

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF AGRICULTURE
WESTERN VISAYAS
PAROLA, ILOILO CITY

DETAILED ENGINEERING DESIGN PLAN

CONSTRUCTION OF RICE PROCESSING CENTER III (WAREHOUSE)
BRGY. TALOC, BAGO CITY, NEGROS OCCIDENTAL
RICE PROGRAM 2023

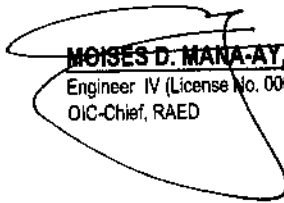
Prepared:


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Approved:


ENGR. JOSE ALBERT A. BARROGO
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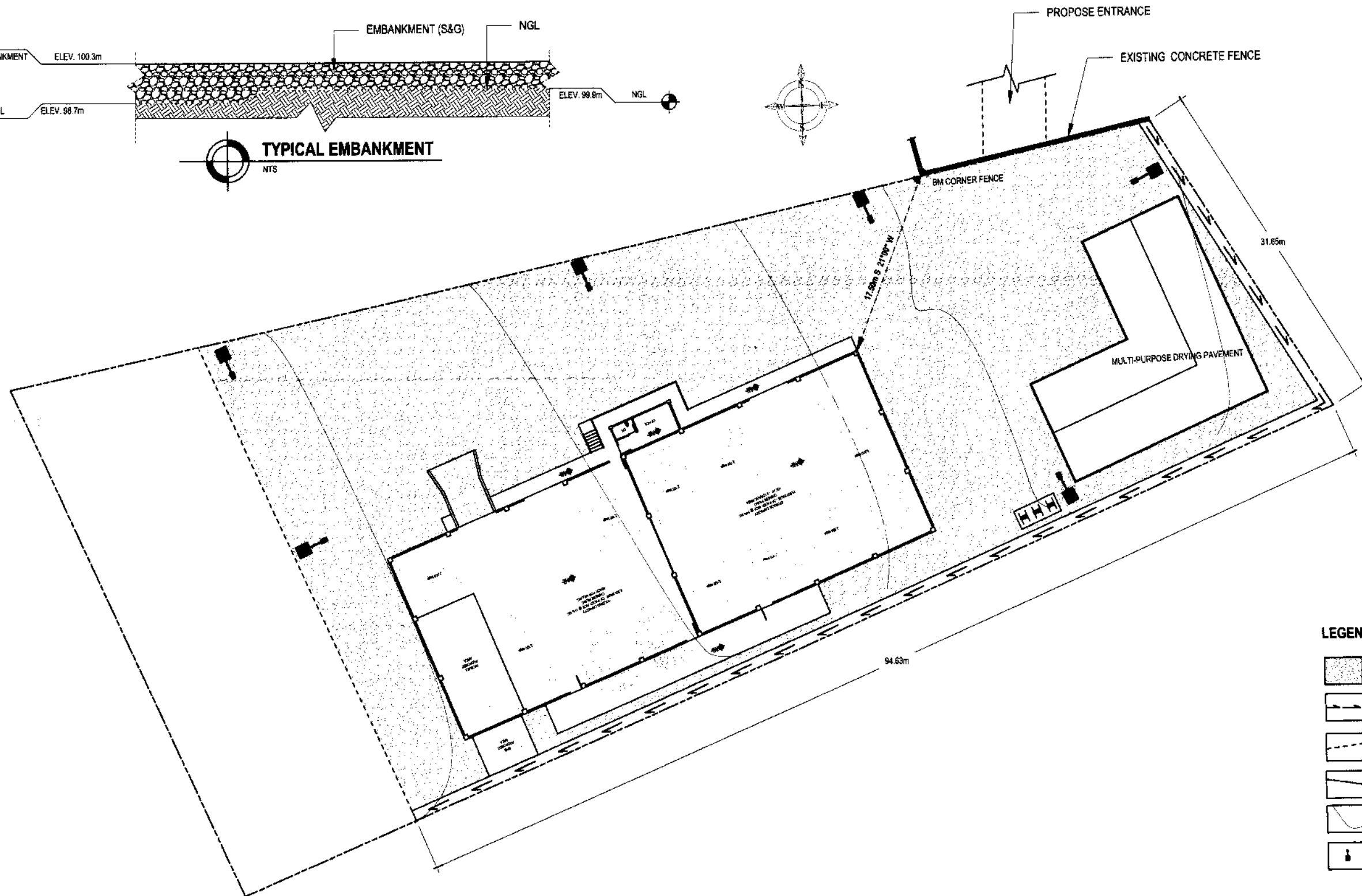
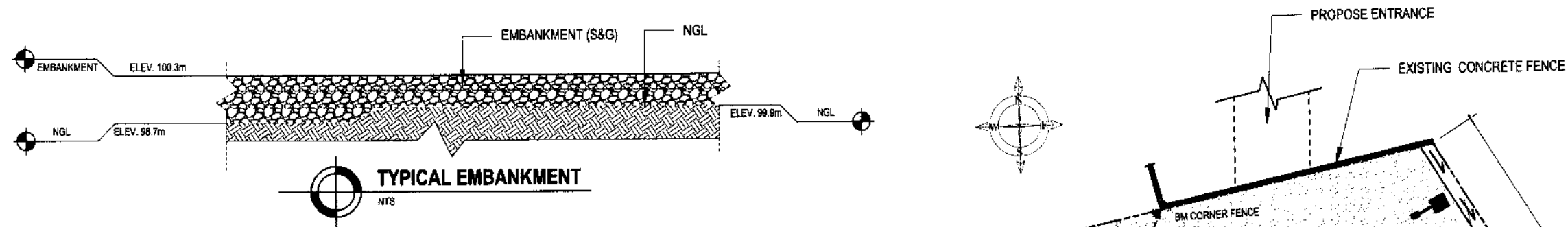
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ITEM NO.	SCOPE OF WORKS	QNTY	UNIT
PART I GENERAL REQUIREMENTS			
SPL1	GEOTECHNICAL EXPLORATION & STRUCTURAL ANALYSIS	1.00	lot
SPL2	PERMITS & CLEARANCES	1.00	lot
SPL3	TEMPORARY FIELD OFFICE	1.00	lot
SPL4	SIGNBOARD/BILLBOARD (1-4'x8' and 1-8'x8') & PROJECT MARKER	1.00	lot
SPL5	CONSTRUCTION SAFETY & HEALTH	1.00	lot
SPL6	MOBILIZATION/DEMOLITION	1.00	lot
PART II SITE DEVELOPMENT & EARTH WORKS			
2.1	CLEARING & LAYOUT	2,200.00	sq.m
2.2	EMBANKMENT (Compacted)	5035.60	cu.m
2.3	EXCAVATION (Mechanical)	472.00	cu.m
2.4	BACKFILLING (Compacted)	304.00	cu.m
2.5	LEVELING COURSE (Compacted)	132.00	cu.m
2.6	FALSE WORK	1.00	lot
PART III REINFORCED CONCRETE WORKS			
3.1	FOOTING	39.00	cu.m
3.2	COLUMN	50.45	cu.m
3.3	FOOTING TIE BEAM (FTB)	28.00	cu.m
3.4	CHB FOOTING (CF)	9.54	cu.m
3.5	STIFFENER BEAM (SB)	3.58	cu.m
3.6	BEAM 1, 1-A & 1-B	18.46	cu.m
3.7	BEAM 2	9.86	cu.m
3.8	BEAM 3, 3-A & 3-B	18.27	cu.m
3.9	ROOF BEAM (RB)	17.50	cu.m
3.1	CONCRETE GUTTER	10.56	cu.m
3.1	SLAB ON GRADE	156.08	cu.m
3.1	STAIRS & RAMP	4.21	cu.m
3.1	TRANSFORMER PAD	2.35	cu.m
3.1	DRAINAGE	25.00	cu.m
PART IV MASONRY WORKS, WALL FRAMING & CLADDING			
4.1	MASONRY WORKS	725.00	sq.m
4.2	WALL FRAMING	5,554.00	kg
4.3	WALL CLADDING	1,117.00	sq.m
PART V ROOF FRAMING & CLADDING WORKS			
5.1	ROOF FRAMING		
5.1.a	TRUSS	9,836.00	kg
5.1.b	GIRTS & STRUT	5,018.00	kg
5.1.c	CANOPY	2,690.00	kg
5.1.d	PURLINS	12,278.00	kg
5.1.e	TENSION ROD & SAGROD	1.00	lot
5.2	FLASHING, FASCIA & GUTTER	444.00	l.m
5.3	ROOF CLADDING	1,229.00	sq.m
PART VI PLUMBING & SANITARY WORKS			
6.1	SEPTIC VAULT	1.00	lot
6.2	CATCH BASIN	16.00	unit
6.3	PIPES, FITTINGS & SANITARY ACCESSORIES	1.00	lot
PART VII ELECTRICAL WORKS			
7.1	CONDUITS, BOXES & FITTINGS	1.00	lot
7.2	WIRES AND WIRING DEVICES	1.00	lot
7.3	POWER LOAD CENTER, SWITCHGEAR & PANEL BOARDS	1.00	lot
7.4	TRANSFORMER (3-187kVA)	3.00	set
7.5	SOLAR STREET LIGHT	6.00	set
7.6	SOLAR PHOTOVOLTAICS		
7.6.a	ALUM. RAILINGS & CLAMPS	1.00	lot
7.6.b	SOLAR PHOTOVOLTAIC MODULE (39,600 Watts)	88.00	pc
7.6.c	INVERTER (25kVA), BREAKERS, WIRINGS & DEVICES	1.00	lot
PART VIII FINISHING TOUCHES AND ATTACHMENTS			
8.1	PLASTERING (Smooth Finish)	815.00	sq.m
8.2	PAINTING WORKS		
8.2.a	PAINTING WORKS (MASONRY)	815.00	sq.m
8.2.b	PAINTING WORKS (METAL STRUCTURE)	1.00	lot
8.3	STEEL SLIDING DOOR	3.00	set
8.4	DOORS, WINDOWS & STEEL LOUVERS	1.00	lot
PART IX MULTI-PURPOSE DRYING PAVEMENT			
9.1	EXCAVATION	16.80	cu.m
9.2	EMBANKMENT (Compacted)	105.00	cu.m
9.3	WALL FOOTING (Reinforced Concrete)	3.65	cu.m
9.4	MASONRY WORKS	80.00	sq.m
9.5	CONCRETE PAVEMENT (Reinforced Concrete)	45.00	cu.m
9.6	PLASTERING (Smooth Finish)	40.00	sq.m

ON THIS SITE



IMPLEMENTING AGENCY:	PROJECT NAME & LOCATION:	SHEET CONTENTS	PREPARED BY:	REVIEWED BY:	RECOMMENDED BY:	APPROVED BY:	CAD BY:
<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF AGRICULTURE WESTERN VISAYAS ILOILO CITY</p>	<p>CONSTRUCTION OF RICE PROCESSING CENTER III (WAREHOUSE) BRGY. TALOC, BAGO CITY, NEGROS OCCIDENTAL</p>	<p>TABLE OF CONTENTS SCOPE OF WORKS VICINITY MAP</p>	<p> JERRY B. GUANCO, ABE Engineer II (ABE NO. 0007258)</p>	<p> YVONNE GRACE H. SUR, ABE Engineer III (ABE NO. 0008770) HEAD, EPOSS</p>	<p> MOISES D. MANA-AY, ABE, MEE Engineer IV (ABE NO. 0006077) CHIEF, RAED</p>	<p> ENGR. JOSE ALBERT A. BARROSO Director III / OIC-Regional Executive Director</p>	<p>JBGUANCO SHEET NO.: 1 23</p>

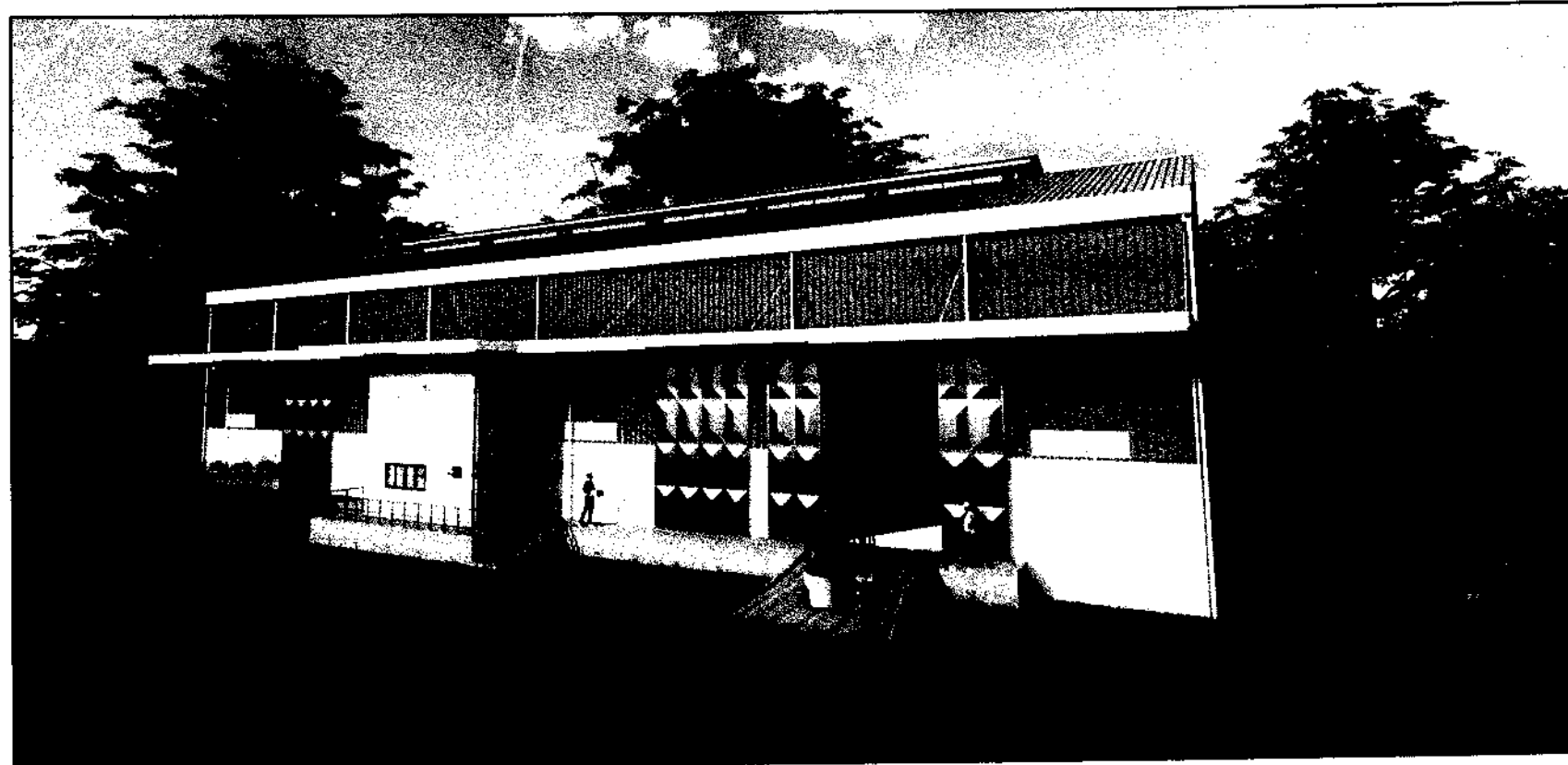


LEGEND:

- EMBANKMENT (AREA=4,900m²)
- DRAINAGE CANAL (146 L.m)
- PROPOSE ROAD ENTRANCE
- LOT BOUNDARY
- CONTOUR
- SOLAR STREET LIGHT

SITE DEVELOPMENT
1:400

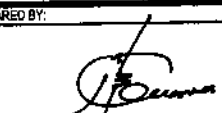
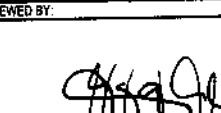

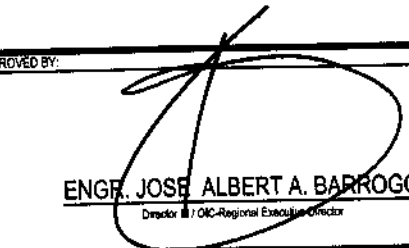
<p>IMPLEMENTING AGENCY:</p> <p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF AGRICULTURE WESTERN VISAYAS ILOILO CITY</p>	<p>PROJECT NAME & LOCATION:</p> <p>CONSTRUCTION OF RICE PROCESSING CENTER III (WAREHOUSE) BRGY. TALOC, BAGO CITY, NEGROS OCCIDENTAL</p>	<p>SHEET CONTENTS:</p> <p>SITE DEVELOPMENT PLAN TYP. EMBANKMENT</p>	<p>PREPARED BY:</p> <p> JERRY B. GUANCO, ABE Engineer II (ABE NO. 0007290)</p>	<p>REVIEWED BY:</p> <p> YVONNE GRACE H. SUR, ABE Engineer III (ABE NO. 0006670) HEAD - EPOS</p>	<p>RECOMMENDED BY:</p> <p> MOISES D. MANAYAY, ABE, MEE Engineer IV (ABE NO. 0006077) OIC-CHM, RAED</p>	<p>APPROVED BY:</p> <p>ENGR. JOSE ALBERT A. BARROGO Director III / OIC-Regional Executive Director</p>	<p>CAD BY:</p> <p>JBGUANCO</p> <p>SHEET NO.:</p> <p>2 23</p>
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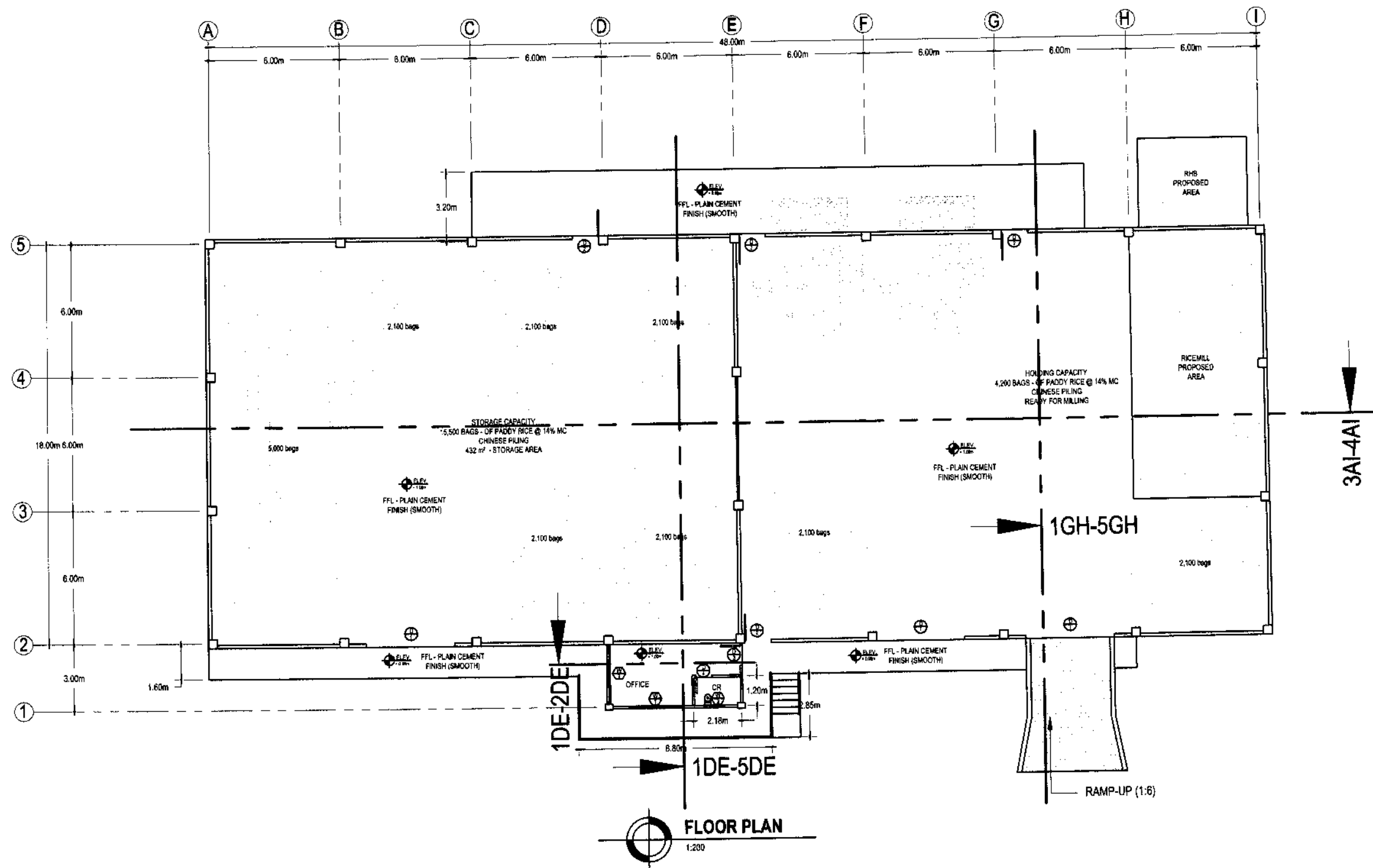



FRONT ISOMETRIC VIEW
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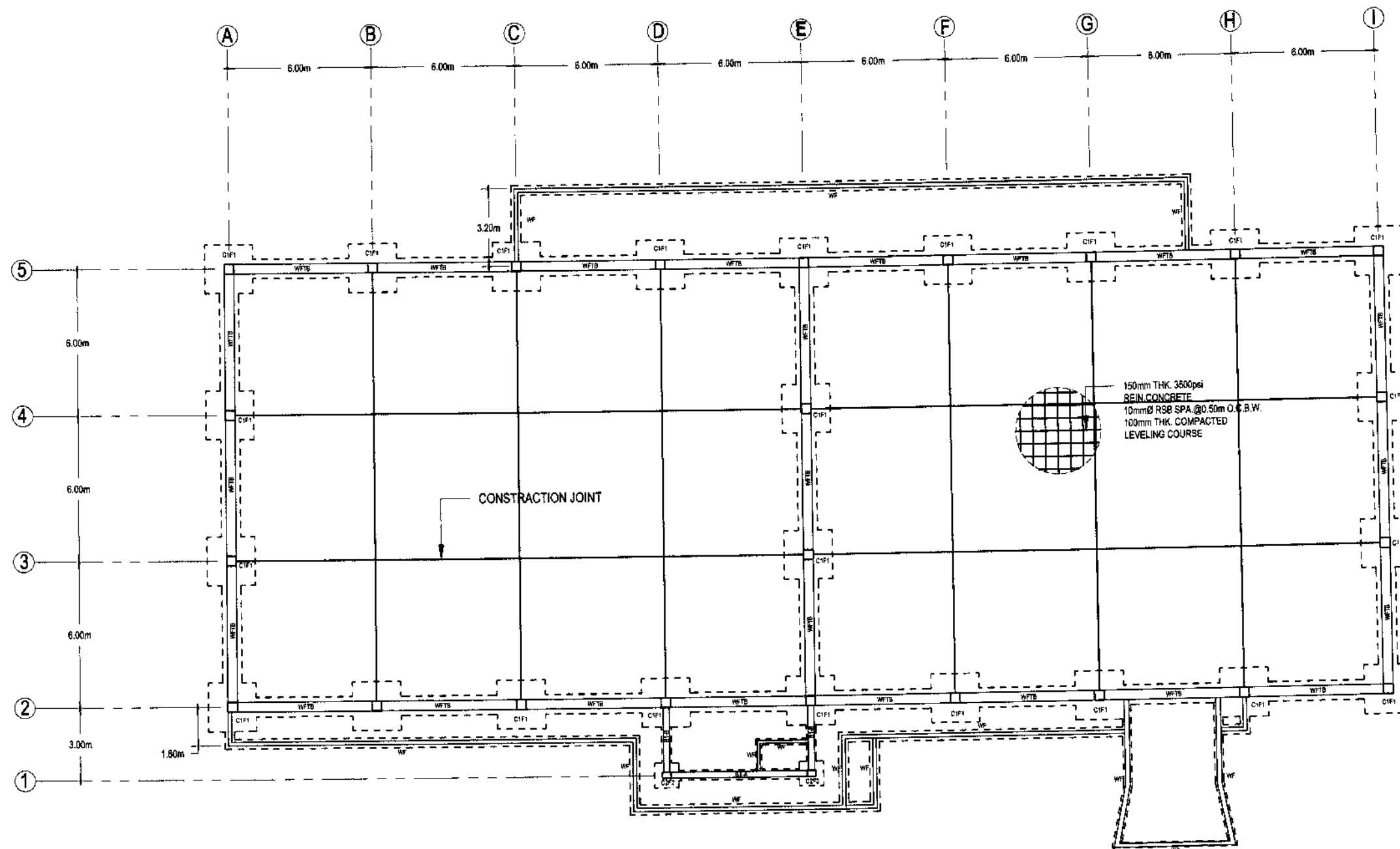



REAR ISOMETRIC VIEW
 NTS

IMPLEMENTING AGENCY: REPUBLIC OF THE PHILIPPINES DEPARTMENT OF AGRICULTURE WESTERN VISAYAS ILOILO CITY	PROJECT NAME & LOCATION: CONSTRUCTION OF RICE PROCESSING CENTER III (WAREHOUSE) BRGY. TALOC, BAGO CITY, NEGROS OCCIDENTAL	SHEET CONTENTS: ISOMETRIC VIEW	PREPARED BY:  JERRY B. GUANCO, ABE Engineer II (ABE NO. 0007298)	REVIEWED BY:  YVONNE GRACE H. SUR, ABE Engineer III (ABE NO. 0005970) HEAD - CROSS	RECOMMENDED BY:  MOISES D. MANAY, ABE, MEE Engineer IV (ABE NO. 0008077) OIC-Chief, RAED	APPROVED BY:  ENGR. JOSE ALBERT A. BARROGO Director III / OIC-Regional Executive Officer	CAD BY: K. FERNANDEZ SHEET NO.: 3 23
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 <p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF AGRICULTURE WESTERN VISAYAS ILOILO CITY</p>	<p>CONSTRUCTION OF RICE PROCESSING CENTER III (WAREHOUSE) BRGY. TALOC, BAGO CITY, NEGROS OCCIDENTAL</p>	FLOOR PLAN	<p>JERRY B. GUANCO, ABE Engineer II (ABE NO. 0007296)</p>	<p>YVONNE GRACE H. SUR, ABE Engineer III (ABE NO. 0006979) HEAD - EPDSS</p>	<p>MOISES D. MANA-AY, ABE, MEE Engineer IV (ABE NO. 0006677) OIC-Chief, RABO</p>	<p>ENGR. JOSE ALBERT A. BARROGO Director III / OIC Regional Executive Director</p>	<p>J. GUANCO</p> <p>SHEET NO. 4 23</p>



FOUNDATION PLAN
1:200

IMPLEMENTING AGENCY: REPUBLIC OF THE PHILIPPINES DEPARTMENT OF AGRICULTURE WESTERN VISAYAS ILOILO CITY	PROJECT NAME & LOCATION: CONSTRUCTION OF RICE PROCESSING CENTER III (WAREHOUSE) BRGY. TALOC, BAGO CITY, NEGROS OCCIDENTAL	SHEET CONTENTS: FOUNDATION PLAN	PREPARED BY: JERRY B. GUANCO, ABE Engineer II (ABE NO. 0007298)	REVIEWED BY: YVONNE GRACE H. SUR, ABE Engineer I (ABE NO. 0005870) HEAD - EDCSS	RECOMMENDED BY: MOISES D. MANAWAY, ABE, MEE Engineer IV (ABE NO. 0005877) OIC-Chief, RAES	APPROVED BY: ENGR. JOSE ALBERT A. BARBOGO Director III (OIC-Regional Executive Director)	CAD BY: K. FERNANDEZ SHEET NO.: 5 23
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GENERAL CONSTRUCTIONS NOTES

NOTES ON FOOTINGS

- 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.
- FOOTING SHALL REST AT LEAST 1500mm BELOW NATURAL GRADE LINE UNLESS OTHERWISE INDICATED IN PLANS. NO FOOTING SHALL REST ON FILL.
- MINIMUM CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE 75mm CLEAR FOR CONCRETE DEPOSITED THE GROUND AND 50mm FOR CONCRETE DEPOSITED AGAINST A FORMWORKS.
- 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 COLUMNS

- 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.
- COLUMN TIES SHALL BE PROTECTED EVERYWHERE BY A COVERING OF CONCRETE CAST MONOLITHICALLY WITH THE CORE WITH A MINIMUM THICKNESS OF 40mm AND NOT LESS THAN 40 TIMES THE MAXIMUM SIZE OF COARSE AGGREGATE.
- 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.
- UNLESS OTHERWISE INDICATED IN THE PLANS, LAP SPLICES FOR VERTICAL COLUMN REINFORCEMENT SHALL BE MADE WITHIN THE CENTER HALF OF COLUMN HEIGHT. 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 SPICED AT ANY LEVEL AND THE VERTICAL DISTANCES BETWEEN THESE WELOS OR SPLICES OF ADJACENT BARS IS NOT LESS THAN 800mm.

NOTES ON BEAMS

UNLESS, OTHERWISE NOTED IN PLANS, CAMBER ALL BEAMS AND GIRDER AT LEAST 5mm FOR EVERY 4.50 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.

NOTES ON REINFORCEMENTS

- UNLESS OTHERWISE NOTED IN PLANS, THE YIELD STRENGTH OF REINFORCING BARS SHALL BE:
 - FOOTINGS, FOOTING TIE BEAMS AND BEAMS $f_y = 414 \text{ MPa (60,000 psi)}$
 - COLUMNS $f_y = 414 \text{ MPa (60,000 psi)}$
 - NON-LOAD BEARING WALL PARTITIONS, BEDDED SLABS, FLOOR, SIDE WALK & CATCHBASIN. $f_y = 275 \text{ MPa (40,000 psi)}$
- ALL REINFORCEMENT BARS SIZE 10mm OR LARGER SHALL BE DEFORMED IN ACCORDANCE WITH THE ASTM A-706 BARS SMALLER THAN 10mm MAY BE PLAIN.
- SPLICES SHALL BE SECURELY WIRED TOGETHER & SHALL LAP OR EXTEND IN ACCORDANCE W/ TABLE B (TABLE OF LAP SPLICE & ANCHORAGE LENGTH) UNLESS OTHERWISE SHOWN ON DRAWINGS. SPLICES SHALL BE STAGGERED WHENEVER POSSIBLE.

SCHEDULE OF BEAMS												
BEAM MARK	BEAM DIMENSION				STEEL REINFORCEMENTS							STIRRUPS <small>12 mm Ø (unless noted otherwise)</small>
	WIDTH (mm)	DEPTH (mm)	LENGTH (m)	QUANTITY	REBAR (mm Ø)	END SUPPORT		MID-SUPPORT		12 mm Ø WEB BAR		
WFTB	400	500	5.60	25	20	3	5	5	3	2	5 @ 50, 4 @ 100, 4 @ 150, REST @ 200 O.C	
SB	150	250	95.4	1	12	2	2	2	2		200 O.C	
B1	250	500	5.60	25	20	4	2	2	4	2	5 @ 50, 4 @ 100, 4 @ 150, REST @ 200 O.C	
B1-A	250	350	5.60	1	16	3	2	2	3		5 @ 50, 4 @ 100, 4 @ 150, REST @ 200 O.C	
B1-B	250	350	2.68	2	16	3	2	2	3		2 @ 50, 2 @ 100, 2 @ 150, REST @ 200 O.C	
B2	200	400	5.60	22	16	3	2	2	3	2	5 @ 50, 4 @ 100, 4 @ 150, REST @ 200 O.C	
B3	250	500	5.60	25	20	4	2	2	4	2	5 @ 50, 4 @ 100, 4 @ 150, REST @ 200 O.C	
B3-A	200	350	5.60	1	16	3	2	2	3		5 @ 50, 4 @ 100, 4 @ 150, REST @ 200 O.C	
B3-B	200	350	2.68	2	16	3	2	2	3		2 @ 50, 2 @ 100, 2 @ 150, REST @ 200 O.C	
RB	250	500	5.60	25	20	4	2	2	4	2	5 @ 50, 4 @ 100, 4 @ 150, REST @ 200 O.C	

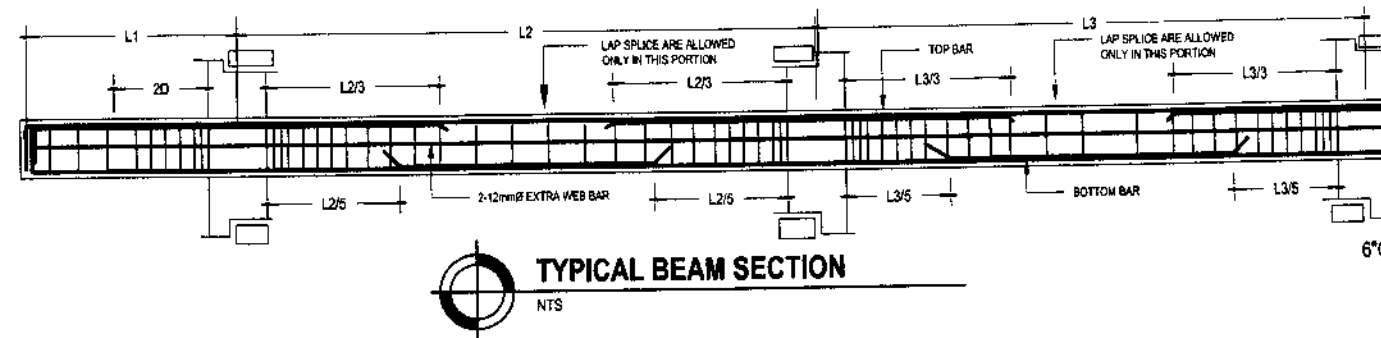


TABLE B COMPRESSION BARS TABLE OF LAP SPLICE & ANCHORAGE LENGTH (mm)				
BAR SIZES (DEFORMED mm)	$f_c' = 20.7 \text{ MPa (3000psi)}$		$f_c' = 27.6 \text{ MPa (4000psi)}$	
	EMBEDMENT	LAPPED	EMBEDMENT	LAPPED
Ø10	225	300	200	300
Ø12	275	300	250	300
Ø16	350	400	325	400
Ø20	450	500	475	500
Ø25	550	625	550	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 SPICED WITHIN THE REQUIRED LAP LENGTH
 3. VALUES GIVEN ABOVE CAN ALSO BE USED FOR COLUMNS

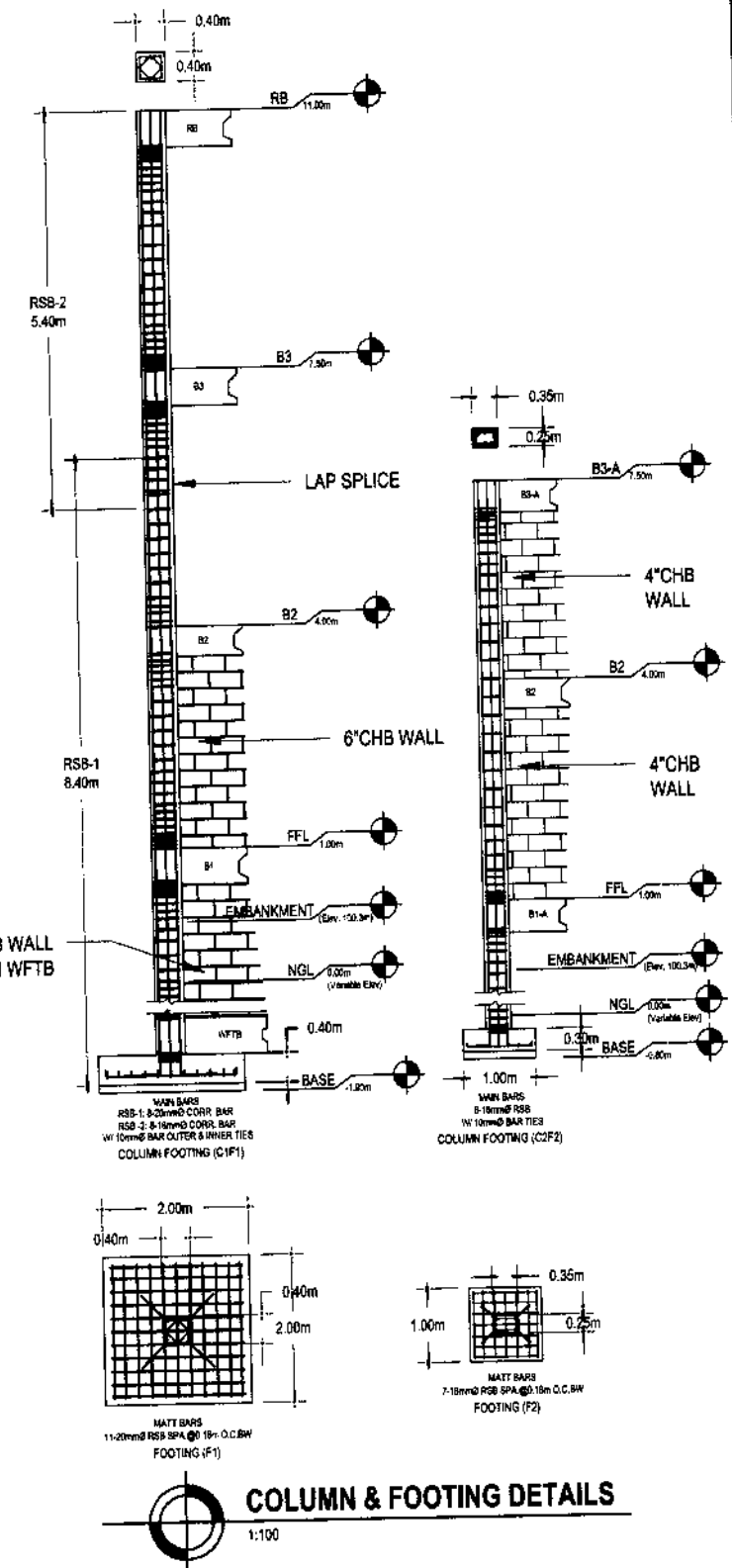
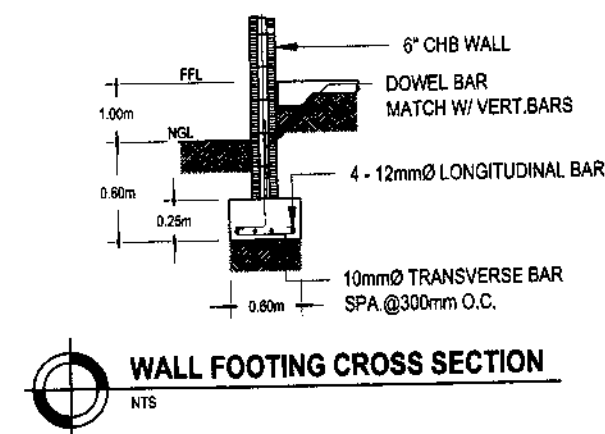
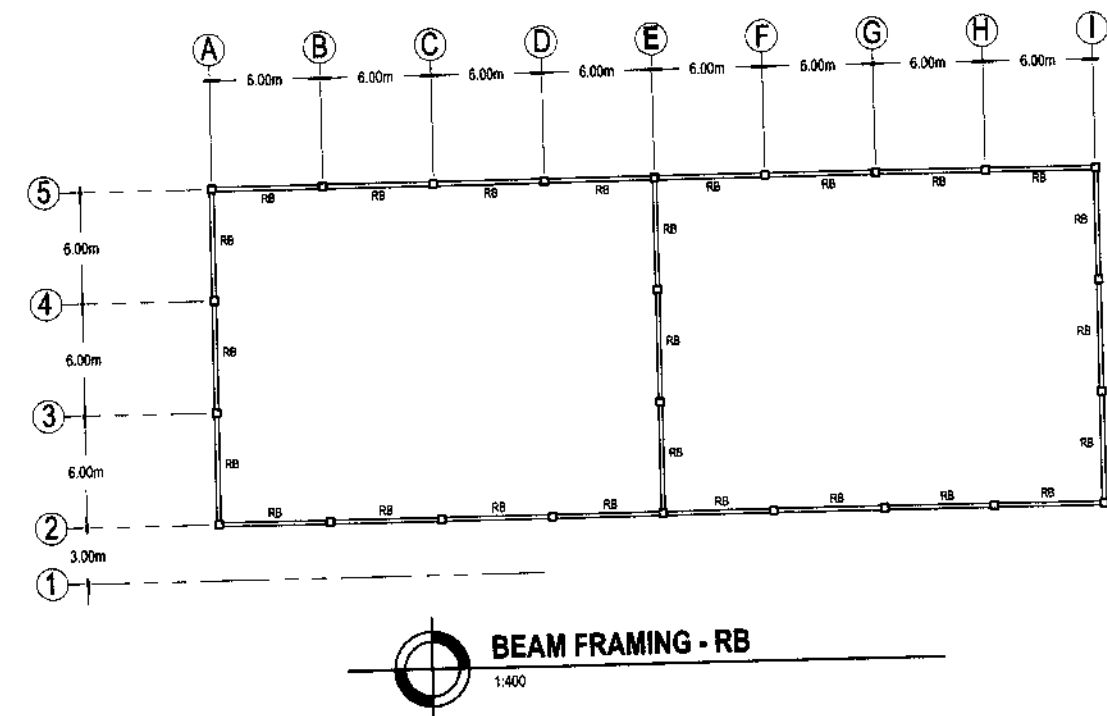
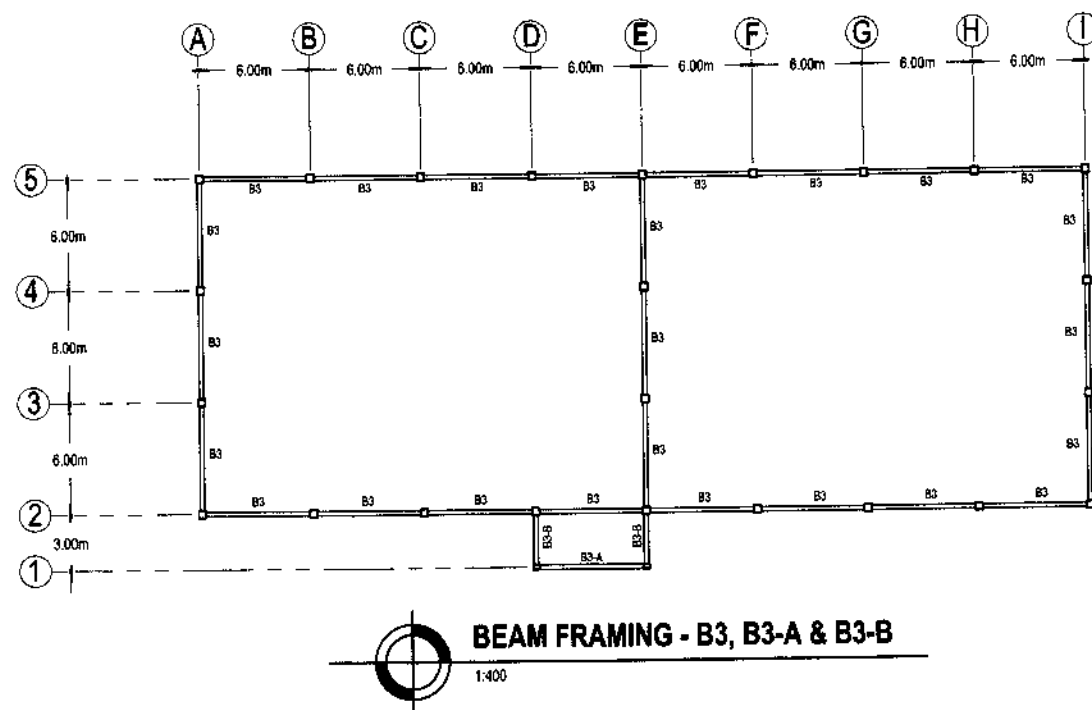
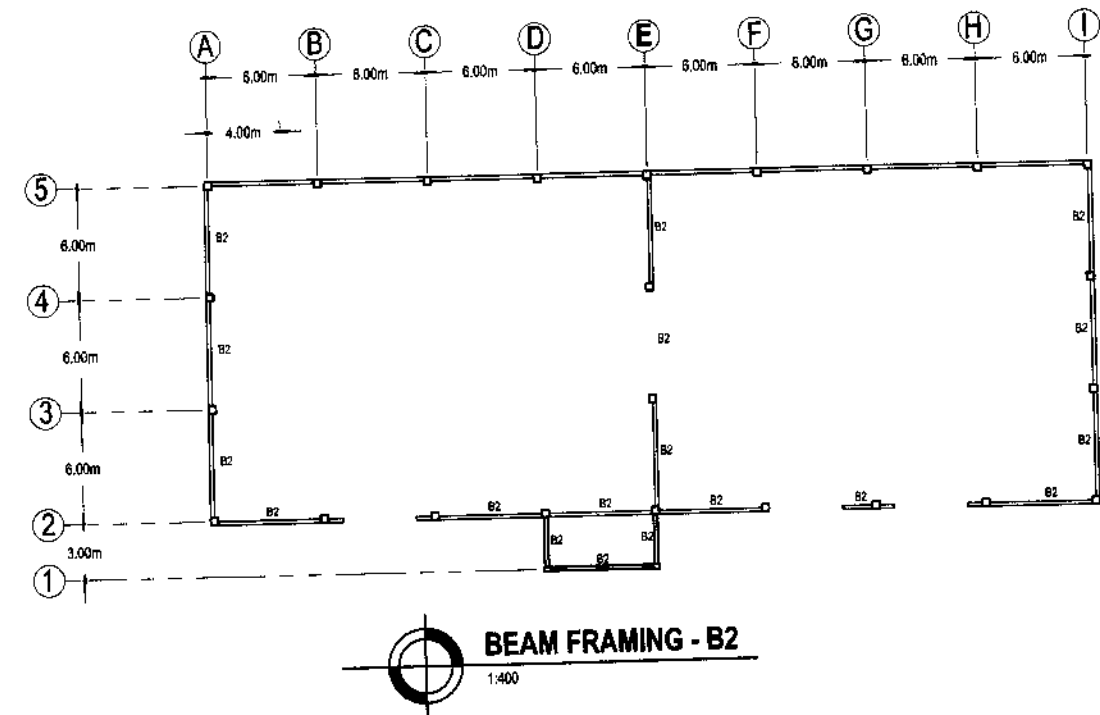
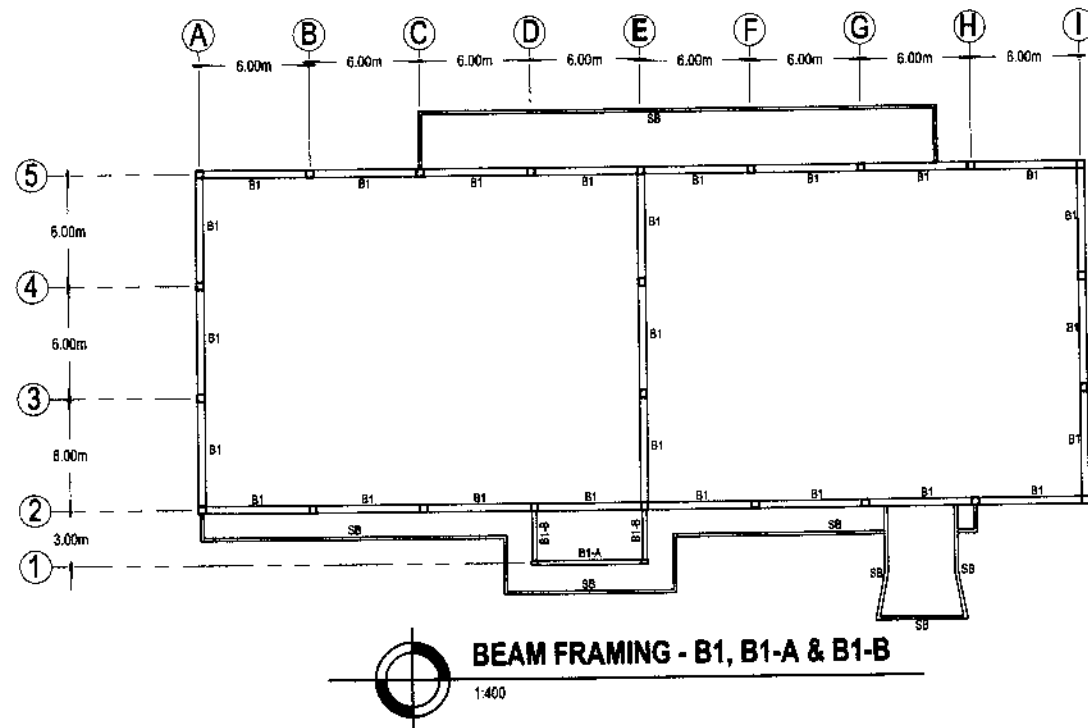

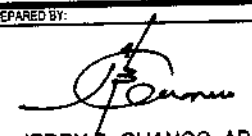
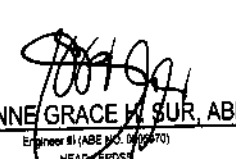
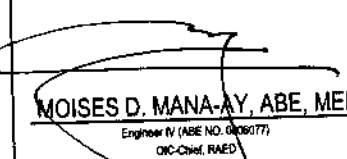
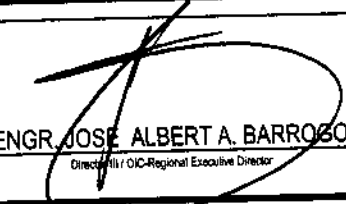


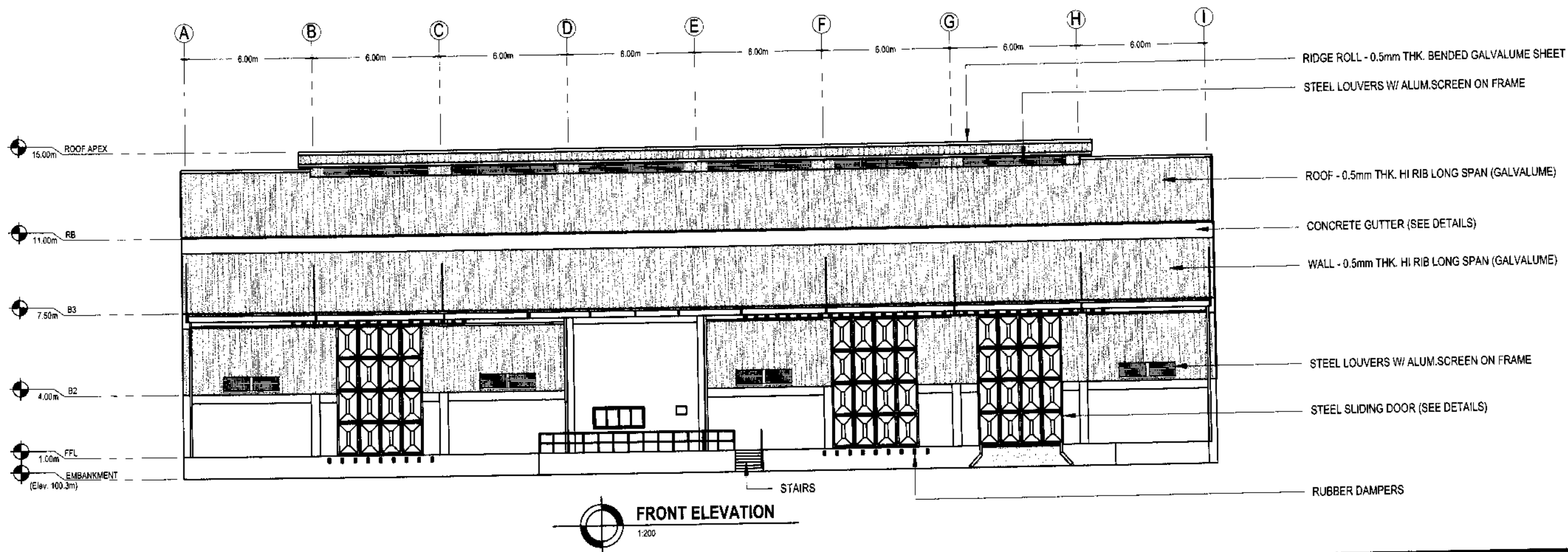
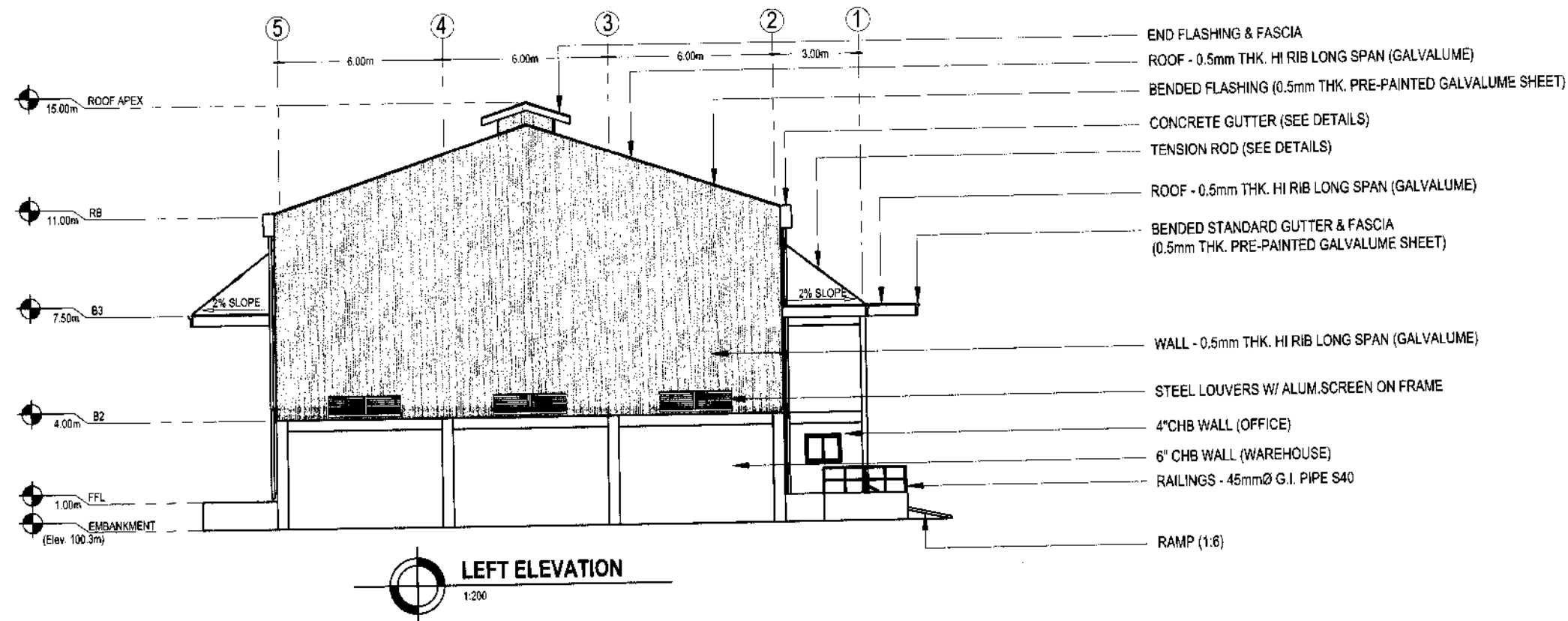
TABLE 'A' TENSION BARS TABLE OF LAP SPLICE & ANCHORAGE LENGTH (mm)				
BAR SIZES (DEFORMED mm)	$f_c' = 20.7 \text{ MPa (3000psi)}$		$f_c' = 27.6 \text{ MPa (4000psi)}$	
	EMBEDMENT	LAPPED	EMBEDMENT	LAPPED
Ø10	300	300	300	300
Ø12	300	300	300	300
Ø16	300	400	300	400
Ø20	400	550	350	500
Ø25	600	800	550	750
Ø28	750	1000	650	850
Ø32	950	1300	850	1100

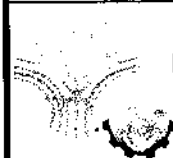
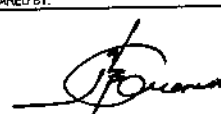
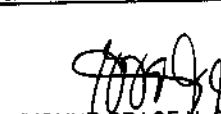
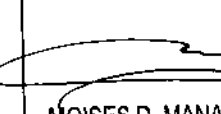
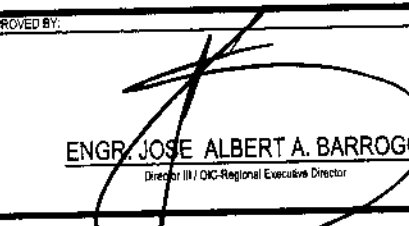
NOTES:
 1. TOP PLAIN BARS, MULTIPLY VALUE BY 2
 2. NOT MORE THAN 33% OF THE BARS SHALL BE SPICED WITHIN THE REQUIRED LAP LENGTH

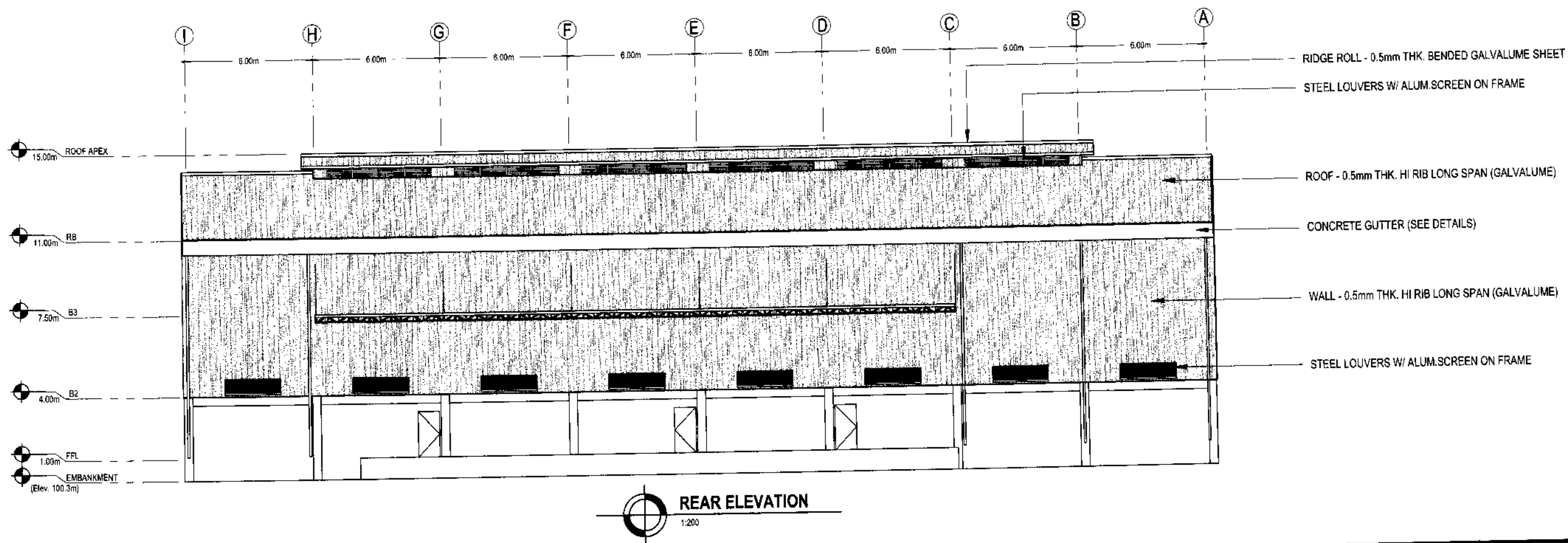
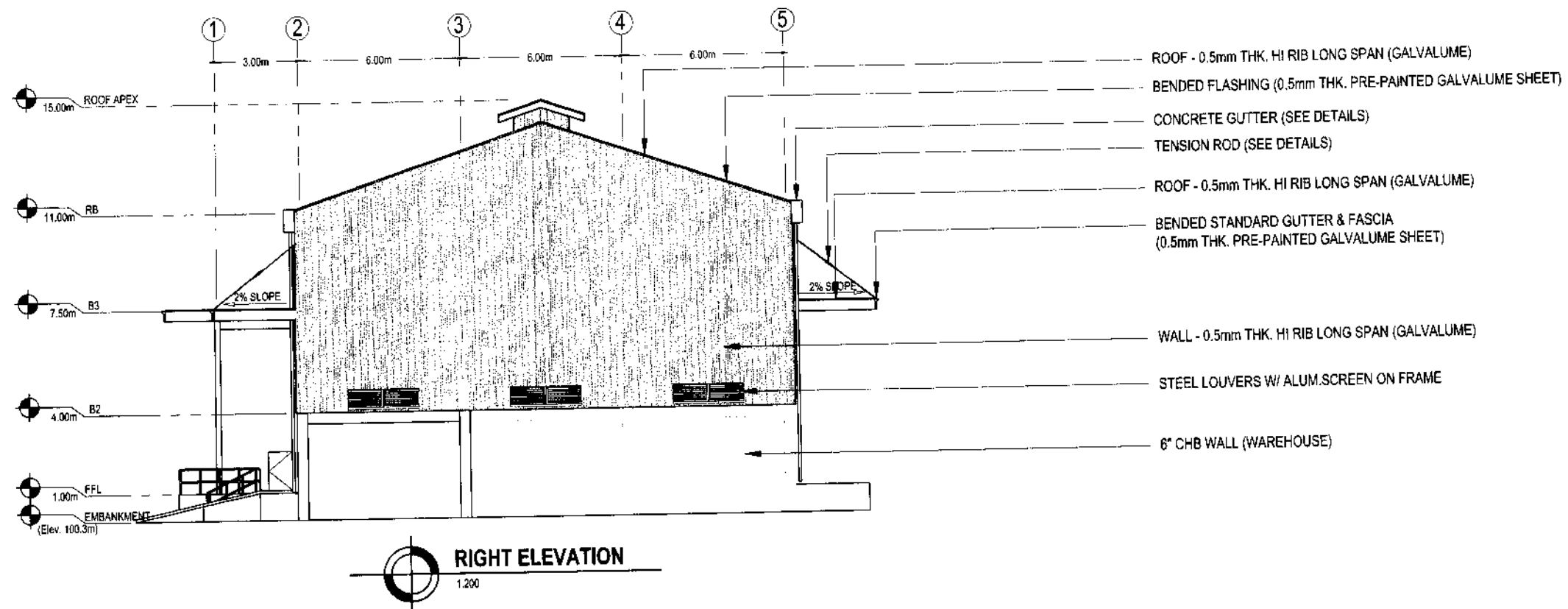
IMPLEMENTING AGENCY: REPUBLIC OF THE PHILIPPINES DEPARTMENT OF AGRICULTURE WESTERN VISAYAS ILOILO CITY	PROJECT NAME & LOCATION: CONSTRUCTION OF RICE PROCESSING CENTER III (WAREHOUSE) BRGY. TALOC, BAGO CITY, NEGROS OCCIDENTAL	SHEET CONTENTS: COLUMN & FOOTING DETAILS TYPICAL BEAM SECTION SCHEDULE OF BEAMS	PREPARED BY: JERRY B. GUANCO, ABE Engineer II (ABE NO. 0007298)	REVIEWED BY: YVONNE GRACE H. SUR, ABE Engineer II (ABE NO. 0006770) HEAD - EPTDS	RECOMMENDED BY: MOISES D. MANA-AY, ABE, MEE Engineer IV (ABE NO. 0006077) OIC-Chief, RAED	APPROVED BY: ENGR. JOSE ALBERT A. BARROGO Director III / OIC-Regional Executive Director	CAD BY: J. GUANCO SHEET NO. 6 23
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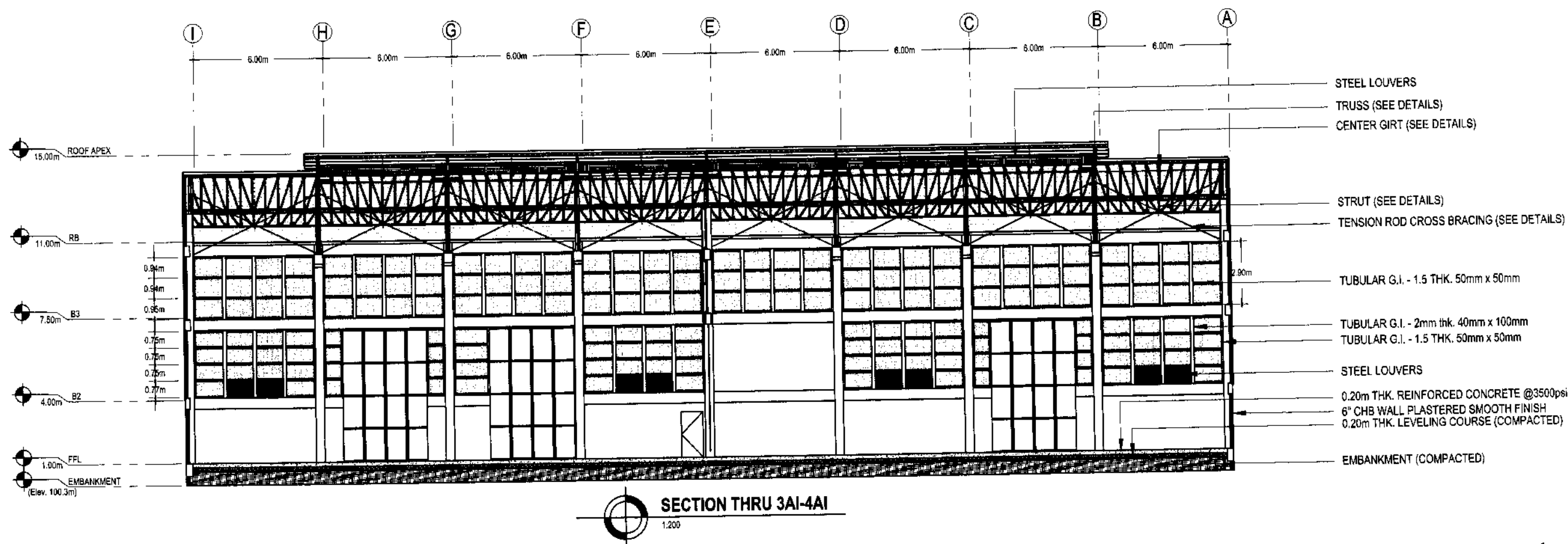
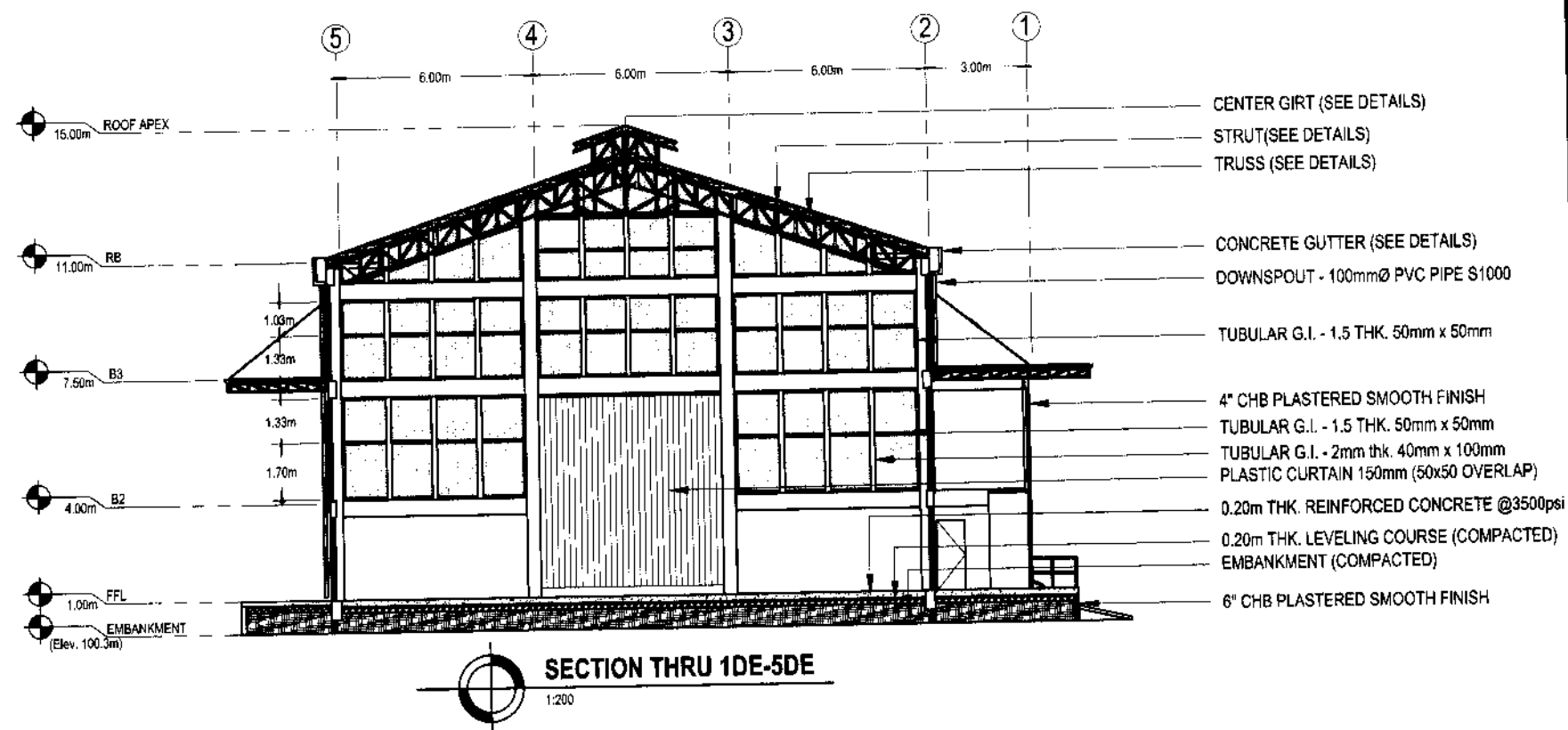
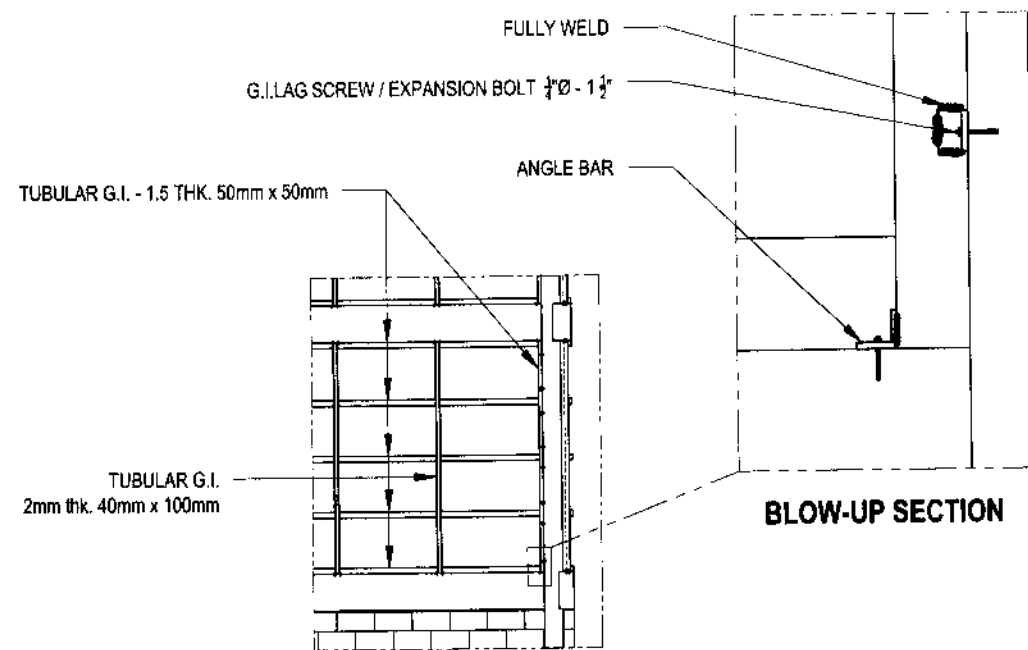
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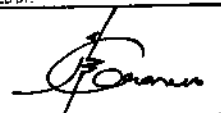

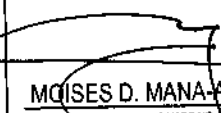
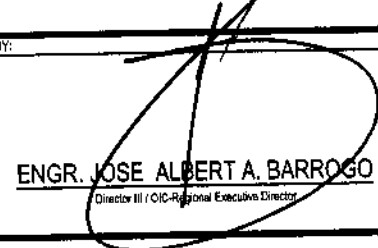


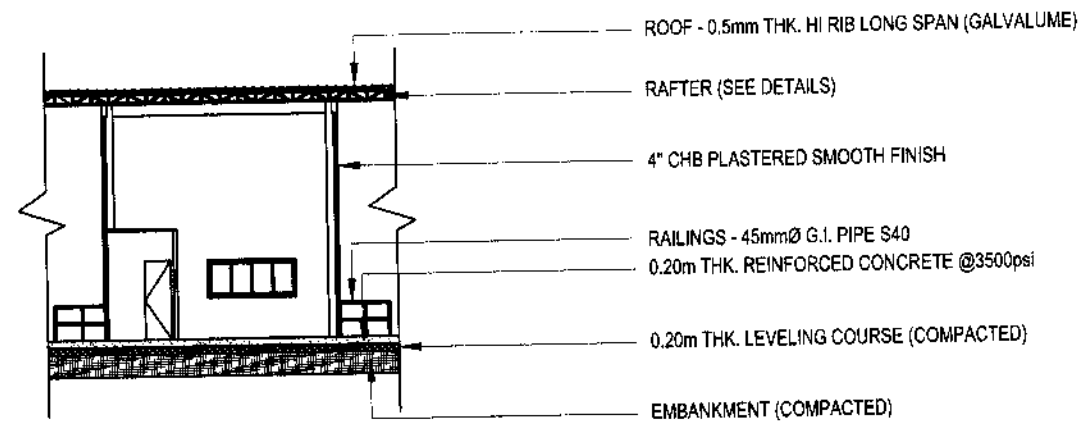
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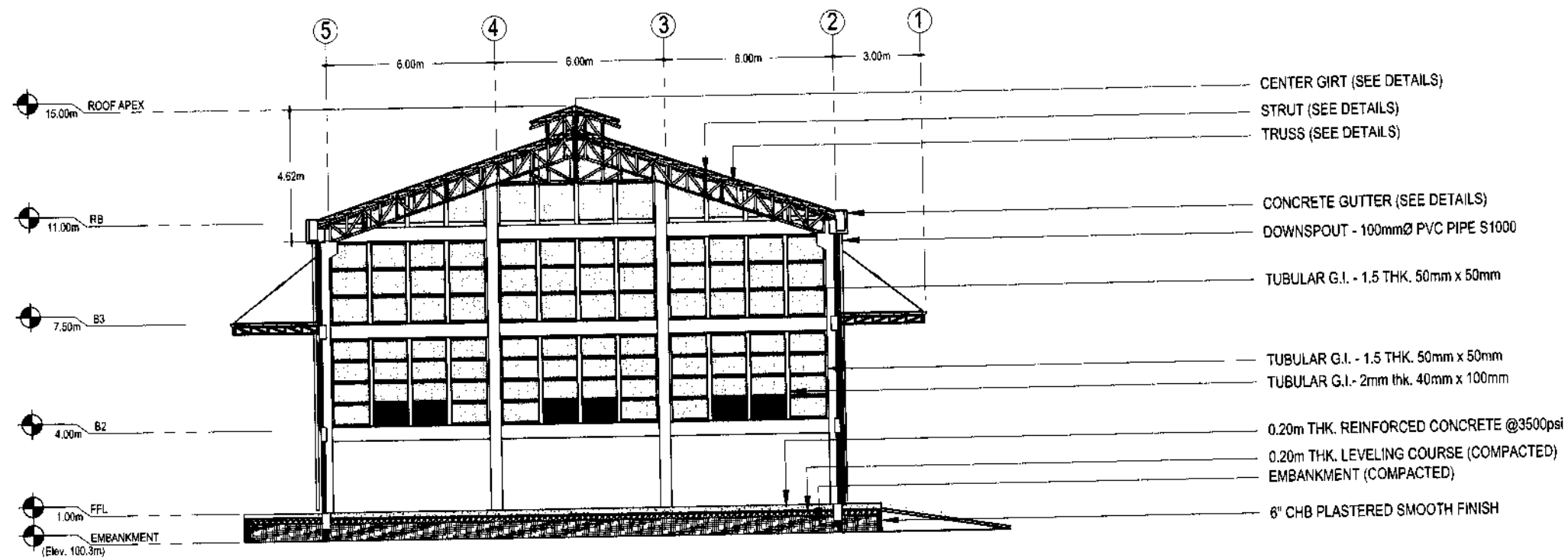
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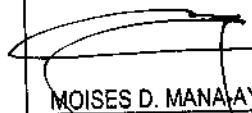
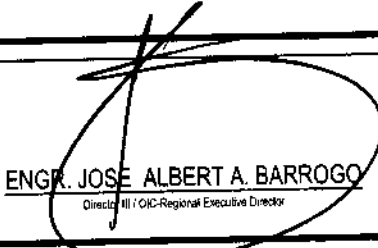
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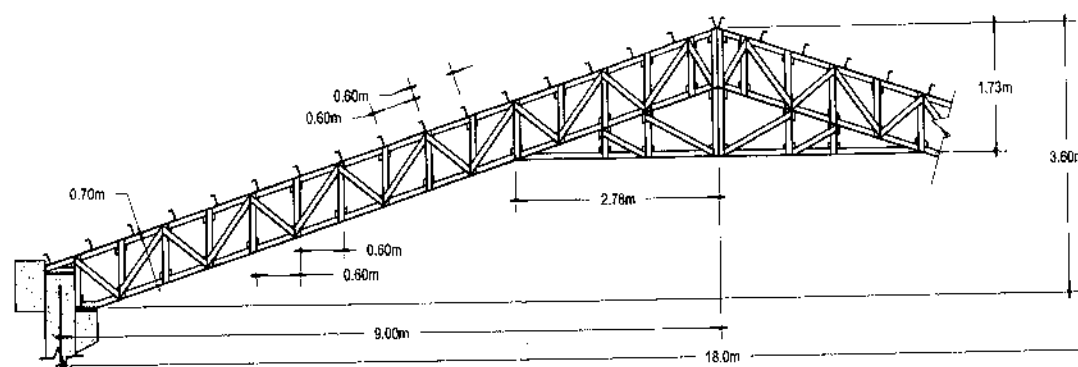


SECTION THRU 1DE-2DE
 1:200

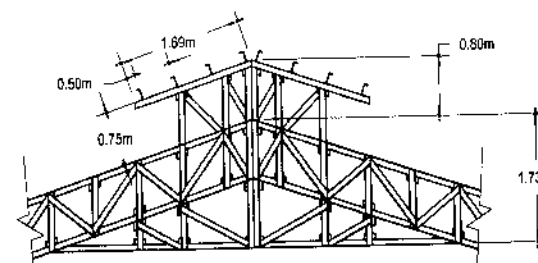


SECTION THRU 1GH-5GH
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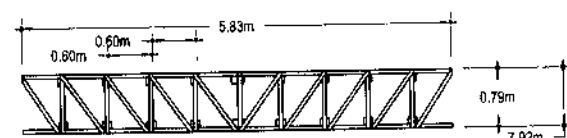
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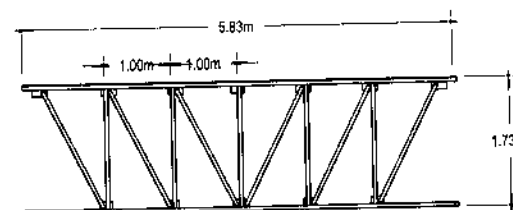
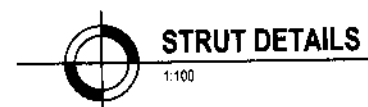
TOP & BOTTOM CORD: 2 - 6mm THK. 63mm x 63mm L
MEMBERS: 2 - 5mm THK. 50mm x 50mm L
GUSSET PLATE: 8mm THK. MILD STEEL
PURLINS: 1.9mm THK. 50mm x 200mm C-CHANNEL PURLIN



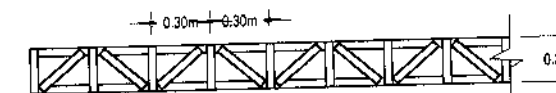
TOP & BOTTOM CORD: 2 - 6mm THK. 63mm x 63mm L
MEMBERS: 2 - 5mm THK. 50mm x 50mm L
GUSSET PLATE: 8mm THK. MILD STEEL
PURLINS: 1.9mm THK. 50mm x 200mm C-CHANNEL PURLIN



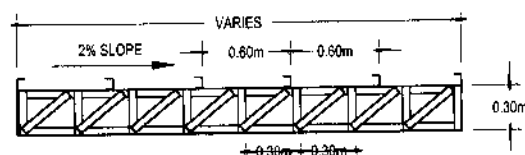
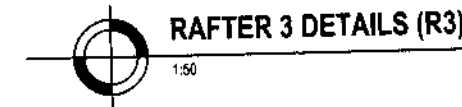
TOP & BOTTOM CORD: 2 - 6mm THK. 63mm x 63mm L
MEMBERS: 2 - 5mm THK. 50mm x 50mm L
GUSSET PLATE: 8mm THK. MILD STEEL



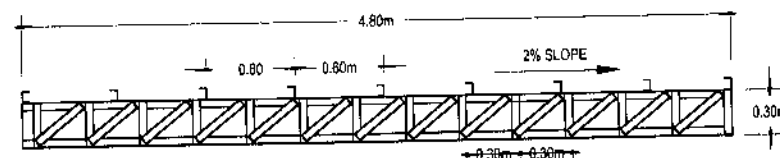
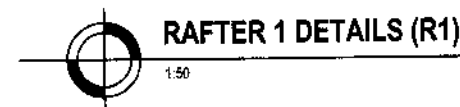
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MEMBERS: 2 - 5mm THK. 63mm x 63mm L
GUSSET PLATE: 8mm THK. MILD STEEL



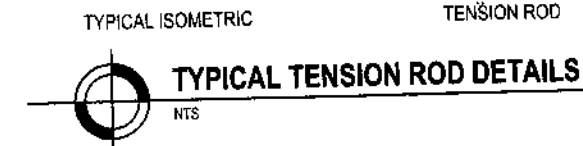
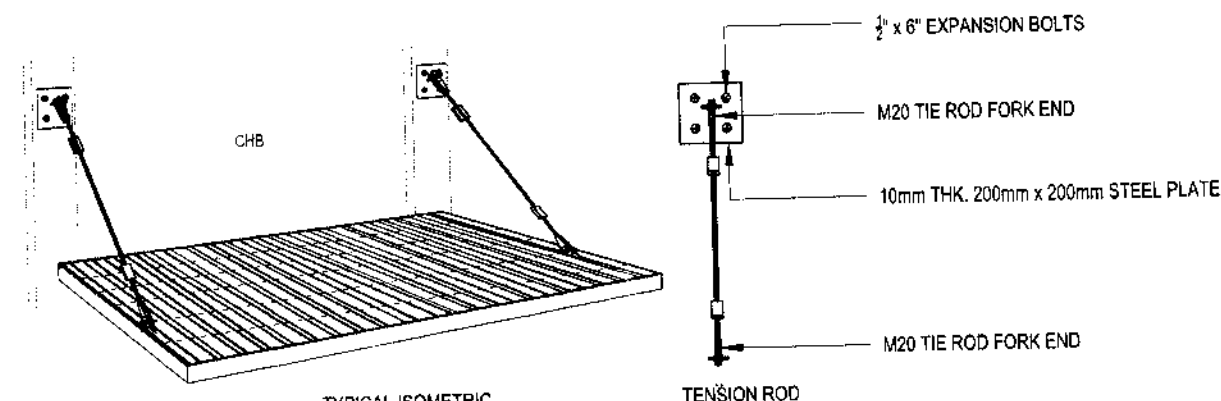
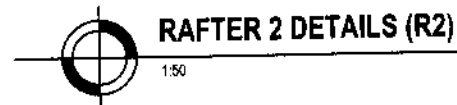
TOP & BOTTOM CORD: 1 - 4mm THK. 50mm x 50mm L
MEMBERS: 1 - 3mm THK. 40mm x 40mm L



TOP & BOTTOM CORD: 1 - 4mm THK. 50mm x 50mm L
MEMBERS: 1 - 3mm THK. 40mm x 40mm L
PURLINS: 1.5mm THK. 50mm x 100mm C-CHANNEL PURLIN



TOP & BOTTOM CORD: 1 - 4mm THK. 50mm x 50mm L
MEMBERS: 1 - 3mm THK. 40mm x 40mm L
PURLINS: 1.5mm THK. 50mm x 100mm C-CHANNEL PURLIN



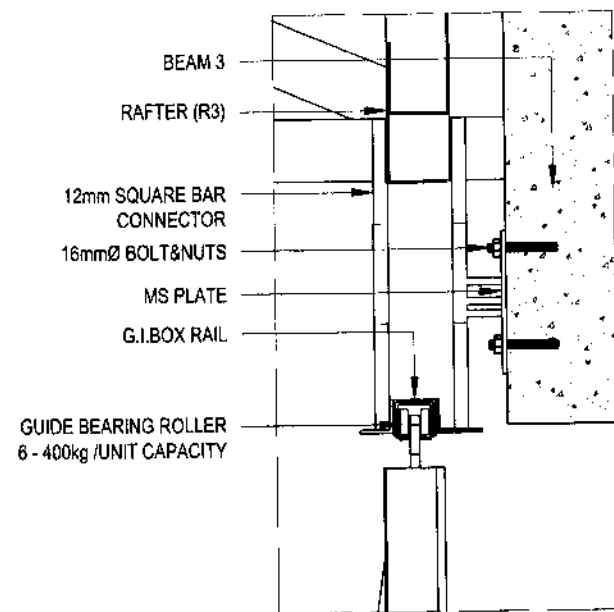
NOTES ON WELDS

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.

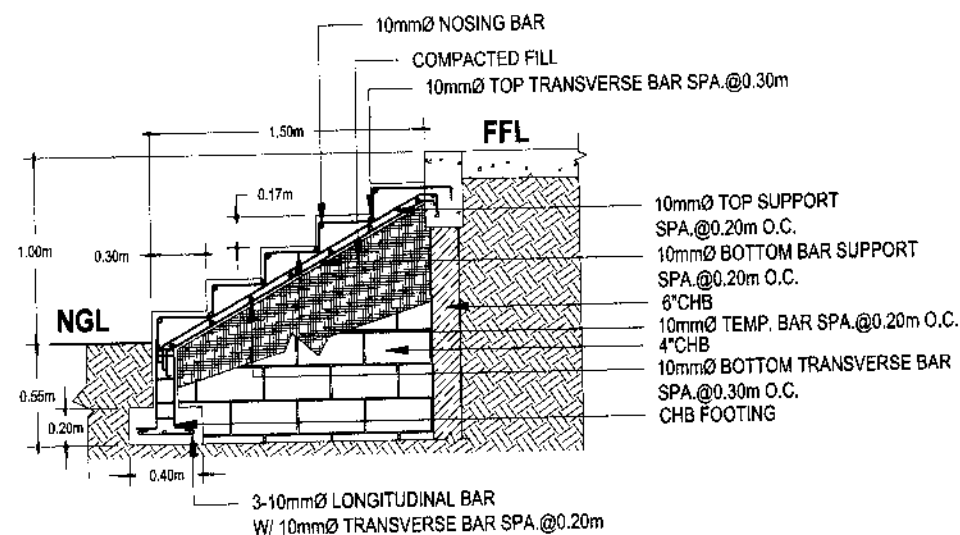
NOTES ON STRUCTURAL STEEL

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.
6. ALL METAL SURFACES SHALL BE PRIMED WITH EPOXY PRIMER COLOR GRAY.

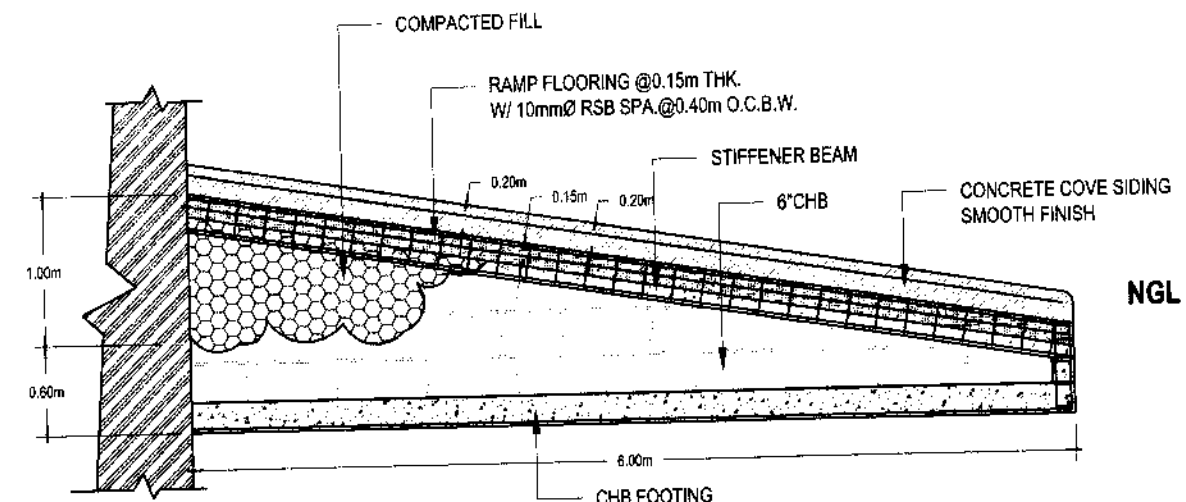
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<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF AGRICULTURE WESTERN VISAYAS ILOILO CITY</p>	<p>CONSTRUCTION OF RICE PROCESSING CENTER III (WAREHOUSE) BRGY. TALOC, BAGO CITY, NEGROS OCCIDENTAL</p>	<p>TRUSS & GIRT DETAILS TENSION ROD DETAILS</p>	<p>JERRY B. GUANCO, ABE Engineer II (ABE NO. 0007286)</p>	<p>YVONNE GRACE H. SUR, ABE Engineer III (ABE NO. 0006970) HEAD - EPOS</p>	<p>MOISES D. MANAYAY, ABE, MEE Engineer IV (ABE NO. 0008077) CIC-CHIEF, RABO</p>	<p>ENGR. JOSE ALBERT A. BARROGO Director III / CIC-Regional Executive Director</p>	<p>K. FERNANDEZ SHEET NO. 13 23</p>



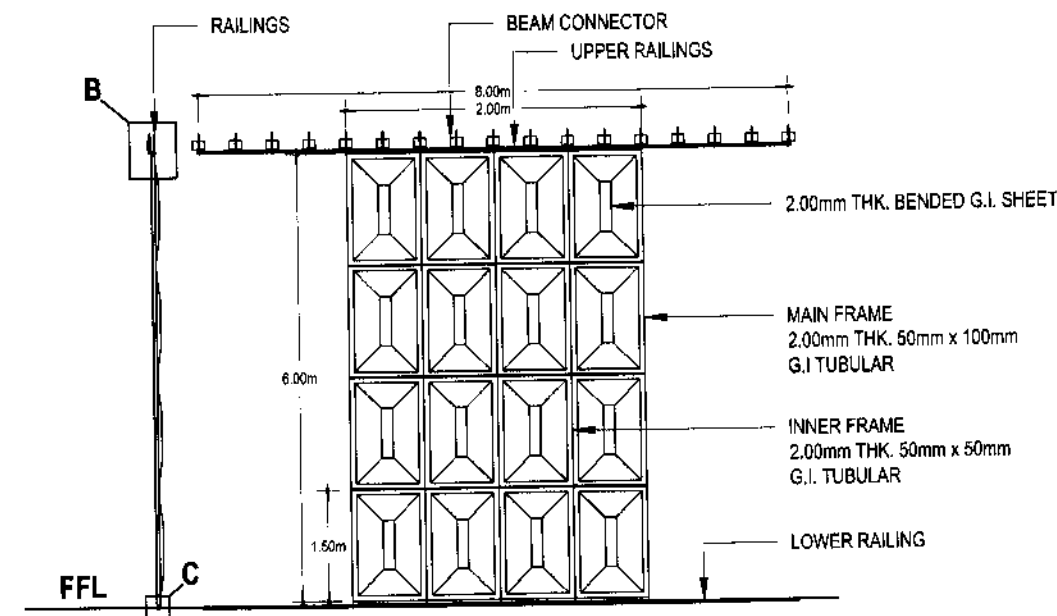
BLOW-UP SECTION THRU B
NTS



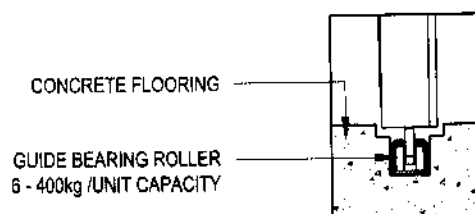
STAIRS DETAILS
1:40



RAMP DETAILS
1:50

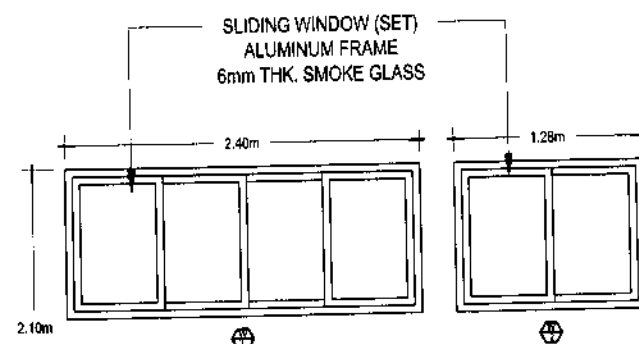


STEEL SLIDING DOOR (D1)
1:100

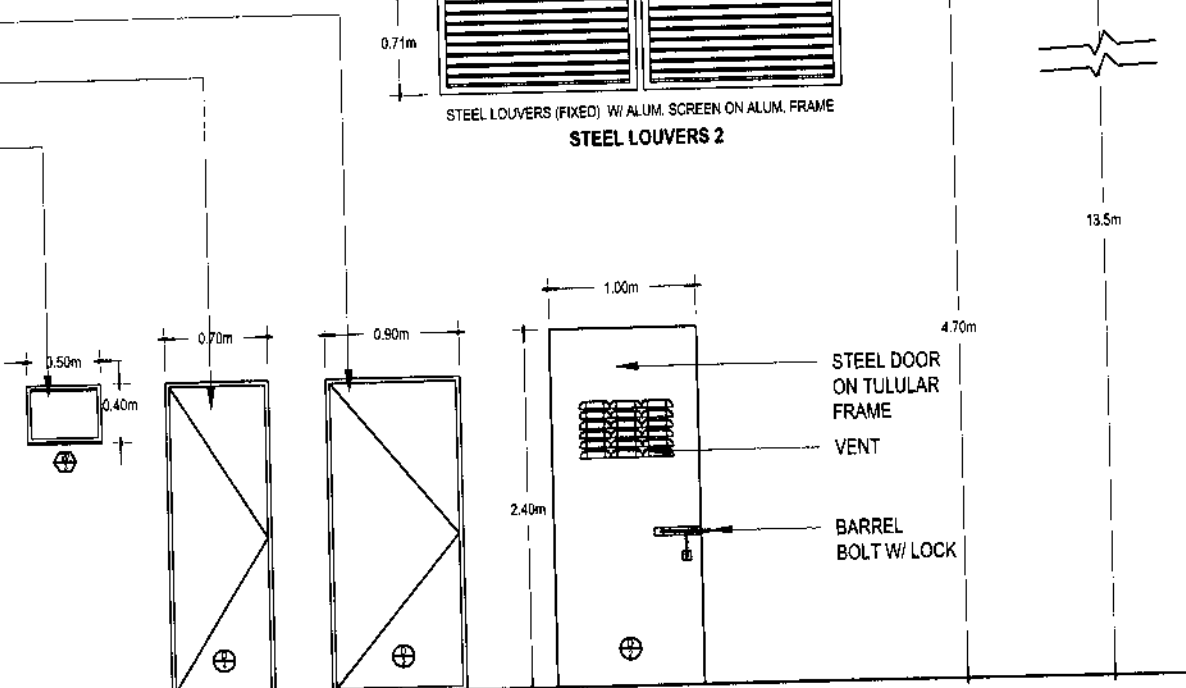
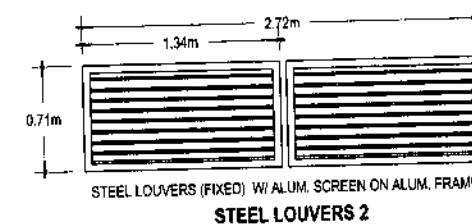
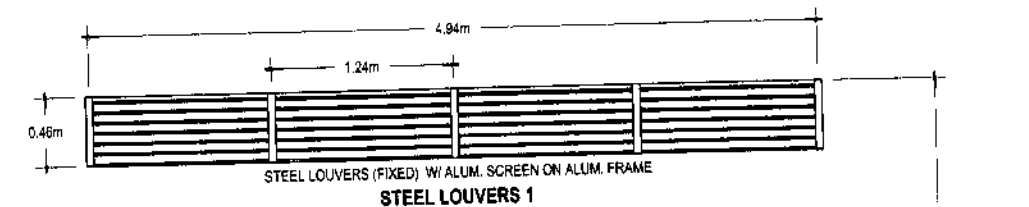


BLOW-UP SECTION THRU C
NTS

PANEL DOOR W/ JAM
AND COMPLETE ACCESSORIES (SET)
FLUSH DOOR W/ JAM
AND COMPLETE ACCESSORIES (SET)
AWNING TYPE (SET)
ALUM. FRAME
6mm THK. SMOKE GLASS

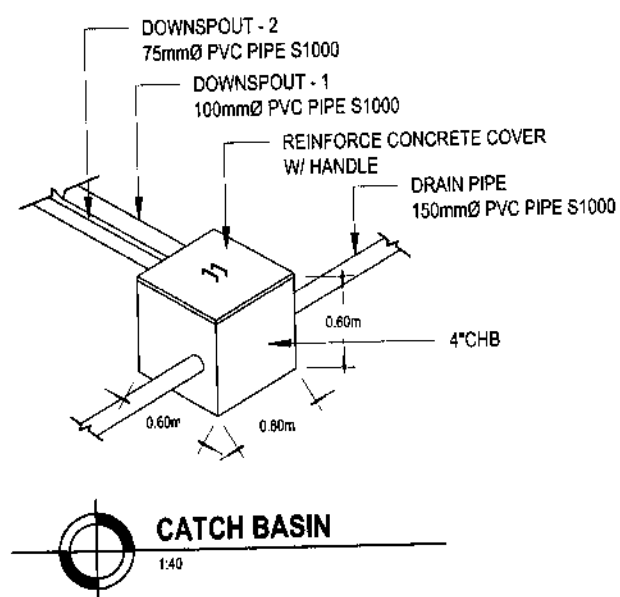
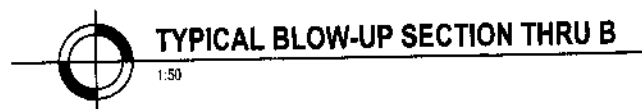


F.F.L.








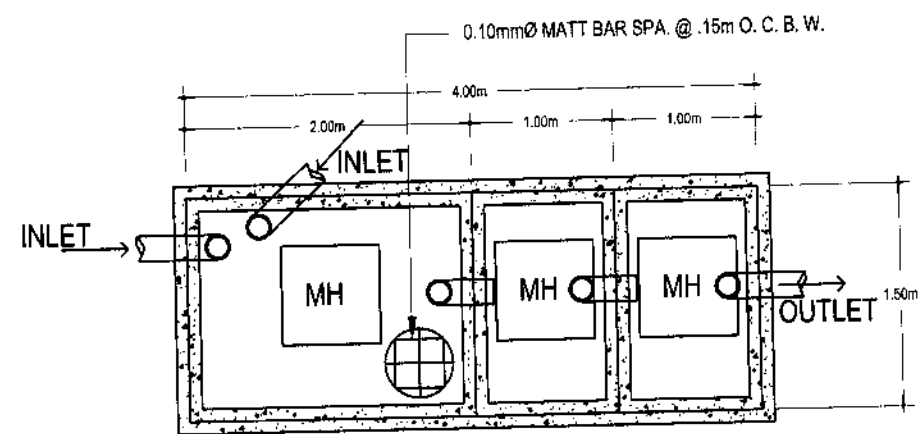
DOORS & WINDOWS
1:50

IMPLEMENTING AGENCY:	PROJECT NAME & LOCATION:	SHEET CONTENTS:	PREPARED BY:	REVIEWED BY:	RECOMMENDED BY:	APPROVED BY:	CAD BY:
<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF AGRICULTURE WESTERN VISAYAS ILOILO CITY</p>	<p>CONSTRUCTION OF RICE PROCESSING CENTER III (WAREHOUSE) BRGY. TALOC, BAGO CITY, NEGROS OCCIDENTAL</p>	<p>SCHD. OF DOORS AND WINDOWS RAMP DETAILS STAIR DETAILS</p>	<p>JERRY B. QUANCO, ABE Engineer II (ABE NO. 9007298)</p>	<p>YVONNE GRACE H. SUR, ABE Engineer IV (ABE NO. 0006077) HEAD - EPOSS</p>	<p>MOISES D. MANAAY, ABE, MEE Engineer IV (ABE NO. 0006077) OIC-Chief, RAC</p>	<p>ENGR. JOSE ALBERT A. BARROGO Director III / OIC-Regional Executive Director</p>	<p>K. FERNANDEZ SHEET NO. 14 23</p>

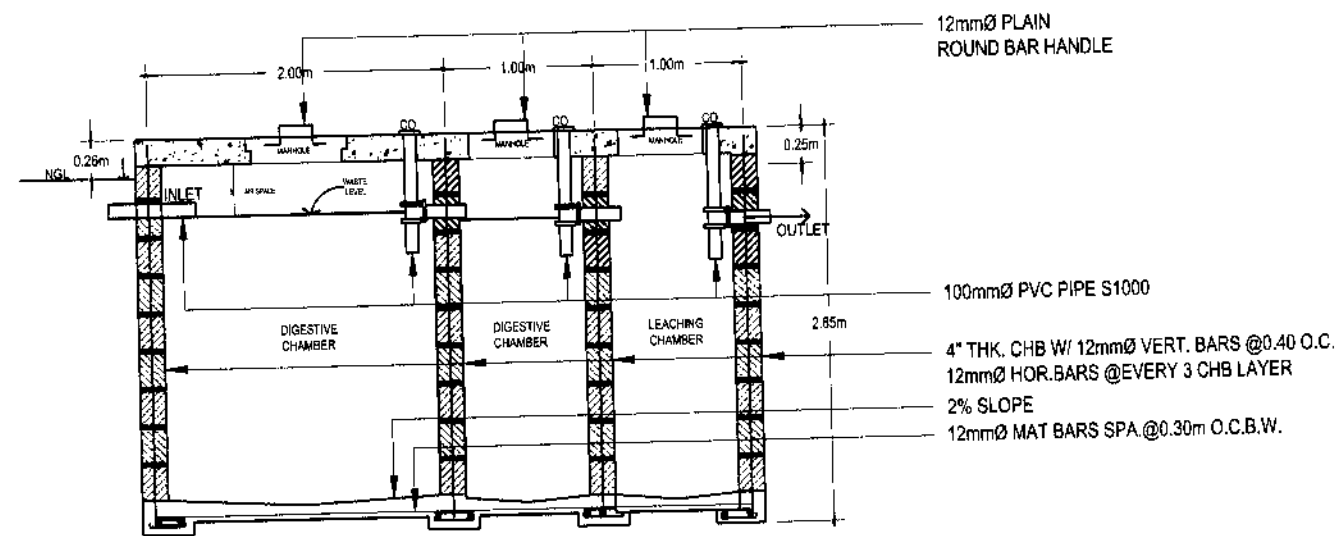


VTR - VENT THRU ROOF
LAV - LAVATORY
CO - CLEAN OUT
SV - SEPTIC VOLT
FD - FLOOR DRAIN
CB - CATCH BASIN
DS - DOWNSPOUT

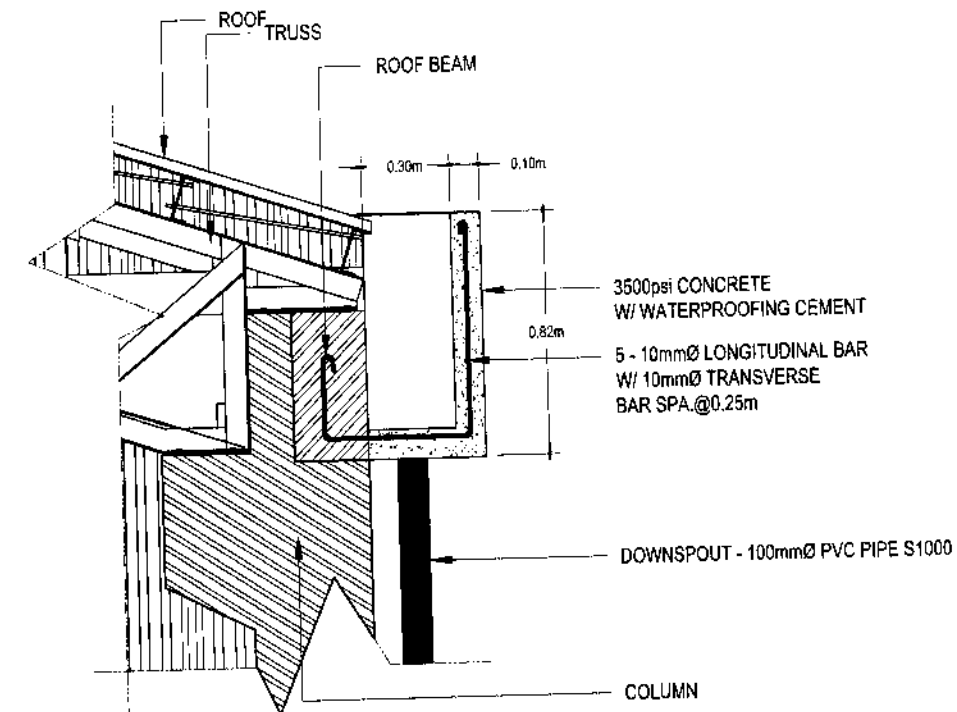
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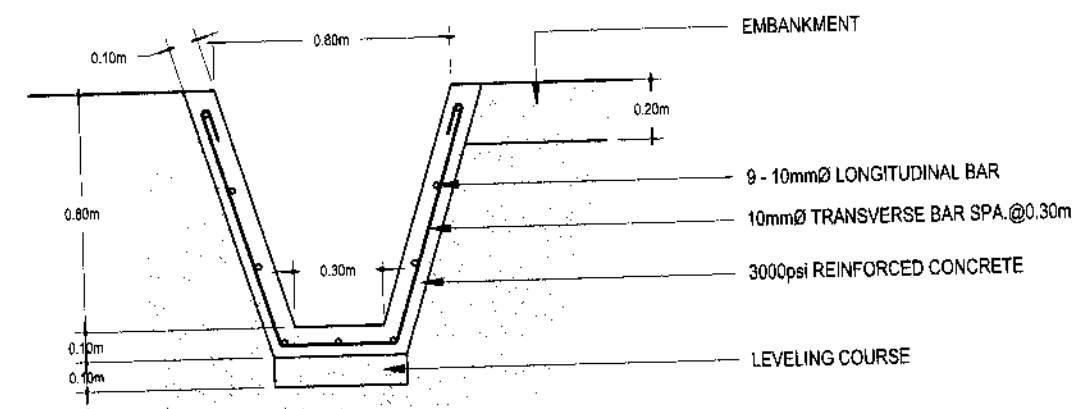
SEPTIC VAULT TOP CROSS-SECTION DETAILS
1:50



SEPTIC VAULT CROSS-SECTION DETAILS
1:50



CONCRETE GUTTER CROSS-SECTION
1:25



DRAINAGE CROSS-SECTION DETAILS
1:25

IMPLEMENTING AGENCY: REPUBLIC OF THE PHILIPPINES DEPARTMENT OF AGRICULTURE WESTERN VISAYAS ILOILO CITY	PROJECT NAME & LOCATION: CONSTRUCTION OF RICE PROCESSING CENTER III (WAREHOUSE) BRGY. TALOC, BAGO CITY, NEGROS OCCIDENTAL	SHEET CONTENTS: DRAINAGE SEPTIC VAULT DETAILS CONC. GUTTER X-SEC.	PREPARED BY: JERRY B. GUANCO, ABE Engineer II (ABE NO. 0007290)	REVIEWED BY: YVONNE GRACE H. SUR, ABE Engineer III (ABE NO. 0006970) HEAD - EPOS	RECOMMENDED BY: MOISES D. MANA-AY, ABE, MEE Engineer IV (ABE NO. 0006077) OIC-Chief, RAED	APPROVED BY: ENGR. JOSE ALBERT A. BARROGO Director III / OIC-Regional Executive Director	CAD BY: JBGUANCO SHEET NO.: 16 23
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GENERAL NOTES & SPECIFICATIONS

1. ALL ELECTRICAL WORKS HEREIN SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF PHILIPPINE ELECTRICAL CODE AND THE EXISTING LOCAL AND NATIONAL CONCERNED IN THE ENFORCEMENT OF THE ELECTRICAL CODE.
2. MUST HAVE 13.8kV PRIMARY AND 230V SECONDARY, 3 PHASE, 60Hz.
3. CONTINUOUS DUTY DIESEL DRIVEN GENERATOR SET SHALL BE PROVIDED AS ALTERNATIVE POWER 230V BUS.
4. ALL ELECTRICAL WORKS HEREIN SHALL BE DONE UNDER THE SUPERVISION OF DULY REGISTERED ELECTRICAL ENGINEER.
5. ALL MATERIALS AND EQUIPMENT TO BE USED SHALL BE NEW AND APPROVED TYPE FOR THE LOCATION AND PURPOSE INTENDED.
6. ALL EXPOSED CIRCUIT WORKS OR RACEWAYS SHALL RUN PERPENDICULAR OR IN PARALLEL TO THE BUILDING.
7. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER TRADE CONTRACTORS TO AVOID CONFLICT WITH LOCATION OF EQUIPMENTS.
8. ALL CONDUCTORS SHALL BE COPPER, TYPE THW, 600V INSULATION MINIMUM SIZE SHALL BE 3.5mm², UNLESS OTHERWISE SPECIFIED.
9. ALL SINGLE PHASE CONNECTED LOADS SHALL BE PROPERLY DISTRIBUTED FOR PROPER BALANCING OF LOADS.
10. ALL ELECTRICAL WIRINGS HEREIN SHALL BE INSULATED THAT WHEN COMPLETED THE SYSTEM WILL BE FREE FROM SHORT CIRCUITS AND FROM GROUND OTHER THAN AS PERMITTED IN ARTICLE 4.2 OF THE PEC.
11. PULL BOXES SHALL BE PROVIDED WHENEVER NECESSARY TO FACILITATE THE PROPER WIRE PULLING EVEN IF THESE ARE NOT INDICATED ON THE PLANS.

MOTOR CONTROL CENTER (MCC)

CKT NO.	LOAD DESCRIPTION	VOLTS AMP	VOLTS	3PH	CB RATING	WIRE SIZE	CONDUIT SIZE
1	PADDY INPUT	5,000	230	21.74	30 AT, 3P	3C - 8.0mm ² THW	32mmØ RSC
2	DESTONER	1,500	230	6.52	15 AT, 3P	3C - 5.50mm ² THW	15mmØ RSC
3	HULLER/ASPIRATOR	11,400	230	49.57	60 AT, 3P	3C - 14.0mm ² THW	32mmØ RSC
4	PADDY SEPARATOR	3,700	230	16.09	30 AT, 3P	3C - 5.50mm ² THW	15mmØ RSC
5	ABRASIVE WHITENER	18,500	230	80.43	100 AT, 3P	3C - 22.0mm ² THW	38mmØ RSC
6	MIST POLISHER	32,200	230	140.00	200 AT, 3P	3C - 22.0mm ² THW	38mmØ RSC
7	OPTICAL SORTER	25,000	230	108.70	150 AT, 3P	3C - 22.0mm ² THW	38mmØ RSC
8	ROTARY SIFTER	400	230	1.74	15 AT, 3P	3C - 5.50mm ² THW	15mmØ RSC
9	SPARE	5,000	230	21.74	30 AT, 3P	3C - 8.0mm ² THW	32mmØ RSC
10	DRYER 1	8,500	230	36.96	50 AT, 3P	3C - 14.0mm ² THW	32mmØ RSC
11	DRYER 2	8,500	230	36.96	50 AT, 3P	3C - 14.0mm ² THW	32mmØ RSC
CONNECTED LOAD		119,700		520.43			

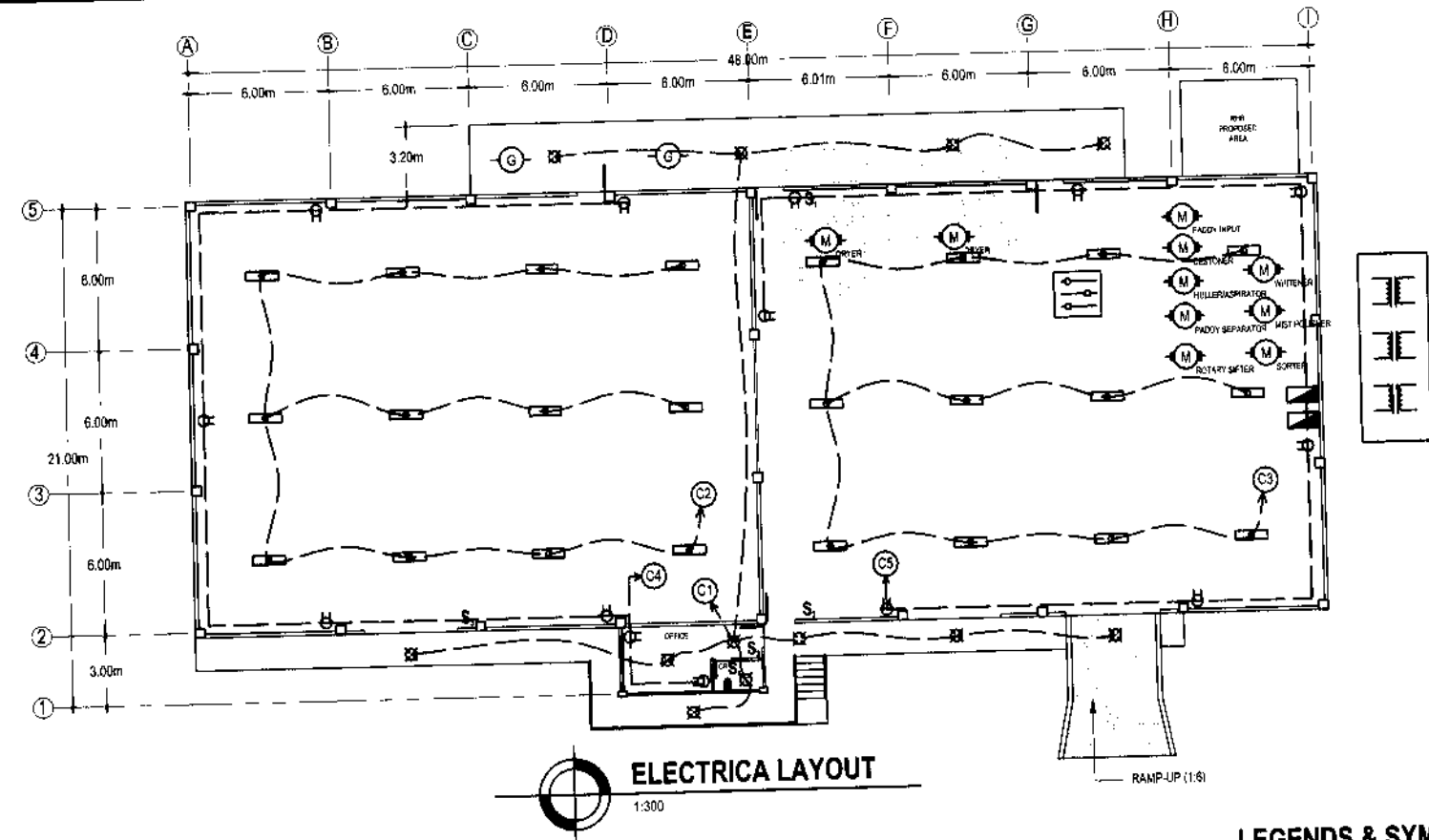
$$I(TOTAL) = 520.43 + (0.25)23.65 = 526.34 \text{ A}$$

USE: 3 SETS, 3-150mm² THW Cu. WIRE @ 75mmØ RSC

$$kVA = \frac{\sqrt{3} (526.34)(230)}{1000}$$

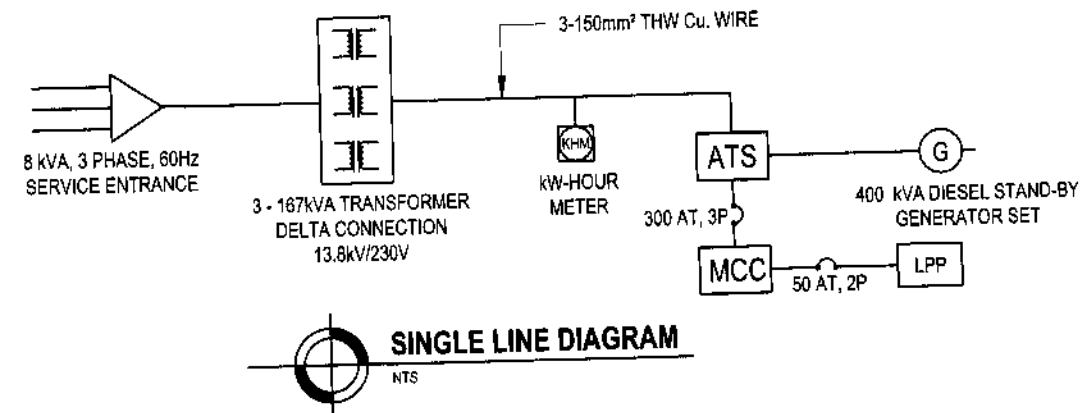
TOTAL kVA = 209.68 kVA

USE: 300 AT, 3P, 230V, 60Hz MAIN CIRCUIT BREAKER
USE: 3 - 167 kVA DISTRIBUTION TYPE TRANSFORMER
USE: 400 kVA DIESEL STAND-BY GENERATOR SET



LEGENDS & SYMBOLS:

- ELECTRIC MOTOR
- GENERATOR SET
- TRANSFORMER (167kVA)
- KW-HOUR METER
- CONTROL PANEL
- PANEL BOARD
- CIRCUIT BREAKER
- 46W LED TUBE LIGHT
- 18W LED BULB LIGHT
- 2 GANG CONVENIENT OUTLET
- 3 GANG SWITCH
- 1 GANG SWITCH
- ELECTRICAL LINE



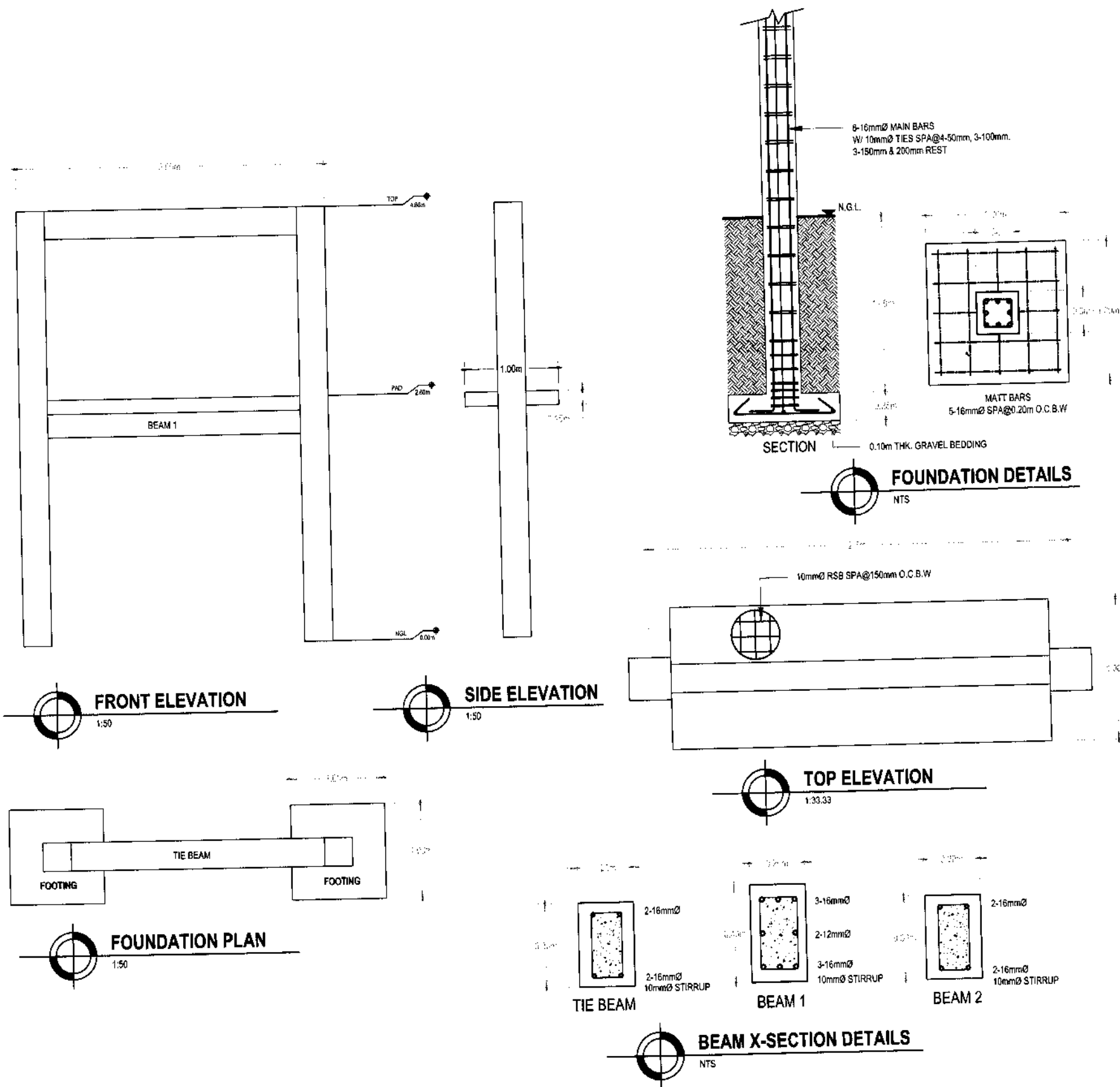
LIGHTING AND POWER PANEL (LPP)


CKT NO.	LOAD DESCRIPTION	OUTLET			SWITCH			VOLTS AMP	VOLTS	AMPERES	CB RATING	WIRE SIZE	CONDUIT SIZE
		L.O.	C.O.	OTHER	s1	s2	s3						
1	OFFICE & BAY AREA LIGHTING	12			2		1	500	230	2.17	15 AT, 2P, 60 Hz	2C - 3.50mm ² THHN	15mmØ RSC
2	STORAGE LIGHTING	12					1	600	230	2.61	15 AT, 2P, 60 Hz	2C - 3.50mm ² THHN	15mmØ RSC
3	DRYER & RICE MILL LIGHTING	12					1	600	230	2.61	15 AT, 2P, 60 Hz	2C - 3.50mm ² THHN	15mmØ RSC
4	STORAGE & OFFICE CONVENIENT OUTLET		7					720	230	3.13	15 AT, 2P, 60 Hz	2C - 3.50mm ² THHN	15mmØ RSC
5	RICE MILL CONVENIENT OUTLET							720	230	3.13	15 AT, 2P, 60 Hz	2C - 3.50mm ² THHN	15mmØ RSC
TOTAL CONNECTED LOAD								3140		13.65			
I(TOTAL) = √3(13.65)										23.65	50.0 AT, 3P, 60 Hz	3C - 14mm ² THW	32mmØ RSC

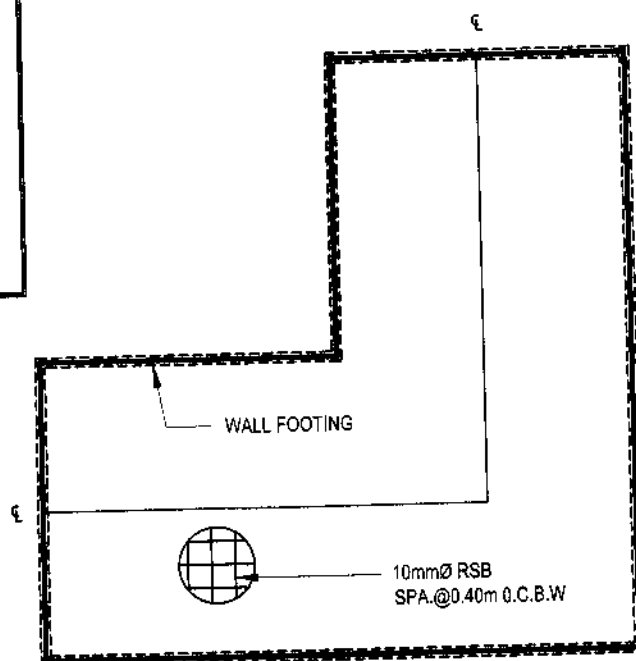
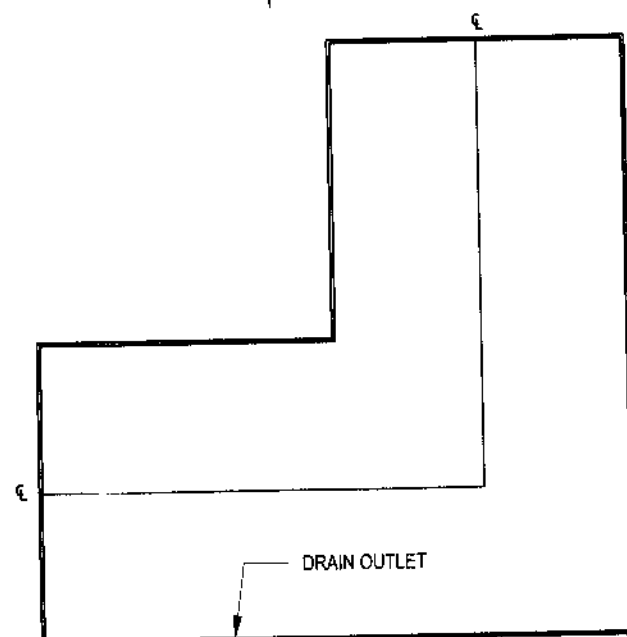
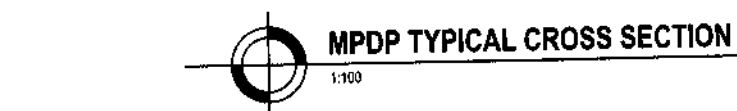
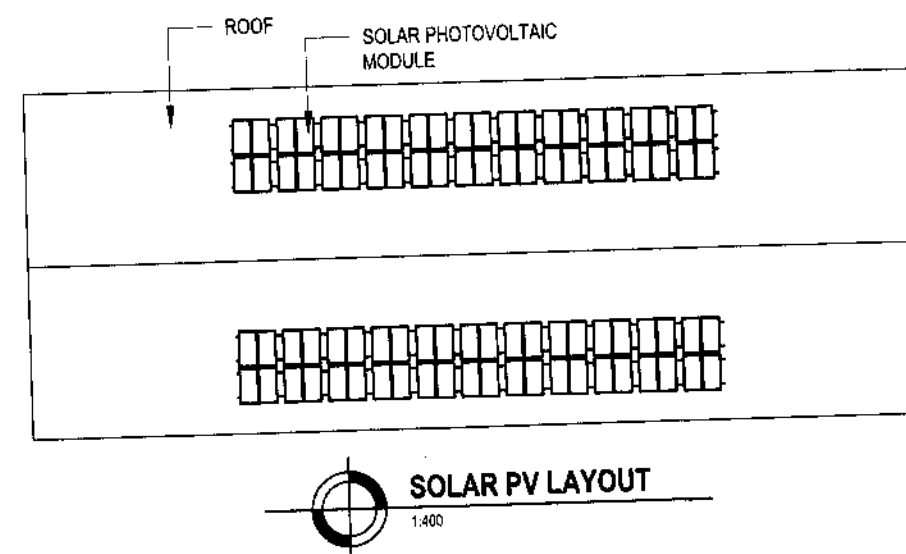
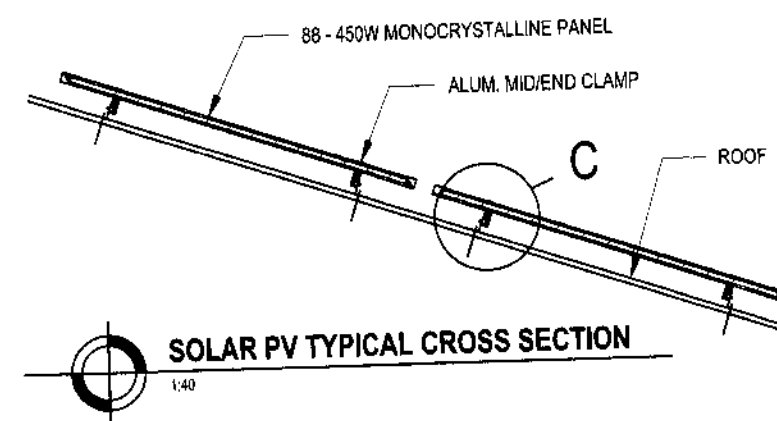
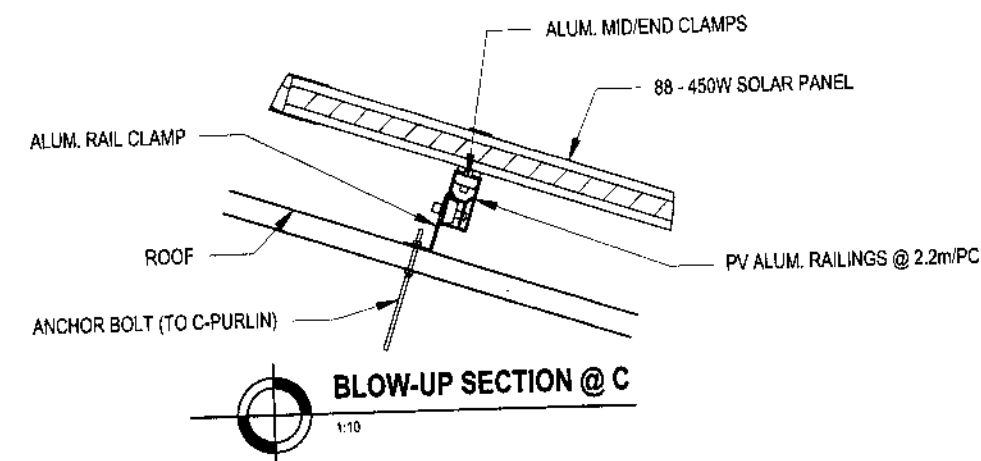
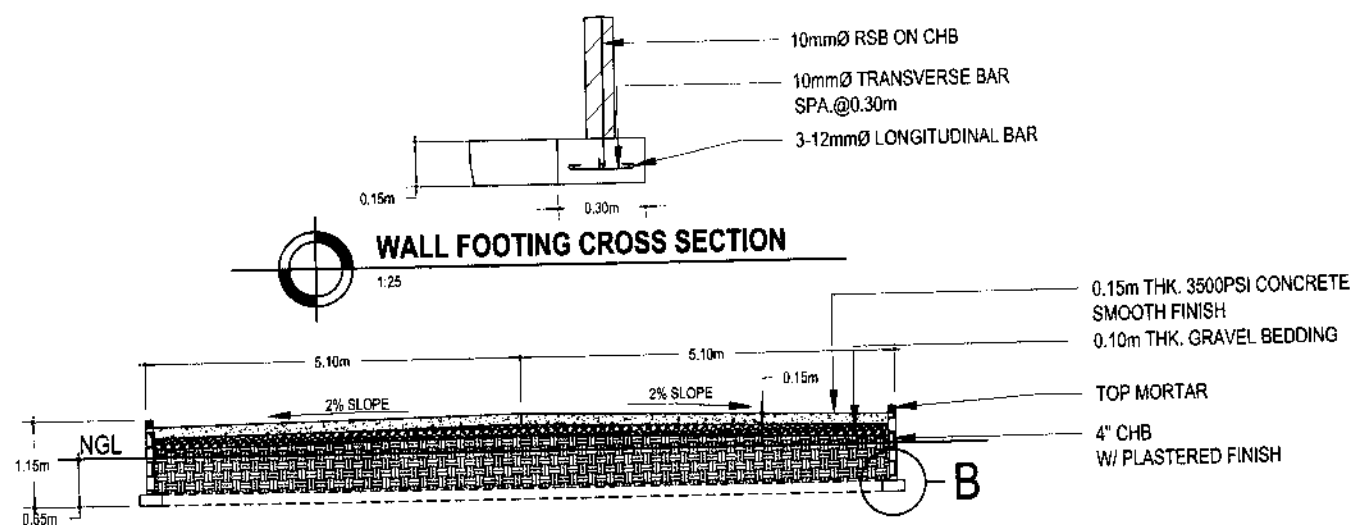
IMPLEMENTING AGENCY: REPUBLIC OF THE PHILIPPINES DEPARTMENT OF AGRICULTURE WESTERN VISAYAS ILOILO CITY	PROJECT NAME & LOCATION: CONSTRUCTION OF RICE PROCESSING CENTER III (WAREHOUSE) BRGY. TALOC, BAGO CITY, NEGROS OCCIDENTAL	SHEET CONTENTS: ELECTRICAL LAYOUT SCHD. OF LOADS & COMPUTATION	PREPARED BY: JERRY B. GUANCO, ABE Engineer II (ABE NO. 000729)	REVIEWED BY: YVONNE GRACE H. SUR, ABE Engineer IV (ABE NO. 000670) READ - EPOS	RECOMMENDED BY: MOISES D. MANA-AY, ABE, MEE Engineer IV (ABE NO. 000677) OIC-Chief, RAEC	APPROVED BY: ENGR. JOSE ALBERT A. BARROGO Director III (OIC-Regional Executive Director)	CAD BY: JBGUANCO SHEET NO.: 17 23
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FIRE PLAN
1:200



IMPLEMENTING AGENCY:	PROJECT NAME & LOCATION:	SHEET CONTENTS:	PREPARED BY:	REVIEWED BY:	RECOMMENDED BY:	APPROVED BY:	CAD BY:
 <p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF AGRICULTURE WESTERN VISAYAS ILOILO CITY</p>	<p>CONSTRUCTION OF RICE PROCESSING CENTER III (WAREHOUSE) BRGY. TALOC, BAGO CITY, NEGROS OCCIDENTAL</p>	<p>TRANSFORMER PAD DETAILS SOLAR STREET LIGHT</p>	<p>JERRY B. GUANCO, ABE Engineer II (ABE NO. 0907298)</p>	<p>YVONNE GRACE V. SUR, ABE Engineer IV (ABE NO. 0005970) HEAD - EROISS</p>	<p>MOISES D. MANA-AY, ABE, MEE Engineer IV (ABE NO. 0006077) OIC-Chief, RAED</p>	<p>ENGR. JOSE ALBERT A. BARRIGO Director III / OIC Regional Executive Director</p>	<p>J. GUANCO</p>
							<p>SHEET NO:</p> <p>19 23</p>



IMPLEMENTING AGENCY: REPUBLIC OF THE PHILIPPINES DEPARTMENT OF AGRICULTURE WESTERN VISAYAS ILOILO CITY	PROJECT NAME & LOCATION: CONSTRUCTION OF RICE PROCESSING CENTER III (WAREHOUSE) BRGY. TALOC, BAGO CITY, NEGROS OCCIDENTAL	SHEET CONTENTS: MPDP SOLAR PHOTOVOLTAICS	PREPARED BY: JERRY B. GUANCO, ABE Engineer II (ABE NO. 0007298)	REVIEWED BY: YVONNE GRACE H. SUR, ABE Engineer IV (ABE NO. 0005701) HEAD - EPOSS	RECOMMENDED BY: MOISES D. MANA-AY, ABE, MEE Engineer IV (ABE NO. 0008077) OIC-Chief, RAED	APPROVED BY: ENGR. JOSE ALBERT A. BARROGO Director III / OIC-Regional Executive Director	CAD BY: JBGUANCO SHEET NO.: 20 23
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GENERAL CONSTRUCTION NOTES

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

BAR SIZES $f_c = 20.7 \text{ MPa}$ (3000 psi) $f_t = 27.6 \text{ MPa}$ (4000 psi)

DEVELOPED BAR	EMBEDMENT	LAPPED EMBEDMENT	LAPPED
Ø10	300	300	300
Ø12	300	300	300
Ø16	300	400	400
Ø20	400	500	500
Ø25	500	600	600
Ø28	600	700	700
Ø32	700	800	800

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.

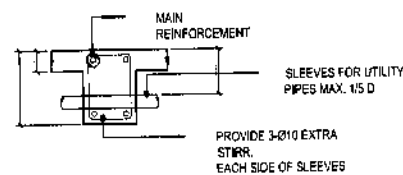
TABLE 'B'
COMPRESSION BARS
TABLE OF LAP SPLICE & ANCHORAGE LENGTH (mm)

BAR SIZES $f_c = 20.7 \text{ MPa}$ (3000 psi) $f_t = 27.6 \text{ MPa}$ (4000 psi)

DEVELOPED BAR	EMBEDMENT	LAPPED EMBEDMENT	LAPPED
Ø10	225	300	300
Ø12	275	300	300
Ø16	350	400	400
Ø20	450	500	500
Ø25	550	625	625
Ø28	625	675	675
Ø32	700	775	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.

- 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 SHALL NOT BE SPLICED WITHIN THE COLUMN OR TWO STIRRUPS SHALL BE PROVIDED AT ALL SPLICES.
- IF THERE ARE TWO OR MORE LAYERS OF REINFORCING BARS, USED 25mm BAR SEPARATORS SPACED AT 1.0M ON CENTER ON NO CASE SHALL THERE BE THAN TWO SEPARATORS BETWEEN LAYERS OF BARS.
- MINIMUM CONCRETE PROTECTION FOR REINFORCING BARS OR STEEL SHAPES SHALL BE AS SHOWN IN FIGURE B-2 UNLESS OTHERWISE.



- 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.
- 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

- 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. 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

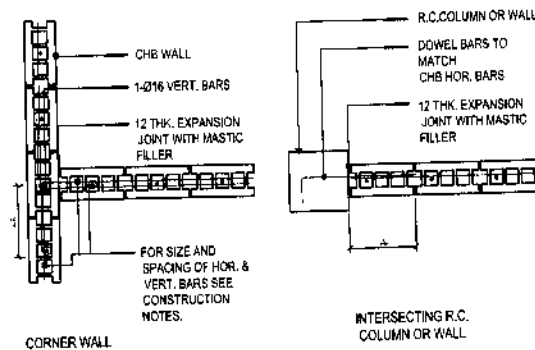
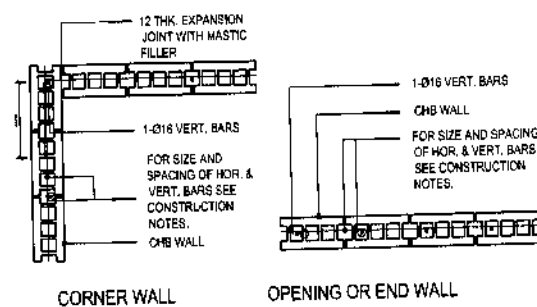
BLOCK THICKNESS	REINFORCEMENT		NOTES
	HORIZONTAL	LAPPED	
75 mm	10mm Ø EVERY 3RD LEVEL 10mm Ø @ 800mm O.C.		A. MINIMUM LAPS AT SPLICES= 0.25 M B. PROVIDE RIGHT ANGLED REINFORCEMENT AT CORNERS 1.22 m LONG
125 mm	10mm Ø EVERY 3RD LEVEL	10mm Ø @ 800mm O.C.	C. WHERE CHB OR CER. BLK. WALL DOWELS WITH THE SAME SIZE AS VER. OR HOR. REINFORCEMENT SHALL BE PROVIDED
150mm	10mm Ø EVERY 3RD LEVEL	10mm Ø @ 800mm O.C.	
200 mm	12mm Ø EVERY 3RD LEVEL	10mm Ø @ 800mm O.C.	

REINFORCING CONCRETE LINTEL BEAMS IN CONCRETE BLOCK WALLS

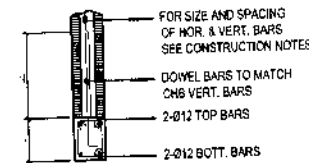
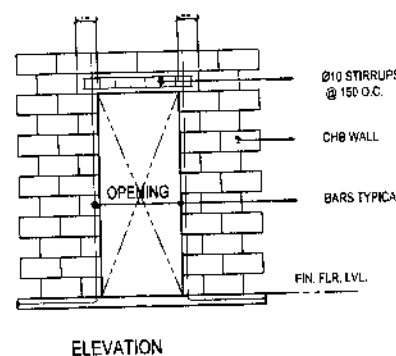
LINELS IN BLOCK WALLS

CLEAR SPAN (L)	TOTAL LENGTH (L+2.40M)	MIN. AC' (MPa)	HEIGHT OF LINTEL (mm)	REINFORCEMENT	
				BOTTOM TOP	STIRRUPS
1.20 M	1.80 M	14.0	200	1-Ø10	Ø6 mm @ 200mm
1.50 M	1.90 M	14.0	200	1-Ø10	Ø6 mm @ 200mm
1.80 M	2.20 M	14.0	200	1-Ø12	Ø6 mm @ 200mm
2.10 M	2.50 M	17.0	250	1-Ø12	Ø6 mm @ 200mm
2.40 M	2.90 M	17.0	250	1-Ø12	Ø6 mm @ 200mm
2.70 M	3.10 M	17.0	250	1-Ø12	Ø6 mm @ 200mm
3.00 M	3.40 M	20.0	300	1-Ø15	Ø10mm @ 200mm
3.30 M	3.70 M	20.0	300	1-Ø16	Ø10mm @ 200mm
3.60 M	4.00 M	20.0	300	1-Ø20	Ø10mm @ 200mm

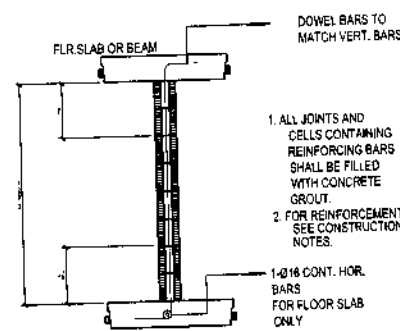
TYPICAL CONNECTION DETAIL OF MASONRY WALL



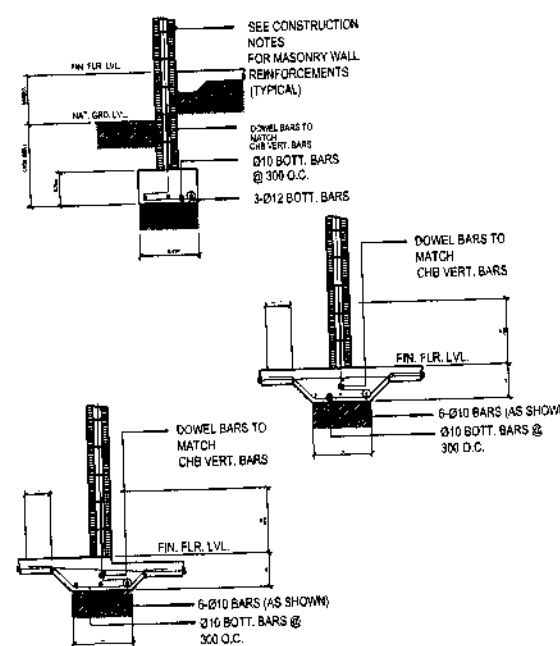
TYP. DET. OF LINTEL BEAM AT CHB WALL OPENING



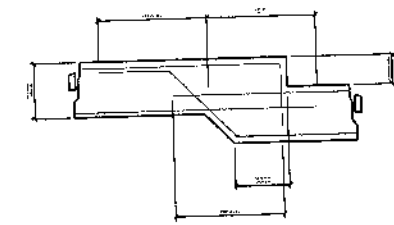
TYP. SECTION OF MASONRY PARTITION REINFORCEMENTS



TYPICAL CHB FOOTING DETAILS (WHERE APPLICABLE)



TYPICAL DETAIL FOR BEAM OR SLAB CHANGE SOFFIT

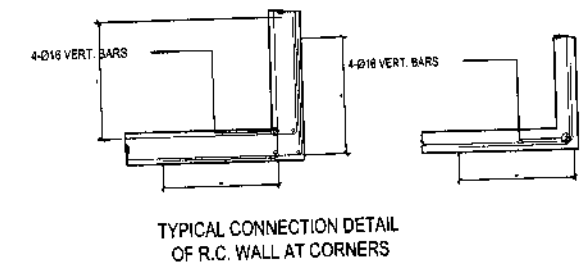


NOTES ON CONCRETE WALLS

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

WALL THICKNESS	REINFORCEMENT		REMARKS	VERTICAL SECTION
	HORIZONTAL	VERTICAL		
100mm	Ø10mm @ 250mm O.C.	Ø10mm @ 300mm O.C.	HORIZONTAL BARS AT CENTERS VERTICAL BARS STAGGERED 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 80mm SHALL BE PROVIDED AND FOR EXPOSED FACES OF FORMED WALLS WHERE THE MINIMUM SHALL BE 50mm CLEAR.
- CARRY VERTICAL BARS AT LEAST 80mm ABOVE FLOOR LEVEL TO PROVIDE FOR SPLICES WHEN NECESSARY STOP AT 80mm 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.
 - UNLESS OTHERWISE NOTED IN THE PLANS, ALL OPENINGS IN WALLS 250mm OR THICKER SHALL BE REINFORCED AROUND WITH 2-20mm Ø BARS. FOR 225mm, 200mm, 175mm, 150mm THICK WALLS, USE 2-16mm Ø. FOR 125mm AND 100mm THICK WALLS, USE 2-12mm Ø BARS. ALL WALLS SPANNING SHALL HAVE VERTICAL REINFORCEMENT BENT A U-FORM LIKE STIRRUPS AND SPACED ACCORDING TO THE SCHEDULE UNLESS OTHERWISE NOTED.



NOTES ON WELDS

- USE E80xx ELECTRODES FOR ALL MEMBERS WELDED.
- WELDS SHALL DEVELOP THE FULL STRENGTH OF MEMBERS JOINED UNLESS OTHERWISE SHOWN OR DETAILED IN THE DRAWINGS.

NOTES ON STRUCTURAL STEEL

- STRUCTURAL STEEL TO BE USED FOR FABRICATION AND ERECTION OF THIS STRUCTURE SHALL COMPLY WITH ALL THE PERTINENT PROVISIONS OF AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDING LATEST EDITION.
- ALL STRUCTURAL STEEL SHAPES SHALL CONFORM TO ASTM A36 STRUCTURAL STEEL UNLESS OTHERWISE INDICATED.
- ALL WELDED CONNECTIONS SHALL DEVELOP THE FULL STRENGTH OF THE MEMBERS CONNECTED.
- UNLESS OTHERWISE SPECIFIED ALL WELDING RODS SHALL CONFORM WITH E60 ELECTRODES.
- ALL BOLTS USED UNLESS OTHERWISE SPECIFIED SHALL BE ASTM A307 BOLTS.

NOTES ON EMBEDDED PIPES

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

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	24.00 kN/m
CONCRETE	27.00 kN/m
STEEL	2.73 kPa
150 mm THK. CHB WALL	2.11 kPa
100 mm THK. CHB WALL	
B. LIVE LOAD	
ROOF	1.00 kPa
OFFICES	1.90 kPa
TOILETS	1.90 kPa
STAIRS	3.80 kPa
PORCH	4.80 kPa
C. WIND LOAD	
BUILDING CATEGORY = 4	

WIND VELOCITY V=250 KPH

(DESIGN WIND PRESSURE)

$P = q_n [(GC_p)(GC_{pf})]$
WHERE: q_n = VELOCITY PRESSURE (kPa)
 GC_p = EXTERNAL PRESSURE COEFFICIENT
 GC_{pf} = INTERNAL PRESSURE COEFFICIENT

D. SEISMIC LOAD

$V = 3.0 \text{ Ca WIR}$ (DESIGN BASE SHEAR)

2.2 DESIGN STRESSES

A. CONCRETE COMPRESSIVE STRENGTH @ 28 DAYS

a. FOOTINGS, COLUMNS, BEAMS AND SLABS	$f_c = 27.5 \text{ MPa}$ (4,000 psi)
b. SLAB ON FILL	$f_c = 20.75 \text{ MPa}$ (3,000 psi)
c. SLAB	$f_c = 27.5 \text{ MPa}$ (4,000 psi)
B. REINFORCING STEEL BARS	
a. FOR BARS 16mm AND GREATER (INTERMEDIATE GRADE DEFORMED BAR)	$f_y = 275 \text{ MPa}$ (40,000 psi)
b. FOR BARS LESS THAN 16mm (STRUCTURAL GRADE DEFORMED BAR)	$f_y = 275 \text{ MPa}$ (40,000 psi)
C. STRUCTURAL STEEL ASTM-A36 FOR TRUSSES, BRACINGS, & STRUTS	$f_y = 248 \text{ MPa}$ (35,000 psi)
D. PURLINS	$f_y = 248 \text{ MPa}$ (35,000 psi)
E. MASONRY UNIT (CHB)	$f_m = 3.45 \text{ MPa}$ (500 psi)
F. WELDS	E-60XX ELECTRODE a. $F_t = 96.60 \text{ MPa}$ (14,000 psi) b. $F_u = 99.00 \text{ MPa}$ (14,000 psi)
G. STRUCTURAL BOLTS ASTM-A307	

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.

6.0 ALL CONCRETE WORKS AND CONCRETE REINFORCEMENTS SHALL BE DONE IN ACCORDANCE WITH THE ACI 318-14M BUILDING CODE REQUIREMENT AND ALL STRUCTURAL STEEL WORKS ACCORDING WITH THE AISC-05 IN SO FAR AS THEY DO NOT CONFLICT WITH THE LOCAL BUILDING CODE REQUIREMENTS.

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 CONSTRUCTION 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 DIAGRAM OF ALL STRUCTURAL STEELS, MISCELLANEOUS, PRE-CAST CONCRETE, ETC. SHALL BE SUBMITTED FOR ENGINEERS APPROVAL BEFORE FABRICATION.

10. CONTRACTOR SHALL NOTE AND PROVIDE ALL MISCELLANEOUS 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	4000 PSI (27.5 MPa)	20 mm	100mm
COLUMNS	4000 PSI (27.5 MPa)	20 mm	100mm
BEAMS	4000 PSI (27.5 MPa)	20 mm	100mm
SLAB ON FILL	3000 PSI (20.75 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	40mm
WHERE CONCRETE IS EXPOSED TO EARTH BUT POURED AGAINST FORMS	50mm
WHERE CONCRETE IS DEPOSITED DIRECTLY AGAINST EARTH	75mm

3. CONCRETE SHALL BE DEPOSITED IN ITS FINAL POSITION WITHOUT SEGREGATION. RE-HANDLING OR PLACING SHALL BE DONE PREFERABLY WITH BUCKETS, BUCKETS OR WHEELBARROWS. NO CHUTES WILL BE ALLOWED EXCEPT TO TRANSFER CONCRETE FROM HOPPERS TO BUCKETS, 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 MOIST FOR A MINIMUM OF SEVEN CONSECUTIVE DAYS IMMEDIATELY AFTER POURING BY THE USE OF 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

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 3. THE CONTRACTOR SHALL FURNISH AND MAINTAIN ADEQUATE FORMS AND SHORINGS UNTIL THE

NOTES ON FOOTINGS

1. FOOTINGS ARE DESIGNED FOR AN ALLOWANCE SOIL BEARING PRESSURE OF 96 kPa (2000 psi). 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 150mm 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 psi) 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	$f_y = 414 \text{ MPa}$ (60,000 psi)
B. COLUMNS AND SHEAR WALLS	$f_y = 414 \text{ MPa}$ (60,000 psi)
C. BEAMS AND GIRDER	$f_y = 414 \text{ MPa}$ (60,000 psi)
D. NON-LOAD BEARING WALL PARTITIONS, BEDDED SLABS, FLOOR & ROOF SLABS, PARAPETS, CATCH BASIN SIDE WALK	$f_y = 275 \text{ MPa}$ (40,000 psi)

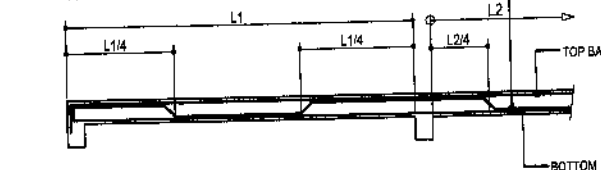
2. ALL REINFORCING BARS SIZE 10mm OR LARGER SHALL BE DEFORMED IN ACCORDANCE WITH THE ASTM A-706 BARS SMALLER THAN 10mm MAY BE PLAIN.

3. SPLICES SHALL BE SECURELY WELDED TOGETHER & SHALL LAP OR EXTEND IN ACCORDANCE W/ TABLE B (TABLE OF LAP SPLICE & ANCHORAGE LENGTH) UNLESS OTHERWISE SHOWN ON 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 ELEVATED SLAB SHALL BE CUT AS FOLLOWS:



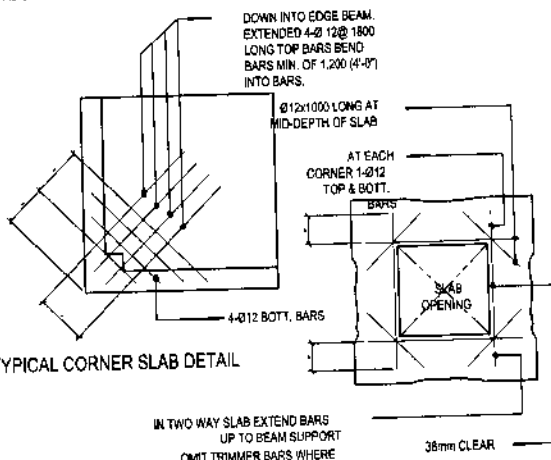
3. IF SLABS ARE REINFORCED BOTHWAYS BARS ALONG THE SHORTER SPAN SHALL BE PLACED BELOW THOSE ALONG THE LONG SPAN AT THE CENTER AND OVER THE LONGER SPAN FOR REINFORCING BARS NEAR THE SUPPORTS. THE SPACING OF THE BARS AT THE COLUMN STRIPS SHALL NOT BE MORE THAN ONE AND A HALF (1.5) SLAB THICKNESS.

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 (A_g) OF THE SLAB. (SEE SCHEDULE BELOW)

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

AT 250mm O.C. EACH WAY TO CENTER OF SLAB AND CONSTRUCTION JOINTS FOR SAME SHALL NOT BE LESS THAN 3.65 METER APART.

5. CONCRETE SLAB REINFORCEMENT BE PROPERLY SUPPORTED WITH 10mm STEEL CHAIR OR APPROVED EQUIVALENT SPACED AT 1.0 METER ON CENTER BOTHWAYS, AS SHOWN BELOW.



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 WITH THE 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 SPICED AT ANY LEVEL AND THE VERTICAL DISTANCES BETWEEN THESE WELDS OR SPLICES OF ADJACENT BARS IS NOT LESS THAN 600mm.

5. TYPICAL BARS BENDING AND CUTTING DETAILS FOR BEAMS SHALL BE AS SHOWN IN FIG. B-1

6. TYPICAL BARS BENDING AND CUTTING DETAILS FOR BEAMS SHALL BE AS SHOWN IN FIG. B-1

7. TYPICAL BARS BENDING AND CUTTING DETAILS FOR BEAMS SHALL BE AS SHOWN IN FIG. B-1

8. TYPICAL BARS BENDING AND CUTTING DETAILS FOR BEAMS SHALL BE AS SHOWN IN FIG. B-1

9. TYPICAL BARS BENDING AND CUTTING DETAILS FOR BEAMS SHALL BE AS SHOWN IN FIG. B-1

10. TYPICAL BARS BENDING AND CUTTING DETAILS FOR BEAMS SHALL BE AS SHOWN IN FIG. B-1

11. TYPICAL BARS BENDING AND CUTTING DETAILS FOR BEAMS SHALL BE AS SHOWN IN FIG. B-1

12. TYPICAL BARS BENDING AND CUTTING DETAILS FOR BEAMS SHALL BE AS SHOWN IN FIG. B-1

13. TYPICAL BARS BENDING AND CUTTING DETAILS FOR BEAMS SHALL BE AS SHOWN IN FIG. B-1

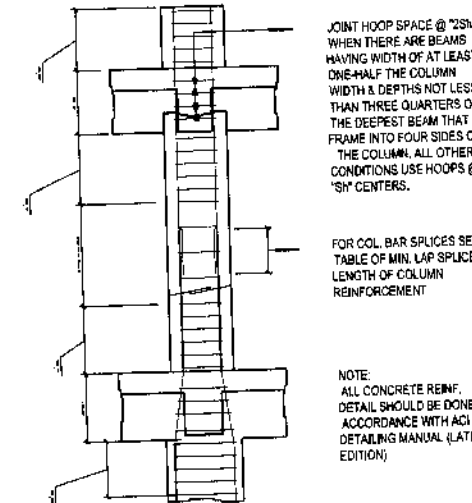
14. TYPICAL BARS BENDING AND CUTTING DETAILS FOR BEAMS SHALL BE AS SHOWN IN FIG. B-1

15. TYPICAL BARS BENDING AND CUTTING DETAILS FOR BEAMS SHALL BE AS SHOWN IN FIG. B-1

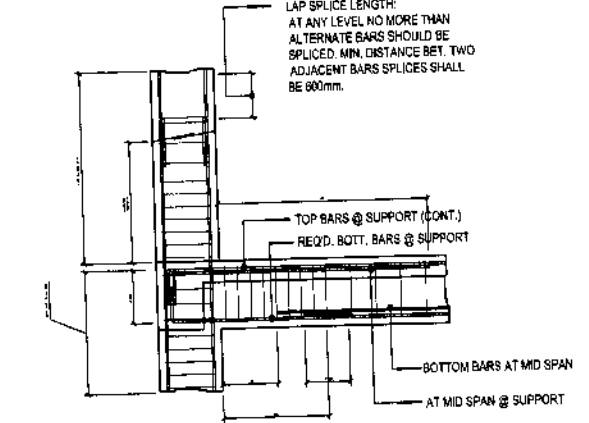
16. TYPICAL BARS BENDING AND CUTTING DETAILS FOR BEAMS SHALL BE AS SHOWN IN FIG. B-1

17. TYPICAL BARS BENDING AND CUTTING DETAILS FOR BEAMS SHALL BE AS SHOWN IN FIG. B-1

18. TYPICAL BARS BENDING AND CUTTING DETAILS FOR BEAMS SHALL BE AS SHOWN IN FIG. B-1



TYPICAL COLUMN ELEV. SHOWING DOWELS AND TIES SPACING



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

NOTES ON BEAMS AND GIRDERS

1. UNLESS OTHERWISE NOTED IN PLANS, CAMBER ALL BEAMS AND GIRDER AT LEAST 6mm @ EVERY 4.30 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

3. TYPICAL BARS BENDING AND CUTTING DETAILS FOR BEAMS SHALL BE AS SHOWN IN FIG. B-1

4. TYPICAL BARS BENDING AND CUTTING DETAILS FOR BEAMS SHALL BE AS SHOWN IN FIG. B-1

5. TYPICAL BARS BENDING AND CUTTING DETAILS FOR BEAMS SHALL BE AS SHOWN IN FIG. B-1

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REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF AGRICULTURE
WESTERN VISAYAS
ILOILO CITY

PROJECT : CONSTRUCTION OF WAREHOUSE
LOCATION : BRGY. CAMALONGO, CALINGOG, ILOILO

COST :
FUND SOURCE/S : RICE PROGRAM (2023)

IMPLEMENTING AGENCY : DEPARTMENT OF AGRICULTURE - WESTERN VISAYAS
DEVELOPMENT PARTNER/S :
CONTRACTOR SUPPLIER :
BRIEF DESCRIPTION OF PROJECT :

PROJECT DETAILS :

PROJECT DATE		PROJECT STATUS				REMARKS
DURATION STARTED	TARGET DATE OF COMPLETION	PERCENTAGE OF COMPLETION	AS OF (DATE)	COST INCURRED TO DATE	DATE COMPLETED	

FOR PARTICULARS OR COMPLAINTS ABOUT THIS PROJECT, PLEASE CONTACT THE REGIONAL OFFICE OR CLUSTER WHICH HAS AUDIT JURISDICTION ON THIS PROJECT:

COA REGIONAL OFFICE NO./CLUSTER :
ADDRESS :
CONTACT NO. : OR TEXT COA CITIZEN'S DESK AT 0915-5391957


TARPAULIN, WHITE, 8 FT x 8 FT
RESOLUTION: 70 DPI
FONT: HELVETICA
FONT SIZE: MAIN INFORMATION - 3"
SUB INFORMATION - 1"
FONT COLOR: BLACK

COA BILLBOARD
NTS

CONSTRUCTION OF BOTANICAL CONCOCTION FACILITY
DA-ROS, SIGMA, CAPIZ / DA-ROS, GUIMARAS

CONTRACTOR :
DATE STARTED :
CONTRACT COMPLETION DATE :
CONTRACT COST :
CONSTRUCTION CONSULTANT :
IMPLEMENTING OFFICE :
SOURCE OF FUND :


DEPARTMENT OF AGRICULTURE - WESTERN VISAYAS



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF AGRICULTURE
WESTERN VISAYAS
ILOILO CITY

- THE BILLBOARD DESIGN LAYOUT AND DIMENSION SHALL BE ON A STANDARD BILLBOARD MEASURING 1200 mm x 2400 mm (4FT x 8FT.) USING 12 mm (1/2 INCH) THICK MARINE PLYWOOD OR TARPULIN POSTED ON 5 mm (3/16 INCH) MARINE PLYWOOD.
- THE BILLBOARD SHALL BE INSTALLED IN FRONT OF THE PROJECT SITE.

PROJECT SIGNBOARD
NTS



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF AGRICULTURE
WESTERN VISAYAS
ILOILO CITY

PROJECT PROFILE

NAME OF PROJECT: CONSTRUCTION OF RICE PROCESSING CENTER (WAREHOUSE)
LOCATION: BRGY. POBLACION 5, HAMTIC, ANTIQUE
FUNDING SOURCE:
BENEFICIARIES:

PROJECT COST (P):

PROJECT MARKER
8mm THK. 0.60m x 0.60m STAINLESS STEEL
W/ ENGRAVE LETTERING

PROJECT MARKER
NTS

IMPLEMENTING AGENCY: REPUBLIC OF THE PHILIPPINES DEPARTMENT OF AGRICULTURE WESTERN VISAYAS ILOILO CITY	PROJECT NAME & LOCATION: CONSTRUCTION OF RICE PROCESSING CENTER III (WAREHOUSE) BRGY. TALOC, BAGO CITY, NEGROS OCCIDENTAL	SHEET CONTENTS: COA BILLBOARD PROJECT SIGNBOARD PROJECT MARKER	PREPARED BY: JERRY B. GUANCO, ABE Engineer II (ABE NO. 0097296)	REVIEWED BY: YVONNE GRACE H. SUR, ABE Engineer III (ABE NO. 0066970) HEAD - EPDS	RECOMMENDED BY: MOISES D. MANA-AY, ABE, MEE Engineer IV (ABE NO. 0049077) OIC-Chief, RAED	APPROVED BY: ENGR. JOSE ALBERT A. BARROGO Director III / OIC-Regional Executive Director	CAD BY: J.B. GUANCO SHEET NO.: 23 23
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