

CONSULTANCY SERVICES FOR SURVEY, DESIGN AND EIA WORKS OF WATER SUPPLY AND
SEWERAGE FACILITIES IN 5 ISLANDS, MALDIVES

PACKAGE 6

SEWERAGE SYSTEM OF L. KUNAHANDHOO, MALDIVES

For Ministry of National Planning, Housing and Infrastructure, Republic of Maldives

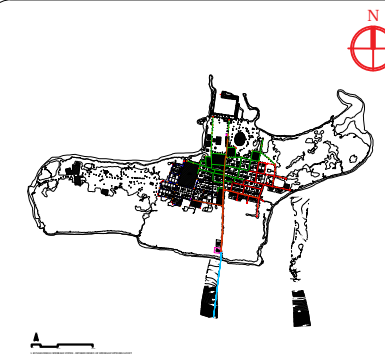
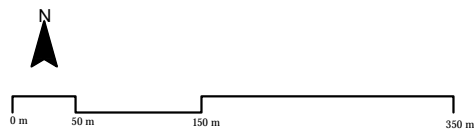


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Legend

- | | |
|--|--|
| 160mm Ø uPVC P51 Gravity Sewer Main (SN4, SDR41) | 2282 m |
| 160mm Ø uPVC P52 Gravity Sewer Main (SN4, SDR41) | 1634 m |
| 160mm Ø uPVC P53 Gravity Sewer Main (SN4, SDR41) | 2676 m |
| 110 mm Ø HDPE Pumping Main (PE100, PN16, SDR11) | 1733 m |
| 160 mm Ø HDPE Sea Outfall Pipe (PE100, PN16, SDR11) | 56 m on shore
335 m offshore
391 m total |
| 600mm Ø PE/PP Maintenance Shaft | 103 nos |
| 160mmØ uPVC Clean Out | 64 nos |
| <p>PERMANENT SURVEY MARK PSKM_0099
 318628.6805E, 197674.0730N
 1.608m From MSL</p> <p>PERMANENT SURVEY MARK PSKM_0100
 318485.463E, 197250.969N
 0.370m From MSL</p> <p>PERMANENT SURVEY MARK PSKM_0101
 318884.223E, 197157.653N
 0.485m From MSL</p> | |

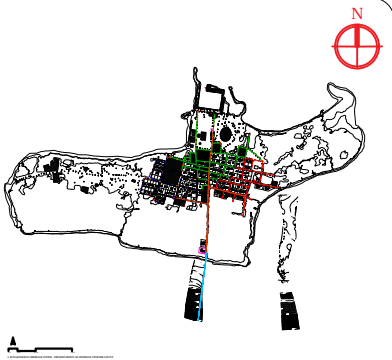
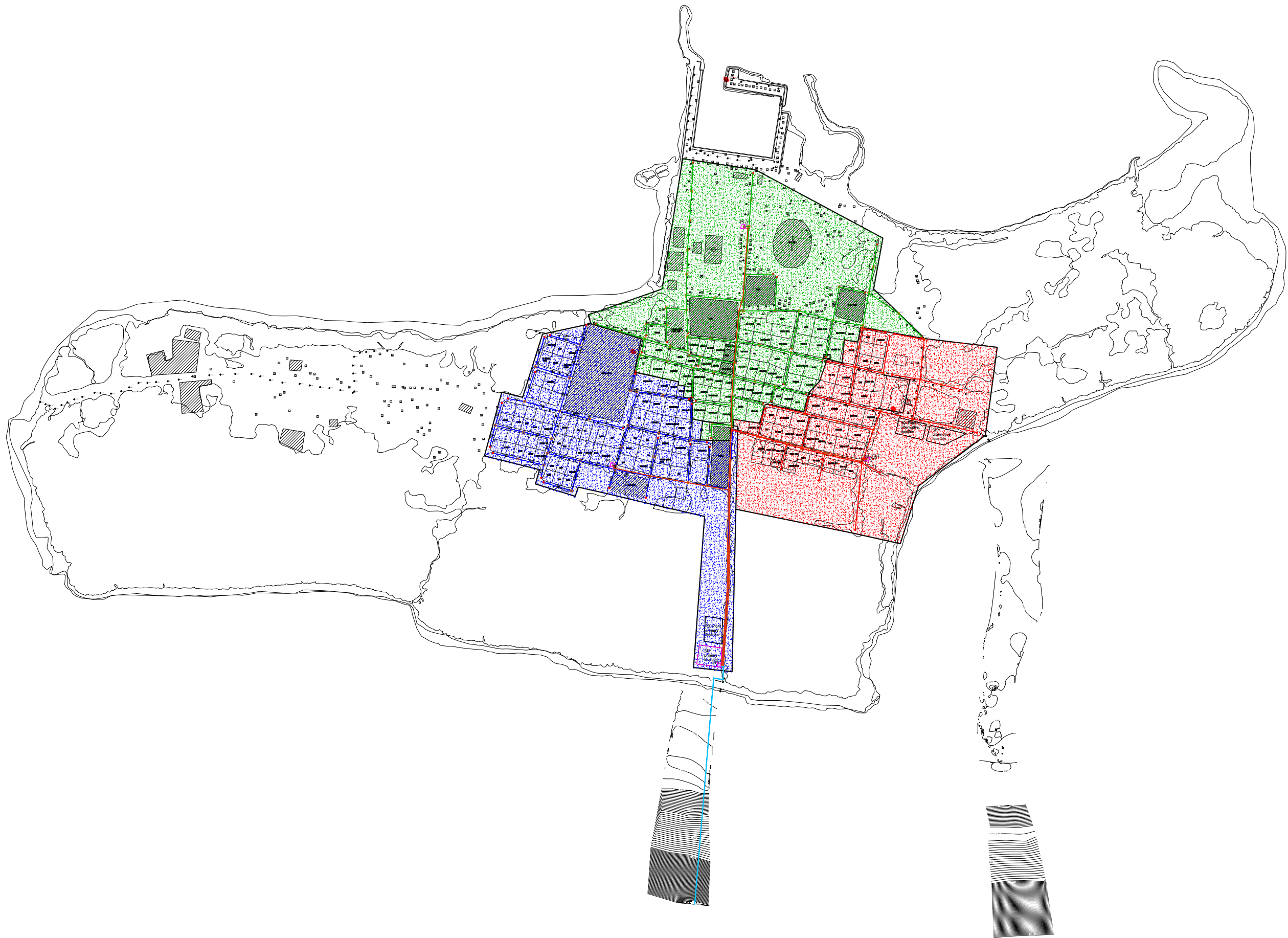
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Consultancy Services for Survey,
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Supply and Sewerage Facilities in
5 islands, Maldives - Package 6

Sub Title:
Sewerage System in L. Kunahandhoo

Client:
Ministry of National Planning, Housing and
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Legend

- PS-1 Catchment Area
- PS-2 Catchment Area
- PS-3 Catchment Area

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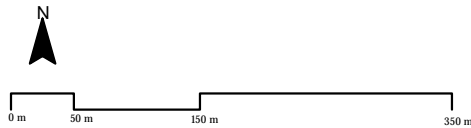
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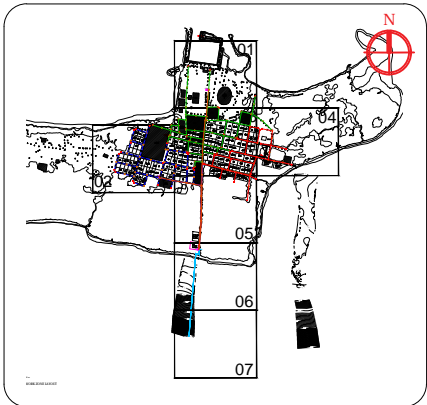
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L. KUNAHANDHOO SEWERAGE SYSTEM - SEWERAGE NETWORK CATCHMENT AREAS
1:6000



Legend

- 160mm Ø uPVC PS1 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS2 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS3 Gravity Sewer Main (SN4, SDR41)
- 600mm Ø PE/PP Maintenance Shaft
- 160mmØ uPVC Clean Out
- 160 mm Ø HDPE Pumping Main (PE100, PN16, SDR11)
- 160 mm Ø HDPE Sea Outfall Pipe (PE100, PN16, SDR11)

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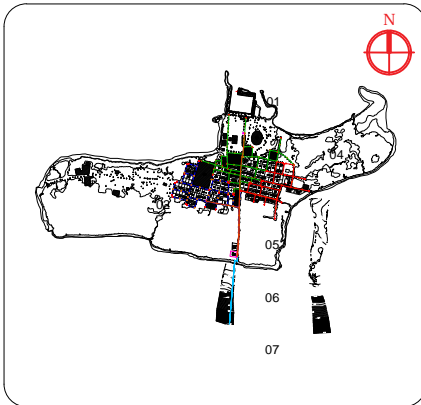
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L. KUNAHANDHOO SEWERAGE SYSTEM
- SEWERAGE NETWORK LAYOUT - ZONE 01
1:1000



- Legend
- 160mm Ø uPVC PS1 Gravity Sewer Main (SN4, SDR41)
 - 160mm Ø uPVC PS2 Gravity Sewer Main (SN4, SDR41)
 - 160mm Ø uPVC PS3 Gravity Sewer Main (SN4, SDR41)
 - 600mm Ø PE/PP Maintenance Shaft
 - 160mm Ø uPVC Clean Out
 - 160 mm Ø HDPE Pumping Main (PE100, PN16, SDR11)
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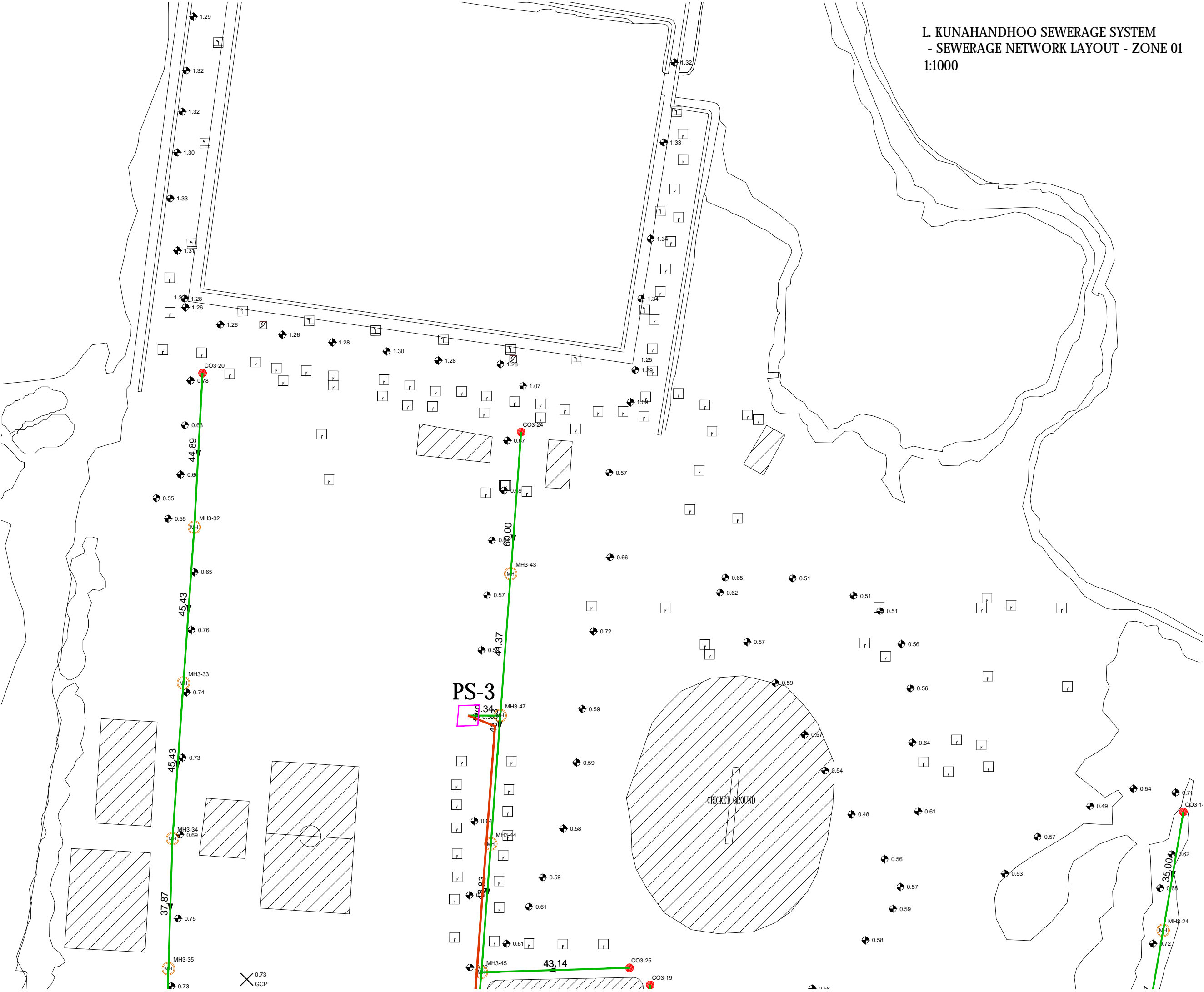
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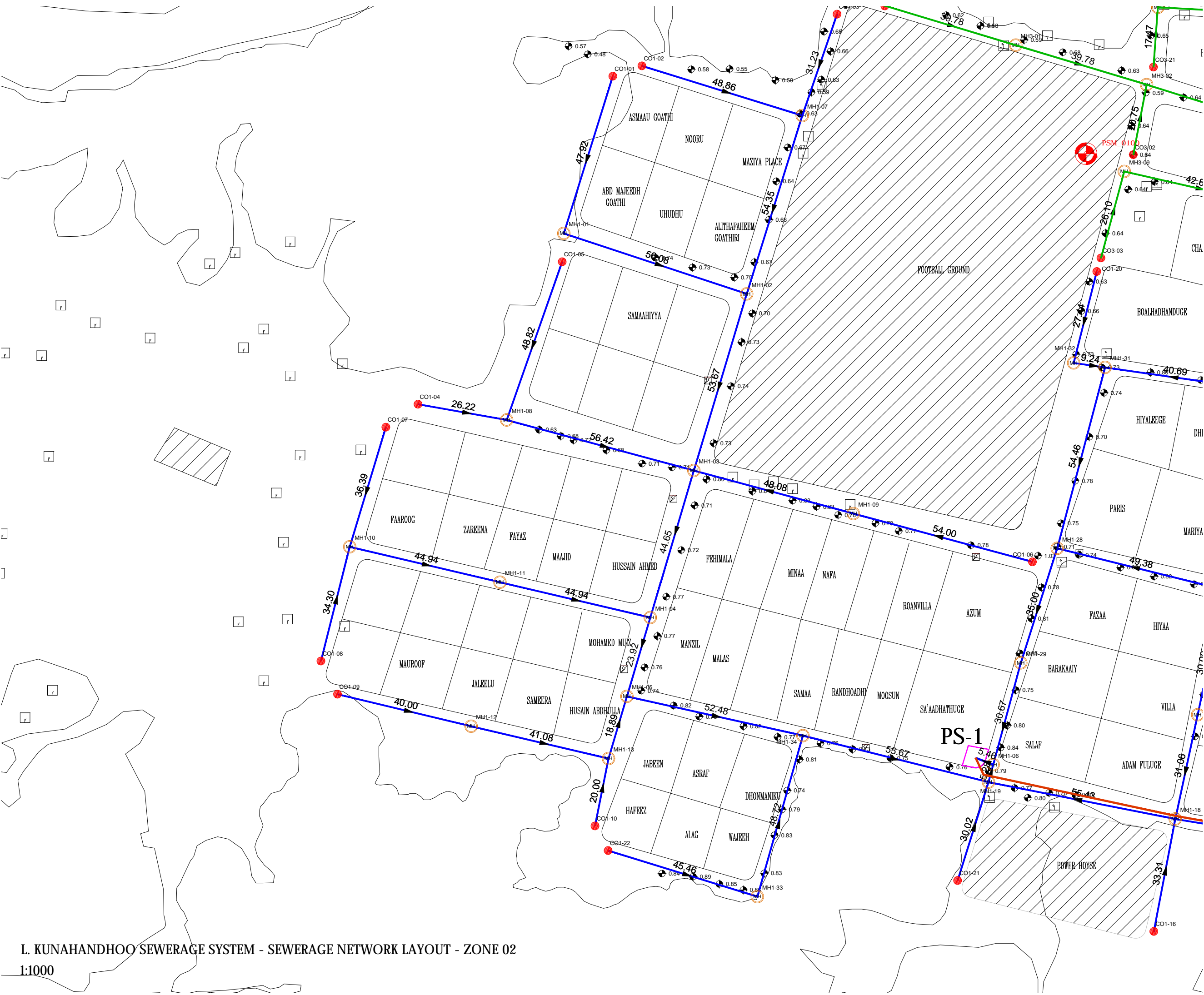
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Making Infrastructure Happen





L. KUNAHANDHOO SEWERAGE SYSTEM - SEWERAGE NETWORK LAYOUT - ZONE 02
1:1000

Legend

- 160mm Ø uPVC PS1 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS2 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS3 Gravity Sewer Main (SN4, SDR41)
- 600mm Ø PE/PP Maintenance Shaft
- 160mmØ uPVC Clean Out
- 160 mm Ø HDPE Pumping Main (PE100, PN16, SDR11)
- 160 mm Ø HDPE Sea Outfall Pipe (PE100, PN16, SDR11)

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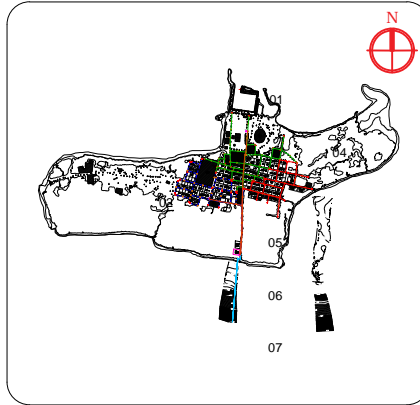
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Legend

- 160mm Ø uPVC PS1 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS2 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS3 Gravity Sewer Main (SN4, SDR41)
- 600mm Ø PE/PP Maintenance Shaft
- 160mm Ø uPVC Clean Out
- 160 mm Ø HDPE Pumping Main (PE100, PN16, SDR11)
- 160 mm Ø HDPE Sea Outfall Pipe (PE100, PN16, SDR11)

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Sub Title: Sewerage System in L. Kunahandhoo

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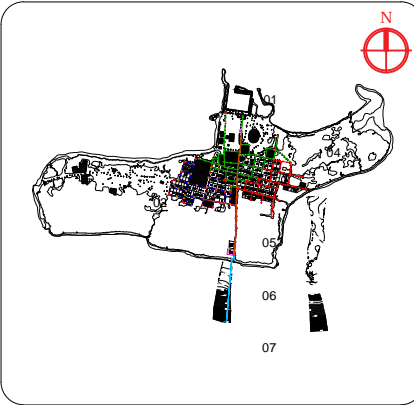
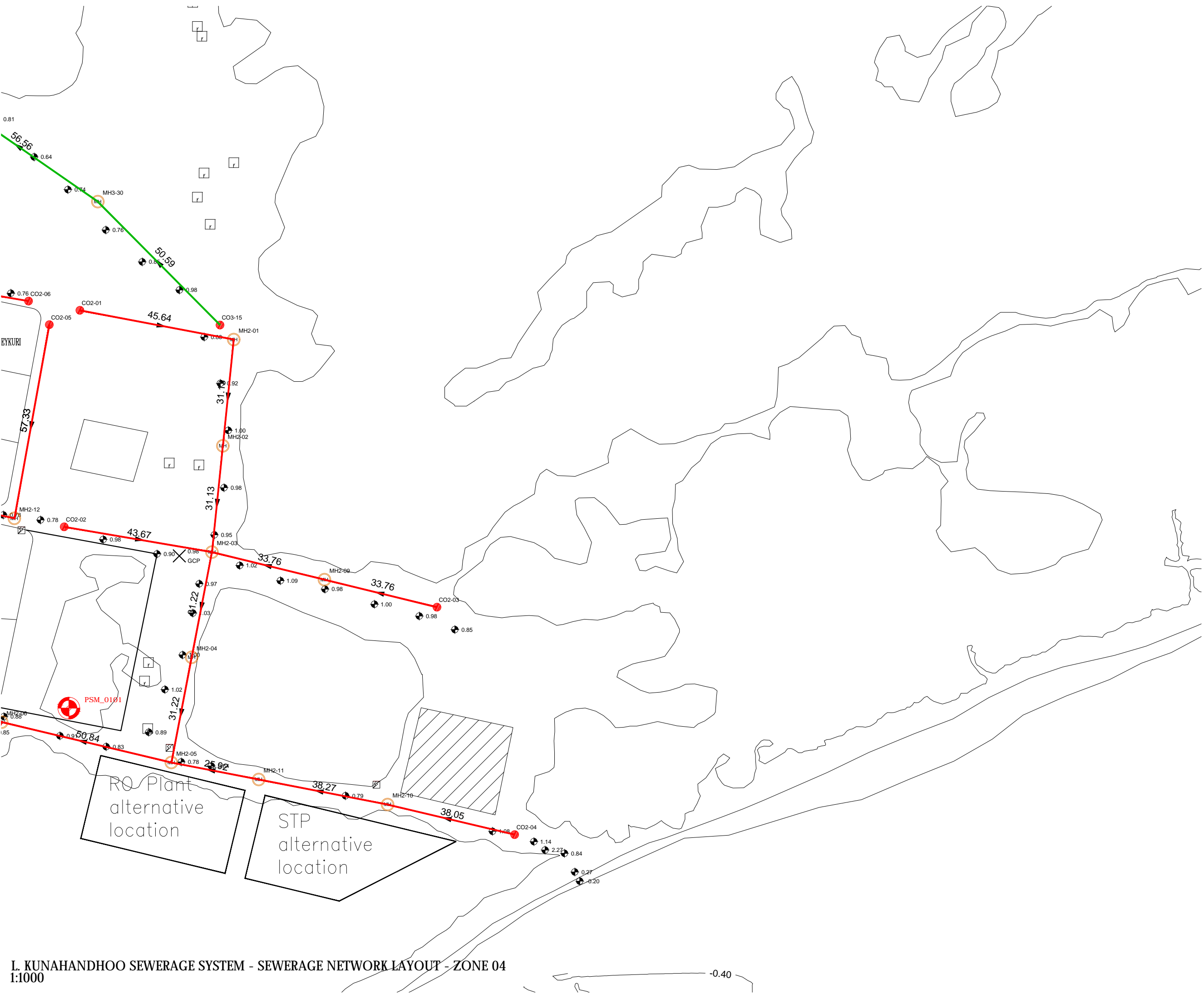
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Legend

- 160mm Ø uPVC PS1 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS2 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS3 Gravity Sewer Main (SN4, SDR41)
- 600mm Ø PE/PP Maintenance Shaft
- 160mm Ø uPVC Clean Out
- 160 mm Ø HDPE Pumping Main (PE100, PN16, SDR11)
- 160 mm Ø HDPE Sea Outfall Pipe (PE100, PN16, SDR11)

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Sub Title:
Sewerage System in L. Kunahandhoo

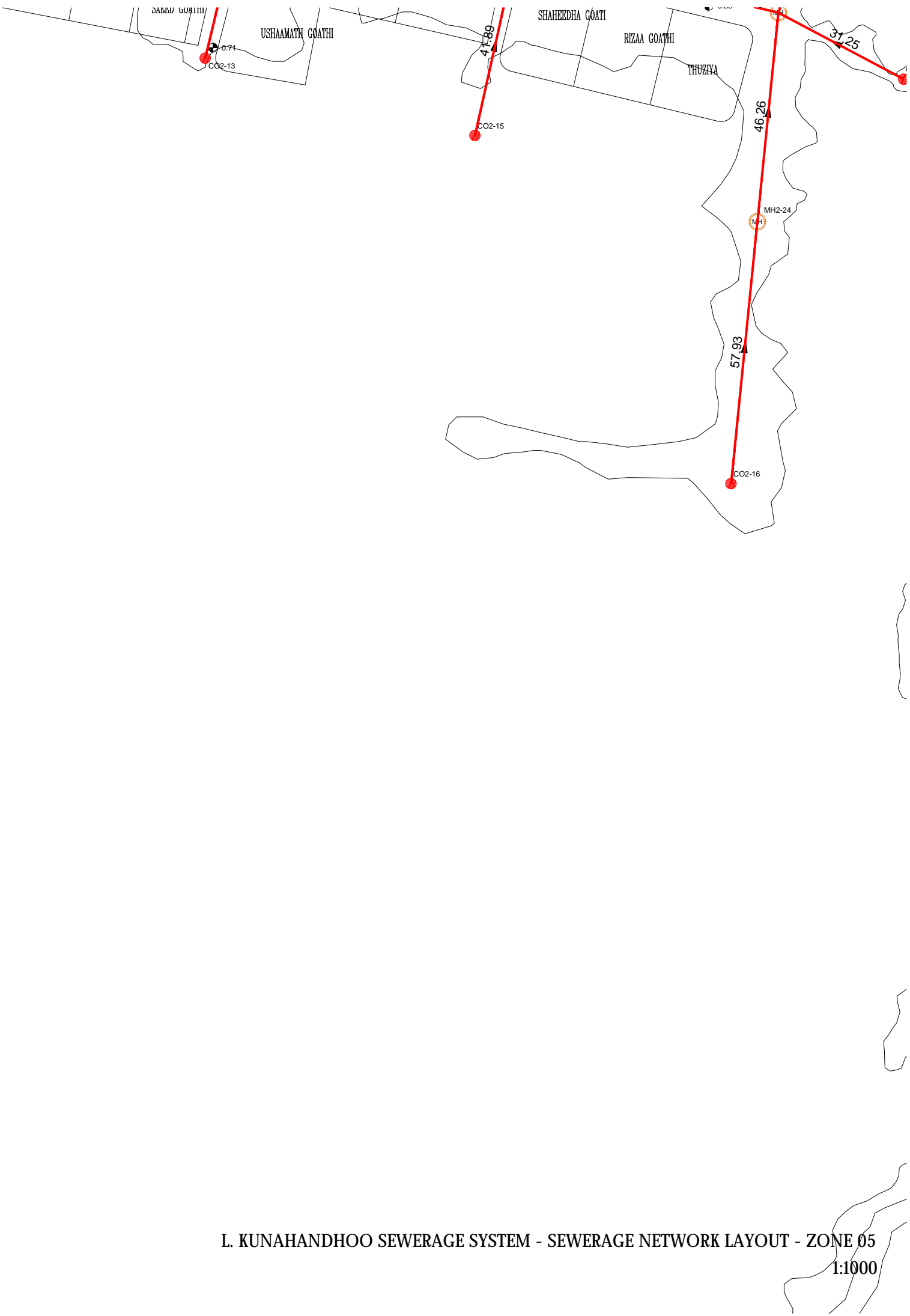
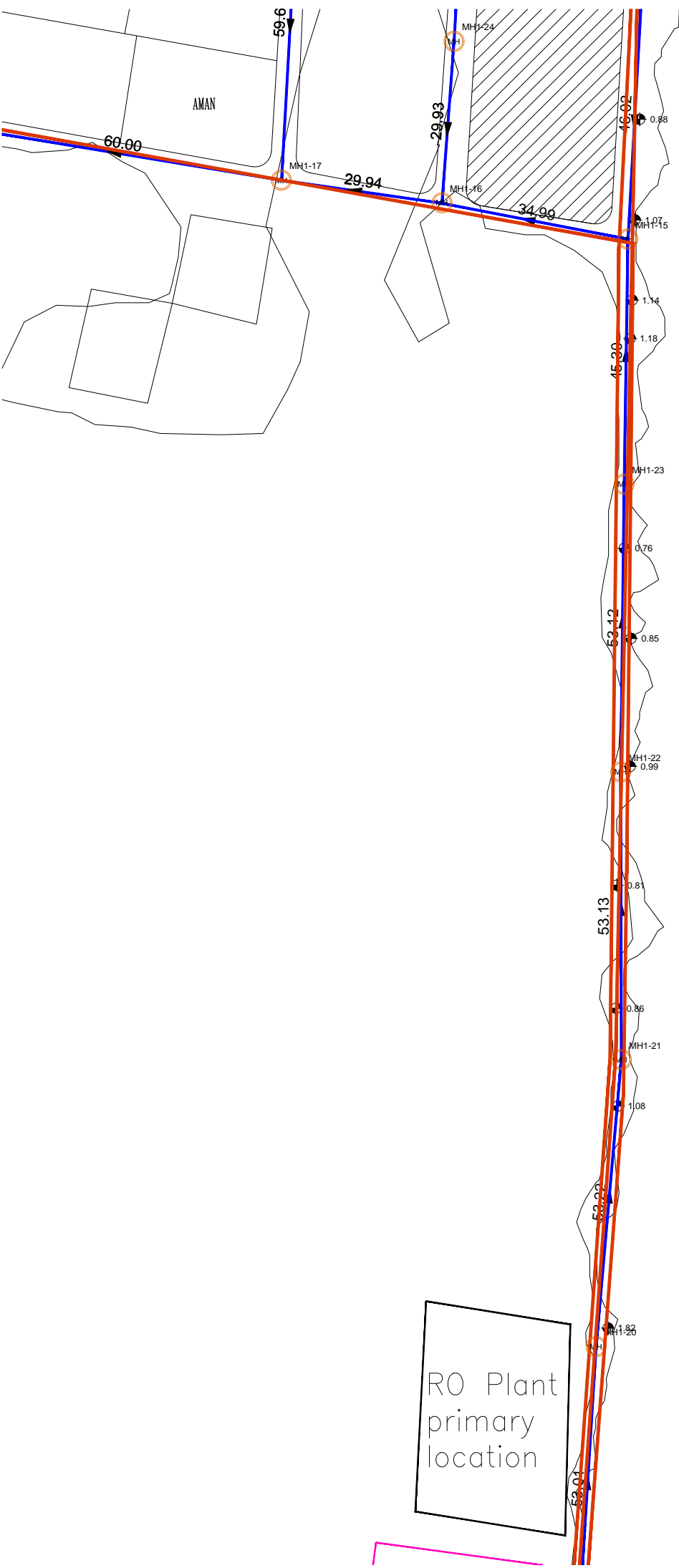
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L. KUNAHANDHOO SEWERAGE SYSTEM - SEWERAGE NETWORK LAYOUT - ZONE 04
1:1000



Legend

- 160mm Ø uPVC PS1 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS2 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS3 Gravity Sewer Main (SN4, SDR41)
- 600mm Ø PE/PP Maintenance Shaft
- 160mmØ uPVC Clean Out
- 160 mm Ø HDPE Pumping Main (PE100, PN16, SDR11)
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Sub Title:
Sewerage System in L. Kunahandhoo

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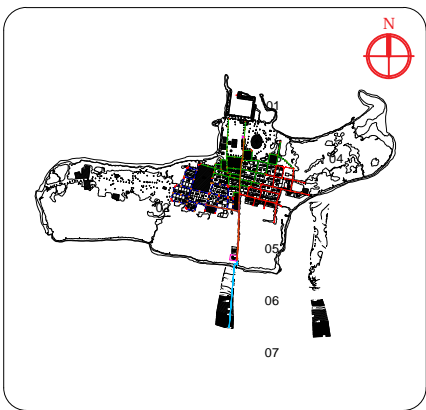
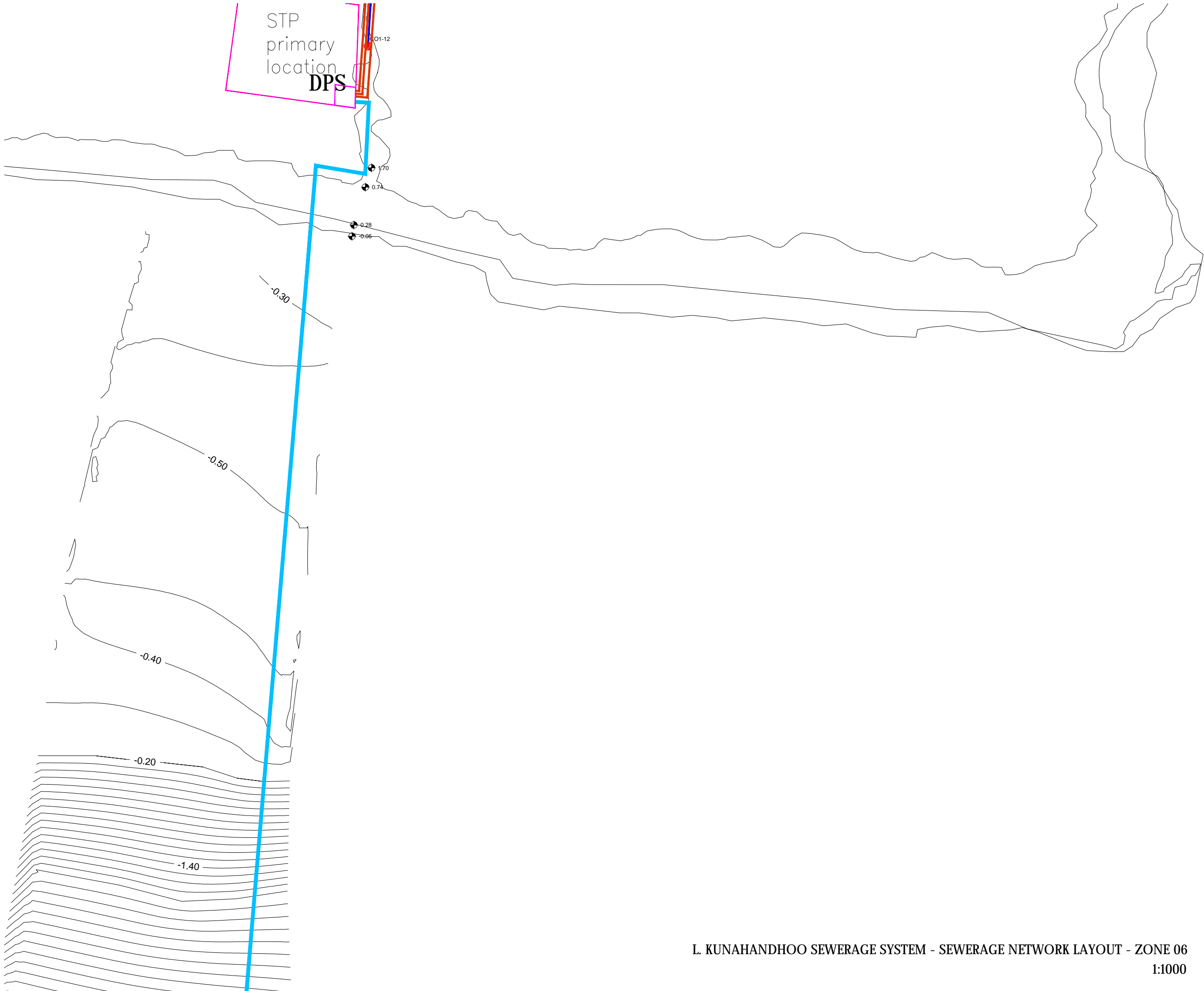
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L. KUNAHANDHOO SEWERAGE SYSTEM - SEWERAGE NETWORK LAYOUT - ZONE 05

1:1000



Legend


- 160mm Ø uPVC PS1 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS2 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS3 Gravity Sewer Main (SN4, SDR41)
- 600mm Ø PE/PP Maintenance Shaft
- 160mmØ uPVC Clean Out
- 160 mm Ø HDPE Pumping Main (PE100, PN16, SDR11)
- 160 mm Ø HDPE Sea Outfall Pipe (PE100, PN16, SDR11)

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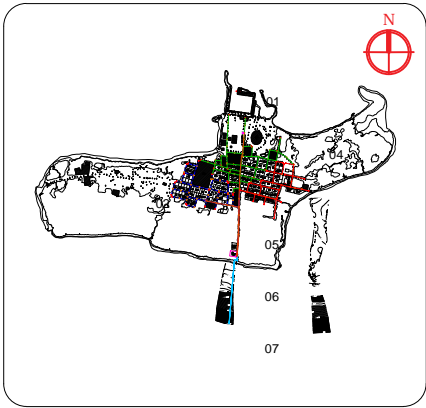
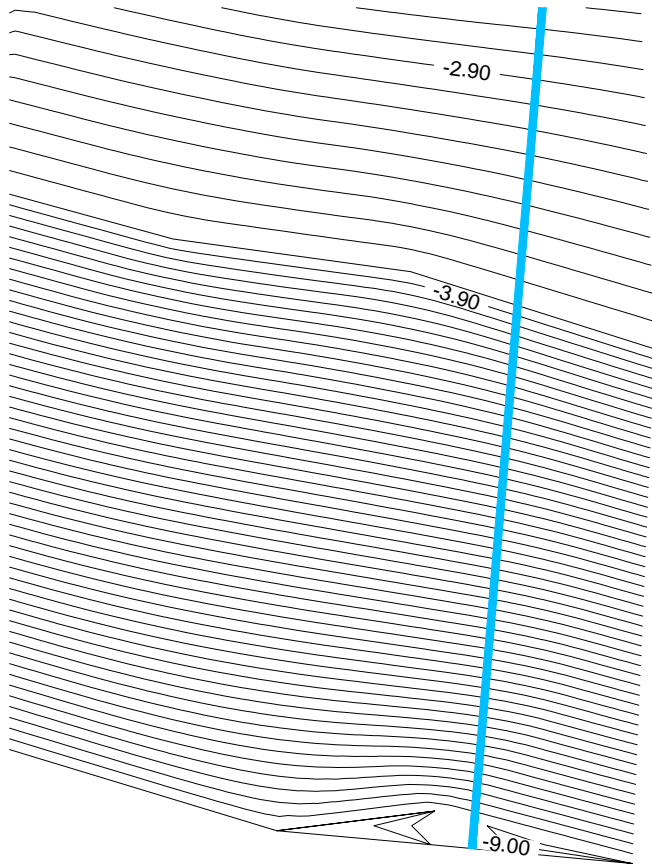


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Legend

- 160mm Ø uPVC PS1 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS2 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS3 Gravity Sewer Main (SN4, SDR41)
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- 160 mm Ø HDPE Pumping Main (PE100, PN16, SDR11)
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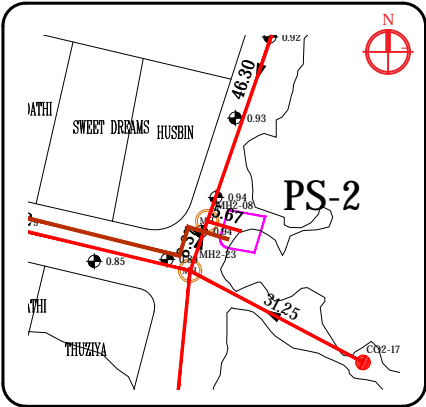
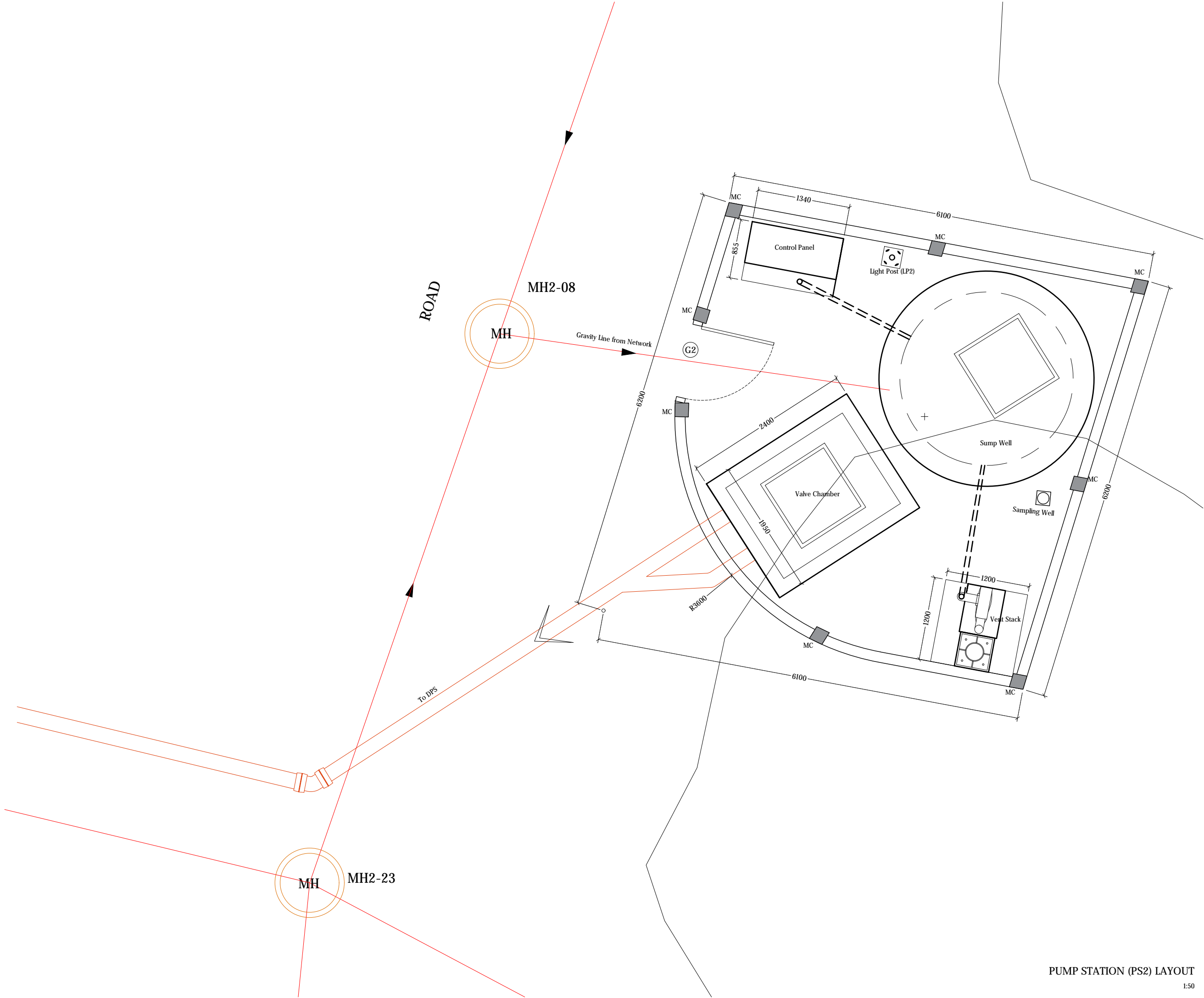
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160mm Ø uPVC PS3 Gravity Sewer Main (SN4, SDR41)

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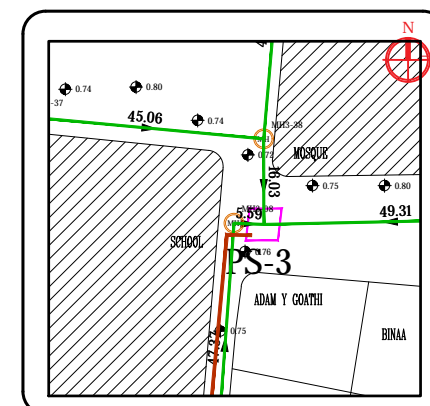
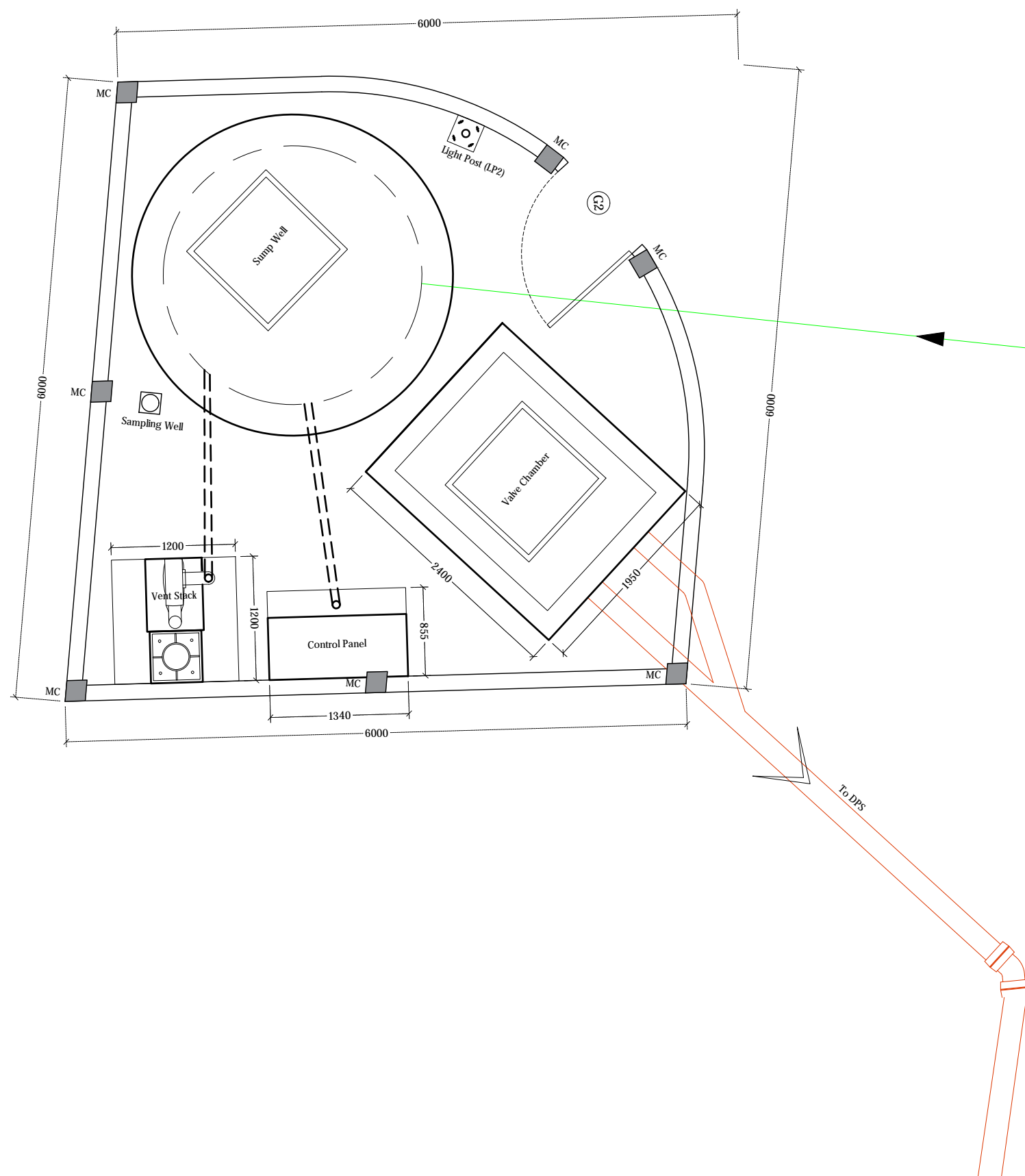
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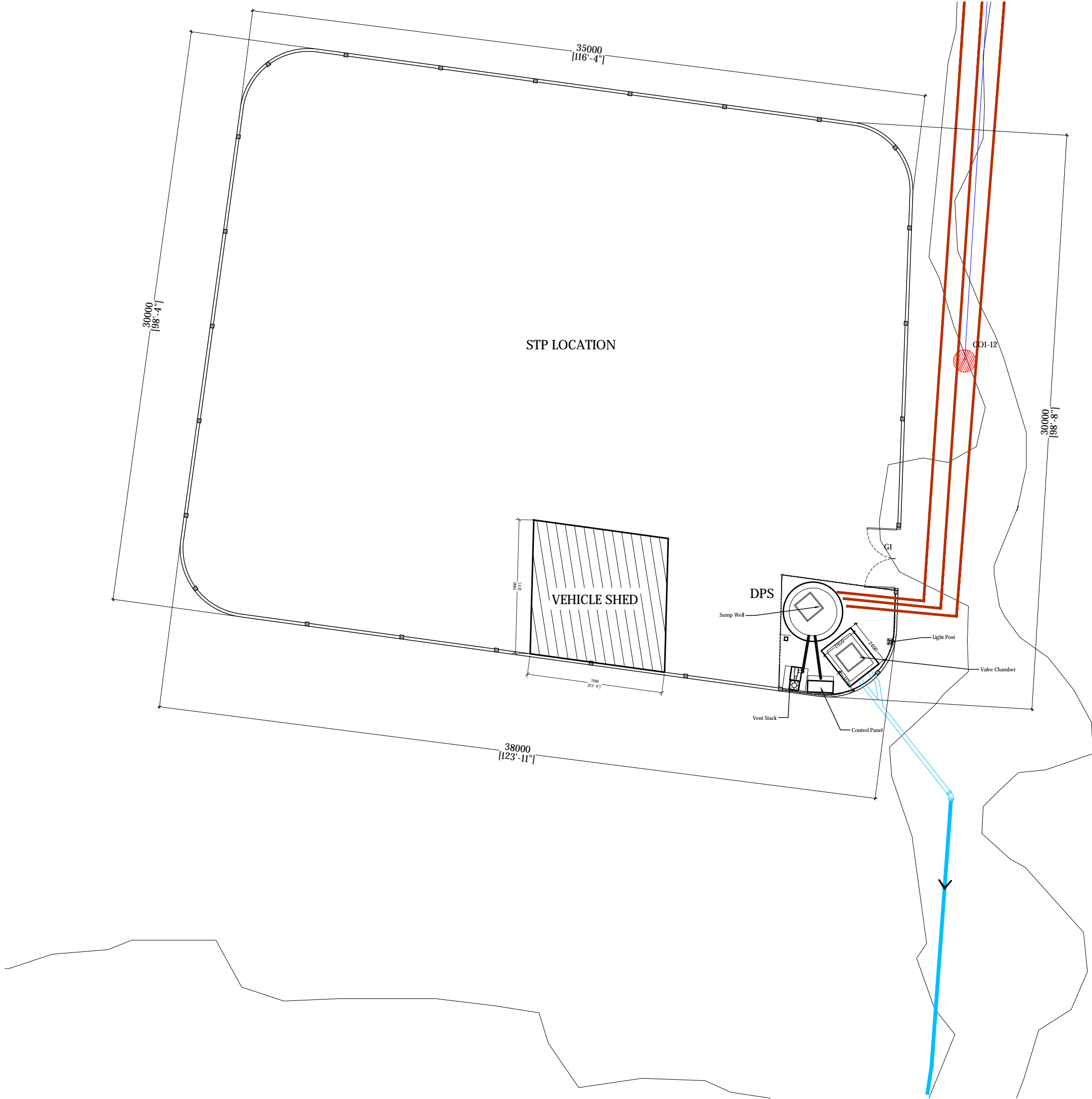
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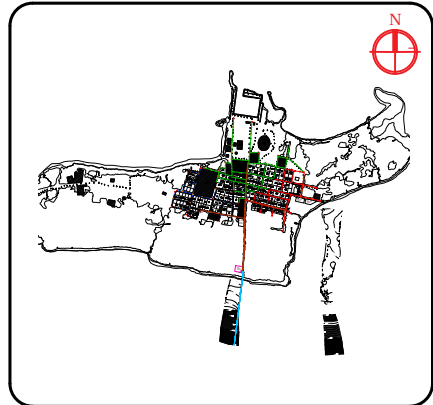
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PUMP STATION (PS2) LAYOUT
1:50

[illegible]



STP/DPS LAYOUT
1:200



- 160mm Ø uPVC Gravity Sewer Main (SN4, SDR41)
- 110 mm Ø HDPE Pumping Main (PE100, PN16, SDR11)
- 160 mm Ø HDPE Sea Outfall Pipe (PE100, PN16, SDR11)

Notes:

- The contract should carry out the site clearing works for future STP plot
- The boundary wall for the STP should be constructed as per the detail
- Discharge pump station structures to be constructed as per the detail layout given

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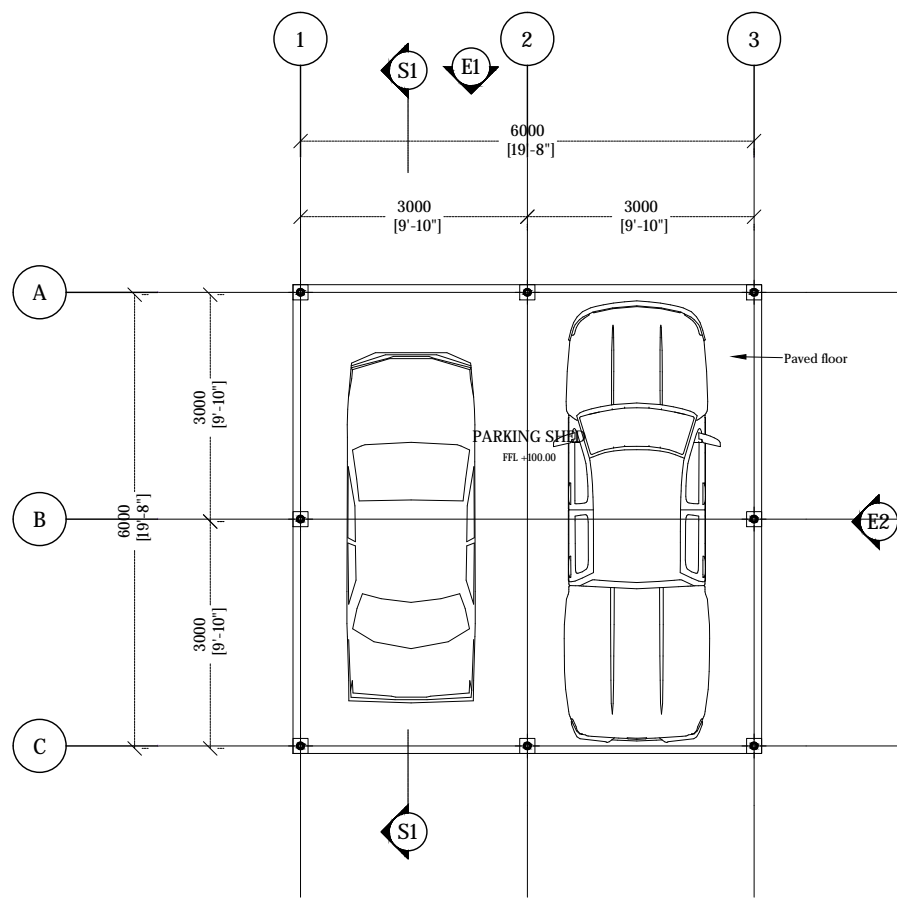
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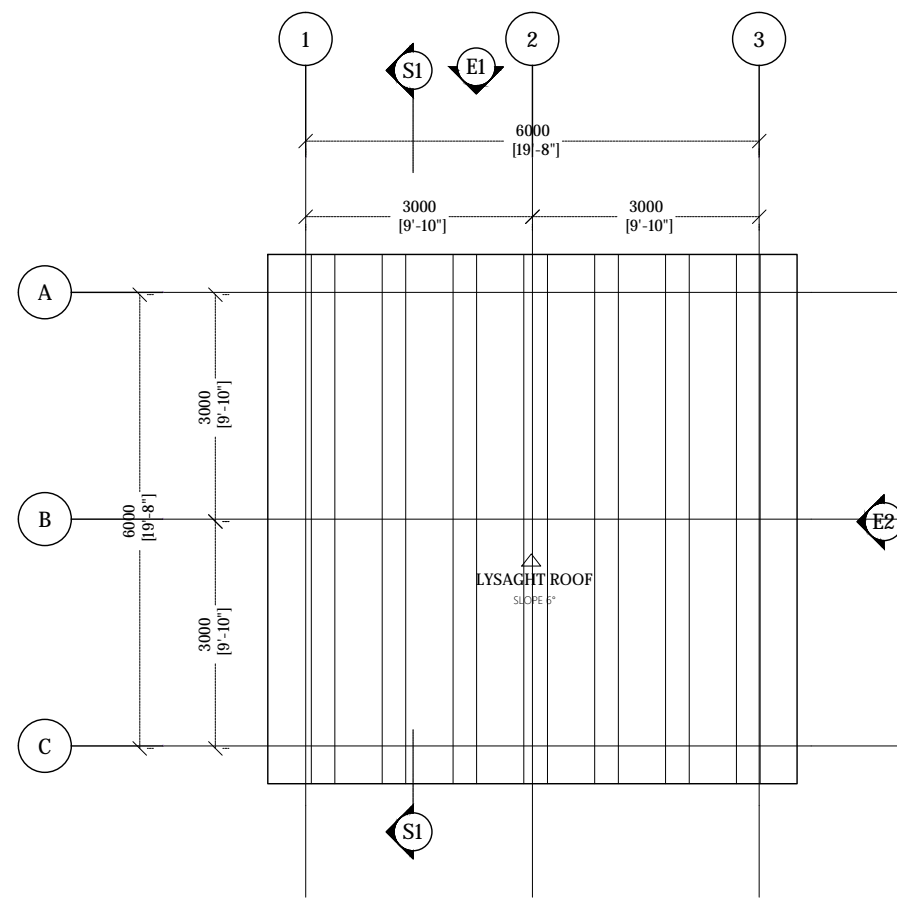
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VEHICLE SHED GROUND FLOOR PLAN

1:100



VEHICLE SHED ROOF PLAN

1:100



Legend

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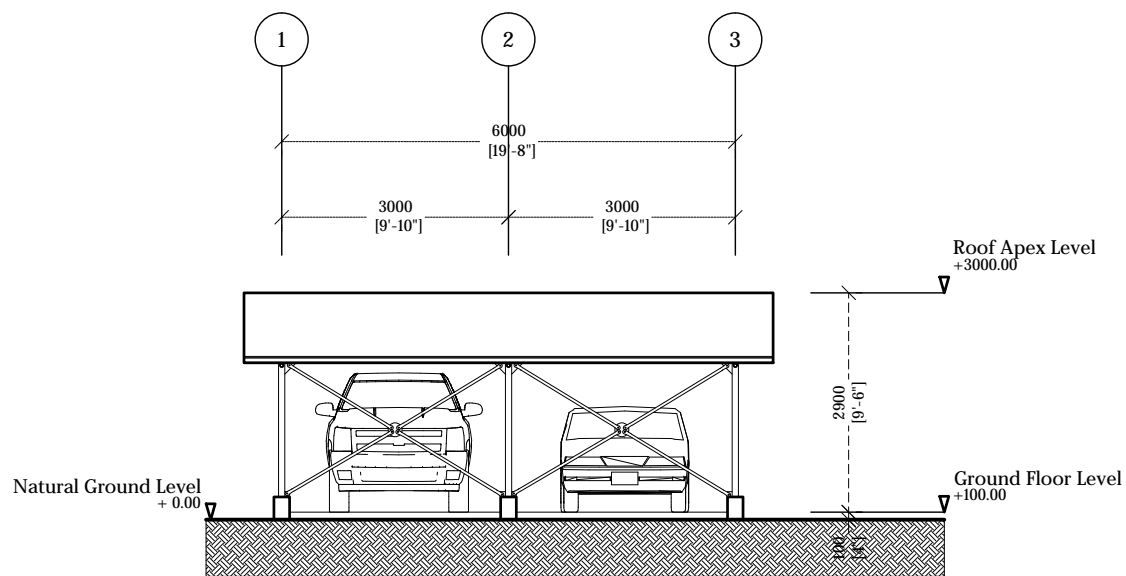
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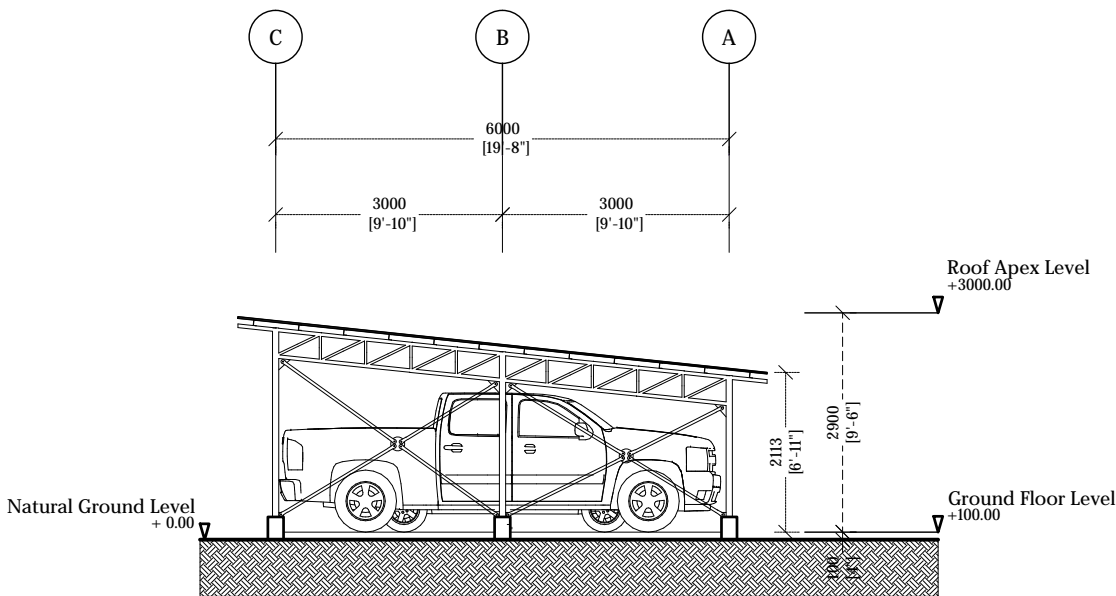
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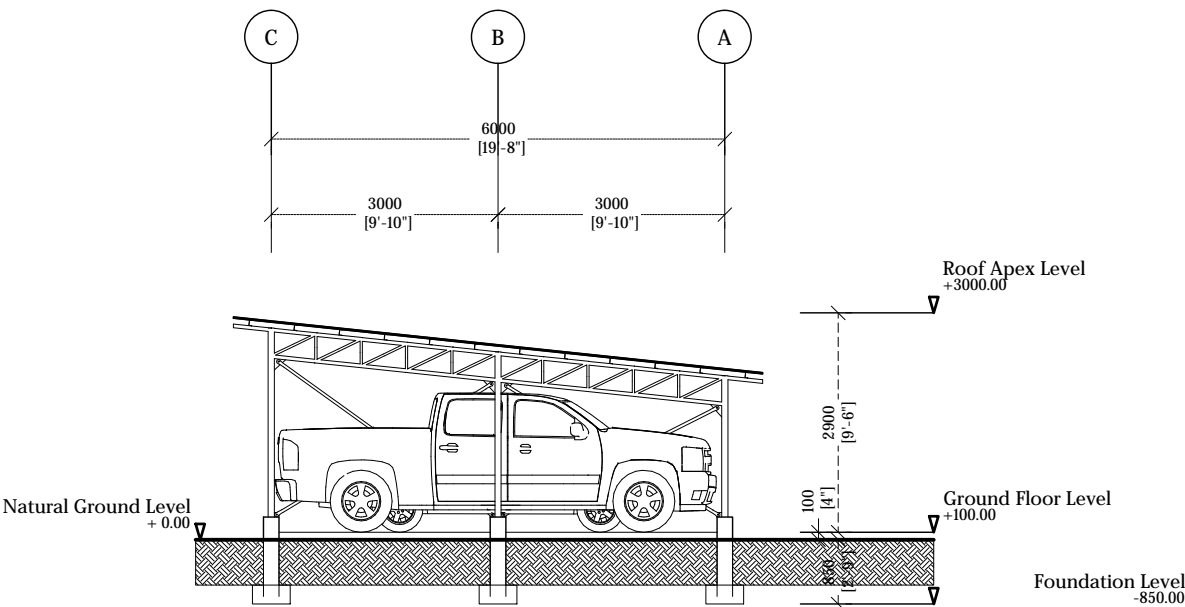
VEHICLE SHED ELEVATION E1

1:100



VEHICLE SHED ELEVATION E2

1:100



VEHICLE SHED SECTION S1

1:100



Legend

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
5 islands, Maldives - Package 6

Sub Title:
Sewerage System in GDh. Nadella

Client:
Ministry of National Planning, Housing and
Infrastructure, Republic of Maldives



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Drawn: F.I.A. Checked: M.S.S.

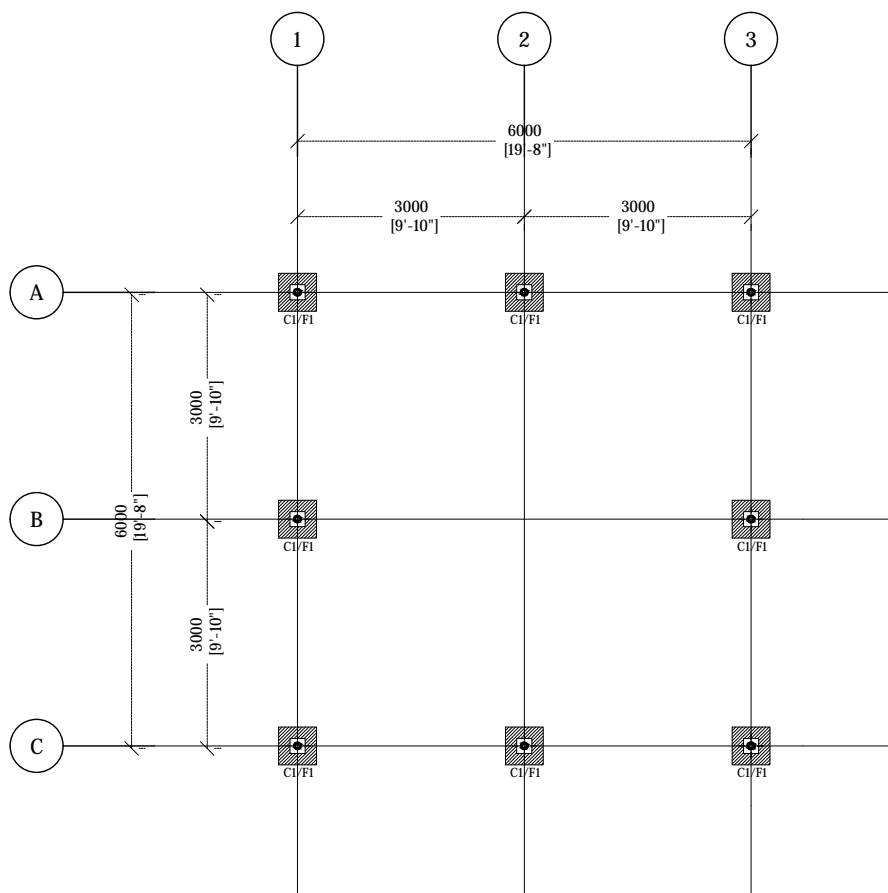
Designed: F.I.A. Approved: I.W.

Date: Sep 2020 SCALE (A3): 1:100

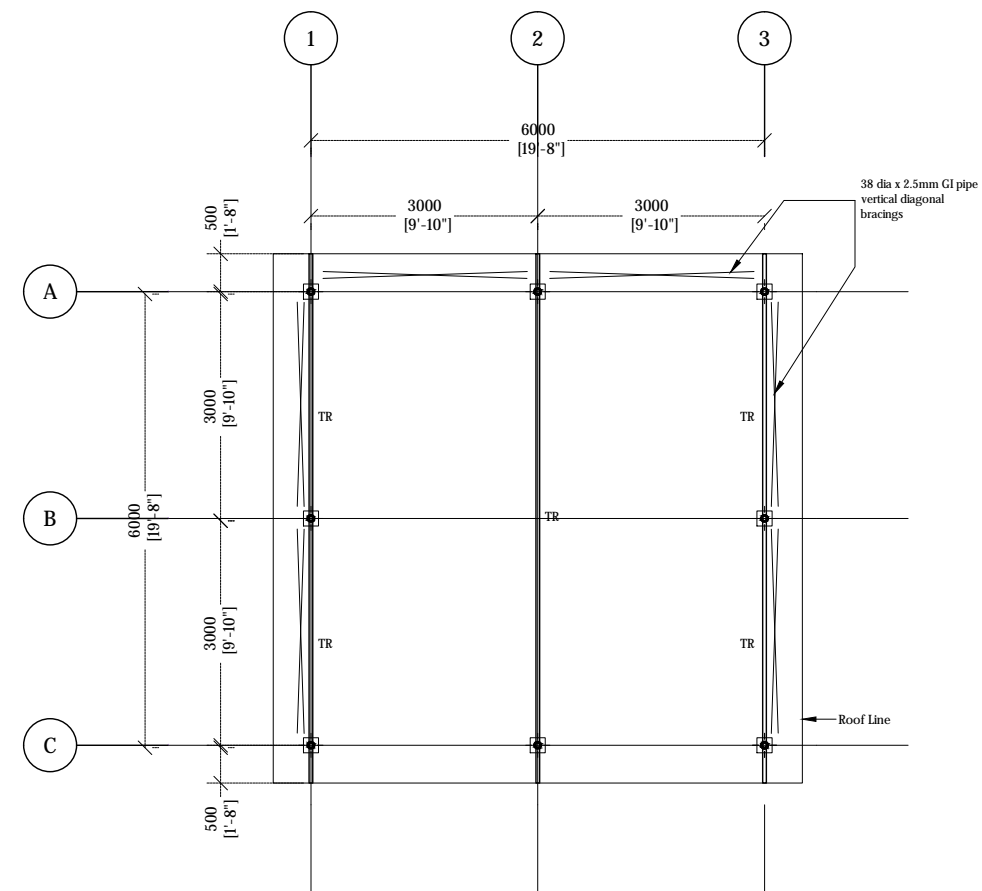
Project No: EP-WS/2019/06

Rev: Page:

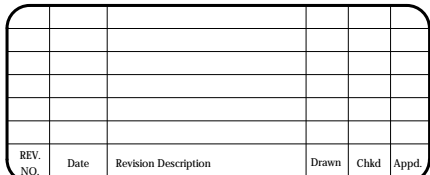
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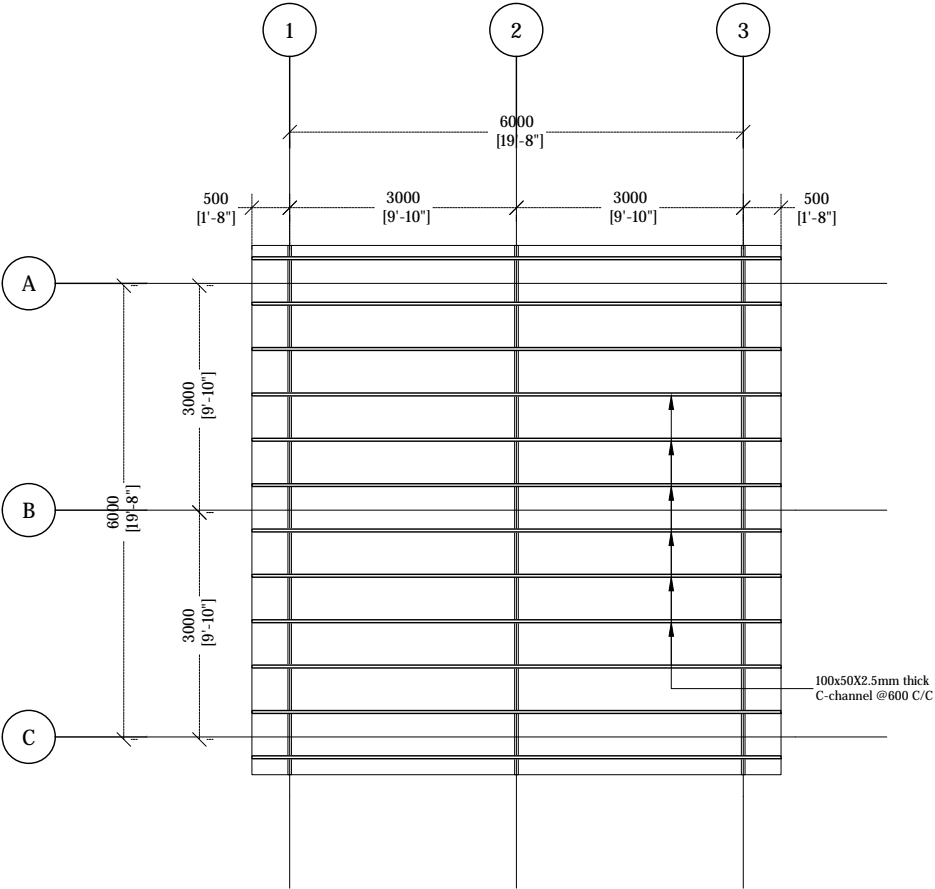
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VS-S(1)



VEHICLE SHED ROOF FRAMING PLAN

1:100



Legend

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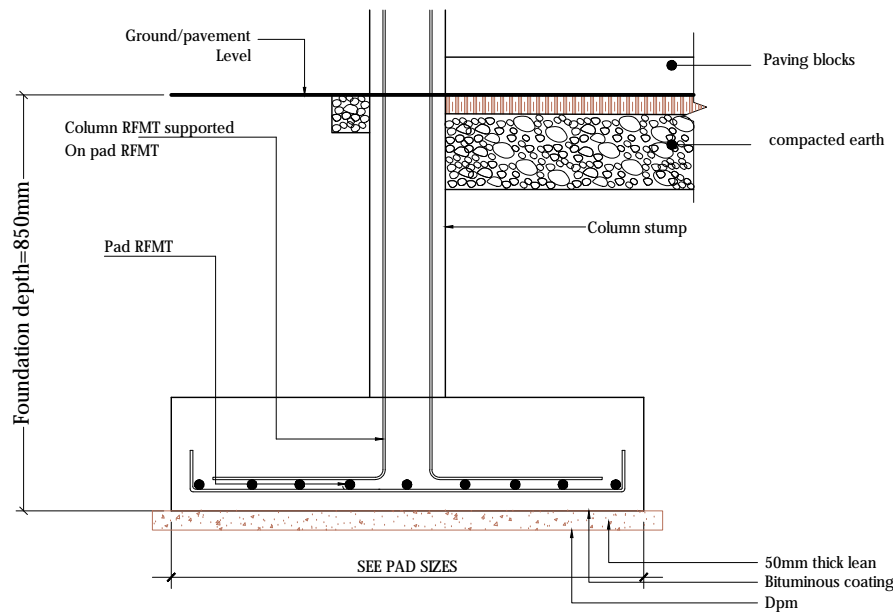
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Date: Sep 2020 SCALE (A3): 1:100

Project No: EP-WS/2019/06

Rev: Page: VS-S(2)

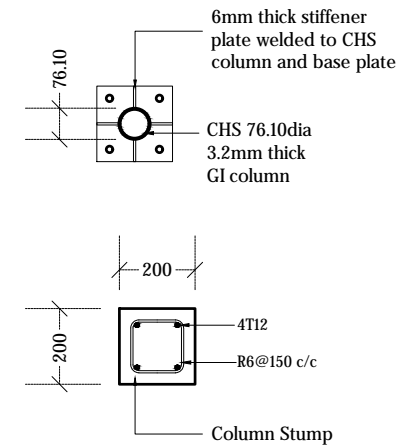
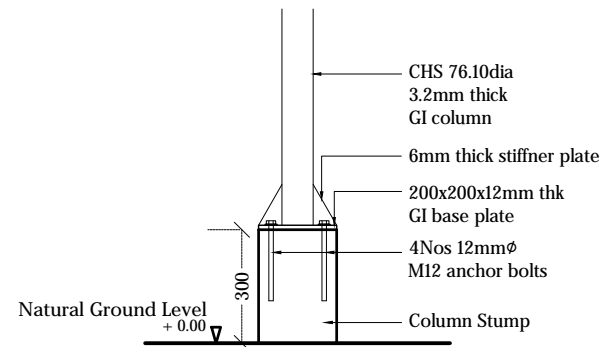


VEHICLE SHED FOOTING DETAIL

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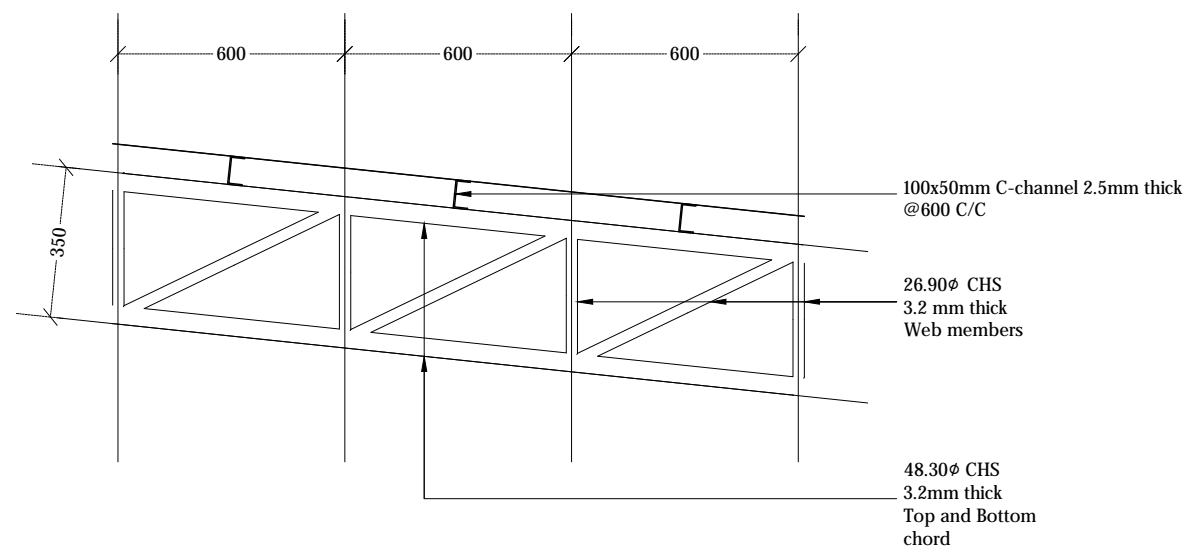
F1 - 500x500x250 - T10@150C/C B/W (B)

FOUNDATION PAD DETAILS



VEHICLE SHED COLUMN DETAIL

1:20



VEHICLE SHED TRUSS DETAIL

1:20



Legend

Notes:

- *All CHS shall have minimum yield stress of 275MPa
- *All welds shall be 6mm thick full perimeter fillet welds
- *All Truss ends shall be end capped with 6mm plates
- *All truss members shall be protected with anti corrosive coatings
- *38 dia x 2.5mm GI pipe to be used for all bracings.
- *Cover for footings shall be 50mm.
- *Cover for columns shall be 40mm.
- *Concrete shall be of grade C25.

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
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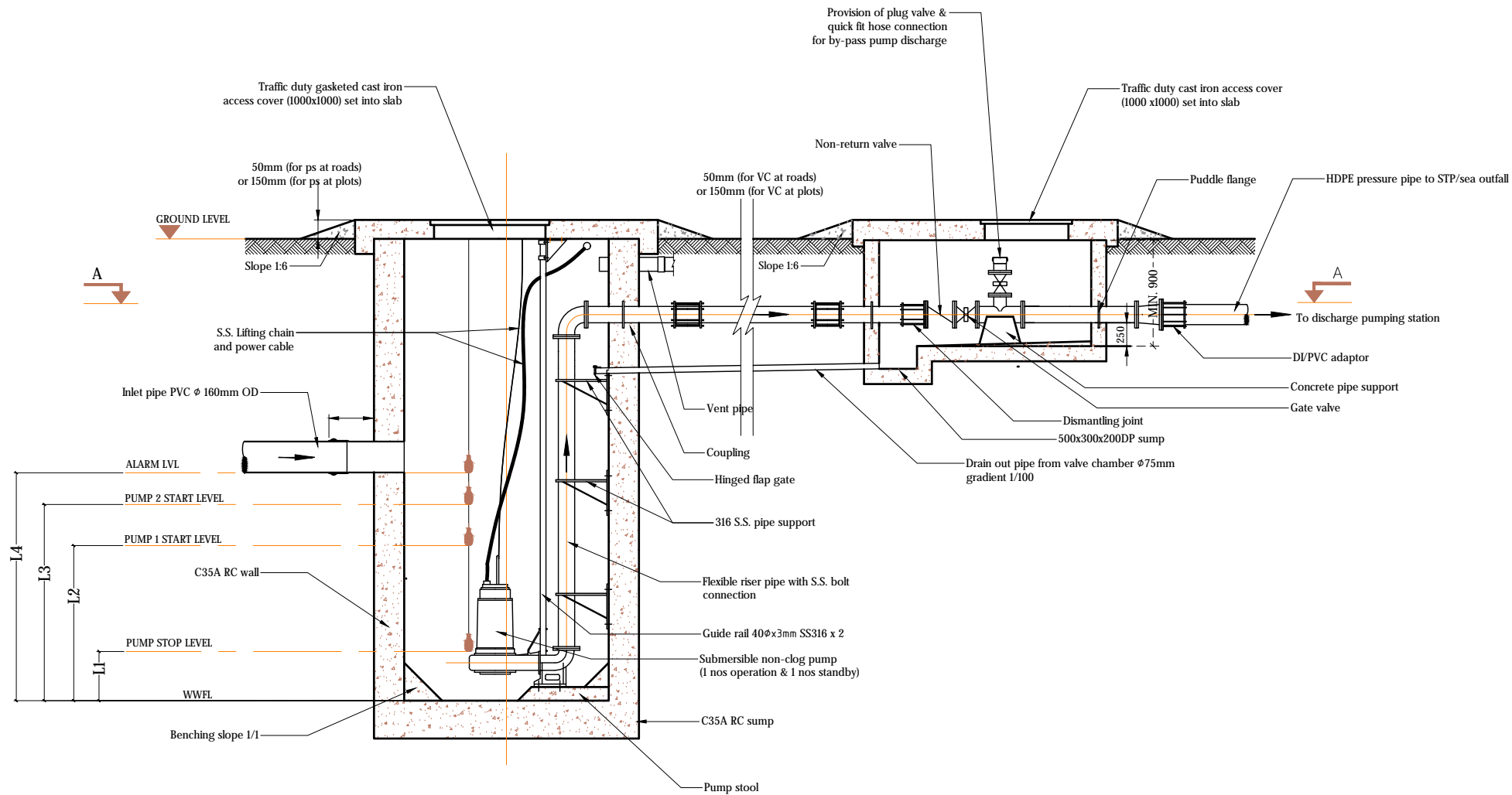
Sub Title:
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Date: Sep 2020	SCALE (A3): 1:20
Project No: EP-WS/2019/06	Page: VS-S(3)



PUMP STATION DESIGN DETAILS						(15 YEARS)			
Pump Station	Diameter (Ø)	Depth (D)	Inlet Depth	Pump Capacity	Head	Levels			
						L1	L2	L3	L4
PS1	2.0m	3.00m	2.4m	2.5 l/s	11.9 m	0.300m	0.628m	0.778m	0.928m
PS2	2.0m	3.00m	2.2m	1.4 l/s	13.3 m	0.300m	0.645m	0.795m	0.945m
PS3	2.0m	3.00m	2.1m, 2.1m, 2.0m	2.2 l/s	14.8 m	0.300m	0.608m	0.758m	0.908m

PUMP STATION DETAILS - LONGITUDINAL SECTION
NTS

- Notes:
- Pumps, pipe work, fittings and control panel shall be installed in accordance with manufacturers recommendations.
 - Orientation of valve chamber pipework to suit location.
 - All structural concrete shall be of grade C35A.
 - All castings shall be done using sulphate resistant portland cement to BS 4027:1996.
 - All structural reinforcement shall be epoxy coating of non-pre-stressed reinforcement to ASTM-A775/A775M.
 - A cover of 75mm should be given for all reinforcements.
 - Internal concrete surfaces to be coated with 5mm thickness of epoxy bonded glass fibre and finished with gel coat or 500 microns epoxy paint coating.
 - External concrete surfaces to be painted with 3 coats of bitumen/rubber emulsion and protected by 500 micron polyethene.
 - All concrete cold joints shall casted with bonding agent
- List of main instruments of pumping station:
1. Sewage pumps (1 duty & 1 standby)
 2. Power cable
 3. Auto-coupling with 40Øx3mm SS316 guide rails
 4. Stainless steel (316) suspension chain
 5. Cable with float control and weight
 6. Discharge pipe
 7. Puddle flange
 8. Bitumen emulsion and 500 micron polythene sheet protection to external concrete surfaces
 9. Construction joint / water bars
 10. Manhole cover double seal ductile heavy duty cast iron / SS 316 cover
 11. Vent pipe with vent cowl

Title:
Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
5 islands, Maldives - Package 6

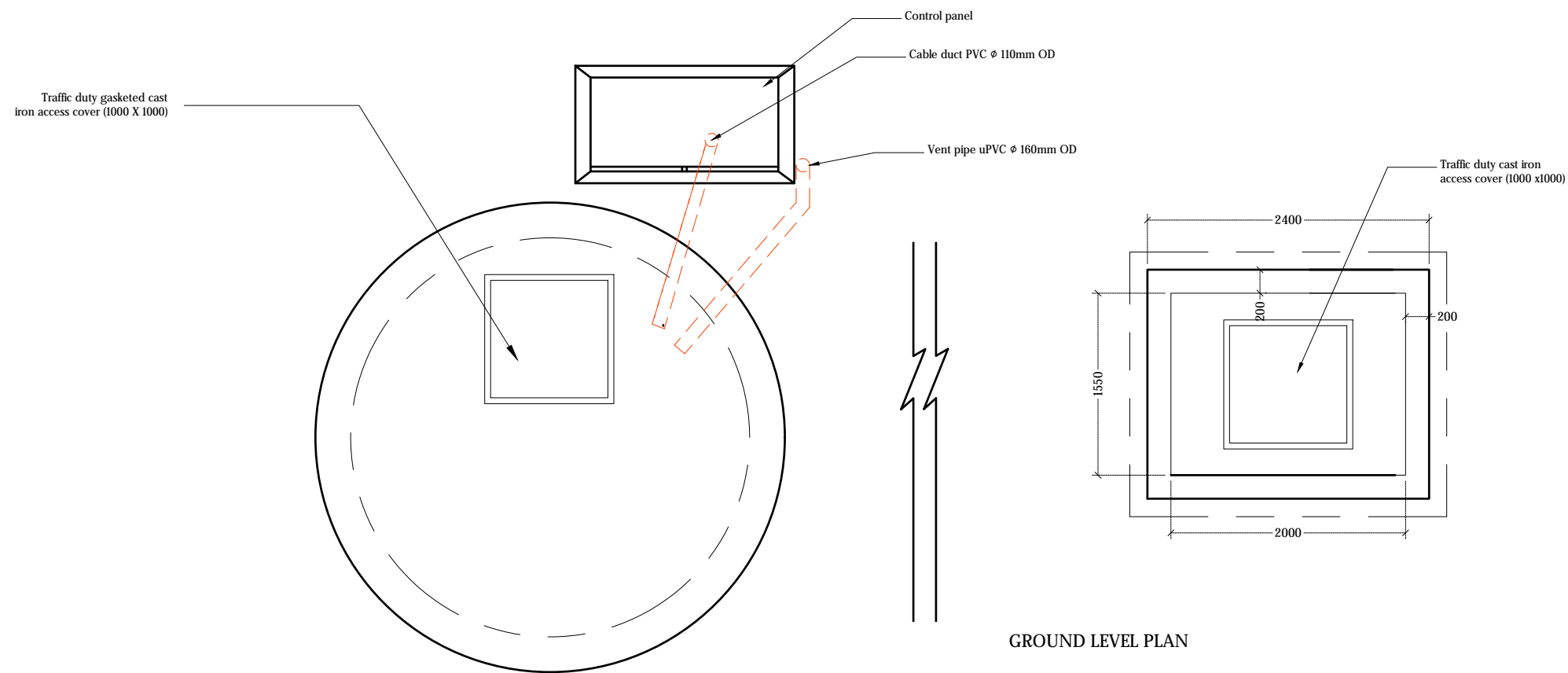
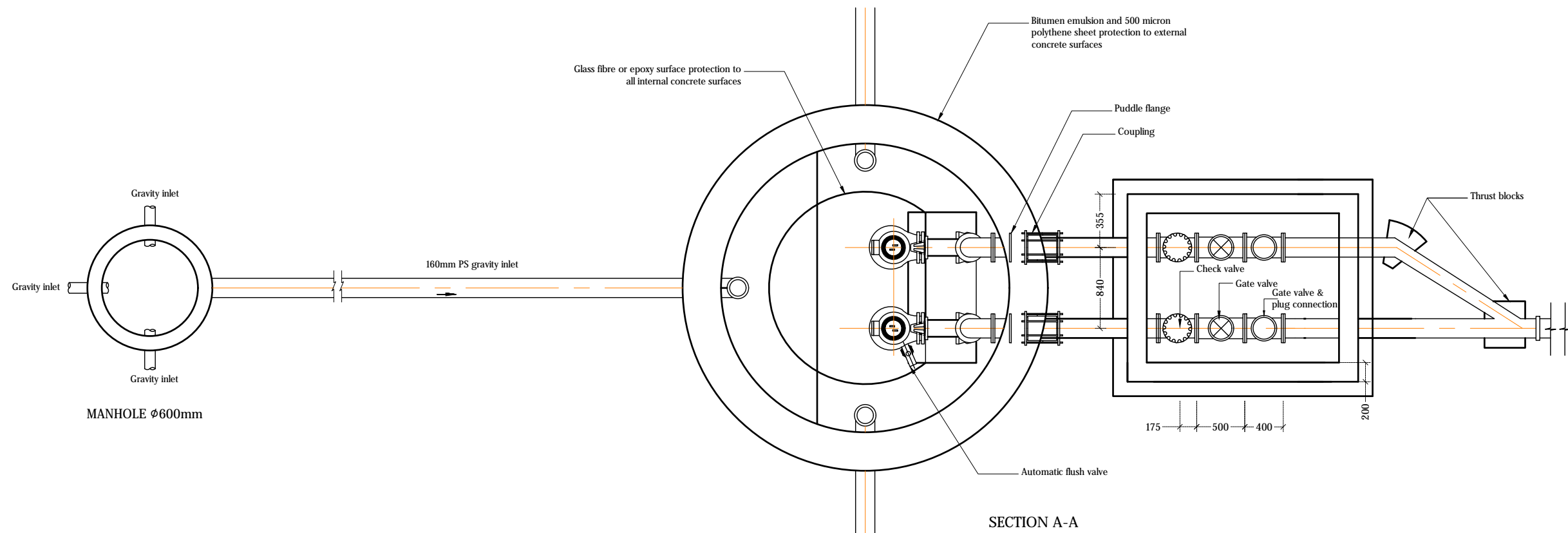
Sub Title:
Sewerage System in GDh. Nadella

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Date: Sep 2020	SCALE (A3): NTS
Project No: EP-WS/2019/06	
Rev:	Page: W-(5)



PUMP STATION DETAILS - PLAN VIEW
NTS

Notes:

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4. Stainless steel (316) suspension chain
5. Cable with float control and weight
6. Discharge pipe
7. Puddle flange
8. Bitumen emulsion and 500 micron polythene sheet protection to external concrete surfaces
9. Construction joint / water bars
10. Manhole cover double seal ductile heavy duty cast iron / SS 316 cover
11. Vent pipe with vent cowl

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:

Consultancy Services for Survey, Design and EIA works of Water Supply and Sewerage Facilities in 5 islands, Maldives - Package 6

Sub Title:

Sewerage System in GDh. Nadella

Client:

Ministry of National Planning, Housing and Infrastructure, Republic of Maldives



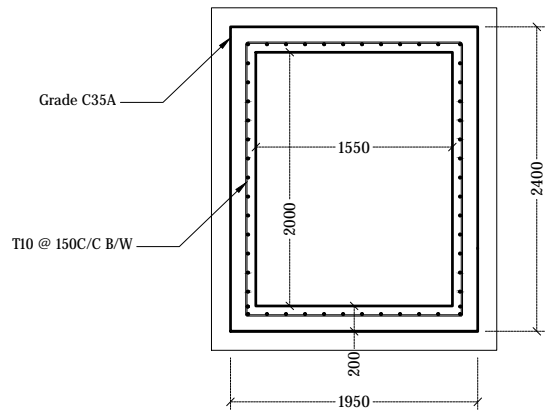
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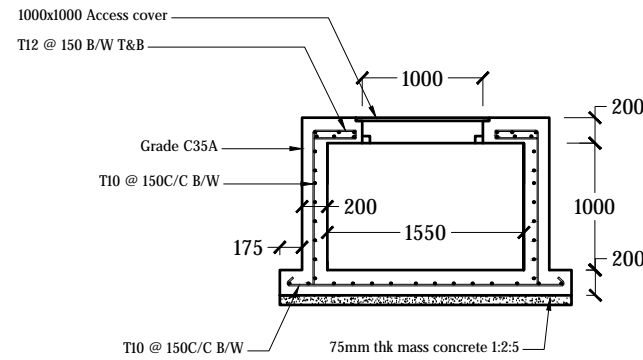
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Project No: EP-WS/2019/06	Page: W-(6)



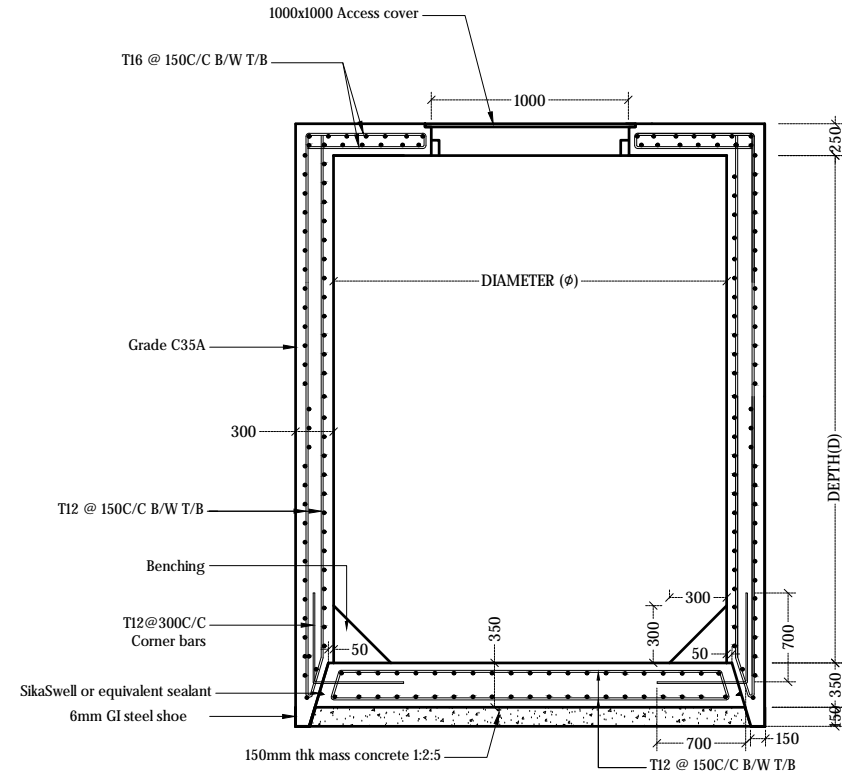
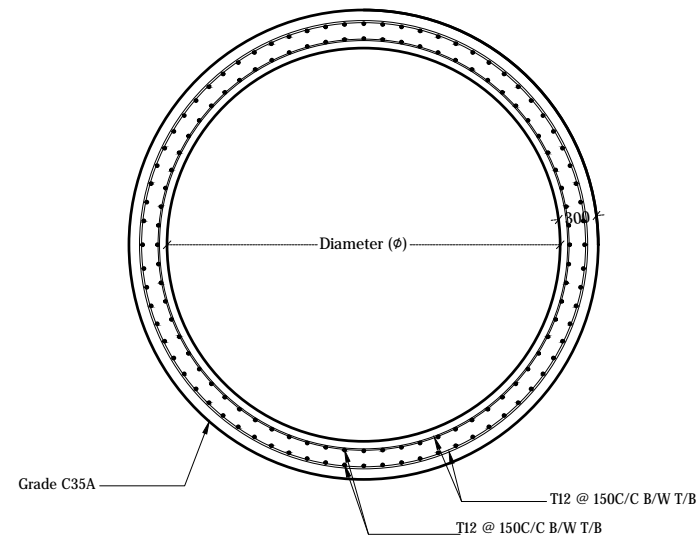
PLAN VIEW



SECTION



VALVE CHAMBER DETAIL



PUMP STATION DETAIL

Pump Station	Diameter (φ)	Depth (D)	Inlet Depth
PS1	2.0m	3.00m	2.429m
PS2	2.0m	3.00m	2.155m
PS3	2.0m	3.00m	2.122m, 2.071m, 2.037m

PUMP STATION STRUCTURAL DETAILS

NTS

- Notes:
- Pumps, pipe work, fittings and control panel shall be installed in accordance with manufacturers recommendations.
 - Orientation of valve chamber pipework to suit location.
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 - External concrete surfaces to be painted with 3 coats of bitumen/rubber emulsion and protected by 500 micron polythene.
 - All concrete cold joints shall casted with bonding agent
 - Corner bars (3T16 @ 75C/C T/B) shall be provided around top slab openings

- List of main instruments of pumping station:
1. Sewage pumps (1 duty & 1 standby)
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 3. Auto-coupling with 400x3mm SS316 guide rail
 4. Stainless steel (316) suspension chain
 5. Cable with float control and weight
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 7. Puddle flange
 8. Bitumen emulsion and 500 micron polythene sheet protection to external concrete surfaces
 9. Construction joint / water bars
 10. Manhole cover double seal ductile heavy duty cast iron / SS 316 cover
 11. Vent pipe with vent cowl

Title:
Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
5 islands, Maldives - Package 6

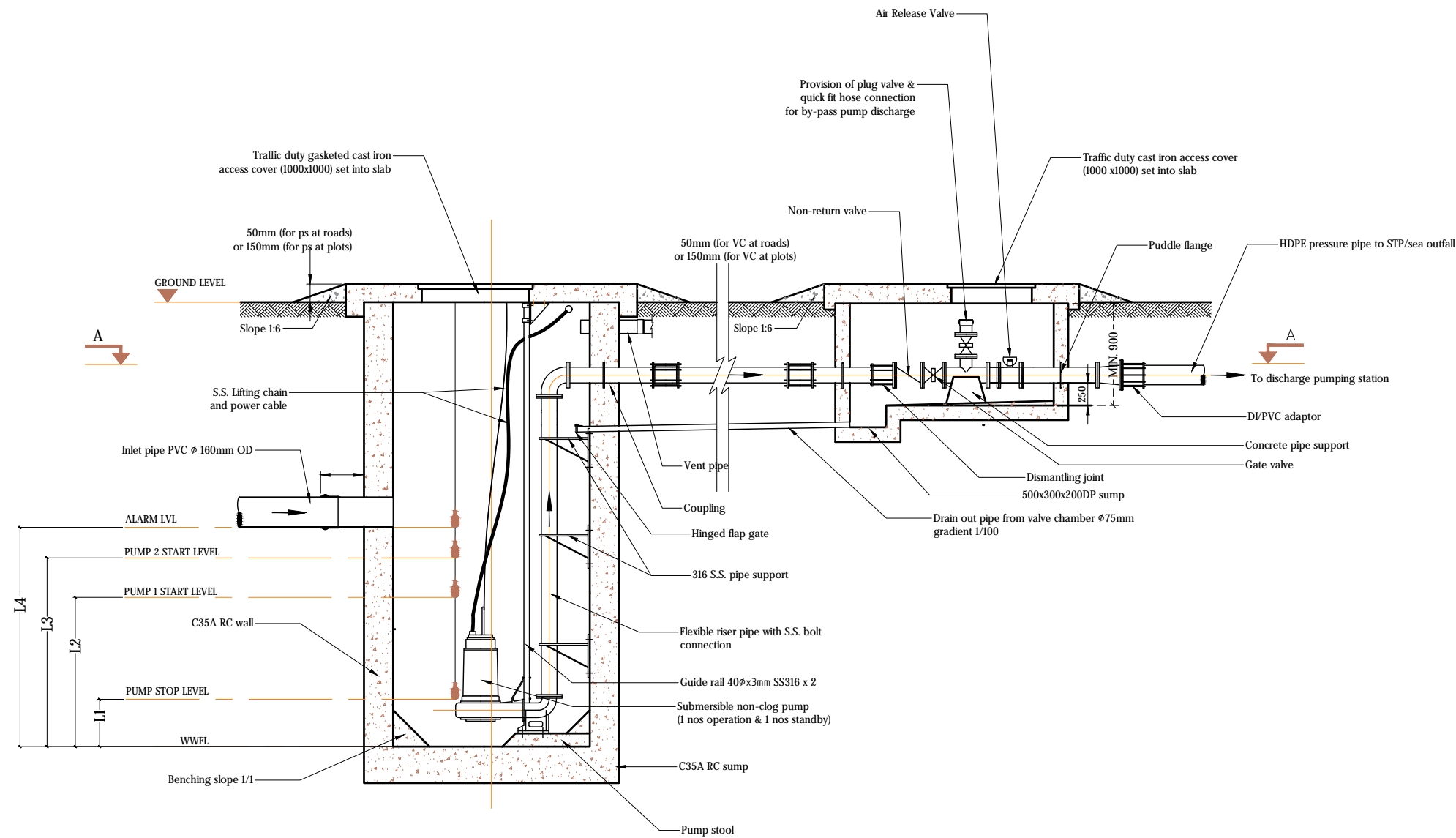
Sub Title:
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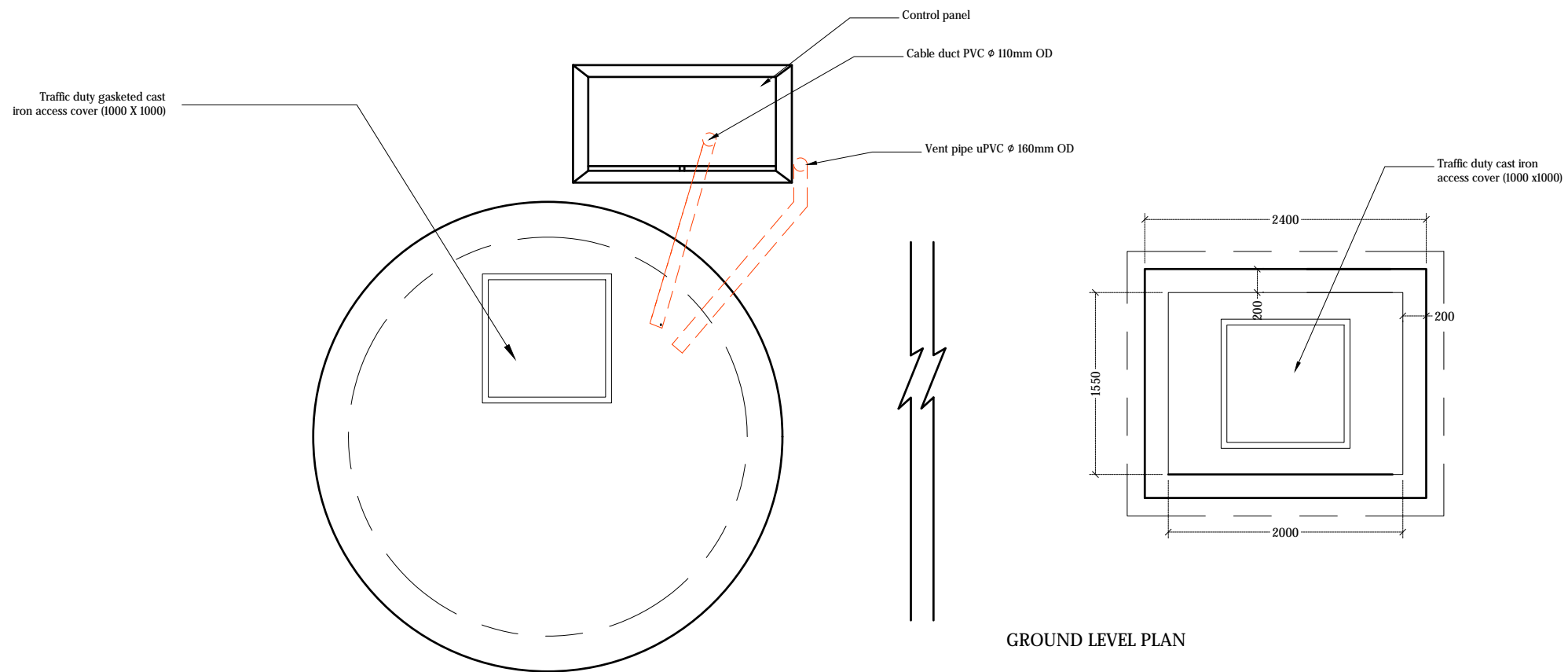
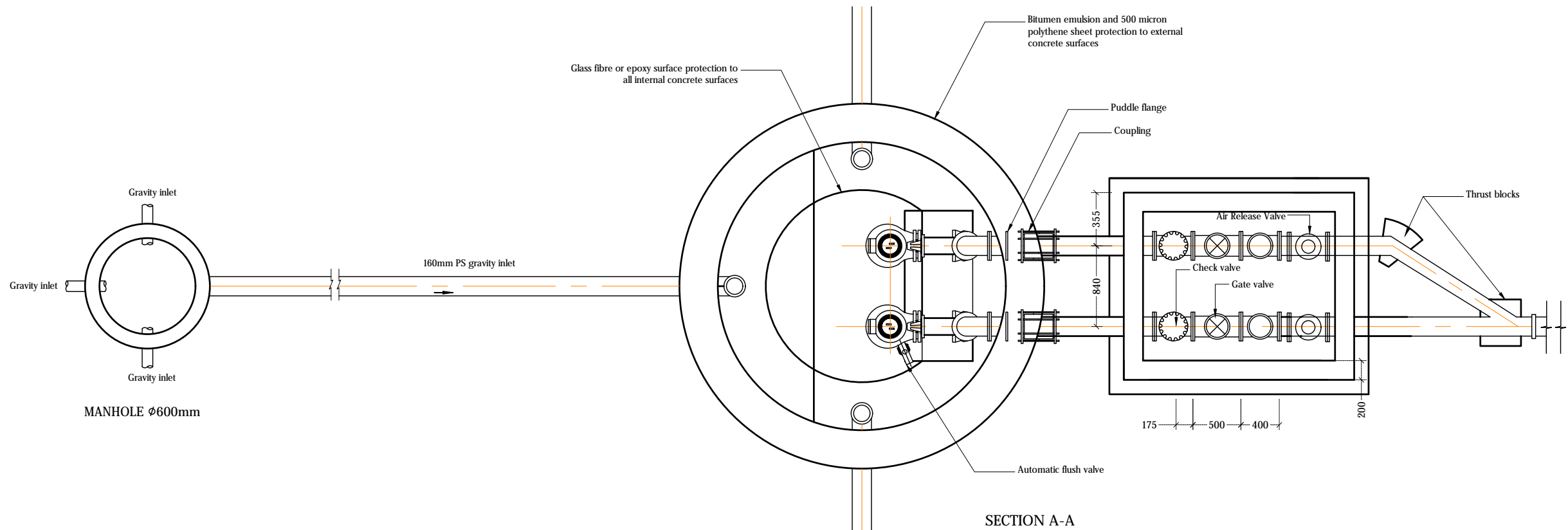
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Date: Sep 2020 SCALE (A3): NTS
Project No: EP-WS/2019/06
Rev: Page: W-(7)



DISCHARGE PUMP STATION DESIGN DETAILS (15 YEARS)						Levels			
Pump Station	Diameter (φ)	Depth (D)	Inlet Depth	Pump Capacity	Head	L1	L2	L3	L4
DPS	2.5m	3.00m	0.8m	6.1 l/s	20.7 m	0.300m	0.635m	0.785m	0.935m

NTS

W-(25)



DISCHARGE PUMP STATION DETAILS - PLAN VIEW

NTS



Legend

Notes:

- Pumps, pipe work, fittings and control panel shall be installed in accordance with manufacturers recommendations.
- Orientation of valve chamber pipework to suit location.
- All structural concrete shall be of grade C35A.
- All castings shall be done using sulphate resistant portland cement to BS 4027:1996.
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6. Discharge pipe
7. Puddle flange
8. Bitumen emulsion and 500 micron polythene sheet protection to external concrete surfaces
9. Construction joint / water bars
10. Manhole cover double seal ductile heavy duty cast iron / SS 316 cover
11. Vent pipe with vent cowl

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:

Consultancy Services for Survey, Design and EIA works of Water Supply and Sewerage Facilities in 5 islands, Maldives - Package 6

Sub Title:

Sewerage System in GDh. Nadella

Client:

Ministry of National Planning, Housing and Infrastructure, Republic of Maldives



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Designed: F.I.A. Approved: I.W.

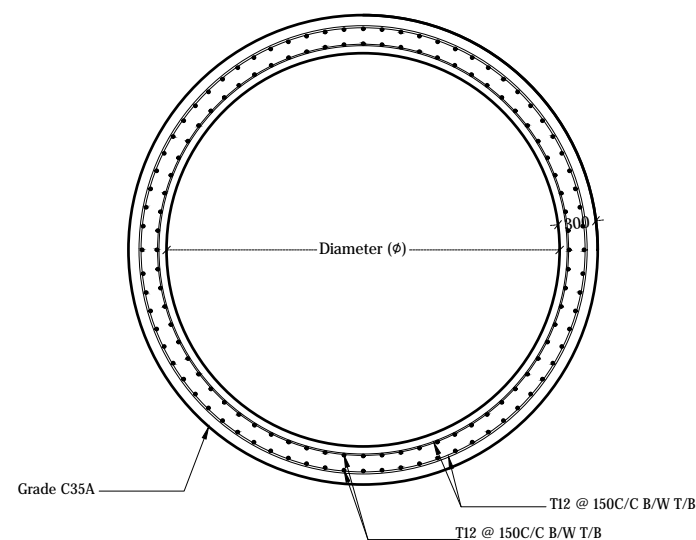
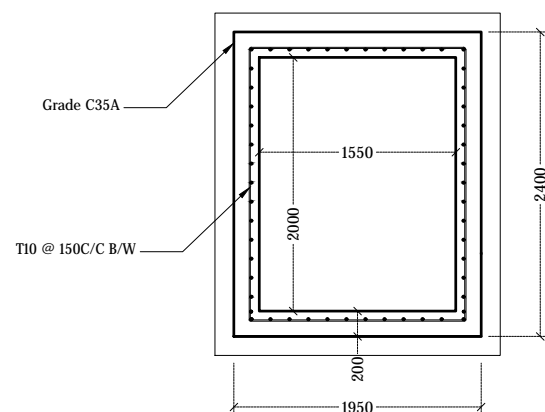
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Project No: EP-WS/2019/06

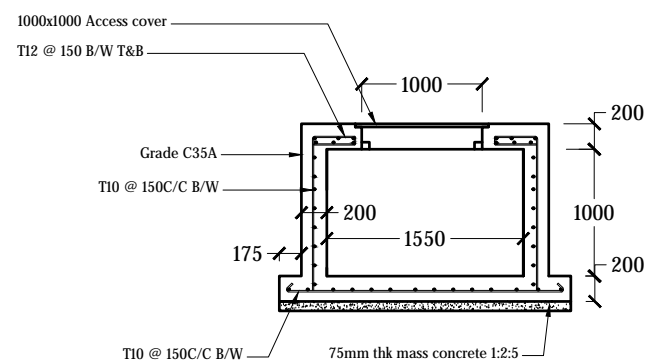
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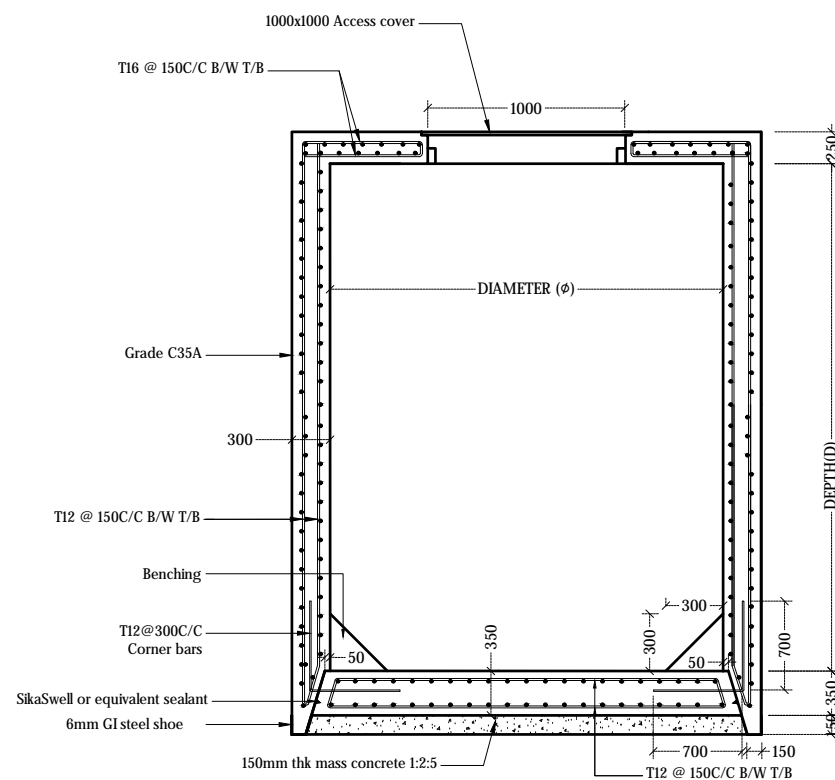
PLAN VIEW



SECTION



VALVE CHAMBER DETAIL



PUMP STATION DETAIL

Pump Station	Diameter (ϕ)	Depth (D)	Inlet Depth
DPS	2.5m	3.00m	0.8m

Legend

Notes:

- Pumps, pipe work, fittings and control panel shall be installed in accordance with manufacturers recommendations.
- Orientation of valve chamber pipework to suit location.
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Consultancy Services for Survey,
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5 islands, Maldives - Package 6

Sub Title:
Sewerage System in GDh. Nadella

Client:
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Designed: F.I.A.	Approved: I.W.
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Date: Sep 2020	SCALE (A3): NTS
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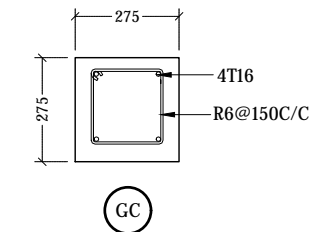
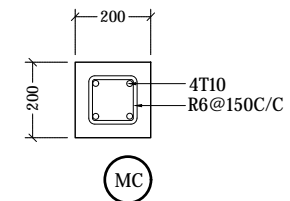
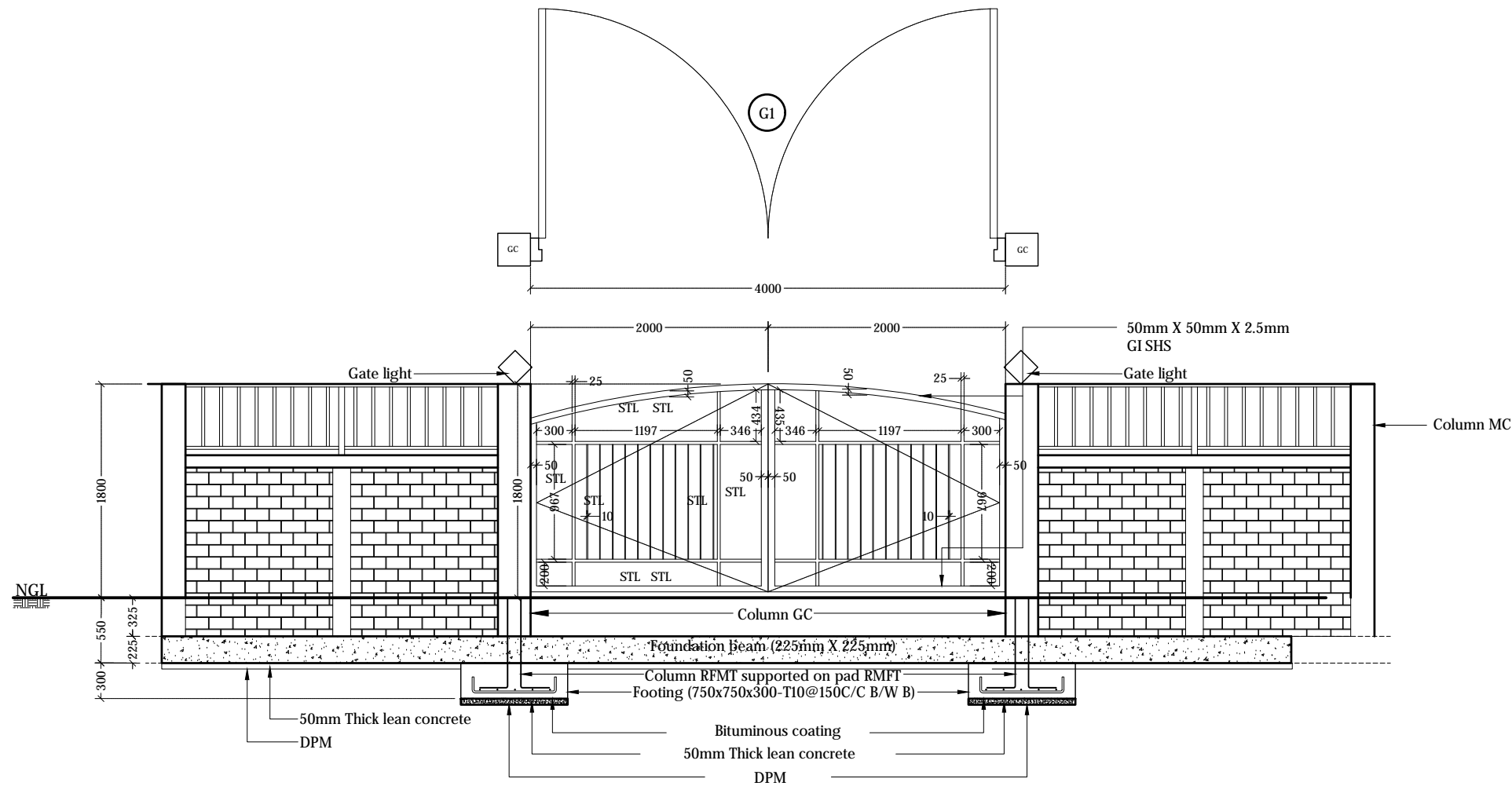
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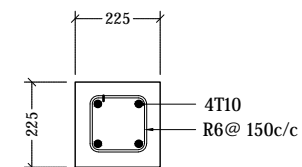
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DISCHARGE PUMP STATION STRUCTURAL DETAILS

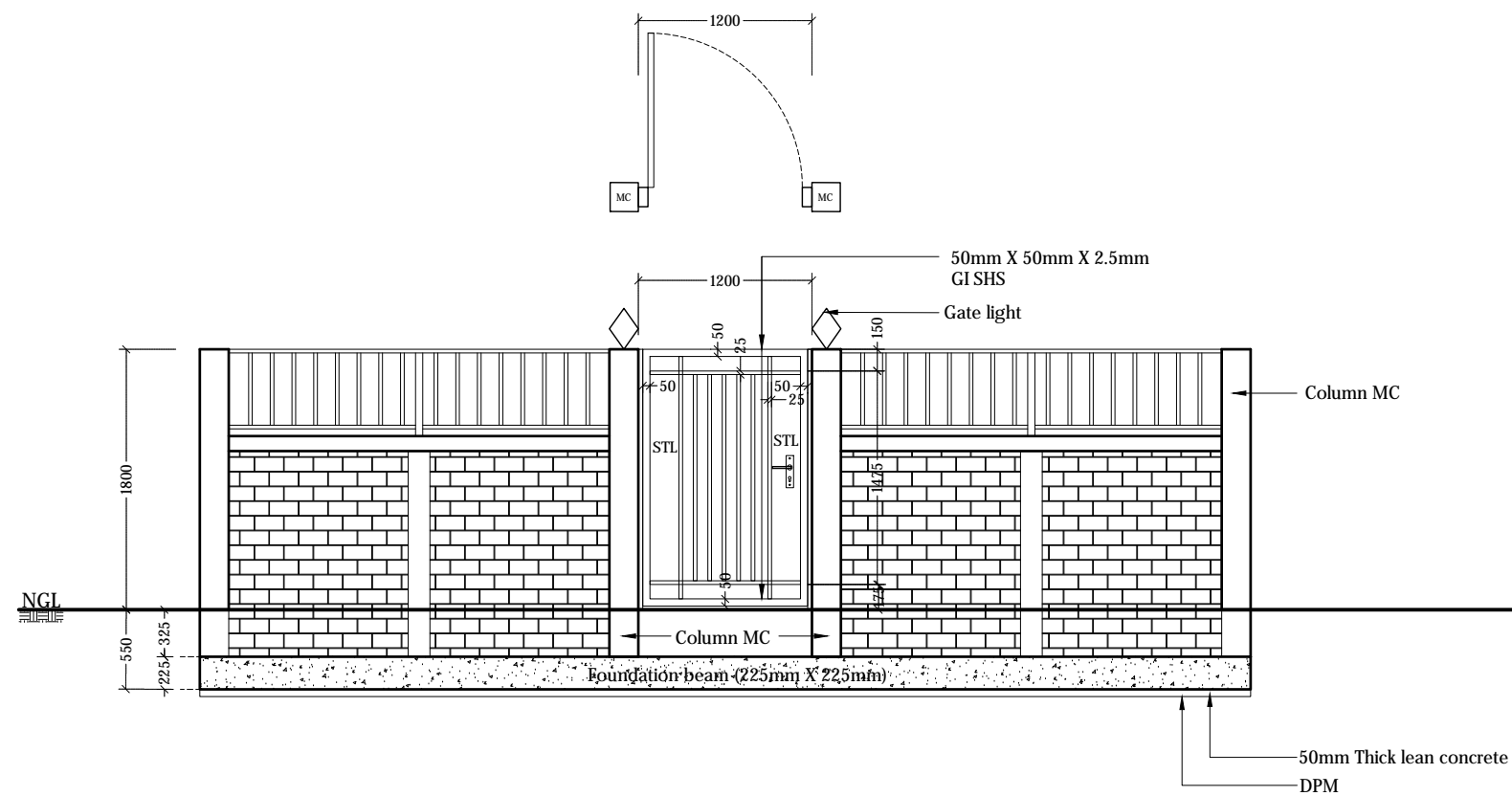
NTS



COLUMN DETAILS
1:20



FOUNDATION BEAM DETAIL
1:20



GATE DETAILS
1:50

Notes:

- FRAME MATERIAL : Steel gate frame 2.5mm thick GI sections RHS
- PANEL MATERIAL : Steel frame with steel panels (STL) as shown on elevation view
- All steel members and GI SHS to be applied with 2 coats of anti-corrosive paint with epoxy finishing paint
- Allowance shall be made to fix pad lock in Gates
- Cover for foundation pads and foundation beams shall be 50mm
- Cover for columns (GC) and (MC) shall be 40mm
- Concrete shall be of grade C25
- All concrete cold joints shall be casted with bonding agent

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

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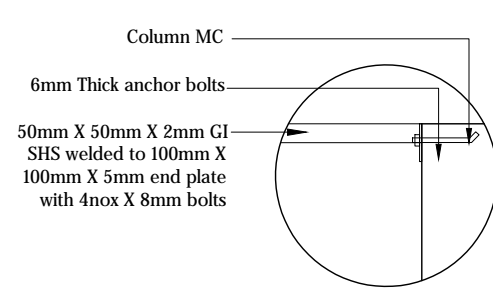
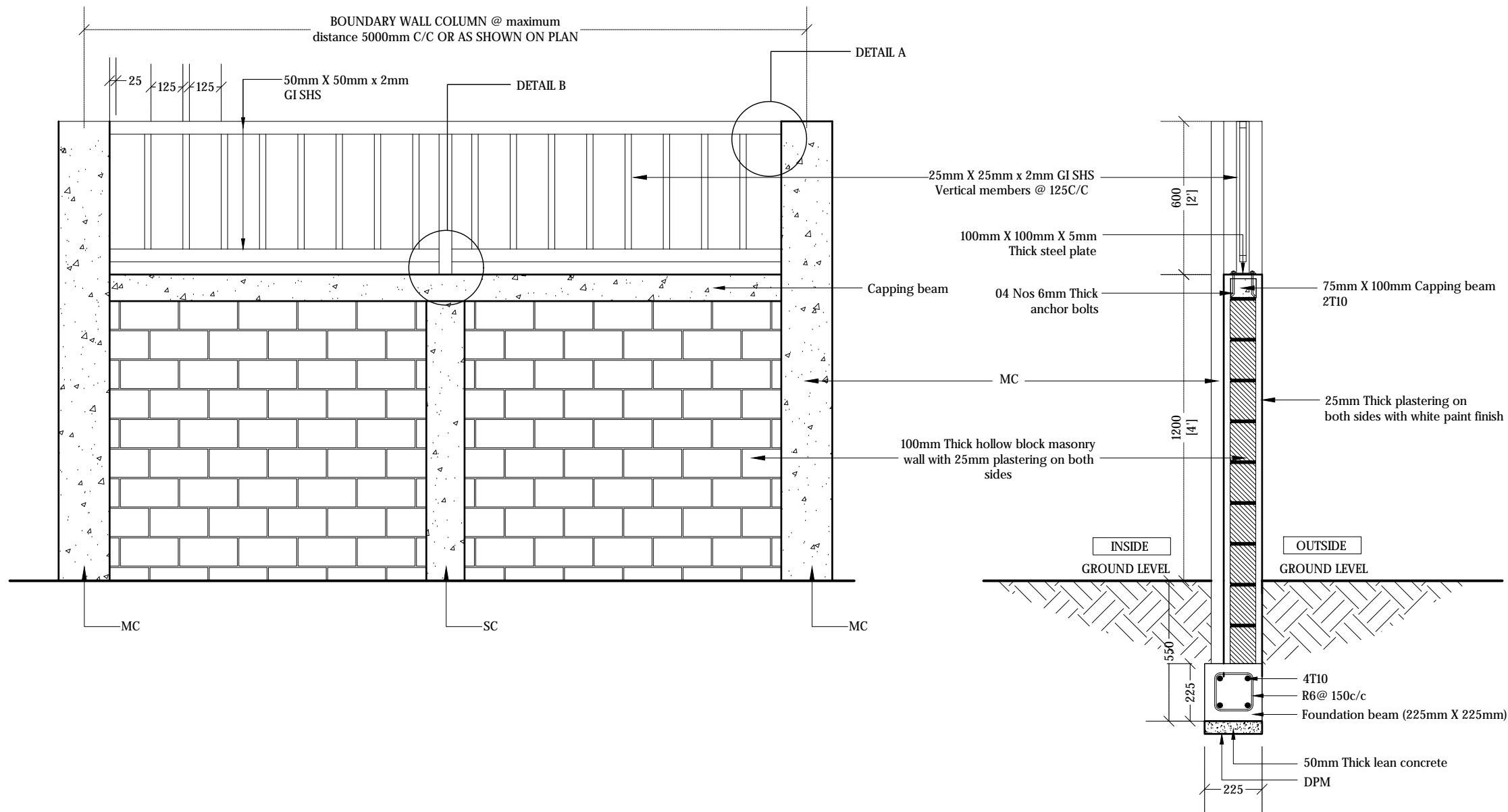
Sub Title:
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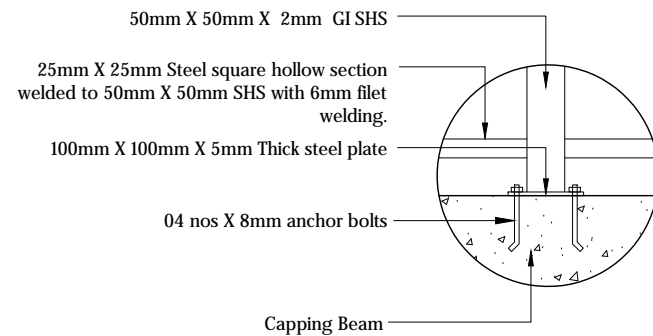
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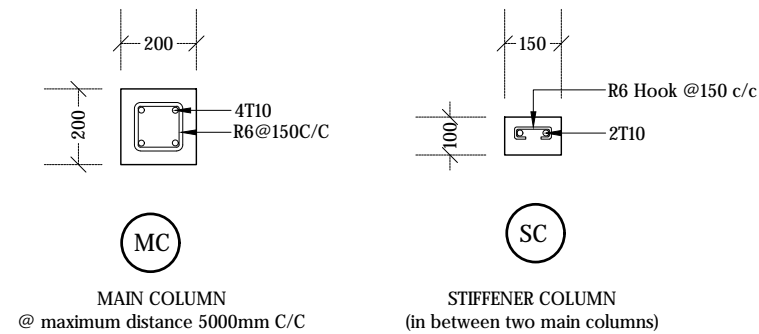
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Date: Sep 2020	SCALE (A3):
Project No: EP-WS/2019/06	Page: W-(8)



DETAIL A
1:10



DETAIL B
1:10



Notes:

- FRAME MATERIAL : Steel gate frame 2.5mm thick GI sections SHS
- All steel members and GI SHS to be applied with 2 coats of anti-corrosive paint with epoxy finishing paint
- Allowance shall be made to fix pad lock in Gates
- Cover for foundation beams shall be 50mm
- Cover for columns (MC) shall be 40mm
- Concrete shall be of grade C25
- All concrete cold joints shall be casted with bonding agent

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

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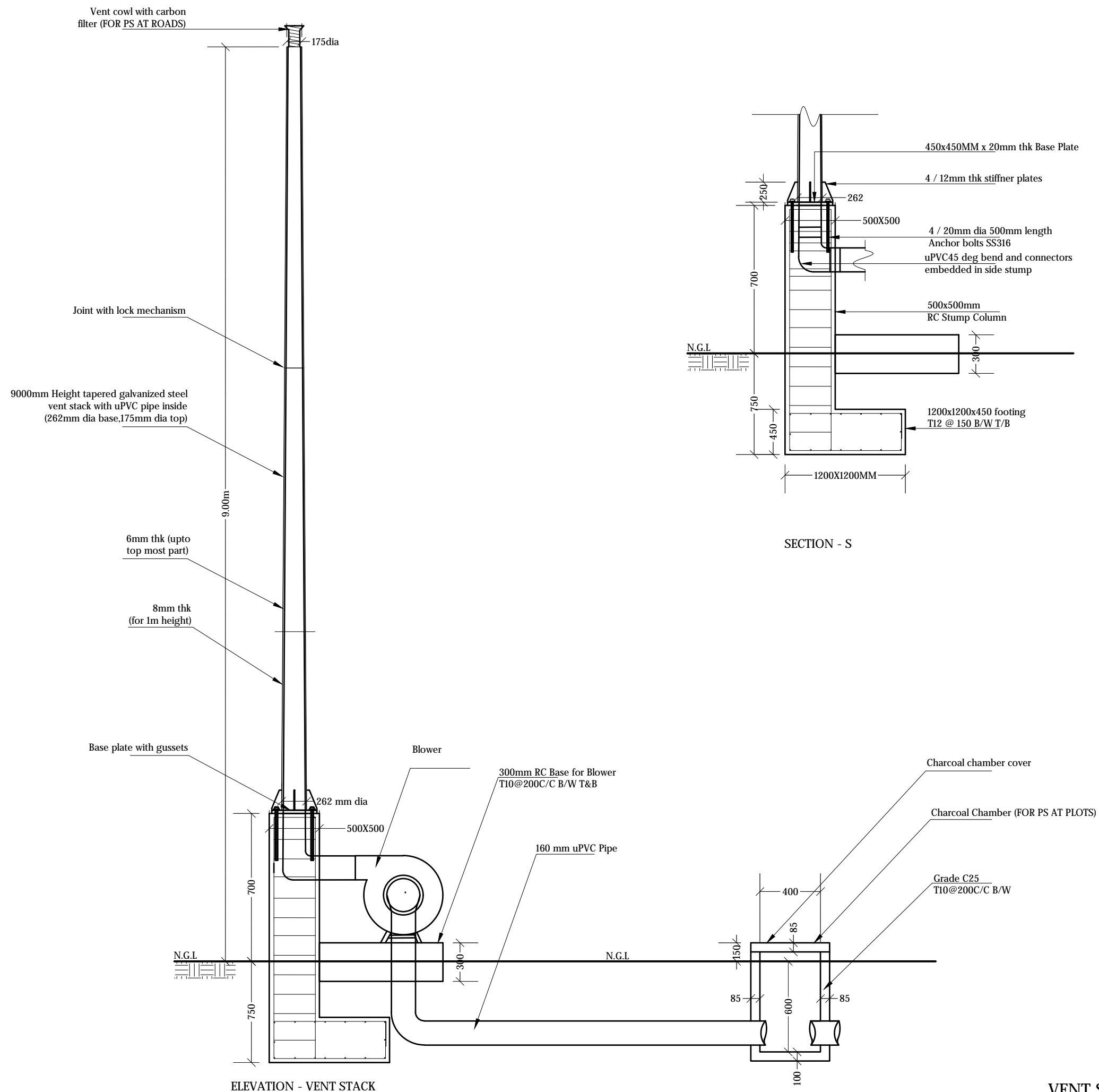
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Date: Sep 2020	SCALE (A3): 1:20
Project No: EP-WS/2019/06	Page: W-(9)

PS & STP BOUNDARY WALL AND FENCING DETAILS



NTS

Notes:

- Vent stack shall be galvanized (minimum 250 micron) and finished with epoxy paint
- All anchor bolts shall be SS316
- Cover for footings shall be 50mm
- Cover for stump shall be 40mm
- Concrete shall be of grade C25
- All concrete cold joints shall be casted with bonding agent

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

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Design and EIA works of Water
Supply and Sewerage Facilities in
5 islands, Maldives - Package 6

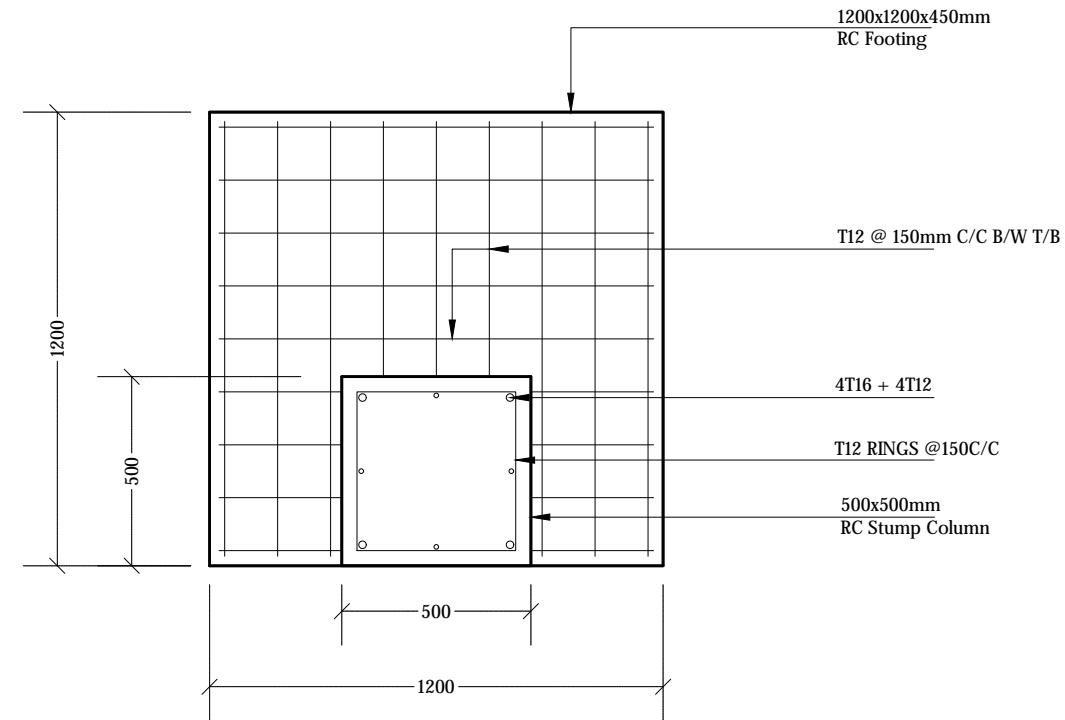
Sub Title:
Sewerage System in GDh. Nadella

Client:
Ministry of National Planning, Housing and
Infrastructure, Republic of Maldives

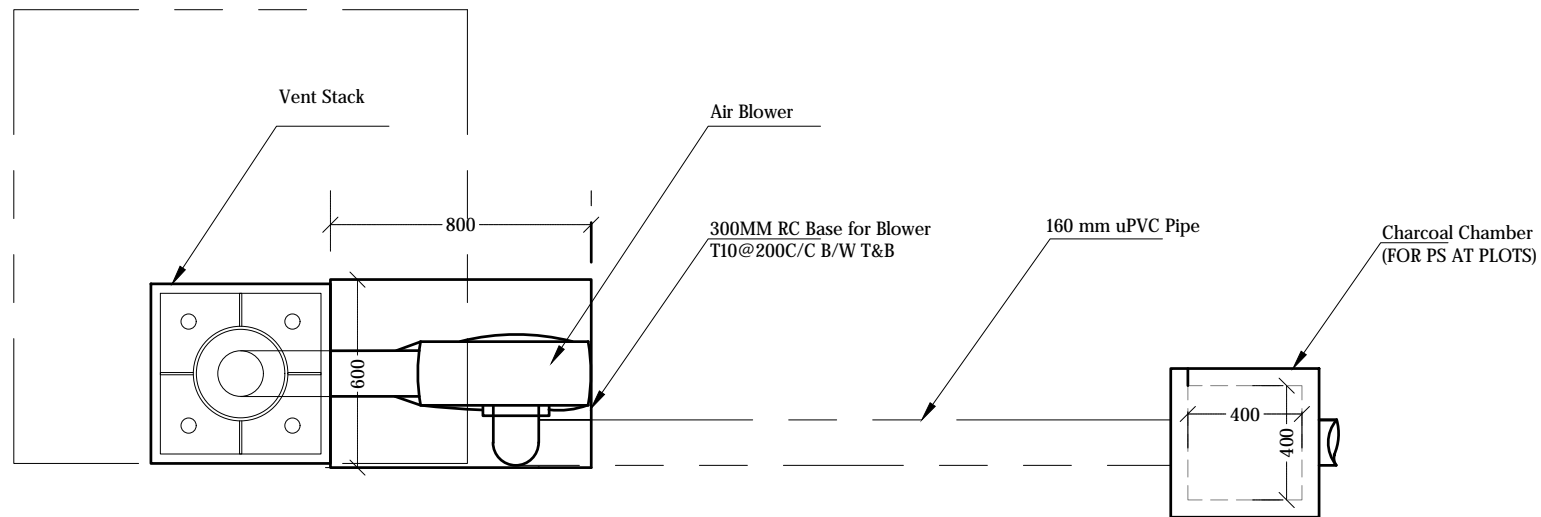


Drawn: F.I.A.	Checked: M.S.S.
Designed: F.I.A.	Approved: L.W.
Date: Sep 2020	SCALE (A3): NTS
Project No: EP-WS/2019/06	

Rev:	Page: W-(10)
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FOOTING & STUMP DETAILS OF VENT STACK



AIR BLOWER DETAILS (Plan View)

VENT STACK AND AIR BLOWER DETAILS

NTS



- Notes:
- All anchor bolts shall be SS316
 - Cover for footings shall be 50mm
 - Cover for stump shall be 40mm
 - Concrete shall be of grade C25
 - All concrete cold joints shall be casted with bonding agent.

DISCHARGE PUMP STATION DETAILS - LONGITUDINAL SECTION

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
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Sub Title:
Sewerage System in GDh. Nadella

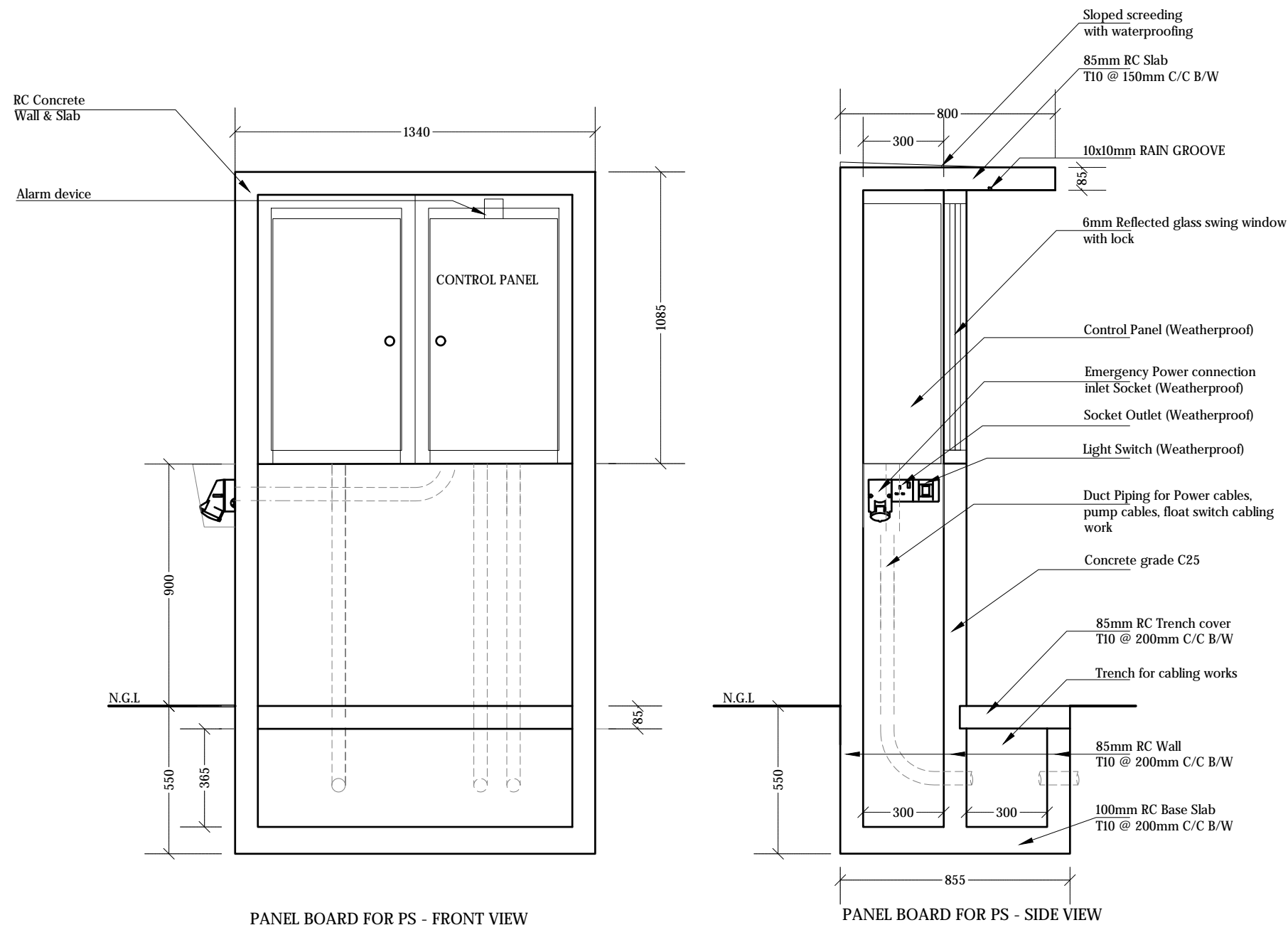
Client:
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Project No: EP-WS/2019/06	Page: W-(11)



CONTROL PANEL BOARD DETAILS

NTS

Title:
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Design and EIA works of Water
Supply and Sewerage Facilities in
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Sub Title:
Sewerage System in GDh. Nadella

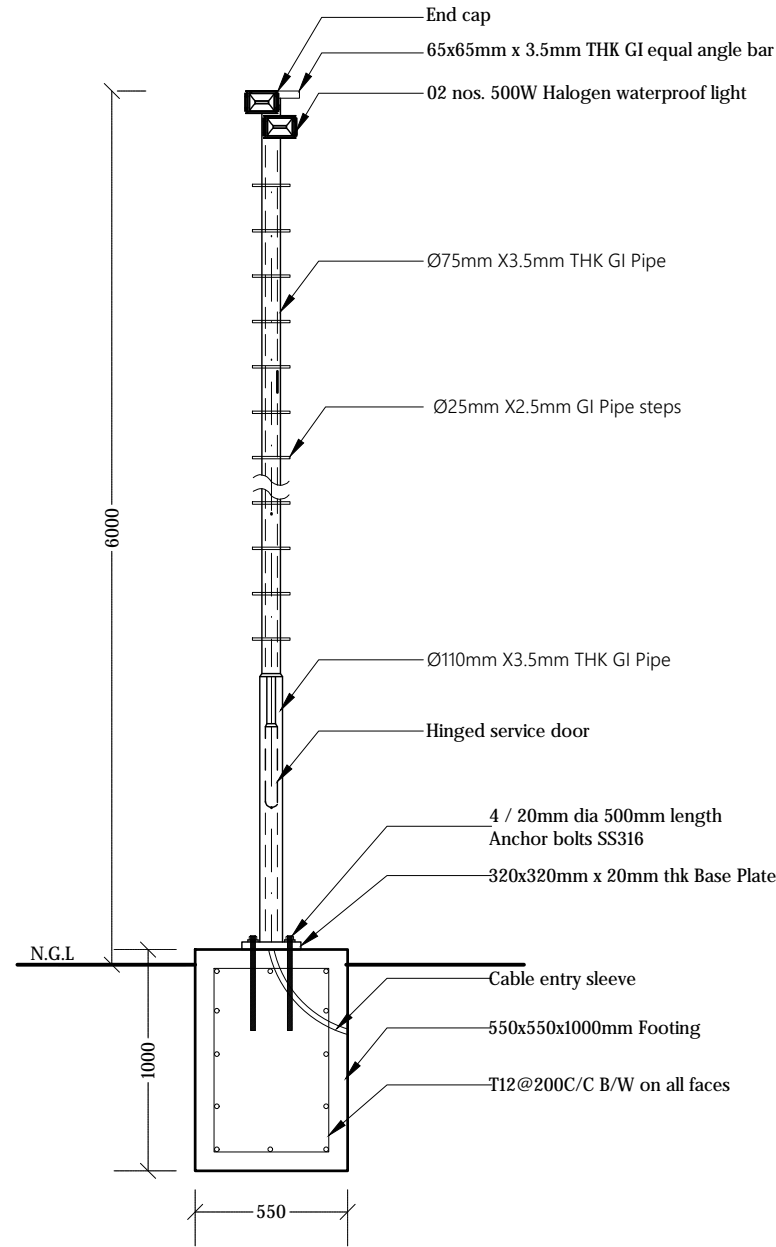
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Husnuheena Magu, Male', Maldives

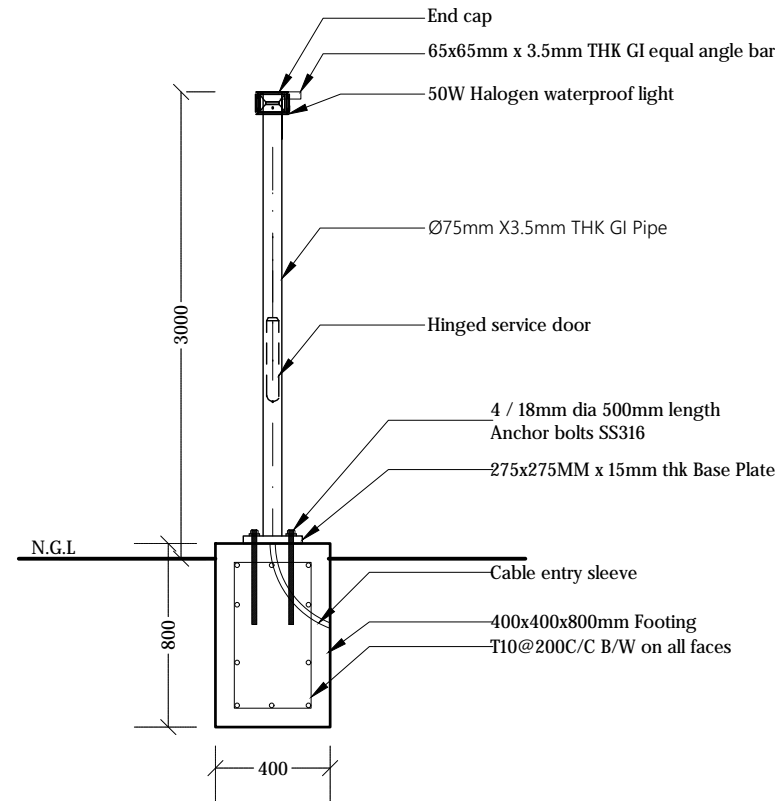
FEDBACK INFRA
Maldivian Infrastructure Development

Drawn: F.I.A.	Checked: M.S.S.
Designed: F.I.A.	Approved: I.W.
Date: Sep 2020	SCALE (A3): NTS
Project No: EP-WS/2019/06	

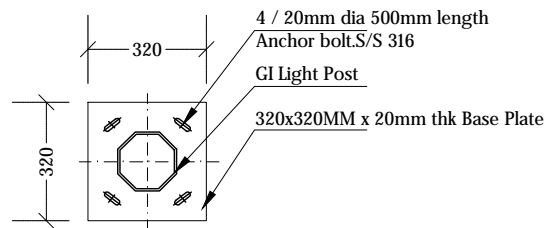
Rev: Page: W-(12)



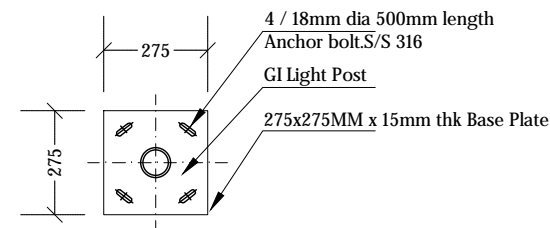
LIGHT POST DETAILS FOR STP COMPOUND (LP1)



LIGHT POST DETAILS FOR PUMP STATION (LP2)



BASE PLATE (LP1)



BASE PLATE (LP2)

LIGHT POST DETAILS

NTS



Notes:

- Light posts shall be galvanized (minimum 200 micron) and finished with epoxy paint
- All anchor bolts shall be SS316
- Cover for footings shall be 50mm
- Concrete shall be of grade C25
- All steel members and GI members to be applied with 2 coats of anti-corrosive paint with epoxy finishing paint
- All concrete cold joints shall be casted with bonding agent

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

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Supply and Sewerage Facilities in
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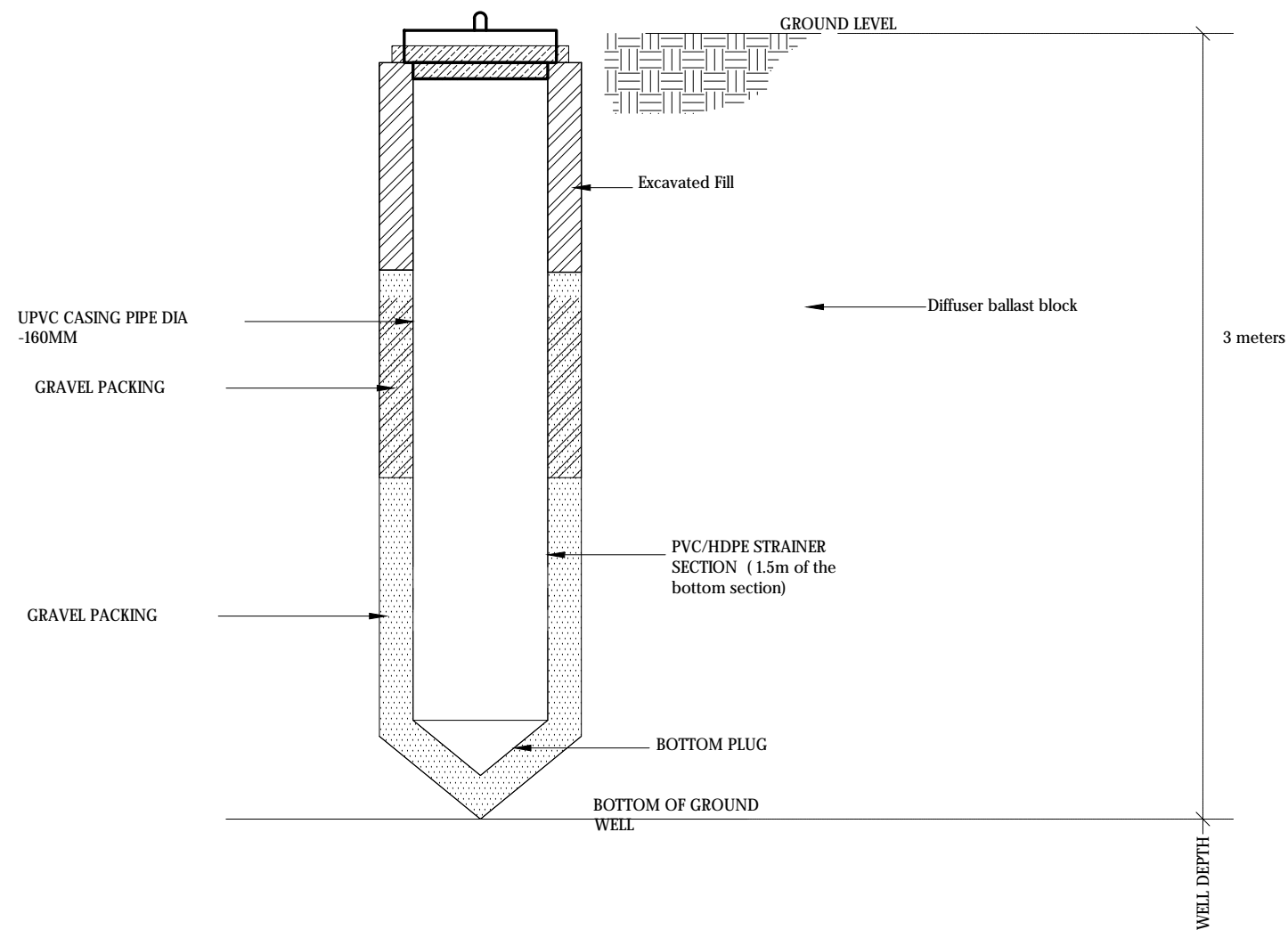
Designed: F.I.A. Approved: I.W.

Date: Sep 2020 SCALE (A3): NTS

Project No: EP-WS/2019/06

Rev: Page:

W-(13)



SAMPLING WELL SECTION
NTS



Legend

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

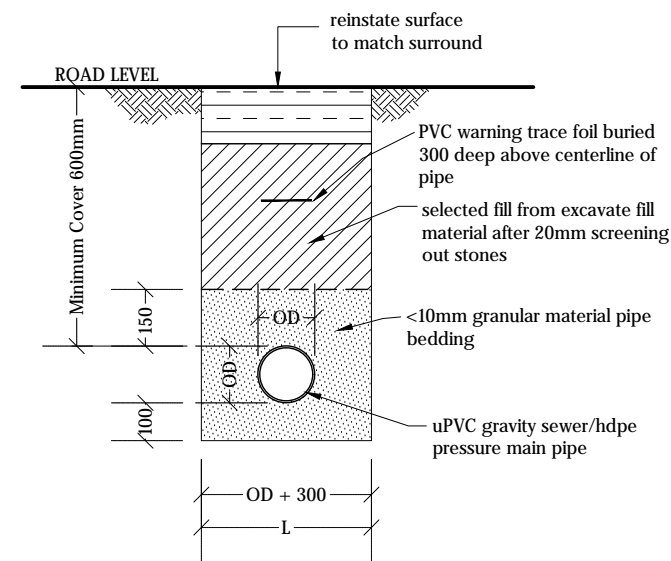
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Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
5 islands, Maldives - Package 6

Sub Title:
Sewerage System in GDh. Nadella

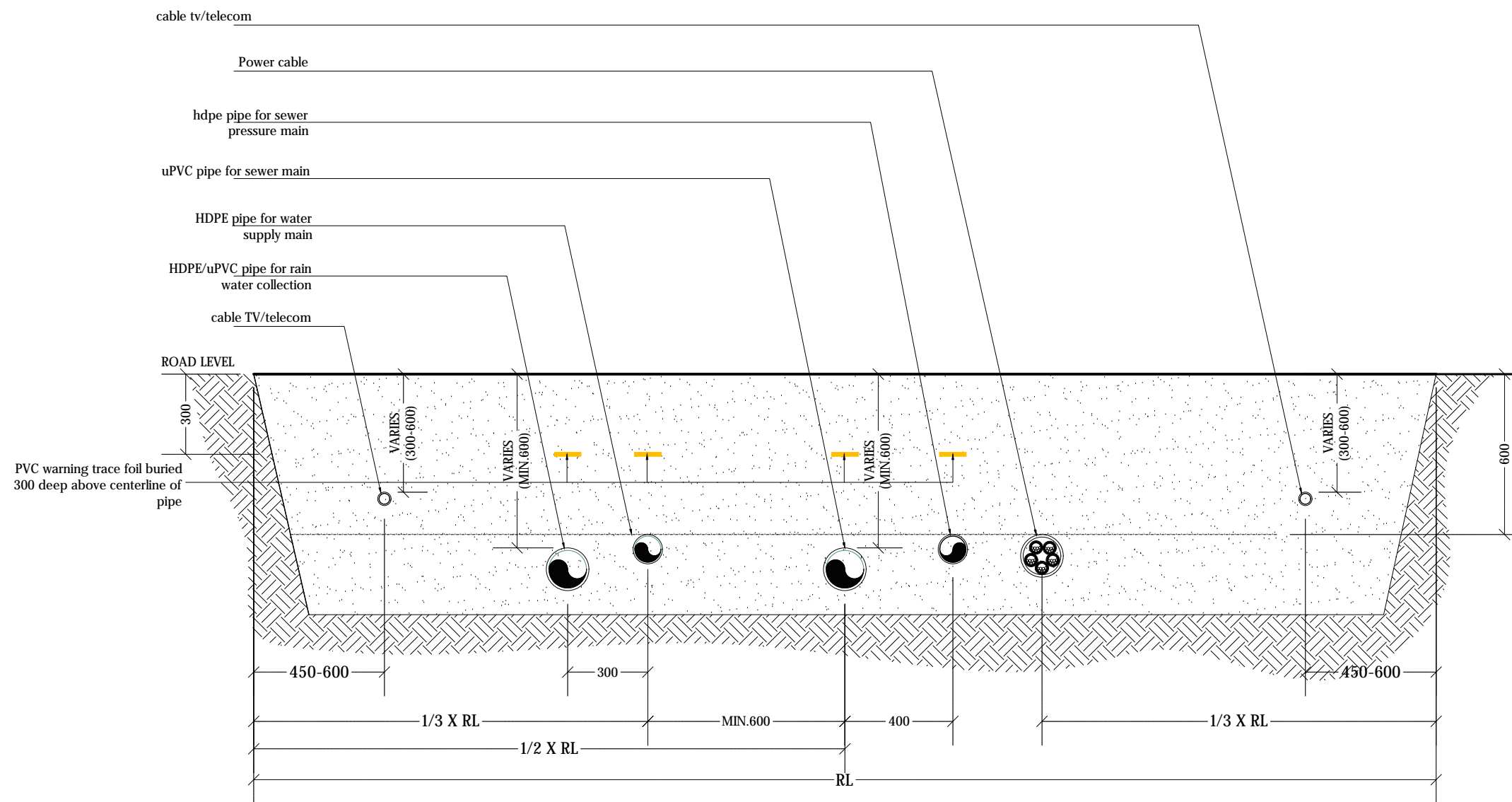
Client:
Ministry of National Planning, Housing and
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Designed: F.I.A.	Approved: I.W.
Date: Sep 2020	SCALE (A3): NTS
Project No: EP-WS/2019/06	
Rev:	Page: W-(24)



TRENCH & BEDDING DETAILS



TYPICAL ROAD SECTION

TRENCH AND BEDDING DETAILS

1:20

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
Consultancy Services for Survey,
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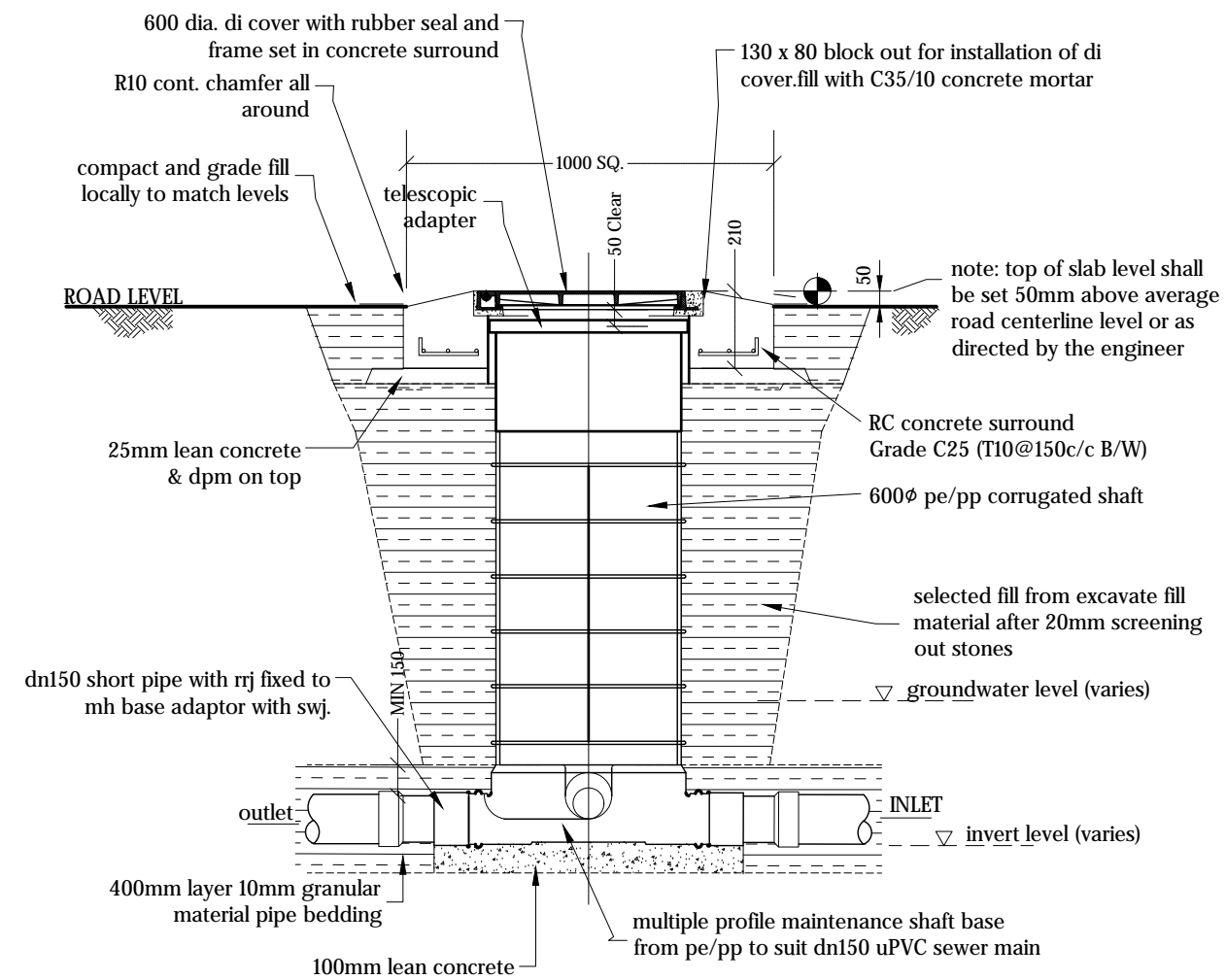
Sub Title:
Sewerage System in GDh. Nadella

Client:
Ministry of National Planning, Housing and
Infrastructure, Republic of Maldives

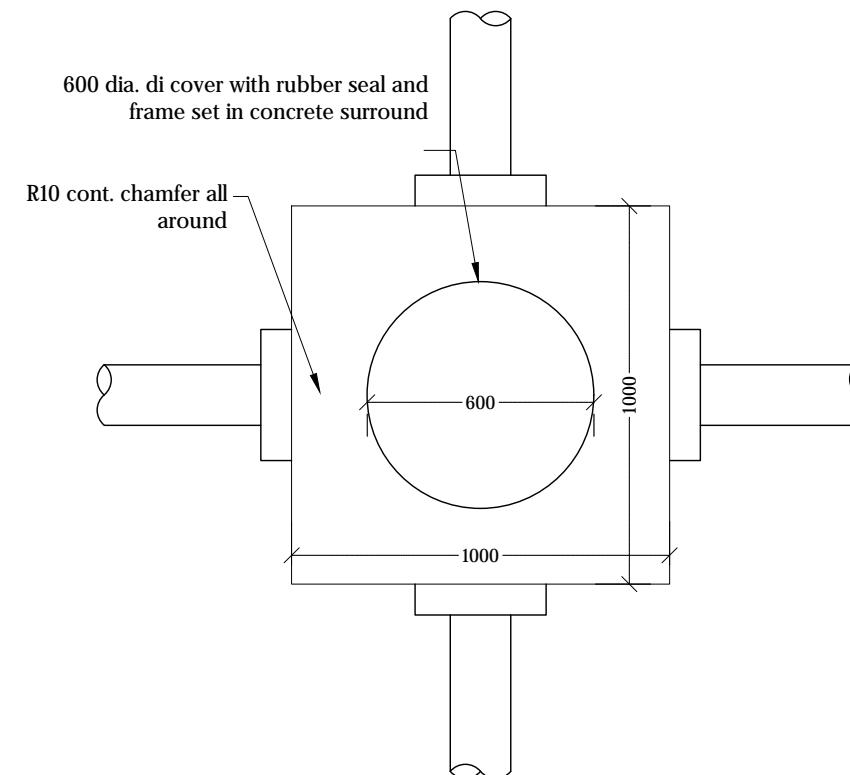
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Maldivu Infrastruktura - Maldives

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Project No: EP-WS/2019/06	Page: W-(14)



ELEVATION - MAINTENANCE SHAFT (MH)



PLAN VIEW - MAINTENANCE SHAFT (MH)

MAINTENANCE SHAFT (MH) DETAILS

1:20

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

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Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
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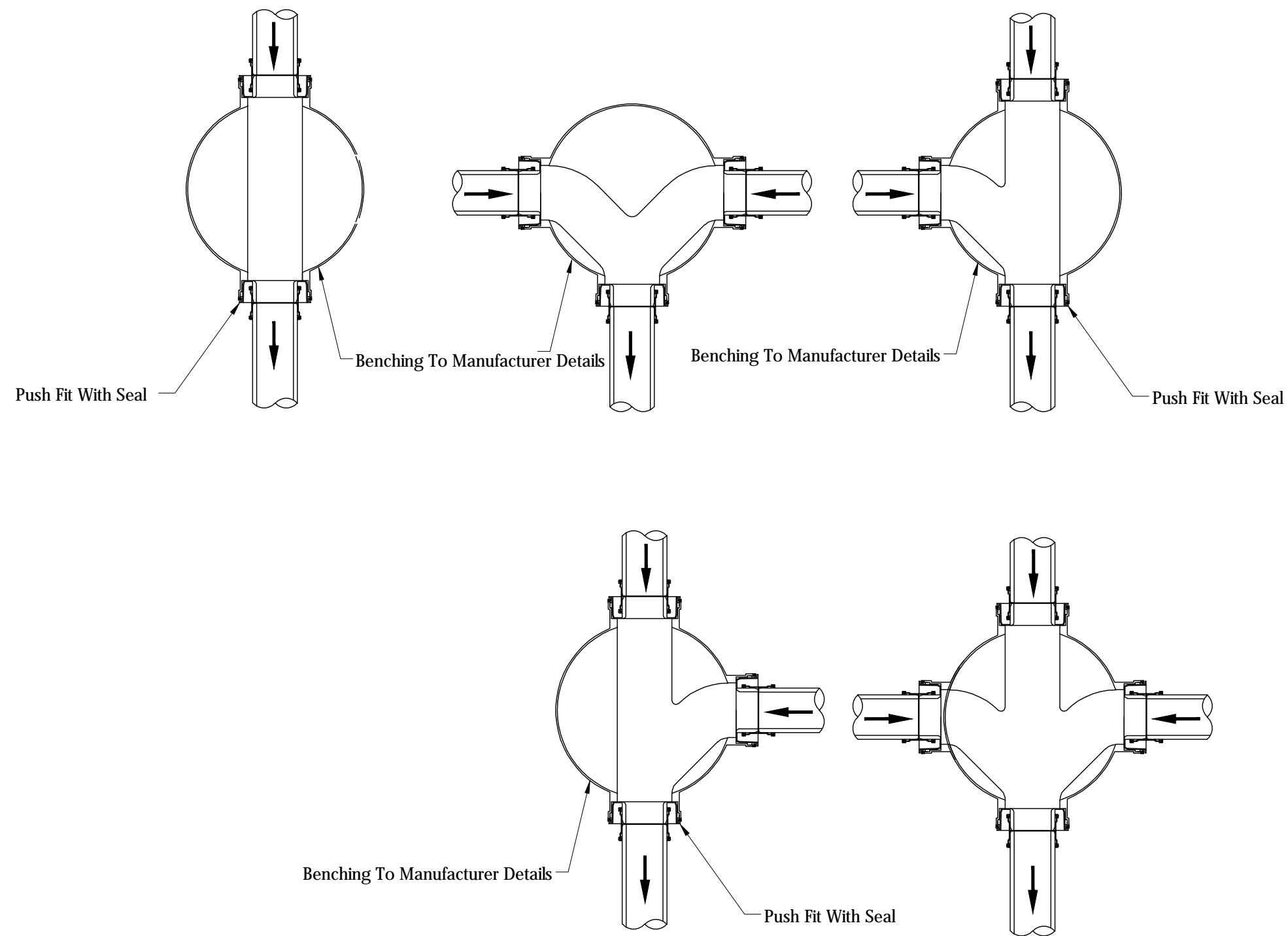
Sub Title:
Sewerage System in GDh. Nadella

Client:
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FOODBACK INFRA
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Designed: F.I.A.	Approved: I.W.
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Project No: EP-WS/2019/06	
Rev:	Page: W-(15)



TYPICAL MANHOLE BASE DETAILS

NTS



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Consultancy Services for Survey, Design and EIA works of Water Supply and Sewerage Facilities in 5 islands, Maldives - Package 6

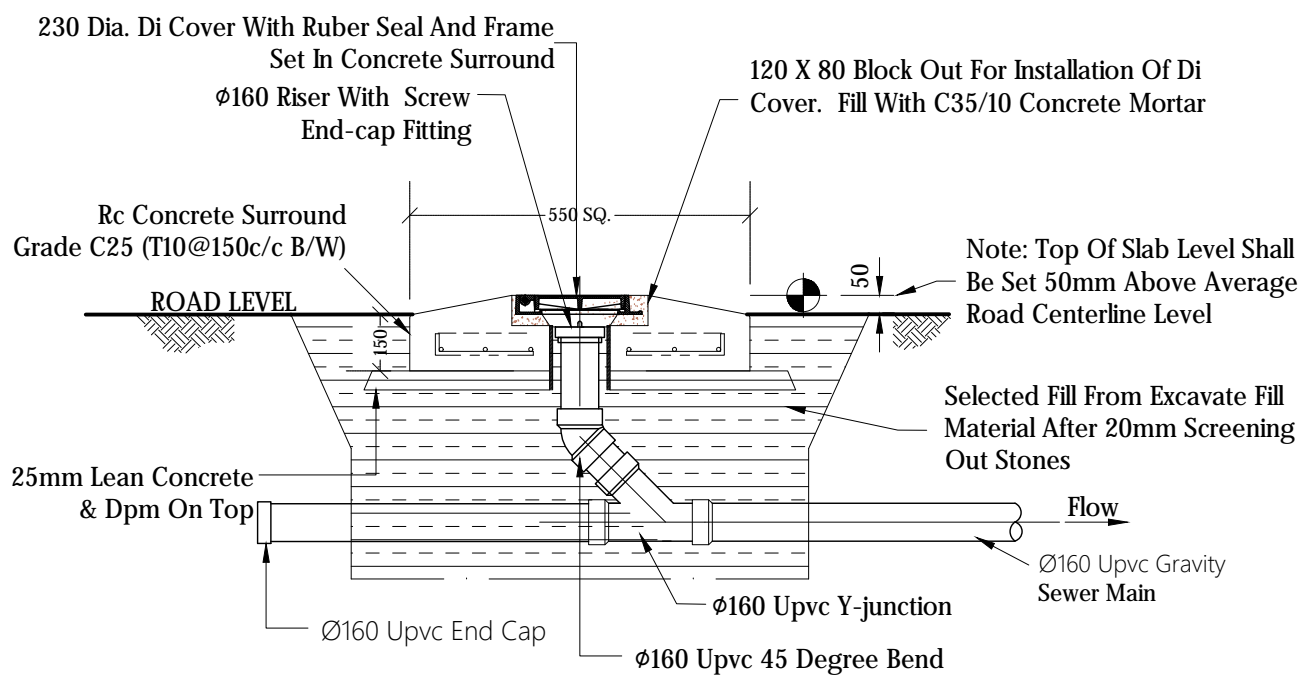
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Sewerage System in GDh. Nadella

Client:
Ministry of National Planning, Housing and Infrastructure, Republic of Maldives

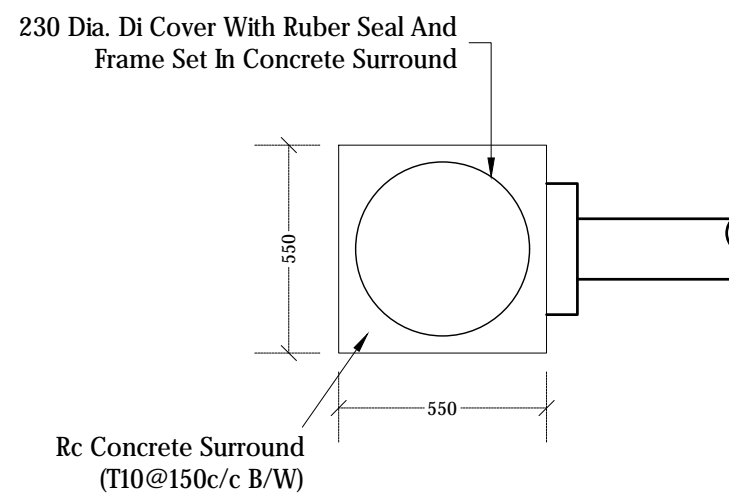
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Designed: F.I.A.	Approved: I.W.
Date: Sep 2020	SCALE (A3): NTS
Project No: EP-WS/2019/06	Page: W-(16)



ELEVATION - CLEANOUT (CO)



PLAN VIEW - CLEANOUT (CO)

CLEAN OUT DETAILS

NTS

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
Consultancy Services for Survey,
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Supply and Sewerage Facilities in
5 islands, Maldives - Package 6

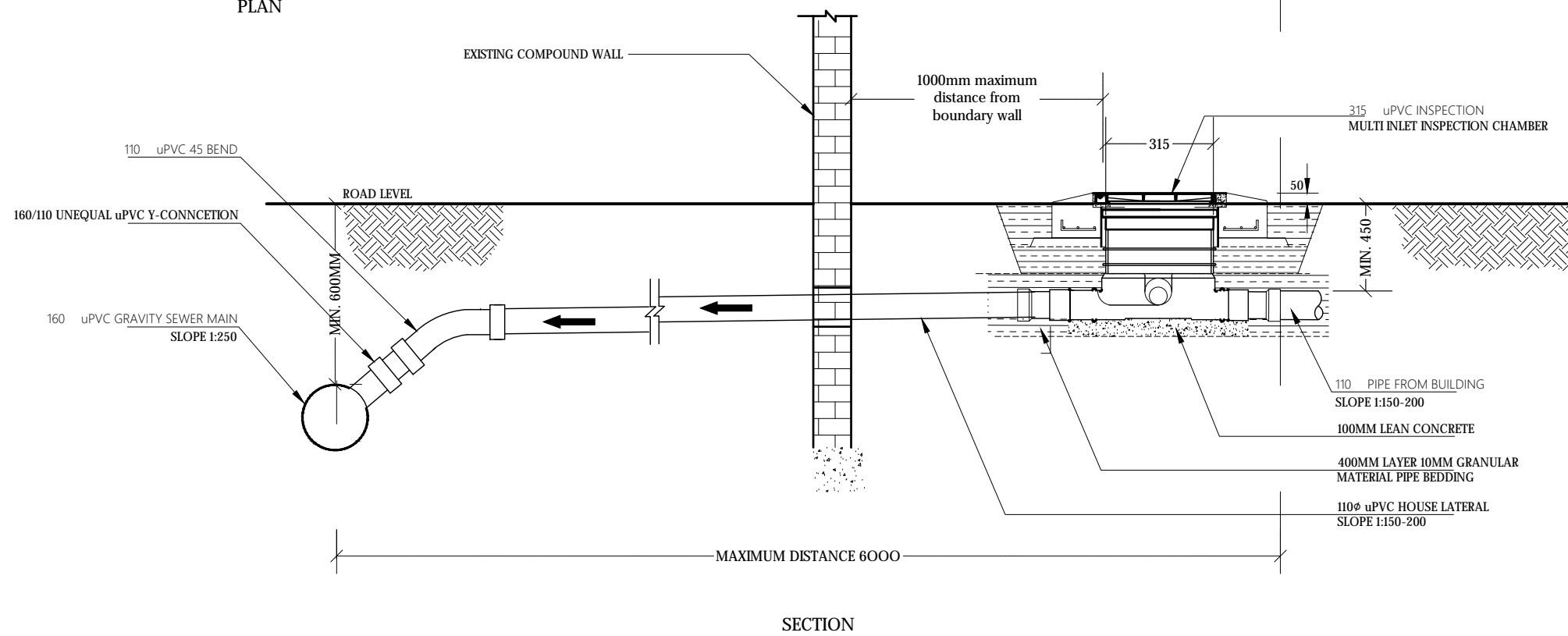
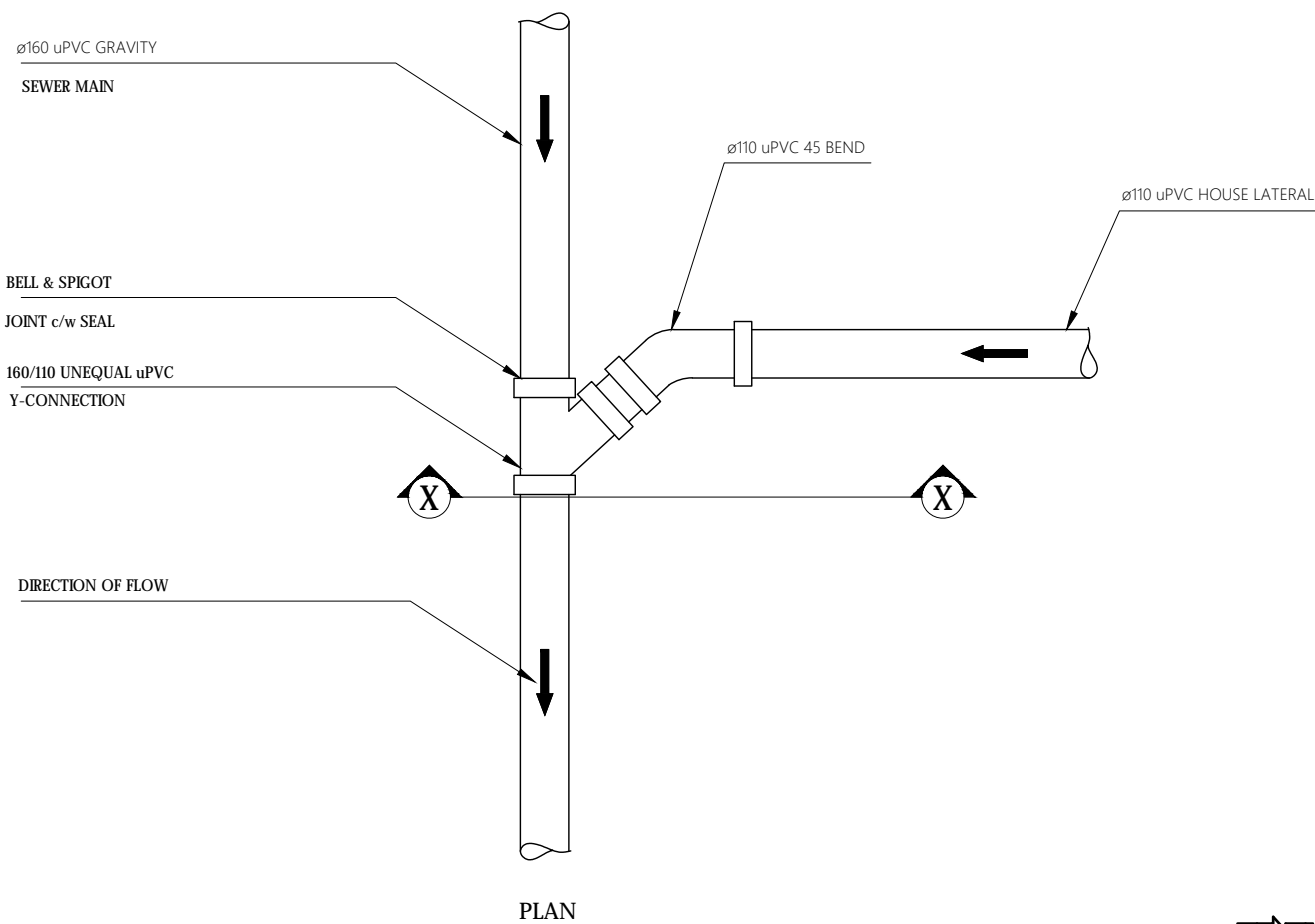
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Sewerage System in GDh. Nadella

Client:
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Project No: EP-WS/2019/06	
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TYPICAL HOUSE CONNECTION DETAIL

NTS

Title:
Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
5 islands, Maldives - Package 6

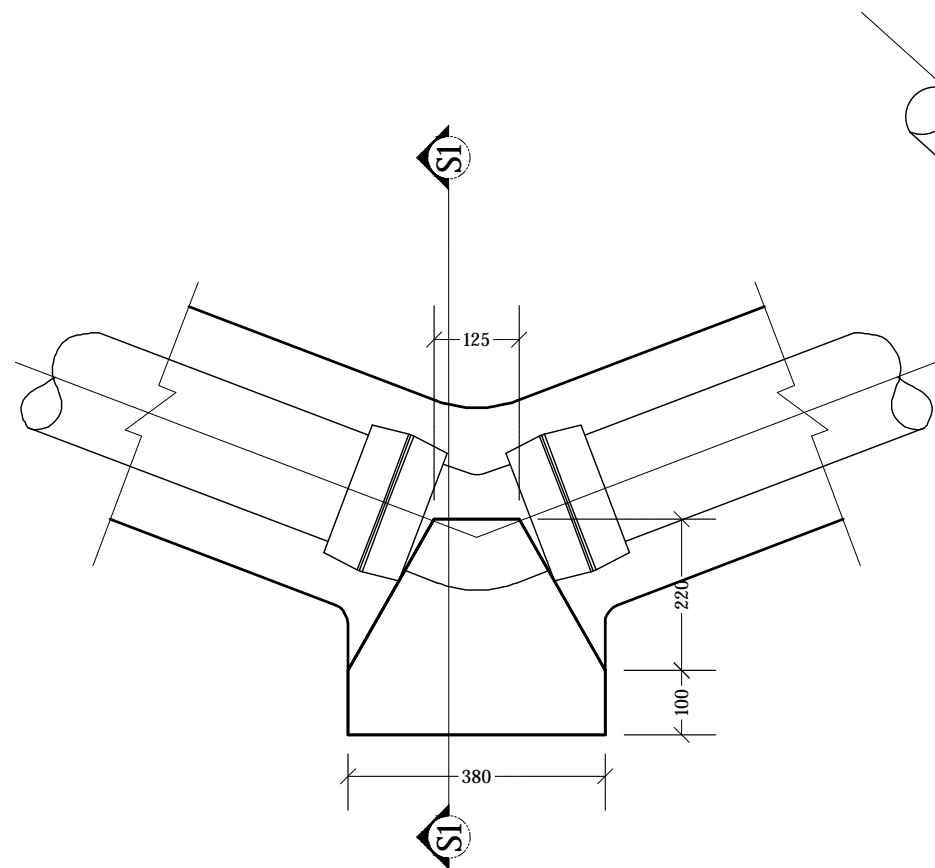
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Sewerage System in GDh. Nadella

Client:
Ministry of National Planning, Housing and
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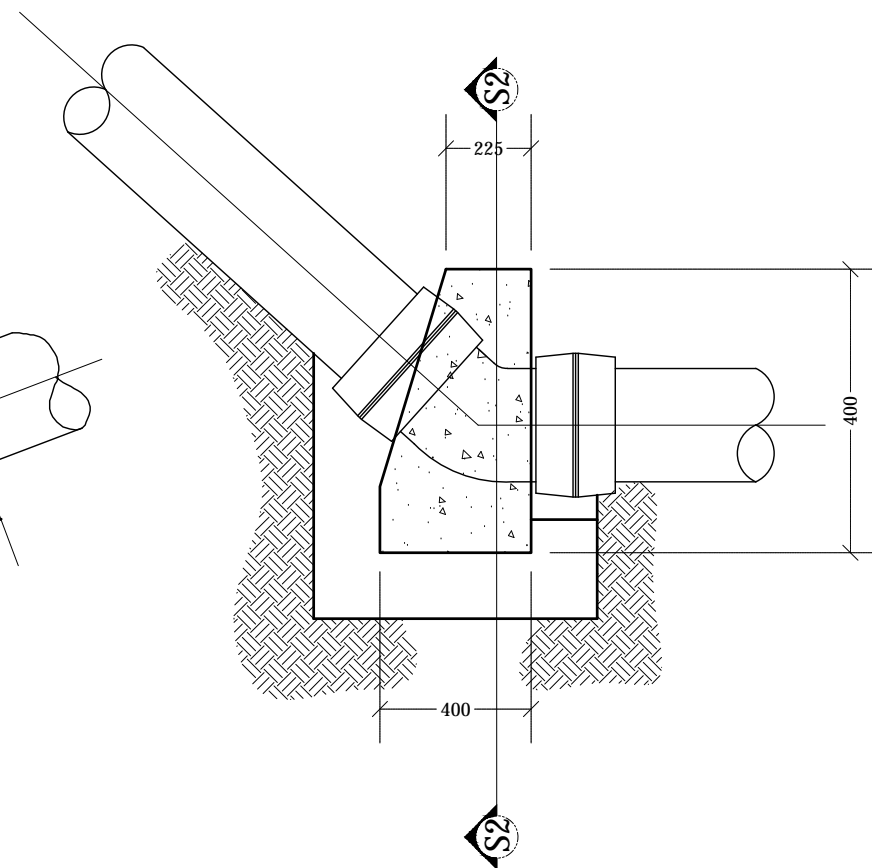
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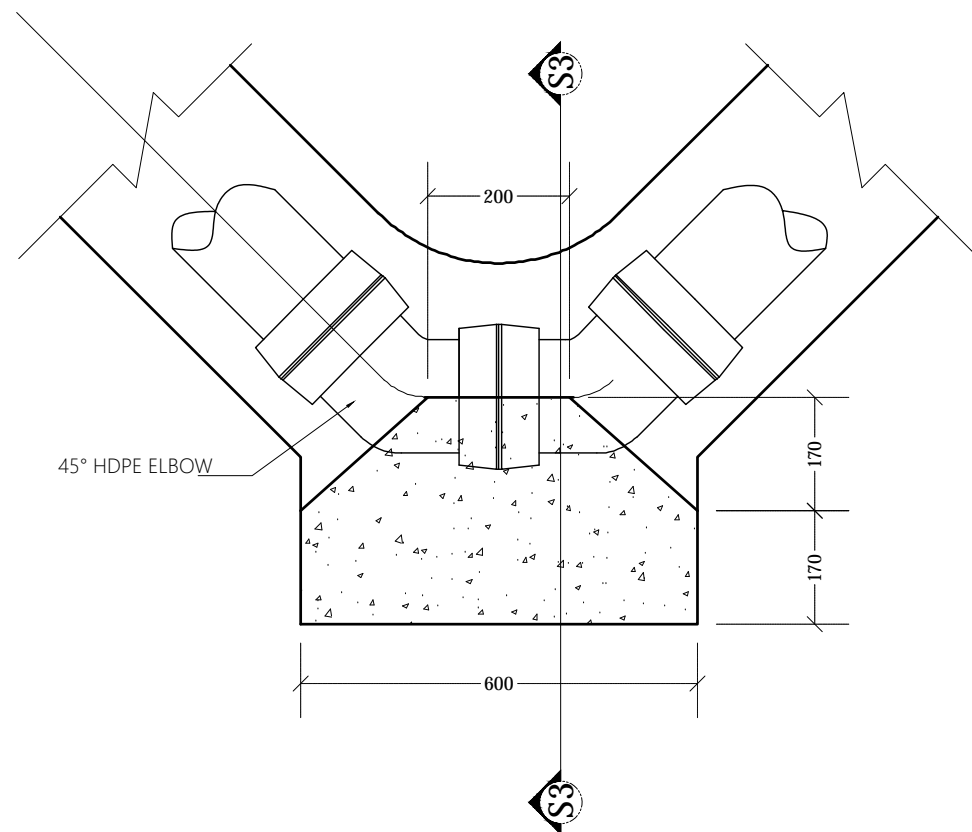
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Date: Sep 2020	SCALE (A3): NTS
Project No: EP-WS/2019/06	
Rev:	Page: W-(18)



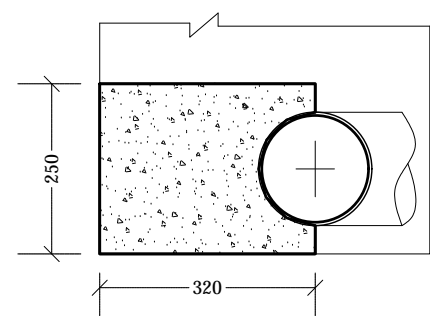
HORIZONTAL 45° BEND
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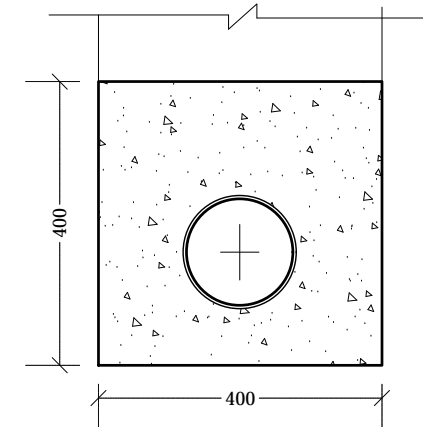
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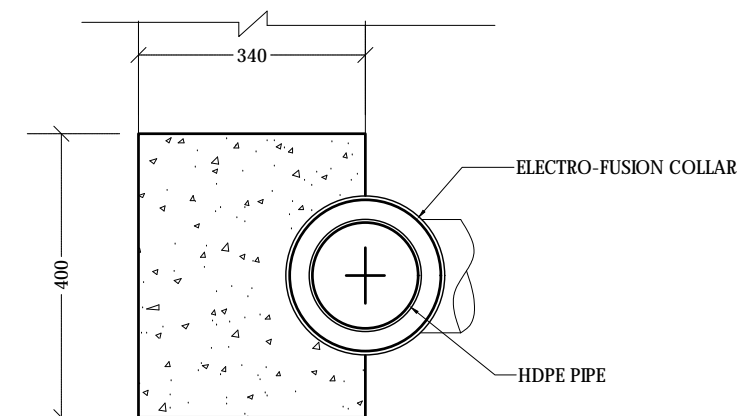
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SECTION S1-S1
NTS



SECTION S2-S2
NTS



SECTION S3-S3
NTS

THRUST BLOCK DETAILS

NTS

Notes:

- Concrete shall be of grade C25

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Title:
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Supply and Sewerage Facilities in
5 islands, Maldives - Package 6

Sub Title:
Sewerage System in GDh. Nadella

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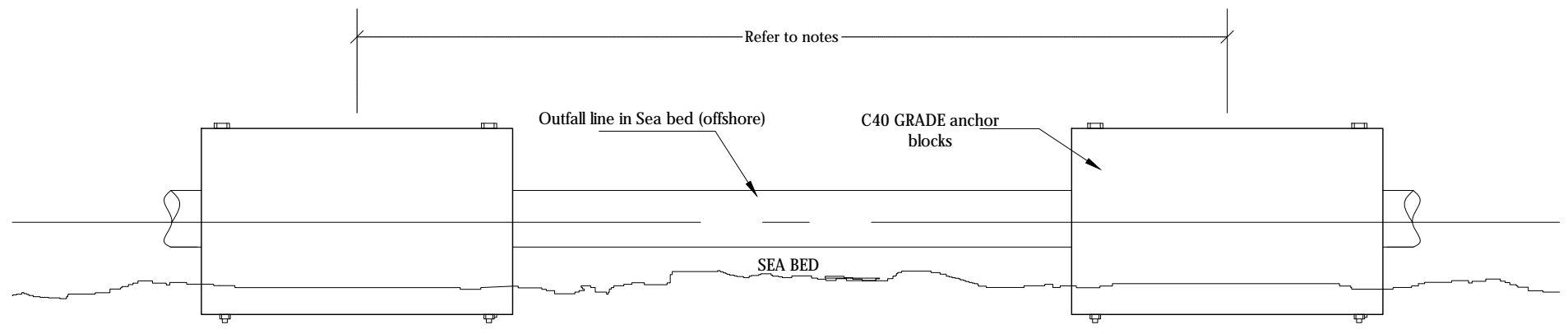
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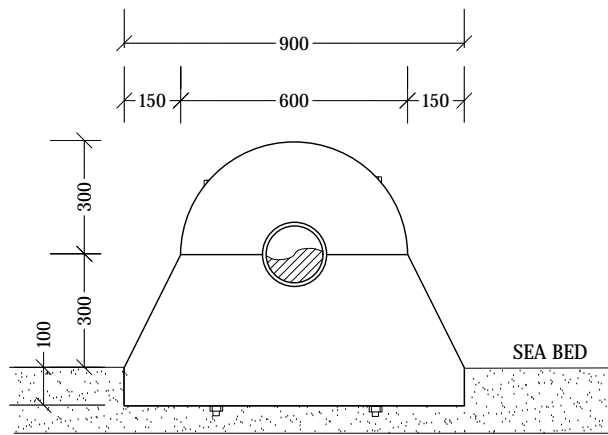
Date: Sep 2020 SCALE (A3): NTS

Project No: EP-WS/2019/06

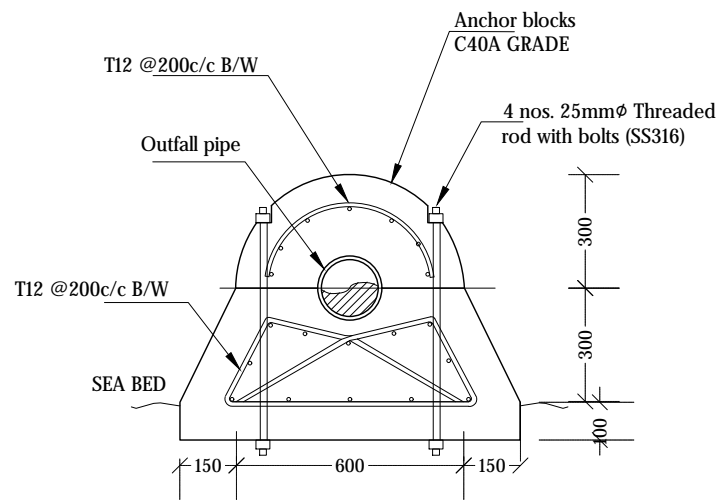
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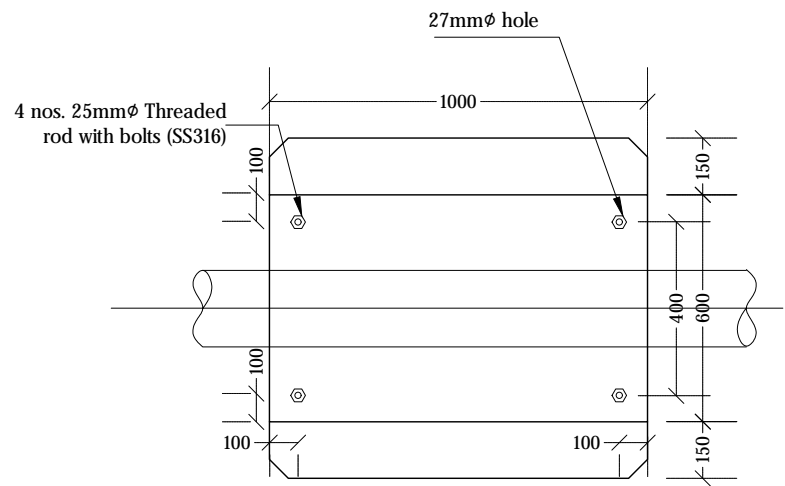
BALLAST BLOCK SIDE ELEVATION



BALLAST BLOCK FRONT ELEVATION



BALLAST BLOCK SECTION



BALLAST BLOCK PLAN

BALLAST BLOCK DETAILS

NTS

Notes:

1. All backing rings for stub flanges , nuts and bolts shall be grade 316 stainless steel.
2. All pipe work shall be bedded on 10mm thick neoprene rubber seat in semicircular recess matching the O.D. the pipe.
3. Fabricate specific pipe clamps to provide firm clamping action according to pipe O.D.
4. All structural concrete shall be of grade C40A.
5. All castings shall be done using sulphate resistant portland cement to BS 4027:1996.
6. All structural reinforcement shall be epoxy coating of non-pre-stressed reinforcement to ASTM-A775/A775M.
7. A cover of 75mm should be given for all reinforcements.
8. In shallow water (regions where the depth is less than 1m), the ballast block spacing is 3.5m. In deeper water (regions where the depth is greater than 1m), the ballast block spacing is 2.0m. All distances are from c/c of blocks.
9. All pipe connections are within blocks.

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Feedback Infrastructure

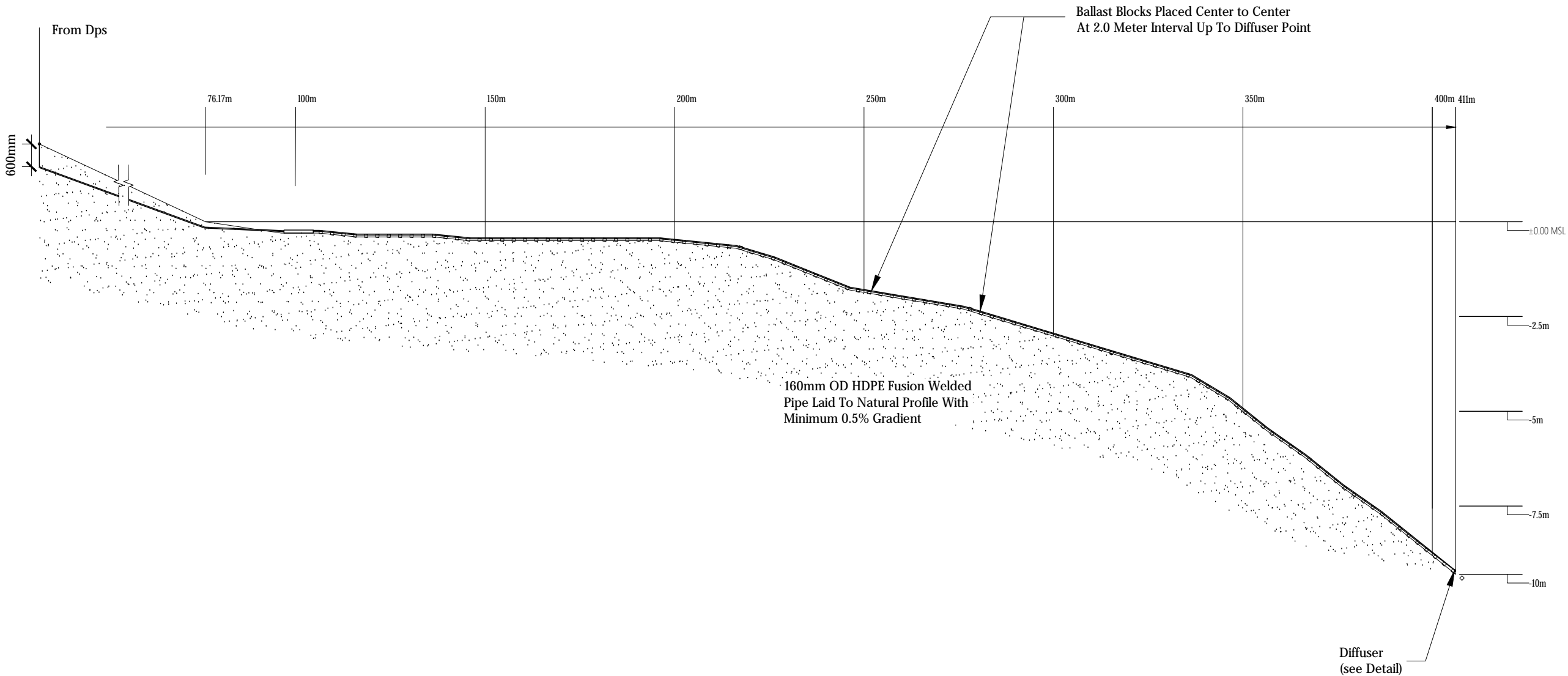
Drawn: F.I.A. Checked: M.S.S.

Designed: F.I.A. Approved: I.W.

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Project No: EP-WS/2019/06

Rev: Page: W-(20)



SEA OUTLET DETAILS
NTS



Notes:



- Contractor should carry out a detailed bathymetric survey for the proposed area, revise and present a shop drawing for the outfall layout prior to commencement of outfall works.
- The ballast block spacing is 2.0m. All distances are from c/c of blocks.

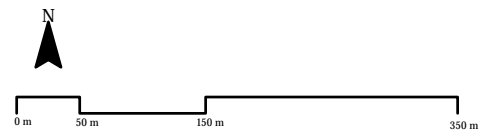
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NO.					

Title:
Consultancy Services for Survey,
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Supply and Sewerage Facilities in
5 islands, Maldives - Package 6

Sub Title:
Sewerage System in GDh. Nadella

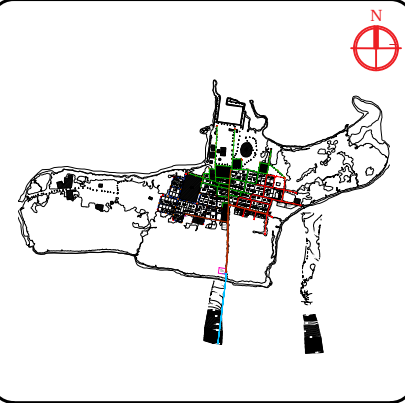
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Designed: F.I.A.	Approved: I.W.
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Project No: EP-WS/2019/06	
Rev:	Page: W-(22)



L. KUNAHANDHOO SEWERAGE SYSTEM - PRESSURE NETWORK LAYOUT

1:6000



- 110 mm Ø HDPE Pumping Main (PE100, PN16, SDR11)
- 160 mm Ø HDPE Sea Outfall Pipe (PE100, PN16, SDR11)

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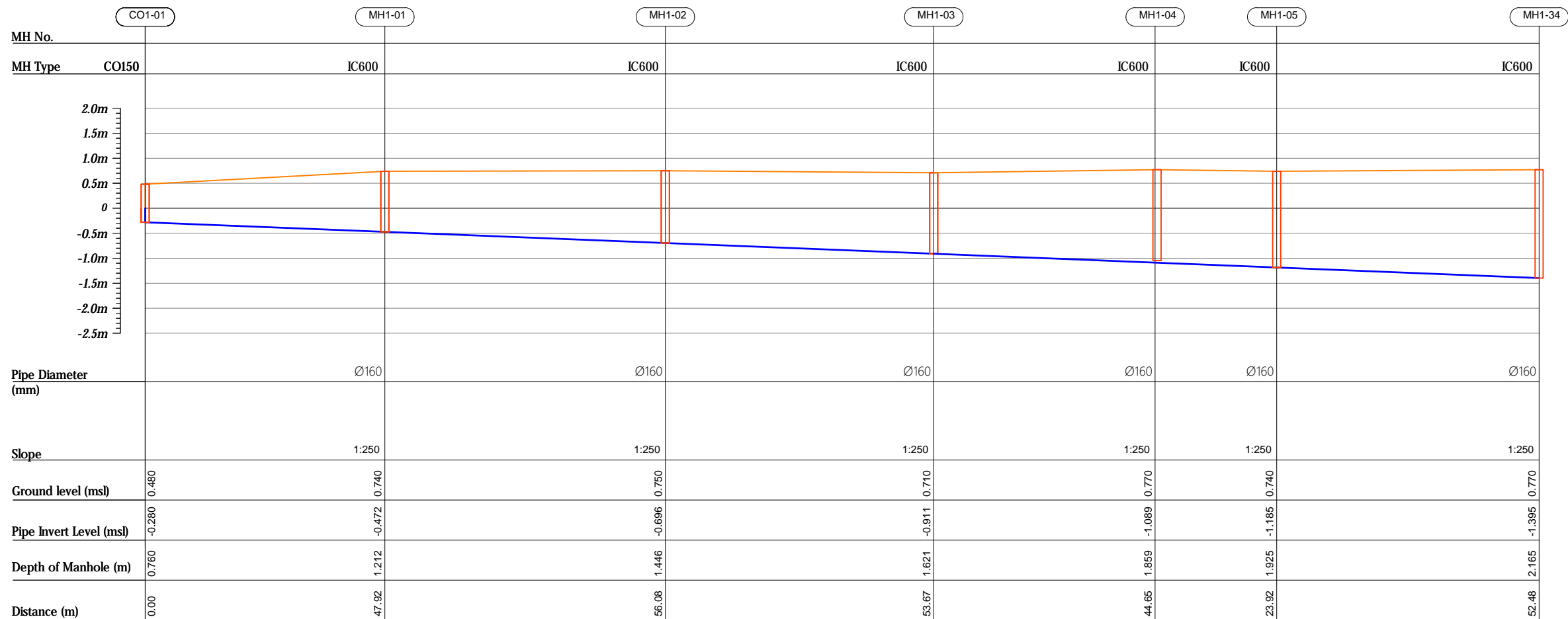
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Date: Sep 2020 SCALE (A3): 1:6000

Project No: EP-WS/2019/06

Rev: Page: W-(23)

Profile 01



R00	JUNE 2020	STAGE -1	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
*Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
5 islands, Maldives - Package 6*

Sub Title:
Sewerage System in L.Kunahandhoo

Client:
*Ministry of National Planning, Housing and
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Drawn: A.R.W	Checked: M.S.S
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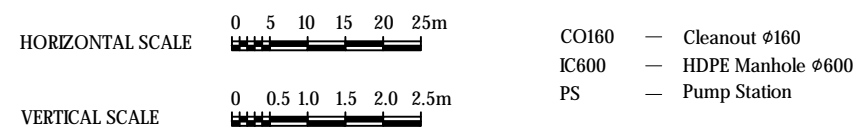
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Date: Aug 2020	SCALE (A3): 1:100
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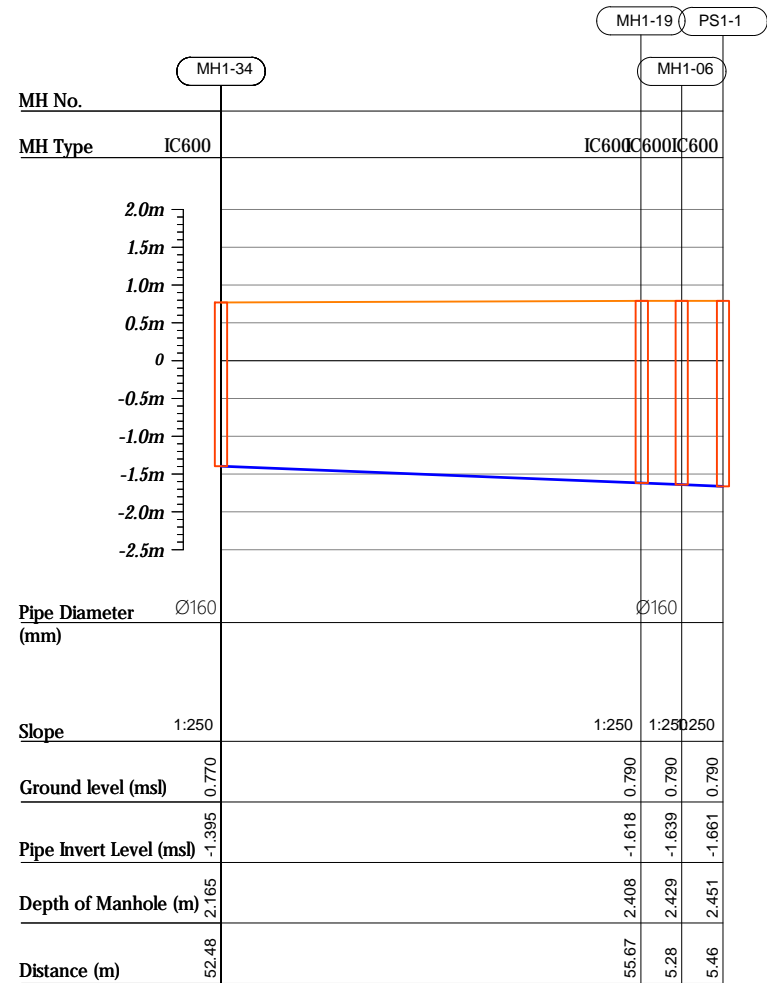
Project No: 01010101

Rev:	Page:
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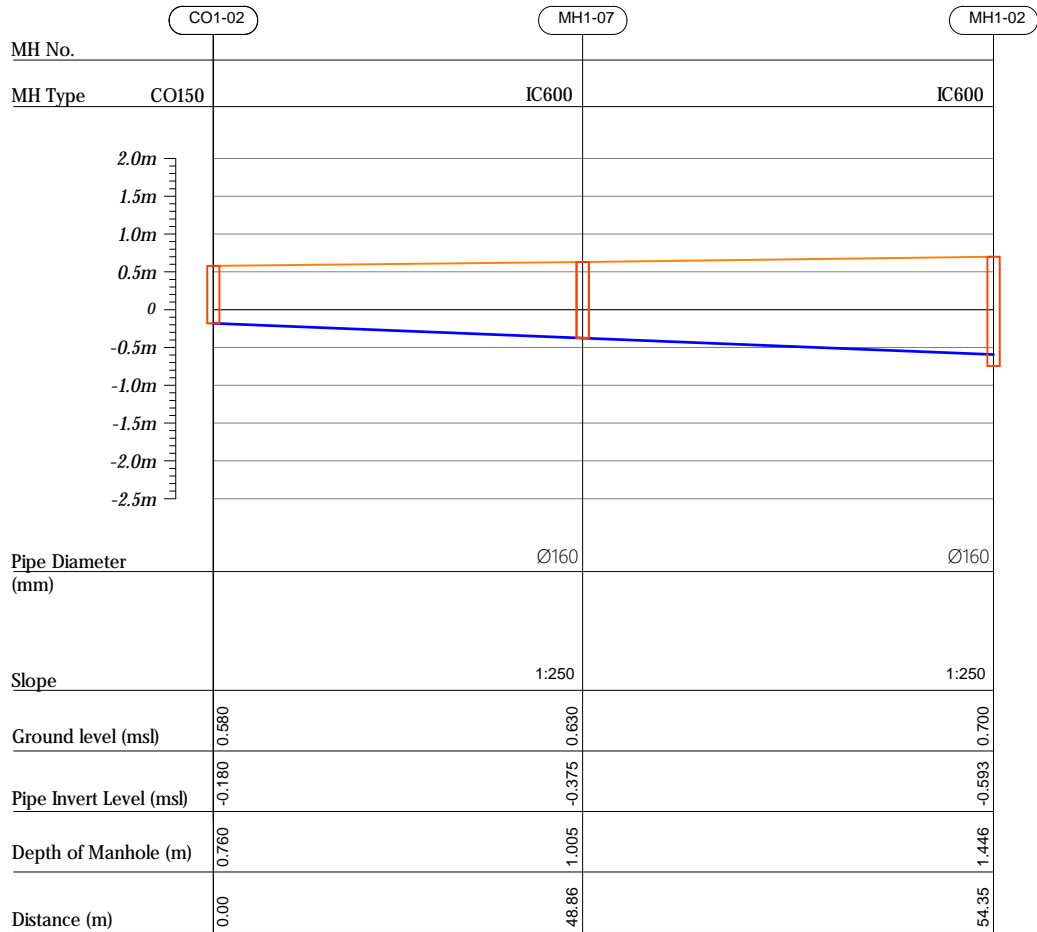
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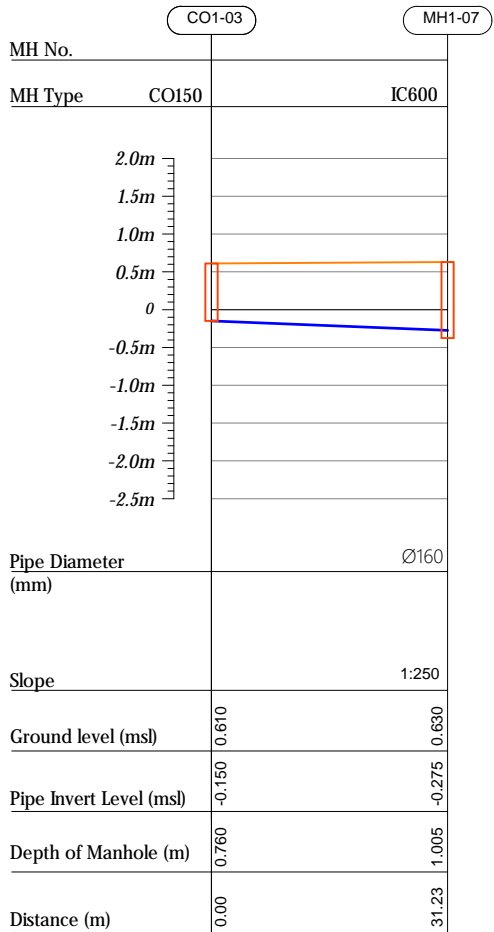
Profile 01



Profile 02



Profile 03



R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
Consultancy Services for Survey,
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Sub Title:
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Maldivu Infrastructure Develop

Drawn: A.R.W. Checked: M.S.S.

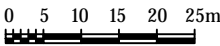
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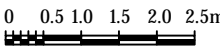
Project No: 01010101

Rev: R-01 Page: PS1-02

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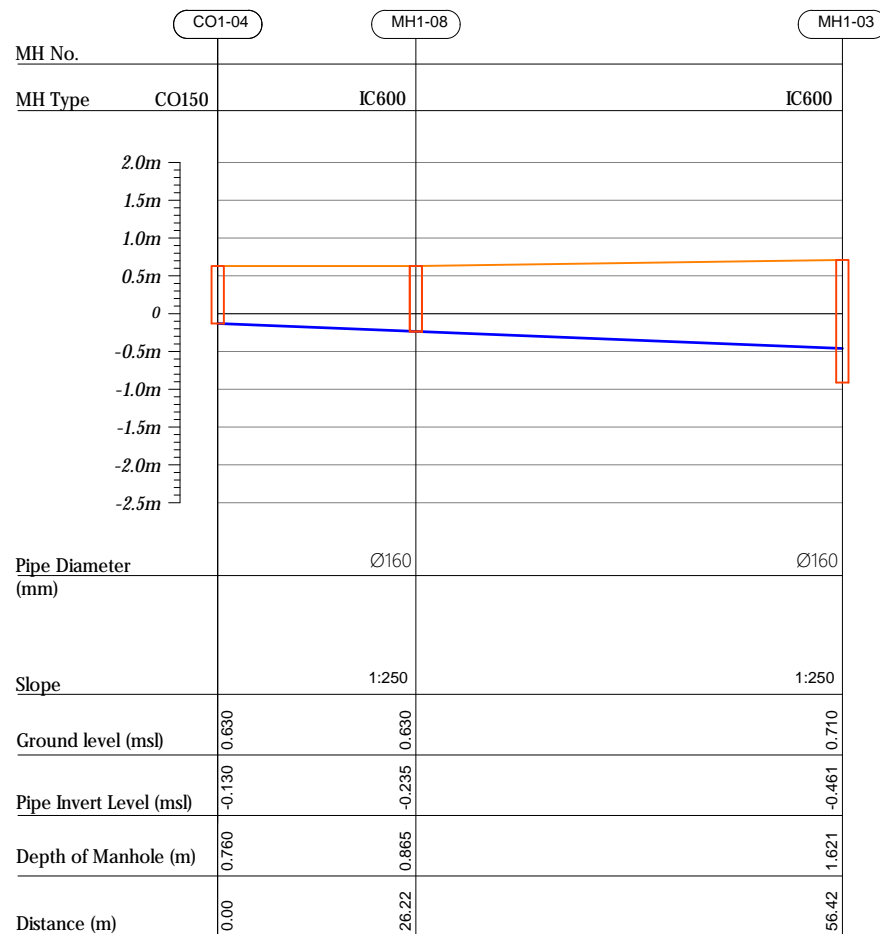


VERTICAL SCALE

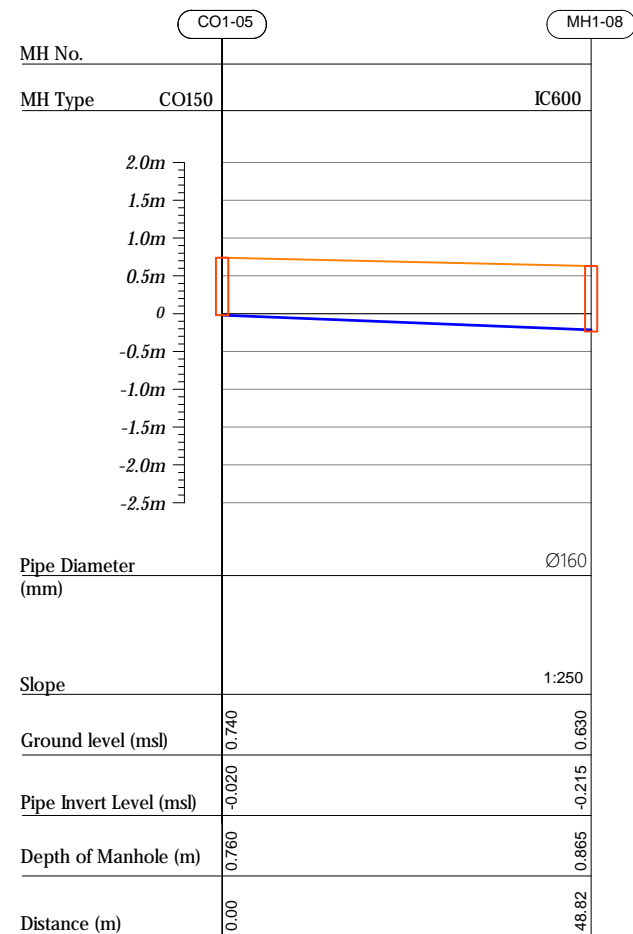


- CO160 — Cleanout Ø160
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

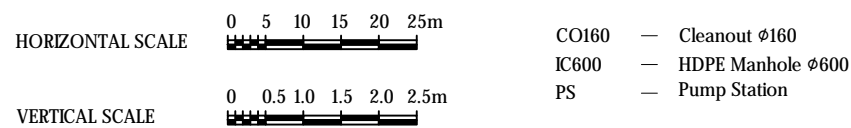
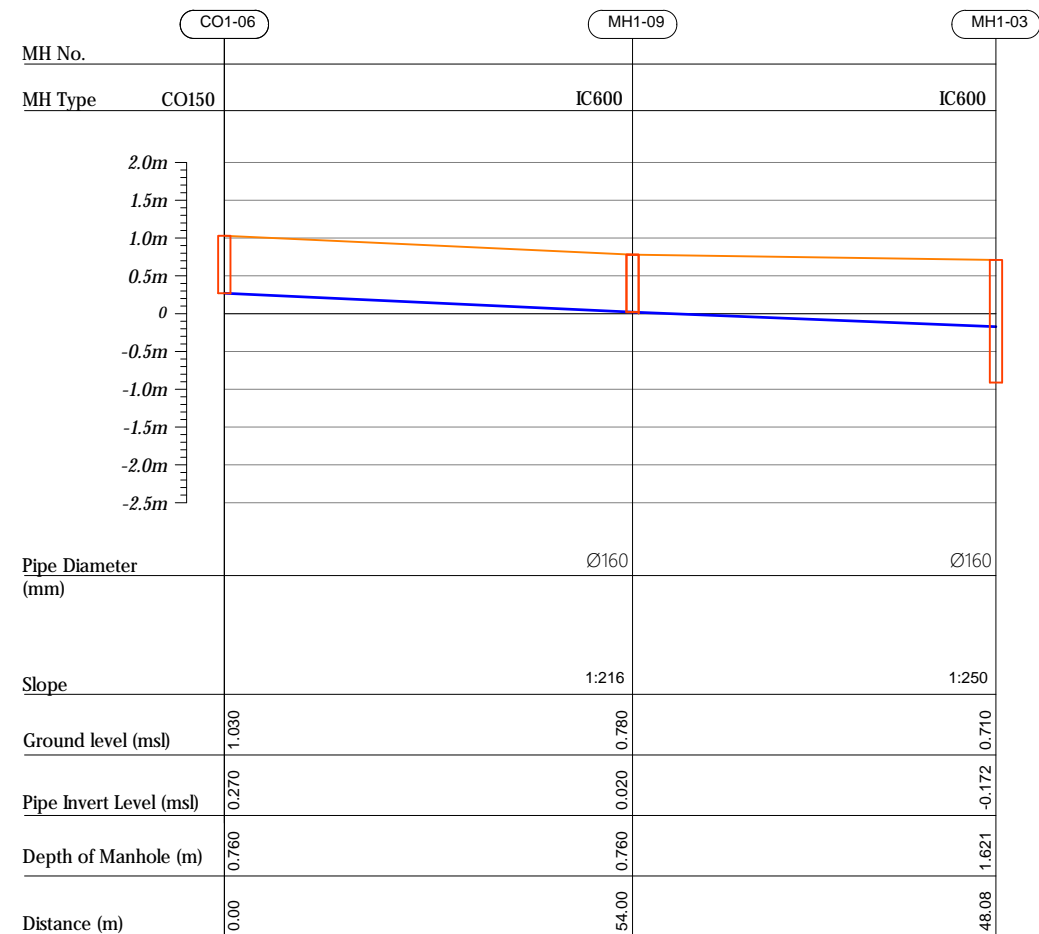
Profile 04



Profile 05



Profile 06



R00	JUNE 2020	STAGE -1	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
*Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
5 islands, Maldives - Package 6*

Sub Title:
Sewerage System in L.Kunahandhoo

Client:
*Ministry of National Planning, Housing and
Infrastructure, Republic of Maldives*



Drawn: A.R.W	Checked: M.S.S
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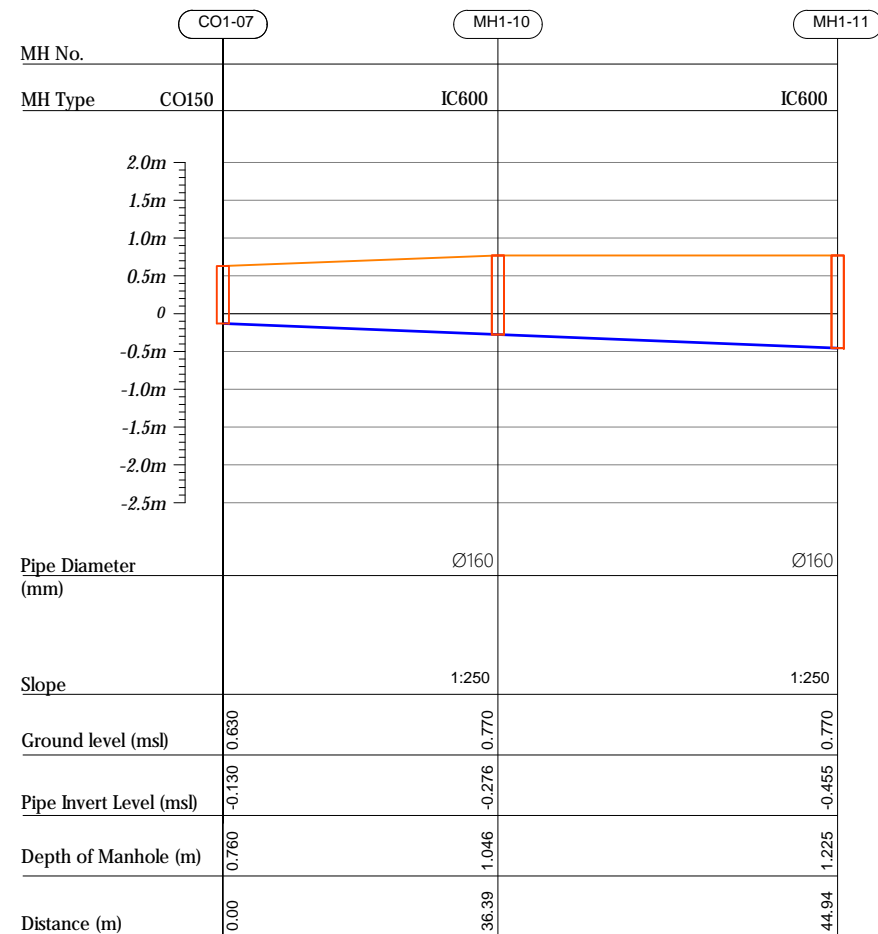
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Date: Aug 2020	SCALE (A3): 1:100
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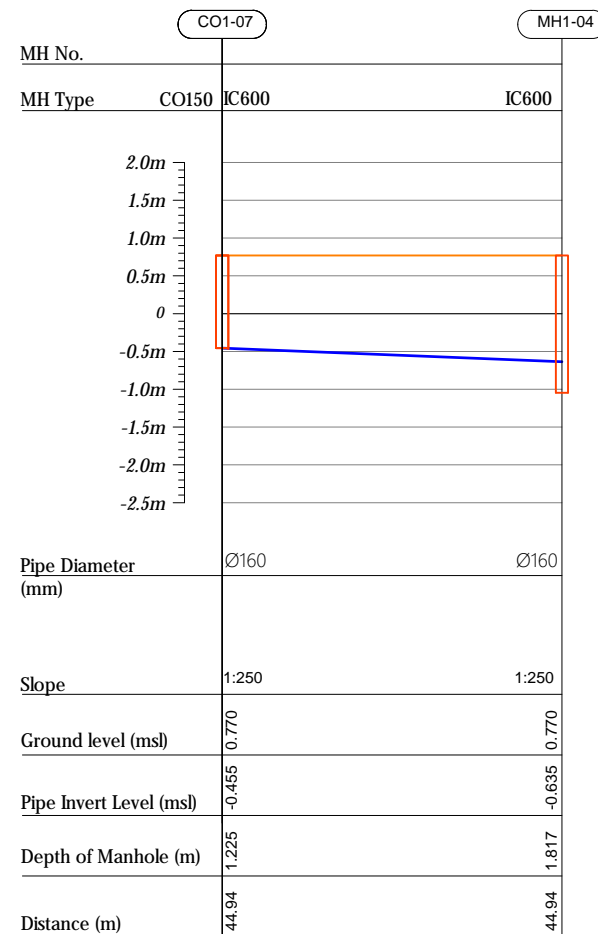
Project No: 01010101

Rev: <i>R-01</i>	Page: <i>PS1-03</i>
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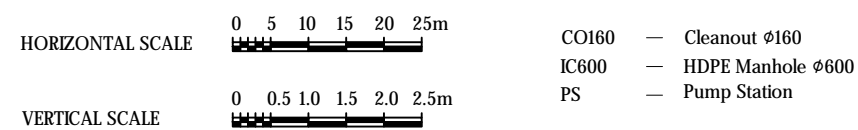
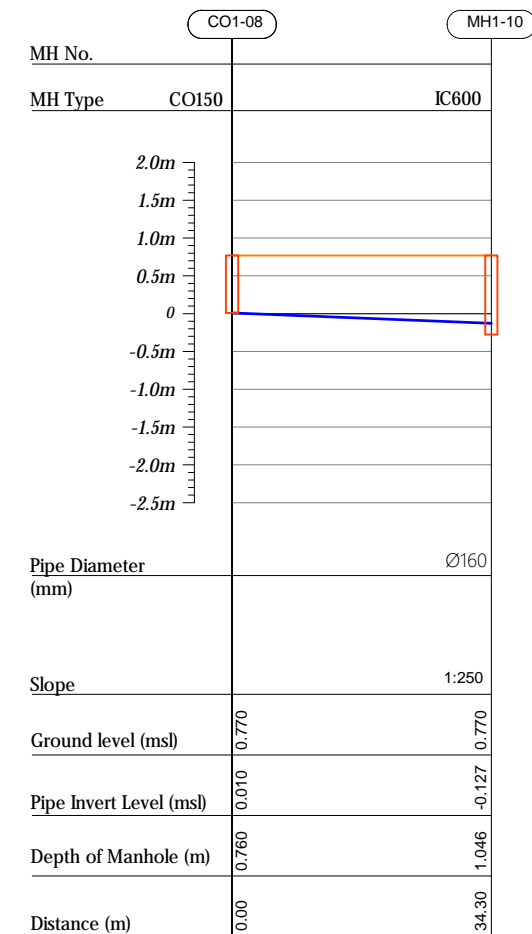
Profile 07



Profile 07



Profile 08



R00	JUNE 2020	STAGE -1	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
*Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
5 islands, Maldives - Package 6*

Sub Title:
Sewerage System in L.Kunahandhoo

Client:
*Ministry of National Planning, Housing and
Infrastructure, Republic of Maldives*



Drawn: A.R.W	Checked: M.S.S
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Designed: F.L.A.	Approved: LW
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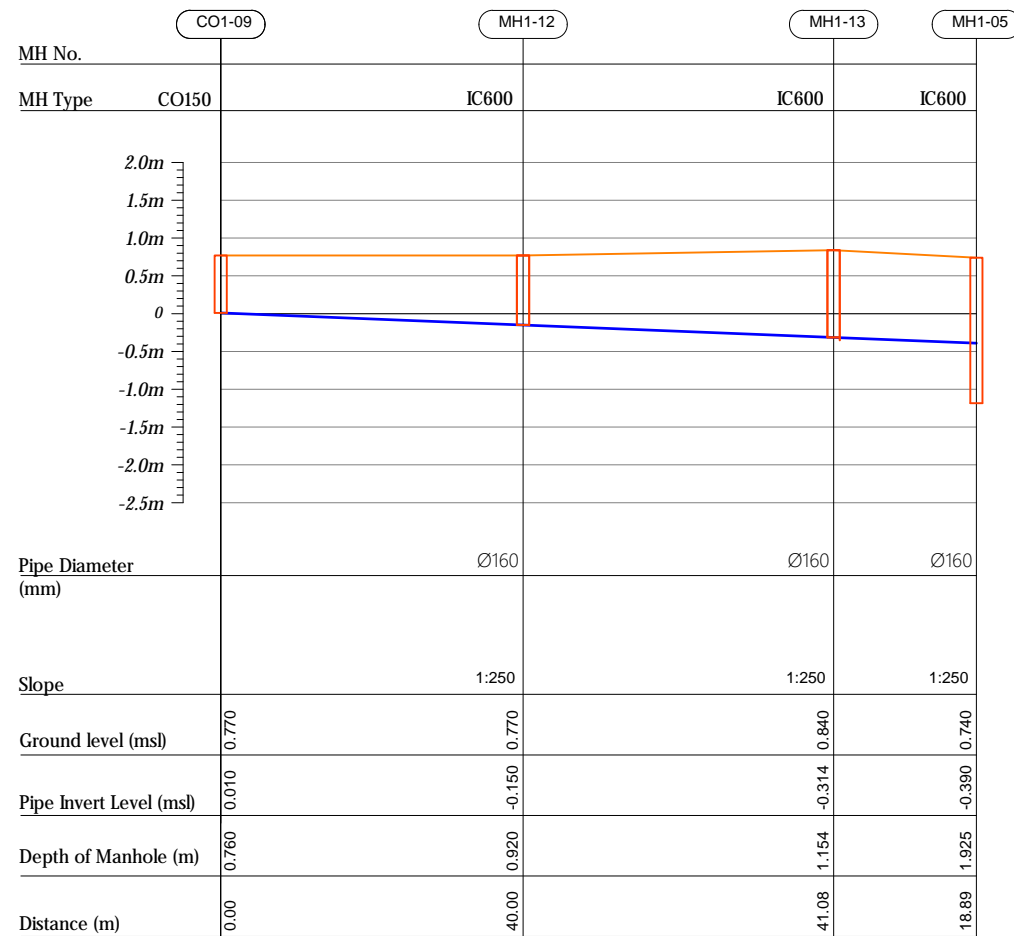
Date: Aug 2020	SCALE (A3): 1:100
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Project No: 01010101

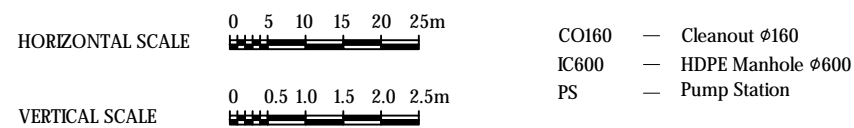
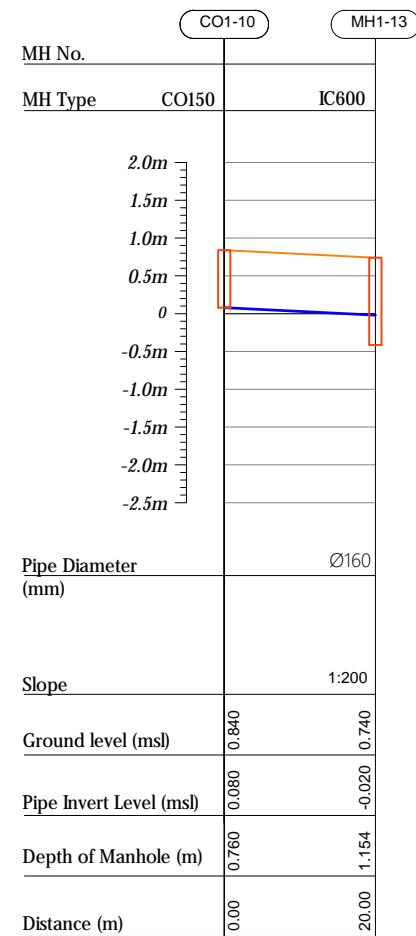
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R-01	PS1-04
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Profile 09



Profile 10



R00	JUNE 2020	STAGE -1	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
*Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
5 islands, Maldives - Package 6*

Sub Title:
Sewerage System in L.Kunahandhoo

Client:
*Ministry of National Planning, Housing and
Infrastructure, Republic of Maldives*

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W: www.epoch.associates
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Husnuheenna Magu, Male', Maldives

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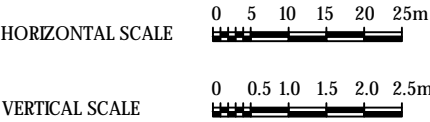
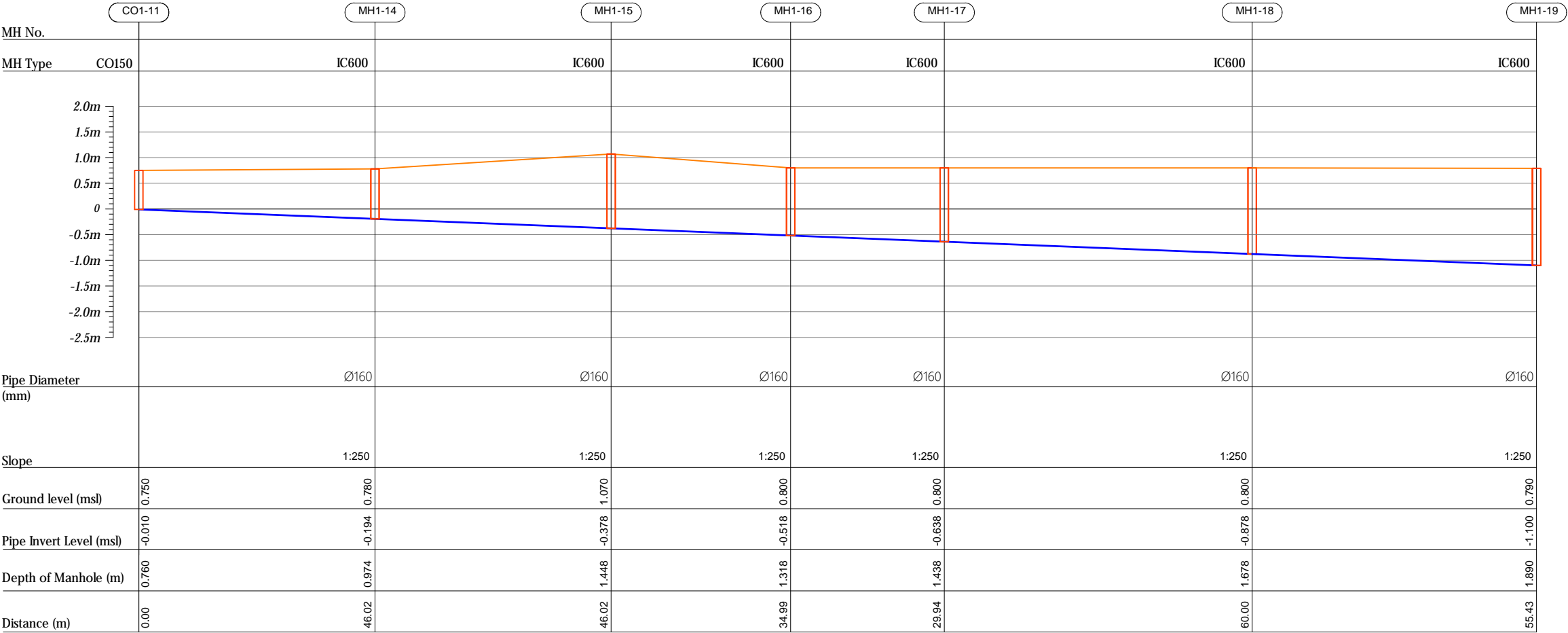
Drawn: A.R.W	Checked: M.S.S
Designed: F.I.A	Approved: I.W
Date: Aug 2020	SCALE (A3): 1:100

Project No: 01010101

Rev: <i>R-01</i>	Page: <i>PS1-05</i>
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Profile 11

Profile 11



CO160 — Cleanout Ø160
IC600 — HDPE Manhole Ø600
PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
5 islands, Maldives - Package 6

Sub Title:
Sewerage System in L.Kunahandhoo

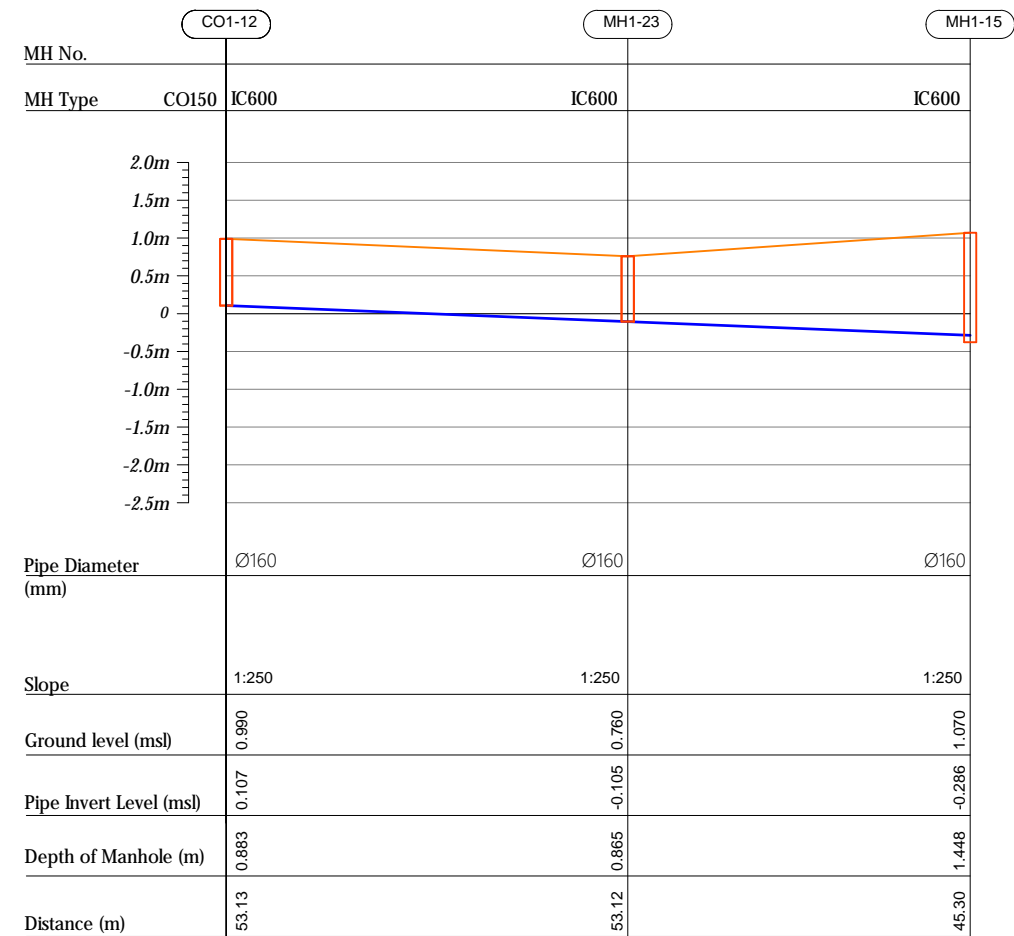
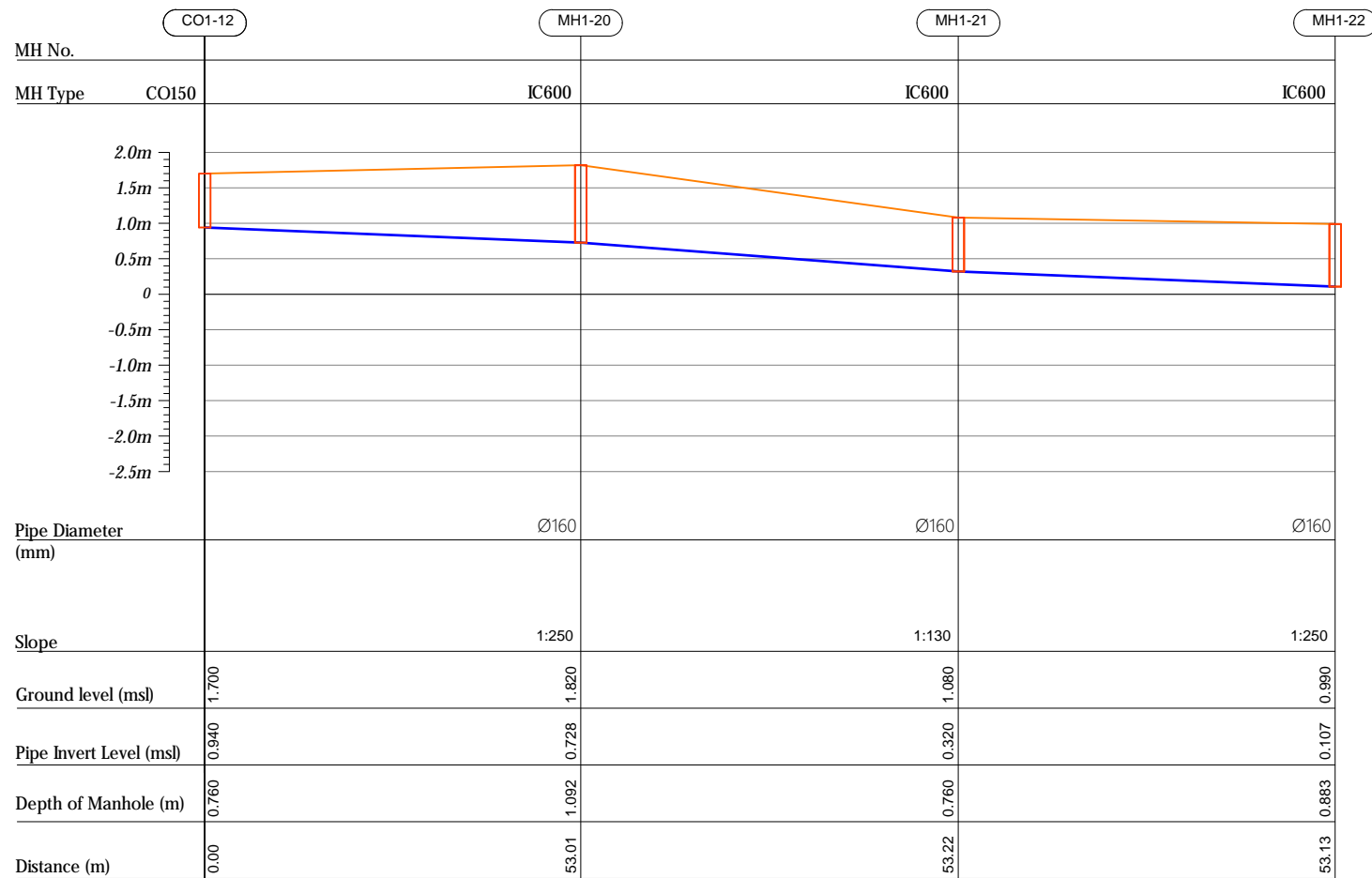
Client:
Ministry of National Planning, Housing and
Infrastructure, Republic of Maldives

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A: G. Rosary West,
Hussuvehemaa Magu, Male', Maldives

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Drawn: A.R.W	Checked: M.S.S
Designed: F.L.A	Approved: L.W
Date: Aug 2020	SCALE (A3): 1:100
Project No: 01010101	
Rev: R-01	Page: PS1-06

Profile 12



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R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
*Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
5 islands, Maldives - Package 6*

Sub Title:
Sewerage System in L.Kunahandhoo

Client:
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Infrastructure, Republic of Maldives*



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Drawn: A.R.W	Checked: M.S.S
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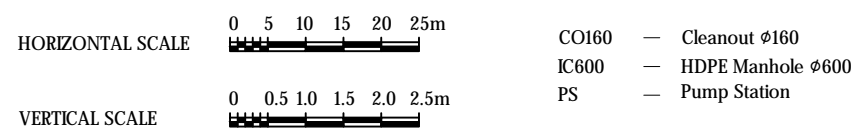
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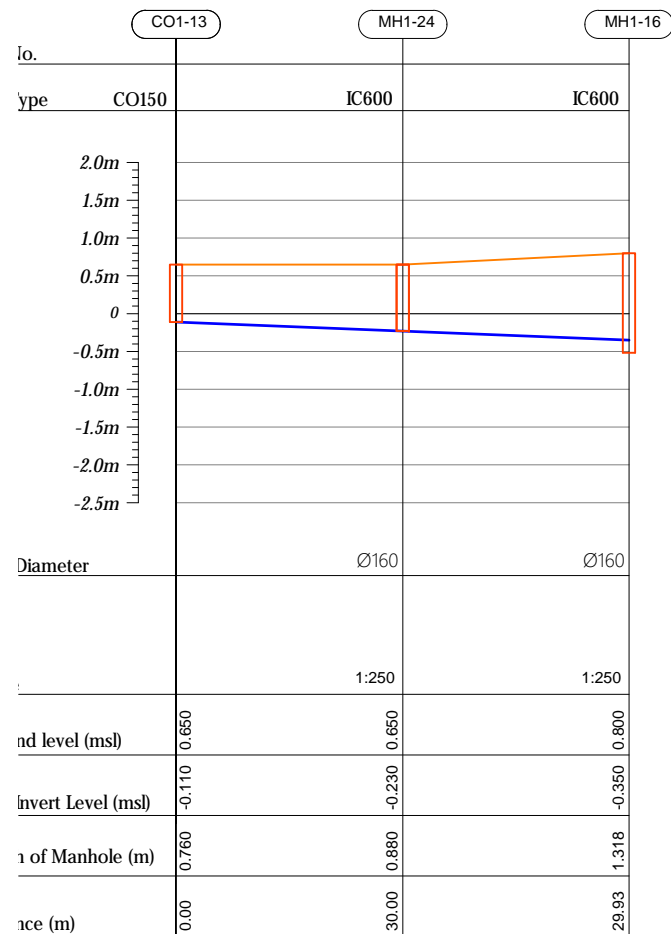
Project No: 01010101

Rev:	Page:
R-01	PS1-07

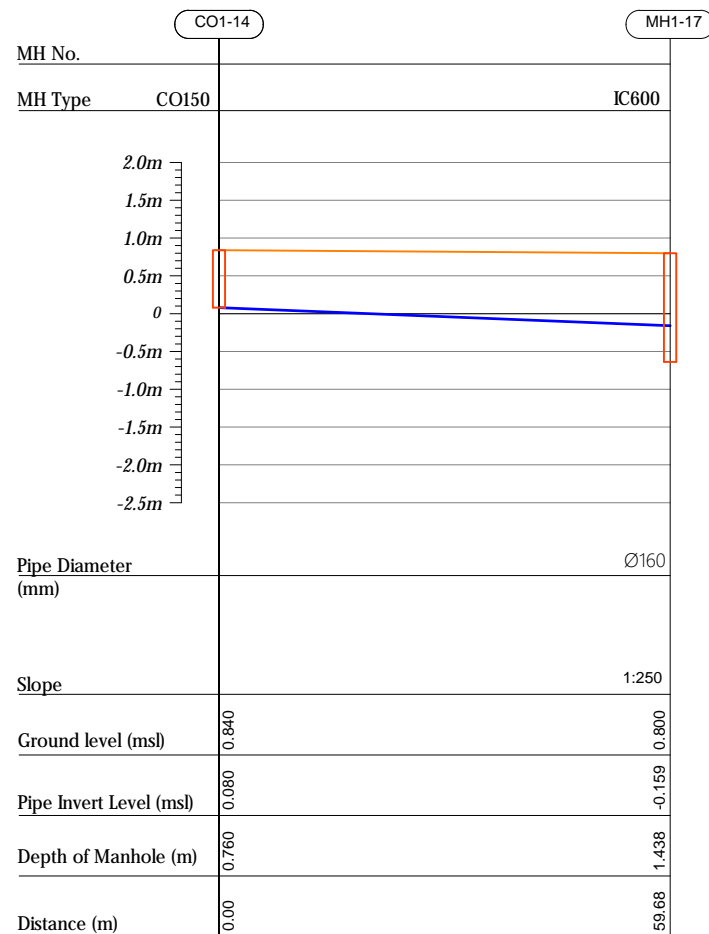
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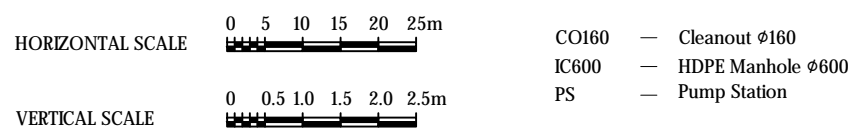
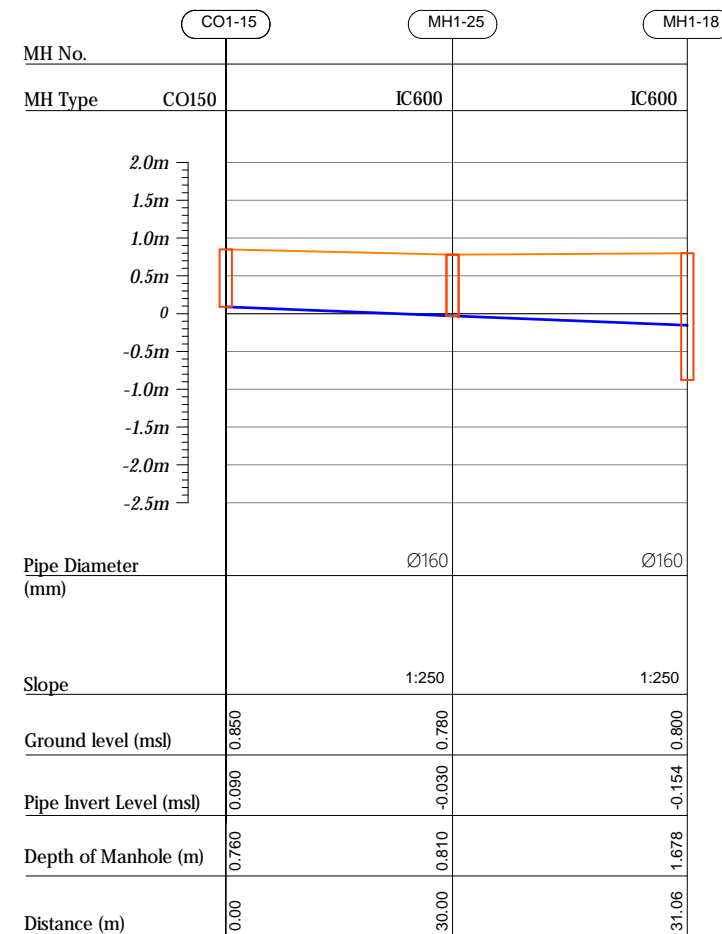
Profile 13



Profile 14



Profile 15



R00	JUNE 2020	STAGE -1	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
*Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
5 islands, Maldives - Package 6*

Sub Title:
Sewerage System in L.Kunahandhoo

Client:
*Ministry of National Planning, Housing and
Infrastructure, Republic of Maldives*

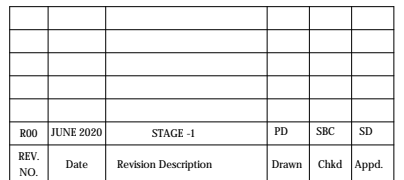
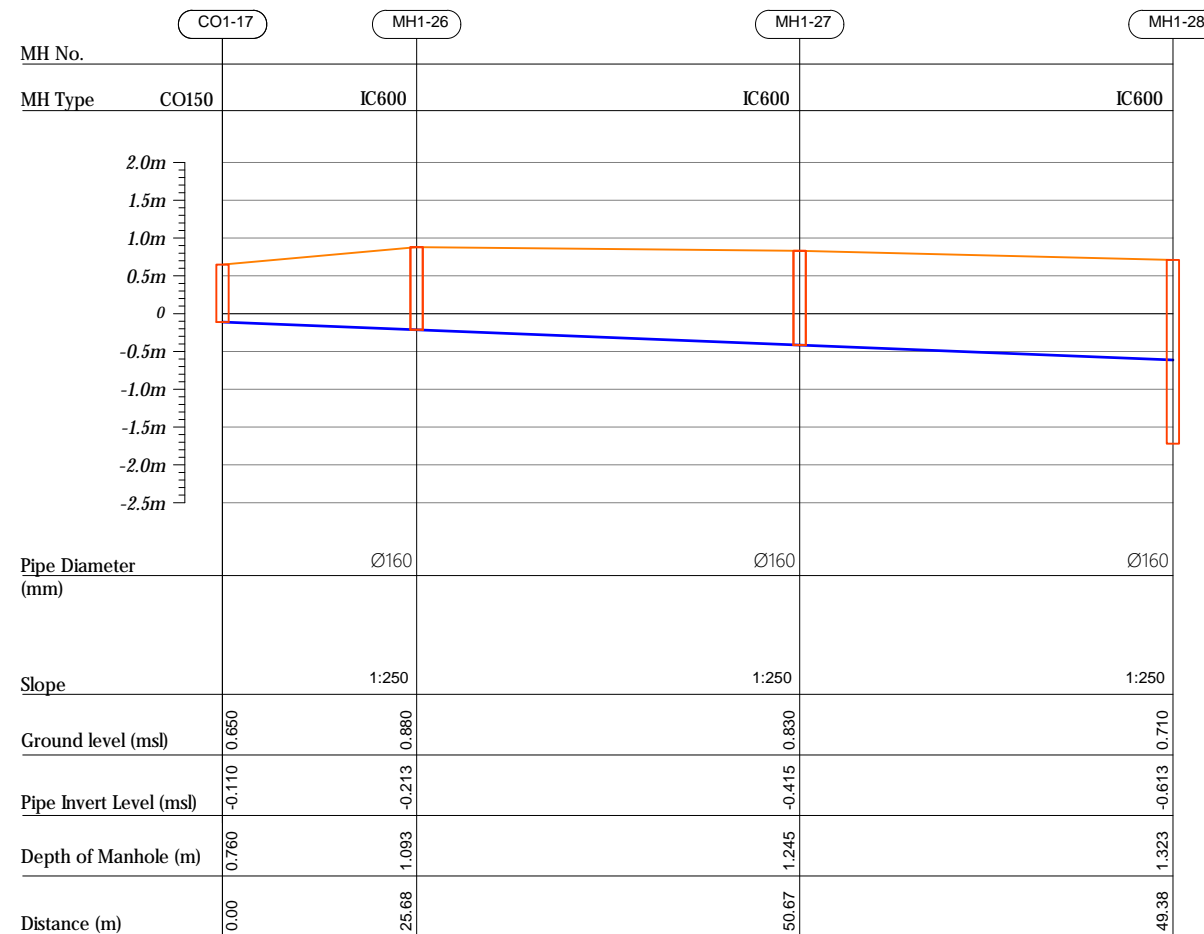
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A: G. Rosary West,
Husnuheena Magu, Male', Maldives

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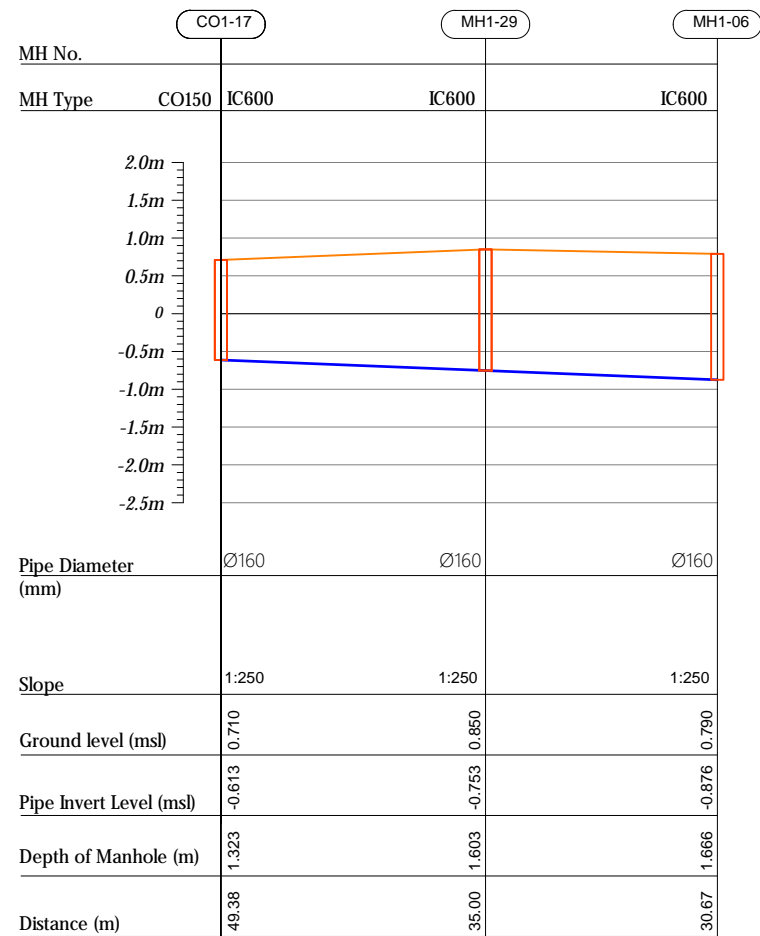
Drawn: A.R.W	Checked: M.S.S
Designed: F.L.A	Approved: I.W
Date: Aug 2020	SCALE (A3): 1:100
Project No: 01010101	
Rev: R-01	Page: <i>PS1-08</i>

Profile 17

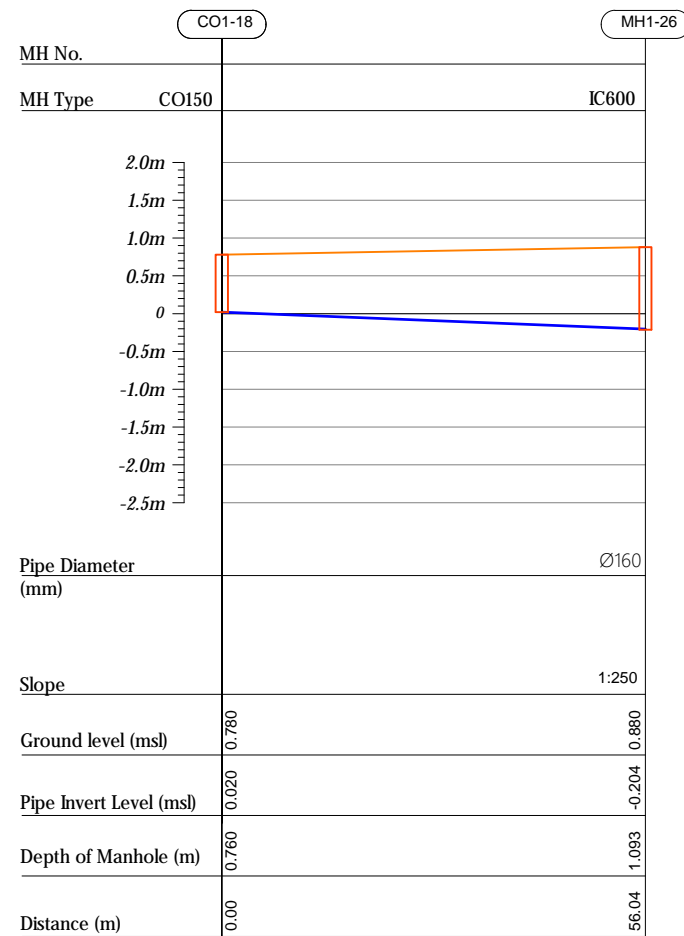


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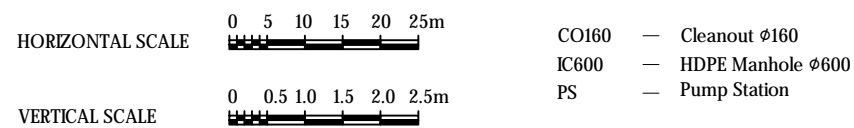
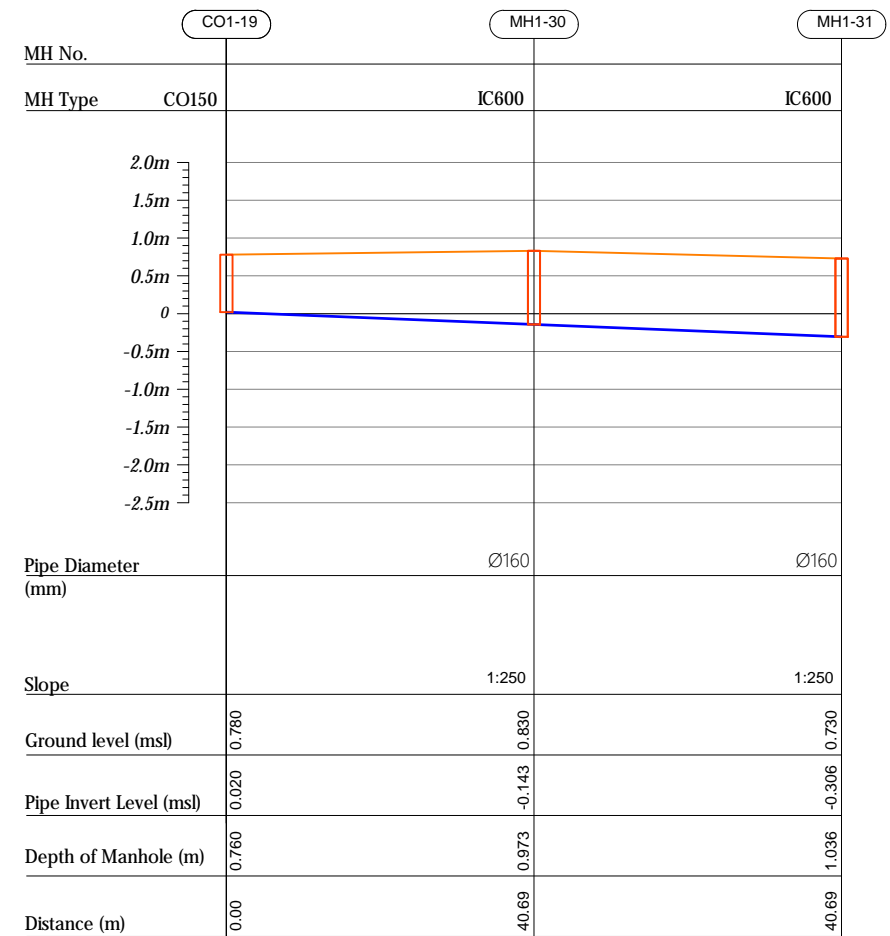
Profile 17



Profile 18



Profile 19



R00	JUNE 2020	STAGE -1	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
*Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
5 islands, Maldives - Package 6*

Sub Title:
Sewerage System in L.Kunahandhoo

Client:
*Ministry of National Planning, Housing and
Infrastructure, Republic of Maldives*



Drawn: A.R.W	Checked: M.S.S
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Designed: F.I.A	Approved: LW
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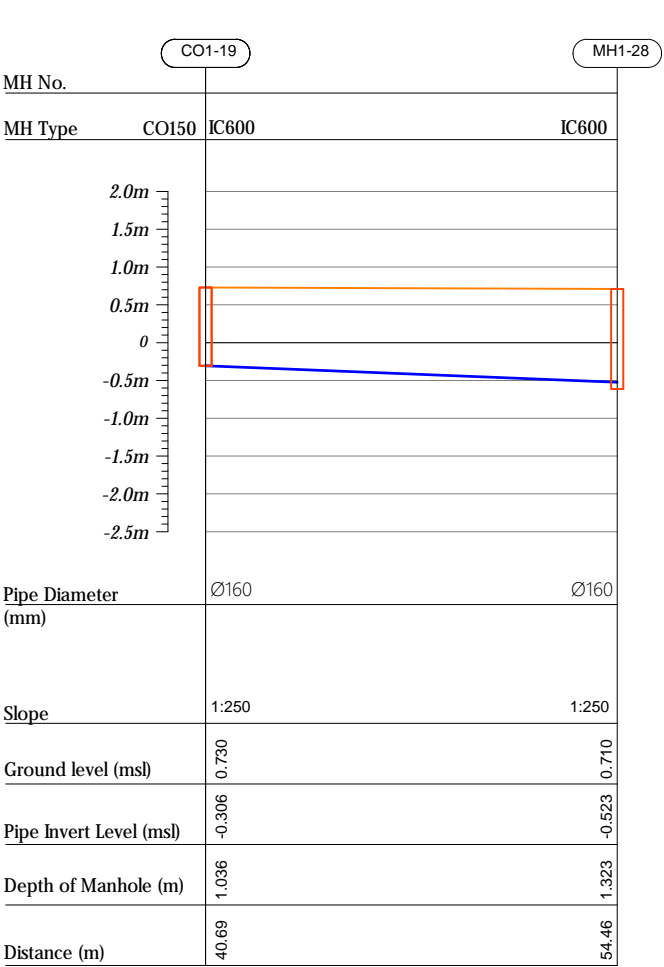
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Project No: 01010101

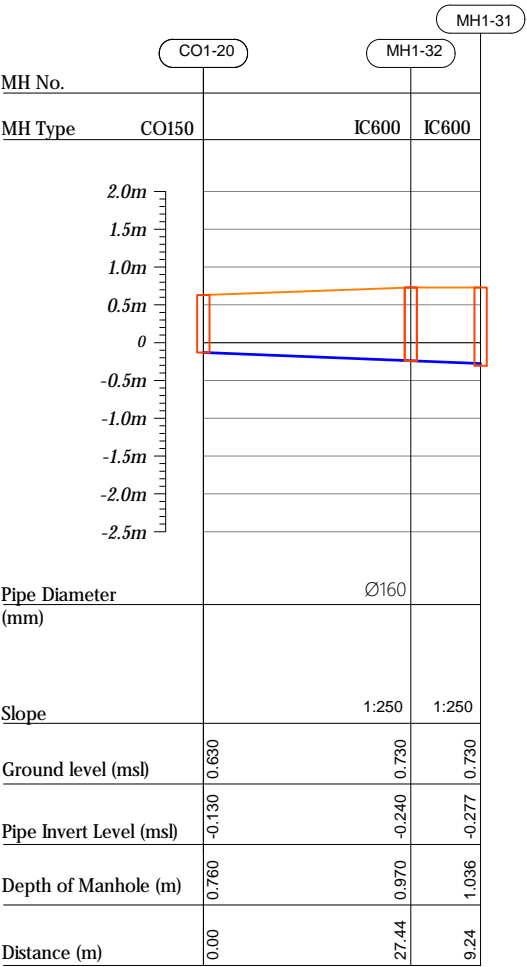
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R-01 PS1-10

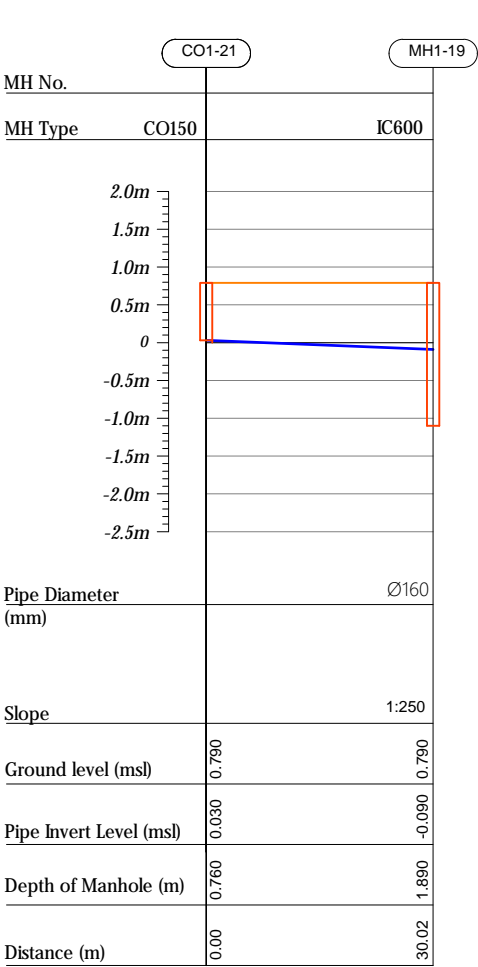
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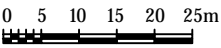
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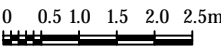
Profile 21



HORIZONTAL SCALE



VERTICAL SCALE



CO160 — Cleanout Ø160
IC600 — HDPE Manhole Ø600
PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
5 islands, Maldives - Package 6

Sub Title:
Sewerage System in L.Kunahandhoo

Client:
Ministry of National Planning, Housing and
Infrastructure, Republic of Maldives



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W: www.epoch.associates
A: G. Rosary West,
Hussuvehemaa Magu, Male', Maldives

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Maldivu Infrastructure Happpu

Drawn: A.R.W. Checked: M.S.S.

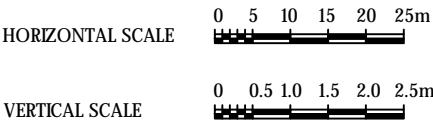
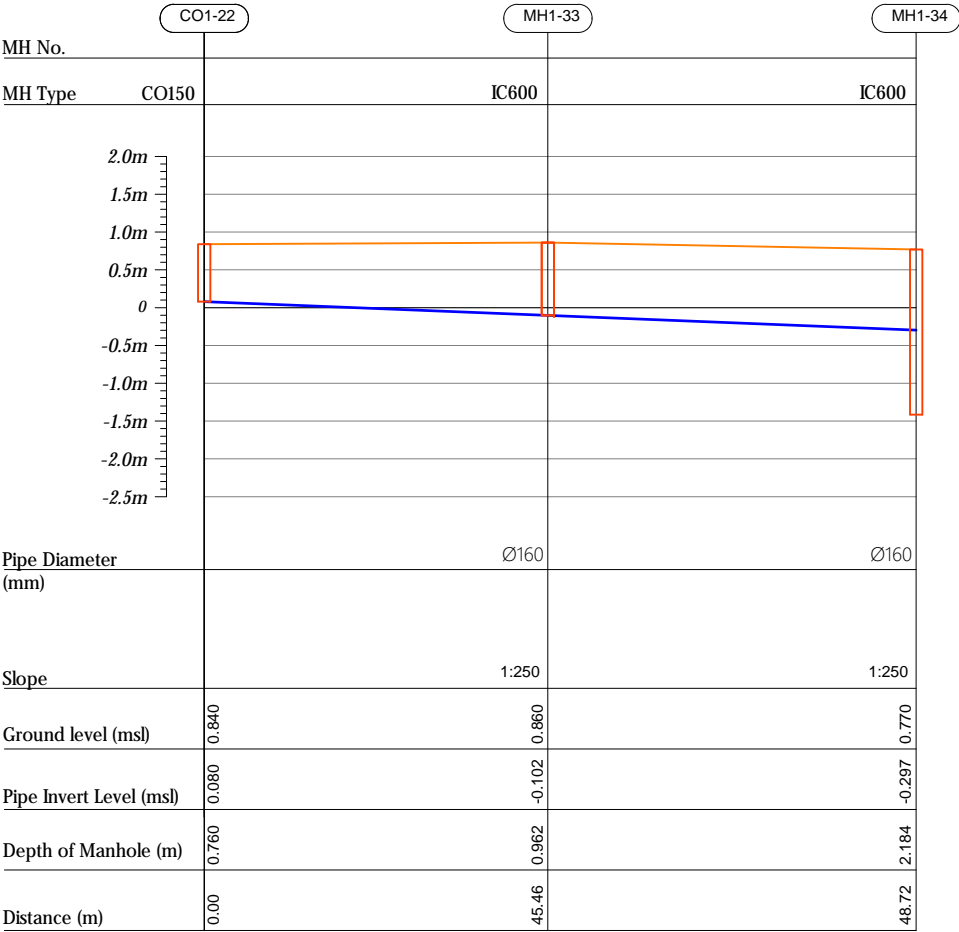
Designed: F.L.A. Approved: L.W.

Date: Aug 2020 SCALE (A3): 1:100

Project No: 01010101

Rev: R-01 Page: PS1-11

Profile 22



- CO160 — Cleanout Ø160
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
Consultancy Services for Survey, Design and EIA works of Water Supply and Sewerage Facilities in 5 islands, Maldives - Package 6

Sub Title:
Sewerage System in L.Kunahandhoo

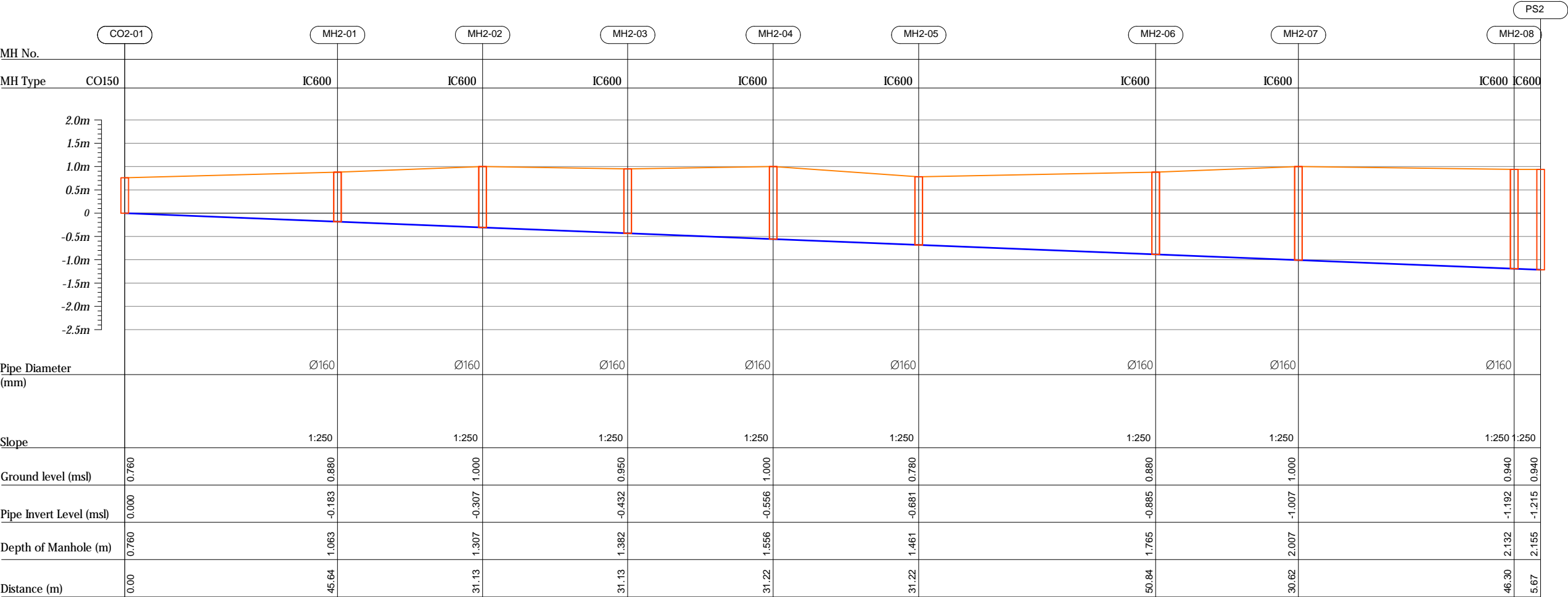
Client:
Ministry of National Planning, Housing and Infrastructure, Republic of Maldives

T: +960 333 3528
E: info@epoch.associates
W: www.epoch.associates
A: G. Rosary West,
Husnuheemaa Magu, Male', Maldives

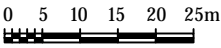
DBAC INFRA
Maldivu Infrastructure Develop

Drawn: A.R.W	Checked: M.S.S
Designed: F.L.A	Approved: L.W
Date: Aug 2020	SCALE (A3): 1:100
Project No:	01010101

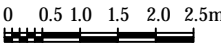
Profile 01



HORIZONTAL SCALE



VERTICAL SCALE



CO160 — Cleanout Ø160
IC600 — HDPE Manhole Ø600
PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
5 islands, Maldives - Package 6

Sub Title:
Sewerage System in L.Kunahandhoo

Client:
Ministry of National Planning, Housing and
Infrastructure, Republic of Maldives



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Hussuvehemaa Magu, Male', Maldives

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Drawn: A.R.W. Checked: M.S.S.

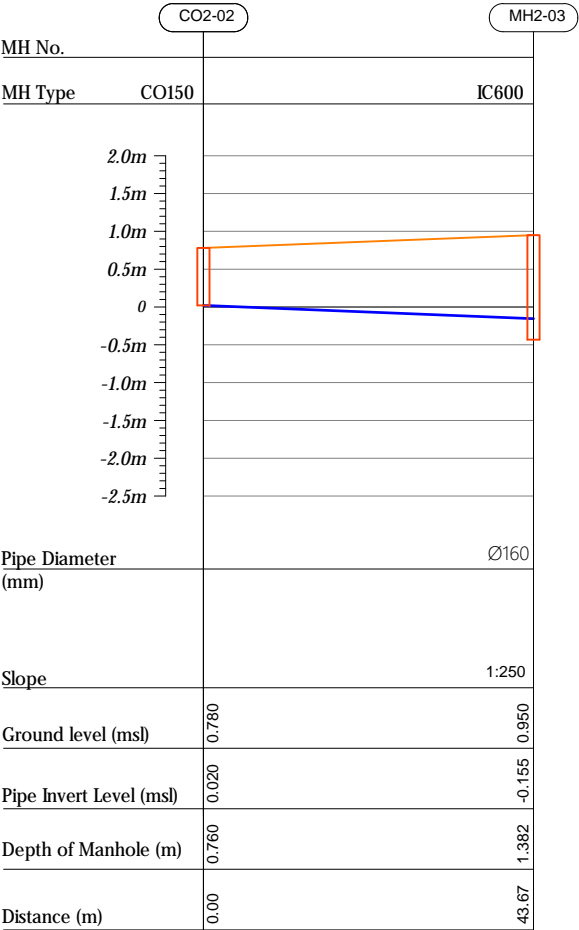
Designed: F.L.A. Approved: L.W.

Date: Aug 2020 SCALE (A3): 1:100

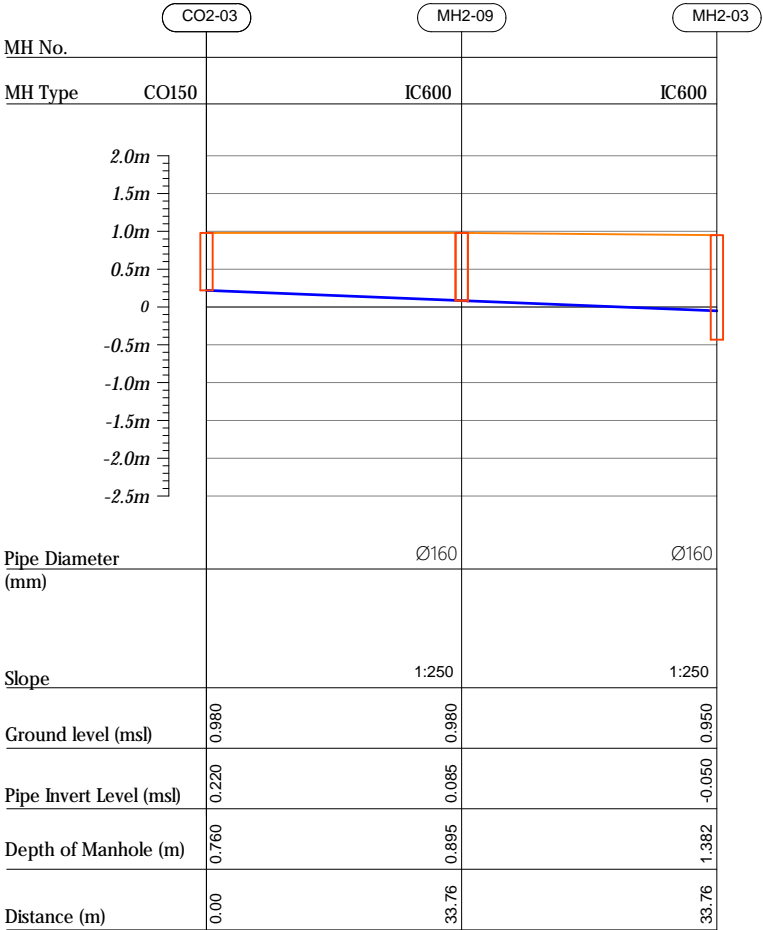
Project No: 01010101

Rev: R-01 Page: PS2-01

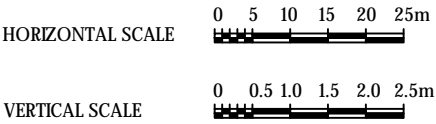
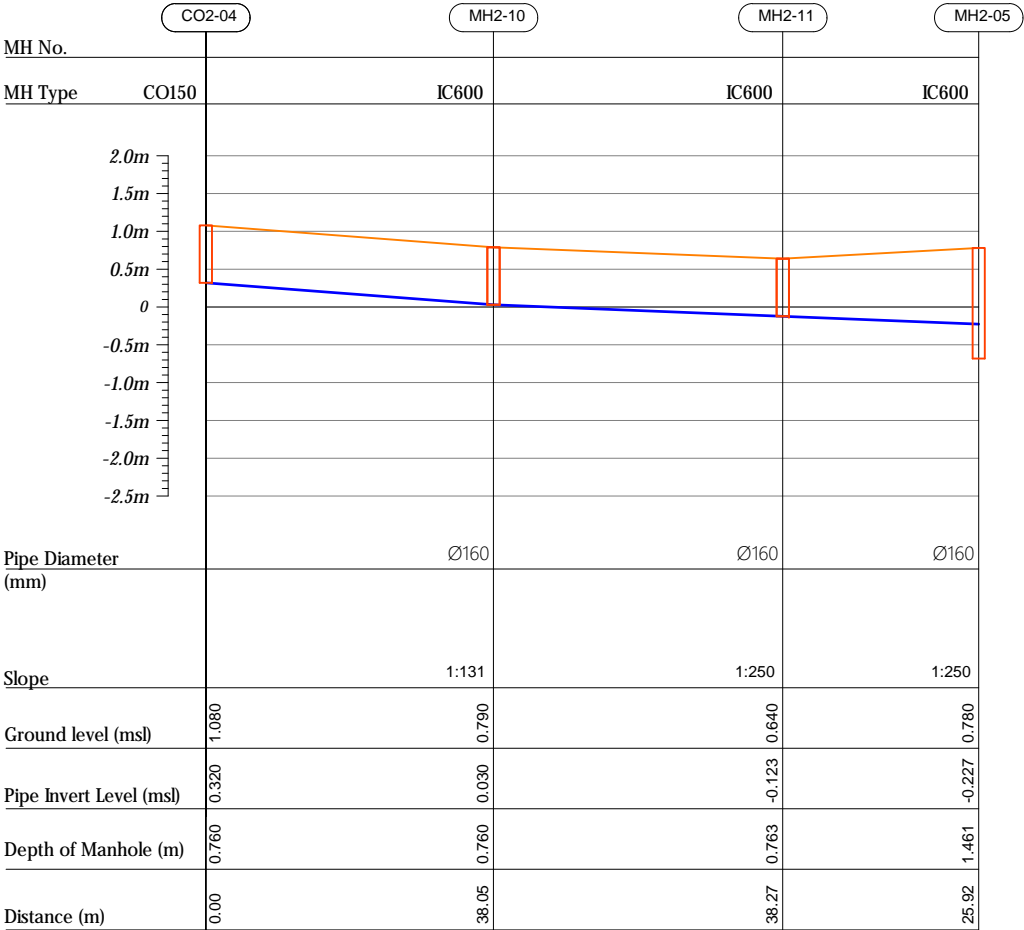
Profile 02



Profile 03



Profile 04



- CO160 — Cleanout Ø160
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
5 islands, Maldives - Package 6

Sub Title:
Sewerage System in L.Kunahandhoo

Client:
Ministry of National Planning, Housing and
Infrastructure, Republic of Maldives

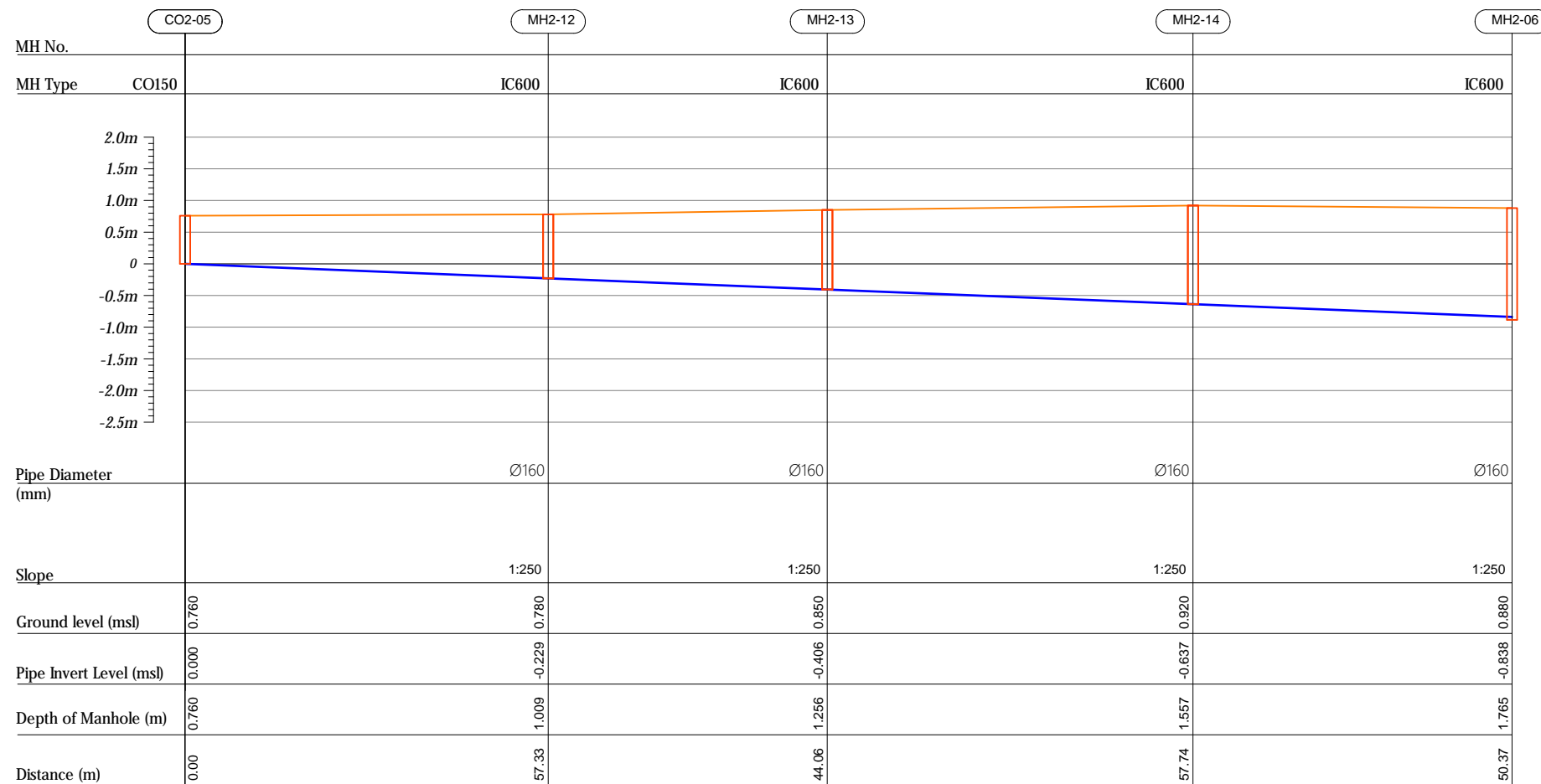


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Husnuheemaa Magu, Male', Maldives

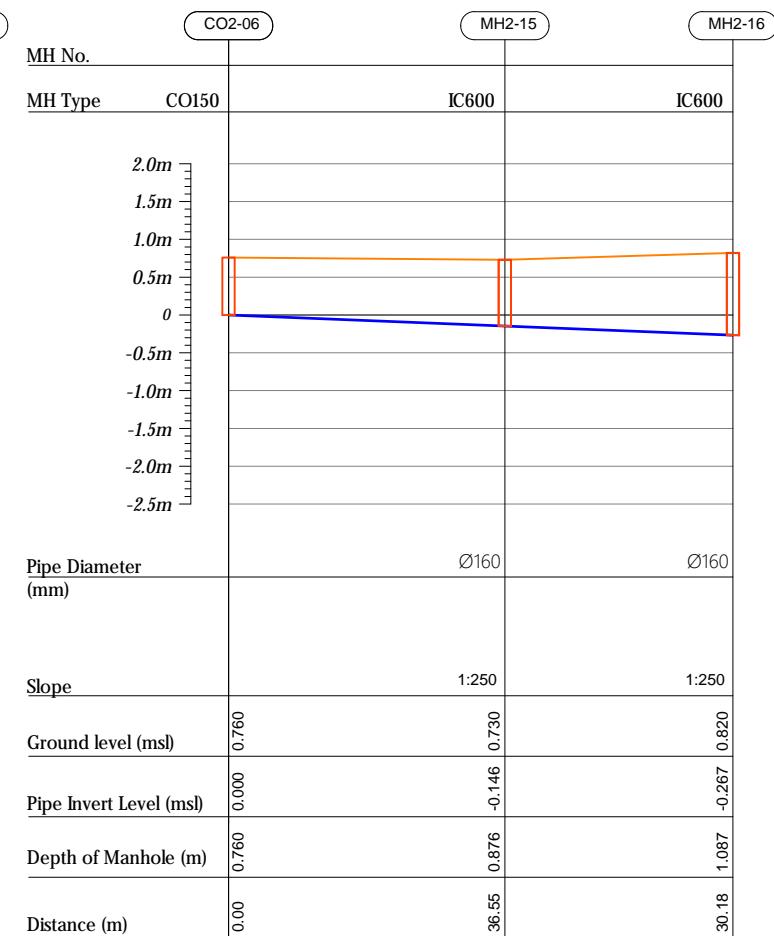
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Drawn: A.R.W	Checked: M.S.S
Designed: F.I.A	Approved: LW
Date: Aug 2020	SCALE (A3): 1:100
Project No:	01010101

Profile 05



Profile 06



000	JUNE 2020	STAGE -1	PD	SEC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
*Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
5 islands, Maldives - Package 6*

Sub Title:
Sewerage System in L.Kunahandhoo

Client:
Ministry of National Planning, Housing and
Infrastructure, Republic of Maldives



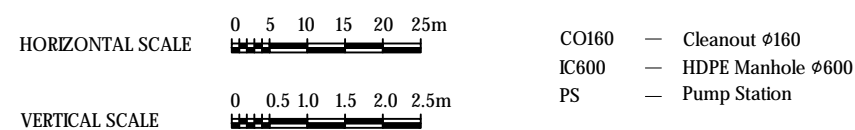
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Designed: EJA	Approved: LW
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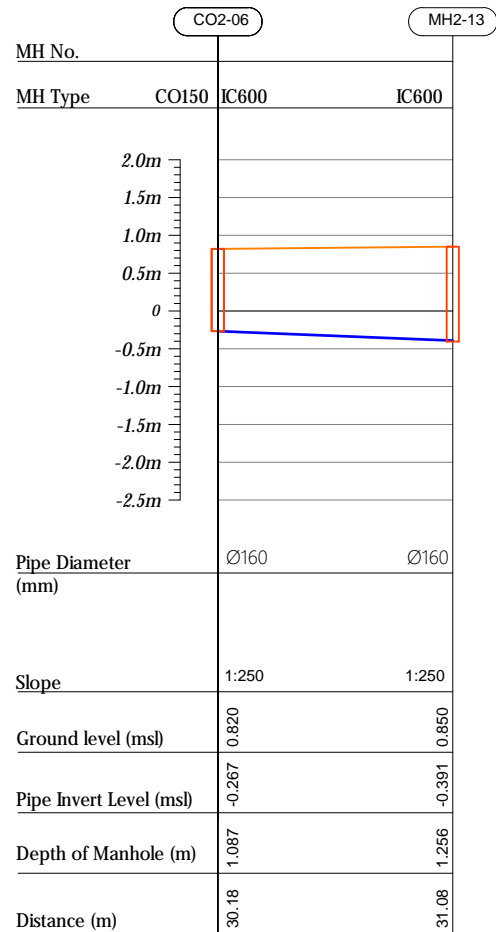
Date: Aug 2020	SCALE (A3): 1:100
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Project No: 01010101

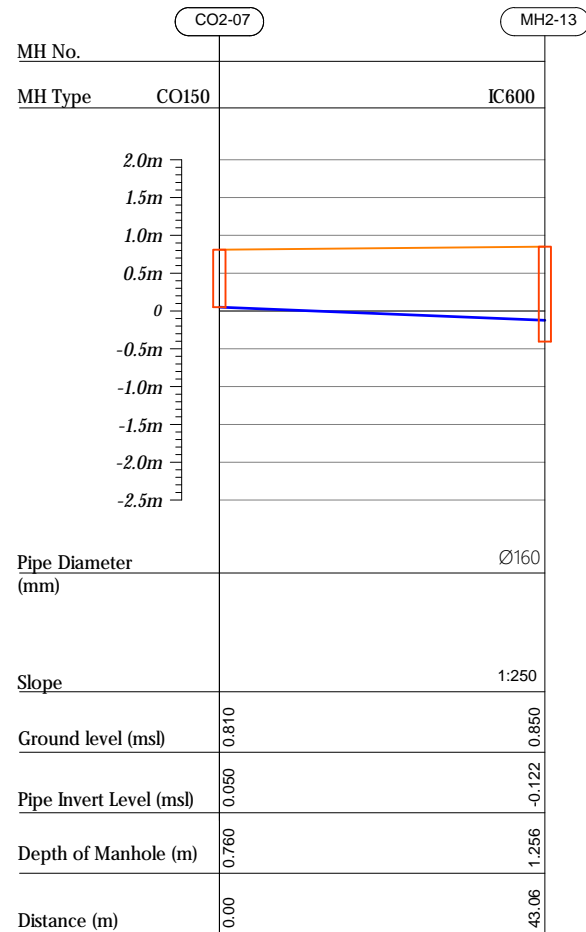
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R-01	PS2-03



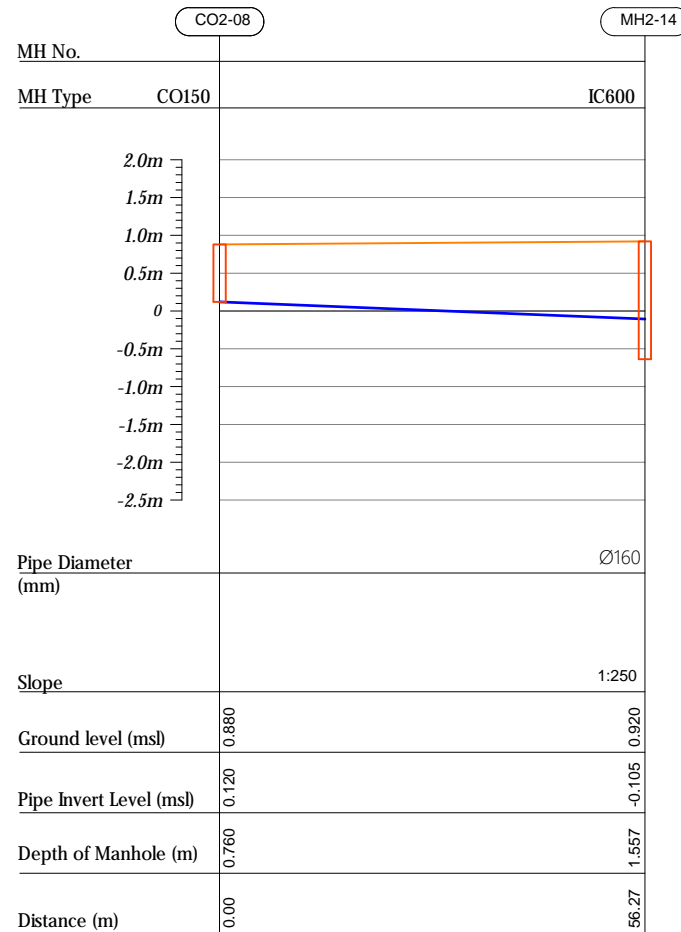
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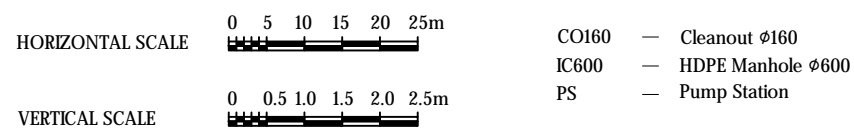
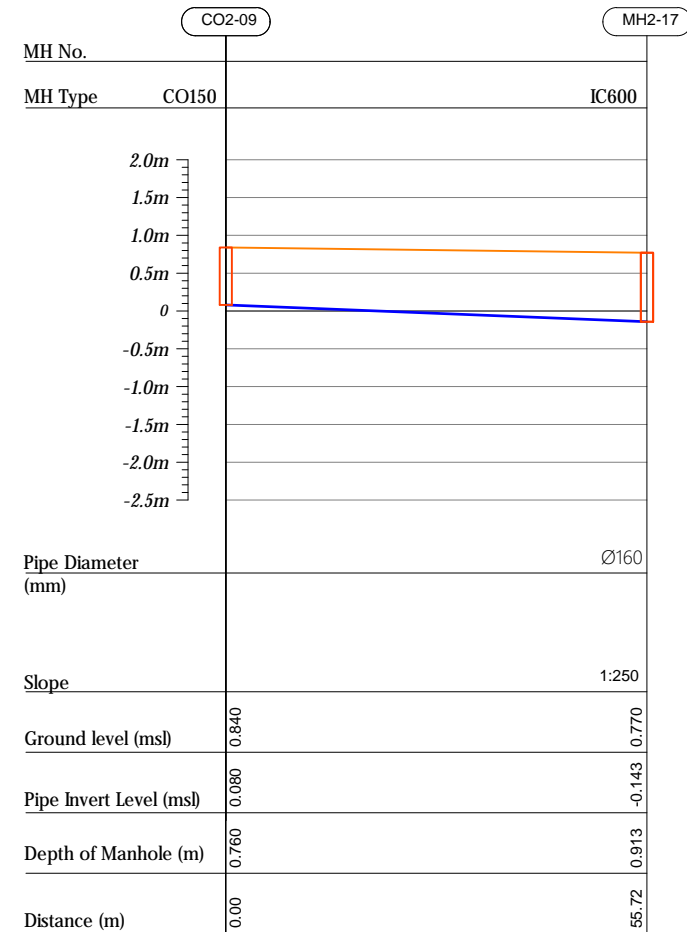
Profile 07



Profile 08



Profile 09



R00	JUNE 2020	STAGE -1	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
*Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
5 islands, Maldives - Package 6*

Sub Title:
Sewerage System in L.Kunahandhoo

Client:
*Ministry of National Planning, Housing and
Infrastructure, Republic of Maldives*



Drawn: A.R.W	Checked: M.S.S
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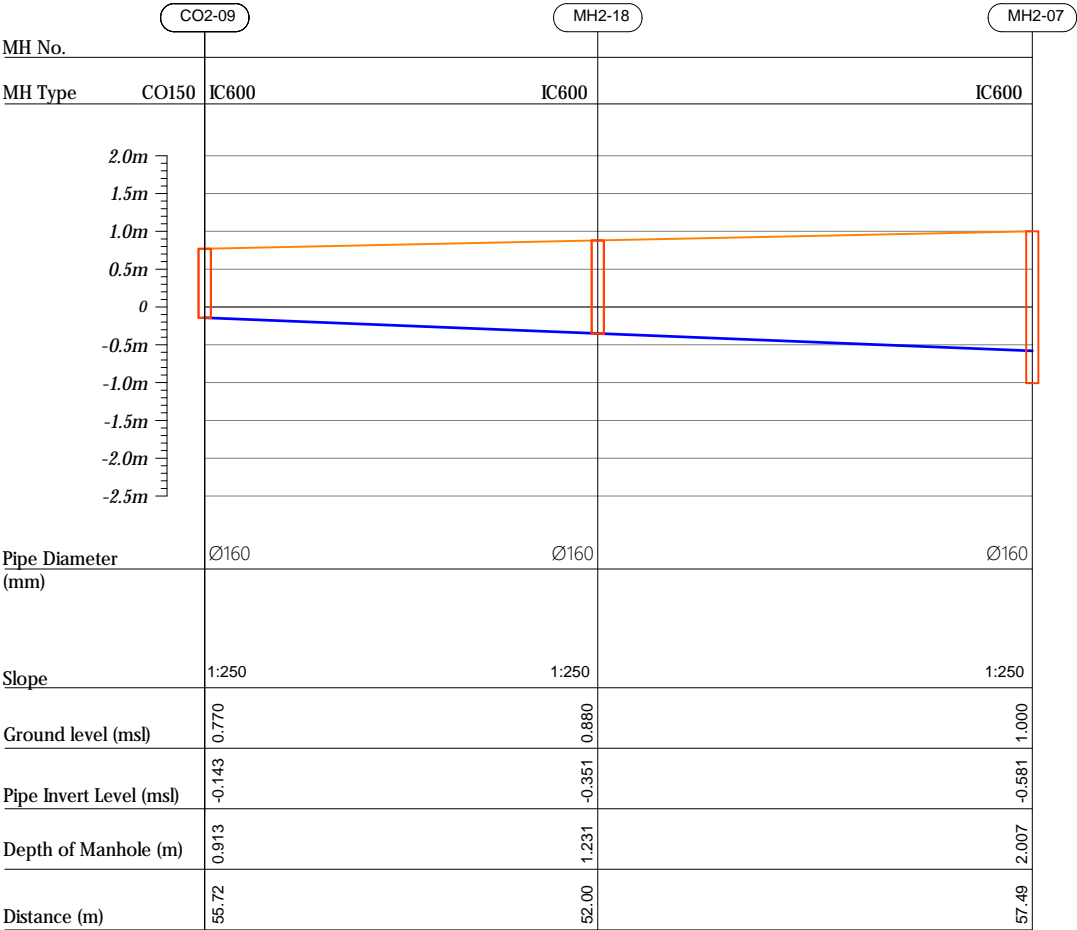
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Date: Aug 2020	SCALE (A3): 1:100
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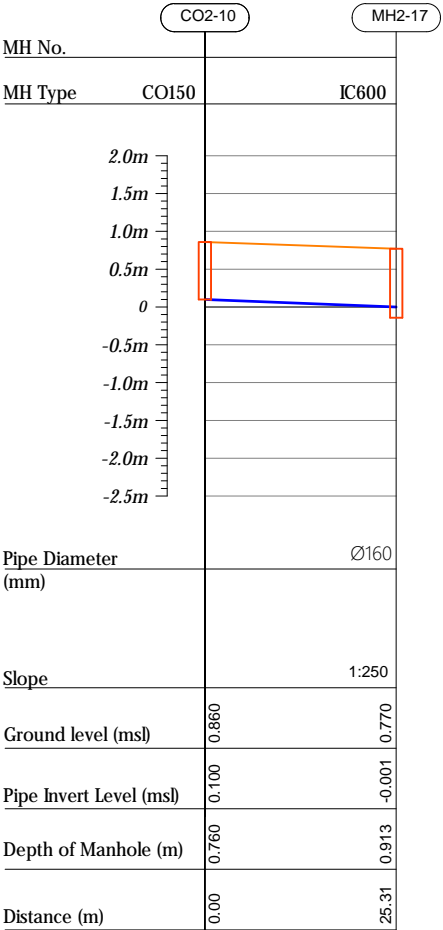
Project No: 01010101

Rev: <i>R-01</i>	Page: <i>PS2-04</i>
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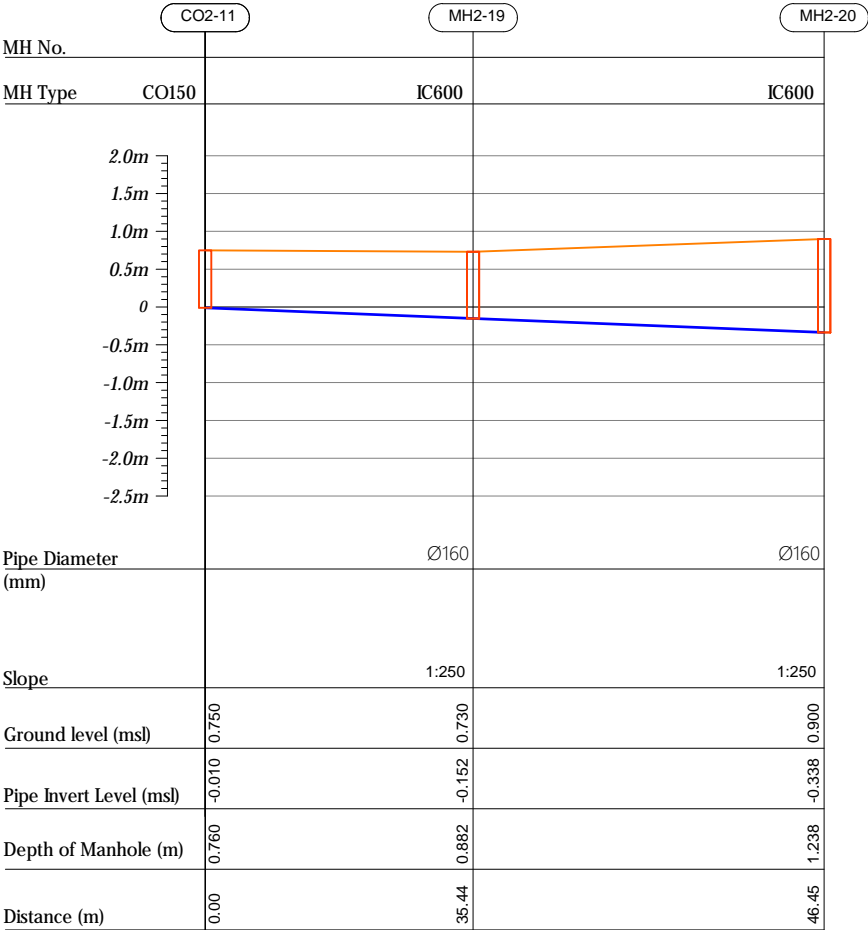
Profile 09



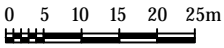
Profile 10



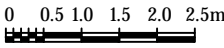
Profile 11



HORIZONTAL SCALE



VERTICAL SCALE



- CO160 — Cleanout Ø160
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
5 islands, Maldives - Package 6

Sub Title:
Sewerage System in L.Kunahandhoo

Client:
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Maldivu Infrastructure Develop

Drawn: A.R.W Checked: M.S.S

Designed: F.L.A Approved: L.W

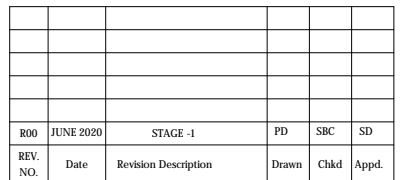
Date: Aug 2020 SCALE (A3): 1:100

Project No: 01010101

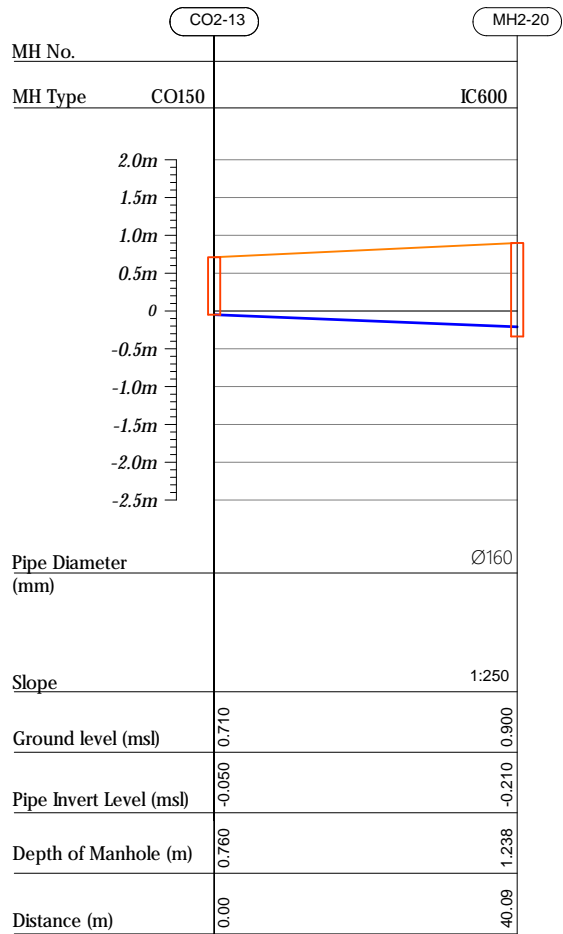
Rev: R-01 Page: PS2-05

MH No.	CO2-11		MH2-21		MH2-22		MH2-23		MH2-08
MH Type	CO150	IC600	IC600		IC600		IC600	IC600	
Pipe Diameter (mm)		Ø160	Ø160		Ø160		Ø160	Ø160	
Slope		1:250	1:250		1:250		1:250	1:250	
Ground level (msl)		0.900	0.820		0.870		0.890	0.940	
Pipe Invert Level (msl)		-0.338	-0.434		-0.582		-0.819	-0.853	
Depth of Manhole (m)		1.238	1.254		1.452		1.709	2.132	
Distance (m)		46.45	24.14		36.91		59.32	8.37	

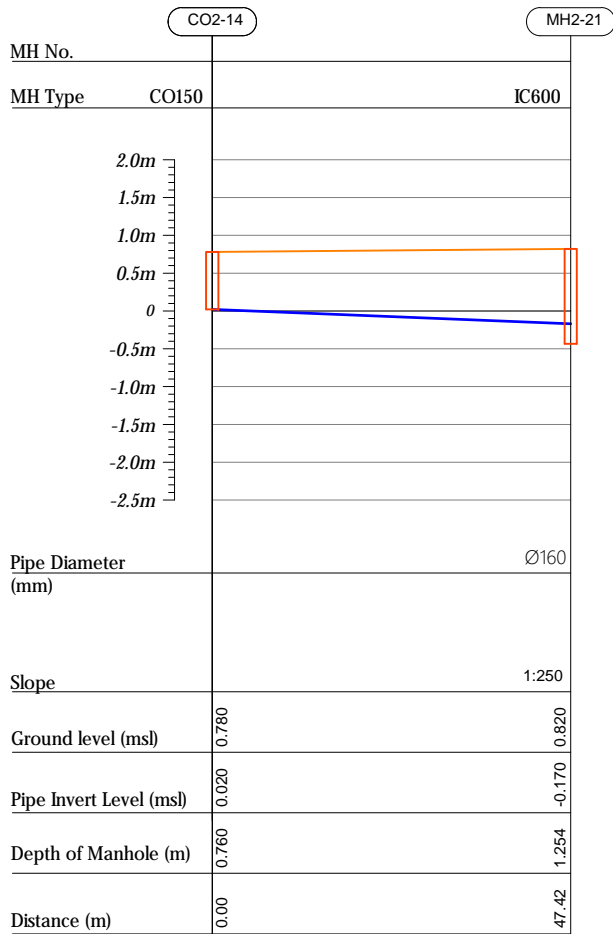
MH No.	CO2-12	MH2-19
MH Type	CO150	IC600
Pipe Diameter (mm)		Ø160
Slope		1:250
Ground level (msl)	0.820	0.730
Pipe Invert Level (msl)	0.060	-0.117
Depth of Manhole (m)	0.760	0.882
Distance (m)	0.00	44.27



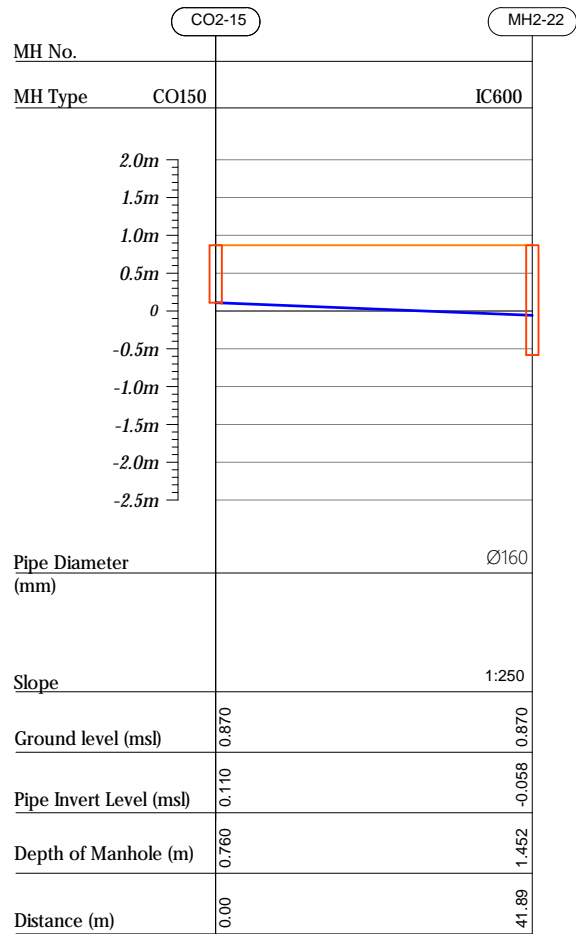
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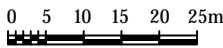
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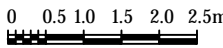
Profile 15



HORIZONTAL SCALE



VERTICAL SCALE



- CO160 — Cleanout Ø160
IC600 — HDPE Manhole Ø600
PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
5 islands, Maldives - Package 6

Sub Title:
Sewerage System in L.Kunahandhoo

Client:
Ministry of National Planning, Housing and
Infrastructure, Republic of Maldives



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W: www.epoch.associates
A: G. Rosary West,
Hussuvehemaa Magu, Male', Maldives

DBAC INFRA
Maldiva Infrastructure Develop

Drawn: A.R.W. Checked: M.S.S.

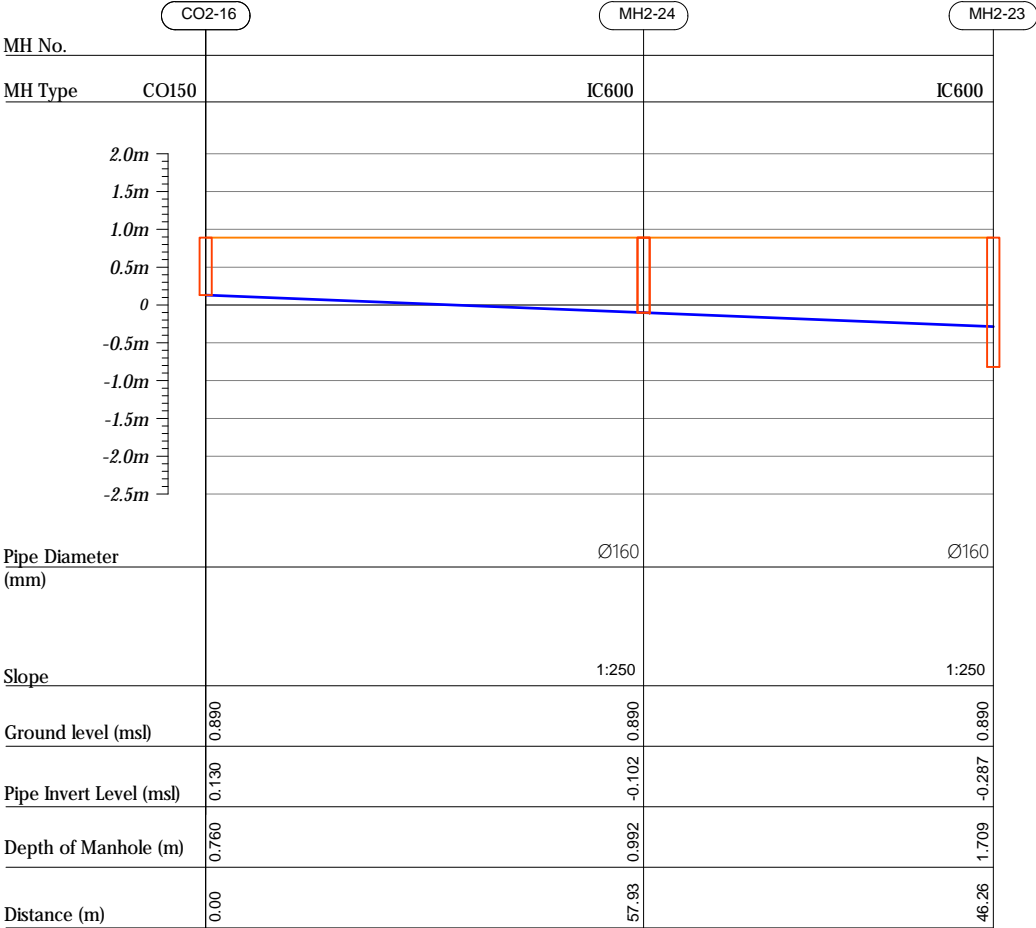
Designed: F.L.A. Approved: L.W.

Date: Aug 2020 SCALE (A3): 1:100

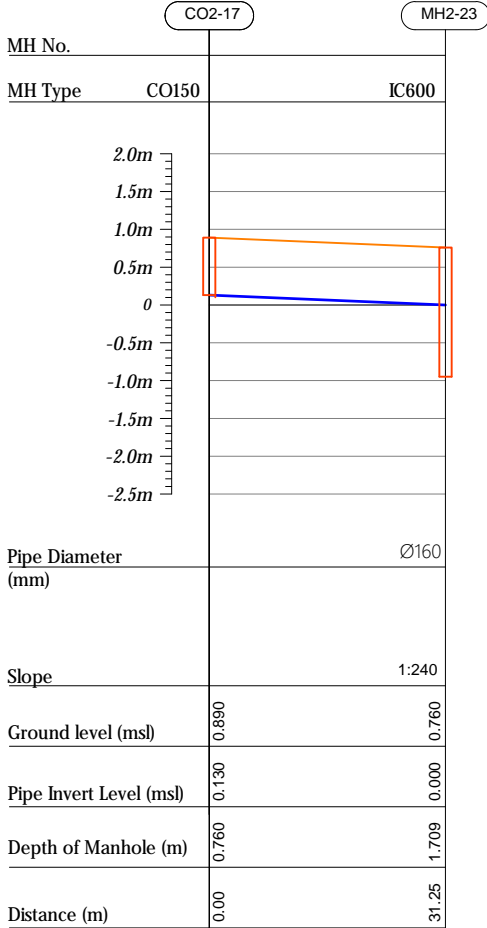
Project No: 01010101

Rev: R-01 Page: PS2-07

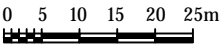
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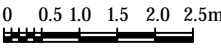
Profile 17



HORIZONTAL SCALE



VERTICAL SCALE



- CO160 — Cleanout Ø160
IC600 — HDPE Manhole Ø600
PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

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Maldivu Infrastructure Develop

Drawn: A.R.W. Checked: M.S.S.

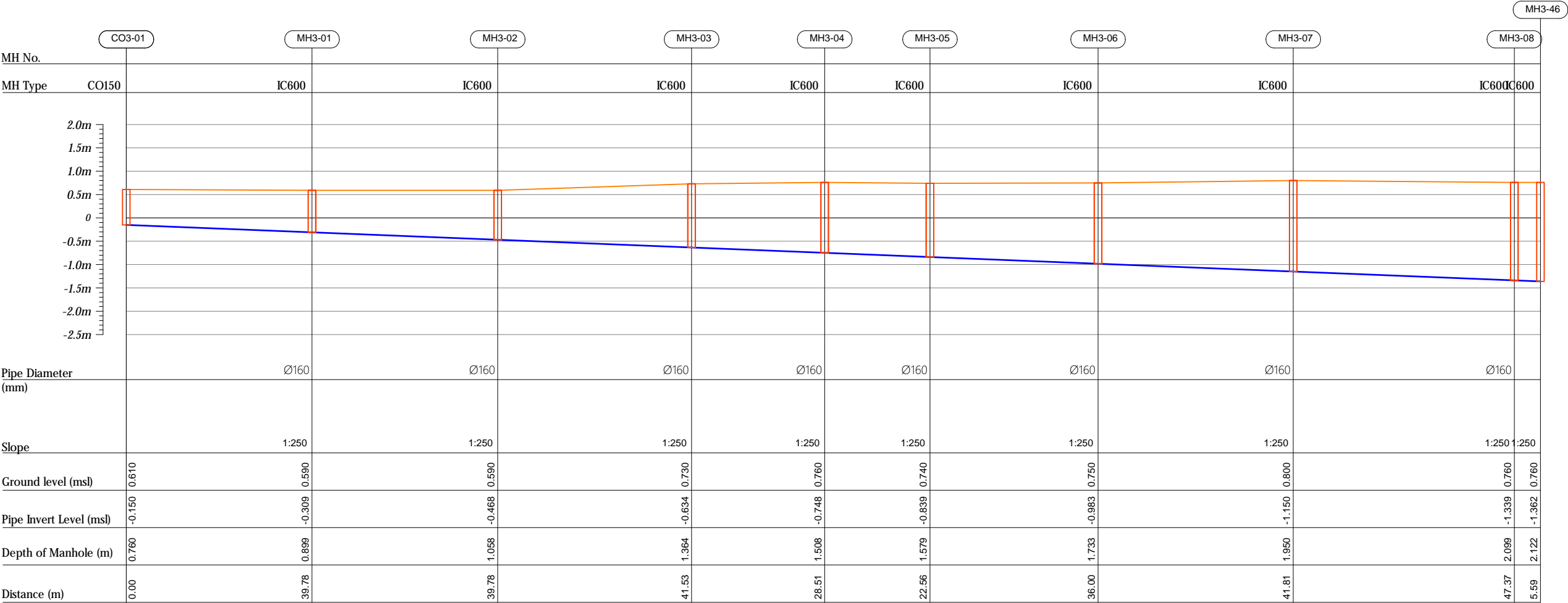
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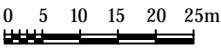
Project No: 01010101

Rev: R-01 Page: PS2-08

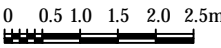
Profile 01



HORIZONTAL SCALE



VERTICAL SCALE



CO160 — Cleanout Ø160
IC600 — HDPE Manhole Ø600
PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

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Sub Title:
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Client:
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Drawn: A.R.W. Checked: M.S.S.

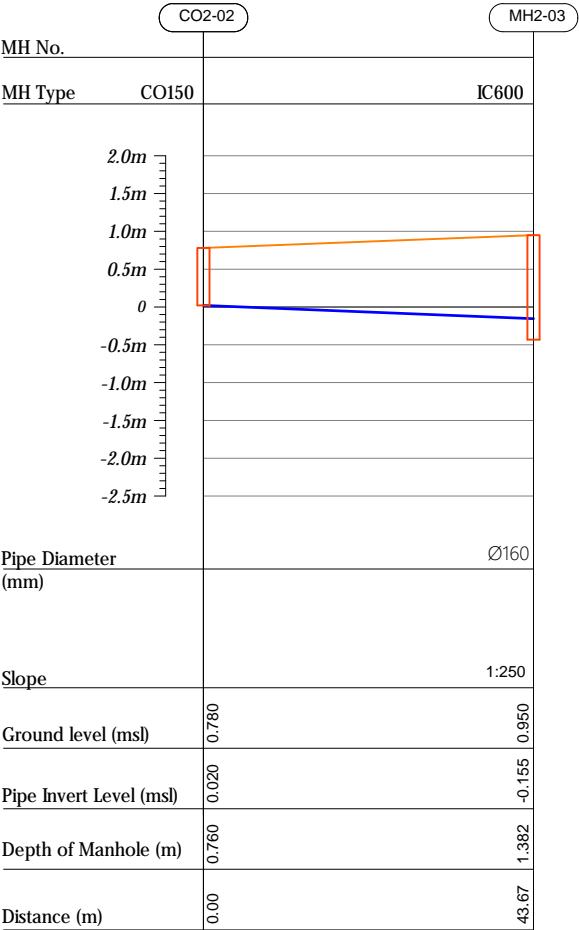
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Date: Aug 2020 SCALE (A3): 1:100

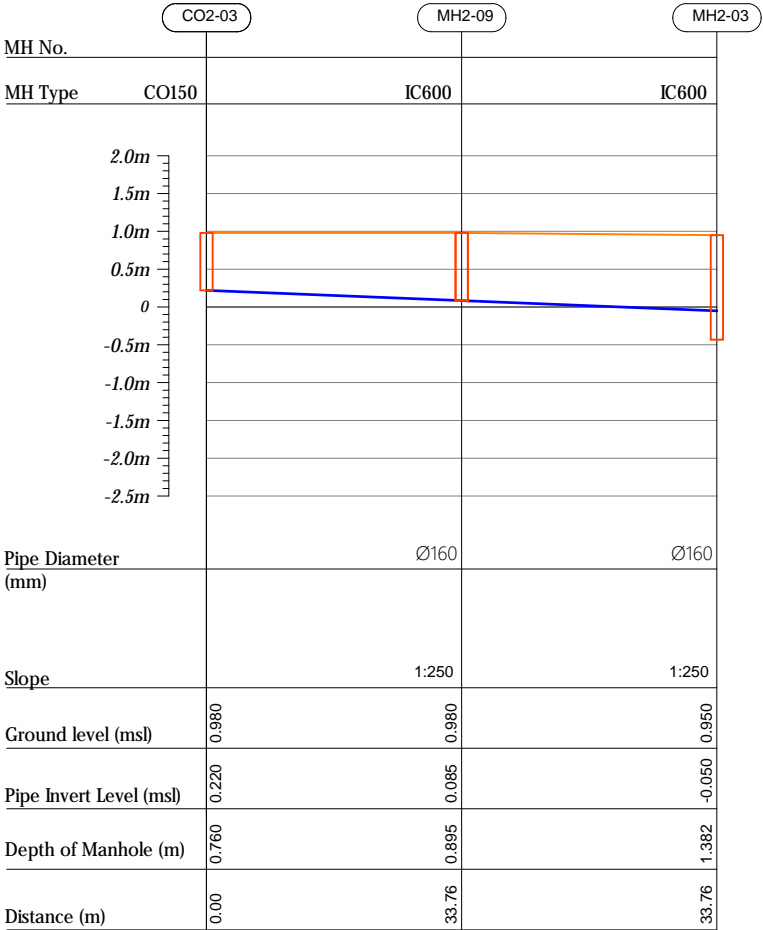
Project No: 01010101

Rev: R-01 Page: PS3-01

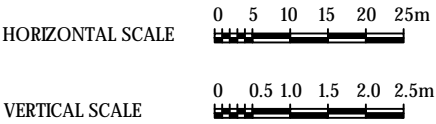
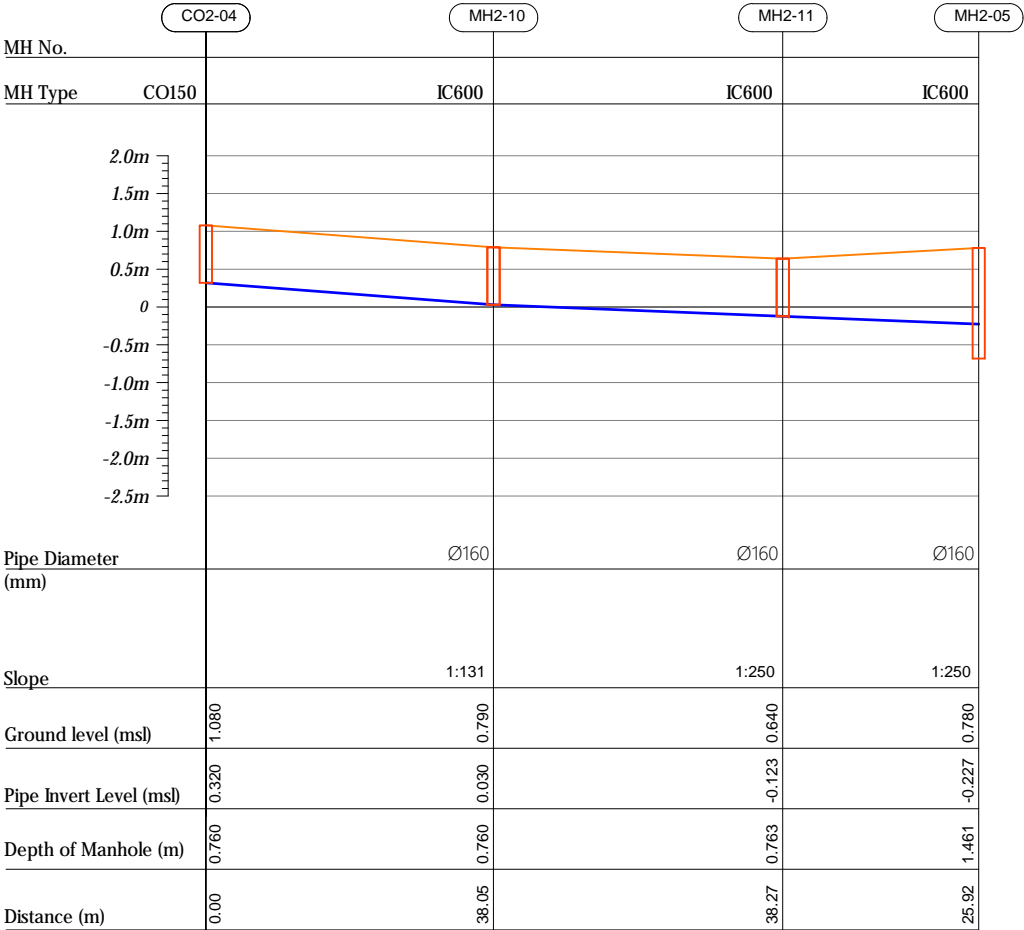
Profile 02



Profile 03



Profile 04



- CO160 — Cleanout Ø160
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
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5 islands, Maldives - Package 6

Sub Title:
Sewerage System in L.Kunahandhoo

Client:
Ministry of National Planning, Housing and
Infrastructure, Republic of Maldives

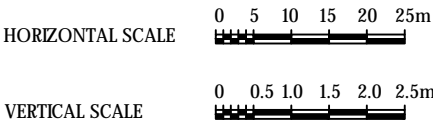
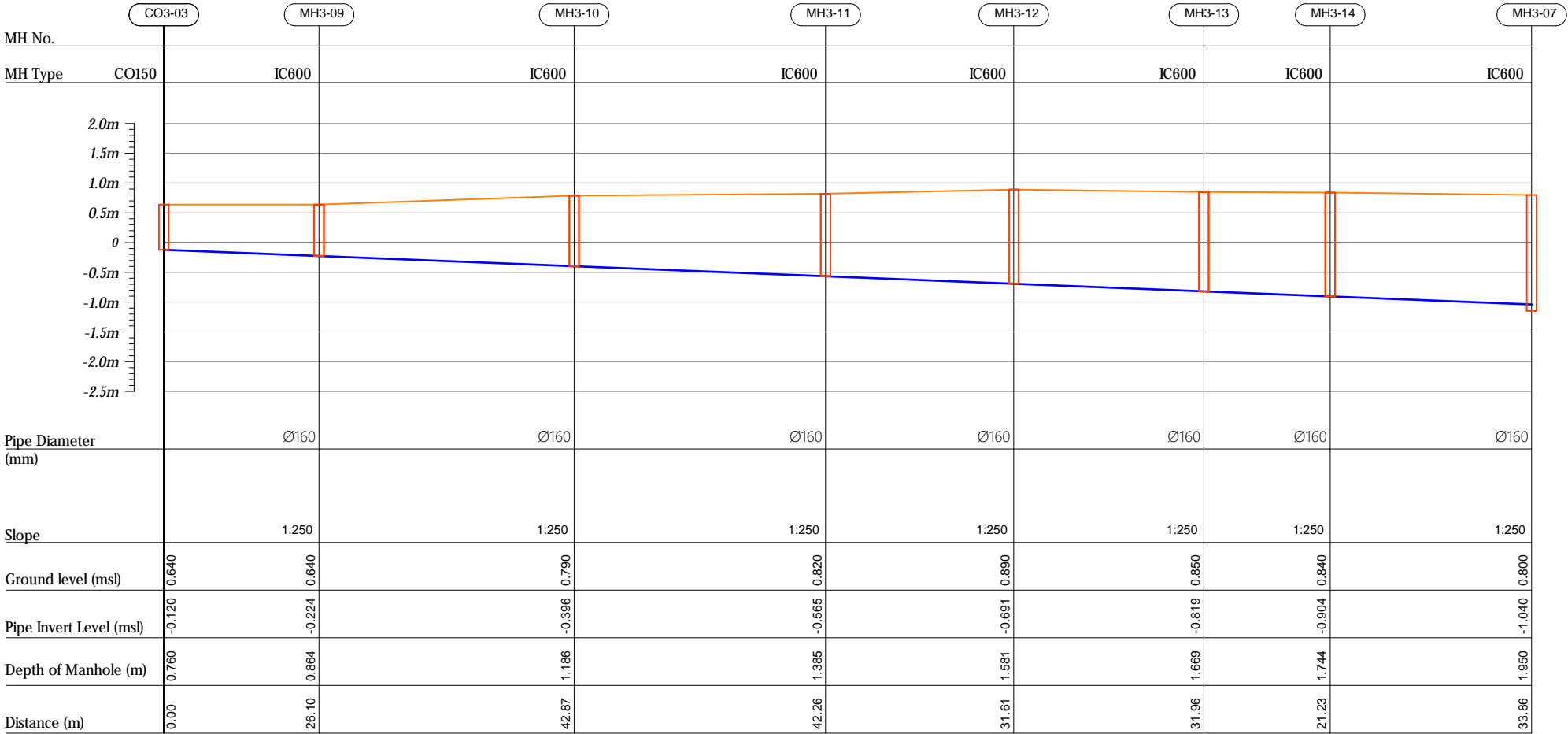


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Husnuheemaa Magu, Male', Maldives

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Maldivu Infrastructure Develop

Drawn: A.R.W	Checked: M.S.S
Designed: F.I.A	Approved: LW
Date: Aug 2020	SCALE (A3): 1:100
Project No:	01010101

Profile 03



- CO160 — Cleanout Ø160
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
Consultancy Services for Survey,
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Sub Title:
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Client:
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Drawn: A.R.W

Checked: M.S.S

Designed: F.L.A

Approved: L.W

Date: Aug 2020

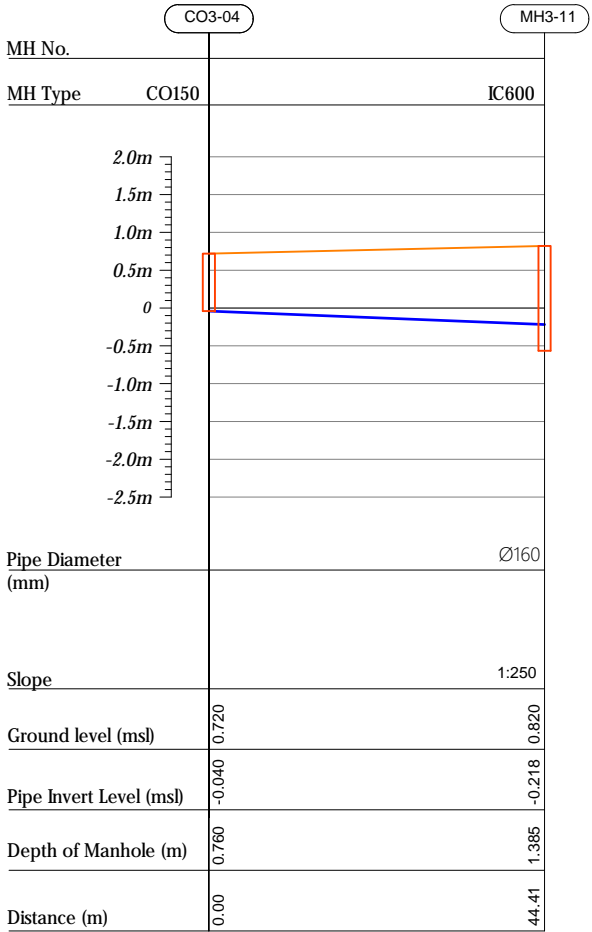
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Project No: 01010101

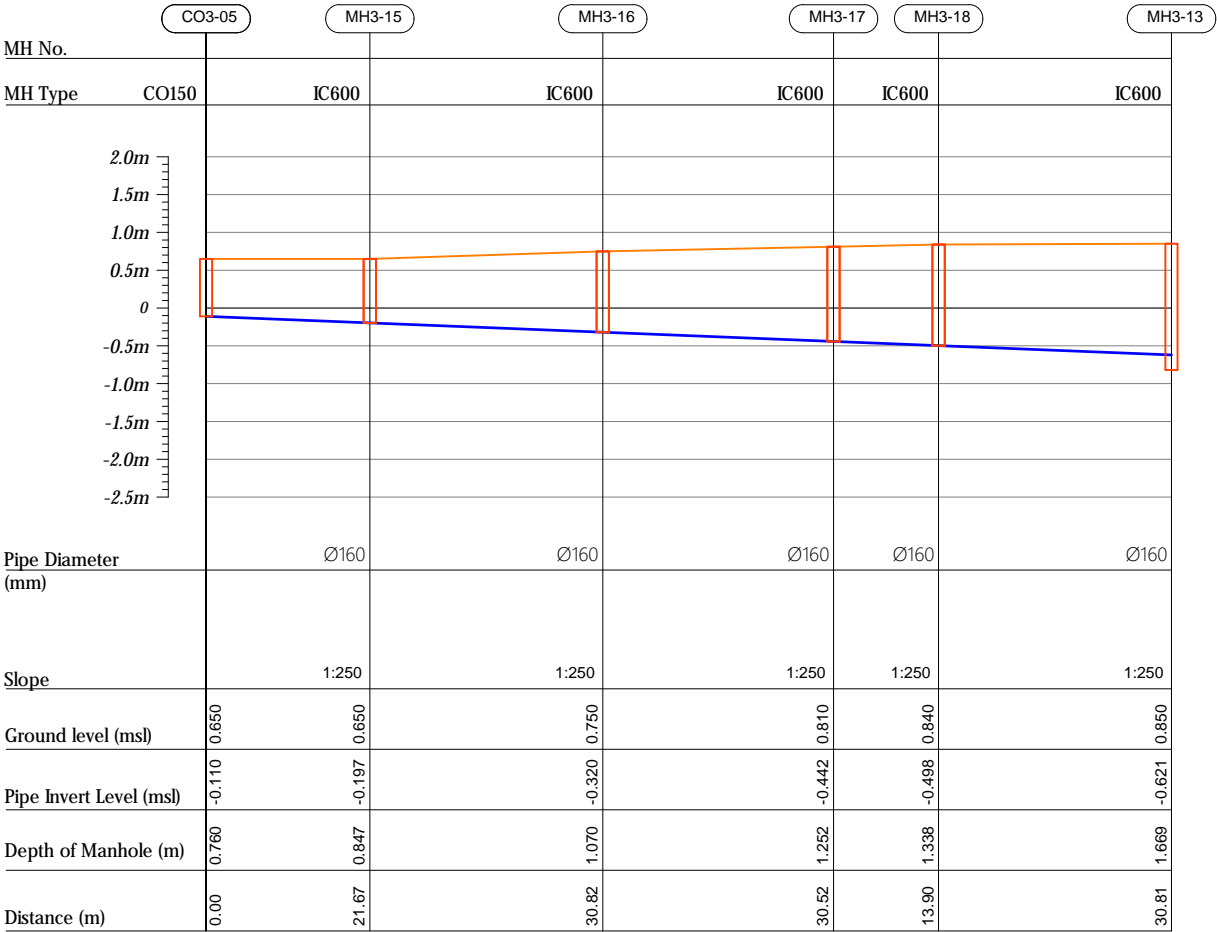
Rev: R-01

Page: PS3-03

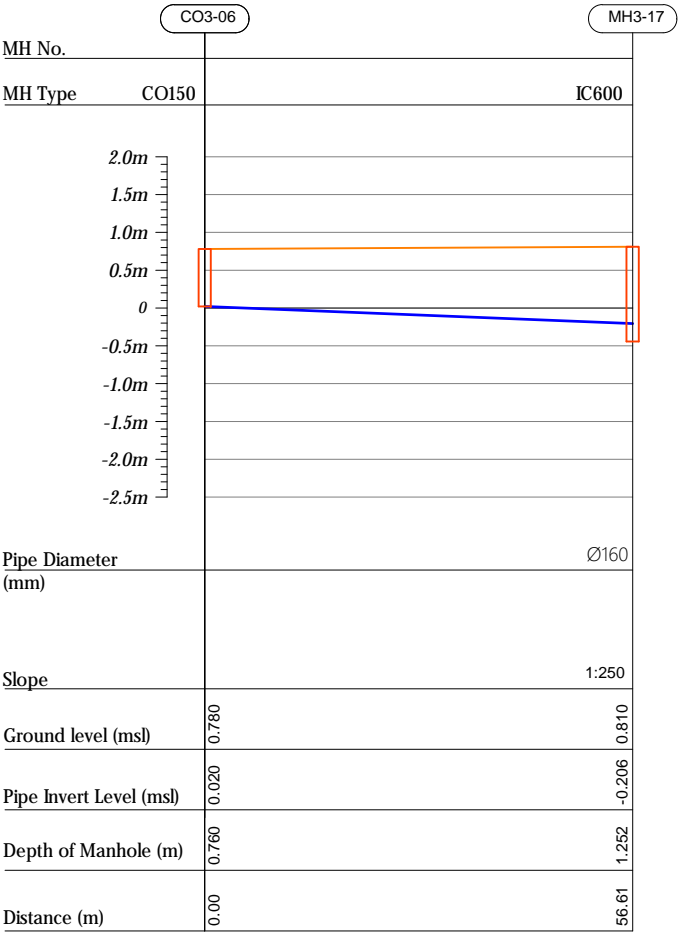
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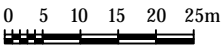
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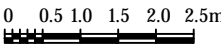
Profile 06



HORIZONTAL SCALE



VERTICAL SCALE



- CO160 — Cleanout Ø160
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
5 islands, Maldives - Package 6

Sub Title:
Sewerage System in L.Kunahandhoo

Client:
Ministry of National Planning, Housing and
Infrastructure, Republic of Maldives



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Hussuvehemaa Magu, Male', Maldives

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Drawn: A.R.W Checked: M.S.S

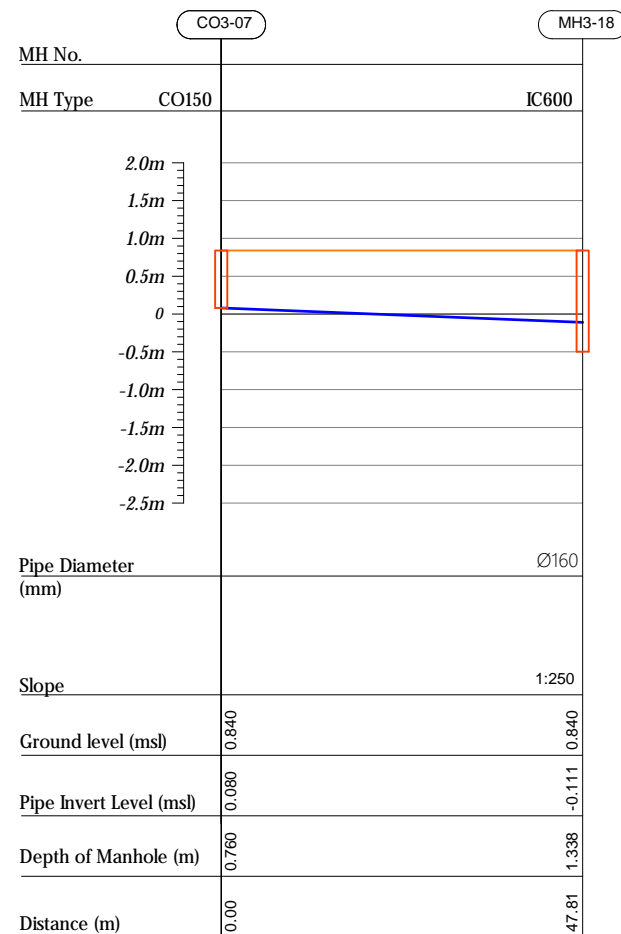
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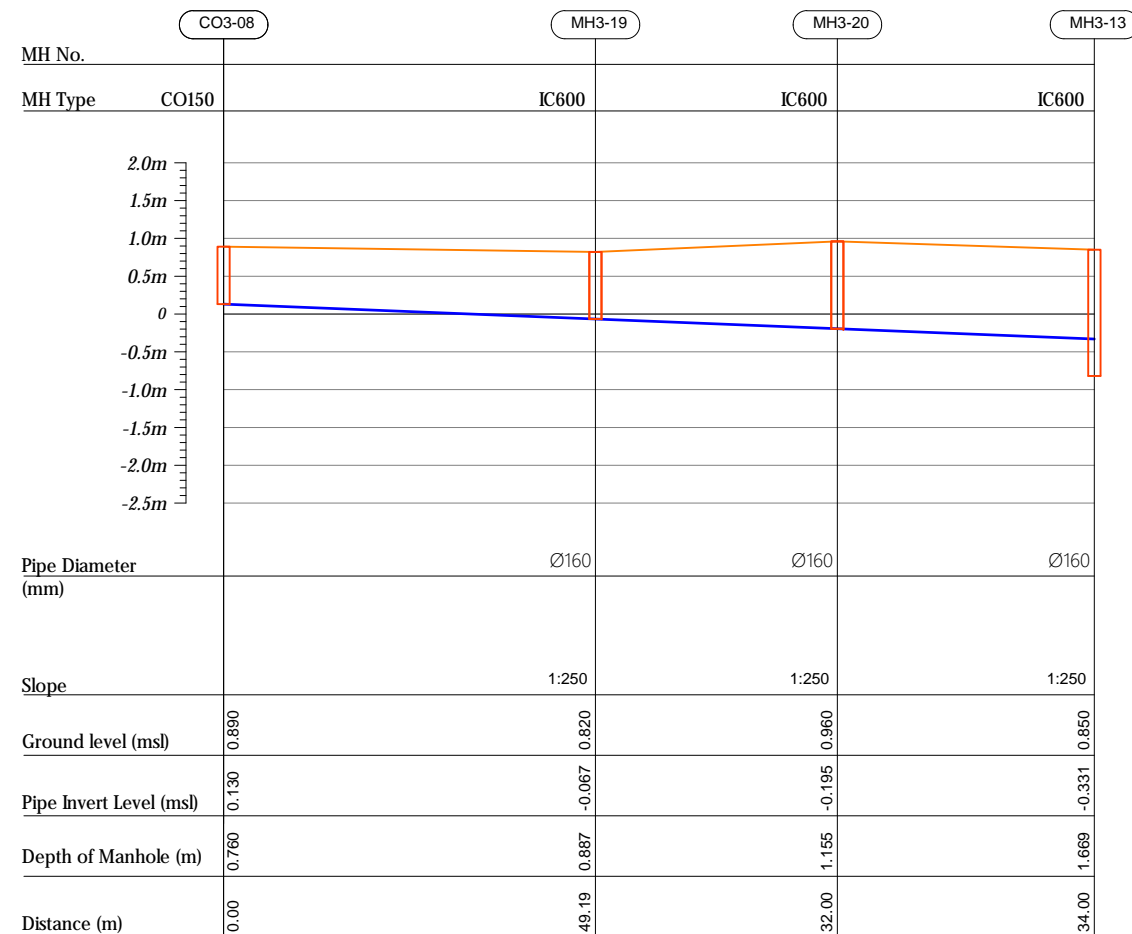
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Rev: R-01 Page: PS3-04

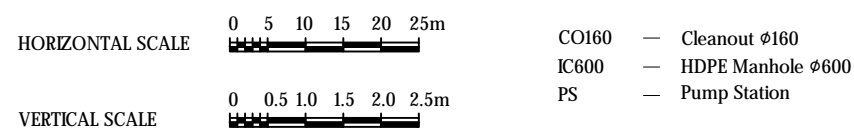
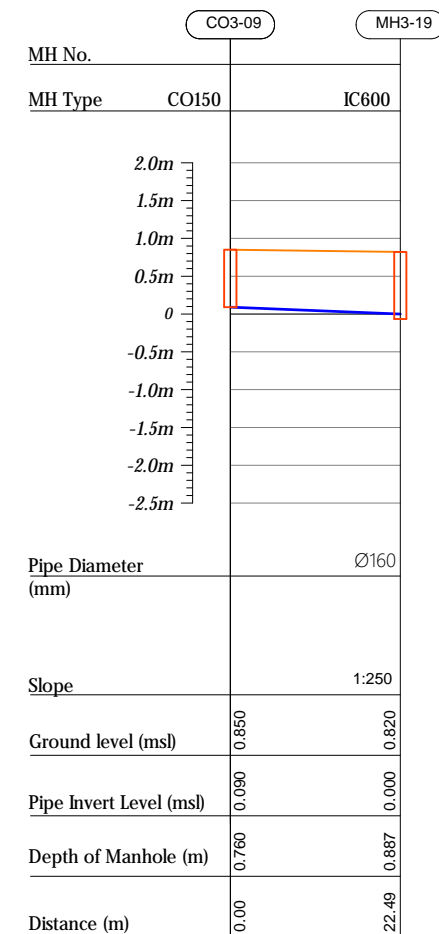
Profile 07



Profile 08



Profile 09



R00	JUNE 2020	STAGE -1	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
*Consultancy Services for Survey,
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5 islands, Maldives - Package 6*

Sub Title:
Sewerage System in L.Kunahandhoo

Client:
Ministry of National Planning, Housing and
Infrastructure, Republic of Maldives

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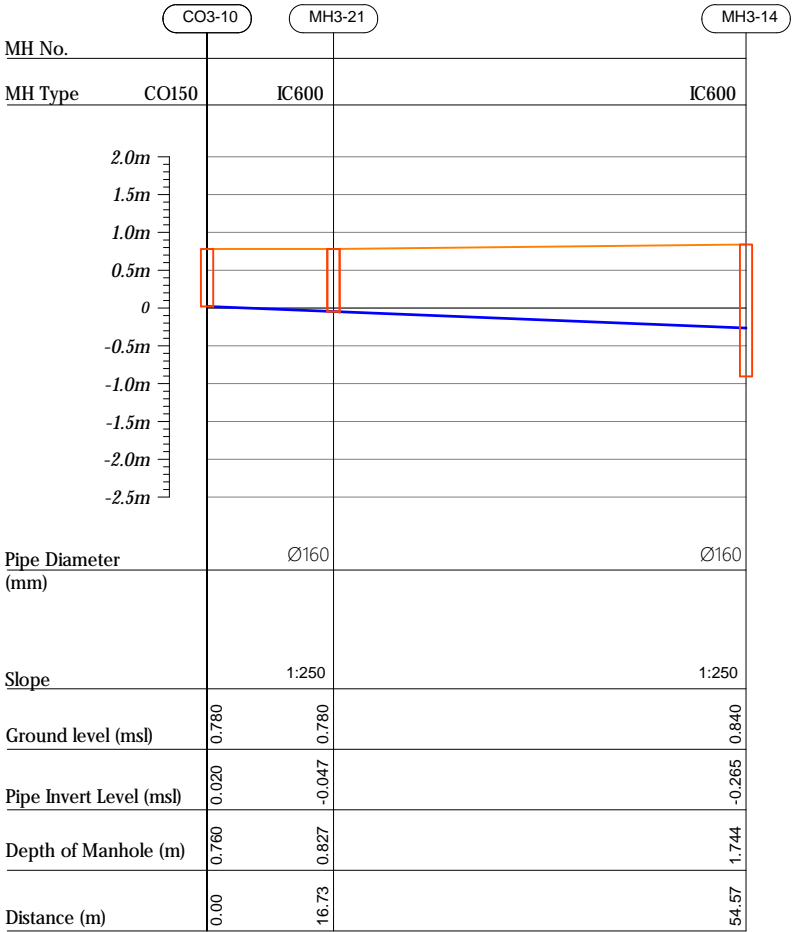
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A: G. Rosary West,
Husnuheenna Magtu, Male', Maldives

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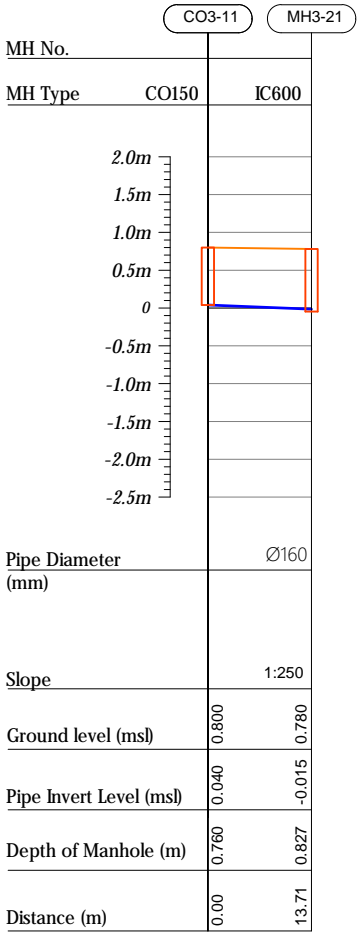
Drawn: A.R.W	Checked: M.S.S
Designed: F.I.A	Approved: L.W
Date: Aug 2020	SCALE (A3): 1:100
Project No: 01010101	

Rev: <i>R-01</i>	Page: <i>PS3-05</i>
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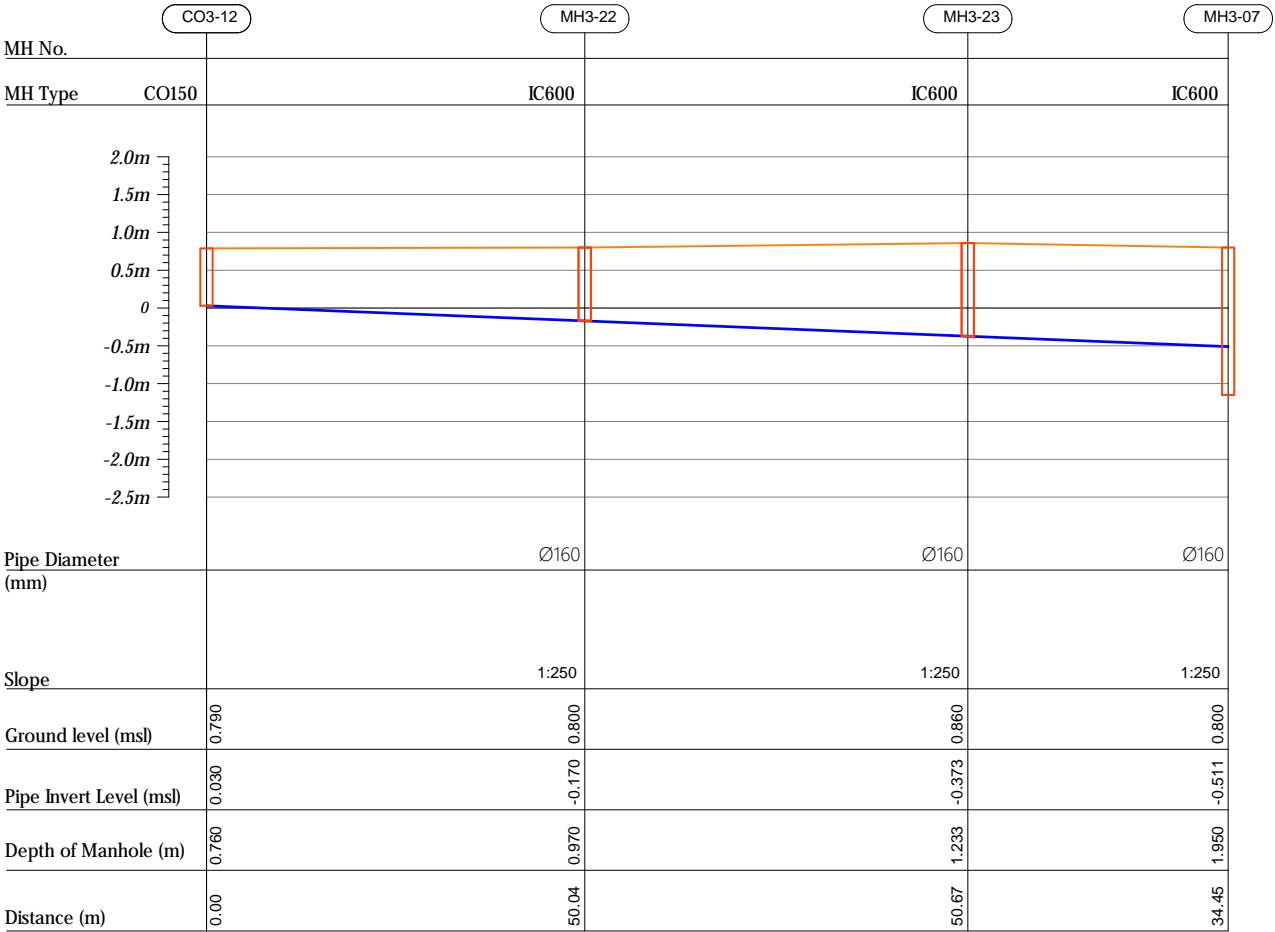
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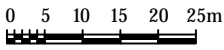
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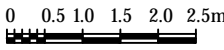
Profile 12



HORIZONTAL SCALE



VERTICAL SCALE



- CO160 — Cleanout Ø160
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
Consultancy Services for Survey,
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5 islands, Maldives - Package 6

Sub Title:
Sewerage System in L.Kunahandhoo

Client:
Ministry of National Planning, Housing and
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Drawn: A.R.W Checked: M.S.S

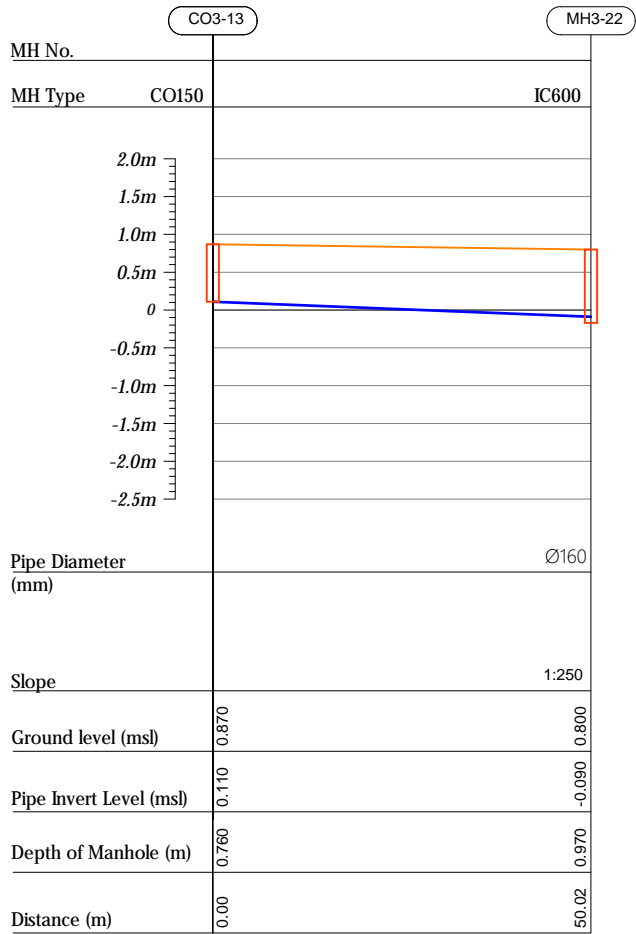
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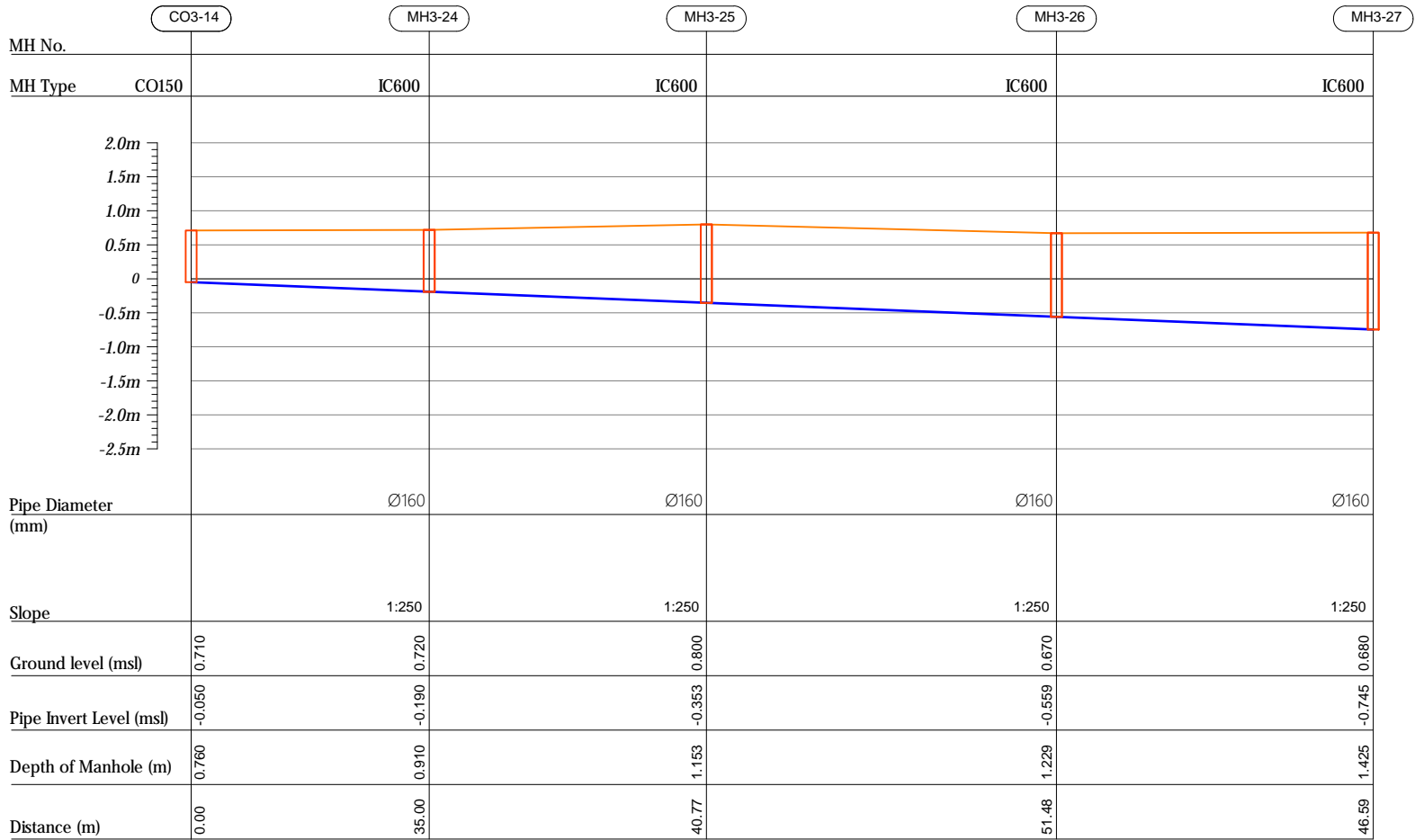
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Rev: R-01 Page: PS3-06

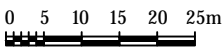
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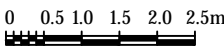
Profile 14



HORIZONTAL SCALE



VERTICAL SCALE



- CO160 — Cleanout Ø160
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
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Drawn: A.R.W. Checked: M.S.S.

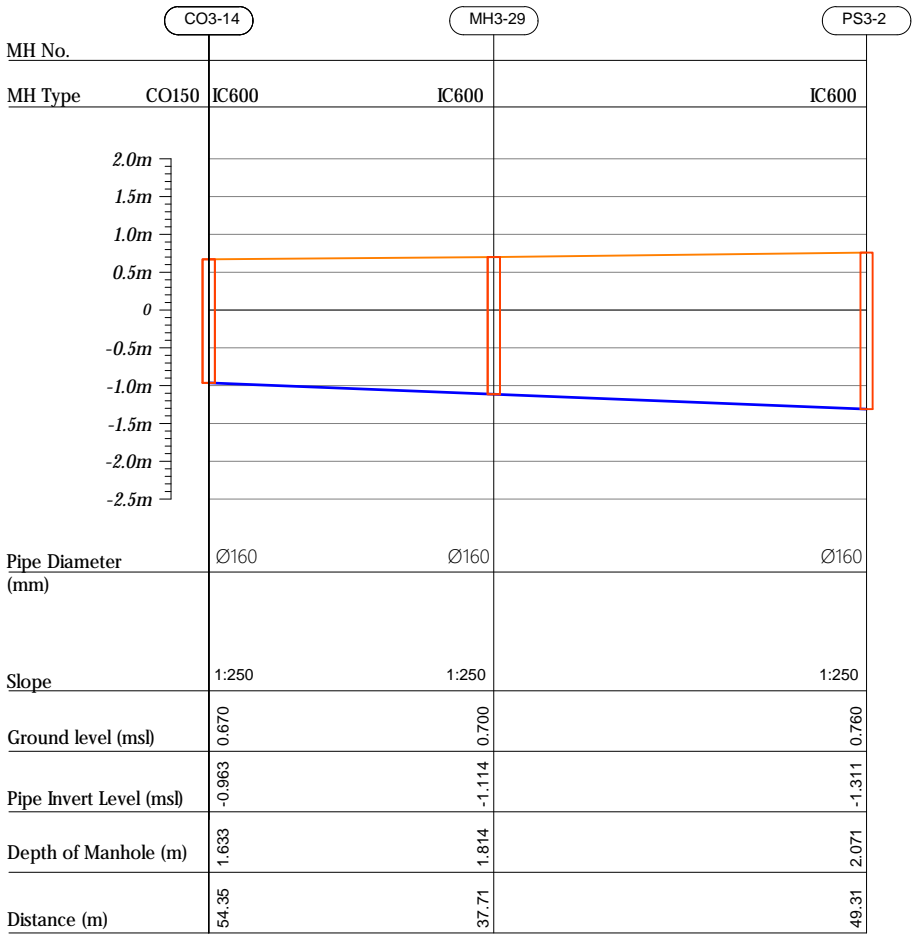
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Date: Aug 2020 SCALE (A3): 1:100

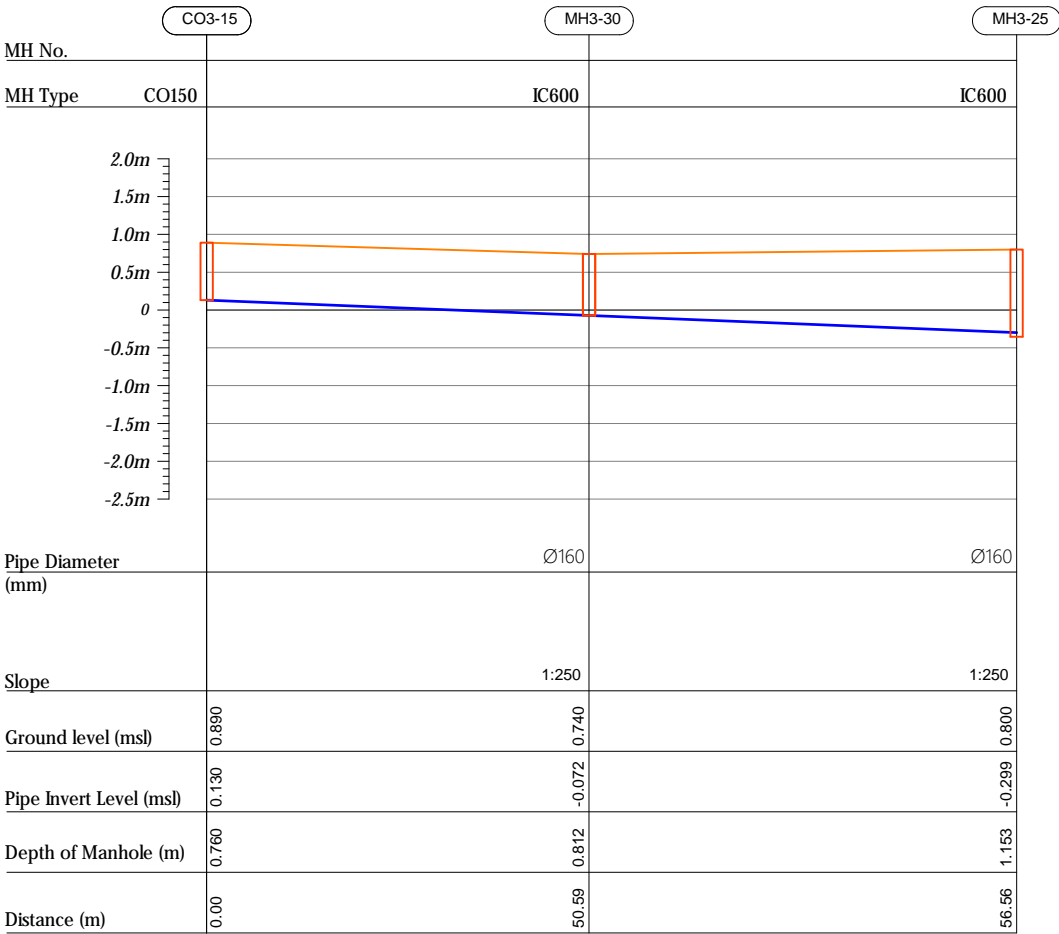
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Rev: R-01 Page: PS3-07

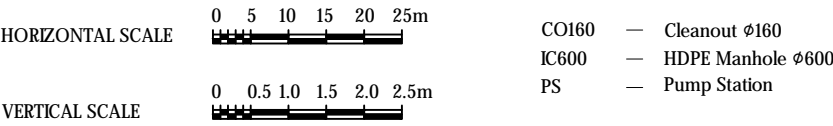
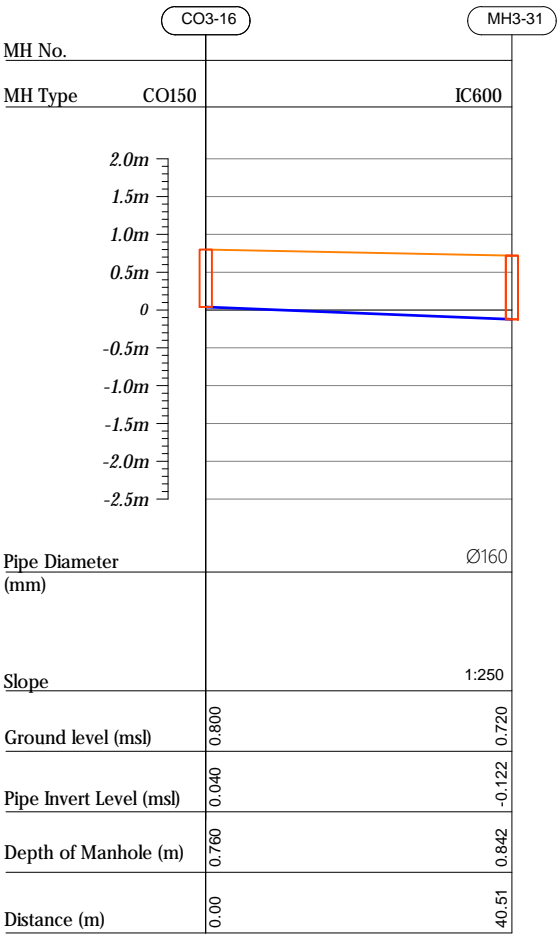
Profile 14



Profile 15



Profile 16



R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
Consultancy Services for Survey,
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Sub Title:
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Client:
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Drawn: A.R.W

Checked: M.S.S

Designed: F.I.A

Approved: LW

Date: Aug 2020

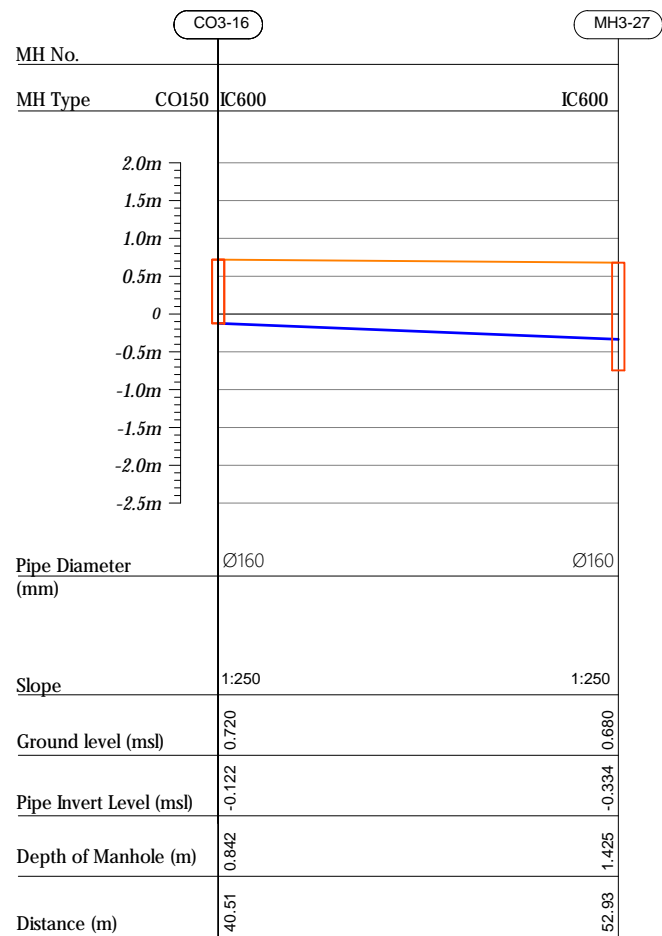
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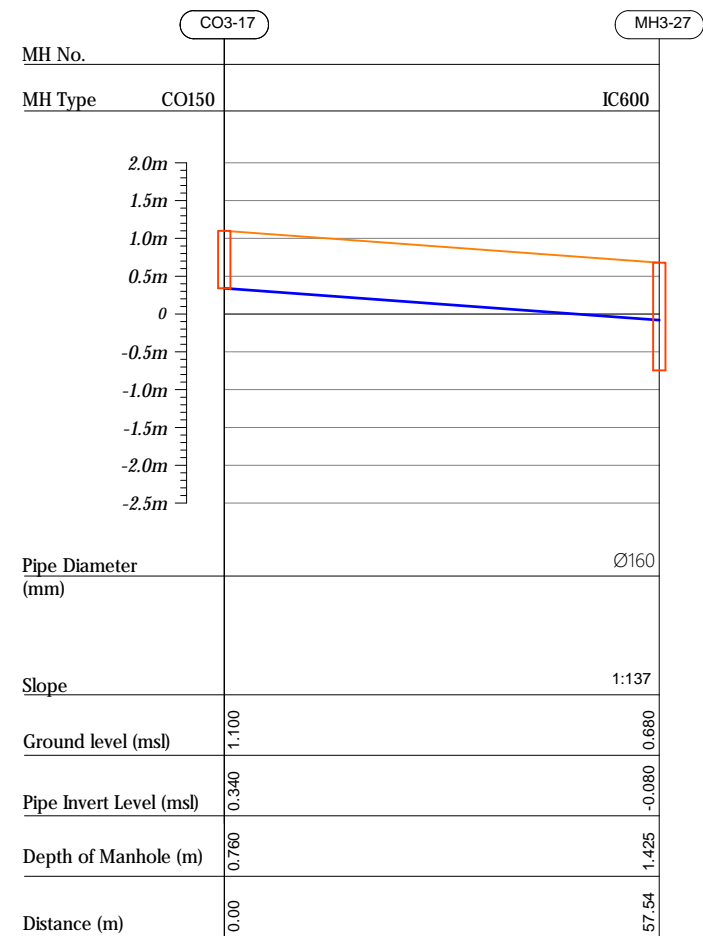
Rev: R-01

Page: PS3-08

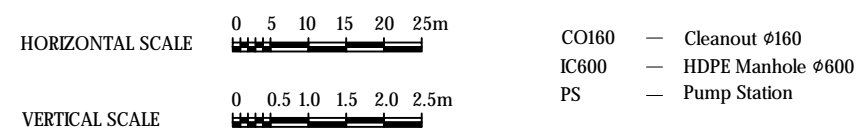
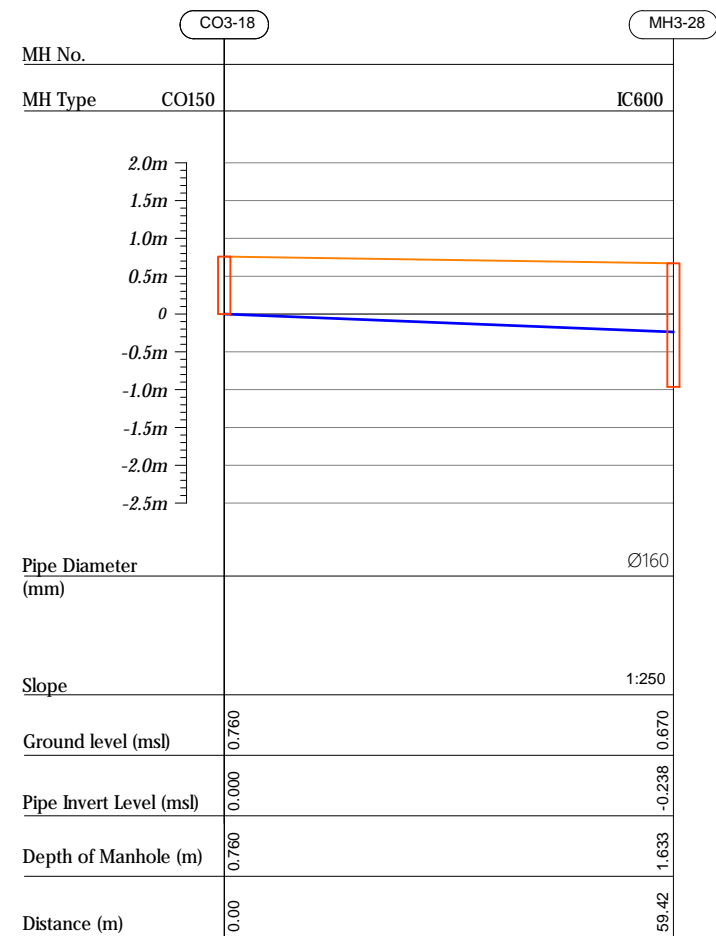
Profile 16



Profile 17



Profile 18



R00	JUNE 2020	STAGE -1	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
*Consultancy Services for Survey,
Design and EIA works of Water
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5 islands, Maldives - Package 6*

Sub Title:
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Client:
*Ministry of National Planning, Housing and
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Drawn: A.R.W	Checked: M.S.S
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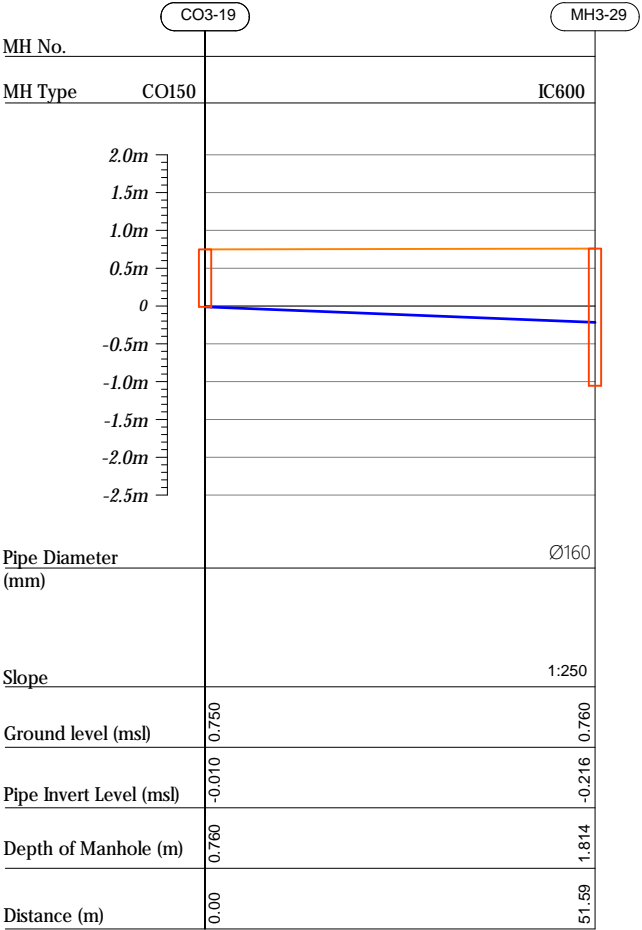
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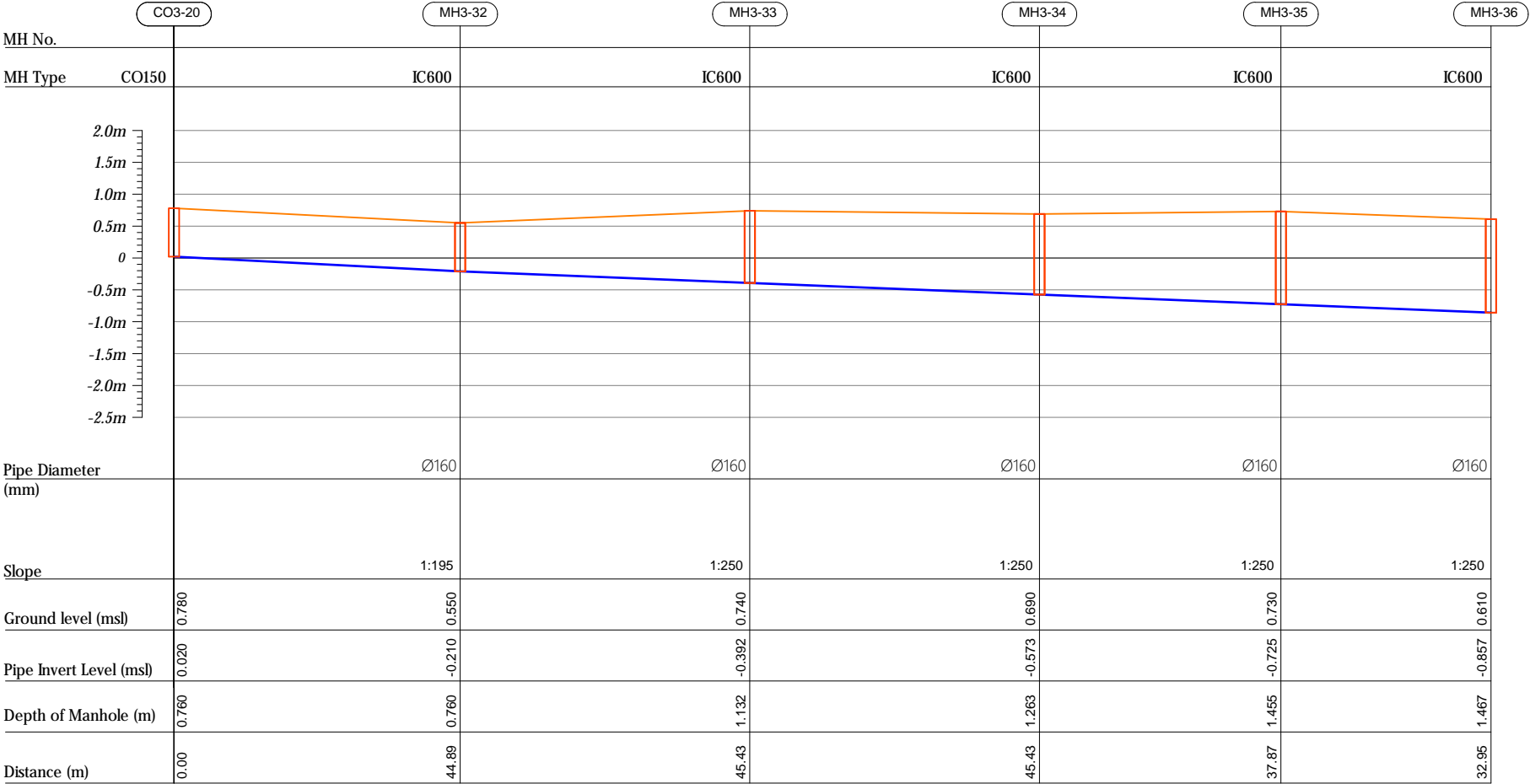
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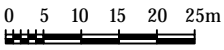
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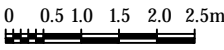
Profile 20



HORIZONTAL SCALE



VERTICAL SCALE



- CO160 — Cleanout Ø160
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
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Approved: L.W

Date: Aug 2020

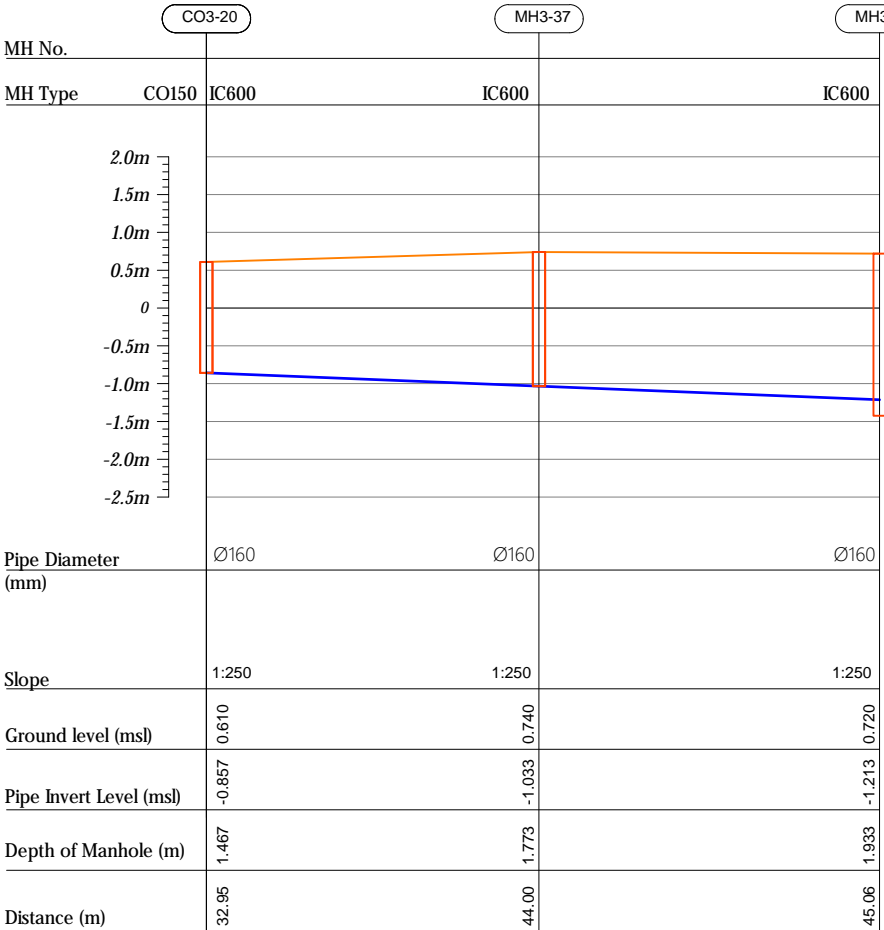
SCALE (A3): 1:100

Project No: 01010101

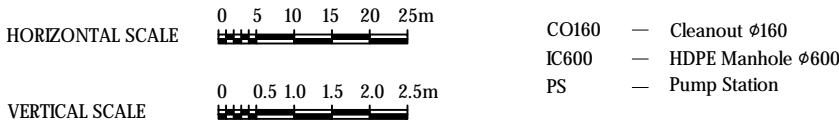
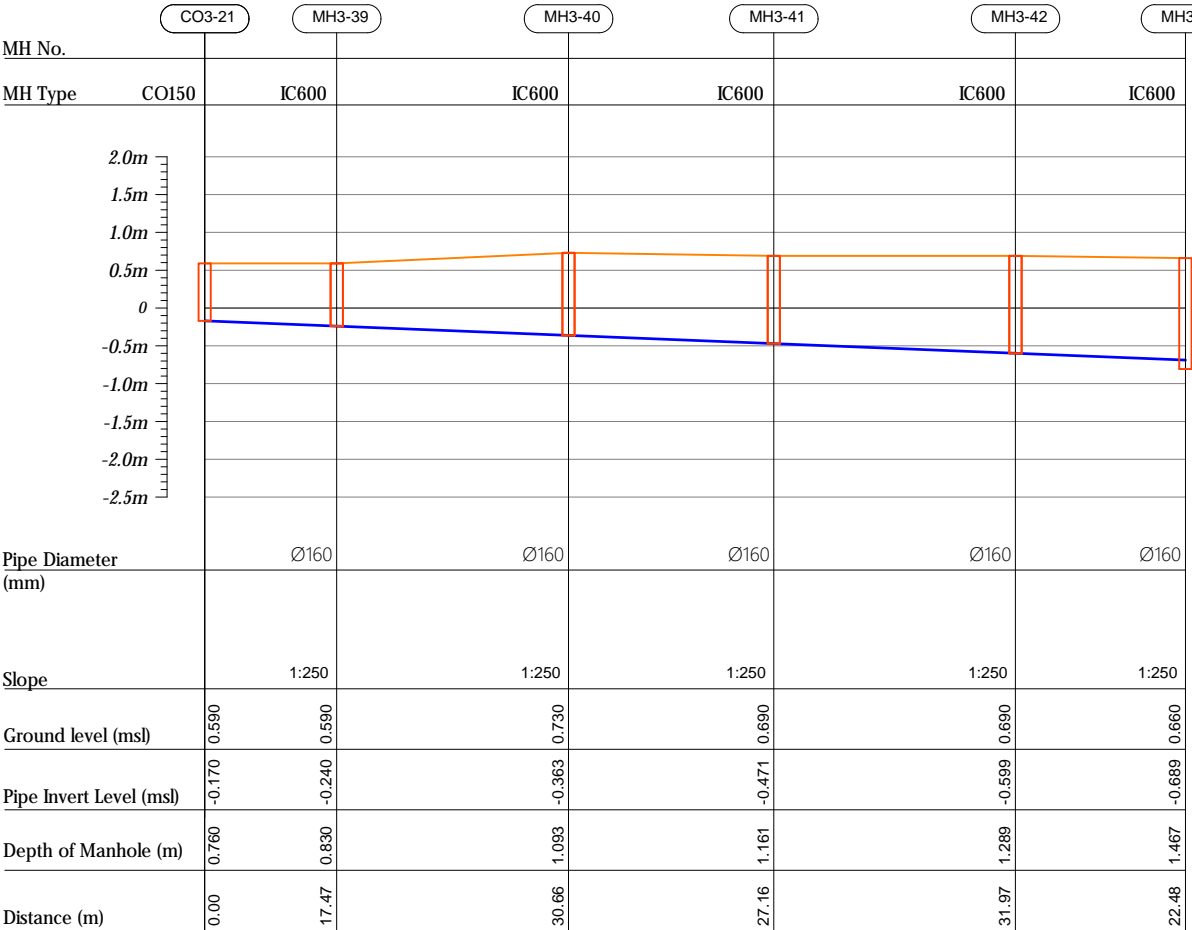
Rev: R-01

Page: PS3-10

Profile 20



Profile 21



REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
*Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
5 islands, Maldives - Package 6*

Sub Title:
Sewerage System in L.Kunahandhoo

Client:
Ministry of National Planning, Housing and
Infrastructure, Republic of Maldives



Drawn: A.R.W	Checked: M.S.S
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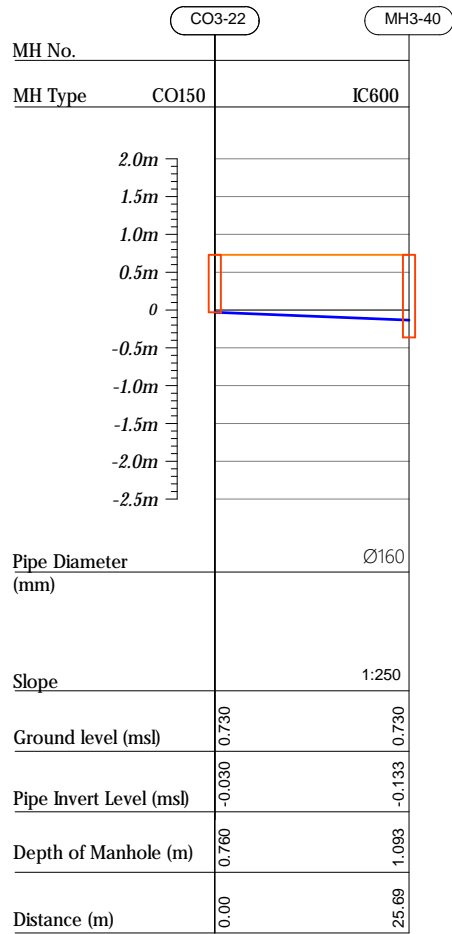
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Date: Aug 2020	SCALE (A2): 1:100
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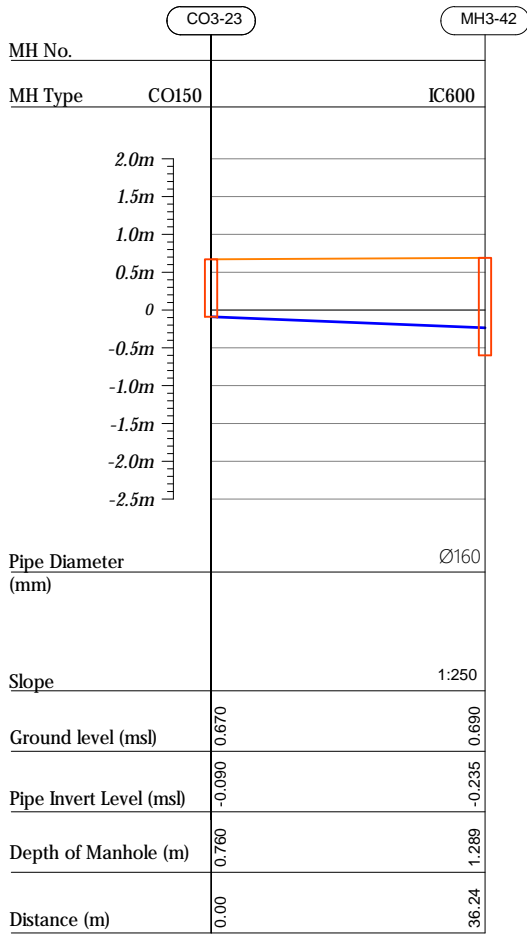
Project No: 0101010

Rev: <i>R-01</i>	Page: <i>PS3-11</i>
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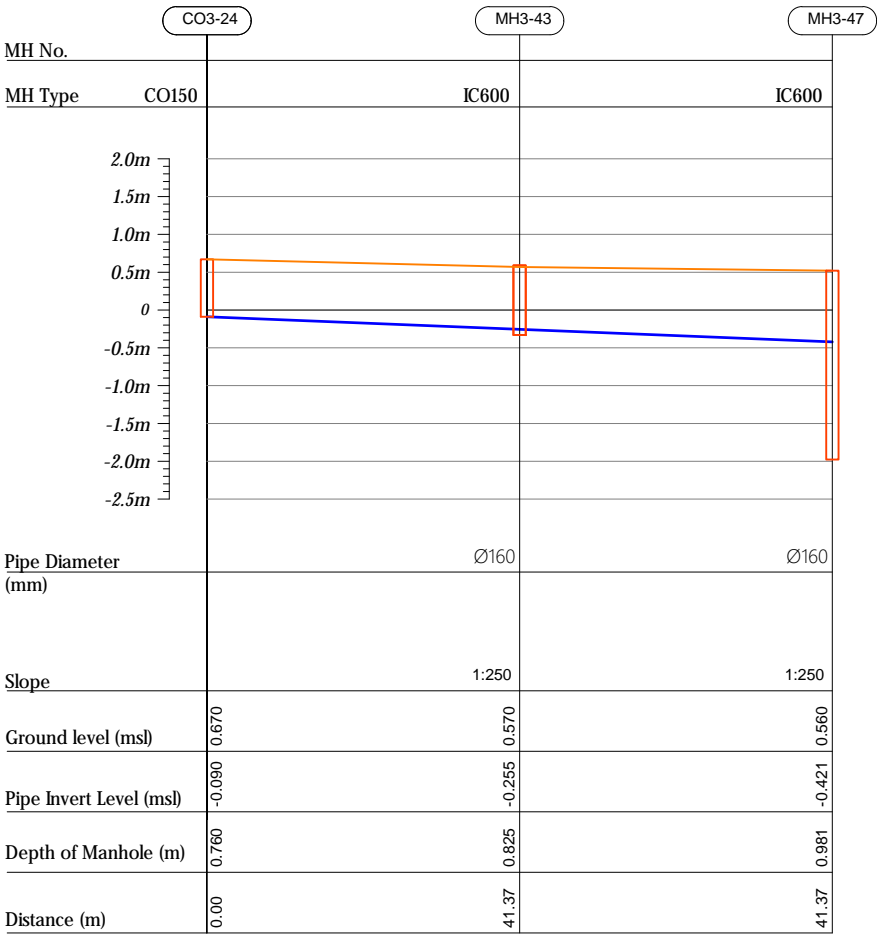
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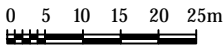
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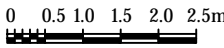
Profile 24



HORIZONTAL SCALE



VERTICAL SCALE



- CO160 — Cleanout Ø160
IC600 — HDPE Manhole Ø600
PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
Consultancy Services for Survey, Design and EIA works of Water Supply and Sewerage Facilities in 5 islands, Maldives - Package 6

Sub Title:
Sewerage System in L.Kunahandhoo

Client:
Ministry of National Planning, Housing and Infrastructure, Republic of Maldives



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DBAC INFRA
Maldivu Infrastructure Develop

Drawn: A.R.W. Checked: M.S.S.

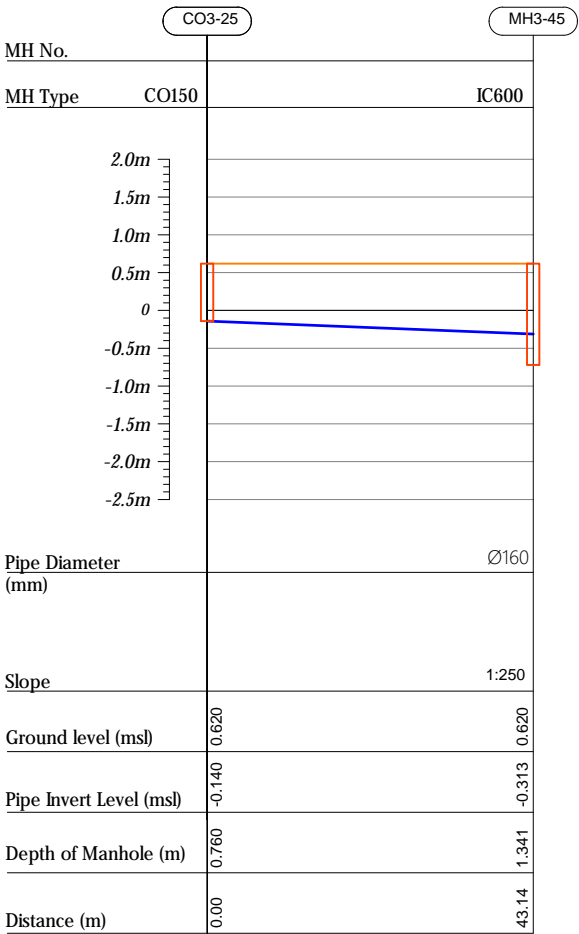
Designed: F.L.A. Approved: L.W.

Date: Aug 2020 SCALE (A3): 1:100

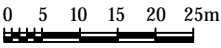
Project No: 01010101

Rev: R-01 Page: PS3-12

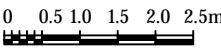
Profile 25



HORIZONTAL SCALE



VERTICAL SCALE




- CO160 — Cleanout Ø160
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

R00	JUNE 2020	STAGE -I	PD	SBC	SD
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.


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Maldivu Sufastruktura Happa

Drawn: A.R.W	Checked: M.S.S
Designed: F.L.A	Approved: L.W
Date: Aug 2020	SCALE (A3): 1:100
Project No: 01010101	
Rev: R-01	Page: PS3-13