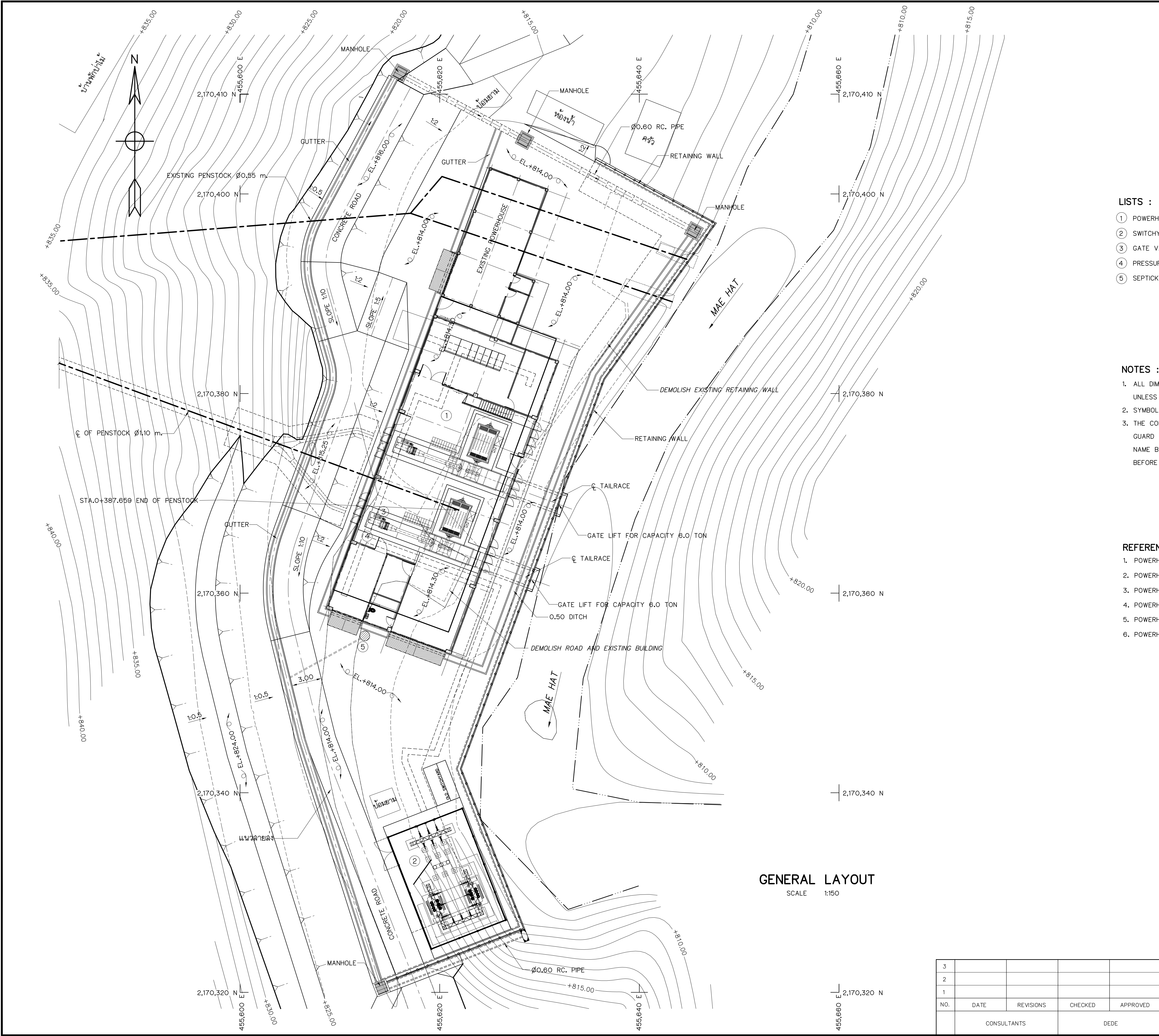




LISTS :

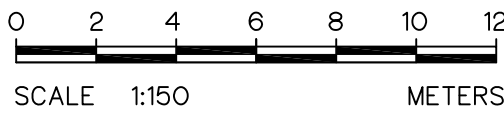
- ① POWERHOUSE
- ② SWITCHYARD
- ③ GATE VALVE Ø3/4"
- ④ PRESSURE REDUCING VALVE
- ⑤ SEPTICK TANK

NOTES :

- ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
- SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03
- THE CONTRACTOR (C1) HAS TO SUBMIT THE SHOP DRAWINGS OF ALL HOUSING, GUARD HOUSE, ELEVATED TANK FLAG POLE, ENTRANCE GATE WITH, NAME BOARD AND GATE WIDTH 6.00 M. TO FIELD ENGINEER FOR APPROVAL, BEFORE CONSTRUCTION.

REFERENCE DRAWINGS :

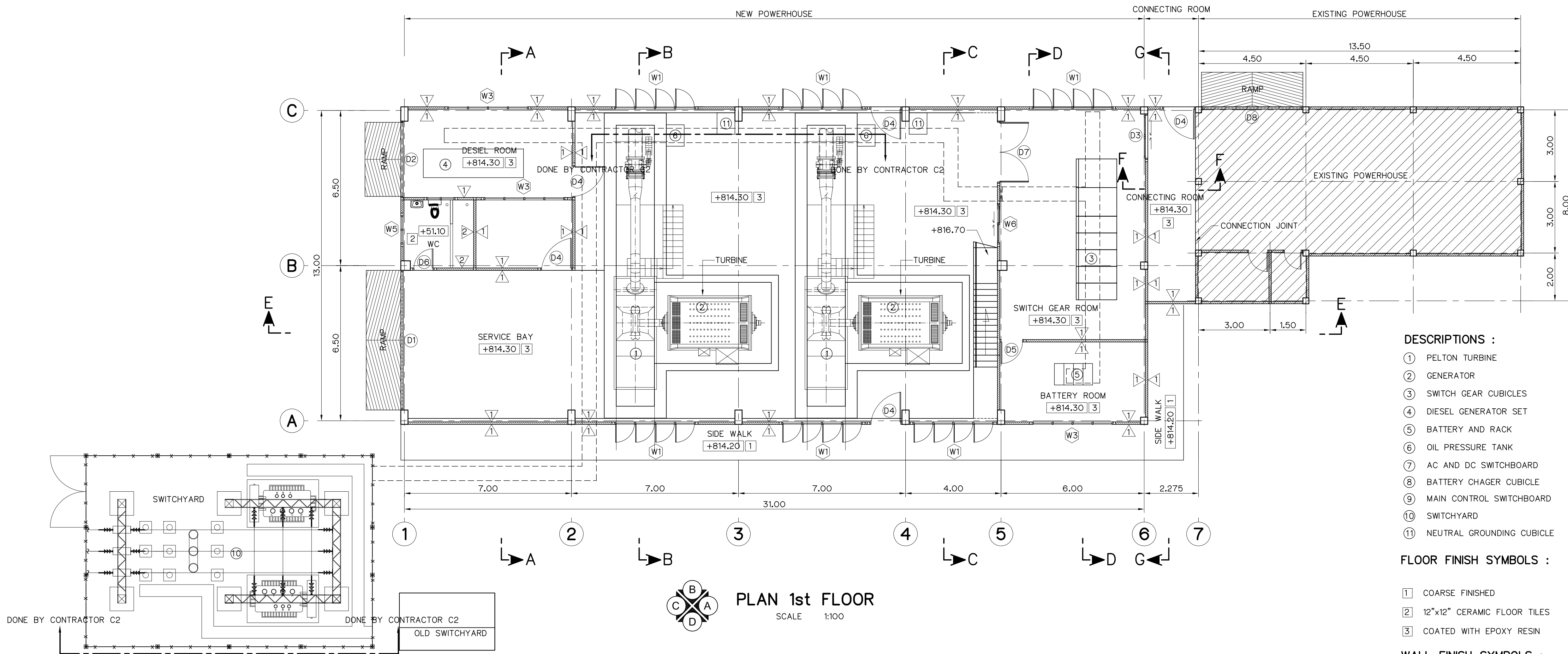
- | | |
|---|----------|
| 1. POWERHOUSE, PLAN 1st FLOOR AND PLAN 2nd FLOOR | MH-PH-02 |
| 2. POWERHOUSE, ELEVATIONS | MH-PH-04 |
| 3. POWERHOUSE, SECTIONS (SHEET 1/2) | MH-PH-05 |
| 4. POWERHOUSE, SECTIONS (SHEET 2/2) | MH-PH-06 |
| 5. POWERHOUSE, DITCH AND MANHOLE DETAILS | MH-PH-19 |
| 6. POWERHOUSE, RETAINING WALL REINFORCEMENT DETAILS | MH-PH-20 |



GENERAL LAYOUT
SCALE 1:150

3				
2				
1				
NO.	DATE	REVISIONS	CHECKED	APPROVED
		CONSULTANTS		DEDE

KINGDOM OF THAILAND Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY	
MAE HAT HYDROPOWER PROJECT	
CIVIL WORKS AND TRANSMISSION LINE POWERHOUSE GENERAL LAYOUT	
PC P&C MANAGEMENT CO.,LTD.	REVIEWED <i>[Signature]</i>
DESIGNED <i>[Signature]</i> 19.6.624 19.6.226	SUBMITTED <i>[Signature]</i>
DRAWN <i>[Signature]</i>	RECOMMENDED <i>[Signature]</i>
CHECKED <i>[Signature]</i> 19.6.226	APPROVED <i>[Signature]</i>
PROJECT MANAGER <i>[Signature]</i> 0810312559 DATE	DRAWING NO. MH-PH-01 SHEET NO. 84 OF 130



DESCRIPTIONS :

- ① PELTON TURBINE
- ② GENERATOR
- ③ SWITCH GEAR CUBICLES
- ④ DIESEL GENERATOR SET
- ⑤ BATTERY AND RACK
- ⑥ OIL PRESSURE TANK
- ⑦ AC AND DC SWITCHBOARD
- ⑧ BATTERY CHAGER CUBICLE
- ⑨ MAIN CONTROL SWITCHBOARD
- ⑩ SWITCHYARD
- ⑪ NEUTRAL GROUNDING CUBICLE

FLOOR FINISH SYMBOLS :

- ① COARSE FINISHED
- ② 12"x12" CERAMIC FLOOR TILES
- ③ COATED WITH EPOXY RESIN

WALL FINISH SYMBOLS :

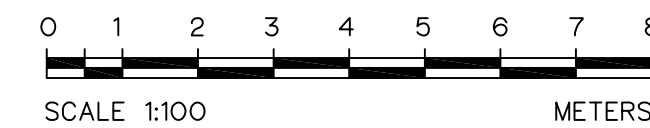
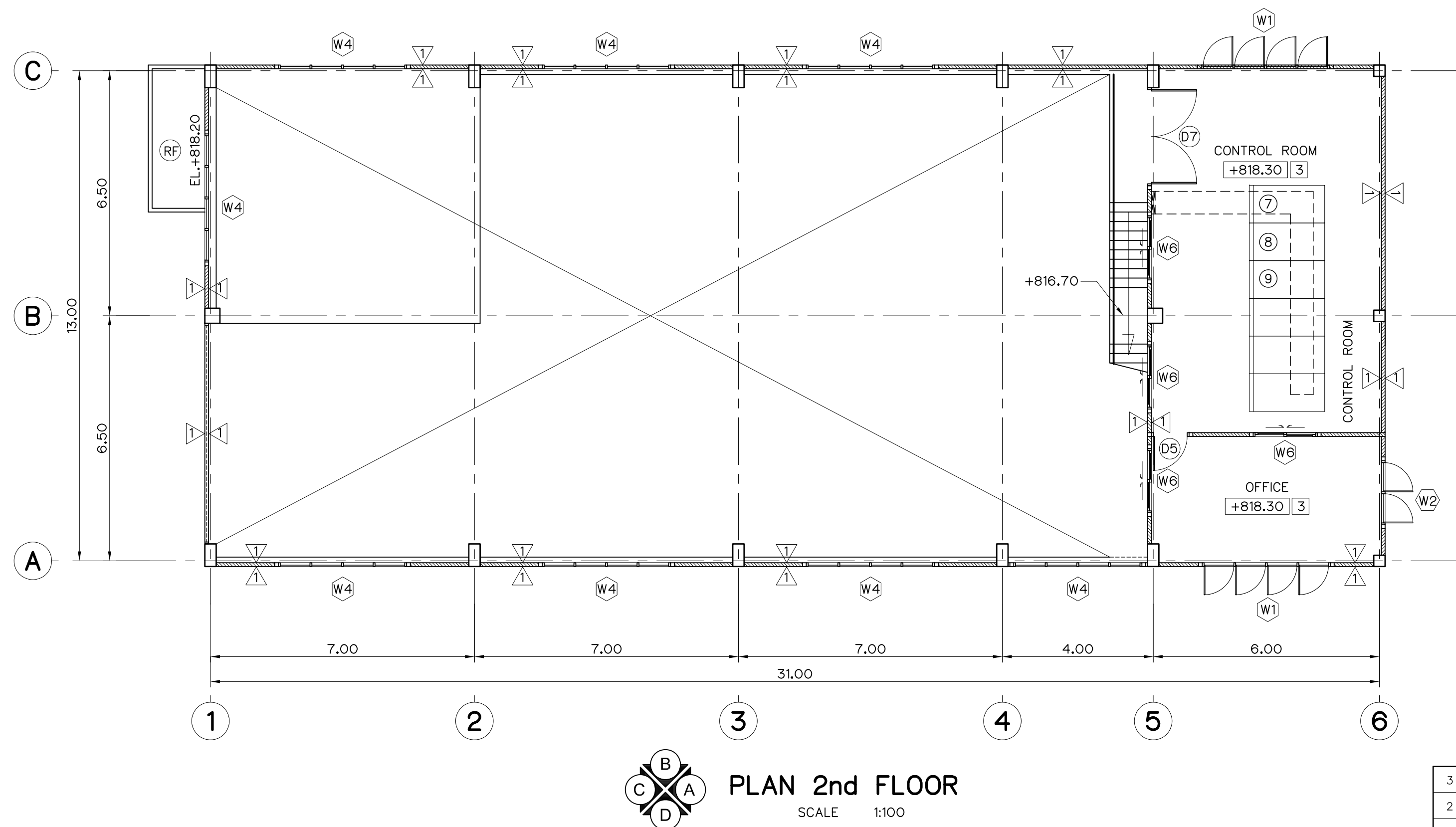
- △ CEMENT PLASTER
- △ 8"x8" CERAMIC WALL TILES
- △ GLASS BLOCK

NOTES :

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03
3. CONTRACT C1 OF INCLUDE PENSTOCK BEYOND POWERHOUSE WALL 1.00 M. (INCLUDE FLANGE)

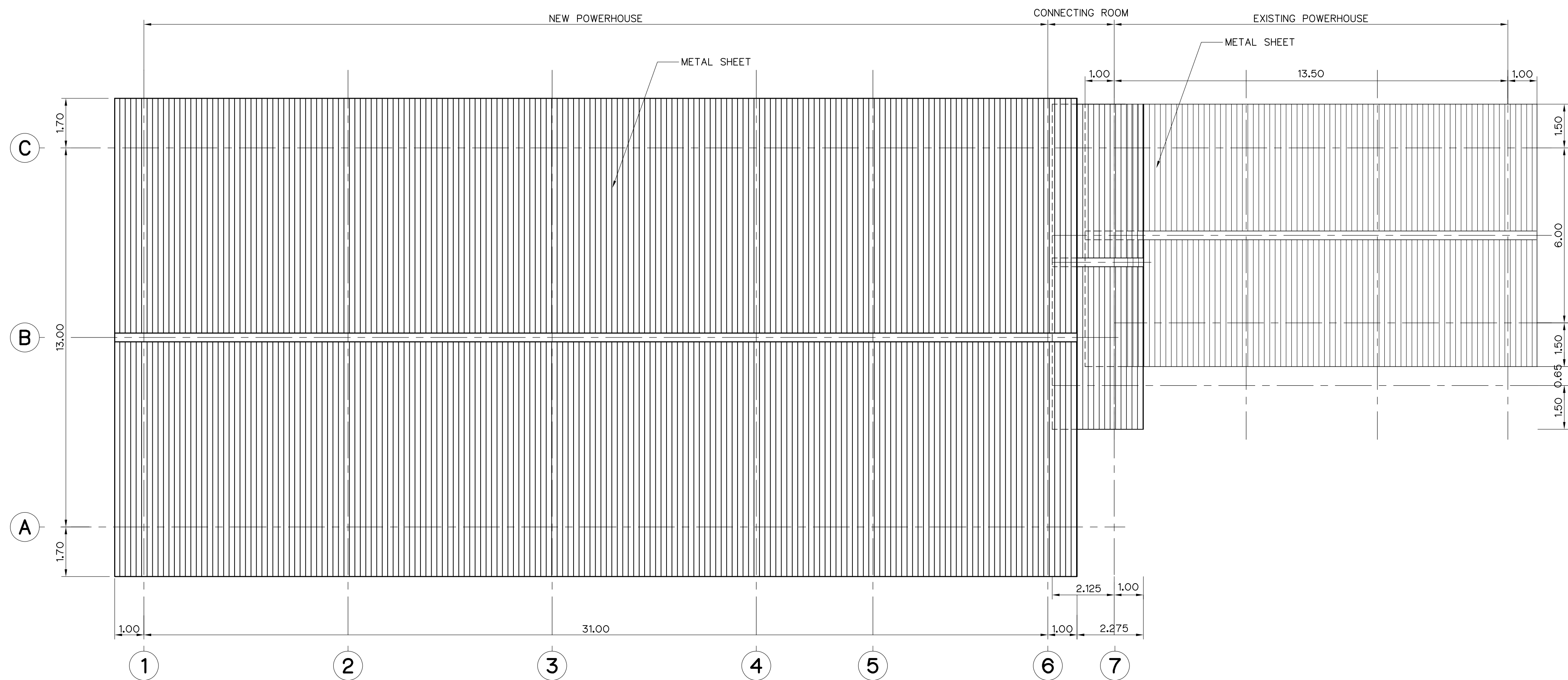
REFERENCE DRAWINGS :

- | | |
|---|----------|
| 1. POWERHOUSE, GENERAL LAYOUT | MH-PH-01 |
| 2. POWERHOUSE, ELEVATIONS | MH-PH-04 |
| 3. POWERHOUSE, SECTIONS (SHEET 1/2) | MH-PH-05 |
| 4. POWERHOUSE, SECTIONS (SHEET 2/2) | MH-PH-06 |
| 5. POWERHOUSE, DETAILS OF TOILET, SEPTIC AND SEEPAGE TANK | MH-PH-07 |
| 6. POWERHOUSE, DETAIL OF DOORS, WINDOWS AND NAME PLATE | MH-PH-08 |



3				
2				
1				
NO.	DATE	REVISIONS	CHECKED	APPROVED
CONSULTANTS			DEDE	

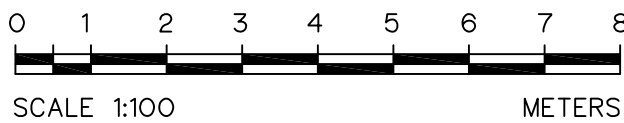
KINGDOM OF THAILAND Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY	
MAE HAT HYDROPOWER PROJECT	
CIVIL WORKS AND TRANSMISSION LINE POWERHOUSE PLAN 1st FLOOR AND PLAN 2nd FLOOR	
P&C MANAGEMENT CO.,LTD. DESIGNED <i>m. 48.64624</i> <i>88.6226</i> DRAWN <i>g.m. 88.6226</i> CHECKED <i>88.6226</i> PROJECT MANAGER	REVIEWED <i>88.6226</i> SUBMITTED <i>Chand</i> RECOMMENDED <i>88.6226</i> APPROVED <i>P. Harrell</i> DRAWING NO. MH-PH-02 SHEET NO. 85 OF 130



ROOF PLAN
SCALE 1:100

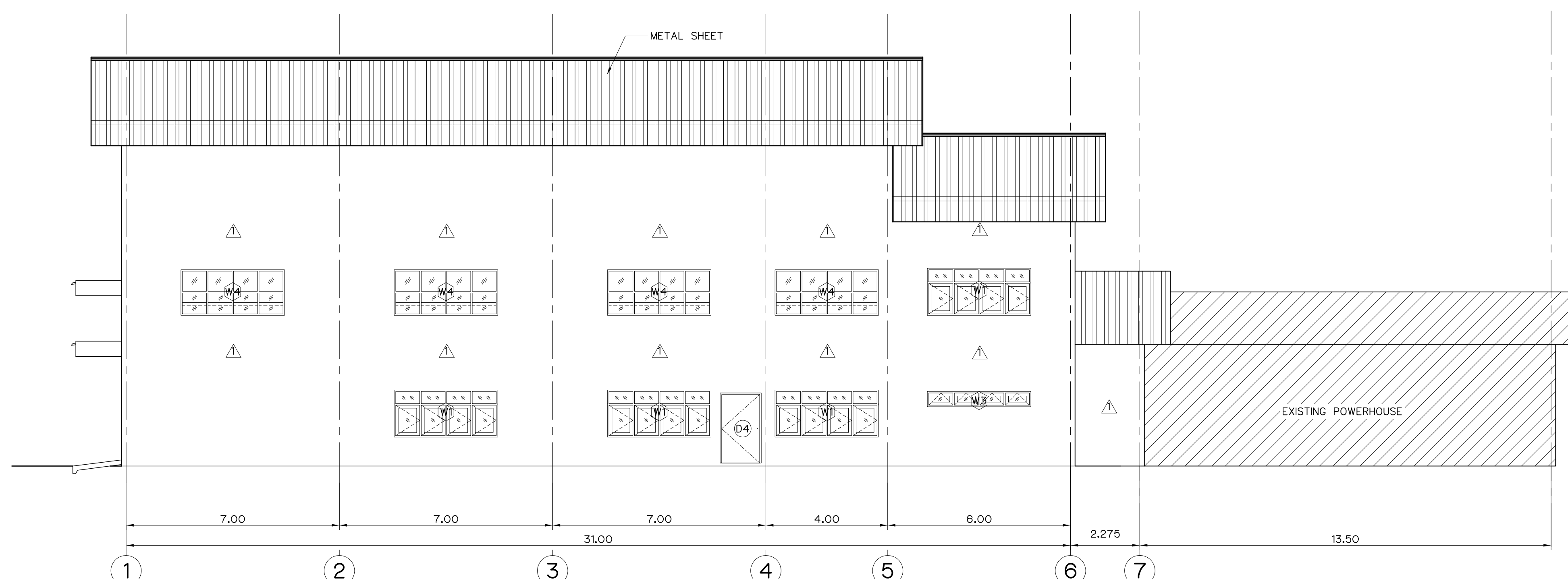
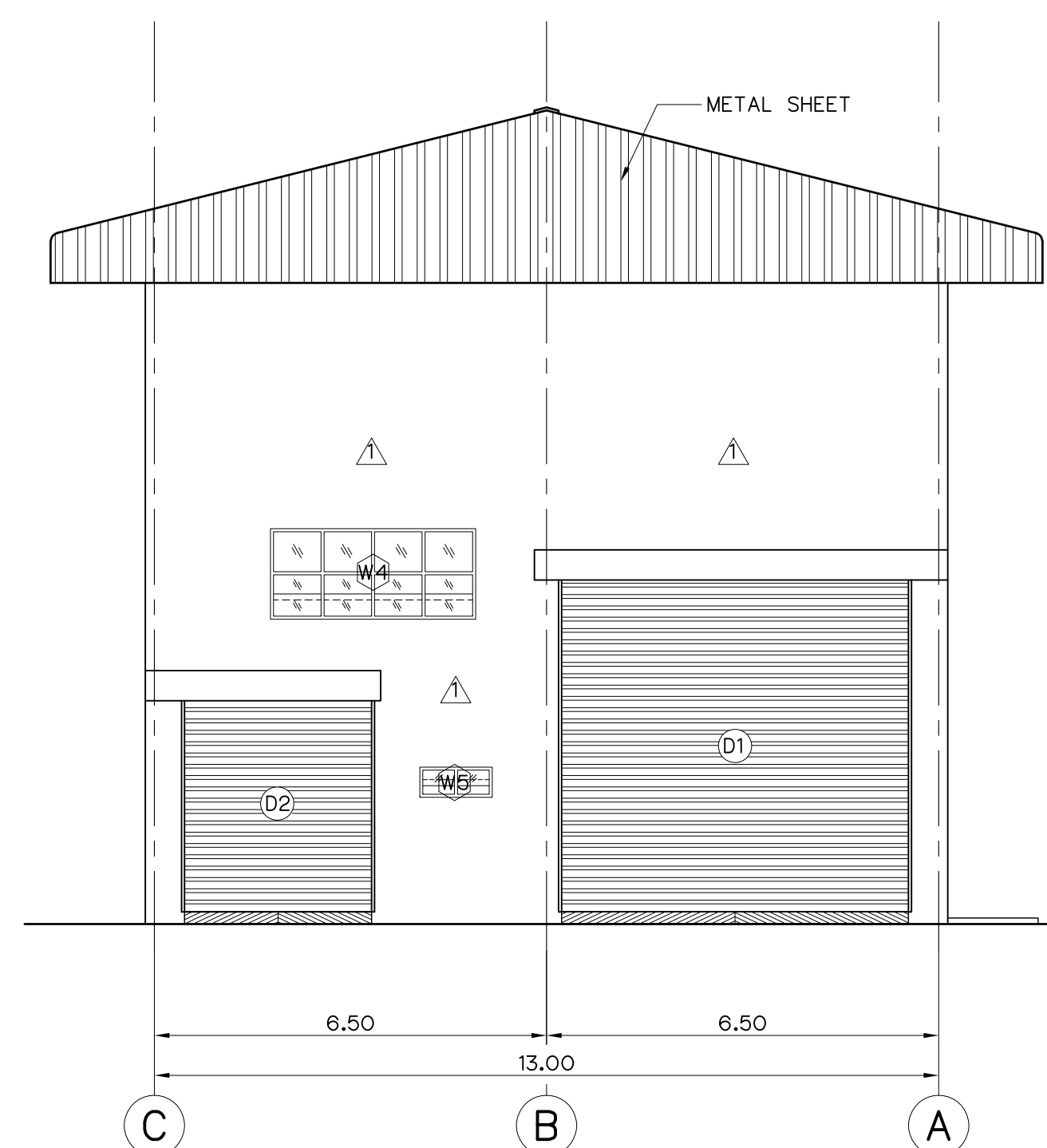
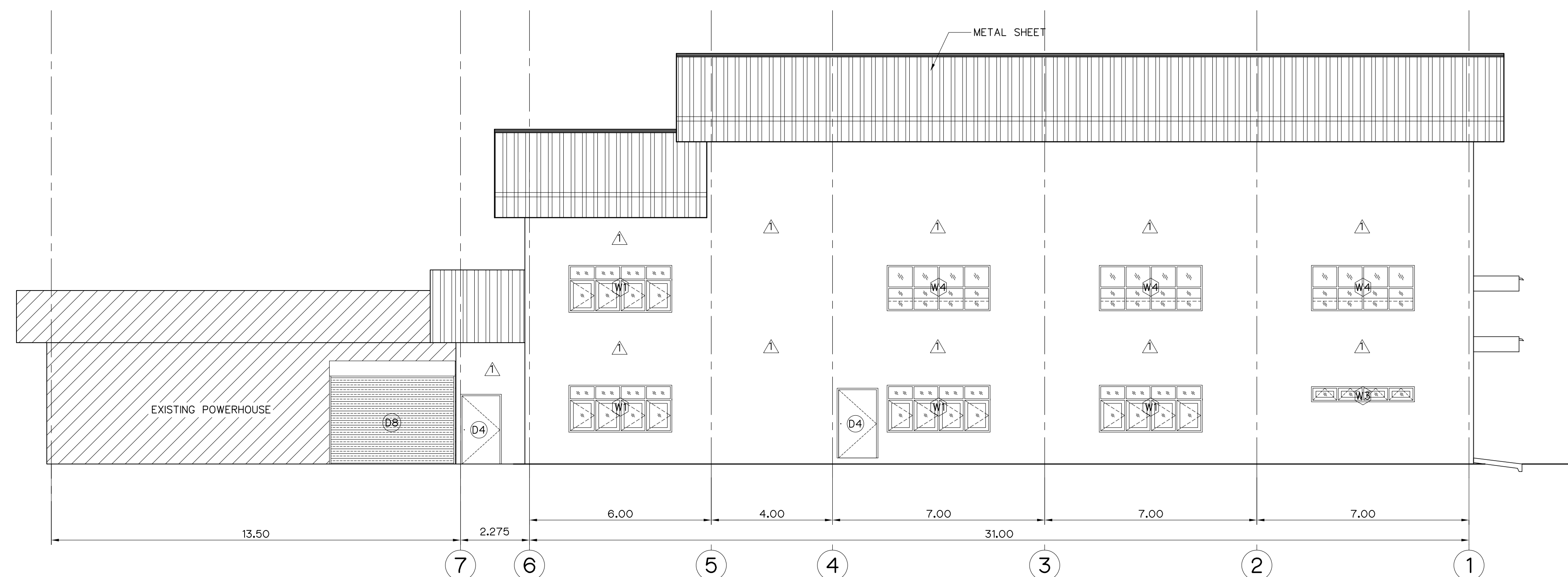
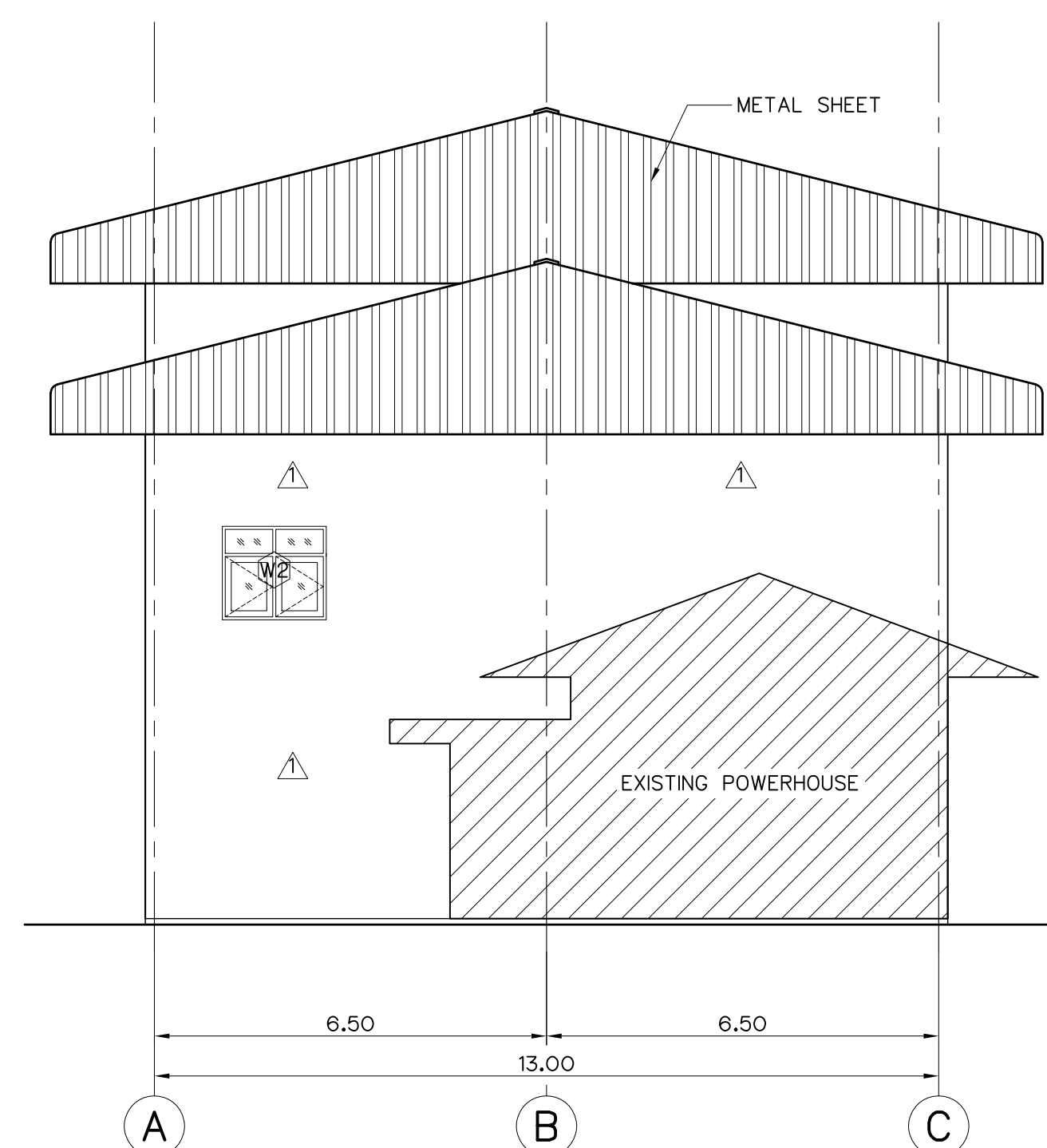
- NOTES :
- 1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
 - 2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03

- REFERENCE DRAWINGS :
- 1. POWERHOUSE, GENERAL LAYOUT MH-PH-01
 - 2. POWERHOUSE, PLAN 1st FLOOR AND PLAN 2nd FLOOR MH-PH-02
 - 3. POWERHOUSE, ELEVATIONS MH-PH-04



3				
2				
1				
NO.	DATE	REVISIONS	CHECKED	APPROVED
CONSULTANTS			DEDE	

KINGDOM OF THAILAND Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY	
MAE HAT HYDROPOWER PROJECT	
CIVIL WORKS AND TRANSMISSION LINE POWERHOUSE ROOF PLAN	
P&C MANAGEMENT CO.,LTD.	Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY
DESIGNED <i>m. ๖๒๔.๖๒๔</i> <i>๖๖.๖๒๔</i>	REVIEWED <i>๖๖.๖๒๔</i>
DRAWN <i>๖๖.๖๒๔</i>	SUBMITTED <i>๖๖.๖๒๔</i>
CHECKED <i>๖๖.๖๒๔</i>	RECOMMENDED <i>๖๖.๖๒๔</i>
APPROVED <i>๖๖.๖๒๔</i>	APPROVED <i>๖๖.๖๒๔</i>
PROJECT MANAGER <i>๖๖.๖๒๔</i>	DATE <i>๖๖.๖๒๔</i>
DRAWING NO. MH-PH-03	SHEET NO. 86 OF 130

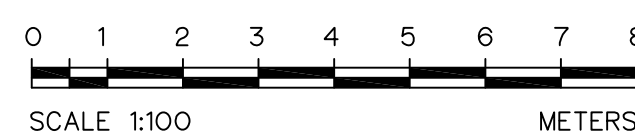


NOTES :

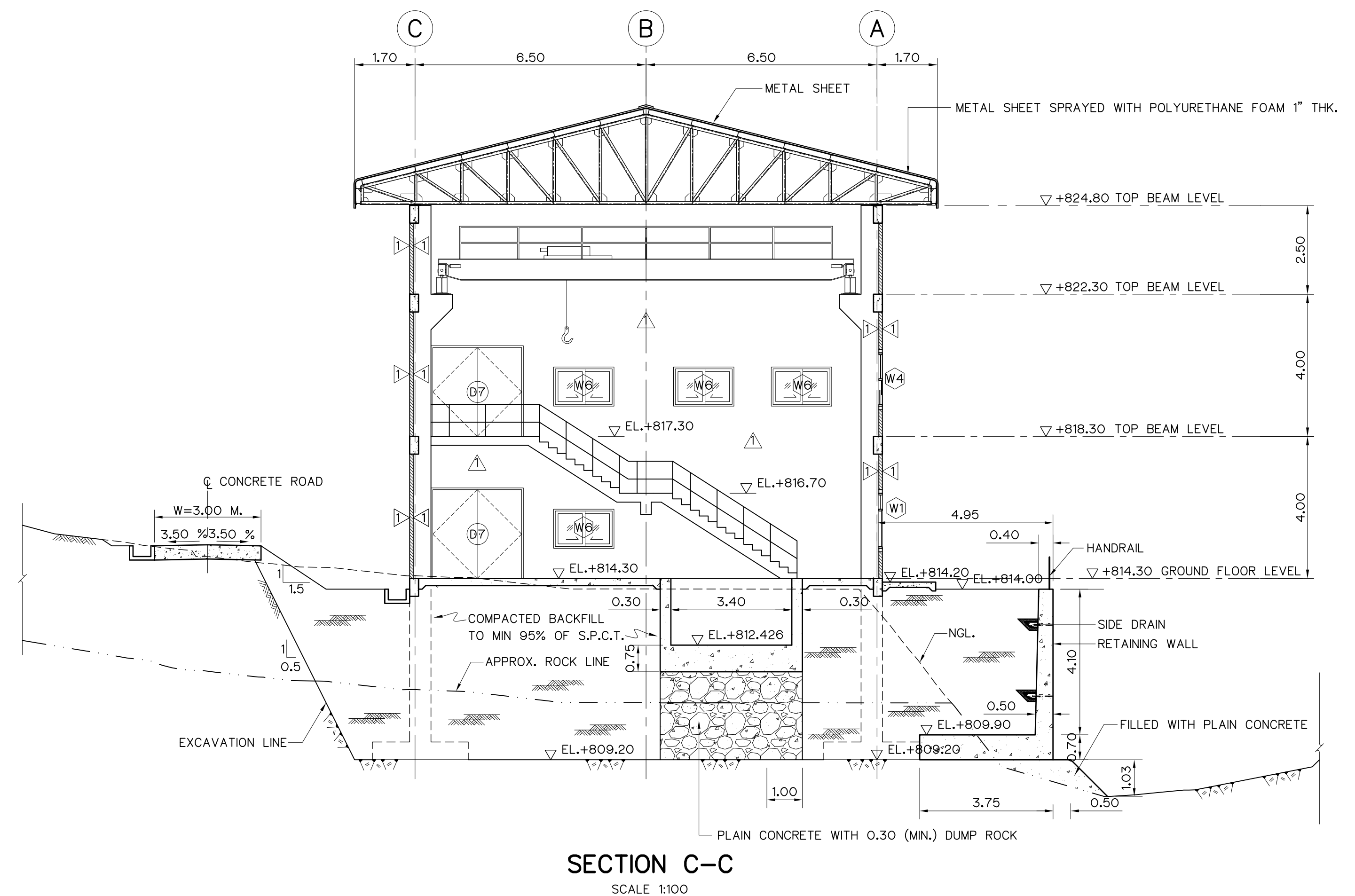
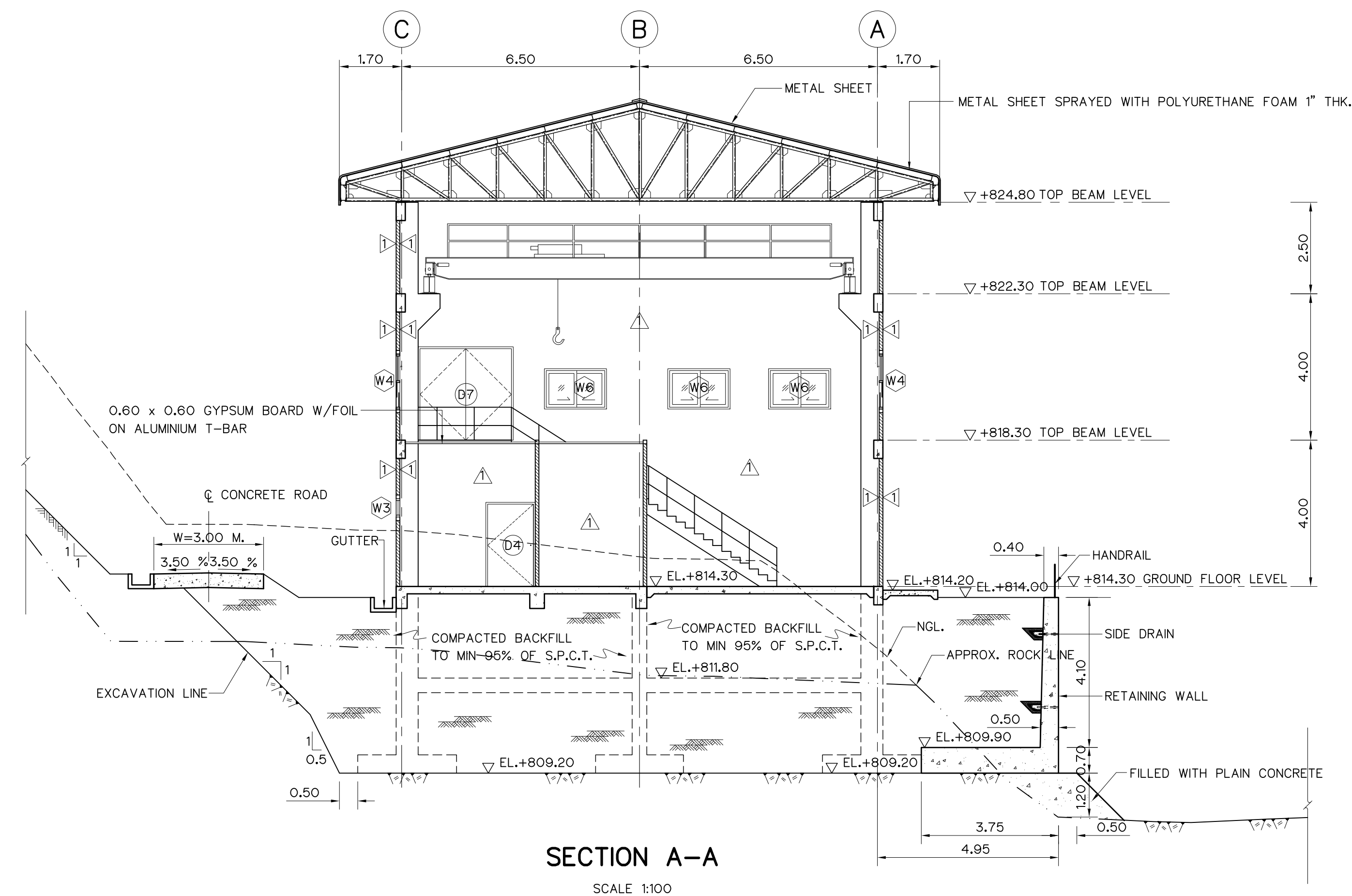
1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS,
UNLESS OTHERWISE SHOWN.
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03

REFERENCE DRAWINGS :

- | | |
|--|----------|
| 1. POWERHOUSE, PLAN 1st FLOOR AND PLAN 2nd FLOOR | MH-PH-02 |
| 2. POWERHOUSE, SECTIONS (SHEET 1/2) | MH-PH-05 |
| 3. POWERHOUSE, SECTIONS (SHEET 2/2) | MH-PH-06 |



3					 P & C MANAGEMENT CO., LTD.	 MINISTRY OF ENERGY	
2						REVIEWED <i>Shin</i>	SUBMITTED <i>Chant</i>
1						DESIGNED <i>m. fbl.64624</i> <i>ff.</i> <i>ffl.6226</i> DRAWN <i>ffl. ff</i>	RECOMMENDED <i>ff</i>
NO.	DATE	REVISIONS	CHECKED	APPROVED		CHECKED <i>ff.</i> <i>ffl.6226</i> APPROVED <i>P. Hamall.</i>	DRAWING NO. MH-PH-04
CONSULTANTS				DEDE		SHEET NO. 87 OF 130	
				PROJECT MANAGER <i>ff</i> 081012559			
				DATE			

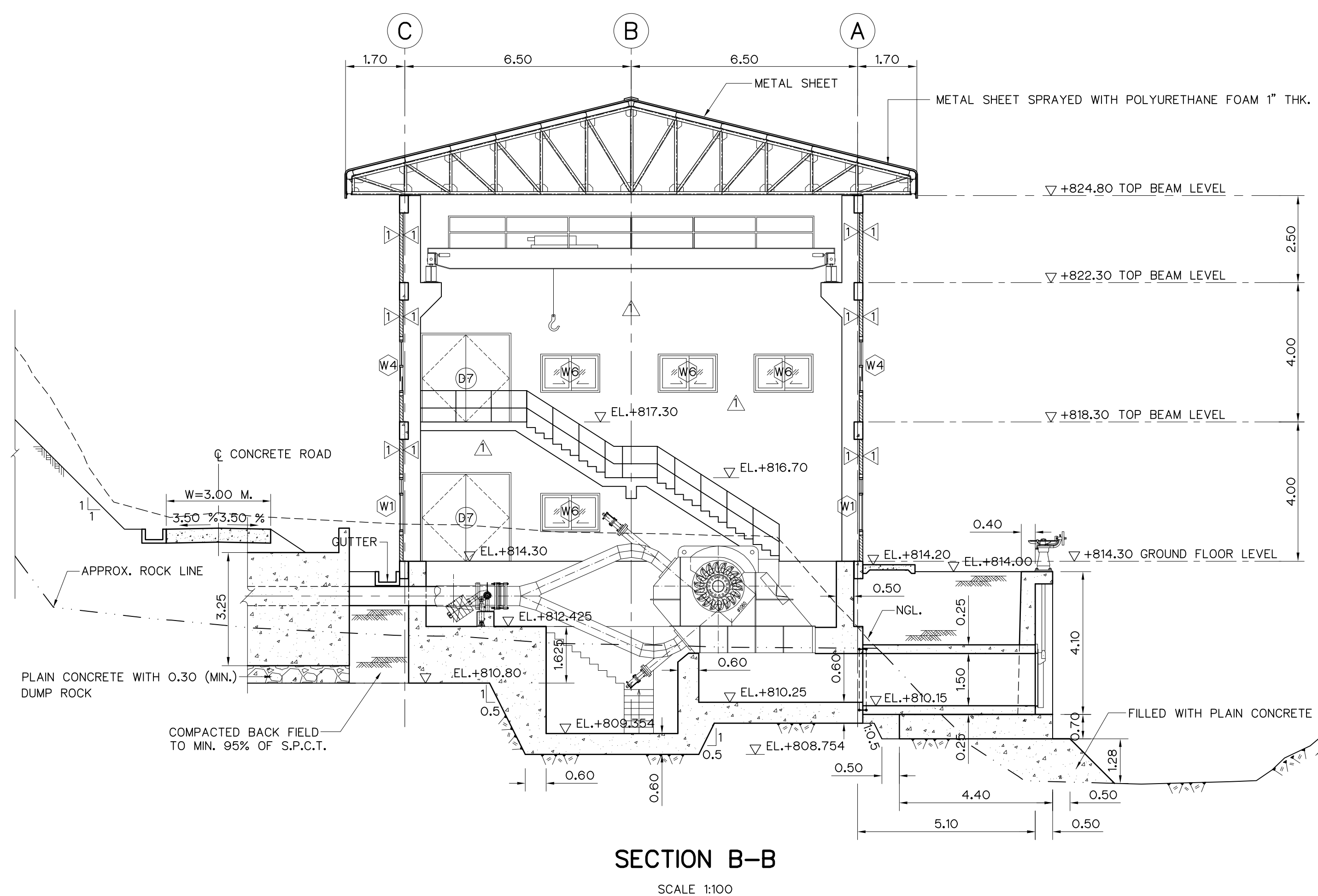
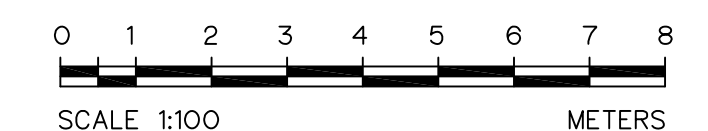


NOTES :

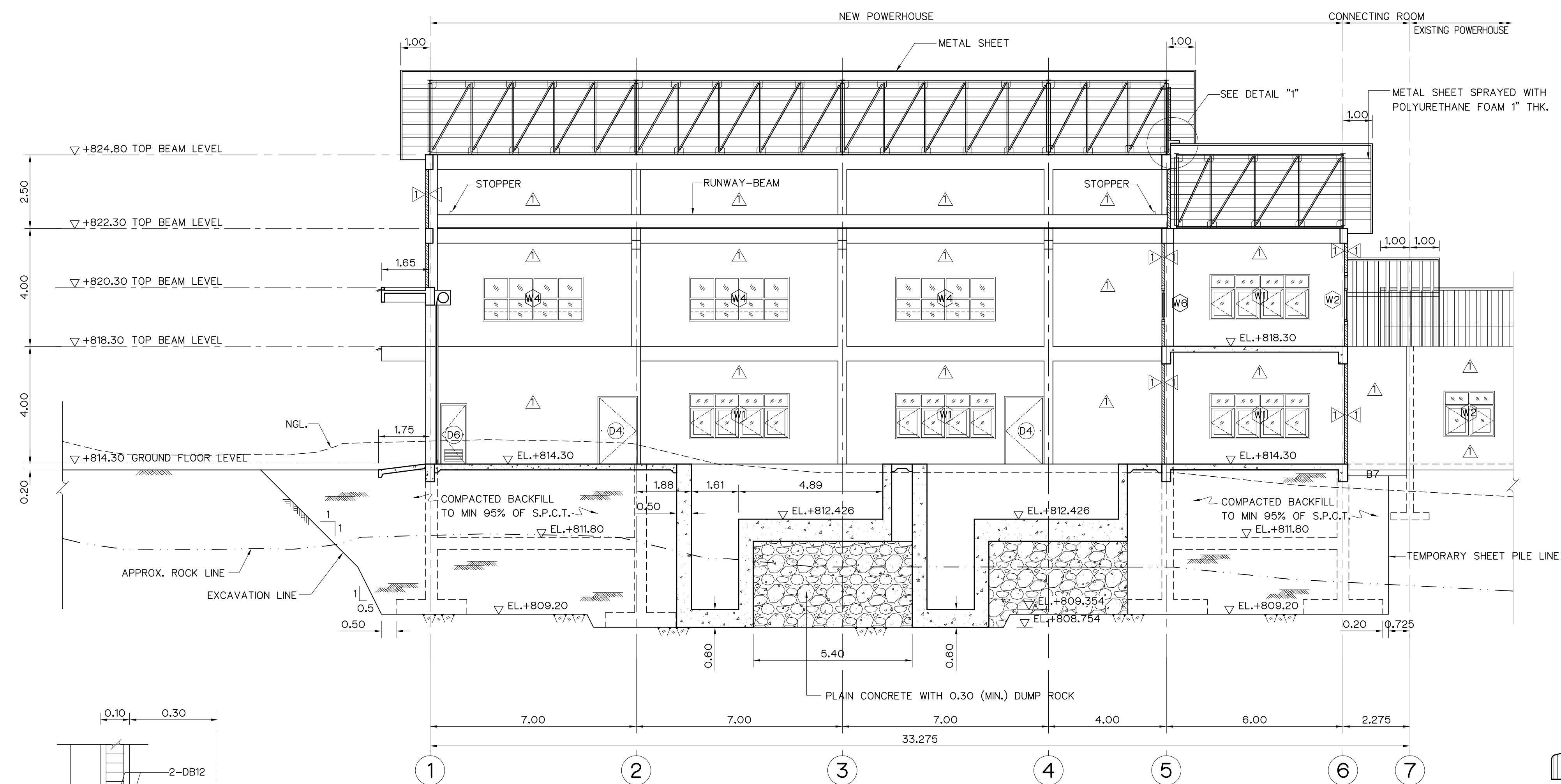
1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS,
UNLESS OTHERWISE SHOWN.
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03

REFERENCE DRAWINGS :

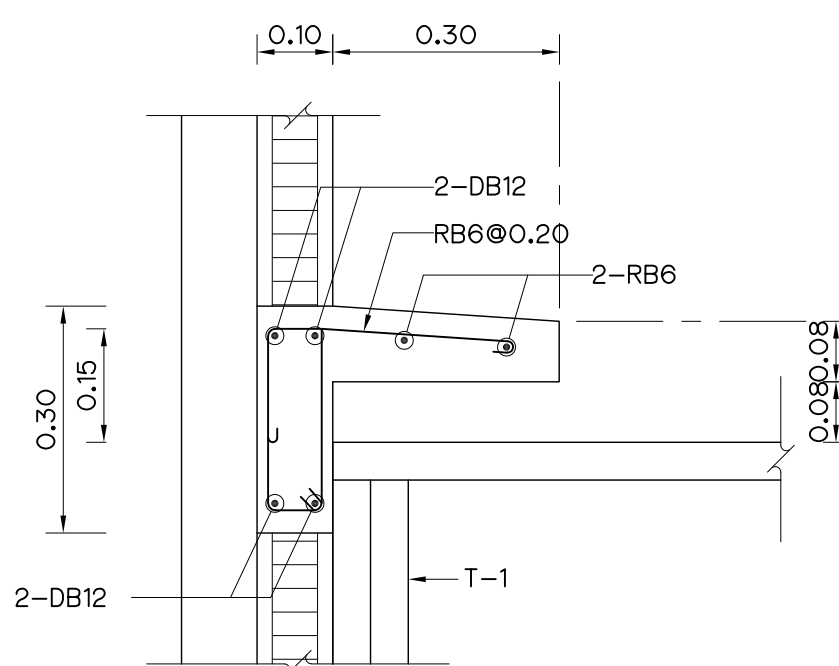
- | | |
|--|----------|
| 1. PLAN 1st FLOOR AND PLAN 2st FLOOR | MH-PH-02 |
| 2. ELEVATIONS | MH-PH-04 |
| 3. RETAININGWALL REINFORCEMENT DETAILS | MH-PH-18 |



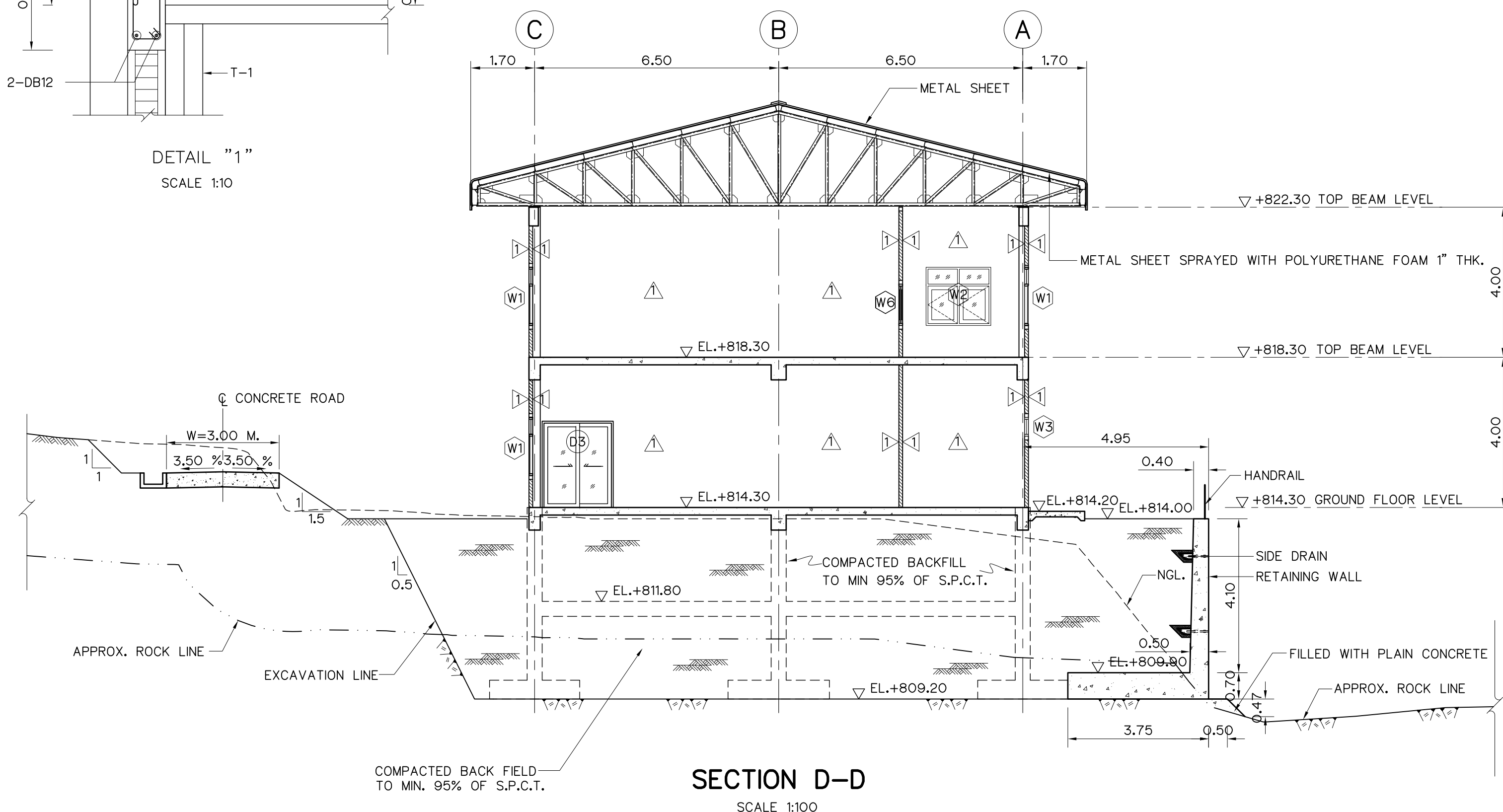
3					 P&C MANAGEMENT CO.,LTD.	 MINISTRY OF ENERGY	
2						DESIGNED  2019.04.24 2019.04.24	REVIEWED 
1						DRAWN 	SUBMITTED 
NO.	DATE	REVISIONS	CHECKED	APPROVED		CHECKED  2019.04.24	APPROVED  P. H. Kim
CONSULTANTS			DEDE			DRAWING NO.	SHEET NO.
					PROJECT MANAGER	DATE	
						MH-PH-05	88 of 130



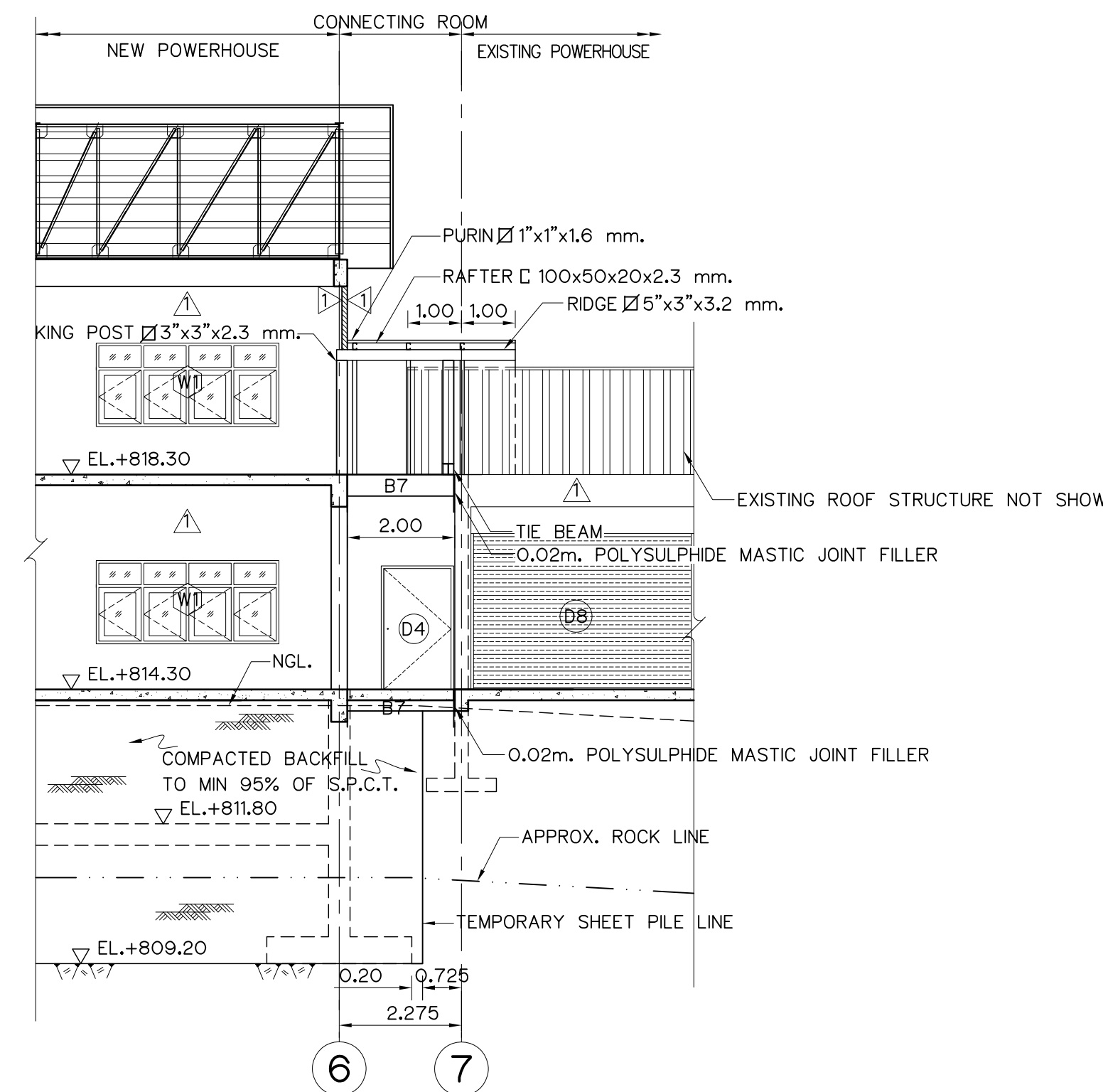
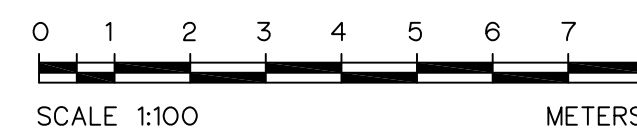
SECTION E-E
SCALE 1:100



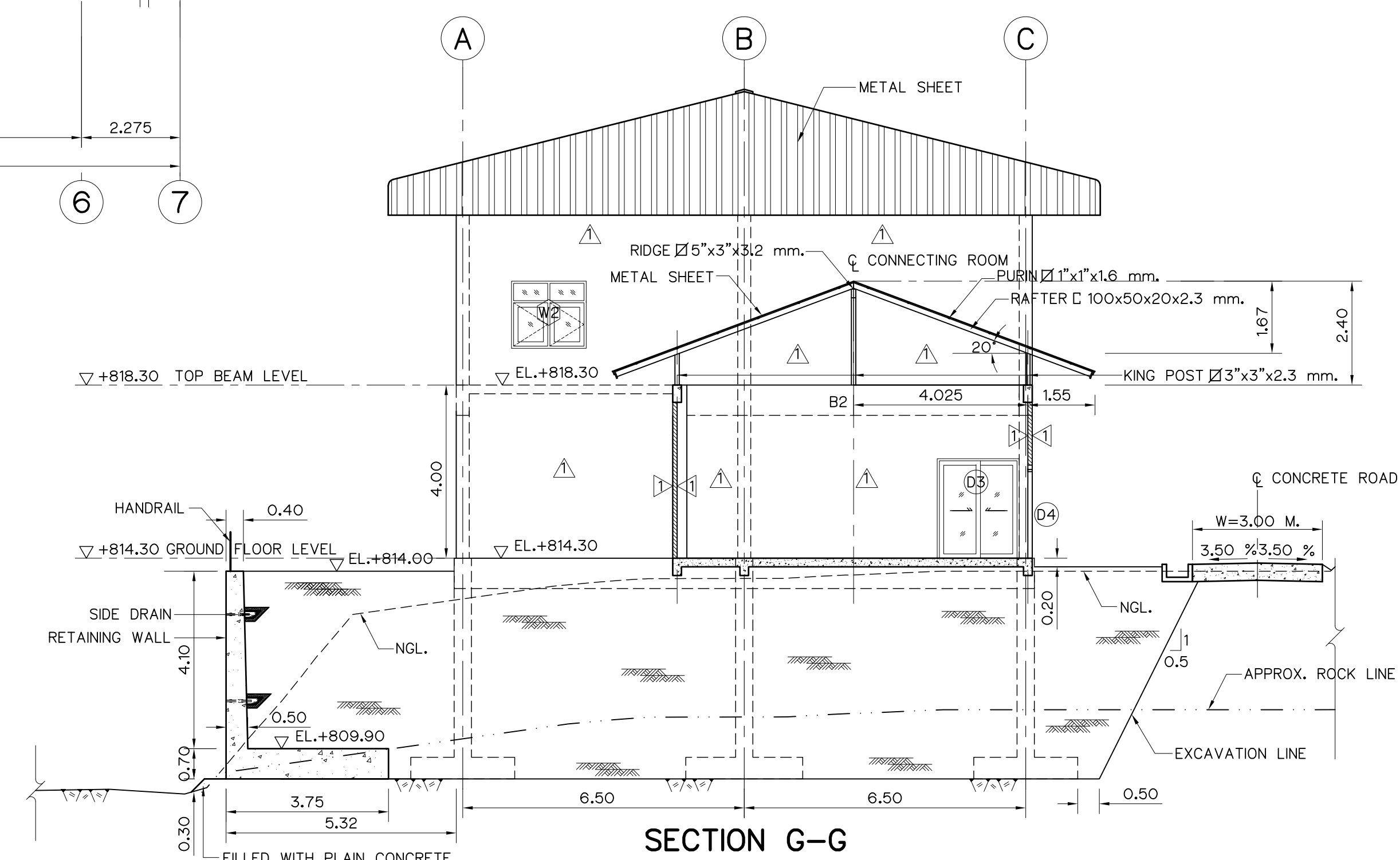
DETAIL "1"
SCALE 1:10



SECTION D-D
SCALE 1:100



SECTION F-F
SCALE 1:100



SECTION G-G
SCALE 1:100

NOTES :

- ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
- SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03

REFERENCE DRAWINGS :

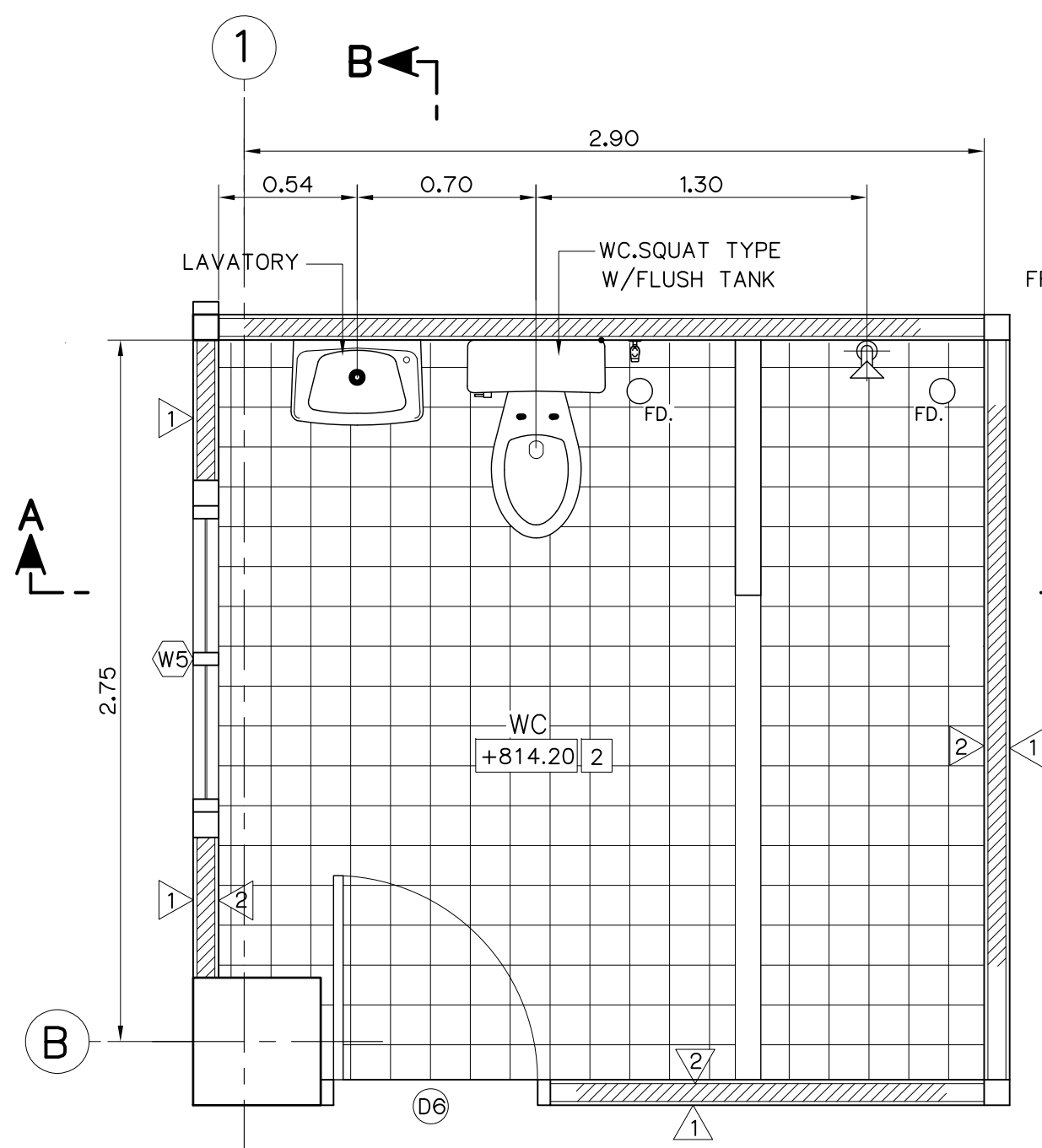
- PLAN 1st FLOOR AND PLAN 2nd FLOOR MH-PH-02
- ELEVATIONS MH-PH-04
- RETAININGWALL REINFORCEMENT DETAILS MH-PH-18

3				
2				
1				
NO.	DATE	REVISIONS	CHECKED	APPROVED

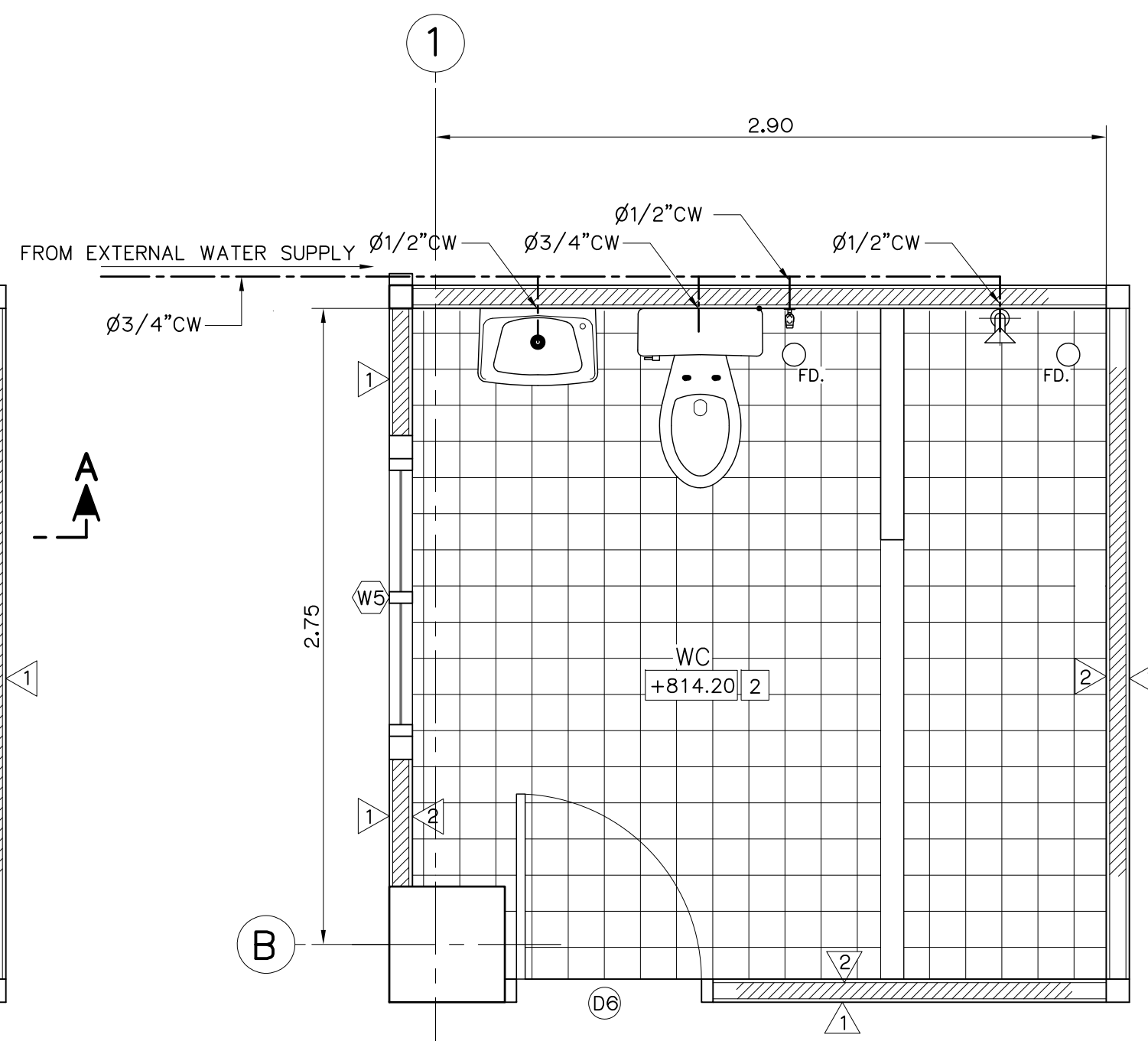
CONSULTANTS

DEDE

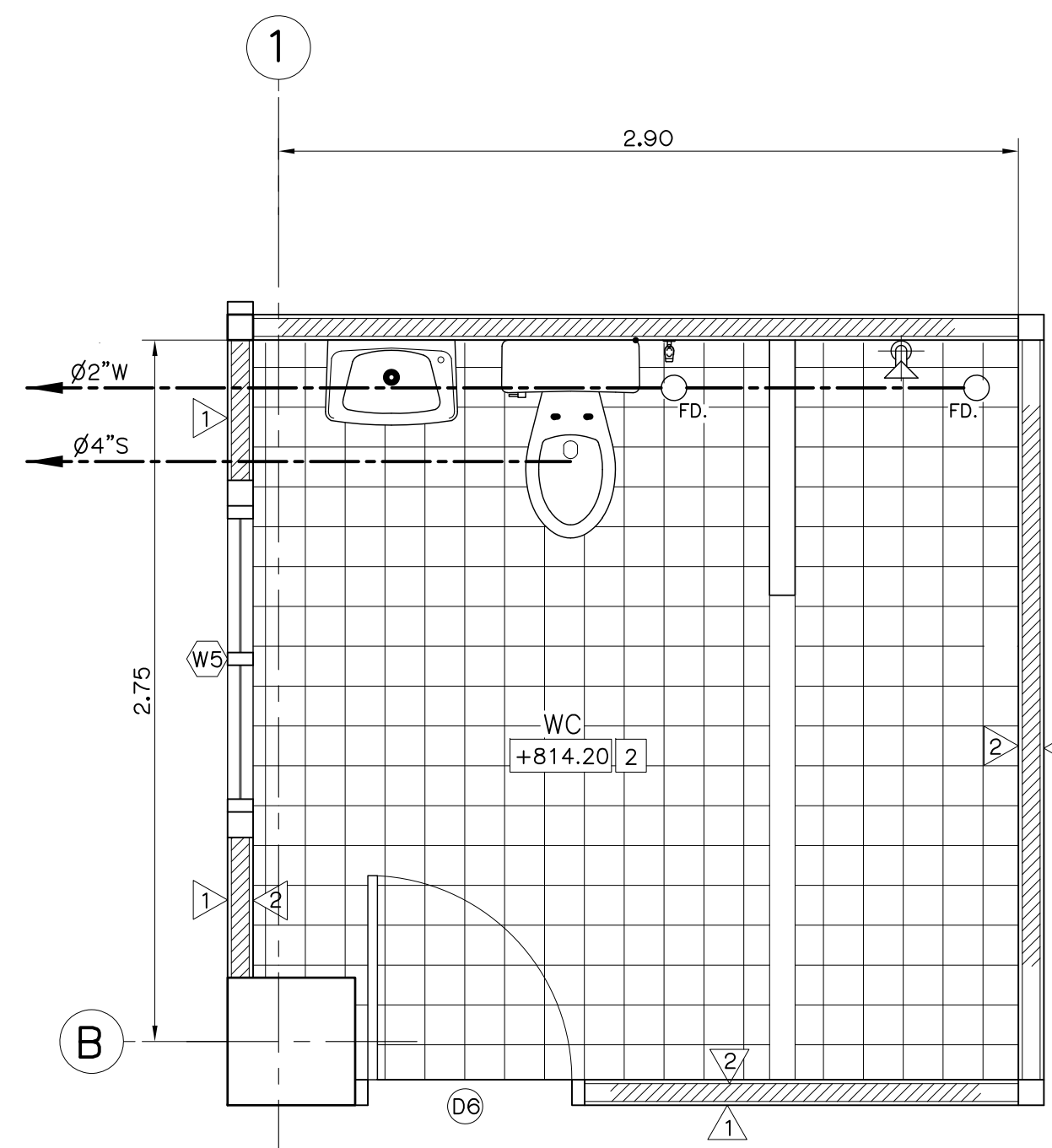
KINGDOM OF THAILAND Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY	
MAE HAT HYDROPOWER PROJECT	
CIVIL WORKS AND TRANSMISSION LINE	
POWERHOUSE	
SECTIONS (SHEET 2/2)	
P&C MANAGEMENT CO.,LTD. DESIGNED <i>m. 11.64624</i> DRAWN <i>g.m. 11.64624</i> CHECKED <i>g.m. 11.64624</i>	REVIEWED <i>g.m. 11.64624</i> SUBMITTED <i>g.m. 11.64624</i> RECOMMENDED <i>g.m. 11.64624</i> APPROVED <i>P. Harrell</i>
PROJECT MANAGER DATE	DRAWING NO. MH-PH-06
	SHEET NO. 89 OF 130



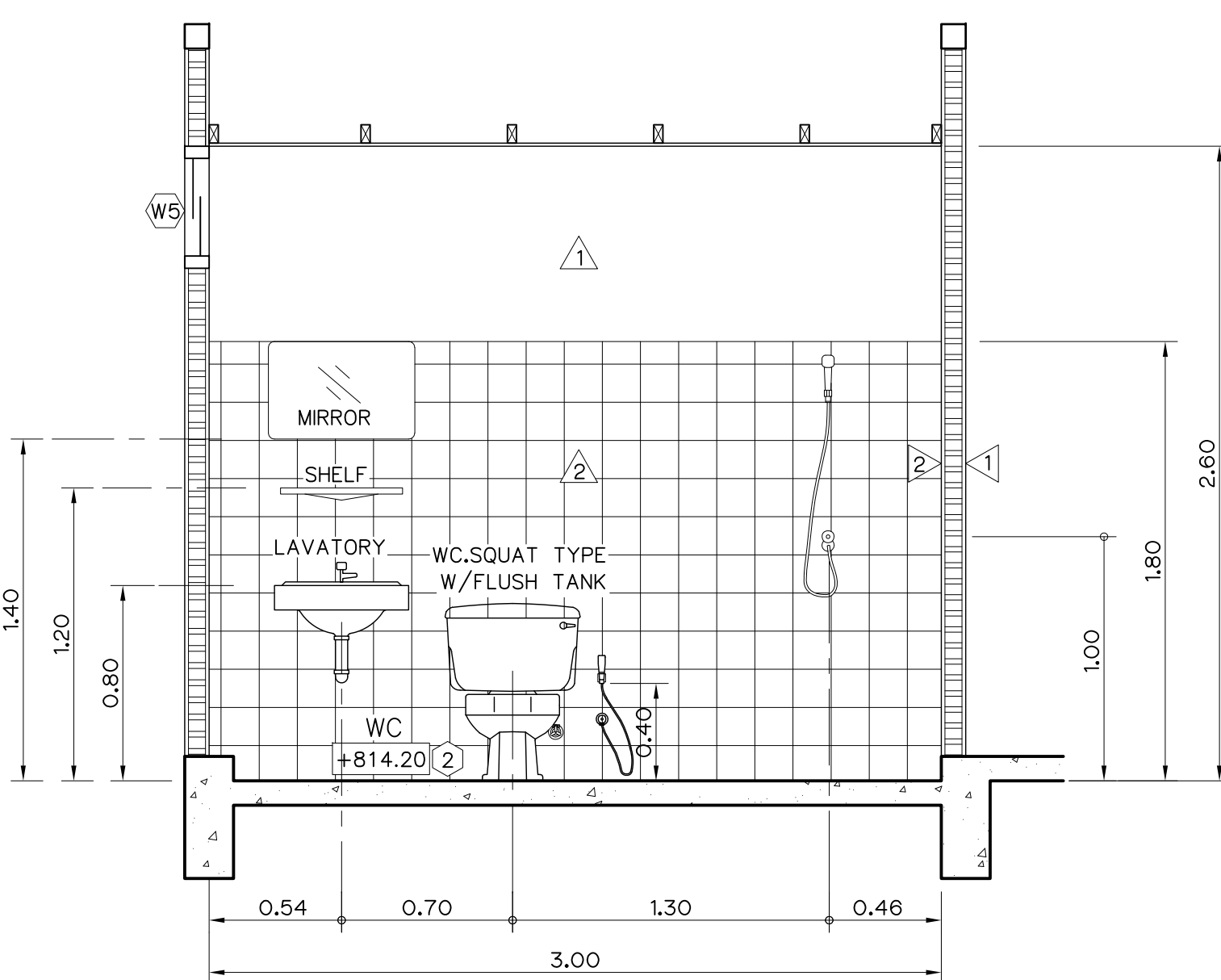
PLAN WC
SCALE 1:25



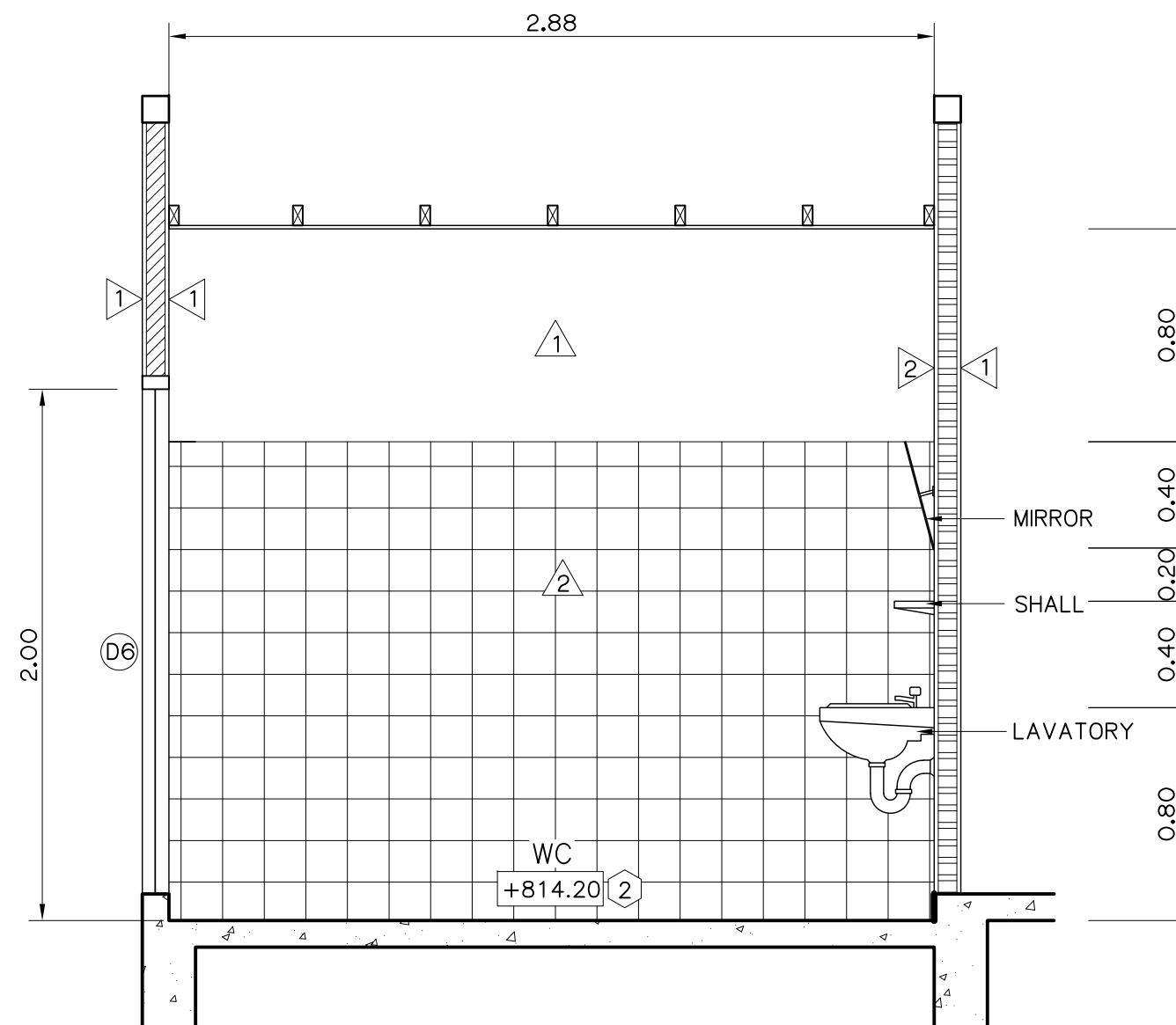
COLD WATER PIPING
SCALE 1:25



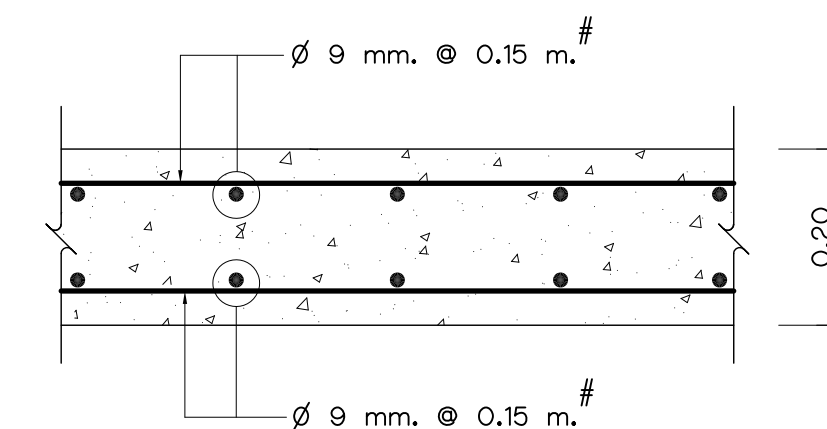
SOIL, WASTE AND VENT PIPING
SCALE 1:25



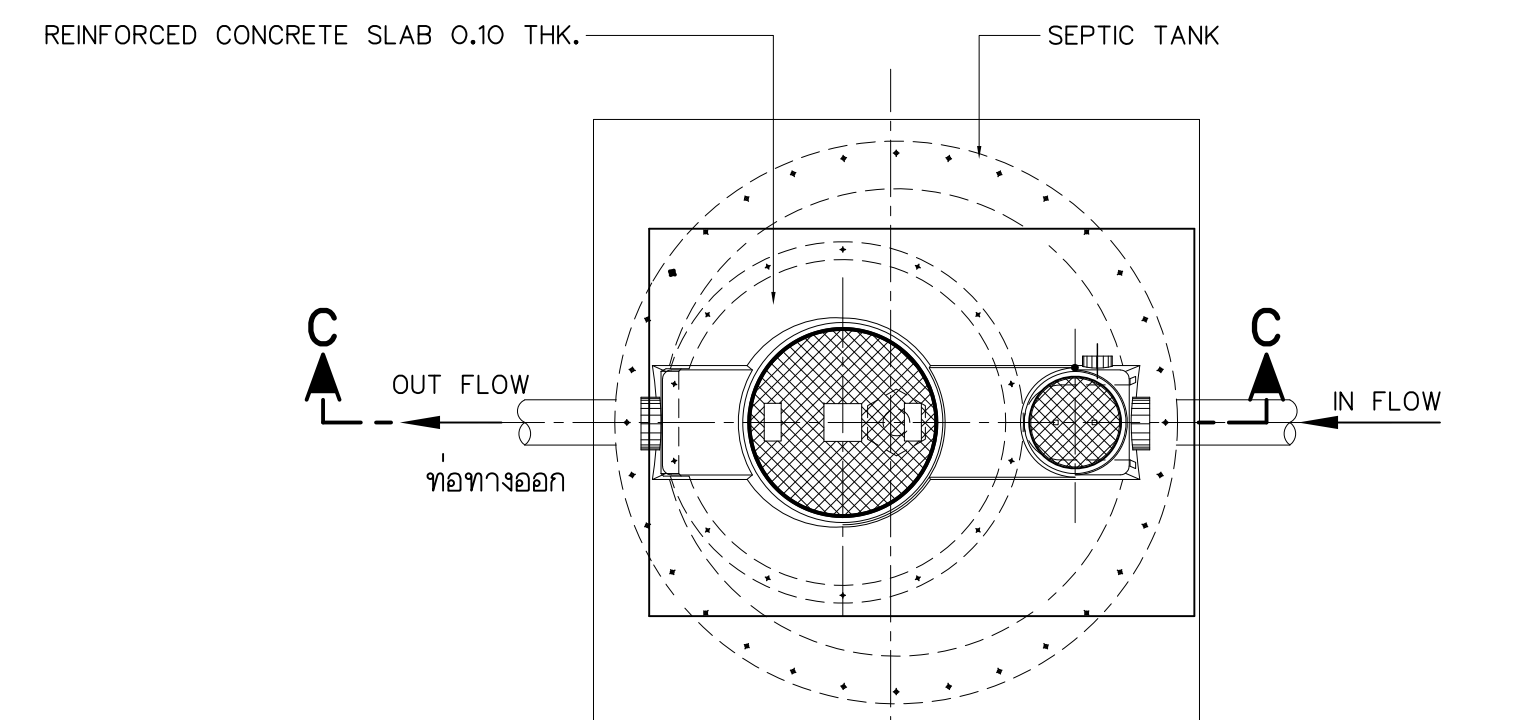
SECTION A-A
SCALE 1:25



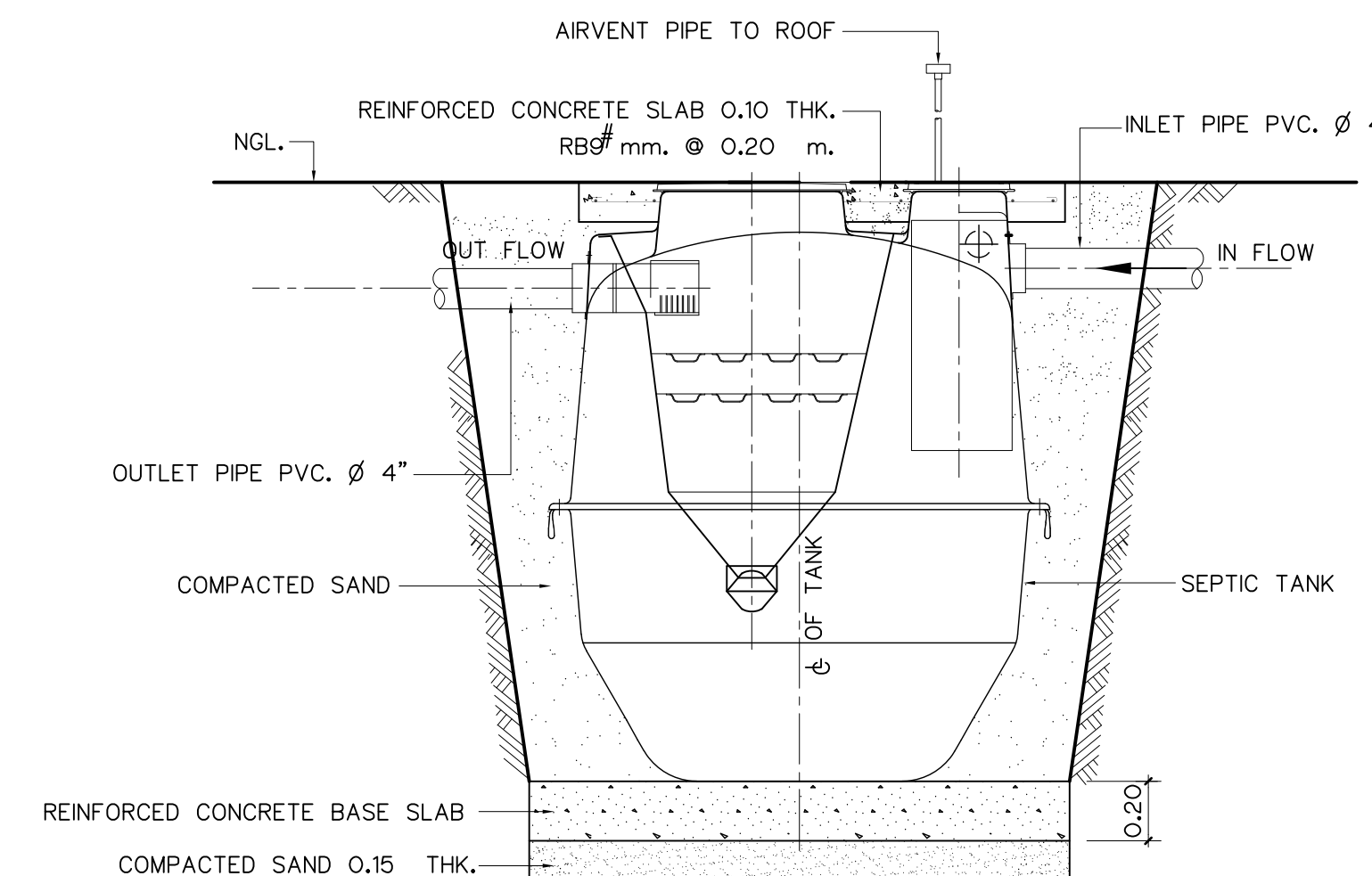
SECTION B-B
SCALE 1:25



REINFORCEMENT OF BASE SLAB
NOT TO SCALE



PLAN OF SEPTIC TANK
NOT TO SCALE



SECTION C-C
NOT TO SCALE

SYMBOLS :

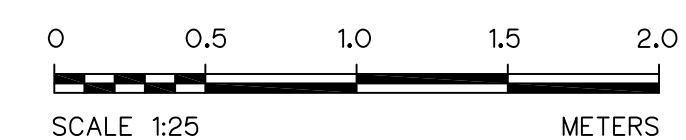
- SOIL PIPE
- WASTE PIPE
- COLD WATER PIPE
- VENT PIPE

NOTES :

- ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
- SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03

REFERENCE DRAWING :

- POWERHOUSE, PLAN 1st FLOOR AND PLAN 2nd FLOOR MH-PH-02



APPLICATION AND DIMENSION OF SEPTIC TANK			
NO. OF USER	VOLUMN		CONDITION
	RESIDENTIAL	SOIL ONLY 60 LPCD TOTAL WASTE 200 LPCD	
			16
			5

REMARK:LPCD = LITER PER CAPITAL PER DAY

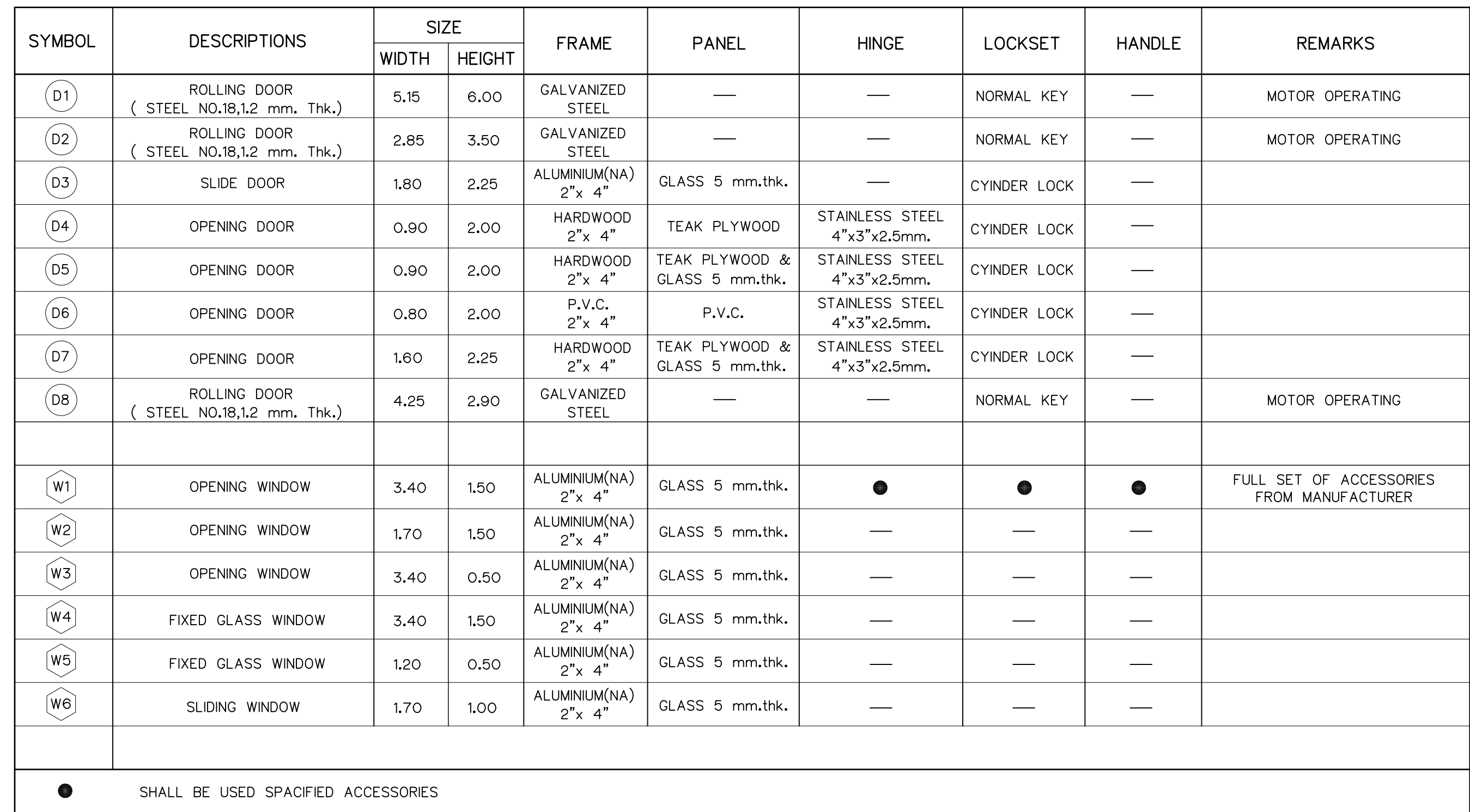
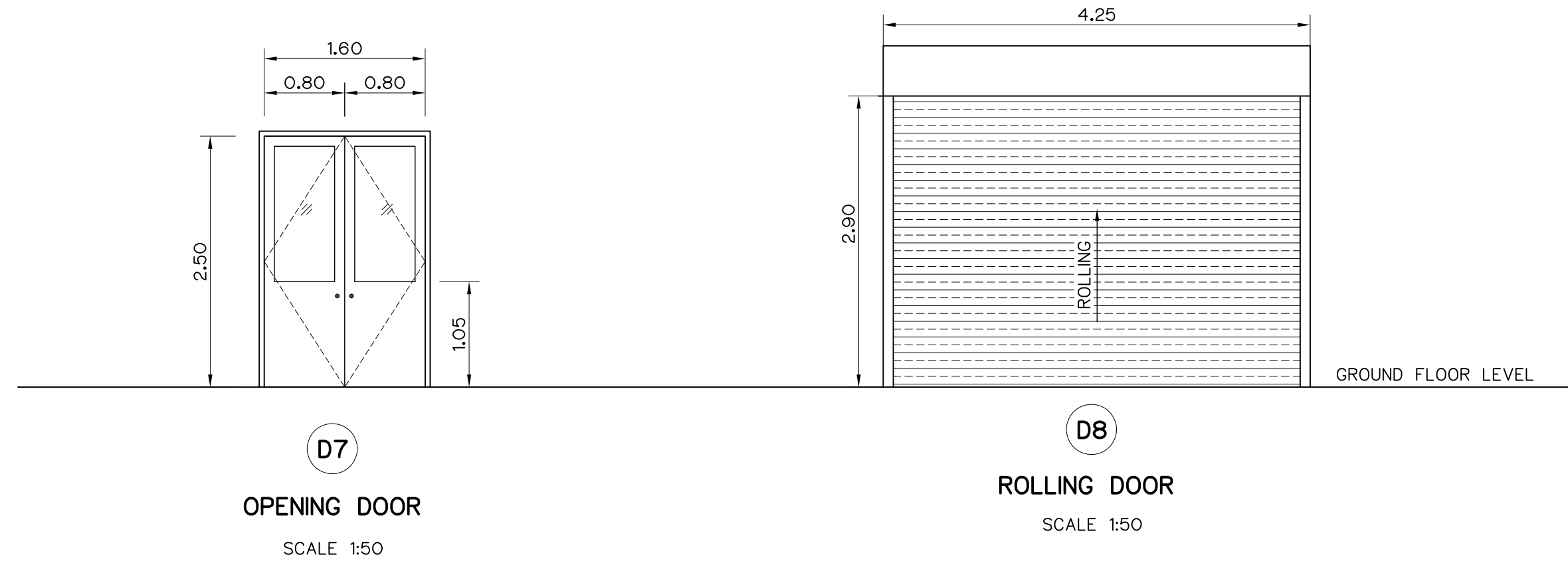
MATERIAL AND APPLICATION OF SEPTIC TANK	
COMPONENTS	MATERIAL
1. TANK BODY	LDEL (LINER LOW TYPE MEDIUM DENSITY)
2. MANHOLE COVER	ABS (ACRYLONITRILE-BUTADIENE-STYRENE), IRON CAST
3. INLET, OUTLET PIPES	POLYETHYLENE
4. FLEX	FLEXIBLE FITTING ABS Ø 100 MM.
5. MEDIA	HDPE

3				
2				
1				
NO.	DATE	REVISIONS	CHECKED	APPROVED

CONSULTANTS

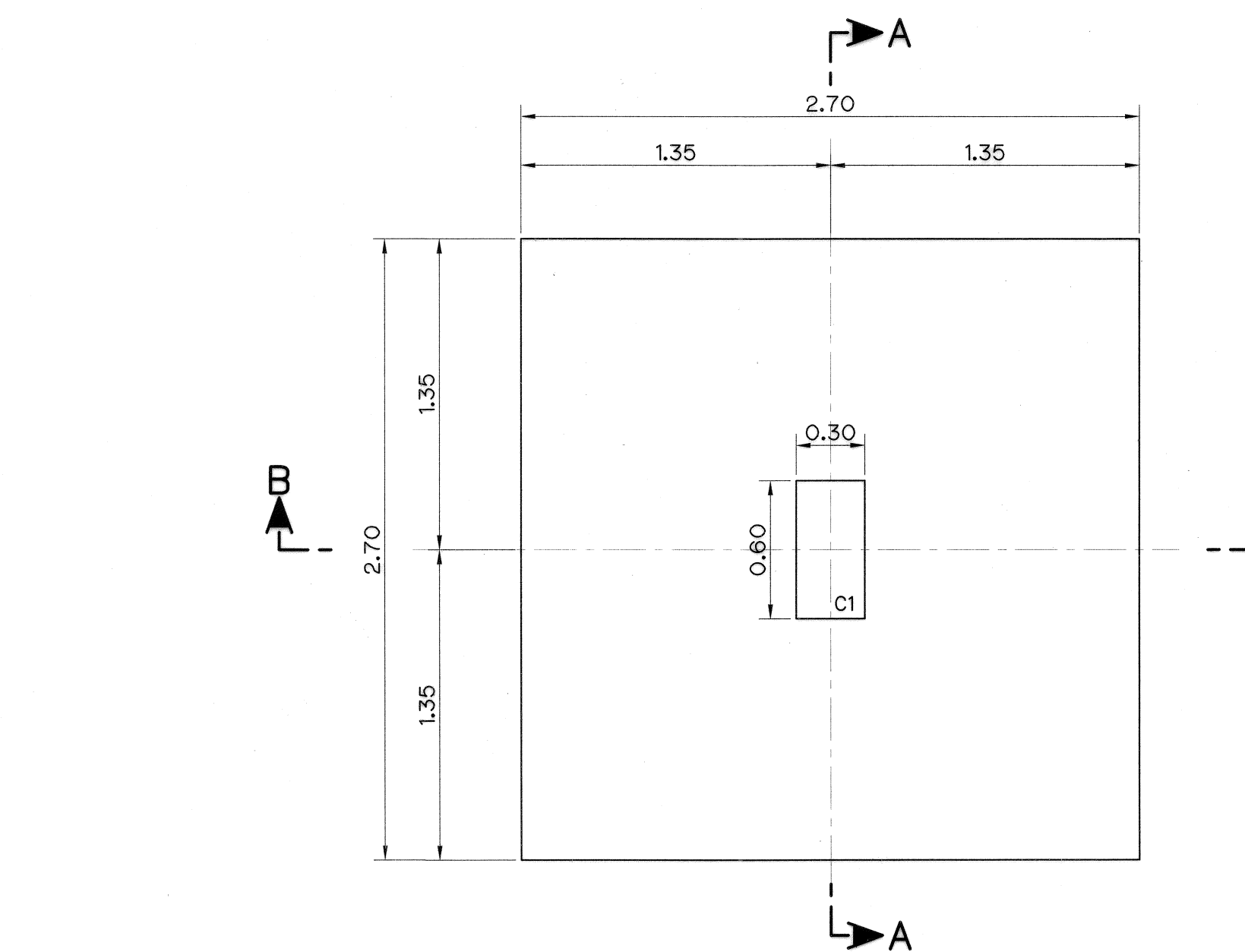
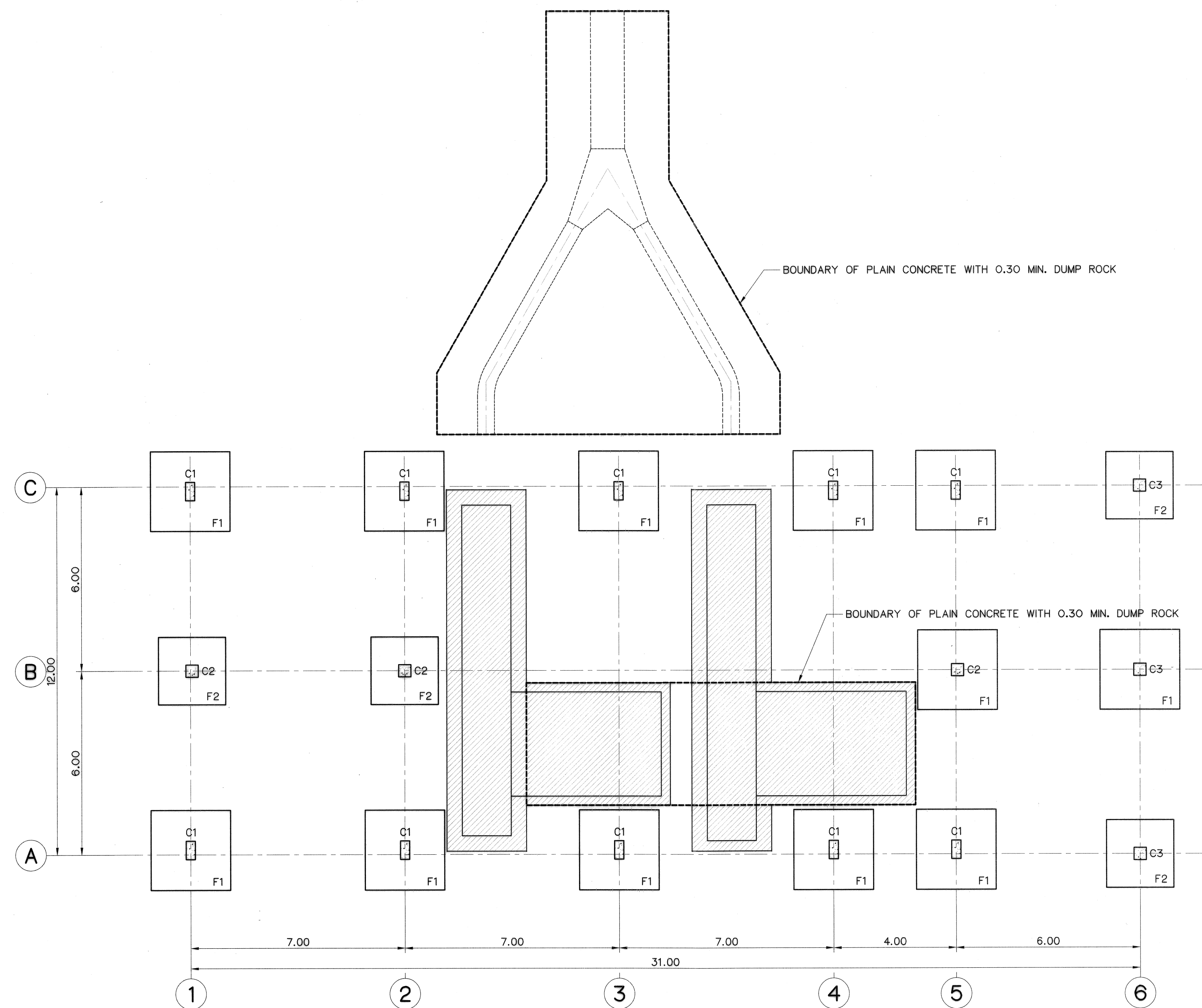
DEDE

KINGDOM OF THAILAND Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY	
MAE HAT HYDROPOWER PROJECT	
CIVIL WORKS AND TRANSMISSION LINE POWERHOUSE DETAILS OF TOILET, SEPTIC AND SEEPAGE TANK	
P&C MANAGEMENT CO.,LTD. DESIGNED <i>m. 64624</i> DRAWN <i>g.m. 6226</i> CHECKED <i>g.v. 6226</i> PROJECT MANAGER	REVIEWED <i>g.v.</i> SUBMITTED <i>Chand</i> RECOMMENDED <i>g.v.</i> APPROVED <i>P.Hanvill.</i> DRAWING NO. MH-PH-07 SHEET NO. 90 OF 130

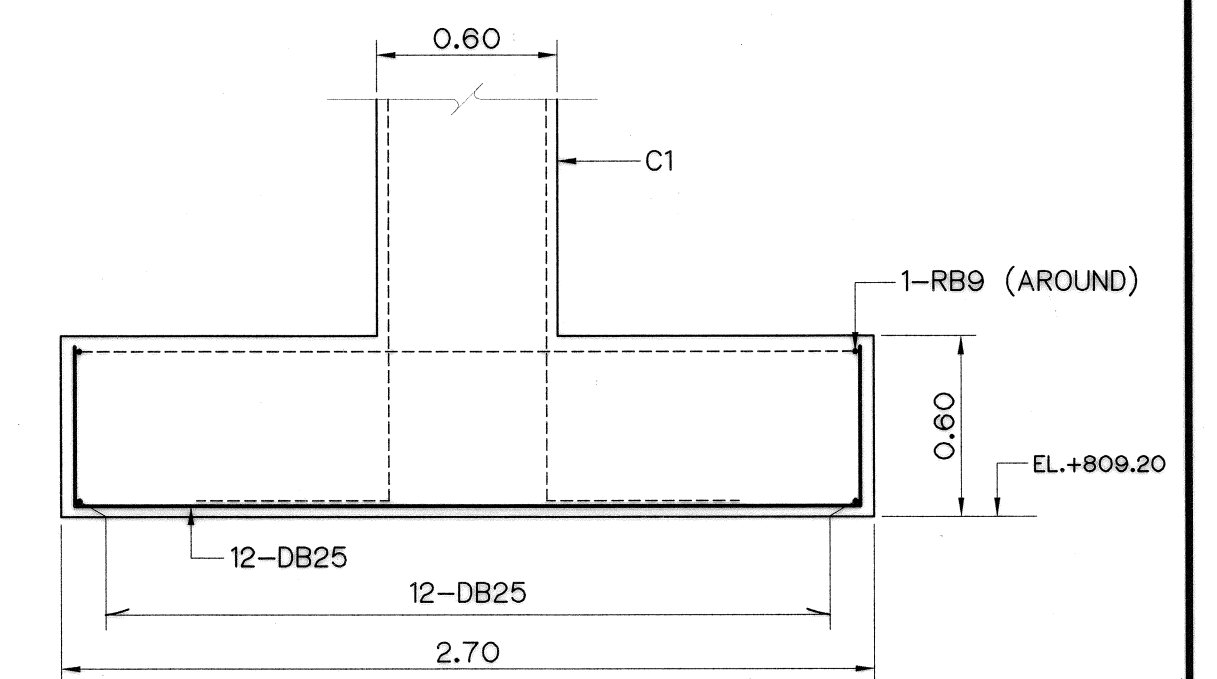


3				
2				
1				
NO.	DATE	REVISIONS	CHECKED	APPROVED
	CONSULTANTS		DEDE	

 KINGDOM OF SHAN Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY	
MAE HAT HYDROPOWER PROJECT	
CIVIL WORKS AND TRANSMISSION LINE POWERHOUSE	
DETAIL OF DOORS, WINDOWS AND NAME PLATE	
 P&C MANAGEMENT CO.,LTD.	 Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY
DESIGNED <i>m. ၁၇.၆.၂၀၂၁</i> <i>၇၃</i> ၁၅.၆.၂၀၂၁	REVIEWED <i>Shin</i>
DRAWN <i>၇၃</i>	SUBMITTED <i>Chaw</i>
CHECKED <i>၇၃</i> ၁၅.၆.၂၀၂၁	RECOMMENDED <i>၇၃</i>
<i>၇၃</i> PROJECT MANAGER	APPROVED <i>P. Harnell</i>
010312559 DATE	DRAWING NO. MH-PH-08
	SHEET NO. 91 OF 130



FOOTING (F1)
SCALE 1:25



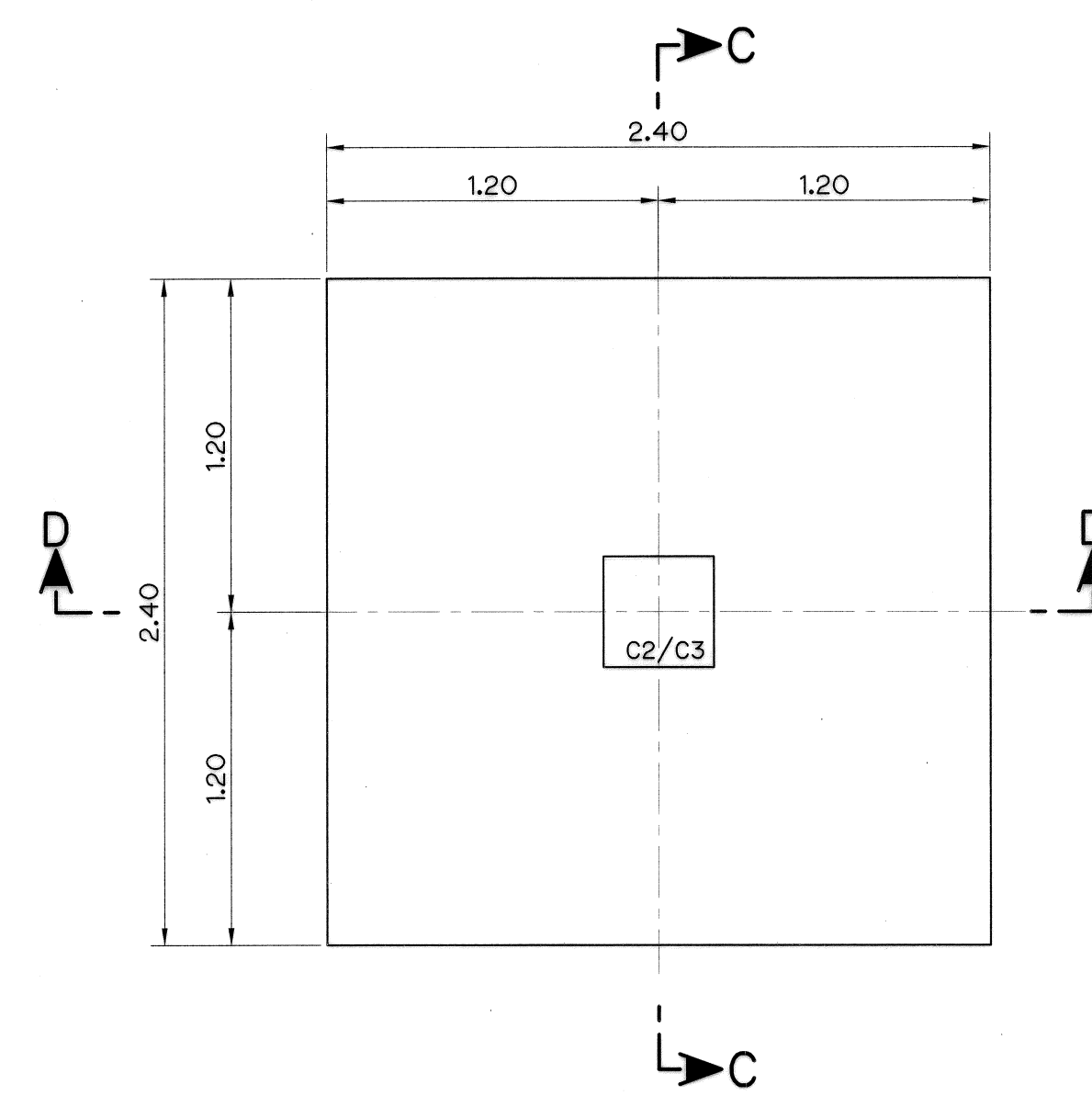
FOOTING (F1)
SCALE 1:25

NOTES :

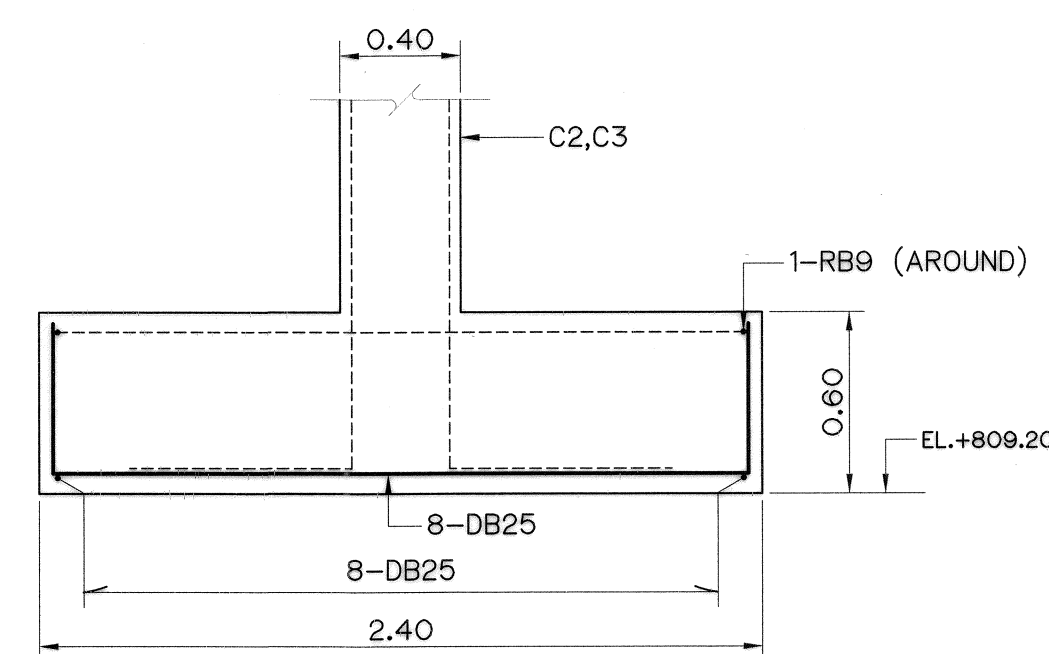
1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03
3. CONCRETE DESIGN BASED ON THE COMPRESSIVE STRENGTH OF 210 KSC, STANDARD CYLINDER $\phi 0.15 \times 0.30$ m. TEST AT AGE 28 DAYS, UNLESS OTHERWISE INDICATED IN SPECIFIC DRAWINGS.

REFERENCE DRAWINGS :

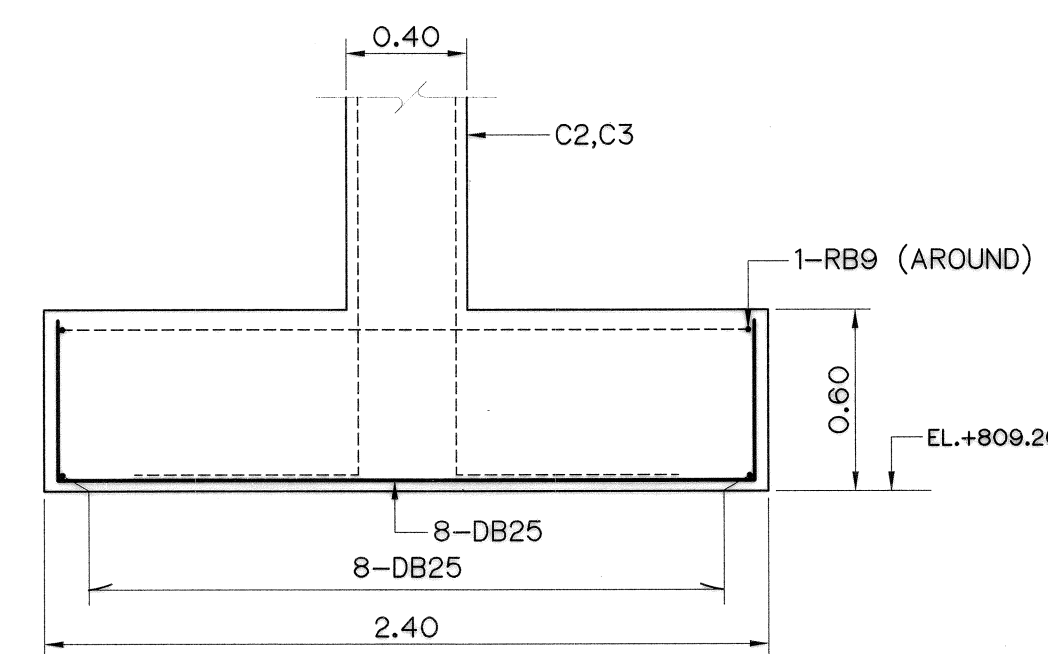
1. POWERHOUSE, PLAN 1st FLOOR AND PLAN 2nd FLOOR MH-PH-02
2. POWERHOUSE, COLUMN, BRACKET AND STAIR DETAILS MH-PH-14



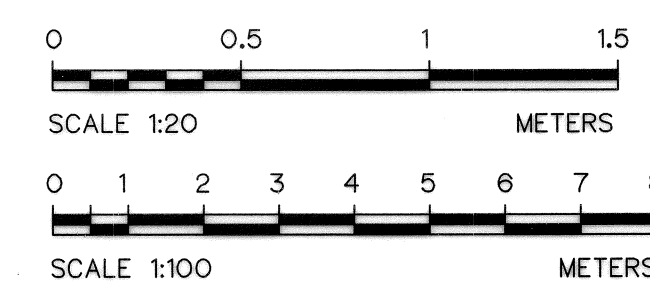
FOOTING (F2)
SCALE 1:25



SECTION C-C

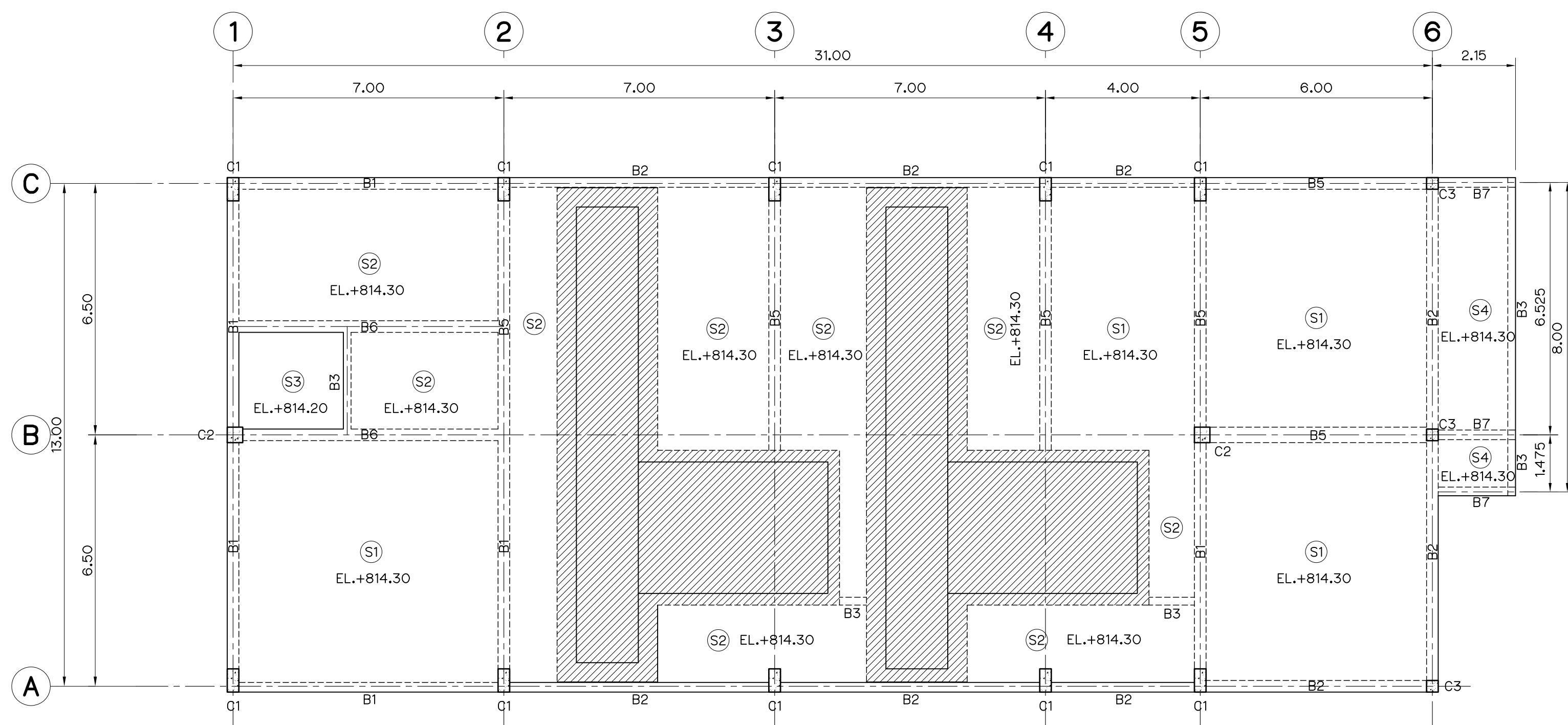


SECTION D-D

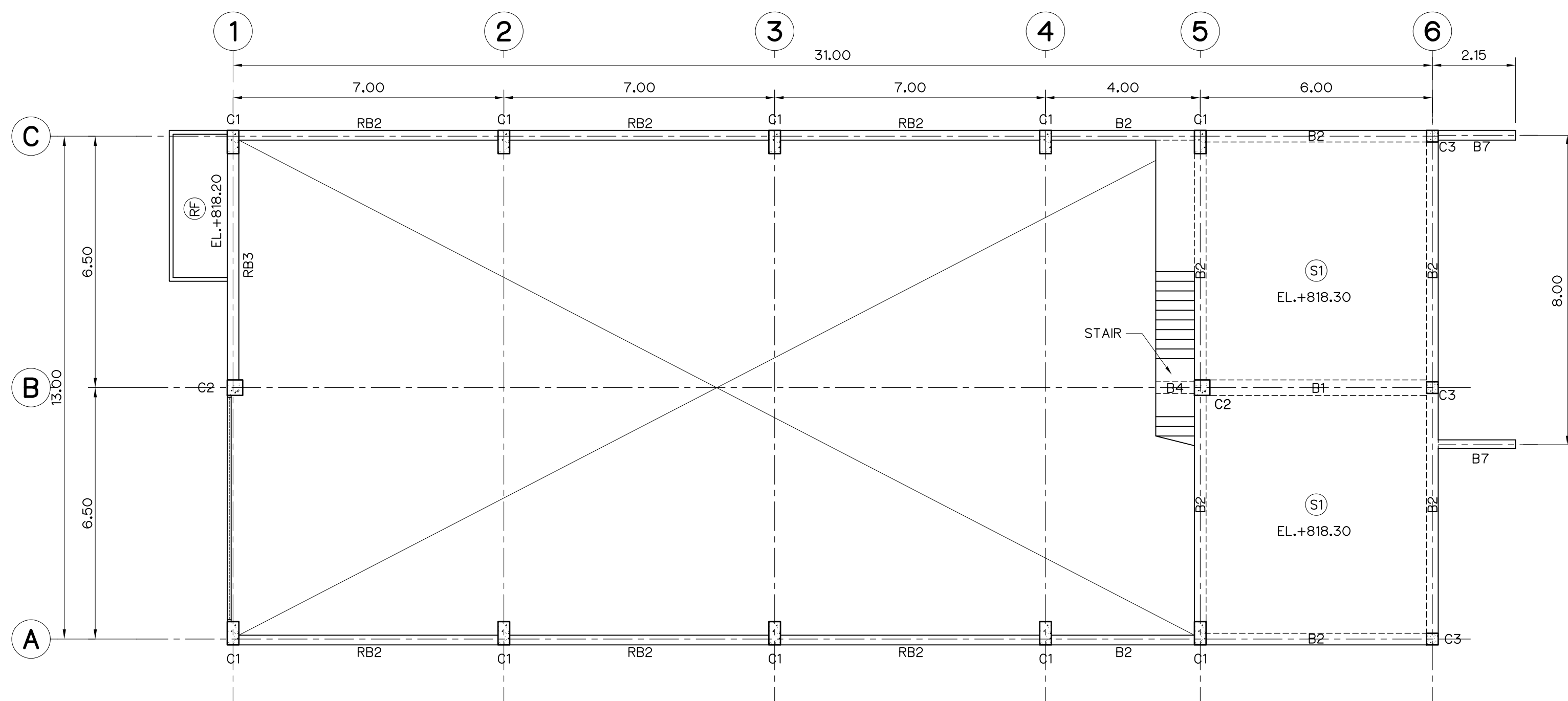


3				
2				
1				
NO.	DATE	REVISIONS	CHECKED	APPROVED

KINGDOM OF THAILAND Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY	
MAE HAT HYDROPOWER PROJECT	
CIVIL WORKS AND TRANSMISSION LINE POWERHOUSE PLAN OF FOOTING AND DETAILS	
P&C MANAGEMENT CO.,LTD. DESIGNED <i>[Signature]</i> 28.6.22 DRAWN <i>[Signature]</i> 28.6.22 CHECKED <i>[Signature]</i> 28.6.22 PROJECT MANAGER	REVIEWED <i>[Signature]</i> SUBMITTED <i>[Signature]</i> RECOMMENDED <i>[Signature]</i> APPROVED <i>[Signature]</i> DRAWING NO. MH-PH-09 SHEET NO. 92 OF 130



PLAN OF 1st FLOOR
SCALE 1:100



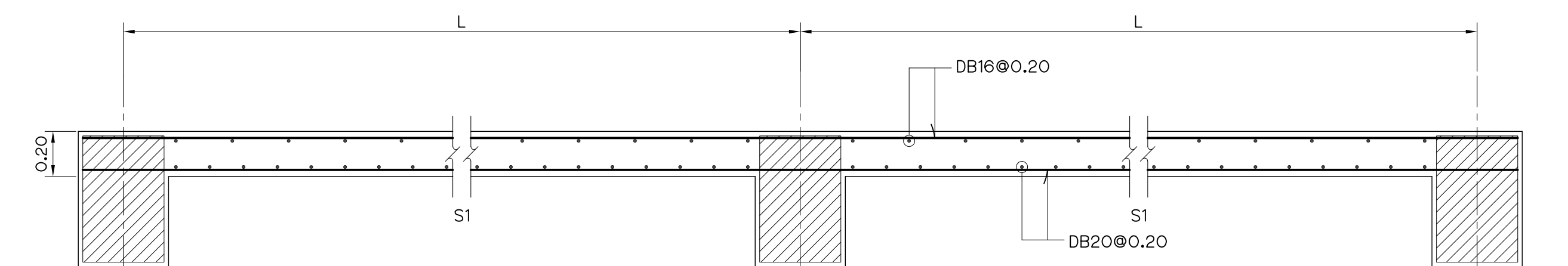
PLAN OF 2nd FLOOR
SCALE 1:100

NOTES :

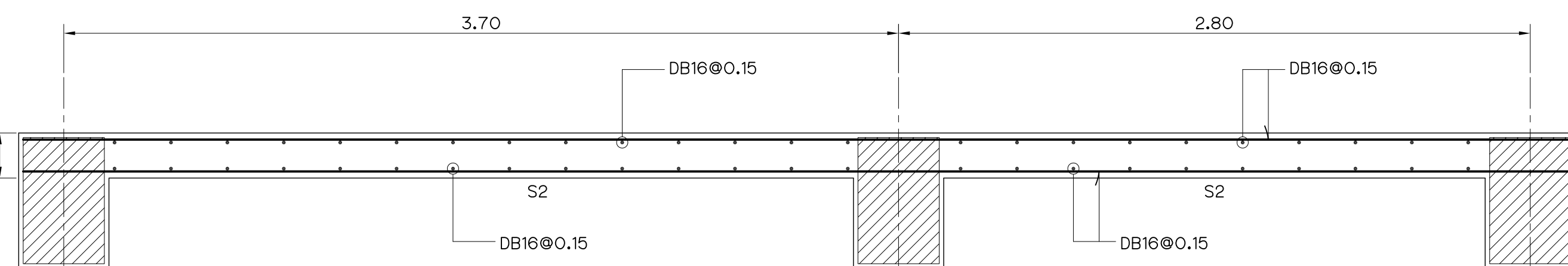
1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03
3. CONCRETE DESIGN BASED ON THE COMPRESSIVE STRENGTH OF 210 KSC, STANDARD CYLINDER $\phi 0.15 \times 0.30$ m. TEST AT AGE 28 DAYS. UNLESS OTHERWISE INDICATED IN SPECIFIC DRAWINGS.

REFERENCE DRAWINGS :

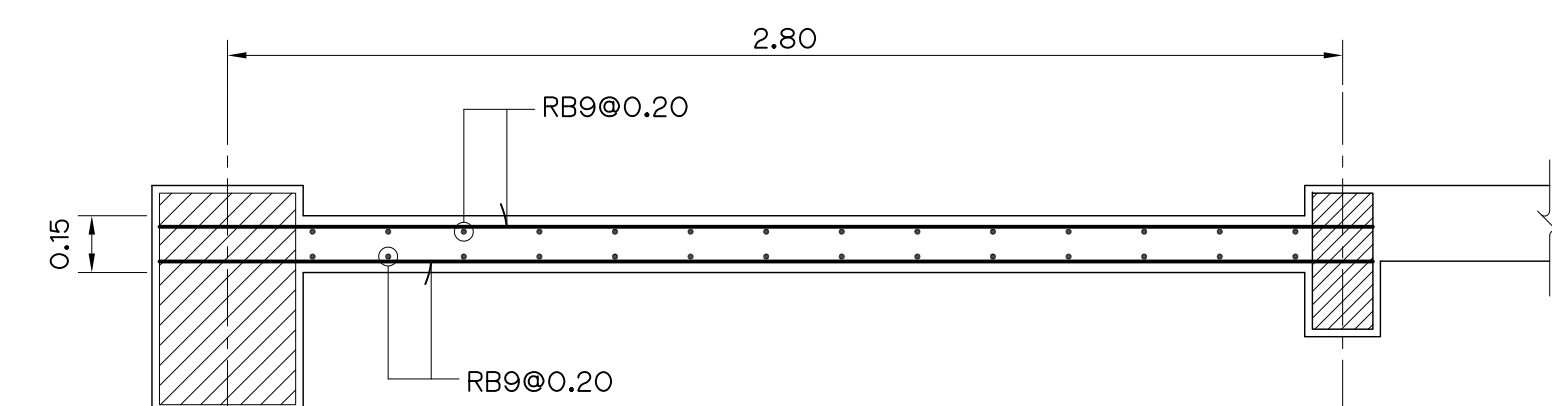
- | | |
|--|----------|
| 1. POWERHOUSE, PLAN 1st FLOOR AND PLAN 2nd FLOOR | MH-PH-02 |
| 2. POWERHOUSE, PLAN OF FOOTING AND DETAILS | MH-PH-09 |
| 3. COLUMN, BRACKET AND STAIR DETAILS | MH-PH-14 |



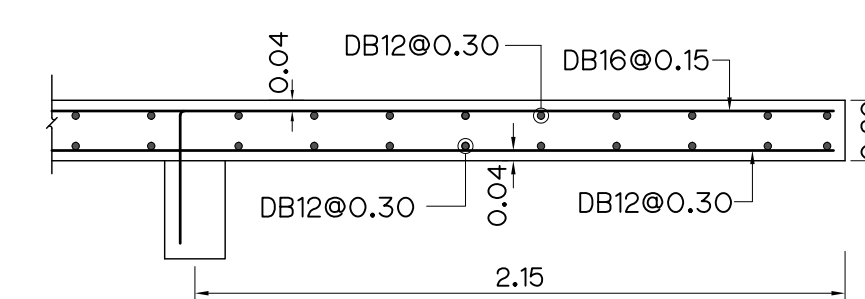
S1
SCALE 1:20



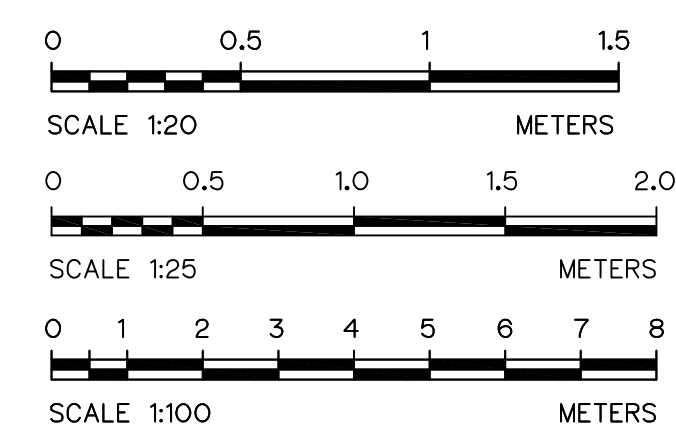
S2
SCALE 1:20



S3
SCALE 1:20

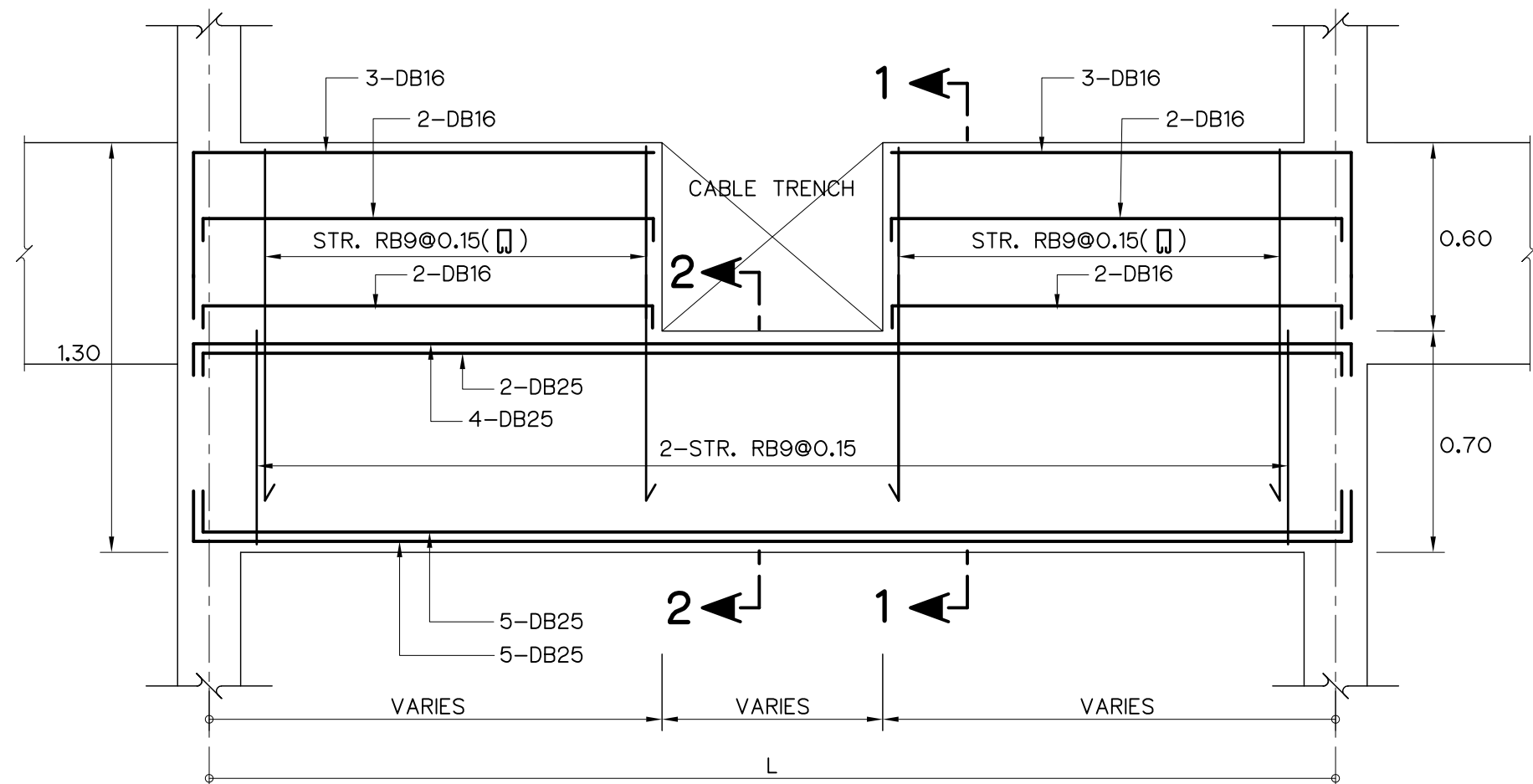


S4
SCALE 1:25

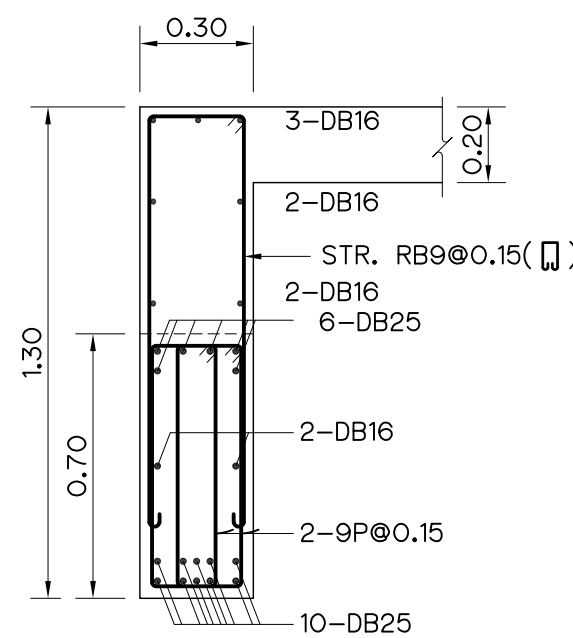


3				
2				
1				
NO.	DATE	REVISIONS	CHECKED	APPROVED
CONSULTANTS		DEDE		

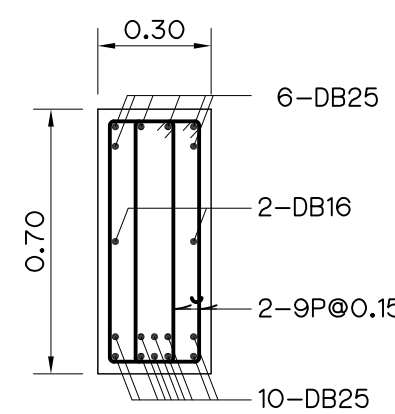
KINGDOM OF THAILAND Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY	
MAE HAT HYDROPOWER PROJECT	
CIVIL WORKS AND TRANSMISSION LINE POWERHOUSE PLAN OF SLAB AND DETAILS (1/2)	
P&C MANAGEMENT CO.,LTD.	REVIEWED <i>[Signature]</i>
DESIGNED <i>m. 64624</i> <i>[Signature]</i> 6226	SUBMITTED <i>Chand</i>
DRAWN <i>[Signature]</i>	RECOMMENDED <i>[Signature]</i>
CHECKED <i>[Signature]</i> 6226	APPROVED <i>P. Harrell</i>
PROJECT MANAGER <i>[Signature]</i> 6226	DRAWING NO. MH-PH-10
DATE	SHEET NO. 93 OF 130



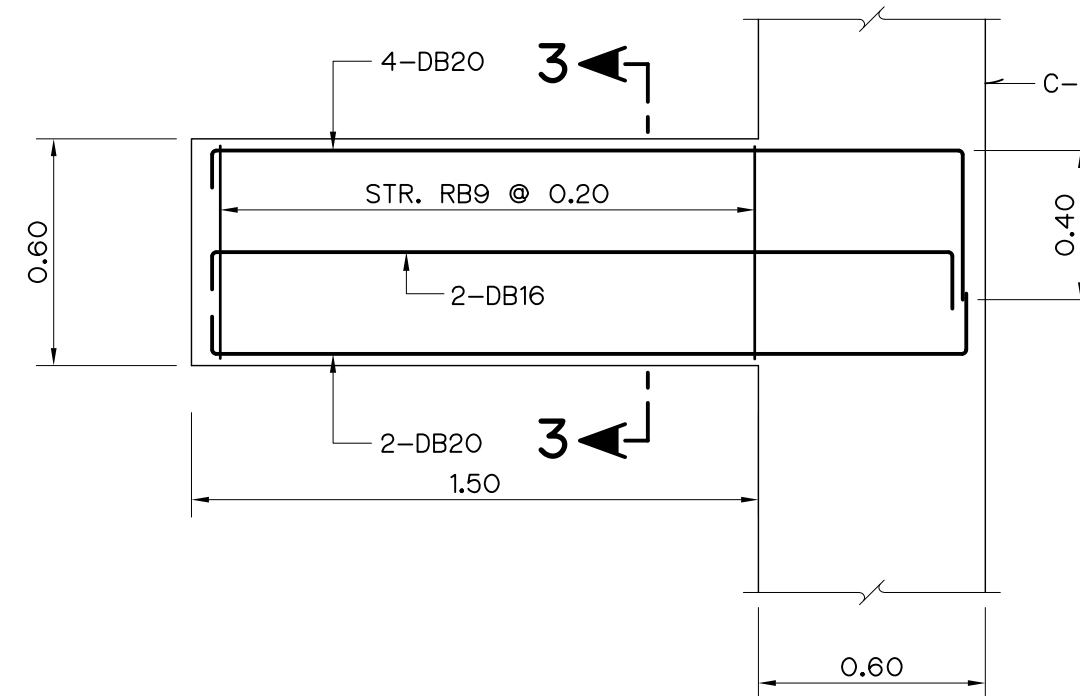
REINFORCEMENT DETAILS OF CABLE TRENCH AT BEAM B5
SCALE 1:20



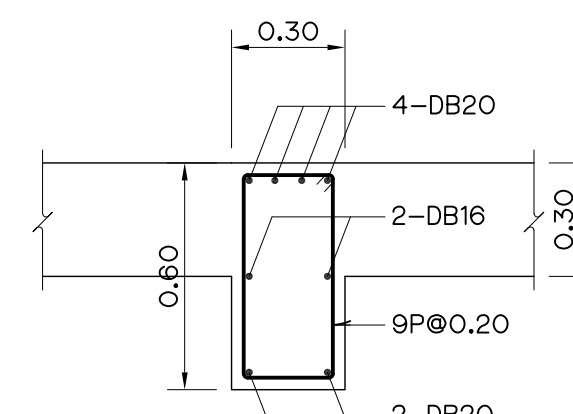
SECTION 1-1
SCALE 1:20



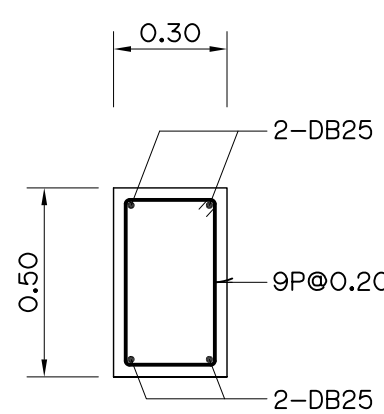
SECTION 2-2
SCALE 1:20



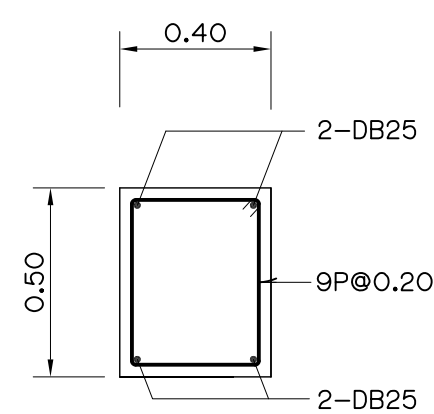
REINFORCEMENT DETAILS BEAM B4
SCALE 1:20



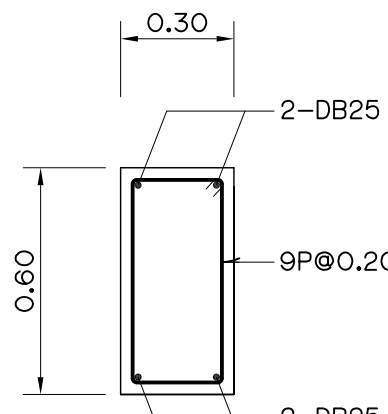
SECTION 3-3
SCALE 1:20



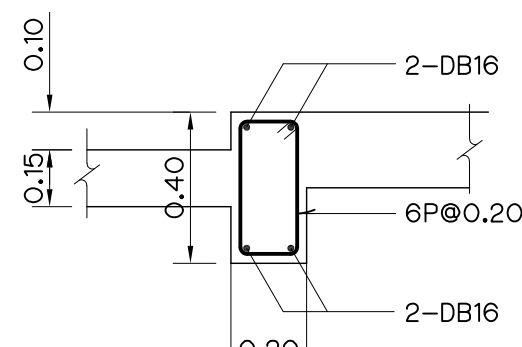
RB1-1
SCALE 1:20



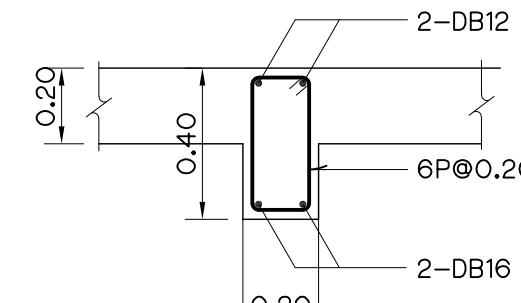
RB1-2
SCALE 1:20



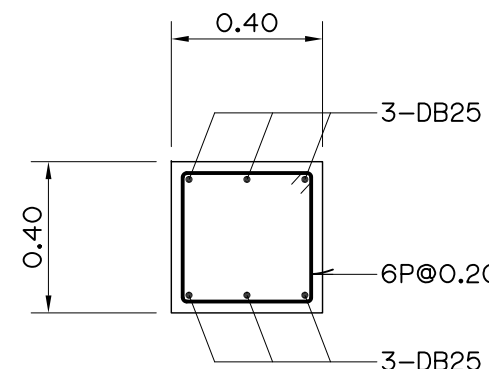
RB2
SCALE 1:20



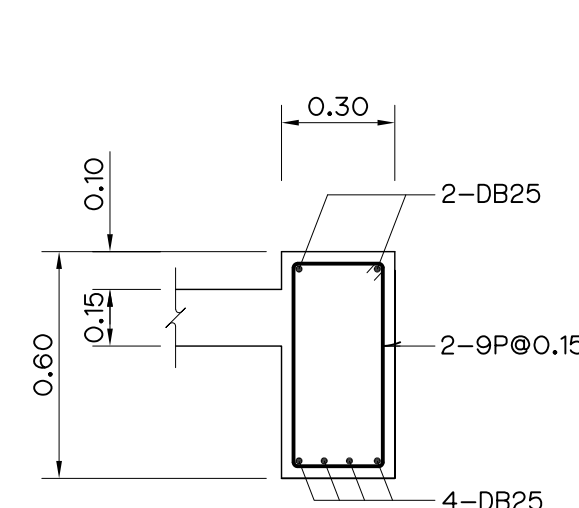
B3
SCALE 1:20



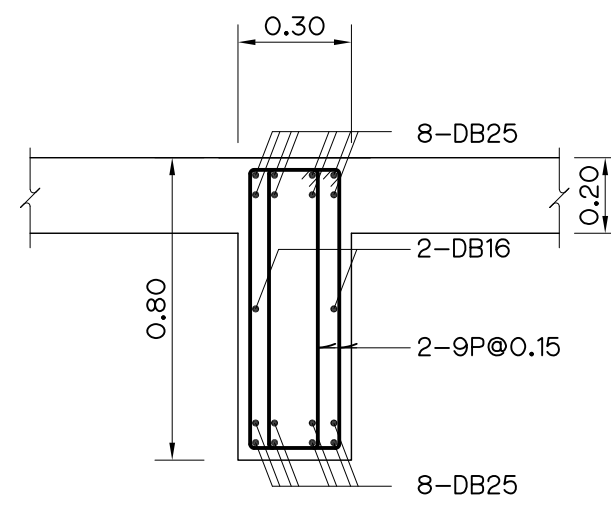
B3
SCALE 1:20



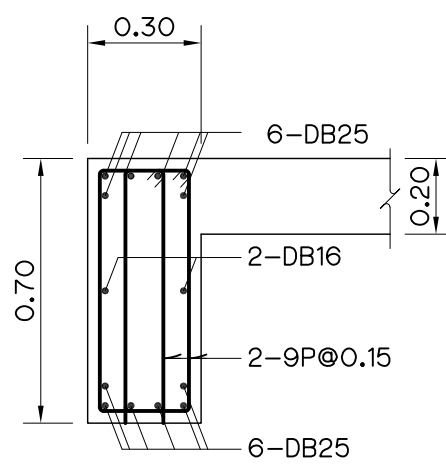
BRACING
SCALE 1:20



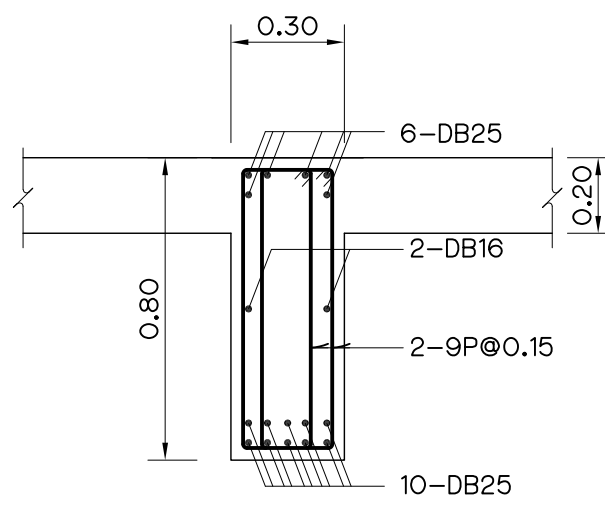
RB3
SCALE 1:20



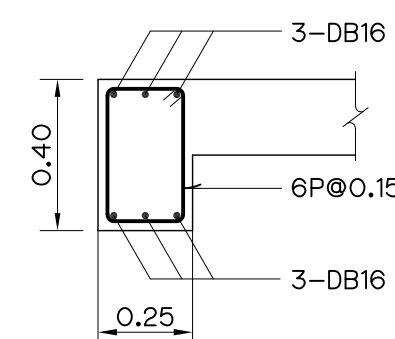
B1
SCALE 1:20



B2
SCALE 1:20



B6
SCALE 1:20



B7
SCALE 1:20

- NOTES :**
- ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
 - SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03
 - CONCRETE DESIGN BASED ON THE COMPRESSIVE STRENGTH OF 210 KSC, STANDARD CYLINDER Ø0.15x0.30 m. TEST AT AGE 28 DAYS. UNLESS OTHERWISE INDICATED IN SPECIFIC DRAWINGS.

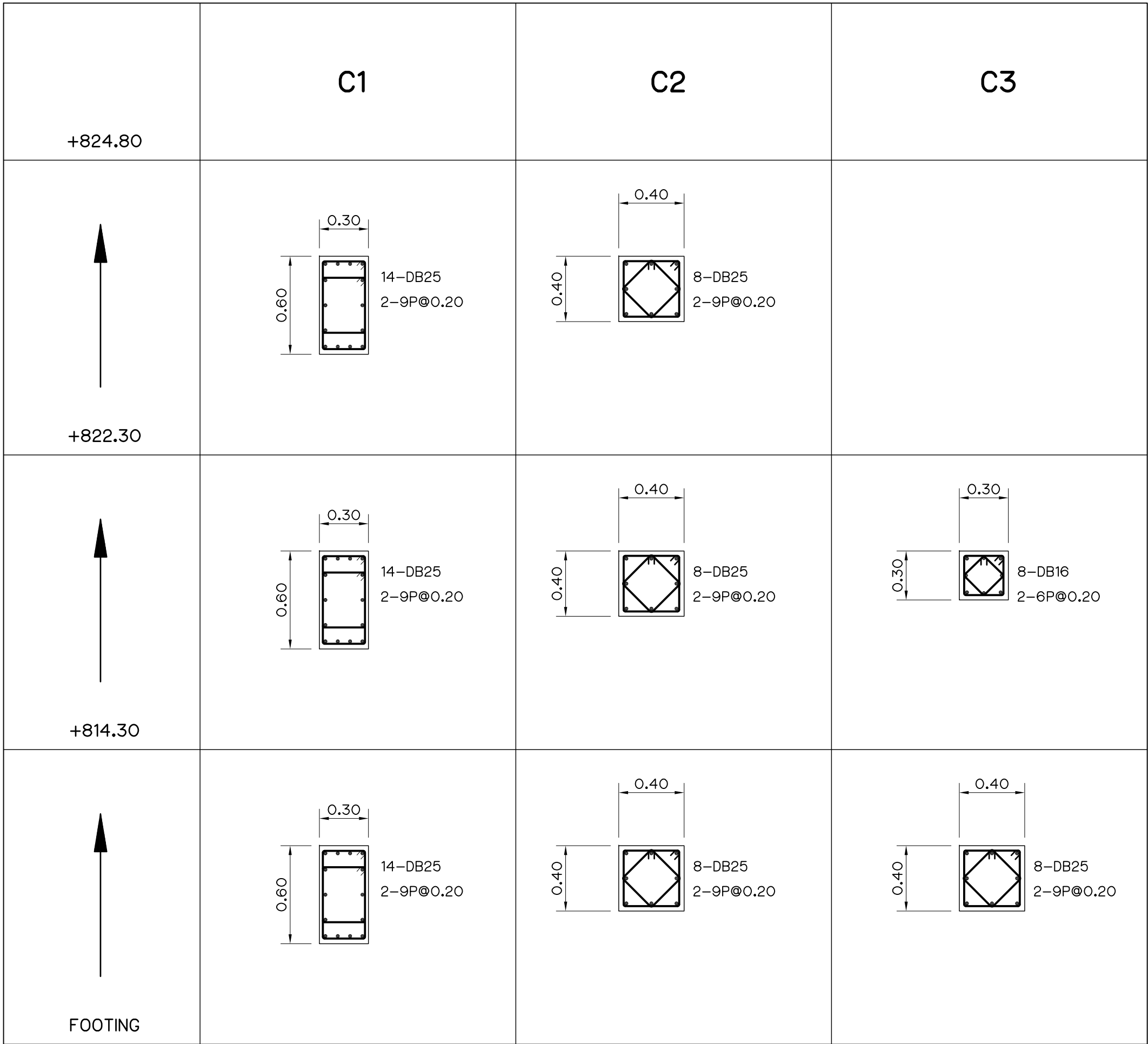
- REFERENCE DRAWINGS :**
- POWERHOUSE, PLAN 1st FLOOR AND PLAN 2nd FLOOR MH-PH-02
 - POWERHOUSE, PLAN OF SLAB AND DETAILS MH-PH-10
 - POWERHOUSE, COLUMN, BRACKET AND STAIR DETAILS MH-PH-14



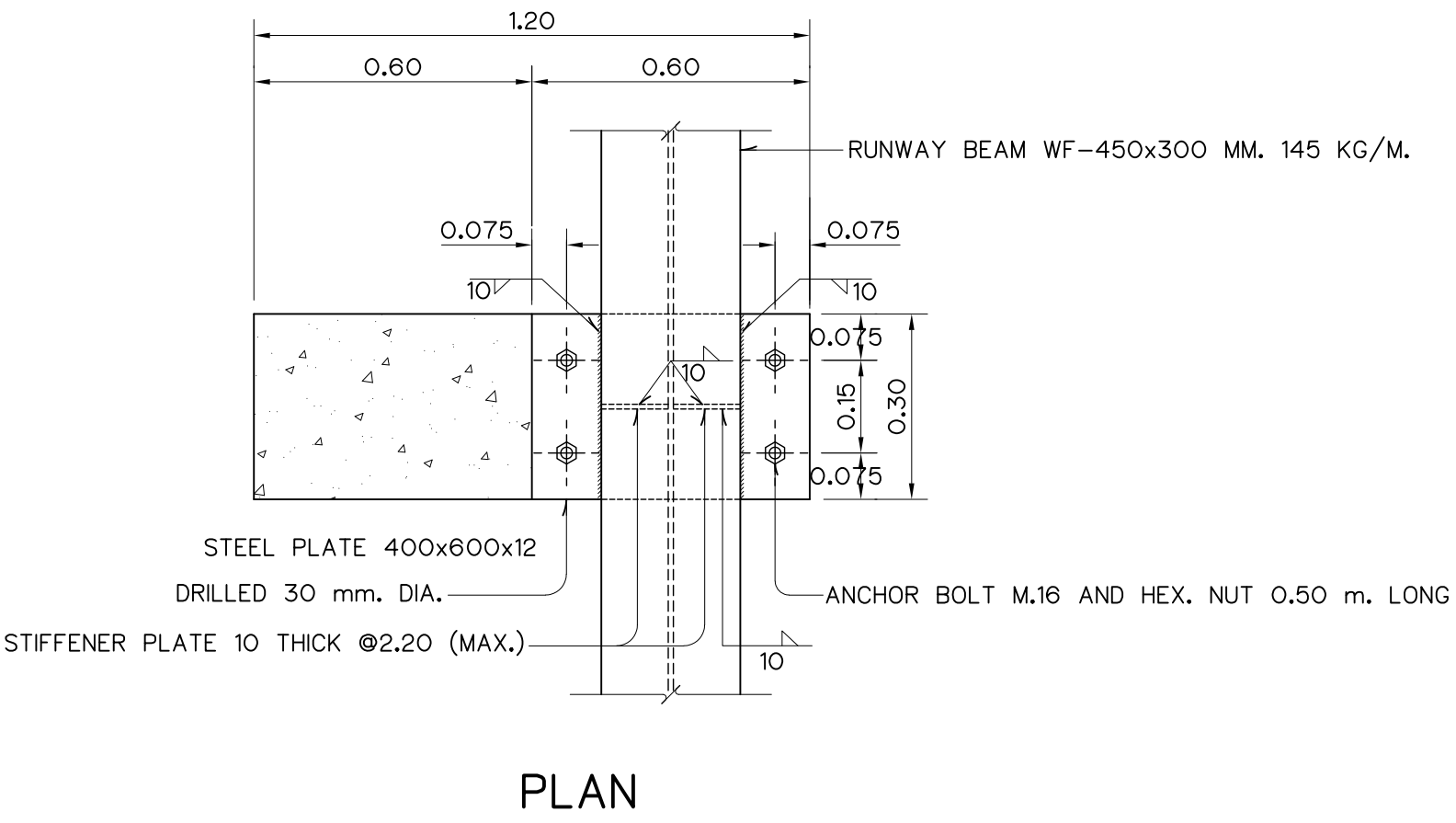
3				
2				
1				
NO.	DATE	REVISIONS	CHECKED	APPROVED

CONSULTANTS DEDE

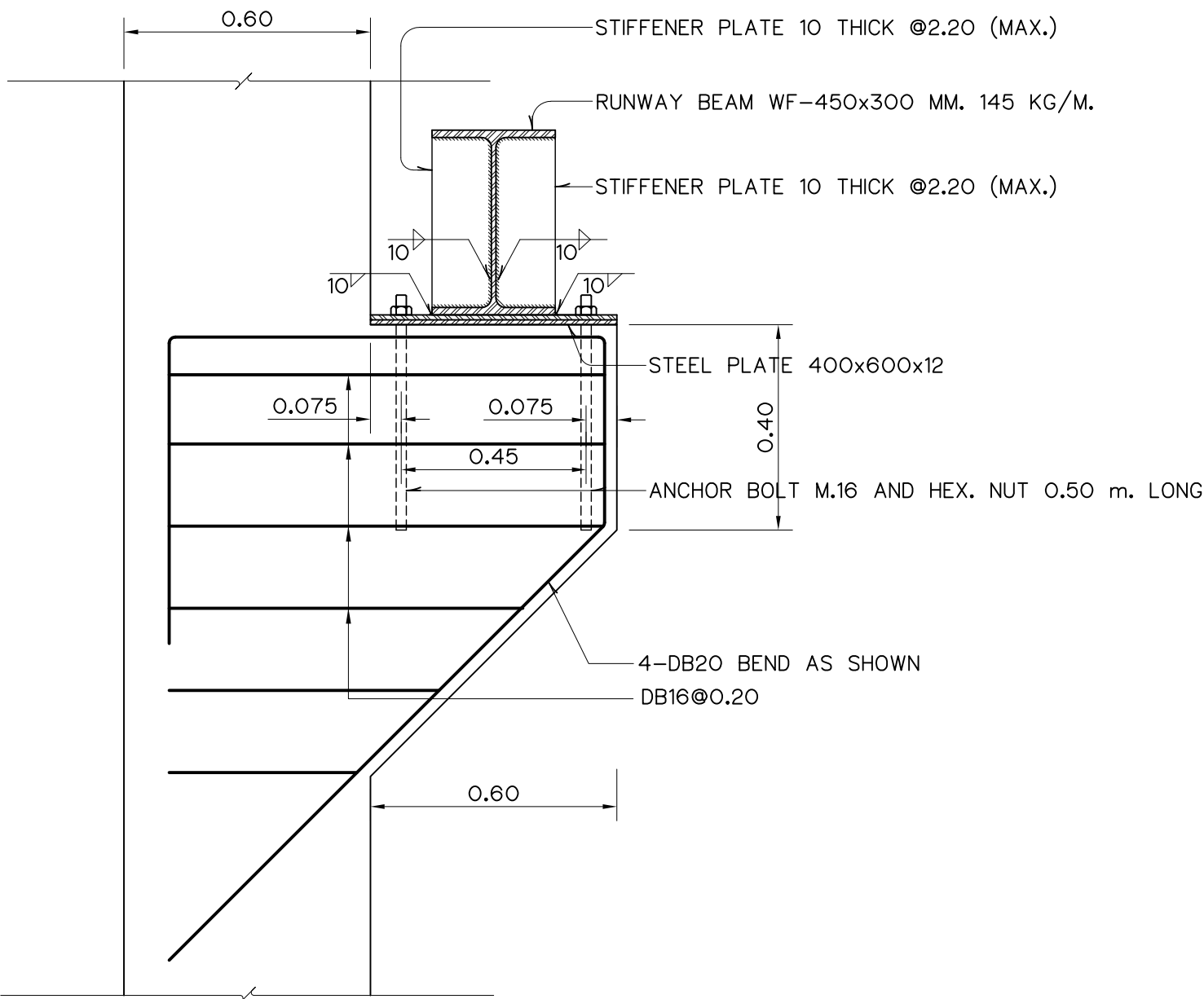
KINGDOM OF THAILAND Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY	
MAE HAT HYDROPOWER PROJECT	
CIVIL WORKS AND TRANSMISSION LINE POWERHOUSE BEAMS DETAILS (2/2)	
P&C MANAGEMENT CO.,LTD. DESIGNED <i>m. 418.64624</i> <i>g.v. 418.6226</i> DRAWN <i>g.v. 418.6226</i> CHECKED <i>g.v. 418.6226</i> PROJECT MANAGER	Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY REVIEWED <i>g.v. 418.6226</i> SUBMITTED <i>Chand</i> RECOMMENDED <i>g.v. 418.6226</i> APPROVED <i>P. Harrell</i> DRAWING NO. MH-PH-13 SHEET NO. 96 OF 130



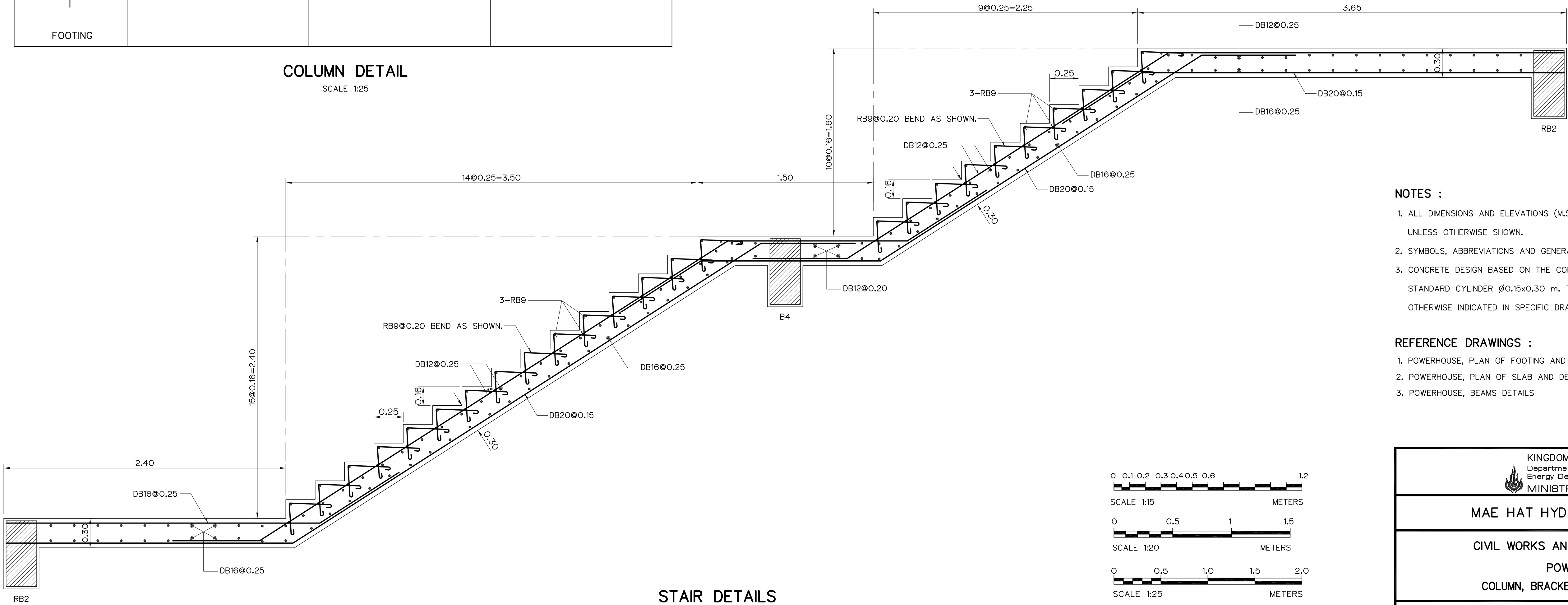
COLUMN DETAIL
SCALE 1:25



RUNWAY BEAM AND BRACKET
SCALE 1:15



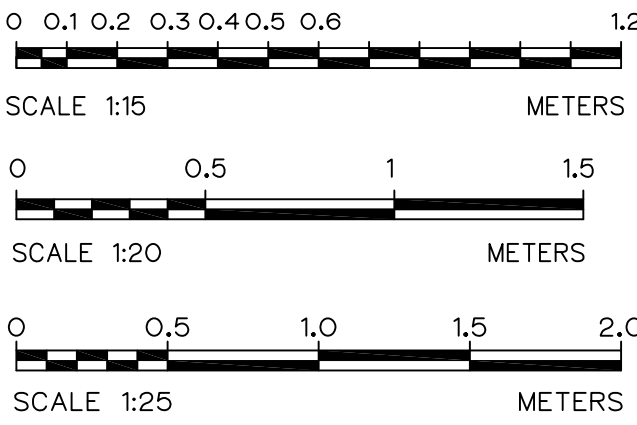
SECTION



STAIR DETAILS
SCALE 1:20

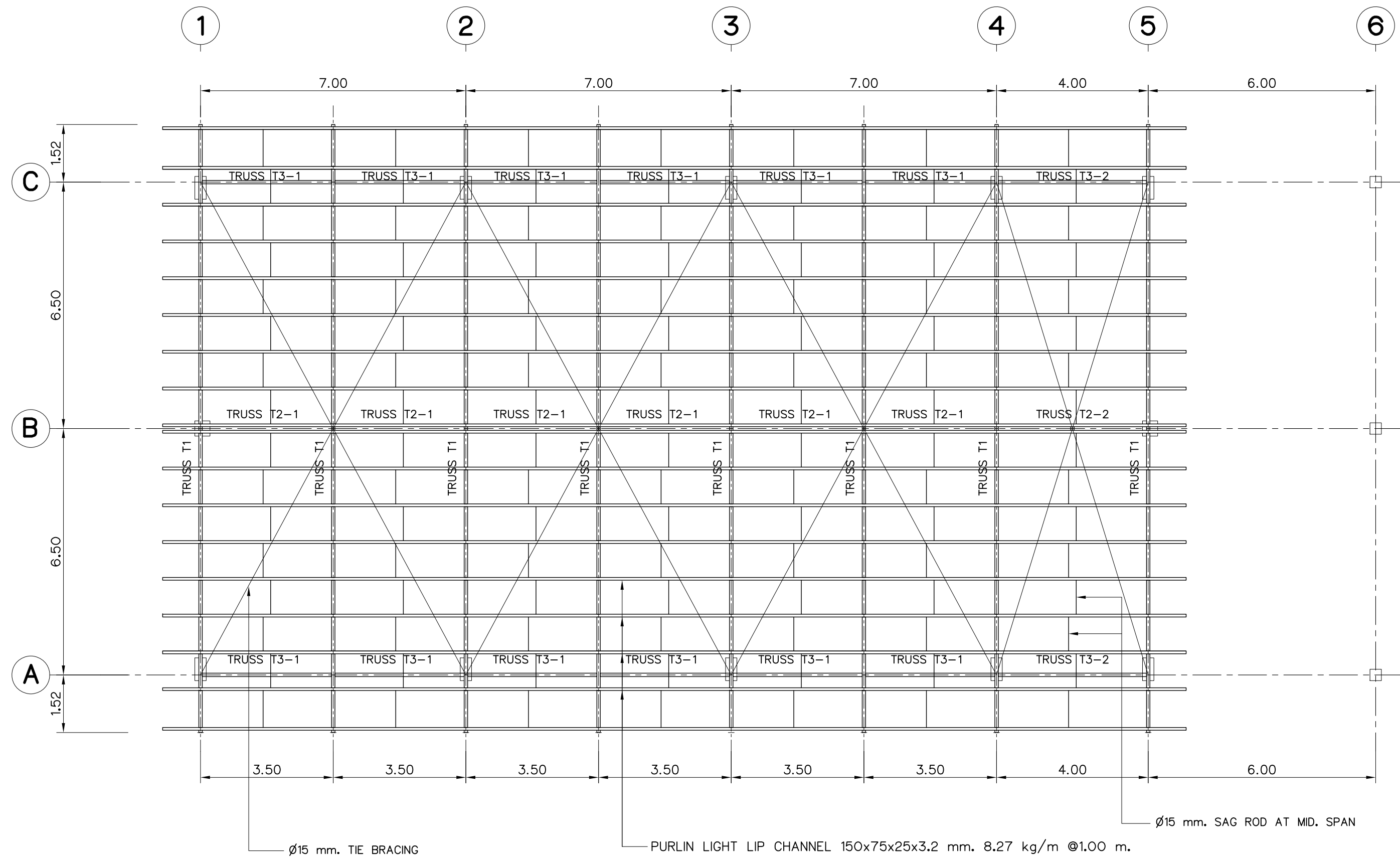
- NOTES :
- ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
 - SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. NMH-GN-03
 - CONCRETE DESIGN BASED ON THE COMPRESSIVE STRENGTH OF 210 KSC, STANDARD CYLINDER Ø0.15x0.30 m. TEST AT AGE 28 DAYS, UNLESS OTHERWISE INDICATED IN SPECIFIC DRAWINGS.

- REFERENCE DRAWINGS :
- | | |
|--|----------|
| 1. POWERHOUSE, PLAN OF FOOTING AND DETAILS | MH-PH-09 |
| 2. POWERHOUSE, PLAN OF SLAB AND DETAILS | MH-PH-10 |
| 3. POWERHOUSE, BEAMS DETAILS | MH-PH-11 |

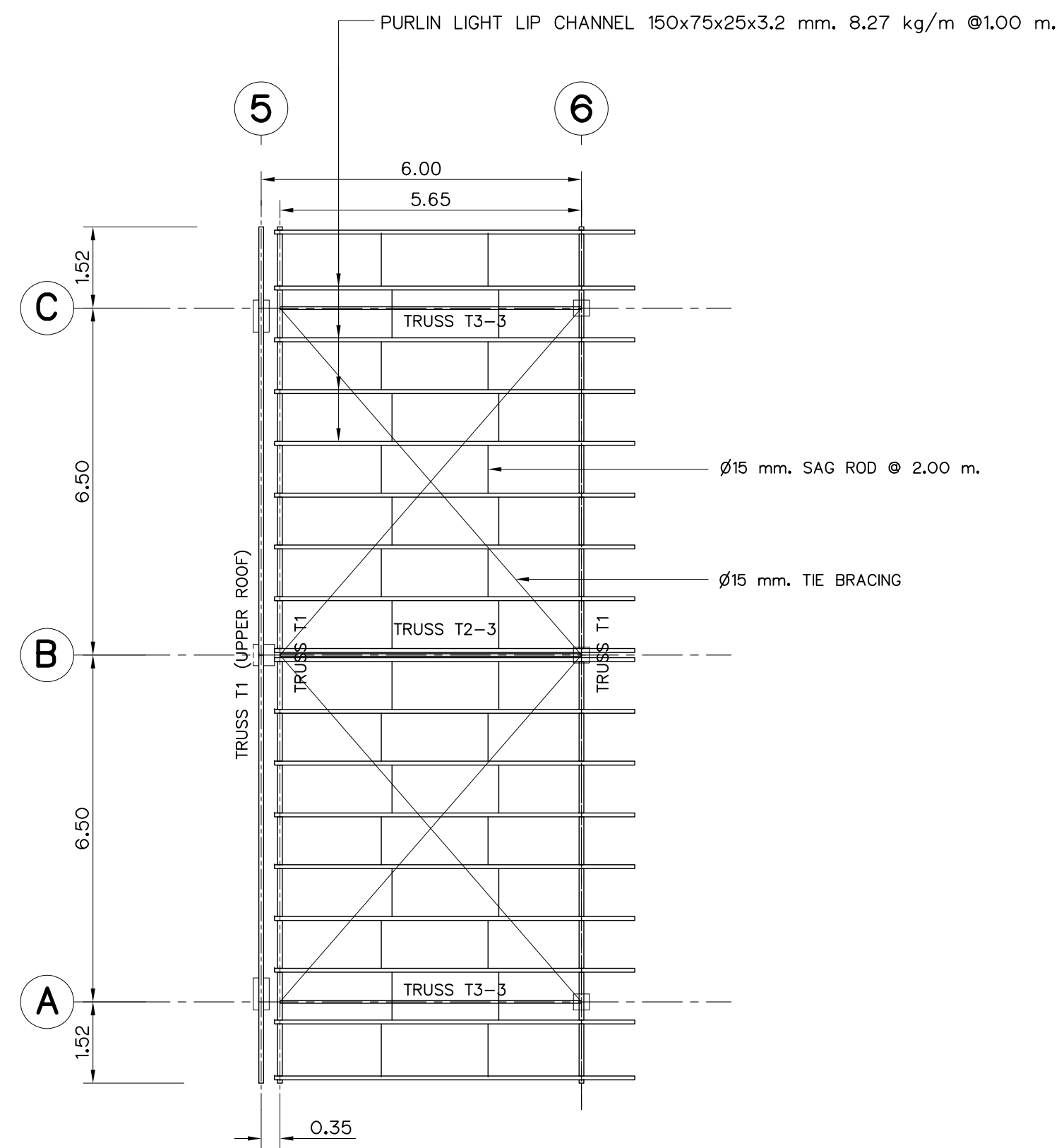


3				
2				
1				
NO.	DATE	REVISIONS	CHECKED	APPROVED
CONSULTANTS		DEDE		

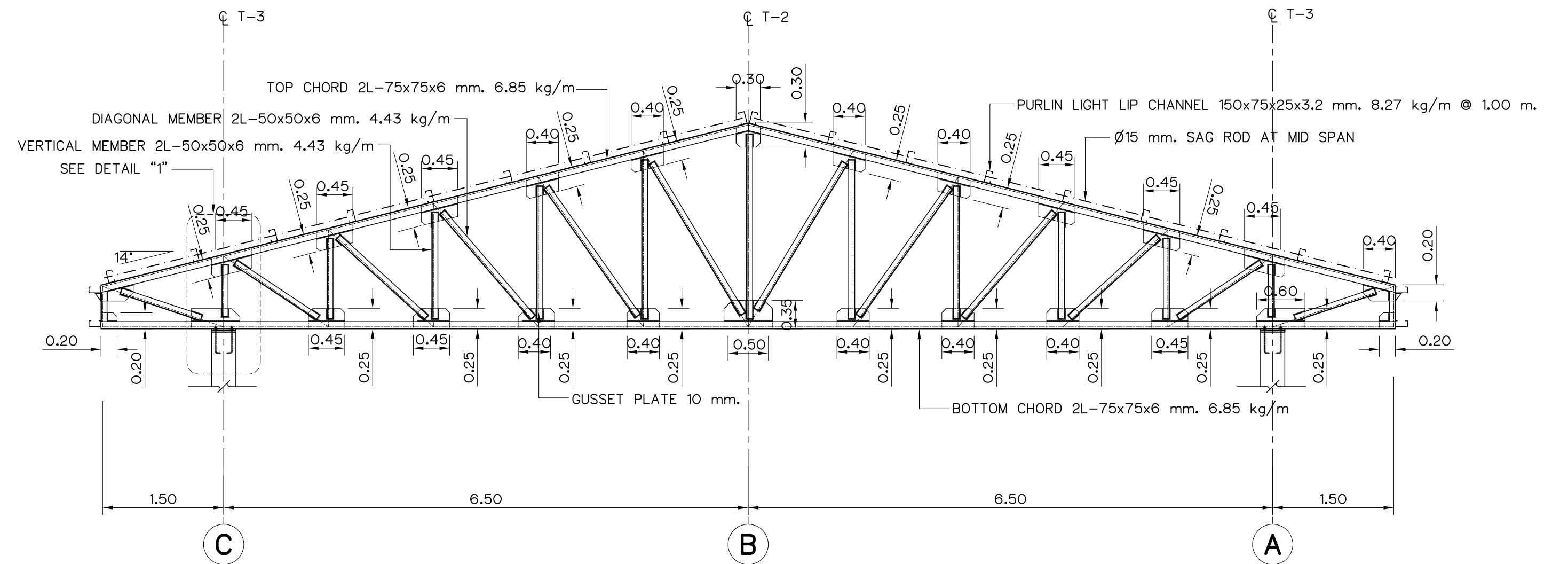
KINGDOM OF THAILAND Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY	
MAE HAT HYDROPOWER PROJECT	
CIVIL WORKS AND TRANSMISSION LINE POWERHOUSE COLUMN, BRACKET AND STAIR DETAILS	
P&C MANAGEMENT CO.,LTD.	REVIEWED
DESIGNED 11.6.6224 11.6.6226	SUBMITTED
DRAWN	RECOMMENDED
CHECKED 11.6.6226	APPROVED P. Harrell
PROJECT MANAGER 11.6.6226	DRAWING NO. MH-PH-14
DATE	SHEET NO. 97 OF 130



PLAN OF UPPER ROOF TRUSSES
SCALE 1:100



PLAN OF LOWER ROOF TRUSSES
SCALE 1:100



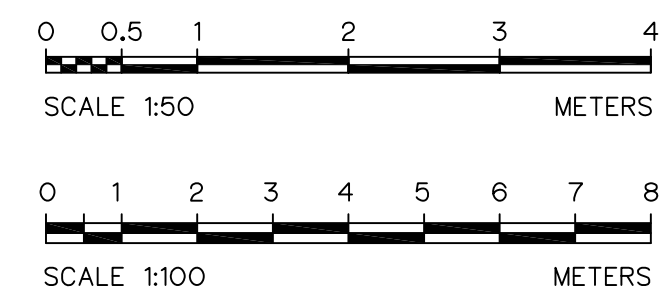
TRUSS T1
SCALE 1:50

NOTES :

1. ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
2. SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03

REFERENCE DRAWINGS :

1. POWERHOUSE, PLAN 1st FLOOR AND PLAN 2nd FLOOR MH-PH-02
2. POWERHOUSE, SECTIONS (SHEET 1/2) MH-PH-05
3. POWERHOUSE, SECTIONS (SHEET 2/2) MH-PH-06
4. POWERHOUSE, TRUSS T2 AND DETAILS MH-PH-16
5. POWERHOUSE, TRUSS T3 AND DETAILS MH-PH-17

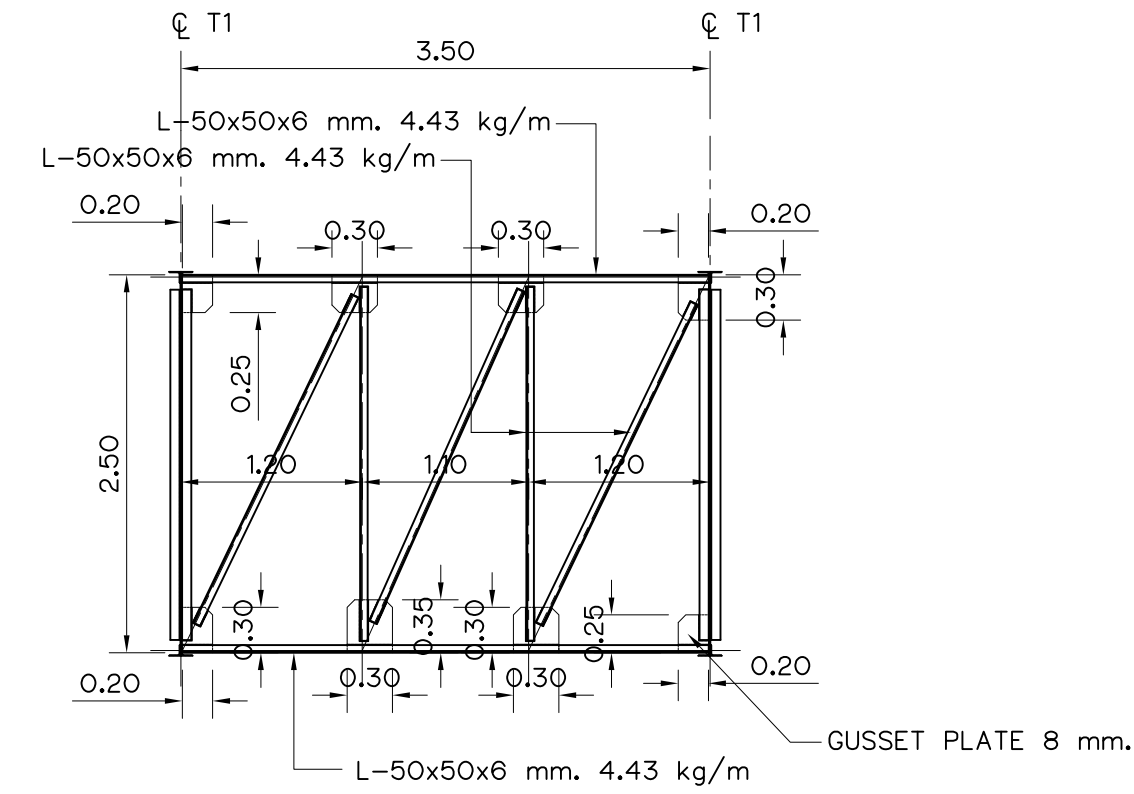


3				
2				
1				
NO.	DATE	REVISIONS	CHECKED	APPROVED

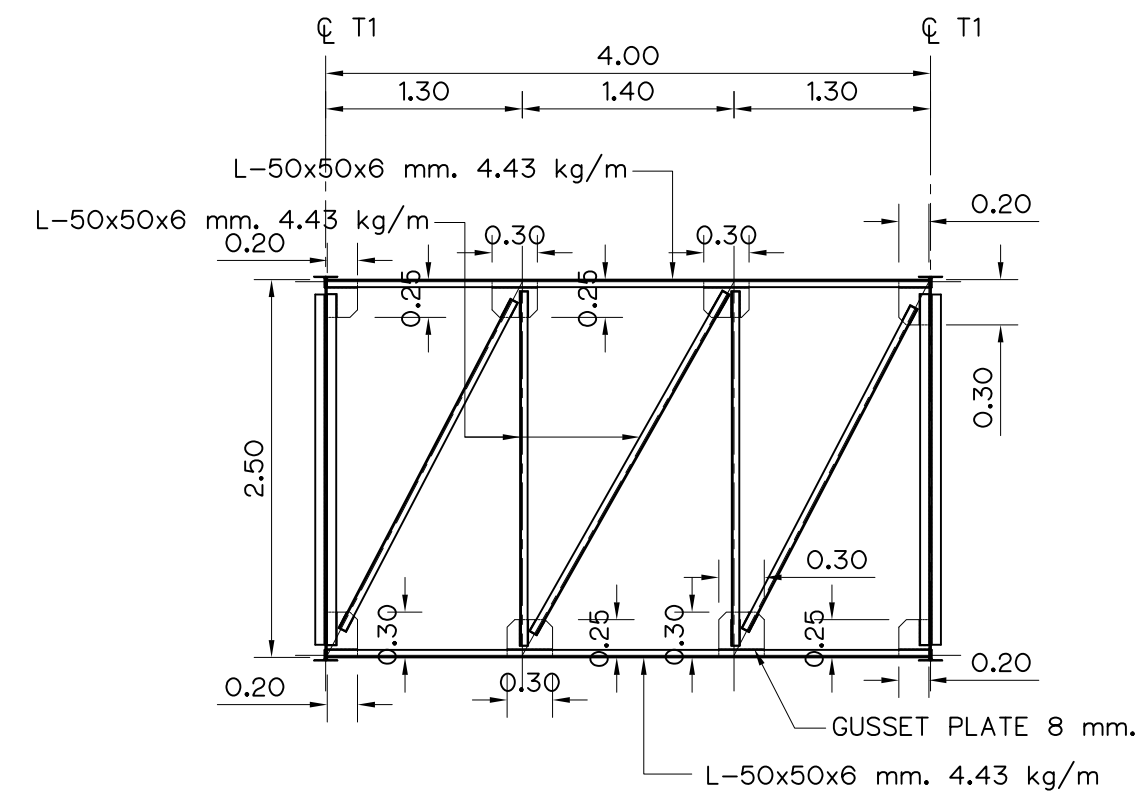
CONSULTANTS

DEDE

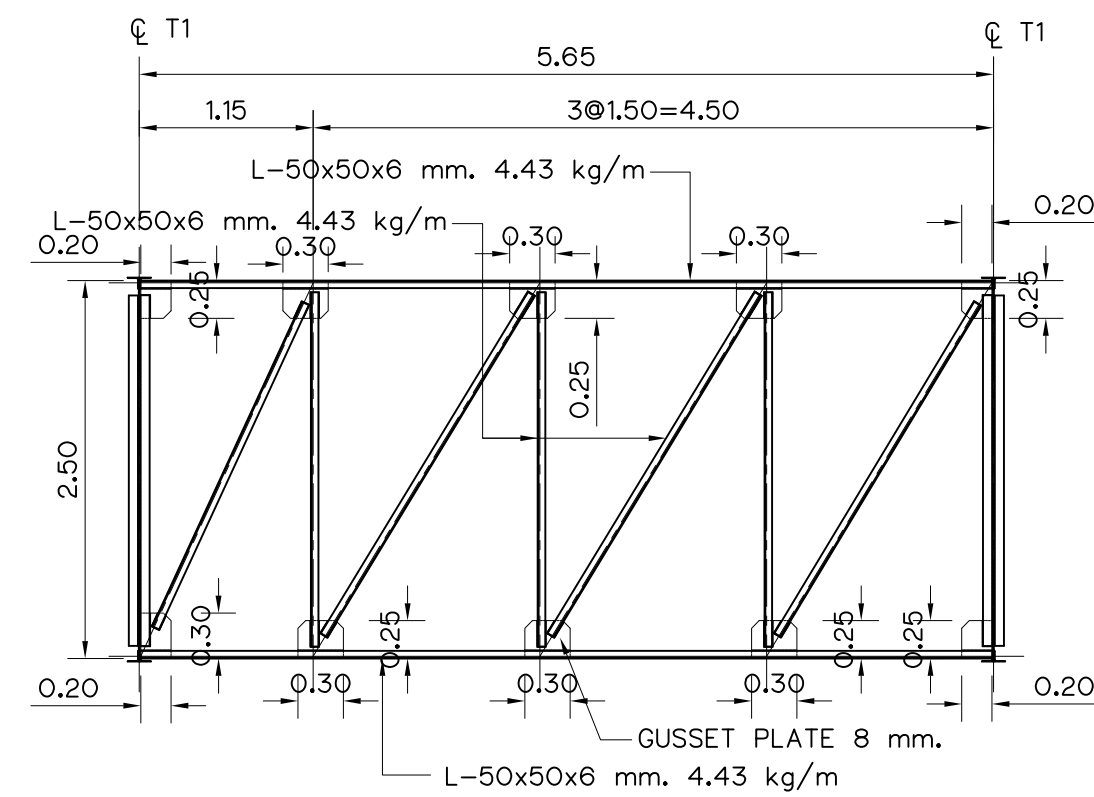
KINGDOM OF THAILAND Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY	
MAE HAT HYDROPOWER PROJECT	
CIVIL WORKS AND TRANSMISSION LINE POWERHOUSE PLAN OF TRUSS AND TRUSS T1 DETAILS	
P&C MANAGEMENT CO.,LTD.	Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY
DESIGNED <i>m. 64624</i> <i>88.6226</i>	REVIEWED <i>Chand</i>
DRAWN <i>88.6226</i>	SUBMITTED <i>88.6226</i>
CHECKED <i>88.6226</i>	RECOMMENDED <i>P. Hannell</i>
PROJECT MANAGER <i>88.6226</i>	DRAWING NO. MH-PH-15
DATE	SHEET NO. 98 OF 130



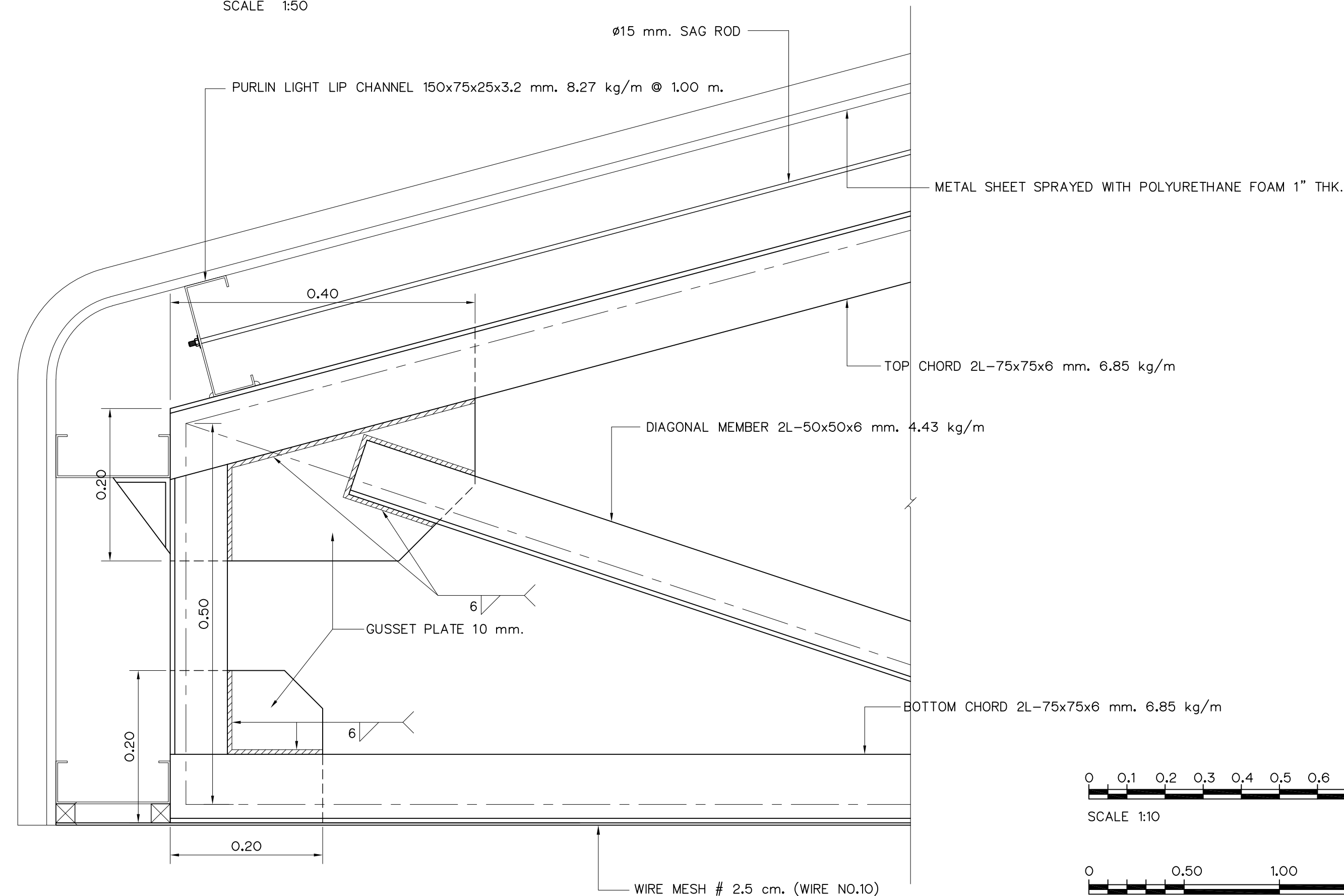
TRUSS T2-1
SCALE 1:50



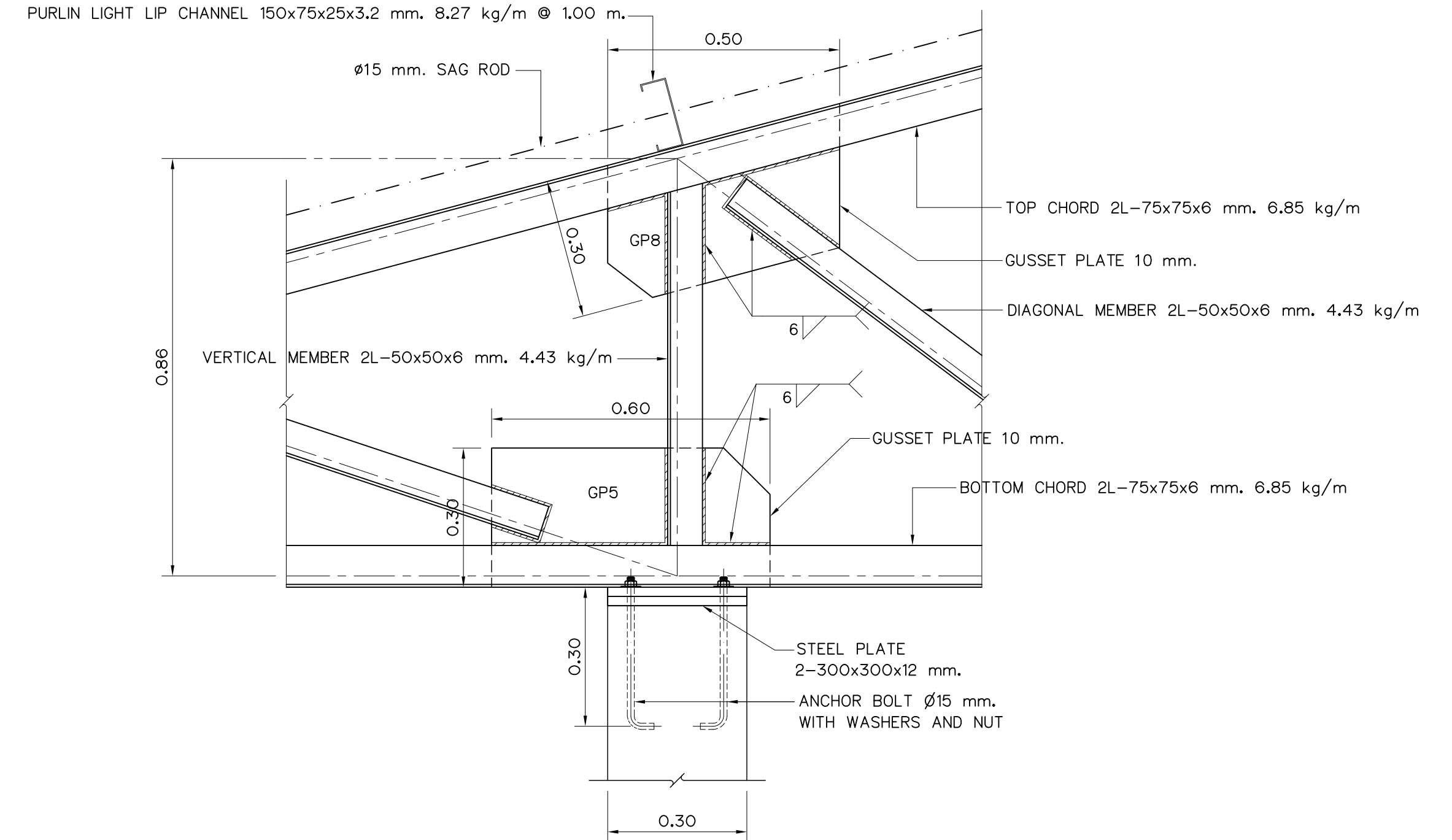
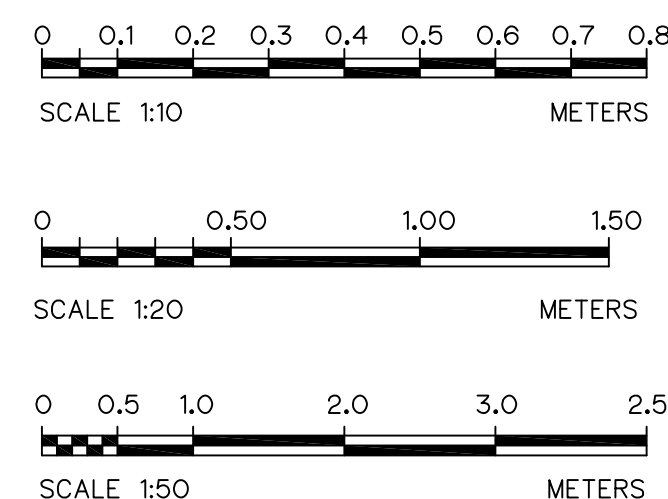
TRUSS T2-2
SCALE 1:50



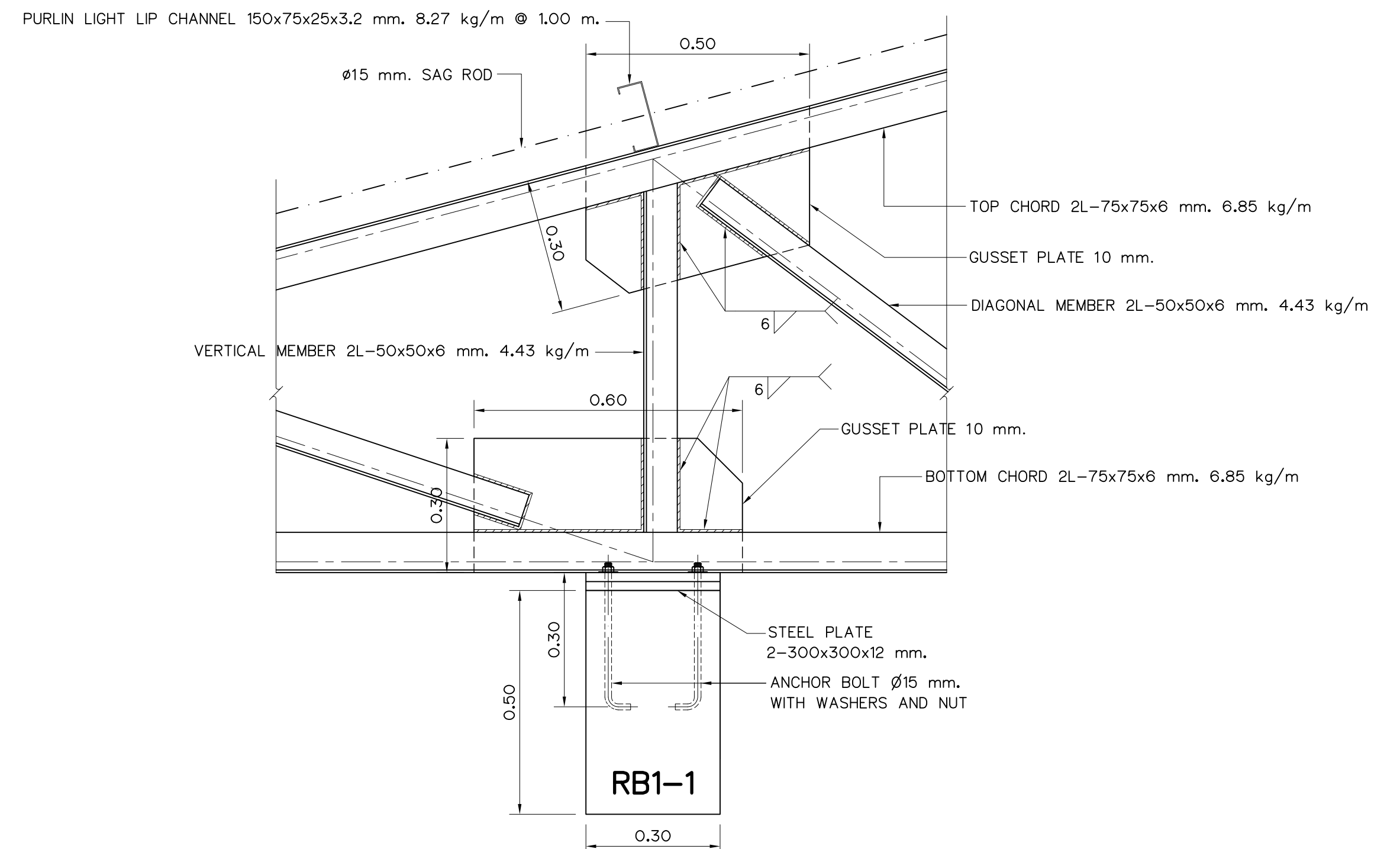
TRUSS T2-3
SCALE 1:50



EAVES DETAIL
SCALE 1:10



DETAILS "1" (Supported on Column)
SCALE 1:20



DETAILS "1" (Supported on Beam)
SCALE 1:20

NOTES :

- ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
- SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03
- WELDING CONNECTION USE 6 MM., UNLESS OTHERWISE SHOWN.

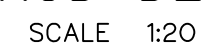
REFERENCE DRAWINGS :

- POWERHOUSE, PLAN OF TRUSS AND TRUSS T1 DETAILS MH-PH-15

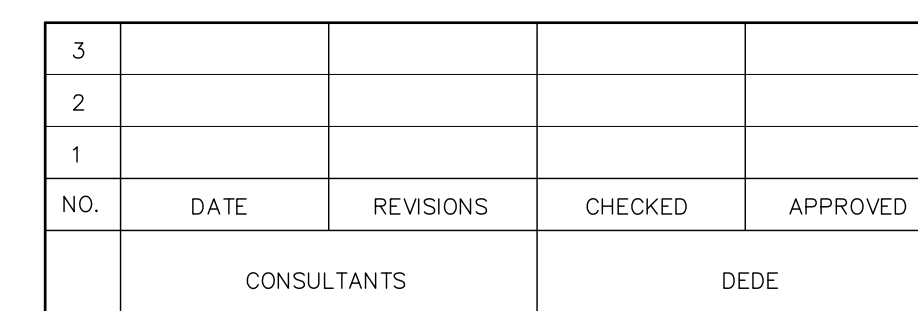
NO.	DATE	REVISIONS	CHECKED	APPROVED
3				
2				
1				

CONSULTANTS DEDE

KINGDOM OF THAILAND Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY	
MAE HAT HYDROPOWER PROJECT	
CIVIL WORKS AND TRANSMISSION LINE POWERHOUSE TRUSS T2 AND DETAILS	
P&C MANAGEMENT CO.,LTD.	REVIEWED
DESIGNED	SUBMITTED
DRAWN	RECOMMENDED
CHECKED	APPROVED
PROJECT MANAGER	DRAWING NO. MH-PH-16
DATE	SHEET NO. 99 OF 130



1. POWERHOUSE, PLAN OF TRUSS AND TRUSS T1 DETAILS MH-PH-15



 KINGDOM OF THAILAND Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY	
MAE HAT HYDROPOWER PROJECT	
CIVIL WORKS AND TRANSMISSION LINE	
POWERHOUSE	
TRUSS T3 AND DETAILS	
 P&C MANAGEMENT CO.,LTD.	 Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY
DESIGNED <i>m. 26.64624</i> <i>27</i> 26.6226	REVIEWED <i>San</i>
DRAWN <i>San</i>	SUBMITTED <i>Chawal</i>
CHECKED <i>27</i> 26.6226	RECOMMENDED <i>San</i>
DRAWING NO. <i>0810312559</i>	APPROVED <i>P. Hanwitt.</i>
PROJECT MANAGER	DATE
	100 OF 130

SCALE 1:10

SCALE 1:10

SCALE 1:10

SCALE 1:10

SCALE 1:5

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

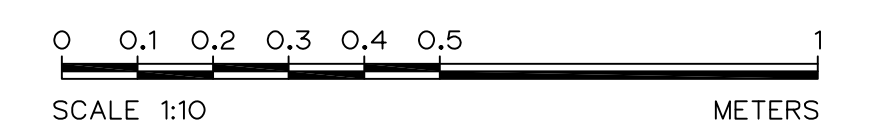
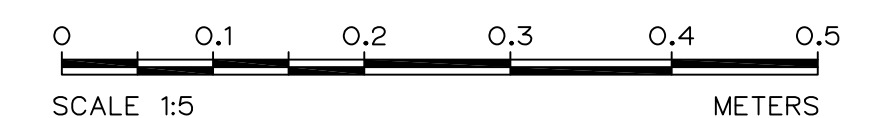
NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

MATERIALS : SHEET STEEL 1.5MM.
SURFACE FINISH : POWDER
COATED IN TEXTURED RAL
7032 OR HOT-DIP GALVANIZED
(UPON YOUR REQUIREMENTS)
ASSEMBLY : WELDING METHOD
APPLICATION : USING FOR INDOOR & OUTDOOR INSTALLATION WORK



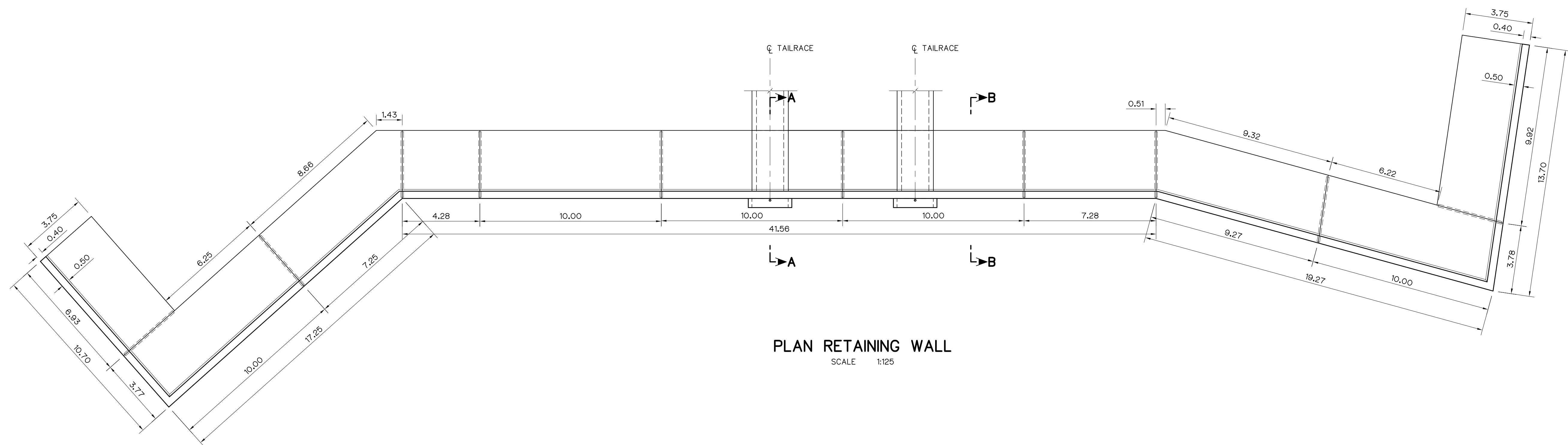
NOTES :

1. ALL DIMENSIONS ARE IN METERS, UNLESS OTHERWISE SHOWN
2. SYMBOLS, ABBREVIATION AND GENERAL NOTES SEE DWG. No. MH-GN-03
3. STEEL COVER FOR IN DOOR TRENCH SHALL BE COATED WITH NON BLEEDING TYPE COAL TAR EPOXY

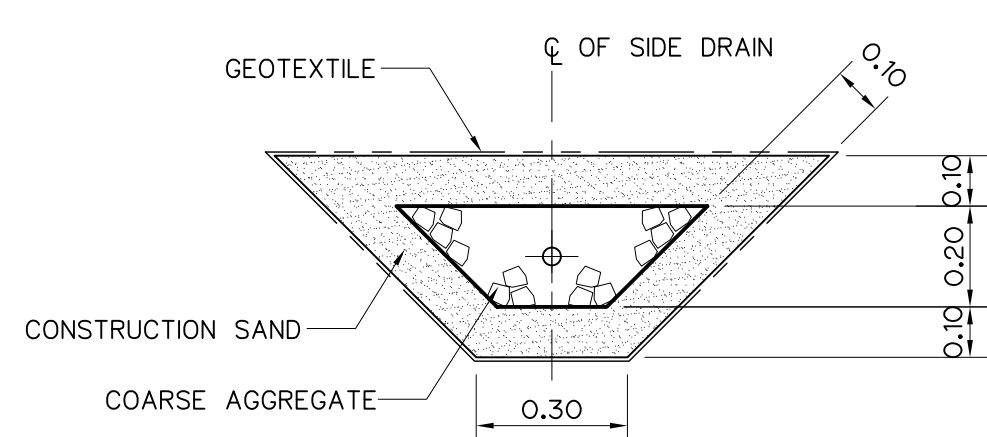
REFERENCE DRAWINGS :

1. POWERHOUSE, PLAN 1st FLOOR AND PLAN 2nd FLOOR

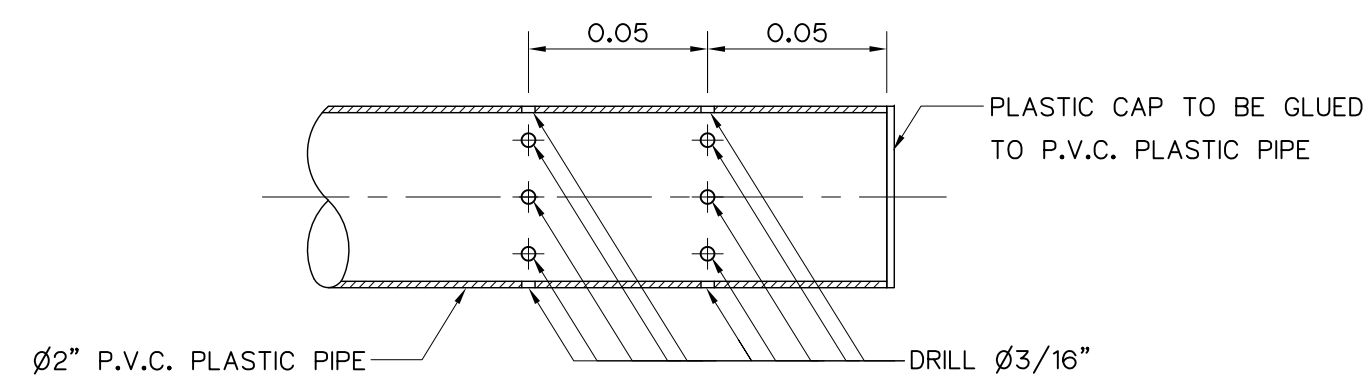
					 P & C MANAGEMENT CO., LTD.	 MINISTRY OF ENERGY			
3						REVIEWED			
2						DESIGNED	m. f.b. 64624 g.b. 6226		
1						DRAWN			
NO.	DATE	REVISIONS	CHECKED	APPROVED	CHECKED	g.b. 6226	APPROVED	P. Hamall	
CONSULTANTS					DEDE		 081012559	DRAWING NO. MH-PH-18	SHEET NO. 101 OF 130
					PROJECT MANAGER		DATE		



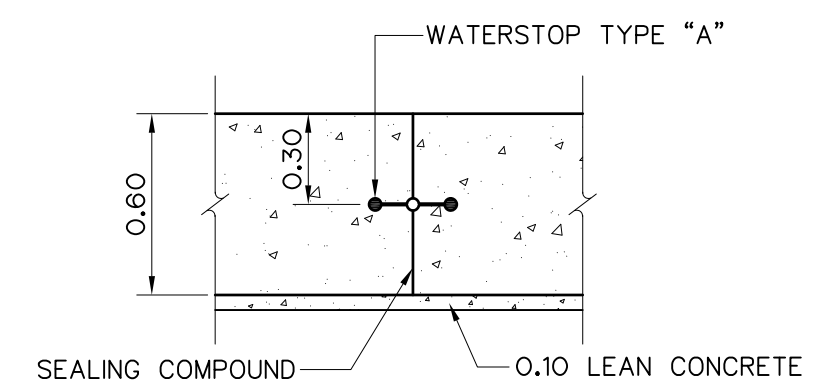
PLAN RETAINING WALL
SCALE 1:125



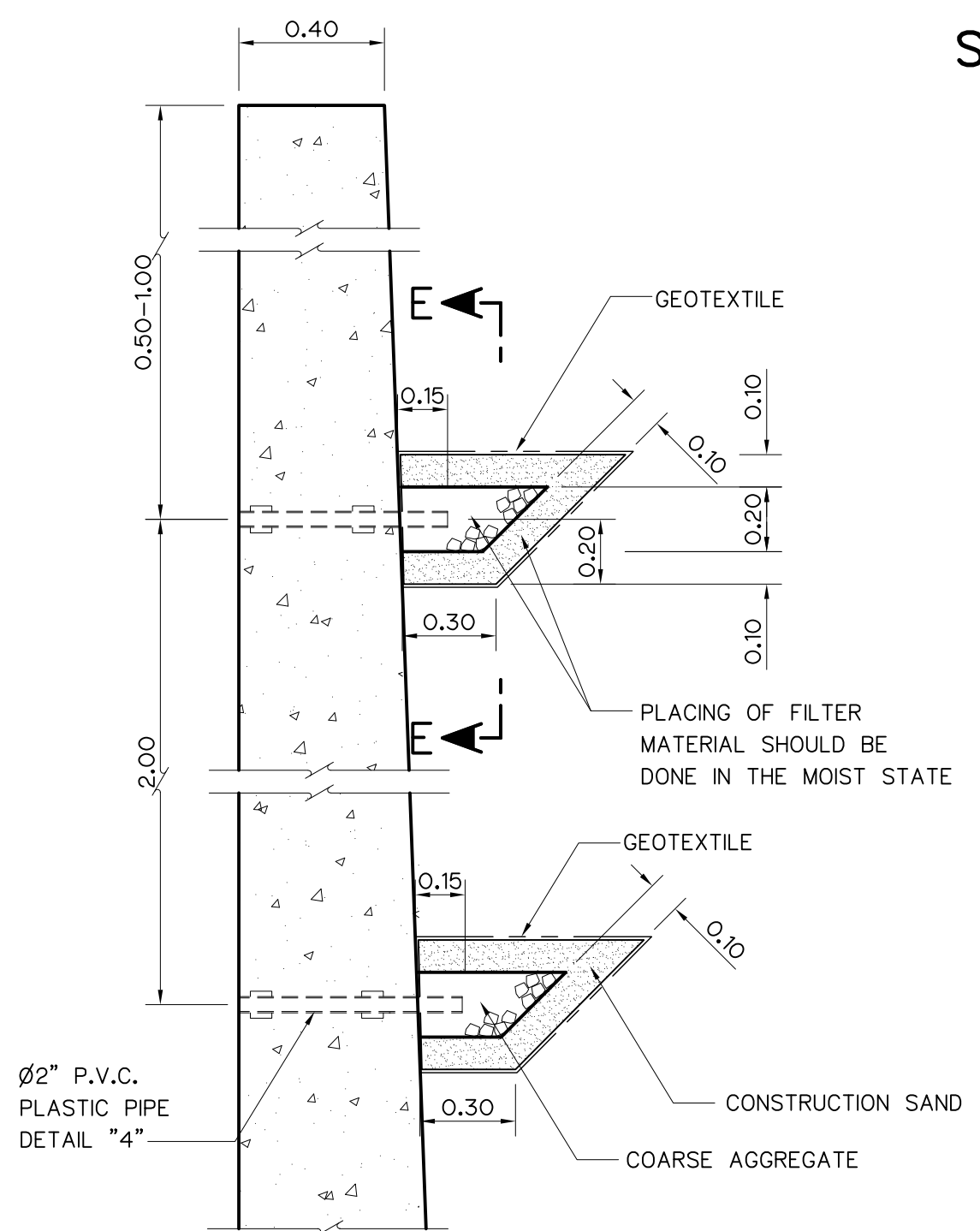
SECTION E - E
SCALE 1:15



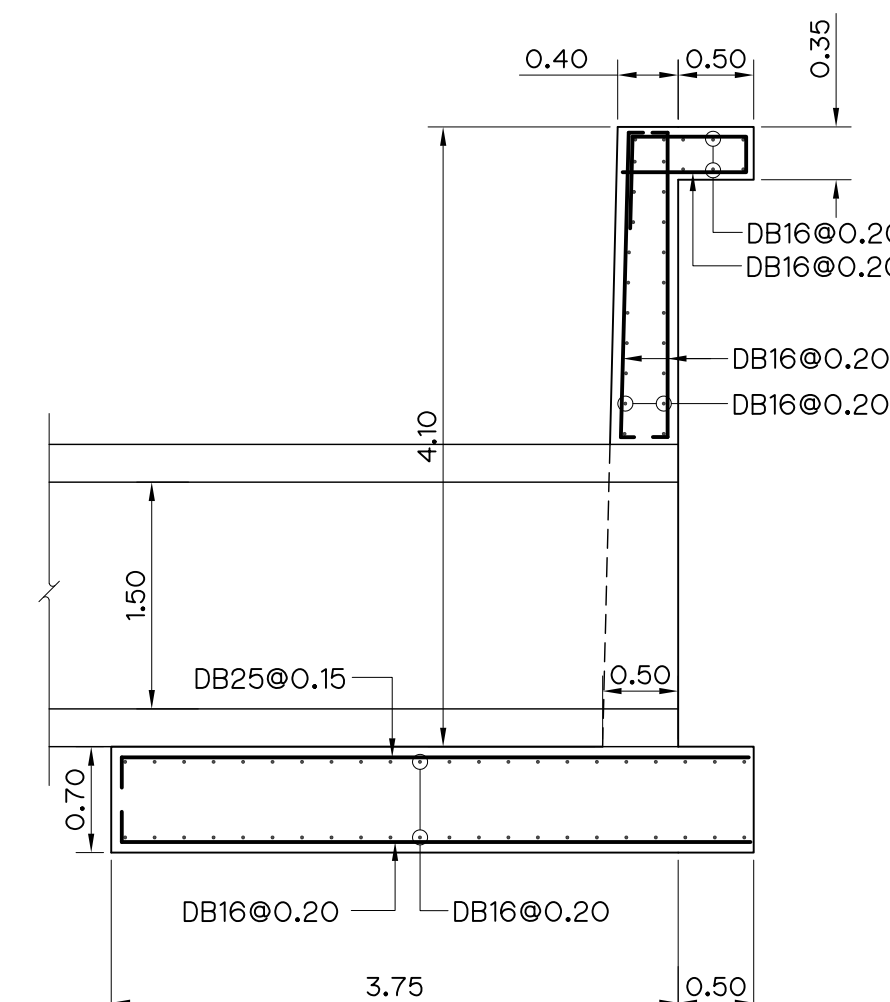
DETAIL "4"
NOT TO SCALE



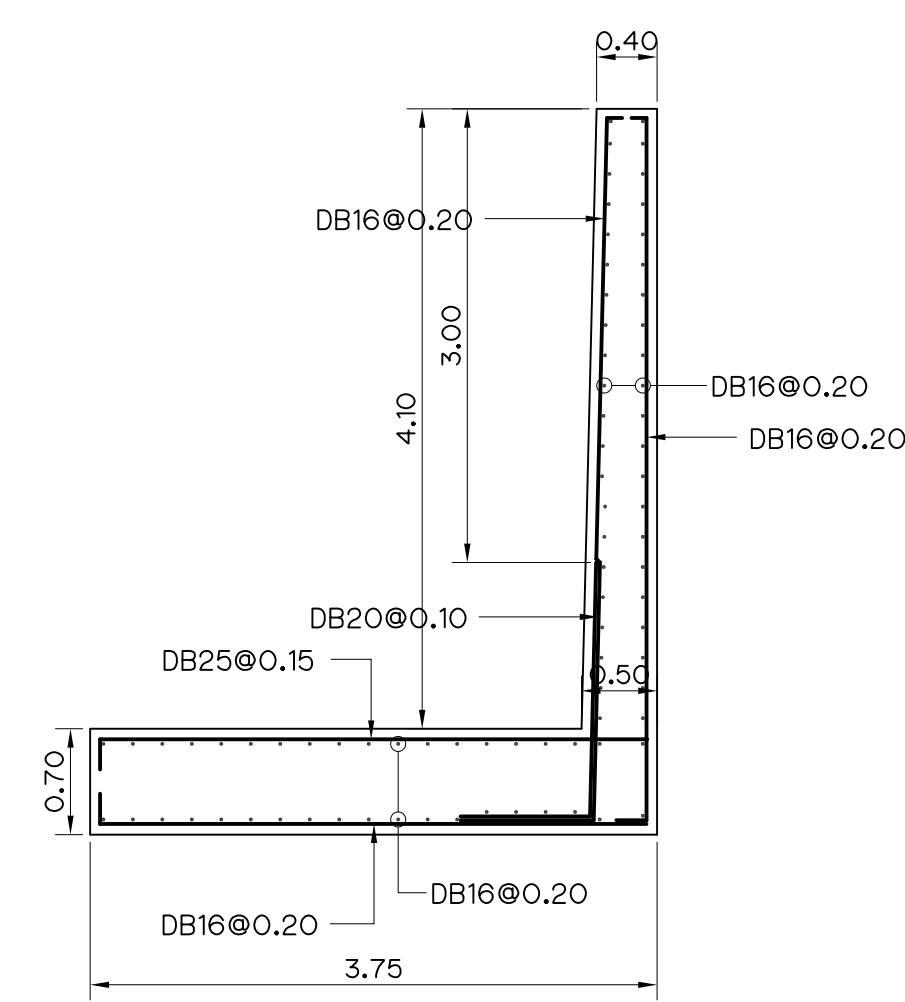
CONTRACTION JOINT AT FLOOR (NON GROOVE)
(FLOOR THK. CONSTANT)
SCALE 1:25



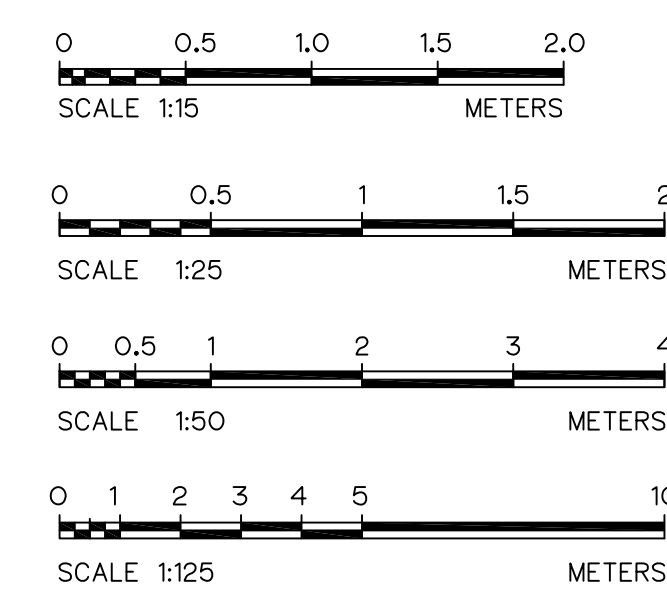
DETAIL OF SIDE DRAIN
NOT TO SCALE



RETAINING WALL SECTION A-A
SCALE 1:50



RETAINING WALL SECTION B-B
SCALE 1:50

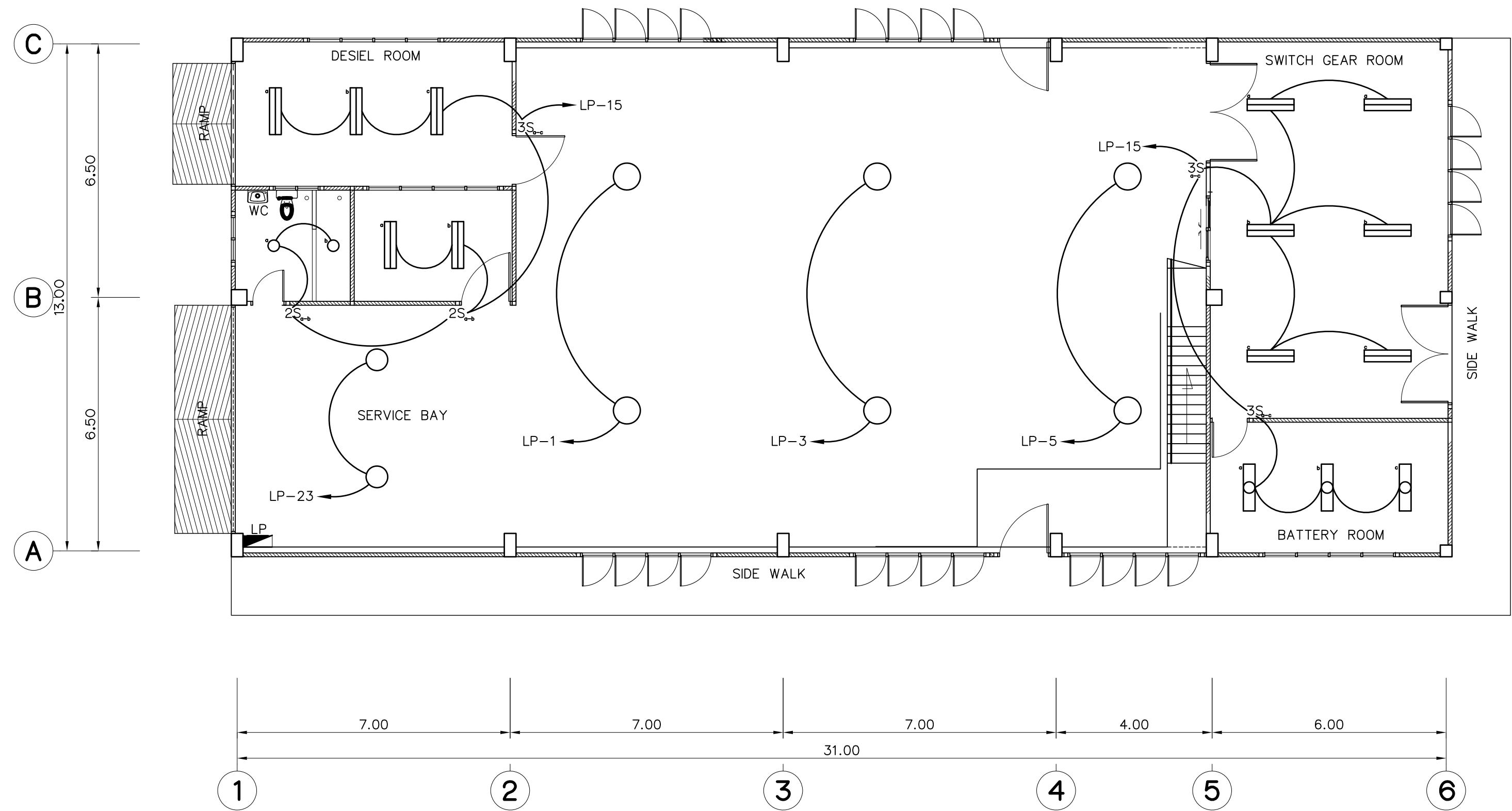


- NOTES :**
- ALL DIMENSIONS AND ELEVATIONS (M.S.L.) ARE IN METERS, UNLESS OTHERWISE SHOWN.
 - SYMBOLS, ABBREVIATIONS AND GENERAL NOTES SEE DWG. NO. MH-GN-03

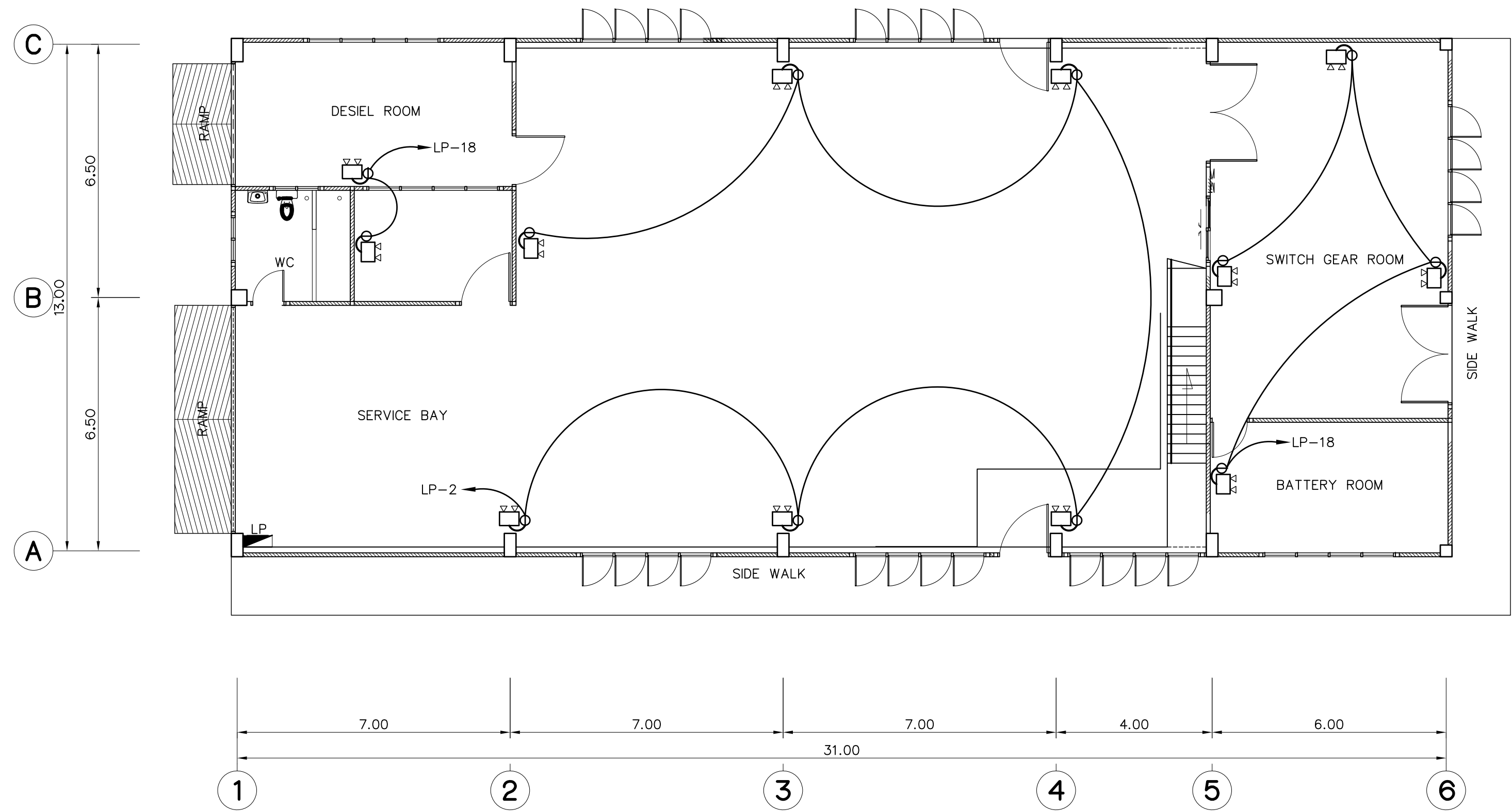
- REFERENCE DRAWINGS :**
- POWERHOUSE, GENERAL LAYOUT MH-PH-01
 - POWERHOUSE, SECTIONS (SHEET 1/2) MH-PH-05
 - POWERHOUSE, SECTIONS (SHEET 2/2) MH-PH-06

3				
2				
1				
NO.	DATE	REVISIONS	CHECKED	APPROVED

KINGDOM OF THAILAND Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY	
MAE HAT HYDROPOWER PROJECT	
CIVIL WORKS AND TRANSMISSION LINE	
TAILRACE	
RETAININGWALL REINFORCEMENT DETAILS	
P&C MANAGEMENT CO.,LTD. DESIGNED <i>m. 261.64624</i> DRAWN <i>g.m. 261.6226</i> CHECKED <i>g.m. 261.6226</i> PROJECT MANAGER	REVIEWED <i>Chand</i> SUBMITTED <i>Chand</i> RECOMMENDED <i>Chand</i> APPROVED <i>P.Hanwell</i> DRAWING NO. MH-PH-20 SHEET NO. 103 OF 130



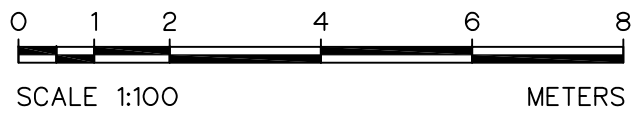
PLAN 1st FLOOR
SCALE 1:100



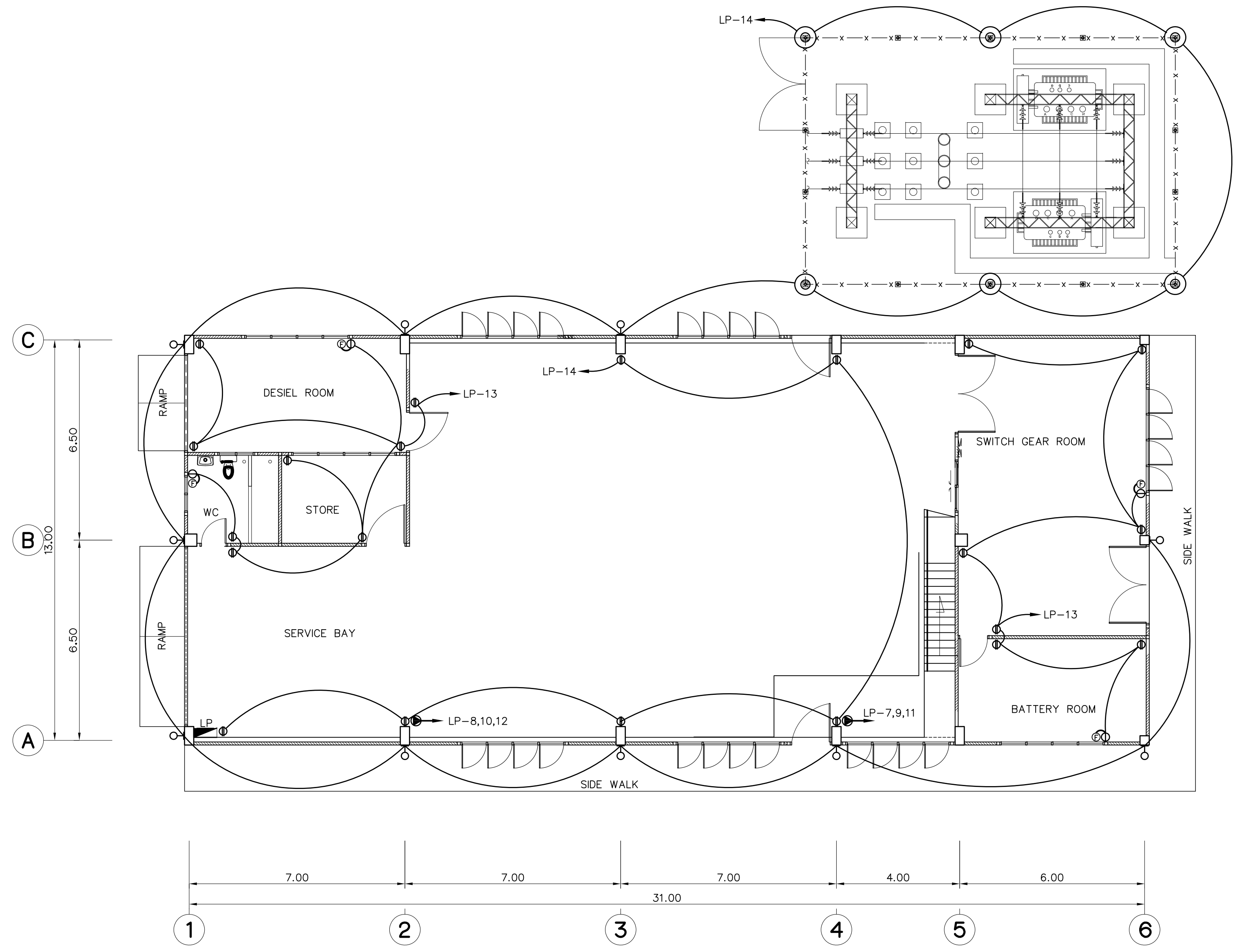
PLAN 1st FLOOR
SCALE 1:100

LEGENDS :

- 2x36 W. FLUORESCENT LAMP (HANGING OR CEILING TYPE) WITH BALLAST LOW LOSS, CAPACITOR AND STARTOR AT SWITCH "a"
- 2x36 W. FLUORESCENT LAMP (CORROSION PROOF) WITH BALLAST LOW LOSS, CAPACITOR AND STARTOR
- 1x36 W. FLUORESCENT LAMP (HANGING CEILING TYPE) WITH BALLAST LOW LOSS, CAPACITOR AND STARTOR, AT SWITCH "a"
- 1x20 W. COMPACT FLUORESCENT (WALL TYPE, OUTDOOR IP54)
- SWITCH "3" SETS FOR SWITCH "a" TO "c"
- TWO-WAYS SWITCH
- SIMPLEX RECEPTACLE WITH GROUND, 10 A. 220 VAC.
- 20 W. COMPACT FLUORESCENT
- EXHAUST FAN 12"
- OUTDOOR BOLLARD TYPE WITH 20 W. COMPACT FLUORESCENT
- DUPLEX RECEPTACLE WITH GROUND, 10 A. 220 VAC.
- POWER RECEPTACLE 3P+N+E 32 A. 400 VAC.
- HIGH BAY FIXTURE 1x400 W. HIGH PRESSURE SODIUM
- HIGH BAY FIXTURE 1x250 W. HIGH PRESSURE SODIUM
- EMERGENCY LIGHTING 2x55 W. HALOGEN W/SEALED LEAD ACID BATTERY BACKUP 2 HOURS
- AIR CONDITIONING, SPLIT TYPE
- LP LOAD PANEL 3 PHASE (18 CIRCUITS) WITH MAIN CIRCUIT BREAKER
- LCP1 LIGHTING CONTROL PANEL
- SECONDARY LINES, 380/220 V 50 MM THW OVERHEAD INSULATED CABLES, 3Ø 4 WIRE
- UNDERGROUND WIRING IN CONDUIT



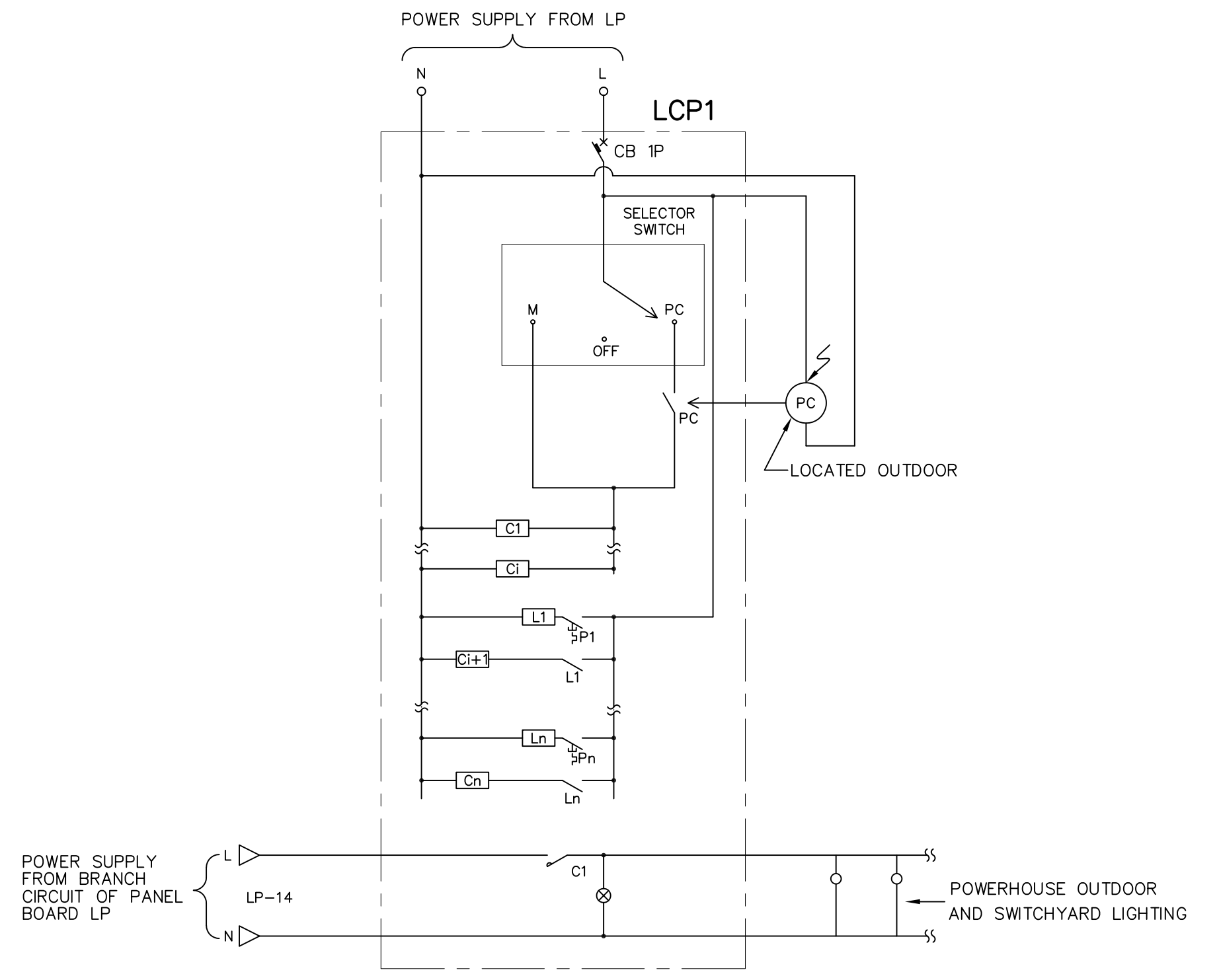
3							
2							
1							
NO.	DATE	REVISIONS	CHECKED	APPROVED			
CONSULTANTS			DEDE				
P&C MANAGEMENT CO.,LTD.			Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY				
DESIGNED			27/11/604		REVIEWED		
DRAWN			27/11/604		SUBMITTED		
CHECKED			27/11/604		RECOMMENDED		
PROJECT MANAGER			DATE		APPROVED		
DRAWING NO.			MH-PH-21		SHEET NO.		
104 OF 130							



PLAN 1st FLOOR
SCALE 1:100

LEGENDS :

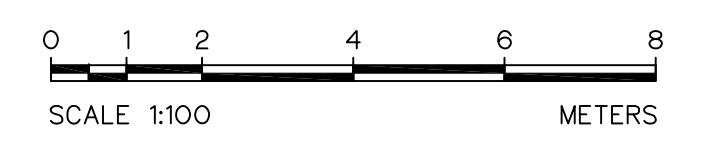
- 2x36 W. FLUORESCENT LAMP (HANGING OR CEILING TYPE) WITH BALLAST LOW LOSS, CAPACITOR AND STARTOR AT SWITCH "a"
- 2x36 W. FLUORESCENT LAMP (CORROSION PROOF) WITH BALLAST LOW LOSS, CAPACITOR AND STARTOR
- 1x36 W. FLUORESCENT LAMP (HANGING CEILING TYPE) WITH BALLAST LOW LOSS, CAPACITOR AND STARTOR, AT SWITCH "a"
- 1x20 W. COMPACT FLUORESCENT (WALL TYPE, OUTDOOR IP54)
- SWITCH "3" SETS FOR SWITCH "a" TO "c"
- TWO-WAYS SWITCH
- SIMPLEX RECEPTACLE WITH GROUND, 10 A. 220 VAC.
- 20 W. COMPACT FLUORESCENT
- EXHAUST FAN 12"
- OUTDOOR BOLLARD TYPE WITH 20 W. COMPACT FLUORESCENT
- DUPLEX RECEPTACLE WITH GROUND, 10 A. 220 VAC.
- POWER RECEPTACLE 3P+N+E 32 A. 400 VAC.
- HIGH BAY FIXTURE 1x400 W. HIGH PRESSURE SODIUM
- HIGH BAY FIXTURE 1x250 W. HIGH PRESSURE SODIUM
- EMERGENCY LIGHTING 2x55 W. HALOGEN W/SEALED LEAD ACID BATTERY BACKUP 2 HOURS
- AIR CONDITIONING, SPLIT TYPE
- LOAD PANEL 3 PHASE (18 CIRCUITS) WITH MAIN CIRCUIT BREAKER
- LIGHTING CONTROL PANEL
- SECONDARY LINES, 380/220 V 50 MM THW OVERHEAD INSULATED CABLES, 3Ø 4 WIRE
- UNDERGROUND WIRING IN CONDUIT



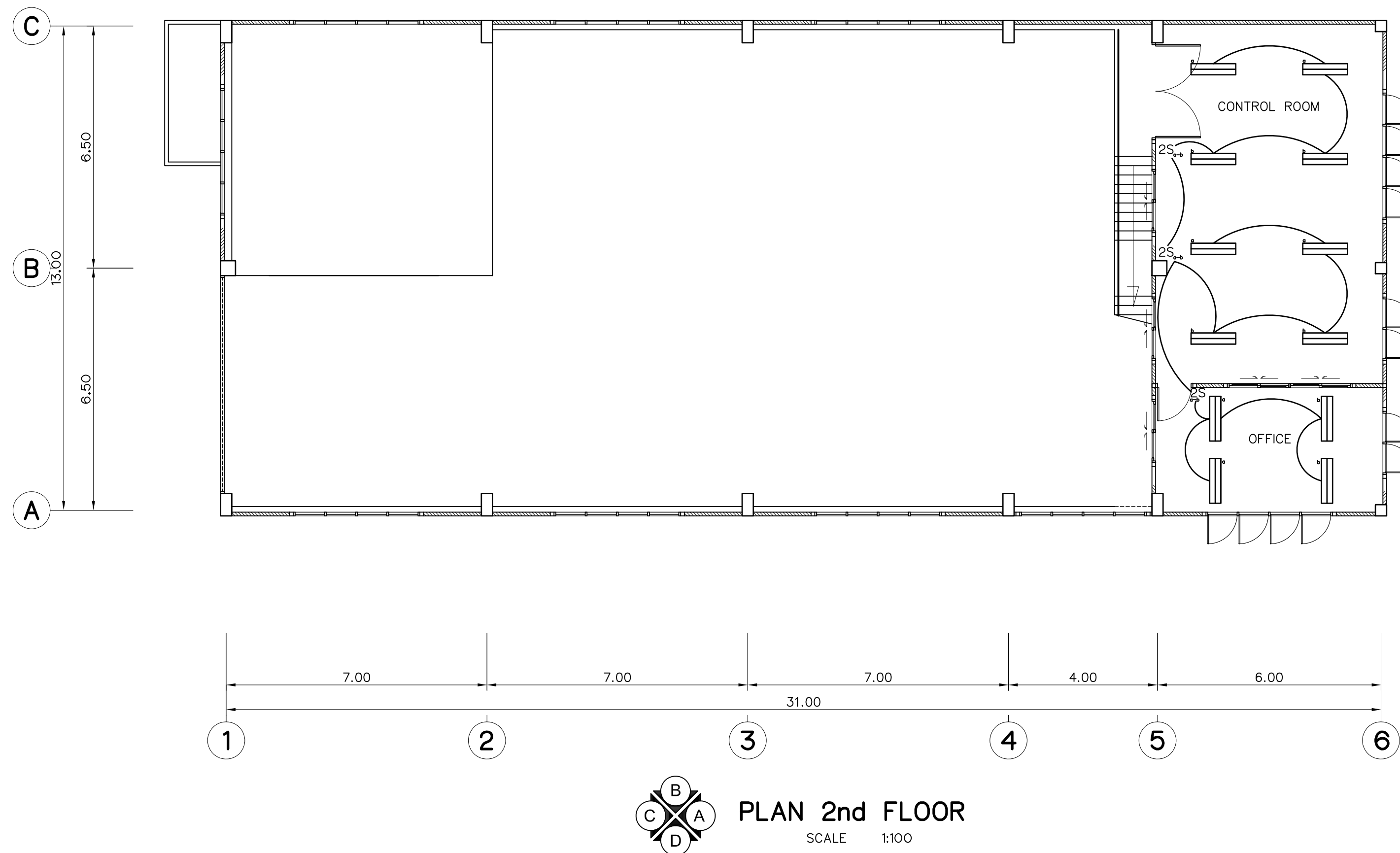
LIGHTING CONTROL PANEL(LCP1) DIAGRAM

LEGEND :

- PC = PHOTO CELL
- PC = PHOTO CELL SWITCH CONTACT
- Cn = MAGNETIC CONTACTOR n : 1, 2, 3...
- Ln = LATCHING CONTACTOR n : 1, 2, 3...
- Pn = PUSH BUTTON SWITCH, NON-LATCHED TYPE
- Cn = MAGNETIC RELAY n : 1, 2, 3...
- Ln = LATCHING RELAY n : 1, 2, 3...

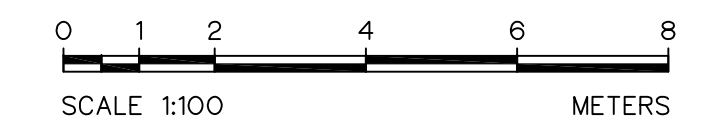
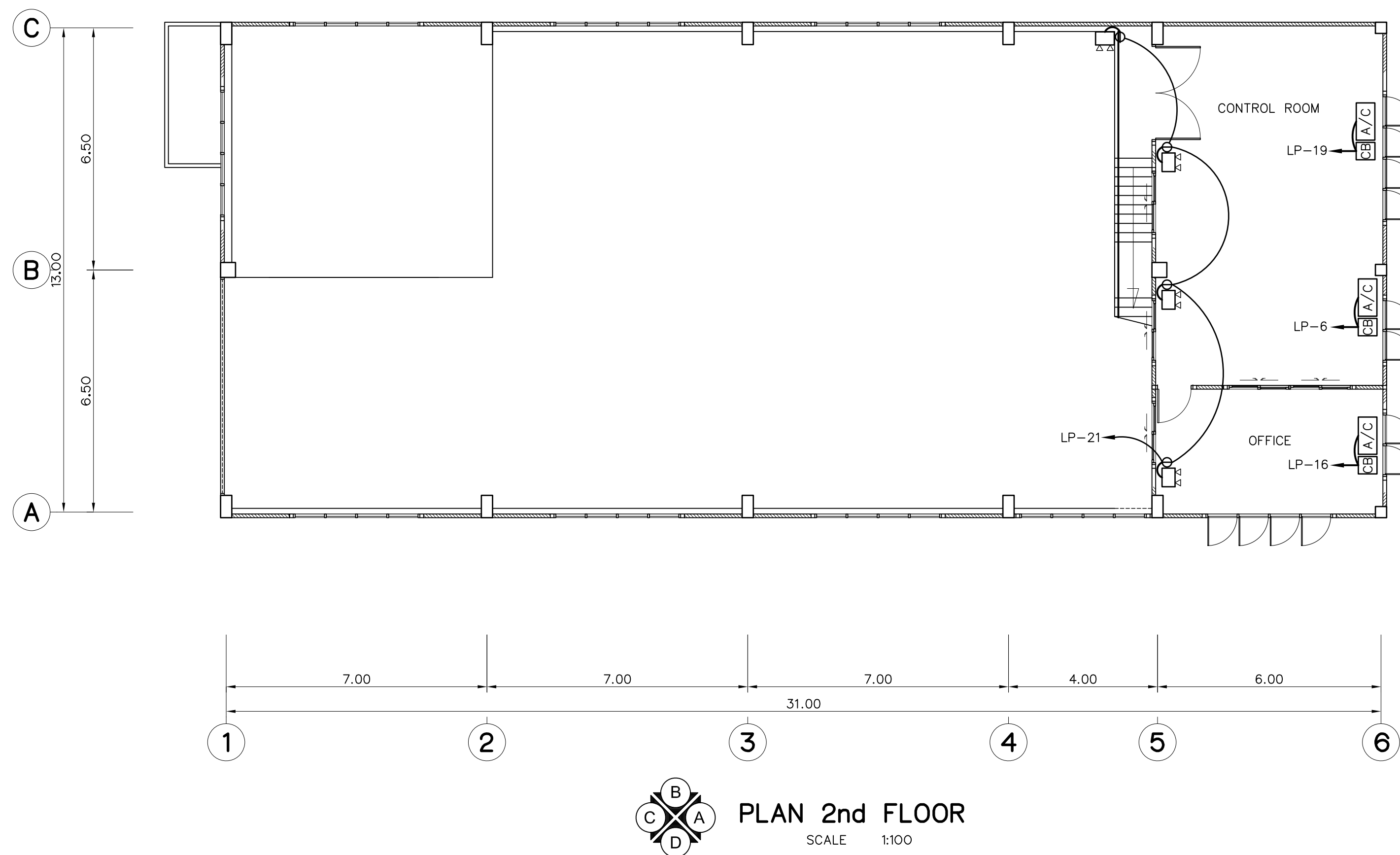


3						
2						
1						
NO.	DATE	REVISIONS	CHECKED	APPROVED		
CONSULTANTS			DEDE			
P&C MANAGEMENT CO.,LTD.			DESIGNED		27/11/604	
			DRAWN			
			CHECKED		27/11/604	
			APPROVED			
PROJECT MANAGER			DATE			
			REVIEWED			
			SUBMITTED			
			RECOMMENDED			
			APPROVED			
			DRAWING NO.			
			SHEET NO.			



LEGENDS :

- 2x36 W. FLUORESCENT LAMP (HANGING OR CEILING TYPE) WITH BALLAST LOW LOSS, CAPACITOR AND STARTOR AT SWITCH "a"
- 2x36 W. FLUORESCENT LAMP (CORROSION PROOF) WITH BALLAST LOW LOSS, CAPACITOR AND STARTOR
- 1x36 W. FLUORESCENT LAMP (HANGING CEILING TYPE) WITH BALLAST LOW LOSS, CAPACITOR AND STARTOR, AT SWITCH "a"
- 1x20 W. COMPACT FLUORESCENT (WALL TYPE, OUTDOOR IP54)
- SWITCH "3" SETS FOR SWITCH "a" TO "c"
- TWO-WAYS SWITCH
- SIMPLEX RECEPTACLE WITH GROUND, 10 A. 220 VAC.
- 20 W. COMPACT FLUORESCENT
- EXHAUST FAN 12"
- OUTDOOR BOLLARD TYPE WITH 20 W. COMPACT FLUORESCENT
- DUPLEX RECEPTACLE WITH GROUND, 10 A. 220 VAC.
- POWER RECEPTACLE 3P+N+E 32 A. 400 VAC.
- HIGH BAY FIXTURE 1x400 W. HIGH PRESSURE SODIUM
- HIGH BAY FIXTURE 1x250 W. HIGH PRESSURE SODIUM
- EMERGENCY LIGHTING 2x55 W. HALOGEN W/SEALED LEAD ACID BATTERY BACKUP 2 HOURS
- AIR CONDITIONING, SPLIT TYPE
- LP LOAD PANEL 3 PHASE (18 CIRCUITS) WITH MAIN CIRCUIT BREAKER
- LCP1 LIGHTING CONTROL PANEL
- SECONDARY LINES, 380/220 V 50 MM THW OVERHEAD INSULATED CABLES, 3Ø 4 WIRE
- UNDERGROUND WIRING IN CONDUIT



3						
2						
1						
NO.	DATE	REVISIONS	CHECKED	APPROVED		
CONSULTANTS			DEDE			

P&C MANAGEMENT CO.,LTD.	Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY
DESIGNED 27/11/604	REVIEWED
DRAWN	SUBMITTED
CHECKED 27/11/604	RECOMMENDED
PROJECT MANAGER	APPROVED P. Hanull.
DATE 08/03/2559	DRAWING NO. MH-PH-23
	SHEET NO. 106 OF 130