

TURNBULL LEARNING CENTRE MUSIC ROOM ADDITION

Name of Practice: HOBIN ARCHITECTURE INCORPORATED 65 PAMILLA STREET, OTTAWA, ONTARIO K1S 3K7		
Name of Project: TURNBULL LEARNING CENTRE MUSIC ROOM ADDITION		
Location: 1132 FISHER AVE., OTTAWA, ONTARIO Date: 2018-07-09		
Ontario Building Code Data Matrix Part 3		
3.00	Building Code Version: <u>O_Reg_332/12</u> Last Amendment: <u>O_Reg_181/14</u>	Building Code Reference: <u>1</u>
3.01	Project Type: <input type="checkbox"/> New <input checked="" type="checkbox"/> Addition <input type="checkbox"/> Renovation <input type="checkbox"/> Change of use <input type="checkbox"/> Addition and renovation Description: <u>SINGLE-STOREY MUSIC ROOM ADDITION ON NORTH SIDE OF TWO-STOREY EXISTING WING, FACING INTERNAL PLAY YARD</u>	[A] 1.1.2.
3.02	Major Occupancy Classification: <u>GROUP A2</u> Use: <u>ASSEMBLY OCCUPANCIES NOT ELSEWHERE CLASSIFIED IN GROUP A</u>	3.1.2.1.(1)
3.03	Superimposed Major Occupancies: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Description: _____	3.2.2.7.
3.04	Building Area (m ²): Description: _____ Existing: _____ New: _____ Total: _____ <u>EX INTERMEDIATE SCHOOL</u> 1295 127.8 1422.8 Total 1295 127.8 1422.8	[A] 1.4.1.2.
3.05	Gross Area (m ²): Description: _____ Existing: _____ New: _____ Total: _____ <u>EX INTERMEDIATE SCHOOL</u> 1863 127.8 1990.8 Total 1863 127.8 1990.8	[A] 1.4.1.2.
3.06	Mezzanine Area (m ²): Description: _____ Existing: _____ New: _____ Total: _____ N/A 0 0 0	3.2.1.1.

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3.07	Building Height: <u>1</u> Storeys above grade <u>3.4</u> (m) Above grade <u>0</u> Storeys below grade	[A] 1.4.1.2. & 3.2.1.1.
3.08	High Building: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	3.2.6.
3.09	Number of Streets/Firefighter access: <u>AS PER EXISTING TO NEW FIRE ROUTE</u>	3.2.2.10. & 3.2.5.
3.10	Building Classification: <u>3.2.2.28</u> Group/Div: <u>GROUP A DIVISION 2.1 STOREY</u>	3.2.2.20. - 83.
3.11	Sprinkler System: <input type="checkbox"/> Required <input checked="" type="checkbox"/> Not Required Proposed: <input type="checkbox"/> entire building <input type="checkbox"/> selected compartments <input type="checkbox"/> selected floor areas <input type="checkbox"/> basement <input type="checkbox"/> in lieu of roof rating <input checked="" type="checkbox"/> none	3.2.1.5. & 3.2.2.17.
3.12	Standpipe System: <input type="checkbox"/> Not required <input checked="" type="checkbox"/> Required	3.2.9.
3.13	Fire Alarm System: <input checked="" type="checkbox"/> Not required <input type="checkbox"/> Required Proposed: <input checked="" type="checkbox"/> Single stage <input type="checkbox"/> Two stage <input type="checkbox"/> None	3.2.4.
3.14	Water Service / Supply is Adequate: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	
3.15	Construction Type: Restriction: <input checked="" type="checkbox"/> Combustible permitted <input type="checkbox"/> Non-combustible required Actual: <input type="checkbox"/> Combustible <input checked="" type="checkbox"/> Non-combustible <input type="checkbox"/> Combination Heavy Timber Construction: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	3.2.2.20. - 83. & 3.2.1.4.
3.16	Importance Category: <input type="checkbox"/> Low <input type="checkbox"/> Low human occupancy <input type="checkbox"/> Post-disaster shelter <input type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Minor storage building <input type="checkbox"/> Explosive or hazardous substances <input type="checkbox"/> Post-disaster	4.1.2.1.(3) & 74.1.2.1B
3.17	Seismic Hazard Index: (I _e Fa Sa (0.2)) = <u>0.832</u> Seismic design required for Table 4.1.8.18, items 6 to 21: (I _e Fa Sa (0.2)) ≥ 0.35 or Post-disaster <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	4.1.2.1.(3) & 4.1.8.18.(2)
3.18	Occupant Load: Floor Level/Area: _____ Occupancy Type: <u>A2</u> Based On: <u>DESIGN</u> Occupant Load (Persons): <u>NO ADDITIONAL OCCUPANT LOAD TO EXISTING</u>	3.1.17.
3.19	Barrier-free Design: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.8.

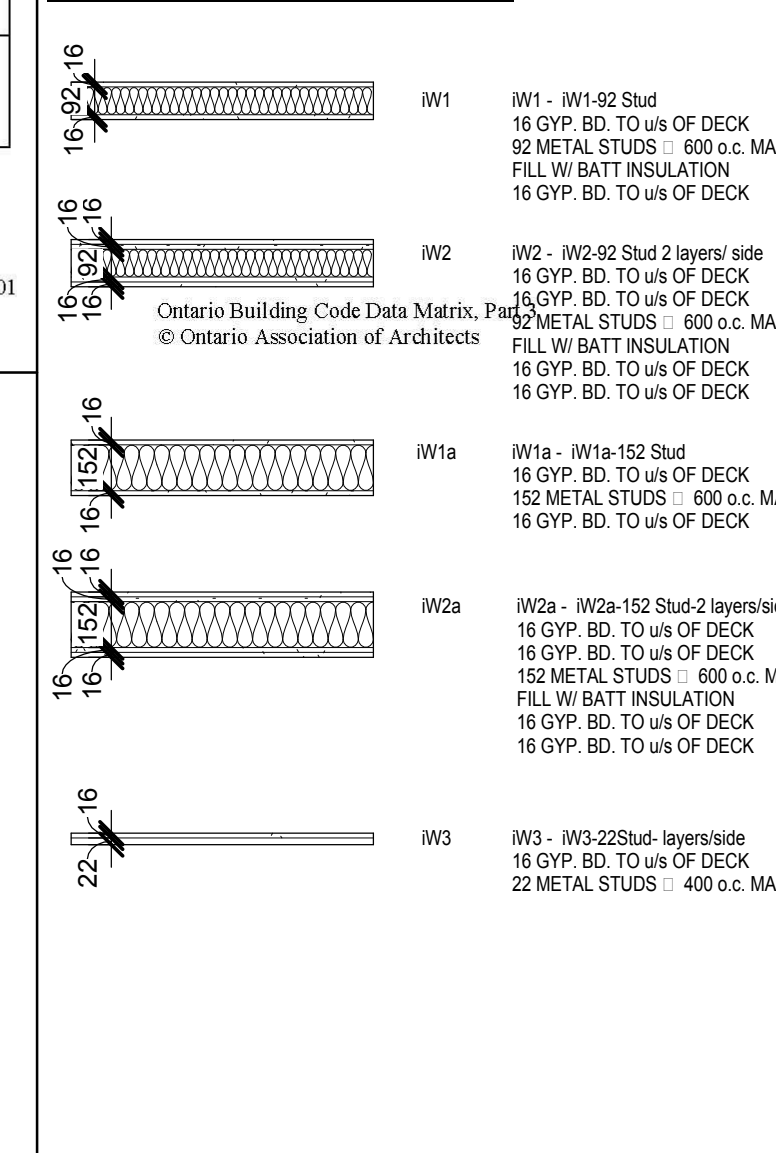
Ontario Building Code Data Matrix, Part 3 October 2011
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3.20	Hazardous Substances: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3.3.1.2. & 3.3.1.19.
3.21	Required Fire Resistance Ratings: Horizontal Assembly: _____ Rating: _____ Supporting Assembly (H): _____ Non-combustible in lieu of rating? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Floors over basement: <u>N/A</u> <u>N/A</u> <input type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A Floors: <u>N/A</u> <u>N/A</u> <input type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A Mezzanine: <u>N/A</u> <u>N/A</u> <input type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A Roof: <u>N/A</u> <u>N/A</u> <input type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A	3.2.2.20. - 83. & 3.2.1.4.
3.22	Spatial Separation: Wall: _____ EBF Area (m ²): _____ L.D. (m): _____ L.H. (m): _____ Required FRR (H): _____ Construction Type Required: _____ Cladding Type Required: _____ EAST: <u>30.6</u> <u>28.7</u> <u>N/A</u> <u>N/A</u> <input type="checkbox"/> Noncombustible <input type="checkbox"/> Noncombustible WEST: <u>28.6</u> <u>6.4</u> <u>N/A</u> <u>N/A</u> <input type="checkbox"/> Noncombustible <input type="checkbox"/> Noncombustible	3.2.3.
3.23	Plumbing Fixture Requirements: Ratio: <u>Male:Female = 50:50 Except as noted otherwise</u>	3.7.4.
3.24	Energy Efficiency: Compliance Path: <u>N/A</u> Climatic Zone: <u>N/A</u>	
3.25	Notes: <u>N/A</u>	

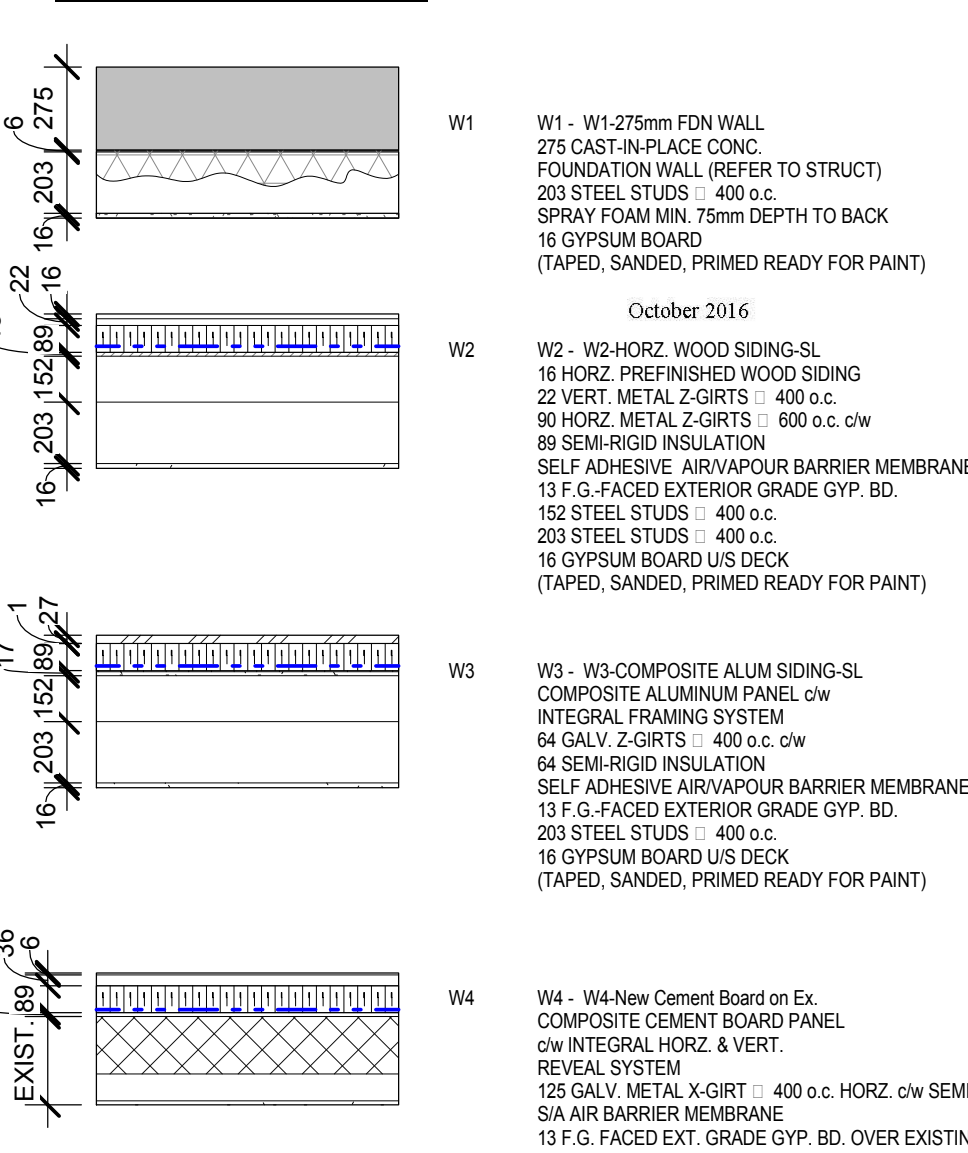
1 All references are to Division B of the OBC unless preceded by [A] for Division A and [C] for Division C.

CONSTRUCTION ASSEMBLIES

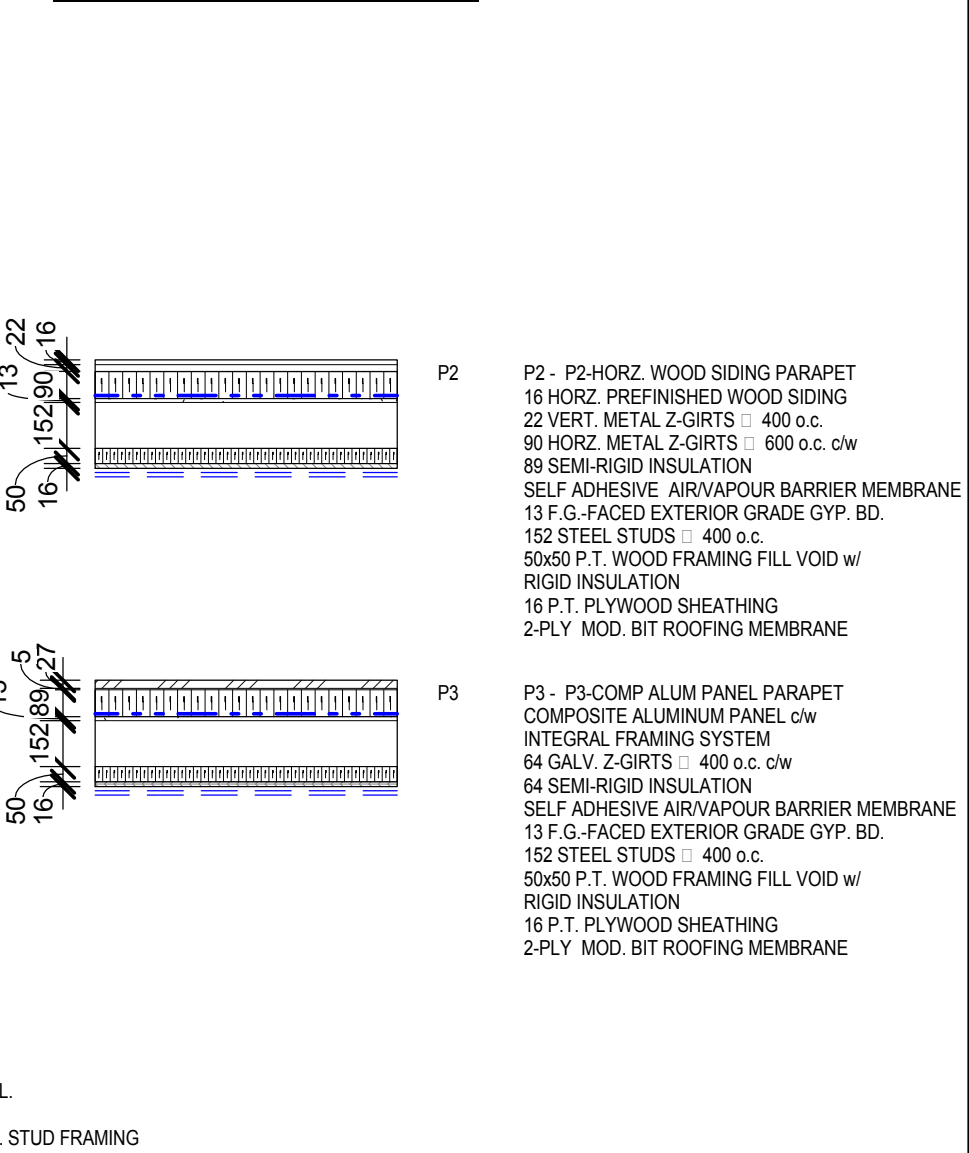
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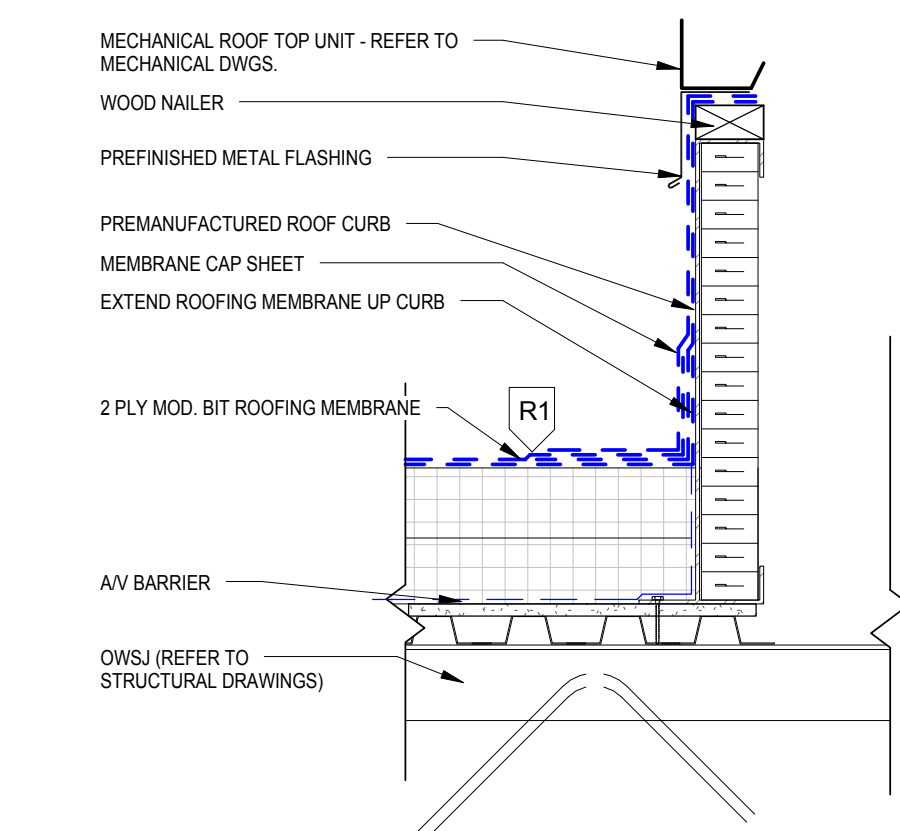
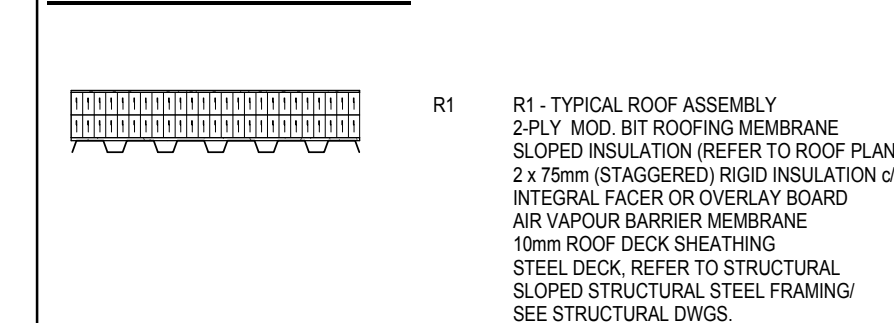
EXTERIOR WALLS:



PARAPET ASSEMBLY



ROOF ASSEMBLY:



3 RTU CURB / TYPICAL
A0.00 SCALE: 1:10

no.	date	revision
2	180712	ISSUED FOR PRICING
1	180709	ISSUED FOR BUILDING PERMIT

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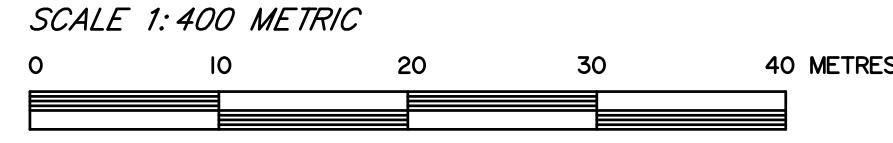
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PROJECT: **TURNBULL SCHOOL MUSIC ROOM ADDITION**
1132 FISHER AVE., OTTAWA, ON

DRAWING TITLE: **COVER PAGE**

DRAWN	DATE	SCALE
SL/RV	08/01/18	As Indicated
PROJECT		1705
DRAWING NO.		A0.00
REVISION NO.		2

SURVEY INFORMATION DERIVED FROM
 SITE PLAN OF
 LOTS 83 & 84
 REGISTERED PLAN NO. 294
 AND
 PART OF LOT "L" & "M", CONCESSION "A" (R.F.)
 TOWNSHIP OF NEPEAN
 NOW IN THE CITY OF OTTAWA
 Regional Municipality of Ottawa-Carleton
 SURVEYED BY D.A. SIMMONDS, O.L.S.
 1995

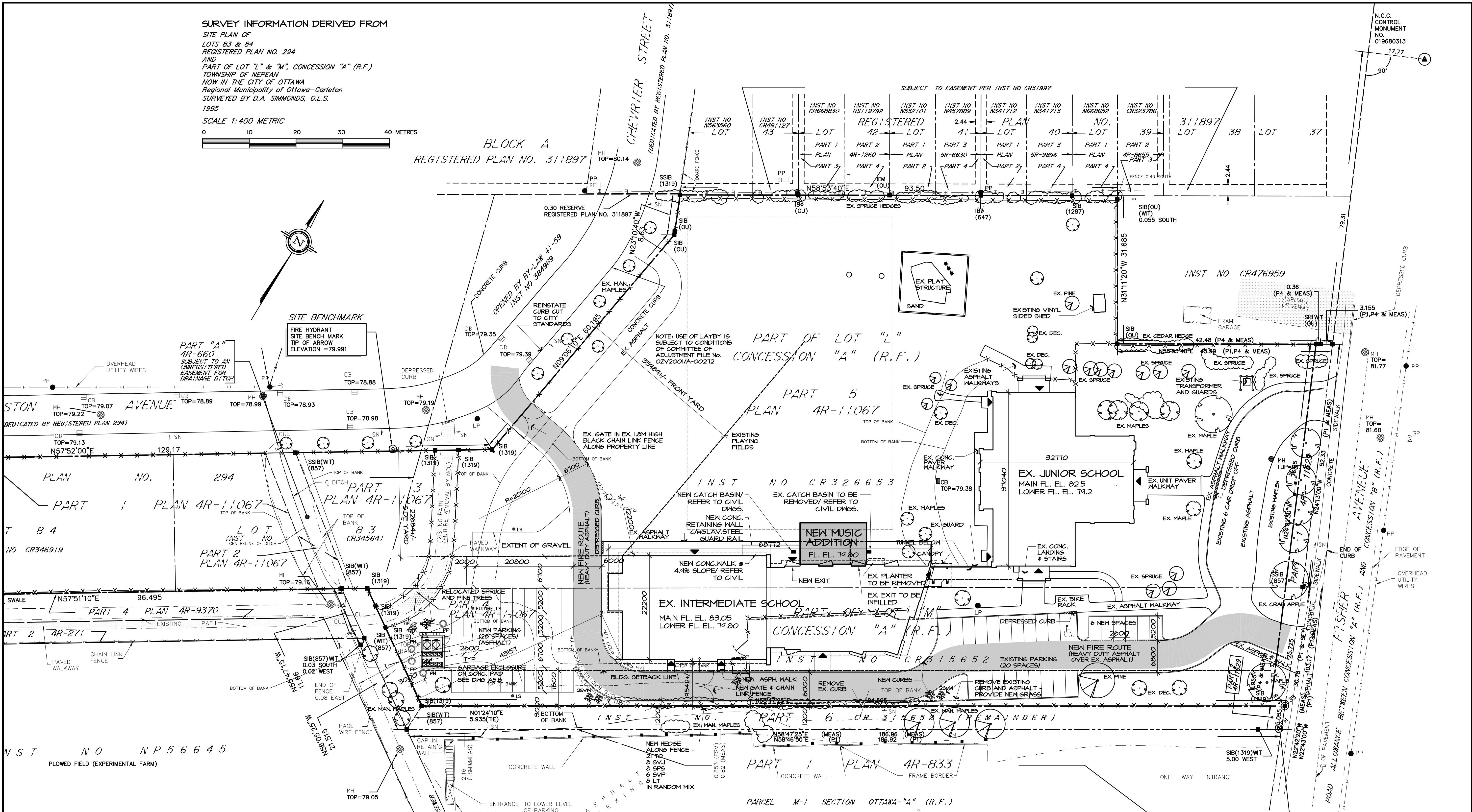


BLOCK A
 REGISTERED PLAN NO. 311897

CHEVRIER STREET
 (DEDICATED BY REGISTERED PLAN NO. 311897)

SUBJECT TO EASEMENT PER INST NO CR31997

N.C.C. CONTROL MONUMENT NO 019680313



- LEGEND:**
- EX. SHRUBS/TREE CLUMP
 - EX. CONIFEROUS TREE
 - EX. DECIDUOUS TREE
 - BUILDING ENTRY POINTS
 - RELOCATED CONIFEROUS TREE
 - NEW CONIFEROUS TREE

no.	date	revision
2	JULY 12/18	ISSUED FOR PRICING
1	JULY 9/18	ISSUED FOR BUILDING PERMIT

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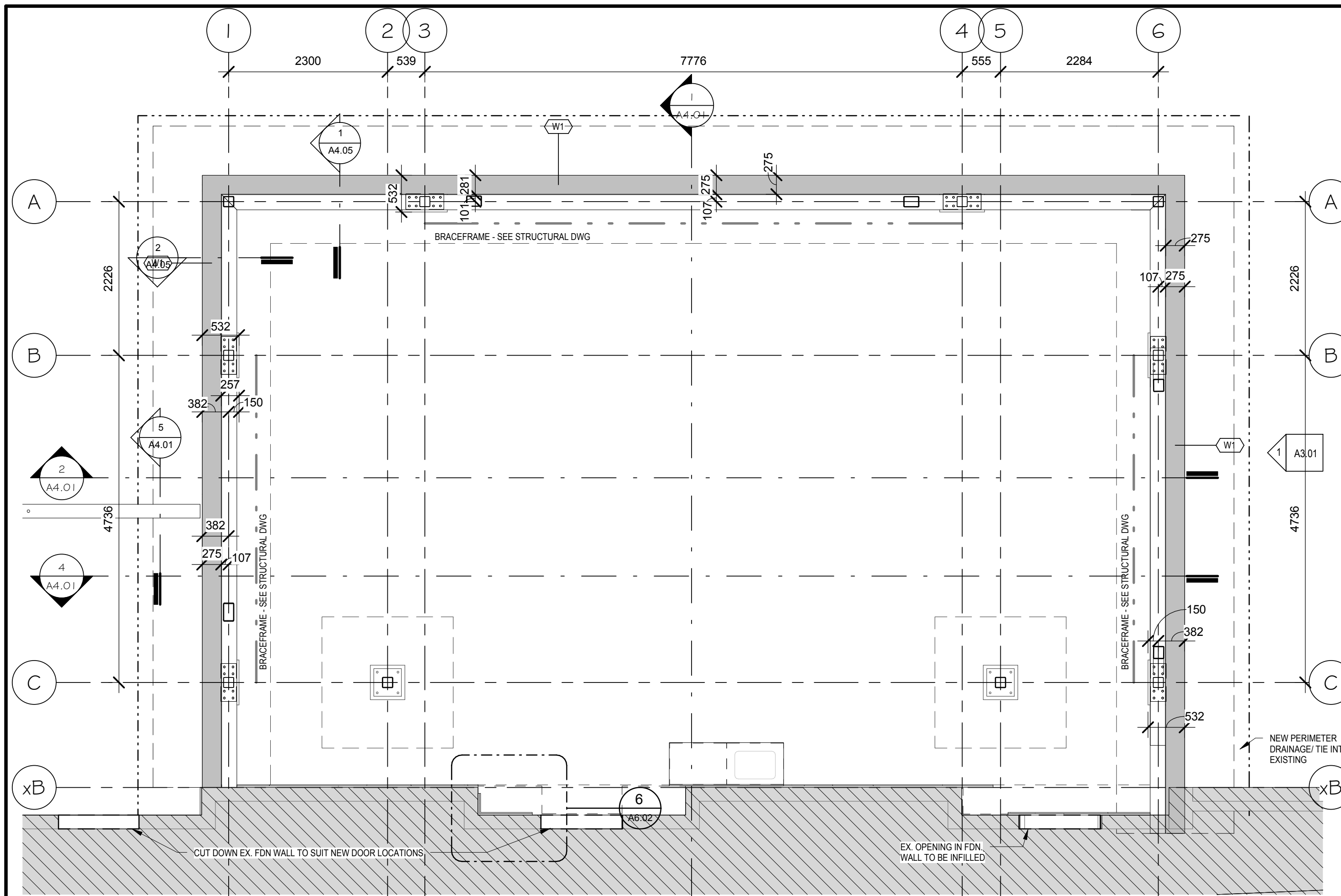
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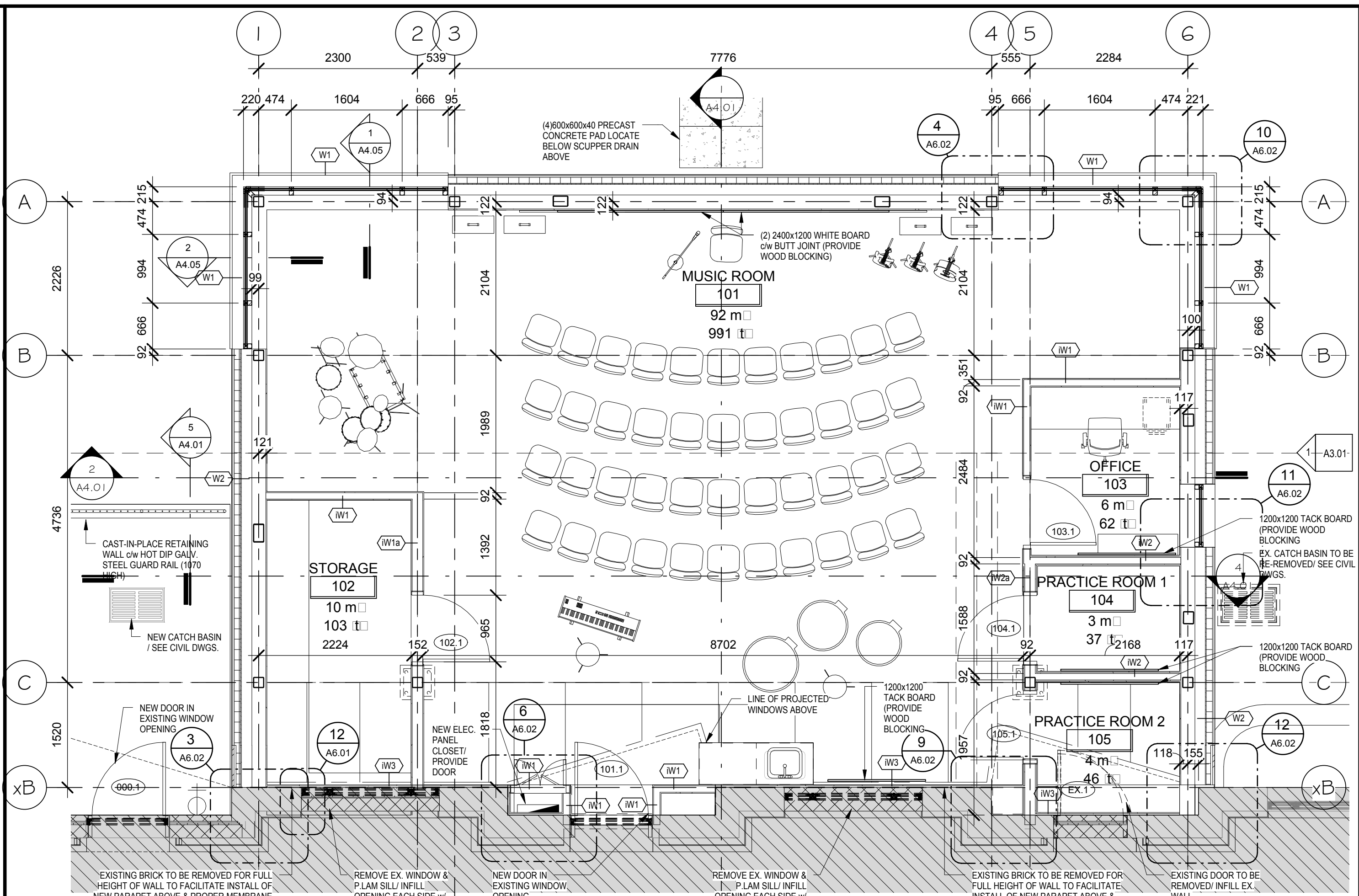
PROJECT/LOCATION:
 TURNBULL LEARNING CENTRE
 MUSIC ROOM ADDITION
 1132 FISHER AVENUE, OTTAWA, ON

DRAWING TITLE:
 SITE PLAN

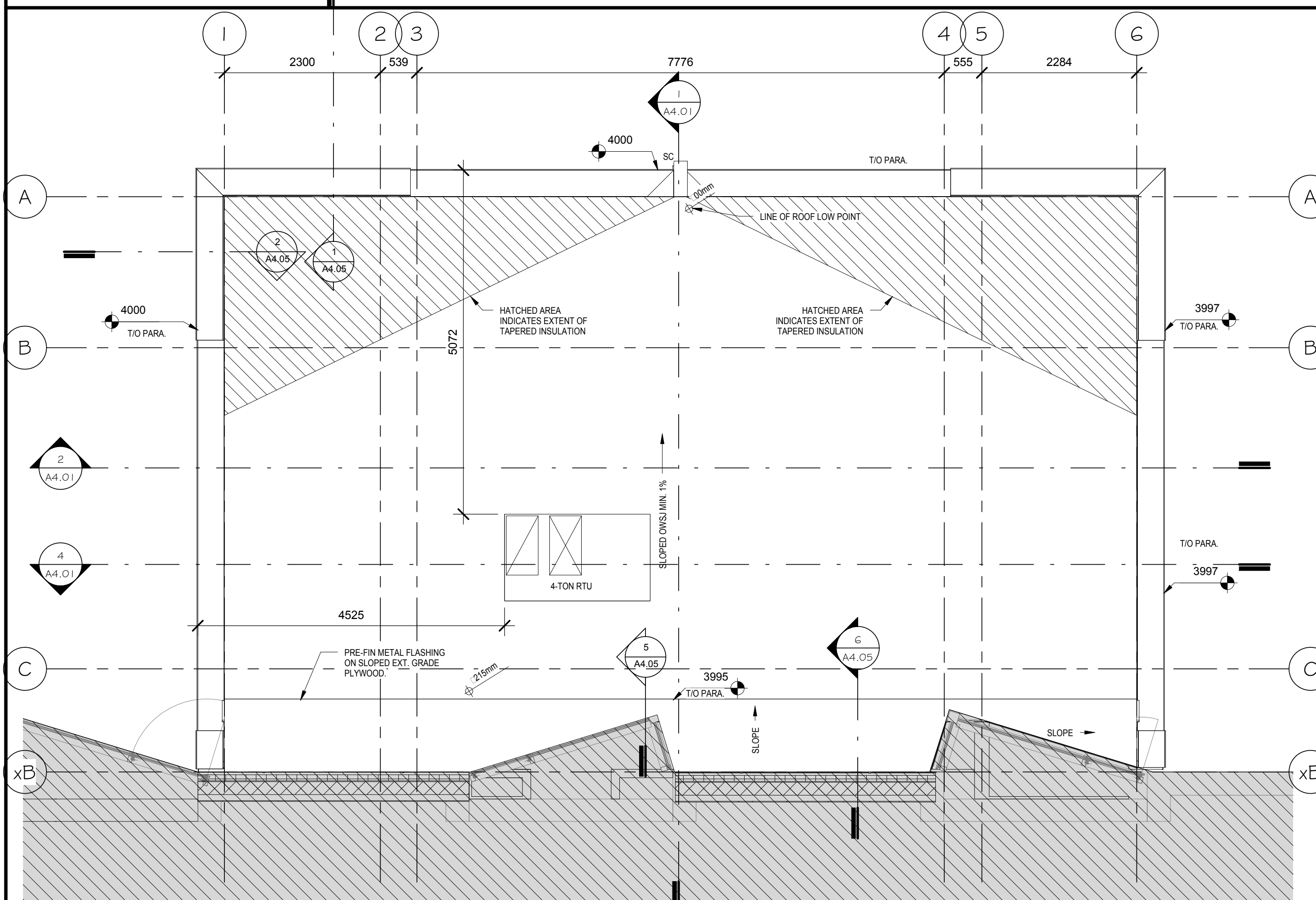
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PROJECT: 1705		DRAWING NO.:
		A0.01
		REVISION NO.:



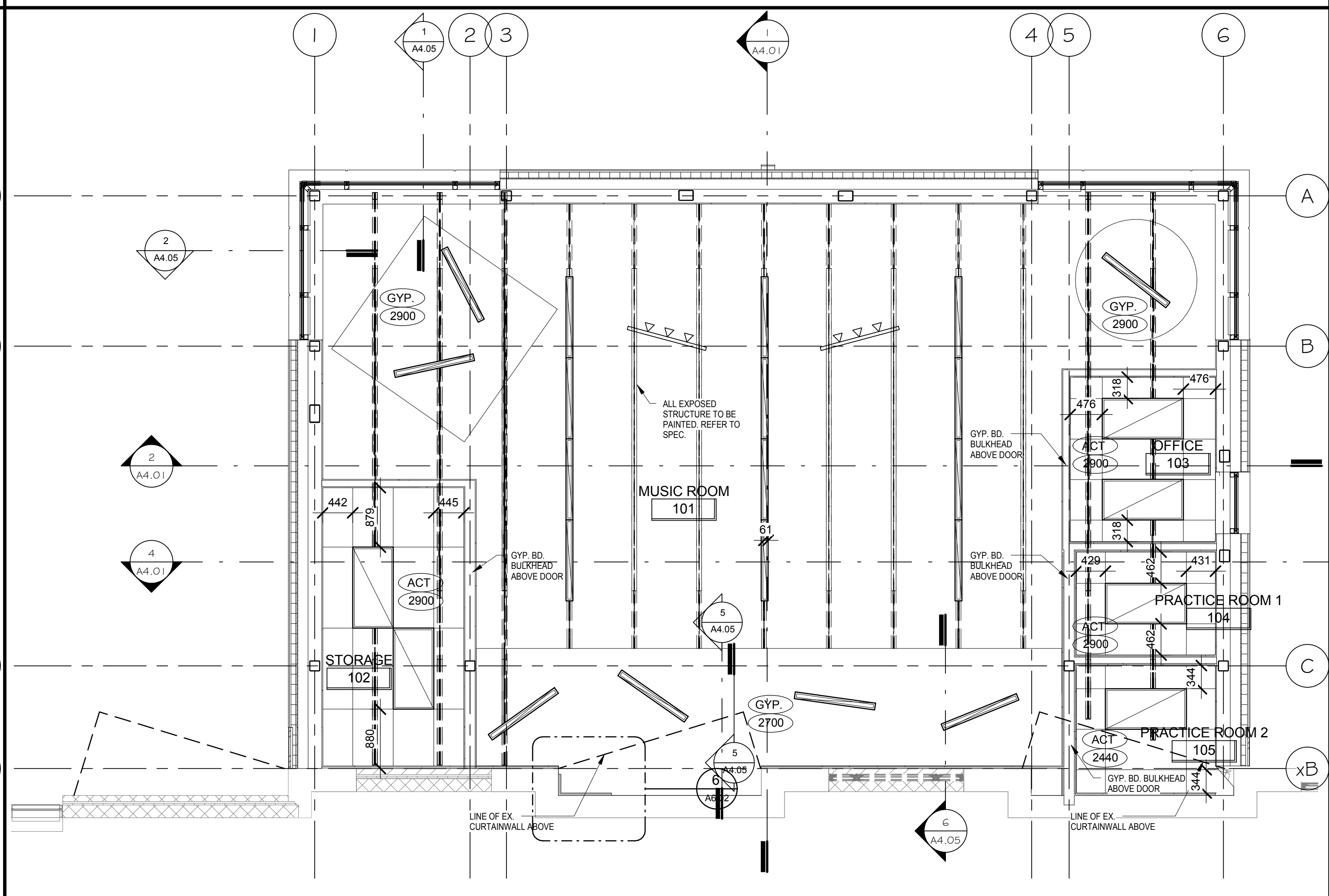
1 MUSIC ROOM ADDITION FOUNDATION PLAN
A2.01 SCALE: 1:50



2 MUSIC ROOM ADDITION FLOOR PLAN
A2.01 SCALE: 1:50



3 MUSIC ROOM ADDITION ROOF PLAN
A2.01 SCALE: 1:50



4 MUSIC ROOM ADDITION RCP
A2.01 SCALE: 1:50

2	180712	ISSUED FOR PRICING
1	180709	ISSUED FOR BUILDING PERMIT
no.	date	revision

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PROJECT
TURNBULL SCHOOL MUSIC ROOM ADDITION
 1132 HURON AVE., OTTAWA, ON

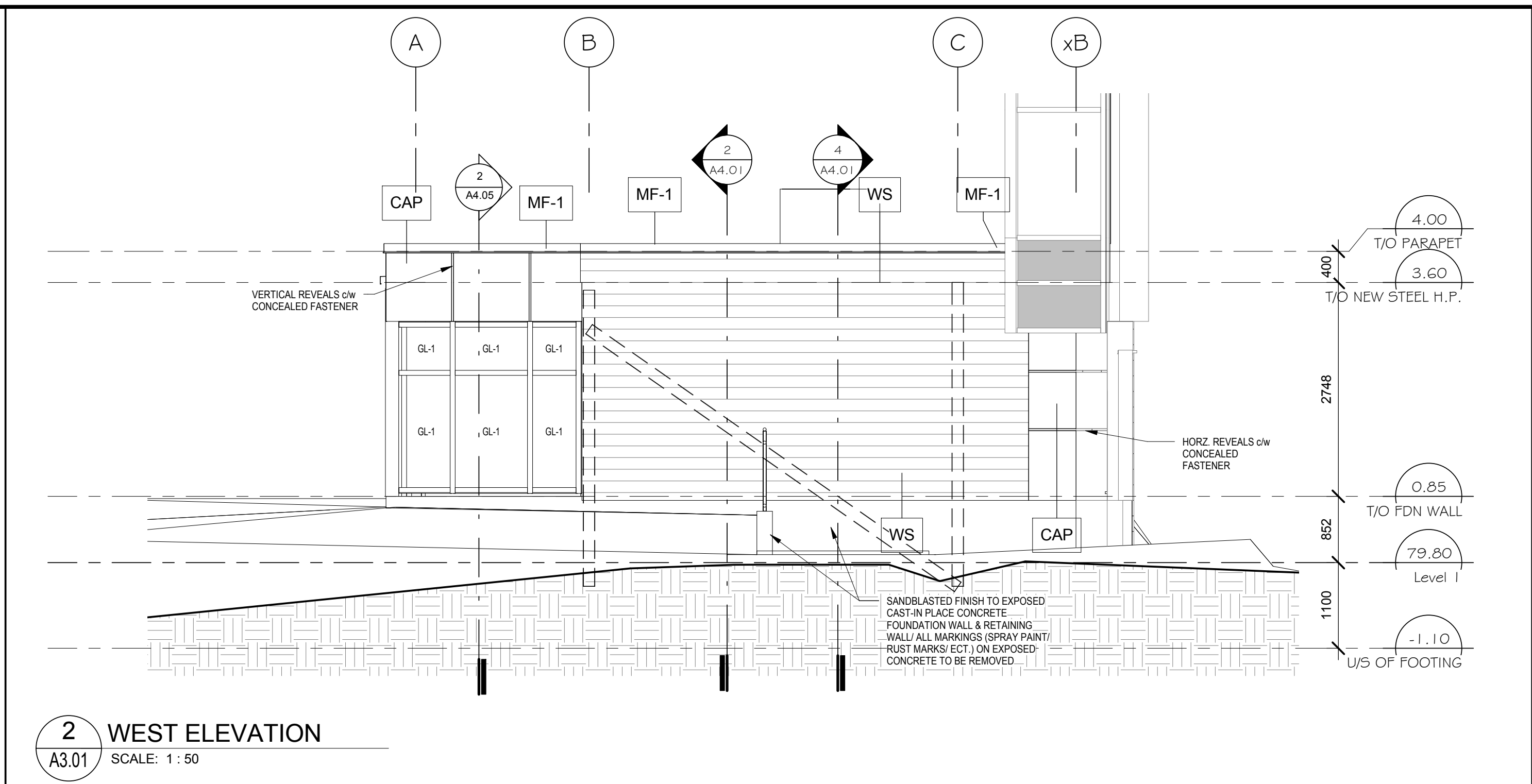
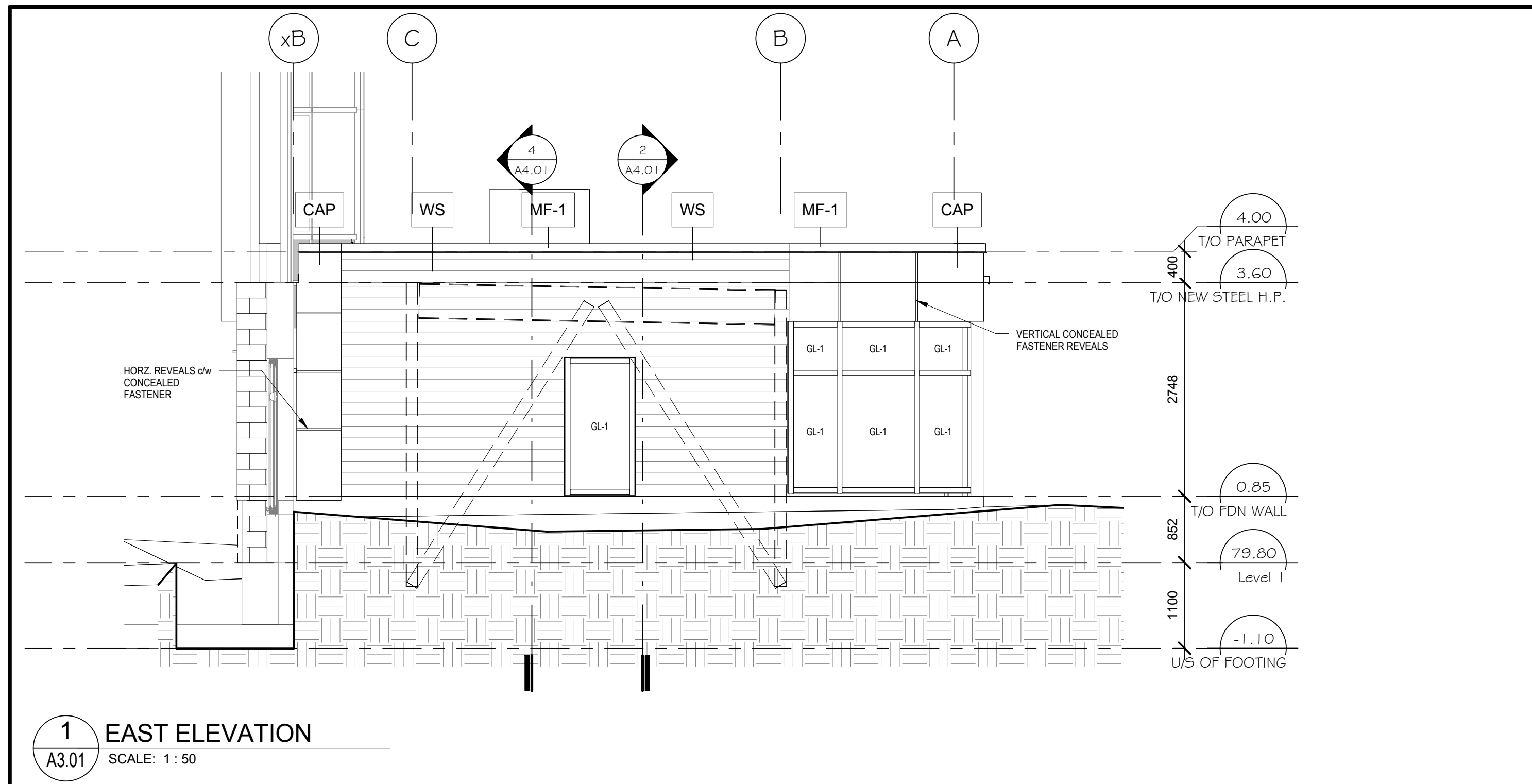
DRAWING TITLE
MUSIC ROOM ADDITION PLANS

DRAWN	DATE	SCALE
SL/RV	05/25/18	1:1:50

PROJECT
1705

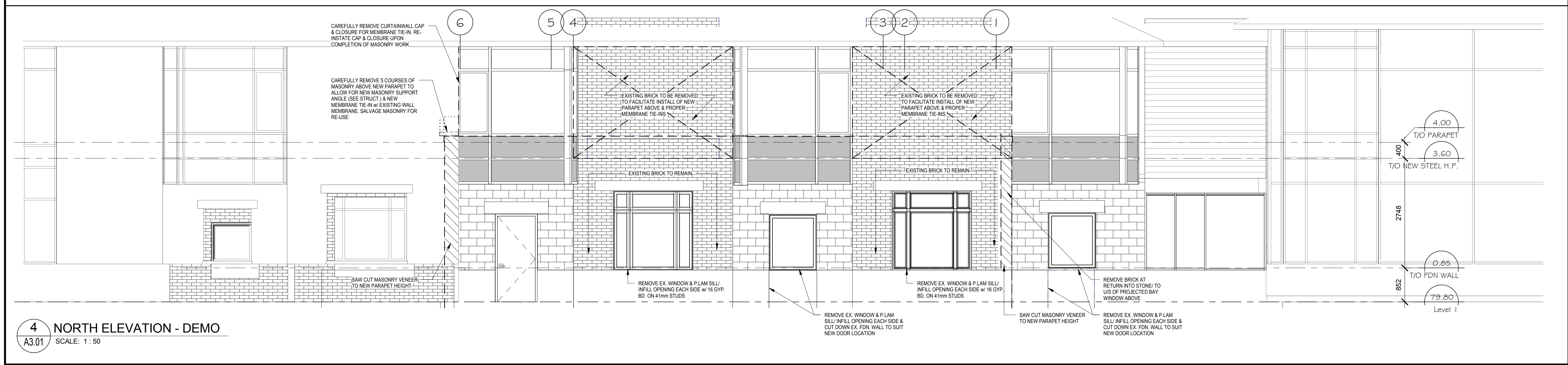
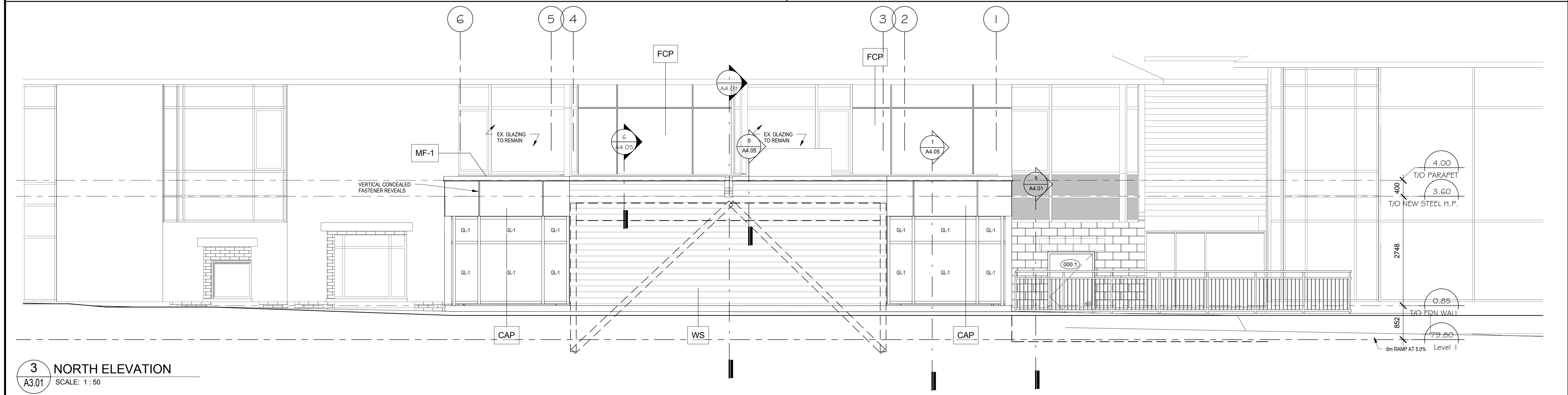
DRAWING NO.
A2.01

REVISED NO. 2



EXTERIOR FINISHES LEGEND

CAP	COMPOSITE ALUMINUM PANEL c/w INTEGRAL FRAMING SYSTEM (DARK GREY) SUBMIT SAMPLE FOR APPROVAL
CW	CLEAR ANODIZED CURTAINWALL FRAMING
FCP	FIBRE REINFORCED CEMENTITIOUS PANELS
MF-1	METAL FLASHING STANDARD PROFILE
GL-1	LOW-E TEMPRED VISION GLASS
SC	PRE-FIN. METAL SCUPPER (TO MATCH SURROUNDING CLADDING, SUBMIT SAMPLE FOR ARCH. APPROVAL)
WS	HORIZ. WOOD SMOOTH LAP SIDING (BLACK) SUBMIT SAMPLE FOR APPROVAL



no.	date	revision
2	18/07/12	ISSUED FOR PRICING
1	18/07/09	ISSUED FOR BUILDING PERMIT

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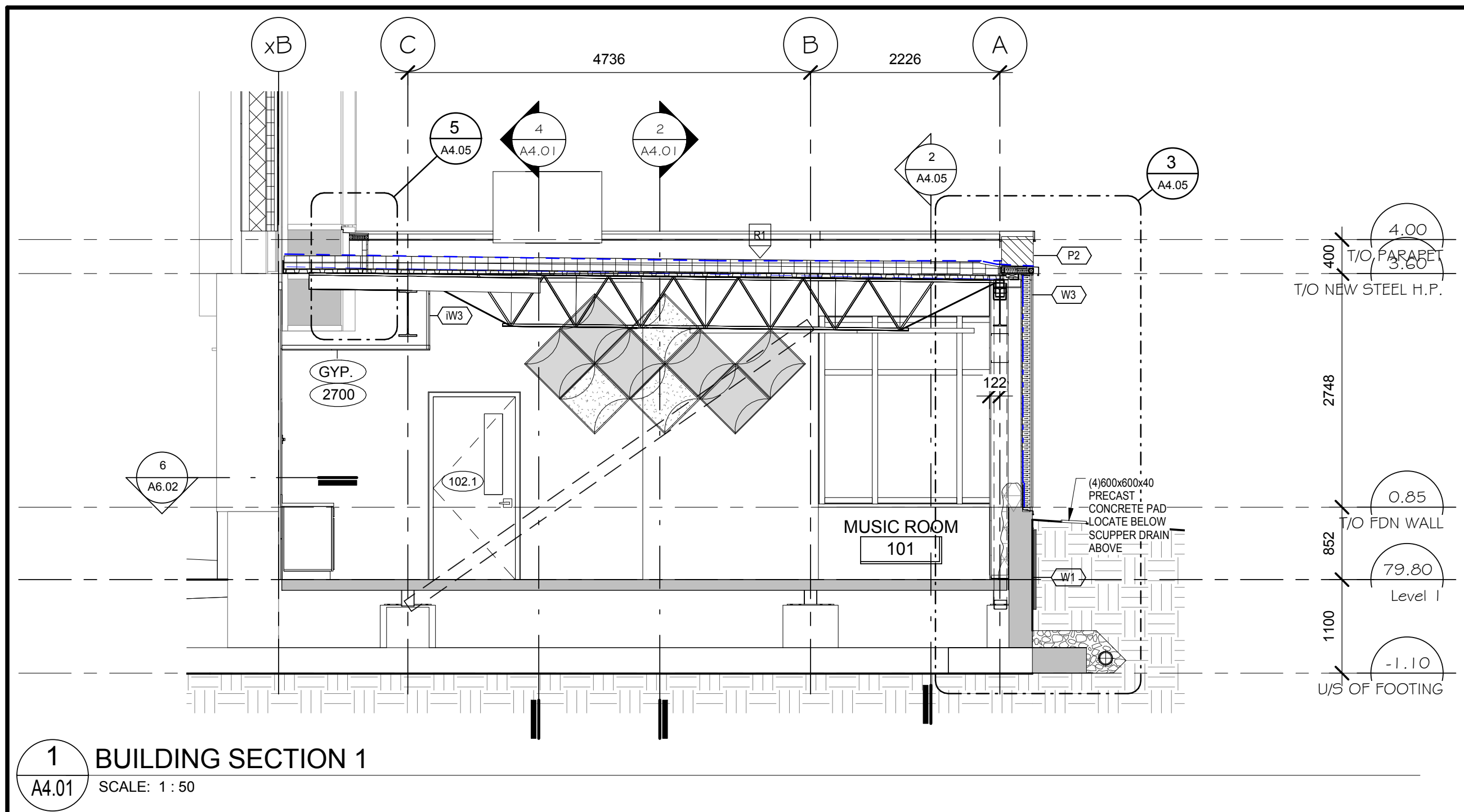
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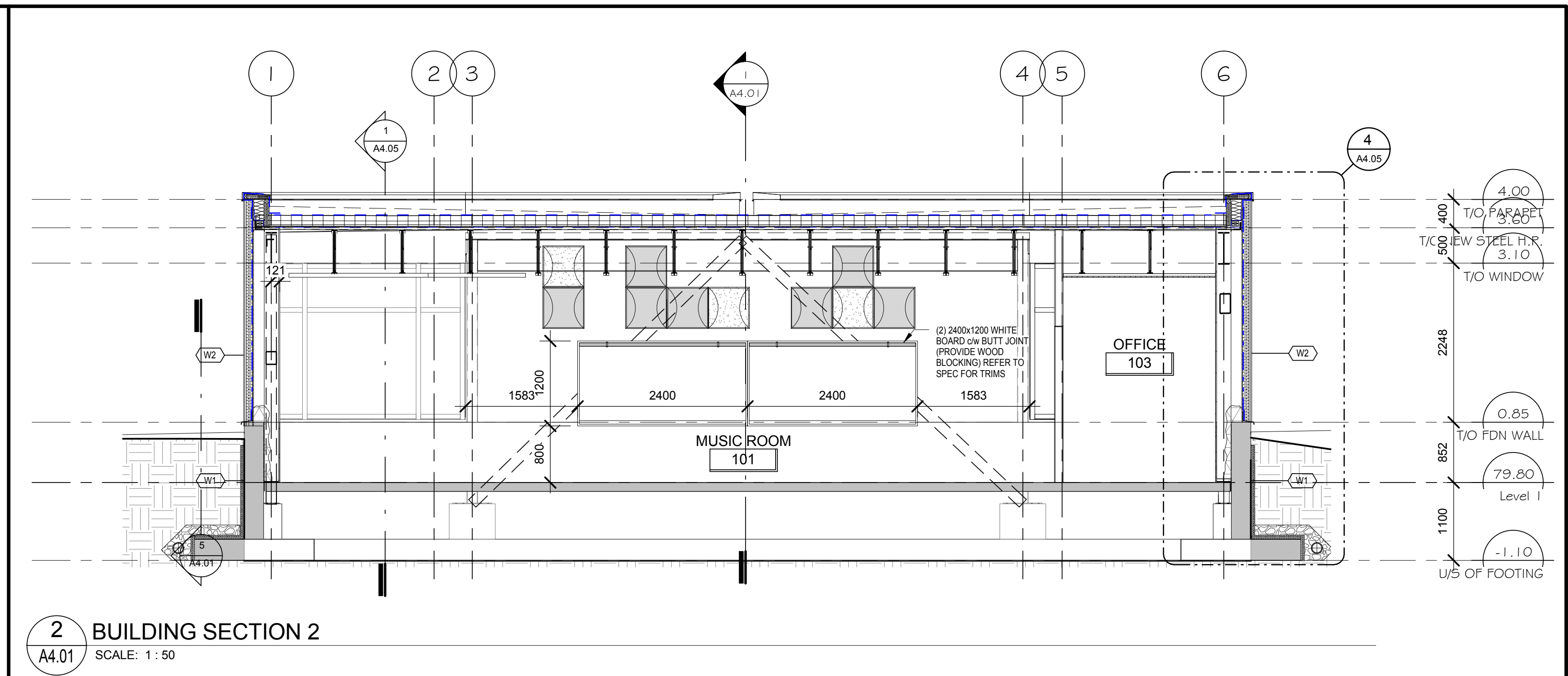
TURNBULL SCHOOL MUSIC ROOM ADDITION
 1755
 OTTAWA, ON

MUSIC ROOM ADDITION EXTERIOR ELEVATIONS

DRAWN	DATE	SCALE
SL/RV	10/09/14	As Indicated
PROJECT 1705		
DRAWING NO. A3.01		
REVISION NO. 2		



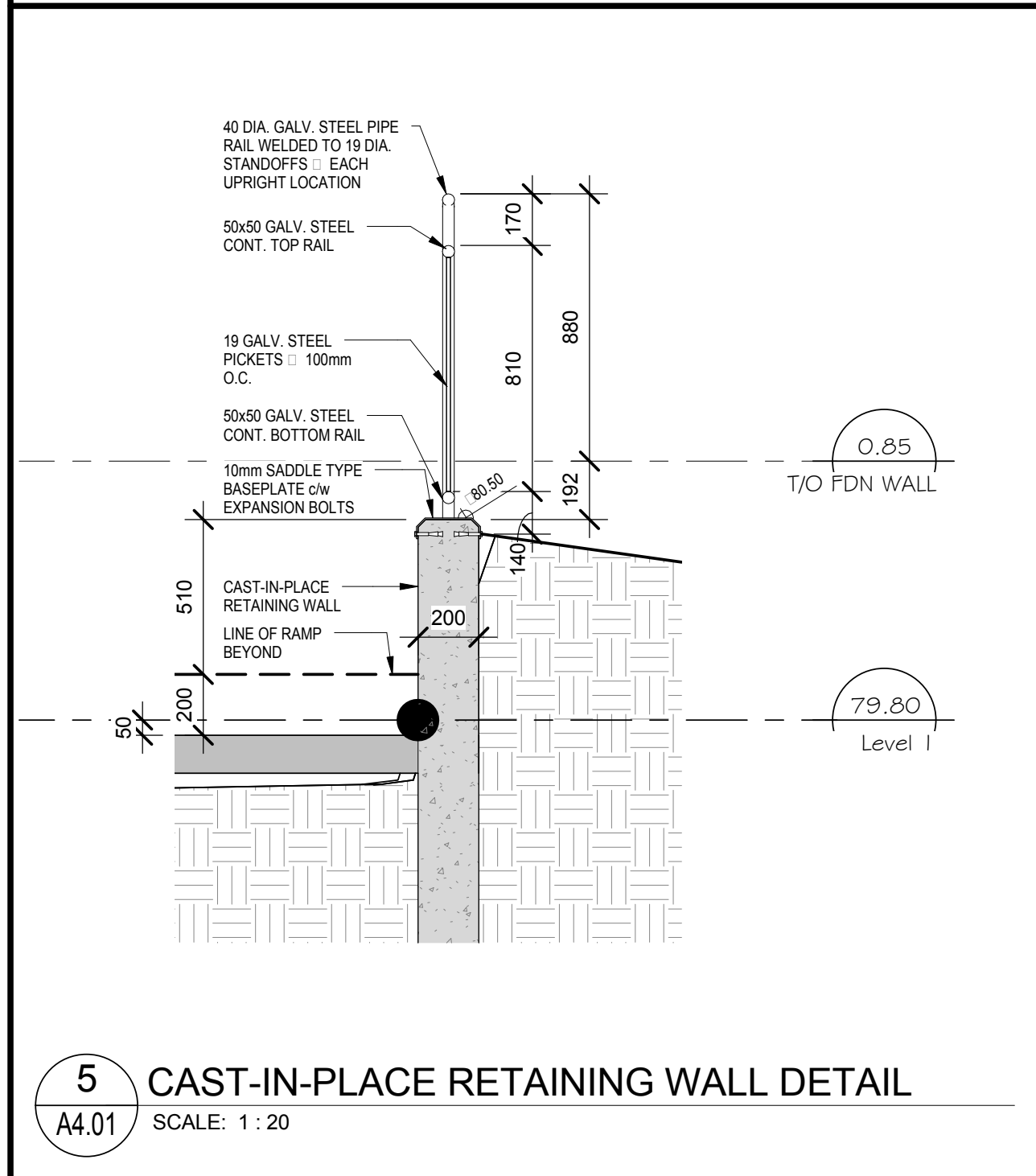
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A4.01 SCALE: 1:50



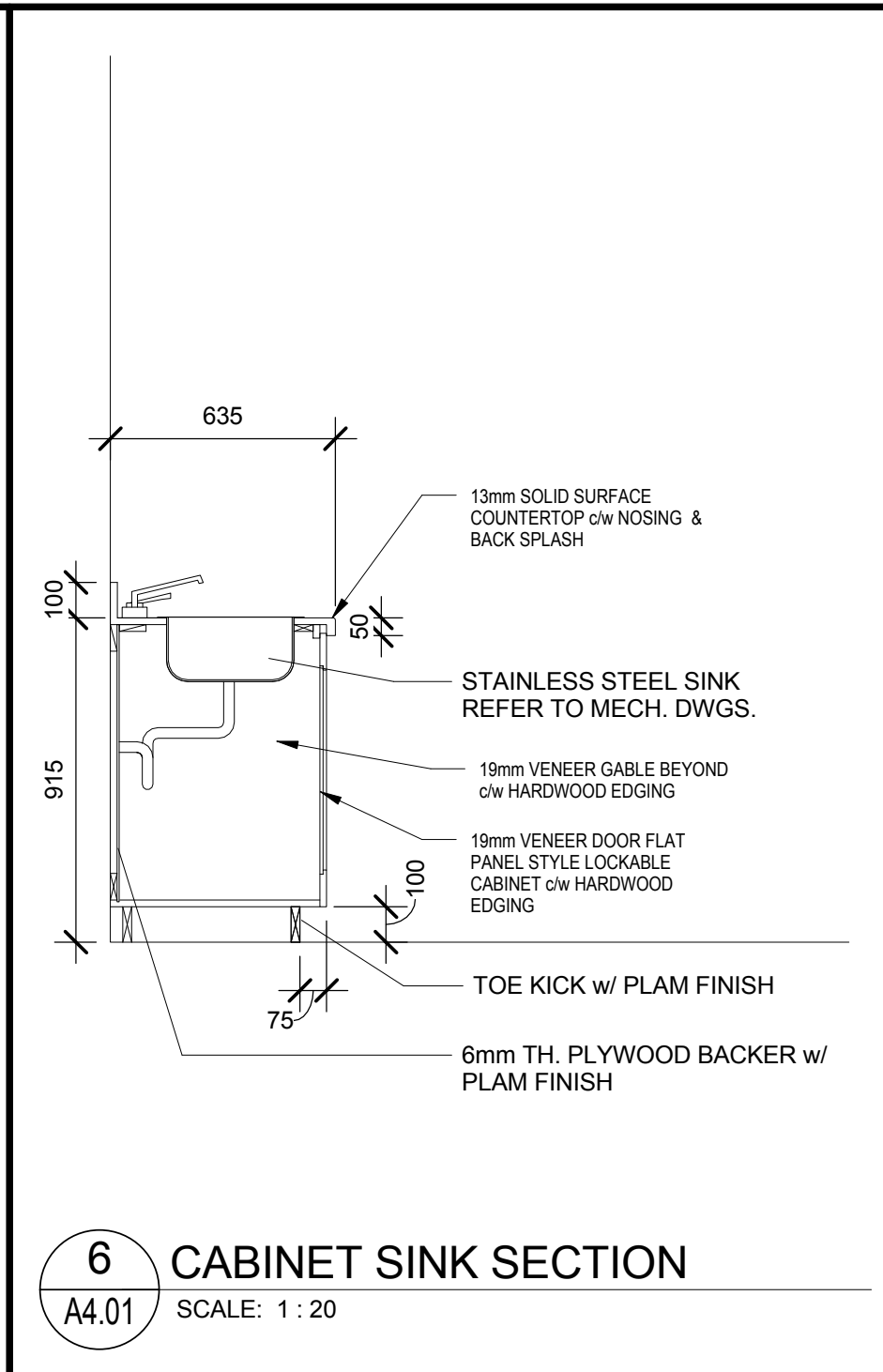
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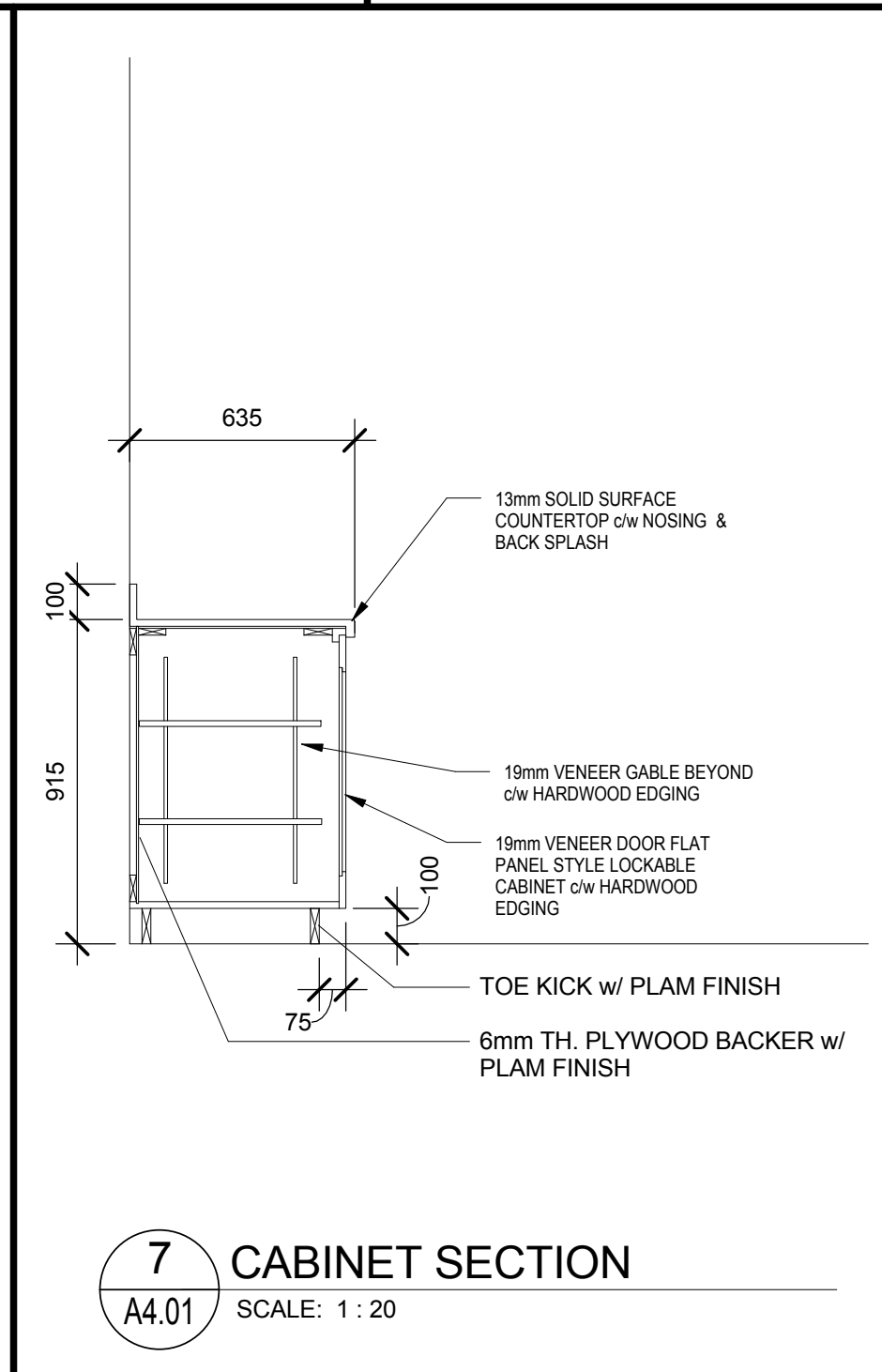
4 BUILDING SECTION 5
A4.01 SCALE: 1:50



5 CAST-IN-PLACE RETAINING WALL DETAIL
A4.01 SCALE: 1:20



6 CABINET SINK SECTION
A4.01 SCALE: 1:20



7 CABINET SECTION
A4.01 SCALE: 1:20

AURAL EX HEMISPHERE MODEL E 180 3D SOUND DIFFUSORS
MATERIAL: 0.125 THERMOFORMED COPOLYMER
SIZE: 23" x 23" x 7"
FINISH: OBISSIAN FABRIC COVERING
(PROVIDE PLYWOOD BLOCKING BEHIND GYP. BD. FOR TWO-PART CLIP SYSTEM MOUNTING)

AURAL EX HEMISPHERE MODEL E 180 3D SOUND DIFFUSORS
MATERIAL: 0.125 THERMOFORMED COPOLYMER
SIZE: 23" x 23" x 7"
FINISH: TEXTURED WHITE
(PROVIDE PLYWOOD BLOCKING BEHIND GYP. BD. FOR TWO-PART CLIP SYSTEM MOUNTING)

2	180712	ISSUED FOR PRICING
1	180709	ISSUED FOR BUILDING PERMIT
no.	date	revision

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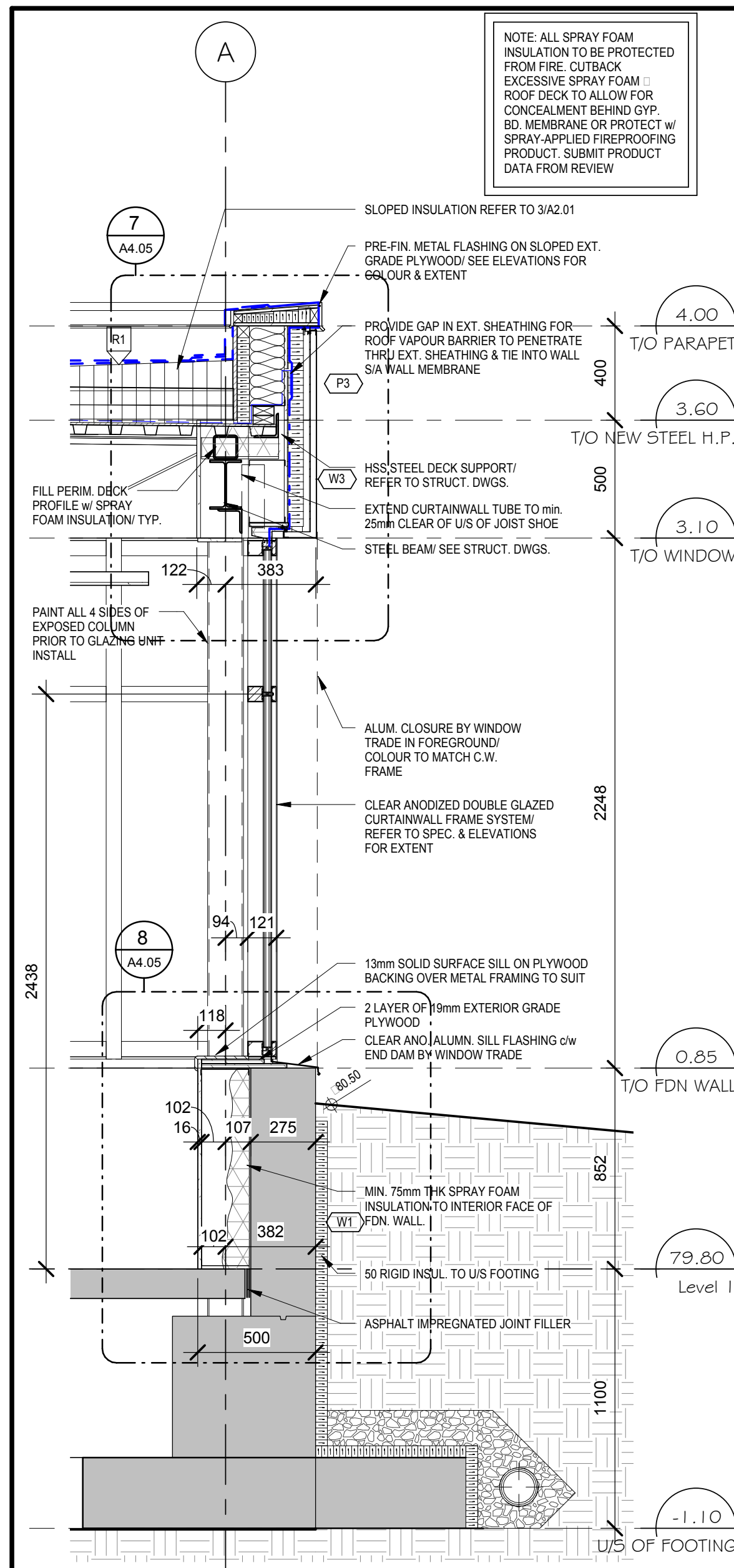
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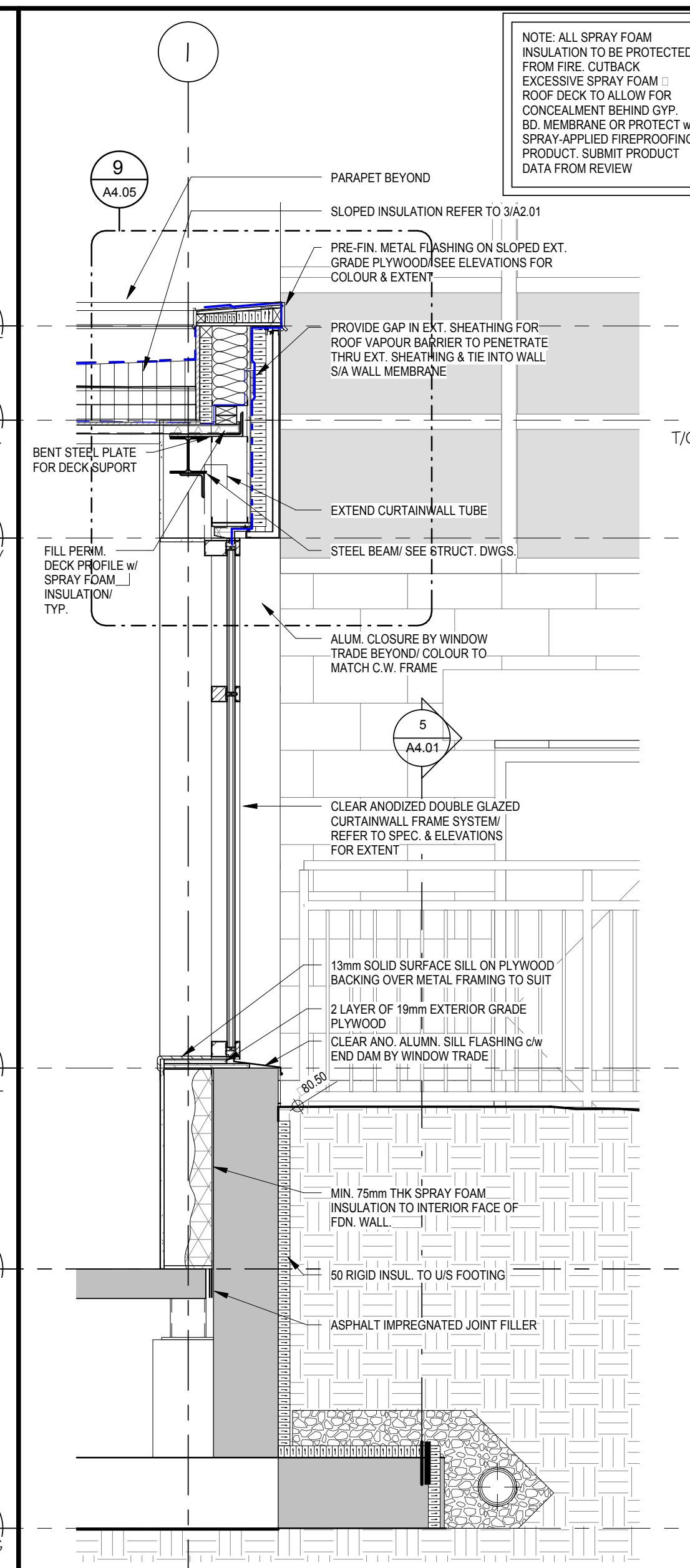
PROJECT
TURNBULL SCHOOL MUSIC ROOM ADDITION
1132 HURON AVE.
OTTAWA, ON

DRAWING TITLE
BUILDING SECTIONS

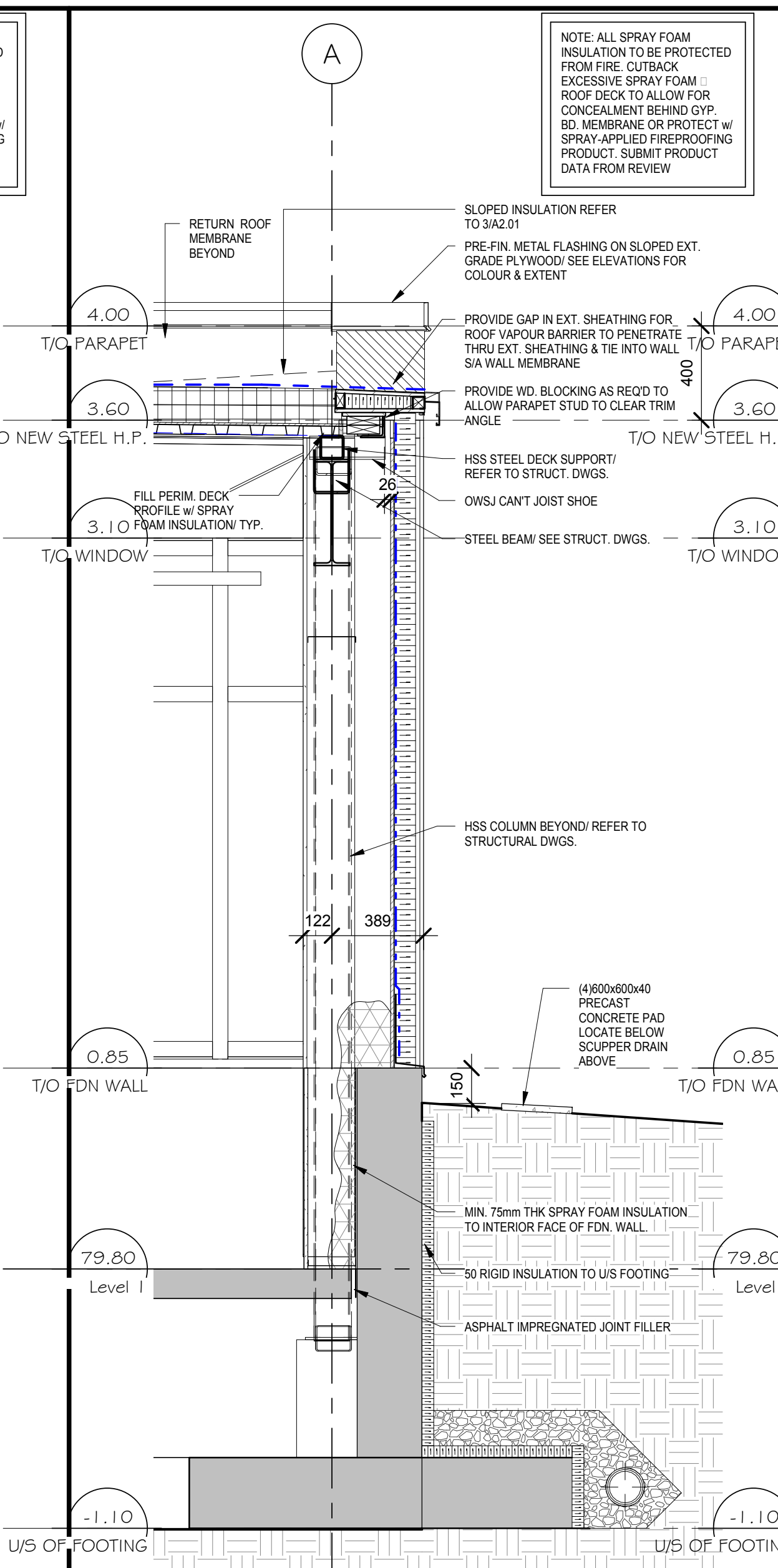
DRAWN SL/RV	DATE 03/28/18	SCALE As Indicated
PROJECT 1705		DRAWING NO. A4.01
REVISION NO. 2		



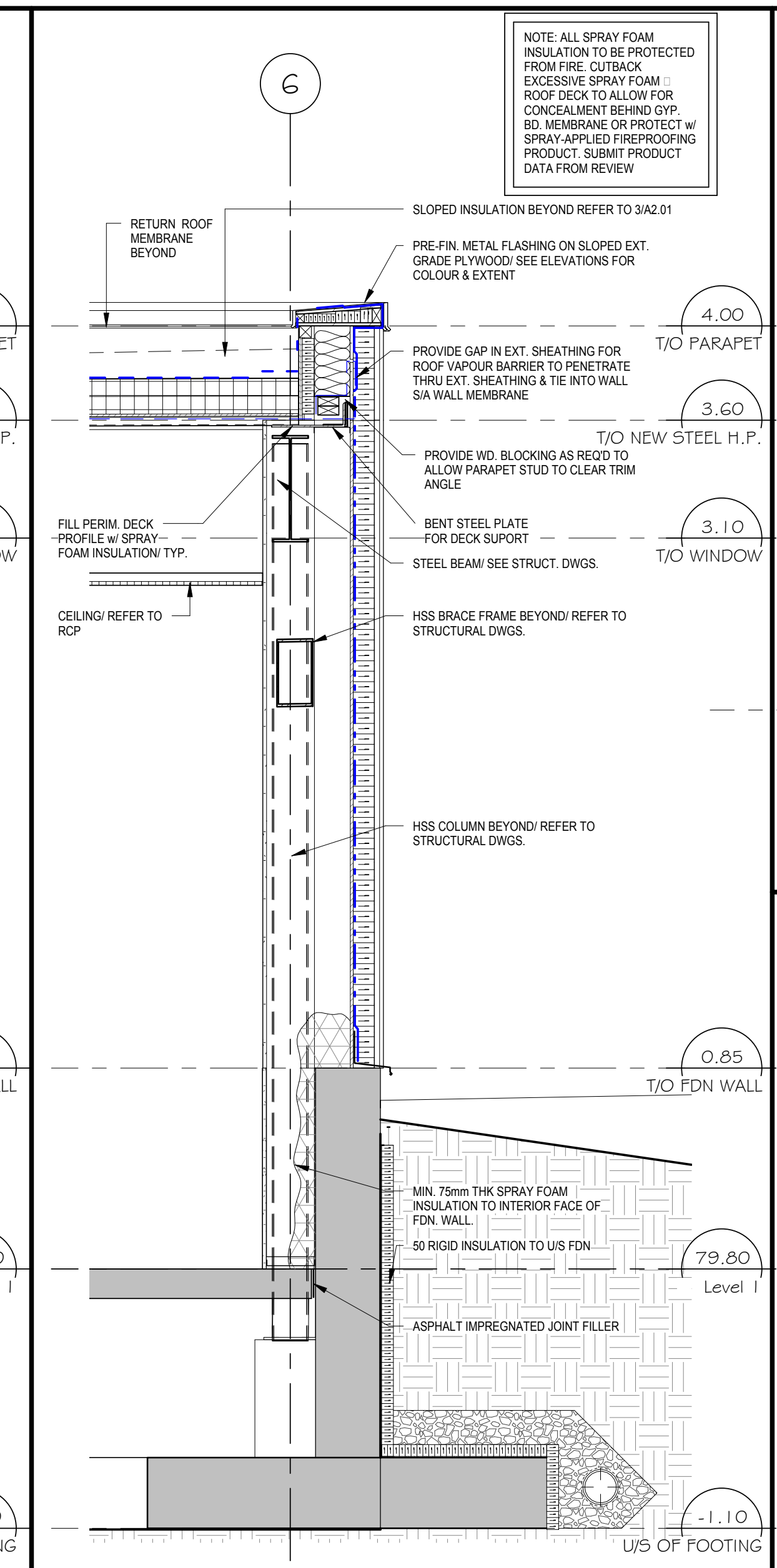
1 WALL SECTION 1
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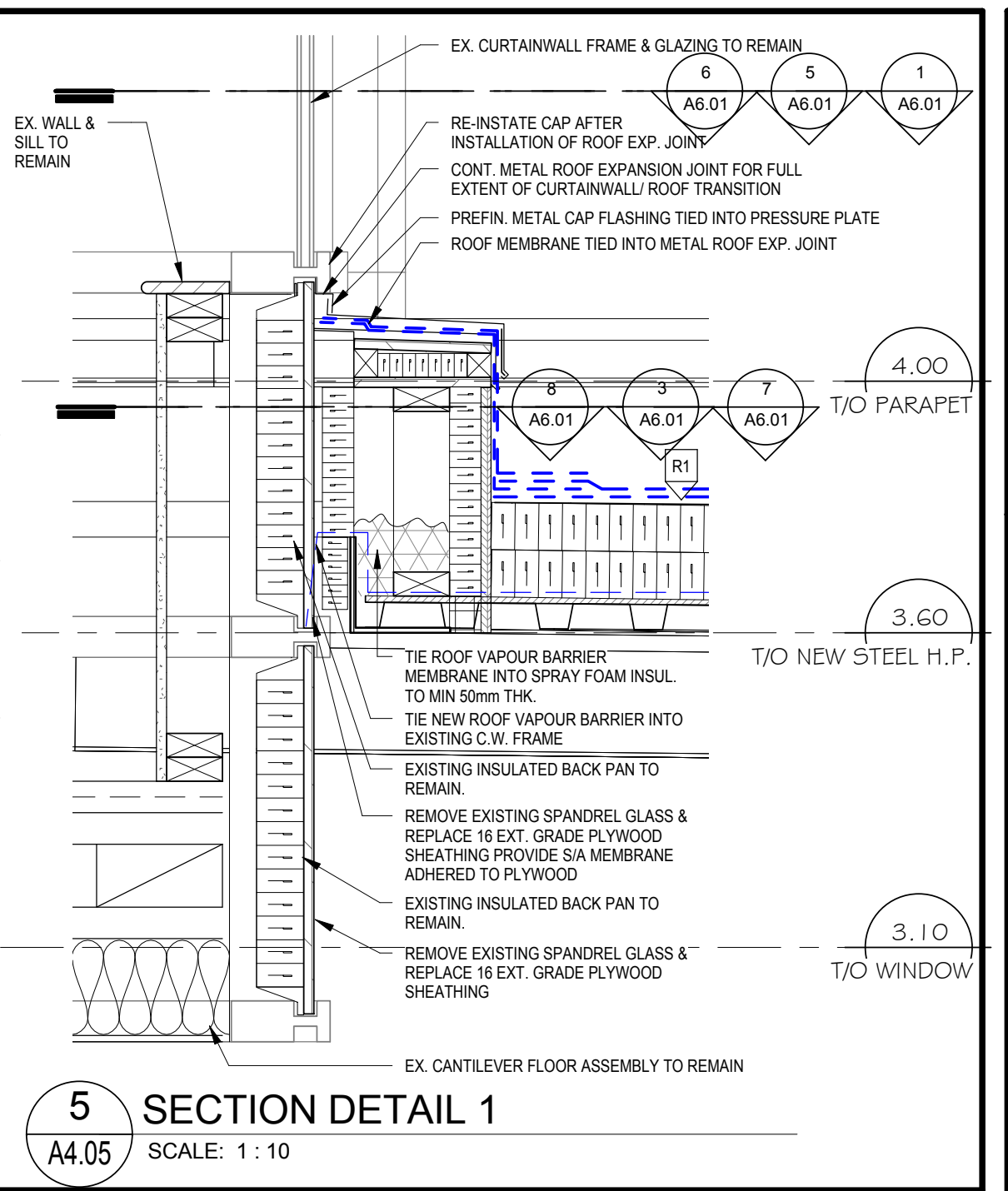
2 WALL SECTION 2
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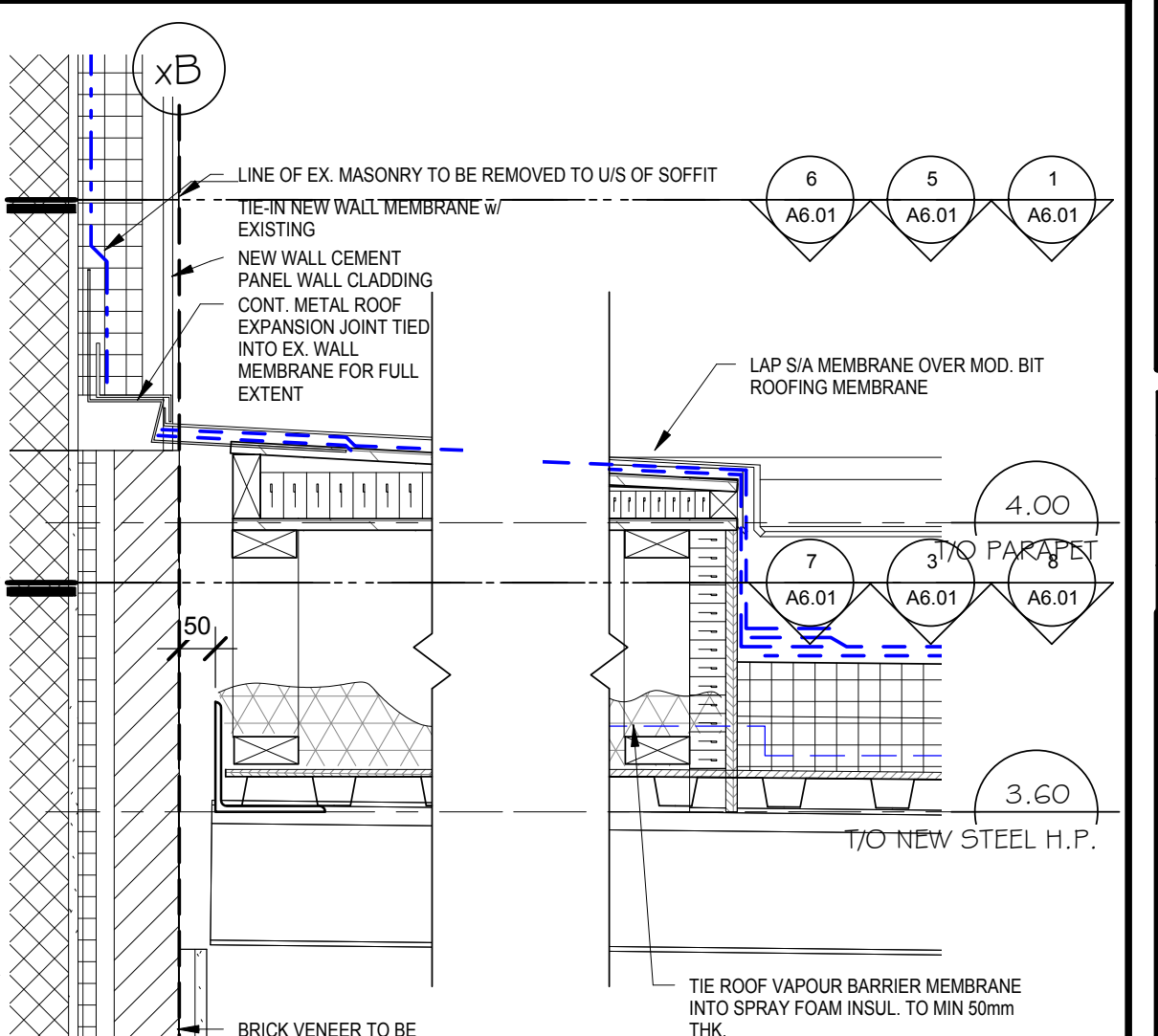
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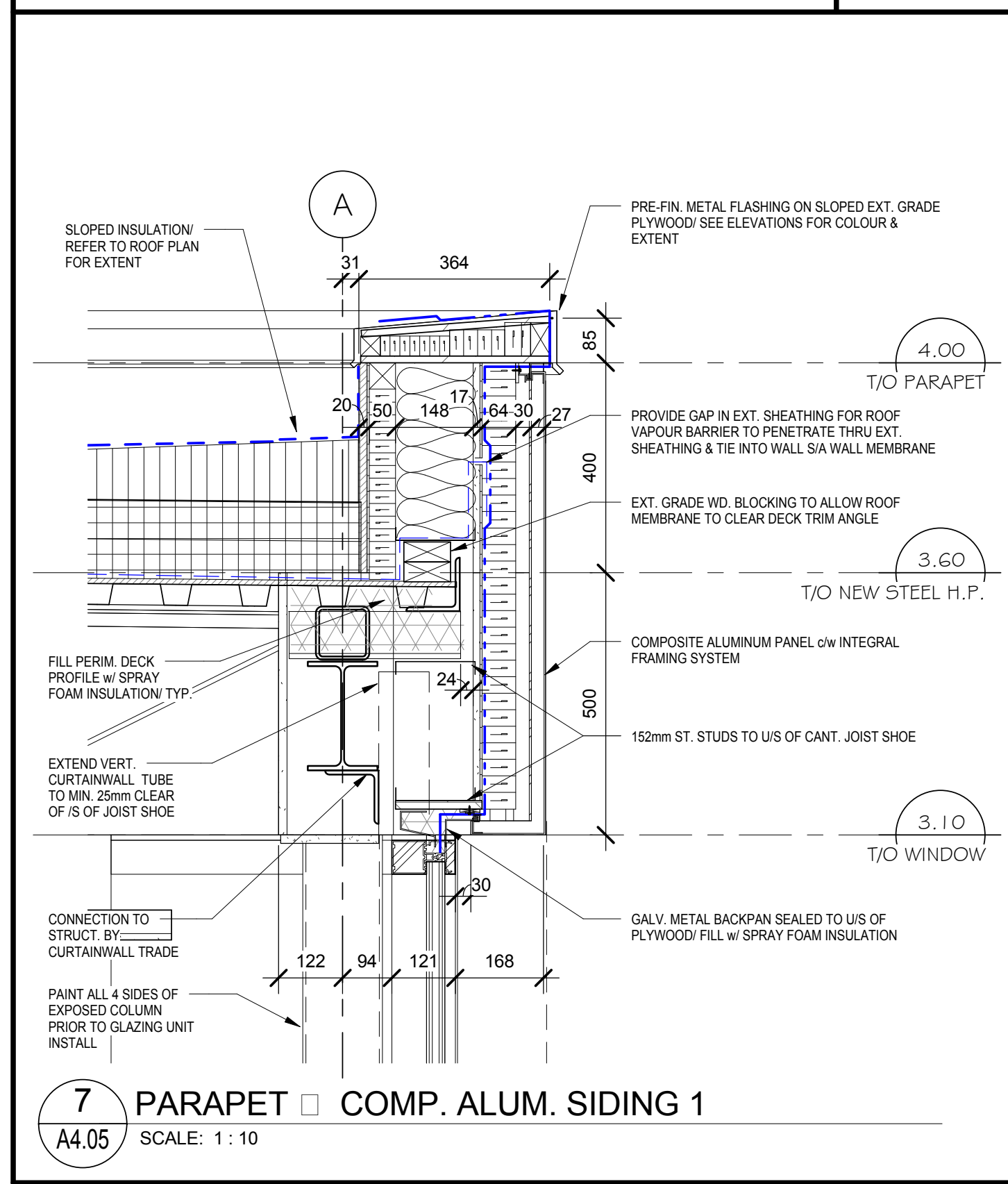
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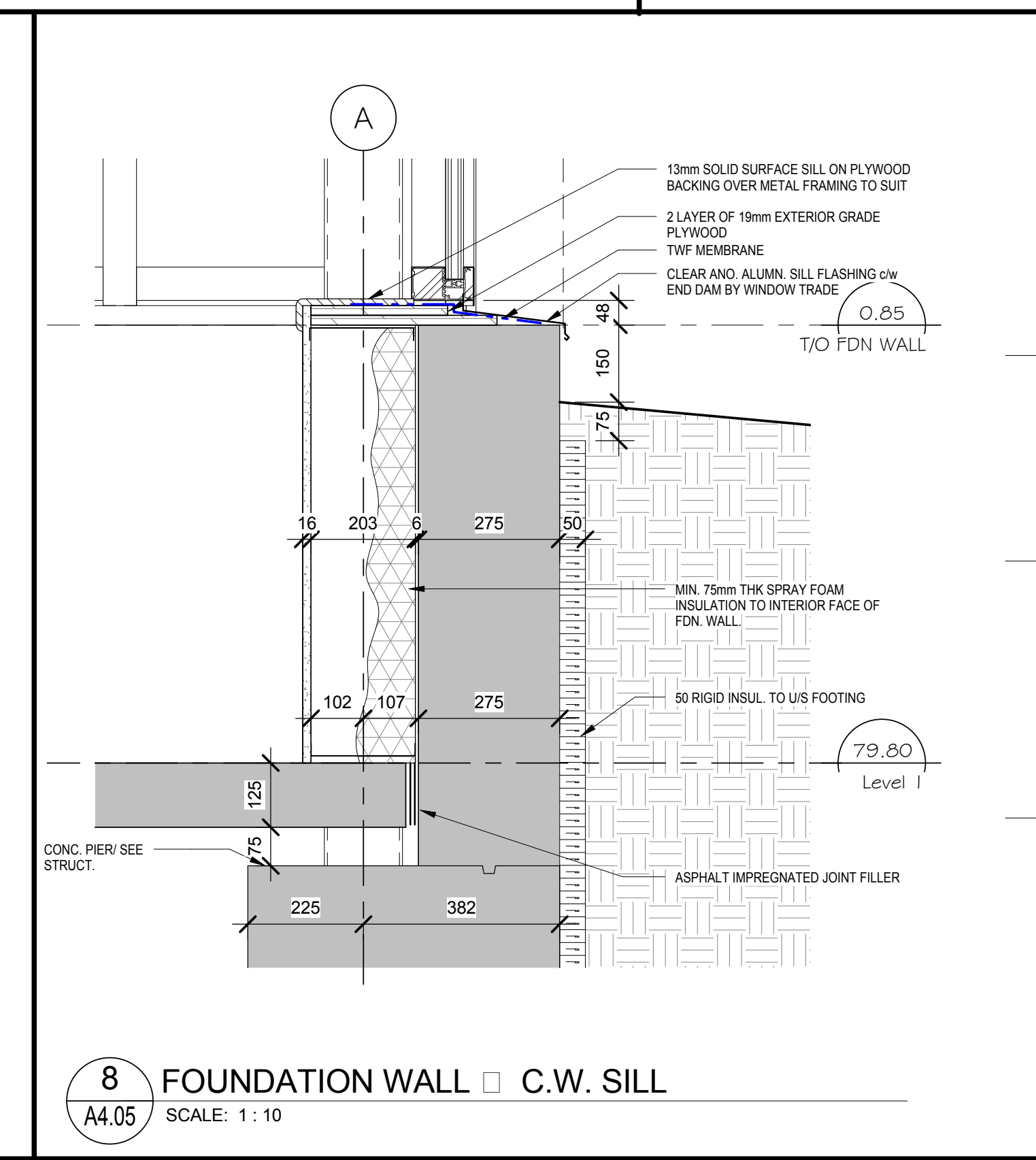
5 SECTION DETAIL 1
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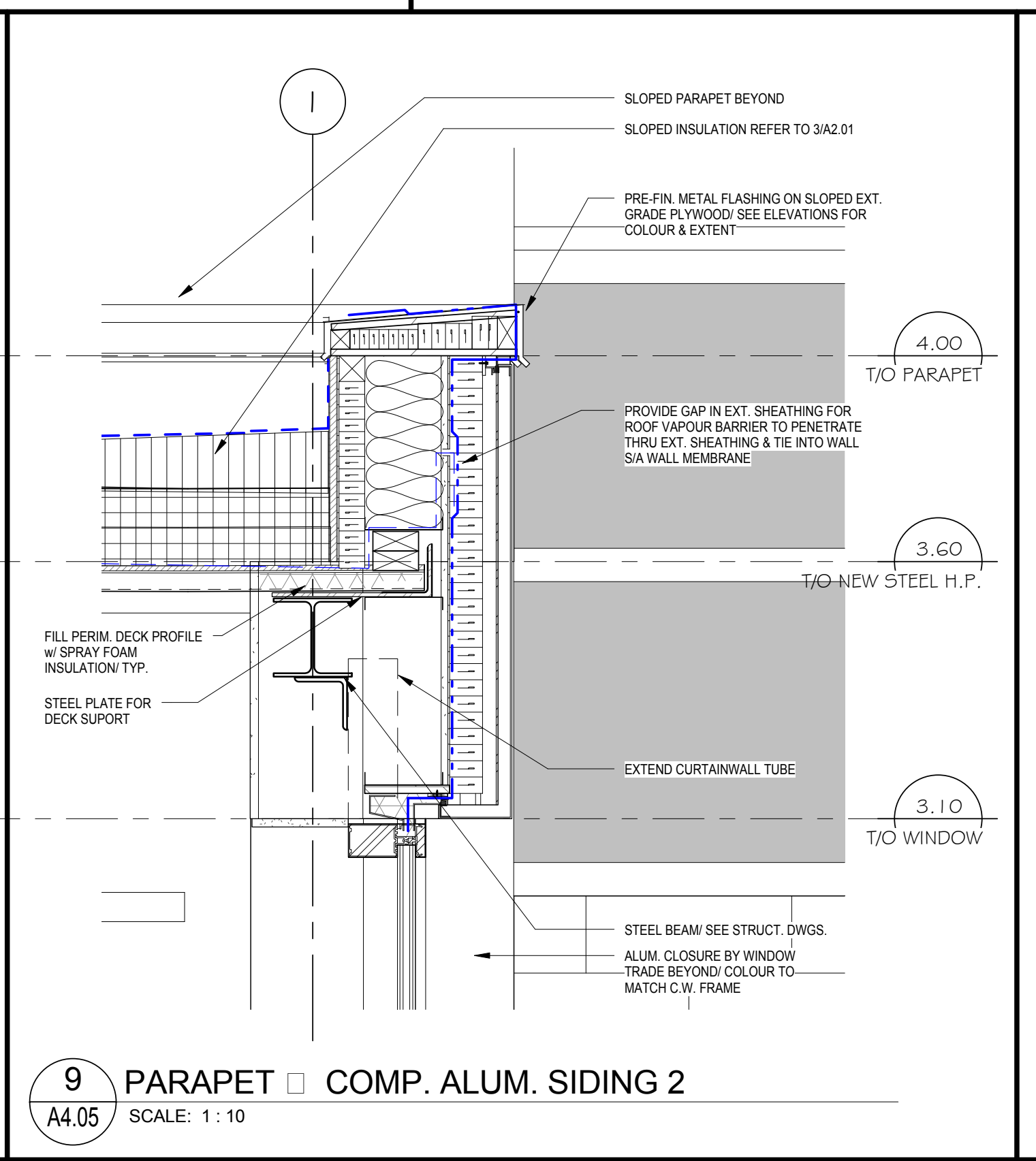
6 SECTION DETAIL 2
A4.05 SCALE: 1:10



7 PARAPET COMP. ALUM. SIDING 1
A4.05 SCALE: 1:10

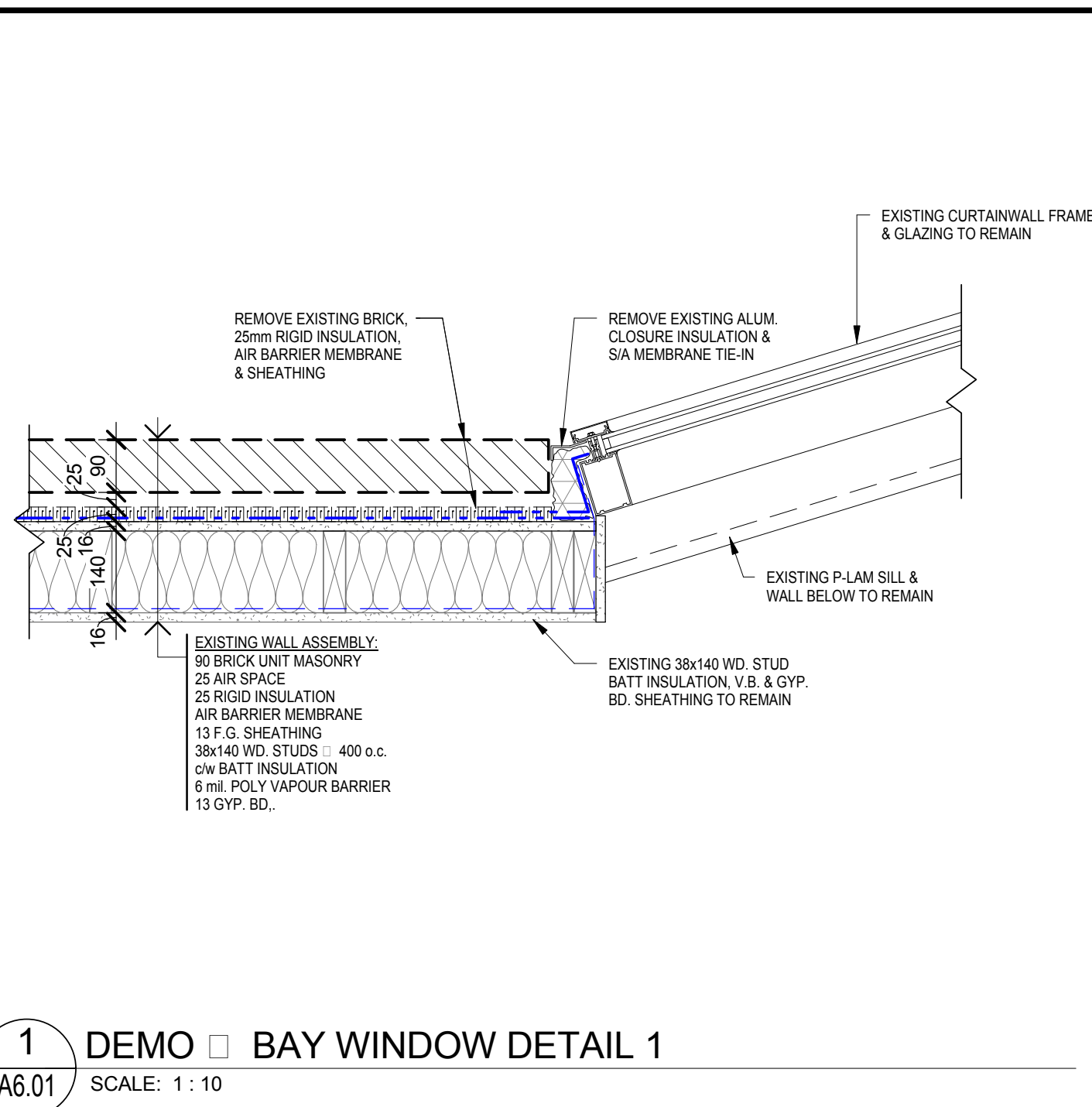


8 FOUNDATION WALL C.W. SILL
A4.05 SCALE: 1:10

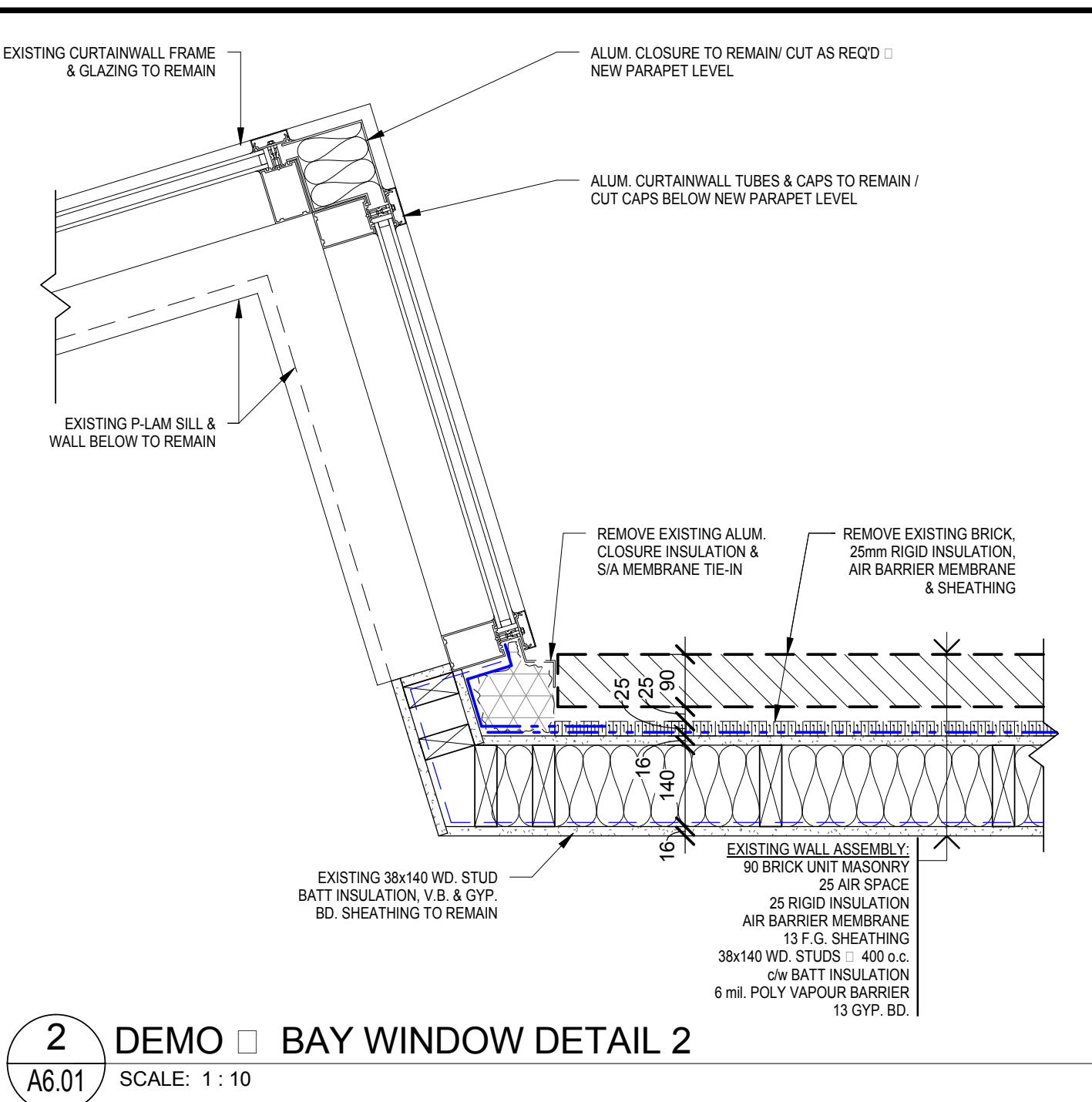


9 PARAPET COMP. ALUM. SIDING 2
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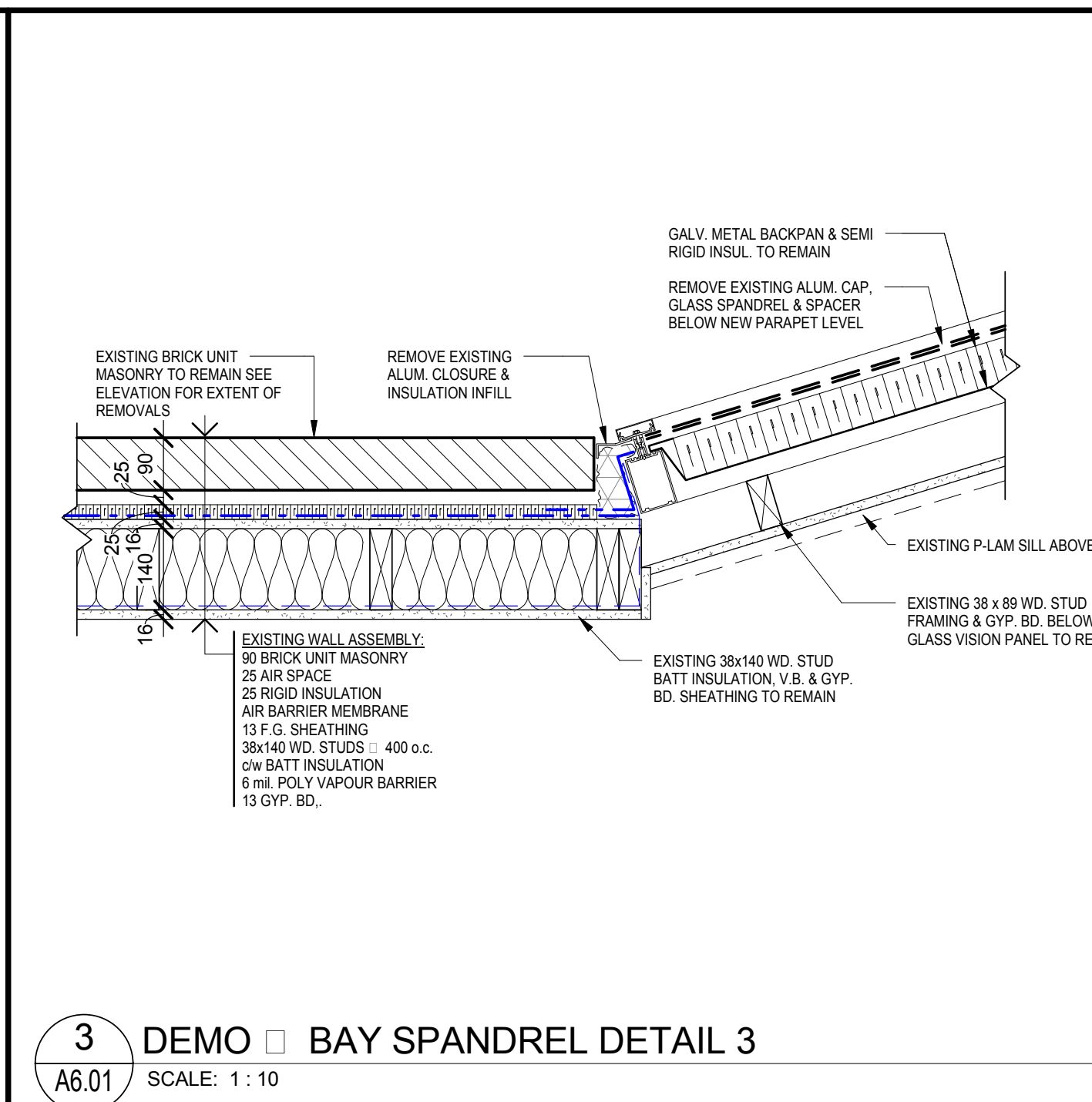
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<p>TURNBULL SCHOOL MUSIC ROOM ADDITION</p> <p>1132 - 1134 LEVEL OTTAWA, ON</p>		
<p>WALL SECTIONS</p>		
<p>DRAWN SL/RV</p>	<p>DATE 03/28/18</p>	<p>SCALE As Indicated</p>
<p>PROJECT 1705</p>		<p>DRAWING NO. A4.05</p>
<p>REVISION NO. 2</p>		



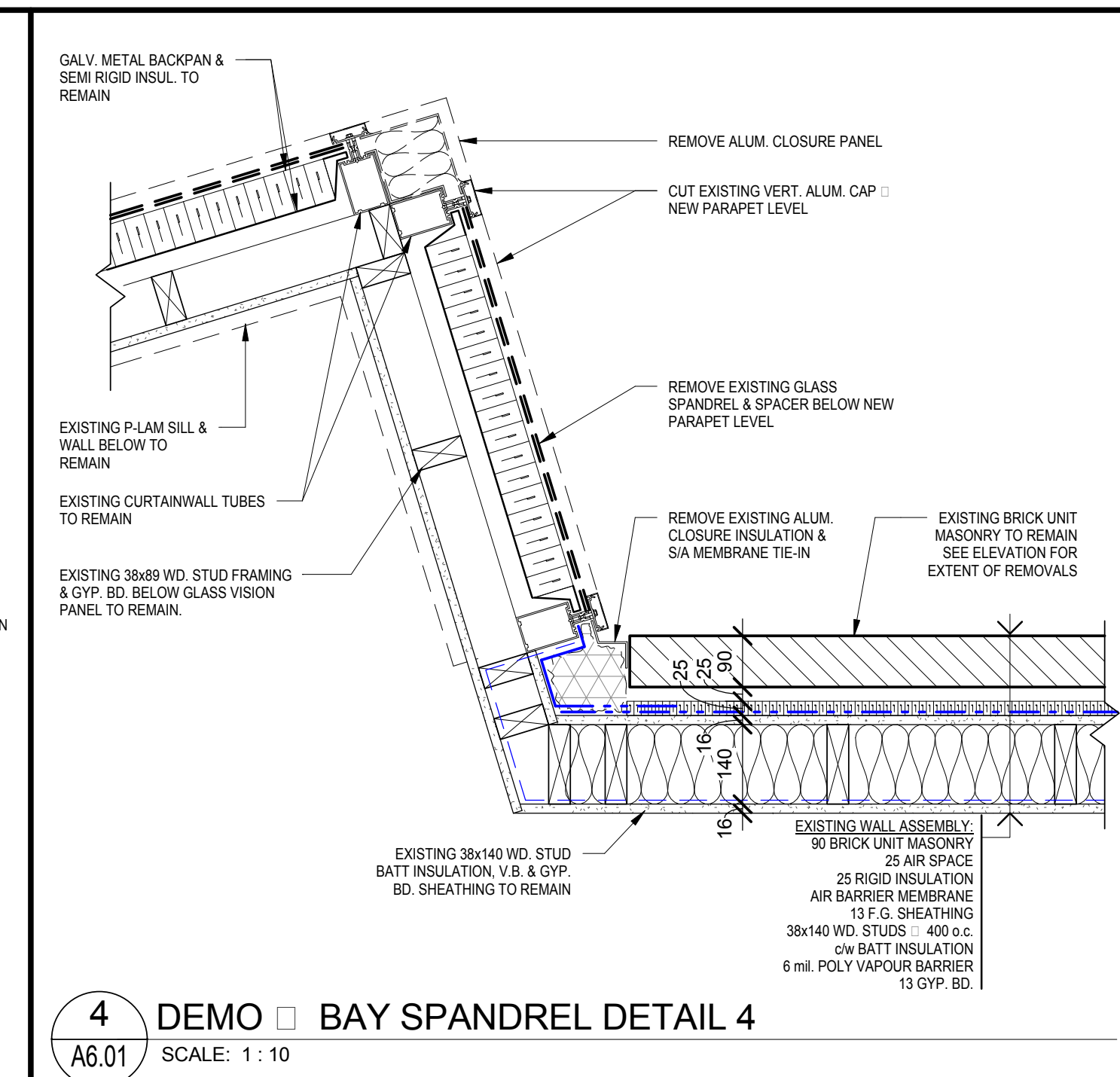
1 DEMO BAY WINDOW DETAIL 1
A6.01 SCALE: 1:10



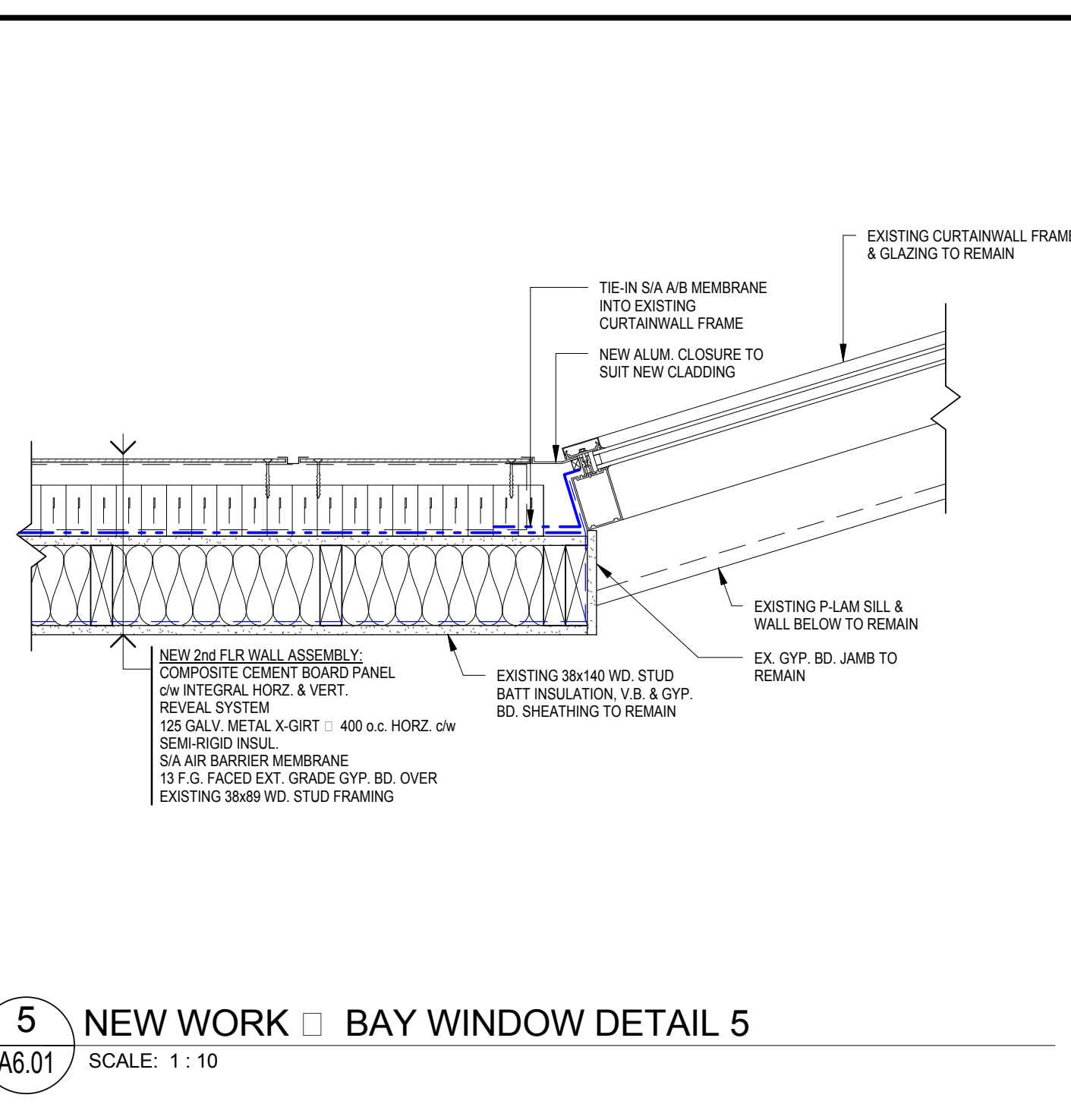
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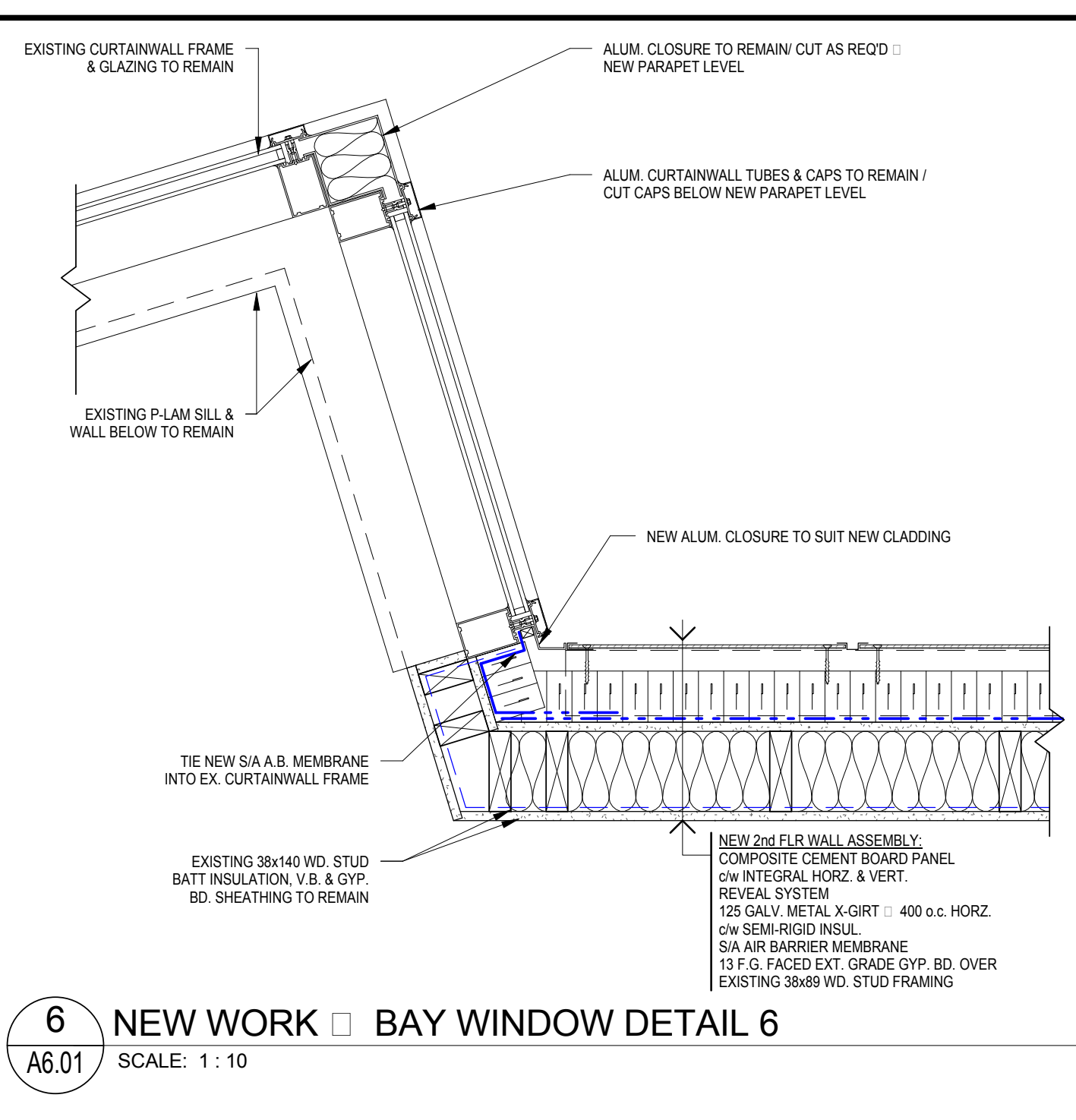
3 DEMO BAY SPANDREL DETAIL 3
A6.01 SCALE: 1:10



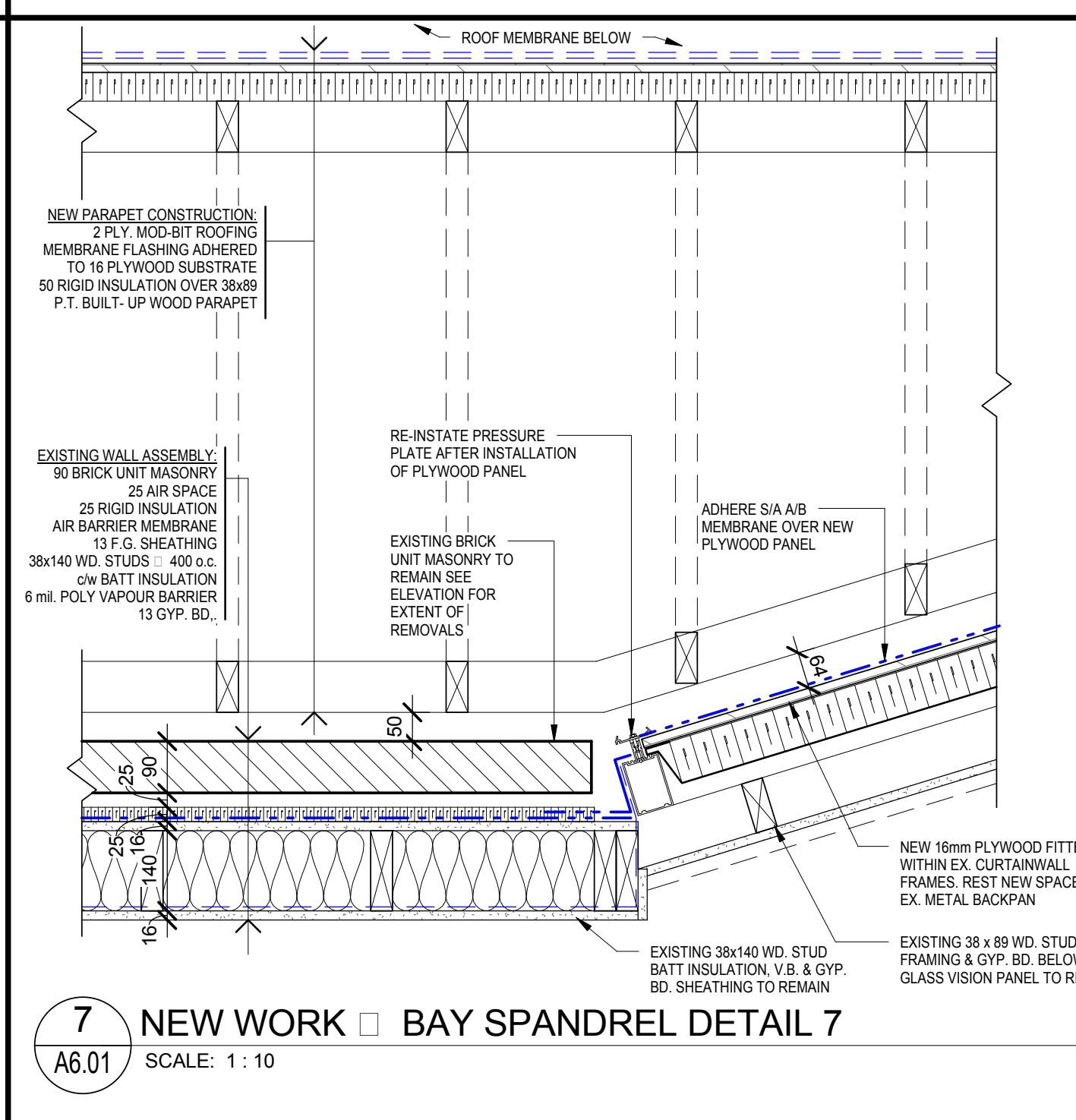
4 DEMO BAY SPANDREL DETAIL 4
A6.01 SCALE: 1:10



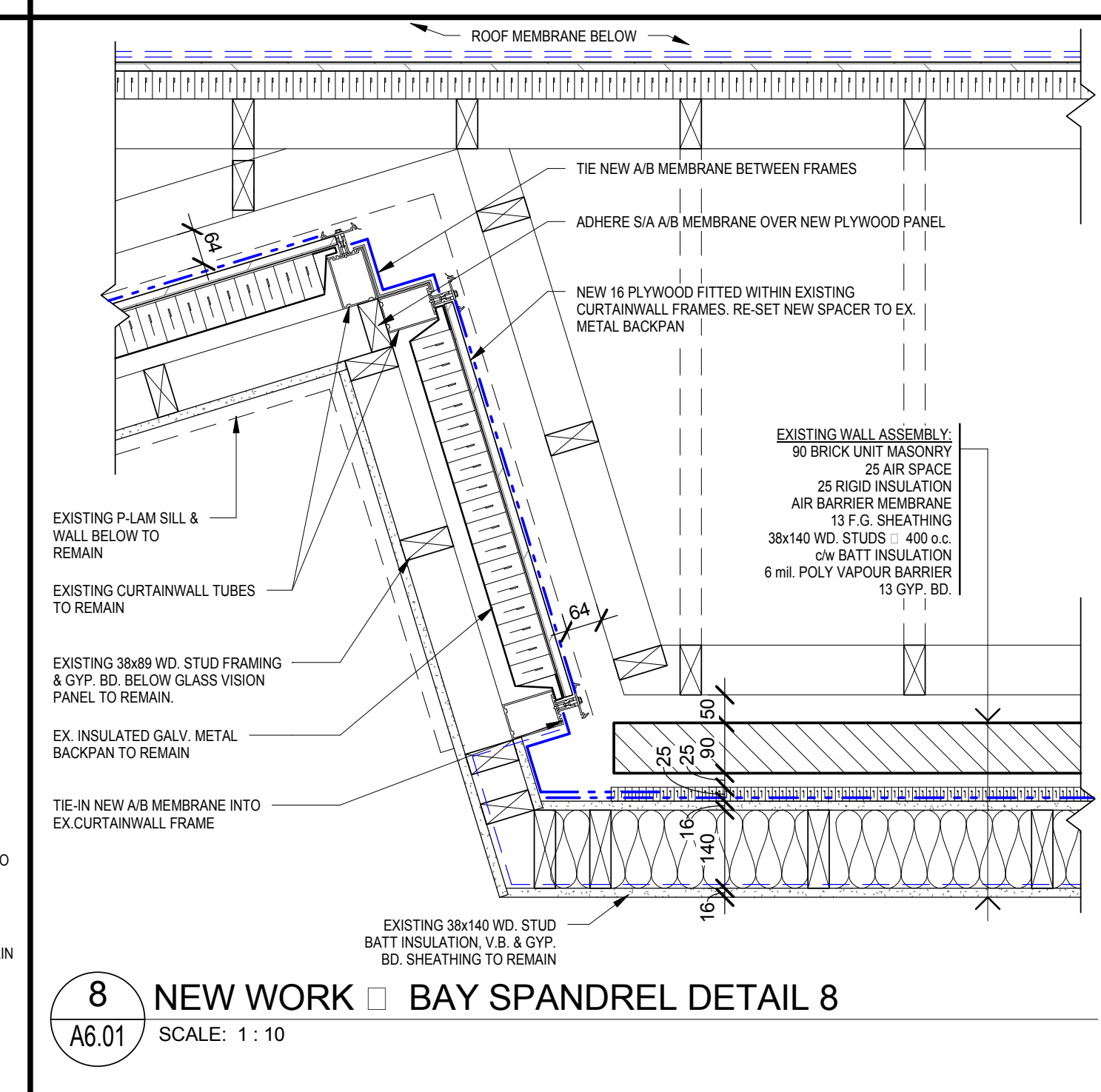
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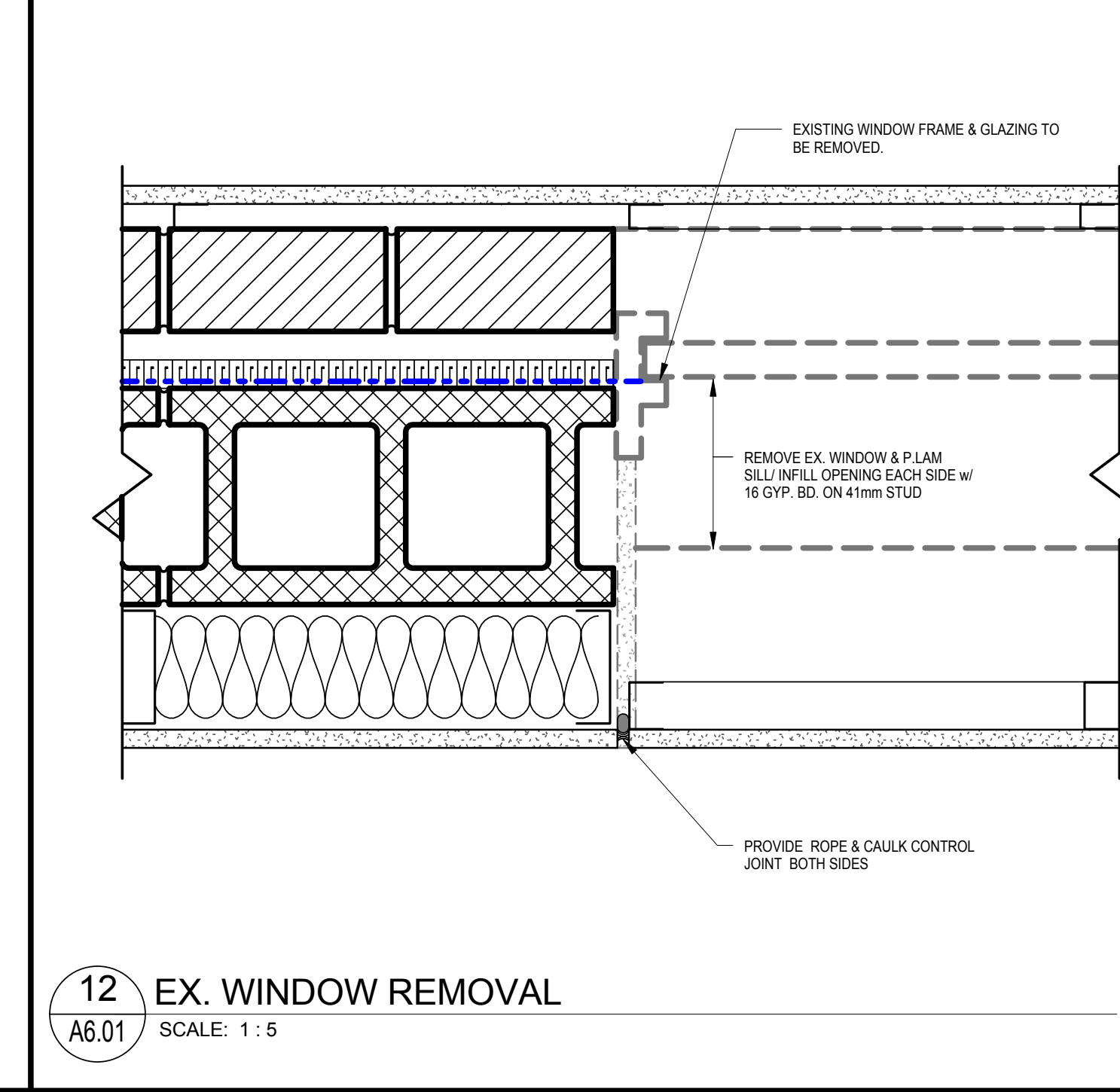
6 NEW WORK BAY WINDOW DETAIL 6
A6.01 SCALE: 1:10



7 NEW WORK BAY SPANDREL DETAIL 7
A6.01 SCALE: 1:10



8 NEW WORK BAY SPANDREL DETAIL 8
A6.01 SCALE: 1:10



12 EX. WINDOW REMOVAL
A6.01 SCALE: 1:5

2	180712	ISSUED FOR PRICING
1	180709	ISSUED FOR BUILDING PERMIT
no.	date	revision

It is the responsibility of the appropriate contractor to check and verify all dimensions on site and report all errors and/or omissions to the engineer.

All contractors must comply with all Do not scale drawings. This drawing may not be used for construction until signed. Copyright reserved.

2	180712	ISSUED FOR PRICING
1	180709	ISSUED FOR BUILDING PERMIT
no.	date	revision

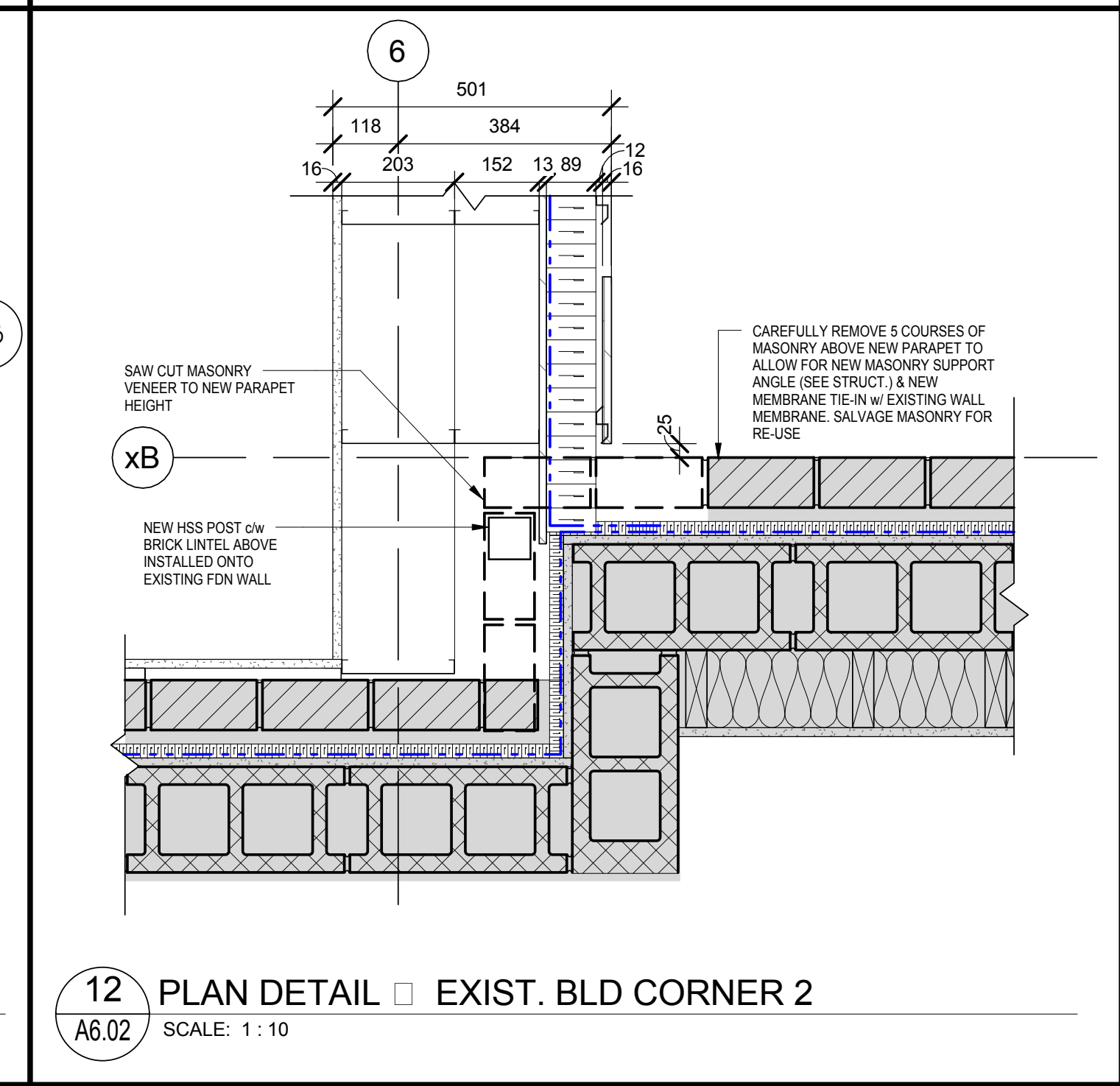
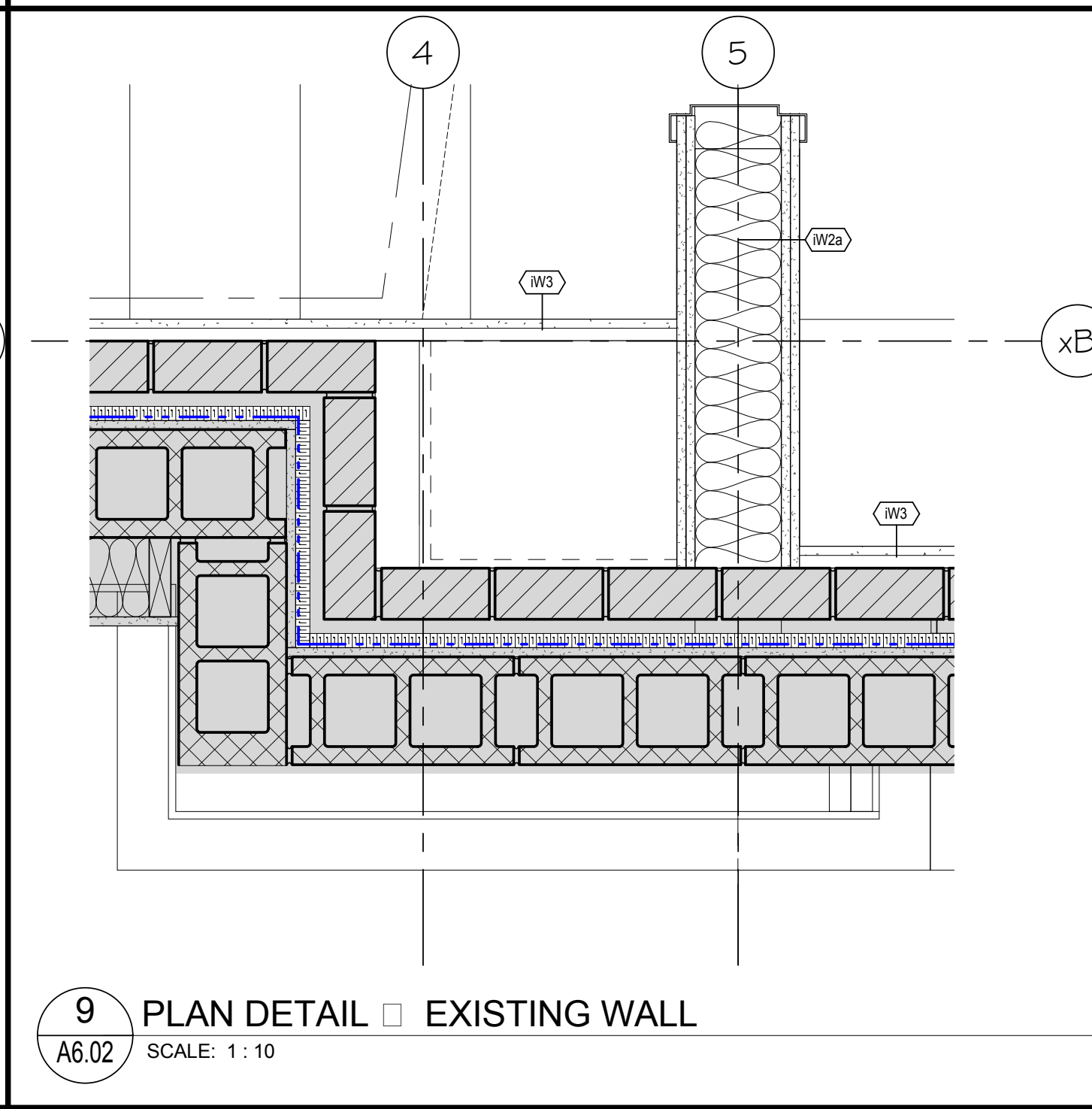
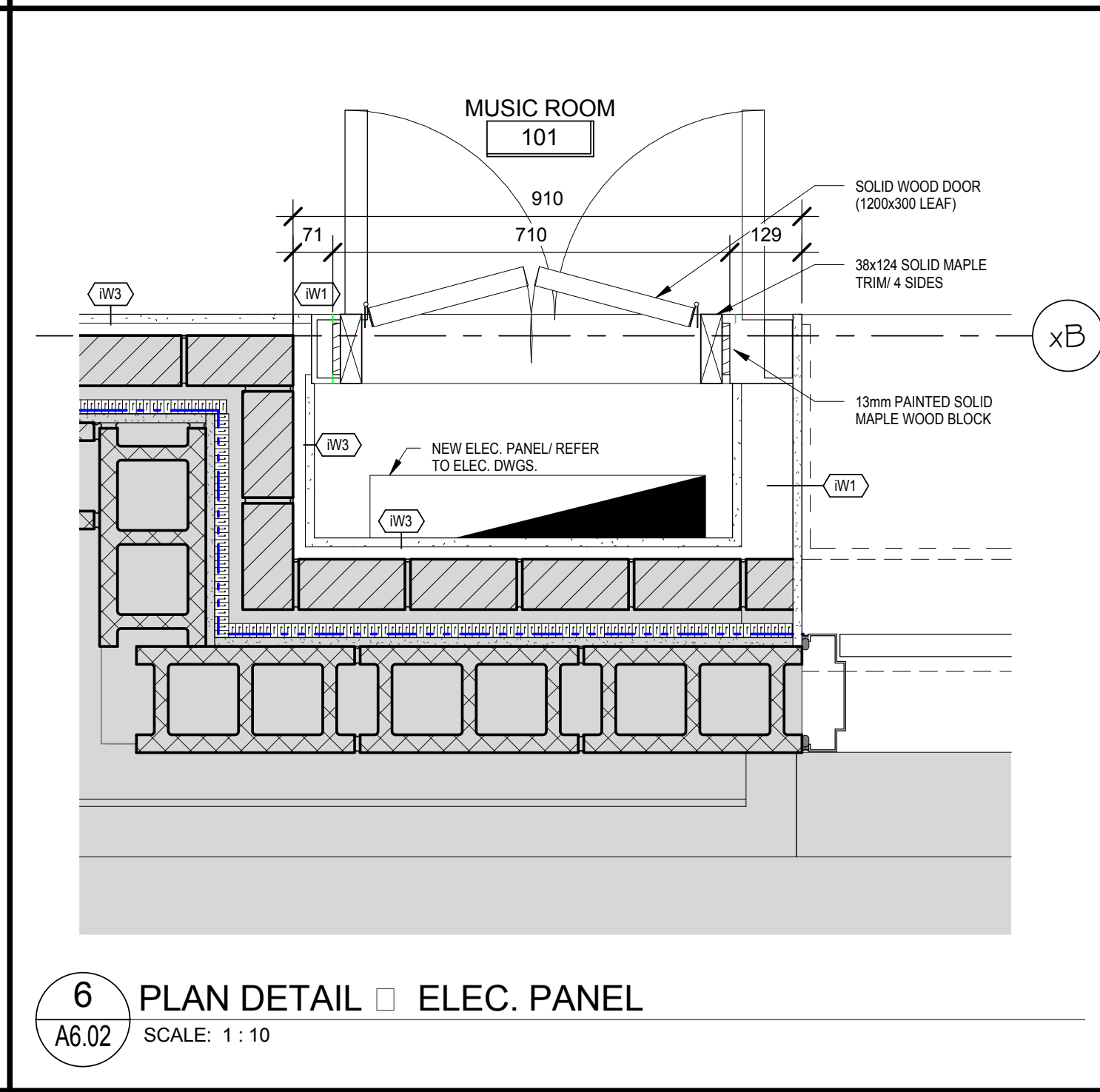
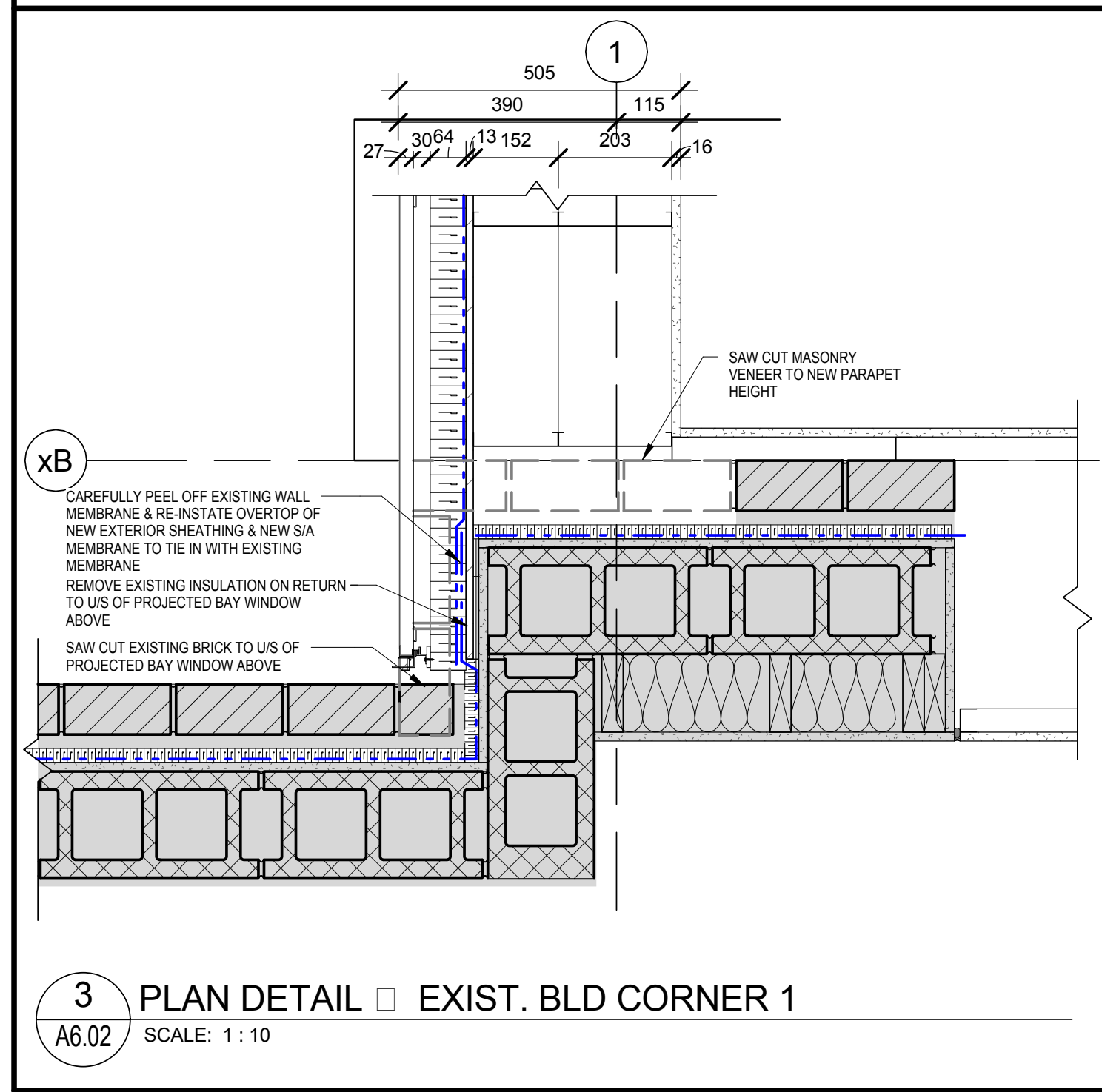
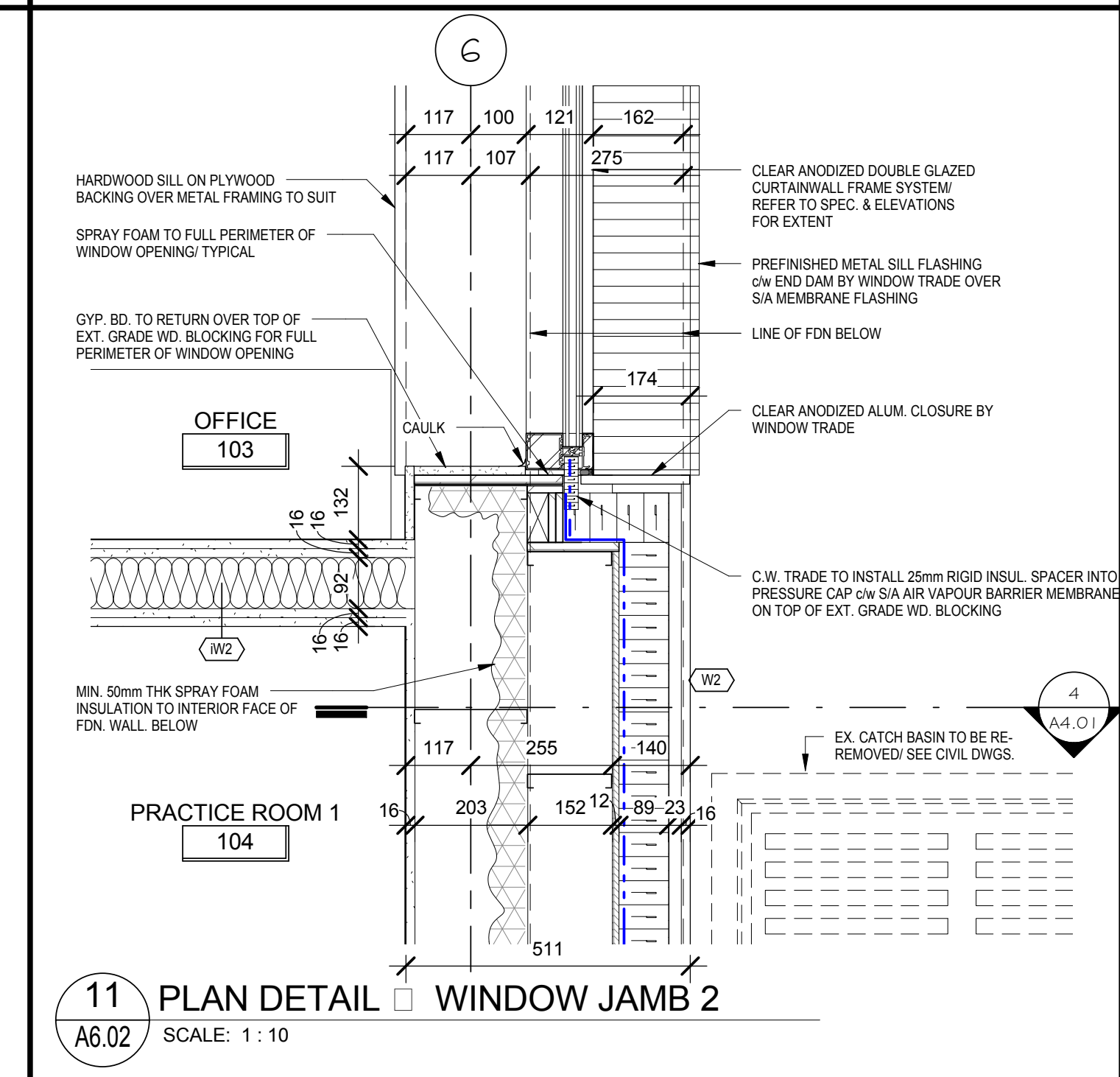
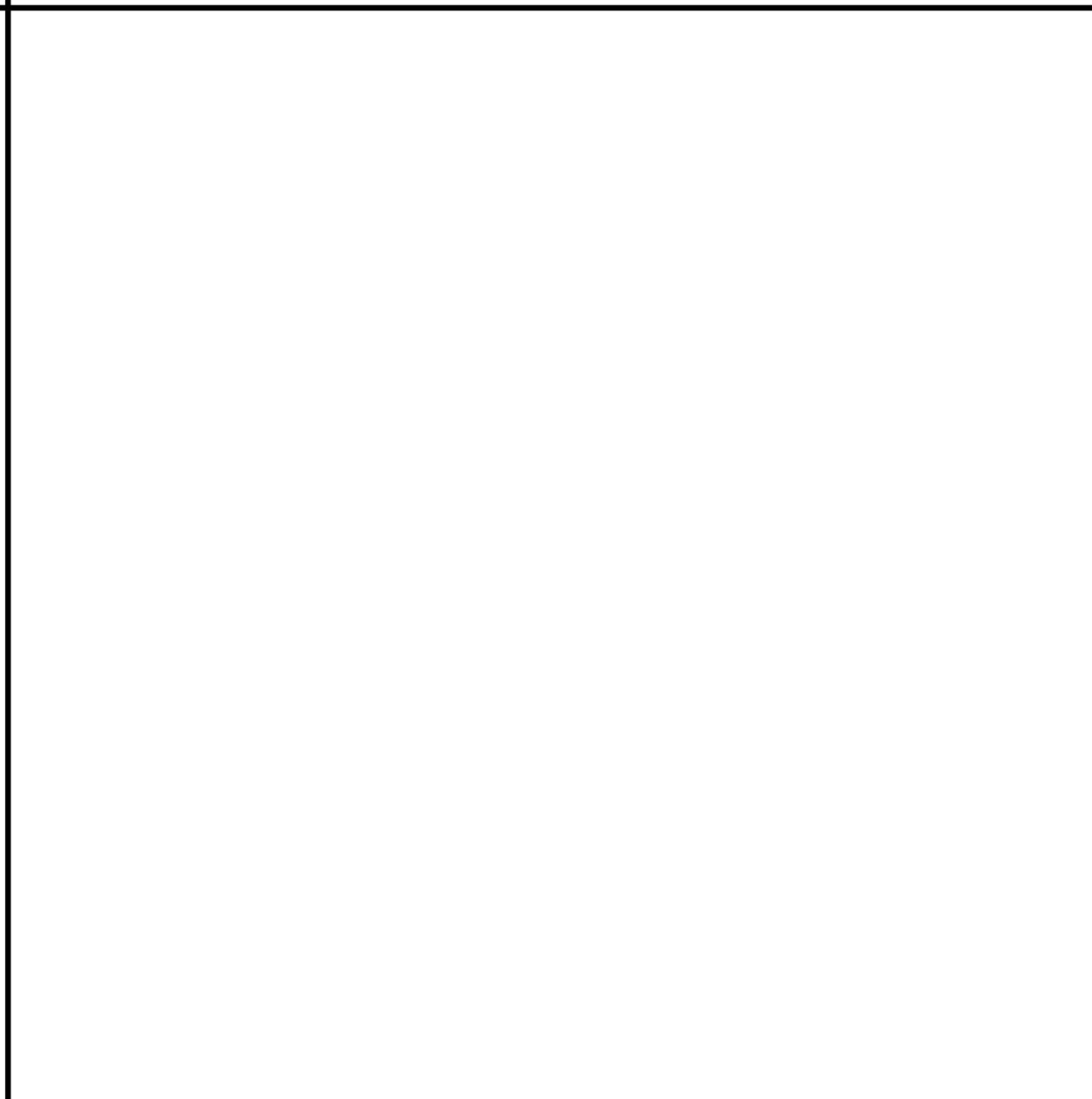
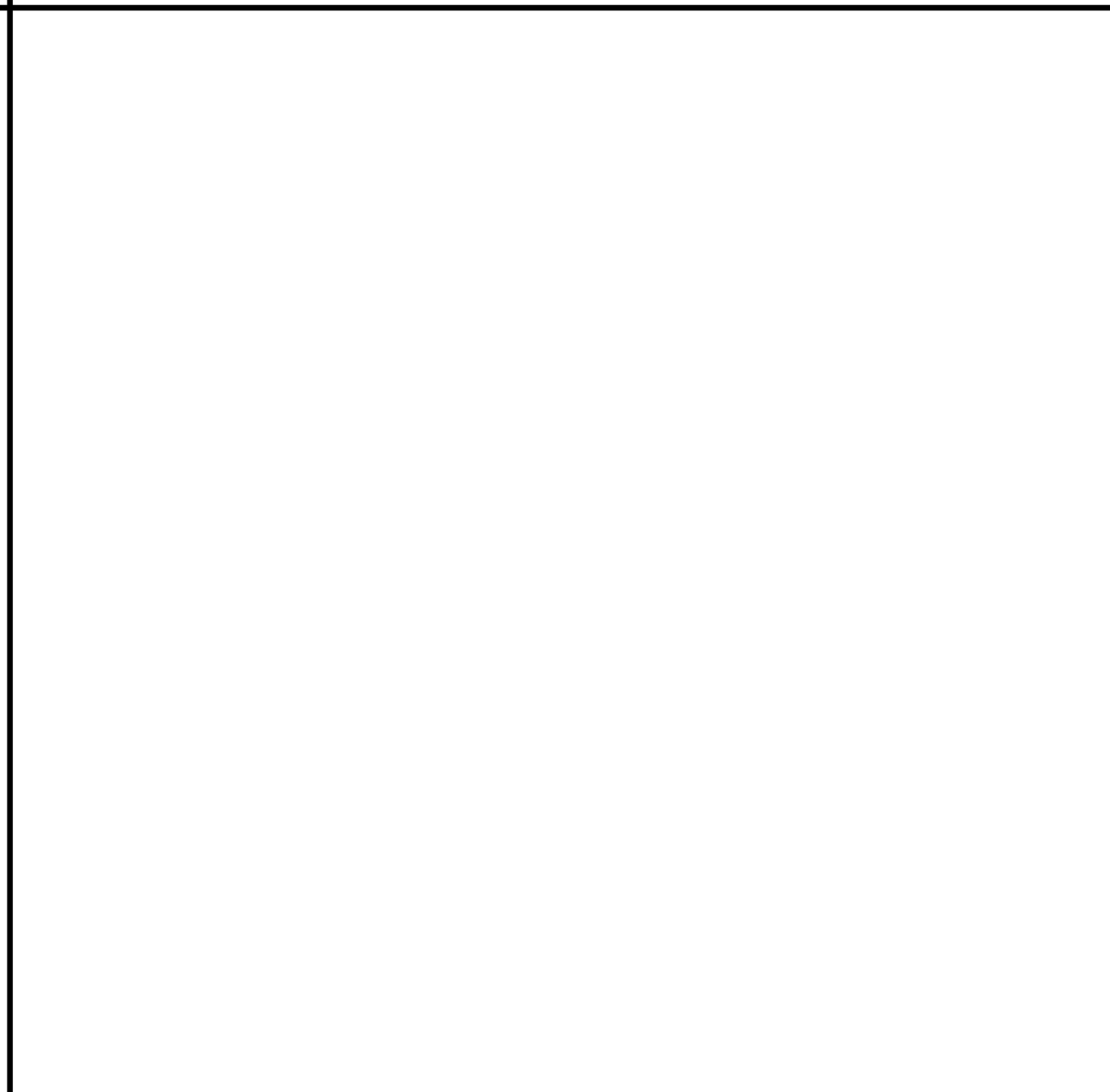
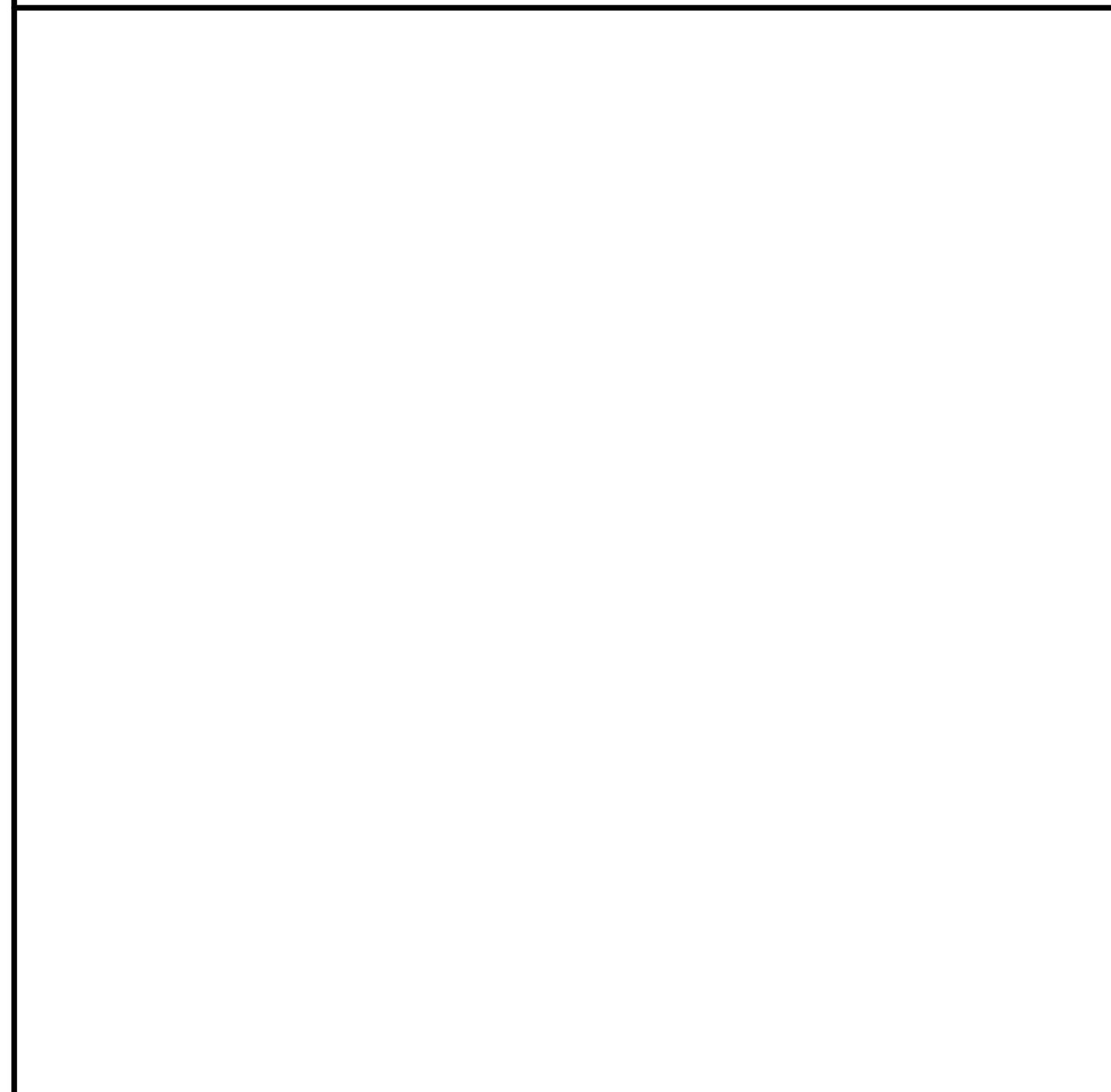
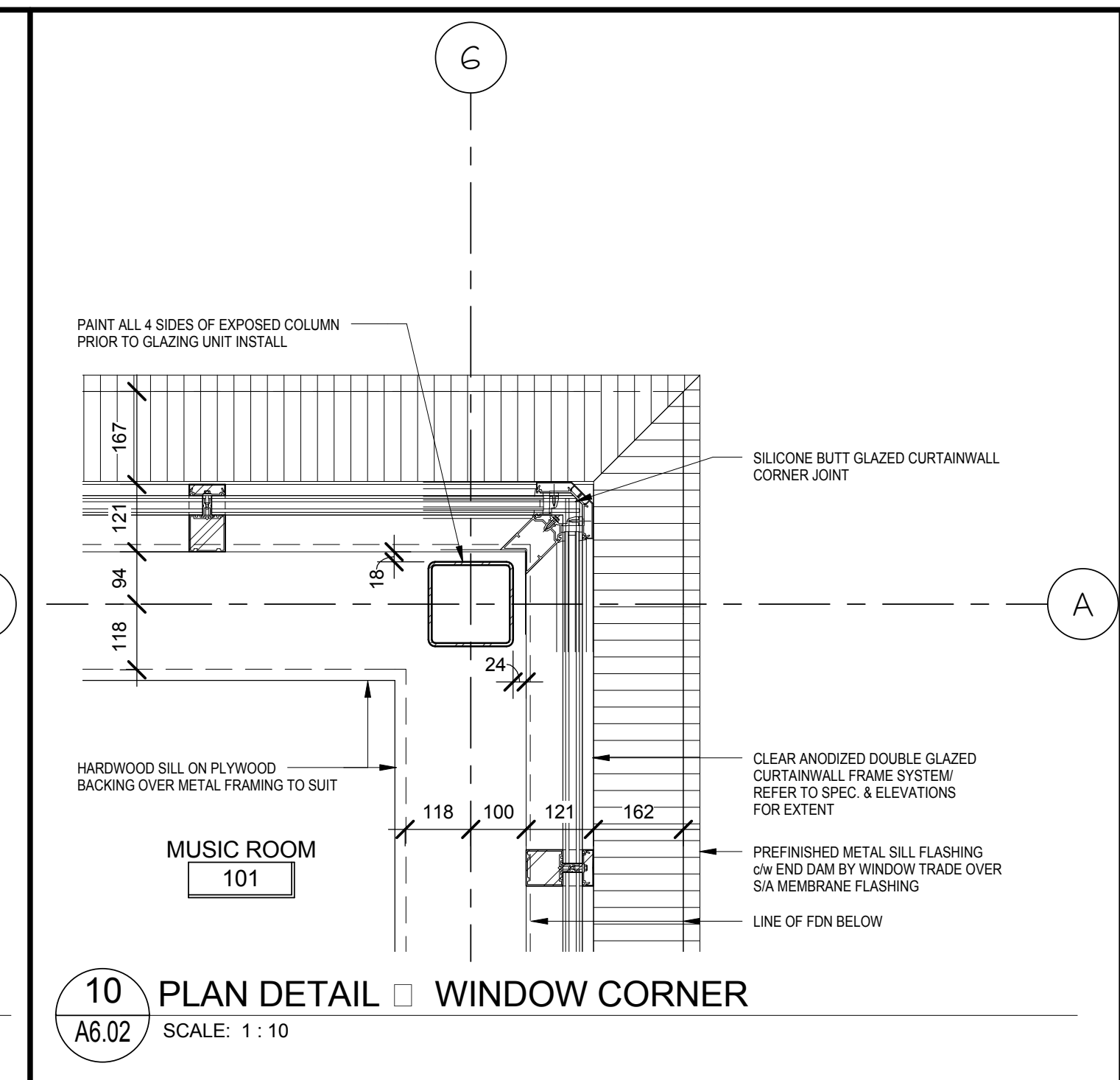
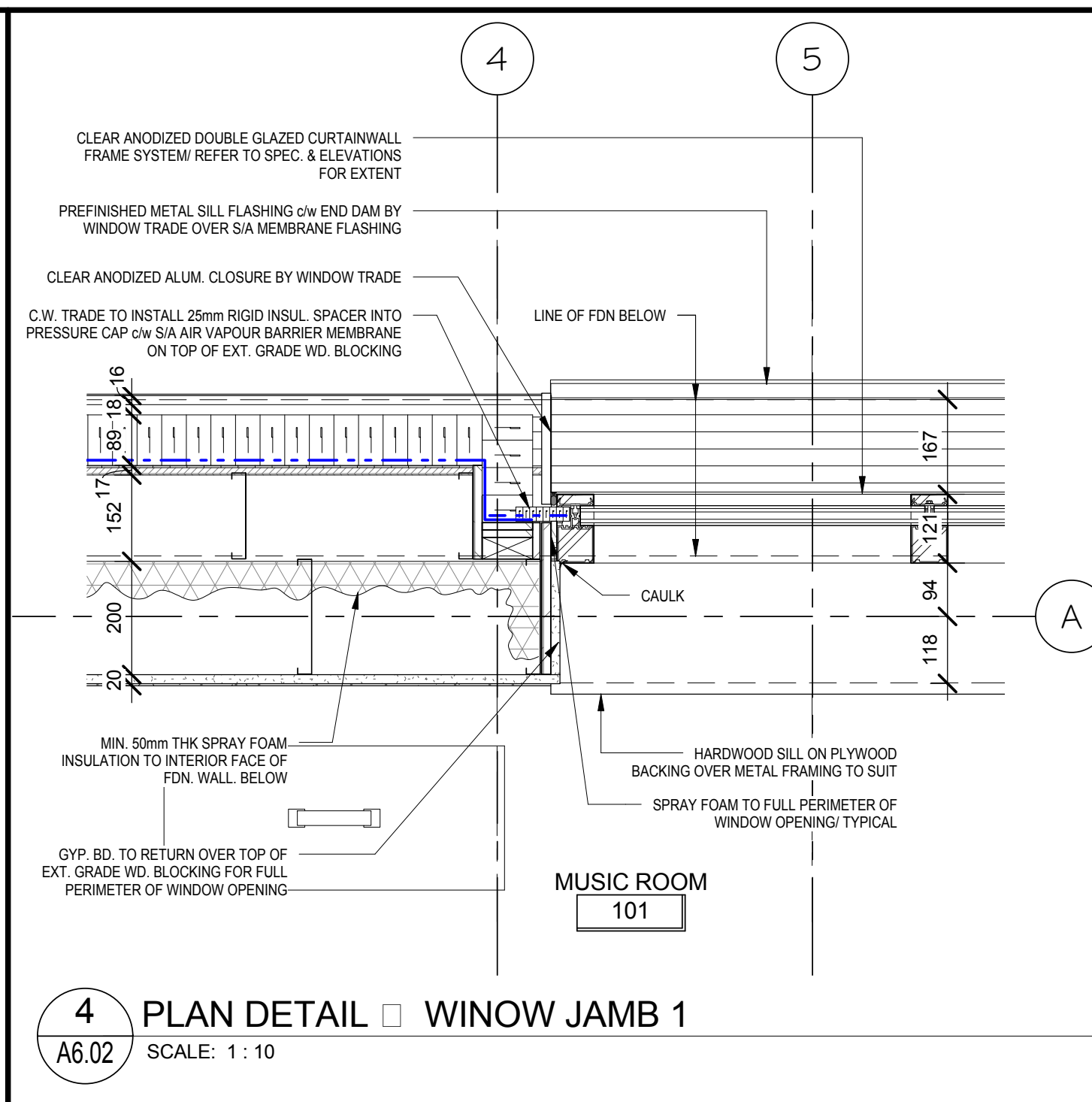
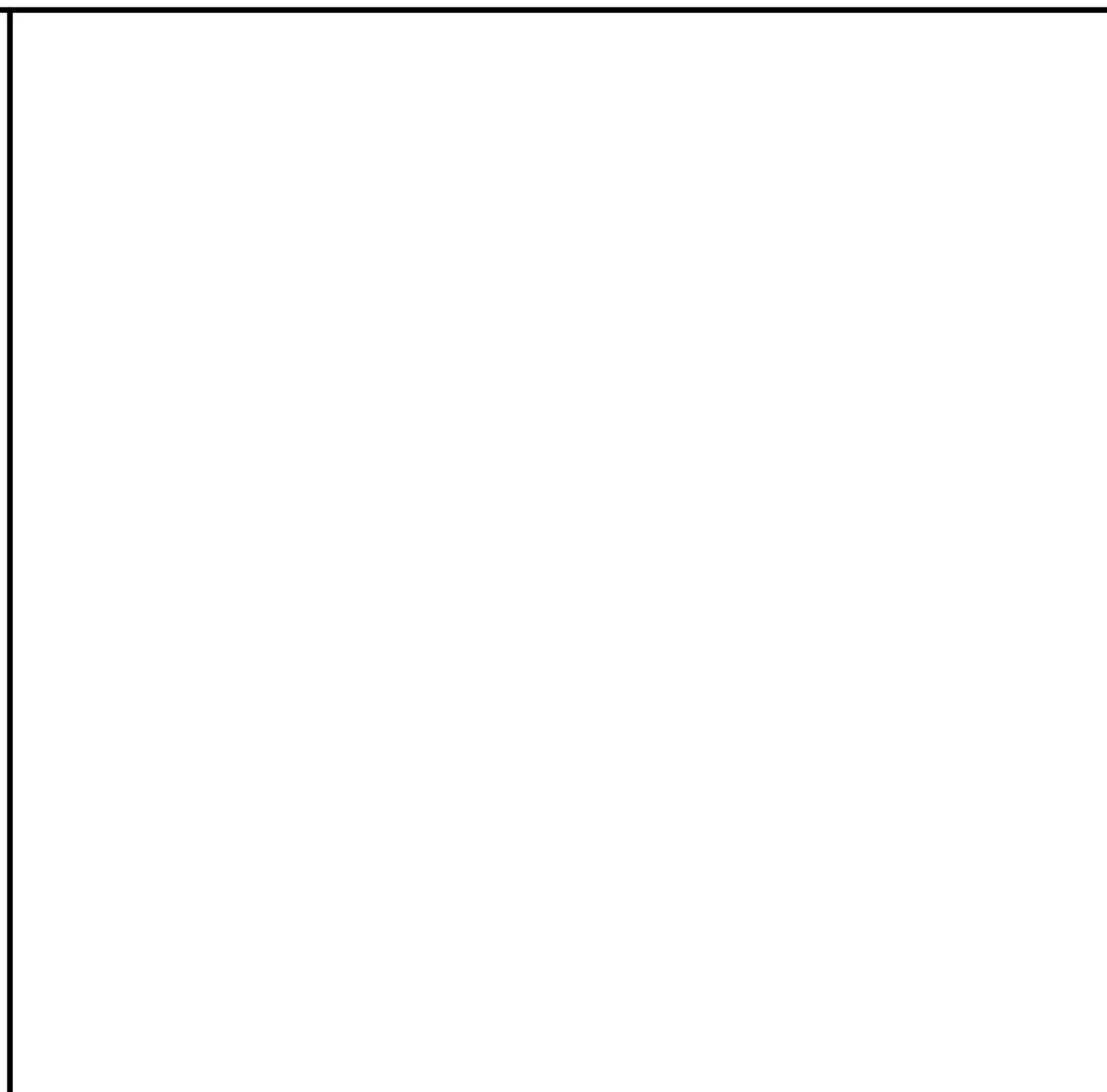
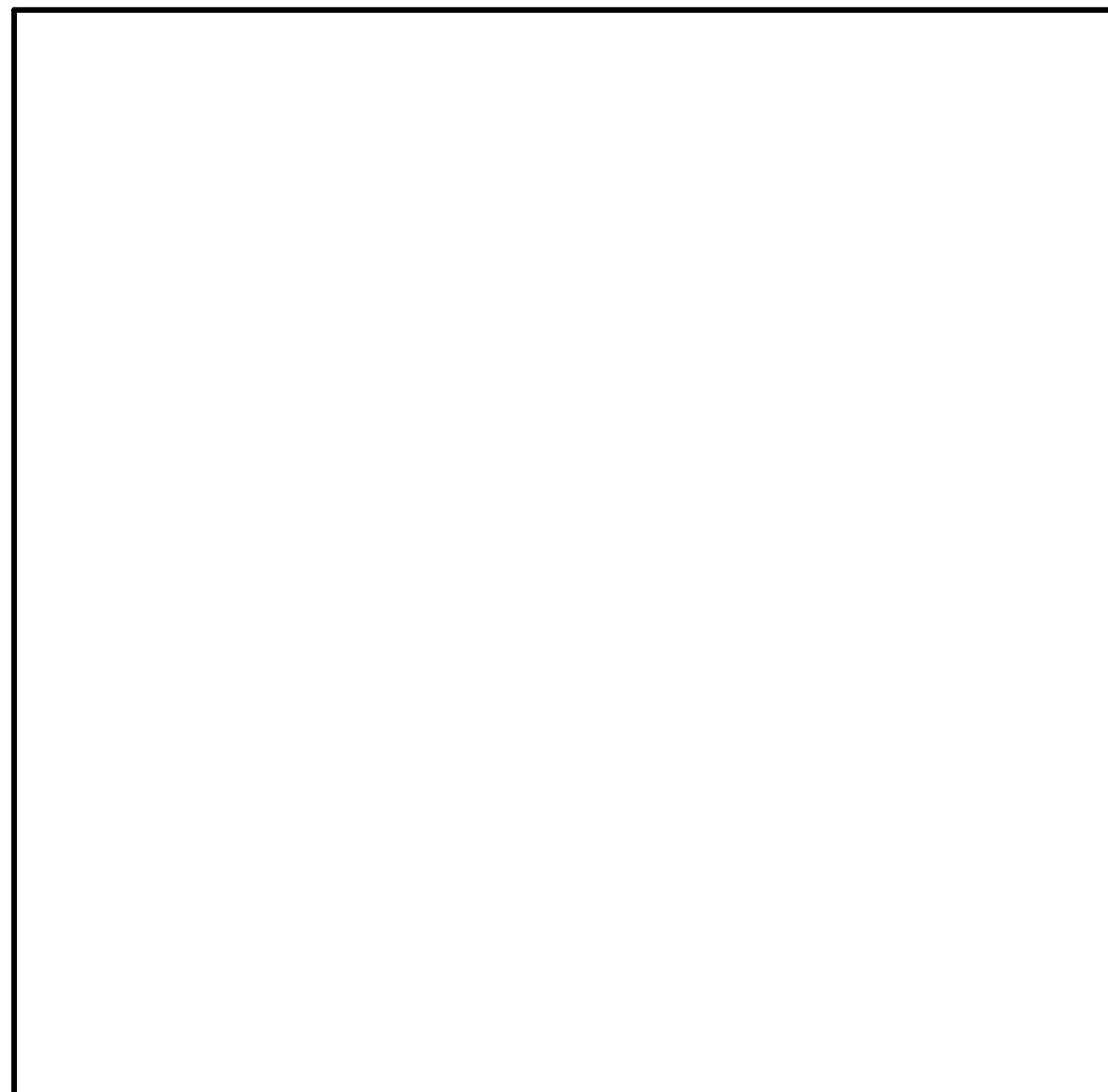
Hobin Architecture Incorporated
63 Pamela Street
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F: 613-235-2005
E: mail@hobinarc.com
hobinarc.com

PROJECT: **TURNBULL SCHOOL MUSIC ROOM ADDITION**
1152 HURON AVE. OTTAWA, ON

DRAWING TITLE: **PLAN DETAILS**

DRAWN	DATE	SCALE
Author	08/11/18	As Indicated

PROJECT: 1705
DRAWING NO. **A6.01**
REVISION NO. 2



2	18/07/12	ISSUED FOR PRICING
1	18/07/09	ISSUED FOR BUILDING PERMIT
no.	date	revision

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 63 Pamela Street
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PROJECT: **TURNBULL SCHOOL MUSIC ROOM ADDITION**
 1132 - 1138 - 1142 AVE. OTTAWA, ON

DRAWING TITLE: **PLAN DETAILS**

DRAWN	DATE	SCALE
SL	08/25/18	1 : 10
PROJECT		1705
DRAWING NO.		A6.02
REVISION NO.		

SEISMIC SYSTEM/LOADING DATA:

MAIN BUILDING

SEISMIC FORCE RESISTING SYSTEM (SFRS)

SFRS: SYSTEM & CONNECTIONS: (2012 OBC CLAUSE 4.1.8.9/4.1.8.10) LATERAL LOAD RESISTING SYSTEM: CONVENTIONAL CONSTRUCTION (STEEL BRACED FRAMES) Rd = 1.5 Ro = 1.3 CSA STANDARD: CAN/CSA S16-09 APPLICABLE CLAUSE(S): 27.11

SFRS: DIAPHRAGMS & CONNECTIONS: (2012 OBC CLAUSE 4.1.8.15) CSA STANDARD: CAN/CSA S16-09 APPLICABLE CLAUSE(S): 27.11.1 (b)

SFRS: SYSTEM FOUNDATIONS: (2012 OBC CLAUSE 4.1.8.16) CSA STANDARD: CAN/CSA A23.3-04 FOR ANCHORED FOOTINGS APPLICABLE CLAUSE(S): 21.11 FOR UNANCHORED FOOTINGS CONFIRMATION: FOUNDATIONS HAVE BEEN DESIGNED TO RESIST THE LATERAL LOAD CAPACITY OF THE SFRS INCLUDING ALL APPLICABLE AMPLIFICATION FACTORS

SEISMIC IMPORTANCE FACTOR: (2012 OBC CLAUSE 4.1.8.5) Ie = 1.3

PROJECT CITY: (OTTAWA, CITY HALL)

SITE CLASS: THE NOTED SITE CLASSIFICATION FOR SEISMIC SITE RESPONSE AND SHEAR WAVE VELOCITY PARAMETERS INDICATED ARE AS REPORTED IN THE GEOTECHNICAL REPORT # PG4528-MEMO.01 BY PATERSON GROUP REFER TO THE NOTED GEOTECHNICAL REPORT FOR Vs, N60, AND/OR Su VALUES USED TO DETERMINE SITE CLASSIFICATION. [] A [] B [X] C [] D [] E [] F (SITE SPECIFIC SPECTRUM: CITY HALL)

PGA: 0.320

RESPONSE SPECTRUM DATA:

5% DAMPED SPECTRAL RESPONSE ACCELERATION VALUES: (2012 OBC SUPPLEMENT STANDARD SB-1)

Sa (0.2) = 0.640 Sa (0.5) = 0.310 Sa (1.0) = 0.140 Sa (2.0) = 0.046

DESIGN SPECTRAL RESPONSE ACCELERATION VALUES (DSRAV): (2012 OBC CLAUSE 4.1.8.4)

[X] CLASS C: (Fo=1.0/Fv=1.0)

S (0) = 0.64 S (0.2) = 0.64 S (0.5) = 0.31 S (1.0) = 0.14 S (2.0) = 0.046 S (4.0) = 0.023

SYSTEM RESTRICTION VALUE: IeFaSa(0.2) = ????? >= 0.35 [X] YES [] NO

PERIOD DATA:

STATIC PERIOD: (2012 OBC CLAUSE 4.1.8.11(3))

To (STATIC) NS = 0.090 sec To (STATIC) EW = 0.090 sec

DESIGN PERIODS/MODE & MOMENT FACTORS: (2012 OBC CLAUSE 4.1.8.11(5))

Sa(0.2) = 13.91 >= 8.0 [X] YES [] NO Sa(2.0) [] YES [] NO To (DESIGN) NS = 0.09 sec MV = 1.00 J = 1.00 To (DESIGN) EW = 0.09 sec MV = 1.00 J = 1.00

DESIGN FUNDAMENTAL PERIOD BASED DSRAV:

S(Ta) NS = 0.640 S(Ta) EW = 0.640

IRREGULARITY REVIEW (2012 OBC CLAUSE 4.1.8.6)

- 1. VERTICAL STIFFNESS: [] YES [X] NO
2. WEIGHT: [] YES [X] NO
3. VERTICAL GEOMETRIC: [] YES [X] NO
4. IN PLANE DISCONTINUITY: [] YES [X] NO
5. OUT OF PLANE: [] YES [X] NO
6. WEAK STOREY: [] YES [X] NO
7. TORSIONAL: [] YES [X] NO
B NS = 1.48 B EW = 1.41
8. NON-ORTHOGONAL: [] YES [X] NO

CONCLUSION: BUILDING IS [X] REGULAR [] IRREGULAR DYNAMIC ANALYSIS: [] REQUIRED [X] NOT REQUIRED DYNAMIC PROCEDURE METHOD: [] MODAL RESPONSE SPECTRUM [] NUMERICAL INTEGRATION TIME HISTORY [X] N/A

TORSIONAL ECCENTRICITY: [X] +/- 0.10 Dnx (4.1.8.11(10a)), B <= 1.7 EQUIV. STATIC FORCE PROCEDURE) [] +/- 0.10 Dnx (4.1.8.12(4a)), B >= 1.7) [] +/- 0.05 Dnx (4.1.8.12(4b)), B < 1.7, 3-D DYNAMIC ANALYSIS)

STRUCTURAL SEPARATION: [X] THE NEW AND EXISTING STRUCTURES HAVE BEEN SEPARATED IN ACCORDANCE WITH 4.1.8.14(1) OF THE 2012 O.B.C. [] N/A

BASE SHEARS/MOMENTS: (2012 OBC CLAUSE 4.1.8.11)

Vstatic = S(Ta)MvleW/(RdRo) = 270 kN W = 625 kN

STATIC MAXIMUM/MINIMUM VALUES:

NORTH-SOUTH: (I)

Vmin = S(2.0)MvleW/(RdRo) = 20 kN W = 625 kN Vmax = 2/3 S(0.2)leW/(RdRo) = 180 kN W = 625 kN

EAST-WEST: (+/-)

Vmin = S(2.0)MvleW/(RdRo) = 20 kN W = 625 kN Vmax = 2/3 S(0.2)leW/(RdRo) = 180 kN W = 625 kN

SEISMIC LOADS table with columns for STATIC LOADS and DESIGN LOADS, including North-South and East-West directions.

WIND UPLIFT (REF FIG I-9 NBC 2010 STRUCTURAL COMMENTARY I) table with columns for PNET, Pe, Pi, z, and DESIGN SNOW LOAD PARAMETERS.

WIND table with columns for WIND, WIND UPLIFT, and WIND UPLIFT, including design parameters and units.

REINFORCING BAR LAP LENGTH TABLE with columns for CONCRETE STRENGTH (MPa) and REINFORCING BAR LAP LENGTH (mm) for various bar sizes.

FOR SPECIAL CONDITIONS MULTIPLY THE VALUES LISTED ABOVE BY THE FOLLOWING FACTORS: 1. EPOXY COATED REINFORCING (X 1.5) 2. HORIZONTAL REINFORCING WITH >300 mm CONCRETE BELOW (X 1.3) 3. FOR CONDITIONS 1 & 2 OCCURRING SIMULTANEOUSLY (X 1.7)

DESIGN & DETAILING CRITERIA FOR SUPPLIERS section containing 7 numbered criteria for structural steel connections, seismic restraint, cold formed steel studs, miscellaneous metals, and temporary shoring.

GENERAL NOTES

- 1. ANY DEVIATION FROM THE CONDITIONS SHOWN ON THESE DRAWINGS MUST BE REPORTED TO THE ENGINEER.
2. THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF PART 4 OF THE O.B.C. (2012 EDITION) ONTARIO REGULATION 332/12 (AS AMENDED)
3. STANDARDS -CSA STANDARD A23.3-04 DESIGN OF CONCRETE STRUCTURES -CAN/CSA-S16-09 LIMIT STATES DESIGNS OF STEEL STRUCTURES -CSA STANDARD S304.1-04 DESIGN OF MASONRY STRUCTURES
4. ANY MODIFICATIONS TO EXISTING STRUCTURES ARE TO BE LIMITED TO WORK NOTED ON THESE DRAWINGS. ANY ADDITIONAL OR PROPOSED MODIFICATIONS TO EXISTING STRUCTURES MUST BE APPROVED BY THE ENGINEER
5. FOUNDATIONS
6. SLABS ON GRADE
7. MATERIALS
8. REINFORCING STEEL DESIGNATION
9. DOWELS
10. REINFORCING STEEL SPLICES
11. OPENINGS
12. LOADS
13. CONCRETE BLOCK MASONRY
14. LEGEND

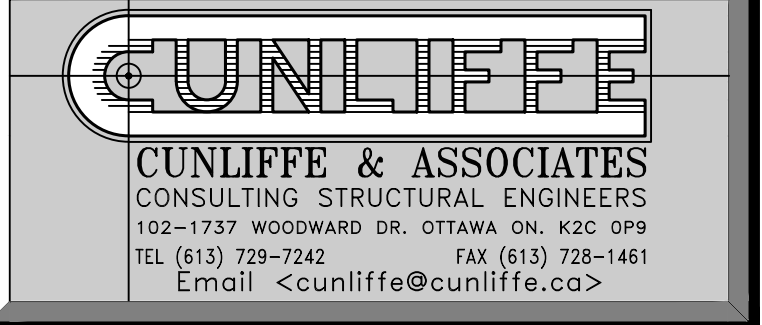
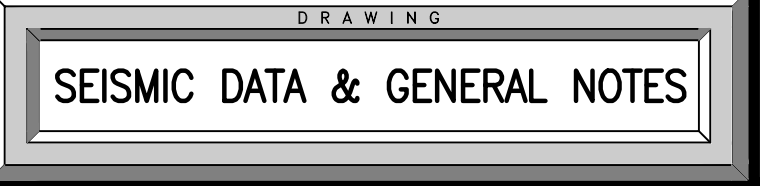
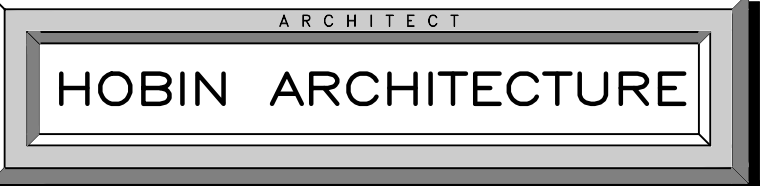
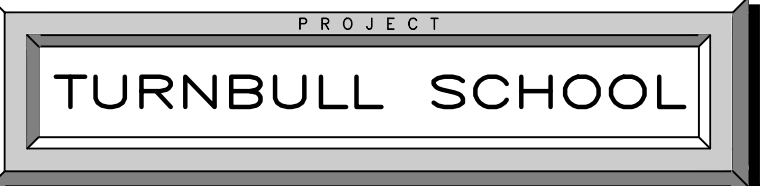
HILTI PRODUCT INSTALLATION REQUIREMENTS: THE CONTRACTOR THAT WILL BE INSTALLING ANY HILTI PRODUCT SHALL BE TRAINED & CERTIFIED BY HILTI CANADA'S REPRESENTATIVE ON THE ACCEPTABLE INSTALLATION PROCEDURES FOR THE SPECIFIC HILTI PRODUCT BEING USED.

DRAWING LIST

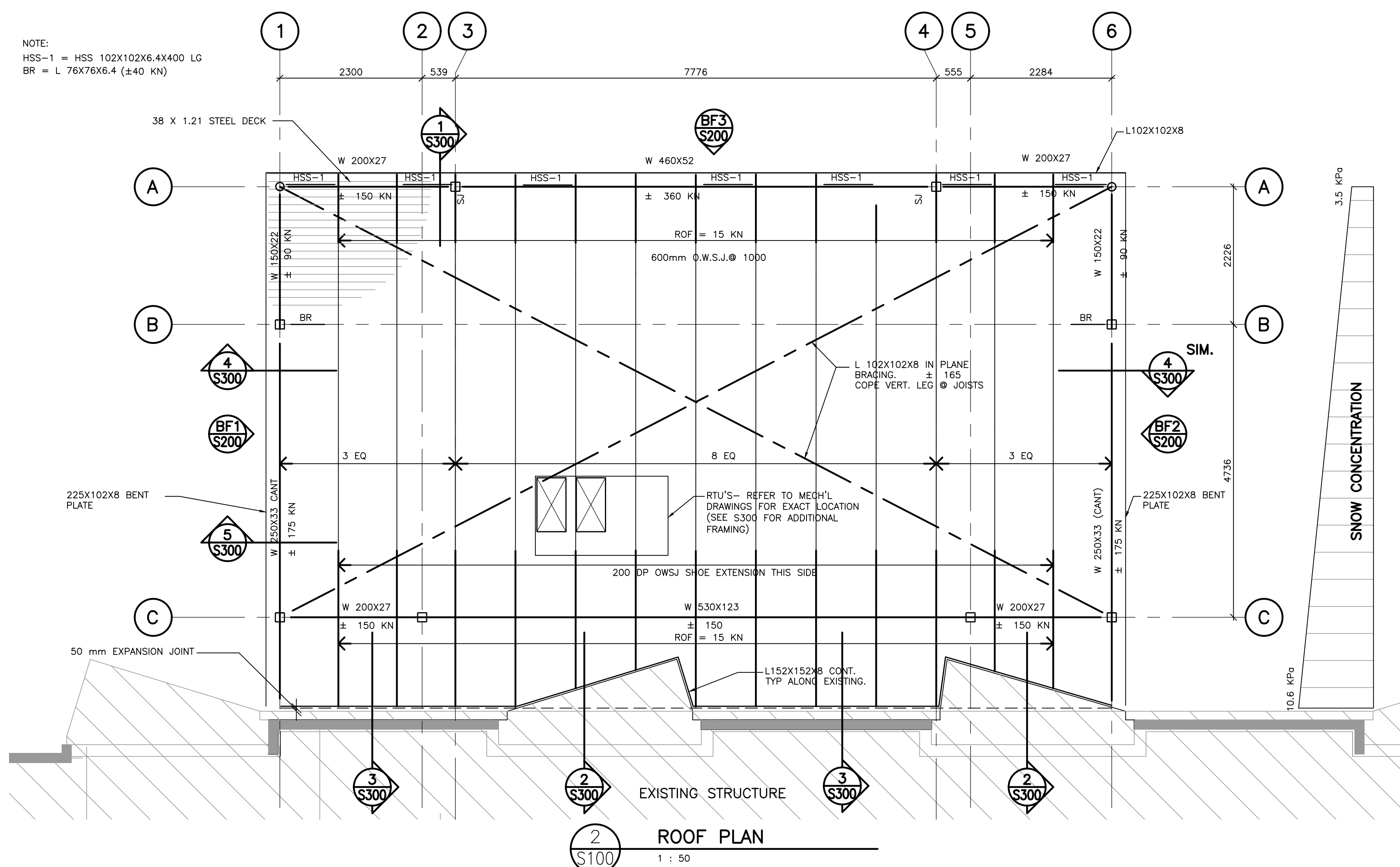
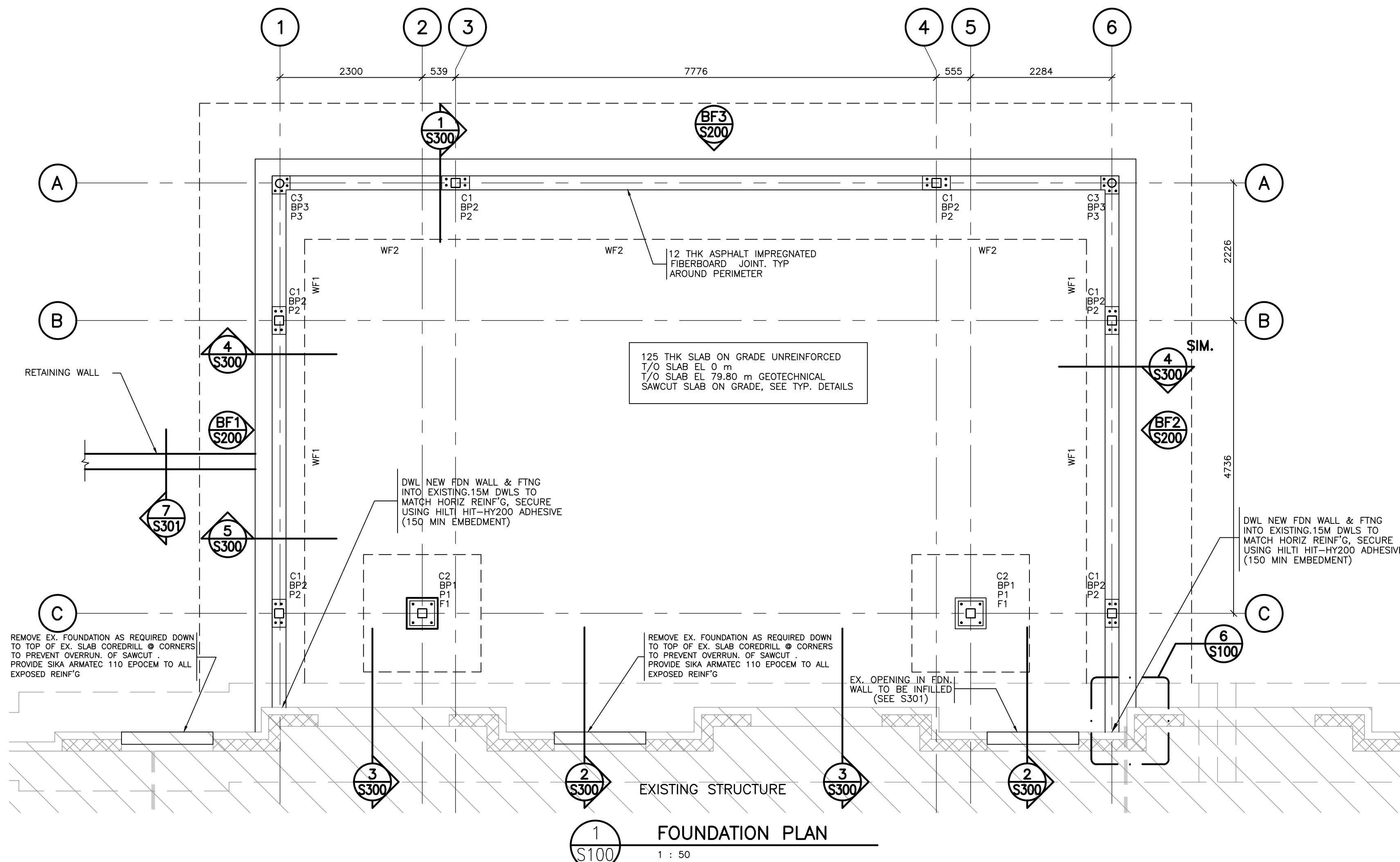
- S01 SEISMIC DATA & GENERAL NOTES
S02 TYPICAL DETAILS
S100 FOUNDATION PLAN & ROOF PLAN
S200 BRACE FRAME ELEVATIONS
S300 SECTIONS & DETAILS
S301 SECTIONS & DETAILS

Table with columns for No., REVISION, and DATE, containing one entry for 'ISSUED FOR PERMIT' dated 2018/06/29.

- 1. THE CONTRACTOR IS RESPONSIBLE FOR CHECKING AND VERIFYING ALL DIMENSIONS. ANY DISCREPANCY SHALL BE REPORTED TO THE ENGINEER.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL MATERIAL RELEVANT TO THE PROJECT.
3. ADDITIONAL DRAWINGS MAY BE ISSUED FOR CLARIFICATION TO ASSIST PROPER EXECUTION OF WORK. SUCH DRAWINGS WILL HAVE THE SAME MEANING AND INTENT AS IF THEY WERE INCLUDED WITH THE DRAWINGS IN THE CONTRACT DOCUMENTS.
4. DO NOT SCALE DRAWINGS.



ENGINEER'S SEAL, SCALE 1:100, DRAWN A.M., REVIEWED J.C., PROJECT NO. 18-052, SHEET NO. S01, JUN 29, 2018, J.C. CUFF 100187411, PROVINCE OF ONTARIO



FOOTING SCHEDULE		
MARK	SIZE	REINF.
F1	1900X1900X250 DP	7-15M X1800 BEW(H)
WF1	1700X250 THK	5-15M BUL.TLL CONT 1-15M X1600 LG BLL @ 200 O/C (H) TUL @ 400 O/C (H)
WF2	2200X250 THK	8-15M BUL.TLL CONT 1-15M X2100 LG (H) BLL @ 200 O/C (H) TUL @ 400 O/C (H)

NOTES:
 1. SEE GENERAL NOTES ALSO.
 2. ALL FOOTINGS TO BE CENTERED UNDER PIERS
 ,COLUMNS OR WALLS UNLESS NOTED.
 3. WALL FOOTINGS TO EXTEND BEYOND ENDS OF WALLS
 A DISTANCE EQUAL TO THE SIDE PROJECTIONS.

PIER SCHEDULE	
MARK	SIZE
P1	500X500 C/W 4-25M VERTS 10M TIE @ 300 4-25M DWLS
P2	325X550 LG C/W 4-25M VERTS (TO BE TIED WITHIN WALL, HORIZONTAL BARS ARE TO BE CONT) 4-25M DWLS
P3	SEE BP DETAIL FOR SIZE C/W 4-20M VERTS (TO BE TIED WITHIN WALL, HORIZONTAL BARS ARE TO BE CONT)

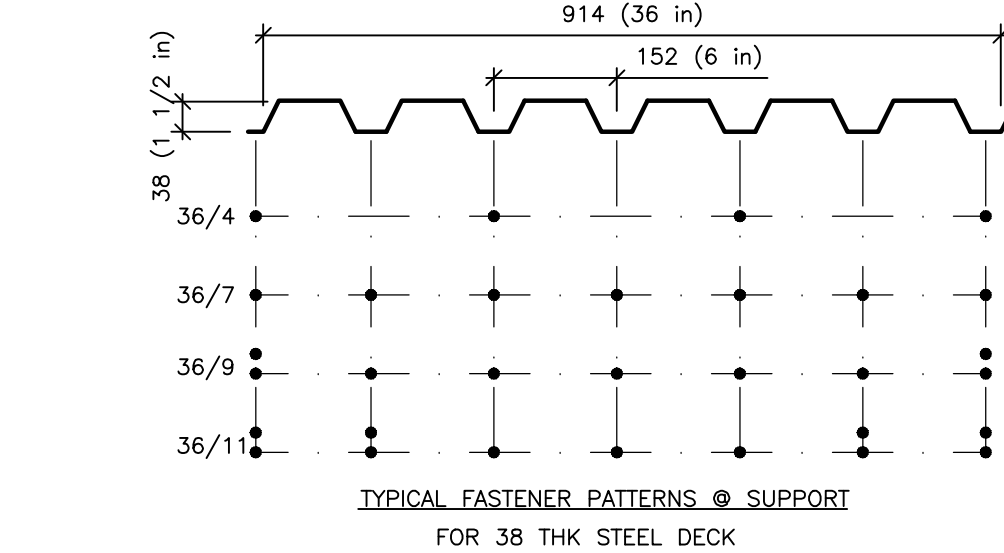
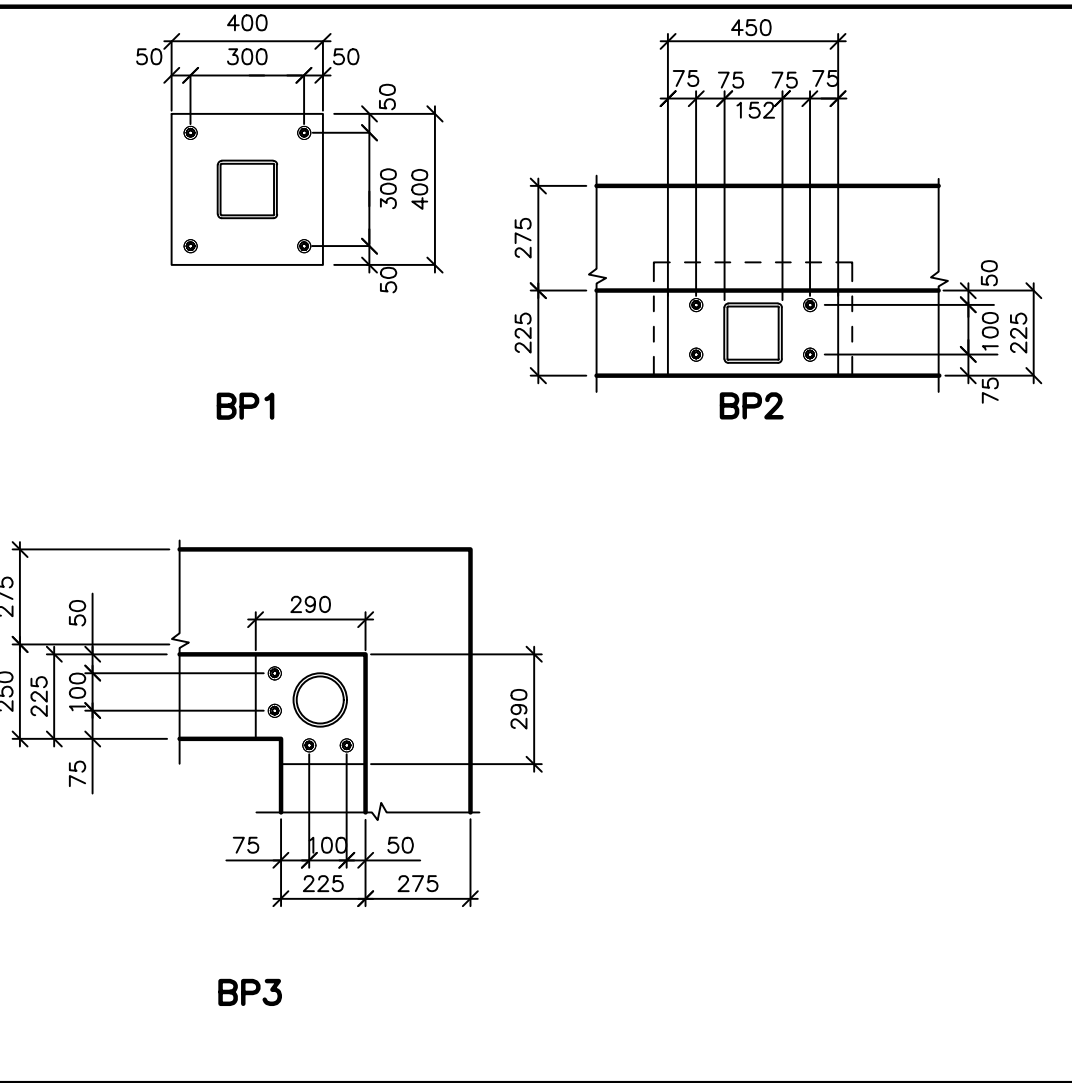
NOTES:
 1. PROVIDE DWLS INTO FT'NG TO MATCH VERT.
 PIER REIN'G
 2. PROVIDE 3 SETS OF TIES SPACED @ 75
 O/C AT TOP OF PIERS.
 3. HORIZ FND WALL REIN'G TO EXTEND THRU
 CONCRETE PIERS.
 4. TOP OF PIER TO BE 200 BELOW TOP OF
 SLAB TYP. U/N

COLUMN SCHEDULE	
MARK	SIZE
C1	HSS 152X152X6.4
C2	HSS 152X152X8
C3	ROUND HSS 1410X4.8 OR ROUND HSS 1270X6.4

CONCRETE STRENGTH	
EXT. FDN WALLS & PIERS	: 25 F-2
INT. PIERS	: 25 N
FOOTING	: 25 N
S.O.G.	: 25 N
RETAINING WALL	: 31 C-1

BASEPLATE SCHEDULE	
MARK	SIZE
BP1	400X400X25 THK PLATE C/W 4-19# AB (400 EMBED)
BP2	225X450X25 THK PLATE C/W 4-25# AB (625 EMBED)
BP3	SEE DETAIL X16 THK PLATE 4-19# AB (625 EMBED)

NOTES:
 1. PROVIDE 25MM NON SHRINK GROUT OR DRYPACK BELOW
 BASEPLATES EXTENDING 25MM BEYOND PERIMETER OF PLATE
 AND FOR FULL AREA BELOW PLATE.
 (NOT APPLICABLE TO CAST-IN PLATES)
 2. PROVIDE 50 MM ANCHOR BOLT PROJECTION ABOVE PLATE.
 3. ALL ANCHOR BOLTS TO BE A307 U/N
 4. ALL ANCHOR BOLTS TO BE HEADED
 5. ALL COLUMNS TO BE CENTERED ON BASEPLATES U/N
 6. USE STEEL TEMPLATES AND PRECISE SURVEYING
 TECHNIQUES TO ACCURATELY LOCATE BASE PLATE & ANCHOR BOLTS.
 7. PROVIDE 50 # x 5 THK WASHERS FOR ANCHORS UP TO 25 #.
 8. PROVIDE 75 # x 6 THK WASHERS FOR ANCHORS LARGER THAN 25 #.



STEEL DECK NOTES: TYPICAL ROOF DECK
 1. 38 x 1.21 INTERLOCKING (CANAM P-3615 OR EQUIVALENT)
 2. BUTTON PUNCH @ 150 o/c
 3. 36/9 FASTENER PATTERN
 4. 19mm PUDDLE WELDS TO SUPPORTING MEMBERS
 5. FASTENER SPACING AROUND PERIMETER & OPENINGS TO BE 150 o/c
 6. DECK BE 3 SPAN MINIMUM
 7. STEEL DECK IS NOT TO BE USED FOR SUPPORT OF ARCH'L,
 MECH'L OR ELECT'L ITEMS. USE STEEL STRUCTURE FOR SUPPORT.

MECHANICAL ROOF TOP UNIT LEGEND:
 RTU (763 lbs + 300 lbs (CURB) = 1063 lbs)
 1749 x 1124 x (921+356 (CURB)) mm TALL

MECHANICAL CONTRACTOR AND STEEL
 FABRICATOR TO COORDINATE EXACT DIMENSIONS.
 SEE DETAILS ON S300 FOR ADDITIONAL FRAMING

ROLLOVER FORCES		ROOF LOADS	
ROLLOVER FORCES (NOTED ON PLAN AS ROF=XX KN). DESIGN OF ROLLOVER FORCES NOTED ON PLAN HAVE BEEN MULTIPLIED BY Rd=1.5		TYPICAL ROOF REF'G & INSUL	0.60 kPa
		BOARD	0.10
		38 STEEL DECK	0.15
		STRUCTURE	0.25
		CEILING/MECH/MISC	0.35
		DEAD LOAD	1.45 kPa
		LIVE LOAD	2.67 kPa (OR SNOW)
		TOTAL LOAD	4.12 kPa (OR DL+SNOW)

- AXIAL COLLECTOR LOADS (NOTED ON
PLAN AS ± XX KN). DESIGN OF AXIAL
COLLECTOR LOADS NOTED ON PLAN
HAVE BEEN MULTIPLIED BY Rd=1.5
- NOTES
- SEE DRAWING S01 FOR GENERAL NOTES
 - SEE DRAWING S02 FOR SCHEDULES
 - SEE DRAWING S03 FOR TYPICAL DETAILS
 - O.W.S.J.'S
 - OWSJ'S ARE TO BE DESIGNED FOR A
MAXIMUM DEFLECTION DUE TO LIVE LOADS
L/360, OR 25mm, WHICHEVER IS LESS.
OWSJ SUPPLIER TO DESIGN OWSJ'S FOR
LOADS INDICATED AS WELL AS A
CONCENTRATED DEAD LOAD OF 0.5 KN TO BE
APPLIED AT ANY POINT ON TOP OR BOTTOM
CHORD. REVIEW MECHANICAL DRAWINGS AND
COORDINATE WITH MECHANICAL
CONTRACTOR FOR PIPE SUPPORT GREATER
THAN 1000.
 - NOTE THAT THE SNOW LOADS INDICATED MAY
BE REDUCED BY THE RATIO 0.9/1.15 IN
ACCORDANCE WITH OBC 4.1.6.2
(FOR CALCULATION OF DEFLECTIONS)
OWSJ SHOE DEPTH: 100 mm DP U/N
 - OWSJ DESIGNER TO ENSURE THE SHOE & TOP
CHORD ARE SUFFICIENT TO TRANSFER THE
STEEL DECK IN-SHEAR CAPACITY (ROLL OVER
RESISTANCE) TO THE SUPPORTING MEMBER.
 - O.W.S.J. L.E.G.E.N.D.
TIE JOIST = TJ
 - PROVIDE 2-12 mm THK STIFFENER PLATES EACH
SIDE OF ALL BEAM WEBS WHICH ARE
CONTINUOUS OVER SUPPORTS (i.e.
COLUMNS)
 - OWSJ TOP & BOTTOM CHORD BRIDGING
 - THE BRIDGING LINES INDICATED ON PLAN ARE
TO BE CONSIDERED A MINIMUM.
 - OWSJ MANUFACTURER TO REVIEW BRIDGING
REQUIREMENTS WITH RESPECT TO ERECTION
& WIND SUCTION ON THE ROOF AND ADD
BRIDGING AS REQUIRED.
 - BRIDGING IS TO BE EQUALLY SPACED OVER
LENGTH OF OPEN WEB STEEL JOISTS
 - PROVIDE DIAGONAL BRIDGING AT BEAMS & AT
END SPACES.
 - OWSJ MANUFACTURER IS TO SPECIFY SIZE
OF BRIDGING ANGLES BUT MINIMUM SIZE TO
BE L35x35x3
 - BRIDGING TO BE NEATLY ERECTED IN ROOMS
WITHOUT CEILINGS.
 - SEE TYPICAL DETAILS FOR MECH'L UNIT
SUPPORT & MECH'L OPENING FRAMING
UNLESS NOTED
 - ENSURE THAT WELDING PROCEDURES DO NOT
DAMAGE OWSJ'S.
 - REFER TO ARCHITECTURAL DRAWINGS FOR
SUPPLEMENTARY INFORMATION AND ALLOW
FOR ARCHITECTURAL REVIEW PRIOR TO
FABRICATION.
 - MECHANICAL OPENINGS SHOWN ON THIS PLAN
ARE 300 x 300 mm IN SIZE OR LARGER. SEE
MECH'L, ELECT'L & ARCH'L DWGS FOR SMALLER
OPENINGS. CONFIRM SIZE OF OPENINGS WITH
MECH'L DWGS. SEE TYPICAL DETAIL ON DWG
S03 FOR ADDITIONAL OPENING FRAMING
UNLESS NOTED

No.	REVISION	DATE
1	ISSUED FOR PERMIT	2018/06/29

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AS IF THEY WERE INCLUDED WITH THE DRAWINGS IN THE CONTRACT DOCUMENTS.
- DO NOT SCALE DRAWINGS.

PROJECT
TURNBULL SCHOOL

ARCHITECT
HOBIN ARCHITECTURE

DRAWING
FOUNDATION PLAN & ROOF PLAN

CUNLIFFE
 CUNLIFFE & ASSOCIATES
 CONSULTING STRUCTURAL ENGINEERS
 102-1737 WOODWARD DR. OTTAWA, ON, K2C 0P9
 TEL (613) 728-7242 FAX (613) 728-1461
 Email cunliffe@cunliffe.ca

ENGINEER'S SEAL

SCALE
1 : 50

DRAWN
A.M.

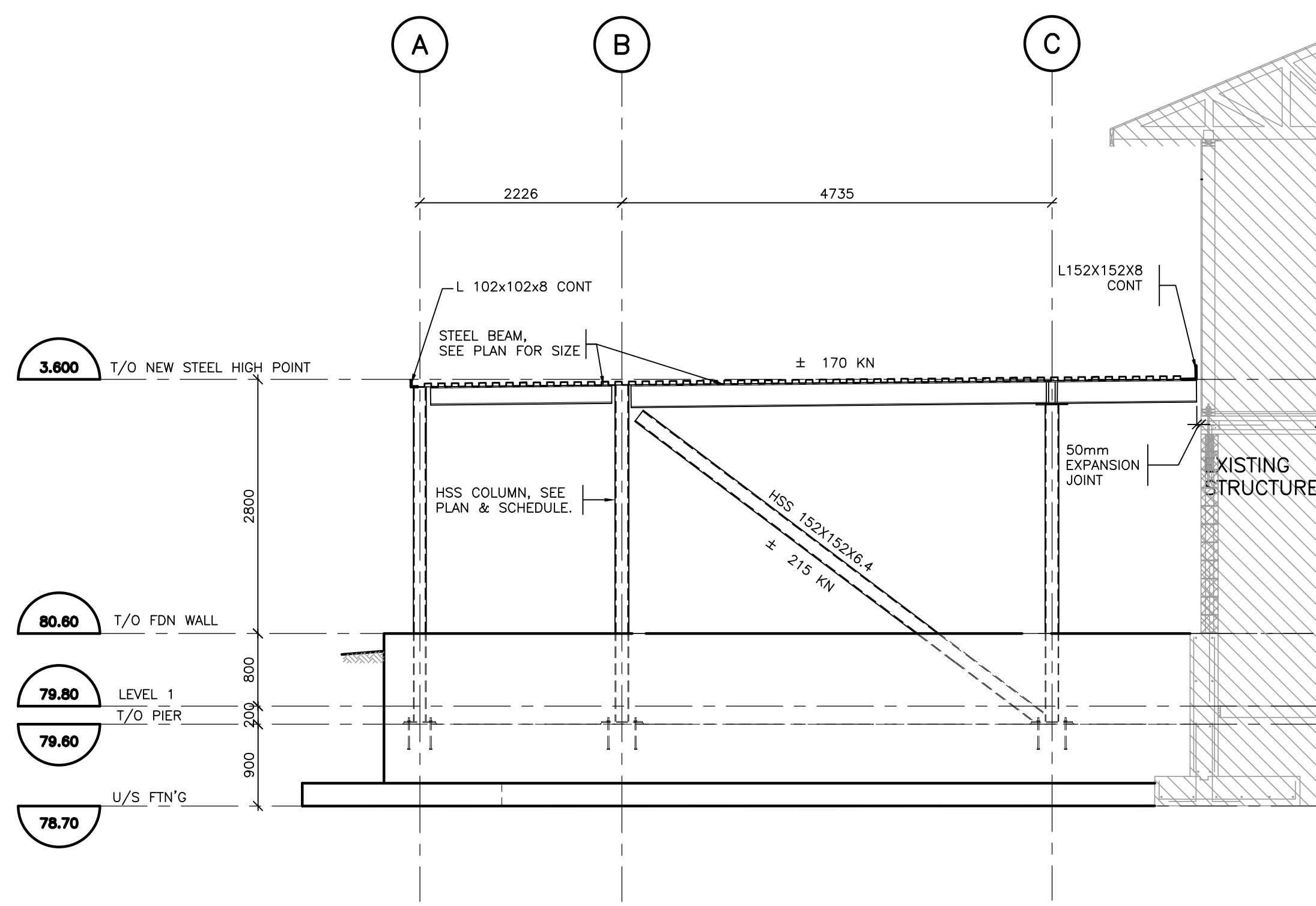
REVIEWED
J.C.

PROJECT NO.
18-052

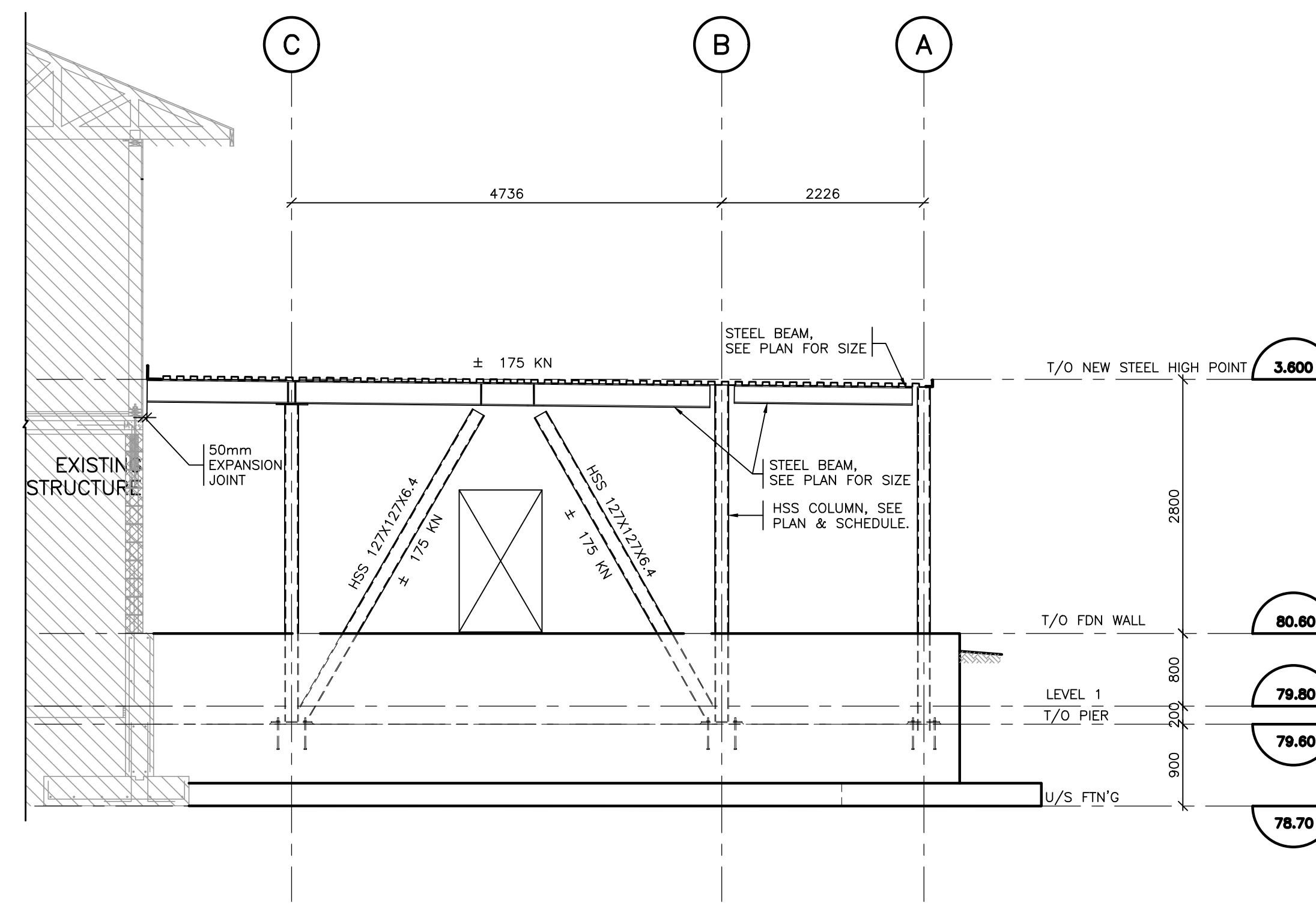
SHEET NO.
S100

REVISION NO.

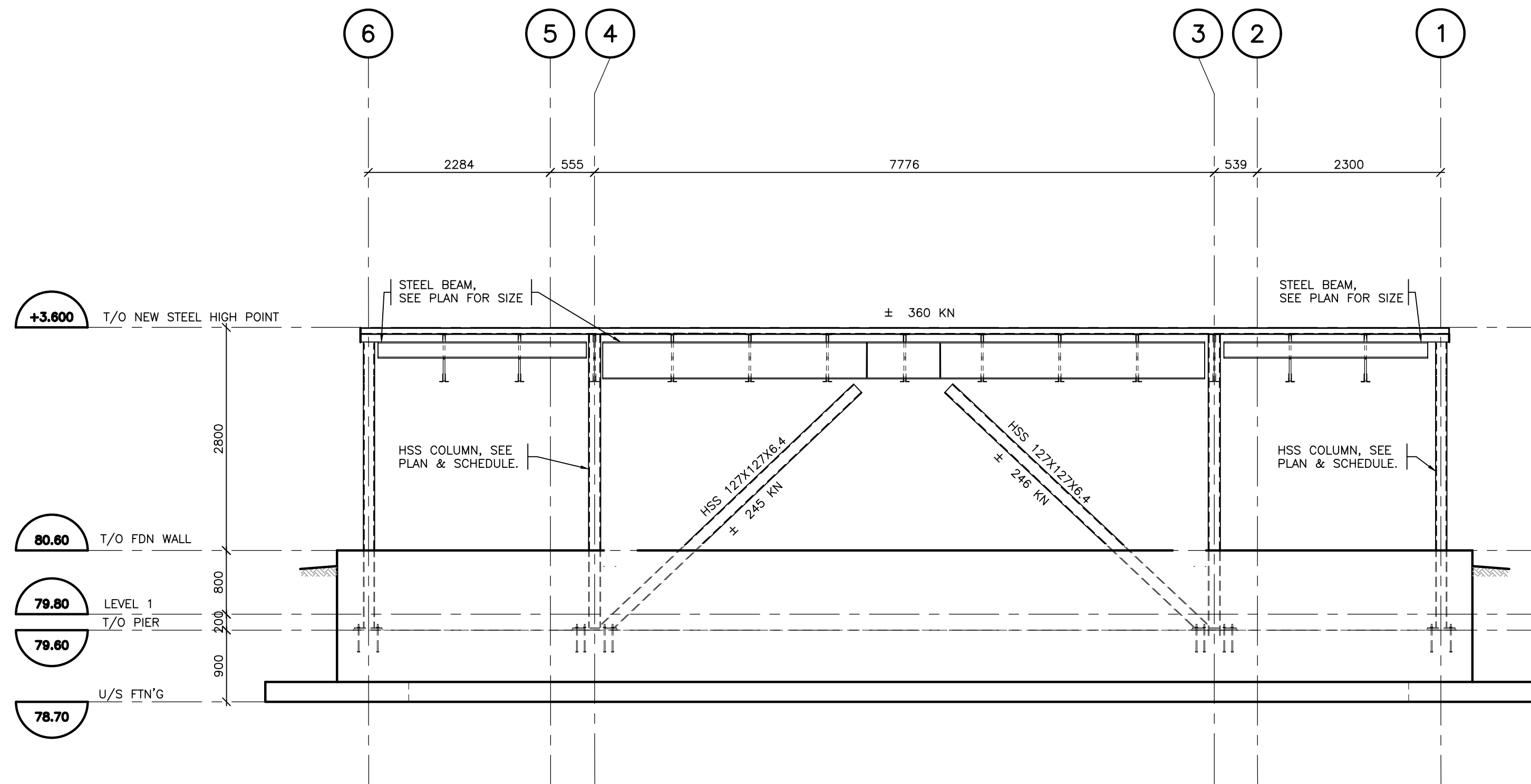
LICENCED PROFESSIONAL ENGINEER
 JUN 29, 2018
 J.C. CUFF
 100187411
 PROVINCE OF ONTARIO



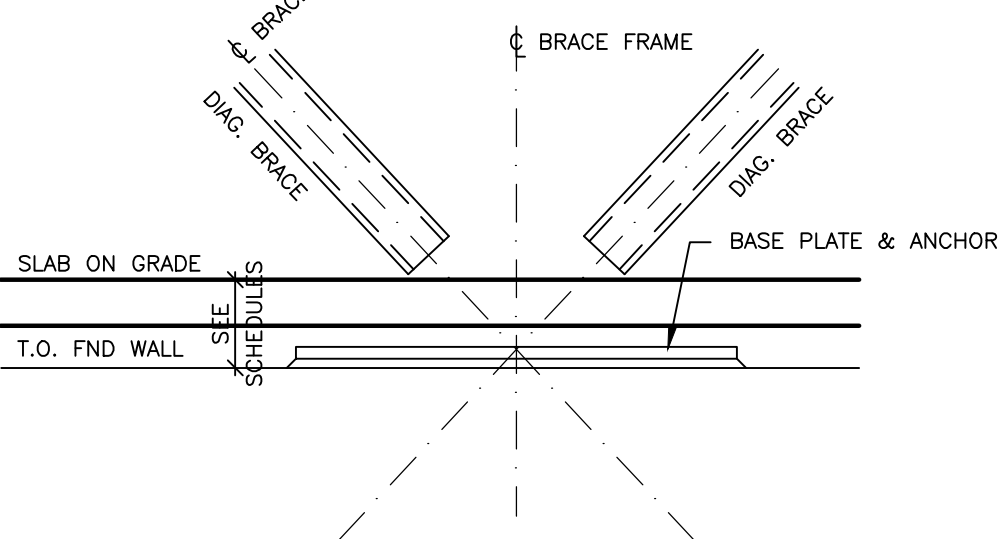
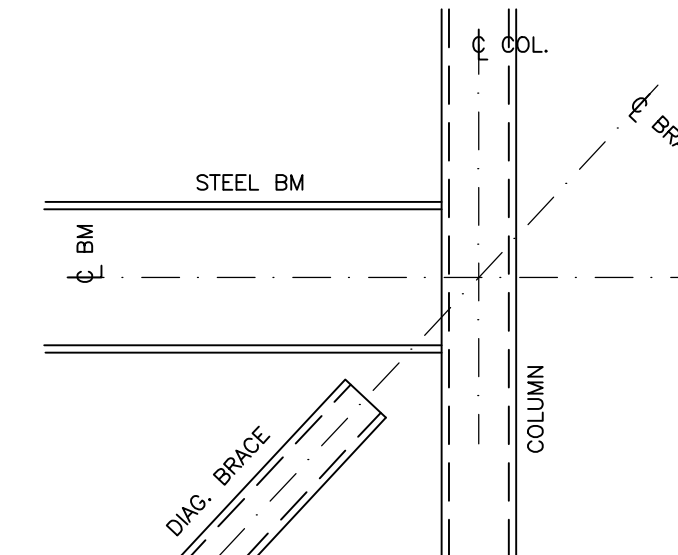
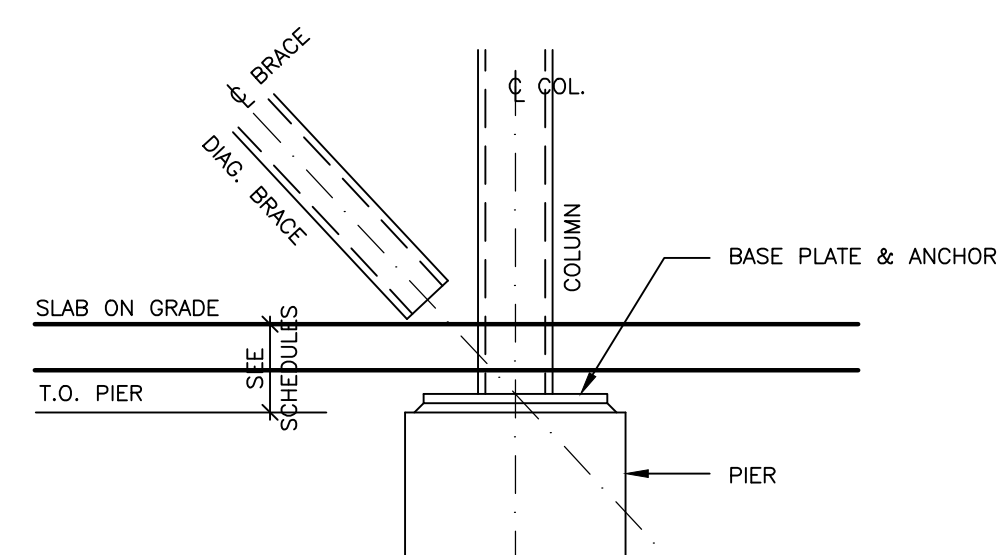
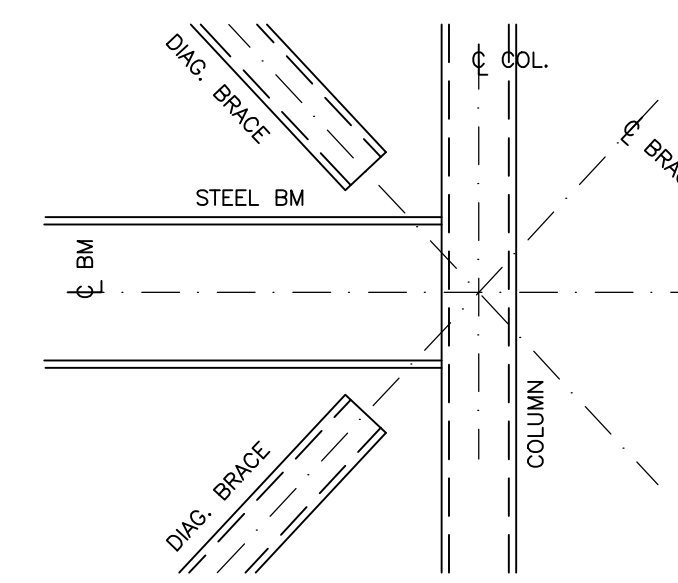
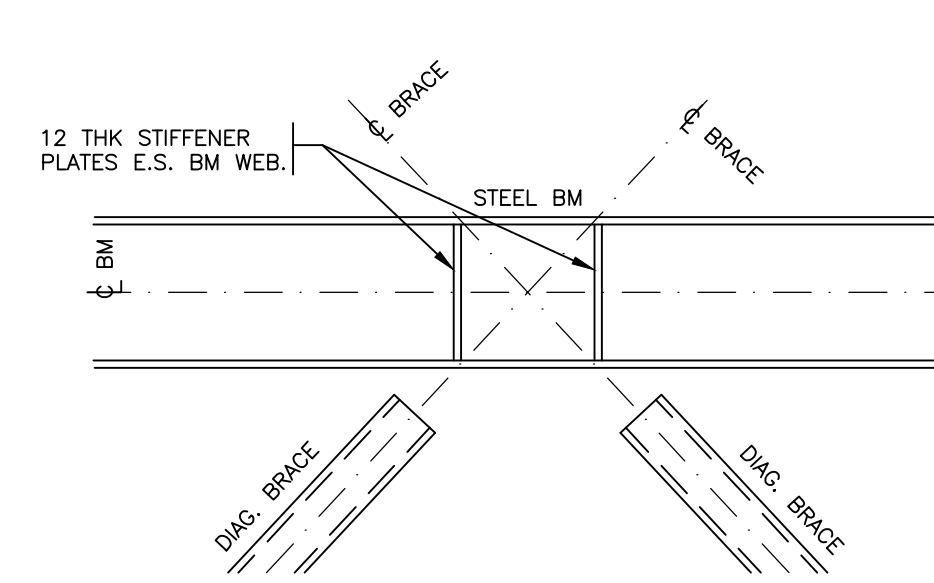
BF1 BRACE ELEVATION
S200 1 : 50



BF2 BRACE ELEVATION
S200 1 : 50



BF3 BRACE ELEVATION
S200 1 : 50



NOTE:
COMPRESSION OR TENSION FACTORED
LOADS HAVE BEEN MULTIPLIED BY R_d=1.5

TYPICAL DETAILS @ DIAGONAL BRACE INTERSECTIONS

1	ISSUED FOR PERMIT	2018/06/29

No.	REVISION	DATE

1. THE CONTRACTOR IS RESPONSIBLE FOR CHECKING AND VERIFYING ALL DIMENSIONS. ANY DISCREPANCY SHALL BE REPORTED TO THE ENGINEER.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL MATERIAL RELEVANT TO THE PROJECT.
3. ADDITIONAL DRAWINGS MAY BE ISSUED FOR CLARIFICATION TO ASSIST PROPER EXECUTION OF WORK. SUCH DRAWINGS WILL HAVE THE SAME MEANING AND INTENT AS IF THEY WERE INCLUDED WITH THE DRAWINGS IN THE CONTRACT DOCUMENTS.
4. DO NOT SCALE DRAWINGS.

PROJECT
TURNBULL SCHOOL

ARCHITECT
HOBIN ARCHITECTURE

DRAWING
BRACE FRAME ELEVATIONS

CUNLIFFE
CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS
1022-1737 WOODWARD DR. OTTAWA, ON, K2C 0P9
TEL (613) 728-7242 FAX (613) 728-1461
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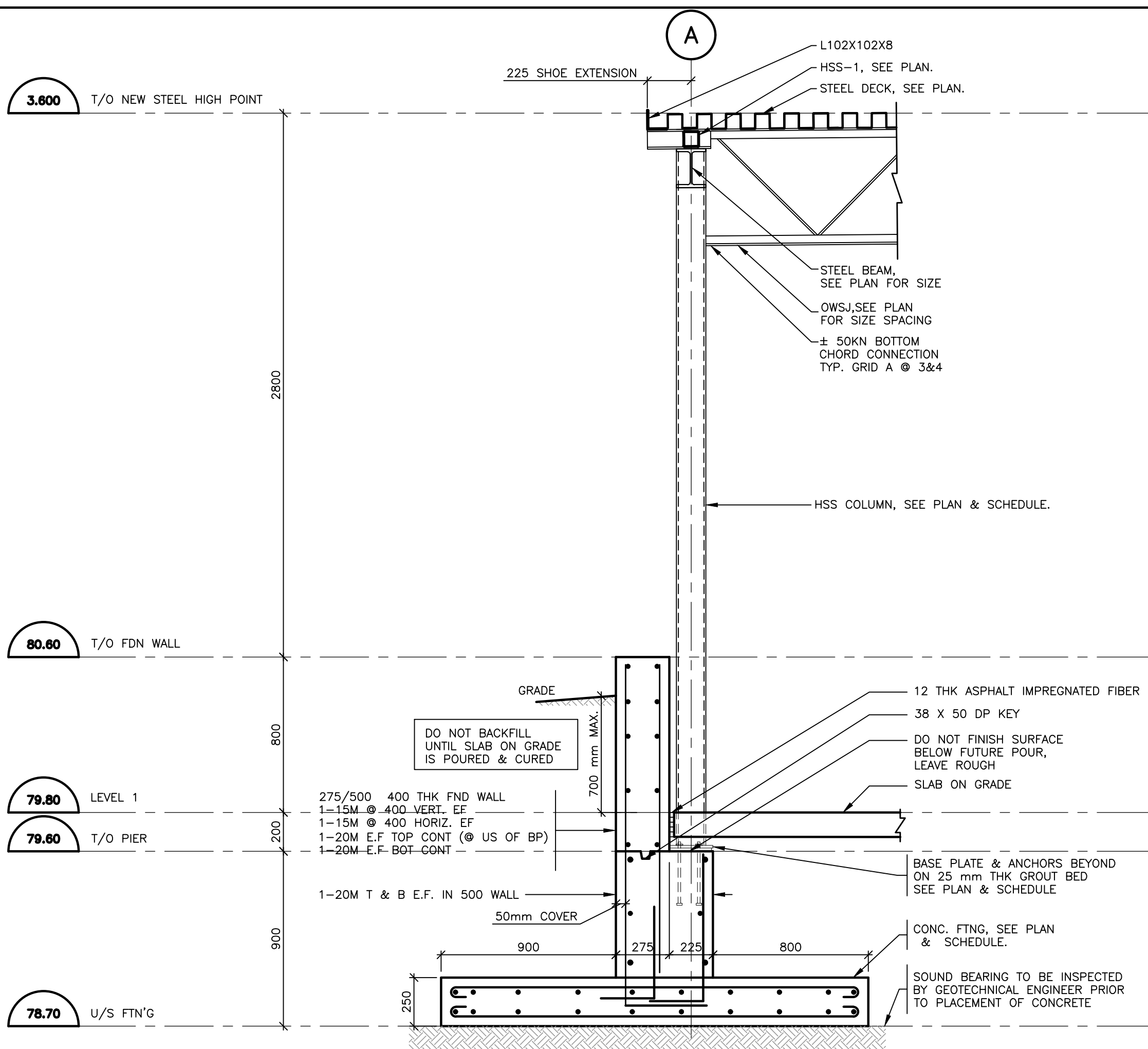
ENGINEER'S SEAL SCALE
1 : 50

DRAWN A.M. REVIEWED J.C.

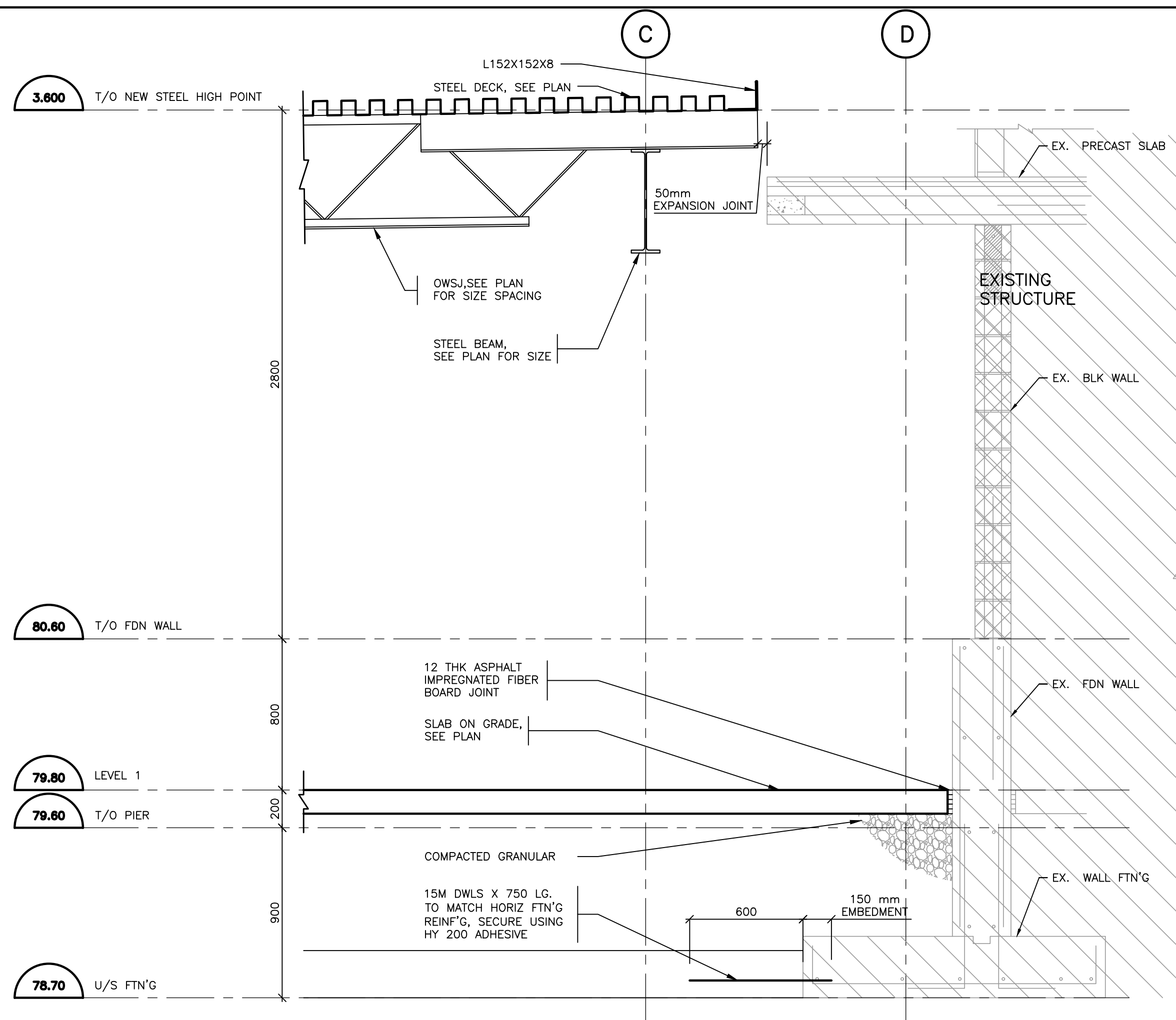
PROJECT NO. 18-052 SHEET NO. S200

REVISION NO. [Symbol]

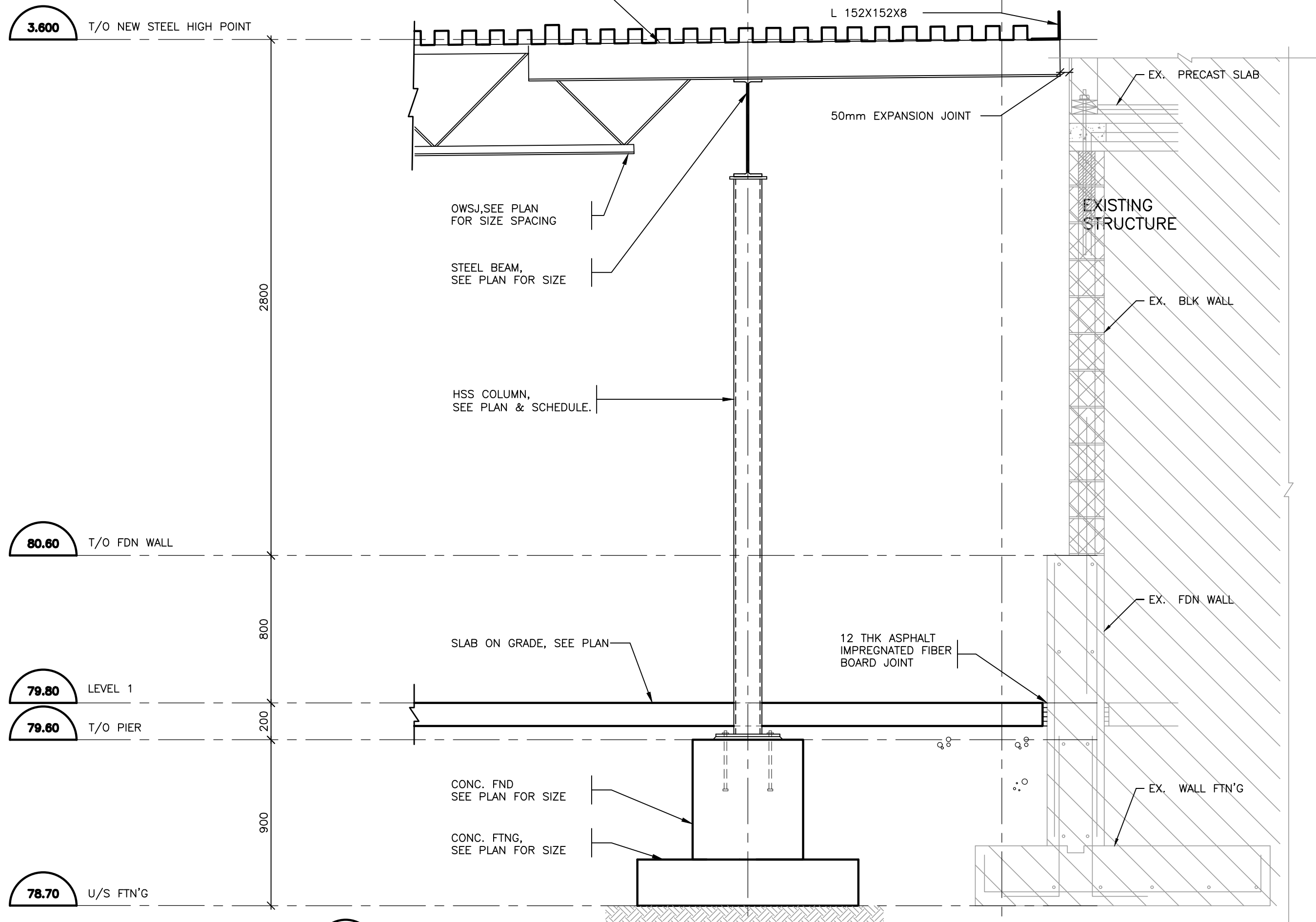
J.C. CUFF
J.C. CUFF
100187411
PROF. OF ONS
JUN 29, 2018



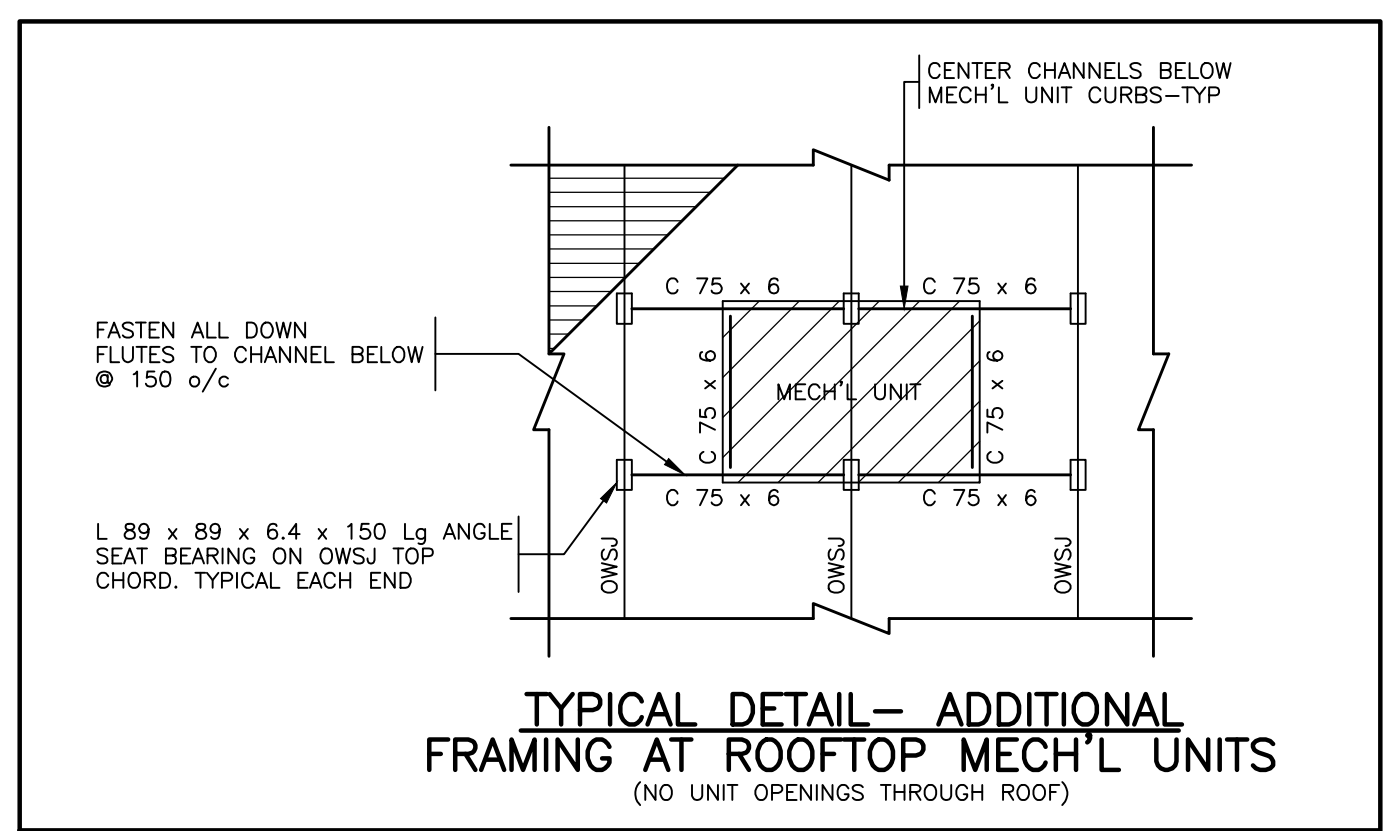
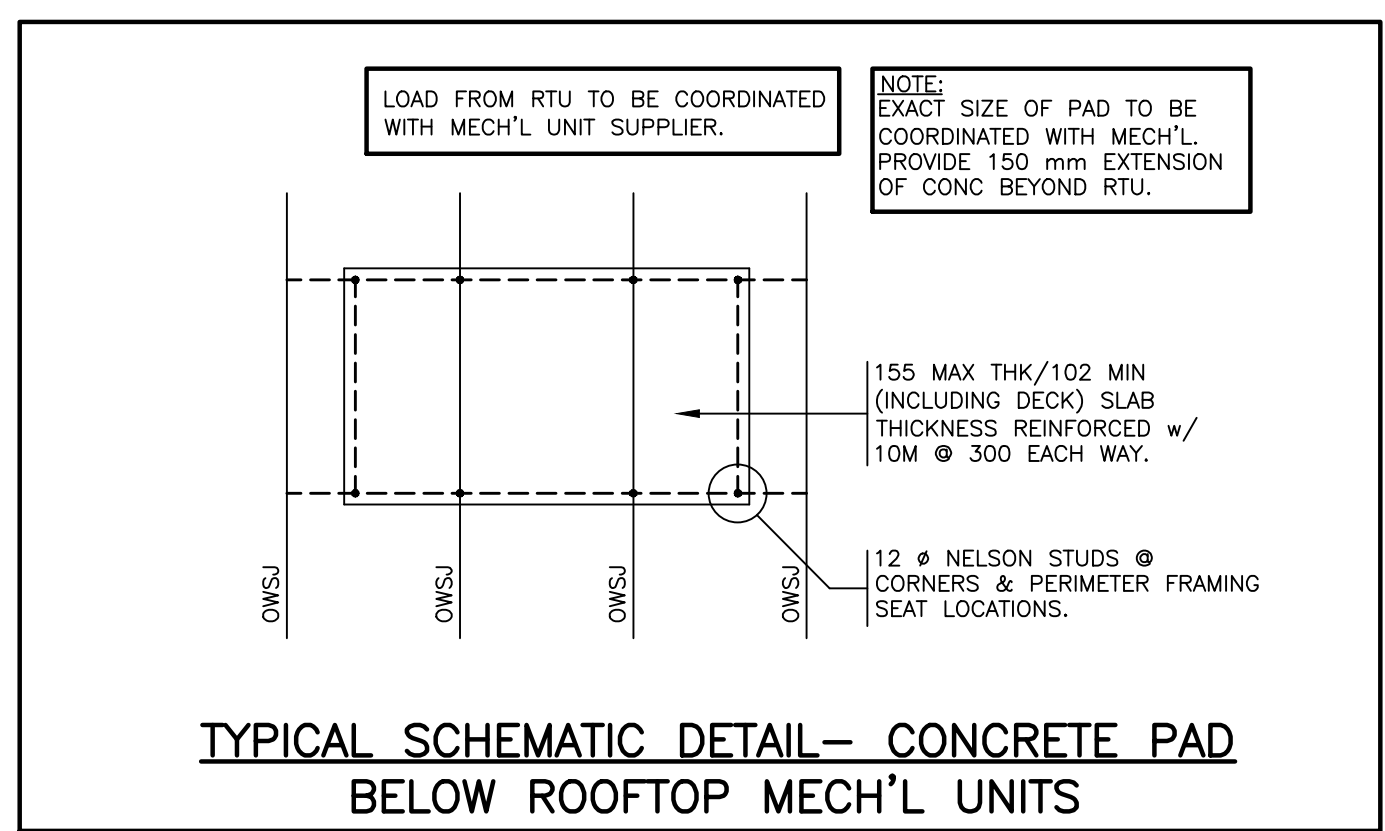
1 SECTION
S100 1:20



2 SECTION
S100 1:20



3 SECTION
S100 1:20



1	ISSUED FOR PERMIT	2018/06/29
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No.	REVISION	DATE

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PROJECT
TURNBULL SCHOOL

ARCHITECT
BARRY J. HOBIN & ASSOCIATES

DRAWING
SECTIONS & DETAILS

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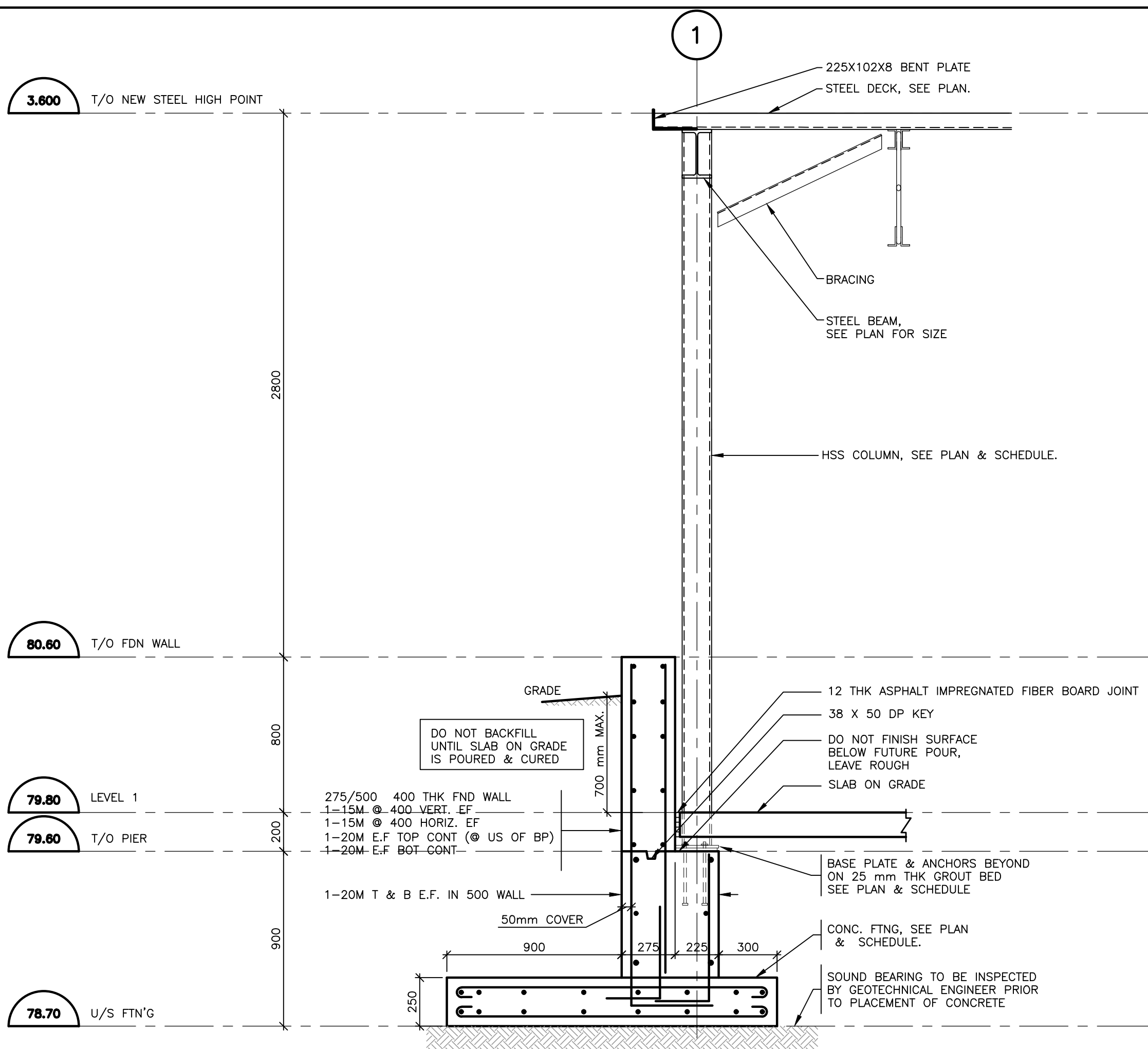
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SCALE: 1:20

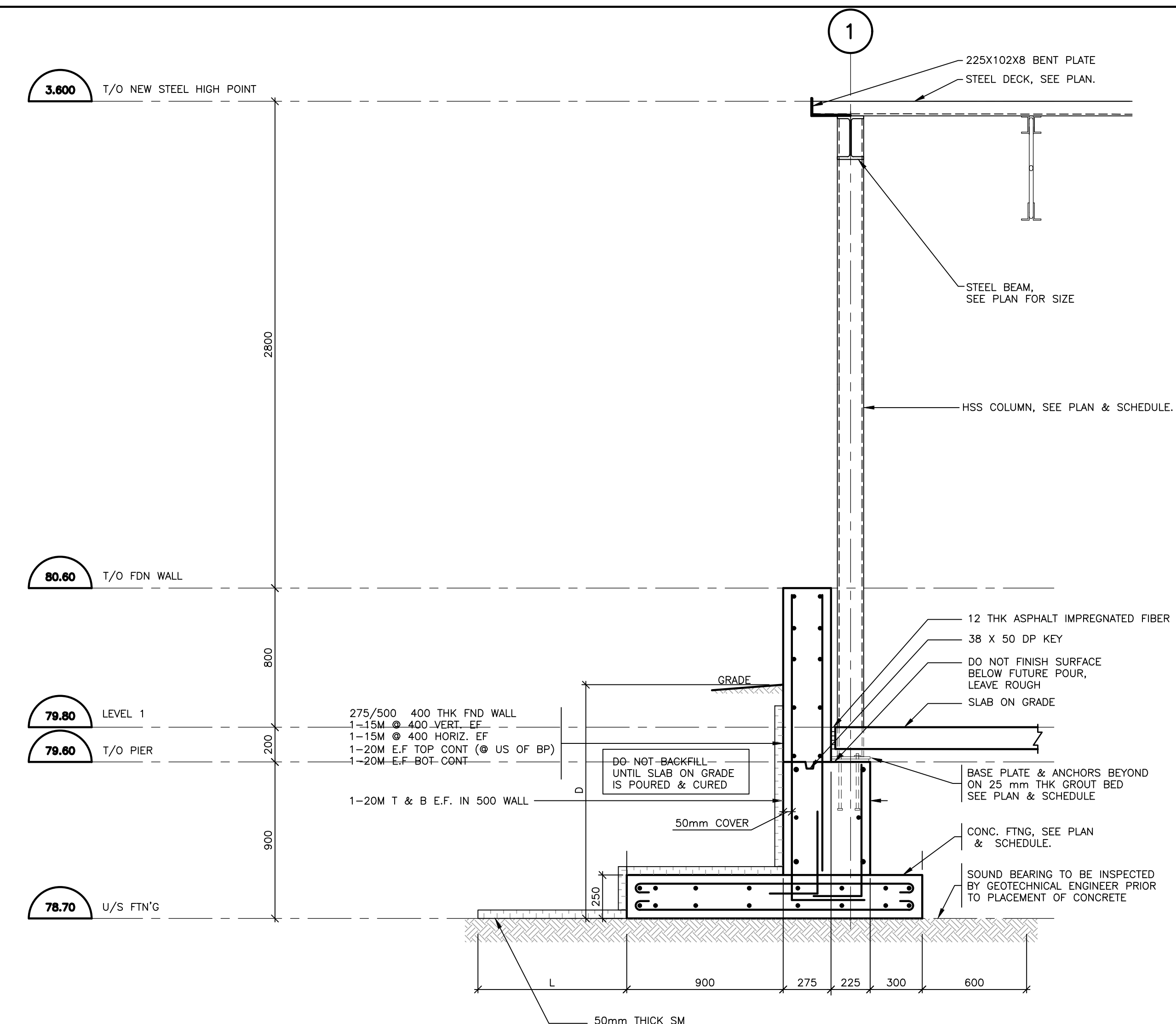
DRAWN: A.M., REVIEWED: J.C.

PROJECT NO: 18-052, SHEET NO: S300

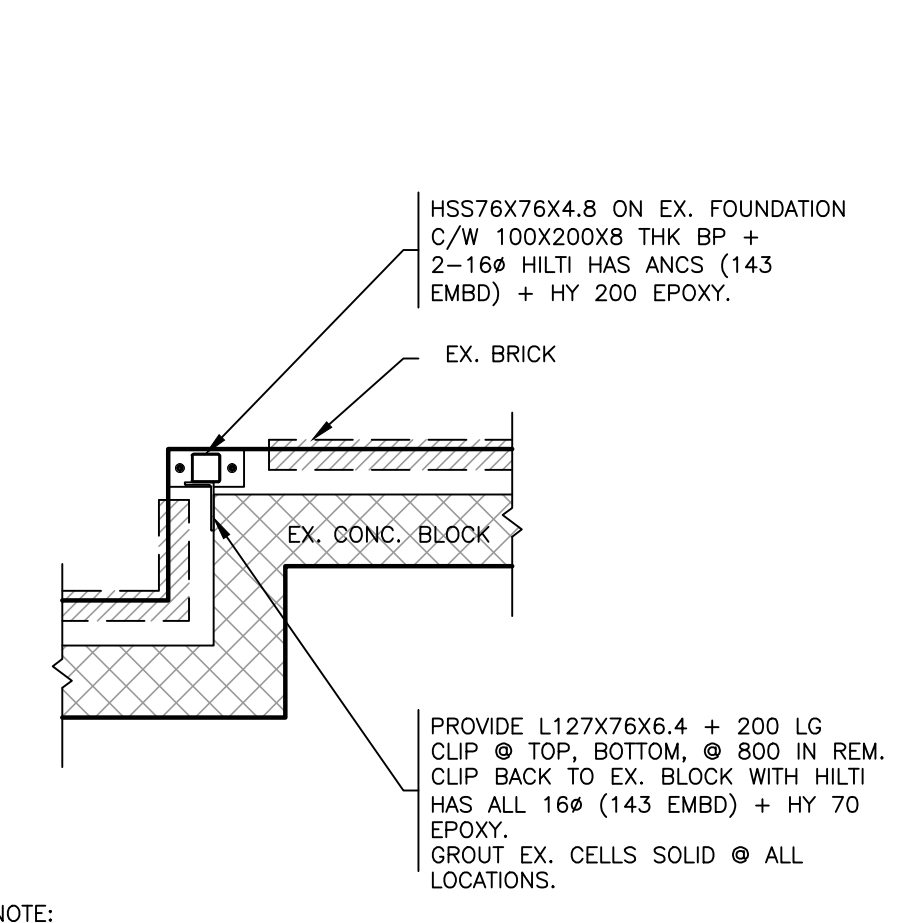
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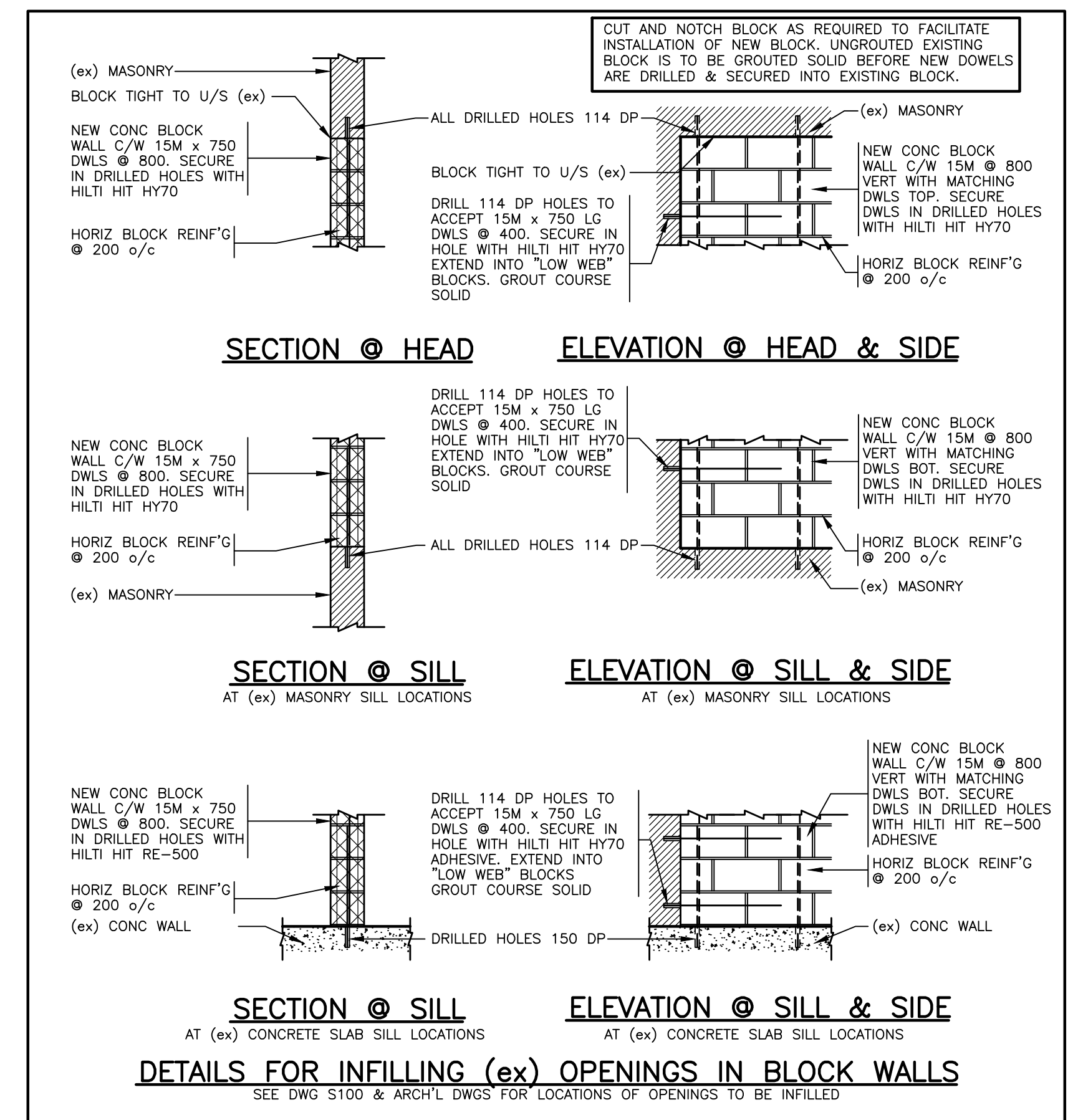
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S100 1 : 20



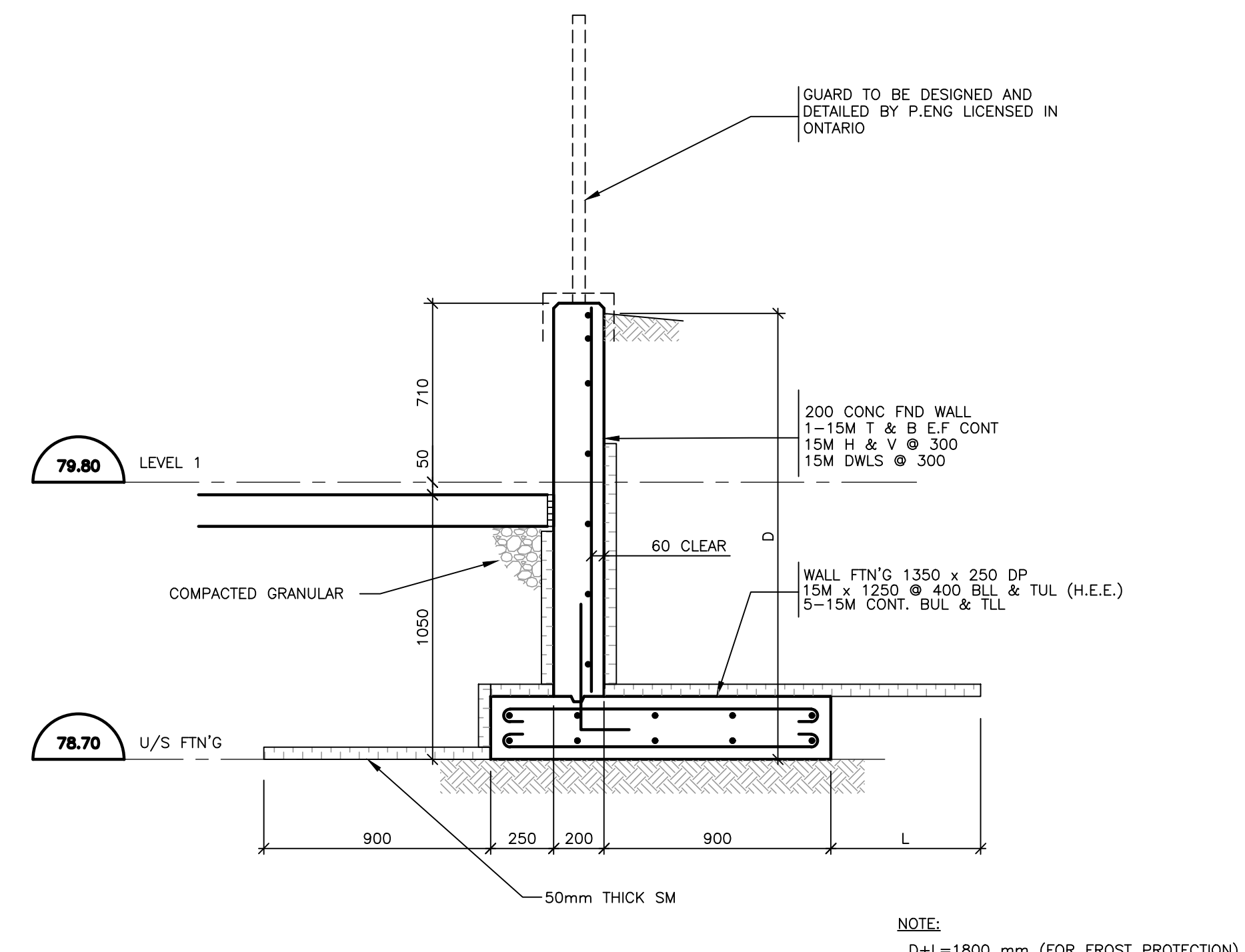
5 SECTION
S100 1 : 20



6 PLAN DETAIL
S100 1 : 20



DETAILS FOR INFILLING (ex) OPENINGS IN BLOCK WALLS
SEE DWG S100 & ARCH'L DWGS FOR LOCATIONS OF OPENINGS TO BE INFILLED



7 SECTION
S100 1 : 20

1	ISSUED FOR PERMIT	2018/06/29
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No.	REVISION	DATE

PROJECT
TURNBULL SCHOOL

ARCHITECT
BARRY J. HOBIN & ASSOCIATES

DRAWING
SECTIONS & DETAILS

CUNLIFFE
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ENGINEER'S SEAL	SCALE 1 : 20
	DRAWN A.M.
	REVIEWED J.C.
PROJECT NO. 18-052	SHEET NO. S301
REVISION NO.	

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SPECIFICATIONS

- 1. Comply with the OBC and local Codes and Bylaws.
2. General:
1 The current Ontario Building Code is to be considered the bare minimum for construction compliance levels and where the Act or the OBC is exceeded by the requirements of this document drawings and/or specifications, this document shall govern unless revised in writing by the Engineer.
2 Comply with the requirements of OBC SB-10 and ASHRAE 90.1 for (prescriptive) energy efficiency compliance (as used in the development of this document).
3 Bekolay & Associates retain the copyright to all drawings and specifications created for this project and sold works (both hard copy and CAD) files are not to be copied or distributed without consent.
4 Obtain all permits, make arrangements for inspections and effect repairs required by inspectors at no cost to the owner.
5 Examine the site and be aware of site conditions associated with this contract since extras related to site conditions will not be accepted.
6 Make arrangements with the building owner to install all roof mounted equipment so the warranties can be maintained.
7 Provide all hoisting, rigging and scaffolding associated with the installation of the equipment and material associated with this contract.
8 Repair or replace, at no cost to the owner, any defect in workmanship or materials which appear within a period of one year from the date of substantial completion of the work.
9 Motor Efficiencies for mechanical equipment:
1 All electrical motors supplied with mechanical equipment shall comply with OBC SB-10, sentence 10.4.1 and tables 10.4.1 (a) or 10.4.1 (b).
10. Identification:
1 2" outside (or insulated) diameter. Provide all weather vinyl pipe markers and tags with arrows and tape bands to identify all piping (except sprinkler branch piping) including direction (and supply or return where applicable).
11. Duct Work:
1 Tape and seal all new supply air ductwork ductwork and comply with ASHRAE (low pressure standards), SMACNA and ICRH details and recommended practices.
12. Flexible Connections:
1 Frame: galvanized sheet metal frame with fabric clenched by means of double locked seams.
13. Flexible Ducts:
1 Factory fabricated spiral wound flexible aluminum.
14. Duct Insulation:
1 Acoustic Liner:
(a) Increase duct dimensions to provide unobstructed sizes shown
(b) Natural cotton fibre or rigid board glass fibre duct liner acoustic/thermal (R-2) duct liner with air side factory coated with black fire resistant and abrasion resistant liner over 100% of the exposed surface.
(c) Microbial resistant (complying with ASTM G21 and G22) and moisture resistant (ASTM C1104) with a flame spread and smoke development rating not exceeding 25/50 respectively without emitting toxic fumes (complying with UL 181 and NFPA90A)
(d) Thickness: 25mm (1") thick insulation on interior of supply and return ducts within 3m (10 ft) of fans and as indicated.
(e) Std: Titus Enviroloc, Fibreglass Canada "Line Acoustic-R"
2 Thermal:
(a) 75mm thick rigid insulation pinned and fastened complete with aluminum waterproof jacket.
(b) Std: Owens Corning Duct Wrap Type 75
3 Adhesive & Sealer: to requirements of ANSI/NFPA 90A with same flame spread and smoke ratings as insulation.
4 Fasteners: Weld or adhesive plated pins 2.0mm diameter, length to suit insulation with metal retaining clips, 32mm square.
5 Joint Tape: Poly-vinyl treated open weave fiberglass membrane 50mm wide.
15. Turning Vanes:
1 Factory or shop fabricated single and double thickness to recommendations of SMACNA, as indicated and in all elbows supply and return where the inside radius of the elbow is less than 1/2 the duct width.

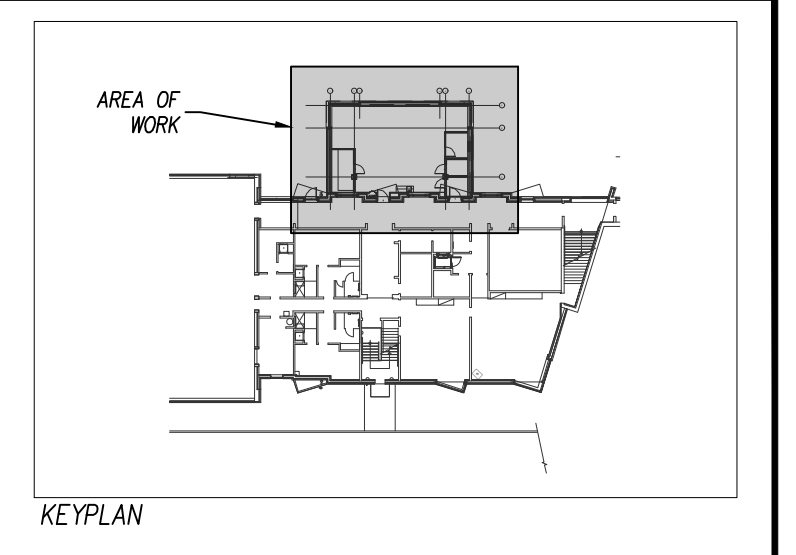
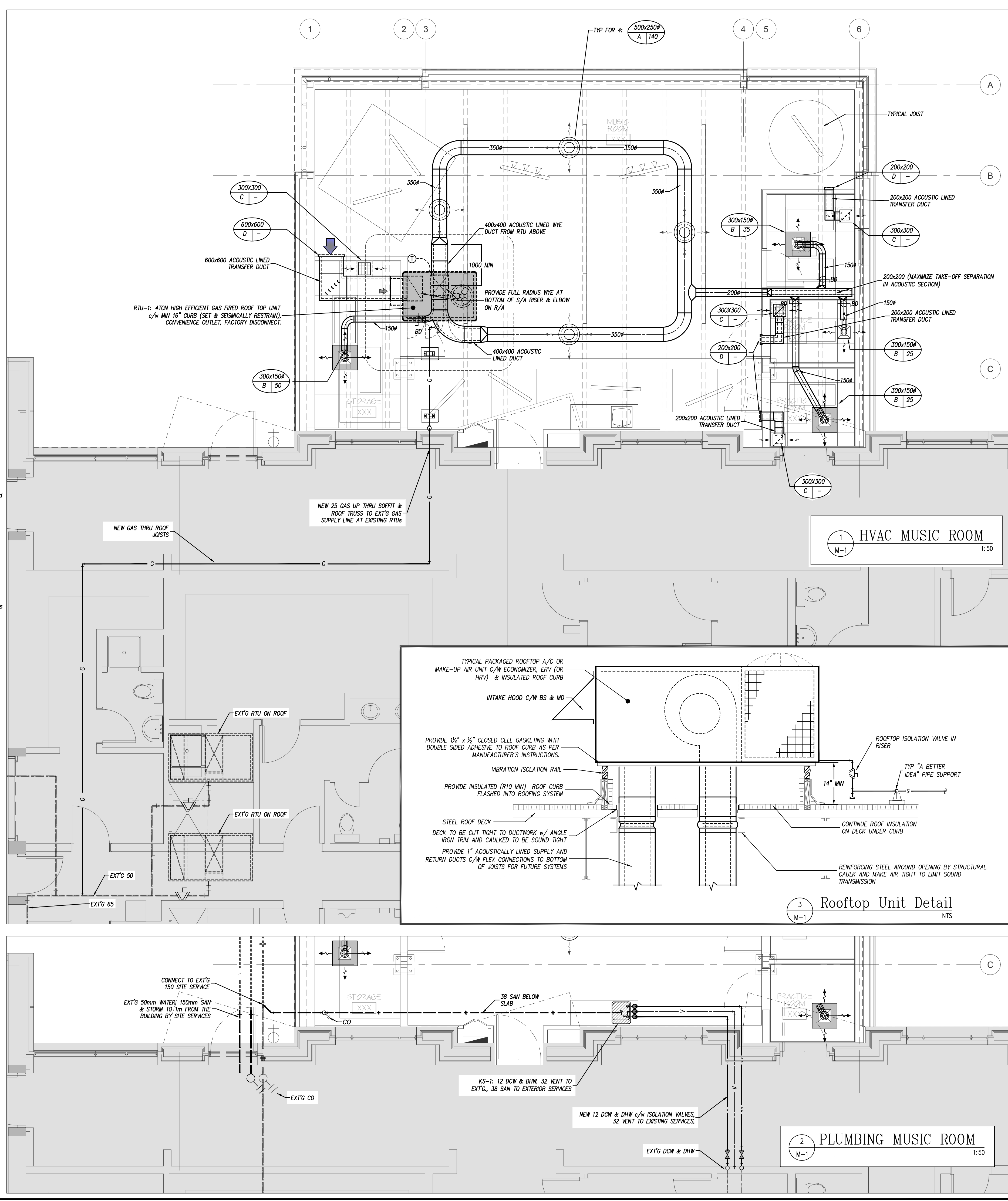
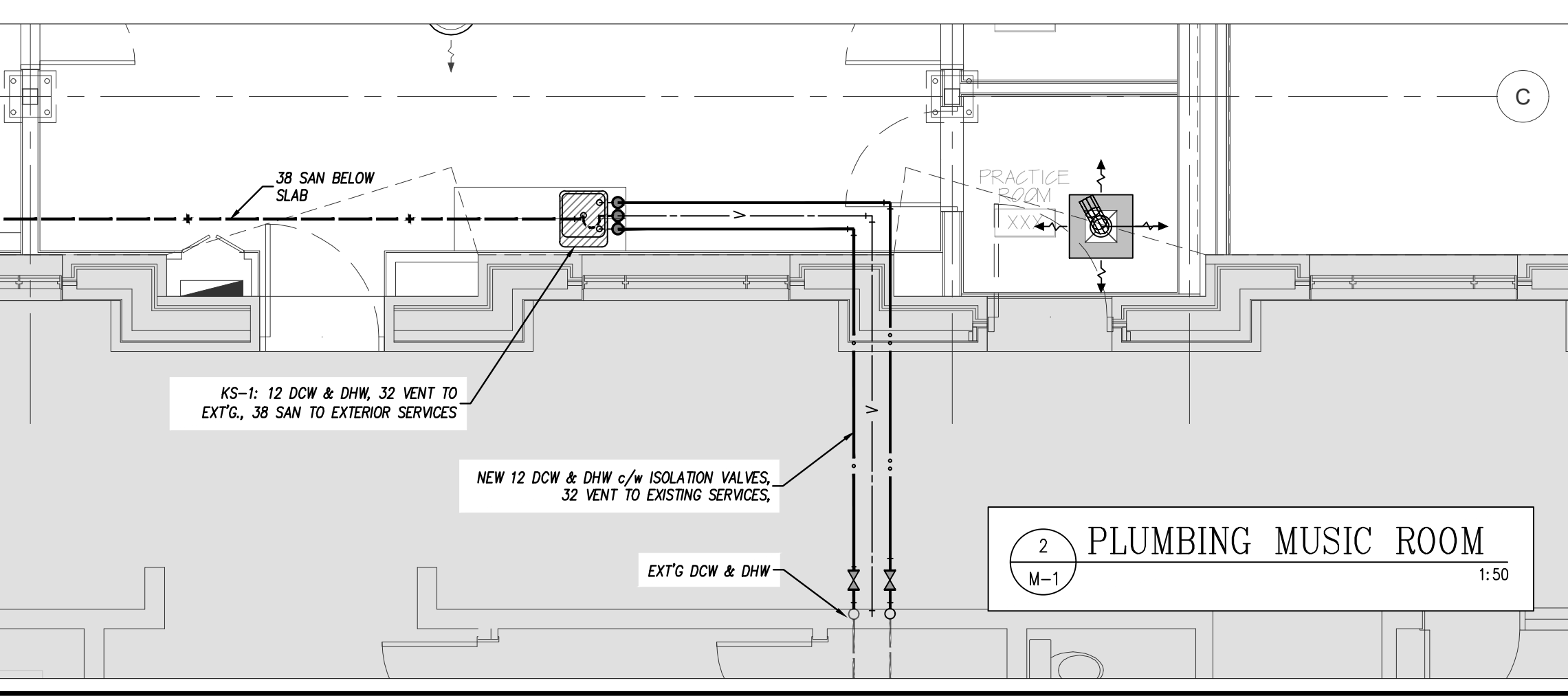
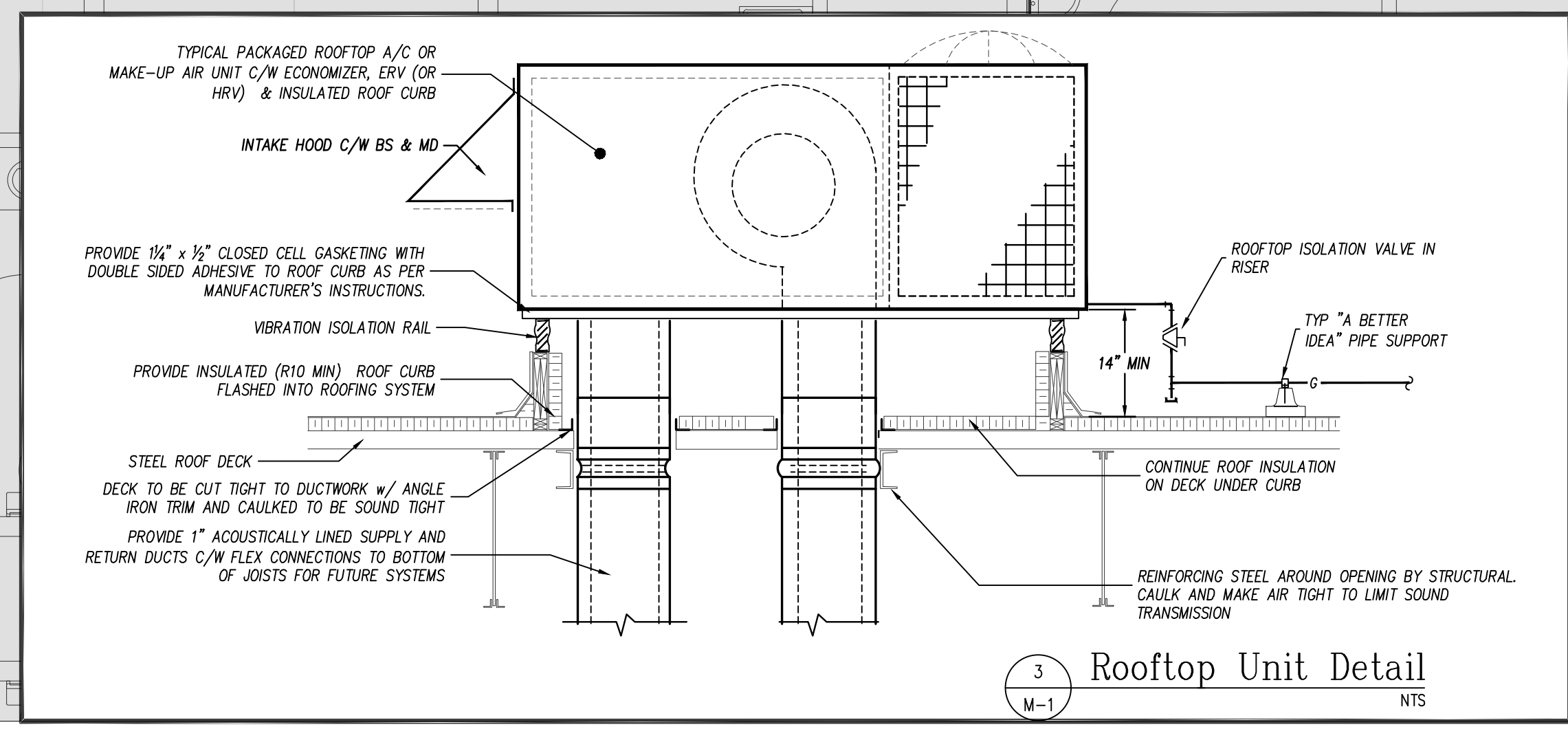


Table with 3 columns: NO., REVISIONS, DATE. Contains revision 1: ISSUED FOR PERMIT 2018-07-05. Below the table is a disclaimer: 'USE OF THESE DRAWINGS IS RESTRICTED SOLELY TO THE CONSTRUCTION FOR WHICH THEY WERE DEVELOPED. BEKOLAY AND ASSOCIATES LTD. ASSUME NO RESPONSIBILITY FOR ANY SUBSEQUENT USE...'

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PROJECT: Turnbull Elementary School Music Room Addition. DRAWING: HVAC & PLUMBING. DATE: 6-Jul-18. SCALE: 1:50. DRAWN BY: MAG. DESIGNED BY: JRB. JOB NO: 2018-10. CHECKED BY: JRB. DRAWING NO: [blank].



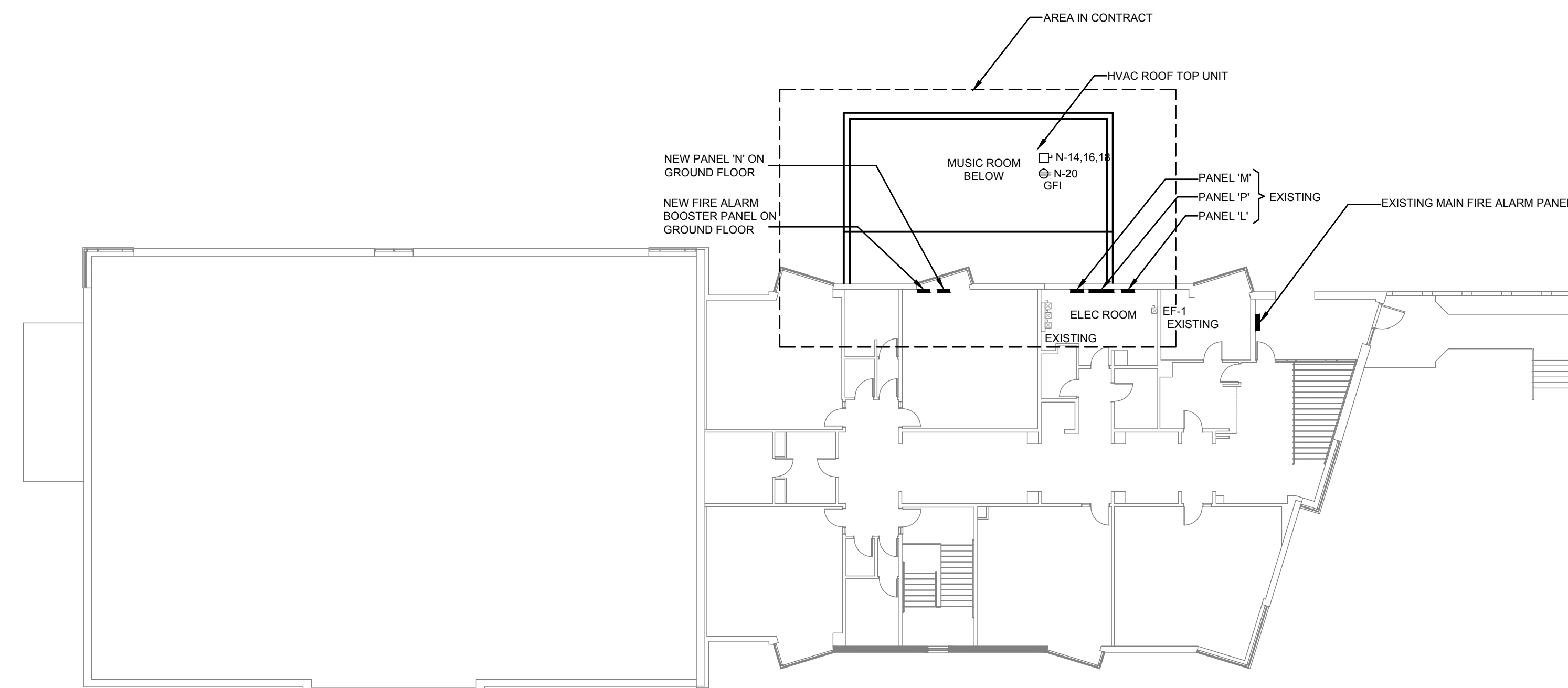
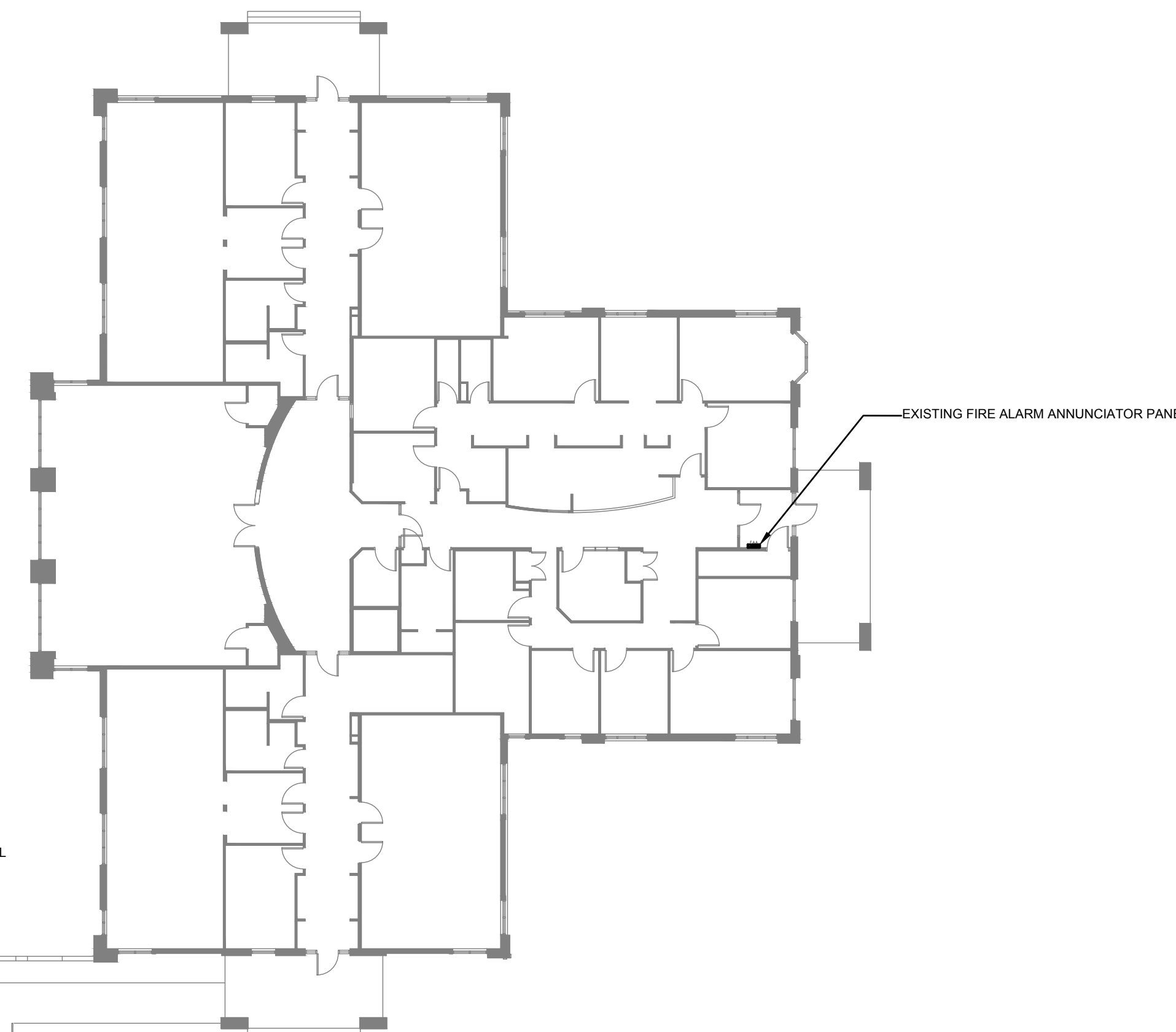
POWER SYMBOLS	
SYMBOL	DESCRIPTION
	DUPLEX U-GROUND 5-20R - 15A/20A, 125 VOLT, 2 POLE, 3 WIRE GROUNDING RECEPTACLE MOUNTED 400 mm ABOVE FINISHED LEVEL, UNLESS OTHERWISE NOTED
GFI	GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE
C	DEVICE MOUNTED IN CEILING
F	DEVICE MOUNTED IN FLOOR MONUMENT
	SIMILAR TO ABOVE, BUT MOUNTED APPROXIMATELY 3'-6" (1050 mm) ABOVE FINISHED FLOOR LEVEL OR ABOVE COUNTER, UNLESS OTHERWISE NOTED
	QUAD (TWO DUPLEX) U-GROUND 15A, 125 VOLT, 2 POLE, 3 WIRE GROUNDING RECEPTACLE MOUNTED 400 mm ABOVE FINISHED FLOOR LEVEL (IN COMMON FACEPLATE) UNLESS OTHERWISE NOTED
	DATA OUTLET
L6-20R	20A-250V 2P-3W GROUNDED SINGLE RECEPTACLE (CSA L6-20R) TWIST LOCK MOUNTED 300mm ABOVE FINISHED FLOOR LEVEL, UNLESS OTHERWISE NOTED.
L6-30R	30A-250V 2P-3W GROUNDED SINGLE RECEPTACLE (CSA L6-30R) TWIST LOCK MOUNTED 300mm ABOVE FINISHED FLOOR LEVEL, UNLESS OTHERWISE NOTED.
	FURNITURE SYSTEM CONNECTION POLE
	120V CONNECTION TO EQUIPMENT
	208V, 1PH CONNECTION TO EQUIPMENT
	208V, 3PH CONNECTION TO EQUIPMENT
	SINGLE SURFACE MOUNTED PANELBOARD
	SINGLE RECESSED MOUNTED PANELBOARD
	JUNCTION BOX
	HORSE POWER RATED SWITCH
	PULL BOX
	DUAL CHANNEL (POWER AND DATA) SURFACE RACEWAY IN CARPET WIRE WAY - REFER TO SPECIFICATION - AT THE TRANSITION WALL BOX PROVIDE A 53MM (2") CONDUIT UP TO THE CEILING SPACE FOR DATA
	MOTOR
	DISCONNECT SWITCH UNLESS NOTED OTHERWISE
	MOTOR STARTER - MAGNETIC
	MAGNETIC STARTER & DISCONNECT SWITCH (COMBINATION STARTER)
	MOTOR STARTER - MANUAL
	MOTOR c/w DISCONNECT SWITCH
	MOTOR c/w STARTER
	MOTOR c/w STARTER AND DISCONNECT SWITCH
	ELECTRIC BASEBOARD HEATER

LIGHTING SYMBOLS	
SYMBOL	DESCRIPTION
	(1200MM x 600MM) 2'X4' LUMINAIRE, LETTER INDICATES LUMINAIRE TYPE AS PER LUMINAIRE SCHEDULE.
	(1200MM x 600MM) 2'X4' LUMINAIRE, SUPPLIED FROM EMERGENCY POWER SOURCE
	(1200MM x 600MM) 2'X4' LUMINAIRE, LETTER INDICATES LUMINAIRE TYPE AS PER LUMINAIRE SCHEDULE. NUMBER INDICATES CONTROLS (DAYLIGHT HARVESTING)
	STRIP LUMINAIRE, 1200MM, LETTER INDICATES LUMINAIRE TYPE AS PER LUMINAIRE SCHEDULE.
	STRIP LUMINAIRE, 2400MM, LETTER INDICATES LUMINAIRE TYPE AS PER LUMINAIRE SCHEDULE.
	RECESSED DOWNLIGHT, LETTER INDICATES LUMINAIRE TYPE AS PER LUMINAIRE SCHEDULE.
	ONE, TWO, THREE AND FOUR GANG LINE VOLTAGE TOGGLE SWITCH MOUNTED 4'-0" (1200MM) ABOVE FINISHED FLOOR LEVEL, UNLESS OTHERWISE NOTED.
	3 - WAY SWITCH
	4 - WAY SWITCH
	LOW VOLTAGE SWITCH
	OCCUPANCY SENSOR - SWITCH MOUNTED
	VACANCY SENSOR - SWITCH MOUNTED
	OCCUPANCY SENSOR - CEILING MOUNTED
	DIMMER SWITCH WITH ON / OFF
	EXIT SIGN - WALL MOUNTED GREEN PICTOGRAM
	EXIT SIGN - CEILING MOUNTED GREEN PICTOGRAM
	EMERGENCY LIGHTING BATTERY PACK (BAT1) C/W TWO HEADS, RECEPTACLE CONNECTED TO LOCAL LIGHTING CIRCUIT
	EMERGENCY LIGHTING REMOTE SINGLE HEAD, CONNECTED TO BAT1
	EMERGENCY LIGHTING REMOTE TWIN HEAD, CONNECTED TO BAT1

FIRE ALARM SYMBOLS	
SYMBOL	DESCRIPTION
	RECESSED OR SURFACE MOUNTED FIRE ALARM CONTROL PANEL.
	RECESSED OR SURFACE MOUNTED FIRE ALARM ANNUNCIATOR PANEL.
	FIRE ALARM PULL STATION MOUNTED 4'-0" (1200) ABOVE FINISHED FLOOR LEVEL UNLESS OTHERWISE NOTED.
	SIMILAR TO ABOVE, EXCEPT "CG" WHERE SHOWN, DENOTES DEVICE c/w CLEAR GUARD.
	FIRE ALARM SMOKE DETECTOR.
	FIRE ALARM HORN
	FIRE ALARM STROBE HORN COMBINATION.
	FIRE ALARM SHUTDOWN RELAY

GENERAL NOTES:

- THIS IS A COMPREHENSIVE LEGEND AND NOT ALL ITEMS APPEAR ON ELECTRICAL DRAWINGS



1 SECOND FLOOR PLAN LAYOUT
E100 1:200

ELECTRICAL DRAWING LIST	
SHEET NO.	DRAWING TITLE
E001	ELECTRICAL LEGEND AND, DRAWING LIST
E002	ELECTRICAL SPECIFICATION SHEET 1 OF 2
E003	ELECTRICAL SPECIFICATION SHEET 2 OF 2
E101	ELECTRICAL LIGHTING & POWER SYSTEMS
E201	ELECTRICAL SCHEDULES AND DETAILS

no.	date	revision
B	2018 07 05	ISSUED FOR PERMIT & TENDER
A	2018 06 28	ISSUED FOR CO ORDINATION

It is the responsibility of the appropriate contractor to check and verify all dimensions on site and report all errors and/or omissions to the architect.

All contractors must comply with all pertinent codes and by-laws.

Do not scale drawings.

This drawing may not be used for construction until signed.

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PROJECT/LOCATION:
**TURNBULL SCHOOL
MUSIC ROOM ADDITION**
1132 Fisher Avenue, Ottawa

DRAWING TITLE:
**ELECTRICAL
LEGEND
AND DRAWING LIST**

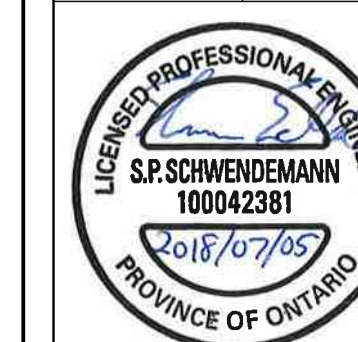
DRAWN BY: K. Mcl. DATE: APR. 2018 SCALE: AS SHOWN

PROJECT: 181-04865-00

DRAWING NO.:

E001

REVISION NO.:



- 24.4 CONNECT LUMINAIRES TO CIRCUITS AND NEW OR EXISTING LIGHTING CONTROL EQUIPMENT AS REQUIRED. DO NOT OVERLOAD CIRCUITS BEYOND FIXTURE MANUFACTURER'S RECOMMENDATIONS.
- 24.5 ENSURE THAT PRODUCTS THAT ARE TO BE DIMMED ARE COMPATIBLE WITH EACH OTHER, AND OF ONE MANUFACTURER. ENSURE DIMMING PERFORMANCE LEVELS ARE ACCEPTABLE TO CONSULTANT. UNLESS OTHERWISE NOTED, LIGHTING TO BE DIMMED FROM 100% DOWN TO 10%.
- 24.6 ACCEPTABLE DRIVER MANUFACTURERS ARE ADVANCE, OSRAM SYLVANIA, AND UNIVERSAL.

25 WALL BOX DIMMERS

- 25.1 PROVIDE WALL BOX DIMMERS TO MATCH THE LIGHTING BEING CONTROLLED (i.e. OF THE SAME MANUFACTURER OR AS RECOMMENDED BY THE LIGHTING MANUFACTURER). DIMMERS TO BE OF TYPE AND CAPACITY TO SUIT INTENDED LOADS, EACH COMPLETE WITH CALIBRATED LINEAR SLIDE CONTROL WITH SILVER CONTACTS AND SILENT POSITIVE ON/OFF, FACEPLATE, EMI AND RFI FILTERING. REVIEW FINISHES WITH CONSULTANT PRIOR TO ORDERING.
- 25.2 INSTALL FLUSH WALL BOX DIMMERS IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS, AND CONNECT TO CONTROL LIGHTING. REVIEW EXACT LOCATIONS WITH CONSULTANT PRIOR TO ROUGHING IN. EQUIP EACH DIMMER WITH FACEPLATE. WHEN INSTALLATION IS COMPLETE, CHECK AND TEST OPERATION OF DIMMERS AND ADJUST AS REQUIRED.

26 LOW VOLTAGE RELAYS/CONTACTORS

- 26.1 NOT USED
- 26.2 MAGNETIC, FULL VOLTAGE CONTACTORS, SUITABLE FOR APPLICATIONS;
- 26.3 ELECTRICAL ENCLOSURES/BOXES SUITABLE FOR HOUSING COMPONENTS.

27 OCCUPANCY SENSORS

- 27.1 PROVIDE DEVICES TO MATCH THE LIGHTING BEING CONTROLLED. DEVICES TO BE CSA APPROVED AND TO PROVIDE AUTOMATIC CONTROL OF LIGHTING WITH FOLLOWING COMPONENTS:
 - POWER AND SLAVE PACKS; LOW VOLTAGE OR LINE VOLTAGE OPERATION TO SUIT SPECIFIC APPLICATIONS;
 - DUAL TECHNOLOGY OCCUPANCY SENSORS;
 - VERRIDE SWITCHES TO BE WALL MOUNTING IN SINGLE GANG RECESSED OUTLET BOXES;
 - DAY LIGHT SENSORS TO BE PROVIDED WHERE REQUIRED FOR DIMMING OR CONTROLLING LIGHTS IN AREAS WITH WINDOWS AND ATRIUMS/SKY LIGHTS;
 - MOUNTING HARDWARE AND ANCILLARY DEVICES AS REQUIRED;
 - WIRING IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S REQUIREMENTS AND APPLICABLE LOCAL GOVERNING CODES AND STANDARDS.
- 27.2 DUAL TECHNOLOGY TYPE SENSORS AS FOLLOWS:
 - COMBINATION PASSIVE INFRARED AND ULTRASONIC TECHNOLOGIES;
 - WHEN BOTH PIR AND ULTRASONIC TECHNOLOGIES DETECT OCCUPANCY, LIGHTS TURN ON AUTOMATICALLY; ONCE LIGHTS ARE ON, DETECTION BY EITHER TECHNOLOGY HOLDS LIGHTS ON UNTIL OCCUPANCY IS NO LONGER DETECTED AND TIME DELAY ELAPSES;
 - 300° LENS AREA COVERAGE, EXTENDING OUT UP TO 6 M AND AREA OF 92.9 M²;
 - LOW PROFILE CEILING MOUNTING DESIGN; INTEGRAL LIGHT SENSOR;
 - ADJUSTABLE SENSITIVITY AND DIGITAL TIME DELAY; WALK-THROUGH MODE; LED INDICATION OF OCCUPANCY DETECTION;
 - ISOLATED RELAY FOR INTERCONNECTION TO AUXILIARY CONTROL SYSTEMS WHERE REQUIRED.
- 27.3 FOR APPLICATIONS IN WASHROOMS AND SMALL STORAGE ROOMS; WALL MOUNTED DUAL TECHNOLOGY SENSORS AS FOLLOWS:
 - WALL SWITCH SENSOR TURNS LIGHTS OFF AND ON BASED ON OCCUPANCY;
 - FACTORY DEFAULT OPERATION IS FOR MANUAL-ON MODE, SO THAT USERS TURN LIGHT ON ONLY WHEN NEEDED;
 - VARIETY OF CONTROL OPTIONS INCLUDING AUTO-ON OPERATION, WALK-THROUGH AND TEST MODE; ADDITIONAL SETTINGS ALLOW CHOICE OF WHICH SENSING TECHNOLOGIES HOLD ON OR RETRIGGER LIGHTING;
 - COLOR MATCHED LENS AND LOW PROFILE DESIGN;
 - WIDE DISPERSION LENS AREA COVERAGE, EXTENDING OUT UP TO 10 M AND AREA OF 37 M²;
 - INFRARED AND ULTRASONIC TECHNOLOGIES;
 - ADJUSTABLE TIME DELAYS AND SENSITIVITY; MANUAL PUSHBUTTON OPERATION (OVERRIDE).

- 30.5 COORDINATE WORK WITH MECHANICAL DIVISION WITH REGARDS TO INTERCONNECTIONS TO AIR HANDLING SYSTEMS, FIRE SUPPRESSION SYSTEMS, SUPERVISORY VALVES AND FLOW SWITCHES, BUILDING AUTOMATION SYSTEM, ETC. PERFORM SUCH INTERCONNECTIONS TO STANDARDS OF EXISTING SYSTEMS AND DOCUMENT IN SHOP DRAWINGS.

- 30.6 WHEN FIRE ALARM SYSTEM WORK IS COMPLETE AND READY FOR ACCEPTANCE, EXISTING SYSTEM MANUFACTURER/VENDOR TO INSPECT, TEST, VERIFY AND CERTIFY WORK AND EQUIPMENT, INCLUDING INITIATING DEVICES, SIGNALLING DEVICES, CONTROL DEVICES AND WIRING.

- 30.7 TEST AND VERIFY THAT AUDIBLE SIGNALS ARE AT LEVELS ACCEPTABLE TO LOCAL FIRE AUTHORITY AND THAT BATTERIES ARE OF SUFFICIENT CAPACITY AS PER OBC. PROVIDE CERTIFICATE OF LIABILITY INSURANCE REGISTERED FOR THIS PROJECT TO SHOW SATISFACTORY PROOF OF MANUFACTURER'S LIABILITY COVERAGE FOR BOTH HIS PRODUCT AND PERSONNEL. CONDUCT WORK IN ACCORDANCE WITH LATEST EDITIONS OF CANULC S536 AND S537. TESTS TO BE CONDUCTED IN PRESENCE OF OWNER AND/OR CONSULTANT. PROVIDE TO CONSULTANT MINIMUM ONE HARD COPY AND ELECTRONIC COPY OF TEST REPORT WITH DETAILED SCHEDULES OF TESTED DEVICES. REPORTS SHALL BE SIGNED BY AUTHORIZED CERTIFIED TESTING TECHNICIAN. DIGITAL COPY OF REPORT TO BE PROVIDED IN COMPATIBLE FORMAT CONFIRMED WITH CONSULTANT.

- 30.8 OBTAIN FROM LOCAL FIRE AUTHORITY, APPROVAL CERTIFICATE AND SUBMIT TO CONSULTANT WITH REPORTS.
- 30.9 EMPLOY TECHNICIANS CERTIFIED BY CANADIAN FIRE ALARM ASSOCIATION AND/OR ONTARIO FIRE MARSHALL AS APPLICABLE AND TO REQUIREMENTS OF ONTARIO FIRE CODE.

31 GENERAL ELECTRICAL WORK TESTING

- 31.1 IN ADDITION TO TESTS REQUIRED BY GOVERNING AUTHORITIES AND REGULATIONS, TEST WORK TO ENSURE THERE ARE NO GROUNDS OR CROSSES. ENSURE DEVICES ARE COMMISSIONED AND OPERABLE. CONNECT CIRCUITS TO PANELBOARDS SO AS TO BALANCE ACTUAL LOADS (WATTAGE) WITHIN 3% IF REQUIRED, TRANSPOSE CIRCUITS WHEN WORK IS COMPLETE TO MEET THIS REQUIREMENT.
- 31.2 IN ADDITION, PERFORM FOLLOWING:
 - CHECK COMPONENT CONNECTIONS AND OVERALL INSTALLATION;
 - ENSURE THAT DEVICES ARE COMMISSIONED AND OPERABLE;
 - TEST AND ADJUST SYSTEM AND ASCERTAIN THAT COMPONENTS ARE AS SPECIFIED AND ENSURE THAT PRODUCTS OPERATE AS DESIGNED;
 - PREPARE, DOCUMENT AND EVALUATE TEST RESULTS;
 - AUTHENTICATE TEST RESULTS WITH SIGNATURE OF AUTHORIZED TESTING ENGINEER/TECHNICIAN.
- 31.3 SUBMIT SIGNED REPORTS TO CONSULTANT.

32 SYSTEM TESTING, CO-ORDINATION AND VERIFICATION

- 32.1 PROVIDE ON-SITE ENGINEERING INSPECTION, TESTING AND VERIFICATION OF DISTRIBUTION EQUIPMENT AND OTHER SYSTEMS. REVIEW AND SURVEY EXISTING DISTRIBUTION SYSTEM PROTECTIVE DEVICES AS REQUIRED TO PROPERLY CO-ORDINATE ADDITIONAL SYSTEM DEVICES. FOR MAJOR DISTRIBUTION EQUIPMENT, PROVIDE PRELIMINARY COORDINATION STUDY AND AVAILABLE FAULT CURRENT CALCULATIONS AND SUPPLY TO CONSULTANT DURING SHOP DRAWING REVIEW PROCESS.
- 32.2 ENGINEERING INSPECTION AND TESTING SHALL BE PERFORMED BY AN APPROVED INDEPENDENT TESTING COMPANY AND INCLUDE WHERE APPLICABLE:
 - TESTING, CLEANING WHEN NECESSARY, AND CALIBRATING RELAYS AND CIRCUIT BREAKER TRIP DEVICES (CALIBRATION OF PROTECTIVE DEVICES SHALL CONFORM TO REQUIREMENTS OF APPROVED COORDINATION CURVES);
 - FUNCTION TEST OF ASSOCIATED CONTROL DEVICES;
 - PROVIDE A COORDINATION STUDY PREPARED TO REVIEW REVISED DISTRIBUTION SYSTEM DEVICES INCLUDING EXISTING MAIN OVER CURRENT PROTECTION DEVICES FEEDING RESPECTIVE MCCS OR PANELS WHERE ADDITIONAL LOADS HAVE BEEN ADDED; REVIEW COORDINATION OF DEVICES AND RESET/ADJUST WHERE POSSIBLE AND AS REQUIRED;
 - REPLACEMENT OF FUSES DESTROYED DURING TESTING;
 - AN ACCEPTANCE TEST IN PRESENCE OF AND AT SATISFACTION OF CONSULTANT;
 - PRESENCE, FOR LENGTH OF TIME REQUIRED, OF QUALIFIED AND COMPETENT EQUIPMENT MANUFACTURER'S SERVICE REPRESENTATIVE DURING START UP;
 - ADJUSTMENTS, START-UP PROCEDURES AND VERIFICATION OF EQUIPMENT;
 - TESTING OF INSTALLED ELECTRICAL DEVICES, WHETHER OR NOT SUPPLIED BY ELECTRICAL DIVISION.
- 32.3 PROVIDE VISUAL AND MECHANICAL INSPECTION OF GROUND SYSTEM AND VERIFY THAT IT IS IN COMPLIANCE WITH ISSUED DOCUMENTS AND OESC REQUIREMENTS.
- 32.4 TESTING SHALL BE DOCUMENTED IN A REPORT SIGNED BY PROFESSIONAL ENGINEERS OF ONTARIO LICENSED TESTING ENGINEER AUTHORIZED BY TESTING COMPANY. INCLUDE FOR MINIMUM 2 HARD COPIES AND ELECTRONIC VERSION OF REPORT SUBMITTED TO CONSULTANT FOR REVIEW. REPORT TO INCLUDE TEST RESULTS WITH PROPERLY PLOTTED CURVES, IDENTIFIED TROUBLE AREAS OF COORDINATION, EXTENSIVE COMMENTS REGARDING TEST RESULTS AND RECOMMENDATIONS ON BEST REMEDIAL COURSE OF ACTION.
- 32.5 PRODUCT MANUFACTURER TO EXAMINE PLANS AND SPECIFICATIONS TO ENSURE THAT RELAYS AND PROTECTIVE DEVICES BEING INSTALLED IN DISTRIBUTION SYSTEM WILL PROVIDE SATISFACTORY COORDINATION.
- 32.6 ACCEPTABLE TESTING COMPANIES TO BE INDEPENDENT OF EQUIPMENT MANUFACTURERS/SUPPLIERS AND ARE G.T. WOODS LTD., AC TESLA, PELIKAN, EATON ELECTRIC AND SCHNEIDER ELECTRIC.

END



B	2018 07 05	ISSUED FOR PERMIT & TENDER
A	2018 06 28	ISSUED FOR CO ORDINATION

no.	date	revision
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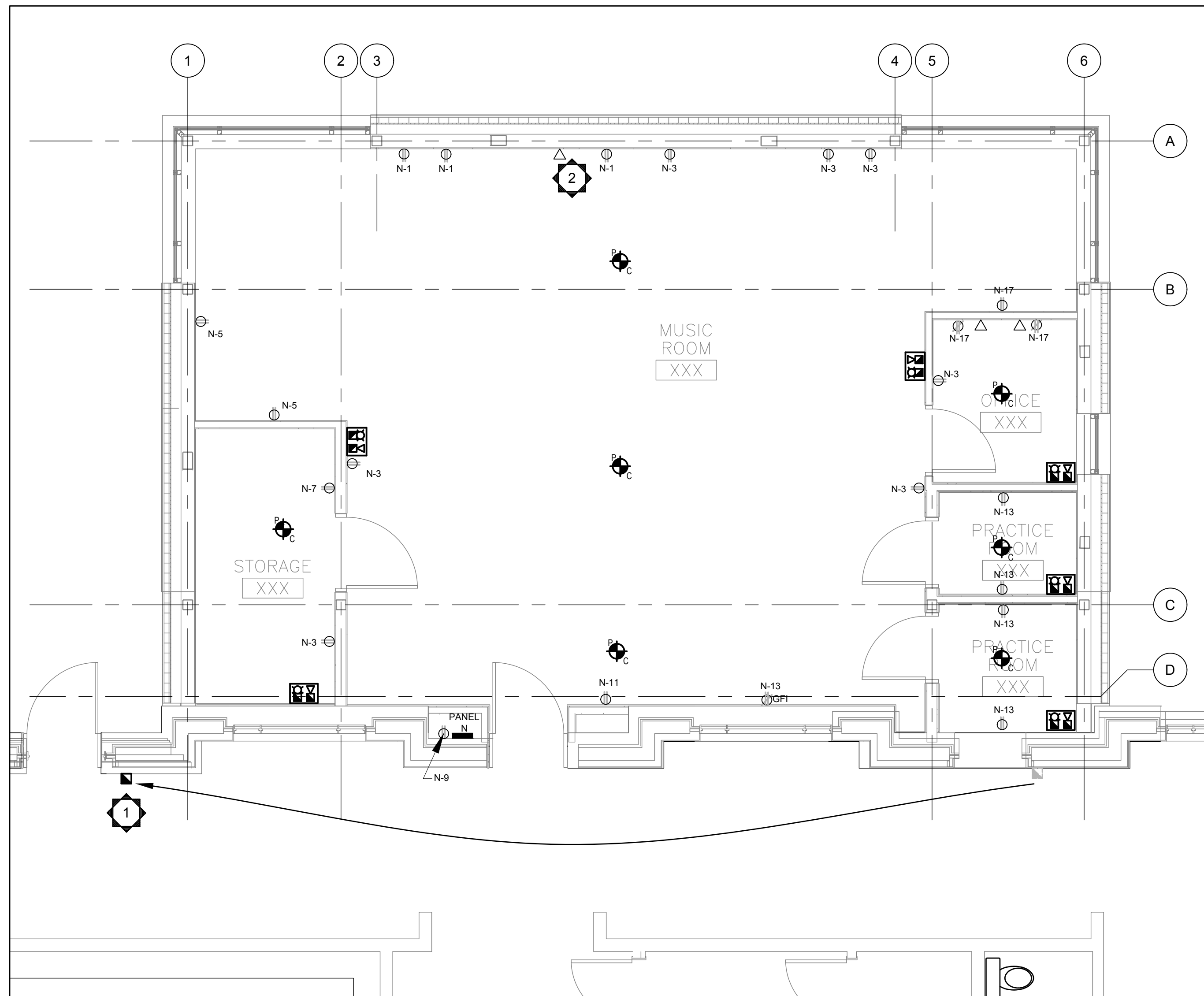
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PROJECT/LOCATION:
TURNBULL SCHOOL MUSIC ROOM ADDITION
1132 Fisher Avenue, Ottawa

DRAWING TITLE:
ELECTRICAL SPECIFICATION SHEET 2 OF 2

DRAWN BY: K. Mcl.	DATE: APR 2018	SCALE: N.T.S.
PROJECT: 181-04865-00		E003
DRAWING NO.:		
REVISION NO.:		





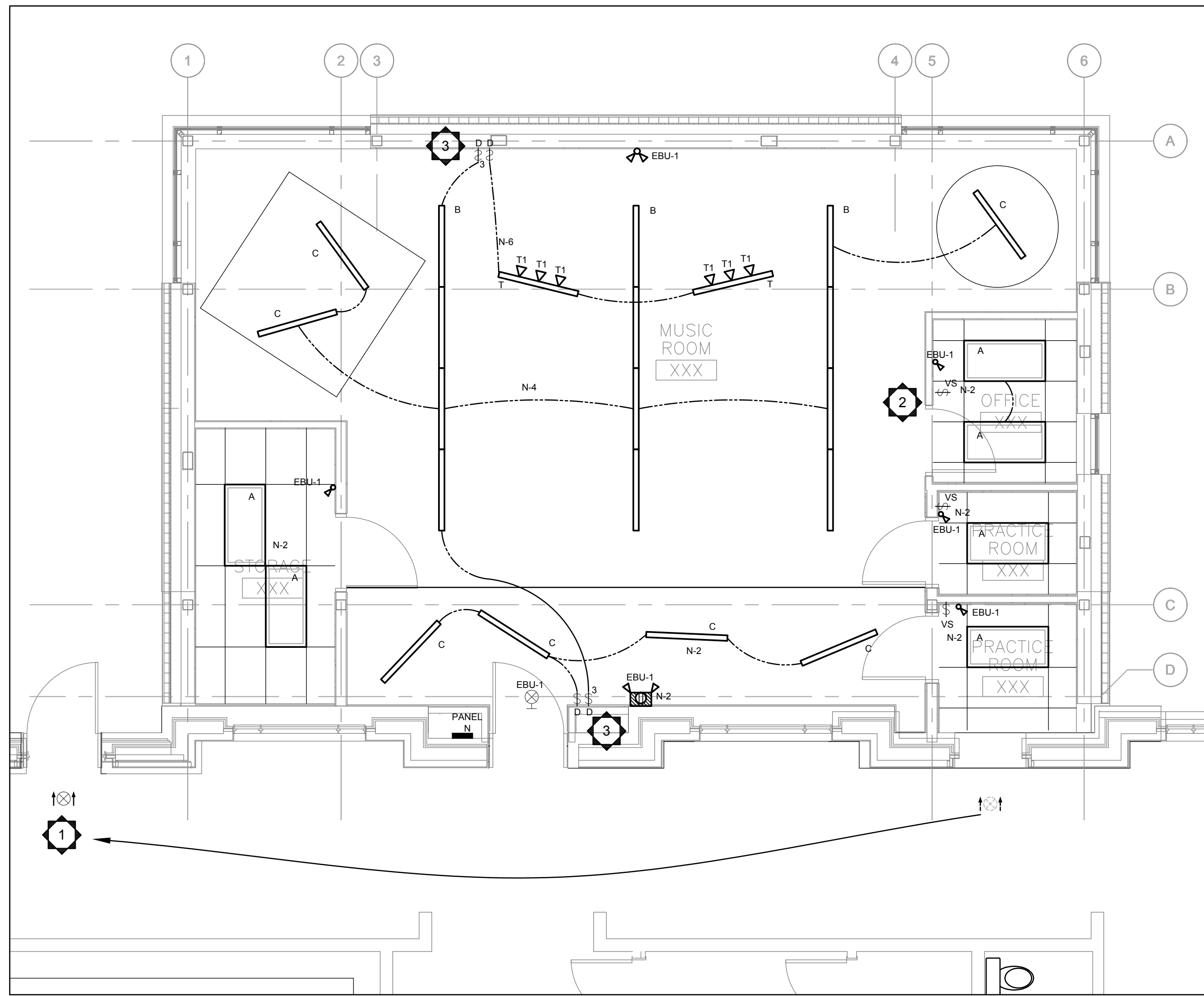
1 PLAN VIEW POWER & SYSTEMS LAYOUT
E101 1:50

POWER AND SYSTEMS NOTES:

- RELOCATE FIRE ALARM PULL STATION TO NEW DOOR OPENING.
- FOR DATA OUTLETS PROVIDE DEVICE BOX AND EMPTY CONDUIT TO CEILING. TERMINATE IN A BOX.

GENERAL NOTES:

- COORDINATE DEVICE LOCATIONS AND HEIGHTS AFF WITH THE ARCHITECTURAL DRAWINGS AND DETAILS



2 PLAN VIEW LIGHTING LAYOUT
E101 1:50

LIGHTING NOTES:

- RELOCATE EXIT SIGN TO NEW DOOR OPENING.
- LIGHTING CONTROL AS FOLLOWS:
CLASSROOMS - OCCUPANCY CONTROL AND DIMMING
STORAGE ROOM - OCCUPANCY
PRACTICE ROOMS - VACANCY CONTROL
OFFICE, DIMMING AND VACANCY CONTROL
- WIRELESS LIGHT SWITCHES -
THE FUNCTION OF THE SWITCH IS INDICATED ON THE DRAWING:
D - DIMMER, OCCUPANCY, DAYLIGHT HARVESTING
VS - DIMMER, VACANCY, DAYLIGHT HARVESTING

GENERAL NOTES:

- COORDINATE DEVICE LOCATIONS AND HEIGHTS AFF WITH THE ARCHITECTURAL DRAWINGS AND DETAILS

B	2018 07 05	ISSUED FOR PERMIT & TENDER
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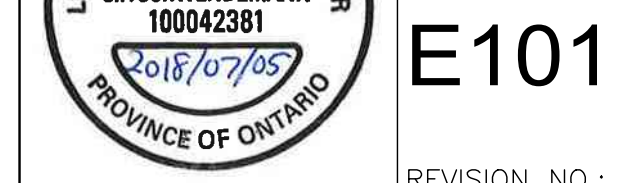
PROJECT/LOCATION:
**TURNBULL SCHOOL
MUSIC ROOM ADDITION**
1132 Fisher Avenue, Ottawa

DRAWING TITLE:
**ELECTRICAL
LIGHTING
POWER AND SYSTEMS**

DRAWN BY: DATE: SCALE:
K. McI. APR. 2018 AS SHOWN

PROJECT:
181-04865-00

DRAWING NO.:



E101

REVISION NO.:

SCHEDULE OF LUMINAIRES						
TYPE	DESIGN BASED ON SPECIFIED MANUFACTURER AND CATALOG NUMBER	PRODUCT DESCRIPTION	VOLTS	LAMPS LUMENS WATTS COLOUR TEMPERATURE	MOUNTING	NOTES
A	PHILIPS DAYBRIGHT CFI FluxGrid 2FS G-42B 835 4D 120 DIM DAY OCC	610mm X 1220mm RECESSED SOFT OPAL DIFFUSER OL	120V	LED MODULE 4276 LUMENS 36.2 WATTS 3500K	RECESSED IN CEILING GRID	DAYLIGHT SENSING C/W DIMMING AND SELECTABLE OCCUPANCY (SPACEWISE)
B	PHILIPS LEADALITE TRUGROOVE 2901LBGQ0471EW DIM DAY OCC	1200mm X 100mm SUSPENDED LINEAR	120V	LED MODULE 4576 LUMENS 40.9 WATTS 3500K	SUSPENDED	DAYLIGHT SENSING C/W DIMMING AND SELECTABLE OCCUPANCY (SPACEWISE)
C	PHILIPS LEADALITE TRUGROOVE 3901LBGQ0471EW DIM SWZDT	1200mm X 100mm RECESSED LINEAR	120V	LED MODULE 4114 LUMENS 41.8 WATTS 3500K	RECESSED IN DRYWALL FEATURE	DAYLIGHT SENSING C/W DIMMING AND SELECTABLE OCCUPANCY (SPACEWISE)
‡	PHILIPS WIRELESS SWITCH UID8451/10	SINGLE GANG SWITCH PROVIDES SELECTABLE FUNCTIONS DIMMER, VACANCY AND OCCUPANCY	SELF POWERED	N/A	RECESSED IN ELECTRICAL WALL BOX OR SURFACE MOUNTING	WIRELESS
T	PHILIPS LIGHTTOLIER LYTESPAN 6001NWH	1200mm LONG BASIC ONE CIRCUIT TRACK	120V	N/A	SUSPENDED (TBD)	CONTROLLED BY DIMMER COMPATIBILITY PHILIPS CONTROLS SR400RPC120
T1	PHILIPS LIGHTTOLIER CorePro LT-08 RWF 830 WH VA	MICRO CYLINDER 57mm Dia X 114mm H COLOUR WHITE MOUNTED ON PIVOTING ARM	120V	LED MODULE 963 LUMENS 9 WATTS 3000K	MOUNTED ON TRACK	DIMMABLE TRACK LIGHTS

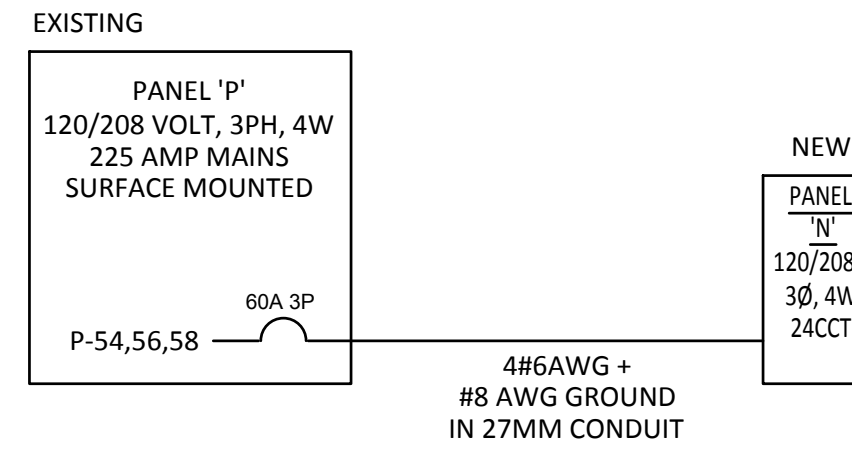
1 SCHEDULE OF LUMINAIRES
E201 N.T.S.

LIGHTING FIXTURE SCHEDULE NOTES:

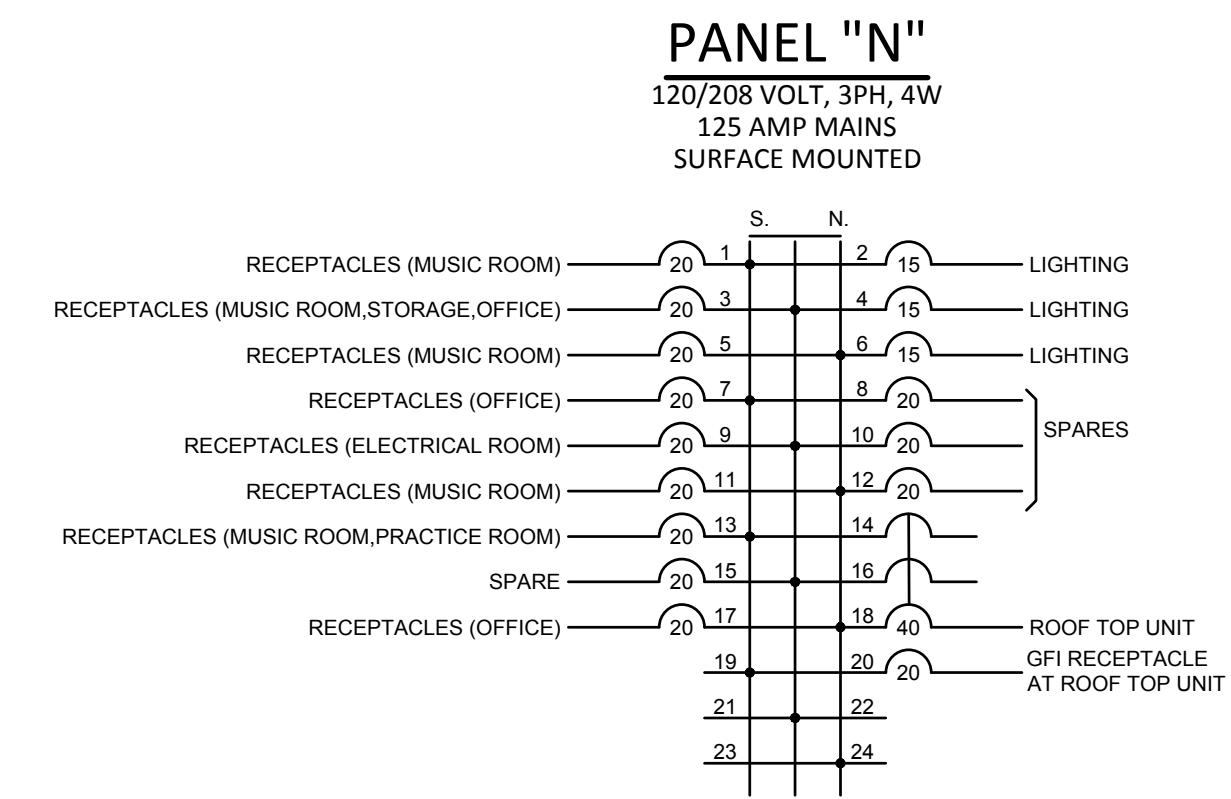
- DESIGN IS BASED ON THE LUMINAIRE SPECIFIED. IN ALL CASES, ALTERNATIVE LUMINAIRE SHALL BE COMPARABLE TO THE SPECIFIED LUMINAIRE IN QUALITY, PERFORMANCE, AND VISUAL CHARACTERISTICS. ACCEPTABILITY WITH RESPECT TO VISUAL CHARACTERISTICS SHALL BE AT THE SOLE DISCRETION OF THE CONSULTANT. IF A PROPOSED ALTERNATIVE LUMINAIRE IS DEEMED TO BE NOT VISUALLY COMPARABLE, THE SPECIFIED LUMINAIRE SHALL BE PROVIDED.
- SUBJECT TO NOTE 1, ALTERNATIVES TO NOTED LUMINAIRE MANUFACTURED BY PHILIPS (AND AFFILIATES) OR BY LITHONIA ARE ACCEPTABLE, AND MAY BE SUPPLIED WITHOUT CREDIT TO CONTRACT AMOUNT. LUMINAIRE NOT SO NOTED SHALL BE PROVIDED AS SPECIFIED; PROPOSED ALTERNATIVES MAY BE ACCEPTED BY THE CONSULTANT, AND, IF THEY ARE, SHALL RESULT IN A CREDIT TO THE CONTRACT AMOUNT.
- SUBJECT TO NOTE 1, ALTERNATIVES TO NOTED LUMINAIRE MANUFACTURED BY EMERGI-LITE, COOPER (AND AFFILIATES), CANLITE (AND AFFILIATES) OR BY LITHONIA ARE ACCEPTABLE, AND MAY BE SUPPLIED WITHOUT CREDIT TO CONTRACT AMOUNT. LUMINAIRE NOT SO NOTED SHALL BE PROVIDED AS SPECIFIED; PROPOSED ALTERNATIVES MAY BE ACCEPTED BY THE CONSULTANT, AND, IF THEY ARE, SHALL RESULT IN A CREDIT TO THE CONTRACT AMOUNT.
- REFER TO ARCHITECTURAL DRAWINGS FOR EXACT MOUNTING HEIGHT OF LUMINAIRE.

BATTERY PACK SCHEDULE							
TAG	DC VOLTS	TWIN HEAD ON BATTERY PACK	# OF TWIN REMOTE HEADS	# OF SINGLE REMOTE HEADS	# OF EXIT LIGHTS	EBU WATTAGE	DESCRIPTION
EBU-1	12VDC	1 OF 2 x 5W	1 OF 2 x 5W	4 OF 5W	1 SIGN 2W	72	EQUAL TO THOMAS & BETTS, EMERGI-LITE 12ESL72 U/2 LI WHITE FINISH
NOTES: 1. EMERGENCY BATTERY UNIT TO HAVE MINIMUM OF 60 MINUTES BACK UP POWER. 2. CONNECT EMERGENCY LIGHTING BATTERY PACKS TO LOCAL (UNSWITCHED) LIGHTING CIRCUIT.							

4 BATTERY PACK SCHEDULE
E201 N.T.S.



2 PARTIAL SINGLE LINE DIAGRAM
E201 N.T.S.

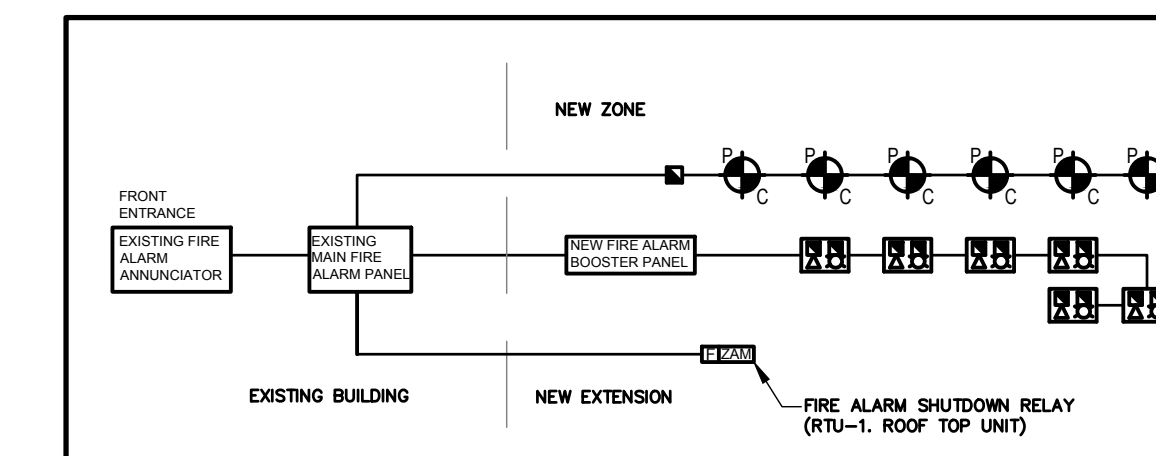


3 PANEL 'N'
E201 N.T.S.

MAXIMUM BRANCH WIRING DISTANCE FOR 120 VOLT SYSTEM AT 2% VOLTAGE DROP										
WIRE SIZE	BREAKER SIZE (AMPERES)	15	20	30	40	50	60	70	80	100
		MAX. LOAD AT 80% (AMPERES)								
NO.12	----	16.8	12.2	-----	-----	-----	-----	-----	-----	-----
NO.10	----	25.9	19.0	12.9	-----	-----	-----	-----	-----	-----
NO.8	----	39.6	30.4	20.5	15.2	-----	-----	-----	-----	-----
NO.6	----	62.4	47.2	32.0	23.6	19.0	16.0	-----	-----	-----
NO.4	----	99.0	73.1	50.2	38.1	30.4	24.3	21.3	19.0	-----
NO.2	----	-----	114.3	77.2	57.9	47.2	38.8	33.5	28.9	22.8
NO.1	----	-----	-----	96.0	73.1	57.9	47.2	42.6	36.5	27.4
NO.1/0	----	-----	-----	-----	85.3	68.5	56.3	48.7	41.9	33.5
NO.2/0	----	-----	-----	-----	102.8	80.7	67.0	57.9	50.2	40.3
NO.3/0	----	-----	-----	-----	-----	95.2	79.2	68.5	59.4	47.2
NO.4/0	----	-----	-----	-----	-----	-----	92.9	79.2	70.1	56.3
250 MCM	----	-----	-----	-----	-----	-----	-----	102.8	86.8	60.9
300 MCM	----	-----	-----	-----	-----	-----	-----	-----	100.5	70.1

NOTE: DISTANCES INDICATED IN METRES FROM PANEL TO LOAD FOR SINGLE PHASE.

5 120 VOLT SYSTEM AT 2% VOLTAGE DROP TABLE
E201 N.T.S.



6 PARTIAL FIRE ALARM DIAGRAM
E201 N.T.S.

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PROJECT/LOCATION:
TURNBULL SCHOOL MUSIC ROOM ADDITION
1132 Fisher Avenue, Ottawa

DRAWING TITLE:
ELECTRICAL LIGHTING SCHEDULES & DETAILS

DRAWN BY: K. Mcl. DATE: APR. 2018 SCALE: AS SHOWN

PROJECT: 181-04865-00

DRAWING NO.: **E201**

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