

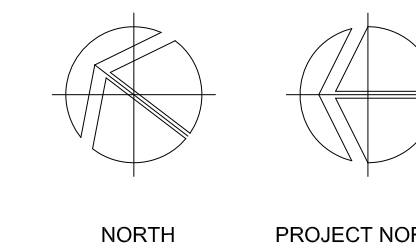
PROJECT
TOWER CONSERVATION
FORT MISSISSAUGA
NATIONAL HISTORIC
SITE OF CANADA

NIAGARA ON THE LAKE, ONTARIO
 143 Front Street

CLIENT
 SOUTHWESTERN
 ONTARIO FIELD UNIT,
 PARKS CANADA AGENCY

CONSULTANT
 AREA ARCHITECTS RASCH ECKLER ASSOCIATES LTD.
 15 Lola Road
 Toronto, Ontario M5E 1P6
 416.896.1989 tel 416.896.1966 fax

WSP CANADA INC.
 2300 Yonge Street, Suite 2300
 Toronto, Ontario M4P 1E4
 416.467.5256 tel
 416.467.9766 fax



REGISTRATION



ISSUE/REVISION

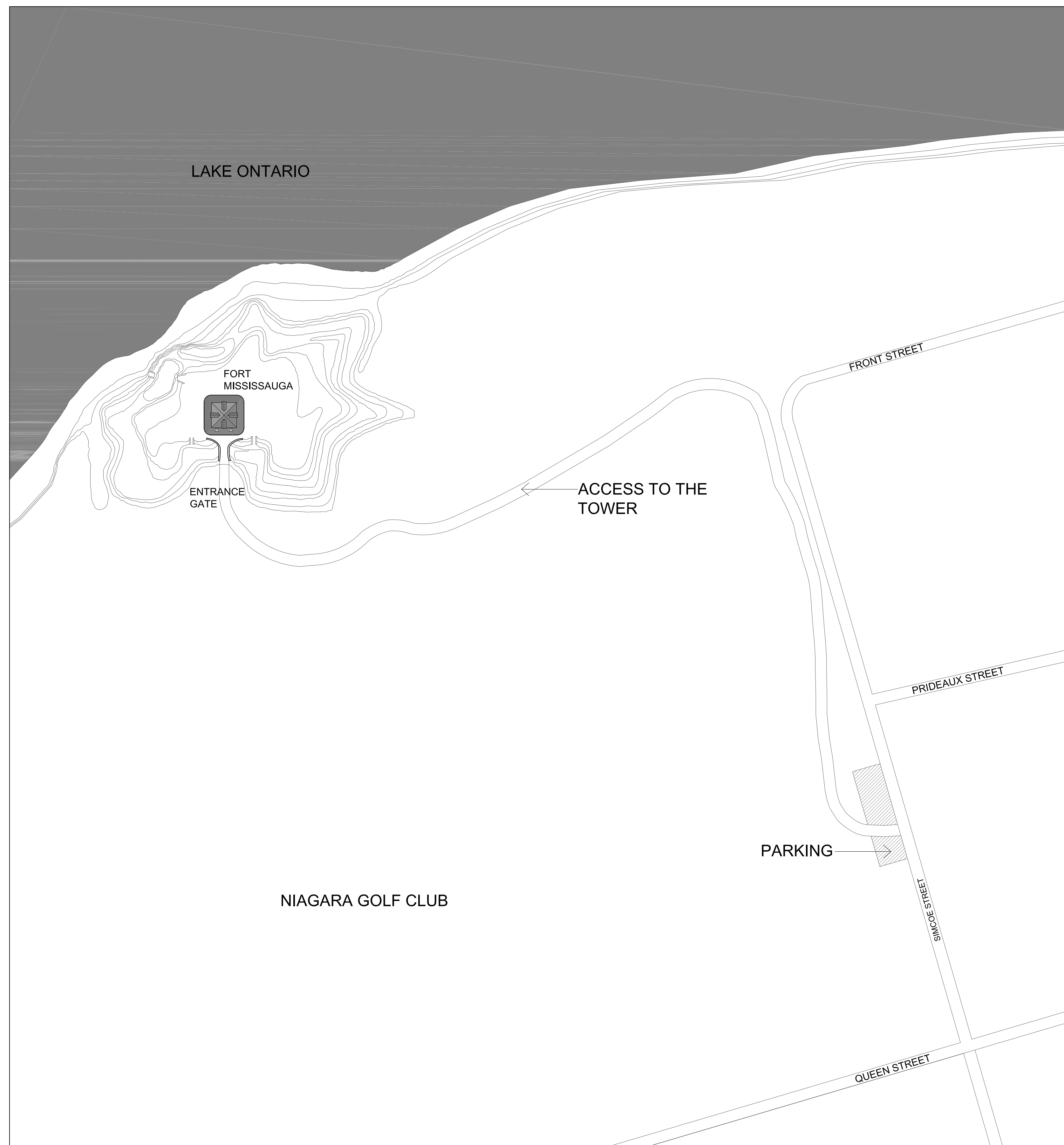
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3	03/21/13	ISSUED FOR TENDER
2	01/15/13	100% FOR CLIENT REVIEW
1	11/30/12	80% FOR CLIENT REVIEW

KEY PLAN

PROJECT NUMBER
 12-579-AREA
 161-16652-WSP

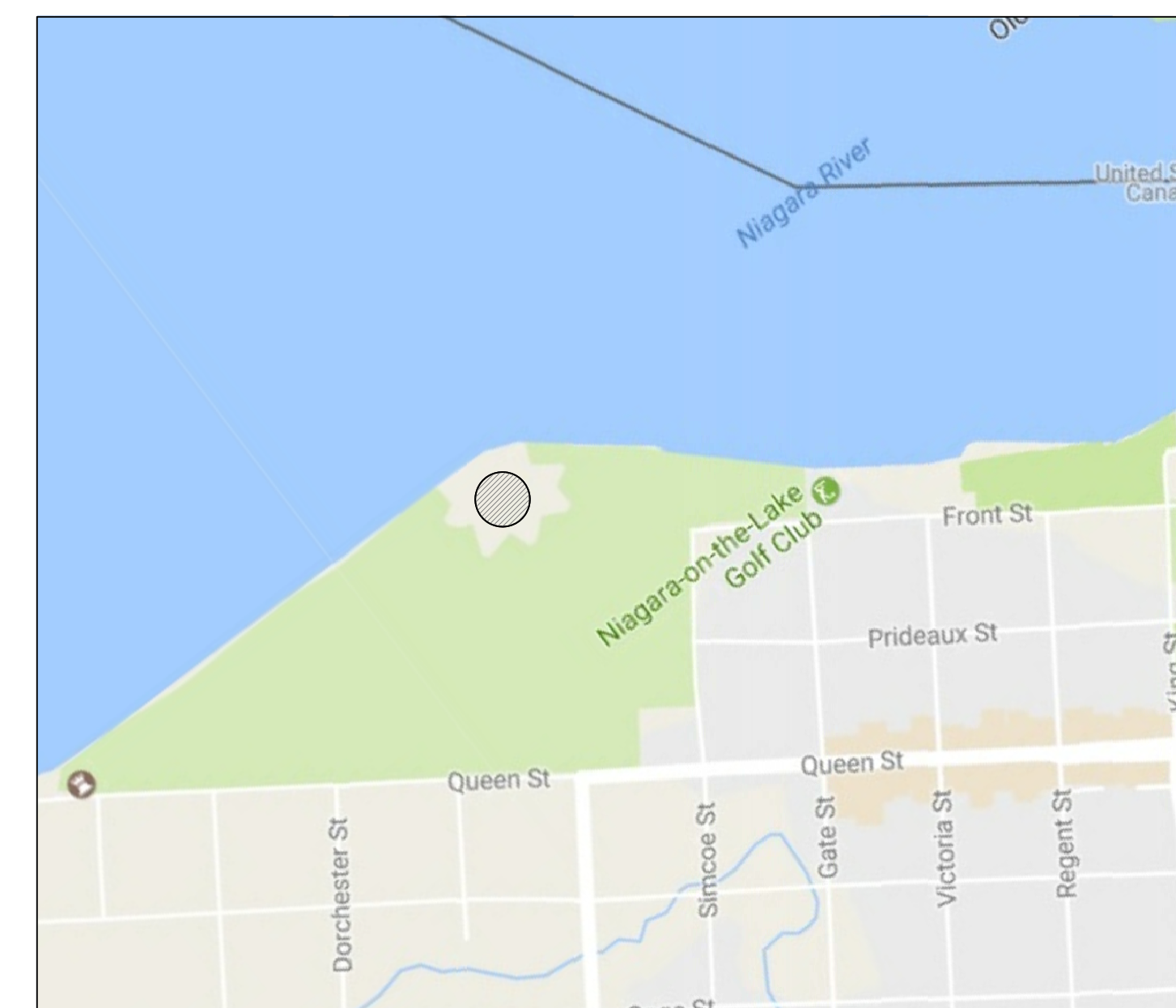
SHEET TITLE
 SITE PLAN
SHEET NUMBER

AH 1-0

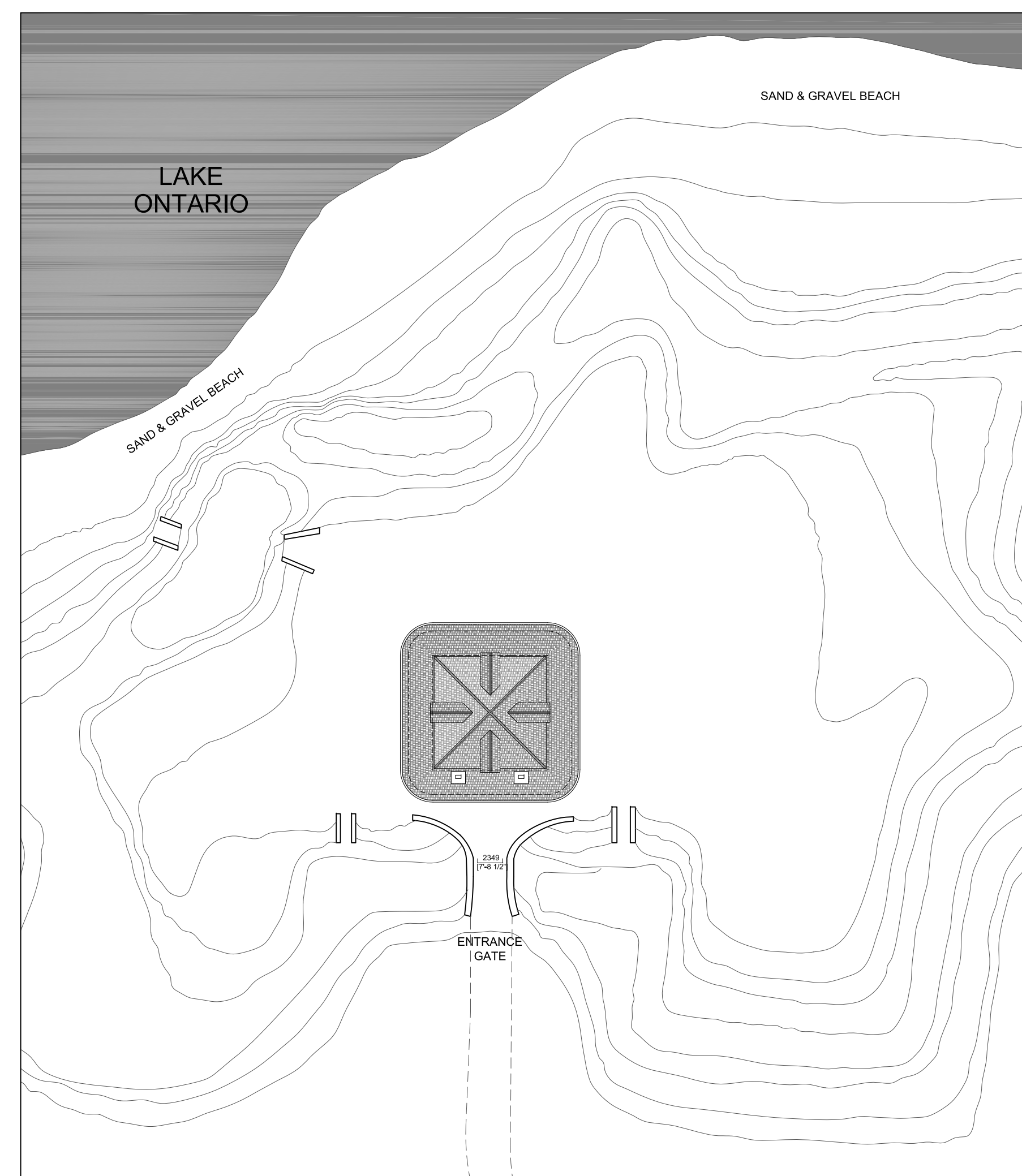


3 EXISTING ACCESS TO THE SITE
 AH1.0 SCALE 1:1000

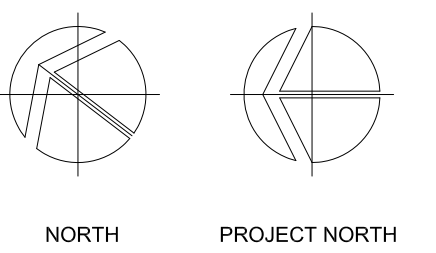
The site plan and other drawings in this set are based on several previous drawings including:
 - Architectural drawing set by Department of Indian Affairs & Northern Development, National & Historic Parks Branch, Engineering & Architectural Division, Dated Dec.30, 1968, Ref.# 68-133.
 - Architectural drawing set by Indian & Northern Affairs, Dated Dec.09, 1973, Ref.# HOFMN 73/R68.
 - Architectural drawing set by Indian & Northern Affairs, Dated Jan.04, 1980, Ref.# HOFMN 79/R47.



2 KEY PLAN
 AH1.0 N.T.S.



1 PROPOSED SITE PLAN (Based on Dwg #1/ Ref. No. 68-133 of 1968 set of drawings)
 AH1.0 SCALE 1:400



NORTH PROJECT NORTH

REGISTRATION



ISSUE/REVISION

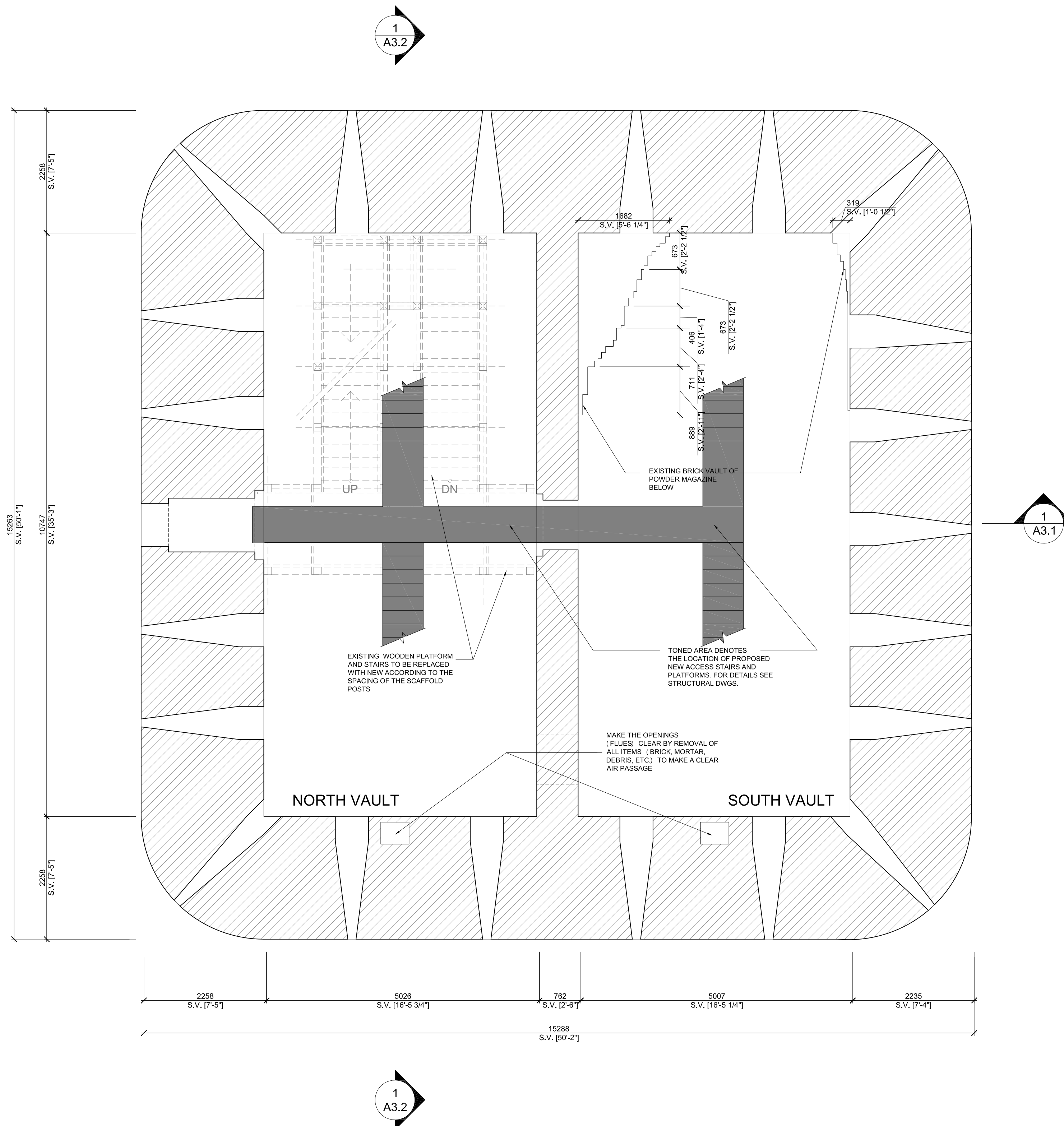
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KEY PLAN

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12-579-AREA
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SHEET TITLE
MAIN LEVEL PLAN

SHEET NUMBER
AH 1-1



1 MAIN LEVEL PLAN
AH1.1 SCALE 1:50

PROJECT

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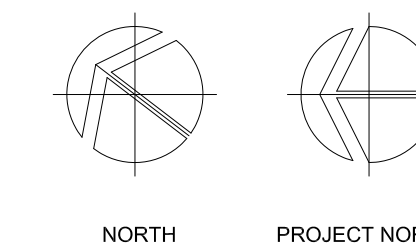
CLIENT

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3	03/22/17	ISSUED FOR TENDER
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1	12/20/16	FOR CLIENT REVIEW

KEY PLAN

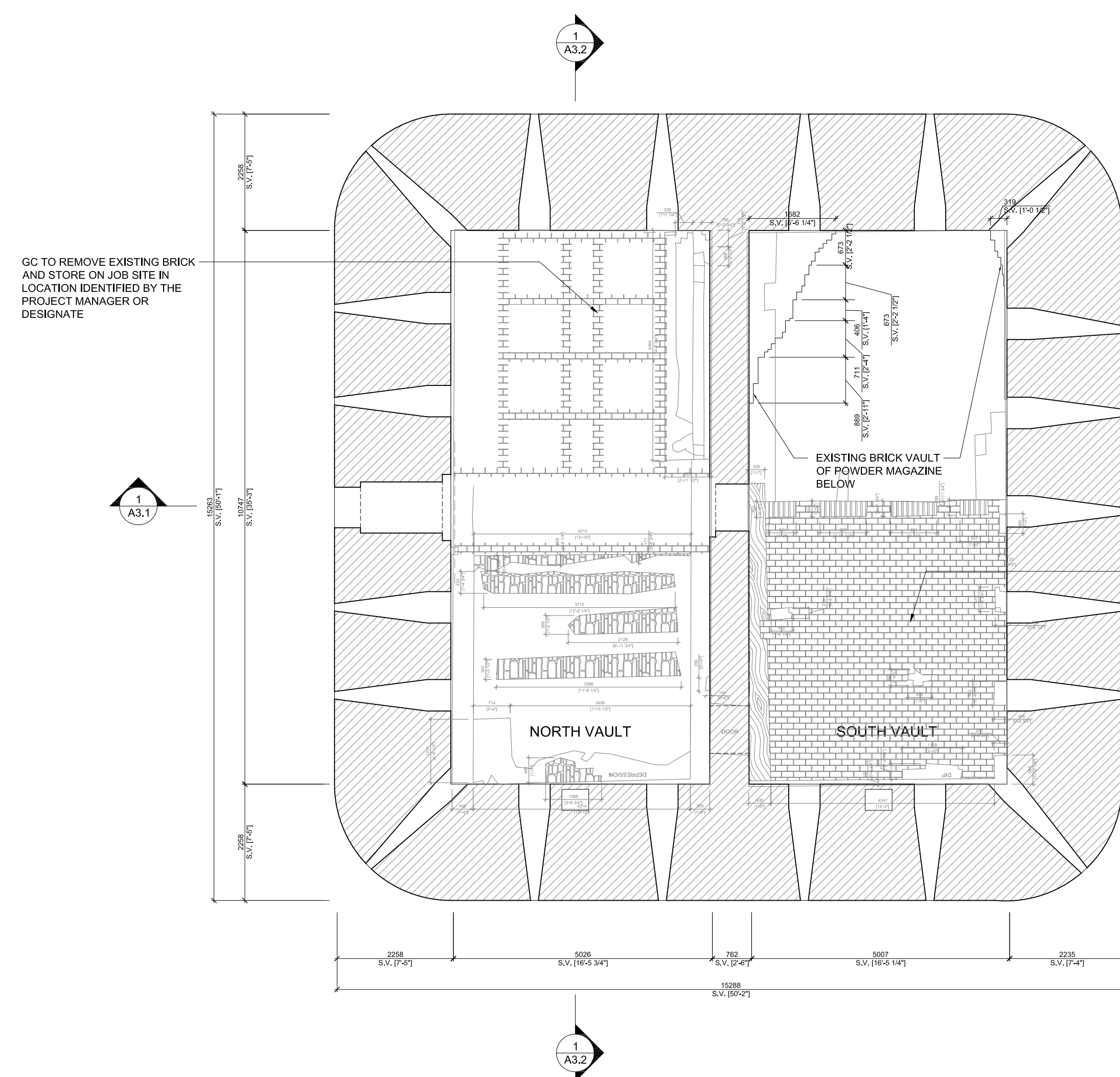
PROJECT NUMBER

12-579-AREA
161-16652-WSP

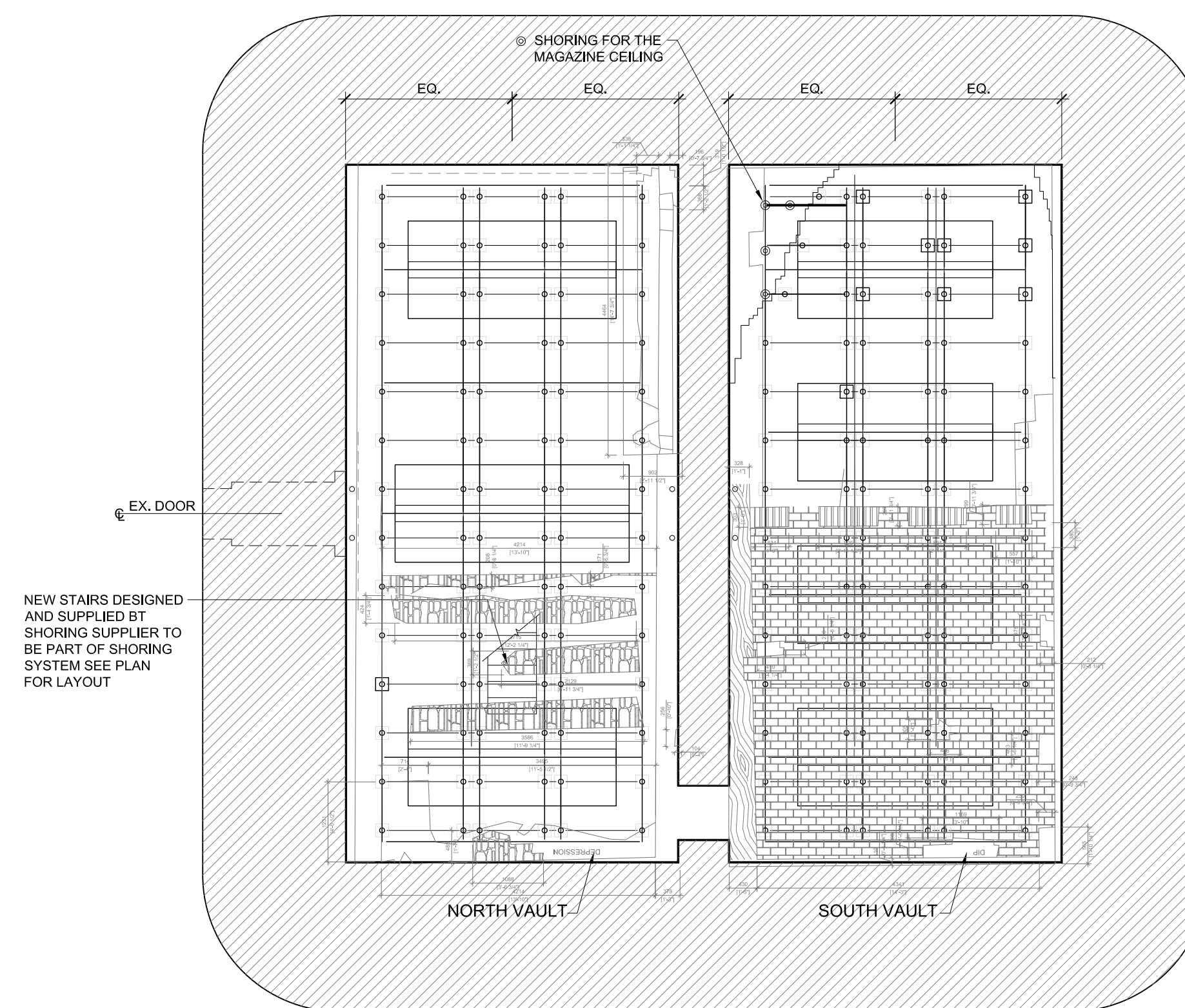
SHEET TITLE

MAIN LEVEL PLAN- ARTIFACTS
PROPOSED FOUNDATION- ARTIFACTS
SHEET NUMBER

AH 1-1a



1 MAIN LEVEL PLAN- ARTIFACTS
AH1.1 SCALE 1:75



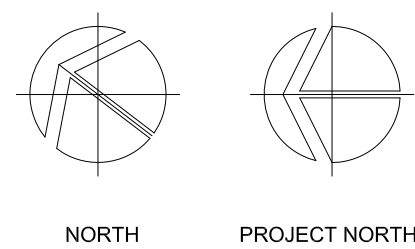
2 PROPOSED FOUNDATION PLAN - ARTIFACTS
AH1.1 SCALE 1:75

PROJECT
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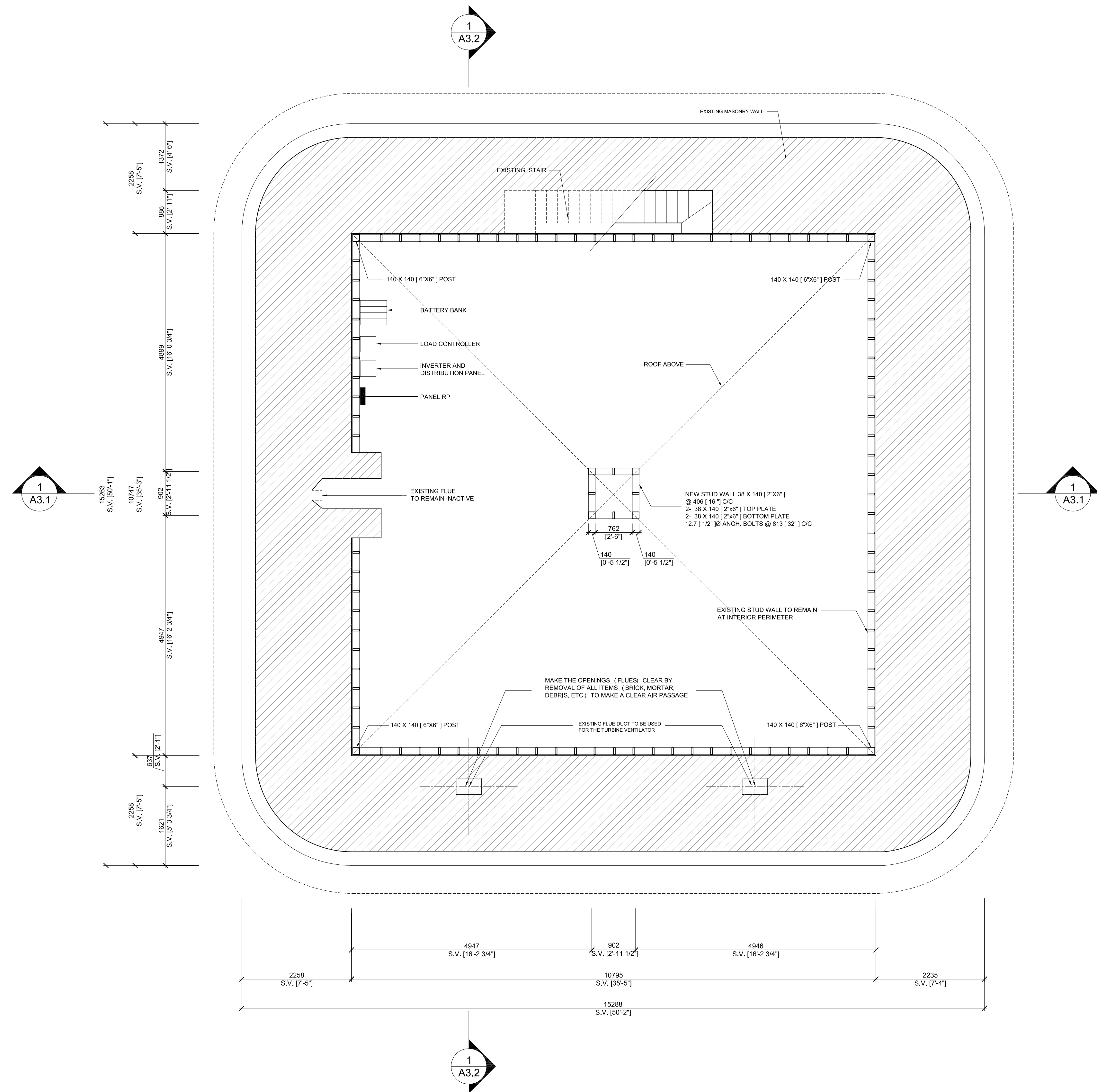
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KEY PLAN

PROJECT NUMBER
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 161-16652-WSP

SHEET TITLE
 ATTIC FLOOR PLAN

SHEET NUMBER
 AH 1-2



1 ATTIC FLOOR PLAN
 AH1.2 SCALE 1:50

PROJECT

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NIAGARA ON THE LAKE, ONTARIO
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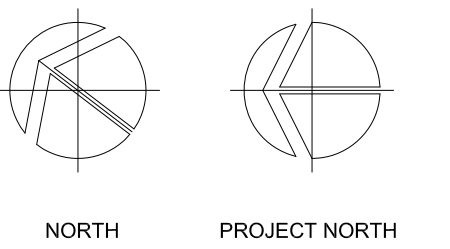
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KEY PLAN

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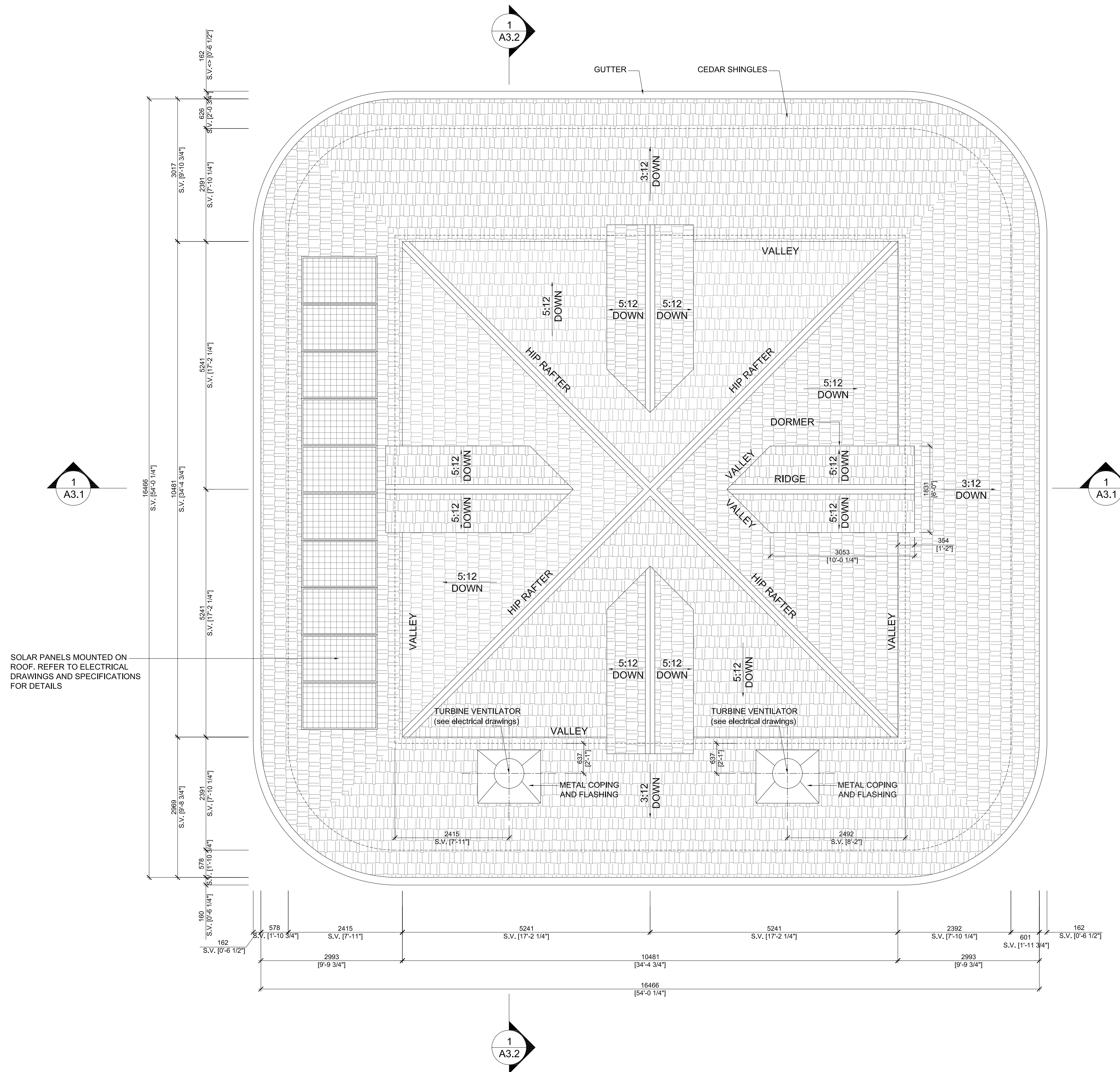
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161-16652-WSP

SHEET TITLE

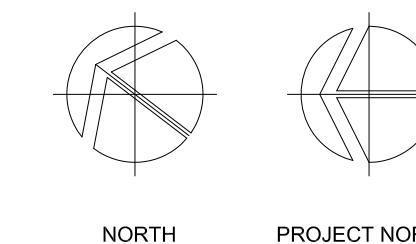
ROOF PLAN

SHEET NUMBER

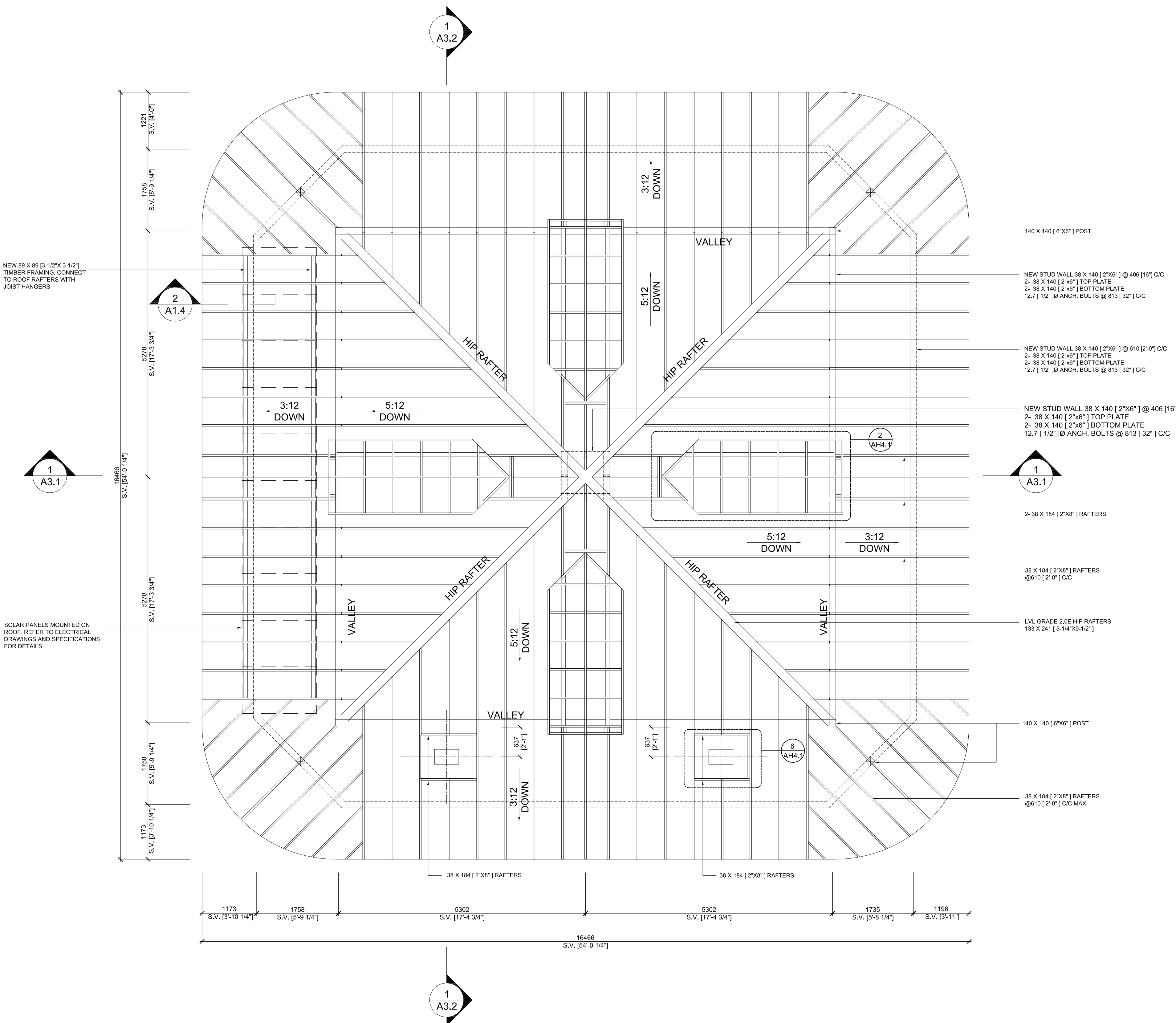
AH 1-3



1 ROOF PLAN
AH1.3 SCALE 1:50



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GENERAL NOTES

THE DRAWINGS DESCRIBE THE COMPLETE PROJECT. THEY DO NOT INDICATE ELEMENTS WHICH MAY BE NECESSARY FOR CONSTRUCTION SAFETY. THE CONTRACTOR IS RESPONSIBLE FOR SAFETY IN AND ABOUT THE JOB SITE DURING CONSTRUCTION.

REFER TO DRAWING S-100 FOR CLIMATIC DATA USED IN THE STRUCTURAL DESIGN.

WOOD FRAMING

TIMBER DESIGN AND CONSTRUCTION IN ACCORDANCE WITH 2006 O.B.C. AND 2010 N.B.C. WITH STRUCTURAL COMMENTARIES (PART 4) AND CAN/C.S.A. 086-01.

WOOD JOISTS, BEAMS, RAFTERS, AND COLUMNS TO BE S-P-F No. 1 GRADE MATERIAL IN ACCORDANCE WITH N.L.G.A. STANDARD GRADING RULES FOR CANADIAN LUMBER.

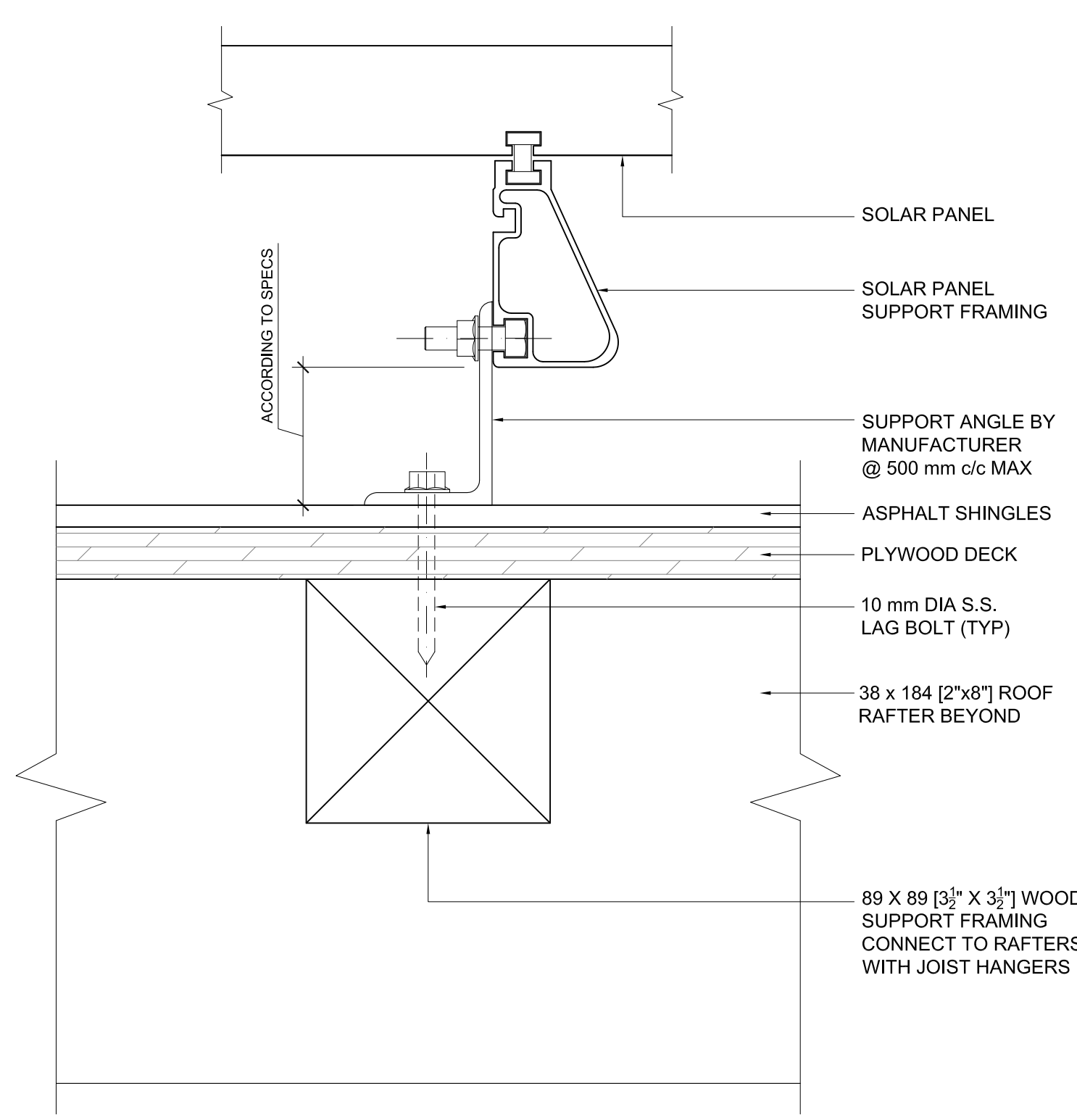
ALL BOTTOM PLATES IN CONTACT WITH MASONRY ARE TO BE PRESSURE TREATED WOOD.

ALL SHEATHING AROUND OUTSIDE PERIMETER AND ROOF SHALL BE FASTENED WITH 3" LG COMMON NAILS @ 150mm O.C. ALONG PANEL EDGES AND 300mm O.C. @ INTERMEDIATE FRAMING MEMBERS - U.N.O.

ALL NAILS INDICATED ON DRAWINGS ARE COMMON WIRE NAILS. IF POWER DRIVEN NAILS ARE USED CONSULT WITH PROJECT ENGINEER TO REVISE NAIL SPACING.

INSTALL SOLID BLOCKING @ MAX. 1220mm O.C. IN ALL STUD WALLS BETWEEN STUDS.

DO NOT CUT, DRILL, NOTCH, OR MODIFY FLOOR JOISTS, ROOF JOISTS, BEAMS, COLUMNS, OR TRUSSES EXCEPT IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND THE ENGINEER.



1 ROOF FRAMING PLAN
 AH1.4 SCALE 1:50

2 SECTION AT SOLAR PANEL-ROOF CONNECTION
 AH1.4 SCALE 1:2

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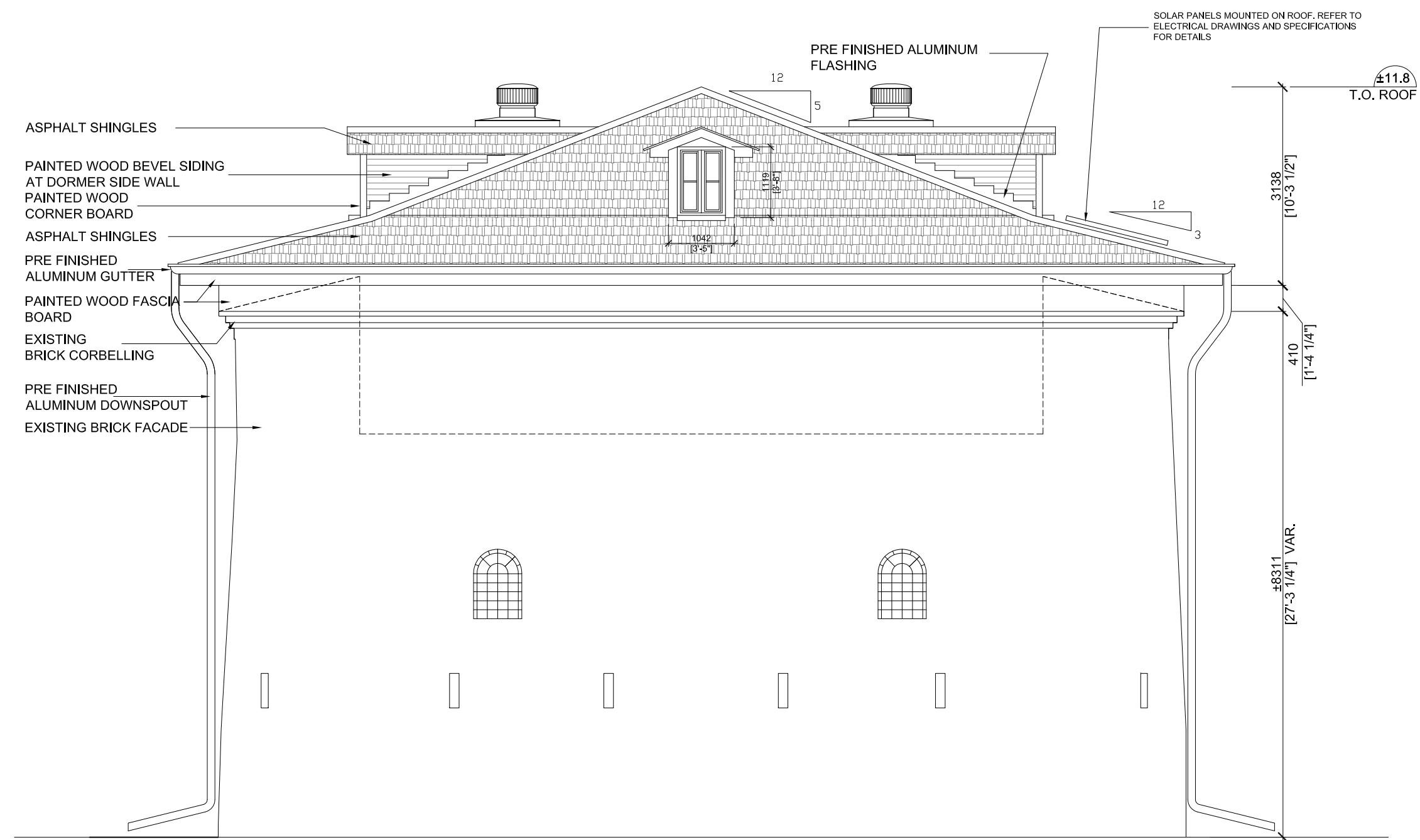
12-579-AREA
161-16652-WSP

SHEET TITLE

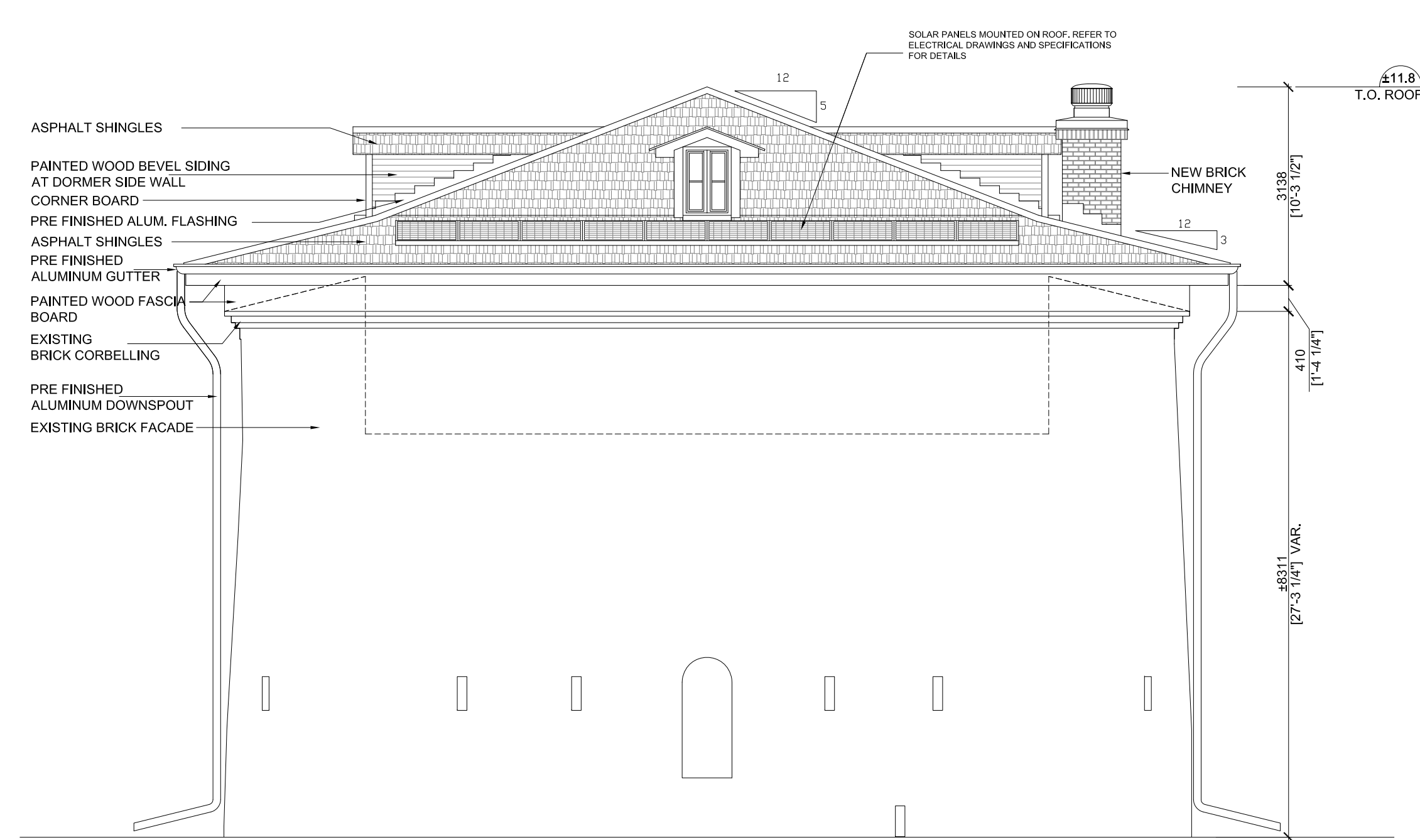
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SHEET NUMBER

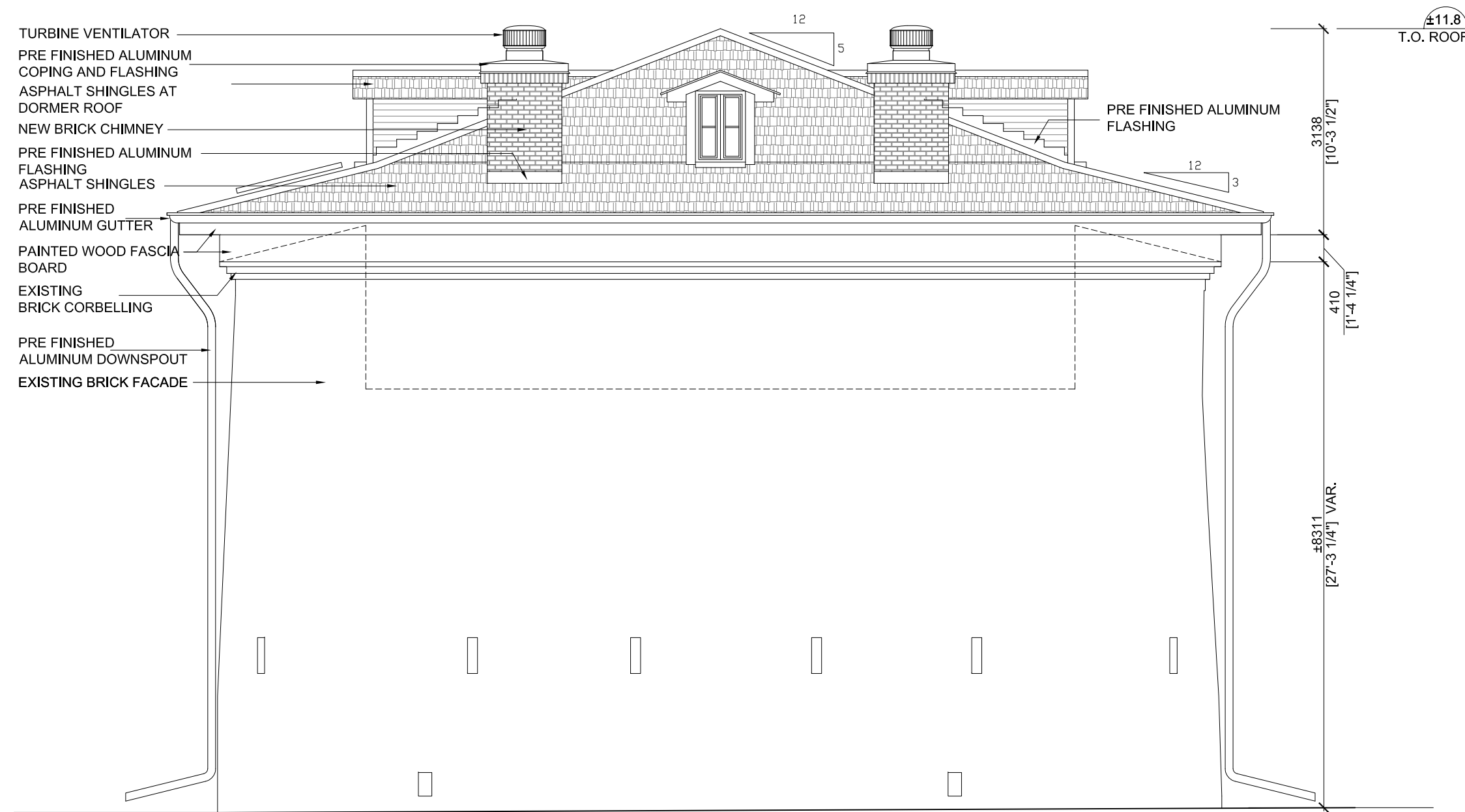
AH 2-1



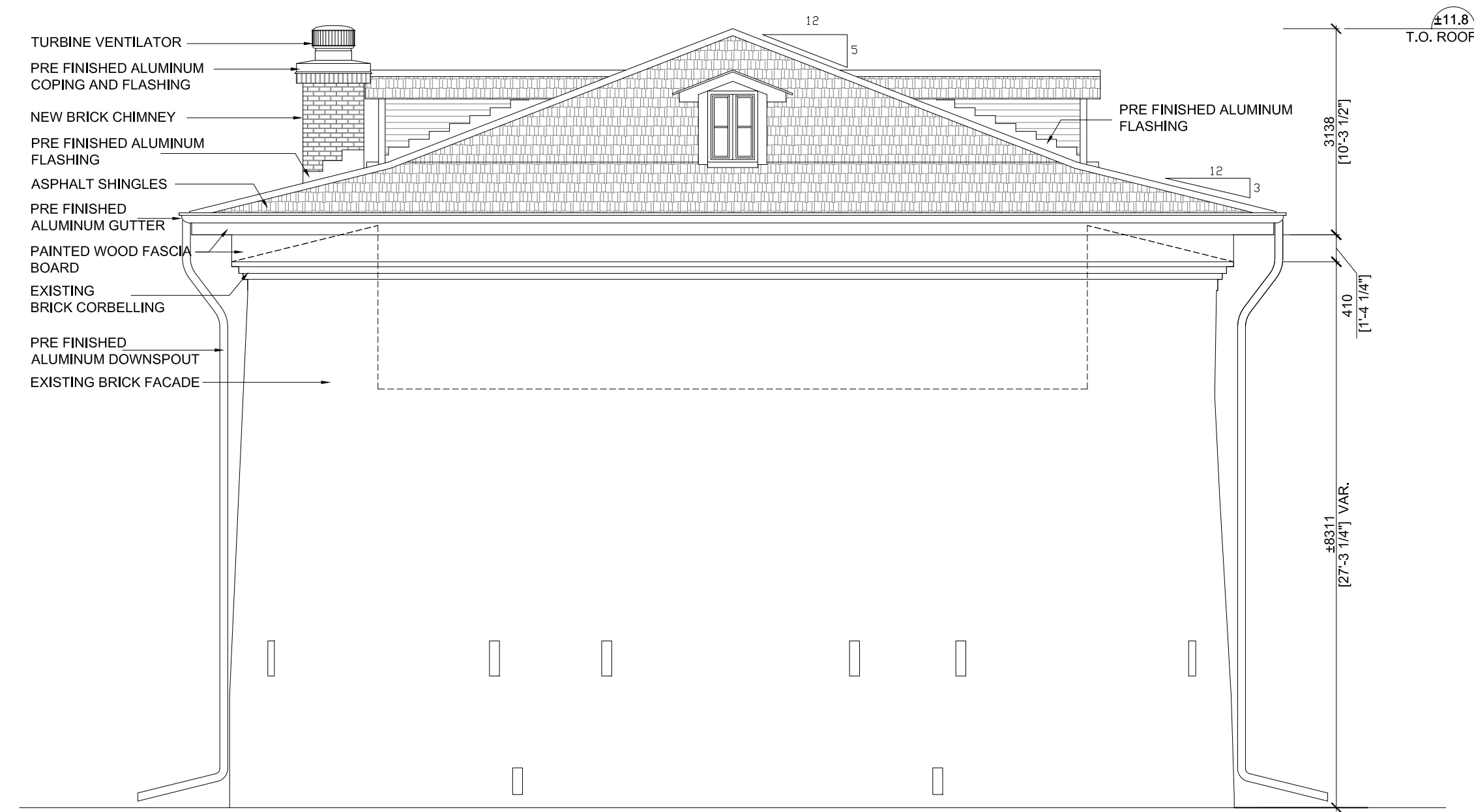
1 EAST ELEVATION
AH2.1 SCALE 1:75



3 NORTH ELEVATION
AH2.1 SCALE 1:75



2 WEST ELEVATION
AH2.1 SCALE 1:75



4 SOUTH ELEVATION
AH2.1 SCALE 1:75

PROJECT

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1	11/30/12	80% FOR CLIENT REVIEW

KEY PLAN

PROJECT NUMBER

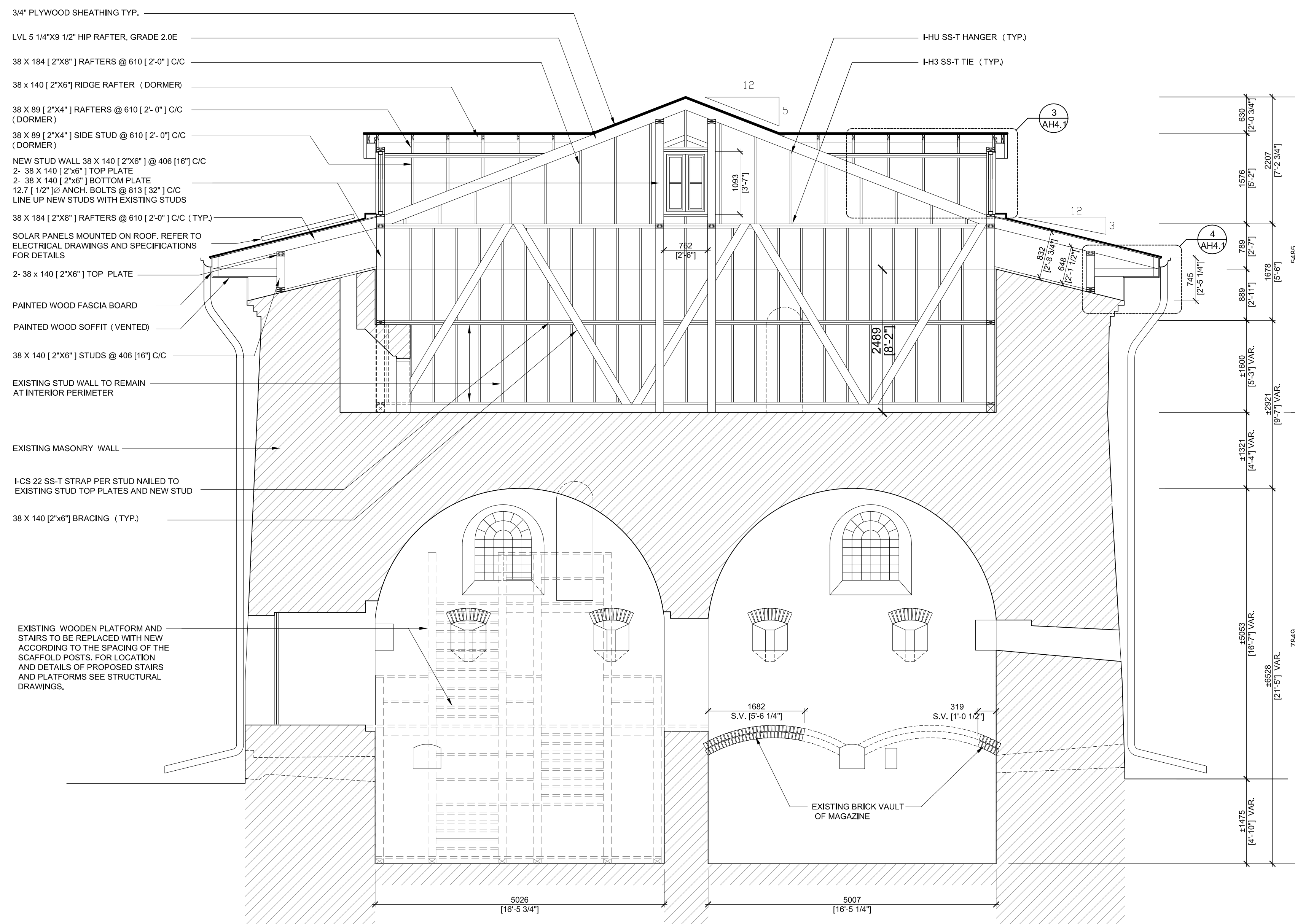
12-579-AREA
161-16652-WSP

SHEET TITLE

SECTIONS

SHEET NUMBER

AH 3-1



1 CROSS SECTION
AH3.1 SCALE 1:50

PROJECT

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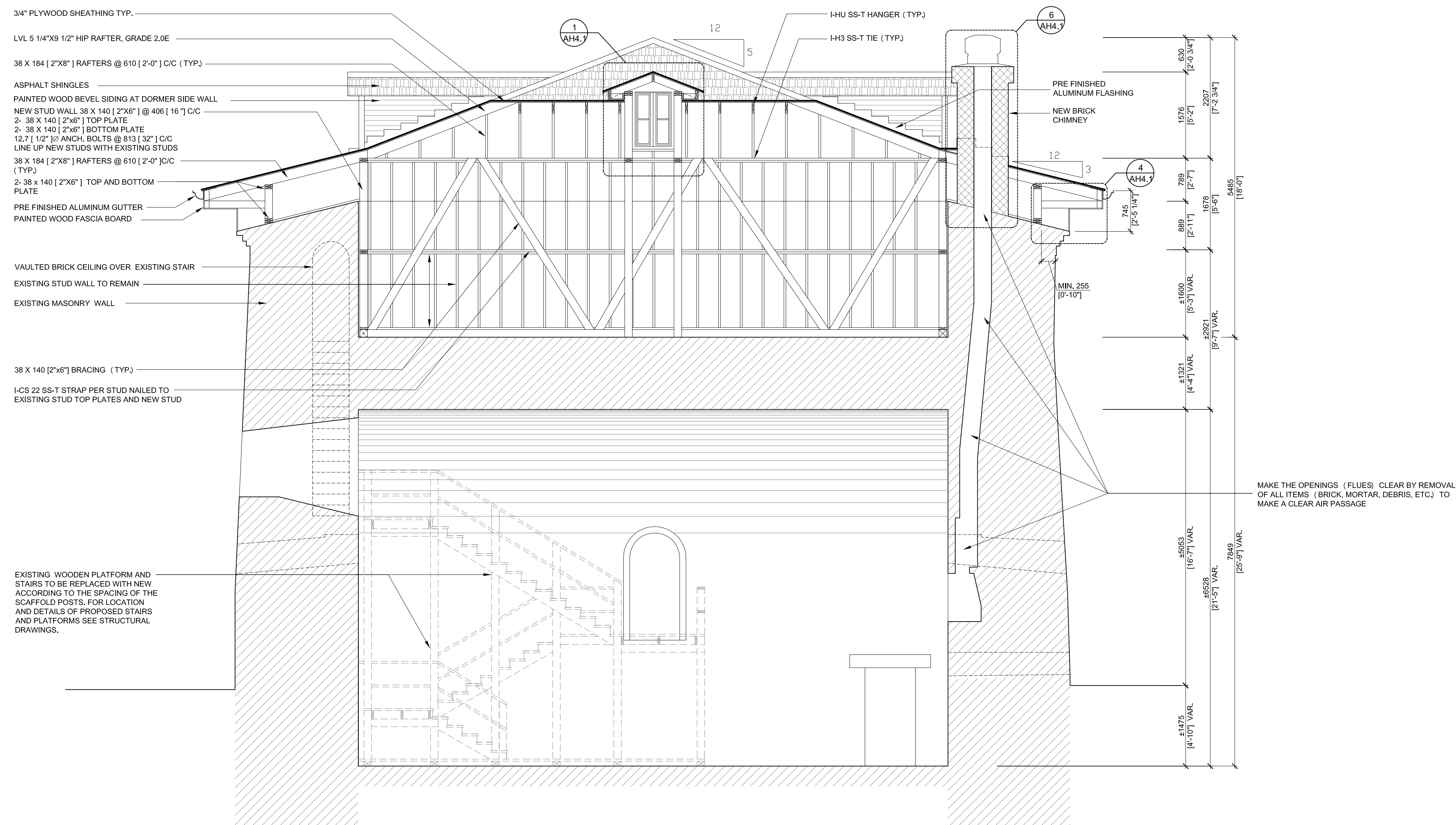
12-579-AREA
161-16652-WSP

SHEET TITLE

SECTIONS

SHEET NUMBER

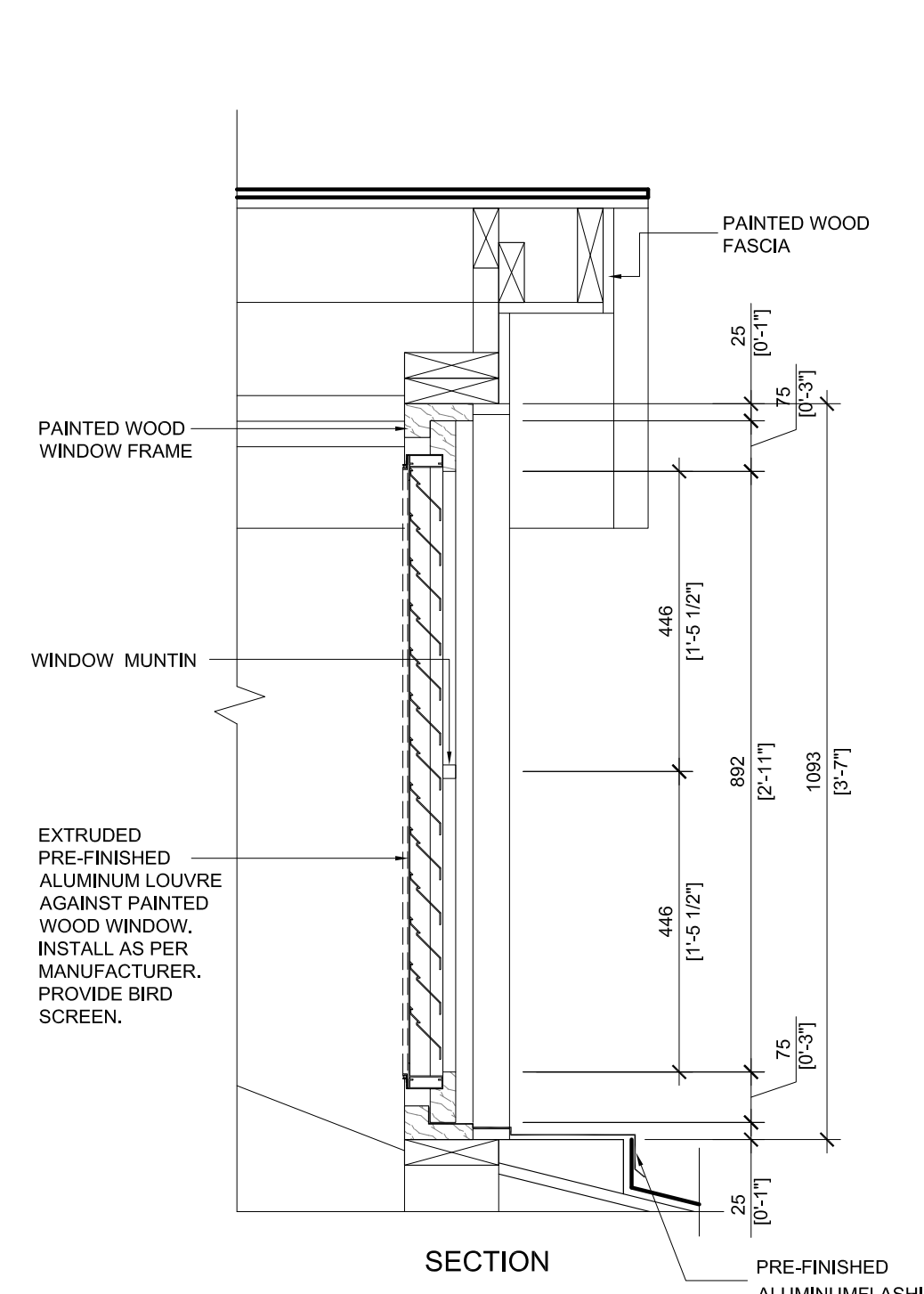
AH 3-2



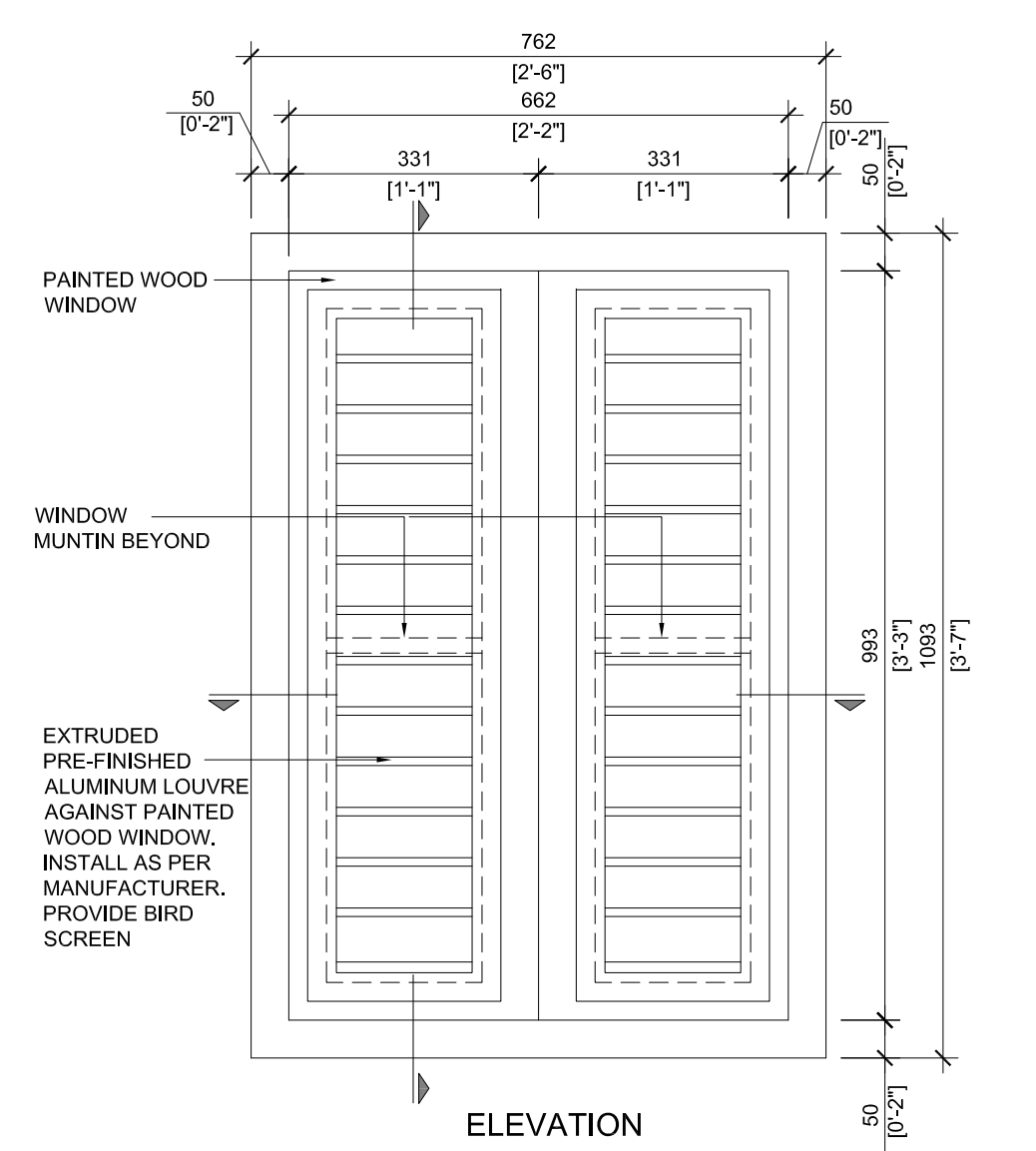
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AH3.2 SCALE 1:50



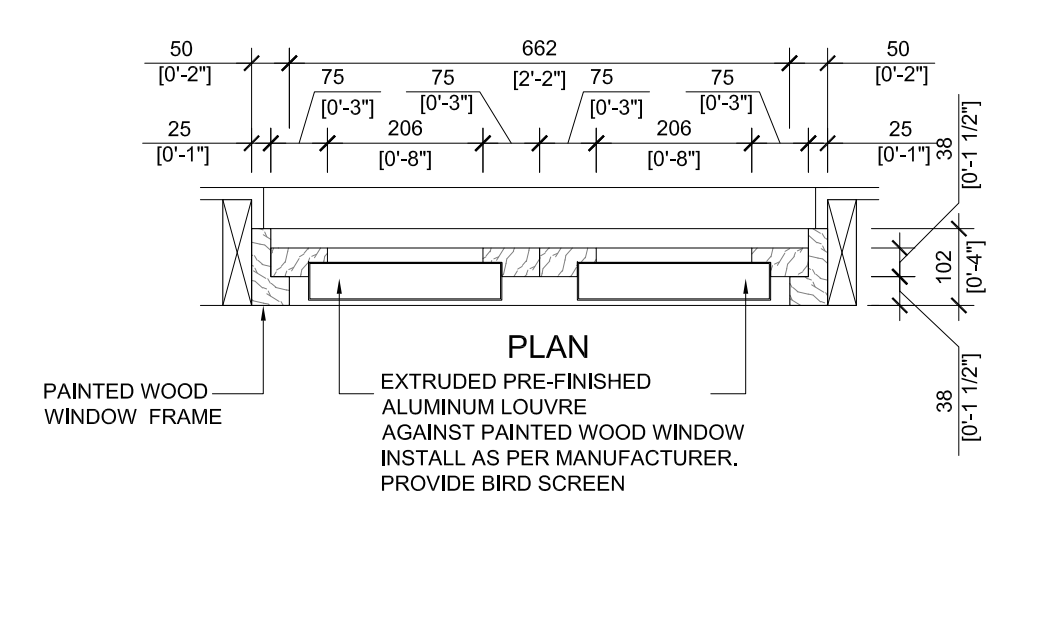
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5	01/03/17	FOR CLIENT REVIEW
4	03/21/13	ISSUED FOR TENDER
3	03/07/13	REVISED WITH STRUCTURAL NOTES
2	01/15/13	100% FOR CLIENT REVIEW
1	11/30/12	80% FOR CLIENT REVIEW



SECTION

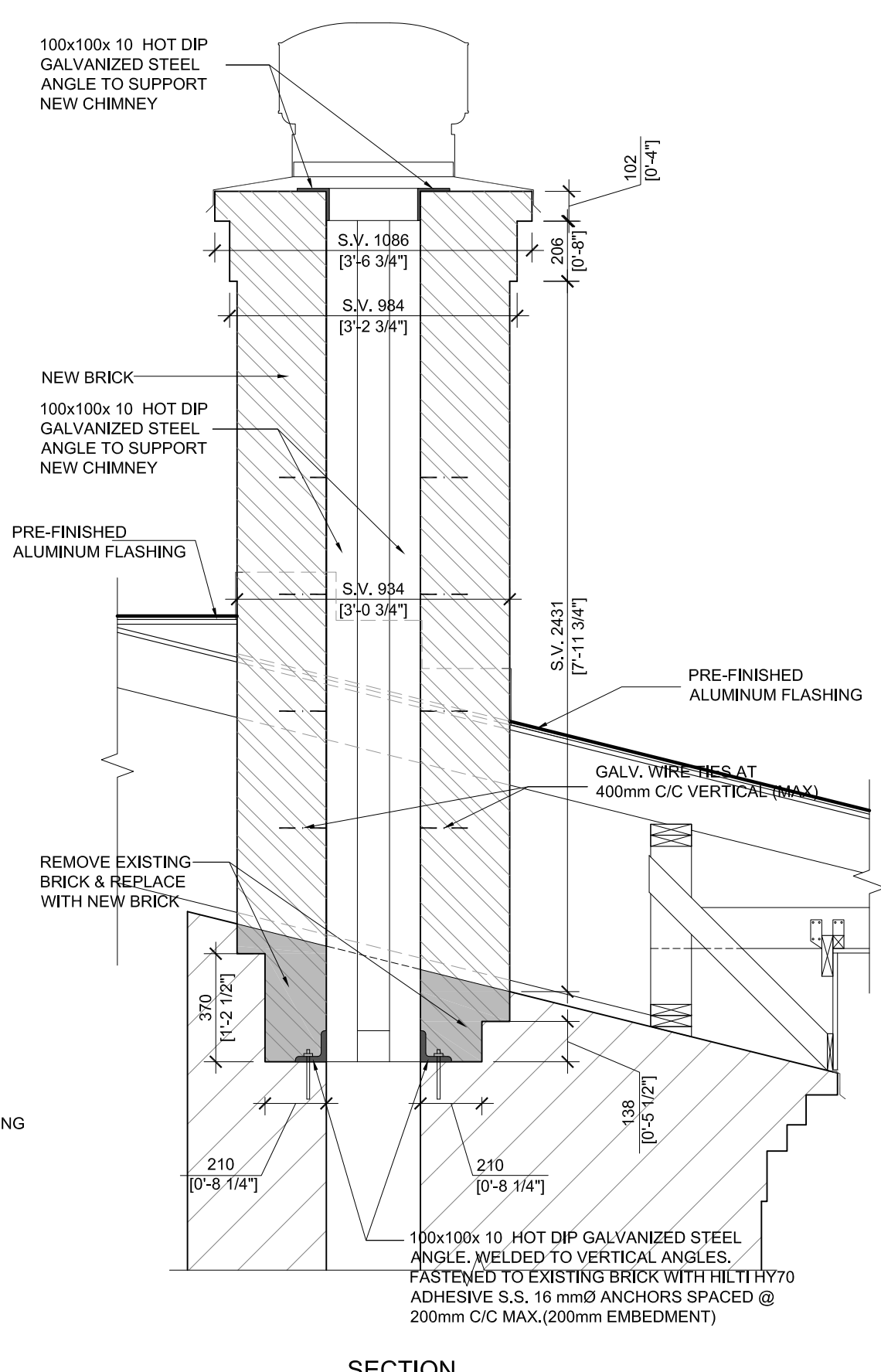


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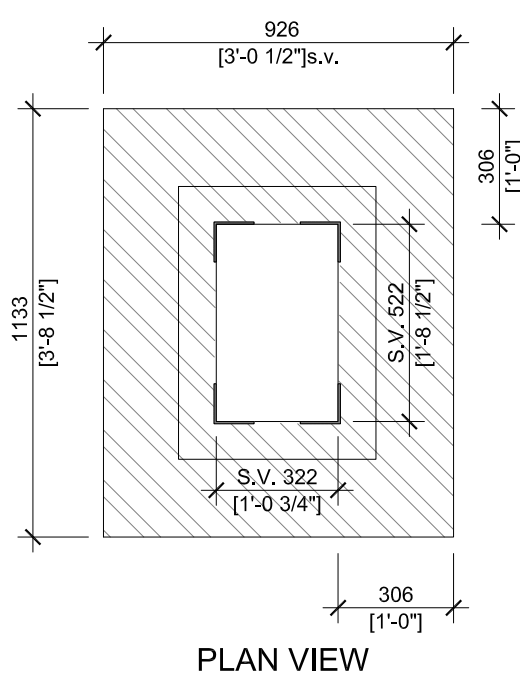


PLAN

7 DORMER WINDOW
 SCALE 1:10

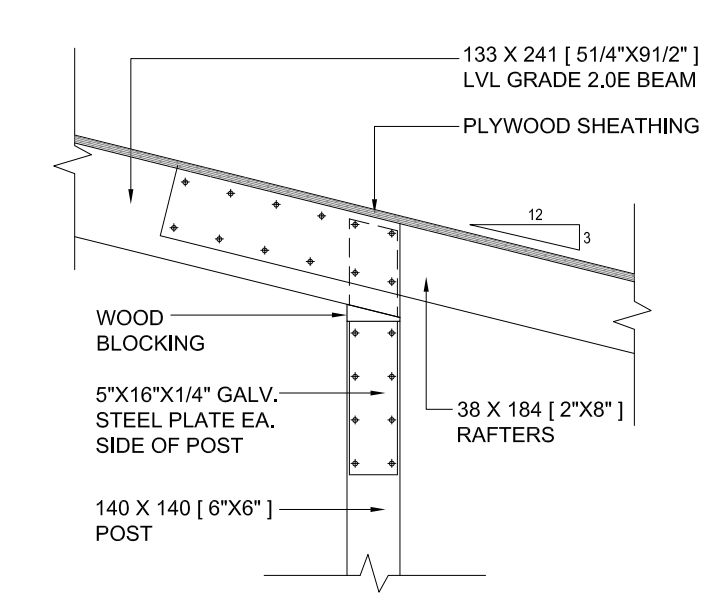


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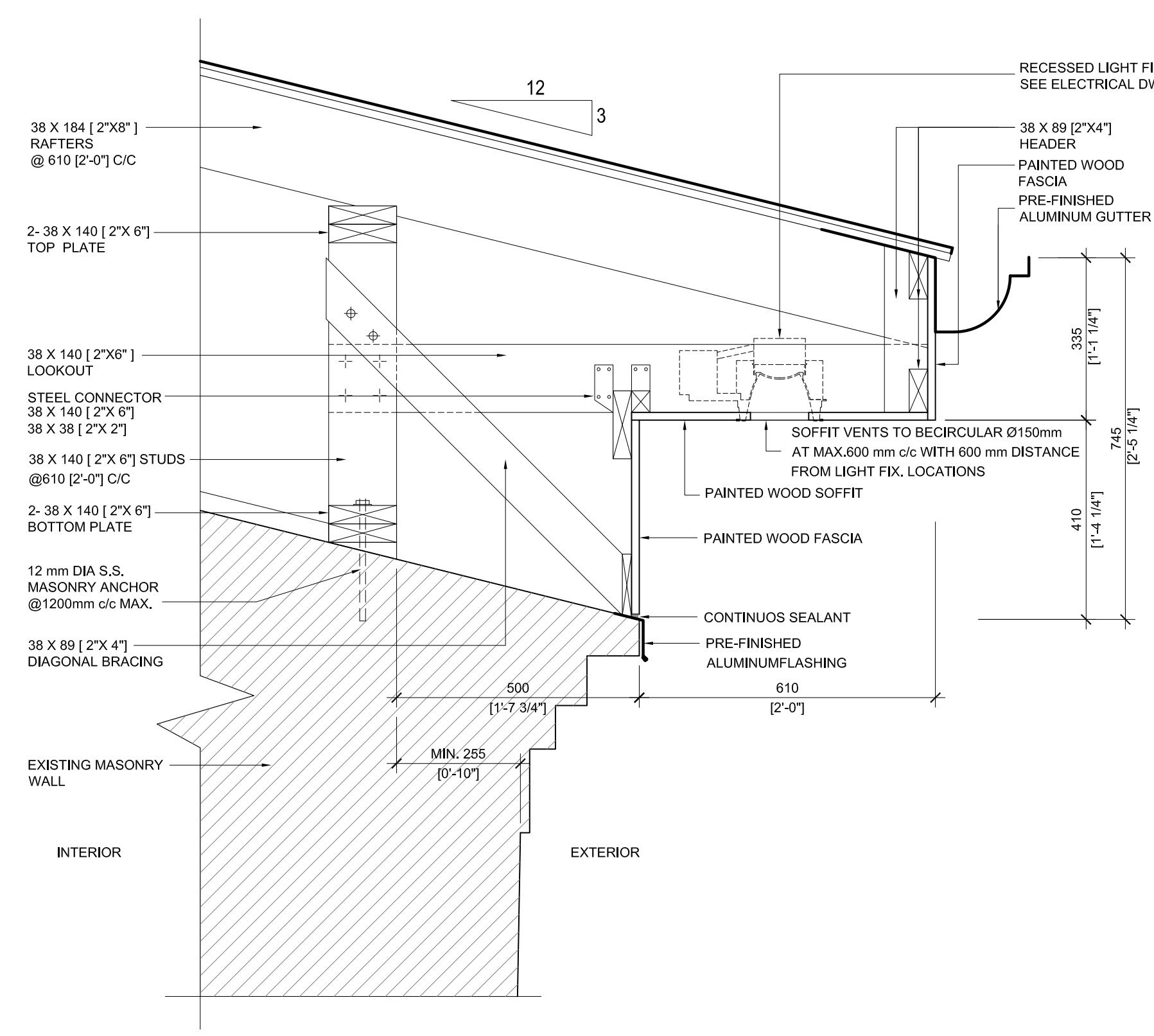


PLAN VIEW

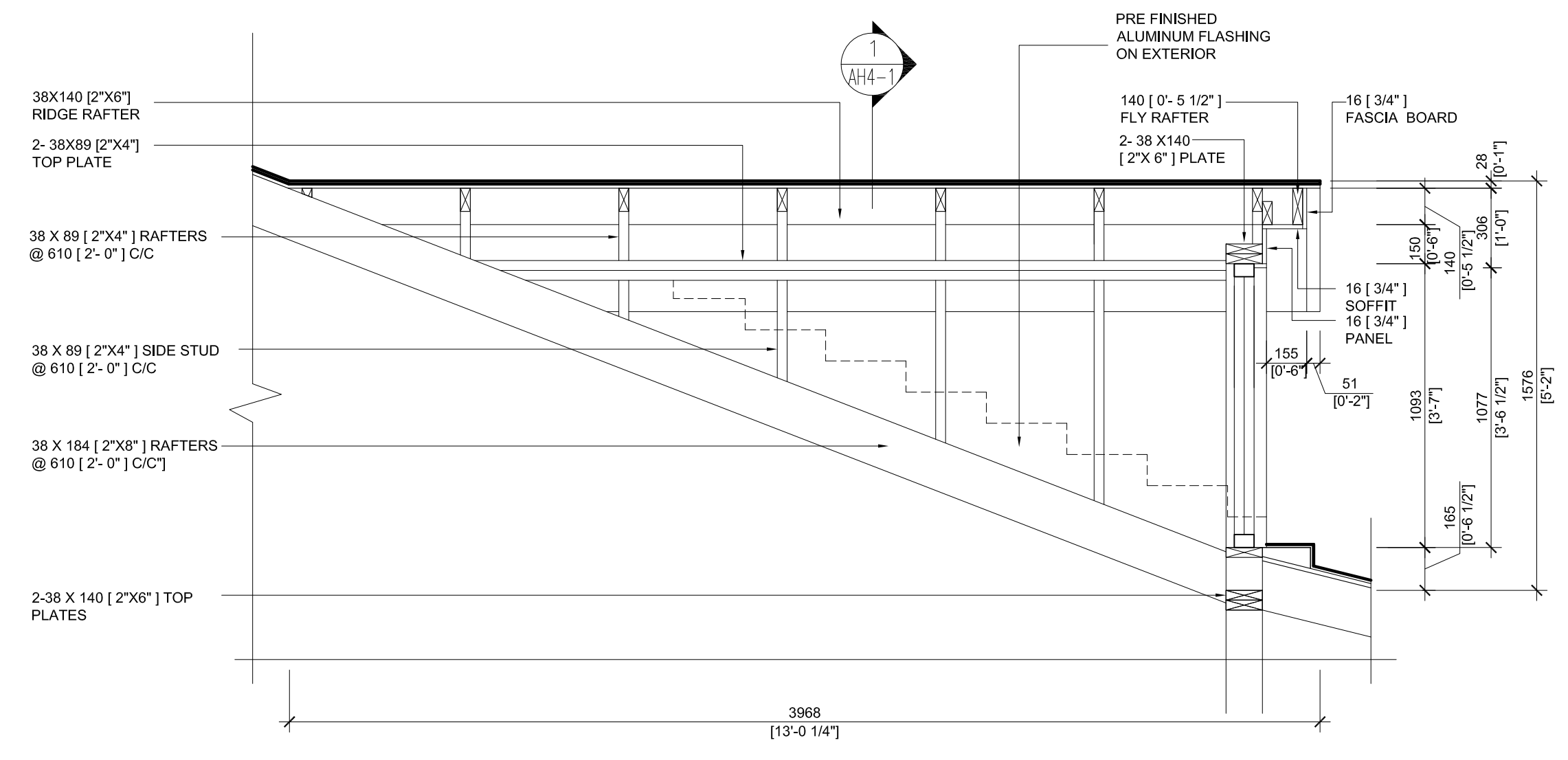
6 CHIMNEY PLAN AND SECTION
 SCALE 1:20



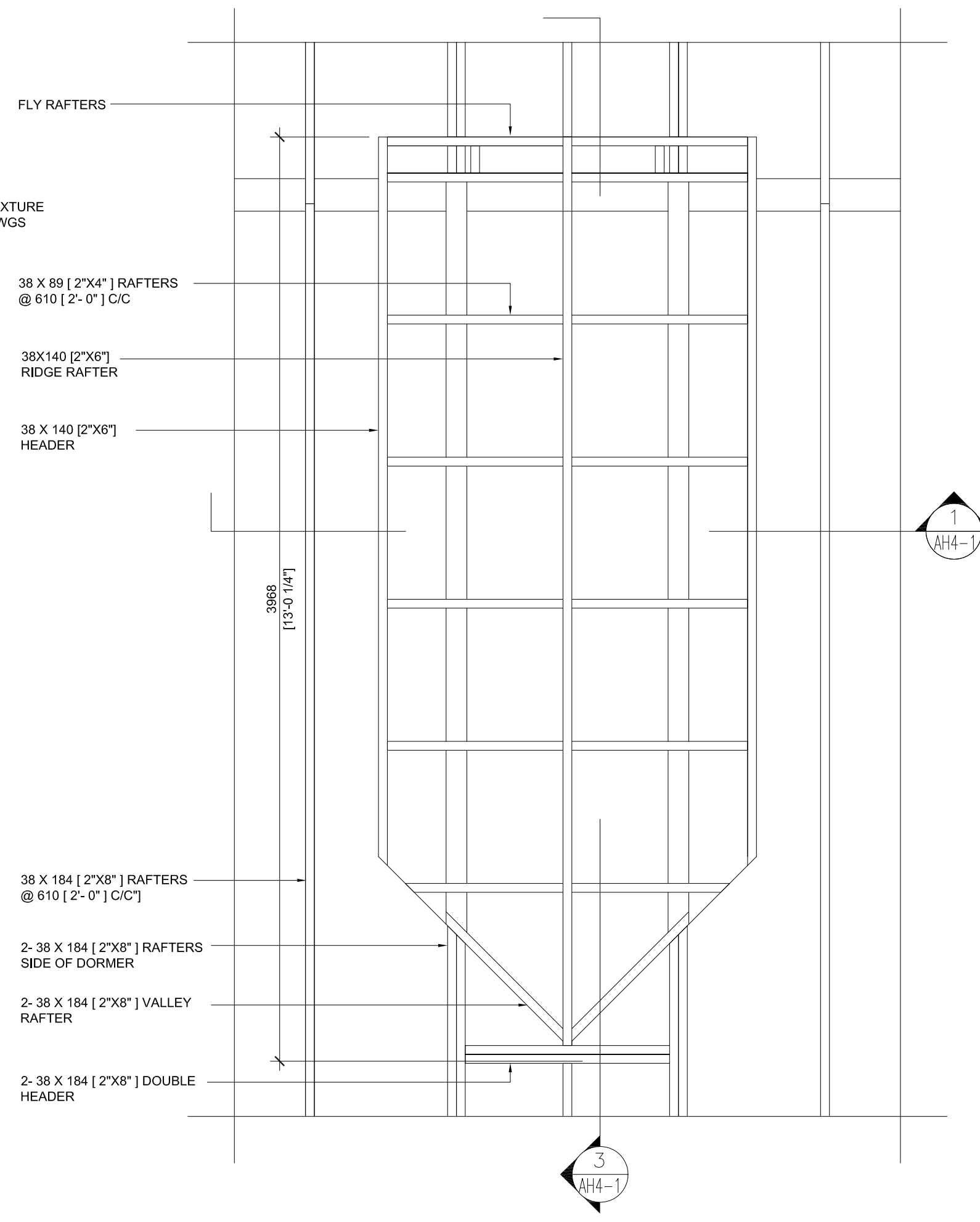
5 POST BEAM CONNECTION
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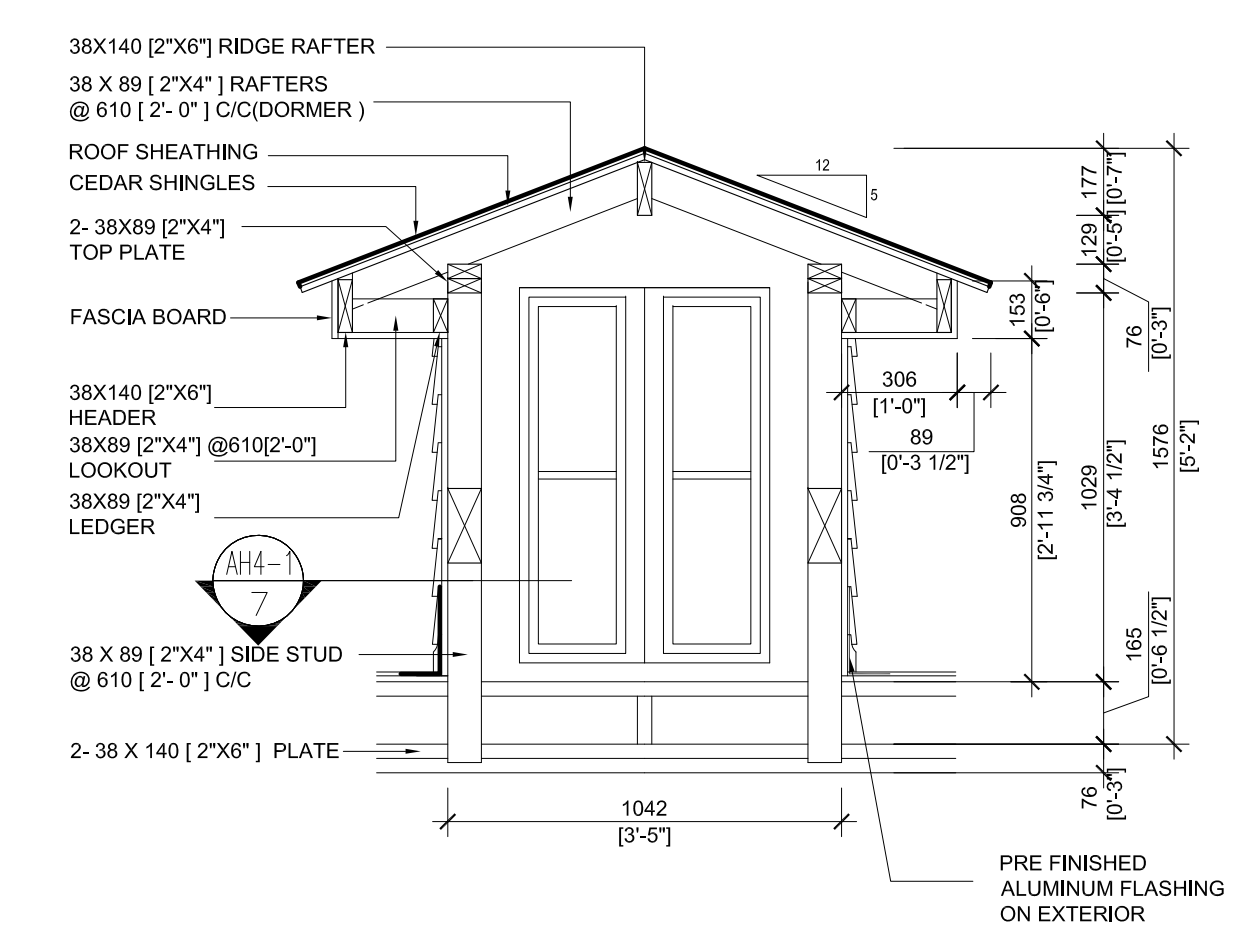
4 SECTION AT EAVE
 SCALE 1:10



3 SECTION AT DORMER
 SCALE 1:20



2 DORMER PLAN VIEW
 SCALE 1:20



1 SECTION AT DORMER
 SCALE 1:20



STRUCTURAL WORK

GENERAL

1. PROVIDE ALL MATERIAL AND LABOUR REQUIRED FOR COMPLETION OF THE WORK. BREAKDOWN OF WORK BY TRADE IS FOR GUIDANCE ONLY AND IS NOT NECESSARILY COMPLETE.
2. COORDINATE WORK SHOWN ON STRUCTURAL DRAWINGS WITH WORK SHOWN ON ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS, WITH ALL OTHER DISCIPLINES AND WITH EXISTING CONDITIONS. REPORT ANY INCONSISTENCIES TO THE CONSULTANT BEFORE PROCEEDING WITH THE WORK.
3. THIS IS A METRIC PROJECT. UNLESS OTHERWISE NOTED, ALL LENGTHS ARE IN MILLIMETERS.
4. DO NOT SCALE THESE DRAWINGS.

CODES AND STANDARDS

1. COMPLY WITH THE REQUIREMENTS OF THE 2012 BUILDING CODE AND REFERENCED DESIGN AND MATERIAL STANDARDS.

SUBMITTALS

1. SUBMIT FOR REVIEW BEFORE START OF WORK, PDF FILES OR 4 COPIES OF SHOP DRAWINGS FOR:
 - CONCRETE REINFORCEMENT (INCLUDING PLACING DIAGRAMS AND BAR LISTS)
 - STRUCTURAL STEEL
 - SHORING OF THE EXISTING ARCHED FLOOR
2. SUBMIT CONCRETE MIX DESIGNS BEFORE START OF WORK.
3. SHOP DRAWINGS FOR FALSEWORK, STRUCTURAL STEEL, AND SHORING TO BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER RESPONSIBLE FOR THEIR DESIGN, RETAINED BY THE CONTRACTOR AND REGISTERED IN THE PLACE THE PROJECT IS LOCATED.
4. REVIEW OF SHOP DRAWINGS BY WSP CANADA INC. IS ON A SAMPLING BASIS. FOR GENERAL CONFORMITY WITH STRUCTURAL CONTRACT DOCUMENTS. IT IS NOT A DETAILED CHECK AND MUST NOT BE CONSTRUED AS RELIEVING THE CONTRACTOR OF HIS RESPONSIBILITY TO MAKE THE WORK ACCURATE AND IN CONFORMITY WITH ALL THE CONTRACT DOCUMENTS, TO REVIEW SHOP DRAWINGS AND TO COORDINATE WORK OF INTERFACING TRADES AND MANUFACTURE OF INTERFACING PRODUCTS.
5. REVIEW OF SHOP DRAWINGS DOES NOT IMPLY ANY CHANGE IN ANY OTHER CONSULTANTS' OR PROFESSIONALS' RESPONSIBILITIES RELATED TO DESIGN OF SPECIFIC ITEMS AS OUTLINED BY THE SPECIFICATIONS.
6. AFTER REVIEW, SHOP DRAWINGS WILL BE STAMPED AND RETURNED. DO NOT COMMENCE FABRICATION UNTIL RETURNED SHOP DRAWINGS HAVE BEEN EXAMINED. CONFORM TO THE REQUIREMENTS OF EACH AUTHORITY THAT HAS REVIEWED THE DRAWINGS.
7. SHOP DRAWINGS MARKED "REVIEWED" CAN BE USED FOR FABRICATION. DO NOT MAKE ANY CHANGES OR ADDITIONS TO THESE DRAWINGS WITHOUT THE CONSULTANT'S APPROVAL.
8. SHOP DRAWINGS MARKED "REVIEWED AS NOTED" CAN BE USED FOR FABRICATION AFTER THE REVISIONS NOTED ARE IMPLEMENTED. DO NOT MAKE ANY FURTHER CHANGES OR ADDITIONS TO THESE DRAWINGS WITHOUT THE CONSULTANT'S APPROVAL.
9. SHOP DRAWINGS MARKED "REVISE AND RESUBMIT" REQUIRE SUBSTANTIAL REVISIONS AND MUST BE RESUBMITTED FOR ADDITIONAL REVIEW PRIOR TO FABRICATION. ALL CHANGES AND ADDITIONS TO THE PREVIOUS SUBMISSION TO BE CLEARLY IDENTIFIED ON THE RESUBMITTED DRAWINGS.
10. SHOP DRAWINGS MARKED "REVIEWED FOR IMPACT ON BASE STRUCTURE ONLY" SHOW WORKS WHICH ARE NOT WITHIN THE SCOPE OF STRUCTURAL CONSULTING SERVICES BUT AFFECT BEHAVIOUR OF THE BASE STRUCTURE. DESIGN OF THESE WORKS IS ENTIRELY THE CONTRACTOR'S RESPONSIBILITY; WSP CANADA INC. WILL NOT REVIEW DESIGN OF THESE WORKS AND ASSUMES THAT THE INDICATED WEIGHTS AND ALL OTHER LOADS IMPOSED ON THE BASE STRUCTURE ARE CORRECTLY IDENTIFIED BY THE DESIGNER / SUPPLIER OF THESE ELEMENTS.
11. DRAWINGS MARKED "NOT REVIEWED" SHOW WORKS WHICH ARE NOT WITHIN THE SCOPE OF STRUCTURAL CONSULTING SERVICES.
12. ALLOW A MINIMUM OF 10 WORKING DAYS FOR REVIEW OF EACH SUBMISSION OF SHOP DRAWINGS IN THE STRUCTURAL ENGINEER'S OFFICE. ALLOW MORE TIME WHEN LARGE QUANTITIES OF SHOP DRAWINGS ARE SUBMITTED. SUBMIT IN GENERAL CONFORMITY WITH THE SEQUENCE OF CONSTRUCTION INTENDED.

EXISTING STRUCTURE

1. EXISTING STRUCTURAL INFORMATION IS BASED UPON DRAWINGS PREPARED BY ARCHITECTS RASCH ECKLER ASSOCIATES (AREA) LTD. DATED MARCH 21, 2013.
2. TAKE ALL PRECAUTIONS NECESSARY TO PROTECT THE EXISTING HISTORIC STRUCTURE AND ARTIFACTS DURING CONSTRUCTION.
3. PROVIDE TEMPORARY SHORING AND BRACING REQUIRED FOR ALL CONSTRUCTION OPERATIONS.
4. EXISTING CONDITIONS ARE ASSUMED. REPORT ANY VARIATIONS TO THE CONSULTANT BEFORE PROCEEDING WITH THE WORK.
5. MAKE GOOD ALL EXISTING WORK DISTURBED BY SHORING OPERATIONS, EXCAVATION AND OTHER CONSTRUCTION PROCEDURES.

FOUNDATIONS

1. FOUNDATION DESIGN IS BASED UPON A GEOTECHNICAL REPORT PREPARED FOR THE PROJECT BY TERRAPROBE INC., REPORT NO. 71-12-7064 DATED OCTOBER 28, 2012.
2. SET FOUNDATIONS ON UNDISTURBED SOIL CAPABLE OF SUPPORTING BEARING PRESSURE OF 150KPA AT ULS AND 225 KPA AT SLS. DEPTHS AT WHICH THESE CAPACITIES CAN BE ACHIEVED CAN BE FOUND IN THE GEOTECHNICAL REPORT.
3. PRIOR TO PLACING FOOTINGS, BEARING CAPACITY OF EACH FOOTING TO BE CONFIRMED IN WRITTEN REPORTS BY A GEOTECHNICAL ENGINEER RETAINED BY THE CONTRACTOR. GEOTECHNICAL ENGINEER TO CARRY LIABILITY INSURANCE REQUIRED BY LEGISLATION. SUBMIT EACH REPORT IMMEDIATELY TO THE CONSULTANT.
4. PROTECT FOOTINGS, WALLS, SLABS ON GRADE AND ADJACENT SOIL AGAINST FREEZING AND FROST ACTION AT ALL TIMES DURING CONSTRUCTION.
5. THE LINE OF SLOPE BETWEEN ADJACENT EXCAVATIONS FOR FOOTINGS OR TRENCHES SHALL NOT EXCEED A RISE OF 7 IN A RUN OF 10.
6. DO NOT BACKFILL AGAINST WALLS RETAINING EARTH UNTIL ELEMENTS PROVIDING LATERAL SUPPORT, INCLUDING SLAB ON GRADE, ARE COMPLETED. BACKFILL SIMULTANEOUSLY ON BOTH SIDES OF OTHER WALLS BELOW GRADE.
7. DO NOT PLACE CONCRETE IN WATER OR ON FROZEN SOIL.

CONCRETE

1. CONFORM TO CSA A23.1 "CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION".
2. FOUNDATION WALLS AND FOOTINGS:
 - CLASS OF EXPOSURE: F1
 - MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS: 25 MPA
 - NOMINAL SIZE OF COARSE AGGREGATE: 20 (3/4").
3. DRILLED CONCRETE ANCHORS (DCA) TO BE HILTI KB-TZ. CONCRETE ADHESIVE ANCHORS TO BE HILTI HIT-HY 200 WITH HILTI HIT-Z ANCHOR RODS. LOCATE REBAR AND OTHER EMBEDMENTS IN CONCRETE FIRST AND ADJUST LOCATIONS OF ANCHORS AS INSTRUCTED BY ENGINEER IF THERE IS A CONFLICT. DO NOT CUT REBARS.
4. WHERE DRILLED IN BOWELS ARE SPECIFIED, USE HILTI HIT-HY200 ADHESIVE ANCHORING SYSTEM INSTALLED USING HILTI SAFESET HOLLOW DRILL BIT TECHNOLOGY.
5. REINFORCEMENT: USE NEW DEFORMED BAR REINFORCEMENT CONFORMING TO CSA S30.18 GRADE 400R OR 400W.
6. WHERE CONCRETE IS CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH, MINIMUM CONCRETE COVER TO REINFORCING BARS CLOSEST TO THE CONCRETE SURFACE TO BE 75 (3").
7. FOR CLASS N CONCRETE, MINIMUM CONCRETE COVER TO REINFORCING BARS CLOSEST TO THE CONCRETE SURFACE TO BE 40 (1 1/2") FOR BEAMS AND COLUMNS AND 25 (1") FOR SLABS AND WALLS.
8. FOR CLASS F-1 CONCRETE, MINIMUM COVER TO BE 40 (1 1/2").
9. HEAT CONCRETE AND DELIVER AT A TEMPERATURE BETWEEN +15°C AND +27°C, WHENEVER OUTDOOR TEMPERATURE IS LESS THAN +5°C.
10. ENSURE THAT SLEEVES AND OPENINGS DO NOT IMPAIR THE REQUIRED STRENGTH OF THE MEMBER, AND UNLESS SHOWN ON THE STRUCTURAL DRAWINGS, ARE ACCEPTED BY THE CONSULTANT FOR SIZE, LOCATION, AND REINFORCEMENT BEFORE CONCRETE IS CAST. NO TRADE SHALL CUT HOLES THROUGH EXISTING CONCRETE UNLESS ACCEPTABLE TO THE CONSULTANT.

STRUCTURAL STEEL

1. CONFORM TO CAN/CSA S16 "LIMIT STATES DESIGN OF STEEL STRUCTURES".
2. FABRICATOR TO BE CERTIFIED BY CANADIAN WELDING BUREAU UNDER REQUIREMENTS OF CSA W47.1, DIVISION 1 OR 2.
3. WELDERS TO BE CWB CERTIFIED.
4. PROTECT COMBUSTIBLE MATERIALS AND FINISHES DURING WELDING OPERATIONS.
5. MATERIALS:
 - WIDE FLANGE SECTIONS: CAN/CSA G40.21, GRADE 350W
 - CHANNEL, ANGLES AND PLATES: CAN/CSA G40.21, GRADE 300W
 - HOLLOW STRUCTURAL SECTIONS: ASTM A500, GRADE C (345 MPA FOR SQUARE / RECTANGULAR AND 317 MPA FOR ROUND SECTIONS), OR CAN/CSA G40.21, GRADE 350W, CLASS C OR H. MEMBERS REQUIRED TO BE GALVANIZED TO BE CLASS H, OR STRESS RELIEVED PRIOR TO GALVANIZING.
 - BOLTS, NUTS AND WASHERS: ASTM A325
 - ANCHOR RODS: CAN/CSA G40.21, GRADE 300W
 - FABRICATION: CAN/CSA S16
 - WELDING: CSA W59
6. PROVIDE ALL ERECTION BRACING REQUIRED TO KEEP THE STRUCTURE STABLE AND IN ALIGNMENT DURING CONSTRUCTION.
7. DETAILS ON STRUCTURAL DRAWINGS SHOW DESIGN INTENT. REFER TO SPECIFICATIONS FOR CONNECTION DESIGN, DETAILING, FABRICATION, AND ERECTION REQUIREMENTS.
8. DO NOT CUT HOLES OR OTHERWISE MODIFY STRUCTURAL MEMBERS ON SITE.
9. PROVIDE 40 MPA NON SHRINK GROUT UNDER BASE PLATES. DO NOT APPLY ANY LOADS TO THE STEELWORK BEFORE GROUT ACHIEVES SUFFICIENT STRENGTH.
10. DO NOT APPLY LATERAL LOADS TO MEMBERS UNLESS APPROVED BY THE CONSULTANT.

CONSTRUCTION REVIEW

1. NOTIFY THE CONSULTANT 48 HOURS PRIOR TO CONCRETE POURS, BACKFILLING, AND COVERING UP THE STRUCTURE WITH FINISHES.

TEMPORARY BRACING AND SHORING

1. MAKE ADEQUATE PROVISIONS FOR ALL LOADS ACTING ON THE STRUCTURE DURING ERECTION. PROVIDE TEMPORARY SHORING AND BRACING TO KEEP THE STRUCTURE PLUMB AND IN TRUE ALIGNMENT DURING CONSTRUCTION. MEMBERS SHOWN ON PLANS ARE THOSE REQUIRED FOR THE COMPLETED STRUCTURE AND MAY NOT BE SUFFICIENT DURING CONSTRUCTION.
2. TEMPORARY BRACING AND SHORING ARE THE RESPONSIBILITY OF THE CONTRACTOR

SHORING OF ARCHED SLAB

1. PROVIDE SHORING TO THE ARCHED SLAB AS PER THE STRUCTURAL DRAWINGS AND SPECIFICATION SECTION 31 04 31. THE SHORING SHOWN ON STRUCTURAL PLAN AND SECTIONS PRESENTS A GENERAL SHORING CONCEPT FOR THE SUPPORT OF THE ARCHED SLAB, AND DOES NOT NECESSARILY SHOW ALL NECESSARY SHORING COMPONENTS. DESIGN OF SHORING SYSTEM (INCLUDING POSTS, BEAMS, BRACING, PLATFORMS, STAIRS, HANDRAILS AND GUARDRAILS) FOR LOADS INDICATED ON THE DRAWINGS AND IN CONFORMANCE WITH APPLICABLE STANDARDS
2. SHORING SYSTEM SHOULD BE BY PERI, OR APPROVED EQUIVALENT.
3. PREPARE A MOCK-UP SAMPLE OF A SHORING TOWER FOR REVIEW.
4. PROVIDE SHOP DRAWINGS OF SHORING. INDICATE SHORING POST BASE REACTIONS, SHORING MEMBERS, SIZES, ERECTION DETAILS, METHODS, SEQUENCE OF ERECTION AND TYPE OF ERECTION EQUIPMENT.
5. VERTICAL LOAD ON INDIVIDUAL POSTS IS NOT TO EXCEED 100KN (ULS).

MONITORING OF MOVEMENTS AND VIBRATIONS

1. PROVIDE MONITORING OF MOVEMENTS AND VIBRATIONS PER THE SPECIFICATION SECTIONS 31 04 31 AND 31 23 33.01. THE QUANTITY AND LOCATION OF MONITORING STATIONS IS SHOWN ON STRUCTURAL DRAWINGS.

REJECTED WORK

1. DO NOT DELIVER MATERIALS WHICH ARE KNOWN NOT TO MEET THE REQUIREMENTS OF THE SPECIFICATIONS. IF REJECTED AFTER DELIVERY, REMOVE IMMEDIATELY.

REGISTRATION



ISSUE/REVISION

I/R	DATE	DESCRIPTION
1	MAR 22, 2017	ISSUED FOR TENDER

KEY PLAN

PROJECT NUMBER

161-16652 (WSP)

SHEET TITLE

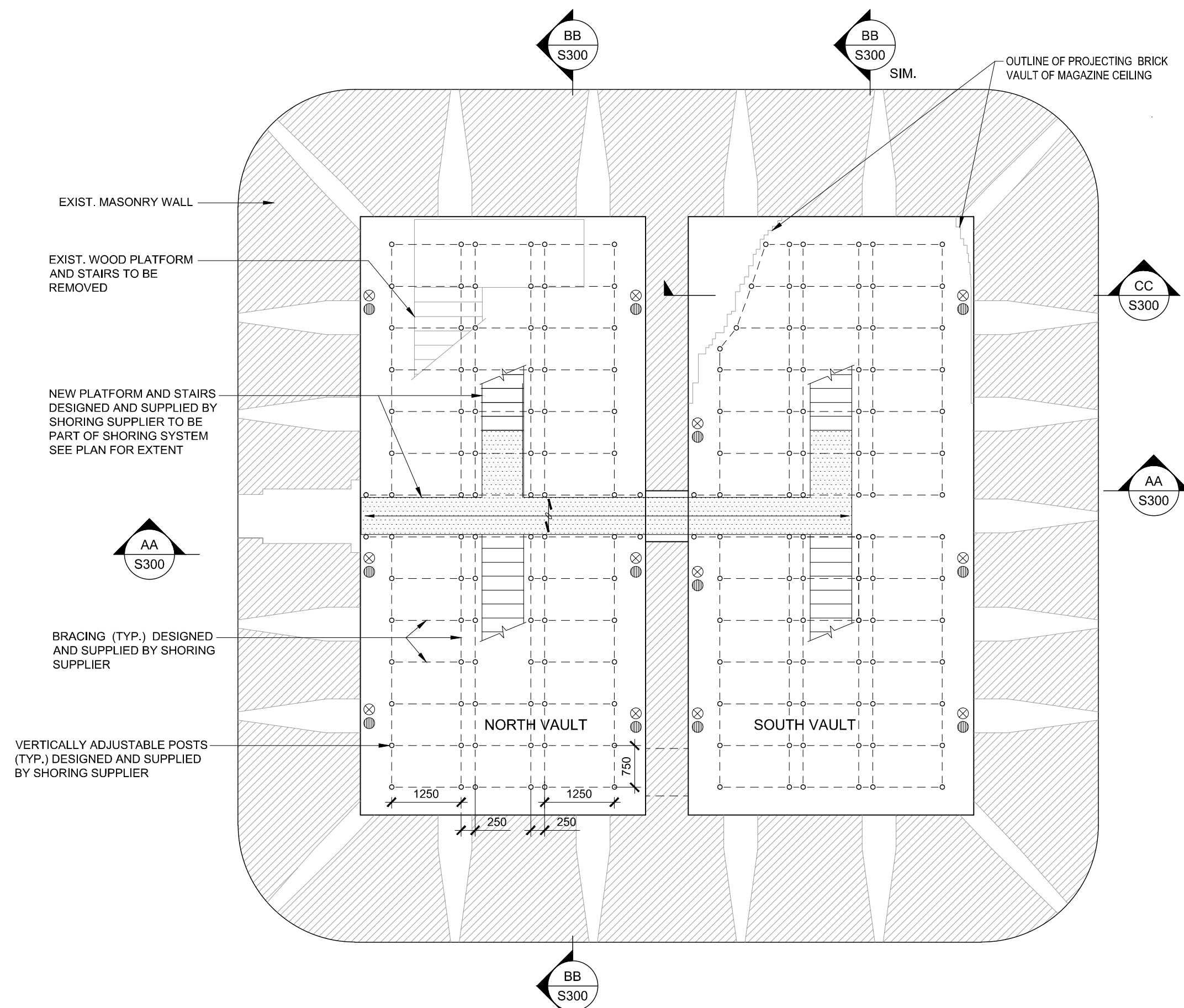
GENERAL NOTES

SHEET NUMBER

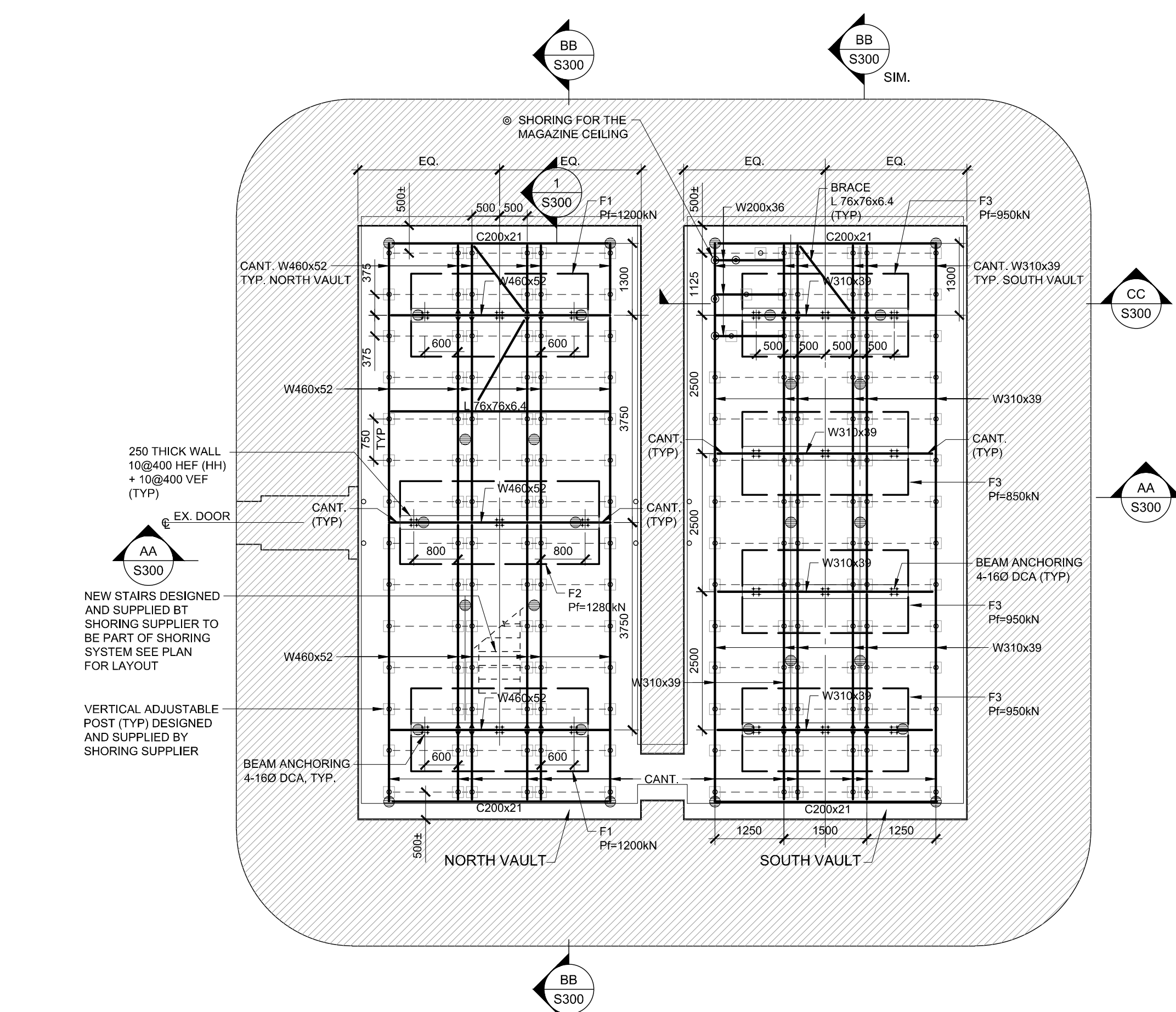
S-100



I/R	DATE	DESCRIPTION
1	MAR 22, 2017	ISSUED FOR TENDER



ENTRANCE LEVEL PLATFORM PLAN 1:75

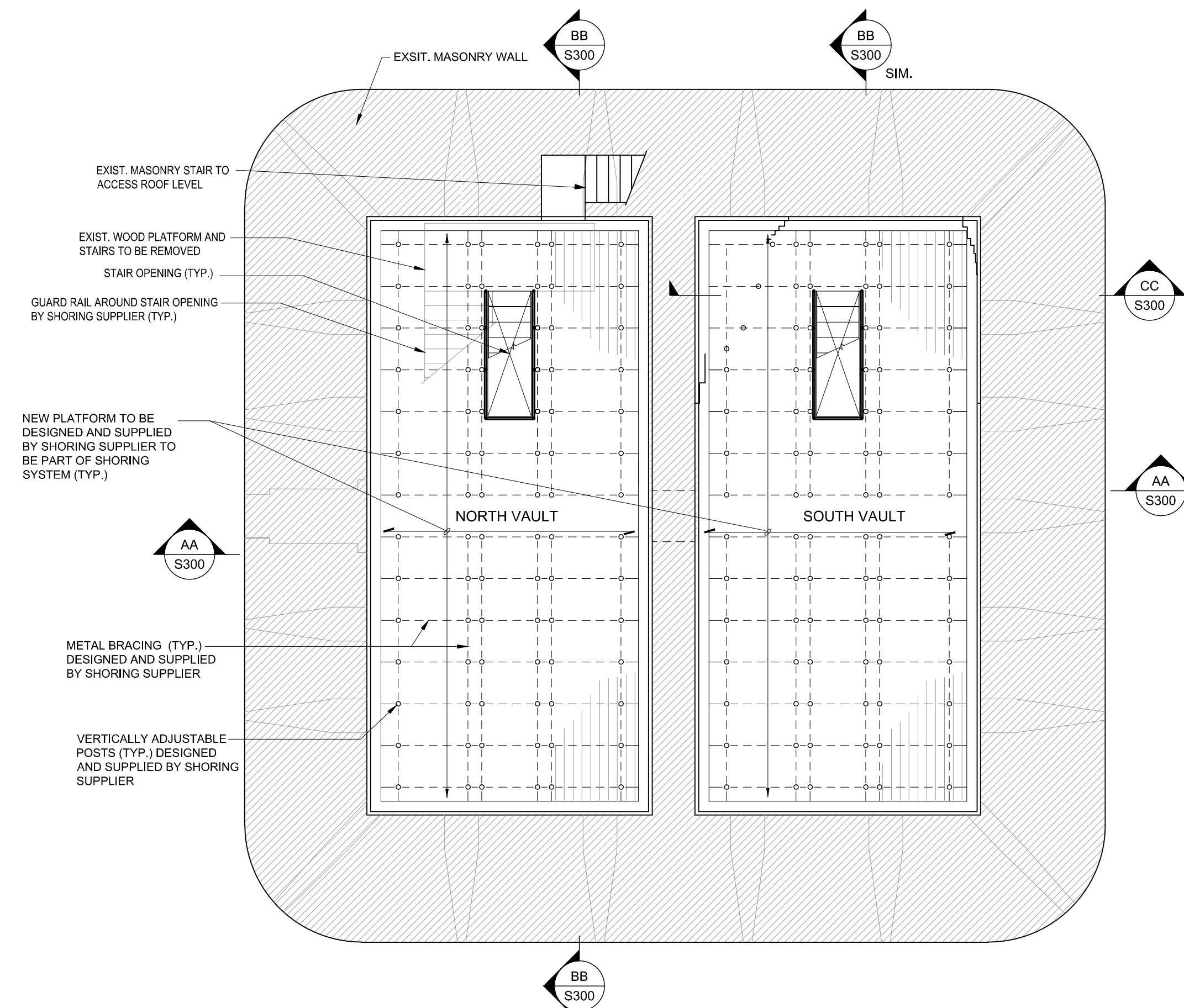


FOUNDATION PLAN 1:75

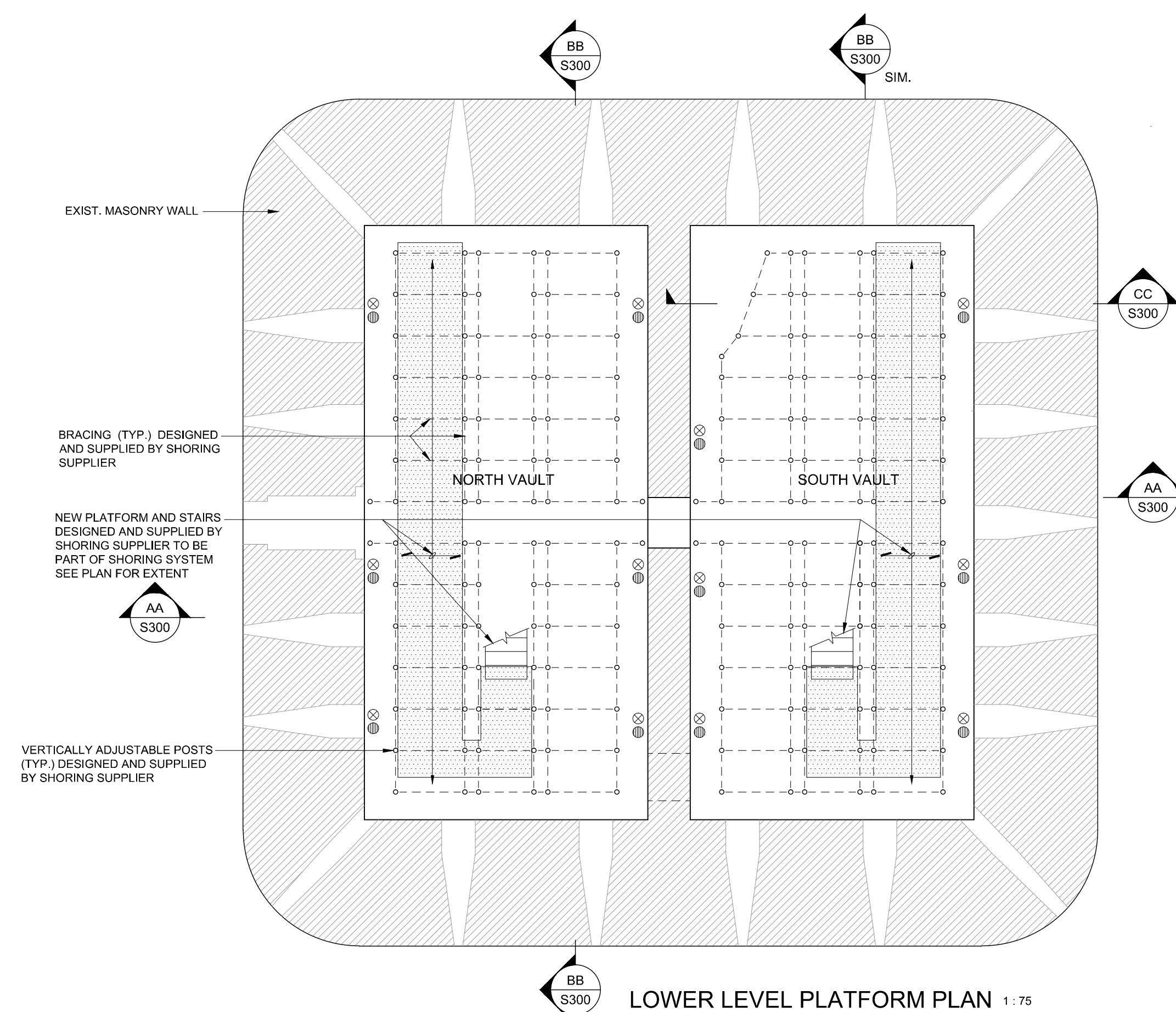
- SEE GENERAL REQUIREMENTS ON DRAWING S100.
- THE MAIN FLOOR DATUM ELEVATION IS LEVEL WITH THE FLOOR AT THE ENTRANCE.
- DESIGN LOADS:
ARCH. ATTIC SERVICE LOAD:
DL = VARIES SEE SCHEMATIC
LL = 2.4 kPa (50 psf)
PLATFORM AND STAIRS SERVICE LOAD:
DL = 1.0 kPa (21 psf)
LL = 2.4 kPa (50 psf)
SCHEMATIC - ARCH SOFFIT DEAD LOAD (UNFACTORED)
- TOP OF STEEL GRADE BEAMS IS -1730MM FROM MAIN FLOOR DATUM ELEVATION, EXCEPT WHERE NOTED xX ON PLAN.
- EXISTING FOUNDATION LOCATIONS AND ELEVATIONS ARE BASED UPON DRAWINGS PREPARED BY ARCHITECTS RASCH ECKLER ASSOCIATES (AREA) LTD. DATED MARCH 21, 2013.
- SEE DRAWING S200 FOR FOOTING AND PIER SCHEDULE.
- UNLESS OTHERWISE NOTED, SET BOTTOMS OF COLUMN AND WALL FOOTINGS (BOF) 1200MM BELOW EXISTING FLOOR LEVEL.
- PROVIDE DOWELS TO PIERS / COLUMNS TO MATCH VERTICAL REINFORCING.
- REFER TO GENERAL NOTES FOR FOUNDATION BEARING CAPACITY.

SNOW LOAD (kPa)		WIND
Ss	Sr	1/50 (kPa)
2.0	0.40	0.43

FOOTING SCHEDULE				
MARK	SIZE	DEPTH	REINFORCEMENT	MAX LOAD (kN)
F1	3200 x 1800	300	15@250 BEW (HH)	-
F2	3600 x 1600	300	15@250 BEW (HH)	-
F3	3000 x 1500	300	15@250 BEW (HH)	-



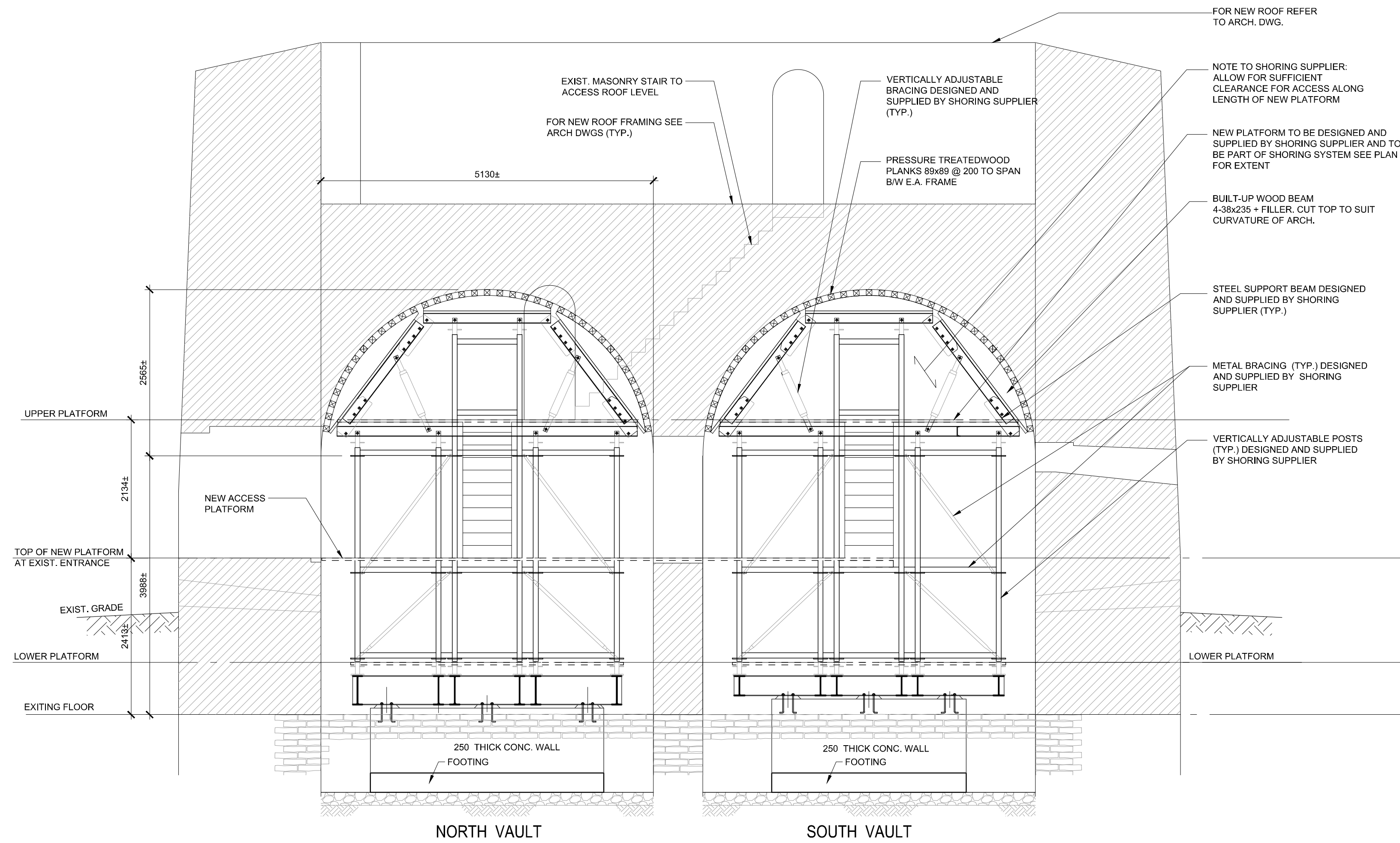
UPPER PLATFORM PLAN 1:75



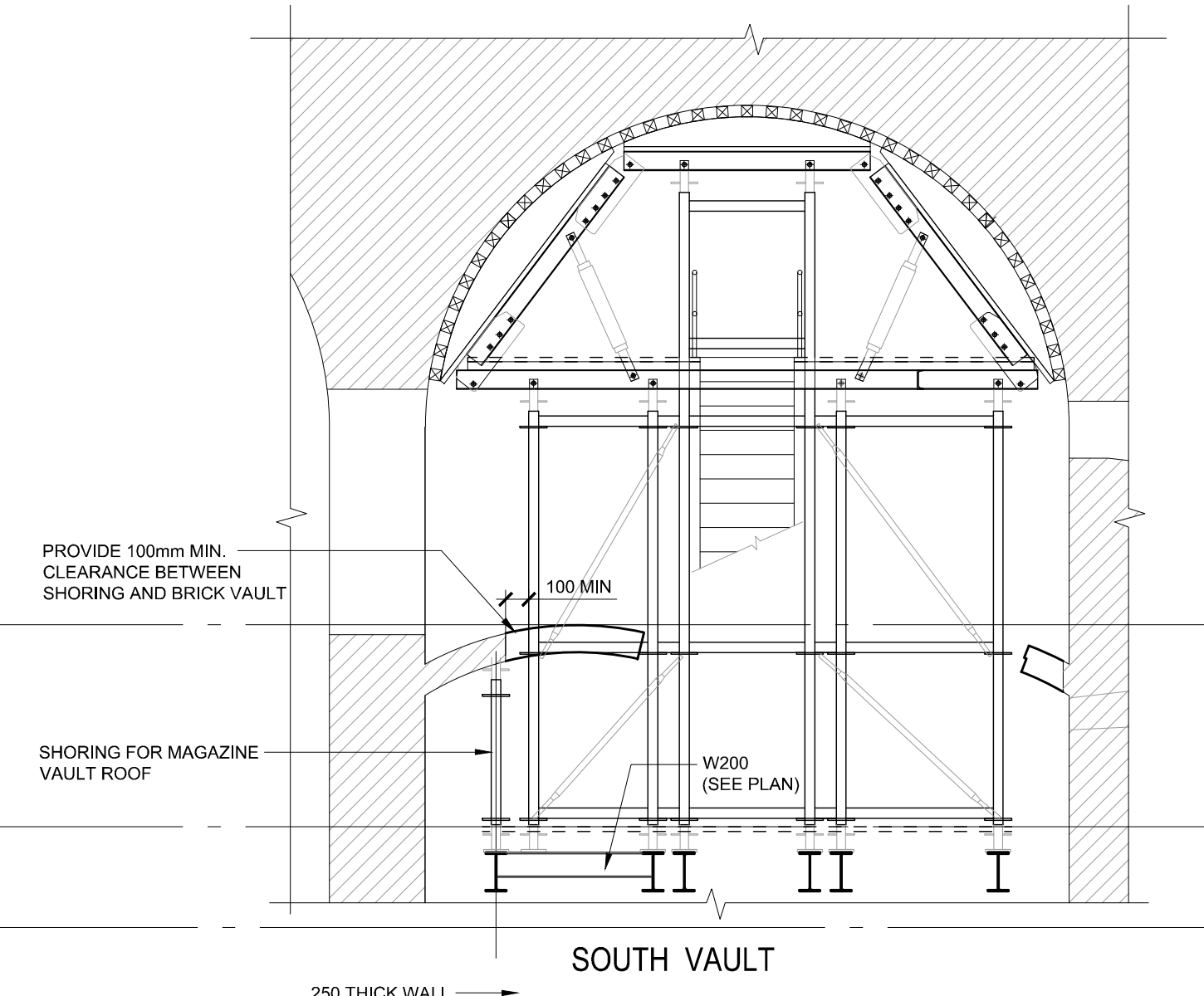
LOWER LEVEL PLATFORM PLAN 1:75



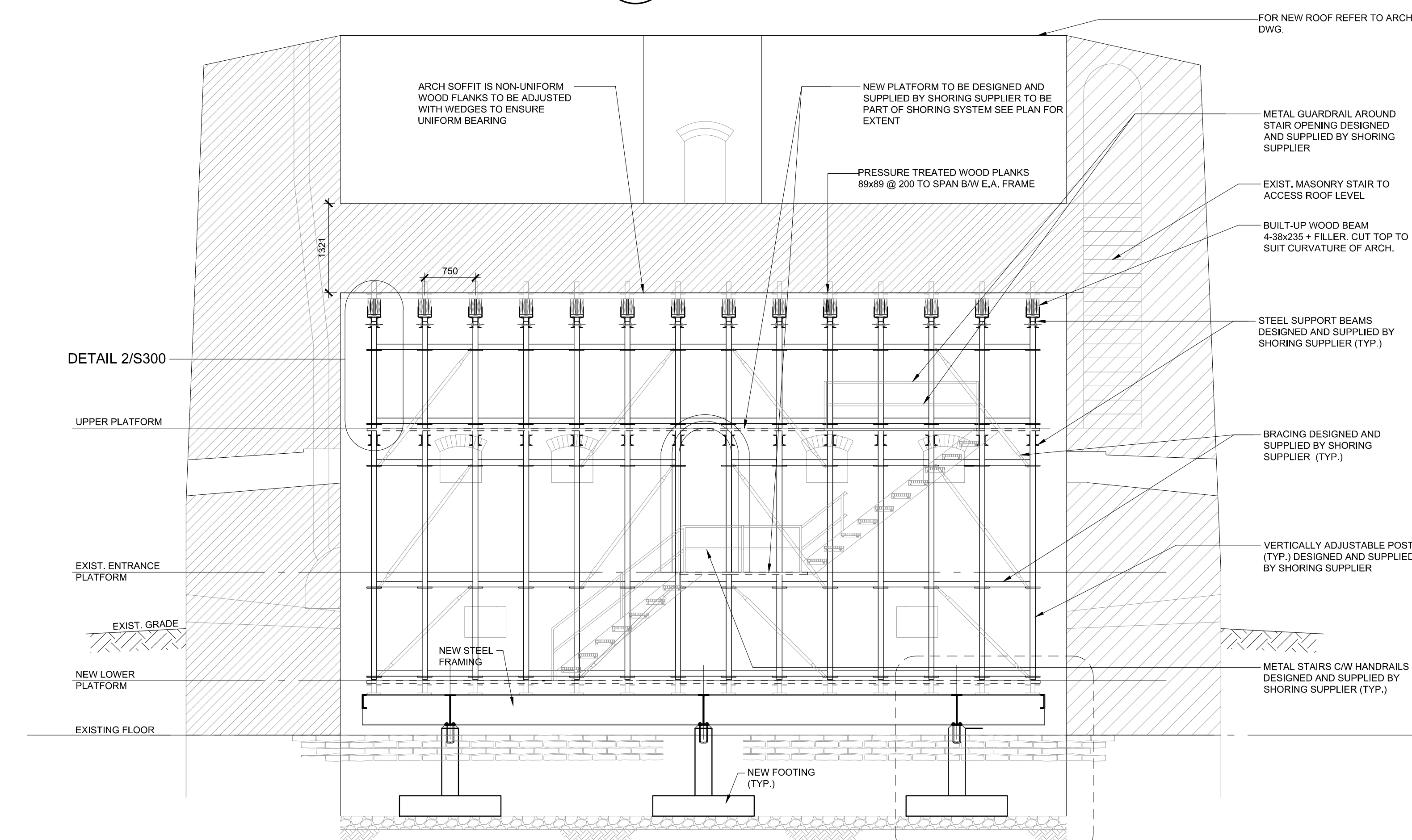
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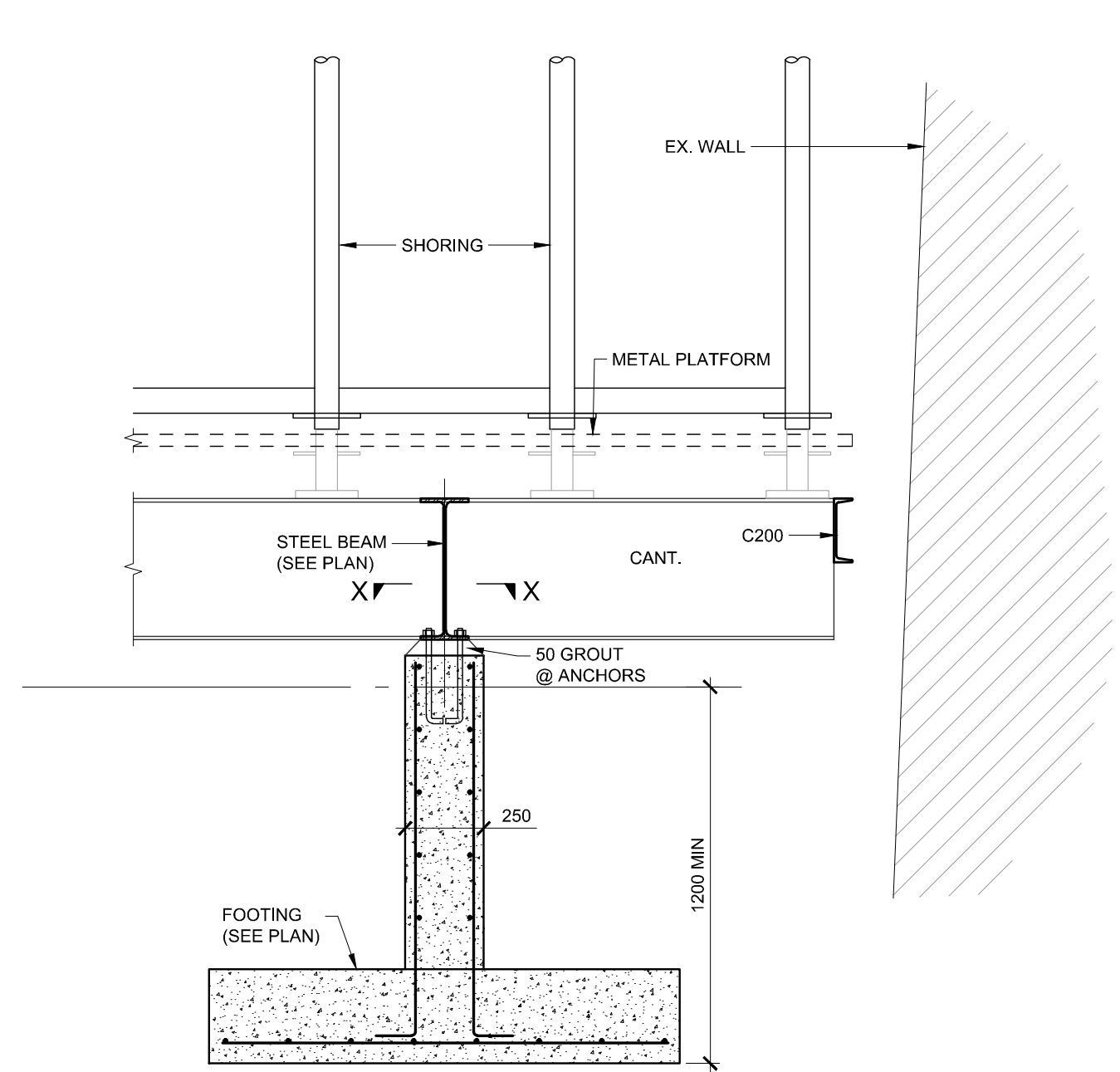
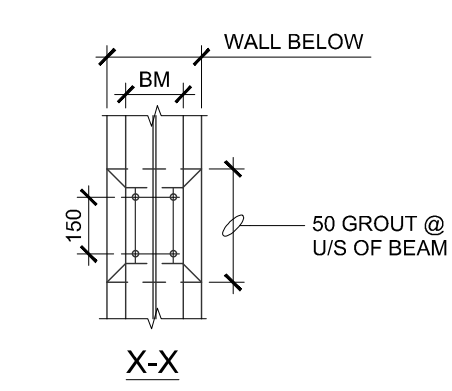
AA
S300 1:50



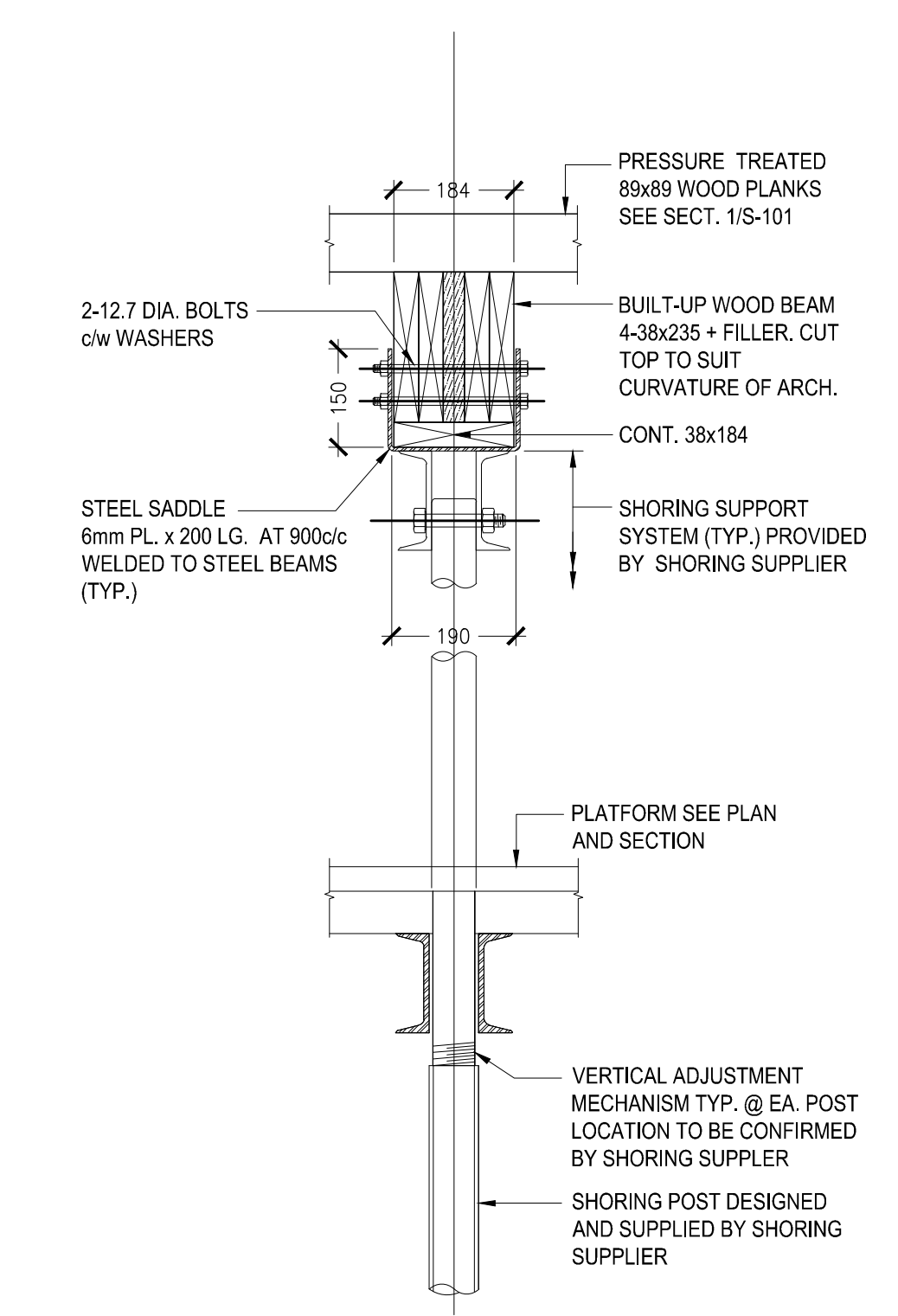
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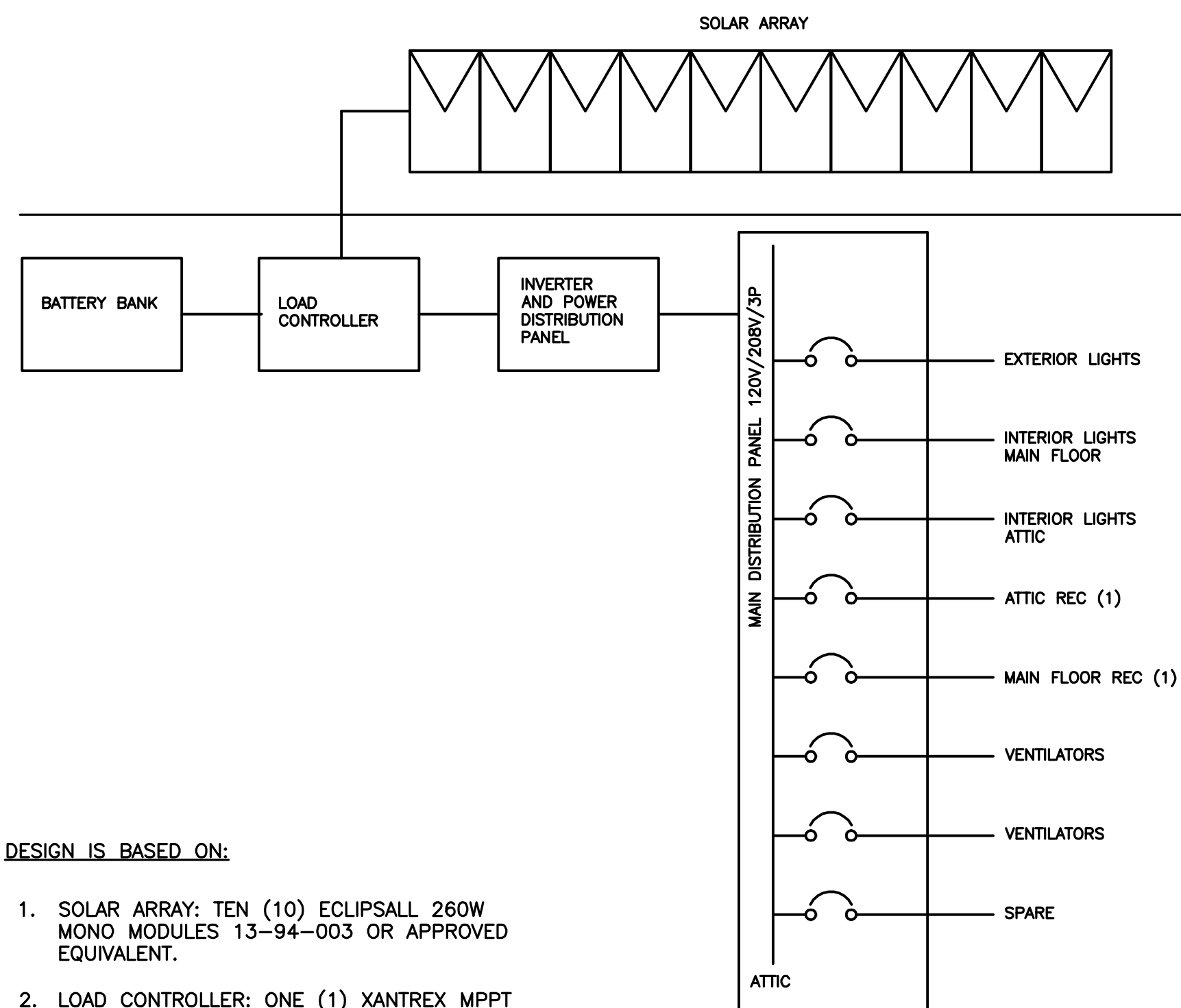
BB
S300 1:50



1
S300 1:20



2
S300 1:10



DESIGN IS BASED ON:

- SOLAR ARRAY: TEN (10) ECLIPALL 260W MONO MODULES 13-94-003 OR APPROVED EQUIVALENT.
- LOAD CONTROLLER: ONE (1) XANTREX MPPT 60A CONTROLLER 04-16-011 OR APPROVED EQUIVALENT.
- BATTERY BANK: ONE (1) OUTBACK INTEGRATED BATTERY RACK WITH TWELVE (12) 170RE ENERGYCELLS 01-53-X01 OR APPROVED EQUIVALENT.
- INVERTER AND POWER DISTRIBUTION PANEL: ONE (1) XANTREX 6.0 XW INVERTER AND POWER DISTRIBUTION PANEL 08-16-180, 08-16-183 OR APPROVED EQUIVALENT.
- THE SYSTEM MUST MEET THE TECHNICAL REQUIREMENTS OF THE MUNICIPALITY. CONTRACTOR TO ENSURE THE CONFORMITY OF INSTALLATION BY SECTION 50 AND 84 OF THE LATEST EDITION OF THE ONTARIO ELECTRICAL SAFETY CODE.
- ONLY PV WIRE CABLES ARE TO BE USED, DESIGNED FOR OUTDOOR AND CONNECTED BY WATERPROOF CONNECTORS FOR UP TO 1000VDC IN ACCORDANCE WITH SECTION 12 AND 50 OF THE ONTARIO ELECTRICAL SAFETY CODE. END CONNECTIONS SHALL BE MADE THROUGH MALE AND FEMALE CONNECTORS, UL4703 COMPLIANT CABLE, VW-1 OR TYPE USE-2 OR RHW-2, 100V MAXIMUM.
- THE DIFFERENT LENGTHS AND DIAMETERS OF CABLES CONNECTING THE SOLAR MODULES AND INVERTER SHOULD BE OPTIMIZED TO MINIMIZE THE LOSS OF CURRENT AND VOLTAGE TO LESS THAN 5% MAXIMUM, TAKING INTO ACCOUNT THE ONTARIO ELECTRICAL SAFETY CODE.
- GROUNDING OF INVERTER SHALL BE MADE IN ACCORDANCE TO THE SPECIFIC MANUFACTURER.
- GROUNDING OF THE RENEWABLE POWER SYSTEM SHALL BE MADE IN ACCORDANCE WITH SECTION 10 OF THE ONTARIO ELECTRICAL SAFETY CODE.
- OESC CERTIFIED MPPT CHARGE CONTROLLERS SHALL BE USED.
- WIRING SHALL BE MADE IN ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATIONS AND MUST RESPECT THE ONTARIO ELECTRICAL SAFETY CODE REQUIREMENTS.
- THE CONTRACTOR SHALL INSTALL THE PRODUCTION SYSTEM TO THE MANUFACTURERS' WRITTEN INSTRUCTIONS AND ELECTRICAL SCHEMATICS. THE ELECTRICAL DRAWINGS PROVIDE A GENERAL IDEA OF THE WIRING OF THE INSTALLATION. IT IS THE RESPONSIBILITY OF THE INSTALLER TO SPECIFY THE PARAMETERS AND ADJUST THE SOLUTION ACCORDING TO THE SITE.
- THE POLARITY SHALL BE CLEARLY INDICATED: BY CONVENTION, RED IS FOR POSITIVE, BLACK IS FOR NEGATIVE. THE POWER DISCONNECT DEVICES SHALL BE CLEARLY IDENTIFIED.
- THE EQUIPMENT TESTING SHALL PROCEED WITH AN AUTHORIZED REPRESENTATIVE OF THE MANUFACTURER IN THE PRESENCE OF THE CONSULTANT. A COMPLIANCE REPORT SHALL BE PROVIDED BY THE CONSULTANT.

PANEL	RP	MOUNTING SURFACE		
VOLTAGE	120/208V	PHASE	3Ø, 4W	
MAINS	400A LUGS ONLY	TYPE	NQ- 30	
LOCATION	ATTIC	NEW	EXISTING	
DESCRIPTION	VA	BRKR	BRKR VA	DESCRIPTION
MAIN FLOOR LTG.	15	1 A	2 15	MAIN FLOOR REC (1)
EXTERIOR LTG.	15	3 B	4 15	ATTIC REC (1)
ATTIC LTG.	15	5 C	6 15	VENTILATORS
SPARE	15	7 A	8	
		9 B	10	
		11 C	12	
		13 A	14	
		15 B	16	
		17 C	18	
		19 A	20	
		21 B	22	
		23 C	24	
		25 A	26	
		27 B	28	
		29 C	30	

PHASE A TOTAL VA _____
 PHASE B TOTAL VA _____
 PHASE C TOTAL VA _____

ELECTRICAL LEGEND	
SYMBOL	DESCRIPTION
\$	120V SINGLE POLE TOGGLE SWITCH
MS	MOTION SENSOR
PC	PHOTOCELL
Φ	15A, 120V, SINGLE PHASE DUPLEX RECEPTACLE (CSA 5-15R)
⎓ B	WALL MOUNTED LED FIXTURE.
⊙ A	CEILING MOUNTED DOWNLIGHT FIXTURE.
PP-A	SURFACE/RECESSED MOUNTED PANEL
—	NEW POWER CONDUIT
◇	NOTE TAG
⊗	CEILING RECIRCULATING FAN

SCHEDULE OF LIGHTING FIXTURES AND LAMPS											CONTRACTOR SHALL ORDER OPTIONS, FEATURES OR ACCESSORIES TO SUIT THE INSTALLATION. QUANTITIES ARE INDICATED FOR GUIDE ONLY. CONTRACTOR SHALL CONFIRM QUANTITIES PRIOR TO BID SUBMISSION.	
QUANTITY SHOWN	FIXTURES					BALLAST	LENS	LAMPS		MOUNTING	REMARKS	
	TYPE	MANUFACTURER	CATALOGUE NUMBER	DESCRIPTION	VOLTAGE			TYPE	TYPE			WATTS
8	A	COOPER LIGHTING	0.05V2.I.3K.90SYM. 102.1.36.1	WALLMOUNTED LINEAR LED WITH EXTRUDED ALUMINUM HOUSING. 90 DEGREES, VERY HIGH OUTPUT.	120	—	—	38	LED	SURFACE MOUNTED	—	
8	B	COOPER LIGHTING	LD620D010 ERM6830H20 6LM0LI	PORTFOLIO 6INCH 50 DEGREE CUTOFF RECESSED DOWNLIGHT MEDIUM DISTRIBUTION WITH SPECULAR CLEAR TRIM.	120	—	—	25	LED	ROOF SOFFIT MOUNTED	INTERCONNECT LIGHTING FIXTURE WITH EXTERNAL WALL MOUNTED MOTION SENSOR	

1 SOLAR POWER SYSTEM DIAGRAM

E-100



PROJECT
 TOWER CONSERVATION
 FORT MISSISSAUGA
 NATIONAL HISTORIC
 SITE OF CANADA

NIAGARA ON THE LAKE, ONTARIO
 143 Front Street

CLIENT
 SOUTHWESTERN
 ONTARIO FIELD UNIT,
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 300 Water Street
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REGISTRATION



ISSUE/REVISION

I/R	DATE	DESCRIPTION
D	APR 18/13	REVISED PER CLIENT COMMENTS
C	APR 01/13	ISSUED FOR TENDER
B	MAR27/13	100% ISSUED FOR REVIEW
A	MAR 26/13	99% ISSUED FOR REVIEW

KEY PLAN

PROJECT NUMBER

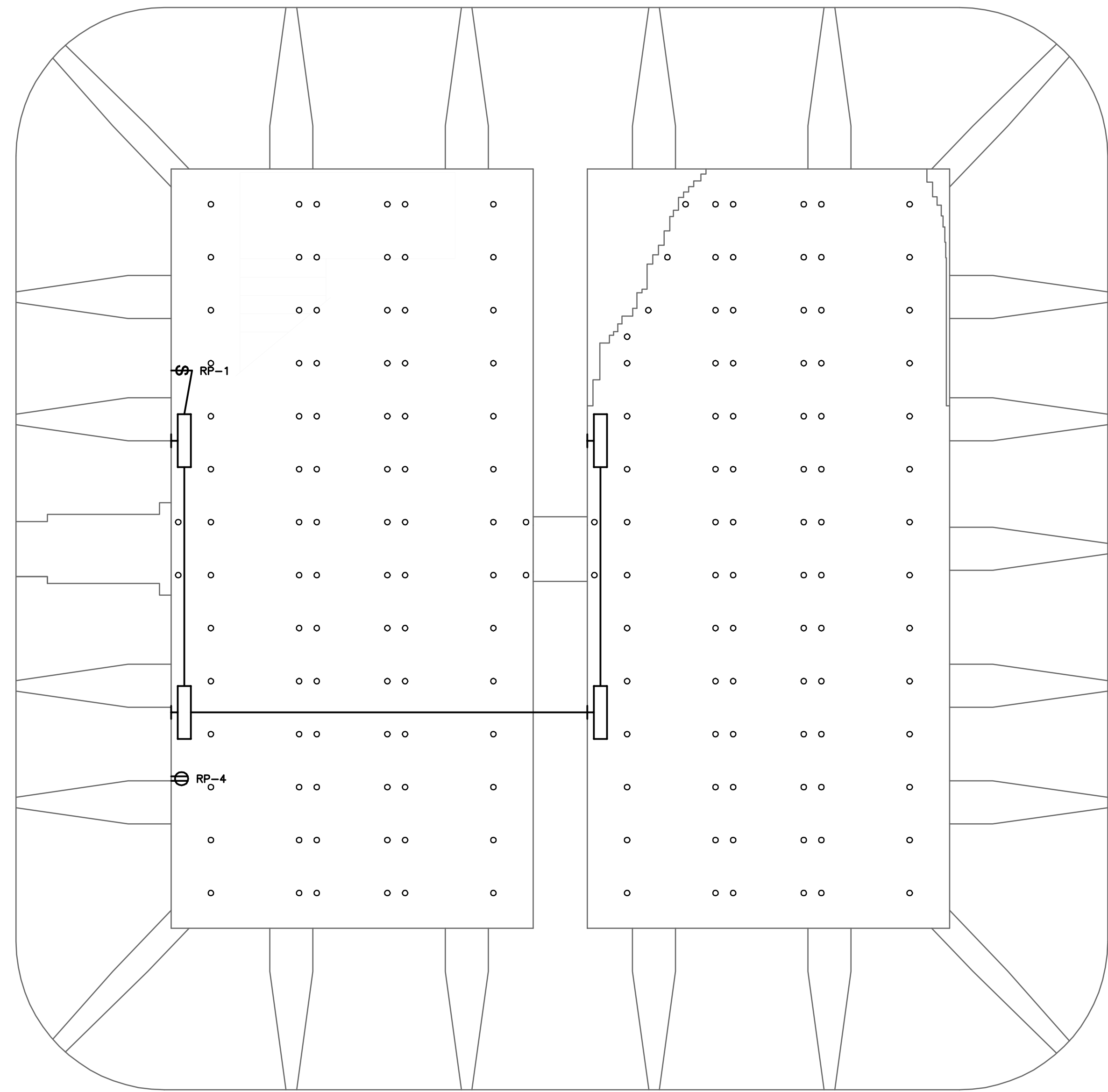
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SHEET TITLE

LEGEND AND SYSTEM DIAGRAM

SHEET NUMBER

E-100

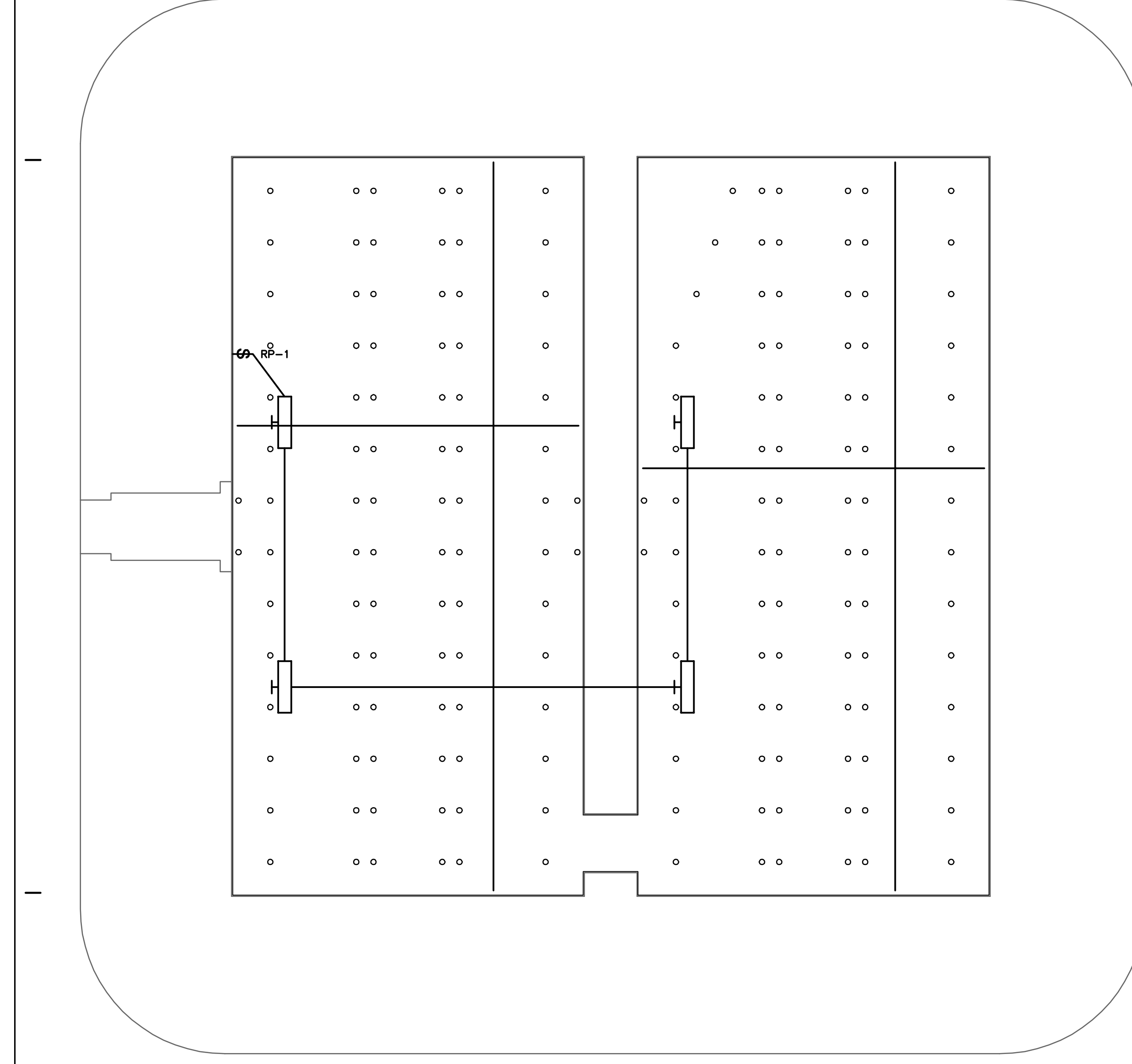


1 ENTRANCE LEVEL PLATFORM PLAN

E-101 Scale: 1:50

GENERAL NOTES:

- REFER TO DRAWING E-102 FOR LIGHTING MOUNTING HEIGHT DETAILS.



2 UPPER LEVEL PLATFORM PLAN

E-101 Scale: 1:50

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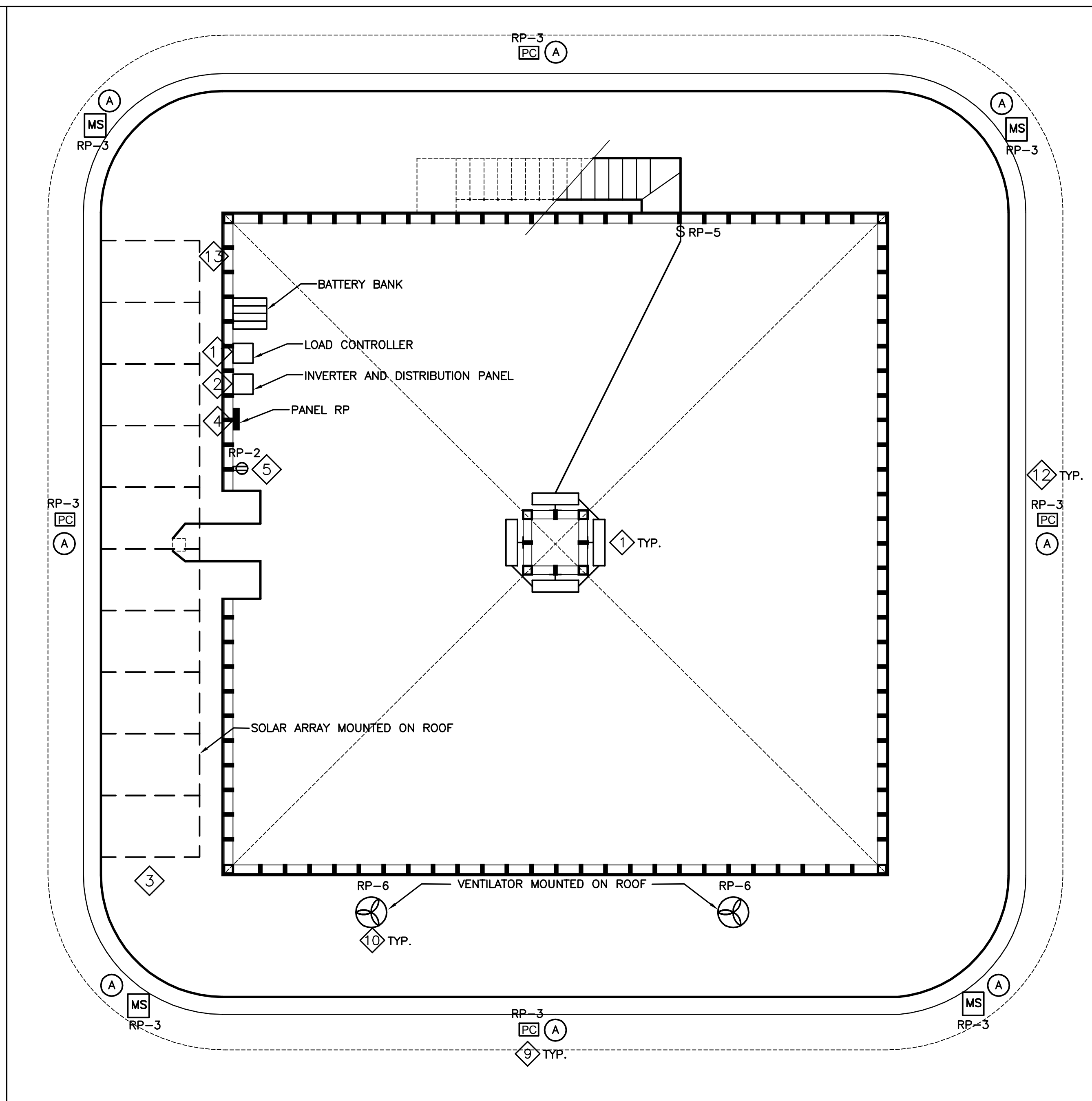
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SHEET TITLE

POWER AND LIGHTING PLAN

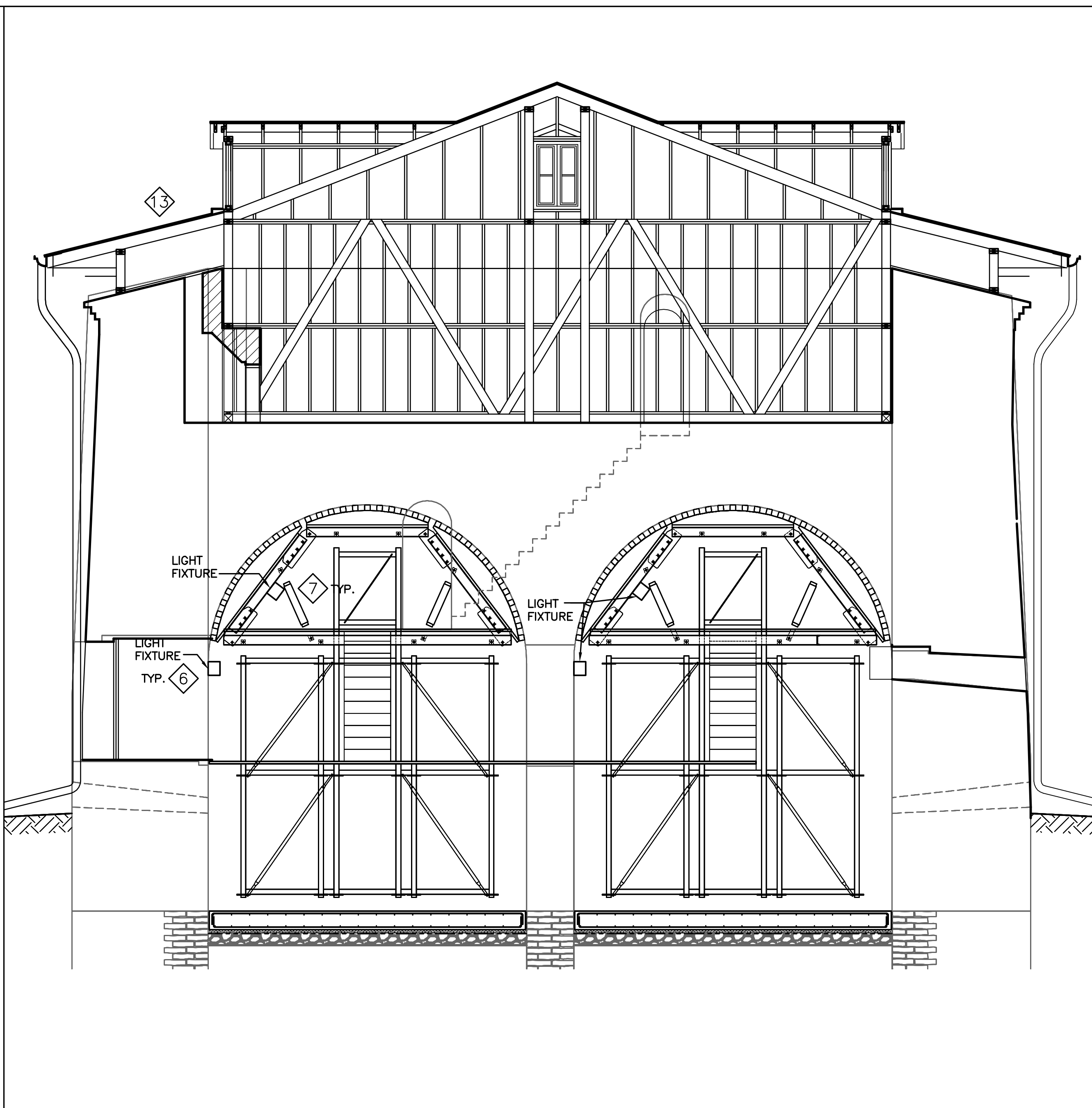
SHEET NUMBER

E-101



1 ATTIC PLAN

E-102 Scale: 1:50



2 SECTION

E-102 Scale: 1:50

GENERAL NOTES:

- 1 LIGHT FIXTURE SURFACE MOUNTED ON ROOF SUPPORT WALL.
- 2 INVERTER SYSTEM MOUNTED ON WALL USING WALL MOUNTING PLATE.
- 3 SOLAR ARRAY MOUNTED ON ROOF. REFER TO STRUCTURAL DRAWINGS FOR MOUNTING DETAILS.
- 4 WALL MOUNTED ELECTRICAL PANEL.
- 5 FEED WALL MOUNTED RECEPTACLE FROM PANEL RP USING SURFACE MOUNTED RIGID STEEL CONDUIT.
- 6 LIGHT FIXTURE MOUNTED ON WALL AT 3962mm AFF.
- 7 LIGHT FIXTURE MOUNTED ON SHORING AT 5943mm AFF.
- 8. COORDINATE WITH OTHER DISCIPLINES FOR INSTALLATION AND SUPPORT SYSTEMS.
- 9 LIGHT FIXTURE MOUNTED ON ROOF SOFFIT.
- 10 DESIGN IS BASED ON ECOPOWER EP400 OR APPROVED EQUIVALENT.
- 11 LOAD CONTROL MOUNTED ON WALL USING WALL MOUNTING PLATE.
- 12 MOTION SENSOR MOUNTED ON EXTERIOR WALL EACH LIGHTING FIXTURE TO BE CONTROLLED BY INDIVIDUAL MOTION SENSOR MOUNTED BELOW FIXTURE ON EXTERIOR WALL.
- 13 AT ELECTRIC CABLE PENETRATION LOCATION THROUGH ROOF, INSTALL A PREFABRICATED ALUMINUM CABLE ACCESS CURB/TUBE COMPLETE WITH ROOF FLASHING AND DETACHABLE LID (MODEL ROOF-NEK MK.II BY ROOF-PRO OR APPROVED EQUIVALENT). INSTALL CABLE ACCESS CURB/TUBE IN ACCORDANCE WITH THE MANUFACTURERS WRITTEN INSTRUCTION AND DETAILS.
- 14. PROVIDE TWO (2) MIN 3m X 19mm COPPER CLAD GROUND RODS SPACED AT 3m. PROVIDE #2/0 BARE STRANDED COPPER GROUND WIRE AT 250mm DEPTH C/W CADWELD CONNECTIONS AND HANDWELLS FOR INSPECTION AT EACH ROD LOCATION. GROUND RODS SHALL BE INSTALLED WITHIN THE BUILDING FOOTPRINT AND LOCATION SHALL BE COORDINATED ON SITE WITH CONTRACTOR AND STRUCTURAL SUPPORT SYSTEMS.

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SHEET TITLE

POWER AND LIGHTING PLAN

SHEET NUMBER

E-102