

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

PACKAGE 6

SEWERAGE SYSTEM OF GA. DHEVVADHOO, MALDIVES

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

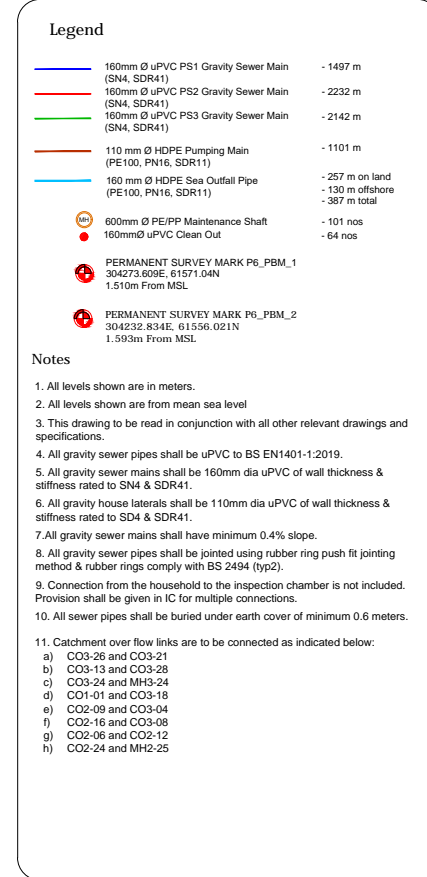


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REV. NO.	Date	Revision Description	Drawn	Chkd	Appr'd

<p>Site Title: Consultancy Services for Survey, Design and EIA works of Water Supply and Sewerage Facilities in 5 islands, Maldives - PaCkage 6</p> <p>Sub Title: Sewerage System in GA. Dhevadvahoo</p>	
<p>Client: Ministry of National Planning, Housing and Infrastructure, Republic of Maldives</p>	
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<p>Designed: F.I.A.</p>	<p>Approved: I.W.</p>
<p>Date: Sept 2020</p>	<p>SCALE (A3): 1:3000</p>
<p>Project No: EP-WS/2019/06</p>	
<p>Rev:</p>	<p>Page: A-(1)</p>

GA. DHEVVADHOO SEWERAGE SYSTEM - SEWERAGE NETWORK CATCHMENT AREAS

1:3000



Legend

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

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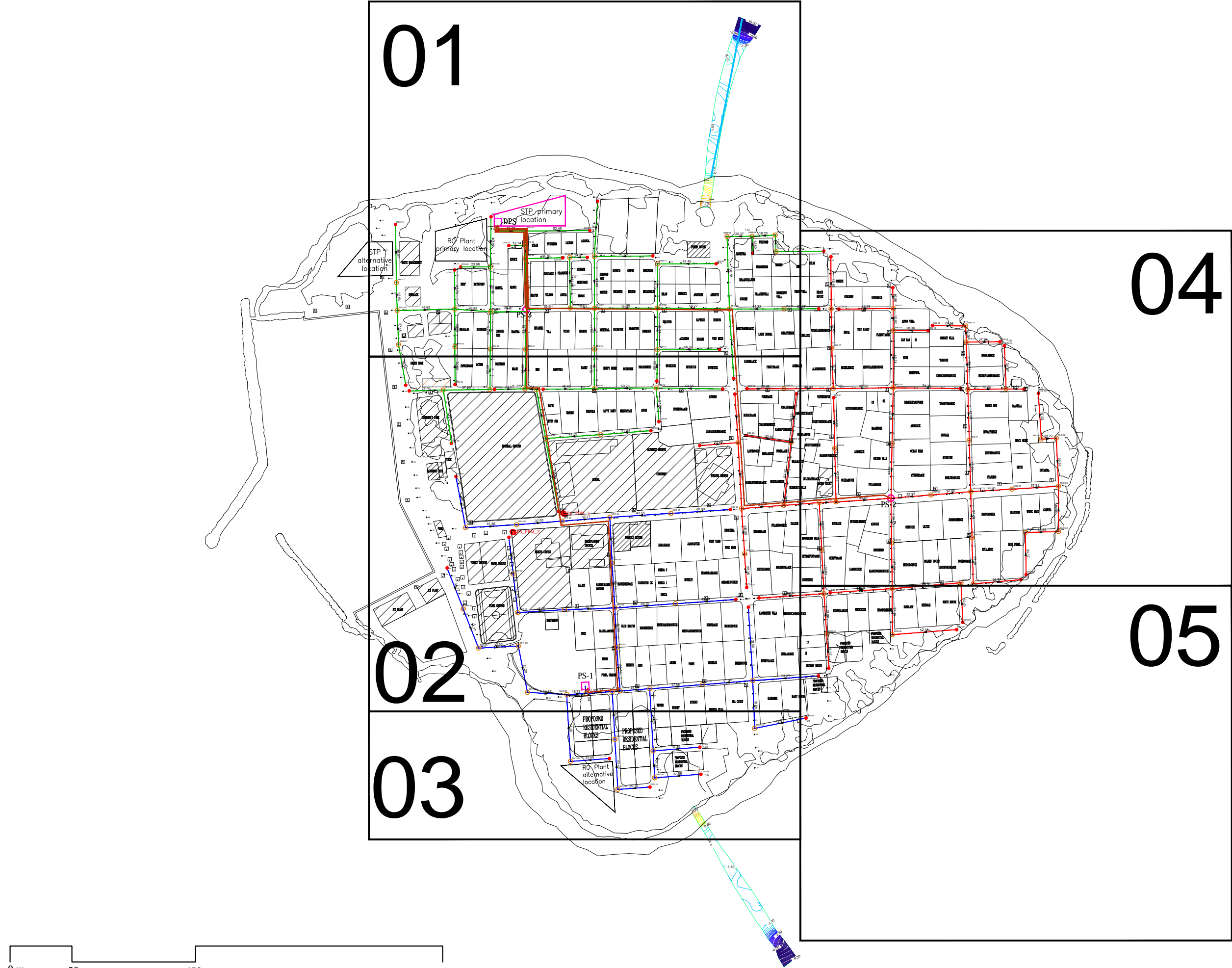
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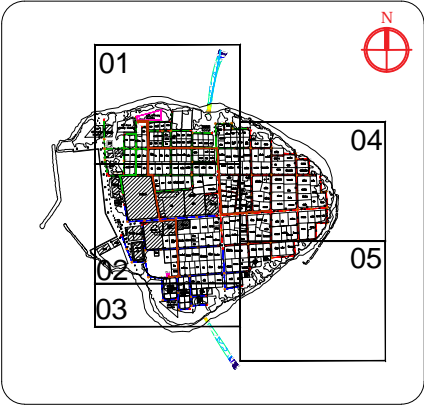
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A-(2)



GA. DHEVVADHOO SEWERAGE SYSTEM - SEWERAGE NETWORK ZONE LAYOUT

1:3000



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
- 110 mm Ø HDPE Pumping Main (PE100, PN16, SDR11)
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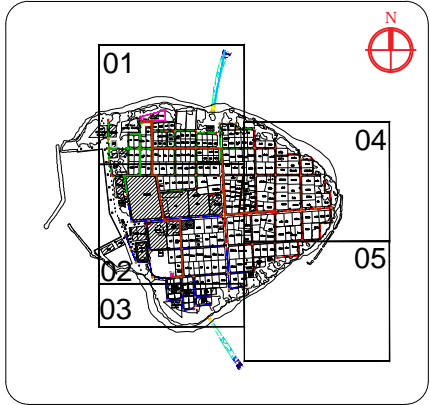
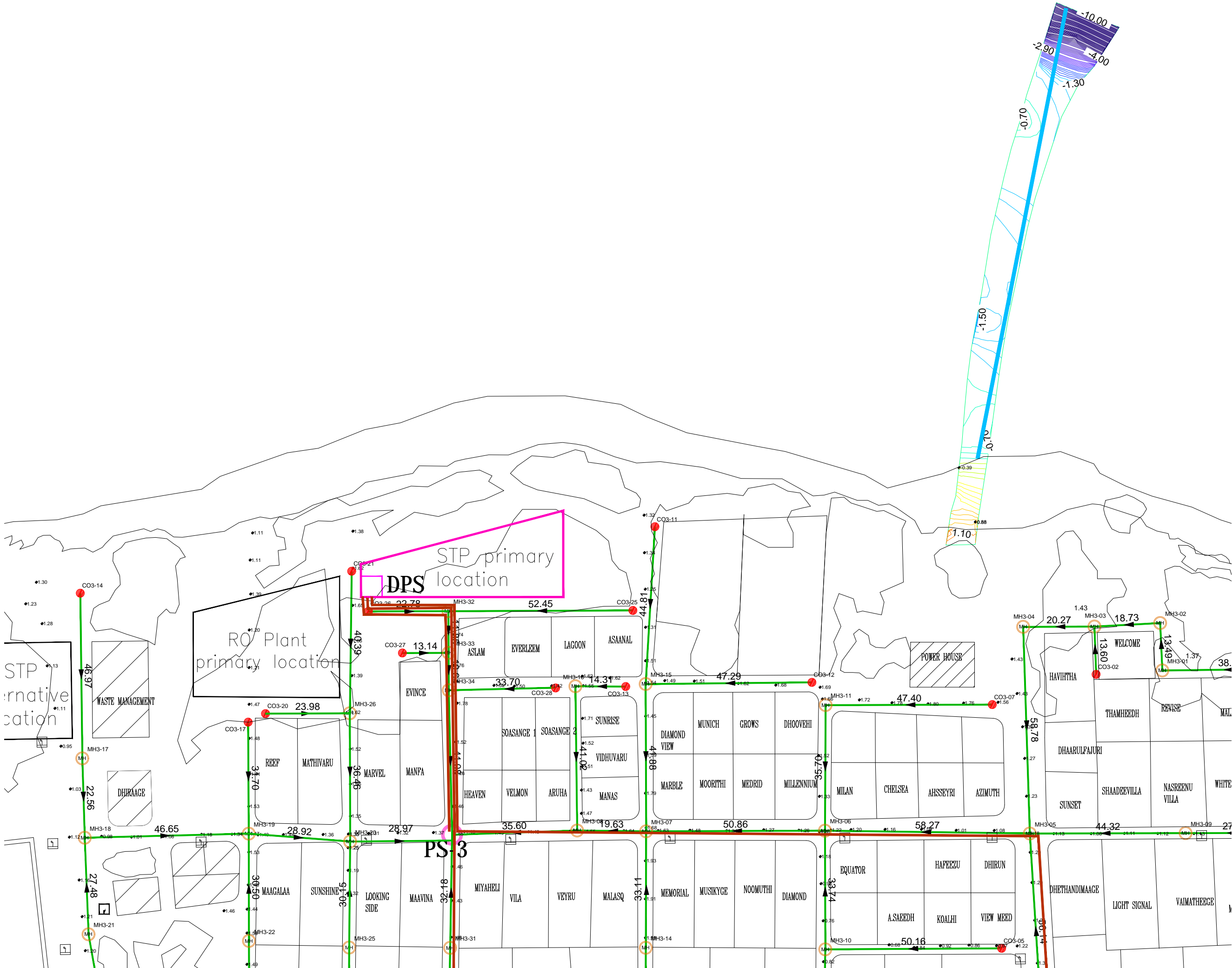
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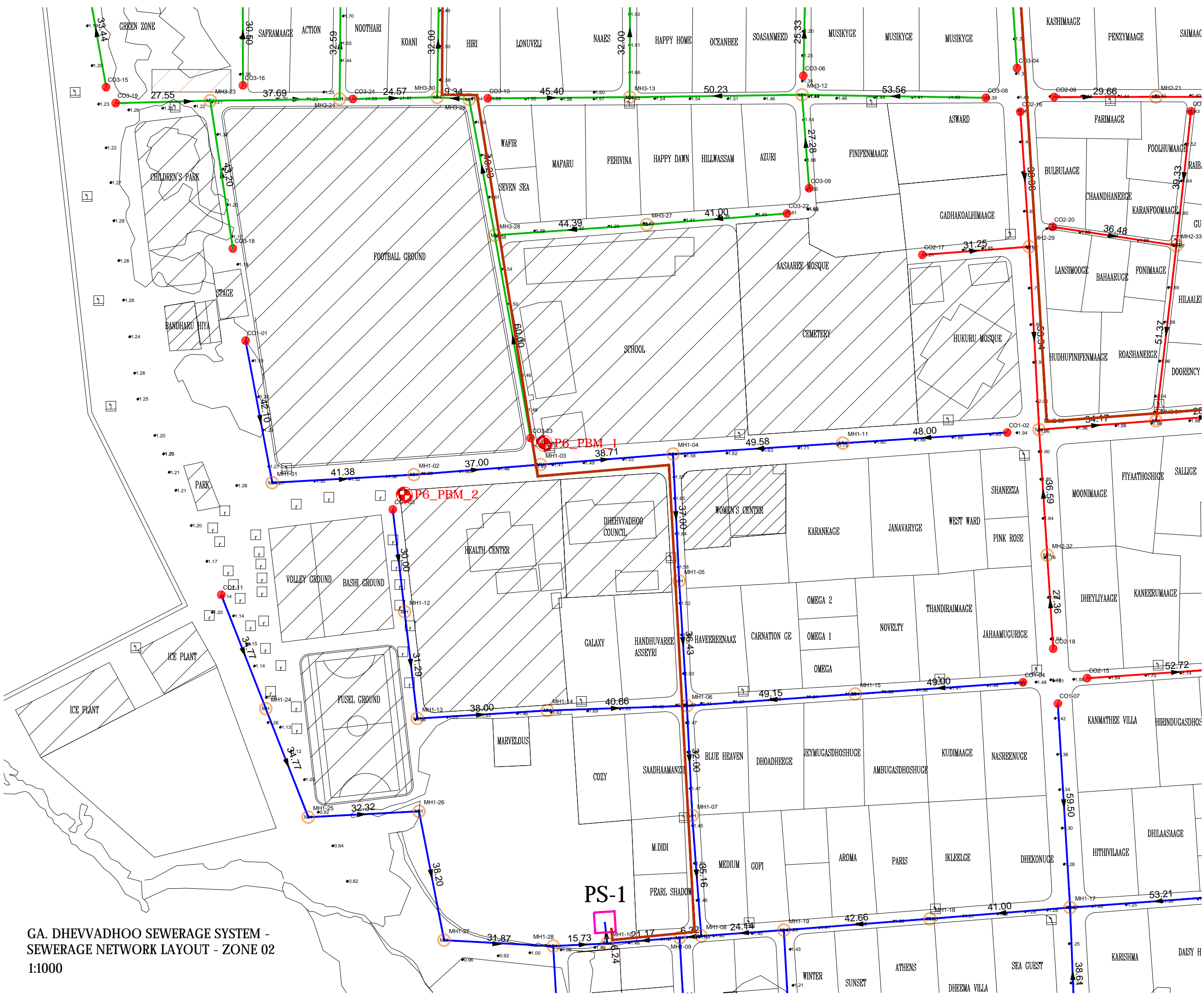
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GA. DHEVVADHOO SEWERAGE SYSTEM - SEWERAGE NETWORK LAYOUT - ZONE 01
1:1000



GA. DHEVVADHOO SEWERAGE SYSTEM -
SEWERAGE NETWORK LAYOUT - ZONE 02
1:1000

01

02

03

04

05

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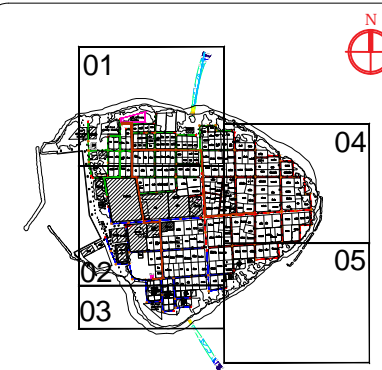
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-  160mm Ø uPVC PS1 Gravity Sewer Main (SN4, SDR41)
- 160mm Ø uPVC PS2 Gravity Sewer Main (SN4, SDR41)
-  160mm Ø uPVC PS3 Gravity Sewer Main (SN4, SDR41)
-  600mm Ø PE/PP Maintenance Shaft
-  160mm Ø uPVC Clean Out
-  110 mm Ø HDPE Pumping Main (PE100,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

GA. DHEVVADHOO SEWERAGE SYSTEM - SEWERAGE NETWORK LAYOUT - ZONE 03
1:1000

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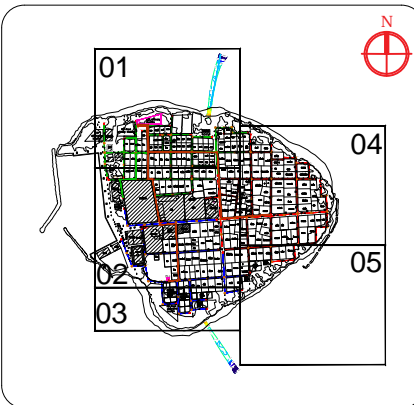
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GA. DHEVVADHOO SEWERAGE SYSTEM - SEWERAGE NETWORK LAYOUT - ZONE 04

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

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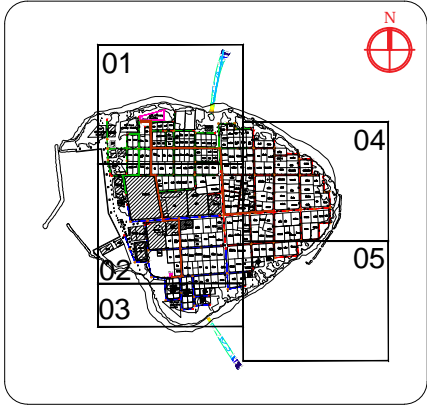
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Legend

- 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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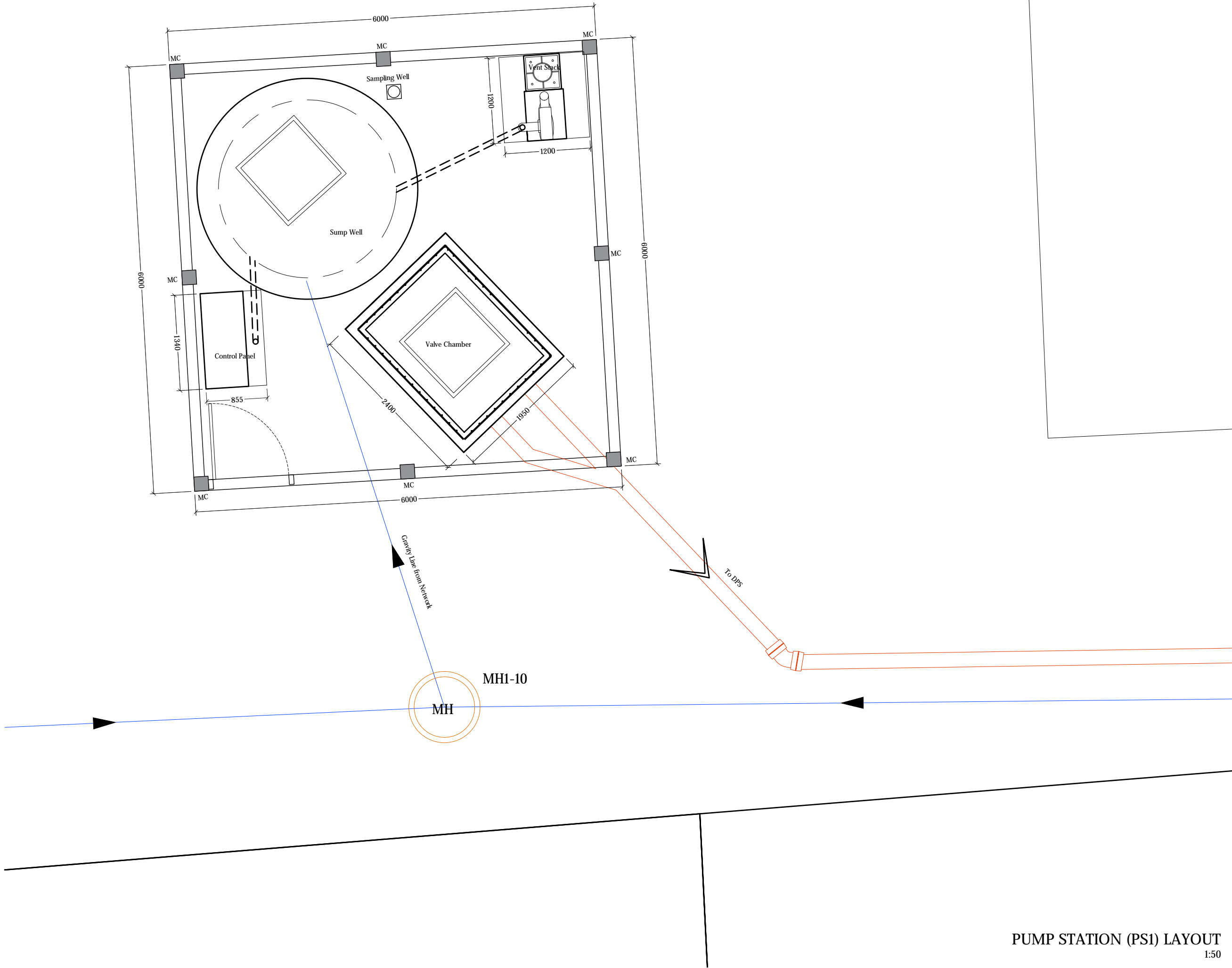
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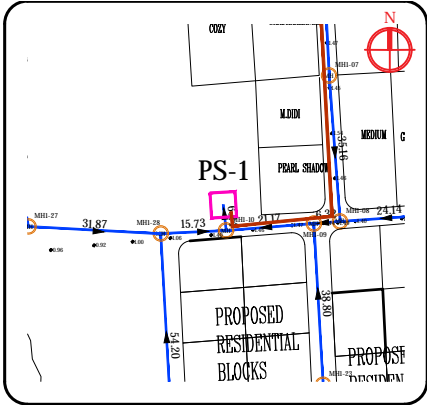
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PUMP STATION (PS1) LAYOUT
1:50



Legend

160mm Ø uPVC PS1 Gravity Sewer Main (SN4, SDR41)

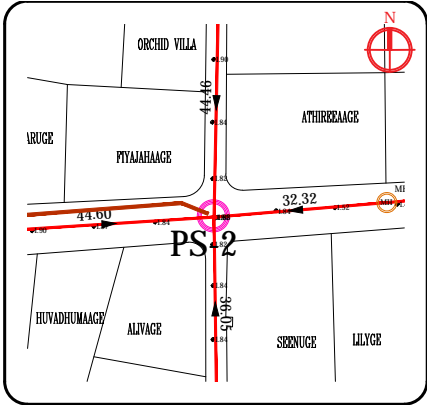
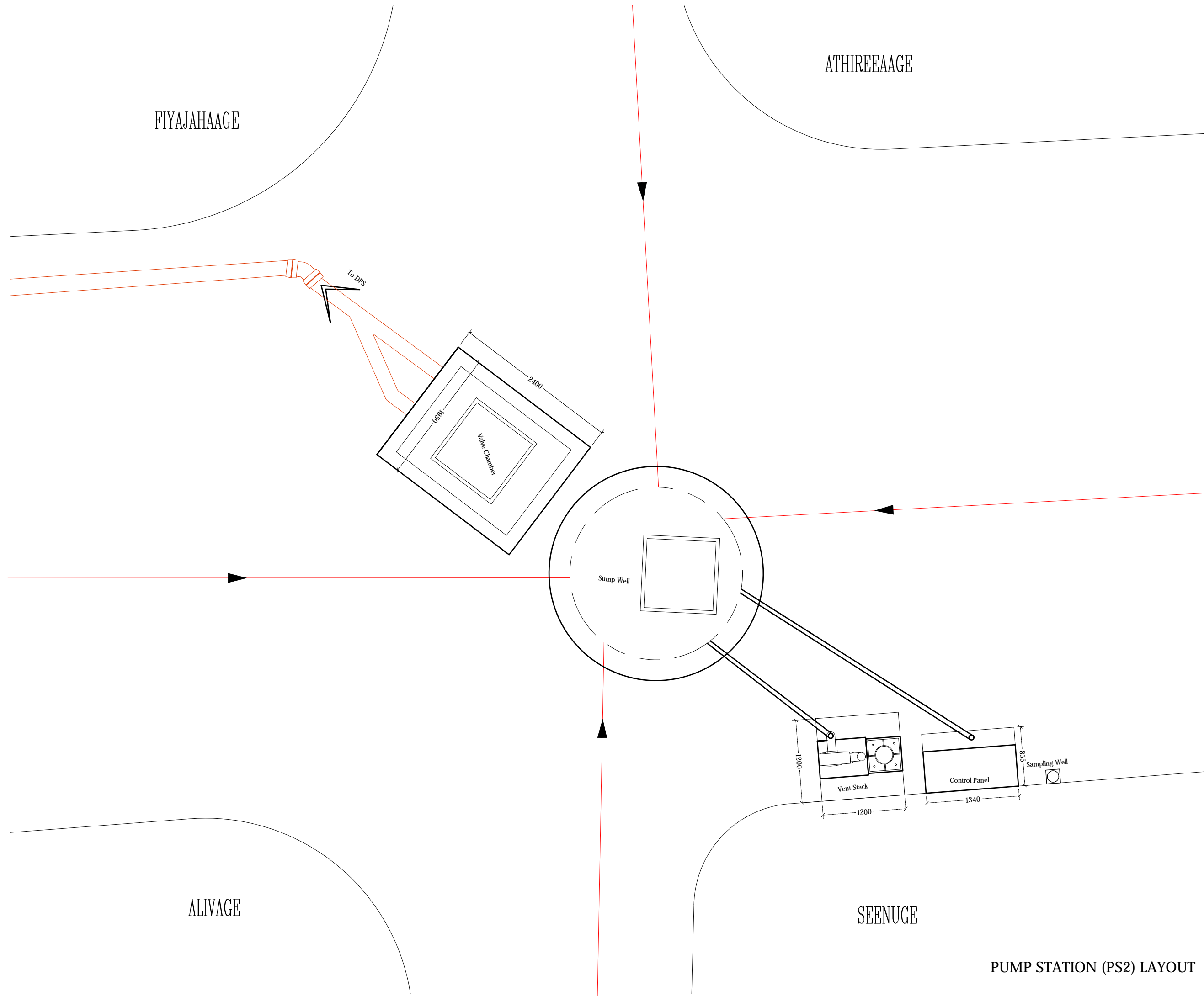
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Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
7 islands, Maldives - Package 6

Sub Title:
Water Supply System in GA. Dheevadhoo

Client:
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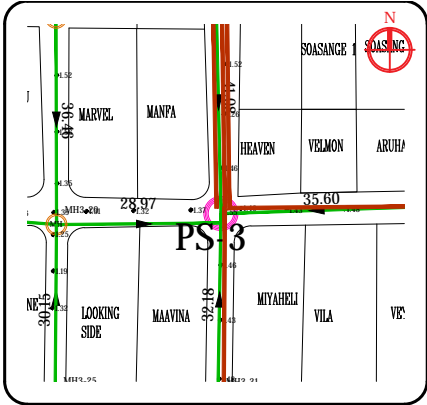
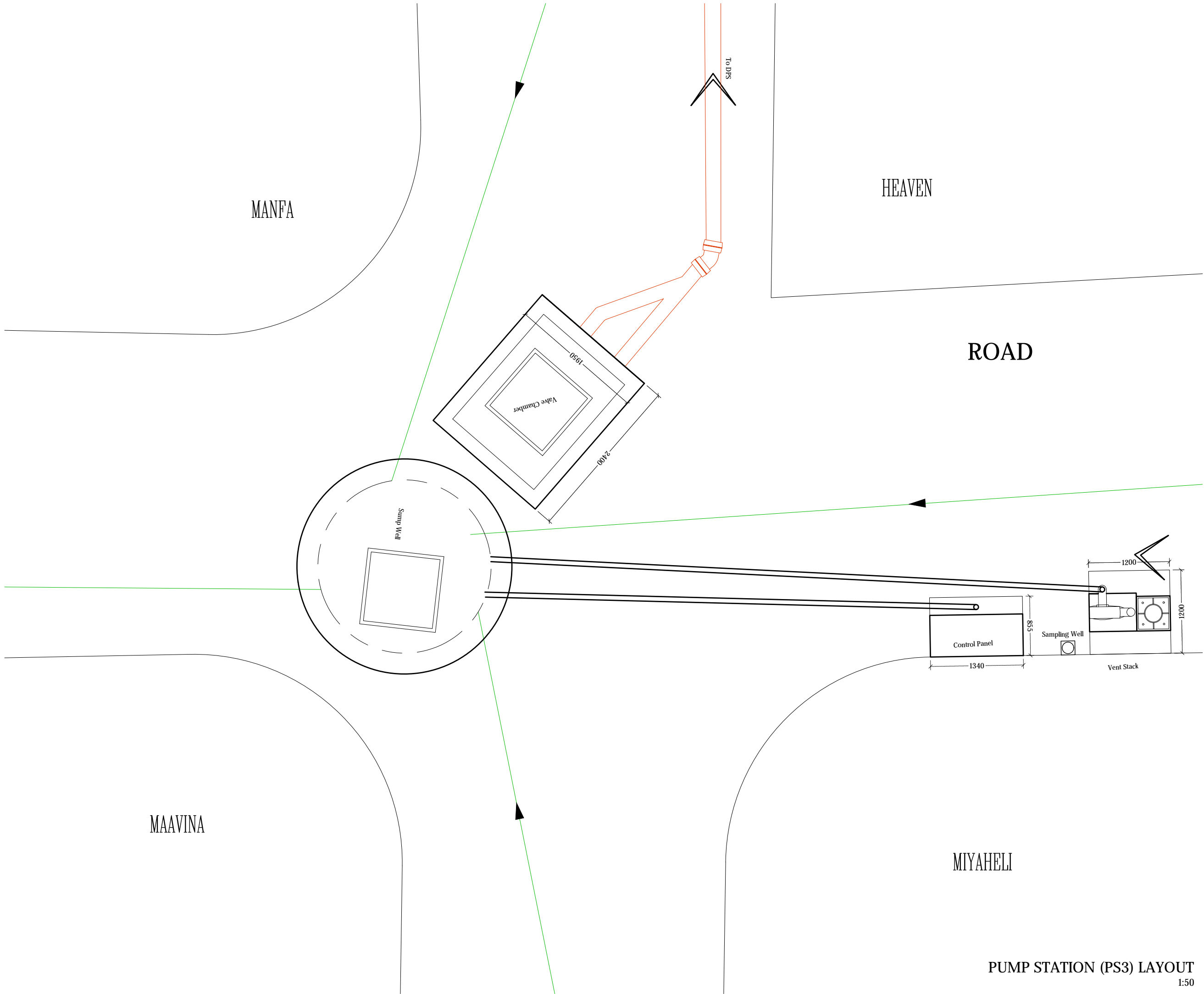
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PUMP STATION (PS2) LAYOUT



Legend

160mm Ø uPVC PS3 Gravity Sewer Main (SN4, SDR41)

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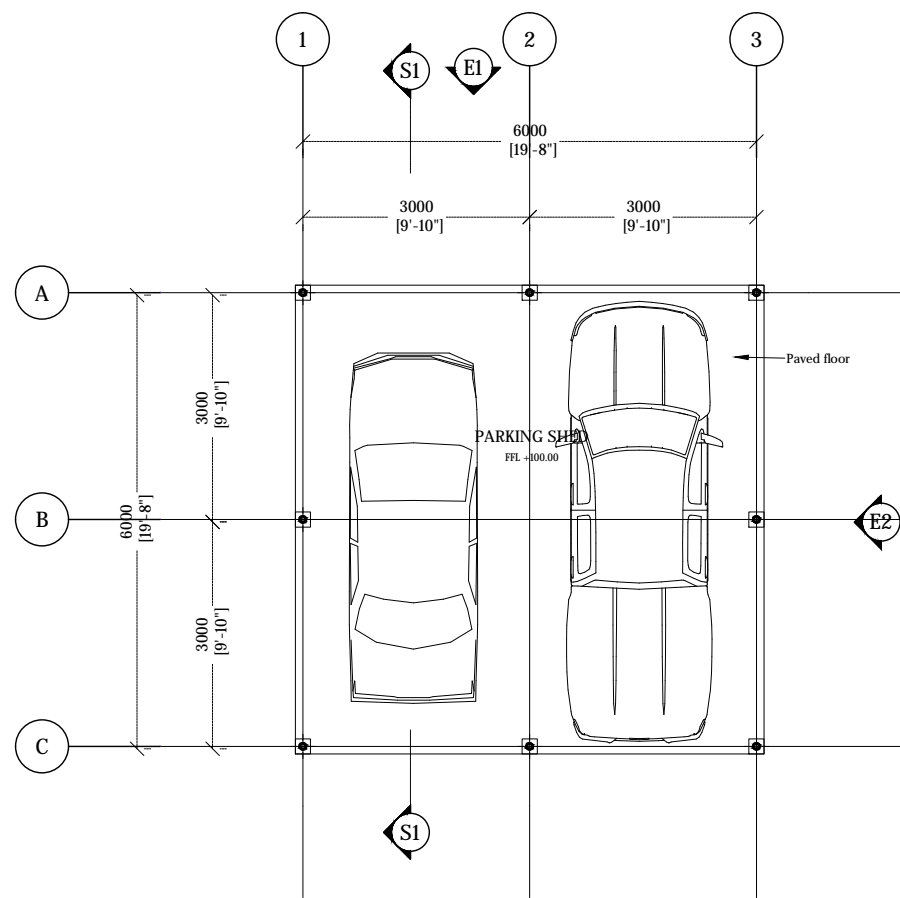
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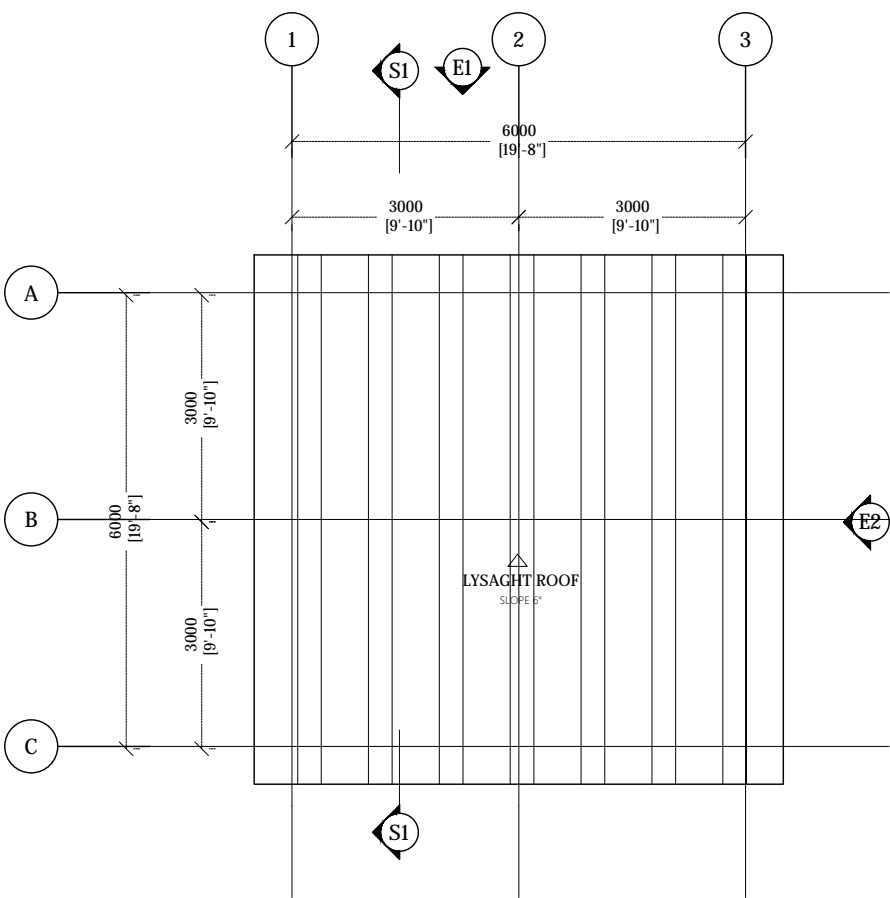
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PUMP STATION (PS3) LAYOUT
1:50



VEHICLE SHED GROUND FLOOR PLAN

1:100



VEHICLE SHED ROOF PLAN

1:100




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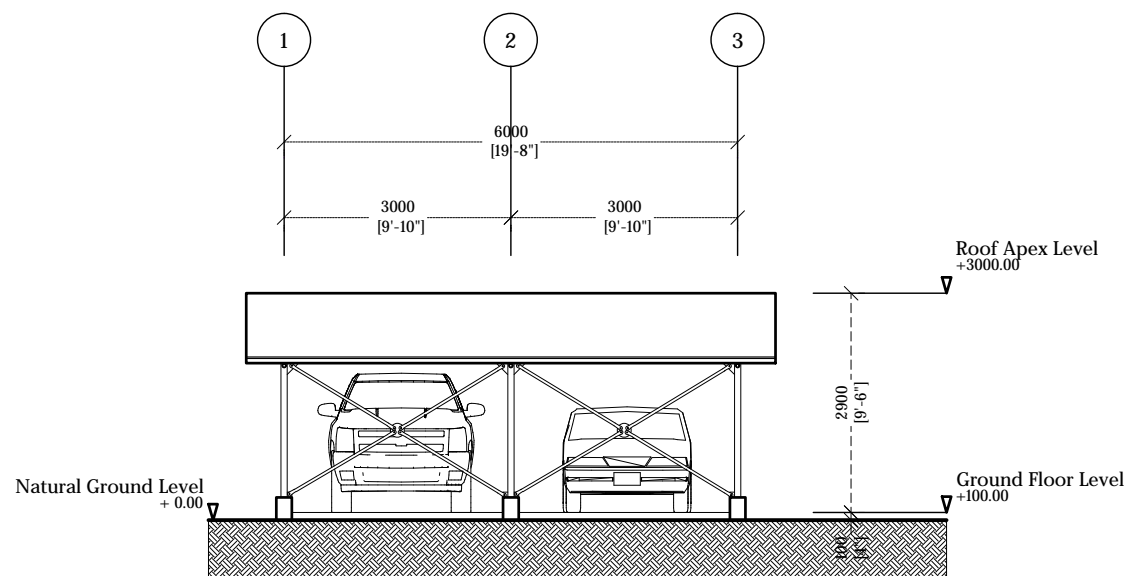


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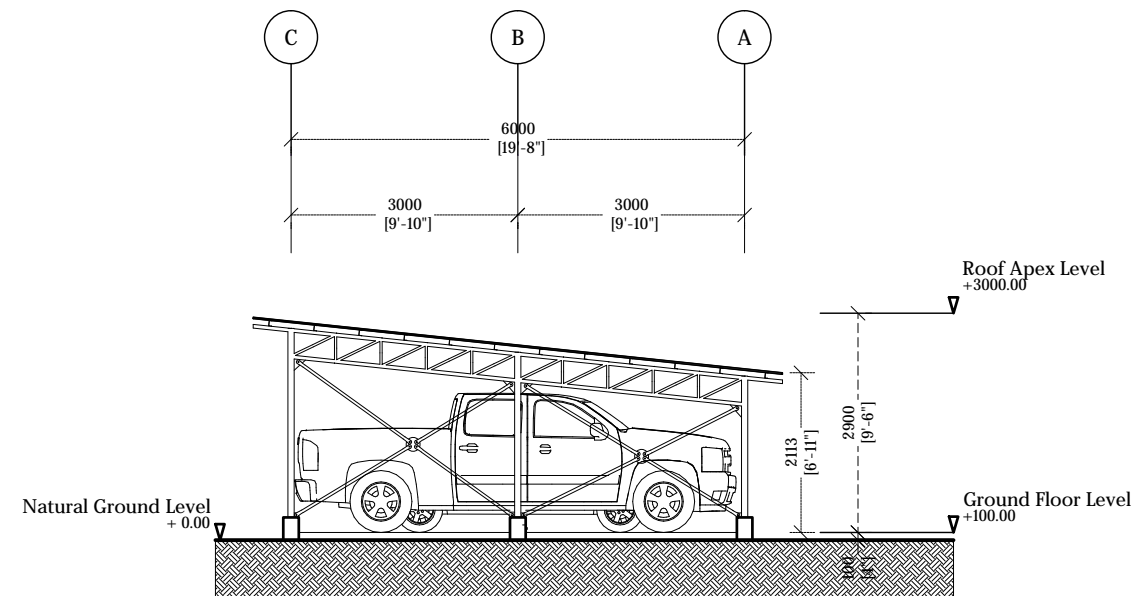
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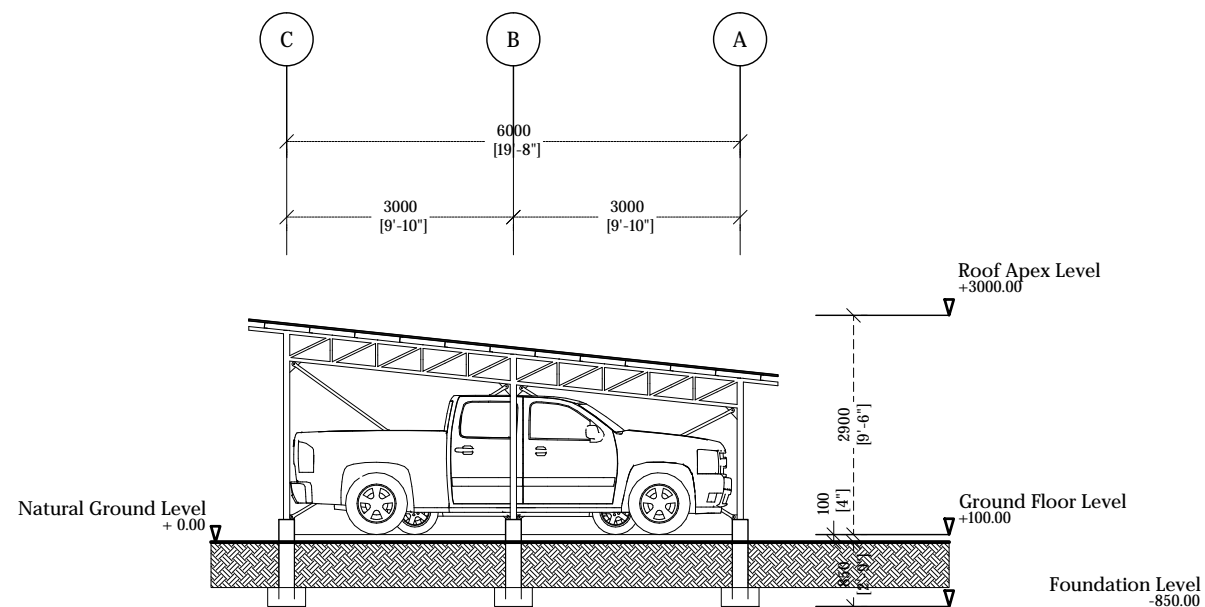
VEHICLE SHED ELEVATION E1

1:100



VEHICLE SHED ELEVATION E2

1:100



VEHICLE SHED SECTION S1

1:100



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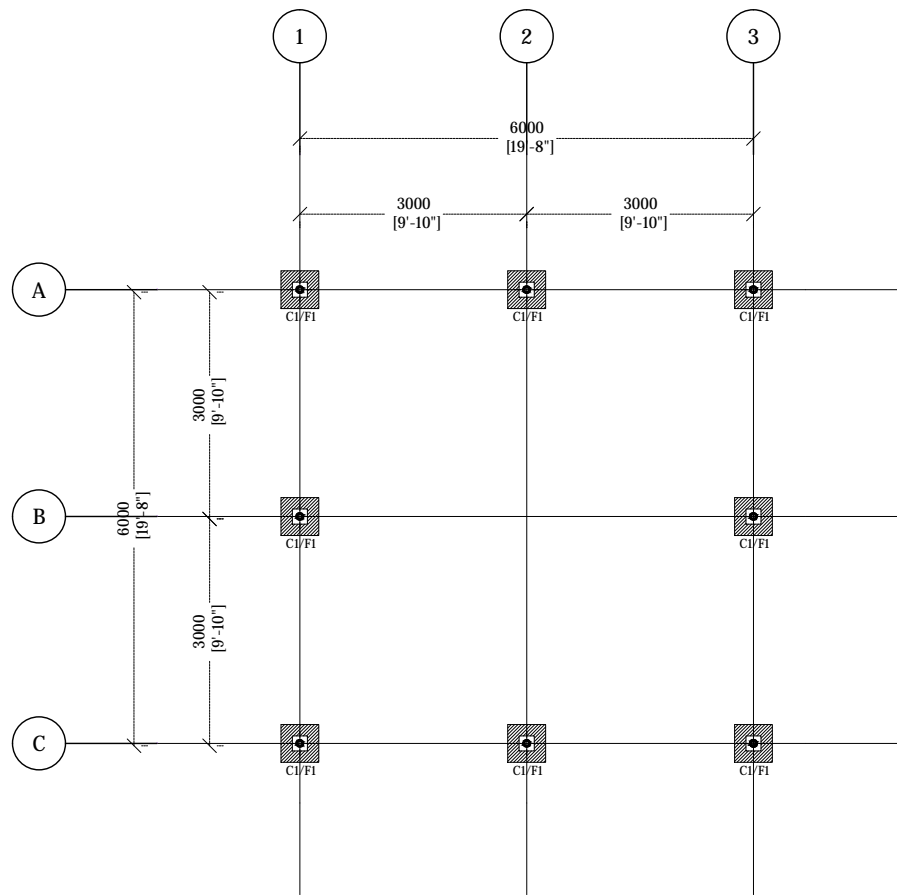
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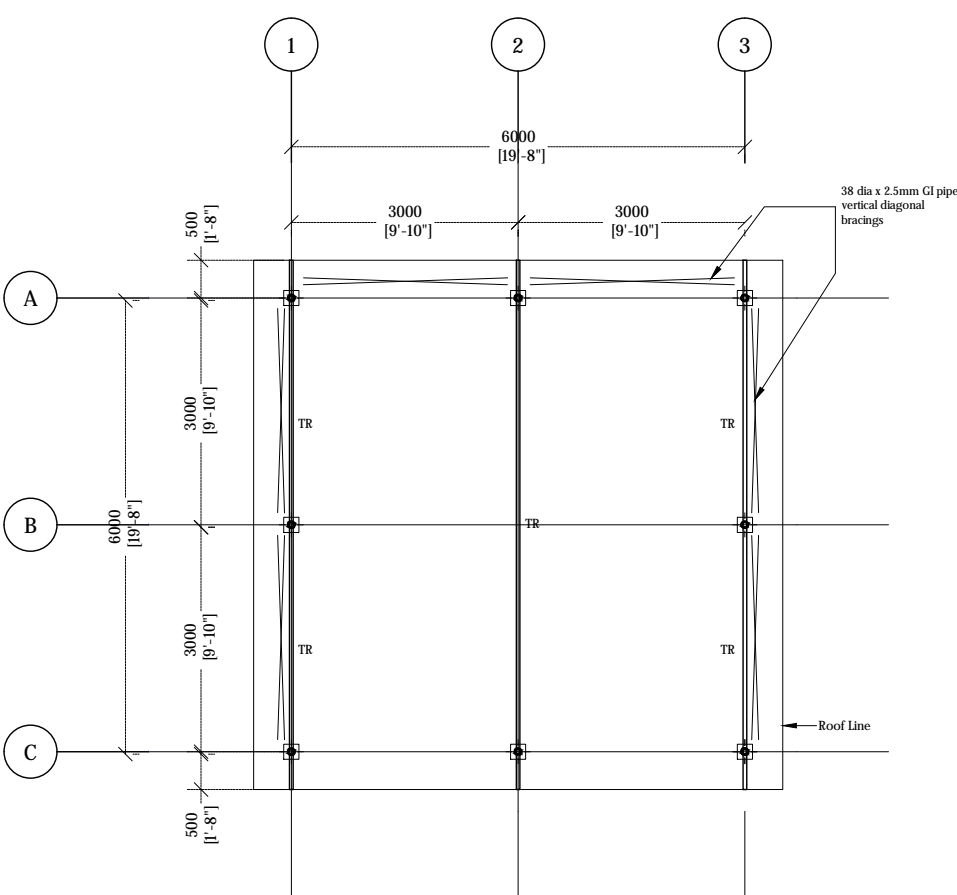
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VS-A(2)



VEHICLE SHED FOUNDATION PLAN
1:100



VEHICLE SHED ROOF TRUSS PLAN
1:100



Legend

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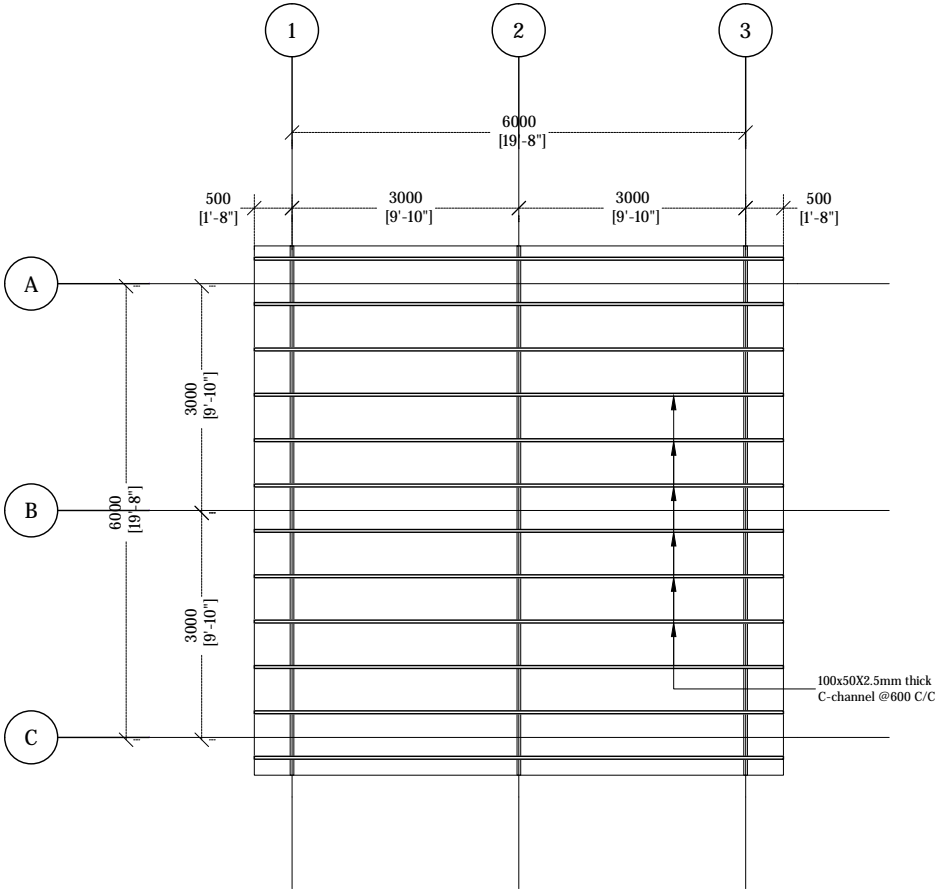
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VEHICLE SHED ROOF FRAMING PLAN

1:100



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Water Supply Sewerage

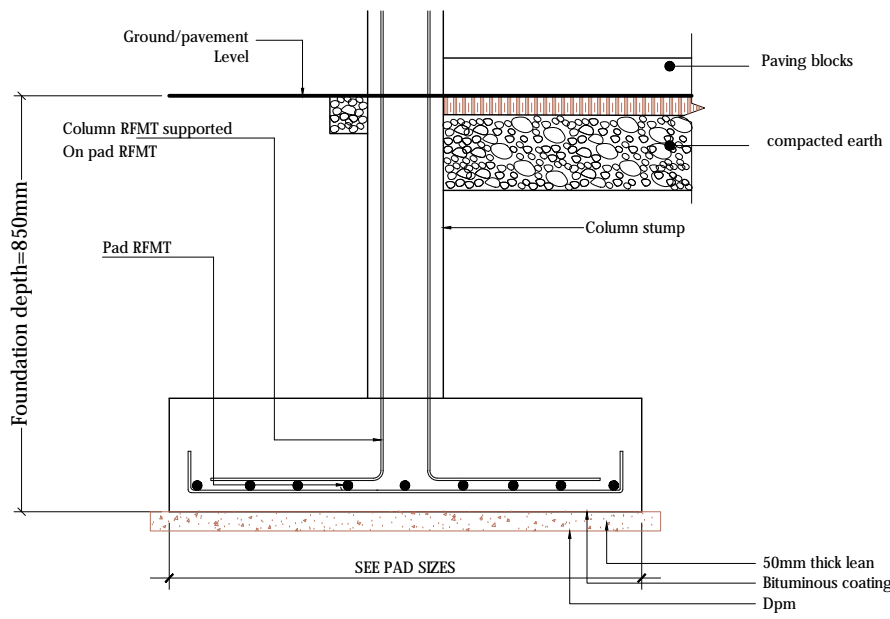
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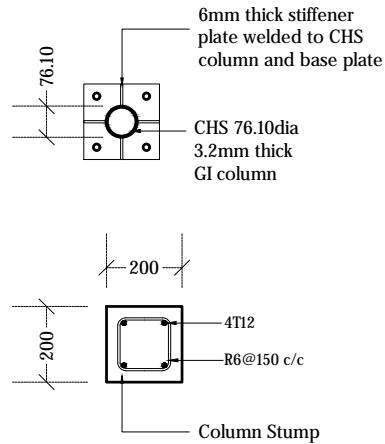
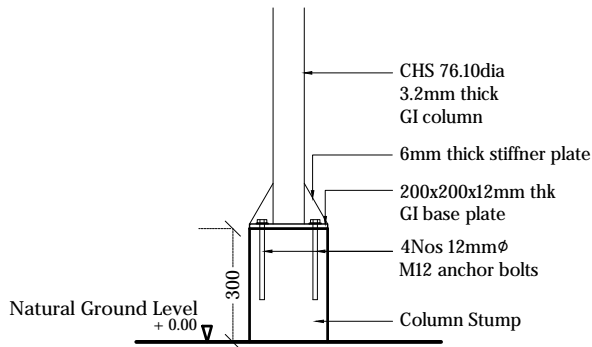


VEHICLE SHED FOOTING DETAIL

1:20

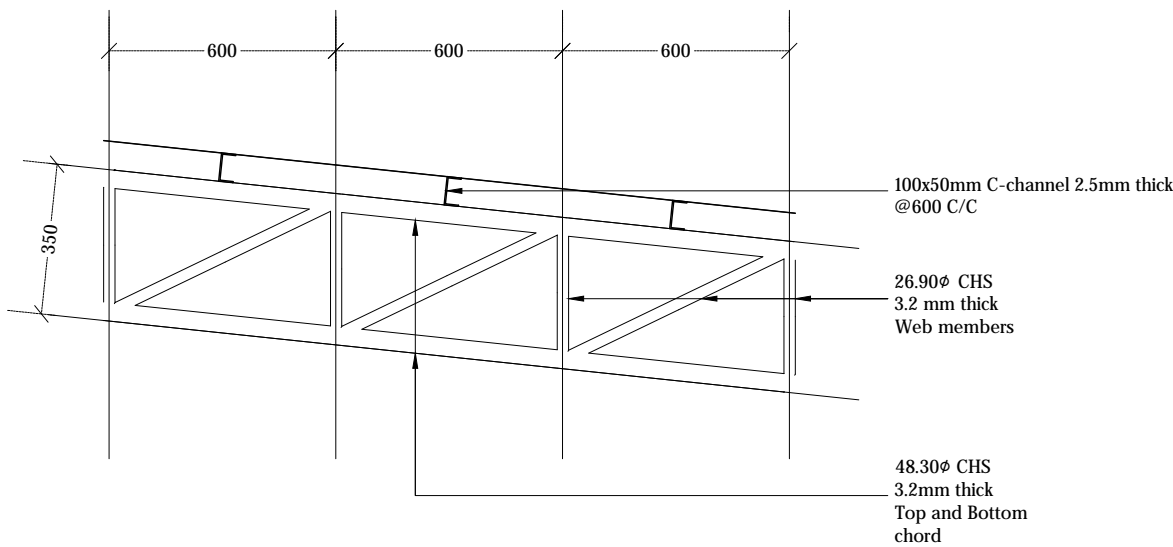
F1 - 500x500x250 - T10@150C/C B/W (B)

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

Sub Title:
Water Supply System in GA. Dhevvadhoo

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



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



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

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

Date: Sep 2020 SCALE (A3): 1:20

Project No: EP-WS/2019/06

Rev: Page:

VS-S(3)



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.
- 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 polythene.
- 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 400x3mm 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

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

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

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

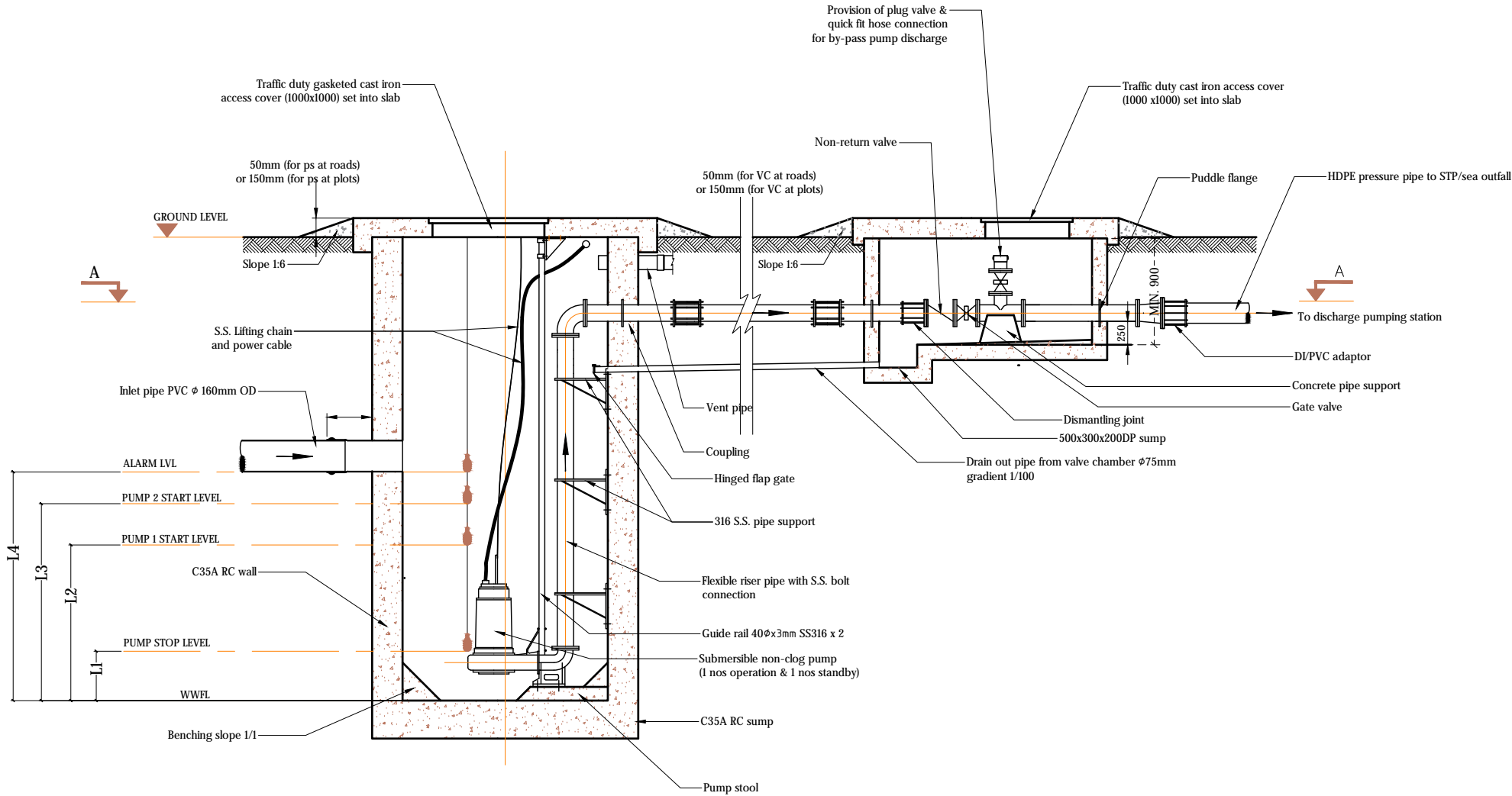
Designed: F.I.A. Approved: I.W.

Date: Sep 2020 SCALE (A3): NTS

Project No: EP-WS/2019/06

Rev: Page:

W-(5)



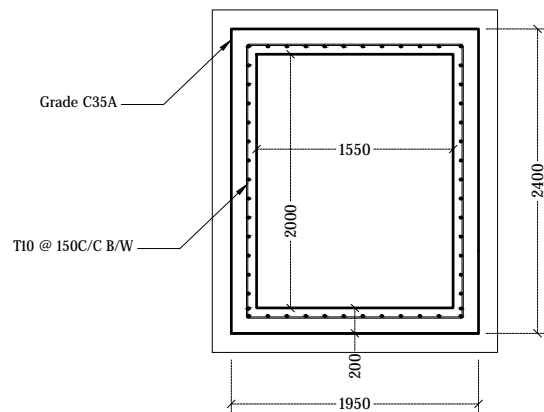
PUMP STATION DESIGN DETAILS

(15 YEARS)

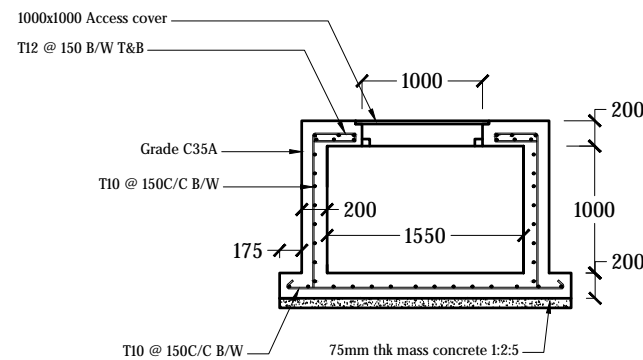
Pump Station	Diameter (Ø)	Depth (D)	Inlet Depth	Pump Capacity	Head	Levels			
						L1	L2	L3	L4
PS1	2.0m	3.20m	2.3m	2.7 l/s	12.2 m	0.300m	0.604m	0.754m	0.904m
PS2	2.0m	3.00m	2.4m, 2.1m, 2.1m, 2.0m	4.0 l/s	12.8 m	0.300m	0.641m	0.791m	0.941m
PS3	2.0m	3.10m	2.2m, 1.9m, 1.8m, 1.5m	3.8 l/s	6.6 m	0.300m	0.633m	0.783m	0.933m

PUMP STATION DETAILS - LONGITUDINAL SECTION
NTS

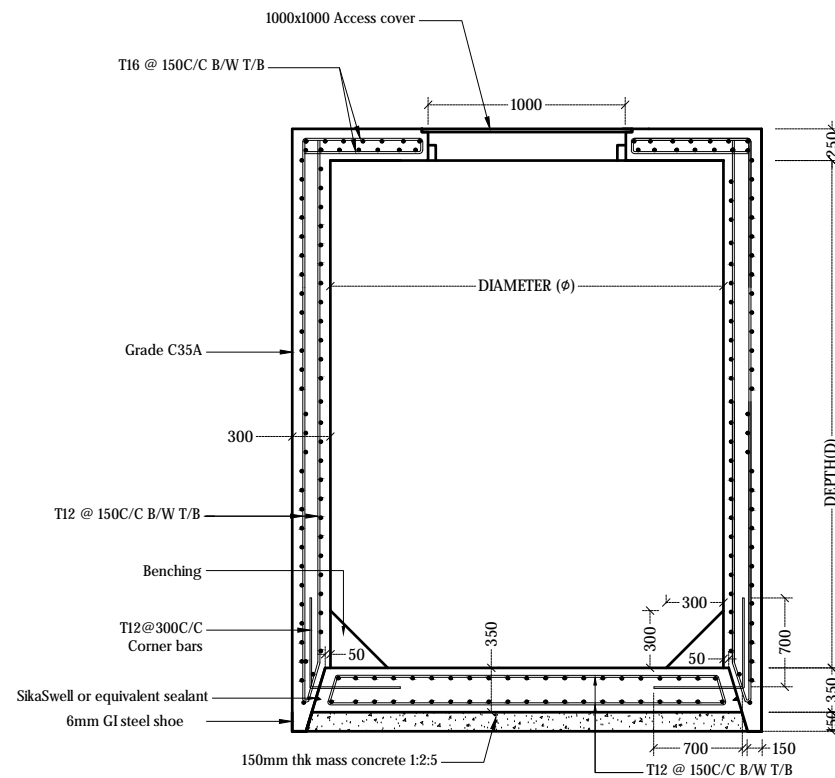
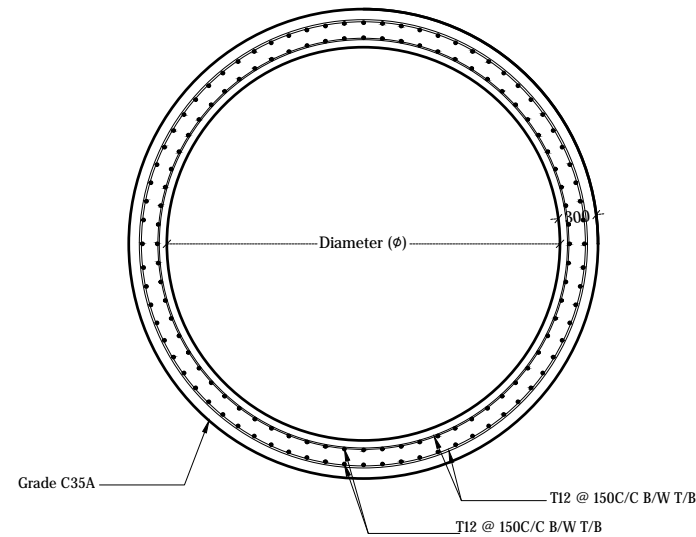
PLAN VIEW



SECTION



VALVE CHAMBER DETAIL



PUMP STATION DETAIL

Pump Station	Diameter (ϕ)	Depth (D)	Inlet Depth
PS1	2.0m	3.20m	2.304m
PS2	2.0m	3.00m	2.414m, 2.148m, 2.139m, 2.039m
PS3	2.0m	3.10m	2.197m, 1.888m, 1.833m, 1.524m

PUMP STATION STRUCTURAL DETAILS

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.
- 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
- 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)
2. Power cable
3. Auto-coupling with 400x3mm SS316 guide rail
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.
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Title:

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

Sub Title:

Water Supply System in GA. Dheevadhoo

Client:

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



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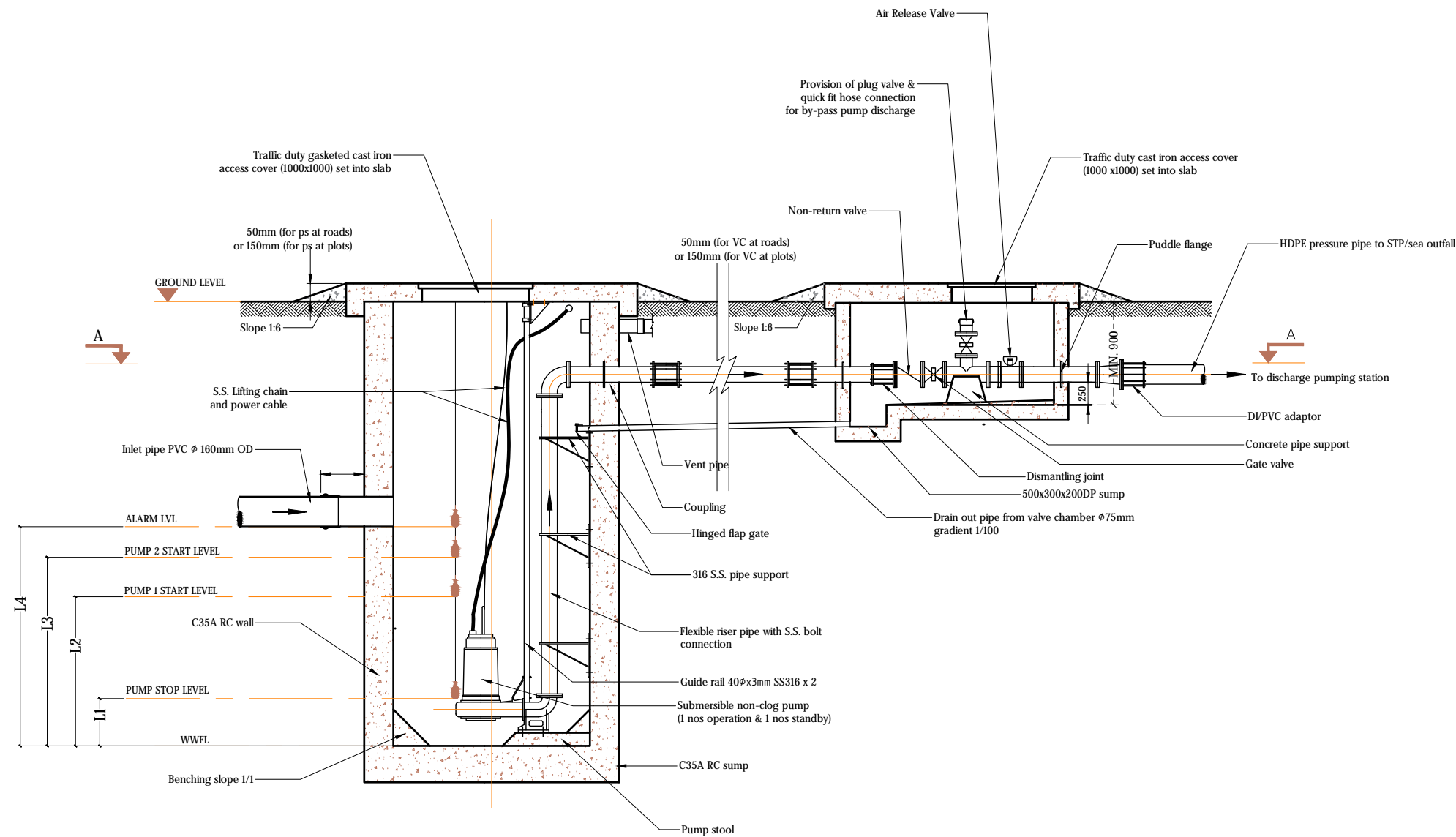
Drawn: F.I.A. Checked: M.S.S.

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

Date: Sep 2020 SCALE (A3): 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	10.5 l/s	20.7 m	0.300m	0.771m	0.921m	1.071m

DISCHARGE PUMP STATION DETAILS - LONGITUDINAL SECTION

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.
- 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 polythene.
- All concrete cold joints shall be 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 40x3mm 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

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.
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Title:
Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
7 Islands, Maldives - Package 6

Sub Title:
Water Supply System in GA. Dheevadhoo

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

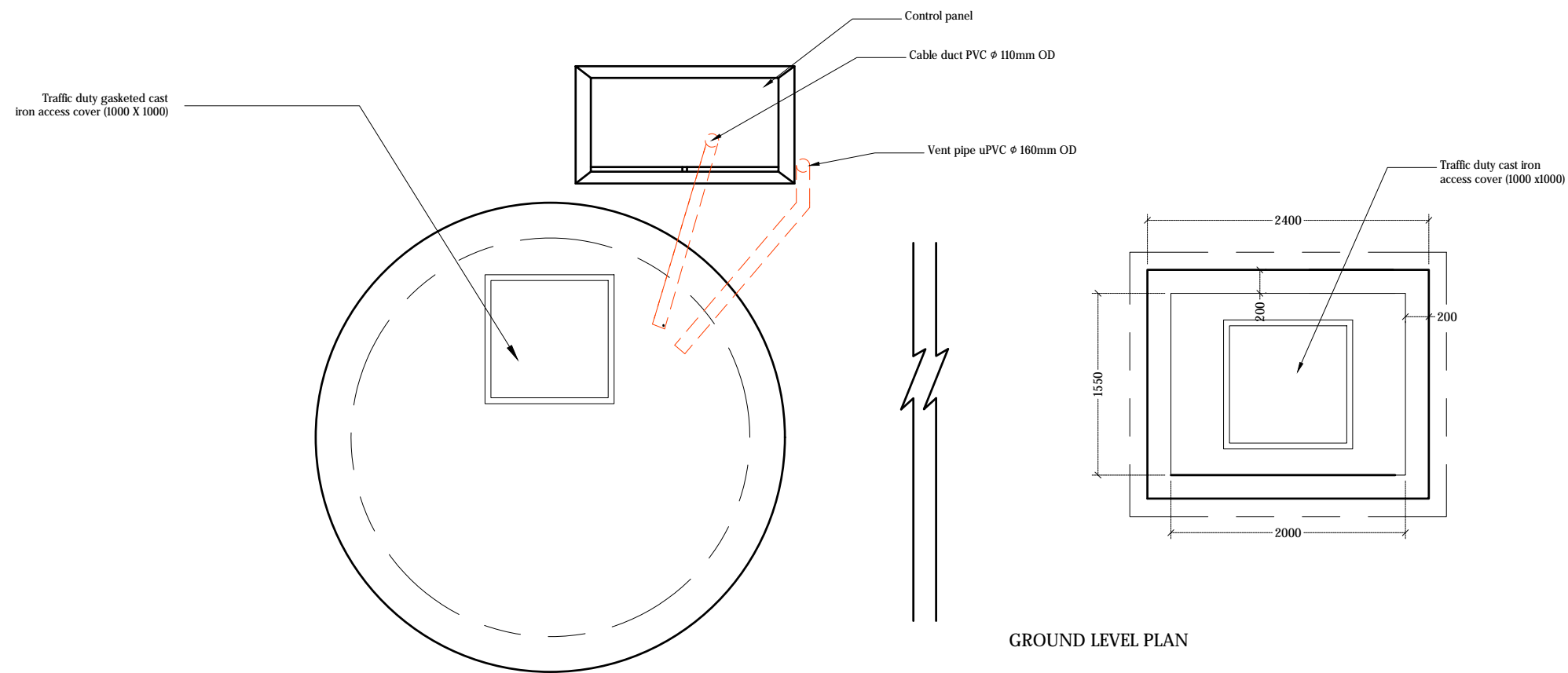
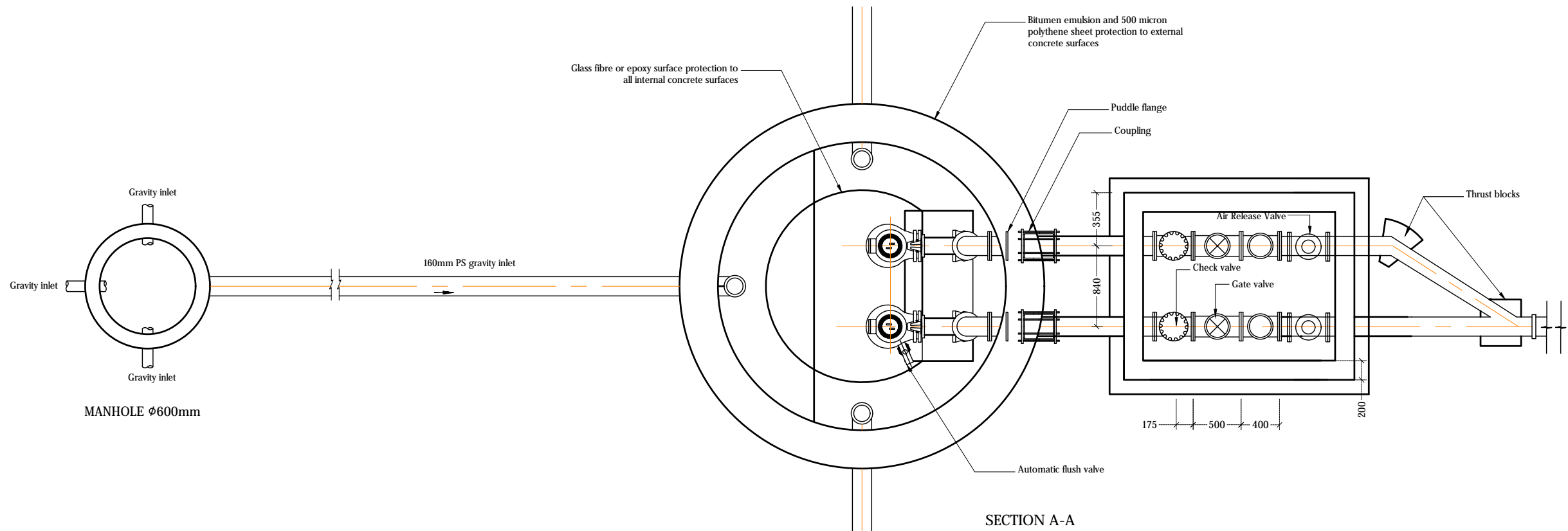
Designed: F.I.A. Approved: I.W.

Date: Sep 2020 SCALE (A3): NTS

Project No: EP-WS/2019/06

Rev: Page:

W-(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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- 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 400x3mm 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

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:

Consultancy Services for Survey, Design and EIA works of Water Supply and Sewerage Facilities in 7 islands, Maldives - Package 6

Sub Title:

Water Supply System in GA. Dheevadhoo

Client:

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



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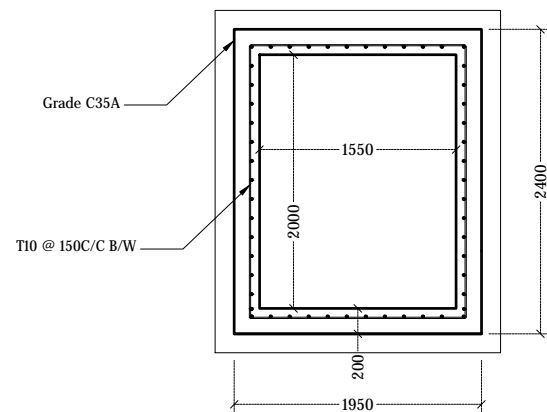
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Project No: EP-WS/2019/06

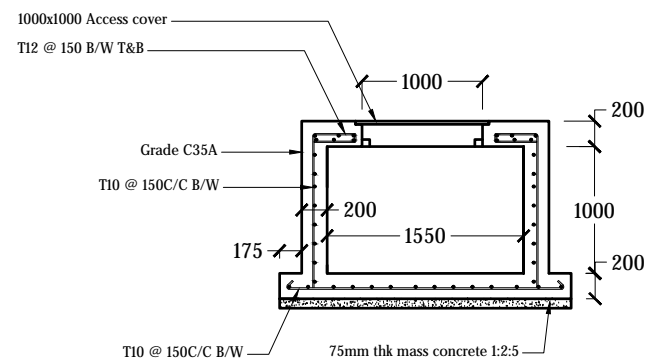
Rev: Page:

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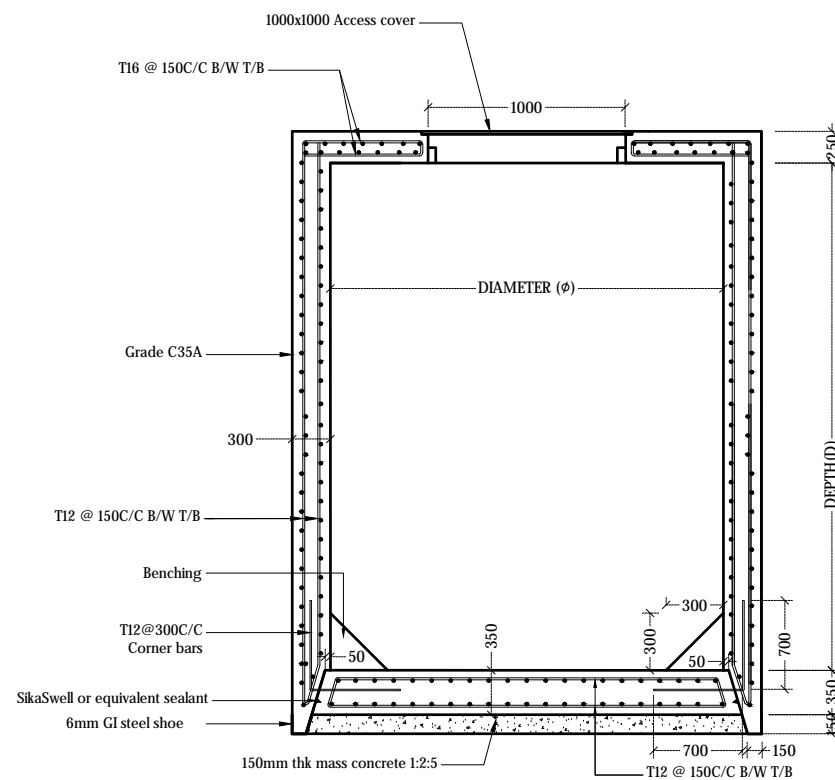
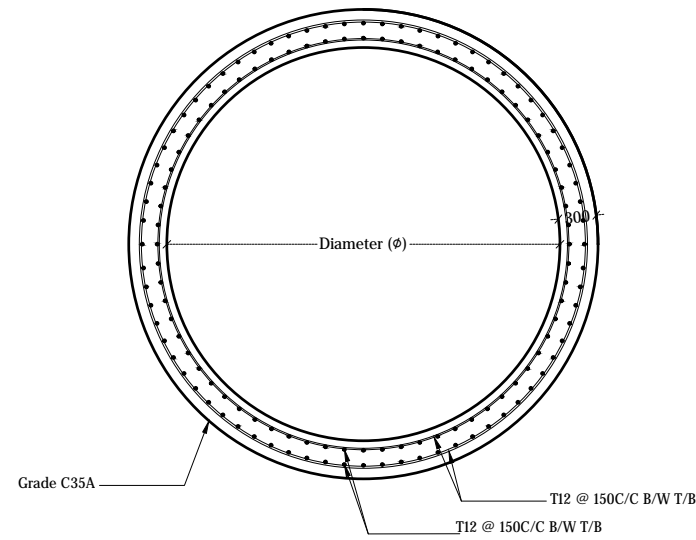
PLAN VIEW



SECTION



VALVE CHAMBER DETAIL



PUMP STATION DETAIL

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

DISCHARGE PUMP STATION STRUCTURAL DETAILS

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.
- 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.
- 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)
2. Power cable
3. Auto-coupling with 400x3mm SS316 guide rail
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.
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Title:

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

Sub Title:

Water Supply System in GA. Dheevadhoo

Client:

Ministry of National Planning, Housing and
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Drawn: F.I.A. Checked: M.S.S.

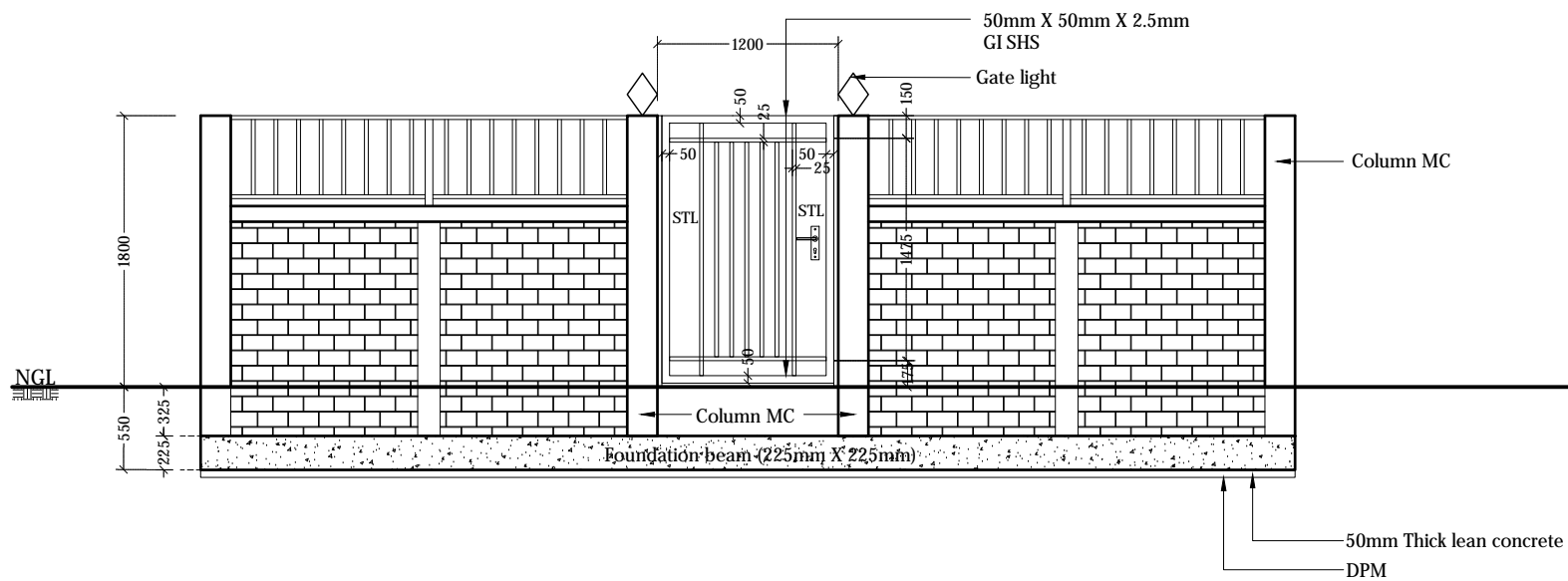
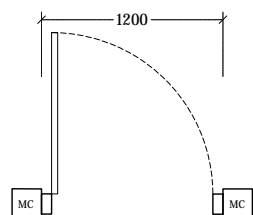
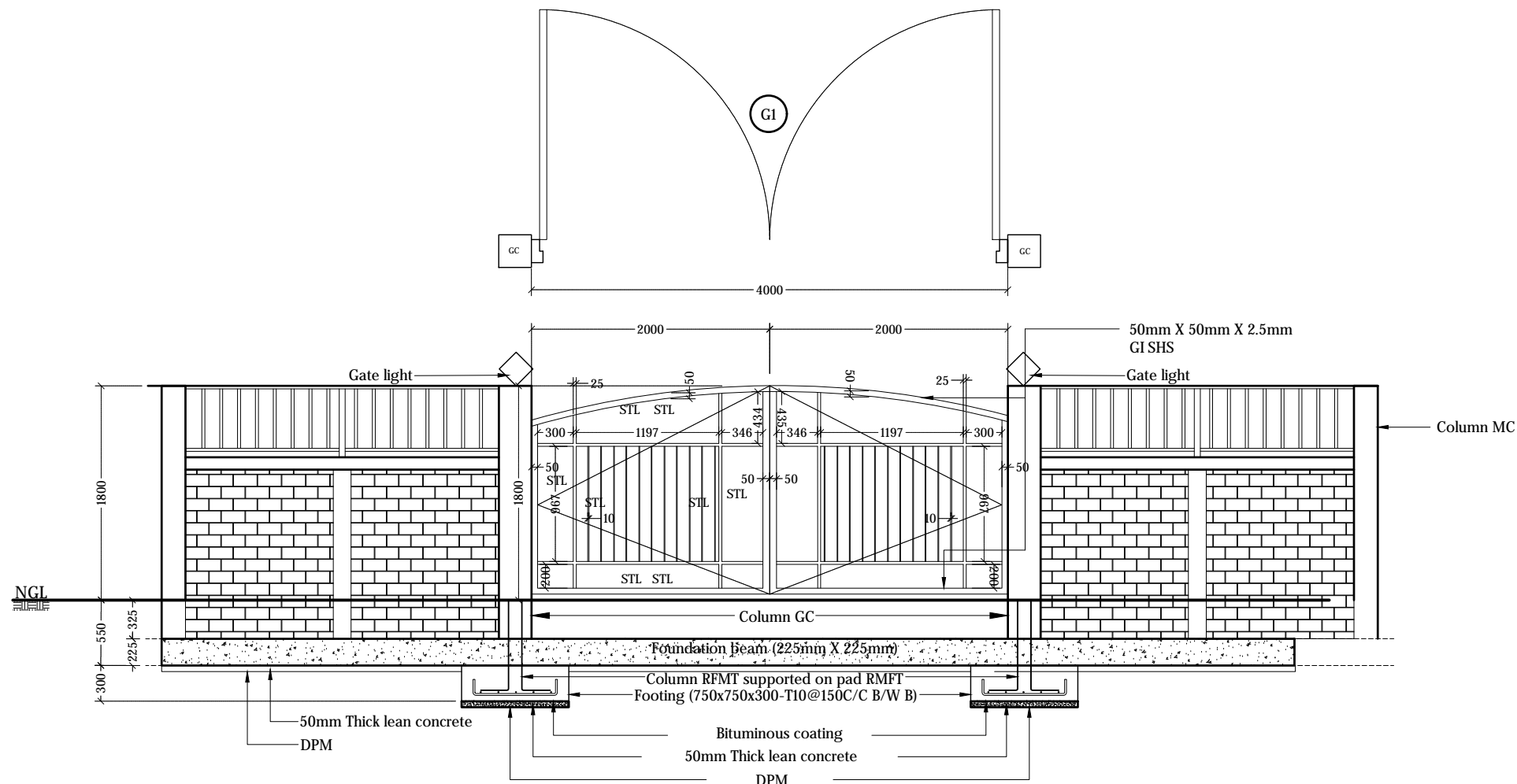
Designed: F.I.A. Approved: I.W.

Date: Sep 2020 SCALE (A3): NTS

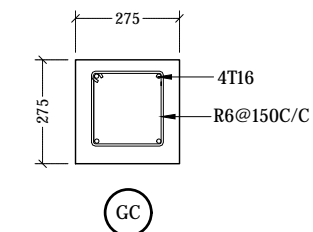
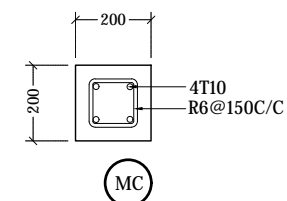
Project No: EP-WS/2019/06

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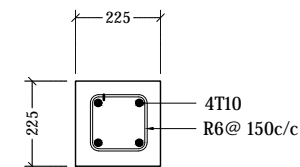
W-(27)



GATE DETAILS
1:50



COLUMN DETAILS
1:20



FOUNDATION BEAM DETAIL
1:20



Legend

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 casted with
bonding agent

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

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

Sub Title:
Water Supply System in GA. Dheevadhoo

Client:
**Ministry of National Planning, Housing and
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Drawn: F.I.A. Checked: M.S.S.

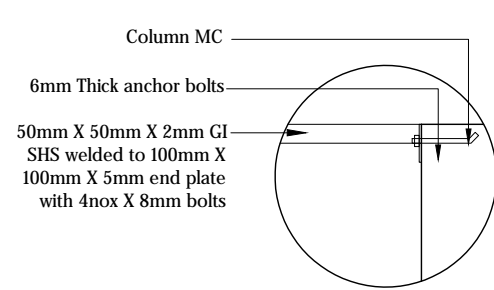
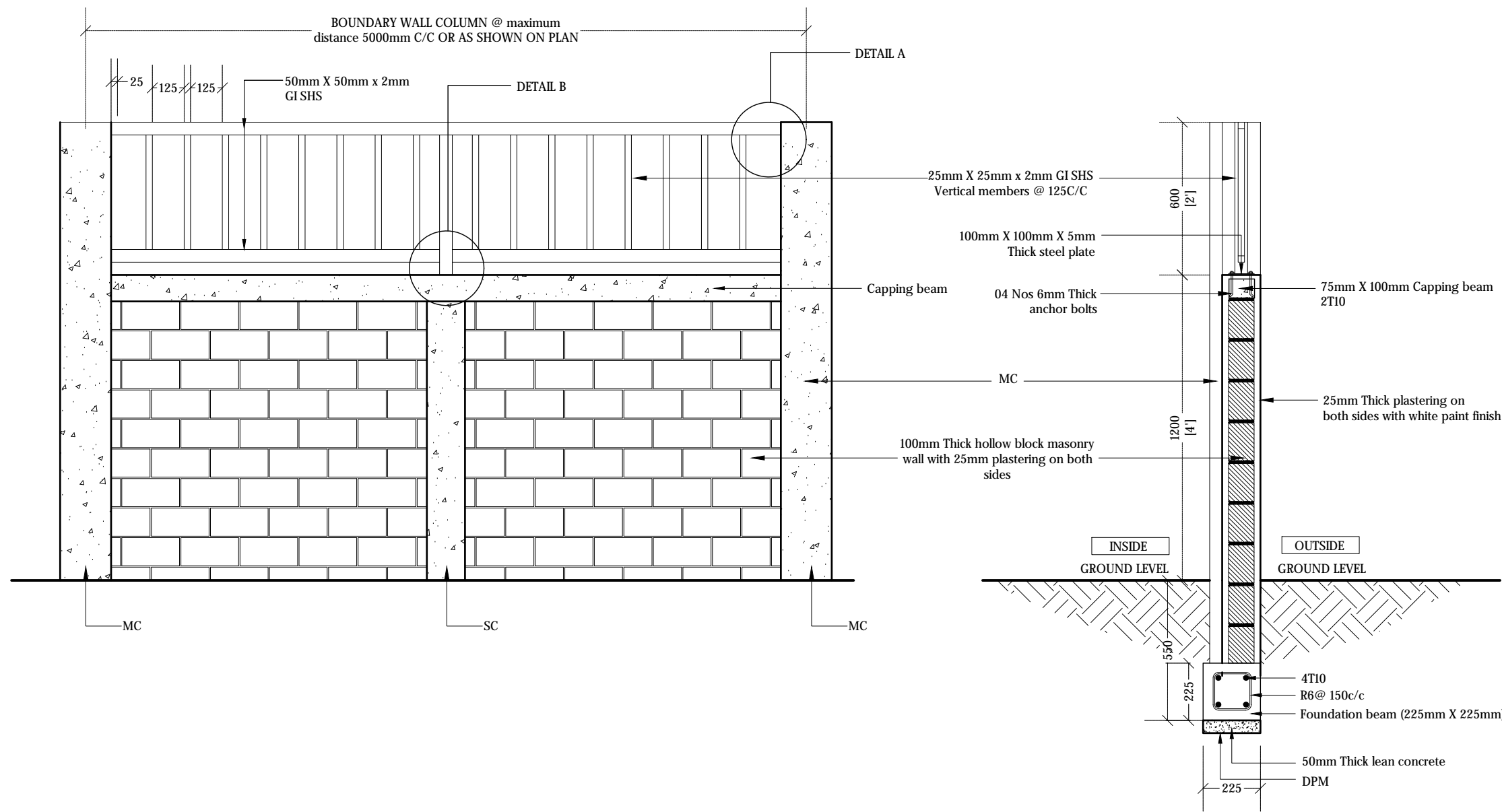
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Date: Sep 2020 SCALE (A3):

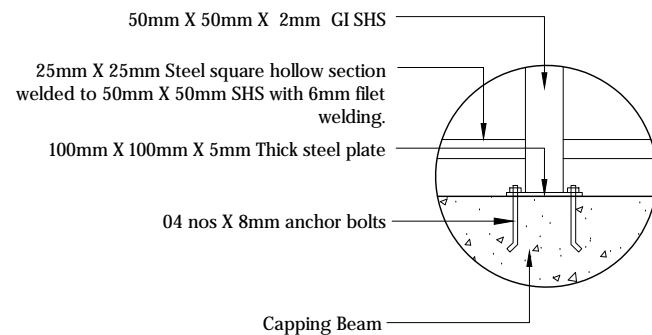
Project No: EP-WS/2019/06

Rev: Page:

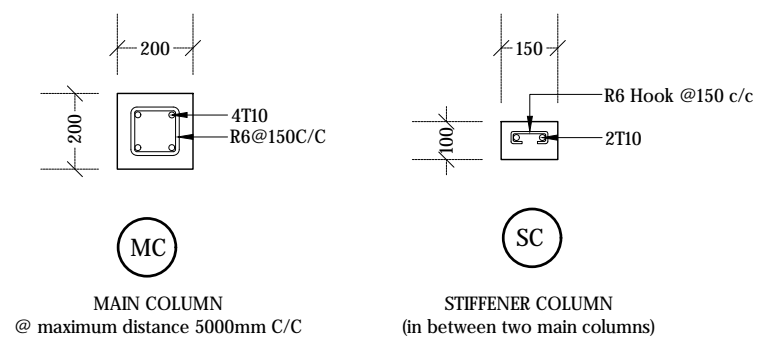
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DETAIL A
1:10



DETAIL B
1:10



Legend

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 casted with bonding agent

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
Consultancy Services for Survey, Design and EIA works of Water Supply and Sewerage Facilities in 7 islands, Maldives - Pakage 6

Sub Title:
Water Supply System in GA. Dheevadhoo

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



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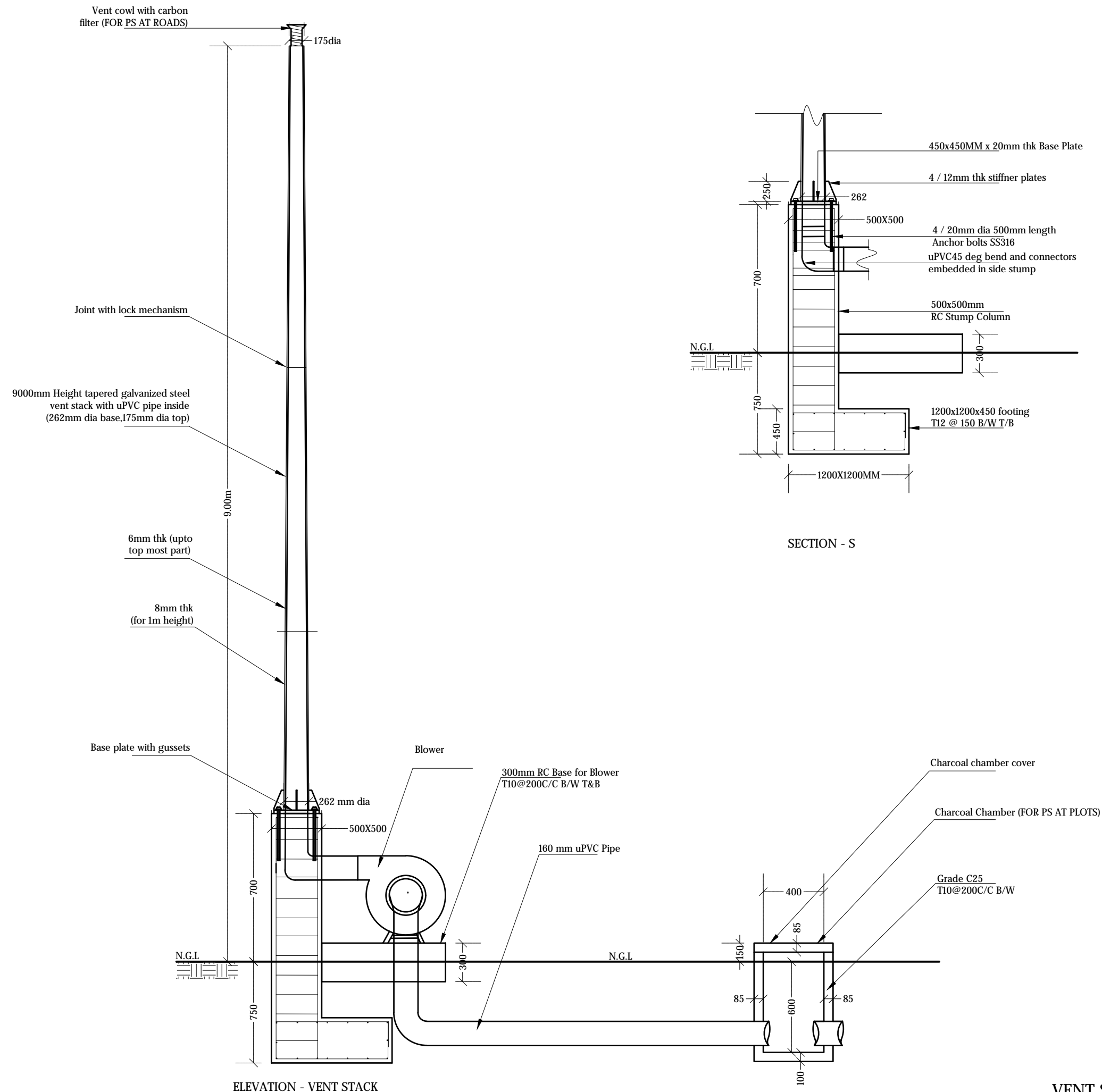
Date: Sep 2020 SCALE (A3): 1:20

Project No: EP-WS/2019/06

Rev: Page:

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PS & STP BOUNDARY WALL AND FENCING DETAILS



VENT STACK DETAILS

NTS



Legend

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.

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

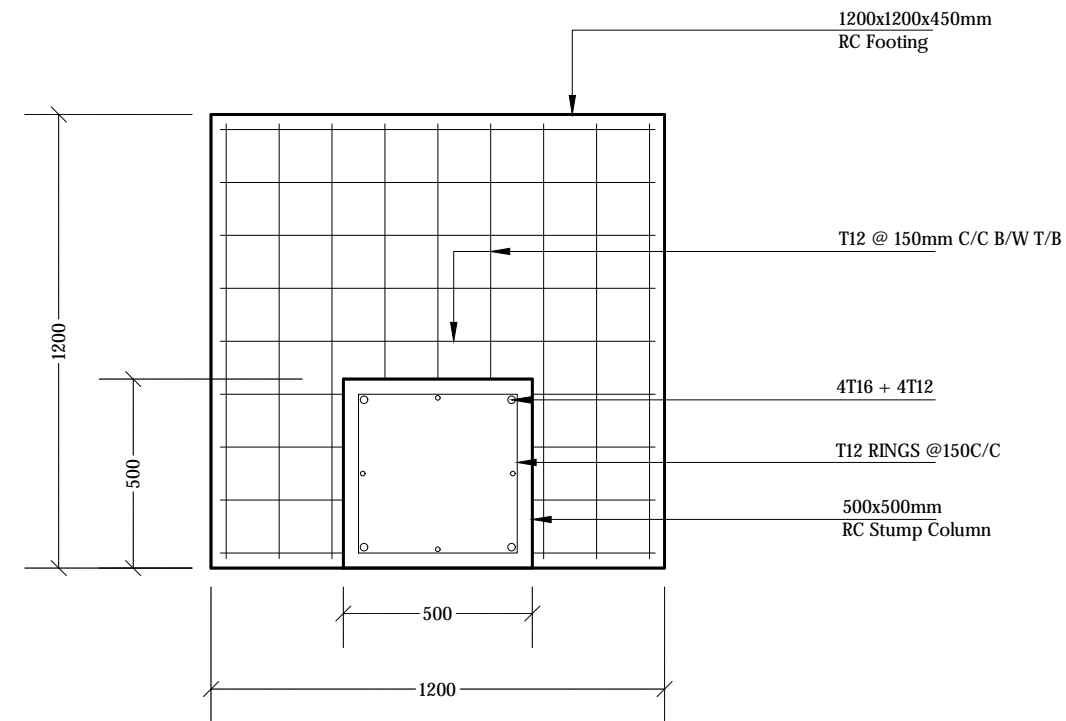
Sub Title:
Water Supply System in GA. Dhevbadhoo

Client:
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FOODBACK INFRA
Water Supply Sewerage Systems

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	Page: W-(10)

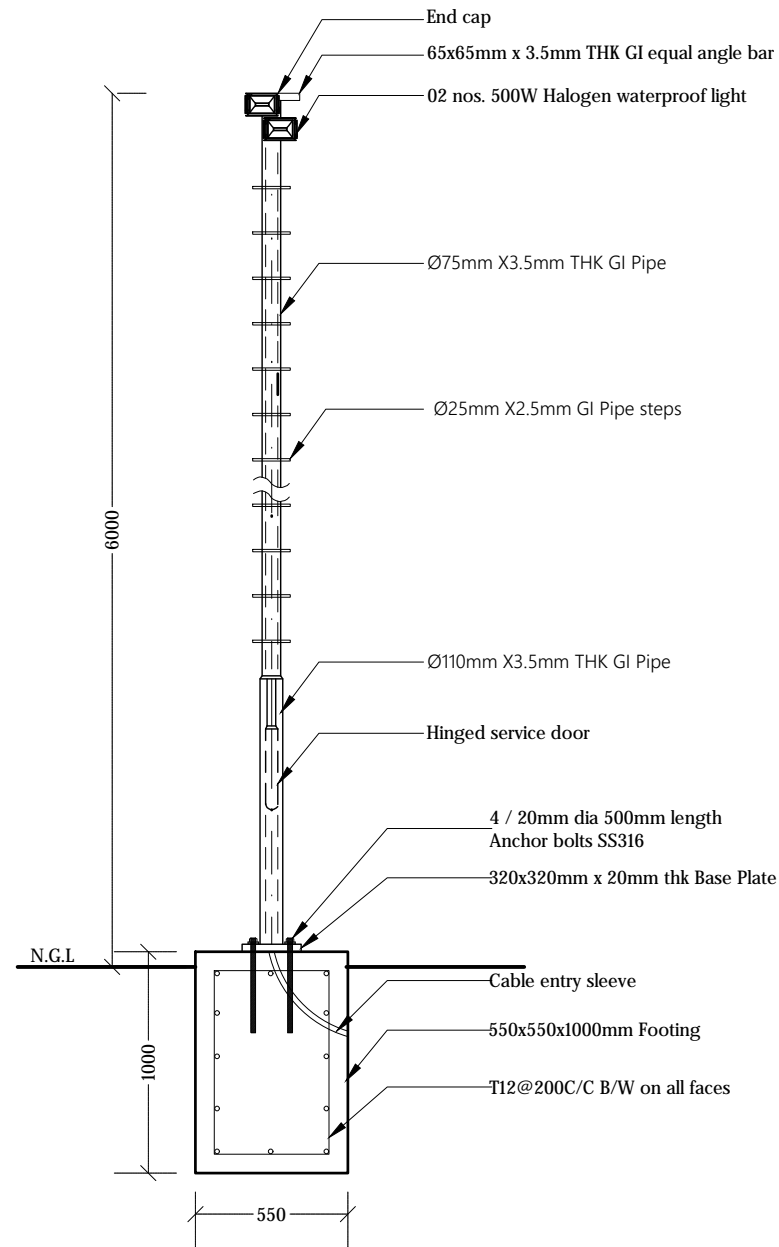


Technical drawing of the Air Blowing Mechanism, showing a side view of the components and their dimensions:

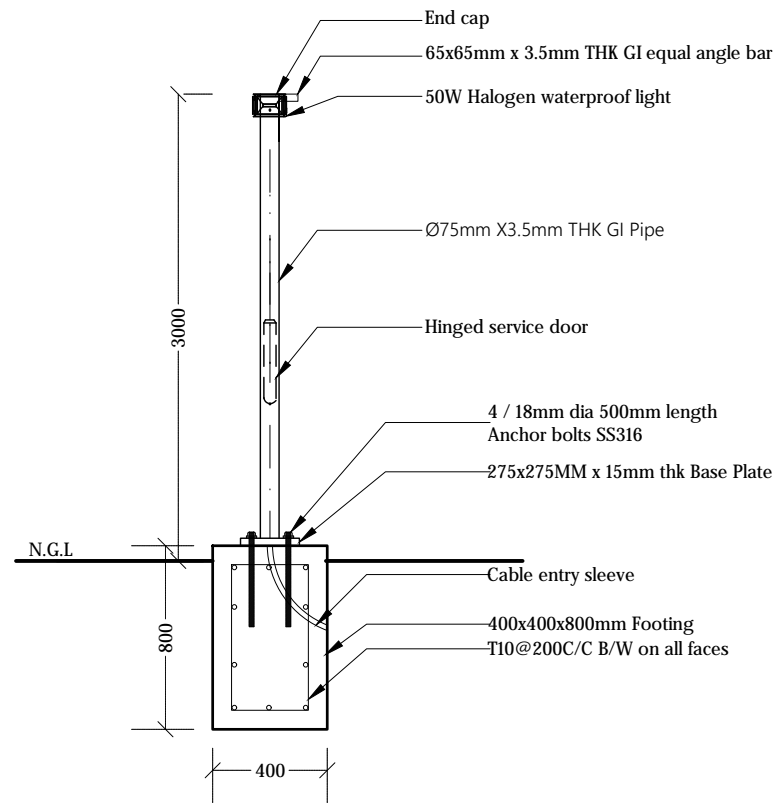
- Vent Stack**: Indicated by a line pointing to the circular opening on the left.
- 800**: Dimension indicating the length of the main rectangular housing.
- 600**: Dimension indicating the height of the main rectangular housing.
- Air Blower**: Indicated by a line pointing to the cylindrical component inside the housing.
- 300MM RC Base for Blower T10@200C/C B/W T&B**: Label for the base of the air blower.
- 160 mm uPVC Pipe**: Indicated by a line pointing to the horizontal pipe connecting the blower to the charcoal chamber.
- Charcoal Chamber (FOR PS AT PLOTS)**: Indicated by a line pointing to the rectangular chamber on the right.
- 400**: Dimension indicating the width and height of the charcoal chamber.

VENT STACK AND AIR BLOWER DETAILS

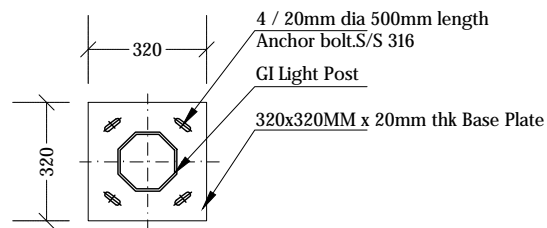
Page:
W-(11)



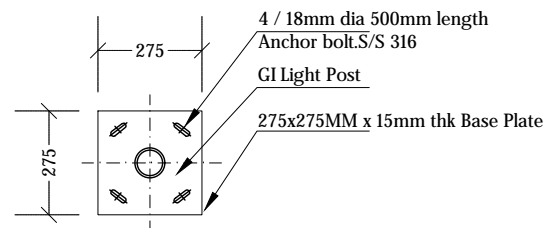
LIGHT POST DETAILS FOR STP COMPOUND (LP1)



LIGHT POST DETAILS FOR PUMP STATION (LP2)



BASE PLATE (LP1)



BASE PLATE (LP2)

LIGHT POST DETAILS

NTS



Legend

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

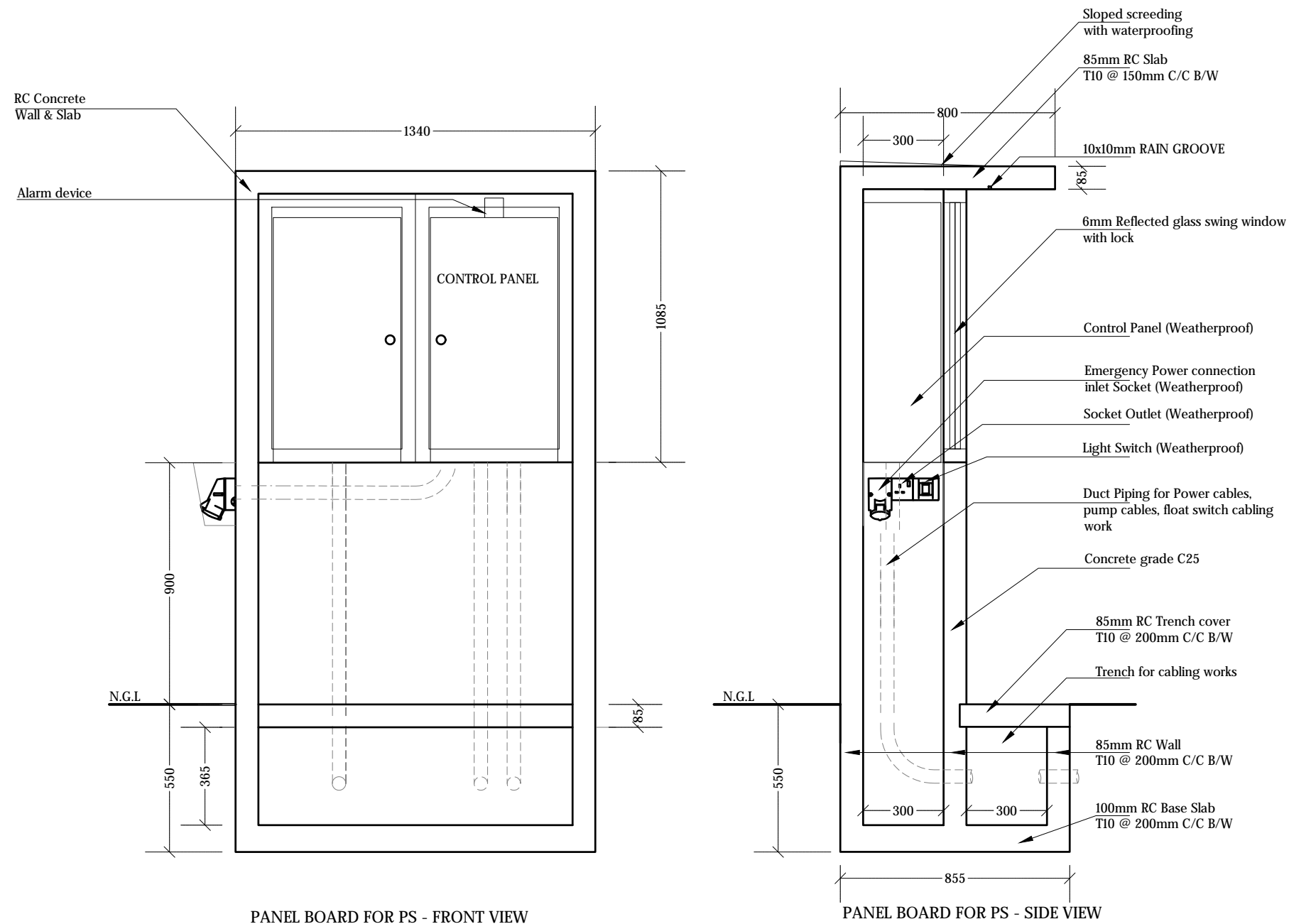
Designed: F.I.A. Approved: I.W.

Date: Sep 2020 SCALE (A3): NTS

Project No: EP-WS/2019/06

Rev: Page:

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CONTROL PANEL BOARD DETAILS

NTS

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
7 islands, Maldives - Package 6

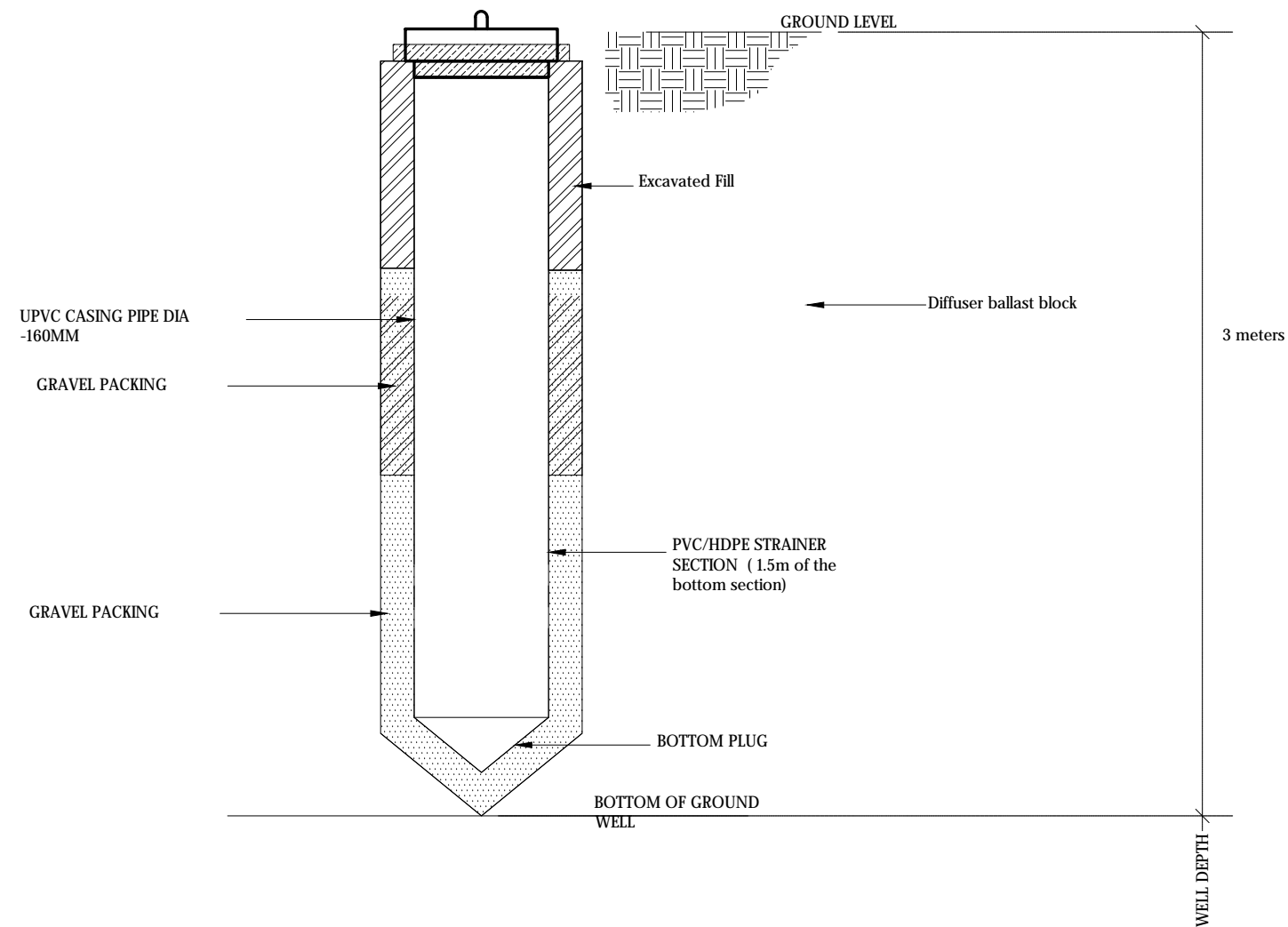
Sub Title:
Water Supply System in GA. Dheevadhoo

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

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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	Page: W-(13)



SAMPLING WELL SECTION

NTS



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
7 islands, Maldives - Pakage 6

Sub Title:
Water Supply System in GA. Dheevadhoo

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

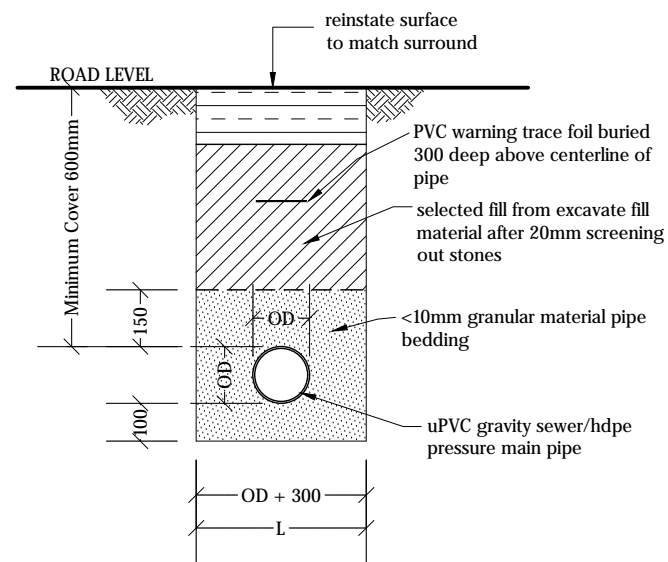


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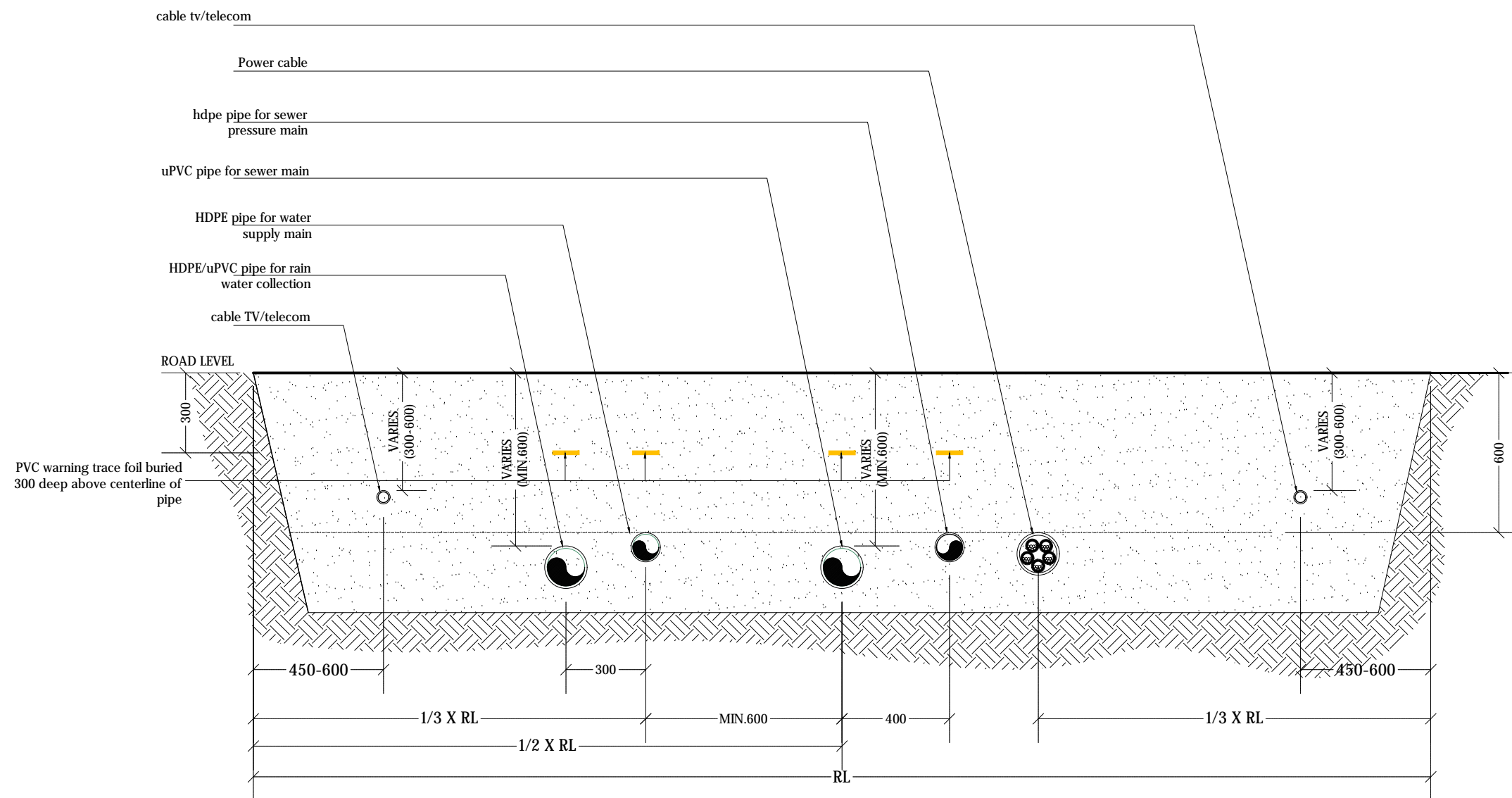


Maldivian Infrastructure Development

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-(24)



TRENCH & BEDDING DETAILS



TYPICAL ROAD SECTION

TRENCH AND BEDDING DETAILS

1:20

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
7 islands, Maldives - Package 6

Sub Title:
Water Supply System in GA. Dheevadhoo

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



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

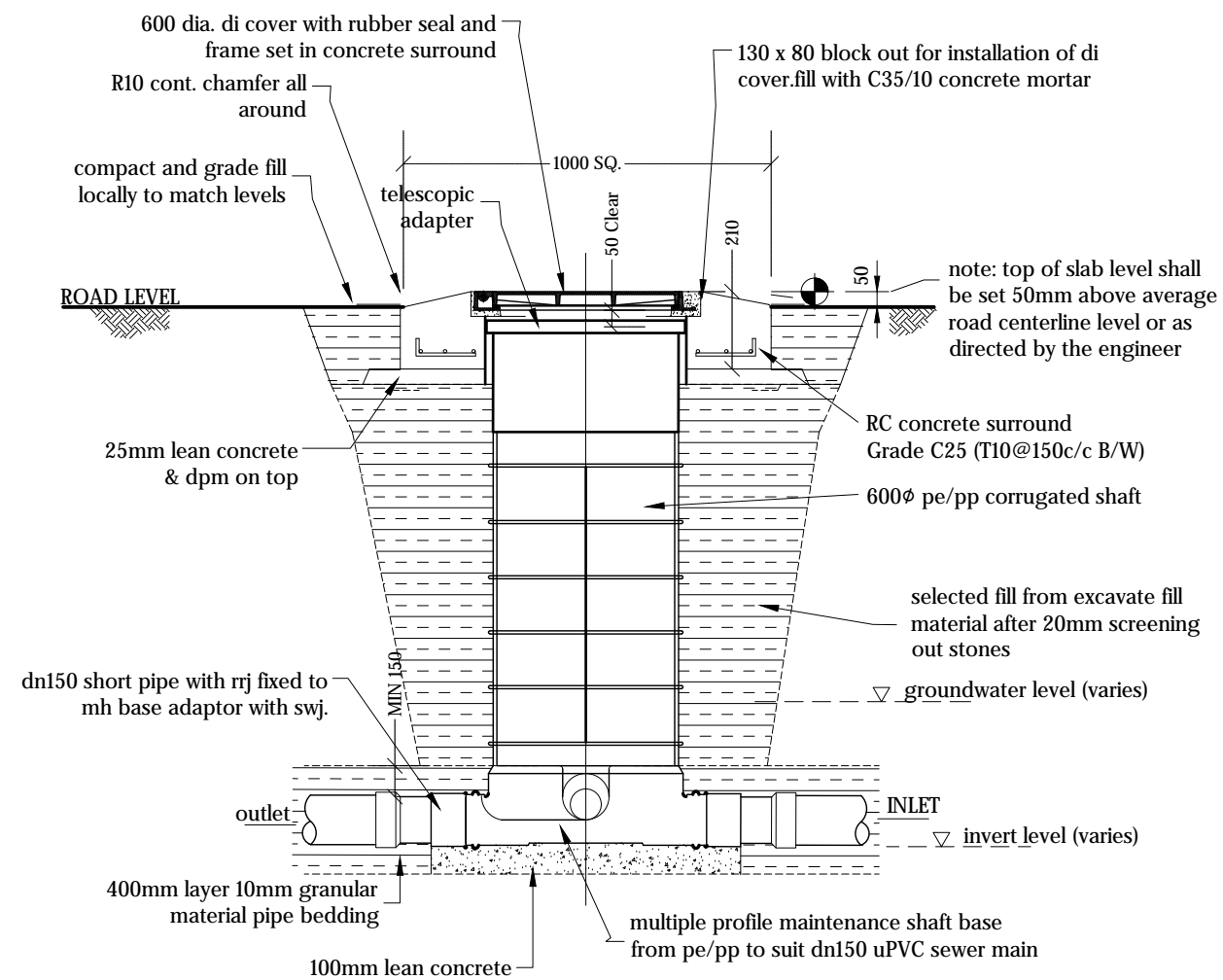
Designed: F.I.A. Approved: I.W.

Date: Sep 2020 SCALE (A3): 1:20

Project No: EP-WS/2019/06

Rev: Page:

W-(14)



600 dia. di cover with rubber seal and frame set in concrete surround

R10 cont. chamfer all around

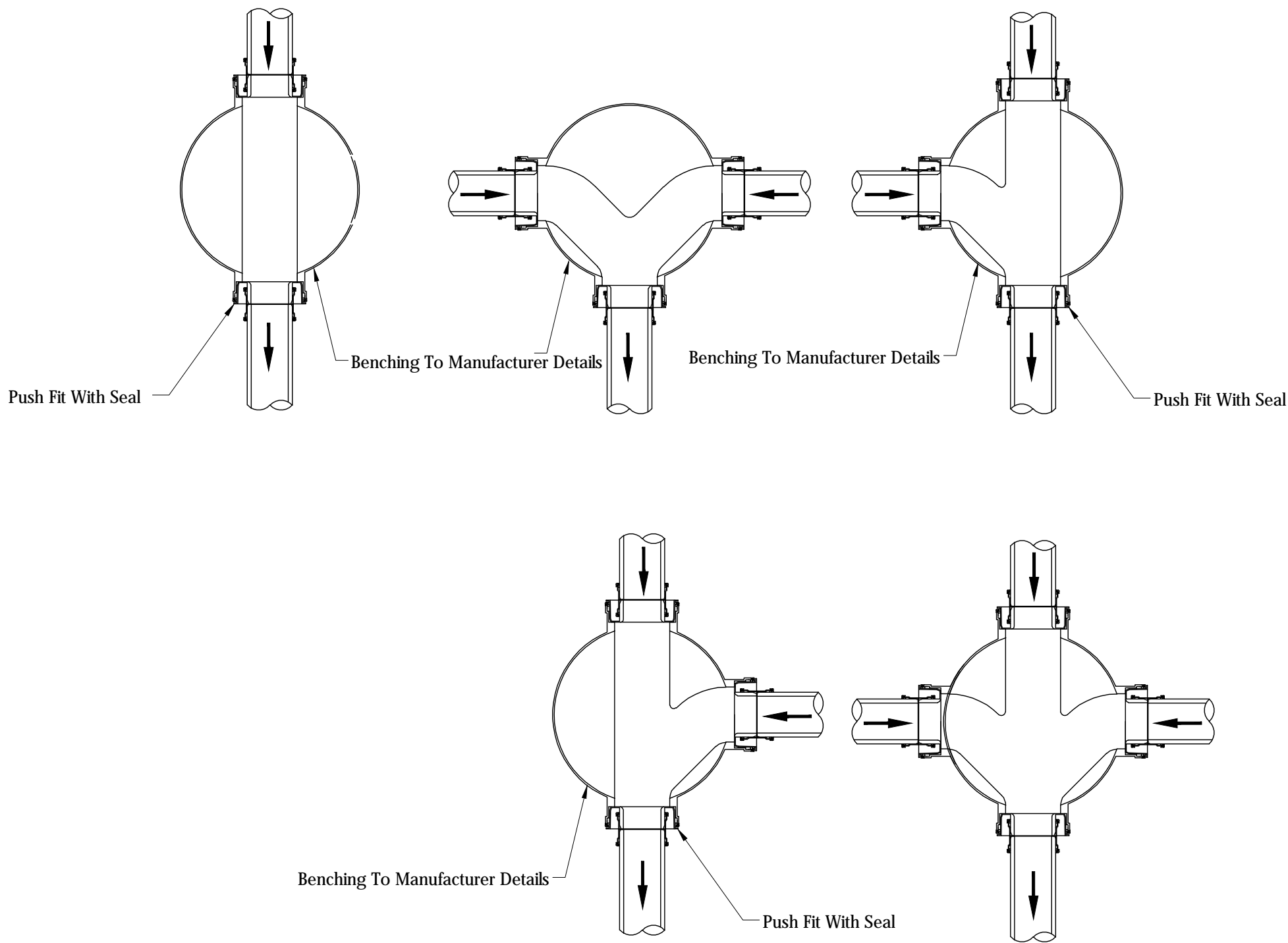
600

1000

1000

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd

Page:
W-(15)



TYPICAL MANHOLE BASE DETAILS
NTS



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 7 islands, Maldives - Package 6

Sub Title:
Water Supply System in GA. Dhevadhoo

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

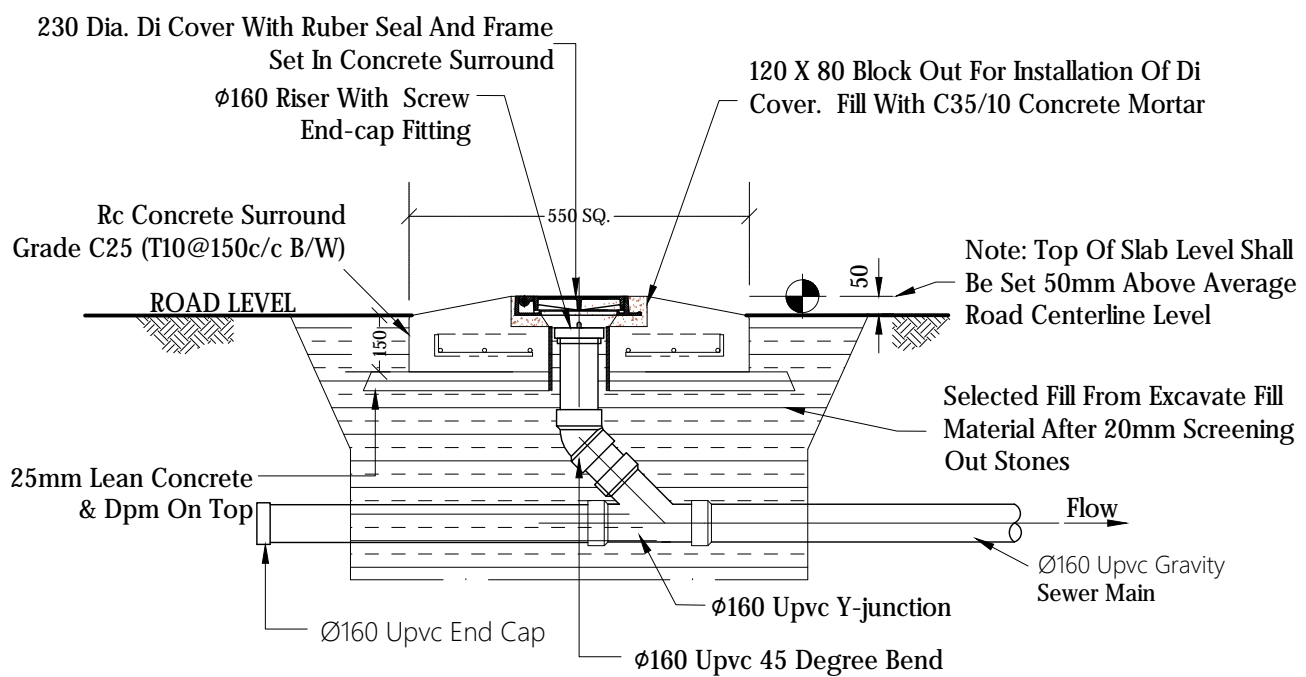


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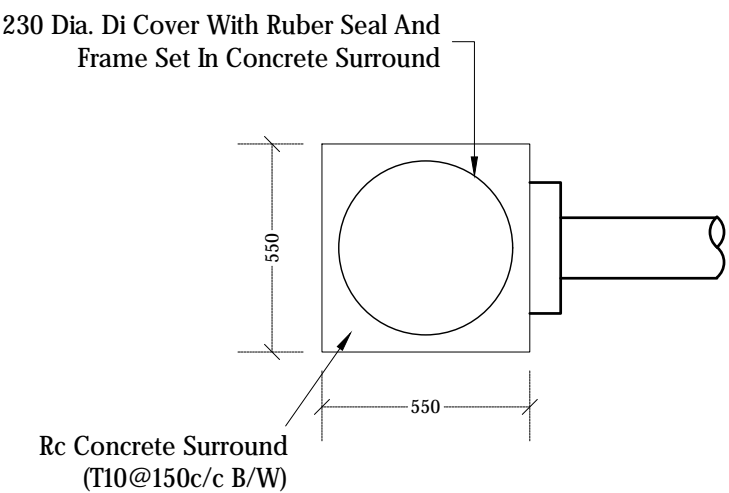


Feedback Infrastructure
 Building Sustainable Infrastructure

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	Page: W-(16)



ELEVATION - CLEANOUT (CO)



PLAN VIEW - CLEANOUT (CO)

CLEAN OUT DETAILS

NTS

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 7 islands, Maldives - Pakage 6

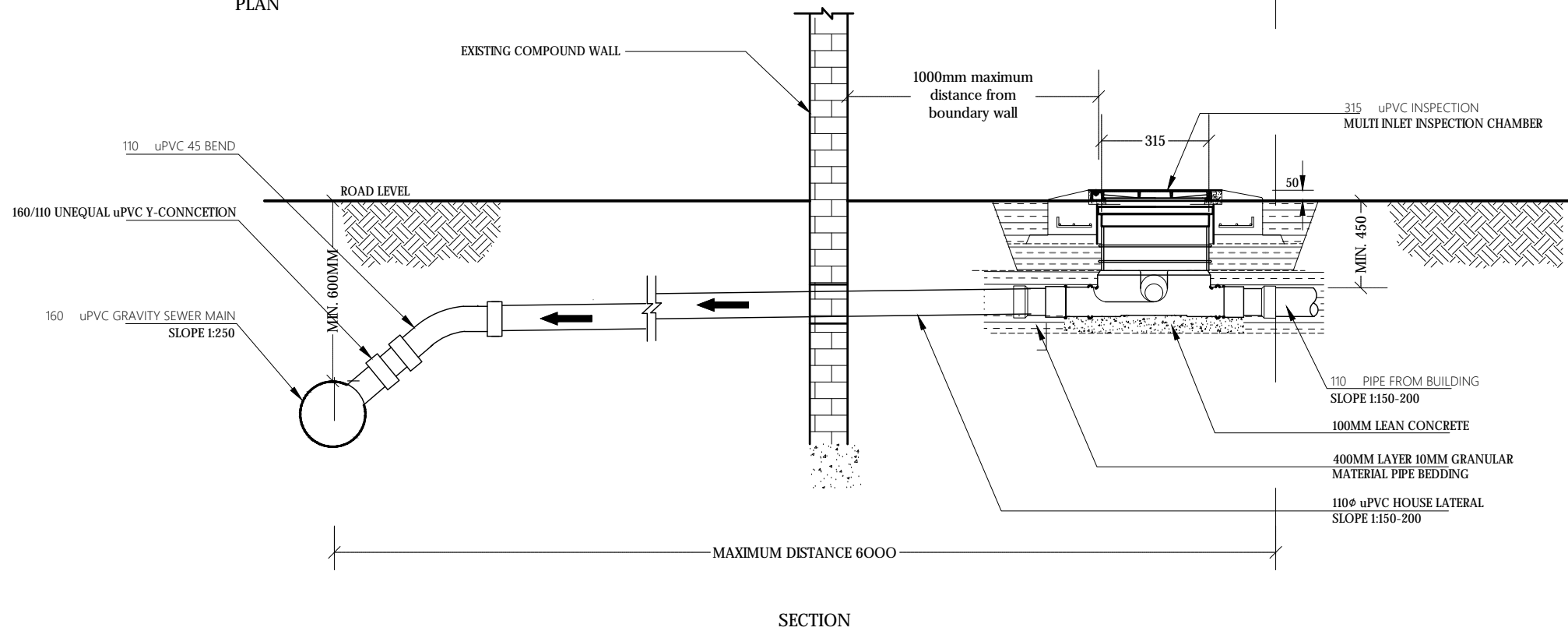
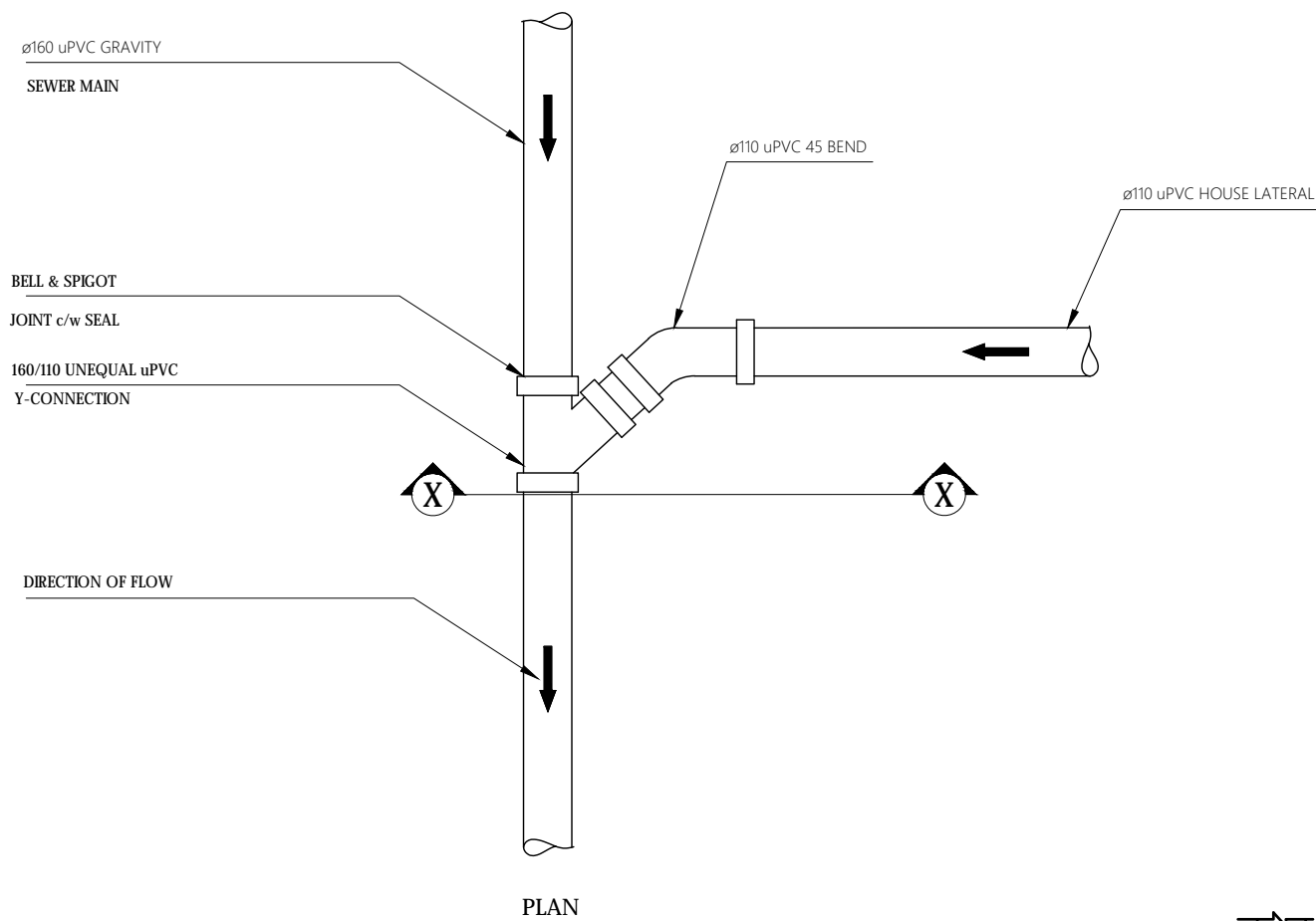
Sub Title:
 Water Supply System in GA. Dheevadhoo

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

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FDBACK INFRA
 Maldives 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-(17)



TYPICAL HOUSE CONNECTION DETAIL

NTS



Legend

Notes:

1. Invert level at house inspection chamber and invert level of the sewer main on the road should be checked during the house connection survey and invert level should be adjusted in order to facilitate gravity flow from house inspection chamber to sewer main.

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

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

Sub Title:
Water Supply System in GA. Dheevadhoo

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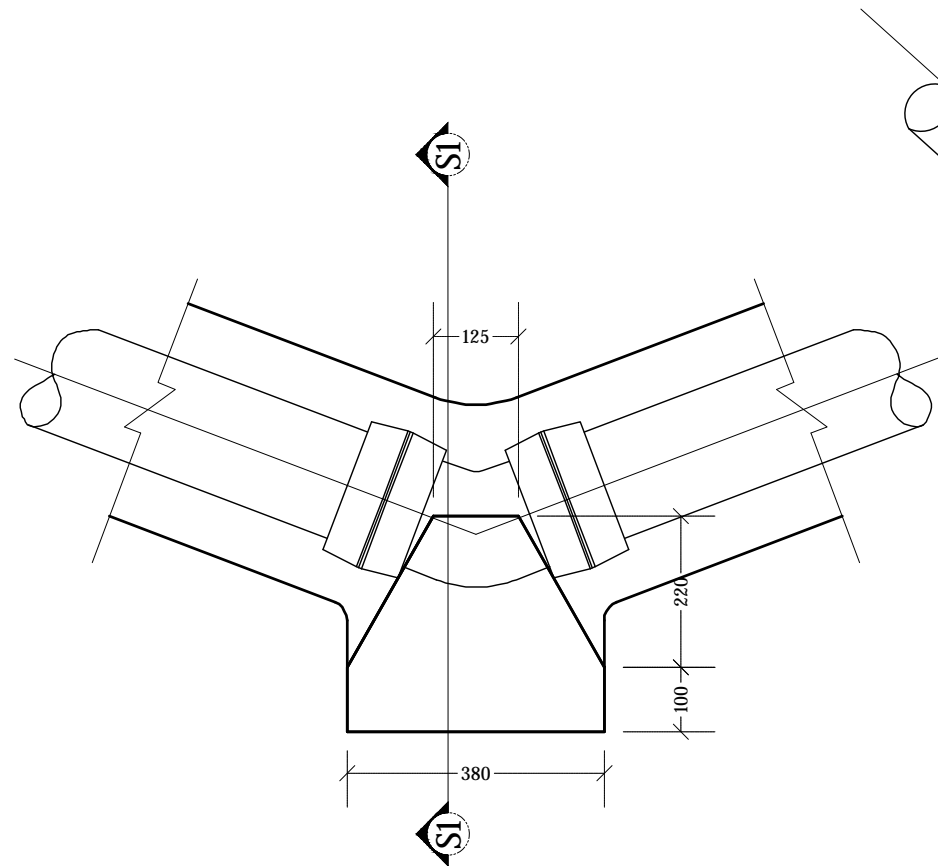
Designed: F.I.A. Approved: I.W.

Date: Sep 2020 SCALE (A3): NTS

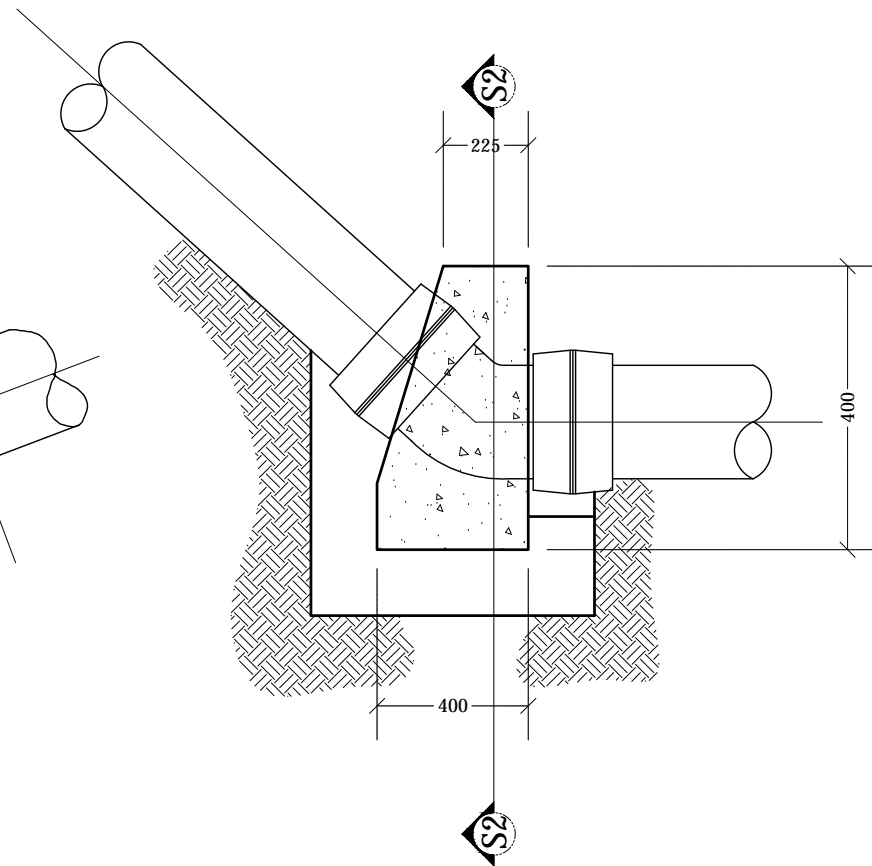
Project No: EP-WS/2019/06

Rev: Page:

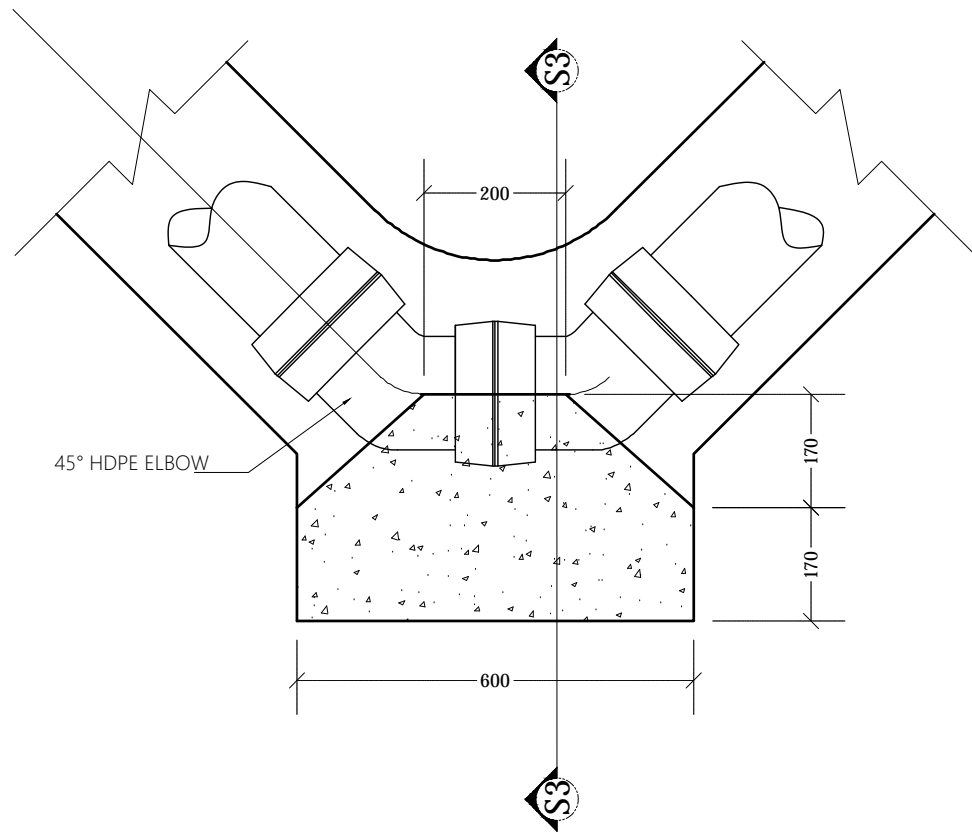
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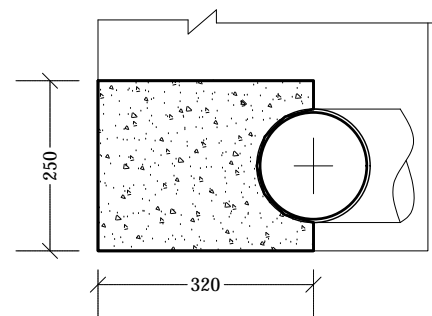
HORIZONTAL 45° BEND
NTS



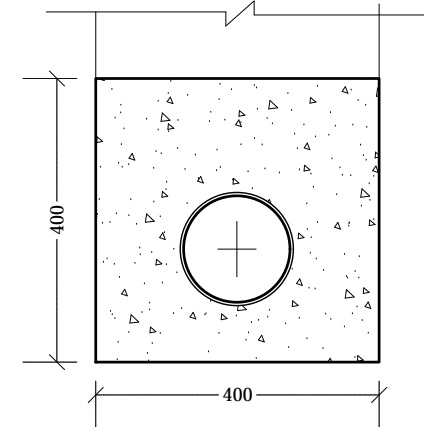
VERTICAL 45° BEND
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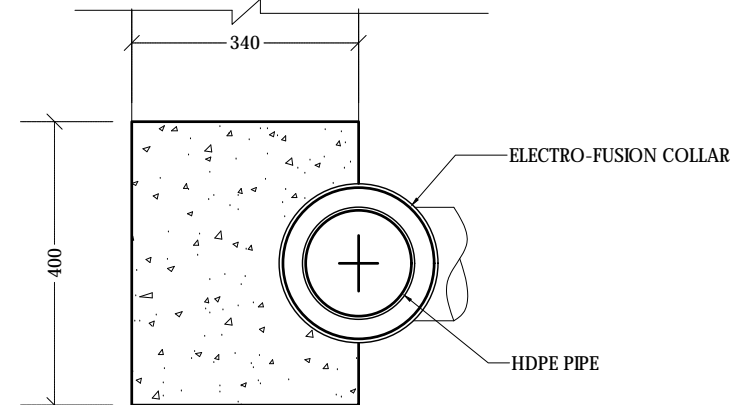
HORIZONTAL 90° BEND
NTS



SECTION S1-S1
NTS



SECTION S2-S2
NTS



SECTION S3-S3
NTS

THRUST BLOCK DETAILS
NTS

Legend



- Notes:
- Concrete shall be of grade C25

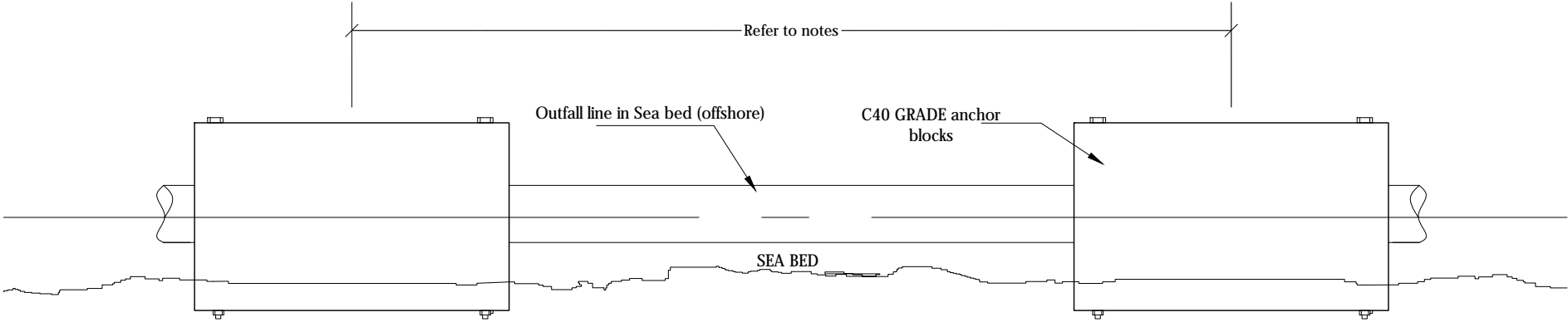
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

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

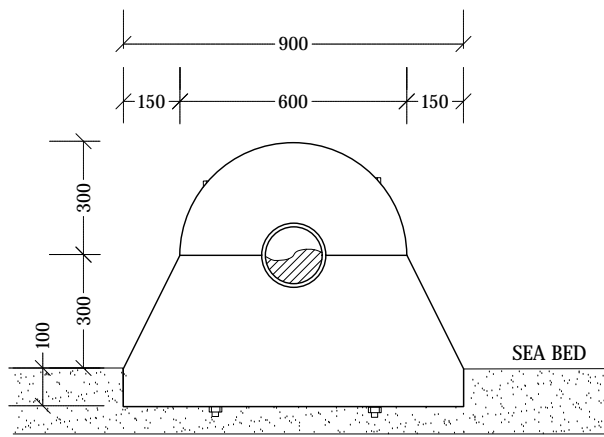
Sub Title:
Water Supply System in GA. Dheevadhoo

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

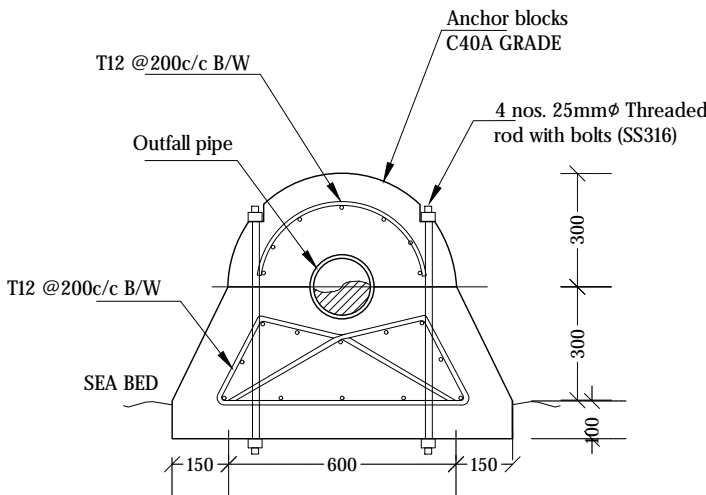
 T: +960 333 3528 E: info@epochassociates W: www.epochassociates A: G. Rosary West, Hunuheena Magu, Male', Maldives		 Working Safely, Smartly, Happily	
Drawn: F.I.A.	Checked: M.S.S.		
Designed: F.I.A.	Approved: I.W.		
Date: Sep 2020	SCALE (A3): NTS		
Project No: EP-WS/2019/06			
Rev:	Page:		



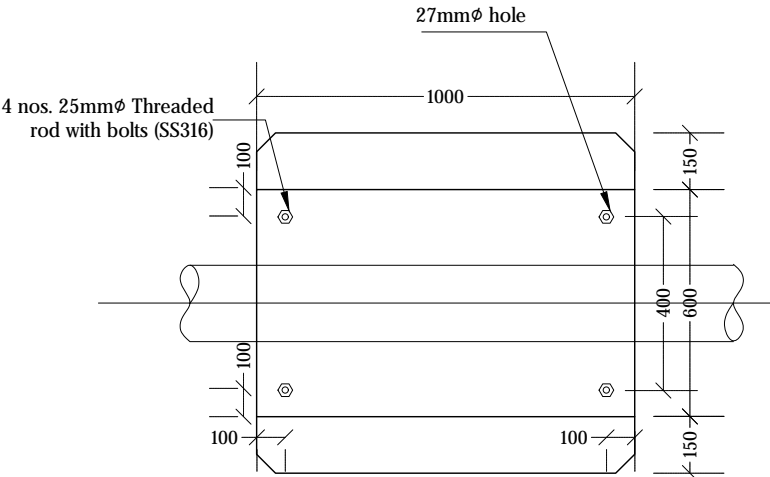
BALLAST BLOCK SIDE ELEVATION



BALLAST BLOCK FRONT ELEVATION



BALLAST BLOCK SECTION



BALLAST BLOCK PLAN

BALLAST BLOCK DETAILS

NTS



Legend

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

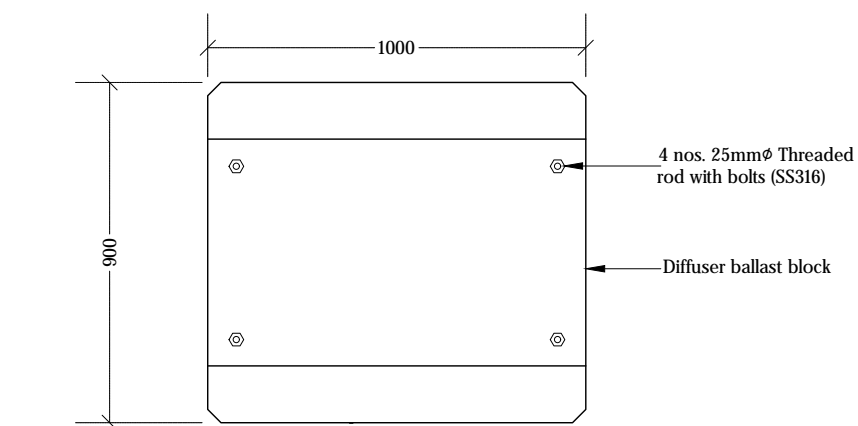
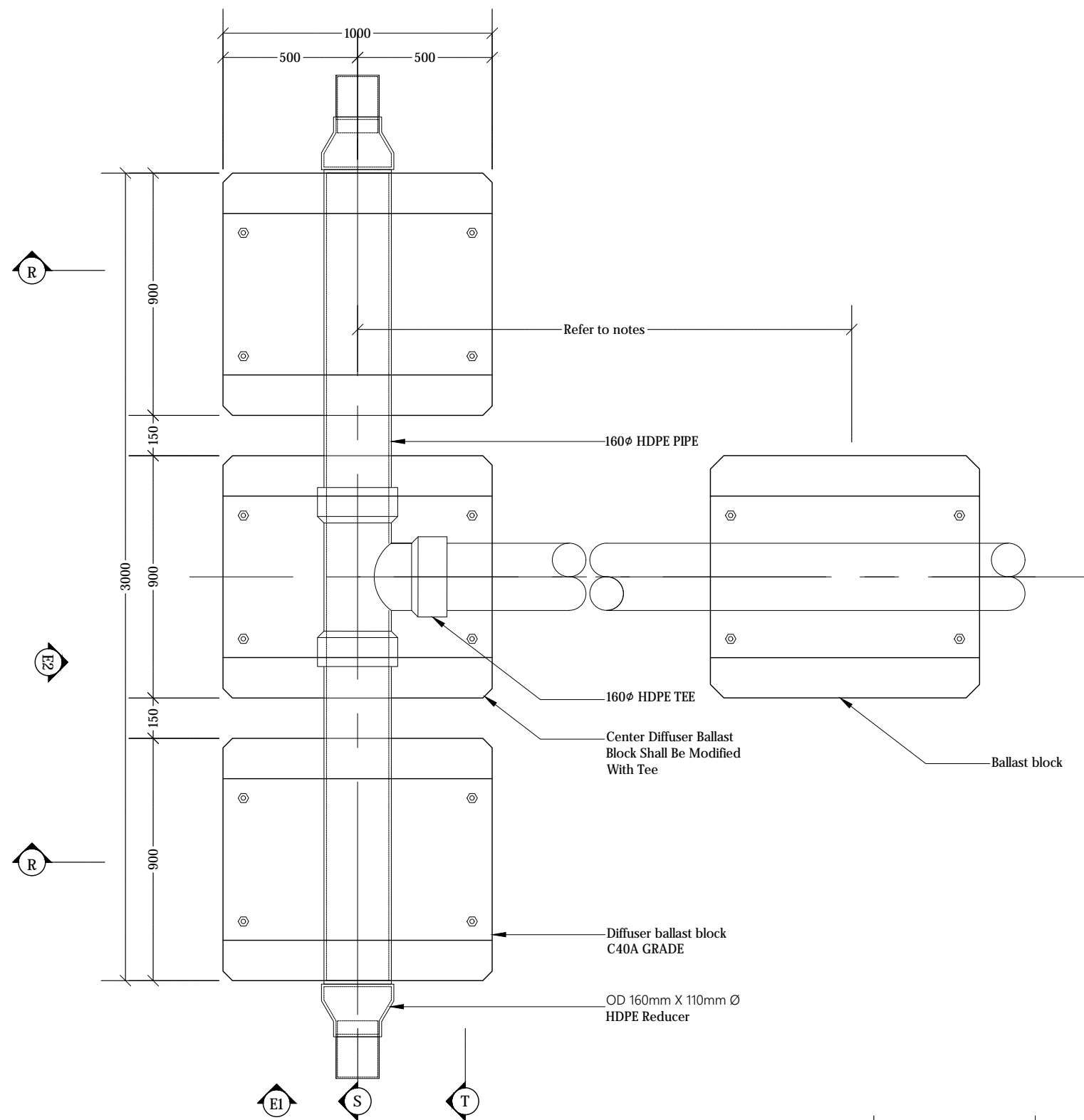
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

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

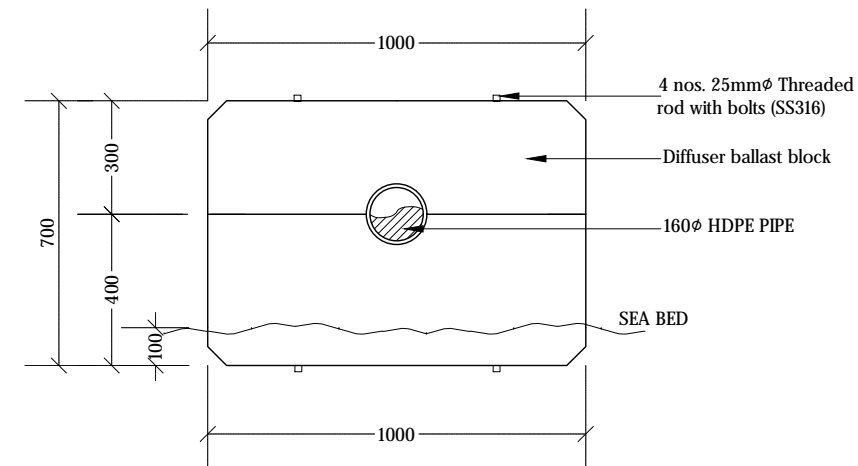
Sub Title:
Water Supply System in GA. Dheevadhoo

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

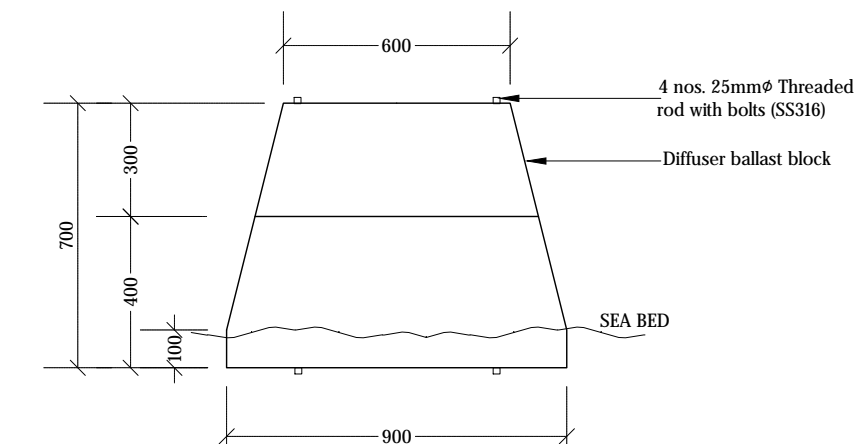
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Drawn: F.I.A.	Checked: M.S.S.
Designed: F.I.A.	Approved: I.W.
Date: Sep 2020	SCALE (A3): NTS
Project No: EP-WS/2019/06	Page: W-(20)



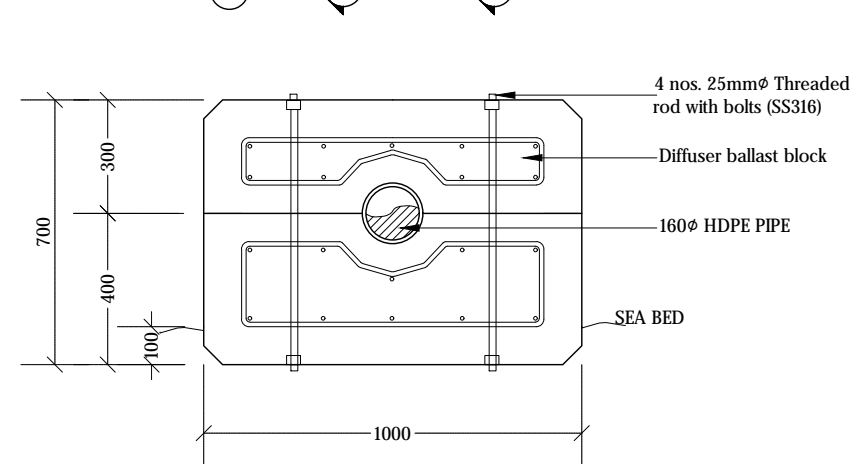
DIFFUSER BALLAST BLOCK PLAN



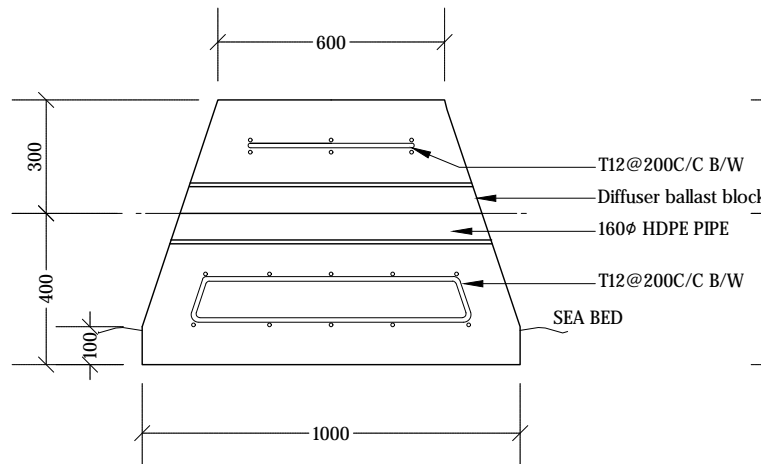
DIFFUSER BALLAST BLOCK FRONT ELEVATION - E1



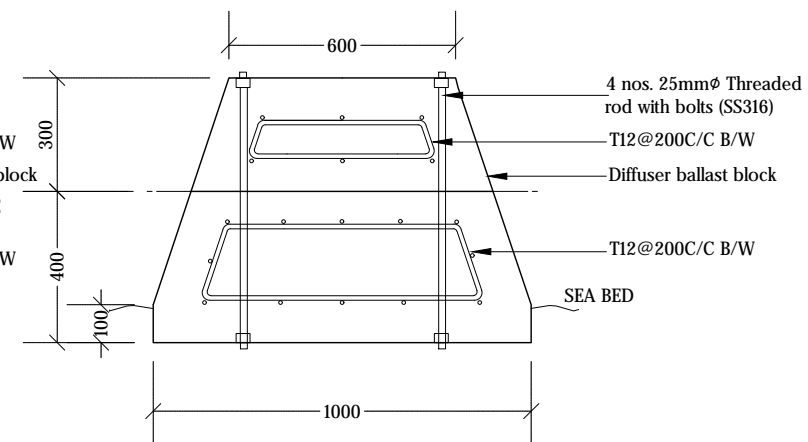
DIFFUSER BALLAST BLOCK FRONT ELEVATION - E2



DIFFUSER BALLAST BLOCK SECTION - R



DIFFUSER BALLAST BLOCK SECTION - S



DIFFUSER BALLAST BLOCK SECTION - T

DIFFUSER DETAILS
NTS

Legend

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.

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

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

Sub Title:
Water Supply System in GA. Dheevadhoo

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

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INFRA
Maldives

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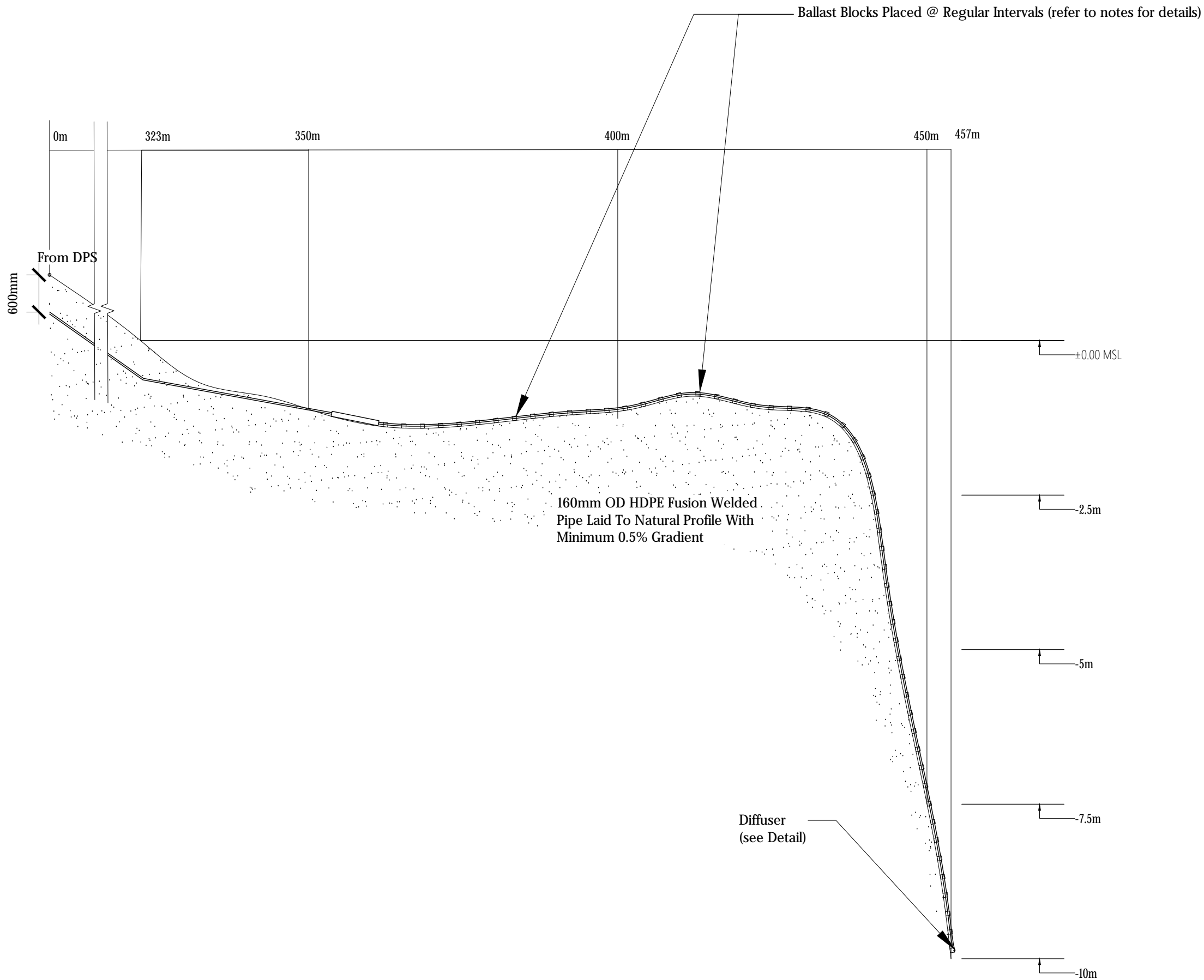
Designed: F.I.A. Approved: I.W.

Date: Sep 2020 SCALE (A3): NTS

Project No: EP-WS/2019/06

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SEA OUTLET DETAILS

NTS



Legend

Notes:

1. 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.
2. 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.

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

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

Sub Title:
Water Supply System in GA. Dheevadhoo

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

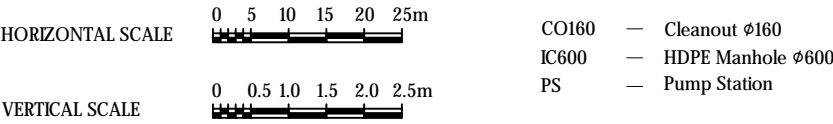
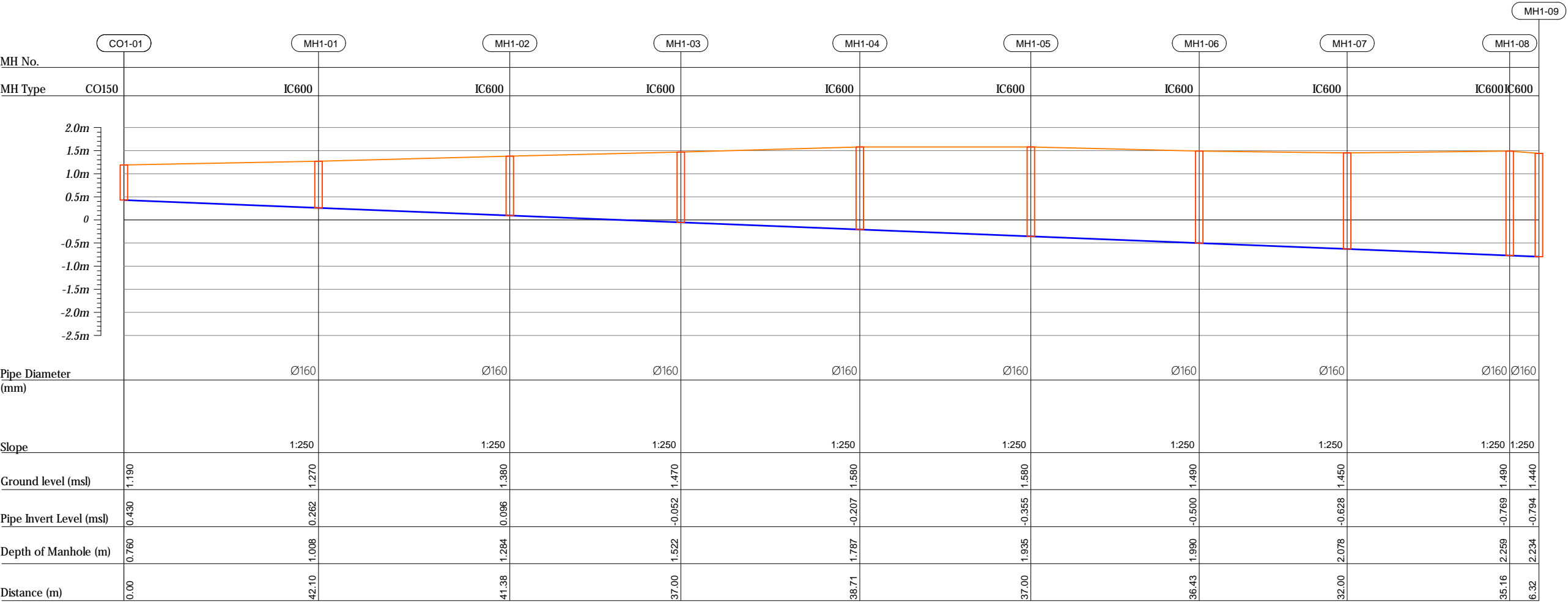


Title:
**Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
7 islands, Maldives - Pakage 6**

Client:
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Drawn: F.I.A.	Checked: M.S.S.		
Designed: F.I.A.	Approved: I.W.		
Date: Sep 2020	SCALE (A3): 1:3000		
Project No: EP-WS/2019/06			
Rev:			Page: W-(2)

Profile 01



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 GA.Dhehvhadoo

Client:
Ministry of National Planning, Housing and
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DBAC

INFRA

Making Infrastructure Happen

Drawn: A.R.W

Checked: M.S.S

Designed: F.L.A

Approved: LW

Date: Aug 2020

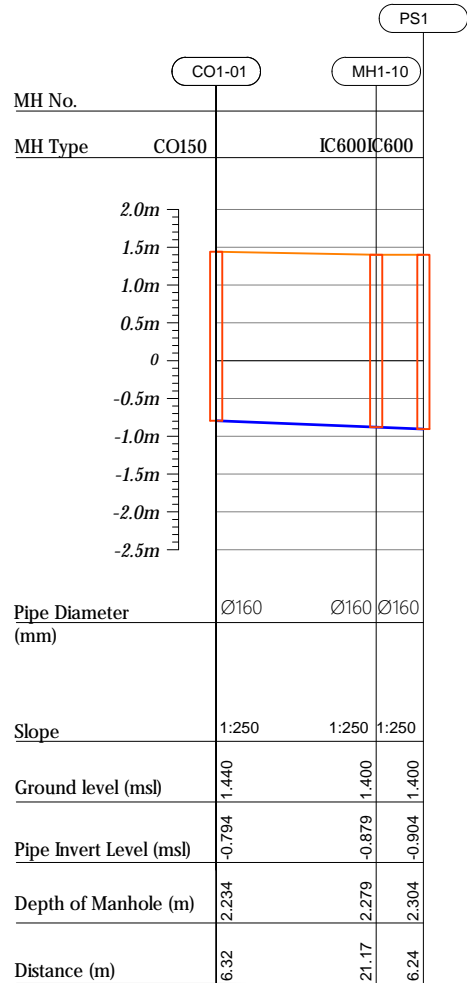
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Project No: 01010101

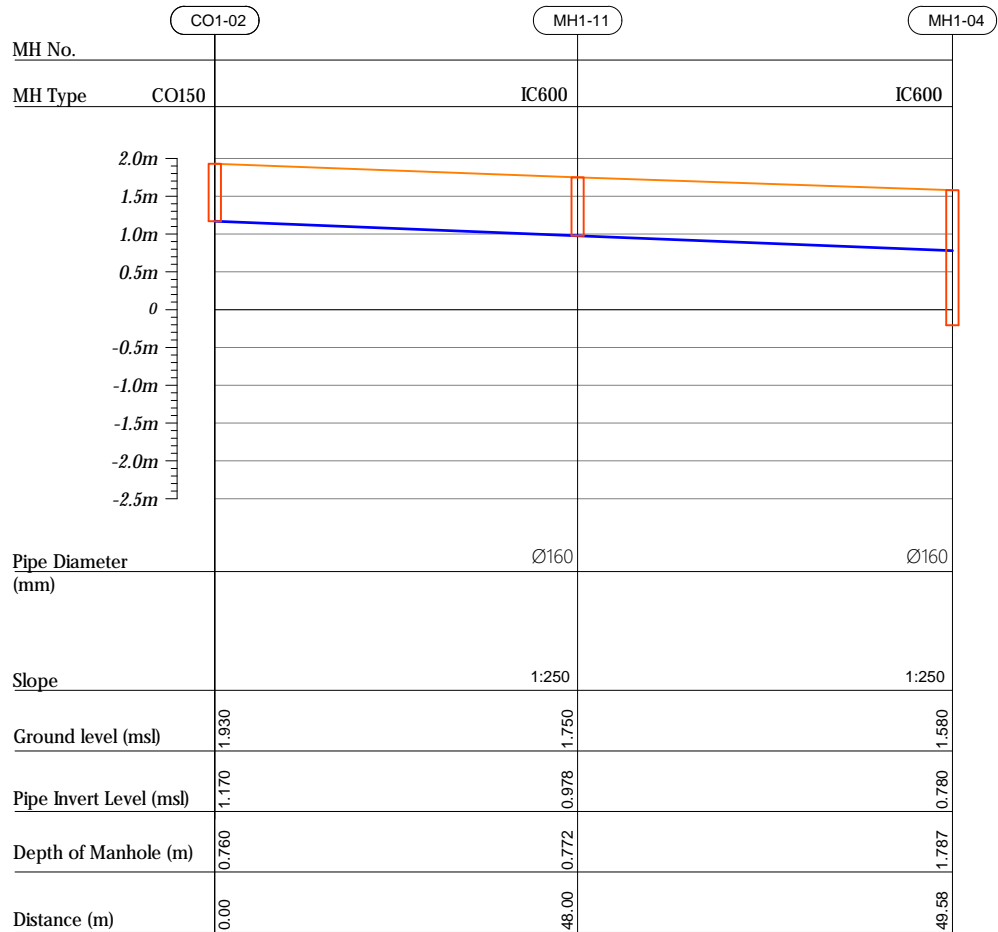
Rev: R-01

Page: PS1-01

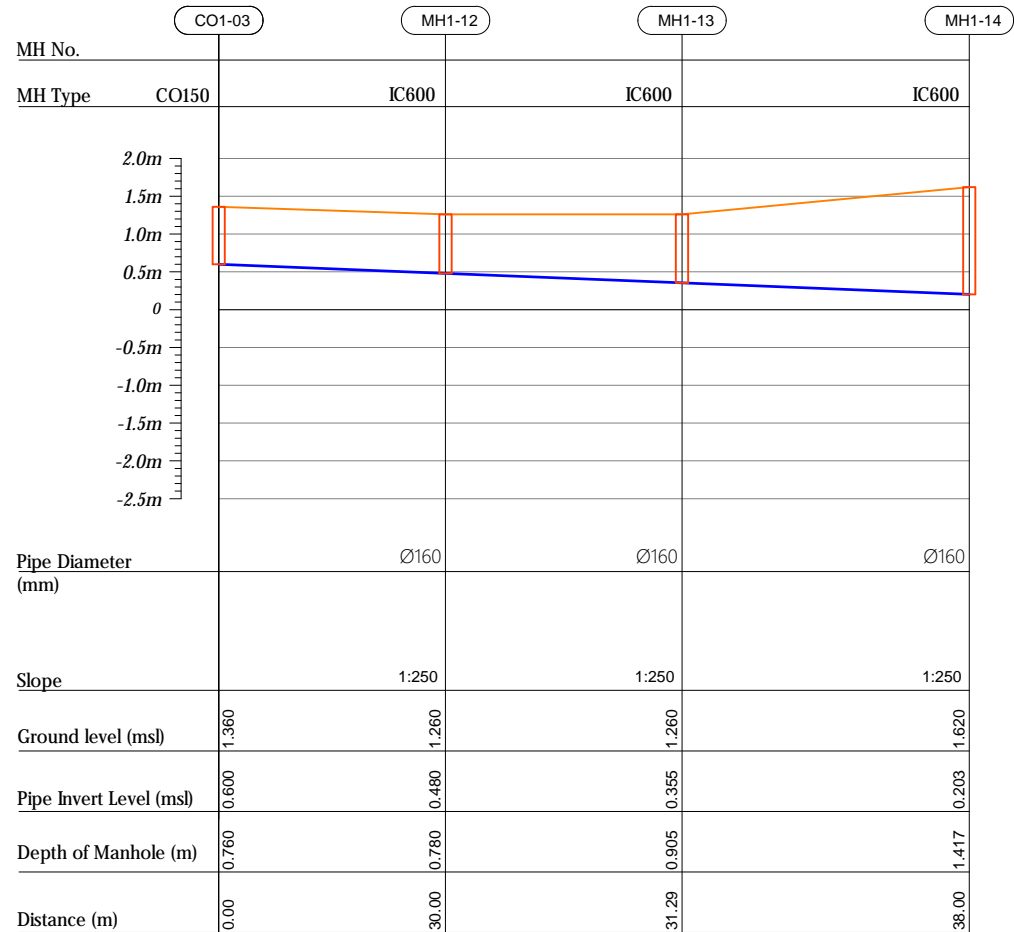
Profile 01



Profile 02



Profile 03



R00	JUNE 2020	STAGE -1	PD	SBC	SD
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*

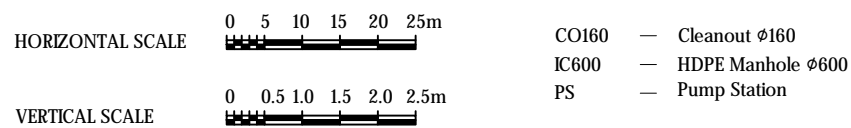
Sub Title:
Sewerage System in GA.Dhehvadhoo

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

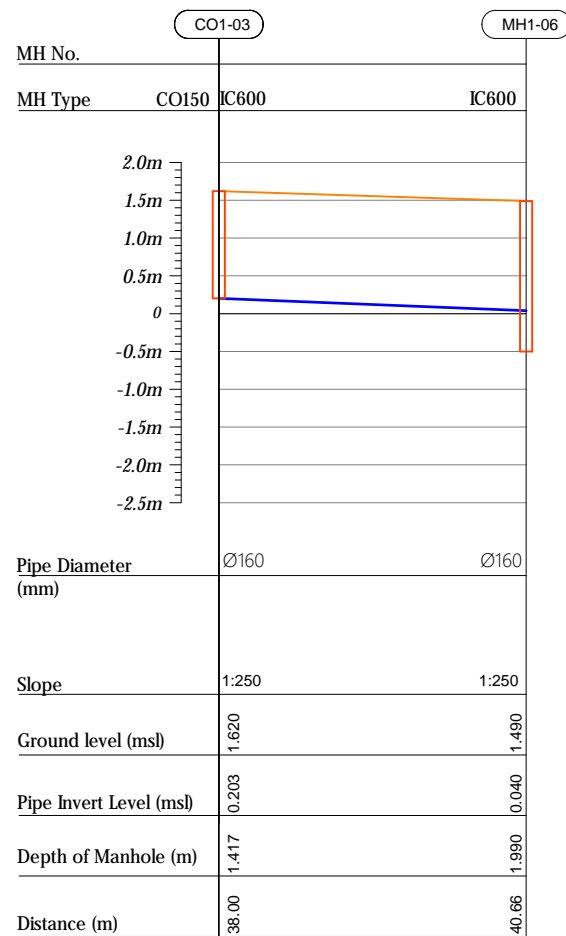
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 A: G. Rosary West,
 Huseenuheena Magu, Male', Maldives

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

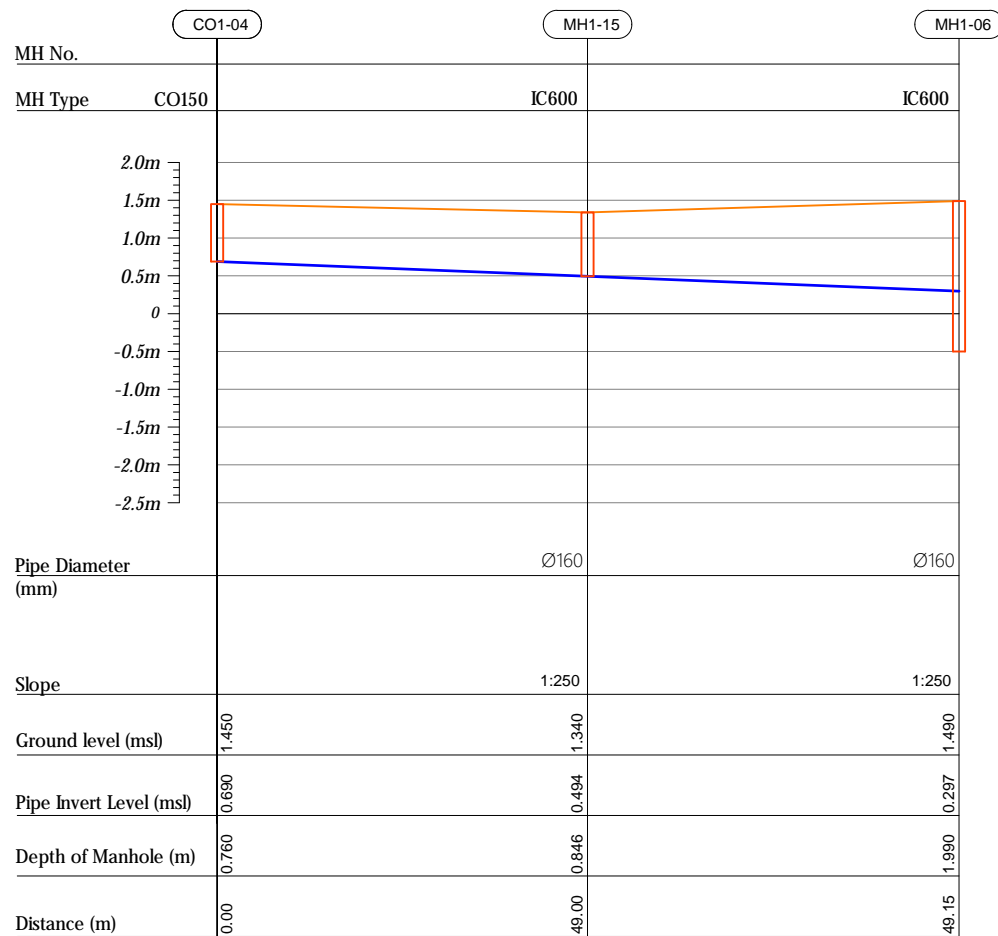
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Rev: R-01	Page: PS1-02



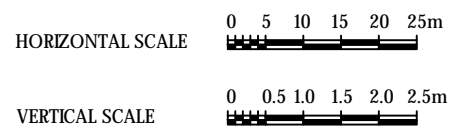
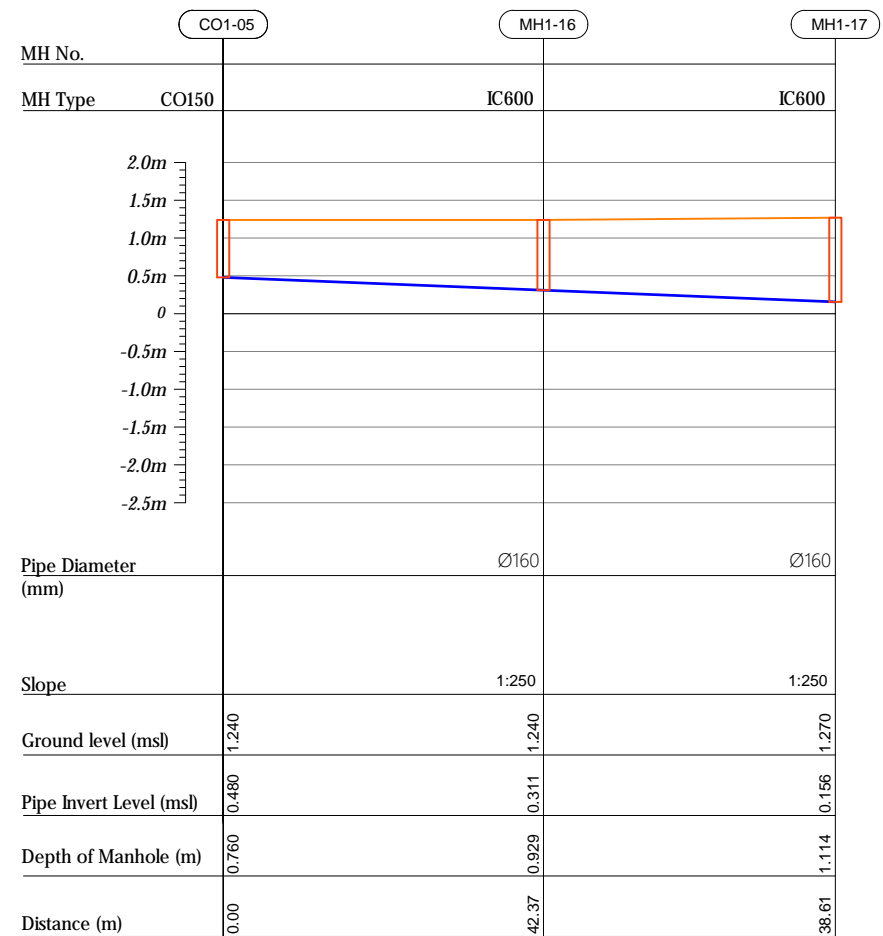
Profile 03



Profile 04



Profile 05




CO160	—	Cleanout $\phi 160$
IC600	—	HDPE Manhole $\phi 600$
PS	—	Pump Station

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

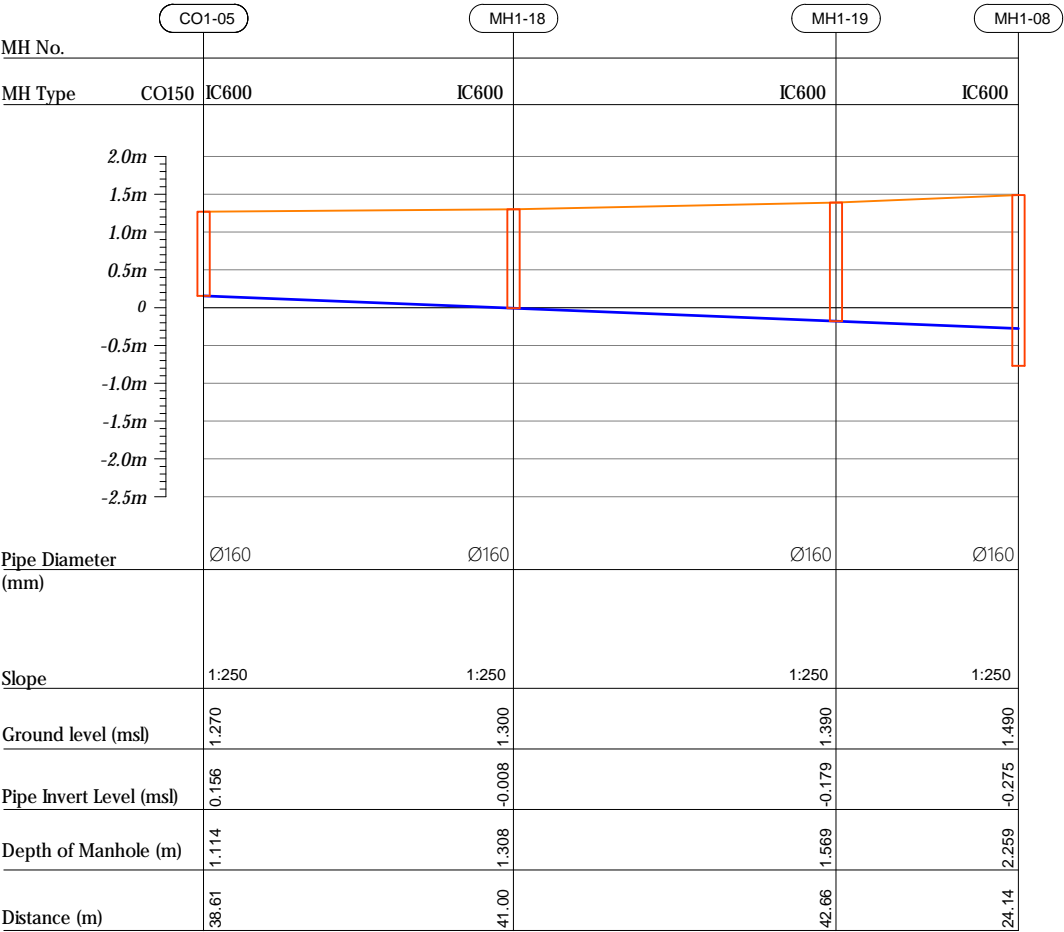
Title:
*Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
5 islands, Maldives - Package 6*

Sub Title:
Sewerage System in GA.Dhehvadhoo

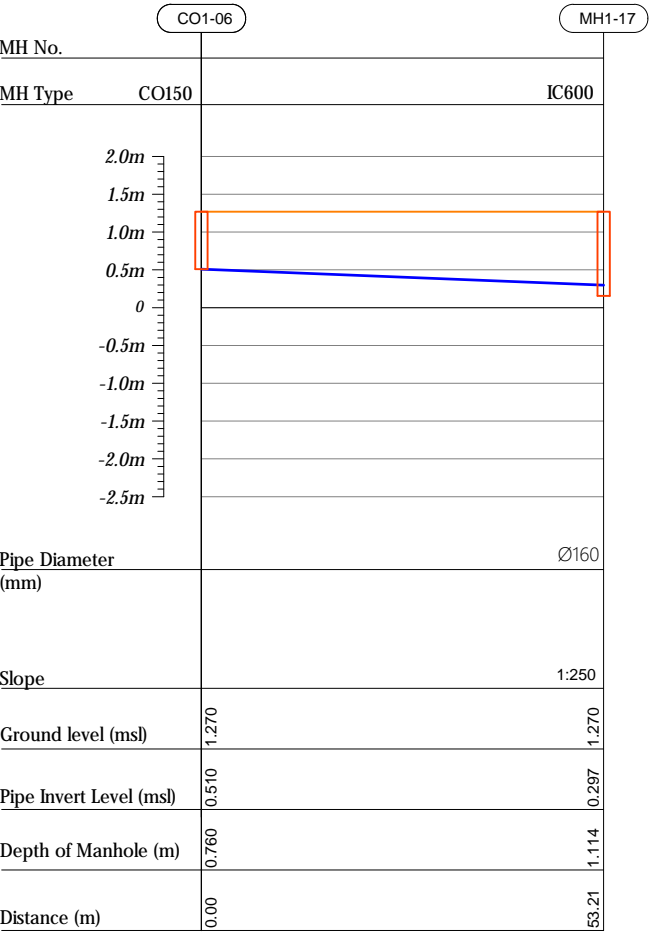
Client:
*Ministry of National Planning, Housing and
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Drawn: A.R.W	Checked: M.S.S
Designed: F.I.A	Approved: L.W
Date: Aug 2020	SCALE (AS: 1:100
Project No:	01010101
Rev: <i>R-01</i>	Page: <i>PS1-03</i>

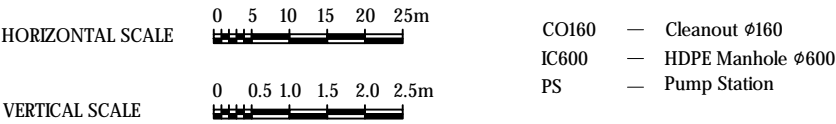
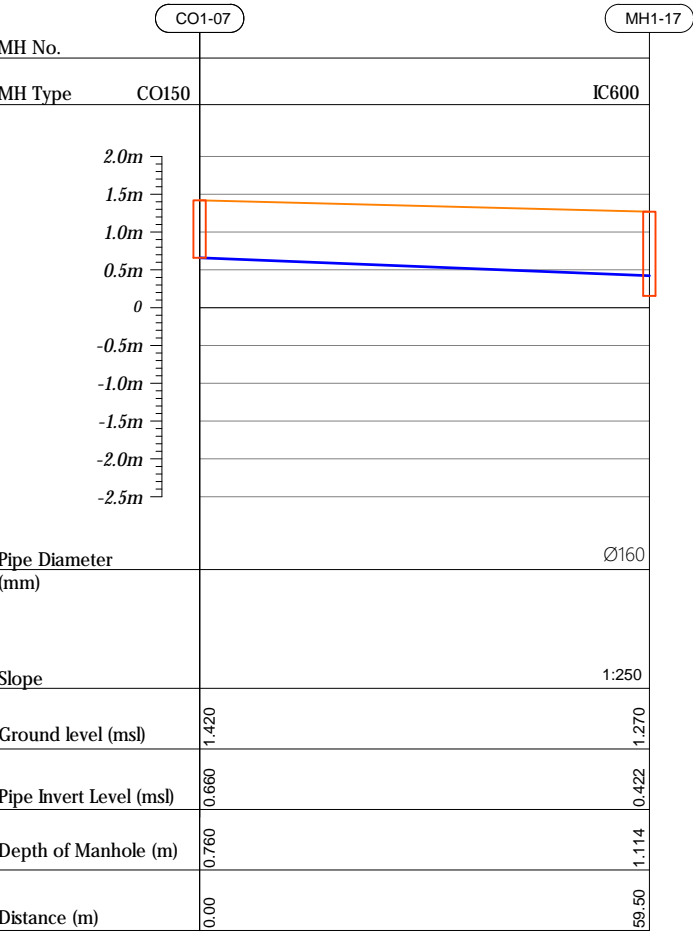
Profile 05



Profile 06



Profile 07



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 GA.Dhehvhadoo

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

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A: G. Rosary West,

Hussuvehemaa Magu, Male', Maldives

DBAC

INFRA

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Drawn: A.R.W

Checked: M.S.S

Designed: F.L.A

Approved: LW

Date: Aug 2020

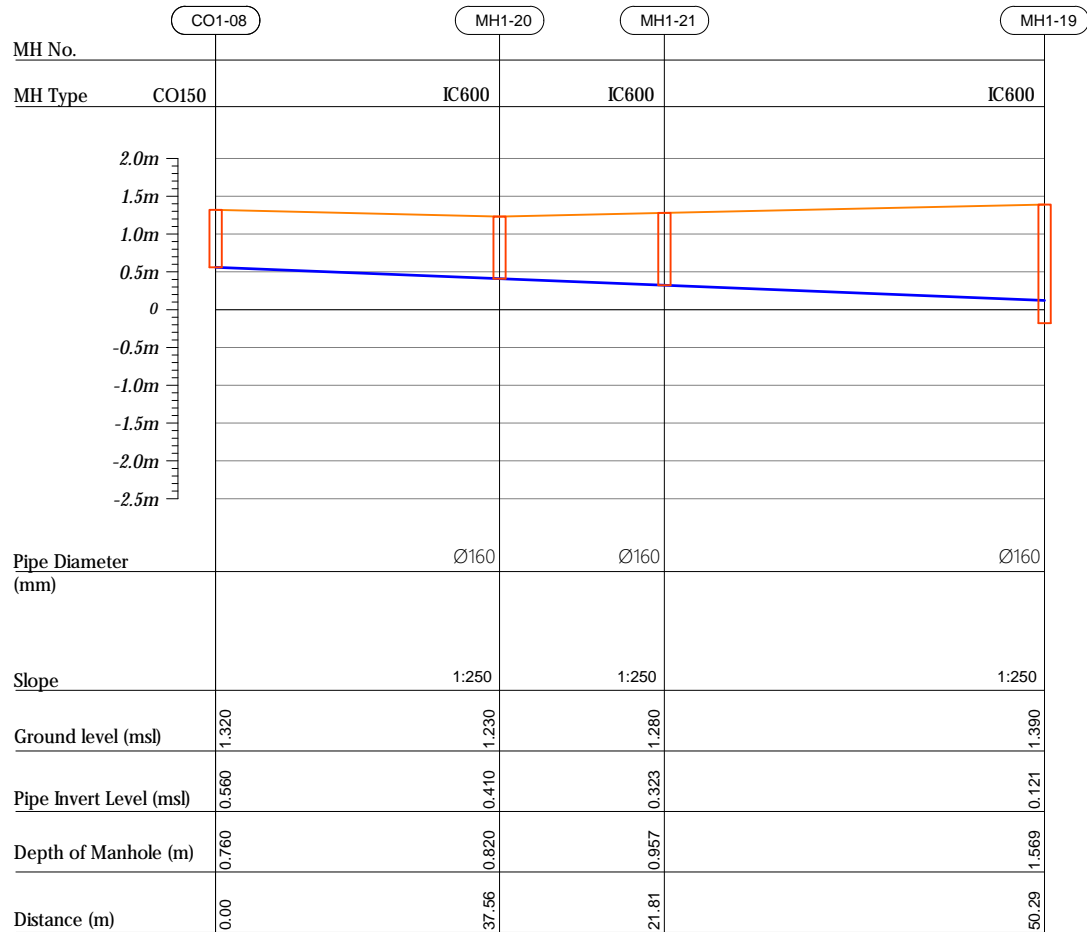
SCALE (A3): 1:100

Project No: 01010101

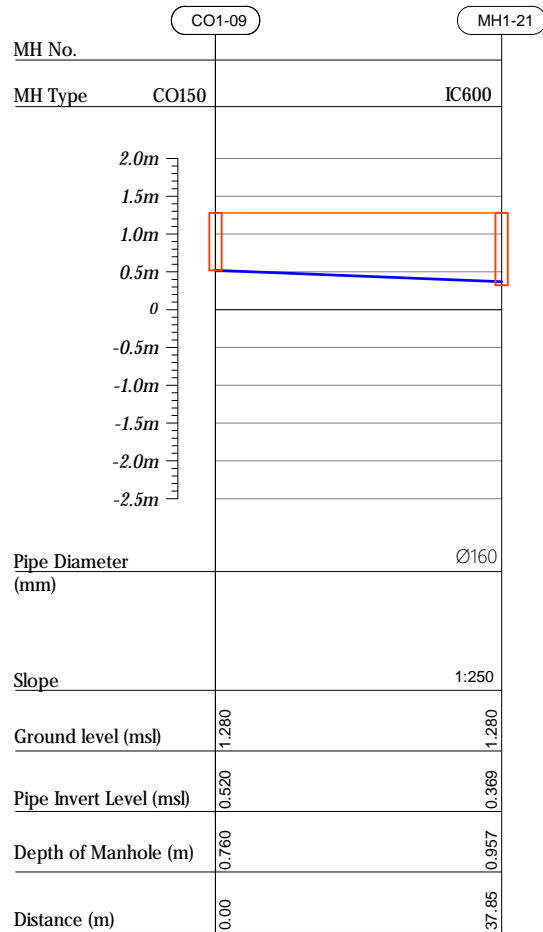
Rev: R-01

Page: PS1-04

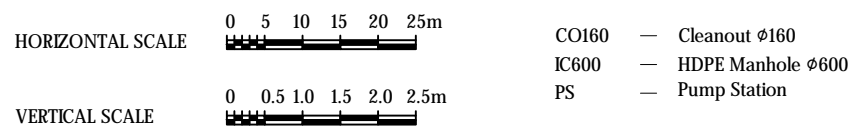
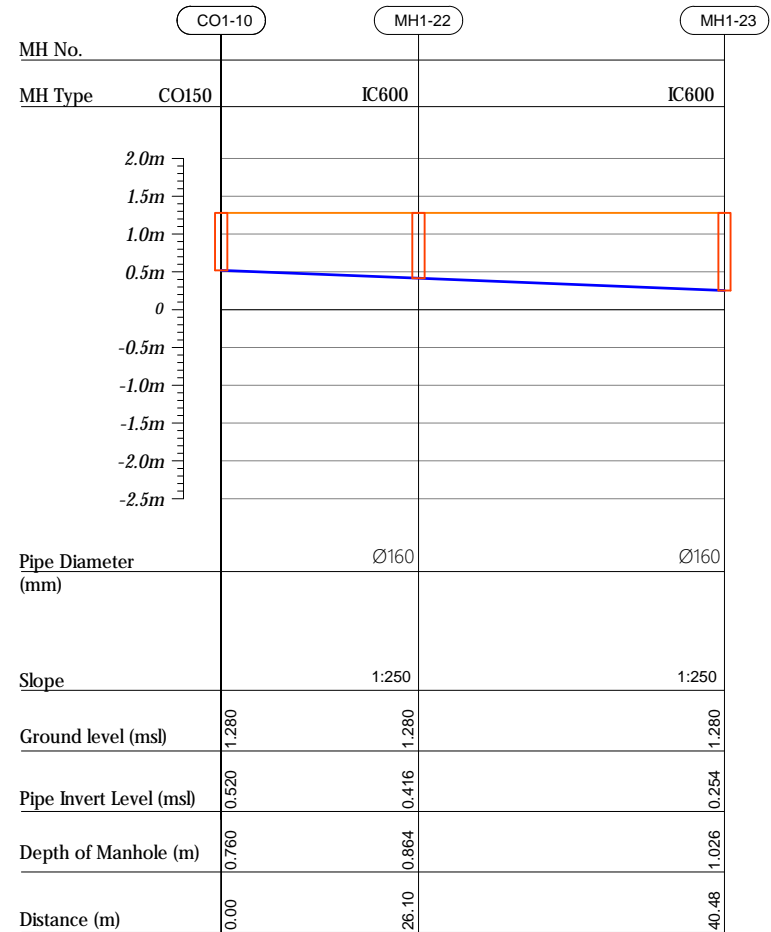
Profile 08



Profile 09



Profile 10




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

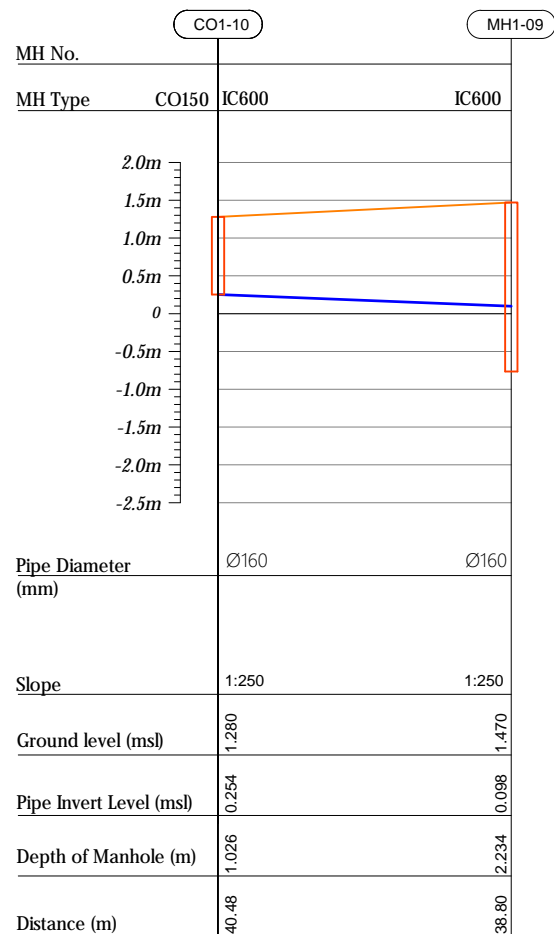
Title:
*Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
5 islands, Maldives - Package 6*

Sub Title:
Sewerage System in GA.Dhehvadhoo

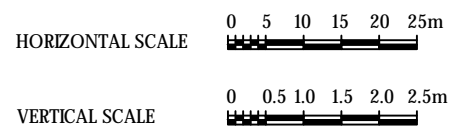
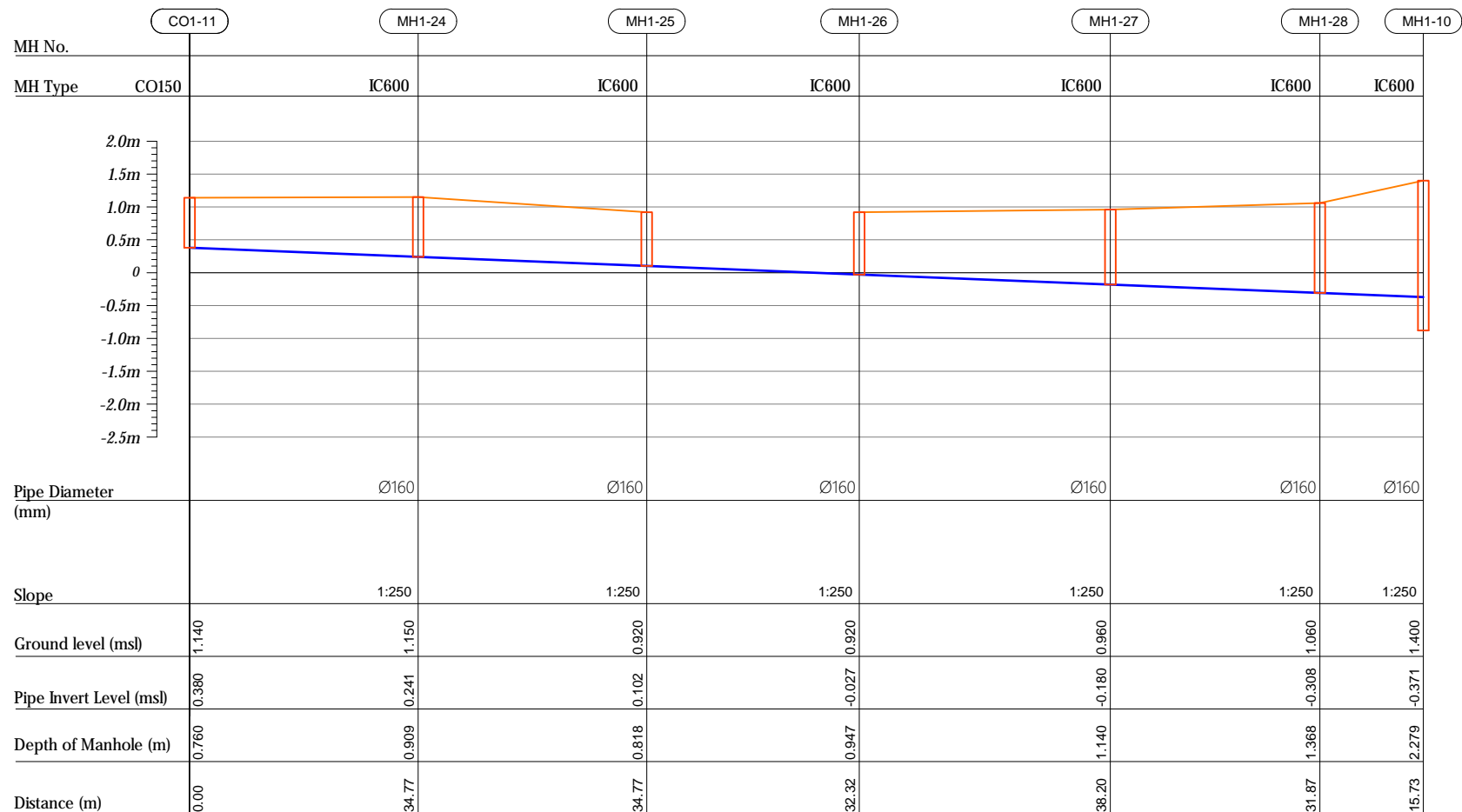
Client:
Ministry of National Planning, Housing and
Infrastructure, Republic of Maldives

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T: +960 333 3528 E: info@epochassociates W: www.epochassociates A: G. Rosary West, Hunsunheemaa Magu, Male', Maldives	
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	
Recv: R-01	Page: PS1-05

Profile 10



Profile 11




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

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

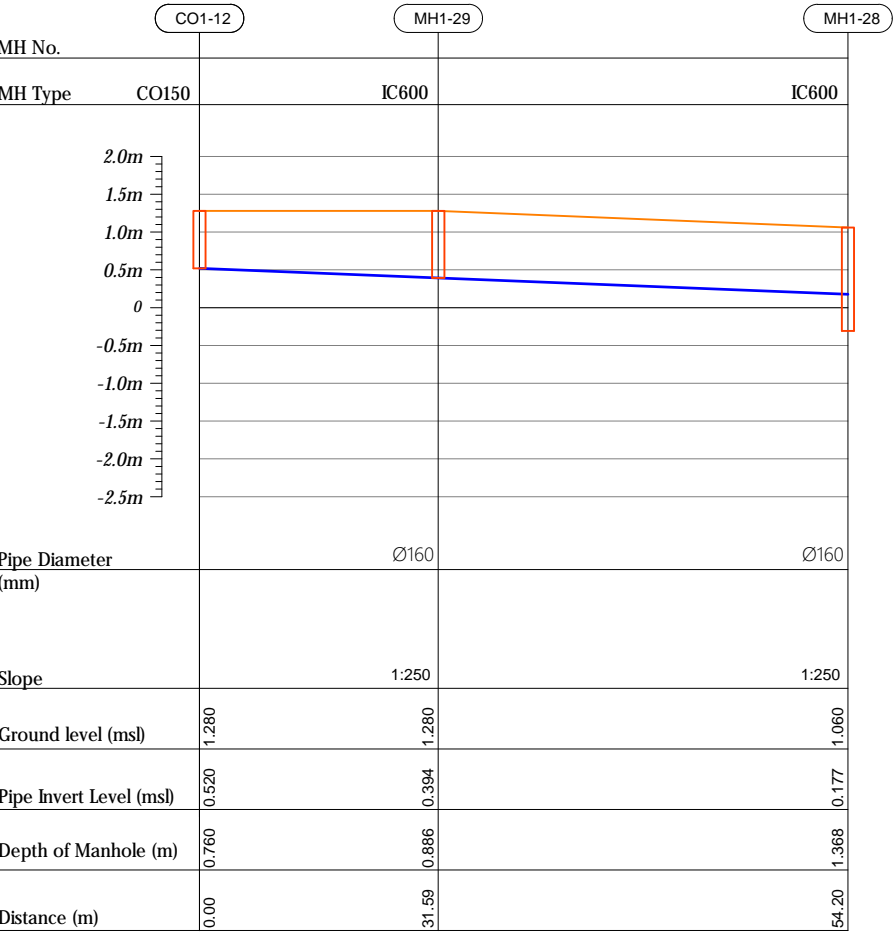
Title:
*Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
5 islands, Maldives - Package 6*

Sub Title:
Sewerage System in GA.Dhehvadhoo

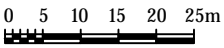
Client:
*Ministry of National Planning, Housing and
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Drawn: A.R.W	Checked: M.S.S
Designed: F.I.A	Approved: L.W
Date: Aug 2020	SCALE (AS: 1:100
Project No:	01010101
Rev: <i>R-01</i>	Page: <i>PS1-06</i>

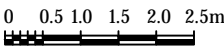
Profile 12



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

Sub Title:
Sewerage System in GA.Dhehvadhoo

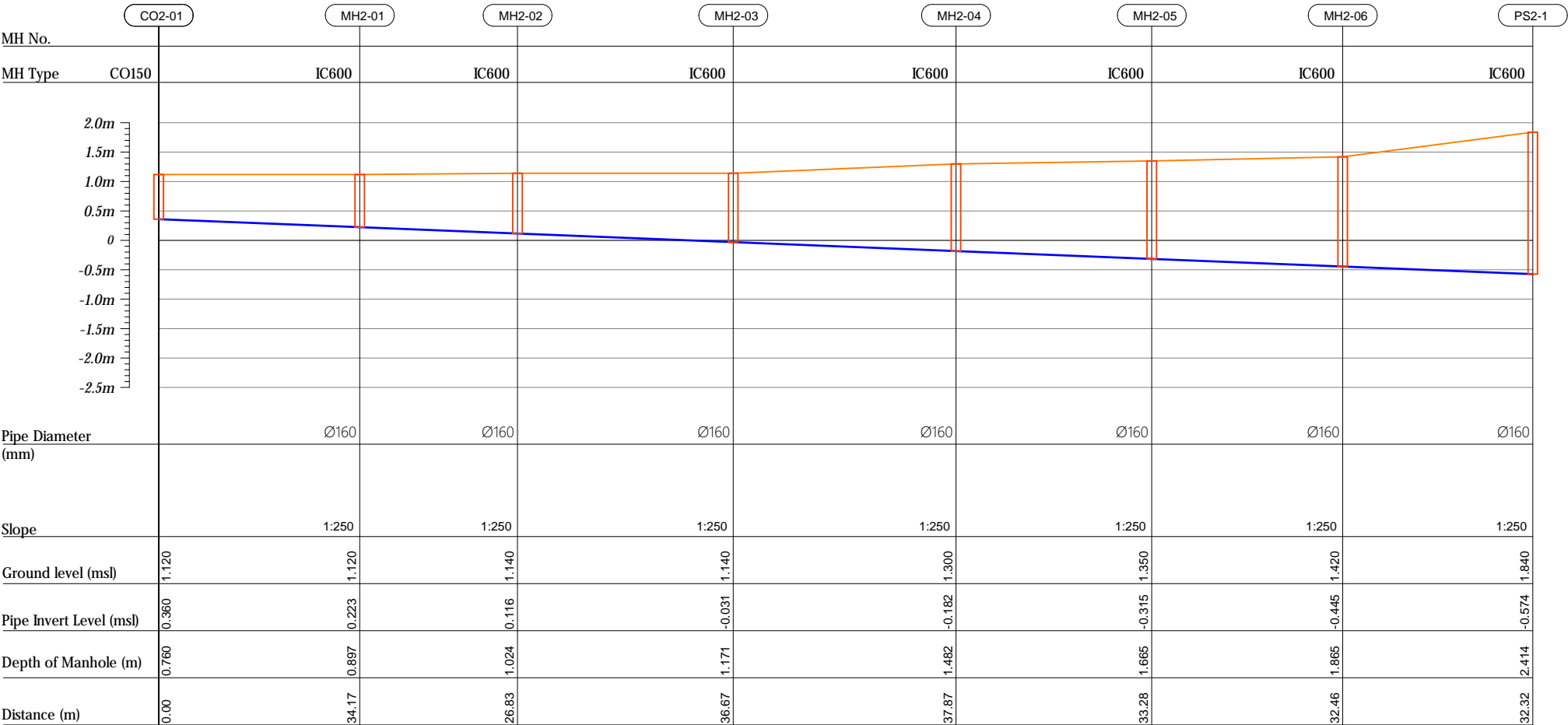
Client:
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Infrastructure, Republic of Maldives

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W: www.epoch.associates
A: G. Rosary West,
Husnuheemaa 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: PS1-07

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
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5 islands, Maldives - Package 6*

Sub Title:
Sewerage System in GA.Dhehvadhoo

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



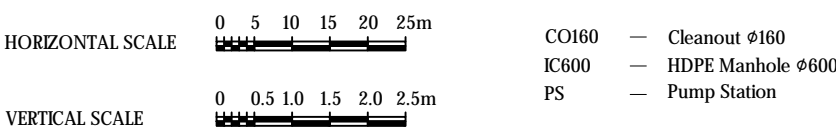
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Designed: F.L.A	Approved: LW
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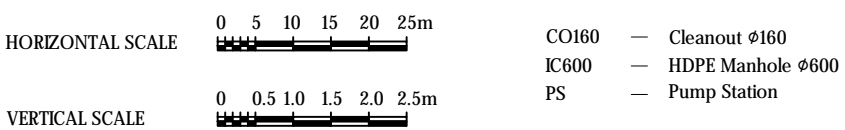
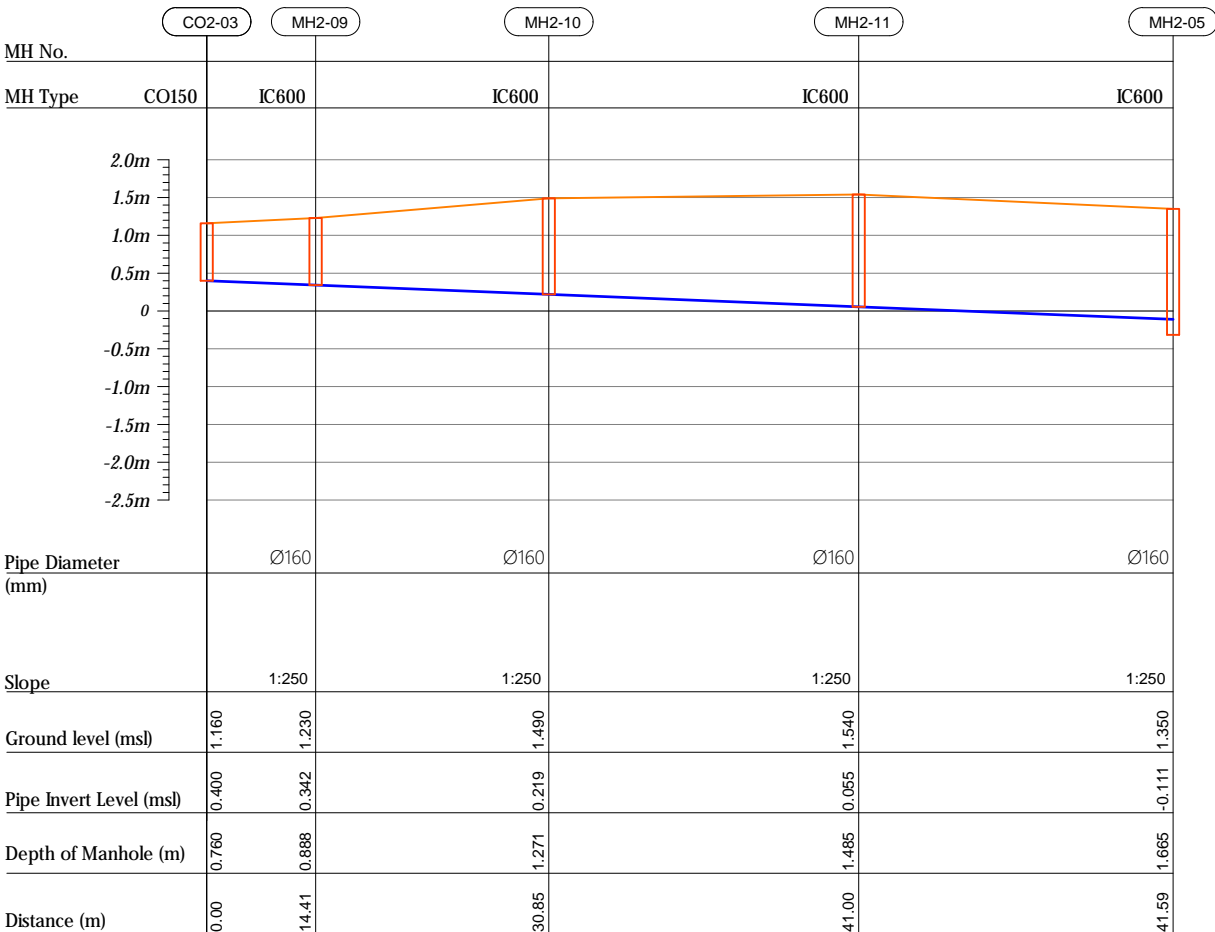
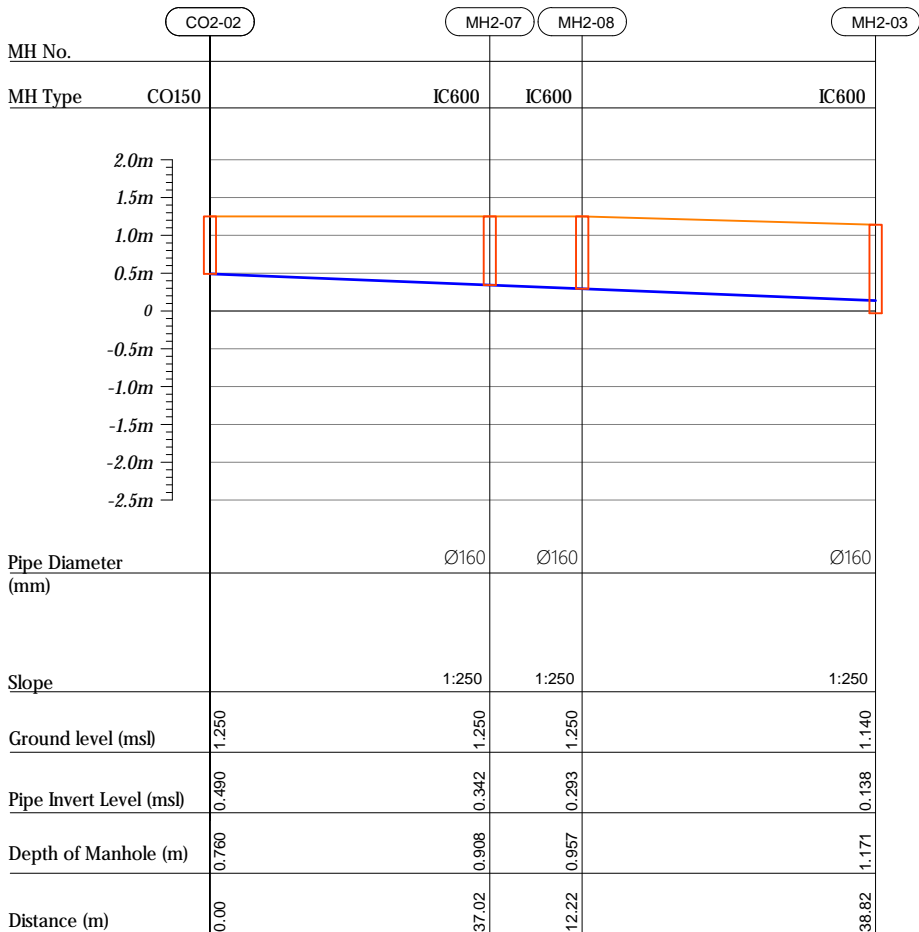
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Project No: 01010101

Rev: <i>R-01</i>	Page: <i>PS2-01</i>
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Profile 02



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 GA.Dhehvadhoo

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



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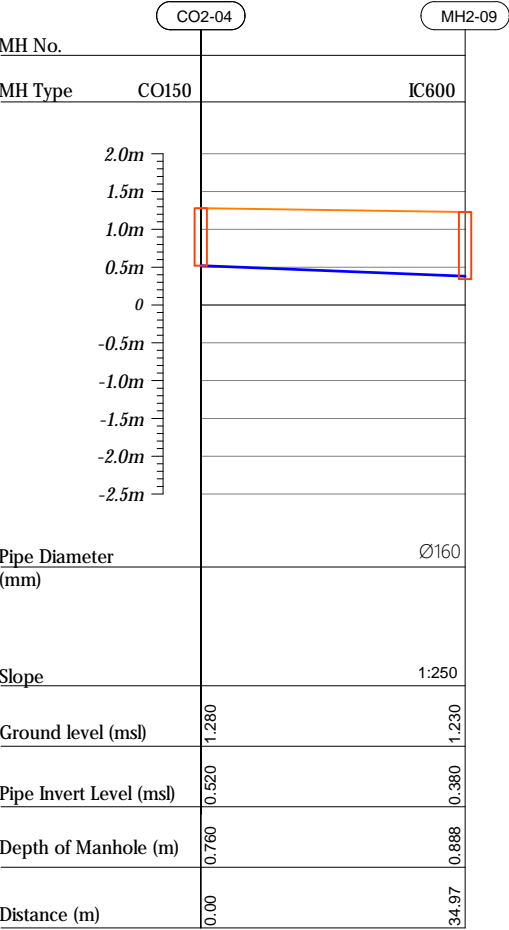
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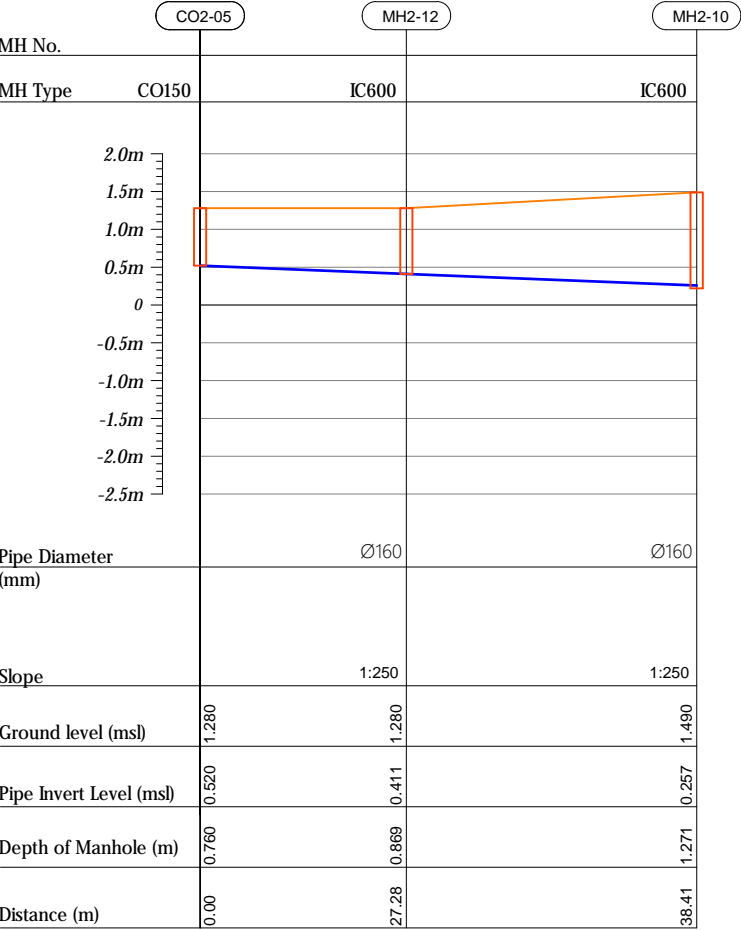
Project No: 01010101

Rev: <i>R-01</i>	Page: <i>PS2-02</i>
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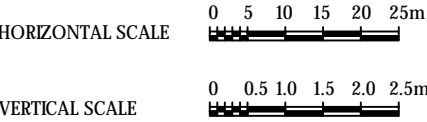
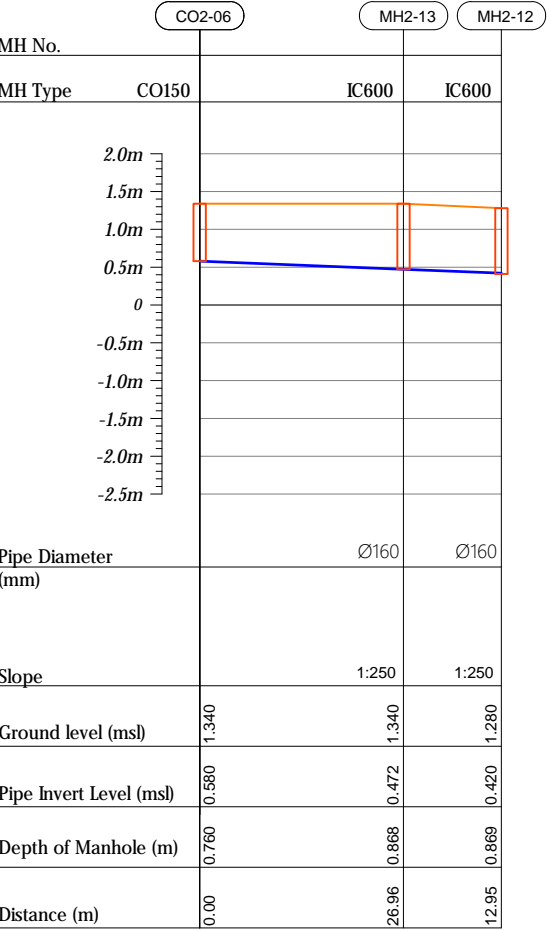
Profile 04



Profile 05



Profile 06



- 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 GA.Dhehvadhoo

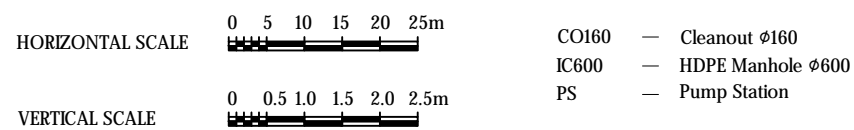
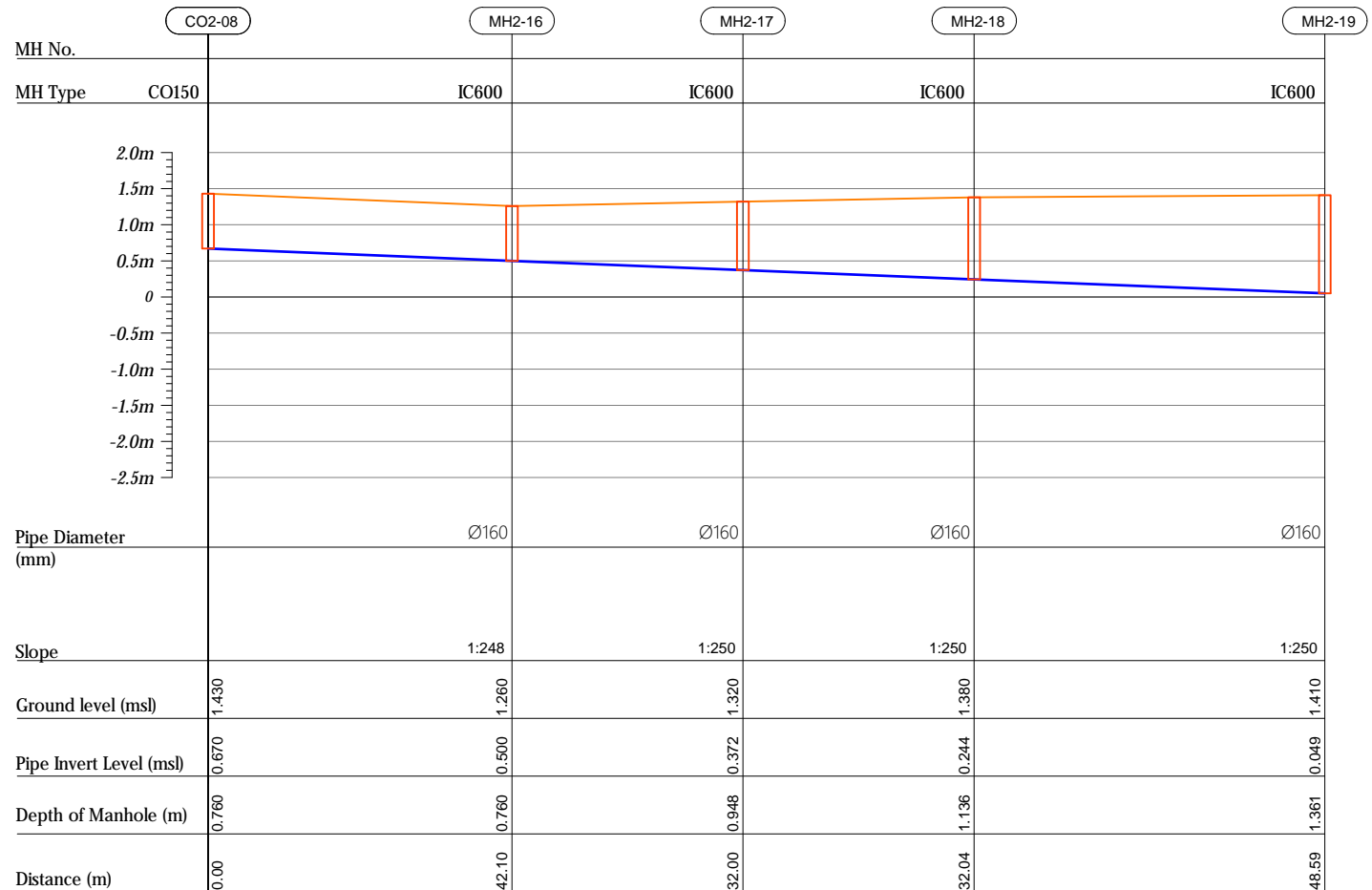
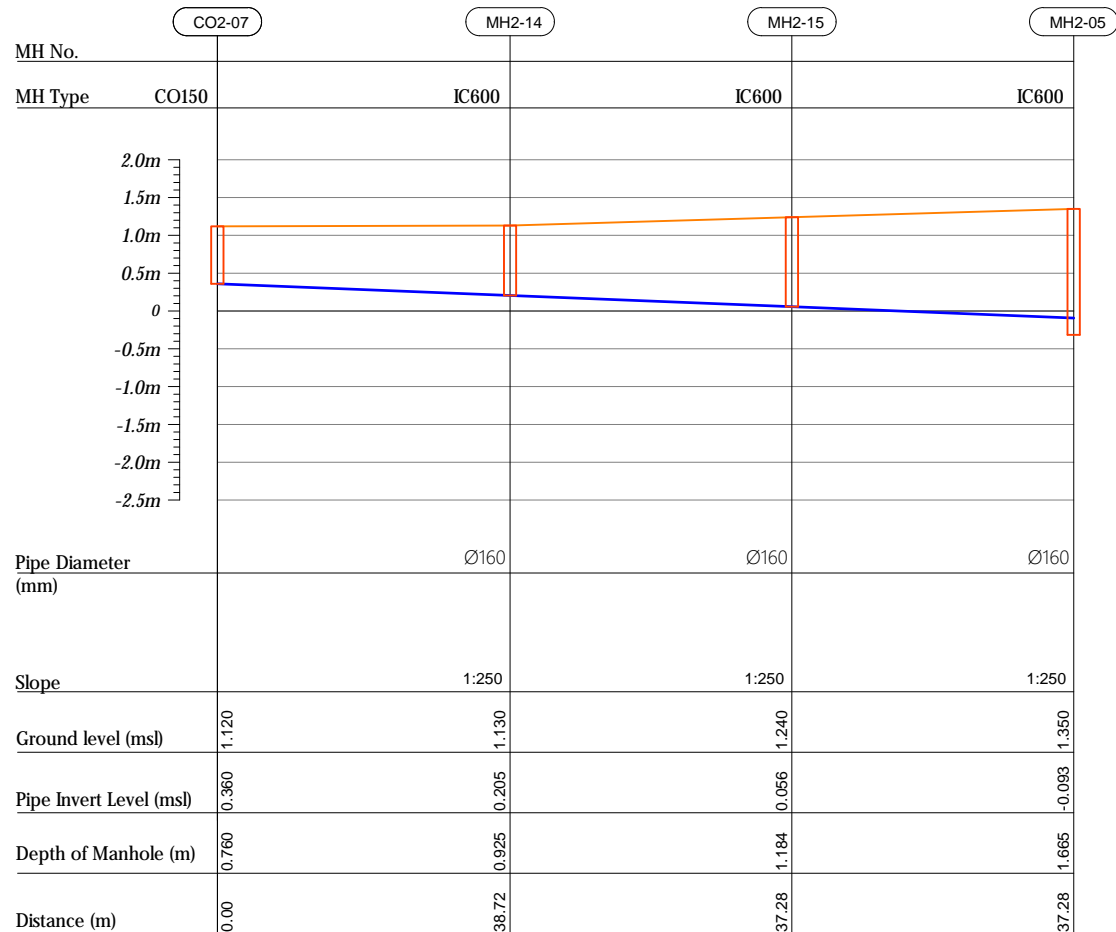
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Hussuvehemaa Magu, Male', Maldives

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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: PS2-03

Profile 07




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

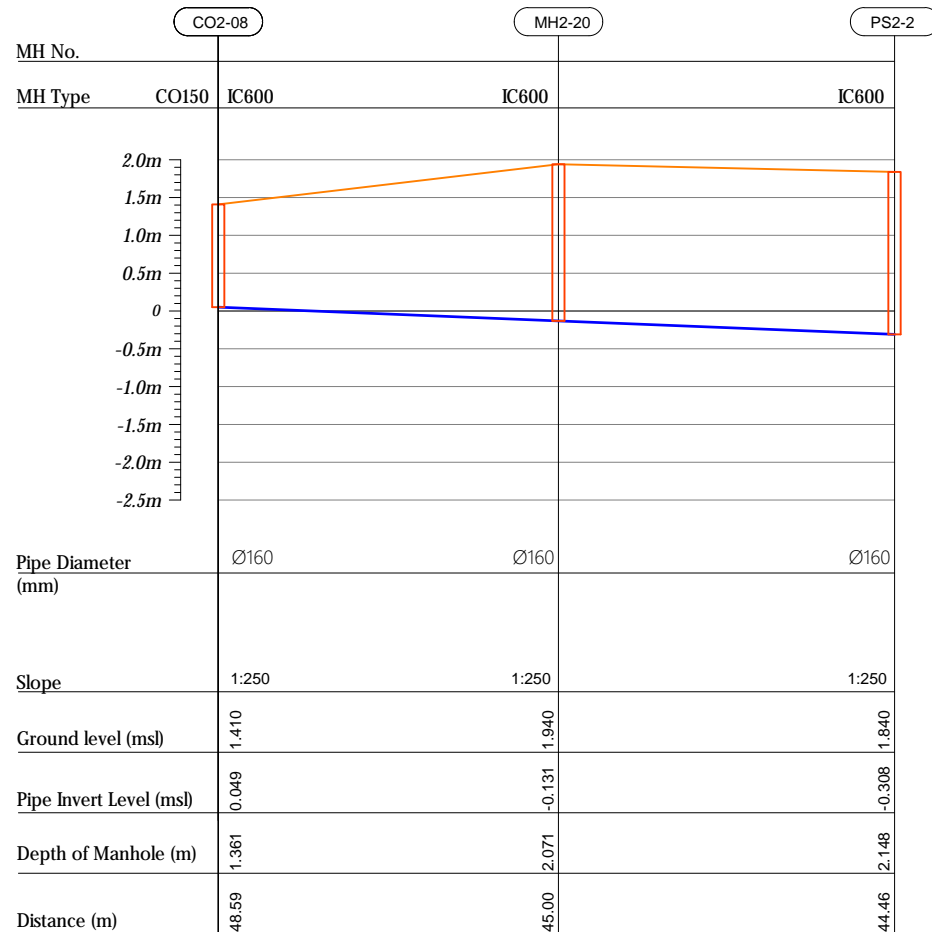
Title:
*Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
5 islands, Maldives - Package 6*

Sub Title:
Sewerage System in GA.Dhehvadhoo

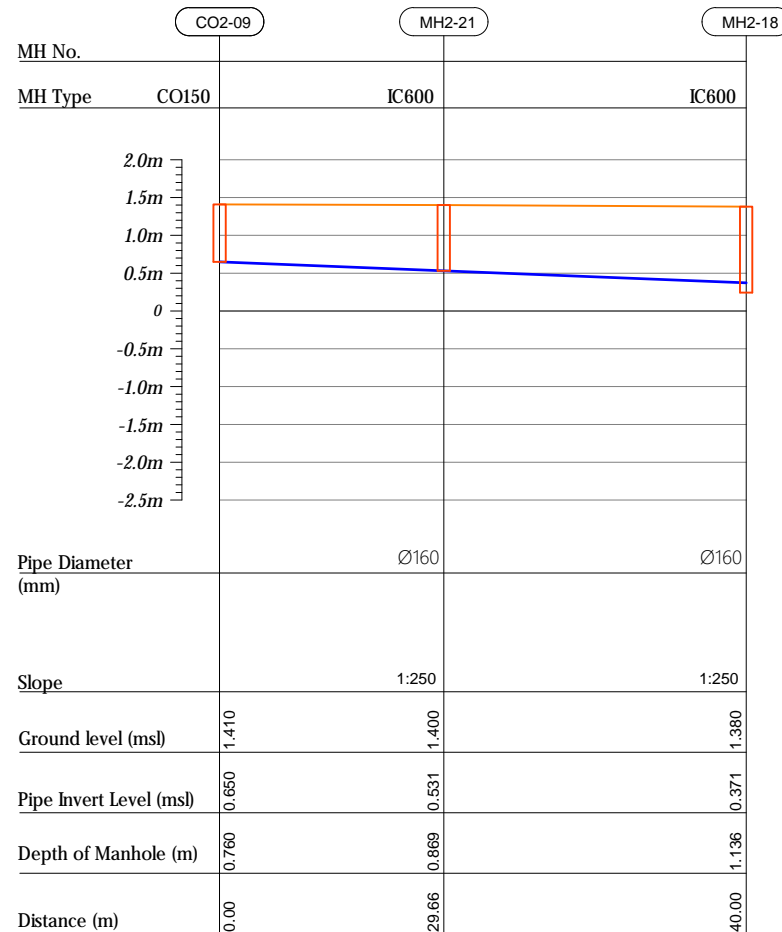
Client:
*Ministry of National Planning, Housing and
Infrastructure, Republic of Maldives*

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Drawn: A.R.W	Checked: M.S.S
Designed: F.I.A	Approved: L.W
Date: Aug 2020	SCALE (ASR): 1:100
Project No: 01010101	
Rev: R-01	Page: PS2-04

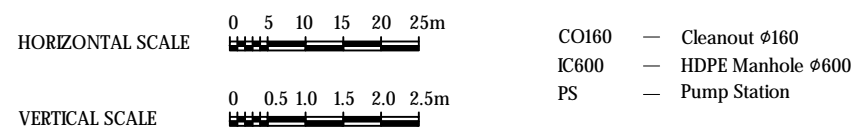
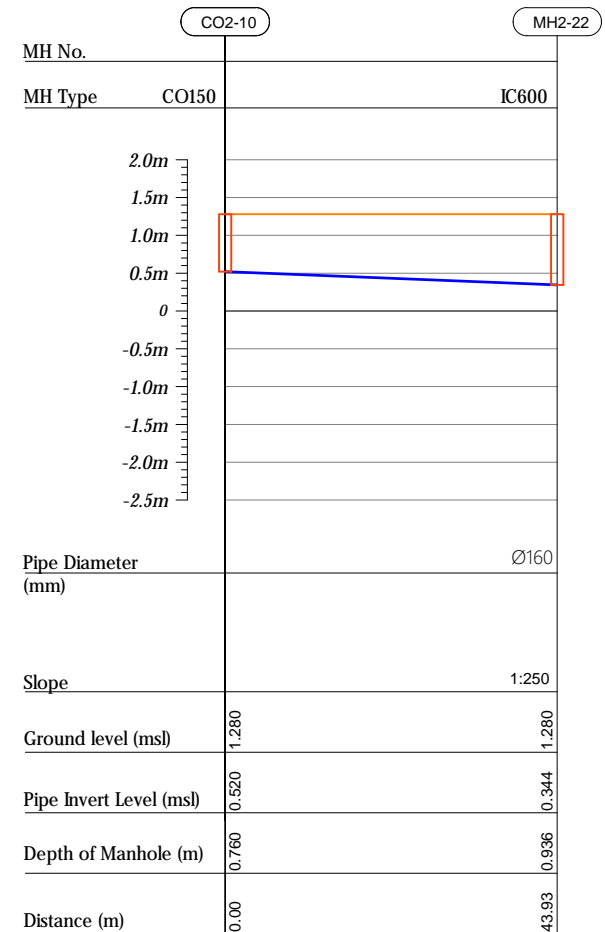
Profile 08



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 GA.Dhehvadhoo

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



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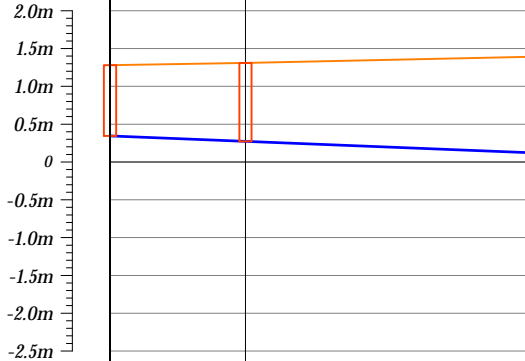
Designed: F.I.A	Approved: LW
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Date: Aug 2020	SCALE (A3): 1:100
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Project No: 01010101

Rev: <i>R-01</i>	Page: <i>PS2-05</i>
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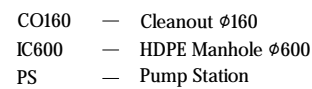
Profile 10



MH No.	CO2-10		MH2-23	MH2-19
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2.0m				
1.5m				
1.0m				
0.5m				
0				
-0.5m				
-1.0m				
-1.5m				
-2.0m				
-2.5m				
Pipe Diameter (mm)	Ø160	Ø160		Ø160
Slope	1:250	1:250		1:250
Ground level (msl)	1.280	1.310		1.410
Pipe Invert Level (msl)	0.344	0.273		0.088
Depth of Manhole (m)	0.936	1.037		1.361
Distance (m)	43.93	17.92		46.14

Profile 11	
MH No.	CO2-11
MH Type	IC600
Pipe Diameter (mm)	Ø160
Slope	1:250
Ground level (msl)	1.280
Pipe Invert Level (msl)	0.520
Depth of Manhole (m)	0.760
Distance (m)	0.00

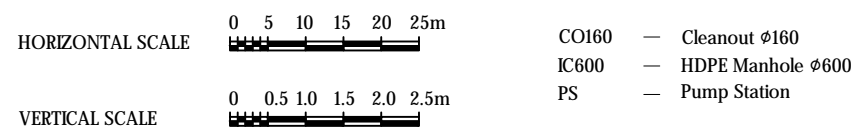
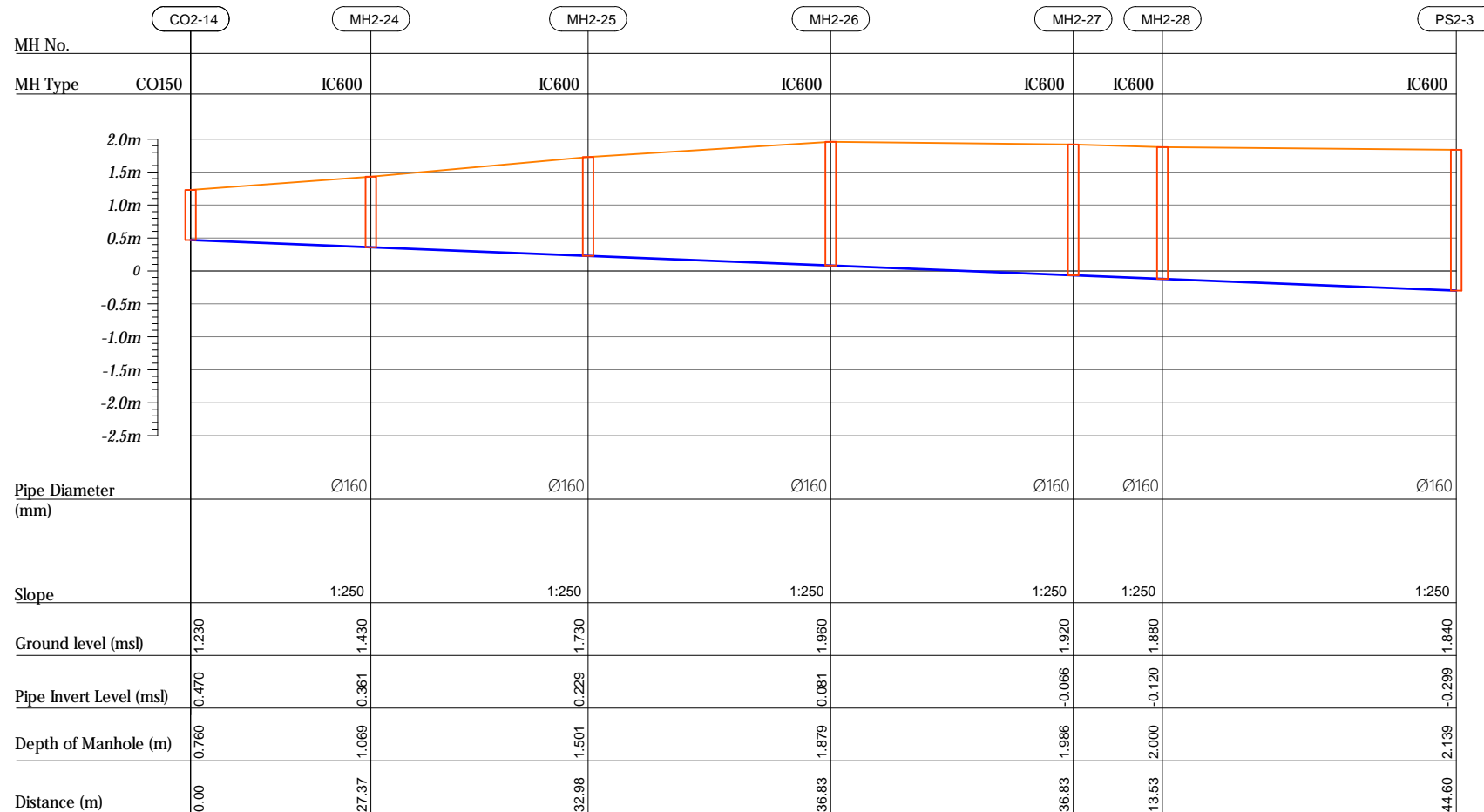
Profile 12		CO2-12	MH2-23
MH No.			
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Pipe Diameter (mm)			Ø160
Slope			1:250
Ground level (msl)	1.310		1.310
Pipe Invert Level (msl)	0.550		0.437
Depth of Manhole (m)	0.760		1.037
Distance (m)	0.00		28.30

Profile 13	
MH No.	CO2-13
MH Type	IC600
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Pipe Diameter (mm)	Ø160
Slope	1:250
Ground level (msl)	1.560
Pipe Invert Level (msl)	0.800
Depth of Manhole (m)	0.760
Distance (m)	0.00

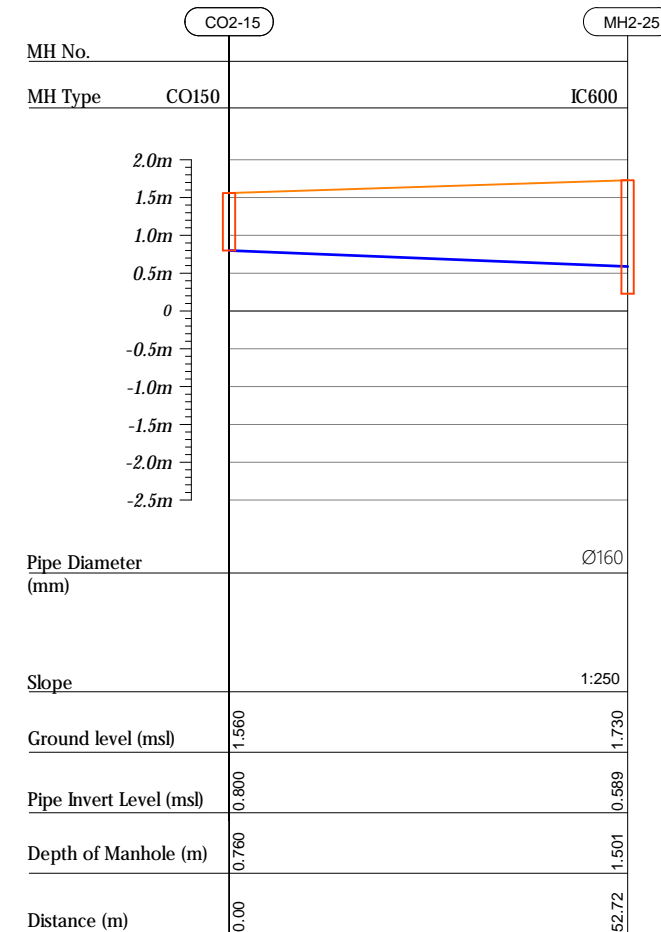


Title: <i>Consultancy Services for Survey, Design and EIA works of Water Supply and Sewerage Facilities in 5 islands, Maldives - Package 6</i>	
Sub Title: <i>Sewerage System in GA.Dhehvadhoo</i>	
Client: <i>Ministry of National Planning, Housing and Infrastructure, Republic of Maldives</i>	
 <p> T: +960 333 3528 E: info@epoch.associates W: www.epoch.associates A: G. Rosary West, Hunnuheenna Magu, Male', Maldives </p>	 <p> BLACK & INFRA <i>Making Infrastructure Happen</i> </p>
Drawn: A.R.W	Checked: M.S.S
Designed: F.I.A	Approved: I.W
Date: Aug 2020	SCALE (AS): 1:100
Project No: 01010101	
Rev: R-01	Page: PS2-06

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 GA.Dhehvadhoo

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

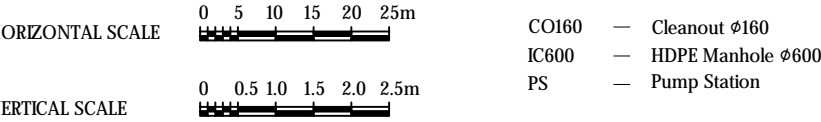
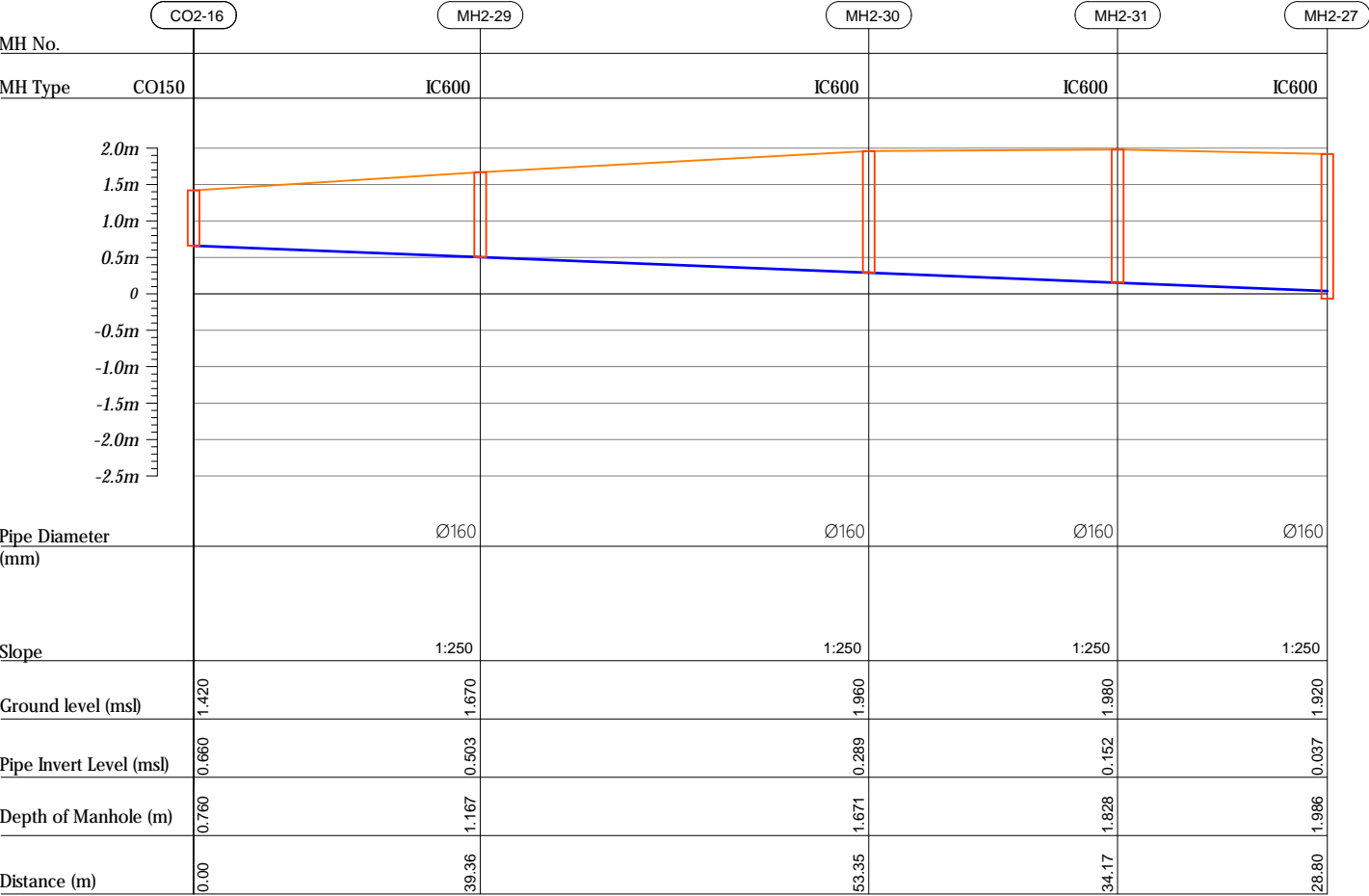
Project No: 01010101

Rev: _____ Page: _____

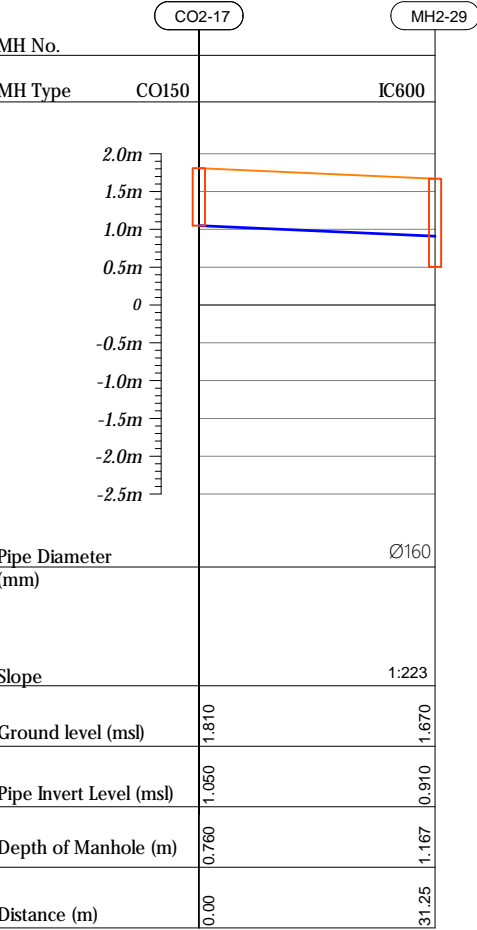
R-01 PS2-07

PS2-07

Profile 16



Profile 17



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



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Hussuvehemaa Magu, Male', Maldives

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Maldivu Infrastructure Develop

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

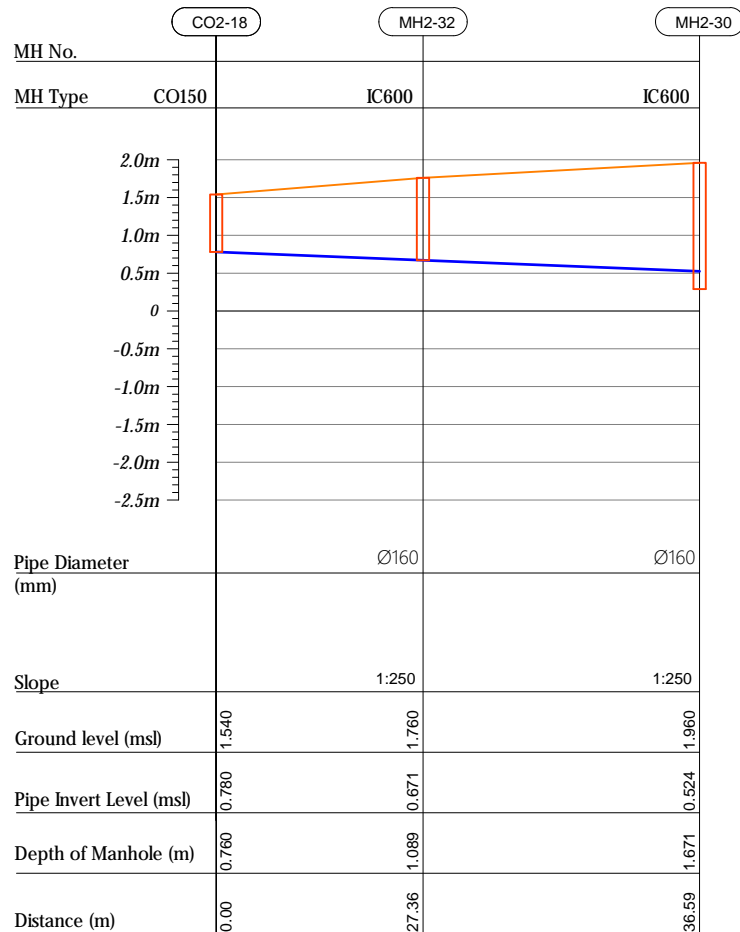
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Date: Aug 2020 SCALE (A3): 1:100

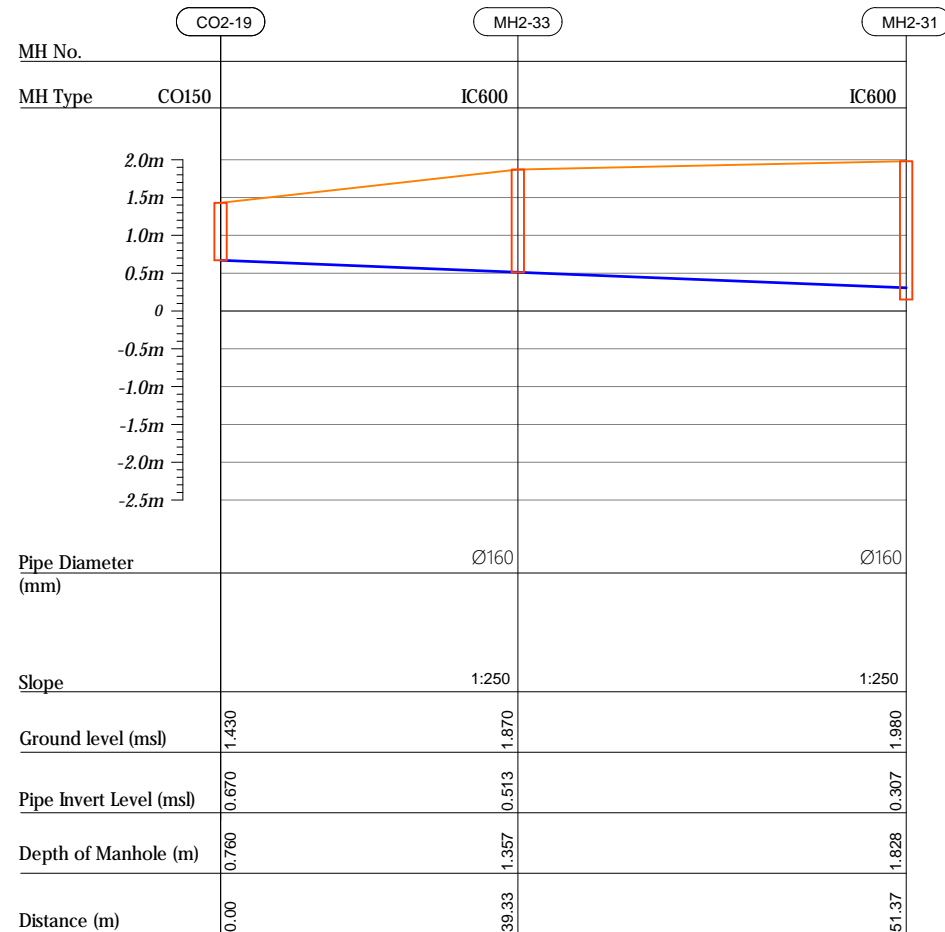
Project No: 01010101

Rev: R-01 Page: PS2-08

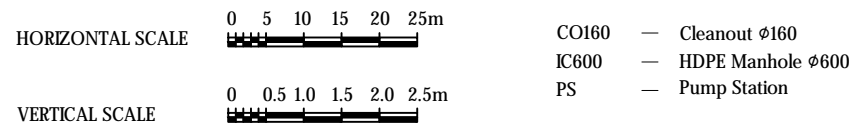
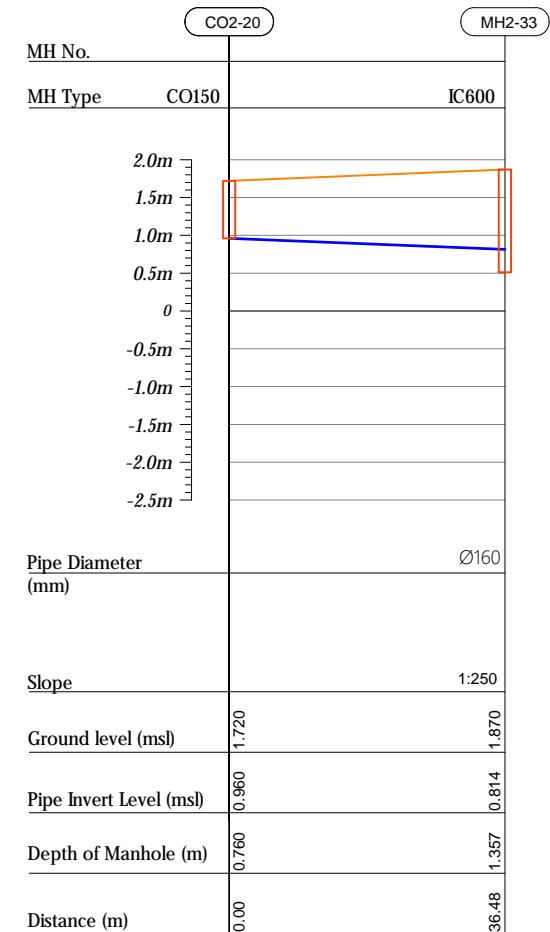
Profile 18



Profile 19



Profile 20



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

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Sewerage System in GA.Dhehvadhoo

Client:
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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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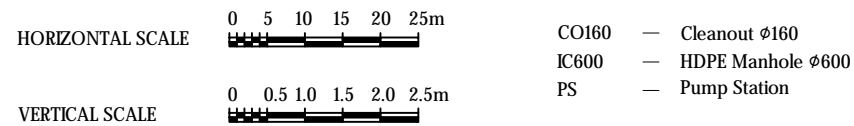
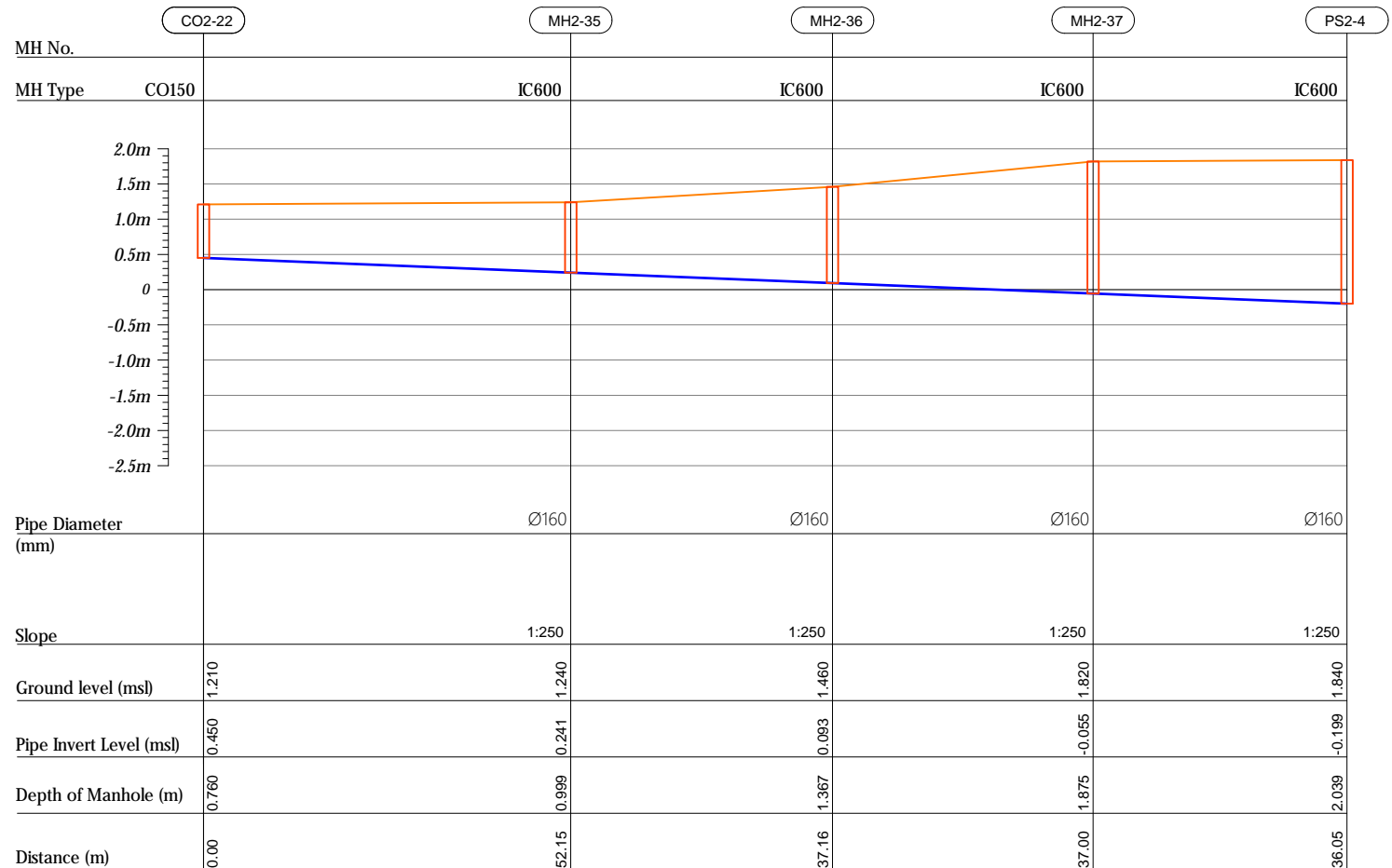
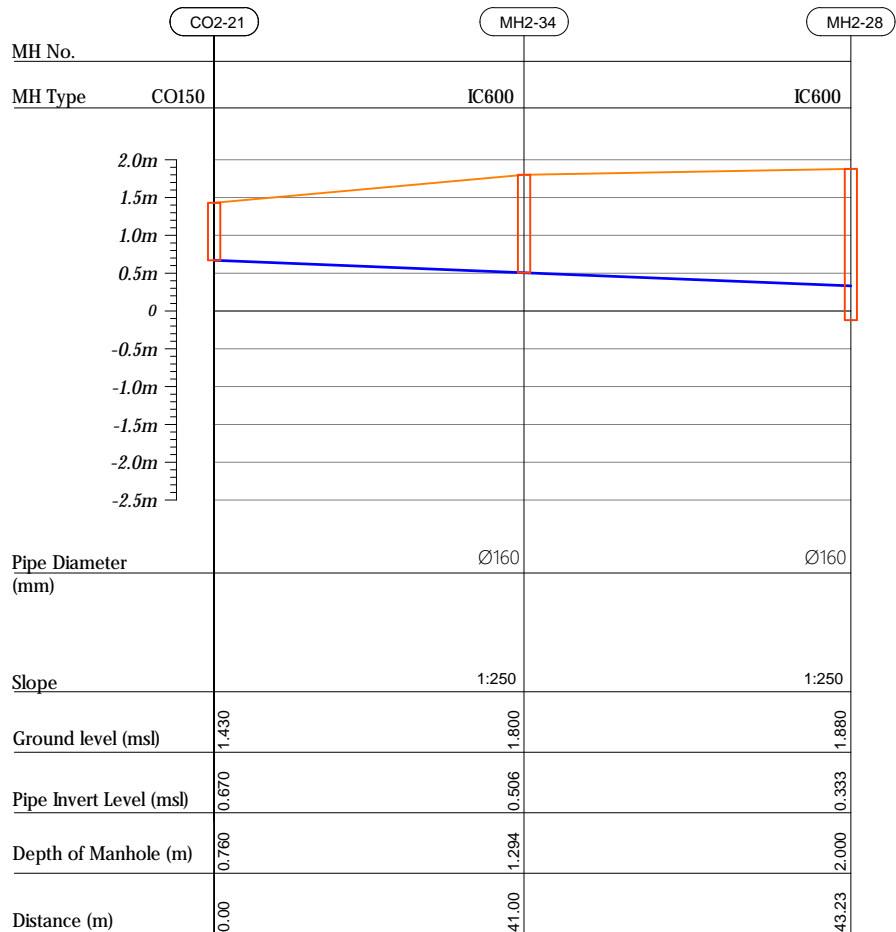
Date: Aug 2020	SCALE (A3): 1:100
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Project No: 01010101

Rev:	Page:
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R-01 PS2-09

Profile 21



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

Sub Title:
Sewerage System in GA.Dhehvadhoo

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

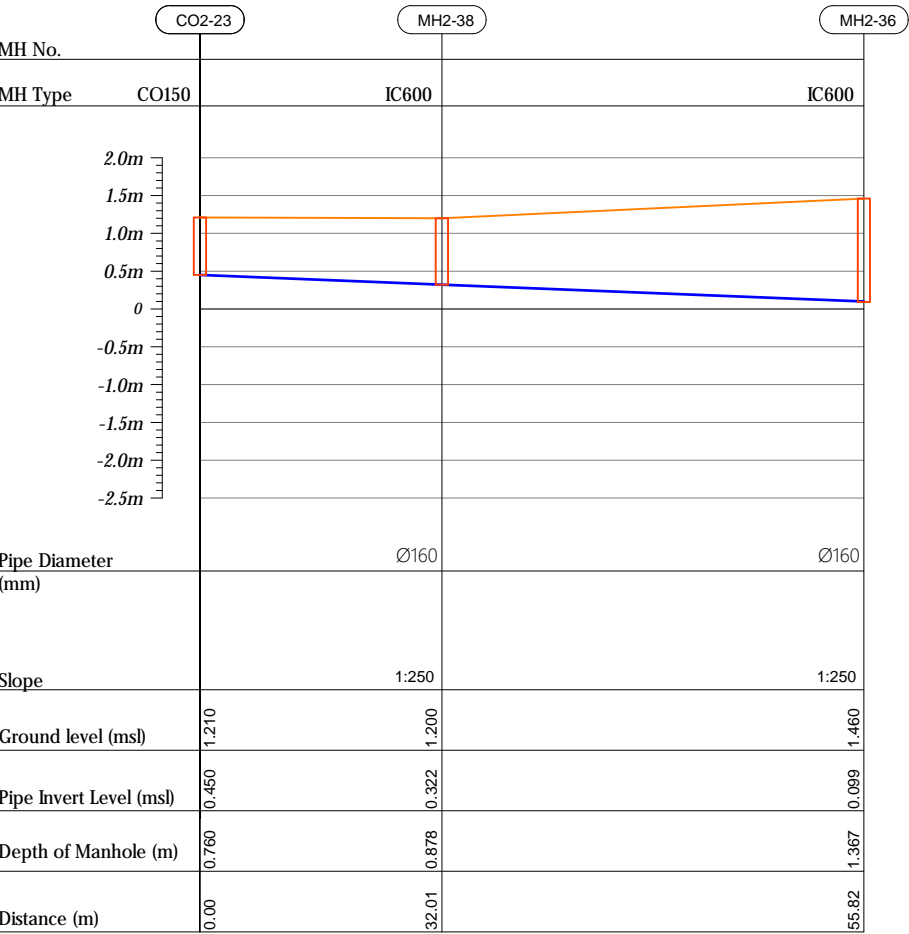
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A: G. Rosary West,
Husuunheena Magu, Male', Maldives

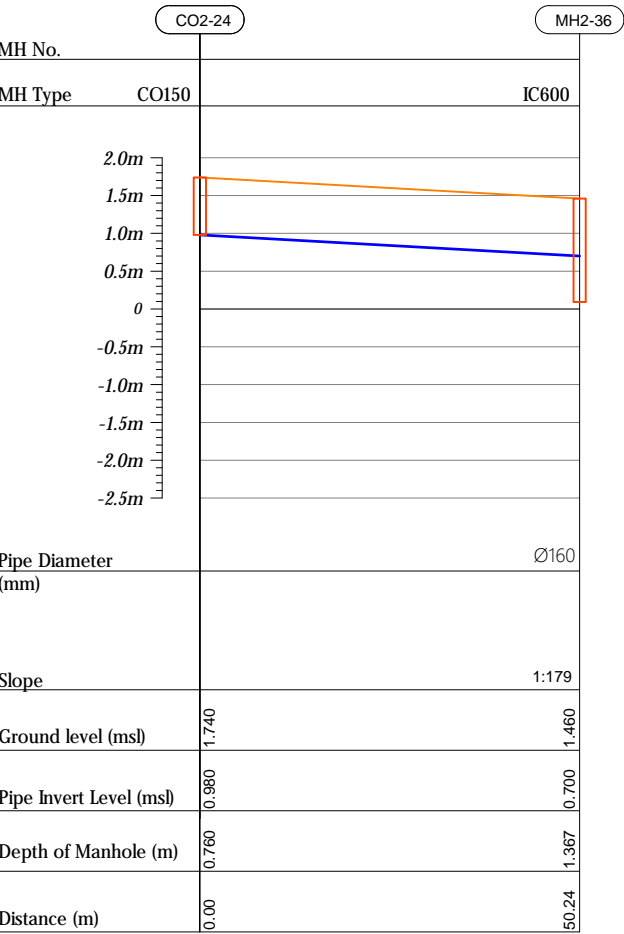
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Drawn: A.R.W	Checked: M.S.S
Designed: F.I.A	Approved: L.W
Date: Aug 2020	SCALE (A3): 1:100
Project No: 01010101	
Rev: R-01	Page: PS2-10

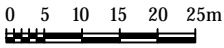
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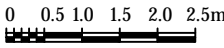
Profile 24



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 GA.Dhehvadhoo

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



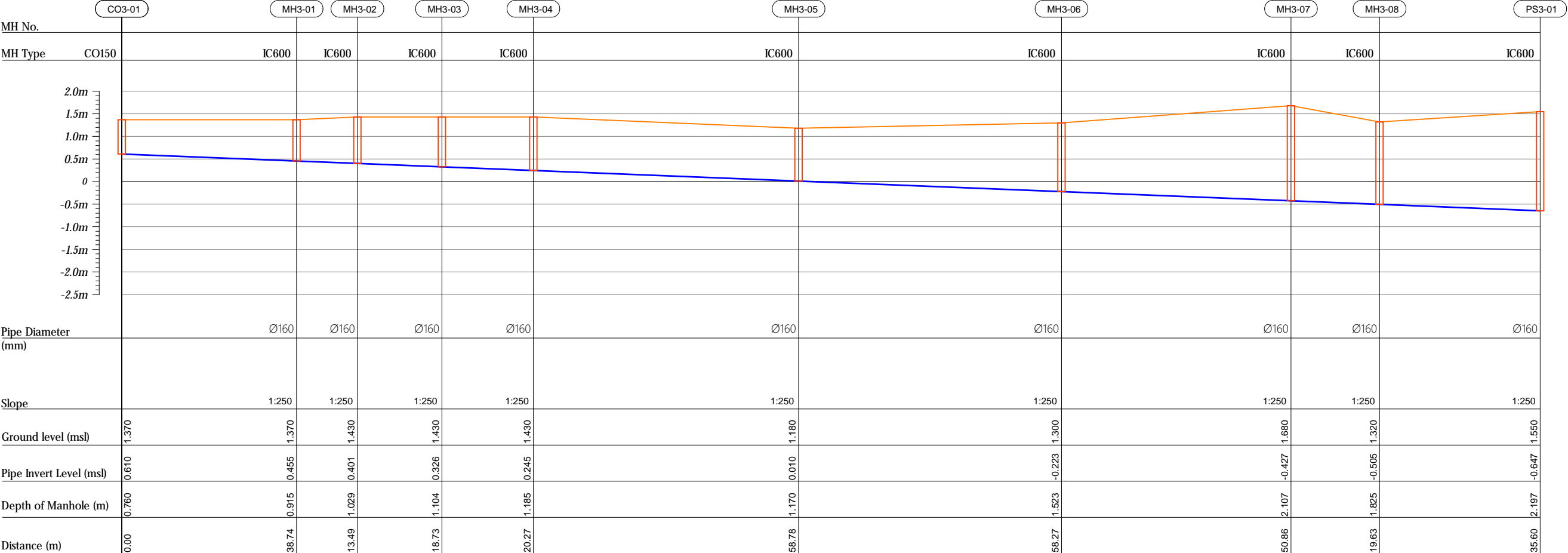
T: +960 333 3528
E: info@epoch.associates
W: www.epoch.associates
A: G. Rosary West,
Hussuhenias Magu, Male', Maldives



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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: PS2-11

Profile 01



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 GA.Dhehvadhoo

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

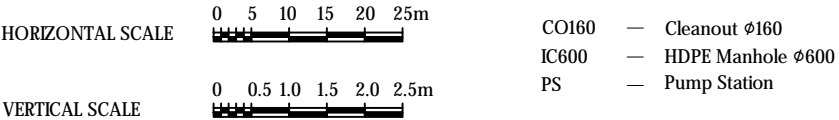
 **EPOCH**
ASSOCIATES

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

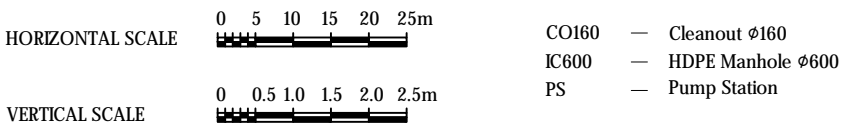
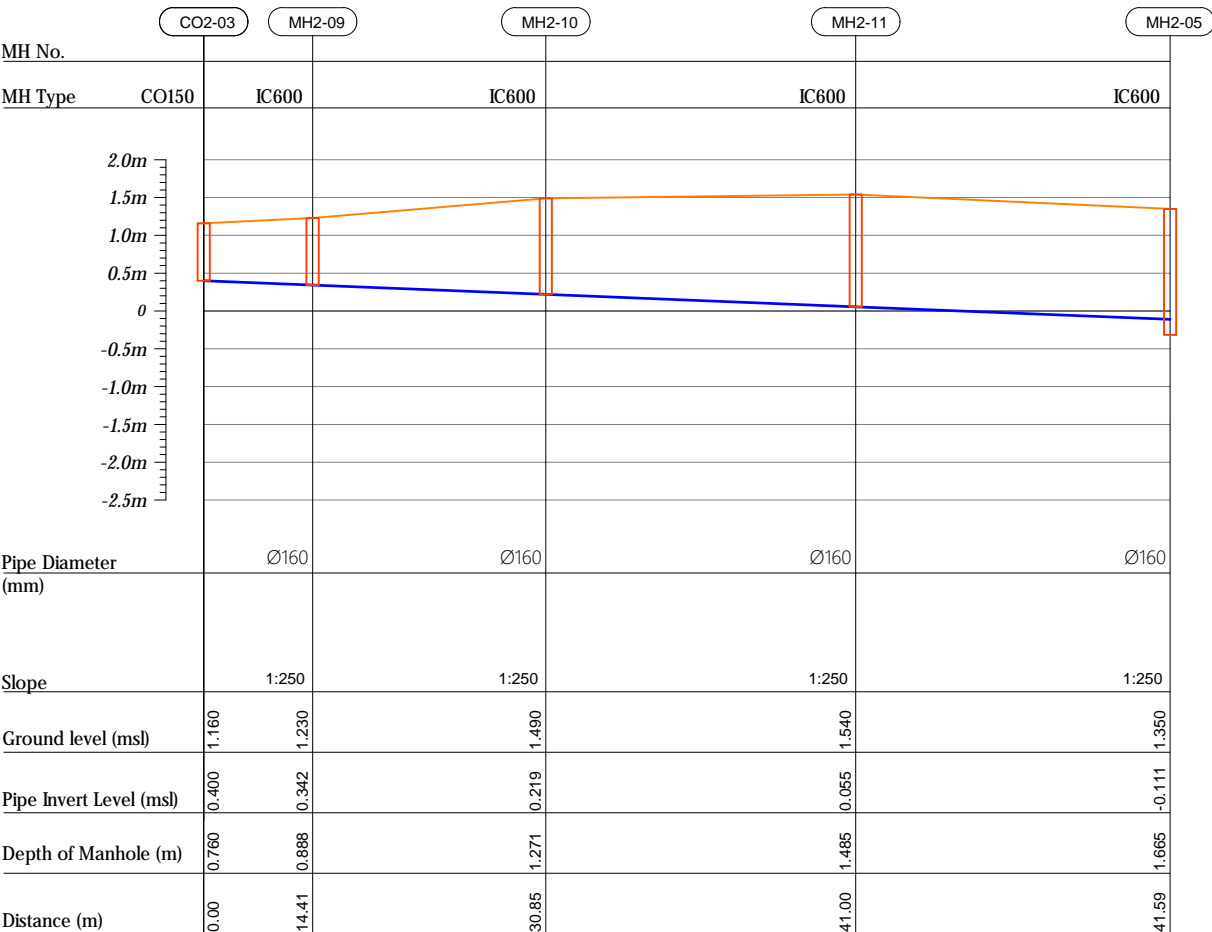
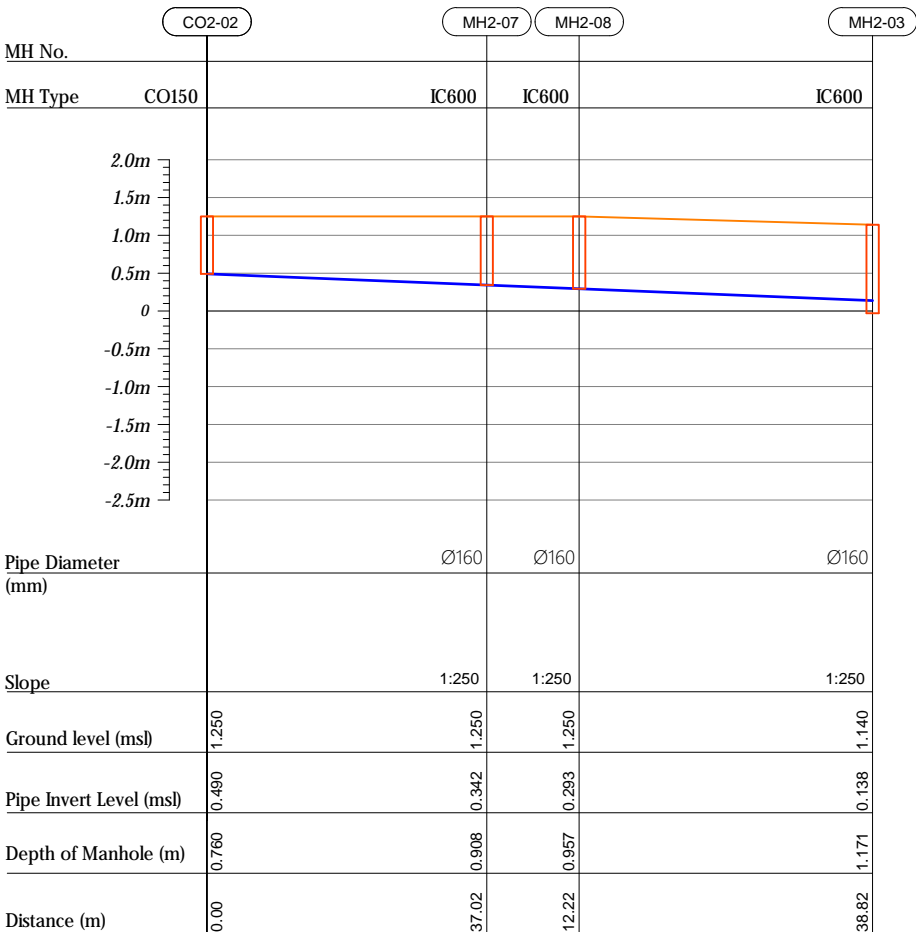
FEEDBACK INFRA
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Drawn: A.R.W	Checked: M.S.S
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Date: Aug 2020	SCALE (A3): 1:100
Project No: 01010101	

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Profile 02



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 GA.Dhehvadhoo

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



Drawn: A.R.W	Checked: M.S.S
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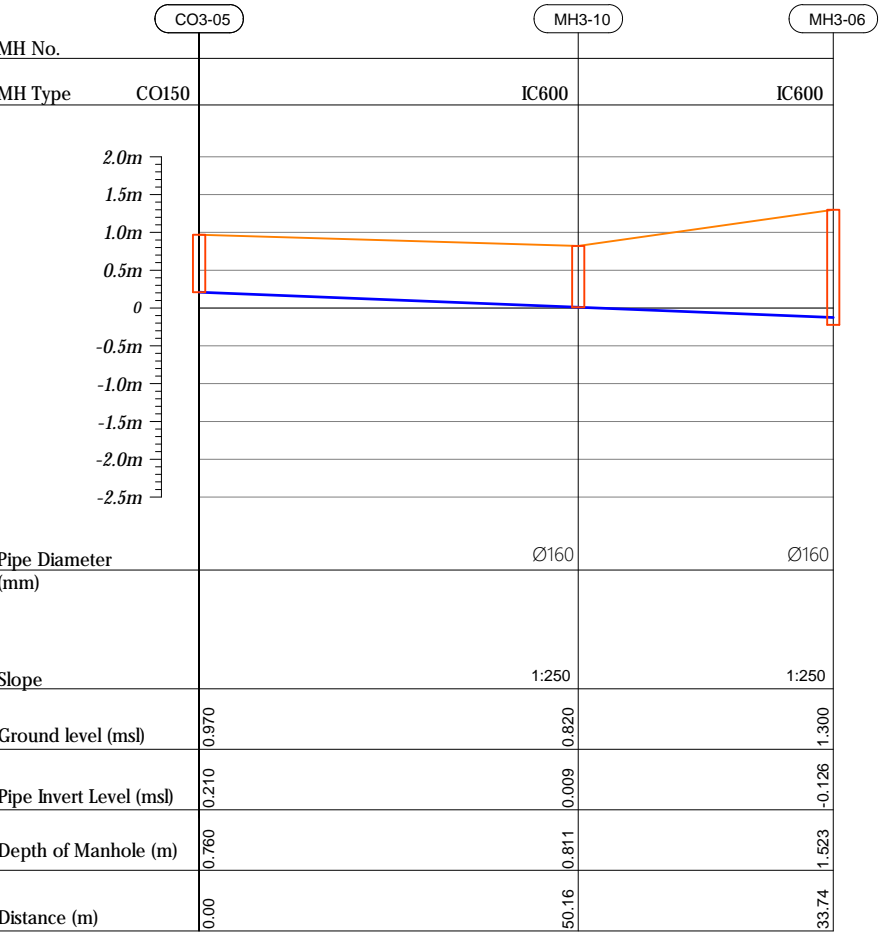
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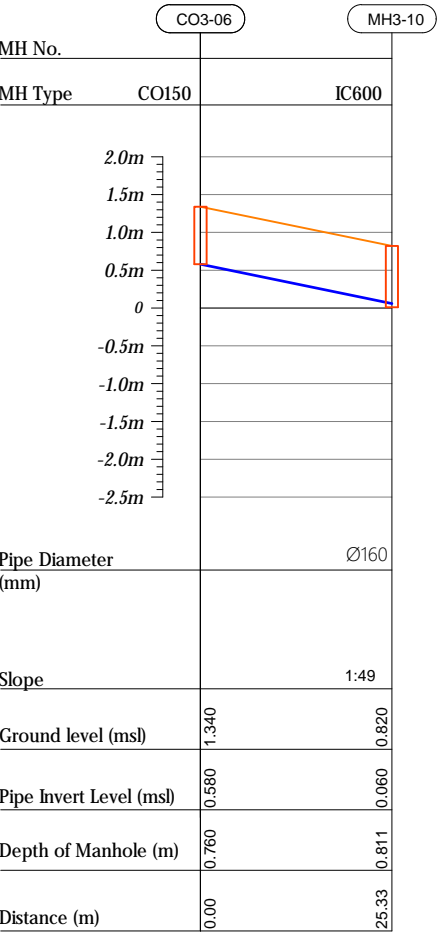
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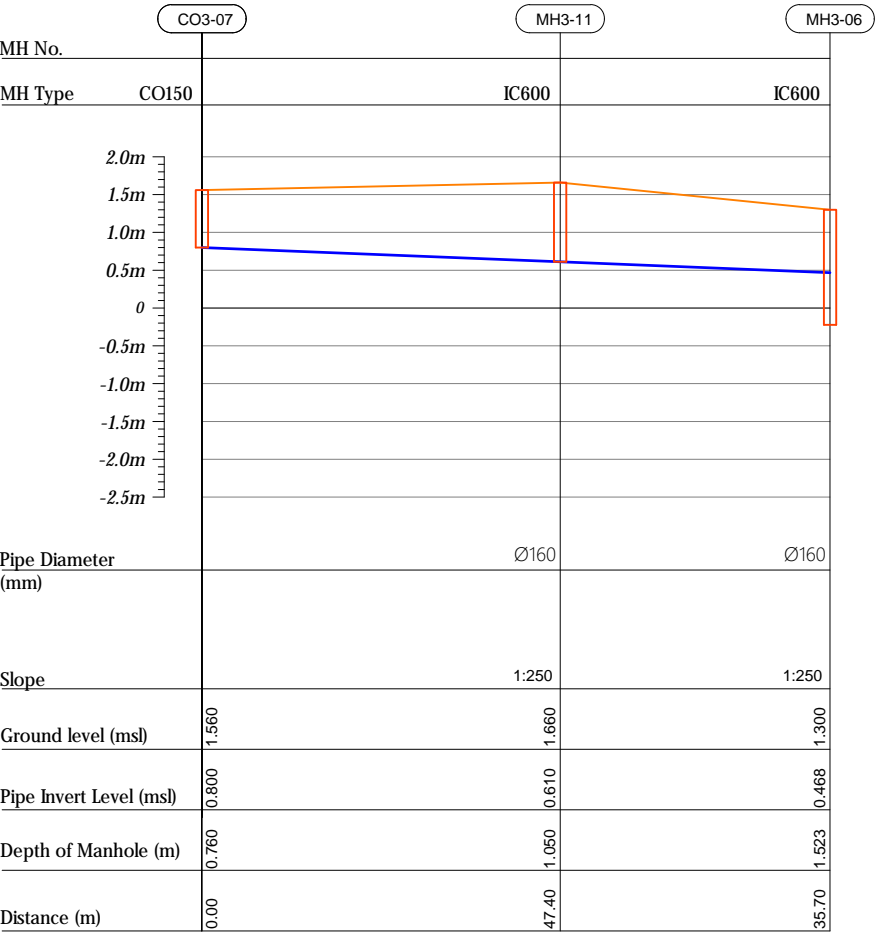
Profile 05



Profile 06



Profile 07



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 GA.Dhehvadhoo

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



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

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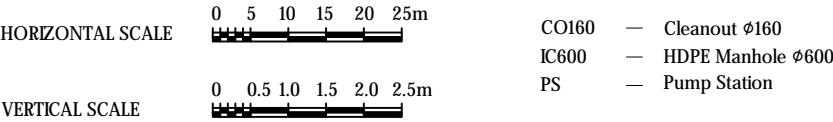
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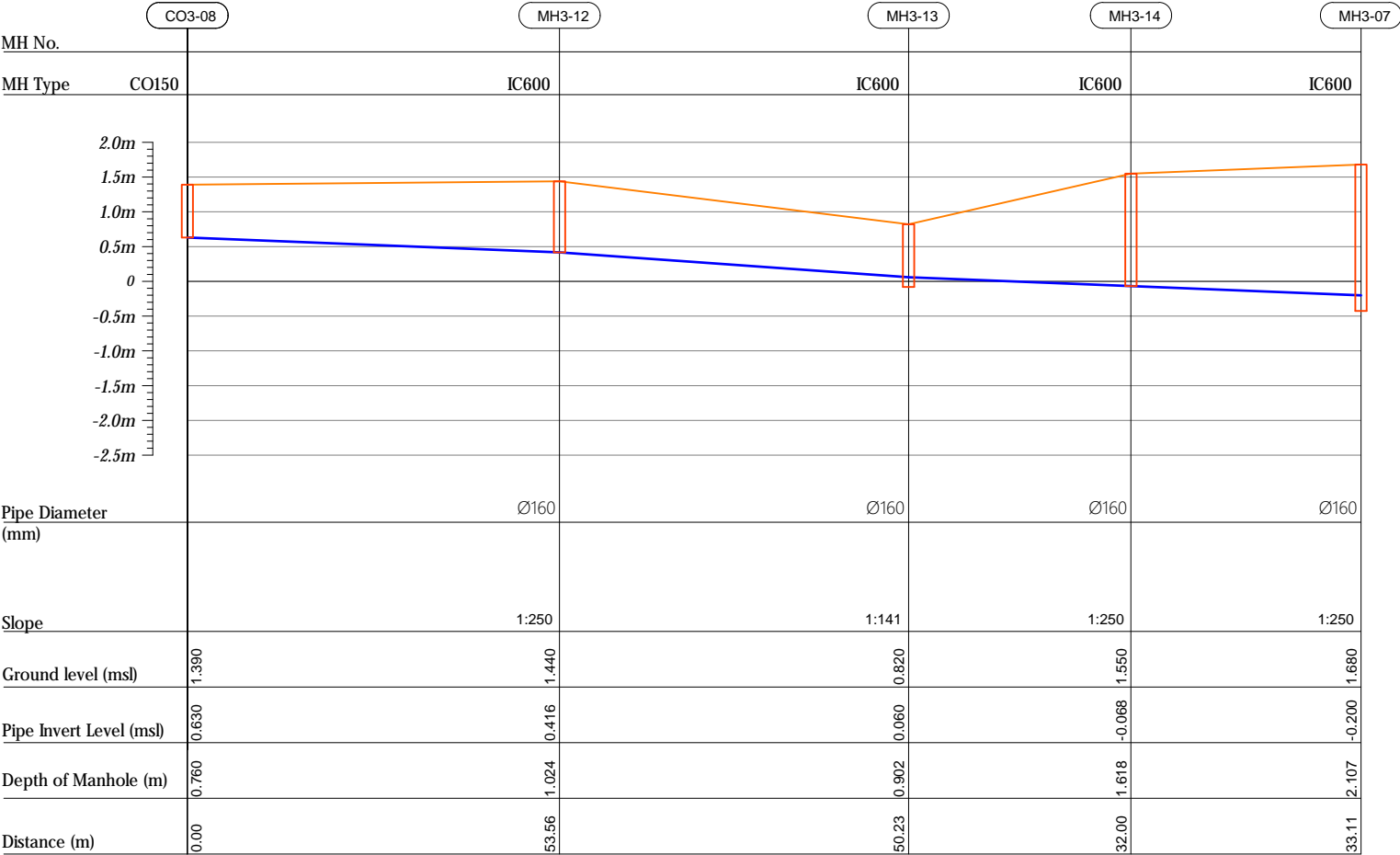
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Project No: 01010101

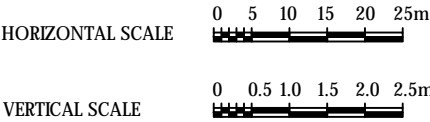
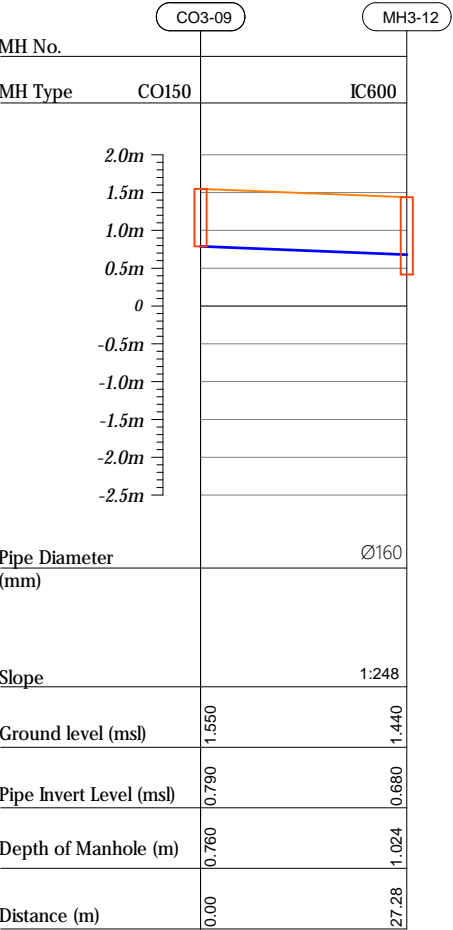
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Profile 08



Profile 09



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 GA.Dhehvadhoo

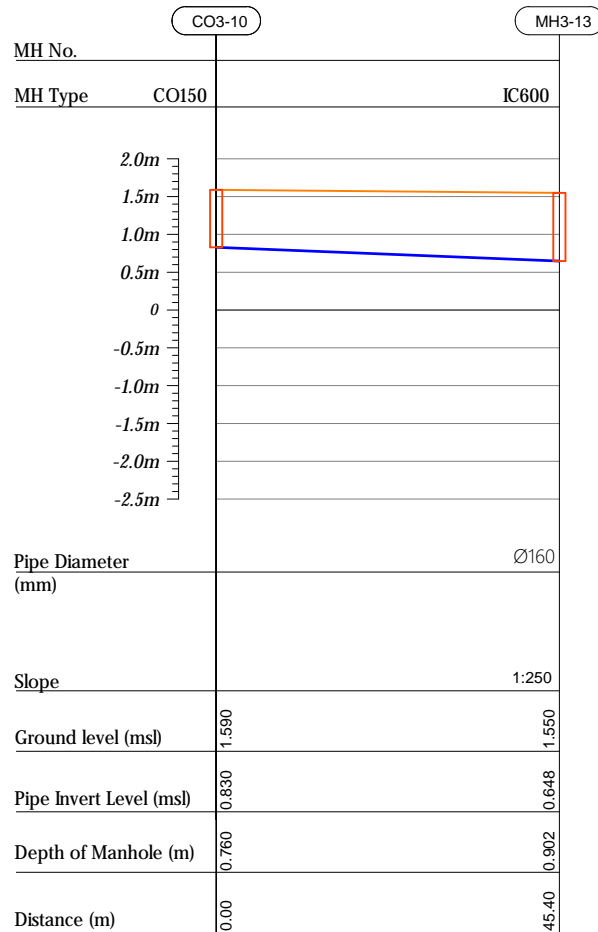
Client:
*Ministry of National Planning, Housing and
Infrastructure, Republic of Maldives*

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

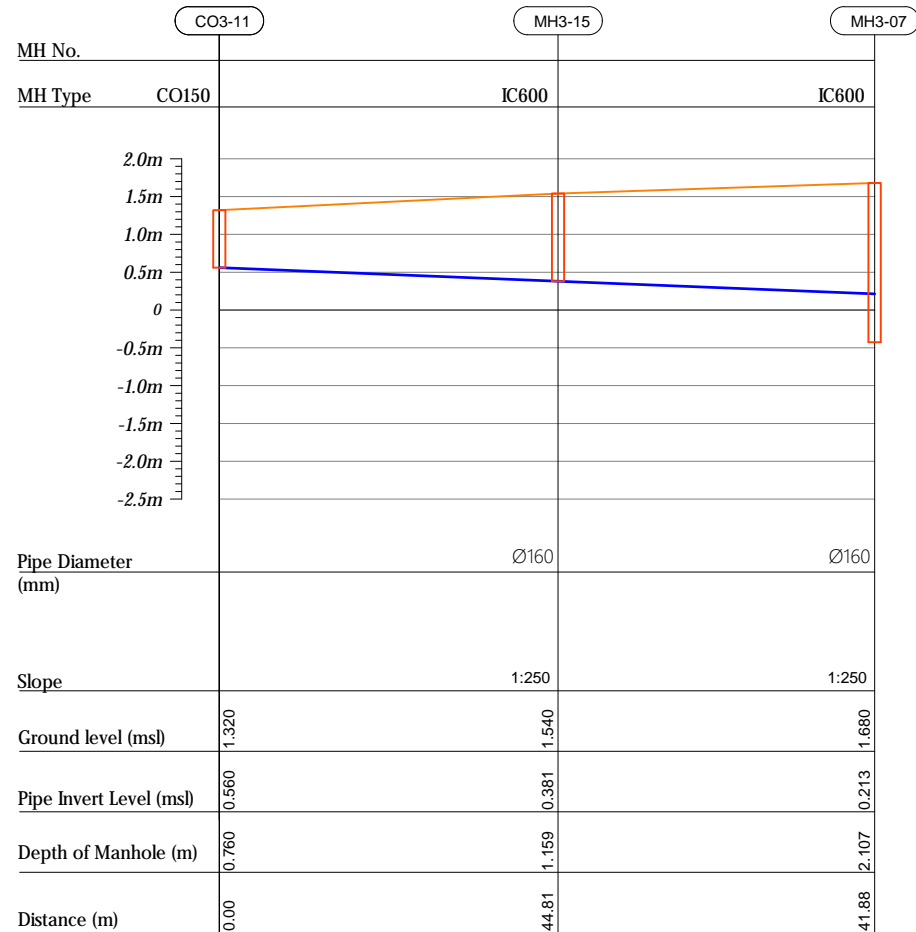
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Drawn: A.R.W	Checked: M.S.S
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Date: Aug 2020	SCALE (A3): 1:100
Project No: 01010101	
Rev: R-01	Page: PS3-04

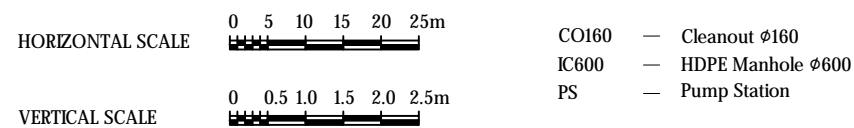
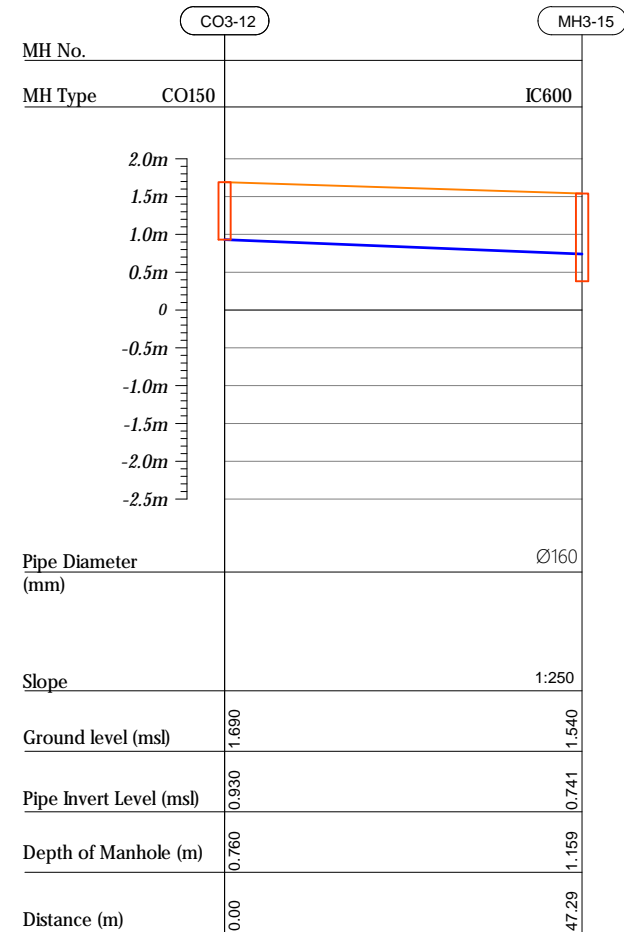
Profile 10



Profile 11



Profile 12




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

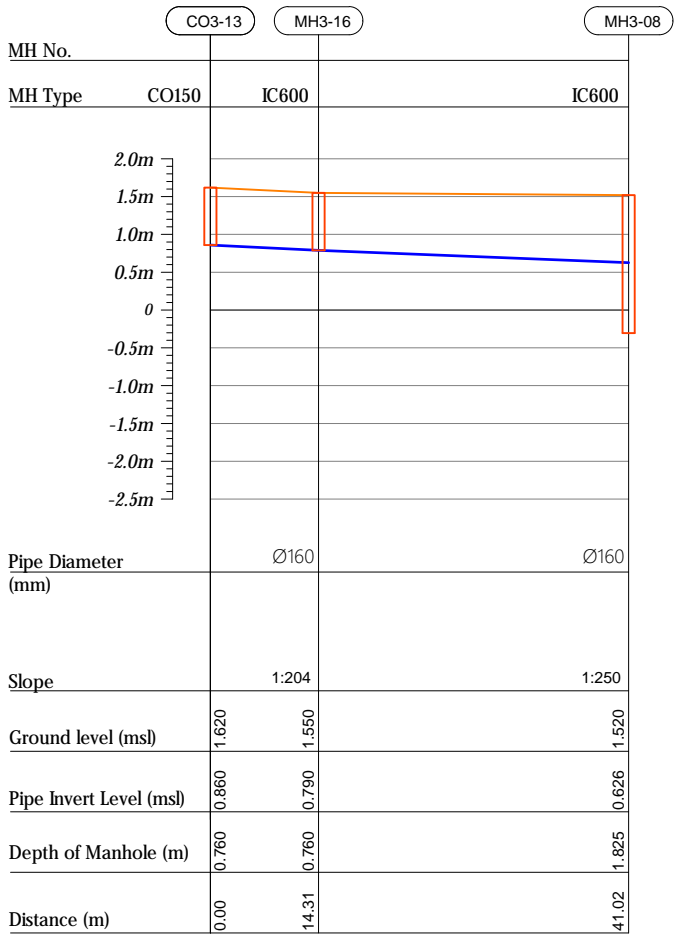
Title:
*Consultancy Services for Survey,
Design and EIA works of Water
Supply and Sewerage Facilities in
5 islands, Maldives - Package 6*

Sub Title:
Sewerage System in GA.Dhehvadhoo

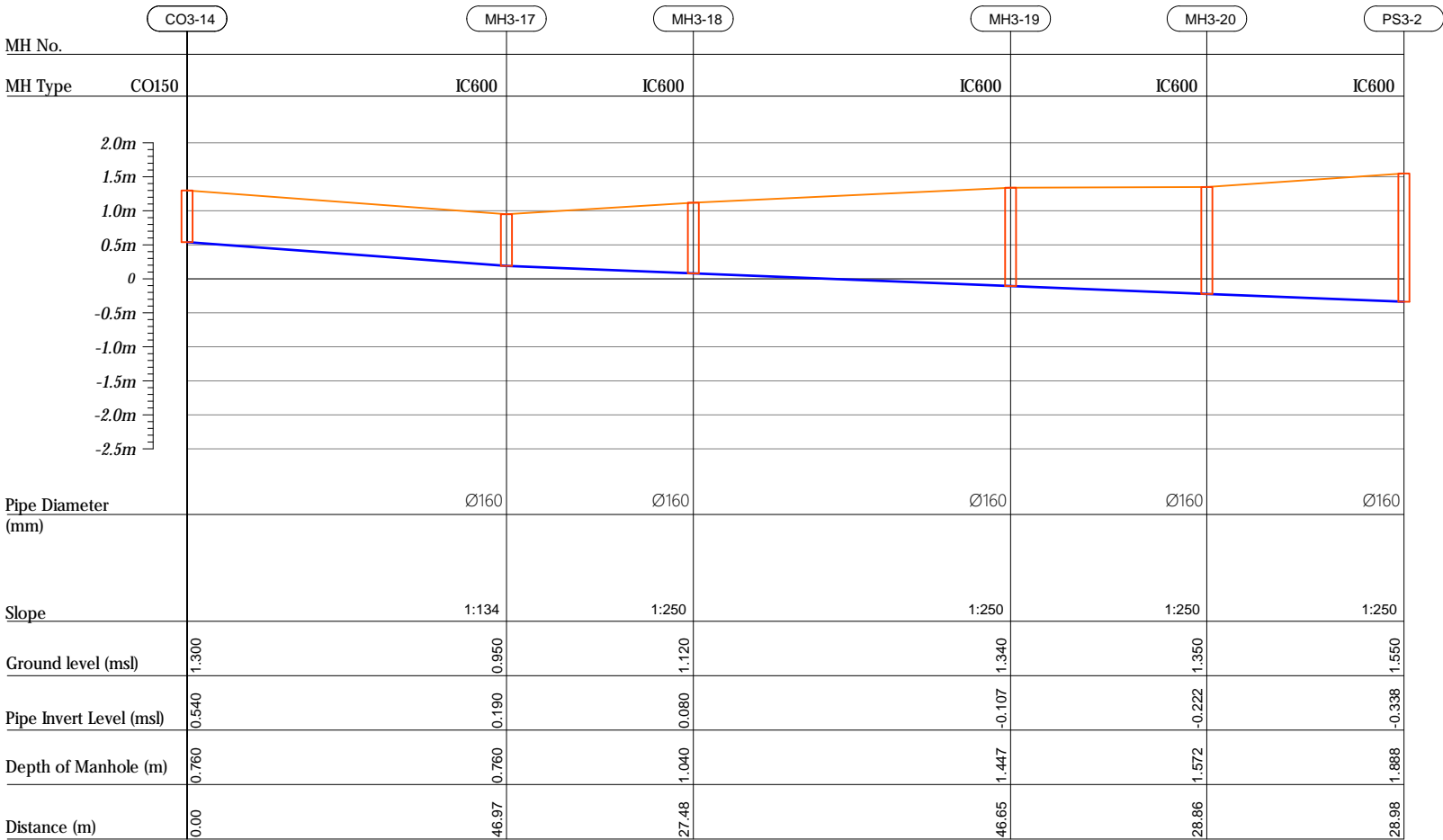
Client:
*Ministry of National Planning, Housing and
Infrastructure, Republic of Maldives*

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Drawn: A.R.W	Checked: M.S.S
Designed: F.I.A	Approved: L.W
Date: Aug 2020	SCALE (AS: 1:100
Project No:	01010101
Rev: <i>R-01</i>	Page: <i>PS3-05</i>

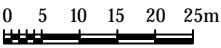
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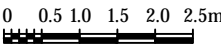
Profile 14



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

Sub Title:
Sewerage System in GA.Dhehvadhoo

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



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Hussuheemaa Magu, Male', Maldives

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Maldivu Sufustructure Hoppu

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

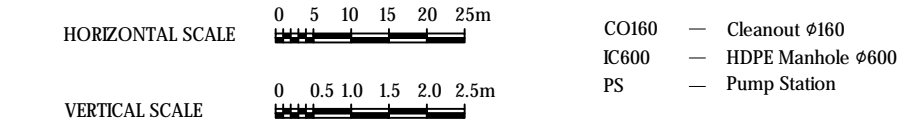
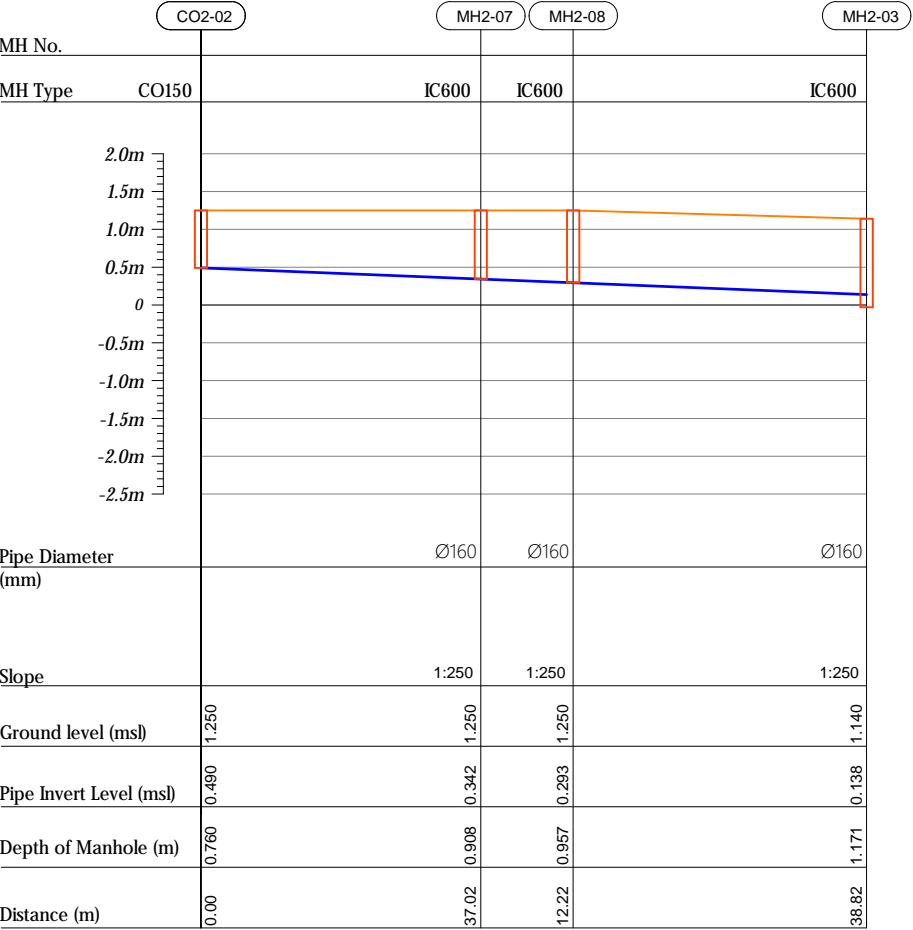
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Date: Aug 2020 SCALE (A3): 1:100

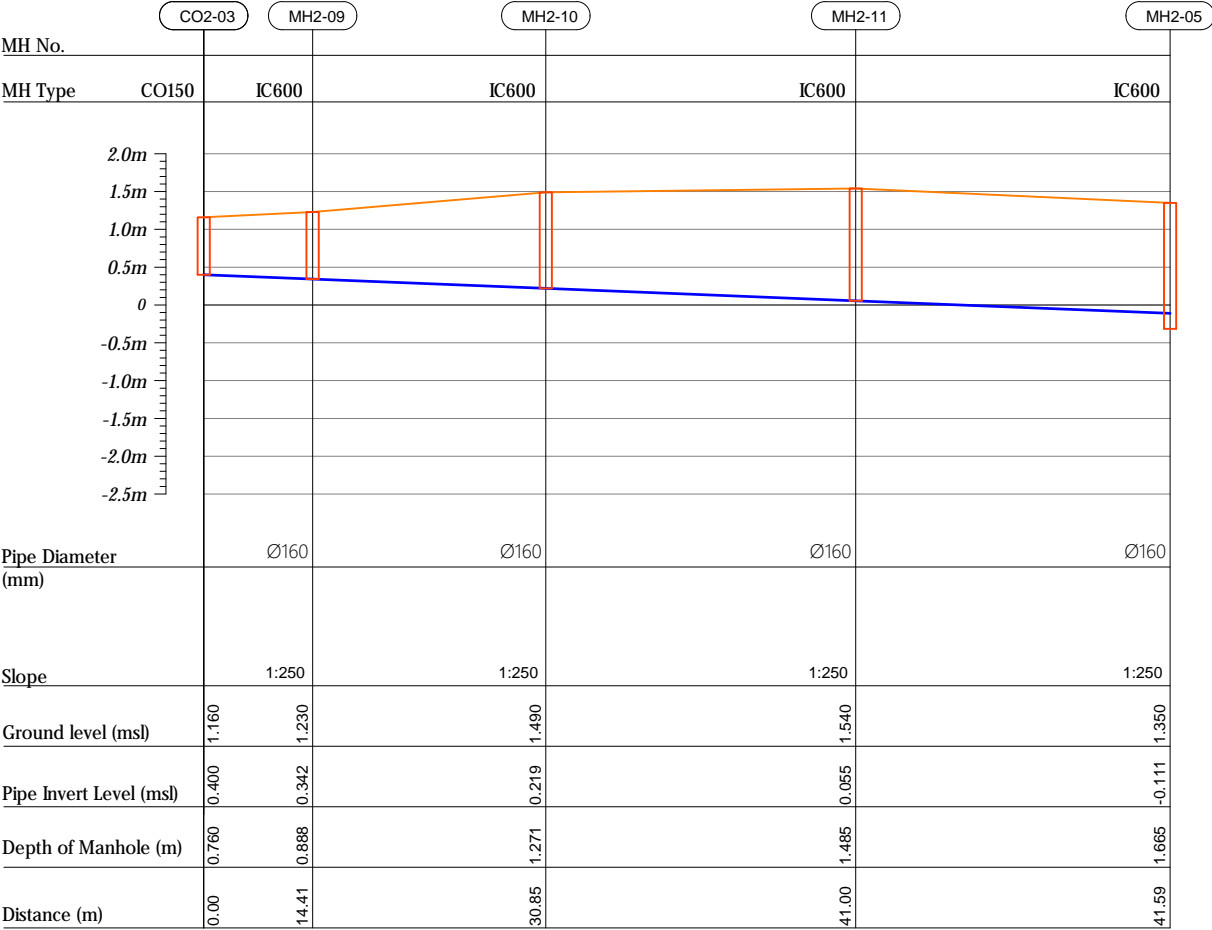
Project No: 01010101

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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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5 islands, Maldives - Package 6

Sub Title:
Sewerage System in GA.Dhehvadhoo

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



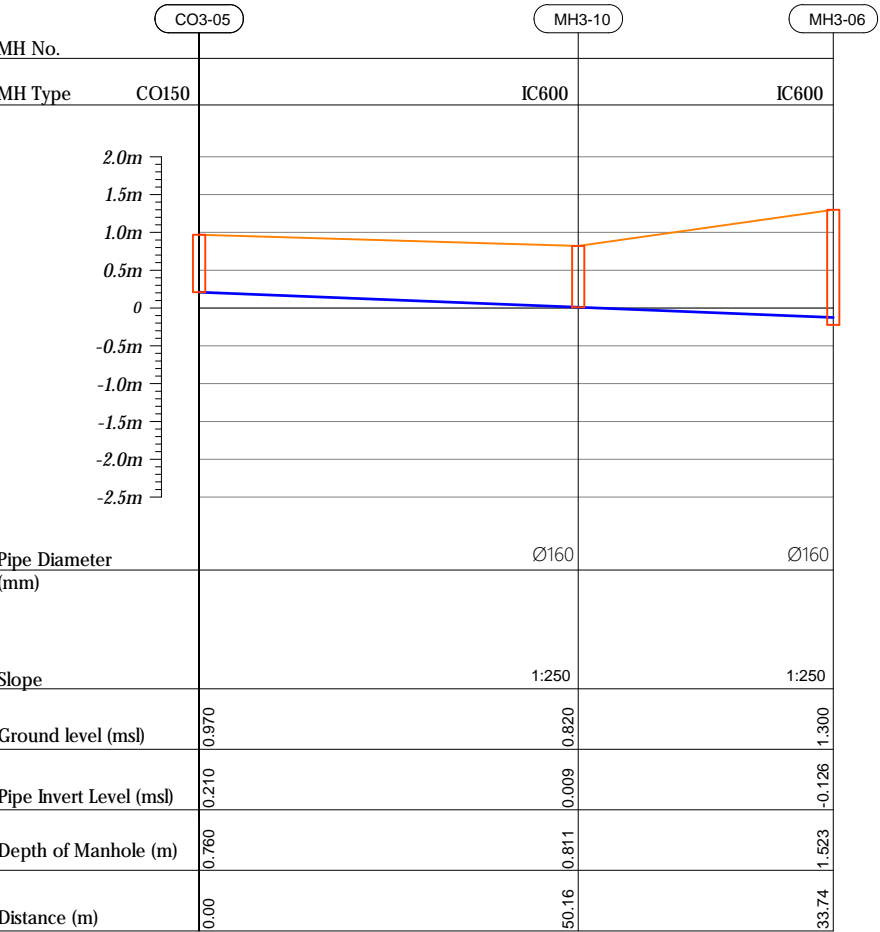
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E: info@epoch.associates
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Hussuvehemaa Magu, Male', Maldives



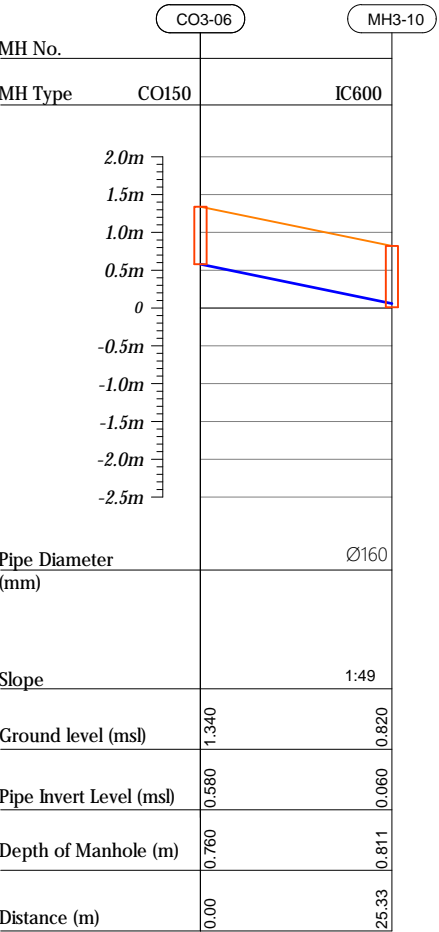
Maldivuq Infrastructure Develop

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

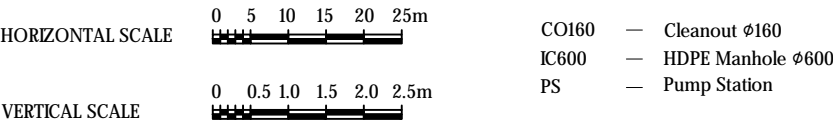
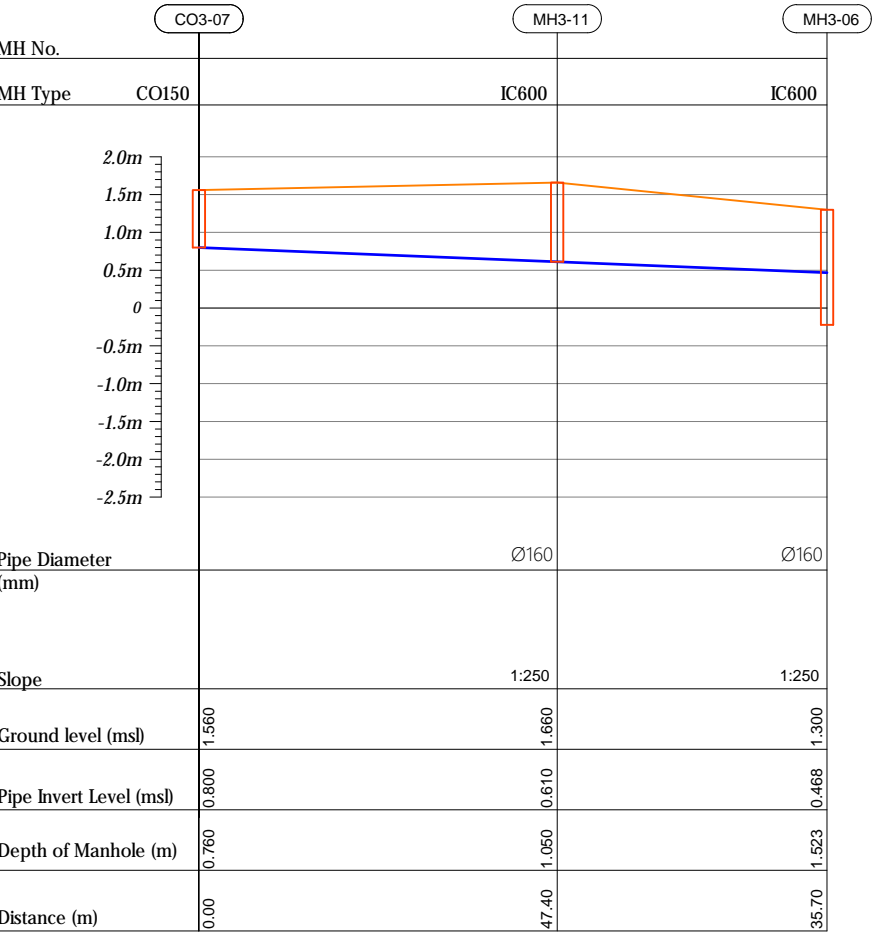
Profile 05



Profile 06



Profile 07



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

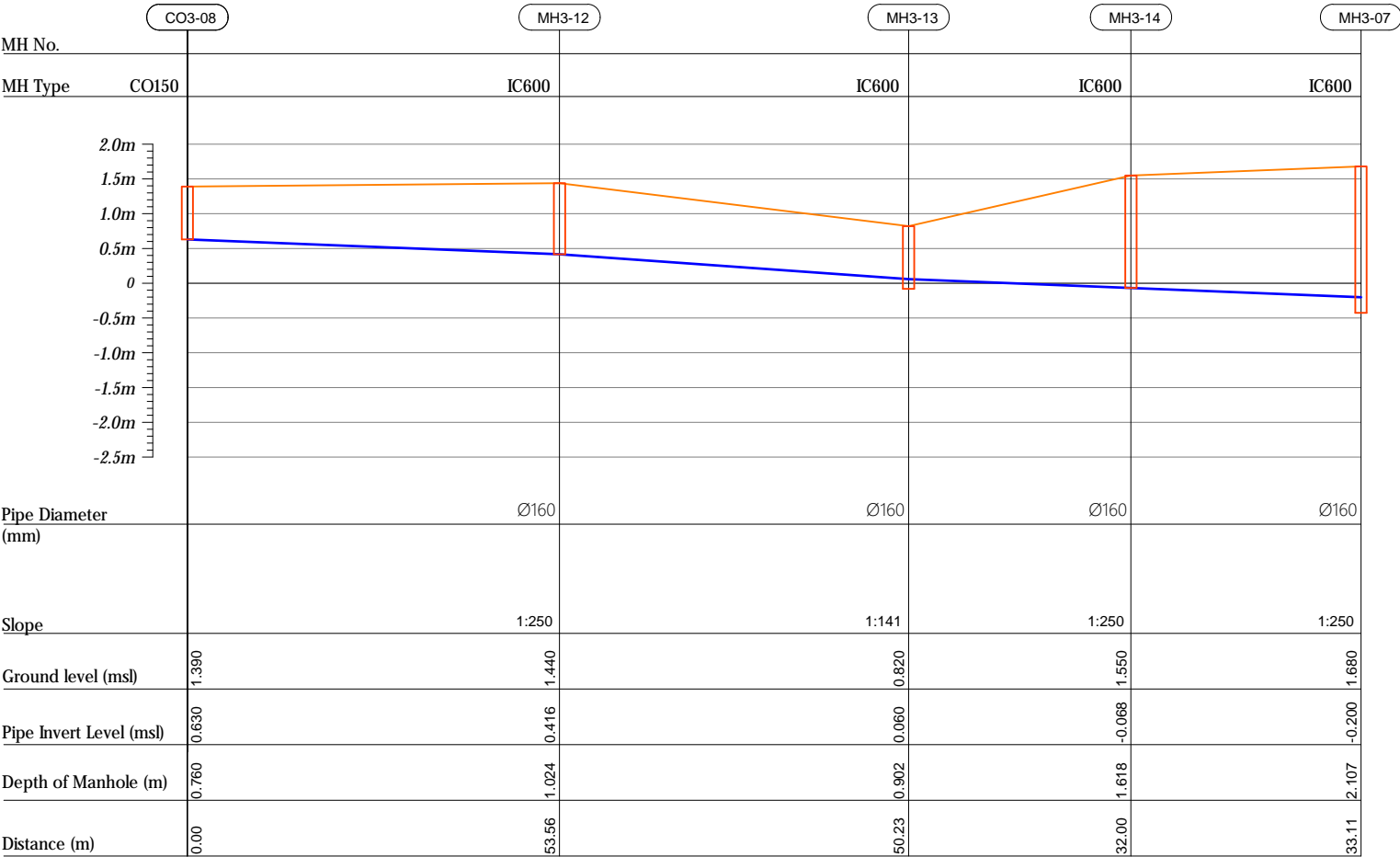


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E: info@epoch.associates
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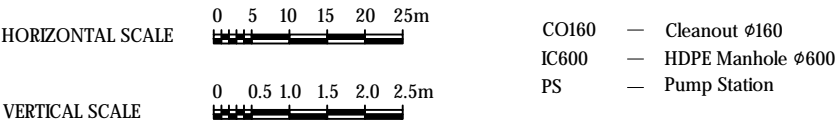
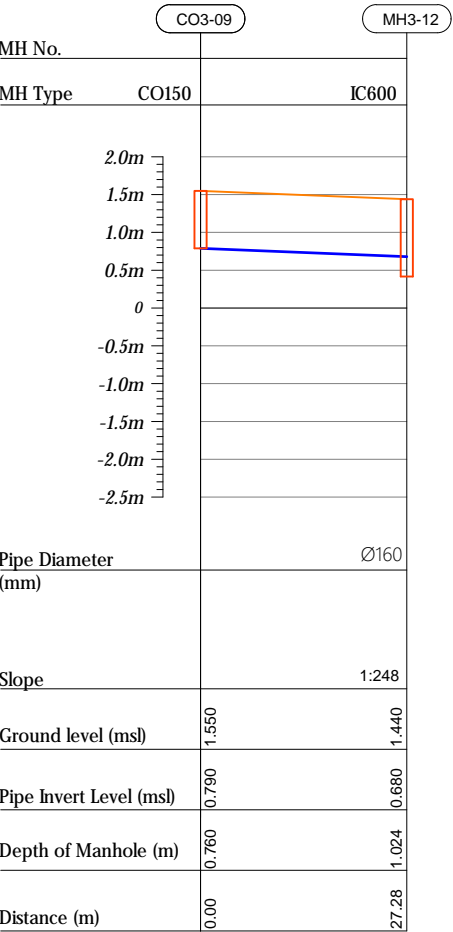
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Drawn: A.R.W	Checked: M.S.S
Designed: F.I.A	Approved: LW
Date: Aug 2020	SCALE (A3): 1:100
Project No:	01010101

Profile 08



Profile 09



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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Husnuheemaa Magu, Male', Maldives

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

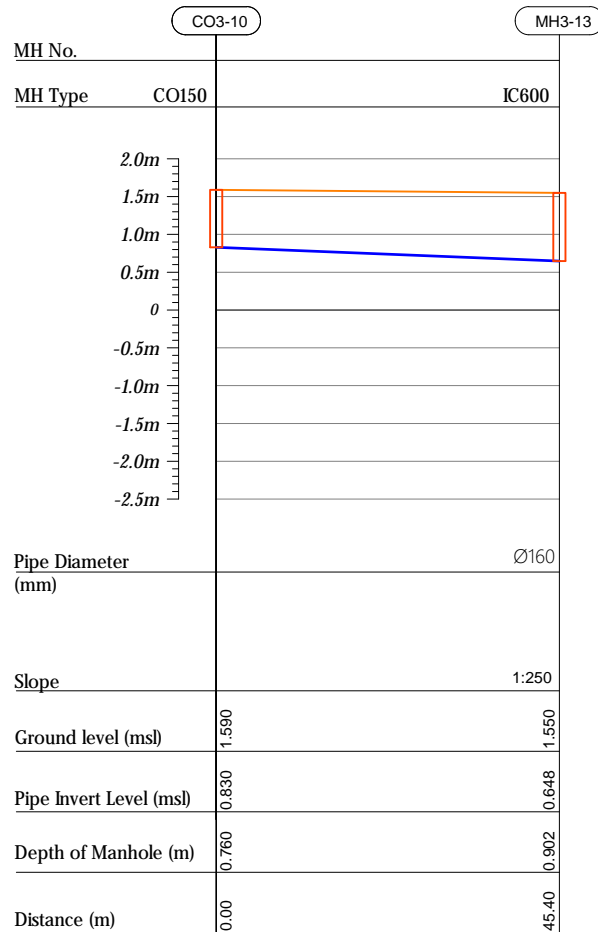
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Date: Aug 2020 SCALE (A3): 1:100

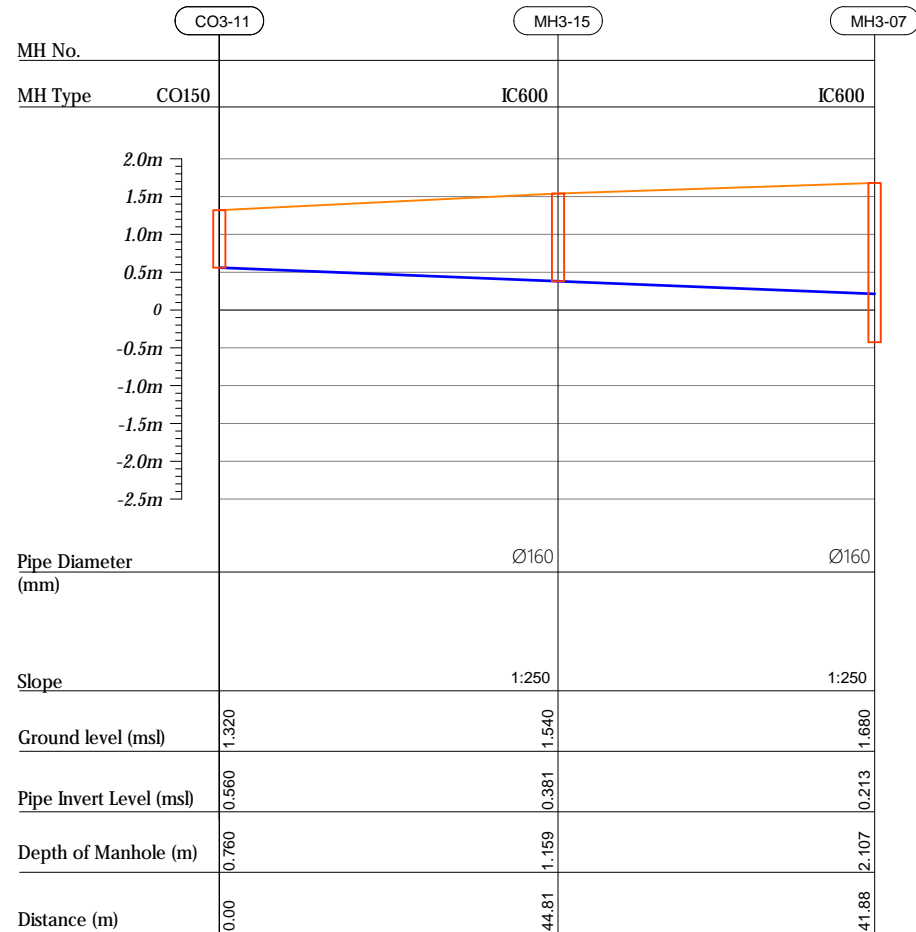
Project No: 01010101

Rev: R-01 Page: PS3-09

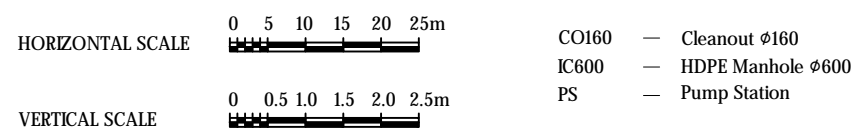
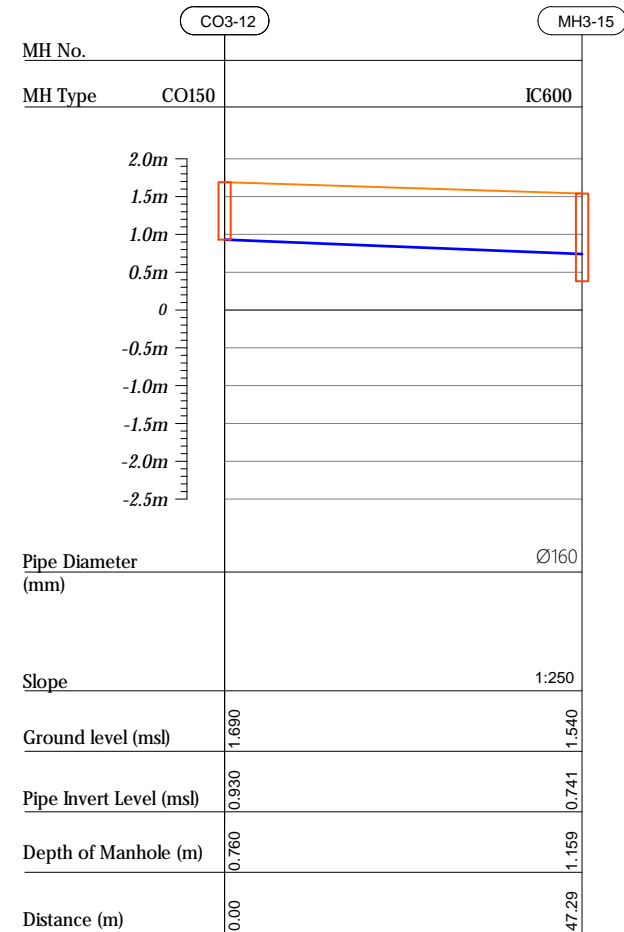
Profile 10



Profile 11



Profile 12



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

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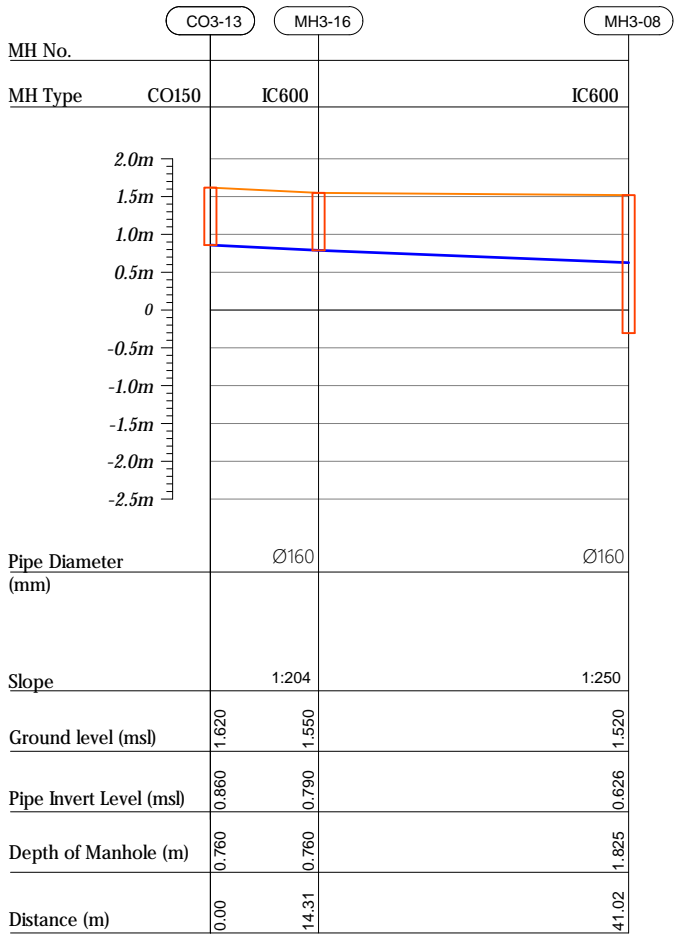
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W: www.epoch.associates
A: G. Rosary West,
Husnuheena Magu, Male', Maldives

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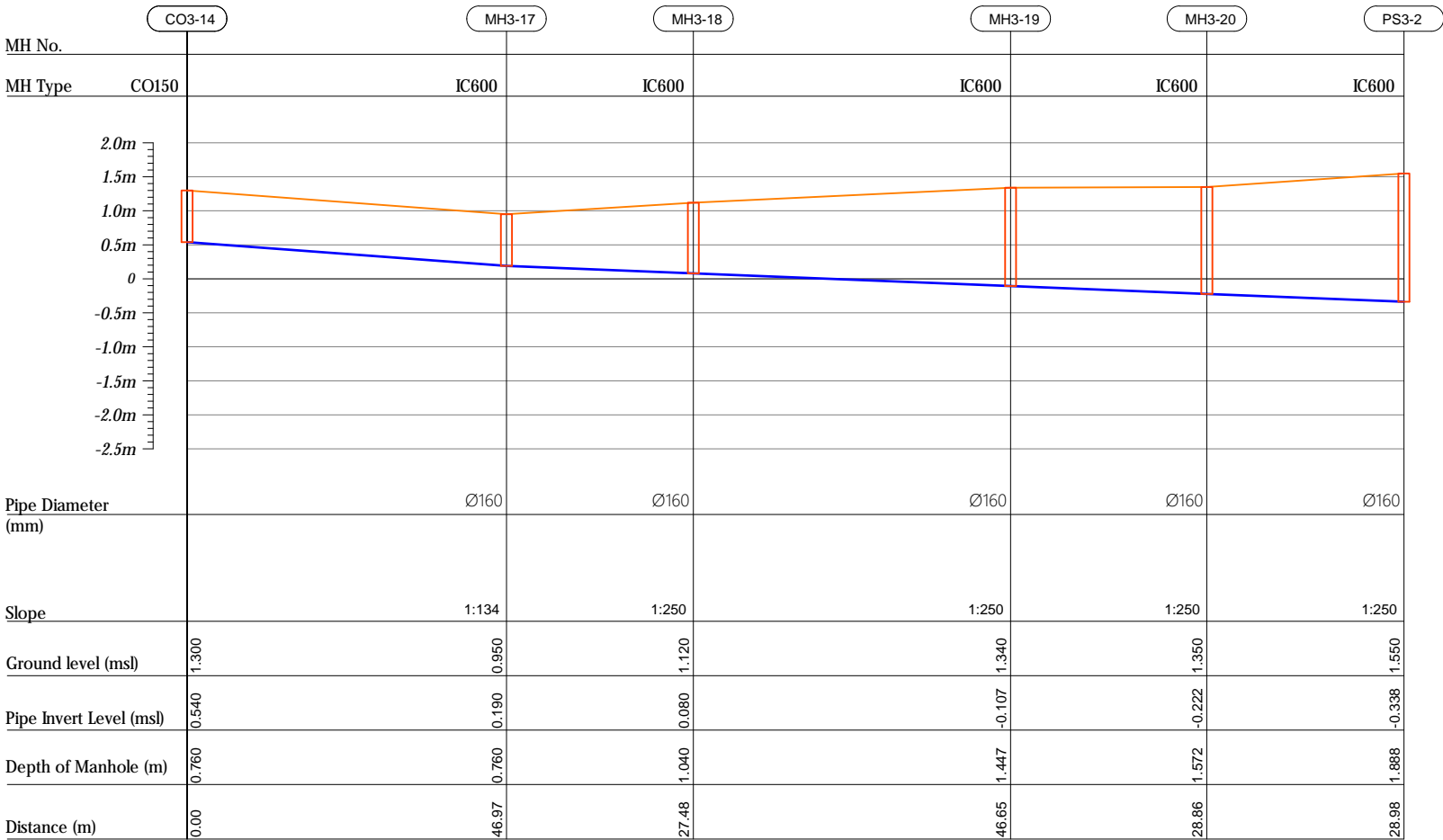
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Project No: 01010101	

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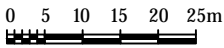
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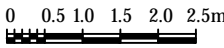
Profile 14



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.

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

Project No: 01010101	Page: PS3-11
Rev: R-01	