

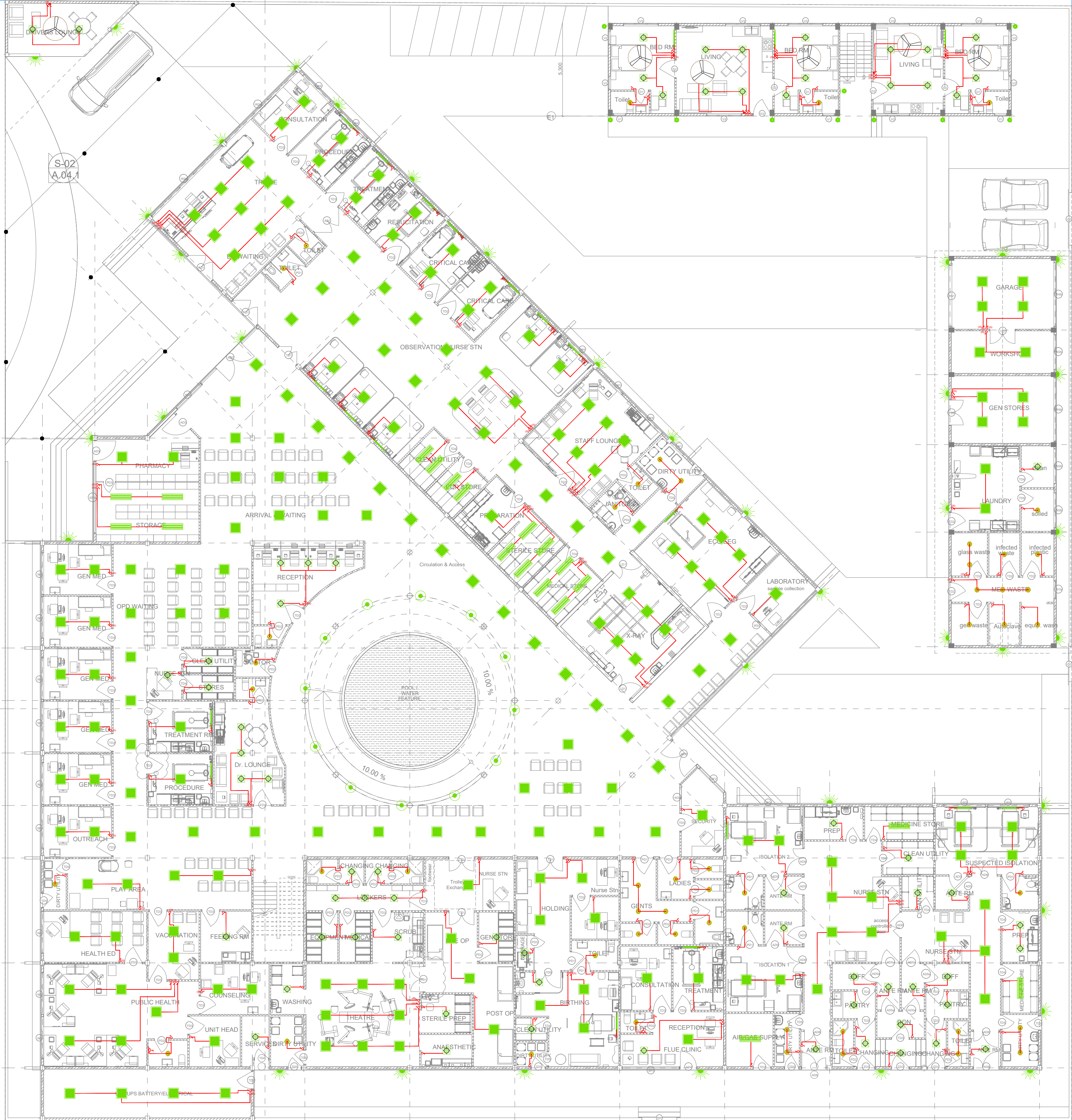
N.MAAFARU HEALTH CENTER
SERVICES DRAWINGS
Client: Ministry of Health



RIYAN PRIVATE LIMITED
t: +9603335049 f: +9603332776
e: info@riyan.com.mv
w: www.riyan.com.mv
3rd floor, H. Alcorn, Amereemagga, Malé

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| S - 03 /09 | SOLAR PANEL | --- | --- | --- |
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| S - 05 /09 | SOLAR PANEL | --- | --- | --- |
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| S - 08 /09 | SOLAR PANEL | --- | --- | --- |
| S - 09 /09 | SOLAR PANEL | --- | --- | --- |
| | | | | |



LIGHTING LEGEND

LED RECESSED LIGHT TYPE 1 (18W)

LED STRIP COVER LIGHT IP65 (8W)

LED RECESSED LIGHT TYPE 2 (12W)

600 X 600 LED SQUARE DIFFUSER WITH T5 FITTINGS (12W)

LED RECESSED LIGHT TYPE 3 (12W)

LED DOWN LIGHT (18W) - WEATHER PROOF

FLEX. POWER OUTLET W/ COVER PLATE (EXHAUST FAN)

CEILING FAN (52" - 54")

LED OUTDOOR WALL LIGHT UP/DWN (8W) - WEATHER PROOF

LED SPKE LIGHT (3W)

OUTDOOR WALL LIGHT 12W - WEATHER PROOF

LIGHTING SWITCH

FAN SWITCH

LIGHTING CABLE

TROFFER DIFFUSER WITH T5 FITTING (28W)

LED INDOOR WALL LIGHT UP/DWN (8W)

LIGHTING NOTES

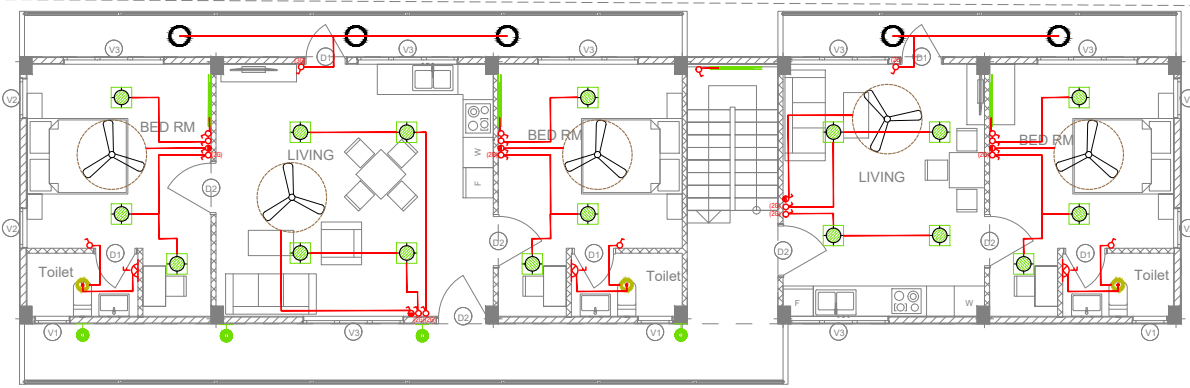
-ALL LIGHTS TO BE CONNECTED TO THEIR RESPECTIVE DB

-ALL CORRIDOR LIGHTS AND OUTDOOR LIGHTS ARE TIMMERD

-CONTRACTOR TO PREPARE SHOP DRAWINGS AND GET APPROVAL FROM CONSULTANT/PROJECT MANAGER FOR ALL LIGHTS, SWITCHES, DB, PANEL BOARD AND OTHER RELEVANT LIGHTING AND POWER POINT LOCATIONS INCLUDING CONDUITING AND WIRING AND TO BE VERIFIED AT SITE PRIOR TO CONSTRUCTION

GROUND FLOOR LIGHTING PLAN

SCALE:1:100

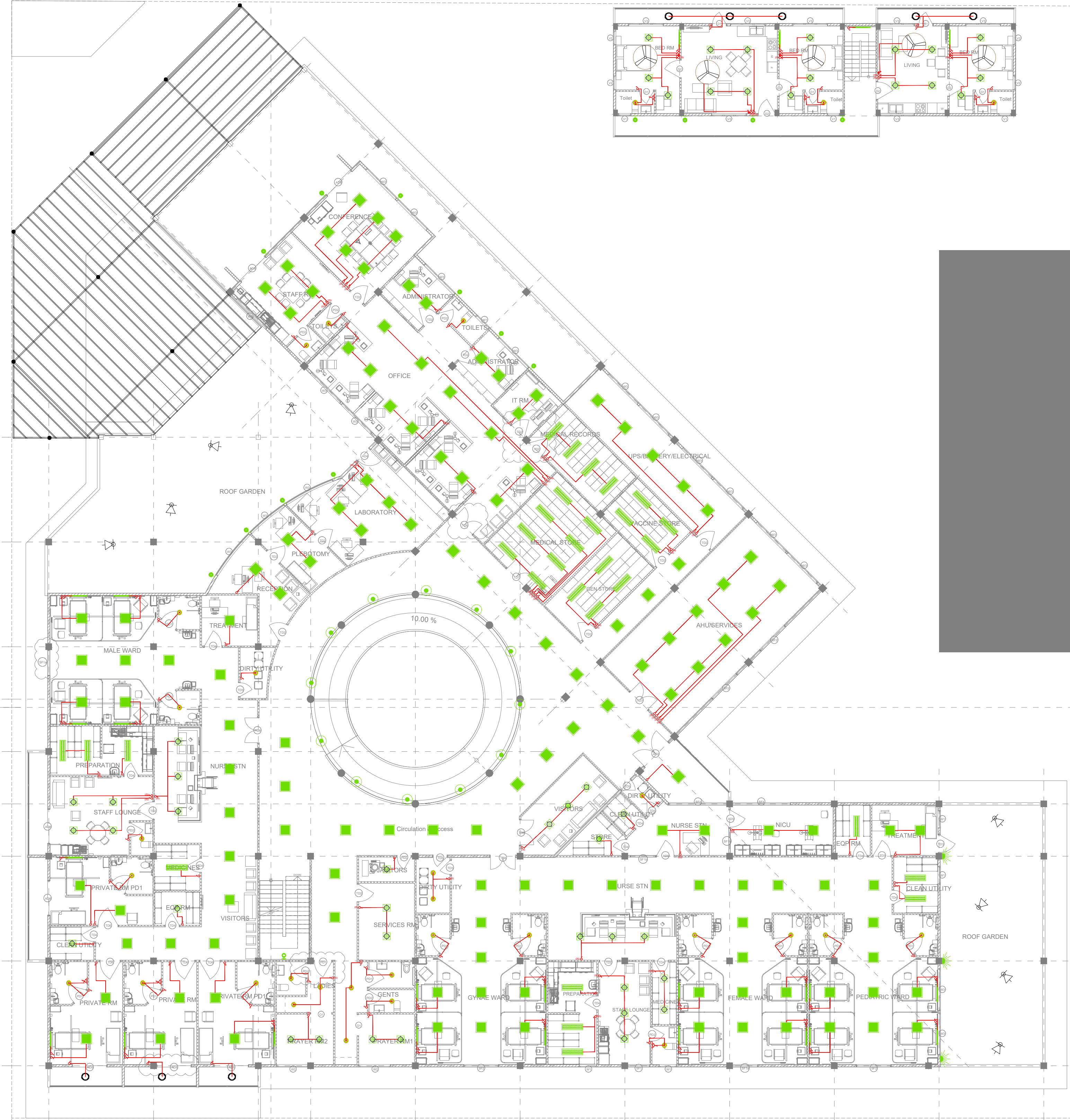


LIGHTING LEGEND

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LIGHTING NOTES

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FIRST FLOOR LIGHTING PLAN
SCALE 1:150
0 1 2 3 4 5

N. Maafaru Health Center
Client: Ministry of Health

Project Number: R2122404 - NHF
Architect: Zuhair Abdul Majid
Engineer: N. Maafaru
Services: Interior

Rev no

Date



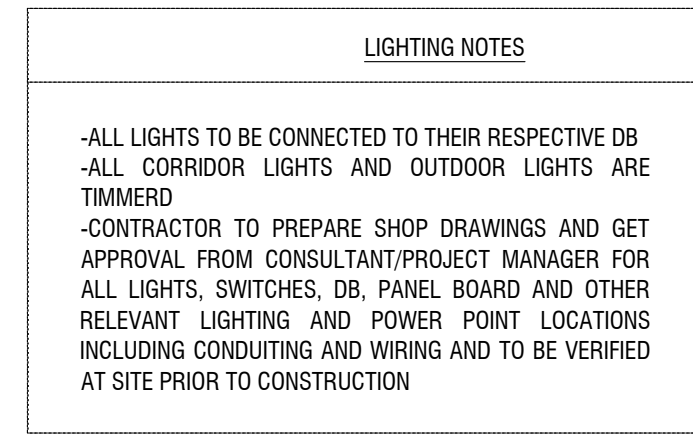
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e: info@riyan.com.mv
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3rd floor, H. Aqun, Ammanmugha, Malé

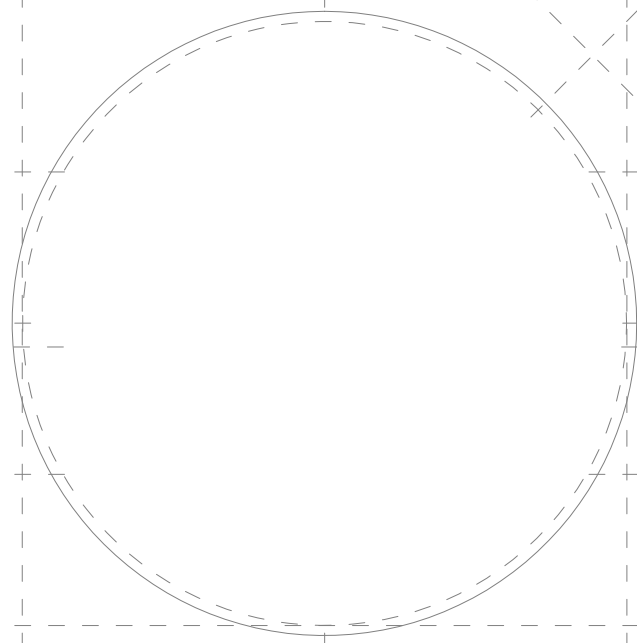
Title: First Floor
Lighting Layout

Page: EL-02 /04

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SCALE 1:150



LIGHTING LEGEND

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S-02
A.04

ROOF FLOOR LIGHTING PLAN
SCALE 1:150
0 1 2 3 4

N. Maafaru Health Center
Client: Ministry of Health

Project Number: R2172404H - NHF
Architect: Zuhair Abdul Majid
Engineer: Nici Dels Cruz
Services: Interior

Rev no

Date



RYAN PRIVATE LIMITED

t: +963395049 f: +9633950776
e: info@ryan.com.my
w: www.ryan.com.my
3rd Floor, H. Azmi, Ammanmugha, MAW

Title: Roof Floor
Lighting Layout

Page: EL-04 /04

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- LIGHTING LEGEND
- TWO GANG TV SOCKET OUTLET
- 13A POWER OUTLET (300MM FROM F.F.L)
(ABOVE FALSE CEILING FOR TOKEN MONITORS)
- 13A TWIN SOCKET OUTLET (300MM FROM F.F.L)
- 13A UPS SOCKET OUTLET (300MM FROM F.F.L)
- POWER OVER ETHERNET OUTLET
- 15A POWER OUTLET
- VGA CABLE FOR PROJECTOR
- PROXIMITY CARD READER
- EXIT SWITCH
- DISTRIBUTION BOX
- 13A SOCKETS FOR TOILETS (1500 F.F.L)
- WEATHER PROOF POLYCARBONATE ENCLOSURE
- PAGING MIC
- VOLUME CONTROLLER
- WALL SPEAKERS AT CEILING LEVEL
- EMERGENCY DOOR RELEASE
- NURSE STATION PANEL ROOM INDICATOR
- ELECTROMAGNETIC LOCK
- DOOR BELL BUTTON
- DOOR BELL RECEIVER
- HONE SPEAKER
- CEILING SPEAKER
- 8 POWER POINTS ON ENVIROM VERTICAL
HEADWALLS CALL POINT TO NURSES STATION:
INTEGRATED IN ENVIROM BEDHEAD TRUNK
- THEATER CONTROL PANEL
(INCLUDES TELEPHONE UNIT, FIRE ALARM
STROBE, MEDICAL GAS INDICATOR UNIT)
- T.I TABLE INTEGRATED OR F.F.L OUTLETS
- C.L CEILING LEVEL OUTLETS
- H.L HIGH LEVEL OUTLETS ON WALL

- POWER NOTES
- ALL POWER POINTS CONNECTED TO THE RESPECTIVE DB

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FIRST FLOOR POWER PLAN

SCALE 1:150

0

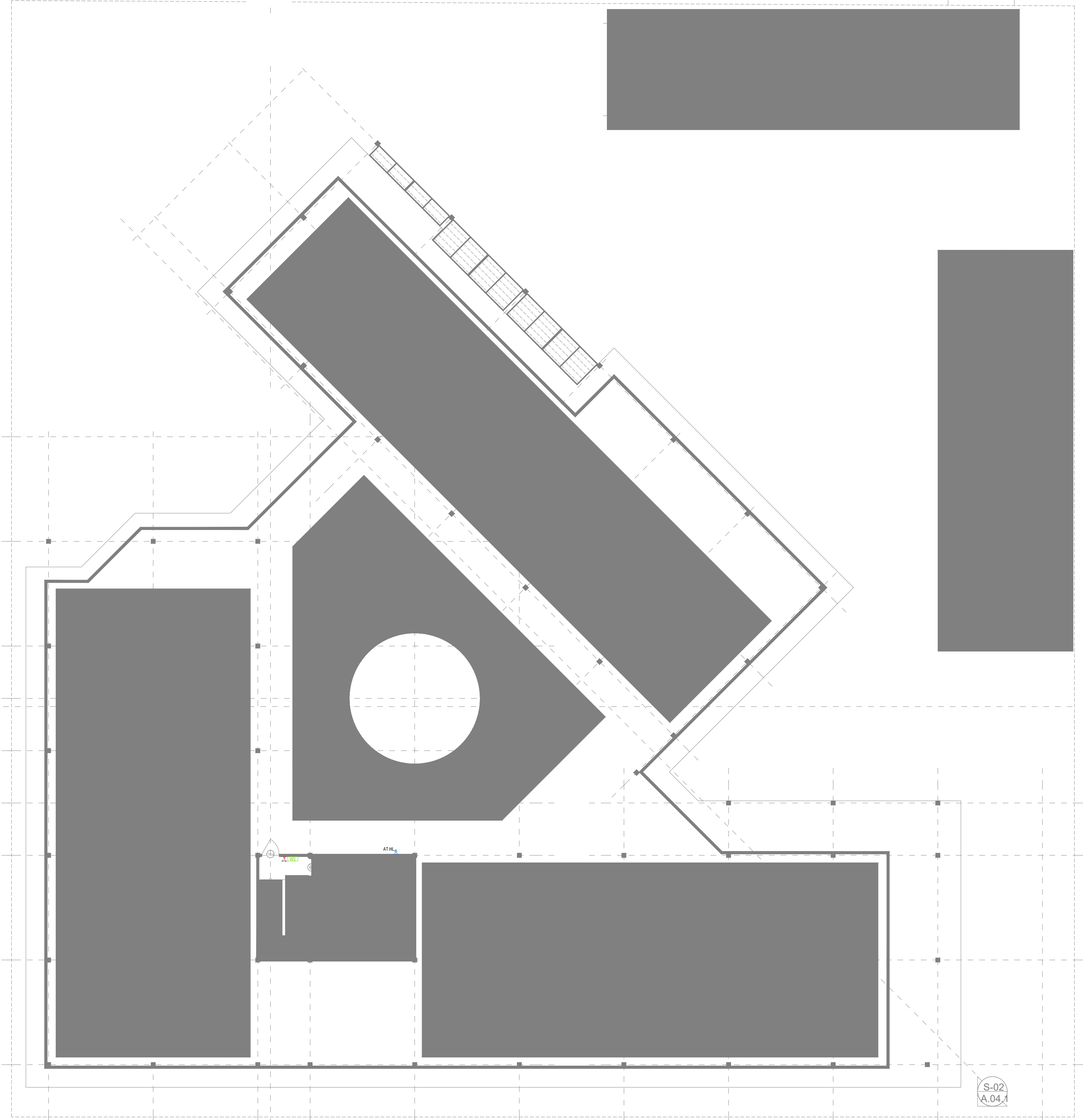
1

2

3

4

5



| LIGHTING LEGEND | |
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TERRACE FLOOR POWER PLAN
SCALE 1:150
0 0.5 1 2 3 4

N. Maafaru Health Center
Client: Ministry of Health

| Project Number | Rev no | Date |
|-------------------------------|--------|------------|
| 2021/03/01 | 1 | 2021/03/01 |
| Architect: Zuhair Abdul Majid | 2 | 2021/03/01 |
| Engineer: N. Maafaru | 3 | 2021/03/01 |
| Services: N. Maafaru | 4 | 2021/03/01 |
| Interior: N. Maafaru | 5 | 2021/03/01 |



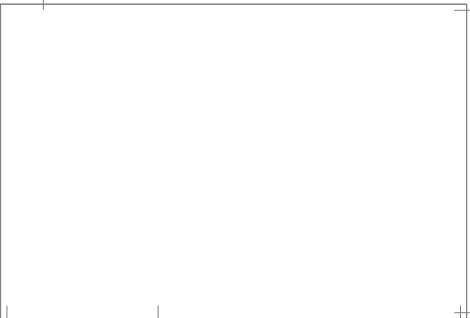
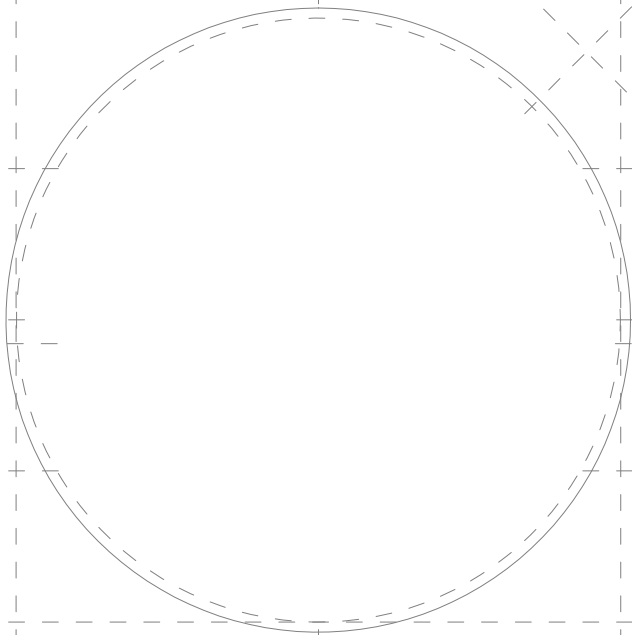
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t: +960335048 f: +9603350776
e: info@riyan.com.mv
w: www.riyan.com.mv
3rd floor, H. Aqun, Amememogga, Malé

Title: Terrace Floor
Power Layout

Page: EP-03 /04

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| LIGHTING LEGEND | |
|-----------------|--|
| | TWO GANG TV SOCKET OUTLET |
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| | 13A TWIN SOCKET OUTLET (300MM FROM F.F.L.) |
| | 13A UPS SOCKET OUTLET (300MM FROM F.F.L.) |
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| | 15A POWER OUTLET |
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| | PROXIMITY CARD READER |
| | EXIT SWITCH |
| | DISTRIBUTION BOX |
| | 13A SOCKETS FOR TOILETS (1500 F.F.L) |
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| | VOLUME CONTROLLER |
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| | NURSE STATION PANEL ROOM INDICATOR |
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ROOF FLOOR POWER PLAN

SCALE 1:150

0 0.5 1 2 3 4

S-02
A.04

N. Maafaru Health Center
Client: Ministry of Health

| | | |
|--------------------------------|--------|------------|
| Project Number: R2172404 - NMH | Rev no | Date |
| Client: Ministry of Health | 1 | 2024/04/04 |
| Architect: Zuhair Abdul Majid | 2 | 2024/04/04 |
| Engineer: Nidhal Dels Cruz | 3 | 2024/04/04 |
| Services: Nidhal Dels Cruz | 4 | 2024/04/04 |
| Interior: Nidhal Dels Cruz | 5 | 2024/04/04 |



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t: +960335049 f: +9603350776
e: info@ryian.com.mv
w: www.ryian.com.mv
3rd floor, H. Aqun, Amememogga, Malé

Title: Roof Floor
Power Layout

Page: EP-04 /04

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ACV LEGEND & ABBREVIATION

- AHU AIR HANDLING UNIT
- WMU WALL MOUNTED UNIT
- CASSETTE UNIT
- ODU OUTDOOR UNIT (TOP DISCHARGE)
- ODU OUTDOOR UNIT (SIDE DISCHARGE)
- CEILING MOUNTED EXHAUST FAN
- FRESH AIR/EXHAUST AIR FAN (DUCT IN LINE)
- WALL MOUNTED FAN
- REFRIGERANT PIPES WITH INSULATION
- AC DRAIN PIPES WITH INSULATION
- SUPPLY AIR DUCT WITH THERMAL INSULATION
- RETURN AIR DUCT WITH THERMAL INSULATION
- EXHAUST AIR DUCT
- FRESH AIR DUCT
- VOLUME CONTROL DAMPER
- SUPPLY AIR DIFFUSER WITH DAMPER
- RETURN AIR DIFFUSER WITH DAMPER
- EXHAUST AIR GRILL
- 150MM WIDTH SUPPLY AND RETURN AIR GRILL
- T/B TO BELOW
- T/A TO ABOVE
- F/A FROM ABOVE
- F/B FROM BELOW
- AHU AIR HANDLING UNIT
- TFA TREATED FRESH AIR HANDLING UNIT
- ODU OUT DOOR UNIT

SPECIFICATION FOR VRF/VRV

Outdoor Unit
Air cooled VRF / VRV system working in R410A / R-407C or equivalent refrigerant. The system shall be suitable to operate on 3 phase, 380-415 V, 50Hz AC power supply & shall comprises with multiple no's of inverter, digital scroll/screw compressors, air cooled condenser fan with motor, microprocessor control panel, starter controls for all scroll compressors and condenser fan motors along with internal control and power wiring, cooling coil with internally inter-connected refrigerant pipes, charging port and all other required accessories, & hardware's. The entire unit shall be with weather resistant powder coating paint for withstanding all ambient conditions for continuous outdoor operation.

Indoor unit
Air Conditioning Units suitable for mounting inside false ceiling/wall hang, each comprising of cooling coil, blower with motor, electronic expansion valve, filter, insulated connection of refrigerant circuit, provision for fresh air intake ducting, condensate water drain pump with electronic level sensor, including wireless remote controller etc.

Air Handling Unit (DX type)
AHU having GI double skin (0.6/0.8 mm thick) sandwich panel (PU injected foam with 45 mm thick, minimum density 40-50 kg/cu.m) with thermal break aluminium profile and heavy duty unit base. Air Handling Units complete with, dx coil (copper), motor, SSW/DWDW fan, pre filter (MERV 7/8) and fine filters (MERV 13).

Air Handling Unit (DX type) for OT, ICU, Labour room, Sterile Areas and Accidents and Emergencies:
AHU having GI double skin (0.6/0.8 mm thick) sandwich panel (PU injected foam with 45 mm thick, minimum density 40-50 kg/cu.m) with thermal break aluminium profile and heavy duty unit base. Air Handling Units complete with, dx coil (copper), motor, SSW/DWDW fan, pre filter (MERV 7/8), fine filters (MERV 13) and HEPA Filter(H14).

NOTE

- The AC unit shall be suitable for operation under tropical condition with ambient temperature and relative humidity.
- Proper access for easy maintenance to be provided as recommended by the manufacturer of AC equipment above false ceiling.
- All ceiling suspended unit to be provided with vibration hangers spring type.
- GI Ducting/Pre insulated duct for common areas and AL Ducting for OT's, CSSD and sterile areas.
- Acoustic insulation to be provided for duct with minimum 35gsm from each AHU unit except OT and CSSD areas AHUs.
- Canvas connection to be provided between indoor unit and duct.
- Aluminium cladding to be provided over the insulation for the exposed duct and pipe works.
- Air outlet shall be completely factory aluminium extruded with powder coated and the colour shall be the approval of the interior design.
- Air outlet location and size shall be adjusted to suit reflected ceiling drawing or site condition.
- Louver with bird screen to be provided for all the fresh air and exhaust air duct.
- Kitchen hood exhaust should be provided in the kitchen areas.
- Contractor shall be responsible to provide electrical power requirements to electrical contractor.
- Contractor shall be responsible for coordination of all other services.
- Contractor shall be responsible to calculating the static pressure for AHU/Exhaust air fan.
- Contractor shall be responsible to modify/change reroute, re locate as per the site condition and submit shop drawing for approval.
- Contractor to be provided detailed shop drawings before starting works.
- The minimum Energy Efficient Ratio (EER) value for AC Should be 3.5 (kW/kW).
- All ACV equipment should be anti corrosive coated.

GROUND FLOOR AC LAYOUT
SCALE: 1:150

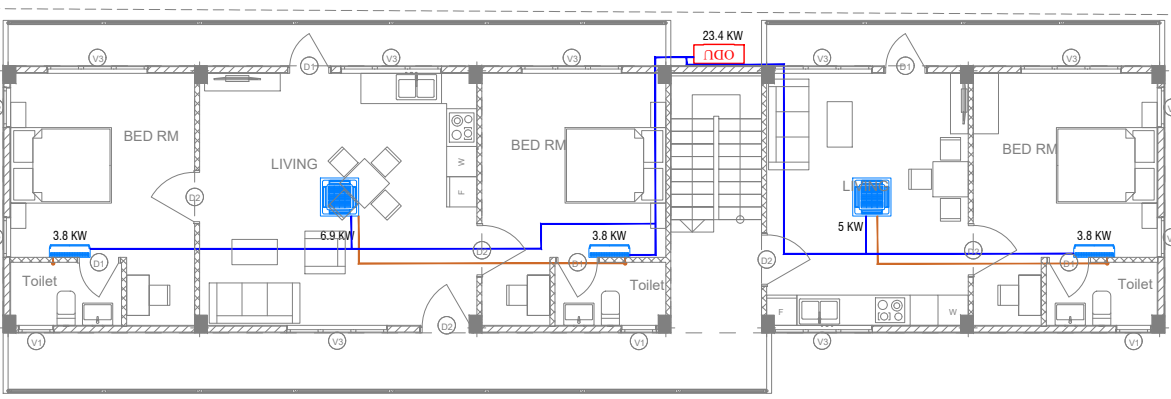
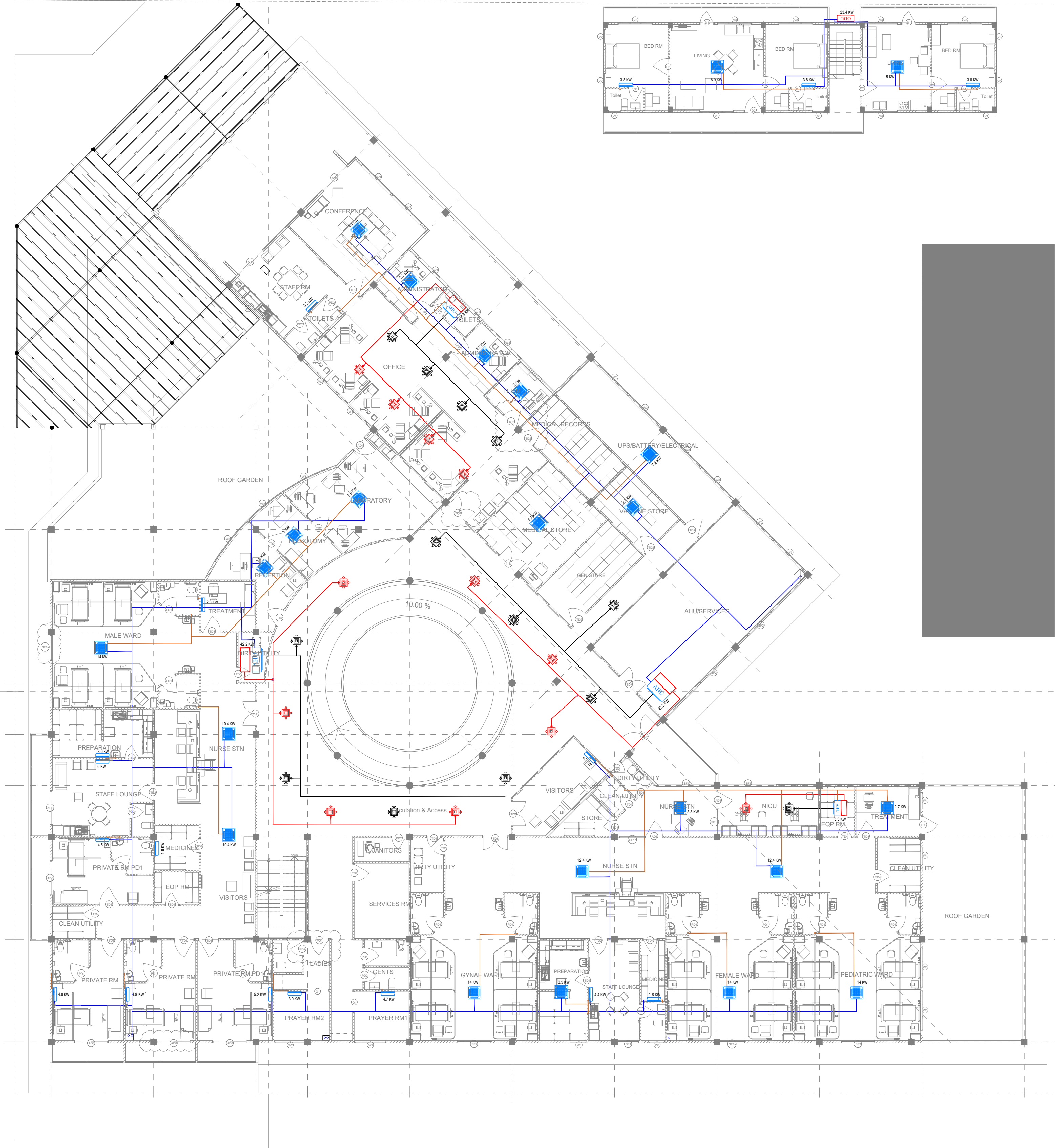
N. Maafaru Health Center
Client: Ministry of Health
Project Number: R2172404 - NHF
Architect: Zuhairah Abdul Majid
Engineer: Nik Dels Cruze
Services: Interior



RYAN PRIVATE LIMITED
t: +960335049 f: +9603310776
e: info@ryan.com.my
w: www.ryan.com.my
3rd Floor, H. Apur, Ammanmugha, M&M

Title: Ground Floor
AC Layout
Page: AC-01/04

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| ACV LEGEND & ABBREVIATION | |
|---------------------------|--|
| | AIR HANDLING UNIT |
| | WALL MOUNTED UNIT |
| | CASSETTE UNIT |
| | OUTDOOR UNIT (TOP DISCHARGE) |
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| | EXHAUST AIR DUCT |
| | FRESH AIR DUCT |
| | VOLUME CONTROL DAMPER |
| | SUPPLY AIR DIFFUSER WITH DAMPER |
| | RETURN AIR DIFFUSER WITH DAMPER |
| | EXHAUST AIR GRILL |
| | 150MM WIDTH SUPPLY AND RETURN AIR GRILL |
| T/B | TO BELOW |
| T/A | TO ABOVE |
| F/A | FROM ABOVE |
| F/B | FROM BELOW |
| AHU | AIR HANDLING UNIT |
| TFA | TREATED FRESH AIR HANDLING UNIT |
| ODU | OUT DOOR UNIT |

SPECIFICATION FOR VRF/VRV

Outdoor Unit
Air cooled VRF / VRV system working in R410A / R-407C or equivalent refrigerant. The system shall be suitable to operate on 3 phase 380-415 V, 50Hz AC power supply & shall comprise with multiple no's of inverter, digital scroll/compressor, air cooled condenser fan with motor, microprocessor control panel, starter controls for all scroll compressors and condenser fan motors along with internal control and power wiring, cooling coil with internally interconnect refrigerant pipes, charging port and all other required accessories, & hardware's. The entire unit shall be with weather resistant powder coating paint for withstanding all ambient conditions for continuous outdoor operation

Indoor unit
Air Conditioning Units suitable for mounting inside false ceiling/wall hang, each comprising of cooling coil, blower with motor, electronic expansion valve, filter, insulated connection of refrigerant circuit, provision for fresh air intake ducting, condensate water drain pump with electronic level sensor, including wireless remote controller etc

Air Handling Unit (DX type)
AHU having GI double skin (0.6/0.8 mm thick) sandwich panel (PU injected foam with 45 mm thick, minimum density 40-50 kg/cu.m) with thermal break aluminium profile and heavy duty unit base. Air Handling Units complete with, dc coil (copper), motor, SSW/DWDW fan, pre filter (MERV 7/8) and fine filters (MERV 13).

Air Handling Unit (DX type) for OT, NICU, Labour room, Sterile Areas and Accidents and Emergencies
AHU having GI double skin (0.6/0.8 mm thick) sandwich panel (PU injected foam with 45 mm thick, minimum density 40-50 kg/cu.m) with thermal break aluminium profile and heavy duty unit base. Air Handling Units complete with, dc coil (copper), motor, SSW/DWDW fan, pre filter (MERV 7/8), fine filters (MERV 13) and HEPA Filter(H14)

NOTE

- The AC unit shall be suitable for operation under tropical condition with ambient temperature and relative humidity
- Proper access for easy maintenance to be provided as recommended by the manufacturer of AC equipment above false ceiling
- All ceiling suspended unit to be provided with anti vibration hangers spring type
- GI Ducting/Pre insulated duct for common areas and AL Ducting for OTs, CSSD and sterile areas
- Acoustic insulation to be provided for duct with minimum 35qsm from each AHU unit except OT and CSSD areas AHUs
- Canvas connection to be provided between indoor unit and duct
- Aluminium cladding to be provided over the insulation for the exposed duct and pipe works
- Air outlet shall be completely factory aluminium extruded with powder coated and the colour shall be the approval of the interior design
- Air outlet location and size shall be adjusted to suit reflected ceiling drawing or site condition
- Louver with bird screen to be provided for all the fresh air and exhaust air duct
- Ratchet hood exhaust should be provided in the kitchen areas
- Contractor shall be responsible to provide electrical power requirements to electrical contractor
- Contractor shall be responsible for coordination of all other services
- Contractor shall be responsible to calculating the static pressure for AHU/Exhaust air fan
- Contractor shall be responsible to modify/change, reroute, or locate as per the site condition and submit shop drawing for approval
- Contractor to be provided detailed shop drawings before starting works
- The minimum Energy Efficient Ratio (EER) value for AC Should be 3.5 (kW/kW)
- All ACV equipment should be anti corrosive coated

FIRST FLOOR AC LAYOUT
SCALE 1:150

N. Maafaru Health Center
Client: Ministry of Health

Project Number: R2122404 - NHF
Architect: Zuhairah Abdul Majid
Engineer: Nik Dels Cruze
Services: Interior



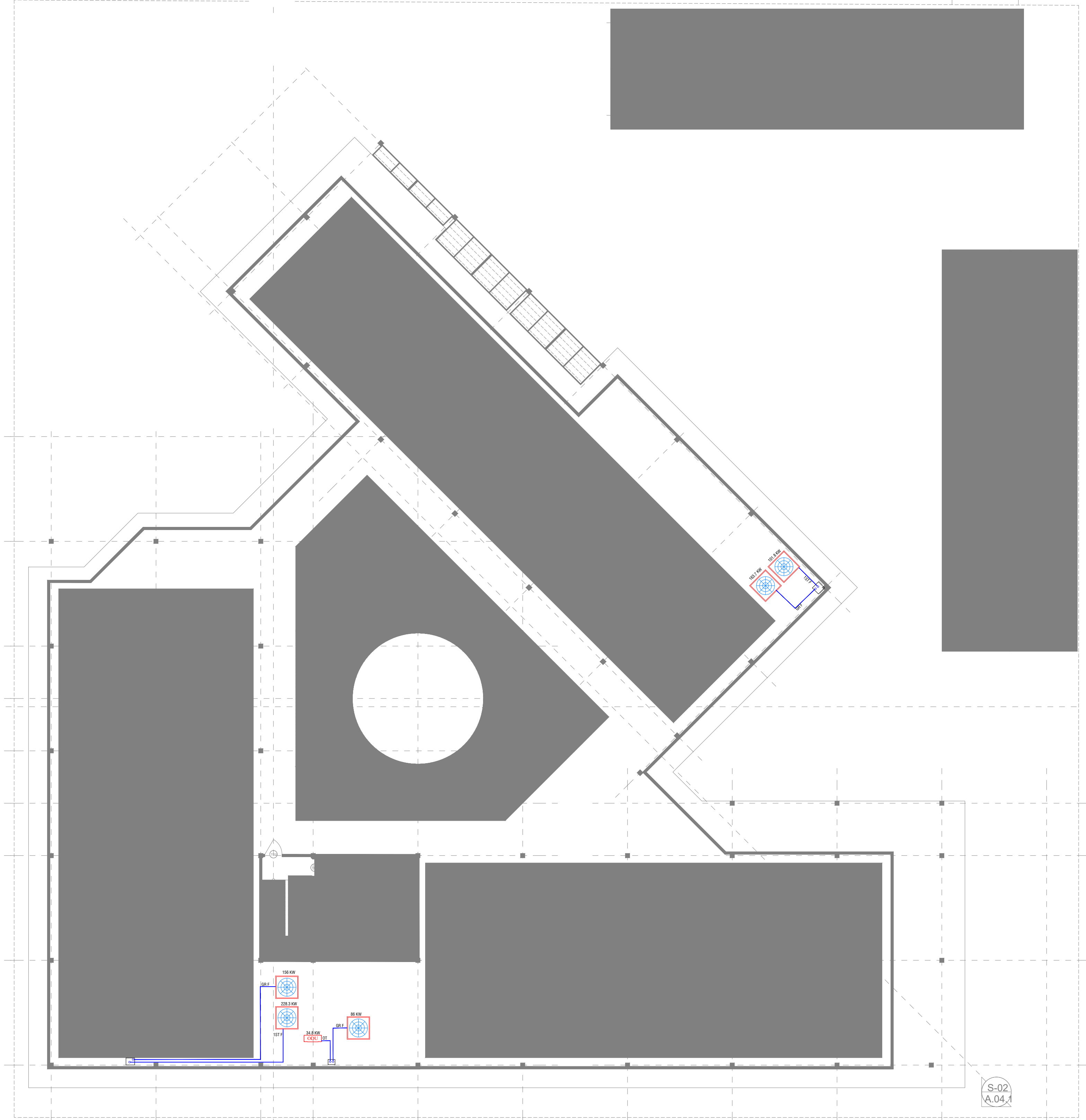
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t: +60335049 f: +603350776
e: info@ryan.com.my
w: www.ryan.com.my
3rd Floor, H. Apur, Amnennongga, MAM

Title: First Floor
AC Layout

Page: AC-02 /04

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| ACV LEGEND & ABBREVIATION | |
|---------------------------|---|
| | AIR HANDLING UNIT |
| | WALL MOUNTED UNIT |
| | CASSETTE UNIT |
| | OUTDOOR UNIT (TOP DISCHARGE) |
| | OUTDOOR UNIT (SIDE DISCHARGE) |
| | CEILING MOUNTED EXHAUST FAN |
| | FRESH AIR/EXHAUST AIR FAN (DUCT IN LINE) |
| | WALL MOUNTED FAN |
| | REFRIGERANT PIPES WITH INSULATION |
| | AC DRAIN PIPES WITH INSULATION |
| | SUPPLY AIR DUCT WITH THERMAL INSULATION |
| | RETURN AIR DUCT WITH THERMAL INSULATION |
| | EXHAUST AIR DUCT |
| | FRESH AIR DUCT |
| | VOLUME CONTROL DAMPER |
| | SUPPLY AIR DIFFUSER WITH DAMPER |
| | RETURN AIR DIFFUSER WITH DAMPER |
| | EXHAUST AIR GRILL |
| | 150MM WIDTH SUPPLY AND RETURN AIR GRILL |
| T/B | TO BELOW |
| T/A | TO ABOVE |
| F/A | FROM ABOVE |
| F/B | FROM BELOW |
| AHU | AIR HANDLING UNIT |
| TFA | TREATED FRESH AIR HANDLING UNIT |
| ODU | OUT DOOR UNIT |

SPECIFICATION FOR VRF/VRV

Outdoor Unit
Air cooled VRF / VRV system working in R410A / R -407C or equivalent refrigerant. The system shall be suitable to operate on 3 phase, 380-415 V, 50Hz AC power supply & shall comprises with multiple no's of inverter, digital scroll/screw compressors, air cooled condenser fan with motor, microprocessor control panel, starter controls for all scroll compressors and condenser fan motors along with internal control and power wiring, cooling coil with internally interconnected refrigerant pipes, charging port and all other required accessories, & hardware's. The entire unit shall be with weather resistant powder coating paint for withstanding all ambient conditions for continuous outdoor operation

Indoor unit
Air Conditioning Units suitable for mounting inside false ceiling/wall hang, each comprising of cooling coil, blower with motor, electronic expansion valve, filter, insulated connection of refrigerant circuit, provision for fresh air intake ducting, condensate water drain pump with electronic level sensor, including wireless remote controller etc

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AHU having GI double skin (0.6/0.8 mm thick) sandwich panel (PU injected foam with 45 mm thick, minimum density 40-50 kg/cu.m) with thermal break aluminium profile and heavy duty unit base. Air Handling Units complete with, dx coil (copper), motor, SSW/DWDW fan, pre filter (MERV 7/8) and fine filters (MERV 13).

Air Handling Unit (DX type) for OT, ICU, Labour room, Sterile Areas and Accidents and Emergencies:
AHU having GI double skin (0.6/0.8 mm thick) sandwich panel (PU injected foam with 45 mm thick, minimum density 40-50 kg/cu.m) with thermal break aluminium profile and heavy duty unit base. Air Handling Units complete with, dx coil (copper), motor, SSW/DWDW fan, pre filter (MERV 7/8), fine filters (MERV 13) and HEPA Filter(H14)

NOTE

- The AC unit shall be suitable for operation under tropical condition with ambient temperature and relative humidity
- Proper access for easy maintenance to be provided as recommended by the manufacturer of AC equipment above false ceiling
- All ceiling suspended unit to be provided with anti vibration hangers spring type
- GI Ducting/Pre insulated duct for common areas and AL Ducting for OTs, CSSD and sterile areas
- Acoustic insulation to be provided for duct with minimum 35qgm from each AHU unit except OT and CSSD areas AHUs
- Canvas connection to be provided between indoor unit and duct
- Aluminium cladding to be provided over the insulation for the exposed duct and pipe works
- Air outlet shall be completely factory aluminium retouched with powder coated and the colour shall be the approval of the interior design
- Air outlet location and size shall be adjusted to suit reflected ceiling drawing or site condition
- Louver with bird screen to be provided for all the fresh air and exhaust air duct
- Kitchen hood exhaust should be provided in the kitchen areas
- Contractor shall be responsible to provide electrical power requirements to electrical contractor
- Contractor shall be responsible for coordination of all other services
- Contractor shall be responsible for calculating the static pressure for AHU/Exhaust air fan
- Contractor shall be responsible to modify/change, reroute, re locate as per the site condition and submit shop drawing for approval
- Contractor to be provided detailed shop drawings before starting works
- The minimum Energy Efficient Ratio [EER] value for AC Should be 3.5 (kW/kW)
- All ACV equipment should be anti corrosive coated

N. Maafaru Health Center
Client: Ministry of Health

Project Number: R27122404H - NHF
Architect: Zuhairah Abdul Majid
Engineer: N. Maafaru
Services: N. Maafaru
Interior: N. Maafaru

Rev no Date

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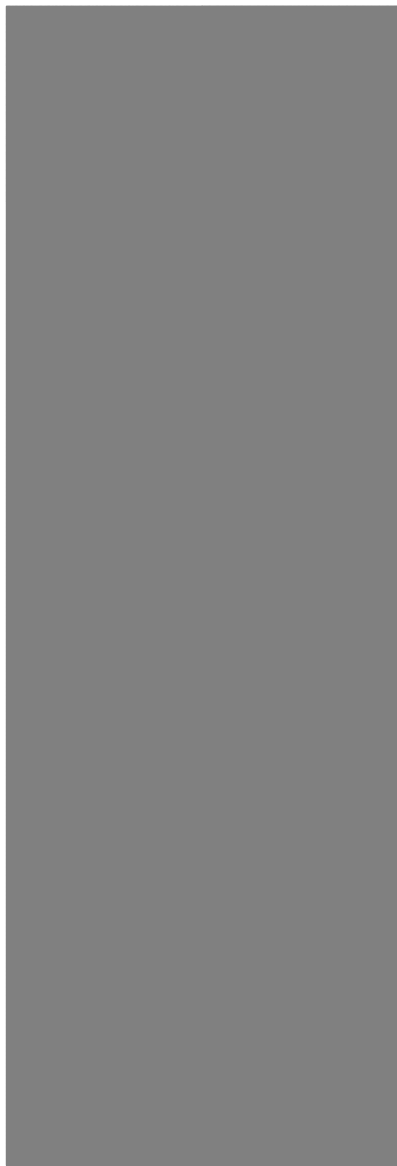
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w : www.ryan.com.mv
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Title: Terrace Floor
AC Layout

Page: AC-03 /04

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| ACV LEGEND & ABBREVIATION | |
|---------------------------|---|
| | AIR HANDLING UNIT |
| | WALL MOUNTED UNIT |
| | CASSETTE UNIT |
| | OUTDOOR UNIT (TOP DISCHARGE) |
| | OUTDOOR UNIT (SIDE DISCHARGE) |
| | CEILING MOUNTED EXHAUST FAN |
| | FRESH AIR/EXHAUST AIR FAN (DUCT IN LINE) |
| | WALL MOUNTED FAN |
| | REFRIGERANT PIPES WITH INSULATION |
| | AC DRAIN PIPES WITH INSULATION |
| | SUPPLY AIR DUCT WITH THERMAL INSULATION |
| | RETURN AIR DUCT WITH THERMAL INSULATION |
| | EXHAUST AIR DUCT |
| | FRESH AIR DUCT |
| | VOLUME CONTROL DAMPER |
| | SUPPLY AIR DIFFUSER WITH DAMPER |
| | RETURN AIR DIFFUSER WITH DAMPER |
| | EXHAUST AIR GRILL |
| | 150MM WIDTH SUPPLY AND RETURN AIR GRILL |
| T/B | TO BELOW |
| T/A | TO ABOVE |
| F/A | FROM ABOVE |
| F/B | FROM BELOW |
| AHU | AIR HANDLING UNIT |
| TFA | TREATED FRESH AIR HANDLING UNIT |
| ODU | OUT DOOR UNIT |

| SPECIFICATION FOR VRF/VRV | |
|---|--|
| Outdoor Unit | Air cooled VRF / VRV system working in R410A / R -407C or equivalent refrigerant. The system shall be suitable to operate on 3 phase 380-415 V, 50Hz AC power supply & shall comprise with multiple no's of inverter, digital scroll/screw compressors, air cooled condenser fan with motor, microprocessor control panel, starter controls for all scroll compressors and condenser fan motors along with internal control and power wiring, cooling coil with internally interconnected refrigerant pipes, charging port and all other required accessories, & hardware's. The entire unit shall be with weather resistant powder coating paint for withstanding all ambient conditions for continuous outdoor operation |
| Indoor unit | Air Conditioning Units suitable for mounting inside false ceiling/wall hang, each comprising of cooling coil, blower with motor, electronic expansion valve, filter, insulated connection of refrigerant circuit, provision for fresh air intake ducting, condensate water drain pump with electronic level sensor, including wireless remote controller etc |
| Air Handling Unit (DX type) | AHU having GI double skin (0.6/0.8 mm thick) sandwich panel (PU injected foam with 45 mm thick, minimum density 40-50 kg/cu.m) with thermal break aluminium profile and heavy duty unit base. Air Handling Units complete with, da coil (copper), motor, SSW/DIDW fan, pre filter (MERV 7/8) and fine filters (MERV 13). |
| Air Handling Unit (DX type) for OT/NCU, Labour room,Sterile Areas and Accidents and Emergencies | AHU having GI double skin (0.6/0.8 mm thick) sandwich panel (PU injected foam with 45 mm thick, minimum density 40-50 kg/cu.m) with thermal break aluminium profile and heavy duty unit base. Air Handling Units complete with, da coil (copper), motor, SSW/DIDW fan, pre filter (MERV 7/8) , fine filters (MERV 13) and HEPA Filter(H14) |

| NOTE | |
|---|--|
| -The AC unit shall be suitable for operation under tropical condition with ambient temperature and relative humidity | |
| -Proper access for easy maintenance to be provided as recommended by the manufacturer of AC equipment above false ceiling | |
| -All ceiling suspended unit to be provided with anti vibration hangers spring type | |
| -GI Ducting/Pre insulated duct for common areas and AL Ducting for OT's, CSSD and sterile areas | |
| -Acoustic insulation to be provided for duct with minimum 35qgm from each AHU unit except OT and CSSD areas AHUs | |
| -Canvas connection to be provided between indoor unit and duct | |
| -Aluminium cladding to be provided over the insulation for the exposed duct and pipe works | |
| -Air outlet shall be completely factory aluminium extruded with powder coated and the colour shall be the approval of the interior design | |
| -Air outlet location and size shall be adjusted to suit reflected ceiling drawing or site condition | |
| -Cover with bird screen to be provided for all the fresh air and exhaust air duct | |
| -Kitchen hood exhaust should be provided in the kitchen areas | |
| -Contractor shall be responsible to provide electrical power requirements to electrical contractor | |
| -Contractor shall be responsible for coordination of all other services | |
| -Contractor shall be responsible to calculating the static pressure for AHU/Exhaust air fan | |
| -Contractor shall be responsible to modify/change/reoute/re locate as per the site condition and submit shop drawing for approval | |
| -Contractor to be provided detailed shop drawings before starting works | |
| -The minimum Energy Efficient Ratio [EER] value for AC Should be 3.5 [kW/kW] | |
| -All ACV equipment should be anti corrosive coated | |

S-02
A.04.1

ROOF FLOOR AC LAYOUT
SCALE 1:150

N. Maafaru Health Center
Client: Ministry of Health

Project Number: R21722404 - MHF
Architect: Zuhairah Abdul Majid
Engineer: N. Maafaru
Services: N. Maafaru
Interior: N. Maafaru

Reo no
Date



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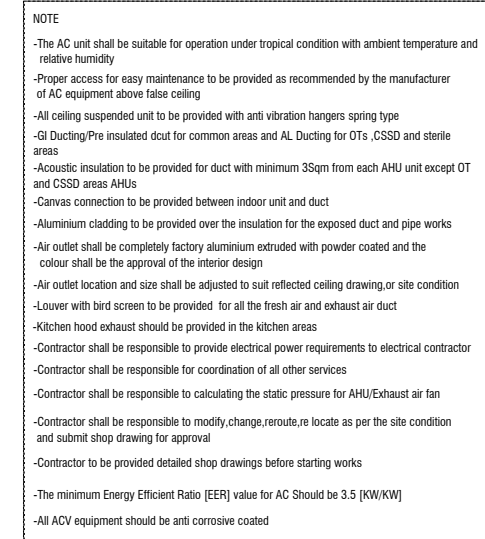
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w : www.riyan.com.mv

3rd floor, H. Aqun, Amememogga, Malé

Title: Roof Floor
AC Layout

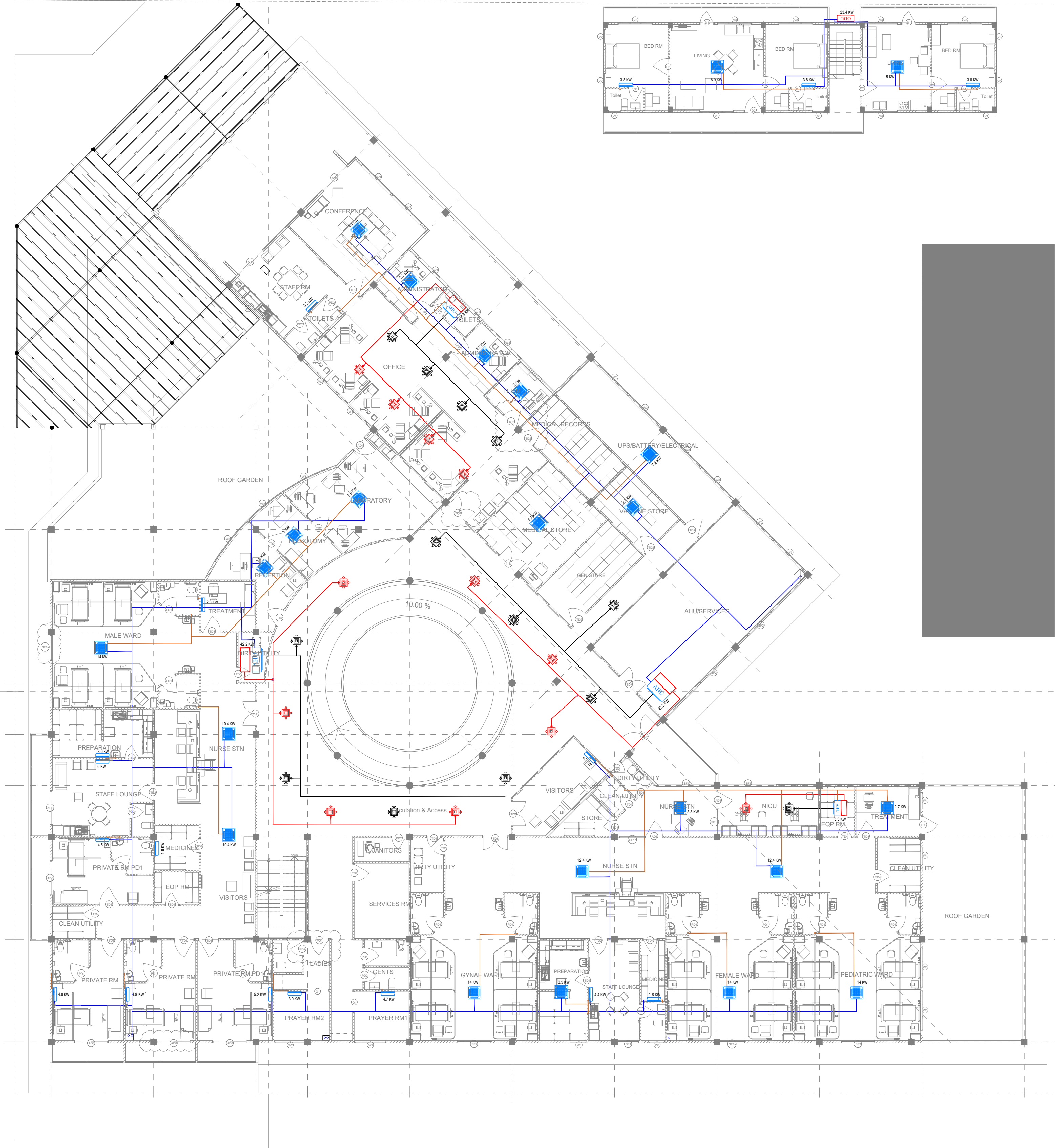
Page: AC-04 /04

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Title: Ground Floor
Ventilation Layout

Page: V-01 /04



| ACV LEGEND & ABBREVIATION | |
|---------------------------|--|
| | AIR HANDLING UNIT |
| | WALL MOUNTED UNIT |
| | CASSETTE UNIT |
| | OUTDOOR UNIT (TOP DISCHARGE) |
| | OUTDOOR UNIT (SIDE DISCHARGE) |
| | CEILING MOUNTED EXHAUST FAN |
| | FRESH AIR/EXHAUST AIR FAN (DUCT IN LINE) |
| | WALL MOUNTED FAN |
| | REFRIGERANT PIPES WITH INSULATION |
| | AC DRAIN PIPES WITH INSULATION |
| | SUPPLY AIR DUCT WITH THERMAL INSULATION |
| | RETURN AIR DUCT WITH THERMAL INSULATION |
| | EXHAUST AIR DUCT |
| | FRESH AIR DUCT |
| | VOLUME CONTROL DAMPER |
| | SUPPLY AIR DIFFUSER WITH DAMPER |
| | RETURN AIR DIFFUSER WITH DAMPER |
| | EXHAUST AIR GRILL |
| | 150MM WIDTH SUPPLY AND RETURN AIR GRILL |
| T/B | TO BELOW |
| T/A | TO ABOVE |
| F/A | FROM ABOVE |
| F/B | FROM BELOW |
| AHU | AIR HANDLING UNIT |
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| ODU | OUT DOOR UNIT |

SPECIFICATION FOR VRF/VRV

Outdoor Unit
Air cooled VRF / VRV system working in R410A / R-407C or equivalent refrigerant. The system shall be suitable to operate on 3 phase 380-415 V, 50Hz AC power supply & shall comprises with multiple no's of inverter, digital scroll/screw compressors, air cooled condenser fan with motor, microprocessor control panel, starter controls for all scroll compressors and condenser fan motors along with internal control and power wiring, cooling coil with internally interconnect refrigerant pipes, charging port and all other required accessories, & hardware's. The entire unit shall be with weather resistant powder coating paint for withstanding all ambient conditions for continuous outdoor operation

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NOTE

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- Contractor to be provided detailed shop drawings before starting works
- The minimum Energy Efficient Ratio (EER) value for AC Should be 3.5 (kW/kW)
- All ACV equipment should be anti corrosive coated

FIRST FLOOR AC LAYOUT
SCALE 1:150

N. Maafaru Health Center
Client: Ministry of Health
Project Number: R27122404H - NHF
Architect: Zuhairah Abdul Majid
Engineer: Nik Dels Cruze
Services: Interior



RYAN PRIVATE LIMITED
t: +60335049 f: +603350776
e: info@ryan.com.my
w: www.ryan.com.my
3rd Floor, H. Azura, Amanmenggus, MAM

Title: First Floor
Ventilation Layout
Page: V-02 /04

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| ACV LEGEND & ABBREVIATION | |
|---------------------------|---|
| | AIR HANDLING UNIT |
| | WALL MOUNTED UNIT |
| | CASSETTE UNIT |
| | OUTDOOR UNIT (TOP DISCHARGE) |
| | OUTDOOR UNIT (SIDE DISCHARGE) |
| | CEILING MOUNTED EXHAUST FAN |
| | FRESH AIR/EXHAUST AIR FAN (DUCT IN LINE) |
| | WALL MOUNTED FAN |
| | REFRIGERANT PIPES WITH INSULATION |
| | AC DRAIN PIPES WITH INSULATION |
| | SUPPLY AIR DUCT WITH THERMAL INSULATION |
| | RETURN AIR DUCT WITH THERMAL INSULATION |
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| SPECIFICATION FOR VRF/VRV | |
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| NOTE | |
|---|--|
| -The AC unit shall be suitable for operation under tropical condition with ambient temperature and relative humidity | |
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| -Aluminium cladding to be provided over the insulation for the exposed duct and pipe works | |
| -Air outlet shall be completely factory aluminium extruded with powder coated and the colour shall be the approval of the interior design | |
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| -Kitchen hood exhaust should be provided in the kitchen areas | |
| -Contractor shall be responsible to provide electrical power requirements to electrical contractor | |
| -Contractor shall be responsible for coordination of all other services | |
| -Contractor shall be responsible to calculating the static pressure for AHU/Exhaust air fan | |
| -Contractor shall be responsible to modify/change/reoute/re locate as per the site condition and submit shop drawing for approval | |
| -Contractor to be provided detailed shop drawings before starting works | |
| -The minimum Energy Efficient Ratio (EER) value for AC Should be 3.5 (KWH/KWH) | |
| -All ACV equipment should be anti corrosive coated | |

S-02
A.04.1

ROOF FLOOR AC LAYOUT
SCALE 1:150
0 0.5 1 2 3 4

N. Maafaru Health Center
Client: Ministry of Health

Project Number: R21722404H - MHF
Architect: Zuhairah Abdul Majid
Engineer: N. Maafaru
Services: N. Maafaru
Interior: N. Maafaru

Reo no
Date



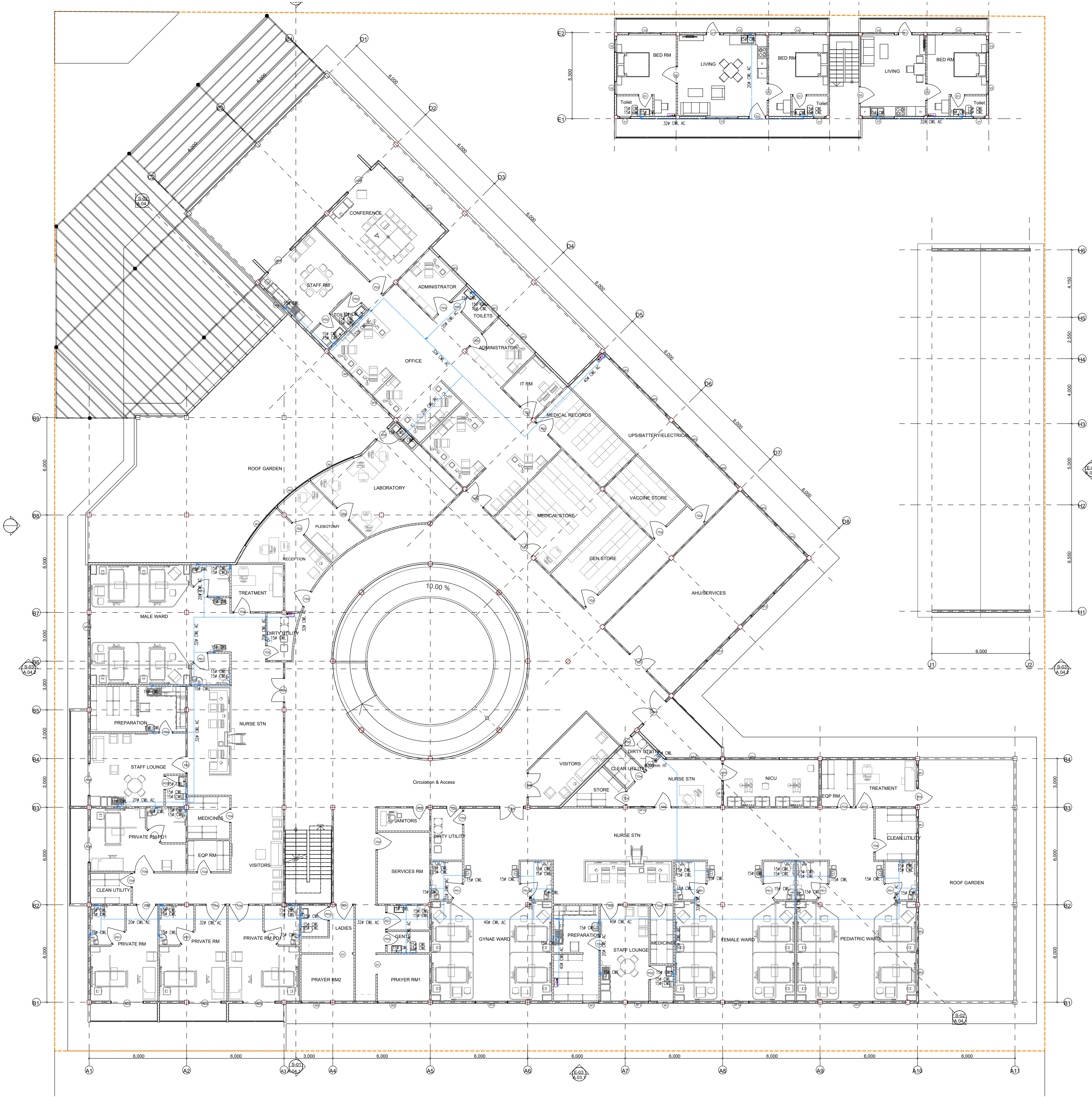
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e : info@riyan.com.mv
w : www.riyan.com.mv
3rd floor, H. Aqun, Amememogga, Malé

Title: Roof Floor
Ventilation Layout

Page: V-04 /04

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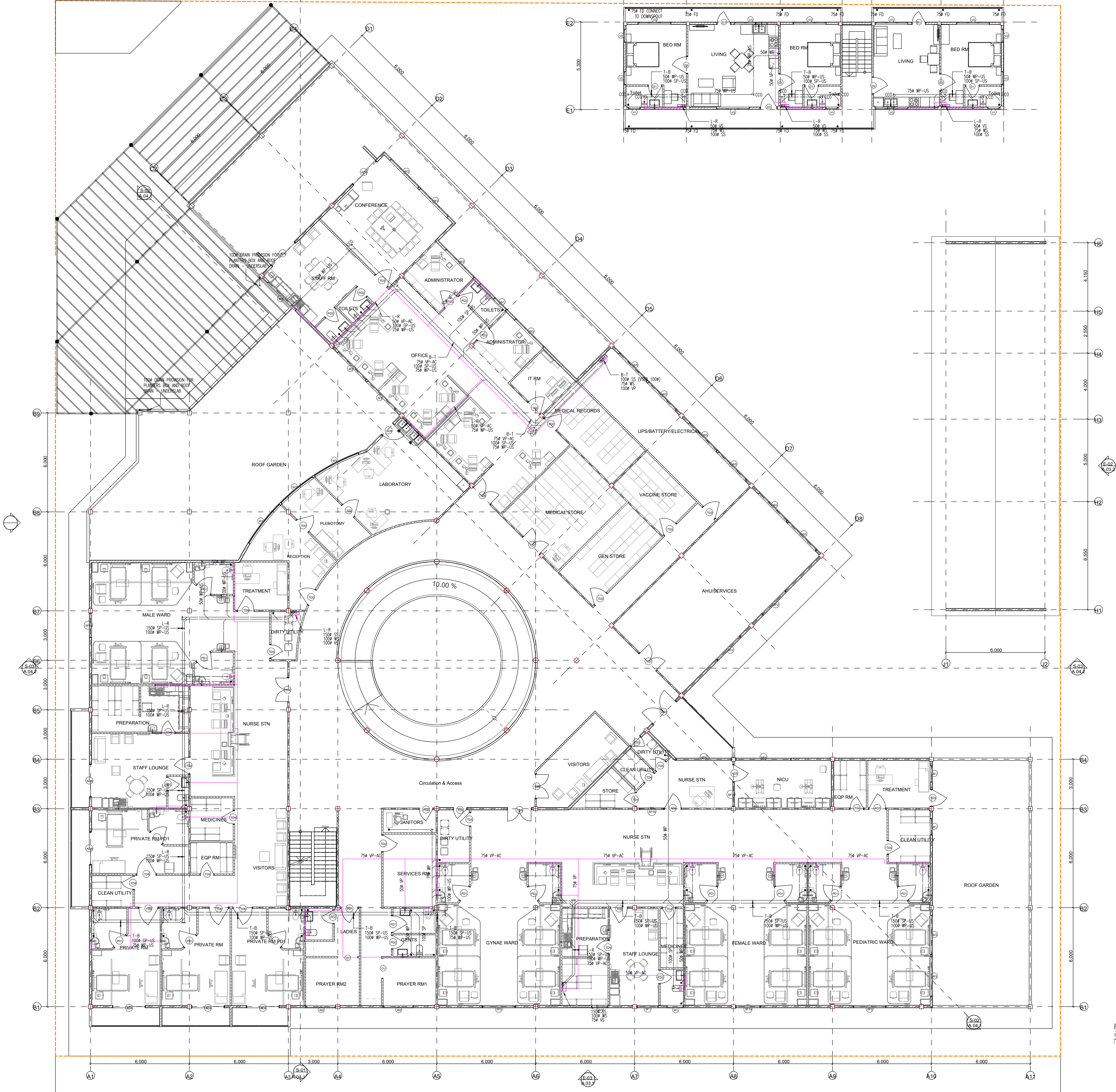
FIRST FLOOR PLUMBING LAYOUT
SCALE: 1:150

N. Maafaru Health Center
Client: Ministry of Health

| Project Number | Rev no | Date |
|-------------------------------|--------|------------|
| 2021/01/01 | 1 | 2021/01/01 |
| Architect: Zuhair Abdul Majid | | |
| Engineer: N. Maafaru | | |
| Services: N. Maafaru | | |
| Interior: N. Maafaru | | |



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FIRST FLOOR DRAINAGE LAYOUT
SCALE 1:150
0 1 2 3 4 5

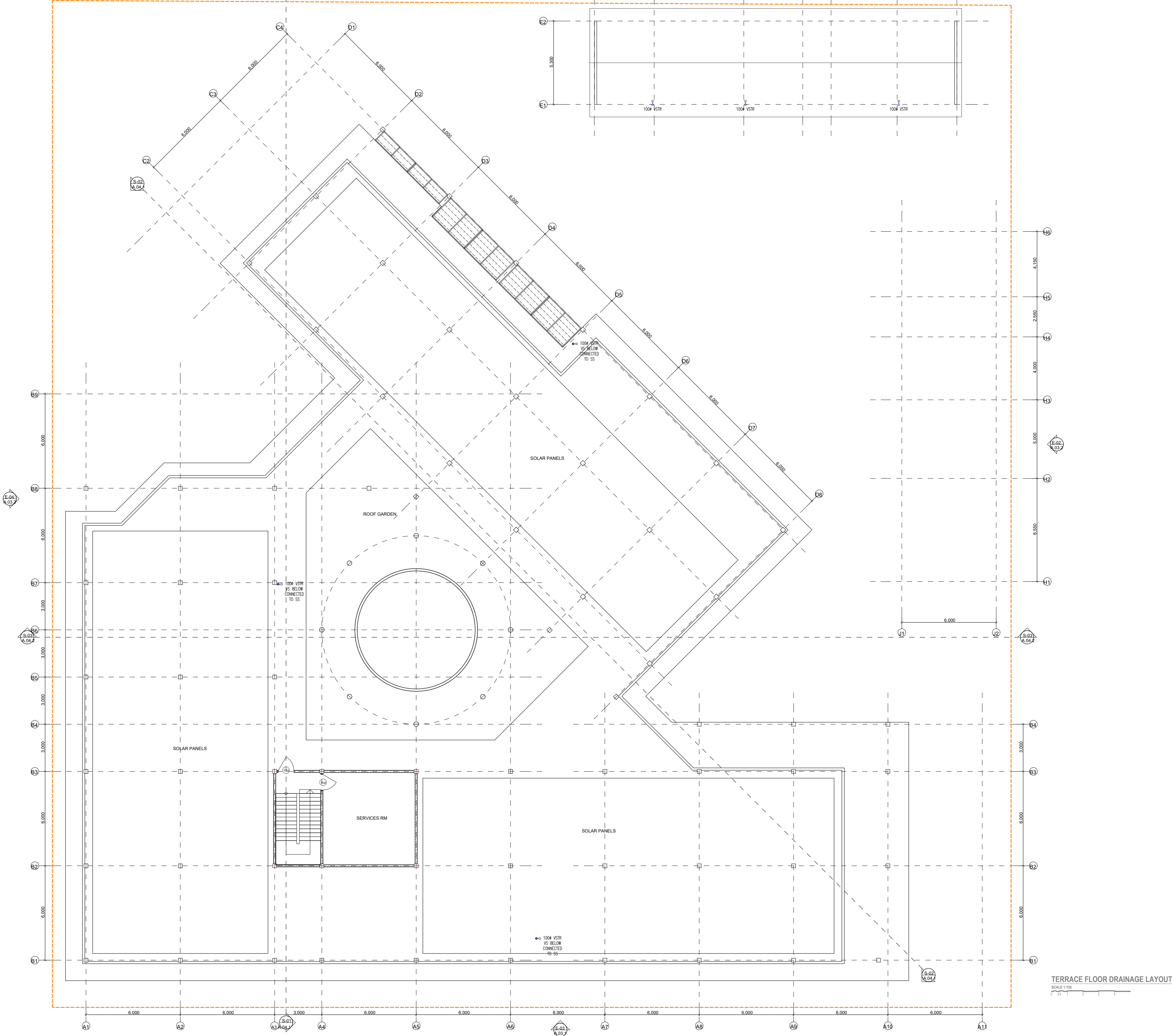
N. Maafaru Health Center
Client: Ministry of Health

| Project Number | Rev no | Date |
|----------------|--------|------------|
| 2021/01/01 | 1 | 2021/01/01 |
| 2021/01/01 | 2 | 2021/01/01 |
| 2021/01/01 | 3 | 2021/01/01 |
| 2021/01/01 | 4 | 2021/01/01 |
| 2021/01/01 | 5 | 2021/01/01 |
| 2021/01/01 | 6 | 2021/01/01 |
| 2021/01/01 | 7 | 2021/01/01 |
| 2021/01/01 | 8 | 2021/01/01 |
| 2021/01/01 | 9 | 2021/01/01 |
| 2021/01/01 | 10 | 2021/01/01 |



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t: +960335048 f: +960330776
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Title: First Floor
Drainage Layout
Page: DR-02 /03

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TERRACE FLOOR DRAINAGE LAYOUT
SCALE 1:100

N. Maafaru Health Center
Client: Ministry of Health

Project Number: R2712404 - NHF
Client: Ministry of Health
Architect: Zuhair Abdul Majid
Engineer: N. Maafaru
Services: Interior
Revised: -
Date: -

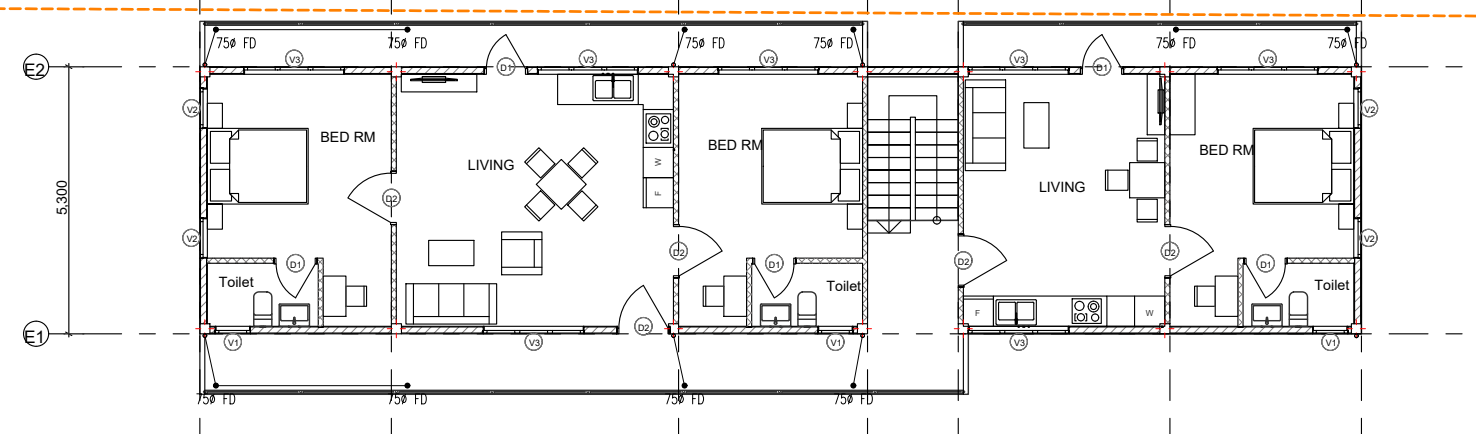
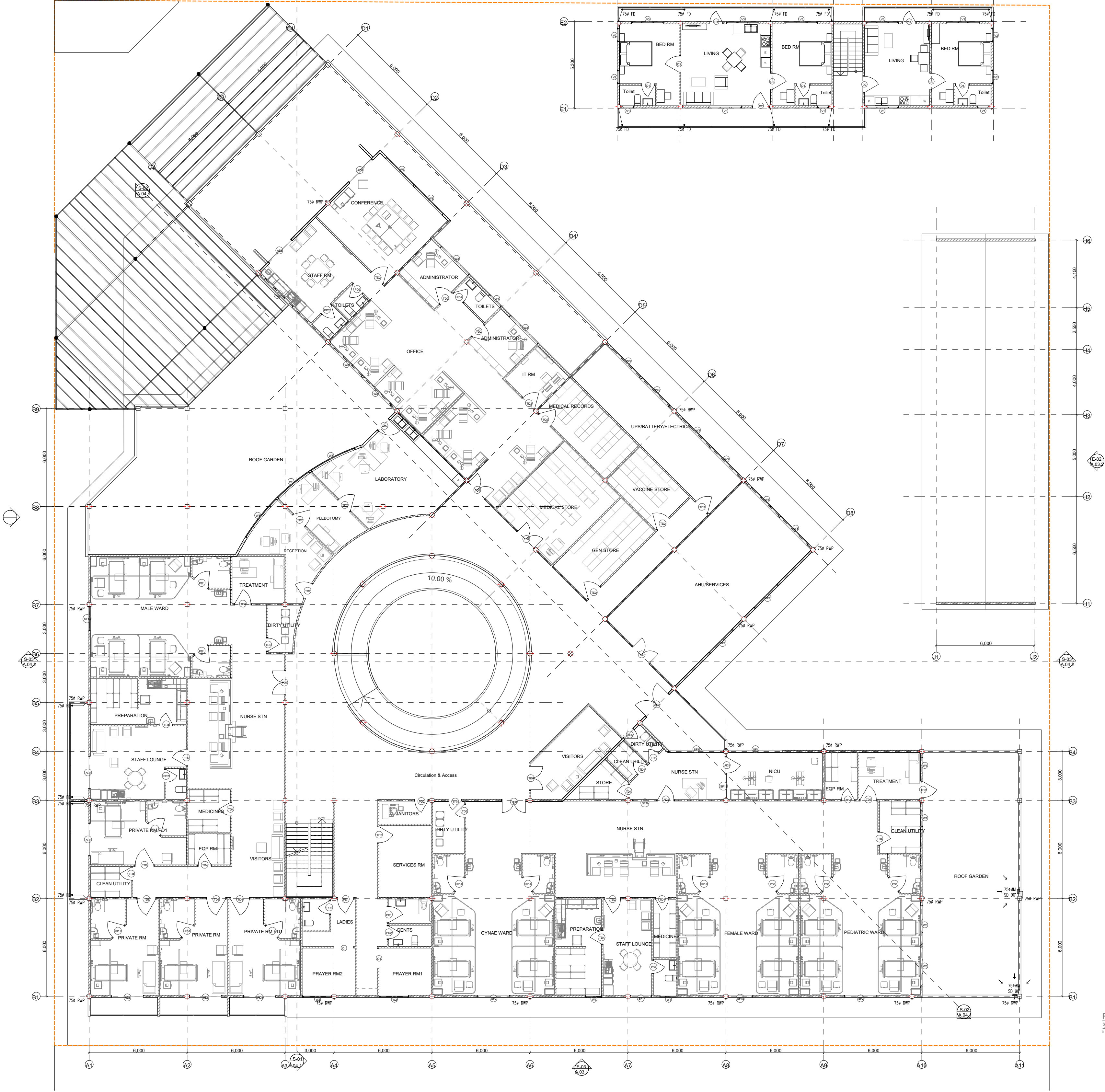


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e: info@ryan.com.mv
w: www.ryan.com.mv
3rd Floor, H. Aqun, Ameermeegha, Malé

Title: Terrace Floor
Drainage Layout
Page: DR-03 /03

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FIRST FLOOR STORM LAYOUT
SCALE 1:150
0 1 2 3 4 5

GROUND FLOOR LIGHTING
PROTECTION LAYOUT

SCALE 1:150



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3rd Floor, H. Azumi, Amnemeemigau, Malé

Title: Ground Floor
Lighting Protection Layout

Page: LP-01 /04

N. Maafaru Health Center
Client: Ministry of Health

Project Number: R271250CH - NMH
Architect: Zuhairah Abdul Majid
Engineer: - Nid Dels Cruze
Services: -
Interior: -

| Rev no | Date |
|--------|-------|
| -- | ----- |
| -- | ----- |
| -- | ----- |

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Project Name :
Client :
Drawing No. :

N. Maafaru Health Center
Client: Ministry of Health

Project Number: R271250CH - NMH
Architect: Zuhairah Abdul Majid
Engineer: -
Designer: Nid Dels Cruze
Interior: -

Revised By: -
Revised Date: -
Revised No: -
Revised Date: -
Revised No: -



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t : +9603395049 f : +9603310776
e : info@ryan.com.my
w : www.ryan.com.my
3rd Floor, H. Azumi, Ammanemogga, Malé

Title: First Floor
Lighting Protection Layout
Page: LP-02 /04

FIRST FLOOR LIGHTING
PROTECTION LAYOUT
SCALE 1:150



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TERRACE FLOOR LIGHTING
PROTECTION LAYOUT

SCALE 1:150



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3rd Floor, H. Azura, Amnemelegu, Malé

Title: Terrace Floor
Lighting Protection Layout
Page: LP-03 /04

N. Maafaru Health Center
Client: Ministry of Health

Project Number: R271250CH - NMH

Architect: Zuhairi Abdul Majid

Engineer: -

Services: -

Interior: -

Rev no

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Date

ROOF FLOOR LIGHTING
PROTECTION LAYOUT

SCALE 1:150

0 0.5 1 2 3 4



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3rd Floor, H. Azumi, Ammanemogga, MAW

Title: Roof Floor
Lighting Protection Layout

Page: LP-04 /04

N. Maafaru Health Center
Client: Ministry of Health

Project Number: R271250CH - NMH

Architect: Zuhairi Abdul Majid

Engineer: Nidhi Datta

Services: Nidhi Datta

Interior: Nidhi Datta

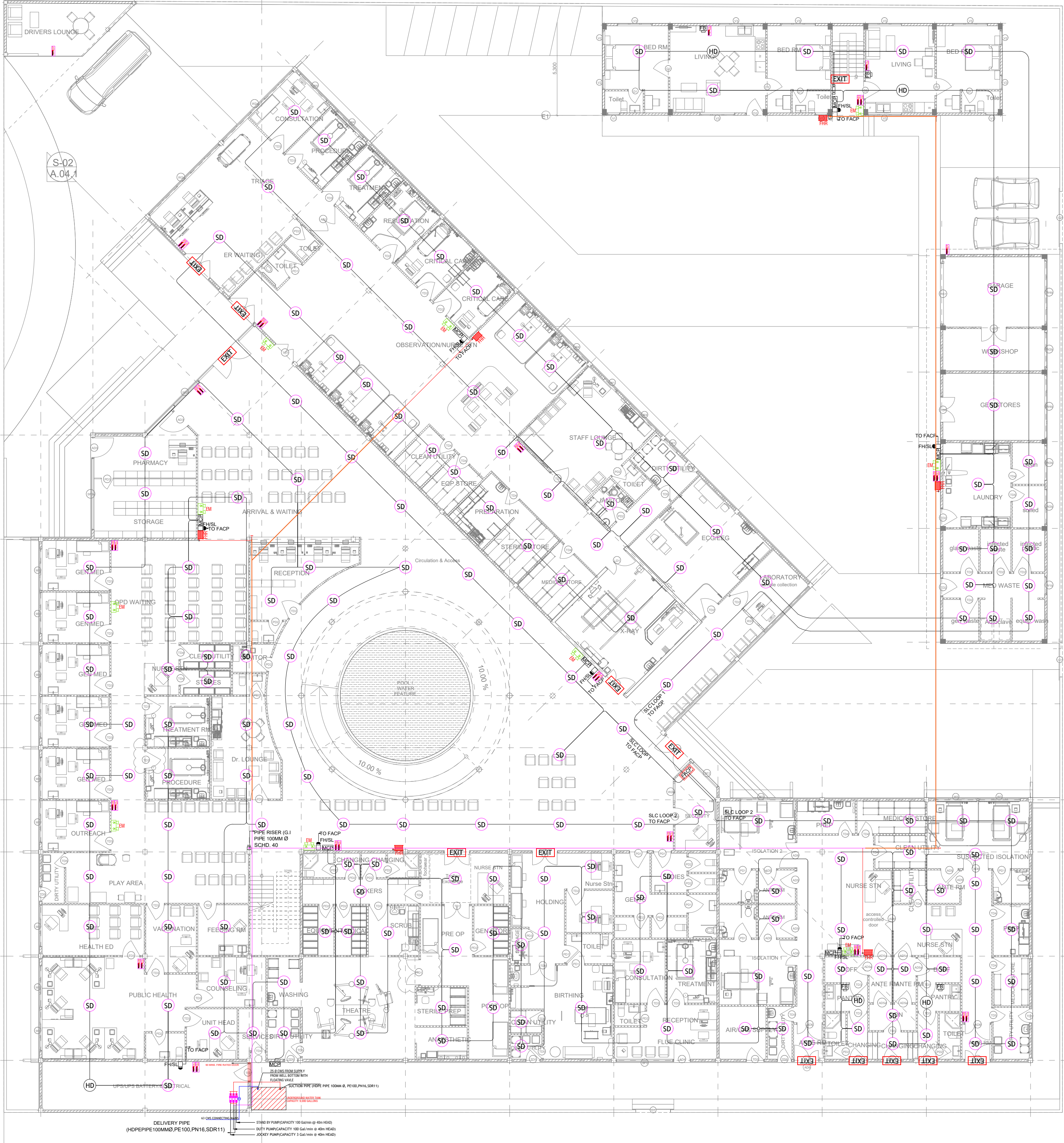
Rev no Date

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| LEGEND : FDP SYSTEM | | |
|---------------------|---|------|
| 1 | SMOKE DETECTOR - ADDRESSABLE/ANALOG | SD |
| 2 | HEAT DETECTOR - ADDRESSABLE/ANALOG | HD |
| 3 | FIRE ALARM CONTROL PANEL | FACP |
| 4 | FIRE MANUAL CALL POINT | MCP |
| 5 | FIRE ALARM SOUNDER WITH STROBE LIGHT 95DB | FASL |
| 6 | FIRE RESISTANT CABLE 1.5MM² X 2 CORE | |
| 7 | FIRE BLANKET | FBL |
| 8 | FIRE EXTINGUISHERS - 9 LTRS H2O & 2KG Co2 | FEX |
| 8 | FIRE EXTINGUISHERS - 50KG TROLLEY DCP & 2KG DCP | FEX |
| 9 | FIRE HOSE REEL W/ 25mm HOSE & 30 METERS | FHR |
| 10 | EMERGENCY LIGHT | EL |
| 11 | EXIT SIGNS LIGHT W/ BACK UP BATTERIES | EXIT |
| 12 | MWSC WATER METER | M |
| 13 | 25 MMØ AIR RELEASE VALVE | |
| 14 | PVC PIPE - 40MMØ CONNECTION TO FILL FIRE TANK | |
| 15 | PIPE RISER - GI PIPE 100MMØ, SCHEDULE 40 | |
| 16 | PIPE RISER - GI PIPE 25MMØ, SCHEDULE 40 | |
| 17 | PIPE RISER - GI PIPE 50MMØ, SCHEDULE 40 | |
| 18 | PIPE RISER - GI PIPE 25MMØ, SCHEDULE 40 | |
| 19 | PIPE HDPE 100MMØ, PE100, PN16, SDR11 | |
| 20 | FIRE PUMP SYSTEM CONSIST OF ELECTRICAL DUTY PUMP & DIESEL STAND BY PUMP - PUMPS CAPACITY IS 100 GPM @ 40M HEAD - JOCKEY PUMPS IS 3 GPM @ 40m HEAD | |
| 21 | FIRE RATED DOOR - 90 MINS. | |

GROUND FLOOR FDP LAYOUT
SCALE: 1:100
1" = 25'

N. Maafaru Health Center
Client: Ministry of Health

Project Number: R2122404 - NHF
Architect: Zuhairah Abdul Majid
Engineer: N. Maafaru
Services: Interior



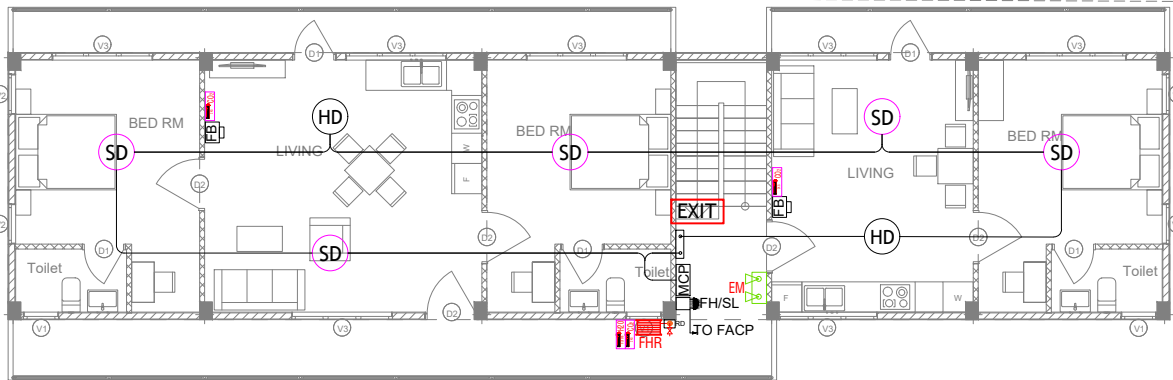
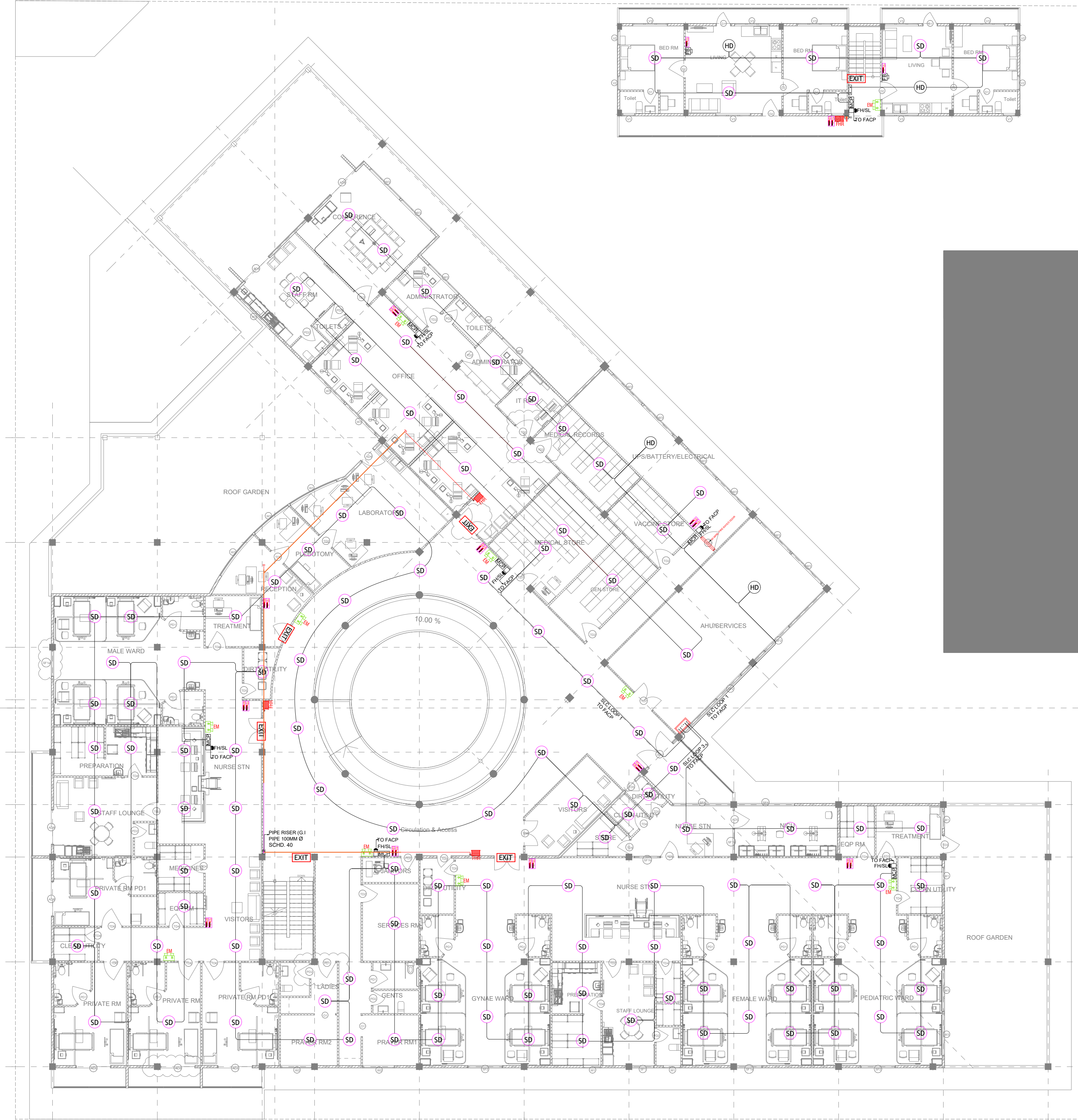
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3rd Floor, H. Aqun, Amememegga, Malé

Title: Ground Floor
FDP Layout

Page: FDP-01/03

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| LEGEND : FDP SYSTEM | | |
|---------------------|---|------|
| 1 | SMOKE DETECTOR - ADDRESSABLE/ANALOG | SD |
| 2 | HEAT DETECTOR - ADDRESSABLE/ANALOG | HD |
| 3 | FIRE ALARM CONTROL PANEL | FACP |
| 4 | FIRE MANUAL CALL POINT | MCP |
| 5 | FIRE ALARM SOUNDER WITH STROBE LIGHT 95DB | FHSL |
| 6 | FIRE RESISTANT CABLE 1.5MM² X 2 CORE | |
| 7 | FIRE BLANKET | |
| 8 | FIRE EXTINGUISHERS - 9 LTRS H2O & 2KG Co2 FIRE EXTINGUISHERS - 50KG TROLLEY DCP & 2KG DCP | |
| 9 | FIRE HOSE REEL W/ 25mm HOSE & 30 METERS | |
| 10 | EMERGENCY LIGHT | |
| 11 | EXIT SIGNS LIGHT W/ BACK UP BATTERIES | EXIT |
| 12 | MWSC WATER METER | M |
| 13 | 25 MMØ AIR RELEASE VALVE | |
| 14 | PVC PIPE - 40MMØ CONNECTION TO FILL FIRE TANK | |
| 15 | PIPE RISER - GI PIPE 100MMØ, SCHEDULE 40 | |
| 16 | PIPE RISER - GI PIPE 25MMØ, SCHEDULE 40 | |
| 17 | PIPE RISER - GI PIPE 50MMØ, SCHEDULE 40 | |
| 18 | PIPE RISER - GI PIPE 25MMØ, SCHEDULE 40 | |
| 19 | PIPE HDPE 100MMØ, PE100, PN16, SDR11 | |
| 20 | FIRE PUMP SYSTEM CONSIST OF ELECTRICAL DUTY PUMP & DIESEL STAND BY PUMP - PUMPS CAPACITY IS 100 GPM @ 40m HEAD - JOCKEY PUMPS IS 3 GPM @ 40m HEAD | |
| 21 | FIRE RATED DOOR - 90 MINS. | |

FIRST FLOOR FDP LAYOUT
SCALE: 1:150
0 1 2 3 4 5

N. Maafaru Health Center
Client: Ministry of Health

Project Number: R2172KACH - NHF
Client: Ministry of Health
Architect: Zuhair Abdul Majid
Engineer: N. Maafaru
Services: N. Maafaru
Interior: N. Maafaru



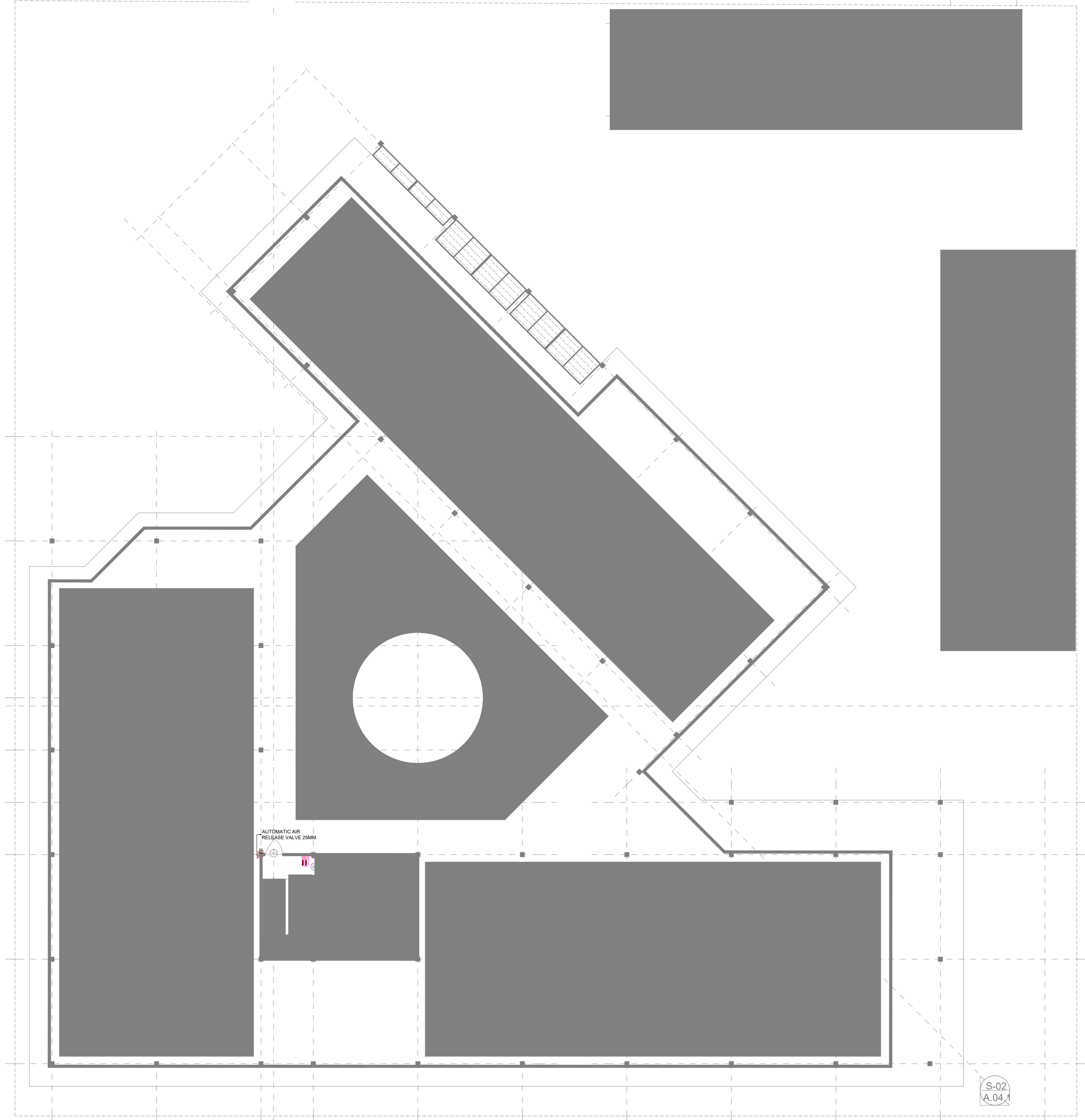
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3rd floor, H. Aqun, Amememegga, Malé

Title: First Floor
FDP Layout

Page: FDP-02 /03

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| LEGEND : FDP SYSTEM | | |
|---------------------|---|--|
| 1 | SMOKE DETECTOR - ADDRESSABLE/ANALOG | |
| 2 | HEAT DETECTOR - ADDRESSABLE/ANALOG | |
| 3 | FIRE ALARM CONTROL PANEL | |
| 4 | FIRE MANUAL CALL POINT | |
| 5 | FIRE ALARM SOUNDER WITH STROBE LIGHT 95DB | |
| 6 | FIRE RESISTANT CABLE 1.5MM² X 2 CORE | |
| 7 | FIRE BLANKET | |
| 8 | FIRE EXTINGUISHERS - 9 LTRS H2O & 2KG Co2 FIRE EXTINGUISHERS - 50KG TROLLEY DCP & 2KG DCP | |
| 9 | FIRE HOSE REEL W/ 25mm HOSE & 30 METERS | |
| 10 | EMERGENCY LIGHT | |
| 11 | EXIT SIGNS LIGHT W/ BACK UP BATTERIES | |
| 12 | MWSC WATER METER | |
| 13 | 25 MMØ AIR RELEASE VALVE | |
| 14 | PVC PIPE - 40MMØ CONNECTION TO FILL FIRE TANK | |
| 15 | PIPE RISER - GI PIPE 100MMØ, SCHEDULE 40 | |
| 16 | PIPE RISER - GI PIPE 25MMØ, SCHEDULE 40 | |
| 17 | PIPE RISER - GI PIPE 50MMØ, SCHEDULE 40 | |
| 18 | PIPE RISER - GI PIPE 25MMØ, SCHEDULE 40 | |
| 19 | PIPE HDPE 100MMØ, PE100, PN16,SDR11 | |
| 20 | FIRE PUMP SYSTEM CONSIST OF ELECTRICAL DUTY PUMP & DIESEL STAND BY PUMP - PUMPS CAPACITY IS 100 GPM @ 40M HEAD - JOCKEY PUMPS IS 3 GPM @ 40m HEAD | |
| 21 | FIRE RATED DOOR - 90 MINS. | |

TERRACE FLOOR FDP LAYOUT
SCALE 1:100
0' 1' 2' 3' 4'

N. Maafaru Health Center
Client: Ministry of Health

Project Number: R27122404 - NMH
Client: Ministry of Health
Architect: Zuhairah Abdul Majid
Engineer: Nidalee Cruz
Services: Interior
Revised: -
Date: -



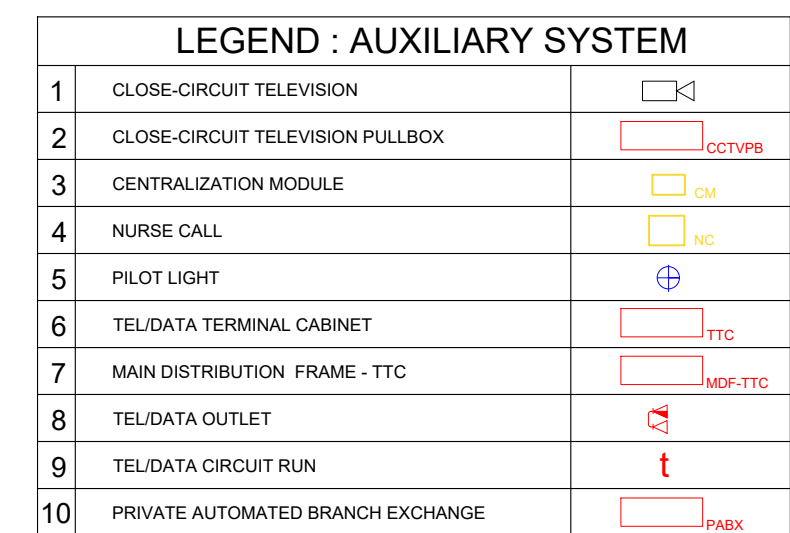
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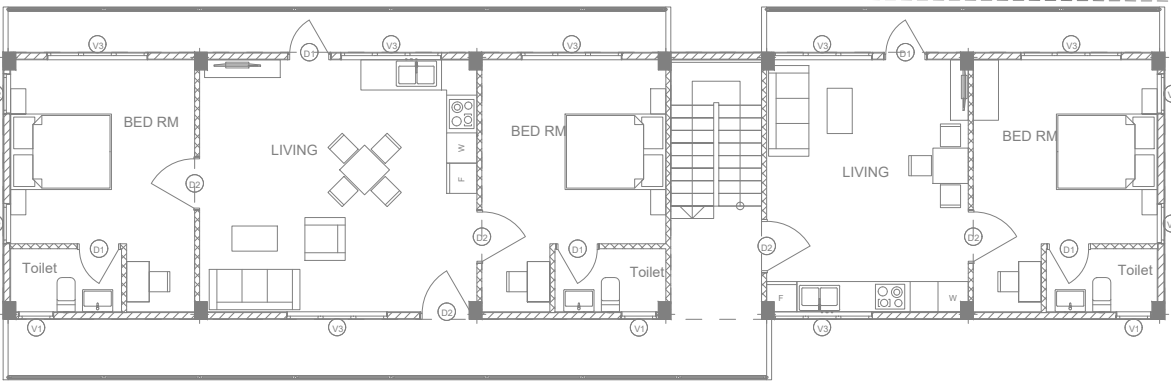
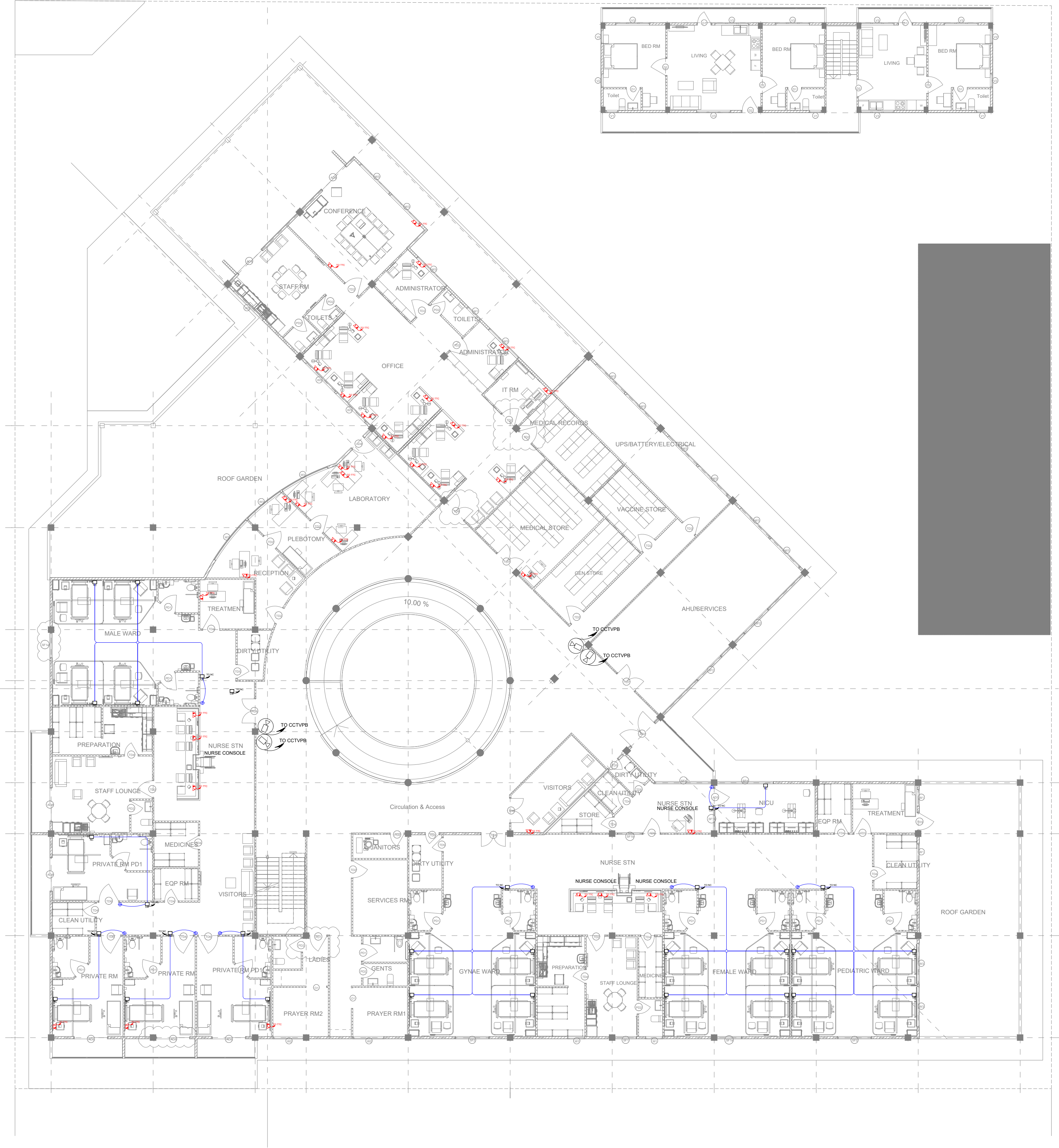
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w: www.ryan.com.mv
3rd Floor, H. Aqun, Aramenemogga, Malé

Title: Terrace Floor
FDP Layout

Page: FDP-03 /03

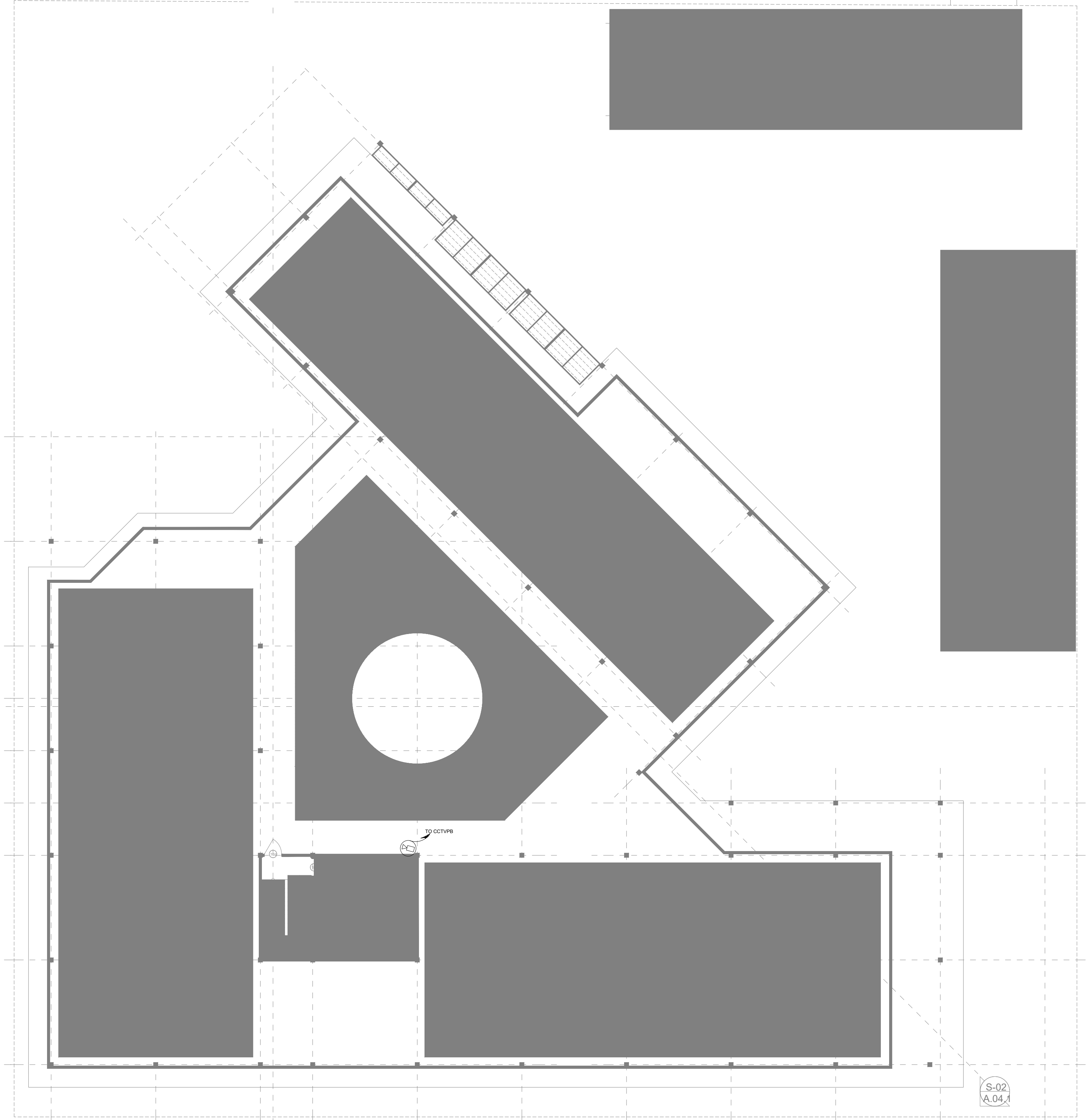
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| LEGEND : AUXILIARY SYSTEM | | |
|---------------------------|-----------------------------------|--|
| 1 | CLOSE-CIRCUIT TELEVISION | |
| 2 | CLOSE-CIRCUIT TELEVISION PULLBOX | |
| 3 | CENTRALIZATION MODULE | |
| 4 | NURSE CALL | |
| 5 | PILOT LIGHT | |
| 6 | TEL/DATA TERMINAL CABINET | |
| 7 | MAIN DISTRIBUTION FRAME - TTC | |
| 8 | TEL/DATA OUTLET | |
| 9 | TEL/DATA CIRCUIT RUN | |
| 10 | PRIVATE AUTOMATED BRANCH EXCHANGE | |

FIRST FLOOR
INFORMATION & COMMUNICATION TECHNOLOGY / SECURITY
SCALE: 1:150
0 0.5 1 2 3 4 5



| LEGEND : AUXILIARY SYSTEM | | |
|---------------------------|-----------------------------------|--|
| 1 | CLOSE-CIRCUIT TELEVISION | |
| 2 | CLOSE-CIRCUIT TELEVISION PULLBOX | |
| 3 | CENTRALIZATION MODULE | |
| 4 | NURSE CALL | |
| 5 | PILOT LIGHT | |
| 6 | TEL/DATA TERMINAL CABINET | |
| 7 | MAIN DISTRIBUTION FRAME - TTC | |
| 8 | TEL/DATA OUTLET | |
| 9 | TEL/DATA CIRCUIT RUN | |
| 10 | PRIVATE AUTOMATED BRANCH EXCHANGE | |

TERRACE FLOOR
INFORMATION & COMMUNICATION TECHNOLOGY / SECURITY
SCALE 1:150
0 1 2 3 4

N. Maafaru Health Center
Client: Ministry of Health

Project Number: R271224CH - NHF
Client: Ministry of Health
Architect: Zuhairah Abdul Majid
Engineer: Nkl Dels Cruz
Services: Interior
Revised By: Nkl Dels Cruz
Date: 2024-03-01



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t: +960335049 f: +960335076
e: info@ryan.com.mv
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Title: Terrace Floor
ICT- Security Layout

Page: ICT-03 /03

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