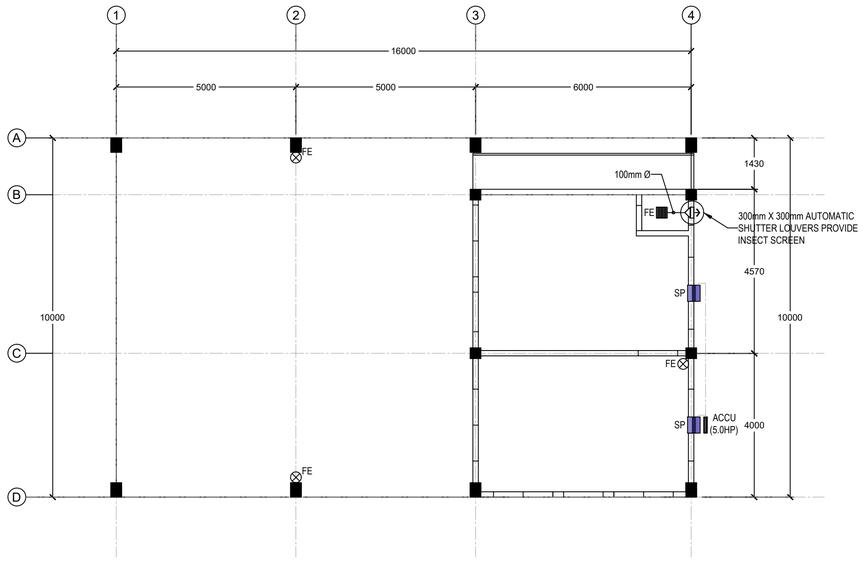


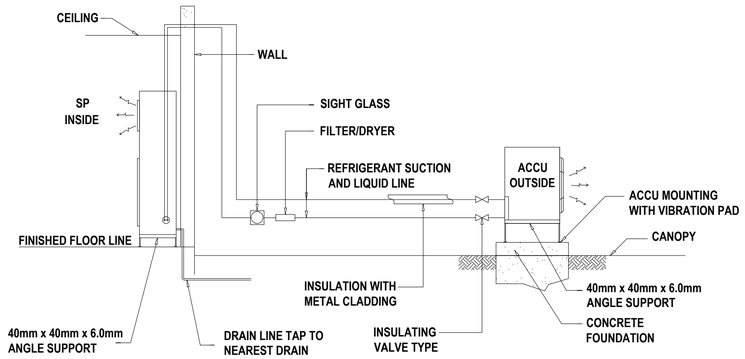
1 / M-2

GROUND FLOOR AIR CONDITIONING, VENTILATION & FIRE PROTECTION LAYOUT

S C A L E : 1 : 1 0 0 M

NOTES:

1. ALL EQUIPMENT ACCESSORIES LIKE FILTER/DRY, SOLENOID VALVE, SIGHT GLASS, EXPANSION VALVE, ETC. SHALL BE INCLUDED BY THE PURCHASE OF THE REFRIGERANT PIPING SYSTEM AND SHALL BE INSTALLED AS PER MANUFACTURERS INSTALLATION RECOMMENDATION.
2. ALL EXPOSED REFRIGERANT AND CONDENSING DRAIN PIPE TO BE INSULATED AND METAL G.I. CLADDED.



2 / M-2

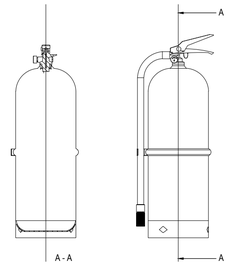
ACCU INSTALLATION DETAILS

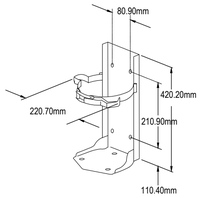
N O T T O S C A L E

MECHANICAL LEGENDS:

ACCU	AIR COOLED CONDENSING UNIT
SP	FAN COIL UNIT (WALL MOUNTED) (1.5 HP)
EF	EXHAUST FAN (100 CFM, CEILING CASSETTE TYPE)
FE	FIRE EXTINGUISHER (WALL MOUNTED)

FIRE EXTINGUISHER: MOUNTING BRACKET DETAILS:





SCHEDULE OF EQUIPMENTS:

QTY	UNIT DESIGNATION	CAPACITY	TYPE	CLASS		REMARKS:
				A -COMBUSTIBLE MATERIALS B -FLAMMABLE LIQUIDS C -FLAMMABLE GASSES D -FLAMMABALE MATERIALS E -ENERGIZED ELECTRICAL EQPT.	NOT FOR CLASS F FIRES.	
3	⊗FE	10 LBS	FIRE EXTINGUISHER DRY POWDER CHEMICAL			BRAND NEW AND OF THE APPROVED TYPE COMPLETE WITH STANDARD ACCESSORIES READY FOR SERVICE

3 / M-2

FIRE EXTINGUISHER DETAILS

N O T T O S C A L E

REPUBLIC OF THE PHILPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE VI

NEGROS OCCIDENTAL SUB-DEO
SAN CARLOS CITY, NEG.OCC.

PROJECT NAME AND LOCATION

DETAILED ENGINEERING DESIGN PLAN FOR
CONSTRUCTION OF DPWH DISTRICT OFFICE BUILDING, SAN CARLOS CITY, NEGROS OCCIDENTAL
BRGY. PUNAO, SA CARLOS CITY, NEGROS OCCIDENTAL

SHEET CONTENTS

GROUND FLOOR AIR CONDITIONING, VENTILATION & FIRE PROTECTION LAYOUT
ACCU INSTALLATION DETAILS
FIRE EXTINGUISHER DETAILS
MECHANICAL LEGENDS

PREPARED:
PROFESSIONAL MECHANICAL ENGINEER
DATE:

REVIEWED:
JANNA ROSE G. ATIENZA
ENGINEER II
DATE:

SUBMITTED:
VENGIE C. MORACA
OIC CHIEF, PLANNING AND DESIGN SECTION
DATE:

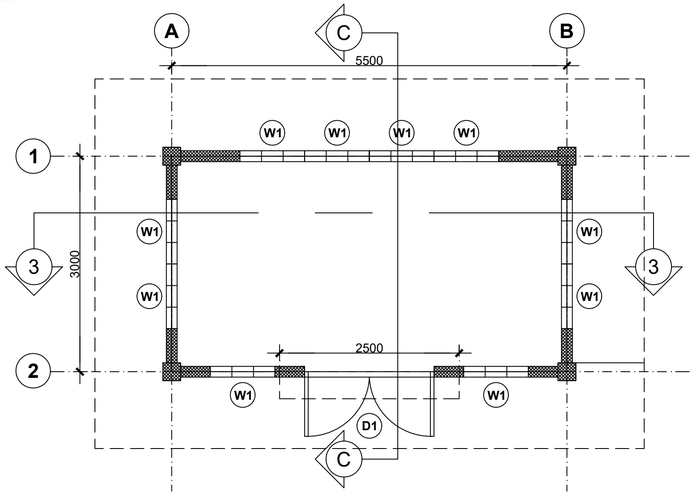
RECOMMENDED:
PEDRITO R. BAUTISTA
ASSISTANT DISTRICT ENGINEER
DATE:

APPROVED:
JUAN ALFONSO G. JORBINA, SR.
OIC, DISTRICT ENGINEER
DATE:

SET NO.: M 2 2

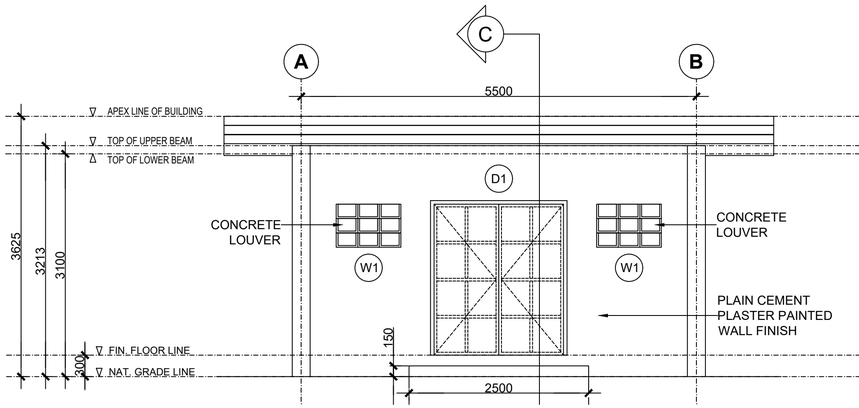
SHEET NO.: 26 / 26

G. POWERHOUSE



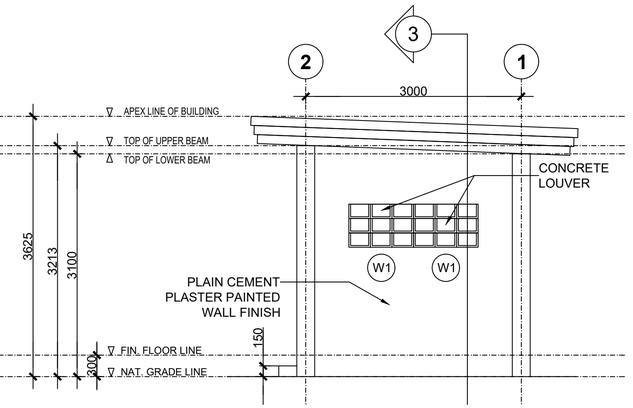
1 / A-4 **GROUND FLOOR PLAN**

SCALE: 1 : 50 M



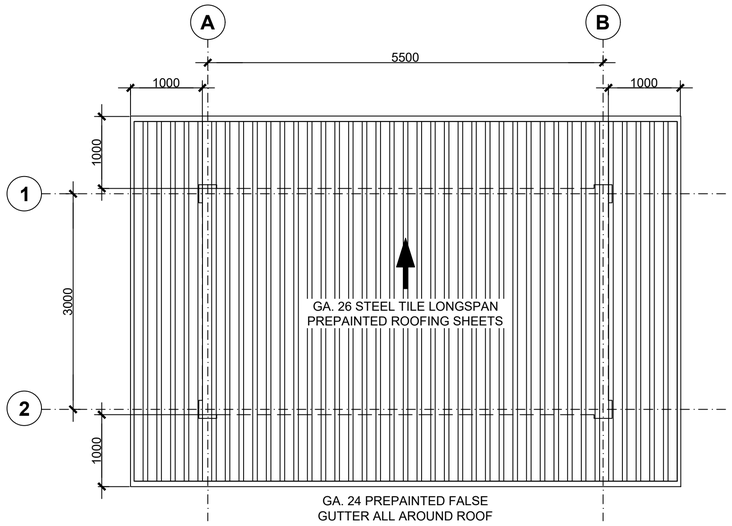
2 / A-4 **FRONT ELEVATION**

SCALE: 1 : 50 M



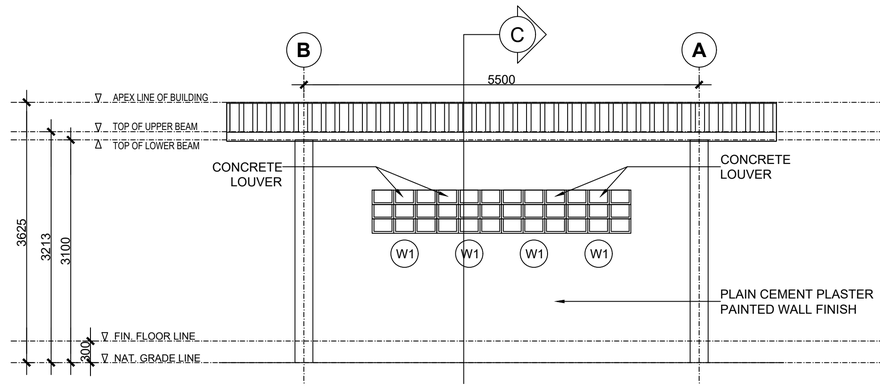
3 / A-4 **RIGHT SIDE ELEVATION**

SCALE: 1 : 50 M



8 / A-4 **ROOF PLAN**

SCALE: 1 : 50 M



4 / A-4 **REAR ELEVATION**

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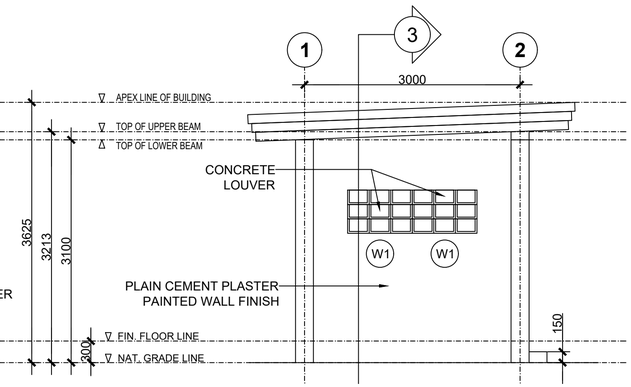
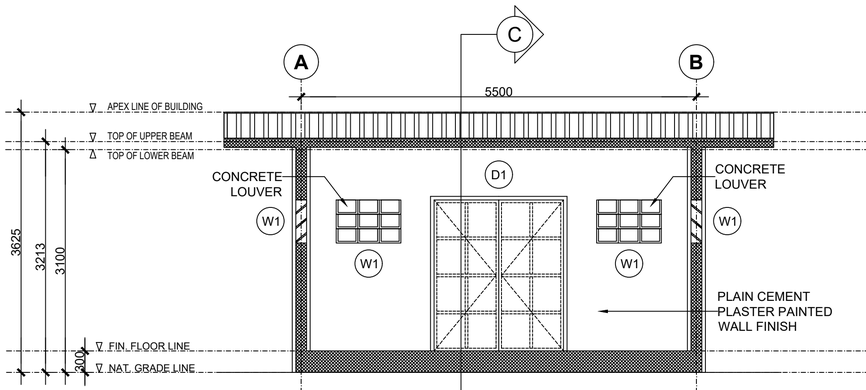


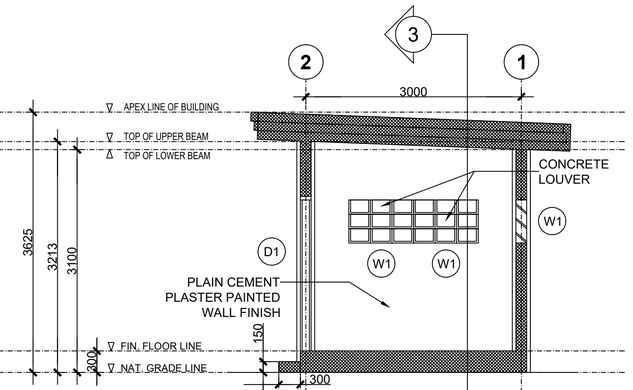
5 / A-4 **LEFT SIDE ELEVATION**

SCALE: 1 : 50 M



6 / A-4 **SECTION THRU "C-C"**

SCALE: 1 : 50 M



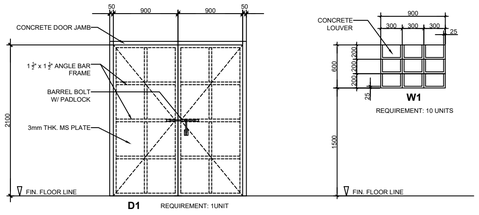
7 / A-4 **SECTION THRU "3-3"**

SCALE: 1 : 50 M

SCHEDULE OF DOORS & WINDOW

9 / A-4

SCALE: 1:50 M



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
NEGROS ISLAND REGION

NEGROS OCCIDENTAL 5TH DEO
SAN CARLOS CITY, NEGROS OCCIDENTAL

PROJECT NAME AND LOCATION	SHEET CONTENTS	DESIGNED:	REVIEWED:	SUBMITTED:	RECOMMENDED:	APPROVED:	SET NO.	SHEET NO.
DETAILED ENGINEERING DESIGN PLAN FOR **CONSTRUCTION (COMPLETION) OF DPWH BUILDING OF NEGROS OCCIDENTAL SUB DEO, SAN CARLOS CITY, NEGROS OCCIDENTAL** BRGY. PUNAO, SA CARLOS CITY, NEGROS OCCIDENTAL	GROUND FLOOR PLAN FRONT ELEVATION RIGHT SIDE ELEVATION REAR ELEVATION LEFT SIDE ELEVATION SECTION THRU "C-C" SECTION THRU "3-3" ROOF PLAN SCHEDULE OF DOORS AND WINDOWS	**ORNIF JOHN A. CARATAO** ARCHITECT I DATE:	**JANNA ROSE G. ATIENZA** ENGINEER II DATE:	**VENGIE C. MORACA** OIC CHIEF, PLANNING AND DESIGN SECTION DATE:	**PEDRITO R. BAUTISTA** ASSISTANT DISTRICT ENGINEER DATE:	**JUAN ALFONSO G. JORBINA, SR.** OIC, DISTRICT ENGINEER DATE:	A 3 3	4 29

GENERAL CONSTRUCTION NOTES

GENERAL NOTES

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 (N.S.C.P 2015) VOL. 1, SEVENTH EDITION.

2.0 DESIGN CRITERIA

2.1 LOADINGS

A. DEAD LOAD

CONCRETE	23.56 kN/m^3
STEEL	76.93 kN/m^3
150 mm THK. CHB WALL	2.73 kPa
100 mm THK. CHB WALL	2.11 kPa

B. LIVE LOAD

ROOF	1.00 kPa
CLASSROOMS	1.90 kPa
TOILETS	1.90 kPa
CORRIDORS ABOVE, STAIRS	3.80 kPa
CORRIDORS ON GROUND	4.80 kPa

C. WIND LOAD

BUILDING CATEGORY = 1 (ESSENTIAL FACILITIES)
EXPOSURE = D (FLAT, UNOBSTRUCTED AREAS AND WATER SURFACES)
MAXIMUM WIND VELOCITY, V = 340 KPH

P = qh [(GCpf)-(GCpi)] (DESIGN WIND PRESSURE)

WHERE: qh = VELOCITY PRESSURE (kPa)
GCpf = EXTERNAL PRESSURE COFFECIENT
GCpf = INTERNAL PRESSURE COFFECIENT

D. SEISMIC LOAD

$V = \frac{Cvl}{RT} \cdot W$ (DESIGN BASE SHEAR)

$Vmax = \frac{2.50Cal}{RT} W$ Vmin = 0.11 CalW

$Vmin = \frac{0.80\ ZNvl}{R} W$ (ZONE 4)

WHERE: W = TOTAL DEAD LOAD
T = NATURAL PERIOD = Ct (h)
WHERE: C = NUMERICAL COEFFICIENT
h = BUILDING HEIGHT
I = IMPORTANCE FACTOR = 1.50
R = NUMERICAL FACTOR = 8.50
SEISMIC COEFFICIENT Cv = 0.44 Nv
Ca = 0.64 Nv
NEAR SOURCE FACTOR (5 km) Nv = 1.6
Na = 1.2
Z = SEISMIC ZONE = 0.40 (ZONE 4)
S = SOIL TYPE = D

2.2 DESIGN STRESSES

A. CONCRETE COMPRESSIVE STRENGTH @ 28 DAYS:	
a. FOOTINGS, COLUMNS, BEAMS AND SLABS	f'c = 20.7 MPa (3,000 psi)
b. SLAB ON FILL	f'c = 17.5 MPa (2,500 psi)
B. REINFORCING STEEL BARS	
a. FOR BARS 16mm AND GREATER (INTERMEDIATE GRADE DEFORMED BAR)	fy = 275 MPa (40,000 psi)
b. FOR BARS LESS THAN 16mm (STRUCTURAL GRADE DEFORMED BAR)	fy = 230 MPa (33,000 psi)
C. STRUCTURAL STEEL ASTM-A36	
FOR TRUSSES, BRACINGS , & STRUTS	fy = 248 MPa (36,000 psi)
D. PURLINS	
COLD FORMED LIGHT	fy = 248 MPa (36,000 psi)
E. MASONRY UNIT (CHB)	
NON - LOADING BEARING CHB WALLS	fm' = 3.45 MPa (500 psi)
F. WELDS	E - 60XX ELECTRODE
G. STRUCTURAL BOLTS ASTM- A307	a. Ft = 96.60 mPa (14, 000 psi)
	b. Fv= 69.00 mPa (10, 000 psi)

3.0 IN THE INTERPRETATION OF THE DRAWING, INDICATED DIMENSIONS SHALL GOVERN. DISTANCES AND SIZES SHALL NOT BE SCALED FOR CONSTRUCTIONS PURPOSES

4.0 IN REFERENCES TO OTHER DRAWINGS, SEE ARCHITECTURAL DRAWINGS FOR DEPRESSIONS IN FLOOR SLABS , OPENINGS IN THE WALLS AND SLABS , INTERIOR PARTITIONS , LOCATIONS OF DRAINS ETC.

5.0 IN CASE OF DISCREPANCIES AS TO THE LAYOUT, DIMENSIONS AND ELEVATIONS BETWEEN THE STRUCTURAL PLANS AND ARCHITECTURAL DRAWINGS, THE CONTRACTORS SHALL NOTIFY BOTH THE STRUCTURAL ENGINEER AND ARCHITECTS.

6.0 ALL CONCRETE WORKS AND CONCRETE REINFORCEMENTS SHALL BE DONE IN ACCORDANCE WITH THE ACI.318 95 BUILDING CODE REQUIREMENT AND ALL STRUCTURAL STEEL WORKS ACCORDING WITH THE WITH THE AISC SPECIFICATION (9TH EDITION) IN SOFAR AS THEY DO NOT CONFLICT WITH THE LOCAL BUILDING CODE REQUIREMENT.

7.0 ACI REFERS TO AMERICAN CONCRETE INSTITUTE, AISC REFERS TO AMERICAN INSTITUTE OF STEEL CONSTRUCTION AND ASTM REFERS TO AMERICAN SOCIETY FOR TESTING MATERIALS.

8.0 CONSTURCTION NOTES AND TYPICAL DETAILS APPLY TO ALL DRAWINGS UNLESS OTHERWISE SHOWN OR NOTED. MODIFY TYPICAL DETAILS AS DIRECTED TO MEET SPECIAL CONDITIONS.

9.0 SHOP DRAWING WITH ERECTION AND PLACING DIAGRAMS OF ALL STRUCTURAL STEELS, MISCELLANEOUS IRON, PRE-CAST CONCRETE, ETC. SHALL BE SUBMITTED FOR ENGINEERS APPROVAL BEFORE FABRICATION.

10. CONTRACTOR SHALL NOTE AND PROVIDE ALL MISCELLANEUOS CURBS, SILLS , STOOLS EQUIPMENT AND MECHANICAL BASES THAT ARE REQUIRED BY THE ARCHITECTURAL , ELECTRICAL AND MECHANICAL DRAWINGS.

11. ALL RESULTS OF THE MATERIAL TESTING FOR CONCRETE, REINFORCING BARS & STRUCTURAL STEEL MUST BE NOTED & APPROVED BY THE MATERIALS ENGINEER/STRUCTURAL DESIGNER.

NOTES ON CONCRETE MIXES & PLACING

1. ALL CONCRETE SHALL DEVELOP A MIN. COMPRESSIVE STRENGTH AT THE END OF TWENTY EIGHT (28) DAYS W/ CORRESPONDING MAXIMUM SIZE AGGREGATE & SLUMP AS FOLLOWS.

LOCATION	28 DAYS STRENGTH	MAX. SIZE OF AGGREGATE	MAX SLUMP
ALL OTHERS, INCLUDING SUSPENDED SLABS	3000 PSI (20.7 MPa)	20 mm	100mm
COLUMNS	3000 PSI (20.7 MPa)	20 mm	100mm
BEAMS ,SLABS	3000 PSI (20.7 MPa)	20 mm	100mm
SLAB ON FILL	2500 PSI (17.5 MPa)	20 mm	100mm

2. MAINTAIN MINIMUM CONCRETE COVER FOR REINFORCING STEEL AS FOLLOWS.

SUSPENDED SLABS	20mm
SLAB ON GRADE	40mm
WALLS ABOVE THE GRADE	25mm
BEAM STIRRUPS AND COLUMN TIES WHERE CONCRETE IS EXPOSED TO	40mm
EARTH BUT POURED AGAINST FORMS WHERE CONCRETE IS DEPOSITED	50mm
DIRECTLY AGAINST EARTH	75mm

3. CONCRETE SHALL BE DEPOSITED IN ITS FINAL POSISITON WITHOUT SEGREGATION. RE-HANDLING OR PLACING SHALL BE DONE PREFERABLY WITH BUGGIES , BUCKETS OR WHEELBARROWS, NO CHUTES WILL BE ALLOWED EXCEPT TO TRANSFER CONCRETE FROM HOPPERS TO BUIGGIES, WHEELBARROWS OR BUCKETS IN WHICH CASE THEY SHALL NOT EXCEED SIX (6) METERS IN AGGREGATE LENGTH.
4. NO DEPOSITING OF CONCRETE SHALL BE ALLOWED WITHOUT THE USE OF VIBRATORS UNLESS AUTHORIZED IN WRITING DESIGNER AND ONLY FOR UNUSUAL CONDITIONS WHERE VIBRATIONS ARE EXTREMELY DIFFICULT TO ACCOMPLISH.
5. ALL ANCHOR BOLTS, DOWELS, AND OTHER INSERTS SHALL BE PROPERLY POSITIONED & SECURED IN PLACE PRIOR TO PLACING OF CONCRETE.
6. ALL CONCRETE SHALL BE KEPT MOST FOR A MINIMUM OF SEVEN CONSECUTIVE DAYS IMMEDIATELY AFTER POURING BY THE USE O WET BURLAP, FOG SPRAYING, CURING COMPOUNDS OR OTHER APPROVED METHODS.
7. STRIPPING OF FORMS AND SHORES:

FOUNDATION	24 HOURS
SUSPENDED SLAB EXCEPT WHEN ADDITIONAL LOADS ARE IMPOSED	8 DAYS
WALLS	21 DAYS
BEAMS	14 DAYS
COLUMNS	21 DAYS

8. THE CONTRACTOR SHALL SUBMIT THE SCHEDULE OF POURING AND THE LOCATION OF THE CONSTRUCTION JOINTS TO THE STRUCTURAL ENGINEER AT LEAST (4) DAYS PRIOR TO THE POURING FOR APPROVAL.
9. THE CONTRACTOR SHALL FURNISH AND MAITAIN ADEQUATE FORMS AND SHORINGS UNTIL THE CONCRETE MEMBERS HAVE ATTAINED THEIR WORKING CONDITION AND STRENGTH.

NOTES ON FOOTINGS

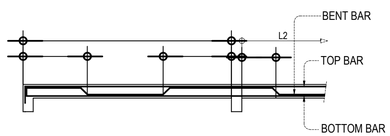
1. FOOTINGS ARE DESIGNED FOR AN ALLOWANCE SOIL BEARING PRESSURE OF 96 KPa (2000psf). CONTRACTOR SHALL REPORT TO THE ENGINEER, IN WRITING ,THE ACTUAL SOIL CONDITIONS UNCOVERED AND CONFIRM ACTUAL BEARING CAPACITY OF SOIL BEFORE DEPOSITING CONCRETE.
2. FOOTING SHALL REST AT LEAST 1500mm BELOW NATURAL GRADE LINE UNLESS OTHERWISE INDICATED IN PLANS. NO FOOTING SHALL REST ON FILL
3. MINIMUM CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE 75mm CLEAR FOR CONCRETE DEPOSITED THE GROUND AND 50mm FOR CONCRETE DEPOSITED AGAINST A FORMWORK.
4. IN CASES WHERE THE SOIL CONDITION IS SUCH THAT THE MINIMUM ALLOWABLE SOIL PRESSURE OF 96KPa (2000 psf) CAN NOT BE ATTAINED AT A PRACTICAL DEPTHS THE USE OF MICROPILES , BORED PILES, OR DRIVEN PILES MAY BE ADOPTED IN LIEU OF STANDARD ISOLATED FOOTINGS.

NOTES ON REINFORCEMENT

1. UNLESS OTHERWISE NOTED IN PLANS, THE YIELD STRENGTH OF REINFORCING BARS SHALL BE:
   A. FOOTINGS , FOOTING BEAMS AND GIRDERS — fy = 275 MPa (40,000 psi)
   B. COLUMNS AND SHEAR WALLS — fy = 275 MPa (40,000 psi)
   C. BEAMS AND GIRDER — fy = 275 MPa (40,000 psi)
   D. NON-LOAD BEARING WALL PARTITIONS ,BEDDED SLABS , FLOOR & ROOF SLABS, PARAPETS ,CATCH BASIN,SIDE WALK — fy = 275 MPa (40,000 psi)
2. ALL REINFORCING BARS SIZE 10mm OR LARGER SHALL BE DEFORMED IN ACCORDANCE WITH THE ASTM A-706 BARS SMALLER THAN 10mm MAY BE PLAIN.
3. SPLICES SHALL BE SECURELY WIRED TOGETHER & SHALL LAP OR EXTEND IN ACCORDANCE w/ TABLE B (TABLE OF LAP SPLICE & ANCHORAGE LENGTH) UNLESS OTHERWISE SHOWNON DRAWINGS , SPLICES SHALL BE STAGGERED WHENEVER POSSIBLE.

NOTES ON CONCRETE SLABS

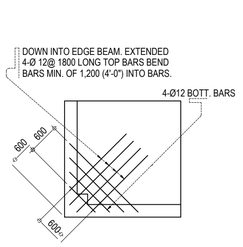
1. ALL SLAB REINFORCEMENTS SHALL BE 20mm CLEAR MINIMUM FROM BOTTOM AND FROM THE TOP OF SLAB.
2. UNLESS OTHERWISE SHOWN, REINFORCEMENT IN CONTINUOUS ELEVETED SLAB SHALL BE CUT AS FOLLOWS:



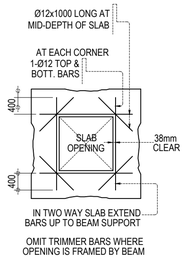
3. IF SLABS AR E REINFORCED BOTHWAYS BARS ALONG THE SHORTER SPAN SHALL BE PLACED BELOW THOSE ALONE THE LONG SPAN AT THE CENTER AND OVER THE LONGER SPAN FOR REINFORCING BARS NEAR THE SUPPORTS. THE SPACING OF THE BARS AT THE COLUMN STRIPS SHALL NOT BE MORE THAN ONE AND A HALF (1 1/2) SLAB THICKNESS.
4. TEMPERATURE BARS FOR SLAB SHALL BE GENERALLY PLACED NEAR THE FACE IN TENSION AND SHALL NOT BE LESS THAN 0.0025 X GROSS-SECTIONAL AREA (Ag) OF THE SLAB. (SEE SCHEDULE BELOW)

SCHEDULE OF MINIMUM SLAB REINFORCEMENT	
	MINIMUM TEMPERATURE BARS
100 mm	10mm Ø @ 250mm EACH WAY
125 mm	10mm Ø @ 250mm EACH WAY
150 mm	10mm Ø @ 250mm EACH WAY
175 mm	10mm Ø @ 250mm EACH WAY
200 mm	10mm Ø @ 250mm EACH WAY

5. UNLESS OTHERWISE NOTED IN THE PLANS ALL BEDDED SLABS SHALL BE REINFORCED WITH 10mm Ø AT 250mm O.C. EACH WAY TO CENTER OF SLAB AND CONSTRUCTION JOINTS FOR SAME SHALL NOT BE LESS THAN 3.65 METER APART.
6. PROVIDE EXTRA REINFORCEMENTS FOR CORNER SLAB (TWO ADJACENT DISCONTINUOES EDGES) AS SHOWN BELOW.
7. CONCRETE SLAB REINFORCEMENT BE PROPERLY SUPPORTED WITH 10mm STEEL CHAIR OR APPROVED EQUIVALENT SPACED AT 1.0 METER ON CENTER BOTHWAYS.



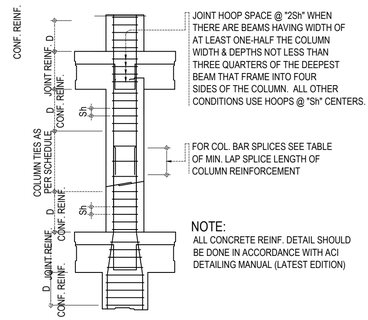
TYPICAL CORNER SLAB DETAIL



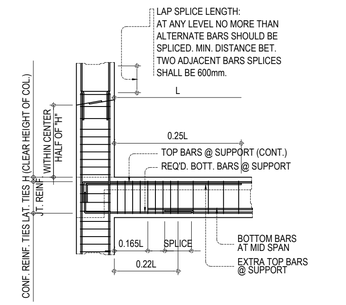
TYPICAL SLAB OPENING DET.

NOTES ON COLUMNS

1. PROVIDE EXTRA SETS OF TIES AT 100 O.C. FOR TIED COLUMN REINFORCEMENT ABOVE AND BELOW BEAM-COLUMN CONNECTIONS FOR A DISTANCE FROM FACE OF CONNECTION EQUAL TO GREATER OF THE OVERALL THICKNESS OF COLUMN, 1/6 THE CLEAR HEIGHT OF COLUMN OR 450mm.
2. COLUMN TIES SHALL BE PROTECTED EVERYWHERE BY A COVERING OF CONCRETE CAST MONOLITHICALLY WIT HTHE CORE WITH A MINIMUM THICKNESS OF 40mm AND NOT LESS THAN 40 TIMES THE MAXIMUM SIZE OF COARSE AGGREGATE IN MILLIMETERS.
3. WHERE COLUMNS CHANGE IN SIZE ,VERTICAL REINFORCEMENT SHALL BE OFFSET AT A SLOPE MONOLITHICALLY WITH THE CORE WITH MINIMUM THICKNESS OF 40mm AND NOT LESS THAN 40 TIMES THE MAXIMUM SIZE COARSE AGGREGATE IN MILLIMETERS
4. UNLESS OTHERWISE INDICATED IN THE PLANS, LAP SPLICES FOR VERTICAL COLUMN REINFORCEMENT SHALL BE MADE WITHIN THE CENTER HALF OF COLUMN HEIGHT, AND THE SPLICE LENGTH SHALL BE LESS THAN 40 BAR DIAMETERS. WELDING OR APPROVED MECHANICAL DEVICES MAY BE USED PROVIDED THAT NOT MORE THAN ALTERNATE BARS ARE WELDED OR MECHANICALLY SPLICED AT ANY LEVEL AND THE VERTICAL DISTANCES BETWEEN THESE WELDS OR SPLICES OF ADJACENT BARS IS NOT LESS THAN 600mm.



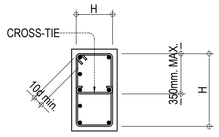
TYPICAL COLUMN ELEV. SHOWING DOWELS AND TIES SPACING



TYP. DETAIL OF COL. LAP SPLICE & EXT. GIRDER TO COL. CONNECT.

NOTES ON BEAMS AND GIRDERS

1. UNLESS, OTHERWISE NOTED IN PLANS , CAMBER ALL BEAMS AND GIRDER AT LEAST 6mmØ FOR EVERY 4.5O M OF SPAN , EXCEPT CANTILEVERS FOR WHICH THE CAMBER SHALL BE AS NOTED IN PLANS OR AS ORDERED BY THE ENGINEER BUT IN NO CASE LESS THAN 20 mm FOR EVERY 3.0 M OF FREE SPAN.
2. TYPICAL BARS BENDING AND CUTTING DETAILS FOR BEAMS SHALL BE AS SHOWN IN FIG. B-1



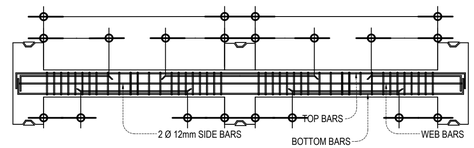


FIGURE B-1

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
NEGROS ISLAND REGION

NEGROS OCCIDENTAL 5TH DEO
SAN CARLOS CITY, NEGROS OCCIDENTAL

PROJECT NAME AND LOCATION	SHEET CONTENTS	PREPARED:	REVIEWED:	SUBMITTED:	RECOMMENDED:	APPROVED:	SET NO.	SHEET NO.
DETAILED ENGINEERING DESIGN PLAN FOR **CONSTRUCTION (COMPLETION) OF DPWH BUILDING OF NEGROS OCCIDENTAL SUB DEO, SAN CARLOS CITY, NEGROS OCCIDENTAL** BRGY. PUNAO, SA CARLOS CITY, NEGROS OCCIDENTAL	CONSTRUCTION NOTES	**MICHAEL JOHN W. GILLESANIA** ENGINEER II DATE:	**JANNA ROSE G. ATIENZA** ENGINEER II DATE:	**VENGIE C. MORACA** OIC CHIEF, PLANNING AND DESIGN SECTION DATE:	**PEDRITO R. BAUTISTA** ASSISTANT DISTRICT ENGINEER DATE:	**JUAN ALFONSO G. JORBINA, SR.** OIC, DISTRICT ENGINEER DATE:	S 1 4	5 29

GENERAL CONSTRUCTION NOTES

TABLE 'A'
TENSION BARS
TABLE OF LAP SPLICE & ANCHORAGE LENGTH (mm)

BAR SIZES (DEFORMED MM)	fc' = 20.7MPa(300psi)		fc' = 27.6 MPa (4000psi)	
	EMBEDMENT	LAPPED	EMBEDMENT	LAPPED
Ø10	300	300	300	300
Ø12	300	300	300	300
Ø16	300	400	300	400
Ø20	400	550	350	500
Ø25	600	800	550	750
Ø28	750	1000	650	850
Ø32	950	1300	850	1100

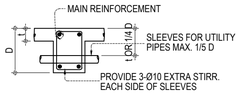
NOTES:
1. TOP PLAIN BARS, MULTIPLY VALUE BY 2
2. NOT MORE THAN 33% OF THE BARS SHALL BE SPLICED WITHIN THE REQUIRED LAP LENGTH

TABLE 'B'
COMPRESSION BARS
TABLE OF LAP SPLICE & ANCHORAGE LENGTH (mm)

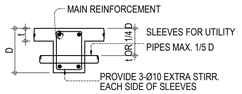
BAR SIZES (DEFORMED MM)	fc' = 20.7MPa(300psi)		fc' = 27.6 MPa (4000psi)	
	EMBEDMENT	LAPPED	EMBEDMENT	LAPPED
Ø10	225	300	200	300
Ø12	275	300	250	300
Ø16	350	400	325	400
Ø20	450	500	475	500
Ø25	550	625	550	625
Ø28	625	675	625	675
Ø32	700	775	700	775

NOTES:
1. TOP PLAIN BARS, MULTIPLY VALUE BY 2
2. NOT MORE THAN 33% OF THE BARS SHALL BE SPLICED WITHIN THE REQUIRED LAP LENGTH
3. VALUES GIVEN ABOVE CAN ALSO BE USED FOR COLUMNS

3. IF THE BEAM REINFORCING BARS END IN A WALL, THE CLEAR DISTANCE FROM THE BAR TO THE FARTHER FACE OF THE WALL IS NOT LESS THAN 25mm. EMBEDMENT LENGTH SHALL BE SHOWN IN A TABLE 'A' FOR TENSION BARS AND TABLE 'B' FOR COMPRESSION BARS UNLESS UNLESS SPECIFIED IN PLAN. TOP BARS AND SHALL NOT BE SPLICED WITHIN THE COLUMN OR TWO STIRRUPS SHALL BE PROVED AT ALL SPLICES.
4. IF THERE ARE TWO OR MORE LAYERS OF REINFORCING BARS, USED 25mm BAR SEPARATORS SPACED AT 1.0M ON ON CENTER ON NO CASE SHALL THERE BE THAN TWO (2) SEPARATORS BETWEEN LAYERS OF BARS
5. MINIMUM CONCRETE PROTECTION FOR REINFORCING BARS OR STEEL SHAPES SHALL BE AS SHOWN IN FIGURE B-2 UNLESS ELSEWHERE.



TYP. DET. FOR SLEEVES THRU CONCRETE BEAM
FIG. B-2



TYP. DET. FOR SLEEVES THRU CONCRETE BEAM
FIG. B-3

6. WHEN A BEAM CROSSES A GIRDER , REST BEAM ON TOP OF GIRDER BARS, BEAM REINFORCING BARS SHALL BE SYMMETRICAL ABOUT THE CENTER LINE WHENEVER POSSIBLE.
7. GENERALLY, NO SPLICES SHALL BE PERMITTED AT POINTS WHERE CRITICAL BENDING STRESSES OCCUR, SPLICES WHERE SO PERMITTED SHALL BE INDICATED IN TABLE 'A' AND 'B'. WELDED SPLICES SHALL DEVELOP IN TENSION AT LEAST 125% OF THE SPLICED YIELD STRENGTH OF THE BAR NOT MORE THAN 50% OF THE BARS AT ANY ONE SECTION IS ALLOWED TO BE SPLICED THEREIN.

NOTES ON CONCRETE HOLLOW BLOCKS WALLS

1. UNLESS OTHERWISE SHOWN IN PLANS ALL CONCRETE HOLLOW BLOCKS AND CERAMIC BLOCKS SHALL BE REINFORCED AS SHOWN IN THE SCHEDULE OF CONCRETE HOLLOW BLOCKS AND CERAMIC BLOCK REINFORCEMENT.
2. PROVIDE 150mm x 300mm STIFFENER COLUMN REINFORCED WITH 4-12mm WITH 10mm Ø TIES AT 150mm ON CENTER WHERE CONCRETE HOLLOW BLOCK TERMINATES AND AT EVERY 3.0M LENGTH OF CONCRETE HOLLOW BLOCK WALLS UNLESS NOTED IN STRUCTURAL PLANS.

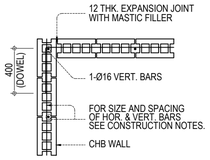
NOTES ON CONCRETE HOLLOW BLOCKS WALLS REINFORCEMENTS

BLOCK THICKNESS	REINFORCEMENT		NOTES
	HORIZONTAL	LAPPED	
75 mm	10mm Ø EVERY 3RD LEVEL	10mm Ø @ 600mm O.C.	A. MINIMUM LAPS AT SPLICE= 0.25 M
125 mm	10mm Ø EVERY 3RD LEVEL	10mm Ø @ 600mm O.C.	B. PROVIDE RIGHT ANGLED REINFORCEMENT AT CORNERS 0.92 m LONG
150mm	10mm Ø EVERY 3RD LEVEL	10mm Ø @ 600mm O.C.	C. WHERE CHB OR CER. BLK. WALL DOWELS WITH THE SAME SIZE AS VER. OR HOR. REINFORCEMENT SHALL BE PROVIDED
200 mm	12mm Ø EVERY 3RD LEVEL	10mm Ø @ 600mm O.C.	

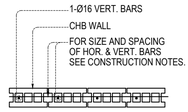
REINFORCING CONCRETE LINTEL BEAMS IN CONCRETE BLOCK WALLS

LINTELS IN BLOCK WALLS

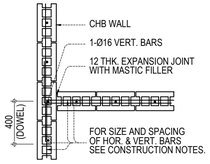
CLEAR SPAN (L)	TOTAL LENGTH (L+0.40M)	MIN. fc' (MPa)	HEIGHT OF LINTEL (mm)	REINFORCEMENT		
				BOTTOM	TOP	STIRRUPS
1.20 M	1.60 M	14.0	200	1-Ø10	1-Ø10	Ø6 mm @ 200mm
1.50 M	1.90 M		200	1-Ø10	1-Ø10	Ø6 mm @ 200mm
1.80 M	2.20 M		200	1-Ø12	1-Ø10	Ø6 mm @ 200mm
2.10 M	2.50 M	17.0	250	1-Ø12	1-Ø10	Ø6 mm @ 200mm
2.40 M	2.90 M		250	1-Ø12	1-Ø10	Ø6 mm @ 200mm
2.70 M	3.10 M		250	1-Ø16	1-Ø12	Ø10mm @ 200mm
3.00 M	3.40 M	20.0	300	1-Ø16	1-Ø12	Ø10mm @ 200mm
3.30 M	3.70 M		300	1-Ø16	1-Ø12	Ø10mm @ 200mm
3.60 M	4.00 M		300	1-Ø20	1-Ø12	Ø10mm @ 200mm



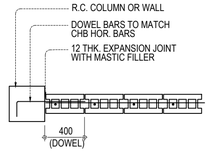
CORNER WALL



OPENING OR END WALL

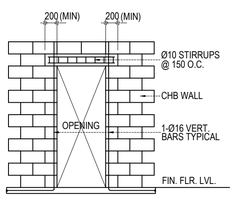


INTERSECTION WALL

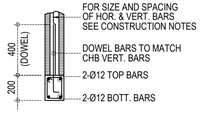


INTERSECTING R.C. COLUMN OR WALL

TYPICAL CONNECTION DETAIL OF MASONRY WALL

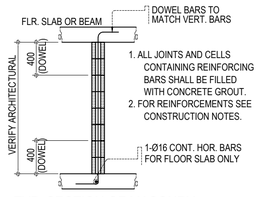


ELEVATION

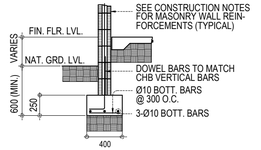


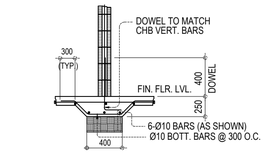
SECTION

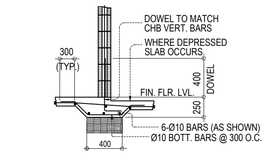
TYP. DET. OF LINTEL BEAM AT CHB WALL OPENING



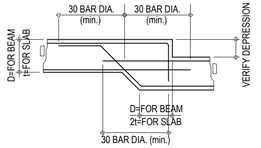
TYP. SECTION OF MASONRY PARTITION REINFORCEMENTS



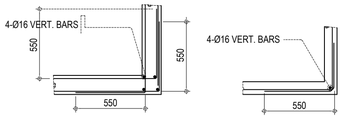




TYPICAL CHB FOOTING DETAILS
(WHERE APPLICABLE)



TYPICAL DETAIL FOR BEAM OR SLAB CHANGE SOFFIT



TYPICAL CONNECTION DETAIL OF R.C. WALL AT CORNERS

NOTES ON WELDS

1. USE E60xx ELECTRODES FOR ALL MEMBERS WELDED.
2. WELDS SHALL DEVELOP THE FULL STRENGTH OF MEMBERS JOINED UNLESS OTHERWISE SHOWN OR DETAILED IN THE DRAWINGS.

NOTES ON STRUCTURAL STEEL

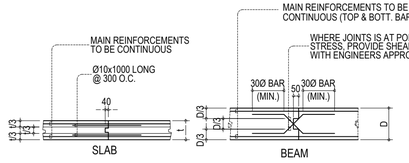
1. STRUCTURAL STEEL TO BE USED FOR FABRICATION AND ERECTION OF THIS STRUCTURE SHALL COMPLY WITH ALL THE PERTINENT PROVISION OF AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDING LATEST EDITION.
2. ALL STRUCTURAL STEEL SHAPES SHALL CONFORM TO ASTM A36 STRUCTURAL STEEL UNLESS OTHERWISE INDICATED.
3. ALL WELDED CONNECTIONS SHALL DEVELOP THE FULL STRENGTH OF THE MEMBERS CONNECTED.
4. UNLESS OTHERWISE SPECIFIED ALL WELDING RODS SHALL CONFORM WITH E60 ELECTRODES.
5. ALL BOLTS USED UNLESS OTHERWISE SPECIFIED SHALL BE ASTM A 307 BOLTS.

NOTES ON EMBBED PIPES

1. ALL EMBEDED PIPES FOR UTILITIES ETC. THAT PASS THRU BEAMS SHALL NOT EXCEED 100mm IN DIAMETER OR 1/3 BEAM DETPH WHICHEVER IS LESS, UNLESS OTHERWISE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER.
2. NO PIPES SHALL BE ALLOWED TO PASS THRU BEAMS VERTICALLY.
3. NO PIPES SHALL BE EMBEDDED IN COLUMNS.

NOTES ON CONSTRUCTION JOINTS IN CONCRETE

1. WHERE A CONSTRUCTION JOINT IS TO BE MADE, THE SURFACE OF CONCRETE SHALL BE CLEANED AND ALL LAITANCE AND STANDING WATER REMOVED SHEAR KEY SHALL BE PROVIDE AT THE JOINT.



TYPICAL SLAB & BEAM CONSTRUCTION JOINT DET.

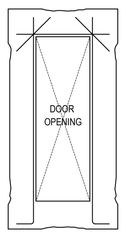
NOTES ON CONCRETE WALLS

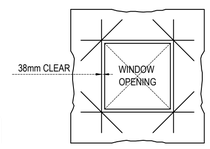
1. ALL WALLS SHALL BE REINFORCED ACCORDING TO THE FOLLOWING SCHEDULE OF WALL REINFORCEMENT UNLESS OTHERWISE INDICATED IN THE PLANS.

WALL THICKNESS	REINFORCEMENT			VERTICAL SECTION
	HORIZONTAL	VERTICAL	REMARKS	
100mm	Ø10mm @ 250mm O.C.	Ø10mm @ 300mm O.C.	HORIZONTAL BARS AT CENTERS VERTICAL BARS STAGGED OUT	VER. BARS / HOR. BARS
125mm	Ø10mm @ 200mm O.C.	Ø10mm @ 250mm O.C.		
150mm	Ø12mm @ 250mm O.C.	Ø12mm @ 300mm O.C.		

REINFORCING BARS SHALL HAVE 25mm CLEAR CONCRETE COVER FROM FACE OF WALL EXCEPT FOR WALLS IN CONTACT WITH THE GROUND WHERE A MINIMUM OF 60mm SHALL BE PROVIDED AND FOR EXPOSED FACES OF FORMED WALLS WHERE THE MINIMUM SHALL BE 50mm CLEAR.

2. CARRY VERTICAL BARS AT LEAST 60mm ABOVE FLOOR LEVEL TO PROVIDE FOR SPLICES WHEN NECESSARY STOP AT 50mm BELOW TOP SLAB OR SOLID BAND WHERE THE WALL ENDS VERTICAL AND HORIZONTAL BARS SHALL BE SPLICED BY LAPPING A DISTANCE EQUAL TO 30 DIAMETERS AND WIRED SECURELY WITH 16 G.I. WIRE PROVIDED THAT SPLICES IN ADJACENT BARS ARE STAGGERED AT LEAST 1.50M O.C.
3. UNLESS OTHERWISE NOTED IN THE PLANS, ALL OPENINGS IN WALLS 250mm OR THICKER SHALL BE REINFORCED AROUND WITH 2-20mmØ BARS. FOR 225mm, 200mm, 175mm, 150mm THICK WALLS, USE 2-16mmØ. FOR 125mm AND 100mm THICK WALLS, USE 2-12mmØ BARS. ALL WALLS SPANNING SHALL HAVE VERTICAL REINFORCEMENT BENT A U-FORM LIKE STIRRUPS AND SPACED ACCORDING TO THE SCHEDULE UNLESS OTHERWISE NOTED.





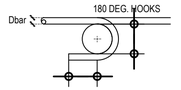
TYP. EXTERIOR WDW. & DOOR OPENING

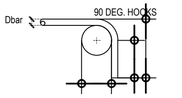
NOTE:
PROVIDE THESE ADDITIONAL BARS FOR ALL OPENINGS PLUS BARS (NOT SHOWN) PARALLEL TO SIDE OF OPENING EQUAL TO THE NUMBER OF TERMINATED BARS AT OPENING

SEE ARCHITECTURAL & MECHANICAL PLANS FOR SLAB OPENING LOCATION.

NOTES ON STIRUPS

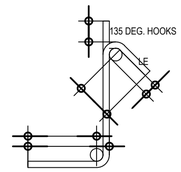
1. ALL REINFORCEMENT SHALL BE BENT COLD UNLESS OTHERWISE PERMITTED BY THE STRUCTURAL ENGINEER.
2. AS SHOWN IN THE DESIGN DRAWINGS OR PERMITTED BY THE STRUCTURAL ENGINEER.
3. TIES & CLOSE STIRRUPS MUST BE AT 135.





MAIN BAR END HOOKS (ALL GRADES)

BAR SIZE (DEFORMED)	DIAMETER (mm)	180° HOOK		90° HOOK
		D+2db	L	L
10 mm Ø	60	75	125	150
12 mm Ø	75	100	150	200
16 mm Ø	95	125	175	250
20 mm Ø	115	150	200	300
25 mm Ø	150	200	230	450
28 mm Ø	240	300	350	550
32 mm Ø	300	335	450	600



STIRRUP AND THE TIE HOOKS (ALL GRADES)

BAR SIZE (DEFORMED)	DIAMETER (mm)	180° HOOK		90° HOOK
		D+2db	L	L
10 mm Ø	40	125	85	100
12 mm Ø	50	165	115	115
16 mm Ø	65	200	140	150
20 mm Ø	115	300	165	300
32 mm Ø	150	335	230	405

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
NEGROS ISLAND REGION

NEGROS OCCIDENTAL 5TH DEO
SAN CARLOS CITY, NEGROS OCCIDENTAL

PROJECT NAME AND LOCATION
DETAILED ENGINEERING DESIGN PLAN FOR
CONSTRUCTION (COMPLETION) OF DPWH BUILDING OF NEGROS OCCIDENTAL SUB DEO, SAN CARLOS CITY, NEGROS OCCIDENTAL
BRGY. PUNAO, SA CARLOS CITY, NEGROS OCCIDENTAL

SHEET CONTENTS: CONSTRUCTION NOTES

DESIGNED: **MICHAEL JOHN W. GILLESANIA**, ENGINEER II, DATE:

REVIEWED: _ _, DA

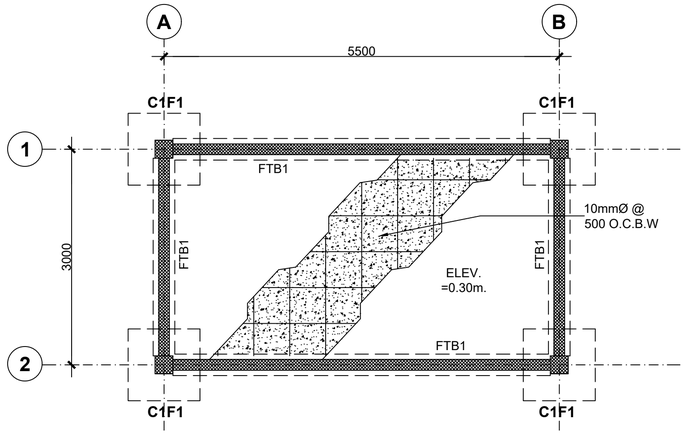
SUBMITTED: _ _, OIC ECTION, DATE

RECOMMENDED: PI 'A, ASS ER, DATE:

APPROVED: JUAN A, SR., DATE:

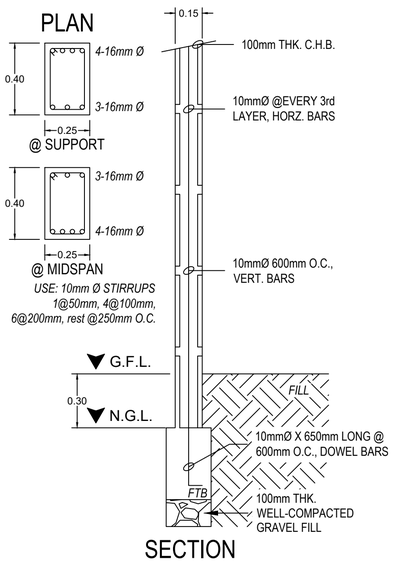
SET NO. S 2 4

SHEET NO. 6 29



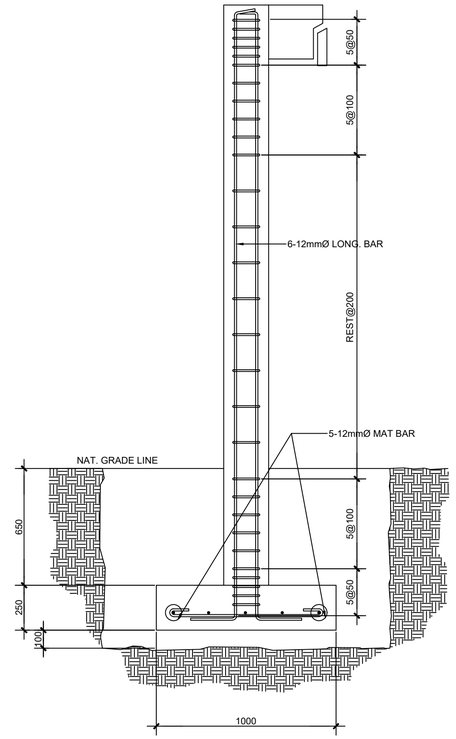
1 S-3 **FOUNDATION PLAN**

SCALE: 1:50 M



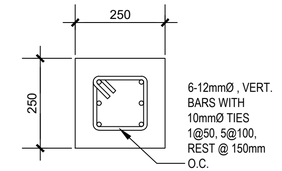
5 S-3 **FTB-1 DETAIL**

SCALE: 1:20 M



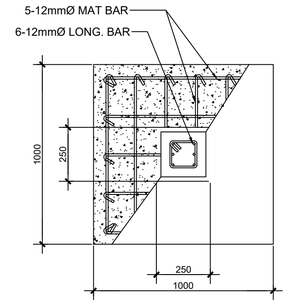
4 S-3 **C1-F1 DETAIL**

SCALE: 1:20 M



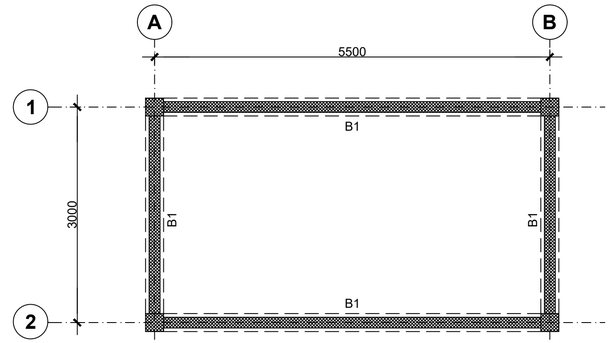
2 S-3 **C-1 DETAIL**

SCALE: 1:10 M



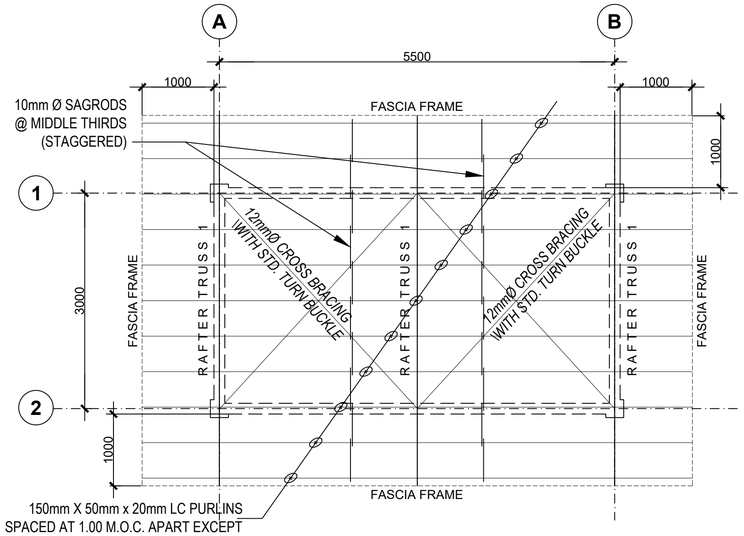
3 S-3 **F-1 DETAIL**

SCALE: 1:20 M



7 S-4 **BEAM LAYOUT PLAN**

SCALE: 1:50 M



8 S-3 **ROOF FRAMING PLAN**

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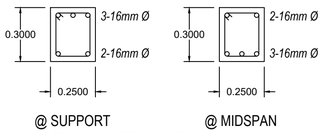
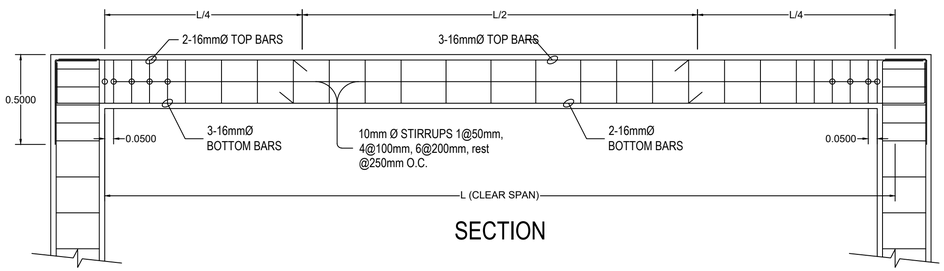
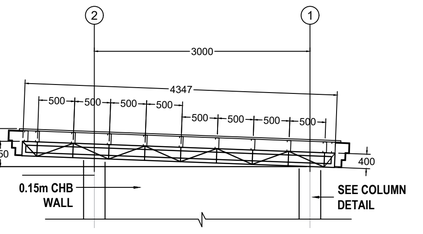
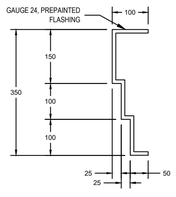






9 S-3 **RAFTER TRUSS 1 DETAIL**

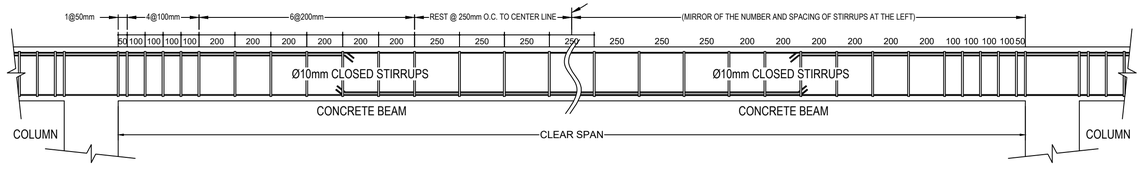
SCALE: 1:50 M



DETAIL

10 S-3 **FALSE GUTTER**

SCALE: 1:10 M



11 S-3 **TYPICAL BEAM DETAIL**

SCALE: 1:20 M

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
NEGROS ISLAND REGION

NEGROS OCCIDENTAL 5TH DEO
SAN CARLOS CITY, NEGROS OCCIDENTAL

PROJECT NAME AND LOCATION

DETAILED ENGINEERING DESIGN PLAN FOR
CONSTRUCTION (COMPLETION) OF DPWH BUILDING OF NEGROS OCCIDENTAL SUB DEO, SAN CARLOS CITY, NEGROS OCCIDENTAL
BRGY. PUNAO, SA CARLOS CITY, NEGROS OCCIDENTAL

SHEET CONTENTS

FOUNDATION PLAN
C-1 DETAIL
F-1 DETAIL
C-1 F-1 DETAIL
FTB-1 DETAIL
WF-1 DETAIL
BEAM LAYOUT PLAN
ROOF FRAMING PLAN
RAFTER TRUSS DETAIL
FALSE GUTTER DETAIL
TYPICAL BEAM DETAIL

PREPARED:
MICHAEL JOHN W. GILLESANIA
ENGINEER II
DATE:

REVIEWED:
JANNA ROSE G. ATIENZA
ENGINEER II
DATE:

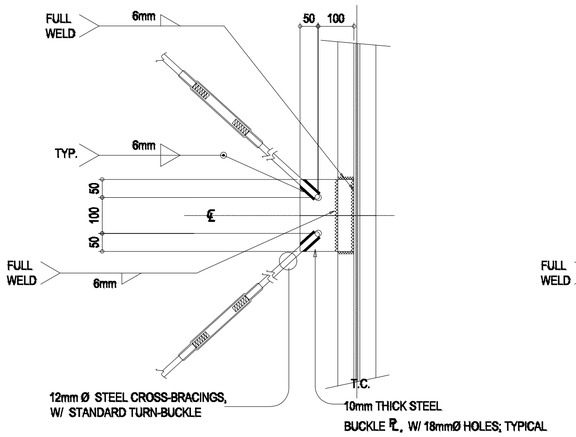
SUBMITTED:
VENGIE C. MORACA
OIC CHIEF, PLANNING AND DESIGN SECTION
DATE:

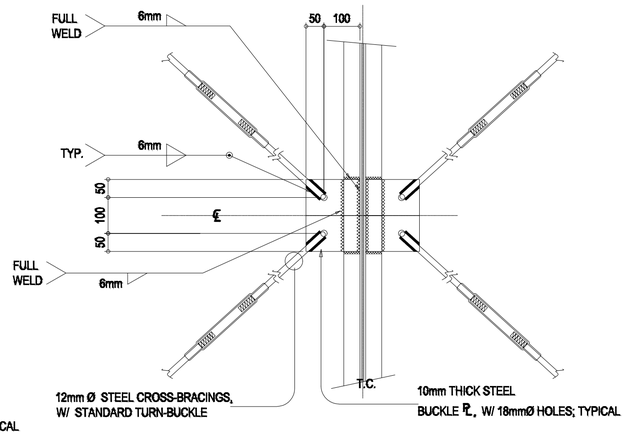
RECOMMENDED:
PEDRITO R. BAUTISTA
ASSISTANT DISTRICT ENGINEER
DATE:

APPROVED:
JUAN ALFONSO G. JORBINA, SR.
OIC, DISTRICT ENGINEER
DATE:

SET NO. S 1 4

SHEET NO. 7 29

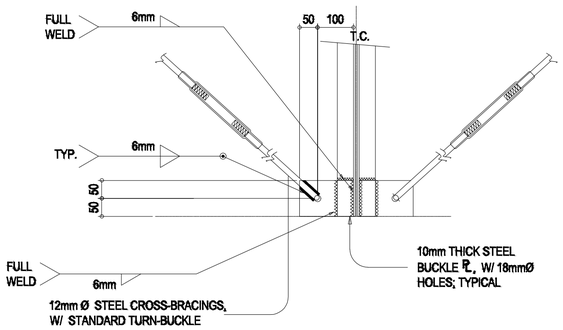




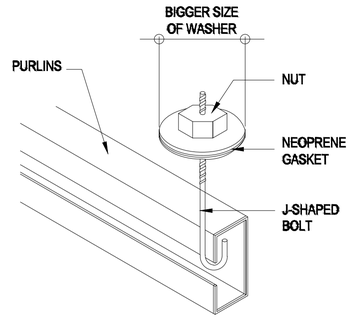
AT APEX OF TRUSS

1 / S-6 **DETAIL CONN. OF CROSS-BRACING**

SCALE : 1 : 10 M

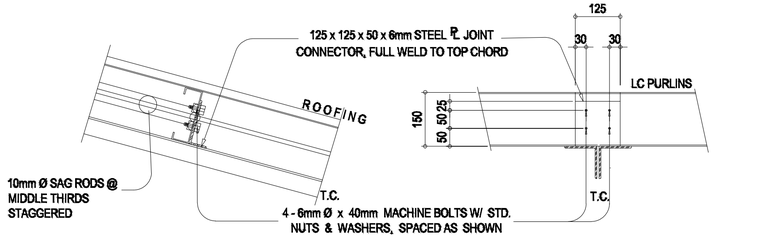


ALONG GRID LINE A & D



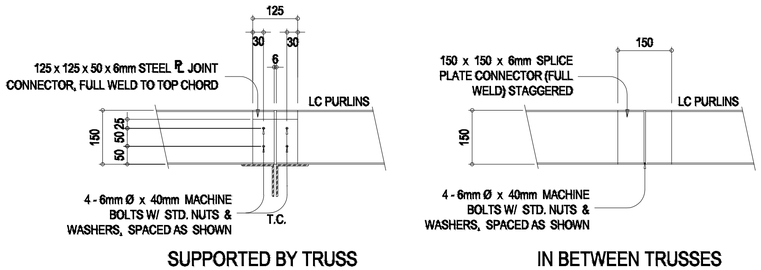
2 / S-6 **ROOFING FIXER**

SCALE : 1 : 10 M



3 / S-6 **DETAIL CONN. OF PURLIN TO TOP CHORD**

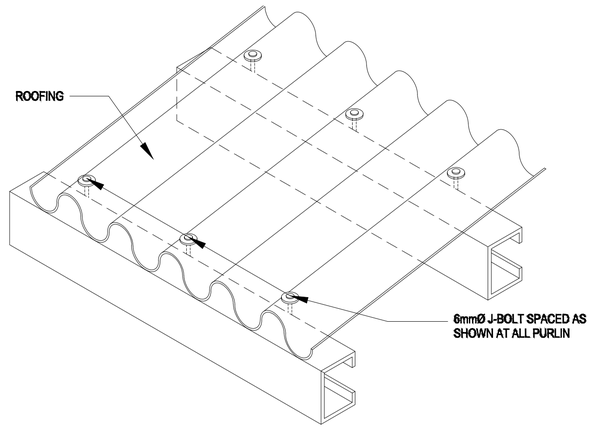
SCALE : 1 : 10 M



SUPPORTED BY TRUSS IN BETWEEN TRUSSES

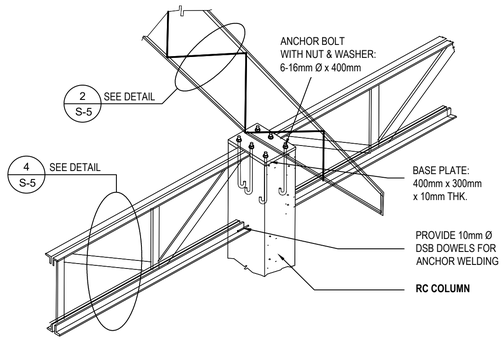
4 / S-6 **DETAIL OF PURLIN SPLICE**

SCALE 1 : 10 M



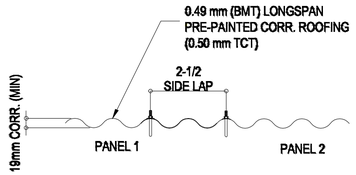
5 / S-6 **ISO. VIEW OF CONN. OF ROOFING TO PURLINS**

SCALE : 1 : 10 M



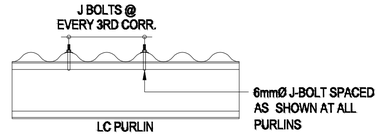
6 / S-6 **TRUSS TO COLUMN CONN. DETAIL**

NOT TO SCALE



7 / S-6 **ROOF PANEL SIDE LAP DETAIL**

SCALE : 1 : 10 M



8 / S-6 **J-BOLT SPACING**

SCALE : 1 : 10 M

REPUBLIC OF THE PHILPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE VI

NEGROS OCCIDENTAL SUB-DEO
SAN CARLOS CITY, NEG.OCC.

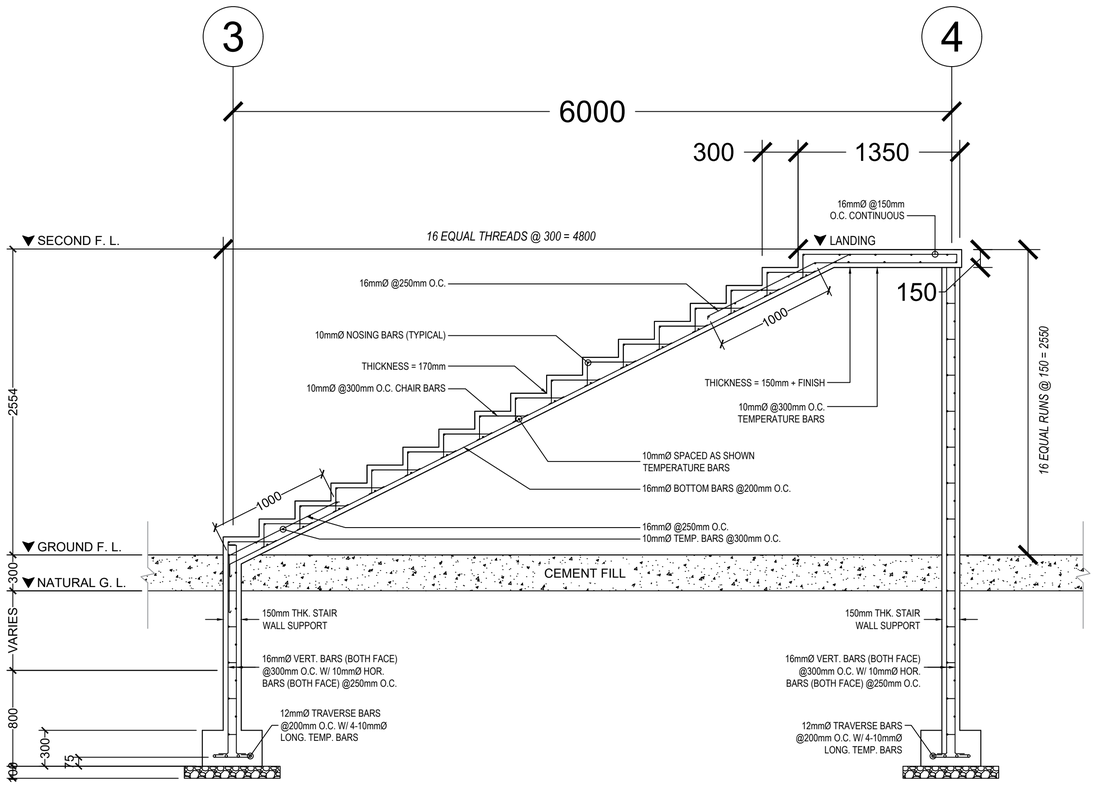
PROJECT NAME AND LOCATION

DETAILED ENGINEERING DESIGN PLAN FOR
CONSTRUCTION OF DPWH DISTRICT OFFICE BUILDING, SAN CARLOS CITY, NEGROS OCCIDENTAL
BRGY. PUNAO, SA CARLOS CITY, NEGROS OCCIDENTAL

SHEET CONTENTS

DETAIL CONNECTION OF CROSS-BRACING
ROOFING FIXER
DETAIL CONNECTION OF PURLIN TO TOP CHORD
DETAIL OF PURLIN SPLICE
ISO. VIEW OF CONNECTION OF ROOFING TO PURLINS
TRUSS TO COLUM CONNECTION DETAIL
ROOF PANEL SIDE LAP DETAIL
J-BOLT SPACING

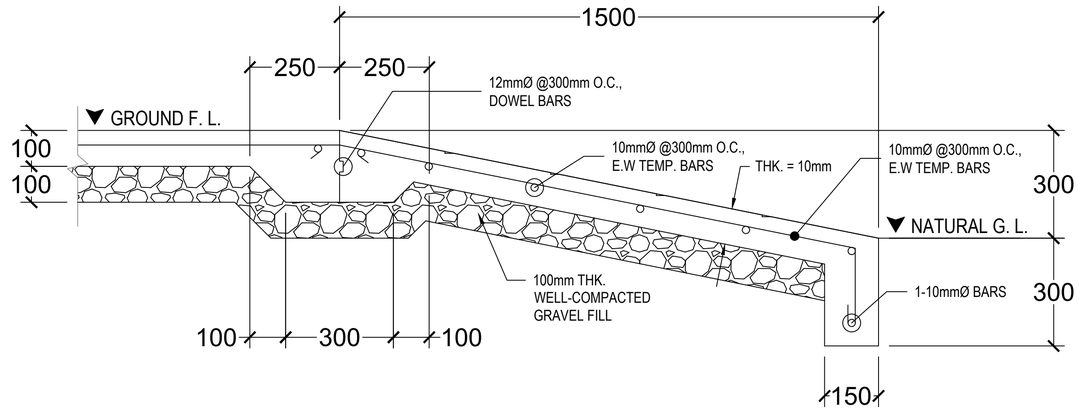
PREPARED:	REVIEWED:	SUBMITTED:	RECOMMENDED:	APPROVED:	SET NO.	SHEET NO.
MICHAEL JOHN W. GILLESANIA ENGINEER II DATE:	**JANNA ROSE G. ATIENZA** ENGINEER II DATE:	**VENGIE C. MORACA** OIC CHIEF, PLANNING AND DESIGN SECTION DATE:	**PEDRITO R. BAUTISTA** ASSISTANT DISTRICT ENGINEER DATE:	**JUAN ALFONSO G. JORBINA, SR.** OIC, DISTRICT ENGINEER DATE:	S 6 7	16 26



1 / S-7

DETAIL SECTION OF STAIR

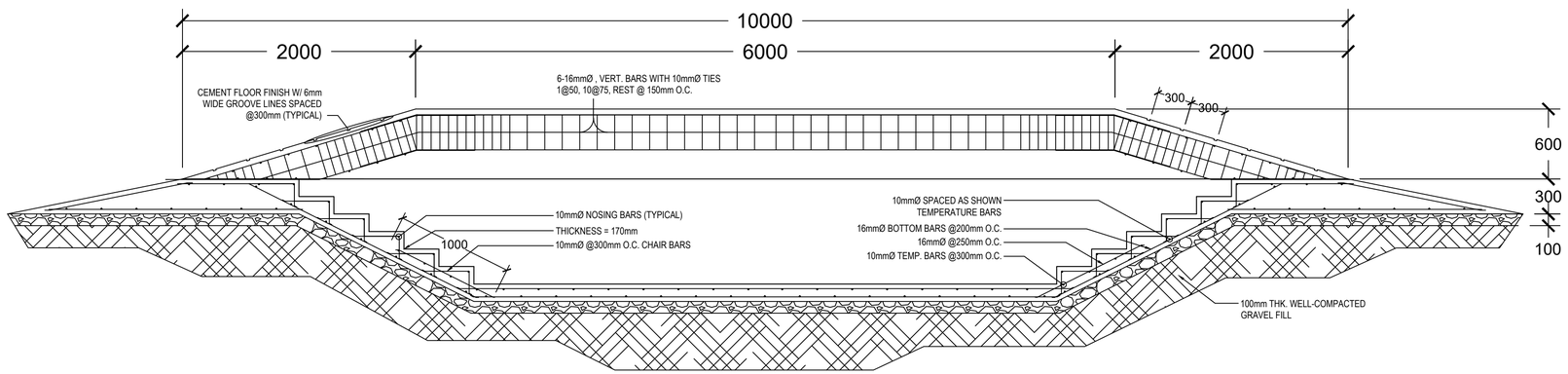
SCALE : 1 : 30 M



2 / S-7

DETAIL SECTION OF R.C. RAMP

SCALE : 1 : 10 M



3 / S-7

DETAIL SECTION OF WHEEL RISER RAMP

SCALE : 1 : 30 M

REPUBLIC OF THE PHILPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE VI

NEGROS OCCIDENTAL SUB-DEO
SAN CARLOS CITY, NEG.OCC.

PROJECT NAME AND LOCATION	SHEET CONTENTS	PREPARED:	REVIEWED:	SUBMITTED:	RECOMMENDED:	APPROVED:	SET NO.	SHEET NO.
DETAILED ENGINEERING DESIGN PLAN FOR **CONSTRUCTION OF DPWH DISTRICT OFFICE BUILDING, SAN CARLOS CITY, NEGROS OCCIDENTAL** BRGY. PUNAO, SA CARLOS CITY, NEGROS OCCIDENTAL	DETAIL SECTION OF STAIR DETAIL SECTION OF R.C. RAMP DETAIL SECTION OF WHEEL RISER RAMP	**MICHAEL JOHN W. GILLESANIA** ENGINEER II DATE:	**JANNA ROSE G. ATIENZA** ENGINEER II DATE:	**VENGIE C. MORACA** OIC CHIEF, PLANNING AND DESIGN SECTION DATE:	**PEDRITO R. BAUTISTA** ASSISTANT DISTRICT ENGINEER DATE:	**JUAN ALFONSO G. JORBINA, SR.** OIC, DISTRICT ENGINEER DATE:	S 7 | 7	17 / 26

ELECTRICAL NOTES:

1. ALL ELECTRICAL WORKS SHALL COMPLY IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS. THE APPLICABLE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE (PEC). THE RULES AND REGULATION OF THE LOCAL ENFORCING AUTHORITY AND THE REQUIREMENTS OF THE LOCAL POWER COMPANY. THE ELECTRICAL WORKS SHALL BE UNDER IMMEDIATE SUPERVISION OF A DULY REGISTERED ELECTRICAL ENGINEER.

2. ELECTRICAL SERVICE POWER SHALL BE SINGLE PHASE, 2- WIRE, 230 V AC, 60 HZ

3. WIRING CONDUIT SPECS. SHALL BE AS FOLLOWS :

   a. FEEDERS AND RISERS - INTERMEDIATE CONDUIT
   b. LIGHTING, POWER RECEPTACLE BRANCH CKT. AND AUXILIARY - POLYVINYL CHLORIDE CONDUIT SCH. 40

4. ALL WIRES SHALL BE COPPER AND THERMOPLASTIC INSULATED TYPE -THW TYPE UNLESS OTHERWISE INDICATED IN THE PLAN. THE MINIMUM SIZE OF WIRE FOR POWER AND LIGHTING CIRCUIT HOMERUN SHALL BE 3.5 mm AND INSULATED FOR 600 VOLTS. SMALLEST RACEWAY SHALL BE 15 mm Ø TRADE / NOMINAL SIZE.

5. ALL OUTLET BOXES SHALL BE GALVANIZED GAUGE NO. 16 DEEP TYPE W/ FACTORY KNOCKOUTS.

6. ALL MATERIALS TO BE USED SHALL BE BRAND NEW AND APPROVED TYPE FOR THE PARTICULAR LOCATION AND PURPOSE OF USAGE.

7. GROUNDING SYSTEM SHALL BE PROVIDED TO ALL LIGHTING AND POWER CIRCUIT AS PER PHILIPPINE ELECTRICAL CODE REQUIREMENT.

8. MOUNTING HEIGHT OF WIRING DEVICES SHALL BE AS FOLLOWS :

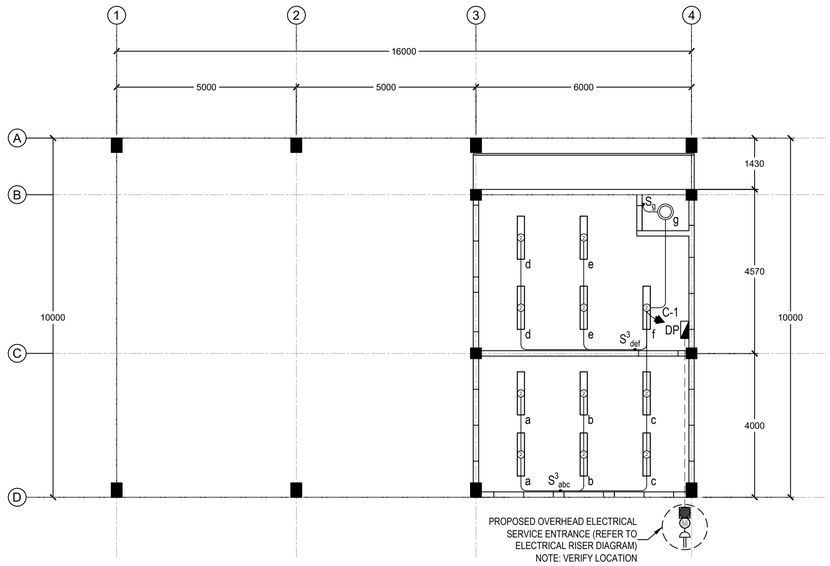
   a. WALL LIGHT SWITCH - 1.20 m. ABOVE FINISH FLOOR
   b. WALL CONVENIENCE OUTLET - 0.30 m. ABOVE FINISH FLOOR
   c. DISTRIBUTION PANEL BOARD - 1.80 m. ABOVE FINISH FLOOR

E L E C T R I C A L S Y M B O L S	
S Y M B O L	D E S C R I P T I O N
	- 1-36WATTS, 230 VOLTS, 60Hz, LED PIN LIGHT
	- 1-50WATTS, 230 VOLTS, 60Hz, LED INDUSTRIAL DROP LIGHT
	- 2-36 WATTS, 230 VOLTS, 60Hz, FLUORESCENT LIGHTING FIXTURE, BOX TYPE
	- ONE GANG, LIGHT SWITCH, 10A, 230V
	- TWO GANG, LIGHT SWITCH, 10A, 230V
	- THREE GANG, LIGHT SWITCH, 10A, 230V
	- DUPLEX CONVENIENCE OUTLET, GROUNDING TYPE, 15A, 230 VOLTS, "WP" DENOTES WEATHER PROOF OUTLET
	- SINGLE AIR CONDITIONING OUTLET, GROUNDING TYPE, 15A, 230 VOLTS
	- CIRCUIT HOMERUN
	- RACEWAY CONDUIT CONCEALED IN CEILING
	- RACEWAY CONDUIT CONCEALED UNDER FLOOR & IN WALL
	- DISTRIBUTION PANEL BOARD (DP)
	- CIRCUIT BREAKER, RATING AS INTENDED
	- ELECTRIC SERVICE METER
	- ELECTRIC SERVICE ENTRANCE
	- GROUNDING SYSTEM

REPUBLIC OF THE PHILPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE VI

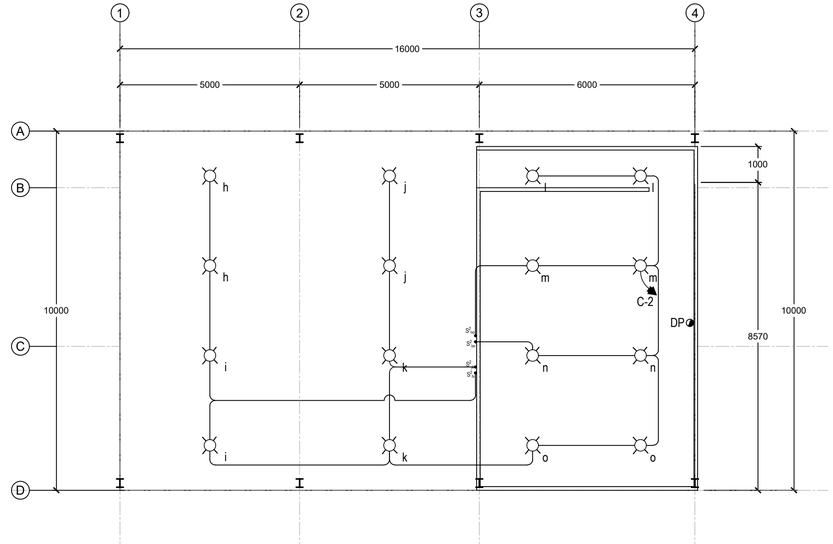
NEGROS OCCIDENTAL SUB-DEO
SAN CARLOS CITY, NEG.OCC.

PROJECT NAME AND LOCATION	SHEET CONTENTS	PREPARED:	REVIEWED:	SUBMITTED:	RECOMMENDED:	APPROVED:	SET NO.	SHEET NO.
DETAILED ENGINEERING DESIGN PLAN FOR **CONSTRUCTION OF DPWH DISTRICT OFFICE BUILDING, SAN CARLOS CITY, NEGROS OCCIDENTAL** BRGY. PUNAO, SA CARLOS CITY, NEGROS OCCIDENTAL	ELECTRICAL NOTES ELECTRICAL SYMBOLS	PROFESSIONAL ELECTRICAL ENGINEER DATE:	**JANNA ROSE G. ATIENZA** ENGINEER II DATE:	**VENGIE C. MORACA** OIC CHIEF, PLANNING AND DESIGN SECTION DATE:	**PEDRITO R. BAUTISTA** ASSISTANT DISTRICT ENGINEER DATE:	**JUAN ALFONSO G. JORBINA, SR.** OIC, DISTRICT ENGINEER DATE:	E 1 4	18 26



1 / E-2 **GROUND FLOOR LIGHTING PLAN**

S C A L E : 1 : 1 0 0 M



2 / E-2 **SECOND FLOOR LIGHTING PLAN**

S C A L E : 1 : 1 0 0 M

SCHEDULE OF LIGHTING FIXTURES AND LAMPS:

SYMBOL	DESCRIPTION	INSTALLING/ MOUNTING
◎	- 1-36WATTS, 230 VOLTS, 60Hz, LED PIN LIGHT	SURFACE CEILING MOUNTED
⊗	- 1-50WATTS, 230 VOLTS, 60Hz, LED INDUSTRIAL DROP LIGHT	SURFACE CEILING MOUNTED
②	- 2-36 WATTS, 230 VOLTS, 60Hz, FLUORESCENT LIGHTING FIXTURE, BOX TYPE	SURFACE CEILING MOUNTED
NOTE:	ALL FLUORESCENT LIGHTING FIXTURES SHALL BE EQUIPPED WITH A HIGH POWER FACTOR, PRE-HEAT WITH STARTER AND THERMALLY PROTECTED BALLAST, COMPLETE WITH ALL NECESSARY ACCESSORIES, WIRED AND READY FOR USE.	

REPUBLIC OF THE PHILPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE VI

NEGROS OCCIDENTAL SUB-DEO
SAN CARLOS CITY, NEG.OCC.

PROJECT NAME AND LOCATION

DETAILED ENGINEERING DESIGN PLAN FOR
CONSTRUCTION OF DPWH DISTRICT OFFICE BUILDING, SAN CARLOS CITY, NEGROS OCCIDENTAL
BRGY. PUNAO, SA CARLOS CITY, NEGROS OCCIDENTAL

SHEET CONTENTS

GROUND FLOOR LIGHTING PLAN
SECOND FLOOR LIGHTING PLAN
SCHEDULE OF LIGHTING FIXTURES AND LAMPS

PREPARED:

PROFESSIONAL ELECTRICAL ENGINEER
DATE:

REVIEWED:

JANNA ROSE G. ATIENZA
ENGINEER II
DATE:

SUBMITTED:

VENGIE C. MORACA
OIC CHIEF, PLANNING AND DESIGN SECTION
DATE:

RECOMMENDED:

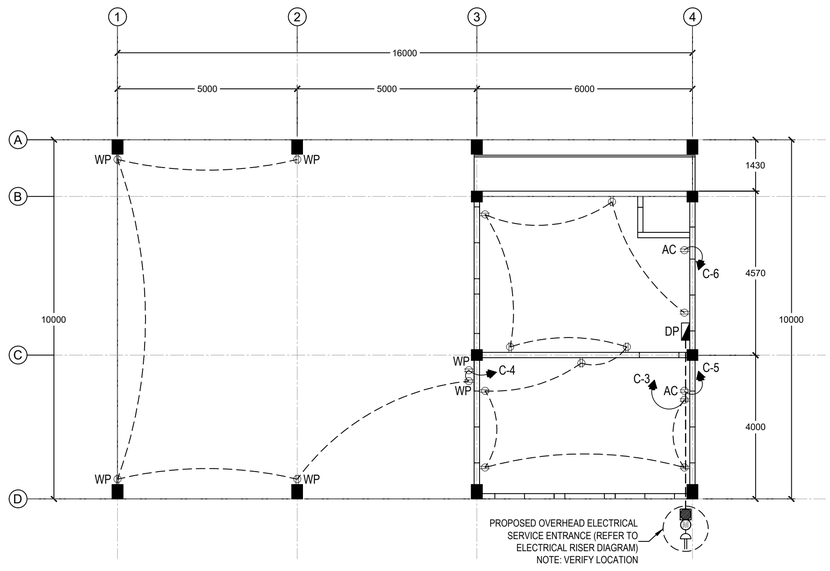
PEDRITO R. BAUTISTA
ASSISTANT DISTRICT ENGINEER
DATE:

APPROVED:

JUAN ALFONSO G. JORBINA, SR.
OIC, DISTRICT ENGINEER
DATE:

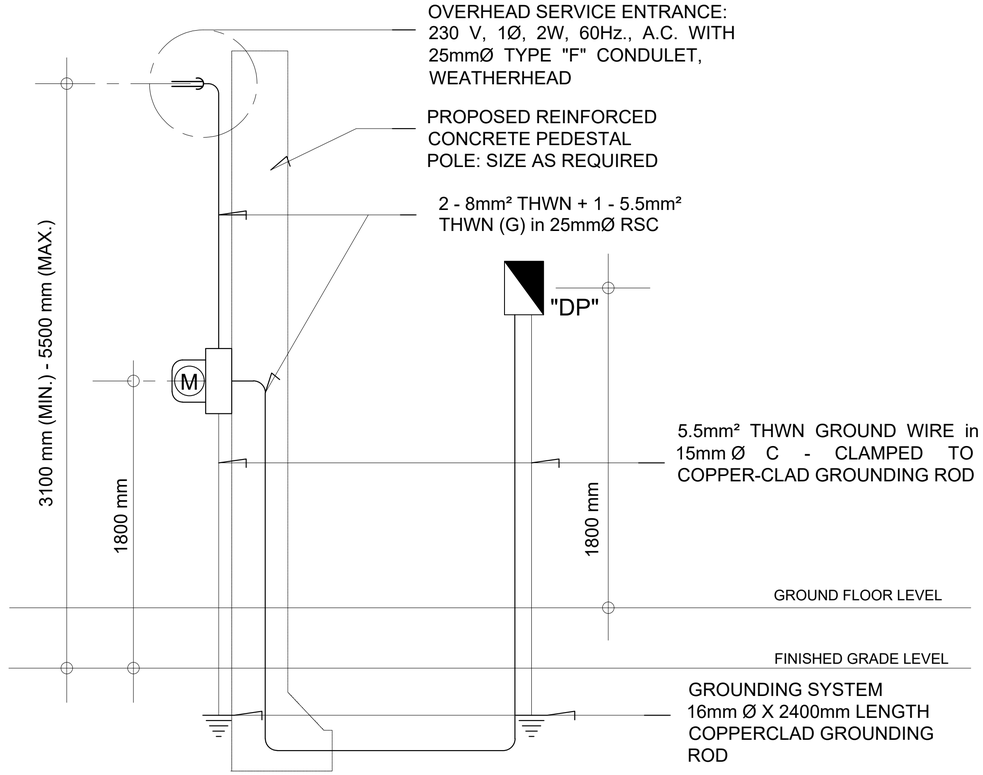
SET NO. E 2 4

SHEET NO. 19 26



1 / E-3 **GROUND FLOOR POWER PLAN**

SCALE: 1:100 M



2 / E-3 **ELECTRICAL RISER DIAGRAM**

NOT TO SCALE

SCHEDULE OF CONVENIENCE OUTLETS:

SYMBOL	DESCRIPTION	INSTALLING/ MOUNTING
	- DUPLEX CONVENIENCE OUTLET, GROUNDING TYPE, 15A, 230 VOLTS	SURFACE WALL MOUNTED
WP	- WEATHER PROOF DUPLEX CONVENIENCE OUTLET, GROUNDING TYPE, 15A, 230 VOLTS	SURFACE WALL MOUNTED
AC	- SINGLE AIR CONDITIONING OUTLET, GROUNDING TYPE, 15A, 230 VOLTS	SURFACE WALL MOUNTED

REPUBLIC OF THE PHILPPINES
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REGIONAL OFFICE VI

NEGROS OCCIDENTAL SUB-DEO
SAN CARLOS CITY, NEG.OCC.

PROJECT NAME AND LOCATION
DETAILED ENGINEERING DESIGN PLAN FOR
CONSTRUCTION OF DPWH DISTRICT OFFICE BUILDING, SAN CARLOS CITY, NEGROS OCCIDENTAL
BRGY. PUNAO, SA CARLOS CITY, NEGROS OCCIDENTAL

SHEET CONTENTS
GROUND FLOOR POWER PLAN
ELECTRICAL RISER DIAGRAM
SCHEDULE OF CONVENIENCE OUTLETS

PREPARED:
PROFESSIONAL ELECTRICAL ENGINEER
DATE:

REVIEWED:
JANNA ROSE G. ATIENZA
ENGINEER II
DATE:

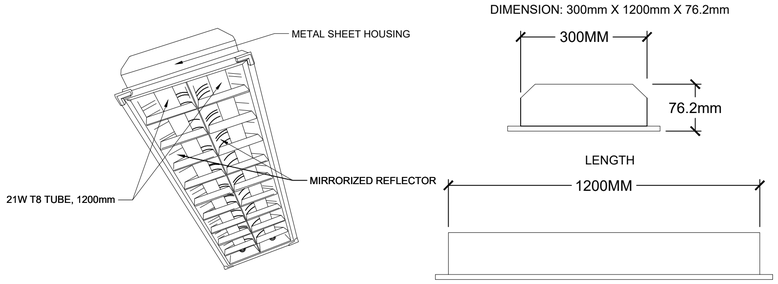
SUBMITTED:
VENGIE C. MORACA
OIC CHIEF, PLANNING AND DESIGN SECTION
DATE:

RECOMMENDED:
PEDRITO R. BAUTISTA
ASSISTANT DISTRICT ENGINEER
DATE:

APPROVED:
JUAN ALFONSO G. JORBINA, SR.
OIC, DISTRICT ENGINEER
DATE:

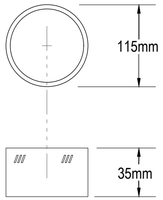
SET NO. E 3 4

SHEET NO. 20 26

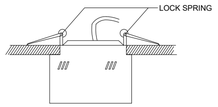


1 / E-4 FLUORESCENT LIGHT DETAIL

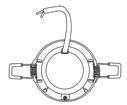
NOT TO SCALE



MOUNTING DETAILS:



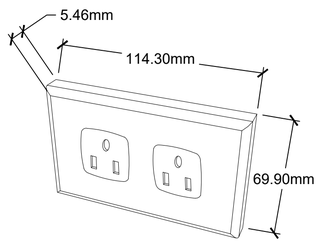
BACK DETAILS:



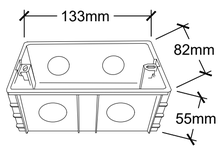
2 / E-4 PIN LIGHT DETAIL

NOT TO SCALE

CONVENIENCE OUTLET
3-PINS GROUNDING TYPE:

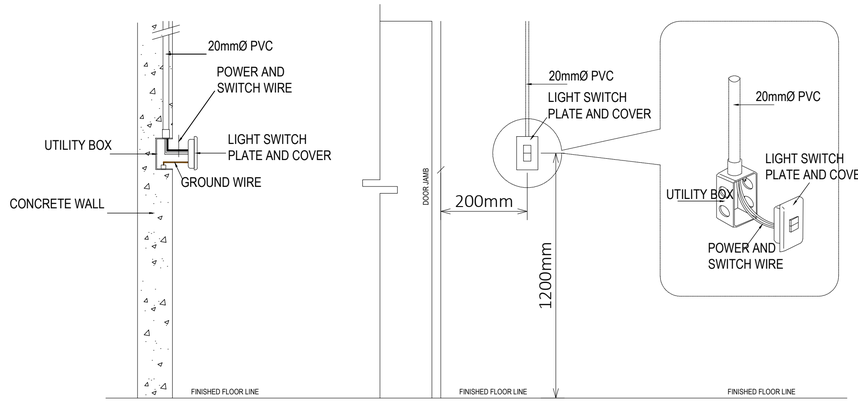


UTILITY BOX DETAILS:

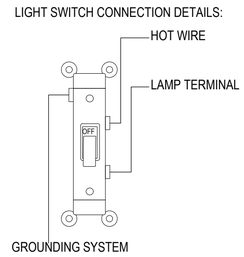


3 / E-4 CONVENIENCE OUTLET DETAIL

NOT TO SCALE



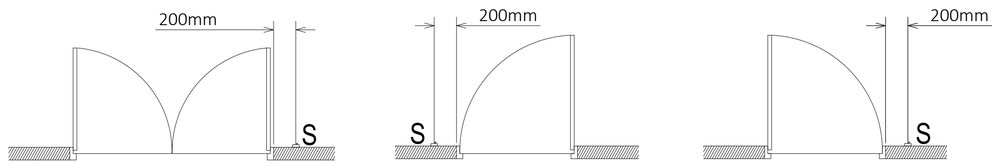
LIGHT SWITCH CONNECTION DETAILS:



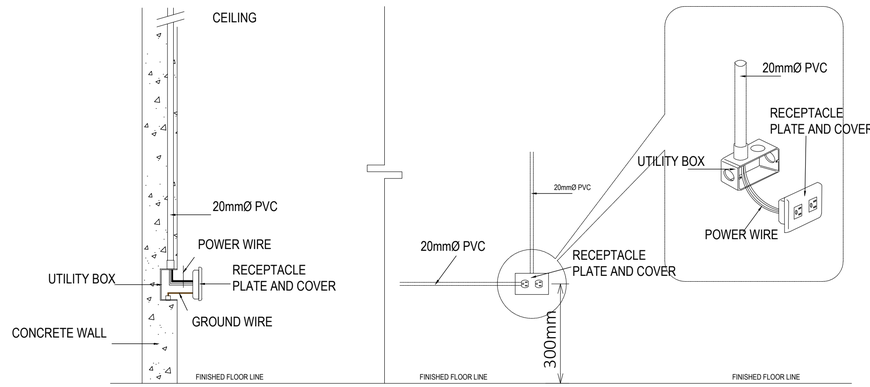
SCHEDULE OF EQUIPMENTS:

QTY	UNIT DESIGNATION	TYPE	RATING V	RATING A	RATING IP	REMARKS:
1	S	LIGHT SWITCH GROUNDING TYPE	230	16	65	BRAND NEW AND OF THE APPROVED TYPE COMPLETE WITH STANDARD ACCESSORIES READY FOR SERVICE

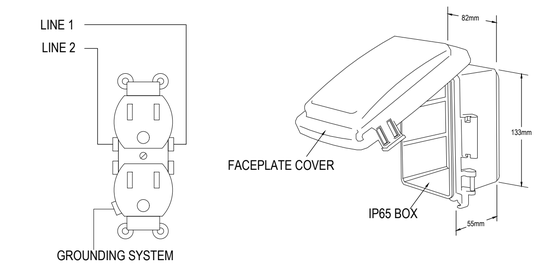
LIGHT SWITCH MOUNTING DETAILS:



NOTE:
LIGHT SWITCH WILL BE LOCATED 200mm FROM DOOR OPENING TO CENTER OF DEVICE.



CONVENIENCE OUTLET CONNECTION DETAILS:



WEATHERPROOF COVER DETAILS:

SCHEDULE OF EQUIPMENTS:

QTY	UNIT DESIGNATION	TYPE	RATING V	RATING A	RATING IP	REMARKS:
1		CONVENIENCE OUTLET GROUNDING TYPE - WEATHERPROOF	230	20	65	BRAND NEW AND OF THE APPROVED TYPE COMPLETE WITH STANDARD ACCESSORIES READY FOR SERVICE

CONVENIENCE OUTLET MOUNTING DETAILS:

4 / E-4 MISCELLANEOUS DRAWING DETAILS

NOT TO SCALE

REPUBLIC OF THE PHILPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE VI

NEGROS OCCIDENTAL 5TH DEO
SAN CARLOS CITY, NEG.OCC.

PROJECT NAME AND LOCATION:
DETAILED ENGINEERING DESIGN PLAN FOR
CONSTRUCTION OF DPWH DISTRICT OFFICE BUILDING, SAN CARLOS CITY, NEGROS OCCIDENTAL
BRGY. PUNAO, SA CARLOS CITY, NEGROS OCCIDENTAL

SHEET CONTENTS:
FLUORESCENT LIGHT DETAIL
PIN LIGHT DETAIL
CONVENIENCE OUTLET DETAIL
MISCELLANEOUS DRAWING DETAILS

PREPARED:
PROFESSIONAL ELECTRICAL ENGINEER
DATE:

REVIEWED:
JANNA ROSE G. ATIENZA
ENGINEER II
DATE:

SUBMITTED:
VENGIE C. MORACA
OIC CHIEF, PLANNING AND DESIGN SECTION
DATE:

RECOMMENDED:
PEDRITO R. BAUTISTA
ASSISTANT DISTRICT ENGINEER
DATE:

APPROVED:
JUAN ALFONSO G. JORBINA, SR.
OIC, DISTRICT ENGINEER
DATE:

SET NO.: E 4 4

SHEET NO.: 21 / 26

PLUMBING NOTES:

1. GRADES OF HORIZONTAL PIPING
   RUN ALL HORIZONTAL PIPINGS IN PERFECT ALIGNMENT AND AT A FORM GRADE OF NOT LESS THAN TWO PERCENT (2%).

2. CHANGE IN DIRECTION
   ALL CHANGE IN DIRECTION SHALL BE MADE BY APPROPRIATE USE OF FORTY FIVE DEGREES (45°) WYES, LONGSWEEP QUARTER BEND, SIX-EIGHT OR SIXTEENTH BENDS. WHEN THE CHANGE OF FLOW IS FROM HORIZONTAL TO VERTICAL, 1/8 BEND COMBINATION MAYBE USED ON VERTICAL STACKS AND SHORT QUARTER BENDS MAYBE USED ON WASTE LINE. TEE AND CROSSES MAYBE USED IN VENT PIPES.

3. PROHIBITED FITTINGS
   NO DOUBLE HUB OR TEE BRANCH SHALL BE USED ON HORIZONTAL WASTE LINES. THE DRILLINGS AND TAPPINGS OF HOUSE DRAIN, WASTE OR VENT PIPES AND USE OF SADDLE HUB AND BEND ARE PROHIBITED.

4. SLEEVES
   PROVIDE PIPE SLEEVES AT WALLS, COLUMNS OR SLABS ONE SIZE BIGGER THAN THE ACTUAL SIZE PASSING THROUGH THE WALLS, COLUMNS OR UNDER SLAB TO PROTECT PIPE FROM BREAKAGE.

5. PIPE CLEAN-OUTS
   PIPE CLEAN-OUTS ARE REQUIRED UNDER THE FOLLOWING CONDITIONS:
   a. EVERY CHANGE IN HORIZONTAL DIRECTIONS EXCEEDING TWENTY-TWO AND ONE-HALF DEGREES (22 1/2°).
   b. ONE AND ONE-HALF METERS (1.50 m) INSIDE THE PROPERTY LINE BEFORE THE HOUSE DRAINAGE CONNECTION.
   c. EVERY FIFTEEN METERS (15.00 m) IN HORIZONTAL RUN OF PIPES.
   d. AT THE END OF ANY HORIZONTAL PIPE LINES.

6. THE DIGESTION CHAMBER OF SEPTIC VAULT MUST BE WATERPROOFED.

7. NOT LESS THAN 300 mm OF AIR SPACE MUST BE LEFT BETWEEN THE TOP OF THE SEWAGE AND THE UNDER PART OF THE VAULT ROOF SLAB.

8. NO SEPTIC VAULT MUST BE CONSTRUCTED UNDER THE BUILDING.

9. ALL PLUMBING WORKS SHALL BE DONE BY A LICENSED MASTER PLUMBER AND A LICENSED PLUMBING CONTRACTOR.

PLUMBING LEGENDS:

CO	**CLEAN OUT**
FD	**FLOOR DRAIN**
FAU	**FAUCET**
LAV	**LAVATORY**
MH	**MANHOLE**
WC	**WATER CLOSET**
SV	**SEPTIC VAULT**
PVCCWL	**POLYVINYL CHLORIDE COLD WATER LINE** (ASTM D2729 / ASTM D3311, ISO 4435 / ASTM D2564)
PVCWP	**POLYVINYL CHLORIDE WASTE PIPE** (ASTM D2729 / ASTM D3311, ISO 4435 / ASTM D2564)
PVCVP	**POLYVINYL CHLORIDE VENT PIPE** (ASTM D2729 / ASTM D3311, ISO 4435 / ASTM D2564)
PVCVTR	**POLYVINYL CHLORIDE VENT THRU ROOF** (ASTM D2729 / ASTM D3311, ISO 4435 / ASTM D2564)
PVCDP	**POLYVINYL CHLORIDE DRAIN PIPE** (ASTM D2729 / ASTM D3311, ISO 4435 / ASTM D2564)

REPUBLIC OF THE PHILPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE VI

NEGROS OCCIDENTAL SUB-DEO
SAN CARLOS CITY, NEG.OCC.

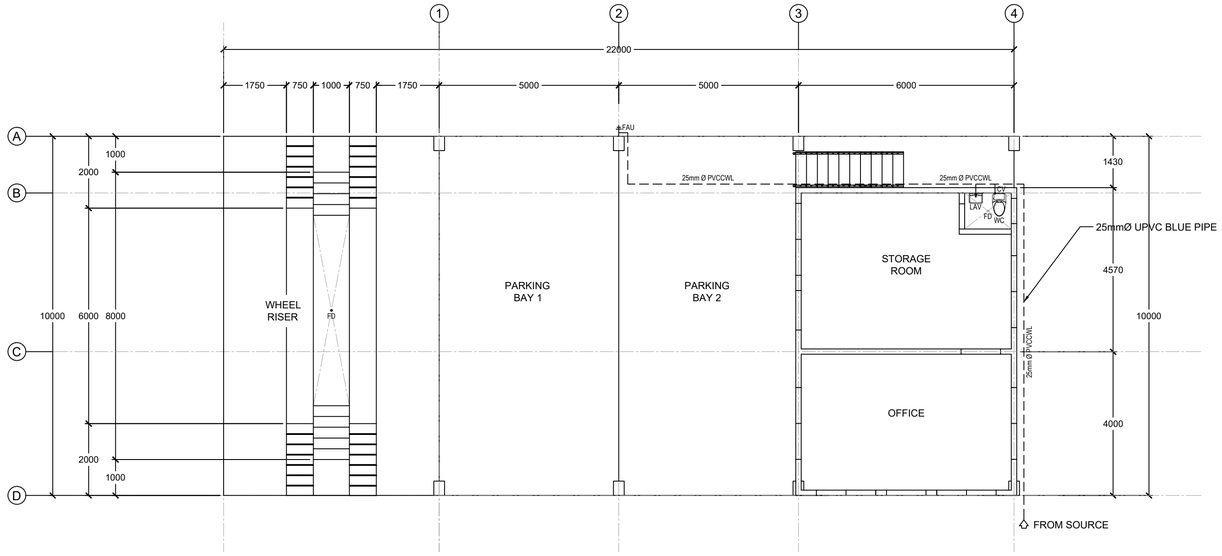
PROJECT NAME AND LOCATION
DETAILED ENGINEERING DESIGN PLAN FOR
CONSTRUCTION OF DPWH DISTRICT OFFICE BUILDING, SAN CARLOS CITY, NEGROS OCCIDENTAL
BRGY. PUNAO, SA CARLOS CITY, NEGROS OCCIDENTAL

SHEET CONTENTS
PLUMBING NOTES
PLUMBING LEGENDS

PREPARED:	REVIEWED:	SUBMITTED:	RECOMMENDED:	APPROVED:
FRANCIS HIRO H. LEDUNA	**JANNA ROSE G. ATIENZA**	**VENGIE C. MORACA**	**PEDRITO R. BAUTISTA**	**JUAN ALFONSO G. JORBINA, SR.**
ENGINEER II	ENGINEER II	OIC CHIEF, PLANNING AND DESIGN SECTION	ASSISTANT DISTRICT ENGINEER	OIC, DISTRICT ENGINEER
DATE:	DATE:	DATE:	DATE:	DATE:

SET NO. P 1 3

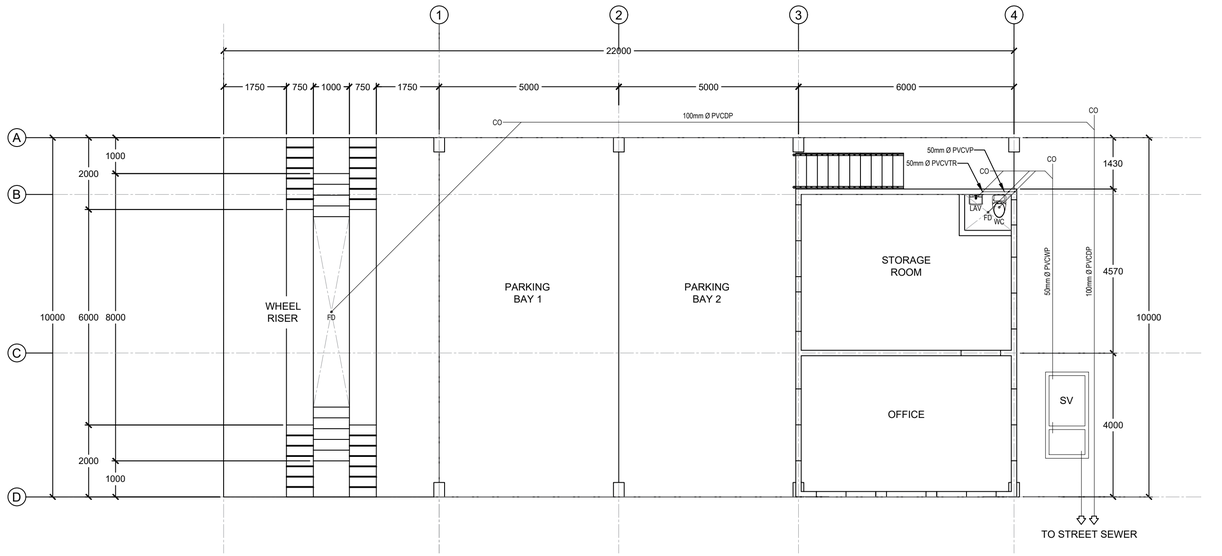
SHEET NO. 22 26



1
P-2

GROUND FLOOR WATER LINE LAYOUT

S C A L E : 1 : 1 0 0 M



2
P-2

GROUND FLOOR SANITARY LAYOUT

S C A L E : 1 : 1 0 0 M

PLUMBING LEGENDS:

CO	CLEAN OUT
FD	FLOOR DRAIN
FAU	FAUCET
LAV	LAVATORY
MH	MANHOLE
WC	WATER CLOSET
SV	SEPTIC VAULT
PVCCWL	POLYVINYL CHLORIDE COLD WATER LINE (ASTM D2729 / ASTM D3311, ISO 4435 / ASTM D2564)
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PVCVTR	POLYVINYL CHLORIDE VENT THRU ROOF (ASTM D2729 / ASTM D3311, ISO 4435 / ASTM D2564)
PVCDP	POLYVINYL CHLORIDE DRAIN PIPE (ASTM D2729 / ASTM D3311, ISO 4435 / ASTM D2564)

PLUMBING SPECIFICATIONS:

1. SUPPLY PIPE LINES SHALL BE OF G.I. PIPE AND WASTE PIPE LINES SHALL BE OF UPVC PIPES, JOINTS SHALL BE INSTALLED WITH UPVC SOLVENT.
2. WATER SUPPLY SHALL BE OF G.I. WITH FITTINGS WHICH SHALL BE OF THREADED JOINTS.
3. PROVIDE INDIVIDUAL SHUT-OFF FOR EACH FIXTURE BRANCH.
4. VENT THRU ROOF (VTR) SHALL BE EXTENDED ONE FOOT ABOVE THE ROOF.
5. OTHER ASPECTS NOT FOUND ON THIS PLAN, THE PROVISIONS AND REQUIREMENTS OF THE NATIONAL PLUMBING CODE OF THE PHILIPPINES AND REPUBLIC ACT 1378 SHALL PREVAIL.

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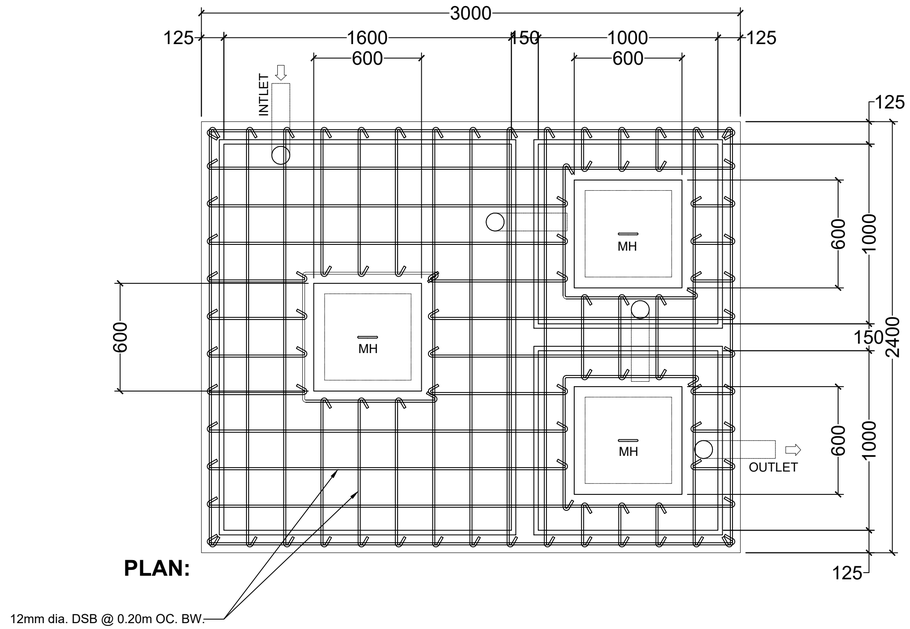
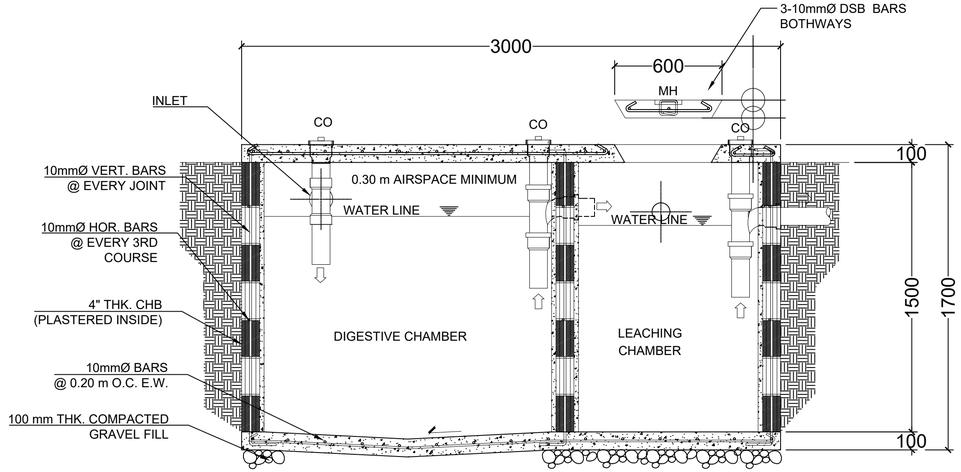


PLAN:



SECTION:

1 / P-3 SEPTIC VAULT DETAILS

SCALE: 1:20 M

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MECHANICAL NOTES

1. CONTRACTOR IS ADVISED TO VISIT AND SURVEY THE PLACE OF INSTALLATION. HE SHALL BE RESPONSIBLE TO COORDINATE CLOSELY HIS WORK WITH ALL OTHER TRADES AND ALL INSTALLATION WORKS SHALL BE DONE IN A NEAT AND WORK-LESS MANNER.

2. ALL NECESSARY GOVERNMENT PERMITS SHALL BE SECURED AND FOR ACCOUNT OF THE CONTRACTOR AND HE SHALL PROVIDE AS-BUILT PLANS TO THE OWNER AFTER THE COMPLETION OF HIS WORKS.

3. ALL AIR CONDITIONING UNITS AND VENTILATING UNITS TO BE SUPPLIED SHALL BE NEW AND APPROVED PRODUCTS OF REPUTABLE MANUFACTURERS. ALL AIR CONDITIONING EQUIPMENT SHALL BE MANUFACTURED BY "PANASONIC" OR APPROVED EQUAL.

4. ALL DUCT WORKS SHALL BE PROVIDED WITH ANGULAR BAR SUPPORTS AND ALL-MECHANICAL EQUIPMENT SHALL BE EQUIPED WITH VIBRATION ISOLATORS. (SUBMIT SHOP DRAWING PRIOR TO INSTALLATION)

5. THE CONTRACTOR SHALL SUBMIT CATALOUGE / BROCHURES SUBJECT FOR FURTHER TECHNICAL EVALUATION BY THE CONCERNED AUTHORITY (BOD) PRIOR TO PROCUREMENT / INSTALLATION OF THE EQUIPMENT / UNIT.

6. REFRIGERANT SUCTION LINES SHALL BE INSULATED WITH 25mm THICK PREMOULDED ELASTOMERIC RUBBER INSULATION AS MANUFACTURED BY "ARMAFLEX", AEROFLEX OR APPROVED EQUAL.

7. INDIVIDUAL WEATHER PROOF TYPE CIRCUIT BREAKER SHALL BE PROVIDED FOR ALL CONDENSING UNITS.

8. ALL EXPOSED DRAIN LINES TO THE CEILING SHALL BE PROVIDED WITH INSULATION TYPICAL TO REFRIGERANT PIPING. (REFER TO PIPE INSTALLATION DETAIL)

9. ALL REFRIGERANT SUCTION LINES EXPOSED INDOORS AND/OR EXPOSED TO WEATHER SHOULD BE PROVIDED WITH GAUGE #24 ALUMINUM CLADDING. (SUBMIT SHOP DRAWING PRIOR TO INSTALLATION)

10. ALL ACCU's AND FCU's SHALL BE PROVIDED WITH ANGULAR BAR SUPPORTS. (SUBMIT DRAWING PRIOR TO INSTALLATION)

1. ALL WORKS SHOULD BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) CODES NO. 13 & 20, NATIONAL FIRE BUILDING CODE OF THE PHILIPPINES.

2. ALL WORKS SHALL BE EXECUTED IN-CLOSE COORDINATION WITH ALL OTHER TRADES. THE ARCHITECT AND THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY CONFLICT.

3. EXACT LOCATION OF THE SPRINKLER HEADS SHALL BE COORDINATED WITH ARCHITECTURAL CEILING LAYOUT AND SHALL BE SUBJECTED TO ARCHITECTS & ENGINEERS APRROVAL.

4. LOCATION OF DRAIN PIPES FOR INSPECTORS TEST AND DRAIN VALVES SHALL BE COORDINATED WITH THE PLUMBING CONTRACTOR.

5. FIRE/JOCKEY PUMP, WATERFLOW SWITCHES, MONITOR SWITCHES ELECTRICAL CONNECTIONS SHALL BE DONE BY THE SPRINKLER CONTRACTOR UP TO THE CONTROL PANEL & SHALL BE COORDINATED WITH THE ELECTRICAL CONTRACTOR FOR POWER TAPPING.

6. MINIMUM PIPE SIZE FOR ALL SPRINKLER HEAD SHALL BE 25mm DIAMETER UNLESS OTHERWISE NOTED AND ALL PIPE SIZES ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

7. UNLESS OTHERWISE NOTED, ALL FEEDMAINS & CROSSMAINS SHALL BE WELD JOINTS AND ALL BRANCHLINES SHALL BE SCREWED JOINTS.

8. PIPE SLEEVES SHALL BE PROVIDED FOR ALL PIPES PASSING THRU SLABS, WALLS AND BEAMS.

9. THE CONTRACTOR SHALL SUBMIT CATALOGUE / BROCHURES FOR FURTHER TECHNICAL EVALUATION BY THE CONCERNED AUTHORITY (BOD) PRIOR TO PROCUREMENT / INSTALLATION OF THE EQUIPMENTS.

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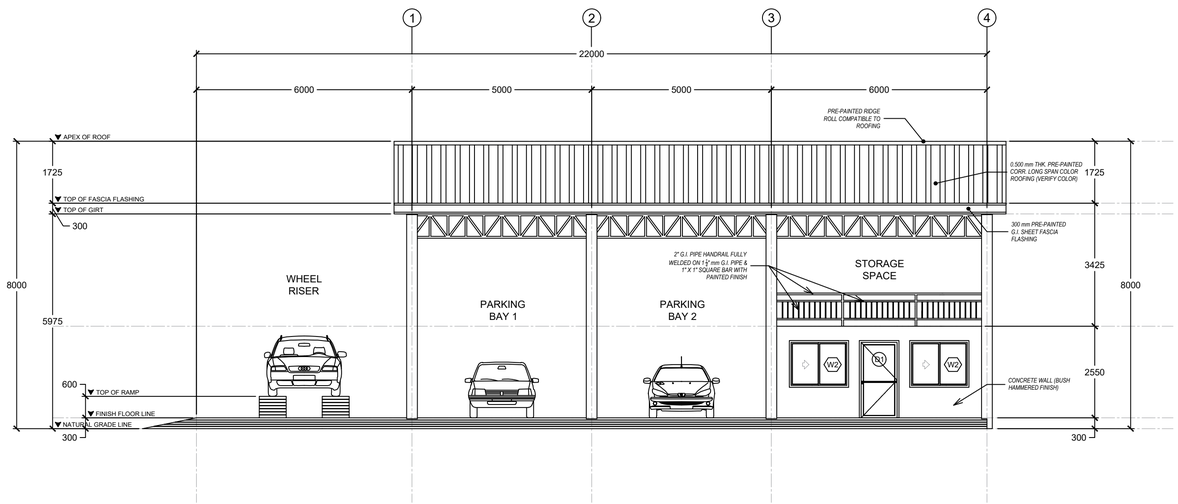
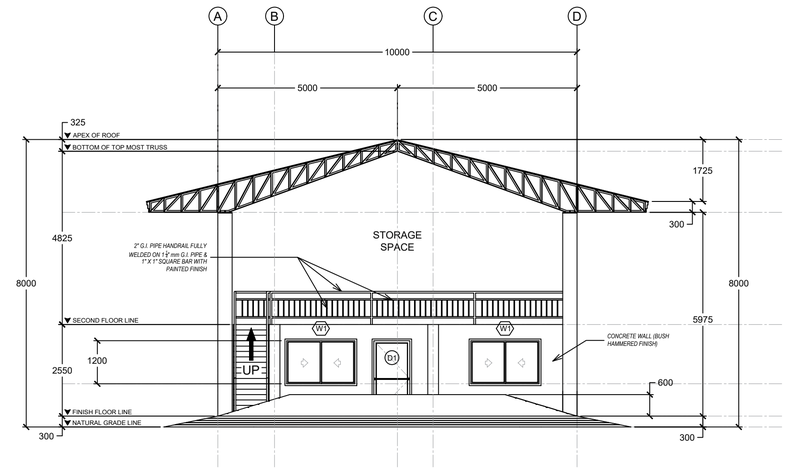


1 / A-6 **FRONT ELEVATION**

SCALE: 1:100 M



3 / A-6 **LEFT SIDE ELEVATION**

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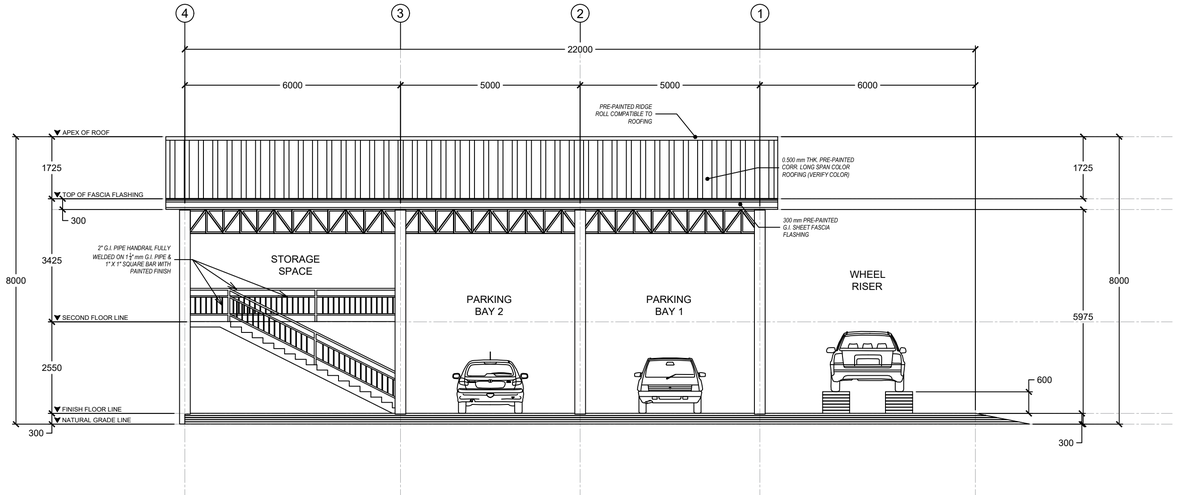

2 / A-6 **REAR ELEVATION**

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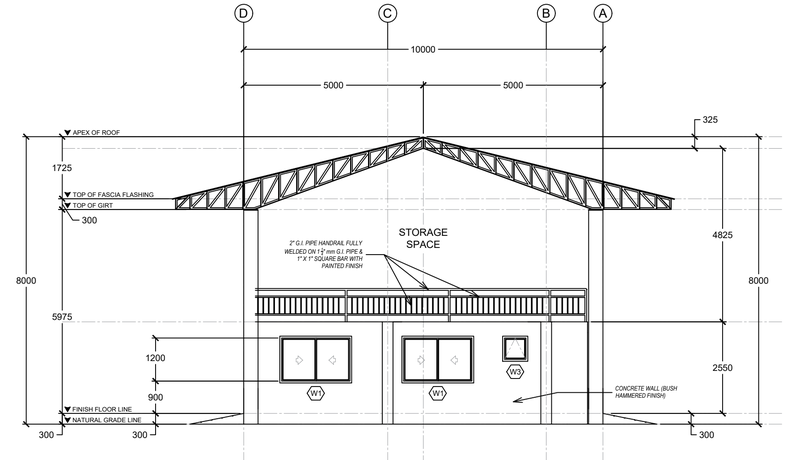

4 / A-6 **RIGHT SIDE ELEVATION**

SCALE: 1:100 M

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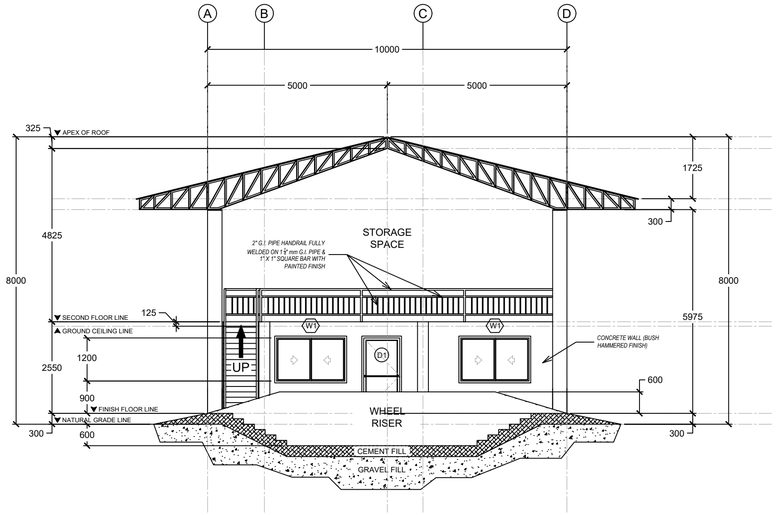

1 / A-7

SECTION THRU "A-A"

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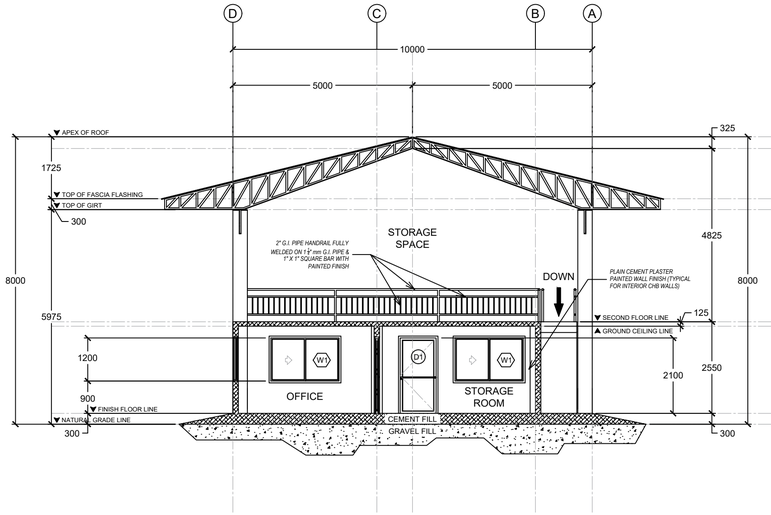

2 / A-7

SECTION THRU "B-B"

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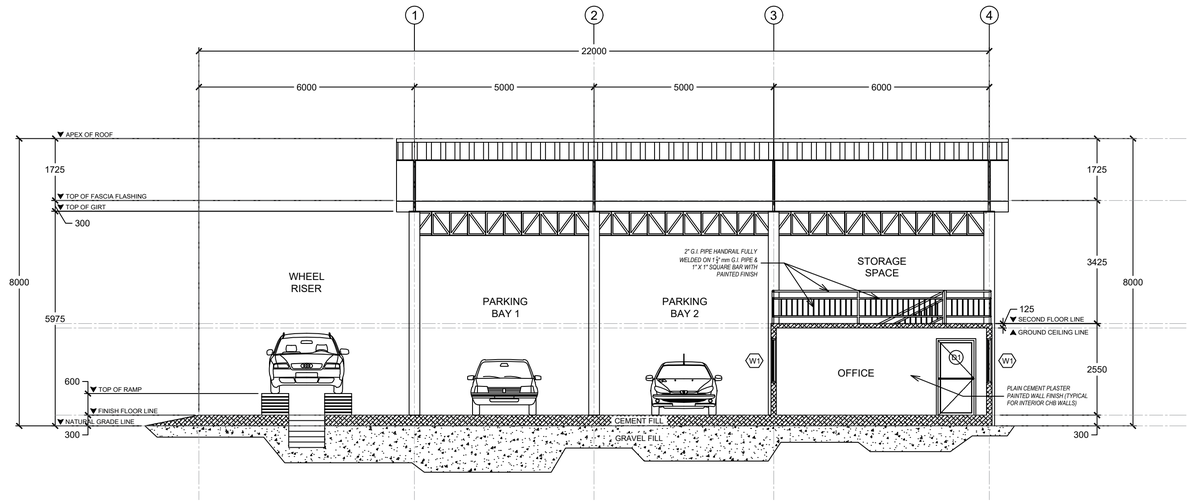

3 / A-7

SECTION THRU "1-1"

SCALE: 1:100 M

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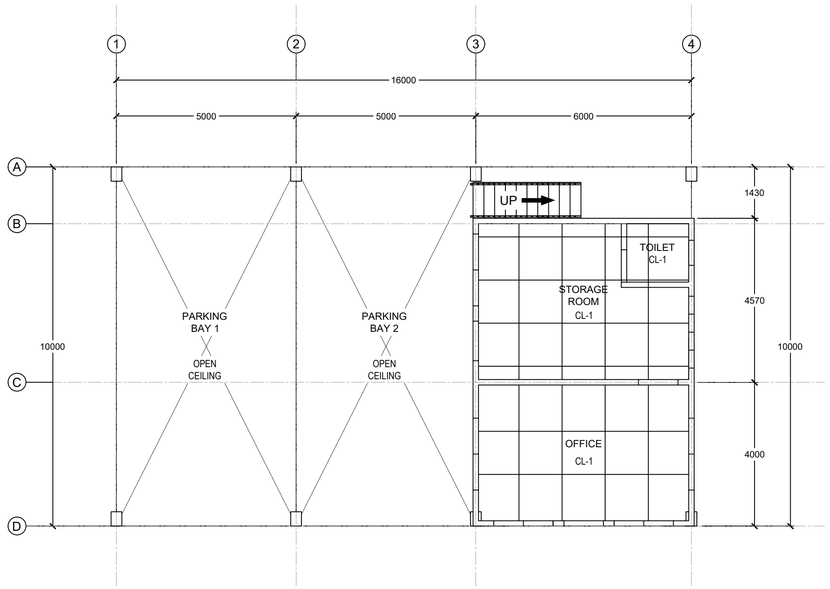
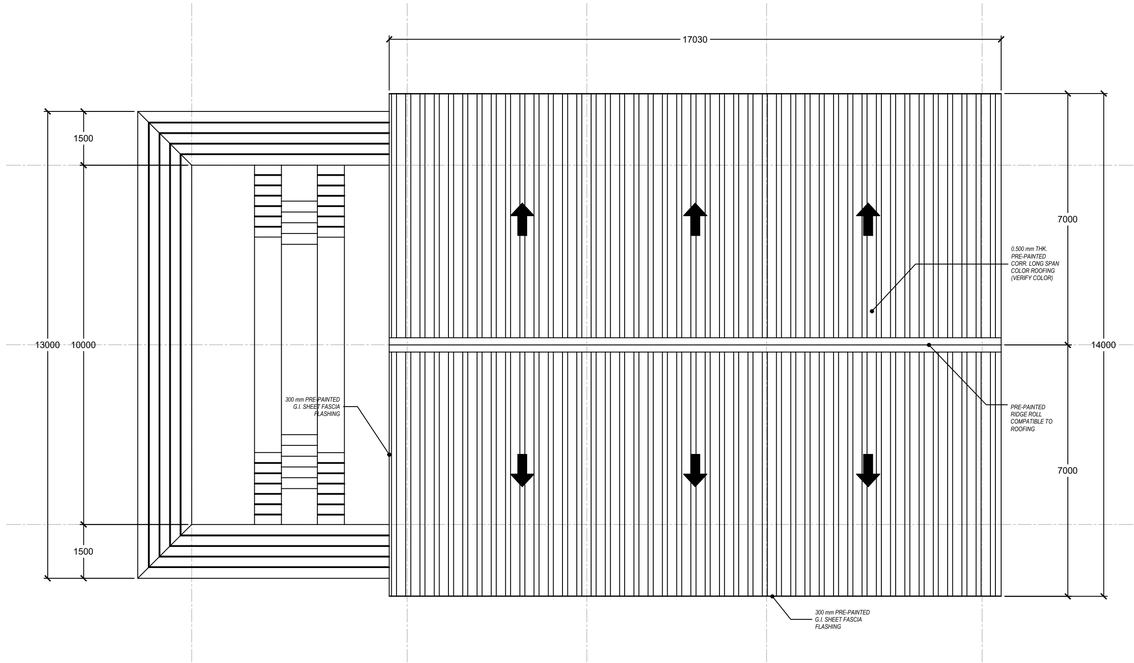


1 / A-8 **REFLECTED CEILING PLAN**

SCALE: 1:100 M

SCHEDULE OF CEILING FINISHES

CL-1	4.5 mm THK. FIBER CEMENT CEILING BOARD WITH PAINTED FINISH	PROVIDE 12 mm X 38 mm X 5 m X 0.8 mm THK. METAL CARRYING CHANNEL (CEILING JOIST) AT 1200 mm ON CENTER WITH 19 mm X 50 mm X 5 m X 0.5 mm THK. METAL DOUBLE FURRING CHANNEL (CEILING NAILER) AT 400 mm ON CENTER AND WITH 12 mm X 38 mm X 5 m X 0.8 mm THK. METAL CHANNEL (CEILING HANGERS) AT 1200 mm ON CENTER



2 / A-8 **ROOF PLAN**

SCALE: 1:100 M

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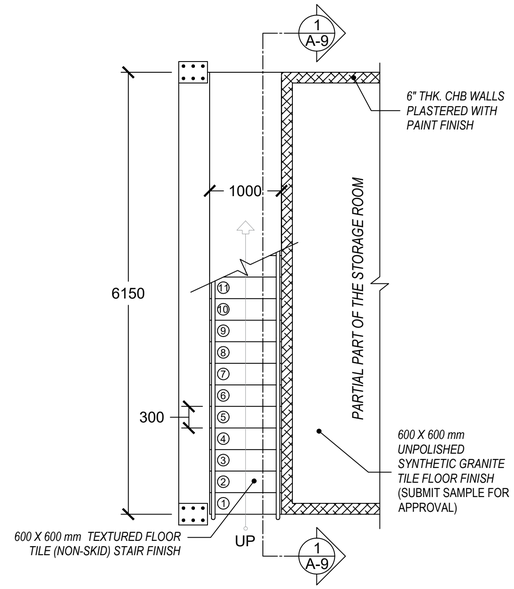
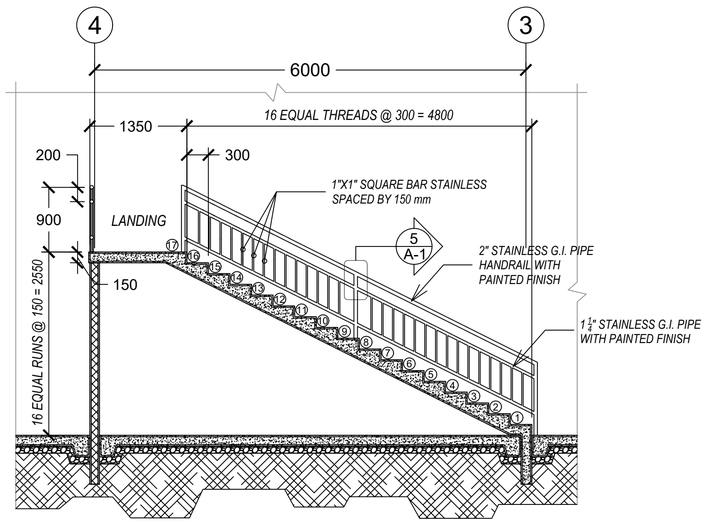


1/A-9 DETAIL PLAN OF STAIR
GROUND FLOOR

SCALE: 1 : 50 M



3/A-9 DETAIL SECTION OF STAIR
GROUND FLOOR

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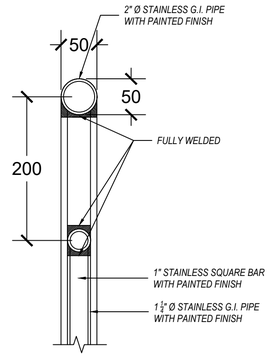
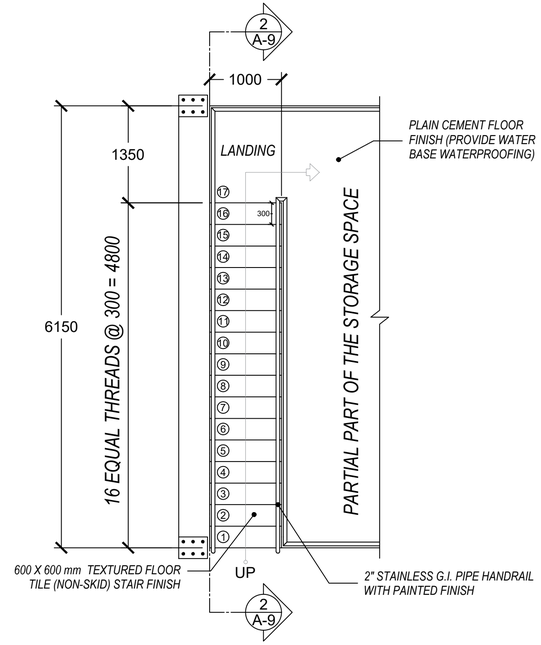
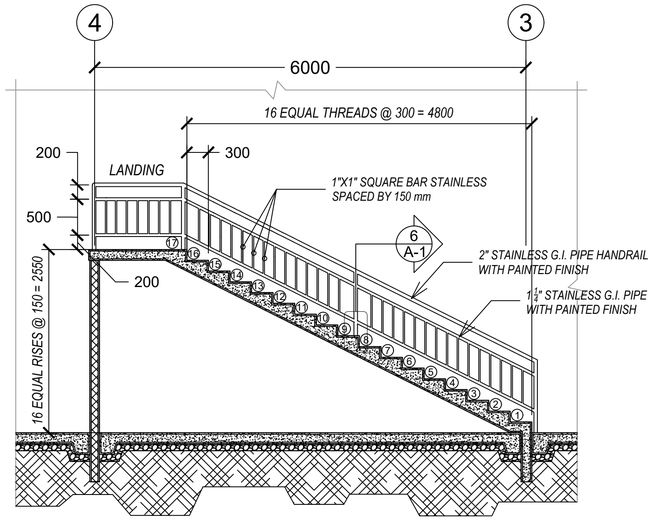


5/A-9 SPOT DETAIL (HANDRAIL)
SCALE: 1 : 5 M



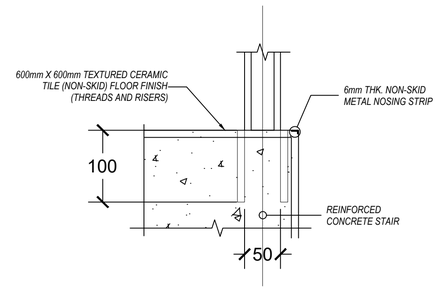
2/A-9 DETAIL PLAN OF STAIR
SECOND FLOOR

SCALE: 1 : 50 M



4/A-9 DETAIL SECTION OF STAIR
GROUND FLOOR

SCALE: 1 : 50 M



6/A-9 SPOT DETAIL (NOSING)
SCALE: 1 : 5 M

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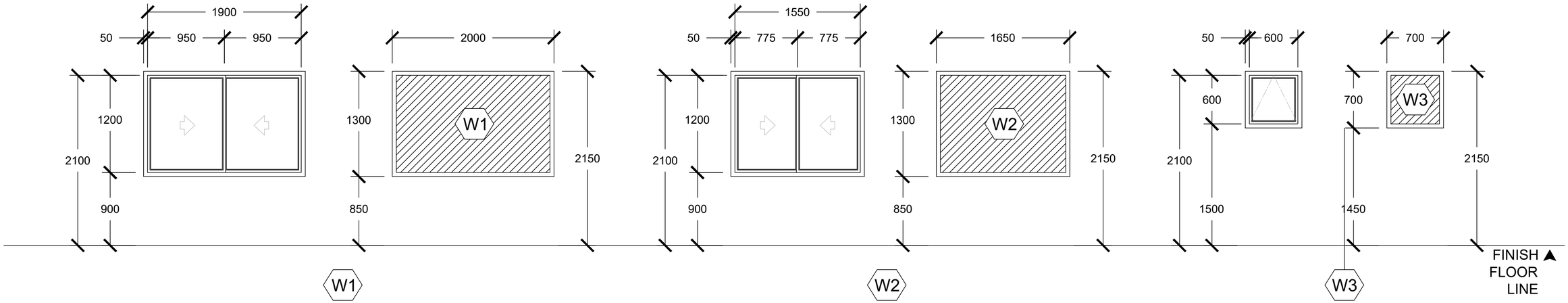
PROJECT NAME AND LOCATION

DETAILED ENGINEERING DESIGN PLAN FOR
CONSTRUCTION OF DPWH DISTRICT OFFICE BUILDING, SAN CARLOS CITY, NEGROS OCCIDENTAL
BRGY. PUNAO, SA CARLOS CITY, NEGROS OCCIDENTAL

SHEET CONTENTS

DETAIL PLAN OF STAIR (GROUND FLOOR)
DETAIL PLAN OF STAIR (SECOND FLOOR)
DETAIL SECTION OF STAIR (GROUND FLOOR)
DETAIL SECTION OF STAIR (SECOND FLOOR)
SPOT DETAIL (HANDRAIL)
SPOT DETAIL (NOSING STRIP)

DESIGNED:	REVIEWED:	SUBMITTED:	RECOMMENDED:	APPROVED:	SET NO.	SHEET NO.
ORNIF JOHN A. CARATAO ARCHITECT I DATE:	**JANNA ROSE G. ATIENZA** ENGINEER II DATE:	**VENGIE C. MORACA** OIC CHIEF, PLANNING AND DESIGN SECTION DATE:	**PEDRITO R. BAUTISTA** ASSISTANT DISTRICT ENGINEER DATE:	**JUAN ALFONSO G. JORBINA, SR.** OIC, DISTRICT ENGINEER DATE:	A 7 | 8	50



TUBULAR ALUMINUM FRAME SLIDING WINDOW (TINTED GLASS)

4-SETS

TUBULAR ALUMINUM FRAME SLIDING WINDOW (TINTED GLASS)

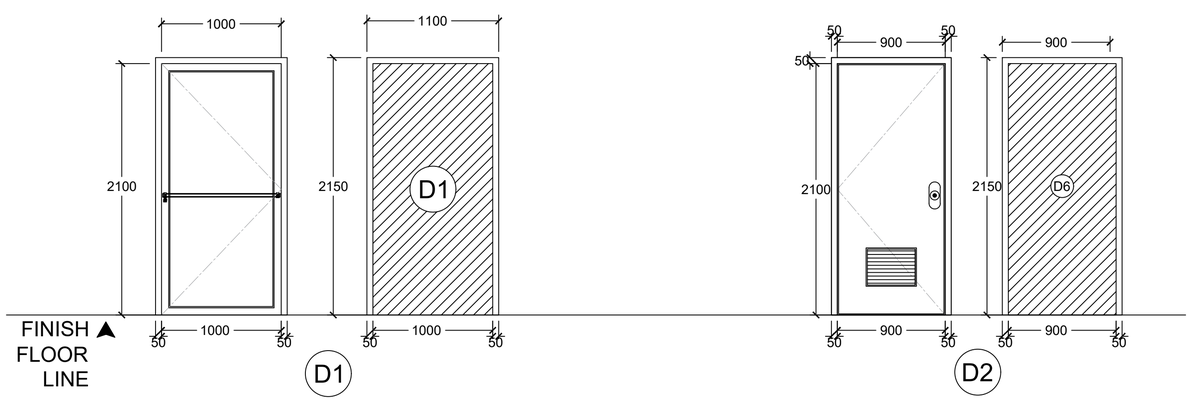
2-SETS

TUBULAR ALUMINUM FRAME AWNING WINDOW (TINTED GLASS)

1-SET

1 / A-10 **SCHEDULE OF WINDOWS**

SCALE: 1:30 M



TUBULAR ALUMINUM FRAME SWING DOOR (TINTED GLASS)

3-SETS

POLYVINYL CHLORIDE PANEL SWING DOOR & POLYVINYL CHLORIDE DOOR JAMB

1-SET

2 / A-10 **SCHEDULE OF DOORS**

SCALE: 1:30 M

REPUBLIC OF THE PHILPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE VI

NEGROS OCCIDENTAL SUB-DEO
SAN CARLOS CITY, NEG.OCC.

PROJECT NAME AND LOCATION

DETAILED ENGINEERING DESIGN PLAN FOR
CONSTRUCTION OF DPWH DISTRICT OFFICE BUILDING, SAN CARLOS CITY, NEGROS OCCIDENTAL
BRGY. PUNAO, SA CARLOS CITY, NEGROS OCCIDENTAL

SHEET CONTENTS

SCHEDULE OF WINDOWS
SCHEDULE OF DOORS

DESIGNED:	REVIEWED:	SUBMITTED:	RECOMMENDED:	APPROVED:	SET NO.	SHEET NO.
ORNIF JOHN A. CARATAO ARCHITECT I DATE:	**JANNA ROSE G. ATIENZA** ENGINEER II DATE:	**VENGIE C. MORACA** OIC CHIEF, PLANNING AND DESIGN SECTION DATE:	**PEDRITO R. BAUTISTA** ASSISTANT DISTRICT ENGINEER DATE:	**JUAN ALFONSO G. JORBINA, SR.** OIC, DISTRICT ENGINEER DATE:	A 8 / 8	50

GENERAL CONSTRUCTION NOTES

GENERAL NOTES

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 (N.S.C.P 2015) VOL. 1, SEVENTH EDITION.

2.0 DESIGN CRITERIA

2.1 LOADINGS

A. DEAD LOAD

CONCRETE	23.56 kN/m^3
STEEL	76.93 kN/m^3
150 mm THK. CHB WALL	2.73 kPa
100 mm THK. CHB WALL	2.11 kPa

B. LIVE LOAD

ROOF	1.00 kPa
CLASSROOMS	1.90 kPa
TOILETS	1.90 kPa
CORRIDORS ABOVE, STAIRS	3.80 kPa
CORRIDORS ON GROUND	4.80 kPa

C. WIND LOAD

BUILDING CATEGORY = 1 (ESSENTIAL FACILITIES)
EXPOSURE = D (FLAT, UNOBSTRUCTED AREAS AND WATER SURFACES)
MAXIMUM WIND VELOCITY, V = 340 KPH

$P = qh \quad [(GCpf)-(GCpi)]$ (DESIGN WIND PRESSURE)

WHERE: qh = VELOCITY PRESSURE (kPa)
GCpf = EXTERNAL PRESSURE COFFECIENT
GCpf = INTERNAL PRESSURE COFFECIENT

D. SEISMIC LOAD

$V = \frac{CvI}{RT} W$ (DESIGN BASE SHEAR)

$Vmax = \frac{2.50Cal}{RT} W$ $\quad Vmin = 0.11\ CaIW$

$Vmin = \frac{0.80\ ZNvI}{R} W$ (ZONE 4)

WHERE: W = TOTAL DEAD LOAD
T = NATURAL PERIOD = Ct (h)
WHERE: C = NUMERICAL COEFFICIENT
h = BUILDING HEIGHT
I = IMPORTANCE FACTOR = 1.50
R = NUMERICAL FACTOR = 8.50
SEISMIC COEFFICIENT Cv = 0.44 Nv
Ca = 0.64 Nv
NEAR SOURCE FACTOR (5 km) Nv = 1.6
Na = 1.2
Z = SEISMIC ZONE = 0.40 (ZONE 4)
S = SOIL TYPE = D

2.2 DESIGN STRESSES

A. CONCRETE COMPRESSIVE STRENGTH @ 28 DAYS:	
a. FOOTINGS, COLUMNS, BEAMS AND SLABS	f'c = 20.7 MPa (3,000 psi)
b. SLAB ON FILL	f'c = 17.5 MPa (2,500 psi)
B. REINFORCING STEEL BARS	
a. FOR BARS 16mm AND GREATER (INTERMEDIATE GRADE DEFORMED BAR)	fy = 275 MPa (40,000 psi)
b. FOR BARS LESS THAN 16mm (STRUCTURAL GRADE DEFORMED BAR)	fy = 230 MPa (33,000 psi)
C. STRUCTURAL STEEL ASTM-A36	
FOR TRUSSES, BRACINGS , & STRUTS	fy = 248 MPa (36,000 psi)
D. PURLINS	
COLD FORMED LIGHT	fy = 248 MPa (36,000 psi)
E. MASONRY UNIT (CHB)	
NON - LOADING BEARING CHB WALLS	fm' = 3.45 MPa (500 psi)
F. WELDS	E - 60XX ELECTRODE
G. STRUCTURAL BOLTS ASTM- A307	a. Ft = 96.60 mPa (14, 000 psi)
	b. Fv= 69.00 mPa (10, 000 psi)

3.0 IN THE INTERPRETATION OF THE DRAWING, INDICATED DIMENSIONS SHALL GOVERN. DISTANCES AND SIZES SHALL NOT BE SCALED FOR CONSTRUCTIONS PURPOSES

4.0 IN REFERENCES TO OTHER DRAWINGS, SEE ARCHITECTURAL DRAWINGS FOR DEPRESSIONS IN FLOOR SLABS , OPENINGS IN THE WALLS AND SLABS , INTERIOR PARTITIONS , LOCATIONS OF DRAINS ETC.

5.0 IN CASE OF DISCREPANCIES AS TO THE LAYOUT, DIMENSIONS AND ELEVATIONS BETWEEN THE STRUCTURAL PLANS AND ARCHITECTURAL DRAWINGS, THE CONTRACTORS SHALL NOTIFY BOTH THE STRUCTURAL ENGINEER AND ARCHITECTS.

6.0 ALL CONCRETE WORKS AND CONCRETE REINFORCEMENTS SHALL BE DONE IN ACCORDANCE WITH THE ACI.318 95 BUILDING CODE REQUIREMENT AND ALL STRUCTURAL STEEL WORKS ACCORDING WITH THE WITH THE AISC SPECIFICATION (9TH EDITION) IN SOFAR AS THEY DO NOT CONFLICT WITH THE LOCAL BUILDING CODE REQUIREMENT.

7.0 ACI REFERS TO AMERICAN CONCRETE INSTITUTE, AISC REFERS TO AMERICAN INSTITUTE OF STEEL CONSTRUCTION AND ASTM REFERS TO AMERICAN SOCIETY FOR TESTING MATERIALS.

8.0 CONSTURCTION NOTES AND TYPICAL DETAILS APPLY TO ALL DRAWINGS UNLESS OTHERWISE SHOWN OR NOTED. MODIFY TYPICAL DETAILS AS DIRECTED TO MEET SPECIAL CONDITIONS.

9.0 SHOP DRAWING WITH ERECTION AND PLACING DIAGRAMS OF ALL STRUCTURAL STEELS, MISCELLANEOUS IRON, PRE-CAST CONCRETE, ETC. SHALL BE SUBMITTED FOR ENGINEERS APPROVAL BEFORE FABRICATION.

10. CONTRACTOR SHALL NOTE AND PROVIDE ALL MISCELLANEUOS CURBS, SILLS , STOOLS EQUIPMENT AND MECHANICAL BASES THAT ARE REQUIRED BY THE ARCHITECTURAL , ELECTRICAL AND MECHANICAL DRAWINGS.

11. ALL RESULTS OF THE MATERIAL TESTING FOR CONCRETE, REINFORCING BARS & STRUCTURAL STEEL MUST BE NOTED & APPROVED BY THE MATERIALS ENGINEER/STRUCTURAL DESIGNER.

NOTES ON CONCRETE MIXES & PLACING

1. ALL CONCRETE SHALL DEVELOP A MIN. COMPRESSIVE STRENGTH AT THE END OF TWENTY EIGHT (28) DAYS W/ CORRESPONDING MAXIMUM SIZE AGGREGATE & SLUMP AS FOLLOWS.

LOCATION	28 DAYS STRENGTH	MAX. SIZE OF AGGREGATE	MAX SLUMP
ALL OTHERS, INCLUDING SUSPENDED SLABS	3000 PSI (20.7 MPa)	20 mm	100mm
COLUMNS	3000 PSI (20.7 MPa)	20 mm	100mm
BEAMS ,SLABS	3000 PSI (20.7 MPa)	20 mm	100mm
SLAB ON FILL	2500 PSI (17.5 MPa)	20 mm	100mm

2. MAINTAIN MINIMUM CONCRETE COVER FOR REINFORCING STEEL AS FOLLOWS.

SUSPENDED SLABS	20mm
SLAB ON GRADE	40mm
WALLS ABOVE THE GRADE	25mm
BEAM STIRRUPS AND COLUMN TIES WHERE CONCRETE IS EXPOSED TO	40mm
EARTH BUT POURED AGAINST FORMS WHERE CONCRETE IS DEPOSITED DIRECTLY AGAINST EARTH	50mm 75mm

3. CONCRETE SHALL BE DEPOSITED IN ITS FINAL POSISITON WITHOUT SEGREGATION. RE-HANDLING OR PLACING SHALL BE DONE PREFERABLY WITH BUGGIES , BUCKETS OR WHEELBARROWS, NO CHUTES WILL BE ALLOWED EXCEPT TO TRANSFER CONCRETE FROM HOPPERS TO BUIGGIES, WHEELBARROWS OR BUCKETS IN WHICH CASE THEY SHALL NOT EXCEED SIX (6) METERS IN AGGREGATE LENGTH.
4. NO DEPOSITING OF CONCRETE SHALL BE ALLOWED WITHOUT THE USE OF VIBRATORS UNLESS AUTHORIZED IN WRITING DESIGNER AND ONLY FOR UNUSUAL CONDITIONS WHERE VIBRATIONS ARE EXTREMELY DIFFICULT TO ACCOMPLISH.
5. ALL ANCHOR BOLTS, DOWELS, AND OTHER INSERTS SHALL BE PROPERLY POSITIONED & SECURED IN PLACE PRIOR TO PLACING OF CONCRETE.
6. ALL CONCRETE SHALL BE KEPT MOST FOR A MINIMUM OF SEVEN CONSECUTIVE DAYS IMMEDIATELY AFTER POURING BY THE USE O WET BURLAP, FOG SPRAYING, CURING COMPOUNDS OR OTHER APPROVED METHODS.
7. STRIPPING OF FORMS AND SHORES:

FOUNDATION	24 HOURS
SUSPENDED SLAB EXCEPT WHEN ADDITIONAL LOADS ARE IMPOSED	8 DAYS
WALLS	21 DAYS
BEAMS	14 DAYS
COLUMNS	21 DAYS

8. THE CONTRACTOR SHALL SUBMIT THE SCHEDULE OF POURING AND THE LOCATION OF THE CONSTRUCTION JOINTS TO THE STRUCTURAL ENGINEER AT LEAST (4) DAYS PRIOR TO THE POURING FOR APPROVAL.
9. THE CONTRACTOR SHALL FURNISH AND MAITAIN ADEQUATE FORMS AND SHORINGS UNTIL THE CONCRETE MEMBERS HAVE ATTAINED THEIR WORKING CONDITION AND STRENGTH.

NOTES ON FOOTINGS

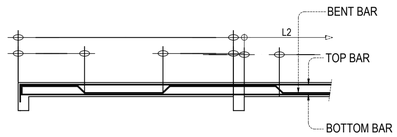
1. FOOTINGS ARE DESIGNED FOR AN ALLOWANCE SOIL BEARING PRESSURE OF 96 KPa (2000psf). CONTRACTOR SHALL REPORT TO THE ENGINEER, IN WRITING ,THE ACTUAL SOIL CONDITIONS UNCOVERED AND CONFIRM ACTUAL BEARING CAPACITY OF SOIL BEFORE DEPOSITING CONCRETE.
2. FOOTING SHALL REST AT LEAST 1500mm BELOW NATURAL GRADE LINE UNLESS OTHERWISE INDICATED IN PLANS. NO FOOTING SHALL REST ON FILL
3. MINIMUM CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE 75mm CLEAR FOR CONCRETE DEPOSITED THE GROUND AND 50mm FOR CONCRETE DEPOSITED AGAINST A FORMWORK.
4. IN CASES WHERE THE SOIL CONDITION IS SUCH THAT THE MINIMUM ALLOWABLE SOIL PRESSURE OF 96KPa (2000 psf) CAN NOT BE ATTAINED AT A PRACTICAL DEPTHS THE USE OF MICROPILES , BORED PILES, OR DRIVEN PILES MAY BE ADOPTED IN LIEU OF STANDARD ISOLATED FOOTINGS.

NOTES ON REINFORCEMENT

1. UNLESS OTHERWISE NOTED IN PLANS, THE YIELD STRENGTH OF REINFORCING BARS SHALL BE:
   A. FOOTINGS , FOOTING BEAMS AND GIRDERS — fy = 275 MPa (40,000 psi)
   B. COLUMNS AND SHEAR WALLS — fy = 275 MPa (40,000 psi)
   C. BEAMS AND GIRDER — fy = 275 MPa (40,000 psi)
   D. NON-LOAD BEARING WALL PARTITIONS ,BEDDED SLABS , FLOOR & ROOF SLABS, PARAPETS ,CATCH BASIN,SIDE WALK — fy = 275 MPa (40,000 psi)
2. ALL REINFORCING BARS SIZE 10mm OR LARGER SHALL BE DEFORMED IN ACCORDANCE WITH THE ASTM A-706 BARS SMALLER THAN 10mm MAY BE PLAIN.
3. SPLICES SHALL BE SECURELY WIRED TOGETHER & SHALL LAP OR EXTEND IN ACCORDANCE w/ TABLE B (TABLE OF LAP SPLICE & ANCHORAGE LENGTH) UNLESS OTHERWISE SHOWNON DRAWINGS , SPLICES SHALL BE STAGGERED WHENEVER POSSIBLE.

NOTES ON CONCRETE SLABS

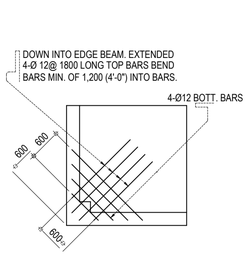
1. ALL SLAB REINFORCEMENTS SHALL BE 20mm CLEAR MINIMUM FROM BOTTOM AND FROM THE TOP OF SLAB.
2. UNLESS OTHERWISE SHOWN, REINFORCEMENT IN CONTINUOUS ELEVETED SLAB SHALL BE CUT AS FOLLOWS:



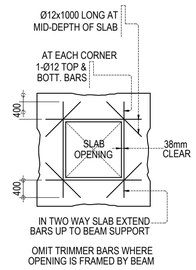
3. IF SLABS AR E REINFORCED BOTHWAYS BARS ALONG THE SHORTER SPAN SHALL BE PLACED BELOW THOSE ALONE THE LONG SPAN AT THE CENTER AND OVER THE LONGER SPAN FOR REINFORCING BARS NEAR THE SUPPORTS. THE SPACING OF THE BARS AT THE COLUMN STRIPS SHALL NOT BE MORE THAN ONE AND A HALF (1 ½) SLAB THICKNESS.
4. TEMPERATURE BARS FOR SLAB SHALL BE GENERALLY PLACED NEAR THE FACE IN TENSION AND SHALL NOT BE LESS THAN 0.0025 X GROSS-SECTIONAL AREA (Ag) OF THE SLAB. (SEE SCHEDULE BELOW)

SCHEDULE OF MINIMUM SLAB REINFORCEMENT	
	MINIMUM TEMPERATURE BARS
100 mm	10mm Ø @ 250mm EACH WAY
125 mm	10mm Ø @ 250mm EACH WAY
150 mm	10mm Ø @ 250mm EACH WAY
175 mm	10mm Ø @ 250mm EACH WAY
200 mm	10mm Ø @ 250mm EACH WAY

5. UNLESS OTHERWISE NOTED IN THE PLANS ALL BEDDED SLABS SHALL BE REINFORCED WITH 10mm Ø AT 250mm O.C. EACH WAY TO CENTER OF SLAB AND CONSTRUCTION JOINTS FOR SAME SHALL NOT BE LESS THAN 3.65 METER APART.
6. PROVIDE EXTRA REINFORCEMENTS FOR CORNER SLAB (TWO ADJACENT DISCONTINUOES EDGES) AS SHOWN BELOW.
7. CONCRETE SLAB REINFORCEMENT BE PROPERLY SUPPORTED WITH 10mm STEEL CHAIR OR APPROVED EQUIVALENT SPACED AT 1.0 METER ON CENTER BOTHWAYS.



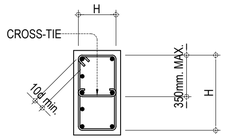
TYPICAL CORNER SLAB DETAIL

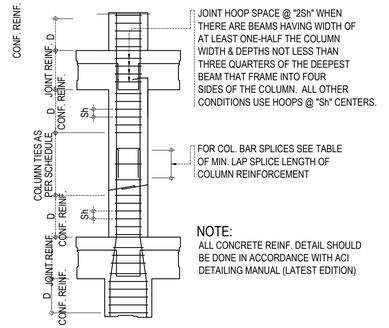


TYPICAL SLAB OPENING DET.

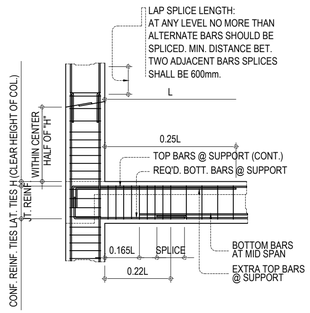
NOTES ON COLUMNS

1. PROVIDE EXTRA SETS OF TIES AT 100 O.C. FOR TIED COLUMN REINFORCEMENT ABOVE AND BELOW BEAM-COLUMN CONNECTIONS FOR A DISTANCE FROM FACE OF CONNECTION EQUAL TO GREATER OF THE OVERALL THICKNESS OF COLUMN, 1/6 THE CLEAR HEIGHT OF COLUMN OR 450mm.
2. COLUMN TIES SHALL BE PROTECTED EVERYWHERE BY A COVERING OF CONCRETE CAST MONOLITHICALLY WIT HTHE CORE WITH A MINIMUM THICKNESS OF 40mm AND NOT LESS THAN 40 TIMES THE MAXIMUM SIZE OF COARSE AGGREGATE IN MILLIMETERS.
3. WHERE COLUMNS CHANGE IN SIZE ,VERTICAL REINFORCEMENT SHALL BE OFFSET AT A SLOPE MONOLITHICALLY WITH THE CORE WITH MINIMUM THICKNESS OF 40mm AND NOT LESS THAN 40 TIMES THE MAXIMUM SIZE COARSE AGGREGATE IN MILLIMETERS
4. UNLESS OTHERWISE INDICATED IN THE PLANS, LAP SPLICES FOR VERTICAL COLUMN REINFORCEMENT SHALL BE MADE WITHIN THE CENTER HALF OF COLUMN HEIGHT, AND THE SPLICE LENGTH SHALL BE LESS THAN 40 BAR DIAMETERS. WELDING OR APPROVED MECHANICAL DEVICES MAY BE USED PROVIDED THAT NOT MORE THAN ALTERNATE BARS ARE WELDED OR MECHANICALLY SPLICED AT ANY LEVEL AND THE VERTICAL DISTANCES BETWEEN THESE WELDS OR SPLICES OF ADJACENT BARS IS NOT LESS THAN 600mm.





TYPICAL COLUMN ELEV. SHOWING DOWELS AND TIES SPACING



TYP. DETAIL OF COL. LAP SPLICE & EXT. GIRDER TO COL. CONNECT.

NOTES ON BEAMS AND GIRDERS

1. UNLESS, OTHERWISE NOTED IN PLANS , CAMBER ALL BEAMS AND GIRDER AT LEAST 6mmØ FOR EVERY 4.5O M OF SPAN , EXCEPT CANTILEVERS FOR WHICH THE CAMBER SHALL BE AS NOTED IN PLANS OR AS ORDERED BY THE ENGINEER BUT IN NO CASE LESS THAN 20 mm FOR EVERY 3.0 M OF FREE SPAN.
2. TYPICAL BARS BENDING AND CUTTING DETAILS FOR BEAMS SHALL BE AS SHOWN IN FIG. B-1

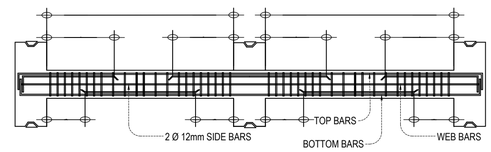


FIGURE B-1

REPUBLIC OF THE PHILPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE VI

NEGROS OCCIDENTAL SUB-DEO
SAN CARLOS CITY, NEG.OCC.

PROJECT NAME AND LOCATION
DETAILED ENGINEERING DESIGN PLAN FOR
CONSTRUCTION OF DPWH DISTRICT OFFICE BUILDING, SAN CARLOS CITY, NEGROS OCCIDENTAL
BRGY. PUNAO, SA CARLOS CITY, NEGROS OCCIDENTAL

SHEET CONTENTS: GENERAL CONSTRUCTION NOTES

PREPARED:	REVIEWED:	SUBMITTED:	RECOMMENDED:	APPROVED:
MICHAEL JOHN W. GILLESANIA	JANNA ROSE G. ATIENZA	VENGIE C. MORACA	PEDRITO R. BAUTISTA	JUAN ALFONSO G. JORBINA, SR.
ENGINEER II	ENGINEER II	OIC CHIEF, PLANNING AND DESIGN SECTION	ASSISTANT DISTRICT ENGINEER	OIC, DISTRICT ENGINEER
DATE:	DATE:	DATE:	DATE:	DATE:

SET NO. S 1 7
SHEET NO. 11 26

GENERAL CONSTRUCTION NOTES

TABLE 'A'
TENSION BARS
TABLE OF LAP SPLICE & ANCHORAGE LENGTH (mm)

BAR SIZES (DEFORMED MM)	fc' = 20.7MPa(300psi)		fc' = 27.6 MPa (4000psi)	
	EMBEDMENT	LAPPED	EMBEDMENT	LAPPED
Ø10	300	300	300	300
Ø12	300	300	300	300
Ø16	300	400	300	400
Ø20	400	550	350	500
Ø25	600	800	550	750
Ø28	750	1000	650	850
Ø32	950	1300	850	1100

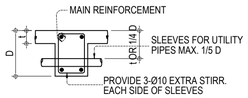
NOTES:
1. TOP PLAIN BARS, MULTIPLY VALUE BY 2
2. NOT MORE THAN 33% OF THE BARS SHALL BE SPLICED WITHIN THE REQUIRED LAP LENGTH

TABLE 'B'
COMPRESSION BARS
TABLE OF LAP SPLICE & ANCHORAGE LENGTH (mm)

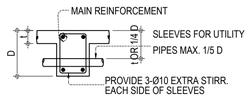
BAR SIZES (DEFORMED MM)	fc' = 20.7MPa(300psi)		fc' = 27.6 MPa (4000psi)	
	EMBEDMENT	LAPPED	EMBEDMENT	LAPPED
Ø10	225	300	200	300
Ø12	275	300	250	300
Ø16	350	400	325	400
Ø20	450	500	475	500
Ø25	550	625	550	625
Ø28	625	675	625	675
Ø32	700	775	700	775

NOTES:
1. TOP PLAIN BARS, MULTIPLY VALUE BY 2
2. NOT MORE THAN 33% OF THE BARS SHALL BE SPLICED WITHIN THE REQUIRED LAP LENGTH
3. VALUES GIVEN ABOVE CAN ALSO BE USED FOR COLUMNS

3. IF THE BEAM REINFORCING BARS END IN A WALL, THE CLEAR DISTANCE FROM THE BAR TO THE FARTHER FACE OF THE WALL IS NOT LESS THAN 25mm. EMBEDMENT LENGTH SHALL BE SHOWN IN A TABLE 'A' FOR TENSION BARS AND TABLE 'B' FOR COMPRESSION BARS UNLESS UNLESS SPECIFIED IN PLAN. TOP BARS AND SHALL NOT BE SPLICED WITHIN THE COLUMN OR TWO STIRRUPS SHALL BE PROVED AT ALL SPLICES.
4. IF THERE ARE TWO OR MORE LAYERS OF REINFORCING BARS, USED 25mm BAR SEPARATORS SPACED AT 1.0M ON ON CENTER ON NO CASE SHALL THERE BE THAN TWO (2) SEPARATORS BETWEEN LAYERS OF BARS
5. MINIMUM CONCRETE PROTECTION FOR REINFORCING BARS OR STEEL SHAPES SHALL BE AS SHOWN IN FIGURE B-2 UNLESS ELSEWHERE.



TYP. DET. FOR SLEEVES THRU CONCRETE BEAM
FIG. B-2



TYP. DET. FOR SLEEVES THRU CONCRETE BEAM
FIG. B-3

6. WHEN A BEAM CROSSES A GIRDER , REST BEAM ON TOP OF GIRDER BARS, BEAM REINFORCING BARS SHALL BE SYMMETRICAL ABOUT THE CENTER LINE WHENEVER POSSIBLE.
7. GENERALLY, NO SPLICES SHALL BE PERMITTED AT POINTS WHERE CRITICAL BENDING STRESSES OCCUR, SPLICES WHERE SO PERMITTED SHALL BE INDICATED IN TABLE 'A' AND 'B'. WELDED SPLICES SHALL DEVELOP IN TENSION AT LEAST 125% OF THE SPLICED YIELD STRENGTH OF THE BAR NOT MORE THAN 50% OF THE BARS AT ANY ONE SECTION IS ALLOWED TO BE SPLICED THEREIN.

NOTES ON CONCRETE HOLLOW BLOCKS WALLS

1. UNLESS OTHERWISE SHOWN IN PLANS ALL CONCRETE HOLLOW BLOCKS AND CERAMIC BLOCKS SHALL BE REINFORCED AS SHOWN IN THE SCHEDULE OF CONCRETE HOLLOW BLOCKS AND CERAMIC BLOCK REINFORCEMENT.
2. PROVIDE 150mm x 300mm STIFFENER COLUMN REINFORCED WITH 4-12mm WITH 10mm Ø TIES AT 150mm ON CENTER WHERE CONCRETE HOLLOW BLOCK TERMINATES AND AT EVERY 3.0M LENGTH OF CONCRETE HOLLOW BLOCK WALLS UNLESS NOTED IN STRUCTURAL PLANS.

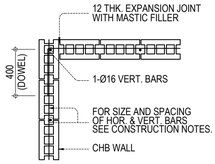
NOTES ON CONCRETE HOLLOW BLOCKS WALLS REINFORCEMENTS

BLOCK THICKNESS	REINFORCEMENT		NOTES
	HORIZONTAL	LAPPED	
75 mm	10mm Ø EVERY 3RD LEVEL	10mm Ø @ 600mm O.C.	A. MINIMUM LAPS AT SPLICE= 0.25 M B. PROVIDE RIGHT ANGLED REINFORCEMENT AT CORNERS 0.92 m LONG C. WHERE CHB OR CER. BLK. WALL DOWELS WITH THE SAME SIZE AS VER. OR HOR. REINFORCEMENT SHALL BE PROVIDED
125 mm	10mm Ø EVERY 3RD LEVEL	10mm Ø @ 600mm O.C.	
150mm	10mm Ø EVERY 3RD LEVEL	10mm Ø @ 600mm O.C.	
200 mm	12mm Ø EVERY 3RD LEVEL	10mm Ø @ 600mm O.C.	

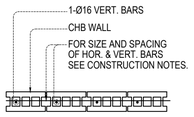
REINFORCING CONCRETE LINTEL BEAMS IN CONCRETE BLOCK WALLS

LINTELS IN BLOCK WALLS

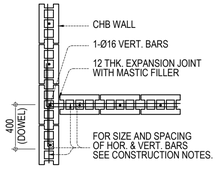
CLEAR SPAN (L)	TOTAL LENGTH (L+0.40M)	MIN. fc' (MPa)	HEIGHT OF LINTEL (mm)	REINFORCEMENT		
				BOTTOM	TOP	STIRRUPS
1.20 M	1.60 M	14.0	200	1-Ø10	1-Ø10	Ø6 mm @ 200mm
1.50 M	1.90 M		200	1-Ø10	1-Ø10	Ø6 mm @ 200mm
1.80 M	2.20 M		200	1-Ø12	1-Ø10	Ø6 mm @ 200mm
2.10 M	2.50 M	17.0	250	1-Ø12	1-Ø10	Ø6 mm @ 200mm
2.40 M	2.90 M		250	1-Ø12	1-Ø10	Ø6 mm @ 200mm
2.70 M	3.10 M		250	1-Ø16	1-Ø12	Ø10mm @ 200mm
3.00 M	3.40 M	20.0	300	1-Ø16	1-Ø12	Ø10mm @ 200mm
3.30 M	3.70 M		300	1-Ø16	1-Ø12	Ø10mm @ 200mm
3.60 M	4.00 M		300	1-Ø20	1-Ø12	Ø10mm @ 200mm



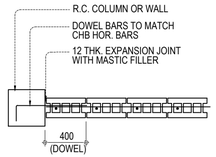
CORNER WALL



OPENING OR END WALL

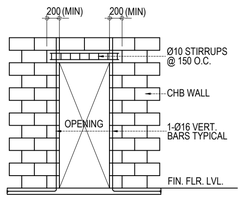


INTERSECTION WALL

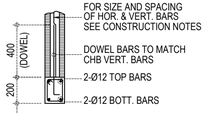


INTERSECTING R.C. COLUMN OR WALL

TYPICAL CONNECTION DETAIL OF MASONRY WALL

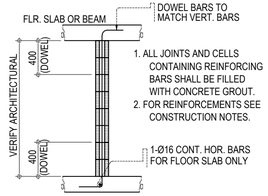


ELEVATION

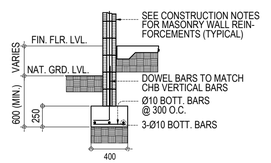


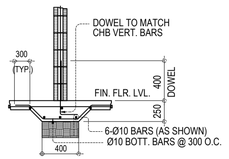
SECTION

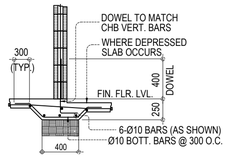
TYP. DET. OF LINTEL BEAM AT CHB WALL OPENING



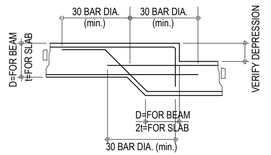
TYP. SECTION OF MASONRY PARTITION REINFORCEMENTS



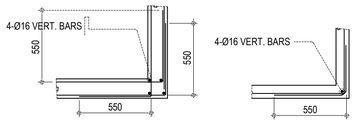




TYPICAL CHB FOOTING DETAILS
(WHERE APPLICABLE)



TYPICAL DETAIL FOR BEAM OR SLAB CHANGE SOFFIT



TYPICAL CONNECTION DETAIL OF R.C. WALL AT CORNERS

NOTES ON WELDS

1. USE E60xx ELECTRODES FOR ALL MEMBERS WELDED.
2. WELDS SHALL DEVELOP THE FULL STRENGTH OF MEMBERS JOINED UNLESS OTHERWISE SHOWN OR DETAILED IN THE DRAWINGS.

NOTES ON STRUCTURAL STEEL

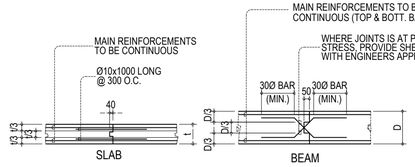
1. STRUCTURAL STEEL TO BE USED FOR FABRICATION AND ERECTION OF THIS STRUCTURE SHALL COMPLY WITH ALL THE PERTINENT PROVISION OF AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDING LATEST EDITION.
2. ALL STRUCTURAL STEEL SHAPES SHALL CONFORM TO ASTM A36 STRUCTURAL STEEL UNLESS OTHERWISE INDICATED.
3. ALL WELDED CONNECTIONS SHALL DEVELOP THE FULL STRENGTH OF THE MEMBERS CONNECTED.
4. UNLESS OTHERWISE SPECIFIED ALL WELDING RODS SHALL CONFORM WITH E60 ELECTRODES.
5. ALL BOLTS USED UNLESS OTHERWISE SPECIFIED SHALL BE ASTM A 307 BOLTS.

NOTES ON EMBBED PIPES

1. ALL EMBEDED PIPES FOR UTILITIES ETC. THAT PASS THRU BEAMS SHALL NOT EXCEED 100mm IN DIAMETER OR 1/3 BEAM DETPH WHICHEVER IS LESS, UNLESS OTHERWISE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER.
2. NO PIPES SHALL BE ALLOWED TO PASS THRU BEAMS VERTICALLY.
3. NO PIPES SHALL BE EMBEDDED IN COLUMNS.

NOTES ON CONSTRUCTION JOINTS IN CONCRETE

1. WHERE A CONSTRUCTION JOINT IS TO BE MADE, THE SURFACE OF CONCRETE SHALL BE CLEANED AND ALL LAITANCE AND STANDING WATER REMOVED SHEAR KEY SHALL BE PROVIDE AT THE JOINT.



TYPICAL SLAB & BEAM CONSTRUCTION JOINT DET.

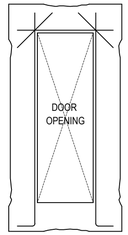
NOTES ON CONCRETE WALLS

1. ALL WALLS SHALL BE REINFORCED ACCORDING TO THE FOLLOWING SCHEDULE OF WALL REINFORCEMENT UNLESS OTHERWISE INDICATED IN THE PLANS.

WALL THICKNESS	REINFORCEMENT			VERTICAL SECTION
	HORIZONTAL	VERTICAL	REMARKS	
100mm	Ø10mm @ 250mm O.C.	Ø10mm @ 300mm O.C.	HORIZONTAL BARS AT CENTERS VERTICAL BARS STAGGED OUT	VER. BARS HOR. BARS
125mm	Ø10mm @ 200mm O.C.	Ø10mm @ 250mm O.C.		
150mm	Ø12mm @ 250mm O.C.	Ø12mm @ 300mm O.C.		

REINFORCING BARS SHALL HAVE 25mm CLEAR CONCRETE COVER FROM FACE OF WALL EXCEPT FOR WALLS IN CONTACT WITH THE GROUND WHERE A MINIMUM OF 60mm SHALL BE PROVIDED AND FOR EXPOSED FACES OF FORMED WALLS WHERE THE MINIMUM SHALL BE 50mm CLEAR.

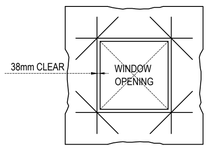
2. CARRY VERTICAL BARS AT LEAST 60mm ABOVE FLOOR LEVEL TO PROVIDE FOR SPLICES WHEN NECESSARY STOP AT 50mm BELOW TOP SLAB OR SOLID BAND WHERE THE WALL ENDS VERTICAL AND HORIZONTAL BARS SHALL BE SPLICED BY LAPPING A DISTANCE EQUAL TO 30 DIAMETERS AND WIRED SECURELY WITH 16 G.I. WIRE PROVIDED THAT SPLICES IN ADJACENT BARS ARE STAGGERED AT LEAST 1.50M O.C.
3. UNLESS OTHERWISE NOTED IN THE PLANS, ALL OPENINGS IN WALLS 250mm OR THICKER SHALL BE REINFORCED AROUND WITH 2-20mmØ BARS. FOR 225mm, 200mm, 175mm, 150mm THICK WALLS, USE 2-16mmØ. FOR 125mm AND 100mm THICK WALLS, USE 2-12mmØ BARS. ALL WALLS SPANNING SHALL HAVE VERTICAL REINFORCEMENT BENT A U-FORM LIKE STIRRUPS AND SPACED ACCORDING TO THE SCHEDULE UNLESS OTHERWISE NOTED.



TYP. EXTERIOR WDW. & DOOR OPENING

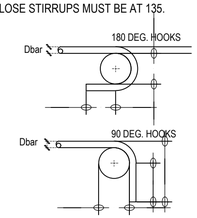
NOTE:
PROVIDE THESE ADDITIONAL BARS FOR ALL OPENINGS PLUS BARS (NOT SHOWN) PARALLEL TO SIDE OF OPENING EQUAL TO THE NUMBER OF TERMINATED BARS AT OPENING

SEE ARCHITECTURAL & MECHANICAL PLANS FOR SLAB OPENING LOCATION.



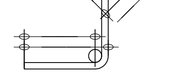
NOTES ON STIRUPS

1. ALL REINFORCEMENT SHALL BE BENT COLD UNLESS OTHERWISE PERMITTED BY THE STRUCTURAL ENGINEER.
2. AS SHOWN IN THE DESIGN DRAWINGS OR PERMITTED BY THE STRUCTURAL ENGINEER.
3. TIES & CLOSE STIRRUPS MUST BE AT 135.



MAIN BAR END HOOKS
(ALL GRADES)

BAR SIZE (DEFORMED)	DIAMETER (mm)	180° HOOK		90° HOOK
		D+2db	L	L
10 mm Ø	60	75	125	150
12 mm Ø	75	100	150	200
16 mm Ø	95	125	175	250
20 mm Ø	115	150	200	300
25 mm Ø	150	200	230	450
28 mm Ø	240	300	350	550
32 mm Ø	300	335	450	600



STIRRUP AND THE TIE HOOKS
(ALL GRADES)

BAR SIZE (DEFORMED)	DIAMETER (mm)	180° HOOK		90° HOOK
		D+2db	L	L
10 mm Ø	40	125	85	100
12 mm Ø	50	165	115	115
16 mm Ø	65	200	140	150
20 mm Ø	115	300	165	300
32 mm Ø	150	335	230	405

REPUBLIC OF THE PHILPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE VI

NEGROS OCCIDENTAL SUB-DEO
SAN CARLOS CITY, NEG.OCC.

PROJECT NAME AND LOCATION
DETAILED ENGINEERING DESIGN PLAN FOR
CONSTRUCTION OF DPWH DISTRICT OFFICE BUILDING, SAN CARLOS CITY, NEGROS OCCIDENTAL
BRGY. PUNAO, SA CARLOS CITY, NEGROS OCCIDENTAL

SHEET CONTENTS
GENERAL CONSTRUCTION NOTES

PREPARED:
MICHAEL JOHN W. GILLESANIA
ENGINEER II
DATE:

REVIEWED:
JANNA ROSE G. ATIENZA
ENGINEER II
DATE:

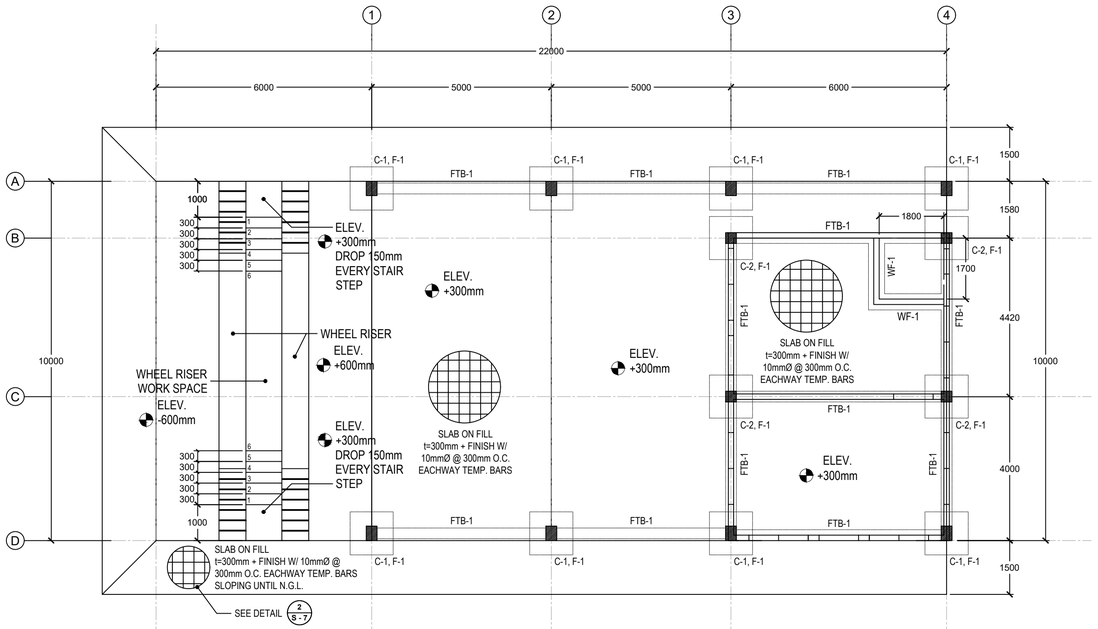
SUBMITTED:
VENGIE C. MORACA
OIC CHIEF, PLANNING AND DESIGN SECTION
DATE:

RECOMMENDED:
PEDRITO R. BAUTISTA
ASSISTANT DISTRICT ENGINEER
DATE:

APPROVED:
JUAN ALFONSO G. JORBINA, SR.
OIC, DISTRICT ENGINEER
DATE:

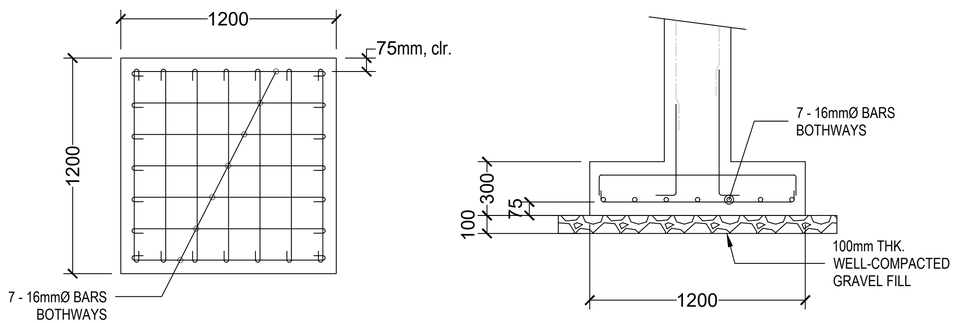
SET NO. S 2 7

SHEET NO. 12 26



1/S-3 FOUNDATION PLAN

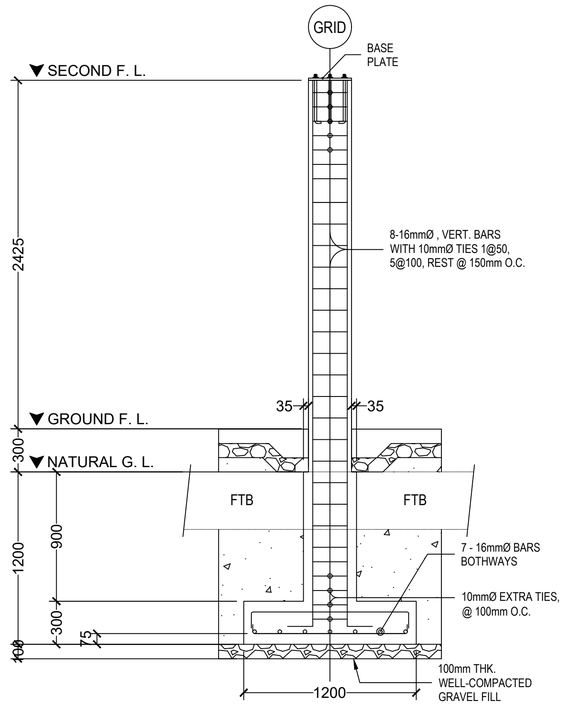
SCALE: 1 : 100 M



PLAN SECTION

2/S-3 FOOTING-1 DETAILS

SCALE: 1 : 20 M



SECTION

PLAN

3/S-3 COLUMN-1 DETAILS

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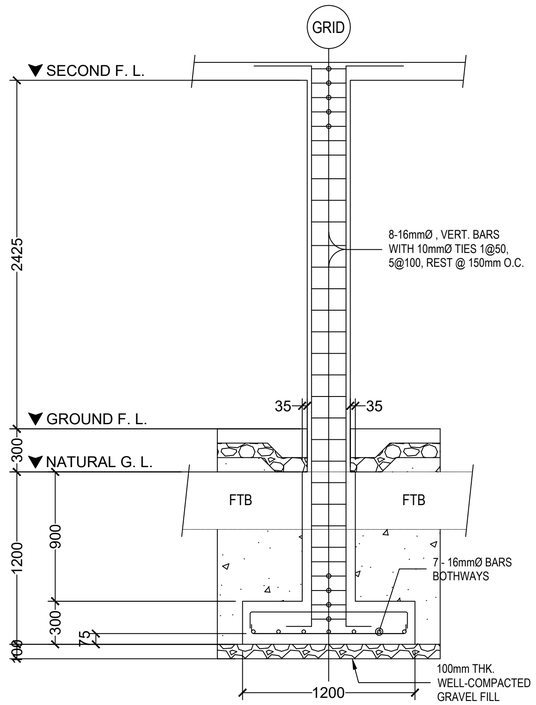

SECTION

PLAN

4/S-3 COLUMN-2 DETAILS

SCALE: 1 : 25 M

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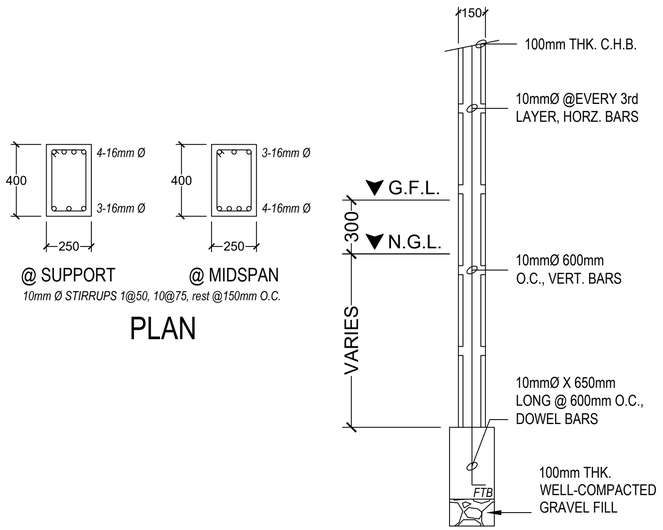
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE VI

NEGROS OCCIDENTAL SUB-DEO
SAN CARLOS CITY, NEG.OCC.

PROJECT NAME AND LOCATION	SHEET CONTENTS	PREPARED:	REVIEWED:	SUBMITTED:	RECOMMENDED:	APPROVED:	SET NO.	SHEET NO.
DETAILED ENGINEERING DESIGN PLAN FOR **CONSTRUCTION OF DPWH DISTRICT OFFICE BUILDING, SAN CARLOS CITY, NEGROS OCCIDENTAL** BRGY. PUNAO, SA CARLOS CITY, NEGROS OCCIDENTAL	FOUNDATION PLAN F-1 DETAILS C-1 DETAILS C-2 DETAILS	**MICHAEL JOHN W. GILLESANIA** ENGINEER II DATE:	**JANNA ROSE G. ATIENZA** ENGINEER II DATE:	**VENGIE C. MORACA** OIC CHIEF, PLANNING AND DESIGN SECTION DATE:	**PEDRITO R. BAUTISTA** ASSISTANT DISTRICT ENGINEER DATE:	**JUAN ALFONSO G. JORBINA, SR.** OIC, DISTRICT ENGINEER DATE:	S 3 7	13 26



1 S-4 FOOTING TIE BEAM DETAIL

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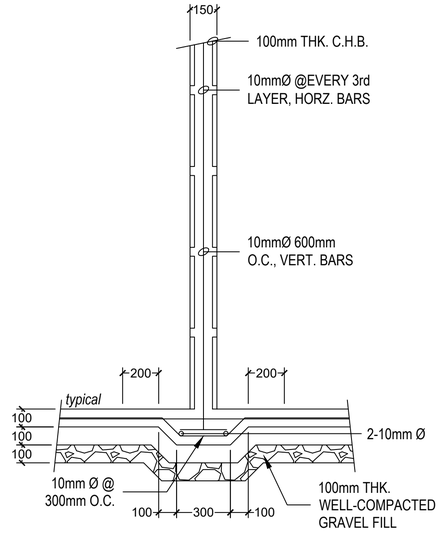
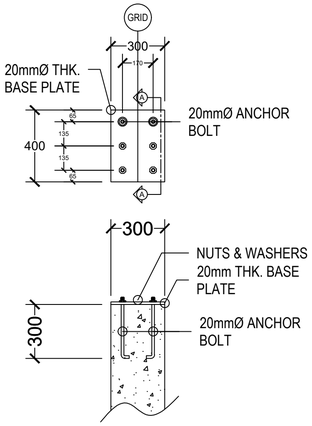


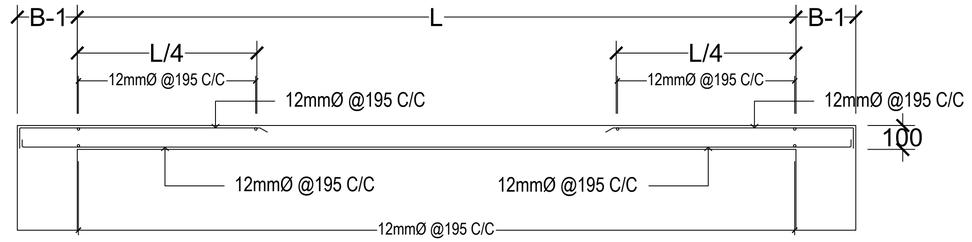
2 S-4 WALL FOOTING DETAIL

SCALE: 1 : 20 M



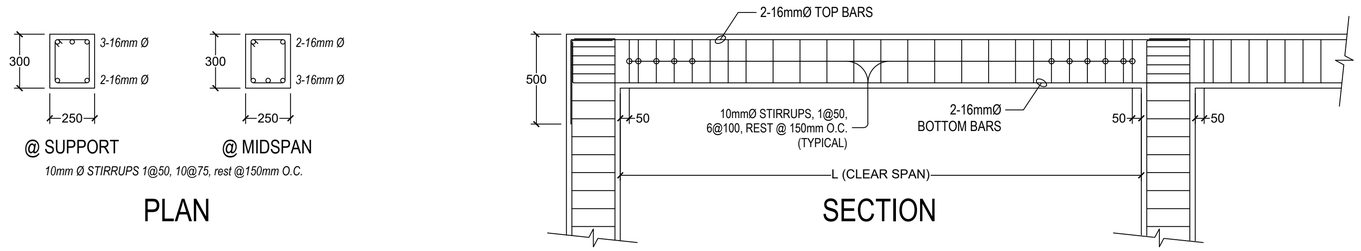
3 S-4 BASE PLATE DETAILS

SCALE: 1 : 20 M



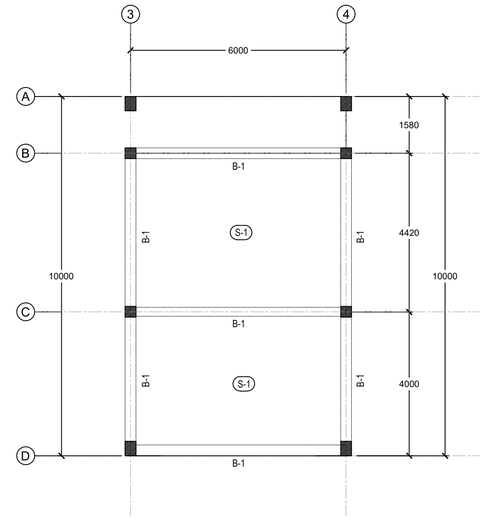
4 S-4 SLAB-1 DETAIL

SCALE: 1 : 15 M



4 S-4 BEAM-1 DETAILS

SCALE: 1 : 20 M



5 S-4 SECOND FLOOR FRAMING PLAN

SCALE: 1 : 100 M

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BRGY. PUNAO, SA CARLOS CITY, NEGROS OCCIDENTAL

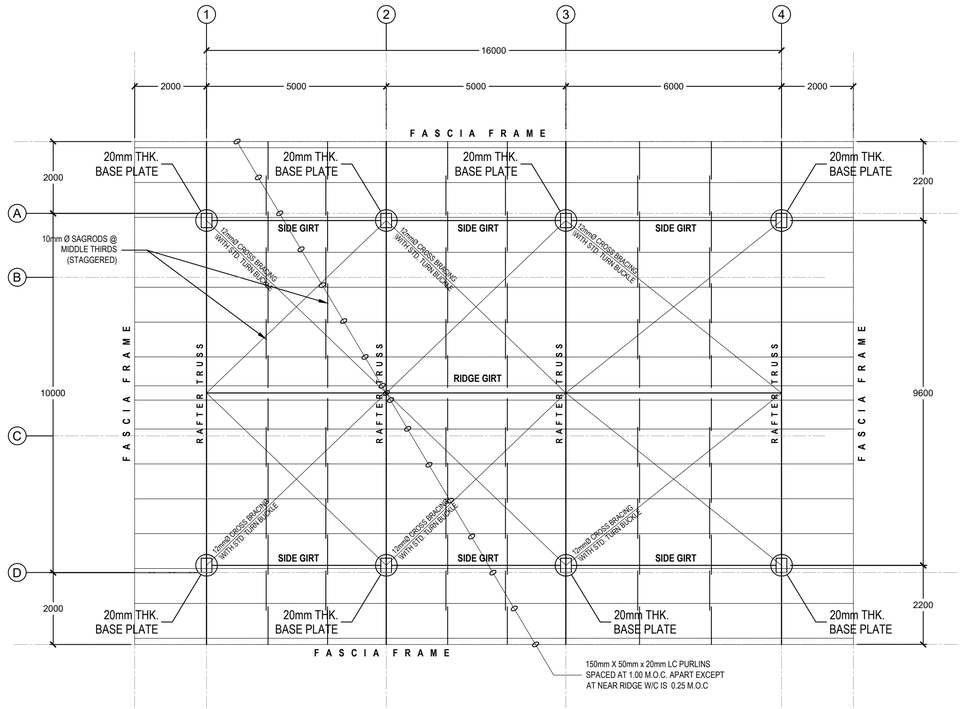
SHEET CONTENTS

FOOTING TIE BEAM DETAIL
WALL FOOTING DETAIL
BASE PLATE DETAIL
BEAM-1 DETAIL
SECOND FLOOR FRAMING PLAN

PREPARED:	REVIEWED:	SUBMITTED:	RECOMMENDED:	APPROVED:
MICHAEL JOHN W. GILLESANIA ENGINEER II	JANNA ROSE G. ATIENZA ENGINEER II	VENGIE C. MORACA OIC CHIEF, PLANNING AND DESIGN SECTION	PEDRITO R. BAUTISTA ASSISTANT DISTRICT ENGINEER	JUAN ALFONSO G. JORBINA, SR. OIC, DISTRICT ENGINEER
DATE:	DATE:	DATE:	DATE:	DATE:

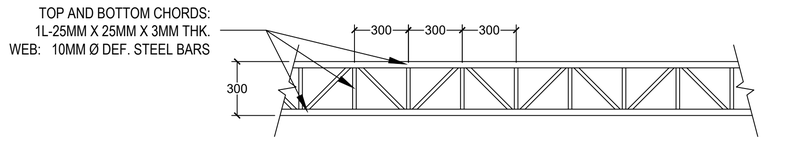
SET NO. S 4 7

SHEET NO. 14 26



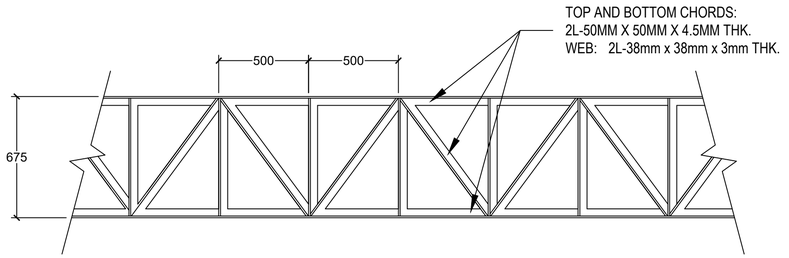
1 S-5 ROOF FRAMING PLAN

SCALE: 1 : 100 M



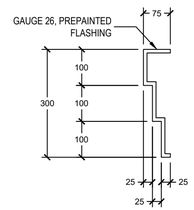
3 S-5 FASCIA FRAME DETAILS

SCALE: 1 : 20 M



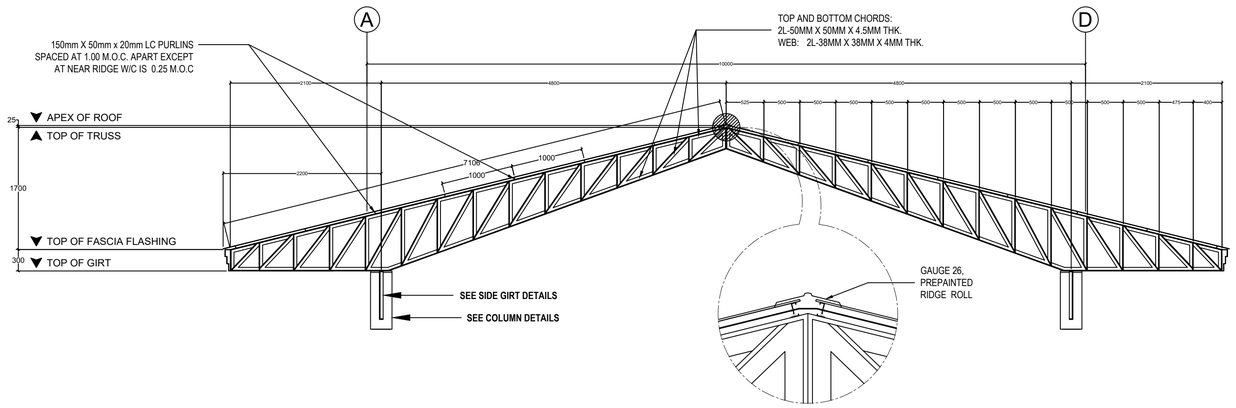
4 S-5 SIDE GIRT DETAILS

SCALE: 1 : 20 M



5 S-5 FALS E GUTTER DETAILS

SCALE: 1:10 M



2 S-5 ROOF TRUSS DETAILS

SCALE: 1 : 50 M

NOTES:

1. IN ACTUAL FABRICATION OF STEEL TRUSSES, MEMBERS MEETING AT POINT SHALL HAVE THEIR GRAVITY AXES INTERSECT AS NEARLY AS PRACTICABLE AT COMMON POINT.

2. THE CONTRACTOR SHALL PROVIDE TEMPORARY ERECTION BRACINGS AND SHORING, AND MAKE ACTUAL MEASUREMENTS IN THE FIELD PRIOR TO FABRICATION/ INSTALLATION OF ALL TRUSSES

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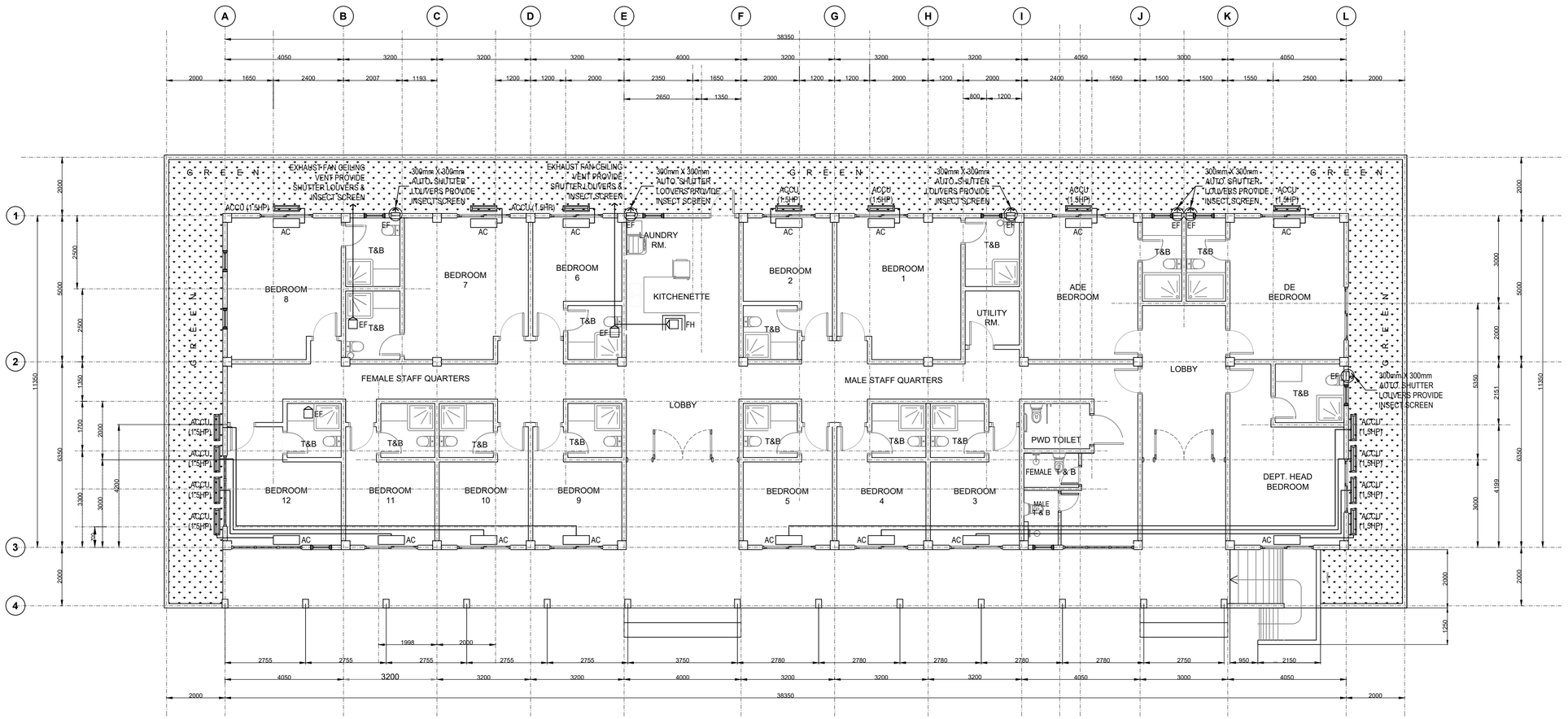


SCHEDULE OF EQUIPMENTS:

QTY	UNIT DESIGNATION	TYPE	REMARKS
15	**AC**	SPLIT TYPE FAN COIL UNIT (WALL MOUNTED UNIT) (1.5 HP) WITH ACCU	BRAND NEW AND OF THE APPROVED TYPE COMPLETE WITH STANDARD ACCESSORIES READY FOR SERVICE.
20	**EF**	EXHAUST FAN (100 CFM) (CEILING CASSETTE TYPE)	

1
M - 2

AIR CONDITIONING SYSTEM LAYOUT PLAN

S C A L E : 1 : 1 0 0 M

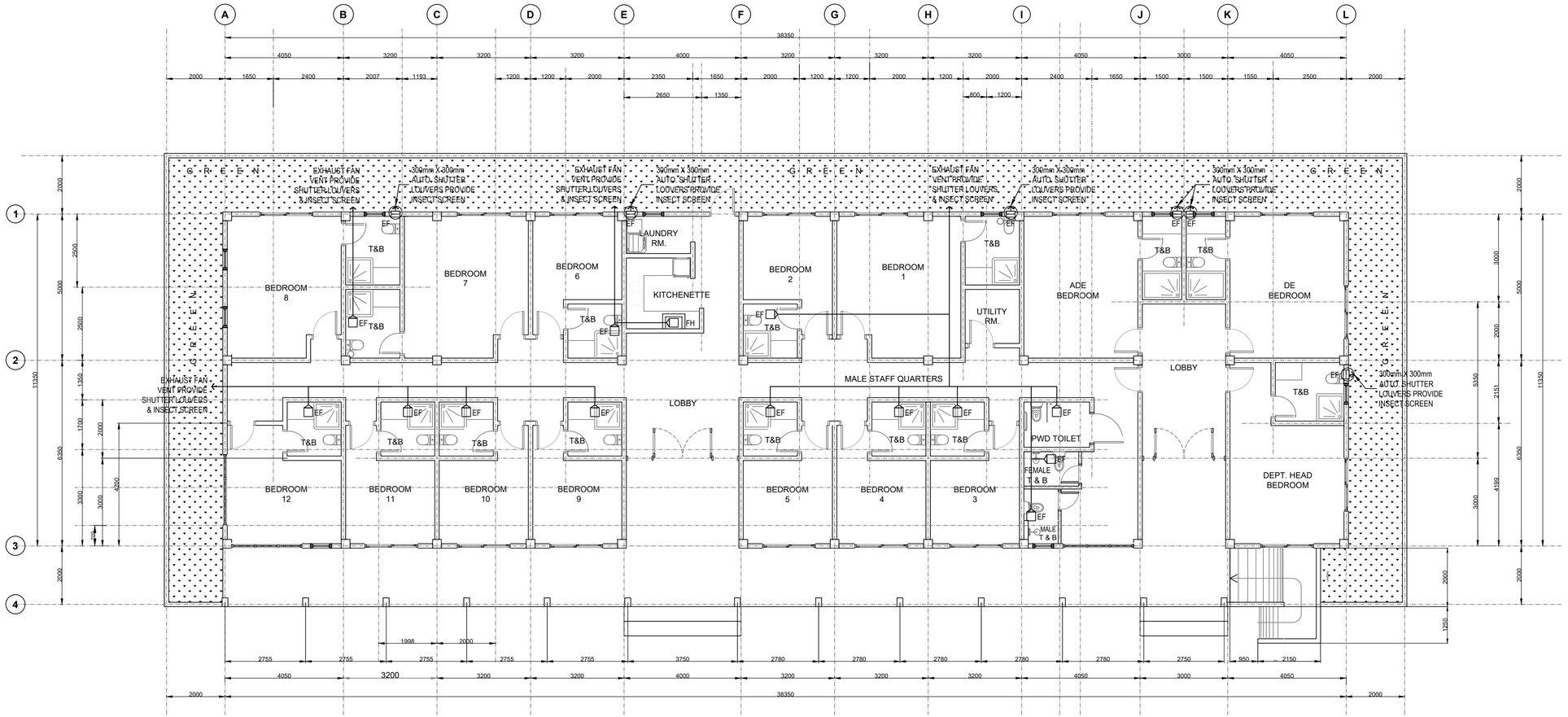
LEGEND:

ACCU	**AIR COOLED CONDENSING UNIT**
AC	**SPLIT TYPE FAN COIL UNIT (WALL MOUNTED) (1.5 HP)**
EF	**EXHAUST FAN (100 CFM, CEILING CASSETTE TYPE & WALL TYPE)**

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
NEGROS ISLAND REGION

NEGROS OCCIDENTAL 5TH DEO
SAN CARLOS CITY, NEGROS OCCIDENTAL

PROJECT NAME AND LOCATION	SHEET CONTENTS	DESIGNED:	REVIEWED:	SUBMITTED:	RECOMMENDED:	APPROVED:	SET NO.	SHEET NO.
DETAILED ENGINEERING DESIGN PLAN FOR **CONSTRUCTION (COMPLETION) OF DPWH BUILDING OF NEGROS OCCIDENTAL SUB DEO, SAN CARLOS CITY, NEGROS OCCIDENTAL** BRGY. PUNAO, SA CARLOS CITY, NEGROS OCCIDENTAL	AIR CONDITIONING SYSTEM LAYOUT PLAN LEGEND SCHEDULE OF EQUIPMENTS	PROFESSIONAL MECHANICAL ENGINEER DATE:	**JANNA ROSE G. ATIENZA** ENGINEER II DATE:	**VENGIE C. MORACA** OIC CHIEF, PLANNING AND DESIGN SECTION DATE:	**PEDRITO R. BAUTISTA** ASSISTANT DISTRICT ENGINEER DATE:	**JUAN ALFONSO G. JORBINA, SR.** OIC, DISTRICT ENGINEER DATE:	M 2 3	50



SCHEDULE OF EQUIPMENTS:

QTY	UNIT DESIGNATION	TYPE	REMARKS
15	**AC**	SPLIT TYPE FAN COIL UNIT (WALL MOUNTED UNIT) (1.5 HP) WITH ACCU	BRAND NEW AND OF THE APPROVED TYPE COMPLETE WITH STANDARD ACCESSORIES READY FOR SERVICE.
20	**EF**	EXHAUST FAN (100 CFM) (CEILING CASSETTE TYPE)	

1
M - 3

AIR VENTILATION SYSTEM LAYOUT PLAN

S C A L E : 1 : 1 0 0 M

LEGEND:

ACCU	**AIR COOLED CONDENSING UNIT**
AC	**SPLIT TYPE FAN COIL UNIT (WALL MOUNTED) (1.5 HP)**
EF	**EXHAUST FAN (100 CFM, CEILING CASSETTE TYPE & WALL TYPE)**

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
NEGROS ISLAND REGION

NEGROS OCCIDENTAL 5TH DEO
SAN CARLOS CITY, NEGROS OCCIDENTAL

PROJECT NAME AND LOCATION	SHEET CONTENTS	DESIGNED:	REVIEWED:	SUBMITTED:	RECOMMENDED:	APPROVED:	SET NO.	SHEET NO.
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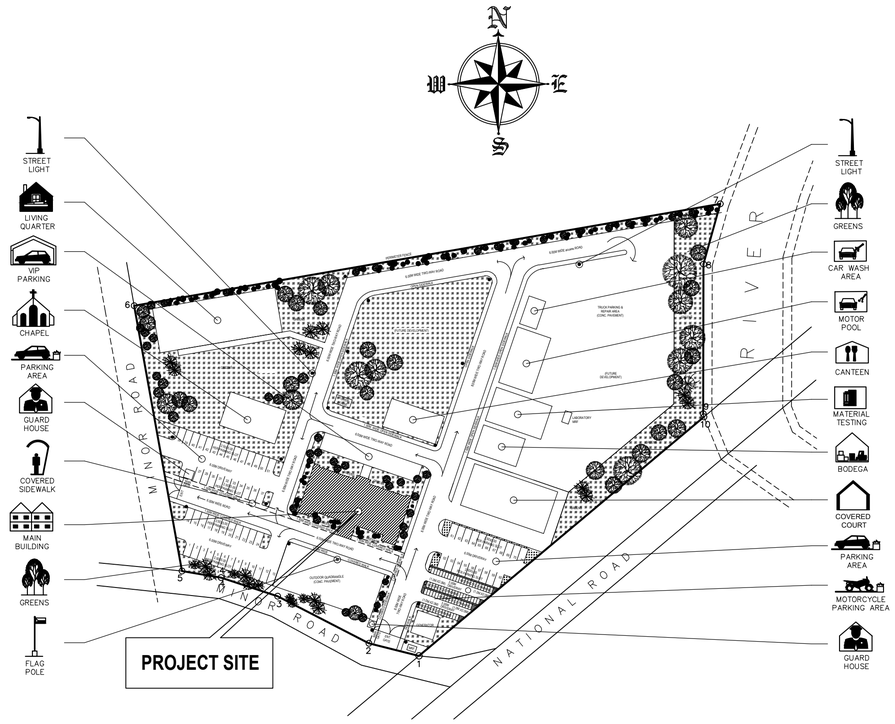
E. MAIN BUILDING (COMPLETION)

1 A-2 **PERSPECTIVE**

NOT TO SCALE



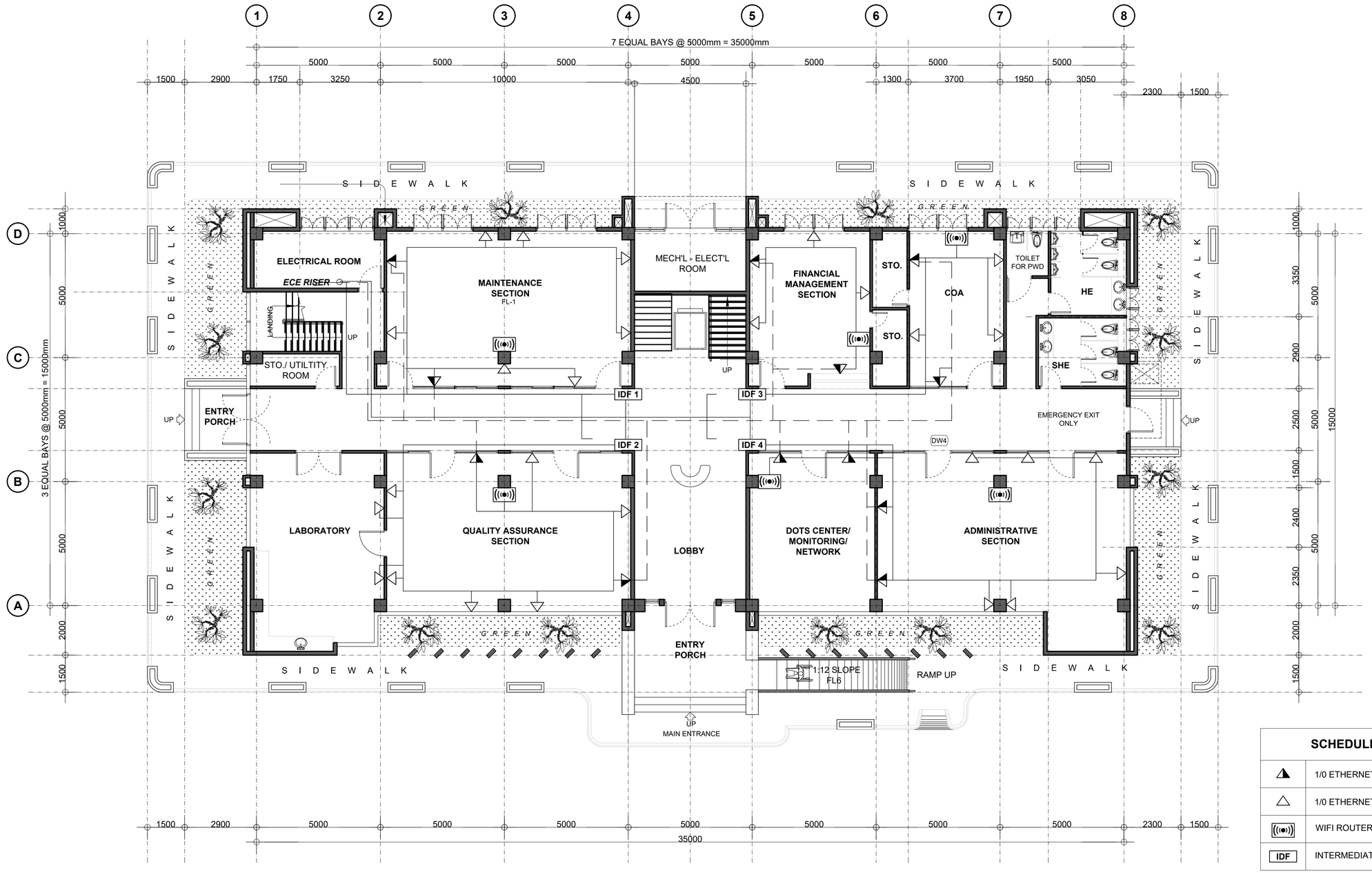
2 A-2 **SITE DEVELOPMENT PLAN**

NOT TO SCALE

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
NEGROS ISLAND REGION

NEGROS OCCIDENTAL 5TH DEO
SAN CARLOS CITY, NEGROS OCCIDENTAL

PROJECT NAME AND LOCATION	SHEET CONTENTS	DESIGNED:	REVIEWED:	SUBMITTED:	RECOMMENDED:	APPROVED:	SET NO.	SHEET NO.
DETAILED ENGINEERING DESIGN PLAN FOR **CONSTRUCTION (COMPLETION) OF DPWH BUILDING OF NEGROS OCCIDENTAL SUB DEO, SAN CARLOS CITY, NEGROS OCCIDENTAL** BRGY. PUNAO, SA CARLOS CITY, NEGROS OCCIDENTAL	PERSPECTIVE SITE DEVELOPMENT PLAN	**ORNIF JOHN A. CARATAO** ARCHITECT I DATE:	**JANNA ROSE G. ATIENZA** ENGINEER II DATE:	**VENGIE C. MORACA** OIC CHIEF, PLANNING AND DESIGN SECTION DATE:	**PEDRITO R. BAUTISTA** ASSISTANT DISTRICT ENGINEER DATE:	**JUAN ALFONSO G. JORBINA, SR.** OIC, DISTRICT ENGINEER DATE:	A 1 1	50



SCHEDULE OF ELECTRONICS

◭	1/0 ETHERNET PORT (DOUBLE)	12 UNITS
△	1/0 ETHERNET PORT (SINGLE)	27 UNITS
((•))	WIFI ROUTER	6 UNITS
IDF	INTERMEDIATE DISTRIBUTION FRAME	4 UNITS

1
EC - 1

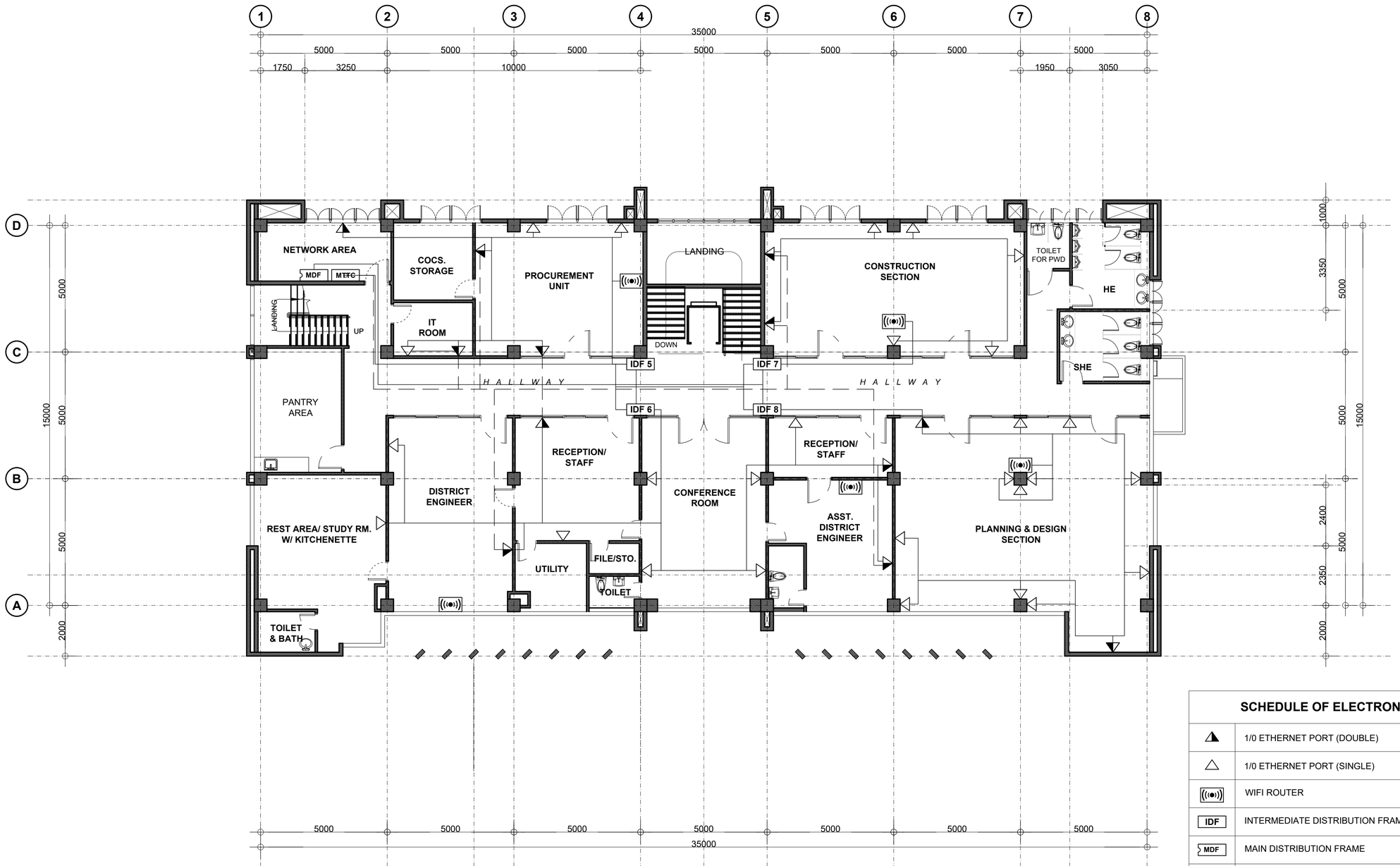
GROUND FLOOR NODE ASSIGNMENTS

SCALE: 1:100 M

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
NEGROS ISLAND REGION

NEGROS OCCIDENTAL 5TH DEO
SAN CARLOS CITY, NEGROS OCCIDENTAL

PROJECT NAME AND LOCATION	SHEET CONTENTS	DESIGNED:	REVIEWED:	SUBMITTED:	RECOMMENDED:	APPROVED:	SET NO.	SHEET NO.
DETAILED ENGINEERING DESIGN PLAN FOR **CONSTRUCTION OF DPWH BUILDING OF NEGROS OCCIDENTAL SUB DEO, SAN CARLOS CITY, NEGROS OCCIDENTAL** BRGY. PUNAO, SA CARLOS CITY, NEGROS OCCIDENTAL	GROUND FLOOR NODE ASSIGNMENTS	**ORNIF JOHN A. CARATAO** ARCHITECT I DATE:	**JANNA ROSE G. ATIENZA** ENGINEER II DATE:	**VENGIE C. MORACA** OIC CHIEF, PLANNING AND DESIGN SECTION DATE:	**PEDRITO R. BAUTISTA** ASSISTANT DISTRICT ENGINEER DATE:	**JUAN ALFONSO G. JORBINA, SR.** OIC, DISTRICT ENGINEER DATE:	EC 1 2	68 71



SCHEDULE OF ELECTRONICS		
◭	1/0 ETHERNET PORT (DOUBLE)	12 UNITS
△	1/0 ETHERNET PORT (SINGLE)	22 UNITS
((•))	WIFI ROUTER	5 UNITS
IDF	INTERMEDIATE DISTRIBUTION FRAME	4 UNITS
MDF	MAIN DISTRIBUTION FRAME	1 UNIT
MTTC	MAIN TELEPHONE TERMINAL CABINET	1 UNIT

1
EC - 2

SECOND FLOOR NODE ASSIGNMENTS

S C A L E : 1 : 1 0 0 M

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
NEGROS ISLAND REGION

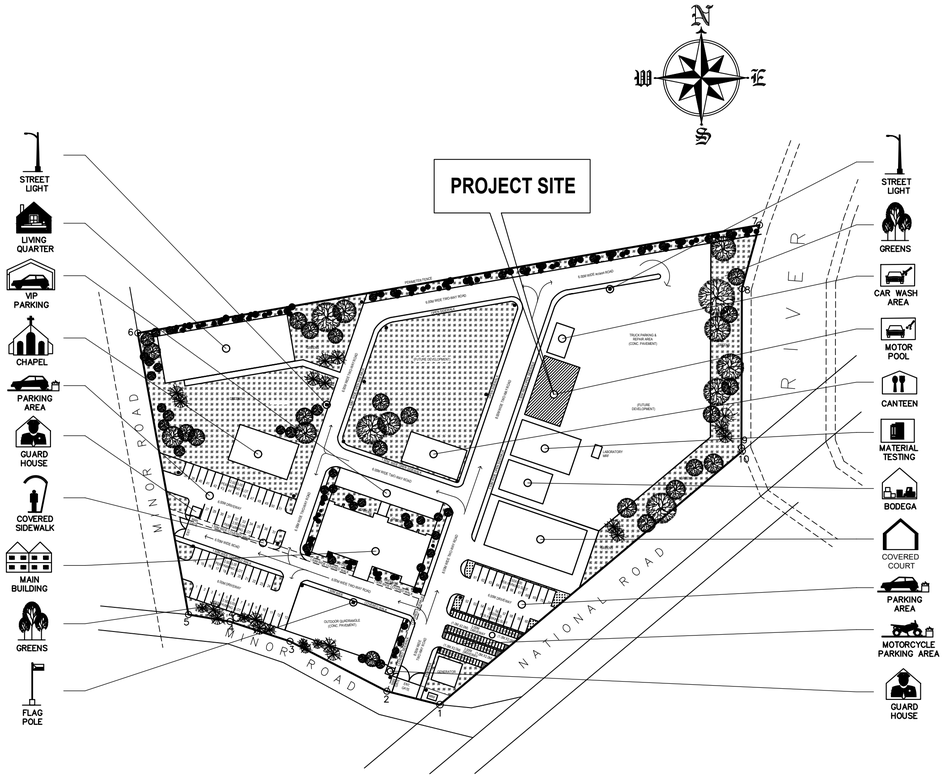
NEGROS OCCIDENTAL 5TH DEO
SAN CARLOS CITY, NEGROS OCCIDENTAL

PROJECT NAME AND LOCATION	SHEET CONTENTS	DESIGNED:	REVIEWED:	SUBMITTED:	RECOMMENDED:	APPROVED:	SET NO.	SHEET NO.
DETAILED ENGINEERING DESIGN PLAN FOR **CONSTRUCTION OF DPWH BUILDING OF NEGROS OCCIDENTAL SUB DEO, SAN CARLOS CITY, NEGROS OCCIDENTAL** BRGY. PUNAO, SA CARLOS CITY, NEGROS OCCIDENTAL	SECOND FLOOR NODE ASSIGNMENTS	**ORNIF JOHN A. CARATAO** ARCHITECT I DATE:	**JANNA ROSE G. ATIENZA** ENGINEER II DATE:	**VENGIE C. MORACA** OIC CHIEF, PLANNING AND DESIGN SECTION DATE:	**PEDRITO R. BAUTISTA** ASSISTANT DISTRICT ENGINEER DATE:	**JUAN ALFONSO G. JORBINA, SR.** OIC, DISTRICT ENGINEER DATE:	EC 2 2	69 / 71

F. MOTOR POOL

2 / A-2 **PERSPECTIVE**

NOT TO SCALE



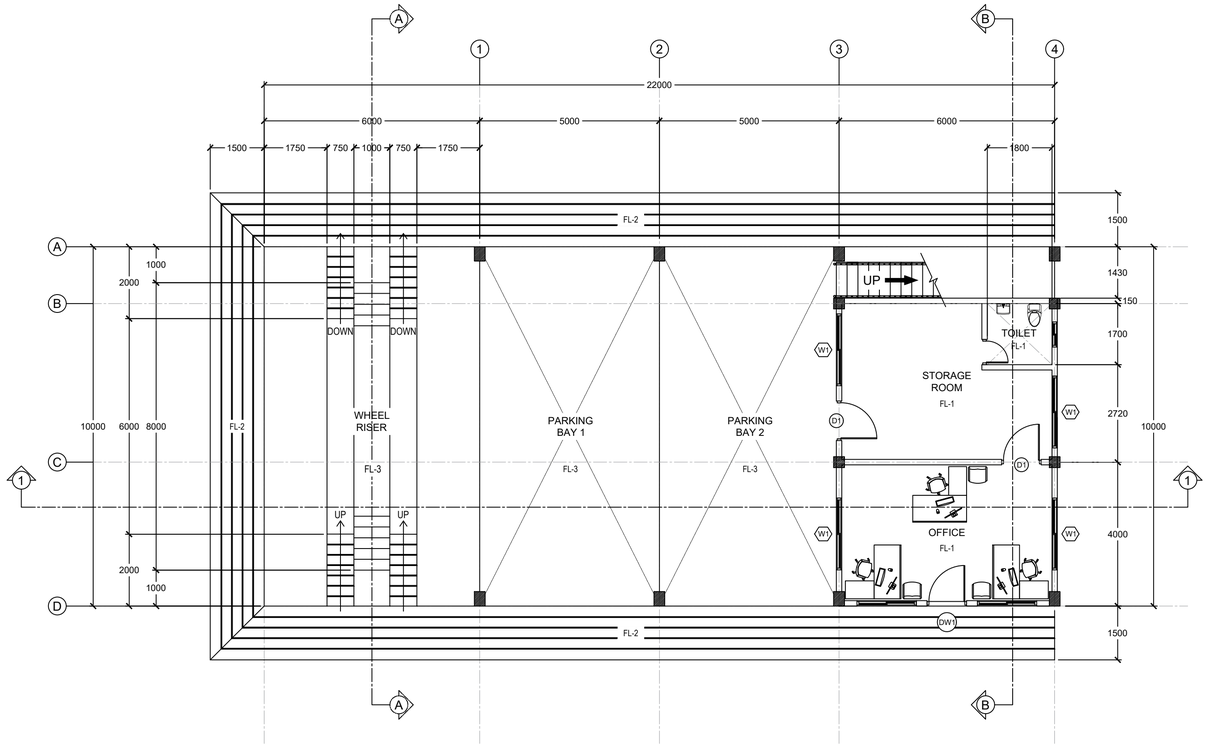
2 / A-2 **SITE DEVELOPMENT PLAN**

NOT TO SCALE

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
NEGROS ISLAND REGION

NEGROS OCCIDENTAL 5TH DEO
SAN CARLOS CITY, NEGROS OCCIDENTAL

PROJECT NAME AND LOCATION	SHEET CONTENTS	DESIGNED:	REVIEWED:	SUBMITTED:	RECOMMENDED:	APPROVED:	SET NO.	SHEET NO.
DETAILED ENGINEERING DESIGN PLAN FOR **CONSTRUCTION (COMPLETION) OF DPWH BUILDING OF NEGROS OCCIDENTAL SUB DEO, SAN CARLOS CITY, NEGROS OCCIDENTAL** BRGY. PUNAO, SA CARLOS CITY, NEGROS OCCIDENTAL	PERSPECTIVE SITE DEVELOPMENT PLAN	**ORNIF JOHN A. CARATAO** ARCHITECT I DATE:	**JANNA ROSE G. ATIENZA** ENGINEER II DATE:	**VENGIE C. MORACA** OIC CHIEF, PLANNING AND DESIGN SECTION DATE:	**PEDRITO R. BAUTISTA** ASSISTANT DISTRICT ENGINEER DATE:	**JUAN ALFONSO G. JORBINA, SR.** OIC, DISTRICT ENGINEER DATE:	A 1 / 8	50



GROUND FLOOR PLAN

1
A-4

SCALE: 1:100 M

SCHEDULE OF FLOOR FINISHES

FL-1	600 X 600 mm UNPOLISHED SYNTHETIC CERAMIC TILE FLOOR FINISH (SUBMIT SAMPLE FOR APPROVAL)
FL-2	NON-SKID CEMENT FLOOR FINISH WITH WITH 6 mm WIDE GROOVE LINES (PROVIDE FLOOR HARDENER)
FL-3	PLAIN CEMENT FLOOR FINISH (PROVIDE WATER BASE WATERPROOFING)

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
NEGROS ISLAND REGION

NEGROS OCCIDENTAL 5TH DEO
SAN CARLOS CITY, NEGROS OCCIDENTAL

PROJECT NAME AND LOCATION
DETAILED ENGINEERING DESIGN PLAN FOR
CONSTRUCTION (COMPLETION) OF DPWH BUILDING OF NEGROS OCCIDENTAL SUB DEO, SAN CARLOS CITY, NEGROS OCCIDENTAL
BRGY. PUNAO, SA CARLOS CITY, NEGROS OCCIDENTAL

SHEET CONTENTS
GROUND FLOOR PLAN
SCHEDULES OF FLOOR FINISHES

DESIGNED:
ORNIF JOHN A. CARATAO
ARCHITECT I
DATE:

REVIEWED:
JANNA ROSE G. ATIENZA
ENGINEER II
DATE:

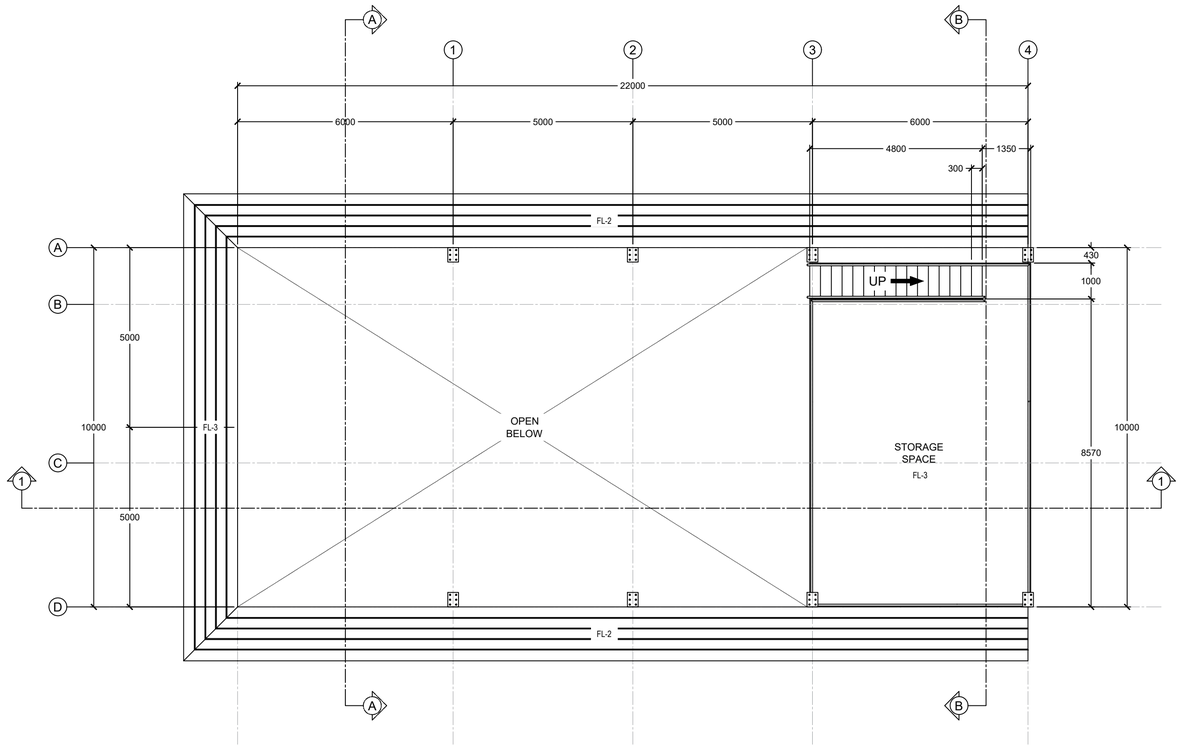
SUBMITTED:
VENGIE C. MORACA
OIC CHIEF, PLANNING AND DESIGN SECTION
DATE:

RECOMMENDED:
PEDRITO R. BAUTISTA
ASSISTANT DISTRICT ENGINEER
DATE:

APPROVED:
JUAN ALFONSO G. JORBINA, SR.
OIC, DISTRICT ENGINEER
DATE:

SET NO. A 2 8

SHEET NO. 50



1 / A-5 **SECOND FLOOR PLAN**

SCALE: 1:100 M

SCHEDULE OF FLOOR FINISHES

FL-1	600 X 600 mm UNPOLISHED SYNTHETIC CERAMIC TILE FLOOR FINISH (SUBMIT SAMPLE FOR APPROVAL)
FL-2	NON-SKID CEMENT FLOOR FINISH WITH WITH 6 mm WIDE GROOVE LINES (PROVIDE FLOOR HARDENER)
FL-3	PLAIN CEMENT FLOOR FINISH (PROVIDE WATER BASE WATERPROOFING)

REPUBLIC OF THE PHILPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE VI

NEGROS OCCIDENTAL SUB-DEO
SAN CARLOS CITY, NEG.OCC.

PROJECT NAME AND LOCATION
DETAILED ENGINEERING DESIGN PLAN FOR
CONSTRUCTION OF DPWH DISTRICT OFFICE BUILDING, SAN CARLOS CITY, NEGROS OCCIDENTAL
BRGY. PUNAO, SA CARLOS CITY, NEGROS OCCIDENTAL

SHEET CONTENTS
SECOND FLOOR PLAN
SCHEDULES OF FLOOR FINISHES

DESIGNED:
ORNIF JOHN A. CARATAO
ARCHITECT V
DATE:

REVIEWED:
JANNA ROSE G. ATIENZA
ENGINEER II
DATE:

SUBMITTED:
VENGIE G. MORACA
OIC CHIEF, PLANNING AND DESIGN SECTION
DATE:

RECOMMENDED:
PEDRITO R. BAUTISTA
ASSISTANT DISTRICT ENGINEER
DATE:

APPROVED:
JUAN ALFONSO G. JORBINA, SR.
OIC, DISTRICT ENGINEER
DATE:

SET NO. A 3 8

SHEET NO. 50