



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE NO. 02
QUIRINO DISTRICT ENGINEERING OFFICE
CABARROGUIS, QUIRINO

C.Y. 2025 PROJECT
DETAILED ENGINEERING DESIGN PLAN FOR
**Repair/Maintenance of DILG Building, Philippine National Police Station Male Barracks, Maddela,
Quirino**

LATITUDE (X)= 16.340047
LONGITUDE (Y)= 121.684550

SUBMITTED:

RUSELL G. LOZANO
CHIEF, PLANNING AND DESIGN SECTION

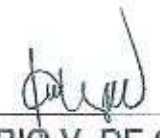
DATE:

RECOMMENDED:


FERDINAND JINGGO M. YTING
OFFICER-IN-CHARGE,
OFFICE OF THE ASSISTANT DISTRICT ENGINEER

DATE:

APPROVED:


ROSARIO V. DE GUZMAN
DISTRICT ENGINEER

DATE:

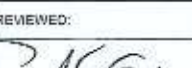
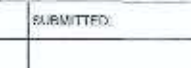
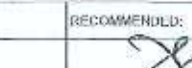
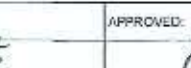
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SCOPE OF WORKS

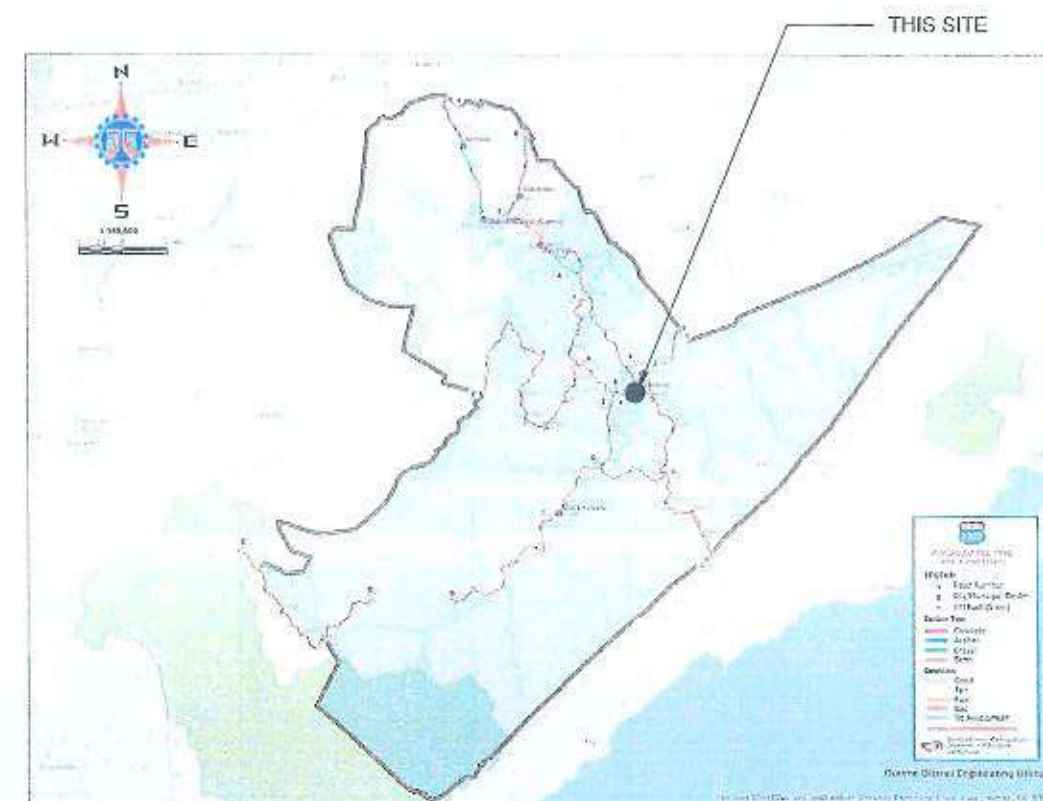
CONCRETE WORKS
FOOTING
COLUMN
ROOF BEAM
GROUND FLOOR SLAB
MASONRY WORKS
100mm THK CHB WALL
STEEL WORKS
TRUSSES
PURLINS
ROOFING WORKS
ROOFING SHEETS
FLASHING
FINISHING AND OTHER CIVIL WORKS
CEILING WORKS
DOORS AND WINDOWS
PAINTING (STEEL)
PAINTING (MASONRY)
ELECTRICAL WORKS
LIGHTING FIXTURES AND LAMPS
CONVENIENCE OUTLET
PANEL BOARD
PLUMBING WORKS
PLUMBING FIXTURES
WATER LINE AND SEWER LINE

Item No.	Description	Unit	QTY (AS Per Plan)	QTY (AS Per POW)	Remarks
B.5	Project Billboard/Signboard	ea	2.00	2.00	
B.7 (2)	Occupational Safety and Health Program	ls	1.00	1.00	
B.9	Mobilization/Demobilization	ls	1.00	1.00	
801 (1)	Removal of Structures and Obstruction	ls	1.00	1.00	
803 (1)a	Structure Excavation, Common Soil	cu.m	24.70	24.70	
804 (1)b	Embankment, From Borrow	cu.m	38.18	38.18	
804 (4)	Gravel Fill	cu.m	3.53	3.53	
900 (1)c1	Structural Concrete, A, 28 days	cu.m	25.97	25.97	
902 (1)a	Reinforcing Steel (Deformed), Grade 40	kgs	2162.07	2162.07	
903 (1)	Formworks and Falseworks	sq.m	89.68	89.68	
1002 (4)	Plumbing Fixtures	ls	1.00	1.00	
1002 (24)	Cold Water Lines	ls	1.00	1.00	
1002 (27)	Plumbing Works	ls	1.00	1.00	
1003 (1)a1	Ceiling 4.5mm, Metal Frame, Fiber Cement Board	sq.m	3.53	3.53	
1004 (2)	Finishing Hardware	ls	1.00	1.00	
1008 (1)b	Aluminum Glass Windows, Casement Type	sq.m	8.93	8.93	
1010 (1)	Frames, Jambos, Sills, Head, Transoms and Mullions	sq	4.00	4.00	
1010 (2)a	Doors, Flush	sq.m	7.70	7.70	
1013 (2)a2	Fabricated Metal Roofing Accessory, gauge 26, Flashings	ln.m	47.60	47.60	
1014 (1)b2	Prepainted Metal Sheets, above 0.427mm, Rn Type, Long Span	sq.m	123.23	123.23	
1018 (2)	Unglazed Tiles	sq.m	32.18	32.18	
1027 (1)	Cement Plaster Finish	sq.m	368.37	368.37	
1032 (1)a	Painting Works, Masonry/Concrete	sq.m	308.37	308.37	
1032(1)c	Painting Works, Steel	sq.m	77.69	77.69	
1046 (1)a1	CHB Load Bearing (including Reinforcing Steel), 100mm	sq.m	216.47	216.47	
1047 (2)a	Structural Steel, Trusses	kgs	352.26	352.26	
1047 (2)b	Structural Steel, Purlins	kgs	374.66	374.66	
1100 (1)	Conduits, Boxes & Fittings (Conduit Works/Conduit Rough In)	ls	1.00	1.00	
1101 (33)	Wires and Wiring Devices	ls	1.00	1.00	
1102 (1)	Panelboard with Main & Branch Breakers	ls	1.00	1.00	
1103 (1)	Lighting Fixtures and Lamps	ls	1.00	1.00	

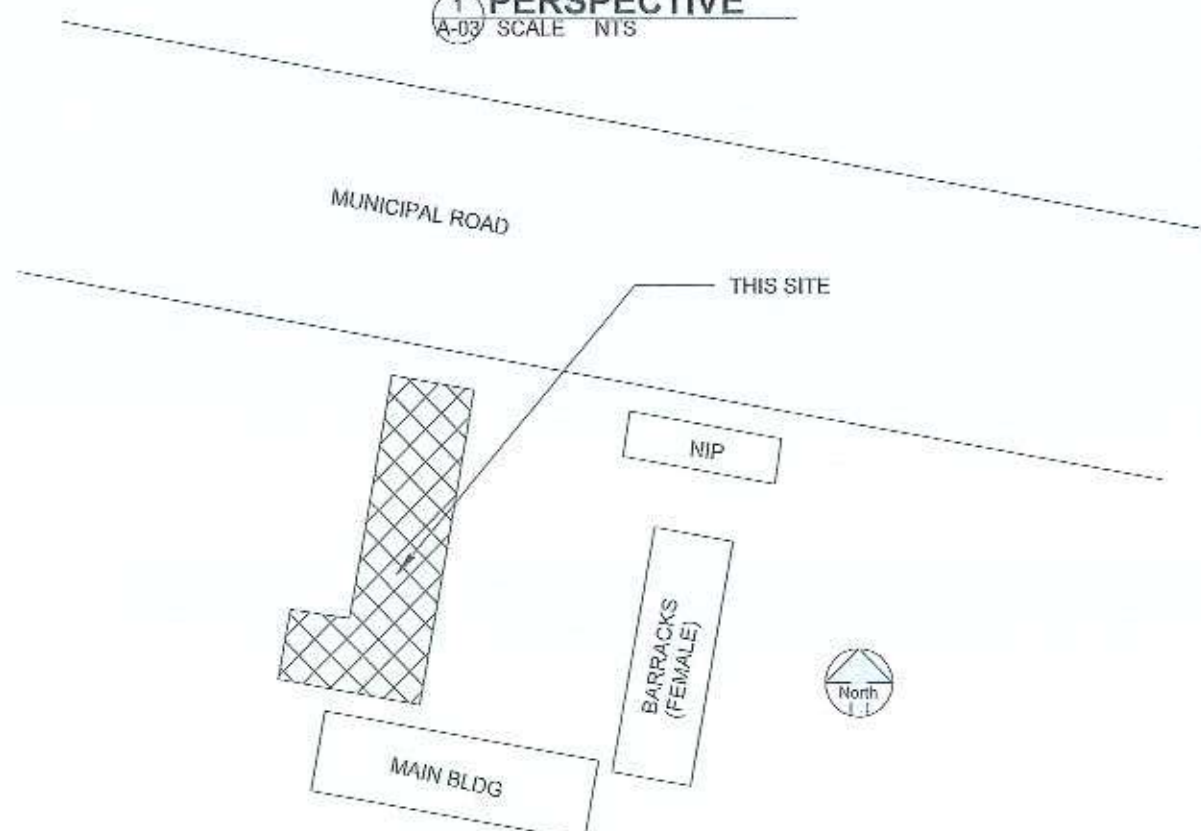
 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE NO. 02 QUIRINO DISTRICT ENGINEERING OFFICE CABARROGUE, QUIRINO	PROJECT NAME AND LOCATION: Repair/Maintenance of DILG Building, Philippine National Police Station Male Barracks, Madela, Quirino	SHEET CONTENTS: TABLE OF CONTENTS SCOPE OF WORKS BILL OF QUANTITIES	DRAFTED:  CHESTER PAUL C. TACADENA ENGINEER	REVIEWED:  GLADYS JANE S. CORPUZ DIO-CHIEF, MAINTENANCE SECTION	SUBMITTED:  RUSSELL G. LOZANO CHIEF, PLANNING & DESIGN SECTION	RECOMMENDED:  FERDINAND LIM OFFICER-IN-CHARGE, OFFICE OF THE ASSISTANT DISTRICT ENGINEER	APPROVED:  ROSALIND V. DROUZHAN DISTRICT ENGINEER	SET NO: MS A.02	SHEET NO: 2 18
	DATE: _____								



1 PERSPECTIVE
A-03 SCALE NTS



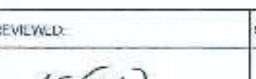
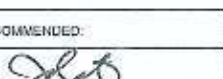
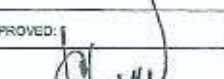
2 LOCATION MAP
A-03 SCALE NTS

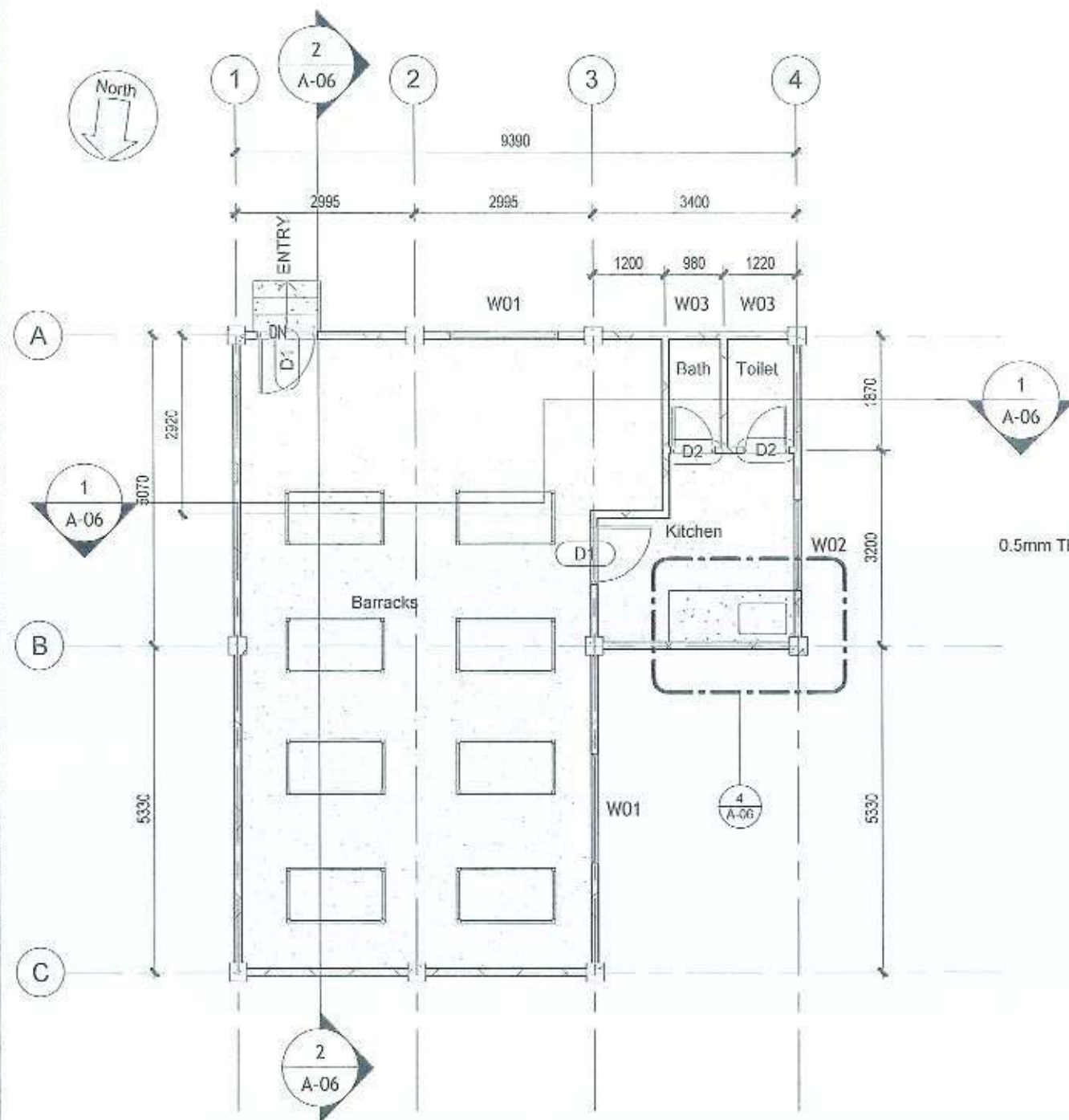


3 SITE DEVELOPMENT PLAN
A-03 SCALE NTS



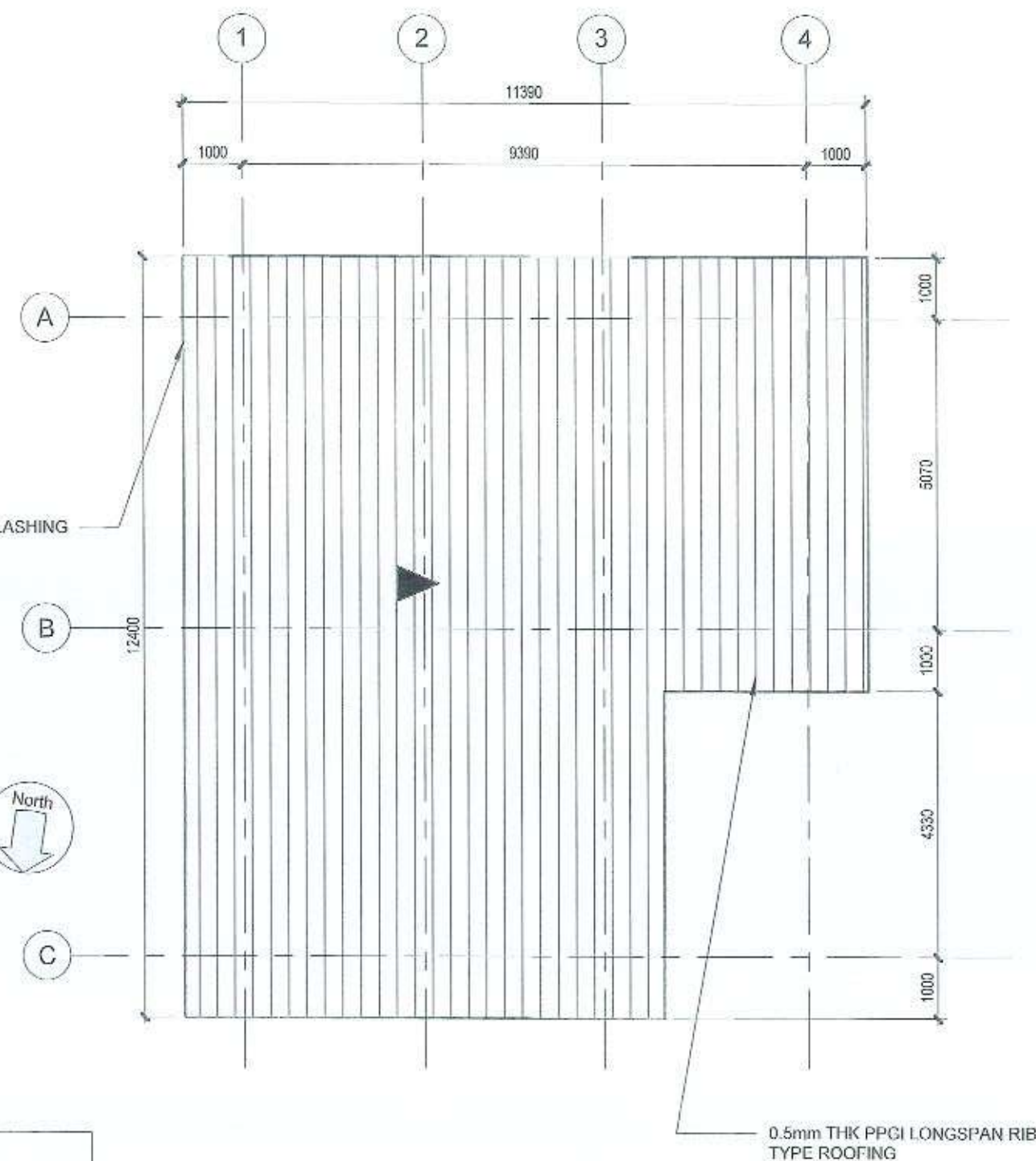
4 VICINITY MAP
A-03 SCALE NTS

 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE NO. 02 QUIRINO DISTRICT ENGINEERING OFFICE TALAMBUKANG, QUIRINO	PROJECT NAME AND LOCATION: Repair/Maintenance of DILG Building, Philippine National Police Station Male Barracks, Maddela, Quirino	SHEET CONTENTS: PERSPECTIVE SITE DEVELOPMENT PLAN VICINITY MAP LOCATION MAP	DRAWN BY:  PREPARED BY:  CHESTER P. ACACIA ENGINEER II	REVIEWED BY:  GARY S. G. CORPUZ ENGINEER I, MAINTENANCE SECTION DATE: 15 SEP 2015	SUBMITTED BY: RUSSELL G. LOZANO CHIEF, PLANNING & DESIGN SECTION DATE:	RECOMMENDED BY:  FERDINAND S. YONG M. YONG OFFICER IN CHARGE, OFFICE OF THE ASSISTANT DISTRICT ENGINEER DATE:	APPROVED BY:  ROSARIO V. DE GUZMAN DISTRICT ENGINEER DATE:	SET NO.: MS A-03 SHEET NO.: 3 18
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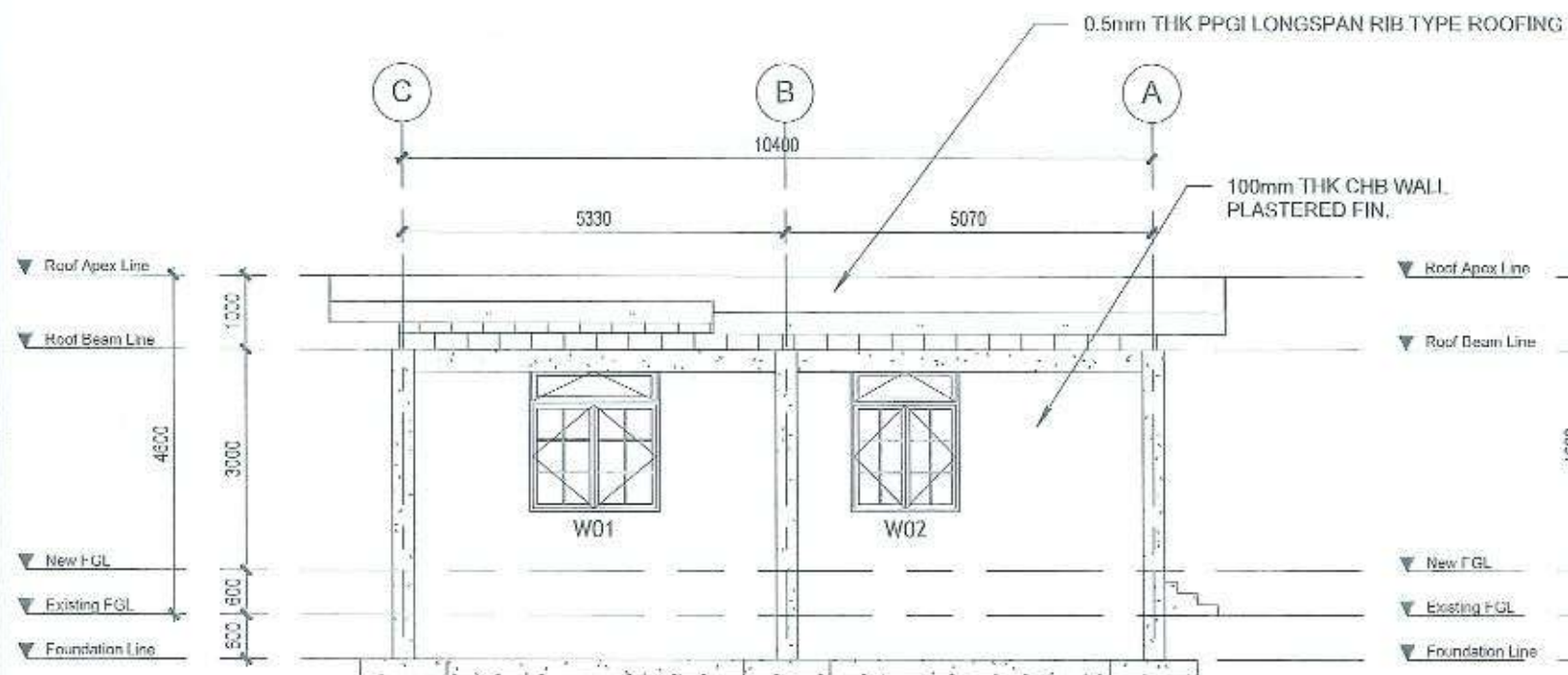
1 FLOOR PLAN
A-04 SCALE 1 : 100 M

SCHEDULE OF FLOOR FINISH		
Room	Area	Floor Finish
Barracks	63.57 m ²	Plain Cement Finish
Kitchen	8.74 m ²	Unglazed Tiles
Toilet	1.93 m ²	Unglazed Tiles
Bath	1.51 m ²	Unglazed Tiles

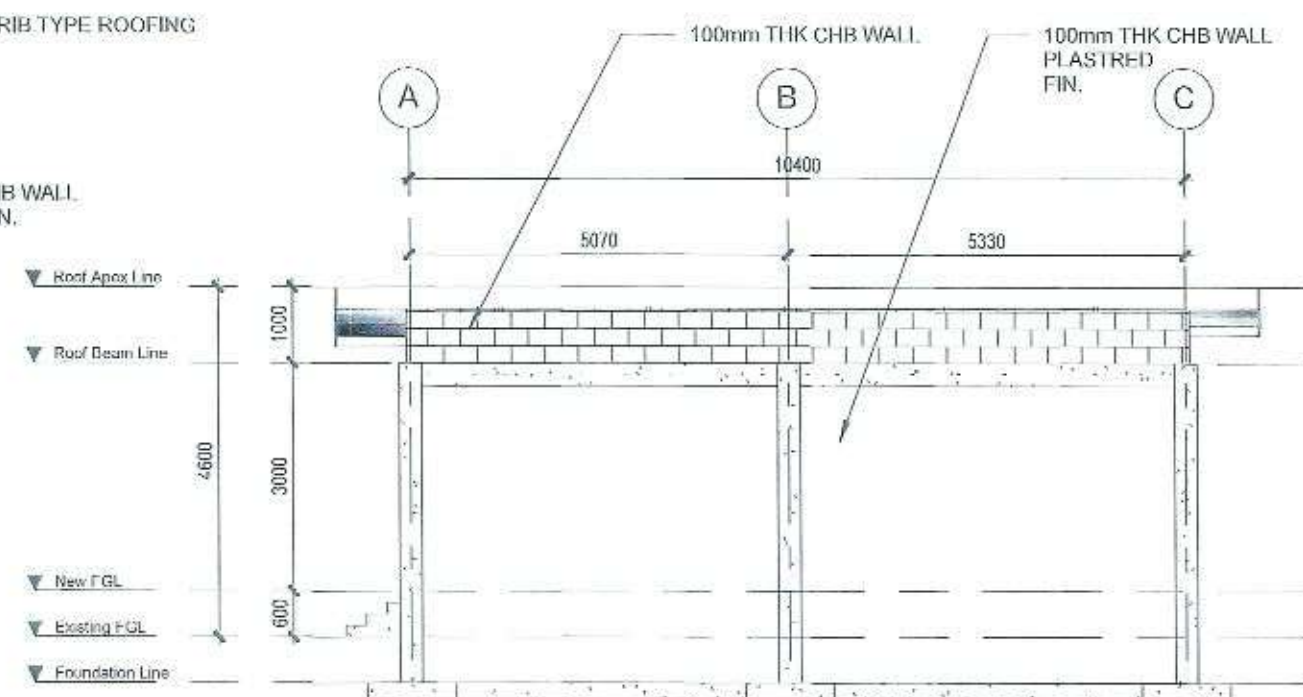


2 ROOF PLAN
A-04 SCALE 1 : 100 M

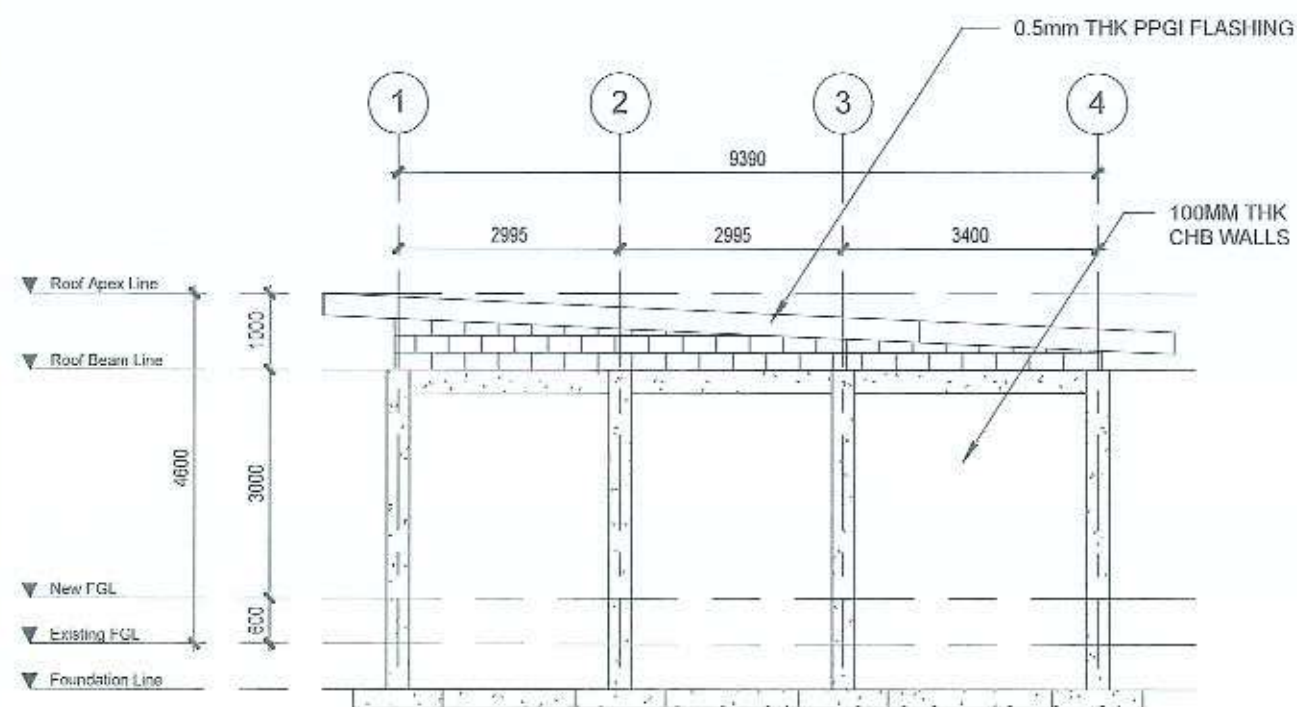
REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE NO. 02 QUIRINO DISTRICT ENGINEERING OFFICE CABARDOSS, QUIRINO	PROJECT NAME AND LOCATION:	SHEET CONTENTS:	DRAFTED:	REVIEWED:	SUBMITTED:	RECOMMENDED:	APPROVED:	SET NO.:	SHEET NO.:
	Repair/Maintenance of DILG Building, Philippine National Police Station Male Barracks, Madaya, Quirino	FLOOR PLAN ROOF PLAN SCHEDULE OF FLOOR FINISH	GLADYS JANE G. CORPUZ DIPLOMA IN ARCHITECTURE DATE: _____ CHESTER PAUL C. YACADENA ENGINEER II DATE: _____	RUSSELL G. LOZANO CHIEF, PLANNING & DESIGN SECTION DATE: _____	FERDINAND ANGGIO M. YTING OFFICER-IN-CHARGE, OFFICE OF THE ASSISTANT DISTRICT ENGINEER DATE: _____	ROSARIO V. DE GUZMAN DISTRICT ENGINEER DATE: _____	MS A-04	4 18	



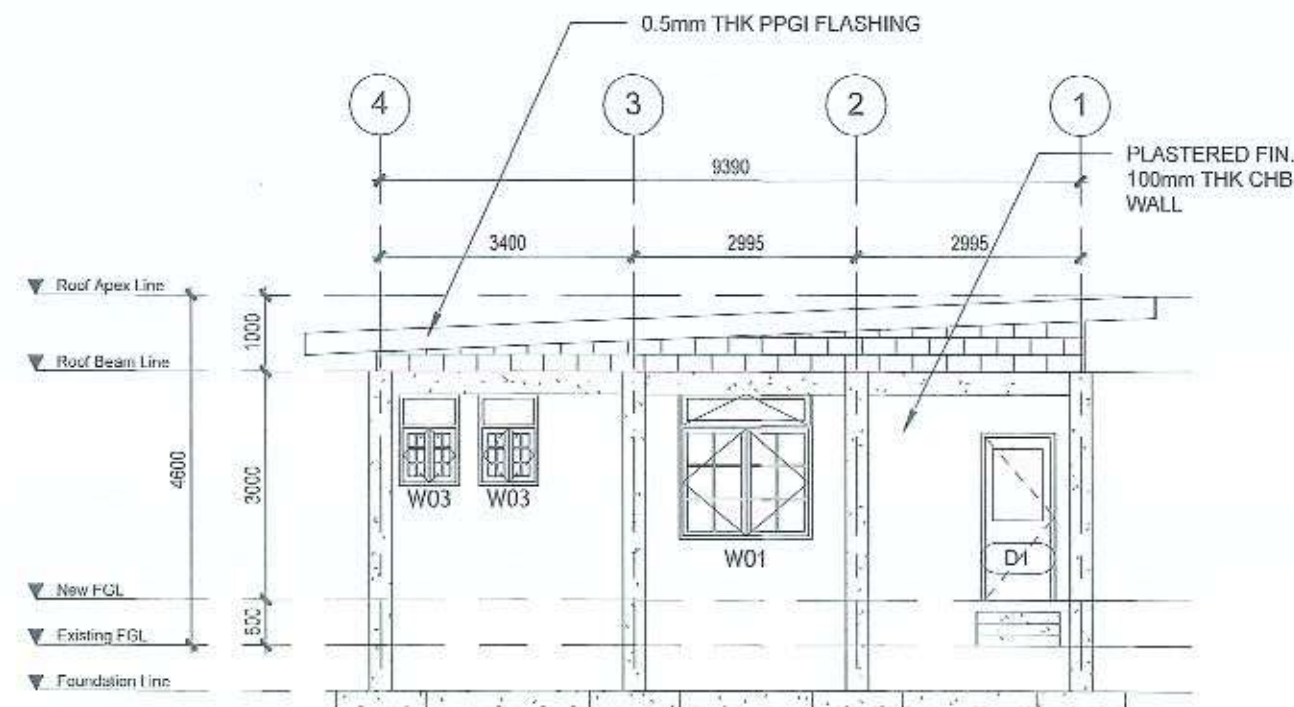
1 LEFT ELEVATION
A-05 SCALE 1:100 M



2 FRONT ELEVATION
A-05 SCALE 1:100 M



3 RIGHT ELEVATION
A-05 SCALE 1:100 M



4 REAR ELEVATION
A-05 SCALE 1:100 M



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE NO. 02

QUIRINO
DISTRICT ENGINEERING OFFICE
CABANRIGUAN, QUIRINO

PROJECT NAME AND LOCATION:
Repair/Maintenance of DILG Building, Philippine
National Police Station Male Barracks, Madula,
Quirino

SHEET CONTENTS:
ELEVATION VIEWS

DRAFTED: [Signature]
PREPARED: [Signature]
CHESTER PAUL G. TACADENA
ENGINEER II

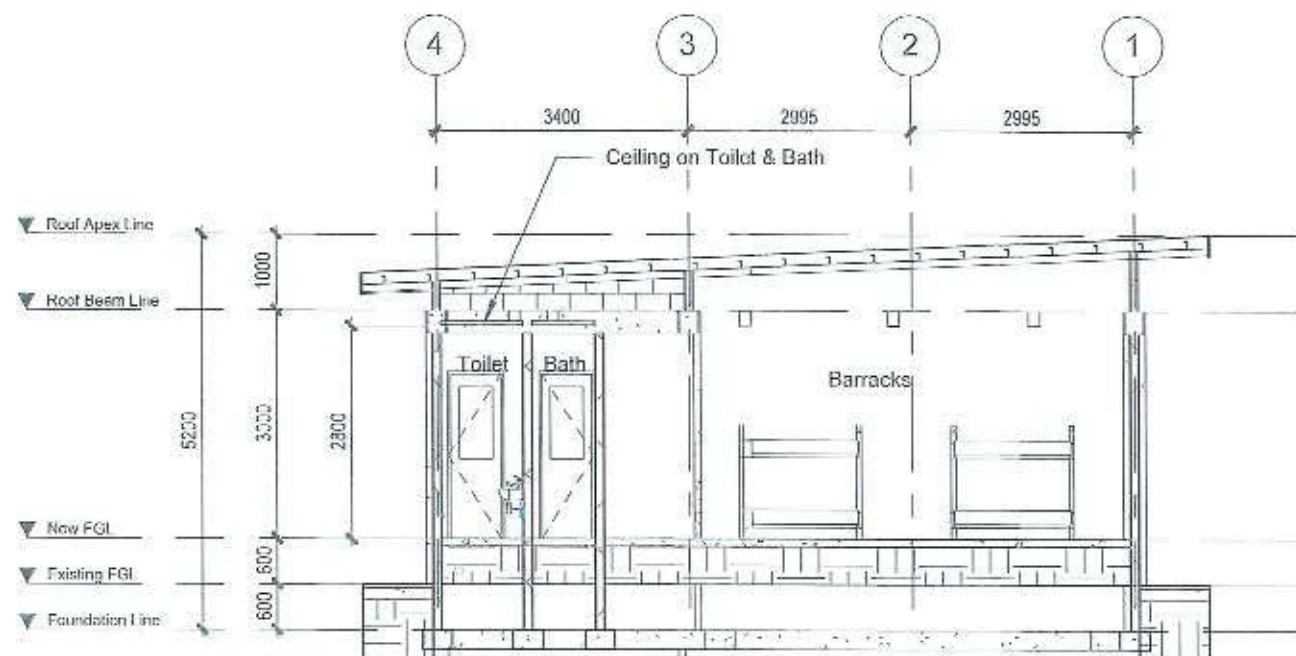
REVIEWED: [Signature]
GLADYS SANEY CORPUZ
OIC-CHIEF, MAINTENANCE SECTION
DATE: [Blank]

SUBMITTED: [Signature]
RUSSELL G. LOZANO
CHIEF, PLANNING & DESIGN SECTION
DATE: [Blank]

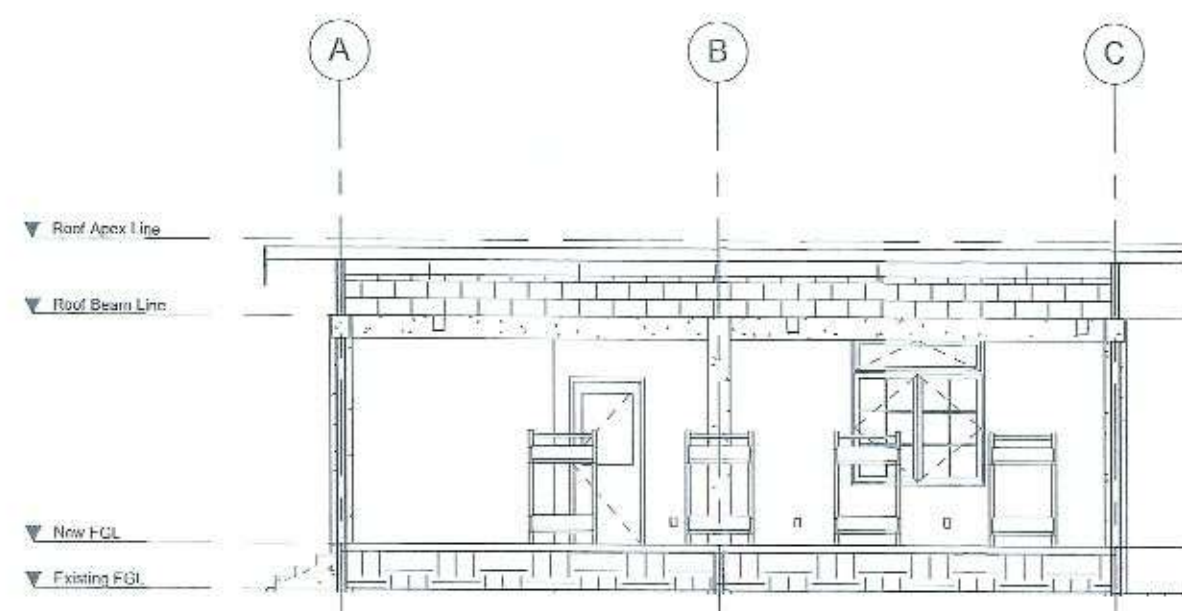
RECOMMENDED: [Signature]
FERDINAND JINGCO N. YTING
OFFICER-IN-CHARGE, OFFICE OF THE
ASSISTANT DISTRICT ENGINEER
DATE: [Blank]

APPROVED: [Signature]
ROSARIO Y. DE GUZMAN
DISTRICT ENGINEER
DATE: [Blank]

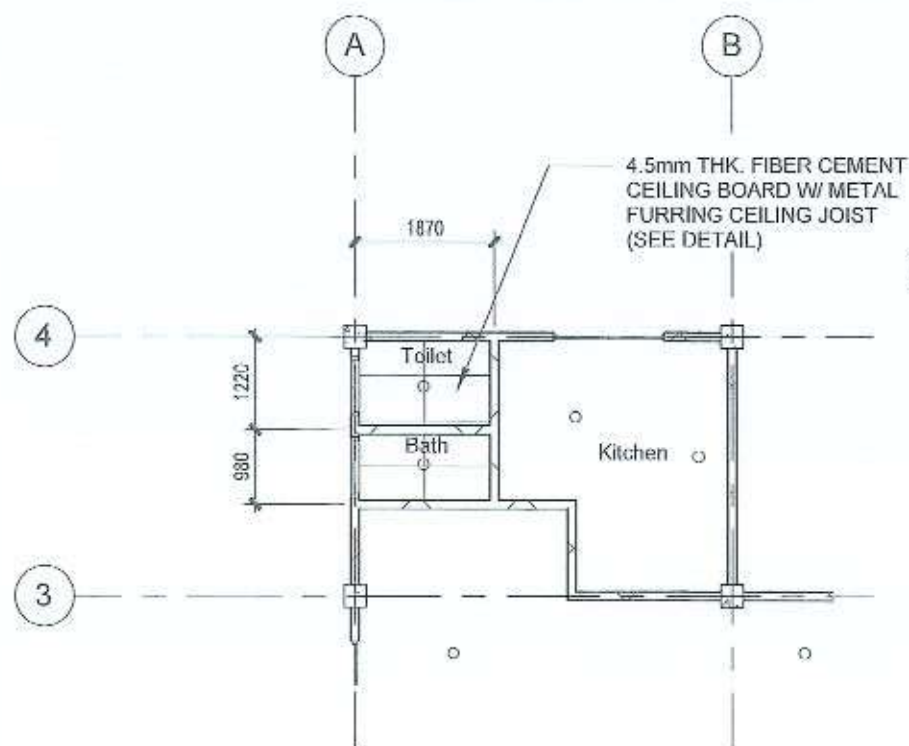
SHEET NO.: MS
A-05
SHEET NO.: 5
18



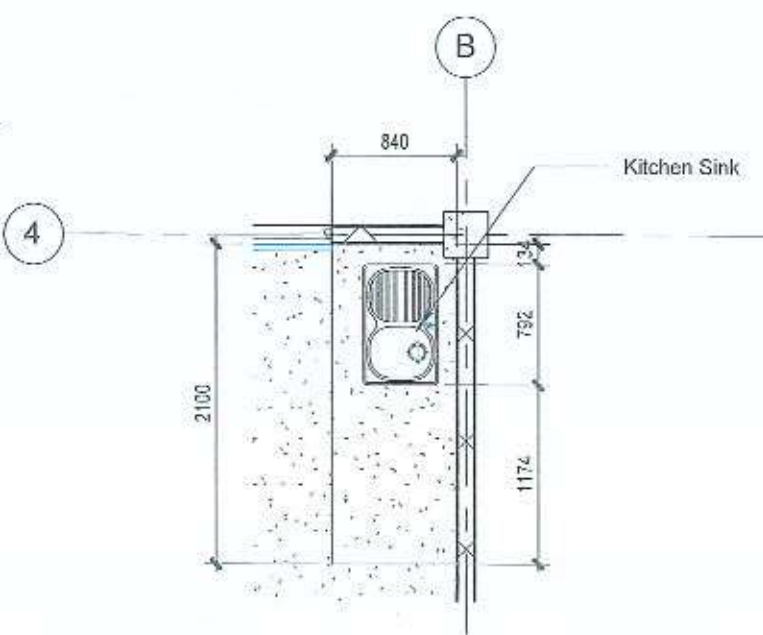
1 CROSS SECTION
A-06 SCALE 1:100 M



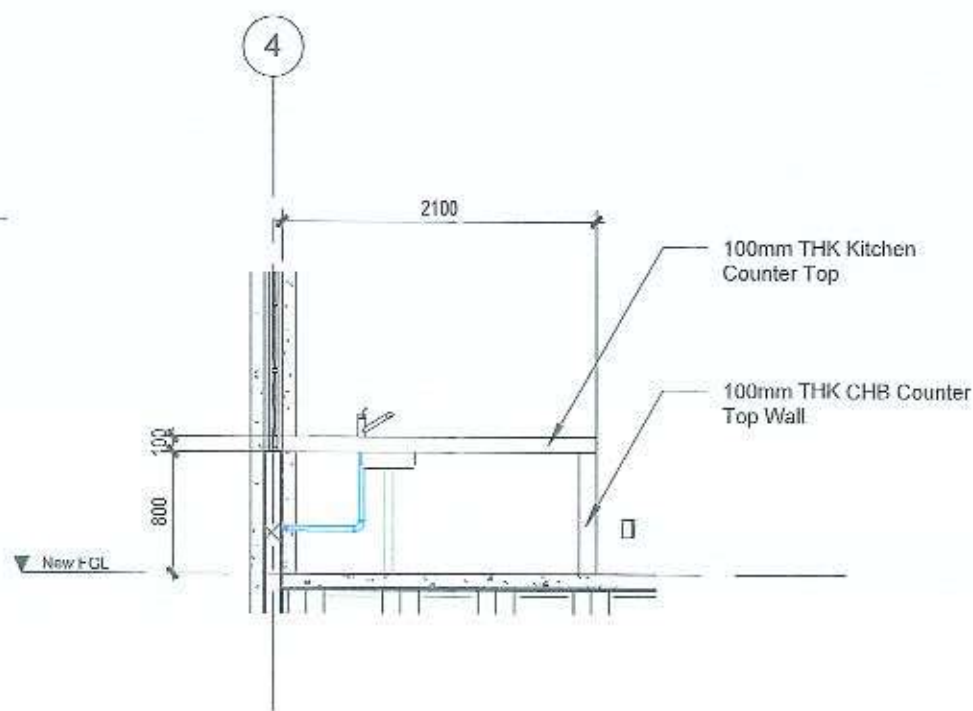
2 LONGITUDINAL SECTION
A-06 SCALE 1:100 M



3 REFLECTED CEILING PLAN @ T&B
A-06 SCALE 1:100 M



4 PLAN
A-06 SCALE 1:50 M



5 SECTION
A-06 SCALE 1:50 M



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE NO. 02
QUIRINO
DISTRICT ENGINEERING OFFICE
CABARROGUE, QUIRINO

PROJECT NAME AND LOCATION:
Repair/Maintenance of DILG Building, Philippine
National Police Station Male Barracks, Madela,
Quirino

SHEET CONTENTS:
SECTION VIEWS
KITCHEN PLANS
CEILING PLANS

DRAFTED: *[Signature]*
PREPARED: *[Signature]*
CHESTER PAUL M. MANDAY
PROJECT I

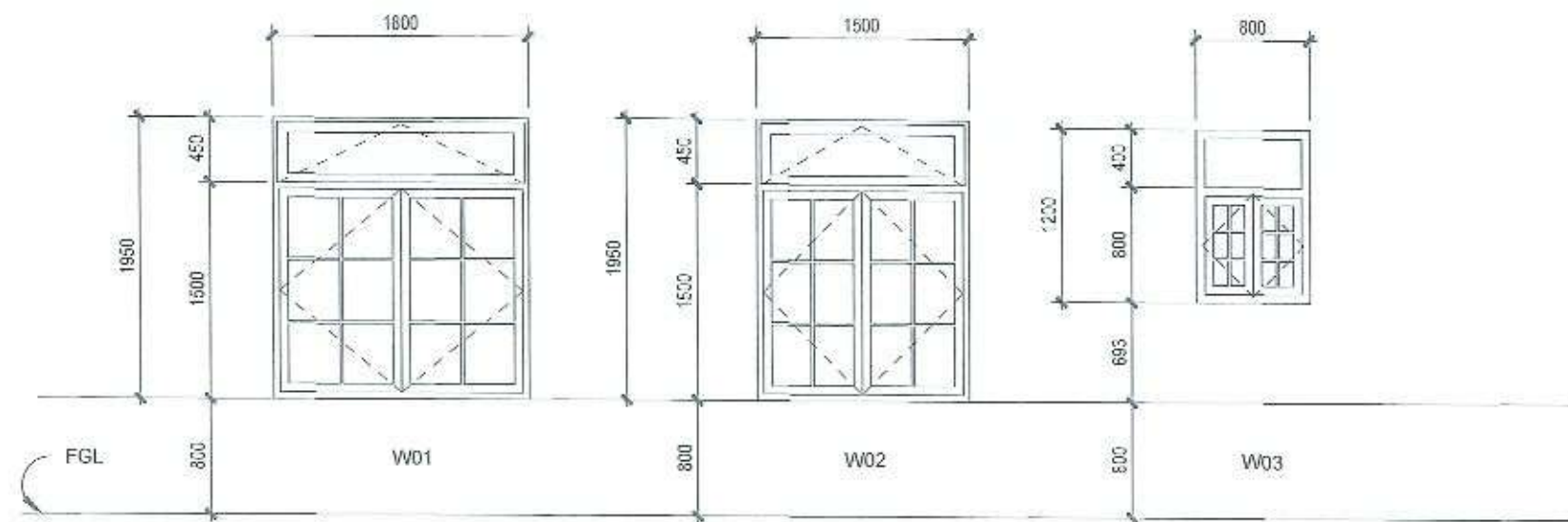
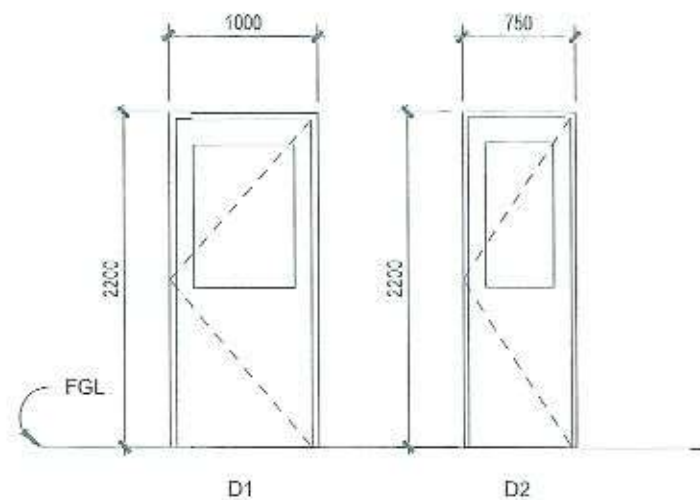
REVIEWED: *[Signature]*
GLADYS JANE G. CORPUZ
OIC-CHIEF MAINTENANCE SECTION
DATE: *[Date]*

SUBMITTED: *[Signature]*
RUSSELL G. LOZANO
CHIEF, PLANNING & DESIGN SECTION
DATE: *[Date]*

RECOMMENDED: *[Signature]*
FERDINAND J. M. YTING
OFFICER-IN-CHARGE - OFFICE OF THE
ASSISTANT DISTRICT ENGINEER
DATE: *[Date]*

APPROVED: *[Signature]*
ROSARIO V. DE GUZMAN
DISTRICT ENGINEER
DATE: *[Date]*

SET NO: MS
A-06
SHEET NO: 6
18



Schedule of Doors

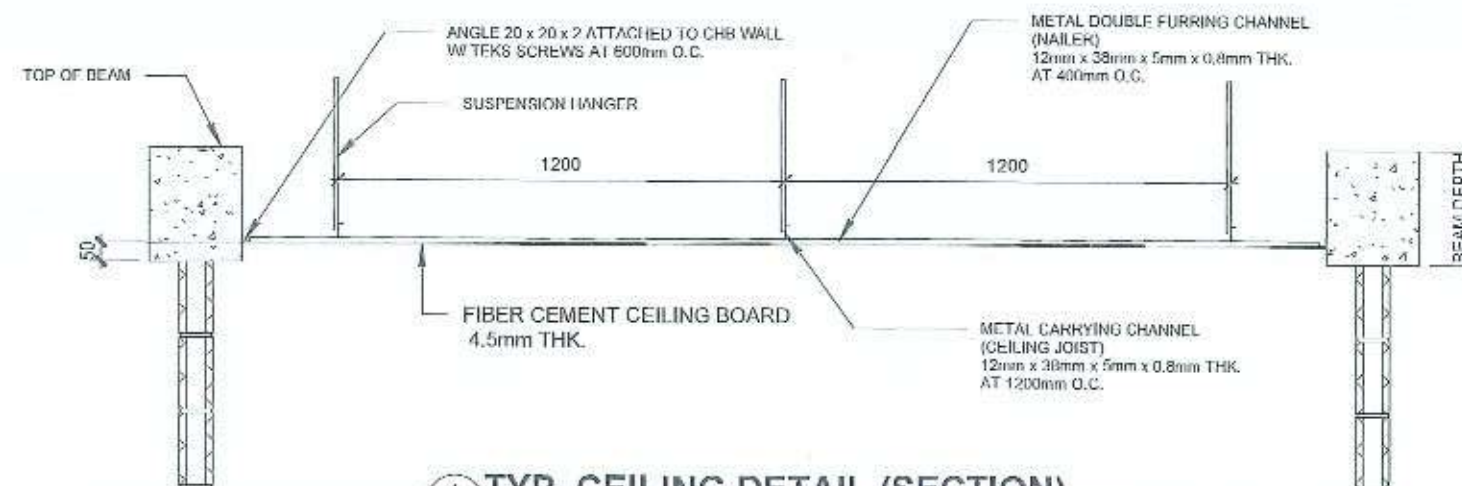
Type	Width	Height	Location	Description
D1	1000	2200	Entrance	Wooden Panel Door on 50x150mm Wood Jambs/Frames
D1	1000	2200	Dirty Kitchen	Wooden Panel Door on 50x150mm Wood Jambs/Frames
D2	750	2200	Toilet	Hollow Core Flush Type Hinged Door on 50x150mm Wood Jambs/Frames
D2	750	2200	Bath	Hollow Core Flush Type Hinged Door on 50x150mm Wood Jambs/Frames

DOOR SCHEDULE
SCALE 1:50 M

Schedule of Windows

Type	Height	Width	Location	Description
W01	1500	1800	Barracks	Casement Type Window w/ 6mm Thick Colored Glass on Powder Coated Frame Finish
W01	1500	1800	Barracks	Casement Type Window w/ 6mm Thick Colored Glass on Powder Coated Frame Finish
W02	1500	1500	Dirty Kitchen	Casement Type Window w/ 6mm Thick Colored Glass on Powder Coated Frame Finish
W03	800	800	Toilet	Casement Type Window w/ 6mm Thick Colored Glass on Powder Coated Frame Finish
W03	800	800	Bath	Casement Type Window w/ 6mm Thick Colored Glass on Powder Coated Frame Finish

WINDOW SCHEDULE
SCALE 1:50 M



1
A-07 TYP. CEILING DETAIL (SECTION)
SCALE 1:20 M



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE NO. 02

QUIRINO
DISTRICT ENGINEERING OFFICE
CABANACULAN, QUIRINO

PROJECT NAME AND LOCATION:
Repair/Maintenance of DILG Building, Philippine
National Police Station Male Barracks, Mardela,
Quirino

SHEET CONTENTS:

TYPICAL DETAILS FOR CEILING
WINDOW SCHEDULE
DOOR SCHEDULE

DRAFTED:
CHECKED: *[Signature]*
PREPARED: *[Signature]*
CHESTER PAUL S. TACADENA
ENGINEER

REVIEWED:
GLADYS JANE S. CORPUZ
OIC-CHIEF PLANNING & DESIGN SECTION
DATE: *[Date]*

SUBMITTED:
RUSSELL G. LOZANO
CHIEF, PLANNING & DESIGN SECTION
DATE: *[Date]*

RECOMMENDED:
FERDINAND JINSGO M. YTING
OFFICIAL IN CHARGE, OFFICE OF THE
ASSISTANT DISTRICT ENGINEER
DATE: *[Date]*

APPROVED:
ROSARIO V. DE GUZMAN
DISTRICT ENGINEER
DATE: *[Date]*

SET NO: MS
A-07
SHEET NO: 7
18

1.0 STANDARDS AND REFERENCES

THE FOLLOWING SHALL GOVERN THE DESIGN, FABRICATION AND CONSTRUCTION OF THE PROJECT.

1.1 NATIONAL STRUCTURAL CODE OF THE PHILIPPINES (NSCP) VOL1, 7TH EDITION, 2015

2.0 DESIGN CRITERIA

2.1 LOADINGS

2.1.1 DEAD LOAD

CONCRETE	24.00 kN/m ³
STEEL	77.00 kN/m ³
100mm CHB	2.98 kPa

2.1.2 LIVE LOAD

ROOF LIVE LOAD	0.60 kPa
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2.1.3 WIND LOAD (NSCP 2015)

BASIC WIND SPEED	300 Kph
VELOCITY PRESSURE COEF	0.85
EXPOSURE	B

2.1.4 SEISMIC LOAD (NSCP 2015)

SEISMIC IMPORTANCE FACTOR	1.0
SOIL PROFILE TYPE	Sd
SEISMIC ZONE	0.4
SEISMIC SOURCE TYPE	A
N _a	1
N _v	1

2.2 DESIGN STRESS

CONCRETE	21.00 MPa
16mm AND GREATER	280 MPa
LESS THAN 16mm	230 MPa
CHB	3.45 MPa

3.0 FOUNDATION

3.1 SOIL BEARING CAPACITY ASSUMED TO BE 200 KPa

3.2 NO FOOTING SHALL REST ON FILL

3.3 ALL FOOTINGS SHALL REST ON 100mm THK WELL COMPACTED GRAVEL BASE COURSE

3.4 BACKFILL SHALL BE PLACED IN 200mm THK LAYER AND SHALL BE COMPACTED TO 95% MAXIMUM

DRY DENSITY

3.5 WHERE LOOSE/SOFT MATERIAL IS ENCOUNTERED AT DEPTH OF EMBEDMENT

INDICATED, EXCAVATED

TO FIRM LAYER AND REPLACE LOOSE/SOFT MATERIALS UNDERNEATH THE FOOTING

WITHIN THE FOOTING AREA

PLUS 1/2 DEPTH OF SOFT MATERIAL ON ALL SIDES WITH SELECT GRANULAR BACKFILL.

COMPACT SELECT

GRANULAR BACKFILL TO 95% OF MAXIMUM DRY DENSITY

4.0 MATERIALS

4.1 CONCRETE

4.1.1 CONCRETE COVER OVER REINFORCING BARS SHALL BE AS FOLLOW:

4.1.1.1 FOOTINGS, FOOTING TIE BEAMS, (CAST AGAINST EARTH)	75mm
4.1.1.2 BEAMS AND COLUMNS (TO STIRRUPS AND TIES)	40mm
4.1.1.3 SUSPENDED SLAB	20mm

4.1.2 BEFORE CONCRETE IS POURED, CHECK WILL ALL TRADES TO ENSURE PROPER

PLACEMENT OF ALL OPENINGS,

SLEEVES, CURBS, CONDUITS, ETC RELATING TO THE WORK.

4.1.3 UNLESS INDICATED OTHERWISE ON PLAN, THE CONCRETE CLASS AND STRENGTH SHALL BE AS FOLLOWS:

4.1.3.1 SLABS, CANOPY, STAIRS, COLUMN, AND BEAM	21.00 MPa
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4.1.3.2 FOOTINGS	21.00 MPa
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4.1.4 DESIGN OF CONCRETE MIX SHALL MEET THE DESIGN CONCRETE STRENGTH.

4.1.5 CONCRETE SHALL BE DEPOSITED, VIBRATED AND CURED IN ACCORDANCE WITH THE SPECIFICATIONS.

4.1.6 THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL THE PLACING SEQUENCE FOR ALL CONCRETE WORKS

4.2 REINFORCING BARS

4.2.1 ALL REINFORCING BARS SHALL BE CLEAN OF RUST, GREASE OR OTHER MATERIALS THAT WILL IMPAIR BOND.

4.2.2 ALL REINFORCING BARS SHALL BE ACCURATELY AND SECURELY PLACED BEFORE POURING CONCRETE OR APPLYING MORTAR OR GROUT.

4.2.3 LAPPED SPLICES SHALL BE STAGGERED WHERE POSSIBLE.

4.2.4 UNLESS OTHERWISE INDICATED, SPLICING OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH ACI-318M.

EXCEPT THAT THE MINIMUM LAP SLICE SHALL BE 40 BAR DIAMETER BUT NOT LESS THAN 600mm.

4.2.5 UNLESS SHOWN OTHERWISE ON PLANS, SPLICES SHALL BE AS FOLLOWS:

4.2.5.1 INTERMEDIATE BEAMS: TOP BARS SHALL BE SPLICED AT MIDSPAN AND BOTTOM BARS AT THE SUPPORT.

4.2.5.2 BEAMS FRAMING TO COLUMNS: TOP BAR SHALL BE SPLICED AT MIDSPAN AND BOTTOM BARS SHALL NOT BE

SPLICED WITHIN THE COLUMN OR WITHIN A DISTANCE OF TWICE THE MEMBER DEPTH FROM THE FACE OF THE COLUMN.

THE SPLICED LENGTH SHALL NOT BE LESS THAN 600mm.

4.2.5.3 COLUMNS: LAP SPLICES SHALL BE MADE WITHIN THE CENTER HALF OF HEIGHT AND THE SPLICE SHALL NOT

BE LESS THAN 30 BAR DIAMETER. WELDING OR THE USE OF APPROVED MECHANICAL DEVICES MAY BE PERMITTED

PROVIDED NOT MORE THAN ALTERNATE BARS ARE WELDED OR SPLICED AT ANY LEVEL AND THE MINIMUM VERTICAL

DISTANCE BETWEEN TWO ADJACENT BAR SPLICES SHALL BE 600mm.

4.2.5.4 CHB WALLS: VERTICAL BARS SHALL BE SPLICED AT THE TOP OF WALL. FOOTINGS OR FOOTING TIE BEAMS AND

THE BOTTOM OF REINFORCED CONCRETE LINTEL BEAMS OR BEAMS.

4.2.6 UNLESS OTHERWISE INDICATED: ALL BEAMS TERMINATING AT A COLUMN SHALL HAVE TOP AND BOTTOM BARS

EXTENDING TO THE FAR FACE OF THE COLUMN, TERMINATING IN A STANDARD 90 DEGREE HOOK LENGTH OF ANCHORAGE

SHALL NOT BE LESS THAN 600mm.

4.2.7 SHOP DRAWING FOR REINFORCEMENT SHALL BE SUBMITTED FOR APPROVAL OF THE ENGINEER PRIOR TO

FABRICATION & INSTALLATION.

4.2.8 DEVELOPMENT LENGTH (L_d) OF REINFORCING BARS SHALL BE AS FOLLOWS:

10mm	170mm
12mm	220mm
16mm	270mm
20mm	380mm
25mm	600mm

4.3 STRUCTURAL STEEL

4.3.1 ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A36 AND SHALL HAVE A MINIMUM YIELD STRESS, $F_y = 248$ MPa.

4.3.2 ALL STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE AISC SPECIFICATIONS AND CODE OF STANDARD PRACTICE AS AMENDED TO DATE.

4.3.3 ALL BOLTS SHALL CONFORM TO ASTM A-307 UNLESS OTHERWISE INDICATED.

4.3.4 SHOP AND FIELD WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1 AND PERFORMED BY QUALIFIED WELDERS.

4.3.5 UNLESS OTHERWISE INDICATED, WELDING ELECTRODES SHALL BE E60xx.

4.3.6 NO STEEL SHALL BE FABRICATED AND ERECTED UNTIL SHOP DRAWINGS HAVE BEEN APPROVED BY THE STRUCTURAL ENGINEER.

4.3.7 WELD USING E60xx ELECTRODES, $f_y = 93.77$ MPa.

4.3.8 ANCHOR BOLTS CONFORM WITH ASTM A-307, $f_t = 96.60$ MPa, $f_v = 69$ MPa.

4.4 CONCRETE HOLLOW BLOCK (CHB)

4.4.1 UNLESS OTHERWISE INDICATED, CHB USED IN THIS WORK SHALL HAVE MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 3.45 MPa.

4.4.2 ALL CHB CELLS SHALL BE FILLED SOLIDLY WITH GROUT.

4.5 FALSEWORK

4.5.1 ALL FALSEWORK SHALL BE DESIGNED BY THE CONTRACTOR SUBJECT TO THE APPROVAL OF THE ENGINEER.

4.6 FORMWORKS

4.6.1 ALL FORMWORKS SHALL BE CONSTRUCTED SUCH THAT IT WILL NOT YIELD UNDER LOAD AND SHALL BE SUCH AS TO AVOID THE FORMATION OF PINS IN THE INTERSECTIONS OF SURFACES. ALL CORNER OF CONCRETE SHALL BE CHAMFERED TO 20mm UNLESS NOTED OTHERWISE IN THE DRAWINGS.

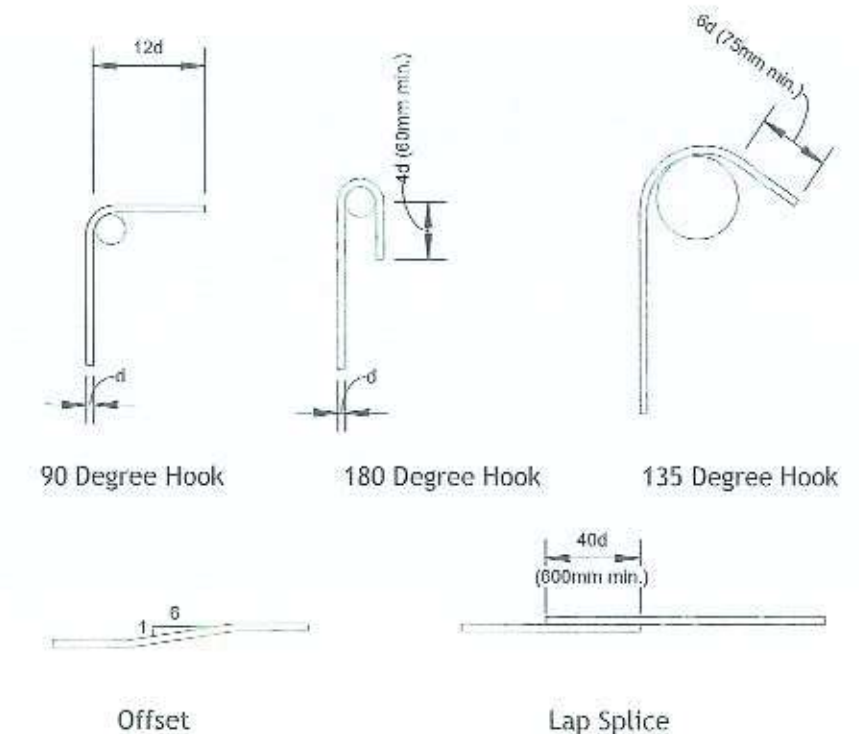
4.6.2 STRIPPING OF FORMS AND SHORES SHALL BE DESIGNED BY THE ENGINEER.

4.6.3 THE FOLLOWING MAY BE USED AS GUIDE:

4.6.3.1 SHORING UNDER GIRDERS AND BEAMS	14 DAYS
4.6.3.2 COLUMN	7 DAYS
4.6.3.3 SIDES OF BEAMS AND OTHER SURFACE	2 DAYS

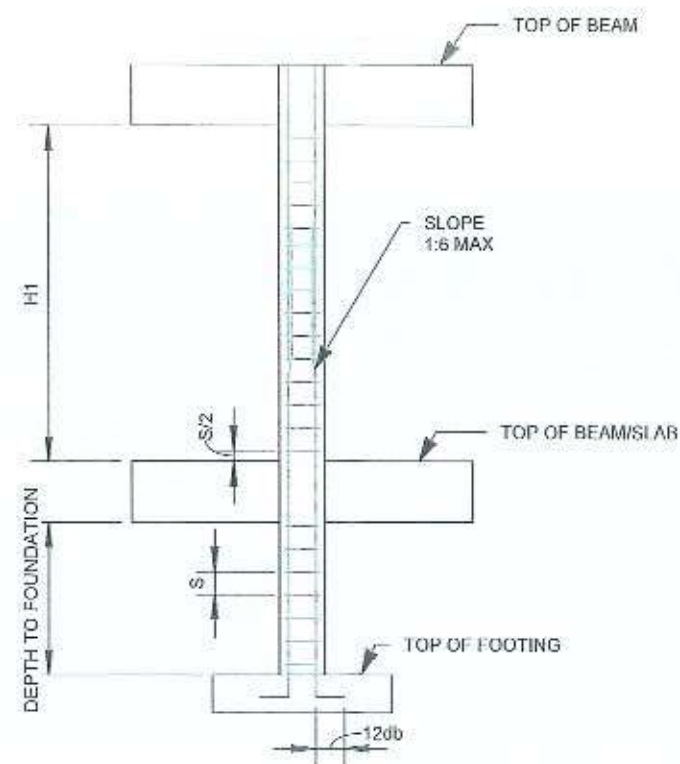
4.7 PROTECTION AND CURING

4.7.1 PROTECTION AND CURING SHALL BE PROTECTED FROM HARMFUL EFFECTS OF THE SUN, WIND, RUNNING WATER, AND SHALL BE KEPT DAMP FOR AT LEAST 7 DAYS.

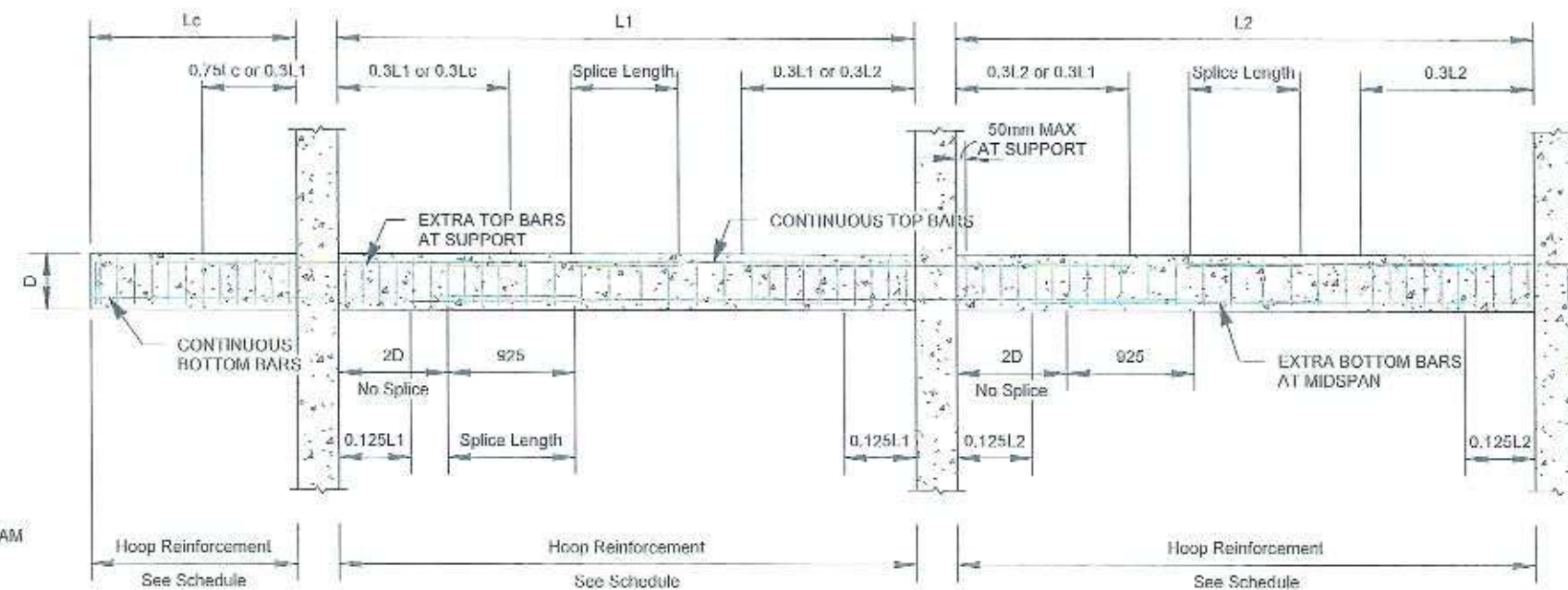


2 TYP. REINFORCEMENT DETAILS
S-01 SCALE 1:10 M

	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE NO. 02 QUIRINO DISTRICT ENGINEERING OFFICE CAGAYAN DE ORO, CAGAYAN	PROJECT NAME AND LOCATION: Repair/Maintenance of DILG Building, Philippine National Police Station Male Barracks, Maddela, Quirino	SHEET CONTENTS:	CRAFTED: PREPARED: CHESTER PAUL B. TACADENA ENGINEER I	REVIEWED: GLADYS ARCE CORPUZ OIC-CHIEF MAINTENANCE SECTION DATE:	SUBMITTED: RUSSELL G. LOZANO CHIEF, PLANNING & DESIGN SECTION DATE:	RECOMMENDED: FERDINAND ANDINO M. YTING OFFICER-IN-CHARGE, OFFICE OF THE ASSISTANT DISTRICT ENGINEER DATE:	APPROVED: ROSALINDA B. RUIZMAN DISTRICT ENGINEER DATE:	SFT NO.: MS S-01	SHEET NO.: 8 18
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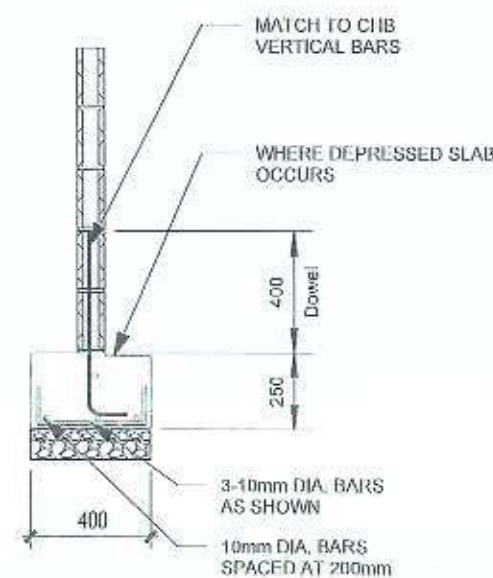


1
S-02
TYPICAL COLUMN DETAILS
SCALE 1:50 M

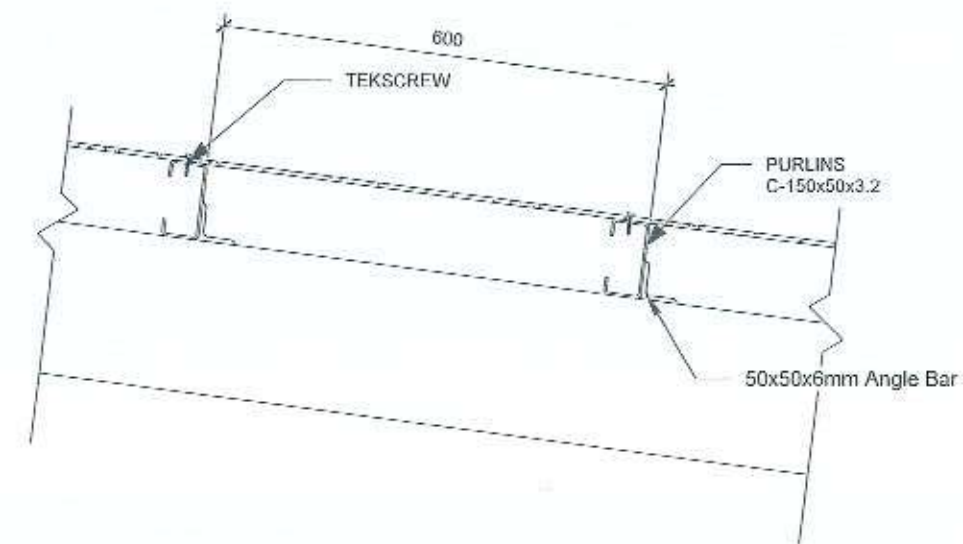


- STRUCTURAL NOTES:
1. SEE TABLE OF LAP SPLICE & ANCHORAGE LENGTHS SHOWN ON SHEET.
 2. LAP SPLICE SHALL BE LOCATED ONLY WITHIN THE LAP SPLICE ZONE.
 3. TOP & BOTTOM BARS MAY BE LAP SPICED ONLY ON ONE LOCATION FOR EACH STRING OF BEAMS.
 4. CLOSED HOOPS WITH A 135 DEGREE BEND SHALL 50mm MAX FROM THE FACE OF THE SUPPORT.
 5. SPACING OF STIRRUPS ON LAP SPLICE SHALL BE SPACED @ 100mm O.C. MAXIMUM.
 6. NO SPLICE SHALL BE ALLOWED 2D FROM THE FACE OF THE SUPPORT

2
S-02
TYPICAL BEAM DETAILS
SCALE 1:50 M



3
S-02
WF1 DETAILS
SCALE 1:25 M



4
S-02
TYP. ROOF TO PURLIN CONN. DETAIL
SCALE 1:10 M



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE NO. 02

QUIRINO
DISTRICT ENGINEERING OFFICE
CABARROGUS, QUIRINO

PROJECT NAME AND LOCATION:
Repair/Maintenance of Dil G Building, Philippine
National Police Station Male Barracks, Maddela,
Quirino

SHEET CONTENTS:
TYPICAL DETAILS

DRAFTED: *[Signature]*
PREPARED: *[Signature]*
CHESTER PAUL C. TACADENA
ENGINEER

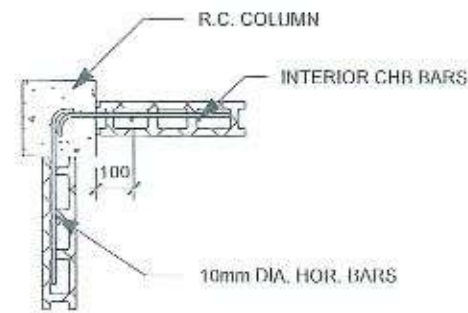
REVIEWED: *[Signature]*
GLADYS DAVE G. CORPUZ
CHIEF, MAINTENANCE SECTION
DATE: *[Date]*

SUBMITTED: *[Signature]*
RUSHEL G. LOZANO
CHIEF, PLANNING & DESIGN SECTION
DATE: *[Date]*

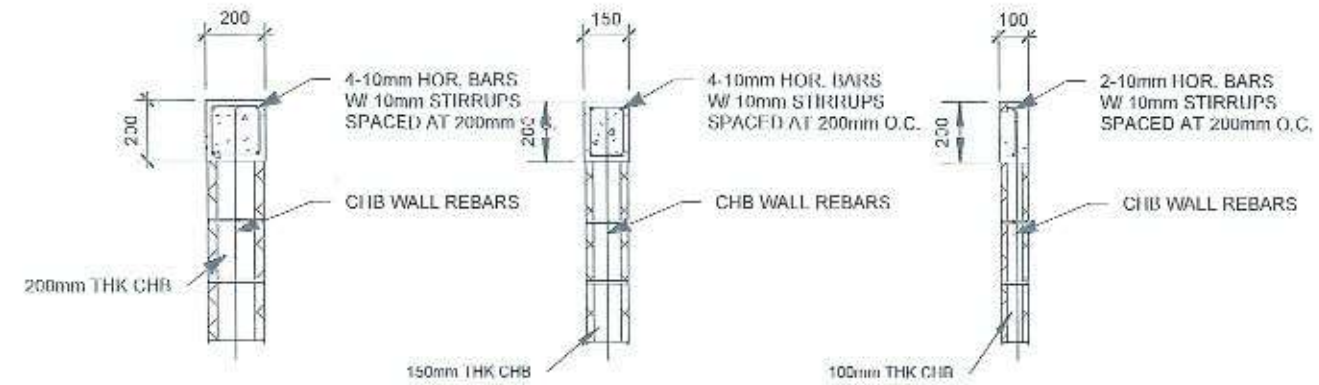
RECOMMENDED: *[Signature]*
FERDINAND JINGGO M. YTING
CHIEF, IN-CHARGE, OFFICE OF THE
ASSISTANT DISTRICT ENGINEER
DATE: *[Date]*

APPROVED: *[Signature]*
ROSARIO V. DE GUZMAN
DISTRICT ENGINEER
DATE: *[Date]*

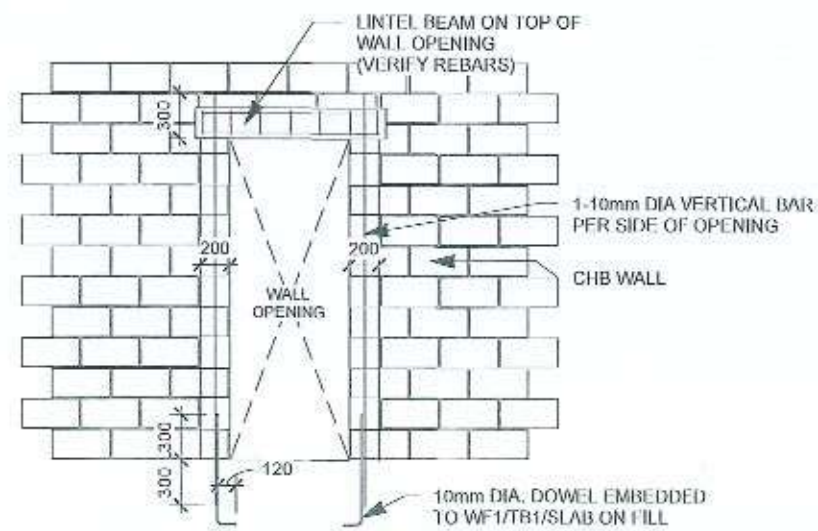
SET NO. MS
SHEET NO. 9
S-02 18



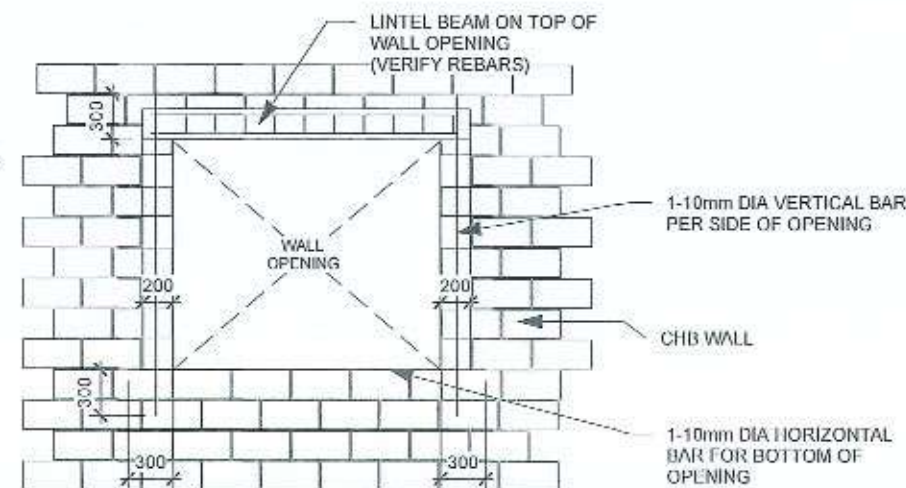
1 RC CHB ANCHORAGE DETAIL
S-03 SCALE 1 : 20 M



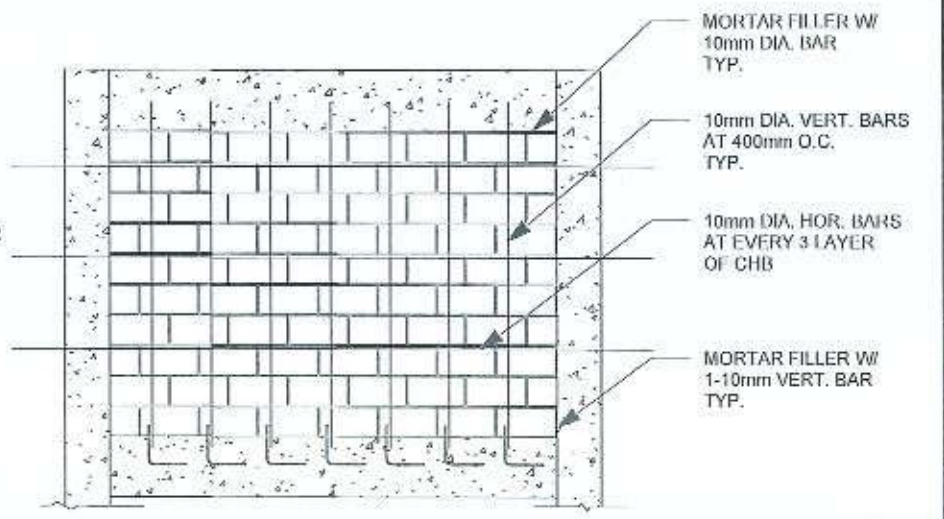
4 TYP. LINTEL BEAM DETAILS
S-03 SCALE 1 : 25 M



2 TYP. CHB WALL (DOOR)
S-03 SCALE 1 : 50 M



3 TYP. CHB WALL (WINDOW)
S-03 SCALE 1 : 50 M



5 TYPICAL MASONRY ELEVATION
S-03 SCALE 1 : 50 M



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE NO. 02
QUIRINO
DISTRICT ENGINEERING OFFICE
CABARROGUS, QUIRINO

PROJECT NAME AND LOCATION:
Repair/Maintenance of Dilig Building, Philippine
National Police Station Male Barracks, Madaela,
Quirino

SHEET CONTENTS:
TYPICAL DETAILS

DRAFTED: *CHRISTINE B. MANDAC*
ENGINEER
PREPARED: *CHESTER PAUL C. TREADER*
ENGINEER

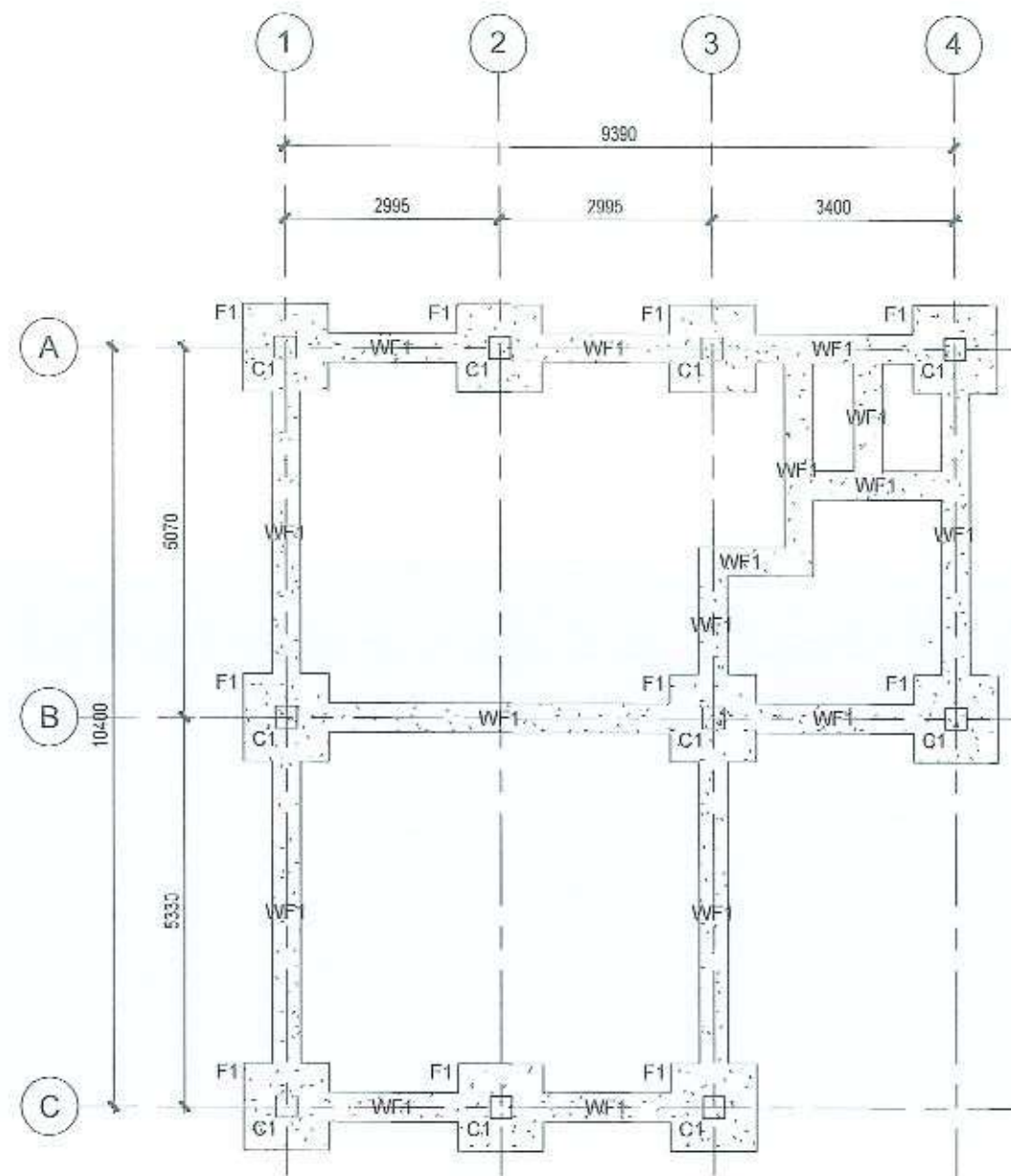
REVIEWED: *GLADYS MARIE S. CORPUZ*
OIC-CHB, MAINTENANCE SECTION
DATE: _____

SUBMITTED: *RUSSELL G. LOZANO*
CHIEF, PLANNING & DESIGN SECTION
DATE: _____

RECOMMENDED: *FERDINAND JINGGO M. YTING*
OFFICER-IN-CHARGE, OFFICE OF THE
ASSISTANT DISTRICT ENGINEER
DATE: _____

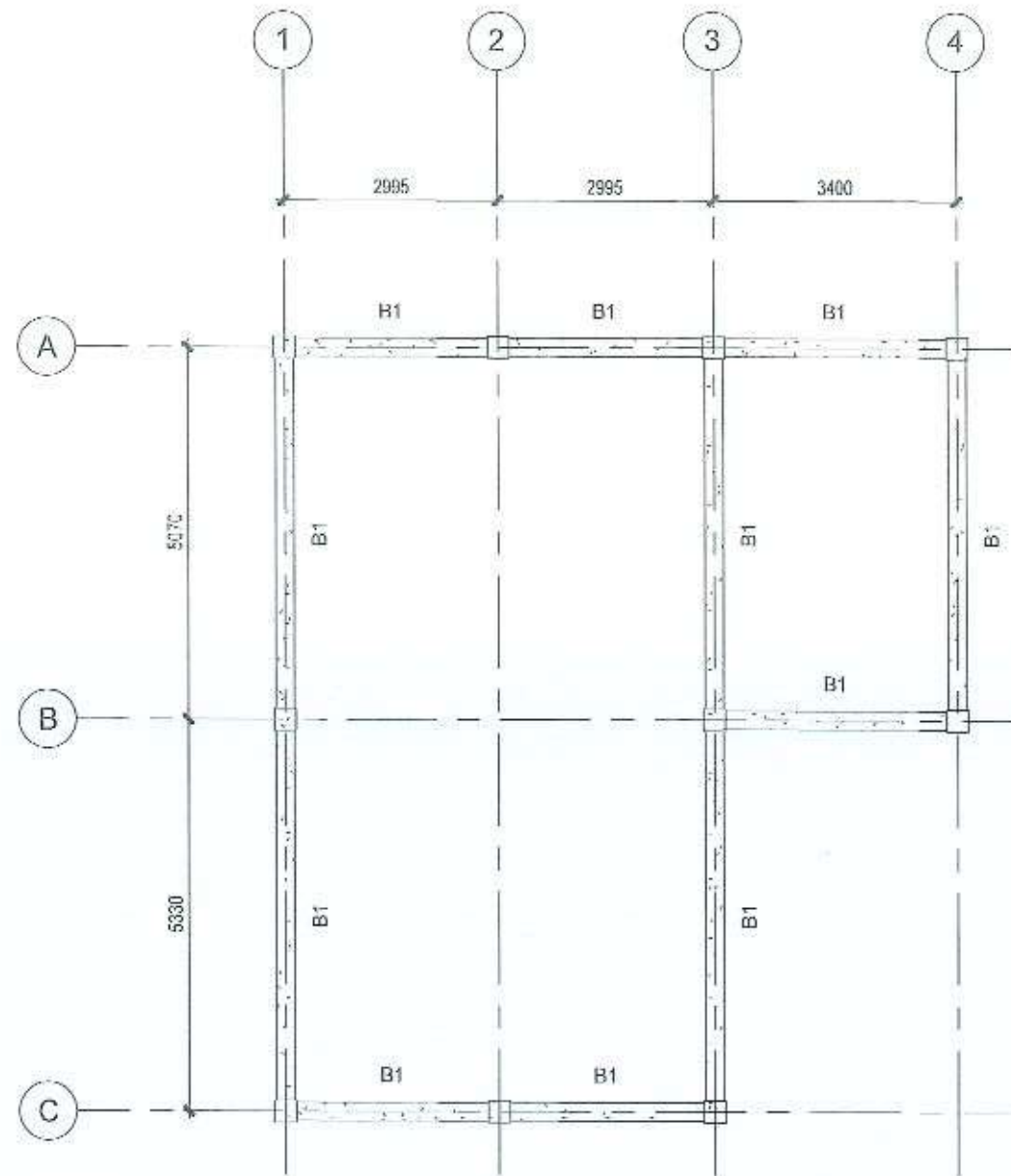
APPROVED: *ROSARIO W. DELA CRUZ*
DISTRICT ENGINEER
DATE: _____

SET NO: MS
S-03
SHEET NO: 10
18

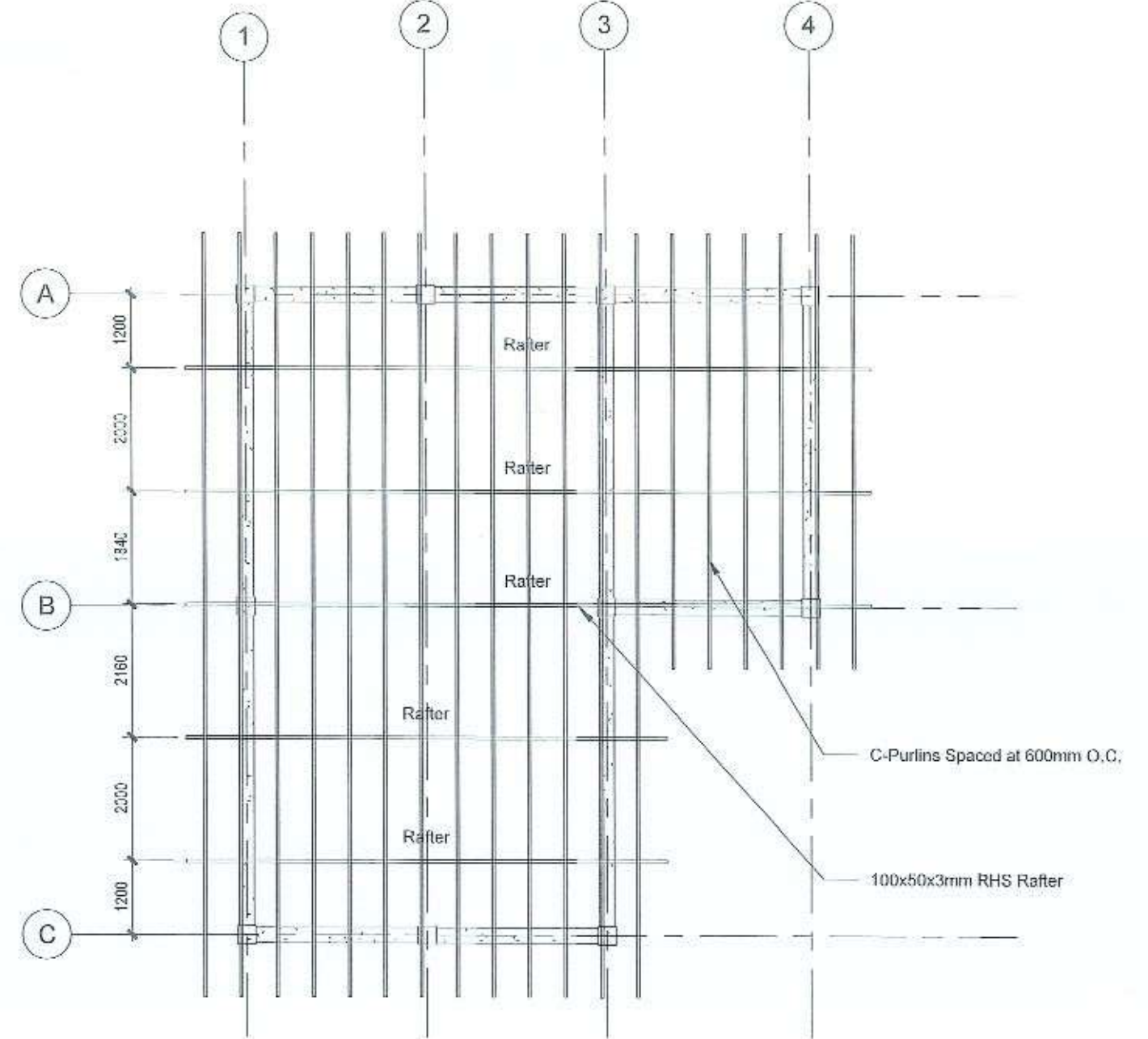


1 FOUNDATION PLAN
S-04 SCALE 1:100 M

 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE NO. 02 QUIRINO DISTRICT ENGINEERING OFFICE CABARROGUIS, QUIRINO	PROJECT NAME AND LOCATION: Repair/Maintenance of DILG Building, Philippine National Police Station Male Barracks, Maddela, Quirino	SHEET CONTENTS: FRAMING PLANS	DRAFTED: <i>[Signature]</i> CHESTER PAUL C. TACADENA ENGINEER II	REVIEWED: GLADYS JANE G. CONPUZ DIC-CHIEF, MAINTENANCE SECTION DATE:	SUBMITTED: RUSSELL G. LOZANO CHIEF, PLANNING & DESIGN SECTION DATE:	RECOMMENDED: FERDINAND JINGGO M. YTING OFFICER-IN-CHARGE, OFFICE OF THE ASSISTANT DISTRICT ENGINEER DATE:	APPROVED: <i>[Signature]</i> ROSARIO C. DRUZMAN DISTRICT ENGINEER DATE:	SET NO: MS S-04	SHEET NO: 11 18
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1 ROOF BEAM LAYOUT
S-05 SCALE 1:100 M



2 ROOF FRAMING PLAN
S-05 SCALE 1:100 M



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE NO. 02

QUIRINO
DISTRICT ENGINEERING OFFICE
CABARROGUS, QUIRINO

PROJECT NAME AND LOCATION:
Repair/Maintenance of DILG Building, Philippine
National Police Station Male Barracks, Maddela,
Quirino

SHEET CONTENTS:
ROOF BEAM LAYOUT
ROOF FRAMING PLAN

DRAFTED:
CRENSIL M. MANDAL
ENGINEER II

PREPARED:
CHESTER PAUL D. TACADEN
ENGINEER II

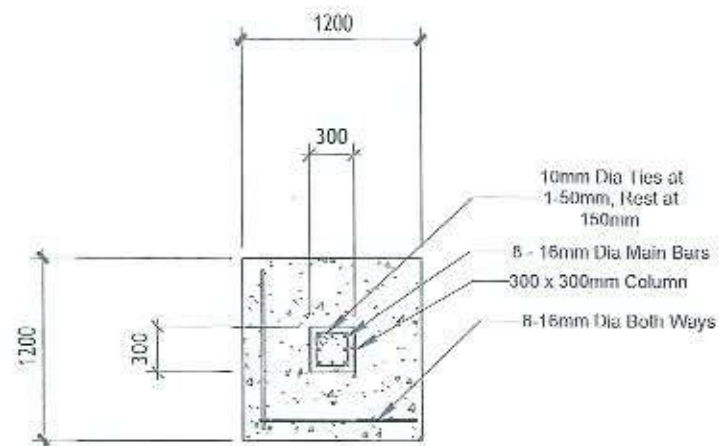
REVIEWED:
GLADYS JANE A. CORPUZ
CIC CHIEF, MAINTENANCE SECTION
DATE: _____

SUBMITTED:
RUSSELL G. LOZANO
CHIEF, PLANNING & DESIGN SECTION
DATE: _____

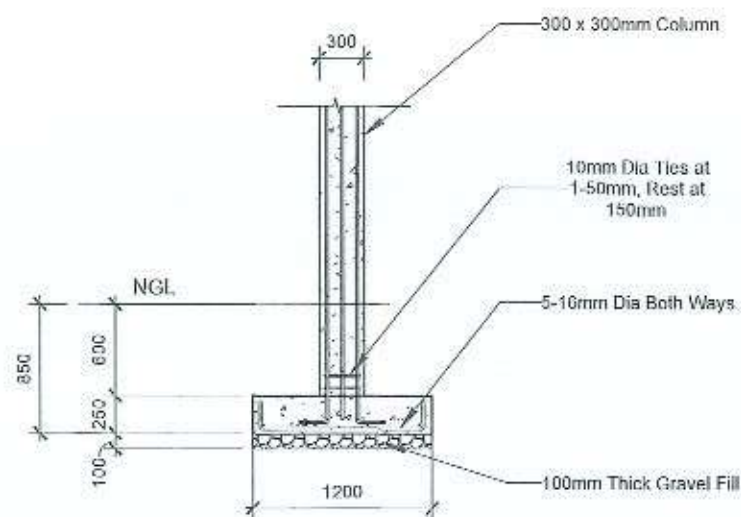
RECOMMENDED:
FERDINAND JINIGDO M. YTING
OFFICER-IN-CHARGE, OFFICE OF THE
ASSISTANT DISTRICT ENGINEER
DATE: _____

APPROVED:
ROSARIO V. DE GUZMAN
DISTRICT ENGINEER
DATE: _____

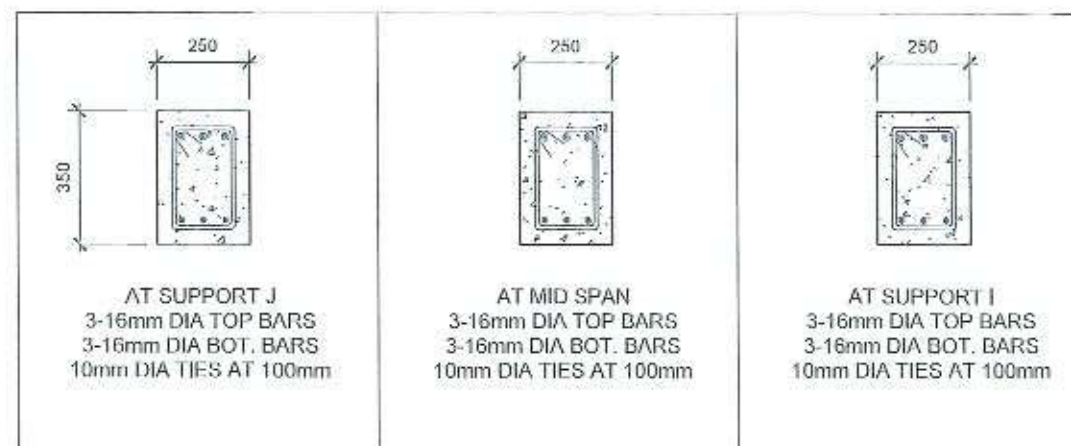
SET NO: MS
S-05
SHEET NO: 12
18



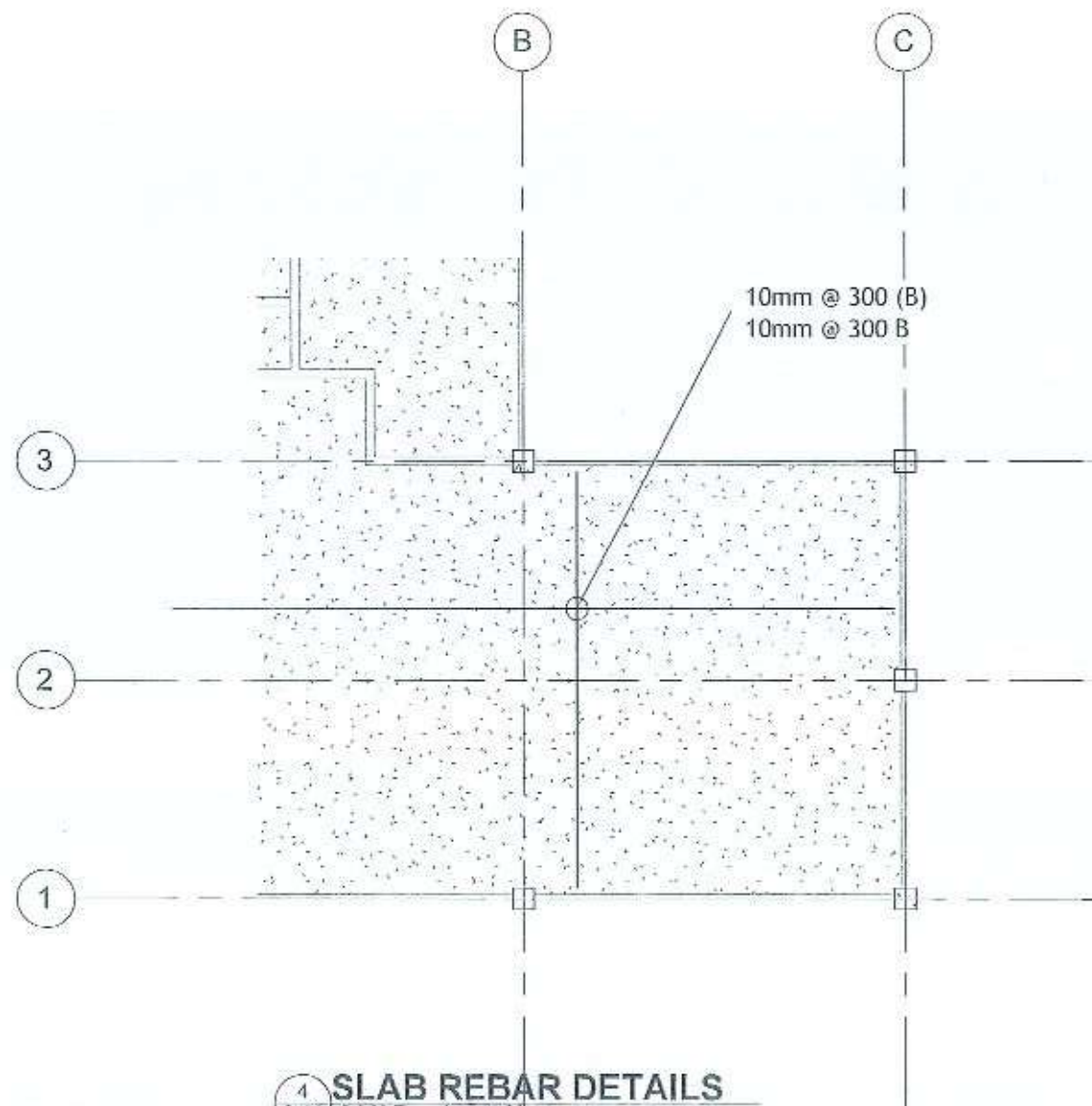
1 C1F1 PLAN
S-06 SCALE 1:50 M



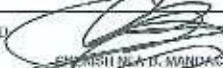
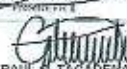
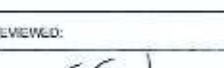
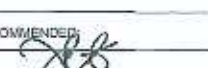
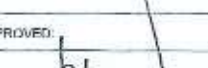
2 C1F1 DETAILS
S-06 SCALE 1:50 M



3 SCHEDULE OF BEAMS
S-06 SCALE 1:20 M



4 SLAB REBAR DETAILS
S-06 SCALE 1:100 M

 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE NO. 02 QUIRINO DISTRICT ENGINEERING OFFICE CAGAYAN DE ORO, QUIRINO	PROJECT NAME AND LOCATION: Repair/Maintenance of DILG Building, Philippine National Police Station Male Barracks, Maddela, Quirino	SHEET CONTENTS: C1F1 DETAILS B1 DETAILS SLAB REBAR DETAILS	DRAFTED:  PREPARED:  CHESTER PAUL C. TACADENA ENGINEER	REVIEWED:  GLADYS JAY S. CORPUZ CHIEF, MAINTENANCE SECTION DATE: _____	SUBMITTED:  RUSSELL G. LOZANO CHIEF, PLANNING & DESIGN SECTION DATE: _____	RECOMMENDED:  FERDINAND J. GOZON OFFICER IN CHARGE, OFFICE OF THE ASSISTANT DISTRICT ENGINEER DATE: _____	APPROVED:  ROSALYN B. BERMAN DISTRICT ENGINEER DATE: _____	SHEET NO.: MS S-06 13 18
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1. ALL ELECTRICAL WORKS/ INSTALLATION HEREIN SHALL BE DONE IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, APPLICABLE ORDINANCES OF THE LOCAL GOVERNMENT AND THE REQUIREMENTS OF LOCAL POWER UTILITY.

2. ALL MATERIALS AND EQUIPMENT TO BE USED SHALL BE BRAND NEW AND OF THE APPROVED TYPE FOR BOTH LOCATION AND PURPOSES.

3. ALL WIRINGS SHALL BE INSTALLED IN STANDARD CONDUIT RUN EMBEDDED INSIDE THE CONCRETE FLOOR/ROOF, STRUCTURES, SLABS, COLUMNS WALL PARTITIONS, & CEILING SPACES WHERE THE USE OF CONCEALED WIRING IS IMPRACTICABLE, SURFACE METAL MOLDING WIRING MAYBE USED.

4. WHENEVER REQUIRED AND NECESSARY, PULL BOX AND JUNCTION BOXES, SHALL BE INSTALLED AT A CONVENIENT AND INCONSPICUOUS LOCATIONS.

5. SIZE OF CONDUIT SHALL NOT BE SMALLER THAN 20mm DIA. WITH PROPER SUPPORTS AND FITTINGS.

6. ALL WIRES TO BE USED MUST BE OF STANDARD SIZES, MINIMUM OF 3.5 SQ.MM. FOR LIGHTINGS

7. SERVICE ENTRANCE POWER SUPPLY SHALL BE 230V VAC, 1 PH, 60 HZ

8. PROVIDE EFFECTIVE GROUNDING FOR THE WHOLE SYSTEM.

9. WIRING COLOR CODE SHALL BE THE FOLLOWING:

A. BLACK COLOR FOR LIVE CONDUCTOR

B. WHITE COLOR FOR NEUTRAL / GROUND

C. GREEN COLOR FOR EQUIPMENT GROUNDING

CONDUCTOR

CONDUCTOR

10. ALL WALL OUTLETS SHALL BE INSTALLED AT THE FOLLOWING HEIGHTS ABOVE THE FINISHED FLOOR LEVEL UNLESS OTHERWISE NOTED.

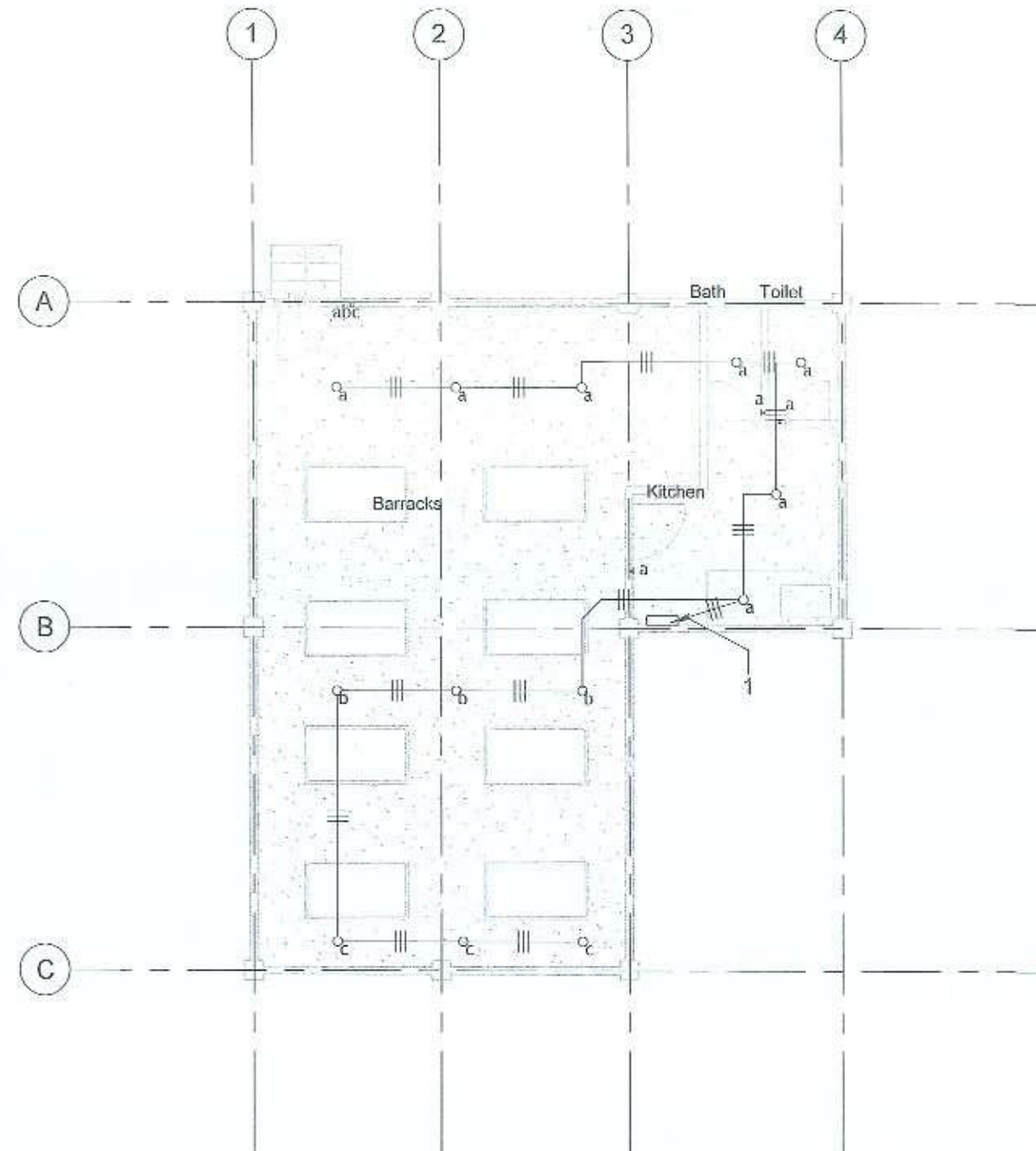
A. SWITCH - 1.4m ABOVE FINISHED FLOOR LINE

B. OUTLET - 0.3m ABOVE FINISHED FLOOR LINE

C. PANEL BOARD - 1.75m FROM FINISHED FLOOR LINE

11. THE ELECTRICAL WORKS SHALL BE DONE UNDER THE DIRECT AND IMMEDIATE SUPERVISION OF A DULY LICENSED PROFESSIONAL ELECTRICAL ENGINEER, REGISTERED ELECTRICAL ENGINEER OR REGISTERED MASTER ELECTRICIAN AS ENFORCED BY THE NEW ELECTRICAL ENGINEERING LAW OR RA 7920.

1 GENERAL NOTES E-01 SCALE 1 : 100 M



2 LIGHTING LAYOUT E-01 SCALE 1 : 100 M

 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE NO. 02 QUIRINO DISTRICT ENGINEERING OFFICE CABARROQUE, QUIRINO	PROJECT NAME AND LOCATION: Repair/Maintenance of DILG Building, Philippine National Police Station Male Barracks, Maddela, Quirino	SHEET CONTENTS: LIGHTING LAYOUT	DRAWN BY: CHESTER PAUL C. YACADENA ENGINEER II PREPARED BY: CHESTER PAUL C. YACADENA ENGINEER II	REVIEWED BY: GLADYS JANE G. CORPUZ OIC-CHIEF, MAINTENANCE SECTION DATE:	SUBMITTED BY: RUSSELL G. LOZANO CHIEF, PLANNING & DESIGN SECTION DATE:	RECOMMENDED BY: FERDINAND JINGOM, YTING OFFICER-IN-CHARGE/OFFICE OF THE ASSISTANT DISTRICT ENGINEER DATE:	APPROVED BY: ROSARIO V. DE GUZMAN DISTRICT ENGINEER DATE:	SET NO: MS E-01 SHEET NO: 14 18
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1. ALL ELECTRICAL WORKS/INSTALLATION HEREIN SHALL BE DONE IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, APPLICABLE ORDINANCES OF THE LOCAL GOVERNMENT AND THE REQUIREMENTS OF LOCAL POWER UTILITY.

2. ALL MATERIALS AND EQUIPMENT TO BE USED SHALL BE BRAND NEW AND OF THE APPROVED TYPE FOR BOTH LOCATION AND PURPOSES.

3. ALL WIRINGS SHALL BE INSTALLED IN STANDARD CONDUIT RUN EMBEDDED INSIDE THE CONCRETE (HOLLOW BLOCK, STRUCTURES, SLABS, COLUMNS WALL PARTITIONS, & CEILING SPACES WHERE THE USE OF CONCEALED WIRING IS IMPRACTICABLE, SURFACE METAL MOLDING WIRING MAYBE USED.

4. WHENEVER REQUIRED AND NECESSARY, PULL BOX AND JUNCTION BOXES, SHALL BE INSTALLED AT A CONVENIENT AND INCONSPICUOUS LOCATIONS.

5. SIZE OF CONDUIT SHALL NOT BE SMALLER THAN 20mm DIA. WITH PROPER SUPPORTS AND FITTINGS.

6. ALL WIRES TO BE USED MUST BE OF STANDARD SIZES, MINIMUM OF 3.5 SQ.MM. FOR LIGHTINGS.

7. SERVICE ENTRANCE POWER SUPPLY SHALL BE 230 VAC, 1 PH, 60 HZ.

8. PROVIDE EFFECTIVE GROUNDING FOR THE WHOLE SYSTEM.

9. WIRING COLOR CODE SHALL BE THE FOLLOWING:

- A. BLACK COLOR FOR LIVE CONDUCTOR
- B. WHITE COLOR FOR NEUTRAL/ GROUNDING CONDUCTOR
- C. GREEN COLOR FOR EQUIPMENT GROUNDING CONDUCTOR

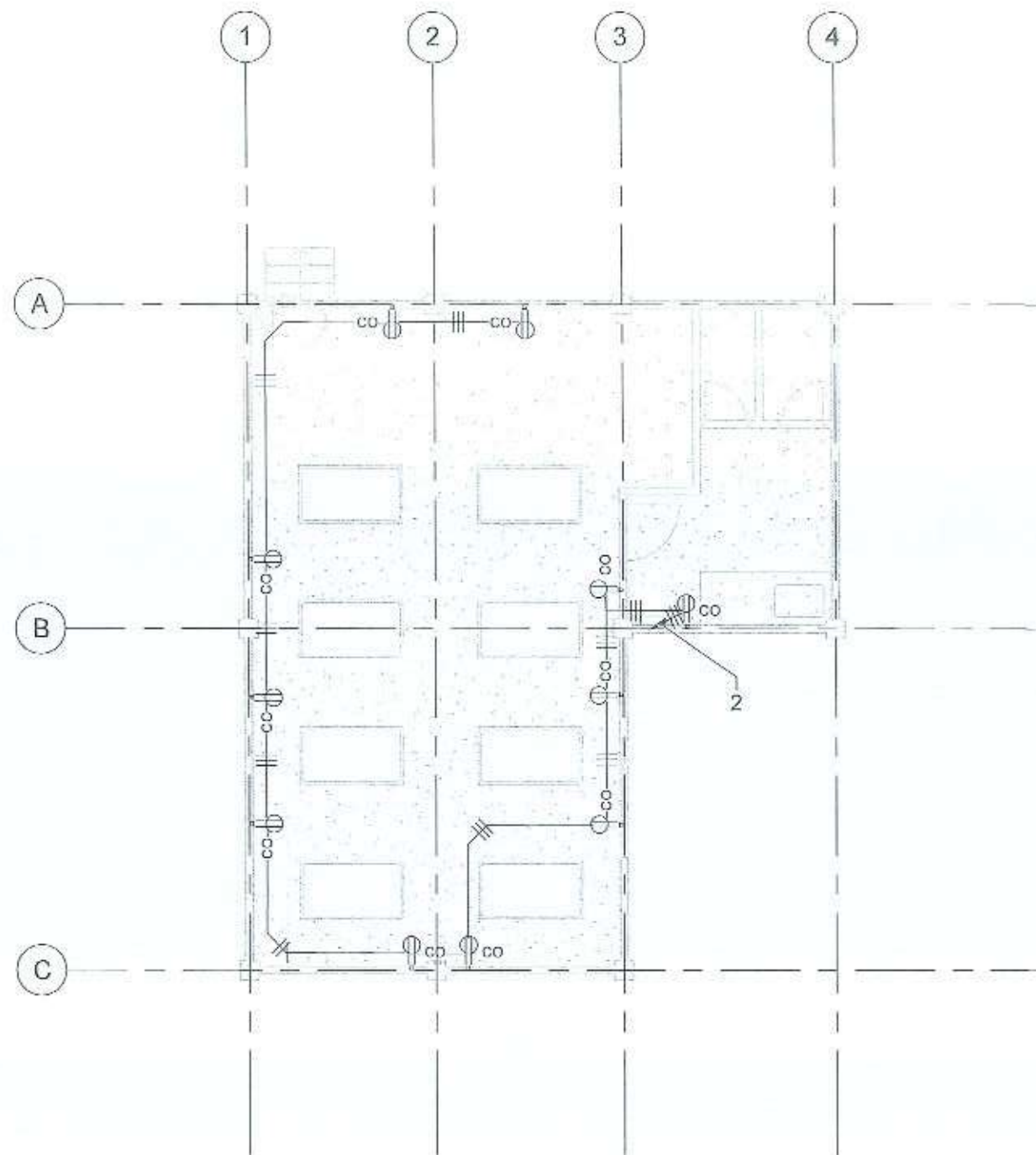
10. ALL WALL OUTLETS SHALL BE INSTALLED AT THE FOLLOWING HEIGHTS ABOVE THE FINISHED FLOOR LEVEL UNLESS OTHERWISE NOTED.

- A. SWITCH - 1.4m ABOVE FINISHED FLOOR LINE
- B. OUTLET - 0.3m ABOVE FINISHED FLOOR LINE
- C. PANEL BOARD - 1.75m FROM FINISHED FLOOR LINE

11. THE ELECTRICAL WORKS SHALL BE DONE UNDER THE DIRECT AND IMMEDIATE SUPERVISION OF A DULY LICENSED PROFESSIONAL ELECTRICAL ENGINEER, REGISTERED ELECTRICAL ENGINEER OR REGISTERED MASTER ELECTRICIAN AS ENFORCED BY THE NEW ELECTRICAL ENGINEERING LAW OR RA 7920.

1 GENERAL NOTES

E-02 SCALE 1 : 100 M



2 POWER LAYOUT

E-02 SCALE 1 : 100 M

 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE NO. 02 QUIRINO DISTRICT ENGINEERING OFFICE CABARRIGUE, QUIRINO	PROJECT NAME AND LOCATION: Repair/Maintenance of DII G Building, Philippine National Police Station Male Barracks, Madula, Quirino	SHEET CONTENTS: POWER LAYOUT	DRAFTED: CHESTER PAUL C. TACADENA ENGINEER 1 PREPARED: CHESTER PAUL C. TACADENA ENGINEER 1	REVIEWED: GLADYS JANE A. CORPUZ DIC-CHIEF, MAINTENANCE SECTION DATE: / /	SUBMITTED: RUSSELL G. LOZANO CHIEF, PLANNING & DESIGN SECTION DATE: / /	RECOMMENDED: FERDINAND JINGGO M. YTING OFFICER-IN-CHARGE, OFFICE OF THE ASSISTANT DISTRICT ENGINEER DATE: / /	APPROVED: ROSARIO V. DE GUZMAN DISTRICT ENGINEER DATE: / /	SHEET NO: MS F-02 SHEET NO: 15 18
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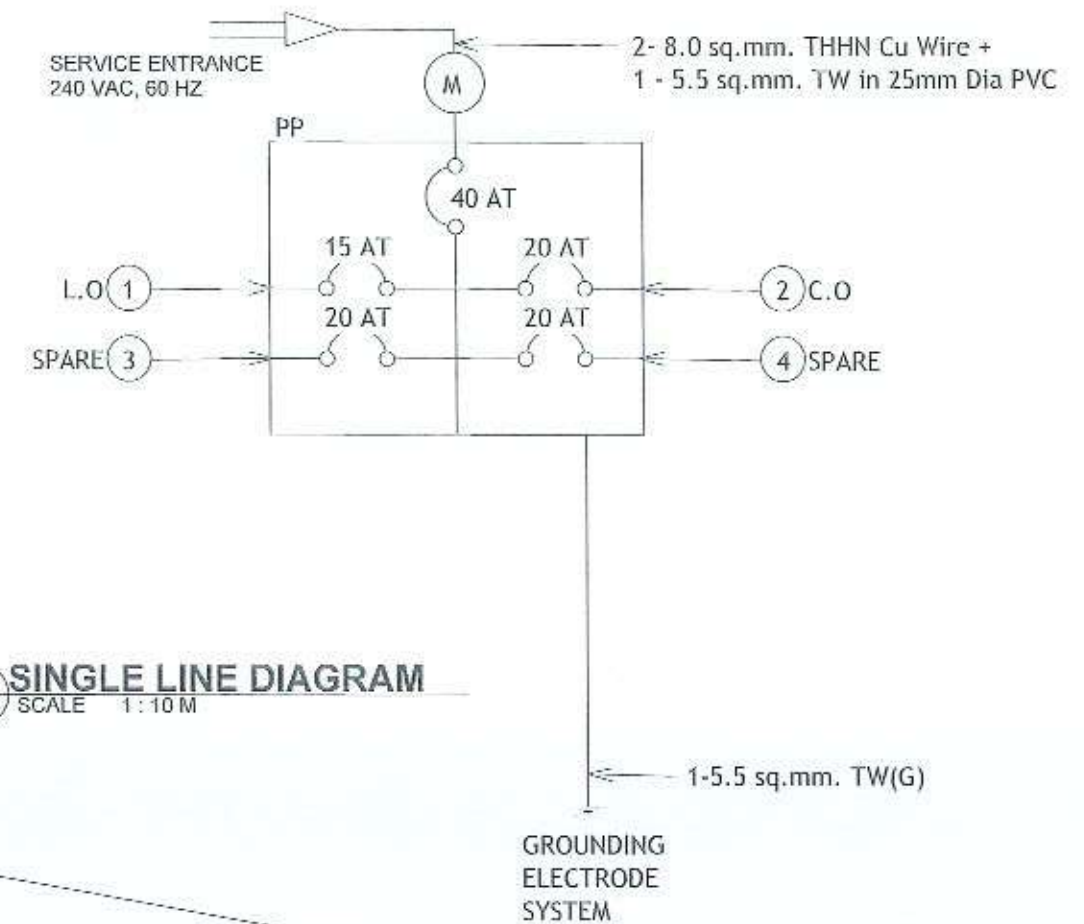
CKT NO. (L.P.)	DESCRIPTION	NO. OF OUTLETS	WATTS/ OUTLETS	TOTAL WT. CRT.	VOLTS	AMPS/ CRT	AT	AF	P	MINIMUM SIZE OF WIRE
1	LIGHTINGS	13	100	1300	220	5.91	15	50	2	2-3.5sq.mm THW CU Wire @ 20mm dia. PVC PIPE
2	CONVENIENCE OUTLETS	11	100	1900	220	9.00	20	50	2	2-3.5sq.mm THW / 1-2.0 sq.mm THW CU WIRE @ 20mm dia. PVC PIPE
3	SPARE	-	-	1500	220	6.82	20	50	2	
4	SPARE	-	-	1500	220	6.82	20	50	2	
TOTAL:										6280W / 220 V = 28.55 A

LOAD COMPUTATION	
IT =	$\frac{6280W}{220V}$
	28.55
IT =	27.31 AMPERES (0.85 DF)
IT =	24.27 AMPERES
	USE: 2- 8.0 sq.mm. THHN + 1-5.5 sq.mm THHN in 25mm dia PVC AND 40 AT, 50 AF, 2 POLE MCB

1 LOAD SCHEDULE
E-03 SCALE 1:1 M



3 VICINITY MAP
E-03 SCALE NTS M



2 SINGLE LINE DIAGRAM
E-03 SCALE 1:10 M



4 SITE DEVELOPMENT PLAN
E-03 SCALE NTS M



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE NO. 02
QUIRINO
DISTRICT ENGINEERING OFFICE
CABARROBOS, QUIRINO

PROJECT NAME AND LOCATION:
Repair/Maintenance of DILG Building, Philippine
National Police Station Male Barracks, Maddela,
Quirino

SHEET CONTENTS:
LOAD SCHEDULE
SINGLE LINE DIAGRAM

DRAFTED:
CHESTER PAUL C. TACADENA
ENGINEER I
PREPARED:
CHESTER PAUL C. TACADENA
ENGINEER I

REVIEWED:
GUARDY JANK G. CORPUZ
DIE, CHIEF, MAINTENANCE SECTION
DATE:

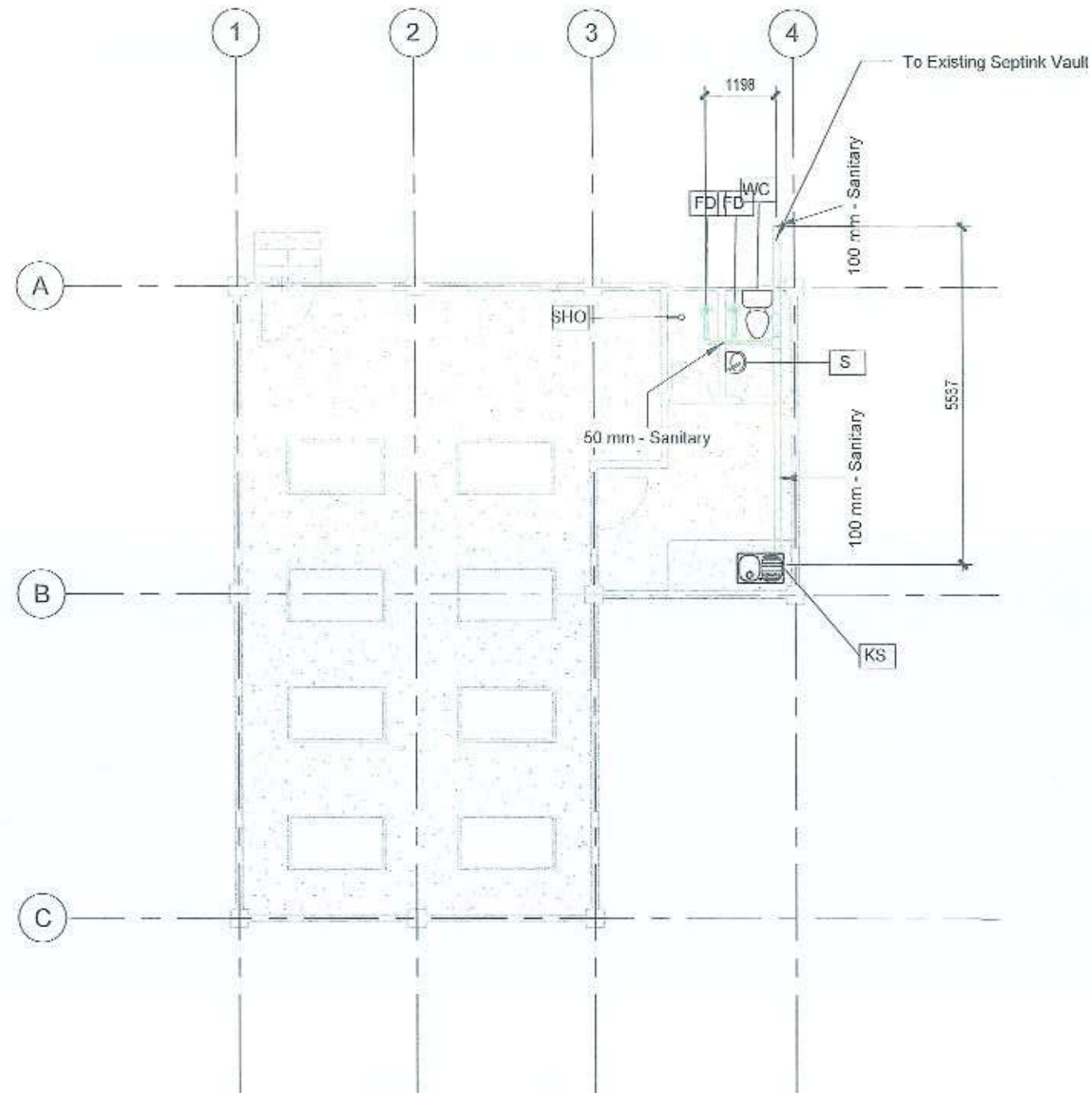
SUBMITTED:
RUSSELL G. LOZANO
CHIEF, PLANNING & DESIGN SECTION
DATE:

RECOMMENDED:
FERDINAND JINGBO M. YTING
OFFICER IN CHARGE, OFFICE OF THE
ASSISTANT DISTRICT ENGINEER
DATE:

APPROVED:
ROSARIO V. DINGIZMAN
DISTRICT ENGINEER
DATE:

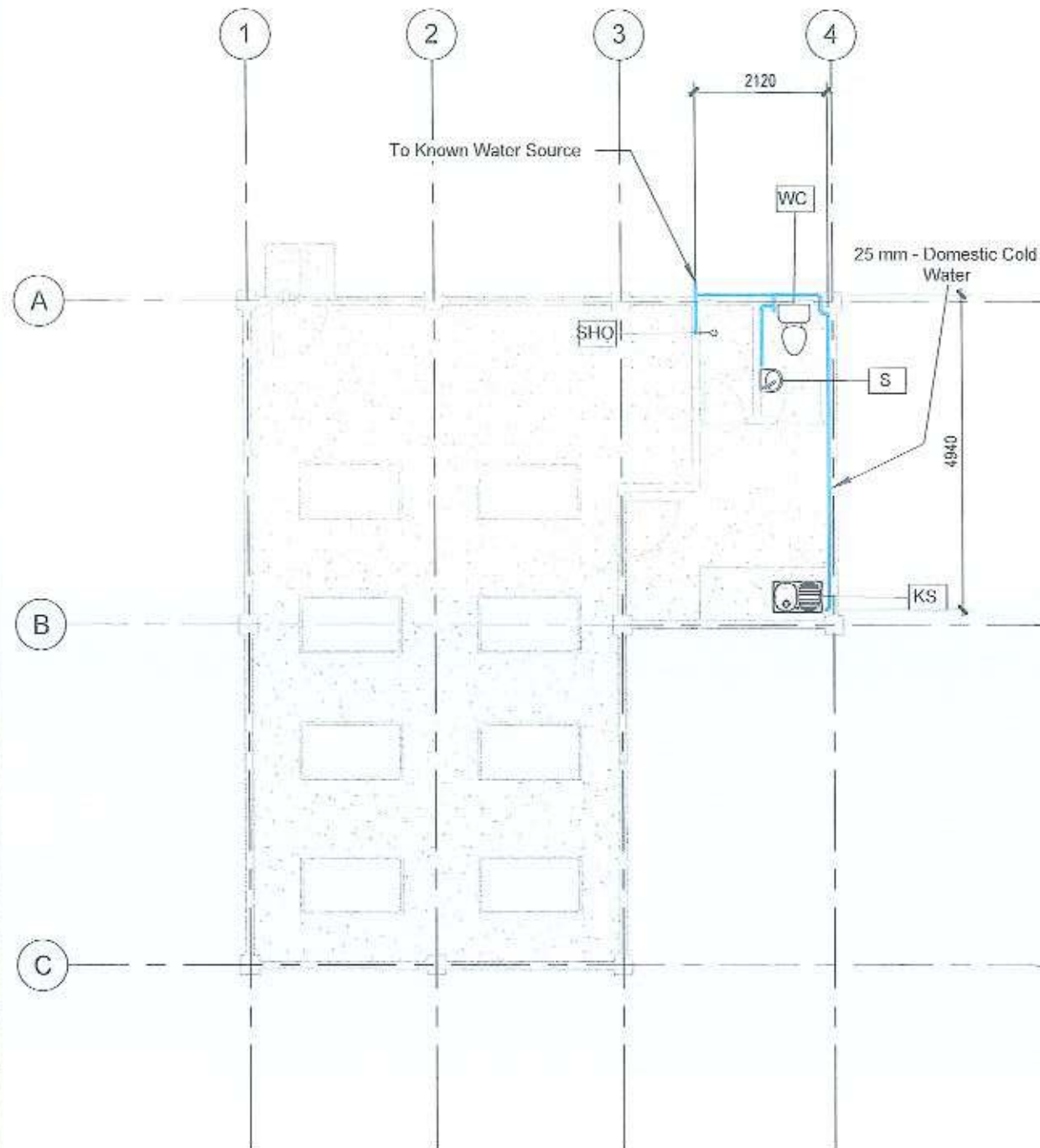
SET NO: MS
E-03
SHEET NO: 16
18

1. ALL PLUMBING WORKS TO BE DONE AND SIZES OF PIPES TO BE USED SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL PLUMBING CODE OF THE PHILIPPINES AND LOCAL REGULATIONS AND ORDINANCES.
2. ALL PIPES SHALL BE INSTALLED AS INDICATED IN THE WORKING DRAWINGS. ANY RELOCATIONS REQUIRED FOR PROPER EXECUTION OF THE OTHER TRADES SHALL BE UPON THE APPROVAL OF THE ENGINEER.
3. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS.
4. ALL PIPES SHALL BE PROVIDED WITH PROPER HANGER/SUPPORT.
5. ALL FIXTURES SHALL BE VENTED INDIVIDUALLY AND WATERLINES SHALL BE VALVE BY GROUP.
6. UNLESS OTHERWISE SPECIFIED, ALL PLUMBING FIXTURES SHALL BE PROPERLY VENTED. MAXIMUM DISTANCE OF VENTILATION FROM FIXTURES SHALL BE 1.50m MEASURED ALONG THE LENGTH OF THE PIPE.
7. ALL PLUMBING FITTINGS SHALL BE ACCESSIBLE FOR MAINTENANCE. PROVIDE MANHOLE IF SUCH INSTALLATIONS ARE INSIDE THE CEILING.
8. ALL CHANGES IN DIRECTIONS SHALL BE MADE BY THE APPROPRIATE USE OF FORTY FIVE (45) WYE LONG SWEEP QUARTER BEND. ONE EIGHT WHEN THE CHANGE OF FLOW IS FROM HORIZONTAL TO VERTICAL. A SINGLE BEND COMBINATION MAY BE USED ONLY ON VENT PIPE.
9. NO DOUBLE HUB OR DOUBLE TEE BRANCH SHALL BE USED ON HORIZONTAL SOIL OR WASTE LINES.
10. PROVIDE PIPE SLEEVES AT WALL, COLUMNS OR SLAB TO PROTECT FROM BREAKAGE.
11. ALL EXPOSED PIPINGS AND FITTINGS IN THE AREAS SHALL BE CHROME PLATED.
12. THE BRAND AND OTHER DETAILED PLUMBING FIXTURES SHALL BE IN ACCORDANCE WITH THE SCHEDULE FURNISHED BY THE ENGINEER.
13. GATE VALVE SHALL BE BRONZE BODY, SOLID WEDGE TYPE, SCREWED OR FLANGE END.
14. USE POLYPROPYLENE RANDOM, TYPE 3, PN20 FOR ALL WATER PIPING SYSTEM.
15. USE uPVC SANITARY PIPING SYSTEM SERIES 1000 FOR 100 DIA. AND SMALLER AND GRAVITY SEWER MAIN uPVC PIPING SYSTEM FOR 150 DIA. AND BIGGER.
16. ENGINEER-IN-CHARGE TO VERIFY ACTUAL LOCATION AND ELEVATION OF STREET DRAINAGE, STREET SEWER AND STREET WATER MAINS FOR CONNECTION BEFORE CONSTRUCTION.

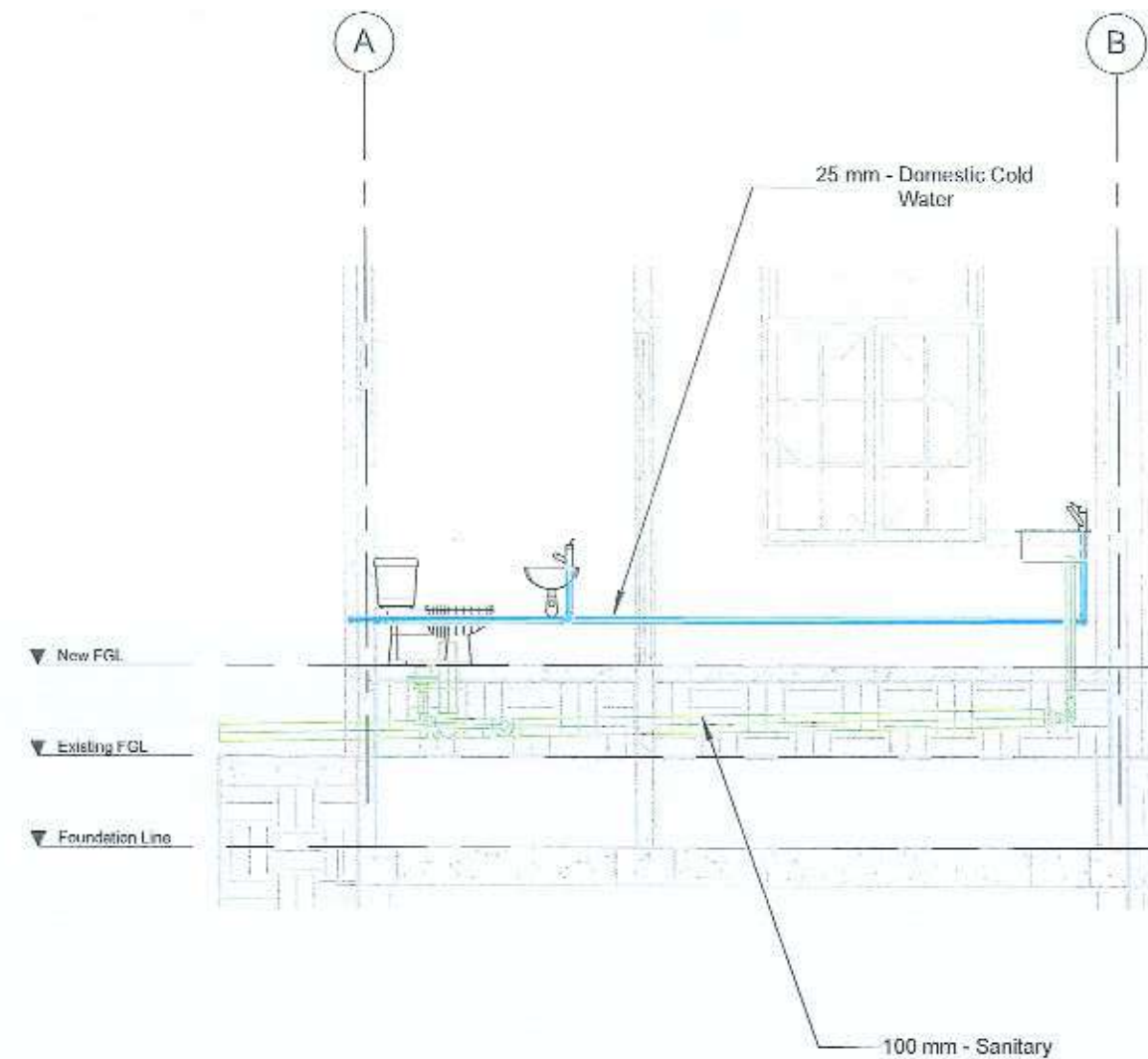


2 SEWER LINE AND VENT LAYOUT
P-01 SCALE 1 : 100 M

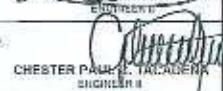
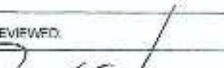
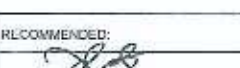
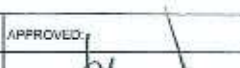
 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE NO. 02 QUIRINO DISTRICT ENGINEERING OFFICE CABARROGUE, QUIRINO	PROJECT NAME AND LOCATION: Repair/Maintenance of DII G Building, Philippine National Police Station Male Barracks, Madela, Quirino	SHEET CONTENTS: SEWER LINE AND VENT LAYOUT	DRAFTED: CHESTER PAUL C. TACKENAL ENGINEER I PREPARED: CHESTER PAUL C. TACKENAL ENGINEER I	REVIEWED: GLAUFOS JANE G. CORPUZ OIC-CHIEF, MAINTENANCE SECTION	SUBMITTED: RUSSELL G. LOZANO CHIEF, PLANNING & DESIGN SECTION	RECOMMENDED: FERDINAND MARCO M. YTING OIC-CHIEF, DISTRICT OF THE ASSISTANT DISTRICT ENGINEER	APPROVED: ROSARIO V. DE GUZMAN DISTRICT ENGINEER	SET NO: MS 1'-01 SHEET NO: 17 18
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1 WATER LINE LAYOUT
P-02 SCALE 1:100 M



2 ELEVATION PLAN
P-02 SCALE 1:50 M

 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE NO. 02 QUIRINO DISTRICT ENGINEERING OFFICE CATANDUANS, QUIRINO	PROJECT NAME AND LOCATION: Repair/Maintenance of DILG Building, Philippine National Police Station Male Barracks, Madaya, Quirino	SHEET CONTENTS: WATER LINE LAYOUT ELEVATION	DRAFTED:  PREPARED:  CHESTER PAUL L. TACADENA ENGINEER	REVIEWED:  GILBERTO J. CORPUZ CHIEF, MAINTENANCE SECTION DATE: _____	SUBMITTED:  RUSSELL G. LOZANO CHIEF, PLANNING & DESIGN SECTION DATE: _____	RECOMMENDED:  FERDINAND JUNGCO M. YTING OFFICER IN CHARGE, OFFICE OF THE ASSISTANT DISTRICT ENGINEER DATE: _____	APPROVED:  ROSARIO M. GUZMAN DISTRICT ENGINEER DATE: _____	SET NO: MS P-02 SHEET NO: 18 18
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