FOI CMU

Office of the President
NATIONAL HOUSING AUTHORITY

January 30, 2020

MR. ROBERT MALAYAO
Esmeralda Compound, Tintay
Talamban, Cebu City
Cebu, Philippines

Dear **Mr. Malayao;**

Greetings!

This has reference to your request dated January 16, 2020 through the Electronic Freedom of Information (eFOI) website of the government re: Data on the National Housing Authority's Resettlement Projects located in Bantayan Island for the victims of Typhoon Yolanda.

Attached herein are the information requested for your reference, to wit:

1. Number of units/houses
2. Location/Address of projects
3. How are beneficiaries chosen
4. How are locations identified
5. Construction drawings and specifications
6. Livelihood activities for beneficiaries after turn-over of units

We hope we have addressed your request accordingly. Should you have clarifications, please reach us through lines (032) 232-9053/232-9048 or email us at nha.reg7@gmail.com.

Thank you.

Very truly yours,

CONSTANCIO G. ANTINIERO
Officer-in-Charge
Region 7

RECEIVED BY:
ROBERT MALAYAO 2/3/20

Cc: FOI CMU

FOI CMU

NATIONAL HOUSING AUTHORITY
REGION 7- CEBU DISTRICT OFFICE
PROJECT MONITORING REPORT
YOLANDA PERMANENT HOUSING PROJECT
BANTAYAN ISLAND

LOCATION/ CONTRACTOR/ ORIGINAL/REVISED CONTRACT COST	LOCATION	NO. OF UNITS	HOW BENEFICIARIES ARE CHOSEN	HOW ARE LOCATIONS IDENTIFIED	ACTIVITIES AFTER TURN-OVER OF HOUSES
BANTAYAN ISLAND		**9480**			
BANTAYAN		**3482**			
BALAI BANTAYAN PHASE - 1 Granby Trading & Const. PhP 130,313,272.51	Brgy. Kabac, Bantayan	450	1. Conduct of General Assembly to inform the barangay officials about the upcoming validation 2. Validation of the list of prospective Beneficiaries 3. Preparation of the list of Validated prospective beneficiaries 4. Prioritization of the validated prospective beneficiaries per category Output: Masterlist of Qualified Households (MQH) 5. Presentation of the MQH to the BSAAC & come up with a resolution for its endorsement to LIAC 6. LIAC deliberation & approval of the MQH Output: Resolution Approving MQH 7. Conduct of House & Lot Raffle based on the approved MQH Output: List of Awardees 8. Turn over of keys of the housing units to the awardees 9. Compliance of documentary requirements by the awardees	Site Selection Factors: 1. Densely built-up residential areas, commercial centers, and labor-intensive industrial facilities 2. Present and future transportation networks 3. Physical and social infrastructure networks 4. Vulnerability to geological and environmental hazards 5. Cost	Livelihood Projects: 1. Urban Gardening 2. Vermi-composting 3. Manicure/Pedicure Training 4. Haircut & Hair Coloring 5. Bread Making 6. Pastry Making 7. Puto Flan Making 8. Cooperative Organizing 9. Entreprenurial Development Seminar 10. Training on Financial Literacy
BALAI BANTAYAN PHASE - 2 Granby Trading & Const. PhP 130,313,272.51	Brgy. Kabac, Bantayan	450			
BALAI BANTAYAN PHASE - 3 Granby Trading & Const. PhP 101,933,937.60	Brgy. Kabac, Bantayan	352			
VILLA MERCEDES 1 BSP & Company, Inc. PhP 211,476,421.65	Brgy. Kampingganon,Bantayan	750			
VILLA MERCEDES 2 BSP & Company, Inc. PhP 66,674,258.29	Brgy. Kampingganon,Bantayan	230			
VILLA MERCEDES 3 BSP & Company, Inc. PhP 139, 873,365.25	Brgy. Sillon,Bantayan	500			
MUNICIPALITY OF BANTAYAN (LGU-Downloaded)		750			
MADRIDEJOS		**3693**			
ST. FRANCIS PARK HOMES 1 Floridablanca Const. & Dev't Corp. PhP 217,408,970.67	Brgy. Kangwayaan, Madridejos	750			

NATIONAL HOUSING AUTHORITY
REGION 7- CEBU DISTRICT OFFICE
PROJECT MONITORING REPORT
YOLANDA PERMANENT HOUSING PROJECT
BANTAYAN ISLAND

LOCATION/ CONTRACTOR/ ORIGINAL/REVISED CONTRACT COST	LOCATION	NO. OF UNITS	HOW BENEFICIARIES ARE CHOSEN	HOW ARE LOCATIONS IDENTIFIED	ACTIVITIES AFTER TURN-OVER OF HOUSES
ST. FRANCIS PARK HOMES 2 BSP & Company, Inc. PhP 212,412,572.85	Brgy. Kodia, Madridejos	750	10. Execution of Deed of Conditional Donation between LGU (Donor) & Awardee (Donee) 11. Issuance of Transfer Certificate of Titles (TCTs) in the name of the awardees		
ST. FRANCIS PARK HOMES 3 Floridablanca Const. & Dev't Corp. PhP 217,408,970.67	Brgy. Kangwayaan, Madridejos	750			
ST. FRANCIS PARK HOMES 4 Floridablanca Const. & Dev't Corp. PhP 217,408,970.57	Brgy. Kangwayaan, Madridejos	750			
ST. FRANCIS PARK HOMES 5 BSP & Company, Inc. PhP 195,950,450.65	Brgy. Maalat, Madridejos	693			
STA. FE		**2305**			
STO. NIÑO HOMES EddMari Construction & Trading PhP 289,800,000.00	Brgy. Maricaban, Sta.Fe	1000			
STA. FE SITE 1 WTG Constrcution/ RDY Const. (JV) (LGU-Downloaded) PhP 217,500,000.00	Brgy. Okoy, Sta. Fe	750			
STA. FE SITE 2 WTG Constrcution/ RDY Const. (JV) (LGU-Downloaded) PhP 217,500,000.00	Brgy. Okoy, Sta. Fe	555			

Prepared by:

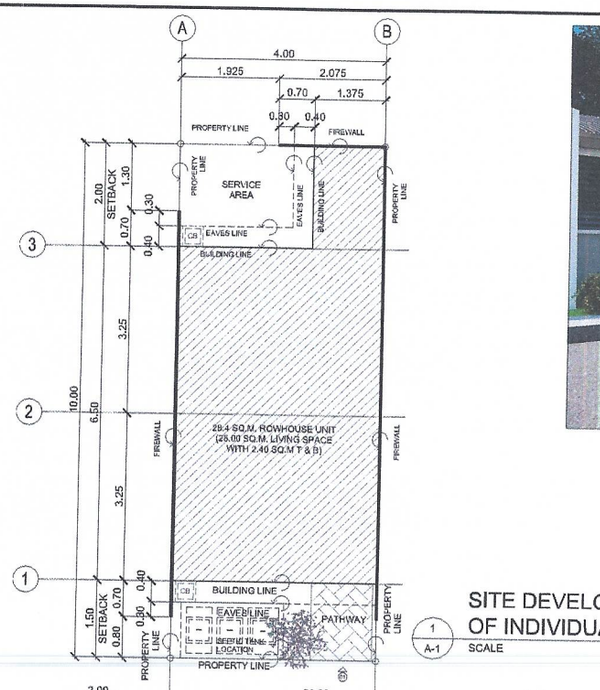
MARY ANN V. QUIMADO
Senior Engineer A
Cebu District Office

Reviewed by:

HERMES JUDE G. JUNTILO
Officer-in-Charge
Cebu District Office

Approved by:

CONSTANCIO G. ANTINIERO
Officer-in-Charge
Region 7



1 A-1 SITE DEVELOPMENT PLAN OF INDIVIDUAL UNIT

SCALE 1:50 M

2 A-1 PERSPECTIVE

SCALE NTS

3 A-1 SITE DEVELOPMENT PLAN- 8 UNIT

SCALE 1:200 M

4 A-1 VICINITY MAP

SCALE NTS

5 A-1 LOCATION MAP

SCALE NTS

TABLE OF CONTENTS

Republic of the Philippines
OFFICE OF THE BUILDING OFFICIAL

District / City / Municipality

LAND USE & ZONING

LINE & GRADE

ARCHITECTURAL

CIVIL / STRUCTURAL

SANITARY

ELECTRICAL

MECHANICAL

Office of the President
NATIONAL HOUSING AUTHORITY
Elliptical Road, Diliman, Quezon City

PROJECT TITLE:
PROPOSED STANDARD 28.40 SQ.M ROWHOUSE FOR YOLANDA PROJECT ONLY

LOCATION:

ARCHITECT:

SIGNATURE AND SEAL

REG No.: DATE:
PTR No.: PLACE:

DESIGNED BY: HTDO | CHECKED BY: L.C.L.
DRAWN BY: R.T.DV. | DATE: 09-05-2016

SHEET CONTENT:
SITE DEVELOPMENT PLAN / PERSPECTIVE / LOCATION MAP / VICINITY MAP

REVISIONS: | DATE:
TITLE BLOCK | 09/05/2016

STANDARD DESIGNED PREPARED BY:
HOUSING TECHNOLOGY DEVELOPMENT OFFICE

REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:
LUZVIMINDA C. LAGUADOR PRINCIPAL ARCHITECT B, HTDO	EDUARDO SJ. HERRERA DIVISION MANAGER, TSU-HTDO	MA. BENITA O. REGALA DEPARTMENT MANAGER, HTDO

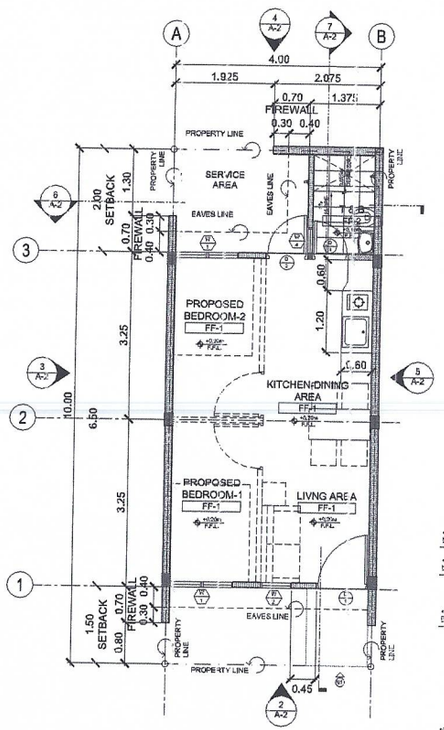
FOR IMPLEMENTATION BY:
AMO

REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:

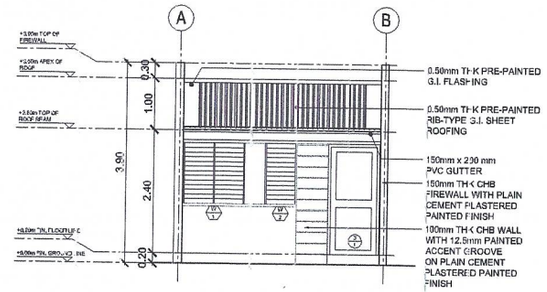
APPROVED BY:
MARCELINO P. ESCALADA, JR.
GENERAL MANAGER

SHEET NO.
A
1 / 5

LEGEND-FLOOR FINISH	
FF-1	PLAN CEMENT-SMOOTH FINISH
FF-2	300mm x 300mm VITRIFIED UNGLAZED CERAMIC TILES



1 A-2 FLOOR PLAN
SCALE 1:50 M



2 A-2 FRONT ELEVATION
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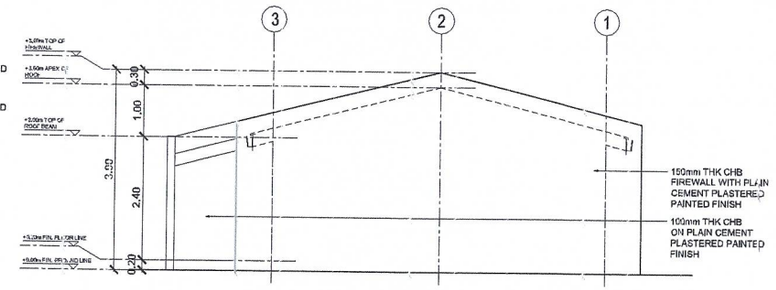
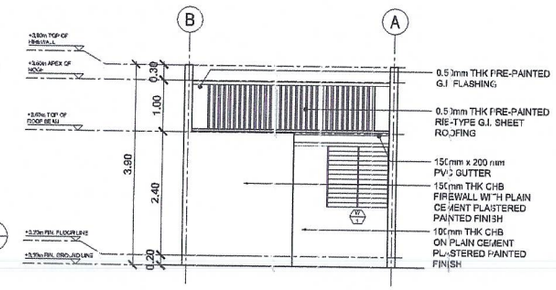
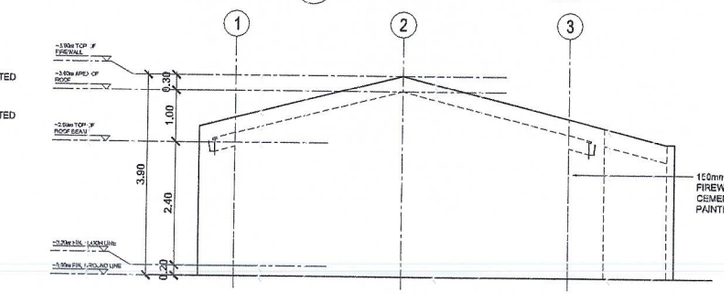


3 A-2 LEFT-SIDE ELEVATION
SCALE 1:50 M



4 A-2 REAR ELEVATION
SCALE 1:50 M



5 A-2 RIGHT-SIDE ELEVATION
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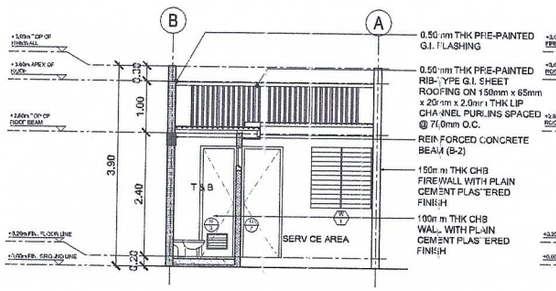
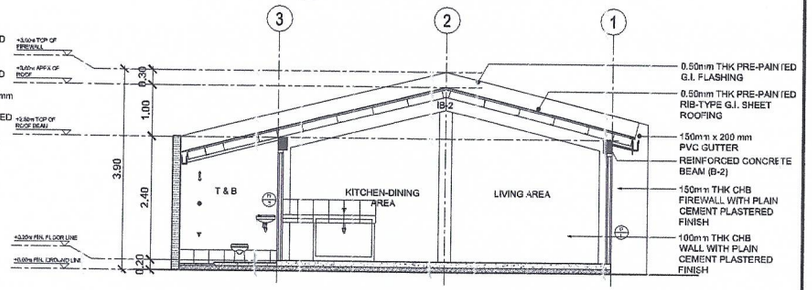


6 A-2 CROSS SECTION
SCALE 1:50 M



7 A-2 LONGITUDINAL SECTION
SCALE 1:50 M

Office of the President
NATIONAL HOUSING AUTHORITY
Elliptical Road, Diliman, Quezon City

PROJECT TITLE:
PROPOSED STANDARD 28.40 SQ.M ROWHOUSE FOR YOLANDA PROJECT ONLY

LOCATION:

ARCHITECT:
SIGNATURE AND SEAL
REG No.: DATE:
PTR No.: PLACE

DESIGNED BY: HTDO | CHECKED BY: L.C.L.
DRAWN BY: R.T.DV. | DATE: 09-05-2016
SHEET CONTENT: FLOOR PLAN/ ELEVATIONS/ SECTIONS

REVISIONS:	DATE:
TITLE BLOCK	03/22/2013

STANDARD DESIGNED PREPARED BY:
HOUSING TECHNOLOGY DEVELOPMENT OFFICE

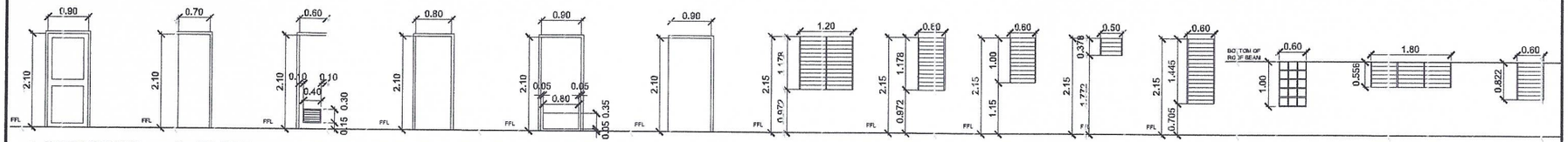
REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:
LUZVIMINDA C. LAGUADOR PRINCIPAL ARCHITECT B, HTDO	EDUARDO S.J. HERRERA DIVISION MANAGER, TSU-HTDO	MA. BENITA O. REGALA DEPARTMENT MANAGER, HTDO

FOR IMPLEMENTATION BY:
AMO

REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:

APPROVED BY:
MARCELINO P. ESCALADA, JR.
GENERAL MANAGER

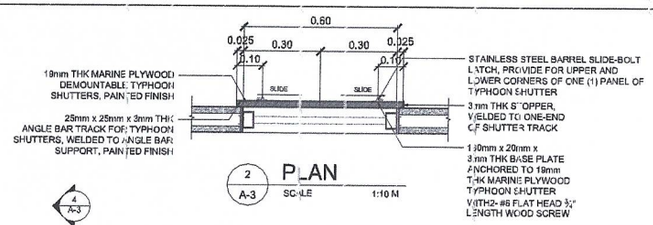
SHEET NO.
A
2/5



1	50mm THK. SINGLE-LEAF SINGLE-ACTION SOLID WOOD PANEL SWING DOOR ON 50mm x 100mm THK. WOODEN DOOR JAMBS LOCATION: FRONT MAIN DOOR REQUIRED: 1 SET
2	50mm THK. SINGLE-LEAF SINGLE-ACTION HOLLOW-CORE FLUSH SWING DOOR WITH 6mm THK. MARINE PLYWOOD FACING ON EXTERIOR SIDE AND 3mm THK. ORDINARY PLYWOOD FACING ON INTERIOR SIDE, ON 50mm x 100mm THK. WOODEN DOOR JAMBS LOCATION: REAR SERVICE DOOR REQUIRED: 1 SET
3	40mm THK. SINGLE-LEAF SINGLE-ACTION PVC SWING DOOR WITH PVC LOUVERS, ON PVC JAMBS LOCATION: TOILET DOOR REQUIRED: 1 SET
4	50mm THK. SINGLE-LEAF SINGLE-ACTION HOLLOW-CORE FLUSH SWING DOOR WITH 6mm THK. ORDINARY PLYWOOD FACING ON BOTH SIDES, ON 50mm x 100mm THK. WOODEN DOOR JAMBS LOCATION: BEDROOM REQUIRED: N/A
5	50mm THK. SINGLE-LEAF SINGLE-ACTION HOLLOW-CORE FLUSH SWING DOOR WITH 6mm THK. MARINE PLYWOOD FACING ON T&B SIDE AND 6mm THK. ORDINARY PLYWOOD FACING ON EXTERIOR SIDE, ON 50mm x 100mm THK. WOODEN DOOR JAMBS PROVIDE STAINLESS STEEL KICK PLATE ON PUSH-SIDE LOCATION: TOILET DOOR (PWD) REQUIRED: N/A
6	50mm THK. SINGLE-LEAF SINGLE-ACTION HOLLOW-CORE FLUSH SWING DOOR WITH 6mm THK. MARINE PLYWOOD FACING ON EXTERIOR SIDE AND 6mm THK. ORDINARY PLYWOOD FACING ON INTERIOR SIDE, ON 50mm x 100mm THK. WOODEN DOOR JAMBS LOCATION: REAR SERVICE DOOR (PWD) REQUIRED: N/A
W-1	100mm x 4.5mm THK GLASS BLADES (13 EQ. BLADES @ ±90mm O.C.) ON DUAL CONTROL ALUMINUM JALOUSIE FRAMES LOCATION: FRONT WALL/ REAR WALL REQUIRED: 2 SETS
W-2	100mm x 4.5mm THK GLASS BLADES (13 EQ. BLADES @ ±90mm O.C.) ON DUAL CONTROL ALUMINUM JALOUSIE FRAMES LOCATION: FRONT WALL REQUIRED: 1 SET
W-3	100mm x 4.5mm THK GLASS BLADES (11 EQ. BLADES @ ±90mm O.C.) ON SINGLE CONTROL ALUMINUM JALOUSIE FRAMES LOCATION: N/A REQUIRED: N/A
W-4	100mm x 4.5mm THK GLASS BLADES (4 EQ. BLADES @ ±90mm O.C.) ON SINGLE CONTROL ALUMINUM JALOUSIE FRAMES LOCATION: TOILET WALL REQUIRED: 1 SET
W-5	100mm x 4.5mm THK GLASS BLADES (16 EQ. BLADES @ ±90mm O.C.) ON DUAL CONTROL ALUMINUM JALOUSIE FRAMES LOCATION: N/A REQUIRED: N/A
W-6	200mm x 200mm x 100mm CONCRETE LOUVER BLOCKS LOCATION: FRONT WALL (LOFT AREA) REQUIRED: N/A
W-7	100mm x 4.5mm THK GLASS BLADES (8 EQ. BLADES @ ±90mm O.C.) ON SINGLE CONTROL ALUMINUM JALOUSIE FRAMES LOCATION: REAR WALL (LOFT AREA) REQUIRED: N/A
W-8	100mm x 4.5mm THK GLASS BLADES (9 EQ. BLADES @ ±90mm O.C.) ON SINGLE CONTROL ALUMINUM JALOUSIE FRAMES LOCATION: N/A REQUIRED: N/A

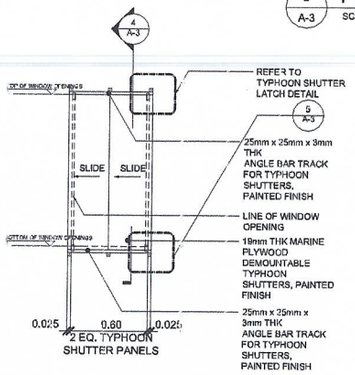
1 / A-3 SCHEDULE OF DOORSAND WINDOWS

SCALE 1:50 M



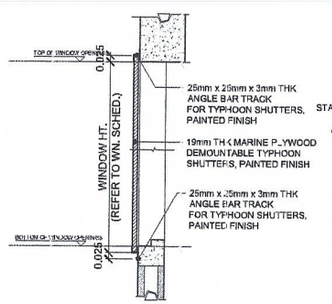
2 / A-3 PLAN

SCALE 1:10 M



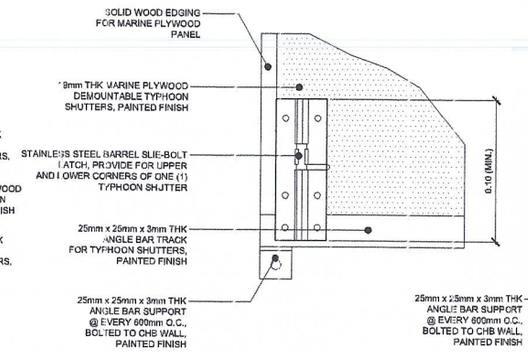
3 / A-3 ELEVATION

SCALE 1:20 M



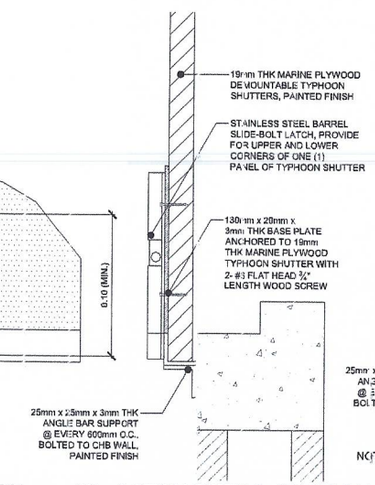
4 / A-3 SECTION

SCALE 1:10 M



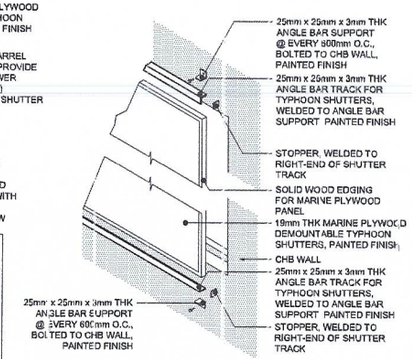
5 / A-3 LATCH DETAIL ELEVATION

SCALE 1:2 M



6 / A-3 LATCH DETAIL SECTION

SCALE 1:2 M



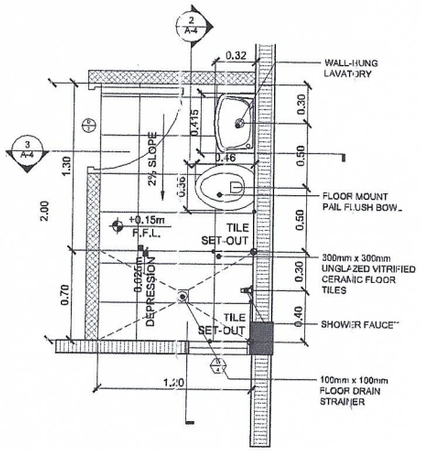
NOTE: ALTERNATIVE CONNECTION FOR TECHNOLOGY WALL SYSTEM

7 / A-3 TRACK SPOT DETAIL

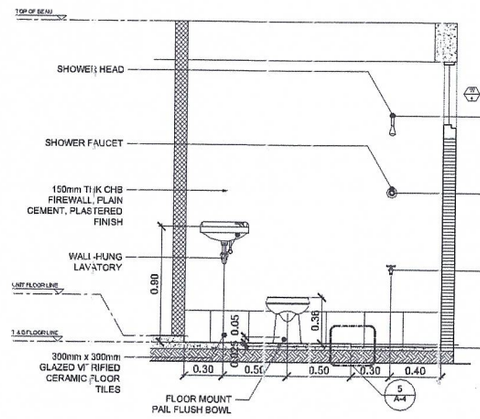
SCALE 1:10 M

TYPHOON SHUTTER DETAILS

Office of the President NATIONAL HOUSING AUTHORITY Elliptical Road, Diliman, Quezon City	ARCHITECT:	DESIGNED BY: HTDO	CHECKED BY: L.C.L.	STANDARD DESIGNED PREPARED BY:		FOR IMPLEMENTATION BY:		APPROVED BY:	SHEET NO.
PROJECT TITLE: PROPOSED STANDARD 28.40 SQ.M ROWHOUSE FOR YOLANDA PROJECT ONLY	SIGNATURE AND SEAL	DRAWN BY: R.T.D.V.	DATE: 9-05-2016	HOUSING TECHNOLOGY DEVELOPMENT OFFICE		AMO			A
LOCATION:		SHEET CONTENT: SCHEDULE OF DOORS & WINDOWS / TYPHOON SHUTTER DETAILS		REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:		3 / 5
	F.E.O. No.: DATE: F.F.R. No.: PLACE	REVISIONS:	DATE:	LUZVIMINDA C. LAGUADOR PRINCIPAL ARCHITECT B, HTDO	EDUARDO SJ. HERRERA DIVISION MANAGER, TSUHTDO	MA. BENITA O. REGALA DEPARTMENT MANAGER, HTDO				MARCELINO P. ESCALADA, JR. GENERAL MANAGER	
		TITLE BLOCK	0 5/20/2013								



1 A-4 PLAN
SCALE 1:20 M



2 A-4 SECTION-1
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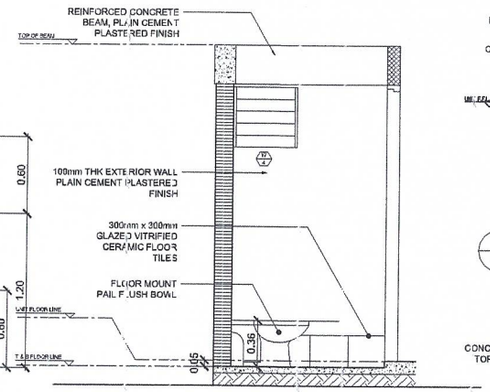

3 A-4 SECTION-2
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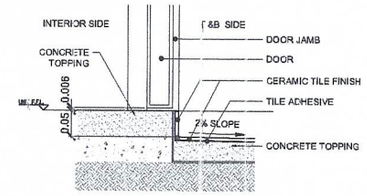
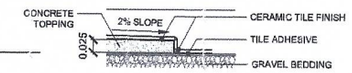
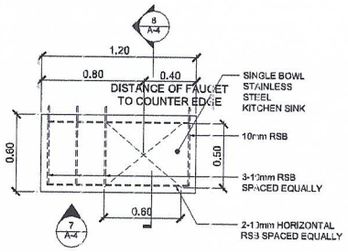


4 A-4 THRESHOLD AND WATER GUARD DETAIL
SCALE 1:5 M

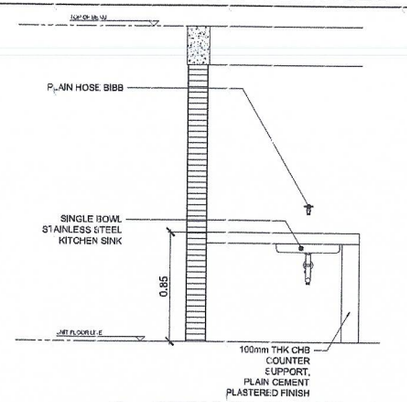


5 A-4 DETAIL-1
SCALE 1:5 M

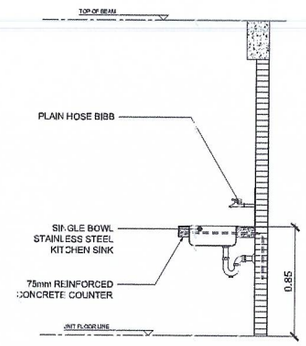
TOILET & BATH DETAILS



6 A-4 PLAN
SCALE 1:20 M



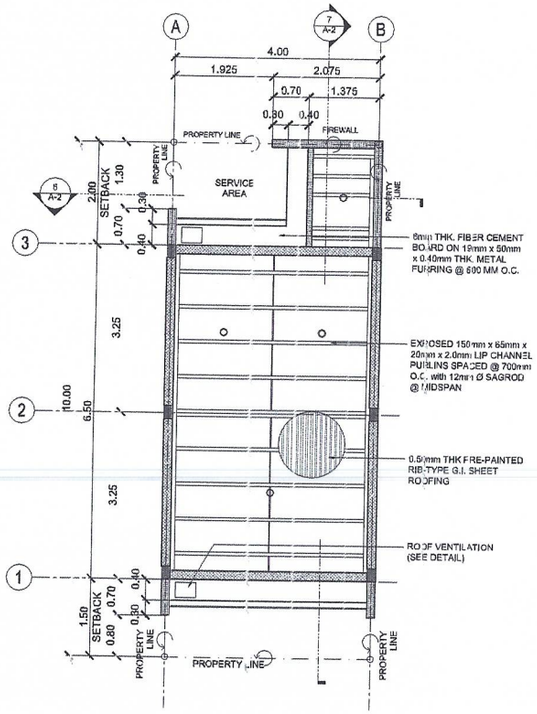
7 A-4 DETAILED ELEVATION
SCALE 1:20 M



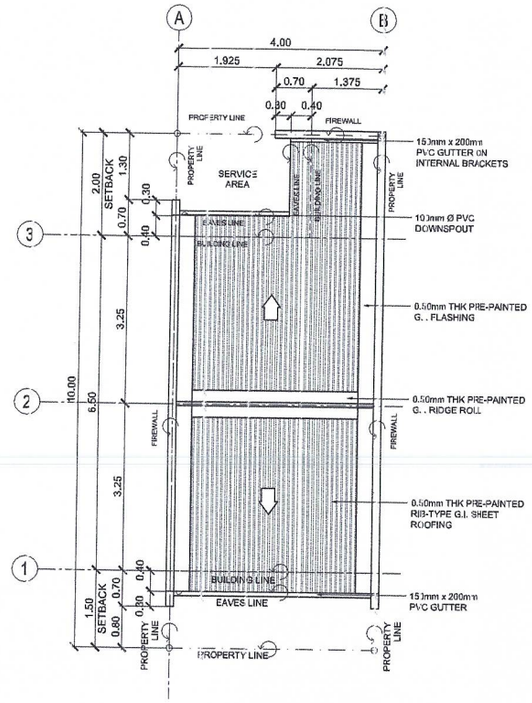
8 A-4 DETAILED SECTION
SCALE 1:20 M

KITCHEN DETAILS

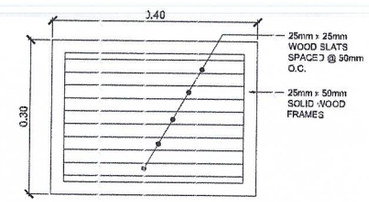
Office of the President NATIONAL HOUSING AUTHORITY Elliptical Road, Diliman, Quezon City	ARCHITECT:	DESIGNED BY: HTDO DRAWN BY: R.T.DV. SHEET CONTENT:	CHECKED BY: L.C.L. DATE: 9-25-2015	STANDARD DESIGNED PREPARED BY: HOUSING TECHNOLOGY DEVELOPMENT OFFICE		FOR IMPLEMENTATION BY: AMO		APPROVED BY:	SHEET NO.
PROJECT TITLE: PROPOSED STANDARD 28.40 SQ.M ROWHOUSE FOR YOLANDA PROJECT ONLY	SIGNATURE AND SEAL	T&B DETAILS/ KITCHEN DETAILS		REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	A
LOCATION:		REVISIONS:	DATE:	LUZVIMINDA C. LAGUADOR PRINCIPAL ARCHITECT B, HTDO	EDUARDO SJ. HERRERA DIVISION MANAGER, TSU-HTDO	MA. BENITA O. REGALA DEPARTMENT MANAGER, HTDO			MARCELINO P. ESCALADA, JR. GENERAL MANAGER	4/5
	P.E.O No.: DATE: P.R.C No.: PLACE	TITLE BLOCK THRESHOLD DETAIL	9/25/2015 9/25/2015							



1 / A-5 REFLECTED CEILING PLAN
SCALE 1:50 M



2 / A-5 ROOF PLAN
SCALE 1:50 M



3 / A-5 ROOF VENTILATION DETAIL
SCALE 1:5 M

Office of the President **NATIONAL HOUSING AUTHORITY** Elliptical Road, Diliman, Quezon City	ARCHITECT:	DESIGNED BY: HTDO CHECKED BY: LCL DRAWN BY: R.T.S.V. DATE: 9-05-2016 SHEET CONTENT: REFLECTED CEILING PLAN / ROOF PLAN / ROOF VENTILATION DETAIL	STANDARD DESIGNED PREPARED BY: HOUSING TECHNOLOGY DEVELOPMENT OFFICE REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	FOR IMPLEMENTATION BY: AMO REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET NO.
PROJECT TITLE: PROPOSED STANDARD 28.40 SQ.M ROWHOUSE FOR YOLANDA PROJECT ONLY	SIGNATURE AND SEAL	REVISIONS: TITLE BLOCK	DATE: 09/01/2015	LUZVIMINDA C. LAGUADOR PRINCIPAL ARCHITECT B, HTDO	EDUARDO SJ. HERRERA DIVISION MANAGER, TSU-HTDO	MA. BENITA O. REGALA DEPARTMENT MANAGER, HTDO			MARCELINO P. ESCALADA, JR. GENERAL MANAGER	A 5/5
LOCATION:	REG No.: DATE: PTR No.: PLACE:									

GENERAL NOTES

A. IN THE INTERPRETATION OF THESE DRAWINGS, INDICATED DIMENSIONS SHALL GOVERN AND DISTANCES OR SIZES SHALL NOT BE SCALED FOR CONSTRUCTION PURPOSES.

B. THE CONTRACTOR SHALL COORDINATE WITH THE ARCHITECT, STRUCTURAL ENGINEER, ELECTRICAL ENGINEER, AND OTHER UTILITY AND EQUIPMENT PLANS FOR THE EXACT SIZE, NUMBER AND LOCATIONS OF ALL SLEEVES OR OPENINGS THRU FLOOR SLABS, BEAMS, AND WALLS.

C. ALL REINFORCED CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH THE NATIONAL STRUCTURAL CODE OF THE PHILIPPINES (NSCP) VOL. 1, 1992 EDITION, CHAPTER 5, AND THE ACI 318-95 BUILDING CODE.

D. ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH THE NSCP VOL. 1, 1992 EDITION, CHAPTER 4 AND THE AISC ASD 1989 IN SO FAR AS THEY DO NOT CONFLICT WITH THE LOCAL BUILDING CODE REQUIREMENTS.

E. ALL SLABS, BEAMS, GIRDERS, AND OTHER STRUCTURAL ELEMENTS WHICH ARE NOT INDICATED, DETAILED, DESIGNATED, OR INADVERTENTLY OMITTED BUT ARE NECESSARY TO BE COORDINATED WITH ARCHITECTURAL AND OTHER ALLIED ENGINEERING PLANS, AS WELL AS TO COMPLETE THE STRUCTURAL WORKS IN ACCORDANCE WITH THE INTENT OF THE PLANS AND SPECIFICATIONS, SHALL BE BROUGHT UP DURING PRE-BIDS, MEETINGS, AND/OR NEGOTIATIONS. IT IS UNDERSTOOD THAT THE CONTRACTOR HAS PROVIDED AND INCLUDED ALL THESE ITEMS IN HIS BID.

F. SLABS ON FILL MUST NOT BE PLACED UNLESS FILL HAS BEEN PROPERLY COMPACTED. UNLESS DETAILED OTHERWISE, ALL SLABS ON FILL SHALL BE PROVIDED WITH 100 MM WELL-COMPACTED CLEAN COARSE SAND BED. BACK FILLING OF ALL EXCAVATED AREAS AND PREPARATION OF SUB-BASE SHALL BE WELL COMPACTED TO AT LEAST 95% OF THE MODIFIED PROCTOR DENSITY BEFORE LAYING 100 MM CLEAN COARSE SAND BED.

NOTES ON CONCRETE MIXES AND PLACING

A. UNLESS OTHERWISE INDICATED IN THE PLANS OR NOTED IN THE SPECIFICATIONS, THE MINIMUM 28-DAY CYLINDER COMPRESSIVE STRENGTH OF CONCRETE, f'c SHALL BE AS FOLLOWS.

1.	COLUMNS, BEAMS, GIRDERS, FOOTINGS, WALL FOOTINGS, CONCRETE WALLS, BORED PILES, AND PILE CAPS	21.0 MPa (3,000 psi)
2.	SLABS ON GRADE	17.3 MPa (2,500 psi)
3.	LEAN CONCRETE	7 Mpa (1,000 psi)

B. CONCRETE SHALL BE DEPOSITED IN ITS FINAL POSITION WITHOUT SEGREGATION, REHANDLING OR FLOWING. PLACING SHALL BE DONE PREFERABLY WITH BUGGIES, BUCKETS, OR WHEEL BARROWS. NO CHUTES WILL BE ALLOWED EXCEPT TO TRANSFER CONCRETE FROM HOPPERS TO BUGGIES, WHEEL BARROWS OR BUCKETS, IN WHICH CASE, THEY SHALL NOT EXCEED SIX (6) METERS IN AGGREGATE LENGTH.

C. NO DEPOSITING OF CONCRETE SHALL BE ALLOWED WITHOUT THE USE OF VIBRATORS UNLESS AUTHORIZED IN WRITING BY THE DESIGNERS AND ONLY FOR UNUSUAL CONDITIONS WHERE VIBRATION IS EXTREMELY DIFFICULT TO ACCOMPLISH.

NOTES ON REINFORCING STEEL BARS

A. ALL REINFORCING STEEL BARS SHALL BE NEW BILLET, HOT ROLLED, DEFORMED BARS CONFORMING TO THE SPECIFICATIONS OF PNS 49: 1995 (ASTM 615) AND GRADE AS FOLLOWS.

GRADE		BAR DIAMETER
fy = 415 MPa (60 Ksi)	-	16 Ø
fy = 275 MPa (40 Ksi)	-	12 Ø and SMALLER

B. ALL CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED, AND SPACED IN FORMS, SECURED IN THE REQUIRED LOCATION IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE LATEST EDITION OF THE BUILDING CODE AND THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES, ACI-315.

C. ALL REINFORCING BARS SHALL BE CLEANED THOROUGHLY OF ALL LOOSE RUST, SOIL, OR OTHER MATERIAL IMMEDIATELY PRIOR TO PLACING CONCRETE.

D. REINFORCING BARS SHALL NOT BE WELDED WITHOUT THE STRUCTURAL ENGINEER'S WRITTEN PERMISSION. WELDING OF STIRRUPS, TIES, INSERTS, OR OTHER SIMILAR ELEMENTS TO LONGITUDINAL REINFORCEMENT SHALL NOT BE ALLOWED.

E. MINIMUM CLEAR CONCRETE COVER FOR REINFORCING BARS SHALL BE AS FOLLOWS.

1.	CONCRETE CAST AGAINST EARTH	- 75 MM
2.	CONCRETE EXPOSED TO EARTH OR WEATHER 20 Ø TO 36 Ø BARS 16 Ø BARS AND SMALLER	 - 50 MM - 40 MM
3.	CONCRETE NOT EXPOSED TO EARTH OR WEATHER SLABS, WALLS, JOINTS BEAMS AND COLUMNS	 - 20 MM - 40 MM

F. SEE TABLE "A" FOR SCHEDULE OF LAP SPLICES.

TABLE A: LAP SPLICE LENGTHS

BAR DIAMETER	BEAMS/GIRDERS	COLUMNS	WALLS	SLABS
10	-	-	400	400
12	-	-	400	400
16	800	650	400	400
20	1300	1000	400	400
25	2000	1600	400	400

NOTES ON FOUNDATION

A. FOOTINGS WERE DESIGNED WITH AN ASSUMED ALLOWABLE SOIL BEARING PRESSURE OF 95 KPa (2000 psf). CONTRACTOR SHALL REPORT IN WRITING TO THE STRUCTURAL ENGINEER ACTUAL SOIL CONDITION UNCOVERED, AND CONFIRM ACTUAL BEARING CAPACITY OF SOIL BEFORE DEPOSITING CONCRETE.

B. NO FOOTING SHALL REST ON UNCOMPACTED FILL. PROVIDE 100 MM WELL-COMPACTED GRAVEL BEDDING.

C. MINIMUM CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE 75 MM CLEAR FOR CONCRETE DEPOSITED AGAINST THE GROUND, AND 50 MM FOR CONCRETE DEPOSITED AGAINST FORMWORK.

D. PROVIDE TEMPORARY REMOVAL OF WATER FROM ANY SOURCE DURING CONSTRUCTION. DEWATERING SHALL BE CAREFULLY AND PROPERLY PERFORMED TO AVOID DISTURBING THE FOUNDATIONS AND SLAB BEARING SURFACES.

E. CONTRACTOR SHALL DESIGN, INSTALL, AND MONITOR ALL EXCAVATION RETENTION SYSTEMS AS REQUIRED FOR PROTECTION OF ADJACENT PROPERTIES AND PROVIDE ALL MEASURES AND PRECAUTIONS NECESSARY TO MINIMIZE SETTLEMENT AND PREVENT DAMAGE TO ADJACENT EXISTING OR NEW CONSTRUCTION.

F. IN CASES WHERE REQUIRED FOOTING LEVELS SHOW A HONEYCOMBED STRUCTURE CONTAINING LOOSE MATERIALS, REMOVE LOOSE MATERIALS AND FILL ALL VOIDS WITH 10 MPa (1500 Psi) LEAN CONCRETE. USE A VIBRATOR TO ASSURE WELL COMPACTED CONCRETE IN ALL VOID PORTIONS.

G. REFER TO ARCHITECTURAL, PLUMBING, AND OTHER TRADES FOR SUB-SOIL DRAINAGE SYSTEM, MACHINERY, ANCHORS AND OTHER EMBEDDED ITEMS, DEPRESSIONS, FINISHES, DOWELS FOR MASONRY WALLS, CURBS, ETC.

NOTES ON BEAMS AND GIRDERS

A. UNLESS OTHERWISE NOTED IN PLAN OR SPECIFICATIONS, CAMBER ALL BEAMS AND GIRDERS AT LEAST 6 MM FOR EVERY 4500 MM OF SPAN EXCEPT CANTILEVERS FOR WHICH THE CAMBERS SHALL BE AS NOTED IN PLANS OR AS ORDERED BY THE DESIGNERS, BUT IN NO CASE LESS THAN 20 MM FOR EVERY 3000 MM OF FREE SPAN.

B. WHEN A BEAM CROSSES A GIRDER, REST BEAM BARS ON TOP OF GIRDER BARS. REINFORCING BARS SHALL BE SYMMETRICAL ABOUT THE CENTER LINE WHEREVER POSSIBLE, AND UPPER BARS SHALL BE PLACED DIRECTLY ABOVE THOSE IN THE BOTTOM LAYER.

C. LONGITUDINAL REINFORCEMENT OF GIRDERS, BOTH TOP AND BOTTOM, TERMINATED IN A COLUMN SHALL BE EXTENDED TO THE FAR FACE OF THE CONFINED CONCRETE CORE OF THE COLUMN AND TERMINATED BY A STANDARD 90° HOOK UNLESS OTHERWISE INDICATED IN THE PLANS. SEE FIG. 1 FOR DETAILS OF STANDARD HOOKS.

D. PROVIDE HOOP REINFORCEMENT SPACED AT 100 MM O.C. OVER THE LENGTH OF LAPPED BARS.

E. WELDED SPLICES SHALL NOT BE ALLOWED WITHOUT THE WRITTEN PERMISSION OF THE STRUCTURAL ENGINEER.

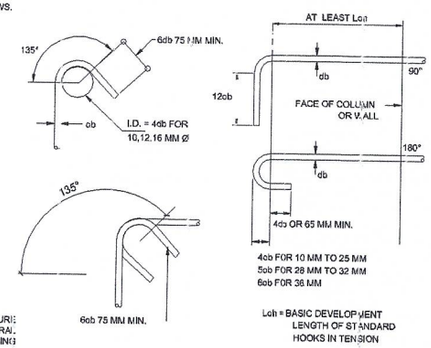


FIGURE 1. DETAILS OF STANDARD HOOKS

NOTES ON MASONRY WALLS

A. ALL MATERIALS AND WORKSMANSHIP SHALL BE IN ACCORDANCE WITH THE APPLICABLE STANDARDS AND SPECIFICATIONS OF THE NATIONAL CONCRETE MASONRY ASSOCIATION AND UNIFORM BUILDING CODE.

B. CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 GRADE N, NON-LOAD BEARING, UNLESS NOTED OTHERWISE ON PLAN.

C. MORTAR AND GROUT FOR ALL REINFORCED MASONRY SHALL CONFORM TO ASTM C270-TYPE M.

D. ALL MASONRY WALLS SHALL BE REINFORCED ACCORDING TO THE FOLLOWING SCHEDULE OF CONCRETE HOLLOW BLOCK REINFORCEMENT UNLESS OTHERWISE INDICATED IN THE PLANS.

SCHEDULE OF CONCRETE HOLLOW BLOCK REINFORCEMENT		
BLOCK THICKNESS (MM)	REINFORCEMENT	
	HORIZONTAL	VERTICAL
100	10 Ø at 800 O.C.	10 Ø at 600 O.C.
150	10 Ø at 800 O.C.	10 Ø at 600 O.C.

E. PROVIDE A MINIMUM OF 400 MM DEVELOPMENT LENGTH OR HOOK CHB WALL HORIZONTAL BARS INTO CONFINED CONCRETE (BOUNDARY ELEMENTS) (SEE TYPICAL WALL AND OPENING REINFORCEMENT DETAILS ON PLAN).

F. PROVIDE DOUBLE REINFORCEMENT AROUND OPENINGS AS SHOWN ON PLANS.

NOTES ON STRUCTURAL STEEL

A. ALL DETAILING FABRICATION AND ERECTION SHALL CONFORM TO AISC AND AWS SPECIFICATIONS AND CODES SPECIFY. ALL STEEL SHAPES AND SECTIONS SHALL CONFORM TO AISC LATEST ED. AND ASEP HANDBOOK OF STRUCTURAL STEEL SHAPES AND SECTIONS 1994 ED.

B. THE CONTRACTOR SHALL PREPARE FABRICATION (SHOP) DRAWINGS OF ALL STRUCTURAL STEEL WORKS BASED ON DESIGNS FOR APPROVAL OF THE STRUCTURAL ENGINEER PRIOR TO FABRICATION.

DESIGN CRITERIA:

A. DEAD LOADS		
CONCRETE	24	kN/m³
STEEL	77	kN/m³
B. LIVE LOADS		
ROOF	1	kPa 20.8 PSF
RESIDENTIAL	1.9	kPa 40 PSF
C. WIND VELOCITY	250 KPH	
D. SEISMIC ZONE	4	
E. ALLOWABLE SOIL BEARING CAPACITY	95	kPa

NOTES ON CONCRETE SLABS

A. ALL SLAB REINFORCEMENTS SHALL HAVE A CLEAR DISTANCE OF 20 MM FROM THE BOTTOM AND FROM THE TOP OF SLABS. TYPICAL BAR DETAILS FOR SLABS ARE SHOWN IN FIGURE 2.

B. IF SLABS ARE REINFORCED BOTHWAYS, BARS ALONG THE SHORTER SPAN SHALL BE PLACED BELOW THOSE ALONG THE SPAN AT THE CENTER AND OVER THE LONGER SPAN BARS NEAR THE SUPPORTS.

C. PROVIDE EXTRA REINFORCEMENT FOR CORNER SLABS TWO (2) ADJACENT DISCONTINUOUS EDGES AS SHOWN ON FIGURE 3.

DESIGN LIVE LOAD = 1.92 KPa (40 psf)

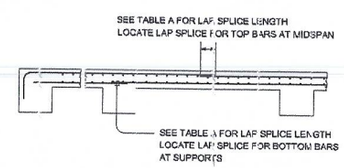


FIGURE 2

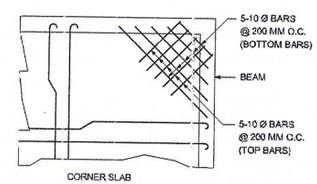
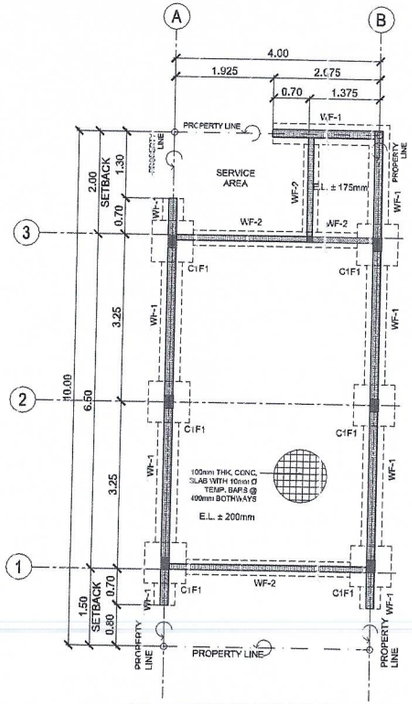
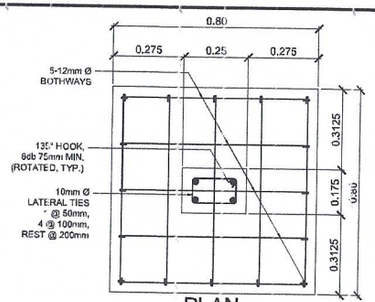


FIGURE 3

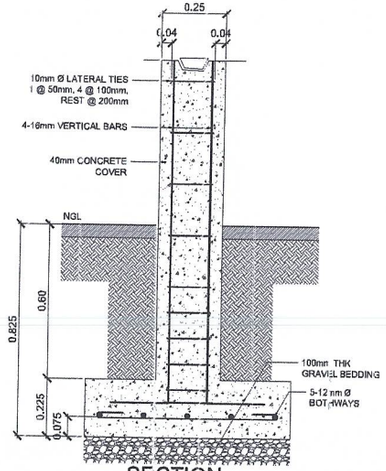
Office of the President NATIONAL HOUSING AUTHORITY Elliptical Road, Diliman, Quezon City	ENGINEER:	DESIGNED BY: HTDO CHECKED BY: DRAWN BY: R.T.DV. DATE: 9-05-2016 SHEET CONTENT: GENERAL NOTES	STANDARD DESIGNED PREPARED BY: HOUSING TECHNOLOGY DEVELOPMENT OFFICE REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	FOR IMPLEMENTATION BY: AMO REVIEWED BY: / SUBMITTED BY: / RECOMMENDING APPROVAL:	APPROVED BY:	SHEET NO.
PROJECT TITLE: PROPOSED STANDARD 28.40 SQ.M ROWHOUSE FOR YOLANDA PROJECT ONLY LOCATION:	SIGNATURE AND SEAL REG. No.: DATE: PTR No.: PLACE	REVISIONS: DATE: TITLE BLOCK 09/05/2016	ABIGAIL ANN A. CADORES SUPERVISING ENGINEER, TSU-HTDO	EDUARDO SJ. HERRERA DIVISION MANAGER, TSU-HTDO	MA. BENITA O. REGALA DEPARTMENT MANAGER, HTDO		MARCELINO P. ESCALADA, JR. GENERAL MANAGER	S 1/4



1 S-2 FOUNDATION PLAN
SCALE 1:50 M

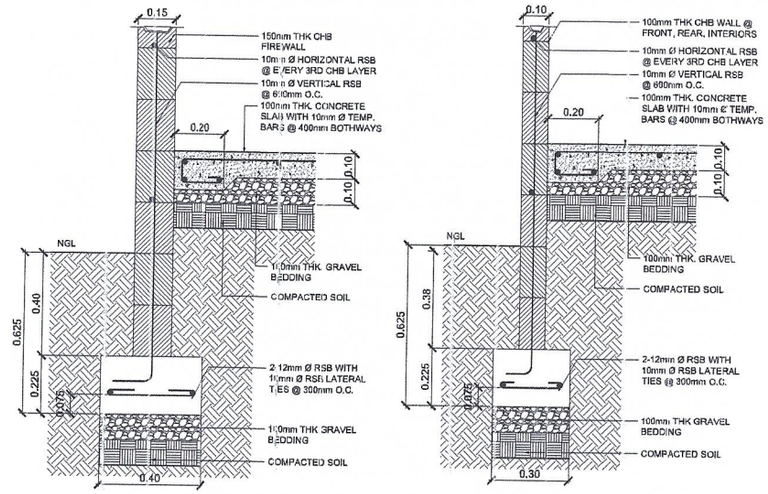


PLAN



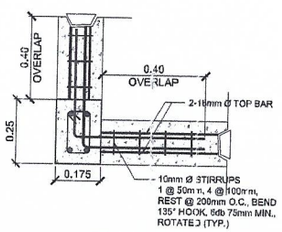
SECTION

2 S-2 COLUMN & FOOTING DETAIL
SCALE 1:10 M



WF-1 WF-2

4 S-2 WALL FOOTING DETAIL
SCALE 1:10 M



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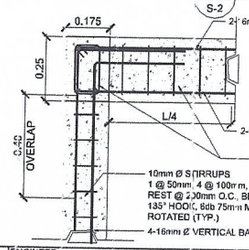
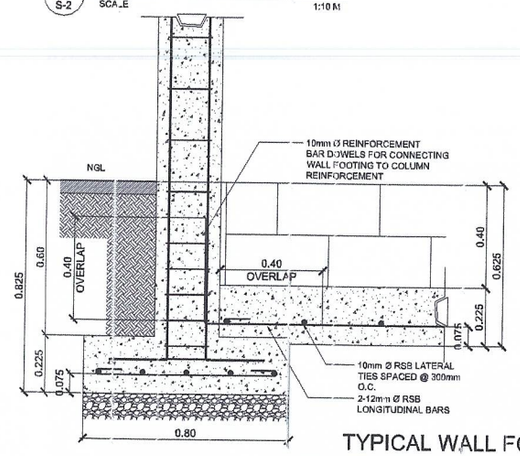


SECTION

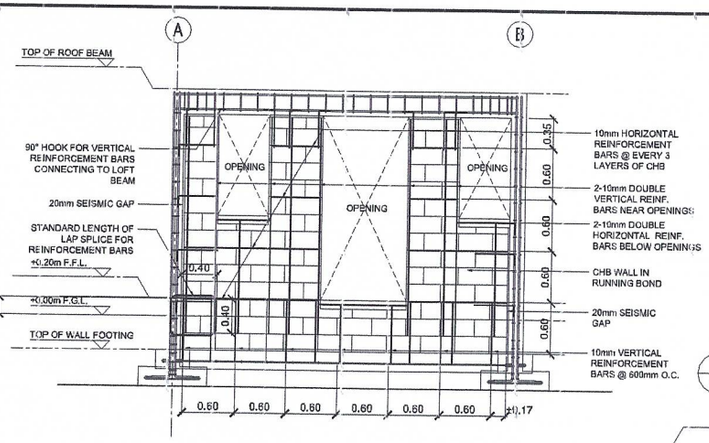
3 S-2 TYPICAL BEAM TO COLUMN CONNECTION
SCALE 1:10 M



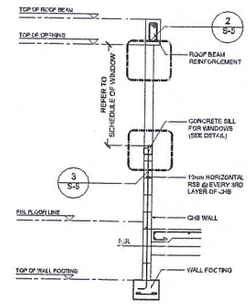
TYPICAL WALL FOOTING TO COLUMN CONNECTION

5 S-2 SCALE 1:10 M

Office of the President **NATIONAL HOUSING AUTHORITY** Elliptical Road, Diliman, Quezon City	ENGINEER:	DESIGNED BY: HTD / CHECKED BY: DRAWN BY: R.T.DV. DATE: 09-25-2016 SHEET CONTENT: FOUNDATION PLAN / COLUMN & FOOTING DETAIL / TYPICAL BEAM TO COLUMN CONNECTION DETAIL / TYPICAL WALL FOOTING TO COL. CONNECTION	STANDARD DESIGNED PREPARED BY: HOUSING TECHNOLOGY DEVELOPMENT OFFICE REVIEWED BY:	FOR IMPLEMENTATION BY: AMO		APPROVED BY:	SHEET NO.
PROJECT TITLE: PROPOSED STANDARD 28.40 SQ.M ROWHOUSE FOR YOLANDA PROJECT ONLY	SIGNATURE AND SEAL	REVISIONS: TITLE BLOCK DATE: 09/25/2015	SUBMITTED BY:	RECOMMENDING APPROVAL:	REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	S 2 / 4
LOCATION:	TEG No.: PTR No.: DATE: PLACE		ABIGAIL ANN A. CADORES SUPERVISING ENGINEER, TSU-HTDO	EDUARDO SJ. HERRERA DIVISION MANAGER, TSU-HTDO	MA. BENITA O. REGALA DEPARTMENT MANAGER, HTDO		MARCELINO P. ESCALADA, JR. GENERAL MANAGER	



1 S-4 SECTION DETAIL OF TYPICAL WALL & OPENING REINFORCEMENT
SCALE 1:30 M



2 S-4 WALL AND OPENING SECTION
SCALE 1:30 M

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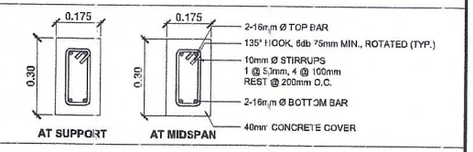
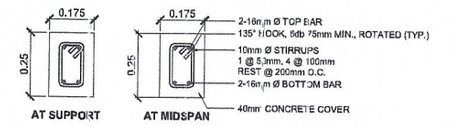
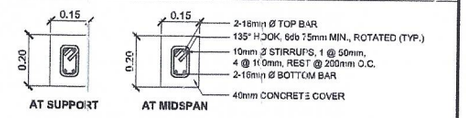
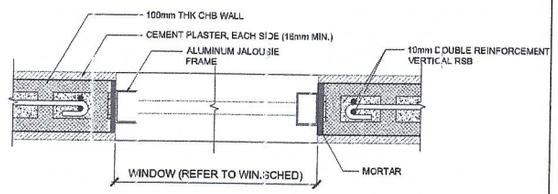
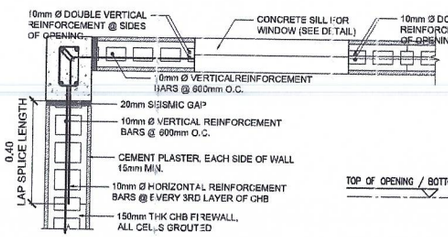
B-1 IB-1	
B-2 IB-2	
B-3	

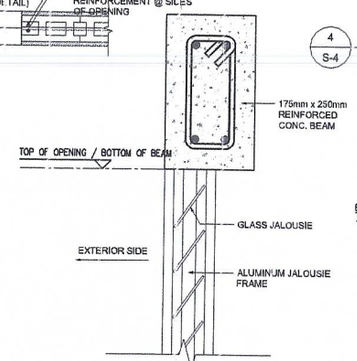
3 S-3 SCHEDULE OF BEAMS
SCALE 1:10 M



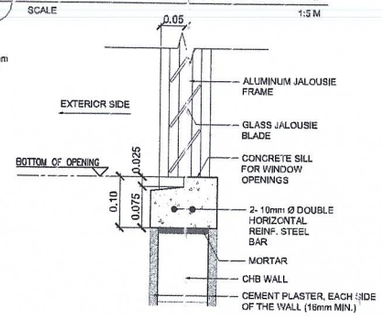
4 S-4 PLAN OF WINDOW OPENING
SCALE 1:5 M



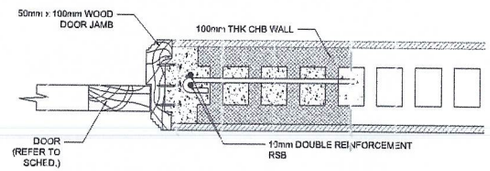
3 S-4 DETAILED PLAN OF VERTICAL REINFORCEMENT AT SIDES OF OPENINGS
SCALE 1:10 M



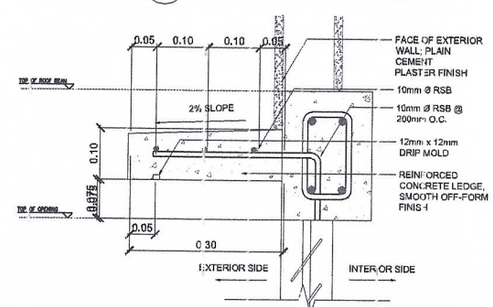
5 S-4 SECTION DETAIL ABOVE OPENING
SCALE 1:5 M



6 S-4 SECTION DETAIL OF CONCRETE SILL BELOW WINDOW OPENING
SCALE 1:5 M



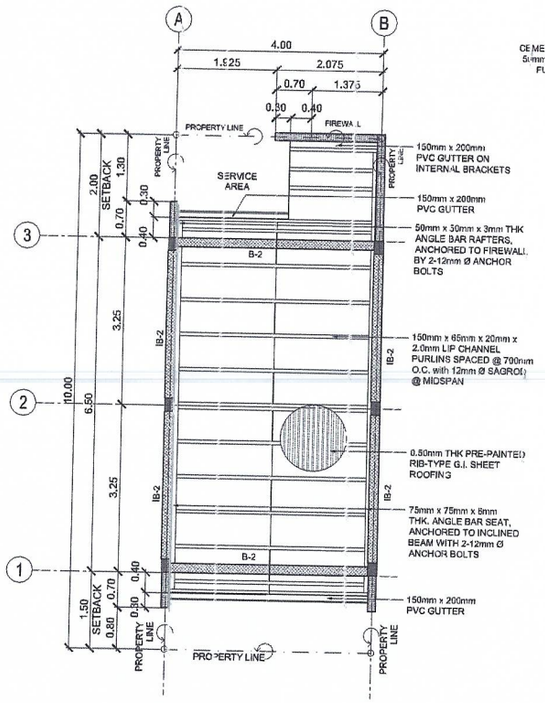
7 S-4 DOOR JAMB DETAIL
SCALE 1:5 M



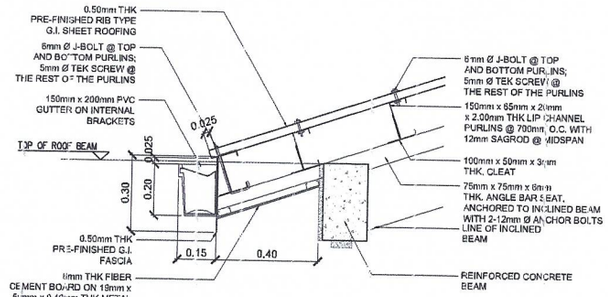
8 S-4 CONCRETE LEDGE DETAIL
SCALE 1:5 M

WALL & OPENING REINFORCEMENT DETAILS

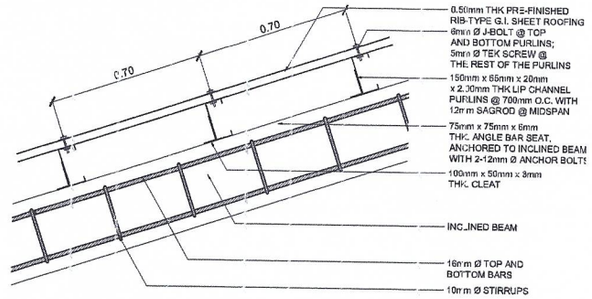
Office of the President NATIONAL HOUSING AUTHORITY Elliptical Road, Diliman, Quezon City	ENGINEER:	DESIGNED BY: HTD / CHECKED BY: DRAWN BY: R.T.DV. DATE: 09-05-2016 SHEET CONTENT: WALL & OPENING REINFORCEMENT DETAILS / SCHED. OF BEAMS/ DOOR JAMB DETAILS / CONC. LEDGE DETAIL	STANDARD DESIGNED PREPARED BY: HOUSING TECHNOLOGY DEVELOPMENT OFFICE REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	FOR IMPLEMENTATION BY: AMO REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET NO.
PROJECT TITLE: PROPOSED STANDARD 28.40 SQ.M ROWHOUSE FOR YOLANDA PROJECT ONLY LOCATION:	SIGNATURE AND SEAL REG No.: DATE: PTR No.: PLACE	REVISIONS: DATE: TITLE BLOCK 03/22/2013	ABIGAIL ANN A. CADORES SUPERVISING ENGINEER, TSU-HTDO	EDUARDO SJ. HERRERA DIVISION MANAGER, TSU-HTDO	MA. BENITA O. REGALA DEPARTMENT MANAGER, HTDO			MARCELINO P. ESCALADA, JR. GENERAL MANAGER	S 3 4



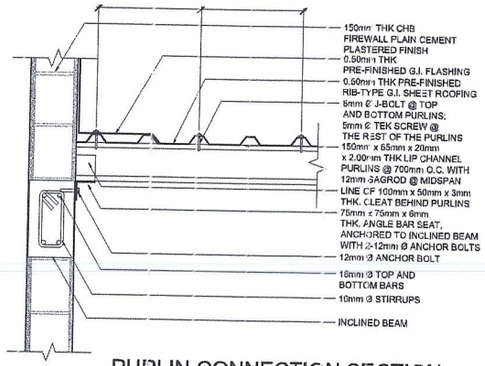
1 S-4 ROOF FRAMING PLAN
SCALE 1:50 M



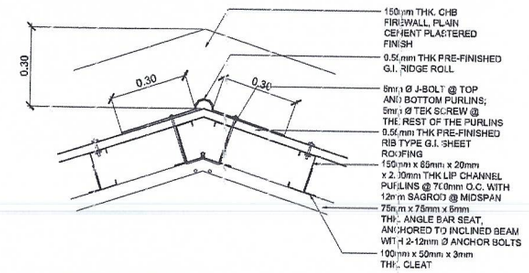
2 S-4 EAVES & GUTTER SECTION DETAIL
SCALE 1:10 M



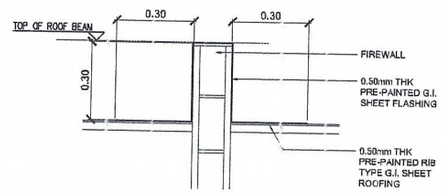
5 S-4 INCLINED BEAM SECTION DETAIL
SCALE 1:10 M



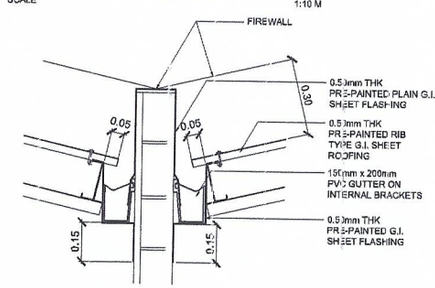
3 S-4 PURLIN CONNECTION SECTION DETAIL
SCALE 1:10 M



6 S-4 ROOF RIDGE SECTION DETAIL
SCALE 1:10 M



4 S-4 FLASHING SECTION DETAIL
SCALE 1:10 M



7 S-4 INSIDE GUTTER SECTION DETAIL
SCALE 1:10 M

Office of the President
NATIONAL HOUSING AUTHORITY
Elliptical Road, Diliman, Quezon City

PROJECT TITLE:
PROPOSED STANDARD 28.40 SQ.M ROWHOUSE FOR YOLANDA PROJECT ONLY

LOCATION:

ENGINEER:
SIGNATURE AND SEAL
REG No.: DATE:
PTR No.: PLACE

DESIGNED BY: HTD /CHECKED BY:
DRAWN BY: R.T.DV. DATE: 09-05-2019
SHEET CONTENT: ROOF FRAMING PLAN/ ROOFING DETAILS
REVISIONS: DATE:
TITLE BLOCK 09/24/2019

STANDARD DESIGNED PREPARED BY: HOUSING TECHNOLOGY DEVELOPMENT OFFICE
REVIEWED BY: ABIGAIL ANN A. CADORES, SUPERVISING ENGINEER, TSU-HTDO
SUBMITTED BY: EDUARDO S. HERRERA, DIVISION MANAGER, TSU-HTDO
RECOMMENDING APPROVAL: MA. BENITA O. REGALA, DEPARTMENT MANAGER, HTDO

FOR IMPLEMENTATION BY: AMO
REVIEWED BY:
SUBMITTED BY:
RECOMMENDING APPROVAL:

APPROVED BY: MARCELINO P. ESCALADA, JR., GENERAL MANAGER

SHEET NO. S 4/4

LOAD SCHEDULE - LP UNIT/TYPICAL

NEMA 1 ENCLOSURE

MAIN: 30AT, 50 AF, 2P, 230V, 10KAIC

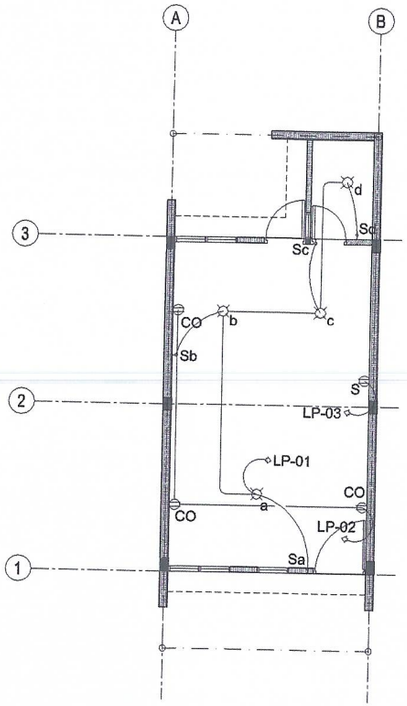
CKT NO.	LOAD DESCRIPTION	V	VA	A	WIRE SIZE	CONDUIT SIZE	BREAKERS				
							AT	AF	P	KAIC	TYPE
1	LIGHTING OUTLET 4 - 100VA	230	400	1.74	2 - 1.6mmø THHN	20mmø RNC PNS:14	15	50	2	10	BOLT-ON
2	CONVENIENCE OUTLET 3 - 200VA	230	600	2.61	2 - 3.5mm² THHN	20mmø RNC PNS:14	20	50	2	10	BOLT-ON
3	STOVE OUTLET	230	1500	6.52	2 - 3.5mm² THHN	20mmø RNC PNS:14	20	50	2	10	BOLT-ON
4	SPARE	230	1500	6.52			20	50	2	10	BOLT-ON
	TOTAL	230	4000	17.39							

IT = 4000/230 x 80%
= 13.91 A

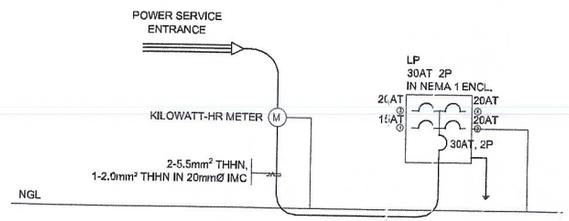
Applying 80% Demand Factor
Use: 2 - 5.5mm2 THHN in 20mmø Rigid Non-metallic conduit PNS:14

LEGEND:

- LIGHTING OUTLET
- SINGLE - POLE SWITCH IN A GANG
- DUPLEX CONVENIENCE OUTLET
- STOVE OUTLET
- KILOWATT HOUR METER
- CIRCUIT BREAKER, RATING AS INDICATED
- SERVICE ENTRANCE
- PANELBOARD, NEMA 1 ENCLOSURE



1 / E-1 ELECTRICAL LAYOUT PLAN
SCALE 1:50 M



2 / E-1 SINGLE LINE DIAGRAM
SCALE 1:N/S

GENERAL NOTES:

1. THE ELECTRICAL INSTALLATION HEREIN SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, THE EXISTING LOCAL ORDINANCES, RULES & REGULATIONS OF LOCAL ENFORCING AUTHORITY & REQUIREMENTS OF THE LOCAL POWER COMPANY.
2. THE TYPE OF POWER SERVICE TO BE SUPPLIED SHALL BE 230 VAC, SINGLE PHASE, 2 WIRE, 60HZ SECONDARY SERVICE ENTRANCE.
3. WIRING METHOD SHALL BE DONE IN RIGID NON-METALLIC PVC CONDUIT TYPE UNLESS OTHERWISE INDICATED IN PLAN.
4. ALL MATERIALS TO BE USED SHALL BE NEW AND OF THE APPROVED TYPE AS TO LOCATION AND PURPOSE INTENDED. PROVIDE PULL BOX WHENEVER NECESSARY EVEN WHEN NOT INDICATED IN DRAWING.
5. MINIMUM SIZE OF WIRE AND CONDUIT SHALL BE 2.0MM² THHN AND 20MMØ RIGID PVC PNS:14 TRADE SIZE RESPECTIVELY.
6. STANDARD TYPES OF ACCESSORIES, SPLICING DEVICES TERMINATION AND OTHER APPURTENANCES OF THE ENTIRE ELECTRICAL INSTALLATION SHALL BE USED.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSULTING AND COORDINATING POWER WITH THE LOCAL POWER COMPANY AS REGARDS TO SERVICE CONNECTION REQUIREMENTS.
8. MOUNTING HEIGHTS HEREUNDER SHALL BE AS FOLLOWS:
   TUMBLER SWITCH..... 1.40 M ABOVE FLOOR FINISH
   CONVENIENCE OUTLET..... 0.30 M ABOVE FLOOR FINISH
   PANEL BOARD..... 1.60 M ABOVE FLOOR FINISH
   COUNTER TOP OUTLET..... 0.30 M ABOVE WORKING TABLE
9. THE CONTRACTOR SHALL SECURE ALL NECESSARY WIRING PERMITS, CERTIFICATE OF THE ELECTRICAL INSPECTION AND PAY ALL THE FEES NECESSARY THERE TO.
10. OPEN WIRING INSTALLATION SHALL BE RUN IN PARALLEL WITH AND/OR AT RIGHT ANGLE TO TRUSSES AND COLUMNS, DIAGONAL RUNS SHALL NOT BE PERMITTED. PROVIDE CONDUIT CLAMP ON CONDUITS TO ENSURE FIRM ANCHORAGE.
11. ALL INSTALLATION HEREIN SHALL BE DONE UNDER THE DIRECT SUPERVISION OF LICENSED ELECTRICAL ENGINEER OR MASTER ELECTRICIAN.
12. SUBMIT AS-BUILT PLANS OF COMPLETED ELECTRICAL INSTALLATION.
13. PROVIDE LOCKNUT AND ADAPTOR TO ALL ATTACHMENT/CONNECTIONS OF PIPES & METAL FRAMES OR BOXES.

Office of the President
NATIONAL HOUSING AUTHORITY
Elliptical Road, Diliman, Quezon City

PROJECT TITLE:
PROPOSED STANDARD 28.40 SQ.M ROWHOUSE FOR YOLANDA PROJECT ONLY

LOCATION:

ENGINEER:
SIGNATURE AND SEAL
REG No.: DATE:
PTR No.: PLACE:

DESIGNED BY: HTDO CHECKED BY:
DRAWN BY: R.T.DV. DATE:
SHEET CONTENT: GENERAL NOTES / ELECTRICAL LAYOUT PLAN / SINGLE LINE DIAGRAM
REVISIONS: DATE:
TITLE BLOCK 09/03/2013

STANDARD DESIGNED PREPARED BY: HOUSING TECHNOLOGY DEVELOPMENT OFFICE
REVIEWED BY: ABIGAIL ANN A. CADORES, SUPERVISING ENGINEER, TSU-HTDO
SUBMITTED BY: EDUARDO SJ. HERRERA, DIVISION MANAGER, TSU-HTDO
RECOMMENDING APPROVAL: MA. BENITA O. REGALA, DEPARTMENT MANAGER, HTDO

FOR IMPLEMENTATION BY: AMO
REVIEWED BY:
SUBMITTED BY:
RECOMMENDING APPROVAL:

APPROVED BY: MARCELINO P. ESCALADA, JR., GENERAL MANAGER

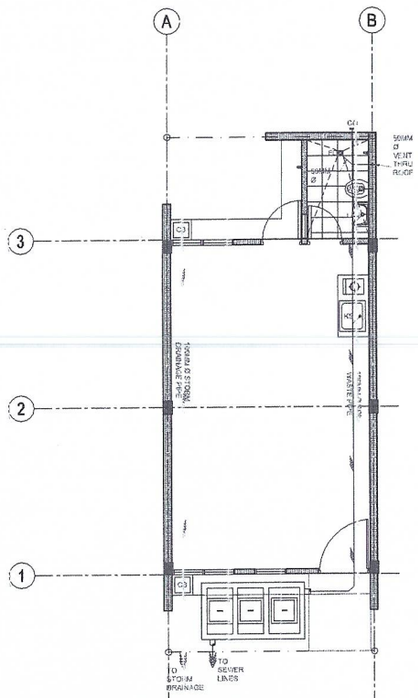
SHEET NO. E 1/1

GENERAL NOTES:

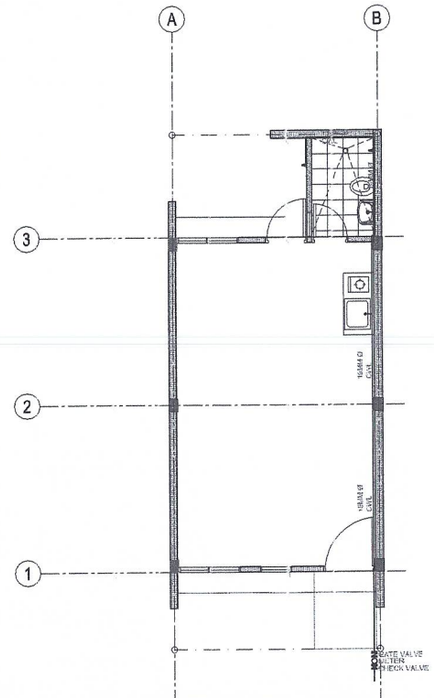
1. ALL PLUMBING WORKS TO BE DONE AND SIZES OF THE PIPES TO BE USED SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF UNIFORM PLUMBING CODE OF THE PHILIPPINES AND LOCAL REGULATIONS AND ORDINANCES.
2. ALL PIPES SHALL BE INSTALLED AS INDICATED IN THE WORKING DRAWINGS. ANY RELOCATION REQUIRED FOR PROPER EXECUTION OF OTHER TRADES SHALL BE UPON THE APPROVAL OF SANITARY ENGINEER.
3. ALL PIPES SHALL BE PROVIDED BY PROPER HANGER AND SUPPORT.
4. ALL FIXTURES SHALL BE VENTED INDIVIDUALLY AND WATER LINES SHALL BE VALVE BY GROUP.
5. ALL PLUMBING FITTING SHALL BE ACCESSIBLE FOR MAINTENANCE. PROVIDE MANHOLE IF SUCH INSTALLATION ARE INSIDE THE CEILING.
6. ALL CHANGES IN DIRECTION SHALL BE MADE BY THE APPROPRIATE USE OF FORTY FIVE (45) WYE LONG SWEEP QUARTER BEND. ONE EIGHT WHEN THE CHANGE OF FLOW IS FROM HORIZONTAL TO VERTICAL A SINGLE BEND COMBINATION MAY BE USED ONLY ON VENT PIPE.
7. NO DOUBLE HUB OR DOUBLE TEE BRANCH SHALL BE USED ON HORIZONTAL SOIL AND WASTE LINES.
8. PROVIDE PIPE SLEEVES AT WALL, COLUMNS OR SLAB TO PROTECT FROM BREAKAGE.
9. ALL SLOPES FROM HORIZONTAL DRAINAGE PIPES SHALL MAINTAIN 1% UNLESS OTHERWISE SPECIFIED.
10. THE BRAND AND OTHER DETAILED PLUMBING FIXTURES SHALL BE IN ACCORDANCE WITH THE SCHEDULE FURNISHED BY THE ARCHITECT.
11. GATE VALVE SHALL BE BRONZE BODY, SOLID WEDGE TYPE, SCREWED OR FLANGED END.
12. USE UPLASTICIZED POLYVINYL CHLORIDE (uPVC) FOR ALL WATER PIPING SYSTEM.
13. USED uPVC SANITARY PIPING SYSTEM SERIES 1000 FOR 100Ø AND SMALLER AND SBR-34 GRAVITY SEWER MAIN uPVC PIPING SYSTEM FOR 150Ø AND BIGGER.
14. ENGINEER-IN-CHARGE TO VERIFY ACTUAL LOCATION AND ELEVATION OF STREET DRAINAGE, STREET SEWER AND STREET WATER MAINS FOR CONNECTION BEFORE CONSTRUCTION.

LEGEND:

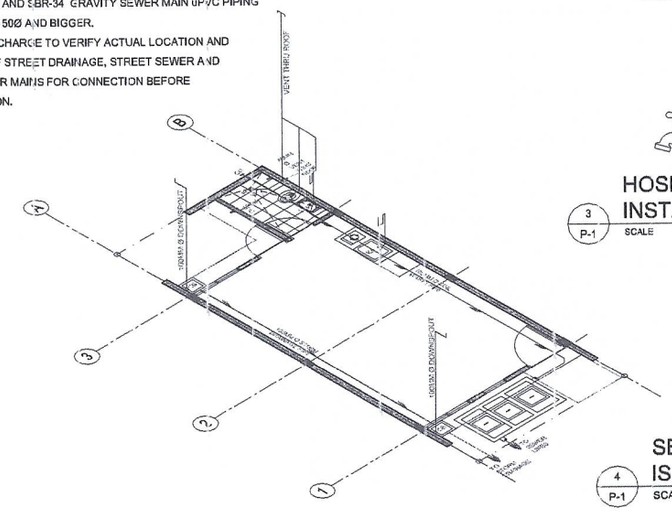
SIZE	DESCRIPTION	LINE TYPE
100MMØ	SOIL WASTE PIPE	
100MMØ	DOWNSPOUT	
50MMØ	SOIL BRANCH/ VENT	
19MMØ	COLD WATER LINE	
100MMØ	STORM WATER LINE	



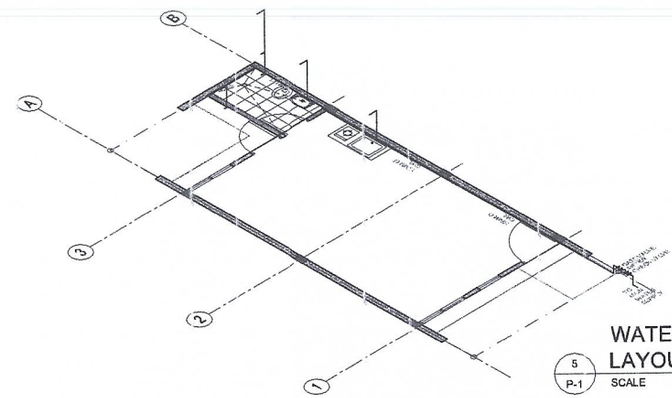
1 / P-1 SEWER AND DRAINAGE LAYOUT
SCALE 1:50 M



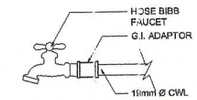
2 / P-1 WATER SUPPLY LAYOUT
SCALE 1:50 M



3 / P-1 SEWER AND DRAINAGE ISOMETRICLAYOUT
SCALE NTS



5 / P-1 WATER SUPPLY ISOMETRIC LAYOUT
SCALE NTS

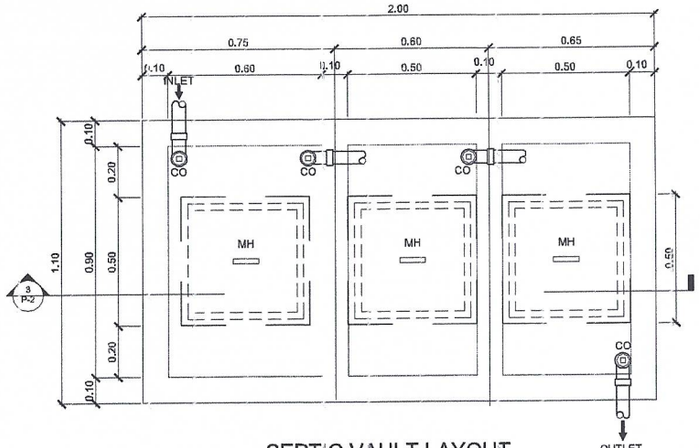


4 / P-1 HOSE BIBB/ FAUCET INSTALLATION DETAIL
SCALE NTS

Office of the President NATIONAL HOUSING AUTHORITY Elliptical Road, Diliman, Quezon City	ENGINEER: SIGNATURE AND SEAL REG No.: DATE: PTR No.: PLACE	DESIGNED BY: HTDO CHECKED BY: DRAWN BY: E.C.S. DATE: 10-03-2016 SHEET CONTENTS: SEWER & DRAINAGE LAYOUT/ WATER SUPPLY LAYOUT/ SEWER & DRAINAGE ISO LAYOUT/ WATER SUPPLY ISO. LAYOUT REVISIONS: DATE:	STANDARD DESIGNED PREPARED BY: HOUSING TECHNOLOGY DEVELOPMENT OFFICE REVIEWED BY: SUBMITTED BY: RECOMMENDING APPROVAL: EDUARDO SJ. HERRERA DIVISION MANAGER, TSUHTDO MA. BENITA O. REGALA DEPARTMENT MANAGER, HTDO	FOR IMPLEMENTATION BY: AMO REVIEWED BY: SUBMITTED BY: RECOMMENDING APPROVAL:	APPROVED BY: MARCELINO P. ESCALADA, JR. GENERAL MANAGER	SHEET NO. P 1 / 2

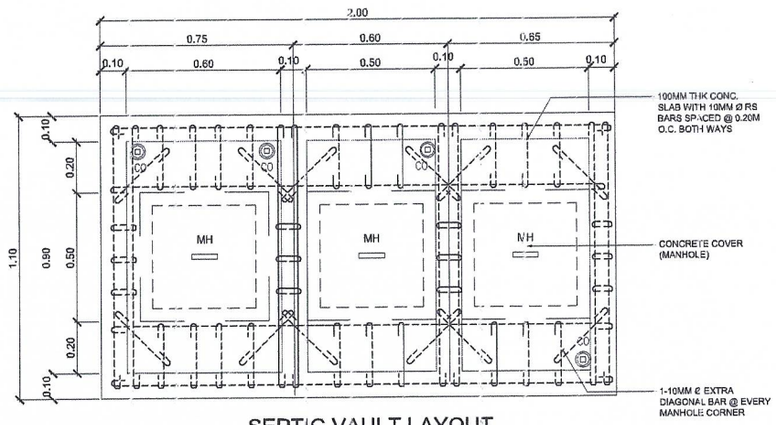
PROJECT TITLE:
PROPOSED STANDARD 28.40 SQ.M ROWHOUSE FOR YOLANDA PROJECT ONLY

LOCATION:



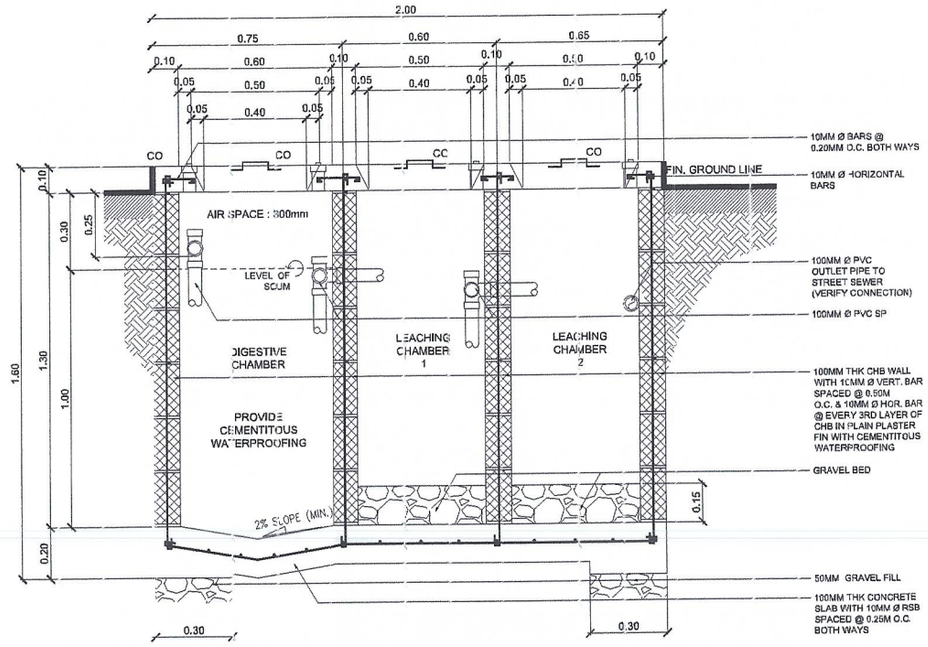
SEPTIC VAULT LAYOUT PLAN

1 / P-2 SCALE 1:10 M



SEPTIC VAULT LAYOUT DETAIL

2 / P-2 SCALE 1:10 M



SEPTIC VAULT SECTION DETAIL

3 / P-2 SCALE 1:10 M

Office of the President **NATIONAL HOUSING AUTHORITY** Elliptical Road, Diliman, Quezon City	ENGINEER:	DESIGNED BY: HTDO / CHECKED BY: DRAWN BY: R.T.D.V. DATE: 09-05-2016 SHEET CONTENT:	STANDARD DESIGNED PREPARED BY: HOUSING TECHNOLOGY DEVELOPMENT OFFICE REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	FOR IMPLEMENTATION BY: AMO REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET NO.
PROJECT TITLE: PROPOSED STANDARD 28.40 SQ.M ROWHOUSE FOR YOLANDA PROJECT ONLY	SIGNATURE AND SEAL	SEPTIC VAULT DETAILS REVISIONS: DATE: TITLE BLOCK 04/22/2013		EDUARDO SJ. HERRERA DIVISION MANAGER, TSUHTDO	MA. BENITA O. REGALA DEPARTMENT MANAGER, HTDO				MARCELINO P. ESCALADA, JR. GENERAL MANAGER	P 2/2
LOCATION:	REG No.: DATE: PTR No.: PLACE:									