NOTE:

PURSUANT TO ITEM 5 OF ANNEX 'A' OF THE REVISED IMPLEMENTING RULES AND REGULATION OF R.A. 9184, THE APPROVAL BY THE AUTHORIZED GOVERNMENT OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGNS UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGNS NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.

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ELMER T. RAMONEDA
PROJECT MANAGER

1 | 1 AR — EXTERIOR PERSPECTIVE
SCALE NTS

TABLE OF CONTENTS

Office of the Building Official

DISTRICT / CITY / MUNICIPALITY

LAND USE & ZONING

LINE & GRADE

ARCHITECTURAL

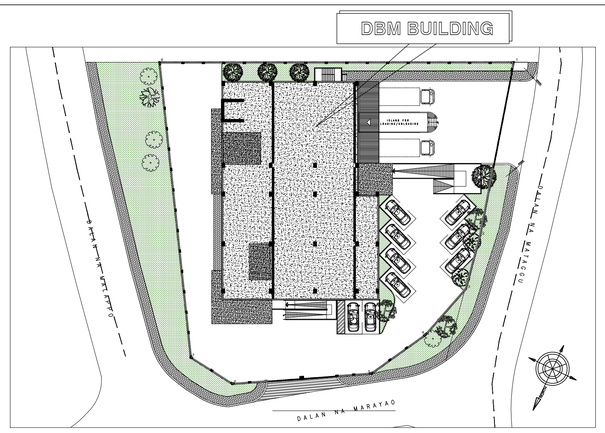
STRUCTURAL

SANITARY

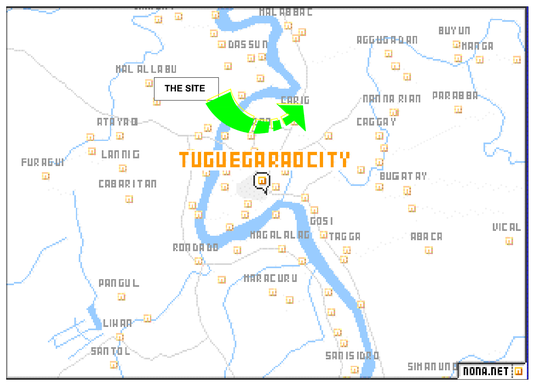
ELECTRICAL

MECHANICAL

ELECTRONICS



2 | 1 AR — MASTER SITE KEY PLAN
SCALE NTS



3 | 1 AR — LOCATION MAP
SCALE NTS

4 | 1 AR — VICINITY MAP
SCALE NTS

URBAN ENGINEERS
CONSULTING CIVIL ENGINEERS
in joint venture with
J.F. CANCIO & Associates
ENGINEERS CONSULTANTS
PTC Engineers & Associates

ARCHITECT:	SUBMITTED:
GODOFREDO L. GARCIA	ELMER T. RAMONEDA
PRC.NO.: 18537 DATE: FEB-08-2021	PROJECT MANAGER
PTR NO.: 1249395 DATE: MAY-21-2019	
PLACE: CABANATUAN CITY TIN NO.: 427991026	

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

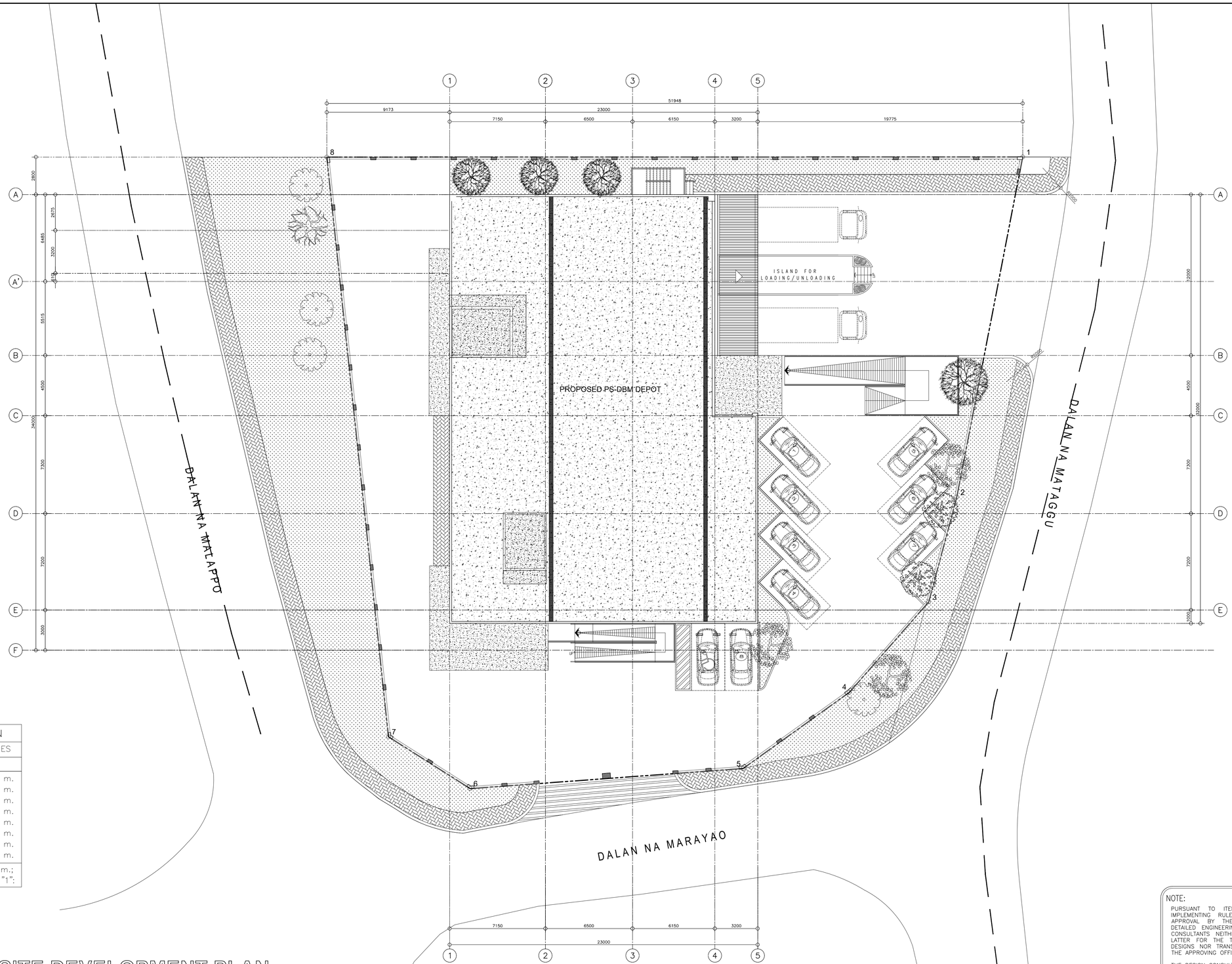
REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:
JOSEPHINE P. ISTURIS	(SEE COVER SHEET)	(SEE COVER SHEET)
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	**EDWIN C. MATANGUIHAN**	**EMIL K. SADAIN, CESO I**
	OIC, ASST.DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II
CARIG SUR, TUGUEGARAO CITY

SHEET CONTENTS:
EXTERIOR PERSPECTIVE
VICINITY MAP
LOCATION MAP
SITE DEVELOPMENT PLAN

SET NO.: A

SHEET NO.: 1 / 36



TECHNICAL DESCRIPTION		
LINES	BEARINGS	DISTANCES
LOT 3-H-1		
1-2	N.34-39E.	25.84 m.
2-3	N.38-38E.	8.10 m.
3-4	N.64-59E.	8.98 m.
4-5	N.78-03E.	9.75 m.
5-6	S.70-32E.	20.44 m.
6-7	S.33-56E.	7.22 m.
7-8	S.17-36W.	43.50 m.
8-1	N.66-20W.	51.95 m.
TIE LINE: N.14-37W., 1689.19 m.; From MBM No.6, CAD-151 Corner "1":		

1 | 2
AR

SITE DEVELOPMENT PLAN

SCALE 1:150MTS

NOTE:

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PROJECT MANAGER

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CARIG SUR, TUGUEGARAO CITY

SHEET CONTENTS:
SITE DEVELOPMENT PLAN
Scale 1:150m

SET NO.: A

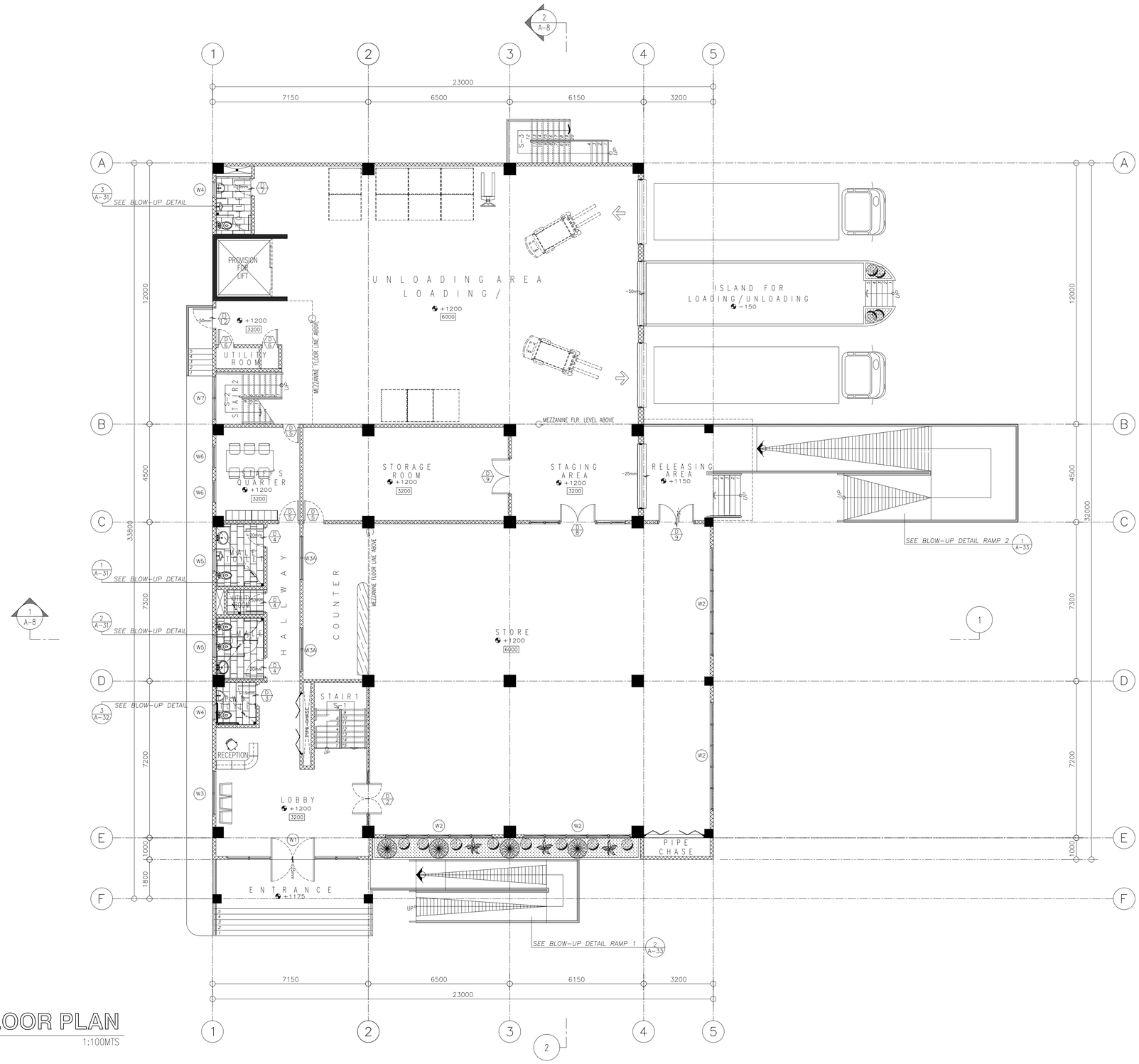
SHEET NO.: 2 / 36

LEGENDS:

- 000 — FLOOR TO FLOOR HEIGHT
- +000 — FINISH FLOOR LEVEL
- LEVEL CHANGE FOR FINISH
- CHB WALL
- SHEAR WALL/BEARING WALL
- COLUMN
- S-1 — STAIR TAG
- D — DOOR TAG
- W1 — WINDOW TAG

GENERAL NOTES:

1. ANY DISCREPANCY FOUND IN THE DRAWING THE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY



GROUND FLOOR PLAN

SCALE 1:100MTS

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CARIG SUR, TUGUEGARAO CITY

SHEET CONTENTS:
GROUND FLOOR PLAN
Scale 1:100m

SET NO.: A

SHEET NO.: 3 / 36

LEGENDS:

- 000 — FLOOR TO FLOOR HEIGHT
- +000 — FINISH FLOOR LEVEL
- LEVEL CHANGE FOR FINISH
- CHB WALL
- SHEAR WALL/BEARING WALL
- COLUMN
- S-1 — STAIR TAG
- D — DOOR TAG
- W1 — WINDOW TAG

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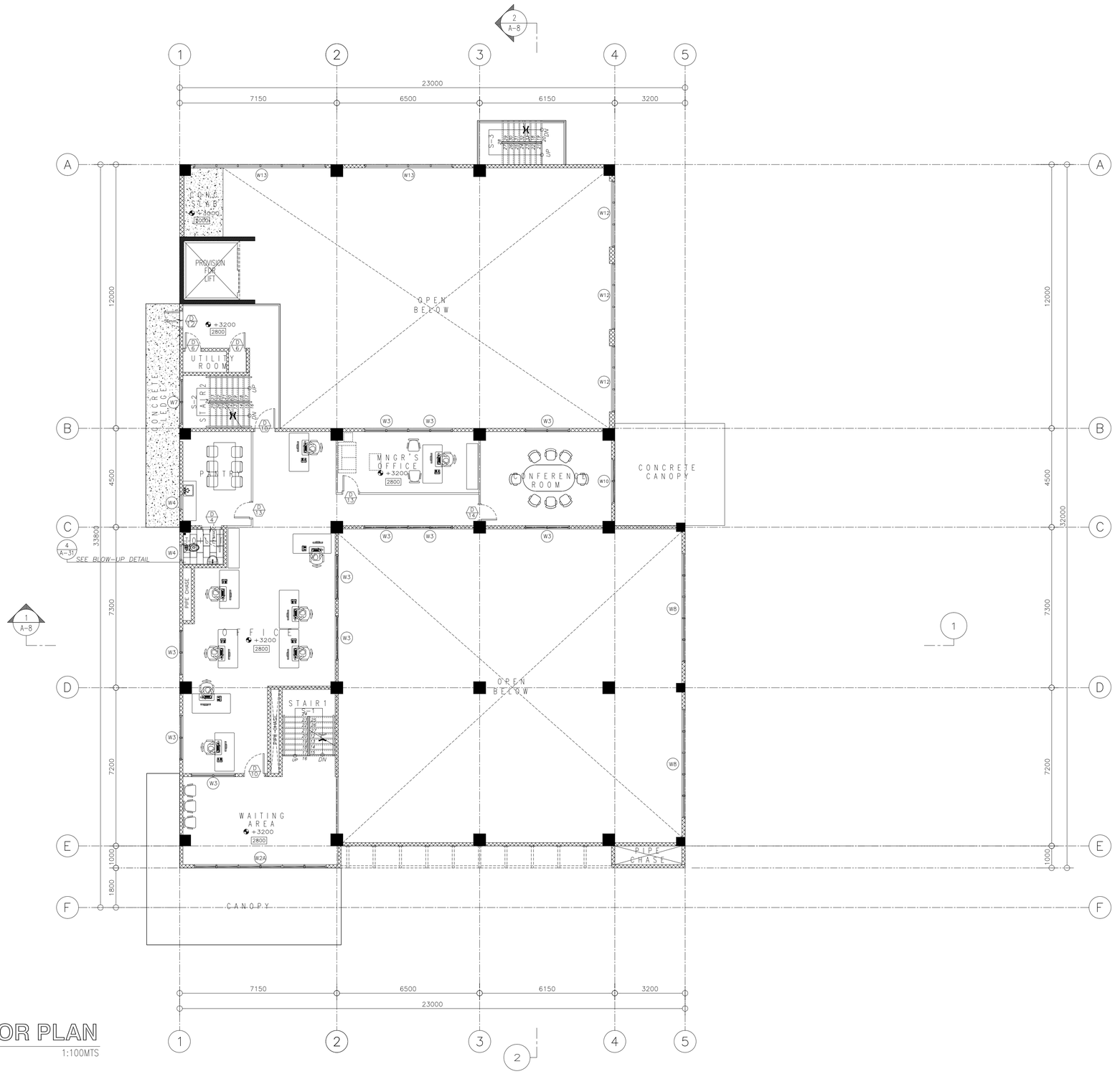

MEZZANINE FLOOR PLAN

1 | 4
AR

SCALE 1:100MTS

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BONIFACIO DRIVE, PORT AREA, MANILA

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CARIG SUR, TUGUEGARAO CITY

SHEET CONTENTS:
MEZZANINE LEVEL PLAN
Scale 1:100m

SET NO.: A

SHEET NO.: 4 / 36

LEGENDS:

- 000 — FLOOR TO FLOOR HEIGHT
- +000 — FINISH FLOOR LEVEL
- LEVEL CHANGE FOR FINISH
- CHB WALL
- SHEAR WALL/BEARING WALL
- COLUMN
- S-1 — STAIR TAG
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- W1 — WINDOW TAG

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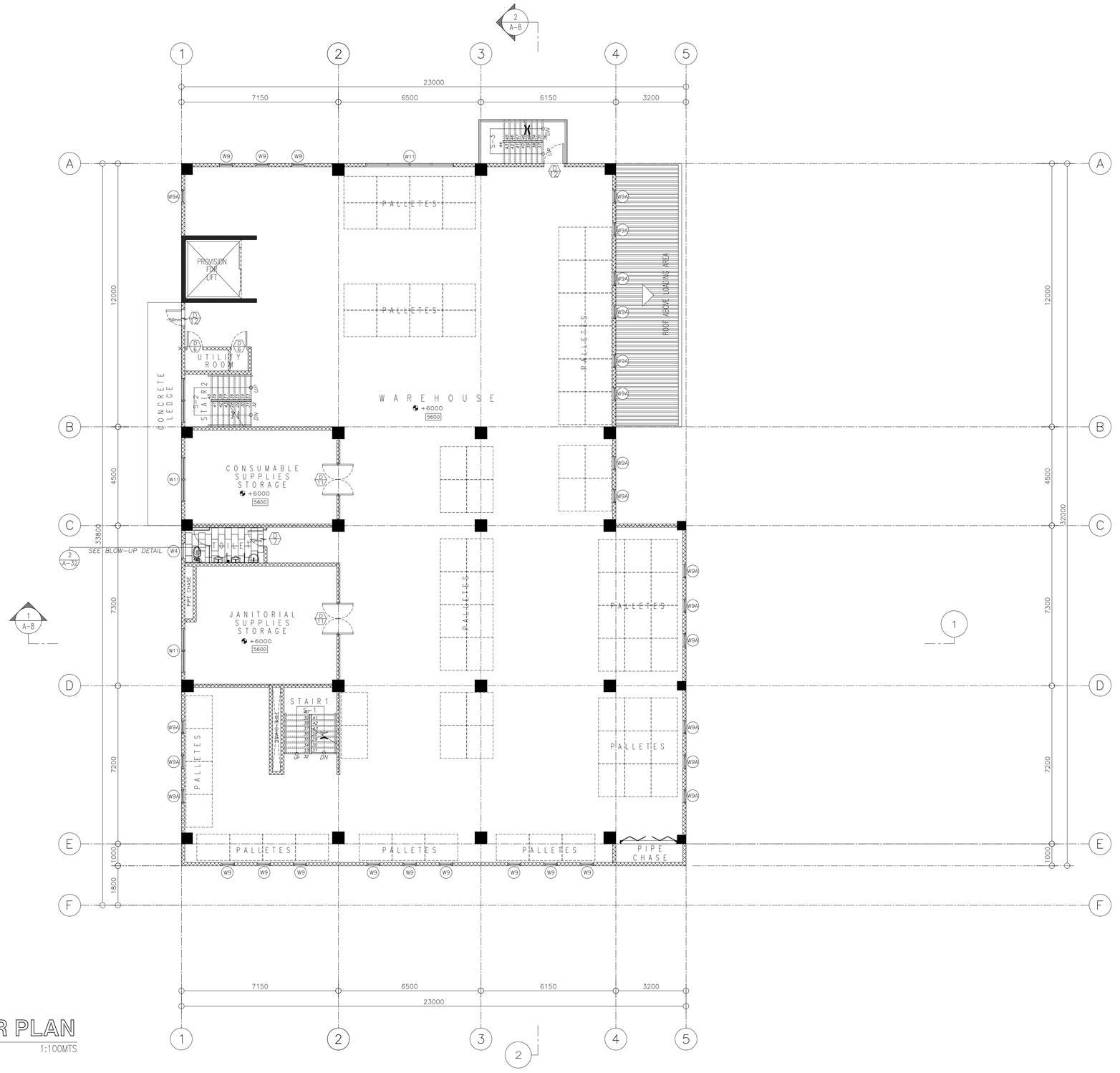

SECOND FLOOR PLAN

1 5 / AR — SCALE 1:100MTS

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ARCHITECT:	SUBMITTED:	REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:	PROJECT & LOCATION:	SHEET CONTENTS:	SET NO.	SHEET NO.
GODOFREDO L. GARCIA PRC NO.: 18537 DATE: FEB-08-2021 PTR NO.: 1249395 DATE: MAY-21-2019 PLACE: CABANATUAN CITY TIN NO.: 427991026	ELMER T. RAMONEDA PROJECT MANAGER	JOSEPHINE P. ISTURIS CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	(SEE COVER SHEET) EDWIN C. MATANGUIHAN OIC, ASST. DIRECTOR, BUREAU OF DESIGN	(SEE COVER SHEET) EMIL K. SADAIN, CESO I UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES	PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II CARIG SUR, TUGUEGARAO CITY	SECOND FLOOR PLAN Scale 1:100m	A	5 36

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

LEGENDS:

- 000 — FLOOR TO FLOOR HEIGHT
- +000 — FINISH FLOOR LEVEL
- LEVEL CHANGE FOR FINISH
- CHB WALL
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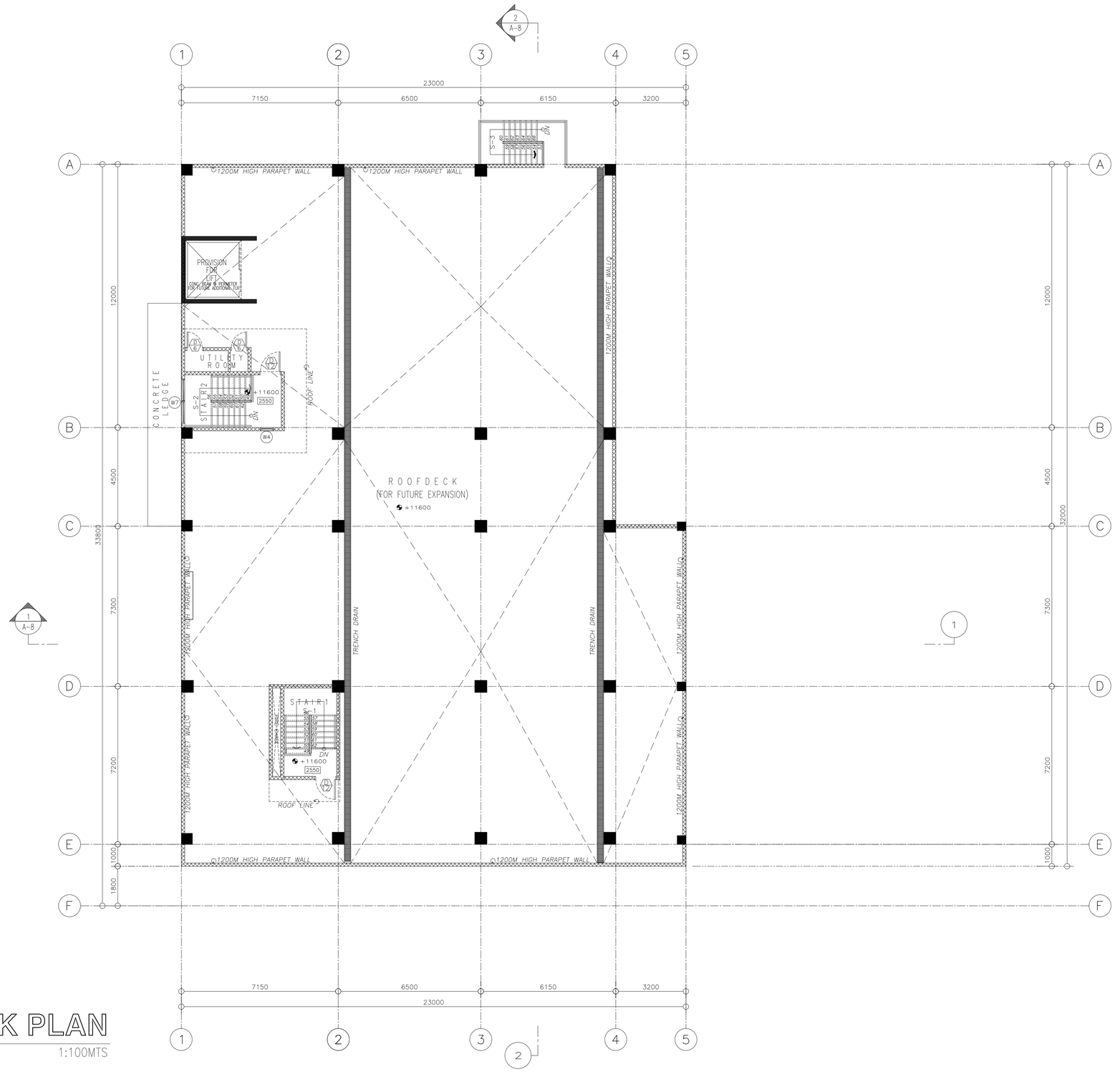

ROOF DECK PLAN

1 | 6
AR

SCALE 1:100MTS

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BONIFACIO DRIVE, PORT AREA, MANILA

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SHEET CONTENTS:
ROOF DECK PLAN
Scale 1:100m

SET NO.: A

SHEET NO.: 6 / 36

LEGENDS:

- 000 — FLOOR TO FLOOR HEIGHT
- +000 — FINISH FLOOR LEVEL
- LEVEL CHANGE FOR FINISH
- CHB WALL
- SHEAR WALL/BEARING WALL
- COLUMN
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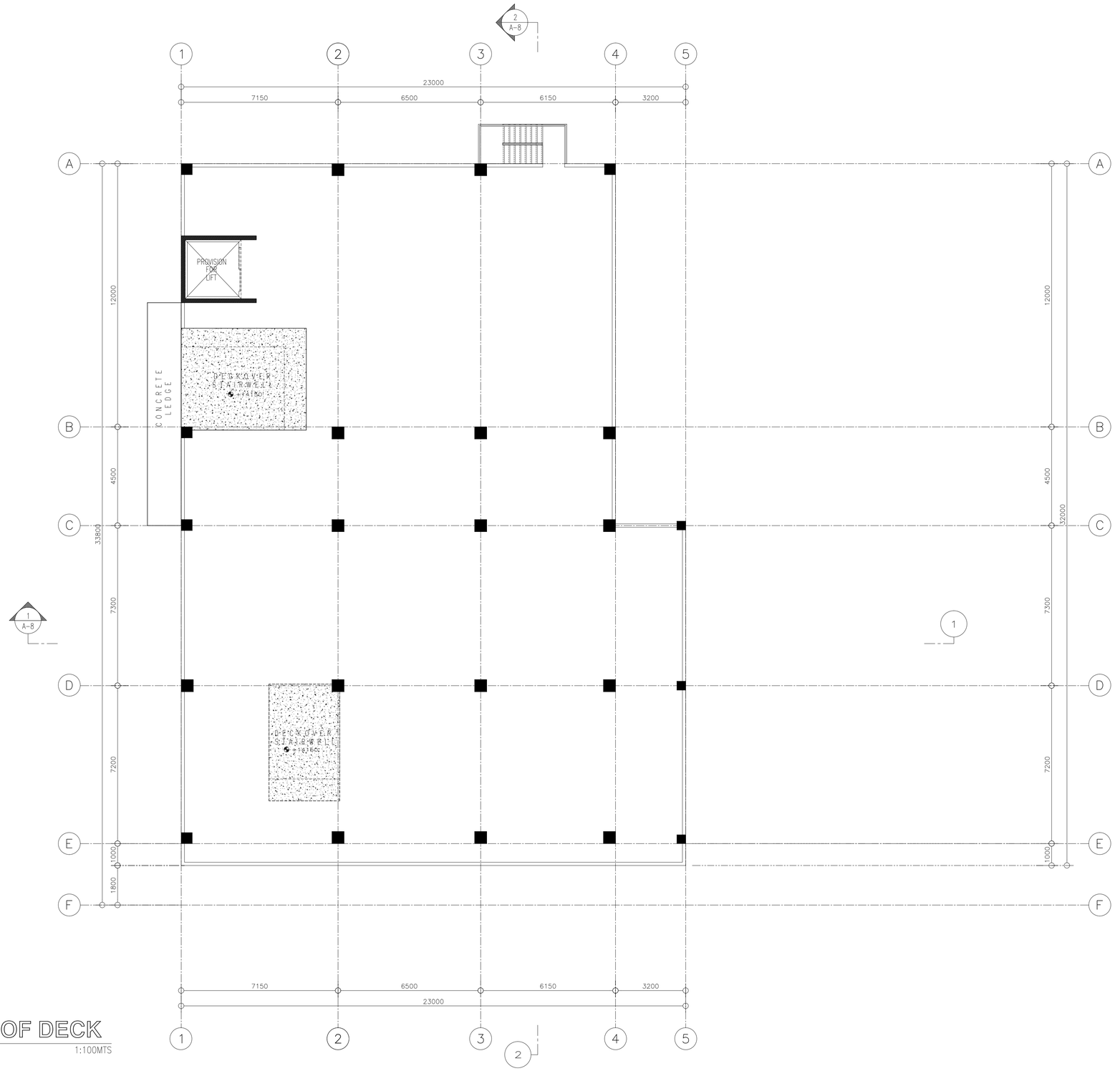

DECK OVER ROOF DECK

1 | 7
AR

SCALE 1:100MTS

NOTE:

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REPUBLIC OF THE PHILIPPINES
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BONIFACIO DRIVE, PORT AREA, MANILA

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SHEET CONTENTS:
ROOF OVER DECK PLAN
Scale 1:100m

SET NO.: A

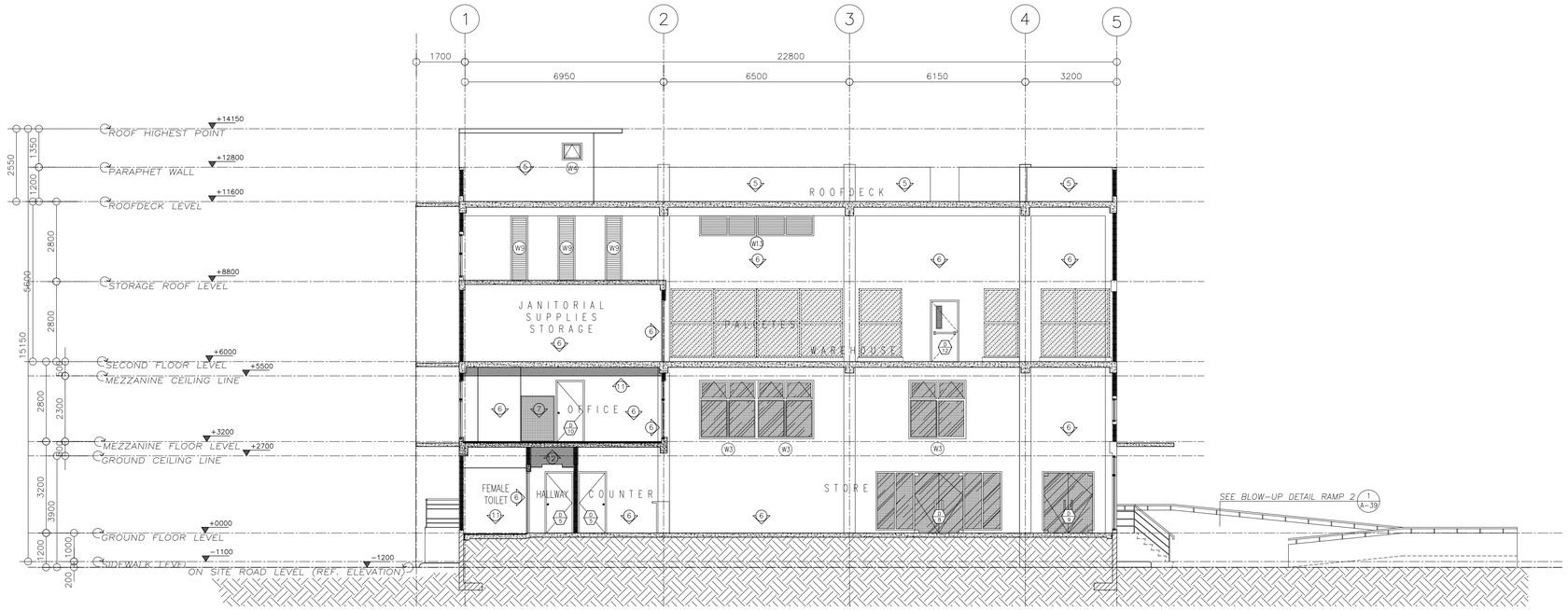
SHEET NO.: 7 / 36

LEGENDS

MARK	DESCRIPTION
1	PLAIN CEMENT STRAIGHT TO FINISH
2	PLAIN CEMENT STRAIGHT TO FINISH, PAINTED AS PER ARCHITECT'S APPROVED COLOR.
3	PLAIN CEMENT PLASTERED FINISH
4	PLAIN CEMENT PLASTERED FINISH, PAINTED AS PER ARCHITECT'S APPROVED COLOR.
5	EXTERIOR WALL, PAINTED AS PER ARCHITECT'S APPROVED COLOR WITH DAMP PROOFING
6	INTERIOR WALL, PAINTED AS PER ARCHITECT'S APPROVED COLOR
7	MODULAR PARTITION (VERIFY DESIGN & SPECS.)
8	VERIFY RAILING DETAIL
9	SYNTHETIC WOOD EXTERIOR
10	MODULAR PARTITION
11	VERIFY TOILET DETAIL
12	DROP CEILING IN 12MM THK. MR GYPSUM BOARD ON METAL FURRING, PAINTED–LATEX FLAT (VERIFY SPECS.)
D 10	DOOR TAG
W1	WINDOW TAG

GENERAL NOTES:

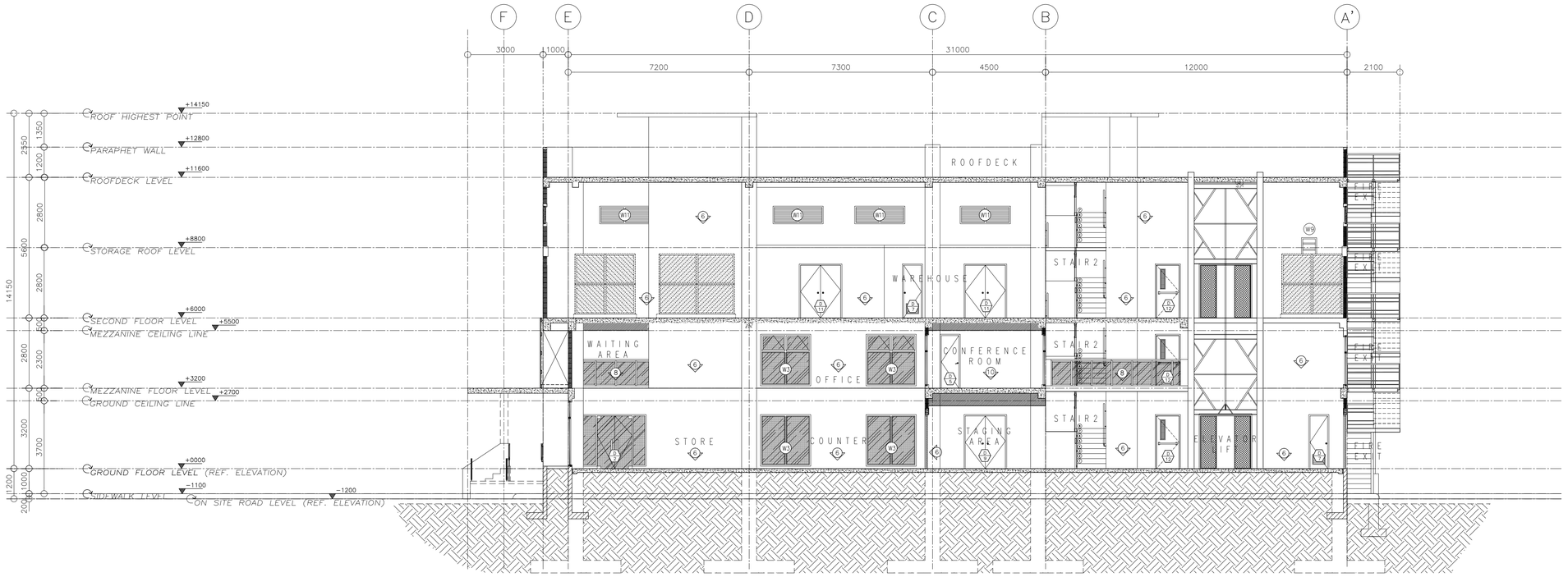
1. SEE ARCHITECTURAL SPECIFICATIONS FOR THE COMPLETE DESCRIPTION/SPECIFICATIONS OF FINISHES.
2. ANY DISCREPANCY FOUND IN THE DRAWING THE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY



1 | 8 AR

CROSS SECTION

SCALE 1:100MTS



2 | 8 AR

LONGITUDINAL SECTION

SCALE 1:100MTS

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DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

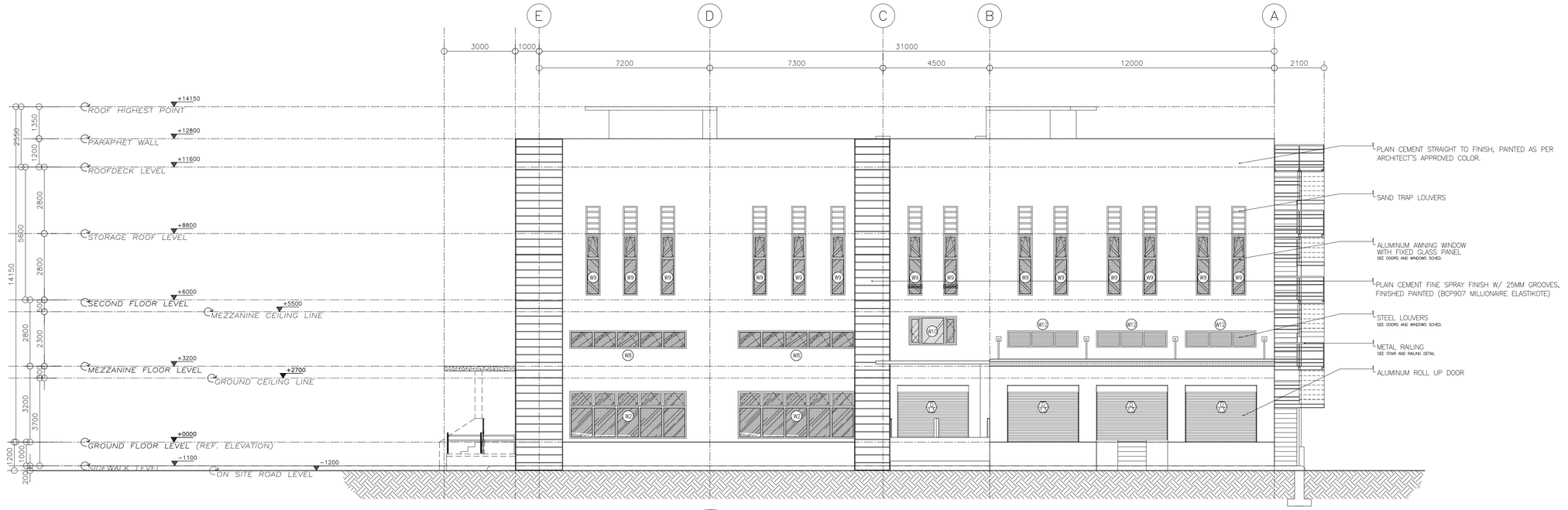
REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:
JOSEPHINE P. ISTURIS	(SEE COVER SHEET) **EDWIN C. MATANGUIHAN**	(SEE COVER SHEET) **EMIL K. SADAIN, CESO I**
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	OIC, ASST. DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II
CARIG SUR, TUGUEGARAO CITY

SHEET CONTENTS:
CROSS SECTION
LONGITUDINAL SECTION
Scale 1:100m

SET NO.: A

SHEET NO.: 8 / 36



1 | 11 AR

RIGHT SIDE ELEVATION

SCALE 1:100MTS

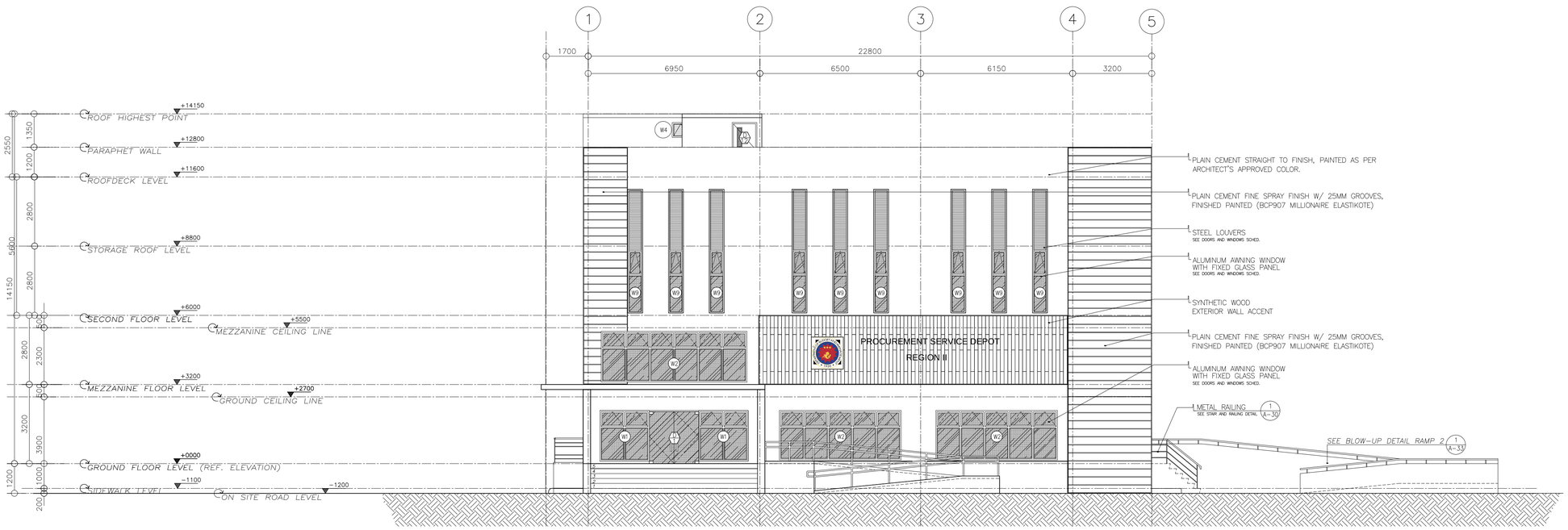
LEGENDS:

000 FINISH FLOOR LEVEL

FINISHES TAG

GENERAL NOTES:

1. ANY DISCREPANCY FOUND IN THE DRAWING THE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY



1 | 10 AR

FRONT ELEVATION

SCALE 1:100MTS

LEGENDS:

000 FINISH FLOOR LEVEL

FINISHES TAG

GENERAL NOTES:

1. ANY DISCREPANCY FOUND IN THE DRAWING THE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY

NOTE:

PURSUANT TO ITEM 5 OF ANNEX "A" OF THE REVISED IMPLEMENTING RULES AND REGULATION OF R.A. 9184, THE APPROVAL BY THE AUTHORIZED GOVERNMENT OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGNS UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGNS NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.

THE DESIGN CONSULTANT SHALL BE HELD FULLY RESPONSIBLE FOR THE FAILURE OF THE FACILITIES/STRUCTURES DUE TO FAULTY DESIGN EXCEPT FOR THE CHANGES MADE WITHOUT THE CONFORMITY OF THE CONSULTANTS.

ELMERIT R. RAMONEDA
PROJECT MANAGER

URBAN ENGINEERS
CONSULTING CIVIL ENGINEERS
in joint venture with
J.F. CANCIO & Associates ENGINEERS CONSULTANTS
PTC Engineers & Associates

ARCHITECT:	SUBMITTED:
GODOFREY E. GARCIA	ELMERIT. RAMONEDA
PRC NO.: 18537 DATE: FEB-08-2021	PROJECT MANAGER
PTR NO.: 1249395 DATE: MAY-21-2019	
PLACE: CABANATUAN CITY TIN NO.: 427991026	

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

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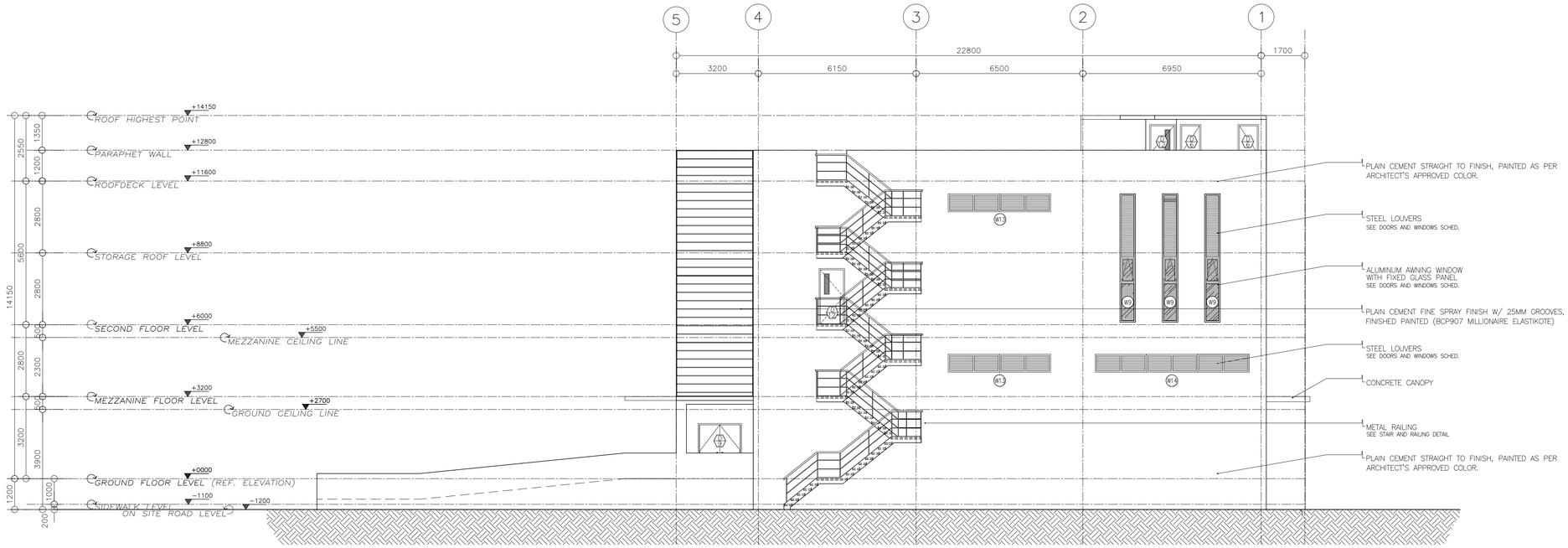
SHEET CONTENTS:
FRONT ELEVATION &
RIGHT SIDE ELEVATION
Scale 1:100m

SET NO.: A

SHEET NO.: 9 / 36



1 | 12
AR

REAR ELEVATION

SCALE 1:100MTS

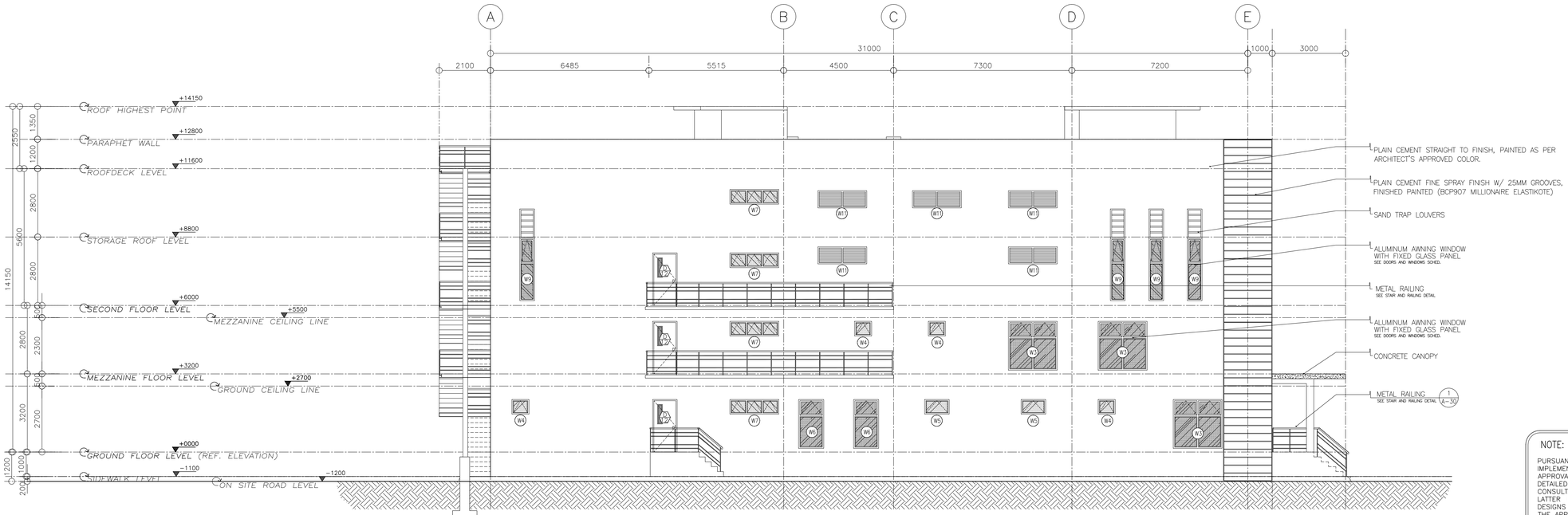
LEGENDS:

000 FINISH FLOOR LEVEL

FINISHES TAG

GENERAL NOTES:

1. ANY DISCREPANCY FOUND IN THE DRAWING THE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY



1 | 13
AR

LEFT SIDE ELEVATION

SCALE 1:100MTS

LEGENDS:

000 FINISH FLOOR LEVEL

FINISHES TAG

GENERAL NOTES:

1. ANY DISCREPANCY FOUND IN THE DRAWING THE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY

NOTE:

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PTC Engineers & Associates

ARCHITECT:	SUBMITTED:
GODOFREDO E. GARCIA	ELMER T. RAMONEDA
PRC NO.: 18537 / DATE: FEB-08-2021	PROJECT MANAGER
PTR NO.: 1249395 / DATE: MAY-21-2019	
PLACE: CABANATUAN CITY / TIN NO.: 427991026	

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:
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CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	OIC, ASST. DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

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SHEET CONTENTS:
REAR ELEVATION &
LEFT SIDE ELEVATION
Scale 1:100m

SET NO.: A

SHEET NO.: 10 / 36

LEGENDS

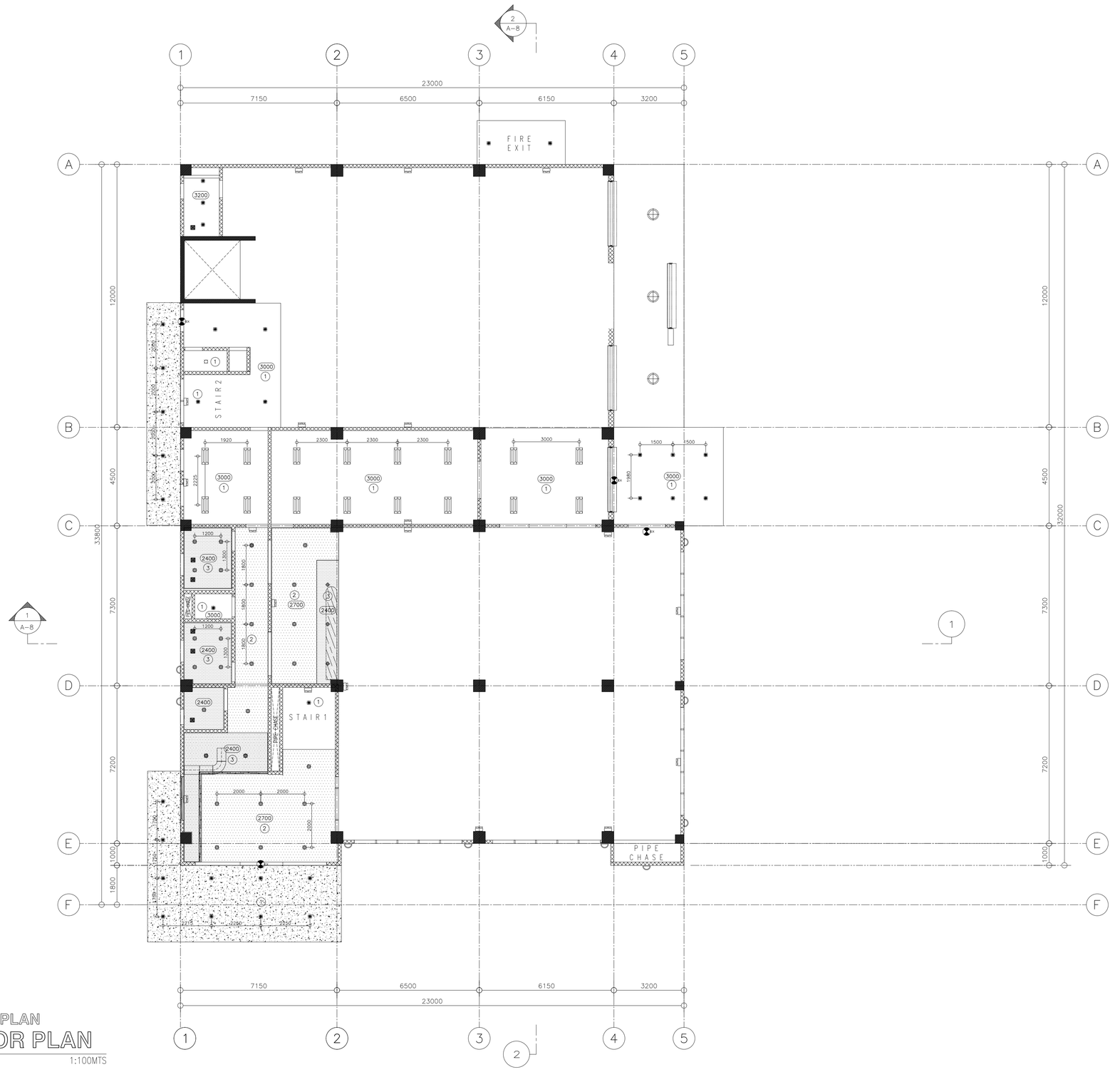
ITEMS	DESCRIPTION
	150x150mm RECESSED DOWNLIGHT SQUARE 15 WATTS (LED WARM WHITE)
	2X16 WATTS TROFFER LIGHT LED – DAYLIGHT (VERIFY SPECS.)
	120MM COVE LIGHTING (VERIFY SPECS.)
	400 MM DIA. ROUND HIGH BAY (100 WATTS, LED – DAYLIGHT)
	500MM DIA. ROUND HIGH BAY (150 WATTS, LED – DAYLIGHT)
	WALL SCONE/WALL LAMP (VERIFY SPECS.)
	150x150mm CEILING MOUNTED DOWNLIGHT, SQUARE 15 WATTS (LED WARM WHITE)
	150 DIAMETER MM RECESSED DOWNLIGHT ROUND 8 WATTS (LED WARM WHITE)
0000	CEILING HEIGHT
	SLAB SOFFIT, PAINTED – LATEX, FLAT FINISH (VERIFY COLOR)
	DROP CEILING IN MR GYPSUM BOARD, PAINTED–LATEX, FLAT FINISH (VERIFY COLOR)
	DROP CEILING IN MR GYPSUM BOARD, PAINTED–LATEX, FLAT FINISH (VERIFY COLOR)

LEGENDS

ITEMS	DESCRIPTION
EX	EXIT SIGN
EX	DOUBLE SIDED EXIT SIGN WITH DIRECTIONAL ARROW
	EMERGENCY LIGHT
	CEILING MOUNTED EXHAUST FAN
SD	SMOKE DETECTOR

GENERAL NOTES:

1. ANY DISCREPANCY FOUND IN THE DRAWING, THE ARCHITECT SHOULD BE NOTIFIED IMMEDIATELY
2. PROVIDE 25mmX25mm SHADOW LINE @ CEILINGS
3. VERIFY STRUCTURAL DRAWINGS FOR STRUCTURAL OPENINGS.
4. VERIFY RCP OF UNITS AT BLOW UP DETAIL.



REFLECTED CEILING PLAN

GROUND FLOOR PLAN

1 | 11
AR

SCALE 1:100MTS

NOTE:

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PROJECT MANAGER

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PTC Engineers & Associates

ARCHITECT:	SUBMITTED:
GODOFREDO G. GARCIA	ELMER C. RAMONEDA
PRC NO.: 18537 DATE: FEB-08-2021	PROJECT MANAGER
PTR NO.: 1249395 DATE: MAY-21-2019	
PLACE: CABANATUAN CITY TIN NO.: 427991026	

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:
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CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	OIC, ASST. DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

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SHEET CONTENTS:
GROUND FLOOR
REFLECTED CEILING PLAN
Scale 1:100m

SET NO.: A

SHEET NO.: 11 / 36

LEGENDS

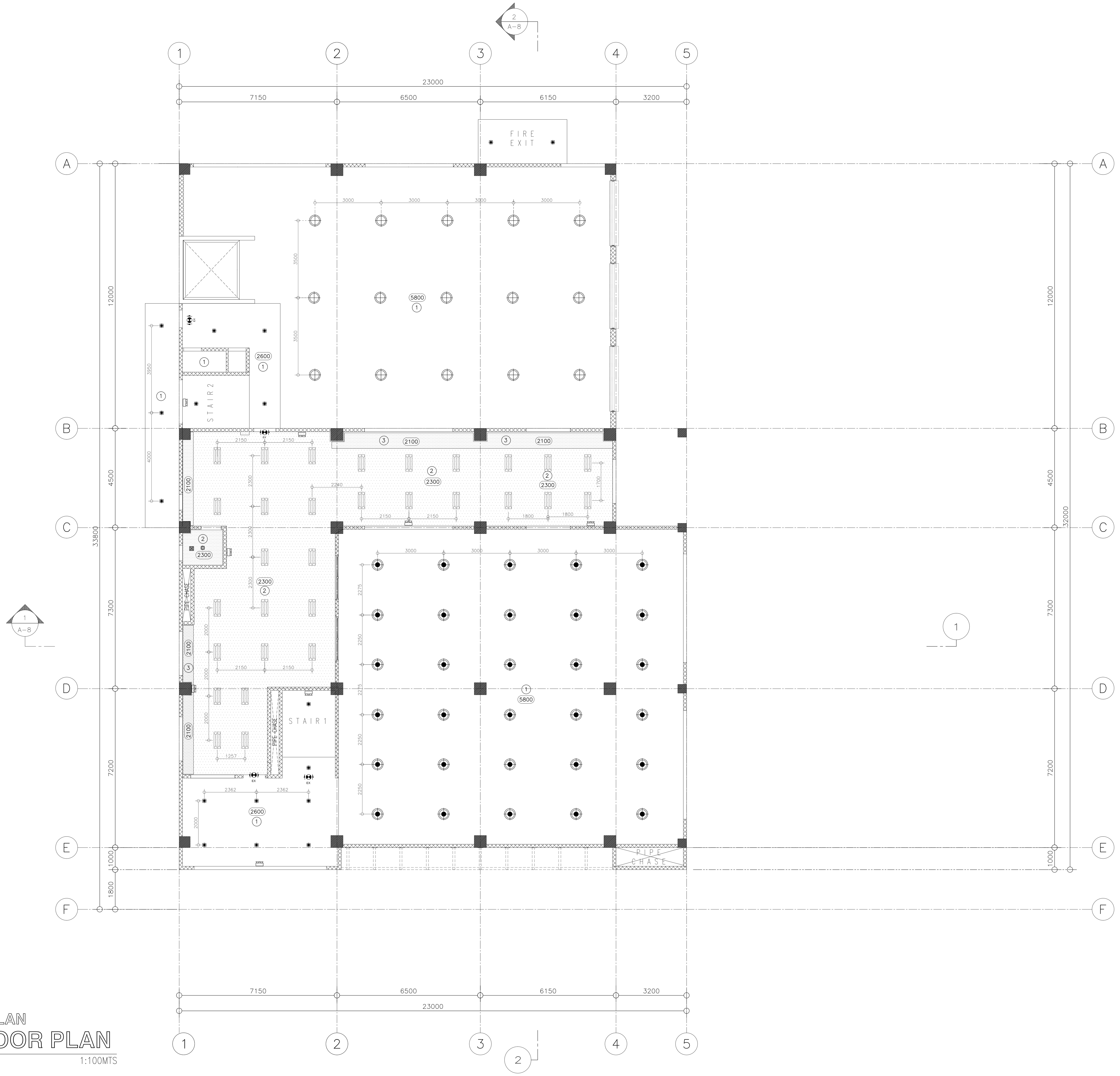
ITEMS	DESCRIPTION
	150x150mm RECESSED DOWNLIGHT SQUARE 15 WATTS (LED WARM WHITE)
	2X16 WATTS TROFFER LIGHT LED – DAYLIGHT (VERIFY SPECS.)
	120MM COVE LIGHTING (VERIFY SPECS.)
	400 MM DIA. ROUND HIGH BAY (100 WATTS, LED – DAYLIGHT)
	500MM DIA. ROUND HIGH BAY (150 WATTS, LED – DAYLIGHT)
	WALL SCONE/WALL LAMP (VERIFY SPECS.)
	150x150mm CEILING MOUNTED DOWNLIGHT, SQUARE 15 WATTS (LED WARM WHITE)
	150 DIAMETER MM RECESSED DOWNLIGHT ROUND 8 WATTS (LED WARM WHITE)
(0000)	CEILING HEIGHT
	SLAB SOFFIT, PAINTED – LATEX, FLAT FINISH (VERIFY COLOR)
	DROP CEILING IN MR GYPSUM BOARD, PAINTED–LATEX, FLAT FINISH (VERIFY COLOR)
	DROP CEILING IN MR GYPSUM BOARD, PAINTED–LATEX, FLAT FINISH (VERIFY COLOR)

LEGENDS

ITEMS	DESCRIPTION
EX	EXIT SIGN
EX	DOUBLE SIDED EXIT SIGN WITH DIRECTIONAL ARROW
	EMERGENCY LIGHT
	CEILING MOUNTED EXHAUST FAN
SD	SMOKE DETECTOR

GENERAL NOTES:

1. ANY DISCREPANCY FOUND IN THE DRAWING, THE ARCHITECT SHOULD BE NOTIFIED IMMEDIATELY
2. PROVIDE 25mmX25mm SHADOW LINE @ CEILINGS
3. VERIFY STRUCTURAL DRAWINGS FOR STRUCTURAL OPENINGS.
4. VERIFY RCP OF UNITS AT BLOW UP DETAIL.



REFLECTED CEILING PLAN

MEZZANINE FLOOR PLAN

1 | 12 AR — SCALE 1:100MTS

NOTE:

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PROJECT MANAGER

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ARCHITECT:		SUBMITTED:
GODOFE E. GARCIA		ELMER T. RAMONEDA, PROJECT MANAGER
PRC.NO.: 18537	DATE: FEB-08-2021	
PTR NO.: 1249395	DATE: MAY-21-2019	
PLACE: CABANATUAN CITY	TIN NO.: 427991026	

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:
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CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	OIC, ASST. DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:	SHEET CONTENTS:	SET NO.	SHEET NO.
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II CARIG SUR, TUGUEGARAO CITY	MEZZANINE FLOOR REFLECTED CEILING PLAN Scale 1:100m	A	12 / 36

LEGENDS

ITEMS	DESCRIPTION
	150x150mm RECESSED DOWNLIGHT SQUARE 15 WATTS (LED WARM WHITE)
	2X16 WATTS TROFFER LIGHT LED – DAYLIGHT (VERIFY SPECS.)
	120MM COVE LIGHTING (VERIFY SPECS.)
	400 MM DIA. ROUND HIGH BAY (100 WATTS, LED – DAYLIGHT)
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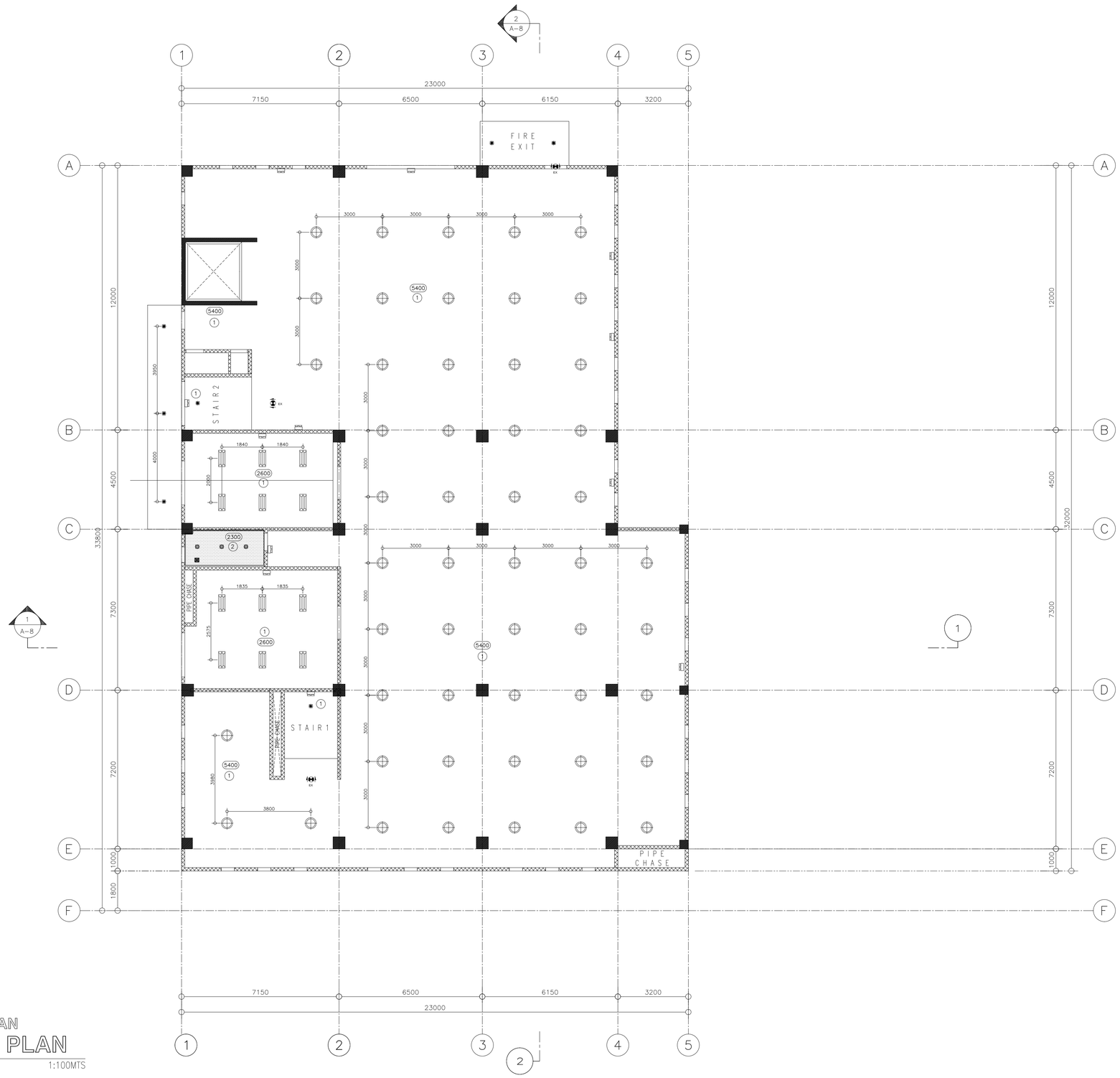
	150x150mm CEILING MOUNTED DOWNLIGHT, SQUARE 15 WATTS (LED WARM WHITE)
	150 DIAMETER MM RECESSED DOWNLIGHT ROUND 8 WATTS (LED WARM WHITE)
0000	CEILING HEIGHT
	SLAB SOFFIT, PAINTED – LATEX, FLAT FINISH (VERIFY COLOR)
	DROP CEILING IN MR GYPSUM BOARD, PAINTED– LATEX, FLAT FINISH (VERIFY COLOR)
	DROP CEILING IN MR GYPSUM BOARD, PAINTED– LATEX, FLAT FINISH (VERIFY COLOR)

LEGENDS

ITEMS	DESCRIPTION
EX	EXIT SIGN
EX	DOUBLE SIDED EXIT SIGN WITH DIRECTIONAL ARROW
	EMERGENCY LIGHT
	CEILING MOUNTED EXHAUST FAN
SD	SMOKE DETECTOR

GENERAL NOTES:

1. ANY DISCREPANCY FOUND IN THE DRAWING, THE ARCHITECT SHOULD BE NOTIFIED IMMEDIATELY
2. PROVIDE 25mmX25mm SHADOW LINE @ CEILINGS
3. VERIFY STRUCTURAL DRAWINGS FOR STRUCTURAL OPENINGS.
4. VERIFY RCP OF UNITS AT BLOW UP DETAIL.



REFLECTED CEILING PLAN
SECOND FLOOR PLAN

1 | 13
AR

SCALE 1:100MTS

NOTE:

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GODOFREDO GARCIA		ELMER T. RAMONEDA
PRC NO.: 18537	DATE: FEB-08-2021	PROJECT MANAGER
PTR NO.: 1249395	DATE: MAY-21-2019	
PLACE: CABANATUAN CITY	TIN NO.: 427991026	

REPUBLIC OF THE PHILIPPINES
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BONIFACIO DRIVE, PORT AREA, MANILA

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SHEET CONTENTS:
SECOND FLOOR
REFLECTED CEILING PLAN
Scale 1:100m

SET NO.	SHEET NO.
A	13 / 36

LEGENDS

ITEMS	DESCRIPTION
	150x150mm RECESSED DOWNLIGHT SQUARE 15 WATTS (LED WARM WHITE)
	2X16 WATTS TROFFER LIGHT LED – DAYLIGHT (VERIFY SPECS.)
	120MM COVE LIGHTING (VERIFY SPECS.)
	400 MM DIA. ROUND HIGH BAY (100 WATTS, LED – DAYLIGHT)
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	150x150mm CEILING MOUNTED DOWNLIGHT, SQUARE 15 WATTS (LED WARM WHITE)
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	DROP CEILING IN MR GYPSUM BOARD, PAINTED–LATEX, FLAT FINISH (VERIFY COLOR)

LEGENDS

ITEMS	DESCRIPTION
EX	EXIT SIGN
EX	DOUBLE SIDED EXIT SIGN WITH DIRECTIONAL ARROW
	EMERGENCY LIGHT
	CEILING MOUNTED EXHAUST FAN
SD	SMOKE DETECTOR

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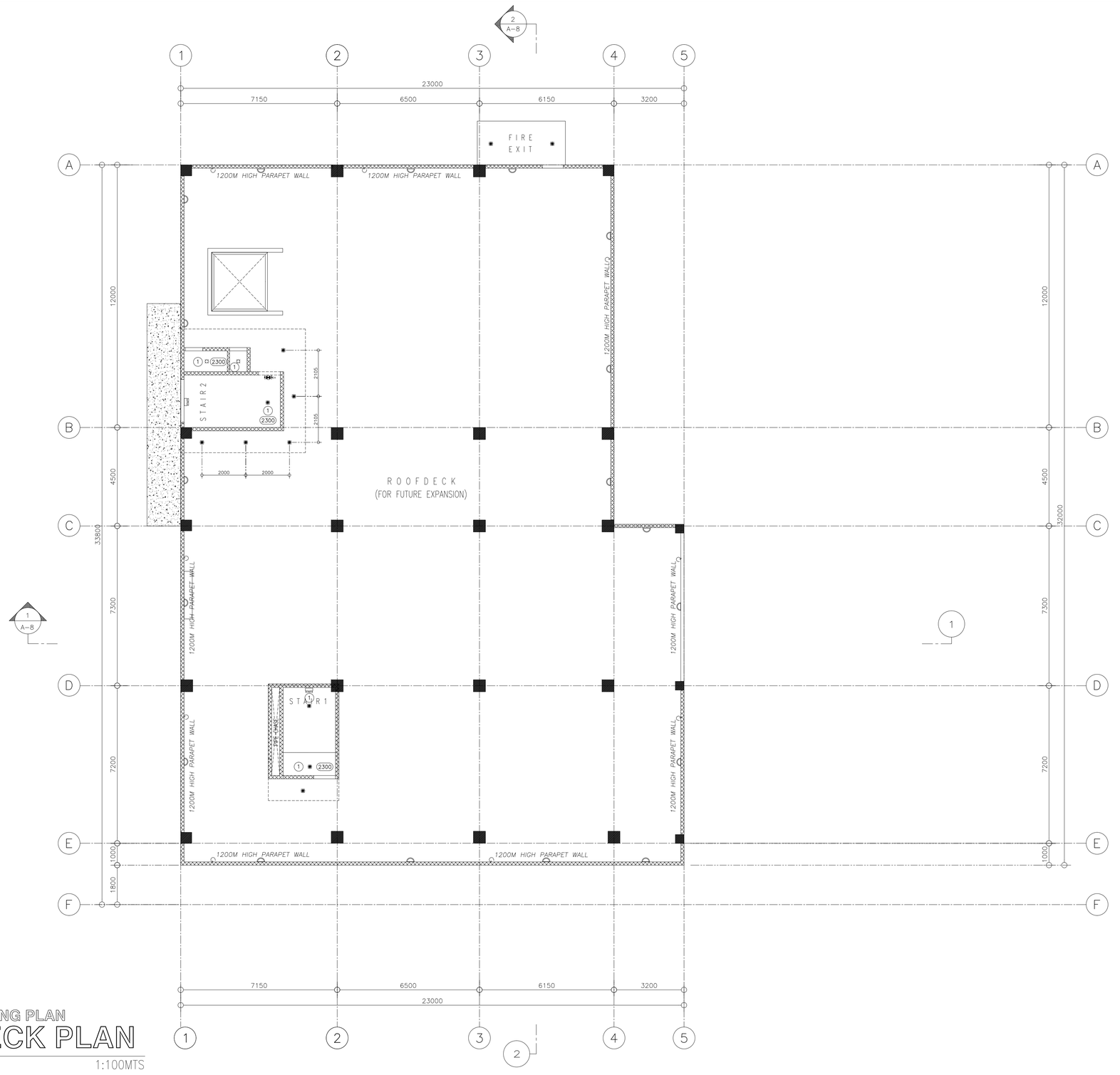

REFLECTED CEILING PLAN

ROOF DECK PLAN

1 | 14
AR

SCALE 1:100MTS

NOTE:

PURSUANT TO ITEM 5 OF ANNEX "A" OF THE REVISED IMPLEMENTING RULES AND REGULATION OF R.A. 9184, THE APPROVAL BY THE AUTHORIZED GOVERNMENT OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGNS UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGNS NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.

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ARCHITECT:	SUBMITTED:	REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:	PROJECT & LOCATION:	SHEET CONTENTS:	SET NO.	SHEET NO.
GODOFREDO GARCIA	ELMER T. RAMONEDA	JOSEPHINE P. ISTURIS	(SEE COVER SHEET)	(SEE COVER SHEET)	PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II CARIG SUR, TUGUEGARAO CITY	ROOF DECK REFLECTED CEILING PLAN Scale 1:100m	A	14 / 36
PRC.NO.: 18537 DATE: FEB-08-2021	PROJECT MANAGER	CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	EDWIN C. MATANGUIHAN OIC, ASST. DIRECTOR, BUREAU OF DESIGN	EMIL K. SADAIN, CESO I UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES				
PTR NO.: 1249395 DATE: MAY-21-2019								
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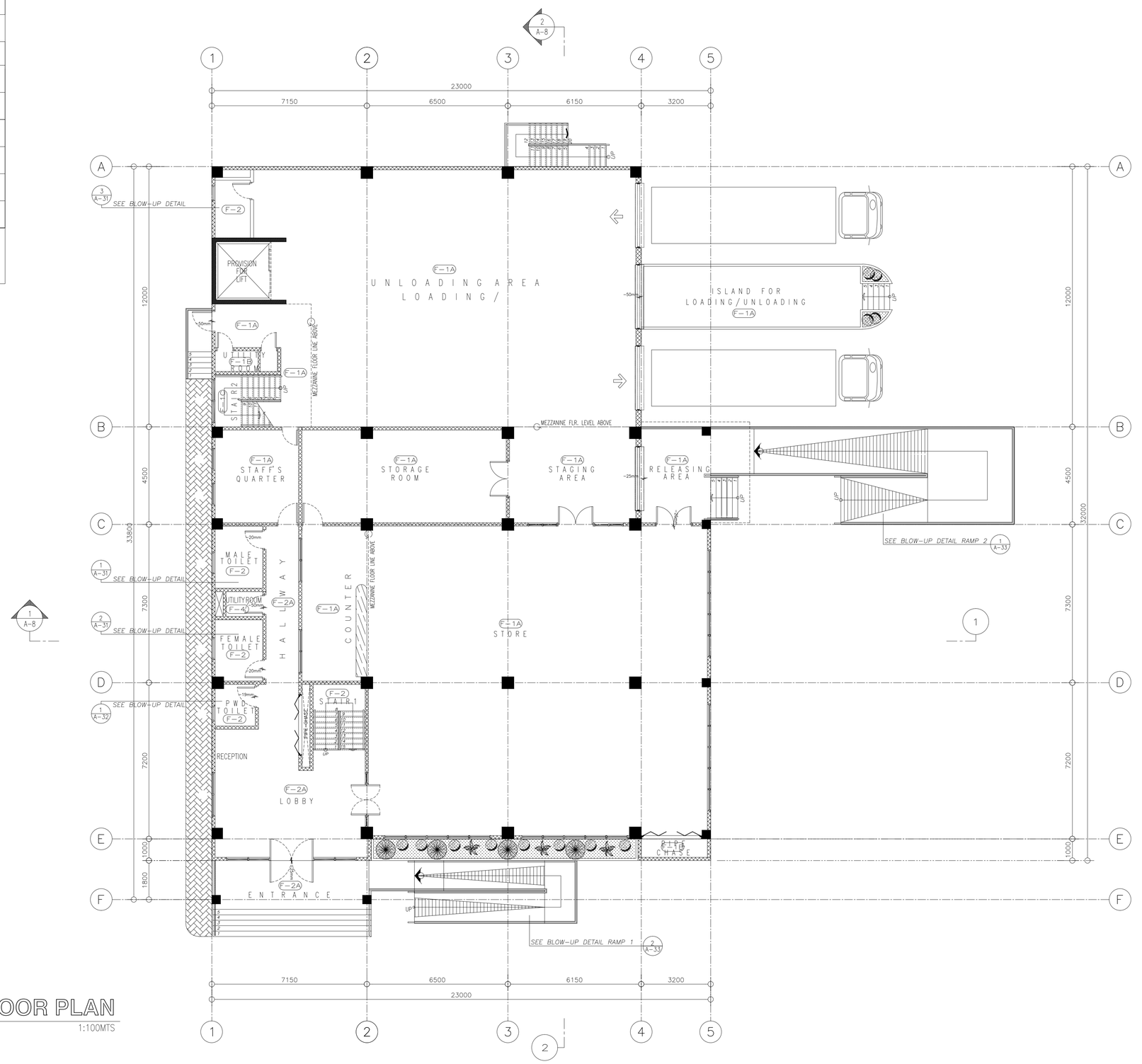
REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

FLOOR FINISHES LEGEND

MARK	DESCRIPTION
F-1A	PLAIN CEMENT STRAIGHT TO FINISH W/ DUSTPROOFING *(VERIFY SPECIFICATIONS)*
F-1B	PLAIN CEMENT STRAIGHT TO FINISH *(VERIFY SPECIFICATIONS)*
F-1C	PLAIN CEMENT STRAIGHT TO FINISH W/ ABRASIVE TAPE NOSING *(VERIFY SPECIFICATIONS)*
F-2	300mm x 600 mm VITRIFIED UNGLAZED CERAMIC TILES *(VERIFY SPECIFICATIONS)*
F-2A	600mm x 600mm VITRIFIED UNGLAZED CERAMIC TILES *(VERIFY SPECIFICATIONS)*
F-3	PLAIN CEMENT STRAIGHT TO FINISH WITH WATER PROOFING *(VERIFY SPECIFICATIONS)*
F-4	300mm x 300mm VITRIFIED UNGLAZED CERAMIC TILES *(VERIFY SPECIFICATIONS)*

GENERAL NOTES:

1. SEE ARCHITECTURAL SPECIFICATIONS FOR THE COMPLETE DESCRIPTION/SPECIFICATIONS OF FINISHES.



FLOOR FINISHES
GROUND FLOOR PLAN
1 | 15 AR
SCALE 1:100MTS

NOTE:

PURSUANT TO ITEM 5 OF ANNEX 'A' OF THE REVISED IMPLEMENTING RULES AND REGULATION OF R.A. 9184, THE APPROVAL BY THE AUTHORIZED GOVERNMENT OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGNS UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGNS NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.

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ELMER T. RAMONEDA
PROJECT MANAGER

URBAN ENGINEERS
CONSULTING CIVIL ENGINEERS
in joint venture with
J.F. CANCIO & Associates ENGINEERS CONSULTANTS
PTC Engineers & Associates

ARCHITECT:	SUBMITTED:
GODOFREDO E. GARCIA	ELMER T. RAMONEDA
PRC NO.: 18537 DATE: FEB-08-2021	PROJECT MANAGER
PTR NO.: 1249395 DATE: MAY-21-2019	
PLACE: CABANATUAN CITY TIN NO.: 427991026	

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:
JOSEPHINE P. ISTURIS	(SEE COVER SHEET) **EDWIN C. MATANGUIHAN**	(SEE COVER SHEET) **EMIL K. SADAIN, CESO I**
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	OIC, ASST. DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II CARIG SUR, TUGUEGARAO CITY

SHEET CONTENTS:
GROUND FLOOR SCHEDULE
OF FLOOR FINISHES
Scale 1:100m

SET NO.: A

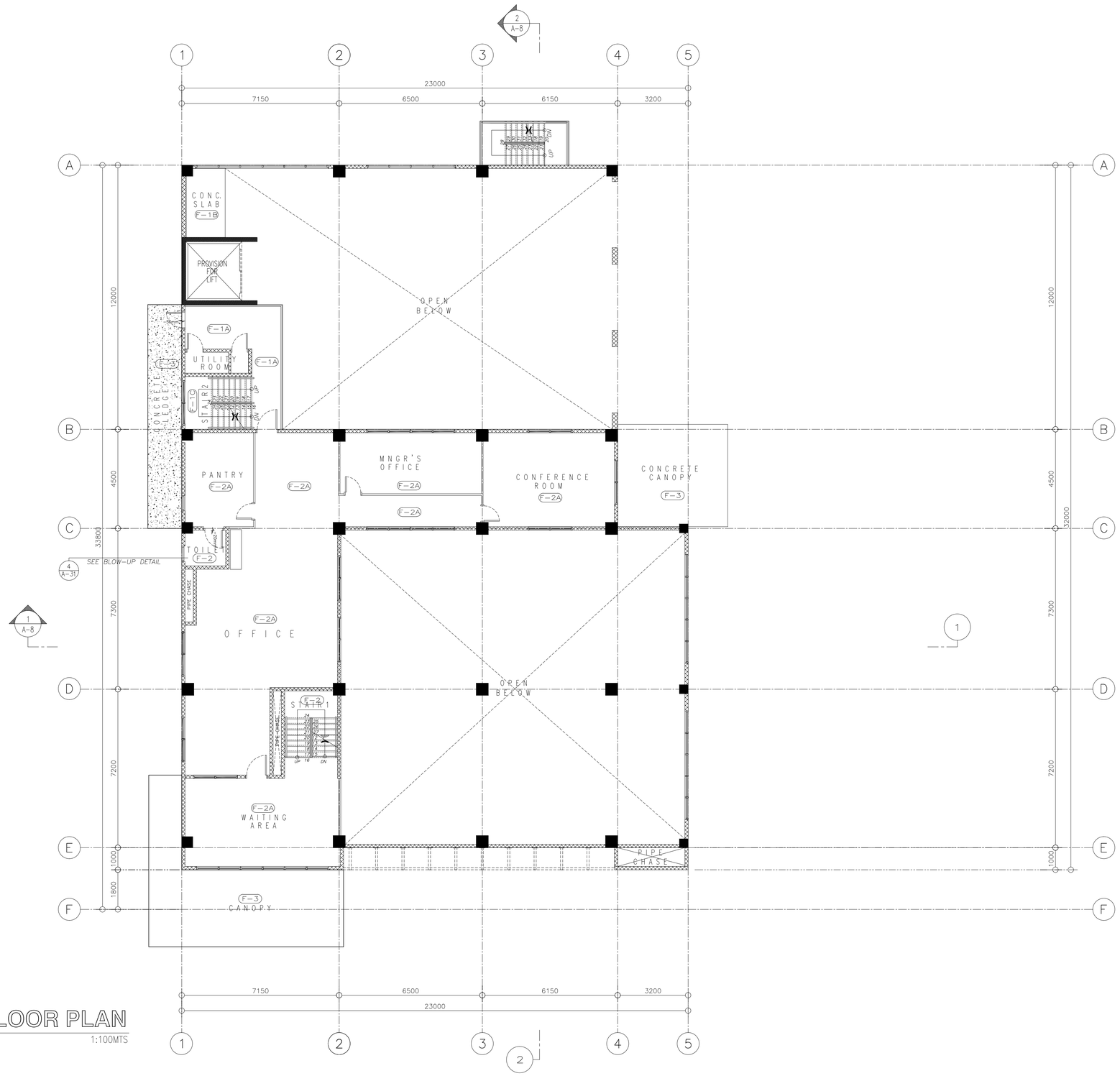
SHEET NO.: 15 / 36

FLOOR FINISHES LEGEND

MARK	DESCRIPTION
F-1A	PLAIN CEMENT STRAIGHT TO FINISH W/ DUSTPROOFING *(VERIFY SPECIFICATIONS)*
F-1B	PLAIN CEMENT STRAIGHT TO FINISH *(VERIFY SPECIFICATIONS)*
F-1C	PLAIN CEMENT STRAIGHT TO FINISH W/ ABRASIVE TAPE NOSING *(VERIFY SPECIFICATIONS)*
F-2	300mm x 600 mm VITRIFIED UNGLAZED CERAMIC TILES *(VERIFY SPECIFICATIONS)*
F-2A	600mm x 600mm VITRIFIED UNGLAZED CERAMIC TILES *(VERIFY SPECIFICATIONS)*
F-3	PLAIN CEMENT STRAIGHT TO FINISH WITH WATER PROOFING *(VERIFY SPECIFICATIONS)*
F-4	300mm x 300mm VITRIFIED UNGLAZED CERAMIC TILES *(VERIFY SPECIFICATIONS)*

GENERAL NOTES:

1. SEE ARCHITECTURAL SPECIFICATIONS FOR THE COMPLETE DESCRIPTION/SPECIFICATIONS OF FINISHES.



FLOOR FINISHES
MEZZANINE FLOOR PLAN

1 | 16 AR

SCALE 1:100MTS

NOTE:

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PRC NO.: 18537 / DATE: FEB-08-2021	PROJECT MANAGER
PTR NO.: 1249395 / DATE: MAY-21-2019	
PLACE: CABANATUAN CITY / TIN NO.: 427991026	

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:
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CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	OIC, ASST. DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

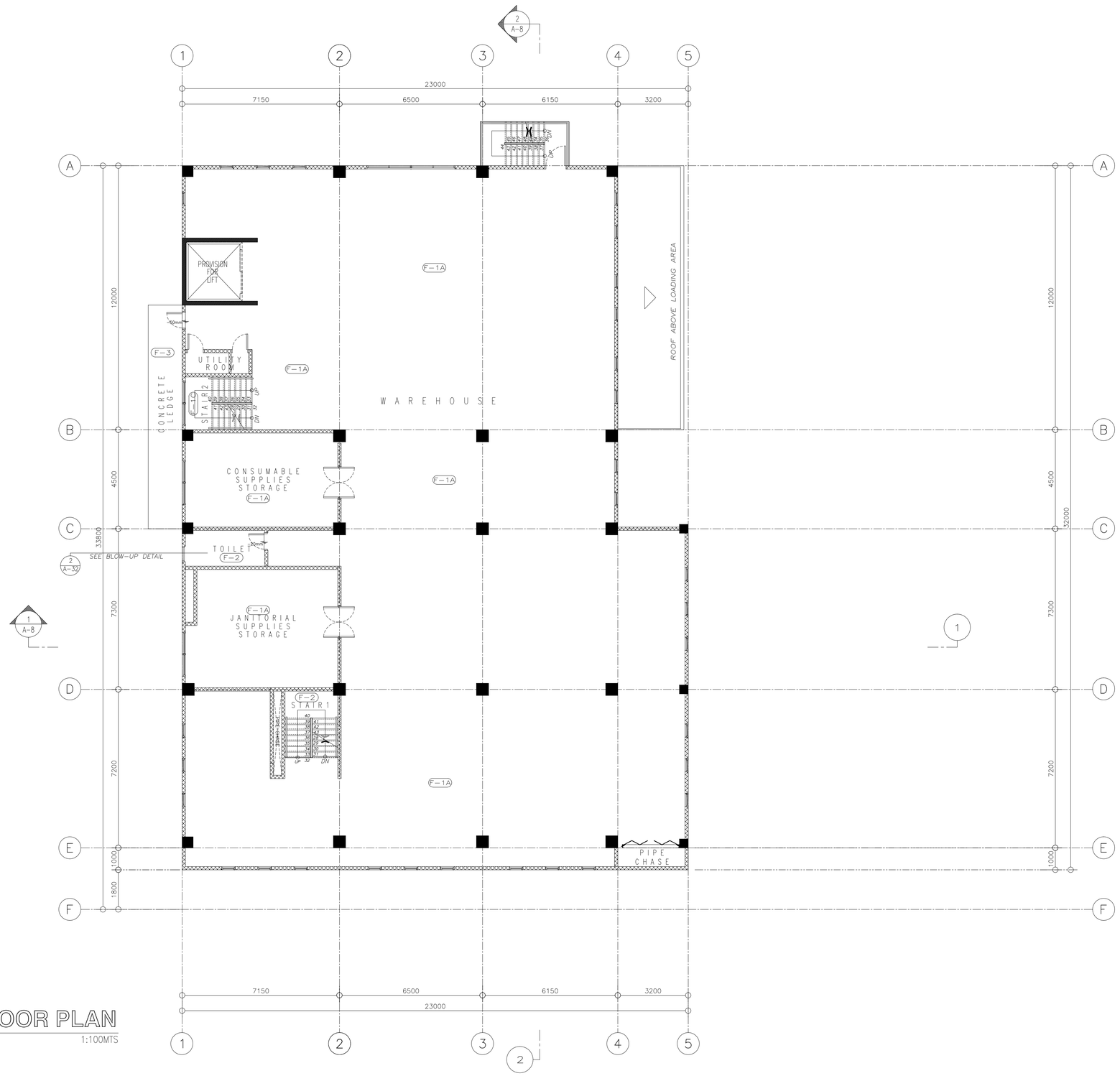
PROJECT & LOCATION:	SHEET CONTENTS:	SET NO.	SHEET NO.
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II CARIG SUR, TUGUEGARAO CITY	MEZZANINE FLOOR SCHEDULE OF FLOOR FINISHES Scale 1:100m	A	16 / 36

FLOOR FINISHES LEGEND

MARK	DESCRIPTION
F-1A	PLAIN CEMENT STRAIGHT TO FINISH W/ DUSTPROOFING *(VERIFY SPECIFICATIONS)*
F-1B	PLAIN CEMENT STRAIGHT TO FINISH *(VERIFY SPECIFICATIONS)*
F-1C	PLAIN CEMENT STRAIGHT TO FINISH W/ ABRASIVE TAPE NOSING *(VERIFY SPECIFICATIONS)*
F-2	300mm x 600 mm VITRIFIED UNGLAZED CERAMIC TILES *(VERIFY SPECIFICATIONS)*
F-2A	600mm x 600mm VITRIFIED UNGLAZED CERAMIC TILES *(VERIFY SPECIFICATIONS)*
F-3	PLAIN CEMENT STRAIGHT TO FINISH WITH WATER PROOFING *(VERIFY SPECIFICATIONS)*
F-4	300mm x 300mm VITRIFIED UNGLAZED CERAMIC TILES *(VERIFY SPECIFICATIONS)*

GENERAL NOTES:

1. SEE ARCHITECTURAL SPECIFICATIONS FOR THE COMPLETE DESCRIPTION/SPECIFICATIONS OF FINISHES.



FLOOR FINISHES SECOND FLOOR PLAN

1 | 17 AR

SCALE 1:100MTS

NOTE:

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REPUBLIC OF THE PHILIPPINES
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BONIFACIO DRIVE, PORT AREA, MANILA

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CARIG SUR, TUGUEGARAO CITY

SHEET CONTENTS:
SECOND FLOOR SCHEDULE
OF FLOOR FINISHES
Scale 1:100m

SET NO.: A

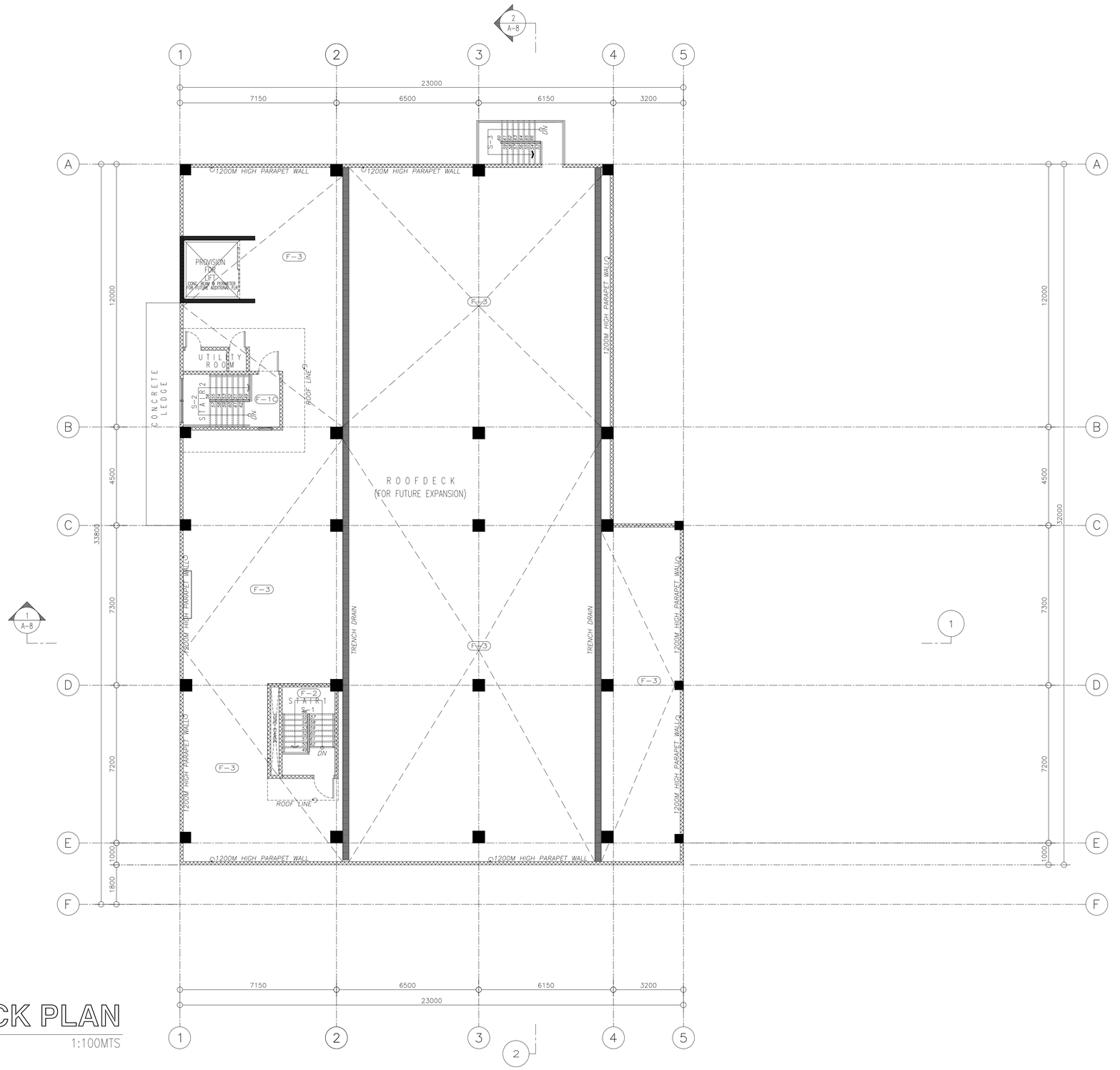
SHEET NO.: 17 / 36

FLOOR FINISHES LEGEND

MARK	DESCRIPTION
F-1A	PLAIN CEMENT STRAIGHT TO FINISH W/ DUSTPROOFING *(VERIFY SPECIFICATIONS)*
F-1B	PLAIN CEMENT STRAIGHT TO FINISH *(VERIFY SPECIFICATIONS)*
F-1C	PLAIN CEMENT STRAIGHT TO FINISH W/ ABRASIVE TAPE NOSING *(VERIFY SPECIFICATIONS)*
F-2	300mm x 600 mm VITRIFIED UNGLAZED CERAMIC TILES *(VERIFY SPECIFICATIONS)*
F-2A	600mm x 600mm VITRIFIED UNGLAZED CERAMIC TILES *(VERIFY SPECIFICATIONS)*
F-3	PLAIN CEMENT STRAIGHT TO FINISH WITH WATER PROOFING *(VERIFY SPECIFICATIONS)*
F-4	300mm x 300mm VITRIFIED UNGLAZED CERAMIC TILES *(VERIFY SPECIFICATIONS)*

GENERAL NOTES:

1. SEE ARCHITECTURAL SPECIFICATIONS FOR THE COMPLETE DESCRIPTION/SPECIFICATIONS OF FINISHES.



FLOOR FINISHES

ROOF DECK PLAN

SCALE 1:100MTS

1 | 18
AR

NOTE:

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ARCHITECT:	SUBMITTED:	REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:	PROJECT & LOCATION:	SHEET CONTENTS:	SET NO.	SHEET NO.
GODOFREDO B. GARCIA PRC NO.: 18537 DATE: FEB-08-2021 PTR NO.: 1249395 DATE: MAY-21-2019 PLACE: CABANATUAN CITY TIN NO.: 427991026	ELMER T. RAMONEDA PROJECT MANAGER	JOSEPHINE P. ISTURIS CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	(SEE COVER SHEET) EDWIN C. MATANGUIHAN OIC, ASST. DIRECTOR, BUREAU OF DESIGN	(SEE COVER SHEET) EMIL K. SADAIN, CESO I UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES	PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II CARIG SUR, TUGUEGARAO CITY	ROOF DECK SCHEDULE OF FLOOR FINISHES Scale 1:100m	A	18 36

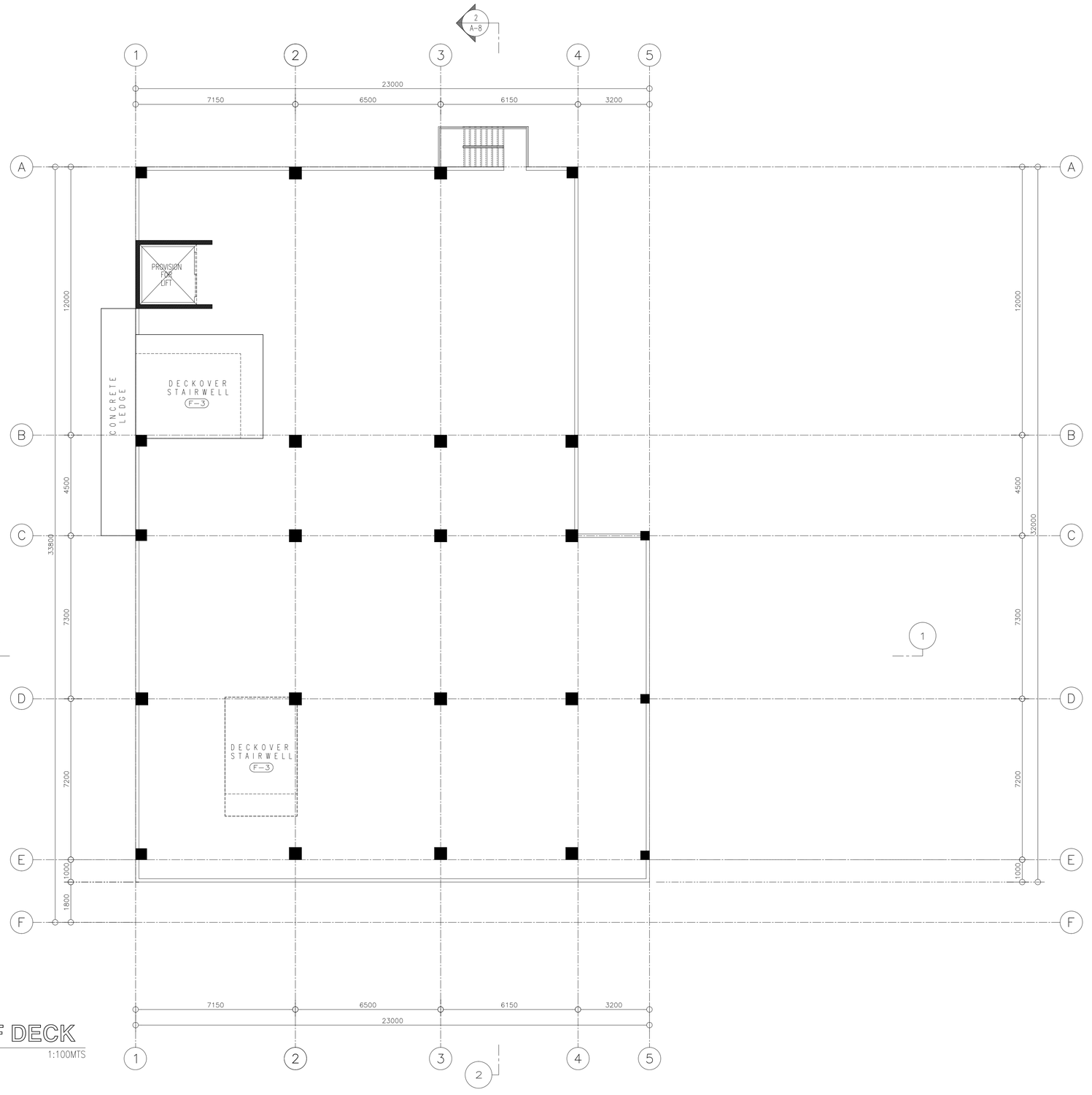
REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

FLOOR FINISHES LEGEND

MARK	DESCRIPTION
F-1A	PLAIN CEMENT STRAIGHT TO FINISH W/ DUSTPROOFING *(VERIFY SPECIFICATIONS)*
F-1B	PLAIN CEMENT STRAIGHT TO FINISH *(VERIFY SPECIFICATIONS)*
F-1C	PLAIN CEMENT STRAIGHT TO FINISH W/ ABRASIVE TAPE NOSING *(VERIFY SPECIFICATIONS)*
F-2	300mm x 600 mm VITRIFIED UNGLAZED CERAMIC TILES *(VERIFY SPECIFICATIONS)*
F-2A	600mm x 600mm VITRIFIED UNGLAZED CERAMIC TILES *(VERIFY SPECIFICATIONS)*
F-3	PLAIN CEMENT STRAIGHT TO FINISH WITH WATER PROOFING *(VERIFY SPECIFICATIONS)*
F-4	300mm x 300mm VITRIFIED UNGLAZED CERAMIC TILES *(VERIFY SPECIFICATIONS)*

GENERAL NOTES:

1. SEE ARCHITECTURAL SPECIFICATIONS FOR THE COMPLETE DESCRIPTION/SPECIFICATIONS OF FINISHES.



FLOOR FINISHES

DECK OVER ROOF DECK

1 | 19 AR

SCALE 1:100MTS

NOTE:

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GODOFREDO B. GARCIA		ELMER T. RAMONEDA
PRC NO.: 18537	DATE: FEB-08-2021	PROJECT MANAGER
PTR NO.: 1249395	DATE: MAY-21-2019	
PLACE: CABANATUAN CITY	TIN NO.: 427991026	

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:
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CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	OIC, ASST. DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

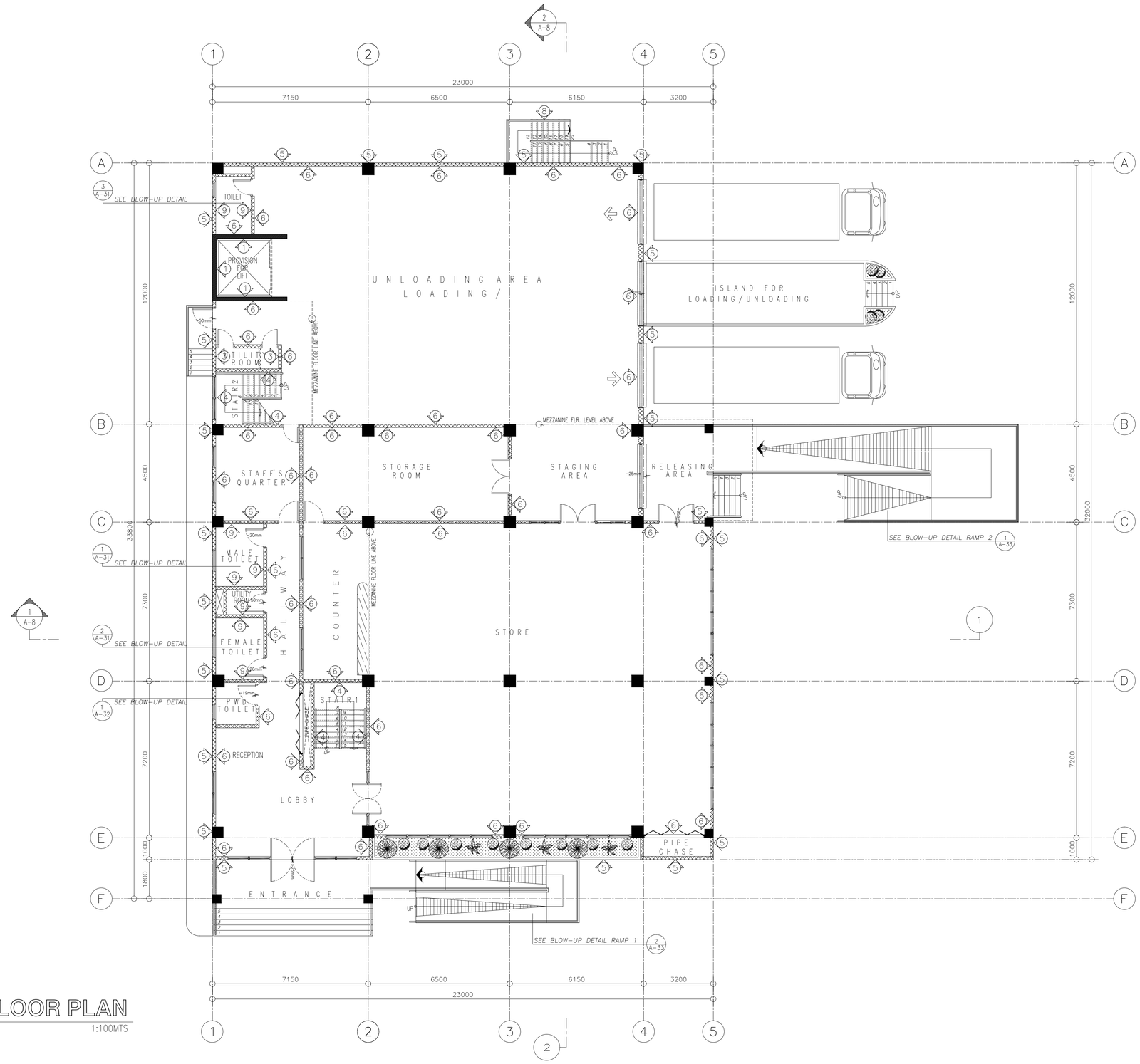
PROJECT & LOCATION:	SHEET CONTENTS:	SET NO.	SHEET NO.
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II CARIG SUR, TUGUEGARAO CITY	ROOF OVER DECK SCHEDULE OF FLOOR FINISHES Scale 1:100m	A	19 / 36

WALL FINISHES LEGEND

MARK	DESCRIPTION
1	PLAIN CEMENT STRAIGHT TO FINISH
2	PLAIN CEMENT STRAIGHT TO FINISH, PAINTED AS PER ARCHITECT'S APPROVED COLOR.
3	PLAIN CEMENT PLASTERED FINISH
4	PLAIN CEMENT PLASTERED FINISH, PAINTED AS PER ARCHITECT'S APPROVED COLOR.
5	EXTERIOR WALL, PAINTED AS PER ARCHITECT'S APPROVED COLOR WITH DAMP PROOFING
6	INTERIOR WALL, PAINTED AS PER ARCHITECT'S APPROVED COLOR
7	VERIFY TOILET DETAIL
8	VERIFY RAILING DETAIL
9	SYNTHETIC WOOD EXTERIOR
10	MODULAR PARTITION

GENERAL NOTES:

1. SEE MATERIAL AND TECHINICAL SPECIFICATION FOR THE COMPLETE SPECIFICATIONS OF FINISHES.



WALL FINISHES
GROUND FLOOR PLAN
1 20 AR
SCALE 1:100MTS

NOTE:

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REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

WALL FINISHES LEGEND

MARK	DESCRIPTION
1	PLAIN CEMENT STRAIGHT TO FINISH
2	PLAIN CEMENT STRAIGHT TO FINISH, PAINTED AS PER ARCHITECT'S APPROVED COLOR.
3	PLAIN CEMENT PLASTERED FINISH
4	PLAIN CEMENT PLASTERED FINISH, PAINTED AS PER ARCHITECT'S APPROVED COLOR.
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6	INTERIOR WALL, PAINTED AS PER ARCHITECT'S APPROVED COLOR
7	VERIFY TOILET DETAIL
8	VERIFY RAILING DETAIL
9	SYNTHETIC WOOD EXTERIOR
10	MODULAR PARTITION

GENERAL NOTES:

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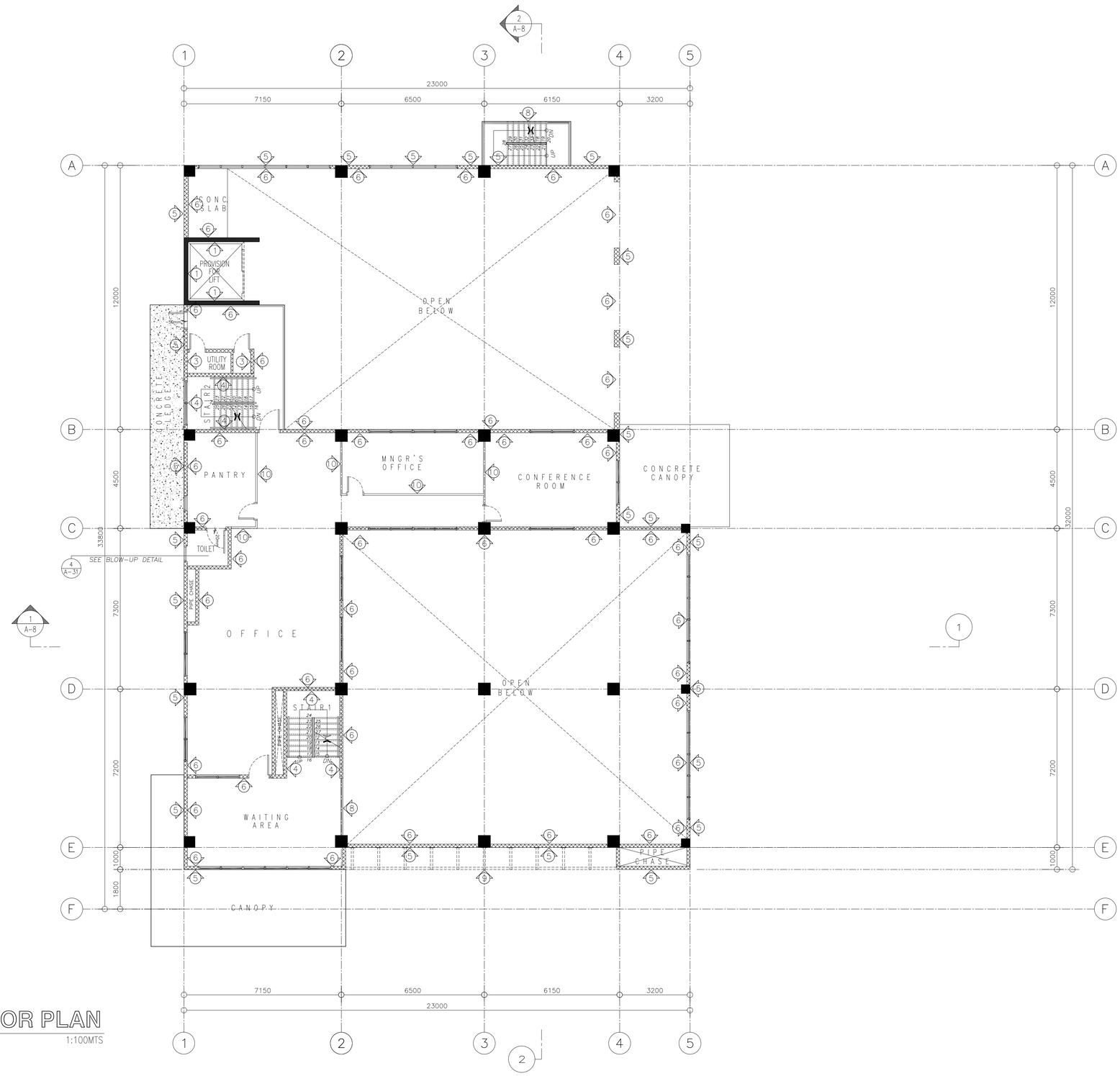

WALL FINISHES

MEZZANINE FLOOR PLAN

1 | 21 AR

SCALE 1:100MTS

NOTE:

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PRC NO.: 18537	DATE: FEB-08-2021	PROJECT MANAGER
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PLACE: CABANATUAN CITY	TIN NO.: 427991026	

REPUBLIC OF THE PHILIPPINES
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BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:
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SHEET CONTENTS:
MEZZANINE SCHEDULE OF WALL FINISHES
Scale 1:100m

SET NO.: A

SHEET NO.: 21 / 36

WALL FINISHES LEGEND

MARK	DESCRIPTION
1	PLAIN CEMENT STRAIGHT TO FINISH
2	PLAIN CEMENT STRAIGHT TO FINISH, PAINTED AS PER ARCHITECT'S APPROVED COLOR.
3	PLAIN CEMENT PLASTERED FINISH
4	PLAIN CEMENT PLASTERED FINISH, PAINTED AS PER ARCHITECT'S APPROVED COLOR.
5	EXTERIOR WALL, PAINTED AS PER ARCHITECT'S APPROVED COLOR WITH DAMP PROOFING
6	INTERIOR WALL, PAINTED AS PER ARCHITECT'S APPROVED COLOR
7	VERIFY TOILET DETAIL
8	VERIFY RAILING DETAIL
9	SYNTHETIC WOOD EXTERIOR
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GENERAL NOTES:

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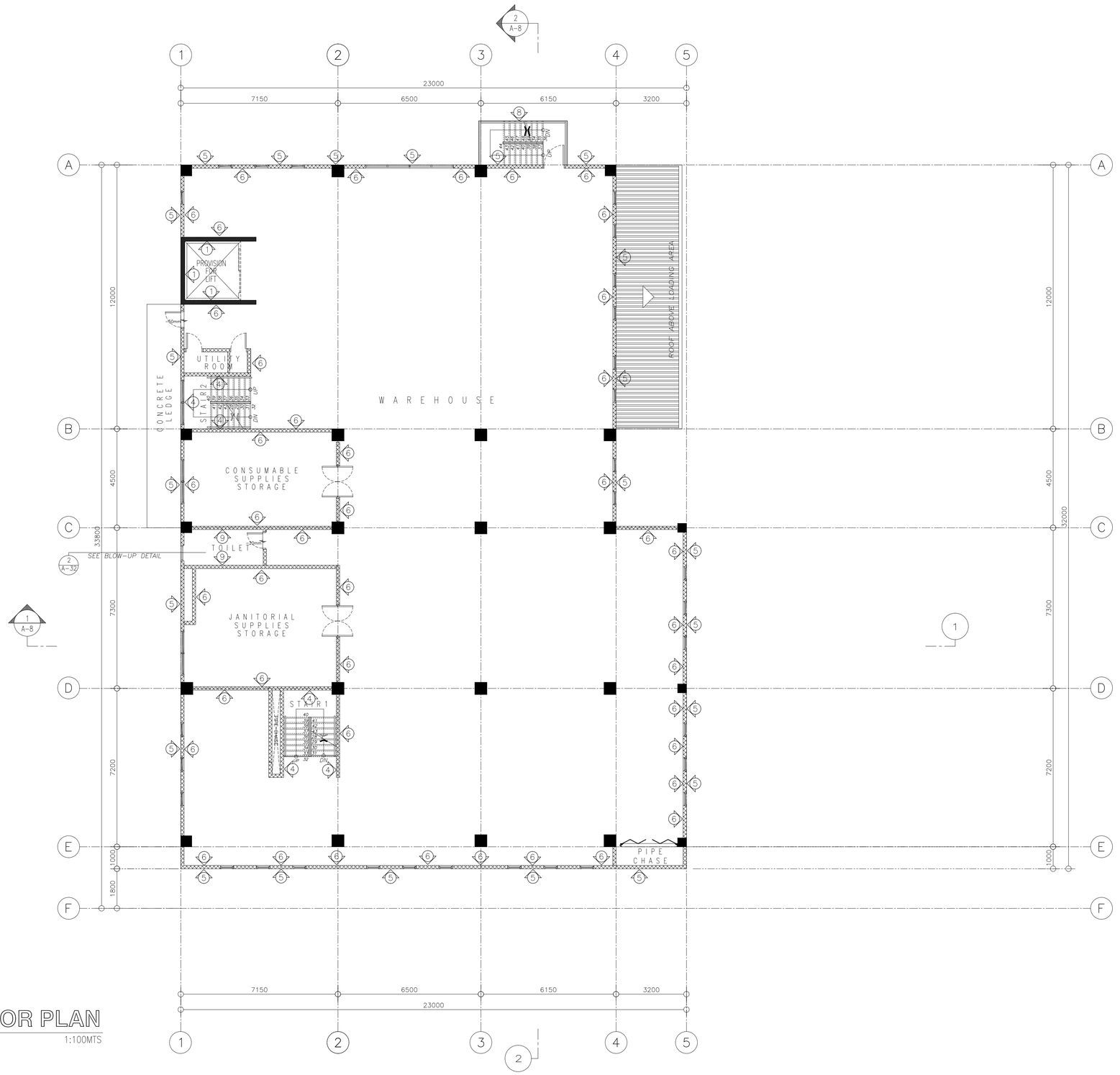

WALL FINISHES

SECOND FLOOR PLAN

1 22 AR

SCALE 1:100MTS

NOTE:

PURSUANT TO ITEM 5 OF ANNEX "A" OF THE REVISED IMPLEMENTING RULES AND REGULATION OF R.A. 9184, THE APPROVAL BY THE AUTHORIZED GOVERNMENT OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGNS UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGNS NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.

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ELMERT T. RAMONEDA
PROJECT MANAGER

URBAN ENGINEERS
CONSULTING CIVIL ENGINEERS
in joint venture with
J.F. CANCIO & Associates ENGINEERS CONSULTANTS
PTC Engineers & Associates

ARCHITECT:	SUBMITTED:
GODOFREDO E. GARCIA	ELMERT T. RAMONEDA
PRC NO.: 18537 DATE: FEB-08-2021	PROJECT MANAGER
PTR NO.: 1249395 DATE: MAY-21-2019	
PLACE: CABANATUAN CITY TIN NO.: 427991026	

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:
JOSEPHINE P. ISTURIS	(SEE COVER SHEET) **EDWIN C. MATANGUIHAN**	(SEE COVER SHEET) **EMIL K. SADAIN, CESO I**
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	OIC, ASST. DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II CARIG SUR, TUGUEGARAO CITY

SHEET CONTENTS:
SECOND FLOOR SCHEDULE OF WALL FINISHES
Scale 1:100m

SET NO.: A

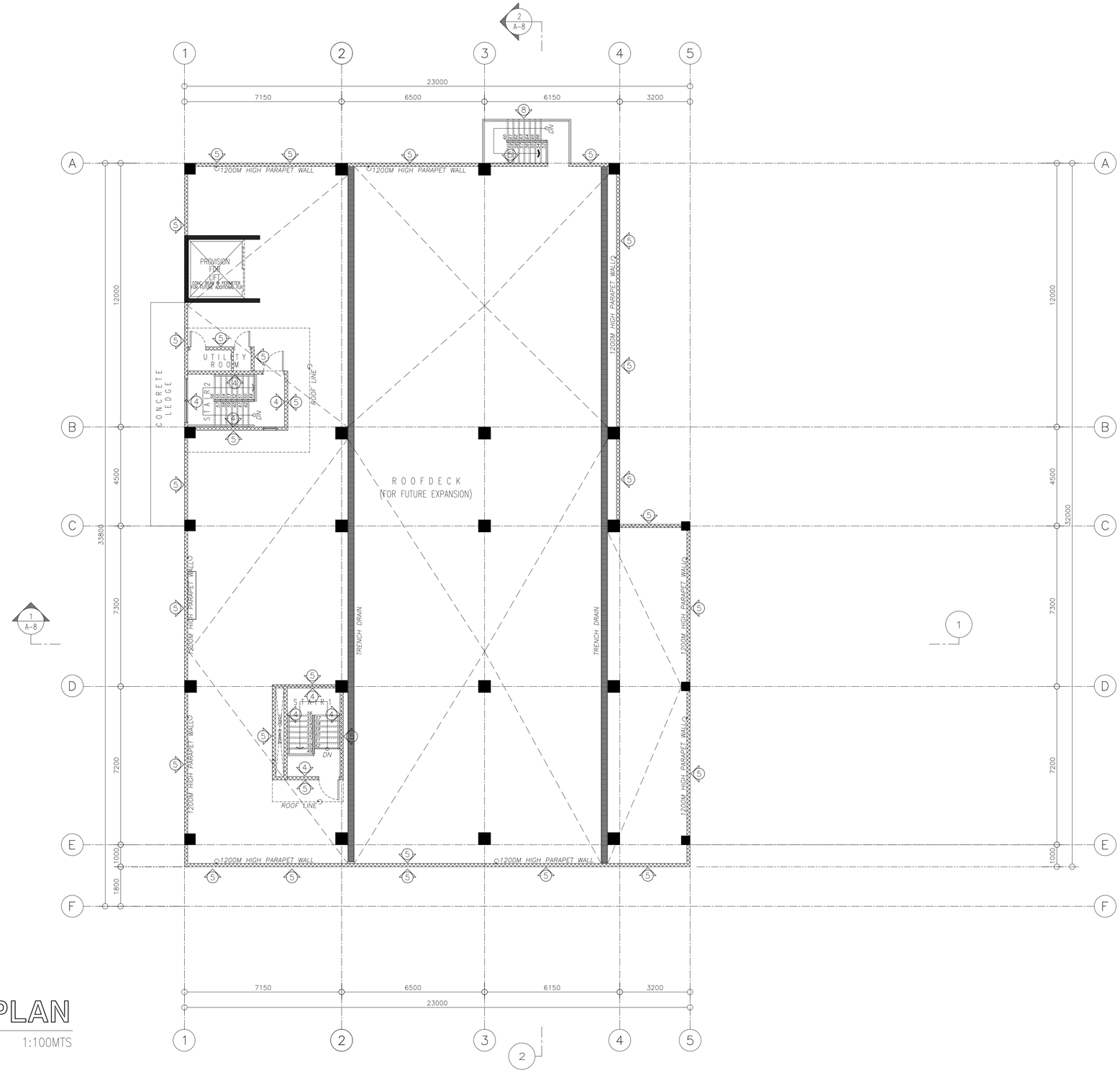
SHEET NO.: 22 / 36

WALL FINISHES LEGEND

MARK	DESCRIPTION
1	PLAIN CEMENT STRAIGHT TO FINISH
2	PLAIN CEMENT STRAIGHT TO FINISH, PAINTED AS PER ARCHITECT'S APPROVED COLOR.
3	PLAIN CEMENT PLASTERED FINISH
4	PLAIN CEMENT PLASTERED FINISH, PAINTED AS PER ARCHITECT'S APPROVED COLOR.
5	EXTERIOR WALL, PAINTED AS PER ARCHITECT'S APPROVED COLOR WITH DAMP PROOFING
6	INTERIOR WALL, PAINTED AS PER ARCHITECT'S APPROVED COLOR
7	VERIFY TOILET DETAIL
8	VERIFY RAILING DETAIL
9	SYNTHETIC WOOD EXTERIOR
10	MODULAR PARTITION

GENERAL NOTES:

1. SEE MATERIAL AND TECHINICAL SPECIFICATION FOR THE COMPLETE SPECIFICATIONS OF FINISHES.



WALL FINISHES

ROOF DECK PLAN

1 | 23 / AR

SCALE 1:100MTS

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ARCHITECT:
GODOFREDO G. GARCIA
PRC.NO.: 18537 | DATE: FEB-08-2021
PTR NO.: 1249395 | DATE: MAY-21-2019
PLACE: CABANATUAN CITY | TIN NO.: 427991026

SUBMITTED:
ELMERT T. RAMONEDA
PROJECT MANAGER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:
JOSEPHINE P. ISTURIS
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN

RECOMMENDING APPROVAL:
(SEE COVER SHEET)
EDWIN C. MATANGUIHAN
OIC, ASST. DIRECTOR, BUREAU OF DESIGN

APPROVED:
(SEE COVER SHEET)
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UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

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CARIG SUR, TUGUEGARAO CITY

SHEET CONTENTS:
ROOF DECK SCHEDULE
OF WALL FINISHES
Scale 1:100m

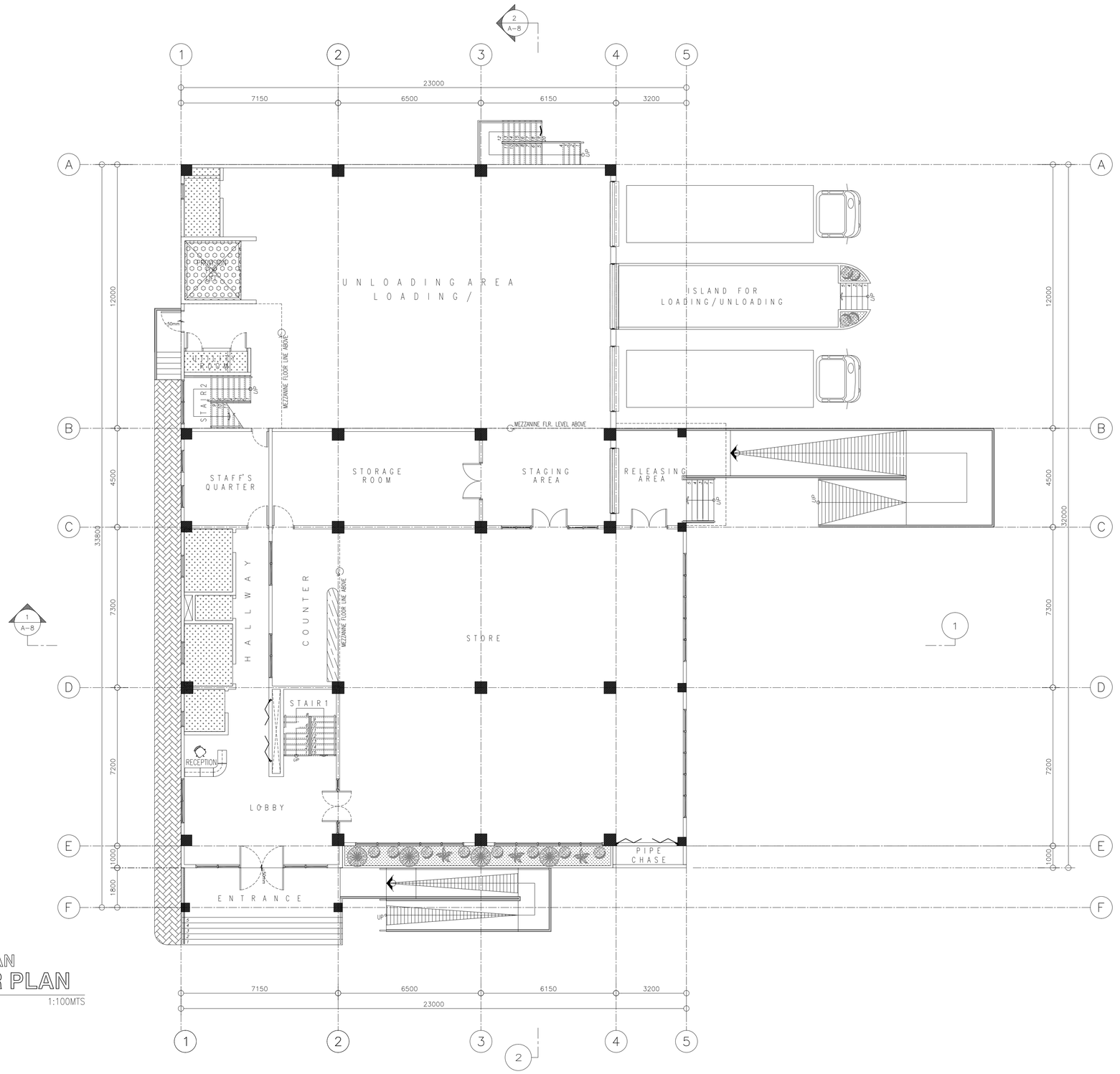
SET NO.: A

SHEET NO.: 23 / 36

LEGEND:

WP-1 TORCHED APPLIED MEMBRANE WATERPROOFING
(VERIFY SPECIFICATIONS FOR BRAND)

WP-2 FLEXIBLE CEMENTITIOUS WATERPROOFING
(VERIFY SPECIFICATIONS FOR BRAND)



WATERPROOFING PLAN
GROUND FLOOR PLAN

1 | 24
AR

SCALE 1:100MTS

NOTE:

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PRC NO.: 18537	DATE: FEB-08-2021	PROJECT MANAGER
PTR NO.: 1249395	DATE: MAY-21-2019	
PLACE: CABANATUAN CITY	TIN NO.: 427991026	

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:
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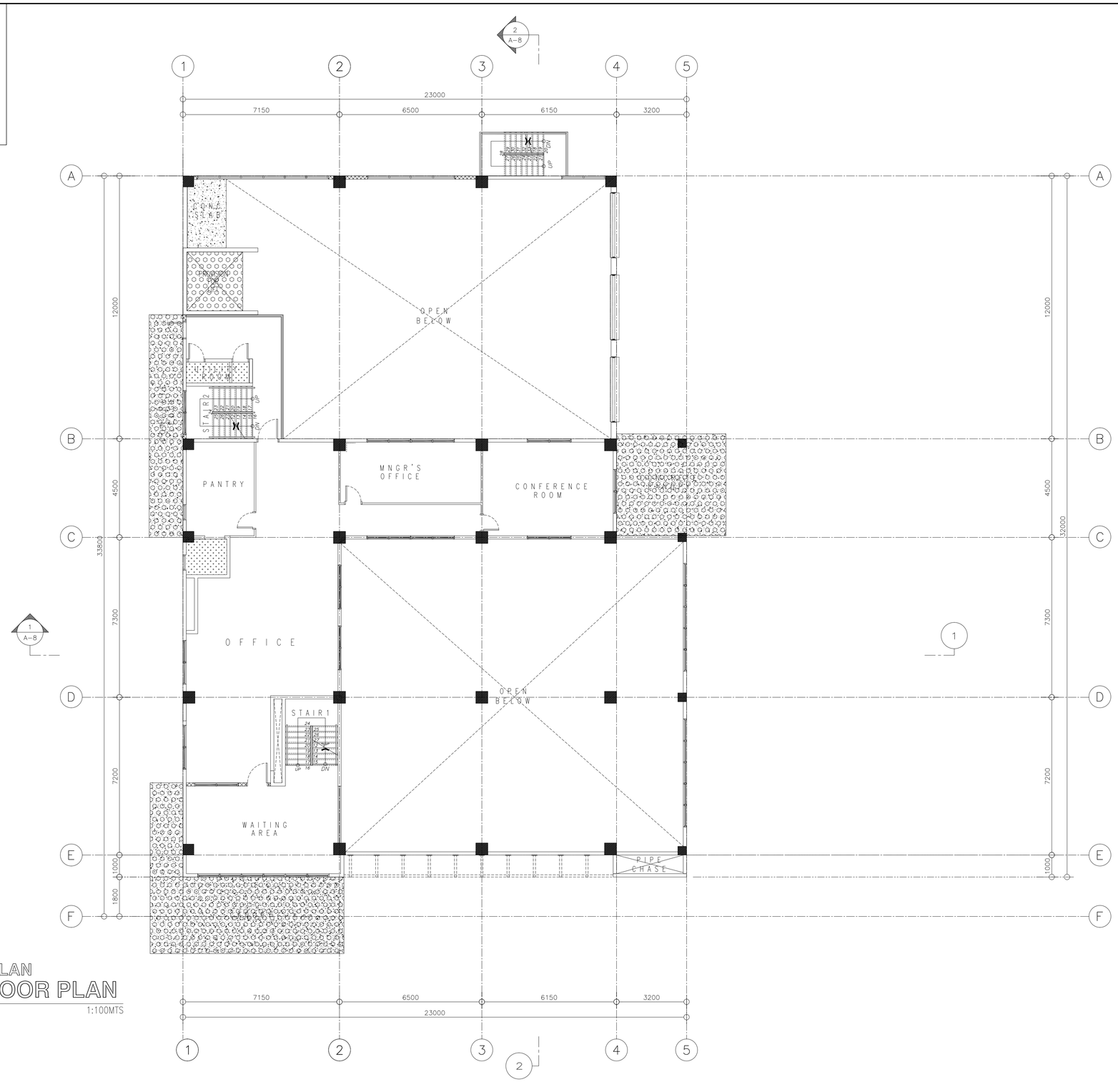
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	**EDWIN C.MATANGUIHAN**	**EMIL K. SADAIN, CESO I**
	OIC, ASST. DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:	SHEET CONTENTS:	SET NO.	SHEET NO.
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II CARIG SUR, TUGUEGARAO CITY	GROUND FLOOR WATERPROOFING PLAN Scale 1:100m	A	24 / 36

LEGEND:

WP-1 — TORCHED APPLIED MEMBRANE WATERPROOFING
(VERIFY SPECIFICATIONS FOR BRAND)

WP-2 — FLEXIBLE CEMENTITIOUS WATERPROOFING
(VERIFY SPECIFICATIONS FOR BRAND)



WATERPROOFING PLAN
MEZZANINE FLOOR PLAN
1 25 / AR
SCALE 1:100MTS

NOTE:

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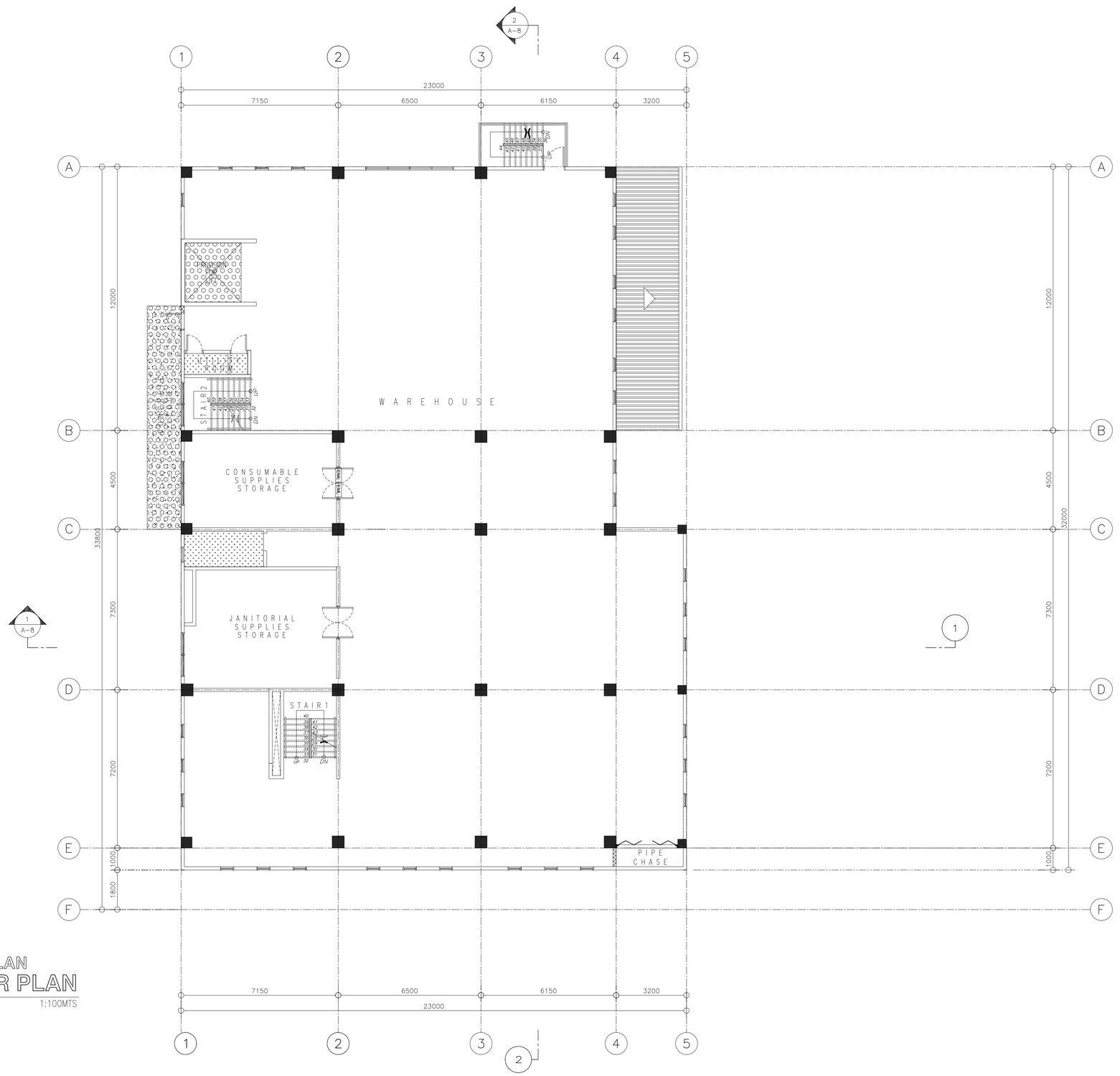
GODOFREDO L. GARCIA PRC NO.: 18537 DATE: FEB-08-2021 PTR NO.: 1249395 DATE: MAY-21-2019 PLACE: CABANATUAN CITY TIN NO.: 427991026	ELMER T. RAMONEDA PROJECT MANAGER	JOSEPHINE P. ISTURIS CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	(SEE COVER SHEET) EDWIN C.MATANGUIHAN OIC, ASST. DIRECTOR, BUREAU OF DESIGN	(SEE COVER SHEET) EMIL K. SADAIN, CESO I UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES	PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II CARIG SUR, TUGUEGARAO CITY	MEZZANINE FLOOR WATERPROOFING PLAN Scale 1:100m	A	25 36

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

LEGEND:

WP-1 TORCHED APPLIED MEMBRANE WATERPROOFING
(VERIFY SPECIFICATIONS FOR BRAND)

WP-2 FLEXIBLE CEMENTITIOUS WATERPROOFING
(VERIFY SPECIFICATIONS FOR BRAND)



WATERPROOFING PLAN
SECOND FLOOR PLAN

1 | 26
AR

SCALE 1:100MTS

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REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

LEGEND:

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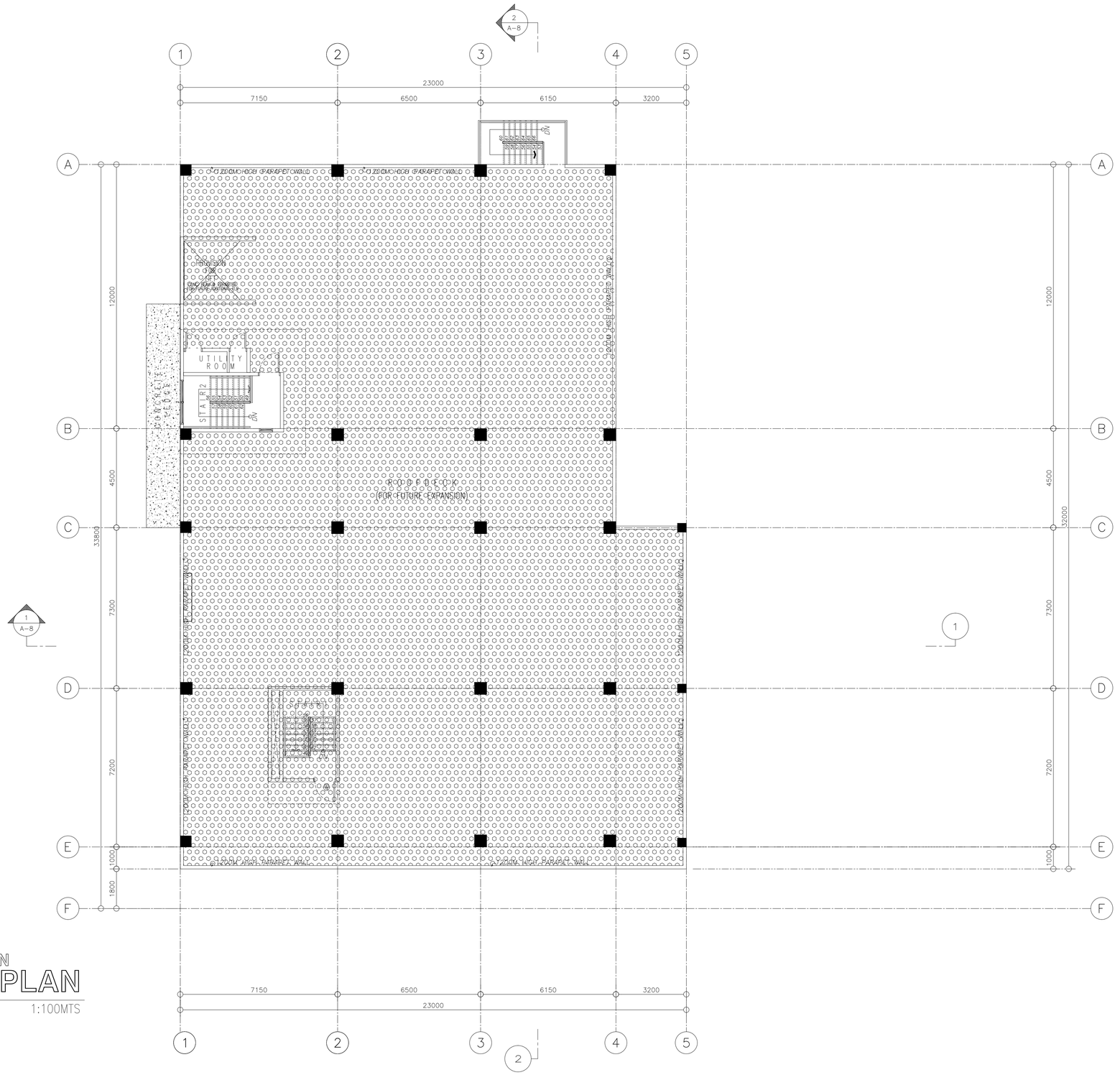

WATERPROOFING PLAN
ROOF DECK PLAN
SCALE 1:100MTS

1 | 27
AR

NOTE:

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SHEET CONTENTS:
ROOF DECK
WATERPROOFING PLAN
Scale 1:100m

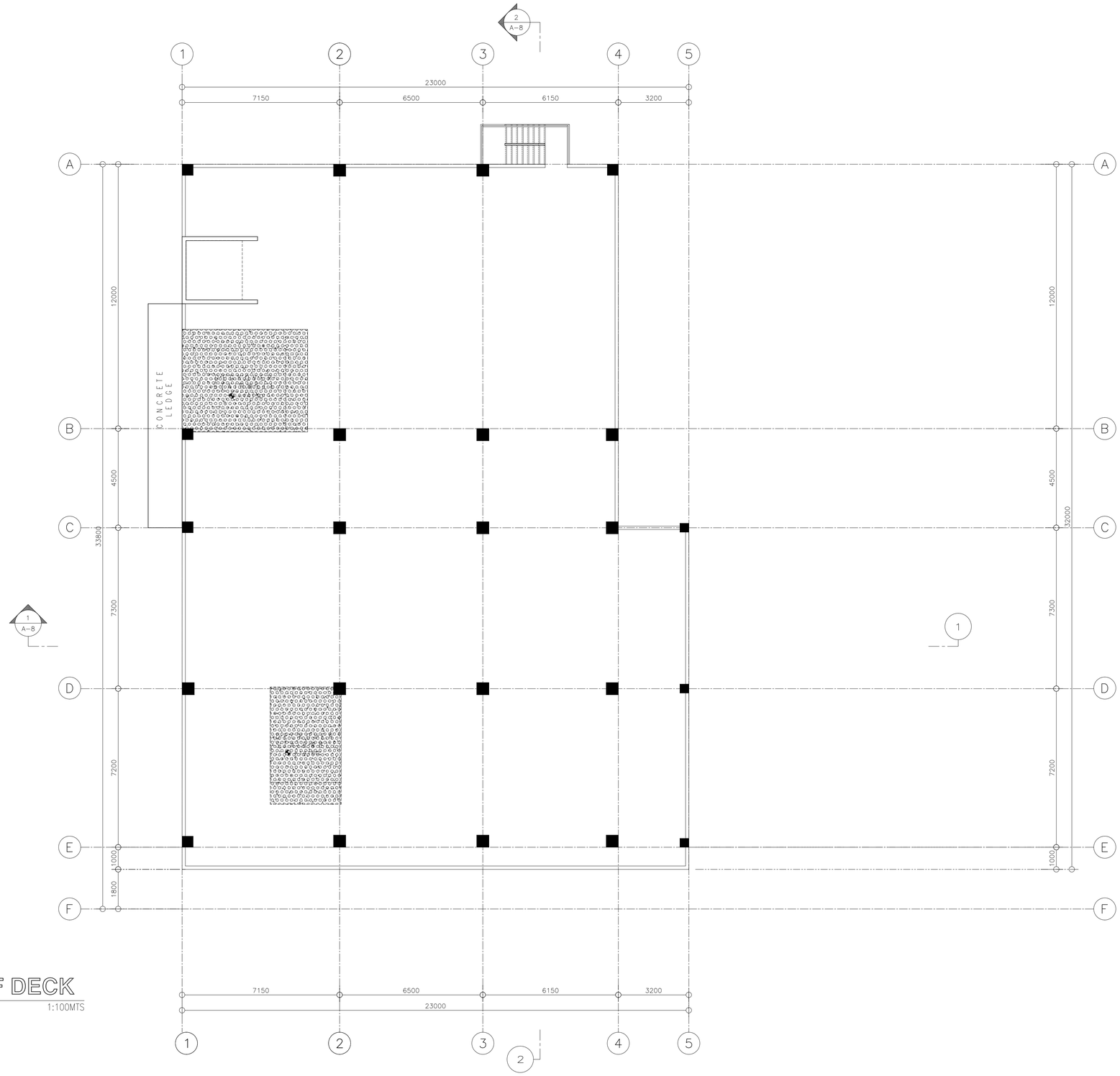
SET NO.: A

SHEET NO.: 27 / 36

LEGEND:

WP-1 TORCHED APPLIED MEMBRANE WATERPROOFING
(VERIFY SPECIFICATIONS FOR BRAND)

WP-2 FLEXIBLE CEMENTITIOUS WATERPROOFING
(VERIFY SPECIFICATIONS FOR BRAND)



1 | 28
AR

WATERPROOFING PLAN
DECK OVER ROOF DECK

SCALE 1:100MTS

NOTE:

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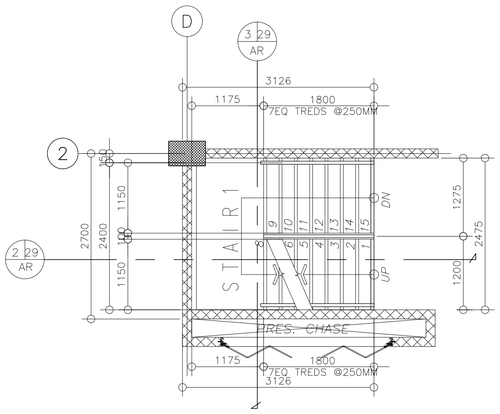
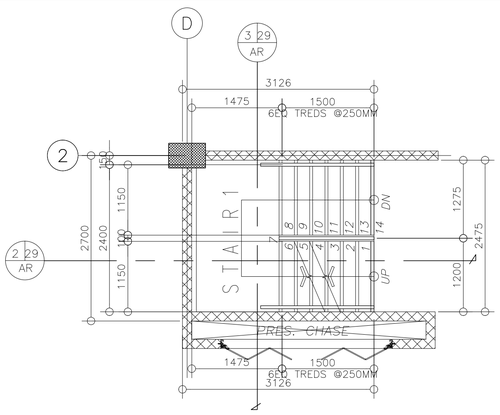
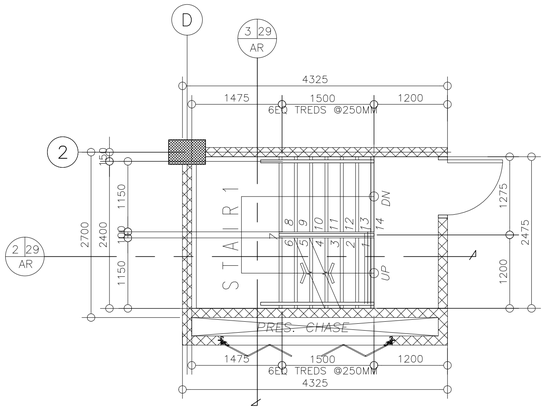
REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA



PLAN @ GROUND FLOOR

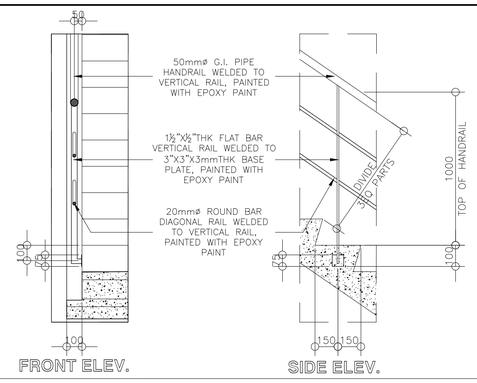


PLAN @ TYP. MEZZANINE-2ND FLOOR

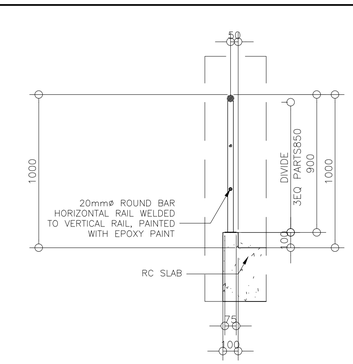


PLAN @ ROOF DECK

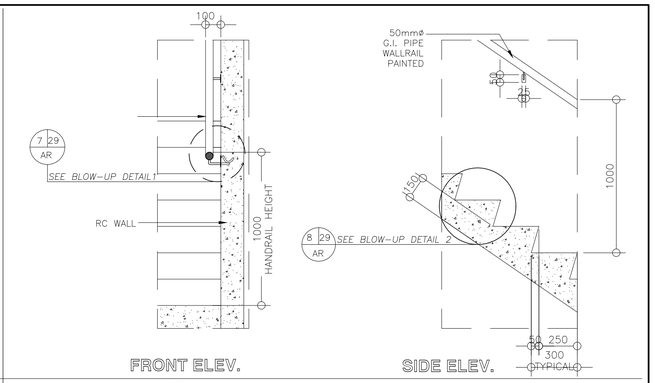
1 29 AR STAIR 1 PLAN
SCALE 1:50M



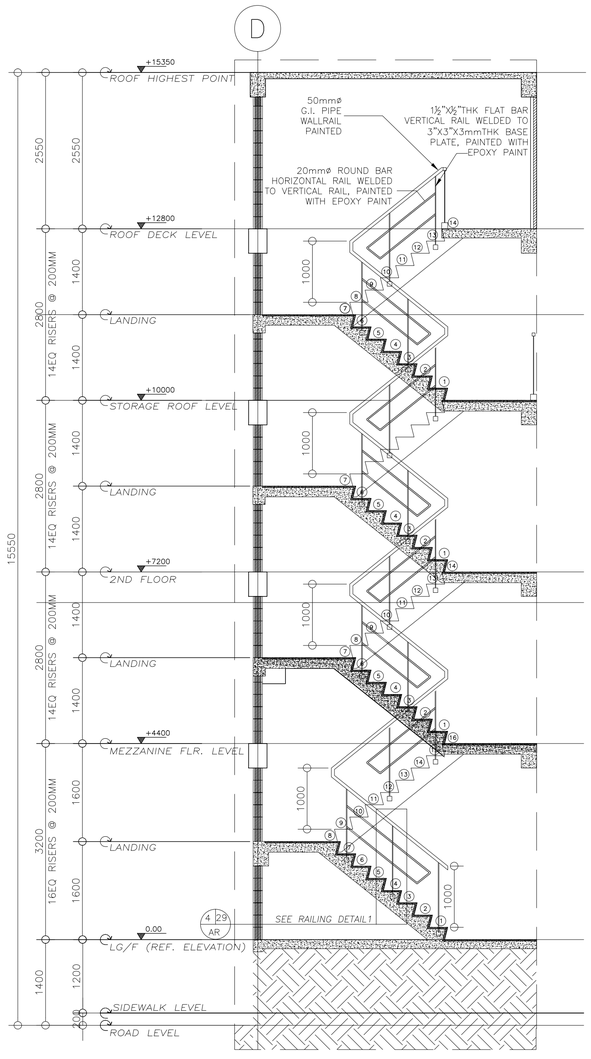
4 29 AR RAILING DETAIL 1
SCALE 1:20 M.



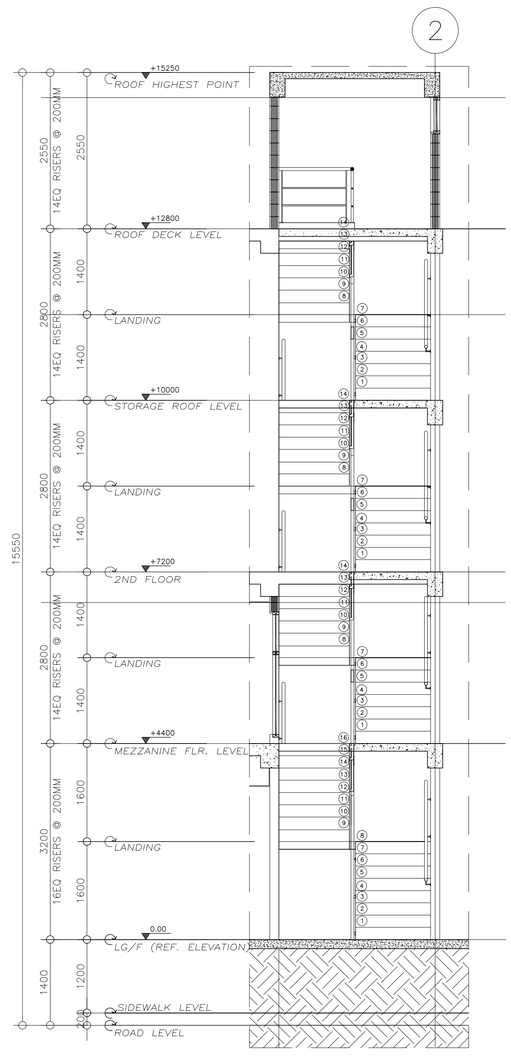
5 29 AR RAILING DETAIL 2
SCALE 1:20 M.



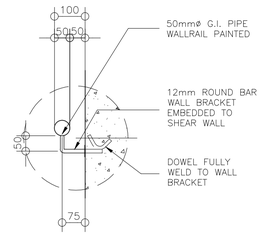
6 29 AR TYPICAL WALL RAIL DETAIL
SCALE 1:20 M.



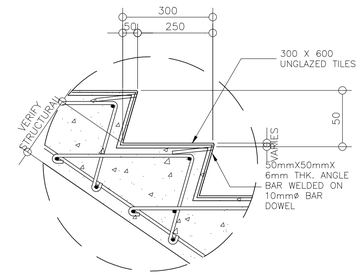
2 29 AR LONGITUDINAL SECTION
SCALE 1:50 M.



3 29 AR CROSS SECTION
SCALE 1:50 M.



7 29 AR BLOW UP DETAIL 1
SCALE 1:20 M.



8 29 AR TYP. BLOW UP DETAIL 2
SCALE 1:10 M.

NOTE:

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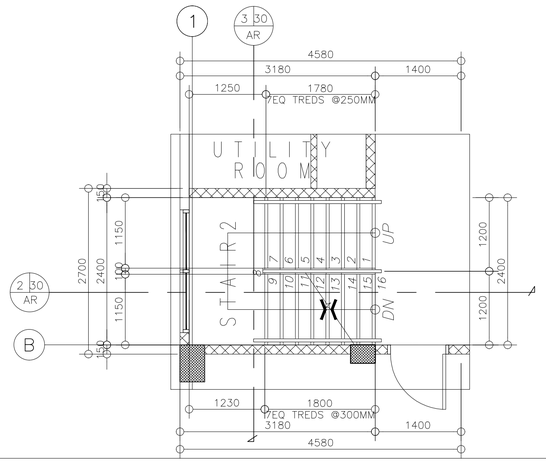
ELMER T. RAMONEDA
PROJECT MANAGER

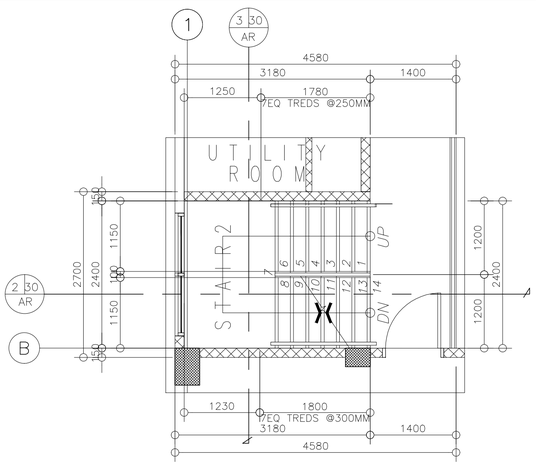
URBAN ENGINEERS
CONSULTING CIVIL ENGINEERS
in joint venture with
J.F. CANCIO & Associates
ENGINEERS CONSULTANTS
PTC Engineers & Associates

ARCHITECT:	SUBMITTED:	REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:	PROJECT & LOCATION:	SHEET CONTENTS:	SET NO.	SHEET NO.
GODOFREDO E. GARCIA PRC NO.: 18537 DATE: FEB-08-2021 PTR NO.: 1249395 DATE: MAY-21-2019 PLACE: CABANATUAN CITY TIN NO.: 427991026	ELMER T. RAMONEDA PROJECT MANAGER	JOSEPHINE P. ISTURIS CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	(SEE COVER SHEET) EDWIN C. MATANGUIHAN OIC, ASST. DIRECTOR, BUREAU OF DESIGN	(SEE COVER SHEET) EMIL K. SADAIN, CESO I UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES	PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II CARIG SUR, TUGUEGARAO CITY	STAIR 1 DETAILS	A	29 36

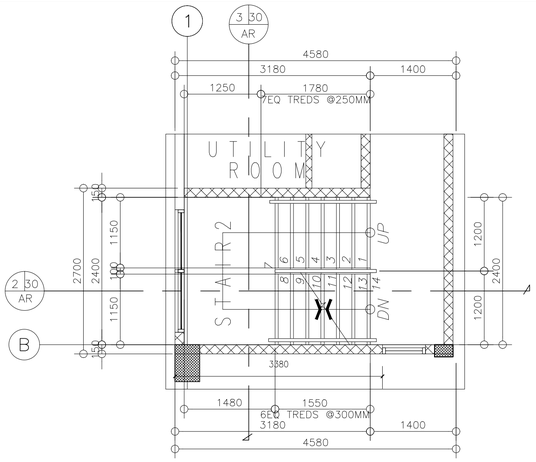
REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA



PLAN @ GROUND FLOOR

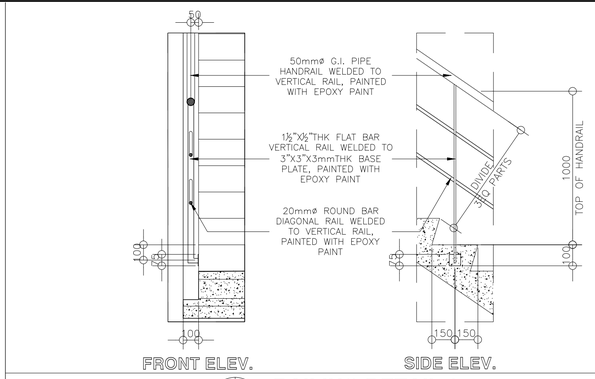


PLAN @ MEZZANINE FLOOR

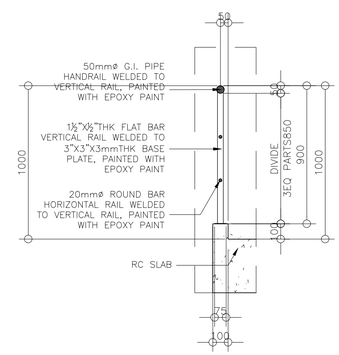


PLAN @ TYP. 2ND FLOOR & ROOF DECK

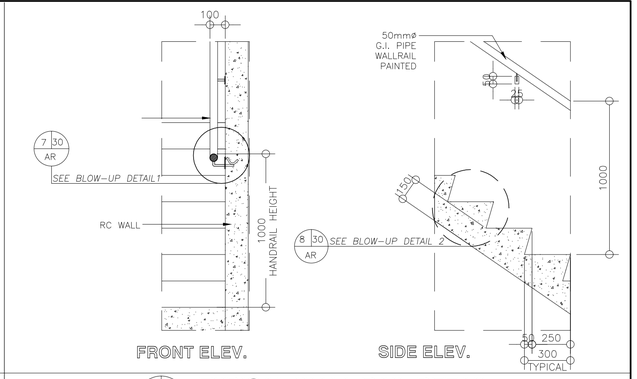
1 30 AR STAIR 2 PLAN
SCALE 1:50M



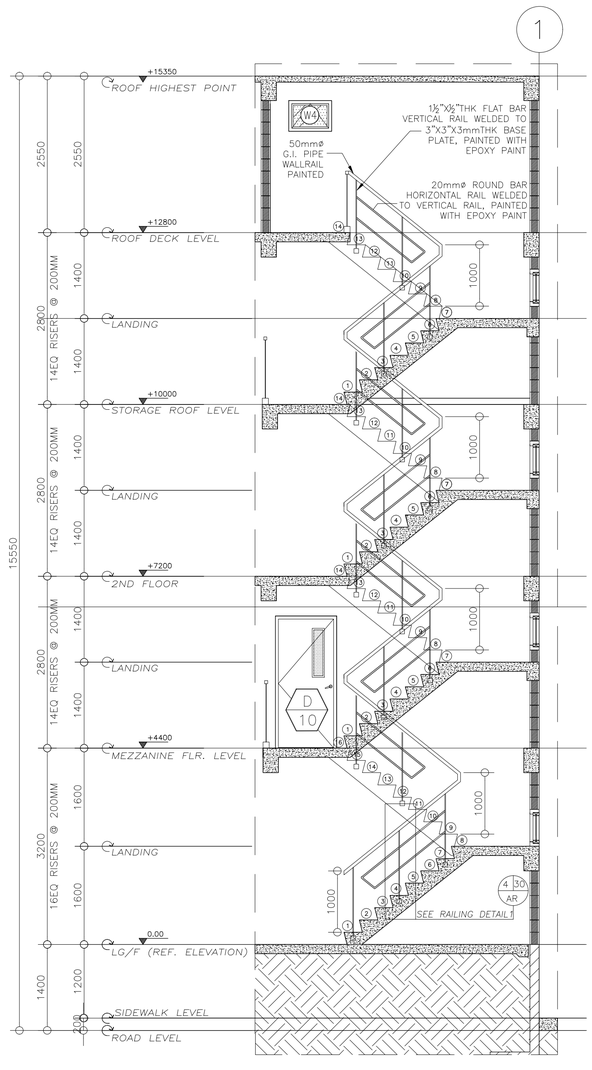
4 30 AR RAILING DETAIL 1
SCALE 1:20 M.



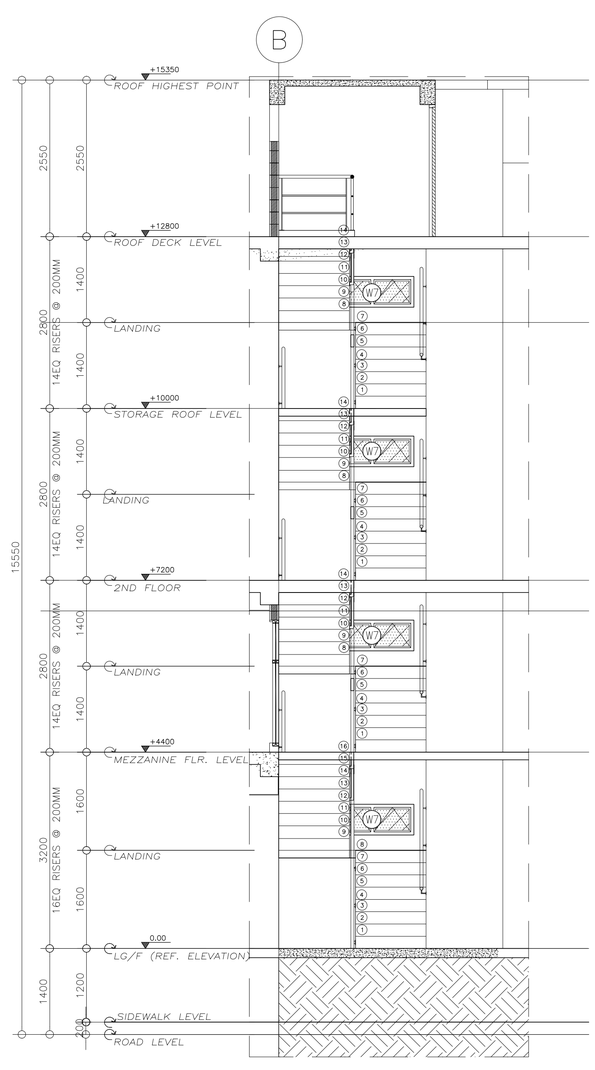
5 30 AR RAILING DETAIL 2
SCALE 1:20 M.



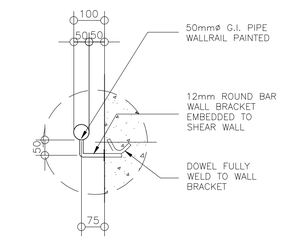
6 30 AR TYPICAL WALL RAIL DETAIL
SCALE 1:20 M.



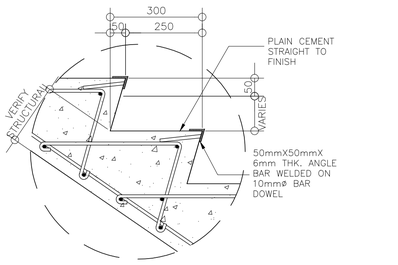
2 30 AR LONGITUDINAL SECTION
SCALE 1:50 M.



3 30 AR CROSS SECTION
SCALE 1:50 M.



7 30 AR BLOW UP DETAIL 1
SCALE 1:20 M.



8 30 AR TYP. BLOW UP DETAIL 2
SCALE 1:10 M.

NOTE:

PURSUANT TO ITEM 5 OF ANNEX 'A' OF THE REVISED IMPLEMENTING RULES AND REGULATION OF R.A. 9184, THE APPROVAL BY THE AUTHORIZED GOVERNMENT OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGNS UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGNS NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.

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ARCHITECT:	SUBMITTED:
GODOFREDO E. GARCIA	ELMER T. RAMONEDA
PRC NO.: 18537 — DATE: FEB-08-2021	PROJECT MANAGER
PTR NO.: 1249395 — DATE: MAY-21-2019	
PLACE: CABANATUAN CITY — TIN NO.: 427991026	

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

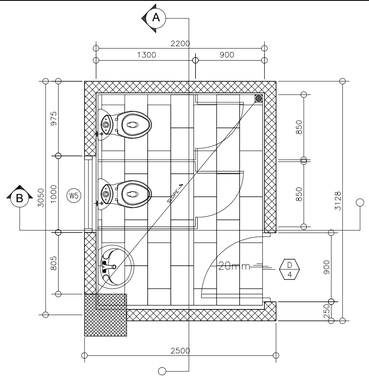
REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:
JOSEPHINE P. ISTURIS	(SEE COVER SHEET) EDWIN C. MATANGUIHAN	(SEE COVER SHEET) EMIL K. SADAIN, CESO I
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	OIC, ASST. DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II CARIG SUR, TUGUEGARAO CITY

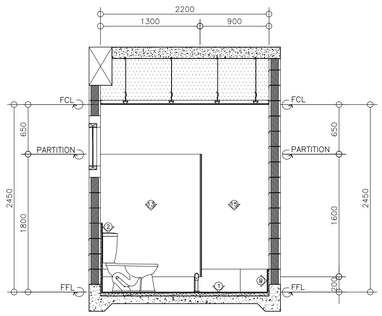
SHEET CONTENTS: STAIR 2 DETAILS

SET NO.: A

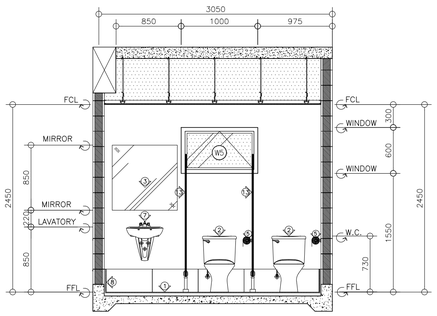
SHEET NO.: 30 / 36



PLAN VIEW
SCALE 1:50 M

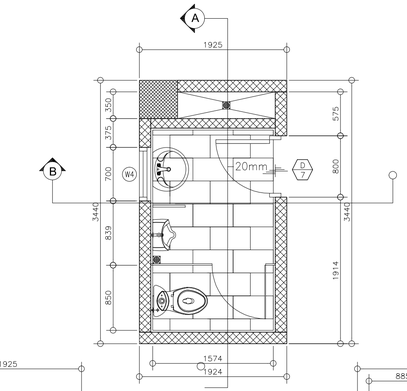


ELEVATION B
SCALE 1:50 M

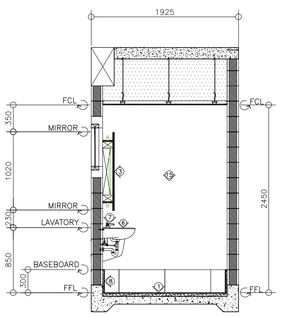


ELEVATION A
SCALE 1:50 M

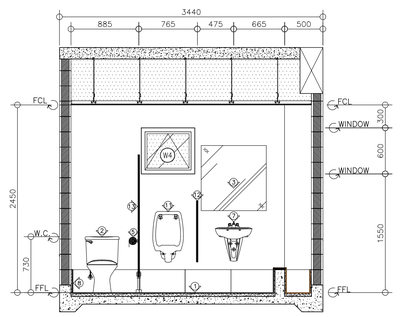
2 31 AR
FEMALE TOILET
SCALE 1:50



PLAN VIEW
SCALE 1:50 M



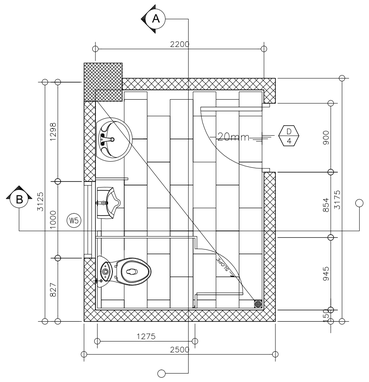
ELEVATION B
SCALE 1:50 M



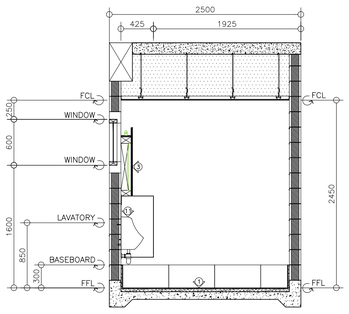
ELEVATION A
SCALE 1:50 M

3 31 AR
TOILET 1 (LOADING AREA)
SCALE 1:50

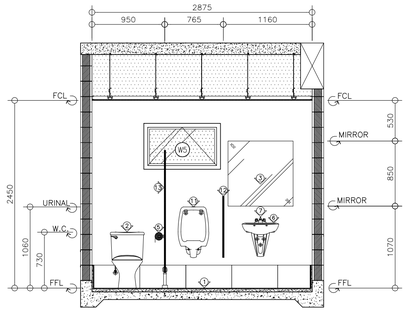
LEGEND:	
MARK	DESCRIPTION
1	300x600MM HOMOGENOUS TILE (VERIFY DESIGN & SPECS.)
2	WATER CLOSET (VERIFY DESIGN & SPECS.)
3	6MM THK. MIRROR WITH MARINE PLYWOOD BACKING; WITH BACKLIGHT (VERIFY DESIGN & SPECS.)
4	STAINLESS STEEL FLOOR DRAIN (VERIFY DESIGN & SPECS.)
5	SURFACE MOUNT TISSUE HOLDER (VERIFY DESIGN & SPECS.)
6	LAVATORY (VERIFY DESIGN & SPECS.)
7	FAUCET (VERIFY DESIGN & SPECS.)
8	300x600MM HOMOGENOUS TILE (BASEBOARD); ABOVE 300MM PAINTED-LATEX PAINT, SEMI-GLOSS FINISH (VERIFY COLOR)
9	300x600MM HOMOGENOUS TILE; ABOVE 1500MM PAINTED-LATEX PAINT, SEMI-GLOSS FINISH; (VERIFY DESIGN & SPECS.)
10	300x600MM HOMOGENOUS TILE; ABOVE 900MM PAINTED-LATEX PAINT, SEMI-GLOSS FINISH; (VERIFY DESIGN & SPECS.)
11	URINAL (VERIFY SPECS.)
12	450MM x 800MM, 12MM THK. PHENOLIC BOARD (VERIFY DESIGN & SPECS.)
13	1525MM x 1600MM, 12MM THK. PHENOLIC BOARD (VERIFY DESIGN & SPECS.)
14	DOOR (VERIFY DESIGN & SPECS.)
15	PAINTED-LATEX PAINT, SEMI-GLOSS FINISH; (VERIFY DESIGN & SPECS.)
16	25MM SHADOW LINE
17	DROP CEILING IN 12MM THK. MR GYPSUM BOARD ON METAL FURRING, PAINTED-LATEX FLAT (WHITE) (VERIFY SPECS.)



PLAN VIEW
SCALE 1:50 M

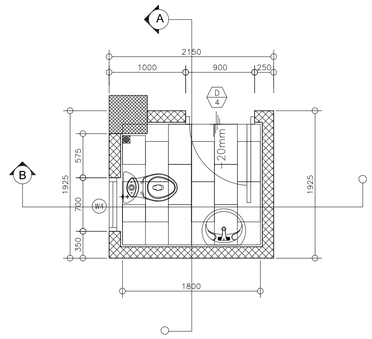


ELEVATION B
SCALE 1:50 M

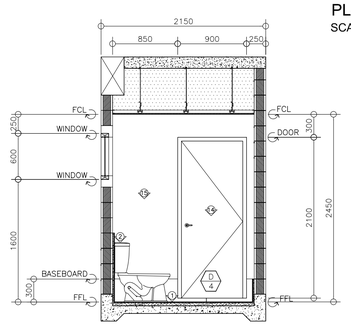


ELEVATION A
SCALE 1:50 M

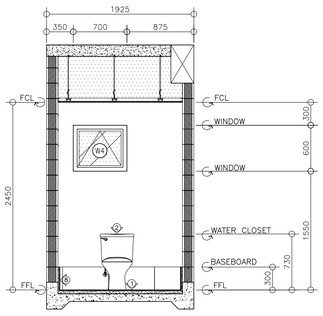
1 31 AR
MALE TOILET
SCALE 1:50



PLAN VIEW
SCALE 1:50 M



ELEVATION B
SCALE 1:50 M



ELEVATION A
SCALE 1:50 M

4 31 AR
TOILET 2 (OFFICE)
SCALE 1:50

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ARCHITECT:
GODOFREDO B. GARCIA
PRC.NO.: 18537 DATE: FEB-08-2021
PTR NO.: 1249395 DATE: MAY-21-2019
PLACE: CABANATUAN CITY TIN NO.: 427991026

SUBMITTED:
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PROJECT MANAGER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:
JOSEPHINE P. ISTURIS
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN

RECOMMENDING APPROVAL:
(SEE COVER SHEET)
EDWIN C. MATANGUIHAN
OIC, ASST. DIRECTOR, BUREAU OF DESIGN

APPROVED:
(SEE COVER SHEET)
EMIL K. SADAIN, CESO I
UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:
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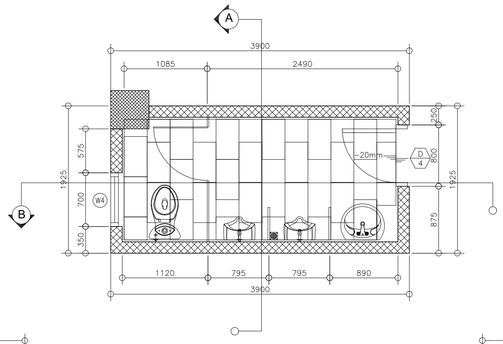
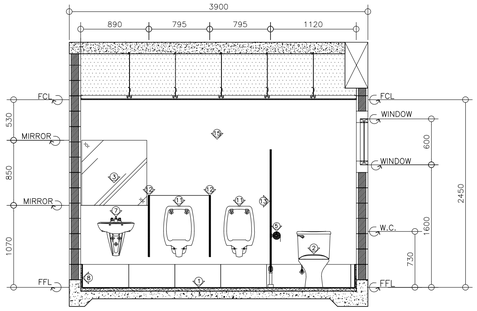
SHEET CONTENTS:
TOILET DETAILS
Scale 1:50m

SET NO.: A

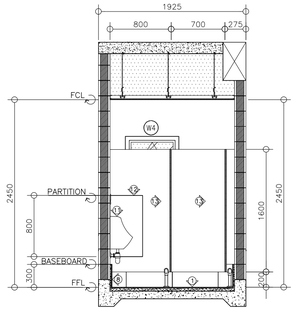
SHEET NO.: 31 / 36



PLAN VIEW
SCALE 1:50 M

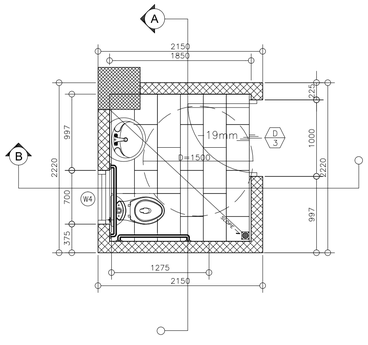


ELEVATION B
SCALE 1:50 M

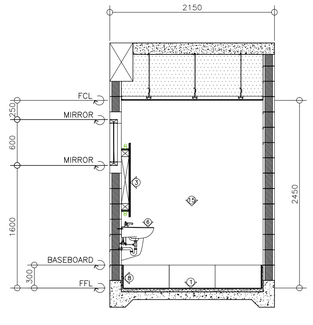


ELEVATION A
SCALE 1:50 M

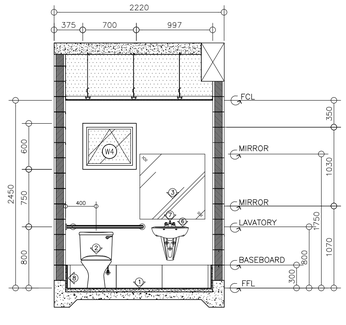
2 32 AR
TOILET 3 (WAREHOUSE)
SCALE 1:50



PLAN VIEW
SCALE 1:50 M



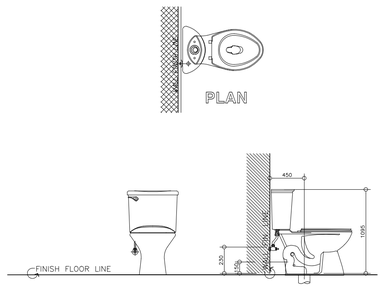
ELEVATION B
SCALE 1:50 M



ELEVATION A
SCALE 1:50 M

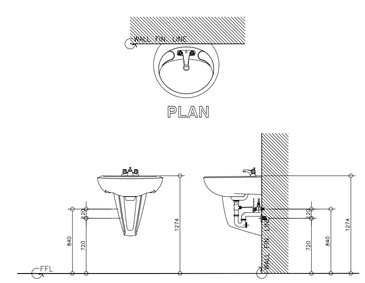
1 32 AR
TOILET FOR PWD
SCALE 1:50

NOTE: VERIFY SPECIFICATIONS FOR FINAL MEASUREMENTS AND DETAILS



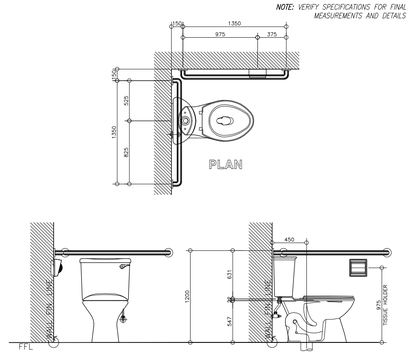
FLOOR DISCHARGE WATER CLOSET

NOTE: VERIFY SPECIFICATIONS FOR FINAL MEASUREMENTS AND DETAILS



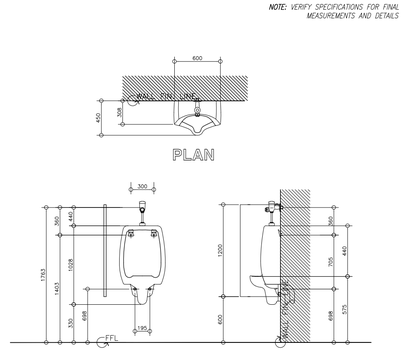
LAVATORY WITH SHORT PEDESTAL

NOTE: VERIFY SPECIFICATIONS FOR FINAL MEASUREMENTS AND DETAILS

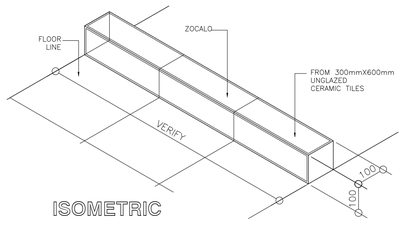


GRAB BAR DETAILS (FOR PWD)

NOTE: VERIFY SPECIFICATIONS FOR FINAL MEASUREMENTS AND DETAILS



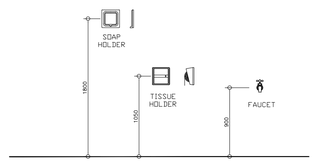
URINAL



ISOMETRIC

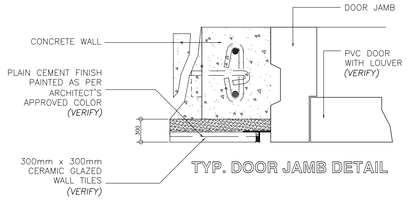
TYPICAL ZOCALO DETAIL

NOTE: VERIFY SPECIFICATIONS FOR FINAL MEASUREMENTS AND DETAILS

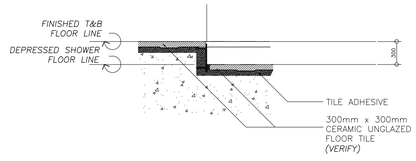


ACCESSORIES

4 32 AR
TYPICAL FIXTURE MOUNTING HEIGHT
SCALE 1:20 M.



TYP. DOOR JAMB DETAIL



TYP. FLOOR DEPRESSION DETAIL

3 32 AR
TYPICAL BLOW-UP DETAILS
SCALE 1:10

LEGEND:	
MARK	DESCRIPTION
1	300x600MM HOMOGENOUS TILE (VERIFY DESIGN & SPECS.)
2	WATER CLOSET (VERIFY DESIGN & SPECS.)
3	6MM THK. MIRROR WITH MARINE PLYWOOD BACKING; WITH BACKLIGHT (VERIFY DESIGN & SPECS.)
4	STAINLESS STEEL FLOOR DRAIN (VERIFY DESIGN & SPECS.)
5	SURFACE MOUNT TISSUE HOLDER (VERIFY DESIGN & SPECS.)
6	LAVATORY (VERIFY DESIGN & SPECS.)
7	FAUCET (VERIFY DESIGN & SPECS.)
8	300x600MM HOMOGENOUS TILE (BASEBOARD); ABOVE 300MM PAINTED-LATEX PAINT, SEMI-GLOSS FINISH (VERIFY COLOR)
9	300x600MM HOMOGENOUS TILE; ABOVE 1500MM PAINTED-LATEX PAINT, SEMI-GLOSS FINISH; (VERIFY DESIGN & SPECS.)
10	300x600MM HOMOGENOUS TILE; ABOVE 900MM PAINTED-LATEX PAINT, SEMI-GLOSS FINISH; (VERIFY DESIGN & SPECS.)
11	URINAL (VERIFY SPECS.)
12	450MM x 800MM, 12MM THK. PHENOLIC BOARD (VERIFY DESIGN & SPECS.)
13	1525MM x 1600MM, 12MM THK. PHENOLIC BOARD (VERIFY DESIGN & SPECS.)
14	DOOR (VERIFY DESIGN & SPECS.)
15	PAINTED-LATEX PAINT, SEMI-GLOSS FINISH; (VERIFY DESIGN & SPECS.)
16	25MM SHADOW LINE
17	DROP CEILING IN 12MM THK. MR GYPSUM BOARD ON METAL FURRING, PAINTED-LATEX FLAT (WHITE) (VERIFY SPECS.)

NOTE:

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ELMER T. RAMONEDA
PROJECT MANAGER

URBAN ENGINEERS
CONSULTING CIVIL ENGINEERS
in joint venture with
J.F. CANCIO & Associates ENGINEERS CONSULTANTS
PTC Engineers & Associates

ARCHITECT:	SUBMITTED:
GODOFREDO E. GARCIA	ELMER T. RAMONEDA
PRC NO.: 18537 DATE: FEB-08-2021	PROJECT MANAGER
PTR NO.: 1249395 DATE: MAY-21-2019	
PLACE: CABANATUAN CITY TIN NO.: 427991026	

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

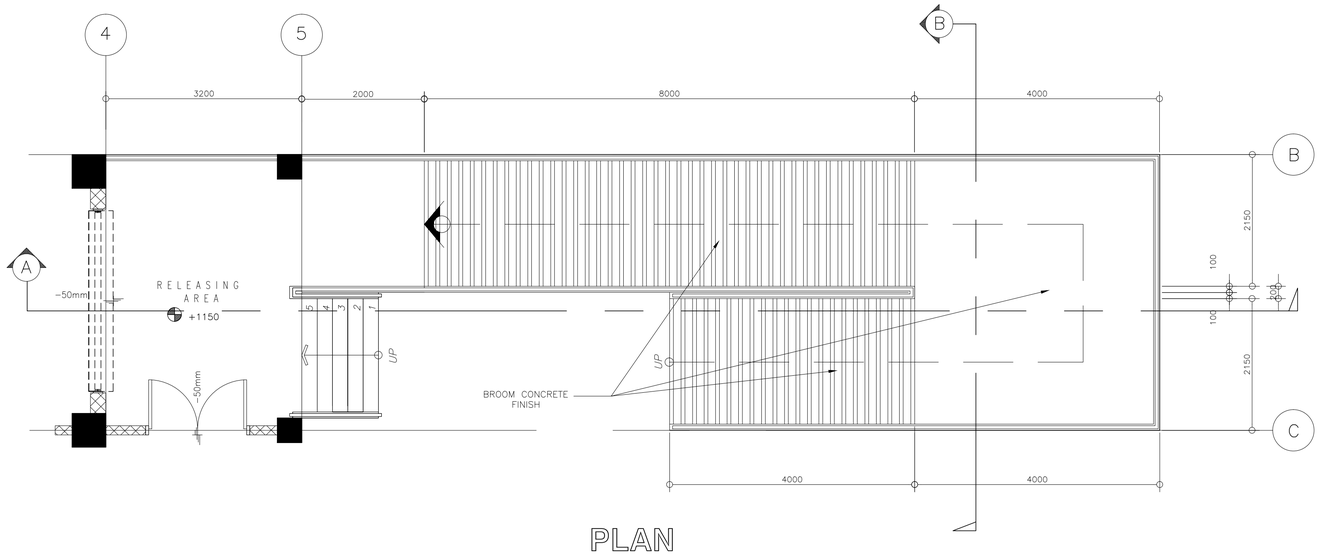
REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:
JOSEPHINE P. ISTURIS	(SEE COVER SHEET) EDWIN C. MATANGUIHAN	(SEE COVER SHEET) EMIL K. SADAIN, CESO I
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	OIC, ASST. DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II
CARIG SUR, TUGUEGARAO CITY

SHEET CONTENTS:
TOILET DETAILS
Scale 1:50m

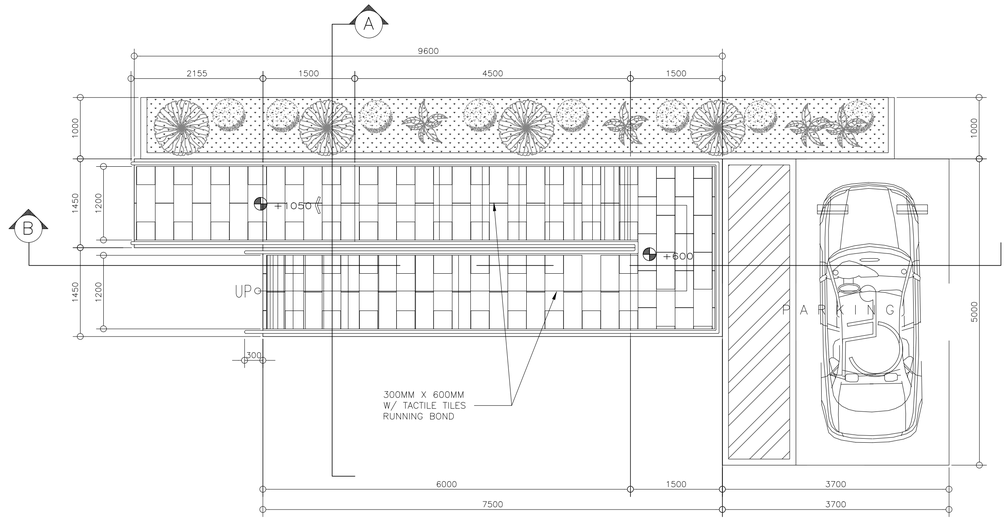
SET NO.: A

SHEET NO.: 32 / 36



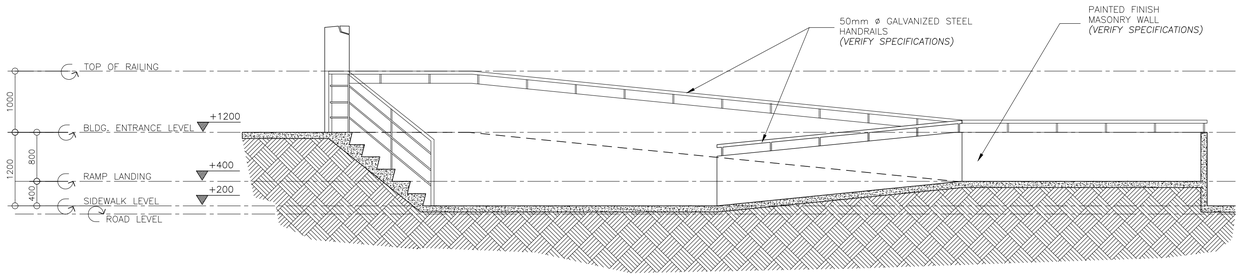
PLAN

SCALE 1:50



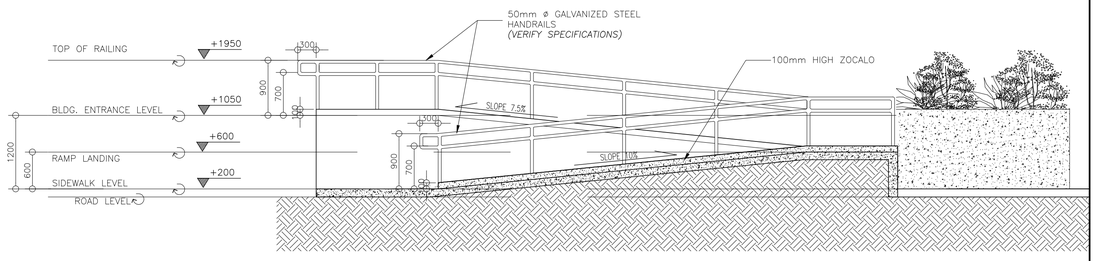
PLAN

SCALE 1:50



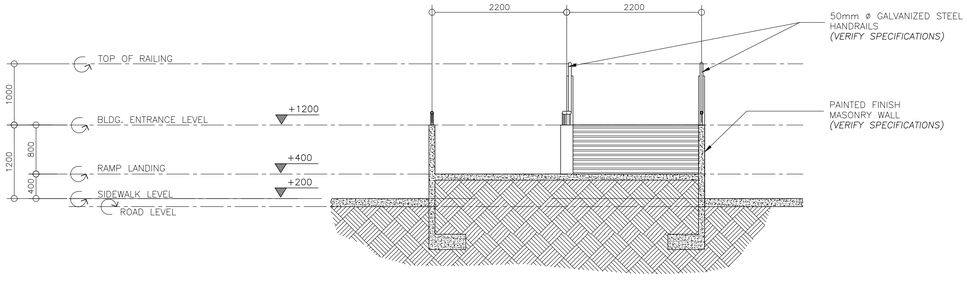
ELEVATION A

SCALE 1:50



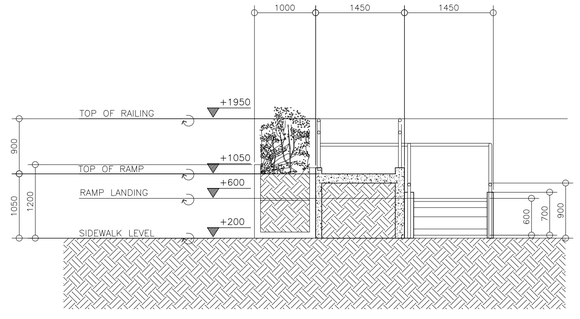
ELEVATION B

SCALE 1:50



ELEVATION B

SCALE 1:50



ELEVATION A

SCALE 1:50

1 | 33
AR

RAMP-2 BLOW-UP PLAN

SCALE 1:50

2 | 33
AR

RAMP 1 BLOW-UP PLAN

SCALE 1:50

NOTE:

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PRC NO.: 18537	DATE: FEB-08-2021	PROJECT MANAGER
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REPUBLIC OF THE PHILIPPINES
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REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:
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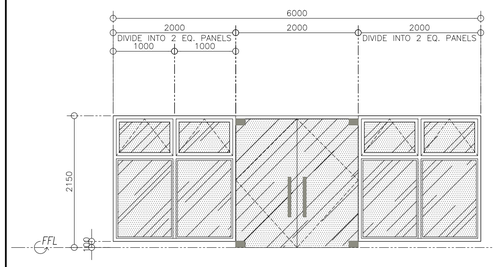
CARIG SUR, TUGUEGARAO CITY

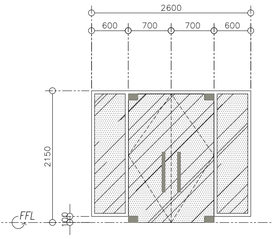
SHEET CONTENTS:
RAMP DETAILS
Scale 1:50m

SET NO.: A

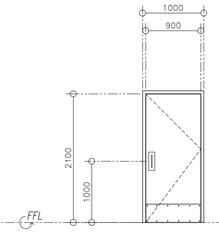
SHEET NO.: 33 / 36



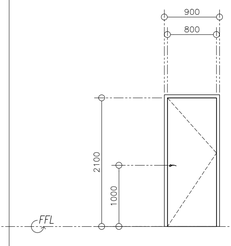
MARK:	W 1
TYPE:	FRAMELESS GLASS DOOR W/ ALUMINUM FIXED GLASS W/ ALUMINUM AWNING WINDOW (DOUBLE SWING)
FRAME:	ALUMINUM FRAME
DOOR JAMB:	
GLAZING:	10mm THK. TINTED TEMPERED GLASS
FINISH:	POWDER-COATED FINISH
QUANTITY:	1 SET *(VERIFY QUANTITY)*
LOCATION:	LOBBY @ G/F
HINGES:	PIVOT HINGE
HARDWARE:	50mm@ X 1000mm STAINLESS STEEL HAIRLINE FINISH
	S/S H-TYPE PULL HANDLE



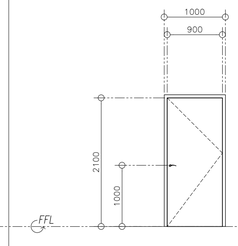
MARK:	D 2
TYPE:	FRAMELESS GLASS DOOR W/ ALUMINUM FIXED GLASS (DOUBLE SWING)
FRAME:	ALUMINUM FRAME
GLAZING:	10mm THK. TINTED TEMPERED GLASS
FINISH:	POWDER-COATED FINISH
QUANTITY:	1 SET *(VERIFY QUANTITY)*
LOCATION:	LOBBY @ G/F
HINGES:	PIVOT HINGE
HARDWARE:	50mm@ X 1000mm STAINLESS STEEL HAIRLINE FINISH
	S/S H-TYPE PULL HANDLE



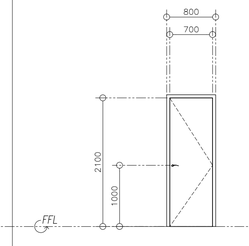
MARK:	D 3
TYPE:	MARINE FLUSH DOOR W/ KICK PLATE (SINGLE SWING)
FRAME:	K.D. TANGUILE
DOOR JAMB:	50mm x100mm KD. TANGUILE JAMB & HEADER
GLAZING:	–
FINISH:	PAINTED FINISH
QUANTITY:	1 SET *(VERIFY QUANTITY)*
LOCATION:	PWD TOILET
HINGES:	4–3 1/2" X 3 1/2" PLAIN BEARING HINGE
HARDWARE:	PUSH & PULL PLATE W/ DEAD BOLT LOCK
	KICK PLATE, STAIN STAINLESS FINISH



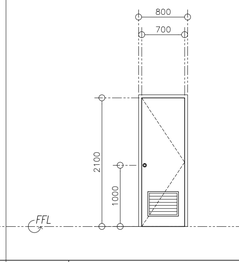
MARK:	D 4
TYPE:	MARINE FLUSH DOOR (SINGLE SWING)
FRAME:	K.D. TANGUILE
DOOR JAMB:	50mm x100mm KD. TANGUILE JAMB & HEADER
GLAZING:	–
FINISH:	PAINTED FINISH
QUANTITY:	4 SETS *(VERIFY QUANTITY)*
LOCATION:	RESTROOMS @ GF (3), MEZZANINE (1)
HINGES:	4–3 1/2" X 3 1/2" LOOSE BUTT HINGE
HARDWARE:	CYLINDIRCAL LOCKSET LEVER TYPE PRIVACY LOCK
	SATIN STAINLESS FINISH



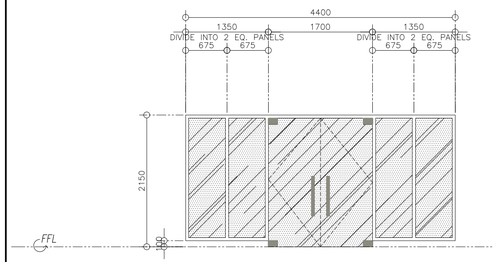
MARK:	D 5
TYPE:	WOODEN FLUSH DOOR (SINGLE SWING)
FRAME:	K.D. TANGUILE
DOOR JAMB:	50mm x100mm KD. TANGUILE JAMB & HEADER
GLAZING:	–
FINISH:	PAINTED FINISH
QUANTITY:	3 SETS *(VERIFY QUANTITY)*
LOCATION:	ADMIN OFFICE @ LG/F
HINGES:	4–3 1/2" X 3 1/2" PLAIN BEARING HINGE
HARDWARE:	CYLINDRICAL LEVER TYPE LOCKSET ENTRANCE LOCK
	SATIN STAINLESS FINISH



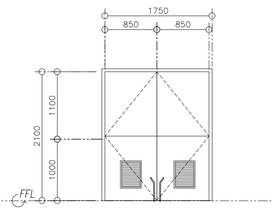
MARK:	D 6
TYPE:	METAL FLUSH DOOR (SINGLE SWING)
FRAME:	GA. 18 METAL DOOR
DOOR JAMB:	50mm x 100mm GA. 14 METAL
GLAZING:	–
FINISH:	PAINTED FINISH
QUANTITY:	8 SETS *(VERIFY QUANTITY)*
LOCATION:	UTILITY ROOM 2 @GF, 2 @MEZZ, 2 @2ND FLR, 2 @RD
HINGES:	4–4"x4" PLAIN BEARING HINGE
HARDWARE:	CYLINDIRCAL LOCKSET LEVER TYPE ENTRANCE LOCK
	SATIN STAINLESS FINISH



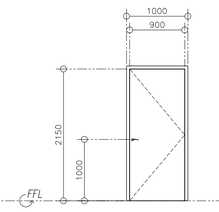
MARK:	D 7
TYPE:	PVC DOOR w/ LOUVER
FRAME:	PVC
DOOR JAMB:	PVC
GLAZING:	–
FINISH:	PAINTED FINISH
QUANTITY:	2 SETS *(VERIFY QUANTITY)*
LOCATION:	TOILET ROOM 1 @ GF WAREHOUSE, 1 @ 2ND FLR
HINGES:	AS PER MANUFACTURER SPECS
HARDWARE:	CYLINDRICAL LOCKSET PRIVACY LOCK
	KNOB TYPE SATIN STAINLESS FINISH



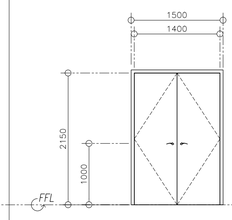
MARK:	D 8
TYPE:	FRAMELESS GLASS DOOR W/ ALUMINUM FIXED GLASS W/ ALUMINUM AWNING WINDOW (DOUBLE SWING)
FRAME:	ALUMINUM FRAME
DOOR JAMB:	
GLAZING:	10mm THK. TINTED TEMPERED GLASS
FINISH:	POWDER-COATED FINISH
QUANTITY:	1 SET *(VERIFY QUANTITY)*
LOCATION:	LOBBY @ G/F
HINGES:	PIVOT HINGE
HARDWARE:	50mm@ X 1000mm STAINLESS STEEL HAIRLINE FINISH
	S/S H-TYPE PULL HANDLE



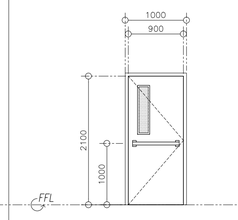
MARK:	D 9
TYPE:	METAL DOOR WITH STORM LOUVER (DOUBLE SWING)
FRAME:	GA. 18 METAL DOOR
GLAZING:	–
FINISH:	PAINTED FINISH
QUANTITY:	1 SET *(VERIFY QUANTITY)*
LOCATION:	STORAGE ROOM @ G/F
HINGES:	4–4"x4" PLAIN BEARING HINGE
HARDWARE:	CYLINDRICAL LOCKSET, ENTRANCE LOCK LEVER-TYPE
	SATIN STAINLESS FINISH, W/ FLUSH BOLT



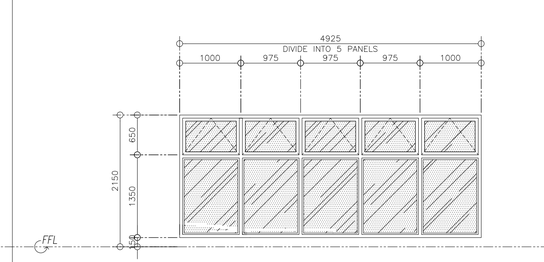
MARK:	D 10
TYPE:	WOOD PANEL DOOR (SINGLE SWING)
FRAME:	K.D. TANGUILE
DOOR JAMB:	50mm x100mm KD. TANGUILE JAMB & HEADER
GLAZING:	–
FINISH:	PAINTED FINISH
QUANTITY:	2 SETS *(VERIFY QUANTITY)*
LOCATION:	ADMIN OFFICE @ MEZZANINE
HINGES:	4–3 1/2" X 3 1/2" PLAIN BEARING HINGE
HARDWARE:	CYLINDRICAL LEVER TYPE LOCKSET ENTRANCE LOCK
	SATIN STAINLESS FINISH



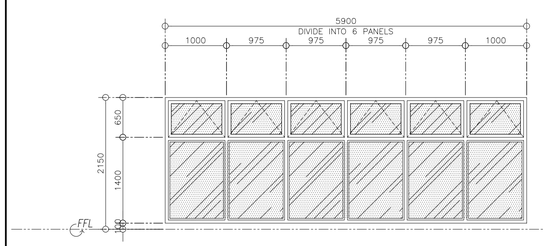
MARK:	D 11
TYPE:	WOODEN FLUSH DOOR (DOUBLE SWING)
FRAME:	K.D. TANGUILE
DOOR JAMB:	50mm x100mm KD. TANGUILE JAMB & HEADER
GLAZING:	–
FINISH:	PAINTED FINISH
QUANTITY:	2 SETS *(VERIFY QUANTITY)*
LOCATION:	WAREHOUSE STORAGE @ 2ND FLOOR
HINGES:	4–3 1/2" X 3 1/2" PLAIN BEARING HINGE
HARDWARE:	CYLINDRICAL LEVER TYPE LOCKSET ENTRANCE LOCK
	SATIN STAINLESS FINISH



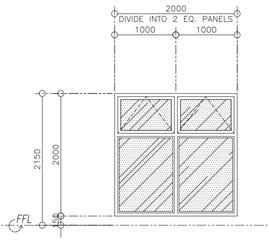
MARK:	D 12
TYPE:	METAL FLUSH DOOR (1 1/2 HR FIRE RATING)
FRAME:	45mm THK. GA. 18
DOOR JAMB:	50MM x 100MM GA. 14. METAL
GLAZING:	6MM THK. WIRED GLASS
FINISH:	PAINTED FINISH
QUANTITY:	6 SETS *(VERIFY QUANTITY)*
LOCATION:	FIRE EXITS
HINGES:	4–4"X4" PLAIN BEARING HINGE S/S FINISH
HARDWARE:	PANIC EXIT DEVICE W/ TRIM, DOOR CLOSER
	W/ HOLD OPEN FEATURE



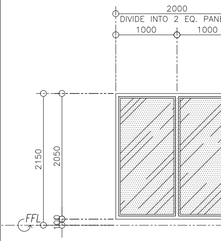
MARK:	W 2
TYPE:	ALUMINUM AWNING WINDOW W/ FIXED GLASS PANELS
FRAME:	ALUMINUM FRAME
GLAZING:	8mm THK. TINTED TEMPERED GLASS
FINISH:	POWDER COATED FINISH
QUANTITY:	4 SETS*(VERIFY QUANTITY)*
LOCATION:	STORE
HARDWARE:	AS PER MANFACTURER'S SPECIFICATIONS



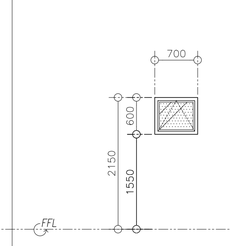
MARK:	W 2A
TYPE:	ALUMINUM AWNING WINDOW W/ FIXED GLASS PANELS
FRAME:	ALUMINUM FRAME
GLAZING:	8mm THK. TINTED TEMPERED GLASS
FINISH:	POWDER COATED FINISH
QUANTITY:	1 SET *(VERIFY QUANTITY)*
LOCATION:	MEZZANINE FLOOR WAITING AREA
HARDWARE:	AS PER MANFACTURER'S SPECIFICATIONS



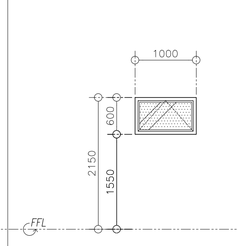
MARK:	W 3
TYPE:	ALUMINUM AWNING WINDOW W/ FIXED GLASS PANELS
FRAME:	ALUMINUM FRAME
GLAZING:	8mm THK. TINTED TEMPERED GLASS
FINISH:	POWDER COATED FINISH
QUANTITY:	12 SETS *(VERIFY QUANTITY)*
LOCATION:	LOBBY & OFFICE
HARDWARE:	AS PER MANFACTURER'S SPECIFICATIONS



MARK:	W 3A
TYPE:	ALUMINUM FRAMED WINDOW W/ FIXED GLASS PANELS
FRAME:	ALUMINUM FRAME
GLAZING:	8mm THK. TINTED TEMPERED GLASS
FINISH:	POWDER COATED FINISH
QUANTITY:	2 SETS *(VERIFY QUANTITY)*
LOCATION:	STORE COUNTER
HARDWARE:	AS PER MANFACTURER'S SPECIFICATIONS



MARK:	W 4
TYPE:	
FRAME:	ALUMINUM FRAME
GLAZING:	6mm THK. CLEAR FLOAT GLASS
FINISH:	POWDER COATED FINISH
QUANTITY:	6 SETS *(VERIFY QUANTITY)*
LOCATION:	PWD TOILET @ G/F, TOILET @ OFFICE, PANTRY, TOILET 2ND FL
HARDWARE:	AS PER MANFACTURER'S SPECIFICATIONS



MARK:	W 5
TYPE:	ALUMINUM AWNING WINDOW
FRAME:	ALUMINUM FRAME
GLAZING:	6mm THK. CLEAR FLOAT GLASS
FINISH:	POWDER COATED FINISH
QUANTITY:	2 SETS*(VERIFY QUANTITY)*
LOCATION:	TOILET ROOMS
HARDWARE:	AS PER MANFACTURER'S SPECIFICATIONS

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ELMER T. RAMONEDA
PROJECT MANAGER

1 | 34
AR

SCHEDULE OF DOORS AND WINDOWS

SCALE 1:50MTS

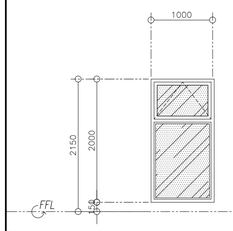
URBAN ENGINEERS
CONSULTING CIVIL ENGINEERS
in joint venture with
J.F. CANCIO & Associates ENGINEERS CONSULTANTS
PTC Engineers & Associates

ARCHITECT:	SUBMITTED:
GODOFREDO E. GARCIA	ELMER T. RAMONEDA
PRC NO.: 18537 DATE: FEB-08-2021	PROJECT MANAGER
PTR NO.: 1249395 DATE: MAY-21-2019	
PLACE: CABANATUAN CITY TIN NO.: 427991026	

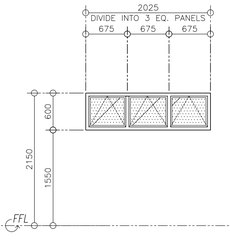
REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:
JOSEPHINE P. ISTURIS	(SEE COVER SHEET) EDWIN C. MATANGUIHAN	(SEE COVER SHEET) EMIL K. SADAIN, CESO I
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	OIC, ASST. DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

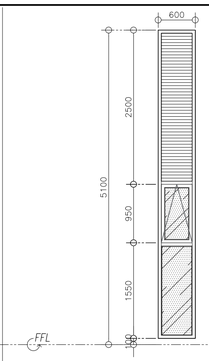
PROJECT & LOCATION:	SHEET CONTENTS:	SET NO.	SHEET NO.
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II CARIG SUR, TUGUEGARAO CITY	DOORS AND WINDOWS SCHEDULE	A	34 / 36



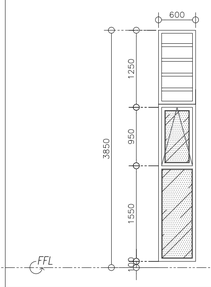
MARK:	W 6
TYPE:	ALUMINUM AWNING WINDOW W/ FIXED GLASS PANELS
FRAME:	ALUMINUM FRAME
GLAZING:	8mm THK. TINTED TEMPERED GLASS
FINISH:	POWDER COATED FINISH
QUANTITY:	2 SETS*(VERIFY QUANTITY)*
LOCATION:	STAFF'S QUARTER
HINGES:	
HARDWARE:	AS PER MANFACTURER'S SPECIFICATIONS



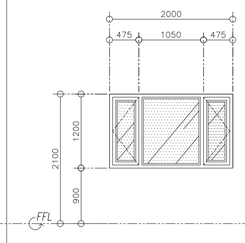
MARK:	W 7
TYPE:	ALUMINUM AWNING WINDOW
FRAME:	ALUMINUM FRAME
GLAZING:	6mm THK. CLEAR FLOAT GLASS
FINISH:	POWDER COATED FINISH
QUANTITY:	4 SETS*(VERIFY QUANTITY)*
LOCATION:	STAIR 2
HINGES:	
HARDWARE:	AS PER MANFACTURER'S SPECIFICATIONS



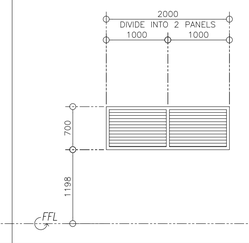
MARK:	W 9
TYPE:	ALUMINUM AWNING WINDOW W/ FIXED GLASS PANELS W/ STORM LOUVER
FRAME:	ALUMINUM FRAME
GLAZING:	8mm THK. TINTED TEMPERED GLASS
FINISH:	POWDER COATED FINISH
QUANTITY:	12 SETS *(VERIFY QUANTITY)*
LOCATION:	WAREHOUSE @ 2ND FLOOR
HINGES:	
HARDWARE:	AS PER MANFACTURER'S SPECIFICATIONS



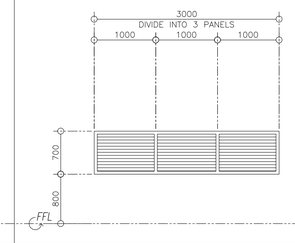
MARK:	W 9A
TYPE:	ALUMINUM AWNING WINDOW W/ FIXED GLASS PANELS W/ SAND TRAP LOUVER
FRAME:	ALUMINUM FRAME
GLAZING:	8mm THK. TINTED TEMPERED GLASS
FINISH:	POWDER COATED FINISH
QUANTITY:	18 SETS *(VERIFY QUANTITY)*
LOCATION:	WAREHOUSE @ 2ND FLOOR
HINGES:	
HARDWARE:	AS PER MANFACTURER'S SPECIFICATIONS



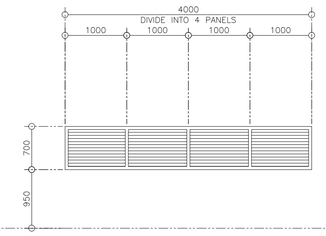
MARK:	W 10
TYPE:	ALUMINUM FIXED LOUVER WINDOW
FRAME:	ALUMINUM FRAME
GLAZING:	8mm THK. TINTED TEMPERED GLASS
FINISH:	POWDER COATED FINISH
QUANTITY:	1 SET *(VERIFY QUANTITY)*
LOCATION:	CONFERENCE ROOM
HINGES:	
HARDWARE:	AS PER MANFACTURER'S SPECIFICATIONS



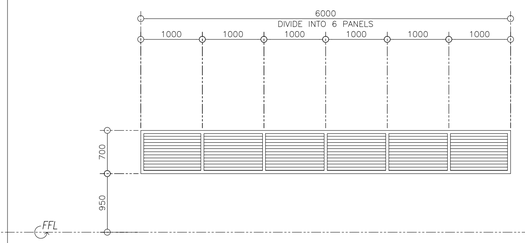
MARK:	W 11
TYPE:	ALUMINUM FIXED LOUVER WINDOW
FRAME:	ALUMINUM FRAME
FINISH:	POWDER COATED FINISH
QUANTITY:	5 SETS*(VERIFY QUANTITY)*
LOCATION:	WAREHOUSE @ 2ND FLOOR
HINGES:	AS PER MANFACTURER'S SPECIFICATIONS
HARDWARE:	AS PER MANFACTURER'S SPECIFICATIONS



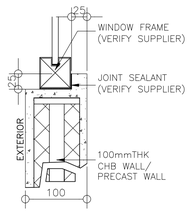
MARK:	W 12
TYPE:	ALUMINUM FIXED LOUVER WINDOW
FRAME:	ALUMINUM FRAME
FINISH:	POWDER COATED FINISH
QUANTITY:	3 SETS*(VERIFY QUANTITY)*
LOCATION:	LOADING/UNLOADING AREA
HINGES:	AS PER MANFACTURER'S SPECIFICATIONS
HARDWARE:	AS PER MANFACTURER'S SPECIFICATIONS



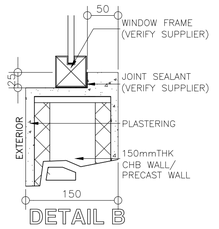
MARK:	W 13
TYPE:	ALUMINUM FIXED LOUVER WINDOW
FRAME:	ALUMINUM FRAME
FINISH:	POWDER COATED FINISH
QUANTITY:	2 SETS*(VERIFY QUANTITY)*
LOCATION:	WAREHOUSE @ 2ND FLOOR
HINGES:	AS PER MANFACTURER'S SPECIFICATIONS
HARDWARE:	AS PER MANFACTURER'S SPECIFICATIONS



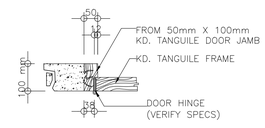
MARK:	W 14
TYPE:	ALUMINUM FIXED LOUVER WINDOW
FRAME:	ALUMINUM FRAME
FINISH:	POWDER COATED FINISH
QUANTITY:	1 SET*(VERIFY QUANTITY)*
LOCATION:	WAREHOUSE @ 2ND FLOOR
HINGES:	AS PER MANFACTURER'S SPECIFICATIONS
HARDWARE:	AS PER MANFACTURER'S SPECIFICATIONS



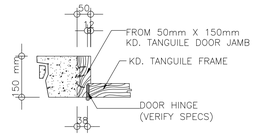
DETAIL A



DETAIL B



DETAIL A



DETAIL B

3 | 35 / AR — **DOOR JAMB DETAIL**
SCALE 1:5 M.

2 | 35 / AR — **WINDOW SILL DETAIL**
SCALE 1:5 M.

GENERAL NOTES:

1. ANY DISCREPANCY FOUND IN THE DRAWING THE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY
2. VERIFY MANUFACTURER FOR GLASS THICKNESS

1 | 35 / AR — **SCHEDULE OF DOORS AND WINDOWS**
SCALE 1:50MTS

NOTE:

PURSUANT TO ITEM 5 OF ANNEX "A" OF THE REVISED IMPLEMENTING RULES AND REGULATION OF R.A. 9184, THE APPROVAL BY THE AUTHORIZED GOVERNMENT OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGNS UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGNS NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.

THE DESIGN CONSULTANT SHALL BE HELD FULLY RESPONSIBLE FOR THE FAILURE OF THE FACILITIES/STRUCTURES DUE TO FAULTY DESIGN EXCEPT FOR THE CHANGES MADE WITHOUT THE CONFORMITY OF THE CONSULTANTS.

ELMER T. RAMONEDA
PROJECT MANAGER

URBAN ENGINEERS
CONSULTING CIVIL ENGINEERS
in joint venture with
J.F. CANCIO & Associates ENGINEERS CONSULTANTS
PTC Engineers & Associates

ARCHITECT:		SUBMITTED:
GODOFREDO B. GARCIA		ELMER T. RAMONEDA
PRC NO.: 18537	DATE: FEB-08-2021	PROJECT MANAGER
PTR NO.: 1249395	DATE: MAY-21-2019	
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GENERAL CONSTRUCTION NOTES

GENERAL NOTES

1. IN THE INTERPRETATION OF THE DRAWING, INDICATED DIMENSIONS SHALL GOVERN AND DISTANCES AND SIZES SHALL NOT BE SCALED FOR CONSTRUCTION PURPOSES.
2. IN REFERENCE IN THE OTHER DRAWINGS. SEE ARCHITECTURAL DRAWINGS FOR DEPRESSIONS IN FLOOR SLABS, OPENINGS IN THE WALLS AND SLABS, INTERIOR PARTITIONS, LOCATION OF DRAINS ETC.
3. IN CASE OF DISCREPANCIES AS TO THE LAYOUT, DIMENSIONS, AND ELEVATIONS BETWEEN THE STRUCTURAL PLANS, AND ARCHITECTURAL DRAWINGS, THE CONTRACTOR SHALL NOTIFY BOTH THE STRUCTURAL ENGINEER AND THE ARCHITECT.
4. ALL CONCRETE SHALL BE DONE IN ACCORDANCE WITH THE ACI. 318 95 BUILDING CODE REQUIREMENTS FOR REINFORCEMENT CONCRETE AND ALL STRUCTURAL STEEL WORK ACCORDING WITH AISC SPECIFICATION (9TH EDITION) IN SO FAR AS THEY DO NOT CONFLICT WITH THE LOCAL BUILDING CODE REQUIREMENT.
5. ACI REFERS TO AMERICAN CONCRETE INSTITUTE, AISC TO AMERICAN INSTITUTE OF STEEL CONSTRUCTION AND ASTM TO AMERICAN SOCIETY FOR TESTING MATERIALS.
6. CONSTRUCTION NOTES AND TYPICAL DETAILS APPLY TO ALL DRAWINGS UNLESS OTHERWISE SHOWN OR NOTED. MODIFY TYPICAL DETAILS AS DIRECTED TO MEET SPECIAL CONDITIONS.
7. SHOP DRAWINGS WITH ERECTION AND PLACING DIAGRAMS OF ALL STRUCTURAL STEELS, MISCELLANEOUS IRON, PRE-CAST CONCRETE, ETC. SHALL BE SUBMITTED FOR ENGINEER'S APPROVAL BEFORE FABRICATION.
8. CONTRACTOR SHALL NOTE AND PROVIDE ALL MISCELLANEOUS CURBS, SILLS, STOOLS, EQUIPMENT'S, AND MECHANICAL BASES THAT ARE REQUIRED BY THE ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS.
9. ALL RESULTS OF MATERIAL TESTING FOR CONCRETE, REINFORCING BARS, & STRUCTURAL STEEL MUST BE NOTED AND APPROVED BY THE STRUCTURAL DESIGNER.
10. USE OF NATIONAL STRUCTURAL CODE OF THE PHILIPPINES 2015, SEVENTH EDITION.

NOTES ON CONCRETE MIXES & PLACING

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

LOCATION	28 DAYS STRENGTH	MAX. SIZE OF AGGREGATE	MAX. SLUMP
ALL OTHERS, INCLUDING SUSPENDED SLABS	4000 PSI (27.6 MPa)	20mm	100mm
COLUMNS	4000 PSI (27.6 MPa)	20mm	100mm
BEAMS, SLABS	4000 PSI (27.6 MPa)	20mm	100mm
SLAB ON FILL	2500 PSI (17.5 MPa)	20mm	100mm

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

SUSPENDED SLABS	20MM
SLAB ON GRADE	40MM
WALLS ABOVE GRADE	25MM
BEAMS STIRRUPS AND COLUMN TIES	40MM
WHERE CONCRETE IS EXPOSED TO EARTH BUT POURED AGAINST FORM	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 BUGGIES, BUCKETS OR 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 BY THE DESIGNERS AND ONLY FOR UNUSUAL CONDITIONS WHERE VIBRATIONS ARE EXTREMELY DIFFICULT TO ACCOMPLISH.
5. ALL ANCHOR BOLTS, DOWELS, AND OTHER INSERT, 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	24HRS.
SUSPENDED SLAB EXCEPT WHEN ADDITIONAL LOADS ARE IMPOSED	8DAYS
WALLS	21DAYS
BEAMS	14DAYS
COLUMNS	21DAYS

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

NOTE:

PURSUANT TO ITEM 5 OF ANNEX 'A' OF THE REVISED IMPLEMENTING RULES AND REGULATION OF R.A. 9184, THE APPROVAL BY THE AUTHORIZED GOVERNMENT OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGNS UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGNS NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.

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ELMER T. RAMONEDA
PROJECT MANAGER

NOTES ON FOOTING

FOOTING ARE DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURE OF 120 KPA (2500 psf). CONTRACTOR SHALL REPORT TO THE ENGINEER, IN WRITING, THE ACTUAL SOIL CONDITIONS UNCOVERED AND CONFIRM ACTUAL BEARING CAPACITY OF SOIL BEFORE DEPOSITING CONCRETE.

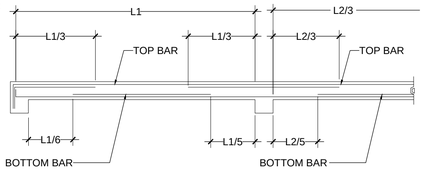
1. FOOTING SHALL REST AT LEAST 1500MM BELOW NATURAL GRADE LINE UNLESS OTHERWISE INDICATED IN PLANS. NO FOOTING SHALL REST IN FILL.
2. MINIMUM CONCRETE PROTECTION FOR REINFORCEMENTS SHALL BE 75MM CLEAR FOR CONCRETE DEPOSITED THE GROUND AND 50MM FOR CONCRETE DEPOSITED AGAINST A FORMWORK.

NOTES ON REINFORCEMENT

1. UNLESS OTHERWISE NOTED IN PLANS, THE YIELD STRENGTH OF REINFORCING BARS SHALL BE:
   a. FOOTINGS BEAMS AND GIRDERS ---------- fy=414 MPa
   b. COLUMNS AND SHEAR WALLS ---------- fy=414 MPa
   c. BEAMS AND GIRDER ---------- fy=414 MPa
   d. NON-LOAD BEARING WALL PARTITIONS, BEDDED SLABS, FLOOR AND ROOF SLABS, PARAPETS, CATCH BASIN, SIDEWALK. ---------- fy=276 MPa
2. ALL REINFORCING BAR SIZE 10MM OR LARGER SHALL DEFORMED IN ACCORDANCE WITH ASTM A 706. BARS SMALLER THAN 10MM MAY BE PAIN.
3. SPLICES SHALL BE SECURELY WIRED TOGETHER & SHALL LAP OR EXTEND IN ACCORDANCE WITH TABLE A & 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:



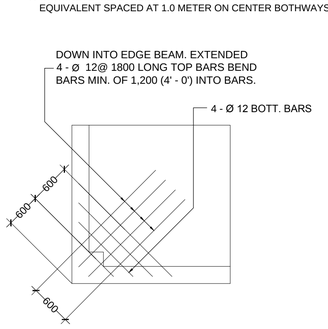
TYPICAL BAR BENDING AND CUTTING DETAILS FOR SLABS

3. IF SLABS ARE REINFORCED BOTH WAYS 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 ½) SLAB THICKNESS.
4. TEMPERATURE BARS FOR SLAB SHALL BE GENERALLY PLACE NEAR THE FACE IN TENSION AND SHALL NOT BE LESS THAN 0.0025 X GROSS CROSS-SECTIONAL AREA (AG) OF THE SLAB (SEE SCHEDULE BELOW)

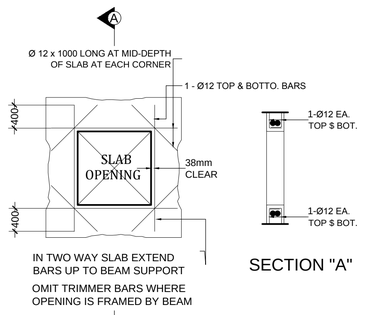
SCHEDULE OF MINIMUM SLAB REINFORCEMENT

THICKNESS	MINIMUM TEMPERATURE BARS
100 mm	10 mm Ø @ 250 EACH WAY
125 mm	10 mm Ø @ 225 EACH WAY
150 mm	10 mm Ø @ 185 EACH WAY
175 mm	10 mm Ø @ 150 EACH WAY
200 mm	10 mm Ø @ 140 EACH WAY

5. UNLESS OTHERWISE NOTED IN THE PLANS ALL BEDDED SLABS SHALL BE REINFORCED WITH 10MM Ø AT 250 O.C EACH WAY TO CENTER OF SLAB AND CONSTRUCTION JOINTS FOR SAME SHALL BE LESS THAN 3.65 METER APART
6. PROVIDE EXTRA REINFORCEMENTS FOR CORNER SLAB (TWO ADJACENT DISCONTINUOUS EDGES) AS SHOWN BELOW.
7. CONCRETE SLAB REINFORCEMENTS SHALL BE PROPERLY SUPPORTED WITH 10 Ø STEEL CHAIR OR APPROVED EQUIVALENT SPACED AT 1.0 METER ON CENTER BOTHWAYS.



TYPICAL CORNER SLAB DETAIL

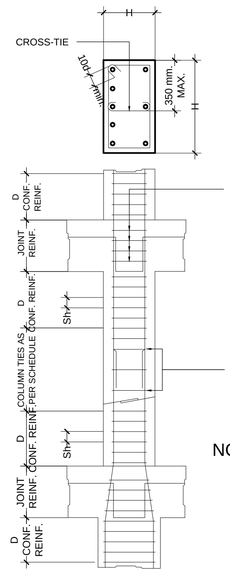


TYPICAL SLAB OPENING DETAIL

SECTION "A"

NOTES ON COLUMNS

1. PROVIDE EXTRA SETS OF TIES AT 100MM O.C. FOR THE TIED COLUMN REINFORCEMENT ABOVE AND BELOW BEAM-COLUMN CONNECTIONS FOR A DISTANCE FROM FACE OF CONNECTION EQUAL TO THE GREATYER OF 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 THE MINIMUM THICKNESS OF 40MM AND NOT LESS THAN 40 TIMES MAXIMUM SIZE OF COARSE AGGREGATE IN MILLIMETRES.
3. WHERE COLUMN CHANGE IN SIZE, VERTICAL REINFORCEMENTS SHALL BE OFFSET AT A SLOPE OF NOT MORE THAN 1 IN 6 AND EXTRA 10MM TIES AT 100MM SHALL BE PROVIDED THRU OUT THE OFFSET REGION.
4. UNLESS OTHERWISE INDICATED IN THE PLANS, LAP SPLICES FOR VERTICAL COLUMN REINFORCEMENT SHALL BE WITHIN THE CENTER HALF OF COLUMN HEIGHT, AND THE SPLICE LENGTH SHALL NOT BE WITHIN THE CENTER HALF OF COLUMN HEIGHT, AND THE SPLICE LENGTH SHALL NOT BE LESS THAN 40 BAR DIAMETERS. WELDING OR APPROVED MECHANICAL DEVICES MAY BE USED PROVIDED THAT NOT MORE THAN ALTERNATE BARS ARE WELDED OR MECHANICALLY SPLICED AT ANY LEVEL AND THE VERTICAL DISTANCES BETWEEN THESE WELDS OR SPLICES OF ADJACENT BARS IS NOT LESS THAN 600mm.



JOINT HOOP SPACE @ "2Sh" WHEN THERE ARE BEAMS HAVING WIDTH OF AT LEAST ONE-HALF THE COLUMN WIDTH & DEPTHS NOT LESS THAN THREE QUARTERS OF THE DEEPEST BEAM THAT FRAME INTO FOUR SIDES OF THE COLUMN. ALL OTHER CONDITIONS USE HOOPS @ "Sh" CENTERS.

FOR COL. BAR SPLICES SEE TABLE OF MIN. LAP SPLICE LENGTH OF COLUMN REINFORCEMENT (SPACING OF TIES ALONG THIS REGION SHALL NOT BE LESS THAN 100mm)

NOTE:

ALL CONCRETE REINF. DETAIL SHOULD BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF ACI DETAILING MANUAL

TYPICAL COLUMN ELEV. SHOWING DOWELS AND TIES SPACING

TABLE 'A'
TENSION BARS
EMBEDMENT LENGTHS AND LAPPED SPLICED IN MILLIMETERS

BAR SIZE (DEFORMED)	fc'=20.7 MPa(3000psi)		fc'=27.6 MPa(4000psi)	
	EMBEDMENT	LAPPED	EMBEDMENT	LAPPED
10mm Ø	300	300	300	300
12mm Ø	300	300	300	300
16mm Ø	300	400	300	400
20mm Ø	400	550	350	500
25mm Ø	600	800	550	750
28mm Ø	750	1000	650	850
32mm Ø	950	1300	850	1100

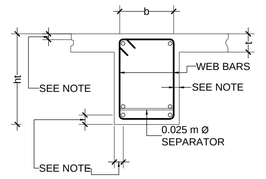
NOTE: TOP PLAIN BARS, MULTIPLY VALUE BY 2

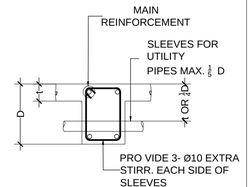
TABLE 'B'
COMPRESSION BARS
EMBEDMENT LENGTHS AND LAPPED SPLICED IN MILLIMETERS

BAR SIZE (DEFORMED)	fc'=20.7 MPa(3000psi)		fc'=27.6 MPa(4000psi)	
	EMBEDMENT	LAPPED	EMBEDMENT	LAPPED
10mm Ø	225	300	200	300
12mm Ø	275	300	250	300
16mm Ø	350	400	325	400
20mm Ø	450	500	475	500
25mm Ø	550	625	550	625
28mm Ø	625	675	625	675
32mm Ø	700	775	700	775

NOTE: TOP PLAIN BARS, MULTIPLY VALUE BY 2
VALUES GIVEN ABOVE CAN ALSO BE USED

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

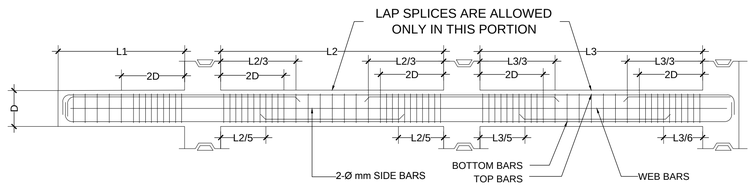




TYP. DET. FOR SLEEVESTHRU CONCRETE BEAM

NOTES ON BEAMS AND GIRDERS

1. UNLESS, OTHERWISE NOTED IN PLANS, CAMBER ALL BEAMS AND GIRDER AT LEAST 6MMØ FOR EVERY 4.50M 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 20MM FOR EVERY 3.0M OF FREE SPAN.
2. TYPICAL BARS BENDING AND CUTTING DETAILS FOR BEAMS SHALL AS SHOWN IN FIG. B-1.
6. WHEN A BEAM CROSSES A GIRDER, REST BEAM ON TOP OF GIRDER BARS, BEAMS REINFORCING BAR SHALL BE SYMMETRICAL ABOUT CENTER LINE WHENEVER POSSIBLE.
7. GENERALLY NO SPLICES SHALL BE PERMITTED AT POINTS WHERE CRITICAL BENDING STRESSES OCCUR, SPLICES WHERE SO PERMITTED SHALL BE INDICATED IN THE TABLE 'A' AND 'B'. WELDED SPLICES SHALL DEVELOP IN TENSION AT LEAST 125% OF THE SPECIFIED YIELD STRENGTH OF THE BAR. NOT MORE THAN 50% OF THE BARS AT ANY ONE SECTION IS ALLOWED TO BE SPLICED THEREIN.



URBAN ENGINEERS
CONSULTING CIVIL ENGINEERS
in joint venture with
J.F. CANCIO & Associates
ENGINEERS CONSULTANTS
PTC Engineers & Associates

STRUCTURAL ENGINEER:	SUBMITTED:
VICTOR D. DELOS REYES, JR.	ELMER T. RAMONEDA
REG.NO.: 76687 DATE: 04 / 16 / 2018	PROJECT MANAGER
PTR NO.: 2202992 PLACE: PAMPANGA	

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:	REVIEWED AS TO DESIGN CONCEPT:	APPROVED:
JOSEPHINE P. ISTURIS	(SEE COVER SHEET) EDWIN C. MATANGUIHAN	(SEE COVER SHEET) EMIL K. SADAIN, CESO I
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	OIC, ASST. DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:	SHEET CONTENTS:	SET NO.	SHEET NO.
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II CARIG SUR, TUGUEGARAO CITY	GENERAL NOTES (1)	-	ST 01 11

GENERAL CONSTRUCTION NOTES

NOTES ON CONCRETE HOLLOW BLOCK WALLS

1. UNLESS OTHERWISE SHOWN IN PLANS ALL CONCRETE HOLLOW BLOCKS AND CERAMIC BLOCKS SHALL BE REINFORCED AS SHOWN IN THE SCHEDULE OF CONCRETE HOLLOW BLOCKS AND CERAMIC BLOCK REINFORCEMENT.
2. PROVIDE 150MM X 300MM STIFFENER COLUMN REINFORCED WITH 4-12MM WITH 6MMØ TIES AT 150 ON CENTER WHERE CONCRETE HOLLOW BLOCK TERMINATES AND AT EVERY 3.0M LENGTH OF CONCRETE HOLLOW BLOCK WALLS UNLESS NOTED IN STRUCTURAL PLANS.

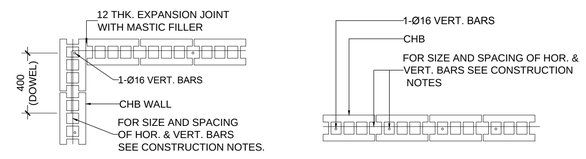
SCHEDULE OF CONCRETE HOLLOW BLOCK AND CERAMIC BLOCK REINFORCEMENT

BLOCK THICKNESS	REINFORCEMENT		NOTES
	HORIZONTAL	VERTICAL	A. MINIMUM LAPS AT SPLICE = 0.22M B. PROVIDE RIGHT ANGLED REINFORCEMENT AT CORNERS 0.92M LONG C. WHERE CHB OR CER. BLK. WALL DOWELS JOIN COL. R.C. BEAMS AND WALL DOWELS WITH THE SAME SIZE AS VERT. OR HOR. REINFORCEMENTS SHALL BE PROVIDED
75mm	10mmØ @ 600mm O.C.	10mmØ @ 600mm O.C.	
125mm	10mmØ @ 600mm O.C.	10mmØ @ 600mm O.C.	
150mm	10mmØ @ 600mm O.C.	10mmØ @ 600mm O.C.	
200mm	12mmØ @ 600mm O.C.	12mmØ @ 600mm O.C.	

IN CONCRETE BLOCK WALLS REINFORCING CONCRETE LINTEL BEAM IN CONCRETE BLOCK WALLS

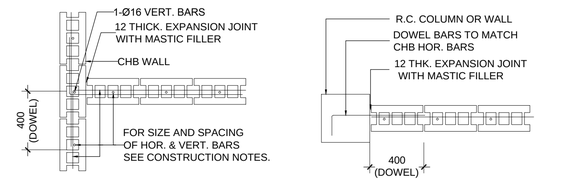
LINTEL IN BLOCK WALLS

CLEAR SPAN ("L")	TOTAL LENGTH (L+0.40M)	MIN. fc' (MPA)	HEIGHT OF LINTEL (MM)	REINFORCEMENT		
				BOTTOM	TOP	STIRRUPS
1.20M	1.60M	14.0	200	1-Ø10	1-Ø10	Ø6mm @ 200mm
150M	1.90M		200	1-Ø10	1-Ø10	Ø6mm @ 200mm
1.80M	2.20M		200	1-Ø12	1-Ø10	Ø6mm @ 200mm
2.10M	2.50M	17.0	250	1-Ø12	1-Ø10	Ø6mm @ 200mm
2.40M	2.90M		250	1-Ø12	1-Ø10	Ø6mm @ 200mm
2.70M	3.10M		250.	1-Ø16	1-Ø12	Ø10mm @ 200mm
3.00	3.40M	20.0	300	1-Ø16	1-Ø12	Ø10mm @ 200mm
3.30	3.70M		300	1-Ø16	1-Ø12	Ø10mm @ 200mm
3.60	4.00		300	1-Ø20	1-Ø12	Ø10mm @ 200mm



CORNER WALL

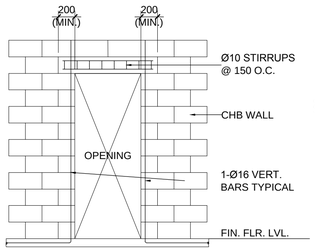
OPENING OR END WALL



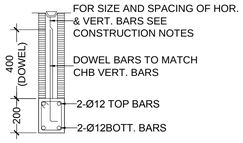
INSERTION WALL

INTERSECTING R.C. COL. OR WALL

TYPICAL CONNECTION DETAIL OF MASONRY WALL

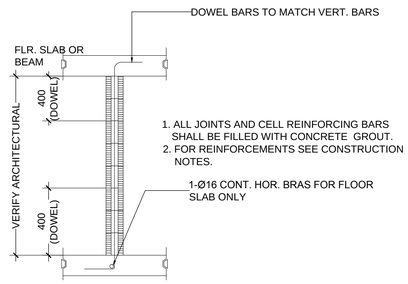


ELEVATION

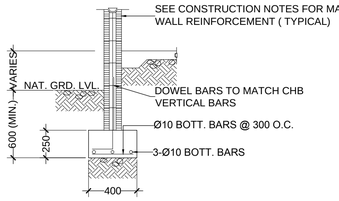


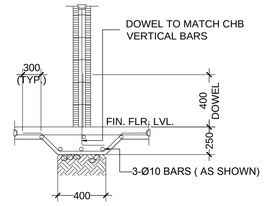
SECTION

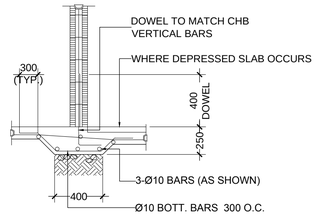
TYPICAL DETAIL OF LINTEL BEAM AND CHB WALL OPENING



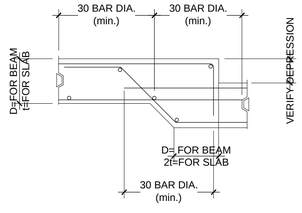
TYP. SECTION OF MASONRY PARTITION REINFORCEMENTS







TYPICAL CHB FOOTING DETAILS (WHERE APPLICABLE)



TYPICAL DETAIL FOR BEAM OR SLAB CHANGE SOFFIT

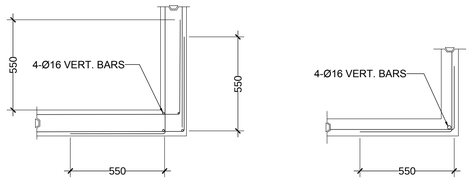
NOTES ON CONCRETE WALLS

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

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

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

2. CARY VERTICAL BARS AT LEAST 60MM ABOVE FLOOR LEVEL TO PROVIDE FOR SPLICES WHEN NECESSARY STOP AT 50MM BELOW TOP SLAB OR SOLID BAND WHERE THE WALL ENDS VERTICAL AND HORIZONTAL BARS SHALL BE SPLICED BY LAPPING A DISTANCE EQUAL TO30 DIAMETERS AND WIRED SECURELY WITH 16 G.I. WIRE PROVIDED THAT SPLICES IN ADJACENT BARS ARE STAGGERED AT LEAST 1.50M.O.C.
3. UNLESS OTHERWISE NOTED IN THE PLANS, ALL OPENINGS IN WALLS 250MM OR THICKER SHALL BE REINFORCED AROUND WITH 2-20MMØ BARS FOR 225MM, 200MM, 175MM, 150MM, USE 2-16MMØ. FOR 125MM AND 100MM WALLS USE 2-12MMØ BARS. ALL WALLS SPANNING SHALL HAVE VERTICAL REINFORCEMENT BENT TO A U-FORM LIKE STIRRUPS AND SPACE ACCORDING TO THE SCHEDULE UNLESS OTHERWISE NOTED (SEE FIG.1)



TYPICAL CONNECTION DETAIL OF R.C. WALL AT CORNERS

NOTES ON WELDS

1. USE E70XX 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 (9TH EDITION) 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 AWS E60 ELECTRODES.
5. ALL BOLTS USED UNLESS OTHERWISE SPECIFIED SHALL BE ASTM A 307 BOLTS.

NOTES ON EMBEDED PIPES

a. 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.

b. NO PIPES SHALL BE ALLOWED TO PASS THRU BEAMS VERTICALLY.

c. NO PIPES SHALL BE EMBEDDED IN COLUMNS.

DESIGN CRITERIA

I. Loads:

a. BASIC WIND SPEED V = 250 kph

a.1. WIND EXPOSURE = EXPOSURE B
a.2. VELOCITY PRESSURE, $q_z = 0.613 K_z K_{zt} K_d V^2$
a.3. VELOCITY PRESSURE EXPOSURE, $K = 2.01(z/z_g)^{2/\alpha}$
a.4. TOPOGRAPHIC FACTOR, K_{zt}=1.0
a.5. WIND DIRENTIONALITY FACTOR. K_d= 0.9
a.6. GUST EFFECT FACTOR, G_f= 0.9

b. Seismic Load
b.1. ZONE = 0.4
b.2. IMPORTANCE FACTOR = 1.2
b.3. SOIL PROFILE TYPE = Sd
b.4. NEAR SOURCE (Na) = 1.2
b.5. NEAR SOURCE (Nv) = 1.6
b.6. PERIOD = COMPUTER GENERATED
TYPE OF STRUCTURAL FRAMING SYSTEM = SPECIAL MOMENT RESIST FRAME

c. DEAD LOAD
c.1. UNIT WEIGHT OF CONCRETE = 24 kN / m^3
c.2. UNIT WEIGHT OF STEEL = 77 kN / m^3
c.3. CEILING AND UTILITIES = 0.4 kPa
c.4. FLOOR FINISH = 1.1 kPa
c.5. CHB WALLS (150mm thk.) = 2.6 kPa
c.6. CHB WALLS (100mm thk.) = 2.46 kPa

d. LIVE LOAD
d.1. OFFICE = 2.4 kPa
d.2. WAREHOUSE = 12.0 kPa
d.3. ROOF = 1.0 kPa

II. Material Strength and Specifications

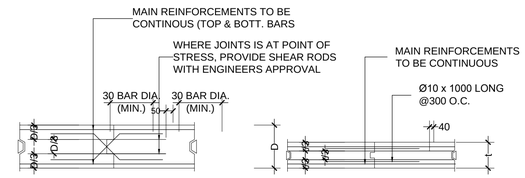
a. ALLOWABLE FOUNDATION PRESSURE
THE ALLOWABLE FOUNDATION PRESSURE USED IN THE DESIGN OF FOOTINGS WAS ASSUMED TO BE EQUA TO 120KPA, THIS VALUE SHALL BE MULTIPLIED A FACTOR OF 1.33 WHEN CONSIDERING EXTREME EVENTS. THE ACTUAL SOIL CONDITION AT THE SITE SHOULD BE CHEKCED AND VERIFIED BY THE CONTRACTOR AND SHOULD BE REPORTED TO THE PROJECT ENGINEER OR THE STRUCTURAL ENGINEER IN WRITING FOR PROPER ACTIONS.

III. Code and References :

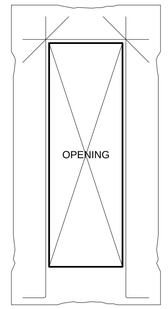
A. NATIONAL STRUCTURAL CODE OF THE PHILIPPINES 2015 (NSCP C101-15) VOLUME I, SEVENTH EDITION
B. IMPLEMENTING RULES AND REGULATIONS, NATIONAL BUILDING CODE OF THE PHILIPPINES
C. BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 318-14
D. DESIGN OF REINFORECED CONCRETE, 10TH EDITION, JACK C. MCCORMAC
E. FOUNDATION ANALYSIS AND DESIGN, 5TH EDITION BY JOSEPH E. BOWLES

NOTES ON CONSTRUCTION JOINTS IN CONCRETE

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

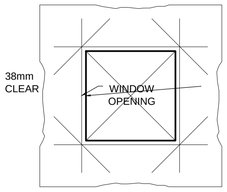


TYPICAL SLAB AND BEAM CONSTRUCTION JOINT DET.



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

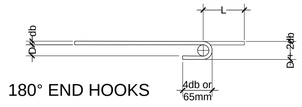
SEE ARCHITECTURAL & MECHANICAL PLANS FOR SLAB OPENING LOCATION.



TYP. EXTERIOR WINDOW & DOOR OPENING

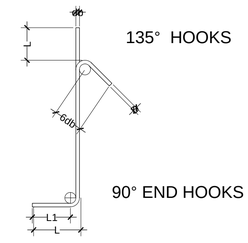
NOTES OF STIRRUPS

1. ALL REINFORCEMENT SHALL BE BENT COLD UNLESS OTHERWISE PERMITTED BY THE STRUCTURAL ENGINEER.
2. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FILLED BENT, EXCEPT AS SHOWN IN THE DESIGN DRAWINGS OR PERMITTED BY THE STRUCTURAL ENGINEER.
3. TIES & CLOSE STIRRUPS MUST BE BENT AT 135°.



180° END HOOKS

90° END HOOKS



MAIN BAR END HOOKS (ALL GRADES)

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

STIRRUP AND TIE HOOKS (ALL GRADES)

BAR SIZE (DEFORMED)	DIAMETER (mm)	180° HOOK		90° HOOK
		D + 2db	L	L
10 mm Ø	40	125	85	100
12 mm Ø	50	165	115	115
16 mm Ø	65	200	140	150
20 mm Ø	115	250	165	300
25 mm Ø	150	365	230	405

NOTE:
PURSUANT TO ITEM 5 OF ANNEX "A" OF THE REVISED IMPLEMENTING RULES AND REGULATION OF R.A. 9184, THE APPROVAL BY THE AUTHORIZED GOVERNMENT OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGNS UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGNS NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.

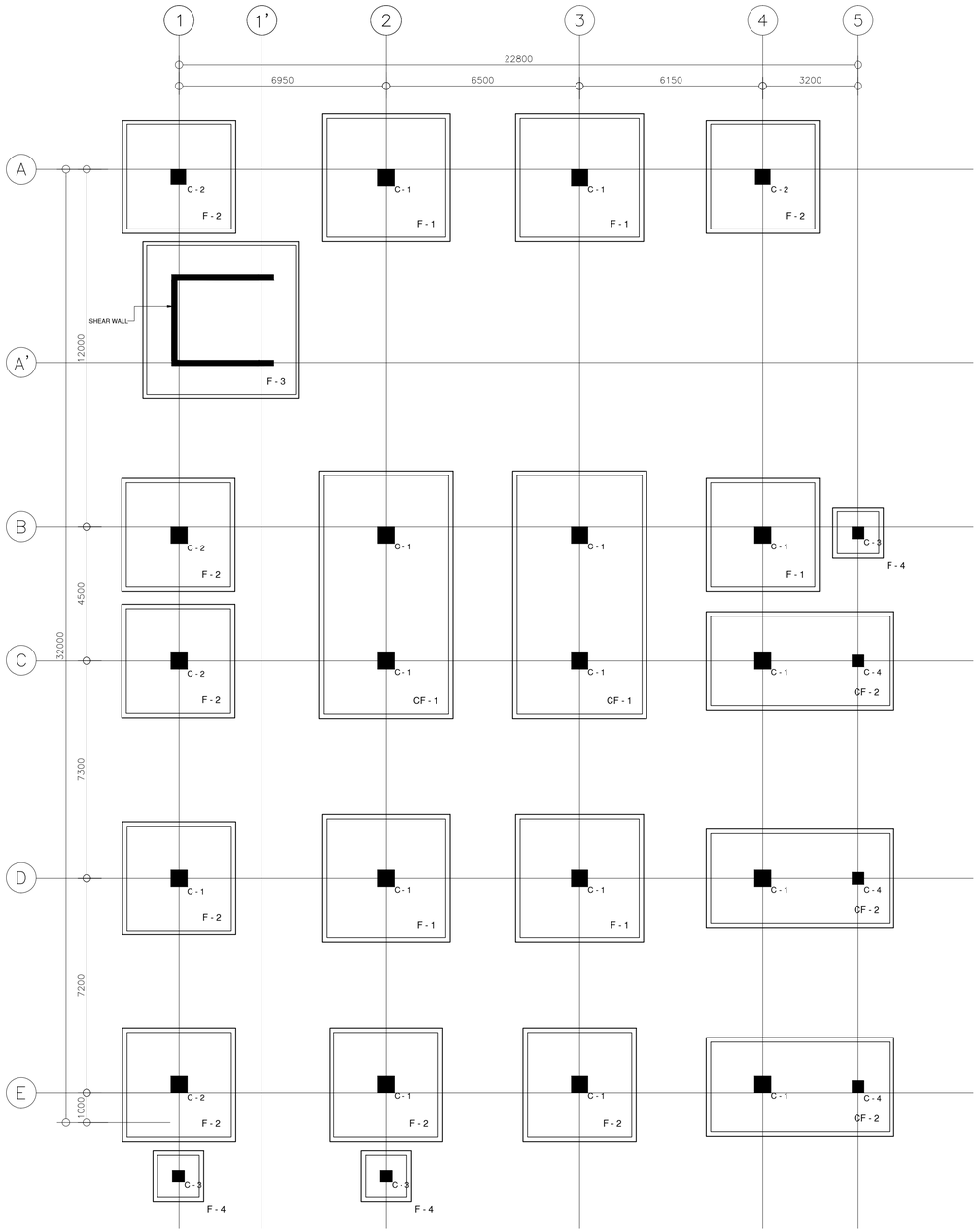
THE DESIGN CONSULTANT SHALL BE HELD FULLY RESPONSIBLE FOR THE FAILURE OF THE FACILITIES/STRUCTURES DUE TO FAULTY DESIGN EXCEPT FOR THE CHANGES MADE WITHOUT THE CONFORMITY OF THE CONSULTANTS.

ELMER T. RAMONEDA
PROJECT MANAGER

URBAN ENGINEERS
CONSULTING CIVIL ENGINEERS
in joint venture with
J.F. CANCIO & Associates
ENGINEERS CONSULTANTS
PTC Engineers & Associates

STRUCTURAL ENGINEER:	SUBMITTED:	REVIEWED AS TO DESIGN CONCEPT:	REVIEWED AS TO DESIGN CONCEPT:	APPROVED:	PROJECT & LOCATION:	SHEET CONTENTS:	SET NO.	SHEET NO.
VICTOR D. DELOS REYES, JR. REG.NO.: 76687 DATE: 04 / 16 / 2018 PTR NO.: 2202992 PLACE: PAMPANGA	ELMER T. RAMONEDA PROJECT MANAGER	JOSEPHINE P. ISTURIS CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	(SEE COVER SHEET) EDWIN C. MATANGUIHAN OIC, ASST. DIRECTOR, BUREAU OF DESIGN	(SEE COVER SHEET) EMIL K. SADAIN, CESO I UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES	PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II CARIG SUR, TUGUEGARAO CITY	GENERAL NOTES (2)	-	ST 02 | 11

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

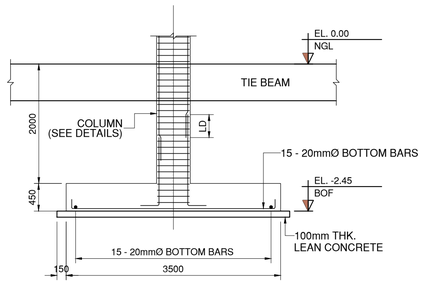


NOTE: ASSUMED SOIL BEARING CAPACITY = 120 kPa
SOIL BEARING CAPACITY SHOULD BE VERIFY
BY THE CONTRACTOR PRIOR TO CONSTRUCTION
SHOULD THERE BE ANY CHANGES IN THE SOIL CONDITION
REPORT TO THE PROJECT ENGINEER.

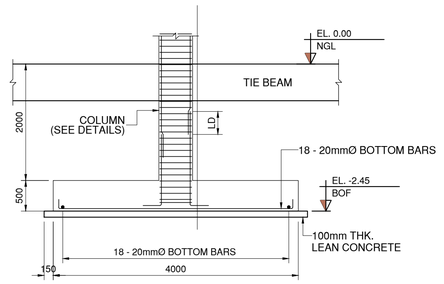
1 ST / 03-11 — **FOUNDATION PLAN**
SCALE 1:200MTS

FOOTING SCHEDULE (C28:Fy414)

FOOTING NUMBERS	COLUMN NUMBERS	FOOTING TYPE	FOOTING DIMENSION				FOOTING REINFORCEMENT				REMARKS
							BOTTOM		TOP		
			LENGTH	WIDTH	THK.	DEPTH	ALONG (W)	ALONG (L)	ALONG (W)	ALONG (L)	
F - 1		ISOLATED	3500	3500	475	2000	15 - 20mmØ	15 - 20mmØ	-	-	-
F - 2		ISOLATED	4000	4000	500	2000	18 - 20mmØ	18 - 20mmØ	-	-	-
F - 3		ISOLATED	5000	5000	500	2000	28 - 20mmØ	25 - 20mmØ	-	-	-
F - 4		ISOLATED	1400	1400	300	1200	6 - 16mmØ	6 - 16mmØ	-	-	-
CF - 1		COMBINED	SEE DETAIL			2000	SEE DETAIL	25 - 20mmØ	12mmØ @ 200mm O.C.	22 - 20mmØ	-
CF - 2		COMBINED	SEE DETAIL			2000	SEE DETAIL	16 - 20mmØ	12mmØ @ 200mm O.C.	16 - 20mmØ	



SECTION 1 - 1



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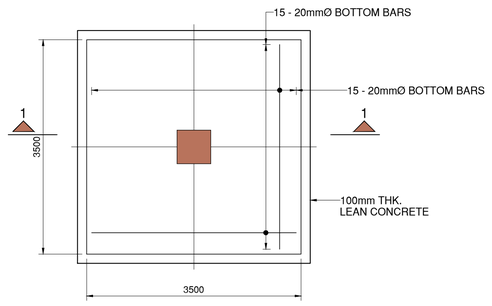
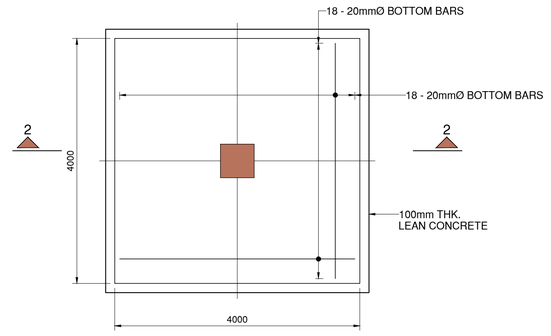


F - 1 DETAIL
ISOLATED FOOTING
2 ST / 03-11 SCALE 1:50MTS



F - 2 DETAIL
ISOLATED FOOTING
3 ST / 03-11 SCALE 1:50MTS

NOTE:
PURSUANT TO ITEM 5 OF ANNEX 'A' OF THE REVISED IMPLEMENTING RULES AND REGULATION OF R.A. 9184, THE APPROVAL BY THE AUTHORIZED GOVERNMENT OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGNS UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGNS NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.

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PROJECT MANAGER

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CONSULTING CIVIL ENGINEERS
in joint venture with
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PTC Engineers & Associates

STRUCTURAL ENGINEER:		SUBMITTED:
VICTOR D. DELOS REYES, JR.		ELMER T. RAMONEDA
REG.NO.: 76687	DATE: 04 / 16 / 2018	PROJECT MANAGER
PTR NO.: 2202992	PLACE: PAMPANGA	

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:	REVIEWED AS TO DESIGN CONCEPT:	APPROVED:
JOSEPHINE P. ISTURIS	(SEE COVER SHEET) EDWIN C. MATANGUIHAN	(SEE COVER SHEET) EMIL K. SADAIN, CESO I
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	OIC, ASST. DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:
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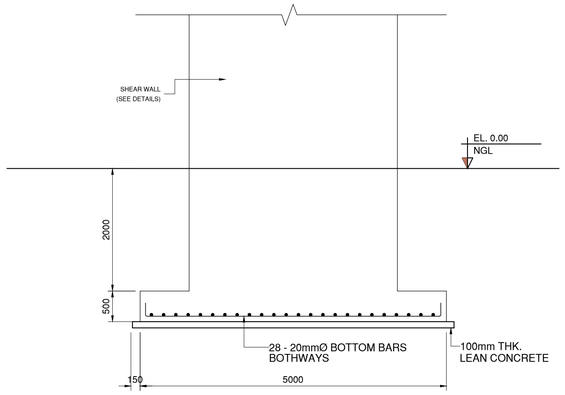
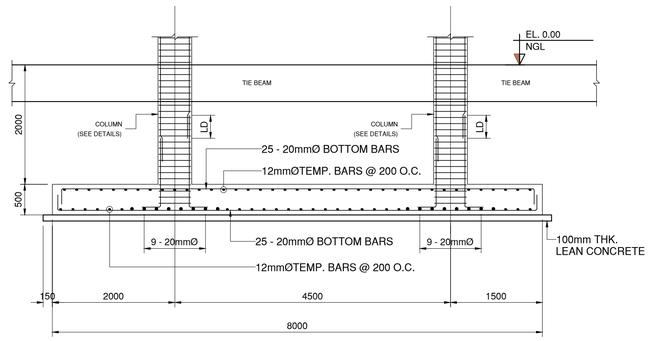
BUREAU OF DESIGN BUILDING DIVISION
CARIG SUR, TUGUEGARAO CITY

PROJECT & LOCATION:
FOOTING SCHEDULE
F-1 ISOLATED FOOTING
F-2 ISOLATED FOOTING

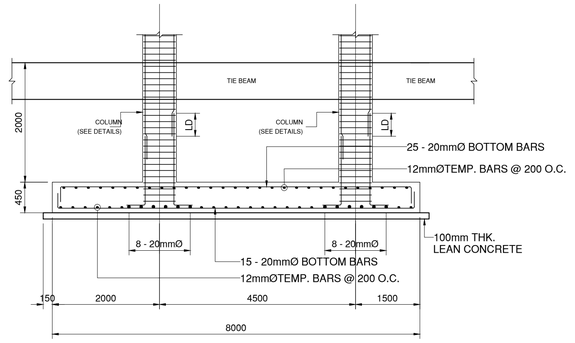
SET NO.: -

SHEET NO.: ST 03 11





SECTION 4 - 4



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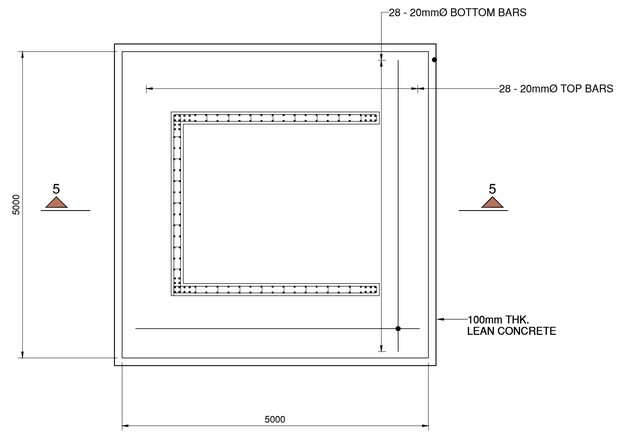
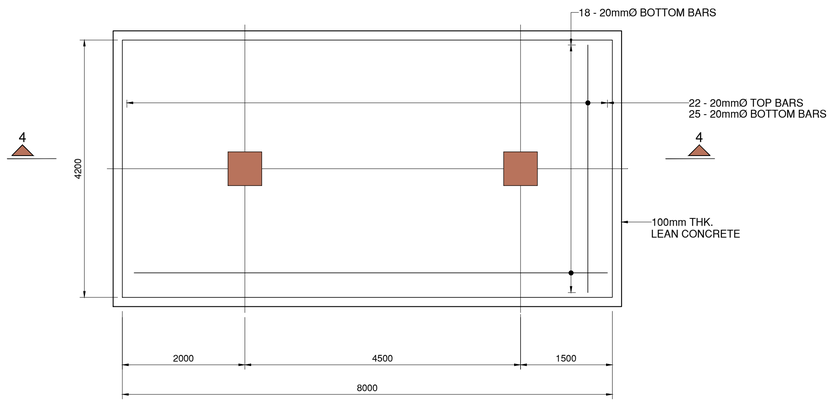
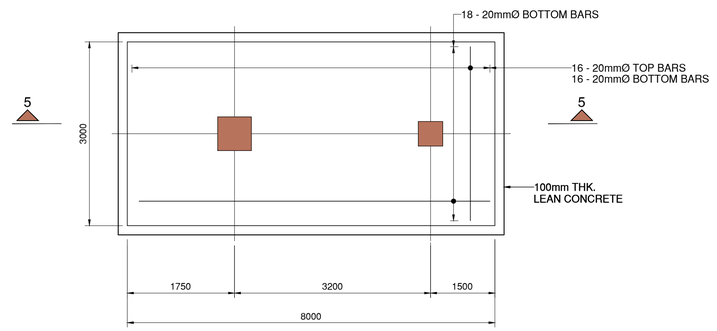


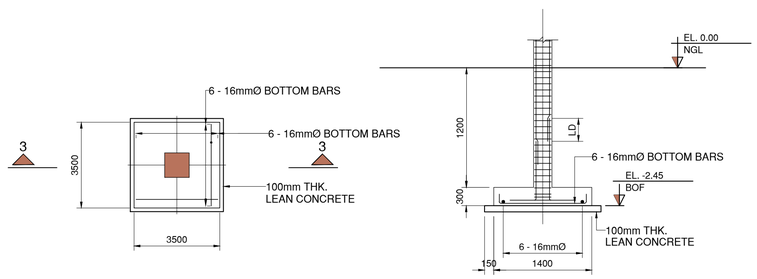
F - 3 DETAIL
ISOLATED FOOTING
1 ST 04-11 SCALE 1:50MTS



CF - 1 DETAIL
COMBINED FOOTING
2 ST 04-11 SCALE 1:50MTS



CF - 2 DETAIL
COMBINED FOOTING
3 ST 04-11 SCALE 1:50MTS



SECTION 3 - 3

F - 4 DETAIL
FOOTING DETAIL
4 ST 04-11 SCALE 1:50MTS

NOTE:

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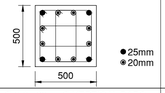
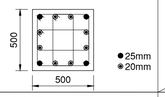
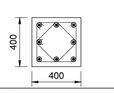
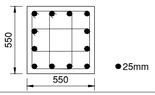
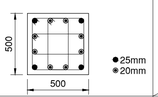
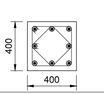
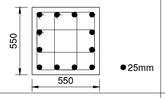
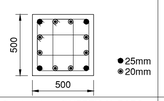
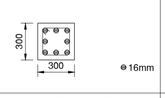
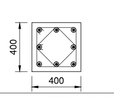
REG.NO.: 76687	DATE: 04 / 16 / 2018	PROJECT MANAGER
PTR NO.: 2202992	PLACE: PAMPANGA	

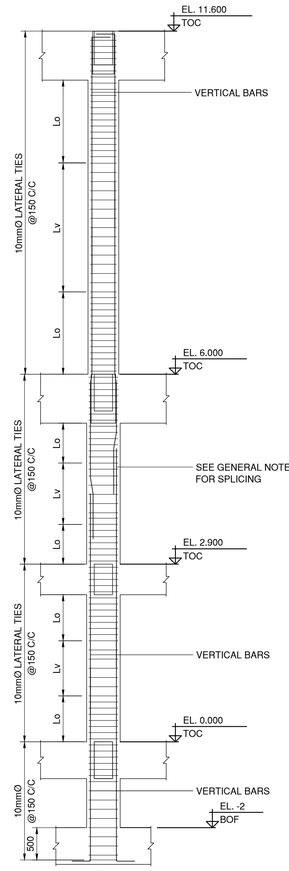
REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:	REVIEWED AS TO DESIGN CONCEPT:	APPROVED:
JOSEPHINE P. ISTURIS	(SEE COVER SHEET) EDWIN C. MATANGUIHAN	(SEE COVER SHEET) EMIL K. SADAIN, CESO I
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	OIC, ASST. DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

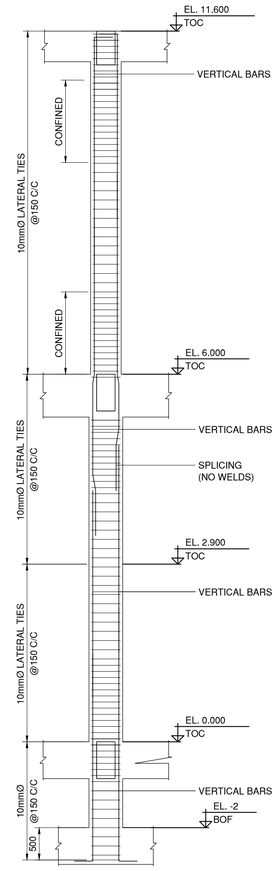
PROJECT & LOCATION:	PROJECT & LOCATION:	SET NO.	SHEET NO.
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPORT BUILDING, REGION II BUREAU OF DESIGN BUILDING DIVISION CARIG SUR, TUGUEGARAO CITY	F-3 ISOLATED FOOTING CF-1 COMBINED FOOTING CF-2 COMBINED FOOTING F-4 FOOTING DETAIL	-	ST 04 11

ROOF DECK TO 2ND FLOOR	C28 : Fy414 , COVER = 40MM	C28 : Fy414 , COVER = 40MM		C28 : Fy414 , COVER = 40MM
	LINKS	LINKS		LINKS
	3 - SETS 10mmØ @ 150 C/C	3 - SETS 10mmØ @ 150 C/C		2 - SET 10mmØ TIES @ 150 C/C
				
	4 - 25mmØ & 8 - 20mmØ VERTICAL BARS	4 - 25mmØ & 8 - 20mmØ VERTICAL BARS		8 - 20mmØ VERTICAL BARS
2ND FLOOR TO MEZZANINE LEVEL	C28 : Fy414 , COVER = 40MM	C28 : Fy414 , COVER = 40MM		C28 : Fy414 , COVER = 40MM
	LINKS	LINKS		LINKS
	3 - SETS 10mmØ TIES @ 150 C/C	3 - SETS 10mmØ @ 150 C/C		2 - SET 10mmØ TIES @ 150 C/C
				
	12 - 25mmØ VERTICAL BARS	4 - 25mmØ & 8 - 20mmØ VERTICAL BARS		8 - 20mmØ VERTICAL BARS
MEZZANINE LEVEL TO FOOTING	C28 : Fy414 , COVER = 40MM	C28 : Fy414 , COVER = 40MM		C28 : Fy414 , COVER = 40MM
	LINKS	LINKS	LINKS	LINKS
	3 - SETS 10mmØ TIES @ 150 C/C	3 - SETS 10mmØ @ 150 C/C	1 - SET 10mmØ TIES @ 150 C/C	2 - SET 10mmØ TIES @ 150 C/C
				
	12 - 25mmØ VERTICAL BARS	4 - 25mmØ & 8 - 20mmØ VERTICAL BARS	8 - 16mmØ VERTICAL BARS	8 - 20mmØ VERTICAL BARS
COLUMN MARK	C - 1	C - 2	C - 3	C - 4

COLUMN AND WALL SCHEDULE



1 ST 05–11 COLUMN ELEVATION WITH MEZZANINE
SCALE 1:50MTS



2 ST 05–11 COLUMN ELEVATION WITHOUT MEZZANINE
SCALE 1:50MTS

NOTE:

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STRUCTURAL ENGINEER:	SUBMITTED:	REVIEWED AS TO DESIGN CONCEPT:	REVIEWED AS TO DESIGN CONCEPT:	APPROVED:	PROJECT & LOCATION:	PROJECT & LOCATION:	SET NO.	SHEET NO.
VICTOR D. DELOS REYES, JR.	ELMER T. RAMONEDA	JOSEPHINE P. ISTURIS	(SEE COVER SHEET)	(SEE COVER SHEET)	PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPORT BUILDING, REGION II BUREAU OF DESIGN BUILDING DIVISION CARIG SUR, TUGUEGARAO CITY	COLUMN AND WALL SCHEDULE COLUMN ELEVATION WITH MEZZANINE COLUMN ELEVATION WITHOUT MEZZANINE	-	ST 05 11
REG.NO.: 76687 DATE: 04 / 16 / 2018	PROJECT MANAGER	CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	EDWIN C. MATANGUIHAN	EMIL K. SADAIN, CESO I				
PTR NO.: 2202992 PLACE: PAMPANGA			OIC, ASST. DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES				

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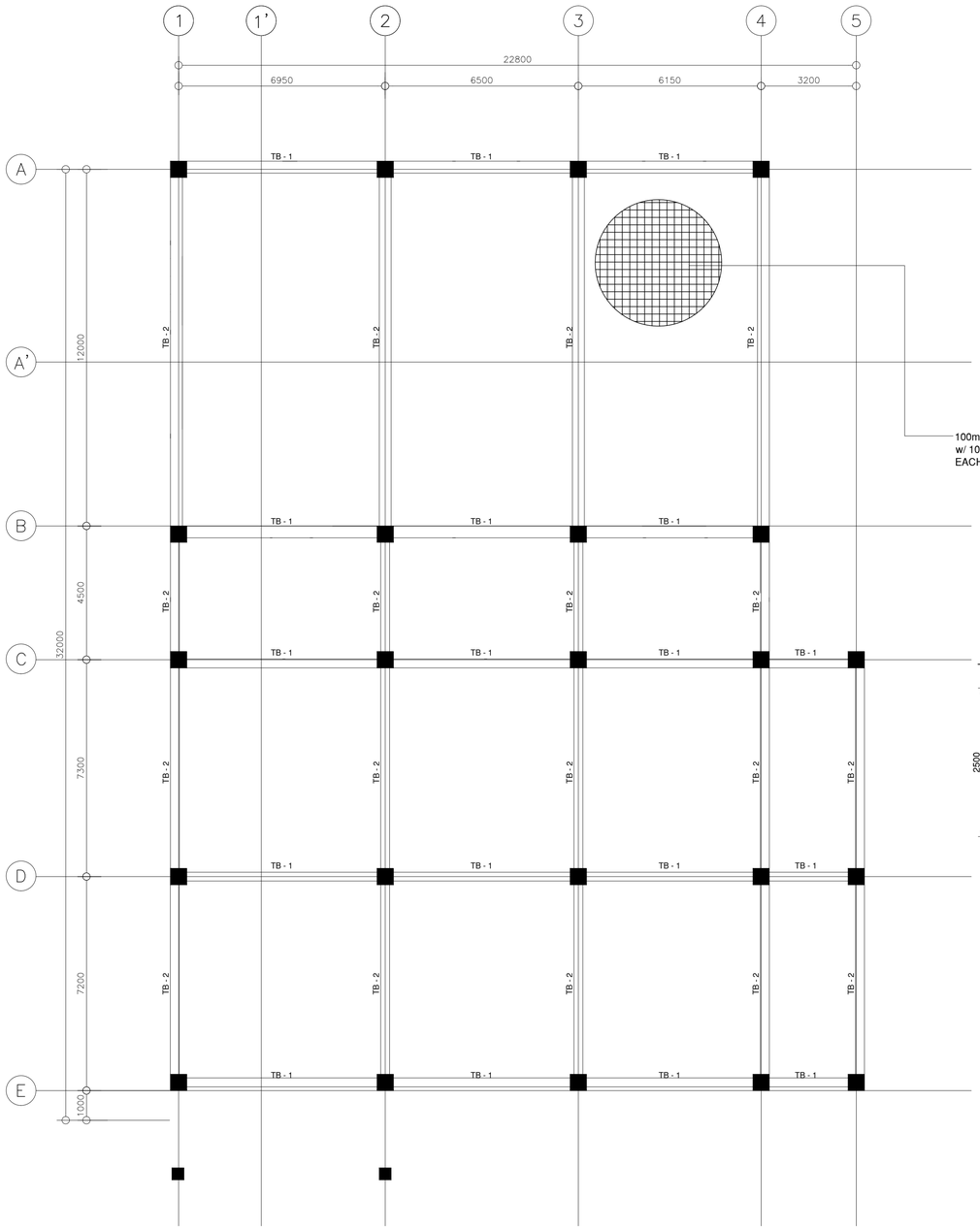
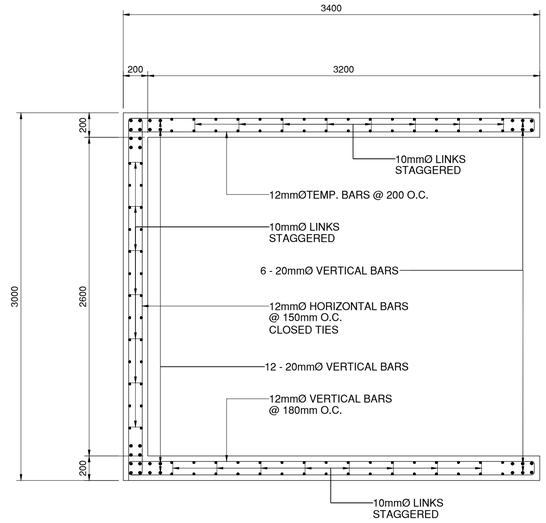


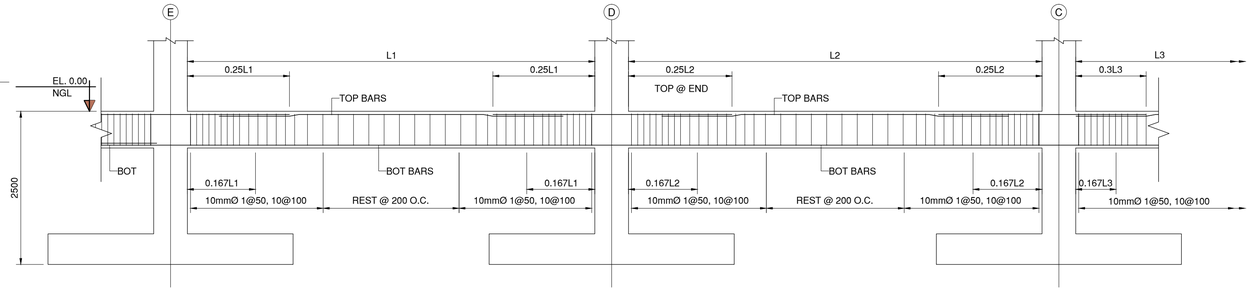
1 ST / 06–11 **GROUND FLOOR FRAMING PLAN**

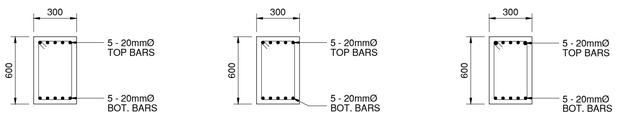
SCALE 1:200MTS



2 ST / 06–11 **SHEAR WALL DETAIL**

SCALE 1:25MTS





3 ST / 06–11 **TIE BEAM 1,2 & 3 DETAILS**

SCALE 1:50MTS

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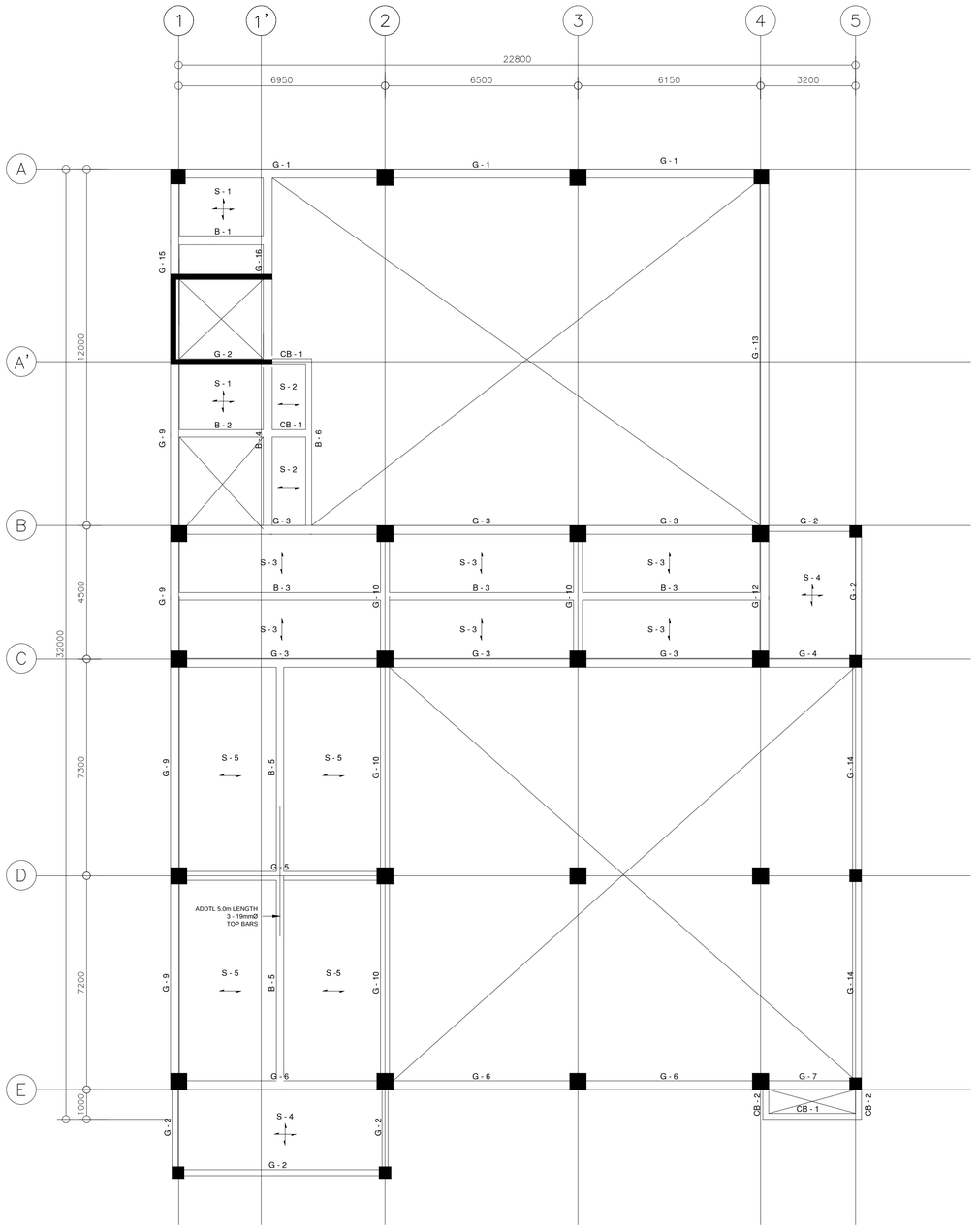

MEZZANINE FRAMING PLAN

1 ST
07–11

SCALE 1:200MTS

BEAM SCHEDULE (C28:Fy414) (LEVEL: 2.9m)

BEAM NUMBERS	SIZE		BOTTOM REINFORCEMENT			TOP REINFORCEMENT			SHEAR STIRRUPS	SFR	REMARKS
	B	D	LEFT	MID SPAN	RIGHT	LEFT	MID SPAN	RIGHT			
G - 1	300	500	4-16mmØ	4-16mmØ	4-16mmØ	5-20mmØ	3-20mmØ	5-20mmØ	2L - 10mmØ 1@50,10@100, REST@200 C/C	-	-
G - 2	250	450	2-16mmØ	2-16mmØ	2-16mmØ	2-20mmØ	2-20mmØ	2-20mmØ	2L - 10mmØ 1@50,8@100, REST@200 C/C	-	-
G - 3	300	500	4-16mmØ	5-16mmØ	4-16mmØ	3-20mmØ + 3-20mmØ	3-20mmØ	3-20mmØ + 3-20mmØ	2L - 10mmØ 1@50,10@100, REST@200 C/C	2-#10EF	-
G - 4	300	500	4-20mmØ + 2-16mmØ	4-16mmØ	4-20mmØ + 2-16mmØ	3-20mmØ + 3-20mmØ	3-20mmØ	3-20mmØ + 3-20mmØ	2L - 10mmØ 1@50,8@100, REST@200 C/C	-	-
G - 5	300	500	2-25mmØ	3-25mmØ + 3-16mmØ	2-25mmØ	3-25mmØ + 3-25mmØ	4-16mmØ	3-25mmØ + 3-25mmØ	2L - 10mmØ 1@50,12@100, REST@200 C/C	-	-
G - 6	300	500	4-16mmØ	4-16mmØ	4-16mmØ	4-16mmØ + 4-16mmØ	4-16mmØ	4-16mmØ + 4-16mmØ	2L - 10mmØ 1@50,10@100, REST@200 C/C	-	-
G - 7	300	500	4-16mmØ + 4-16mmØ	4-16mmØ	4-16mmØ + 4-16mmØ	4-16mmØ + 3-16mmØ	4-16mmØ	4-16mmØ + 4-16mmØ	2L - 10mmØ 1@50,10@100, REST@200 C/C	-	-
G - 8	250	450	3-16mmØ	2-16mmØ	3-16mmØ	3-20mmØ	2-20mmØ	3-20mmØ	2L - 10mmØ 1@50,15@100, REST@200 C/C	-	-
G - 9	300	500	4-16mmØ	4-16mmØ	4-16mmØ	4-16mmØ + 3-16mmØ	4-16mmØ	4-16mmØ + 3-16mmØ	2L - 10mmØ 1@50,10@100, REST@200 C/C	-	-
G - 10	300	500	4-16mmØ	4-16mmØ	4-16mmØ	3-20mmØ + 3-20mmØ	3-20mmØ	3-20mmØ + 3-20mmØ	2L - 10mmØ 1@50,15@100, REST@200 C/C	2-#10EF	-
G - 12	300	500	4-16mmØ	5-16mmØ	4-16mmØ	3-20mmØ + 3-20mmØ	3-20mmØ	3-20mmØ + 3-20mmØ	2L - 10mmØ 1@50,10@100, REST@200 C/C	-	-
G - 13	300	600	4-16mmØ	5-16mmØ	4-Ø16	3-20mmØ + 3-20mmØ	3-20mmØ	3-20mmØ + 3-20mmØ	2L - 10mmØ 1@50,15@100, REST@200 C/C	-	-
G - 14	300	500	4-16mmØ	5-16mmØ	4-16mmØ	4-20mmØ	3-20mmØ	4-20mmØ	2L - 10mmØ 1@50,10@100, REST@200 C/C	-	-
G - 15	300	500	4-16mmØ + 4-16mmØ	5-16mmØ + 4-16mmØ	4-16mmØ + 4-16mmØ	3-25mmØ + 4-16mmØ	3-25mmØ	3-25mmØ + 4-16mmØ	2L - 10mmØ 1@50,10@100, REST@200 C/C	-	-
G - 16	300	500	3-25mmØ + 2-16mmØ	3-25mmØ	3-25mmØ	3-25mmØ + 4-16mmØ	3-25mmØ	3-25mmØ	2L - 10mmØ 1@50,10@100, REST@200 C/C	-	-
B - 1	300	500	3-16mmØ	3-16mmØ	3-16mmØ	3-16mmØ	3-16mmØ	3-16mmØ	2L - 10mmØ 1@50,8@100, REST@200 C/C	-	-
B - 2	200	400	2-20mmØ	2-20mmØ	2-20mmØ	3-20mmØ	2-20mmØ	3-20mmØ	2L - 10mmØ 1@50,15@100, REST@200 C/C	-	-
B - 3	300	450	3-20mmØ	3-20mmØ	3-20mmØ	4-20mmØ	3-20mmØ	4-20mmØ	2L - 10mmØ 1@50,12@100, REST@200 C/C	-	-
B - 4	300	500	3-16mmØ	3-16mmØ	3-16mmØ	4-16mmØ	4-16mmØ	4-16mmØ + 3-16mmØ	2L - 10mmØ 1@50,10@100, REST@200 C/C	-	-
B - 5	300	500	4-16mmØ	4-16mmØ + 2-16mmØ	4-16mmØ	3-20mmØ	3-20mmØ	3-20mmØ	2L - 10mmØ 1@50,10@100, REST@200 C/C	-	-
B - 6	250	450	2-16mmØ	2-16mmØ	2-16mmØ	2-16mmØ	2-16mmØ	2-16mmØ	2L - 10mmØ 1@50,15@100, REST@200 C/C	-	-
CB - 1	250	450	2-16mmØ	2-16mmØ	2-16mmØ	2-16mmØ	2-16mmØ	2-16mmØ	2L - 10mmØ 1@50, REST@100 C/C	-	CANTILEVERED
CB - 2	300	450	2-20mmØ + 2-20mmØ	2-20mmØ + 2-20mmØ	2-20mmØ + 2-20mmØ	2-20mmØ + 2-16mmØ	2-20mmØ + 2-16mmØ	2-20mmØ + 2-16mmØ	2L - 10mmØ 1@50,10@100, 6 @150 REST@200 C/C	-	CANTILEVERED

NOTE:

PURSUANT TO ITEM 5 OF ANNEX 'A' OF THE REVISED IMPLEMENTING RULES AND REGULATION OF R.A. 9184, THE APPROVAL BY THE AUTHORIZED GOVERNMENT OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGNS UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGNS NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.

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ELMER T. RAMONEDA
PROJECT MANAGER

URBAN ENGINEERS
CONSULTING CIVIL ENGINEERS
in joint venture with
J.F. CANCIO & Associates
ENGINEERS CONSULTANTS
PTC Engineers & Associates

STRUCTURAL ENGINEER:
VICTOR D. DELOS REYES, JR.
REG.NO.: 76687 DATE: 04 / 16 / 2018
PTR NO.: 2202992 PLACE: PAMPANGA

SUBMITTED:
ELMER T. RAMONEDA
PROJECT MANAGER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:
JOSEPHINE P. ISTURIS
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN

REVIEWED AS TO DESIGN CONCEPT:
(SEE COVER SHEET)
EDWIN C. MATANGUIHAN
OIC, ASST. DIRECTOR, BUREAU OF DESIGN

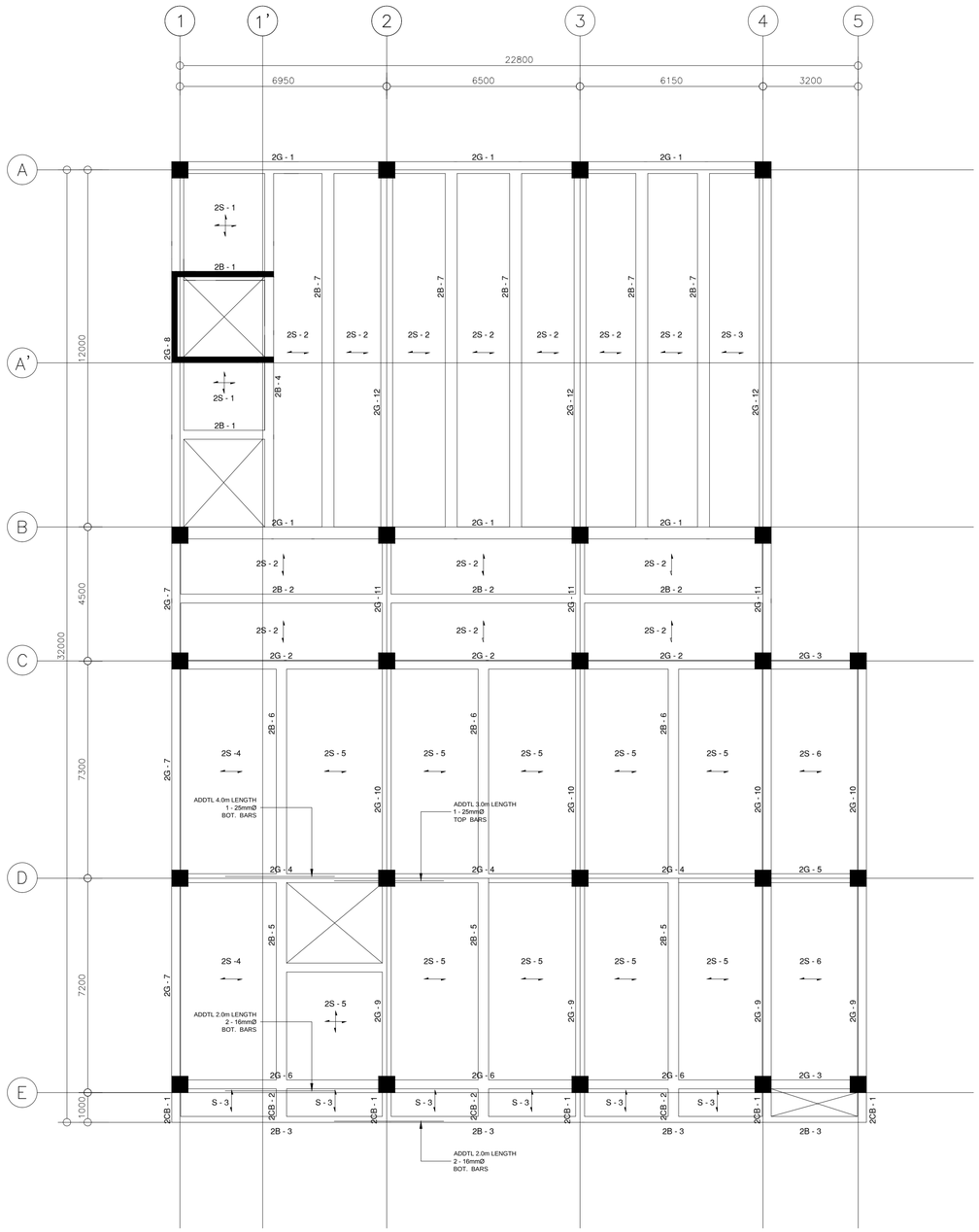
APPROVED:
(SEE COVER SHEET)
EMIL K. SADAIN, CESO I
UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPORT BUILDING, REGION II
BUREAU OF DESIGN BUILDING DIVISION
CARIG SUR, TUGUEGARAO CITY

PROJECT & LOCATION:
MEZZANINE FRAMING PLAN
BEAM SCHEDULE (LEVEL: 2.9M)

SET NO.: -

SHEET NO.: ST 07 11



1 ST
08–11

2ND FLOOR FRAMING PLAN

SCALE 1:200MTS

BEAM SCHEDULE (C28:Fy414) (LEVEL: 6m)

BEAM NUMBERS	SIZE		BOTTOM REINFORCEMENT			TOP REINFORCEMENT			SHEAR STIRRUPS	SFR	REMARKS
	B	D	LEFT	MID SPAN	RIGHT	LEFT	MID SPAN	RIGHT			
2G - 1	400	800	4-25mmØ	5-25mmØ	4-25mmØ	4-25mmØ + 3-20mmØ	4-25mmØ	4-25mmØ + 3-20mmØ	2L - 10mmØ 1@50,10@100, 6@150, REST@200 C/C	2-#16EF	-
2G - 2	300	600	3-25mmØ	3-25mmØ + 2-20mmØ	3-25mmØ	3-25mmØ + 3-20mmØ	3-20mmØ	3-25mmØ + 3-20mmØ	2L - 10mmØ 1@50,10@100, REST@200 C/C	-	-
2G - 3	300	600	4-20mmØ	4-20mmØ	4-20mmØ	3-20mmØ + 3-20mmØ	3-20mmØ	3-20mmØ + 3-20mmØ	2L - 10mmØ 1@50,10@100, REST@200 C/C	-	-
2G - 4	350	700	4-25mmØ	4-25mmØ + 3-25mmØ	4-25mmØ	4-25mmØ + 3-25mmØ	4-25mmØ	4-25mmØ + 3-25mmØ	2L - 10mmØ 1@50,15@100, REST@200 C/C	2-#16EF	-
2G - 5	300	600	3-25mmØ	3-25mmØ	3-25mmØ	5-25mmØ	3-25mmØ	5-25mmØ	2L - 10mmØ 1@50,10@100, REST@200 C/C	-	-
2G - 6	300	600	3-25mmØ	3-25mmØ + 3-20mmØ	3-25mmØ	3-25mmØ + 2-25mmØ	3-25mmØ	3-25mmØ + 2-25mmØ	2L - 10mmØ 1@50,10@100, REST@200 C/C	-	-
2G - 7	300	600	4-20mmØ	5-20mmØ	4-20mmØ	4-20mmØ + 2-20mmØ	4-20mmØ	4-20mmØ + 2-20mmØ	2L - 10mmØ 1@50,12@100, REST@200 C/C	-	-
2G - 8	400	800	4-20mmØ + 2-20mmØ	4-20mmØ + 4-20mmØ	4-20mmØ 2-20mmØ	4-25mmØ	4-25mmØ	4-25mmØ + 2-20mmØ	2L - 10mmØ 1@50,12@100, 10@150, REST@200 C/C	2-#16EF	-
2G - 9	300	600	5-16mmØ	5-16mmØ + 2-16mmØ	5-16mmØ	3-25mmØ + 3-20mmØ	3-25mmØ	3-25mmØ + 3-25mmØ	2L - 12mmØ 1@50,12@100, REST@200 C/C	-	-
2G - 10	300	600	5-16mmØ	5-16mmØ + 2-16mmØ	5-16mmØ	3-25mmØ + 3-25mmØ	3-25mmØ	3-25mmØ + 3-20mmØ	2L - 12mmØ 1@50,12@100, REST@200 C/C	-	-
2G - 11	300	600	5-16mmØ	5-16mmØ + 3-16mmØ	5-16mmØ	3-25mmØ + 3-20mmØ	3-25mmØ	3-25mmØ + 3-20mmØ	2L - 12mmØ 1@50,12@100, REST@200 C/C	2-#16EF	-
2G - 12	400	800	4-25mmØ	4-25mmØ	4-25mmØ	4-25mmØ + 2-25mmØ	4-25mmØ	4-25mmØ + 2-25mmØ	2L - 10mmØ 1@50,12@100, 10@150, REST@200 C/C	2-#16EF	-
2G - 13	300	600	3-16mmØ	3-16mmØ	3-16mmØ	3-25mmØ	3-25mmØ	3-25mmØ	2L - 10mmØ 1@50,12@100, 10@150, REST@200 C/C	-	-
2B - 1	300	500	4-16mmØ	4-16mmØ	4-16mmØ	4-16mmØ	4-16mmØ	4-16mmØ	2L - 10mmØ 1@50,10@100, REST@200 C/C	-	-
2B - 2	350	550	4-20mmØ	5-20mmØ	4-20mmØ	4-20mmØ + 2-20mmØ	4-20mmØ	4-20mmØ + 2-20mmØ	2L - 10mmØ 1@50,10@100, REST@200 C/C	-	-
2B - 3	300	450	4-16mmØ	4-16mmØ	4-16mmØ	4-20mmØ	3-20mmØ	4-20mmØ	2L - 10mmØ 1@50,12@100, REST@200 C/C	-	-
2B - 4	300	600	4-20mmØ	5-20mmØ	4-20mmØ	4-20mmØ	4-20mmØ + 2-16mmØ	4-20mmØ	2L - 10mmØ 1@50,12@100, REST@200 C/C	2-#16EF	-
2B - 5	350	550	4-20mmØ + 2-20mmØ	4-20mmØ + 4-20mmØ	4-20mmØ + 2-20mmØ	4-25mmØ	4-25mmØ	4-25mmØ + 4-25mmØ	2L - 10mmØ 1@50,12@100, REST@200 C/C	-	-
2B - 6	350	550	4-20mmØ + 2-20mmØ	4-20mmØ + 4-20mmØ	4-20mmØ + 2-20mmØ	4-25mmØ + 4-25mmØ	4-25mmØ	4-25mmØ	2L - 12mmØ 1@50,12@100, REST@200 C/C	-	-
2B - 7	400	800	4-28mmØ	4-28mmØ + 4-28mmØ	4-28mmØ	4-25mmØ	4-25mmØ	4-25mmØ	2L - 10mmØ 1@50,10@100, REST@200 C/C	2-#16EF	-
2CB - 1	300	600	4-20mmØ	4-20mmØ	4-20mmØ	3-20mmØ + 3-20mmØ	3-20mmØ 3-20mmØ	3-20mmØ + 3-20mmØ	2L - 10mmØ 1@50, REST@150 C/C	-	CANTILEVERED
2CB - 2	300	600	3-16mmØ	3-16mmØ	3-16mmØ	3-25mmØ + 3-20mmØ	3-25mmØ 3-20mmØ	3-25mmØ + 3-20mmØ	2L - 12mmØ 1@50, REST@150 C/C	2-#16EF	CANTILEVERED

NOTE:

PURSUANT TO ITEM 5 OF ANNEX 'A' OF THE REVISED IMPLEMENTING RULES AND REGULATION OF R.A. 9184, THE APPROVAL BY THE AUTHORIZED GOVERNMENT OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGNS UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGNS NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.

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PTC Engineers & Associates

STRUCTURAL ENGINEER:
VICTOR D. DELOS REYES, JR.
REG.NO.: 76687 DATE: 04 / 16 / 2018
PTR NO.: 2202992 PLACE: PAMPANGA

SUBMITTED:
ELMER T. RAMONEDA
PROJECT MANAGER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:
JOSEPHINE P. ISTURIS
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN

REVIEWED AS TO DESIGN CONCEPT:
(SEE COVER SHEET)
EDWIN C. MATANGUIHAN
OIC, ASST. DIRECTOR, BUREAU OF DESIGN

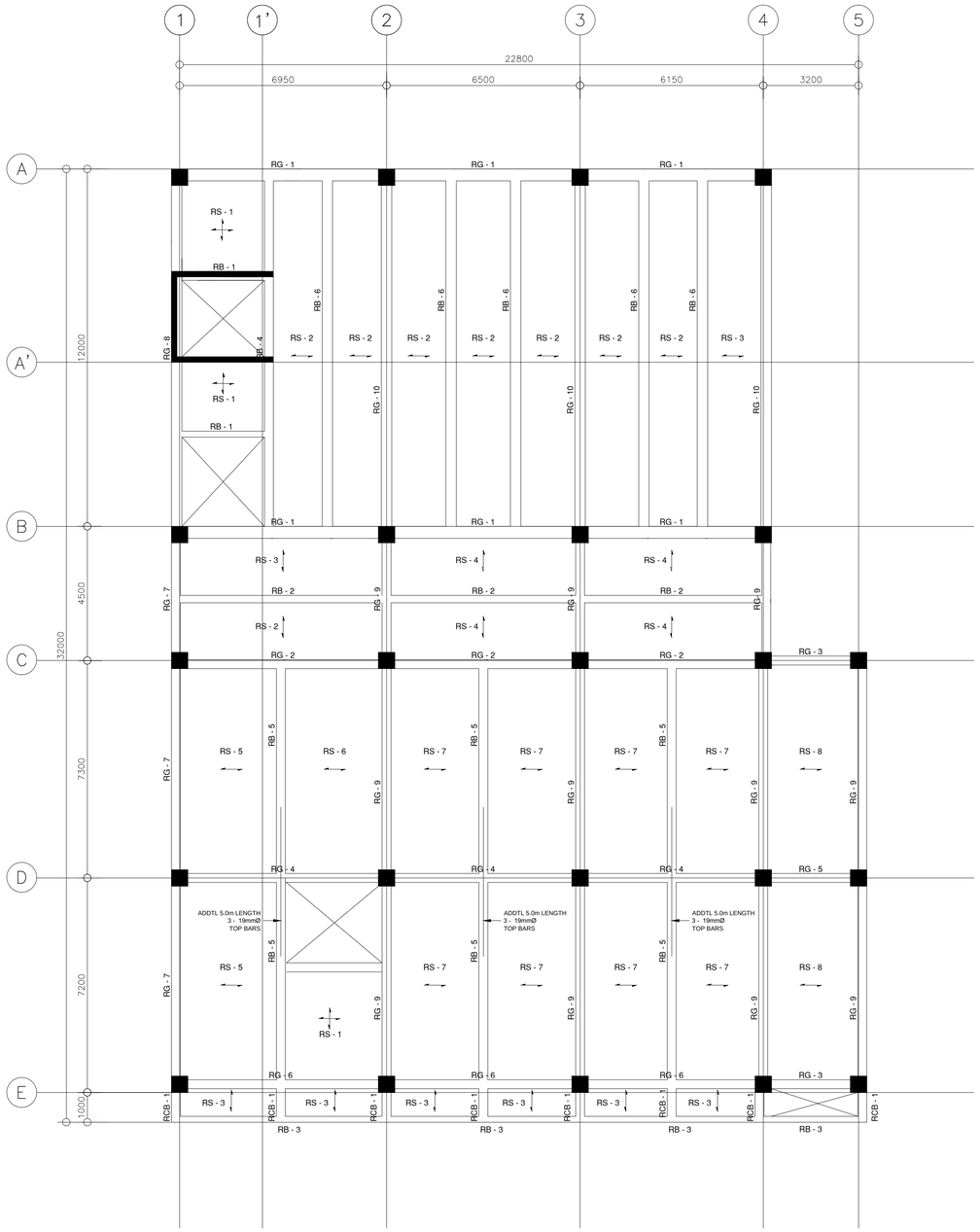
APPROVED:
(SEE COVER SHEET)
EMIL K. SADAIN, CESO I
UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPORT BUILDING, REGION II
BUREAU OF DESIGN BUILDING DIVISION
CARIG SUR, TUGUEGARAO CITY

PROJECT & LOCATION:
SECOND FLOOR FRAMING PLAN
BEAM SCHEDULE (LEVEL: 9M)

SET NO.: -

SHEET NO.: ST 08 11



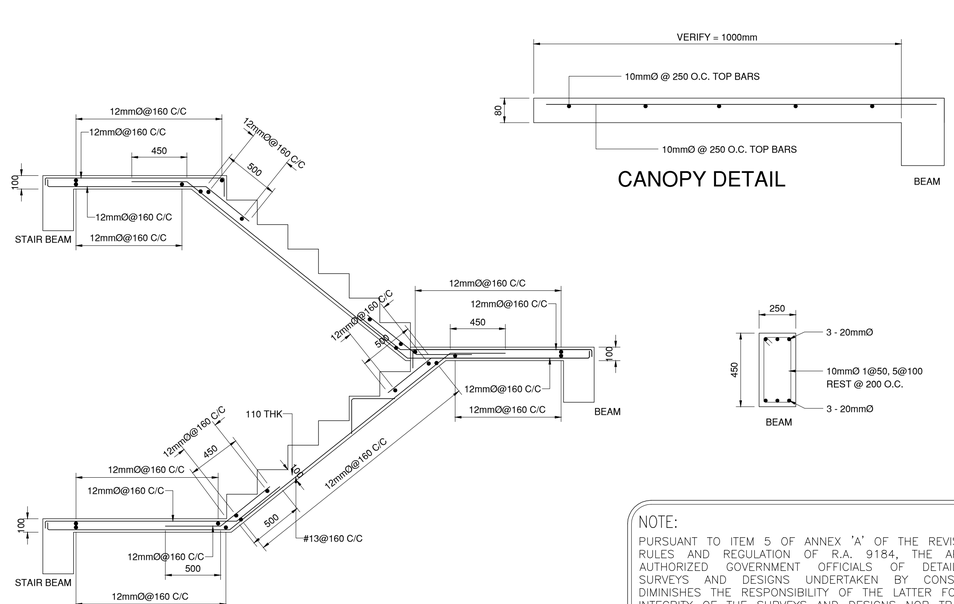
ROOF DECK FRAMING PLAN

1 ST / 09–11

SCALE 1:200MTS

BEAM SCHEDULE (C28:Fy414) (LEVEL: 11.6m)

BEAM NUMBERS	SIZE		BOTTOM REINFORCEMENT			TOP REINFORCEMENT			SHEAR STIRRUPS	SFR	REMARKS
	B	D	LEFT	MID SPAN	RIGHT	LEFT	MID SPAN	RIGHT			
RG - 1	350	700	4-25mmØ	5-25mmØ	4-25mmØ	5-25mmØ	4-25mmØ	5-25mmØ	2L - 10mmØ 1@50,10@100, 6@150, REST@200 C/C	3-#16EF	-
RG - 2	300	550	3-20mmØ	3-20mmØ + 2-16mmØ	3-20mmØ	3-20mmØ + 3-20mmØ	3-20mmØ	3-20mmØ + 3-20mmØ	2L - 10mmØ 1@50,10@100, REST@200 C/C	-	-
RG - 3	300	550	3-20mmØ	3-20mmØ	3-20mmØ	4-20mmØ	4-16mmØ	4-16mmØ	2L - 10mmØ 1@50,10@100, REST@200 C/C	-	-
RG - 4	300	550	2-25mmØ + 2-16mmØ	3-25mmØ + 3-25mmØ	2-25mmØ + 2-16mmØ	3-25mmØ + 3-25mmØ	2-25mmØ + 2-16mmØ	3-25mmØ + 3-25mmØ	2L - 10mmØ 1@50,12@100, REST@150 C/C	-	-
RG - 5	300	550	3-20mmØ	3-20mmØ	3-20mmØ	3-25mmØ + 3-25mmØ	3-20mmØ	3-20mmØ	2L - 10mmØ 1@50,10@100, REST@200 C/C	-	-
RG - 6	300	500	3-20mmØ	3-20mmØ + 3-16mmØ	3-20mmØ	3-20mmØ + 3-16mmØ	3-20mmØ	3-20mmØ + 3-16mmØ	2L - 10mmØ 1@50,10@100, REST@200 C/C	-	-
RCB - 1	300	550	4-16mmØ	5-16mmØ	4-16mmØ	4-20mmØ	4-20mmØ	4-20mmØ	2L - 10mmØ 1@50,10@100, REST@200 C/C	-	CANTILEVERED
RG - 7	300	550	4-16mmØ	4-16mmØ	4-16mmØ	4-20mmØ	3-20mmØ	4-20mmØ	2L - 10mmØ 1@50,10@100, REST@200 C/C	-	-
RG - 8	350	700	4-20mmØ	4-20mmØ + 2-16mmØ	4-20mmØ + 2-16mmØ	4-20mmØ + 2-16mmØ	3-20mmØ	4-20mmØ + 2-16mmØ	2L - 10mmØ 1@50,10@100, 6@150, REST@200 C/C	2-#16EF	-
RG - 9	300	550	4-16mmØ	5-16mmØ	4-16mmØ	4-20mmØ + 2-16mmØ	4-20mmØ	4-20mmØ + 2-16mmØ	2L - 10mmØ 1@50,12@100, REST@150 C/C	1-#16EF	CANTILEVERED
RG - 10	350	700	4-25mmØ	4-25mmØ + 4-16mmØ	4-25mmØ	4-25mmØ + 4-16mmØ	4-25mmØ	4-25mmØ + 4-16mmØ	2L - 10mmØ 1@50,10@100, 6@150, REST@200 C/C	2-#16EF	-
RB - 1	300	500	3-16mmØ	4-16mmØ	3-16mmØ	4-16mmØ	3-16mmØ	4-16mmØ	2L - 10mmØ 1@50,10@100, REST@200 C/C	-	-
RB - 2	300	500	3-20mmØ	3-20mmØ + 2-16mmØ	3-20mmØ	3-20mmØ + 2-16mmØ	3-20mmØ	3-20mmØ + 2-16mmØ	2L - 10mmØ 1@50,12@100, REST@180 C/C	-	-
RB - 3	300	450	3-16mmØ	3-20mmØ	3-16mmØ	3-20mmØ	3-20mmØ	3-20mmØ	2L - 10mmØ 1@50,12@100, REST@150 C/C	-	-
RB - 4	350	700	4-20mmØ	5-20mmØ	4-20mmØ	5-20mmØ	4-20mmØ	5-20mmØ	2L - 10mmØ 1@50,10@100, 6@150, REST@200 C/C	2-#16EF	-
RB - 5	300	550	3-20mmØ	3-20mmØ + 4-16mmØ	3-20mmØ	3-20mmØ	3-20mmØ	3-20mmØ	2L - 10mmØ 1@50,12@100, REST@180 C/C	-	-
RB - 6	350	700	4-25mmØ	4-25mmØ + 4-16mmØ	4-25mmØ	4-25mmØ + 4-16mmØ	4-25mmØ	4-25mmØ + 4-16mmØ	2L - 10mmØ 1@50,10@100, 6@150, REST@200 C/C	2-#16EF	-



STAIR DETAILS

2 ST / 09–11

SCALE 1:25MTS

NOTE:

PURSUANT TO ITEM 5 OF ANNEX 'A' OF THE REVISED IMPLEMENTING RULES AND REGULATION OF R.A. 9184, THE APPROVAL BY THE AUTHORIZED GOVERNMENT OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGNS UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGNS NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.

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ELMER T. RAMONEDA
PROJECT MANAGER

URBAN ENGINEERS
CONSULTING CIVIL ENGINEERS
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PTC Engineers & Associates

STRUCTURAL ENGINEER:	SUBMITTED:	REVIEWED AS TO DESIGN CONCEPT:	REVIEWED AS TO DESIGN CONCEPT:	APPROVED:	PROJECT & LOCATION:	PROJECT & LOCATION:	SET NO.	SHEET NO.
VICTOR D. DELOS REYES, JR.	ELMER T. RAMONEDA	JOSEPHINE P. ISTURIS	(SEE COVER SHEET)	(SEE COVER SHEET)	PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPORT BUILDING, REGION II BUREAU OF DESIGN BUILDING DIVISION CARIG SUR, TUGUEGARAO CITY	ROOF DECK FRAMING PLAN STAIR DETAILS BEAM SCHEDULE (LEVEL:11.6M)	-	ST 09 11
REG.NO.: 76687	PROJECT MANAGER	CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	EDWIN C. MATANGUIHAN	EMIL K. SADAIN, CESO I				
PTR NO.: 2202992			OIC, ASST. DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES				
DATE: 04 / 16 / 2018								
PLACE: PAMPANGA								

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

SLAB SCHEDULE (C28 : FY276) (LEVEL : 2.9M)

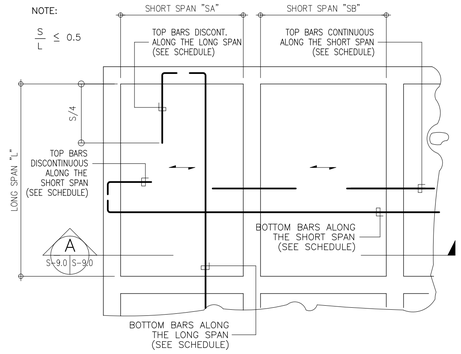
SLAB MARKED	SLAB THICKNESS	BAR DIAMETER	BOTTOM REINFORCEMENT				TOP REINFORCEMENT				DISTRIBUTION	REMARKS
			ALONG SHORT SPAN		ALONG LONG SPAN		OVER LONG SUPPORT		OVER SHORT SUPPORT			
			FULL LENGTH	CURTAILED	FULL LENGTH	CURTAILED	CONTINUOUS SUPPORT	END SUPPORT	CONTINUOUS SUPPORT	END SUPPORT		
S - 1	100	10mmØ	10mmØ @ 150 C/C	---	10mmØ @ 150 C/C	---	---	10mmØ @ 150 C/C	10mmØ @ 150 C/C	10mmØ @ 150 C/C	10mmØ @ 150 C/C	TWO WAY
S - 2	100	10mmØ	10mmØ @ 150 C/C	---	10mmØ @ 150 C/C	---	10mmØ @ 150 C/C	10mmØ @ 150 C/C	---	10mmØ @ 150 C/C	10mmØ @ 150 C/C	ONE WAY
S - 3	100	10mmØ	10mmØ @ 300 C/C	10mmØ @ 300 C/C	10mmØ @ 300 C/C	10mmØ @ 300 C/C	10mmØ @ 150 C/C	10mmØ @ 150 C/C	---	10mmØ @ 150 C/C	10mmØ @ 150 C/C	ONE WAY
S - 4	80	10mmØ	10mmØ @ 200 C/C	---	10mmØ @ 200 C/C	---	10mmØ @ 200 C/C	10mmØ @ 200 C/C	---	10mmØ @ 200 C/C	10mmØ @ 200 C/C	---
S - 5	110	12mmØ	10mmØ @ 150 C/C	---	10mmØ @ 150 C/C	---	10mmØ @ 150 C/C	10mmØ @ 150 C/C	---	10mmØ @ 150 C/C	10mmØ @ 150 C/C	---

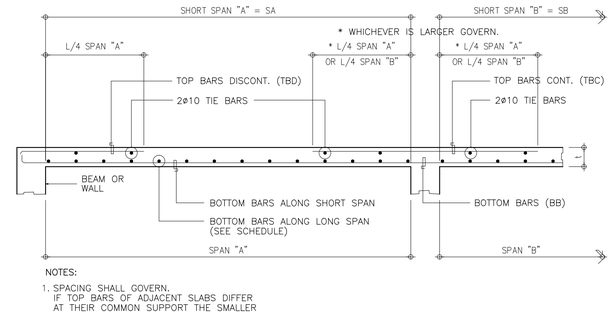
SLAB SCHEDULE (C28 : FY276) (LEVEL : 6M)

SLAB MARKED	SLAB THICKNESS	BAR DIAMETER	BOTTOM REINFORCEMENT				TOP REINFORCEMENT				DISTRIBUTION	REMARKS
			ALONG SHORT SPAN		ALONG LONG SPAN		OVER LONG SUPPORT		OVER SHORT SUPPORT			
			FULL LENGTH	CURTAILED	FULL LENGTH	CURTAILED	CONTINUOUS SUPPORT	END SUPPORT	CONTINUOUS SUPPORT	END SUPPORT		
2S - 1	110	12mmØ	12mmØ @ 160 C/C	---	12mmØ @ 160 C/C	---	12mmØ @ 160 C/C	12mmØ @ 160 C/C	12mmØ @ 160 C/C	12mmØ @ 160 C/C	12mmØ @ 160 C/C	---
2S - 2	110	12mmØ	12mmØ @ 160 C/C	---	12mmØ @ 160 C/C	---	12mmØ @ 160 C/C	---	---	12mmØ @ 160 C/C	12mmØ @ 160 C/C	---
2S - 3	110	12mmØ	12mmØ @ 160 C/C	---	12mmØ @ 160 C/C	---	12mmØ @ 160 C/C	12mmØ @ 160 C/C	---	12mmØ @ 160 C/C	12mmØ @ 160 C/C	---
2S - 4	125	12 / 16mmØ	12mmØ @ 260 C/C	12mmØ @ 260 C/C	12mmØ @ 180 C/C	---	16mmØ @ 140 C/C	12mmØ @ 180 C/C	---	12mmØ @ 180 C/C	12mmØ @ 180 C/C	---
2S - 5	125	12mmØ	12mmØ @ 300 C/C	12mmØ @ 300 C/C	12mmØ @ 180 C/C	---	12mmØ @ 100 C/C	---	---	12mmØ @ 180 C/C	12mmØ @ 180 C/C	---
2S - 6	125	12mmØ	12mmØ @ 180 C/C	---	12mmØ @ 180 C/C	---	12mmØ @ 110 C/C	12mmØ @ 180 C/C	---	12mmØ @ 180 C/C	12mmØ @ 180 C/C	---

SLAB SCHEDULE (C28 : FY276) (LEVEL : 11.6M)

SLAB MARKED	SLAB THICKNESS	BAR DIAMETER	BOTTOM REINFORCEMENT				TOP REINFORCEMENT				DISTRIBUTION	REMARKS
			ALONG SHORT SPAN		ALONG LONG SPAN		OVER LONG SUPPORT		OVER SHORT SUPPORT			
			FULL LENGTH	CURTAILED	FULL LENGTH	CURTAILED	CONTINUOUS SUPPORT	END SUPPORT	CONTINUOUS SUPPORT	END SUPPORT		
RS - 1	100	10mmØ	10mmØ @ 150 C/C	---	10mmØ @ 150 C/C	---	10mmØ @ 150 C/C	10mmØ @ 150 C/C	10mmØ @ 150 C/C	10mmØ @ 150 C/C	10mmØ @ 150 C/C	---
RS- 2	100	10mmØ	10mmØ @ 150 C/C	---	10mmØ @ 150 C/C	---	10mmØ @ 150 C/C	---	---	10mmØ @ 150 C/C	10mmØ @ 150 C/C	---
RS - 3	100	10mmØ	10mmØ @ 150 C/C	---	10mmØ @ 150 C/C	---	10mmØ @ 150 C/C	10mmØ @ 150 C/C	---	10mmØ @ 150 C/C	10mmØ @ 150 C/C	---
RS - 4	100	10mmØ	10mmØ @ 150 C/C	---	10mmØ @ 150 C/C	---	10mmØ @ 150 C/C	---	---	10mmØ @ 150 C/C	10mmØ @ 150 C/C	---
RS - 5	100	10 / 12mmØ	10mmØ @ 150 C/C	---	10mmØ @ 150 C/C	---	12mmØ @ 145 C/C	10mmØ @ 150 C/C	---	10mmØ @ 150 C/C	10mmØ @ 150 C/C	---
RS - 6	100	10 / 12mmØ	10mmØ @ 150 C/C	---	10mmØ @ 150 C/C	---	12mmØ @ 145 C/C	---	---	10mmØ @ 150 C/C	10mmØ @ 150 C/C	---
RS - 7	100	10mmØ	10mmØ @ 150 C/C	---	10mmØ @ 150 C/C	---	10mmØ @ 125 C/C	---	---	10mmØ @ 150 C/C	10mmØ @ 150 C/C	---
RS - 8	100	10mmØ	10mmØ @ 150 C/C	---	10mmØ @ 150 C/C	---	10mmØ @ 130 C/C	10mmØ @ 150 C/C	---	10mmØ @ 150 C/C	10mmØ @ 150 C/C	---



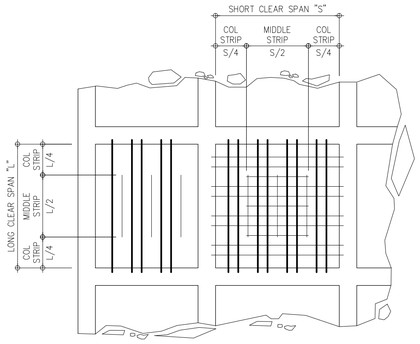


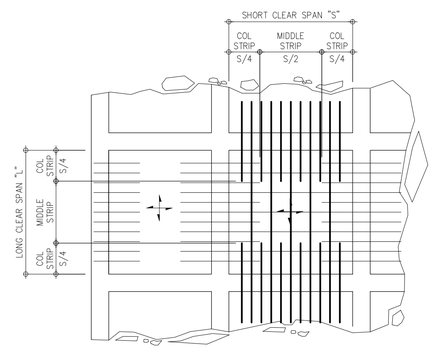
NOTES:
1. SPACING SHALL GOVERN. IF TOP BARS OF ADJACENT SLABS DIFFER AT THEIR COMMON SUPPORT THE SMALLER

1 ST 10–11

ONE WAY SLAB DETAILS

SCALE NTS

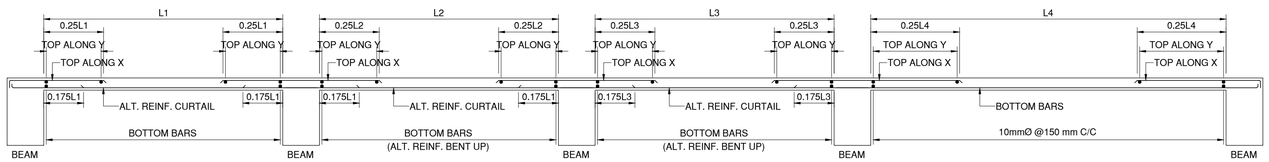




1 ST 10–11

TWO WAY SLAB DETAILS

SCALE NTS



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PROJECT MANAGER

URBAN ENGINEERS
CONSULTING CIVIL ENGINEERS
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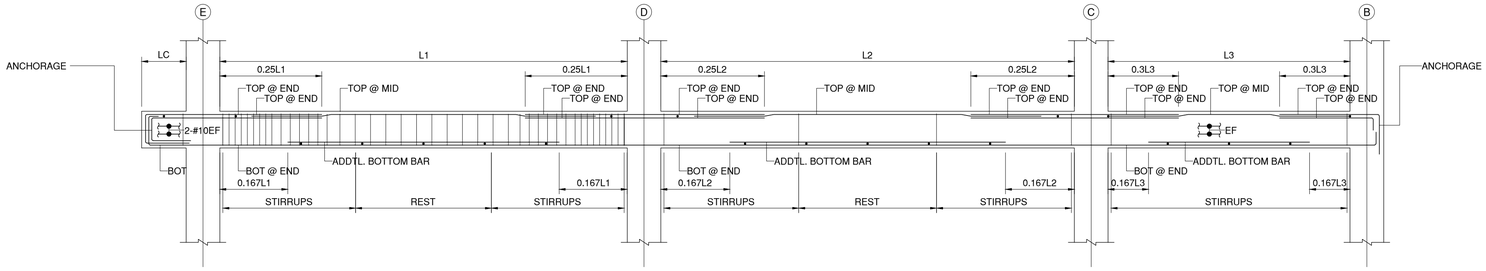
PTC Engineers & Associates

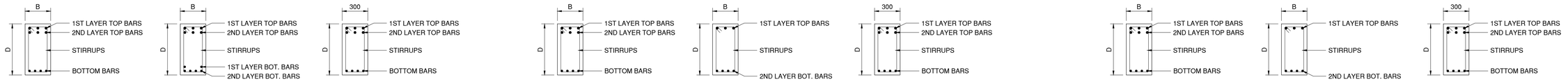
STRUCTURAL ENGINEER:		SUBMITTED:
VICTOR D. DELOS REYES, JR.		ELMER T. RAMONEDA
REG.NO.: 76687	DATE: 04 / 16 / 2018	PROJECT MANAGER
PTR NO.: 2202992	PLACE: PAMPANGA	

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

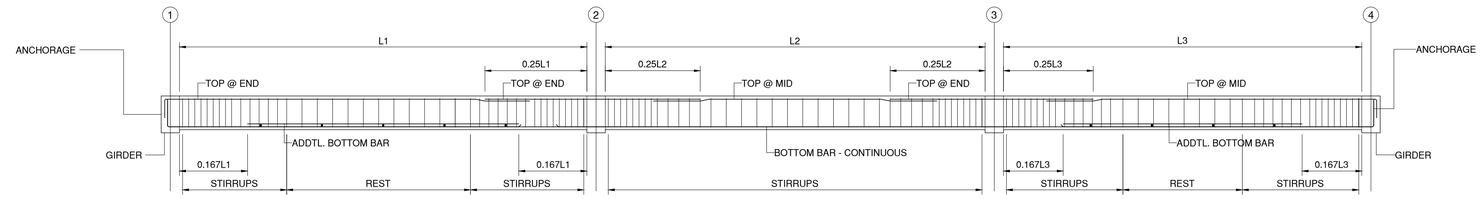
REVIEWED AS TO DESIGN CONCEPT:	REVIEWED AS TO DESIGN CONCEPT:	APPROVED:
JOSEPHINE P. ISTURIS	(SEE COVER SHEET)	(SEE COVER SHEET)
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	EDWIN C. MATANGUIHAN	EMIL K. SADAIN, CESO I
	OIC, ASST. DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

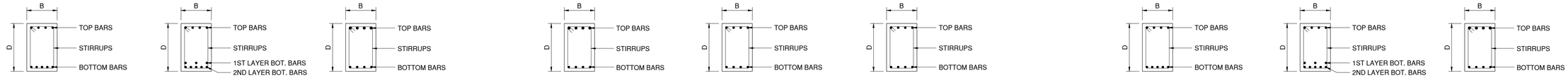
PROJECT & LOCATION:	PROJECT & LOCATION:	SET NO.	SHEET NO.
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPORT BUILDING, REGION II BUREAU OF DESIGN BUILDING DIVISION CARIG SUR, TUGUEGARAO CITY	SLAB SCHEDULE ONE WAY SLAB DETAILS TWO WAY SLAB DETAILS	-	ST 10 11



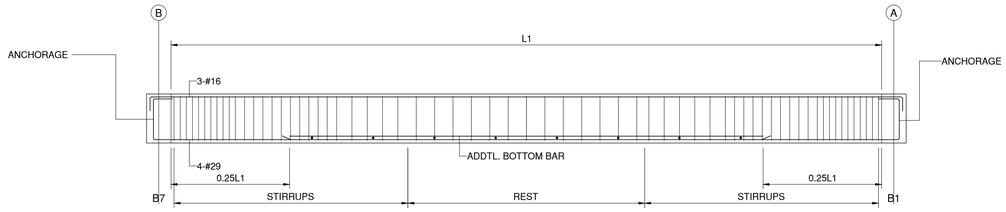


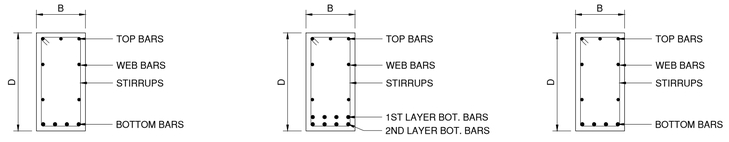
END SPAN DISCONTINUOUS | MID SPAN | END SPAN CONTINUOUS | END SPAN CONTINUOUS | MID SPAN | END SPAN CONTINUOUS | END SPAN CONTINUOUS | MID SPAN | END SPAN DISCONTINUOUS





END SPAN DISCONTINUOUS | MID SPAN | END SPAN CONTINUOUS | END SPAN CONTINUOUS | MID SPAN | END SPAN CONTINUOUS | END SPAN CONTINUOUS | MID SPAN | END SPAN DISCONTINUOUS





END SPAN DISCONTINUOUS | MID SPAN | END SPAN DISCONTINUOUS

1ST BEAM DETAILS

11–11

SCALE NTS

NOTE:

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PROJECT MANAGER

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CONSULTING CIVIL ENGINEERS
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STRUCTURAL ENGINEER:		SUBMITTED:
VICTOR D. DELOS REYES, JR.		ELMER T. RAMONEDA
REG.NO.: 76687	DATE: 04 / 16 / 2018	PROJECT MANAGER
PTR NO.: 2202992	PLACE: PAMPANGA	

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:	REVIEWED AS TO DESIGN CONCEPT:	APPROVED:
JOSEPHINE P. ISTURIS	(SEE COVER SHEET) EDWIN C. MATANGUIHAN	(SEE COVER SHEET) EMIL K. SADAIN, CESO I
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	OIC, ASST. DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPORT BUILDING, REGION II
BUREAU OF DESIGN BUILDING DIVISION
CARIG SUR, TUGUEGARAO CITY

PROJECT & LOCATION:
BEAM DETAILS

SET NO.: -

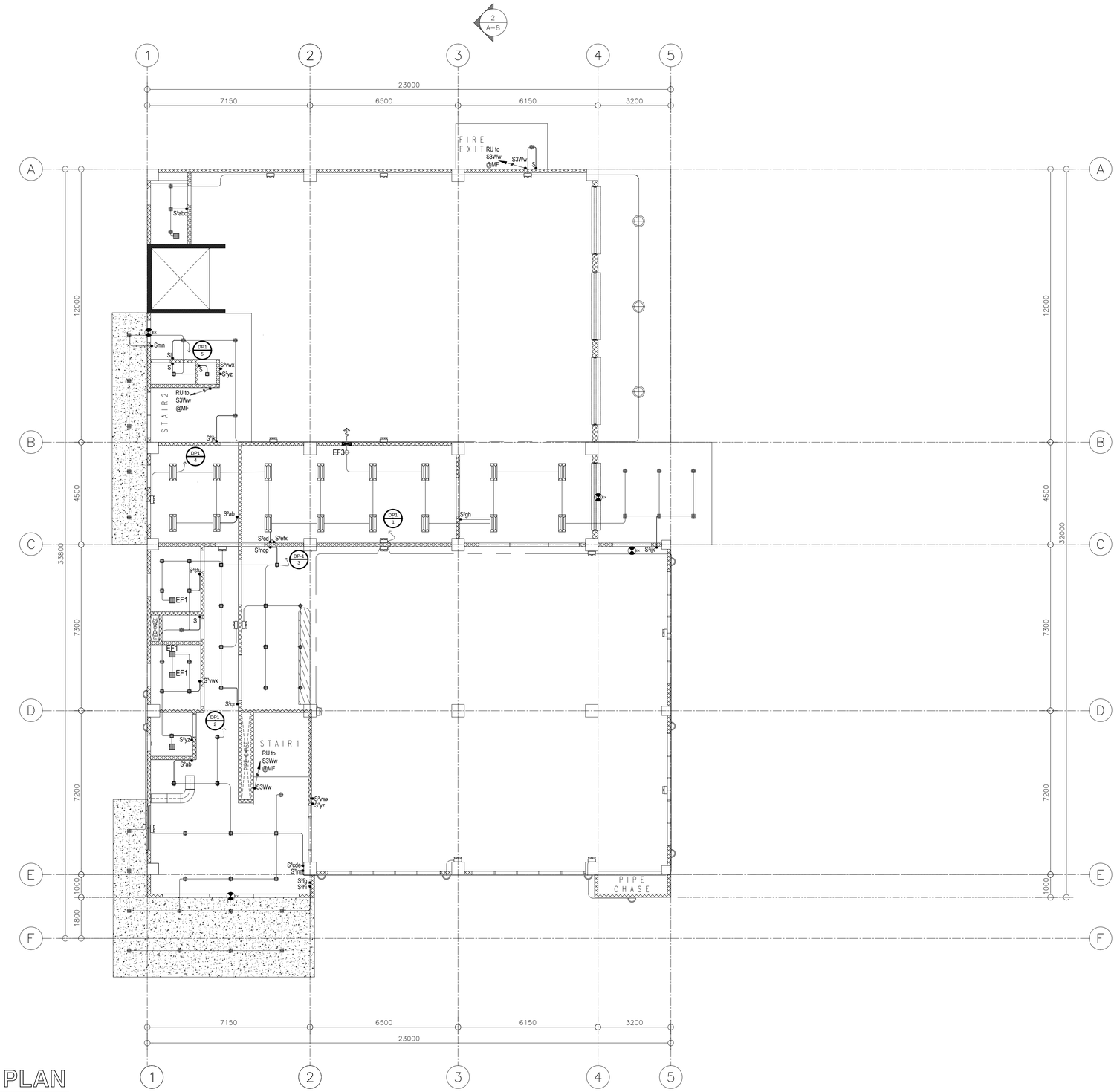
SHEET NO.: ST 11 | 11

SCHEDULE OF LIGHTING FIXTURES

ITEMS	DESCRIPTION
▦	150x150mm RECESSED DOWNLIGHT SQUARE 15 WATTS (LED WARM WHITE)
▭	2X16 WATTS TROFFER LIGHT LED – DAYLIGHT (VERIFY SPECS.)
◉	400 MM DIA. ROUND HIGH BAY (90 WATTS, LED – DAYLIGHT)
⊕	500MM DIA. ROUND HIGH BAY (100 WATTS, LED – DAYLIGHT)
◡	WALL SCONE/WALL LAMP (VERIFY SPECS.)
▣	150x150mm CEILING MOUNTED DOWNLIGHT, SQUARE 15 WATTS (LED WARM WHITE)
⊕	150 DIAMETER MM RECESSED DOWNLIGHT ROUND 8 WATTS (LED WARM WHITE)

LEGENDS/ABBREVIATION

ITEMS	DESCRIPTION
EX	EXIT SIGN
EX	DOUBLE SIDED EXIT SIGN WITH DIRECTIONAL ARROW
	EMERGENCY LIGHT
	CEILING MOUNTED EXHAUST FAN
RU/RD to xF	RISER UP/RISER DOWN "x" denotes specified floor
⊖	SINGLE CONVENIENCE OUTLET
S	SINGLE POLE WALL SWITCH
S²	TWO–SINGLE POLE WALL SWITCH ON ONE SWITCHPLATE
S³	THREE–SINGLE POLE WALL SWITCH ON ONE SWITCHPLATE
S3W	THREE–WAY SWITCH
DP2 5	CIRCUIT HOMERUN, DENOTES PANEL NAME & CIRCUIT NUMBER



1 4 LL

LIGHTING LAYOUT
GROUND FLOOR PLAN

SCALE 1:100MTS

NOTE:

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PTC Engineers & Associates

PROF. ELECTRICAL ENGINEER:		SUBMITTED:
GEORGE M. SIMBULAN		ELMER T. RAMONEDA
REG.NO.: 0002980	DATE: FEB-09-2018	PROJECT MANAGER
PTR NO.: 1076338	PLACE: PAMPANGA	

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:
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SHEET CONTENTS:
GROUND FLOOR LIGHTING LAYOUT
Scale 1:100m

SET NO.: EL

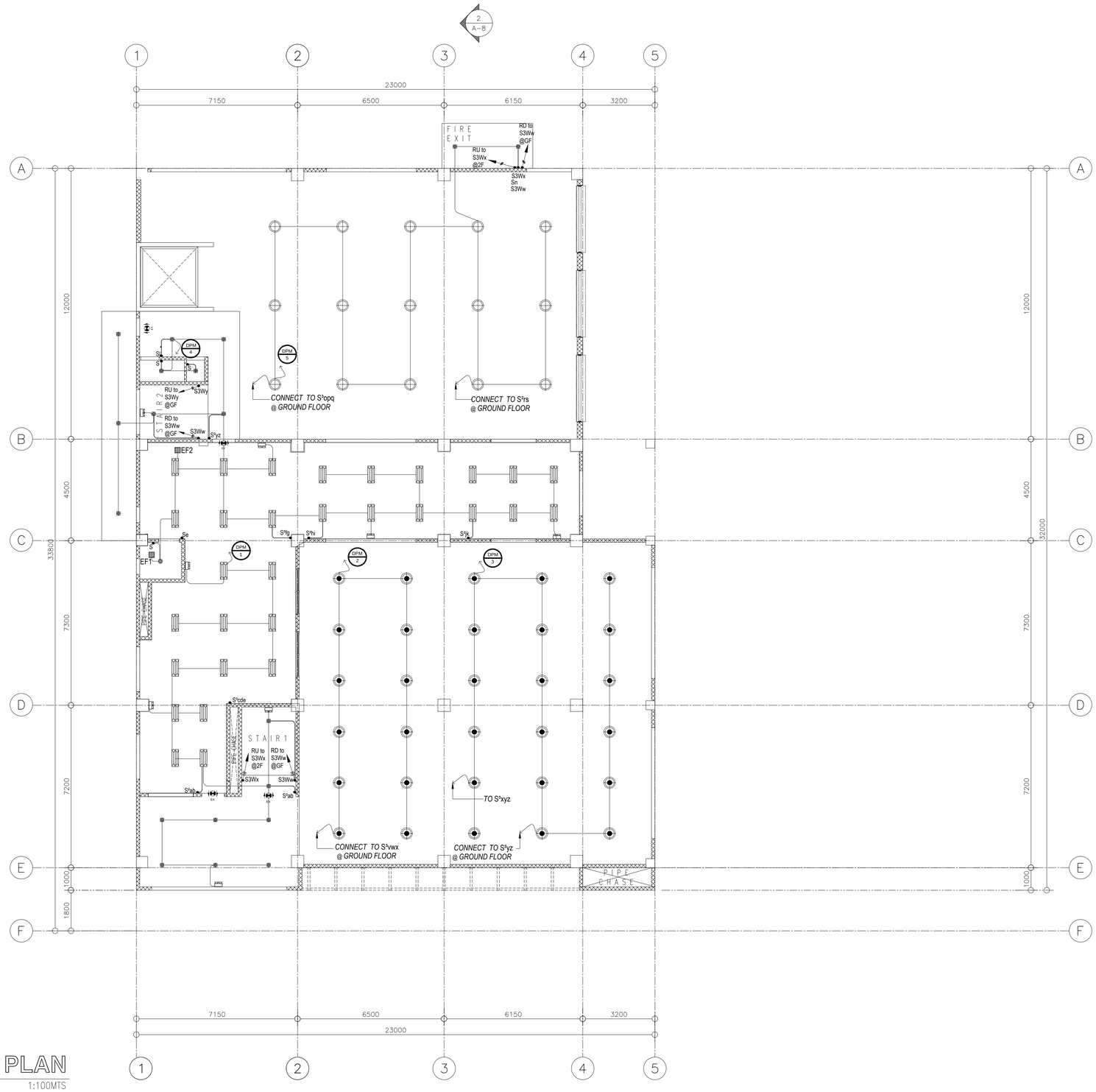
SHEET NO.: 1 / 12

SCHEDULE OF LIGHTING FIXTURES

ITEMS	DESCRIPTION
	150x150mm RECESSED DOWNLIGHT SQUARE 15 WATTS (LED WARM WHITE)
	2X16 WATTS TROFFER LIGHT LED – DAYLIGHT (VERIFY SPECS.)
	400 MM DIA. ROUND HIGH BAY (90 WATTS, LED – DAYLIGHT)
	500MM DIA. ROUND HIGH BAY (100 WATTS, LED – DAYLIGHT)
	WALL SCONE/WALL LAMP (VERIFY SPECS.)
	150x150mm CEILING MOUNTED DOWNLIGHT, SQUARE 15 WATTS (LED WARM WHITE)
	150 DIAMETER MM RECESSED DOWNLIGHT ROUND 8 WATTS (LED WARM WHITE)

LEGENDS/ABBREVIATION

ITEMS	DESCRIPTION
EX	EXIT SIGN
EX	DOUBLE SIDED EXIT SIGN WITH DIRECTIONAL ARROW
	EMERGENCY LIGHT
	CEILING MOUNTED EXHAUST FAN
RU/RD to xF	RISER UP/RISER DOWN "x" denotes specified floor
	SINGLE CONVENIENCE OUTLET
S	SINGLE POLE WALL SWITCH
S^2	TWO–SINGLE POLE WALL SWITCH ON ONE SWITCHPLATE
S^3	THREE–SINGLE POLE WALL SWITCH ON ONE SWITCHPLATE
S3W	THREE–WAY SWITCH
DPO 5	CIRCUIT HOMERUN, DENOTES PANEL NAME & CIRCUIT NUMBER



2 | 4
LL

LIGHTING LAYOUT
MEZZANINE FLOOR PLAN
SCALE 1:100MTS

NOTE:

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BONIFACIO DRIVE, PORT AREA, MANILA

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SHEET CONTENTS:
MEZZANINE FLOOR LIGHTING LAYOUT
Scale 1:100m

SET NO.: EL

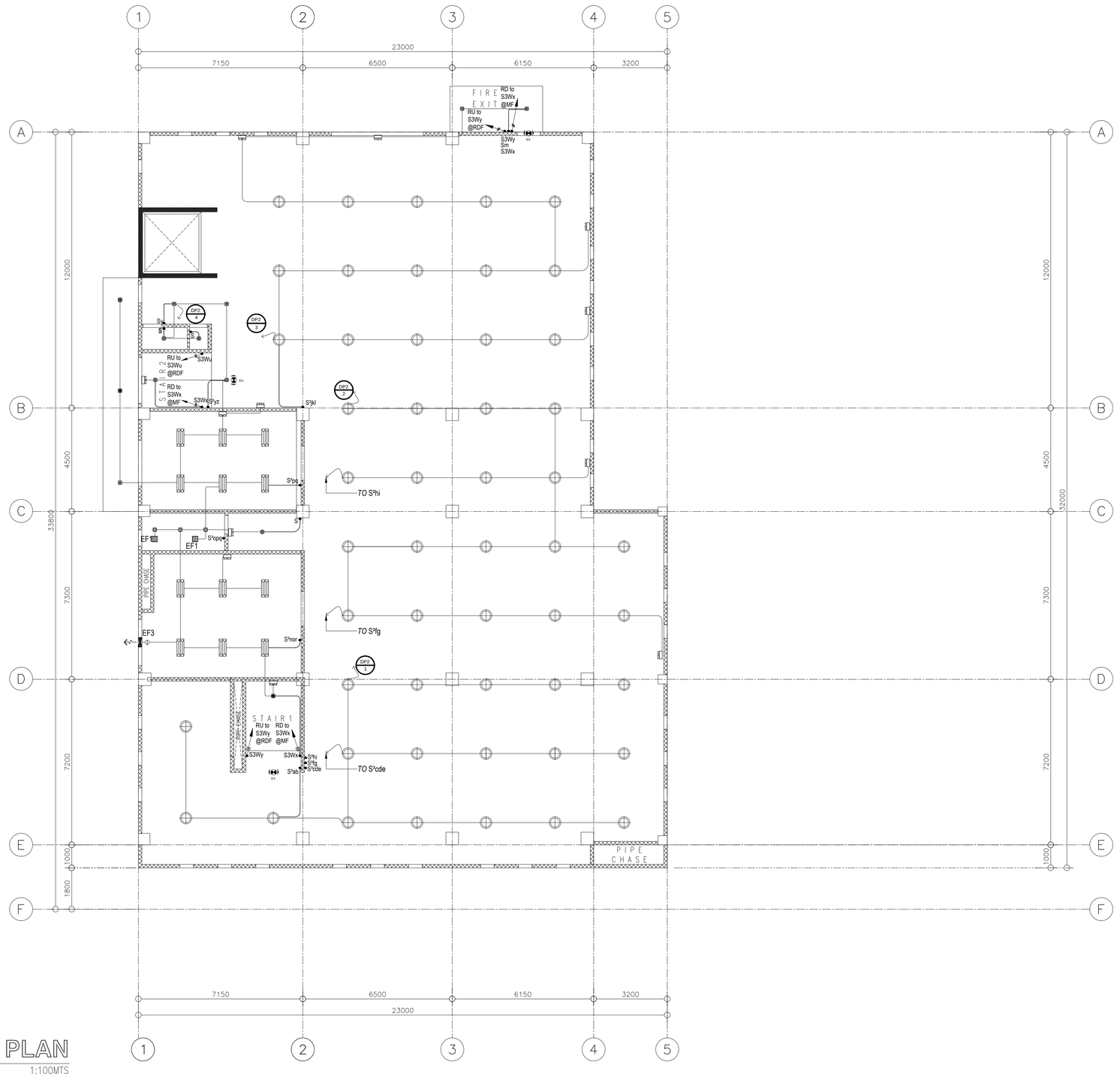
SHEET NO.: 2 / 12

SCHEDULE OF LIGHTING FIXTURES

ITEMS	DESCRIPTION
	150x150mm RECESSED DOWNLIGHT SQUARE 15 WATTS (LED WARM WHITE)
	2X16 WATTS TROFFER LIGHT LED – DAYLIGHT (VERIFY SPECS.)
	400 MM DIA. ROUND HIGH BAY (90 WATTS, LED – DAYLIGHT)
	500MM DIA. ROUND HIGH BAY (100 WATTS, LED – DAYLIGHT)
	WALL SCONE/WALL LAMP (VERIFY SPECS.)
	150x150mm CEILING MOUNTED DOWNLIGHT, SQUARE 15 WATTS (LED WARM WHITE)
	150 DIAMETER MM RECESSED DOWNLIGHT ROUND 8 WATTS (LED WARM WHITE)

LEGENDS/ABBREVIATION

ITEMS	DESCRIPTION
EX	EXIT SIGN
EX	DOUBLE SIDED EXIT SIGN WITH DIRECTIONAL ARROW
	EMERGENCY LIGHT
	CEILING MOUNTED EXHAUST FAN
RU/RD to xF	RISER UP/RISER DOWN "x" denotes specified floor
	SINGLE CONVENIENCE OUTLET
S	SINGLE POLE WALL SWITCH
S^2	TWO–SINGLE POLE WALL SWITCH ON ONE SWITCHPLATE
S^3	THREE–SINGLE POLE WALL SWITCH ON ONE SWITCHPLATE
S3W	THREE–WAY SWITCH
DP2 5	CIRCUIT HOMERUN, DENOTES PANEL NAME & CIRCUIT NUMBER



LIGHTING LAYOUT
SECOND FLOOR PLAN

3 | 4
LL

SCALE 1:100MTS

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SHEET CONTENTS:
SECOND FLOOR LIGHTING LAYOUT
Scale 1:100m

SET NO.: EL

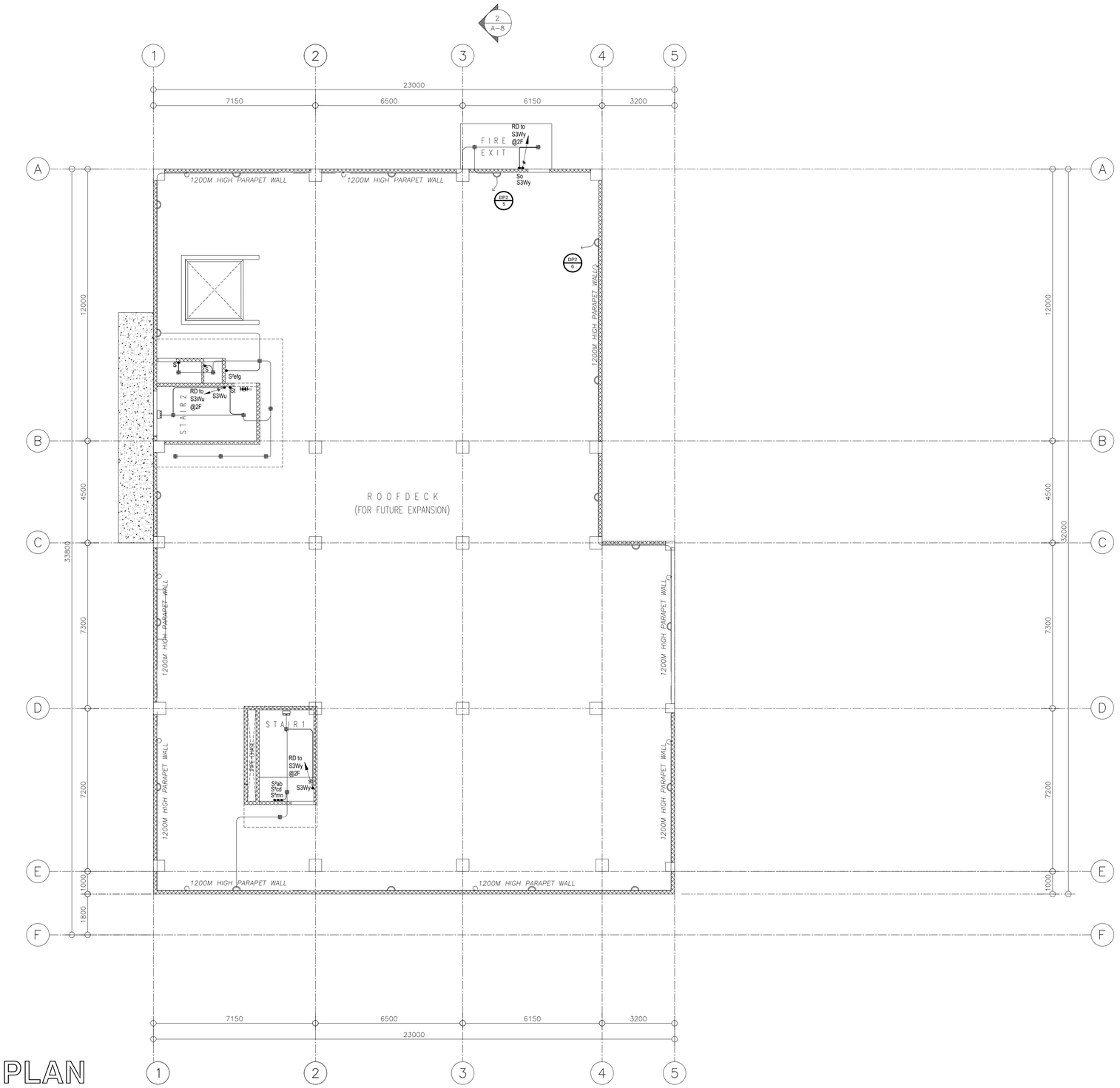
SHEET NO.: 3 / 12

SCHEDULE OF LIGHTING FIXTURES

ITEMS	DESCRIPTION
	150x150mm RECESSED DOWNLIGHT SQUARE 15 WATTS (LED WARM WHITE)
	2X16 WATTS TROFFER LIGHT LED – DAYLIGHT (VERIFY SPECS.)
	400 MM DIA. ROUND HIGH BAY (90 WATTS, LED – DAYLIGHT)
	500MM DIA. ROUND HIGH BAY (100 WATTS, LED – DAYLIGHT)
	WALL SCONE/WALL LAMP (VERIFY SPECS.)
	150x150mm CEILING MOUNTED DOWNLIGHT, SQUARE 15 WATTS (LED WARM WHITE)
	150 DIAMETER MM RECESSED DOWNLIGHT ROUND 8 WATTS (LED WARM WHITE)

LEGENDS/ABBREVIATION

ITEMS	DESCRIPTION
EX	EXIT SIGN
EX	DOUBLE SIDED EXIT SIGN WITH DIRECTIONAL ARROW
	EMERGENCY LIGHT
	CEILING MOUNTED EXHAUST FAN
RU/RD to xF	RISER UP/RISER DOWN "x" denotes specified floor
	SINGLE CONVENIENCE OUTLET
S	SINGLE POLE WALL SWITCH
S²	TWO–SINGLE POLE WALL SWITCH ON ONE SWITCHPLATE
S³	THREE–SINGLE POLE WALL SWITCH ON ONE SWITCHPLATE
S3W	THREE–WAY SWITCH
DP2 5	CIRCUIT HOMERUN, DENOTES PANEL NAME & CIRCUIT NUMBER



LIGHTING LAYOUT
ROOF DECK PLAN

SCALE 1:100MTS

4 | 4
LL

NOTE:

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ELMER T. RAMONEDA
PROJECT MANAGER

URBAN ENGINEERS
CONSULTING CIVIL ENGINEERS
in joint venture with
J.F. CANCIO & Associates ENGINEERS CONSULTANTS
PTC Engineers & Associates

PROF. ELECTRICAL ENGINEER:		SUBMITTED:
GEORGE M. SIMBULAN		ELMER T. RAMONEDA
REG.NO.: 0002980	DATE: FEB-09-2018	PROJECT MANAGER
PTR NO.: 1076338	PLACE: PAMPANGA	

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:
JOSEPHINE P. ISTURIS	(SEE COVER SHEET) EDWIN C. MATANGUIHAN	(SEE COVER SHEET) EMIL K. SADAIN, CESO I
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	OIC, ASST. DIRECTOR , BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II
CARIG SUR, TUGUEGARAO CITY

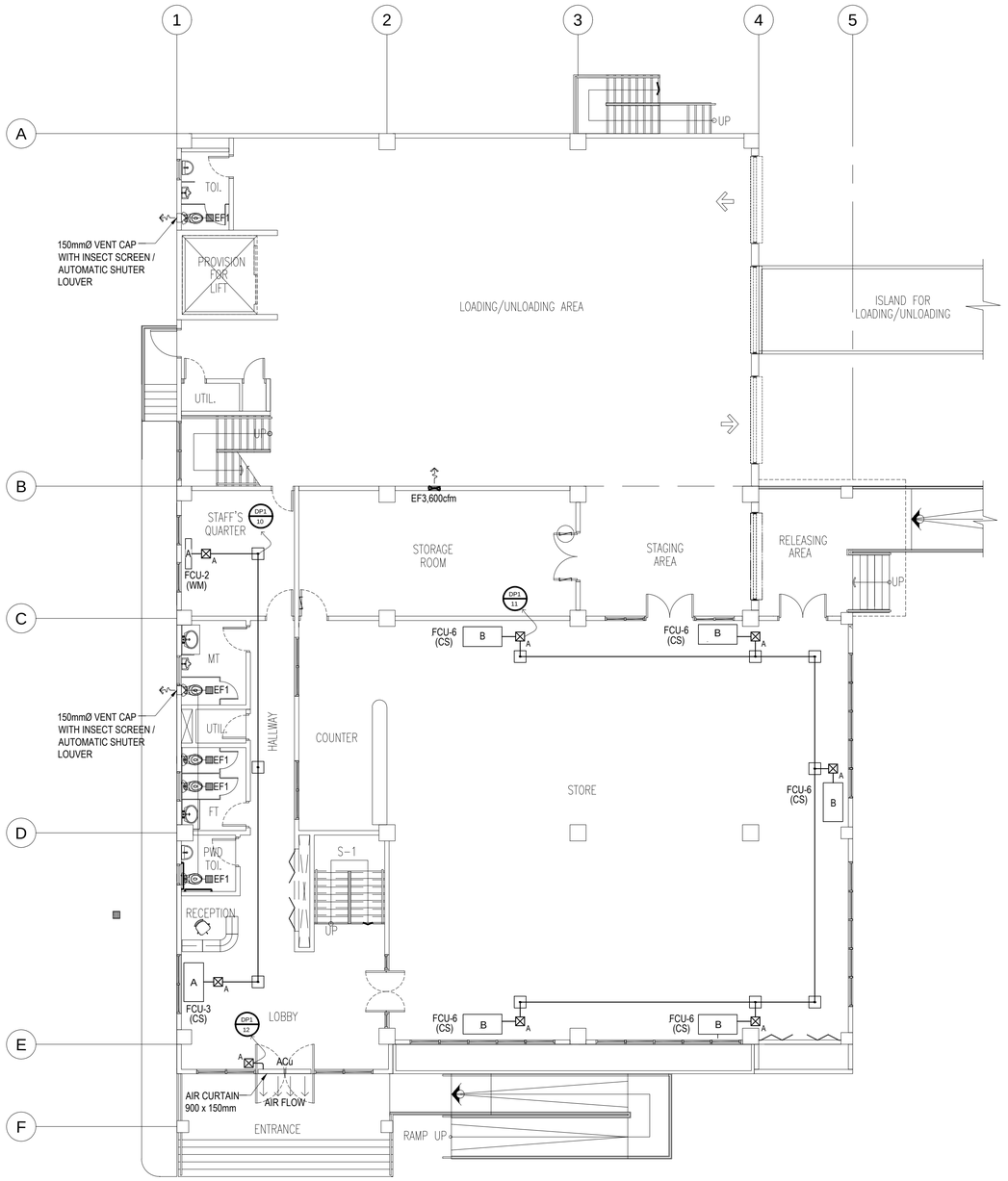
SHEET CONTENTS:
ROOF DECK LIGHTING LAYOUT
Scale 1:100m

SET NO.: EL

SHEET NO.: 4 / 12

LEGENDS

ITEMS	DESCRIPTION
⊠A	20 AT, 50 AF, 230V, 60 Hz, ENCLOSED CIRCUIT BREAKER
⊠B	70 AT, 100 AF, 230V, 60 Hz, ENCLOSED CIRCUIT BREAKER
⊠C	100 AT, 100 AF, 230V, 60 Hz, ENCLOSED CIRCUIT BREAKER
⊠D	125 AT, 225 AF, 230V, 60 Hz, ENCLOSED CIRCUIT BREAKER
▪	PULLBOX (SIZE AS REQUIRED)
DP2 / 5	CIRCUIT HOMERUN, DENOTES PANEL NAME & CIRCUIT NUMBER



1 | 3
ACUL

GROUND FLOOR AIR CONDITIONING AND VENTILATION POWER LAYOUT

SCALE: 1 : 100 MTS.

NOTE:

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REG.NO.: 0002980	DATE: FEB-09-2018	
PTR NO.: 1076338	PLACE: PAMPANGA	

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BONIFACIO DRIVE, PORT AREA, MANILA

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CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	OIC, ASST. DIRECTOR , BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:	SHEET CONTENTS:	SET NO.	SHEET NO.
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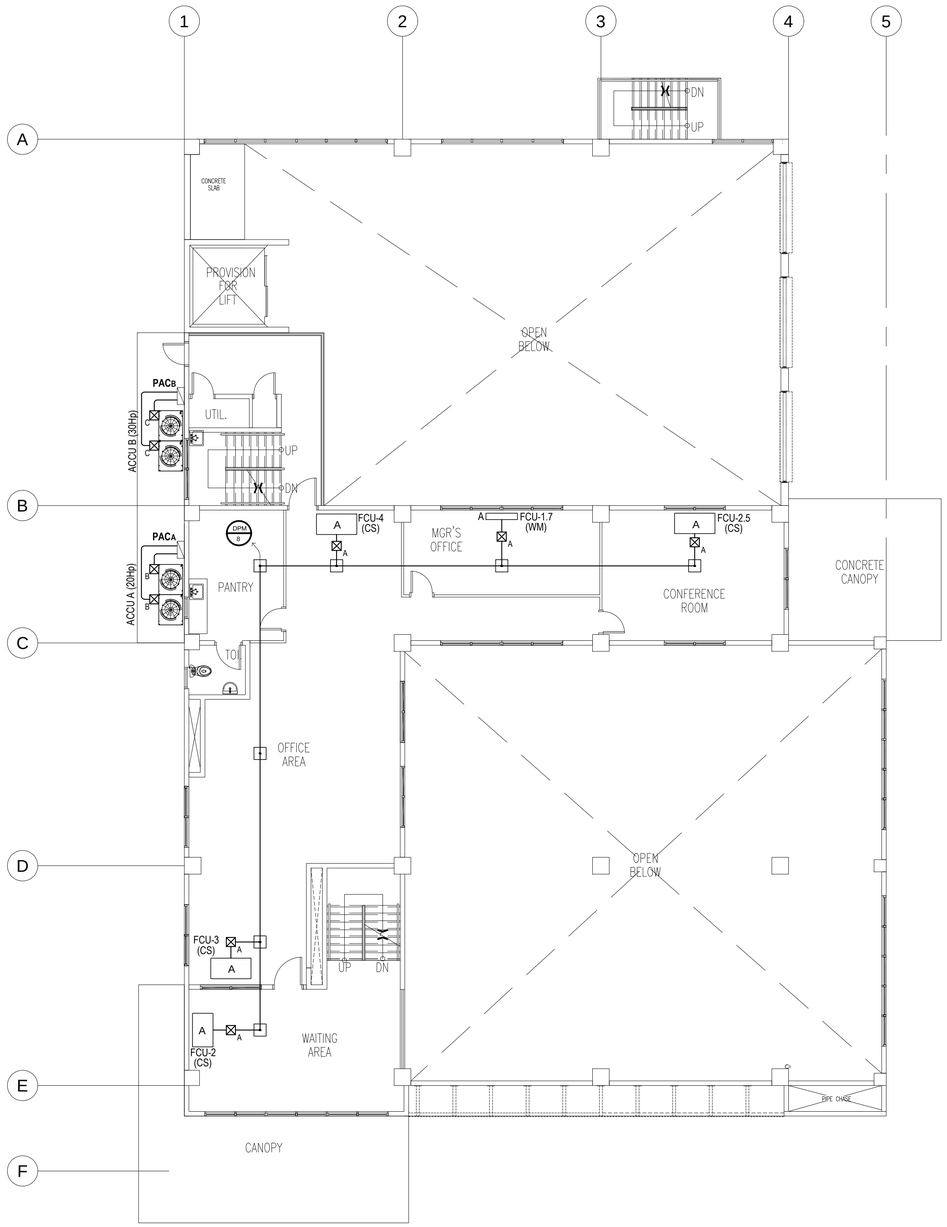
LEGENDS

ITEMS	DESCRIPTION
⊠A	20 AT, 50 AF, 230V, 60 Hz, ENCLOSED CIRCUIT BREAKER
⊠B	70 AT, 100 AF, 230V, 60 Hz, ENCLOSED CIRCUIT BREAKER
⊠C	100 AT, 100 AF, 230V, 60 Hz, ENCLOSED CIRCUIT BREAKER
⊠D	125 AT, 225 AF, 230V, 60 Hz, ENCLOSED CIRCUIT BREAKER
⊡	PULLBOX (SIZE AS REQUIRED)
DP2 / 5	CIRCUIT HOMERUN, DENOTES PANEL NAME & CIRCUIT NUMBER



2 | 3
ACUL

MEZZANINE FLOOR AIR CONDITIONING AND VENTILATION POWER LAYOUT

SCALE: 1 : 100 MTS.

NOTE:

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PROJECT & LOCATION:	SHEET CONTENTS:	SET NO.	SHEET NO.
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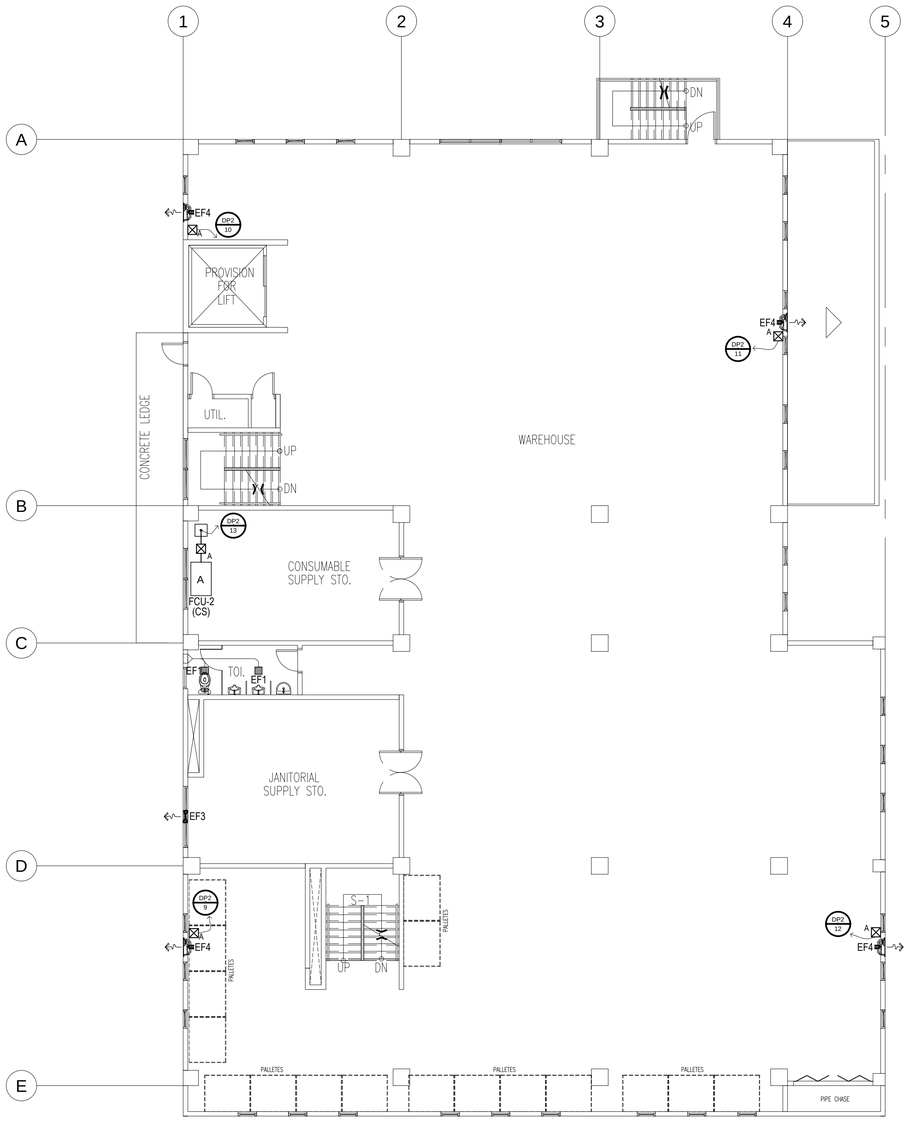
LEGENDS

ITEMS	DESCRIPTION
⊠A	20 AT, 50 AF, 230V, 60 Hz, ENCLOSED CIRCUIT BREAKER
⊠B	70 AT, 100 AF, 230V, 60 Hz, ENCLOSED CIRCUIT BREAKER
⊠C	100 AT, 100 AF, 230V, 60 Hz, ENCLOSED CIRCUIT BREAKER
⊠D	125 AT, 225 AF, 230V, 60 Hz, ENCLOSED CIRCUIT BREAKER
⊡	PULLBOX (SIZE AS REQUIRED)
DP2 / 5	CIRCUIT HOMERUN, DENOTES PANEL NAME & CIRCUIT NUMBER



3 | 3
ACUL

SECOND FLOOR AIR CONDITIONING AND VENTILATION POWER LAYOUT

SCALE: 1 : 100 MTS.

NOTE:

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PTR NO.: 1076338	PLACE: PAMPANGA	

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CARIG SUR, TUGUEGARAO CITY

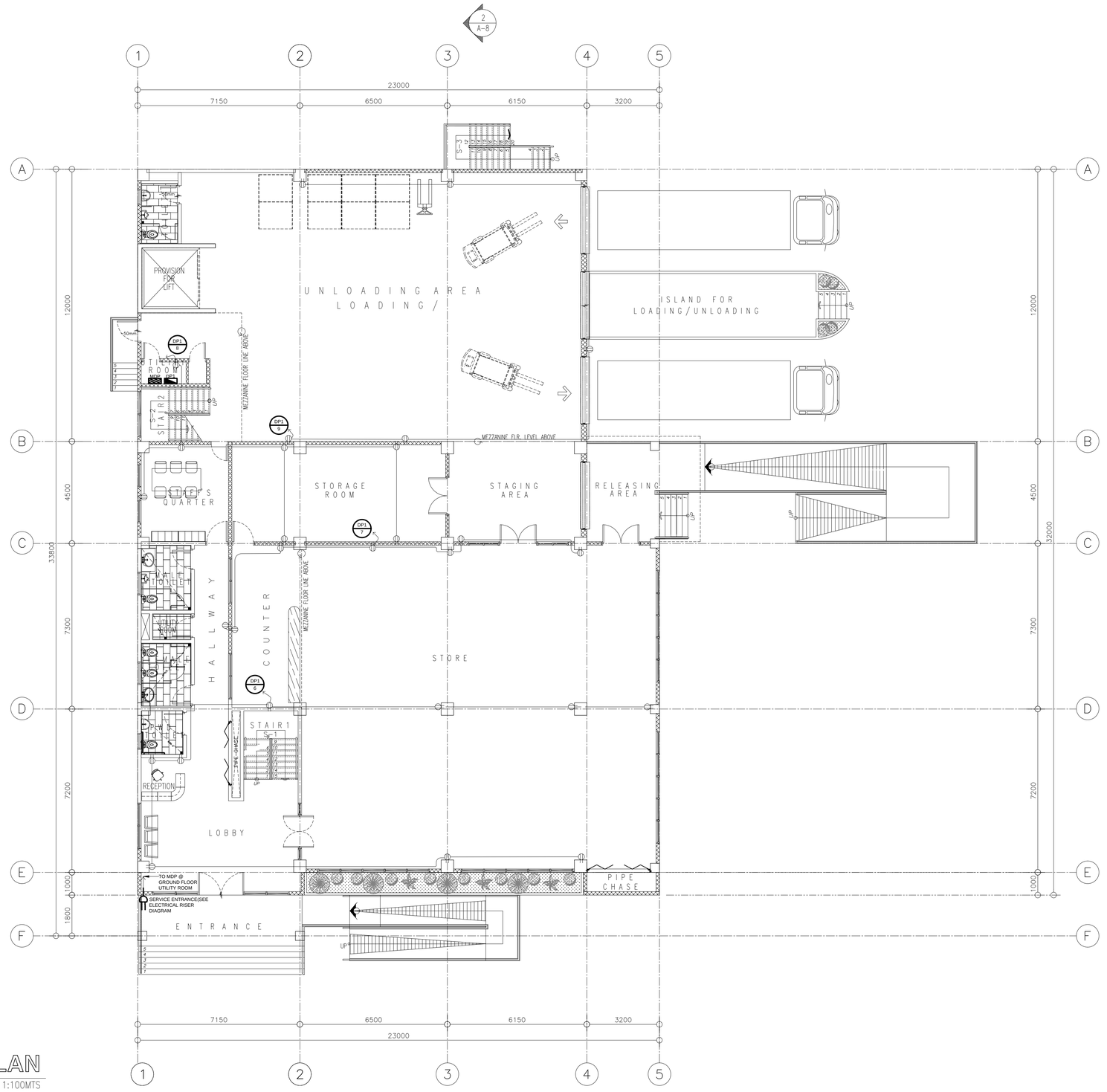
SHEET CONTENTS:
SECOND FLOOR
ACU & VENTILATION POWER LAYOUT
Scale 1:100m

SET NO.: EL

SHEET NO.: 7 / 12

LEGENDS

ITEMS	DESCRIPTION
	GENERAL TYPE CONVENIENCE OUTLET, DUPLEX
	GENERAL TYPE CONVENIENCE OUTLET, DUPLEX FLOOR MOUNTED
MDP	MAIN DISTRIBUTION PANELBOARD
	ELECTRICAL PANELBOARD, DENOTES NAME
DP2 / 5	CIRCUIT HOMERUN, DENOTES PANEL NAME & CIRCUIT NUMBER
	SERVICE ENTRANCE



POWER LAYOUT
GROUND FLOOR PLAN

1 | 4
PL

SCALE 1:100MTS

NOTE:

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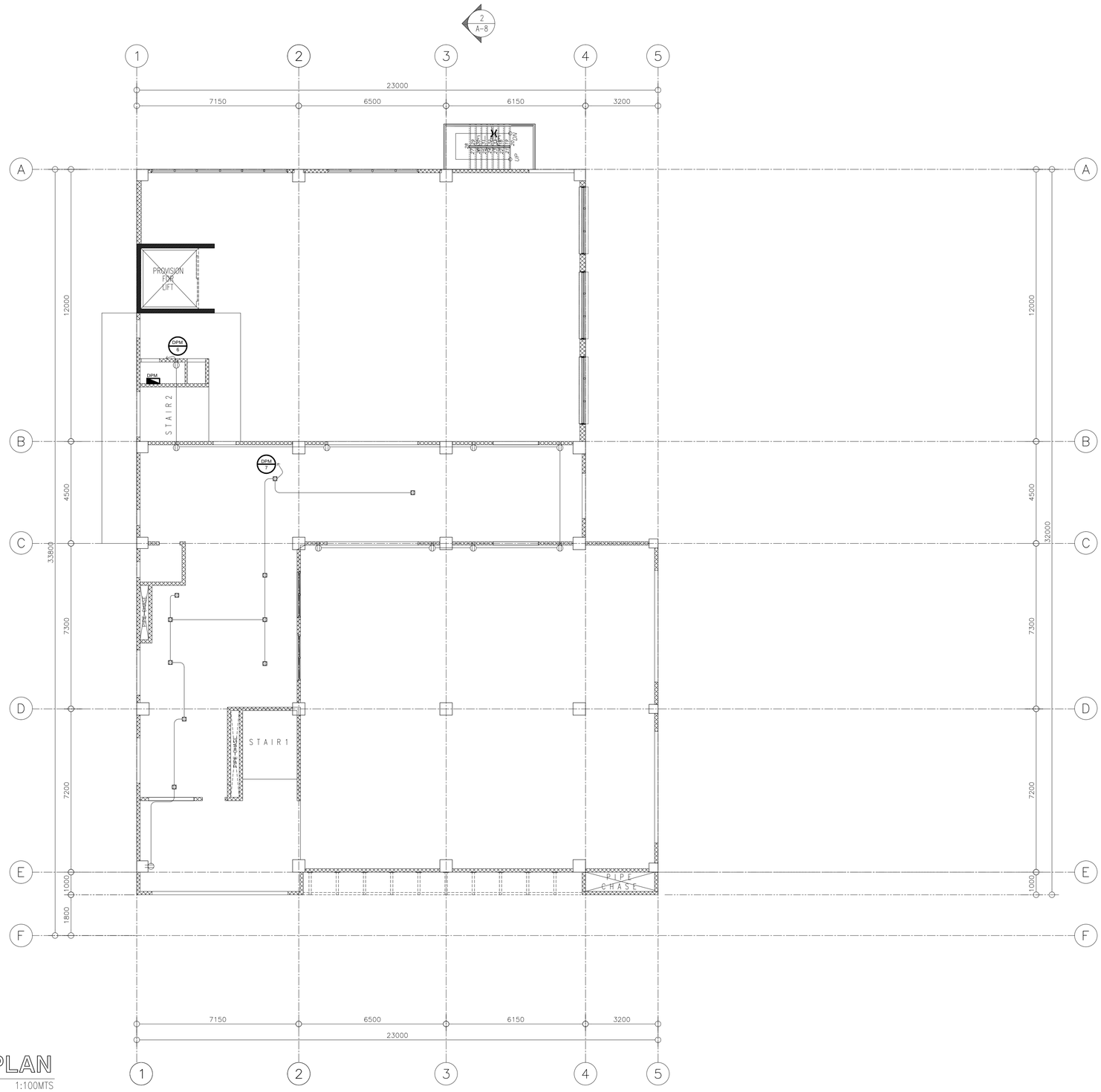
LEGENDS

ITEMS	DESCRIPTION
	GENERAL TYPE CONVENIENCE OUTLET, DUPLEX
	GENERAL TYPE CONVENIENCE OUTLET, DUPLEX FLOOR MOUNTED
MDP	MAIN DISTRIBUTION PANELBOARD
	ELECTRICAL PANELBOARD, DENOTES NAME
DPC 5 / L1	CIRCUIT HOMERUN, DENOTES PANEL NAME & CIRCUIT NUMBER
	SERVICE ENTRANCE



POWER LAYOUT
MEZZANINE FLOOR PLAN

2 / 4 / PL

SCALE 1:100MTS

NOTE:

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CARIG SUR, TUGUEGARAO CITY

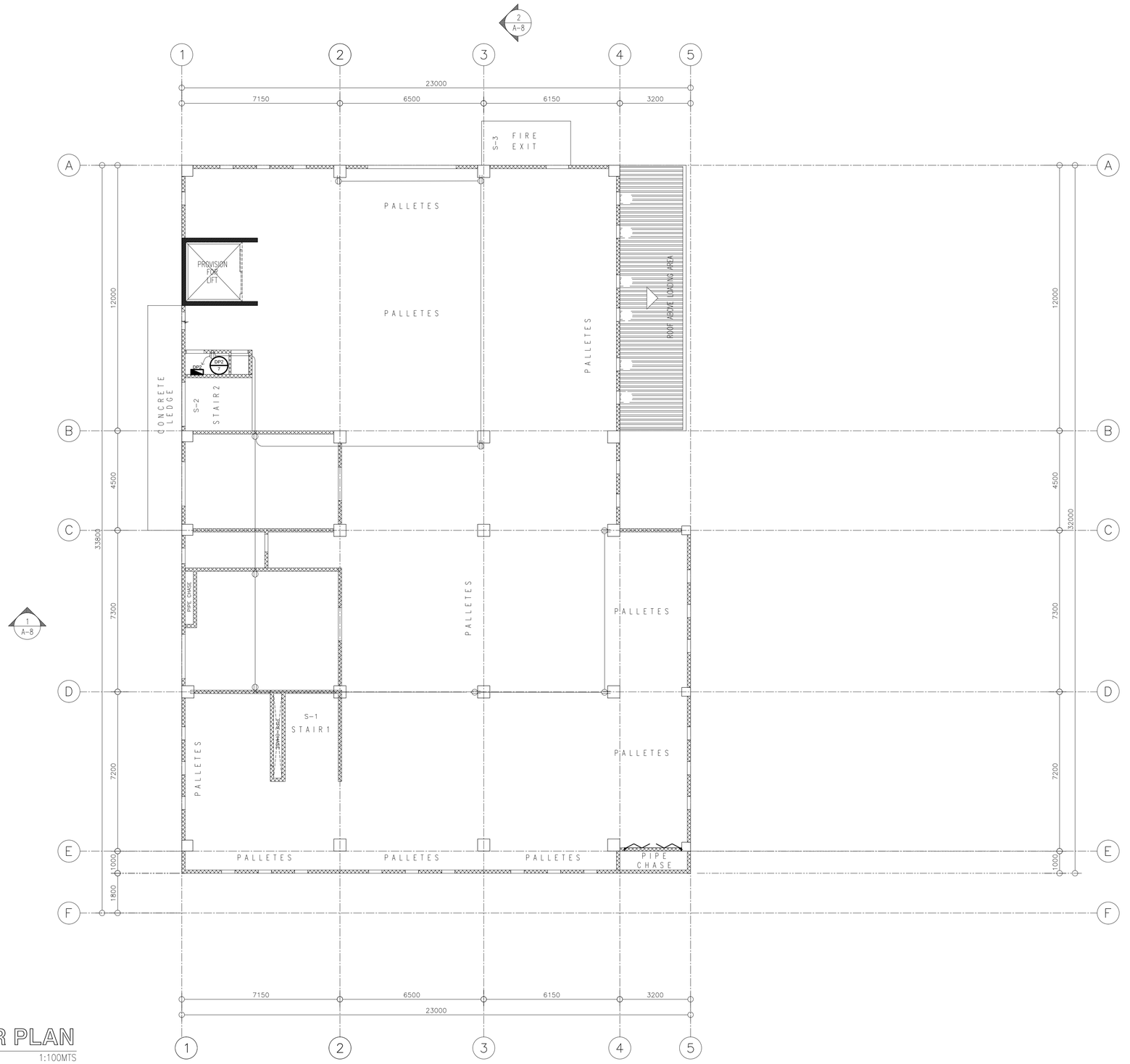
SHEET CONTENTS:
MEZZANINE FLOOR
POWER LAYOUT
Scale 1:100m

SET NO.: EL

SHEET NO.: 9 / 12

LEGENDS

ITEMS	DESCRIPTION
	GENERAL TYPE CONVENIENCE OUTLET, DUPLEX
	GENERAL TYPE CONVENIENCE OUTLET, DUPLEX FLOOR MOUNTED
MDP	MAIN DISTRIBUTION PANELBOARD
	ELECTRICAL PANELBOARD, DENOTES NAME
DP2 5	CIRCUIT HOMERUN, DENOTES PANEL NAME & CIRCUIT NUMBER
	SERVICE ENTRANCE



POWER LAYOUT
SECOND FLOOR PLAN

3 4 / PL

SCALE 1:100MTS

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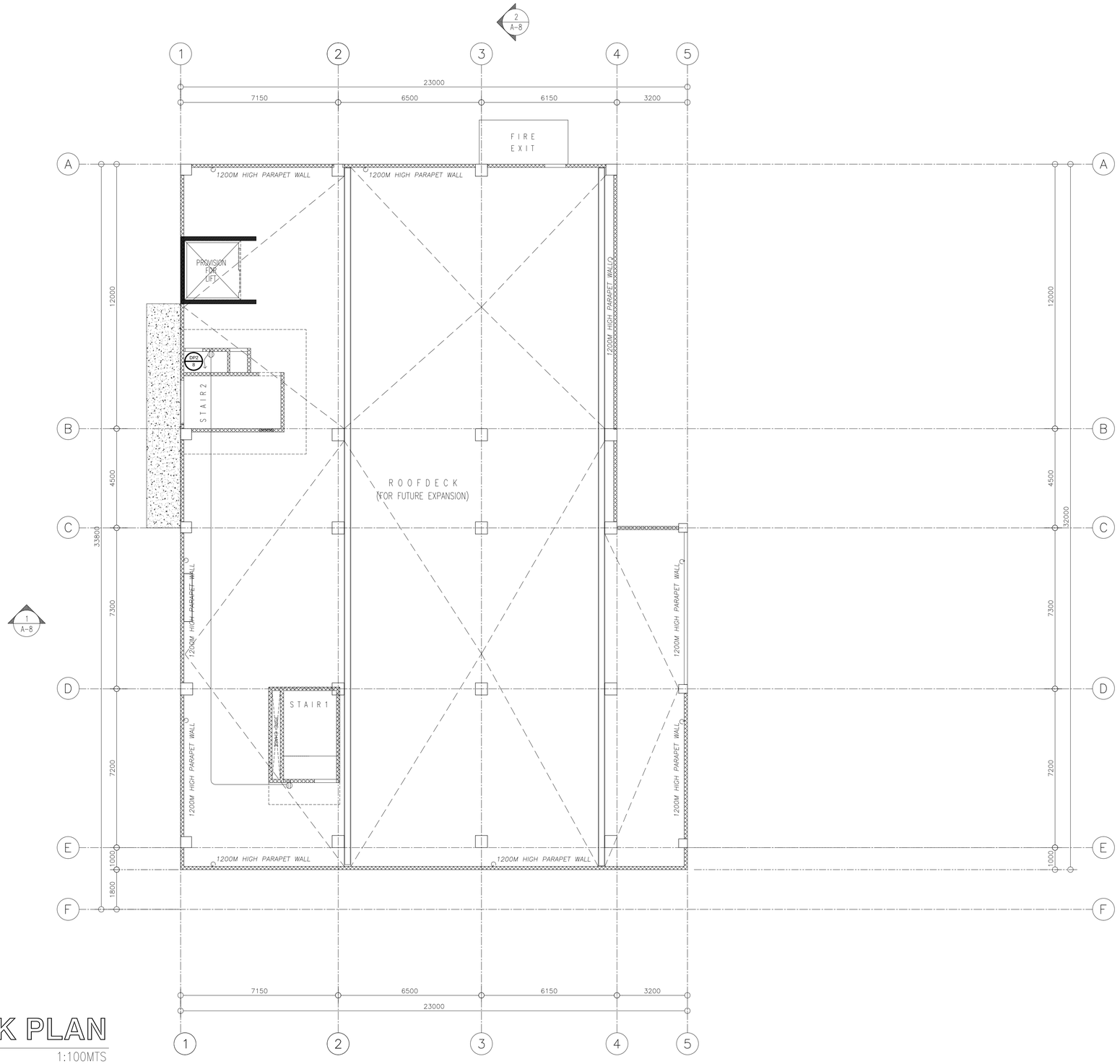
SHEET CONTENTS:
SECOND FLOOR
POWER LAYOUT
Scale 1:100m

SET NO.: EL

SHEET NO.: 10 / 12

LEGENDS

ITEMS	DESCRIPTION
	GENERAL TYPE CONVENIENCE OUTLET, DUPLEX
	GENERAL TYPE CONVENIENCE OUTLET, DUPLEX FLOOR MOUNTED
MDP	MAIN DISTRIBUTION PANELBOARD
	ELECTRICAL PANELBOARD, DENOTES NAME
DP2 5	CIRCUIT HOMERUN, DENOTES PANEL NAME & CIRCUIT NUMBER
	SERVICE ENTRANCE



POWER LAYOUT

ROOF DECK PLAN

4 | 4 | PL

SCALE 1:100MTS

NOTE:

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GENERAL NOTES:

1. ALL ELECTRICAL WORKS SHALL BE DONE IN ACCORDANCE AND IN STRICT COMPLIANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE (PEC), EXISTING APPLICABLE LAWS, ORDINANCES, REQUIREMENTS, RULES AND REGULATIONS OF THE LOCAL GOVERNMENT AND LOCAL POWER AND TELEPHONE COMPANIES.
2. THE TYPE OF SERVICE POWER SHALL BE THREE-PHASE, 3WIRE, 230VOLTS, 60Hz., AC.
3. UNLESS OTHERWISE INDICATED ON THE PLANS, ALL WIRING FOR MAIN SERVICE FEEDER (FROM SERVICE POLE TO MAIN OVERCURRENT PROTECTIVE DEVICE AND FROM MAIN SERVICE TO DISTRIBUTION/POWER PANELS) AND EXPOSED TO PHYSICAL DAMAGE SHALL BE IN STANDARD GALVANIZED RIGID STEEL CONDUIT (RSC) AND CONDUIT RUN EMBEDDED INSIDE THE CONCRETE AND HOLLOW BLOCKS STRUCTURES, SLABS, COLUMNS AND/OR RUN CONCELALED BETWEEN DOUBLE WALL WOODEN PARTITIONS OR INSIDE THE CEILING SPACES SHALL BE IN POLYVINYL CHLORIDE (PVC) CONDUIT SCHEDULE 40. WHERE THE USE OF CONCEALED WIRING IS IMPRACTICABLE, SURFACE METAL MOLDING WIRING MAY BE USED.
4. ALL LIGHTING CIRCUIT HOMERUNS AND CONVENIENCE OUTLETS SHALL BE WIRED WITH NOT LESS THAN 3.5mm², THHN IN SIZE. ALL 20 AMPERE CIRCUIT HOMERUNS WITH MORE THAN 30 METERS IN LENGTH SHALL BE WIRED WITH 5.5mm² , THHN.LIKEWISE, ALL ELECTRICAL WIRES SHALL BE COLOR-CODED.
5. THE MINIMUM SIZE OF WIRE AND CONDUIT TO BE USED SHALL BE 2.0mm² THHN AND 15mm NOMINAL DIAMETER, RESPECTIVELY.
6. WHEREVER REQUIRED AND NECESSARY, JUNCTION BOXES OR PULL BOXES SHALL BE INSTALLED AT INCONSPICUOUS LOCATIONS ALTHOUGH SUCH BOXES ARE NOT SHOWN ON THE PLANS NOR MENTIONED IN THE SPECIFICATIONS.
7. ALL NON-CURRENT CARRYING METAL PARTS/ENCLOSURES OF ELECTRICAL EQUIPMENT AND OVERCURRENT PROTECTIVE DEVICES SHALL BE PROPERLY GROUNDED IN ACCORDANCE WITH ARTICLE 2.50 OF THE PHILIPPINE ELECTRICAL CODE PART 1, 2017 EDITION
8. THE ELECTRICAL SYSTEM SHALL HAVE A GROUND RESISTANCE NOT EXCEEDING 5 OHMS..
9. STANDARD TYPE OF ACCESSORIES, SPLICING DEVICES, TERMINATIONS AND OTHER APPURTENANCES FOR THE ENTIRE ELECTRICAL INSTALLATION SHALL BE USED.
10. ALL MATERIALS TO BE USED AND INSTALLED SHALL BE BRAND NEW AND OF THE APPROVED TYPE FOR THE LOCATION AND PURPOSE.
11. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF SERVICE ENTRANCE FOR CONNECTION TO POWER COMPANY SERVICE POINT.
12. UNDERGROUND CONDUIT SHALL BE BURIED A MINIMUM OF 600mm BELOW FINISHED GRADE LINE AND SHALL BE ENCASED IN 20.69 MPa CONCRETE AT A MINIMUM 76mm THICKNESS ALL AROUND, STEEL REINFORCED WHEN CROSSING THE STREET/ROADWAY.
13. ALL ELECTRICAL WORKS SHALL BE DONE UNDER THE DIRECT AND IMMEDIATE SUPERVISION OF A DULY REGISTERED PROFESSIONAL ELECTRICAL ENGINEER.

WIRE, CONDUIT, AND ROD SCHEDULE

SERVICE & FEEFER WIRE AND CONDUIT:

Y1 3 - 30mm² THHN + 1 - 8.0mm² THHN (G) in 40mm Ø RSC

Y2 3 - 38mm² THHN + 1 - 14mm² THHN (G) in 40mm Ø RSC.

Y3 3 - 125mm² THHN + 1 - 30mm² THHN (G) in 65mm Ø RSC.

Y3 3 - 200mm² THHN + 1 - 30mm² THHN (G) in 80mm Ø RSC.

GROUNDING CONDUCTOR AND CONDUIT:

GW1 1 - 8.0mm² THHN in 40mm Ø PVC.

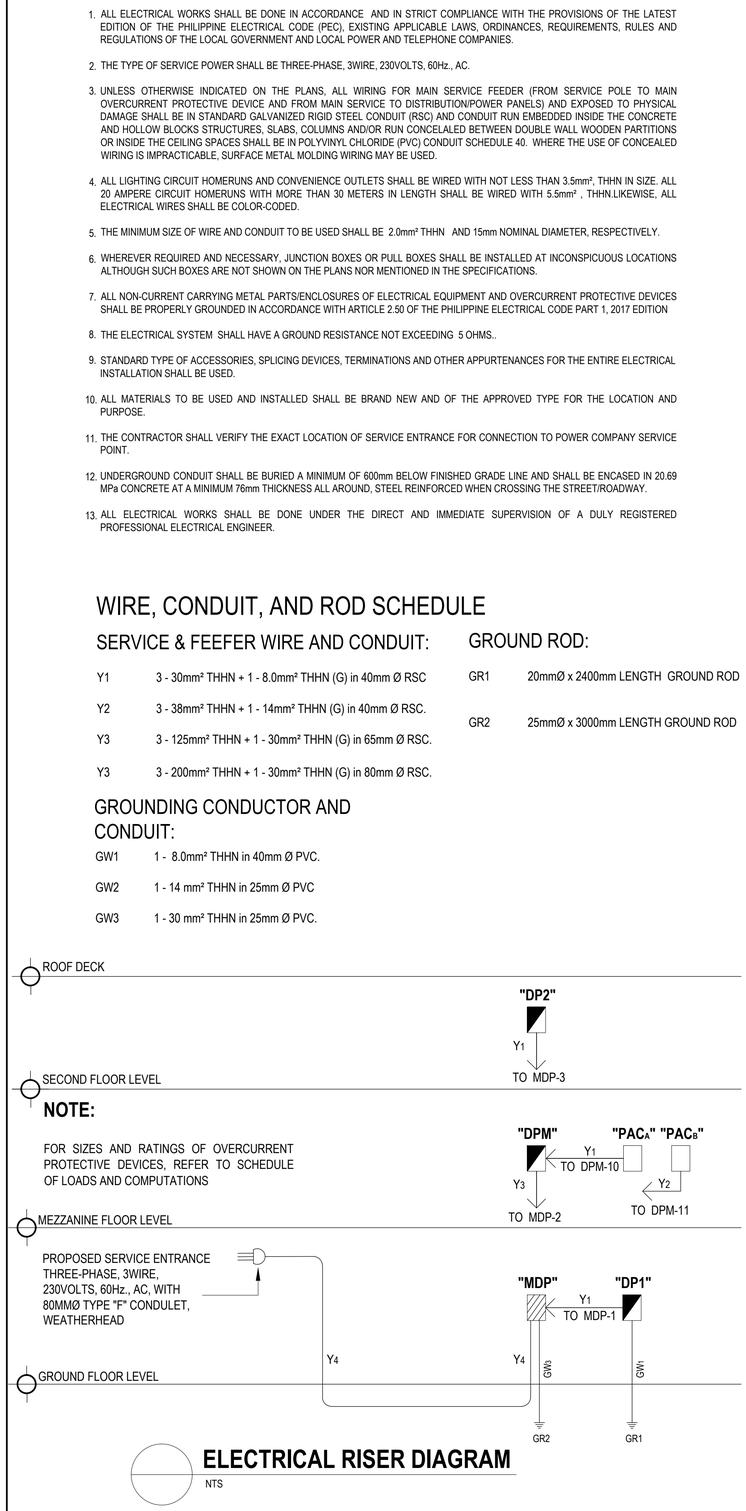
GW2 1 - 14 mm² THHN in 25mm Ø PVC

GW3 1 - 30 mm² THHN in 25mm Ø PVC.

GROUND ROD:

GR1 20mmØ x 2400mm LENGTH GROUND ROD

GR2 25mmØ x 3000mm LENGTH GROUND ROD



NOTE:

FOR SIZES AND RATINGS OF OVERCURRENT PROTECTIVE DEVICES, REFER TO SCHEDULE OF LOADS AND COMPUTATIONS

ELECTRICAL RISER DIAGRAM

NTS

SCHEDULE OF LOADS AND COMPUTATIONS

MAIN DISTRIBUTION PANELBOARD "MDP"

CKT. NO.	LOAD DESCRIPTION	VA PER CKT	VA PER PHASE AB	VA PER PHASE BC	VA PER PHASE CA	VOLTS	BRANCH BREAKER RATING AF	BRANCH BREAKER RATING P	BRANCH BREAKER RATING AT	SIZES OF HOMERUN (WIRES AND CONDUIT)
1	DP1	19740	6960	6460	6320	230	225	3	100	3 -30 mm² THHN + 1- 8.0mm² THHN(G) in 40mmØ RSC.
2	DPM	69427	23014	22954	23459	230	225	3	250	3 -125mm² THHN + 1- 30mm² THHN(G) in 65mmØ RSC.
3	DP2	23235	7850	7675	7710	230	225	3	100	3 -30 mm² THHN + 1- 8.0mm² THHN(G) in 40mmØ RSC.
4	SPARE	15000	5000	5000	5000	230	225	3	100	———
TOTAL CONNECTED LOADS		127402	42824	42089	42489	MAIN ACB: 400AF, 3P, 240 V, 350AT, 25kAIC				

I_L @ 100% D.F. = 1.732 $\left(\frac{42824}{230}\right)$ (0.85) + 0.25 (44.56) = 285.26 AMPS.

USE: 3 - 200mm² THHN + 1 - 30mm² THHN (G) in 80mmØ RSC. (285.26A / 355A)

TRANSFORMER CAPACITY:

KVA = $\frac{1.732(322.49)(230)(0.85)}{1000(1.1)}$

KVA = 99.27 kVA

USE: ONE(1) 150kVA, 34.5/230V, 3Ø, 60Hz., A.C. POLE MOUNTED DISTRIBUTION TRANSFORMER

DISTRIBUTION PANEL BOARD: "DP1" (GROUND FLOOR)

CKT. NO.	LOAD DESCRIPTION	VA PER CKT	VA PER PHASE AB	VA PER PHASE BC	VA PER PHASE CA	VOLTS	BRANCH BREAKER RATING AF	BRANCH BREAKER RATING P	BRANCH BREAKER RATING AT	SIZES OF HOMERUN (WIRES AND CONDUIT)
1	LIGHT OUTLETS	900	900			230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
2	LIGHT OUTLETS	700			700	230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
3	LIGHT OUTLETS	800		800		230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
4	LIGHT OUTLETS	1500	1500			230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
5	LIGHT OUTLETS	700			700	230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
6	CONVENIENCE OUTLETS	1260		1260		230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
7	CONVENIENCE OUTLETS	1260	1260			230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
8	CONVENIENCE OUTLETS	1260			1260	230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
9	CONVENIENCE OUTLETS	900		900		230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
10	2FAN COIL UNITS *(1 - SP2 & 1 - SP3)*	300	300			230	50	2	20	2 - 5.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
11	6FAN COIL UNITS *(5 - SP6)*	660			660	230	50	2	20	2 - 5.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
12	2-AIR CURTAIN	500		500		230	50	2	20	2 - 5.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
13	SPARE	1500	1500			230	50	2	20	———
14	SPARE	1500			1500	230	50	2	20	———
15	SPARE	1500		1500		230	50	2	20	———
16	SPARE	1500	1500			230	50	2	20	———
17	SPARE	1500			1500	230	50	2	20	———
18	SPARE	1500		1500		230	50	2	20	———
TOTAL CONNECTED LOADS		19740	6960	6460	6320	MAIN BREAKER: 100AT, 100 AF, 3P, 240V, 10kAIC IN NEMA 1 ENCLOSURE				

I_L @ 80% D.F. = 1.732 $\left(\frac{6960}{230}\right)$ (0.85) = 44.55 AMPS.

USE : 3 - 30 mm² THHN + 1 - 8.0 mm² THHN (G) in 40 mm Ø RSC. (44.55A / 115A)

PANEL "PACA" *(ACCU-A, 20HP) NEMA 4X*

CKT. NO.	LOAD DESCRIPTION	VA PER CKT	VA PER PHASE AB	VA PER PHASE BC	VA PER PHASE CA	VOLTS	BRANCH BREAKER RATING AF	BRANCH BREAKER RATING P	BRANCH BREAKER RATING AT	SIZES OF HOMERUN (WIRES AND CONDUIT)
1	10 HP, 3Ø, ACCU (7.50kW)	9375	3125	3125	3125	230	100	3	70	3 -8.0 mm² THHN + 1- 5.5mm² THHN(G) in 25mmØ C.
2	10 HP, 3Ø, ACCU (7.50kW)	9375	3125	3125	3125	230	100	3	70	3 -8.0 mm² THHN + 1- 5.5mm² THHN(G) in 25mmØ C.
TOTAL CONNECTED LOADS - 20 HP(15kW, 3Ø,230V)		18750	6250	6250	6250	MAIN BREAKER: 125 AT, 225AF, 3P, 240 V, 125AT,18kAIC IN NEMA 4X ENCLOSURE				

I_L @ 100% D.F. = 1.732 $\left(\frac{6250}{230}\right)$ (1.0) + 0.25 (23.53) = 52.95 AMPS.

USE: 3 - 30mm² THHN + 1 - 8.0mm² THHN (G) in 40mmØ RSC. (52.95A / 115A)

PANEL "PACB" *(ACCU-B, 30HP) NEMA 4X*

CKT. NO.	LOAD DESCRIPTION	VA PER CKT	VA PER PHASE AB	VA PER PHASE BC	VA PER PHASE CA	VOLTS	BRANCH BREAKER RATING AF	BRANCH BREAKER RATING P	BRANCH BREAKER RATING AT	SIZES OF HOMERUN (WIRES AND CONDUIT)
1	14 HP, 3Ø, ACCU (11.20kW)	14001	4667	4667	4667	230	100	3	100	3 -8.0 mm² THHN + 1- 5.5mm² THHN(G) in 25mmØ C.
2	16 HP, 3Ø, ACCU (14.20kW)	17751	5917	5917	5917	230	225	3	125	3 -14mm² THHN + 1- 5.5mm² THHN(G) in 25mmØ C.
TOTAL CONNECTED LOADS - 30 HP(25.40kW, 3Ø,230V)		31752	10584	10584	10584	MAIN BREAKER: 150 AT, 225AF, 3P, 240 V, 18kAIC IN NEMA 4X ENCLOSURE				

I_L @ 100% D.F. = 1.732 $\left(\frac{10584}{230}\right)$ (1.0) + 0.25 (44.56) = 90.84AMPS.

USE: 3 - 38mm² THHN + 1 - 14mm² THHN (G) in 40mmØ RSC. (90.84A / 130A)

DISTRIBUTION PANEL BOARD: "DPM" (MEZZANINE FLOOR)

CKT. NO.	LOAD DESCRIPTION	VA PER CKT	VA PER PHASE AB	VA PER PHASE BC	VA PER PHASE CA	VOLTS	BRANCH BREAKER RATING AF	BRANCH BREAKER RATING P	BRANCH BREAKER RATING AT	SIZES OF HOMERUN (WIRES AND CONDUIT)
1	LIGHT OUTLETS	1500	1500			230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
2	LIGHT OUTLETS	2250			2250	230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
3	LIGHT OUTLETS	1000		1000		230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
4	LIGHT OUTLETS	700	700			230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
5	LIGHT OUTLETS	1875			1875	230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
6	CONVENIENCE OUTLETS	1620		1620		230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
7	CONVENIENCE OUTLETS	1980	1980			230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
8	4FAN COIL UNITS *(1 - SP1.7, 1 - SP2, 1-SP2.5, 1-SP3 & 1-SP4)*	500			500	230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
9	SPARE	1500		1500		230	50	2	20	———
10	20HP (15KW, 3Ø, 230V, 60Hz) ACCU-A	18750	6250	6250	6250	230	225	3	125	2 - 30 mm² THHN + 1 - 8.0 mm² THHN (G) in 40mm Ø C.
11	30HP (25.40KW, 3Ø, 230V, 60Hz) ACCU-B	31752	10584	10584	10584	230	225	3	150	2 - 38 mm² THHN + 1 -14 mm² THHN (G) in 40mm Ø C.
12	SPARE	6000	2000	2000	2000	230	100	3	50	———
TOTAL CONNECTED LOADS		69427	23014	22954	23459	MAIN BREAKER: 250 AT, 400AF, 3P, 240 V, 25kAIC IN NEMA 1 ENCLOSURE				

I_L @ 85% D.F. = 1.732 $\left(\frac{23459}{230}\right)$ (0.85 D.F.) + 0.25(44.56) = 161.30 AMPS.

USE : 3 - 125 mm² THHN + 1 - 30 mm² THHN (G) in 65 mm Ø RSC. (161.30A / 265A)

DISTRIBUTION PANEL BOARD: "DP2" (SECOND FLOOR)

CKT. NO.	LOAD DESCRIPTION	VA PER CKT	VA PER PHASE AB	VA PER PHASE BC	VA PER PHASE CA	VOLTS	BRANCH BREAKER RATING AF	BRANCH BREAKER RATING P	BRANCH BREAKER RATING AT	SIZES OF HOMERUN (WIRES AND CONDUIT)
1	LIGHT OUTLETS	2250	2250			230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
2	LIGHT OUTLETS	2250			2250	230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
3	LIGHT OUTLETS	1875		1875		230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
4	LIGHT OUTLETS	1000	1000			230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
5	LIGHT OUTLETS	1100			1100	230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
6	LIGHT OUTLETS	800		800		230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
7	CONVENIENCE OUTLETS	1800	1800			230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
8	CONVENIENCE OUTLETS	360			360	230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
9	EXHAUST FAN	1000		1000		230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
10	EXHAUST FAN	1000	1000			230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
11	EXHAUST FAN	1000			1000	230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
12	EXHAUST FAN	1000		1000		230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
13	1FAN COIL UNITS *(1 - SP2)*	300	300			230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
14	FACP	1500			1500	230	50	2	20	2 - 3.5 mm² THHN + 1 - 3.5 mm² THHN (G) in 15mm Ø C.
15	SPARE	1500		1500		230	50	2	20	———
16	SPARE	1500	1500			230	50	2	20	———
17	SPARE	1500			1500	230	50	2	20	———
18	SPARE	1500		1500		230	50	2	20	———
TOTAL CONNECTED LOADS		23235	7850	7675	7710	MAIN BREAKER: 100AT, 100 AF, 3P, 240V, 10kAIC IN NEMA 1 ENCLOSURE				

I_L @ 85% D.F. = 1.732 $\left(\frac{7850}{230}\right)$ (0.85 D.F.) = 50.25AMPS.

USE : 3 - 30 mm² THHN + 1 - 8.0 mm² THHN (G) in 40 mm Ø RSC. (50.25A / 115A)

NOTE:

PURSUANT TO ITEM 5 OF ANNEX 'A' OF THE REVISED IMPLEMENTING RULES AND REGULATION OF R.A. 9184, THE APPROVAL BY THE AUTHORIZED GOVERNMENT OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGNS UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGNS NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.

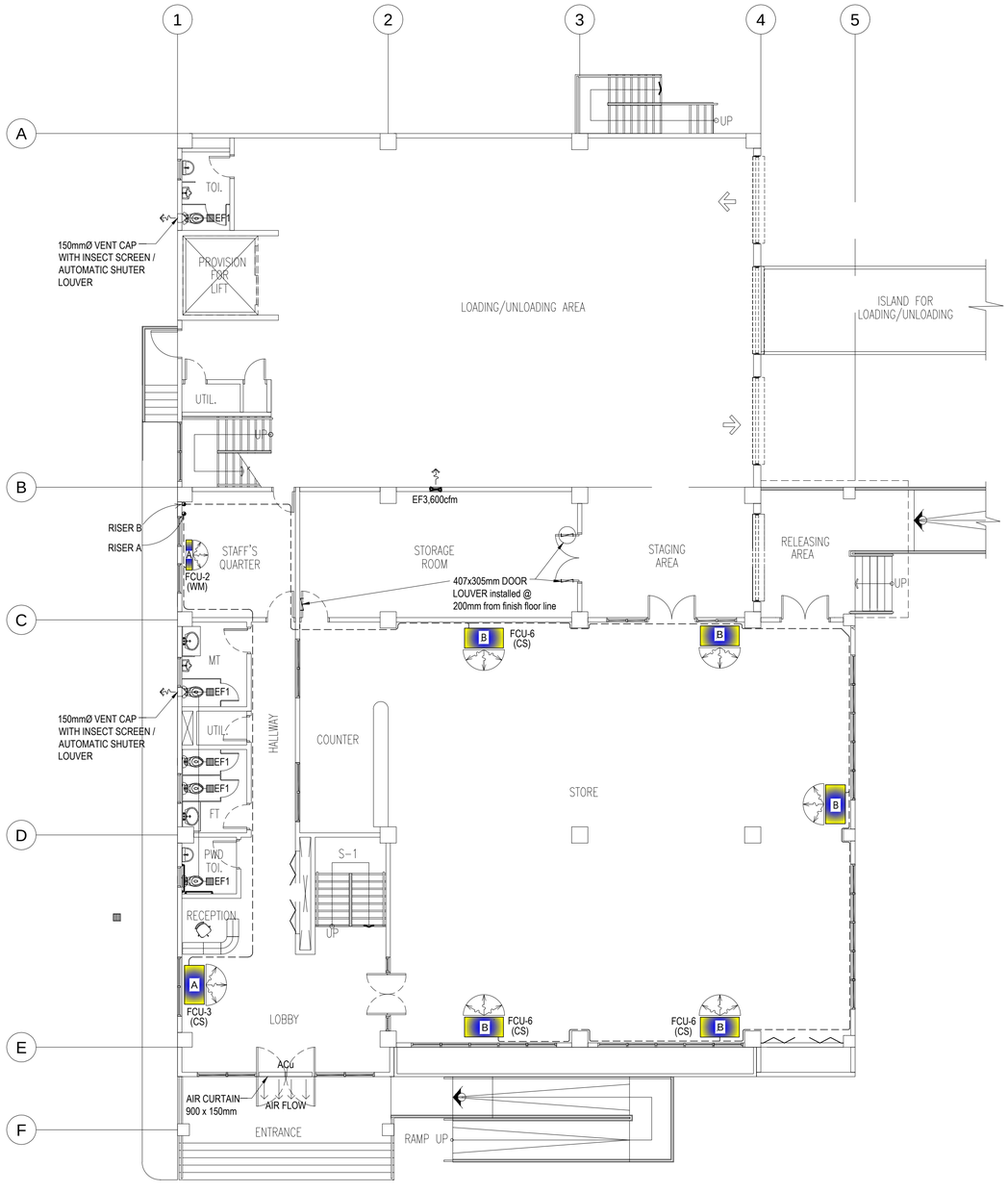
THE DESIGN CONSULTANT SHALL BE HELD FULLY RESPONSIBLE FOR THE FAILURE OF THE FACILITIES/STRUCTURES DUE TO FAULTY DESIGN EXCEPT FOR THE CHANGES MADE WITHOUT THE CONFORMITY OF THE CONSULTANTS.

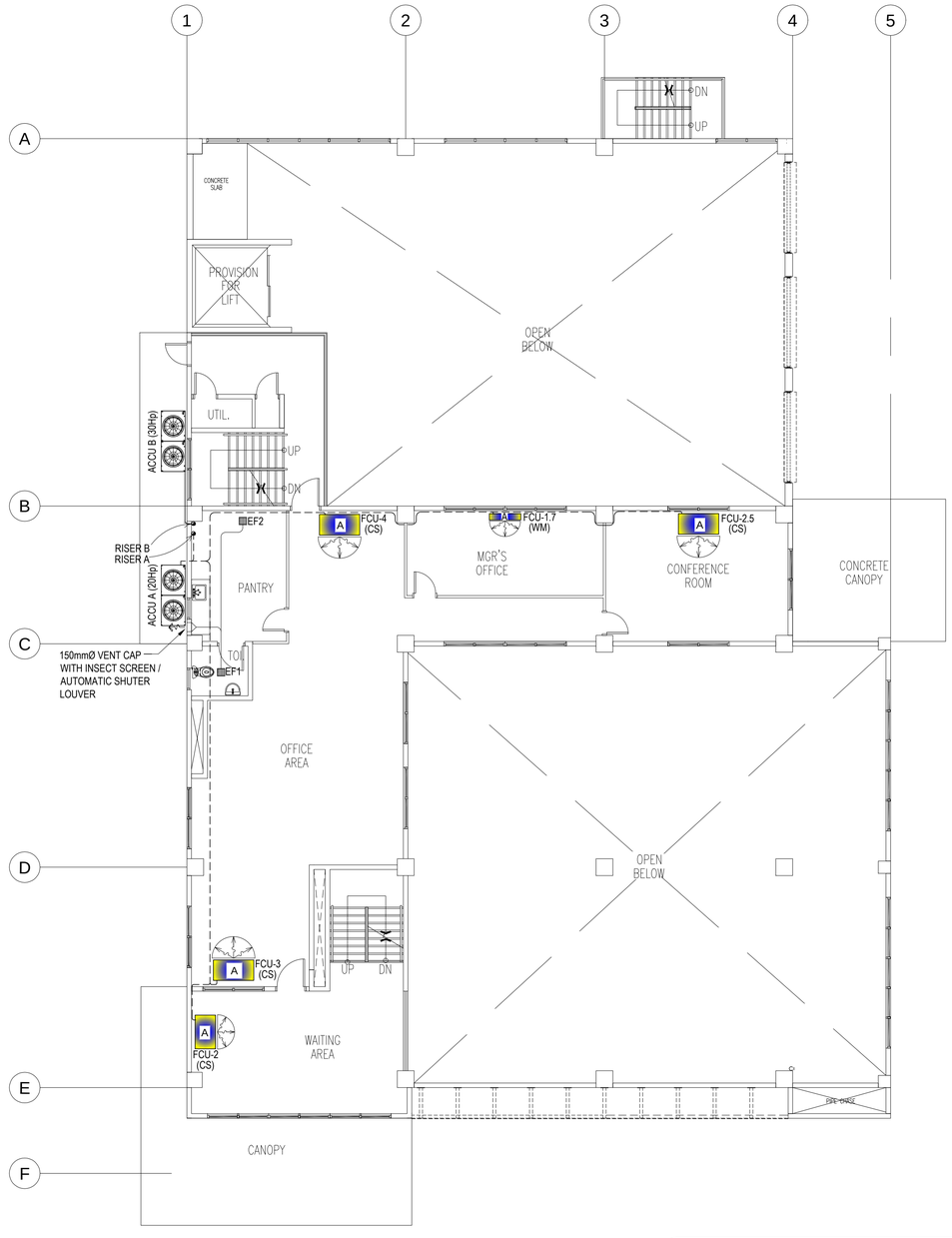
ELMER T. RAMONEDA
PROJECT MANAGER

URBAN ENGINEERS
CONSULTING CIVIL ENGINEERS
in joint venture with
J.F. CANCIO & Associates ENGINEERS CONSULTANTS
PTC Engineers & Associates

PROF. ELECTRICAL ENGINEER:	SUBMITTED:	REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:	PROJECT & LOCATION:	SHEET CONTENTS:	SET NO.	SHEET NO.
GEORGE M. SIMBULAN REG.NO.: 0002980 DATE: FEB-09-2018 PTR NO.: 1076338 PLACE: PAMPANGA	ELMER T. RAMONEDA PROJECT MANAGER	JOSEPHINE P. ISTURIS CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	(SEE COVER SHEET) EDWIN C. MATANGUIHAN OIC, ASST. DIRECTOR , BUREAU OF DESIGN	(SEE COVER SHEET) EMIL K. SADAIN, CESO I UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES	PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II CARIG SUR, TUGUEGARAO CITY	GENERAL NOTES, RISER DIAGRAM, SCHEDULE OF LOADS & COMPUTAIONS	EL	12 12

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA





2 / M-1 GROUND FLOOR AIR CONDITIONING AND VENTILATION LAYOUT

SCALE: 1 : 100 MTS.

1 / M-2 MEZZANINE FLOOR AIR CONDITIONING AND VENTILATION LAYOUT

SCALE: 1 : 100 MTS.

NOTE:

PURSUANT TO ITEM .5 OF ANNEX 'A' OF THE REVISED IMPLEMENTING RULES AND REGULATION OF R.A. 9184, THE APPROVAL BY THE AUTHORIZED GOVERNMENT OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGNS UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGNS NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.

THE DESIGN CONSULTANT SHALL BE HELD FULLY RESPONSIBLE FOR THE FAILURE OF THE FACILITIES/STRUCTURES DUE TO FAULTY DESIGN EXCEPT FOR THE CHANGES MADE WITHOUT THE CONFORMITY OF THE CONSULTANTS.

ELMER T. RAMONEDA
PROJECT MANAGER

URBAN ENGINEERS
CONSULTING CIVIL ENGINEERS
in joint venture with
J.F. CANCIO & Associates ENGINEERS CONSULTANTS
PTC Engineers & Associates

PROF.MECHANICAL ENGINEER:		SUBMITTED:
HERMINIO M. DAVID		ELMER T. RAMONEDA
PRC.NO.: 2715	DATE: OCT-22-2020	PROJECT MANAGER
PTR NO.:1726384	DATE: 01-11-2019	
TIN NO.: 147-630-001	PLACE: PARANAQUE CITY	

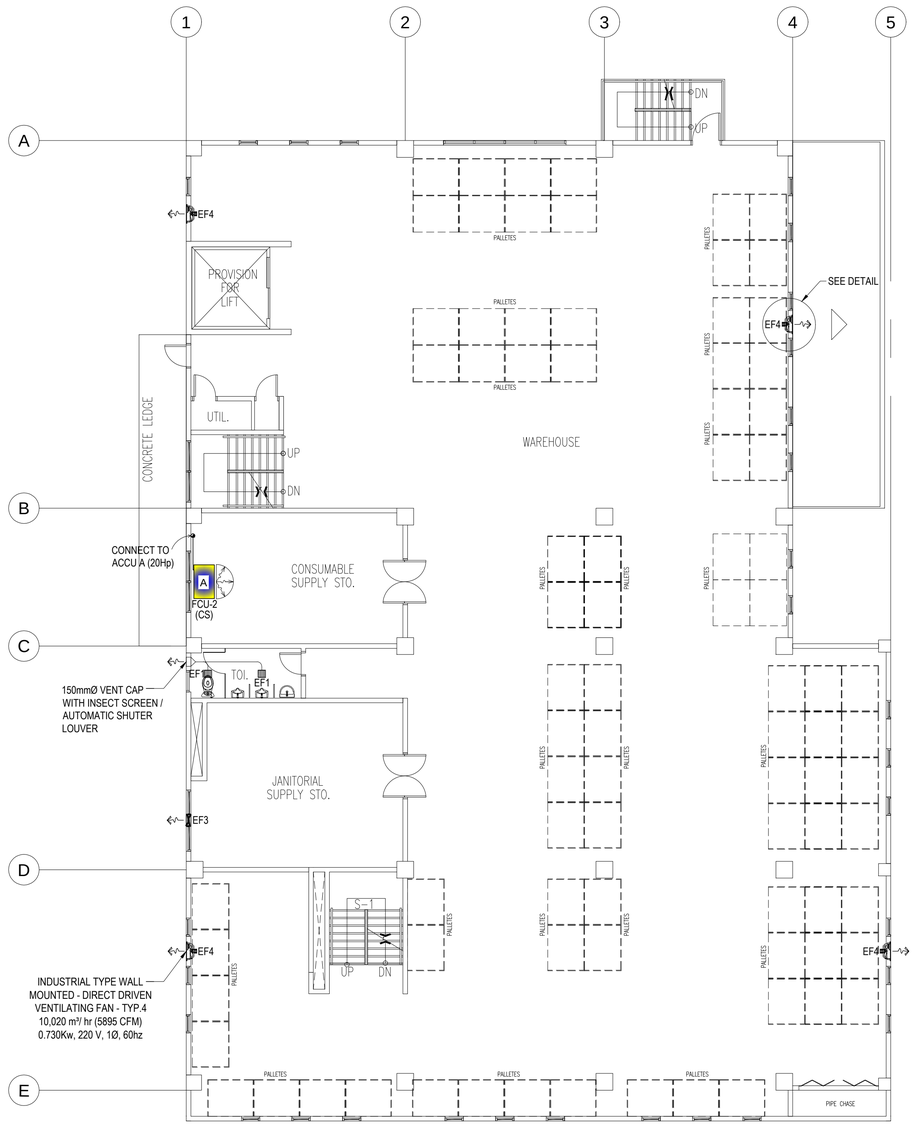
REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:
JOSEPHINE P. ISTURIS	(SEE COVER SHEET) EDWIN C. MATANGUIHAN	(SEE COVER SHEET) EMIL K. SADAIN, CESO I
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	OIC, ASST. DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II CARIG SUR, TUGUEGARAO CITY

SHEET CONTENTS:
GROUND FLOOR AIR CONDITIONING AND VENTILATION LAYOUT
SECOND FLOOR AIR CONDITIONING AND VENTILATION LAYOUT
Scale 1:100m

SET NO.	SHEET NO.
M	1 / 7



1 / M-2 SECOND FLOOR AIR CONDITIONING AND VENTILATION LAYOUT

SCALE: 1 : 100 MTS.

NOTE:

PURSUANT TO ITEM 5 OF ANNEX 'A' OF THE REVISED IMPLEMENTING RULES AND REGULATION OF R.A. 9184, THE APPROVAL BY THE AUTHORIZED GOVERNMENT OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGNS UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGNS NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.

THE DESIGN CONSULTANT SHALL BE HELD FULLY RESPONSIBLE FOR THE FAILURE OF THE FACILITIES/STRUCTURES DUE TO FAULTY DESIGN EXCEPT FOR THE CHANGES MADE WITHOUT THE CONFORMITY OF THE CONSULTANTS.

ELMER T. RAMONEDA
PROJECT MANAGER

URBAN ENGINEERS
CONSULTING CIVIL ENGINEERS
in joint venture with
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ENGINEERS CONSULTANTS
PTC Engineers & Associates

PROF.MECHANICAL ENGINEER:		SUBMITTED:
HERMINIO M. DAVID		ELMER T. RAMONEDA
PRC.NO.: 2715	DATE: OCT-22-2020	PROJECT MANAGER
PTR NO.:1726384	DATE: 01-11-2019	
TIN NO.: 147-630-001	PLACE: PARANAQUE CITY	

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:
JOSEPHINE P. ISTURIS	(SEE COVER SHEET) EDWIN C. MATANGUIHAN	(SEE COVER SHEET) EMIL K. SADAIN, CESO I
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	OIC, ASST. DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II CARIG SUR, TUGUEGARAO CITY

SHEET CONTENTS:
THIRD FLOOR AIR CONDITIONING AND VENTILATION LAYOUT
Scale 1:100m

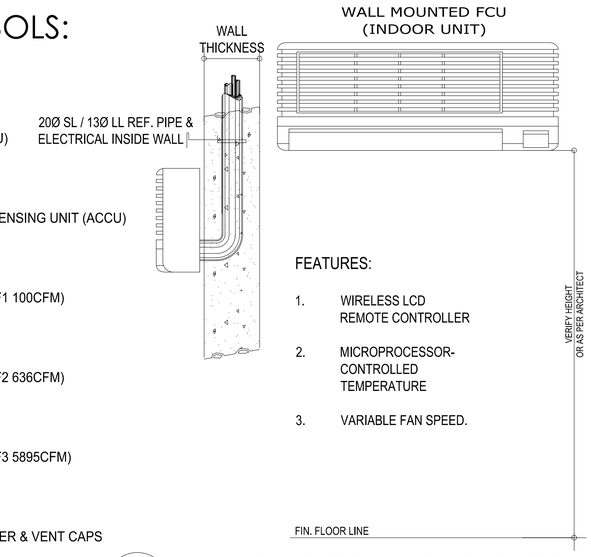
SET NO.	SHEET NO.
M	2 / 7

GENERAL NOTES:

1. CONTRACTOR IS ADVISED TO VISIT AND SURVEY THE PLACE OF INSTALLATION.
2. ALL AIR CONDITIONING UNITS AND VENTILATING UNITS TO BE SUPPLIED SHALL BE NEW AND APPROVED PRODUCTS OF REPUTABLE MANUFACTURERS. ALL AIR CONDITIONING EQUIPMENT SHALL BE MANUFACTURED BY "HITACHI", "OR APPROVED EQUAL.
3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE CLOSELY HIS WORK WITH THE OTHER TRADES CONCERNED.
4. REFRIGERANT SUCTION LINES SHALL BE INSULATED WITH 25 mm THICK PREMOULDED ELASTOMERIC RUBBER INSULATION AS MANUFACTURED BY "ARMAFLEX", AEROFLEX OR APPROVED EQUAL.
5. ALL AIR HANDLING UNITS SHALL BE PROVIDED WITH AT LEAST 300 mm HIGH STEEL PEDESTAL WITH SUITABLE VIBRATION ISOLATOR.
6. INDIVIDUAL WEATHER PROOF TYPE CIRCUIT BREAKER SHALL BE PROVIDED FOR ALL CONDENSING UNITS.
7. ALL EXPOSED DRAIN LINES TO THE CEILING SHALL BE PROVIDED WITH INSULATION TYPICAL TO REFRIGERANT PIPING. (REFER TO PIPE INSULATION DETAIL.)
8. ALL DUCT WORKS SHALL BE PROVIDED WITH ANGULAR BAR SUPPORTS. (SUBMIT SHOP DRAWING PRIOR TO INSTALLATION)
9. THE CONTRACTOR SHALL SUBMIT CATALOUGE / BROCHURES SUBJECT FOR FURTHER TECHNICAL EVALUATION BY THE CONCERNED AUTHORITY (BOD) PRIOR TO PROCUREMENT / INSTALLATION OF THE EQUIPMENT/UNIT.
10. ALL EXPOSED DRAIN LINES TO THE CEILING SHALL BE PROVIDED WITH INSULATION TYPICAL TO REFRIGERANT PIPING. (REFER TO PIPE INSULATION DETAIL.)
11. ALL NECESSARY GOVERNMENT PERMITS SHALL BE SECURED AND FOR ACCOUNT OF THE CONTRACTOR.
12. AS-BUILT PLANS SHALL BE PROVIDED BY THIS CONTRACTOR AFTER COMPLETION OF WORKS.
13. ALL INSTALLATION WORKS SHALL BE DONE IN A NEAT AND WORK- MANLIKE MANNER.
14. ALL VENTILATING FAN SHALL BE MANUFACTURED BY "KDK", "NATIONAL" OR APPROVED EQUAL.
15. ALL REFRIGERANT SUCTION LINES EXPOSED INDOORS AND/OR EXPOSED TO WEATHER SHOULD BE PROVIDED WITH GAUGE #24 ALUMINUM CLADDING. (SUBMIT SHOP DRAWING PRIOR TO INSTALLATION)
16. ALL ACCU's AND FCU's SHALL BE PROVIDED WITH ANGULAR BAR SUPPORTS. (SUBMIT SHOP DRAWING PRIOR TO INSTALLATION)

LEGEND & SYMBOLS:

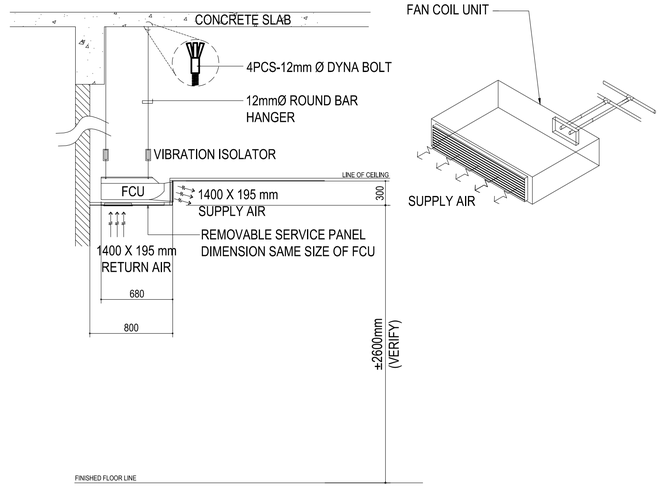
- FAN COIL UNIT (FCU)
- AIR-COOLED CONDENSING UNIT (ACCU)
- EXHAUST FAN 1 (EF1 100CFM)
- EXHAUST FAN 2 (EF2 636CFM)
- EXHAUST FAN 3 (EF3 5895CFM)
- AUTOMATIC SHUTTER & VENT CAPS
- AIR CURTAIN (ACu)
- REFRIGERANT LINE
- 150mmØ EXHAUST DUCT
- SAND TRAP LOUVERS (STL)
- DOOR LOUVERS



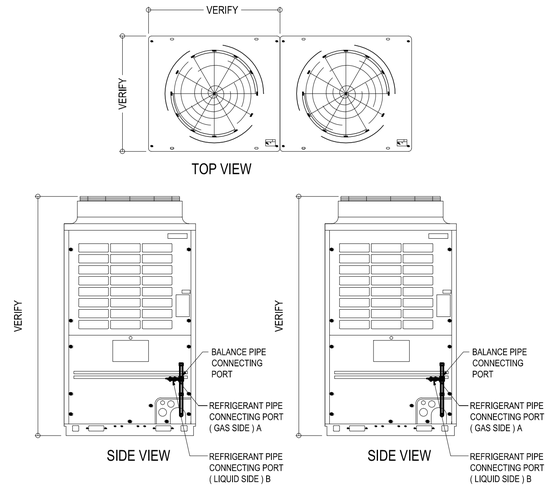
FEATURES:

1. WIRELESS LCD REMOTE CONTROLLER
2. MICROPROCESSOR-CONTROLLED TEMPERATURE
3. VARIABLE FAN SPEED.

1 / M-1 WALL MOUNTED FCU MOUNTING DET.
SCALE NTS



2 / M-1 DET. OF CEILING SUSPENDE FCU
SCALE NTS



3 / M-1 DETAIL OF ACCU
SCALE NTS

NOTE:

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ELMER T. RAMONEDA
PROJECT MANAGER

URBAN ENGINEERS
CONSULTING CIVIL ENGINEERS
in joint venture with
J.F. CANCIO & Associates
ENGINEERS CONSULTANTS
PTC Engineers & Associates

PROF.MECHANICAL ENGINEER:		SUBMITTED:
HERMINIO M. DAVID		ELMER T. RAMONEDA
PRC NO.: 2715	DATE: OCT-22-2020	PROJECT MANAGER
PTR NO.:1726384	DATE: 01-11-2019	
TIN NO.: 147-630-001	PLACE: PARANAQUE CITY	

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:
JOSEPHINE P. ISTURIS	(SEE COVER SHEET) EDWIN C. MATANGUIHAN	(SEE COVER SHEET) EMIL K. SADAIN, CESO I
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	OIC, ASST. DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:	SHEET CONTENTS:	SET NO.	SHEET NO.
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II CARIG SUR, TUGUEGARAO CITY	GENERAL NOTES LEGENDS FAN COIL UNITS (FCU's) AND AIR COOLED CONDESING UNIT (ACCU) DETAIL	M	3 / 7

SCHEDULE OF EQUIPMENT

MULTI-SPLIT AIR CONDITIONER (VRF SYSTEM FOR GROUND FLOOR)

SYSTEM A — INDOOR UNIT													OUTDOOR UNIT														REMARKS
DESIGNATION	QTY.	COOLING CAPACITY		TYPE	AIR FLOW m^3 / hr	ELECTRICAL DATA				PIPE SIZE (MM)		LOCATION	DESIGNATION	QTY.	COOLING CAPACITY		COMPRESSOR DATA		DIMENSION	REFRIGERANT	WEIGHT kG	ELECTRICAL DATA				PIPE SIZE (MM)		LOCATION	
		BTU/HR	HP			WATTS	VOLTS	PHASE	HERTZ	LIQUID	GAS				kW	BTU/HR	QTY.	MOTOR OUTPUT (kW)	HxWxD			kW	VOLTS	PHASE	HERTZ	LIQUID	GAS		
FCU-4 (CS)	1	38,226	4.0	CEILING SUSPENDED	1960-1440	91	220	SINGLE	60	9.5 Ø	15.9 Ø	GROUND MEZZANINE AND SECOND FLOOR	ACCU - B (20 Hp)	1	56	191,128	4	3.1 x 2 + 3.1 x 2	2(1800 x 990 x 780)	410 A	2 x 242 (484)	15.00	220	THREE	60	15.9 Ø	28.6 Ø	MEZZANINE CONCRETE LEDGE	ALL UNITS SHALL BE BRAND NEW & COMPLETE ELECTRONIC (REMOTE)CONTROL WITH STANDARD ACCESSORIES, READY FOR SERVICE.
FCU-3 (CS)	2	27,304	3.0		1100-840	50																							
FCU-2.5 (CS)	1	24,233	2.5		1100-840	50																							
FCU-2 (CS)	2	19,113	2.0		780-540	38				6.4 Ø	12.7 Ø																		
FCU-2 (WM)	1	19,113	2.0	WALL MOUNTED	840-540	43																							
FCU-1.7 (WM)	1	15,359	1.7		840-540	43																							NOTE : ALL FAN COIL UNITS (FCU's) SHALL BE PROVIDED WITH EVAPORATOR DRAIN PIPE.

MULTI-SPLIT AIR CONDITIONER (VRF SYSTEM FOR GROUND FLOOR - STORE AREA)

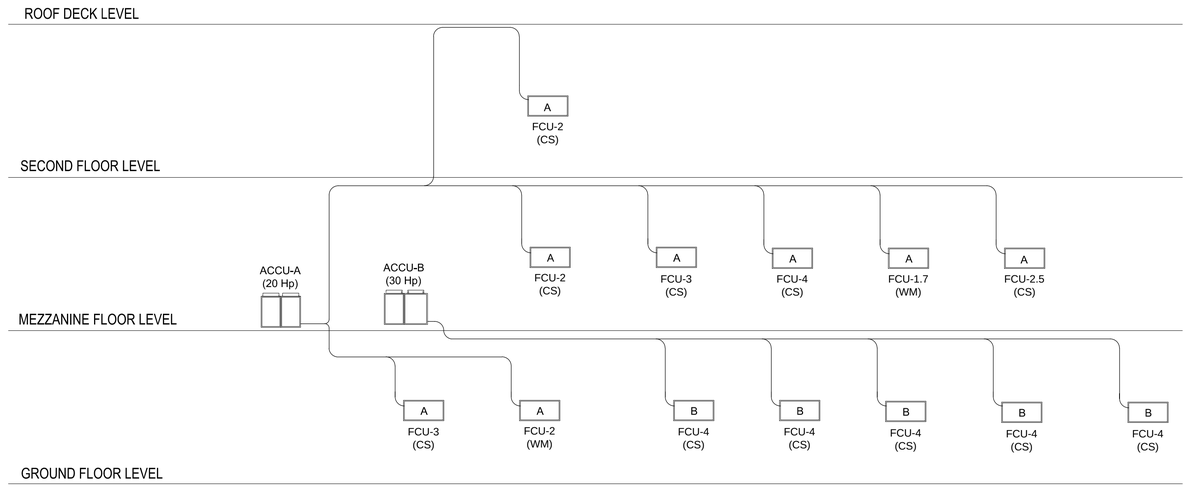
SYSTEM B — INDOOR UNIT													OUTDOOR UNIT														REMARKS
DESIGNATION	QTY.	COOLING CAPACITY		TYPE	AIR FLOW m^3 / hr	ELECTRICAL DATA				PIPE SIZE (MM)		LOCATION	DESIGNATION	QTY.	COOLING CAPACITY		COMPRESSOR DATA		DIMENSION	REFRIGERANT	WEIGHT kG	ELECTRICAL DATA				PIPE SIZE (MM)		LOCATION	
		BTU/HR	HP			WATTS	VOLTS	PHASE	HERTZ	LIQUID	GAS				kW	BTU/HR	QTY.	MOTOR OUTPUT (kW)	HxWxD			kW	VOLTS	PHASE	HERTZ	LIQUID	GAS		
FCU-6 (CS)	5	54,608	6.0	CEILING SUSPENDED	1800-1320	110	220	SINGLE	60	9.5 Ø	15.9 Ø	GROUD FLOOR - STORE AREA	ACCU - B (30 Hp)	1	85	290,105	6	3.6 x 3 + 3.0 x 3	2(1800 x 1210 x 780)	410 A	2 x 330 (660)	25.40	220	THREE	60	19.1 Ø	34.9 Ø	MEZZANINE CONCRETE LEDGE	ALL UNITS SHALL BE BRAND NEW & COMPLETE ELECTRONIC (REMOTE)CONTROL WITH STANDARD ACCESSORIES, READY FOR SERVICE. NOTE : ALL FAN COIL UNITS (FCU'S) SHALL BE PROVIDED WITH EVAPORATOR DRAIN PIPE.

EXHAUST FAN

DESIGNATION	QTY.	CAPACITY		TYPE	STATIC PRESSURE	RPM	WATTS	MOTOR RATING			LOCATION	REMARKS
		CMH	CFM					VOLTS	PHASE	HERTZ		
EF-1	8	170	100	CEILING CASSETTE	3.80mm H_2O	170	19	220	SINGLE	60	ALL TOILETS	ALL UNITS SHALL BE BRAND NEW, WITH INSECT SCREEN, AUTOMATIC SHUTTER AND VENT CAPS.
EF-2	1	330	194	CEILING CASSETTE	3.80mm H_2O	480	23	220	SINGLE	60	PANTRY	
EF-3	2	1080	636	WALL MOUNTED	3.80mm H_2O	1060	45	220	SINGLE	60	GROUND FLOOR - STORAGE and SECOND FLOOR - JANITORIAL STORAGE ROOM	ALL UNITS SHALL BE BRAND NEW AND COMPLETE WITH STANDARD ACCESSORIES READY FOR SERVICE.
EF-4	4	10,020	5895	INDUSTRIAL TYPE WALL MOUNTED VENTILATING FAN	40.0mm H_2O	1675	730	220	SINGLE	60	SECOND FLOOR - WAREHOUSE	

AIR CURTAIN (GROUND FLOOR)

DESIGNATION	QTY	LENGTH (MM)	INPUT (W)		CURRENT (A)		OUTLET VELOCITY (m/s)		AIR VOLUME (m^3/h)		NOISE DB (A)		WEIGHT (Kg.)	ELECTRICAL DATA			
			HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW		WATTS	VOLTS	PHASE	HERTZ
ACu	2	900	57	49	0.28	0.25	12.10	9.90	690	560	43	38	12	116-85	220	SINGLE	60



1 / M-1 REFRIGERANT FLOW RISER DIAGRAM

SCALE NTS

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PROF.MECHANICAL ENGINEER:
HERMINIO M. DAVID
PRC.NO.: 2715 DATE: OCT-22-2020
PTR NO.:1726384 DATE: 01-11-2019
TIN NO.: 147-630-001 PLACE: PARANAQUE CITY

SUBMITTED:
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PROJECT MANAGER

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REVIEWED AS TO DESIGN CONCEPT:
JOSEPHINE P. ISTURIS
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN

RECOMMENDING APPROVAL:
(SEE COVER SHEET)
EDWIN C. MATANGUIHAN
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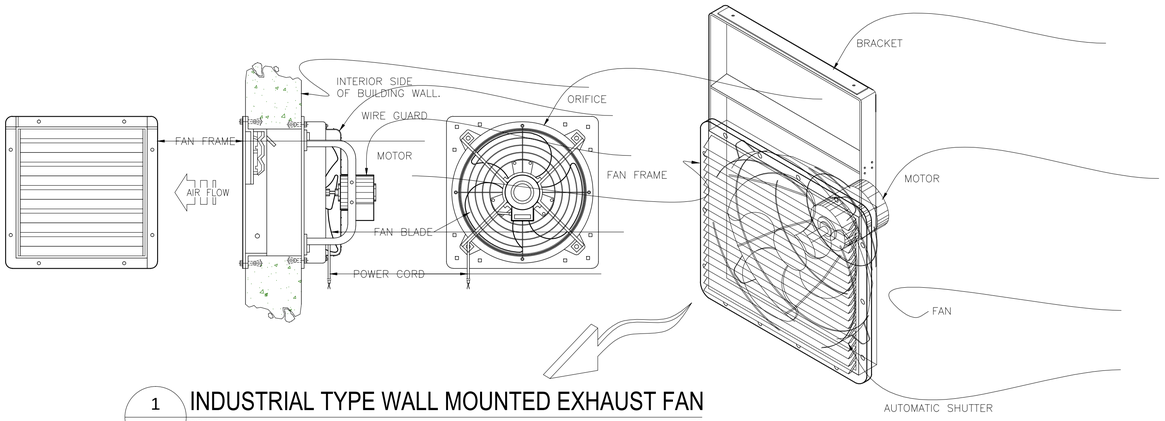
SHEET CONTENTS:
SCHEDULE OF EQUIPMENT
REFRIGERANT RISER FLOW DIAGRAM

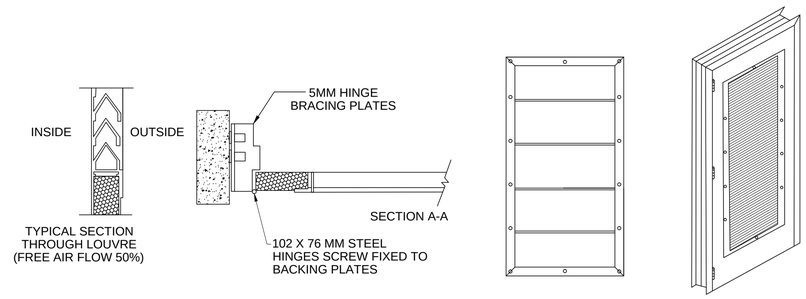
SET NO.: M

SHEET NO.: 4 / 7



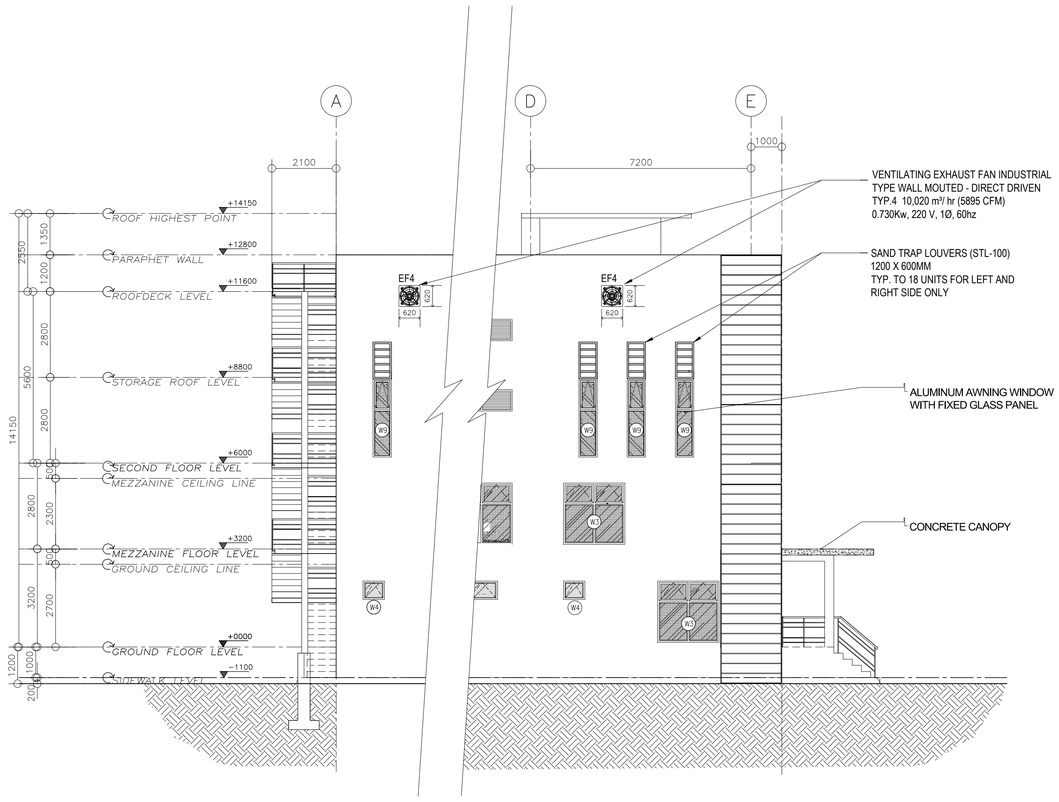
1 / M-3 **INDUSTRIAL TYPE WALL MOUNTED EXHAUST FAN**

SCALE NTS



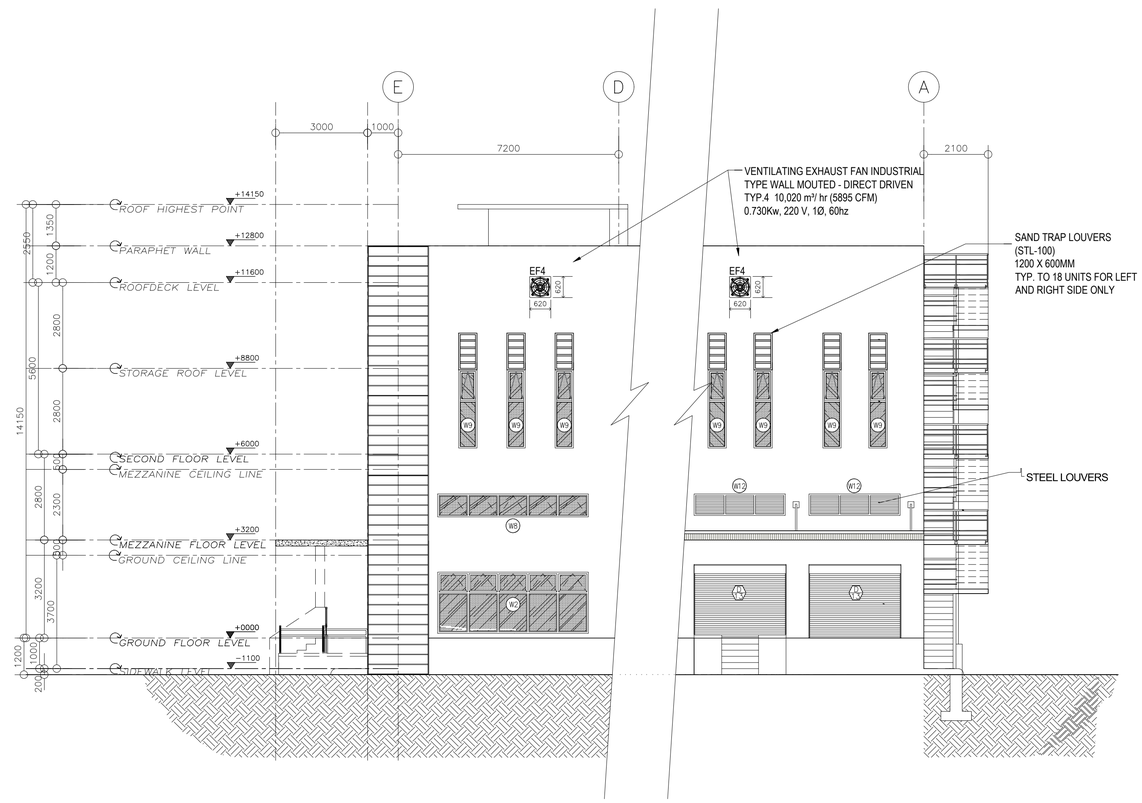
2 / M-3 **SAND TRAP LOUVER DETAIL**

SCALE NTS



3 / M-3 **PARTIAL LEFT SIDE ELEVATION**
(SHOWING LOCATION OF INDUSTRIAL EXHAUST FAN)

SCALE 1 : 100MTS



4 / M-3 **PARTIAL RIGHT SIDE ELEVATION**
(SHOWING LOCATION OF INDUSTRIAL EXHAUST FAN)

SCALE 1 : 100MTS

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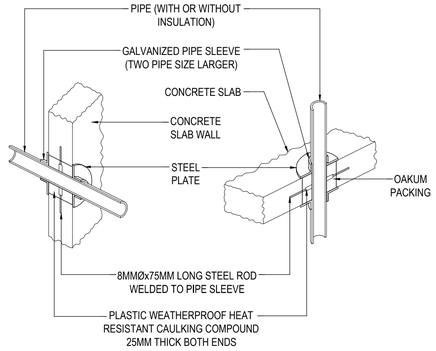
BONIFACIO DRIVE, PORT AREA, MANILA

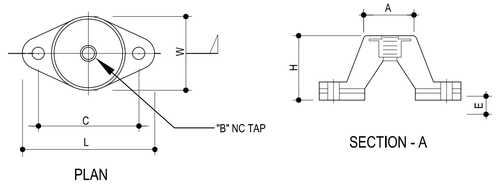
REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:	PROJECT & LOCATION:	SHEET CONTENTS:	SET NO.	SHEET NO.
JOSEPHINE P. ISTURIS CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	(SEE COVER SHEET) EDWIN C. MATANGUIHAN OIC, ASST. DIRECTOR, BUREAU OF DESIGN	(SEE COVER SHEET) EMIL K. SADAIN, CESO I UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES	PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II CARIG SUR, TUGUEGARAO CITY	PARTIAL RIGHT AND LEFT ELEVATION PLAN SHOWING LOCATION OF EXHAUST FAN-EF4 (4 UNITS) AND SAND TRAP LOUVERS - STL 100 (18UNITS) AND DETAILS OF INSTALLATION	M	5 / 7



6 M-8 PIPE PASSING THU WALL & FLOOR

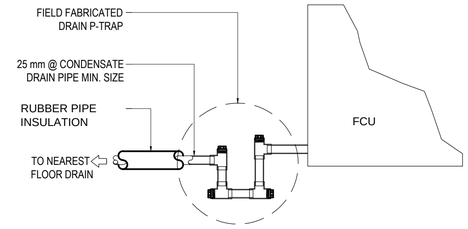
NOT TO SCALE

MAX. LOAD (LBS)	DIMENSIONS IN MM.							
	L	W	H	A	B	C	D	E
35 TO 120	79	44	25	32	8	60	9	6
135 TO 380	98	60	32	44	10	76	9	6
250 TO 1100	140	86	44	64	13	105	14	6
1500 TO 4000	165	108	44	95	16	127	14	6



3 M-8 VIBRATION ISOLATOR DETAIL (CONE TYPE)

NOT TO SCALE



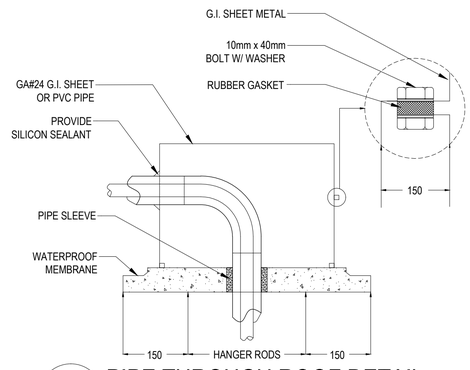
4 M-8 DRAIN CONNECTION DETAIL

NOT TO SCALE

WHERE PIPING PENETRATES WALL AND FLOOR SLABS, THE PIPE WORK SHALL BE SLEEVED WITH 1" THICK FIBERGLASS THE FULL LENGHT OF THE PENETRATION AND SEALED WITH J.M. DUXSEAL OR UNISEAL. FIBERGLASS SLEEVE TO BE INSTALLED WIDER THAN THICKNESS OF SLAB AFTER IS MADE UP TIGHT TO FIBERGLASS AND THE MORTAR SET TRIM EXTENDING FIBERGLASS AND SEAL EACH END WITH A NON-HARDENING COMPOUND SIMILAR TO J.M. DUXSEAL OR UNISEAL.

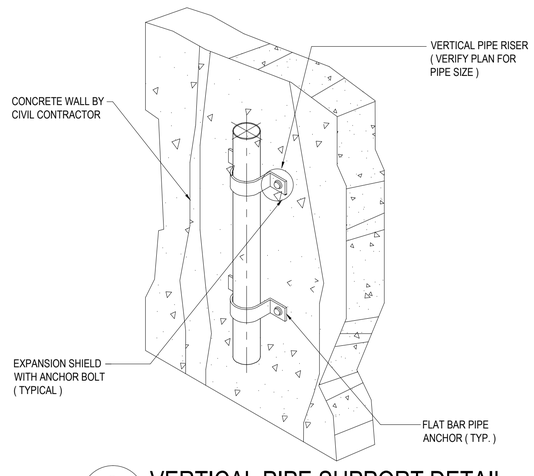
5 M-8 PIPE SLEEVE DETAIL

NOT TO SCALE



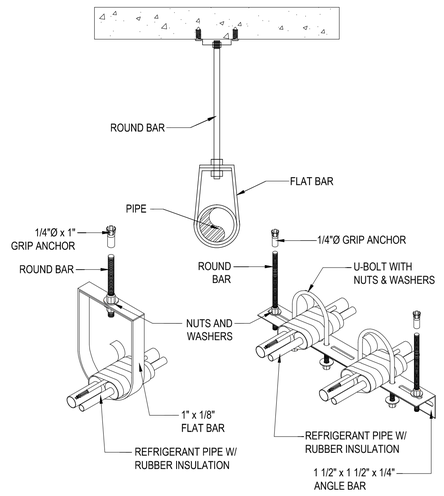
7 M-8 PIPE THROUGH ROOF DETAIL

NOT TO SCALE



8 M-8 VERTICAL PIPE SUPPORT DETAIL

NOT TO SCALE



9 M-8 PIPE HANGER DETAIL

NOT TO SCALE

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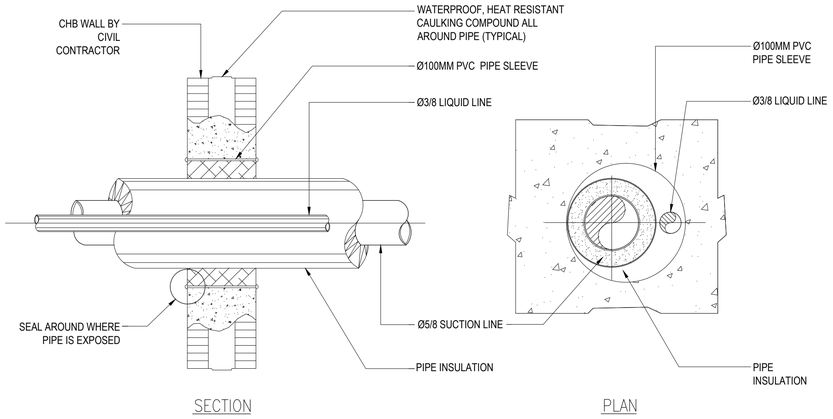
SHEET CONTENTS:
MISCELLANEOUS DETAILS

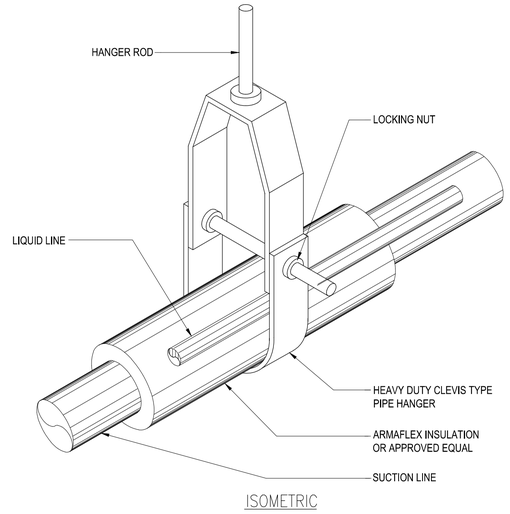
SET NO.: M

SHEET NO.: 6 / 7



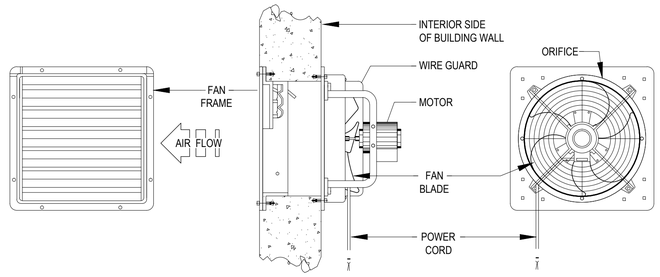
1 M-9 REFRIGERANT PIPE THRU WALL DETAIL

NOT TO SCALE



2 M-9 REFRIGERANT PIPE HANGER DETAIL

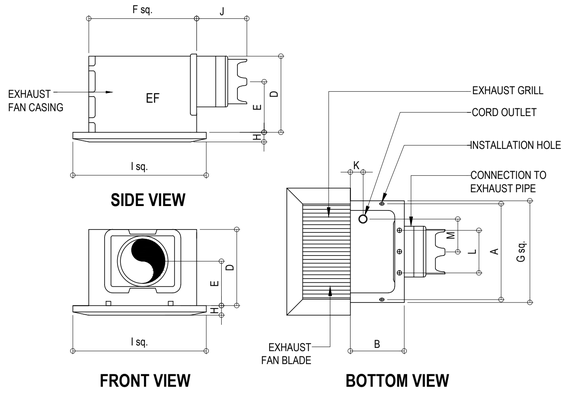
NOT TO SCALE



3 M-9 EXHAUST FAN (WALL MOUNTED) DETAIL

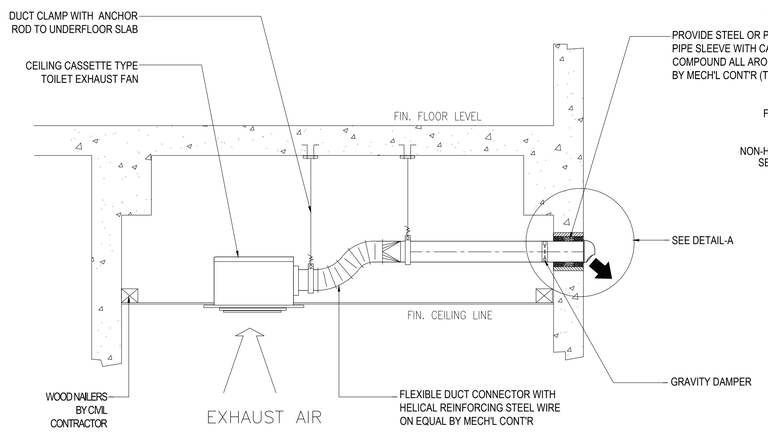
NOT TO SCALE

DESIGNATION	A	B	C	D	E	F	G	H	I	J	K	L	M
EF	354	126	140	200	135	230	268	13	300	108	13	108	13



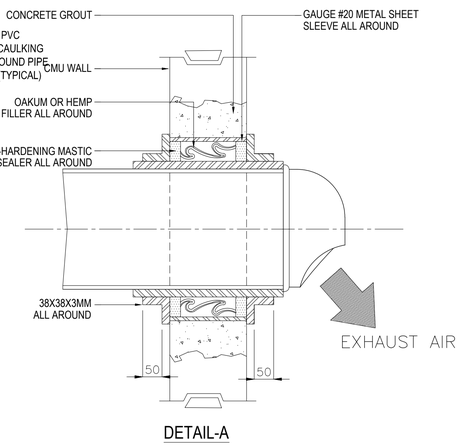
4 M-9 CEILING MOUNTED (CASSETTE TYPE) EXHAUST FAN DETAIL

NOT TO SCALE

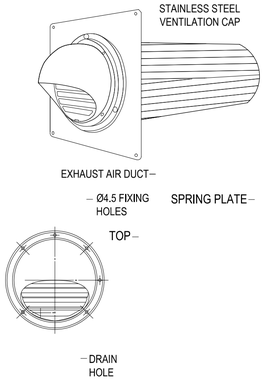


5 M-9 TYPICAL CASSETTE TYPE EXHAUST FAN MOUNTING DETAIL

NOT TO SCALE



ITEM	A	B	C	D	E
VENT CAP	190	106	23	147	53



6 M-9 VENT CAP DETAIL

NOT TO SCALE

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PROJECT MANAGER

URBAN ENGINEERS
CONSULTING CIVIL ENGINEERS
in joint venture with
J.F. CANCIO & Associates ENGINEERS CONSULTANTS
PTC Engineers & Associates

PROF.MECHANICAL ENGINEER:
HERMINIO M. DAVID
PRC NO.: 2715 DATE: OCT-22-2020
PTR NO.:1726384 DATE: 01-11-2019
TIN NO.: 147-630-001 PLACE: PARANAQUE CITY

SUBMITTED:
ELMER T. RAMONEDA
PROJECT MANAGER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:
JOSEPHINE P. ISTURIS
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN

RECOMMENDING APPROVAL:
(SEE COVER SHEET)
EDWIN C. MATANGUIHAN
OIC, ASST. DIRECTOR, BUREAU OF DESIGN

APPROVED:
(SEE COVER SHEET)
EMIL K. SADAIN, CESO I
UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:
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CARIG SUR, TUGUEGARAO CITY

SHEET CONTENTS:
MISCELLANEOUS DETAILS

SET NO.: M

SHEET NO.: 7 / 7

GENERAL NOTES :

1. ALL FIRE PROTECTION WORKS SHALL CONFORM WITH THE LATEST EDITION OF NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) CODES NO. 10, 14, AND 20.
2. READ THE DRAWING IN CONNECTION WITH OTHER RELATED DRAWINGS AND SPECIFICATIONS. THE ARCHITECT AND THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES FOUND HEREIN .
3. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF PFE & FHC IN COORDINATION WITH THE ARCHITECTURAL LAYOUT. ANY RELOCATION SHALL BE SUBJECT TO ARCHITECT'S AND ENGINEER'S APPROVAL.
4. PIPE SLEEVES SHALL BE PROVIDED FOR ALL PIPES PASSING THRU SLABS, WALLS, GIRDER AND BEAMS
5. ALL PIPE SIZES ARE IN MILLIMETER (MM), DIAMETER, UNLESS OTHERWISE NOTED.
6. ALL FEEDMAINS AND CROSSMAINS SHALL HAVE WELDED JOINTS AND ALL BRACHLINES SHALL BE OF THREADED JOINTS, UNLESS OTHERWISE NOTED.
7. ALL PIPES SHALL BE HYDROSTATICALLY TESTED TO A PRESSURE OF 1380 KPa FOR TWO (2) HOURS.
8. WORKMANSHIP: THE WORK THROUGHOUT SHALL BE EXECUTED IN THE BEST AND MOST THOROUGH MANNER KNOWN TO TRADE AND TO THE SATISFACTION OF THE ARCHITECT AND THE ENGINEER.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL GOVERNMENT/ LOCAL CONSTRUCTION AND OPERATION PERMITS AND PAY ALL THE REQUIRED FEES.

LEGEND & SYMBOLS :

FDC	2 – WAY FIRE DEPARTMENT CONNECTION
DSPR	DRY STANDPIPE RISER
FHV	FIRE HOSE VALVE
	CHECK VALVE
25	SIZE AS INDICATED
	PIPE DOWN
	PIPE UP
PFE	PORTABLE FIRE EXTINGUISHER
FHC	FIRE HOSE CABINET
	PIPE HANGER
	2 – WAY SWAY BRACE
	4 – WAY SWAY BRACE
FL	FIRE LINE

PIPE SLEEVE SCHEDULE

NOMINAL SIZE							
PIPE SIZE	25	32	40	50	65	80	100
SLEEVE SIZE	50	50	65	100	125	125	200

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ELMER T. RAMONEDA
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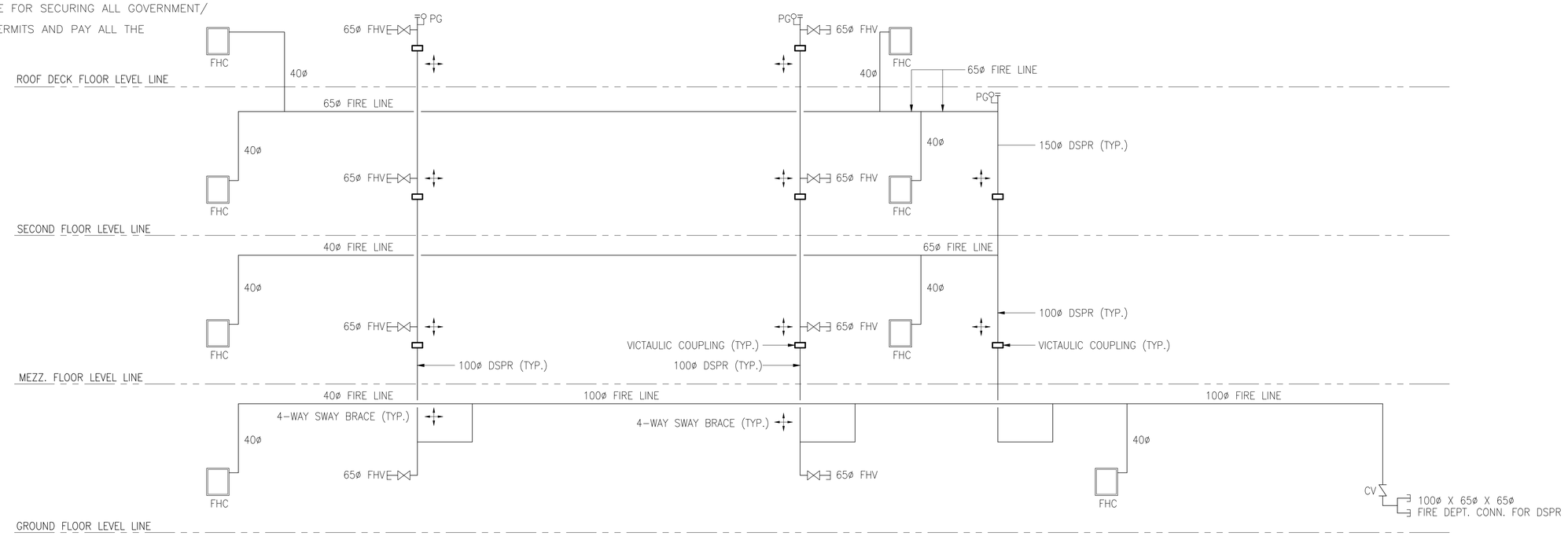

1 / FP-1 SCHEMATIC RISER DIAGRAM
NOT TO SCALE

URBAN ENGINEERS
CONSULTING CIVIL ENGINEERS
in joint venture with
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ENGINEERS CONSULTANTS
PTC Engineers & Associates

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PRC.NO.: 2715	DATE: OCT-22-2020	PROJECT MANAGER
PTR NO.:1726384	DATE: 01-11-2019	
TIN NO.: 147-630-001	PLACE: PARANAQUE CITY	

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:
JOSEPHINE P. ISTURIS	(SEE COVER SHEET)	(SEE COVER SHEET)
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	**EDWIN C. MATANGUIHAN**	**EMIL K. SADAIN, CESO I**
	OIC, ASST. DIRECTOR , BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:	SHEET CONTENTS:	SET NO.	SHEET NO.
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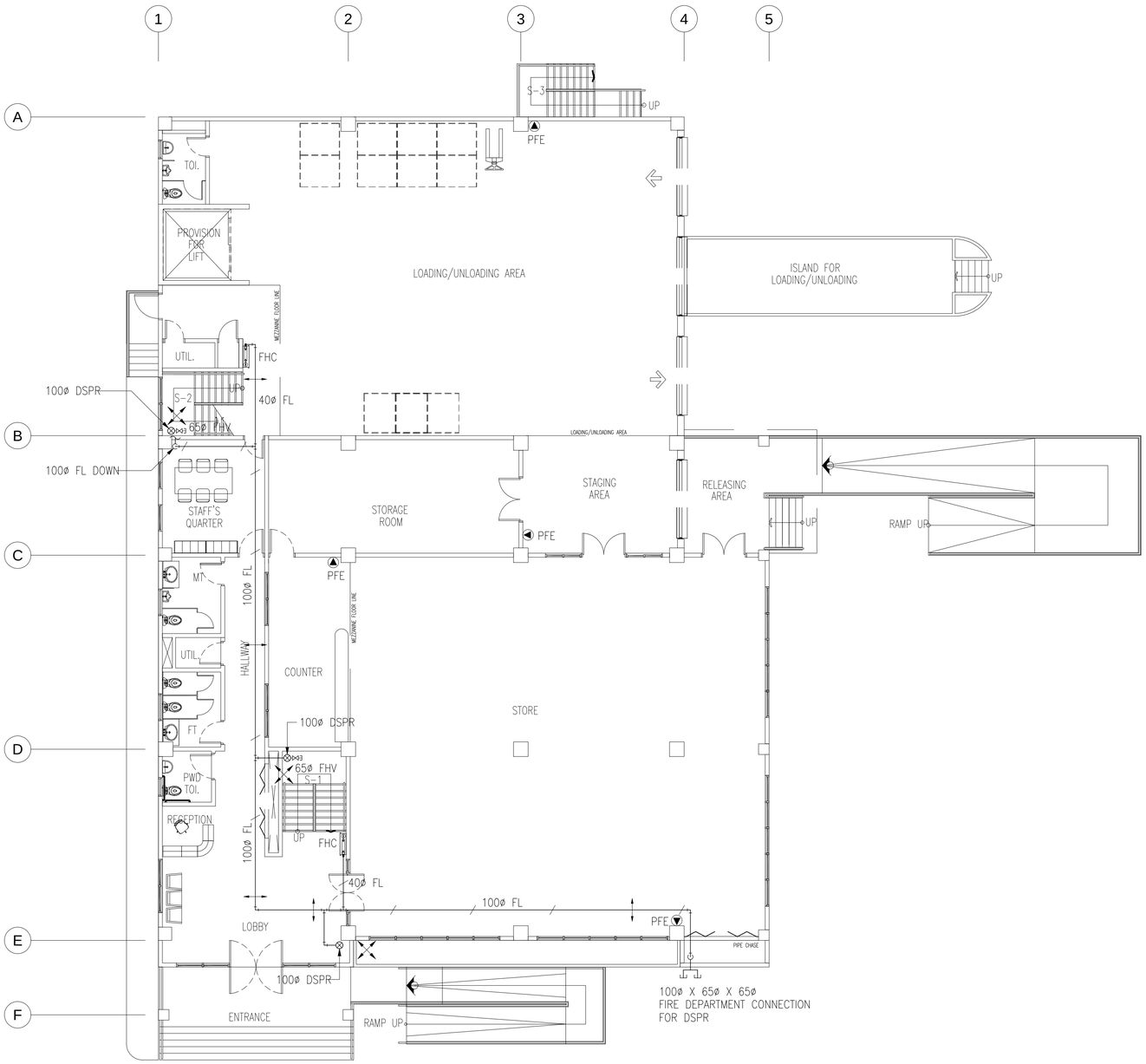
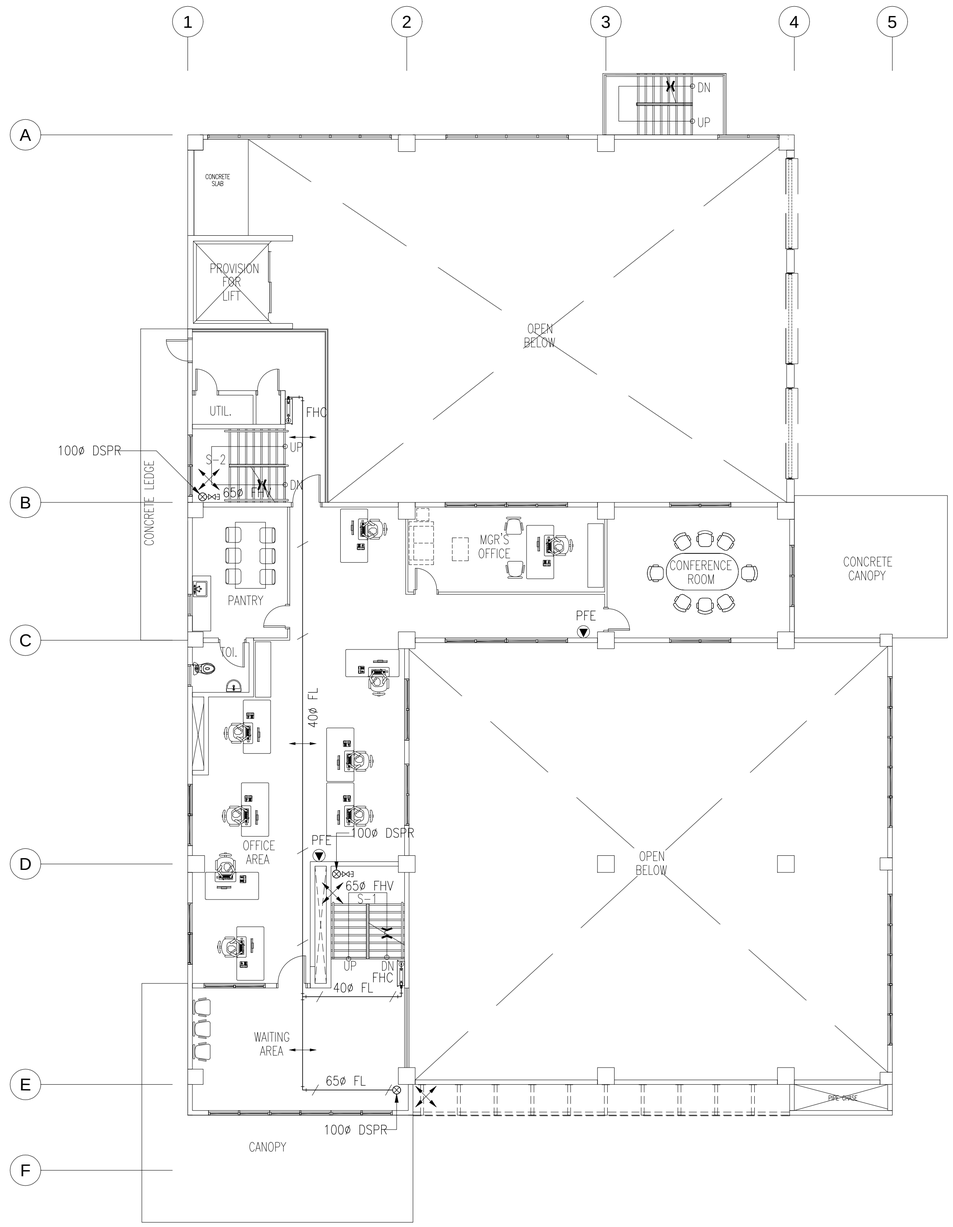


1 FP-2

GROUND FLOOR FIRE PROTECTION PLAN

SCALE: 1 : 200 MTS.



2 FP-2

MEZZANINE FLOOR FIRE PROTECTION PLAN

SCALE: 1 : 200 MTS.

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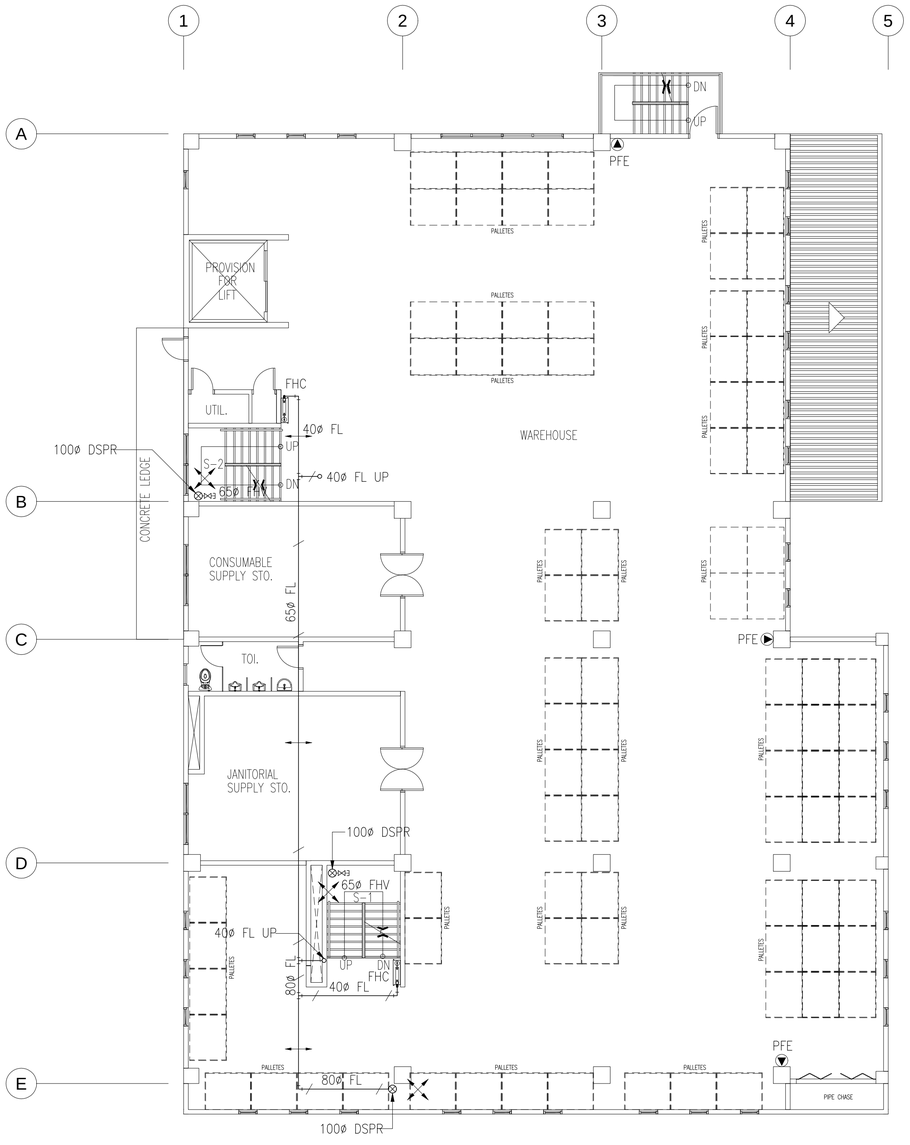
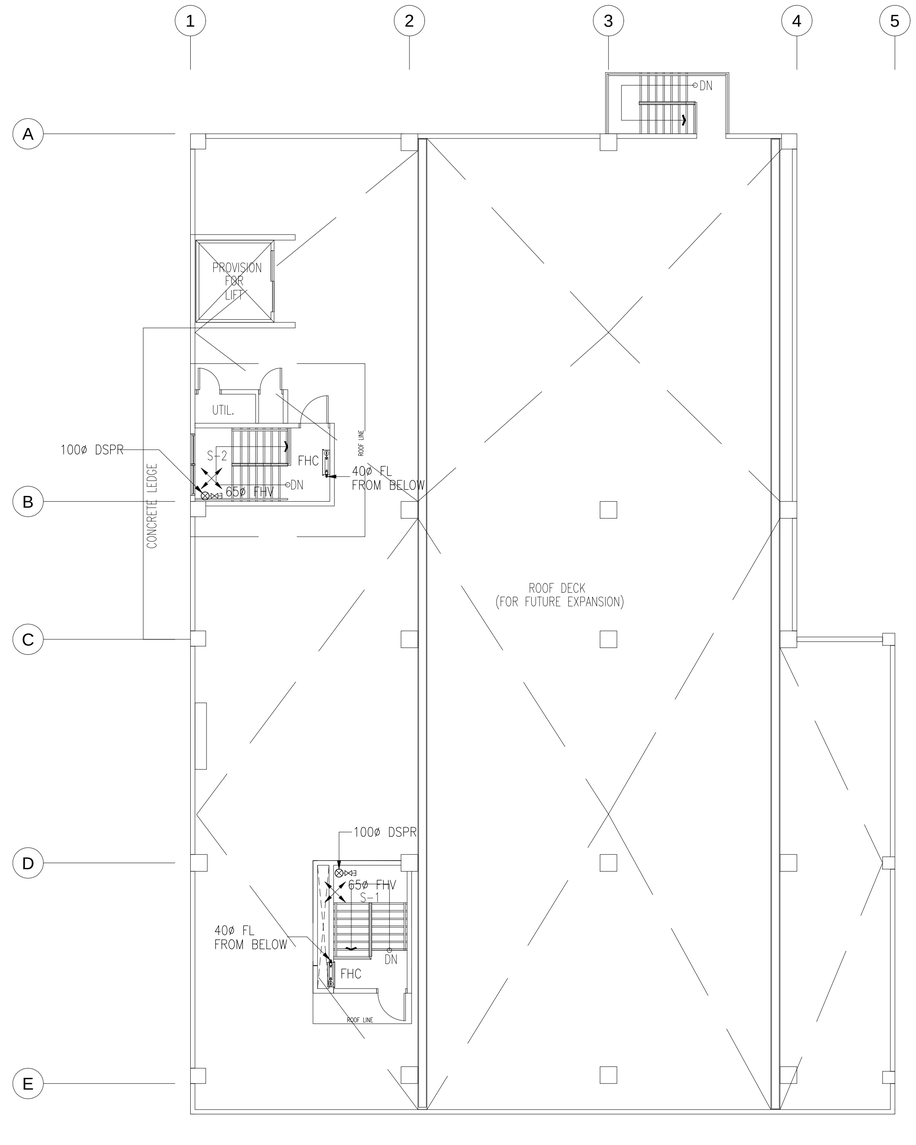


1 FP-3 SECOND FLOOR FIRE PROTECTION PLAN

SCALE: 1 : 200 MTS.



2 FP-3 ROOF DECK FIRE PROTECTION PLAN

SCALE: 1 : 200 MTS.

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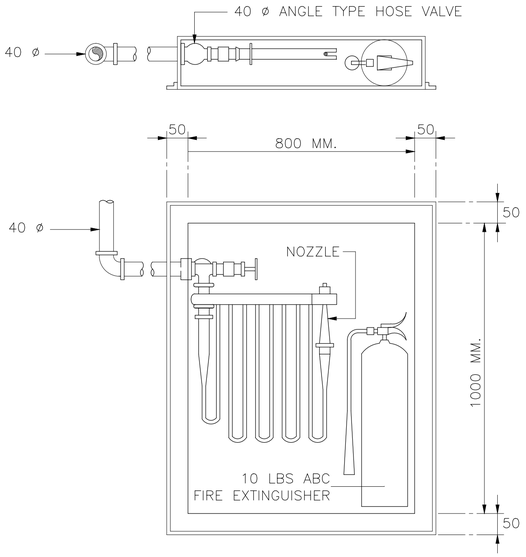
CARIG SUR, TUGUEGARAO CITY

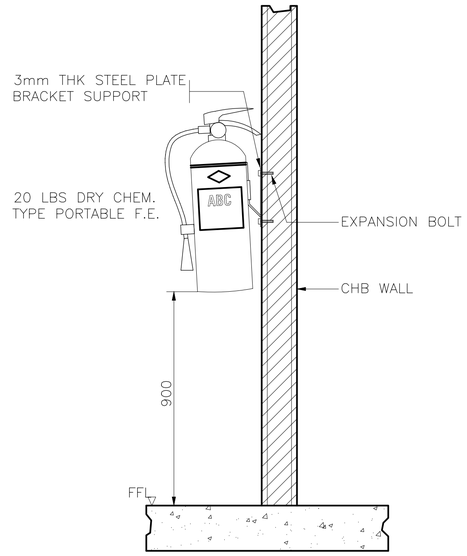
SHEET CONTENTS:
SECOND FLOOR FIRE PROTECTION PLAN
ROOF DECK FIRE PROTECTION PLAN

SET NO.: F

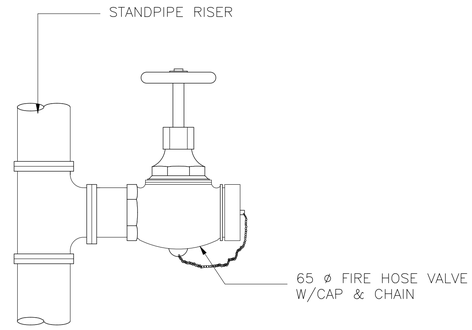
SHEET NO.: 3 / 4



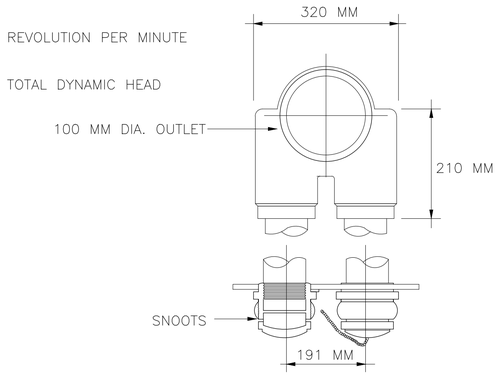
1 FP-4 **FIRE HOSE CABINET DETAIL**
NOT TO SCALE

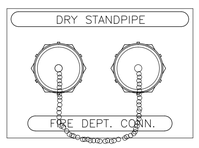


2 FP-4 **PORTABLE FIRE EXTINGUISHER MOUNTING DETAIL**
NOT TO SCALE

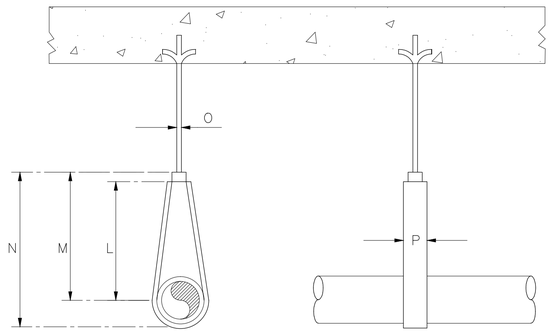


3 FP-4 **FIRE HOSE VALVE DETAIL**
NOT TO SCALE





4 FP-4 **FIRE DEPT. CONNECTION DETAIL**
NOT TO SCALE



PIPE SIZE	25	32	40	50	65	80	100
	1	1-1/4	1-1/2	2	2-1/2	3	4
L	54	57	57	65	75	79	89
	2-1/8	2-1/4	2-1/4	2-1/2	3	3-1/8	3-1/2
M	70	73	79	89	108	121	130
	2-3/4	2-7/8	3-1/8	3-1/2	4-1/4	4-3/4	5-1/8
N	83	95	110	121	143	146	191
	3-1/4	3-3/4	4-1/3	4-3/4	5-5/8	5-3/4	7-1/2
O	10	10	10	10	13	13	16
	3/8	3/8	3/8	3/8	1/2	1/2	5/8
P	1.6 X 16	1.6 X 16	1.6 X 16	1.6 X 16	2.4X19	2.4X19	3.2X19
	1/16X5/8	1/16X5/8	1/16X5/8	1/16X5/8	3/32X3/4	3/32X3/4	1/8X3/4

5 FP-4 **PIPE HANGER DETAIL AND SCHEDULE**
NOT TO SCALE

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SHEET CONTENTS: MISCELLANEOUS DETAILS

SET NO.: F

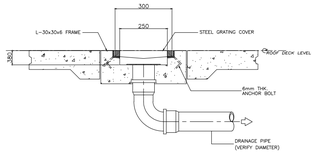
SHEET NO.: 4 / 4

LEGEND :

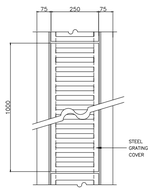
SEWAGE LINE	
DRAIN PIPE LINE	
VENT PIPE LINE	
SP	SOIL PIPE
VS	VENT STACK
VTR	VENT THRU ROOF
DP	DRAIN PIPE
DS	DOWNSPOUT
ADCB	AREA DRAIN CATCH BASIN
PDP	PERPORATED DRAIN PIPE
PBD	PLANT BOX DRAIN
STORM DRAINAGE LINE	
COLD WATER LINE (CWL)	
GV	GATE VALVE (NORMALLY OPEN)
MH	MANHOLE
PIPE DOWN	
PIPE UP	
%S	% SLOPE
FLOOR CLEAN-OUT	
CEILING CLEAN-OUT	
GRADE CLEAN-OUT	
PIPE SLEEVES	

PLUMBING FIXTURE CONNECTION SIZE SCHEDULE :

SYMBOLS	FIXTURES	MIN. PIPE CONNECTION SIZE IN MM DIAMETER					REMARKS
		WASTE/SOIL	VENT	STORM	COLD WATER	HOT WATER	
WC	WATER CLOSET	100	100	–	20	–	TANK TYPE
LAV	LAVATORY	50	100	–	20	–	WITH P-TRAP
KS	KITCHEN SINK	50	100	–	20	–	WITH P-TRAP
FD	FLOOR DRAIN	75	100	–	–	–	WITH P-TRAP
URI.	URINAL	50	100	–	20	–	WITH P-TRAP
HB	HOSE BIBB	–	–	–	20	–	
DD/TD	DECK DRAIN/TRENCH DRAIN	–	–	100	–	–	
FD	FLOOR DRAIN	–	–	75	–	–	WITH P-TRAP
ED	EQUIPMENT DRAIN	–	–	25	–	–	
PBD	PLANT BOX DRAIN	–	–	50	–	–	
PDP	PERPORATED DRAIN PIPE	–	–	50 / 80	–	–	

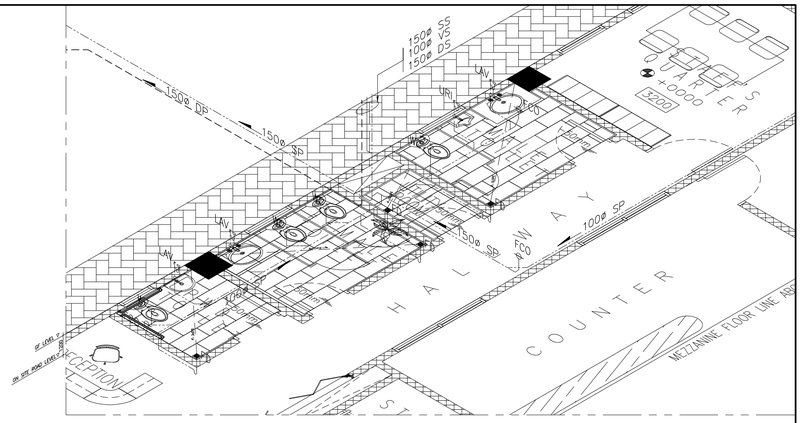


SECTION



PLAN

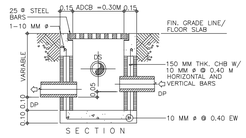
M / P-1 TRENCH DETAILS PLAN (N T S)



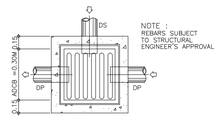
N / P-1 ISOMETRIC DETAILS (N T S)

GENERAL NOTES :

1. ALL PLUMBING WORKS SHALL CONFORM WITH THE PREVAILING REQUIREMENTS OF THE LOCAL ORDINANCE AND NATIONAL LAWS.
2. READ THE DRAWING CONNECTION WITH OTHER RELATED AND SPECIFICATIONS. THE ARCHITECT AND ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES FOUND THEREIN.
3. THE CONTRACTOR SHALL DETERMINE THE ACTUAL LOCATION, DEPTH AND INVERT ELEVATION OF EXISTING PIPES AND STRUCTURES TO CONFORM WITH THE PROPOSED SANITARY UTILITIES.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED FLOOR AND WALL OPENINGS.
5. ALL PIPES SHALL BE INSTALLED AS INDICATED ANY RELOCATION REQUIRED FOR PROPER EXECUTION OF OTHER TRADES SHALL BE W/ PRIOR APPROVAL OF THE ARCHITECT AND THE ENGINEER.
6. ALL SLOPE FOR HORIZONTAL PIPES SHALL MAINTAIN 1% AS MINIMUM, UNLESS OTHERWISE NOTED.
7. ALL FIXTURES SHALL BE VENTED UNLESS OTHERWISE NOTED.
8. ALL PIPE SIZES INDICATED ARE IN MILLIMETER (MM) DIAMETER, UNLESS OTHERWISE NOTED.
9. ALL WATER PIPES SHALL BE PROVIDED WITH 30CM PIPE EXTENSION AND CAPPED AT THE END.
10. ALL SANITARY AND STORM DRAINAGE PIPES SHALL BE HYDROSTATICALLY TESTED (@ LEAST 3.0M HIGH) TO ENSURE THAT THE SYSTEM ARE WATER TIGHT.
11. WORKMANSHIP: THE WORK THROUGHOUT SHALL BE EXECUTED IN THE BEST AND MOST THOROUGH MANNER KNOW TO TRADE AND TO THE SATISFACTION OF THE ARCHITECT AND THE ENGINEER.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL GOVERNMENT /LOCAL CONSTRUCTION AND OPERATION PERMITS AND PAY ALL THE REQUIRED FEES AND REQUIRED TO PROVIDE THE AS-BUILT PLAN.
13. REFER TO TECHNICAL SPECIFICATION FOR DETAILED MATERIALS & EQUIPMENT SPECIFICATIONS.
14. ALL PIPES SIZES FOR WATER LINE ARE NORMAL DIAMETERS.

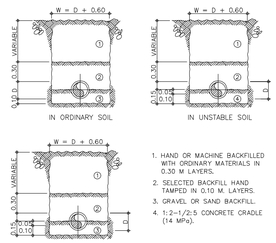


SECTION



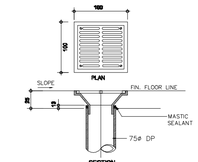
PLAN

C / P-1 AREA DRAIN CATCH BASIN DETAIL (N T S)

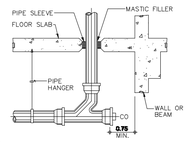


1. HAND OR MACHINE BACKFILLED WITH ORDINARY MATERIALS IN 0.30 M LAYERS.
2. SELECTED BACKFILL HAND TAMPED IN 0.10 M. LAYERS.
3. GRAVEL OR SAND BACKFILL.
4. 1:2-1/2:5 CONCRETE CRADLE (14 MPa).

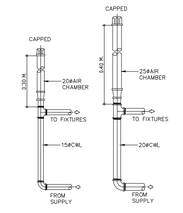
F / P-1 TRENCHING, BEDDING & BACKFILLING DETAIL (N T S)



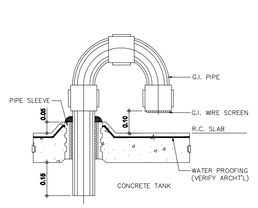
K / P-1 FLOOR DRAIN DETAIL (N T S)



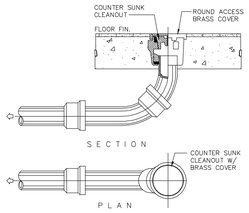
L / P-1 CEILING CLEANOUT DETAIL (N T S)



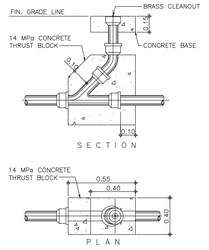
P / P-1 AIR CHAMBER DETAIL (N T S)



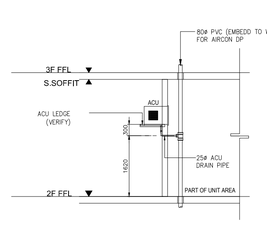
D / P-1 VENT DETAIL (N T S)



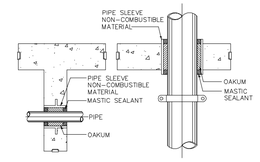
G / P-1 FLOOR CLEANOUT DETAIL (N T S)



J / P-1 GRADE CLEANOUT DETAIL (N T S)

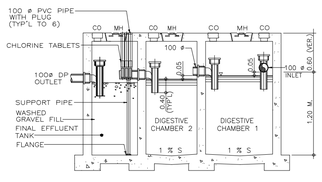


Q / P-1 EQUIPMENT DRAIN DETAIL (N T S)



SCHEDULE OF PIPE SLEEVES (MM)									
PIPE SIZE	25	32	40	50	75	80	100	150	200	250
SLEEVE SIZE	40	50	50	80	100	100	150	200	250	300

R / P-1 PIPE SLEEVE DETAIL (N T S)



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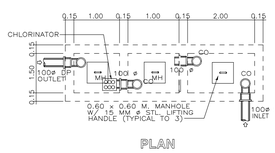
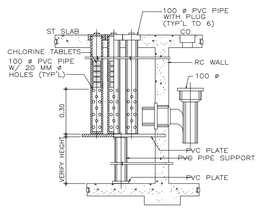


PLAN

B / P-1 SEPTIC TANK DETAIL (N T S)



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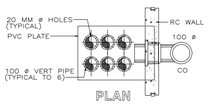
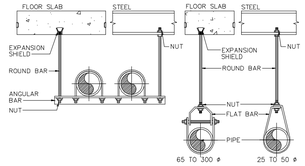


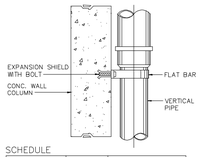
PLAN

C / P-1 CHLORINATOR DETAIL (N T S)



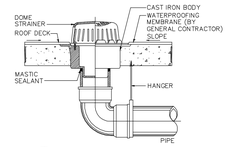
SCHEDULE				
PIPE SIZES	FLAT BAR	ROUND BAR	ANGULAR BAR	EXPANSION SHIELD
25 TO 50 ø	25 x 3	10	25 X 3	10
65 TO 100 ø	40 x 3	12	40 X 3	12
125 TO 150 ø	50 x 6	16	50 X 6	16
200 TO 300 ø	65 X 6	20	65 X 6	20

H / P-1 PIPE HANGER DETAIL (N T S)



SCHEDULE		
PIPE SIZES	FLAT BAR	EXPANSION SHIELD WITH BOLT
50 TO 100 ø	40 x 3	12
125 TO 150 ø	50 x 6	16
200 ø & UP	65 x 6	20

I / P-1 VERTICAL PIPE HANGER DETAIL (N T S)



O / P-1 DECK DRAIN DETAIL (N T S)

NOTE:

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PROJECT MANAGER

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CONSULTING CIVIL ENGINEERS
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PTC Engineers & Associates

SANITARY ENGINEER:	SUBMITTED:
ERNESTO ANTONIO BATTAD JR	ELMER T. RAMONEDA
PRC NO.: 0000909 / DATE: MAY 05, 2020	PROJECT MANAGER
PTR NO.: 7388963 / DATE: JAN. 30, 2019	
TIN NO.: 136-637-451 / PLACE: MAKATI CITY	

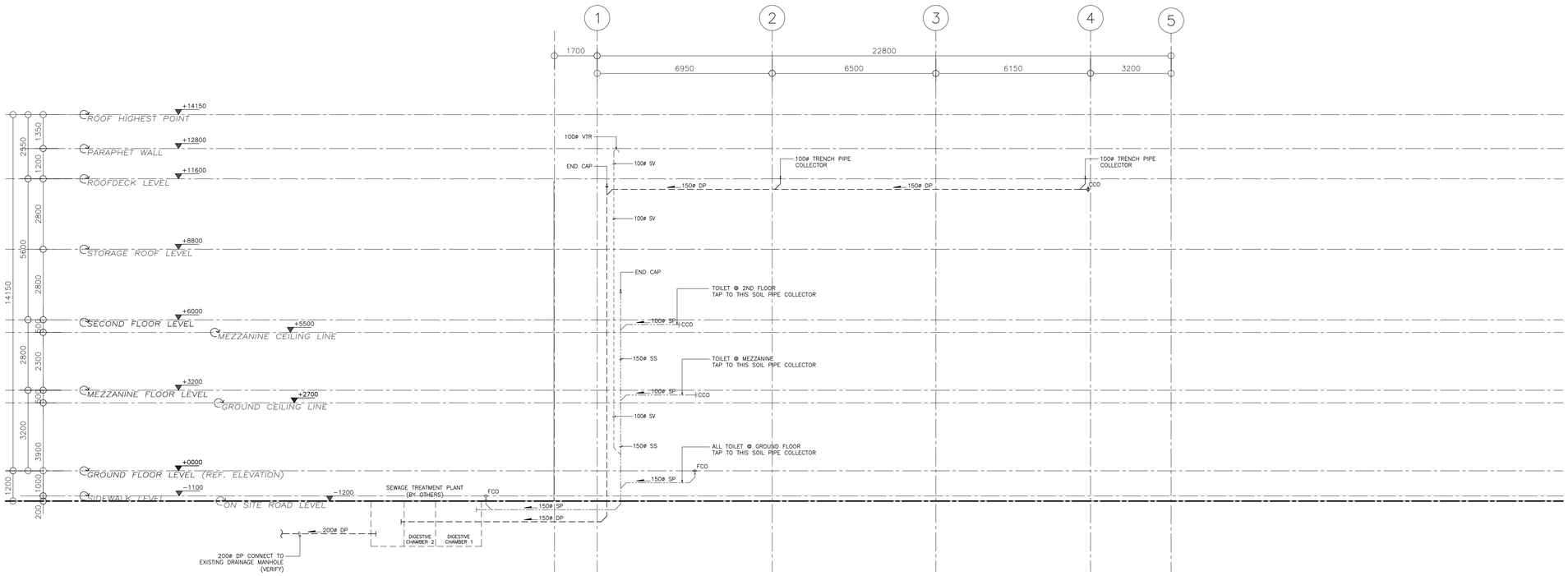
REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:
JOSEPHINE P. ISTURIS	(SEE COVER SHEET) EDWIN C. MATANGUIHAN	(SEE COVER SHEET) EMIL K. SADAIN, CESO I
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	OIC, ASST.DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:	SHEET CONTENTS:	SET NO.	SHEET NO.
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II CARIG SUR, TUGUEGARAO CITY	GENERAL NOTES MISCELLANEOUS DETAILS, ISOMERIC DETAILS	PL	1 / 11

LEGENDS & ABBREVIATION

CCO	CEILING CLEAN-OUT
DP	DRAIN PIPE
DS	DOWN SPOUT
FCO	FLOOR CLEAN-OUT
FD	FLOOR DRAIN
LAV	LAVATORY
SD	SHOWER DRAIN
KS	KITCHEN SINK
GT	GREASE TRAP
SP	SEWER PIPE
VS	VENT STACK
WC	WATER CLOSET
SP	SOIL PIPE
DP	DRAIN PIPE
SS	SOIL STACK
DS	DOWN SPOUT
VTR	VENT THRU ROOF



SCHEMATIC DIAGRAM

SEWAGE & DRAINAGE SYSTEM

1 | A
P-2

SCALE 1:100MTS

NOTE:

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SANITARY ENGINEER:		SUBMITTED:
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PRC NO.: 0000969	DATE: MAY 05, 2020	PROJECT MANAGER
PTR NO.: 7388963	DATE: JAN. 30, 2019	
TIN NO.: 136-637-451	PLACE: MAKATI CITY	

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DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

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CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	OIC, ASST.DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

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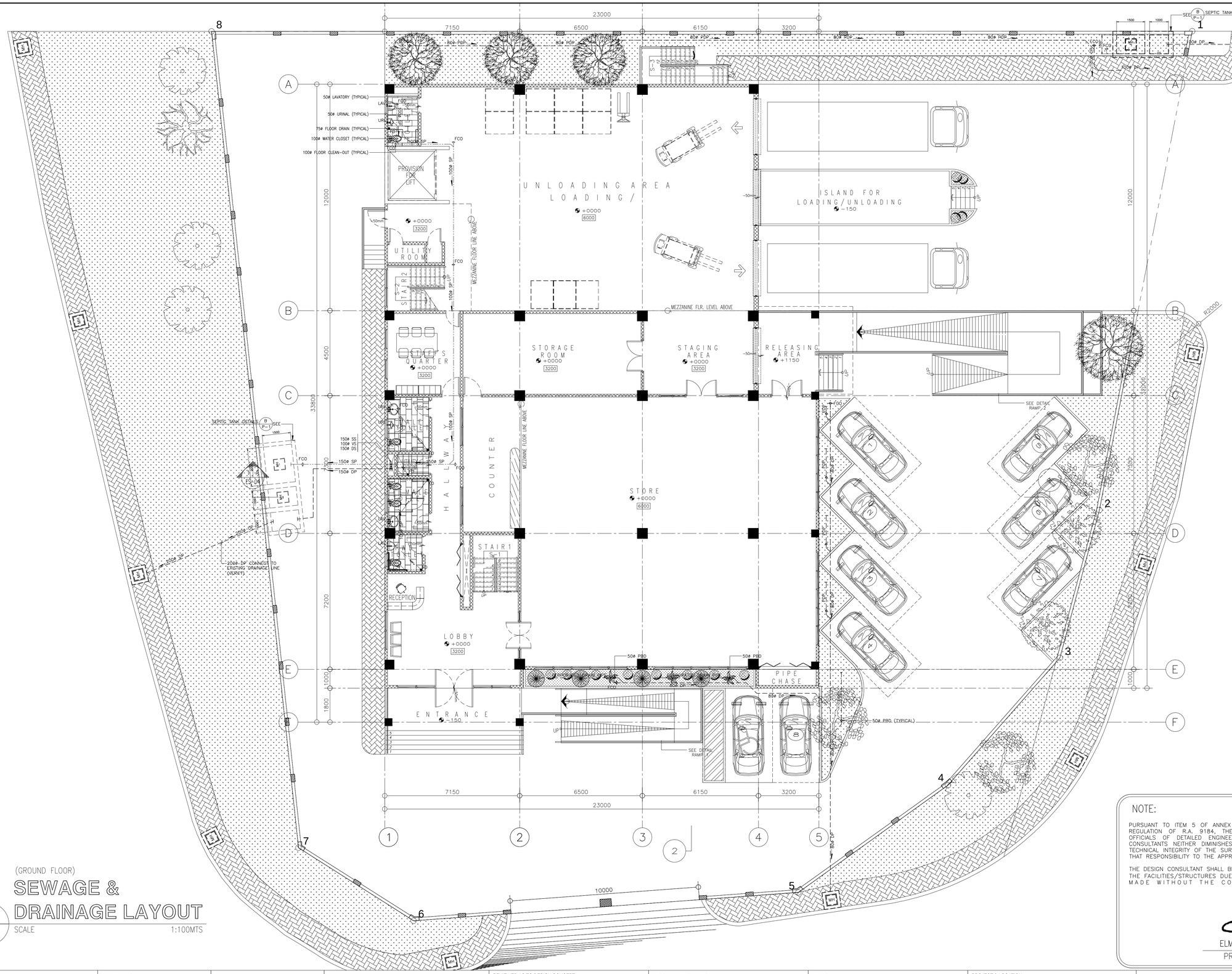

LEGENDS & ABBREVIATION

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GT	GREASE TRAP
SP	SEWER PIPE
VS	VENT STACK
WC	WATER CLOSET
SP	SOIL PIPE
DP	DRAIN PIPE
SS	SOIL STACK
DS	DOWN SPOUT
VTR	VENT THRU ROOF

(GROUND FLOOR)

SEWAGE & DRAINAGE LAYOUT

1 | A
P-2

SCALE 1:100MTS

NOTE:

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LEGENDS & ABBREVIATION

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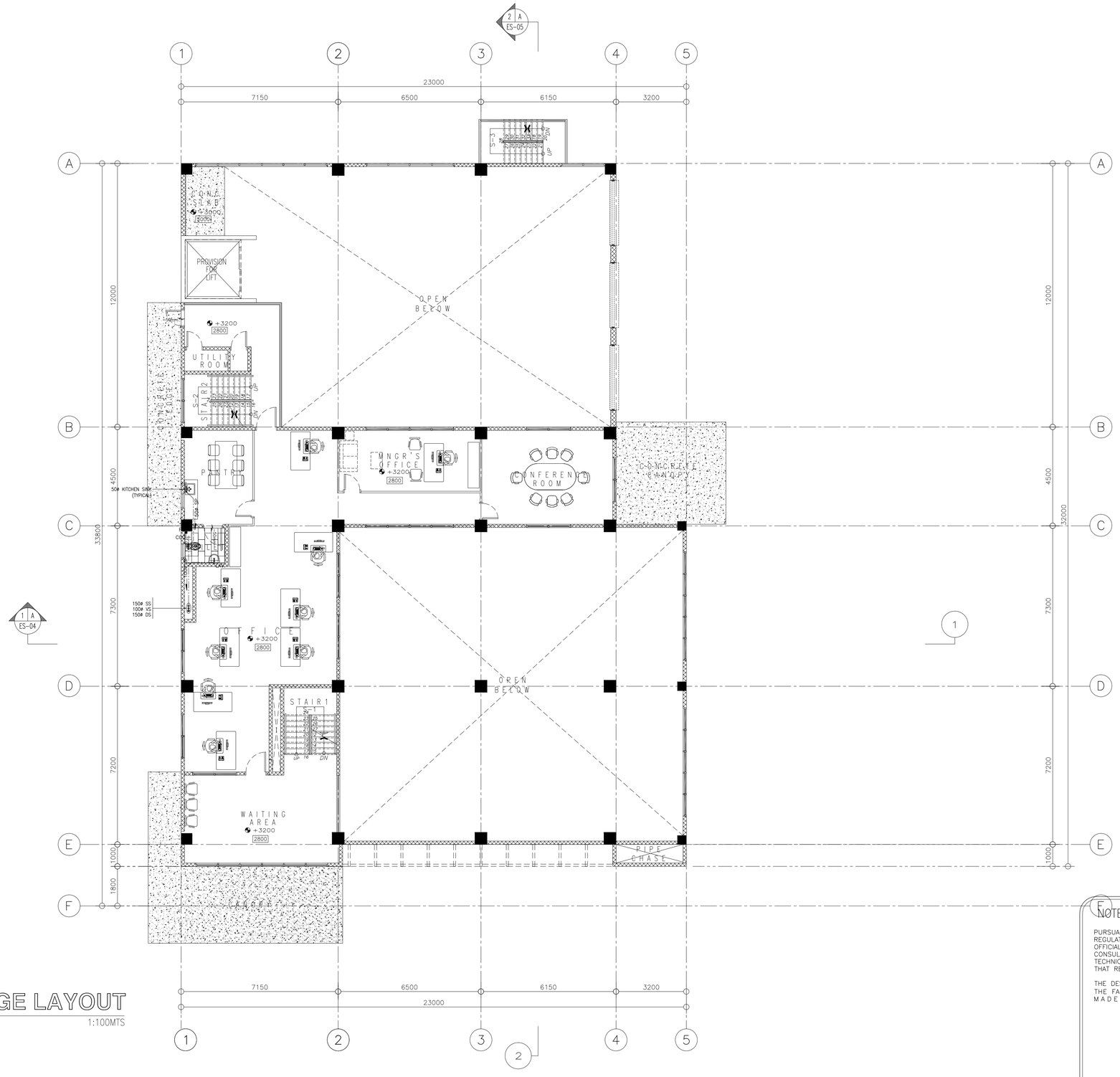

(MEZZANINE)

SEWAGE & DRAINAGE LAYOUT

2 A P-2

SCALE 1:100MTS

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TIN NO.: 136-637-451 — PLACE: MAKATI CITY	

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DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
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LEGENDS & ABBREVIATION

CCO	CEILING CLEAN-OUT
DP	DRAIN PIPE
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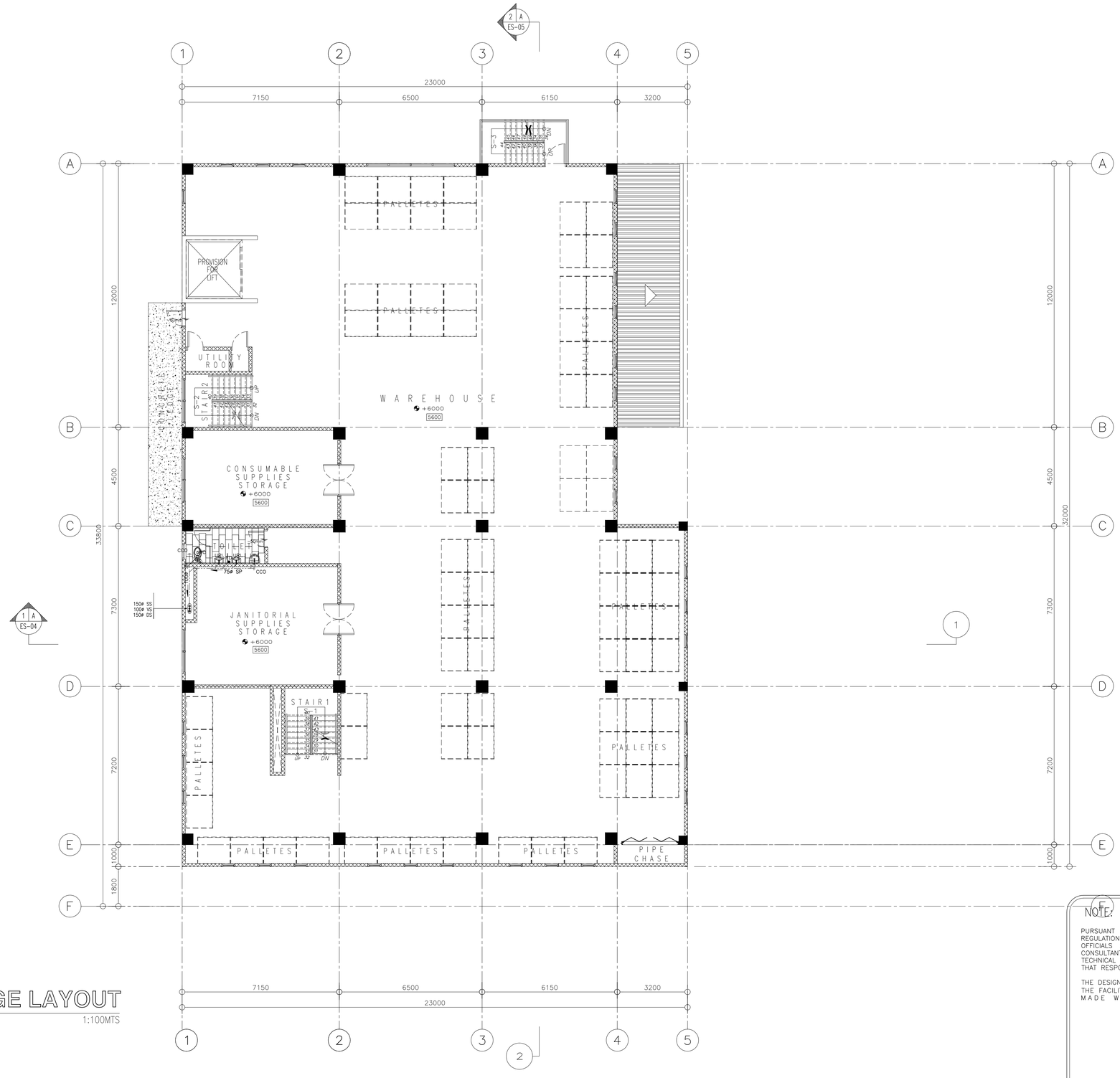

(SECOND FLOOR)

SEWAGE & DRAINAGE LAYOUT

3 A P-2

SCALE 1:100MTS

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SUBMITTED:
ELMER T. RAMONEDA
PROJECT MANAGER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:
JOSEPHINE P. ISTURIS
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN

RECOMMENDING APPROVAL:
(SEE COVER SHEET)
EDWIN C. MATANGUIHAN
OIC, ASST.DIRECTOR, BUREAU OF DESIGN

APPROVED:
(SEE COVER SHEET)
EMIL K. SADAIN, CESO I
UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II CARIG SUR, TUGUEGARAO CITY

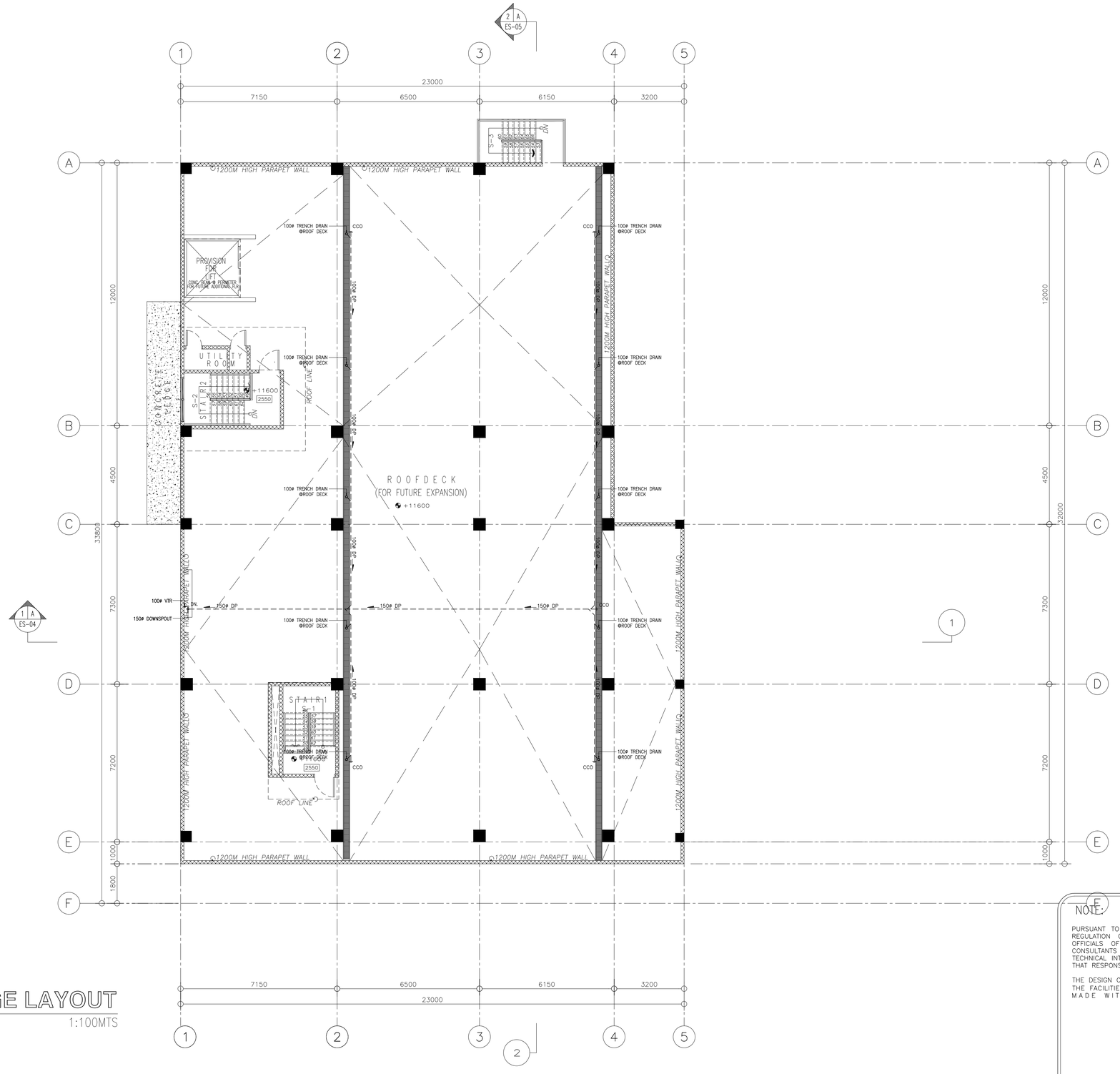
SHEET CONTENTS:
SECOND FLOOR
SEWAGE AND DRAINAGE LAYOUT
Scale 1:100m

SET NO.: PL

SHEET NO.: 5 / 11

LEGENDS & ABBREVIATION

CCO	CEILING CLEAN-OUT
DP	DRAIN PIPE
DS	DOWN SPOUT
FCO	FLOOR CLEAN-OUT
FD	FLOOR DRAIN
LAV	LAVATORY
SD	SHOWER DRAIN
KS	KITCHEN SINK
GT	GREASE TRAP
SP	SEWER PIPE
VS	VENT STACK
WC	WATER CLOSET
SP	SOIL PIPE
DP	DRAIN PIPE
SS	SOIL STACK
DS	DOWN SPOUT
VTR	VENT THRU ROOF



(ROOF DECK)

SEWAGE & DRAINAGE LAYOUT

4 A / P-2

SCALE 1:100MTS

NOTE:

PURSUANT TO ITEM 5 OF ANNEX 'A' OF THE REVISED IMPLEMENTING RULES AND REGULATION OF R.A. 9184, THE APPROVAL BY THE AUTHORIZED GOVERNMENT OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGNS UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGNS NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.

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URBAN ENGINEERS
CONSULTING CIVIL ENGINEERS
in joint venture with
J.F. CANCIO & Associates ENGINEERS CONSULTANTS
PTC Engineers & Associates

SANITARY ENGINEER:		SUBMITTED:
ERNESTO ANTONIO BATTAD JR		ELMER T. RAMONEDA
PRC NO.: 0000989	DATE: MAY 05, 2020	PROJECT MANAGER
PTR NO.: 7388963	DATE: JAN. 30, 2019	
TIN NO.: 136-637-451	PLACE: MAKATI CITY	

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:
JOSEPHINE P. ISTURIS	(SEE COVER SHEET) EDWIN C. MATANGUIHAN	(SEE COVER SHEET) EMIL K. SADAIN, CESO I
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	OIC, ASST.DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:	SHEET CONTENTS:	SET NO.	SHEET NO.
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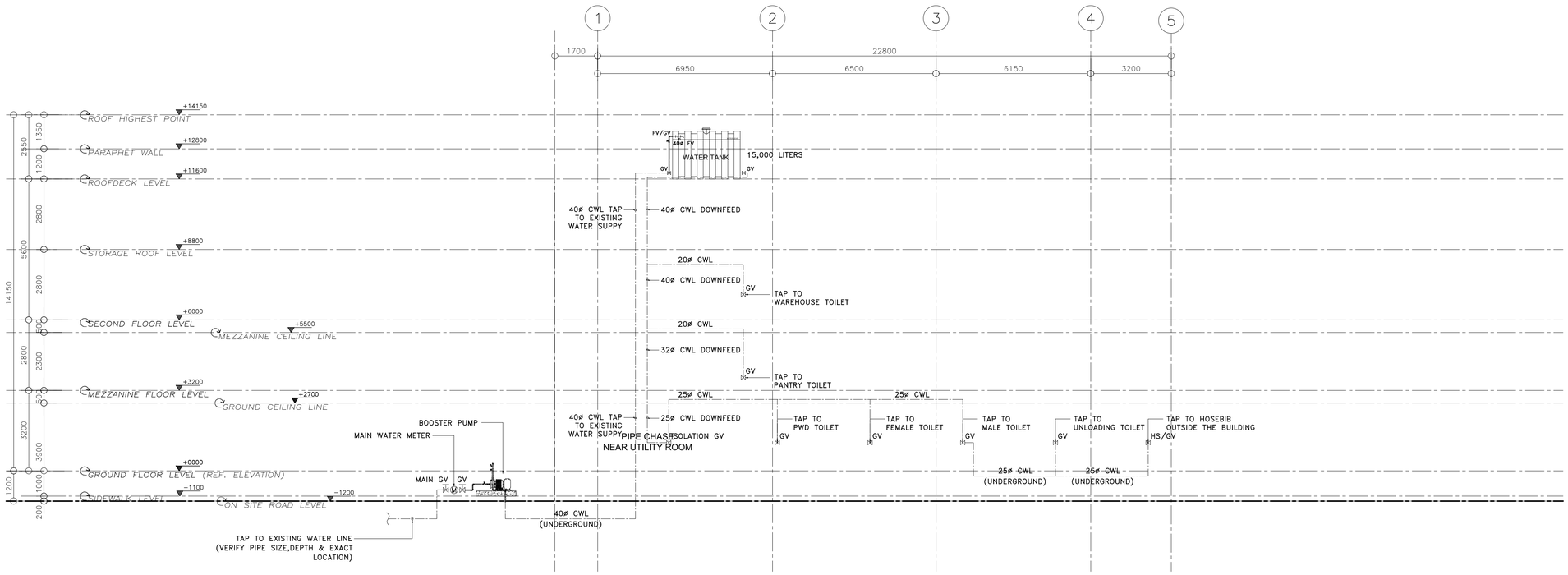
LEGENDS & ABBREVIATION

CWL	COLD WATER LINE
CWR	COLD WATER RISER
ø	DIAMETER
GV	GATE VALVE
HB	HOSE BIB
WF	WASH FOUNTAIN
WH	WATER HEATER
SM	SUB-METER



1 | A
P-2

SCHEMATIC DIAGRAM

WATER SYSTEM

SCALE 1:100MTS

NOTE:

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PTR NO.: 7388963	DATE: JAN. 30, 2019	
TIN NO.: 136-637-451	PLACE: MAKATI CITY	

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BONIFACIO DRIVE, PORT AREA, MANILA

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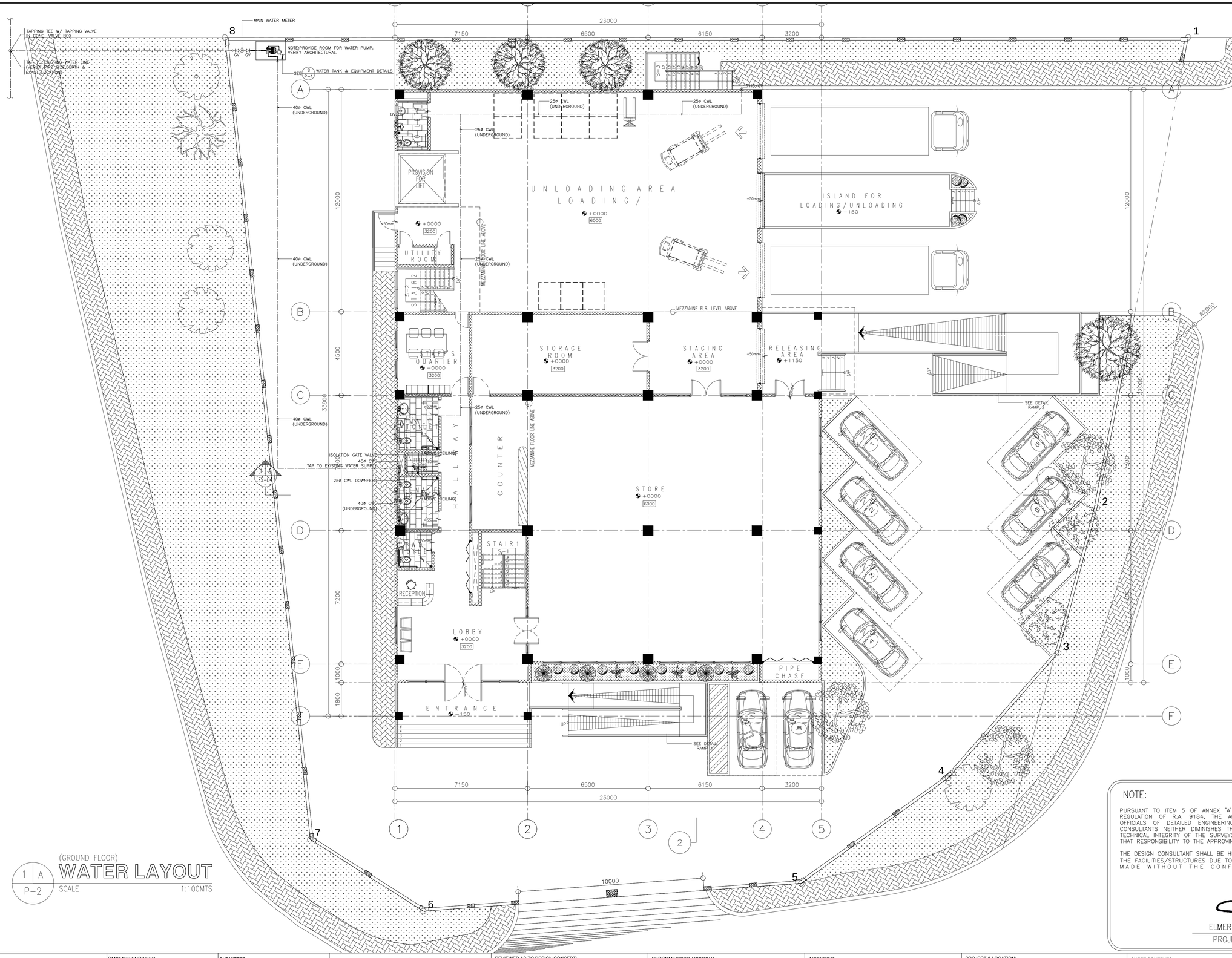

(GROUND FLOOR)

WATER LAYOUT

1 | A | P-2

SCALE 1:100MTS

LEGENDS & ABBREVIATION

CWL	COLD WATER LINE
CWR	COLD WATER RISER
ø	DIAMETER
GV	GATE VALVE
HB	HOSE BIB
WF	WASH FOUNTAIN
WH	WATER HEATER
SM	SUB-METER

NOTE:

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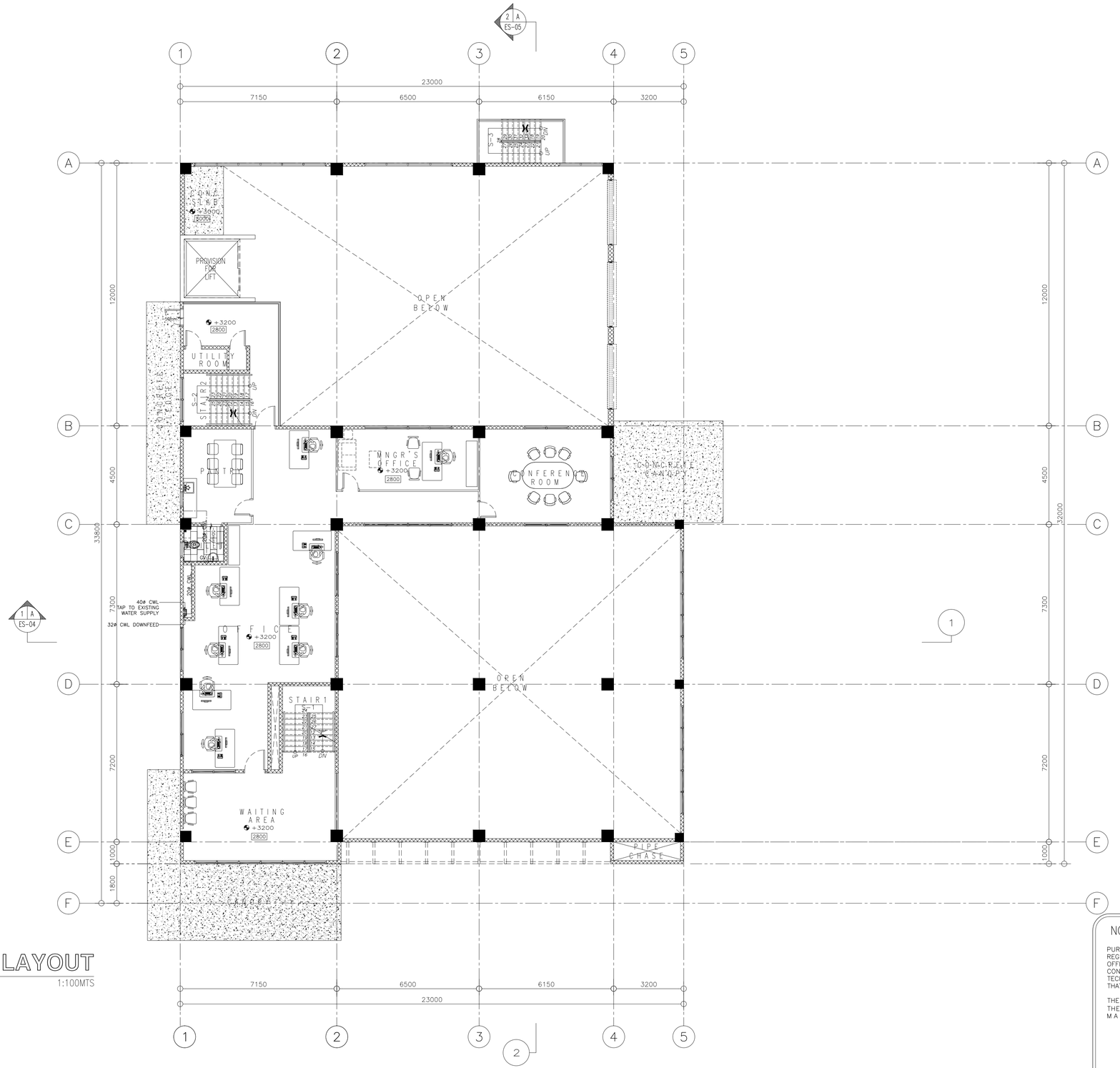
SHEET CONTENTS:
GROUND FLOOR
WATER LAYOUT
Scale 1:100m

SET NO.: PL

SHEET NO.: 8 / 11



(MEZZANINE)

WATER LAYOUT

2 A / P-2

SCALE 1:100MTS

LEGENDS & ABBREVIATION

CWL	COLD WATER LINE
CWR	COLD WATER RISER
ø	DIAMETER
GV	GATE VALVE
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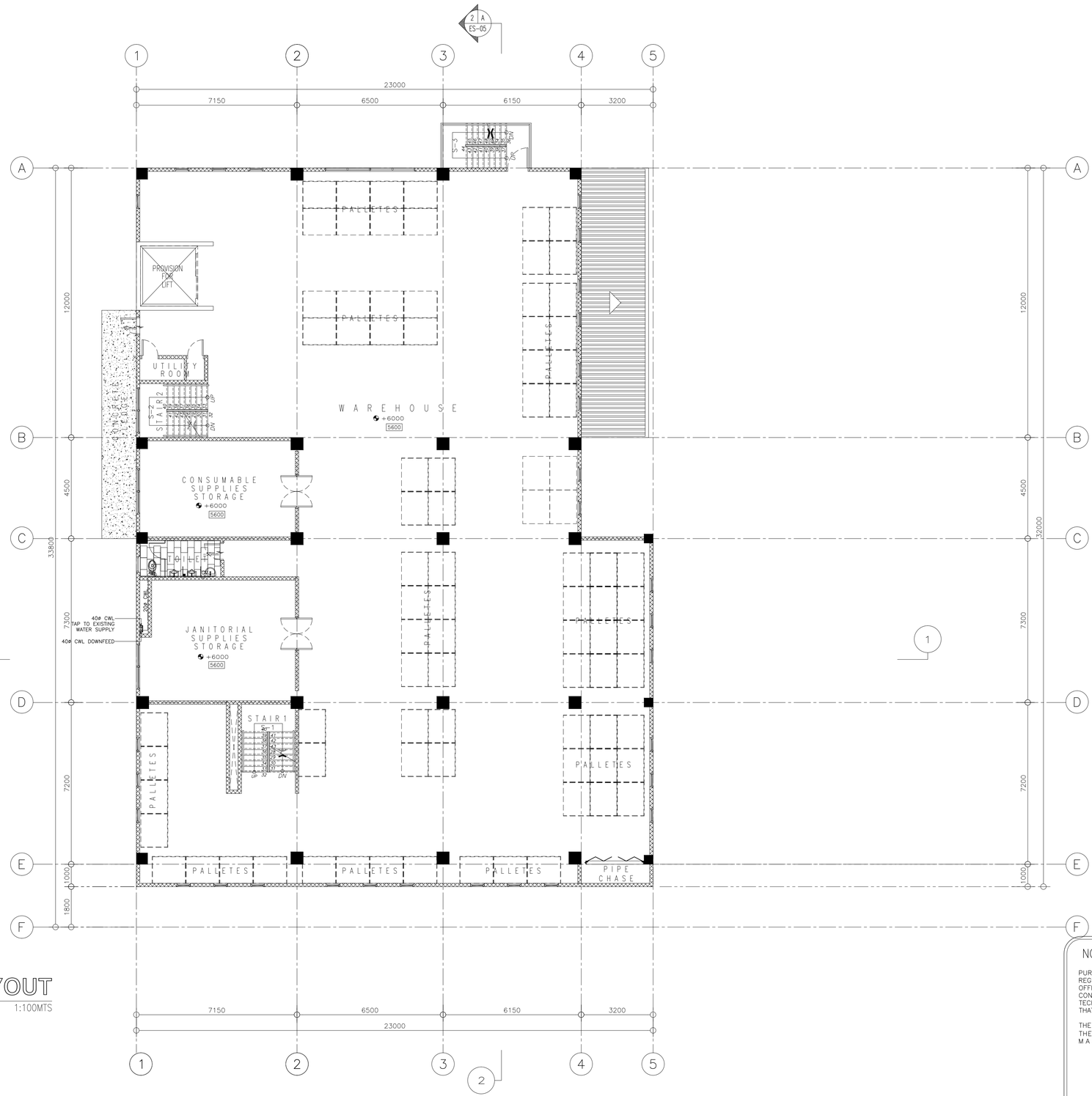
SHEET CONTENTS:
MEZZANINE
WATER LAYOUT
Scale 1:100m

SET NO.: PL

SHEET NO.: 9 / 11



(SECOND FLOOR)

WATER LAYOUT

3 | A | P-2

SCALE 1:100MTS

LEGENDS & ABBREVIATION

CWL	COLD WATER LINE
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SHEET CONTENTS:
SECOND FLOOR
WATER LAYOUT
Scale 1:100m

SET NO.: PL

SHEET NO.: 10 / 11

LEGENDS & ABBREVIATION

CWL	COLD WATER LINE
CWR	COLD WATER RISER
ø	DIAMETER
GV	GATE VALVE
HB	HOSE BIB
WF	WASH FOUNTAIN
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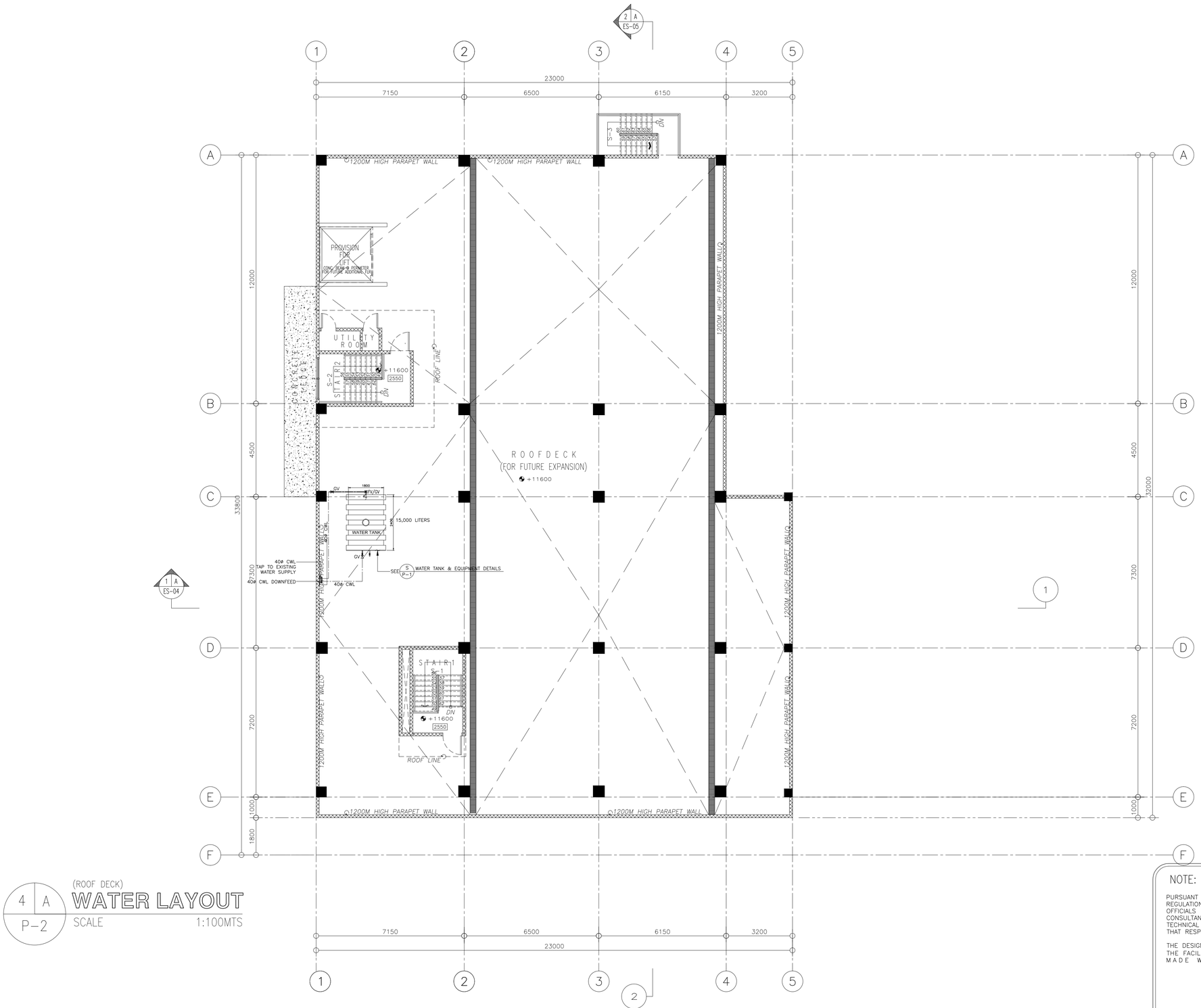

4 | A | P-2 (ROOF DECK)

WATER LAYOUT

SCALE 1:100MTS

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SHEET CONTENTS:
ROOF DECK
WATER LAYOUT
Scale 1:100m

SET NO.: PL

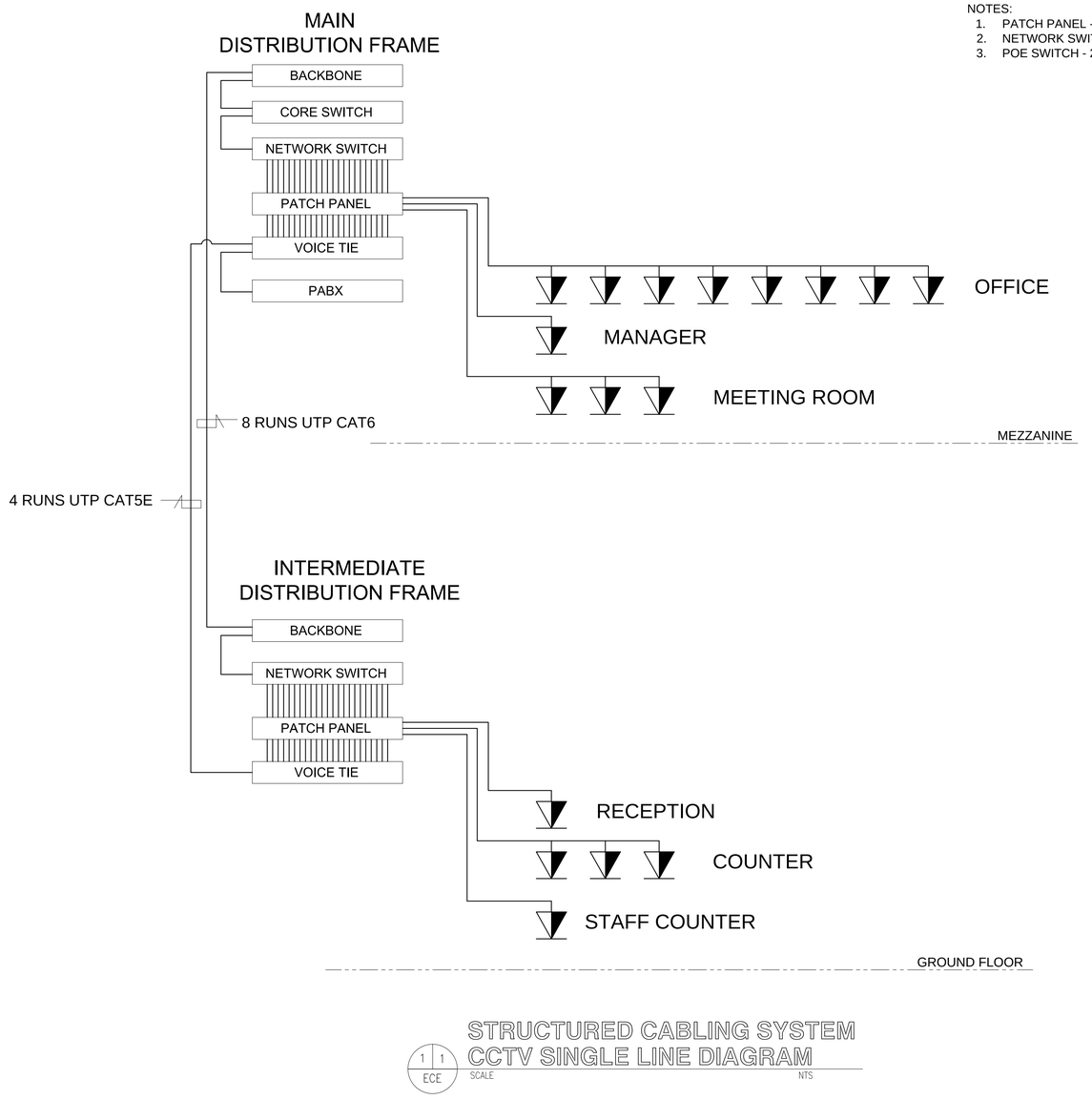
SHEET NO.: 11 / 11

GENERAL NOTES:

1. WIRING SHALL BE IN CONCEALED CONDUIT/TRUNKING UNLESS OTHERWISE SPECIFIED.
2. THE POSITION OF ALL TELCO OUTLETS AS SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY. THE EXACT POSITIONS SHALL BE DETERMINED ON SITE.
3. THE SPECIALITY CONTRACTOR SHALL BE RESPONSIBLE FOR THE LABELING OF ALL EQUIPMENT THROUGHOUT THE INSTALLATION.
4. THE SPECIALITY CONTRACTOR SHALL BE RESPONSIBLE TO LIAISE WITH THE LOCAL GOVERNMENT FOR ALL CLEARANCES, CABLE JOINTING, AND TESTING FOR THE INSTALLATION.
5. THE OVERALL RESISTANCE FOR THE EARTHING SYSTEM (ELECTRICAL) SHALL COMPLY WITH THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL AND ELECTRONICS CODE.
6. THE SPECIALTY CONTRACTOR SHALL BE RESPONSIBLE FOR SEALING OF ALL CABLE/CONDUIT PENETRATION OPENINGS BETWEEN FLOOR SLAB AND WALLS ETC. WITH APPROVED FIRE RATING MATERIAL/SEALANT.
7. ALL CABLES TO BE LAID IN HD uPVC PIPES SHALL BE ENCASED IN CONCRETE WHEN LAID ACROSS THE DRIVEWAY.
8. THE SPECIALTY CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPOTENTIAL GROUNDING/ALL METAL PARTS COMPLETED BY THE OTHER SUB-CONTRACTORS TO THE NEAREST BONDING TO ELECTRICAL PANEL.
9. THE SPECIALTY CONTRACTOR SHALL FURNISH ALL NECESSARY LABOR, MATERIALS AND EQUIPMENT FOR SATISFACTORY COMPLETION OF THE ENTIRE TELECOMMUNICATION AS GENERALLY DESCRIBED IN THE SPECIFICATION AND/OR SHOWN IN DRAWINGS.
10. ALL LOCATION OF EQUIPMENT AND CABLE ROUTES SHOWN ON THE DRAWING ARE INDICATIVE ONLY. THE EXACT LOCATIONS MUST BE COORDINATED ON SITE BEFORE INSTALLATION. FULLY COORDINATED SHOP DRAWINGS MUST BE SUBMITTED TO THE ENGINEER FOR THE APPROVAL BEFORE COMMENCEMENT OF WORK.
11. ALL INSTALLATIONS SHALL BE ACCORDANCE WITH THE LATEST EDITION OF PHILIPPINE ELECTRICAL/ELECTRONICSEIA AND BICSI CODE, THEY SHALL BE PAINTED WITH A COAT OF ANTI-RUST PAINT AND TWO COATS OF SEMI-GLOOSTEAK PAINT OF BEST QUALITY TO THE APPROVAL OF THE CONSULTANT.
12. ALL DISTRIBUTION FRAME CONDUITS WHICH ARE EXPOSED SHALL BE PAINTED WITH A COAT OF RUST-RESISTING PRIMER AND TWO COATS OF ELECTRONIC ORANGE OR AS SPECIFIED BY THE ARCHITECT.
13. EACH CIRCUIT SHALL BE TESTED FOR GROUNDING AND SHORTS BY MEANS OF INSULATION RESISTANCE TESTING INSTRUMENT APPLYING A VOLTAGE OF NOT LESS THAN 500V D.C ON CIRCUIT UNDER TEST.
14. CABLES FOR ESSENTIAL CIRCUITS SUCH AS EMERGENCY LIGHTING CIRCUITS & FIRE FIGHTING EQUIPMENT CIRCUITS ETC. SHALL NOT BE DRAWN TO THE SAME CONDUIT INTENDED FOR NORMAL CIRCUITS AS PER PEC.
15. ALL TELECOMMUNICATION OUTLET, TELCO EQUIPMENT , ETC. LOCATION SHOWN ARE INDICATIVE AND APPROXIMATE ONLY AND THE ELECTRICAL COORDINATE MUST COORDINATE WITH THE ARCHITECT AND THE INTERIOR DESIGNER, AS WELL AS EQUIPMENT SUPPLIERS.
16. THE SPECIALTY CONTRACTOR SHALL OBTAIN APPROVAL FROM STRUCTURAL ENGINEERS FOR PENETRATION THROUGH RC BEAMS AND FLOOR SLABS PRIOR TO CONSTRUCTION.
17. ALL CONDUIT LAYOUT AND INSTALLATION METHOD SHALL BE IDENTICAL IN ALL ROOMS AS MUCH AS POSSIBLE.
18. TESTING CERTIFICATES SHALL BE PROVIDED BY THE SPECIALTY CONTRACTOR PRIOR TO FINAL TURNOVER.
19. ALL MATERIALS/CABLES TO BE USED AND INSTALLATION METHOD SHALL COMPLY WITH THE TECHNICAL SPECIFICATION, STANDARDS, CODE OF PRACTICE AND AUTHORITY REQUIREMENT.
20. THE SPECIALTY CONTRACTOR IS REQUIRED TO SUBMIT DETAILS OF FINAL ARRANGEMENT AND DIMENSIONAL LAYOUT OF ALL EQUIPMENT IN RESPECTIVE ROOMS TO SUIT SITE CONDITIONS, ETC. FOR REVIEW BY THE CONSULTANT BEFORE COMMENCEMENT INSTALLATION.
21. TELECOMMUNICATION OUTLET SHALL BE CATEGORY 6 OR OTHERWISE STATED.
22. ALL ELECTRICAL/ELECTRONIC EQUIPMENT AND ACCESSORIES THAT ARE EXPOSED OR LESS THAN 2.0m AWAY FROM WATER SOURCES SHALL BE WEATHERPROOF TYPE.
23. COLOR FOR ALL TELECOMMUNICATION FACE PLATES SHALL BE AS PER ARCHITECTS/INTERIOR DESIGNERS SELECTION.
24. THE SPECIALTY CONTRACTOR SHALL NOTE THE POSITION OF TELECOM POINTS,AS SHOW ON DRAWINGS. THE ACTUAL POSITIONS SHALL BE BASED ON THE ARCHITECT'S OR INTERIOR DESIGNER'S DRAWING. THE ELECTRICAL CONTRACTOR SHALL DEEMED TO HAVE ALLOWED IN HIS TENDER PRICE FOR ALL NECESSARY SITE ADJUSTMENT TO SUIT THE FINAL POSITIONS.
25. THE SPECIALTY CONTRACTOR SHALL LIAISE WITH OTHER CONTRACTOR TO ENSURE THAT POWER SUPPLIES FOR ALL EQUIPMENT ARE ADEQUATELY PROVIDED TO SUIT THE SYSTEM REQUIREMENTS.
26. SPECIALTY CONTRACTOR SHALL LIAISE WITH INTERIOR DESIGNER/ARCHITECT ON THE EXACT LOCATION AND MOUNTING HEIGHTS (IF APPLICABLE) OF OUTLETS, MAIN DISTRIBUTION FRAME, INTERMEDIATE DISTRIBUTION FRAME BEFORE LAYING THE CONDUITS.
27. REFER TO THE SPECIFICATION FOR FULL DETAILS OF EQUIPMENT AND SPECIFICATIONS.
28. THE ELECTRONICS WORKS SHALL BE UNDER IMMEDIATE SUPERVISION OF A DULLY LICENSED ELECTRONICS ENGINEER AUTHORIZED AS PER R.A 9292.

DRAWING LIST

2 ECE VICINITY MAP
SCALE NTS



1 1 ECE STRUCTURED CABLING SYSTEM CCTV SINGLE LINE DIAGRAM
SCALE NTS

NOTES:
1. PATCH PANEL - 24 PORT CAT6
2. NETWORK SWITCH - 24 PORT
3. POE SWITCH - 24 PORT

LEGEND:

	VOICE AND DATA PORT
	DATA PORT
	100x100mm CABLE TRAY
	100x200mm CABLE TRAY
	100x300mm CABLE TRAY
	PIPING-OVERHEAD
	PIPING-EMBEDDED
	PIPING-OVERHEAD (FDAS)
	MDF/IDF CABINET
	SQUARE BOX
	BULLET CCTV (OUTDOOR)
	DOME CCTV (INDOOR)
CR	PROXIMITY READER
BR	BIOMETRIC READER
PB	PUSH BUTTON
EML	ELECTROMAGNETIC LOCK
BG	BREAK GLASS
AMP	AMPLIFIER
RM	REMOTE MICROPHONE
CS	CEILING SPEAKER
B	WALL SPEAKER
FACP	FIRE ALARM CONTROL PANEL
HD	HEAT DETECTOR
SD	SMOKE DETECTOR
	MANUAL CALL POINT
	HORN STROBE

NUMBER OF 4-pair UTP (t)	EMT CONDUIT (INSIDE DIAMETER)
t	15mm
2t-3t	20mm
4t-5t	25mm
6t-8t	32mm
9t-14t	40mm

NOTE:
PURSUANT TO ITEM 5 OF ANNEX 'A' OF THE REVISED IMPLEMENTING RULES AND REGULATION OF R.A. 9184, THE APPROVAL BY THE AUTHORIZED GOVERNMENT OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGNS UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGNS NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.

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ELMER T. RAMONEDA
PROJECT MANAGER

URBAN ENGINEERS
CONSULTING CIVIL ENGINEERS
in joint venture with
J.F. CANCIO & Associates ENGINEERS CONSULTANTS
PTC Engineers & Associates

PECE:
EDWIN F. DE GUZMAN
PECE NO.: 487 DATE: 15-SEPT-19
PTR NO.: 7333068 DATE: 03-JAN-19
PLACE ISSUED:MAKATI CITY TIN: 215-560-369

SUBMITTED:
ELMER T. RAMONEDA
PROJECT MANAGER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:
JOSEPHINE P. ISTURIS
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN

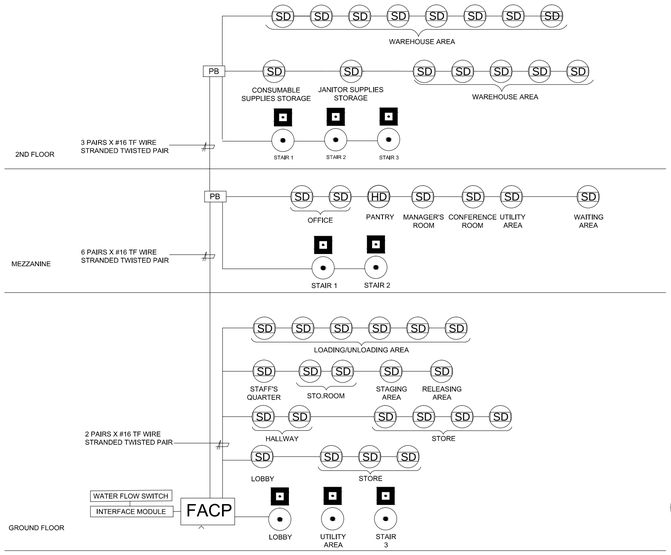
RECOMMENDING APPROVAL:
(SEE COVER SHEET)
EDWIN C. MATANGUIHAN
OIC, ASST. DIRECTOR, BUREAU OF DESIGN

APPROVED:
(SEE COVER SHEET)
EMIL K. SADAIN, CESO I
UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

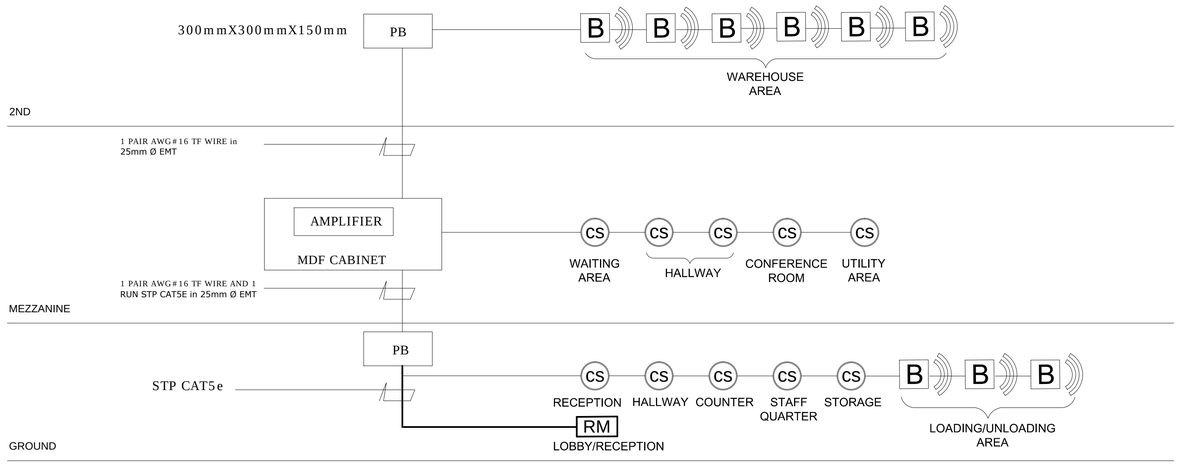
PROJECT & LOCATION:
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II
CARIG SUR, TUGUEGARAO CITY

SHEET CONTENTS:
GENERAL NOTES, DRAWING LIST
VICINITY MAP, & LEGENDS
STRUCTURED CABLING SYSTEM
CCTV SINGLE LINE DIAGRAM

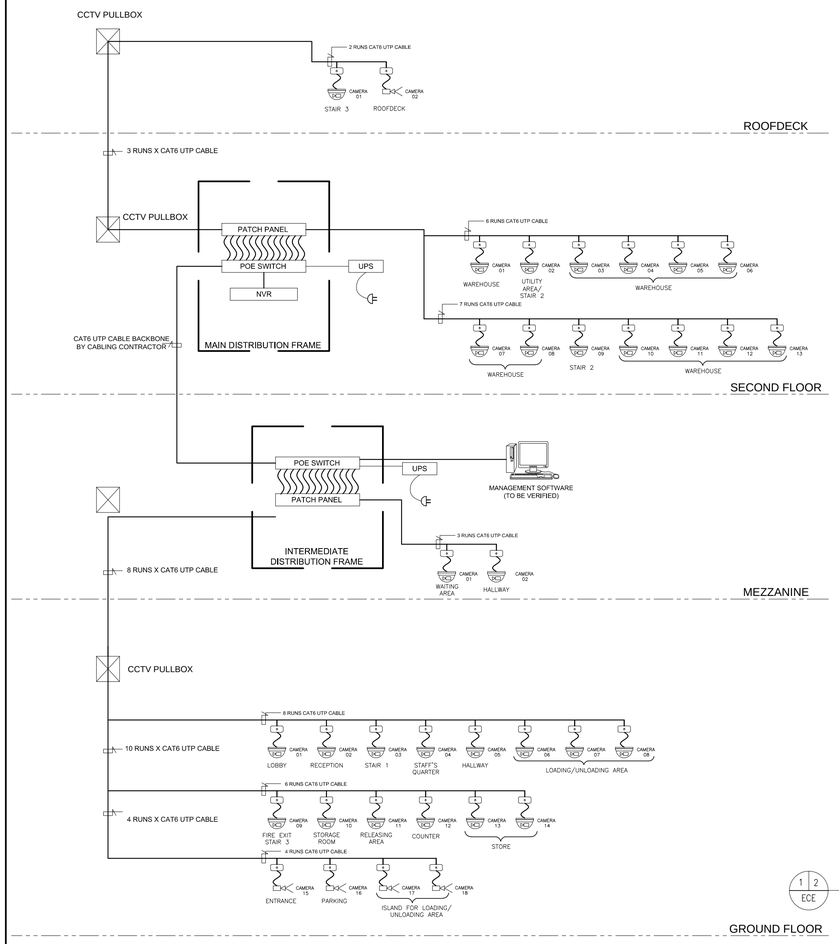
SET NO.: ECE
SHEET NO.: 1 / 12



3 2 ECE FDAS SINGLE LINE DIAGRAM
SCALE NTS

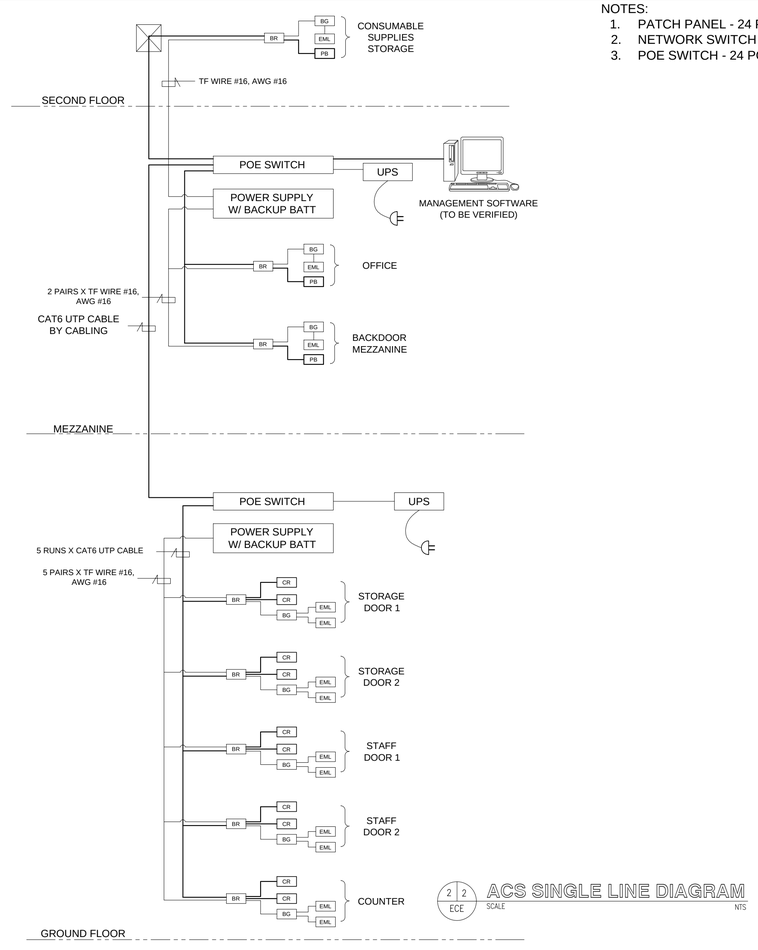


4 2 ECE PUBLIC ADDRESS SINGLE LINE DIAGRAM
SCALE NTS



NUMBER OF 4-pair UTP (t)	EMT CONDUIT (INSIDE DIAMETER)
t	15mm
2t-3t	20mm
4t-5t	25mm
6t-8t	32mm
9t-14t	40mm

1 2 ECE CCTV SINGLE LINE DIAGRAM
SCALE NTS



2 2 ECE ACS SINGLE LINE DIAGRAM
SCALE NTS

NOTES:
1. PATCH PANEL - 24 PORT CAT6
2. NETWORK SWITCH - 24 PORT
3. POE SWITCH - 24 PORT

LEGEND:	
	VOICE AND DATA PORT
	DATA PORT
	100x100mm CABLE TRAY
	100x200mm CABLE TRAY
	100x300mm CABLE TRAY
	PIPING-OVERHEAD
	PIPING-EMBEDDED
	PIPING-OVERHEAD (FDAS)
	MDF/IDF CABINET
	SQUARE BOX
	BULLET CCTV (OUTDOOR)
	DOME CCTV (INDOOR)
CR	PROXIMITY READER
BR	BIOMETRIC READER
PB	PUSH BUTTON
EML	ELECTROMAGNETIC LOCK
BG	BREAK GLASS
AMP	AMPLIFIER
RM	REMOTE MICROPHONE
CS	CEILING SPEAKER
B	WALL SPEAKER
FACP	FIRE ALARM CONTROL PANEL
HD	HEAT DETECTOR
SD	SMOKE DETECTOR
	MANUAL CALL POINT
	HORN STROBE

NOTE:
PURSUANT TO ITEM 5 OF ANNEX 'A' OF THE REVISED IMPLEMENTING RULES AND REGULATION OF R.A. 9184, THE APPROVAL BY THE AUTHORIZED GOVERNMENT OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGNS UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGNS NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.

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ELMER T. RAMONEDA
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PECE:
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PECE NO.: 487 — DATE: 15-SEPT-19
PTR NO.: 7333068 — DATE: 03-JAN-19
PLACE ISSUED MAKATI CITY — TIN: 215-560-369

SUBMITTED:
ELMER T. RAMONEDA
PROJECT MANAGER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:
JOSEPHINE P. ISTURIS
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN

RECOMMENDING APPROVAL:
(SEE COVER SHEET)
EDWIN C. MATANGUIHAN
OIC, ASST. DIRECTOR, BUREAU OF DESIGN

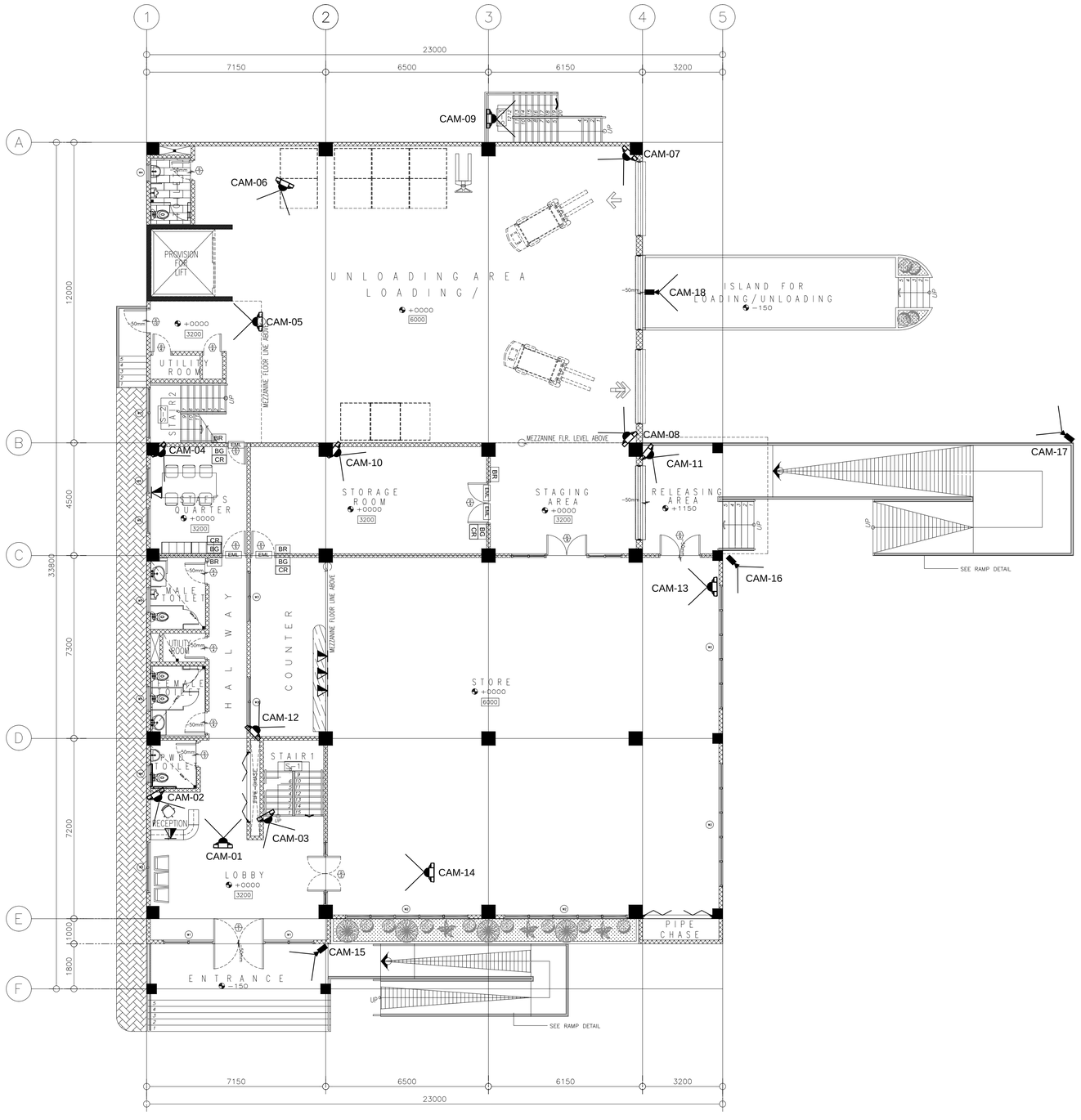
APPROVED:
(SEE COVER SHEET)
EMIL K. SADAIN, CESO I
UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II
CARIG SUR, TUGUEGARAO CITY

SHEET CONTENTS:
CCTV & ACS SINGLE LINE DIAGRAM
&
FDAS & PA SINGLE LINE DIAGRAM

SET NO.: ECE

SHEET NO.: 2 / 12



LEGEND:

	VOICE AND DATA PORT
	DATA PORT
	100x100mm CABLE TRAY
	100x200mm CABLE TRAY
	100x300mm CABLE TRAY
	PIPING-OVERHEAD
	PIPING-EMBEDDED
	PIPING-OVERHEAD (FDAS)
	MDF/IDF CABINET
	SQUARE BOX
	BULLET CCTV (OUTDOOR)
	DOME CCTV (INDOOR)
CR	PROXIMITY READER
BR	BIOMETRIC READER
PB	PUSH BUTTON
EML	ELECTROMAGNETIC LOCK
BG	BREAK GLASS
AMP	AMPLIFIER
RM	REMOTE MICROPHONE
CS	CEILING SPEAKER
B	WALL SPEAKER
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HD	HEAT DETECTOR
SD	SMOKE DETECTOR
	MANUAL CALL POINT
	HORN STROBE

NOTE:

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ELMER T. RAMONEDA
PROJECT MANAGER

VOICE/DATA, ACCESS CONTROL & CCTV DEVICE LAYOUT

GROUND FLOOR PLAN

1 | 3
ECE

SCALE 1:100MTS

URBAN ENGINEERS
CONSULTING CIVIL ENGINEERS
in joint venture with
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PECE:	SUBMITTED:
EDWIN F. DE GUZMAN	ELMER T. RAMONEDA
PECE NO.: 487 / DATE: 15-SEPT-19	PROJECT MANAGER
PTR NO.: 7333068 / DATE: 03-JAN-19	
PLACE ISSUED:MAKATI CITY / TIN: 215-560-369	

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:
JOSEPHINE P. ISTURIS	(SEE COVER SHEET) **EDWIN C. MATANGUIHAN**	(SEE COVER SHEET) **EMIL K. SADAIN, CESO I**
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	OIC, ASST. DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

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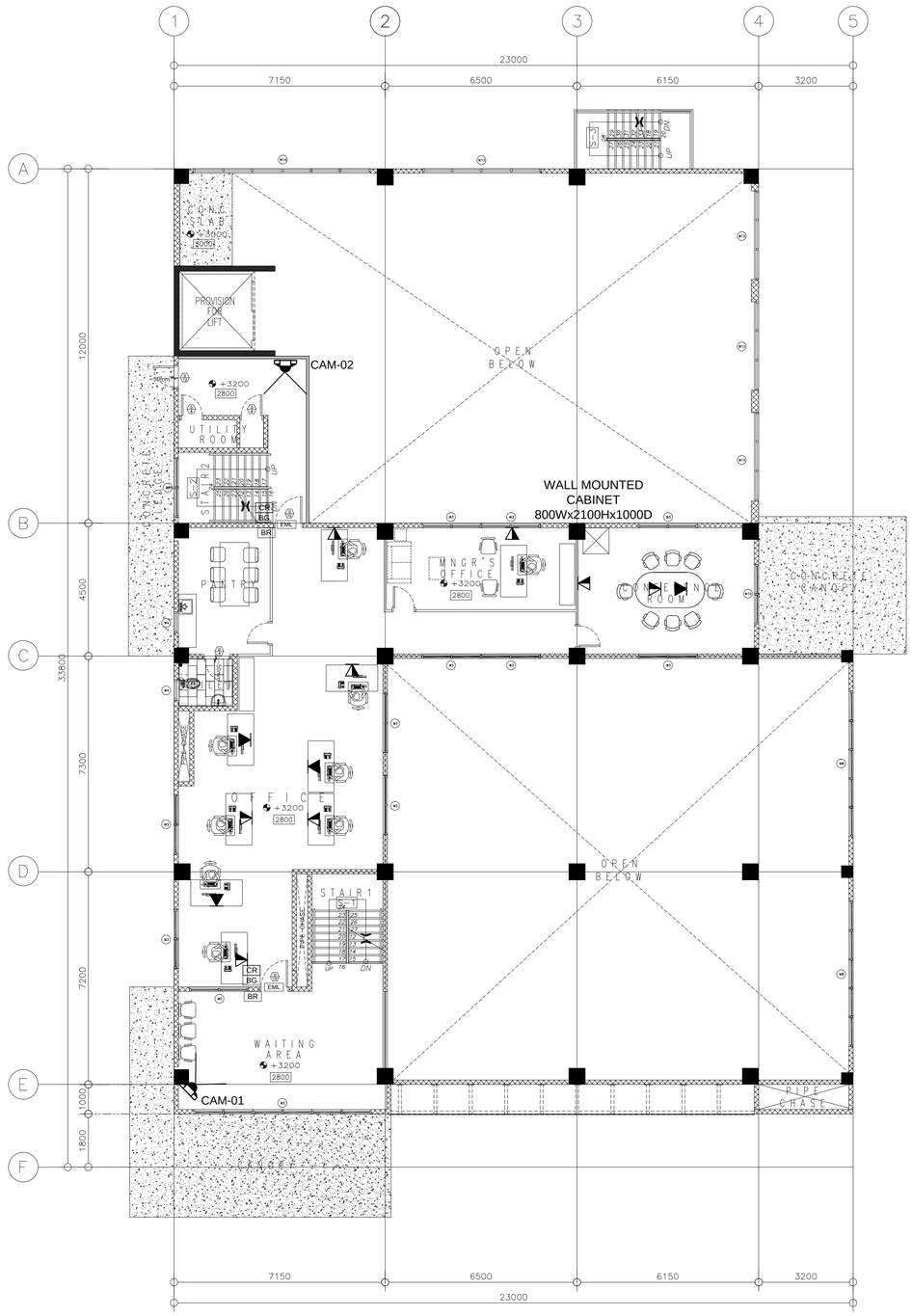
SHEET CONTENTS:
VOICE / DATA, ACCESS CONTROL & CCTV LAYOUT - GROUND FLOOR

SET NO.: ECE

SHEET NO.: 03 / 12



LEGEND:	
	VOICE AND DATA PORT
	DATA PORT
	100x100mm CABLE TRAY
	100x200mm CABLE TRAY
	100x300mm CABLE TRAY
	PIPING-OVERHEAD
	PIPING-EMBEDDED
	PIPING-OVERHEAD (FDAS)
	MDF/IDF CABINET
	SQUARE BOX
	BULLET CCTV (OUTDOOR)
	DOME CCTV (INDOOR)
CR	PROXIMITY READER
BR	BIOMETRIC READER
PB	PUSH BUTTON
EML	ELECTROMAGNETIC LOCK
BG	BREAK GLASS
AMP	AMPLIFIER
RM	REMOTE MICROPHONE
CS	CEILING SPEAKER
B	WALL SPEAKER
FACP	FIRE ALARM CONTROL PANEL
HD	HEAT DETECTOR
SD	SMOKE DETECTOR
	MANUAL CALL POINT
	HORN STROBE

VOICE/DATA, ACCESS CONTROL & CCTV DEVICE LAYOUT

MEZZANINE FLOOR PLAN

1 | 4
ECE

SCALE 1:100MTS

NOTE:

PURSUANT TO ITEM 5 OF ANNEX 'A' OF THE REVISED IMPLEMENTING RULES AND REGULATION OF R.A. 9184, THE APPROVAL BY THE AUTHORIZED GOVERNMENT OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGNS UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGNS NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.

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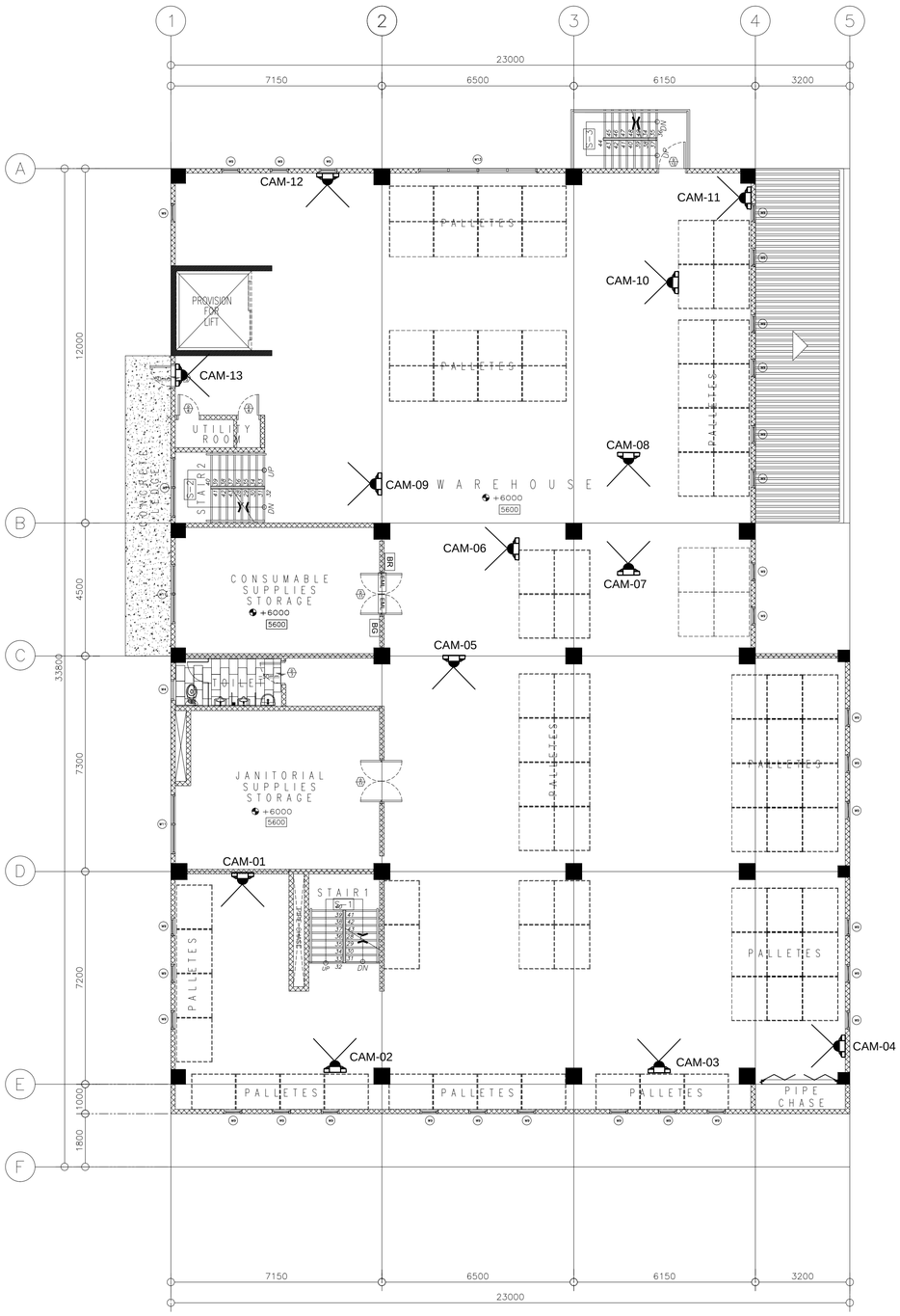
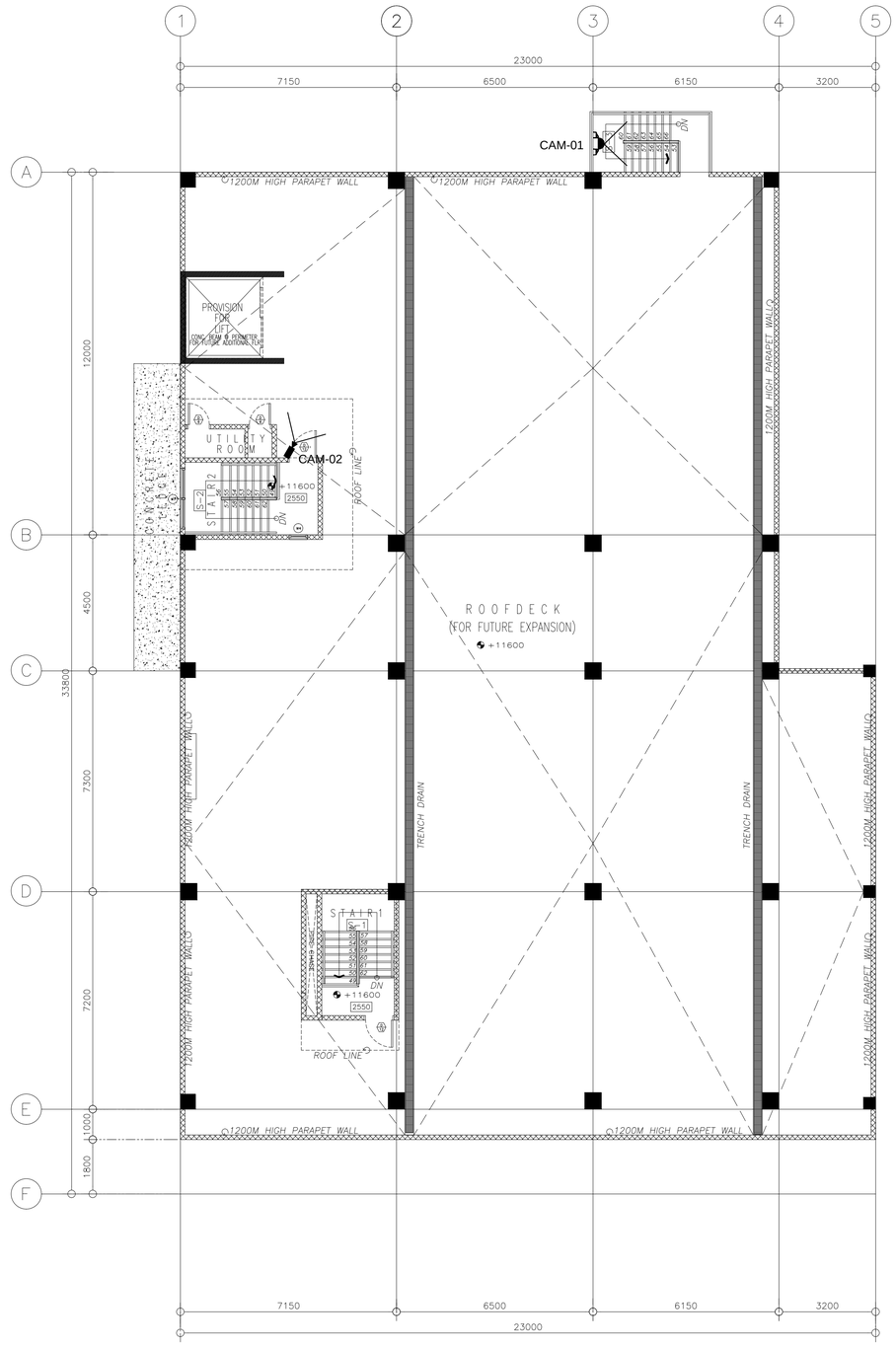
REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:
JOSEPHINE P. ISTURIS	(SEE COVER SHEET) EDWIN C. MATANGUIHAN	(SEE COVER SHEET) EMIL K. SADAIN, CESO I
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	OIC, ASST. DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:	SHEET CONTENTS:	SET NO.	SHEET NO.
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II CARIG SUR, TUGUEGARAO CITY	VOICE / DATA, ACCESS CONTROL & CCTV LAYOUT - MEZZANINE	ECE	04 / 12





LEGEND:	
	VOICE AND DATA PORT
	DATA PORT
	100x100mm CABLE TRAY
	100x200mm CABLE TRAY
	100x300mm CABLE TRAY
	PIPING-OVERHEAD
	PIPING-EMBEDDED
	PIPING-OVERHEAD (FDAS)
	MDF/IDF CABINET
	SQUARE BOX
	BULLET CCTV (OUTDOOR)
	DOME CCTV (INDOOR)
CR	PROXIMITY READER
BR	BIOMETRIC READER
PB	PUSH BUTTON
EML	ELECTROMAGNETIC LOCK
BG	BREAK GLASS
AMP	AMPLIFIER
RM	REMOTE MICROPHONE
CS	CEILING SPEAKER
B	WALL SPEAKER
FACP	FIRE ALARM CONTROL PANEL
HD	HEAT DETECTOR
SD	SMOKE DETECTOR
	MANUAL CALL POINT
	HORN STROBE

VOICE/DATA, ACCESS CONTROL & CCTV DEVICE LAYOUT

1 5 ECE

SECOND FLOOR PLAN

SCALE 1:100MTS

VOICE/DATA, ACCESS CONTROL & CCTV DEVICE LAYOUT

2 5 ECE

ROOF DECK PLAN

SCALE 1:100MTS

NOTE:

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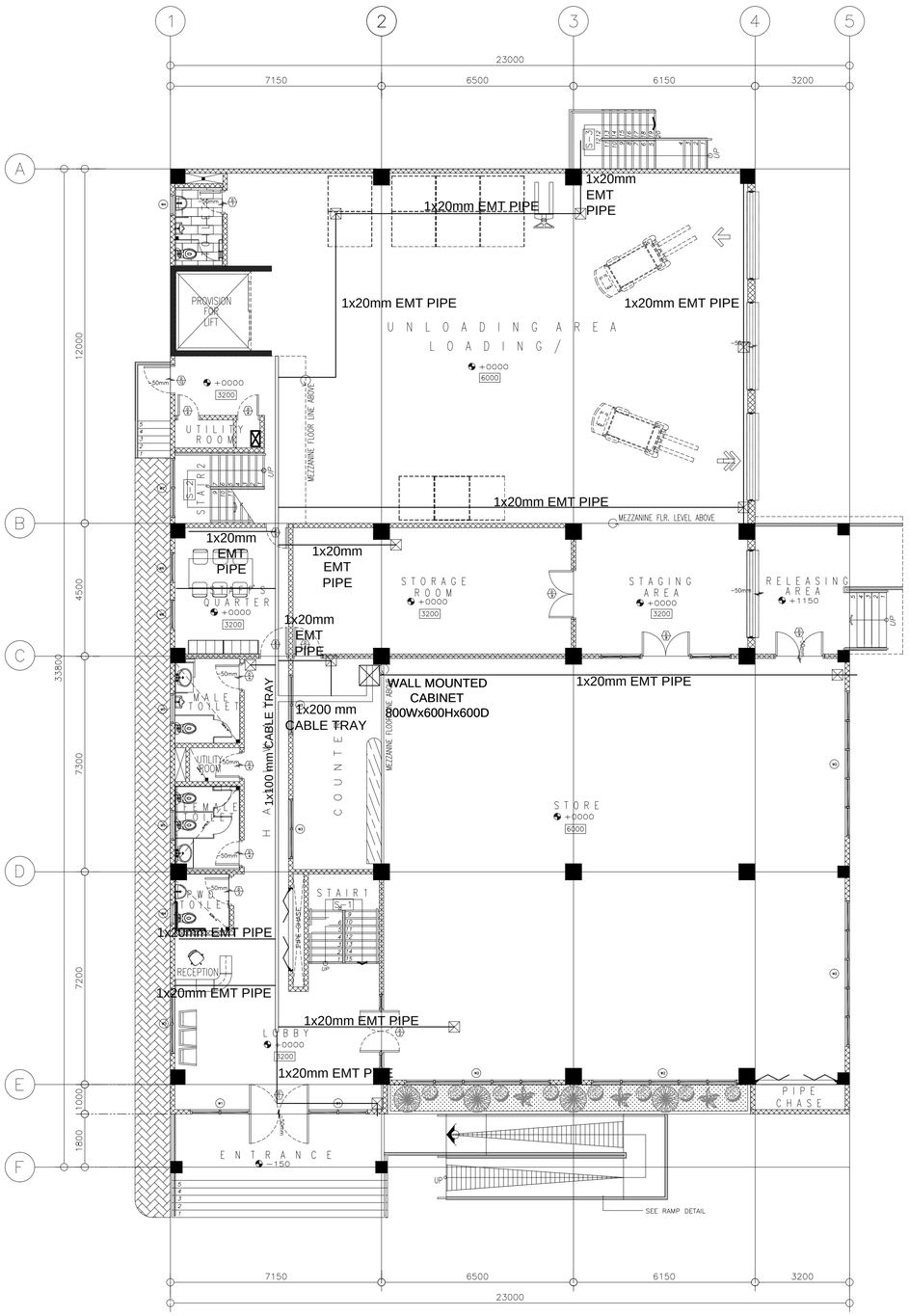
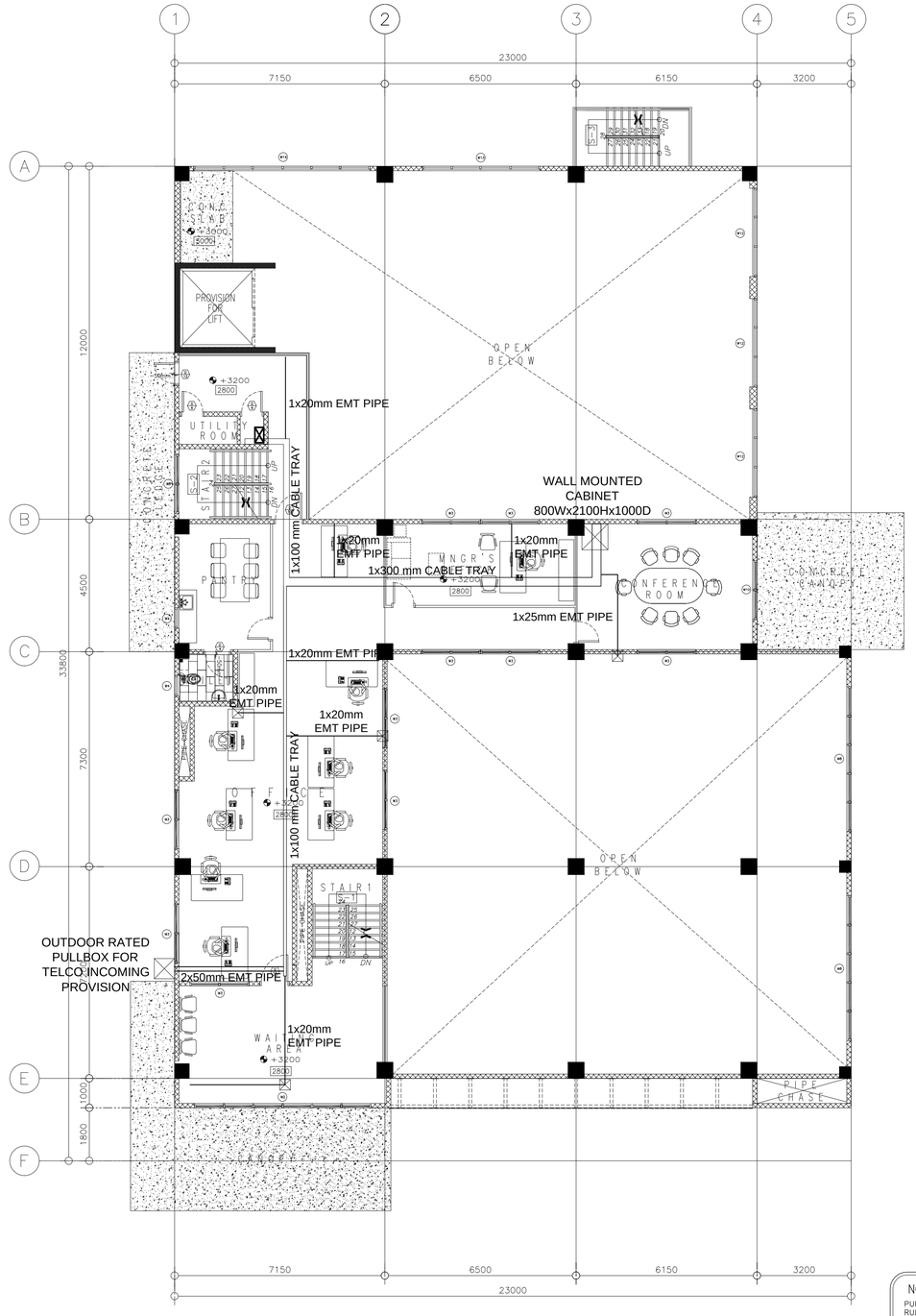
PECE:		SUBMITTED:
EDWIN F. DE GUZMAN		ELMER T. RAMONEDA
PECE NO.: 487	DATE: 15-SEPT-19	PROJECT MANAGER
PTR NO.: 7333068	DATE: 03-JAN-19	
PLACE ISSUED:MAKATI CITY	TIN: 215-560-369	

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:	PROJECT & LOCATION:	SHEET CONTENTS:	SET NO.	SHEET NO.
JOSEPHINE P. ISTURIS CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	(SEE COVER SHEET) EDWIN C. MATANGUIHAN OIC, ASST. DIRECTOR, BUREAU OF DESIGN	(SEE COVER SHEET) EMIL K. SADAIN, CESO I UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES	PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II CARIG SUR, TUGUEGARAO CITY	VOICE / DATA, ACCESS CONTROL & CCTV LAYOUT - SECOND FLOOR & ROOF DECK	ECE	05 12





LEGEND:	
	VOICE AND DATA PORT
	DATA PORT
	100x100mm CABLE TRAY
	100x200mm CABLE TRAY
	100x300mm CABLE TRAY
	PIPING-OVERHEAD
	PIPING-EMBEDDED
	PIPING-OVERHEAD (FDAS)
	MDF/IDF CABINET
	SQUARE BOX
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B	WALL SPEAKER
FACP	FIRE ALARM CONTROL PANEL
HD	HEAT DETECTOR
SD	SMOKE DETECTOR
	MANUAL CALL POINT
	HORN STROBE

SCS, ACS, & CCTV PIPING LAYOUT

GROUND FLOOR PLAN

1 6 ECE

SCALE 1:100MTS

SCS, ACS, & CCTV PIPING LAYOUT

MEZZANINE FLOOR PLAN

2 6 ECE

SCALE 1:100MTS

NOTE:

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PECE NO.: 487 — DATE: 15-SEPT-19	PROJECT MANAGER
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PLACE ISSUED MAKATI CITY — TIN: 215-560-369	

REPUBLIC OF THE PHILIPPINES
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BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:
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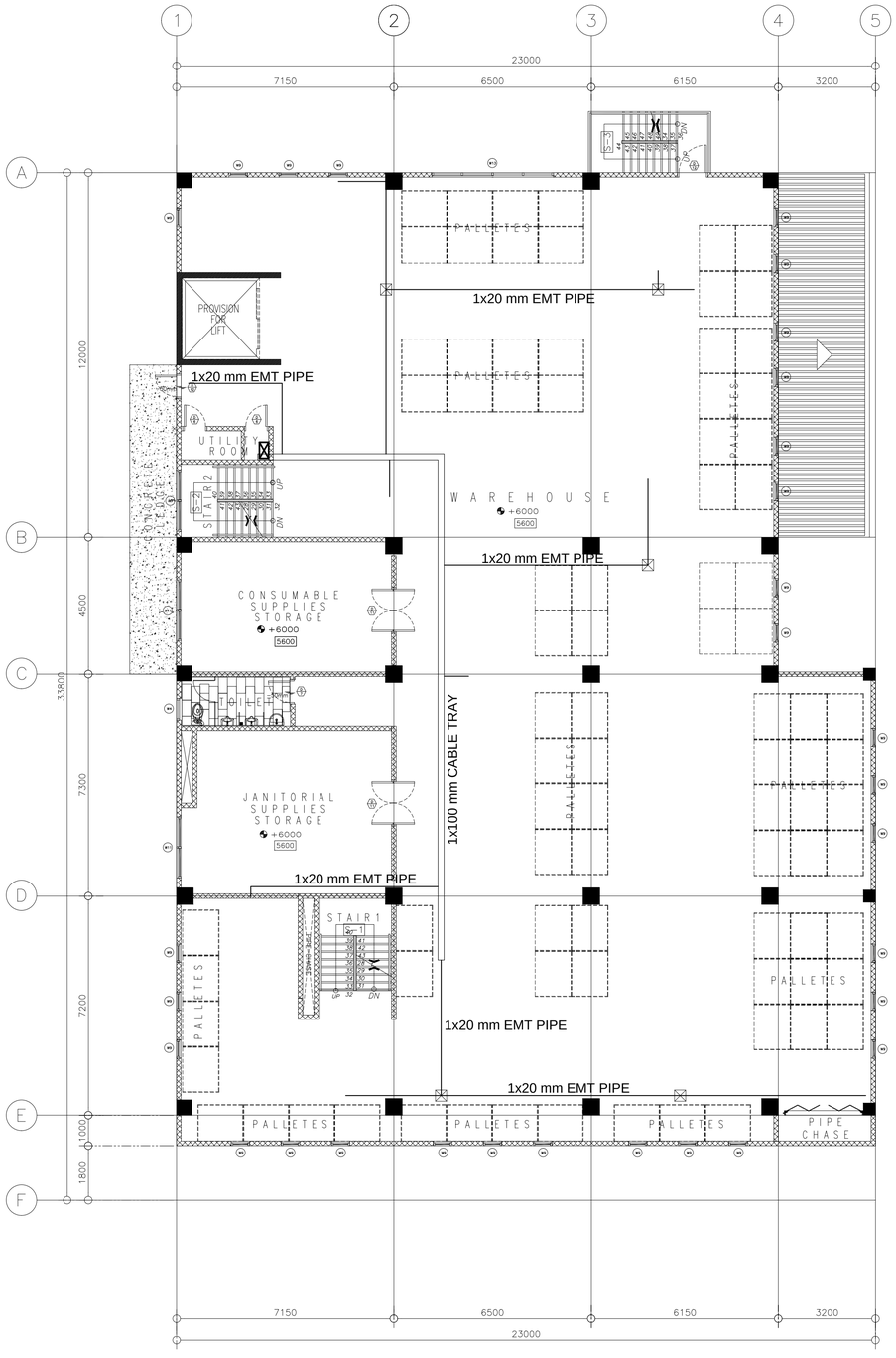
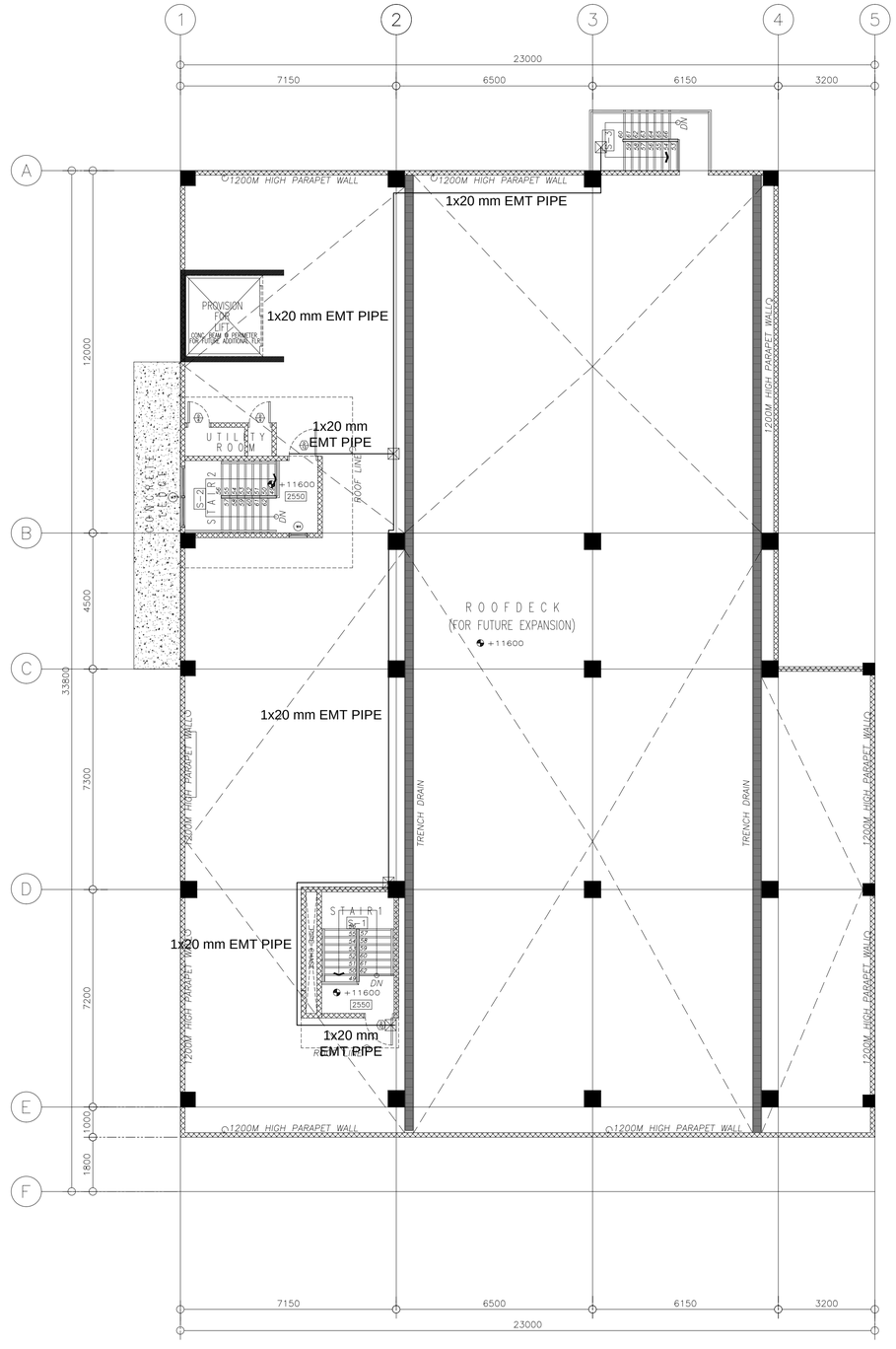
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	OIC, ASST. DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:	SHEET CONTENTS:	SET NO.	SHEET NO.
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II CARIG SUR, TUGUEGARAO CITY	SCS, ACS & CCTV TRUNKING & PIPING LAYOUT GROUND FLOOR & MEZZANINE	ECE	06 / 12





LEGEND:	
	VOICE AND DATA PORT
	DATA PORT
	100x100mm CABLE TRAY
	100x200mm CABLE TRAY
	100x300mm CABLE TRAY
	PIPING-OVERHEAD
	PIPING-EMBEDDED
	PIPING-OVERHEAD (FDAS)
	MDF/IDF CABINET
	SQUARE BOX
	BULLET CCTV (OUTDOOR)
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CS	CEILING SPEAKER
B	WALL SPEAKER
FACP	FIRE ALARM CONTROL PANEL
HD	HEAT DETECTOR
SD	SMOKE DETECTOR
	MANUAL CALL POINT
	HORN STROBE

SCS, ACS, & CCTV PIPING LAYOUT

SECOND FLOOR PLAN

1 7 ECE

SCALE 1:100MTS

SCS, ACS, & CCTV PIPING LAYOUT

ROOF DECK PLAN

2 7 ECE

SCALE 1:100MTS

NOTE:

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ELMER T. RAMONEDA
PROJECT MANAGER

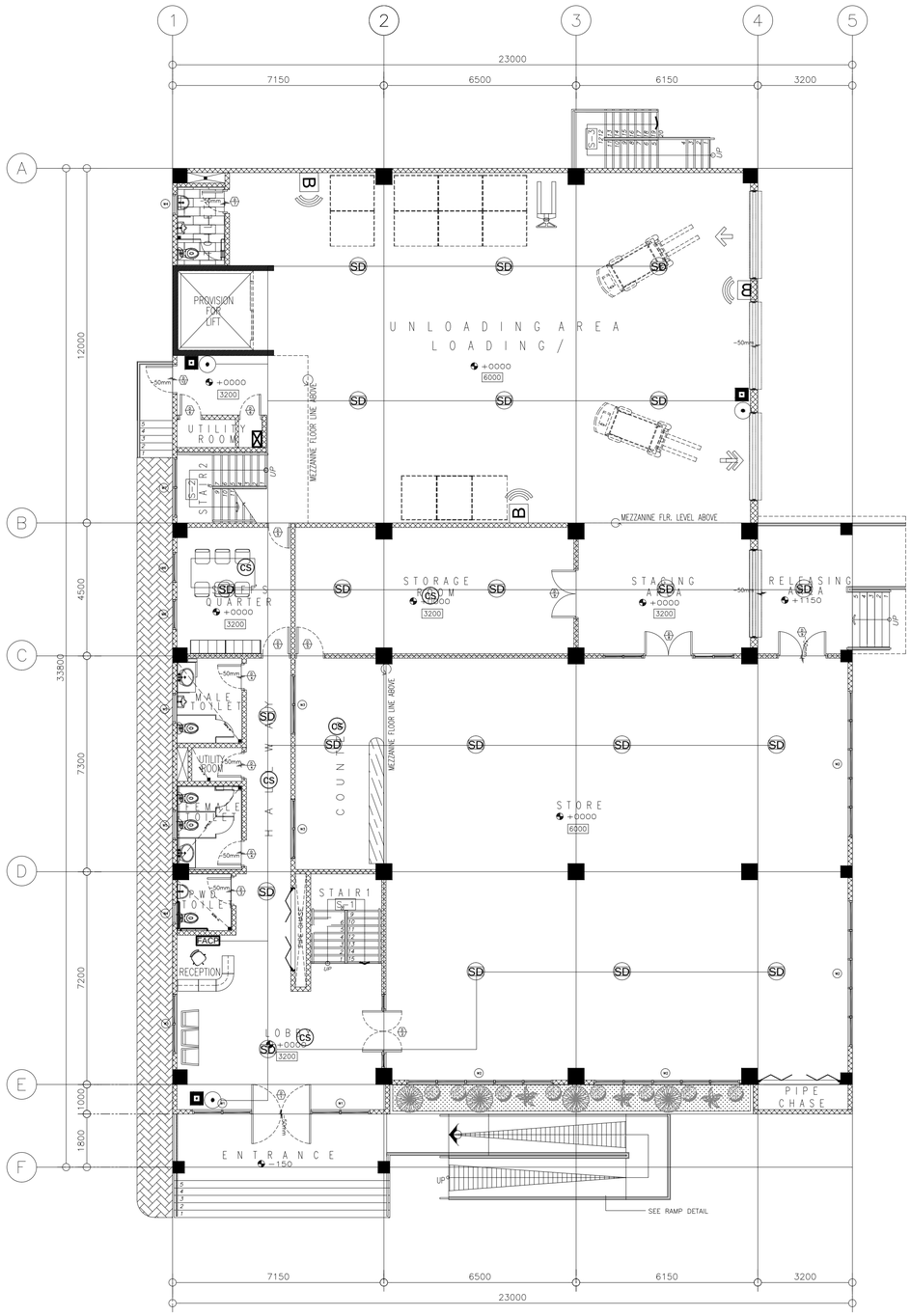
URBAN ENGINEERS
CONSULTING CIVIL ENGINEERS
in joint venture with
J.F. CANCIO & Associates ENGINEERS CONSULTANTS
PTC Engineers & Associates

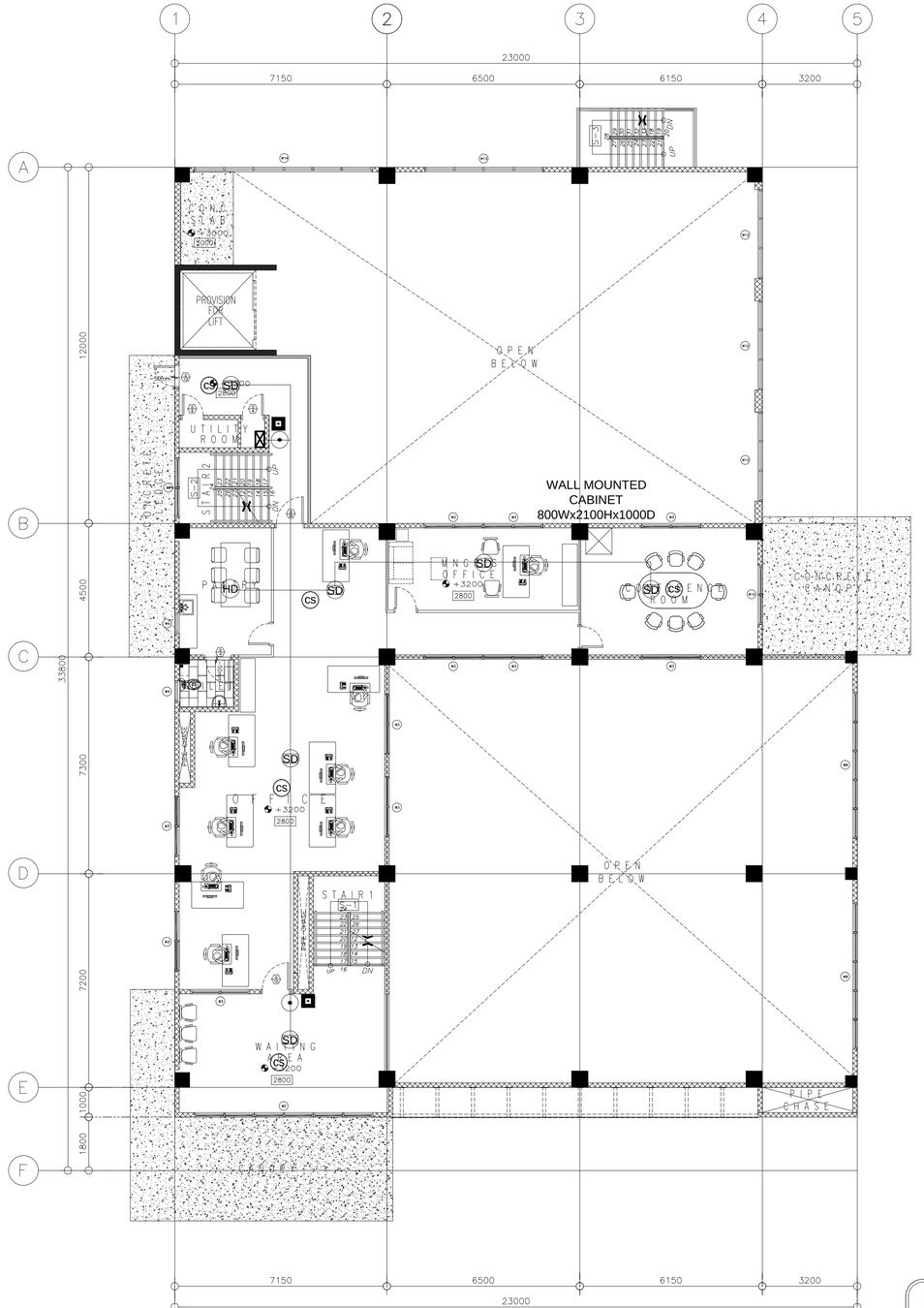
PECE:	SUBMITTED:
EDWIN F. DE GUZMAN	ELMER T. RAMONEDA
PECE NO.: 487 / DATE: 15-SEPT-19	PROJECT MANAGER
PTR NO.: 7330068 / DATE: 03-JAN-19	
PLACE ISSUED MAKATI CITY / TIN: 215-560-369	

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:
JOSEPHINE P. ISTURIS	(SEE COVER SHEET) EDWIN C. MATANGUIHAN	(SEE COVER SHEET) EMIL K. SADAIN, CESO I
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	OIC, ASST. DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:	SHEET CONTENTS:	SET NO.	SHEET NO.
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II CARIG SUR, TUGUEGARAO CITY	SCS, ACS & CCTV TRUNKING & PIPING LAYOUT SECOND FLOOR & ROOF DECK	ECE	07 / 12





LEGEND:	
	VOICE AND DATA PORT
	DATA PORT
	100x100mm CABLE TRAY
	100x200mm CABLE TRAY
	100x300mm CABLE TRAY
	PIPING-OVERHEAD
	PIPING-EMBEDDED
	PIPING-OVERHEAD (FDAS)
	MDF/IDF CABINET
	SQUARE BOX
	BULLET CCTV (OUTDOOR)
	DOME CCTV (INDOOR)
CR	PROXIMITY READER
BR	BIOMETRIC READER
PB	PUSH BUTTON
EML	ELECTROMAGNETIC LOCK
BG	BREAK GLASS
AMP	AMPLIFIER
RM	REMOTE MICROPHONE
CS	CEILING SPEAKER
B	WALL SPEAKER
FACP	FIRE ALARM CONTROL PANEL
HD	HEAT DETECTOR
SD	SMOKE DETECTOR
	MANUAL CALL POINT
	HORN STROBE

PUBLIC ADDRESS & FDAS SYSTEM LAYOUT

GROUND FLOOR PLAN

1 | 8 ECE

SCALE 1:100MTS

PUBLIC ADDRESS & FDAS SYSTEM LAYOUT

MEZZANINE FLOOR PLAN

2 | 8 ECE

SCALE 1:100MTS

NOTE:

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PLACE ISSUED MAKATI CITY / TIN: 215-560-369	

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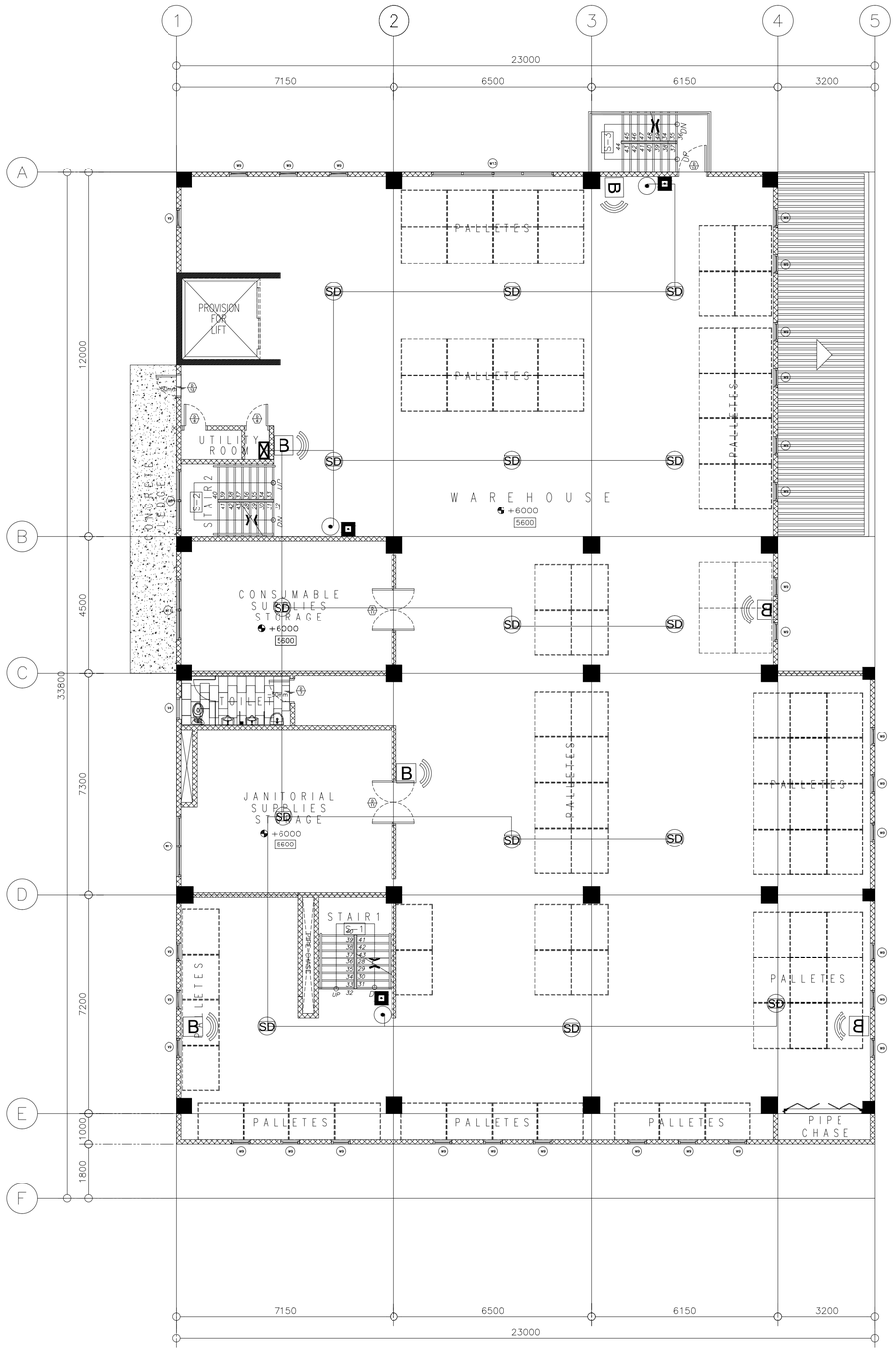

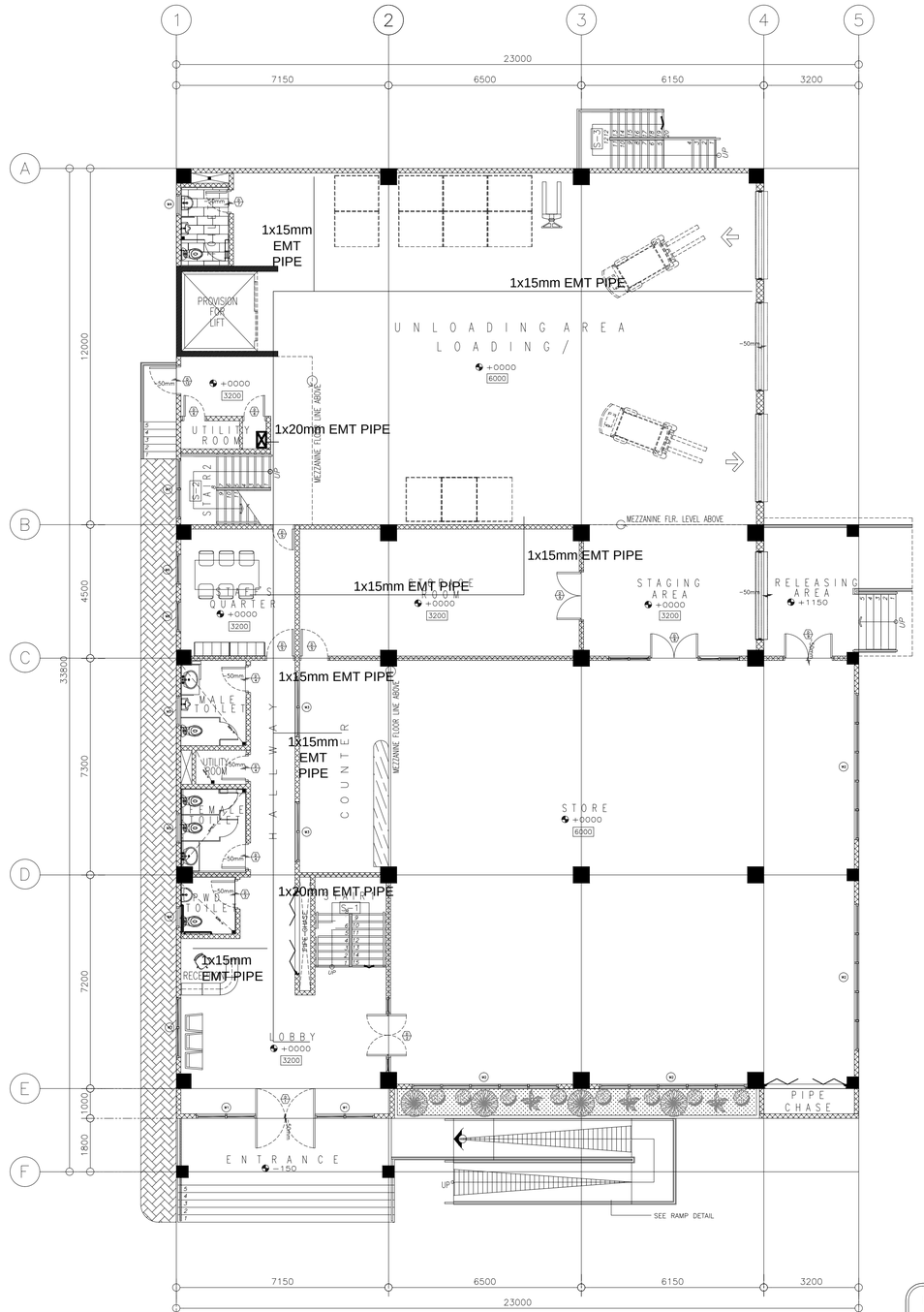

LEGEND:	
	VOICE AND DATA PORT
	DATA PORT
	100x100mm CABLE TRAY
	100x200mm CABLE TRAY
	100x300mm CABLE TRAY
	PIPING-OVERHEAD
	PIPING-EMBEDDED
	PIPING-OVERHEAD (FDAS)
	MDF/IDF CABINET
	SQUARE BOX
	BULLET CCTV (OUTDOOR)
	DOME CCTV (INDOOR)
CR	PROXIMITY READER
BR	BIOMETRIC READER
PB	PUSH BUTTON
EML	ELECTROMAGNETIC LOCK
BG	BREAK GLASS
AMP	AMPLIFIER
RM	REMOTE MICROPHONE
CS	CEILING SPEAKER
B	WALL SPEAKER
FACP	FIRE ALARM CONTROL PANEL
HD	HEAT DETECTOR
SD	SMOKE DETECTOR
	MANUAL CALL POINT
	HORN STROBE

PUBLIC ADDRESS & FDAS SYSTEM LAYOUT

SECOND FLOOR PLAN

1 | 9 | ECE

SCALE 1:100MTS

PUBLIC ADDRESS PIPING LAYOUT

GROUND FLOOR PLAN

2 | 9 | ECE

SCALE 1:100MTS

NOTE:

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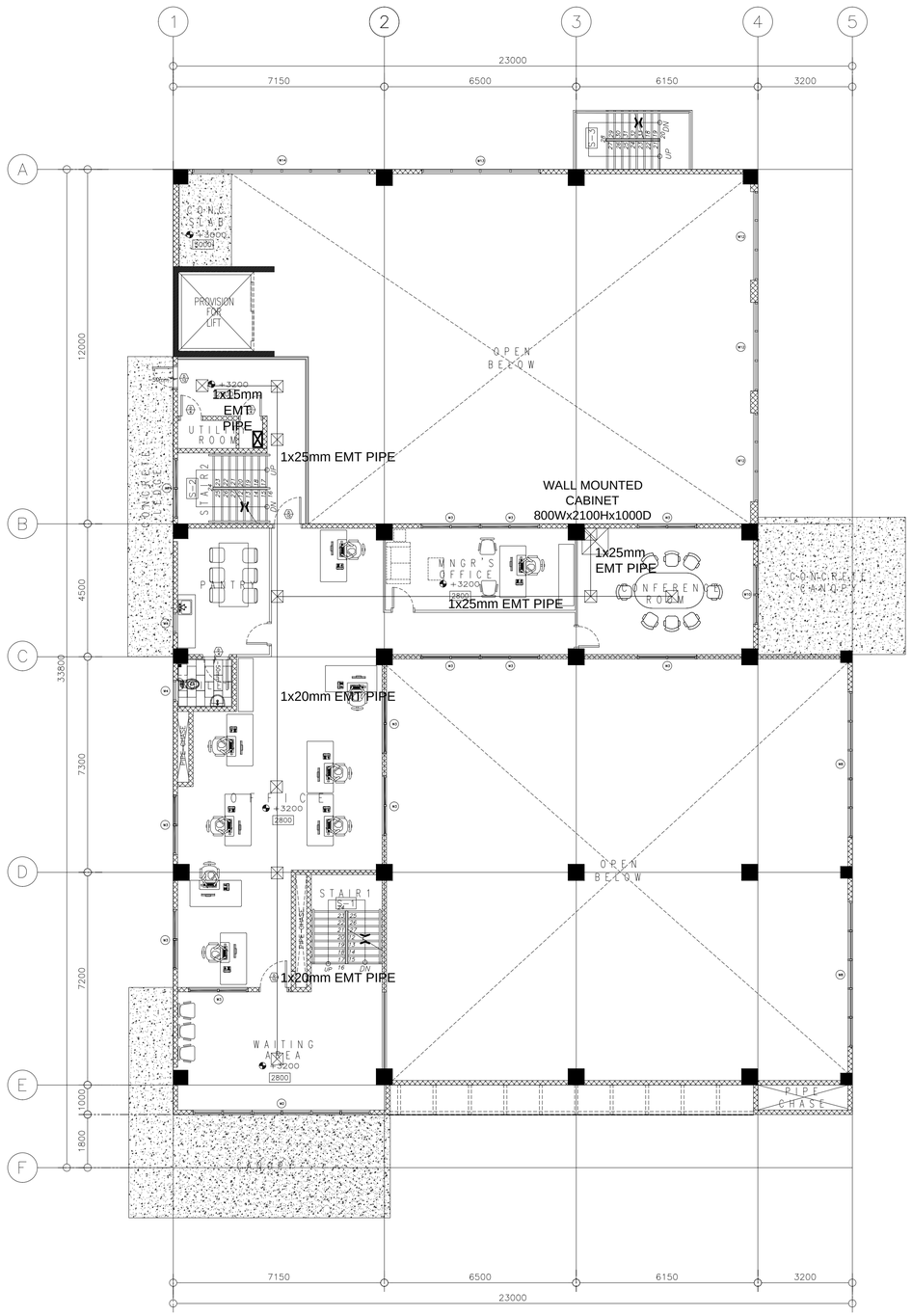
CARIG SUR, TUGUEGARAO CITY

SHEET CONTENTS:
PUBLIC ADDRESS AND FDAS LAYOUT SECOND FLOOR
PUBLIC ADDRESS PIPING LAYOUT GROUND FLOOR

SET NO.: ECE

SHEET NO.: 09 / 12

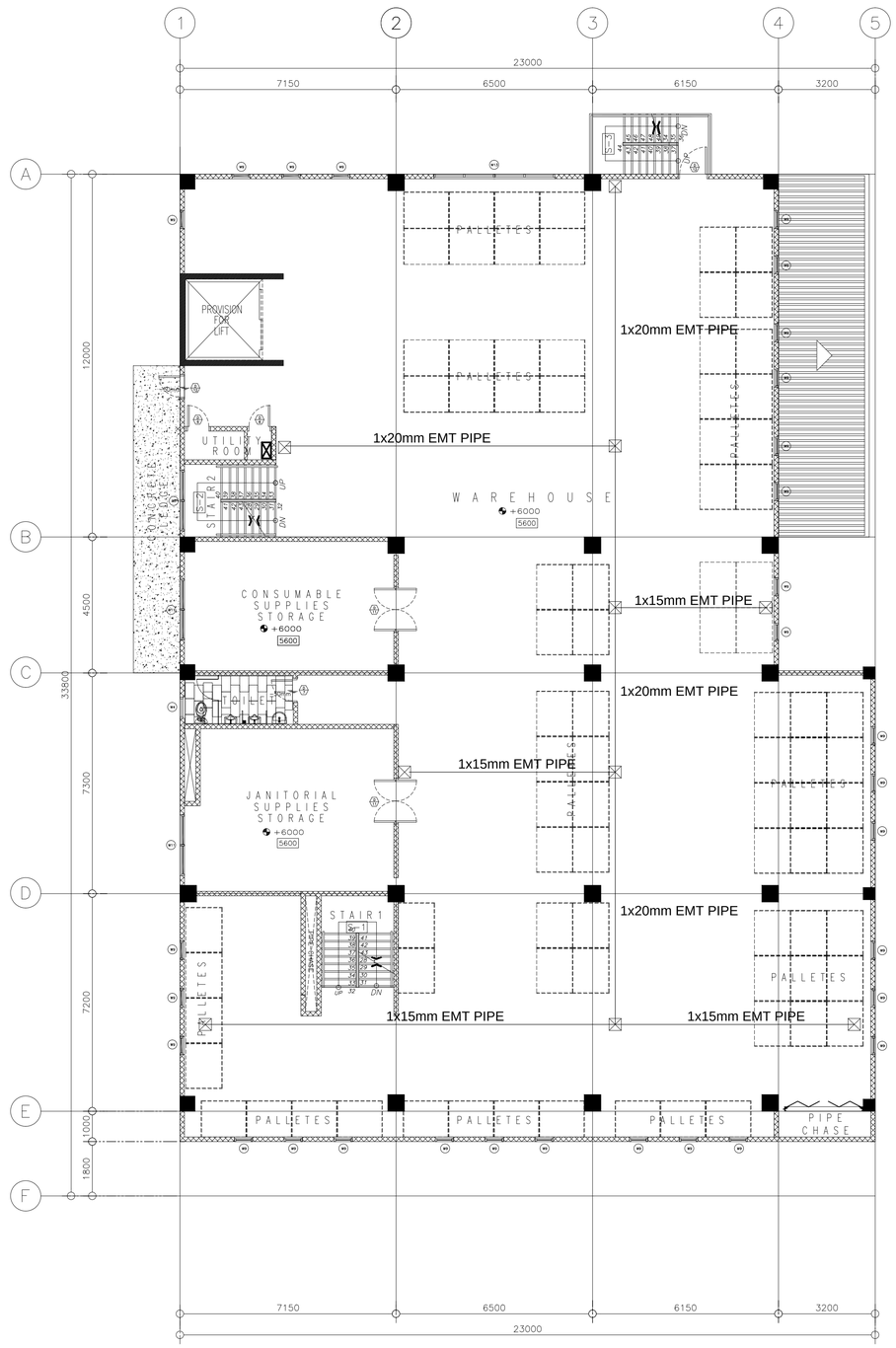


PUBLIC ADDRESS PIPING LAYOUT

1 | 10 ECE

MEZZANINE FLOOR PLAN

SCALE 1:100MTS



PUBLIC ADDRESS PIPING LAYOUT

2 | 10 ECE

SECOND FLOOR PLAN

SCALE 1:100MTS

LEGEND:	
	VOICE AND DATA PORT
	DATA PORT
	100x100mm CABLE TRAY
	100x200mm CABLE TRAY
	100x300mm CABLE TRAY
	PIPING-OVERHEAD
	PIPING-EMBEDDED
	PIPING-OVERHEAD (FDAS)
	MDF/IDF CABINET
	SQUARE BOX
	BULLET CCTV (OUTDOOR)
	DOME CCTV (INDOOR)
CR	PROXIMITY READER
BR	BIOMETRIC READER
PB	PUSH BUTTON
EML	ELECTROMAGNETIC LOCK
BG	BREAK GLASS
AMP	AMPLIFIER
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CS	CEILING SPEAKER
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HD	HEAT DETECTOR
SD	SMOKE DETECTOR
	MANUAL CALL POINT
	HORN STROBE

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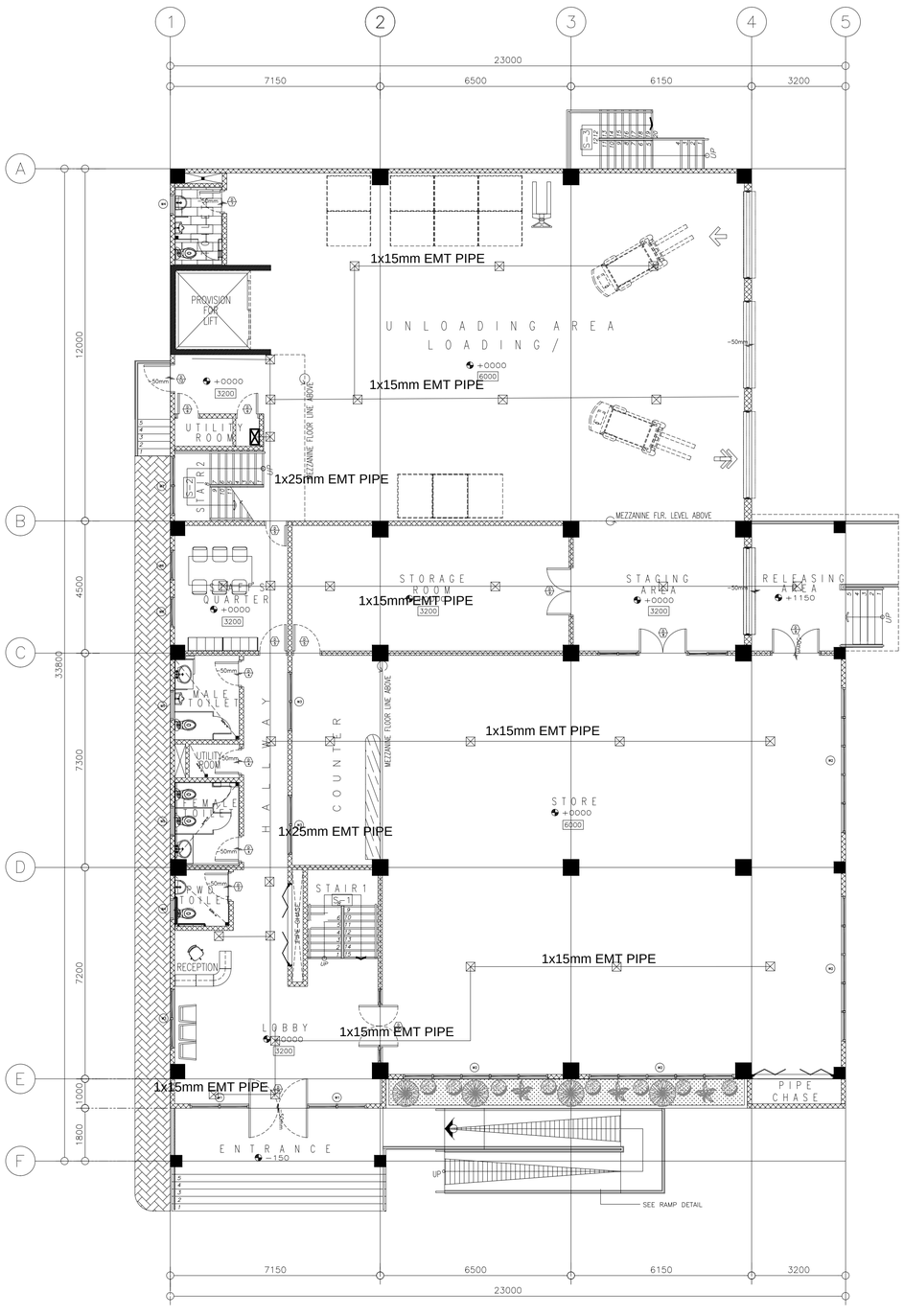
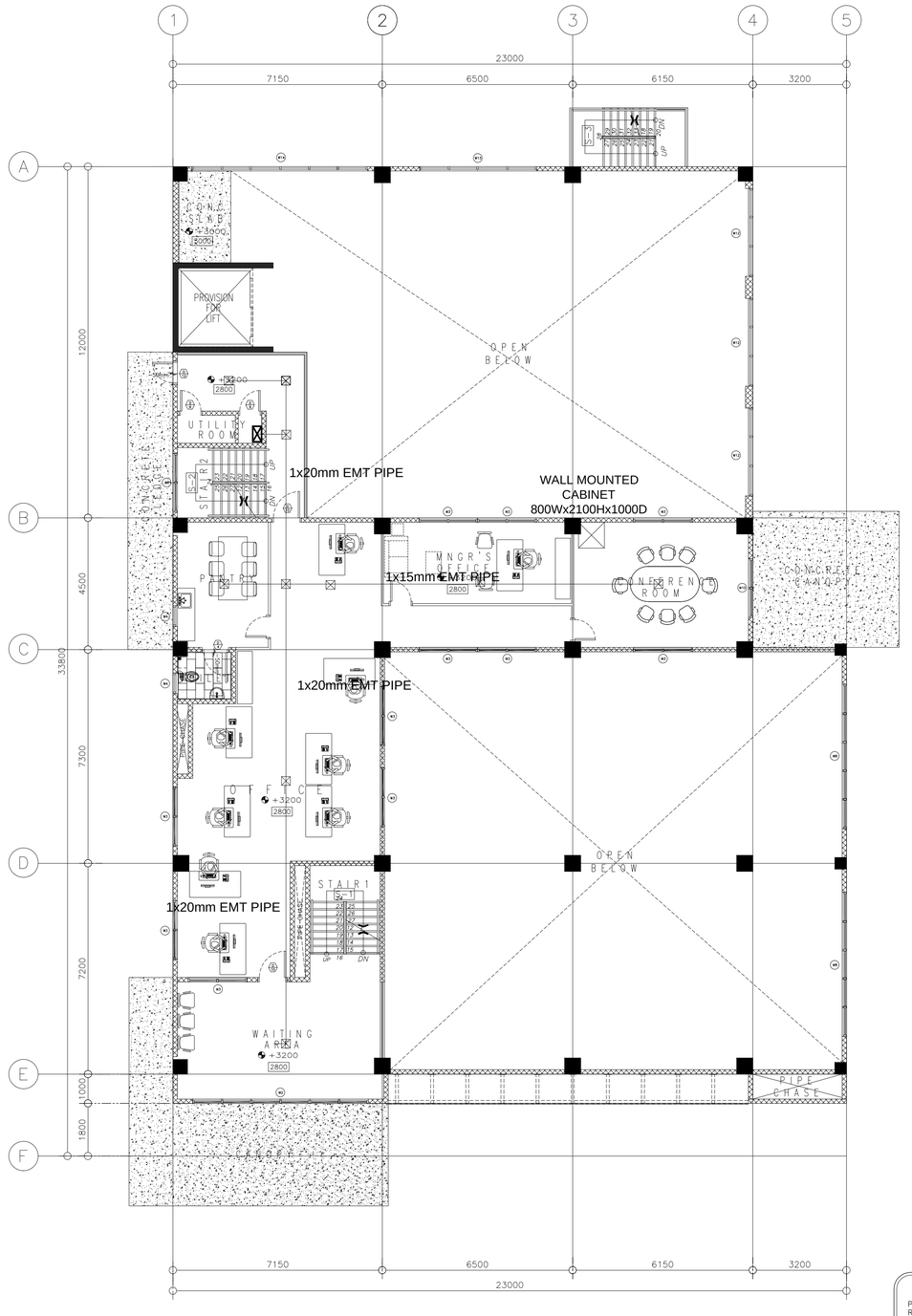
SHEET CONTENTS:
PUBLIC ADDRESS PIPING LAYOUT
MEZZANINE & SECOND FLOOR

SET NO.: ECE

SHEET NO.: 10 / 12





LEGEND:	
	VOICE AND DATA PORT
	DATA PORT
	100x100mm CABLE TRAY
	100x200mm CABLE TRAY
	100x300mm CABLE TRAY
	PIPING-OVERHEAD
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B	WALL SPEAKER
FACP	FIRE ALARM CONTROL PANEL
HD	HEAT DETECTOR
SD	SMOKE DETECTOR
	MANUAL CALL POINT
	HORN STROBE

FDAS PIPING LAYOUT

GROUND FLOOR PLAN

1 | 11 | ECE

SCALE 1:100MTS

FDAS PIPING LAYOUT

MEZZANINE FLOOR PLAN

2 | 11 | ECE

SCALE 1:100MTS

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PLACE ISSUED:MAKATI CITY	TIN: 215-560-369	

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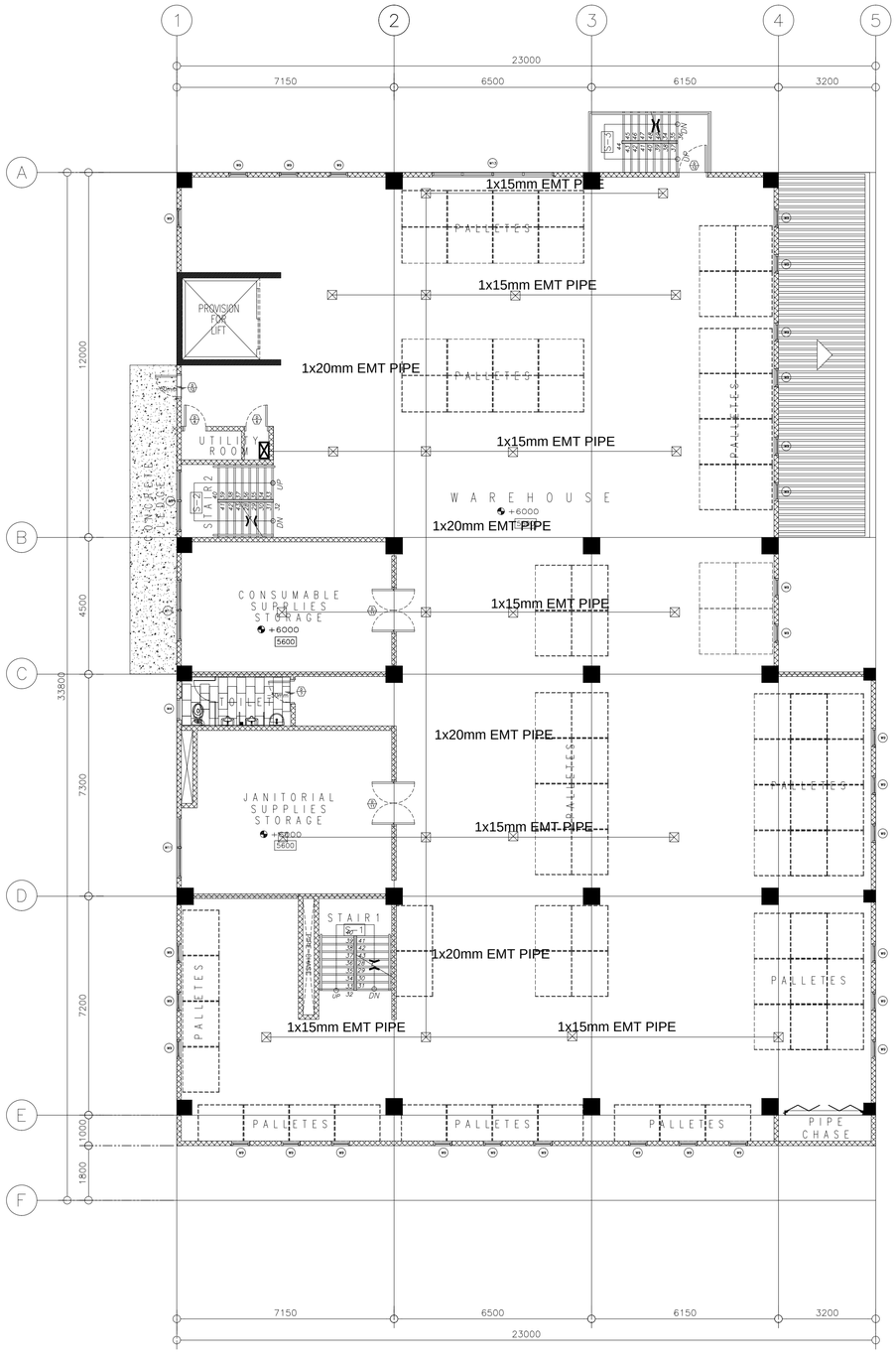
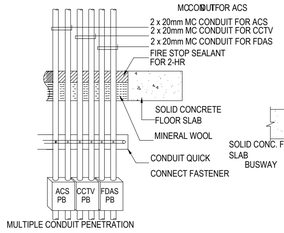


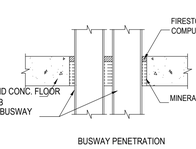
FDAS PIPING LAYOUT

SECOND FLOOR PLAN

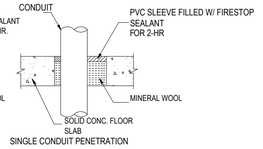
1 | 12 | ECE — SCALE 1:100MTS



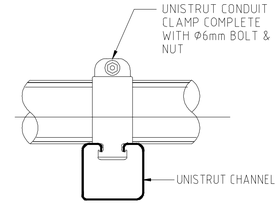
MULTIPLE CONDUIT PENETRATION



BUSWAY PENETRATION



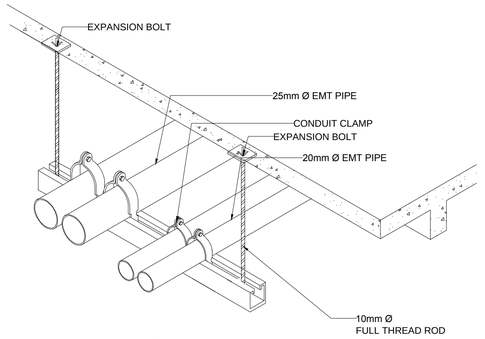
SINGLE CONDUIT PENETRATION



SECTION-A

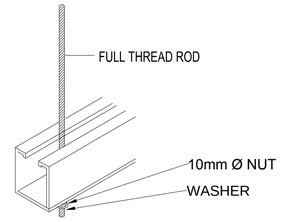
FIRE SPEAKER, MANUAL PUSH STATION AND STROBE LIGHT MOUNTING DETAIL

8 | 12 | ECE — SCALE NTS



CABLE TRAY WALL SUPPORT

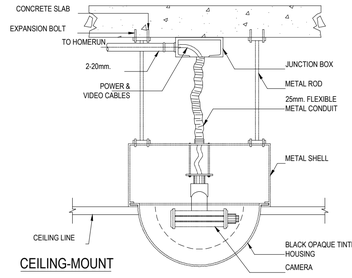
9 | 12 | ECE — SCALE NTS



DETAIL A

MULTIPLE CONDUIT SUSPENDED SUPPORT

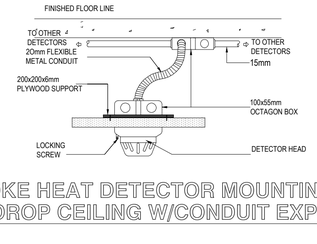
7 | 12 | ECE — SCALE NTS



CEILING-MOUNT

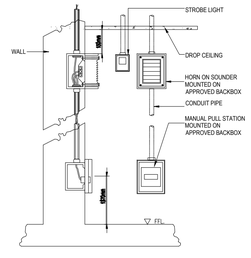
TYPICAL CONDUIT FOR CAMERA MOUNTING

4 | 12 | ECE — SCALE NTS



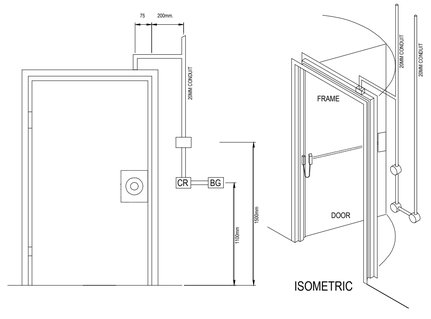
SMOKE HEAT DETECTOR MOUNTING DETAIL ON DROP CEILING W/CONDUIT EXPOSED

5 | 12 | ECE — SCALE NTS



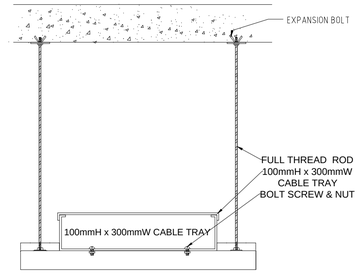
FIRE SPEAKER, MANUAL PUSH STATION AND STROBE LIGHT MOUNTING DETAIL

6 | 12 | ECE — SCALE NTS



TYPICAL DOOR CONDUIT FOR STANDARD CARD READER WITH BREAKGLASS UNIT & INTERCOM

2 | 12 | ECE — SCALE NTS



WIREWAY OR CABLE TRAY SUPPORT

3 | 12 | ECE — SCALE NTS

LEGEND:

	VOICE AND DATA PORT
	DATA PORT
	100x100mm CABLE TRAY
	100x200mm CABLE TRAY
	100x300mm CABLE TRAY
	PIPING-OVERHEAD
	PIPING-EMBEDDED
	PIPING-OVERHEAD (FDAS)
	MDF/IDF CABINET
	SQUARE BOX
	BULLET CCTV (OUTDOOR)
	DOME CCTV (INDOOR)
CR	PROXIMITY READER
BR	BIOMETRIC READER
PB	PUSH BUTTON
EML	ELECTROMAGNETIC LOCK
BG	BREAK GLASS
AMP	AMPLIFIER
RM	REMOTE MICROPHONE
CS	CEILING SPEAKER
B	WALL SPEAKER
FACP	FIRE ALARM CONTROL PANEL
HD	HEAT DETECTOR
SD	SMOKE DETECTOR
	MANUAL CALL POINT
	HORN STROBE

NOTE:

PURSUANT TO ITEM 5 OF ANNEX 'A' OF THE REVISED IMPLEMENTING RULES AND REGULATION OF R.A. 9184, THE APPROVAL BY THE AUTHORIZED GOVERNMENT OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGNS UNDERTAKEN BY CONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGNS NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.

THE DESIGN CONSULTANT SHALL BE HELD FULLY RESPONSIBLE FOR THE FAILURE OF THE FACILITIES/STRUCTURES DUE TO FAULTY DESIGN EXCEPT FOR THE CHANGES MADE WITHOUT THE CONFORMITY OF THE C O N S U L T A N T S .

ELMER T. RAMONEDA
PROJECT MANAGER

URBAN ENGINEERS
CONSULTING CIVIL ENGINEERS
in joint venture with
J.F. CANCIO & Associates ENGINEERS CONSULTANTS
PTC Engineers & Associates

PECE:	SUBMITTED:
EDWIN F. DE GUZMAN	ELMER T. RAMONEDA
PECE NO.: 487 — DATE: 15-SEPT-19	PROJECT MANAGER
PTR NO.: 7333068 — DATE: 03-JAN-19	
PLACE ISSUED:MAKATI CITY — TIN: 215-560-369	

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BONIFACIO DRIVE, PORT AREA, MANILA

REVIEWED AS TO DESIGN CONCEPT:	RECOMMENDING APPROVAL:	APPROVED:
JOSEPHINE P. ISTURIS	(SEE COVER SHEET) EDWIN C. MATANGUIHAN	(SEE COVER SHEET) EMIL K. SADAIN, CESO I
CHIEF, BUILDINGS DIVISION, BUREAU OF DESIGN	OIC, ASST. DIRECTOR, BUREAU OF DESIGN	UNDERSECRETARY FOR UPMO & TECHNICAL SERVICES

PROJECT & LOCATION:
PREPARATION OF ARCHITECTURAL AND ENGINEERING (A&E) DESIGN FOR THE PROPOSED CONSTRUCTION OF TWO (2) STOREY BUILDING PROCUREMENT SERVICES DEPARTMENT OF BUDGET AND MANAGEMENT (PS-DBM) TUGUEGARAO CITY, REGIONAL DEPOT BUILDING, REGION II CARIG SUR, TUGUEGARAO CITY

SHEET CONTENTS:
FDAS SYSTEM PIPING LAYOUT SECOND FLOOR
CABLE TRAY, PIPING, CCTV, ACS, FDAS MOUNTING DETAILS

SET NO.: ECE

SHEET NO.: 12 / 12