

# CANADIAN COAST GUARD SAFETY MOUNTAIN MCTS SITE CALVERT ISLAND, BC

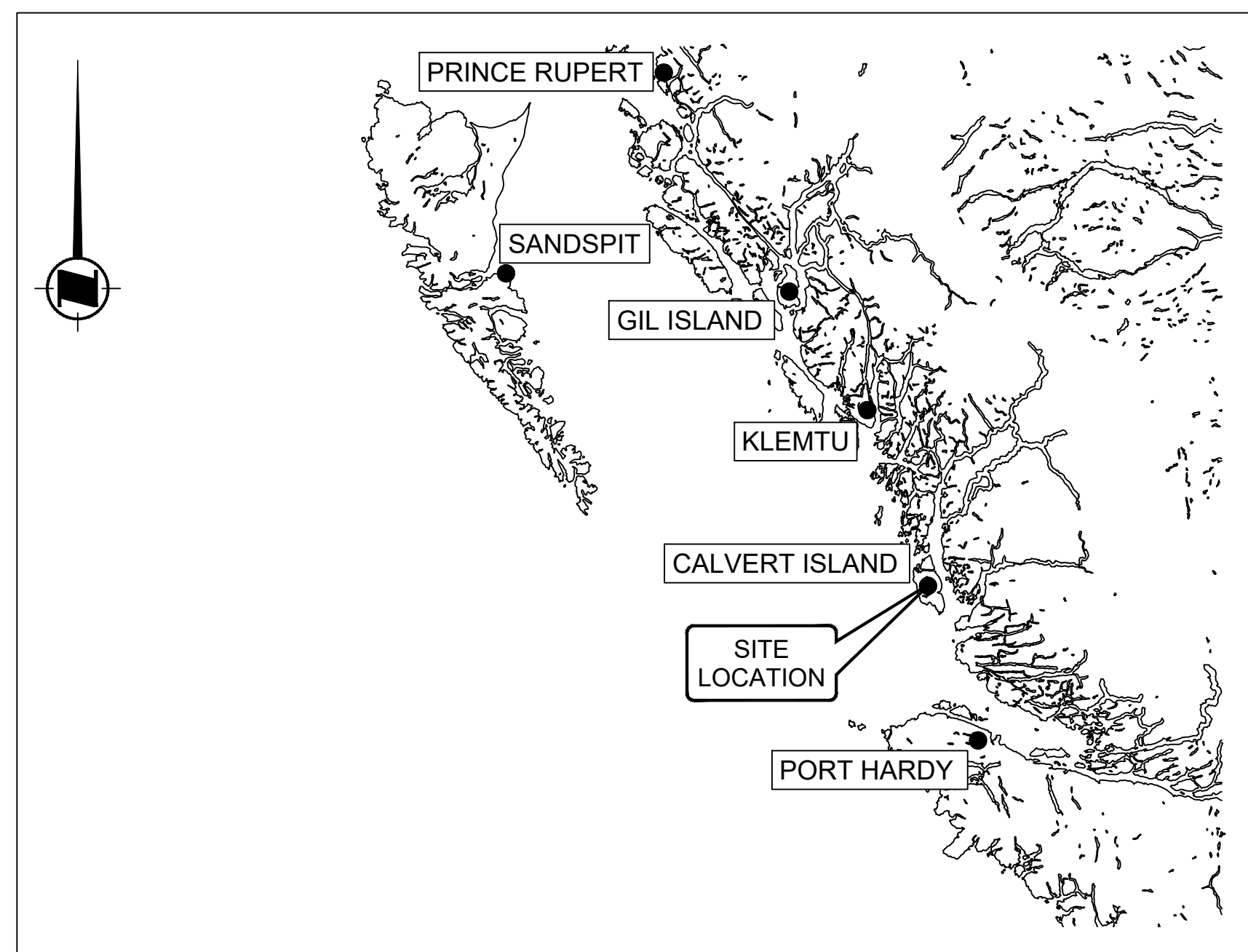
Vendor Information / Sous-traitant

**GENERAL NOTES**

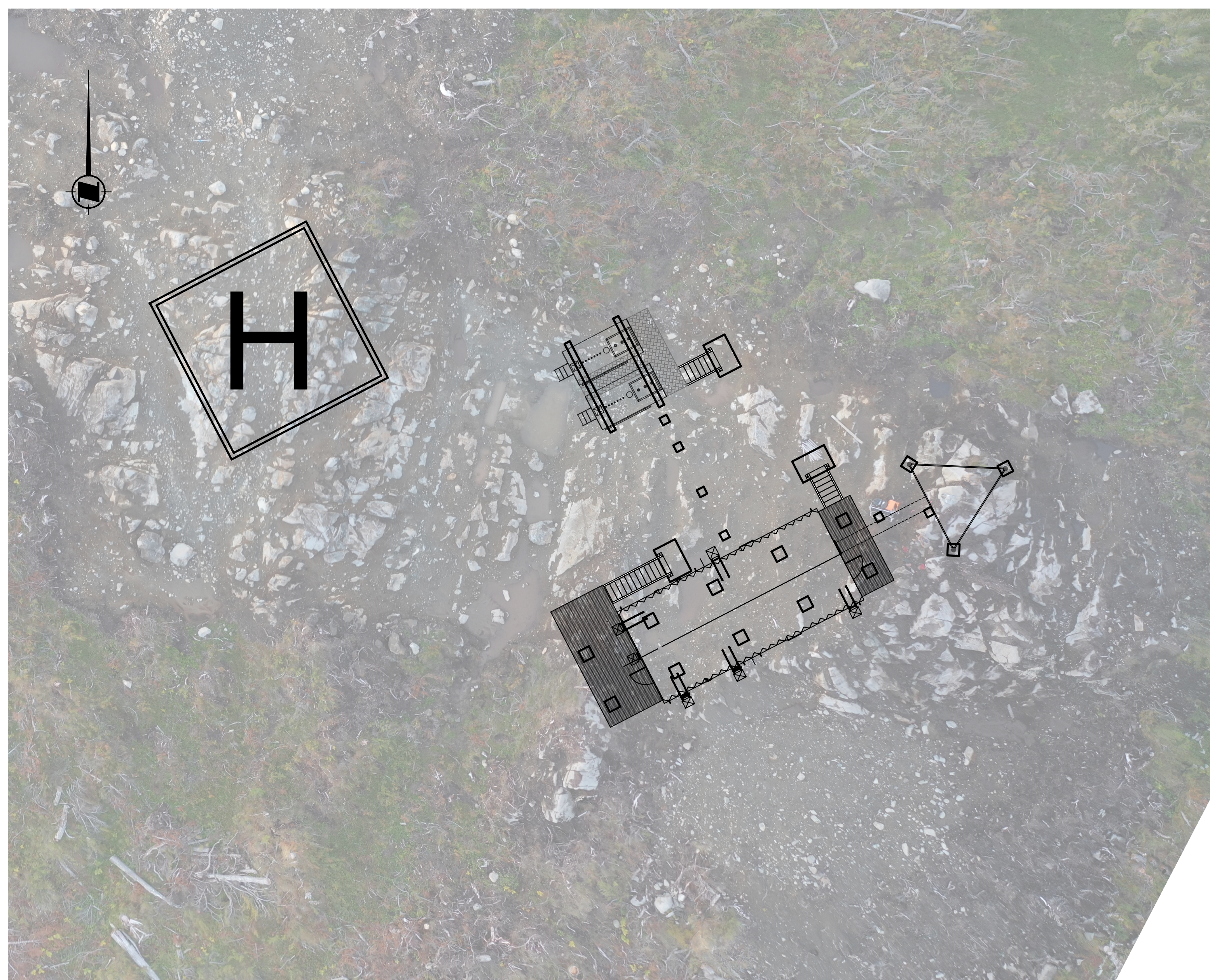
1. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL OTHER APPLICABLE CONSTRUCTION DOCUMENTS. DEVIATION OF PROJECT CONSTRUCTION IS NOT ACCEPTABLE UNLESS INSTRUCTED BY THE ENGINEER.
2. ALL INFORMATION CONCERNING EXISTING SITE CONDITIONS HAVE BEEN TAKEN FROM ORIGINAL DRAWINGS AND SITE MEASUREMENTS. SHOULD INFORMATION OR SITE CONDITIONS DIFFER SIGNIFICANTLY FROM THAT SHOWN, ADVISE CCG ENGINEERING.
3. DO NOT COMMENCE CONSTRUCTION USING THESE DRAWINGS UNLESS NOTED "FOR CONSTRUCTION".
4. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE NATIONAL BUILDING CODE 2010 AND REFERENCED STANDARDS THEREIN.
5. DRAWINGS SHOW COMPLETED STRUCTURES ONLY. CONTRACTOR IS RESPONSIBLE TO PROVIDE TEMPORARY STRUCTURES AND BRACING FOR CONSTRUCTION LOADING CONDITIONS AND STABILITY OF THE STRUCTURE DURING CONSTRUCTION. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN LOADS.
6. IT IS THE DISCRETION OF THE ENGINEER TO CONDUCT INSPECTIONS OR ACCEPT PHOTOS OF REINFORCING PRIOR TO THE PLACEMENT OF CONCRETE.

**DRAWING LIST**

SHEET NUMBER	DRAWING NAME
01	COVER SHEET
02	SITE PLAN
03	FOUNDATION PLAN
04	FOUNDATION DETAILS AND ELEVATIONS
05	ANTENNA LAYOUT
06	GROUNDING PLAN
07	HELIPAD DETAILS
08	FUEL TANK DETAILS



**SITE LOCATION MAP**  
NOT TO SCALE



**KEY PLAN**  
1:150

0	ISSUED FOR TENDER	GR	2021-09-03
rev	description	by	date

Asset - Actif  
**MCTS TOWER SITE  
SAFETY MOUNTAIN**

Drawing - Dessin  
**COVER SHEET**

Drawn - dessiné	date
GR	2021-09-03
Designed - conception	date
GR	2021-09-03
checked - vérifié	date
BT	2021-09-03
approved - approuvé	date
BT	2021-09-03

CCG ref. no. - no. réf. GCC	scale - échelle
8B200-19003	AS SHOWN
drawing no. - no. dessin	sheet-feuille/rev-rév
WM-628-1003	01/08 0

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Vendor Information / Sous-traitant

**LEGEND**

— 491.00 — MAJOR CONTOURS

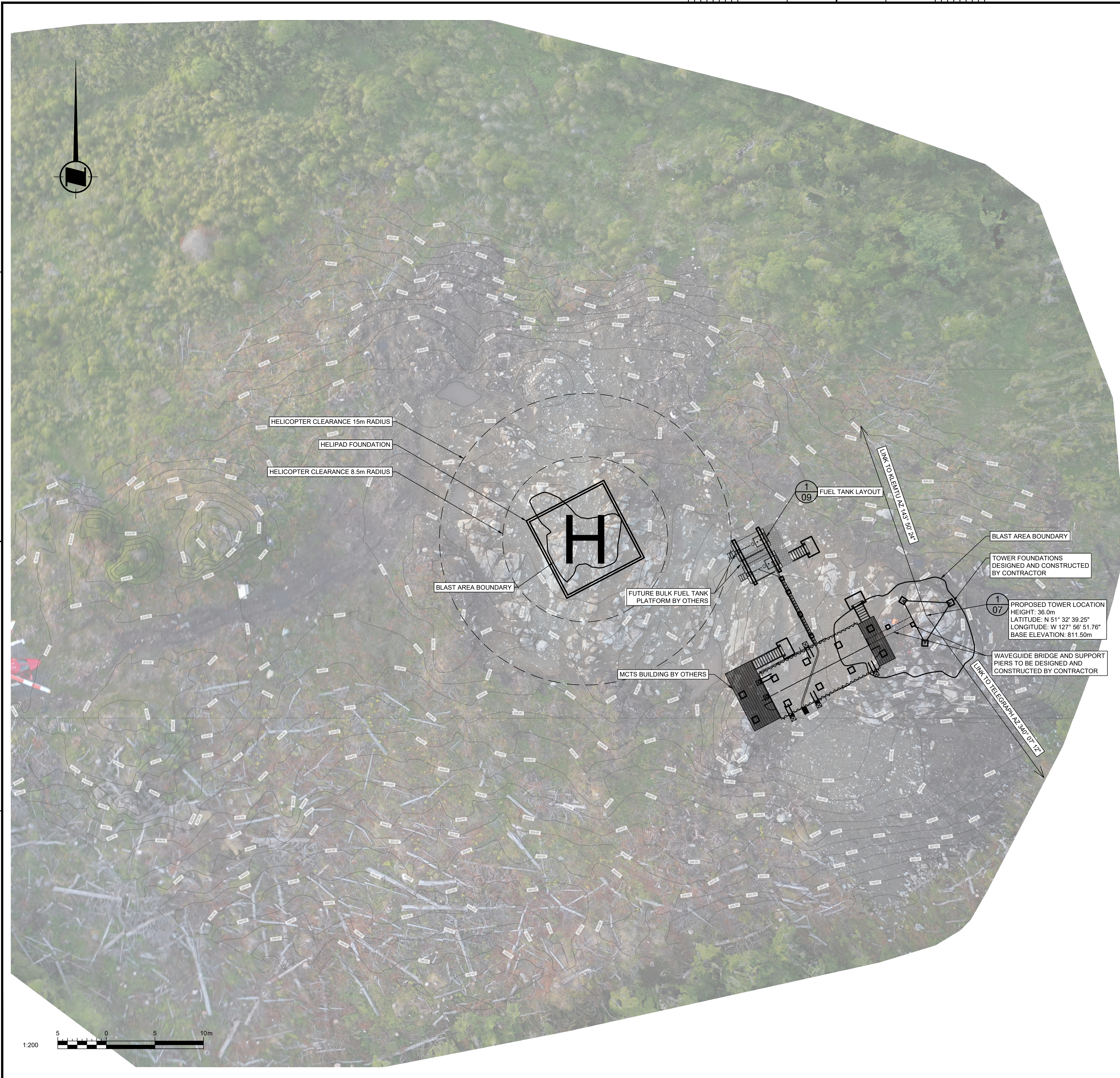
TOPOGRAPHIC CONTOURS BASED ON UAV SURVEY COMPLETED 2020-08-20.

ORTHO-IMAGERY DERIVED FROM UAV SURVEY COMPLETED 2020-08-20.

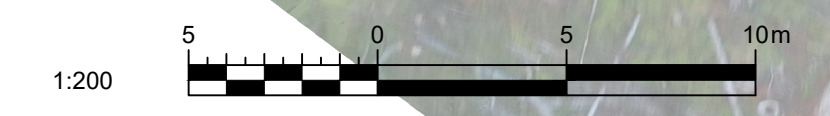
CONTROL INFORMATION BASED ON OBSERVATIONS USING CSRS-PPP SERVICE V2.26.1

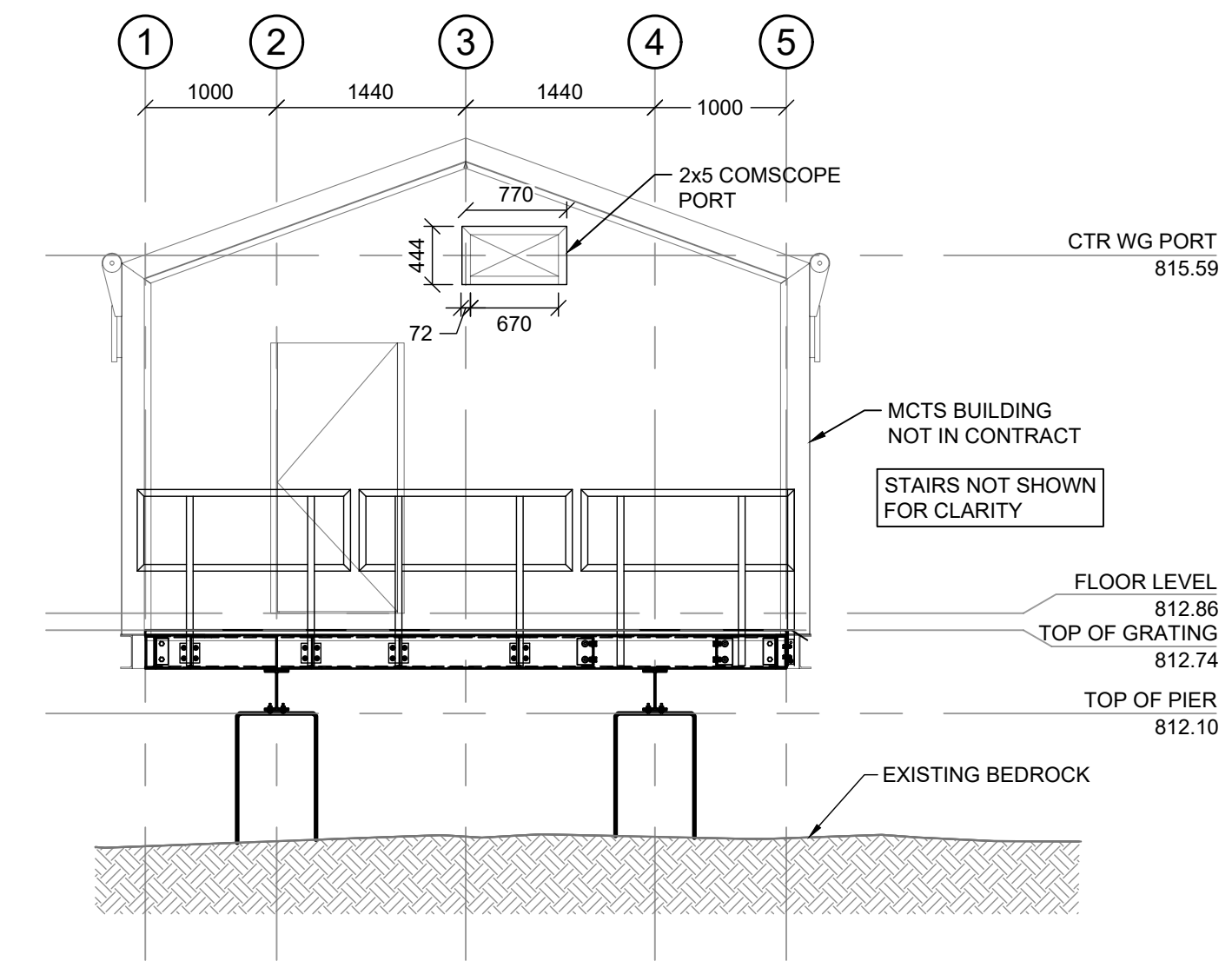
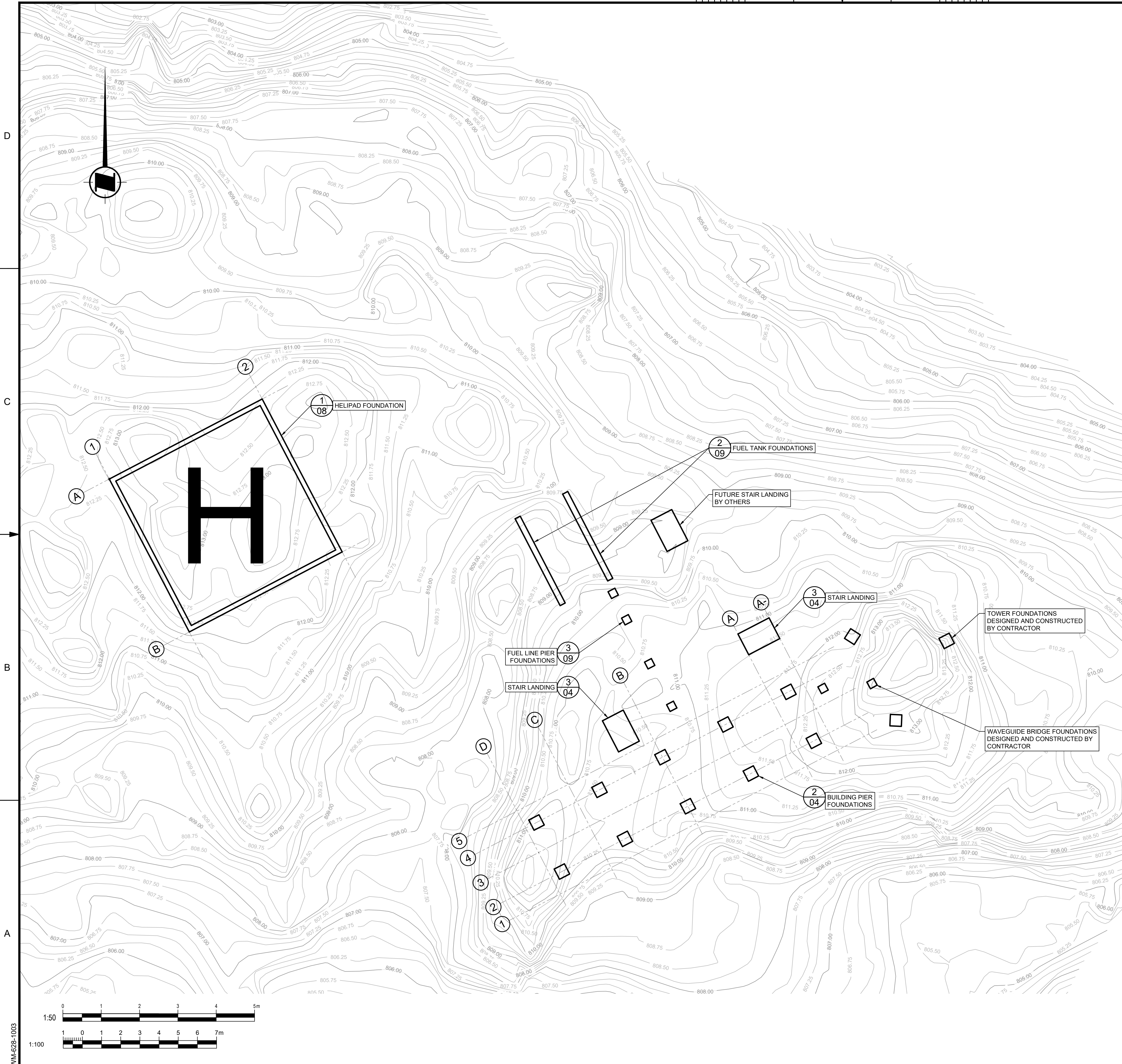
VERTICAL DATUM: ELEVATIONS ARE REFERRED TO CGVD 28  
HORIZONTAL DATUM: COORDINATES ARE REFERRED TO NAD 83 CSRS (2010 EPOCH)  
PROJECTION INFORMATION: UTM ZONE 9N

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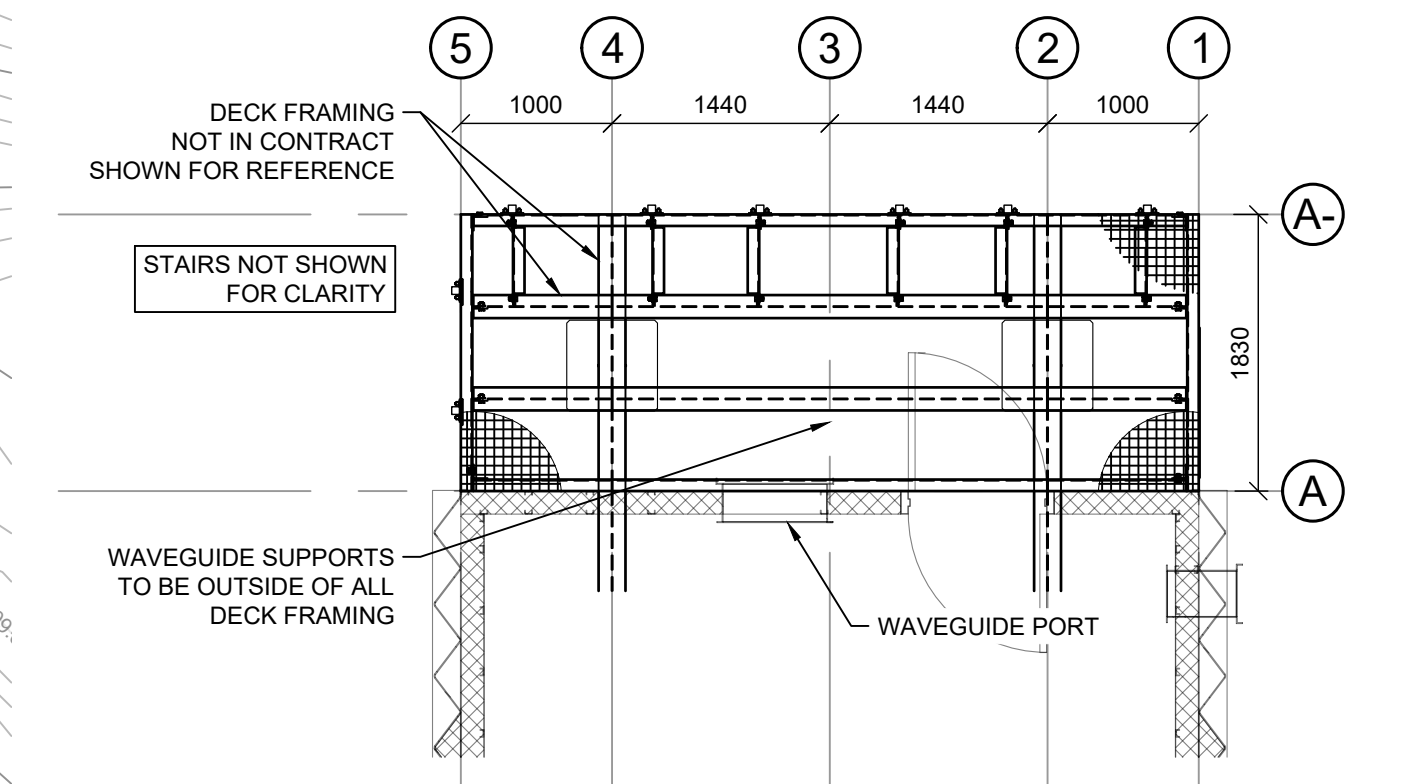


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Asset - Actif			
<b>MCTS TOWER SITE SAFETY MOUNTAIN</b>			
Drawing - Dessin			
<b>SITE PLAN</b>			
Drawn - dessiné		date	
GR		2021-09-03	
Designed - conception		date	
GR		2021-09-03	
checked - vérifié		date	
BT		2021-09-03	
approved - approuvé		date	
BT		2021-09-03	
CCG ref. no. - no. réf. GCC		scale - échelle	
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drawing no. - no. dessin		sheet-feuille	rev-rév
WM-628-1003		02/08	0

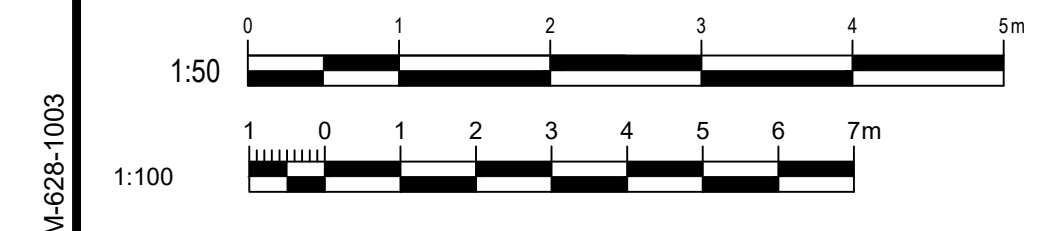




ELEVATION A WAVEGUIDE ENTRY PORT  
SCALE: 1:50



PLAN 1 DECK FRAMING  
SCALE: 1:50



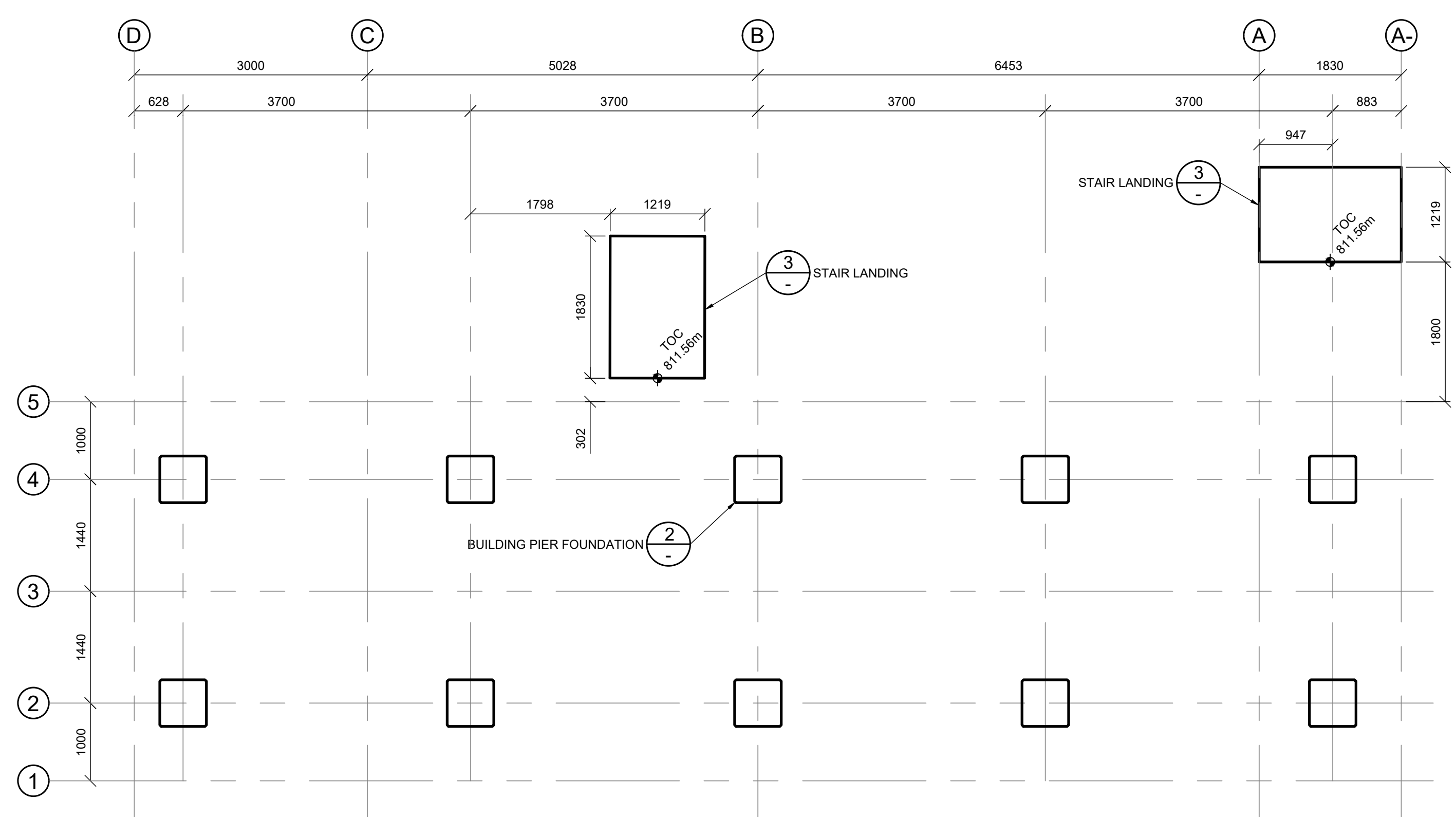
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rev	description	by	date
Asset - Actif			
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Drawing - Dessin			
<b>FOUNDATION PLAN</b>			
Drawn - dessiné		date	
GR		2021-09-03	
Designed - conception		date	
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checked - vérifié		date	
BT		2021-09-03	
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drawing no. - no. dessin		sheet/feuille	rev/rév
WM-628-1003		03/08	0

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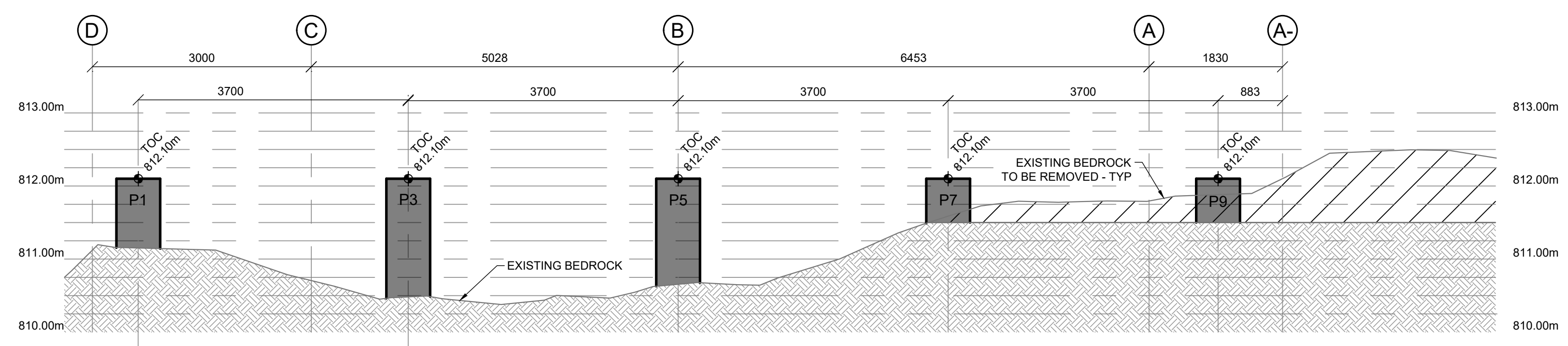
C

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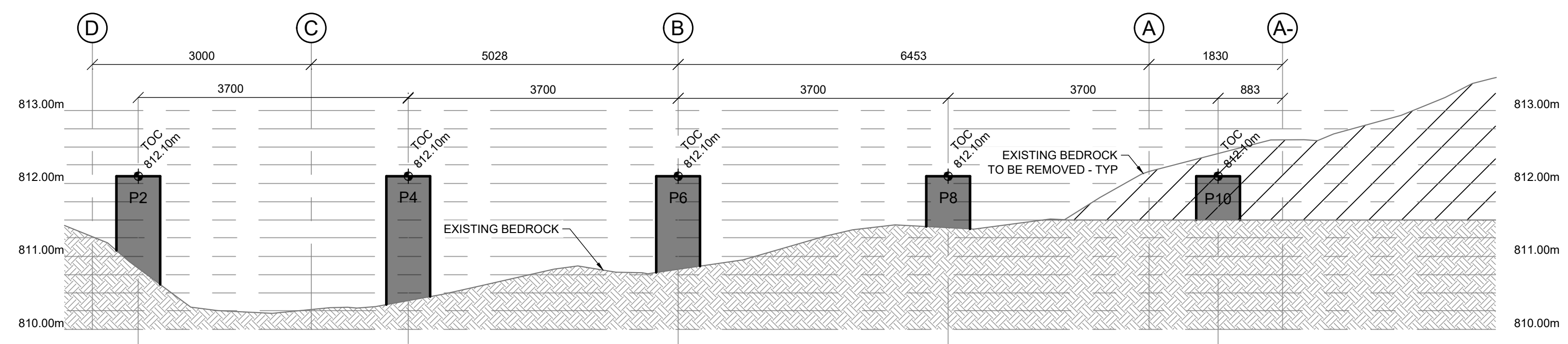
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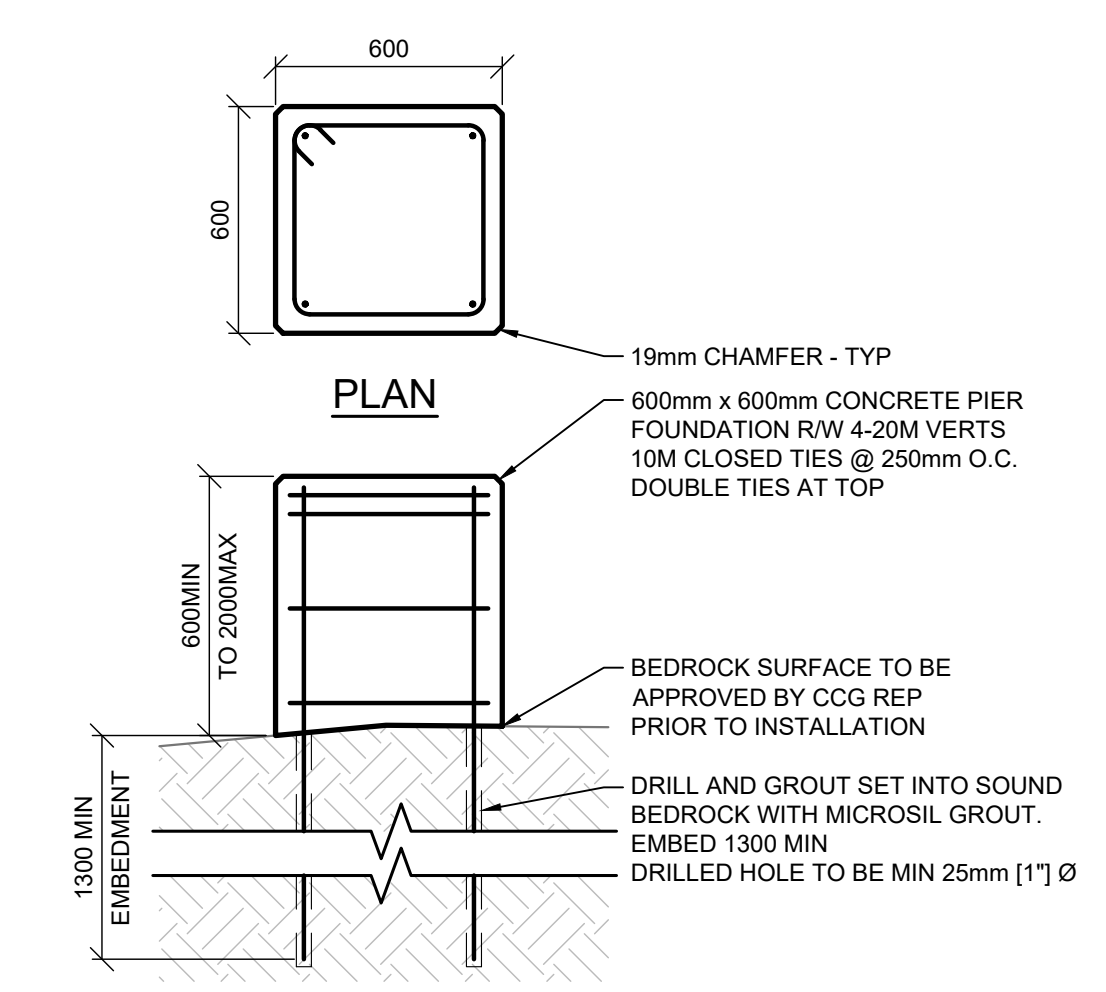
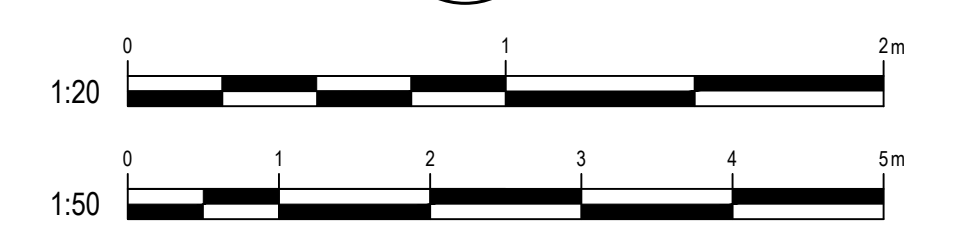
PLAN 1 BUILDING PIER FOUNDATIONS  
SCALE: 1:50



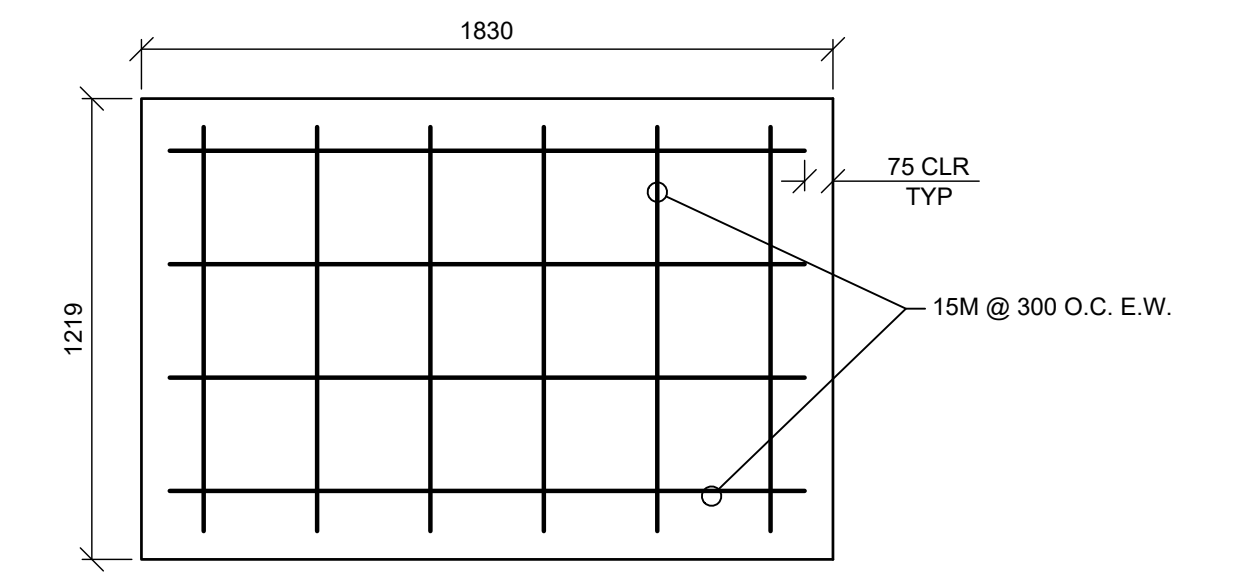
SECTION A BUILDING PIER FOUNDATIONS - GRIDLINE 4  
SCALE: 1:50



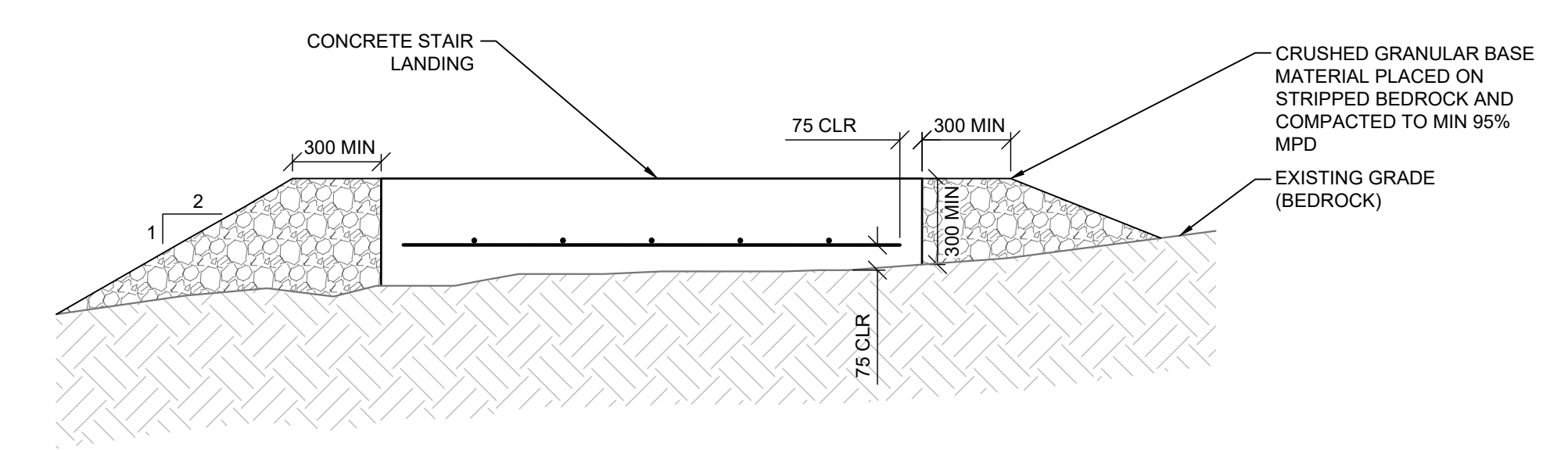
SECTION B BUILDING PIER FOUNDATIONS - GRIDLINE 2  
SCALE: 1:50



DETAIL 2 BUILDING PIER FOUNDATION  
SCALE: 1:20

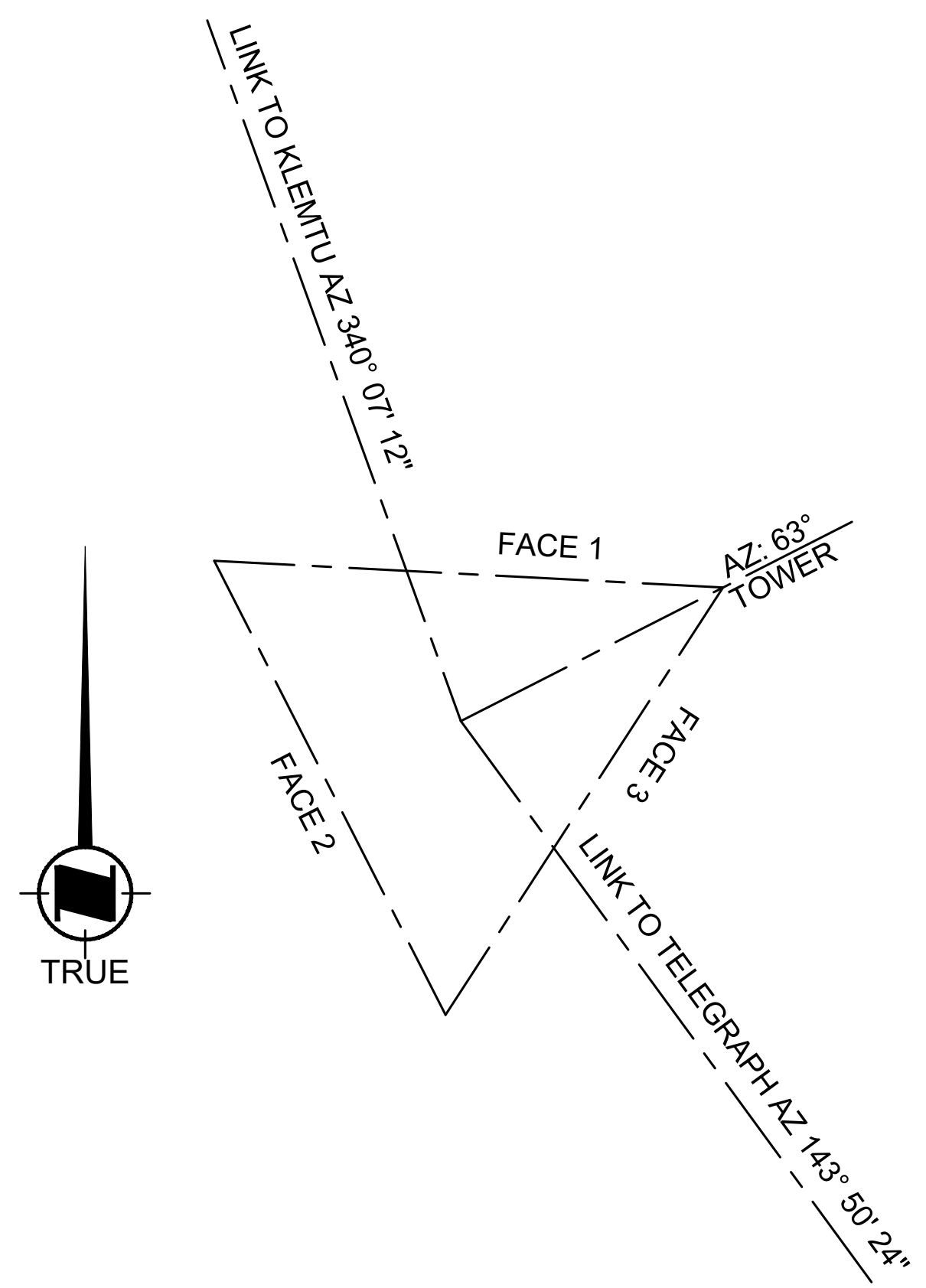


DETAIL 3 STAIR LANDING  
SCALE: 1:20



rev	description	by	date
0	ISSUED FOR TENDER	GR	2021-09-03
Asset - Actif			
<b>MCTS TOWER SITE SAFETY MOUNTAIN</b>			
Drawing - Dessin			
<b>FOUNDATION DETAILS AND ELEVATIONS</b>			
Drawn - dessiné		date	
GR		2021-09-03	
designed - conception		date	
GR		2021-09-03	
checked - vérifié		date	
BT		2021-09-03	
approved - approuvé		date	
BT		2021-09-03	
CCG ref. no. - no. réf. GCC		scale - échelle	
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drawing no. - no. dessin		sheet-feuille	rev-rév
WM-628-1003		04/08	0

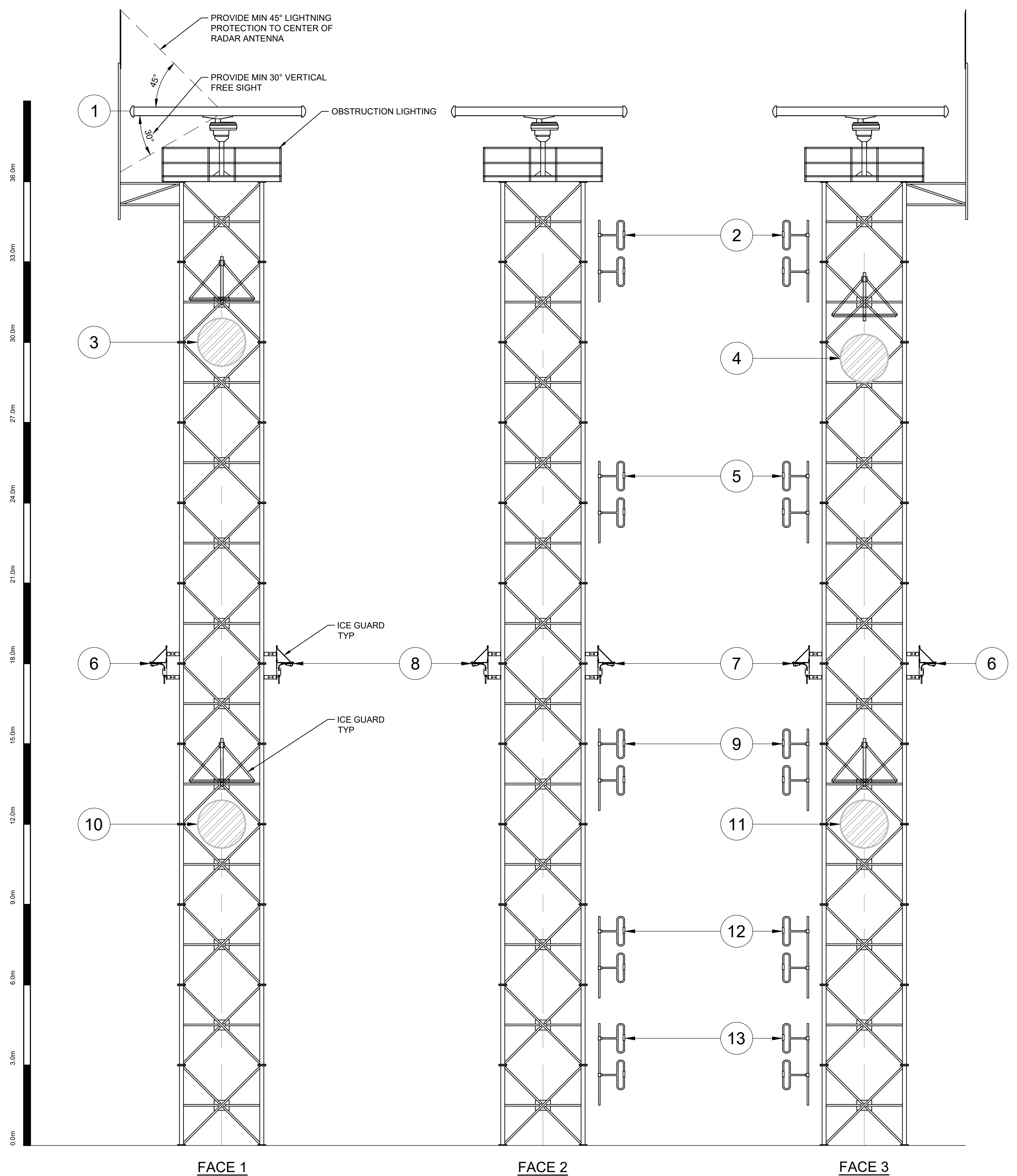
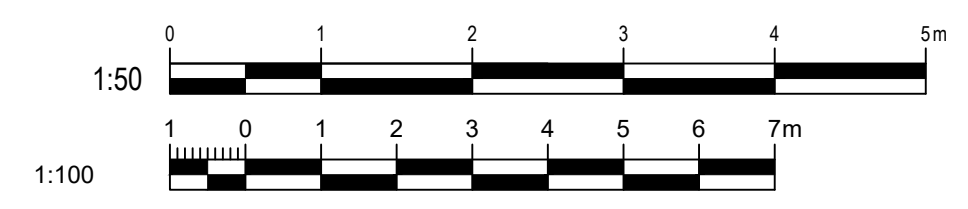
WM-628-1003 Arch D File / Fichier: WM-628-1003 SAFETY MOUNTAIN SITE LAYOUT PACKAGE.DWG - Printed / Imprimé: 2021/09/03 1:3



PLAN 1 TOWER ORIENTATION  
SCALE: 1:50

**ANTENNA SCHEDULE - SAFETY MOUNTAIN**

ANTENNA (#)	USER	ELEV	SYSTEM	ANTENNA MODEL	MAKE	INITIAL OR FUTURE	AZIMUTH	Tx-LINE	ANTENNA MOUNT TYPE
1	CCG	36.0m	RADAR	21' HG-HP-F-38	TERMA	INITIAL	OMNI	EWP85	PLATFORM
2	CCG	34.0m	VHF Ch16	872F-70HDB	COMPROD	INITIAL	180.0	LDF4 x1	LEG MOUNT
3	CCG	30.0m	MICROWAVE MAIN F. KLEMTU	USX10-6W	ANDREWS/COMMSCOPE	INITIAL	340.1	EWP63 x2	FACE MOUNT
4	CCG	29.4m	MICROWAVE MAIN F. TELEGRAPH	USX10-6W	ANDREWS/COMMSCOPE	INITIAL	143.8	EWP63 x2	FACE MOUNT
5	CCG	25.0m	VHF Rx	872F-70HDB	COMPROD	INITIAL	180.0	LDF4 x1	LEG MOUNT
6	CCG	18.0m	CAMERA 1	IN HOUSE	IN HOUSE	INITIAL		CAT6	LEG MOUNT
7	CCG	18.0m	CAMERA 2	IN HOUSE	IN HOUSE	INITIAL		CAT6	LEG MOUNT
8	CCG	18.0m	CAMERA 3	IN HOUSE	IN HOUSE	INITIAL		CAT6	LEG MOUNT
9	CCG	15.0m	VHF Tx	872F-HDB	COMPROD	INITIAL	180.0	LDF4 x1	LEG MOUNT
10	CCG	12.0m	MICROWAVE DIV. F. KLEMTU	USX12-6W	ANDREWS/COMMSCOPE	INITIAL	340.1	EWP63 x2	FACE MOUNT
11	CCG	12.0m	MICROWAVE DIV. F. TELEGRAPH	USX12-6W	ANDREWS/COMMSCOPE	INITIAL	143.8	EWP63 x2	FACE MOUNT
12	CCG	8.0m	VHF Multi	872F-70HDB	COMPROD	INITIAL	180.0	LDF4 x1	LEG MOUNT
13	TBD	4.0m	FUTURE 3rd PARTY	872F-70HDB	COMPROD	INITIAL	180.0	LDF4 x1	LEG MOUNT



ELEVATION A TOWER ANTENNA LAYOUT  
SCALE: 1:100

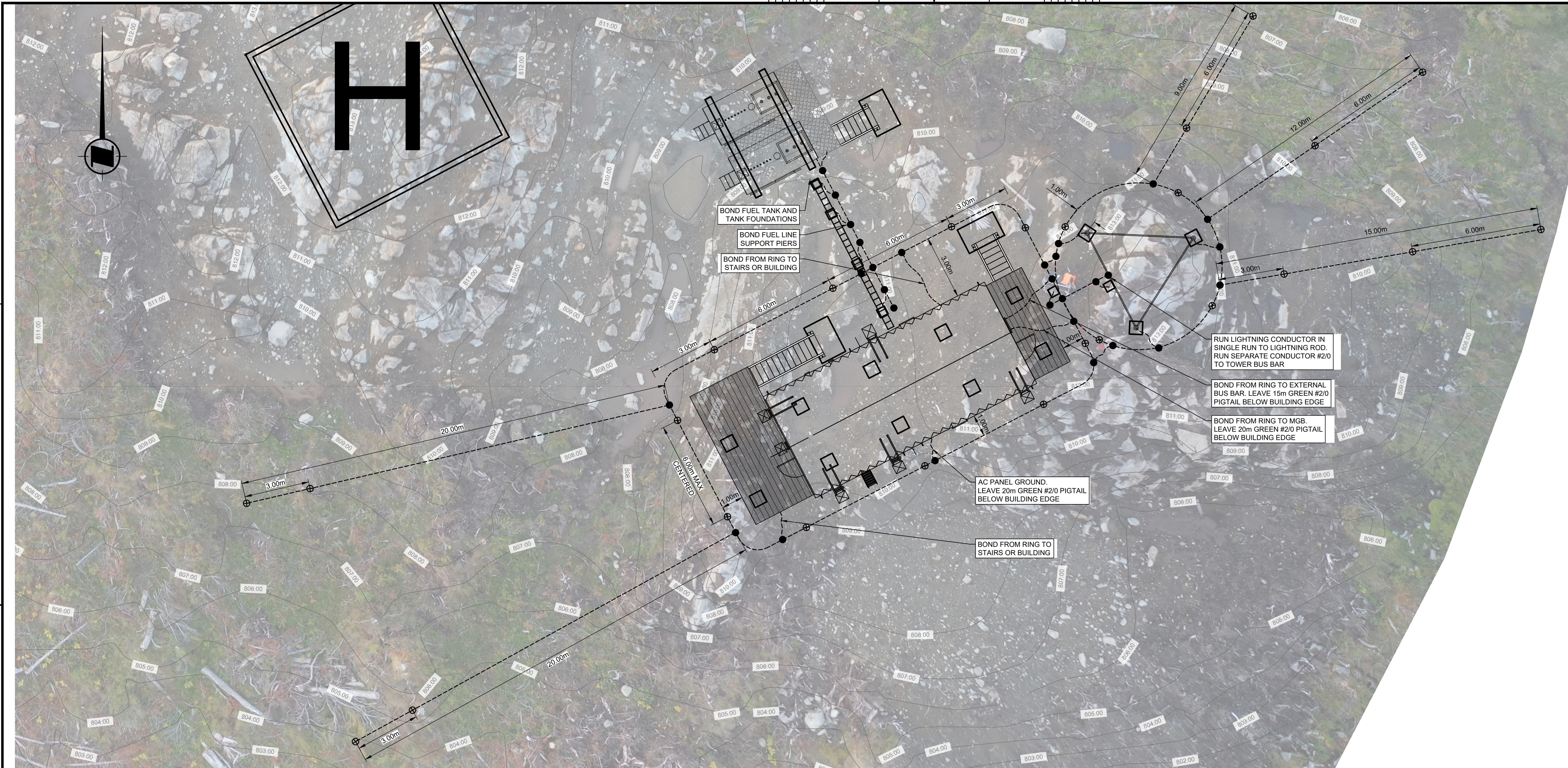
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Drawing - Dessin	ANTENNA LAYOUT		
Drawn - dessiné	date	2021-09-03	
GR	2021-09-03		
Designed - conception	date	2021-09-03	
CS	2021-09-03		
Checked - vérifié	date	2021-09-03	
AW	2021-09-03		
Approved - approuvé	date	2021-09-03	
AW	2021-09-03		
CCG ref. no. - no. réf. GCC	scale - échelle	8B200-19003 AS SHOWN	
drawing no. - no. dessin	sheet-feuille	rev-rév	WM-628-1003 05/08 0

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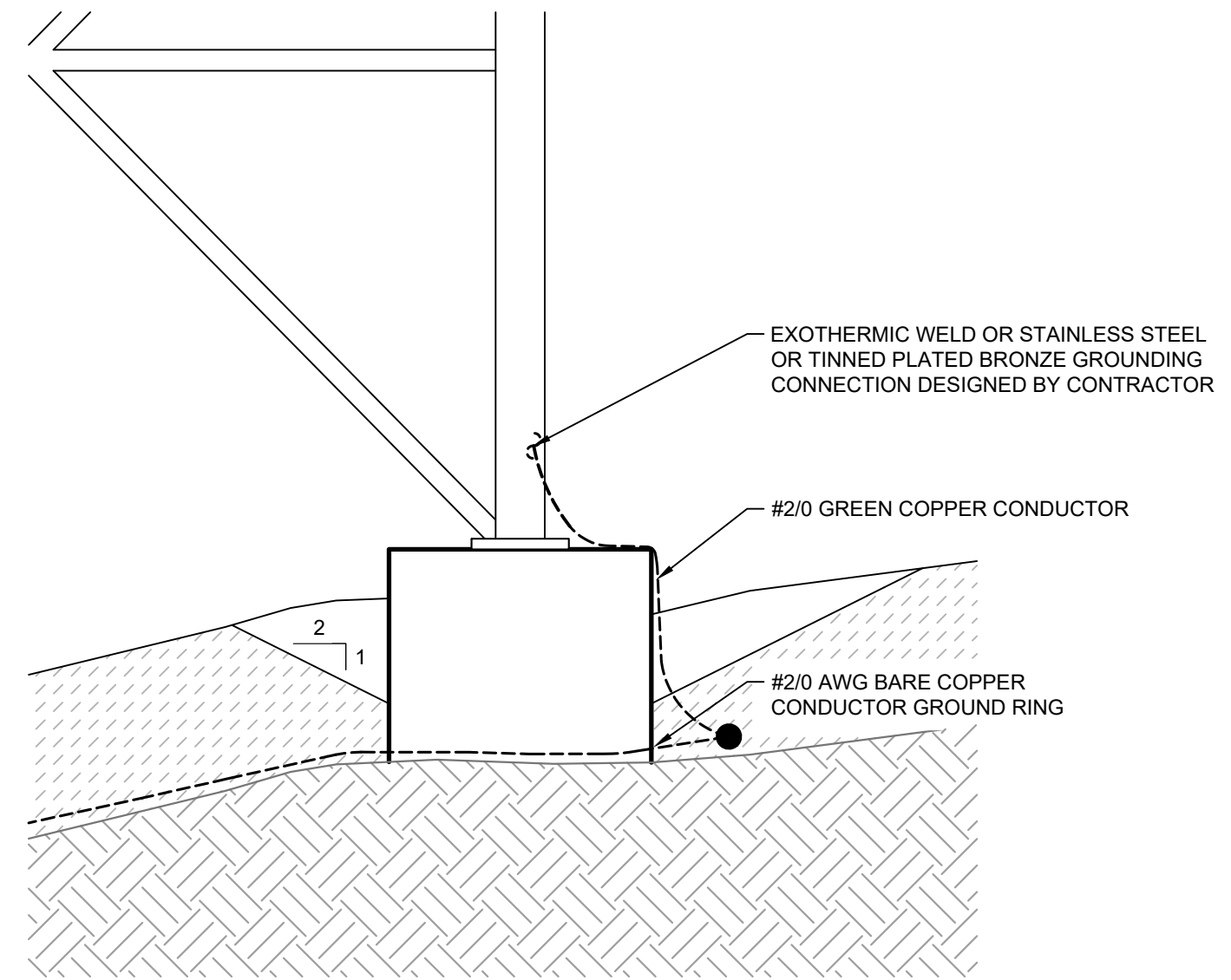
6 5 4 3 2 1

- Vendor Information / Sous-traitant
- ALL BURIED GROUNDING CONDUCTORS SHALL BE #2/0 AWG, BARE, STRANDED TINNED OR UN-TINNED.
  - ALL SPLICES SHALL BE MADE THROUGH IRREVERSIBLE COMPRESSION TYPE CONNECTORS, DESIGNED FOR USE WITH GROUNDING.
  - ABOVE-GROUND BONDING CONDUCTORS SHOULD BE JACKETED, WHENEVER PRACTICAL.
  - SHARP BENDS SHALL BE AVOIDED, WITH A MINIMUM RADIUS OF 203mm.
  - BUILDING SHALL BE BONDED TO THE GROUND RING IN AT LEAST TWO POINTS, WITH AS MUCH PHYSICAL SEPARATION AS PRACTICAL.
  - GROUND RINGS SHALL BE BURIED TO A DEPTH OF 762mm WHERE PRACTICAL. WHEN NOT PRACTICAL TO BURY BELOW 305mm, 38mm OF CONDUCTE SHALL BE UTILIZED ON ALL SIDES OF THE GROUND COMPONENT. ANY VARIATIONS ARE TO BE DOCUMENTED AS PART OF RED-LINE MARKUPS.
  - WHEN ADJUSTING GROUND LOOP FROM DIFFERENT DEPTHS, MINIMUM 45° BEND RADIUS OF NOTE 4 SHALL BE ADHERED TO.
  - GROUND RINGS SHALL BE A MINIMUM OF 610mm FROM FOUNDATIONS OF BUILDING AND TOWERS, OR GREATER WHERE SPECIFIED IN THE DRAWINGS.
  - GROUND RODS SHALL BE COPPER OR COPPER CLAD, 3m LENGTH AND 19.05mm DIAMETER.
  - GROUND RODS SHALL BE SPACED 3m TO 4.5m APART AROUND THE GROUND RING.
  - THE UPPER END OF THE GROUND ROD SHALL BE BURIED TO THE DEPTH OF THE GROUND RING TO ALLOW FOR EASY BONDING.
  - GROUND RODS SHALL BE INSTALLED VERTICALLY HORIZONTALLY OR AT AN ANGLE OF 45° FROM VERTICAL AND PERPENDICULAR TO THE BUILDING. ORIENTATION VARIATION AND DEPTHS MUST BE DOCUMENTED AS PART OF RED-LINE MARKUPS.
  - RODS ARE PREFERRED TO BE INSTALLED AS CLOSE TO VERTICAL AS POSSIBLE THROUGH HAMMER DRILLING. IF RODS CANNOT BE INSTALLED WITHOUT DEFORMING, THEY SHALL BE INSTALLED HORIZONTALLY AS DEEP AS PRACTICAL.
  - HORIZONTAL GROUND RODS ON RADIALS WILL BE INSTALLED PERPENDICULAR TO RADIAL.
  - RODS ARE NOT TO BE INSTALLED IN PRE DRILLED HOLES.
  - IF GROUND RODS ARE INSTALLED LESS THAN 305mm DEEP, THEY SHALL BE ENCASED IN 38mm OF CONDUCTE ON ALL SIDES.
  - GROUND RODS CAN BE SUBSTITUTED WITH GROUND PLATES, WHERE SITUATIONS DO NOT ALLOW FOR INSTALLATION OF GROUND RODS.
  - COPPER GROUND PLATES SHALL BE 1.5mm THICK AND COPPER-CLAD STEEL SHALL BE 6.4mm MINIMUM.
  - GROUND PLATES SHALL HAVE 0.186m<sup>2</sup> MINIMUM SURFACE EXPOSED TO BACKFILL MATERIAL.
  - IF GROUND PLATES ARE INSTALLED LESS THAN 305mm DEEP, THEY SHALL BE ENCASED IN 76mm OF CONDUCTE ON ALL SIDES.
  - ANY SURFACE INSTALLED GROUNDING EQUIPMENT SHALL HAVE CONDUCTE SHAPED TO PREVENT TRIPPING HAZARDS.

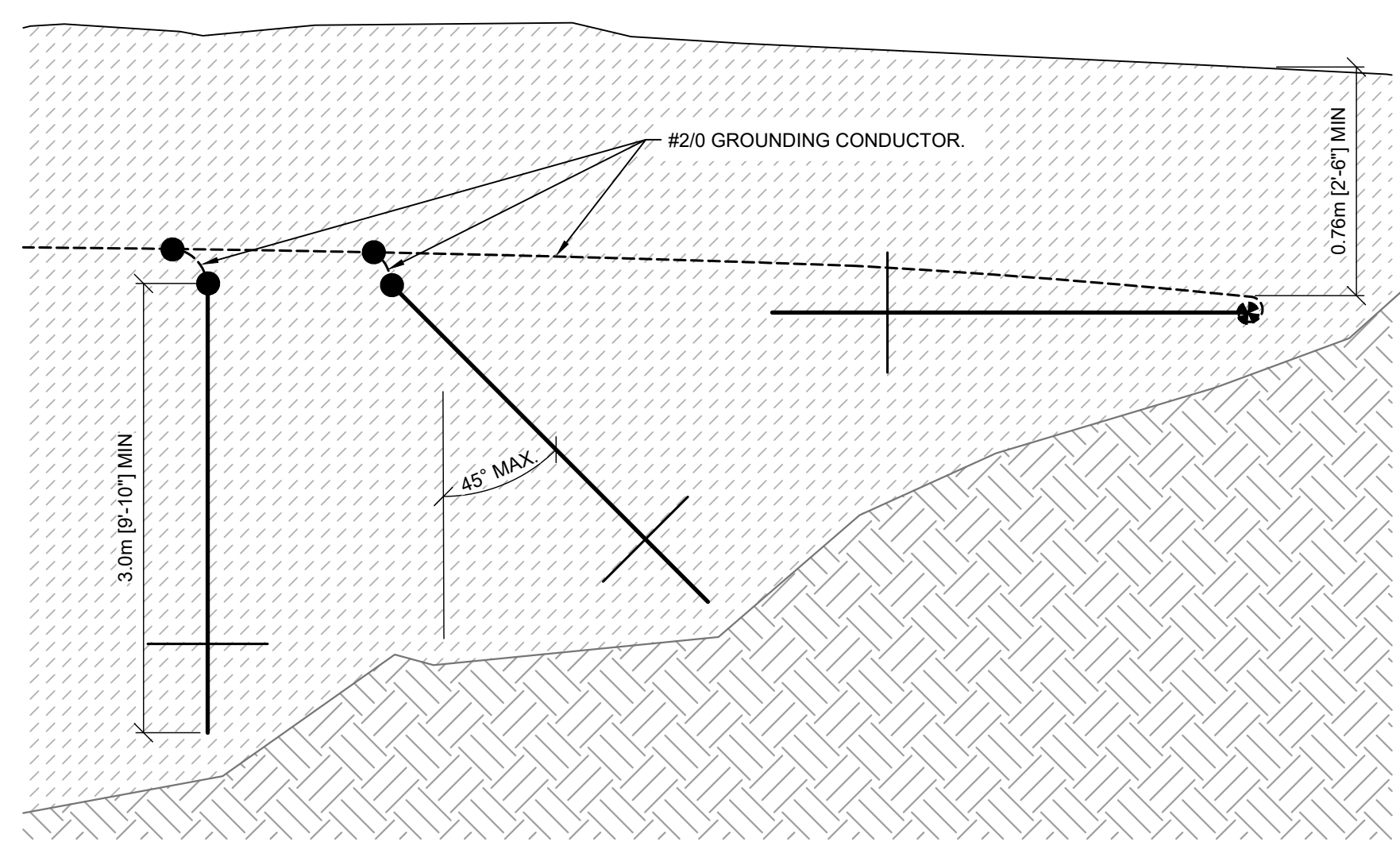
- LEGEND
- JUNCTION
  - ⊗ GROUND ROD
  - GROUND CONDUCTOR



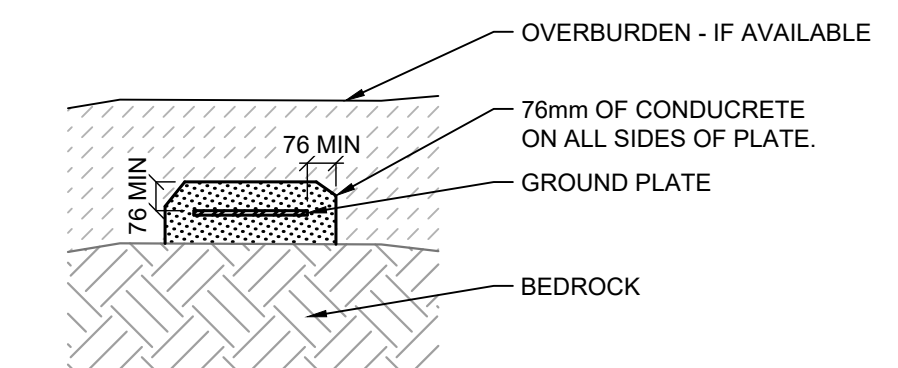
PLAN  
SCALE: 1:100  
1 GROUNDING PLAN



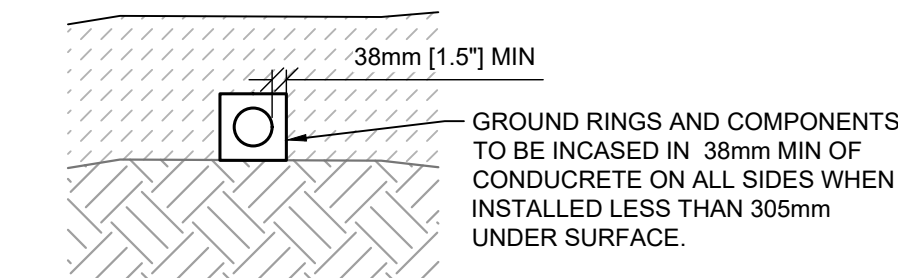
DETAIL  
SCALE: 1:20  
2 TRANSITION TO ABOVE GRADE



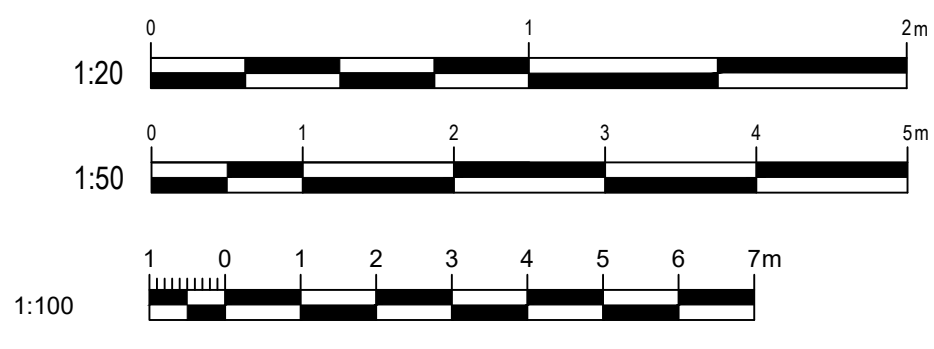
DETAIL  
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3 ANGLED GROUND ROD INSTALLATION



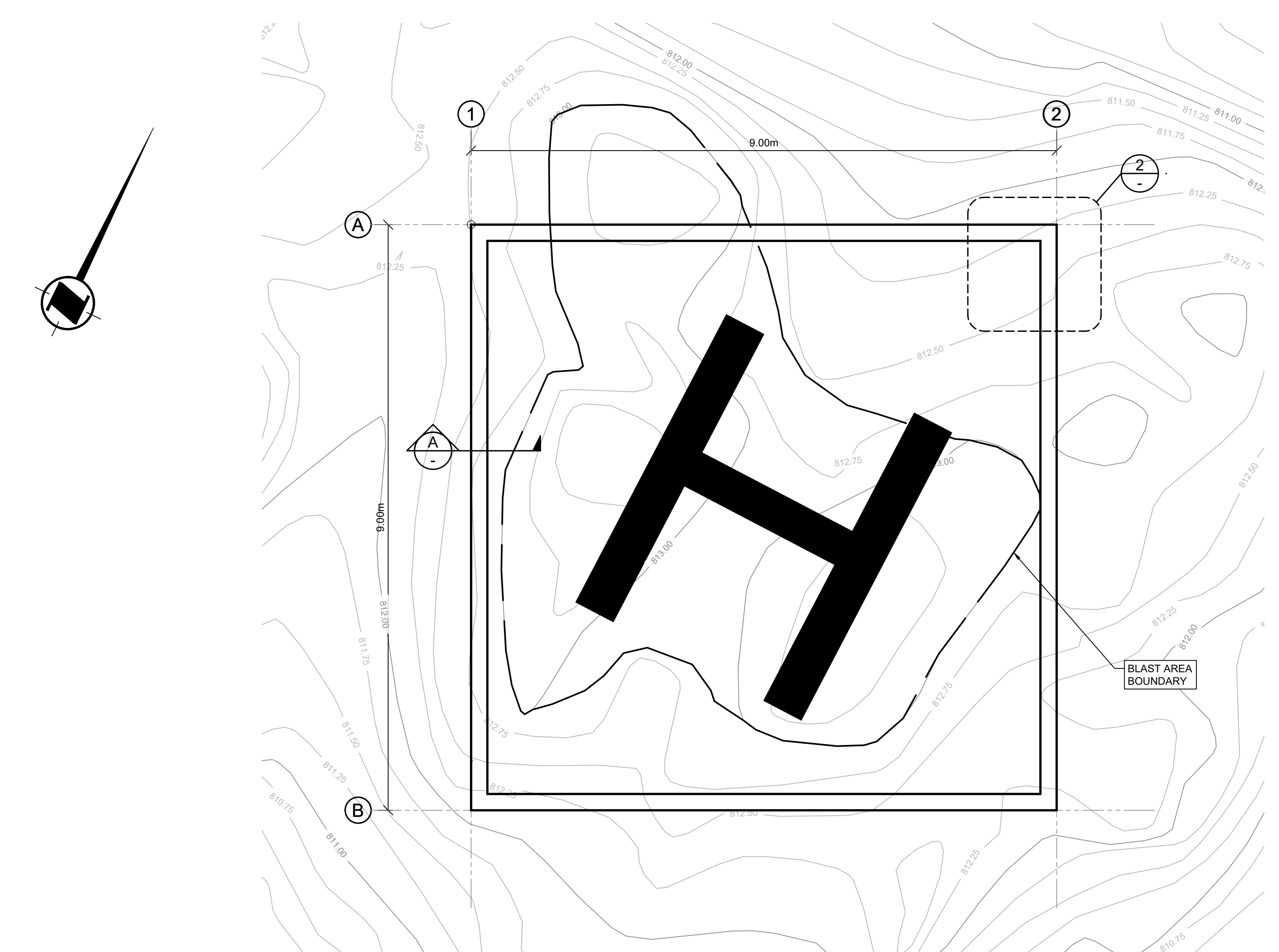
DETAIL  
SCALE: 1:20  
4 GROUND PLATE DETAIL



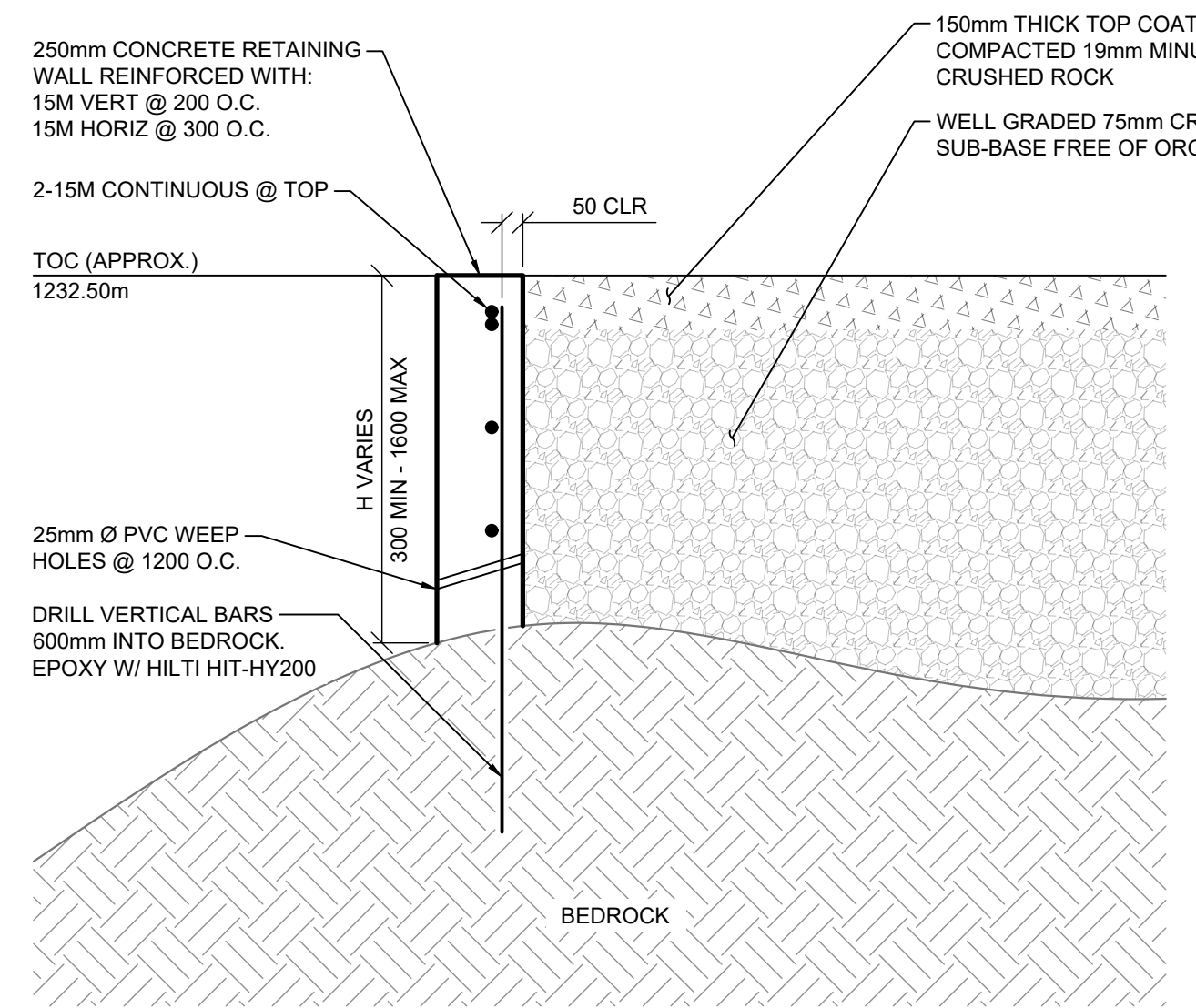
DETAIL  
SCALE: 1:20  
5 TRENCH WITH GEM DETAIL



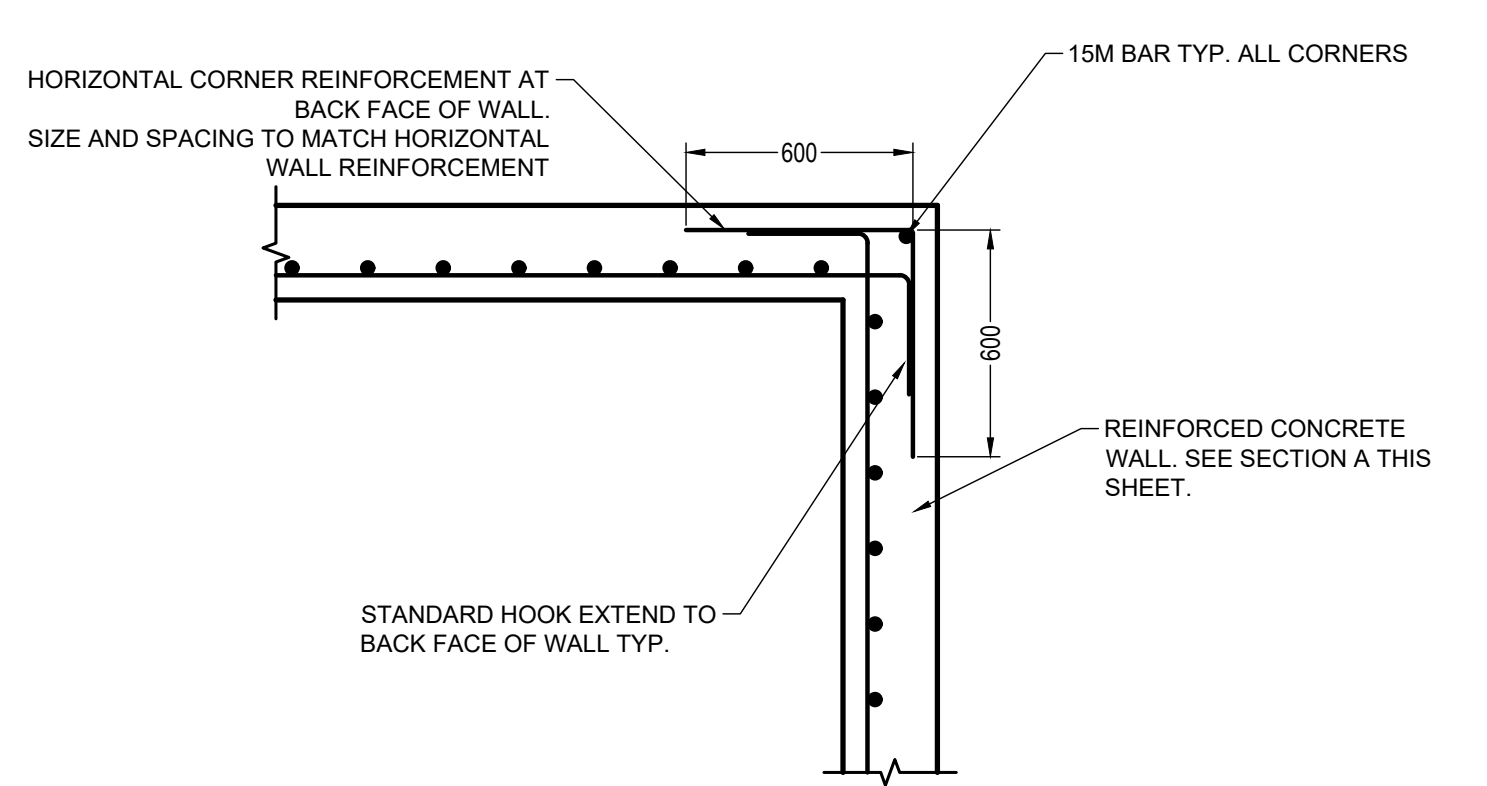
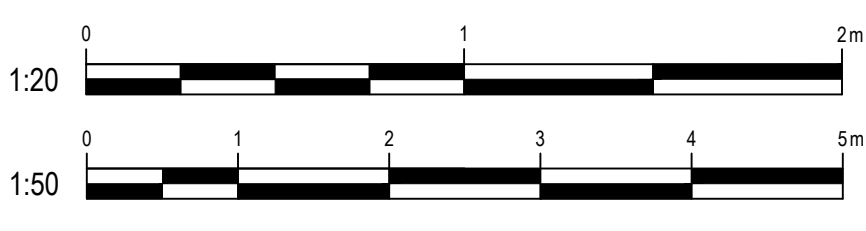
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Asset - Actif	MCTS TOWER SITE SAFETY MOUNTAIN		
Drawing - Dessin	GROUNDING PLAN		
Drawn - dessiné	GR		2021-09-03
Designed - conception	TE		2021-09-03
Checked - vérifié	AW		2021-09-03
Approved - approuvé	AW		2021-09-03
CCG ref. no. - no. réf. GCC	8B200-19003	scale - échelle	AS SHOWN
drawing no. - no. dessin	WM-628-1003	sheet-feuille	rev-rév
		06/08	0



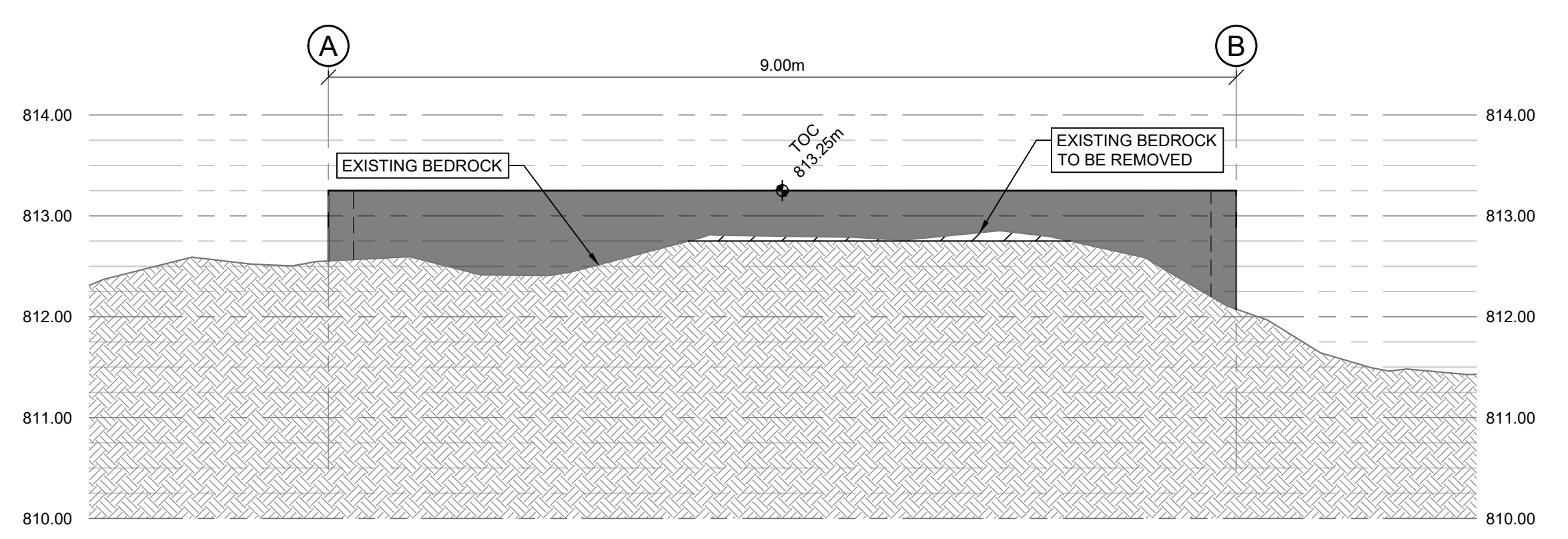
**PLAN**  
SCALE: 1:50  
**1**  
**03**  
**HELIPAD FOUNDATION**



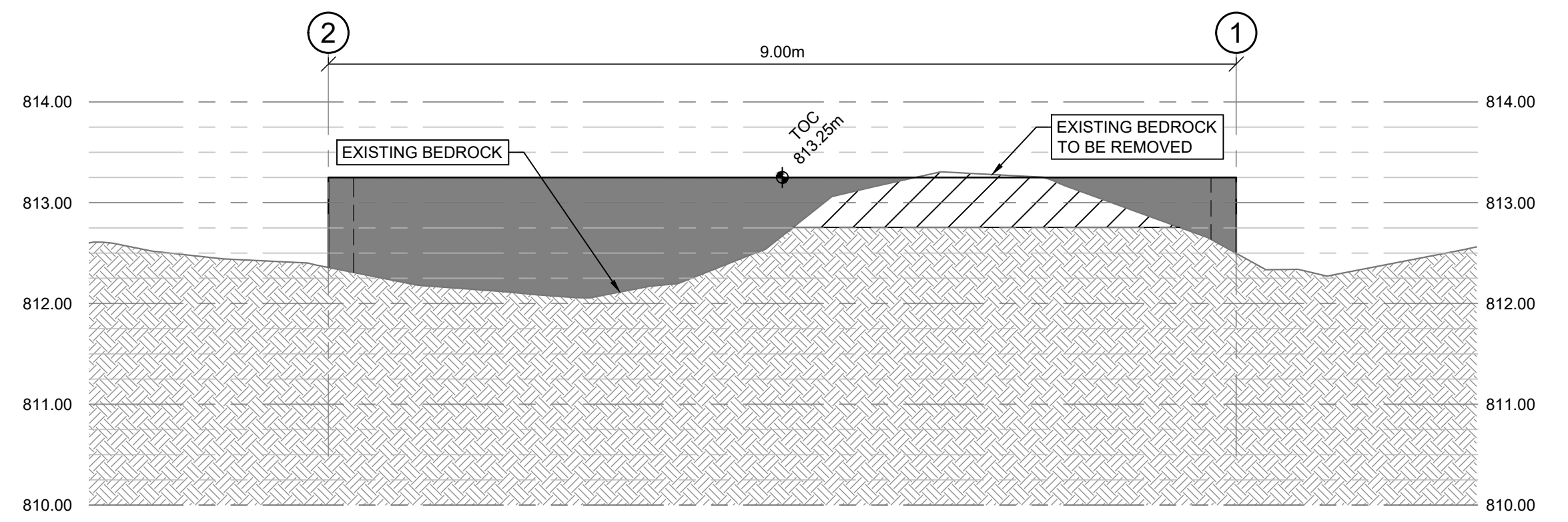
**SECTION A**  
SCALE: 1:20  
**HELIPAD WALL**



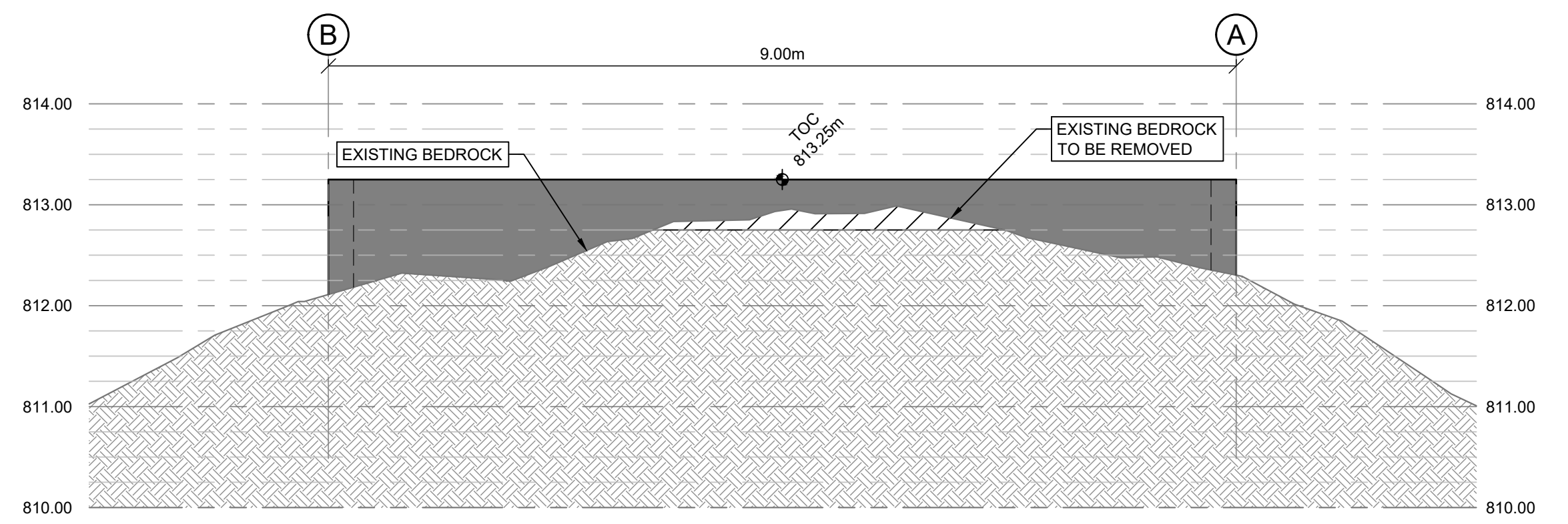
**DETAIL 2**  
SCALE: 1:20  
**HELIPAD CORNER**



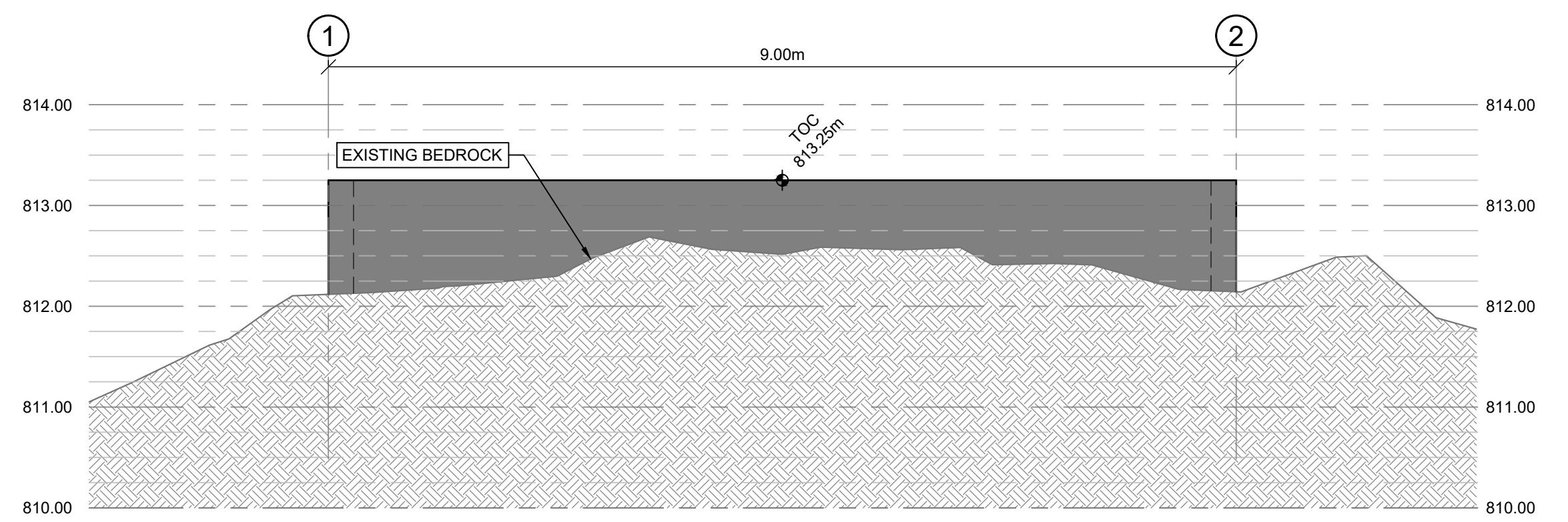
**ELEVATION B**  
SCALE: 1:50  
**GROUND PROFILE AT GRIDLINE 1**



**ELEVATION C**  
SCALE: 1:50  
**GROUND PROFILE AT GRIDLINE A**

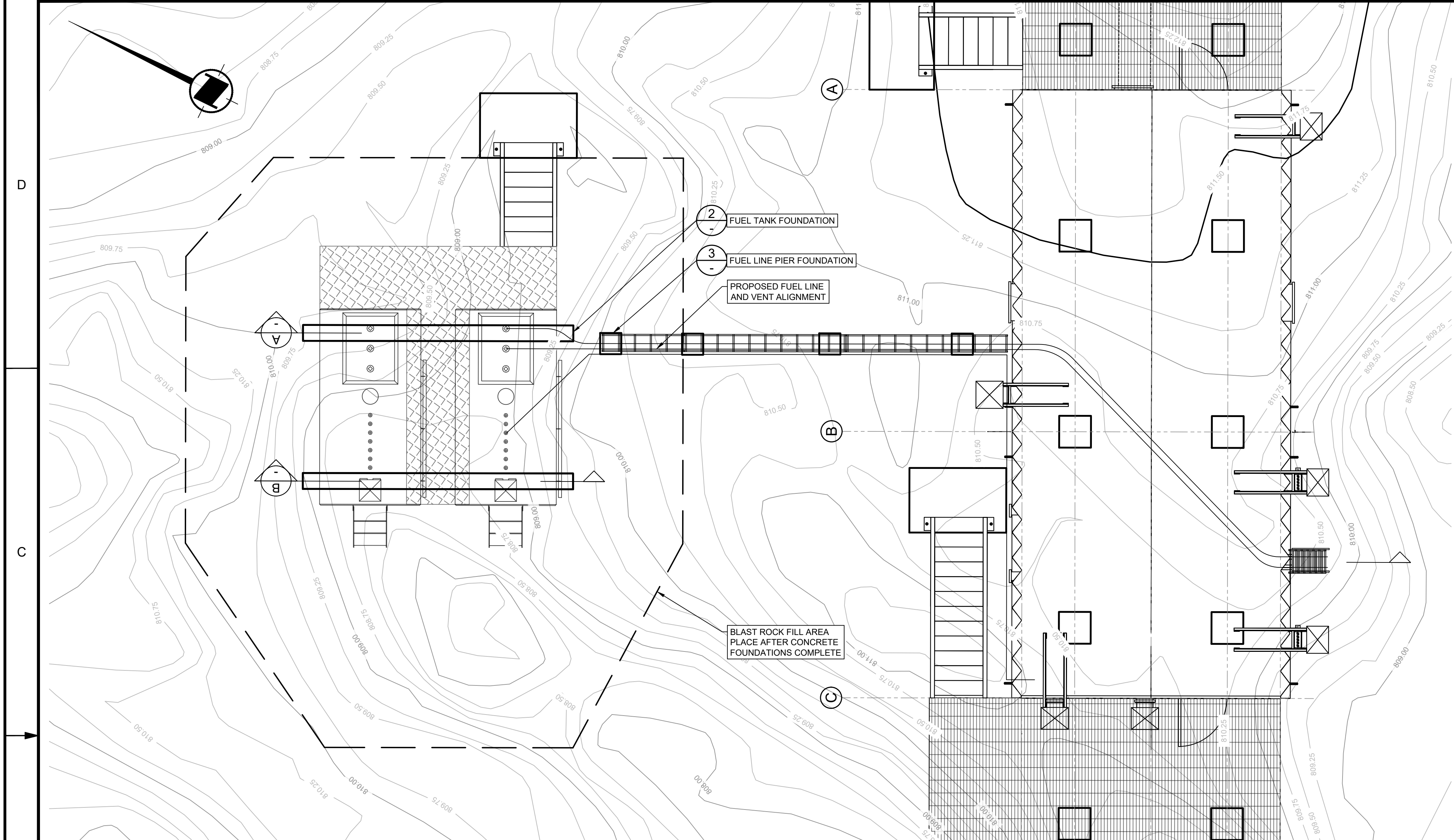


**ELEVATION D**  
SCALE: 1:50  
**GROUND PROFILE AT GRIDLINE 2**

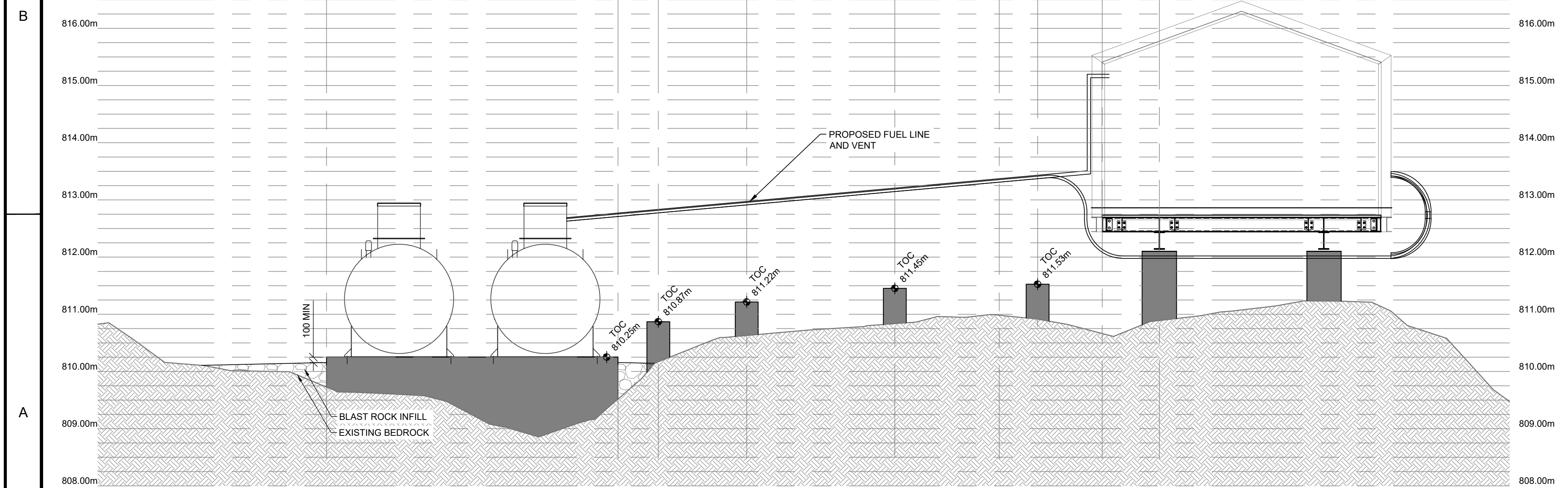


**ELEVATION E**  
SCALE: 1:50  
**GROUND PROFILE AT GRIDLINE B**

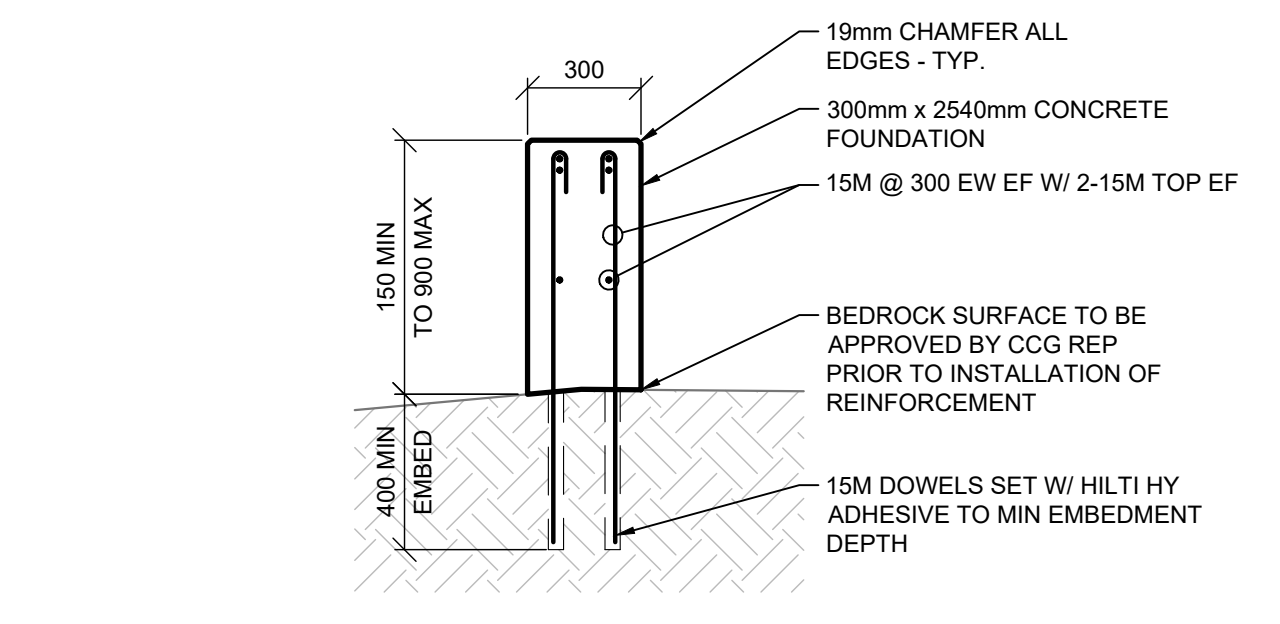
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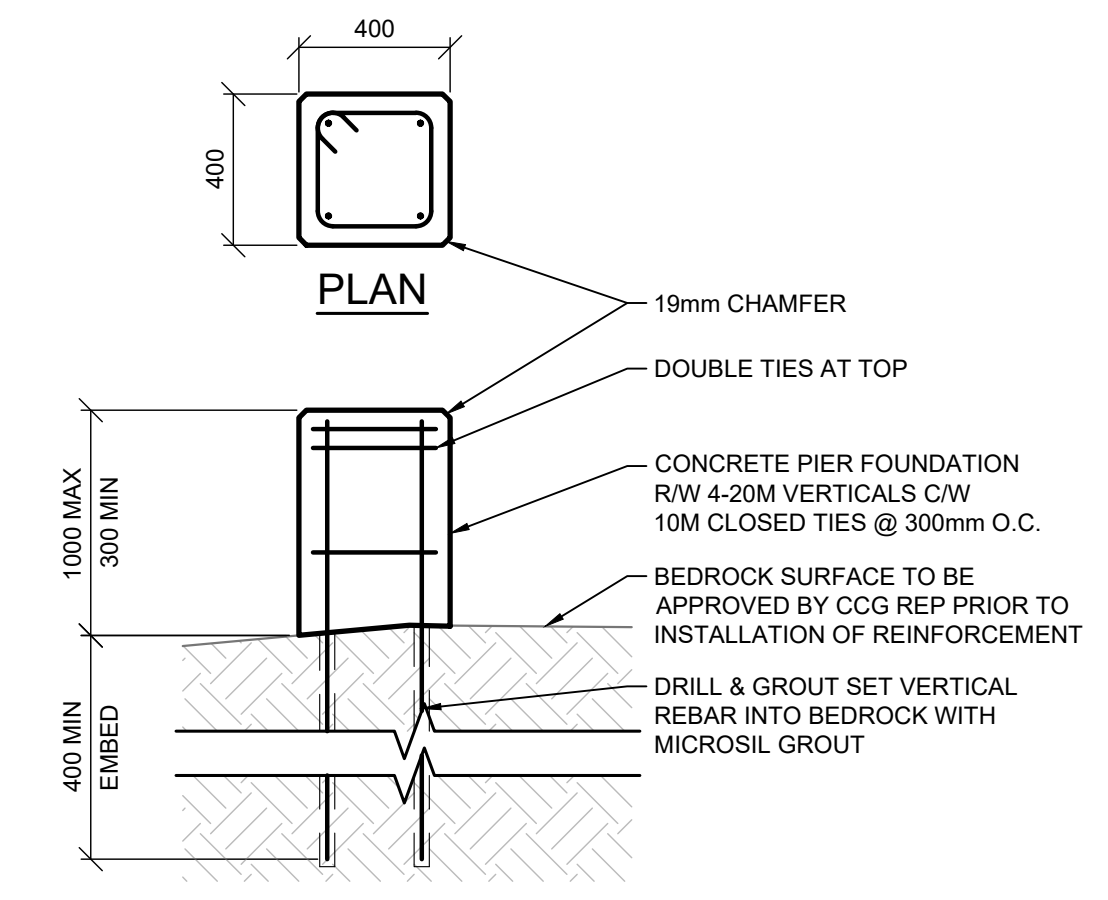
**PLAN 1 FUEL TANK LAYOUT**  
SCALE: 1:50



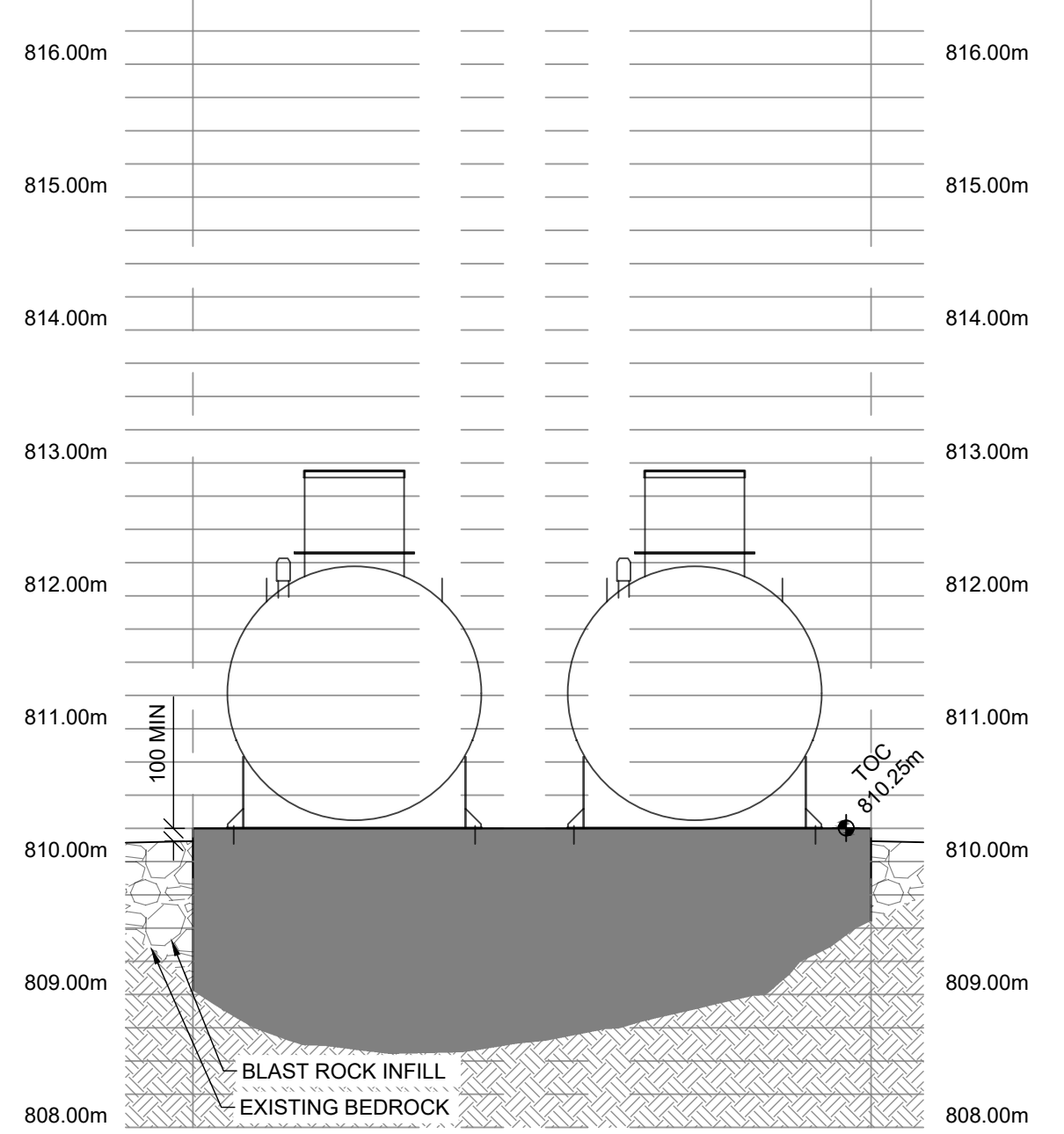
**SECTION A FUEL ALIGNMENT AND EAST FUEL TANK FOUNDATION**  
SCALE: 1:50



**DETAIL 2 FUEL TANK FOUNDATION**  
SCALE: 1:20



**DETAIL 3 FUEL LINE PIER FOUNDATION**  
SCALE: 1:20



**SECTION B WEST FUEL TANK FOUNDATION**  
SCALE: 1:50

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WM-628-1003			08/08 0