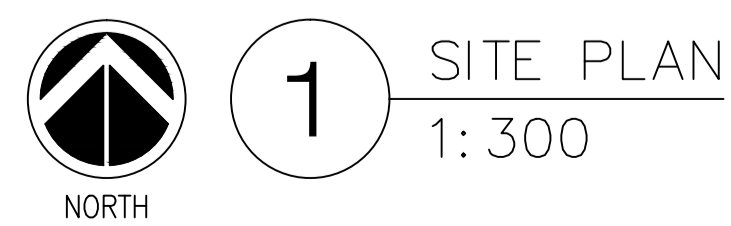
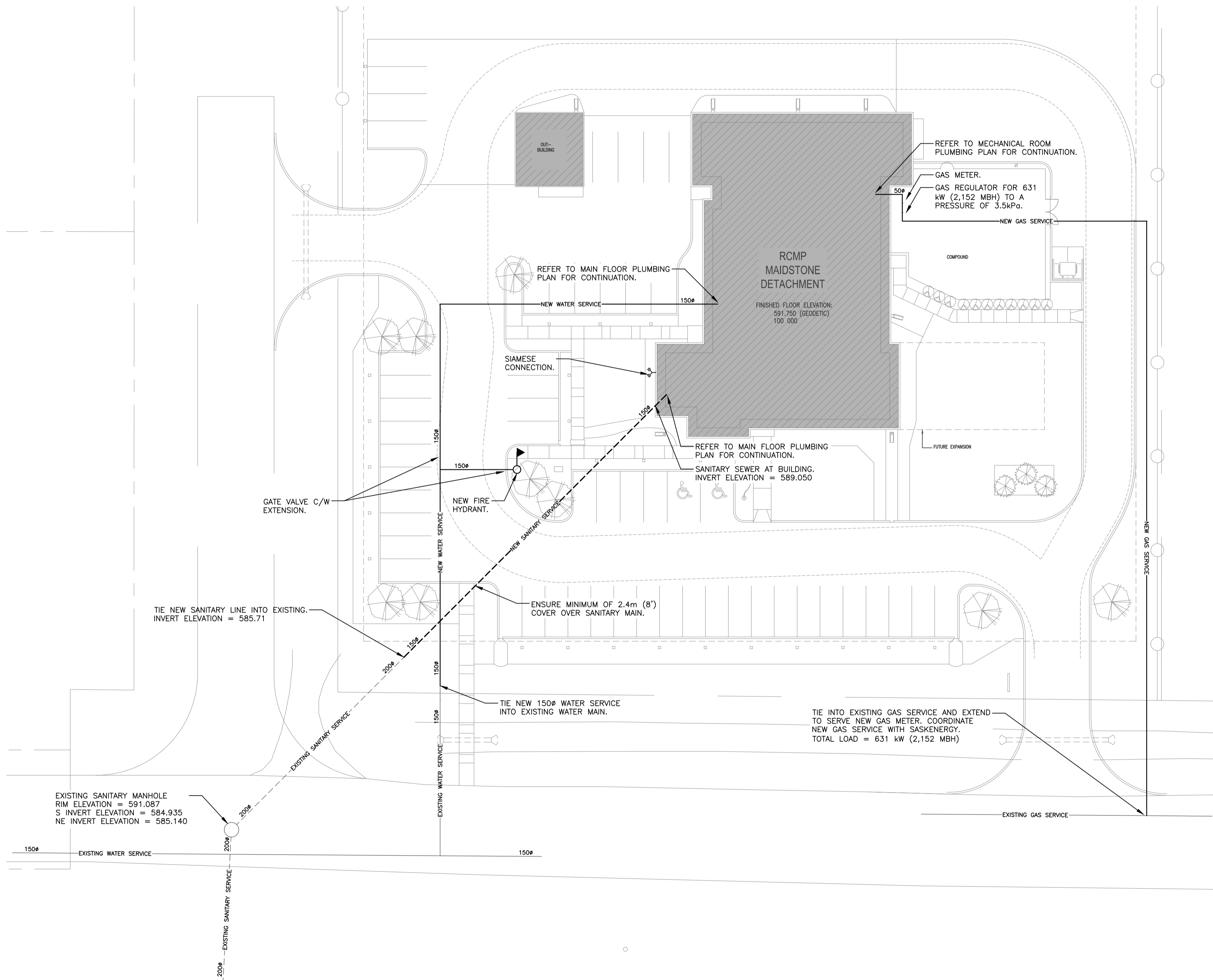
Cross Talk Silencer Schedule																	
Design based on VAW Systems Model XTS. Cross Talk Silencer are constructed of 22 gauge galvanized steel casing, 22 gauge galvanized steel perforated liner, fiberglass accoustic media, and 3" slip connections.																	
Tag	Model Number	Room Served	General Information			Airflow				Minimum Required Attenuation							
			Silencer Cross Section (W x H) mm	Silencer Length mm	Silencer Configuration	Airflow L/S	(CFM)	Pressure Drop Pa	in. w.c.	Octave Band							
						63	125	250	500	1k	2k	4k	8k				
SIL-1	XTS-Z	Room 106	450 x 200	1200	Z Configuration	94	(199)	10	0.04	8	16	29	34	41	38	35	25
SIL-2	XTS-U	Room 114	450 x 250	1200	U Configuration	110	(233)	10	0.04	8	16	29	34	41	38	35	25
SIL-3	XTS-Z	Room 126	400 x 200	1200	Z Configuration	83	(176)	10	0.04	8	16	29	34	41	38	35	25
SIL-4	XTS-Z	Room 130	600 x 250	1200	Z Configuration	157	(333)	10	0.04	8	16	29	34	41	38	35	25
SIL-5	XTS-U	Room 149	400 x 200	1200	U Configuration	76	(161)	10	0.04	8	16	29	34	41	38	35	25

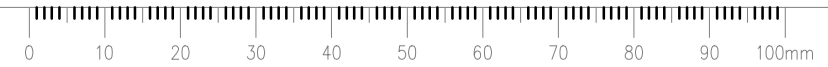
Duct Silencer Schedule																	
Duct Silencer are constructed of 18 gauge galvanized steel casing, 22 gauge galvanized steel perforated liner, fiberglass accoustic media, medial liner (tedlar or mylar) and 2" slip connections.																	
Tag	Model Number	Room Served	Silencer Cross Section (W x H) mm	Silencer Length mm	Silencer Configuration	Airflow L/S	(CFM)	Pressure Drop Pa	in. w.c.	63	125	250	500	1k	2k	4k	8k
SIL-6	26 CSA-42V90	AHU-2	1050	3000	Straight	4500	(9540)	46	0.18	8	20	32	39	46	40	33	26

**LEGEND**

- CHW → DOMESTIC COLD HARD WATER
- HHW → DOMESTIC HOT HARD WATER
- RECIRC → DOMESTIC HOT WATER RECIRC
- SAN → DOMESTIC SANITARY WASTE
- STORM → DOMESTIC SANITARY STORM
- FIRE → FIRE PROTECTION PIPING
- GAS → NATURAL GAS
- HWS → HYDRONIC HOT WATER SUPPLY
- HWR → HYDRONIC HOT WATER RETURN
- LIQD → REFRIGERANT LIQUID
- SUCT → REFRIGERANT SUCTION
- ↗ → ELBOW UP
- ↘ → ELBOW DOWN
- ⊗ → GATE VALVE (UNLESS NOTED OTHERWISE)
- ⊘ → CHECK VALVE
- ▬▬ → FLOW RESTRICTOR
- ⊙ → GAS ISOLATION VALVE
- ⊕ → HOSE BIBB
- ⊖ → PUMP
- ⊙(M) → WATER METER
- ⊙(R) → GAS REGULATOR
- ⊙(M) → GAS METER
- ⊙(C) → CLEAN OUT
- ⊙(P) → PRESSURE GAUGE
- ⊙(T) → THERMOMETER
- ⊙(B) → CIRCUIT BALANCE VALVE
  
- FD → FIRE DAMPER
- M → MOTORIZED DAMPER
- MB → MANUAL BALANCE DAMPER
- II → INTERNALLY INSULATED DUCT
- EI → EXTERNALLY INSULATED DUCT
- SD → SUPPLY DUCT SECTION
- RD → RETURN DUCT SECTION
- ED → EXHAUST DUCT SECTION
  
- T → THERMOSTAT
- S → GAS DETECTION SENSOR
- F → FAN SWITCH



**1 SITE PLAN**  
1:300



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Revision/Revision Client/client	Description/Description	Date/Date
0	ISSUED FOR TENDER	2014-10-08

Project title/Titre du projet

**NEW POLICE BUILDING MAIDSTONE, SASKATCHEWAN**

Approved by/Approve par: NFH  
 Designed by/Concept par: TKC  
 Drawn by/Dessine par: JNM  
 Project Manager/Administrateur de Projets: CS  
 Architectural and Engineering Resources Manager/ Ressources Architectural et de Directeur d'ingénierie  
 Client/client

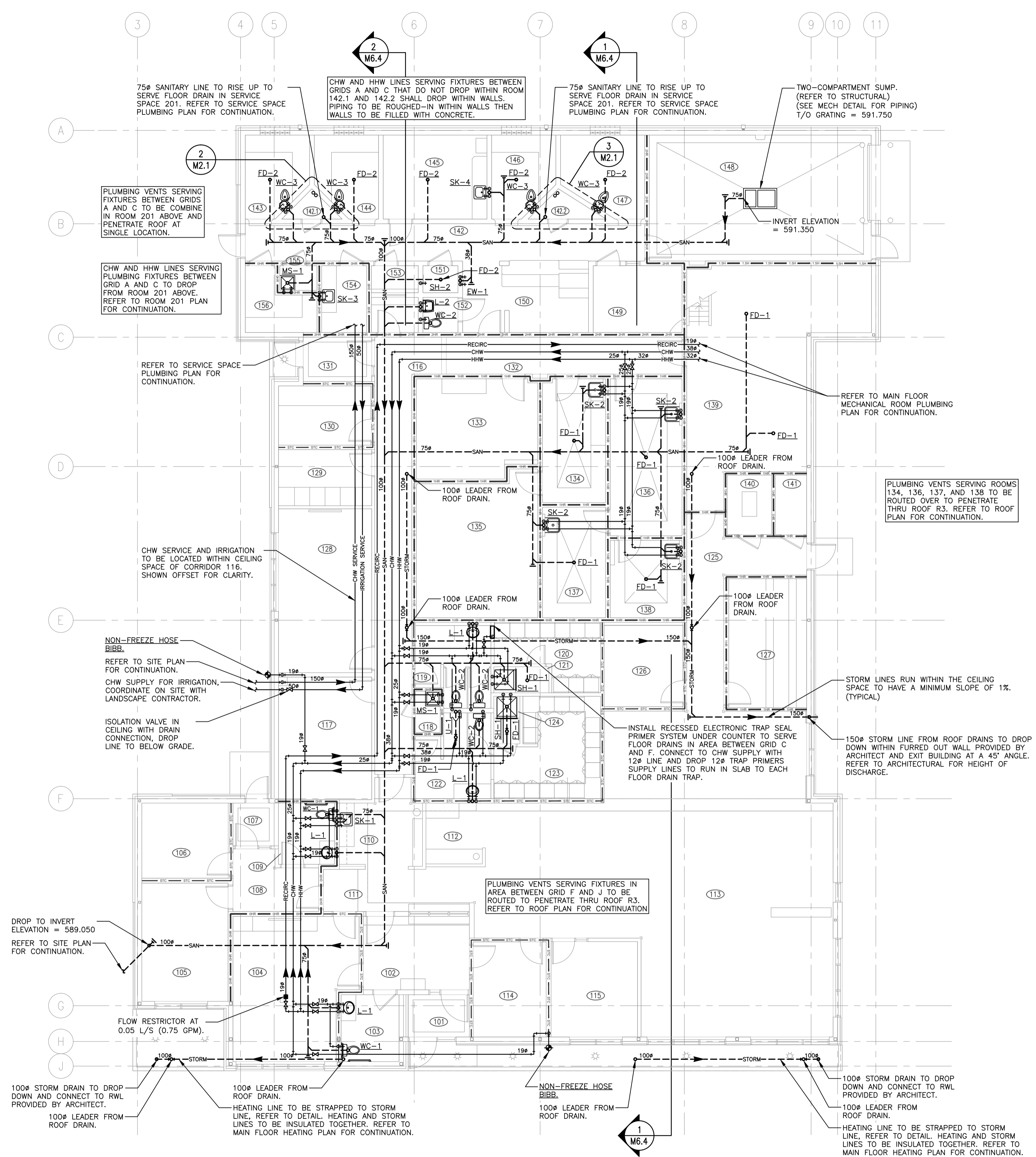
Drawing title/Titre du dessin  
**SITE PLAN**

Project No./No. du projet	Sheet/Feuille	Revision no./La Révision no.
29/2013	M1.3	0

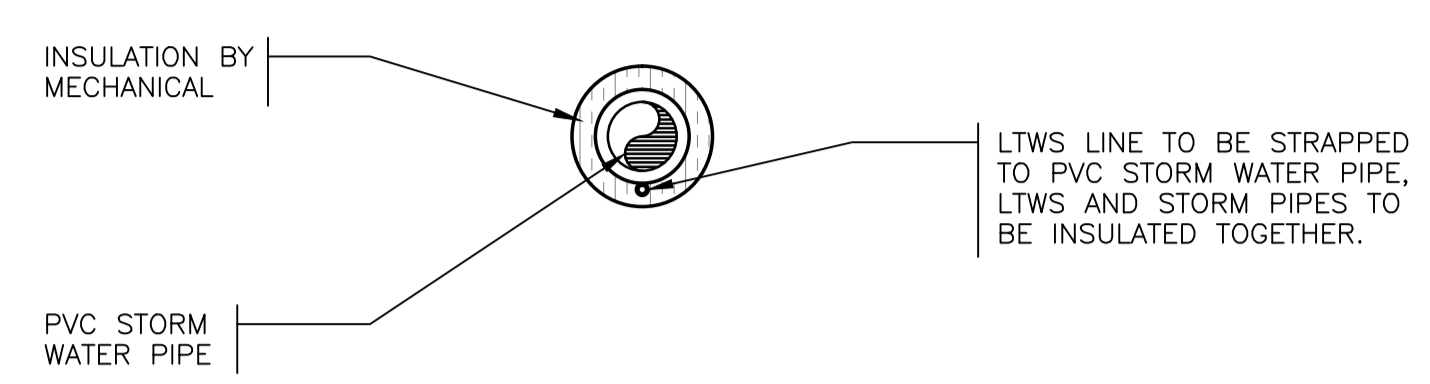






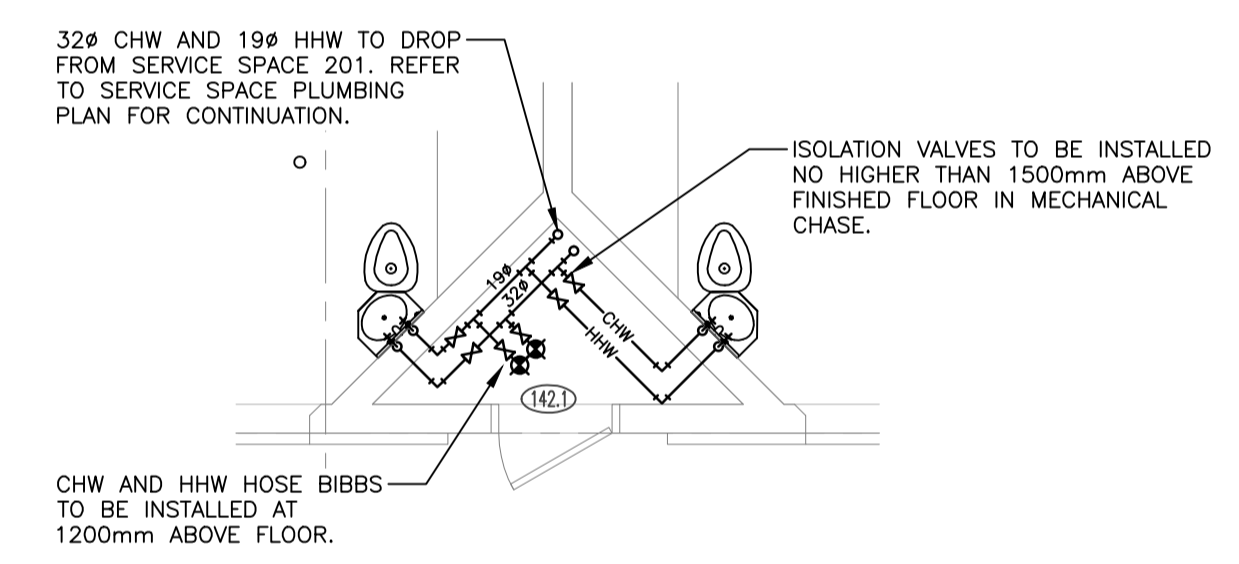


**1** MAIN FLOOR PLAN  
1:100

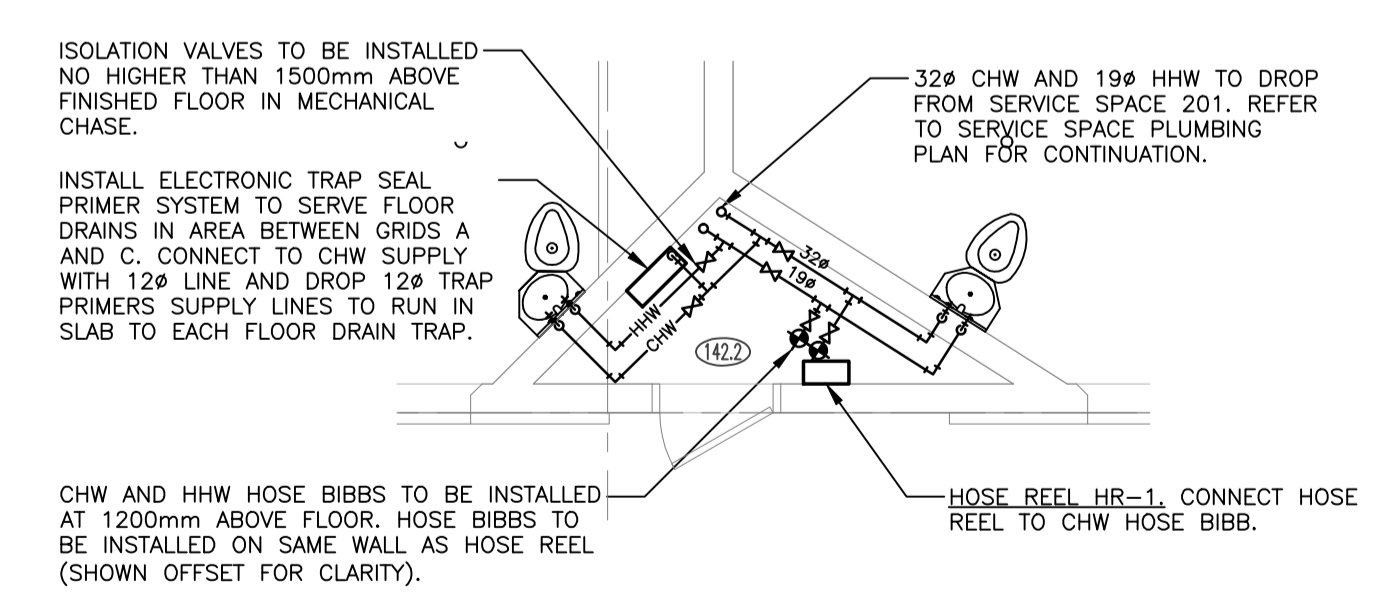


STORM/HEATING LINE DETAIL n.t.s.

- PLUMBING GENERAL NOTES:**
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
  - COORDINATE ALL WORK WITH OTHER TRADES AND SITE CONDITIONS.
  - RUN WATER PIPING AS HIGH AS POSSIBLE TO PROVIDE MAXIMUM CLEARANCE IN ALL AREAS.
  - ALL PLUMBING BRANCH LINES ARE 12# UNLESS NOTED OTHERWISE.
  - BOILER ROOM SANITARY PIPING AND EXPOSED PIPING SHALL BE CAST IRON.
  - ALL SHOWER DRAINS AND FLOOR DRAINS TO BE 75#.
  - VENTING AS PER LOCAL CODES AND REQUIREMENTS.
  - PROVIDE ISOLATION GAS VALVE ON GAS LINE TO ALL EQUIPMENT.
  - MAKE ALL CONNECTIONS FOR EQUIPMENT SUPPLIED BY OTHERS. REFER TO DETAILS FOR CONNECTIONS.



**2** CHASE 142.1  
1:50



**3** CHASE 142.2  
1:50



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Revision/Client	Description/Description	Date/Date
0	ISSUED FOR TENDER	2014-12-08

Project title/Titre du projet

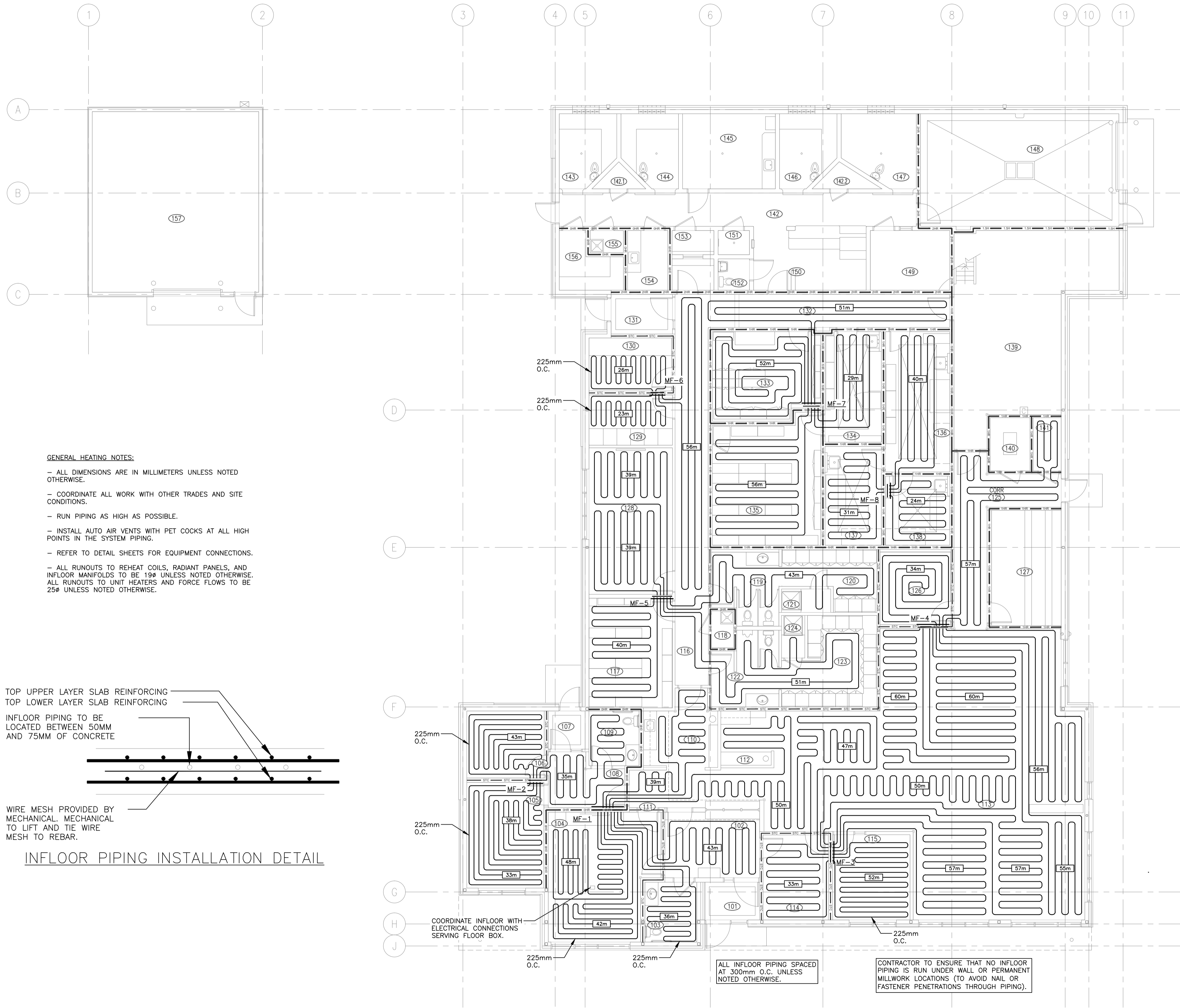
**NEW POLICE BUILDING  
MAIDSTONE, SASKATCHEWAN**

Approved by/Approve par: NFH  
 Designed by/Concept par: TKC  
 Drawn by/Dessine par: JNM  
 Project Manager/Administrateur de Projets: CS  
 Architectural and Engineering Resources Manager/Ressources Architectural et de Directeur d'Ingénierie

Drawing title/Titre du dessin  
**MAIN FLOOR PLAN  
PLUMBING**

Project No./No. du projet	Sheet/Feuille	Revision no./La Révision no.
29/2013	M2.1	0

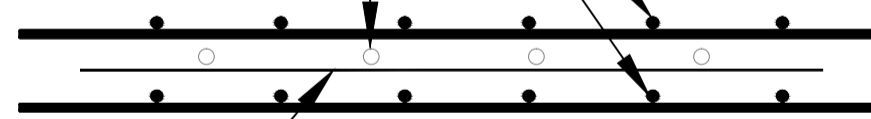




**GENERAL HEATING NOTES:**

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
- COORDINATE ALL WORK WITH OTHER TRADES AND SITE CONDITIONS.
- RUN PIPING AS HIGH AS POSSIBLE.
- INSTALL AUTO AIR VENTS WITH PET COCKS AT ALL HIGH POINTS IN THE SYSTEM PIPING.
- REFER TO DETAIL SHEETS FOR EQUIPMENT CONNECTIONS.
- ALL RUNOUTS TO REHEAT COILS, RADIANT PANELS, AND INFLOOR MANIFOLDS TO BE 19# UNLESS NOTED OTHERWISE. ALL RUNOUTS TO UNIT HEATERS AND FORCE FLOWS TO BE 25# UNLESS NOTED OTHERWISE.

TOP UPPER LAYER SLAB REINFORCING  
TOP LOWER LAYER SLAB REINFORCING  
INFLOOR PIPING TO BE  
LOCATED BETWEEN 50MM  
AND 75MM OF CONCRETE



WIRE MESH PROVIDED BY  
MECHANICAL. MECHANICAL  
TO LIFT AND TIE WIRE  
MESH TO REBAR.

**INFLOOR PIPING INSTALLATION DETAIL**

COORDINATE INFLOOR WITH  
ELECTRICAL CONNECTIONS  
SERVING FLOOR BOX.

ALL INFLOOR PIPING SPACED  
AT 300mm O.C. UNLESS  
NOTED OTHERWISE.

CONTRACTOR TO ENSURE THAT NO INFLOOR  
PIPING IS RUN UNDER WALL OR PERMANENT  
MILLWORK LOCATIONS (TO AVOID NAIL OR  
FASTENER PENETRATIONS THROUGH PIPING).

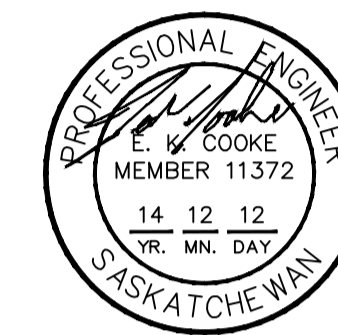


**1** MAIN FLOOR PLAN  
1:100

0 10 20 30 40 50 60 70 80 90 100mm

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 102-3718 Kiewit Place, Saskatoon, SK S7P 0A6 ph: (306) 652-6457  
 website: www.sepw.ca

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 Mechanical Engineering Consultants  
 1580 Angus Street Regina, Saskatchewan S4T 1Z1  
 P: 306-525-9815 F: 306-525-6369 E: hda@hdaeng.com



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 Mech. 6093 *D. Douvan*

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Revision/Revision	Description/Description	Date/Date
0	ISSUED FOR TENDER	2014-12-08

Project title/Titre du projet

**NEW POLICE BUILDING  
MAIDSTONE, SASKATCHEWAN**

Approved by/Approuvé par  
NFH

Designed by/Concept par  
TKC

Drawn by/Dessiné par  
JNM

Project Manager/Administrateur de Projets  
CS

Architectural and Engineering Resources Manager/  
Ressources Architectural et de Directeur d'Ingénierie

Client/client

Drawing title/Titre du dessin

**MAIN FLOOR PLAN  
INFLOOR HEATING**

Project No./No. du  
projet  
29/2013

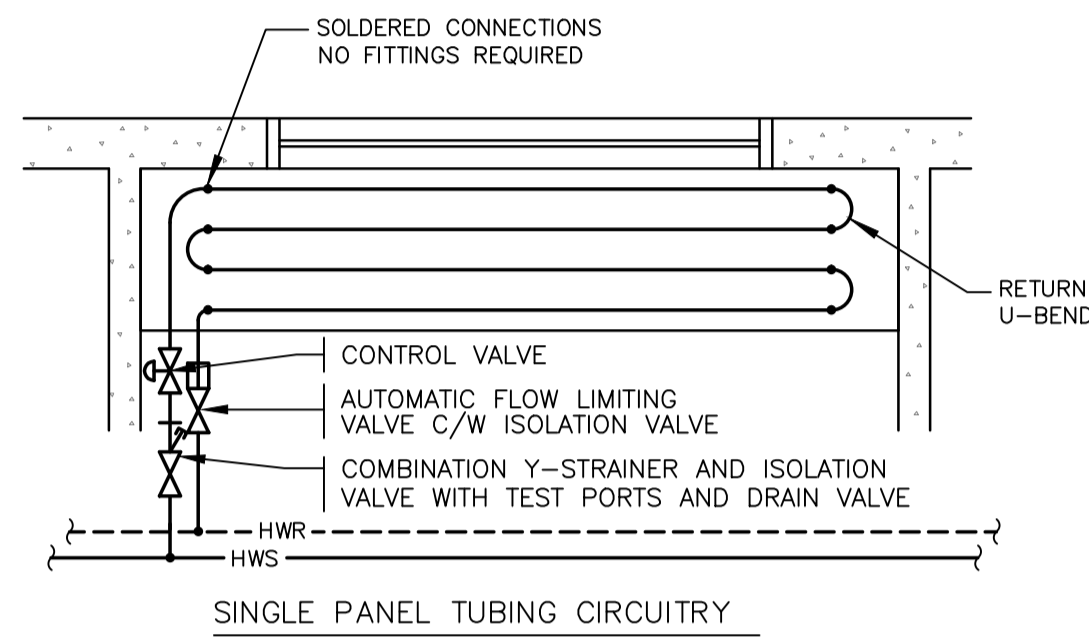
Sheet/Feuille  
M3.1

Revision no./  
La Révision  
no.  
0

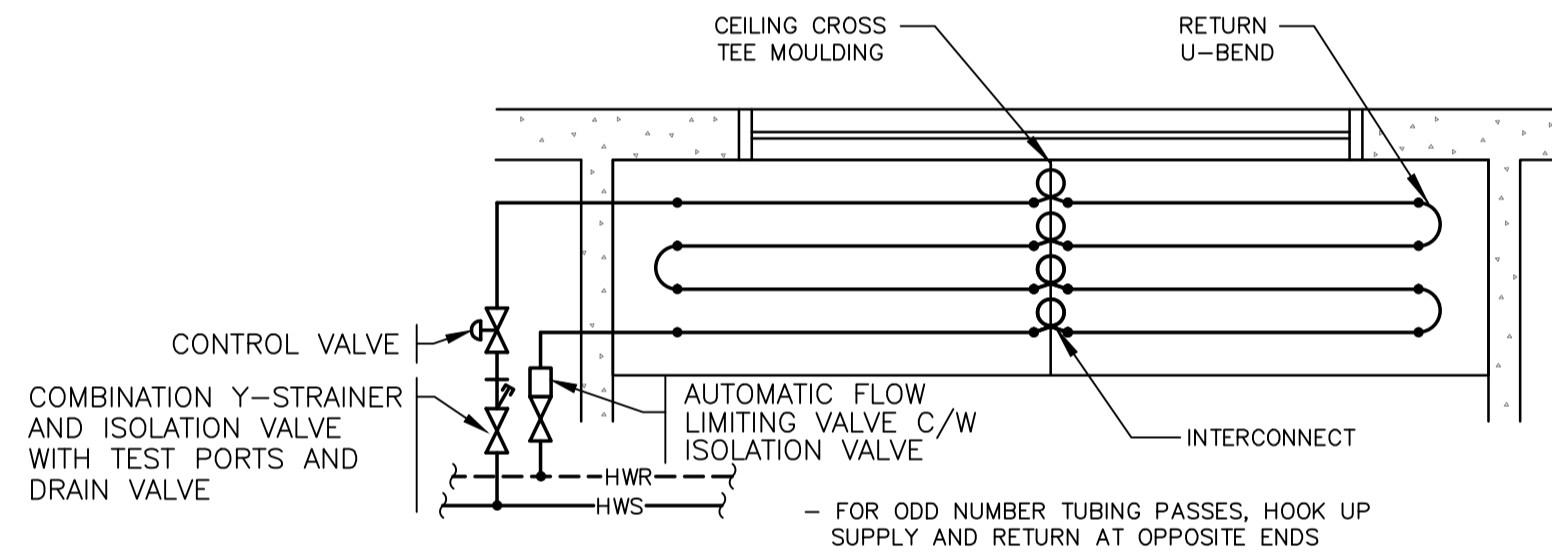




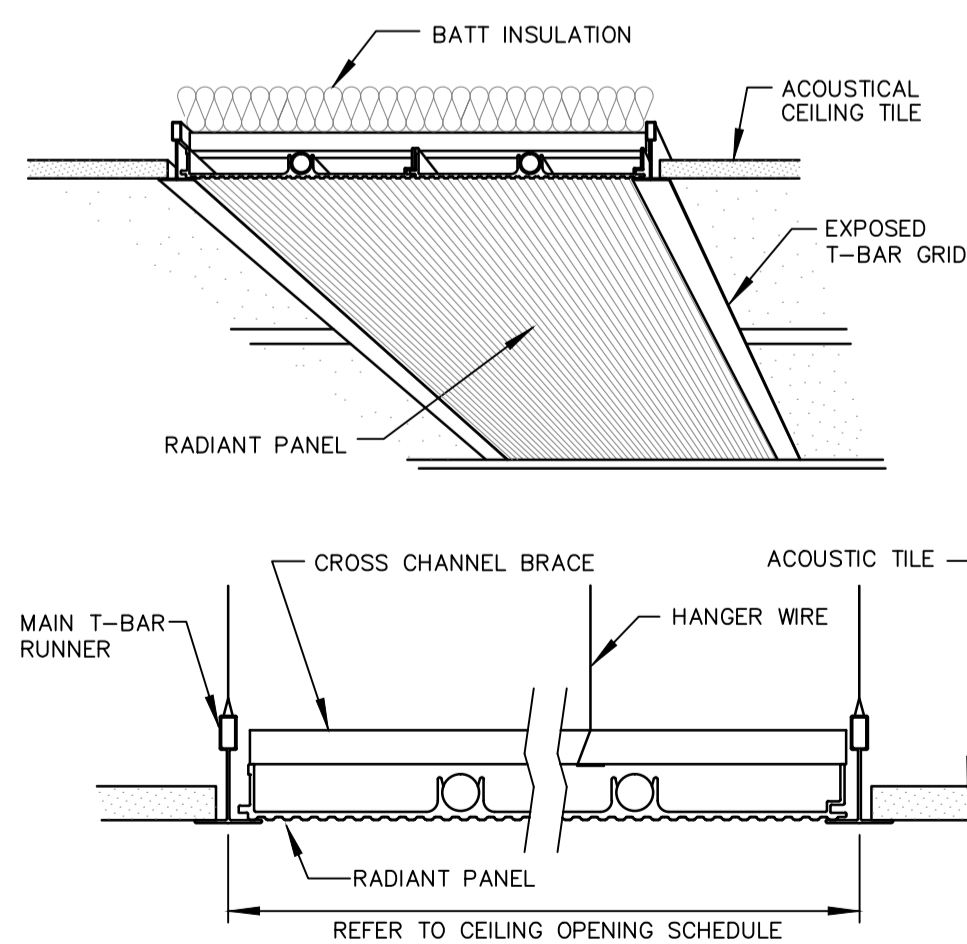
- GENERAL HEATING NOTES:**
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
  - COORDINATE ALL WORK WITH OTHER TRADES AND SITE CONDITIONS.
  - RUN PIPING AS HIGH AS POSSIBLE.
  - INSTALL AUTO AIR VENTS WITH PET COCKS AT ALL HIGH POINTS IN THE SYSTEM PIPING.
  - REFER TO DETAIL SHEETS FOR EQUIPMENT CONNECTIONS.
  - ALL RUNOUTS TO REHEAT COILS, RADIANT PANELS, AND INFLOOR MANIFOLDS TO BE 19# UNLESS NOTED OTHERWISE. ALL RUNOUTS TO UNIT HEATERS AND FORCE FLOWS TO BE 25# UNLESS NOTED OTHERWISE.



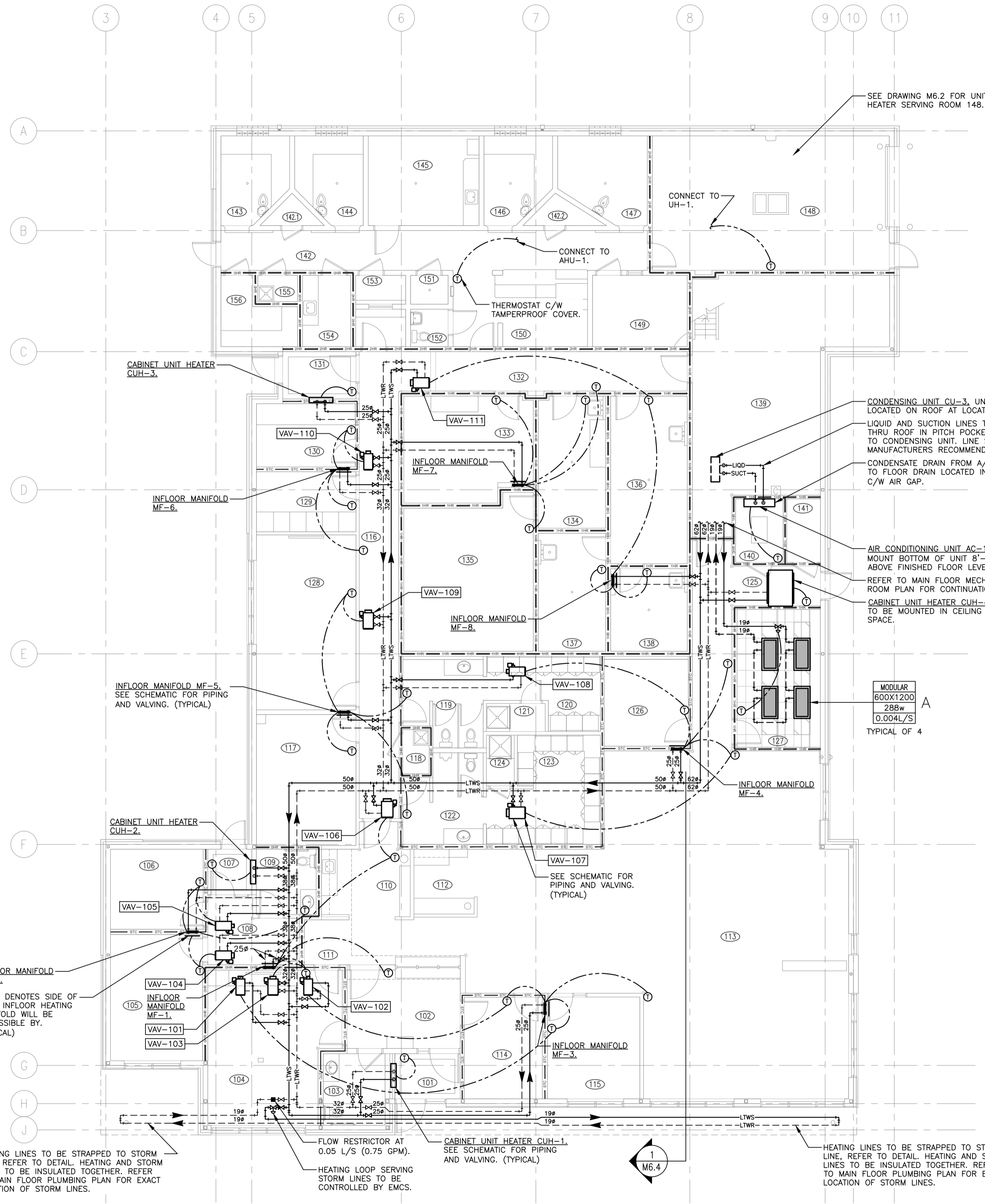
- MAXIMUM SINGLE PANEL LENGTH: 16 FT. (4870 mm)
- REFER TO ARCHITECTURAL DETAILS FOR TYPICAL SECTIONS



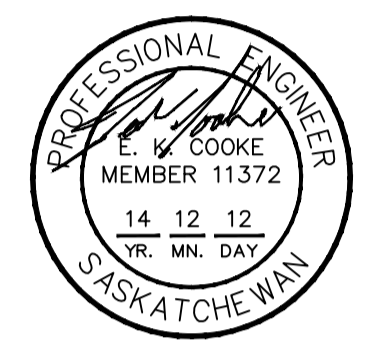
**RADIANT PANEL HOOK-UP DETAIL n.t.s.**



**MODULAR RADIANT PANEL INTERIOR FLUSH MOUNT DETAIL IN T-BAR CEILING n.t.s.**



**1 MAIN FLOOR PLAN**  
1:100



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Revision/Revision	Description/Description	Date/Date
0	ISSUED FOR TENDER	2014-02-08

Project title/Titre du projet

**NEW POLICE BUILDING  
MAIDSTONE, SASKATCHEWAN**

Approved by/Approve par  
NFH

Designed by/Concept par  
TKC

Drawn by/Dessine par  
JNM

Project Manager/Administrateur de Projets  
CS

Architectural and Engineering Resources Manager/  
Ressources Architectural et de Directeur d'Ingénierie

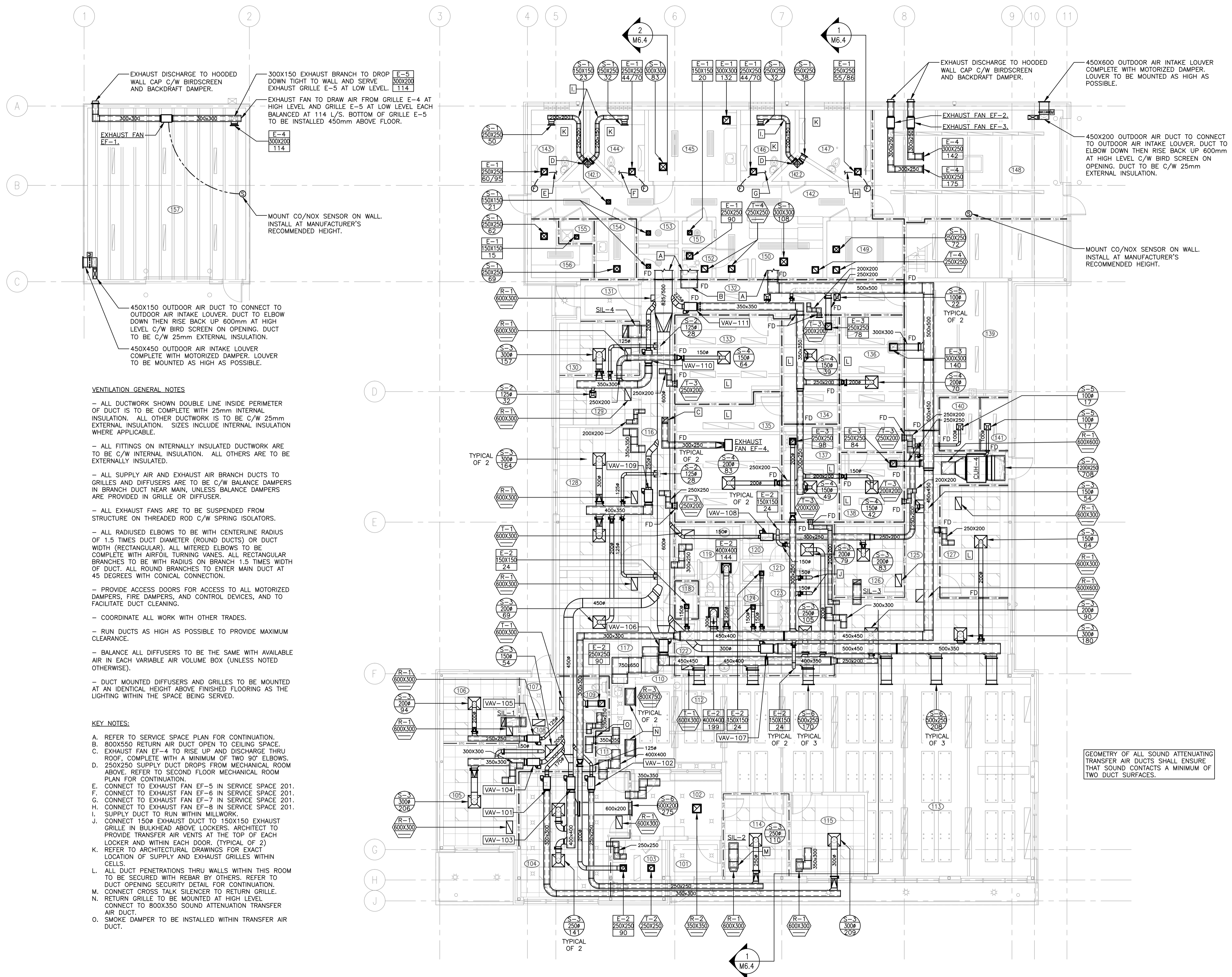
Client/client

Drawing title/Titre du dessin

**MAIN FLOOR PLAN  
HEATING**

Project No./No. du projet	Sheet/Feuille	Revision no./La Révision no.
29/2013	M3.2	0





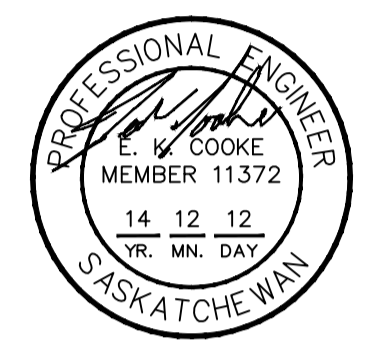
**VENTILATION GENERAL NOTES**

- ALL DUCTWORK SHOWN DOUBLE LINE INSIDE PERIMETER OF DUCT IS TO BE COMPLETE WITH 25mm INTERNAL INSULATION. ALL OTHER DUCTWORK IS TO BE C/W 25mm EXTERNAL INSULATION. SIZES INCLUDE INTERNAL INSULATION WHERE APPLICABLE.
- ALL FITTINGS ON INTERNALLY INSULATED DUCTWORK ARE TO BE C/W INTERNAL INSULATION. ALL OTHERS ARE TO BE EXTERNALLY INSULATED.
- ALL SUPPLY AIR AND EXHAUST AIR BRANCH DUCTS TO GRILLES AND DIFFUSERS ARE TO BE C/W BALANCE DAMPERS IN BRANCH DUCT NEAR MAIN, UNLESS BALANCE DAMPERS ARE PROVIDED IN GRILLE OR DIFFUSER.
- ALL EXHAUST FANS ARE TO BE SUSPENDED FROM STRUCTURE ON THREADED ROD C/W SPRING ISOLATORS.
- ALL RADIUS ELBOWS TO BE WITH CENTERLINE RADIUS OF 1.5 TIMES DUCT DIAMETER (ROUND DUCTS) OR DUCT WIDTH (RECTANGULAR). ALL MITERED ELBOWS TO BE COMPLETE WITH AIRFOIL TURNING VANES. ALL RECTANGULAR BRANCHES TO BE WITH RADIUS ON BRANCH 1.5 TIMES WIDTH OF DUCT. ALL ROUND BRANCHES TO ENTER MAIN DUCT AT 45 DEGREES WITH CONICAL CONNECTION.
- PROVIDE ACCESS DOORS FOR ACCESS TO ALL MOTORIZED DAMPERS, FIRE DAMPERS, AND CONTROL DEVICES, AND TO FACILITATE DUCT CLEANING.
- COORDINATE ALL WORK WITH OTHER TRADES.
- RUN DUCTS AS HIGH AS POSSIBLE TO PROVIDE MAXIMUM CLEARANCE.
- BALANCE ALL DIFFUSERS TO BE THE SAME WITH AVAILABLE AIR IN EACH VARIABLE AIR VOLUME BOX (UNLESS NOTED OTHERWISE).
- DUCT MOUNTED DIFFUSERS AND GRILLES TO BE MOUNTED AT AN IDENTICAL HEIGHT ABOVE FINISHED FLOORING AS THE LIGHTING WITHIN THE SPACE BEING SERVED.

**KEY NOTES:**

- A. REFER TO SERVICE SPACE PLAN FOR CONTINUATION.
- B. 800X550 RETURN AIR DUCT OPEN TO CEILING SPACE.
- C. EXHAUST FAN EF-4 TO RISE UP AND DISCHARGE THRU ROOF, COMPLETE WITH A MINIMUM OF TWO 90° ELBOWS.
- D. 250X250 SUPPLY DUCT DROPS FROM MECHANICAL ROOM ABOVE. REFER TO SECOND FLOOR MECHANICAL ROOM PLAN FOR CONTINUATION.
- E. CONNECT TO EXHAUST FAN EF-5 IN SERVICE SPACE 201.
- F. CONNECT TO EXHAUST FAN EF-6 IN SERVICE SPACE 201.
- G. CONNECT TO EXHAUST FAN EF-7 IN SERVICE SPACE 201.
- H. CONNECT TO EXHAUST FAN EF-8 IN SERVICE SPACE 201.
- I. SUPPLY DUCT TO RUN WITHIN MILLWORK.
- J. CONNECT 150Ø EXHAUST DUCT TO 150X150 EXHAUST GRILLE IN BULKHEAD ABOVE LOCKERS. ARCHITECT TO PROVIDE TRANSFER AIR VENTS AT THE TOP OF EACH LOCKER AND WITHIN EACH DOOR. (TYPICAL OF 2)
- K. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF SUPPLY AND EXHAUST GRILLES WITHIN CELLS.
- L. ALL DUCT PENETRATIONS THRU WALLS WITHIN THIS ROOM TO BE SECURED WITH REBAR BY OTHERS. REFER TO DUCT OPENING SECURITY DETAIL FOR CONTINUATION.
- M. CONNECT CROSS TALK SILENCER TO RETURN GRILLE.
- N. RETURN GRILLE TO BE MOUNTED AT HIGH LEVEL. CONNECT TO 800X350 SOUND ATTENUATION TRANSFER AIR DUCT.
- O. SMOKE DAMPER TO BE INSTALLED WITHIN TRANSFER AIR DUCT.

**1 MAIN FLOOR PLAN**  
1:100



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Revision/Revision	Description/Description	Date/Date
0	ISSUED FOR TENDER	2014-02-08

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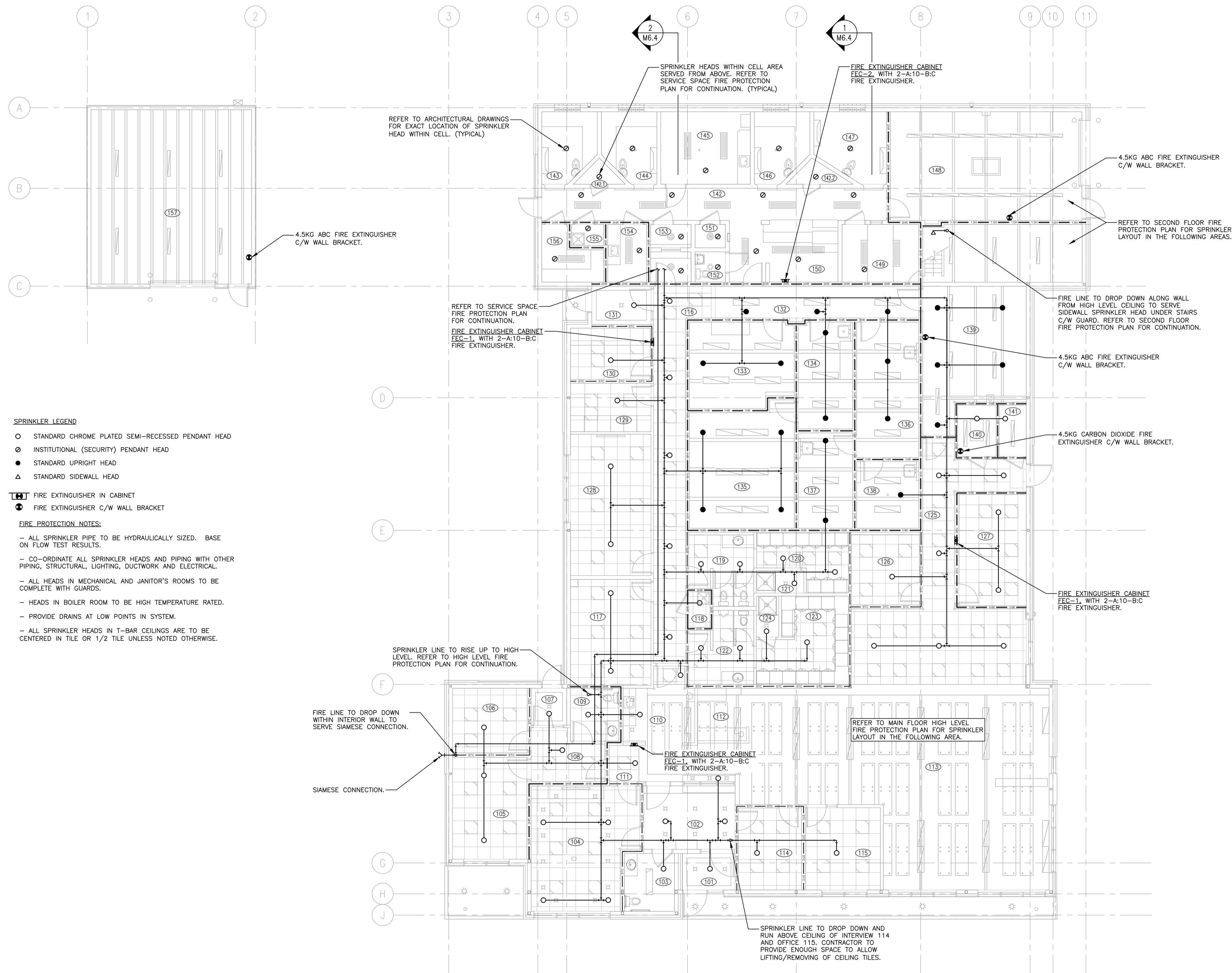
**NEW POLICE BUILDING  
MAIDSTONE, SASKATCHEWAN**

Approved by/Approve par: NFH  
Designed by/Concept par: TKC  
Drawn by/Dessine par: JNM  
Project Manager/Administrateur de Projets: CS  
Architectural and Engineering Resources Manager/ Ressources Architectural et de Directeur d'ingénierie:  
Client/client:

Drawing title/Titre du dessin:  
**MAIN FLOOR PLAN  
VENTILATION**

Project No./No. du projet	Sheet/Feuille	Revision no./La Révision no.
29/2013	M4.1	0





**SPRINKLER LEGEND**

- STANDARD CHROME PLATED SEMI-RECESSED PENDANT HEAD
- ⊗ INSTITUTIONAL (SECURITY) PENDANT HEAD
- STANDARD UPRIGHT HEAD
- △ STANDARD SIDEWALL HEAD

- FIRE EXTINGUISHER IN CABINET
- FIRE EXTINGUISHER C/W WALL BRACKET

**FIRE PROTECTION NOTES:**

- ALL SPRINKLER PIPE TO BE HYDRAULICALLY SIZED. BASE ON FLOW TEST RESULTS.
- CO-ORDINATE ALL SPRINKLER HEADS AND PIPING WITH OTHER PIPING, STRUCTURAL, LIGHTING, DUCTWORK AND ELECTRICAL.
- ALL HEADS IN MECHANICAL AND JANITOR'S ROOMS TO BE COMPLETE WITH GUARDS.
- HEADS IN BOILER ROOM TO BE HIGH TEMPERATURE RATED.
- PROVIDE DRAINS AT LOW POINTS IN SYSTEM.
- ALL SPRINKLER HEADS IN T-BAR CEILINGS ARE TO BE CENTERED IN TILE OR 1/2 TILE UNLESS NOTED OTHERWISE.

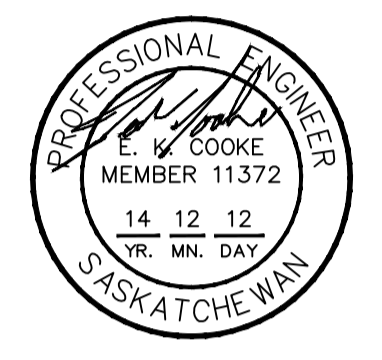


**1** MAIN FLOOR PLAN  
1:100



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 102-3718 Kananis Place, Saskatoon, SK S7P 0A6 ph: (306) 652-4457  
 website: www.sepw.ca

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Revision/Revision Client/client	Description/Description	Date/Date
0	ISSUED FOR TENDER	2014-12-08

Project title/Titre du projet

**NEW POLICE BUILDING  
MAIDSTONE, SASKATCHEWAN**

Approved by/Approve par  
NFH  
 Designed by/Concept par  
TKC  
 Drawn by/Dessine par  
JNM  
 Project Manager/Administrateur de Projets  
CS  
 Architectural and Engineering Resources Manager/  
 Ressources Architectural et de Directeur d'Ingénierie  
 Client/client

Drawing title/Titre du dessin  
**MAIN FLOOR PLAN  
FIRE PROTECTION**

Project No./No. du projet	Sheet/Feuille	Revision no./La Révision no.
29/2013	M5.1	0







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Revision/Client	Description/Description	Date/Date
0	ISSUED FOR TENDER	2014-12-08

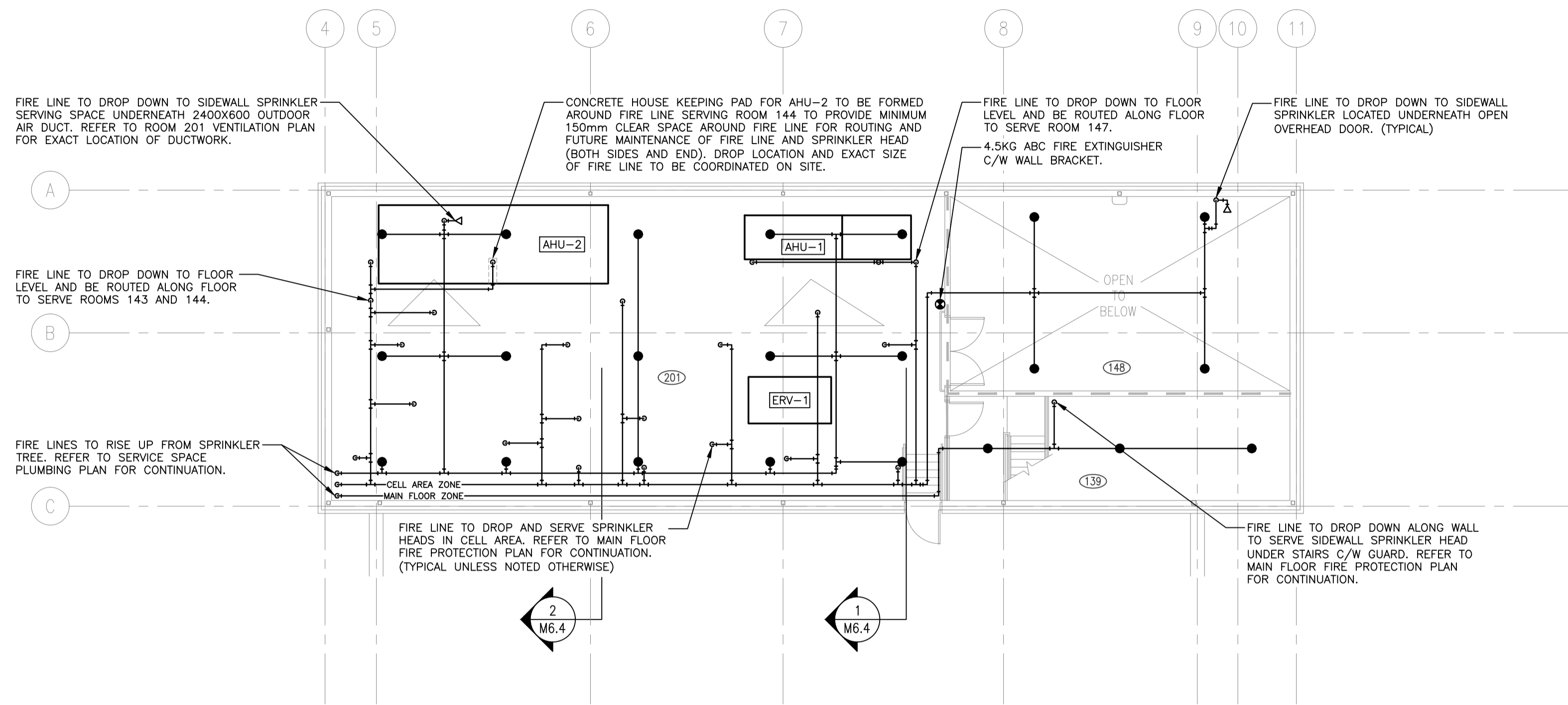
Project title/Titre du projet

**NEW POLICE BUILDING  
 MAIDSTONE, SASKATCHEWAN**

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 NFH  
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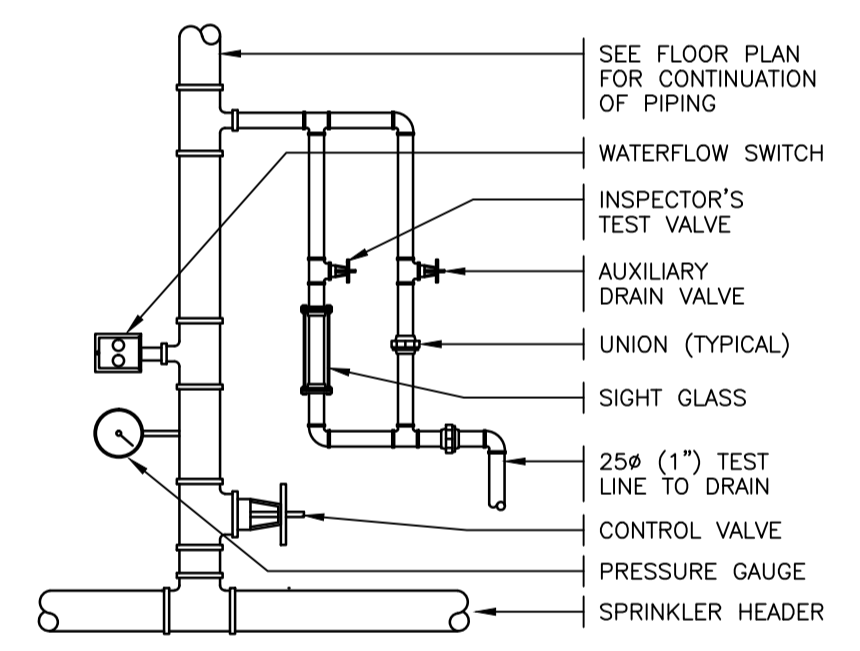
Drawing title/Titre du dessin  
**SECOND FLOOR AND  
 MAIN FLOOR HIGH LEVEL  
 FIRE PROTECTION PLAN  
 DETAILS**

Project No./No. du projet	Sheet/Feuille	Revision no./La Révision no.
29/2013	M5.2	0

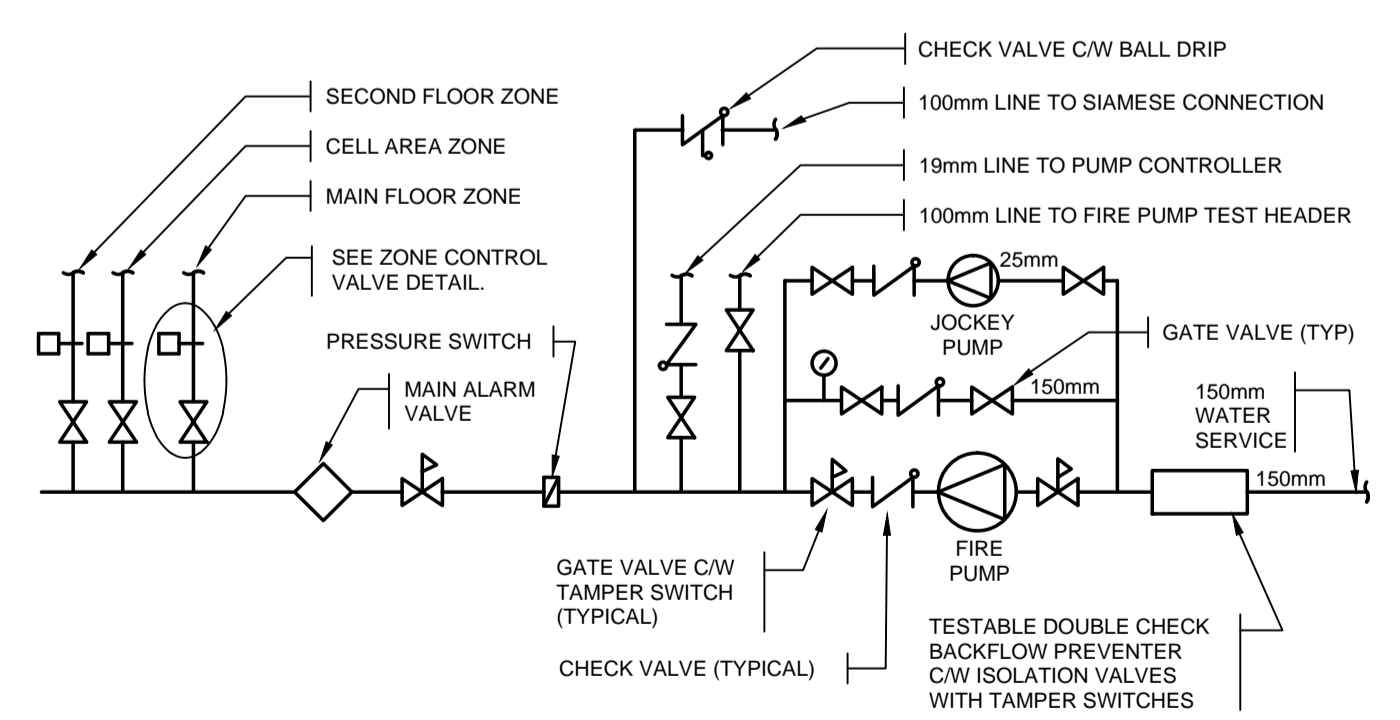


- SPRINKLER LEGEND**
- STANDARD CHROME PLATED SEMI-RECESSED PENDANT HEAD
  - ⊙ INSTITUTIONAL (SECURITY) PENDANT HEAD
  - STANDARD UPRIGHT HEAD
  - △ STANDARD SIDEWALL HEAD
- FIRE EXTINGUISHER IN CABINET**
- FIRE EXTINGUISHER C/W WALL BRACKET**
- FIRE PROTECTION NOTES:**
- ALL SPRINKLER PIPE TO BE HYDRAULICALLY SIZED. BASE ON FLOW TEST RESULTS.
  - CO-ORDINATE ALL SPRINKLER HEADS AND PIPING WITH OTHER PIPING, STRUCTURAL, LIGHTING, DUCTWORK AND ELECTRICAL.
  - ALL HEADS IN MECHANICAL AND JANITOR'S ROOMS TO BE COMPLETE WITH GUARDS.
  - HEADS IN BOILER ROOM TO BE HIGH TEMPERATURE RATED.
  - PROVIDE DRAINS AT LOW POINTS IN SYSTEM.
  - ALL SPRINKLER HEADS IN T-BAR CEILINGS ARE TO BE CENTERED IN TILE OR 1/2 TILE UNLESS NOTED OTHERWISE.

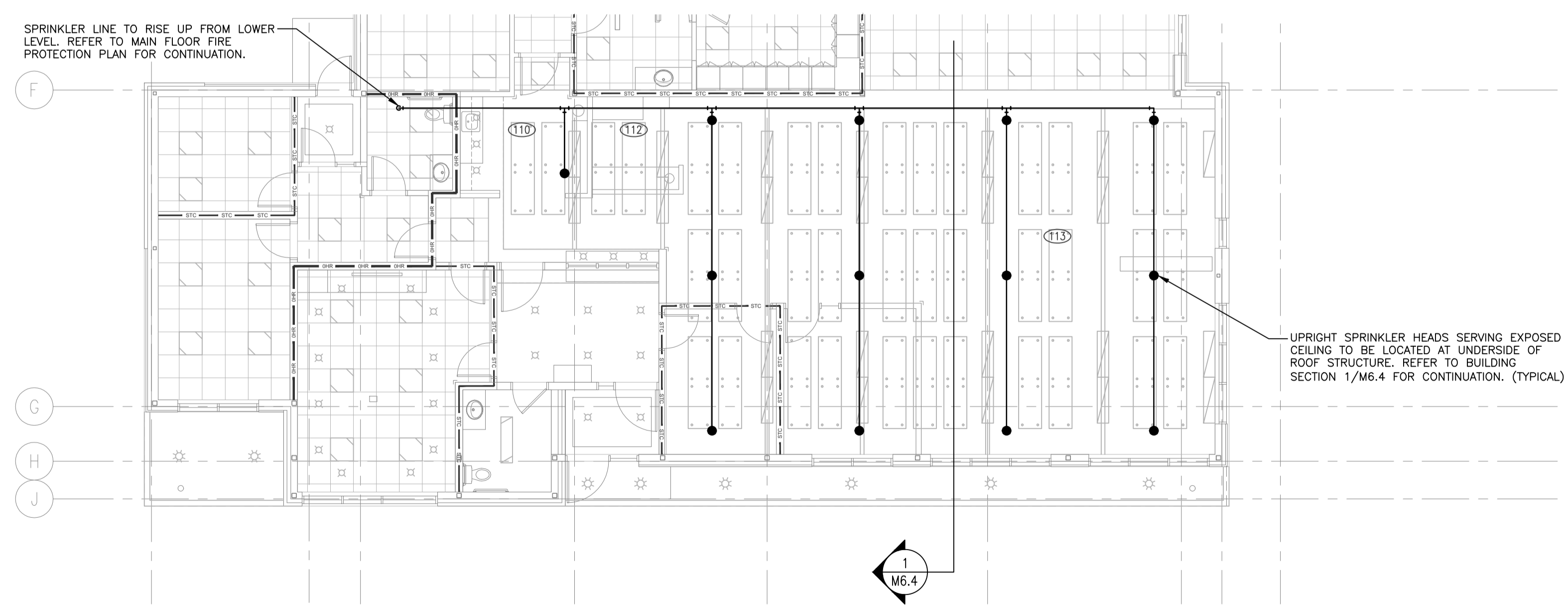
**1 SECOND FLOOR PLAN**  
 1:100



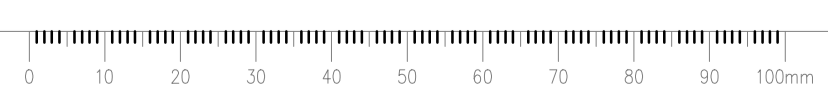
**FIRE PROTECTION ZONE CONTROL VALVE SCHEMATIC**



**SPRINKLER TREE SCHEMATIC n.t.s.**



**2 MAIN FLOOR HIGH LEVEL PLAN**  
 1:100







**DO NOT SCALE DRAWINGS**

Revision/Revision	Description/Description	Date/Date
0	ISSUED FOR TENDER	2014-12-08

Project title/Titre du projet

**NEW POLICE BUILDING  
 MAIDSTONE, SASKATCHEWAN**

Approved by/Approve par  
 NFH

Designed by/Concept par  
 TKC

Drawn by/Dessine par  
 JNM

Project Manager/Administrateur de Projets  
 CS

Architectural and Engineering Resources Manager/  
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Client/client

Drawing title/Titre du dessin

**MECHANICAL ROOM PLAN  
 PLUMBING, HEATING, AND  
 VENTILATION**

Project No./No. du projet	Sheet/Feuille	Revision no./Lo Révision no.
29/2013	M6.1	0



**VENTILATION GENERAL NOTES**

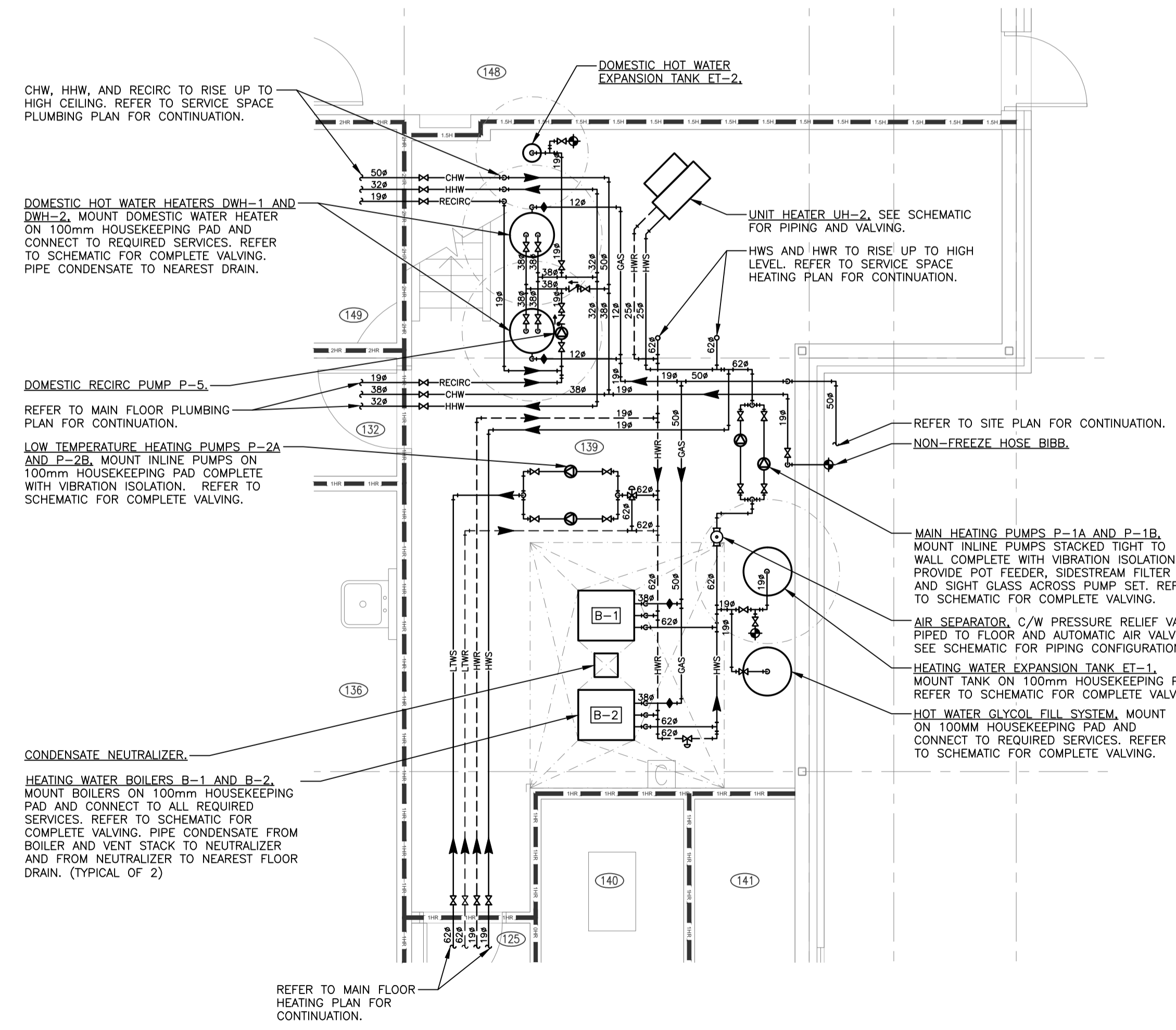
- ALL DUCTWORK SHOWN DOUBLE LINE INSIDE PERIMETER OF DUCT IS TO BE COMPLETE WITH 25mm INTERNAL INSULATION. ALL OTHER DUCTWORK IS TO BE C/W 25mm EXTERNAL INSULATION. SIZES INCLUDE INTERNAL INSULATION WHERE APPLICABLE.
- ALL FITTINGS ON INTERNALLY INSULATED DUCTWORK ARE TO BE C/W INTERNAL INSULATION. ALL OTHERS ARE TO BE EXTERNALLY INSULATED.
- ALL SUPPLY AIR AND EXHAUST AIR BRANCH DUCTS TO GRILLES AND DIFFUSERS ARE TO BE C/W BALANCE DAMPERS IN BRANCH DUCT NEAR MAIN, UNLESS BALANCE DAMPERS ARE PROVIDED IN GRILLE OR DIFFUSER.
- ALL EXHAUST FANS ARE TO BE SUSPENDED FROM STRUCTURE ON THREADED ROD C/W SPRING ISOLATORS.
- ALL RADIUS ELBOWS TO BE WITH CENTERLINE RADIUS OF 1.5 TIMES DUCT DIAMETER (ROUND DUCTS) OR DUCT WIDTH (RECTANGULAR). ALL MITERED ELBOWS TO BE COMPLETE WITH AIRFOIL TURNING VANES. ALL RECTANGULAR BRANCHES TO BE WITH RADIUS ON BRANCH 1.5 TIMES WIDTH OF DUCT. ALL ROUND BRANCHES TO ENTER MAIN DUCT AT 45 DEGREES WITH CONICAL CONNECTION.
- PROVIDE ACCESS DOORS FOR ACCESS TO ALL MOTORIZED DAMPERS, FIRE DAMPERS, AND CONTROL DEVICES, AND TO FACILITATE DUCT CLEANING.
- COORDINATE ALL WORK WITH OTHER TRADES.
- RUN DUCTS AS HIGH AS POSSIBLE TO PROVIDE MAXIMUM CLEARANCE.
- BALANCE ALL DIFFUSERS TO BE THE SAME WITH AVAILABLE AIR IN EACH VARIABLE AIR VOLUME BOX (UNLESS NOTED OTHERWISE).
- DUCT MOUNTED DIFFUSERS AND GRILLES TO BE MOUNTED AT AN IDENTICAL HEIGHT ABOVE FINISHED FLOORING AS THE LIGHTING WITHIN THE SPACE BEING SERVED.

**GENERAL HEATING NOTES:**

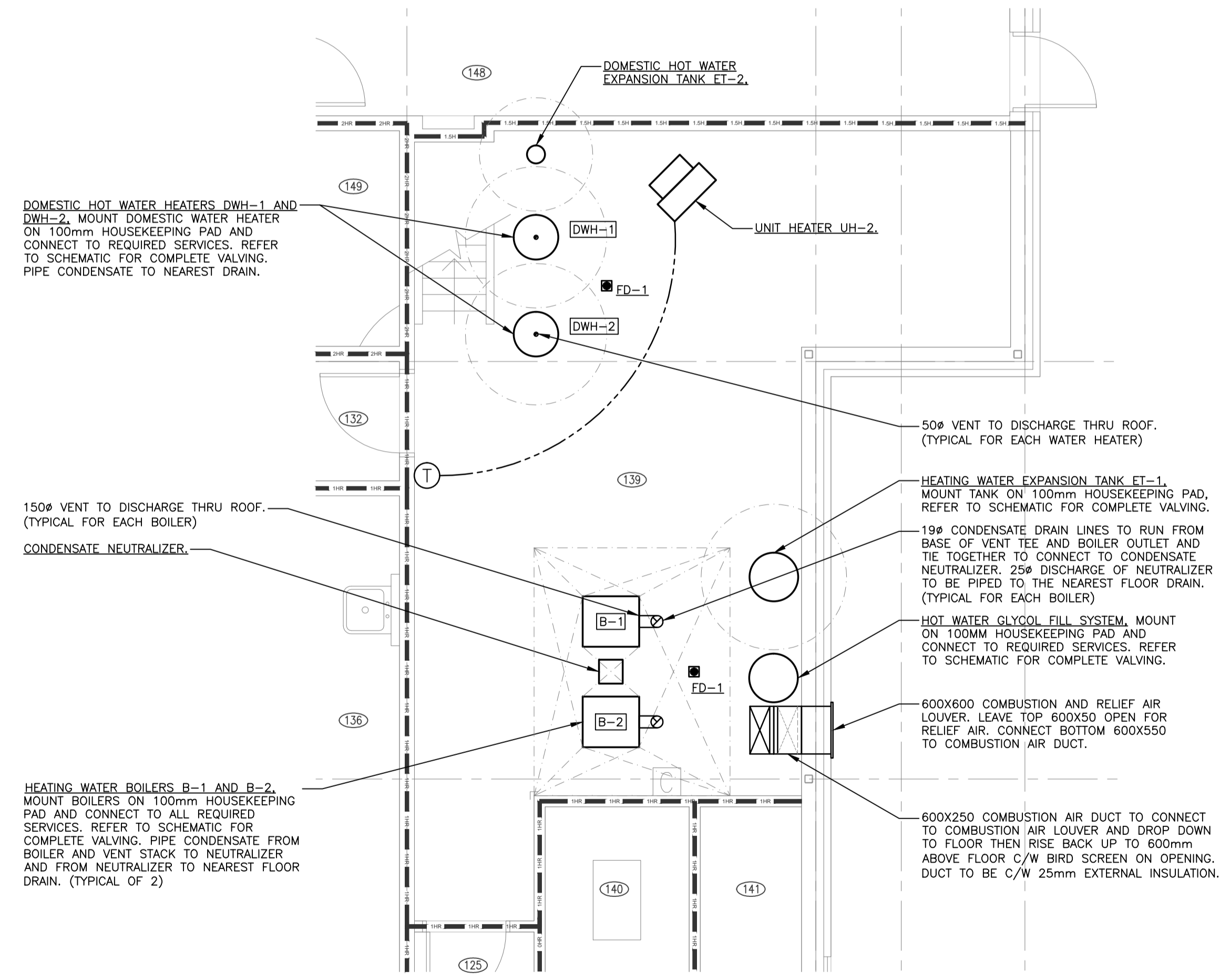
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
- COORDINATE ALL WORK WITH OTHER TRADES AND SITE CONDITIONS.
- RUN PIPING AS HIGH AS POSSIBLE.
- INSTALL AUTO AIR VENTS WITH PET COCKS AT ALL HIGH POINTS IN THE SYSTEM PIPING.
- REFER TO DETAIL SHEETS FOR EQUIPMENT CONNECTIONS.
- ALL RUNOUTS TO REHEAT COILS, RADIANT PANELS, AND INFLOOR MANIFOLDS TO BE 19# UNLESS NOTED OTHERWISE. ALL RUNOUTS TO UNIT HEATERS AND FORCE FLOWS TO BE 25# UNLESS NOTED OTHERWISE.

**PLUMBING GENERAL NOTES:**

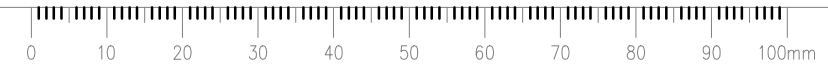
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
- COORDINATE ALL WORK WITH OTHER TRADES AND SITE CONDITIONS.
- RUN WATER PIPING AS HIGH AS POSSIBLE TO PROVIDE MAXIMUM CLEARANCE IN ALL AREAS.
- ALL PLUMBING BRANCH LINES ARE 12# UNLESS NOTED OTHERWISE.
- BOILER ROOM SANITARY PIPING AND EXPOSED PIPING SHALL BE CAST IRON.
- ALL SHOWER DRAINS AND FLOOR DRAINS TO BE 75#.
- VENTING AS PER LOCAL CODES AND REQUIREMENTS.
- PROVIDE ISOLATION GAS VALVE ON GAS LINE TO ALL EQUIPMENT.
- MAKE ALL CONNECTIONS FOR EQUIPMENT SUPPLIED BY OTHERS. REFER TO DETAILS FOR CONNECTIONS.



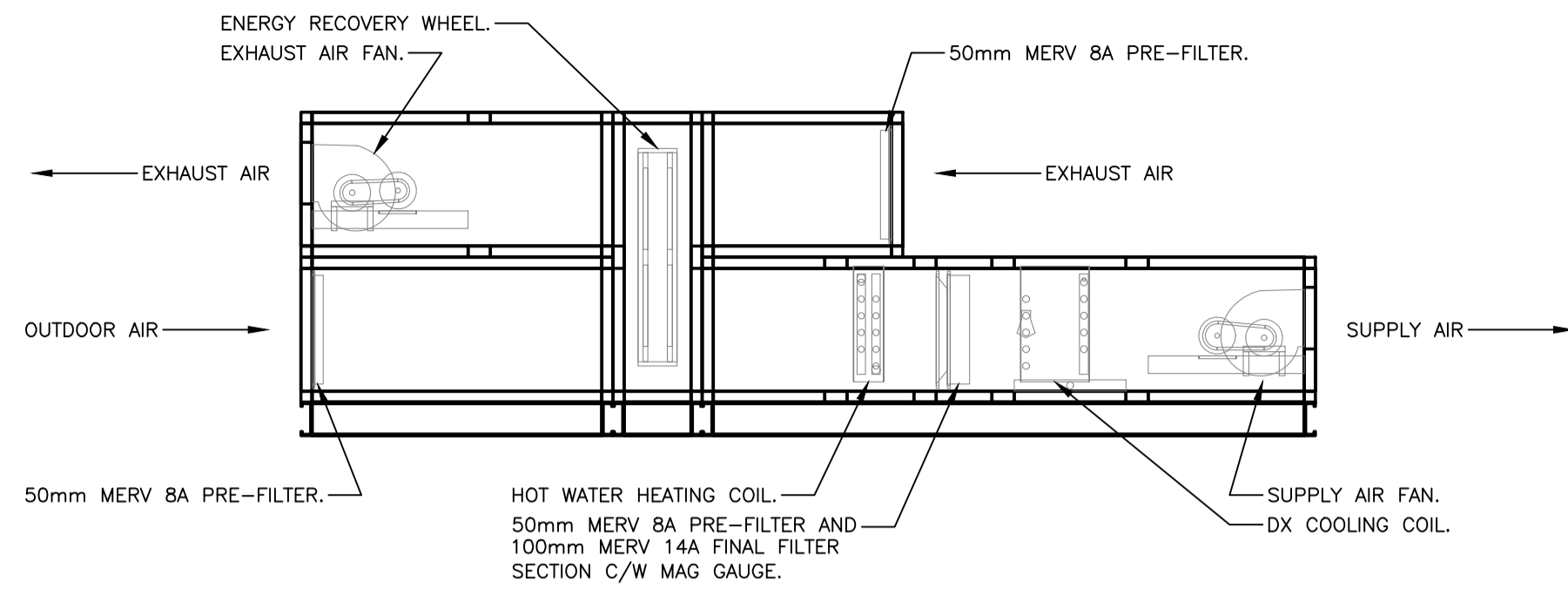
**1** PLUMBING AND HEATING PLAN  
 1:50



**2** VENTILATION PLAN  
 1:50







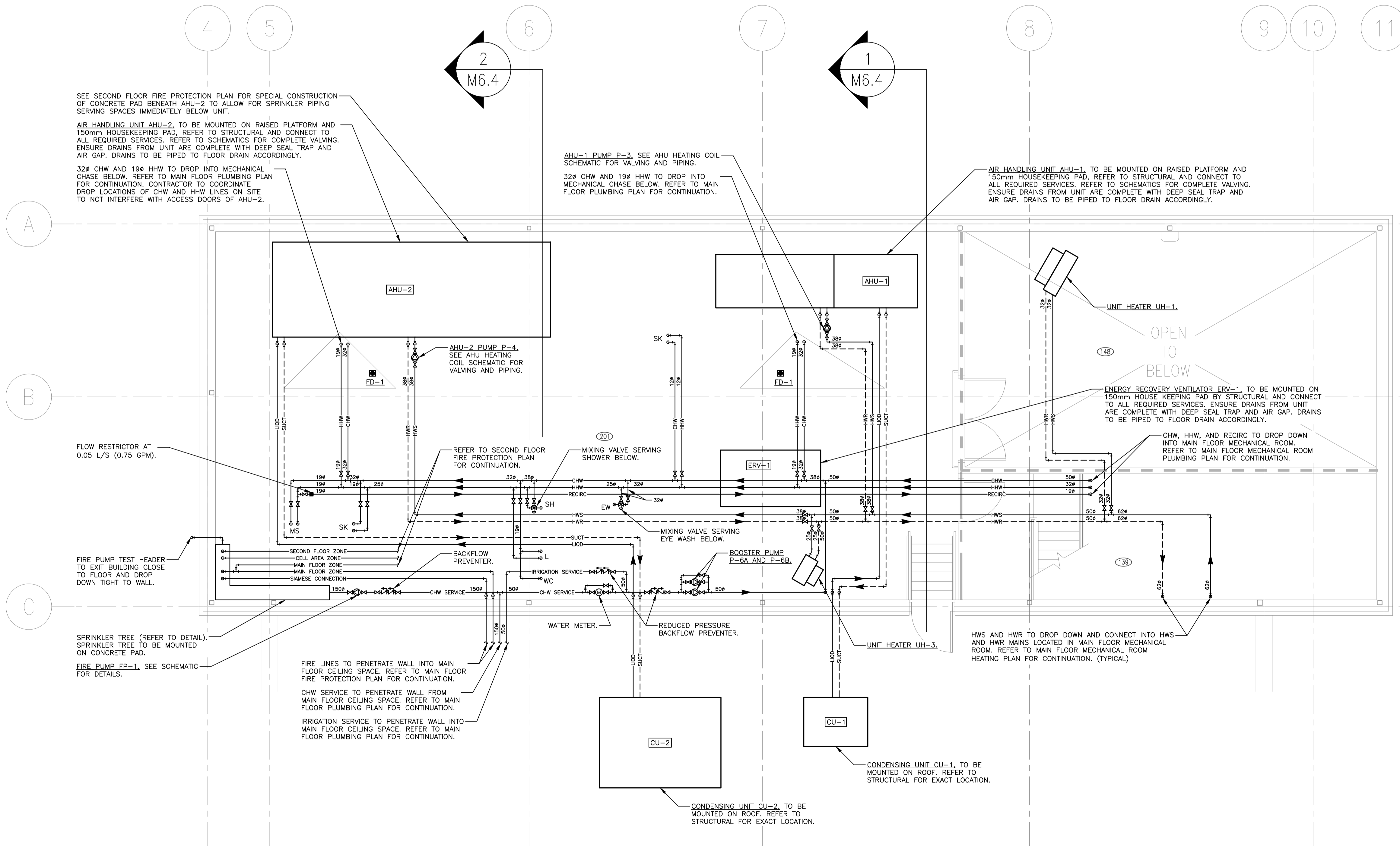
AHU-1 CONFIGURATION

**PLUMBING GENERAL NOTES:**

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
- COORDINATE ALL WORK WITH OTHER TRADES AND SITE CONDITIONS.
- RUN WATER PIPING AS HIGH AS POSSIBLE TO PROVIDE MAXIMUM CLEARANCE IN ALL AREAS.
- ALL PLUMBING BRANCH LINES ARE 12" UNLESS NOTED OTHERWISE.
- BOILER ROOM SANITARY PIPING AND EXPOSED PIPING SHALL BE CAST IRON.
- ALL SHOWER DRAINS AND FLOOR DRAINS TO BE 75#.
- VENTING AS PER LOCAL CODES AND REQUIREMENTS.
- PROVIDE ISOLATION GAS VALVE ON GAS LINE TO ALL EQUIPMENT.
- MAKE ALL CONNECTIONS FOR EQUIPMENT SUPPLIED BY OTHERS. REFER TO DETAILS FOR CONNECTIONS.

**GENERAL HEATING NOTES:**

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
- COORDINATE ALL WORK WITH OTHER TRADES AND SITE CONDITIONS.
- RUN PIPING AS HIGH AS POSSIBLE.
- INSTALL AUTO AIR VENTS WITH PET COCKS AT ALL HIGH POINTS IN THE SYSTEM PIPING.
- REFER TO DETAIL SHEETS FOR EQUIPMENT CONNECTIONS.
- ALL RUNOUTS TO REHEAT COILS, RADIANT PANELS, AND INFLOOR MANIFOLDS TO BE 19# UNLESS NOTED OTHERWISE. ALL RUNOUTS TO UNIT HEATERS AND FORCE FLOWS TO BE 25# UNLESS NOTED OTHERWISE.



SEE SECOND FLOOR FIRE PROTECTION PLAN FOR SPECIAL CONSTRUCTION OF CONCRETE PAD BENEATH AHU-2 TO ALLOW FOR SPRINKLER PIPING SERVING SPACES IMMEDIATELY BELOW UNIT.

AIR HANDLING UNIT AHU-2, TO BE MOUNTED ON RAISED PLATFORM AND 150mm HOUSEKEEPING PAD, REFER TO STRUCTURAL AND CONNECT TO ALL REQUIRED SERVICES. REFER TO SCHEMATICS FOR COMPLETE VALVING. ENSURE DRAINS FROM UNIT ARE COMPLETE WITH DEEP SEAL TRAP AND AIR GAP. DRAINS TO BE PIPED TO FLOOR DRAIN ACCORDINGLY.

32# CHW AND 19# HHW TO DROP INTO MECHANICAL CHASE BELOW. REFER TO MAIN FLOOR PLUMBING PLAN FOR CONTINUATION. CONTRACTOR TO COORDINATE DROP LOCATIONS OF CHW AND HHW LINES ON SITE TO NOT INTERFERE WITH ACCESS DOORS OF AHU-2.

AHU-1 PUMP P-3, SEE AHU HEATING COIL SCHEMATIC FOR VALVING AND PIPING.

32# CHW AND 19# HHW TO DROP INTO MECHANICAL CHASE BELOW. REFER TO MAIN FLOOR PLUMBING PLAN FOR CONTINUATION.

AIR HANDLING UNIT AHU-1, TO BE MOUNTED ON RAISED PLATFORM AND 150mm HOUSEKEEPING PAD, REFER TO STRUCTURAL AND CONNECT TO ALL REQUIRED SERVICES. REFER TO SCHEMATICS FOR COMPLETE VALVING. ENSURE DRAINS FROM UNIT ARE COMPLETE WITH DEEP SEAL TRAP AND AIR GAP. DRAINS TO BE PIPED TO FLOOR DRAIN ACCORDINGLY.

ENERGY RECOVERY VENTILATOR ERV-1, TO BE MOUNTED ON 150mm HOUSE KEEPING PAD BY STRUCTURAL AND CONNECT TO ALL REQUIRED SERVICES. ENSURE DRAINS FROM UNIT ARE COMPLETE WITH DEEP SEAL TRAP AND AIR GAP. DRAINS TO BE PIPED TO FLOOR DRAIN ACCORDINGLY.

CHW, HHW, AND RECIRC TO DROP DOWN INTO MAIN FLOOR MECHANICAL ROOM. REFER TO MAIN FLOOR MECHANICAL ROOM PLUMBING PLAN FOR CONTINUATION.

HWS AND HWR TO DROP DOWN AND CONNECT INTO HWS AND HWR MAINS LOCATED IN MAIN FLOOR MECHANICAL ROOM. REFER TO MAIN FLOOR MECHANICAL ROOM HEATING PLAN FOR CONTINUATION. (TYPICAL)

CONDENSING UNIT CU-1, TO BE MOUNTED ON ROOF. REFER TO STRUCTURAL FOR EXACT LOCATION.

CONDENSING UNIT CU-2, TO BE MOUNTED ON ROOF. REFER TO STRUCTURAL FOR EXACT LOCATION.

FLOW RESTRICTOR AT 0.05 L/S (0.75 GPM).

FIRE PUMP TEST HEADER TO EXIT BUILDING CLOSE TO FLOOR AND DROP DOWN TIGHT TO WALL.

SPRINKLER TREE (REFER TO DETAIL). SPRINKLER TREE TO BE MOUNTED ON CONCRETE PAD.

FIRE PUMP FP-1, SEE SCHEMATIC FOR DETAILS.

FIRE LINES TO PENETRATE WALL INTO MAIN FLOOR CEILING SPACE. REFER TO MAIN FLOOR FIRE PROTECTION PLAN FOR CONTINUATION.

CHW SERVICE TO PENETRATE WALL FROM MAIN FLOOR CEILING SPACE. REFER TO MAIN FLOOR PLUMBING PLAN FOR CONTINUATION.

IRRIGATION SERVICE TO PENETRATE WALL INTO MAIN FLOOR CEILING SPACE. REFER TO MAIN FLOOR PLUMBING PLAN FOR CONTINUATION.



1 PLUMBING, HEATING, AND FIRE PROTECTION PLAN  
1:50



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Mech. 6093 *J. Dawson*

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Revision/Revision	Description/Description	Date/Date
0	ISSUED FOR TENDER	2014-12-08

Project title/Titre du projet

NEW POLICE BUILDING  
MAIDSTONE, SASKATCHEWAN

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Ressources Architectural et de Directeur d'Ingénierie

Client/client

Drawing title/Titre du dessin

ROOM 201

PLUMBING, HEATING AND

FIRE PROTECTION PLAN

Project No./No. du projet

29/2013

Sheet/Feuille

M6.2

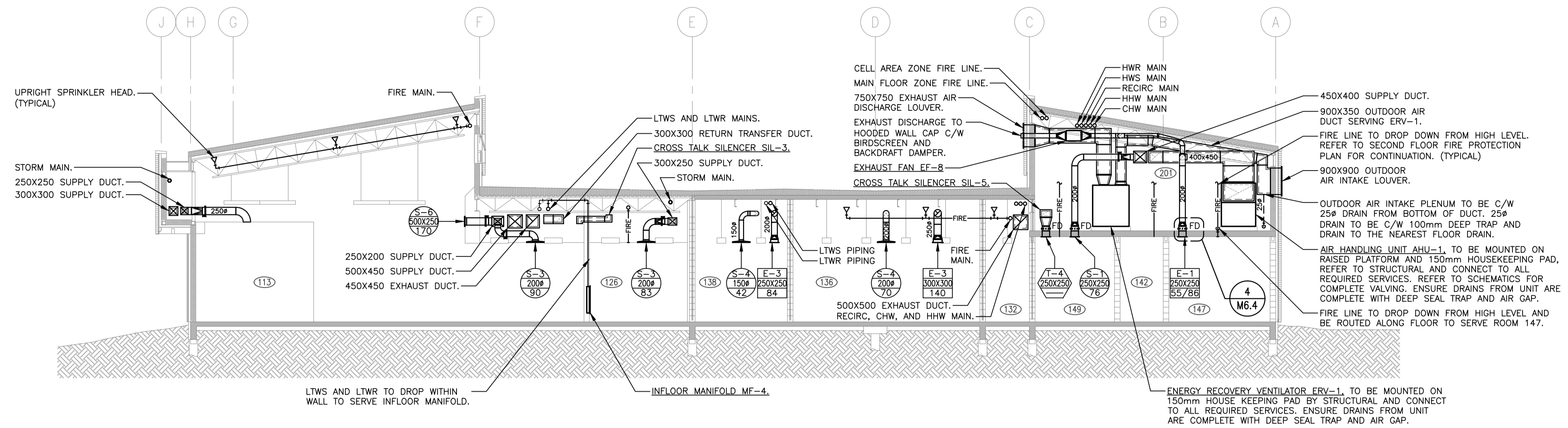
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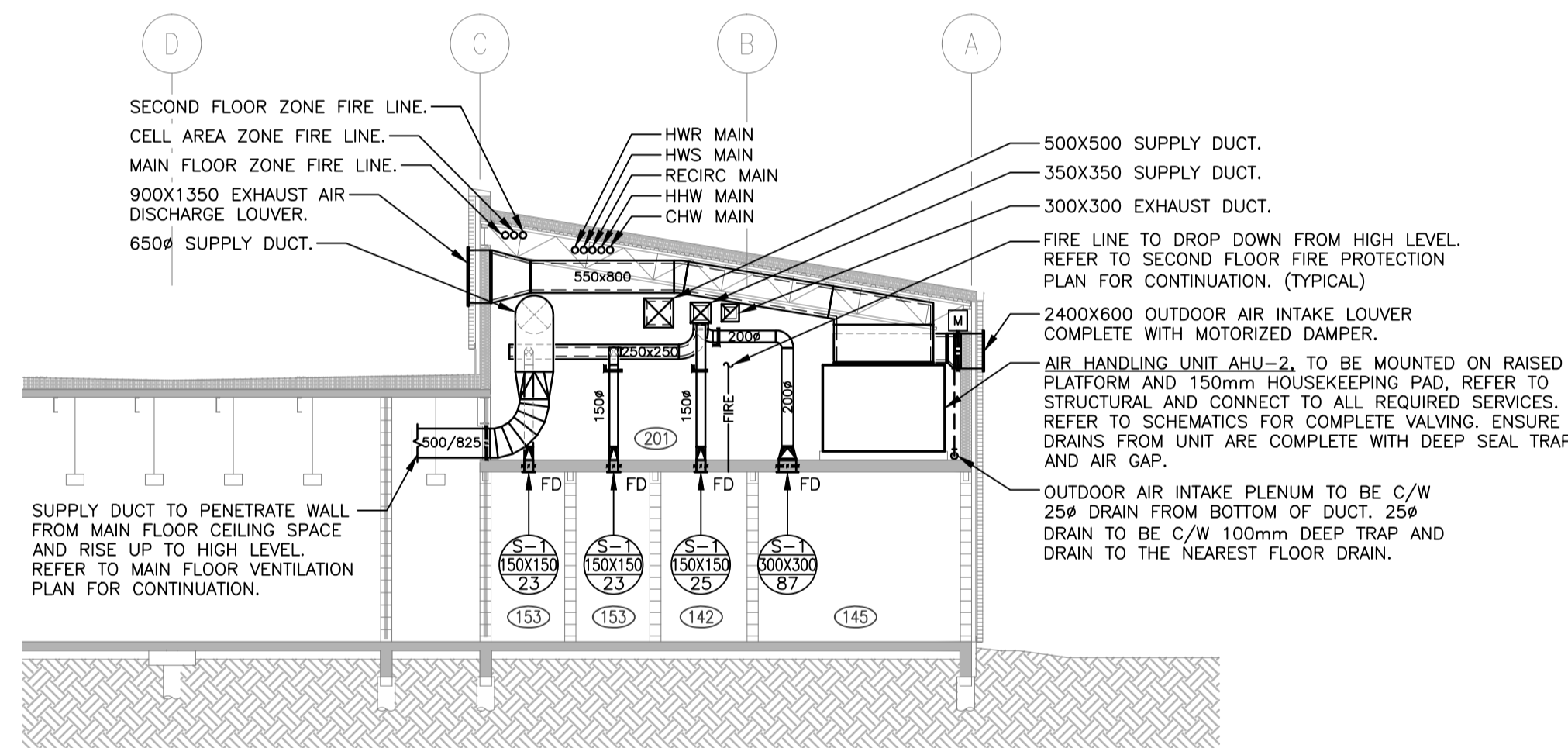




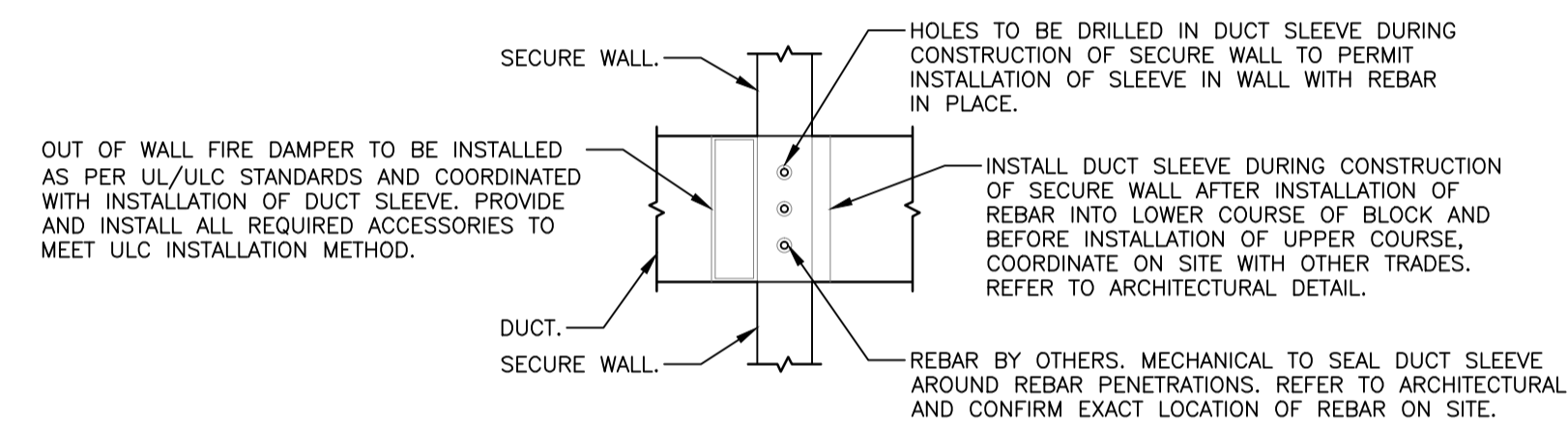




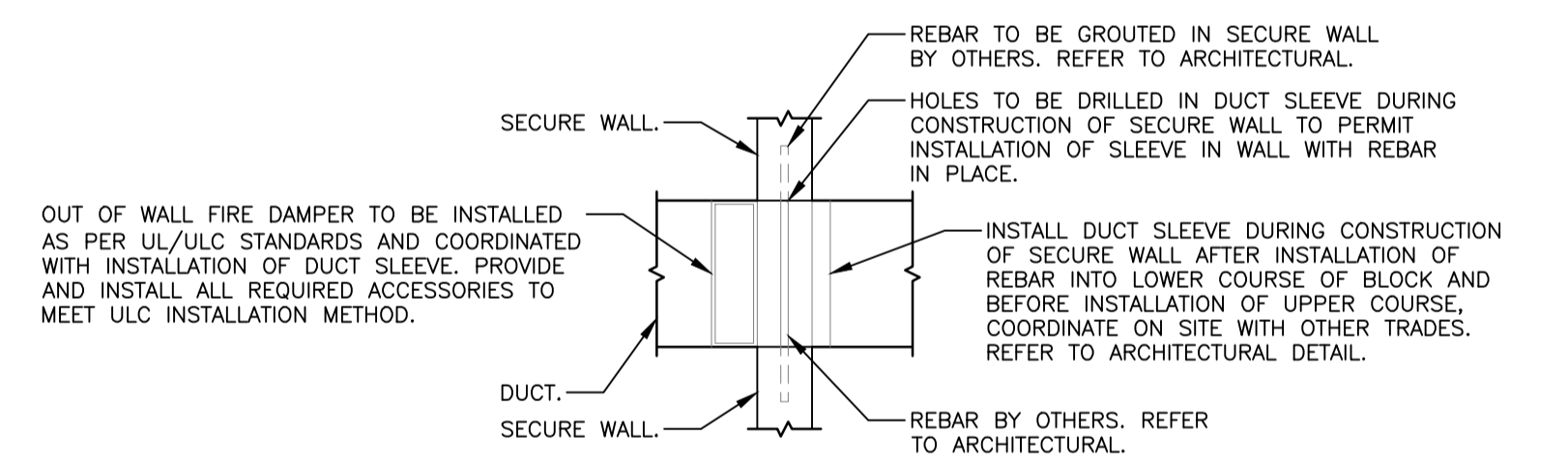
**1** BUILDING SECTION  
1:100



**2** BUILDING SECTION  
1:100

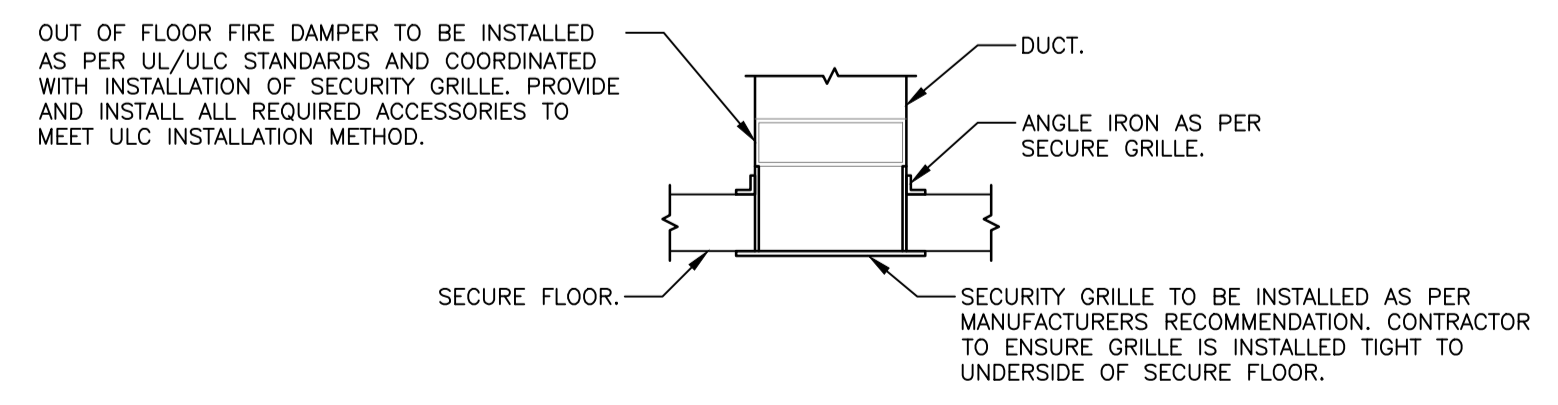


PLAN VIEW

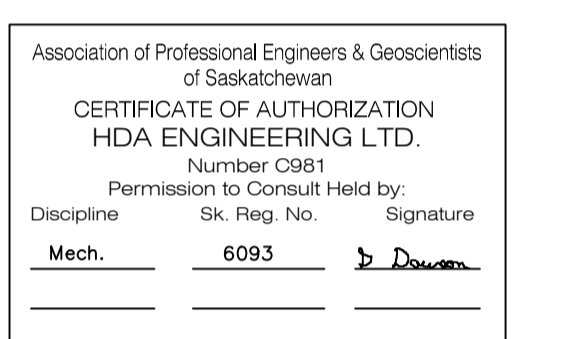


SECTION VIEW

**3** DUCT OPENING SECURITY DETAIL  
N.T.S.



**4** SECURE GRILLE DETAIL  
N.T.S.



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Revision/Revision	Description/Description	Date/Date
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**NEW POLICE BUILDING  
MAIDSTONE, SASKATCHEWAN**

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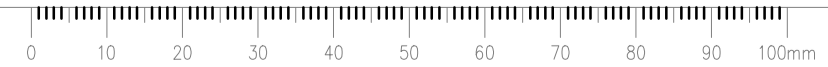
Architectural and Engineering Resources Manager/  
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Client/client

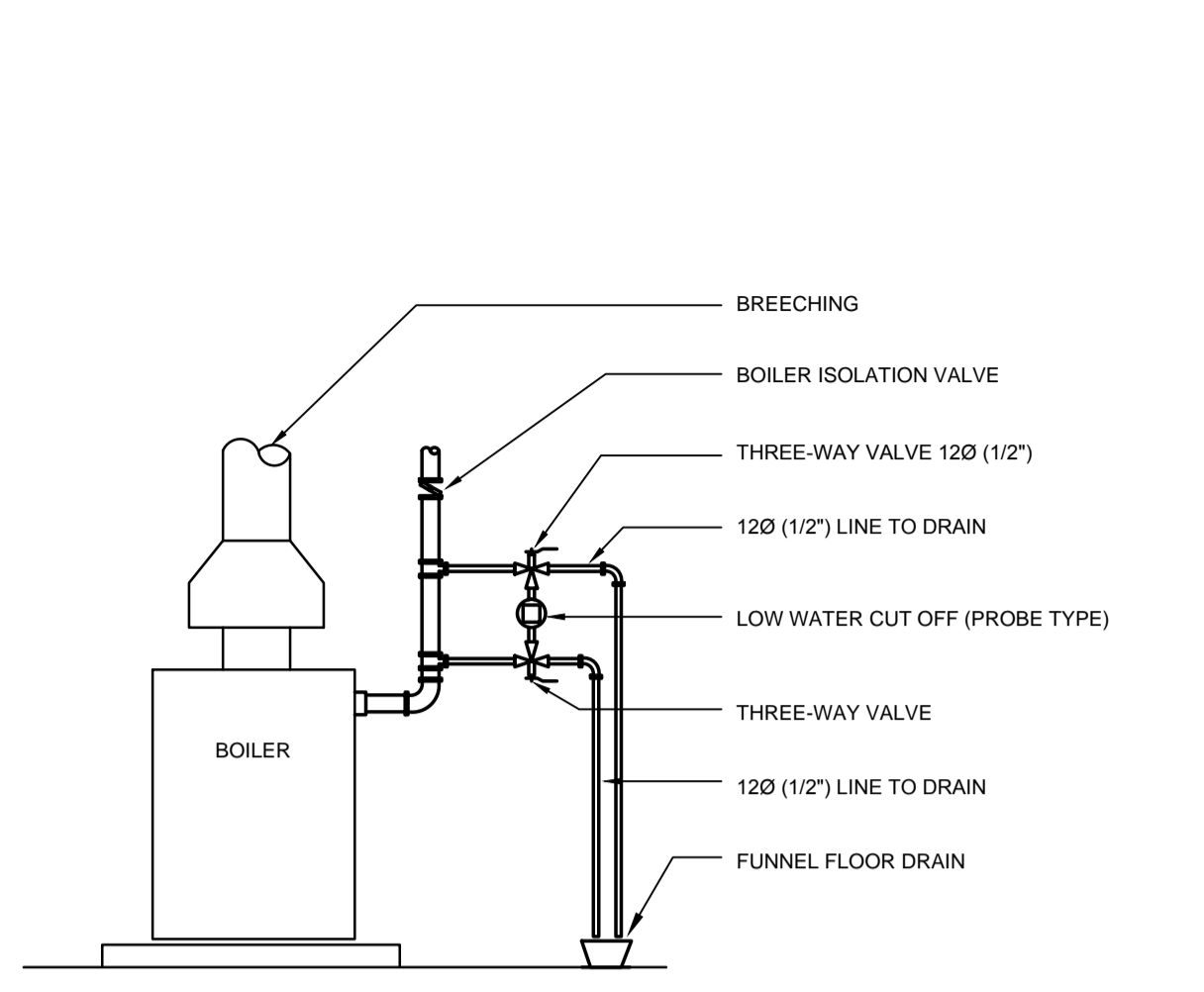
Drawing title/Titre du dessin

**BUILDING SECTIONS  
DETAILS**

Project No./No. du projet	Sheet/Feuille	Revision no./La Révision no.
29/2013	M6.4	0

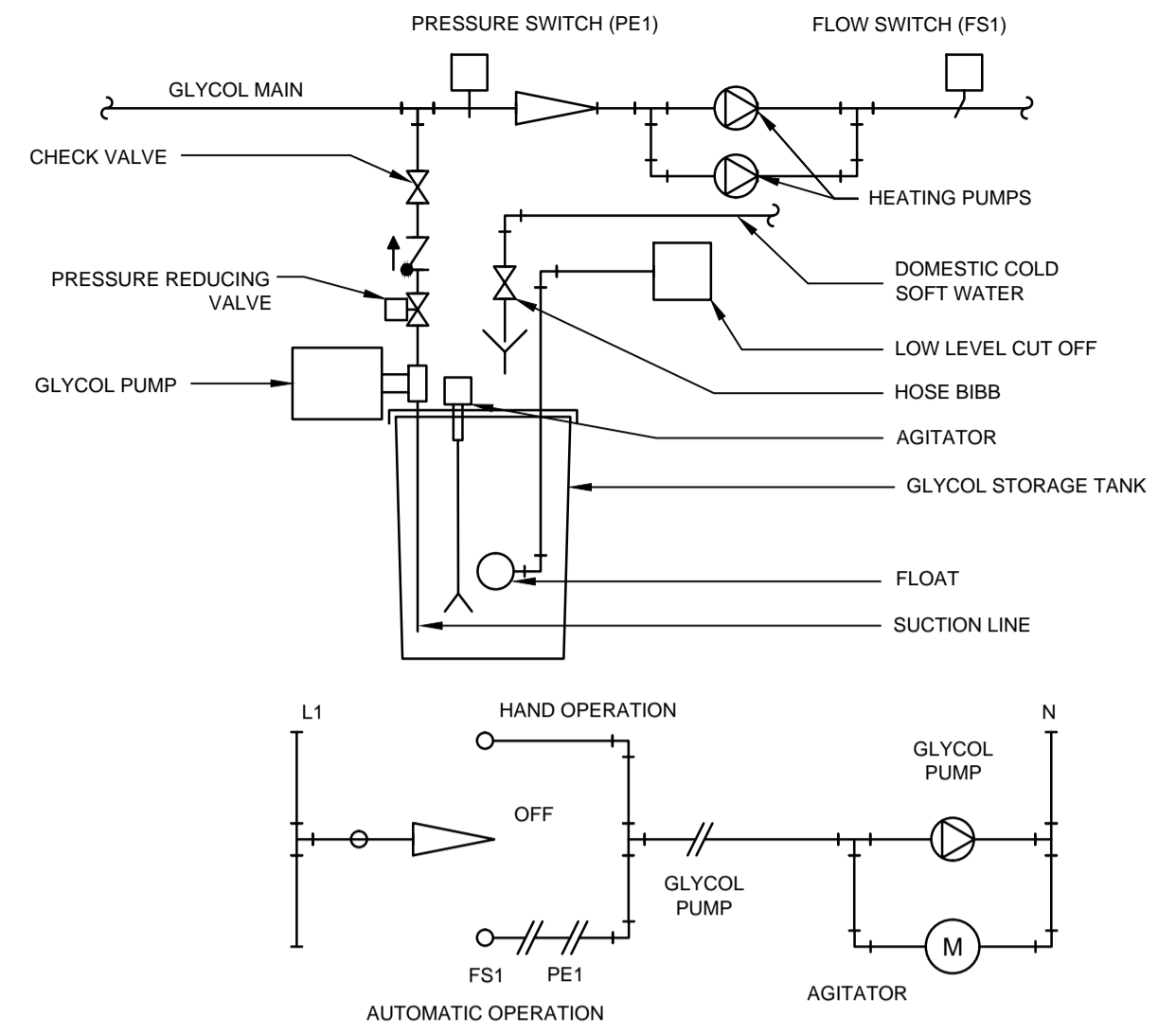




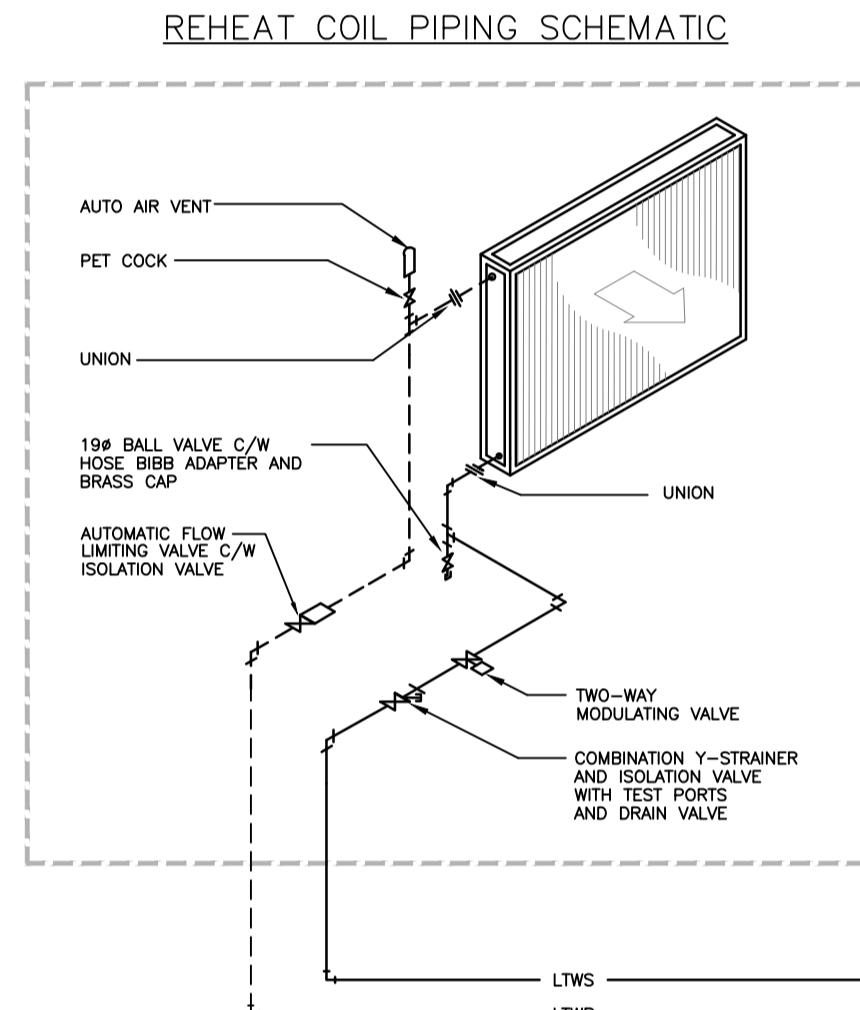


NOTE: PROBE TYPE LOW WATER CUT OFF SHALL BE PLACED DIRECTLY ON HEATING MAIN WITHOUT THREE-WAY VALVE AND ASSOCIATED DRAIN PIPING WHERE ALLOWED BY LOCAL BOILER INSPECTOR. CONTRACTOR TO CONFIRM ON SITE.

LOW WATER CUT OFF SCHEMATIC



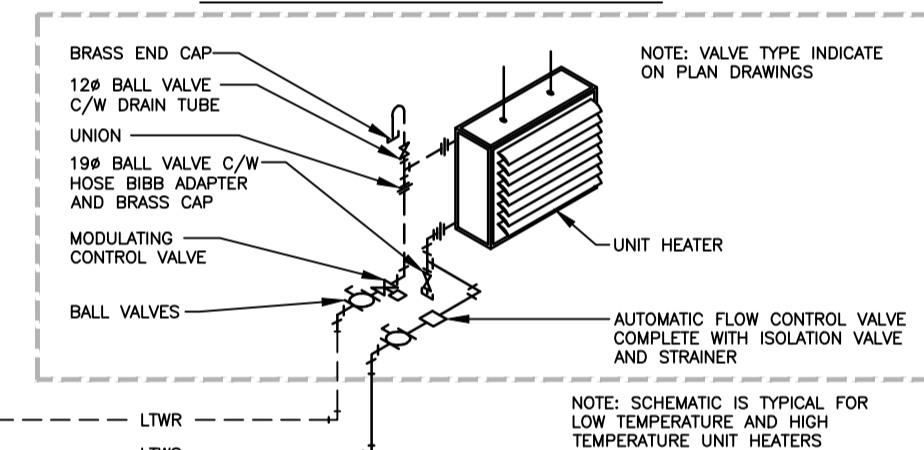
GLYCOL FILL SYSTEM SCHEMATIC



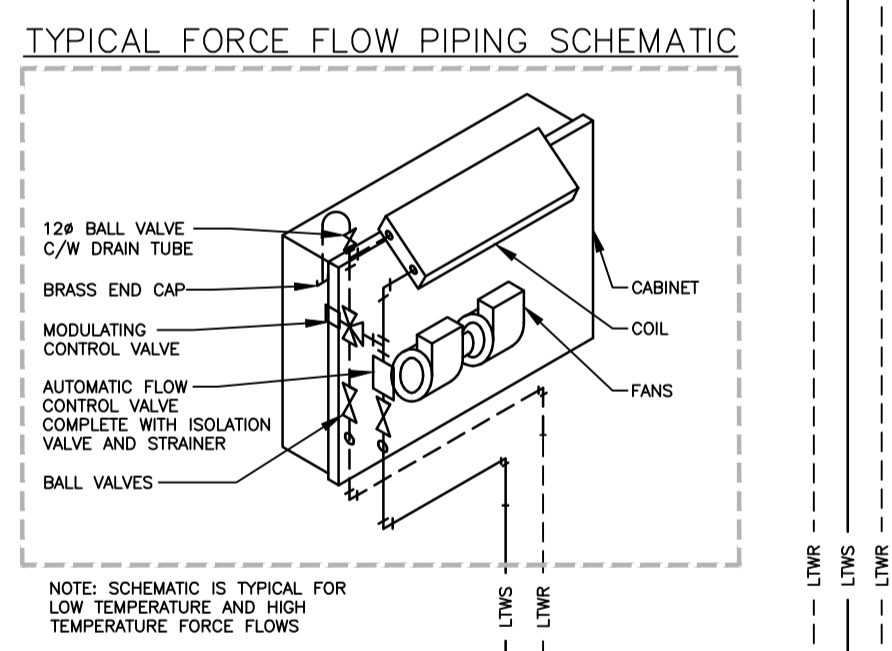
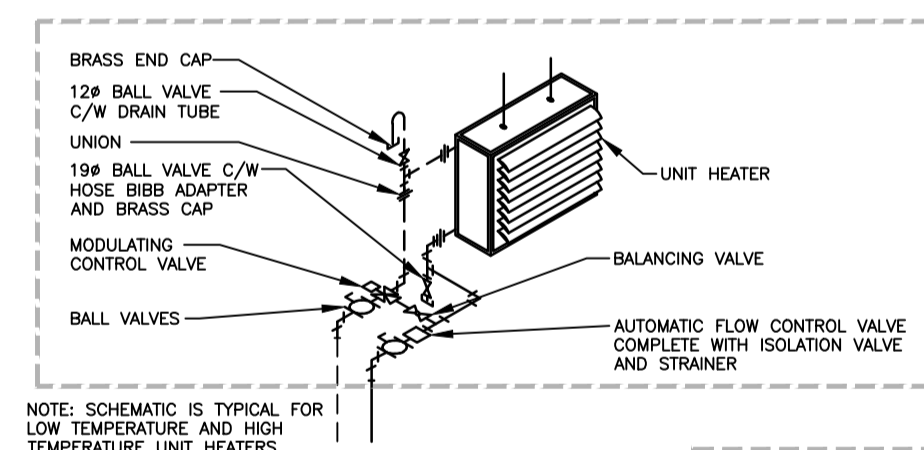
TYPICAL FORCE FLOW PIPING SCHEMATIC

THE DETAILS AND SCHEMATICS ARE DRAWN IN ACCORDANCE WITH AN AUTOMATIC FLOW RESTRICTOR DESIGNED TO BE INSTALLED ON THE SUPPLY SIDE OF THE TERMINAL DEVICE. INSTALLATION OF ALTERNATE AUTOMATIC FLOW RESTRICTOR CONFIGURATIONS SHALL ENSURE THAT THE INTENT OF THE DETAILS AND SCHEMATICS ARE MET. THE TERMINAL DEVICE AND ALL ASSOCIATED EQUIPMENT SHALL BE ISOLATED FROM THE SYSTEM MAINS, INCLUDING THE AUTOMATIC FLOW RESTRICTOR. A STRAINER SHALL BE INSTALLED UPSTREAM OF THE CONTROL VALVES AND TERMINAL DEVICE REGARDLESS OF WHETHER THE AUTOMATIC FLOW RESTRICTORS PURCHASED NEED TO BE PROTECTED.

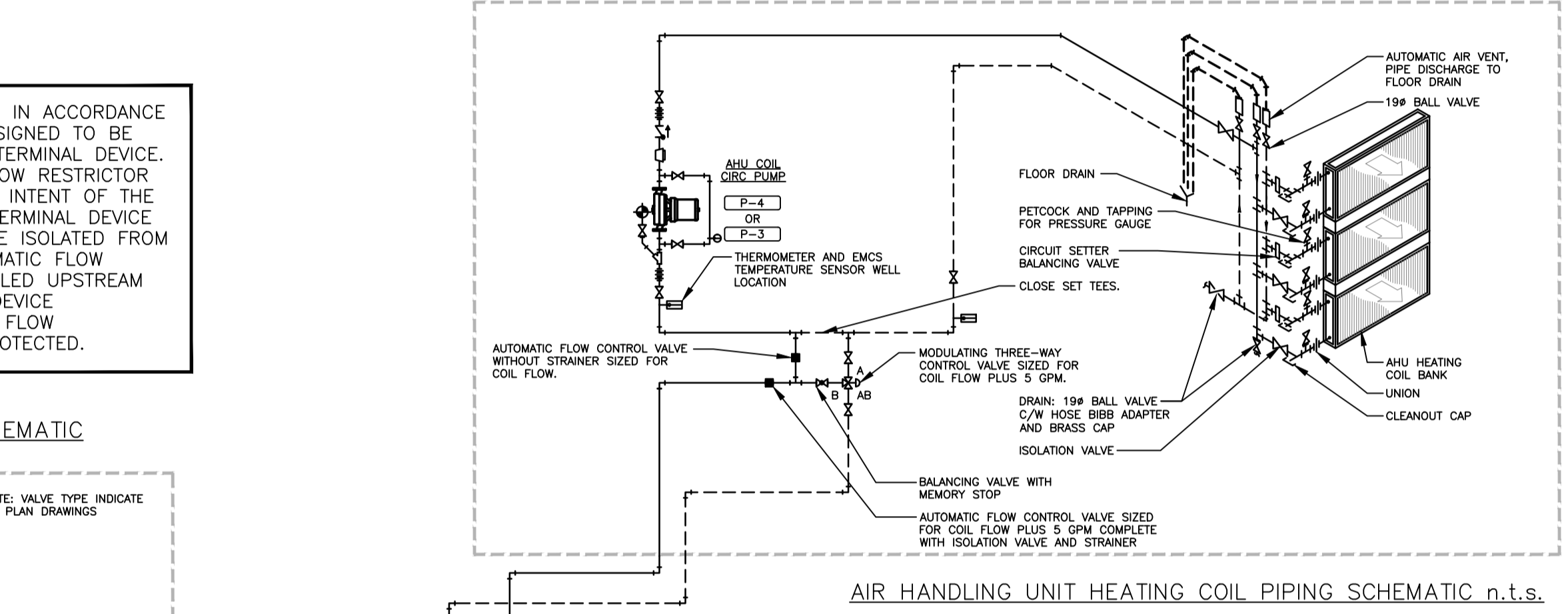
TYPICAL UNIT HEATER PIPING SCHEMATIC TWO WAY CONTROL VALVE



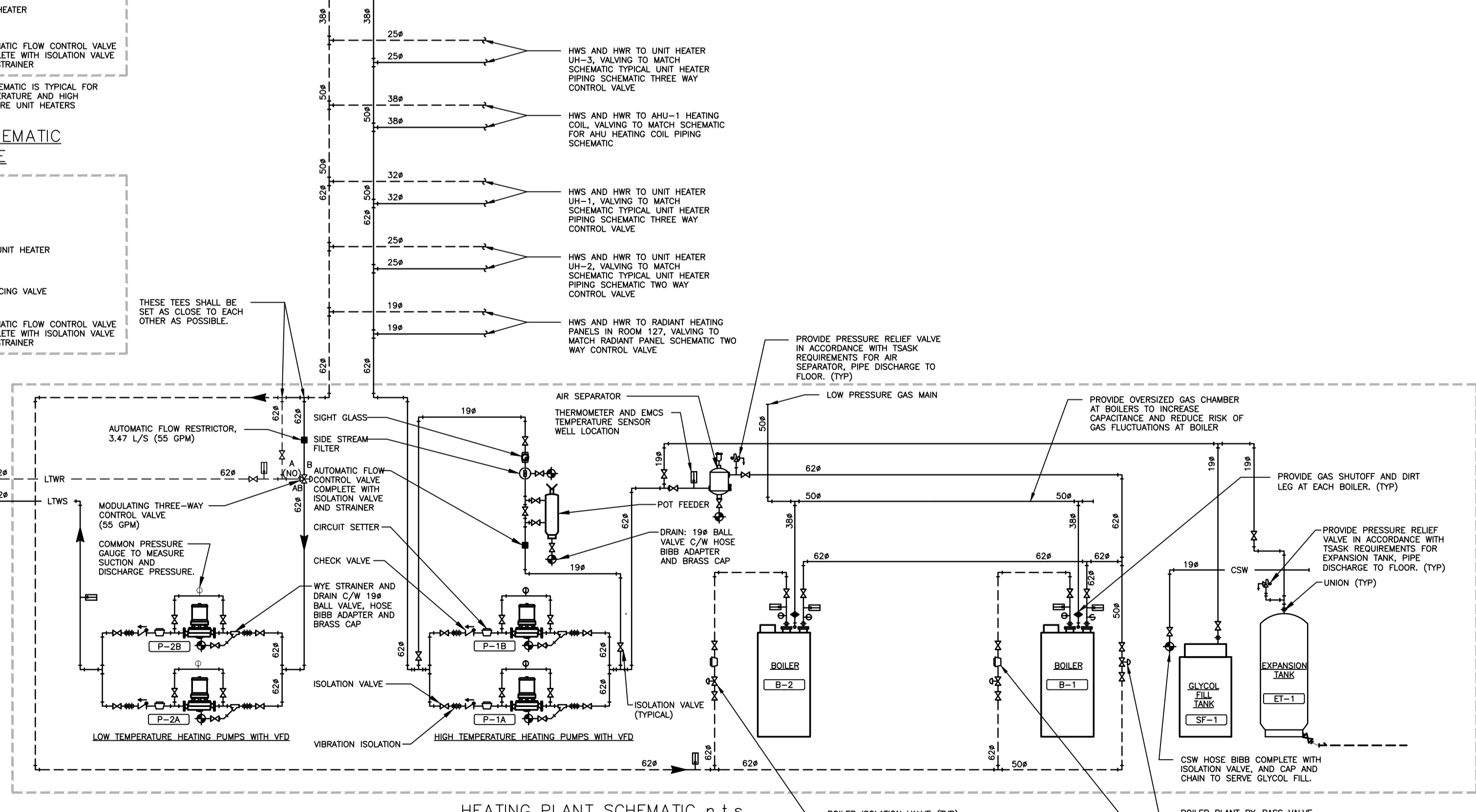
TYPICAL UNIT HEATER PIPING SCHEMATIC THREE WAY CONTROL VALVE



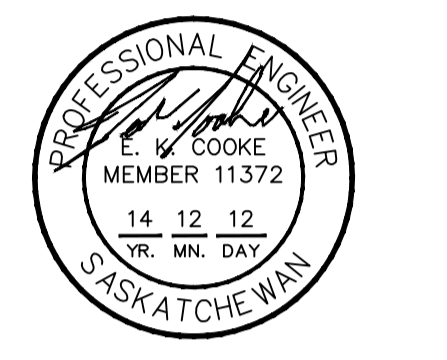
TYPICAL IN-FLOOR HEATING MANIFOLD SCHEMATIC



AIR HANDLING UNIT HEATING COIL PIPING SCHEMATIC n.t.s.



HEATING PLANT SCHEMATIC n.t.s.



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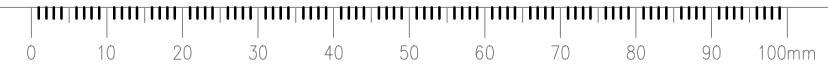
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Drawing title/Titre du dessin

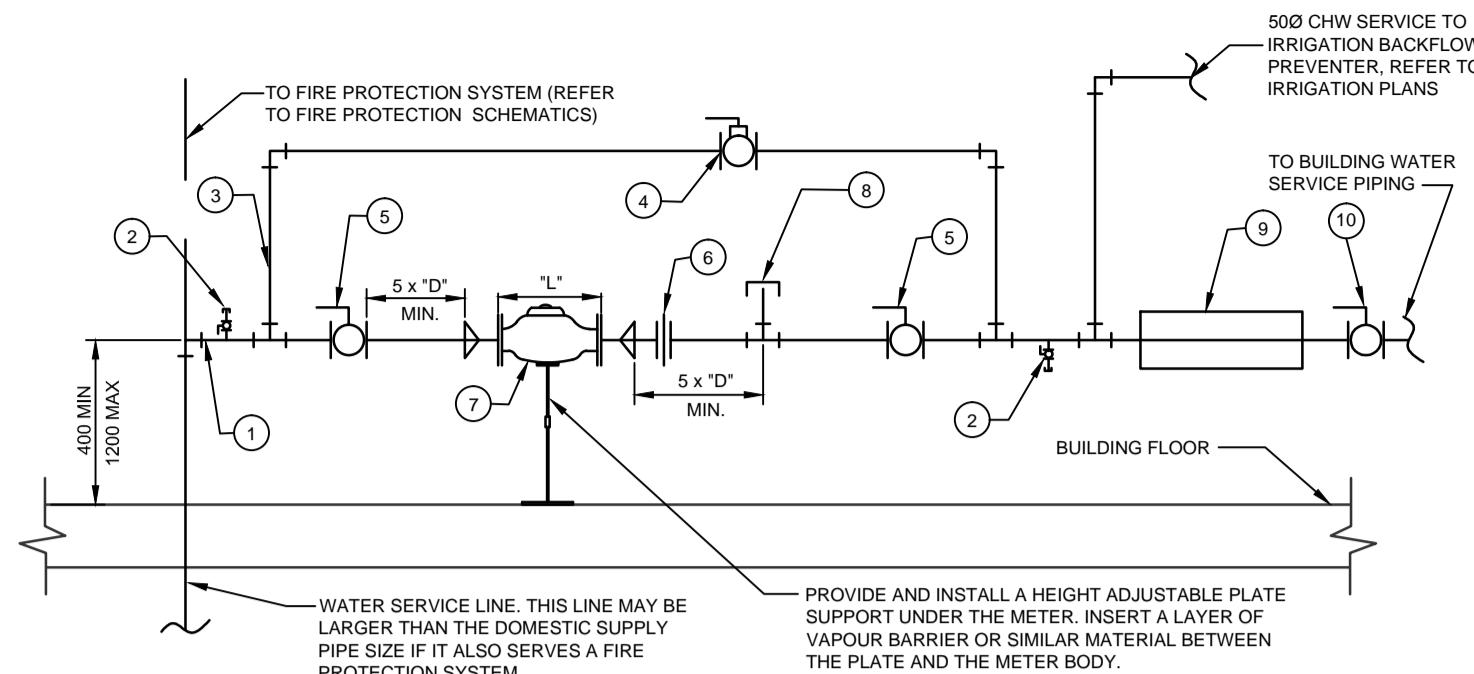
MECHANICAL SCHEMATICS

Project No./No. du projet	Sheet/Feuille	Revision no./Lo Révision no.
29/2013	M6.5	0

1 MECHANICAL ROOM PLAN  
N.T.S.



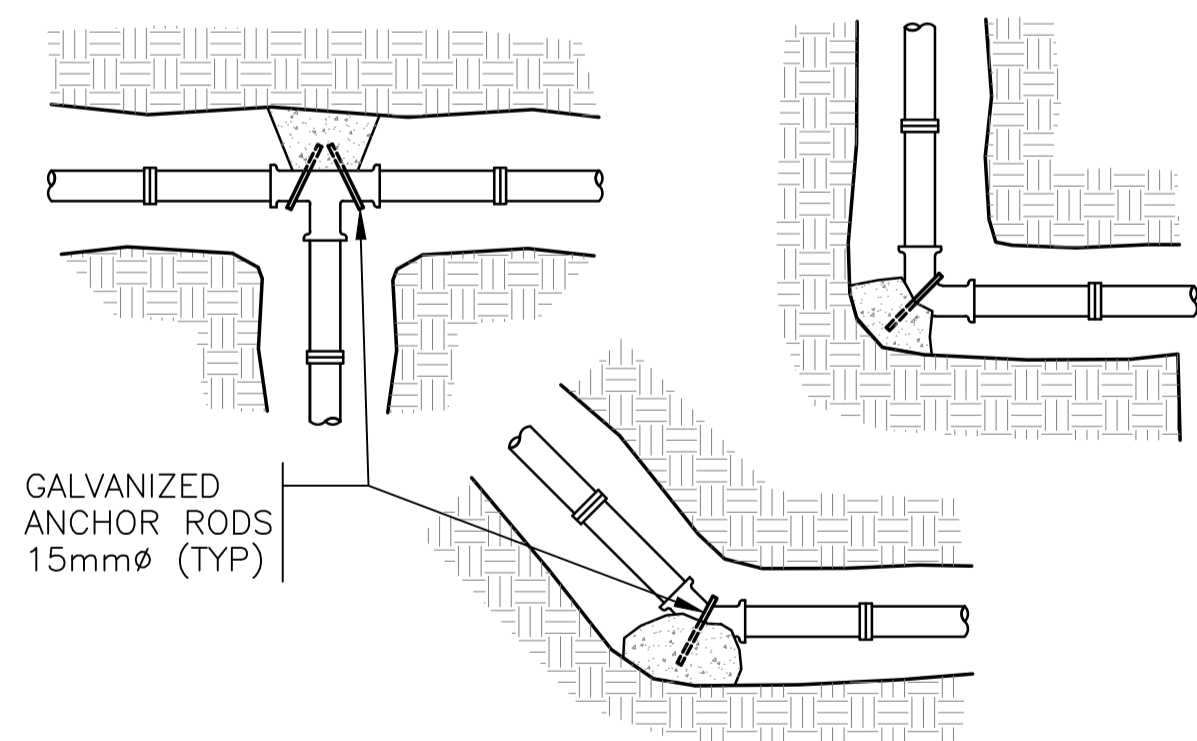




- LEGEND:
- DOMESTIC WATER SUPPLY PIPE. ISOLATING VALVES AND BYPASS VALVE MUST BE THE SAME SIZE AS THIS LINE OR THE INCOMING WATER SERVICE LINE - WHICHEVER IS SMALLER.
  - 6mm CONNECTION c/w BALL VALVE AND THREAD PLUG. ORIENT EACH CONNECTION AS SHOWN.
  - METER BYPASS LINE. THIS PIPING MAY BE ABOVE OR BELOW OR TO EITHER SIDE OF THE METER BUT IF IT IS ABOVE IT MUST BE A MINIMUM OF 500mm CLEAR ABOVE THE METER REGISTER HEAD.
  - METER BYPASS VALVE. THIS VALVE IS TO BE EITHER A BALL OR BUTTERFLY STYLE VALVE AND MUST BE EQUIPPED WITH A FACTORY SUPPLIED, QUARTER TURN, LOCKABLE LEVER ACTUATOR. IF REQUIRED, THE LOCK WILL BE PROVIDED AND INSTALLED BY A REPRESENTATIVE OF THE MUNICIPALITY. BEFORE ORDERING, ENSURE VALVES PROPOSED VALVE IS APPROVED BY MUNICIPALITY. IF THE MUNICIPALITY DOES NOT HAVE AN APPROVED VALVE LIST PROVIDE VALVE IN ACCORDANCE WITH SPECIFICATIONS.
  - METER ISOLATING VALVES - 2 REQUIRED AT LOCATIONS SHOWN. VALVES TO BE EITHER BALL OR BUTTERFLY STYLE WITH QUARTER TURN LEVER ACTUATOR. IF THERE IS A FIRE PROTECTION SYSTEM SERVED FROM THE WATER SERVICE THE ISOLATING VALVE UPSTREAM OF THE METER MUST BE A LOCKABLE TYPE. BEFORE ORDERING, ENSURE VALVES PROPOSED VALVE IS APPROVED BY MUNICIPALITY. IF THE MUNICIPALITY DOES NOT HAVE AN APPROVED VALVE LIST PROVIDE VALVE IN ACCORDANCE WITH SPECIFICATIONS.
  - QUICK DISCONNECT SUCH AS PIPE UNION OR GROOVED COUPLING.
  - WATER METER. METER SIZE WILL BE DETERMINED BY THE MUNICIPALITY. METER WILL BE SUPPLIED AND INSTALLED ONLY BY MUNICIPALITY. WATER METER MUST BE MOUNTED IN THE HORIZONTAL POSITION. PROVIDE PIPING CONNECTIONS AS REQUIRED FOR METER INSTALLATION. METER SPACER WILL BE PROVIDED BY MUNICIPALITY FOR USE BY THE PIPING CONTRACTOR.
  - 65mm CONNECTION WITH NPT THREAD CAP. ORIENT CONNECTION TOWARD THE MOST ACCESSIBLE DIRECTION FOR CONNECTION AND EXTENSION OF A TEST HOSE.
  - BACKFLOW PREVENTION ASSEMBLY c/w ISOLATING VALVES AS SPECIFIED OR REQUIRED BY THE MUNICIPALITY CROSS CONNECTION CONTROL COORDINATOR. ASSEMBLY MAY BE INSTALLED IN THE VERTICAL IF THE ASSEMBLY IS CSA APPROVED FOR MOUNTING IN THAT ORIENTATION. BACKFLOW PREVENTERS MAY ONLY BE INSTALLED DOWNSTREAM OF THE WATER METER AS SHOWN.
  - BALL OR BUTTERFLY TYPE ISOLATING VALVE FOR BACKFLOW PREVENTER.

NOTES:  
 - PIPING MATERIALS AND INSTALLATION MUST COMPLY WITH THE CANADIAN PLUMBING CODE AND THE MUNICIPAL STANDARD CONSTRUCTION SPECIFICATIONS. PROVIDE ADDITIONAL SUPPORT IF REQUIRED TO ENSURE NO STRAIN IS TRANSMITTED TO EITHER THE METER OR BACKFLOW PREVENTER.  
 - IF METER SIZE DOES NOT MATCH WATER SERVICE SIZE, PROVIDE AND INSTALL ALL REQUIRED REDUCERS AND INCREASERS. NOTE THAT USE OF THREADED REDUCING BUSHINGS IS NOT ALLOWED. REDUCERS AND INCREASERS TO BE INSTALLED AS CLOSE TO THE METER AS POSSIBLE. NOTE THAT IN SOME CASES MUNICIPALITY WILL PROVIDE TWO SMALLER METERS IN LIEU OF ONE LARGE METER.  
 - DIMENSION 'D' IS THE NOMINAL DIAMETER OF THE DOMESTIC WATER SUPPLY PIPE.  
 - DIMENSION 'L' IS THE LENGTH OF A FULL DOMESTIC PIPE SIZE WATER METER. OVERALL PIPE RUN PROVIDED MUST ALLOW FOR INSTALLATION OF A METER OF THIS LENGTH.

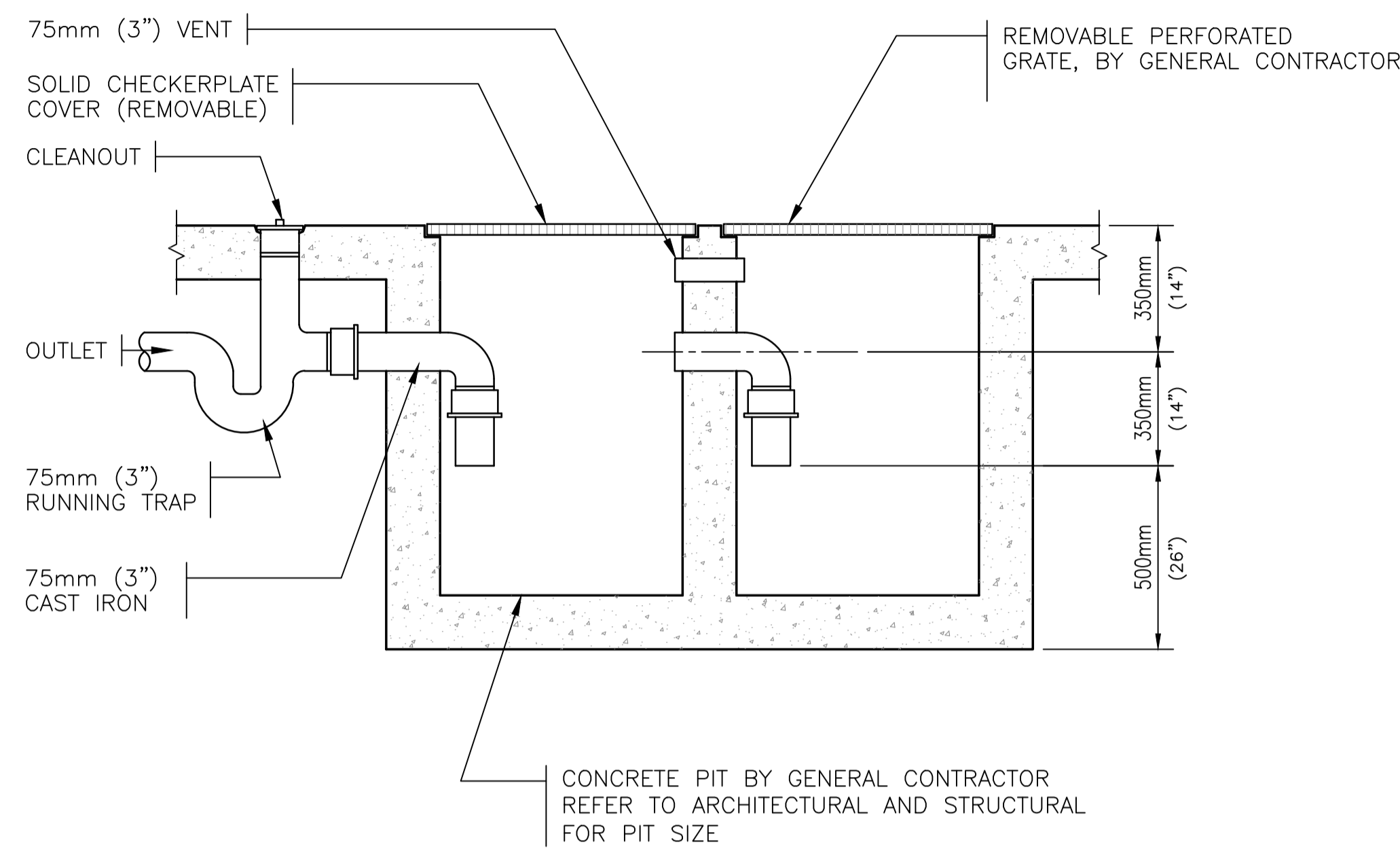
DOMESTIC WATER METER INSTALLATION SCHEMATIC



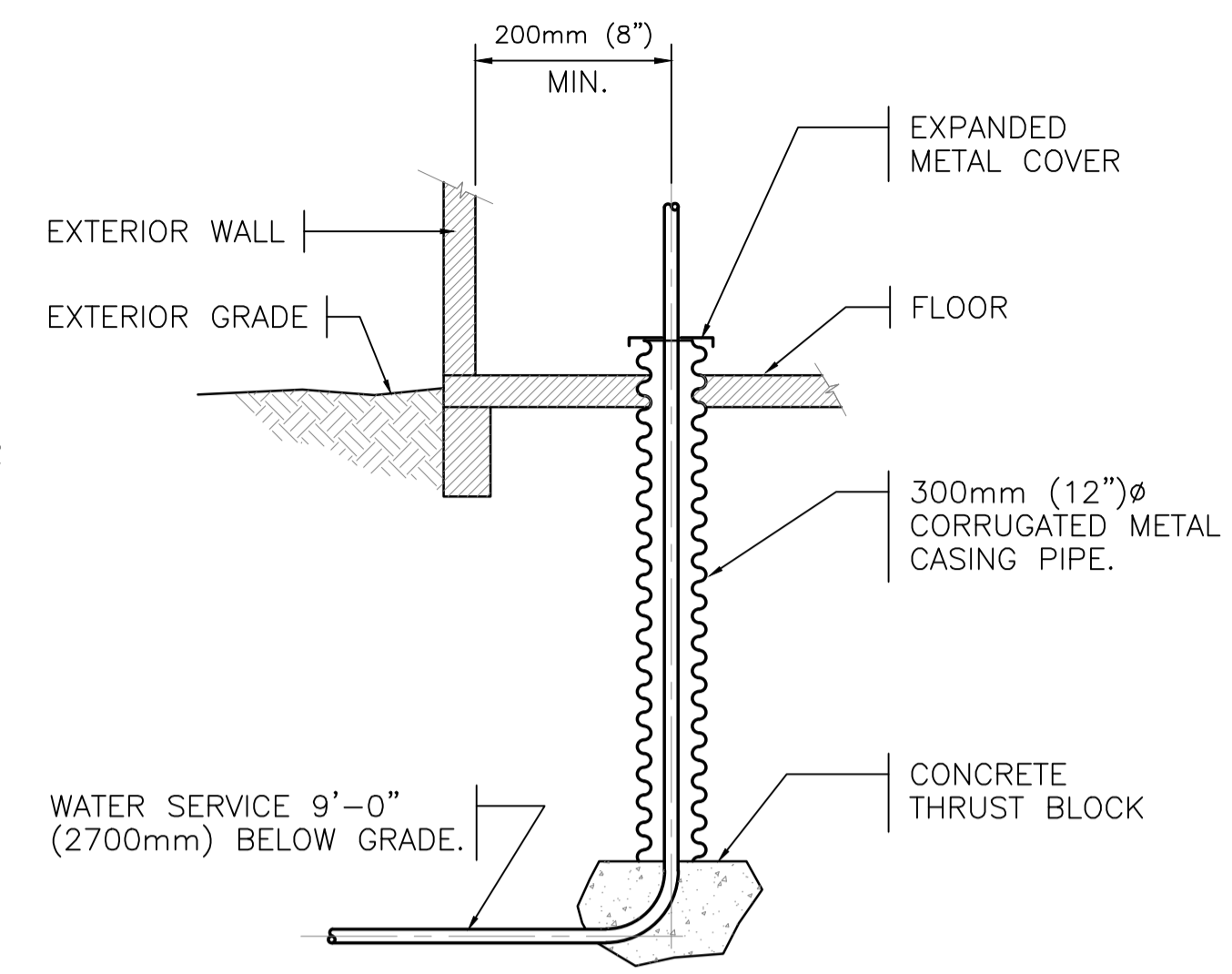
MINIMUM AREA OF CONCRETE THRUST BLOCK FROM FITTING TO SOLID GROUND (CONCRETE STRENGTH 20MPa @ 28 DAYS)			
SIZE OF PIPE	45° BEND	90° BEND	TEE
100 mm	7 dm SQ	20 dm SQ	10 dm SQ
150 mm	20 dm SQ	27 dm SQ	20 dm SQ
200 mm	27 dm SQ	47 dm SQ	37 dm SQ
250 mm	42 dm SQ	74 dm SQ	54 dm SQ

NOTE: ALL UNITS ARE IN SQUARE DECIMETERS

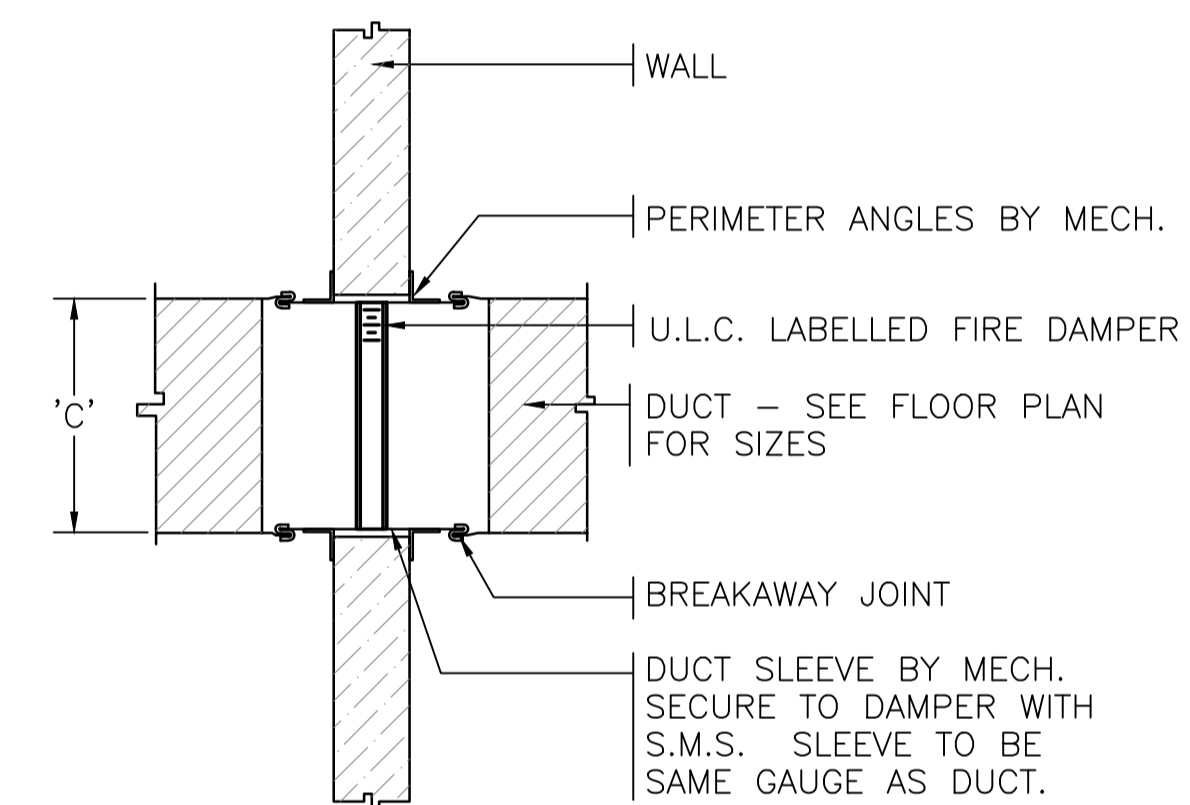
THRUST BLOCK DETAIL n.t.s.



TWO-COMPARTMENT SUMP DETAIL n.t.s.

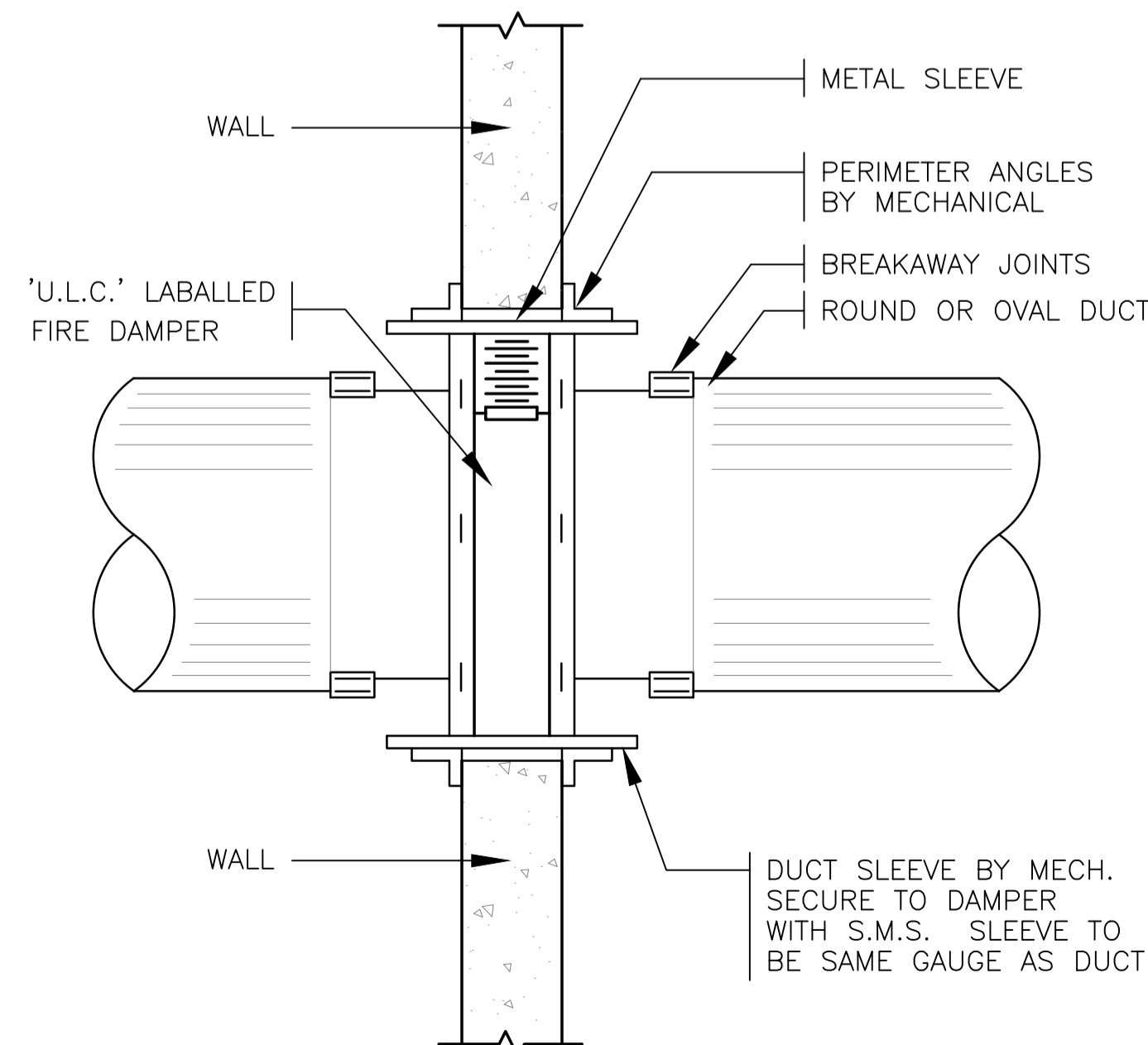


WATER SERVICE ENTRY DETAIL n.t.s.

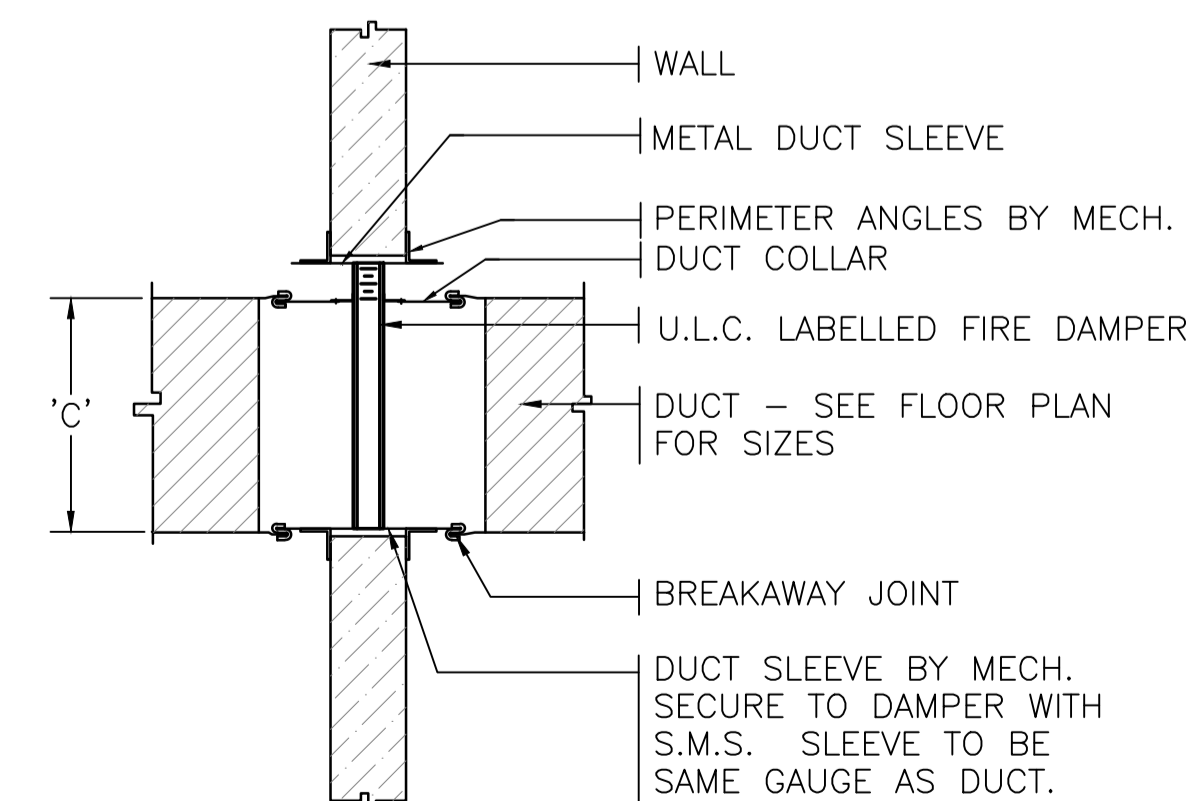


FOR DUCTS WITH 'C' DIMENSION 300 (12") AND LARGER.

TYPE 'A' FIRE DAMPER - n.t.s.

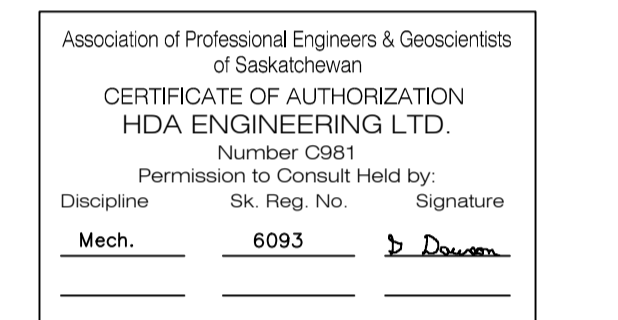


TYPE 'C' FIRE DAMPER n.t.s.



FOR DUCTS WITH 'C' DIMENSION SMALLER THAN 300 (12")

TYPE 'B' FIRE DAMPER - n.t.s.



DO NOT SCALE DRAWINGS

Revision/Revision	Description/Description	Date/Date
0	ISSUED FOR TENDER	2014-12-08

Project title/Titre du projet

**NEW POLICE BUILDING  
MAIDSTONE, SASKATCHEWAN**

Approved by/Approve par  
NFH

Designed by/Concept par  
TKC

Drawn by/Dessine par  
JNM

Project Manager/Administrateur de Projets  
CS

Architectural and Engineering Resources Manager/  
Ressources Architectural et de Directeur d'Ingénierie

Client/client

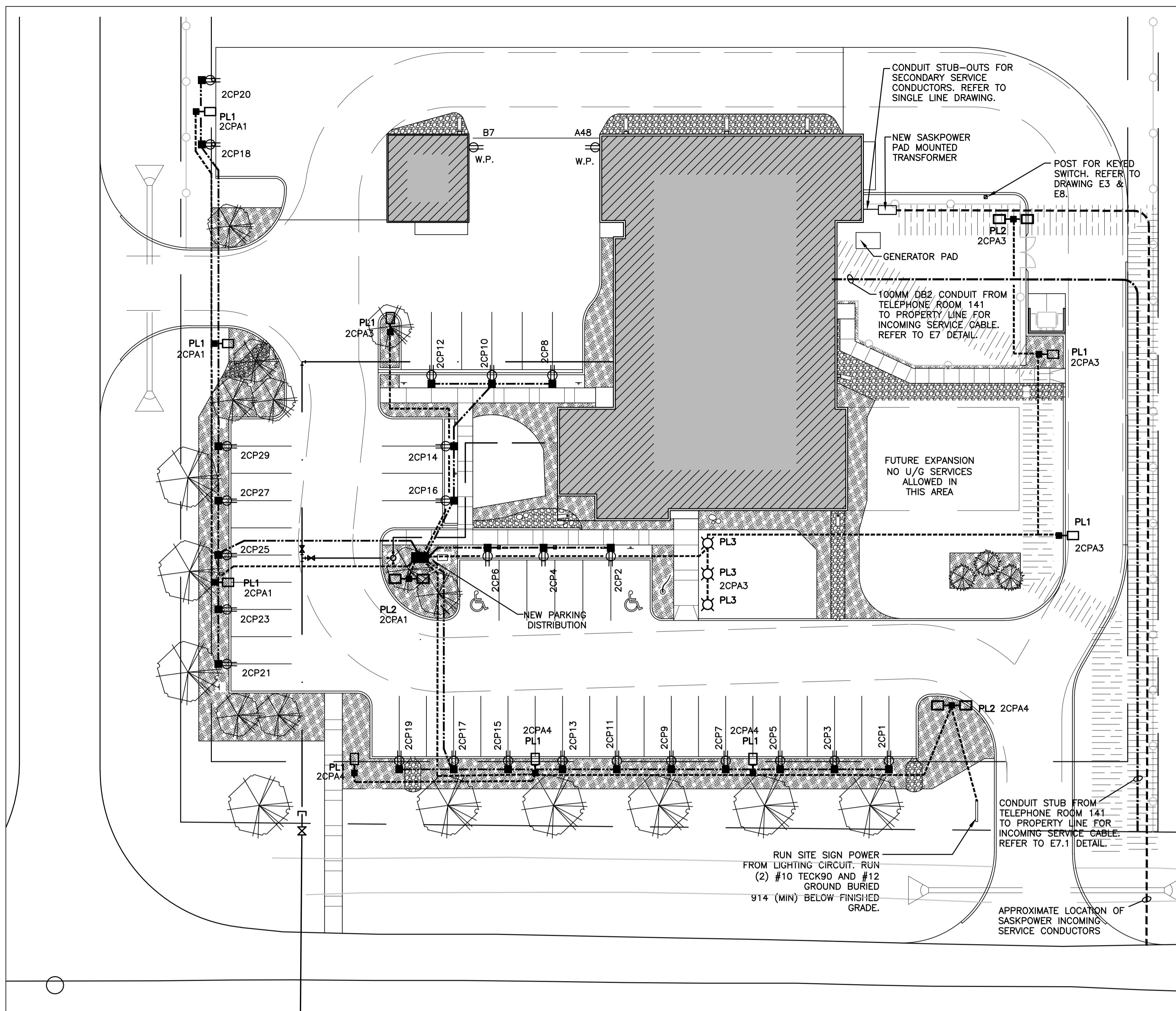
Drawing title/Titre du dessin

**MECHANICAL SCHEMATICS**

Project No./No. du projet	Sheet/Feuille	Revision no./La Révision no.
29/2013	M6.6	0

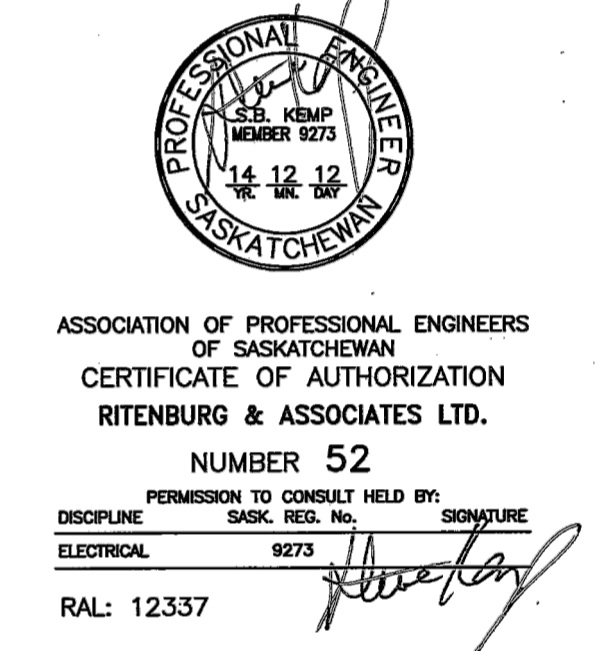
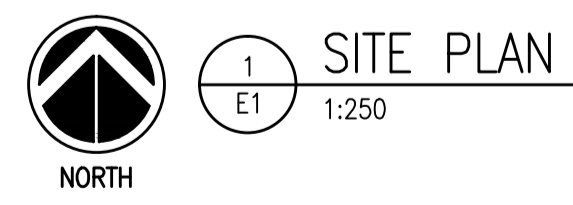






- SYMBOL SCHEDULE**
- ⊕ JUNCTION BOX/OUTLET BOX.
  - ⊙ CEILING/WALL SURFACE MOUNTED INCANDESCENT OR HIGH INTENSITY DISCHARGE FIXTURE.
  - ⊙ RECESSED CEILING MOUNTED FIXTURE
  - ▭ FLUORESCENT FIXTURE, SURFACE MOUNTED OR SUSPENDED.
  - ▭ FLUORESCENT FIXTURE, RECESSED.
  - ▭ FLUORESCENT FIXTURE, SURFACE MOUNTED - NON SWITCHED
  - ▭ ELECTRICAL DISTRIBUTION PANEL, SURFACE/RECESSED.
  - ⊕ MOTOR CONNECTION. COORDINATE FINAL LOCATION ON SITE. 'STP' DESIGNATES MOTOR THERMAL SWITCH MOUNTED AT UNIT.
  - ⊕ COPPCCLAD GROUND ROD 3045mm LONG X 20mm DIAMETER. CONNECTIONS SHALL BE THERMOWELDED OR BURNDY HI-GRND.
  - ⊕ MOULDED CASE TYPE CIRCUIT BREAKER, 15 AMP UNLESS OTHERWISE NOTED.
  - ⊕ MOULDED CASE TYPE CIRCUIT BREAKER, GROUND FAULT INTERRUPTER, 15 AMP UNLESS OTHERWISE NOTED.
  - ⊕ WP MOTOR DISCONNECT SWITCH, SUFFIX 'WP' INDICATES WEATHERPROOF.
  - ⊕ S.P.S.T. SWITCH MOUNTED UP 1200mm. SUFFIX 'F' FOR FAN CONTROL.
  - ⊕ THREE-WAY SWITCH MOUNTED UP 1200mm.
  - ⊕ 3-POSITION LIGHT SWITCH. SWITCH MOUNTED UP 1200mm
  - ⊕ FOUR-WAY SWITCH MOUNTED UP 1200mm.
  - ⊕ KEY OPERATED SWITCH MOUNTED UP 1200mm. CONTRACTOR SHALL PROVIDE AND INSTALL AS SPECIFIED.
  - ⊕ DIMMER SWITCH MOUNTED UP 120mm, DIMMER SHALL BE SIZED ACCORDING TO LOAD AND SUITABLE FOR 'LED'.
  - ⊕ FIRE ALARM MANUAL PULL STATION MOUNTED UP 1350mm A.F.F.
  - ⊕ FIRE ALARM SIGNAL DEVICE (HORN/STROBE) SURFACE WALL MOUNTED UP 2290mm A.F.F.
  - ⊕ PHOTO-ELECTRIC TYPE DUCT SMOKE DETECTOR.
  - ⊕ SPRINKLER SYSTEM FLOW SWITCH SUPPLIED AND INSTALLED BY THE MECHANICAL CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL PROVIDE A MONITOR MODULE WITH A SEPARATE FIRE ALARM ADDRESS. CONFIRM THE EXACT NUMBER AND LOCATIONS OF DEVICES WITH THE MECHANICAL CONTRACTOR.
  - ⊕ SPRINKLER SYSTEM TAMPER SWITCH SUPPLIED AND INSTALLED BY THE MECHANICAL CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL PROVIDE A MONITOR MODULE AND WIRE AS A FIRE ALARM TROUBLE/SUPERVISORY POINT. CONFIRM EXACT NUMBER AND LOCATIONS OF DEVICES WITH THE MECHANICAL CONTRACTOR.
  - ⊕ RM FIRE ALARM CONTROL/RELAY MODULE
  - ⊕ MM FIRE ALARM MONITOR MODULE
  - ⊕ FIRE ALARM SYSTEM COMBINATION TYPE SMOKE DETECTOR CEILING MOUNTED.
  - ⊕ FIRE ALARM SYSTEM HEAT DETECTOR, COMBINATION 135 DEGREES FIXED TEMP/RATE OF RISE.
  - ⊕ EMERGENCY LIGHTING UNIT. SEE EMERGENCY LIGHTING SPECIFICATIONS FOR DETAILS.
  - ⊕ 20A ⊕ DUPLEX GROUNDED RECEPTACLE OUTLETS WITH NO SUFFIX SHALL BE MOUNTED UP 450mm. WHERE SUFFIXED, MOUNT AS FOLLOWS: 'a'- 250mm. ABOVE COUNTER; 'b'- UP 900mm.; 'f' FRIDGE RECEPTACLE UP 450mm; 'hk' 20A RECEPTACLE UP 450mm FOR HOUSE KEEPING; 'm' MICROWAVE RECEPTACLE UP 250mm ABOVE MICROWAVE SHELF. COORDINATE WITH ARCHITECTURE MILLWORK FOR EXACT LOCATION.
  - ⊕ WP ⊕ DUPLEX GROUNDED RECEPTACLE C/W 'WHILE IN USE' COVER MOUNTED UP 900mm.
  - ⊕ ⊕ DUPLEX GROUNDED RECEPTACLE, SPLIT WIRED, PROTECTED BY TWO POLE BREAKER AT PANEL. SEE DRAWINGS FOR MOUNTING HEIGHT.
  - ⊕ ⊕ DUPLEX GROUNDED RECEPTACLE MOUNTED IN RECESSED ADJUSTABLE FLUSH FLOOR BOX. REFER TO DRAWING NOTES FOR SPECIFICATIONS.
  - ⊕ ⊕ DATA AND A/V OUTLET MOUNTED IN RECESSED ADJUSTABLE FLUSH FLOOR BOX. REFER TO DRAWING NOTES FOR SPECIFICATIONS.
  - ⊕ 20A ⊕ DUPLEX GROUNDED RECEPTACLE, 20 AMP T-SLOT MOUNTED UP 450mm.
  - ⊕ ⊕ DUPLEX GROUNDED RECEPTACLE MOUNTED UP 450mm FED FROM EMERGENCY POWER SUPPLY. BODY OF RECEPTACLE SHALL BE IMPREGNATED 'RED' COLOUR.
  - ⊕ 1D/1V ⊕ DATA/VOICE OUTLET MOUNTED UP 450 mm. 100 mm. SQUARE BOX C/W SINGLE GANG EXTENSION AND 20 mm CONDUIT. SUFFIX '1D' INDICATES ONE DATA JACK. '1V' INDICATES ONE VOICE JACK. CABLE TYPE SHALL BE TERMINATED AT THE DATA PATCH PANEL AND OUTLET BOX VOICE CABLE TYPE SHALL BE TERMINATED AT THE OUTLET BOX AND BIX BLOCK.
  - ⊕ ⊕ OCCUPANCY SENSORS 'OC1', 'OC2', CEILING MOUNTED AS DESCRIBED ON DRAWINGS, AND SPECIFICATIONS.
  - ⊕ ⊕ RECESSED SINGLE GANG BOX MOUNTED UP 900mm, FOR POWER DOOR OPERATOR.
  - PL2 ⊕ ⊕ POLE MOUNTED LUMINAIRE WITH TWO HEADS.
  - PL1 ⊕ ⊕ POLE MOUNTED LUMINAIRE WITH ONE HEAD.
  - PL3 ⊕ ⊕ LED BOLLARD MOUNTED ON CONCRETE BASE. REFER TO DETAIL.
  - ⊕ ⊕ DUPLEX GROUNDED RECEPTACLE OUTLETS MOUNTED IN PEDESTAL.
- NOTE:** SUBSCRIPT 'CLG' DENOTES DEVICE IS CEILING MOUNTED.

- GENERAL NOTES:**
1. THE CONTRACTOR SHALL LOCATE ALL UNDER GROUND SERVICES PRIOR TO TRENCHING OR BORING FOR NEW UNDER GROUND FEEDERS.
  2. ALL UNDER GROUND FEEDERS SHALL BE A MINIMUM OF 914mm BELOW FINISHED GRADE.
  3. REFER TO TRENCH DETAIL ON DRAWING E7.1 FOR UNDER GROUND FEEDERS FROM BUILDING TO TRANSFORMER.



**DO NOT SCALE DRAWINGS**

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0	ISSUED FOR TENDER	2014-02-08

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**NEW POLICE BUILDING  
MAIDSTONE, SASKATCHEWAN**

Approved by/Approve par  
SBK

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GTK

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Project Manager/Administrateur de Projets  
CS

Architectural and Engineering Resources Manager/  
Ressources Architectural et de Directeur d'ingénierie

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Drawing title/Titre du dessin

**SITE PLAN  
& SYMBOL SCHEDULE**

Project No./No. du projet	Sheet/Fauille	Revision no./La Révision no.
29/2013	E1	0

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LAYOUT NAME: E1





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Revision/Revision	Description/Description	Date/Date
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 MAIDSTONE, SASKATCHEWAN**

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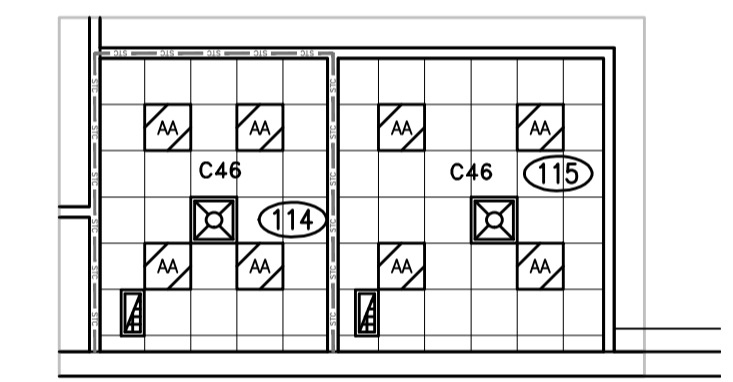
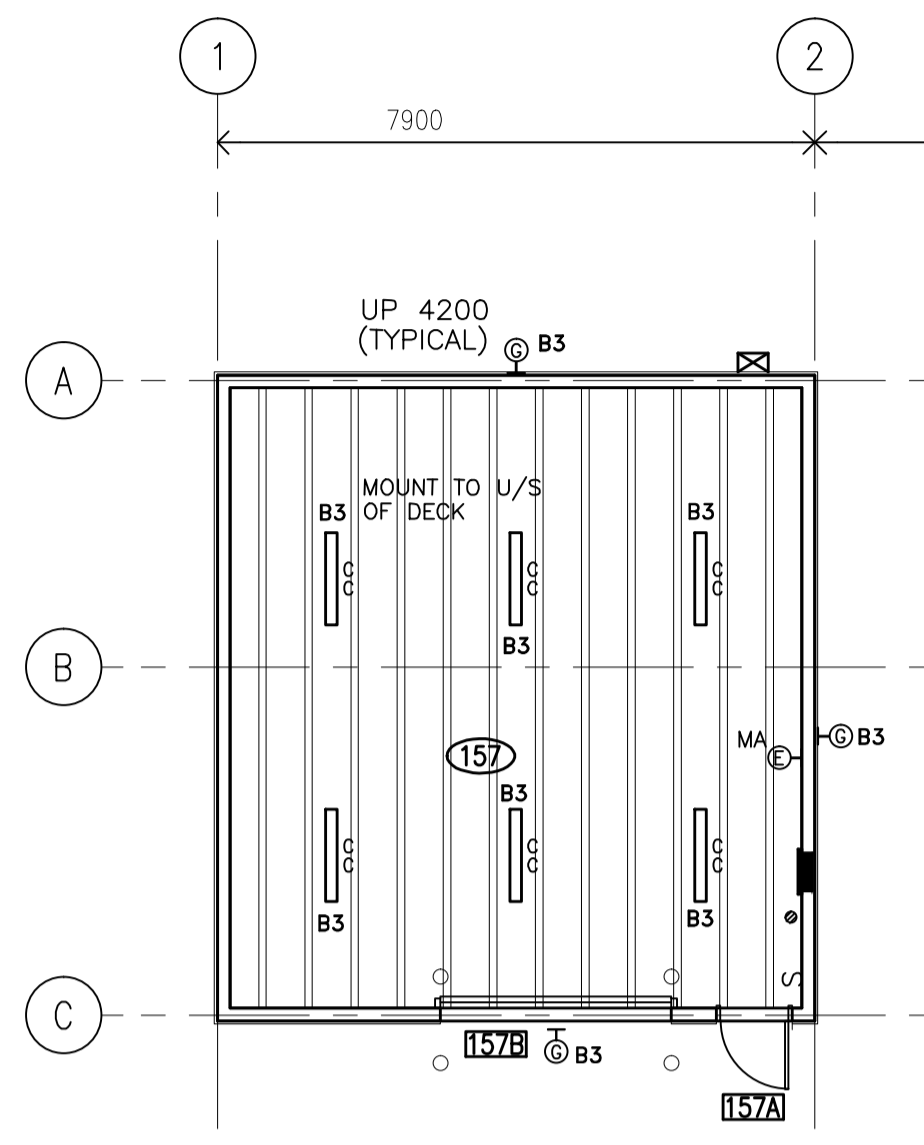
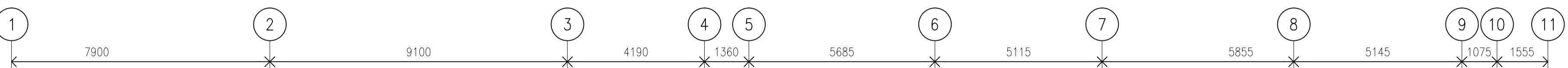
Drawing title/Titre du dessin  
**MAIN FLOOR  
 LIGHTING PLAN**

Project No./No. du projet	Sheet/Fauille	Revision no./La Révision no.
29/2013	E2	0

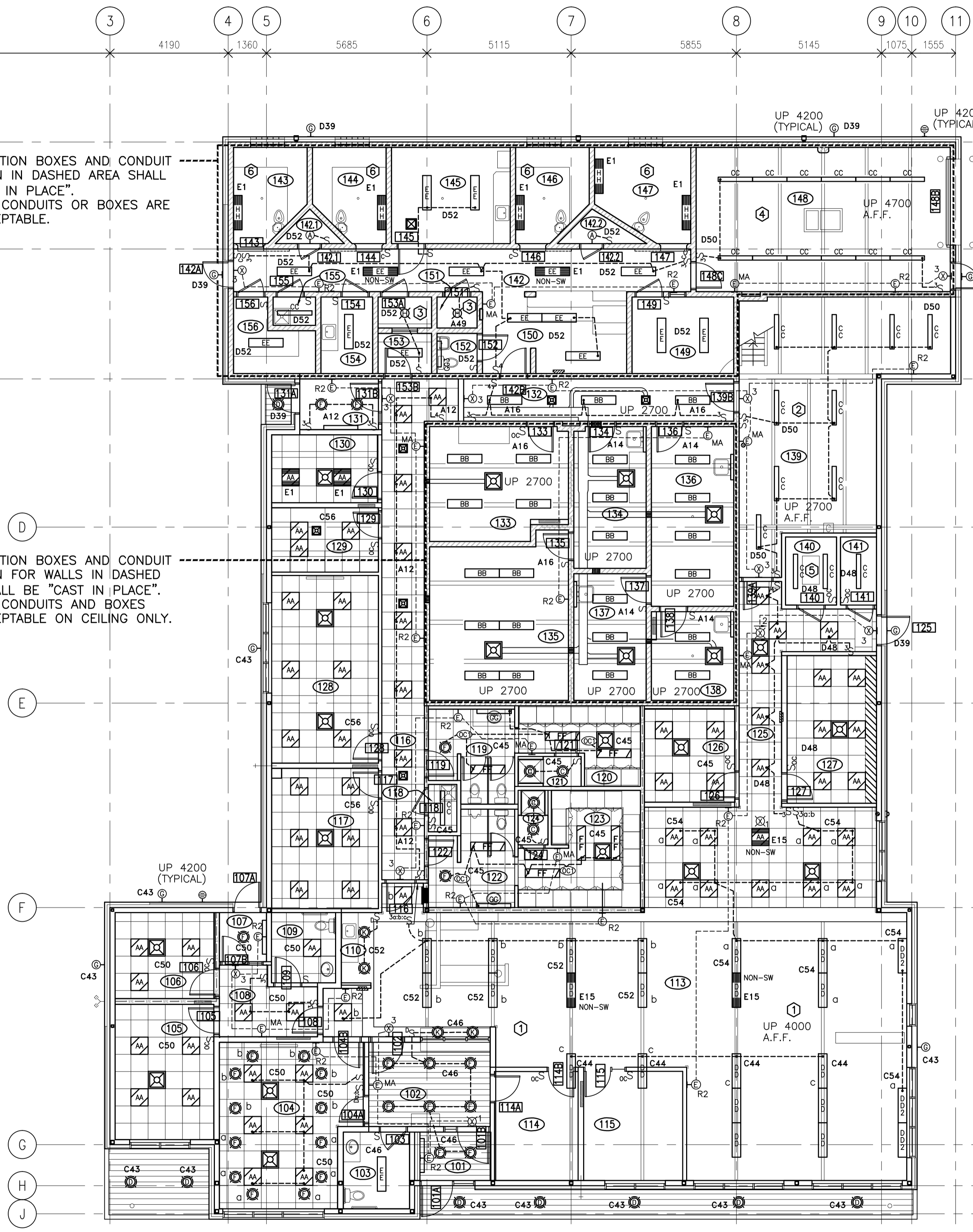
- MAIN FLOOR LIGHTING NOTES:**
- SUSPEND LUMINAIRES FROM UNDERSIDE OF ROOF TRUSS. RUN CONDUITS ALONG BOTTOM CORD OF TRUSS TO WALL. CONDUITS SHALL BE NEATLY INSTALLED TO BE HIDDEN FROM SIGHT AND PAINTED TO MATCH TRUSS FINISH. REFER TO SPECIFICATIONS FOR MOUNTING HEIGHTS.
  - COORDINATE LOCATIONS OF LUMINAIRES WITH MECHANICAL DUCTS AND PIPING TO ACHIEVE OPTIMUM LIGHTING OF SPACE.
  - COORDINATE LOCATION OF RECESSED LUMINAIRES WITH STRUCTURAL DRAWINGS FOR INSTALLATION OF BACK BOXES PRIOR TO DECK BEING POURED.
  - FIXTURES IN THIS SPACE SHALL BE SUSPENDED USING STEM MOUNT OR CONDUIT. CHAIN HANGING OF FIXTURES WILL NOT BE ACCEPTED.
  - COORDINATE MOUNTING OF FIXTURE WITH CABLE TRAY. REFER TO DRAWING E3 FOR TRAY LOCATION.
  - COORDINATE DIMENSIONS OF FINAL LOCATIONS FOR TYPE 'HH' FIXTURES WITH ARCHITECTURAL DETAIL DRAWINGS.

ALL JUNCTION BOXES AND CONDUIT ROUGH-IN IN DASHED AREA SHALL BE "CAST IN PLACE". SURFACE CONDUITS OR BOXES ARE NOT ACCEPTABLE.

ALL JUNCTION BOXES AND CONDUIT ROUGH-IN FOR WALLS IN DASHED AREA SHALL BE "CAST IN PLACE". SURFACE CONDUITS AND BOXES ARE ACCEPTABLE ON CEILING ONLY.

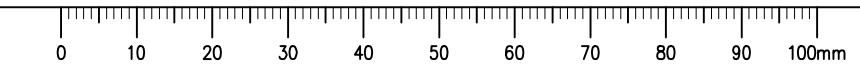


**ROOM 114 & 115 LIGHTING PLAN**  
 1:100  
 NORTH



**LIGHTING PLAN**  
 1:100  
 NORTH

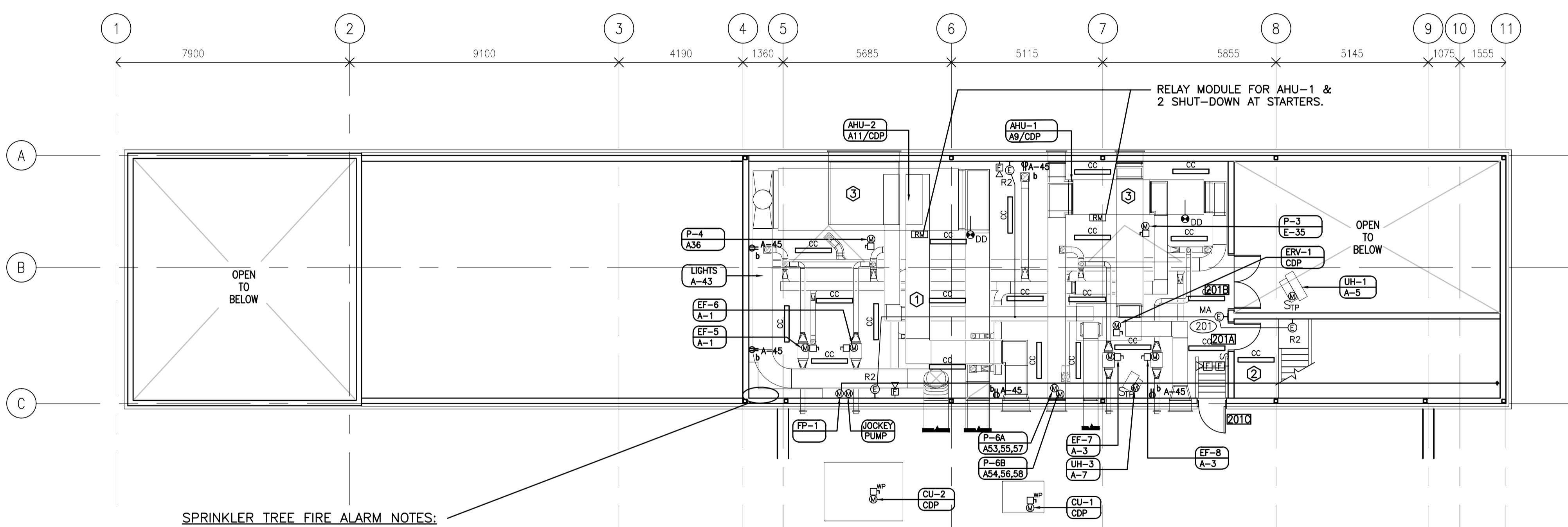
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 LAYOUT NAME: E2











- SPRINKLER TREE FIRE ALARM NOTES:**
- ⊠ ⊠ BACK FLOW TAMPER SWITCHES.
  - ⊠ ⊠ FIRE PUMP ISOLATION VALVES.
  - ⊠ ⊠ FIRE PUMP BY-PASS VALVES.
  - ⊠ FIRE PUMP "RUNNING" MONITOR MODULE.
  - ⊠ FIRE PUMP "FAIL" MONITOR MODULE.
  - ⊠ SPRINKLER PRESSURE SWITCH.
  - ⊠ ⊠ MAIN SPRINKLER SHUT-OFF VALVE & MAIN SPRINKLER FLOW VALVE.
  - ⊠ ⊠ MAIN FLOOR ZONE CONTROL VALVE & FLOW SWITCH.
  - ⊠ ⊠ CELL AREA ZONE CONTROL VALVE & FLOW SWITCH.
  - ⊠ ⊠ SERVICE SPACE ZONE CONTROL VALVE & FLOW SWITCH.

- SERVICE SPACE LIGHTING NOTES:**
- ① COORDINATE LOCATIONS OF LUMINAIRES WITH MECHANICAL DUCTS AND PIPING TO ACHIEVE OPTIMUM LIGHTING OF SPACE.
  - ② MOUNT LUMINAIRE AS HIGH AS POSSIBLE ABOVE LANDING AND CONNECT TO MECHANICAL ROOM LIGHTING CIRCUIT.
  - ③ PROVIDE CONNECTION TO AHU LIGHTS AND RECEPTACLES, CIRCUITS A-9 AND A-11.

**1 LIGHTING & POWER AND SYSTEM PLAN**  
 E4 1:100  
 NORTH

**DO NOT SCALE DRAWINGS**

Revision/Revision	Description/Description	Date/Date
0	ISSUED FOR TENDER	2014-02-08

Project title/Titre du projet  
**NEW POLICE BUILDING  
 MAIDSTONE, SASKATCHEWAN**

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Drawing title/Titre du dessin  
**MEZZANINE  
 LIGHTING AND  
 POWER AND SYSTEMS PLAN**

Project No./No. du projet	Sheet/Feuille	Revision no./La Révision no.
29/2013	E4	0

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# MOTOR & EQUIPMENT SCHEDULE

Equip  
Cct #

Item	Description	Emerg.●	kW	H.P.	Volt	∅	F.L.A.	M.C.A	Starter:	Size	Starter Location	Fuse	Brkr	Feeder	Panel	Notes
AHU-1	AIR HANDLING UNIT RF-1 - SERVICE SPACE 201		1.2	2	208	3	7.8	-	VFD	-	201		15A-3P	3 #12 + #12 INS. BOND IN 21C.	CDP & PANEL A	SEE NOTE 5 & 2 & 3 & 6
	AIR HANDLING UNIT SF-1 - SERVICE SPACE 201		1.5	2	208	3	7.8	-	VFD	-	201		15A-3P	3 #12 + #12 INS. BOND IN 21C.	CDP & PANEL A	SEE NOTE 5
AHU-2	AIR HANDLING UNIT RF-2 - SERVICE SPACE 201		3.73	5	208	3	17.5	-	VFD	-	201		30A-3P	3 #10 + #10 INS. BOND IN 21C.	CDP & PANEL A	SEE NOTE 5 & 2 & 3 & 6
	AIR HANDLING UNIT SF-2 - SERVICE SPACE 201		11.19	15	208	3	48.3	-	VFD	-	201		60A-3P	3 #6 + #6 INS. BOND IN 27C.	CDP	SEE NOTE 5
AHU-1	HEAT RECOVER WHEEL		0.25	1/3	208	3	-	-	-	-	-		-	3 #6 + #6 INS. BOND IN 27C.	PANEL A	SEE NOTE 4
CU-1	CONDENSING UNIT ON ROOF		-	-	208	3	28	31	F.V.N.R.	-	-		40A-3P	3 #8 + #10 INS. BOND IN 27C.	CDP	SEE NOTE 1 & 6
CU-2	CONDENSING UNIT ON ROOF		-	-	208	3	136	150	F.V.N.R.	-	-		200A-3P	3 #3/0 + #6 INS. BOND IN 53C.	CDP	SEE NOTE 1 & 6
ERV-1	ENERGY RECOVERY VENTILATOR		-	-	208	3	-	34.1	VFD	-	-		45A-3P	3 #12 + #12 INS. BOND IN 21C.	CDP	SINGLE POINT CONNECTION
CUH-1	CABINET UNIT HEATER - VEST 101		.19	1/4	120	1	5.8	-	TH. SW.	-	-		15A-1P	2 #12 + #12 INS. BOND IN 21C.	PANEL C	SEE NOTE 6
CUH-2	CABINET UNIT HEATER - VEST 107		.19	1/4	120	1	5.8	-	TH. SW.	-	-		15A-1P	2 #12 + #12 INS. BOND IN 21C.	PANEL C	SEE NOTE 6
CUH-3	CABINET UNIT HEATER - VEST 131		.19	1/4	120	1	5.8	-	TH. SW.	-	-		15A-1P	2 #12 + #12 INS. BOND IN 21C.	PANEL A	SEE NOTE 6
CUH-4	CABINET UNIT HEATER CEILING MOUNTED - CORR 125		.19	1/4	120	1	5.8	-	TH. SW.	-	-		15A-1P	2 #12 + #12 INS. BOND IN 21C.	PANEL A	SEE NOTE 6
AC-1	AIR CONDITIONER - LAN 140		2.65	-	208	1	-	-	-	-	-		25A-2P	2 #10 + #10 INS. BOND IN 21C.	PANEL A	SEE NOTE 1, UNIT C/W CONDENSATE PUMP
CU-3	CONDENSER UNIT - ROOF ABOVE LAN 140		-	-	208	1	-	18	-	-	-		30A-2P	2 #10 + #10 INS. BOND IN 21C.	PANEL A	SEE NOTE 1
B-1, B-2	BOILER UNIT - M&E 139		-	-	120	1	20 ea	-	-	-	-		30A-1P ea	2 #10 + #10 INS. BOND IN 21C.	PANEL A	-
DWH-1, DWH-2	WATER HEATER - M&E 139		-	-	120	1	FR	-	-	-	-		15A-1P	2 #12 + #12 INS. BOND IN 21C.	PANEL A	SEE NOTE 7
P-1A	BOILER CIRC PUMP - M&E 139		1.49	2	208	3	7.8	-	VFD	-	139		15A-3P	3 #12 + #12 INS. BOND IN 21C.	PANEL E	SEE NOTE 5 & 6
P-1B	BOILER CIRC PUMP - M&E 139		1.49	2	208	3	7.8	-	VFD	-	139		15A-3P	3 #12 + #12 INS. BOND IN 21C.	PANEL E	SEE NOTE 5 & 6
P-2A	BUILDING HEATING PUMP - M&E 139		1.49	2	208	3	7.8	-	VFD	-	139		15A-3P	3 #12 + #12 INS. BOND IN 21C.	PANEL A	SEE NOTE 5 & 6
P-2B	BUILDING HEATING PUMP - M&E 139		1.49	2	208	3	7.8	-	VFD	-	139		15A-3P	3 #12 + #12 INS. BOND IN 21C.	PANEL A	SEE NOTE 5 & 6
P-3	AUH-1 PUMP - M&E 139		0.12	1/6	120	1	3.0	-	FVNR	-	139		15A-1P	2 #12 + #12 INS. BOND IN 21C.	PANEL E	SEE NOTE 6
P-4	AUH-2 PUMP - M&E 139		0.12	1/6	120	1	3.0	-	FVNR	-	139		15A-1P	2 #12 + #12 INS. BOND IN 21C.	PANEL A	SEE NOTE 6
P-5	RECIRC PUMP - M&E 139		0.09	1/8	120	1	3.8	-	FVNR	-	139		15A-1P	2 #12 + #12 INS. BOND IN 21C.	PANEL A	SEE NOTE 6
P-6A	DOMESTIC BOOSTER PUMP - M&E 139		0.56	3/4	208	3	3.2	-	VFD	-	139		15A-3P	3 #12 + #12 INS. BOND IN 21C.	PANEL E	SEE NOTE 5
P-6B	DOMESTIC BOOSTER PUMP - M&E 139		0.56	3/4	208	3	3.2	-	VFD	-	139		15A-3P	3 #12 + #12 INS. BOND IN 21C.	PANEL E	SEE NOTE 5
FP-1	FIRE PUMP		11.19	15	208	3	48.3	-	FVNR	-	201		-	3 #6 MI CABLE, FREE AIR		SEPARATE SERVICE REFER TO DRAWING E6
	FIRE PUMP CONTROLLER				208	3	-	-	-	-	201		-	-		SEE NOTE 8
JP-1	SPRINKLER JOCKEY PUMP		0.25	1/3	120	1	-	-	-	-	201		15A-1P	2 #12 + #12 INS. BOND IN 21C.	SEPARATE SERVICE	C/W AUTO AND MANUAL CONTROL REFER TO DRAWING E6
CO/NOX	GAS DETECTOR				120	1	-	-	-	-	-		15A-1P	2 #12 + #12 INS. BOND IN 21C.	PANEL A	DIRECT CONNECT
UH-1	UNIT HEATER ROOM 148		0.37	1/2	120	1	9.8	-	TH. SW.	-	-		15A-1P	2 #12 + #12 INS. BOND IN 21C.	PANEL A	-
UH-2	UNIT HEATER M&E 139		0.12	1/6	120	1	4.4	-	TH. SW.	-	-		15A-1P	2 #12 + #12 INS. BOND IN 21C.	PANEL A	-
UH-3	UNIT HEATER SERVICE SPACE 201		0.06	1/12	120	1	3.0	-	TH. SW.	-	-		15A-1P	2 #12 + #12 INS. BOND IN 21C.	PANEL A	-
EF-1	OUT BUILDING 157		0.19	1/4	120	1	5.8	-	TH. SW.	-	-		15A-1P	2 #12 + #12 INS. BOND IN 21C.	PANEL B	SEE NOTE 6
EF-2	ROOM 148		0.19	1/4	120	1	5.8	-	TH. SW.	-	-		15A-1P	2 #12 + #12 INS. BOND IN 21C.	PANEL A	SEE NOTE 6
EF-3	ROOM 148		0.19	1/4	120	1	5.8	-	TH. SW.	-	-		15A-1P	2 #12 + #12 INS. BOND IN 21C.	PANEL A	SEE NOTE 6
EF-4	ROOM 135		0.12	1/6	120	1	4.4	-	TH. SW.	-	-		15A-1P	2 #12 + #12 INS. BOND IN 21C.	PANEL A	SEE NOTE 6
EF-5	SERVICE SPACE 201		0.12	1/6	120	1	4.4	-	TH. SW.	-	-		15A-1P	2 #12 + #12 INS. BOND IN 21C.	PANEL A	SEE NOTE 6
EF-6	SERVICE SPACE 201		0.12	1/6	120	1	4.4	-	TH. SW.	-	-		15A-1P	2 #12 + #12 INS. BOND IN 21C.	PANEL A	SEE NOTE 6
EF-7	SERVICE SPACE 201		0.12	1/6	120	1	4.4	-	TH. SW.	-	-		15A-1P	2 #12 + #12 INS. BOND IN 21C.	PANEL A	SEE NOTE 6
EF-8	SERVICE SPACE 201		0.12	1/6	120	1	4.4	-	TH. SW.	-	-		15A-1P	2 #12 + #12 INS. BOND IN 21C.	PANEL A	SEE NOTE 6
SF-1	SYSTEM FILL PUMP M&E 139		-	-	120	1	.7	-	TH. SW.	-	-		15A-1P	2 #12 + #12 INS. BOND IN 21C.	PANEL A	SEE NOTE 7

## MECHANICAL EQUIPMENT SCHEDULE NOTES

- PROVIDE FEEDER INDICATED TO ROOF MOUNTED CONDENSING UNIT. PROVIDE A WEATHERPROOF DISCONNECT SWITCH. FROM CONDENSING UNIT PROVIDE 2 #10 RW90 + BND IN 21C (RIGID PVC OUTDOORS/EMT INDOORS) TO THE INDOOR UNIT.
- THE AIR HANDLING UNIT ENCLOSURE IS SUPPLIED WITH LIGHTING AND RECEPTACLES THAT WILL REQUIRE FINAL CONNECTIONS BY THE ELECTRICAL CONTRACTOR. ALL LIGHT FIXTURES, LIGHT SWITCHES AND RECEPTACLES ARE SUPPLIED, INSTALLED AND PRE-WIRED BY THE AHU MANUFACTURER. THE ELECTRICAL CONTRACTOR SHALL PROVIDE A 120V CIRCUIT CONNECTIONS TO THE LIGHTING AND RECEPTACLES MOUNTED ON THE AHU ENCLOSURE.
- THE AHU IS SUPPLIED C/W MOTOR FEEDER TERMINATION BOXES MOUNTED ON THE AHU ENCLOSURE. ALL WIRING WITHIN THE AHU ENCLOSURE IS PREWIRED BY THE MANUFACTURER. PROVIDE A DISCONNECT SWITCH AT THE MOTOR TERMINATION BOX LOCATIONS AND PROVIDE FINAL WIRING AND CONNECTION FROM VFD TO MOTOR.
- THE HEAT RECOVERY WHEEL IS SUPPLIED C/W PACKAGED VFD THAT IS MOUNTED ON THE AHU ENCLOSURE. PROVIDE FINAL CONNECTIONS AT THE VFD. ALL WIRING WITHIN THE AHU ENCLOSURE IS PREWIRED BY THE MANUFACTURER. PROVIDE 15 AMP 120 VOLT CIRCUIT TO HEAT WHEEL FAN MOTOR. PROVIDE FINAL WIRING CONNECTION FROM VFD TO MOTOR.
- VFD IS INTEGRAL AND SHALL BE INSTALLED BY THE MECHANICAL CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR WIRING TO THE UNIT AND FROM THE VFD TO THE EQUIPMENT MOTOR FINAL CONNECTION.
- MECHANICAL EQUIPMENT SHALL BE CONTROLLED BY EMCS REFER TO MECHANICAL FLOOR PLANS FOR SWITCH LOCATIONS.

- PROVIDE DUPLEX RECEPTACLES ADJACENT TO UNIT MOUNT UP 900mm.
- SOFT STOP FIRE PUMP CONTROLLER HORSE POWER TO MATCH FIRE PUMP. COORDINATE WITH MECHANICAL.

## MECHANICAL EQUIPMENT GENERAL NOTES

- ALL EQUIPMENT CONTROLLED BY THE BUILDING BMS SHALL HAVE ALL LOW VOLTAGE CONTROL WIRING SUPPLIED AND INSTALLED BY THE MECHANICAL CONTROLS CONTRACTOR.
- ALL CONTROL WIRING SHALL BE SUPPLIED AND INSTALLED BY THE MECHANICAL CONTROLS CONTRACTOR.
- FAN COIL UNITS ARE SUPPLIED C/W SPEED CONTROL, INTEGRAL DISCONNECT. ELECTRICAL CONTRACTOR SHALL PROVIDE (12) 15 AMP 120 VOLT CIRCUITS LOCATED IN THE CEILING SPACE FOR FAN COILS.
- PROVIDE 120 VOLT CONNECTION FOR TRAP PRIMER SOLENOID VALVES. COORDINATE FINAL LOCATION WITH MECHANICAL DRAWINGS.

NOTE: CONDUCTOR/CONDUIT SIZES SHOWN IN THE EQUIPMENT SCHEDULE ARE MINIMUM SIZES. FEEDERS SHALL BE ADJUSTED ACCORDINGLY TO LIMIT VOLTAGE DROP TO A MAXIMUM OF 3%.



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100 - 3718 Kiewit Place, Saskatoon, SK S7P 0A6 ph: (306) 569-6457  
www.sepw.ca



200-2222 Albert Street, Regina, SK S4P 2V2  
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Email: raj@ritenburg.com



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## DO NOT SCALE DRAWINGS

Revision/Revision	Description/Description	Date/Date
0	ISSUED FOR TENDER	2014-08

Project title/Titre du projet

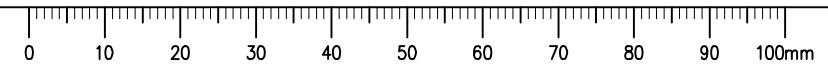
## NEW POLICE BUILDING MAIDSTONE, SASKATCHEWAN

Approved by/Approve par  
SBK  
Designed by/Concept par  
GTK  
Drawn by/Dessine par  
GTK  
Project Manager/Administrateur de Projets  
CS  
Architectural and Engineering Resources Manager/  
Ressources Architectural et de Directeur d'Ingénierie  
Client/client

Drawing title/Titre du dessin  
MOTOR EQUIPMENT SCHEDULE

Project No./No. du projet  
29/2013  
Sheet/Feuille  
E5.1  
Revision no./La Révision no.  
0

DRAWING PLOTTED: 8 PM  
FILE NAME: 292013\_E5.dwg  
LAYOUT NAME: E5.1





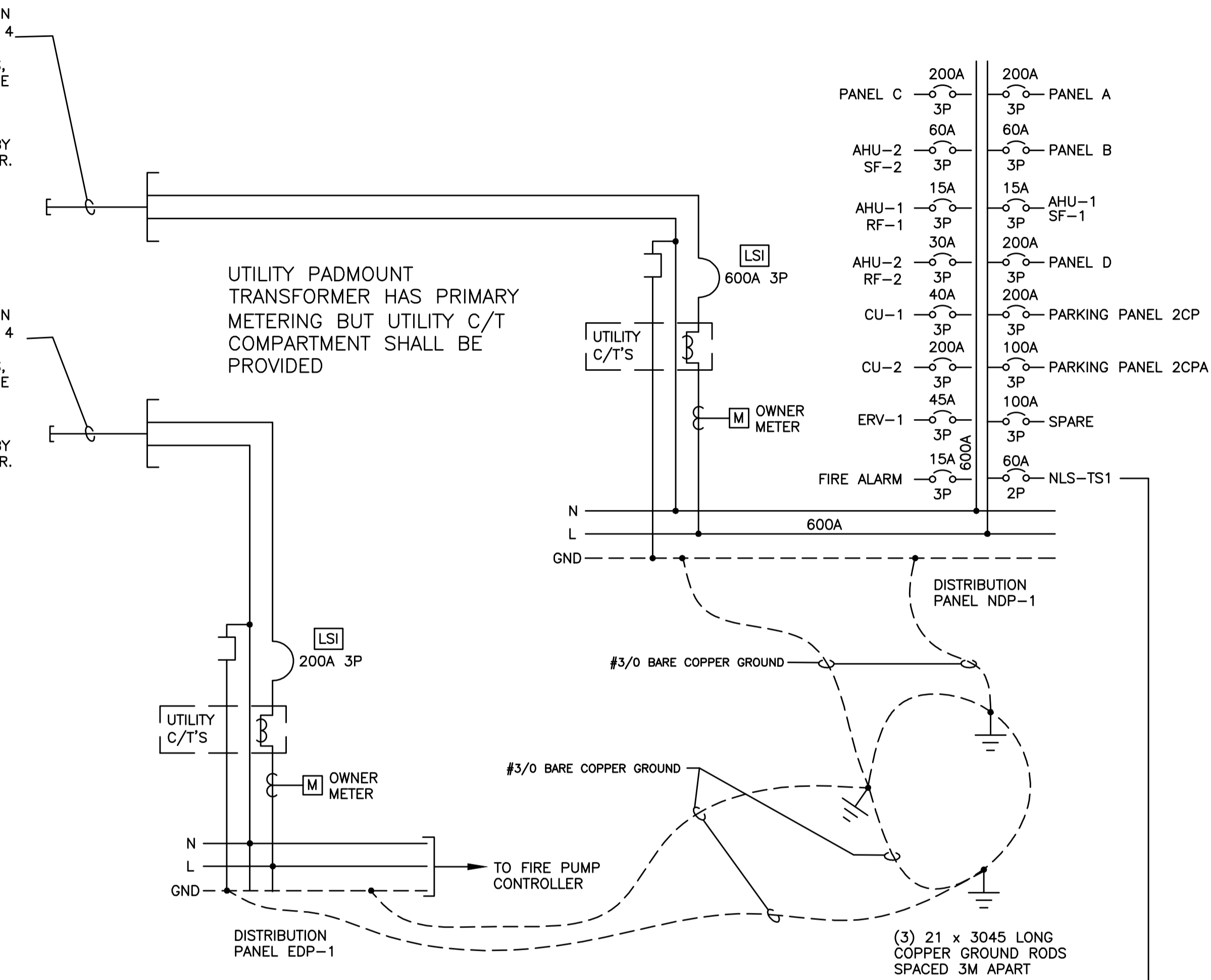




STUB OUT FOR SPC TRANSFORMER. RUN (2) 104mm RIGID PVC CONDUITS C/W 4 # 350MCM RWU90 AND #1 AWG INSULATED COPPER BOND CONDUCTORS, 914mm BELOW FINISHED GRADE TO THE SECONDARY TERMINALS OF THE SASKPOWER PAD MOUNTED TRANSFORMER. CONNECTION TO THE TRANSFORMER SHALL ONLY BE MADE BY INDIVIDUALS AUTHORIZED BY SASKPOWER. SUITABLE CABLE SUPPORT SHALL BE PROVIDED (AS PER ELECTRICAL CODE) AND IN A MANNER APPROVED BY SASKPOWER. REFER TO SITE PLAN FOR APPROXIMATE LOCATION OF TRANSFORMER.

STUB OUT FOR SPC TRANSFORMER. RUN (1) 104mm RIGID PVC CONDUITS C/W 4 # 3/0 AWG RWU90 AND #6 AWG INSULATED COPPER BOND CONDUCTORS, 914mm BELOW FINISHED GRADE TO THE SECONDARY TERMINALS OF THE SASKPOWER PAD MOUNTED TRANSFORMER. CONNECTION TO THE TRANSFORMER SHALL ONLY BE MADE BY INDIVIDUALS AUTHORIZED BY SASKPOWER. SUITABLE CABLE SUPPORT SHALL BE PROVIDED (AS PER ELECTRICAL CODE) AND IN A MANNER APPROVED BY SASKPOWER. REFER TO SITE PLAN FOR APPROXIMATE LOCATION OF TRANSFORMER.

UTILITY PADMOUNT TRANSFORMER HAS PRIMARY METERING BUT UTILITY C/T COMPARTMENT SHALL BE PROVIDED



1 FIRE PUMP SERVICE SINGLE LINE  
E6 N.T.S. 120/208 VOLT - 3 $\phi$ , 4W, 200A

2 MAIN SERVICE SINGLE LINE  
E6 N.T.S. 120/208 VOLT - 3 $\phi$ , 4W, 600A

3 #6 AWG RW90 & #8 INSULATED BOND CLOSE CONNECTED TO SIDE OF PANEL.

MATCHING RECEPTACLE NEMA L21-30R C/W WEATHERPROOF WHILE-IN-USE COVER.

MALE TO MALE CORDSET, WEATHERPROOF HEAVY DUTY EXTERIOR GRADE CAB TIRE PORTABLE CABLE STRANDED #6 AWG & BOND, PROVIDED BY CONTRACTOR. LENGTH TO BE MINIMUM 4,600mm.

TRANSFER SWITCH PANEL E 1 $\phi$ , 240V, 60A

3 EMERGENCY DISTRIBUTION SINGLE LINE  
E6 N.T.S. 120/208 VOLT 3 $\phi$ , 4W, 400A



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NEW POLICE BUILDING  
MAIDSTONE, SASKATCHEWAN

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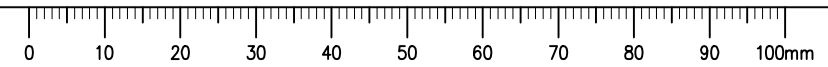
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Ressources Architectural et de Directeur d'Ingénierie

Client/client

Drawing title/Titre du dessin

SINGLE LINE SCHEMATIC

Project No./No. du projet	Sheet/Feuille	Revision no./La Révision no.
29/2013	E6	0



2014-08-08 10:55 AM  
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 USER: RAL









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**NEW POLICE BUILDING  
 MAIDSTONE, SASKATCHEWAN**

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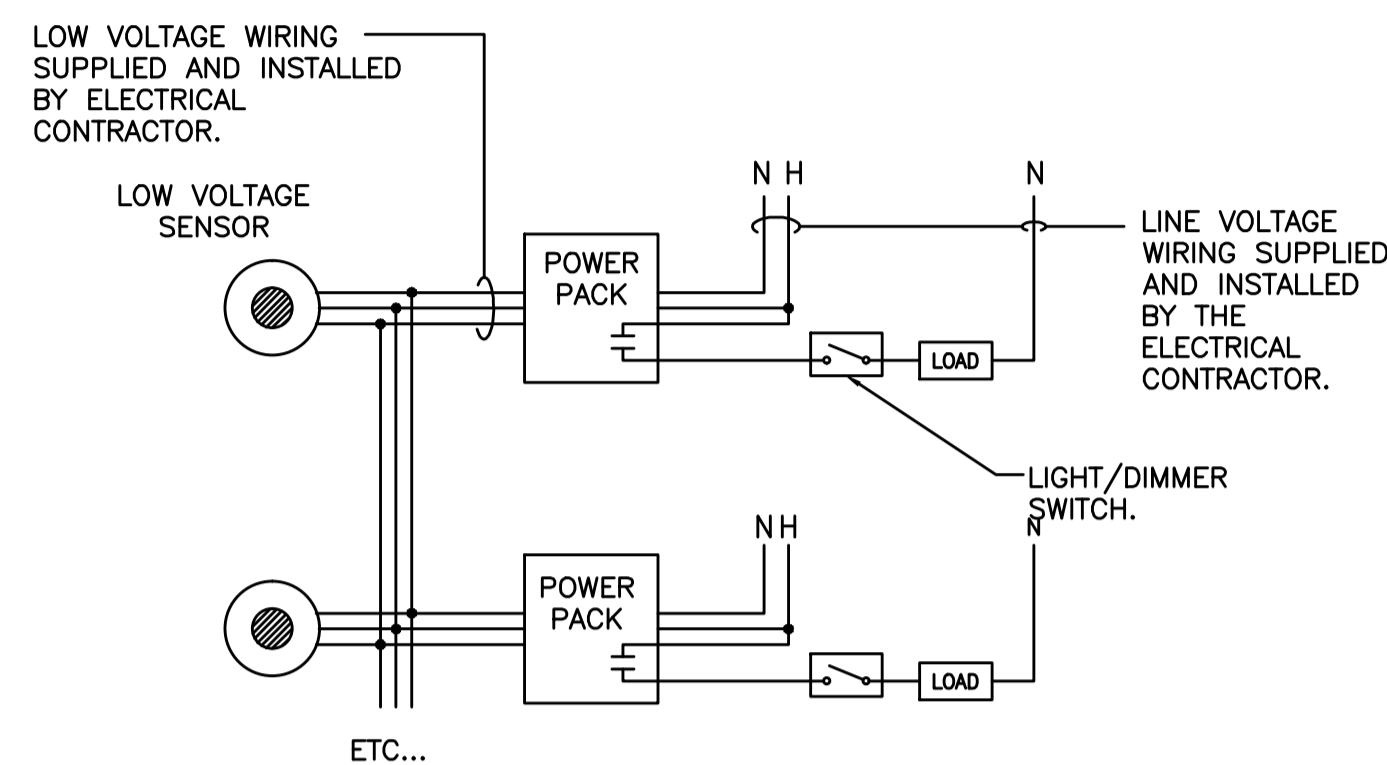
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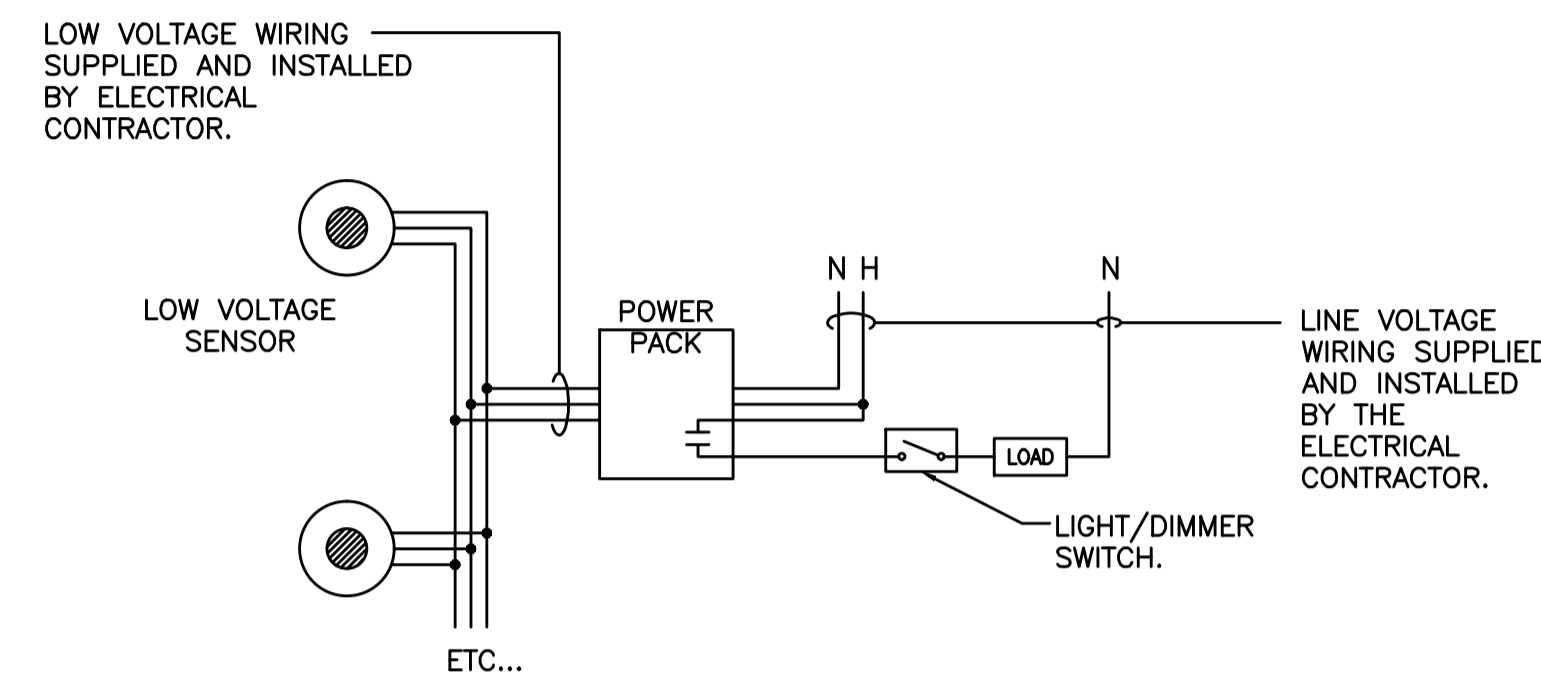
Client/client

Drawing title/Titre du dessin  
**ELECTRICAL DETAILS**

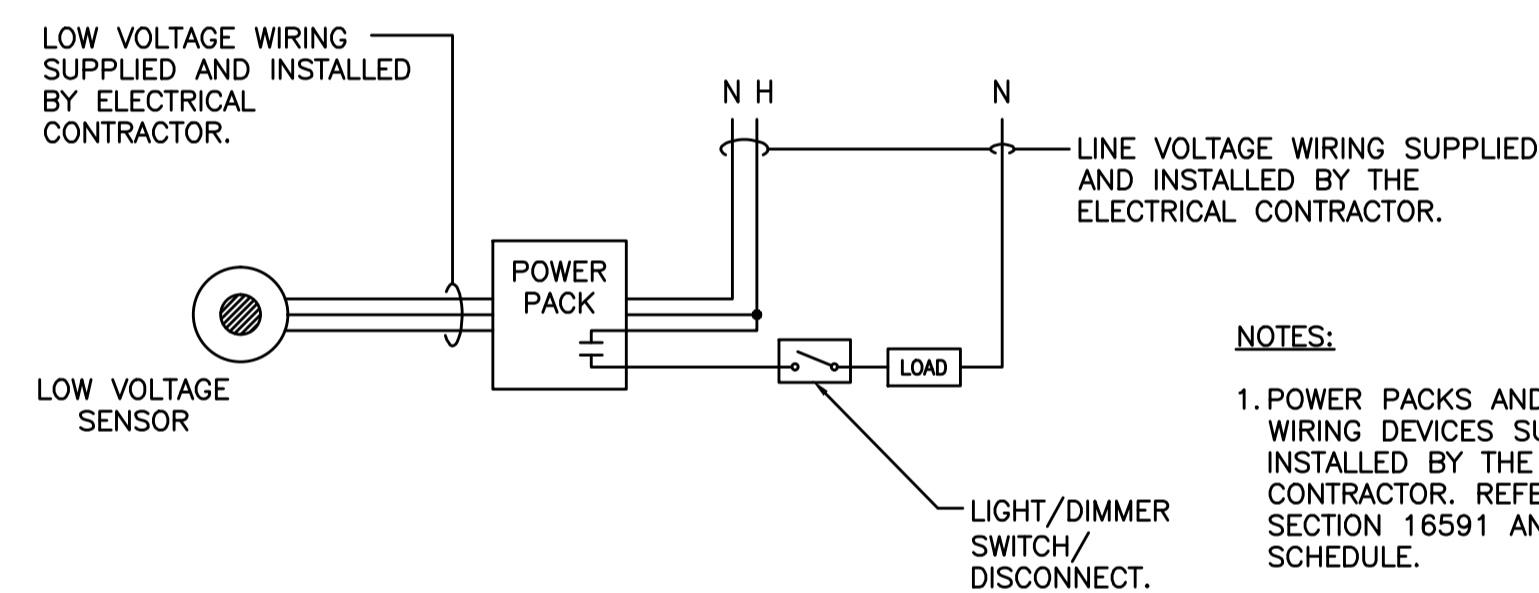
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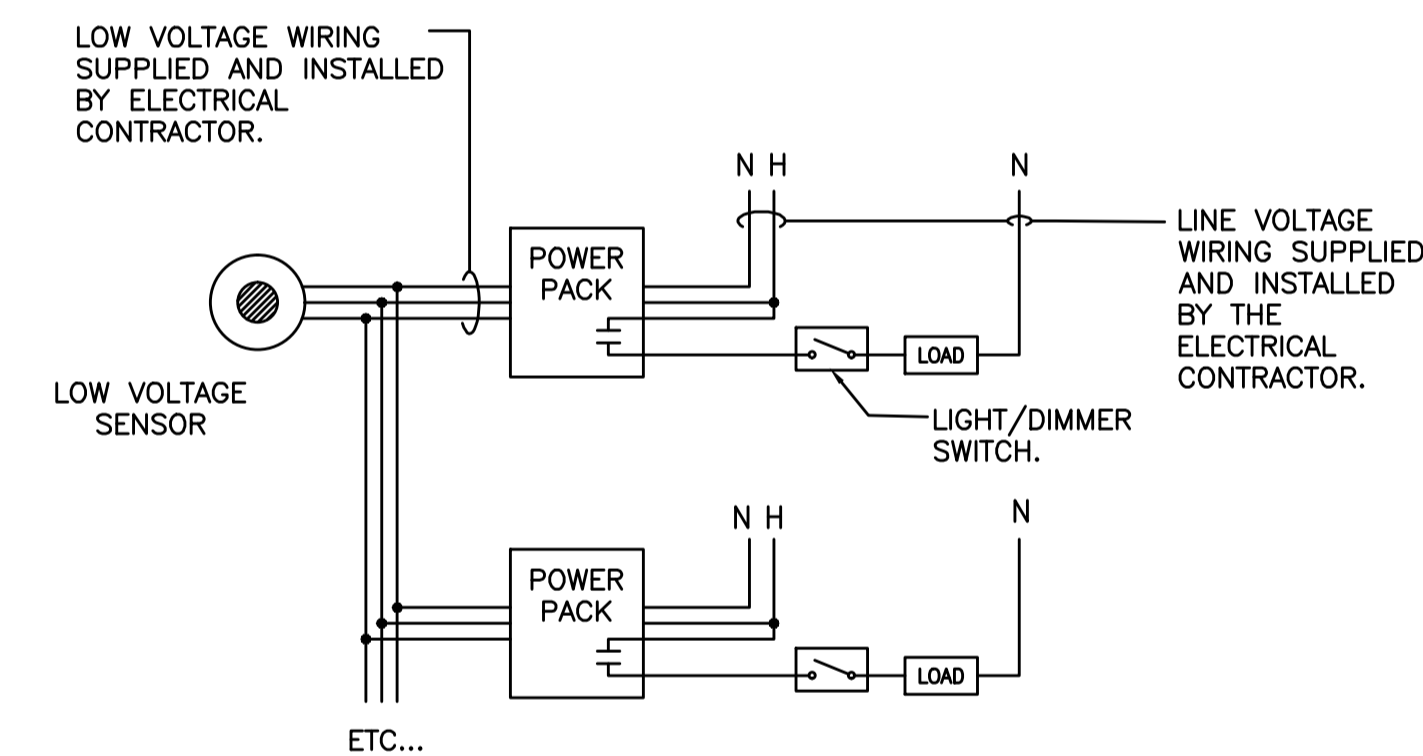
1  
E7.2  
TYPICAL WIRING DIAGRAM -  
MULTIPLE SENSORS W/ MULTIPLE CIRCUITS  
N.T.S.



2  
E7.2  
TYPICAL WIRING DIAGRAM -  
MULTIPLE SENSORS W/ SINGLE CIRCUIT  
N.T.S.



3  
E7.2  
TYPICAL WIRING DIAGRAM  
N.T.S.



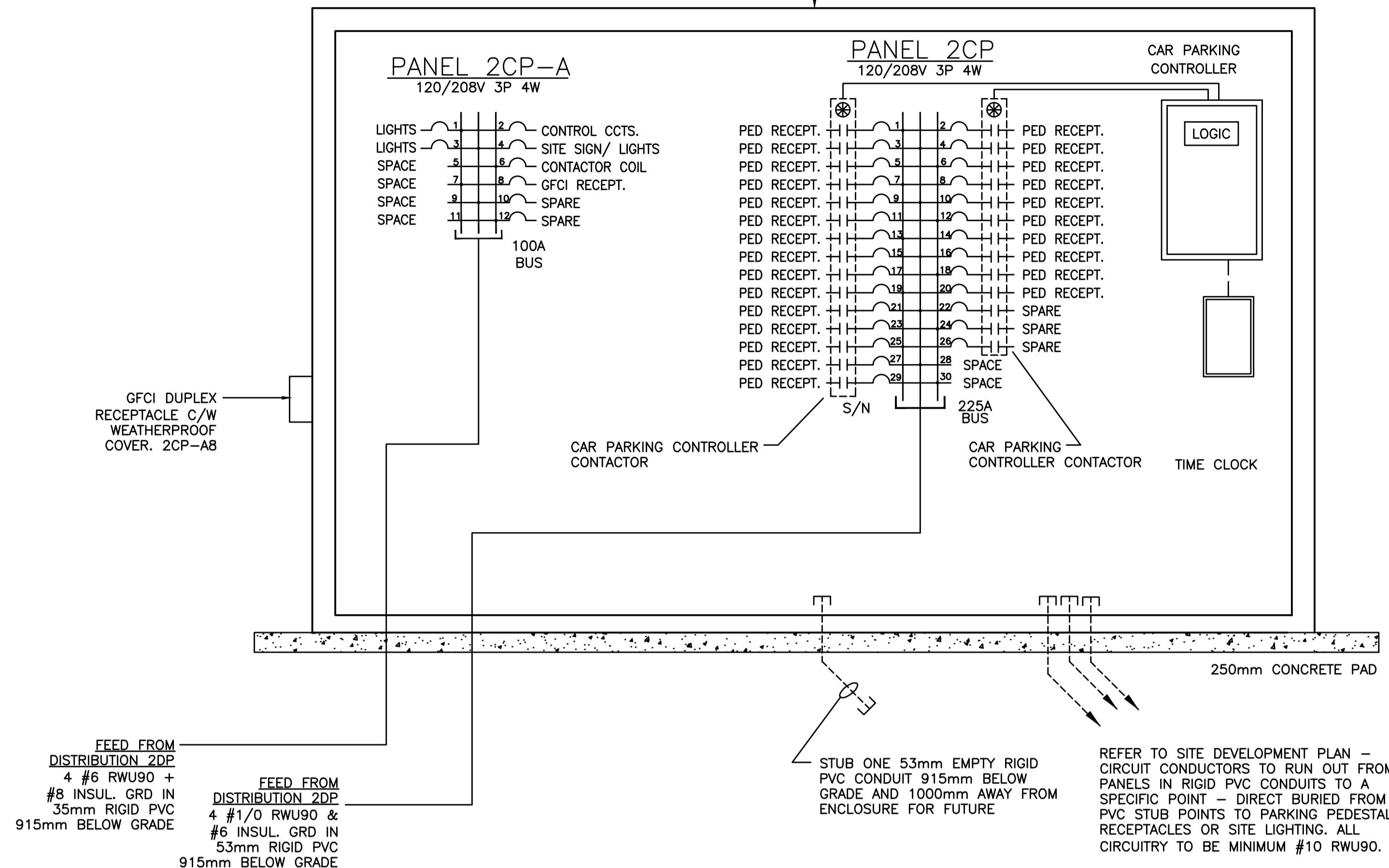
4  
E7.2  
TYPICAL WIRING DIAGRAM -  
SINGLE SENSOR W/ MULTIPLE CIRCUITS  
N.T.S.

- NOTES:**
1. POWER PACKS AND LOW VOLTAGE WIRING DEVICES SUPPLIED BY OWNER, INSTALLED BY THE ELECTRICAL CONTRACTOR. REFER TO SPECIFICATION SECTION 16591 AND SYMBOL SCHEDULE.
  2. ALL LINE VOLTAGE WIRING AND WIRING DEVICES SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
  3. REFER TO FLOOR PLANS FOR DEVICE TYPES AND QUANTITIES. WIRING DIAGRAMS MAY VARY DEPENDING ON ROOM LAYOUTS.
  4. ALL WIRING REQUIREMENTS SHALL BE CONFIRMED WITH DEVICE SHOP DRAWINGS PRIOR TO INSTALLATION.

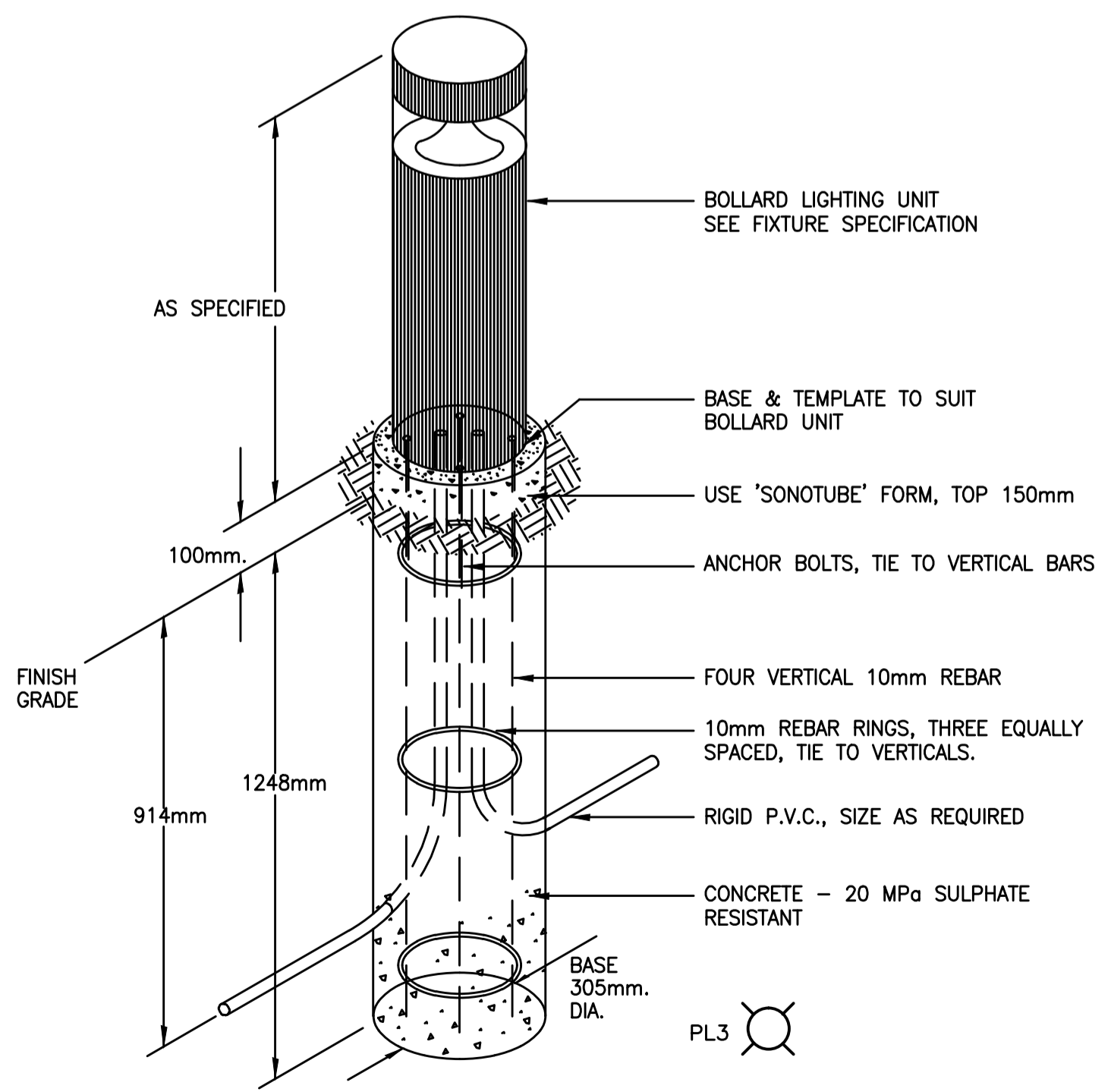




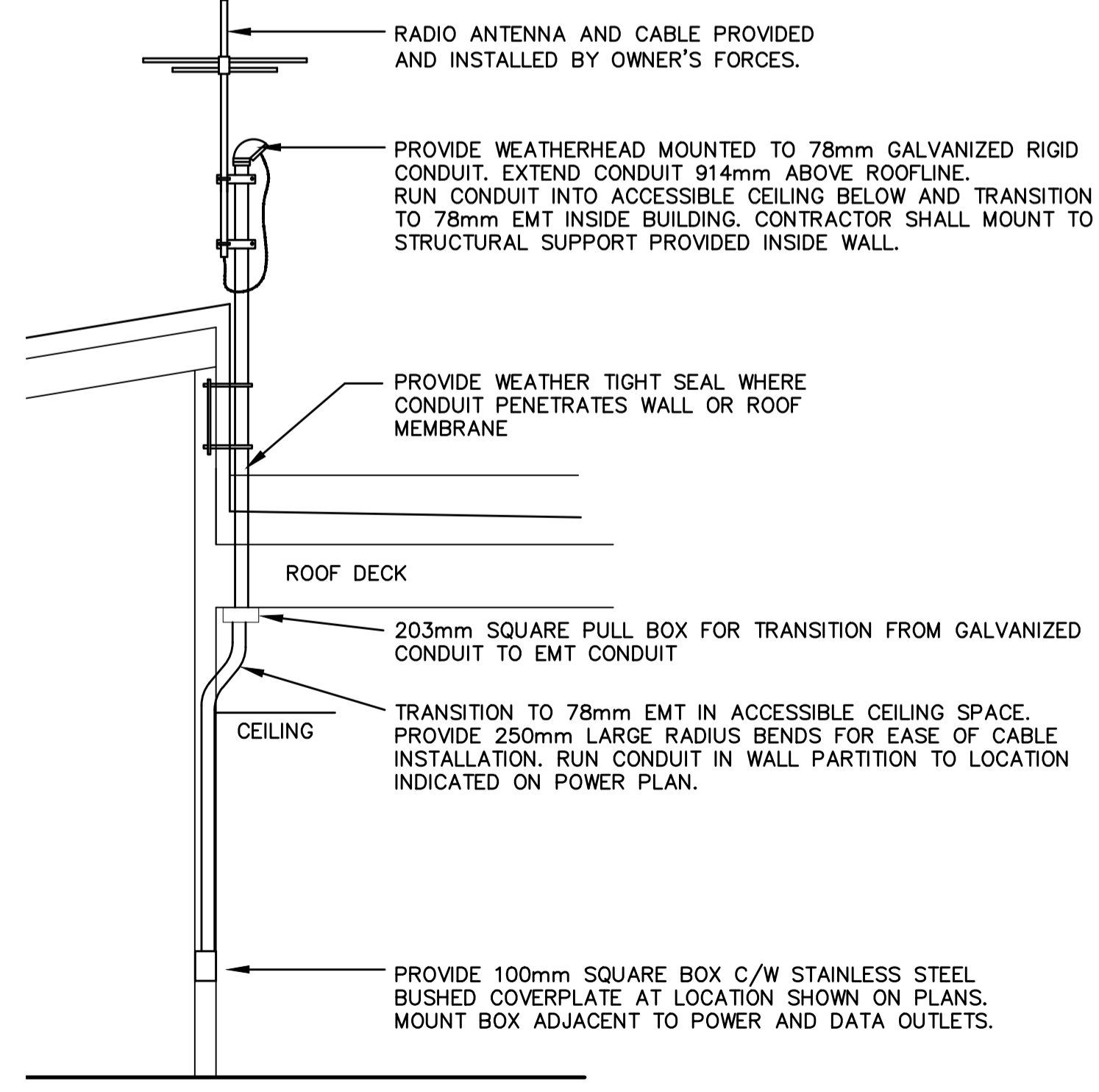
PROVIDE AN EXTERIOR WEATHERPROOF ENCLOSURE C/W FRONT HINGING DOORS LOCKABLE ENCLOSURE FOR PARKING CONTROLLER EQUIPMENT AS SHOWN. SHOP DRAWINGS SHALL BE SUBMITTED PRIOR TO MANUFACTURING. ENCLOSURE SHALL BE PAINTED.



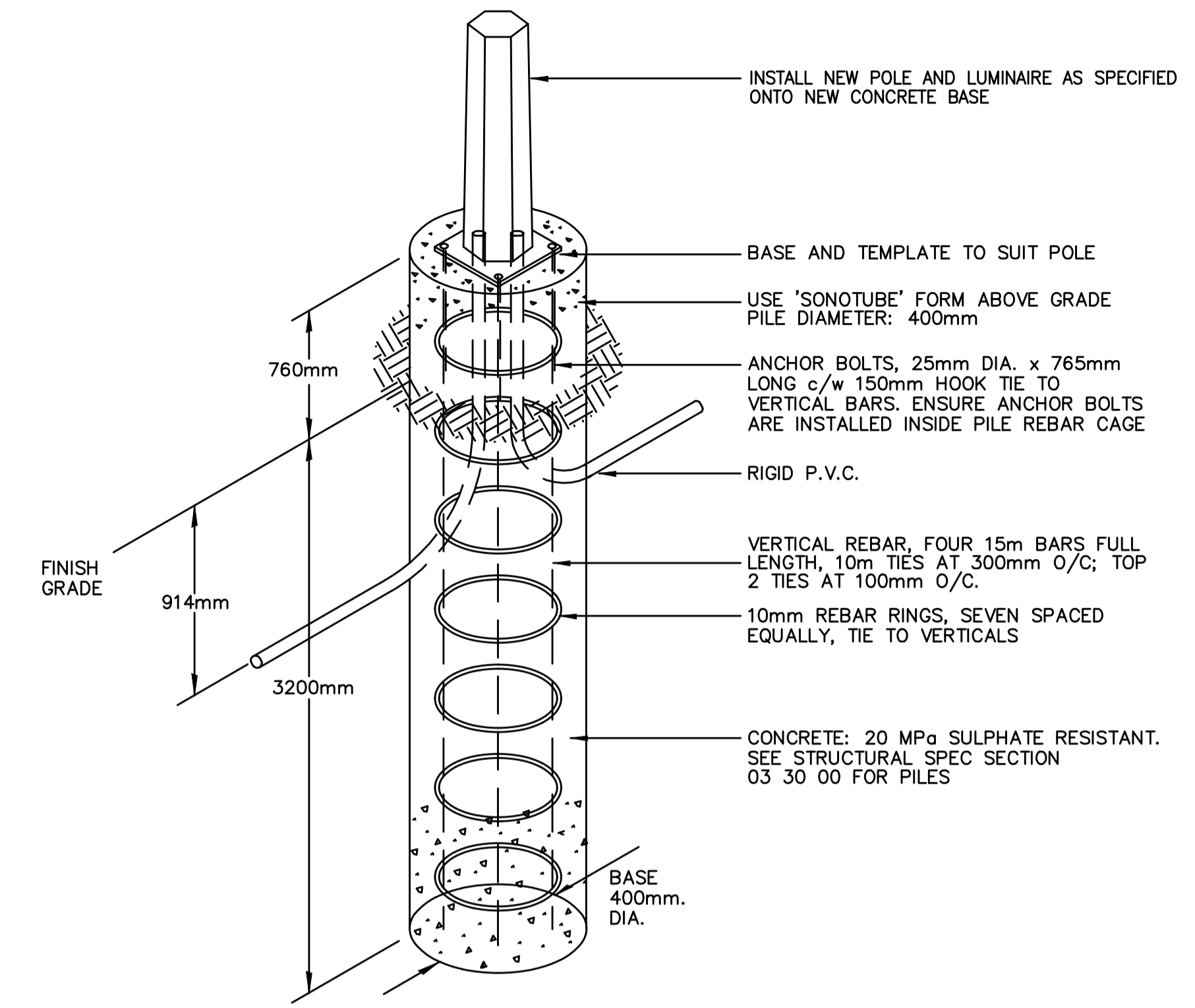
3 PARKING DISTRIBUTION DETAIL  
E7 N.T.S.



5 BOLLARD & BASE DETAIL  
E7 N.T.S.

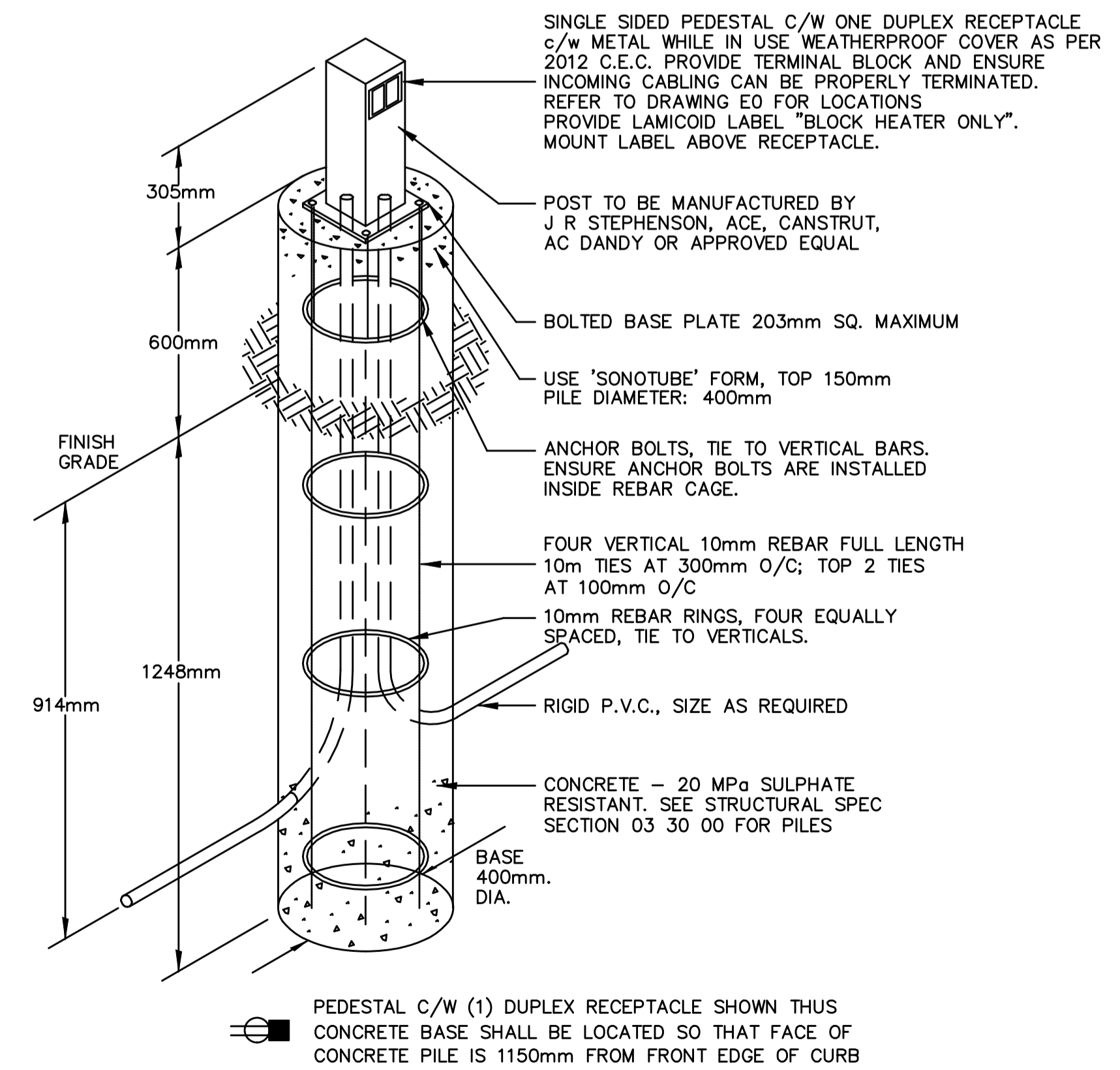


4 BASE ANTENNA MOUNTING DETAIL  
E7 N.T.S.



- PL1 [Symbol] LIGHT POLE, BASE AND SINGLE LUMINAIRE SHOWN THUS.
- PL2 [Symbol] LIGHT POLE, BASE AND DOUBLE LUMINAIRE SHOWN THUS.

1 SITE LIGHTING POST & BASE DETAIL  
E7 N.T.S.



PEDESTAL C/W (1) DUPLEX RECEPTACLE SHOWN THUS CONCRETE BASE SHALL BE LOCATED SO THAT FACE OF CONCRETE PILE IS 1150mm FROM FRONT EDGE OF CURB

2 PARKING PEDESTAL & BASE DETAIL  
E7 N.T.S.



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Revision/Revision	Description/Description	Date/Date
0	ISSUED FOR TENDER	2014-05-08

Project title/Titre du projet

**NEW POLICE BUILDING  
MAIDSTONE, SASKATCHEWAN**

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GTK

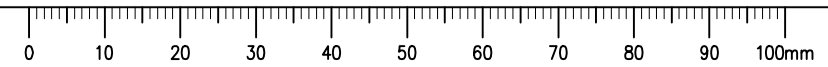
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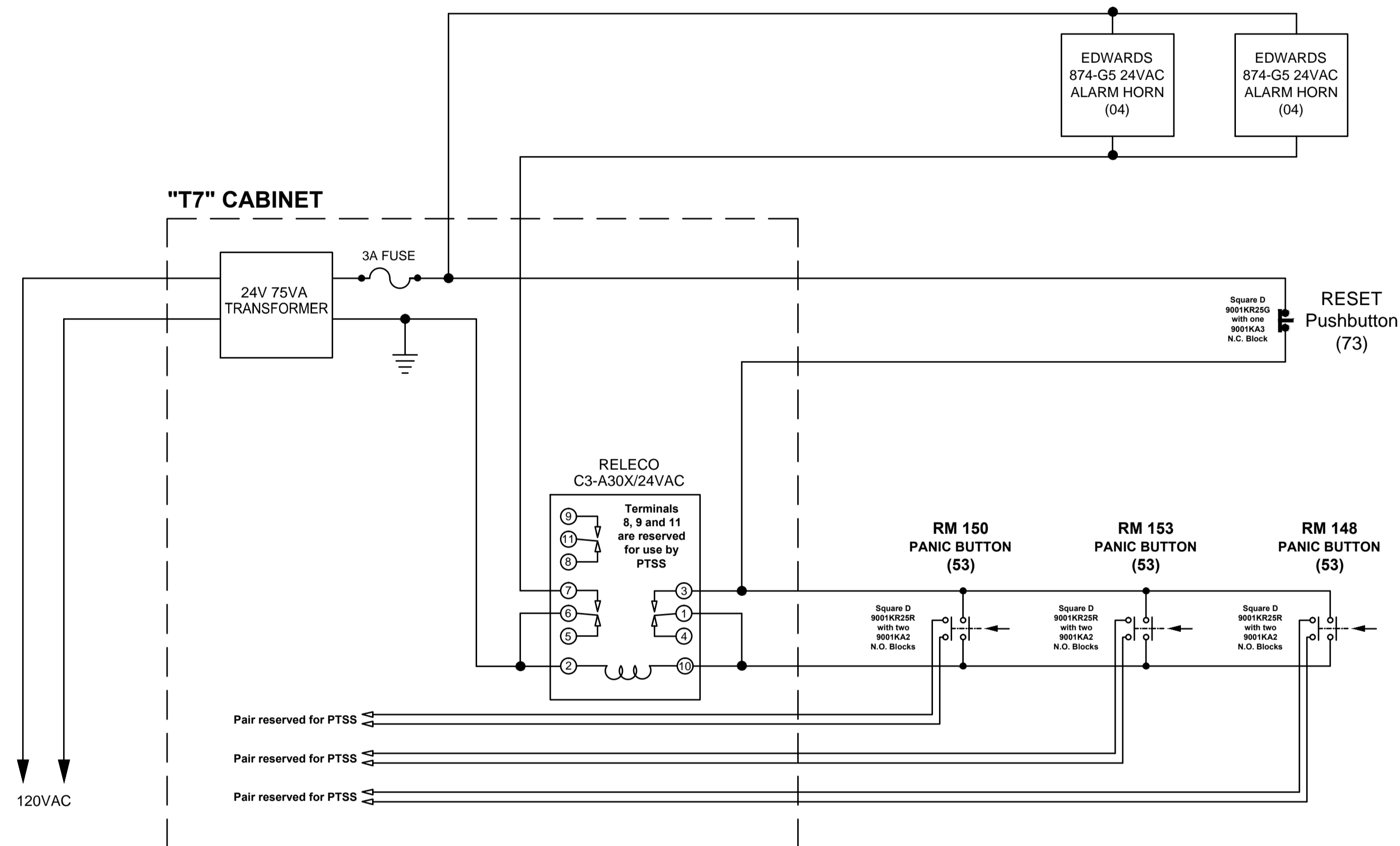
Drawing title/Titre du dessin  
**ELECTRICAL DETAILS**

Project No./No. du projet	Sheet/Feuille	Revision no./La Révision no.
29/2013	E7	0



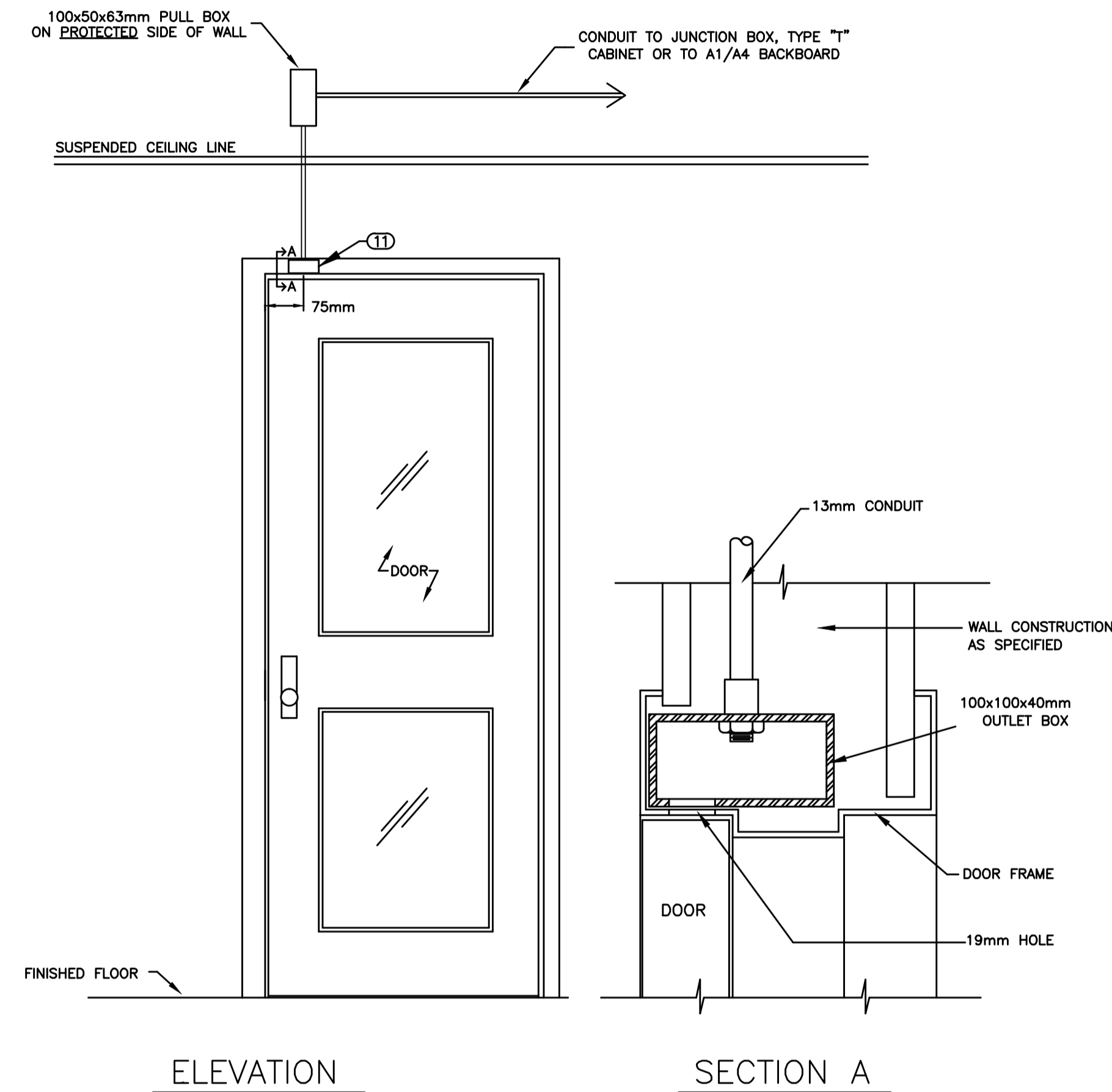


Detail Drawing  
SCHEMATIC - CELL BLOCK RIOT ALARM



1 RIOT ALARM SCHEMATIC  
E8.1 N.T.S.

PROTECTED DOOR – ELEVATION OF SINGLE DOOR  
WITH DOOR CONTACT



NOTES:

- CONDUIT CONNECTOR TO BE MOUNTED AND FASTENED TO THE OUTLET BOX BY DOOR FRAME FABRICATOR.
- OUTLET BOX TO BE SPOT WELDED IN PLACE BY DOOR FRAME FABRICATOR.
- DRILL A 19MM HOLE AT 75MM (CENTER POINT) FROM THE EDGE OF THE DOOR CASING TO ALLOW FOR DOOR SWITCH INSTALLATION AND ACCESS TO WIRING.
- SCALE: N.T.S.

2 ACCESS CONTROL DETAIL  
E8.1 N.T.S.



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MAIDSTONE, SASKATCHEWAN

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CCTV & ALARM SYSTEMS AND  
ACCESS CONTROL DETAILS

Project No./No. du projet  
29/2013

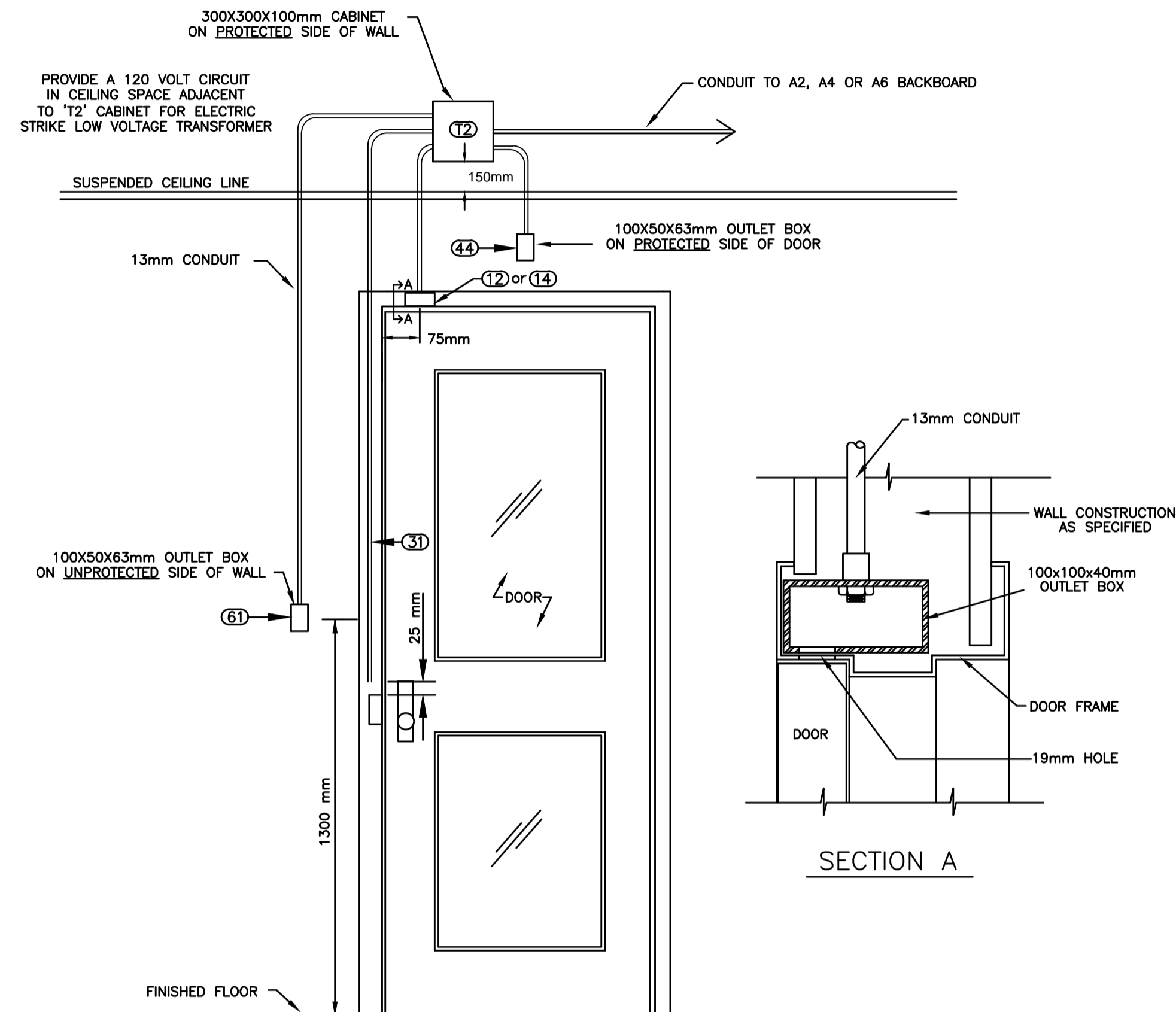
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E8.1

Revision no./  
La Révision no.  
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ACCESS CONTROL – ELEVATION OF SINGLE DOOR WITH DOOR CONTACT, WALL MOUNTED READER AND ELECTRIC STRIKE



ELEVATION

NOTES:

CONDUIT CONNECTOR TO BE MOUNTED AND FASTENED TO OUTLET BOX BY DOOR FRAME FABRICATOR.

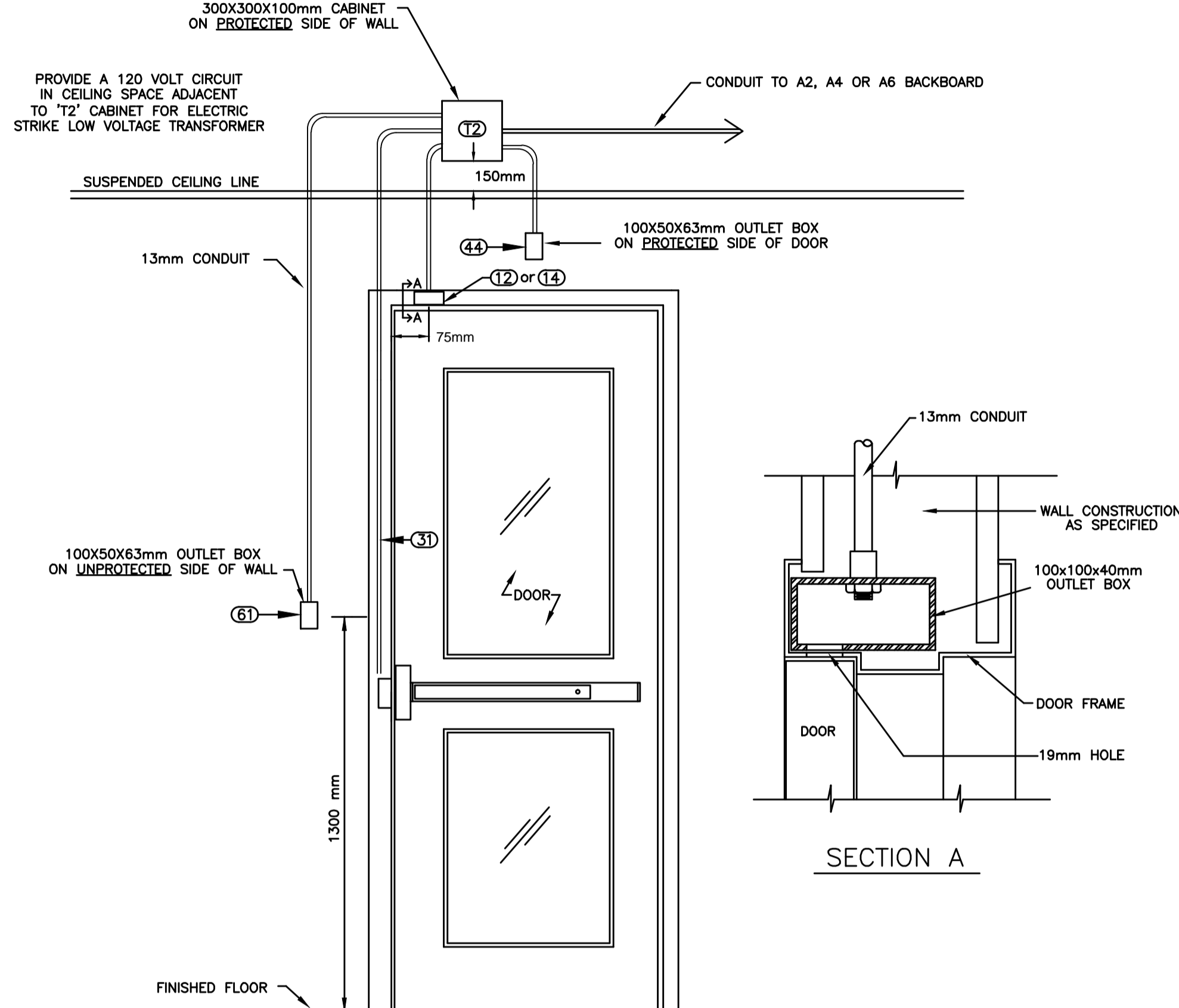
OUTLET BOX TO BE SPOT WELDED IN PLACE BY DOOR FRAME FABRICATOR.

DRILL A 19MM HOLE AT 75MM (CENTER POINT) FROM THE EDGE OF THE DOOR CASING TO ALLOW FOR DOOR SWITCH INSTALLATION AND ACCESS TO WIRING.

SCALE: N.T.S.

1 ACCESS CONTROL DETAIL  
E8.2  
N.T.S.

ACCESS CONTROL – ELEVATION OF SINGLE DOOR WITH DOOR CONTACT, WALL MOUNTED READER AND ELECTRIC STRIKE (PANIC HARDWARE)



ELEVATION

NOTES:

CONDUIT CONNECTOR TO BE MOUNTED AND FASTENED TO OUTLET BOX BY DOOR FRAME FABRICATOR.

OUTLET BOX TO BE SPOT WELDED IN PLACE BY DOOR FRAME FABRICATOR.

DRILL A 19MM HOLE AT 75MM (CENTER POINT) FROM THE EDGE OF THE DOOR CASING TO ALLOW FOR DOOR SWITCH INSTALLATION AND ACCESS TO WIRING.

SCALE: N.T.S.

2 ACCESS CONTROL DETAIL  
E8.2  
N.T.S.



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0	ISSUED FOR TENDER	12.08.14

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NEW POLICE BUILDING  
MAIDSTONE, SASKATCHEWAN

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Drawn by/Dessine par  
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Ressources Architectural et de Directeur d'Ingénierie

Client/client

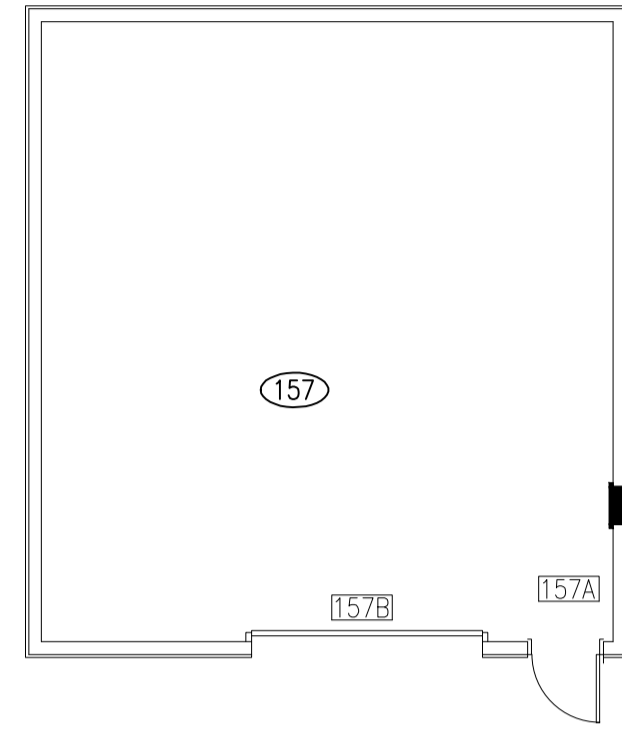
Drawing title/Titre du dessin

CCTV & ALARM SYSTEMS AND  
ACCESS CONTROL DETAILS

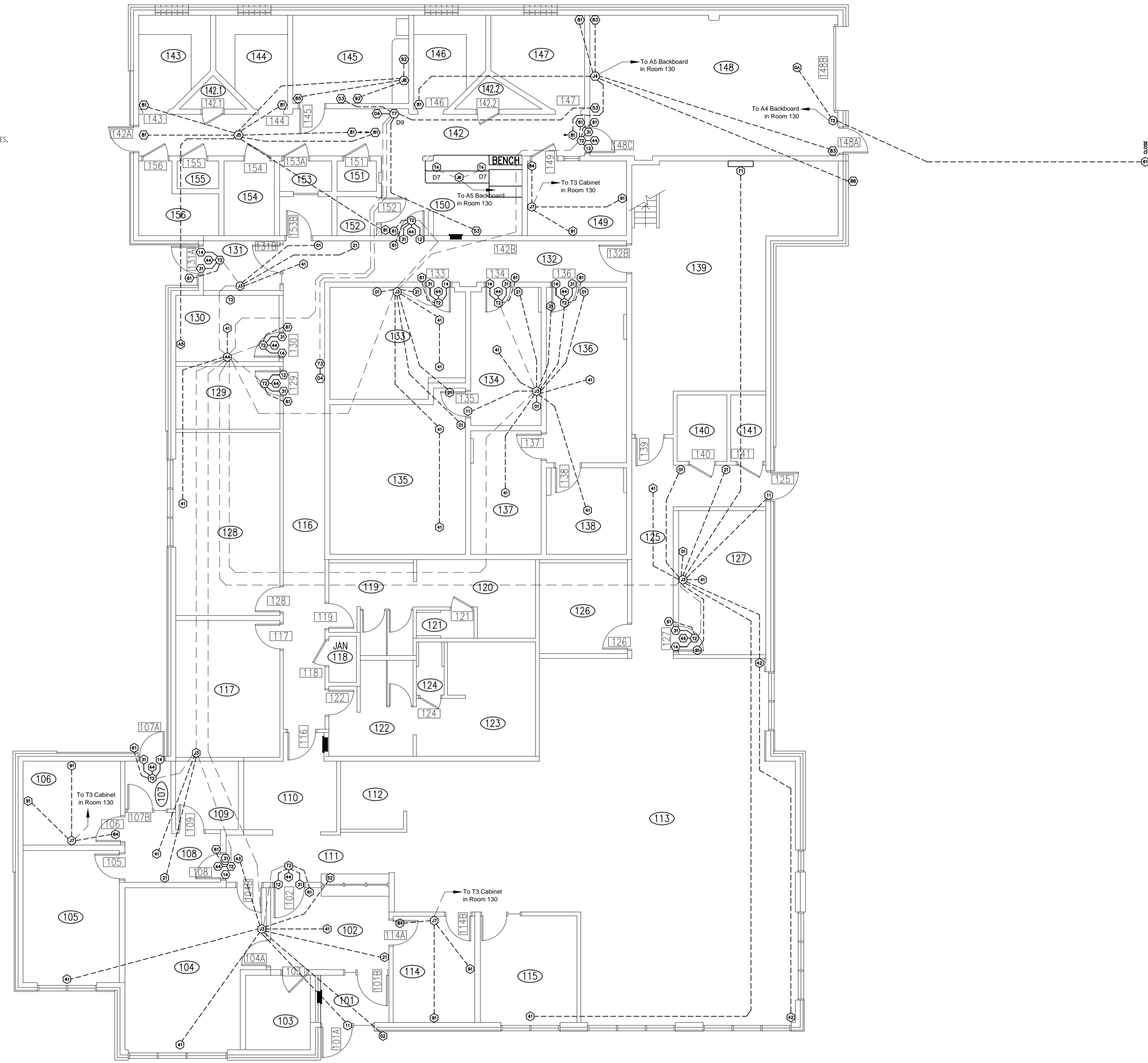
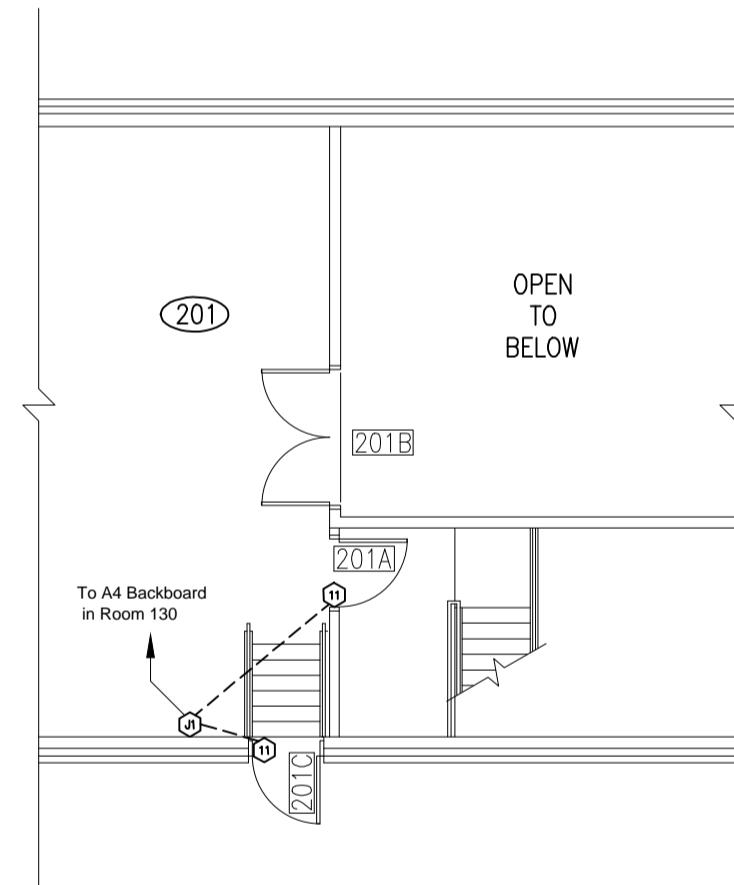
Project No./No. du projet 29/2013	Sheet/Feuille E8.2	Revision no./La Révision no. 0
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**SYMBOL LEGEND**  
 - - - 15mm CONDUIT  
 --- CONDUIT SIZED TO FIT NUMBER OF CABLES, UNLESS SPECIFIED OTHERWISE.



**GENERAL NOTES:**

1. AREA CONDUIT RUNS SHALL NOT CROSS THROUGH ROOMS 133, 134, 135, 136, 137 AND 138. ONLY CONDUITS SERVING THESE SPACES ARE PERMITTED TO PENETRATE THE SPACE.
2. ALL CONDUIT RUNS IN THE OPEN OFFICE AREA CEILING SHALL RUN ALONG CEILING JOISTS AND PAINTED TO MATCH JOIST FINISH.
3. CONDUITS FOR OUTLETS LOCATED ALONG THE EXTERIOR WALLS OF ROOM 113 SHALL STUB UP IN WALL TO BULKHEAD CHASE AND RUN ALONG CHASE TO ACCESSIBLE CEILING SPACE.
4. ALL JUNCTION BOXES AND CONDUITS FOR ELECTRICAL ROUGH-IN IN AREAS WHERE CONCRETE CEILINGS ARE PROVIDED SHALL BE "CAST IN PLACE". COORDINATE ROUGH-IN WITH STRUCTURAL CONTRACTOR PRIOR TO THE CONCRETE POUR.
5. REFER TO SPECIFICATIONS FOR POWER REQUIREMENTS FOR CIRCUITS D7 AND D9.



1 MAIN & SERVICE SPACE FLOOR PLAN  
 E8 1:100

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 101-3718 Keweenaw Place, Saskatoon, SK S7P 0A6 (306) 651-6457  
 Website: www.sepw.ca

**Ritenburg & Associates Ltd**  
 Consulting Electrical Engineers  
 #200-2222 Albert Street, Regina, SK S4P 2V2  
 P: (306) 569-1303 F: (306) 569-1307  
 Email: raj@ritenburg.com



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0	ISSUED FOR TENDER	2014-02-08

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**NEW POLICE BUILDING  
 MAIDSTONE, SASKATCHEWAN**

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 Designed by/Concept par: GTK  
 Drawn by/Dessine par: GTK  
 Project Manager/Administrateur de Projets: CS  
 Architectural and Engineering Resources Manager/Ressources Architectural et de Directeur d'Ingénierie  
 Client/client

Drawing title/Titre du dessin  
**CCTV - ALARM SYSTEMS AND  
 ACCESS CONTROL CONDUIT  
 ROUGH-IN PLAN**

Project No./No. du projet	Sheet/Feuille	Revision no./La Révision no.
29/2013	E8	0

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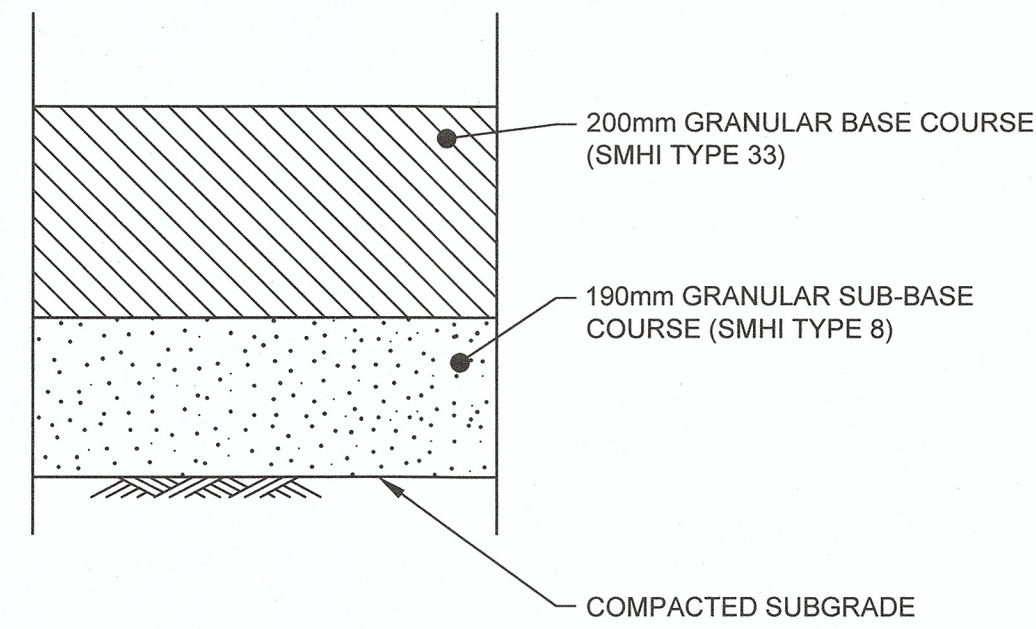




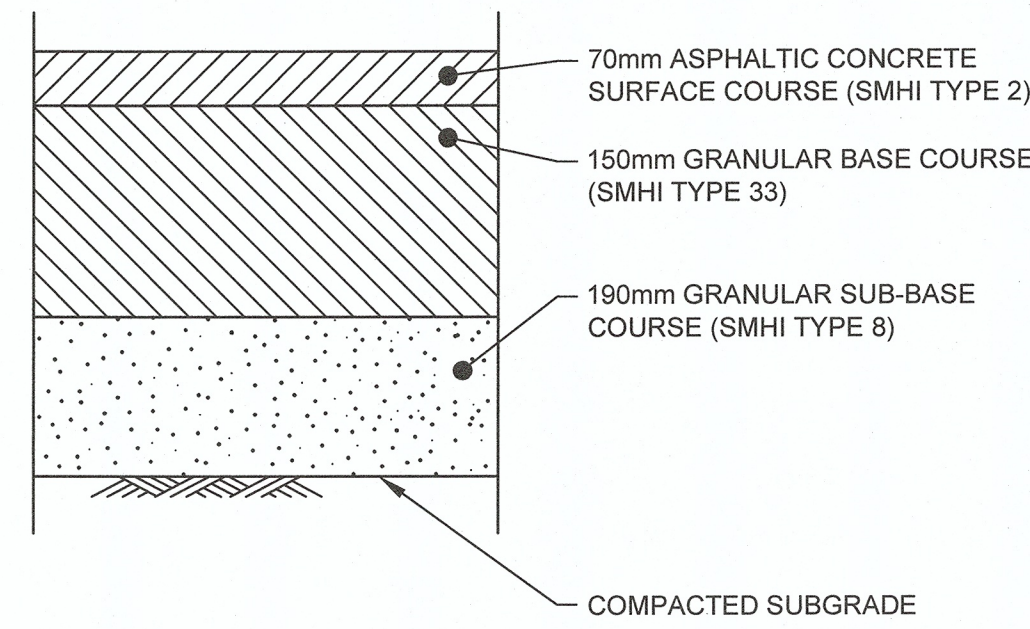


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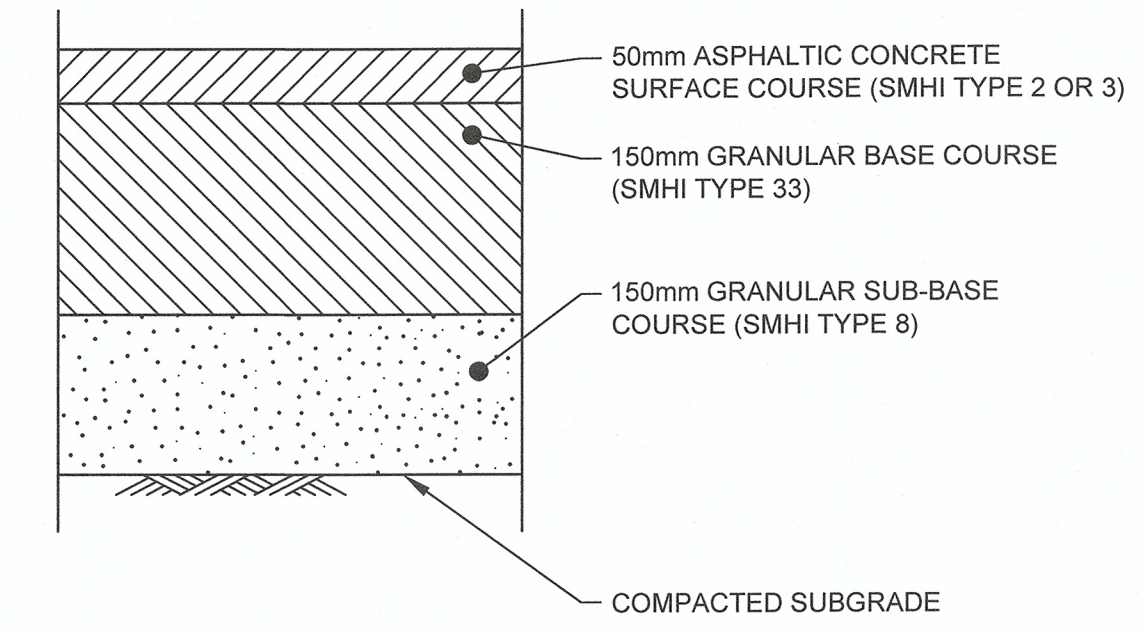
- SMHI - SASK. MINISTRY OF HIGHWAYS & INFRASTRUCTURE.
- ALL UNITS IN MILLIMETERS UNLESS OTHERWISE NOTED.



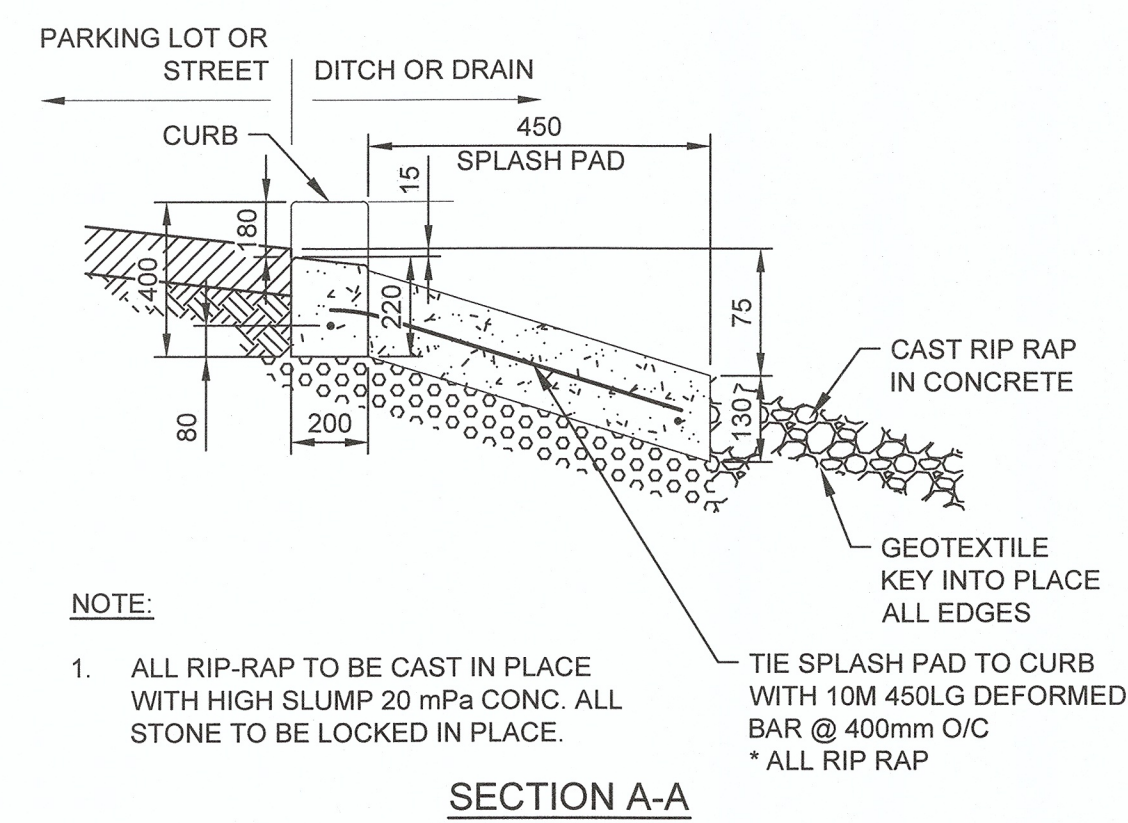
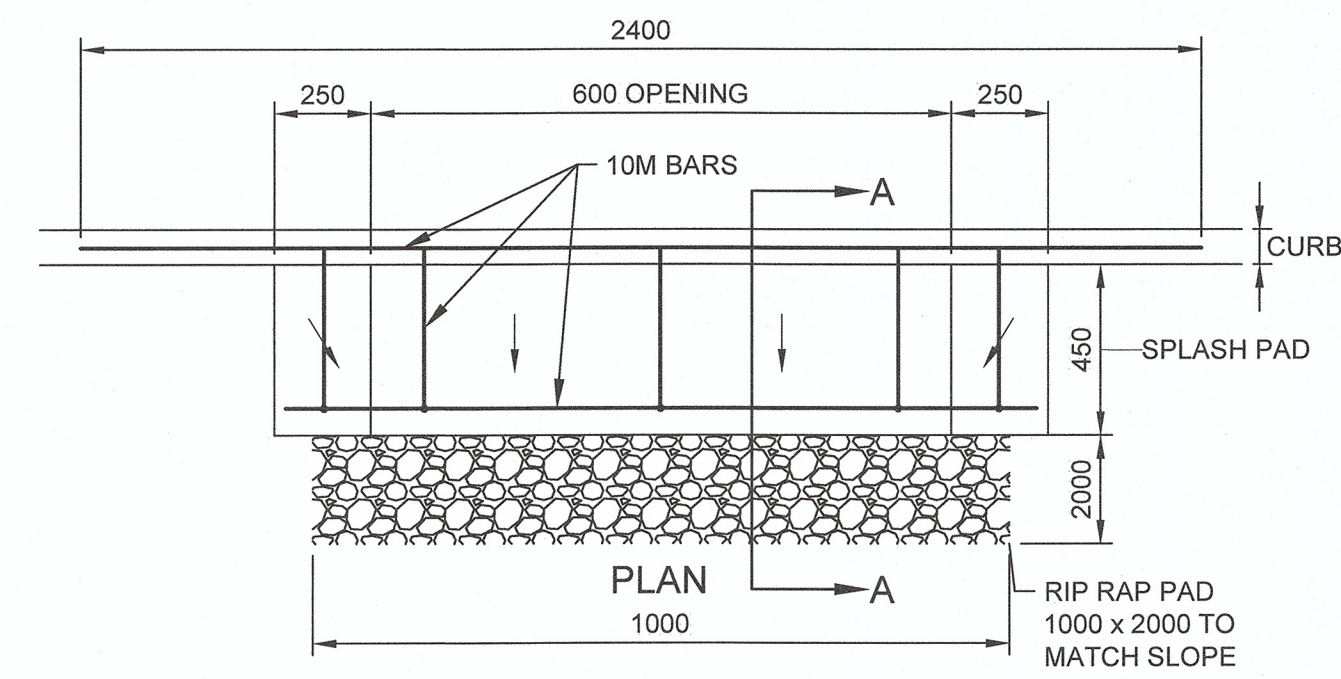
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HEAVY GRANULAR ROAD STRUCTURE



2 DETAIL N.T.S.  
HEAVY ASPHALT ROAD STRUCTURE

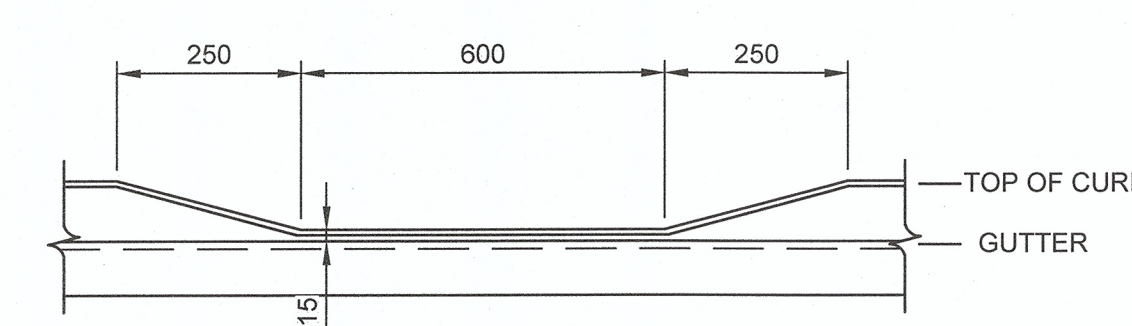


3 DETAIL N.T.S.  
LIGHT ASPHALT ROAD STRUCTURE

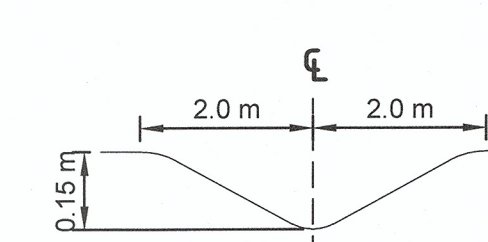


NOTE:  
1. ALL RIP-RAP TO BE CAST IN PLACE WITH HIGH SLUMP 20 MPa CONC. ALL STONE TO BE LOCKED IN PLACE.  
TIE SPLASH PAD TO CURB WITH 10M 450L.G DEFORMED BAR @ 400mm O/C  
\* ALL RIP RAP

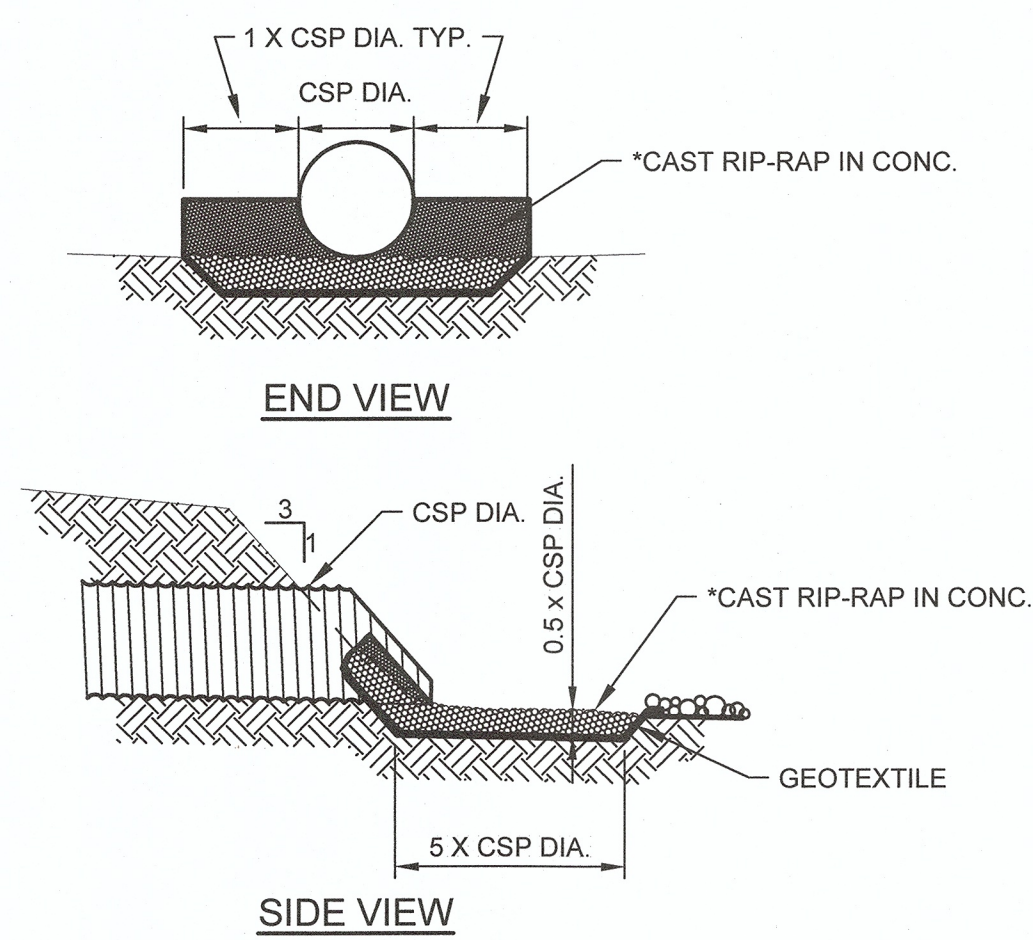
5 DETAIL N.T.S.  
CURB DRAINAGE CUT - TYPE 1



6 DETAIL N.T.S.  
CURB DRAINAGE CUT OUT - TYPE 2



7 DETAIL N.T.S.  
TYPICAL SWALE CROSS LAWN AREA



NOTE:  
1. TYPICAL BOTH ENDS ON ALL CULVERTS

4 DETAIL N.T.S.  
CULVERT

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1102 - 2718 Kinross Place, Saskatoon, SK. S7N 0A6 (R: 306) 652-0457  
www.sepw.ca

**Associated Engineering**  
1922 Park Street, Regina, Saskatchewan, S4N 7M4  
Ph: 306 721 2466 Fax: 306 721 2474  
www.ae.ca



ASSOCIATION OF PROFESSIONAL ENGINEERS AND GEOSCIENTISTS OF SASKATCHEWAN  
CERTIFICATE OF AUTHORIZATION  
ASSOCIATED ENGINEERING (SASK.) LTD.  
NUMBER C116  
PERMISSION TO CONSULT HELD BY:  
DISCIPLINE: MUNICIPAL SASK. REG. No. 09631 SIGNATURE: [Signature]

ASSOCIATED ENGINEERING  
QUALITY MANAGEMENT SIGN-OFF  
Signature: *Stella Madsen*  
Date: *Dec 13, 2014*

DO NOT SCALE DRAWINGS

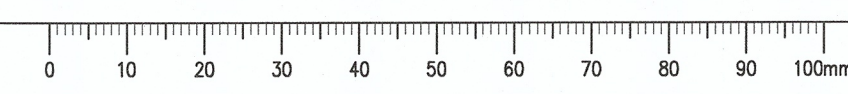
Revision/Description	Date/Date
0 ISSUED FOR TENDER	2014-12-08

Project title/Titre du projet  
**NEW POLCE BUILDING  
MAIDSTONE, SASKATCHEWAN**

Approved by/Approve par  
Designed by/Concept par **K.GALT**  
Drawn by/Dessine par **A.BEATTY**  
Project Manager/Administrateur de Projets **CS**  
Architectural and Engineering Resources Manager/  
Ressources Architectural et de Directeur d'ingénierie

Drawing title/Titre du dessin  
**CIVIL DETAILS**

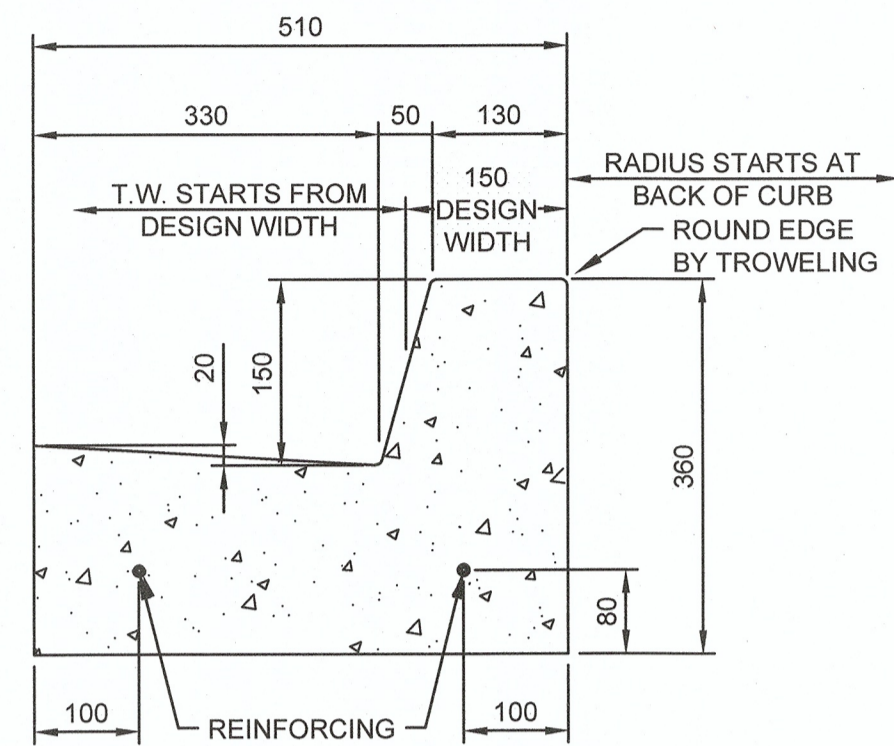
Project No./No. du projet	Sheet/Feuille	Revision no./La Révision no.
29/2013	C2	0





**GENERAL NOTE:**

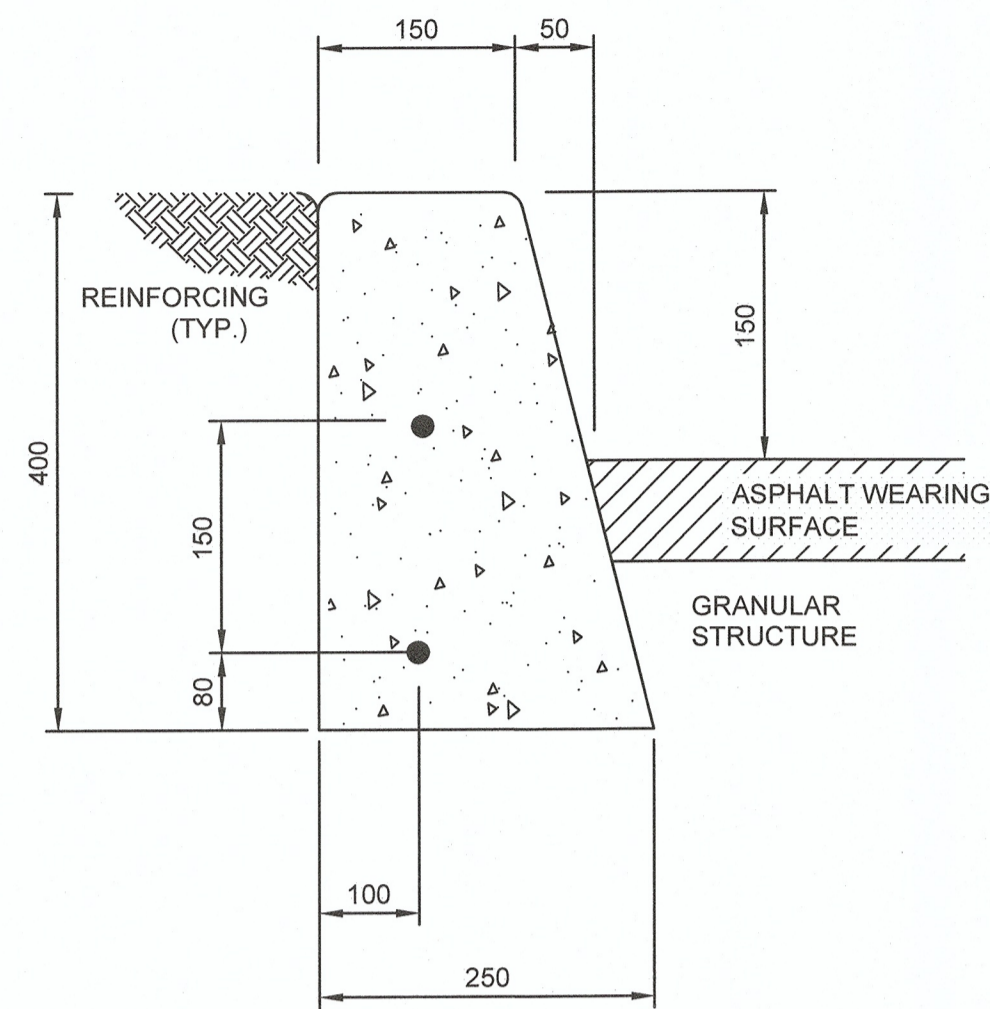
1. ALL UNITS IN MILLIMETERS UNLESS OTHERWISE NOTED.



**NOTE:**

1. 10M REINFORCING REQUIRED:
  - AT INTERSECTIONS ON RADII
  - ADJACENT TO CATCH BASINS
  - OVER SERVICE CONNECTION TRENCHES
  - AND DRIVEWAYS

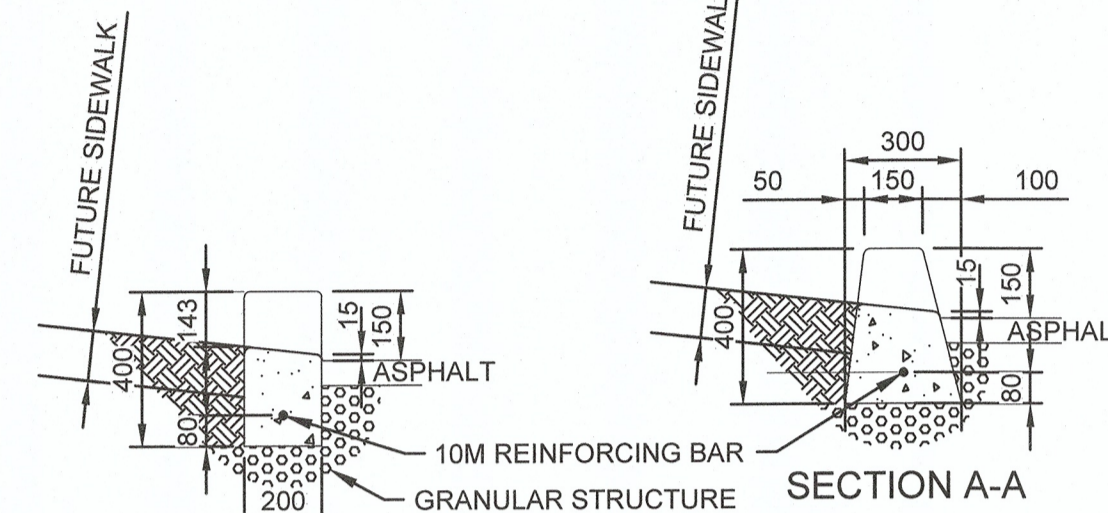
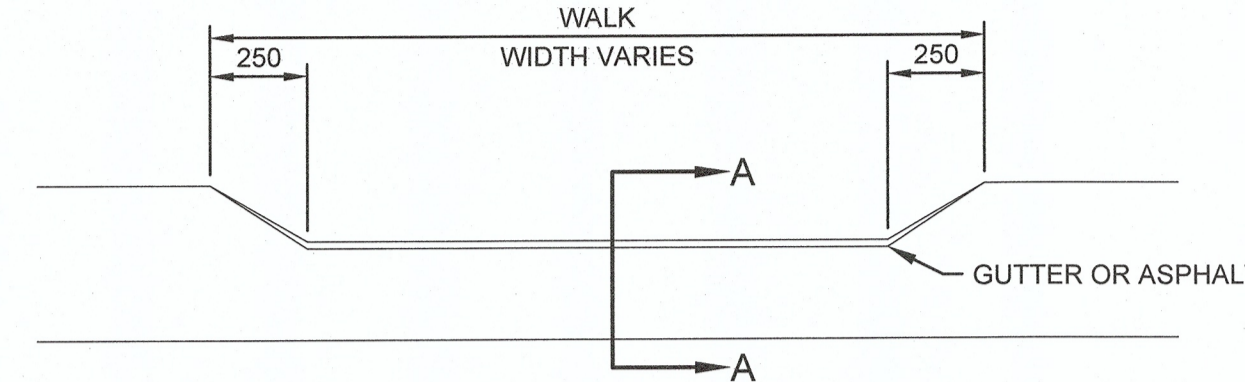
1 DETAIL N.T.S.  
CURB & GUTTER TYPE 5



**NOTES:**

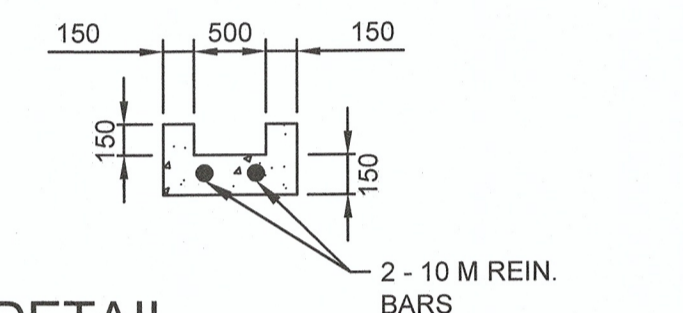
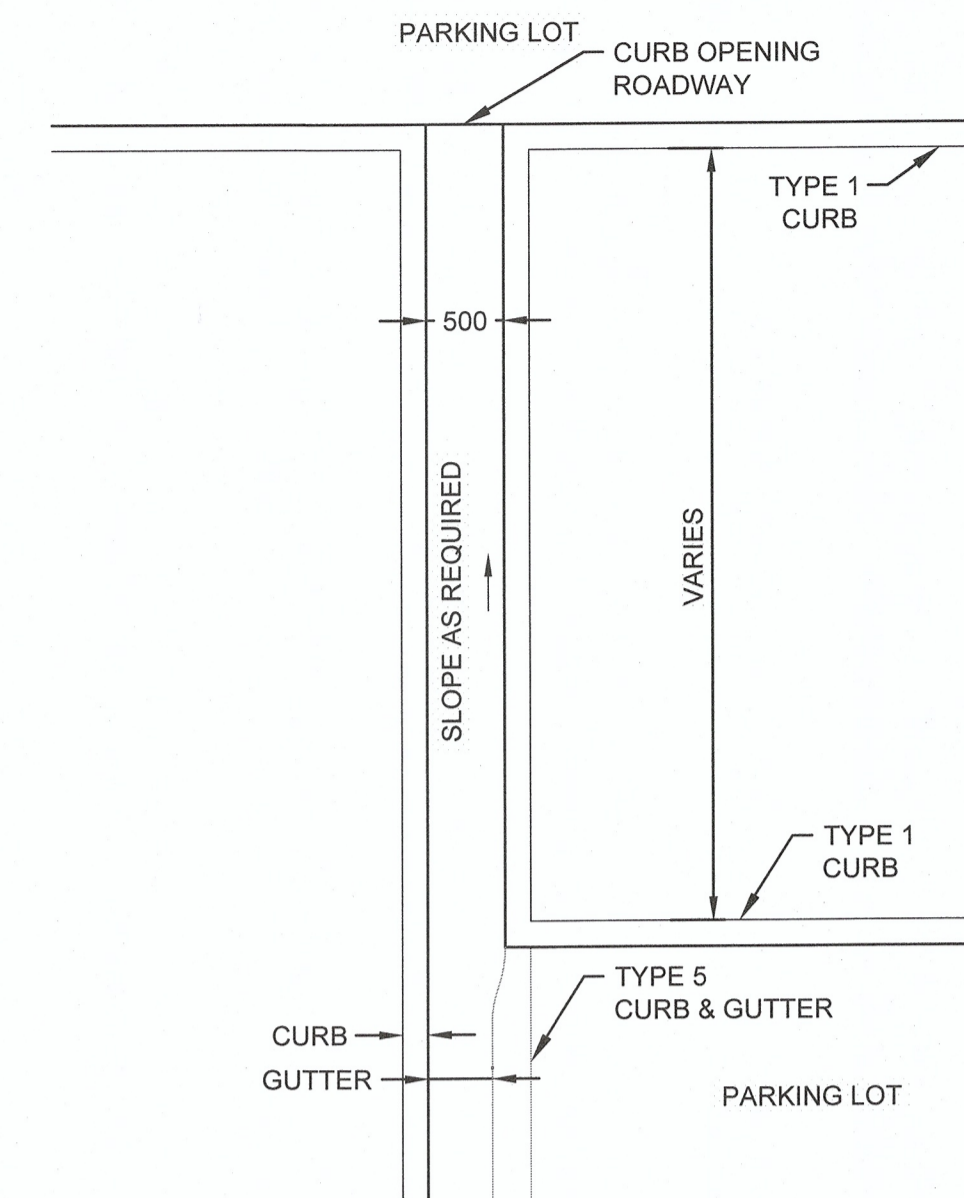
1. 10M REINFORCING BARS TO BE USED ON BULL NOSES AND AREAS OF REDUCED HEIGHT.
2. ON RADII OF LESS THAN 3 METERS, THE FRONT FACE MAY BE VERTICAL.

2 DETAIL N.T.S.  
CURB TYPE 1

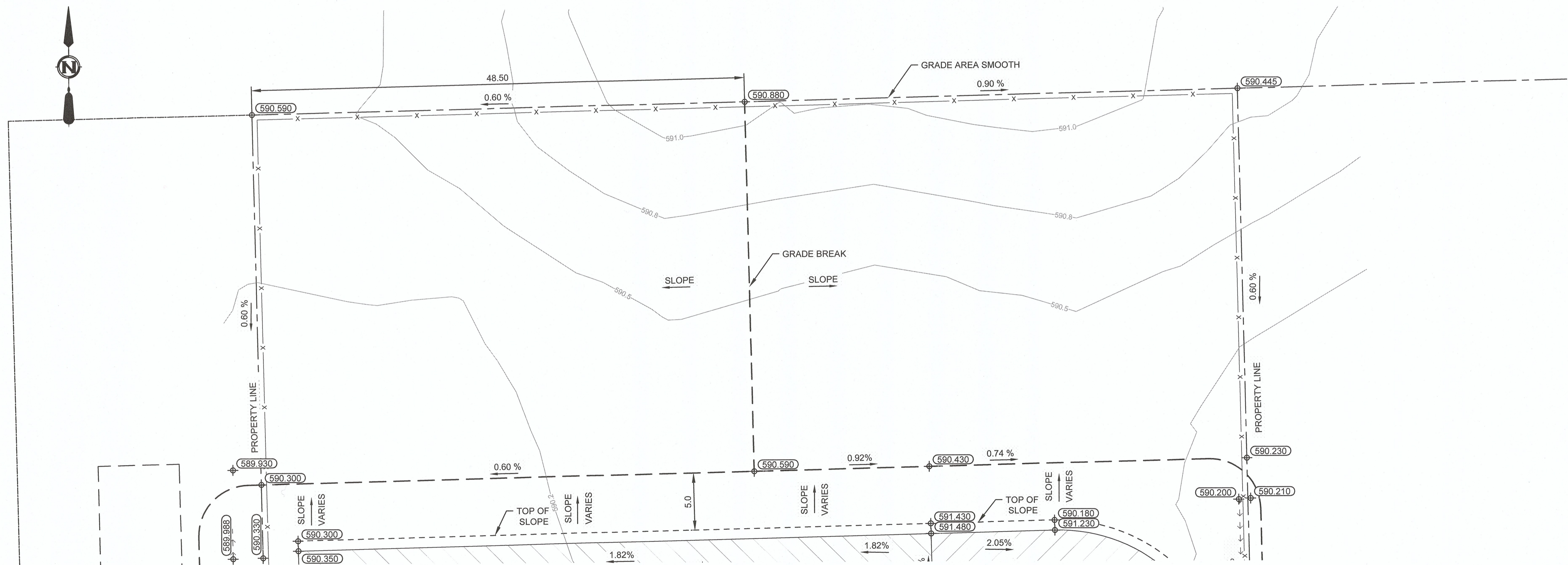


SECTION A-A

3 DETAIL N.T.S.  
TYPICAL DEPRESSED CURB AT WALK



4 DETAIL N.T.S.  
CURB DRAINAGE OPENING TYPE 1



5 PLAN 1:250

**SEPW Architecture Inc.**  
 101-3725 Paskapoo Street, Regina, SK S4S 0R8 Tel: (306) 598-2255  
 102-3718 Kananis Place, Saskatoon, SK S7N 0A8 Tel: (306) 652-4457  
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Revision/Revisions	Issued For Tender	Date/Date
0	ISSUED FOR TENDER	2014-12-08

Project title/Titre du projet

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 MAIDSTONE, SASKATCHEWAN**

Approved by/Approve par

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Client/client

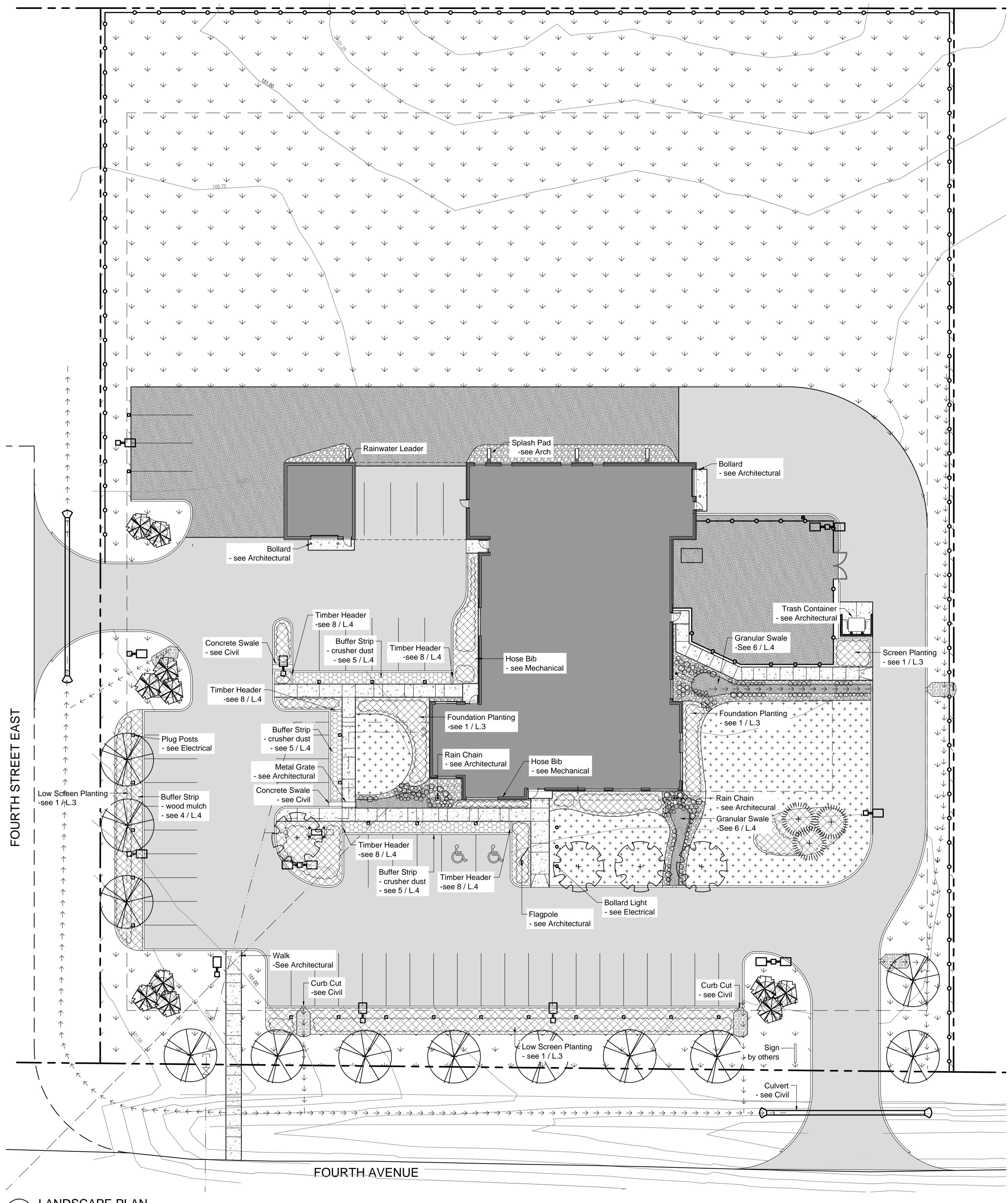
Drawing title/Titre du dessin

**CIVIL DETAILS**

Project No./No. du projet	Sheet/Feuille	Revision no./La Révision no.
29/2013	C3	0







- LEGEND**
- Seed - c/w hydro-mulch
  - Sod
  - Asphalt
  - Gravel
  - Concrete
  - Wood Fibre Mulch w/ landscape fabric
  - 400+ Ø Washed Rock w/ landscape fabric
  - Water
  - Sanitary
  - Hydrant
  - Fire Department Connection
  - Property Line
  - Zoning Setback
  - Existing Contour
  - Chainlink Fence
  - Proposed Trees
  - Swale

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**CROSBY HANNA & ASSOCIATES** Suite 220  
 2300 Dewdney Ave. Regina, SK S4R 1H5  
 www.crosbyhanna.ca  
 LANDSCAPE ARCHITECTURE TEL: (306) 790-7635  
 COMMUNITY PLANNING FAX: (306) 790-7641

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  - BUILDING PLAN TAKEN FROM x-29-13 Floor Plan.DWG PROVIDED BY SEPW ARCHITECTURE INC.
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Revision/Revision	Description/Description	Date/Date
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Client/client

Project title/Titre du projet

**NEW POLICE BUILDING  
MAIDSTONE, SASKATCHEWAN**

Approved by/Approve par  
LS

Designed by/Concept par  
LS

Drawn by/Dessine par  
LMS

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CS

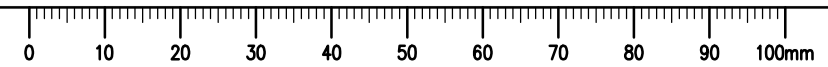
Architectural and Engineering Resources Manager/  
Ressources Architectural et de Directeur d'Ingénierie

Client/client

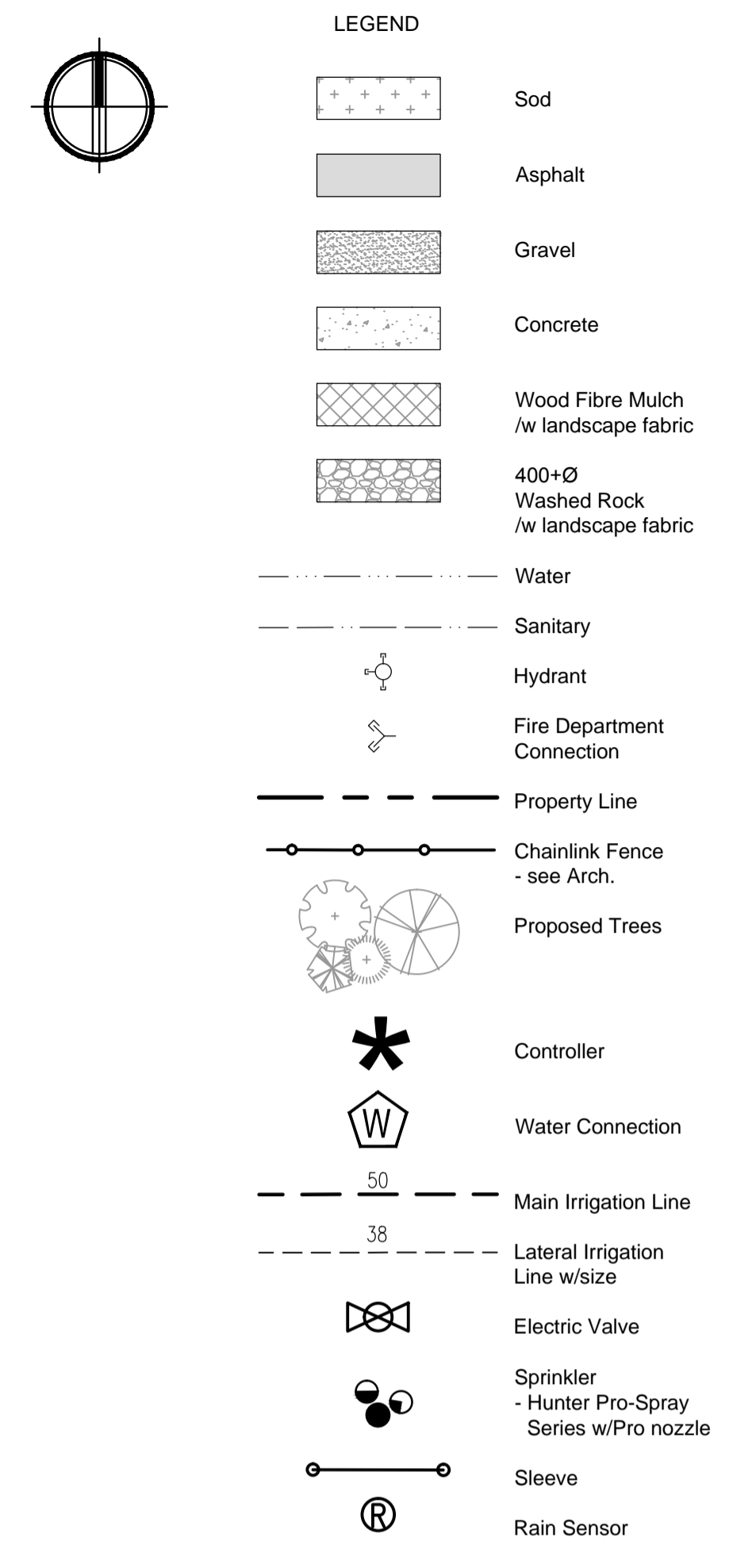
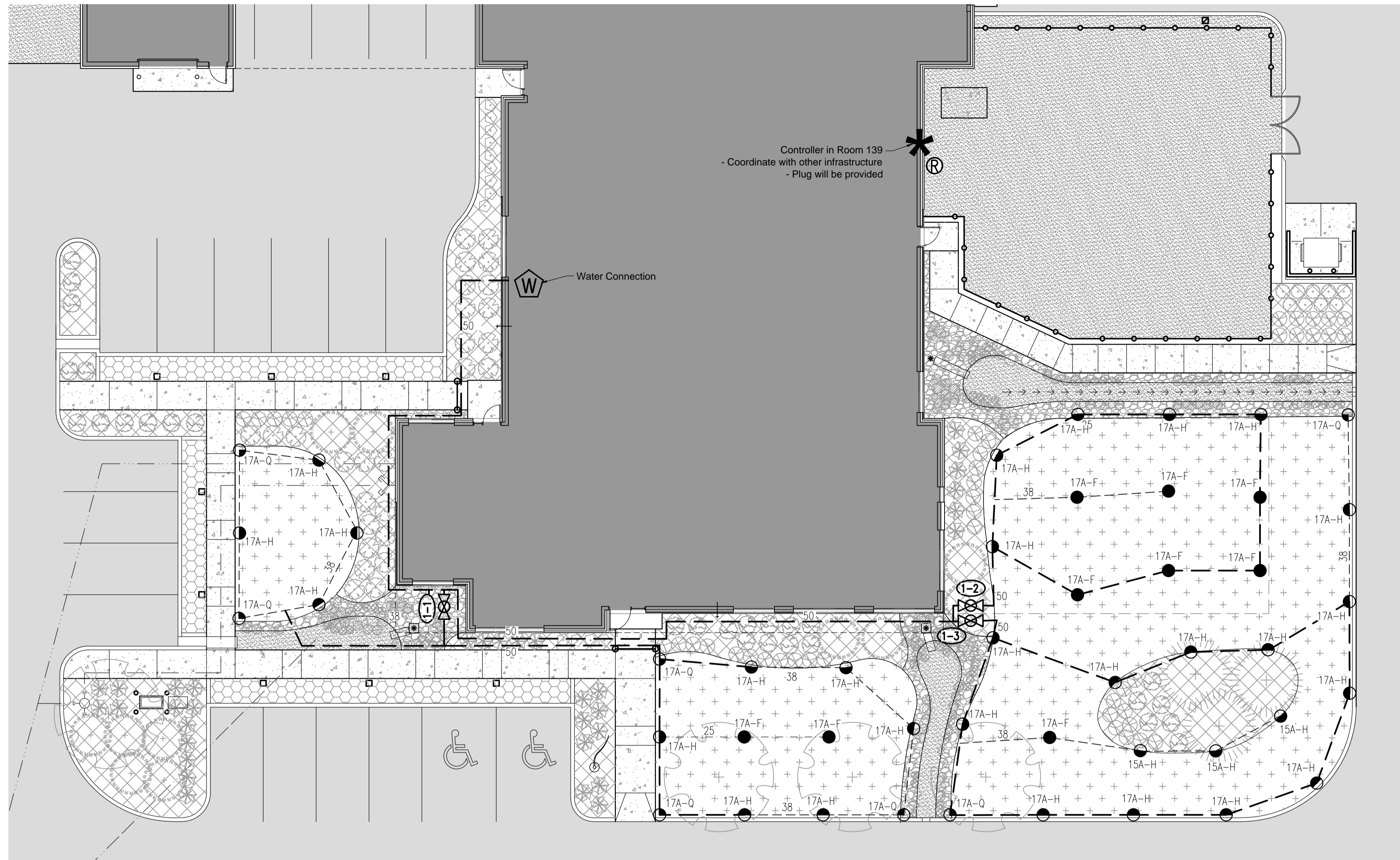
Drawing title/Titre du dessin  
**LANDSCAPE PLAN**

Project No./No. du projet 29/2013 CHA / 13.083R	Sheet/Feuille L.1	Revision no./La Révision no. 0
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**1 LANDSCAPE PLAN**  
1:250





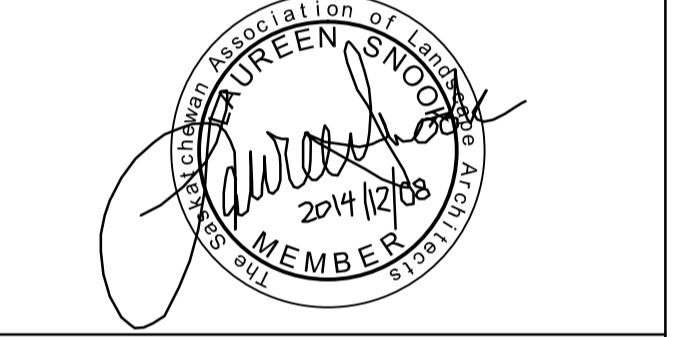


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LANDSCAPE ARCHITECTURE  
 COMMUNITY PLANNING

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  - IRRIGATION DESIGN ARE SCHEMATIC IN NATURE. ON SITE ADJUSTMENTS MAY BE REQUIRED. CONFIRM WITH CONSULTANT PRIOR TO MAKING ANY DESIGN CHANGES.
  - ENSURE VALVES 1-2 AND 1-3 ARE INSTALLED MIN OF 2M OUTSIDE OF FOOT PRINT OF FUTURE BUILDING EXTENSION.
  - EQUALS FOR IRRIGATION PRODUCTS ARE ACCEPTABLE WITH PRIOR APPROVAL OF CONSULTANT.



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0	ISSUED FOR TENDER	2014-12-08

Client/client	Project title/Titre du projet
	<b>NEW POLICE BUILDING MAIDSTONE, SASKATCHEWAN</b>

Approved by/Approve par  
LS

Designed by/Concept par  
AA

Drawn by/Dessine par  
AA

Project Manager/Administrateur de Projets  
CS

Architectural and Engineering Resources Manager/  
Ressources Architectural et de Directeur d'Ingénierie

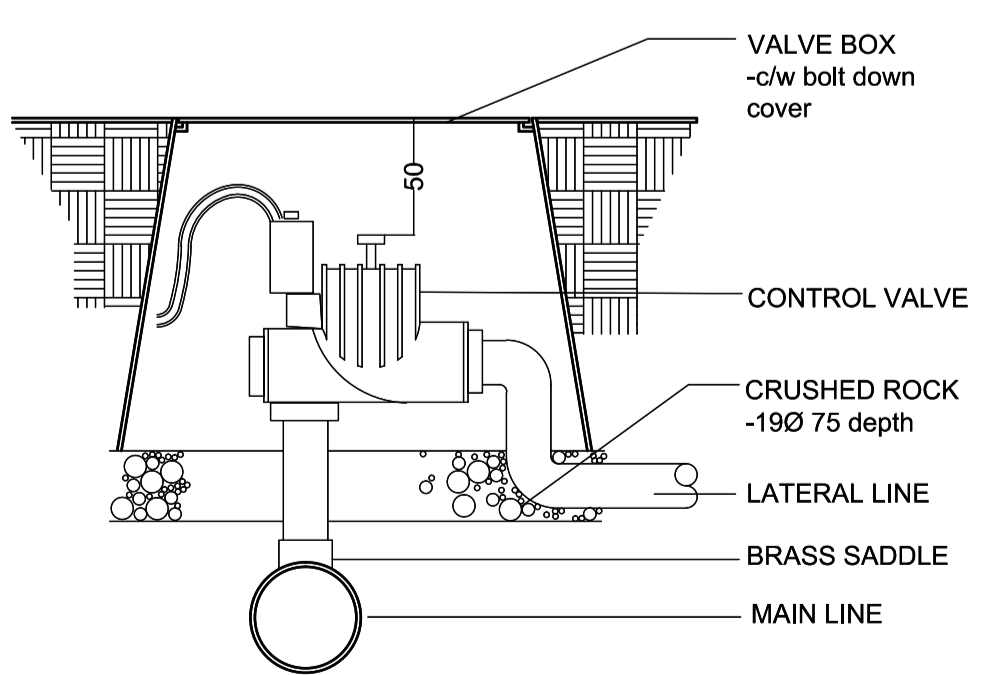
Client/client

Drawing title/Titre du dessin  
**IRRIGATION PLAN**

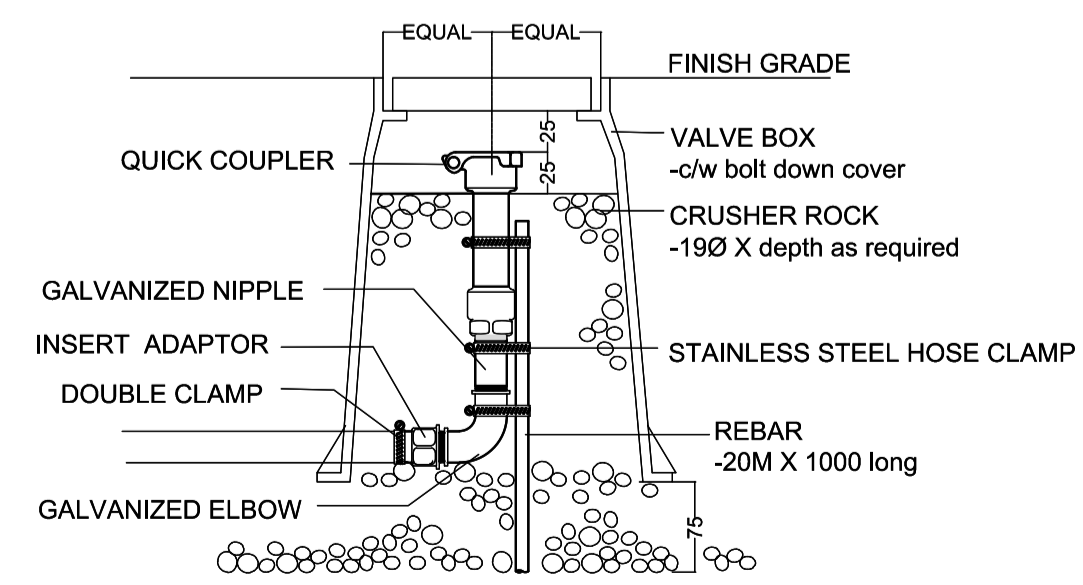
Project No./No. du projet	Sheet/Feuille	Revision no./La Révision no.
29/2013 CHA / 13.083R	L.2	0

**1 IRRIGATION PLAN**  
1:150

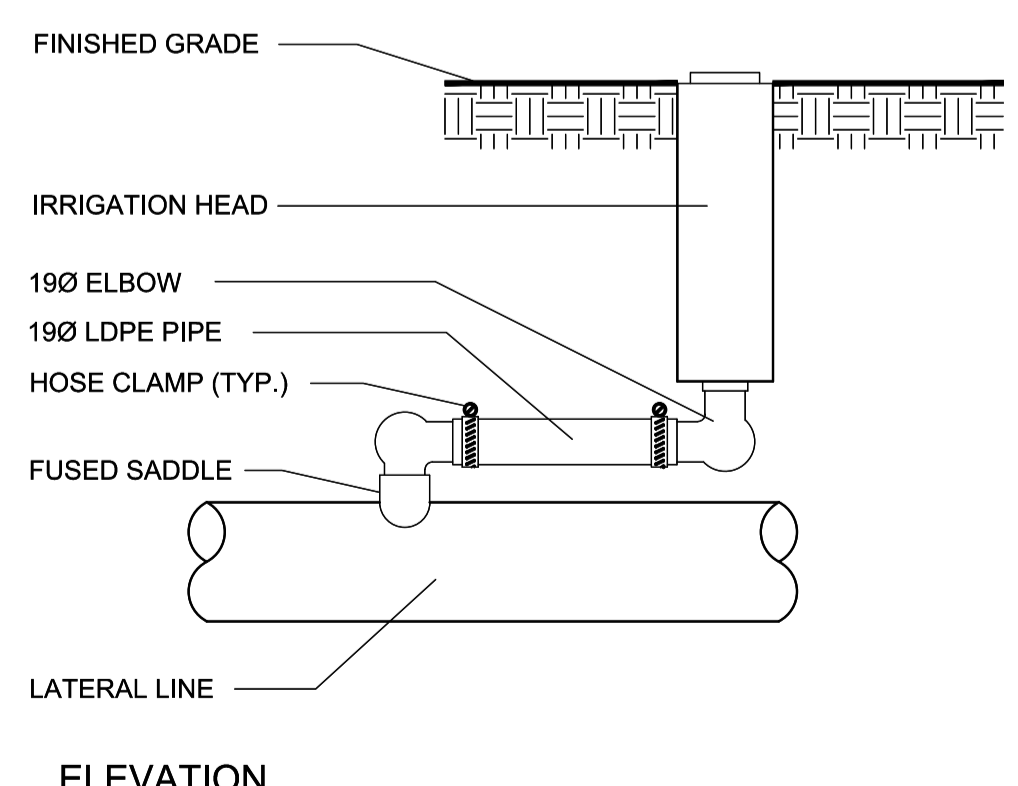
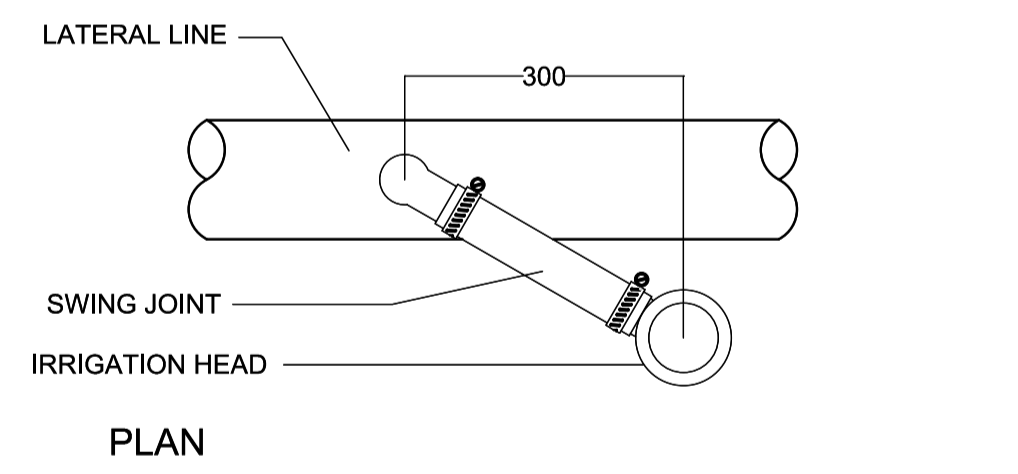
ZONE OPERATION (recommended 3 starts per week)					
Zone	Head Type	Valve Size (gpm)	Flow Rate (min)	Duration	Start time
1-1	Pro-Sprays	50mm	31.68	15.00	5:00 am
1-2	Pro-Sprays	50mm	32.68	15.00	5:15am
1-3	Pro-Sprays	50mm	33.25	15.00	5:30am



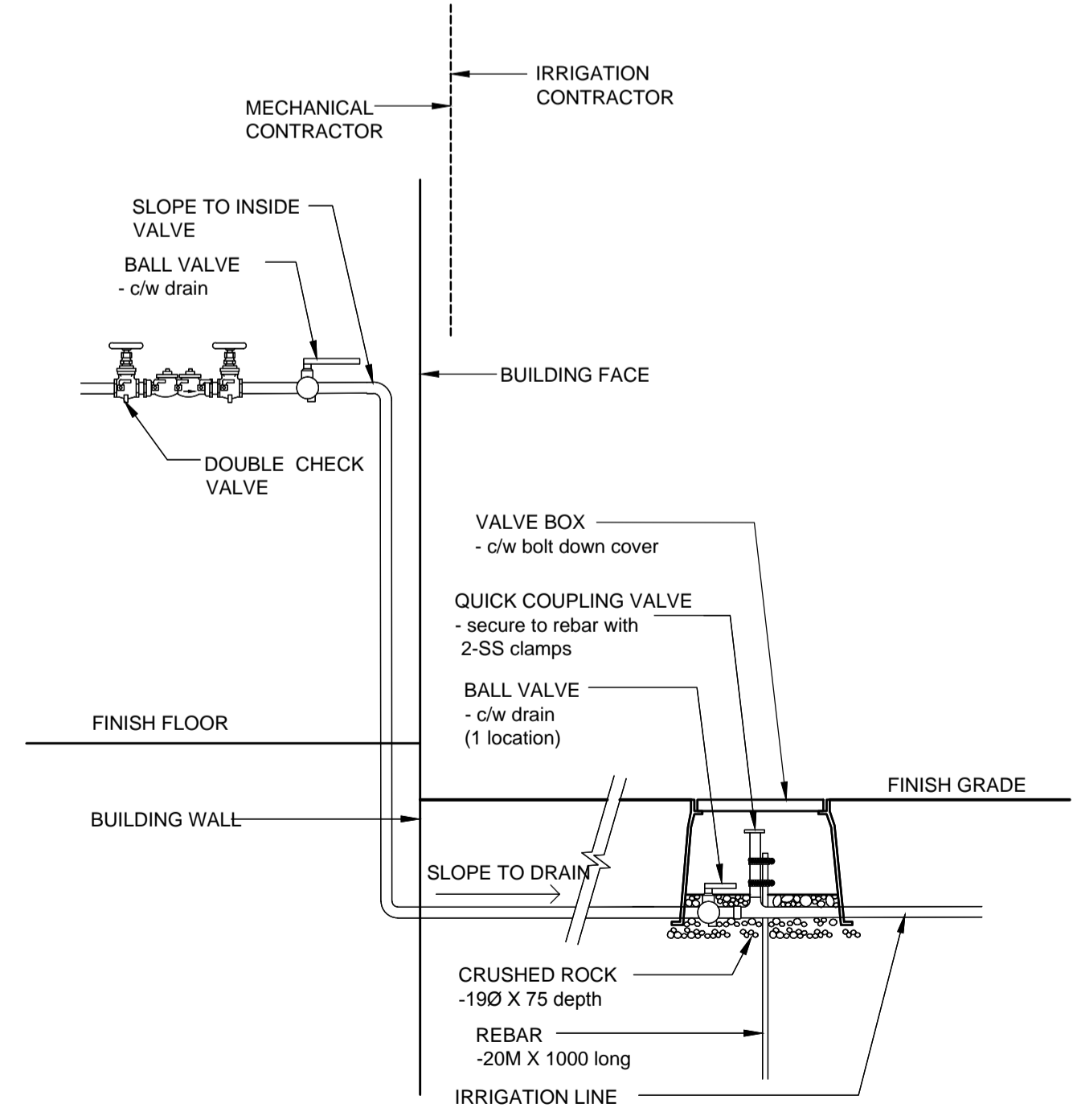
**2 ELECTRIC VALVE**  
NTS



**3 QUICK COUPLER VALVE**  
NTS

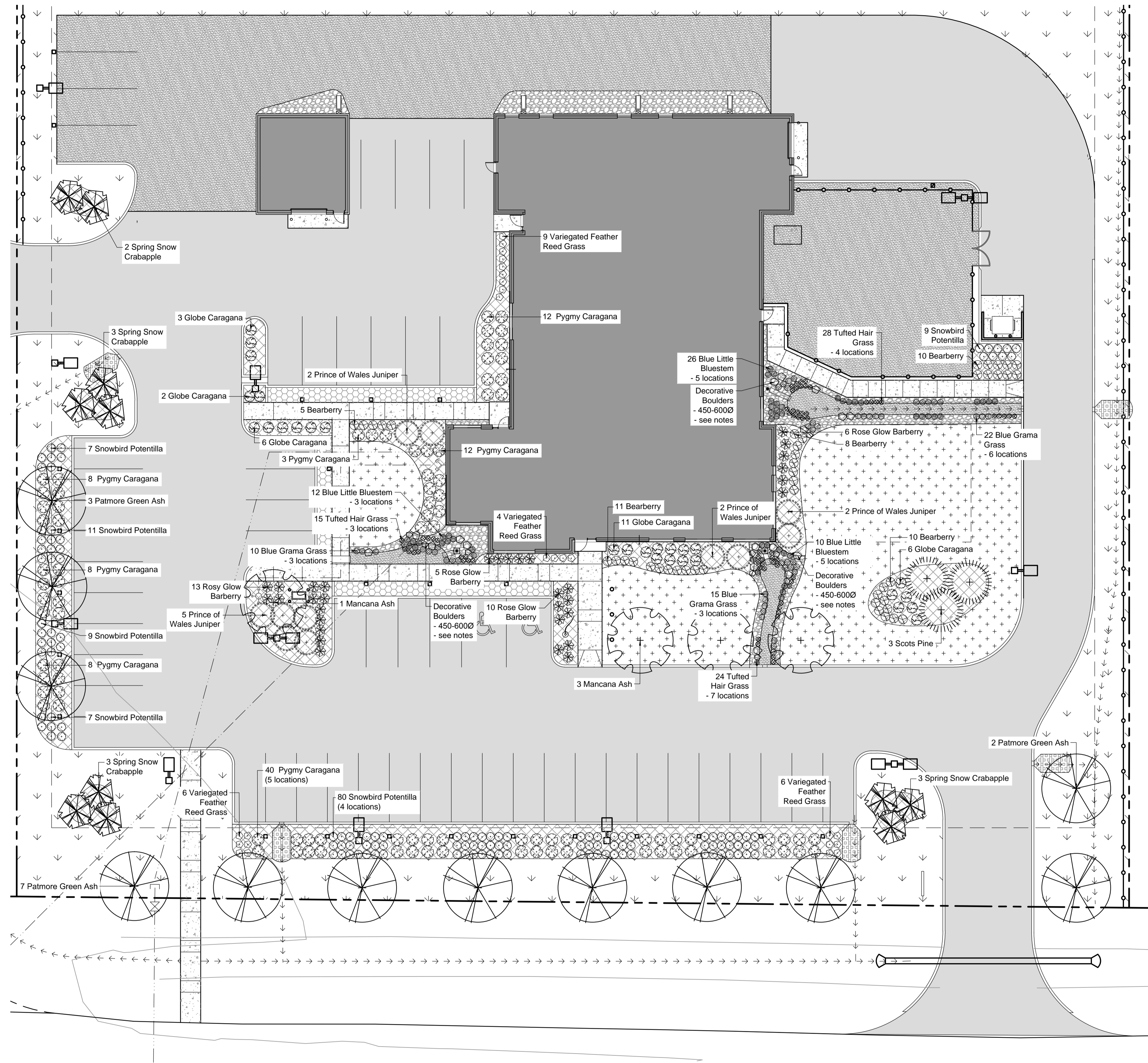


**4 SPRAY HEAD INSTALLATION**  
NTS



**5 CONNECTION TO BUILDING**  
NTS





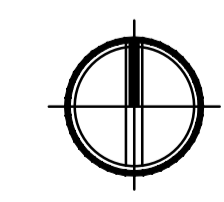
1 PLANTING PLAN  
1:200

LEGEND

	Seed
	- c/w hydro-mulch
	Sod
	Asphalt
	Gravel
	Concrete
	Wood Fibre Mulch w/ landscape fabric
	Concrete with Rocks -see Civil
	400+ Ø Washed Rock w/ landscape fabric
	Water
	Sanitary
	Hydrant
	Fire Department Connection
	Property Line
	Zoning Setback
	100.75 Existing Contour
	101.00 Existing Contour
	Chainlink Fence
	Proposed Trees
	Swale

2 PLANT SPECIFICATION LIST

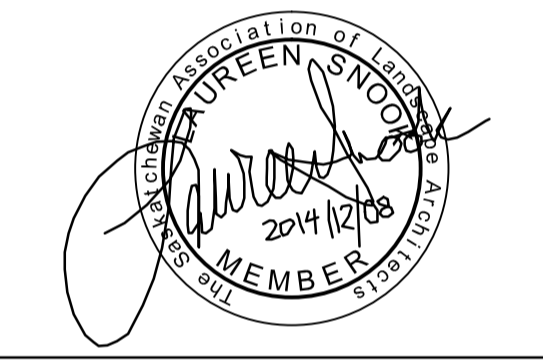
QTY	COMMON / Botanical Name	SIZES AND REMARKS
<b>CONIFEROUS TREES</b>		
3	SCOTS PINE / <i>Pinus sylvestris</i>	- 1800 ht. min.; full, evenly branched; broken leaders unacceptable; B & B or container; min. ball diam. 600; guy.
<b>DECIDUOUS TREES</b>		
4	MANCANA ASH / <i>Fraxinus mandchurica</i> 'Mancana'	- 60 cal. min.; 2500 -3000 ht. min.; 6 branches in well branched head above 1000 ht.; B & B; min. ball diam. 550; stake
12	PATMORE GREEN ASH / <i>Fraxinus pennsylvanica</i> 'Patmore'	- 60 cal. min.; 2000 ht. min.; 6 branches in well branched head above 1000 ht.; B & B; min. ball diam. 550; stake
11	SPRING SNOW CRABAPPLE / <i>Malus x 'Spring Snow'</i>	- 40 cal. min.; 2500 -3000 ht. min.; 6 branches in well branched head above 1000 ht.; B & B or container grown; min. ball diam. 550; stake
<b>CONIFEROUS SHRUBS</b>		
11	PRINCE OF WALES JUNIPER / <i>Juniperus sabina</i> 'Arcadia'	- 400 diam. min.; bushy, even growth and form; B & B or container grown. #2 pot.
<b>DECIDUOUS SHRUBS</b>		
44	BEARBERRY / <i>Arctostaphylos uva-ursi</i>	- 100 ht. min.; bushy plants with 5 major basal stems min.; container grown, #2 pot.
34	ROSE GLOW BARBERRY / <i>Berberis thunbergii</i> 'Rose Glow'	- 400 ht. min.; bushy plants with 5 major basal stems min.; container grown, #2 pot.
28	GLOBE CARAGANA / <i>Caragana frutex</i> 'Globosa'	- 400 ht. min.; bushy plants with 5 major basal stems min.; container grown, #2 pot.
91	PYGMY CARAGANA / <i>Caragana pygmaea</i>	- 400 ht. min.; bushy plants with 5 major basal stems min.; container grown, #2 pot.
123	SNOWBIRD POTENTILLA / <i>Potentilla fruticosa</i> 'Snowbird'	- 400 ht. min.; bushy plants with 5 major basal stems min.; container grown, #2 pot.
<b>GRASSES AND PERENNIAL</b>		
47	BLUE GRAMA / <i>Bouteloua gracilis</i>	- bushy healthy bedding plants with fully developed root system in 1# pots; plant in spring or early summer 500 o/c.
25	VARIEGATED FEATHER REED GRASS / <i>Calamagrostis x acutiflora</i> 'Overdam'	- bushy healthy bedding plants with fully developed root system in 1# pots; plant in spring or early summer 700 o/c.
67	TUFTED HAIR GRASS / <i>Deschampsia cespitosa</i>	- bushy healthy bedding plants with fully developed root system in 1# pots; plant in spring or early summer 400 o/c.
48	BLUE LITTLE BLUESTEM / <i>Schizachyrium scoparium</i> 'The Blues'	- bushy healthy bedding plants with fully developed root system in 1# pots; plant in spring or early summer 500 o/c.



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 LANDSCAPE ARCHITECTURE  
 COMMUNITY PLANNING

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  - INSTALL 450-600Ø DECORATIVE BOULDERS AT 1/3 TO 1/4 BELOW GRADE TO PREVENT UNWARRANTED MOVEMENT. 24 REQUIRED.



DO NOT SCALE DRAWINGS

Revision/Revision	Description/Description	Date/Date
0	ISSUED FOR TENDER	2014-02-08

Project title/Titre du projet

**NEW POLICE BUILDING  
MAIDSTONE, SASKATCHEWAN**

Approved by/Approve par  
LS

Designed by/Concept par  
LS

Drawn by/Dessine par  
LMS

Project Manager/Administrateur de Projets  
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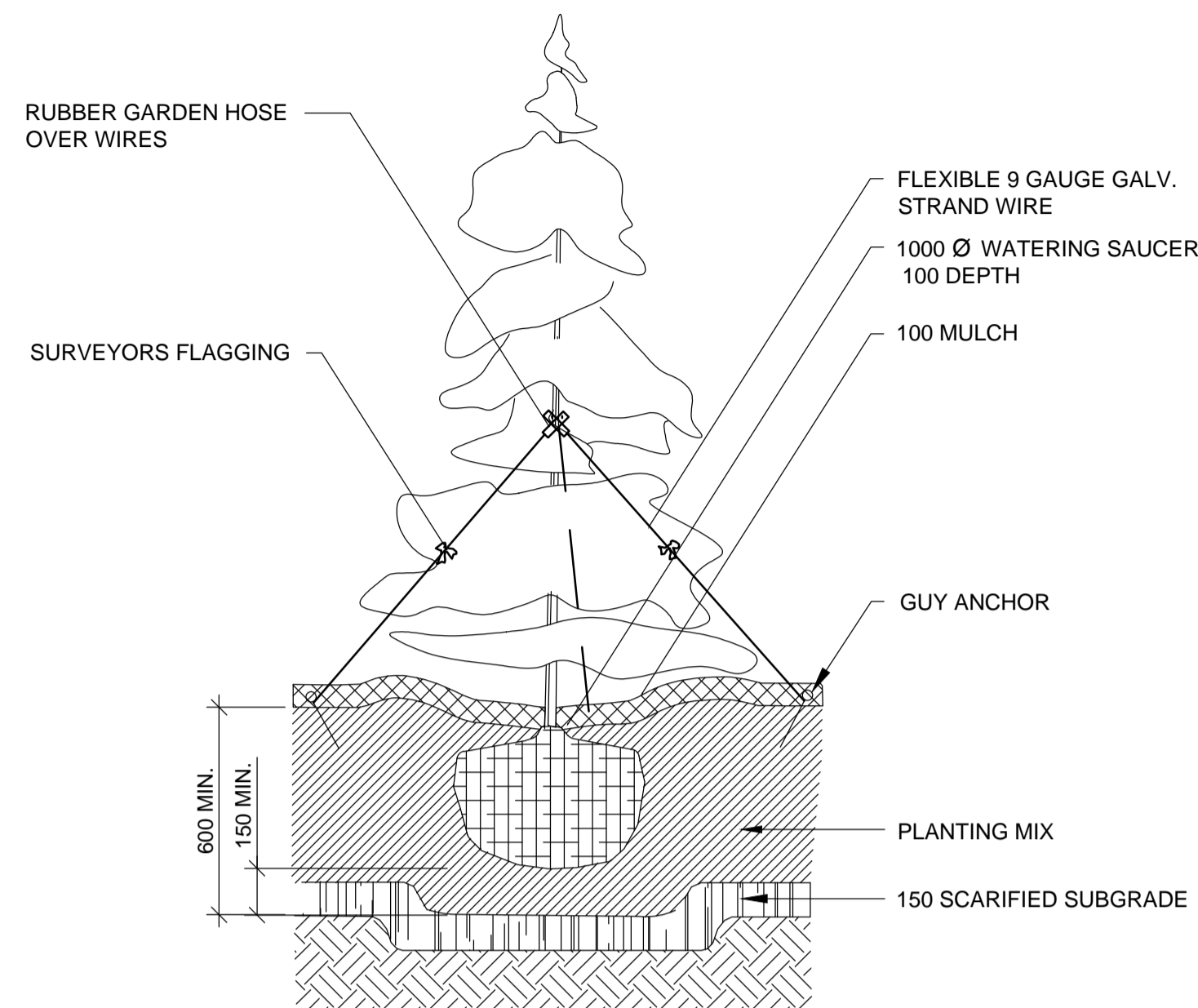
Architectural and Engineering Resources Manager/  
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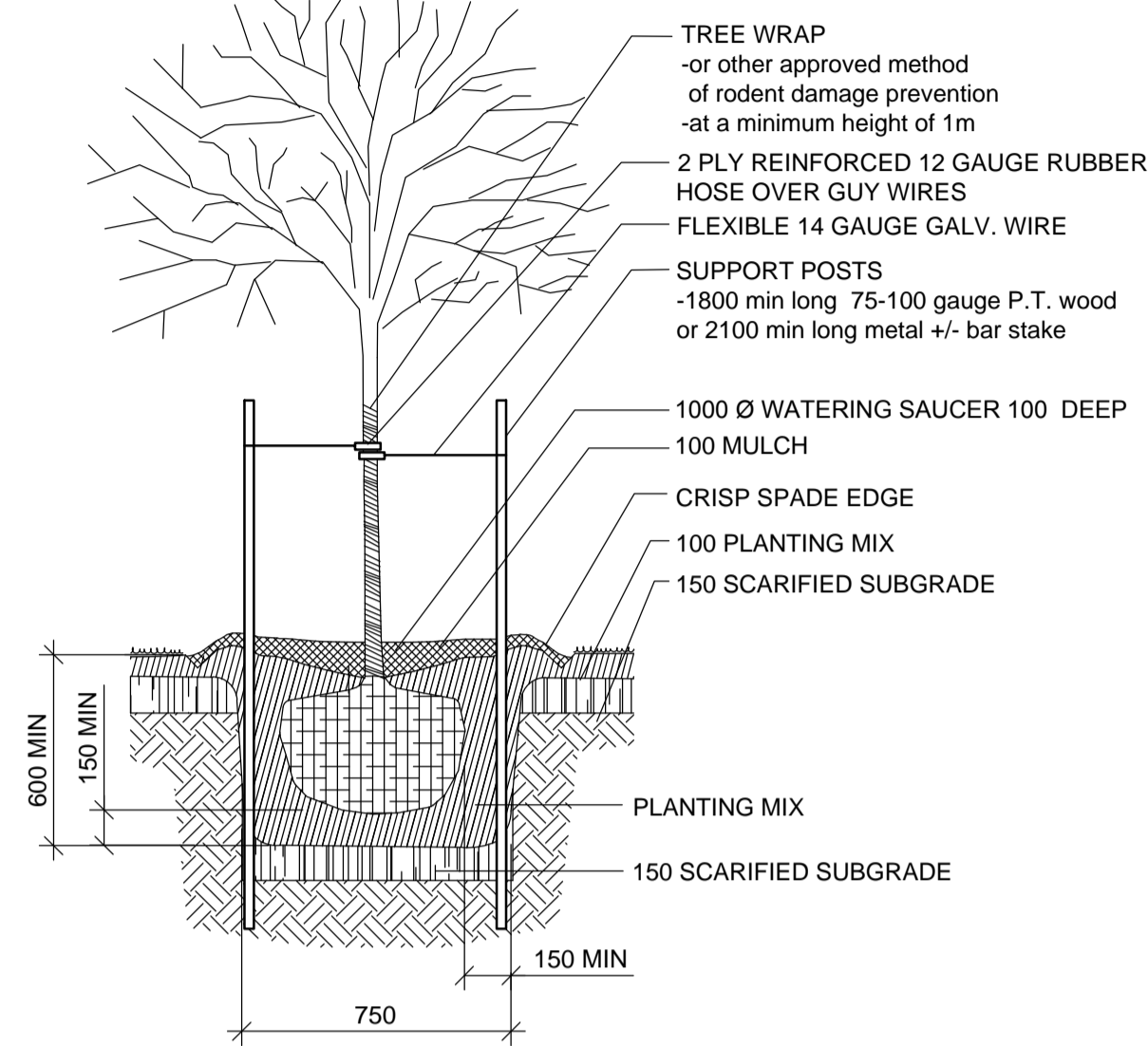
Drawing title/Titre du dessin  
**PLANTING PLAN**

Project No./No. du projet 29/2013 CHA / 13.083R	Sheet/Feuille L.3	Revision no./ La Révision no. 0
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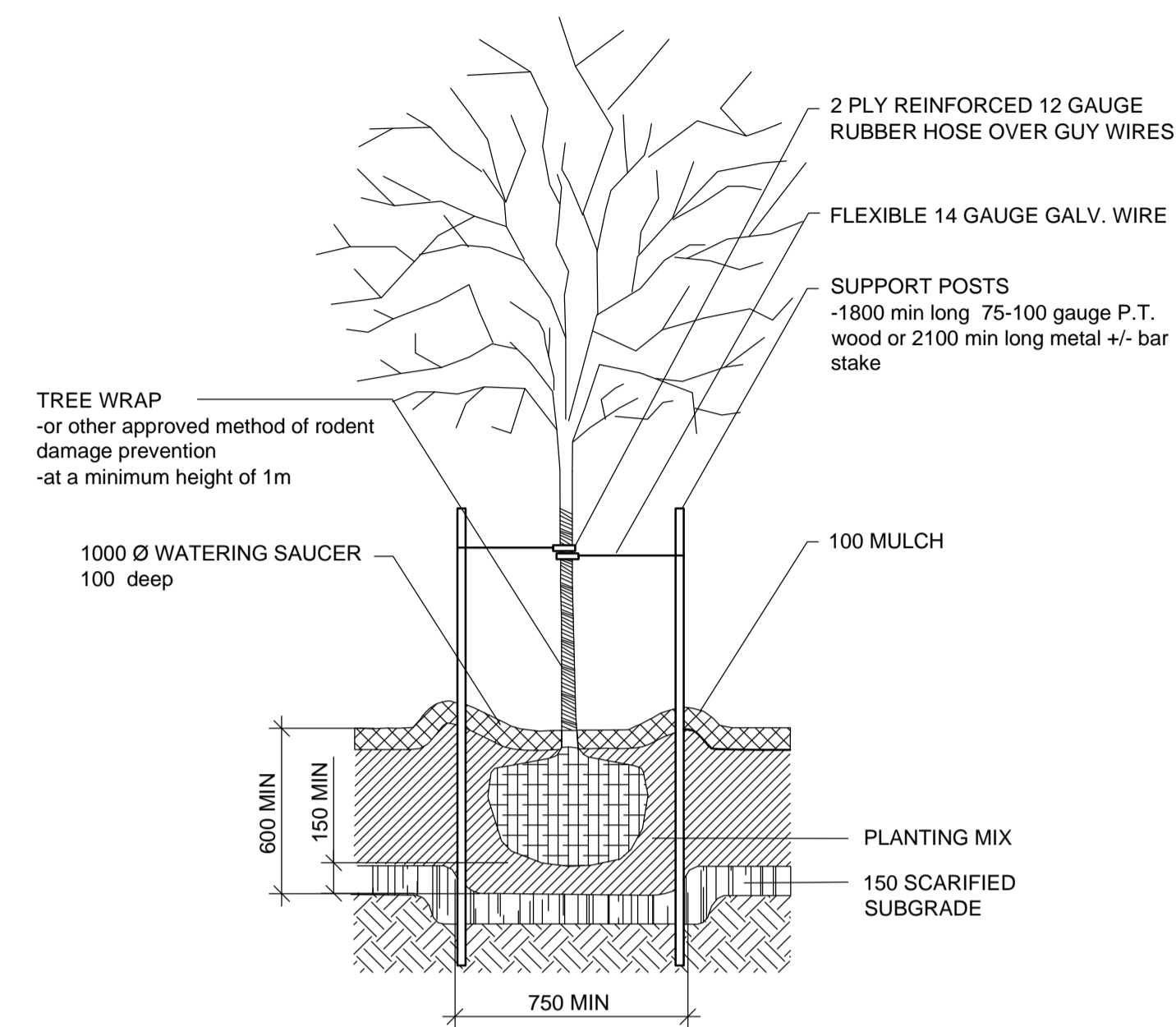




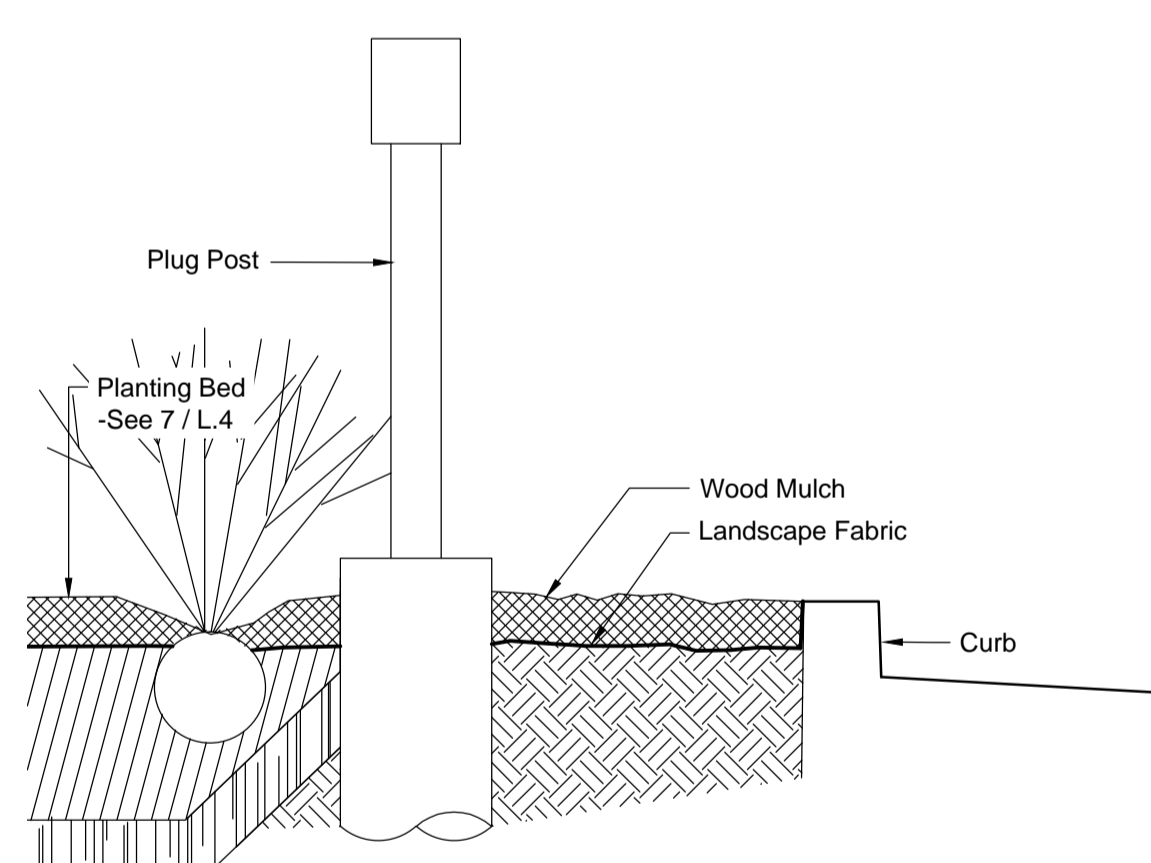
1 CONIFEROUS TREE IN BED - Planting Detail  
NTS



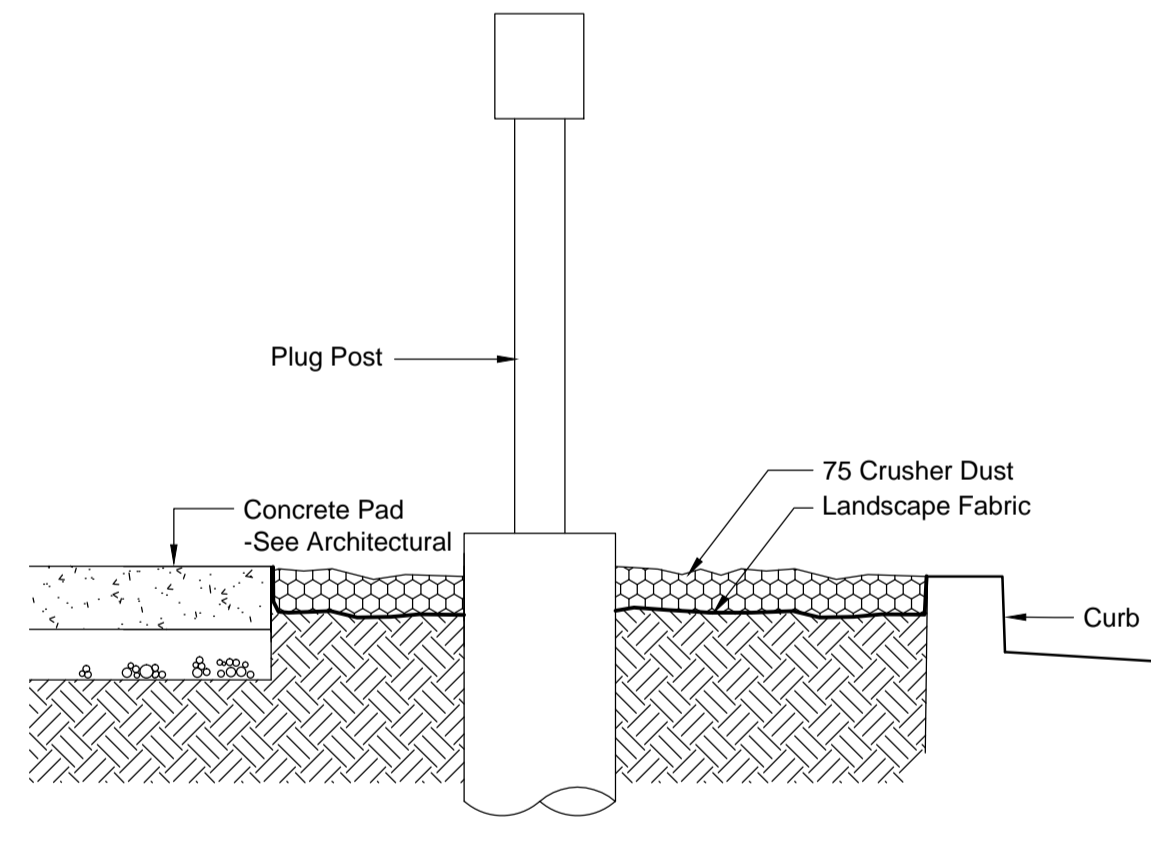
2 DECIDUOUS TREE - Planting Detail  
NTS



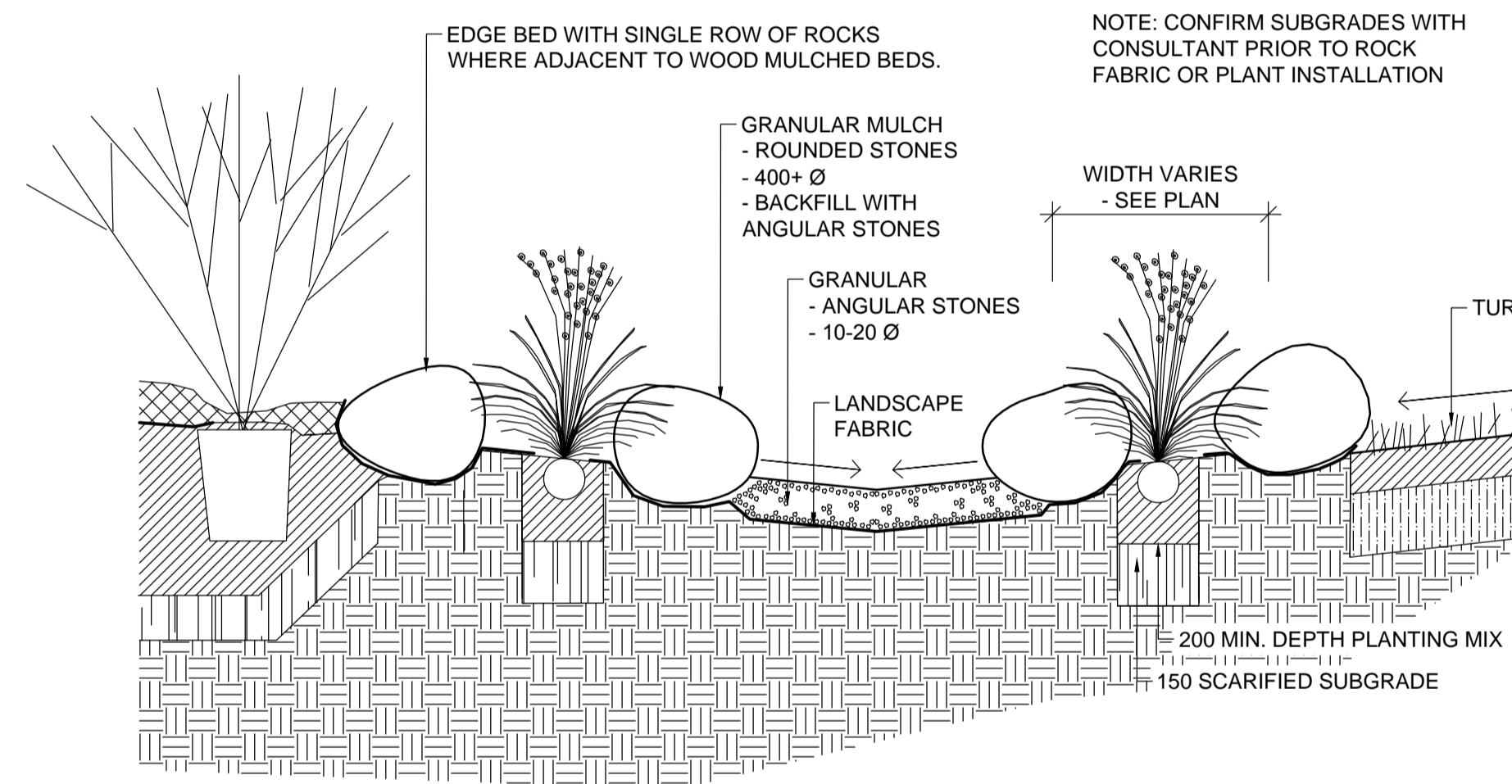
3 DECIDUOUS TREE IN BED- Planting Detail  
NTS



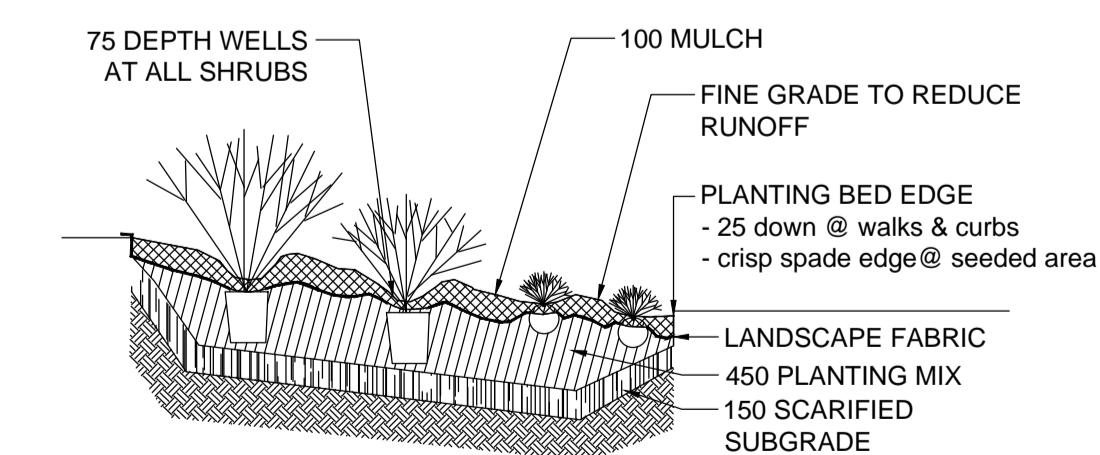
4 BUFFER STRIP - at parking pedestal and planting bed  
1:15



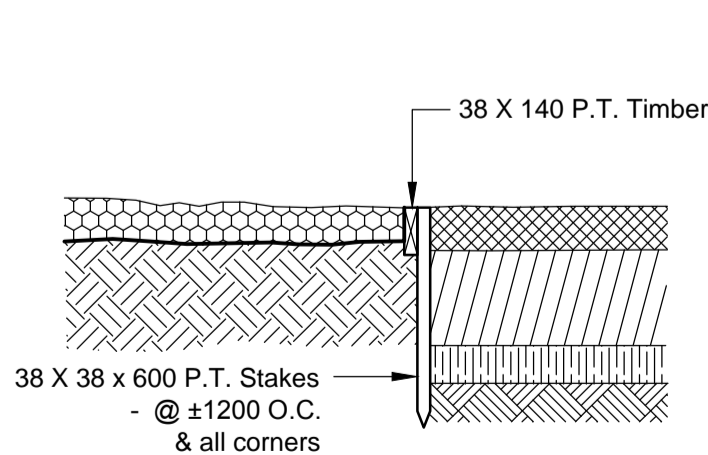
5 BUFFER STRIP - at parking pedestal and walk  
1:15



6 GRANULAR SWALE - Detail  
1:15



7 SHRUB BED - Detail  
NTS



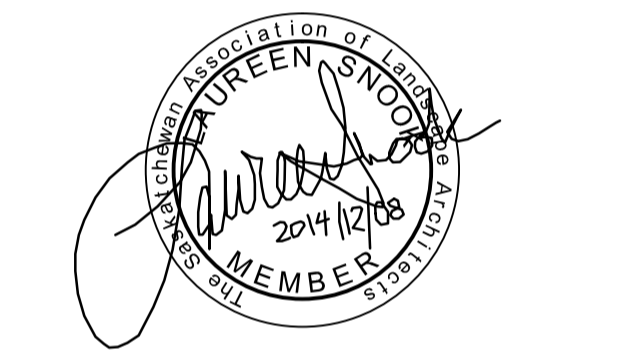
8 TIMBER HEADER - Detail  
1:15

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Drawing title/Titre du dessin

**LANDSCAPE DETAILS**

Project No./No. du projet 29/2013 CHA / 13.083R	Sheet/Feuille L.4	Revision no./ La Révision no. 0
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