



Environment and
Climate Change
Canada

Architectural and
Engineering Services

L'environnement et le
changement climatique
Canada

Services d'architecture
et de génie

SIMPSON, SASKATCHEWAN.
LAST MOUNTAIN LAKE

OBSERVATION TOWER
ECCC Proj. No.: LML-001 e-f



LIST OF DRAWINGS

ARCHITECTURAL

- A1.1 OBSERVATION TOWER PLANS
- A1.2 OBSERVATION TOWER EXTERIOR ELEVATIONS
- A1.3 OBSERVATION TOWER SECTIONS & DETAILS

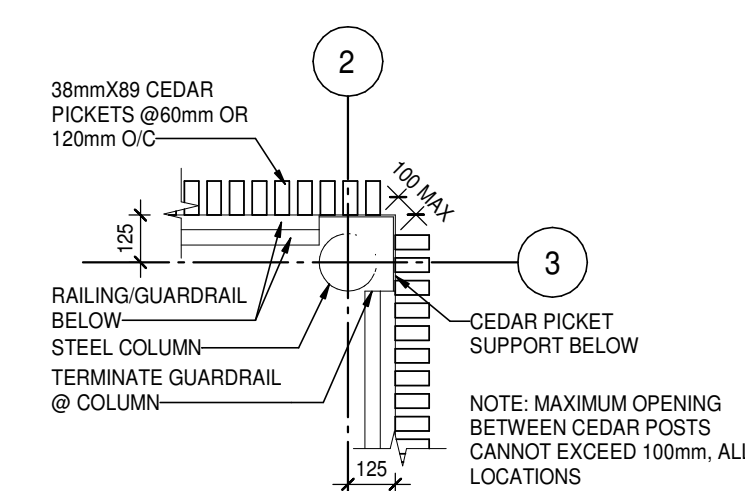
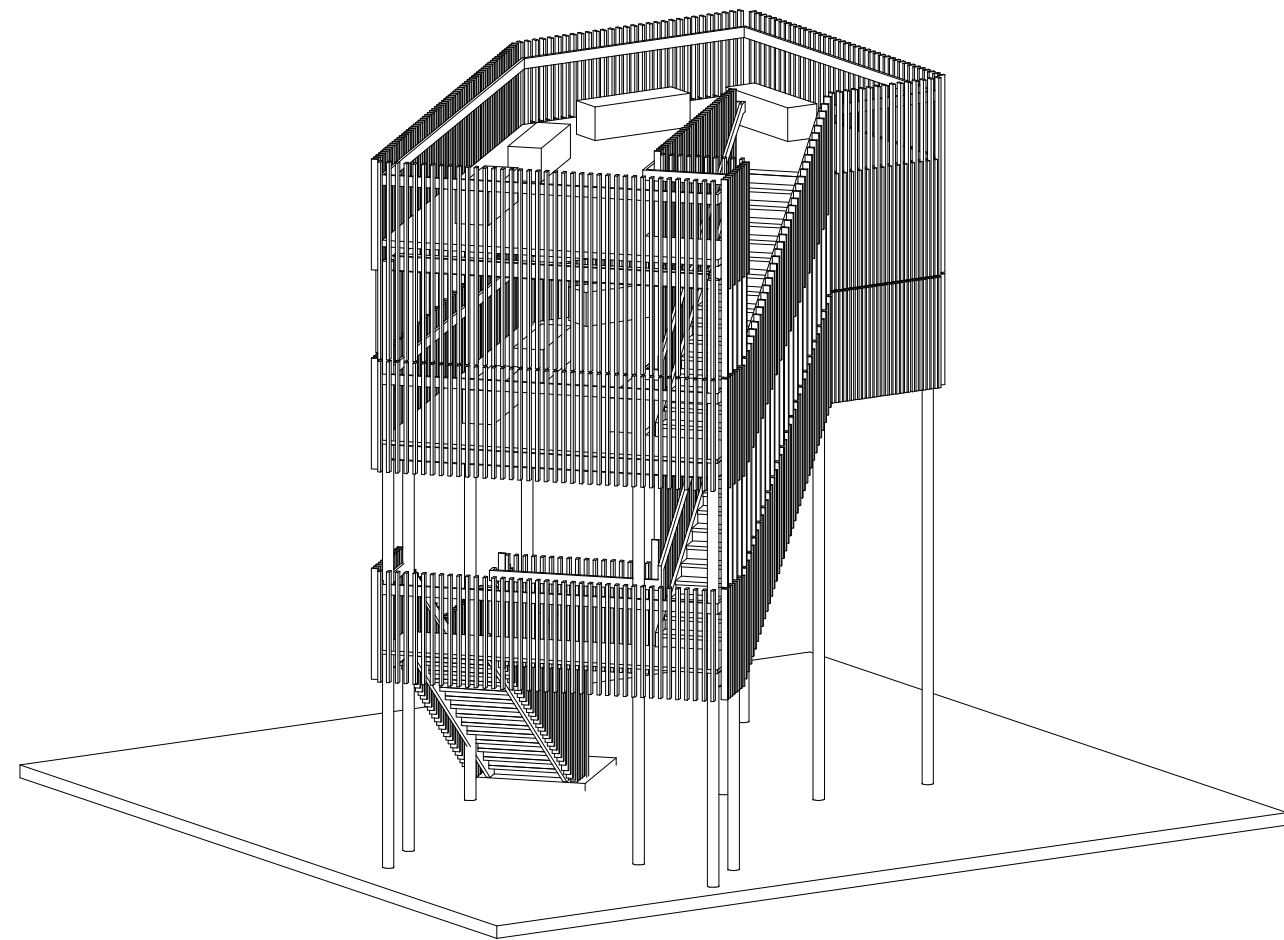
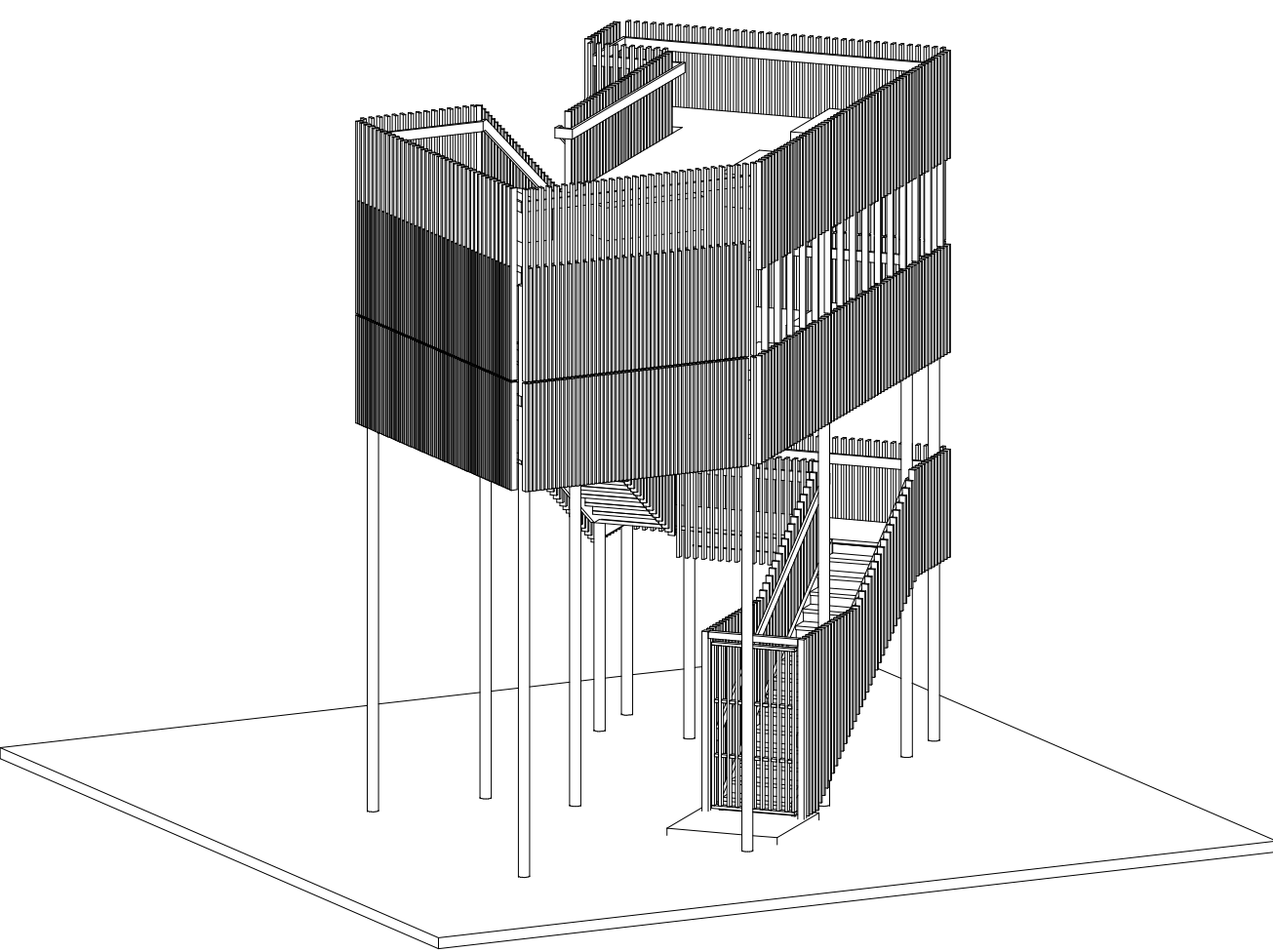
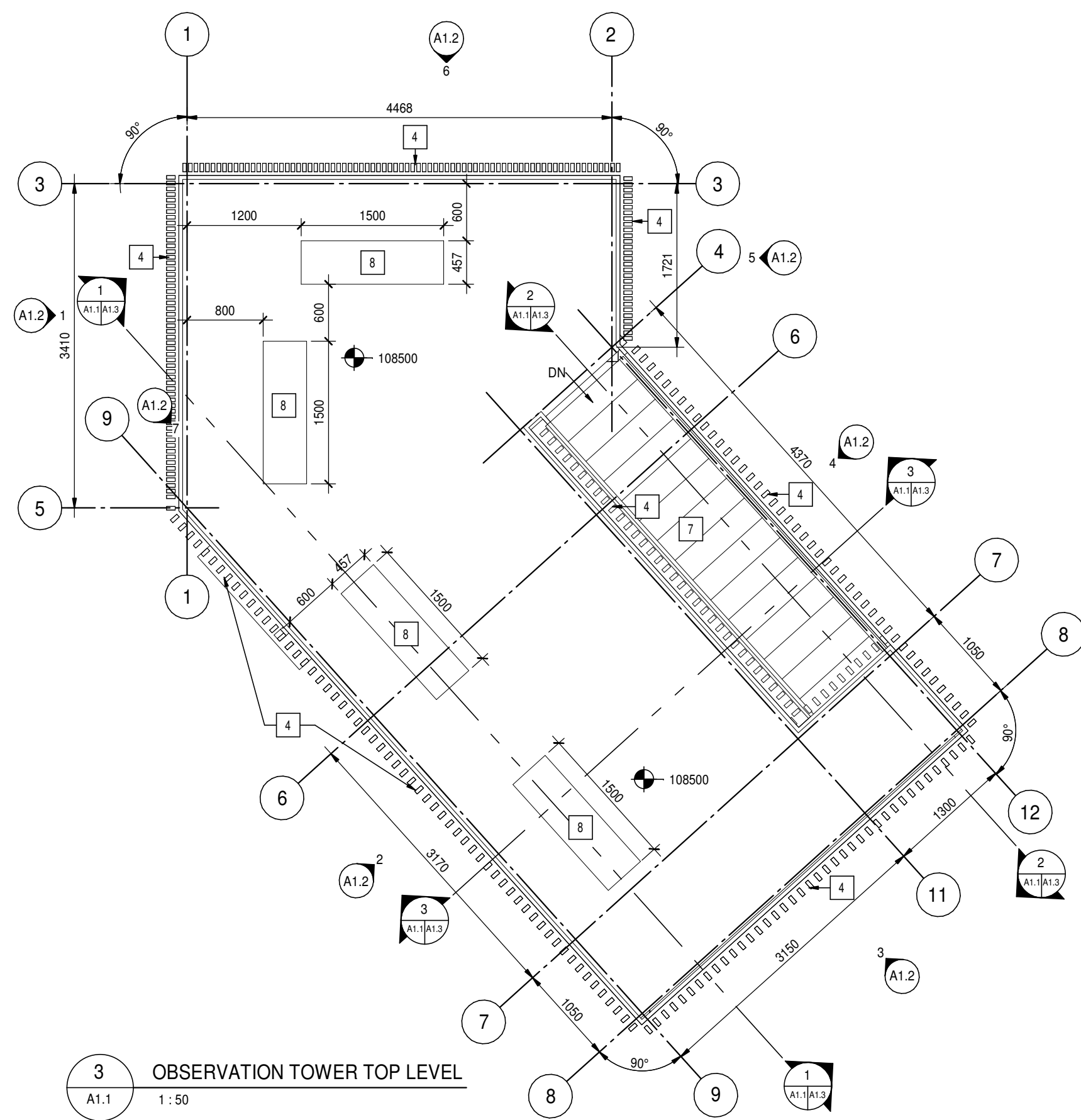
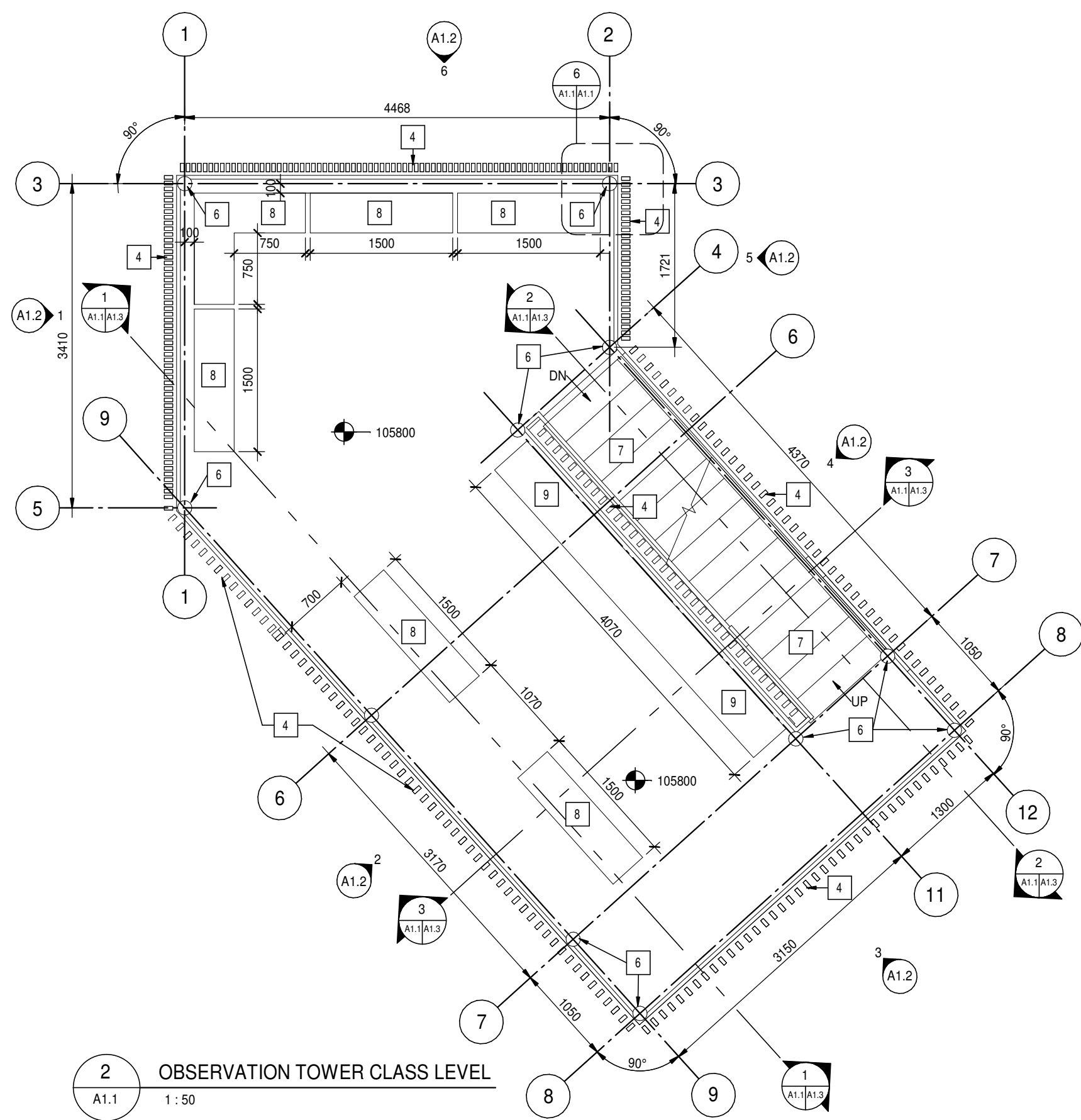
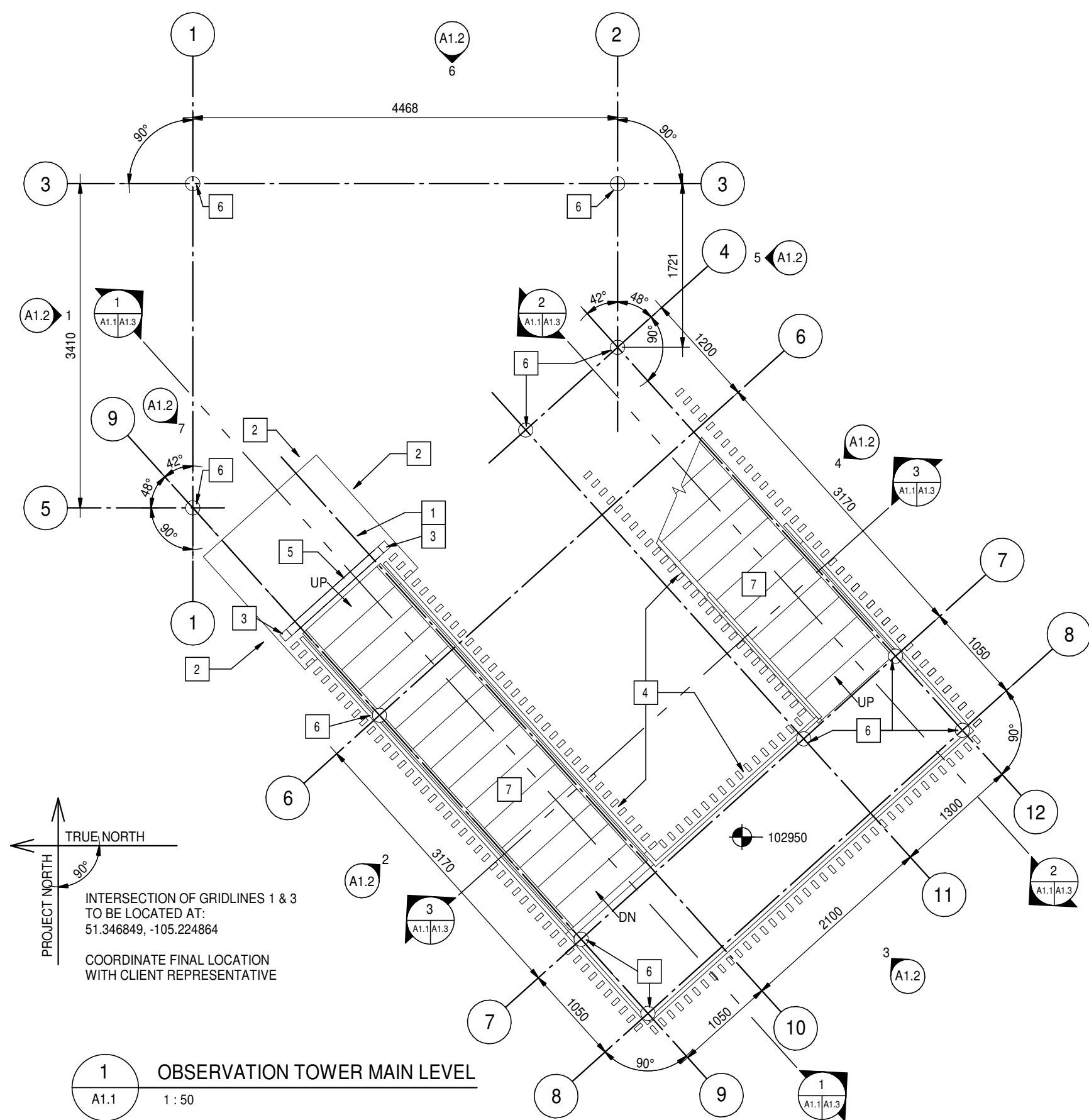
STRUCTURAL

- S4.0 OBSERVATION TOWER PILE PLAN, PILE CAP AND COLUMN PLAN
- S4.1 OBSERVATION TOWER PLANS
- S4.2 OBSERVATION TOWER SECTIONS AND DETAILS
- S4.3 OBSERVATION TOWER FRAMING ELEVATIONS



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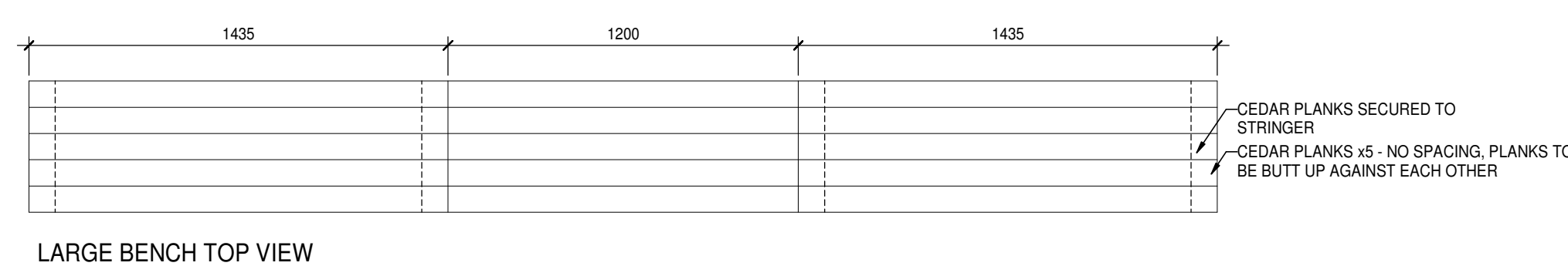
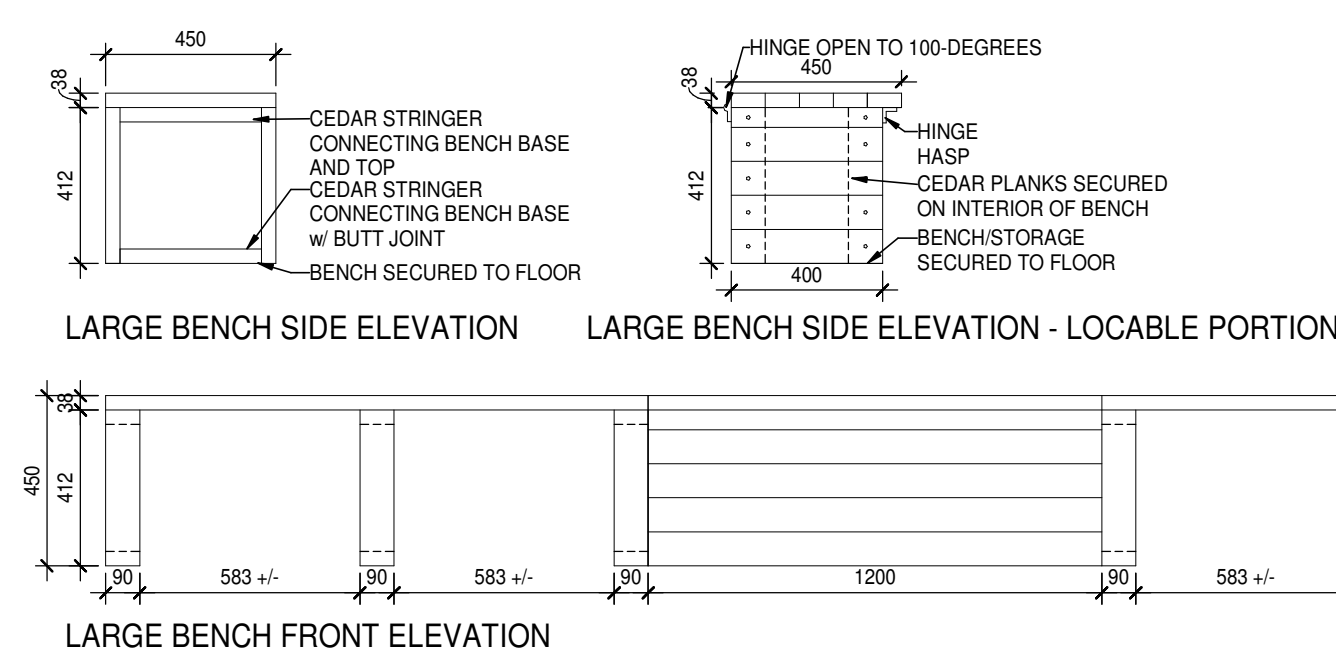
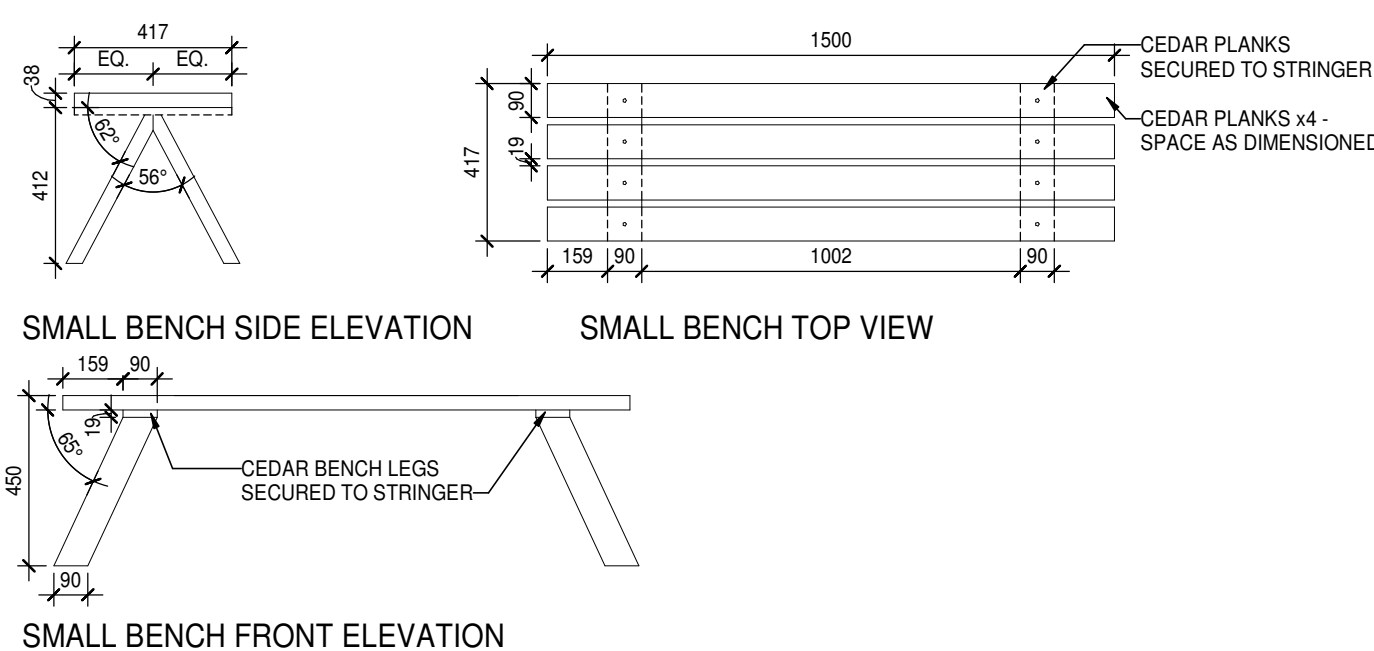
OBSERVATION TOWER PLANS KEYNOTES

- 1 CONCRETE SLAB AT BASE OF STAIR - REFER TO STRUCTURAL DRAWINGS FOR SIZE & LOCATION
- 2 RAMP EARTH/GRAVEL UP TO CONCRETE PAD MIN 1:20 SLOPE
- 3 89x89mm CEDAR POST ON EITHER SIDE OF STAIR - REFER TO STRUCTURAL FOR ATTACHMENT DETAIL
- 4 CEDAR POSTS/HANDRAIL/GUARDRAIL
- 5 GATE C/W LOCKABLE HARDWARE - OPENS OUTWARD
- 6 GALVANIZED STEEL COLUMN
- 7 STAIR
- 8 CEDAR BENCH
- 9 CEDAR BENCH C/W LOCKABLE STORAGE

4 OBSERVATION TOWER 3D
A1.1

5 OBSERVATION TOWER 3D
A1.1

6 TYPICAL CORNER PLAN DETAIL
A1.1:A1.1 1:20



ENVIRONMENT AND CLIMATE CHANGE CANADA

LAST MOUNTAIN LAKE NATIONAL WILDLIFE AREA

Project title: LAST MOUNTAIN LAKE
Projet: LAST MOUNTAIN LAKE

Designed by: JR/JL
Conçu par: JR/JL

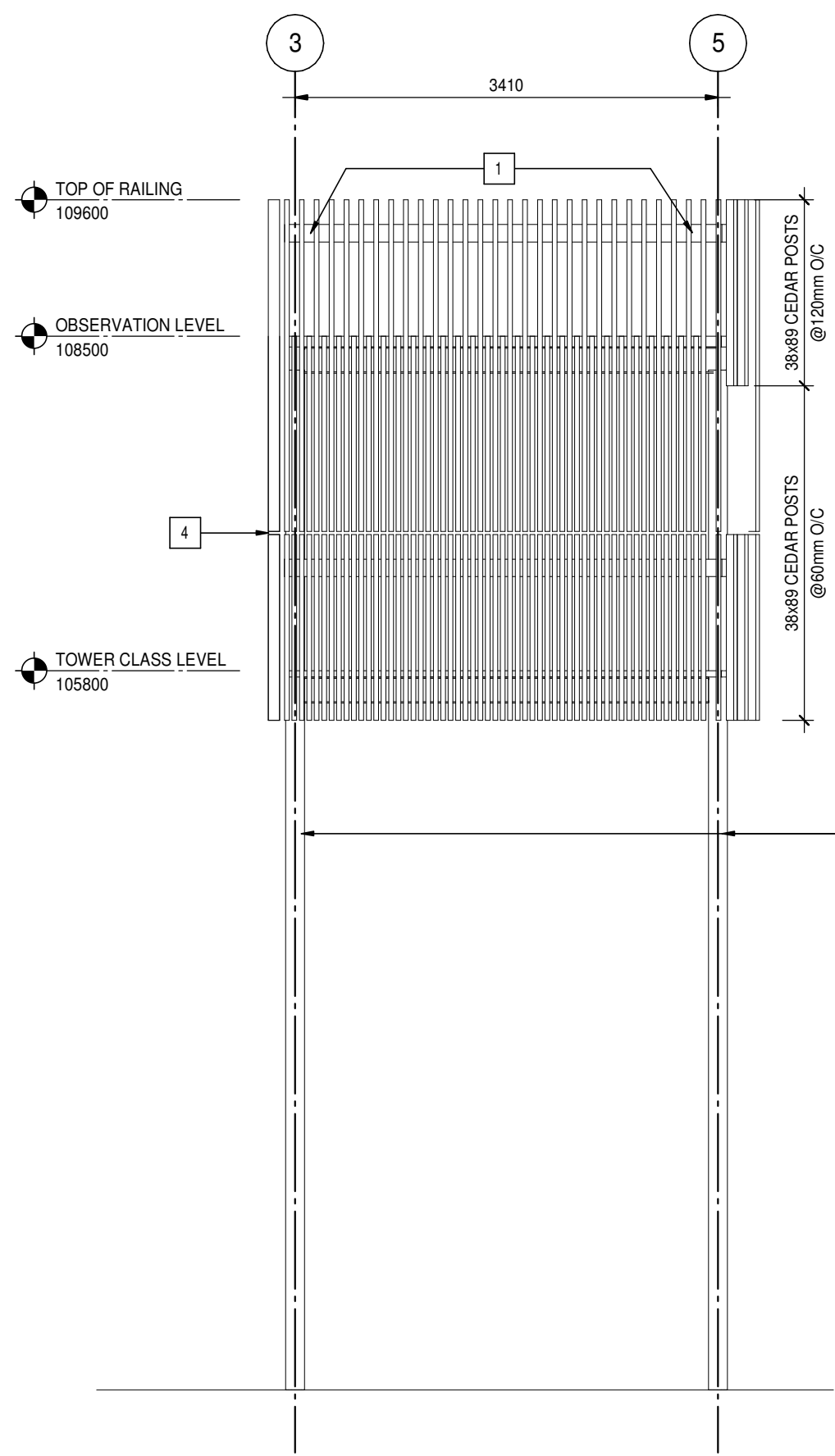
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Dessiné par: JL

Approved by: JR
Approuvé par: JR

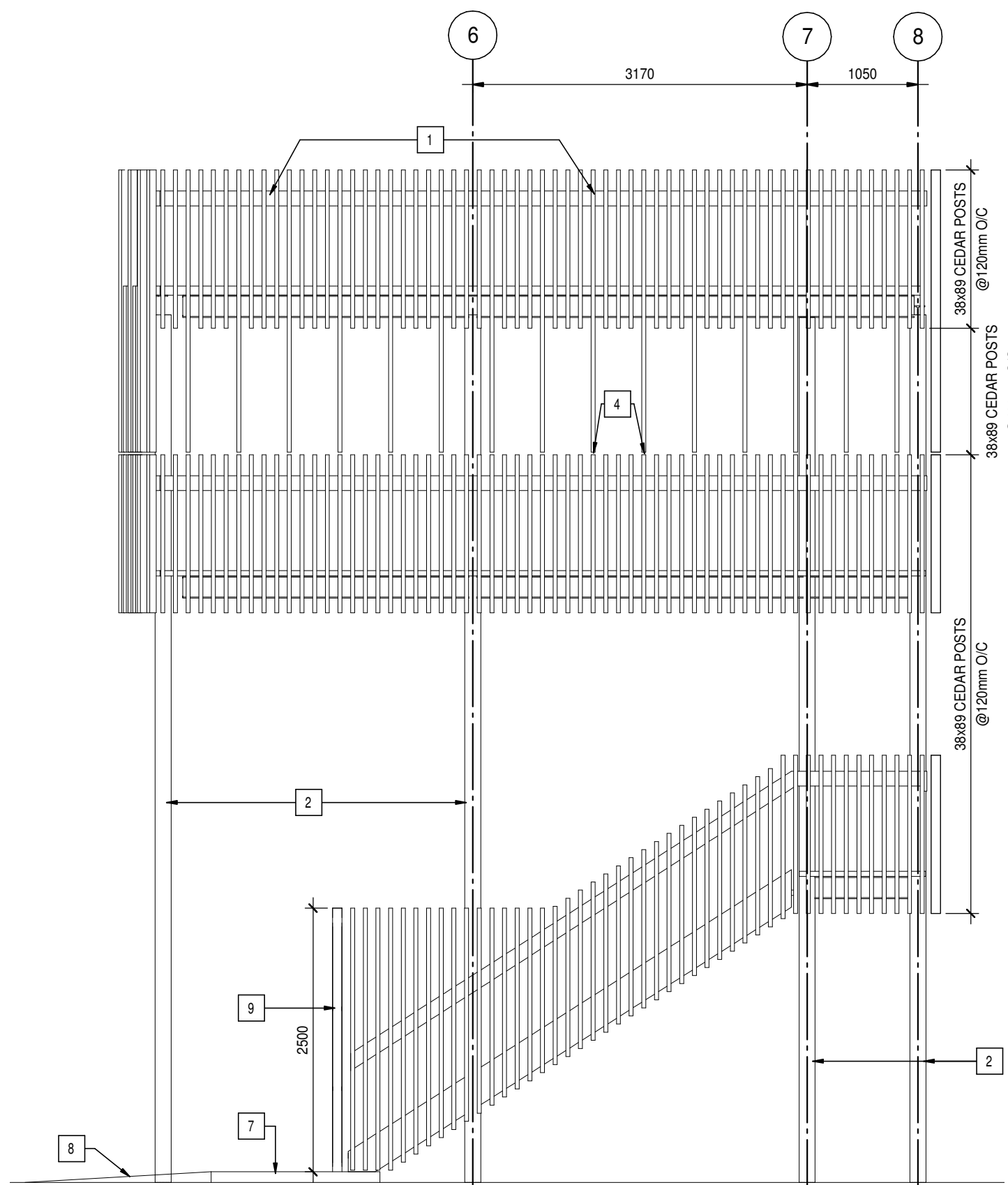
PM/SC Project Manager: ROD KHALED
Administrateur de Projets: ROD KHALED

Drawing Title: OBSERVATION TOWER PLANS
Titre du dessin: OBSERVATION TOWER PLANS

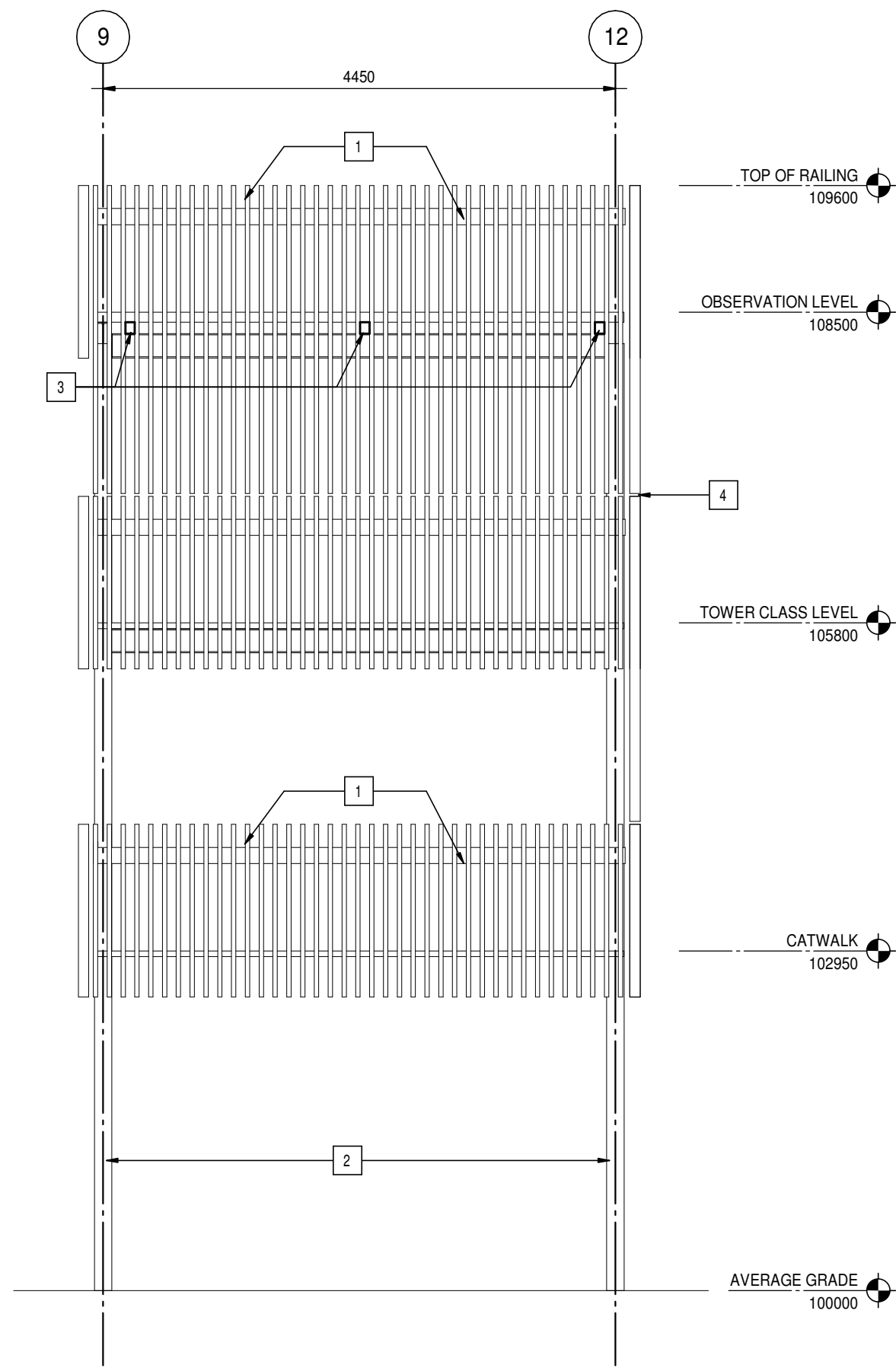
Project no./No. du projet: LML-001 e-f
Drawing no./No. du dessin: A1.1
Revision no.: OF



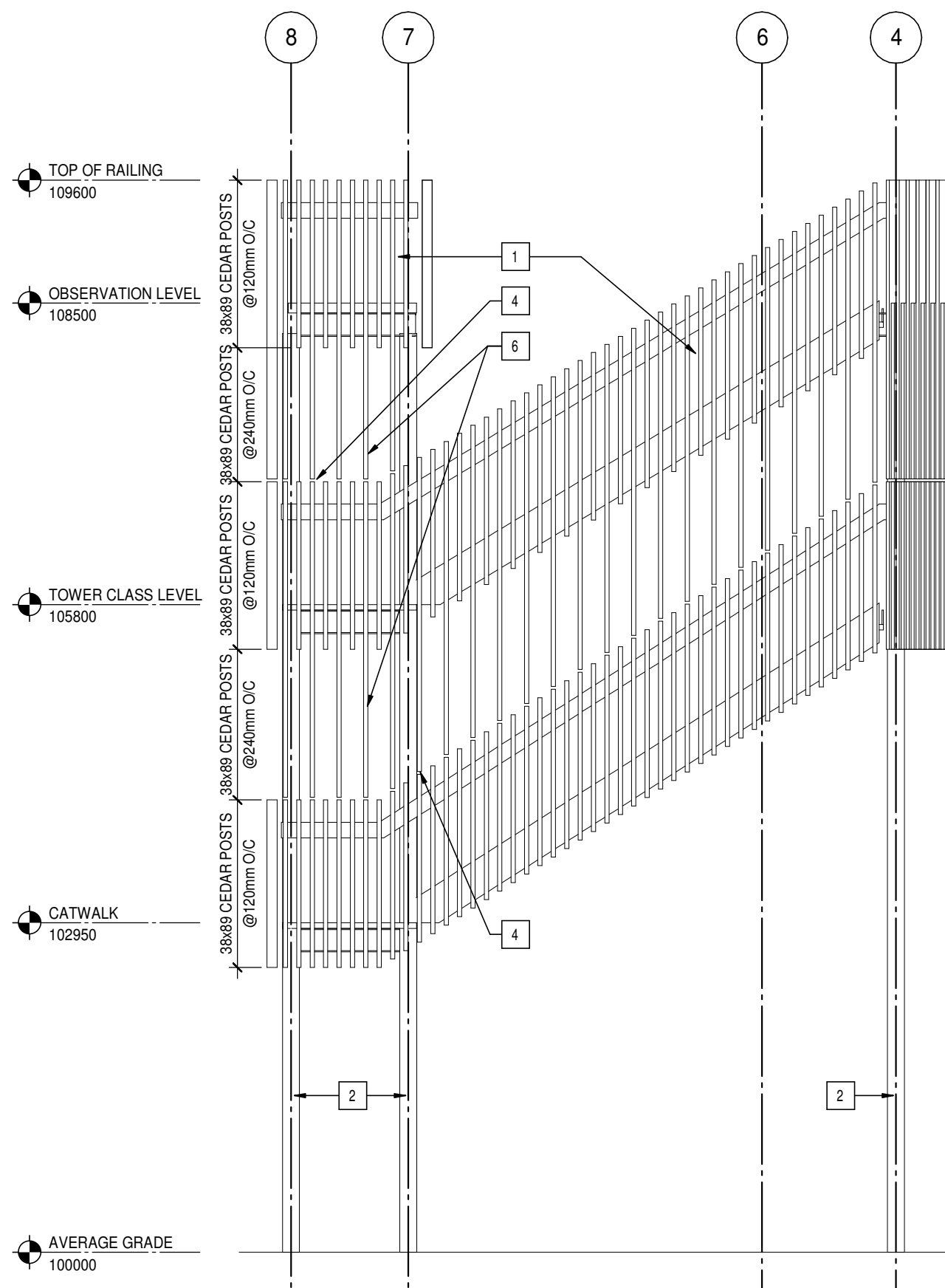
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A1.1/A1.2 1:50



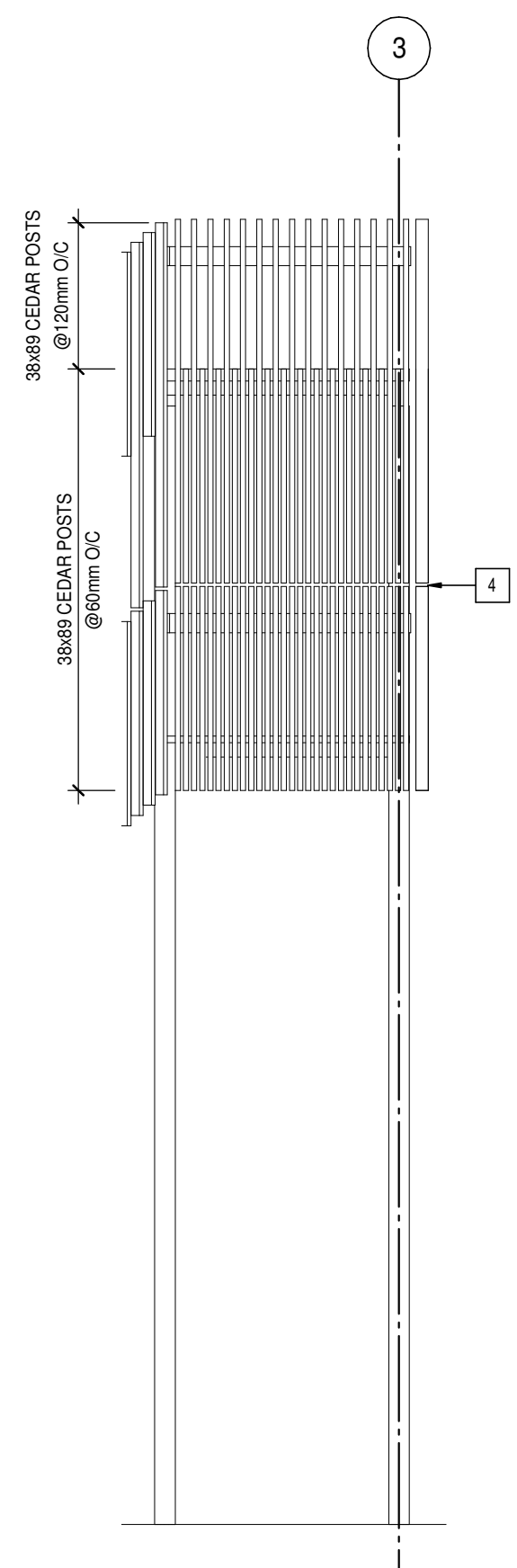
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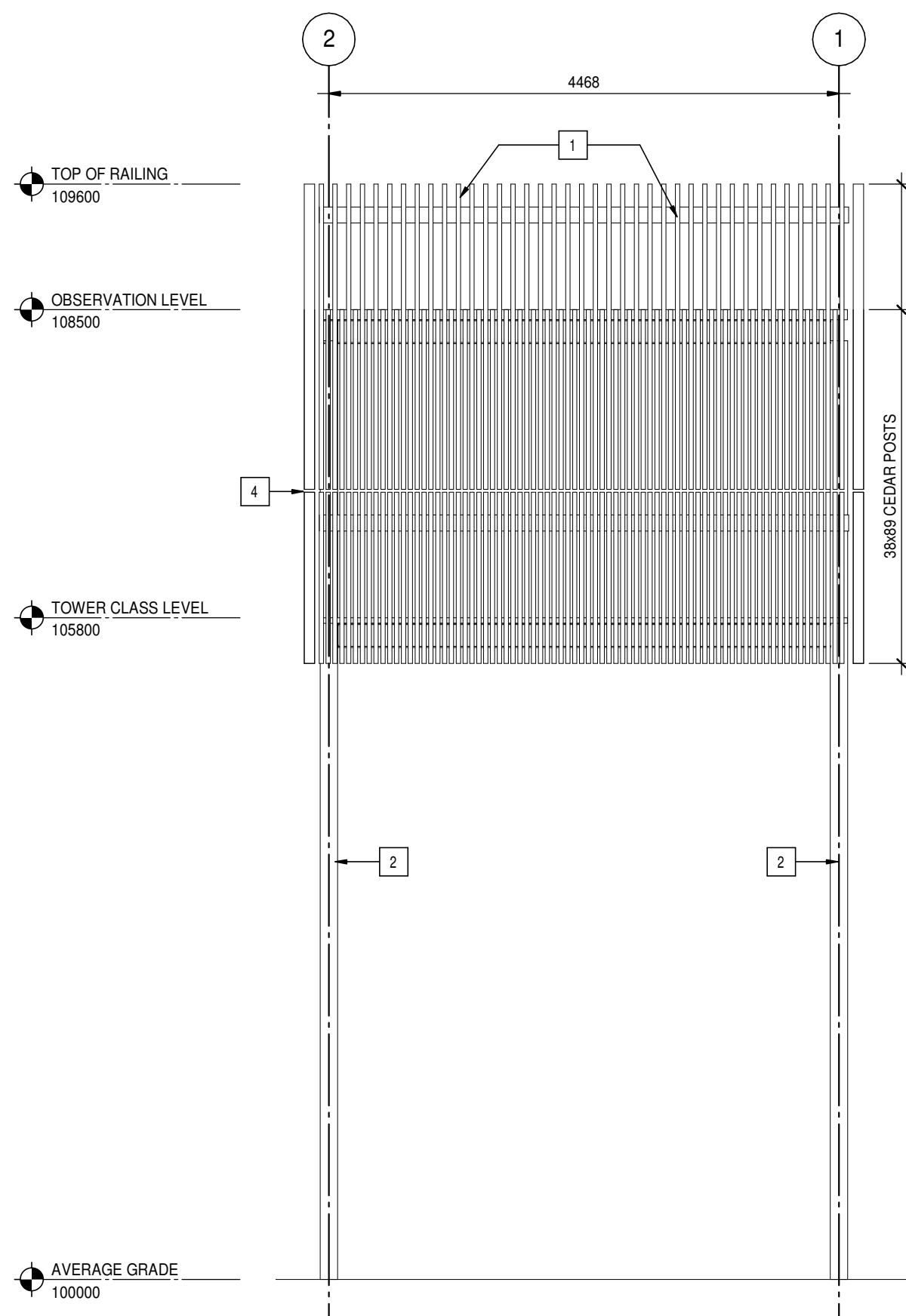
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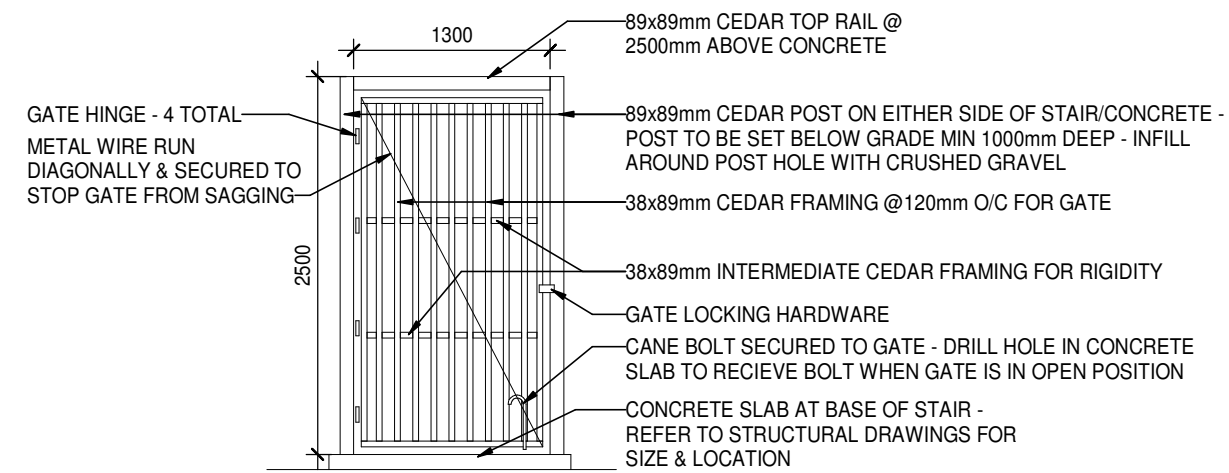
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5 OBSERVATION TOWER ELEVATION - GRIDLINE 2
A1.1/A1.2 1:50



6 OBSERVATION TOWER ELEVATION - GRIDLINE 3
A1.1/A1.2 1:50



7 GATE ELEVATION
A1.1/A1.2 1:50

OBSERVATION TOWER ELEVATIONS KEYNOTES

- 1 CEDAR POSTS/HANDRAIL/GUARDRAIL
- 2 GALVANIZED STEEL COLUMN
- 3 GUTTER
- 4 SLIP JOINT CONNECTION, TYP
- 5 ALIGN CEDAR POSTS
- 6 CONCRETE SLAB AT BASE OF STAIR - REFER TO STRUCTURAL DRAWINGS FOR SIZE & LOCATION
- 7 RAMP EARTH/GRAVEL UP TO CONCRETE PAD MIN 1:20 SLOPE
- 8 89x89mm CEDAR POST ON EITHER SIDE OF STAIR - REFER TO STRUCTURAL FOR ATTACHMENT DETAIL
- 9



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Revision	Description	Date
5		
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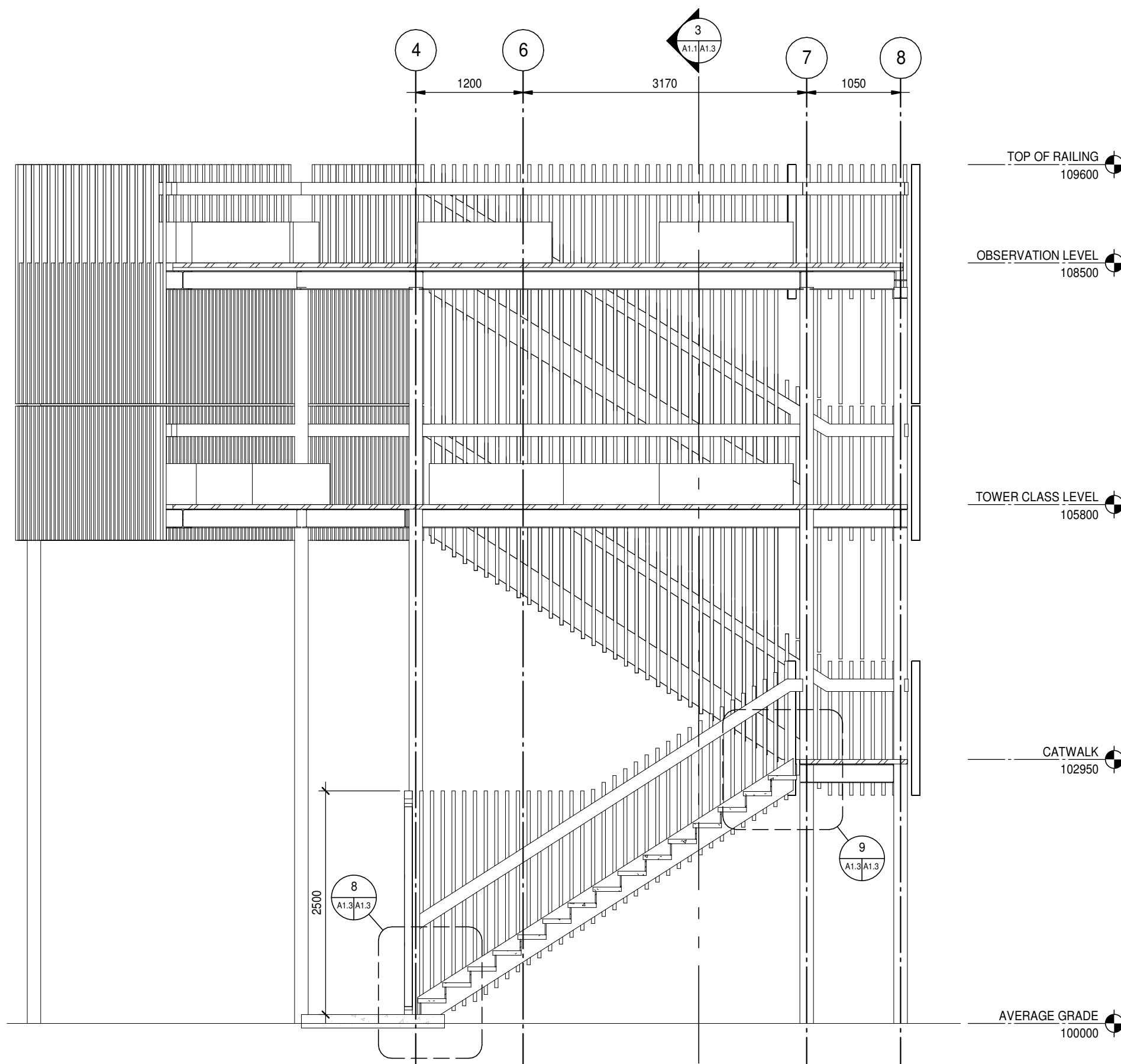
Client: ENVIRONMENT AND CLIMATE
CHANGE CANADA

Project title: LAST MOUNTAIN LAKE NATIONAL
WILDLIFE AREA

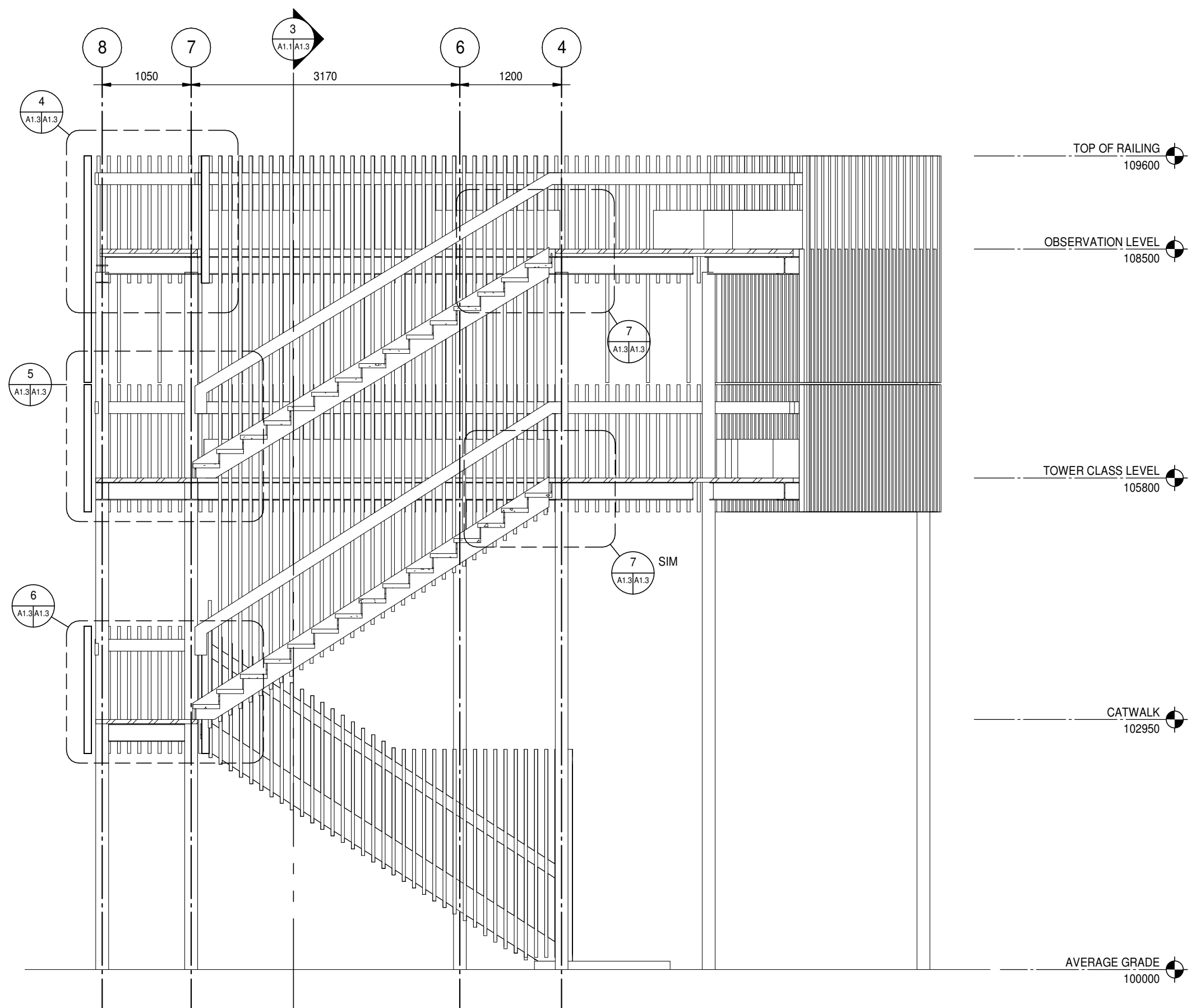
Project title: LAST MOUNTAIN LAKE

Designed by: JR/JL
Drawn by: JL
Approved by: JR
Project Manager: ROD KHALED
Drawing title: OBSERVATION TOWER EXTERIOR
ELEVATIONS

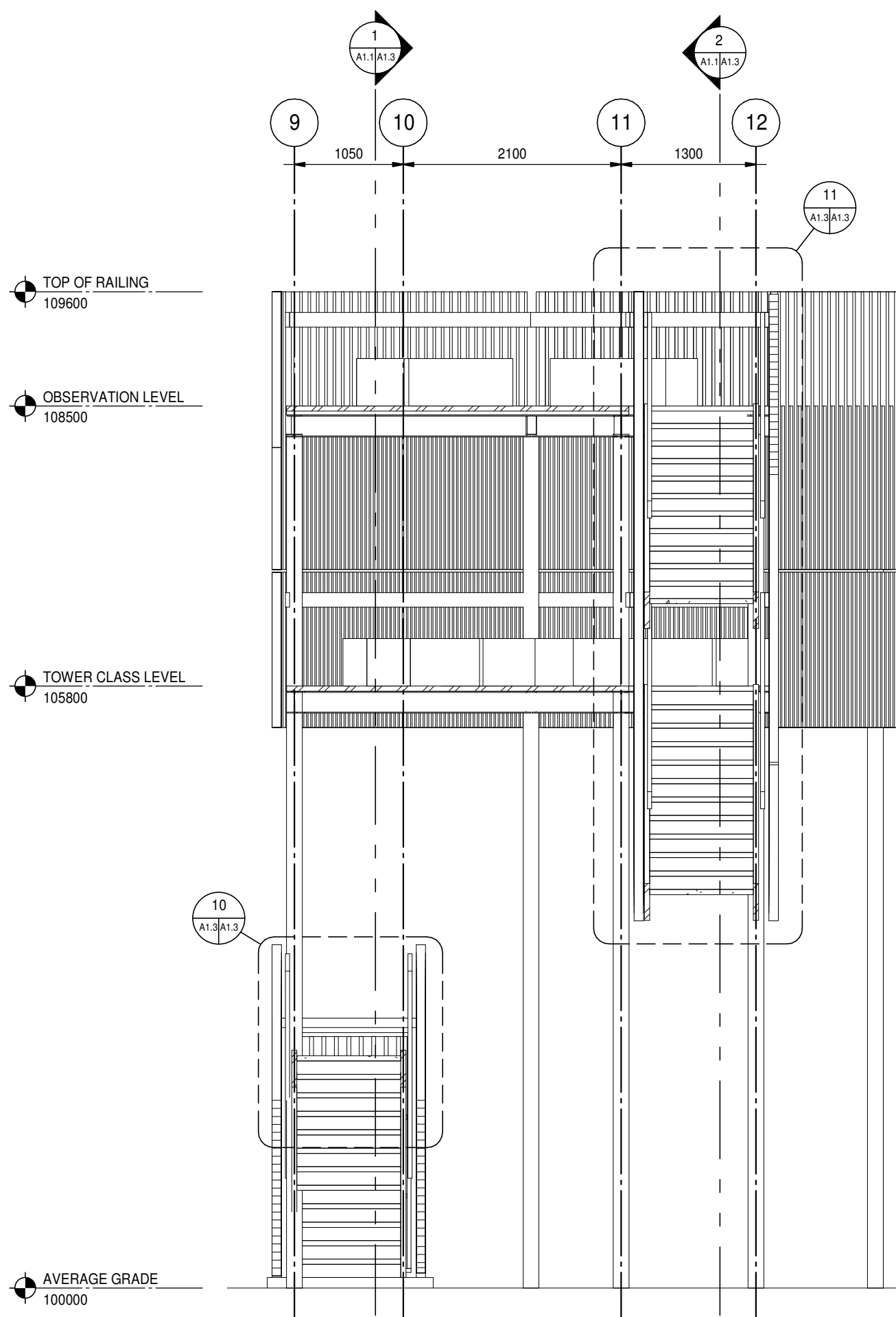
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LML-001 e-f	A1.2 OF	



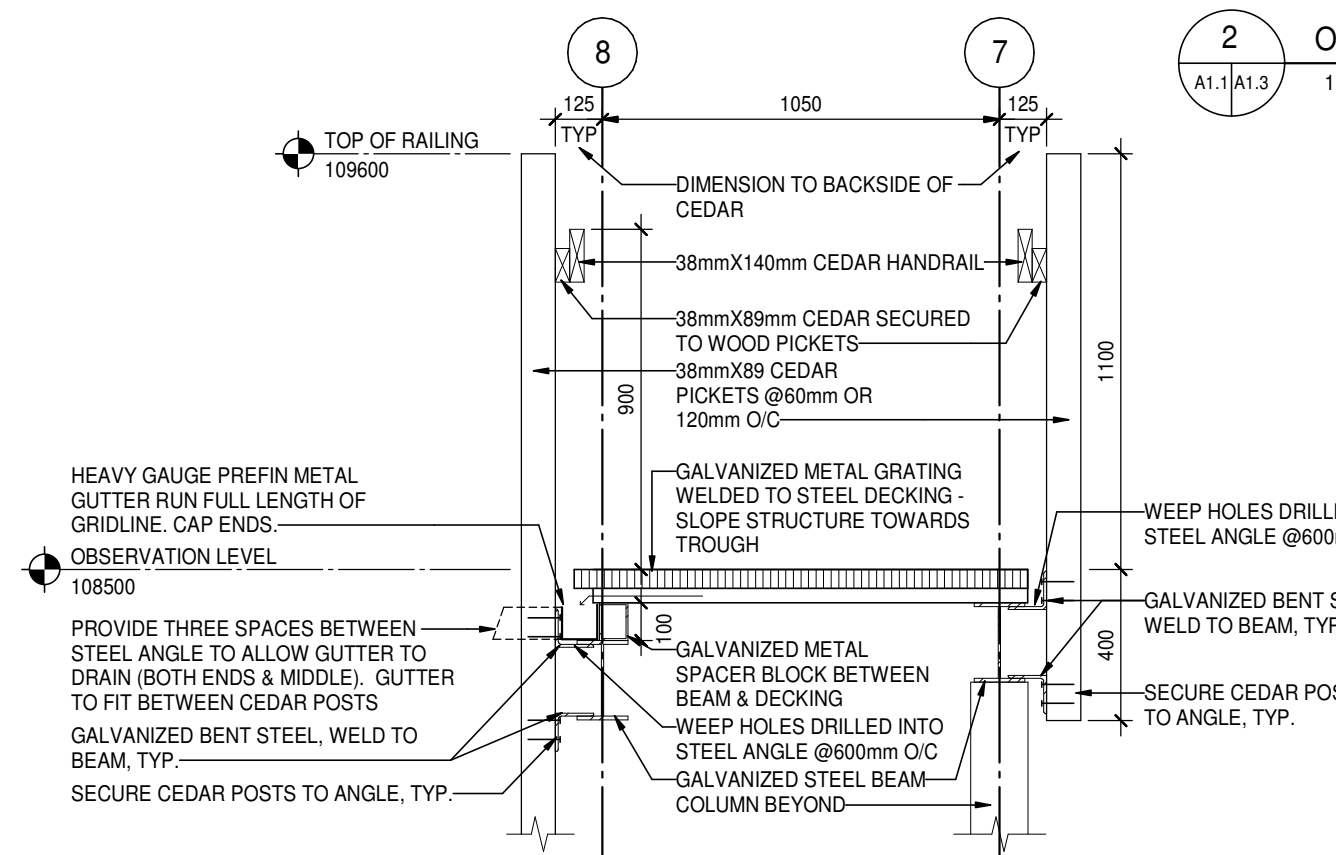
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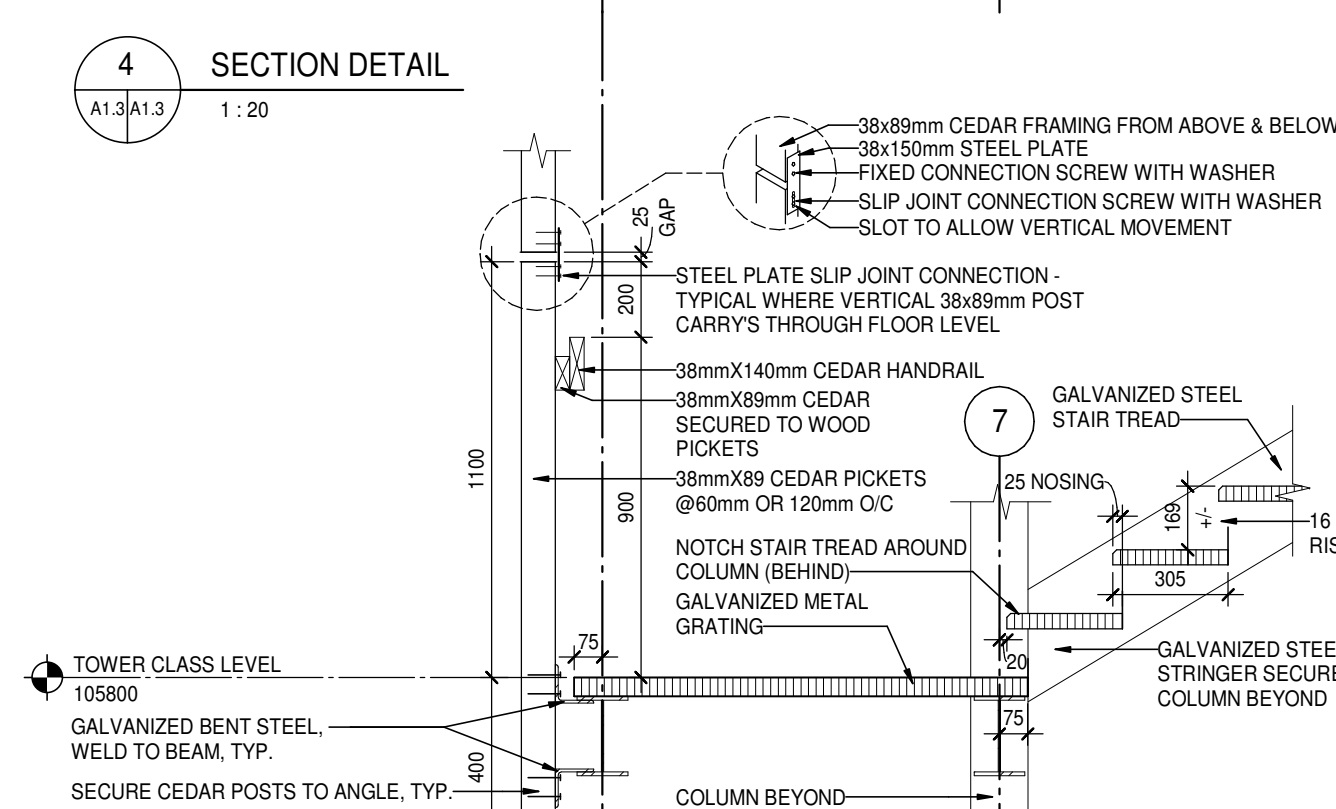
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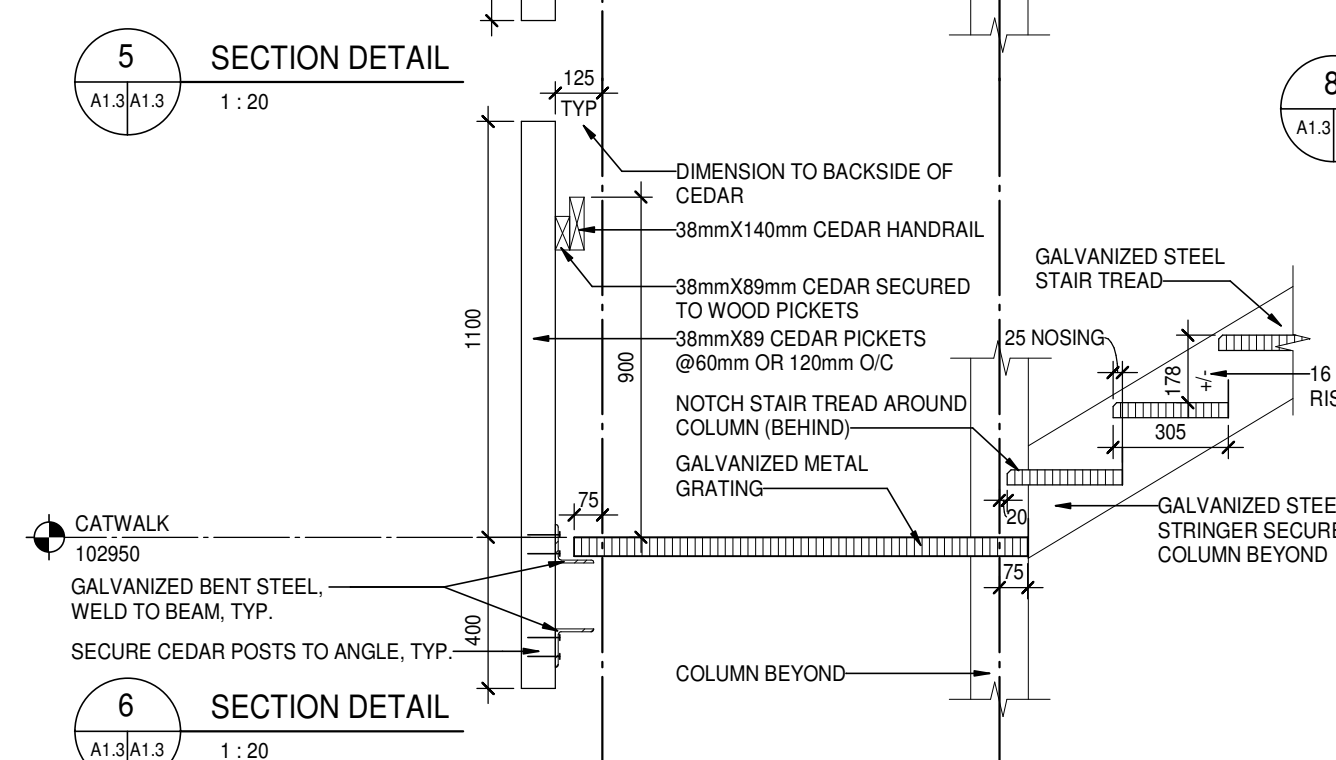
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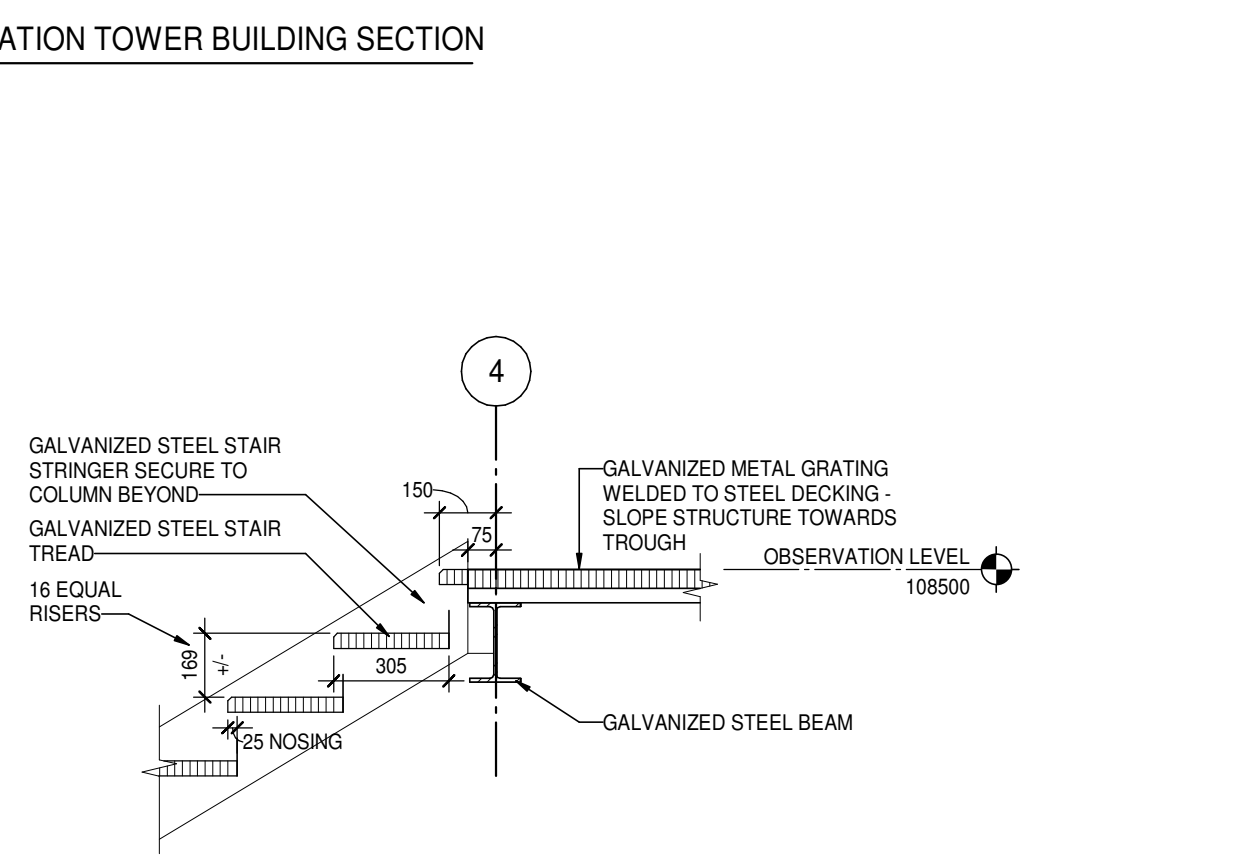
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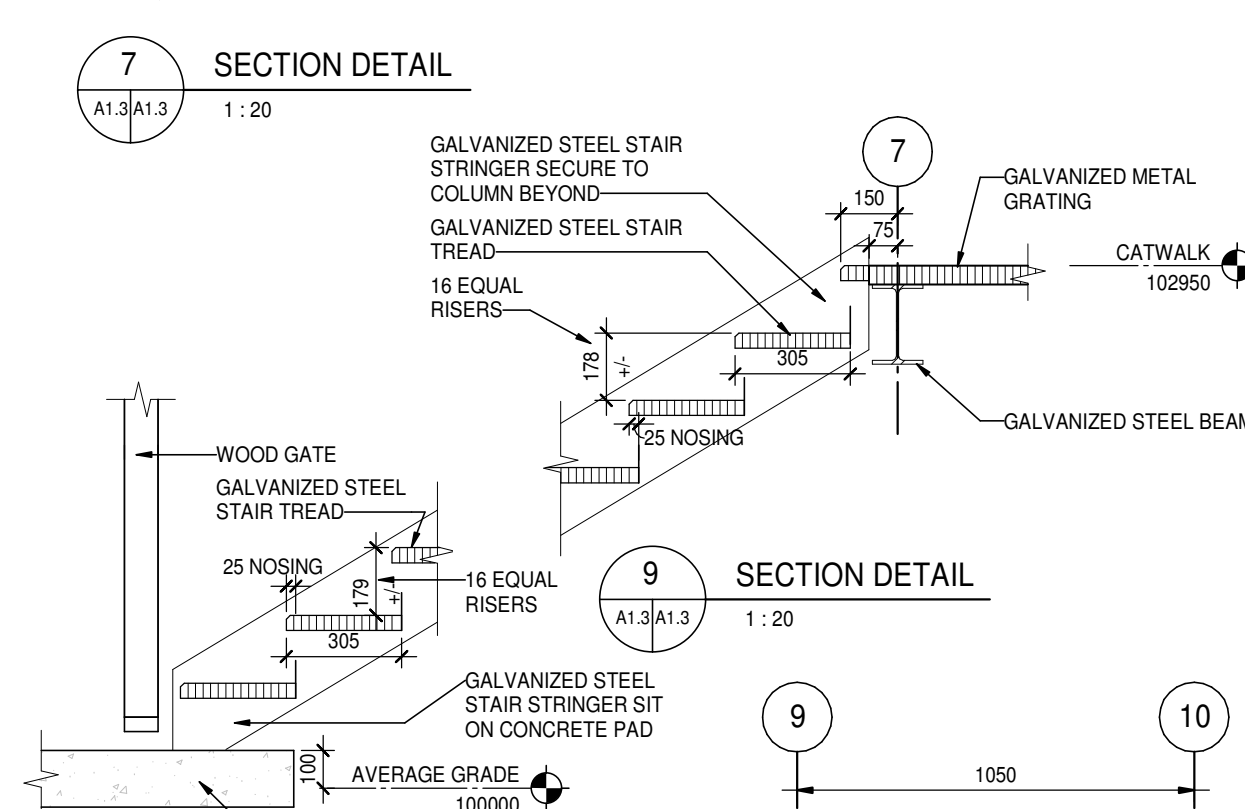
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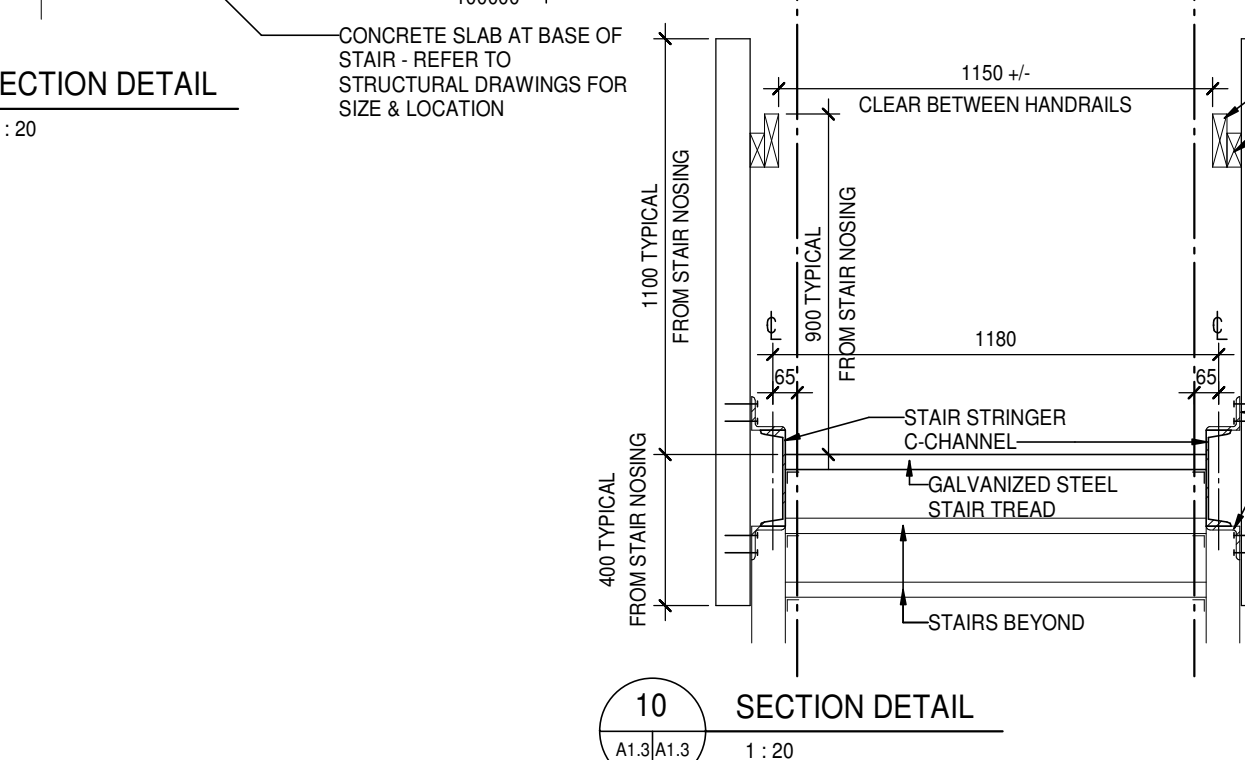
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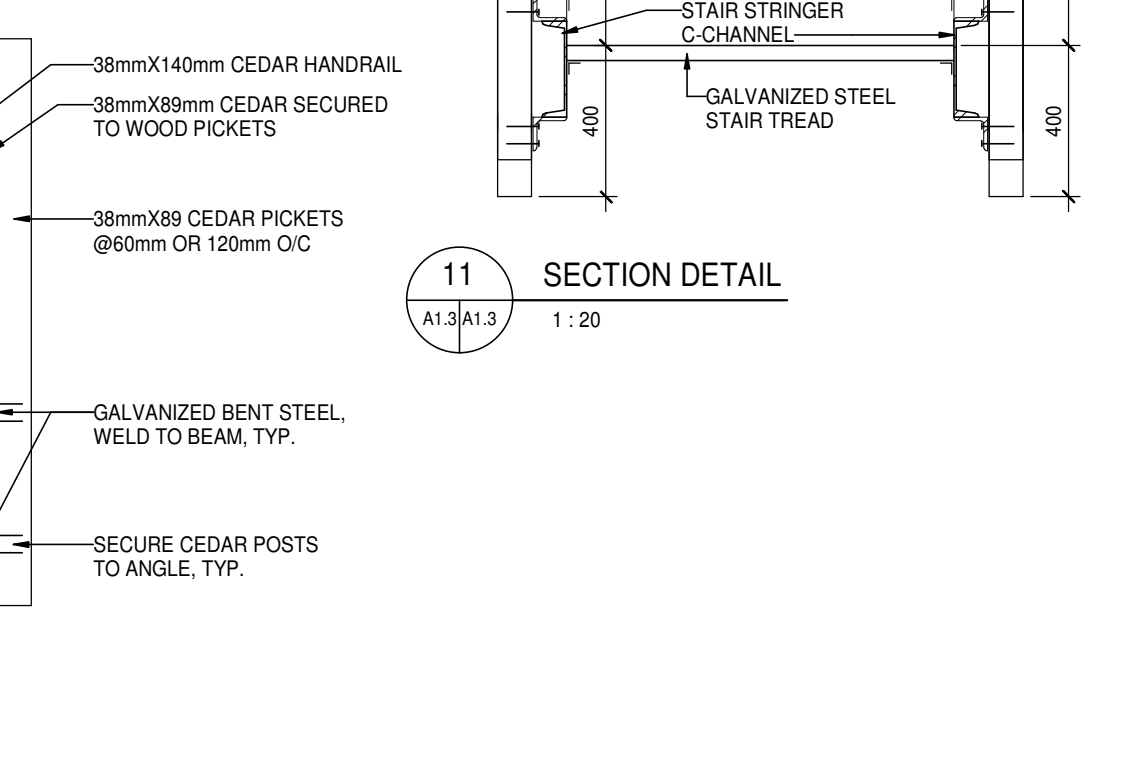
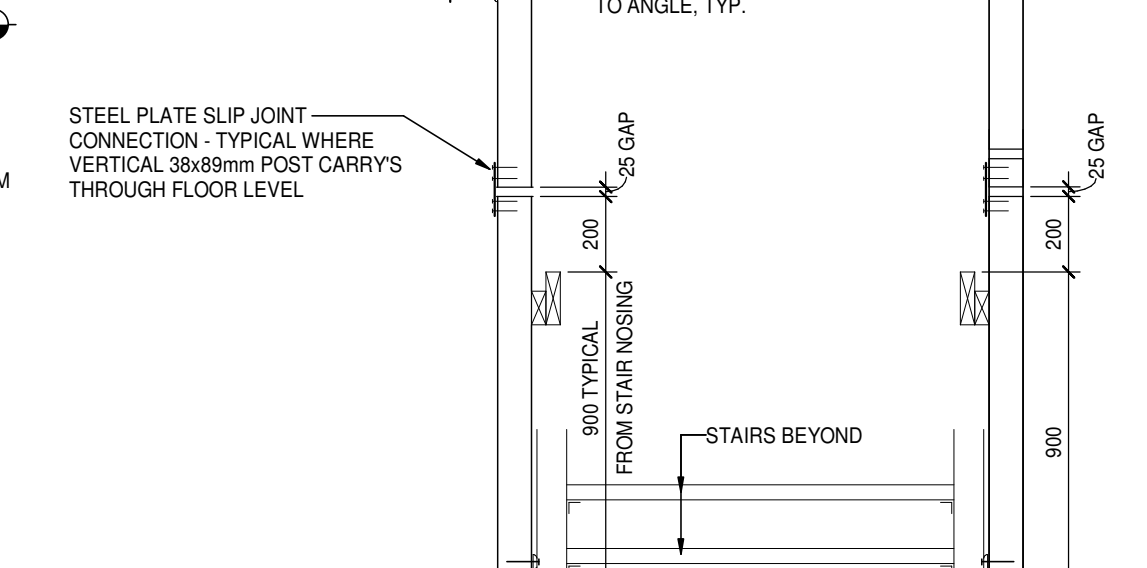
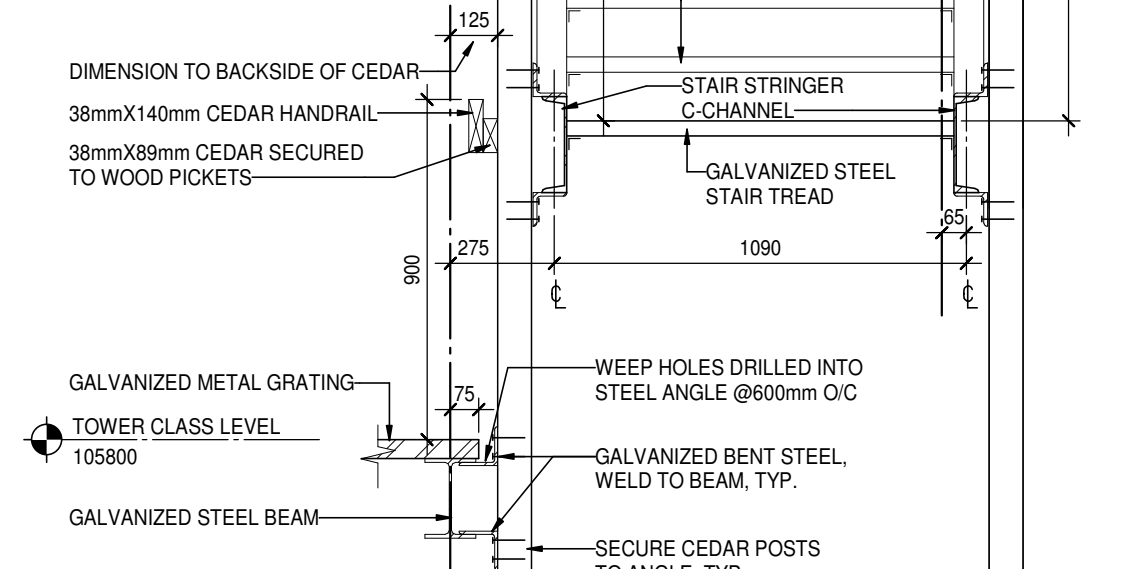
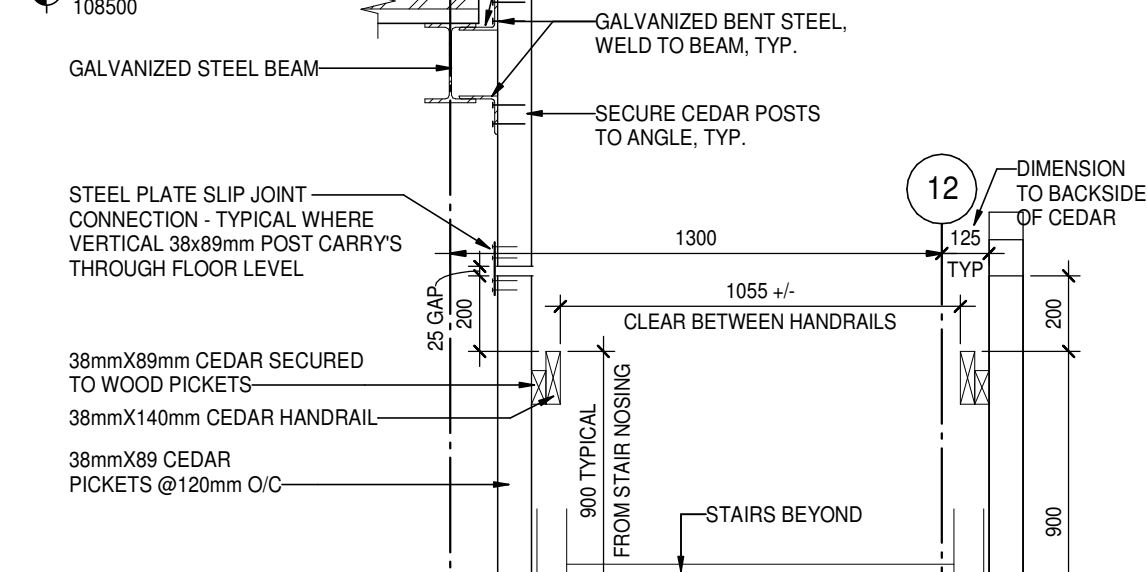
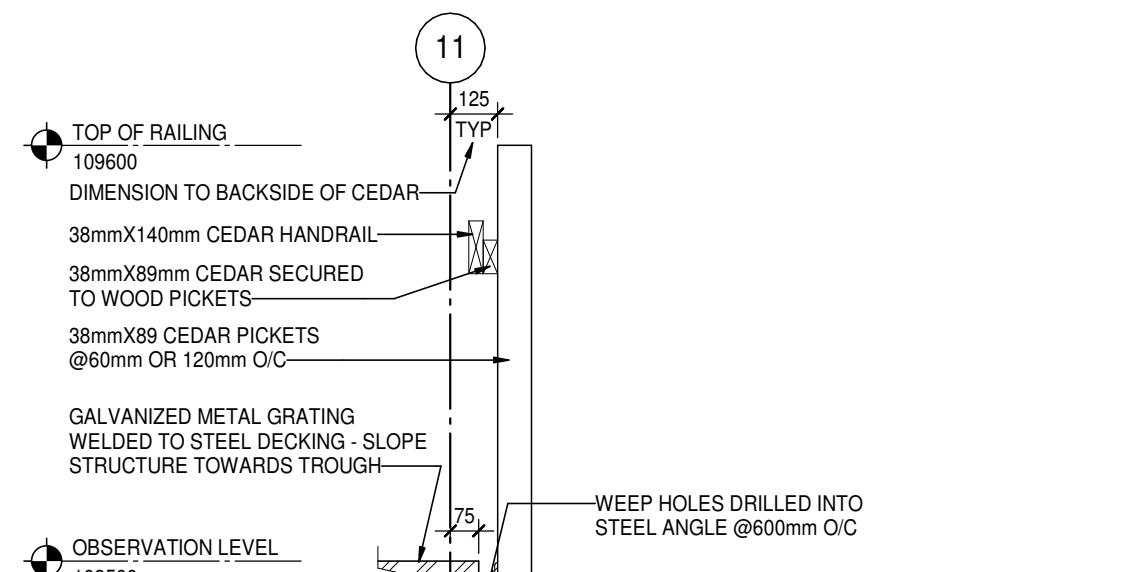
7 SECTION DETAIL
A1.3/A1.3 1:20



8 SECTION DETAIL
A1.3/A1.3 1:20



9 SECTION DETAIL
A1.3/A1.3 1:20



10 SECTION DETAIL
A1.3/A1.3 1:20

Revision	Description	Date
5		
4		
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1		
0	ISSUED FOR CONSTRUCTION	2019/07/31

Client: ENVIRONMENT AND CLIMATE
CHANGE CANADA

Project title: LAST MOUNTAIN LAKE NATIONAL
WILDLIFE AREA

Project title: LAST MOUNTAIN LAKE

Designed by: JR/JL
Drawn by: JL
Approved by: JR
Project Manager: ROD KHALED

OBSERVATION TOWER SECTIONS &
DETAILS

Project no./No. du projet: LML-001 e-f
Drawing no./No. du dessin: A1.3
Revision no.: OF

GENERAL NOTES:

- THESE NOTES ARE TO BE READ IN CONJUNCTION WITH THE TECHNICAL SPECIFICATIONS.
- THE GENERAL CONTRACTOR SHALL SCHEDULE AND CO-ORDINATE THE WORK OF ALL TRADES, INCLUDING THE TIMELY DISTRIBUTION OF SHOP DRAWINGS. ALL CONTRACTORS SHALL CO-OPERATE IN THE COMPLETION OF THE OVERALL PROJECT.
- THE DESIGN AND CONSTRUCTION OF THE WORK SHALL BE IN ACCORDANCE WITH THE 2015 NATIONAL BUILDING CODE OF CANADA AND REFERENCED STANDARDS THEREIN. ANY REFERENCE TO CODES OR STANDARDS SHALL BE THE LATEST EDITION UNLESS SPECIFICALLY NOTED OTHERWISE.
- ALL CONTRACTORS SHALL REVIEW ALL PROJECT DRAWINGS SUFFICIENTLY AND COMPARE WITH STRUCTURAL DRAWINGS PRIOR TO ANY CONSTRUCTION ON SITE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BRING ANY DISCREPANCIES, MISSING DIMENSIONS, AND/OR REQUIRED DETAILS TO THE ATTENTION OF THE CONSULTANT, AND RESOLVE SUCH, BEFORE ANY RELATED WORK IS INITIATED.
- DO NOT SCALE DRAWINGS.
- THE CONTRACTOR IS RESPONSIBLE TO ESTABLISH PERMANENT BENCHMARK(S), TO LAYOUT THE WORK, AND TO MAINTAIN VERTICAL AND LATERAL ALIGNMENT OF THE STRUCTURE DURING CONSTRUCTION.
- THE DRAWINGS SHOW THE COMPLETED STRUCTURES ONLY. THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR CONSTRUCTION LOADING CONDITIONS AND STABILITY OF THE STRUCTURE DURING CONSTRUCTION. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN LOADS INDICATED.
- THE CONTRACTOR IS RESPONSIBLE TO CO-ORDINATE ALL INSPECTION AND TESTING. NOTIFY THE STRUCTURAL ENGINEER AND TESTING AGENCY AT LEAST 36 HOURS IN ADVANCE OF ANY CRITICAL INSPECTIONS OR TESTING.
- DO NOT CUT, CORE, OR ALTER STRUCTURAL MEMBERS WITHOUT APPROVAL OF STRUCTURAL ENGINEER OR FABRICATOR.
- ALL NEW OR EXISTING CONSTRUCTION ALTERED OR DAMAGED DURING COURSE OF WORK TO BE REPAIRED BY THE CONTRACTOR.
- ARCHITECTURAL, MECHANICAL AND ELECTRICAL ITEMS ARE TO BE SUPPORTED FROM SECONDARY MEMBERS, SUPPLIED AND INSTALLED BY THE CONTRACTOR THAT ARE INDEPENDENT OF THE MAIN STRUCTURAL MEMBERS.
- ITEMS ARE NOT TO BE SUPPORTED DIRECTLY FROM THE METAL DECK UNLESS APPROVED BY THE CONSULTANT.

FOUNDATION:

- THE CONTRACTOR SHALL STAKE THE LOCATION OF ALL NEW AND EXISTING UNDERGROUND SERVICES AND UTILITIES, PILES, AND FOUNDATION ELEMENTS.
- RECORD AS-BUILT CONDITIONS OF ALL PILES AND FOUNDATION ELEMENTS, AND SUBMIT TO THE CONSULTANT PRIOR TO ERECTING THE SUPERSTRUCTURE.
- PATCH ALL DEFECTIVE FOUNDATION ELEMENTS PRIOR TO INSTALLING THE DAMPPROOFING AND/OR BACKFILLING.
- DO NOT BACKFILL OR LOAD STRUCTURAL ELEMENTS UNTIL INSITU CONCRETE HAS ACHIEVED A MINIMUM OF 30 MPa. AND STRUCTURAL ELEMENTS ARE LATERALLY SUPPORTED.

HELICAL PILE NOTES:

- REFER TO PLAN FOR PILE SERVICE LOADS.
- TABULATED PILE DESIGN IS PROVIDED FOR COST ESTIMATE PURPOSES ONLY. FINAL DESIGN TO CARRIED BY THIRD-PARTY CONSULTANT AT THE CONTRACTOR'S COST.
- PILE DESIGN TO BE BASED ON RECOMMENDATIONS AS INDICATED IN THE GEOTECHNICAL REPORT PREPARED BY KGS GROUP FILE# 17-2215-002. REFER TO GEOTECHNICAL REPORT FOR PILE DESIGN VALUES.
- CONTRACTOR TO SUBMIT DETAIL FOR CONNECTION OF HELICAL PILES TO GRADE BEAMS FOR APPROVAL.
- PILES TO BE LOCATED WITHIN 1½" OF DESIGN LOCATION.
- PILES ARE TO BE PLACED WITHIN 1" OF VERTICAL IN ALL DIRECTIONS.
- PILE DESIGN TO BE BASED ON SERVICE LOADS INDICATED ON FOUNDATION PLAN.
- TOP OF PILES TO BE FIELD CUT TO THE ELEVATION SHOWN, TO A TOLERANCE OF +0" & -1/4".
- PILE SHAFTS ARE TO BE DESIGNED FOR A HORIZONTAL LOAD OF 1500 lbs APPLIED AT THE CAP PLATE U.N.O. LIMIT HORIZONTAL DEFLECTION TO 1/4".
- ALL PILES TO BE DESIGNED ASSUMING A MAXIMUM ECCENTRIC LOADING OF 3".
- PILE SHAFTS TO BE DESIGNED FOR A MINIMUM UNSUPPORTED LENGTH OF 5'-0".
- DESIGN PILE SHAFTS FOR 0.065" POTENTIAL CORROSION LOSS.
- HELIX TO BE 90° ±1" TO THE PILE SHAFT, MEASURED RADIALLY AT ANY POINT AROUND THE CIRCUMFERENCE.
- CONFIRM PILE LOCATIONS PRIOR TO INSTALLATION.
- SUBMIT SHOP DRAWINGS SEALED BY A PROFESSIONAL ENGINEER REGISTERED WITH THE PROVINCE OF SASKATCHEWAN INDICATING ALL DESIGN CRITERIA, MATERIAL SPECIFICATIONS etc..
- SUBMIT A PILE INSTALLATION REPORT THAT INCLUDES TORQUE READINGS AND PILE DEPTHS FOR EACH PILE, AND A DRAWING SHOWING AS-BUILT LOCATIONS OF PILES.
- PILE SHAFTS TO BE CONCRETE FILLED FULL HEIGHT.

CONCRETE:

- ALL BATCHING, TRANSPORTING, PLACING, AND CURING OF CONCRETE WORKS SHALL COMPLY WITH CAN/CSA A23.1 "CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION". THE CONTRACTOR SHALL HAVE A COPY OF THIS STANDARD ON SITE AT ALL TIMES. HOT AND COLD WEATHER CONCRETING SHALL CONFORM TO THE APPLICABLE ACI CODES.
- CONTRACTOR TESTING SHALL BE IN ACCORDANCE WITH CAN/CSA-A23.2 "METHODS OF TEST AND STANDARD PRACTICES FOR CONCRETE".
- CONCRETE MATERIALS AND ACCESSORIES ARE IDENTIFIED IN THE TECHNICAL SPECIFICATIONS. CHANGES REQUIRED TO SUIT INSTALLATION PROCEDURES MUST BE APPROVED BY THE ENGINEER PRIOR TO INITIATING THE WORK. SUBMIT COPY OF PROPOSED MIX DESIGN FOR REVIEW PRIOR TO INITIATING WORK.
- PRIOR TO CONCRETING, CHECK THAT REINFORCING IS PLACED TO PROVIDE PROPER CLEAR COVER AND SUPPORT OF REINFORCING STEEL DURING CONCRETE PLACEMENT AND FINISHING PROCEDURES. ADJUST AS REQUIRED DURING THE COURSE OF THE WORK.
- CONTRACTOR TO ENSURE INSITU CONDITIONS ARE REPLICATED BY TEST CYLINDERS SUPPLIED FOR TESTING. CAST ADDITIONAL FIELD CURED CYLINDERS AS REQUIRED.
- PROVIDE METHODS AND MEANS TO PROTECT CONCRETE DURING PLACING AND FINISHING. MAINTAIN CURING CONDITIONS.
- DO NOT REMOVE FORMWORK UNTIL INSITU CONCRETE HAS OBTAINED 75% OF SPECIFIED STRENGTH. PREPARE AND PATCH, OR REMOVE AND REPLACE ALL DEFECTIVE CONCRETE PRIOR TO CONTINUING WITH SEQUENTIAL CONSTRUCTION ITEMS.
- ALL CONCRETE TO HAVE MINIMUM INSITU 30 MPa COMPRESSIVE STRENGTH AT 28 DAYS. SEE TECHNICAL SPECIFICATIONS.
- PILE CAPS AND EXTERIOR SLABS TO UTILIZE TYPE HS CEMENT, MAX W/C RATIO 0.45, AIR 4 TO 6%.
- AGGREGATE FOR ALL FLATWORK TO HAVE MAX 0.3% BY WEIGHT LOW DENSITY MATERIAL.
- AGGREGATE FOR TOPPING TO BE MAX 10mm.
- VOID FORM: 150 THICK CARDBOARD HONEYCOMB, TOP SHEET TO BE 5 MM THICK PLYWOOD. COVER AND WRAP EDGES WITH POLY. PROVIDE LEVELED SAND BASE UNDER VOID FORM. SLIT POLY PRIOR TO BACKFILLING.
- GROUT UNDER COLUMN BASE PLATES TO BE NON-SHRINK, NON-METALLIC GROUT. MINIMUM COMPRESSIVE STRENGTH OF 20MPa AT 3 DAYS AND 50MPa AT 28 DAYS.

REINFORCING STEEL:

- NEW DEFORMED BARS CONFORMING TO CSA G30.18M GRADE 400.
- REINFORCING WORK SHALL BE IN ACCORDANCE WITH CSA-A23.1 AND CSA-A23.3.
- REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE LATEST EDITION OF THE ACI DETAILING MANUAL OR THE REINFORCING STEEL INSTITUTE OF CANADA DETAILING MANUAL. SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION.
- REINFORCING TO BE CONTINUOUS UNLESS NOTED. LAP TOP BARS AT MIDSPAN, BOTTOM BARS AT SUPPORTS. MINIMUM LAP FOR 10M BARS TO BE 450 mm. MINIMUM LAPS FOR OTHER BARS TO BE MINIMUM 36 BAR DIAMETERS, INCREASE AT TOP BAR LOCATIONS.
- WHERE REINFORCEMENT LAPS ARE REQUIRED IN ADJACENT BARS, STAGGER LAPS MINIMUM 1200 UNLESS NOTED OTHERWISE.
- CHAIR SLAB REINFORCING NOT FURTHER THAN 1.0 METRE IN EITHER DIRECTION. SUPPLY SUPPORT BARS, CHAIRS, AND CARRIERS AS NECESSARY.
- ANCHOR BOLTS SHALL BE SECURED IN POSITION BY MEANS OF TEMPLATES BEFORE CONCRETE IS POURED.
- CONCRETE COVER TO CONFORM TO CSA A23.3 OR AS SPECIFIED. COVER REQUIREMENTS:

1. PILE CAPS:	
- TOP & SIDES	40mm
- BOTTOM	40mm
2. SLAB ON VOID FORM:	
- TOP	30mm
- BOTTOM	30mm

PILE SCHEDULE			
PILE #	VERT. SERVICE LOAD (kN)	LATERAL SERVICE LOAD (kN)	UPLIFT SERVICE LOAD (kN)
P-1	195	35	110
P-2	110	35	50
P-3	80	35	60
P-4	70	35	10

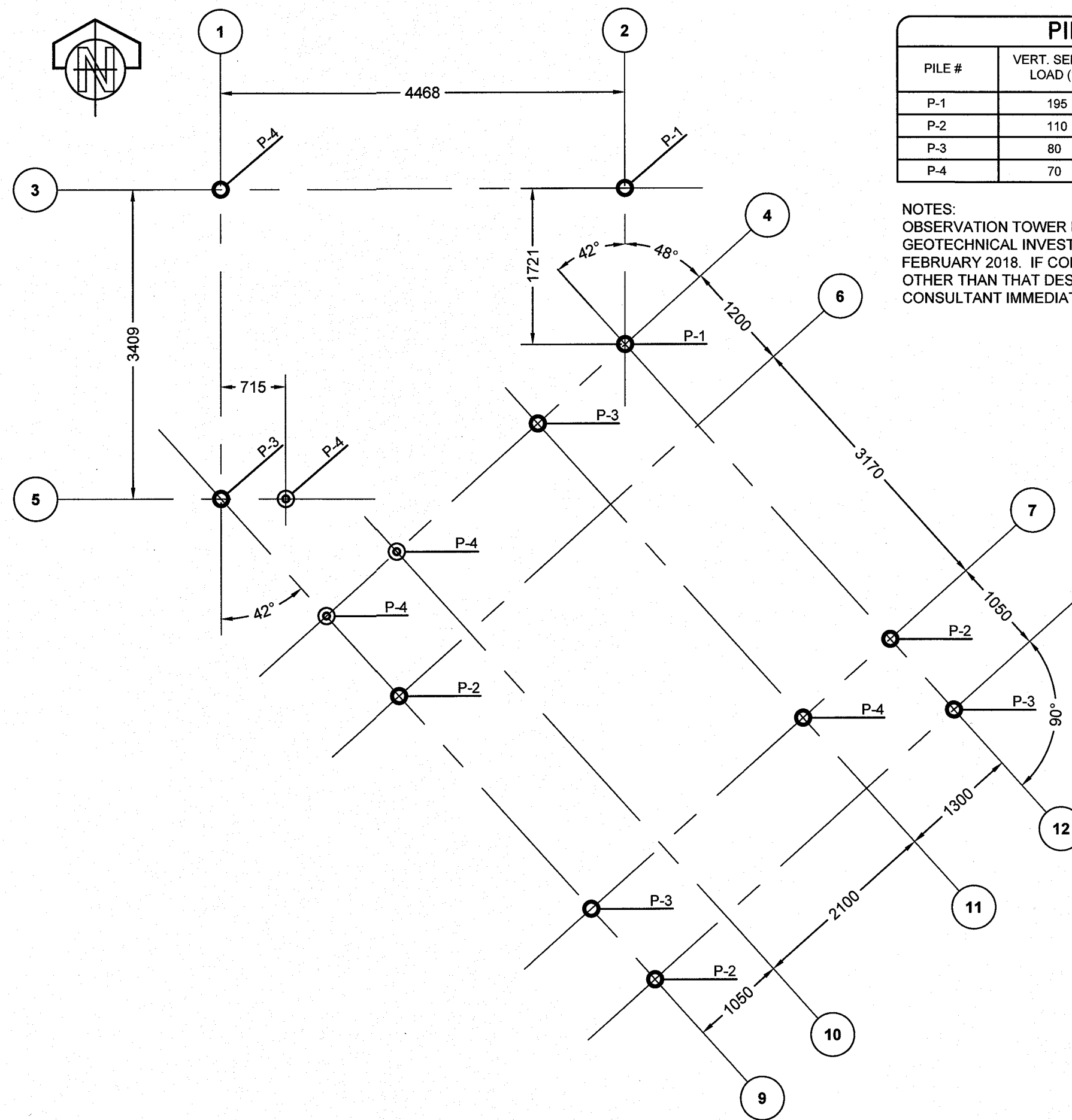
NOTES:
OBSERVATION TOWER IS TO BE LOCATED 200m OF TH17-102 AS PER GEOTECHNICAL INVESTIGATION REPORT BY KGS GROUP DATED FEBRUARY 2018. IF CONTRACTOR ENCOUNTERS SOIL CONDITIONS OTHER THAN THAT DESCRIBED IN THE REPORT, NOTIFY THE CONSULTANT IMMEDIATELY.

STRUCTURAL STEEL:

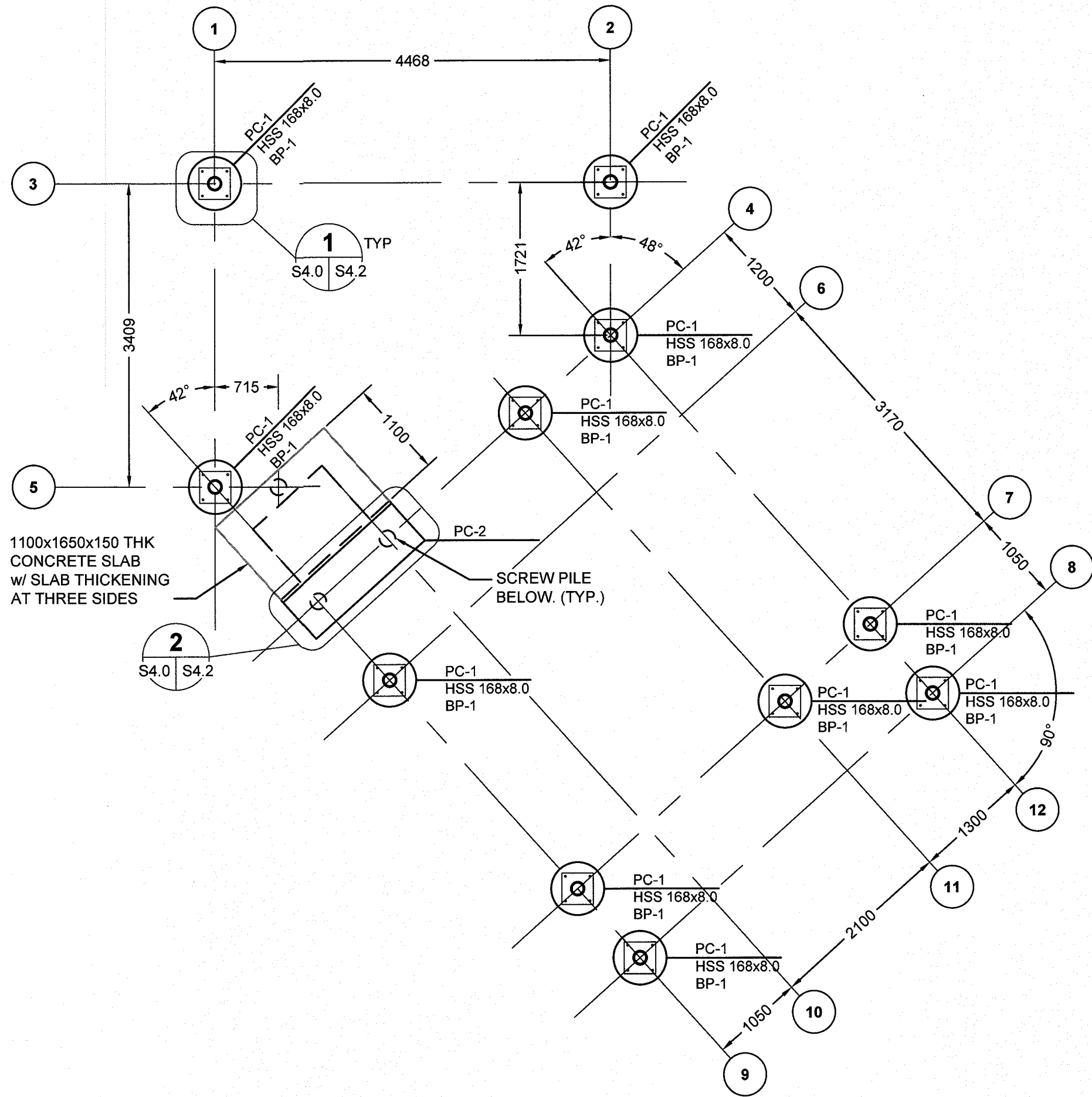
- FABRICATE AND ERECT STRUCTURAL STEEL TO CAN/CSA-16.
- STRUCTURAL STEEL SHALL CONFORM TO CAN/CSA G40.21 GRADE 300W/350W - HSS 350W, CLASS C.
- FABRICATOR TO BE CERTIFIED AS A DIVISION 1 or 2 COMPANY UNDER CSA W47.1.
- SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION.
- ALL SHOP DRAWINGS FOR CONNECTIONS MUST BE DESIGNED AND STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF SASKATCHEWAN.
- ERECTION BOLTS SHALL CONFORM TO ASTM A325M, MIN. 30mm END/EDGE DISTANCE, THREADS EXCLUDED FROM THE SHEAR PLANE.
- ANCHOR BOLTS SHALL CONFORM TO ASTM A307.
- CONTRACTOR TO DEVELOP ERECTION PROCEDURE AND PROVIDE TEMPORARY ERECTION BRACING AS REQUIRED. ERECTION BRACING SHALL BE REMOVED ONLY AFTER PERMANENT FLOOR DIAPHRAGMS, ROOF DIAPHRAGMS, SHEAR WALLS AND PERMANENT BRACING ARE COMPLETED.
- FIELD WELDING BY COMPANIES CERTIFIED BY THE CWB AS PER W47.1 DIVISIONS 1, 2 OR 3. ALL WELDERS TO BE CWB CERTIFIED FOR MATERIALS AND POSITIONS USED.
- WELDING ELECTRODES SHALL BE LOW-HYDROGEN. ALL AREAS TO RECEIVE WELDING SHALL BE CLEAN OF GREASE OR PAINT. WELDING SHALL NOT BE DONE WHEN AMBIENT TEMPERATURE IS LOWER THAN -18°C (0°F).
- MINIMUM WELDS FOR CONNECTIONS SHALL BE 5mm FILLET WELD.
- REMOVE ALL WELDING SLAG BEFORE PAINTING.
- PREPARE AND PAINT ALL EXPOSED STEEL MEMBERS TO BE COMPATIBLE WITH FINISHES APPLIED. OTHER STEEL TO BE PREPARED AND SHOP PRIMED WITH LEED COMPLIANT RUST INHIBITOR TYPE PRIMER. ALL EXTERIOR STEEL, FASTENERS AND COMPONENTS TO WEATHER ELEMENTS SHALL BE GALVANIZED.
- AFTER ERECTION TOUCH UP PAINT ALL FIELD WORKED OR DAMAGED SURFACES.

METAL DECK:

- DECK TO BE 38 MM DEEP PROFILE, MIN. 22 GA. (0.030") BASE METAL THICKNESS. HOT DIP GALVANIZED TO Z275.
- ROOF DECK TO BE MINIMUM 3 SPAN CONTINUOUS. INCREASE BASE METAL THICKNESS AS REQUIRED FOR LOADS AND INSTALLATION.
- SUBMIT SHOP DRAWINGS FOR REVIEW SHOWING ALL CONNECTIONS AND CLOSURE MATERIALS REQUIRED TO COMPLETE THE WORK. ALL SHOP DRAWINGS MUST BE DESIGNED AND STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF SASKATCHEWAN.
- ROOF DECK IS INTEGRAL PART OF LATERAL LOAD RESISTING DIAPHRAGM. PROTECT SHEET. PROFILE TO MAINTAIN PROPERTIES DURING CONSTRUCTION.
- SECURE METAL DECK TO SUPPORTING STEEL MEMBERS WITH SHEET METAL SCREWS OR PUDDLE WELDS, WITHOUT DAMAGING OR REDUCING THE STRENGTH OF THE METAL DECK OR THE SUPPORTING MEMBERS. INSTALL FASTENERS ON BOTH SIDES OF SIDELAPS AT SUPPORTING MEMBERS. USE SHEET METAL SCREWS TO STITCH SHEETS TOGETHER ALONG THE LENGTH OF THE SHEET.



PILE PLAN
1:50



PILE CAP AND COLUMN PLAN
1:50



Environnement et Changement
Climatique Canada
Division Gestion des Biens Immobiliers
Service Techniques

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Proj #: 17-2215-002

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CERTIFICATE OF AUTHORIZATION
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Permission to Consult held by:
Discipline SK, Reg. No. Signature
Struct. 6987 Mahesh Ramesh



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0	ISSUED FOR CONSTRUCTION	2018/07/31
Revision	Description	Date
Client		client

**ENVIRONMENT AND CLIMATE
CHANGE CANADA**

**LAST MOUNTAIN LAKE NATIONAL
WILDLIFE AREA**

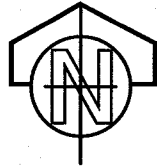
Project title
LAST MOUNTAIN LAKE

Designed by
N.C.K.
Drawn by
MB
Approved by
M.R.

PWGC Project Manager
ROD KHALED

Drawing title
**OBSERVATION TOWER
PILE PLAN
PILE CAP AND COLUMN PLAN**

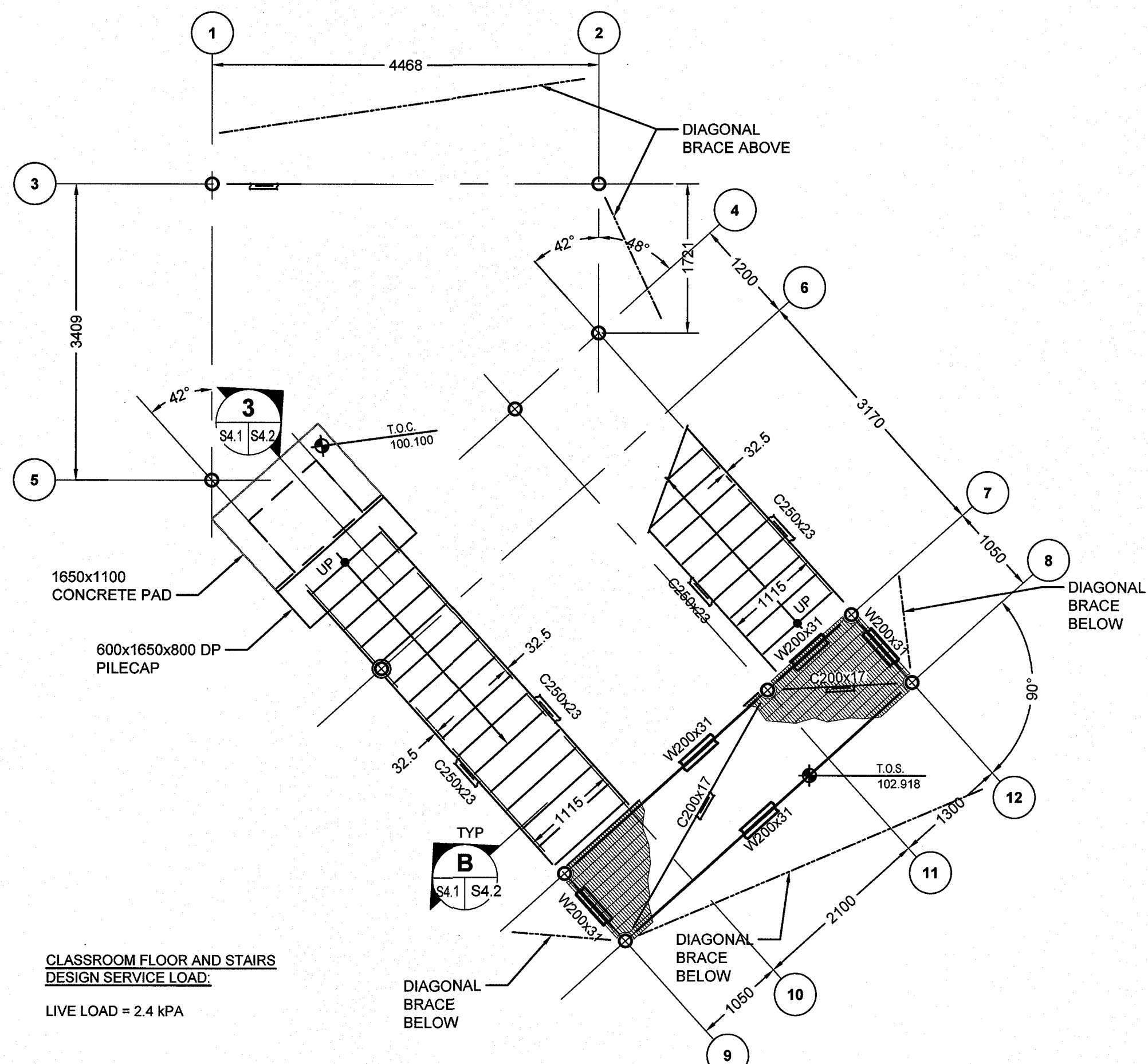
Project no./No. du projet	Drawing no./No. du dessin	Revision no.
LML-001 e-f	S4.0 OF 4	0



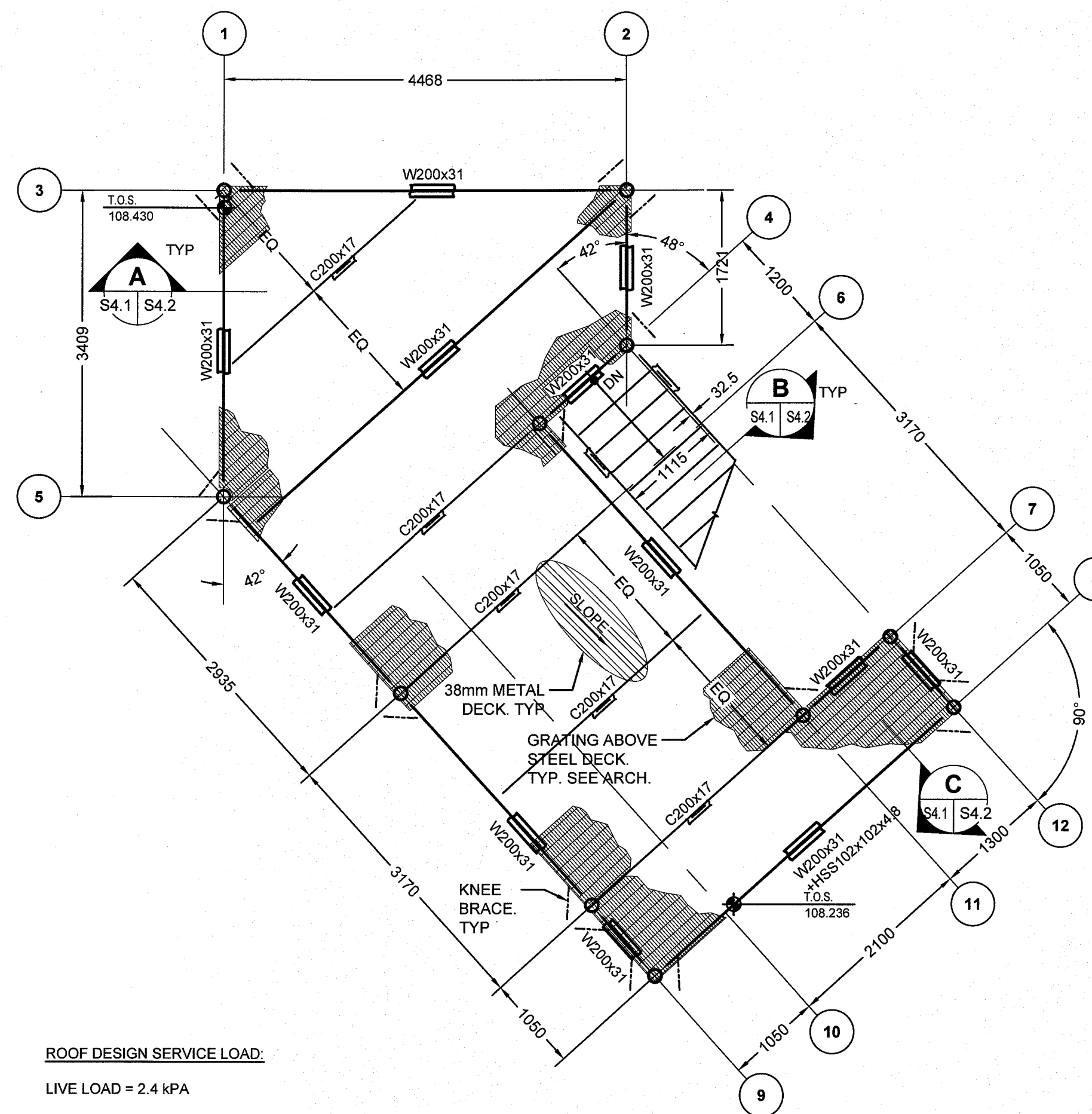
GRATING NOTES: (STAIRS AND UPPER FLOORS)

1. GALVANIZED SLIP-RESISTANT METAL BAR GRATING TYPE 15-4 (BEARING BARS AT $\frac{3}{8}$ " O.C. CROSS BARS AT 4" O.C.).
2. BEARING BARS $1\frac{1}{2}$ " DEEP $\times\frac{1}{2}$ " THICK.
3. SWAGED PRESSURE LOCKED GRATING.
4. WELD ALL GRATING TO TOP OF STEEL BEAMS.

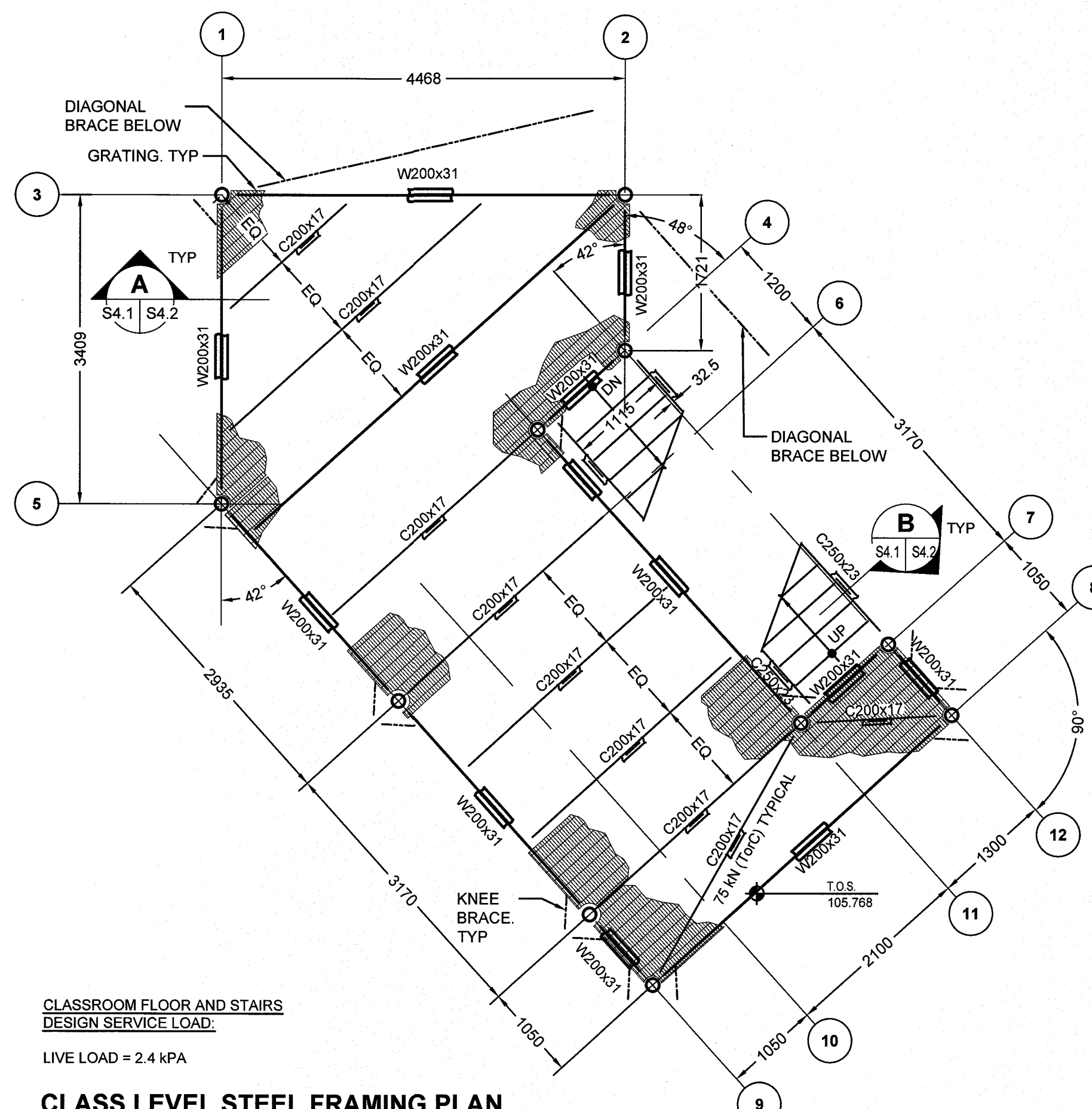
NOTES:
ALL STEEL EXPOSED TO WEATHER SHALL BE GALVANIZED
INCLUDING FASTENERS AND COMPONENTS



MAIN LEVEL STEEL FRAMING
1:50



ROOF DESIGN SERVICE LOAD:
LIVE LOAD = 2.4 kPa
TOP LEVEL STEEL FRAMING PLAN
1:50



CLASSROOM FLOOR AND STAIRS
DESIGN SERVICE LOAD:
LIVE LOAD = 2.4 kPa
CLASS LEVEL STEEL FRAMING PLAN
1:50

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Struct. 6987 Mohsen Rassey



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**ENVIRONMENT AND CLIMATE
CHANGE CANADA**

LAST MOUNTAIN LAKE NATIONAL
WILDLIFE AREA

Project title
LAST MOUNTAIN LAKE

Designed by
N.C.K.
Drawn by
MB
Approved by
M.R.

Conçu par
Dessiné par
Approuvé par

PWSCC Project Manager Administrateur de Projets TPSCC

ROD KHALED

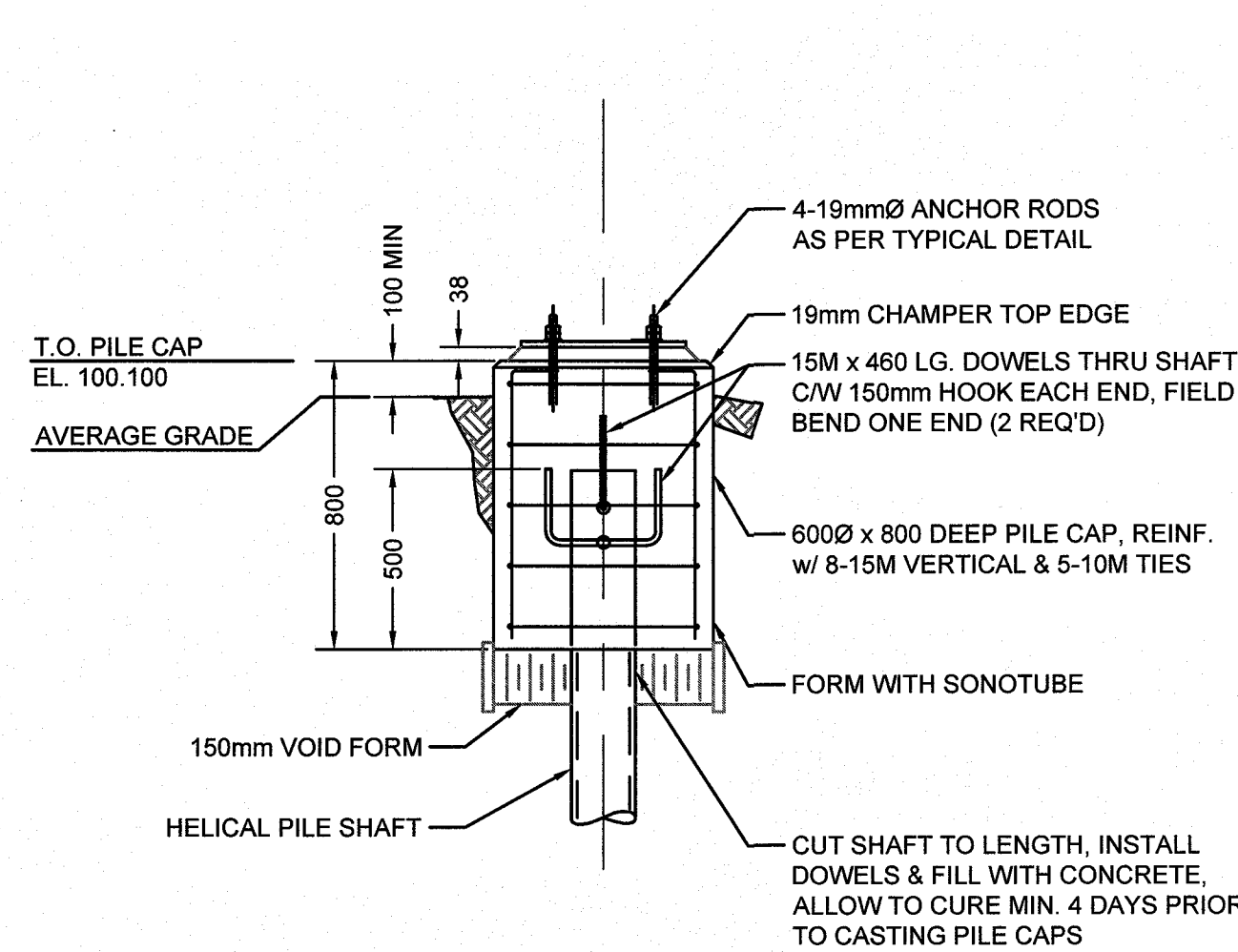
Drawing title Titre du dessin

**OBSERVATION TOWER
PLANS**

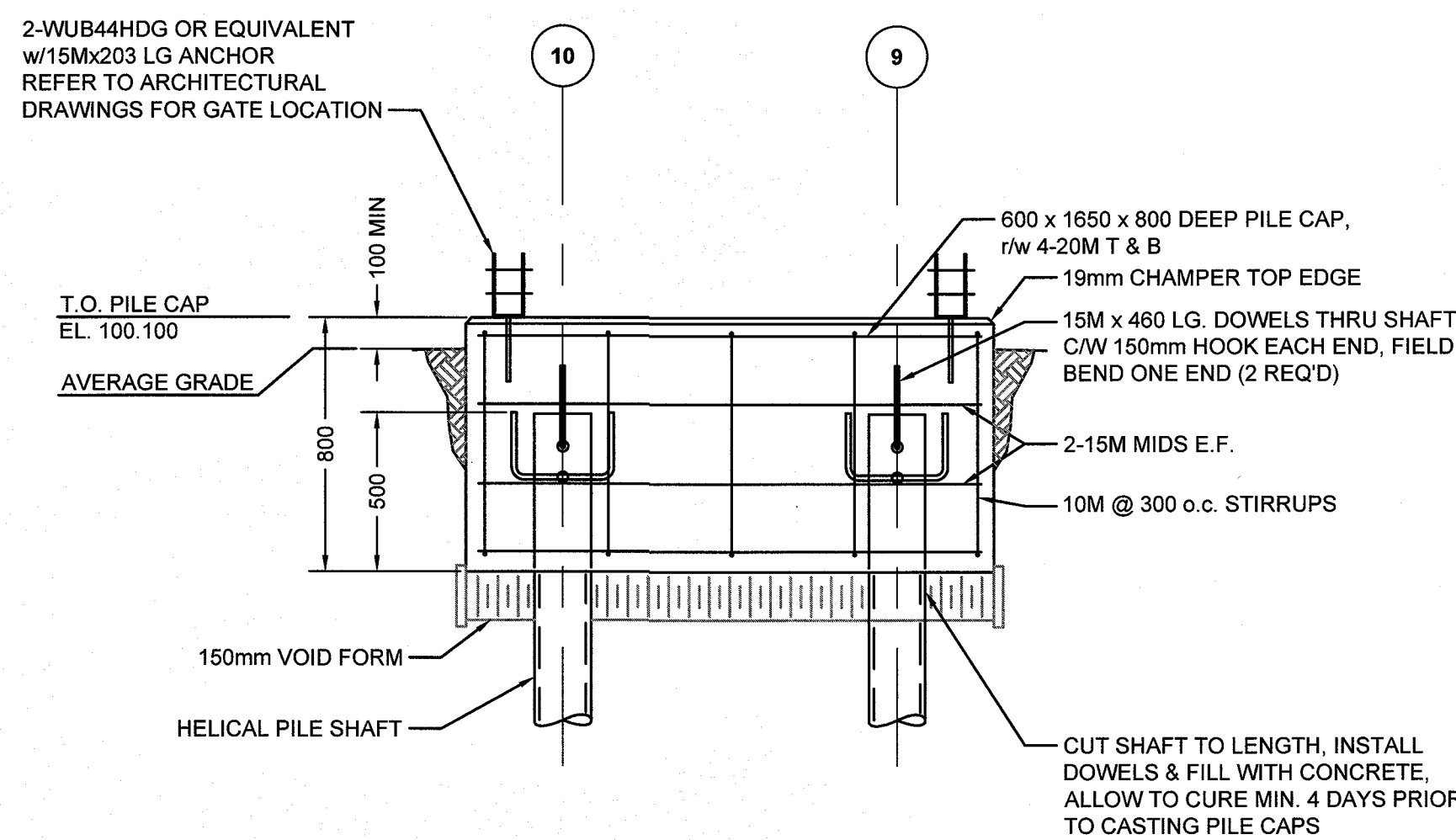
Project no./No. du projet Drawing no./No. du dessin Revision no.

LML-001 e-f S4.1 0

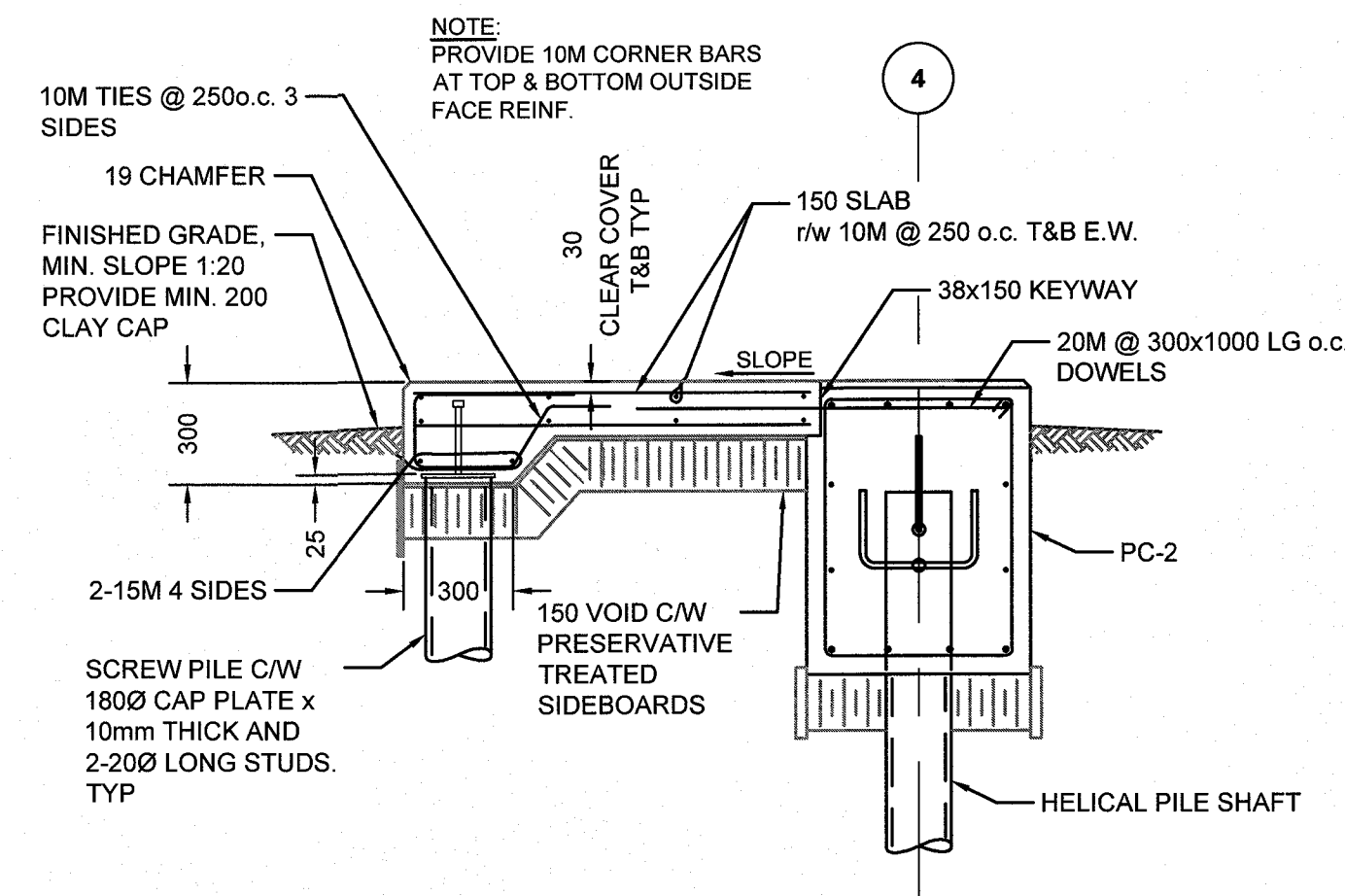
OF 4



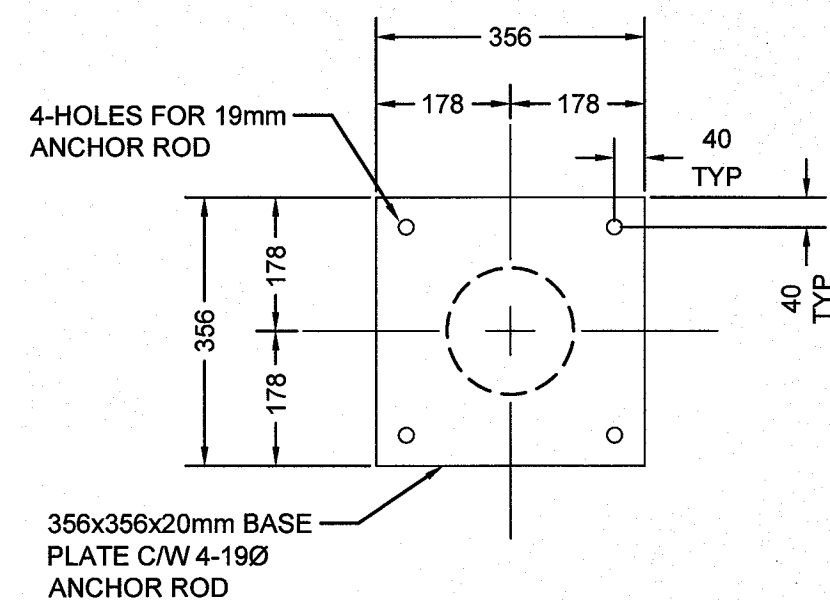
1 DETAIL
S4.0 S4.2 1:20
PILE CAP (PC-1)



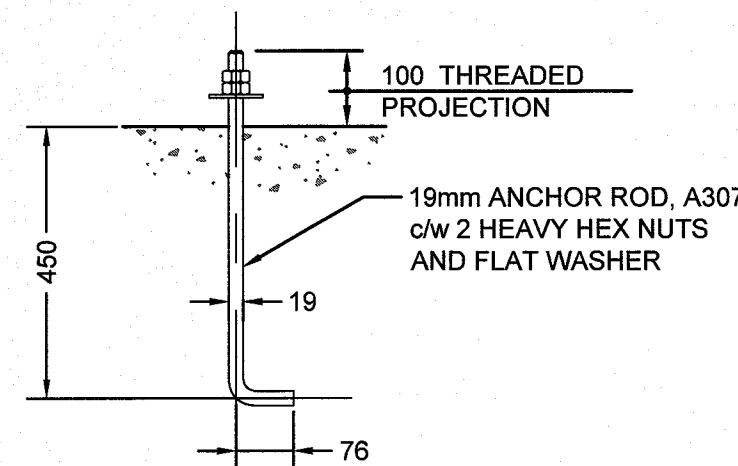
2 DETAIL
S4.0 S4.2 1:20
PILE CAP (PC-2)



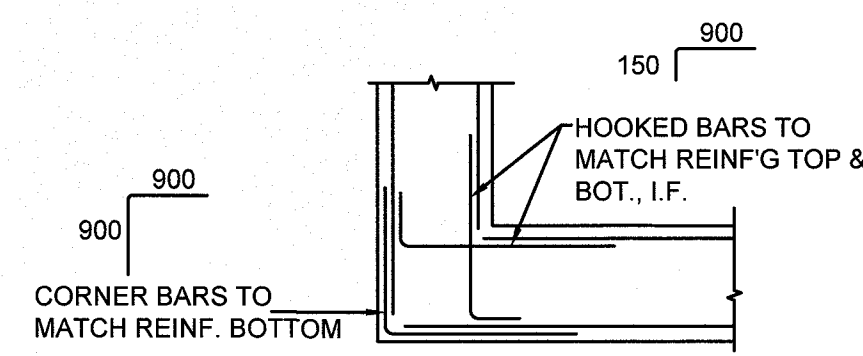
3 SECTION
S4.1 S4.2 1:20



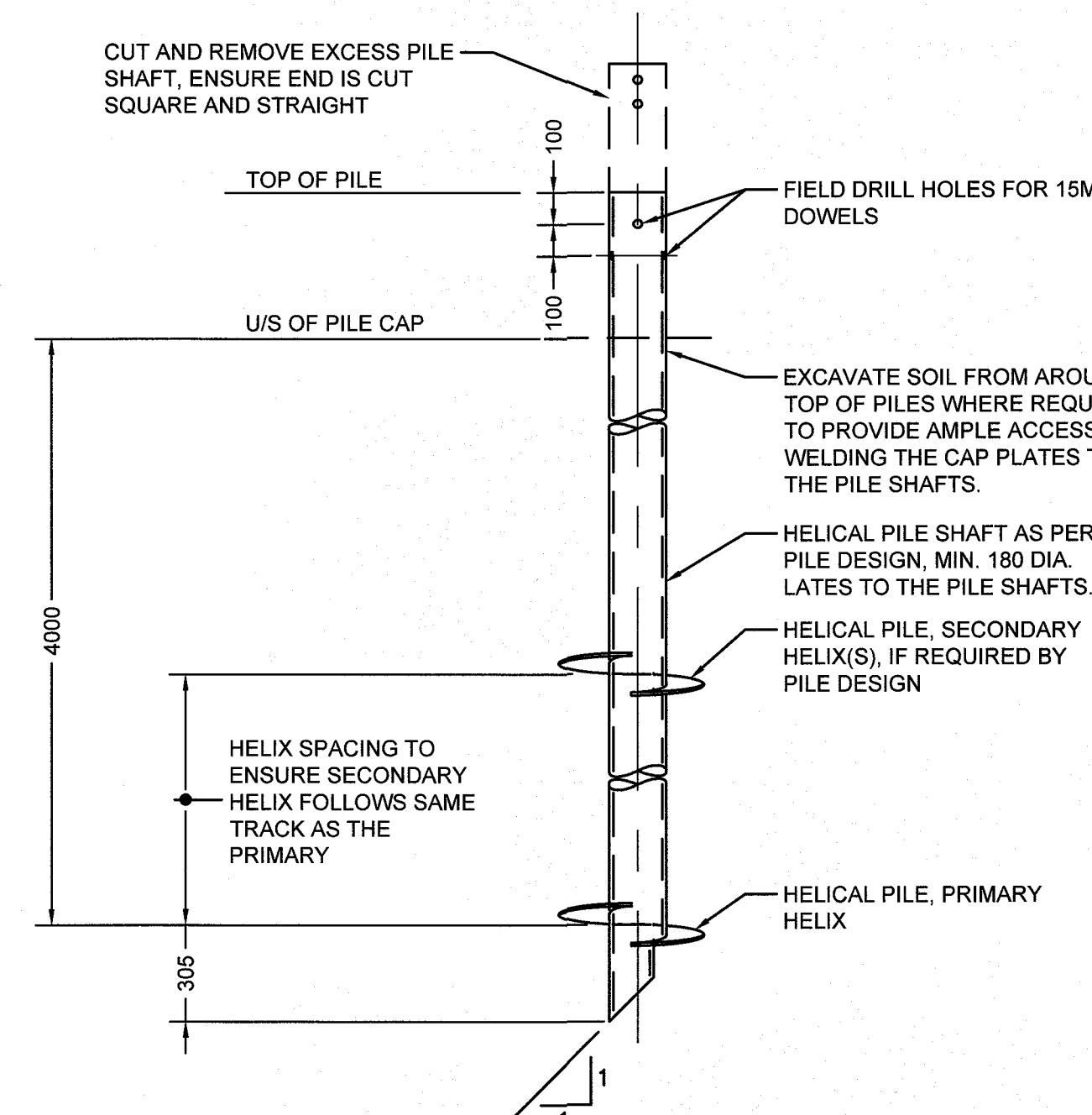
BASE PLATE 1 (BP-1)
1:10
U/S BASE PLATE EL. 100.138



ANCHOR ROD DETAIL
1:10

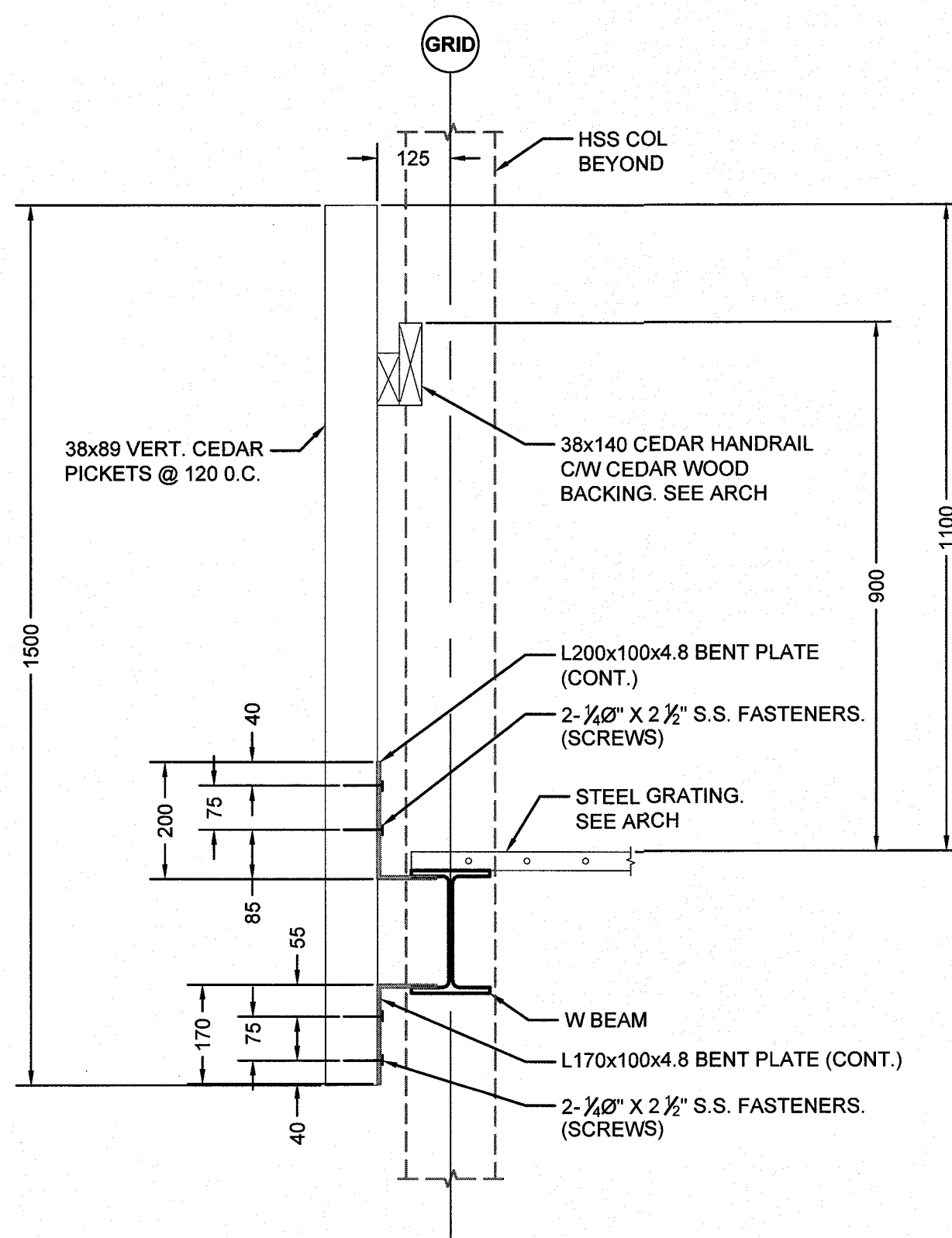


TYPICAL CORNER BAR DETAIL
1:20



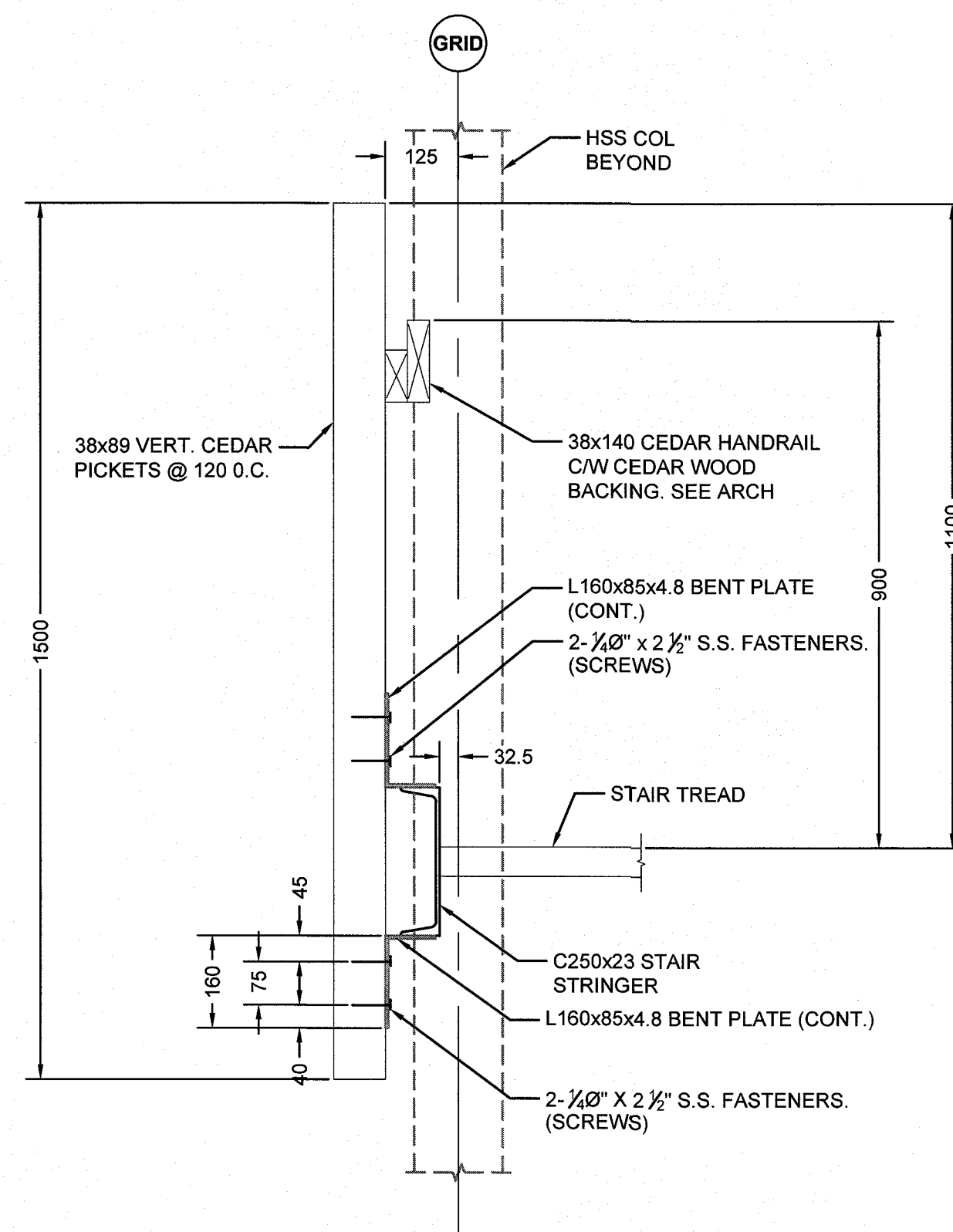
SCREW PILE DETAIL
1:20

NOTE:
STAINLESS STEEL FASTENERS (SCREWS)
- MINIMUM THREAD PENETRATION = 1 1/2"
- MINIMUM WITHDRAWAL RESISTANCE = 6.25kN/FASTENER
- MINIMUM TENSILE RESISTANCE = 8.4kN/FASTENER
- MINIMUM SHEAR RESISTANCE = 7.3kN/FASTENER
- PROVIDE PRODUCT DATA FOR APPROVAL BEFORE CONSTRUCTION



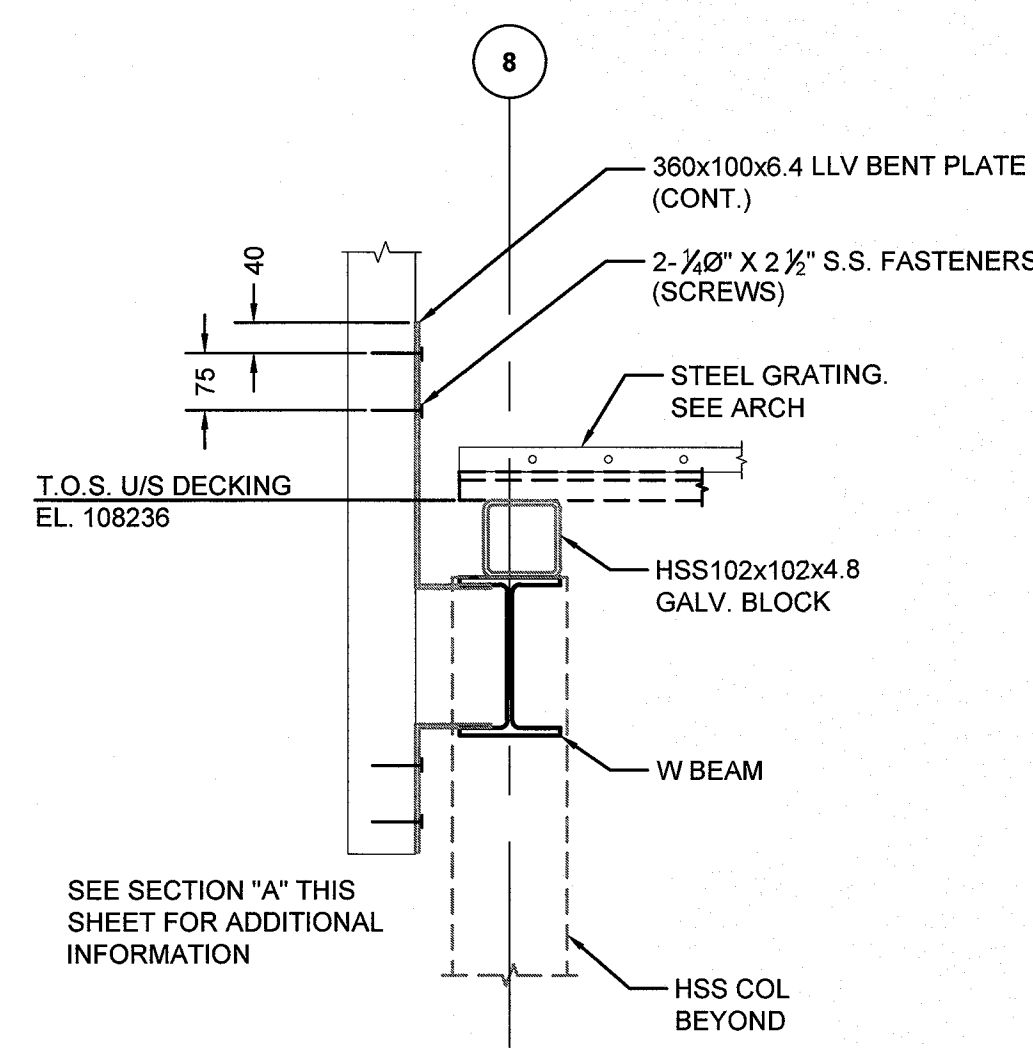
A SECTION
S4.1 S4.2 1:10

TYPICAL AT W-BEAMS

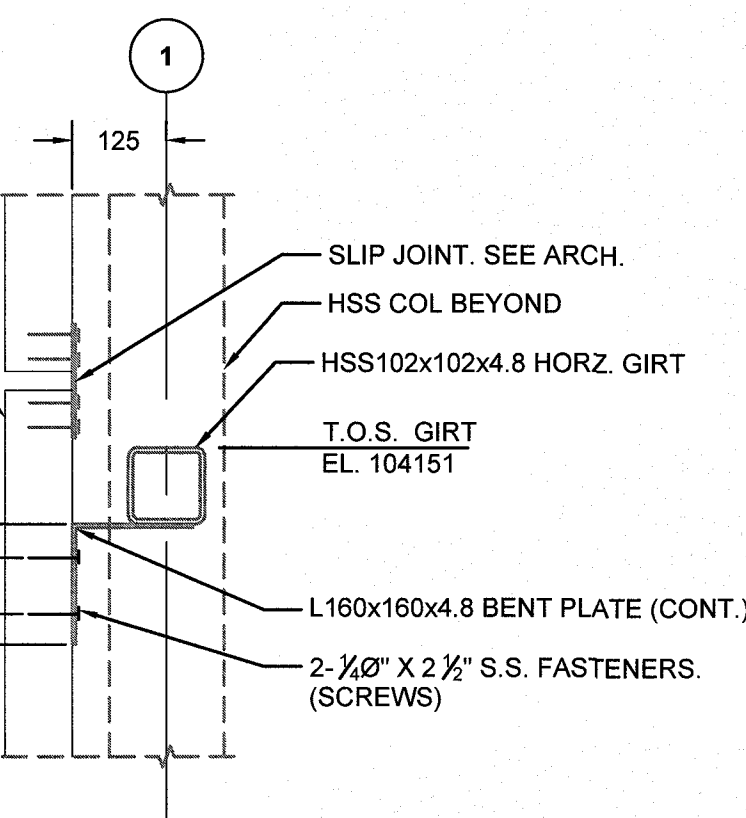


B SECTION
S4.1 S4.2 1:10

TYPICAL AT STAIR STRINGER



C SECTION
S4.1 S4.2 1:10



D SECTION
S4.3 S4.2 1:10

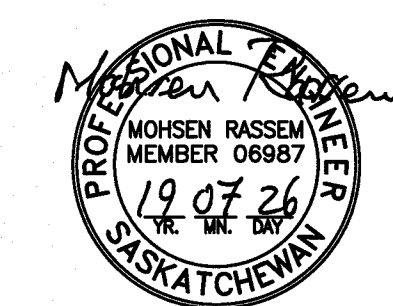
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ENVIRONMENT AND CLIMATE CHANGE CANADA

LAST MOUNTAIN LAKE NATIONAL WILDLIFE AREA

Project title
LAST MOUNTAIN LAKE

Designed by
N.C.K.
Drawn by
MB
Approved by
M.R.

PWSSC Project Manager
ROD KHALED
Administrateur de Projets TPSGC

Drawing title
OBSERVATION TOWER SECTIONS AND DETAILS

Project no./No. du projet
LML-001 e-f
Drawing no./No. du dessin
S4.2
Revision no.
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OF 4

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**ENVIRONMENT AND CLIMATE
CHANGE CANADA**

**LAST MOUNTAIN LAKE NATIONAL
WILDLIFE AREA**

Project title Project
LAST MOUNTAIN LAKE

Designed by Conçu par
N.C.K.

Drawn by Dessiné par
MB

Approved by Approuvé par
M.R.

PWSSC Project Manager Administrateur de Projets TPSSC
ROD KHALED

Drawing title Titre du dessin

**OBSERVATION TOWER
FRAMING ELEVATIONS**

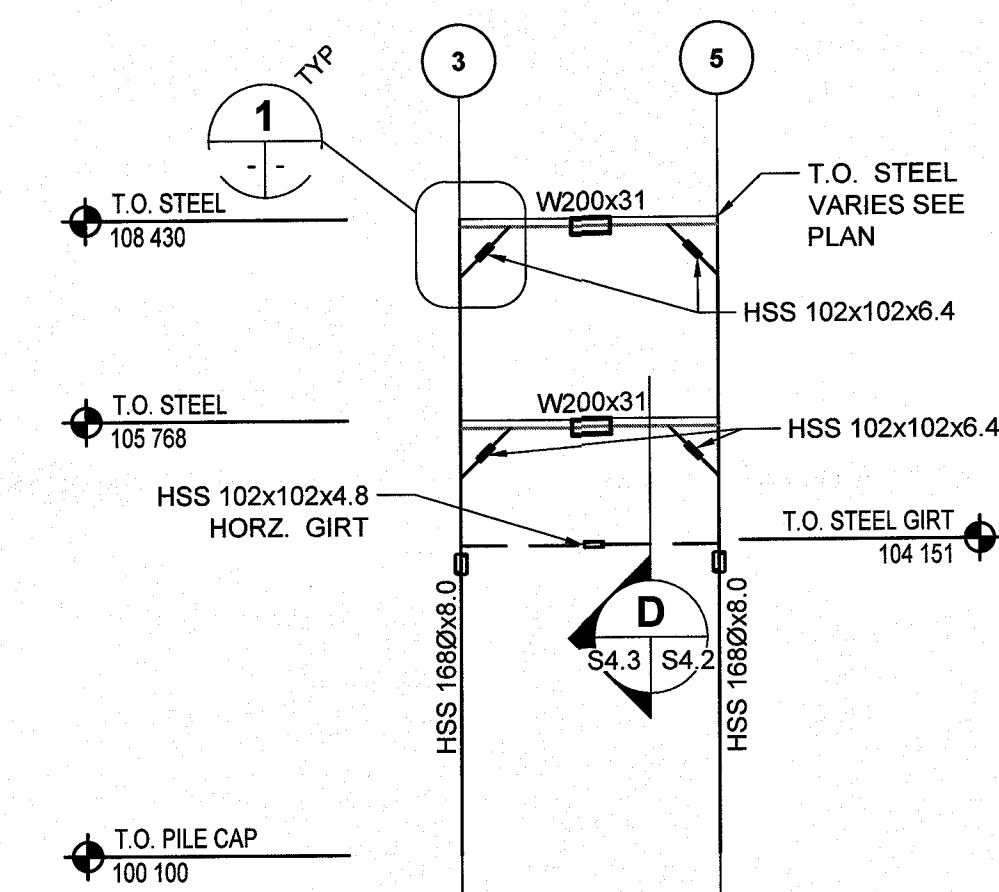
Project no./No. du projet Drawing no./No. du dessin Revision no.

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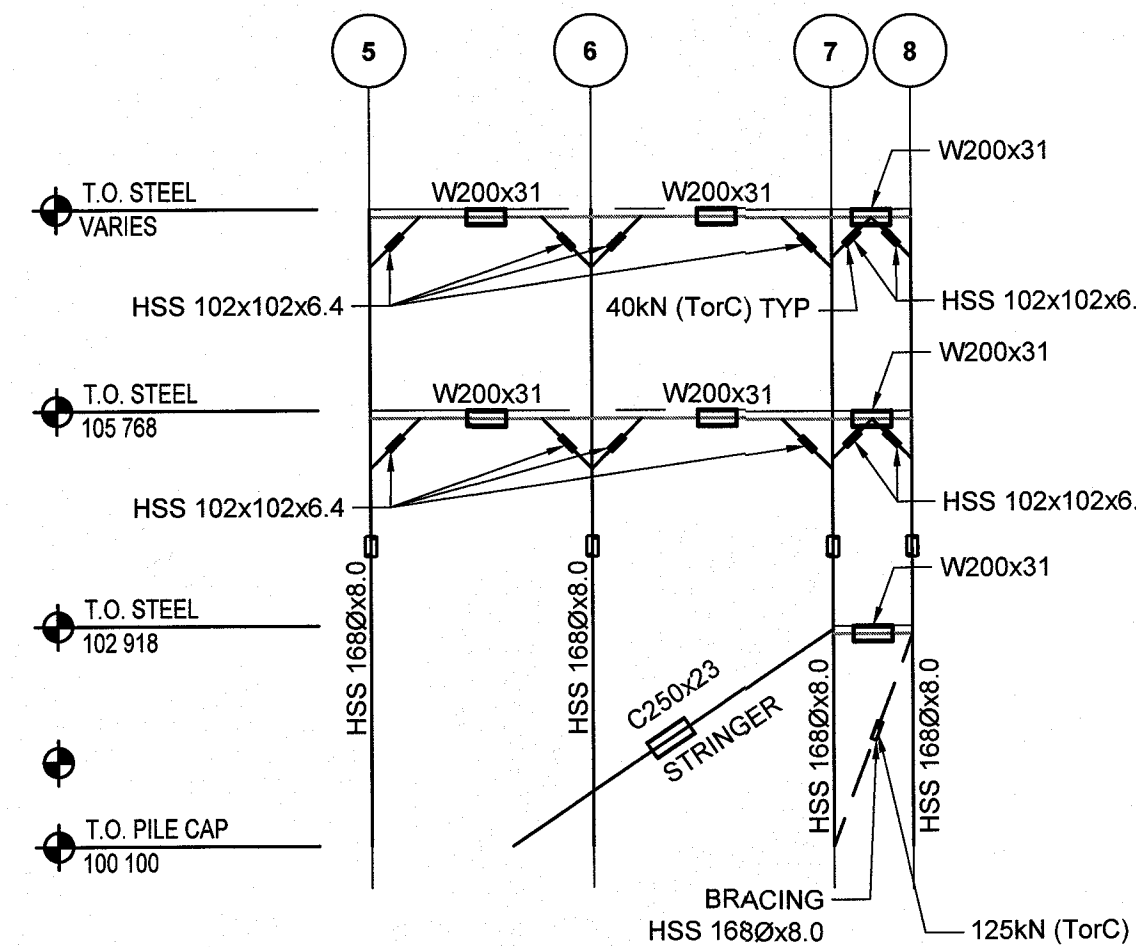
S4.3

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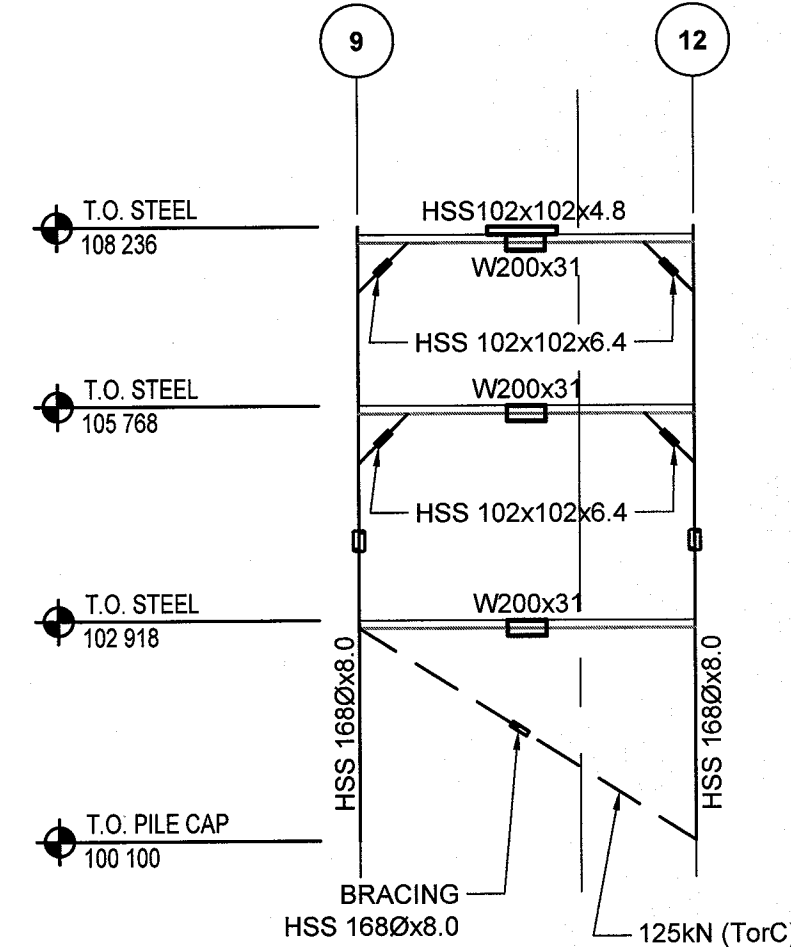
OF 4



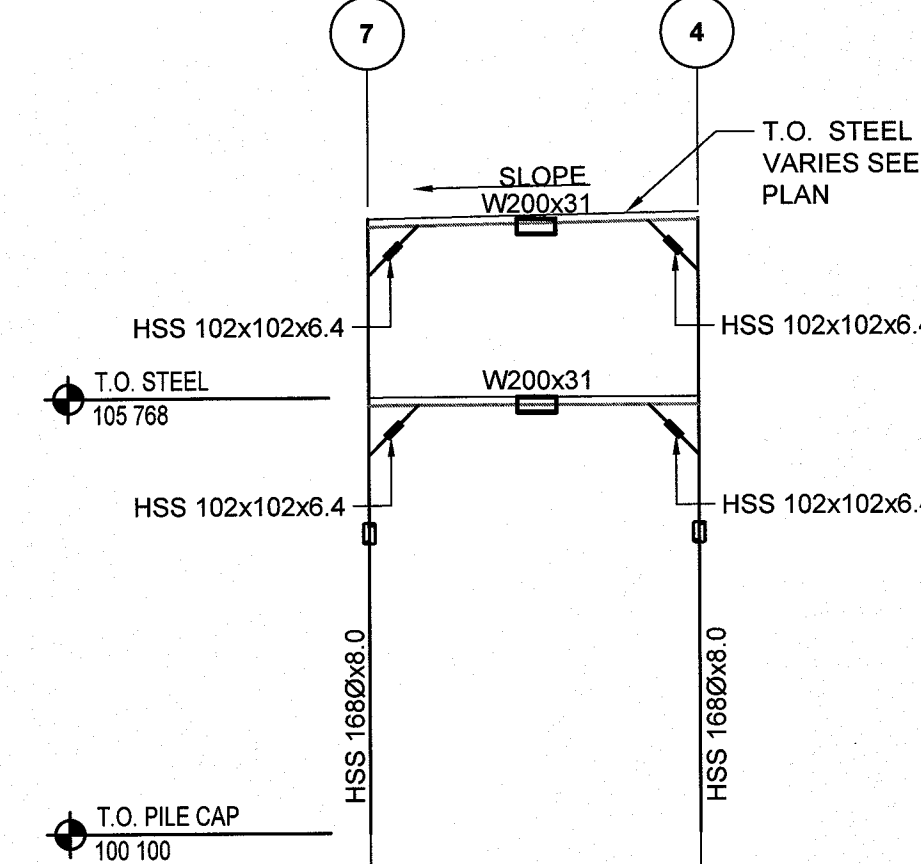
ELEVATION ALONG GRID 1
1:100



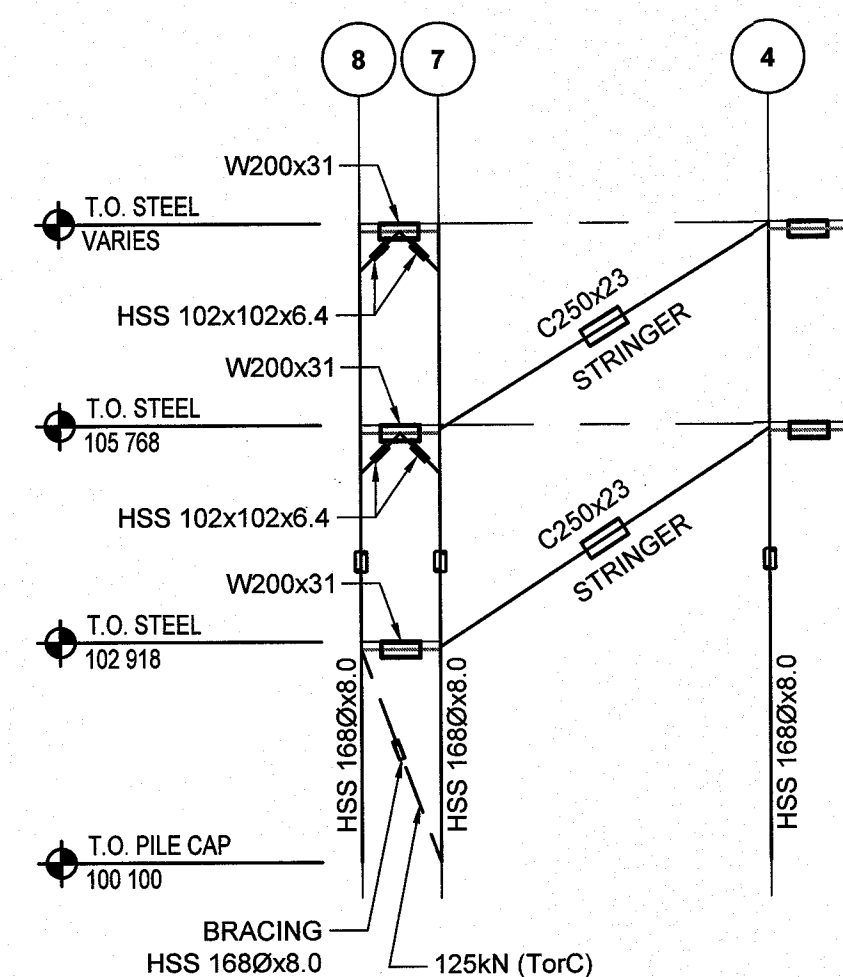
ELEVATION ALONG GRID 9
1:100



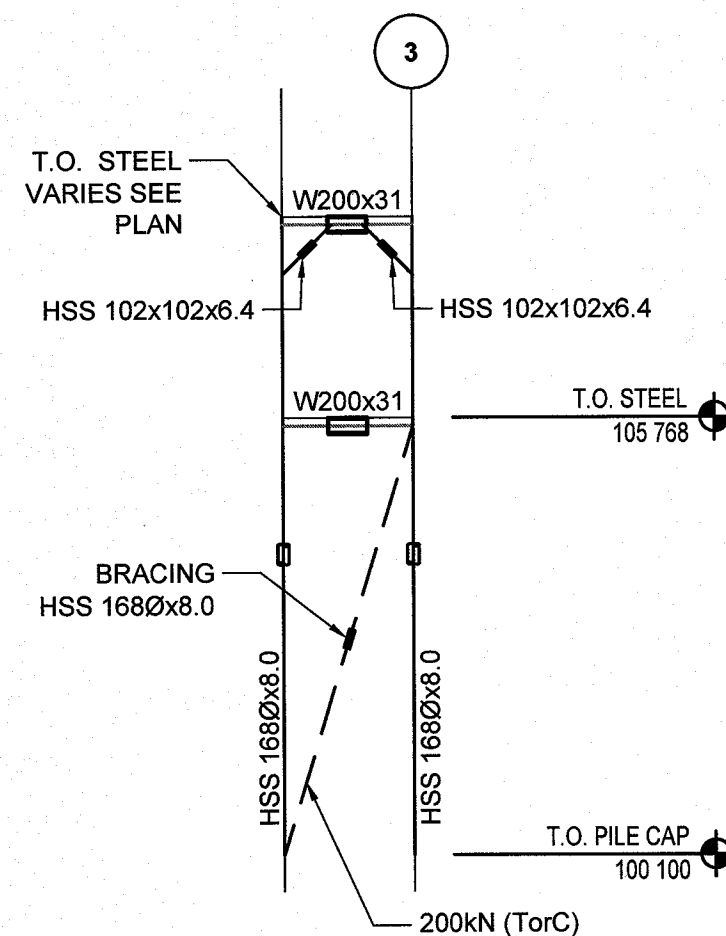
ELEVATION ALONG GRID 8
1:100



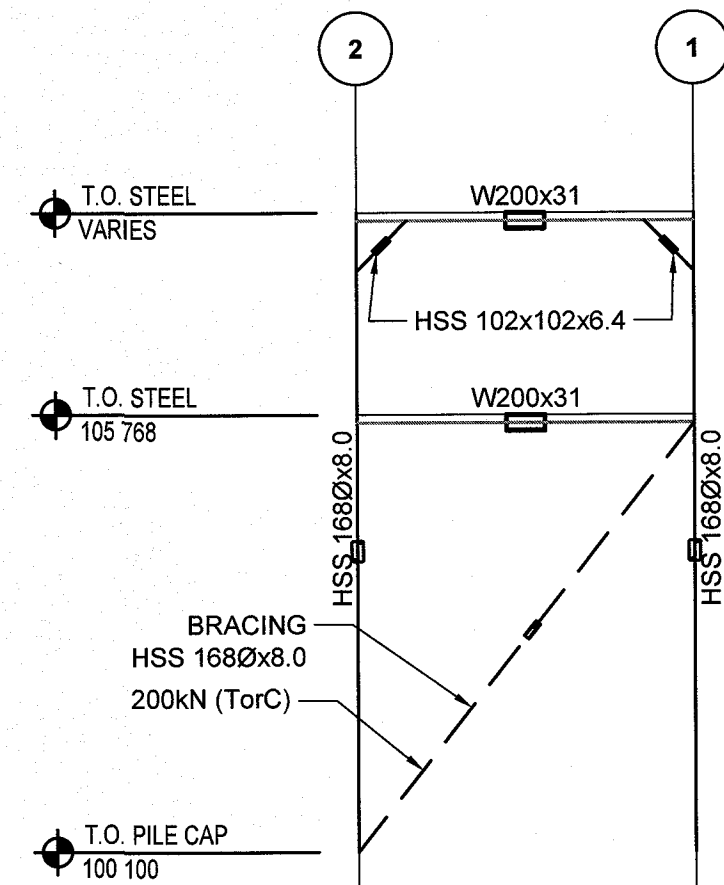
ELEVATION ALONG GRID 11
1:100



ELEVATION ALONG GRID 12
1:100



ELEVATION ALONG GRID 2
1:100



ELEVATION ALONG GRID 3
1:100

