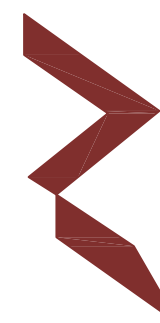


WASTEWATER COLLECTION, TREATMENT, AND DISPOSAL SYSTEM IN AA.MATHIVERI, MALDIVES

ANNEX III - DETAILED DRAWINGS



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CONSULTANCY SERVICES FOR SURVEY & DESIGN
OF SEWERAGE FACILITIES IN F.FEALI,
AA. MATHIVERI & R. RASMAADHOO MALDIVES
CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY
PROJECT NUMBER :
DATE: MARCH 2016

Rev no Date
-- ---
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NOTE

1. ALL LEVELS SHOWN ARE IN METERS.

2. ALL LEVELS SHOWN ARE FROM MEAN SEA LEVEL.

3. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS AND SPECIFICATIONS.

4. ALL GRAVITY SEWER PIPES SHALL BE UPVC TO BS EN1401-1:2009.

5. ALL GRAVITY SEWER MAINS SHALL BE 160MM DIA UPVC OF WALL THICKNESS & STIFFNESS RATED TO SN4 & SDR41.

6. ALL GRAVITY HOUSE LATERALS SHALL BE 110MM DIA UPVC OF WALL THICKNESS & STIFFNESS RATED TO SN4 & SDR41.

7. ALL GRAVITY SEWER MAINS SHALL HAVE MINIMUM 0.4% SLOPE.

8. ALL GRAVITY SEWER PIPES SHALL BE JOINTED USING RUBBER RING PUSH FIT JOINTING METHOD & RUBBER RINGS COMPLY WITH BS 2484 (TYPE2).

9. CONNECTION FROM THE HOUSEHOLD TO THE INSPECTION CHAMBER IS NOT INCLUDED. PROVISION SHALL BE GIVEN IN IC FOR MULTIPLE CONNECTIONS.

10. ALL SEWER PIPES SHALL BE BURIED UNDER EARTH COVER OF MINIMUM 0.6 METERS.

11. CATCHMENT OVER FLOW LINKS ARE TO BE CONNECTED BETWEEN CO1-20 AND CO2-25.

LEGEND

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

- 3903 m

600mm Ø PE/PP Maintenance Shaft

- 55 nos

160mmØ uPVC Clean Out

- 46 nos

110 mm Ø HDPE Pumping Main (PE100, PN16, SDR11)

- 209 m

160 mm Ø HDPE Pumping Main (PE100, PN16, SDR11)

- 201 m

160 mm Ø HDPE Sea Outfall Pipe (PE100, PN16, SDR11)

- 720 m

PRELIMINARY DESIGN DRAWING

PSM 01: 249502.01.01, 463893.03276, 0.3362

PSM 02: 249502.01.02, 463897.74449, 1.6602

CONSULTANCY SERVICES FOR SURVEY & DESIGN
OF SEWERAGE FACILITIES IN AA. MATHIVERI,
MALDIVES

CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY

PROJECT NUMBER: -

DATE: MARCH 2016

ENGINEER: - Mohamed Saif

CHECKED BY: - Ihsan Waheed

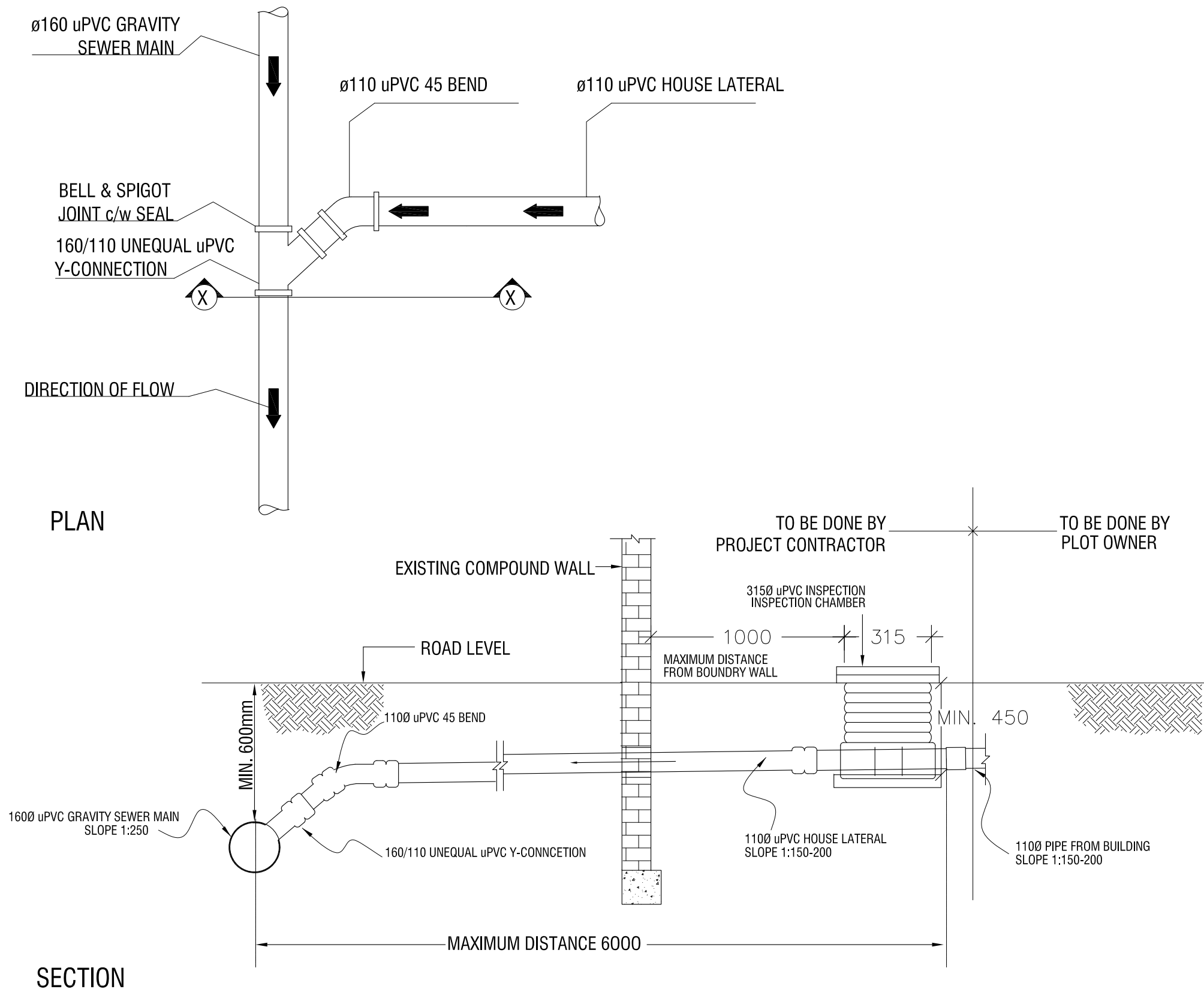
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Title: AA. MATHIVERI SITE
PLAN
Page: A -01 /43



TYPICAL HOUSE CONNECTION DETAIL
N.T.S

CONSULTANCY SERVICES FOR SURVEY & DESIGN
OF SEWERAGE FACILITIES IN AA. MATHIVERI,
MALDIVES

CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY

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DATE: MARCH 2016

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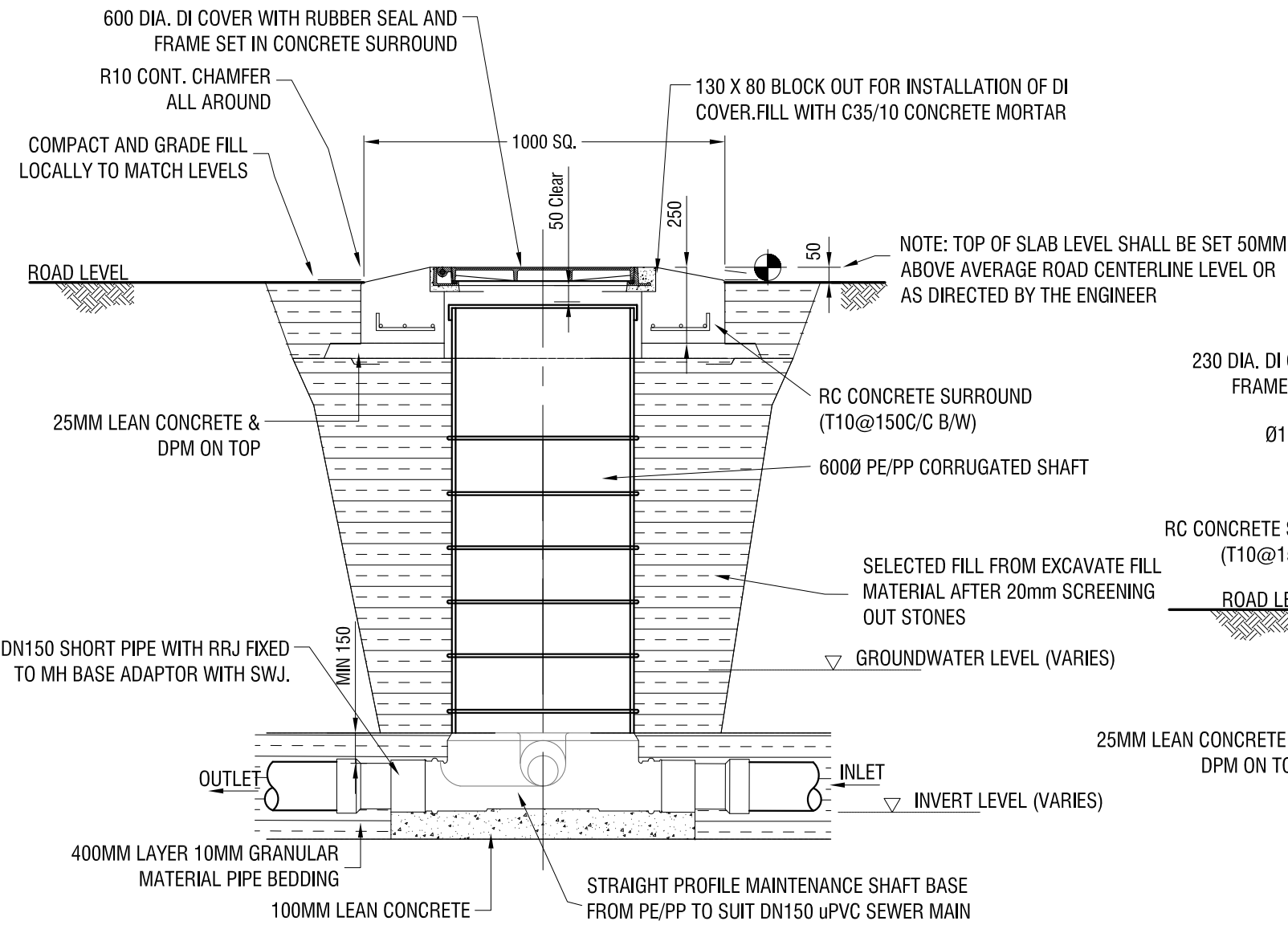


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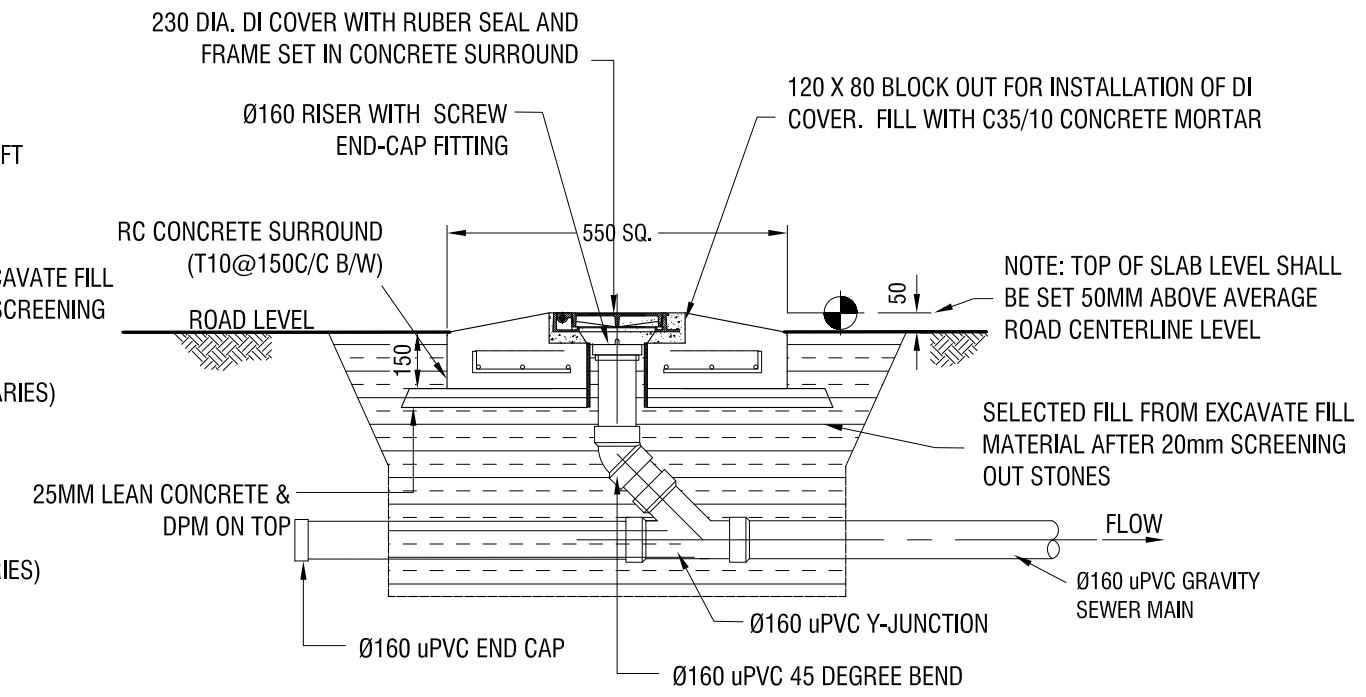
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Title: House connection detail
Page: A -02/43

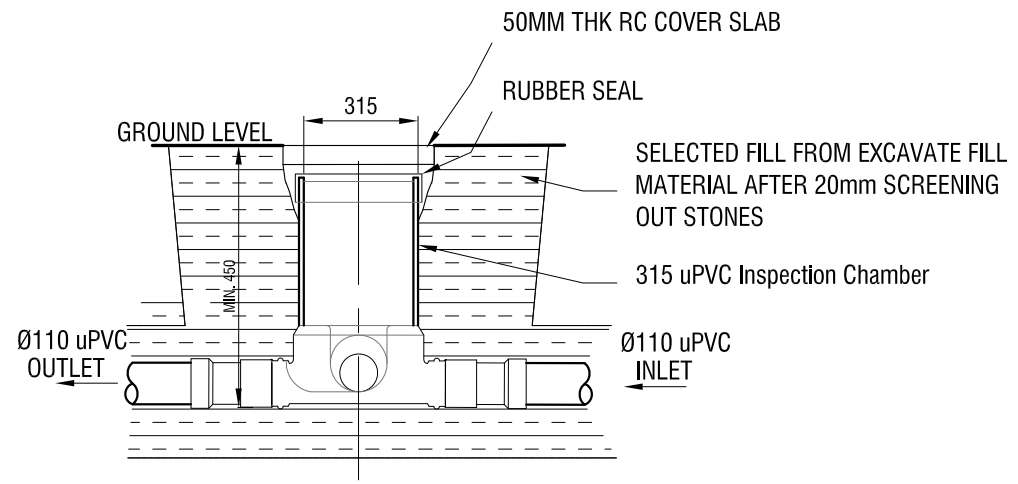
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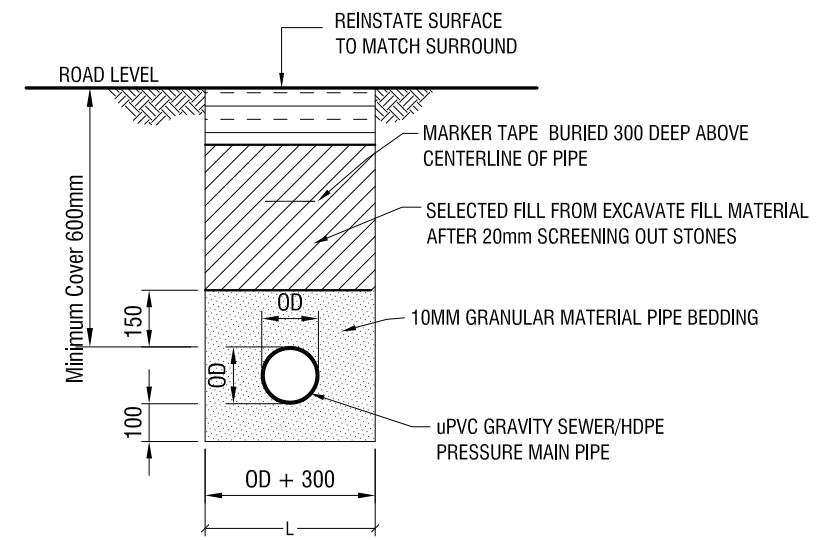
ELEVATION - MAINTENANCE SHAFT (MH)
Scale 1:20



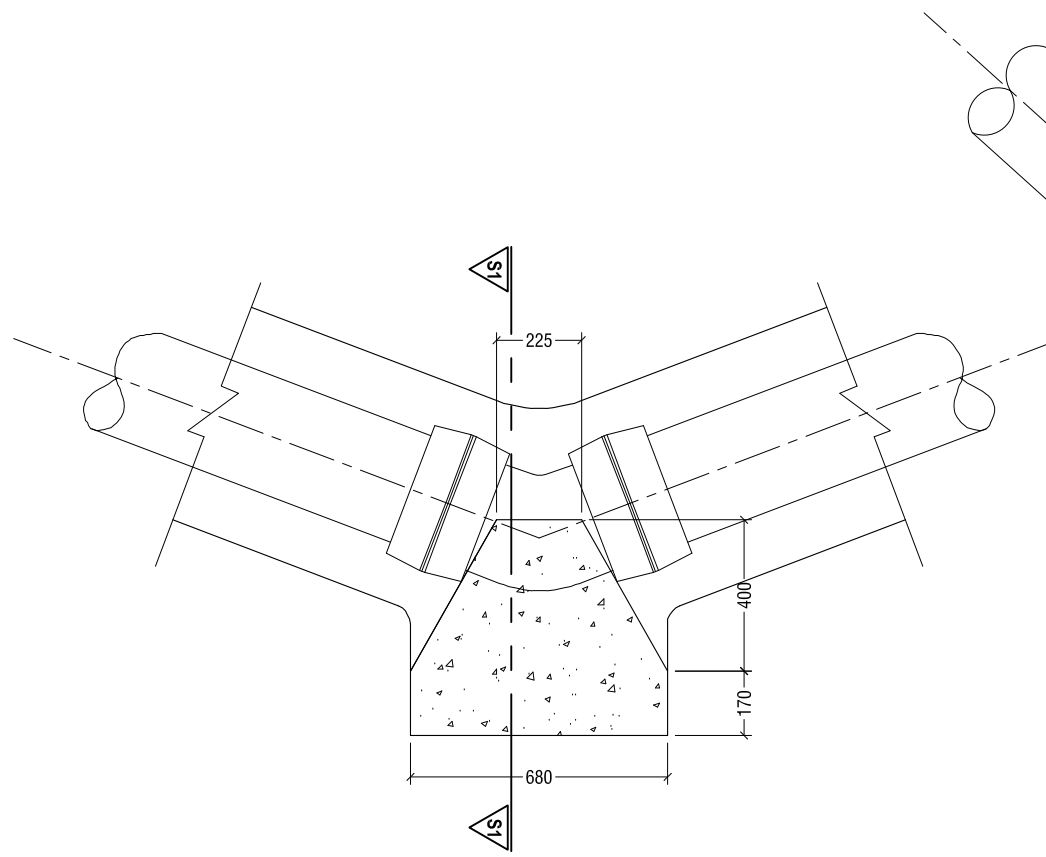
ELEVATION - CLEANOUT (CO)
Scale 1:20



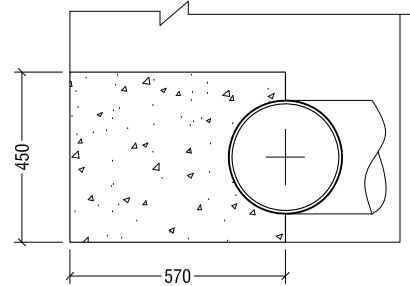
HOUSE ISPECTION CHAMBER (IC)
Scale 1:20



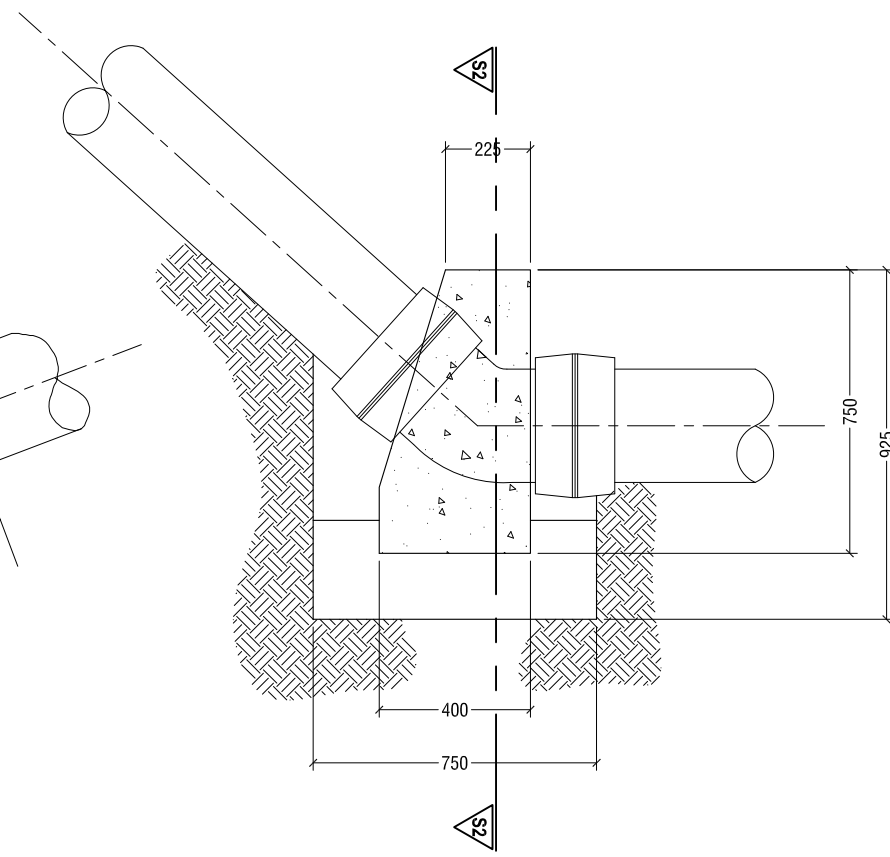
TRENCH & BEDDING DETAILS
Scale 1:20



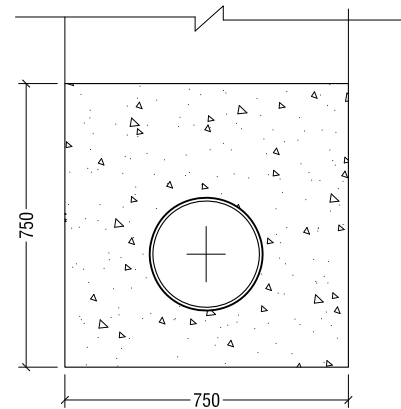
HORIZONTAL 45° BEND
NTS



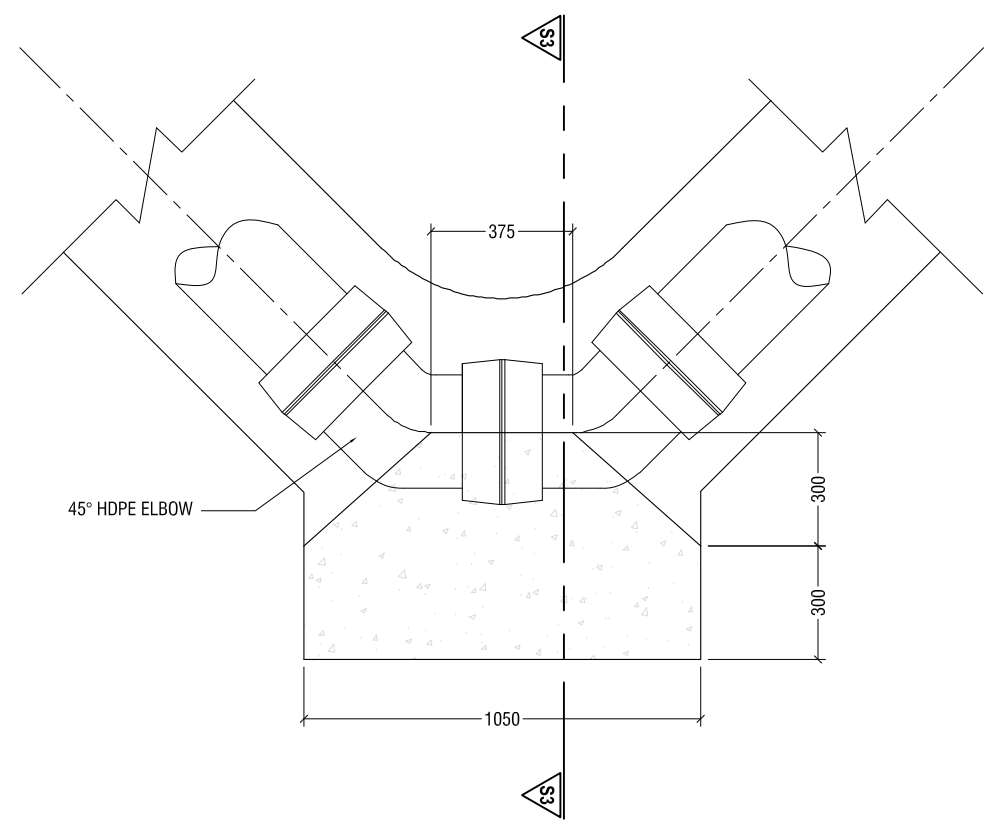
SECTION S1-S1
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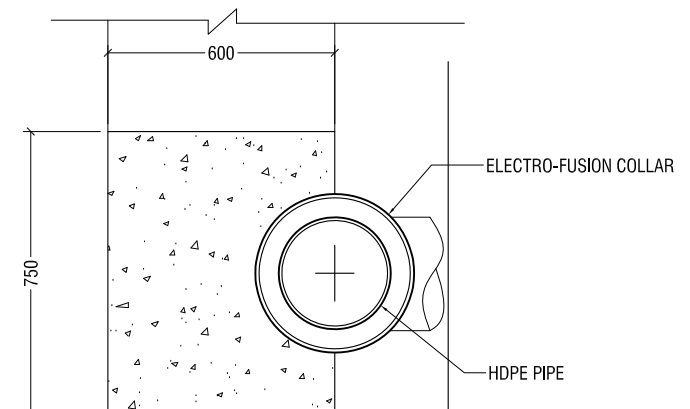
VERTICAL 45° BEND
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SECTION S2-S2
NTS

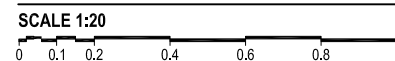


HORIZONTAL 90° BEND
NTS



SECTION S3-S3
NTS

THRUST BLOCK DETAIL - FORCE MAINS ONLY



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Title: Thrust block detail

Page: A -04/43

CONSULTANCY SERVICES FOR SURVEY & DESIGN
OF SEWERAGE FACILITIES IN AA. MATHIVERI,
MALDIVES

CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY
PROJECT NUMBER: -
DATE: MARCH 2016
ENGINEER: - Mohamed Saif
CHECKED BY: - Ihsan Waheed
DRAWN BY: - Mohamed Saif

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1. Internal concrete surfaces to be coated with 5mm thickness of epoxy resin bonded glass fibre and finished with gel coat or 500 microns epoxy paint coating.
2. External concrete surfaces to be painted with 3 coats of bitumen/rubber emulsion and protected by 500 micron polythene.



Scale: N.T.S

CONSULTANCY SERVICES FOR SURVEY & DESIGN OF SEWERAGE FACILITIES IN AA. MATTHEW MALDIVES

CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY

PROJECT NUMBER -

DATE: MARCH 2016

ENGINEER :- Mohamed Saif

CHECKED BY :- Ihsan Waheed

DRAWN BY :- Mohamed Saif

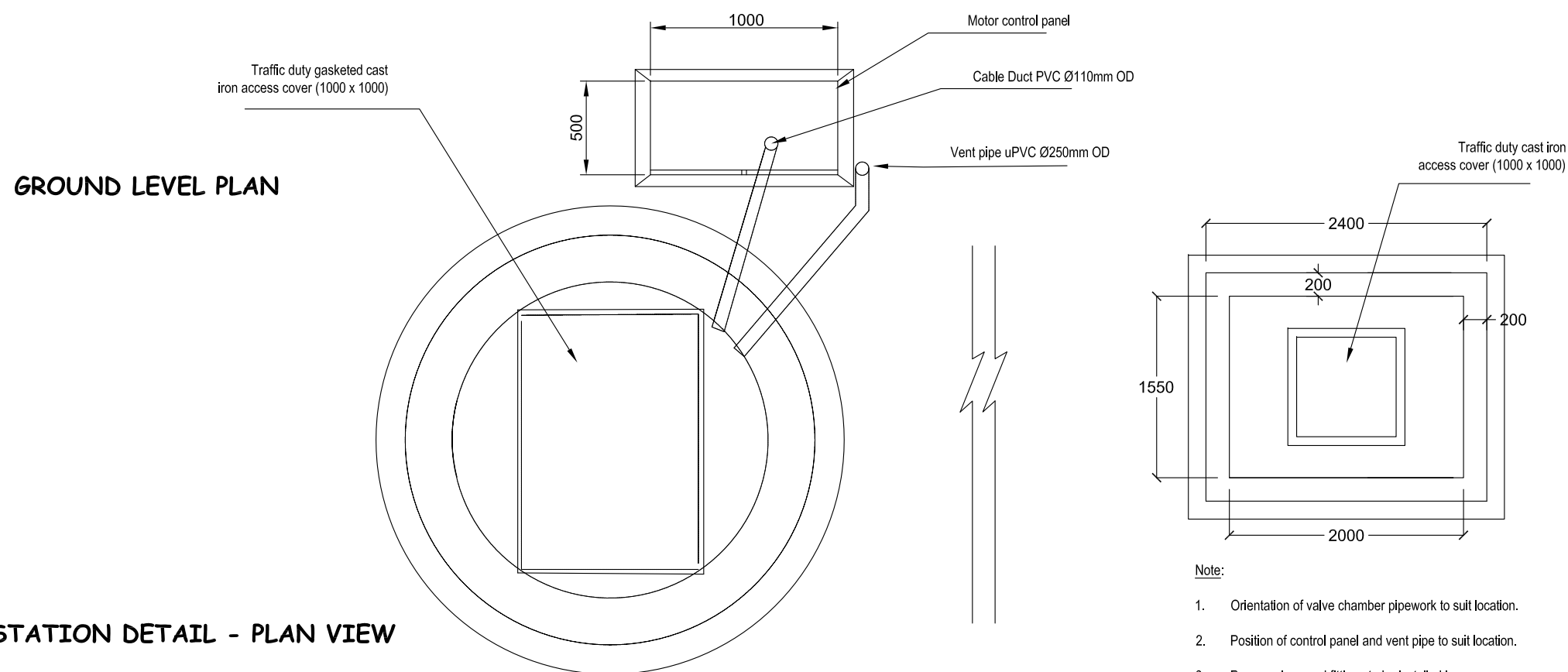
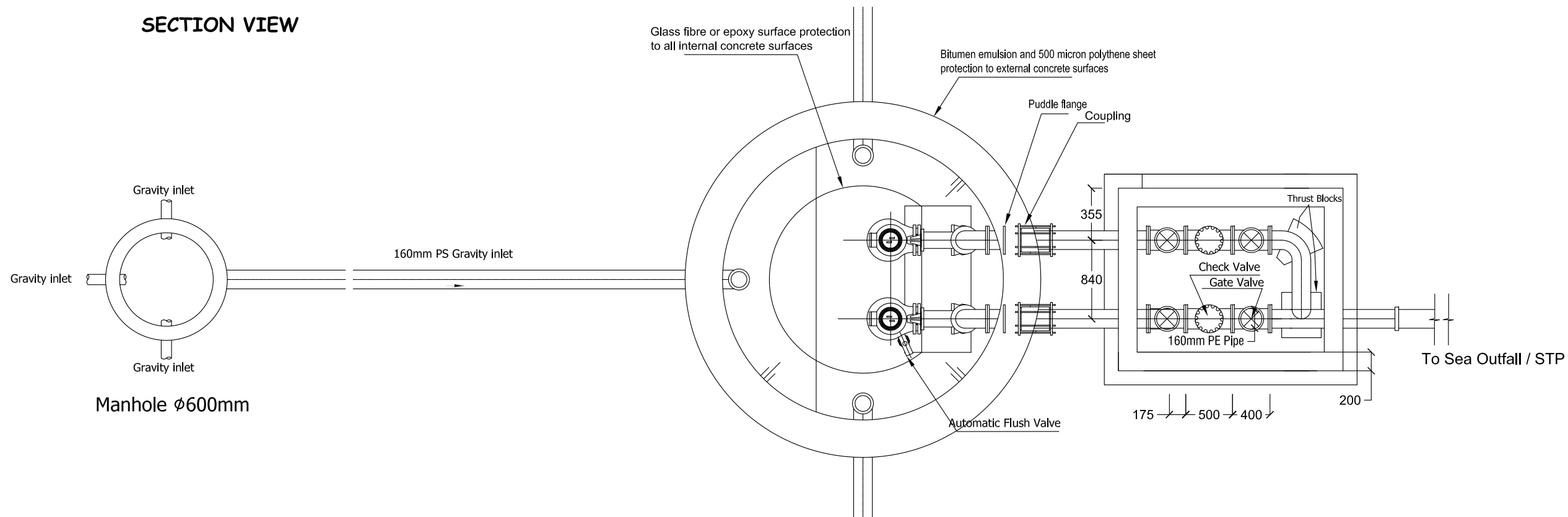
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Title: TYPICAL PUMPING
STATION DETAIL -
SECTION
Page: A -05/43

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Note:

1. Orientation of valve chamber pipework to suit location.
2. Position of control panel and vent pipe to suit location.
3. Pumps, pipes and fittings to be installed in accordance with manufacturers recommendations.

TYPICAL PUMPING STATION DETAIL - PLAN VIEW

Scale: N.T.S

CONSULTANCY SERVICES FOR SURVEY & DESIGN
OF SEWERAGE FACILITIES IN AA. MATHIVERI,
MALDIVES

CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY
PROJECT NUMBER: -
DATE: MARCH 2016
ENGINEER: - Mohamed Saif
CHECKED BY: - Ihsan Waheed
DRAWN BY: - Mohamed Saif

Rev no

Date



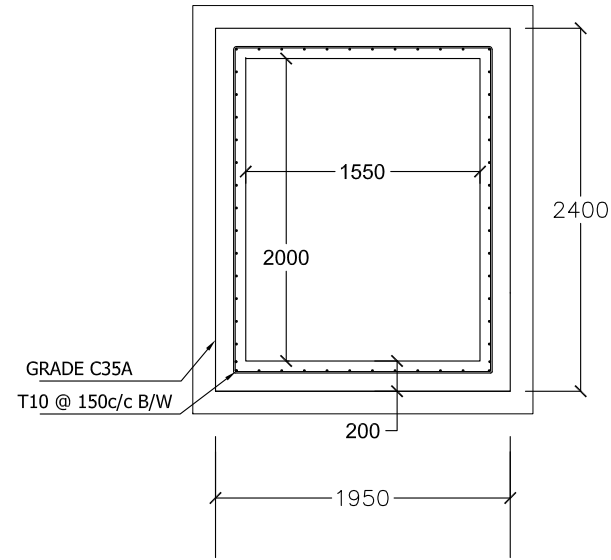
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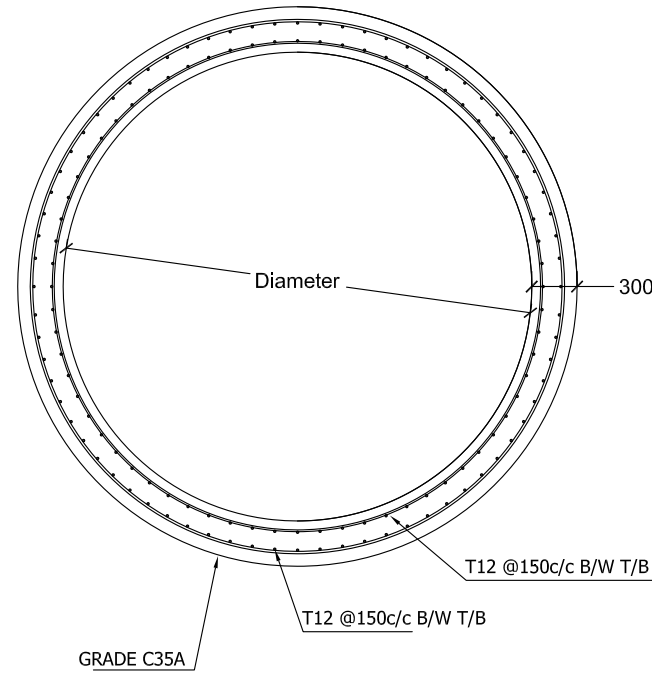
TYPICAL PUMPING
STATION DETAIL - PLAN

Page: A -06/43

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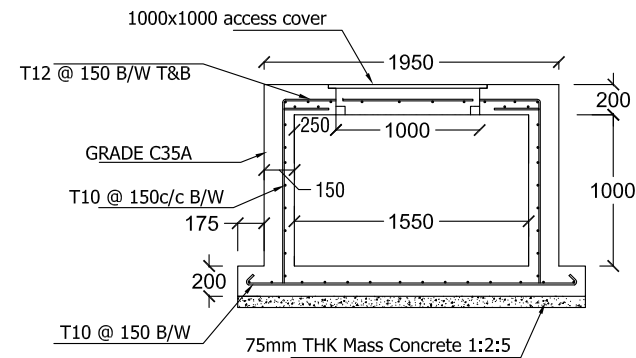


PLAN



Note:

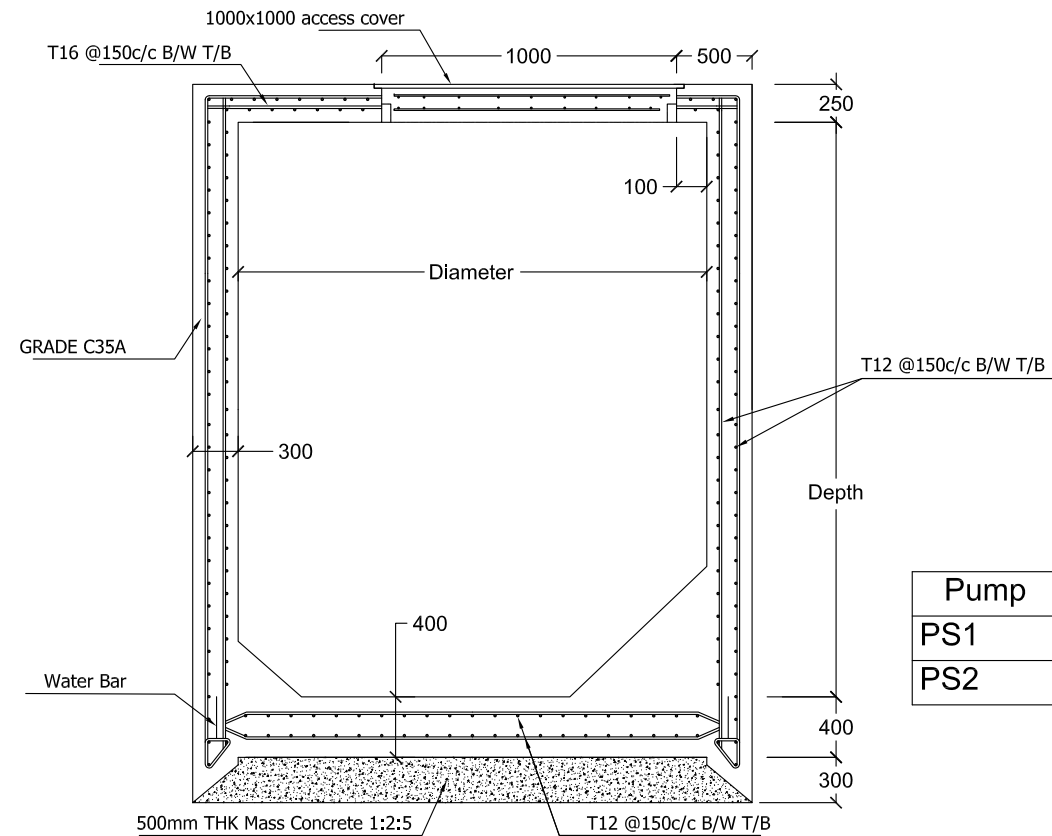
1. All structural concrete shall be of grade C35A.
2. All castings shall be done using Sulpahte Resistant Portland Cement to BS 4027:1996.
3. All structural reinforcement shall be epoxy coating of non-pre-stressed reinforcement to ASTM-A775/A775M.



SECTION

VALVE CHAMBER DETAIL

PUMPING STATION STRUCTURAL DETAILS
Scale: N.T.S



PUMP STATION DETAIL

Pump	Diameter	Depth	Inlet depth
PS1	2.5m	3.2m	1.85m, 1.32m, 1.51m
PS2	2.5m	3.2m	2.19m, 1.72m, 1.96m

CONSULTANCY SERVICES FOR SURVEY & DESIGN
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CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY

PROJECT NUMBER: -

DATE: MARCH 2016

ENGINEER: - Mohamed Saif

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DRAWN BY: - Mohamed Saif

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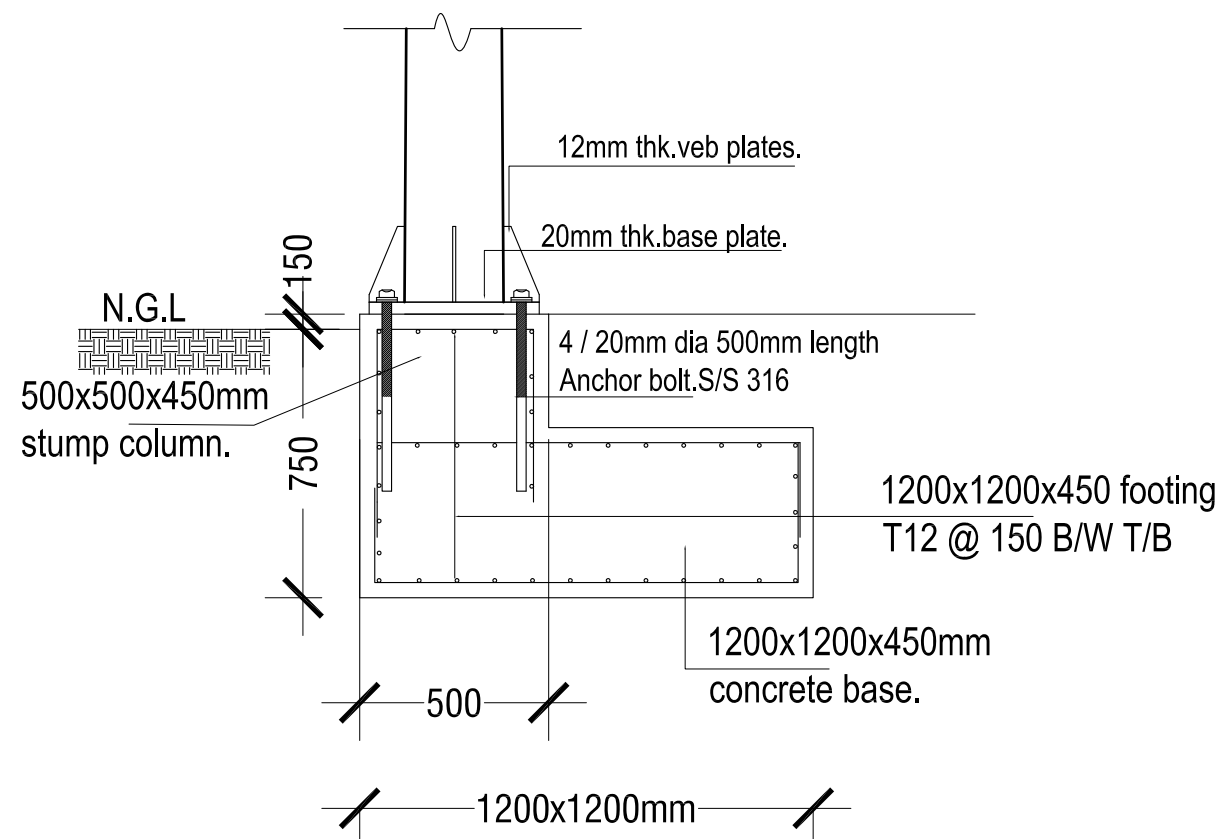
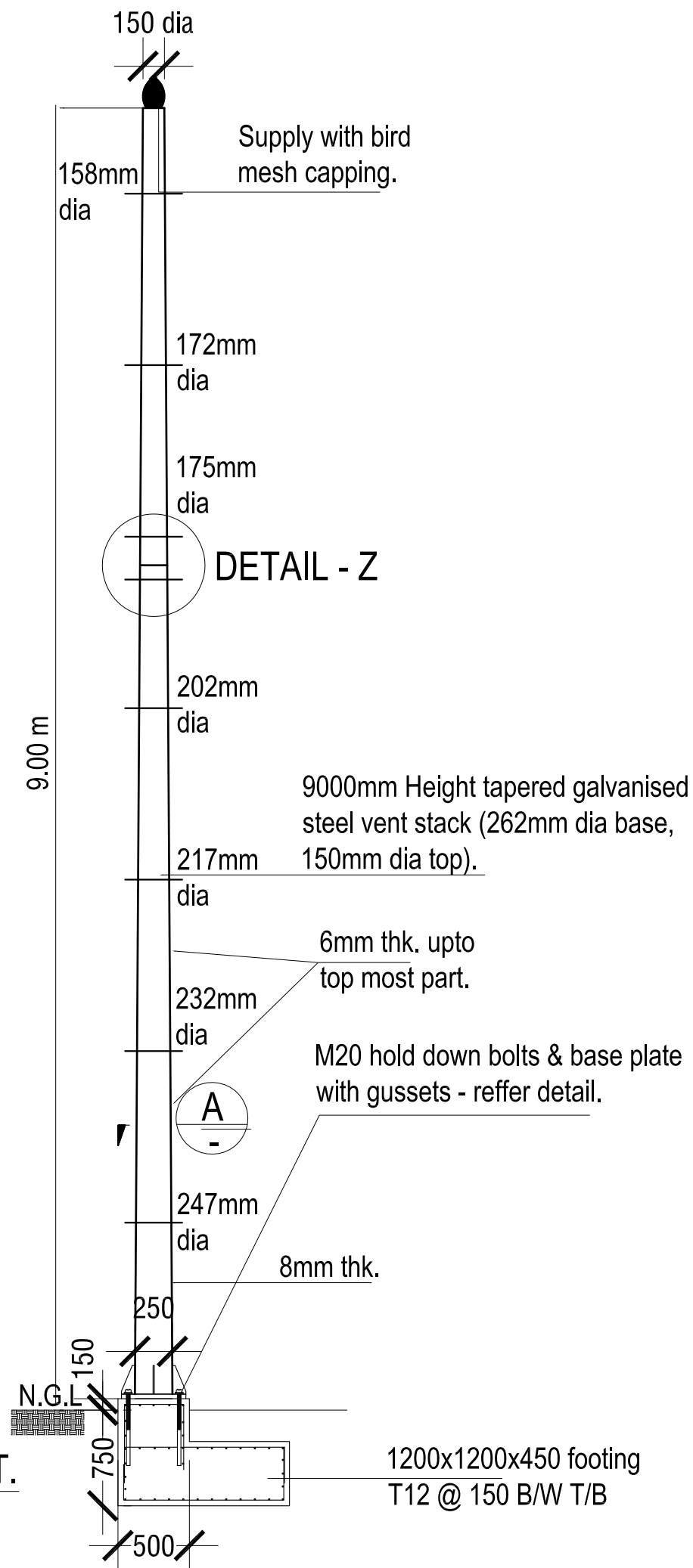
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Title: PUMP STATION
DETAIL
Page: A -07/43

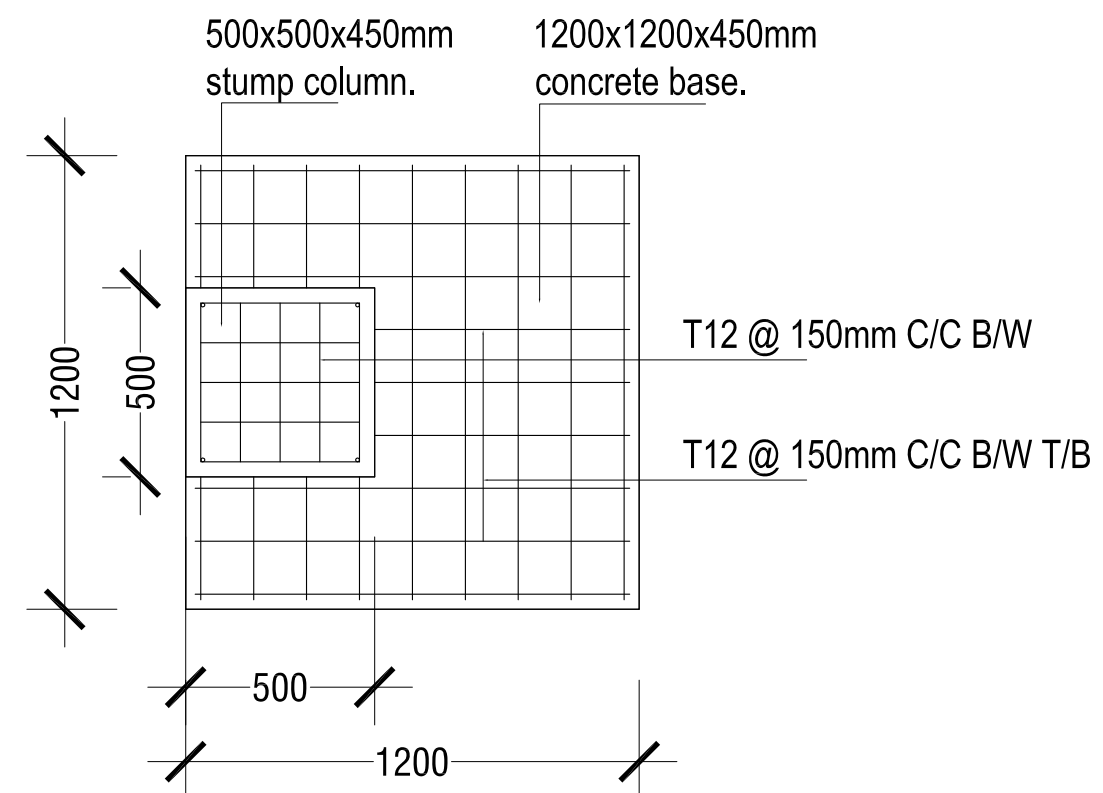
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ELEVATION - PUMPSTATION VENT.

Scale: N.T.S



SECTION.



FOOTING DETAIL PLAN.

Scale: N.T.S

CONSULTANCY SERVICES FOR SURVEY & DESIGN
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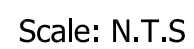
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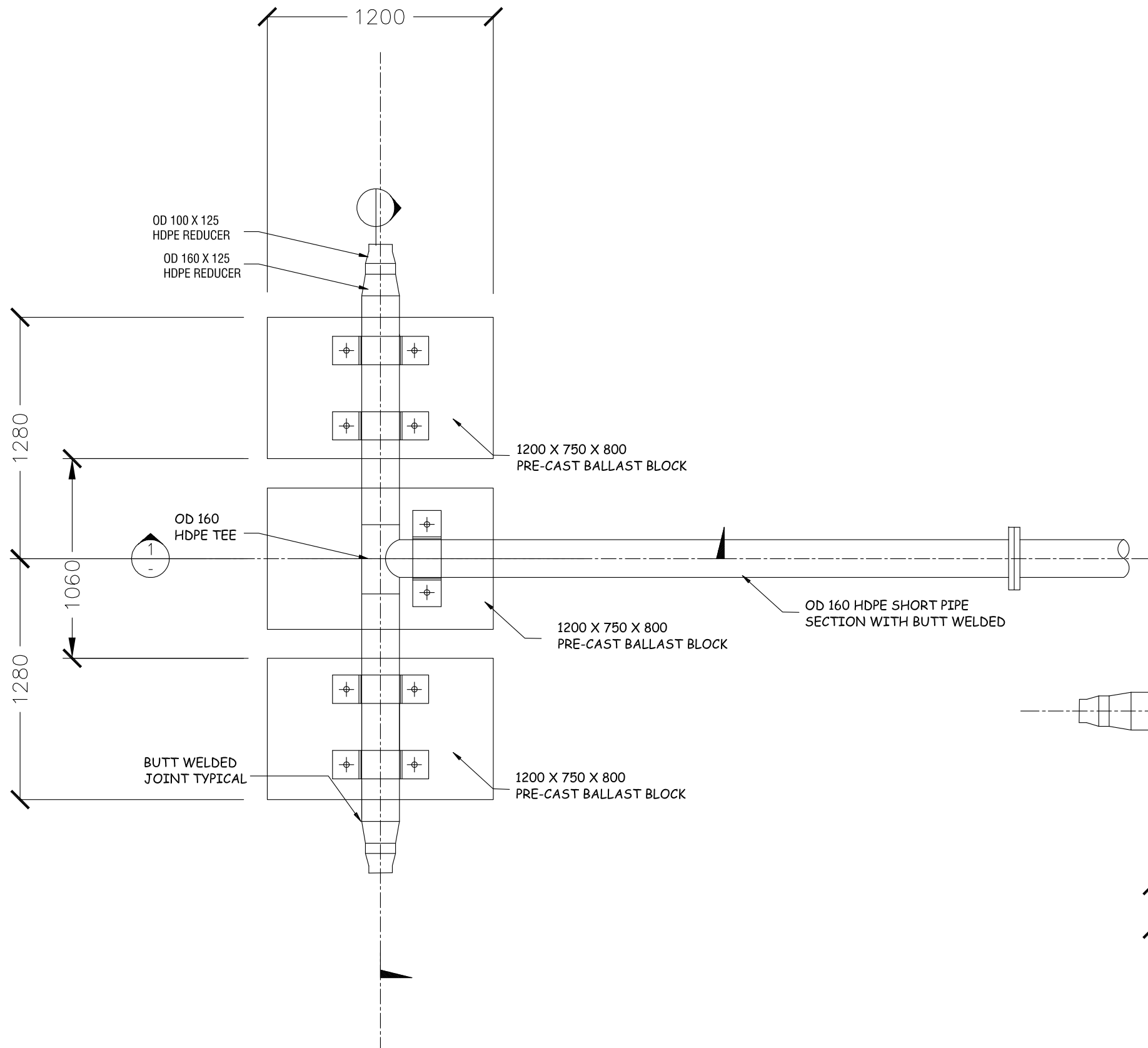
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Page: A -08/43

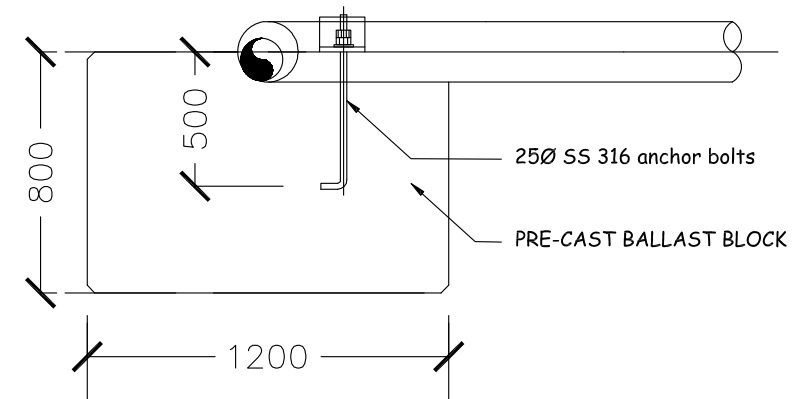
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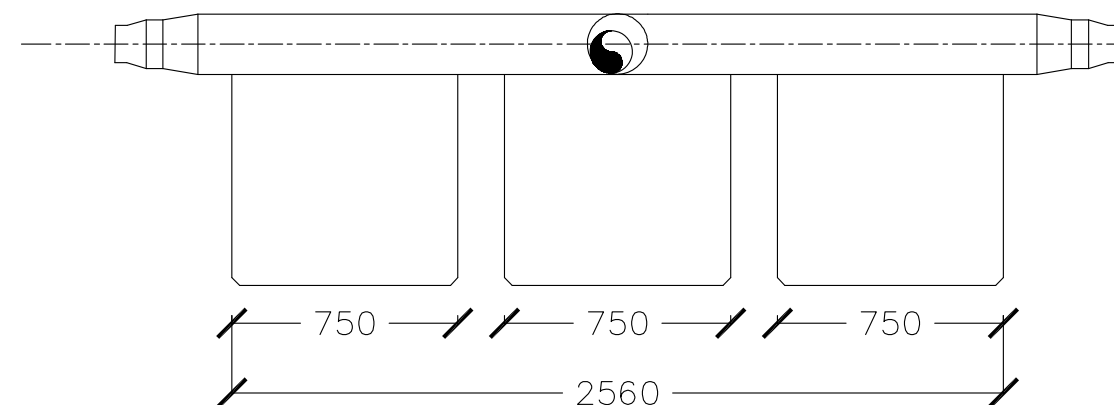
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PLAN — T-HEAD DIFFUSER
Scale: N.T.S



SECTION — T-HEAD DIFFUSER
Scale: N.T.S



SECTION — T-HEAD DIFFUSER

NOTES:

1. ALL BACKING RINGS FOR STUB FLANGES, NUTS AND BOLTS SHALL BE GRADE 316 STAINLESS STEEL.
2. ALL PIPEWORK SHALL BE BEDDED ON 10MM THICK NEOPRENE RUBBER SEAT IN SEMICIRCULAR RECESS MATCHING THE O.D OF THE PIPE.
3. FABRICATE SPECIFIC PIPE CLAMPS TO PROVIDE FIRM CLAMPING ACTION ACCORDING TO PIPE O.D .

CONSULTANCY SERVICES FOR SURVEY & DESIGN
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CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY

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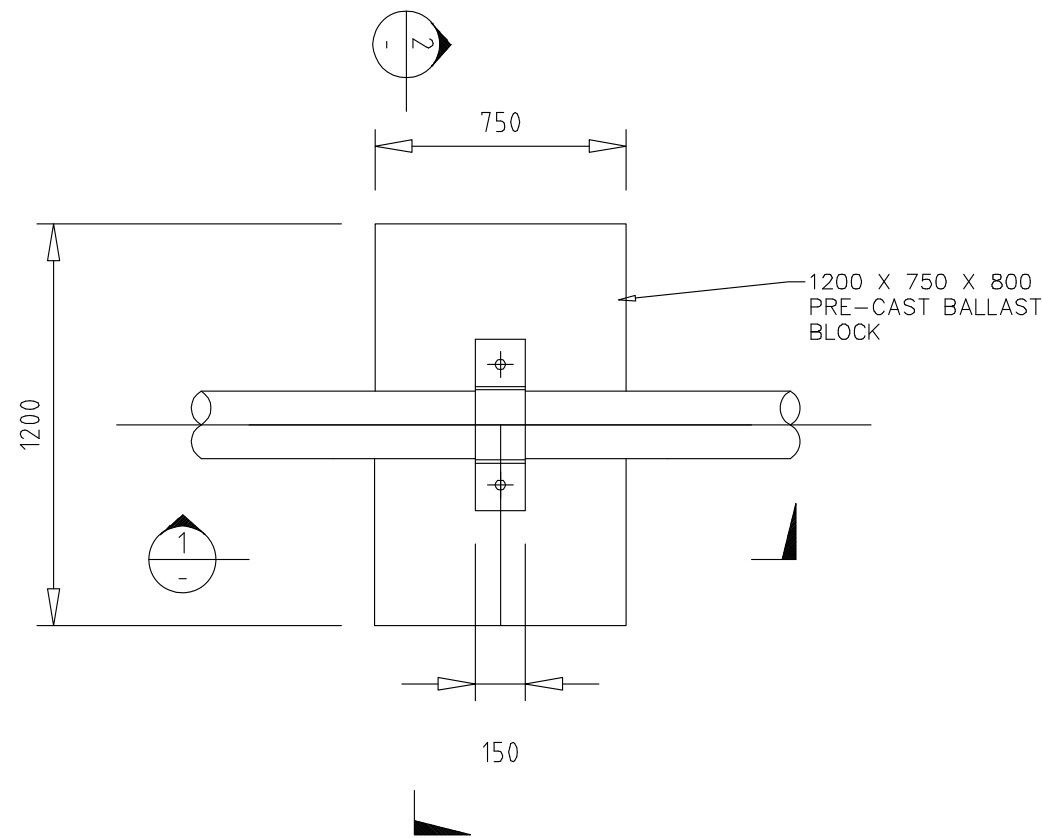
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Title: SEA OUTFALL DETAILS

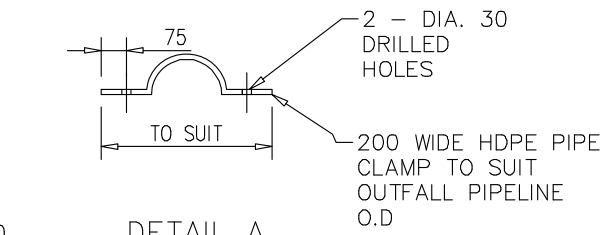
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PLAN PRE-CAST BALLAST BLOCK

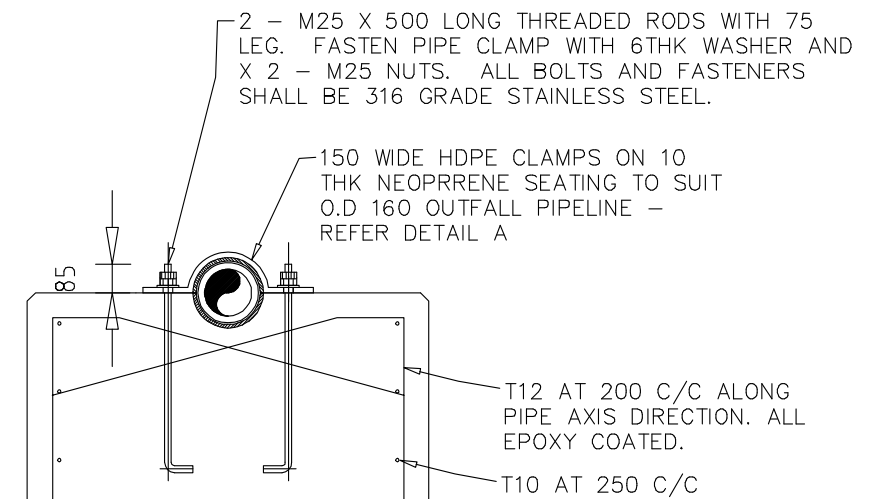
Scale: N.T.S



DETAIL A

PRE-CAST BALLAST BLOCK

PREPARE SEABED PRIOR TO PLACEMENT OF BALLAST BLOCKS MAX. +/- 25MM AMPLITUDE

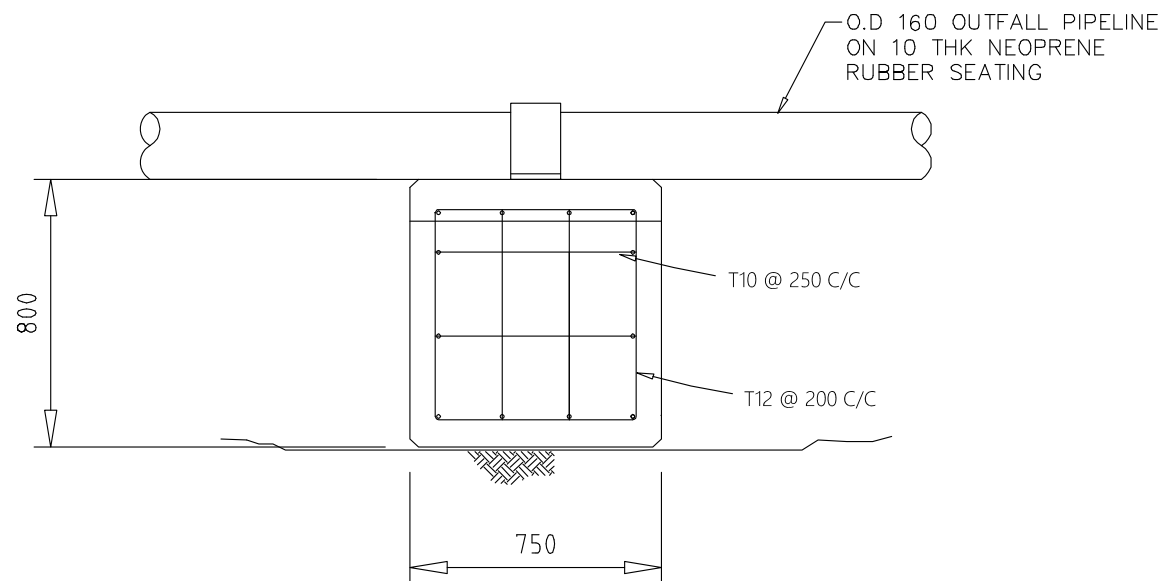


SECTION - PRE-CAST BALLAST BLOCK ASSEMBLY

Scale: N.T.S

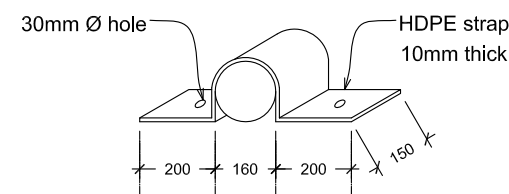
NOTES:

1. MIN 75MM COVER TO ALL REINFORCEMENT BARS.
2. ALL REINFORCEMENT SHALL BE EPOXY COATED PRIOR TO PLACEMENT OF CONCRETE.
3. PRE-CAST BALLAST BLOCKS SHALL BE FABRICATED WITH N40 / 20 CONCRETE.

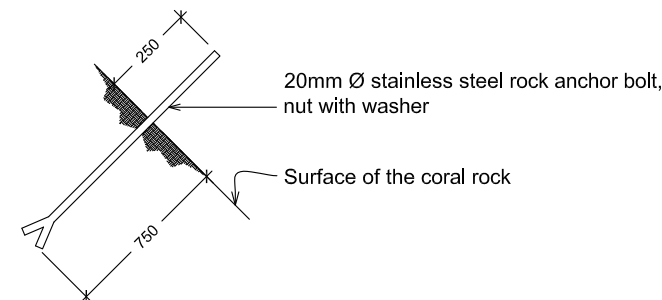


ELEVATION

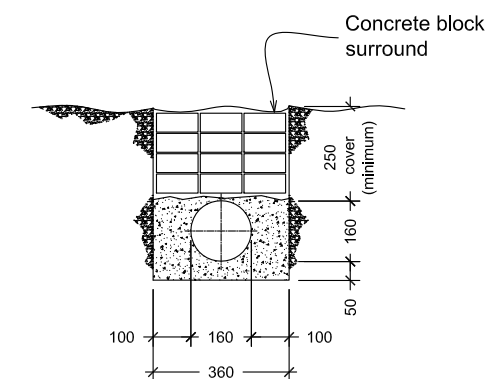
Scale: N.T.S



Straps at every one metre
DETAIL OF FIXING PIPE ON REEF FACE



ANCHOR BOLT DETAIL FOR FIXING OUTFALL PIPE ON STEEP REEF SLOPES



BURIED SECTION DETAIL

SEA OUTFALL FIXING DETAIL

Scale: N.T.S

CONSULTANCY SERVICES FOR SURVEY & DESIGN
OF SEWERAGE FACILITIES IN AA. MATHVERI,
MALDIVES

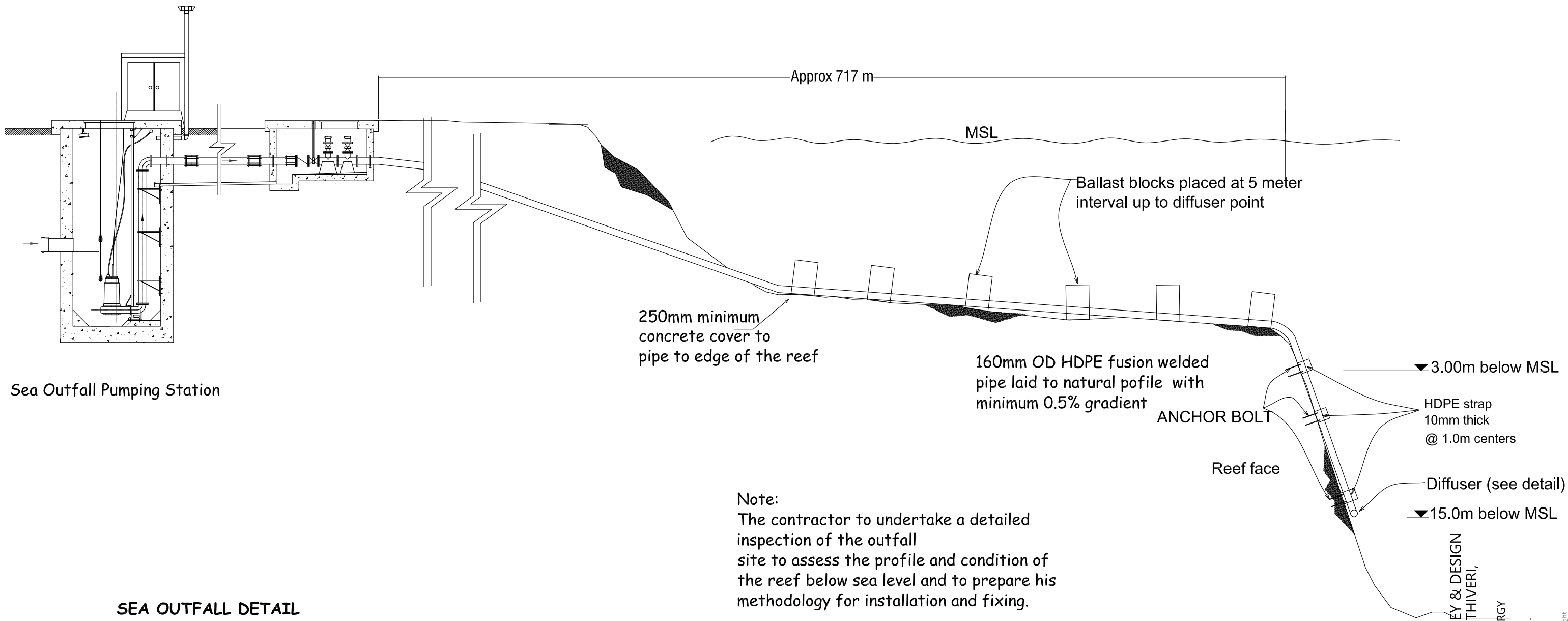
CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY
PROJECT NUMBER: -
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ENGINEER: - Mohamed Saif
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Title: SEA OUTFALL DETAILS

Page: A -11 /43

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SEA OUTFALL DETAIL

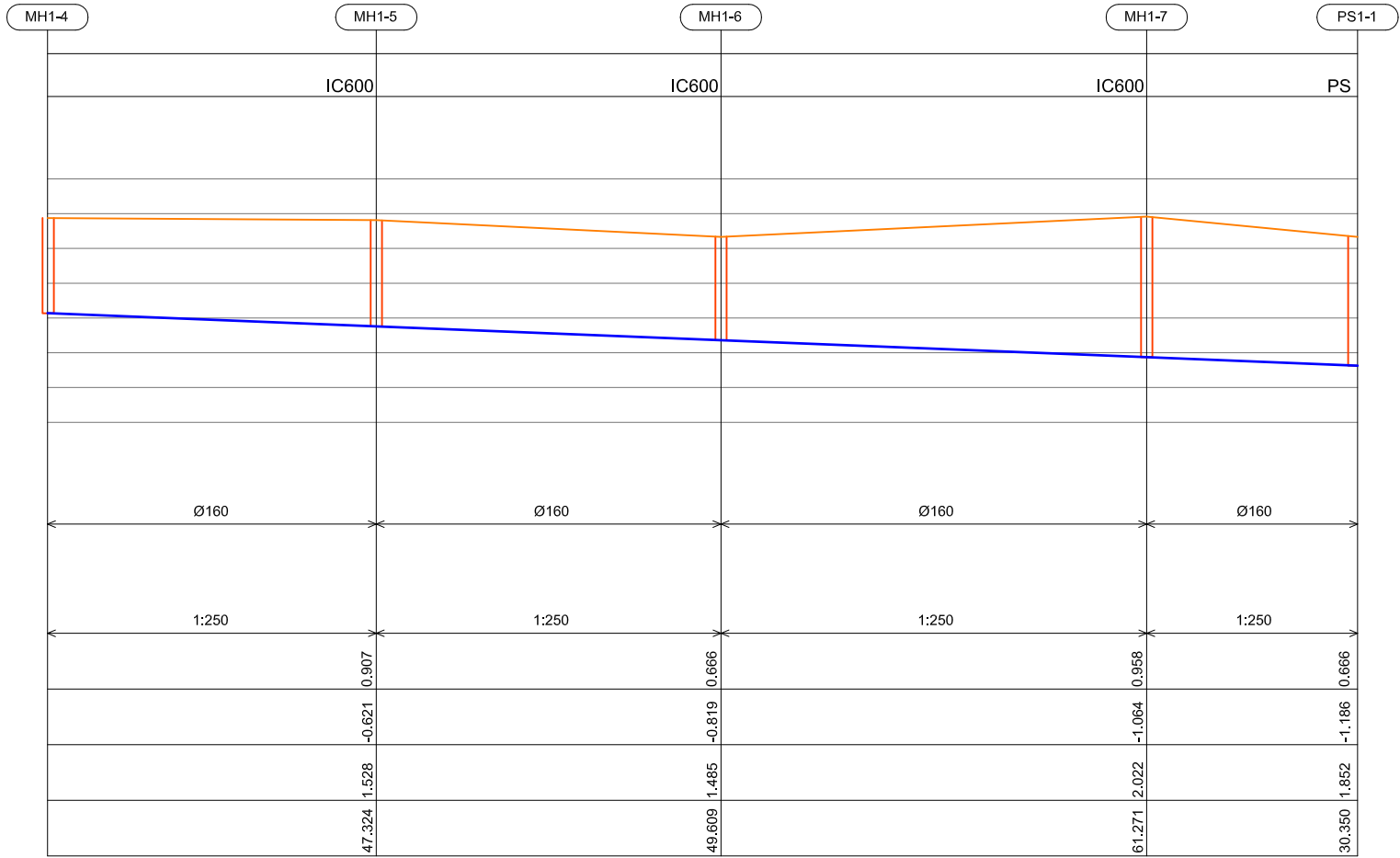
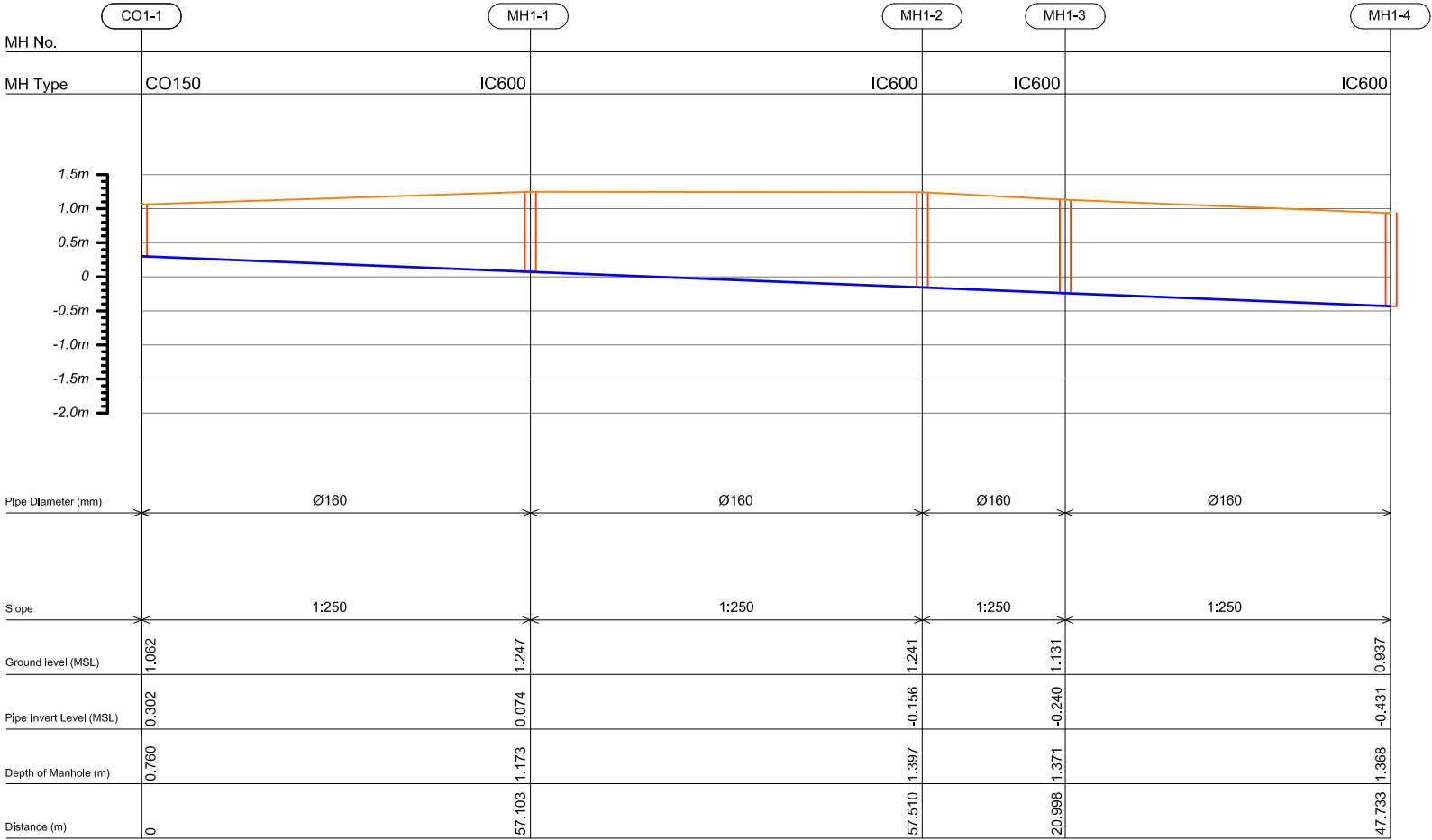
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MALDIVES
CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY
PROJECT NUMBER: -
DATE: MARCH 2016
ENGINEER: - Mohamed Saif
CHECKED BY: - Ihsan Wahheed
DRAWN BY: - Mohamed Saif

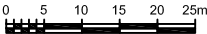
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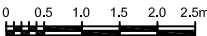
Profile 1



HORIZONTAL SCALE



VERTICAL SCALE



- CO150 — Cleanout Ø150
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

CONSULTANCY SERVICES FOR SURVEY & DESIGN
OF SEWERAGE FACILITIES IN AA. MATHIVERI,
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CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY
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DRAWN BY: - Maumoon Saleem

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Date

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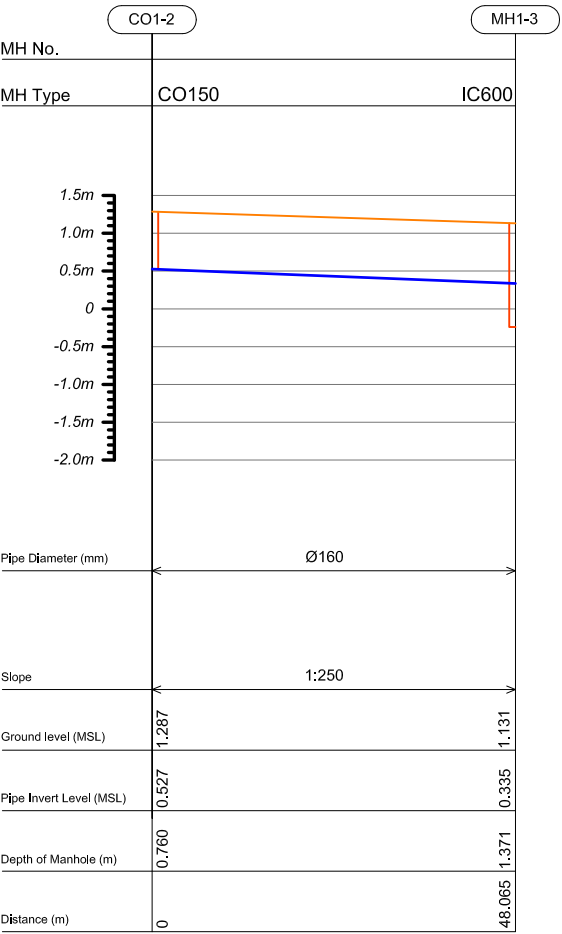
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w: www.riyan.com.mv
3rd floor, H. Azum, Ameerseeragui, Male'

Title: Profile 1

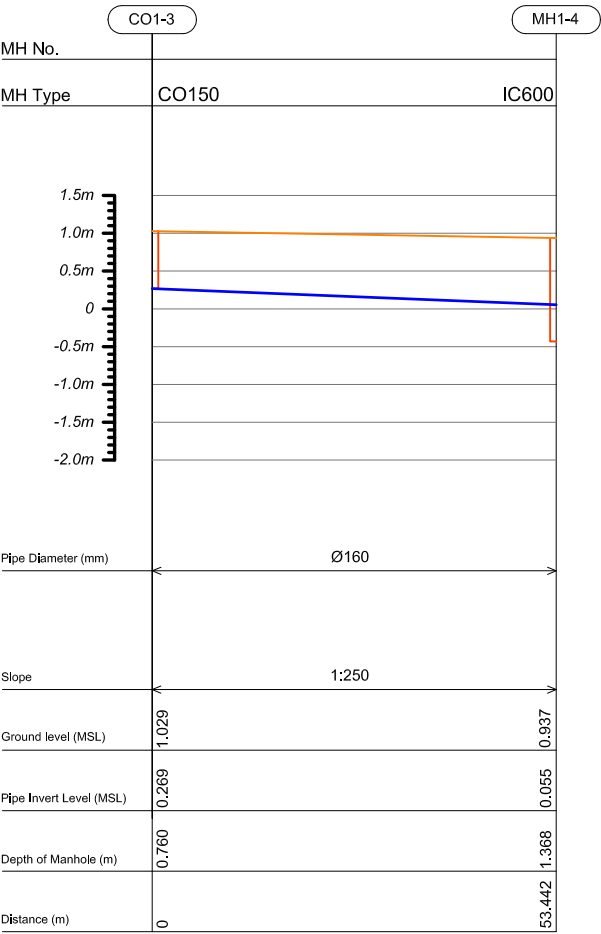
Page: A -13 /43

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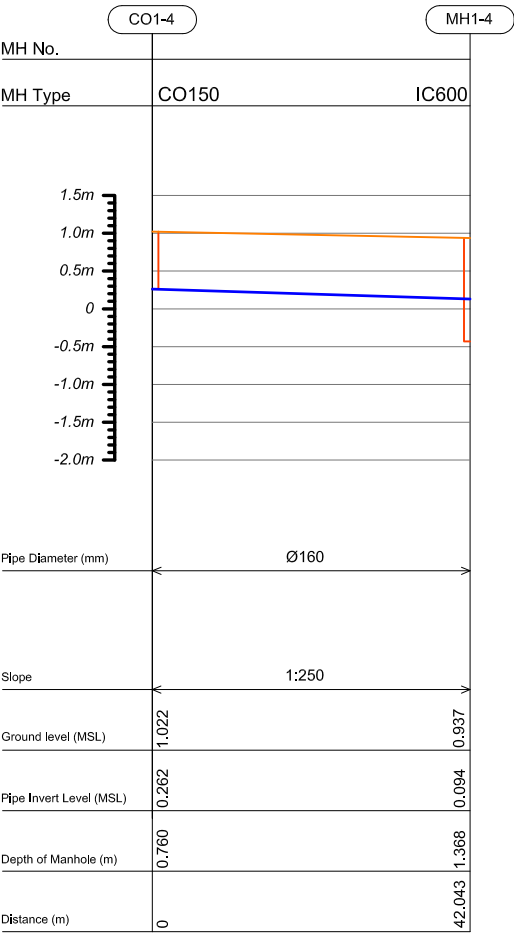
Profile 2



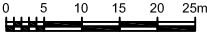
Profile 3



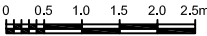
Profile 4



HORIZONTAL SCALE



VERTICAL SCALE



- CO150 — Cleanout Ø150
- IC600 — HDPE Manhole Ø600
- PS — Pump Station



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Title: Profile 2, 3 & 4

Page: A -14/43

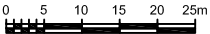
CONSULTANCY SERVICES FOR SURVEY & DESIGN
OF SEWERAGE FACILITIES IN AA. MATHIVERI,
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CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY
PROJECT NUMBER: -
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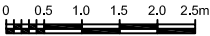
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HORIZONTAL SCALE

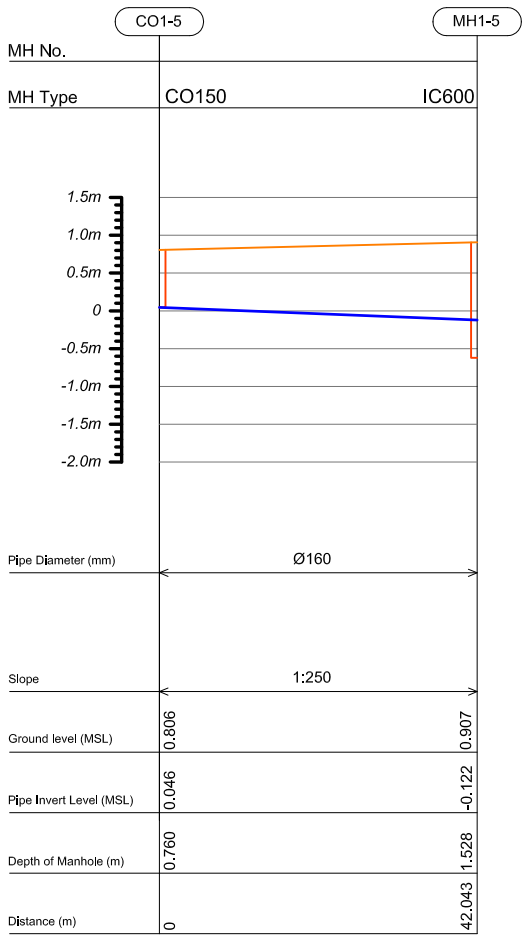


VERTICAL SCALE

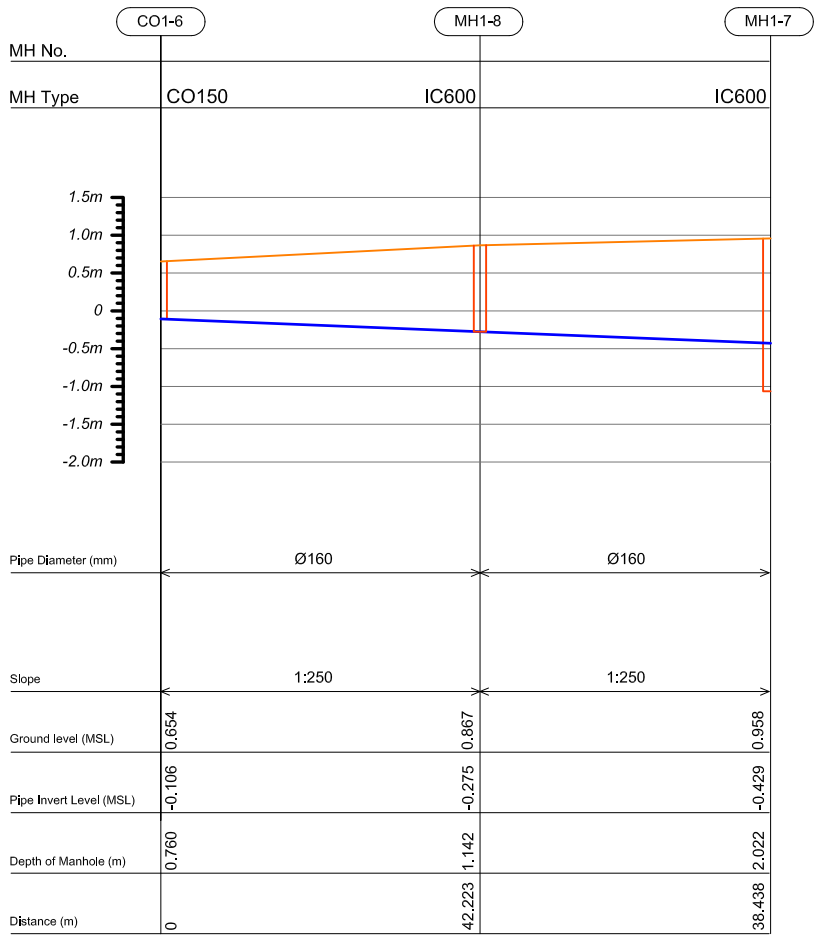


- CO150 — Cleanout Ø150
IC600 — HDPE Manhole Ø600
PS — Pump Station

Profile 5



Profile 6



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Title: Profile 5 & 6

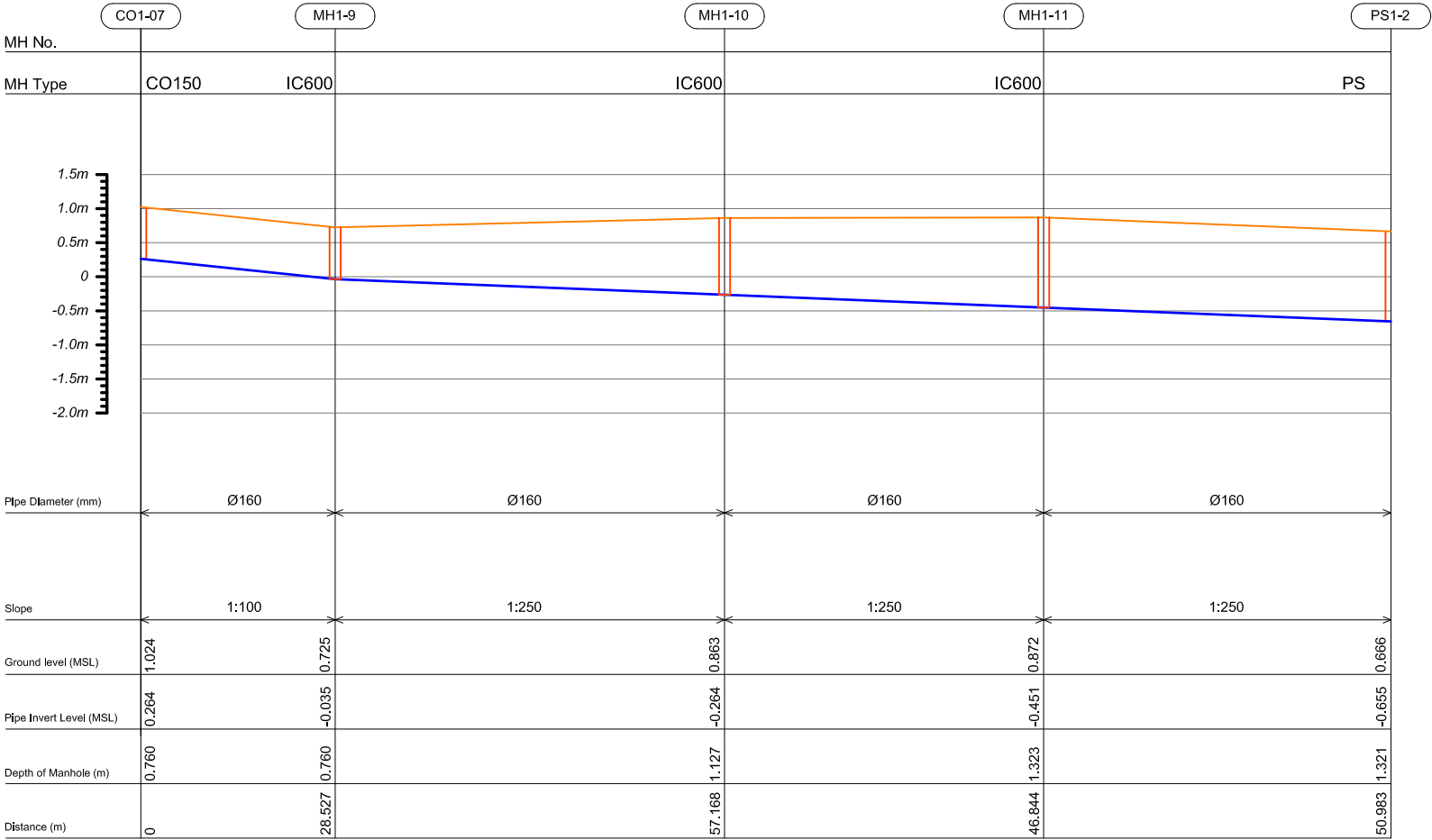
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OF SEWERAGE FACILITIES IN AA. MATHIVERI,
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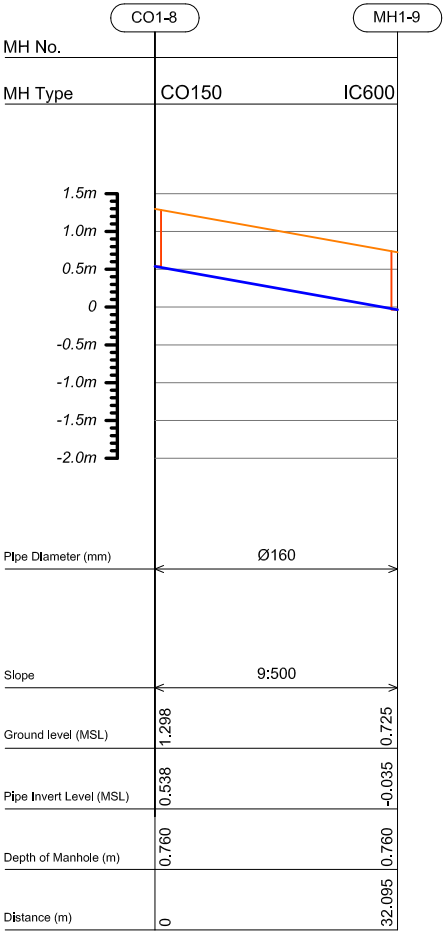
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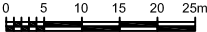
Profile 7



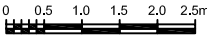
Profile 8



HORIZONTAL SCALE



VERTICAL SCALE



- CO150 — Cleanout Ø150
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

CONSULTANCY SERVICES FOR SURVEY & DESIGN
OF SEWERAGE FACILITIES IN AA. MATHIVERI,
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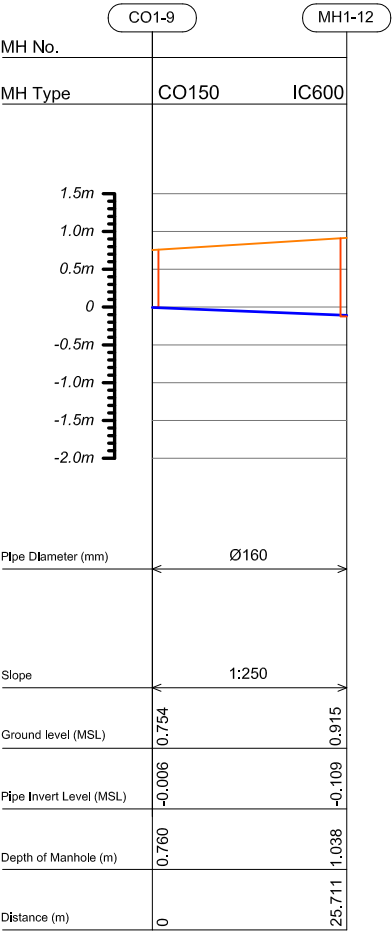
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Title: Profile 7 & 8

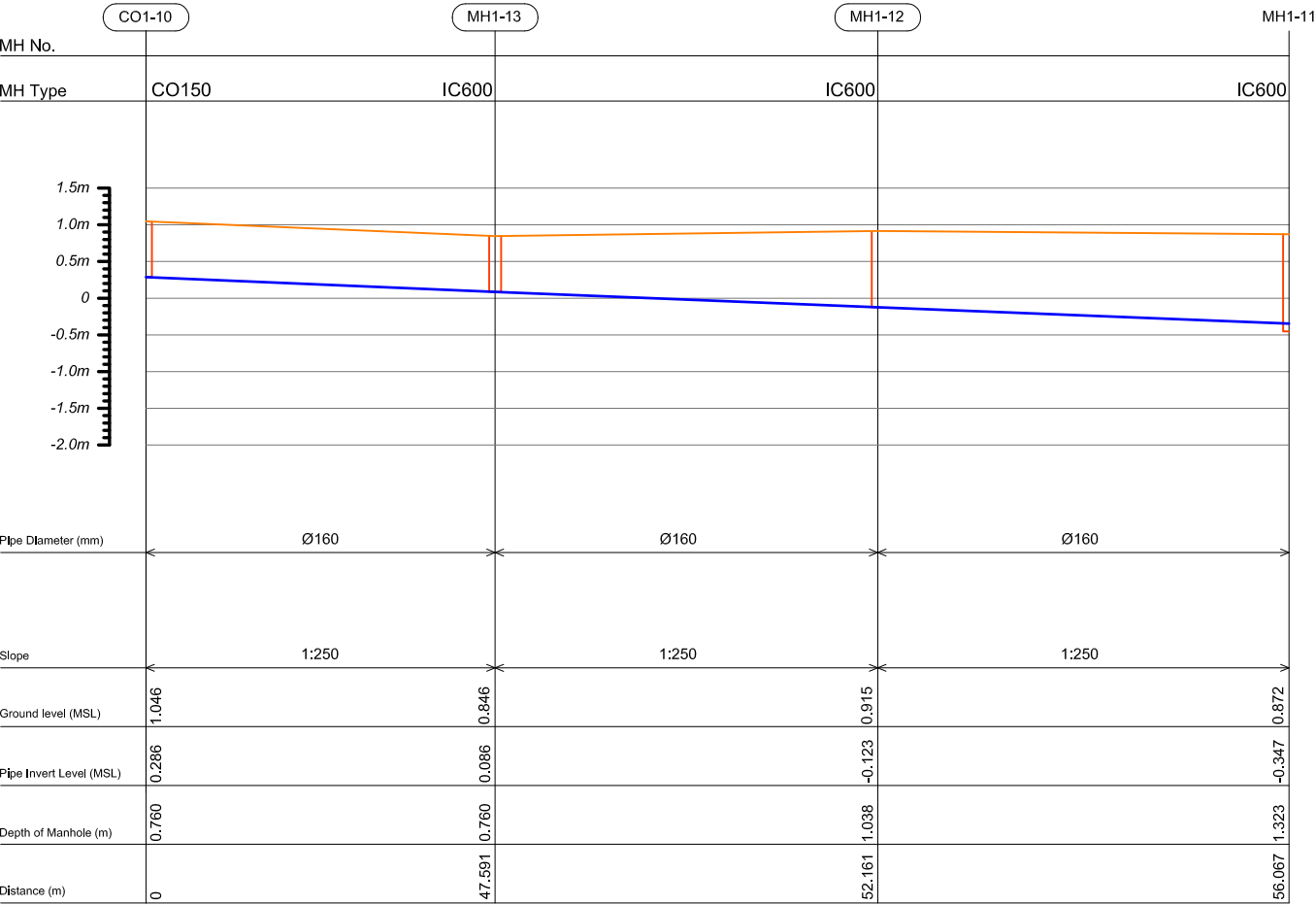
Page: A -16/43

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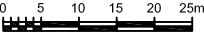
Profile 9



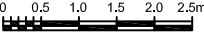
Profile 10



HORIZONTAL SCALE



VERTICAL SCALE



- CO150 — Cleanout Ø150
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

CONSULTANCY SERVICES FOR SURVEY & DESIGN
OF SEWERAGE FACILITIES IN AA. MATHIVERI,
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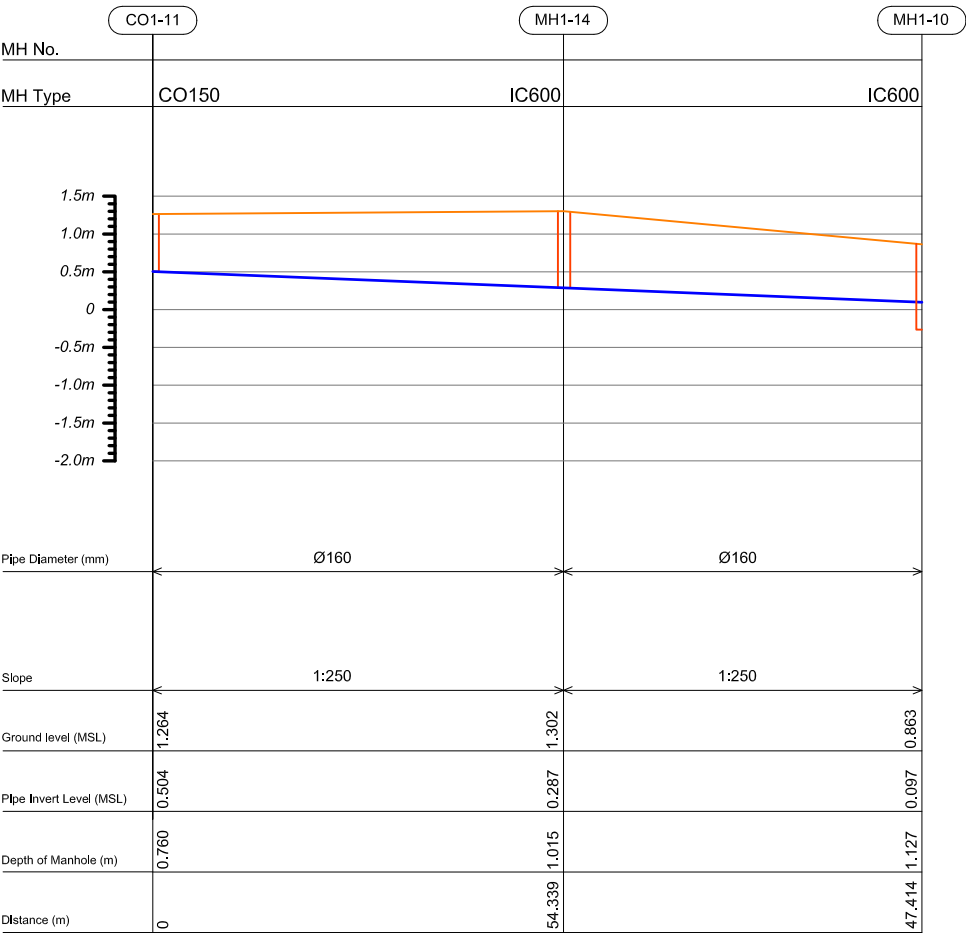
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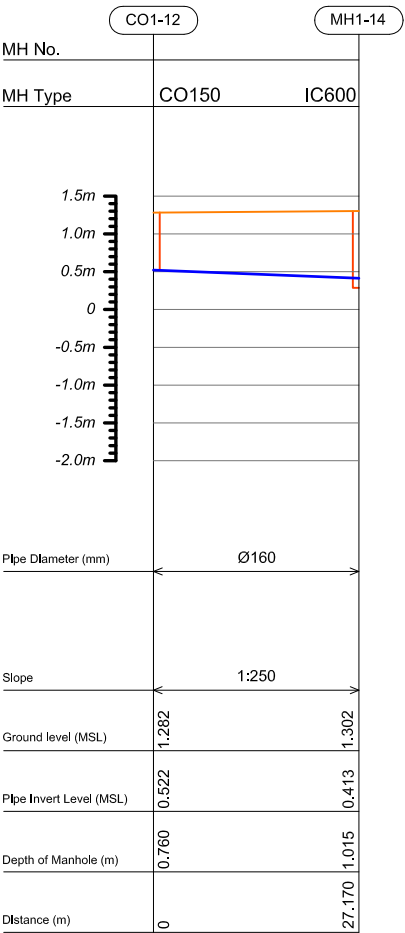
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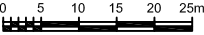
Profile 11



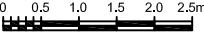
Profile 12



HORIZONTAL SCALE



VERTICAL SCALE



- CO150 — Cleanout Ø150
- IC600 — HDPE Manhole Ø600
- PS — Pump Station



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Title: Profile 11 & 12

Page: A -18/43

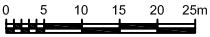
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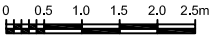
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HORIZONTAL SCALE

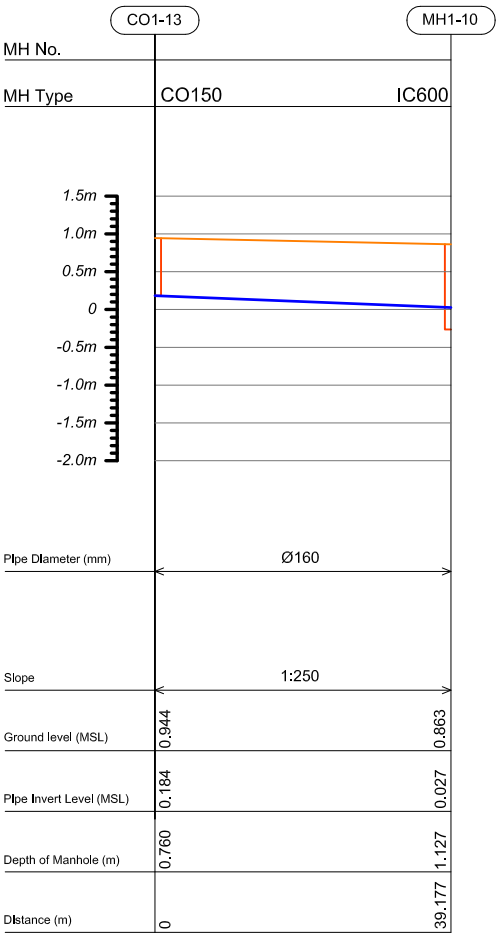


VERTICAL SCALE

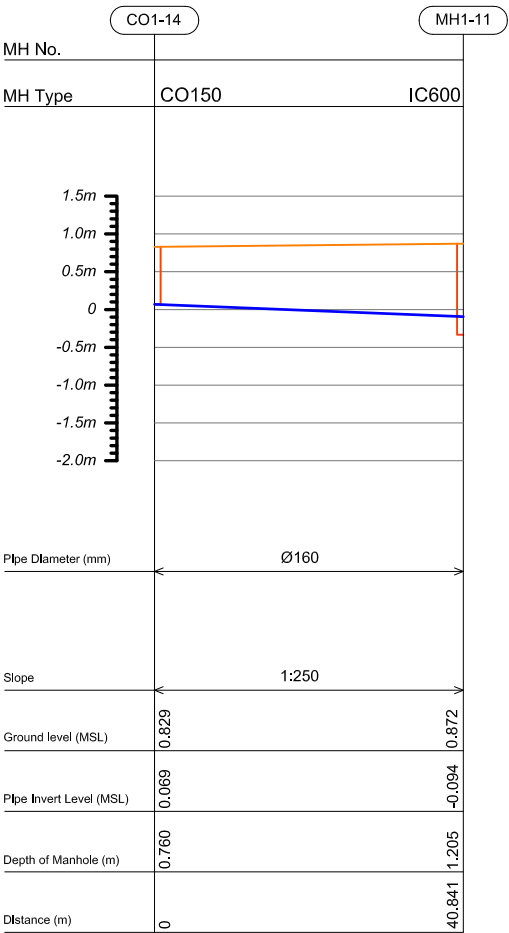


- CO150 — Cleanout Ø150
IC600 — HDPE Manhole Ø600
PS — Pump Station

Profile 13



Profile 14



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Title: Profile 13 & 14

Page: A -19/43

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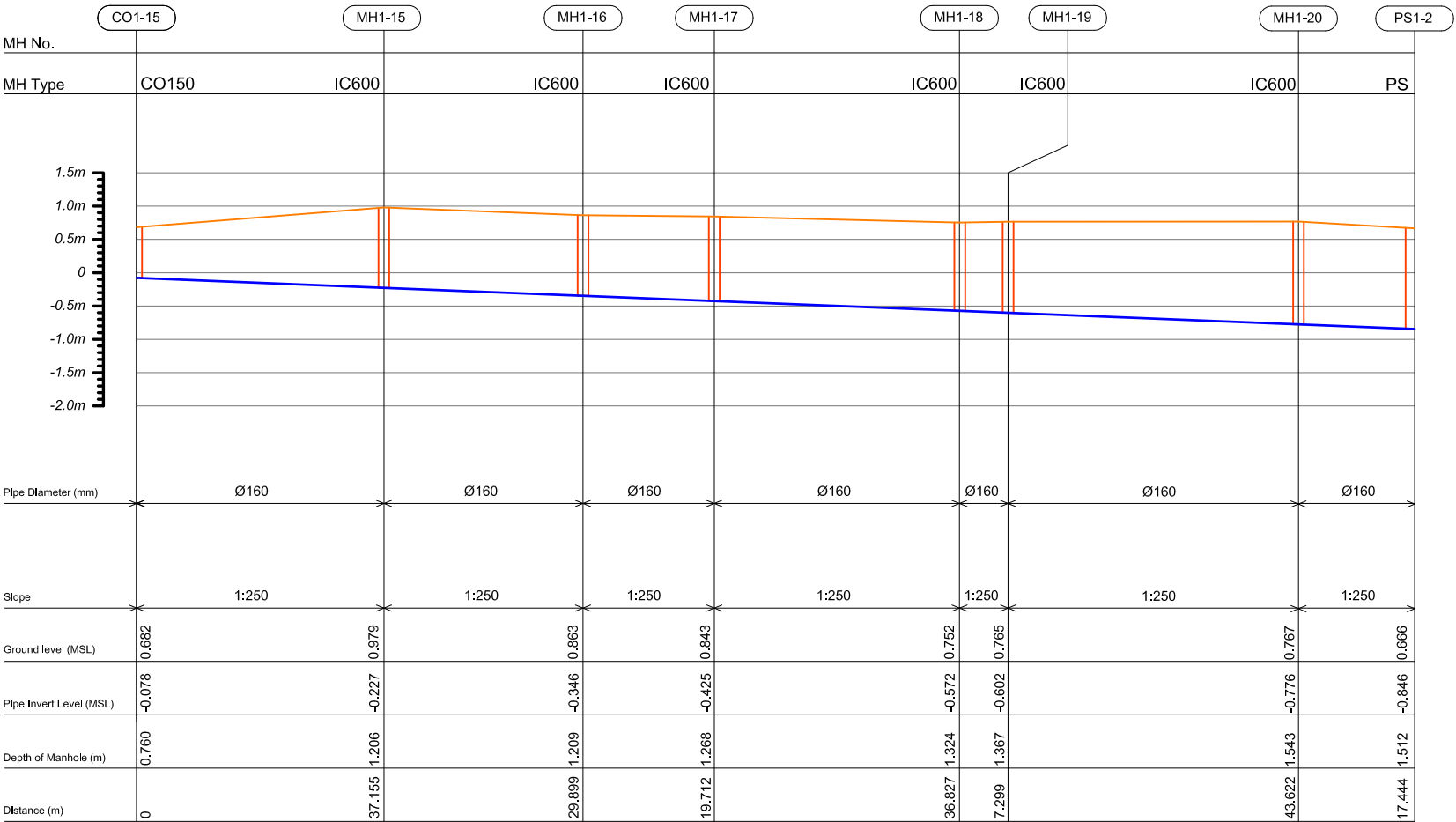
ENGINEER: - Mohamed Saif

CHECKED BY: - Ihsan Waheed

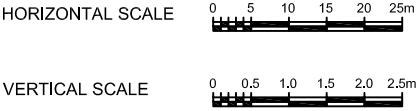
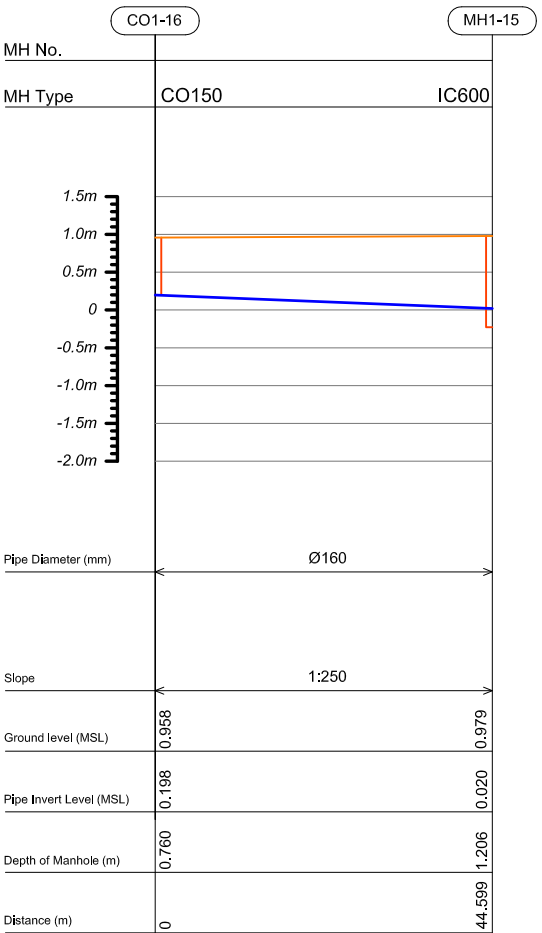
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Profile 15



Profile 16

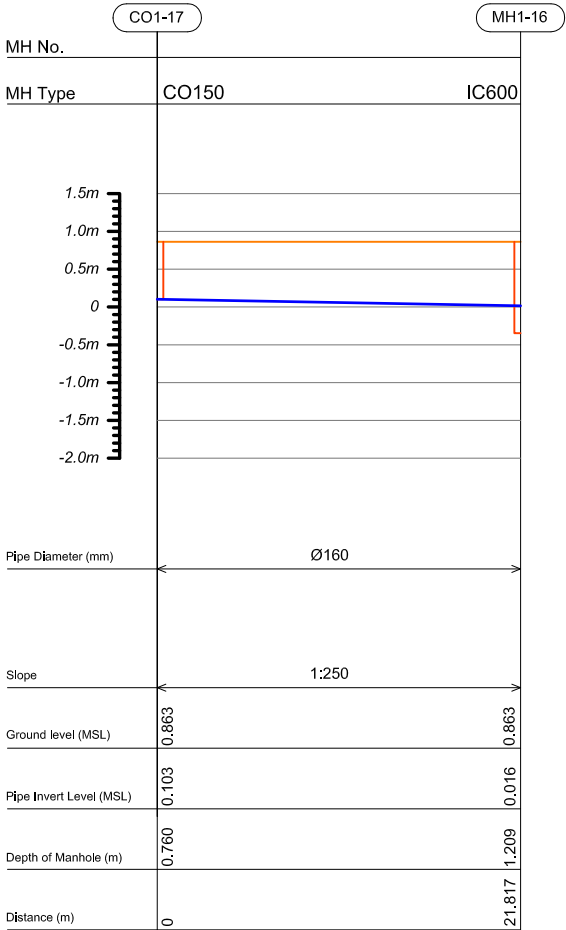


CO150 — Cleanout Ø150
IC600 — HDPE Manhole Ø600
PS — Pump Station

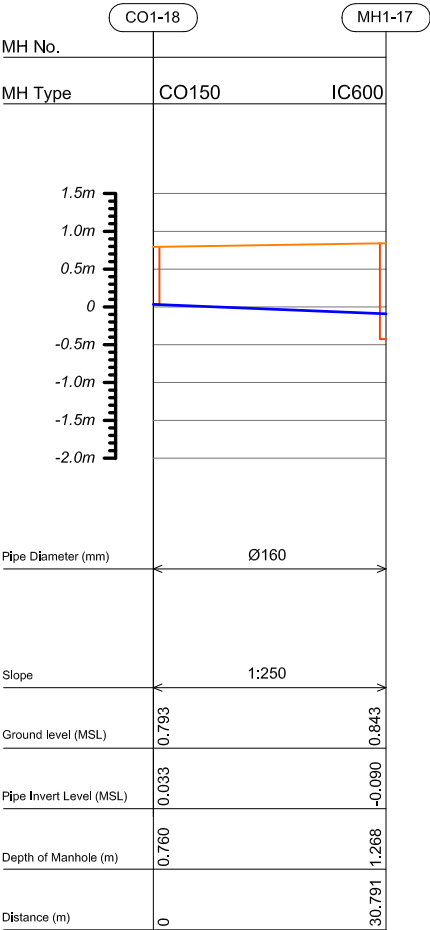
CONSULTANCY SERVICES FOR SURVEY & DESIGN
OF SEWERAGE FACILITIES IN AA. MATHIVERI,
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CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY
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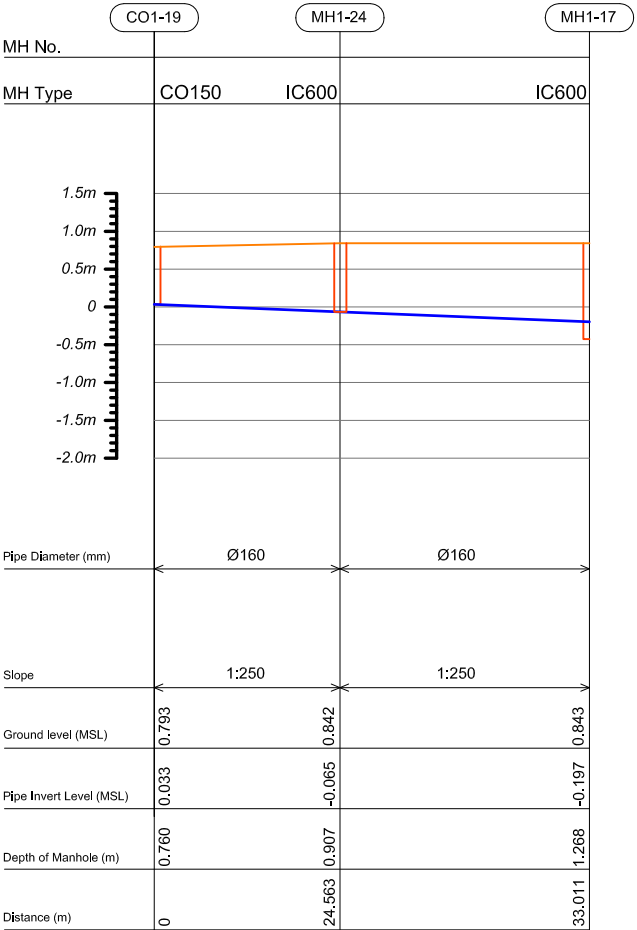
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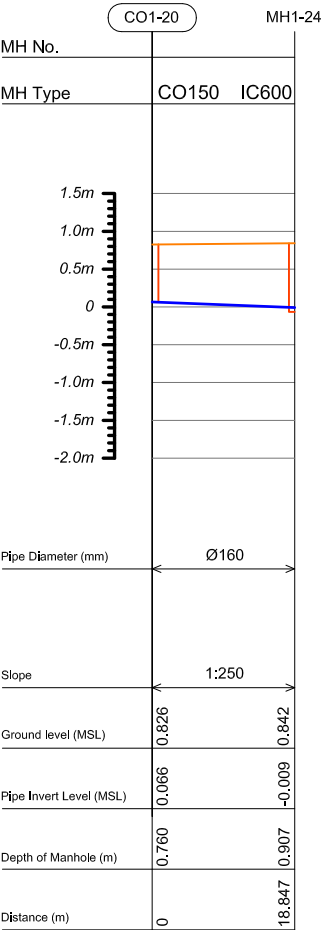
Profile 18



Profile 19



Profile 20



- CO150 — Cleanout Ø150
- IC600 — HDPE Manhole Ø600
- PS — Pump Station



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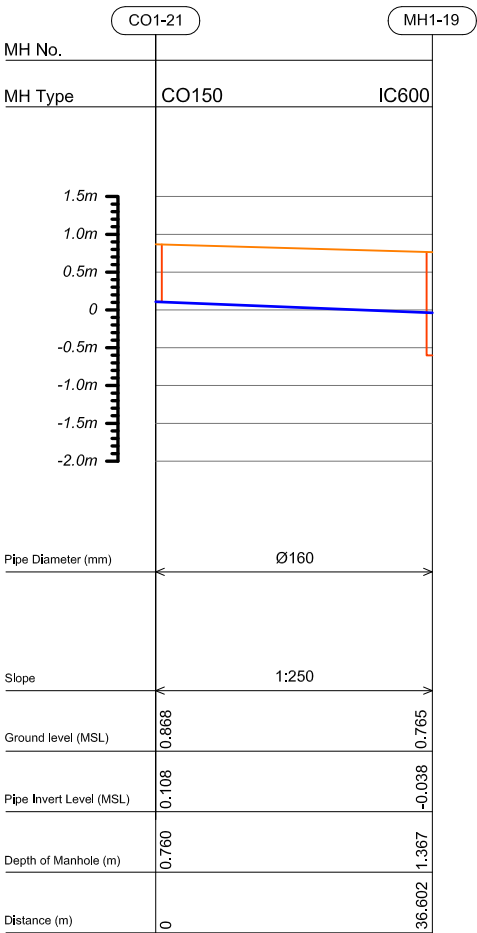
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OF SEWERAGE FACILITIES IN AA. MATHIVERI,
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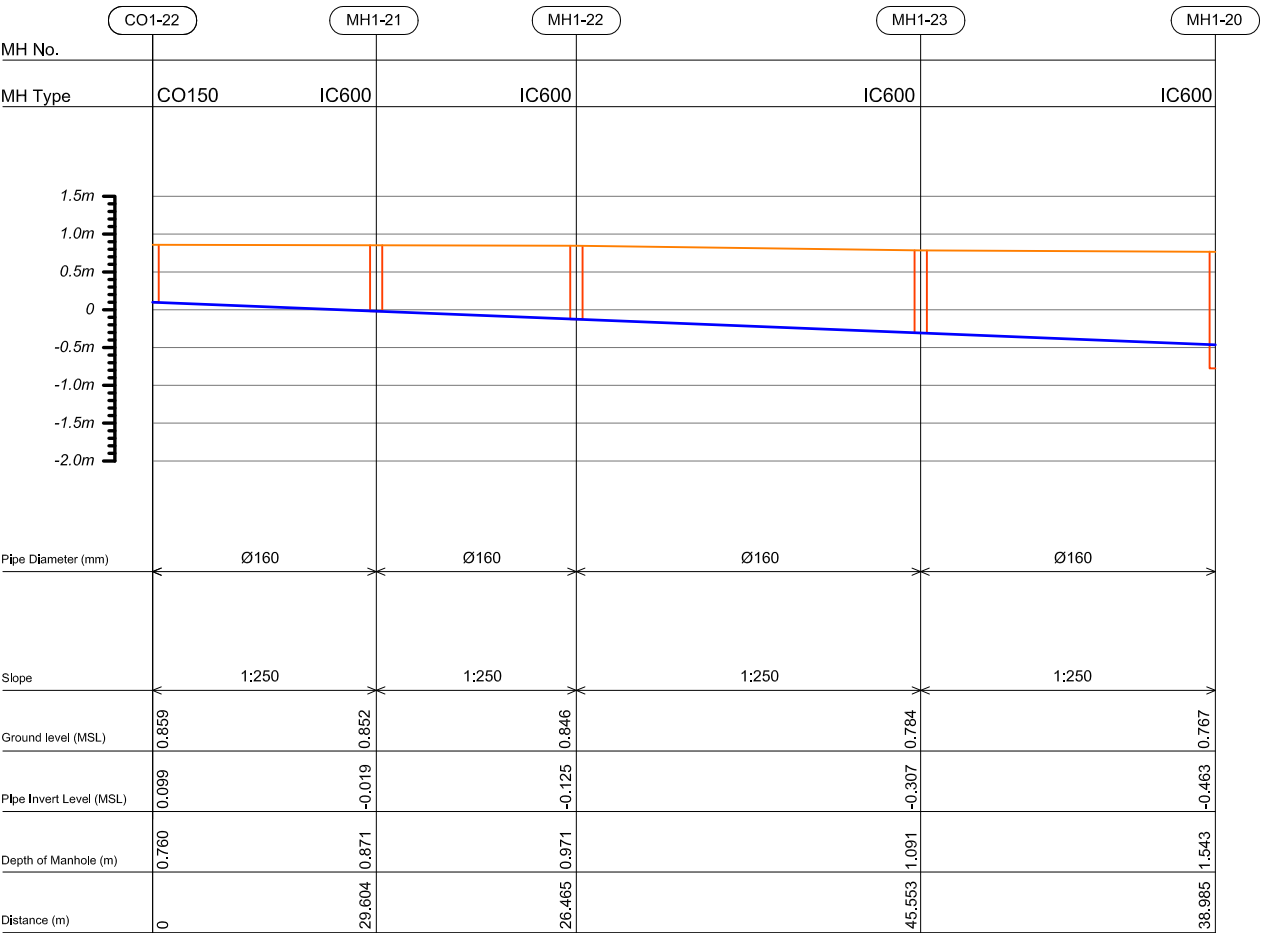
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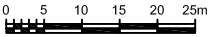
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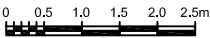
Profile 22



HORIZONTAL SCALE



VERTICAL SCALE



- CO150 — Cleanout Ø150
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

CONSULTANCY SERVICES FOR SURVEY & DESIGN
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PROJECT NUMBER: -
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ENGINEER: - Mohamed Saif
CHECKED BY: - Ihsan Waheed
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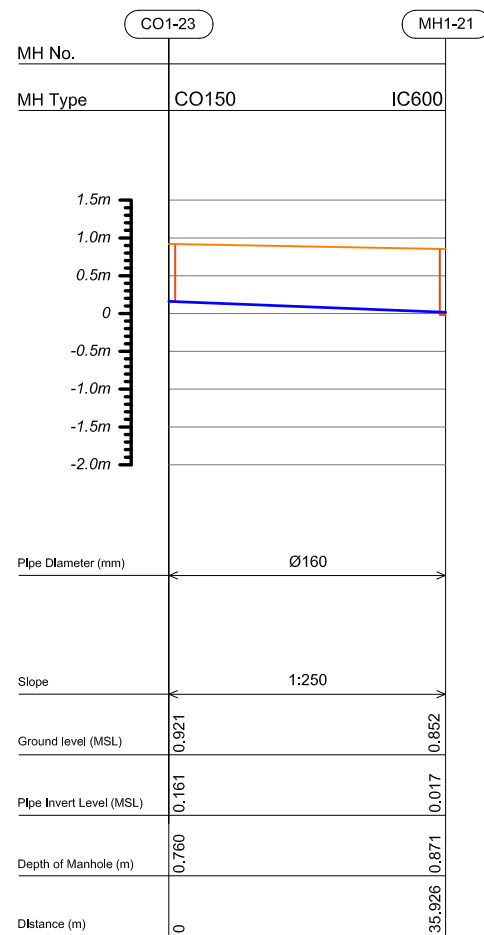

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Title: Profile 21 & 22

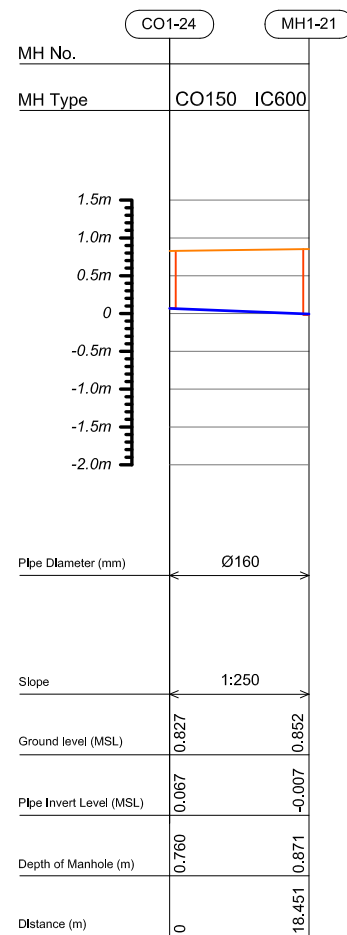
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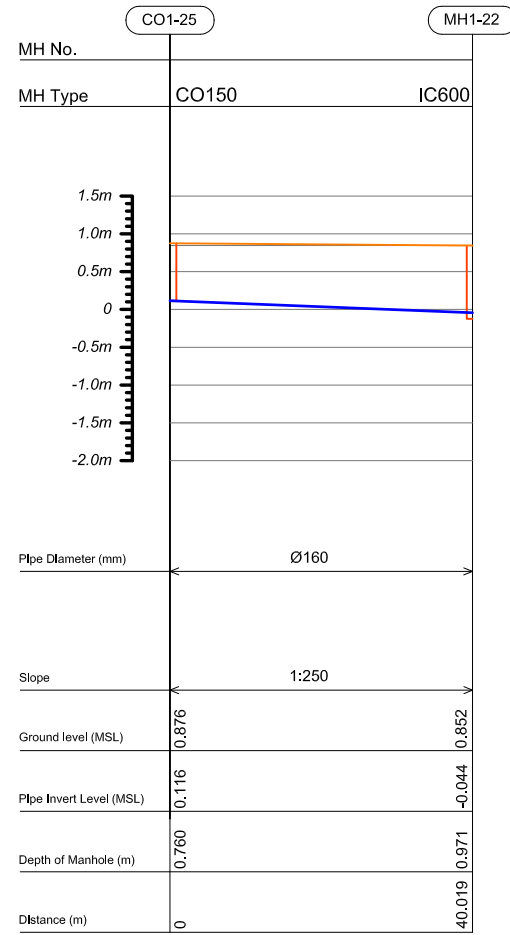
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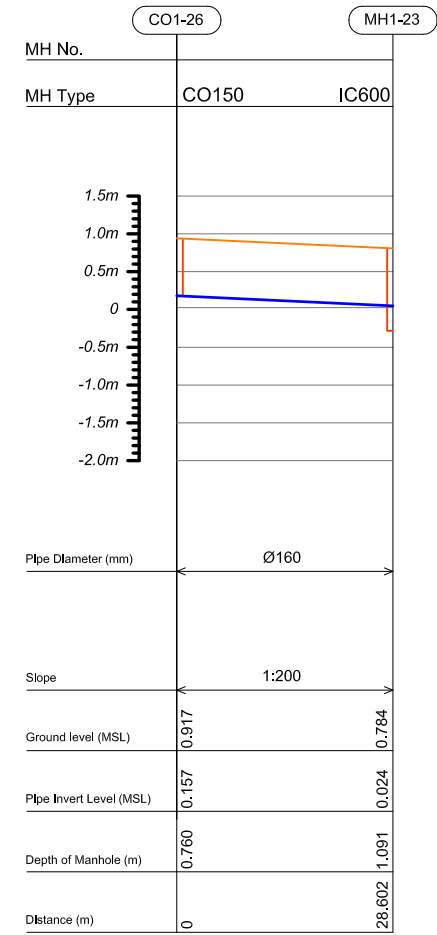
Profile 24



Profile 25



Profile 26



HORIZONTAL SCALE



0 5 10 15 20 25m

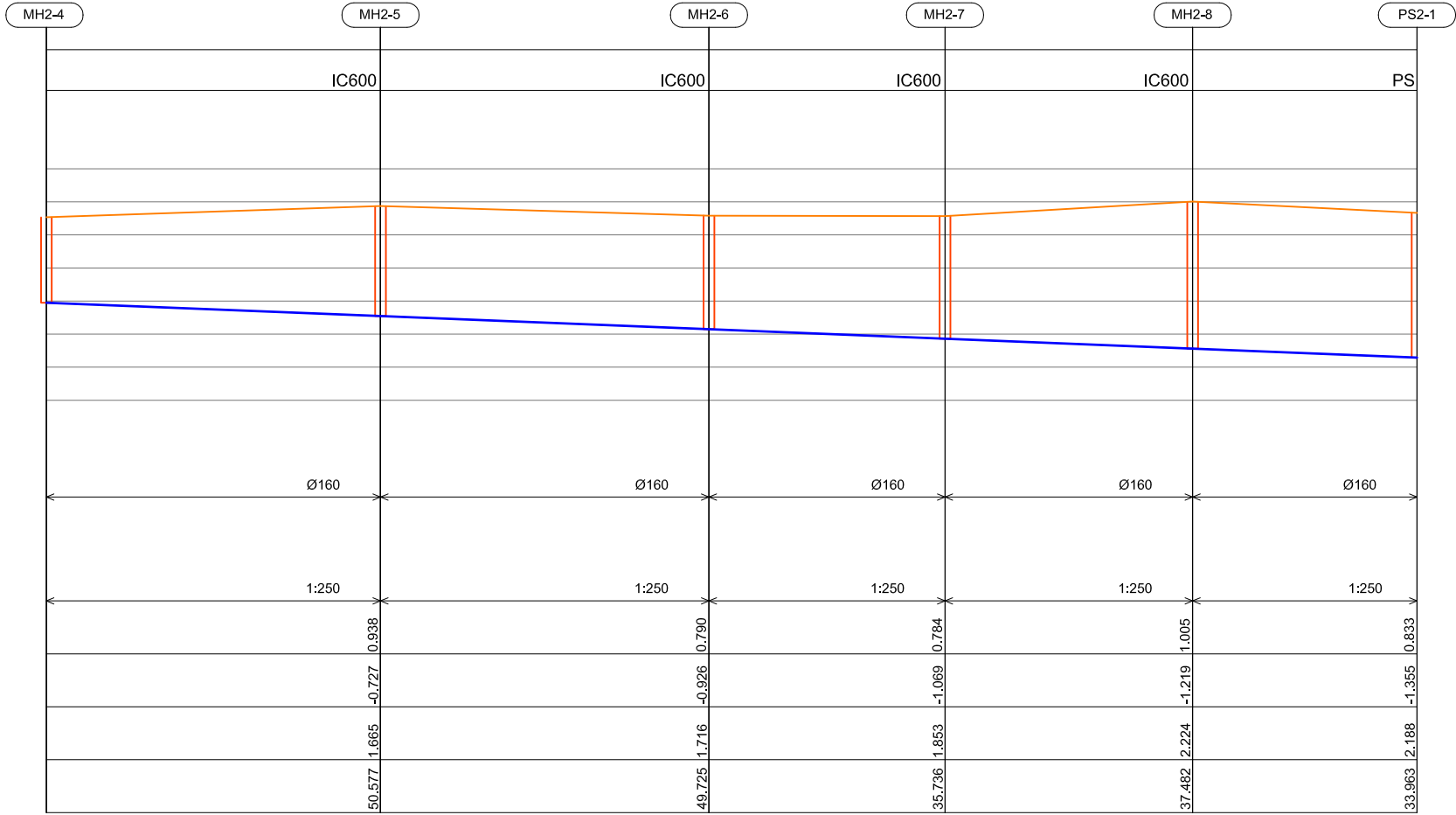
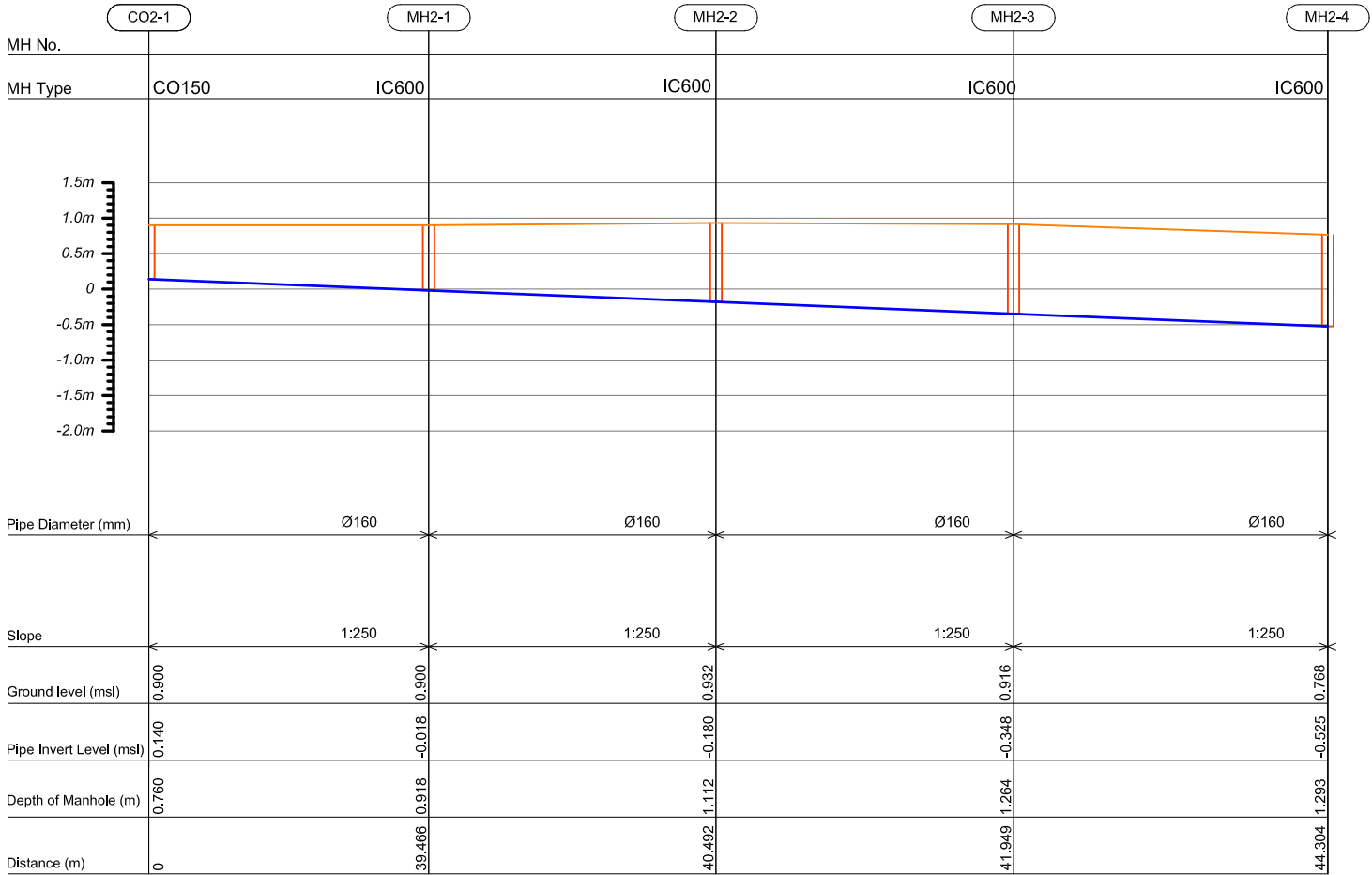
VERTICAL SCALE



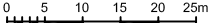
0 0.5 1.0 1.5 2.0 2.5m

CO150	—	Cleanout Ø150
IC600	—	HDPE Manhole Ø600
PS	—	Pump Station

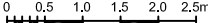
Profile 1



HORIZONTAL SCALE



VERTICAL SCALE



- CO150 — Cleanout Ø150
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

CONSULTANCY SERVICES FOR SURVEY & DESIGN
OF SEWERAGE FACILITIES IN AA. MATHIVERI,
MALDIVES

CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY
PROJECT NUMBER: -
DATE: MARCH 2016
ENGINEER: - Mohamed Saif
CHECKED BY: - Ihsan Waheed
DRAWN BY: - Shaufa Ahmed

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Title: Profile 1

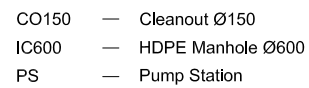
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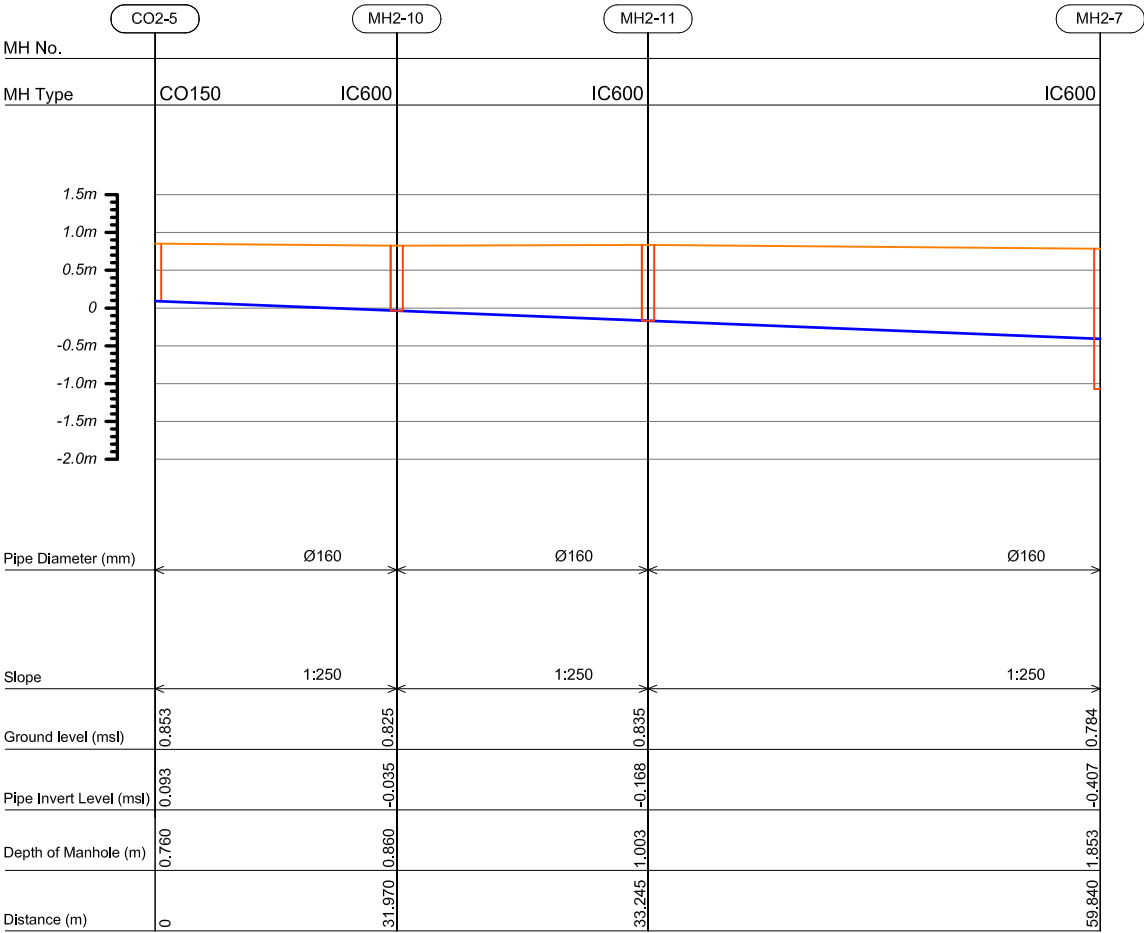
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MH Type	CO150	IC600
Pipe Diameter (mm)	Ø160	
Slope	1:250	
Ground level (msl)	0.909	0.932
Pipe Invert Level (msl)	0.149	-0.023
Depth of Manhole (m)	0.760	1.112
Distance (m)	0	42.906

MH No.	CO2-3	MH2-3
MH Type	CO150	IC600
Pipe Diameter (mm)	Ø160	
Slope	1:250	
Ground level (msl)	0.957	0.916
Pipe Invert Level (msl)	0.197	0.036
Depth of Manhole (m)	0.760	1.264
Distance (m)	0	40.151

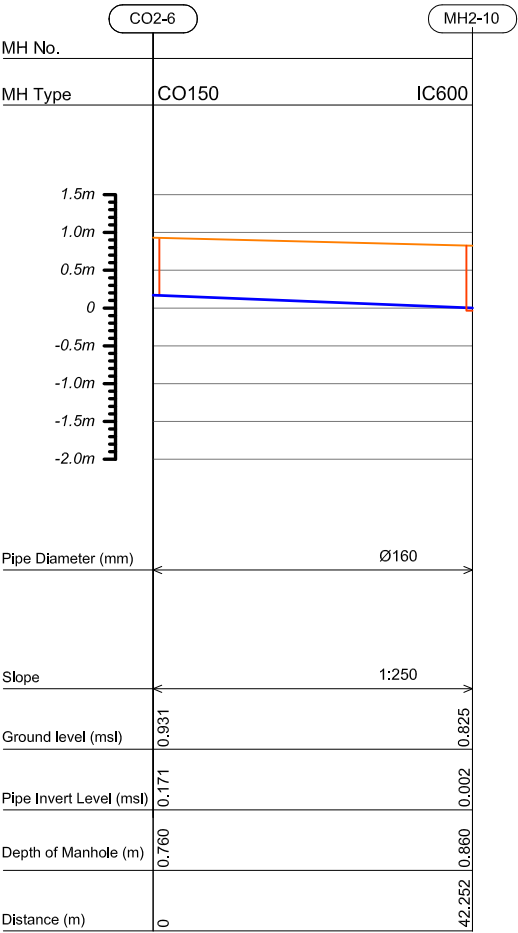
MH No.	CO2-4	MH2-9	MH2-4
MH Type	CO150	IC600	IC600
Pipe Diameter (mm)	Ø160		
Slope	1:250		
Ground level (msl)	0.830	0.784	0.768
Pipe Invert Level (msl)	0.070	-0.059	-0.217
Depth of Manhole (m)	0.760	0.843	1.293
Distance (m)	0	32.299	39.561



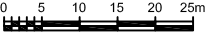
Profile 5



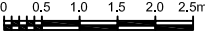
Profile 6



HORIZONTAL SCALE



VERTICAL SCALE



- CO150
- IC600
- PS
- Cleanout Ø150
- HDPE Manhole Ø600
- Pump Station



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Title: Profile, 5 and 6

Page: A -26/43

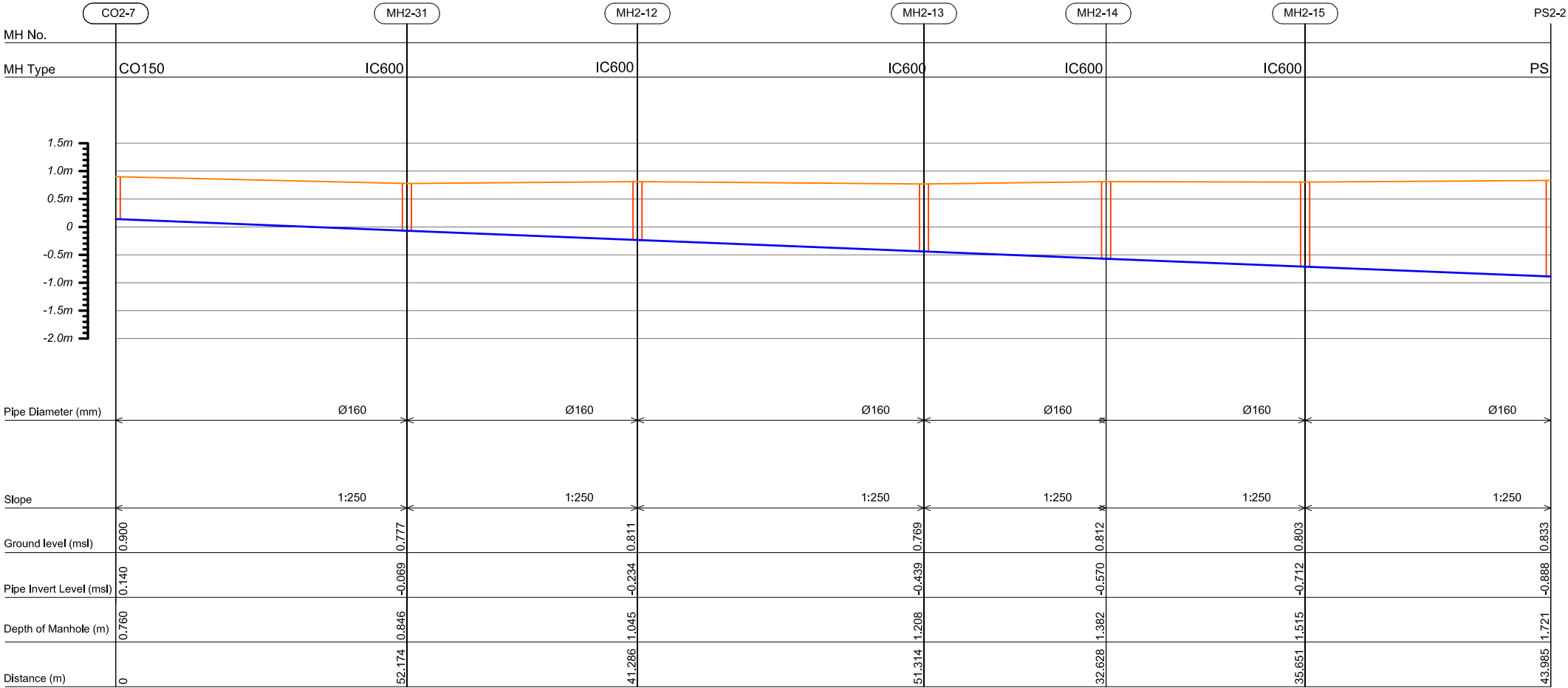
CONSULTANCY SERVICES FOR SURVEY & DESIGN
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ENGINEER : - Mohamed Saif
CHECKED BY : - Ihsan Waheed
DRAWN BY : - Shaufa Ahmed

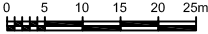
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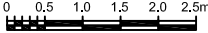
Profile 7



HORIZONTAL SCALE



VERTICAL SCALE



- CO150
- IC600
- PS
- Cleanout Ø150
- HDPE Manhole Ø600
- Pump Station

CONSULTANCY SERVICES FOR SURVEY & DESIGN
OF SEWERAGE FACILITIES IN AA. MATHIVERI,
MALDIVES

CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY

PROJECT NUMBER: -

DATE: MARCH 2016

ENGINEER: - Mohamed Saif

CHECKED BY: - Ihsan Waheed

DRAWN BY: - Shaufa Ahmed

Rev no

Date

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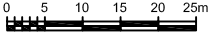
t: +9603315049 f: +9603310776
e: info@riyan.com.mv
w: www.riyan.com.mv
3rd floor, H. Azum, Alimereenagau, Male'

Title: Profile 7

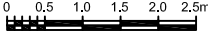
Page: A -27/43

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HORIZONTAL SCALE

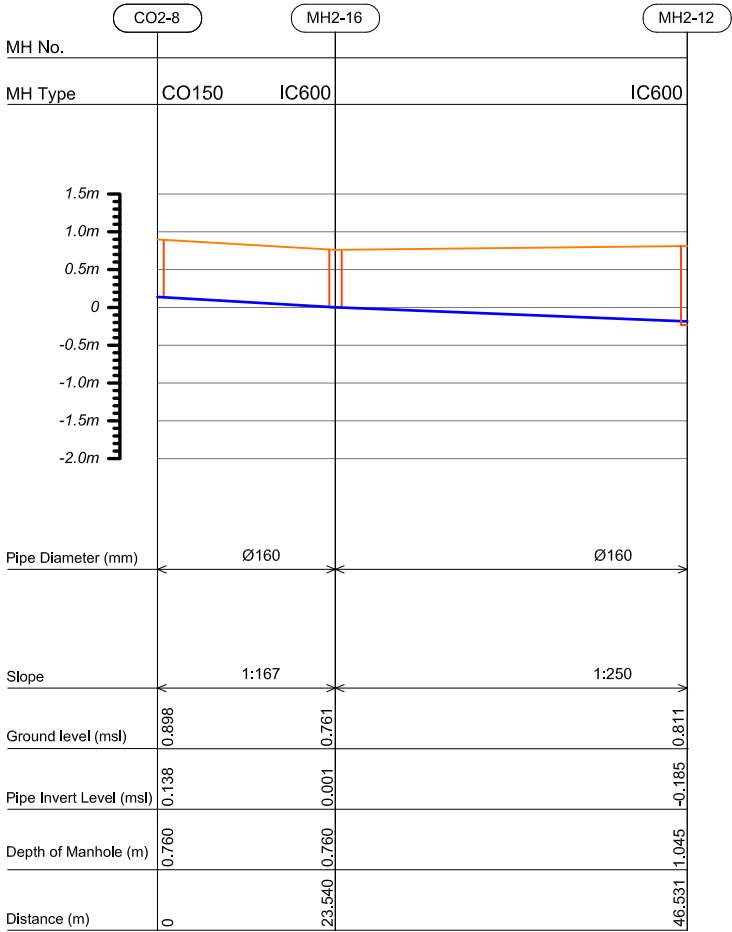


VERTICAL SCALE

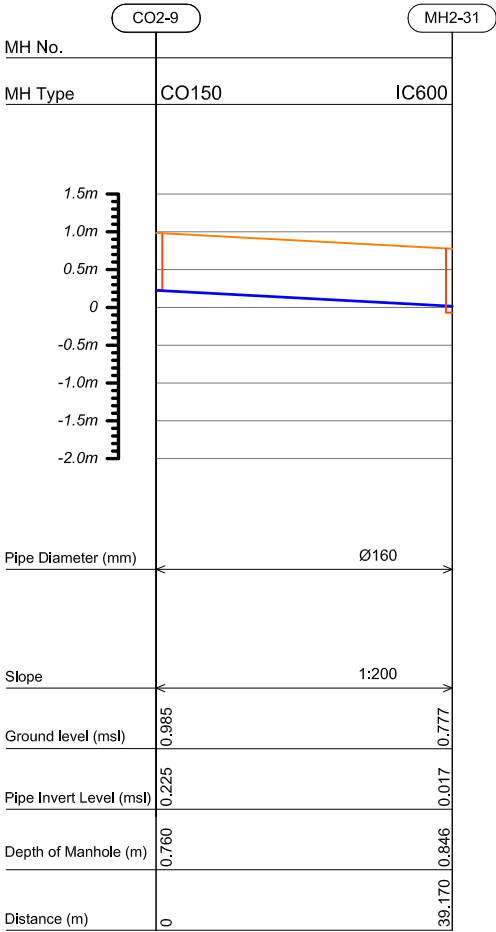


- CO150 — Cleanout Ø150
IC600 — HDPE Manhole Ø600
PS — Pump Station

Profile 8



Profile 9



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Title: Profile 8 & 9

Page: A -28/43

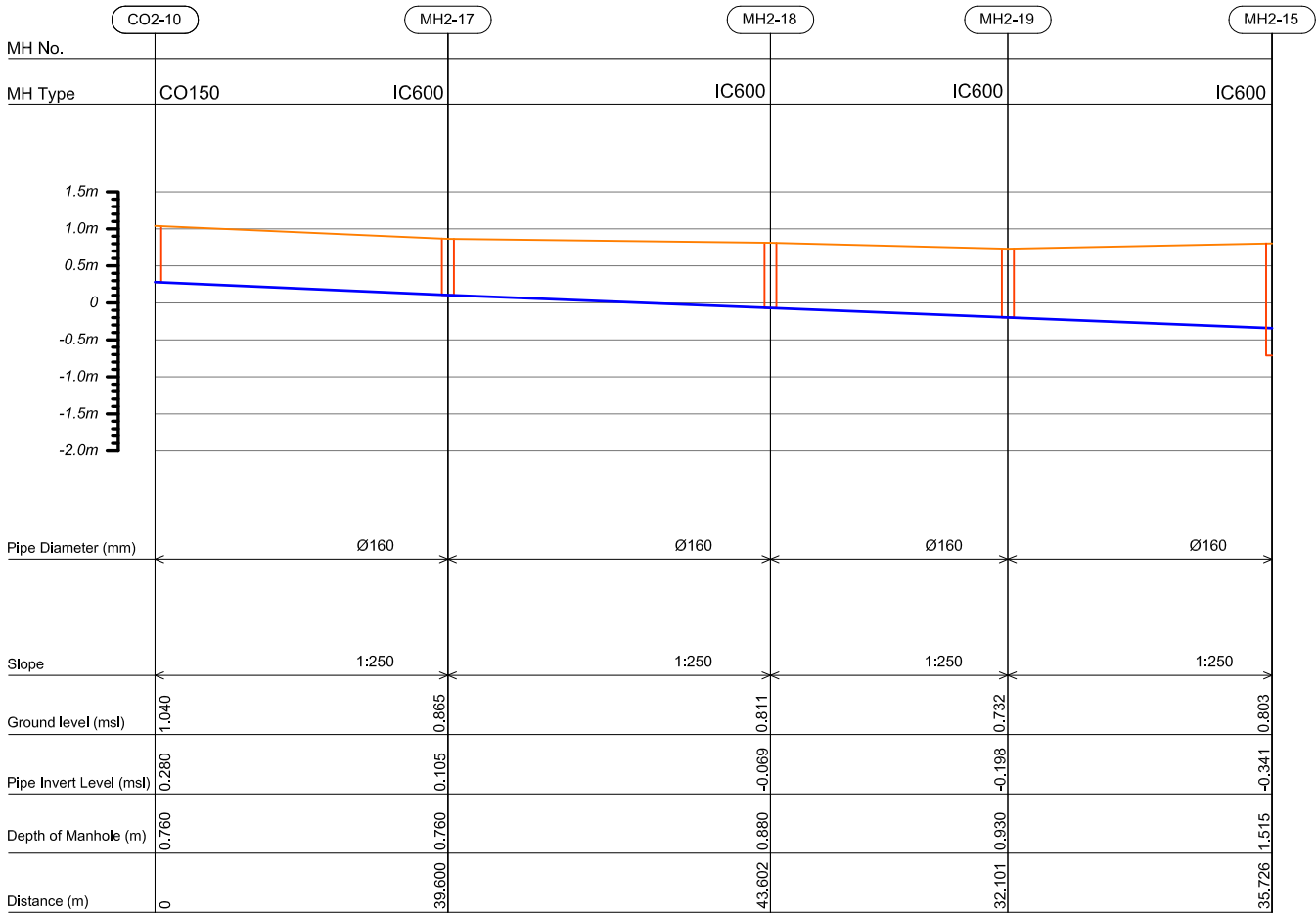
CONSULTANCY SERVICES FOR SURVEY & DESIGN
OF SEWERAGE FACILITIES IN AA. MATHIVERI,
MALDIVES

CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY
PROJECT NUMBER: -
DATE: MARCH 2016
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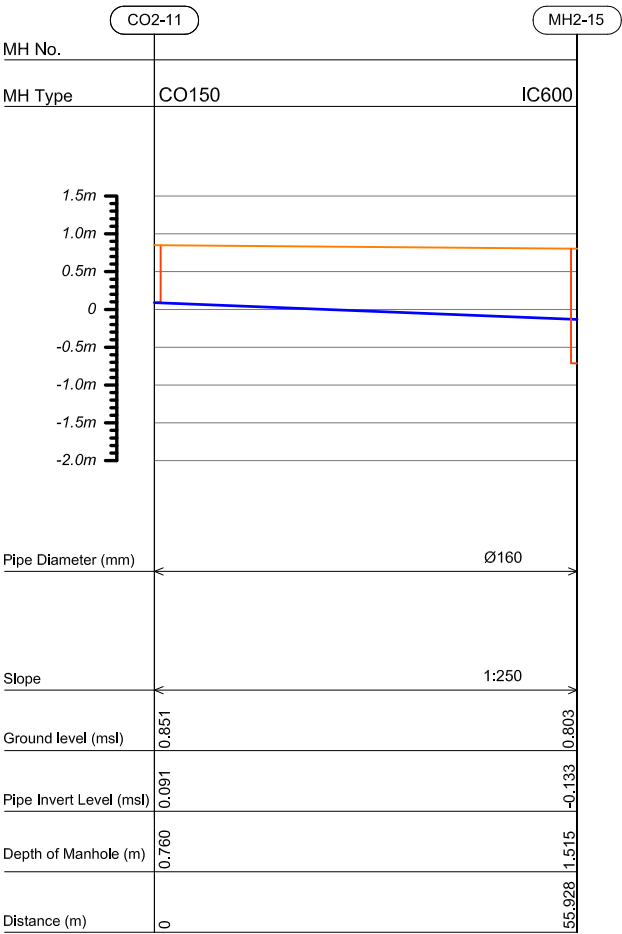
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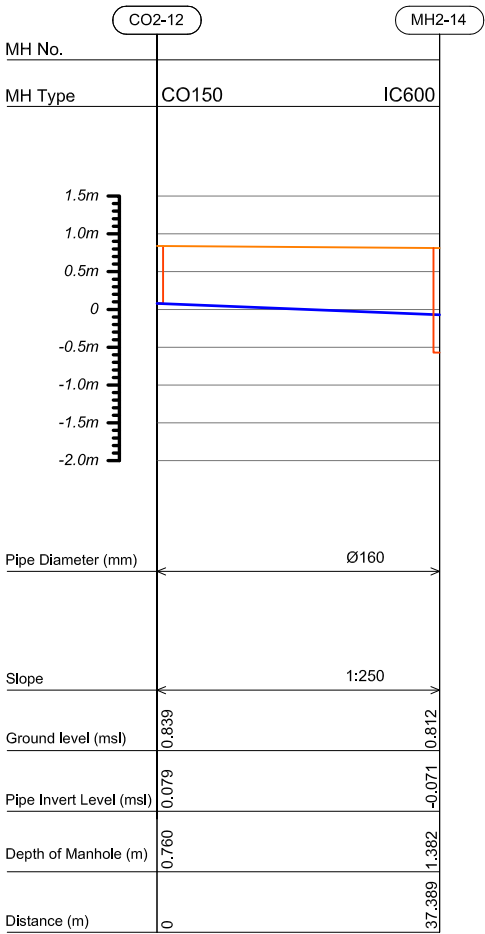
Profile 10



Profile 11



Profile 12



- CO150 — Cleanout Ø150
- IC600 — HDPE Manhole Ø600
- PS — Pump Station

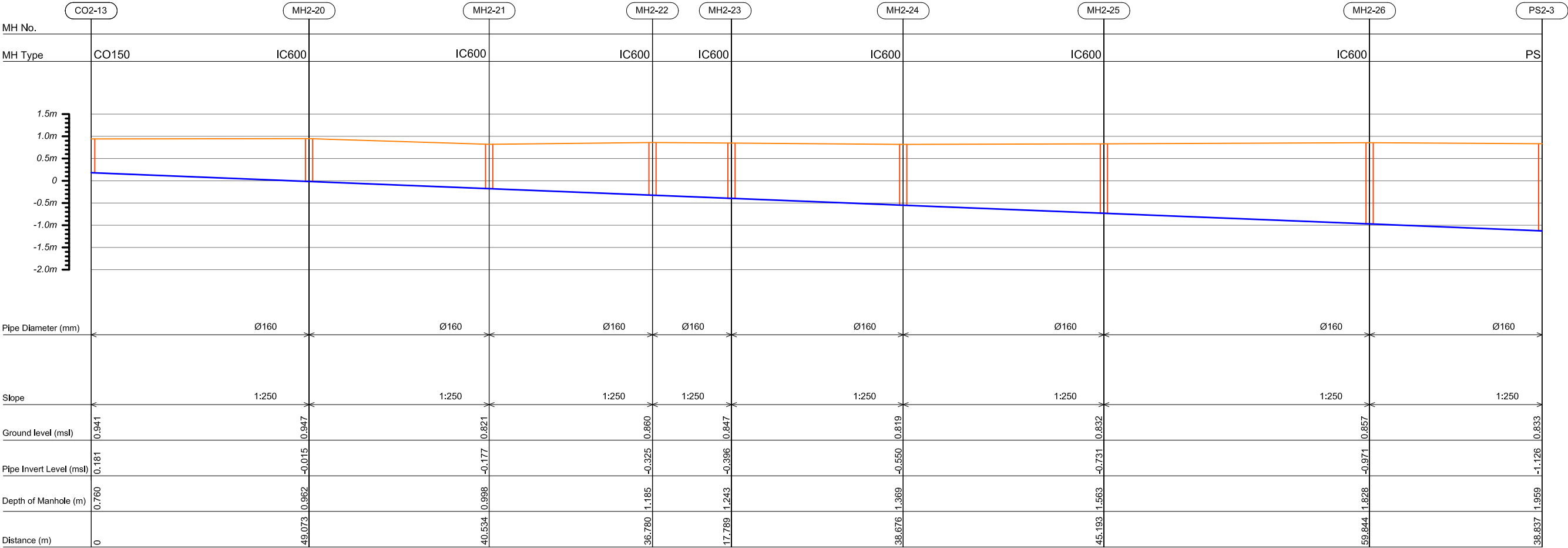
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CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY
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DRAWN BY: - Shaufa Ahmed

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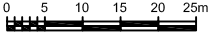
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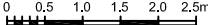
Profile 13



HORIZONTAL SCALE



VERTICAL SCALE



- CO150
- IC600
- PS
- Cleanout Ø150
- HDPE Manhole Ø600
- Pump Station

CONSULTANCY SERVICES FOR SURVEY & DESIGN
OF SEWERAGE FACILITIES IN AA. MATHIVERI,
MALDIVES

CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY
PROJECT NUMBER: -
DATE: MARCH 2016
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Title: Profile 13

Page: A -30/43

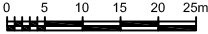
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MH No.	CO2-14	MH2-27	MH2-23
MH Type	CO150	IC600	IC600
Pipe Diameter (mm)	Ø160		Ø160
Slope	1:250		1:250
Ground level (msl)	0.922	0.948	0.847
Pipe Invert Level (msl)	0.162	0.003	-0.149
Depth of Manhole (m)	0.760	0.945	1.243
Distance (m)	0	39.848	37.843

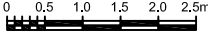
MH No.	CO2-15	MH2-28	MH2-24
MH Type	CO150	IC600	IC600
Pipe Diameter (mm)	Ø160		Ø160
Slope	1:250		1:250
Ground level (msl)	0.833	0.921	0.847
Pipe Invert Level (msl)	0.073	-0.061	-0.243
Depth of Manhole (m)	0.760	0.982	1.369
Distance (m)	0	33.441	45.490

CO150	—	Cleanout Ø150
IC600	—	HDPE Manhole Ø600
PS	—	Pump Station

HORIZONTAL SCALE



VERTICAL SCALE



CO150

— Cleanout Ø150

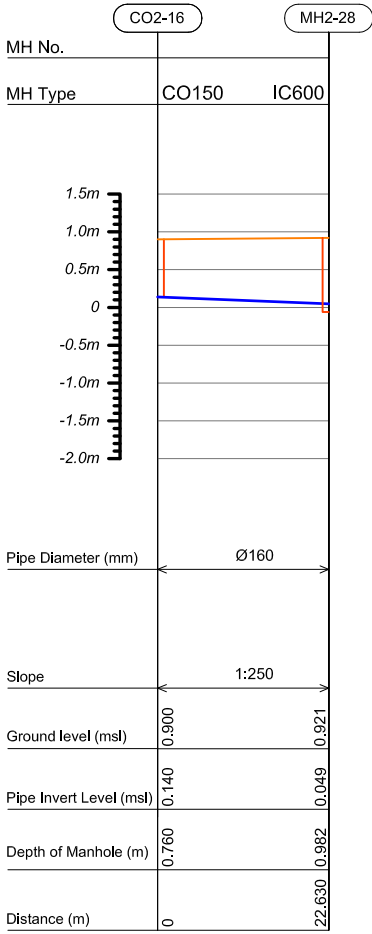
IC600

— HDPE Manhole Ø600

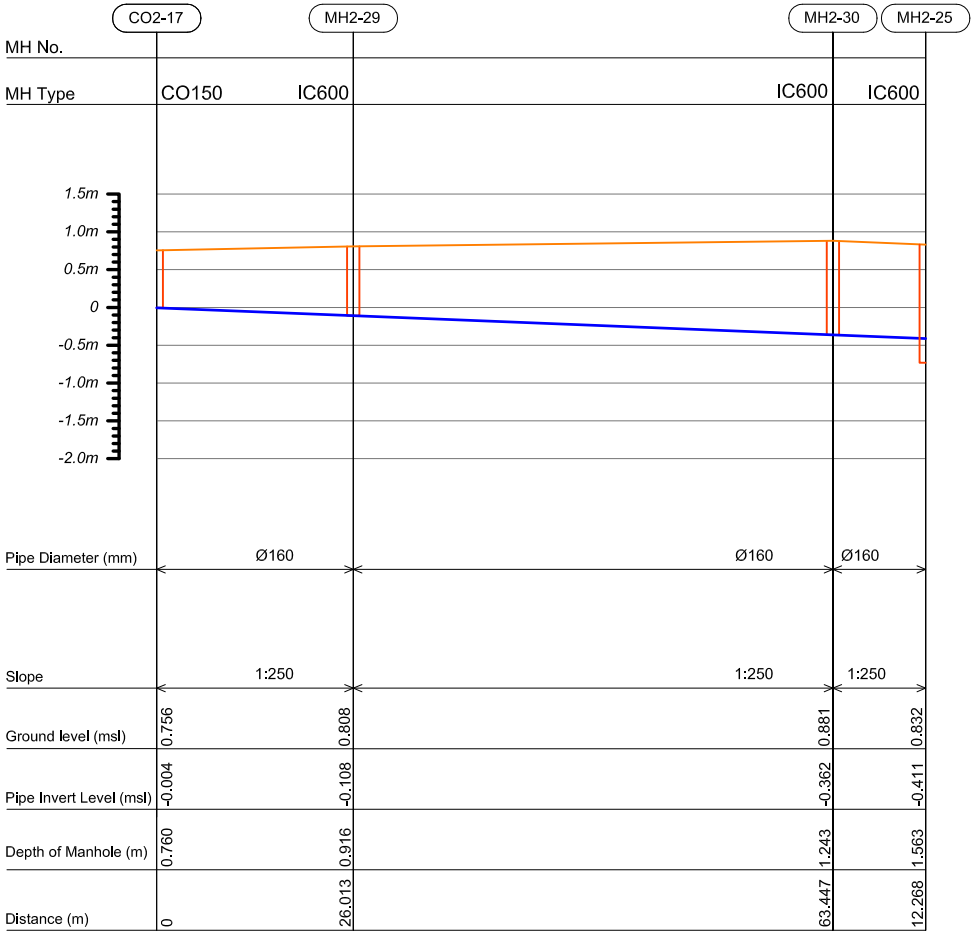
PS

— Pump Station

Profile 16



Profile 17



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Title: Profile 16 & 17

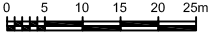
Page: A -32/43

CONSULTANCY SERVICES FOR SURVEY & DESIGN
OF SEWERAGE FACILITIES IN AA. MATHIVERI,
MALDIVES

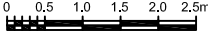
CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY
PROJECT NUMBER: -
DATE: MARCH 2016
ENGINEER: - Mohamed Saif
CHECKED BY: - Ihsan Waheed
DRAWN BY: - Shaufa Ahmed

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HORIZONTAL SCALE

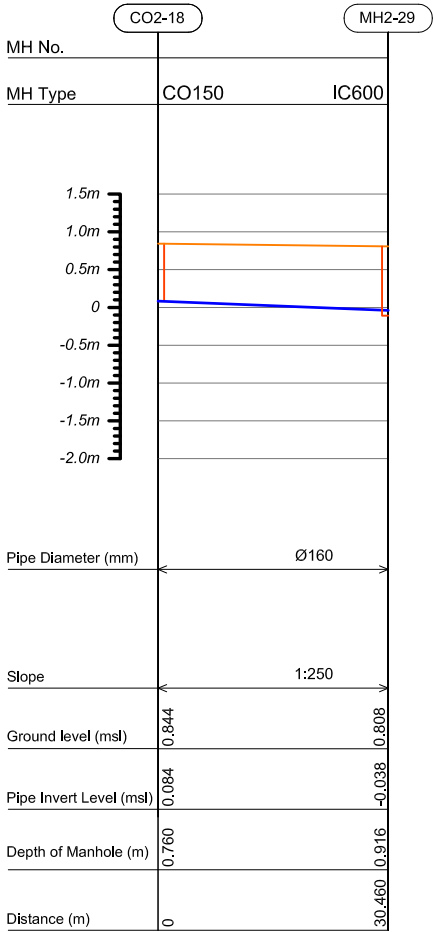


VERTICAL SCALE

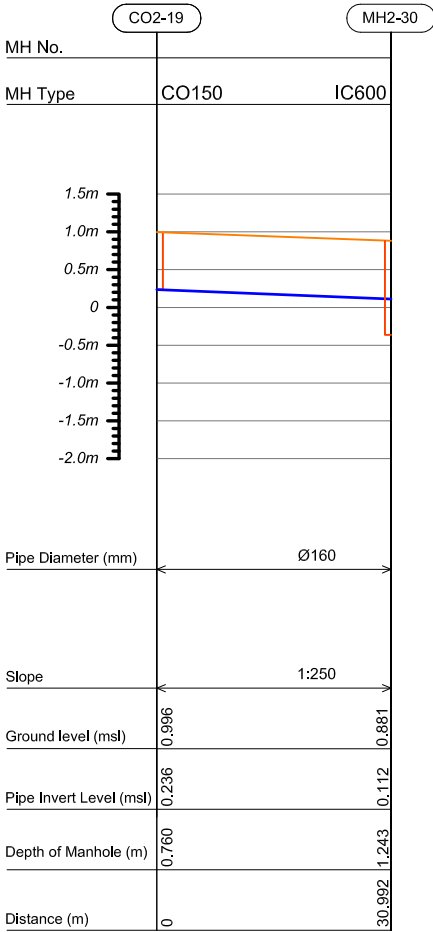


- CO150 — Cleanout Ø150
IC600 — HDPE Manhole Ø600
PS — Pump Station

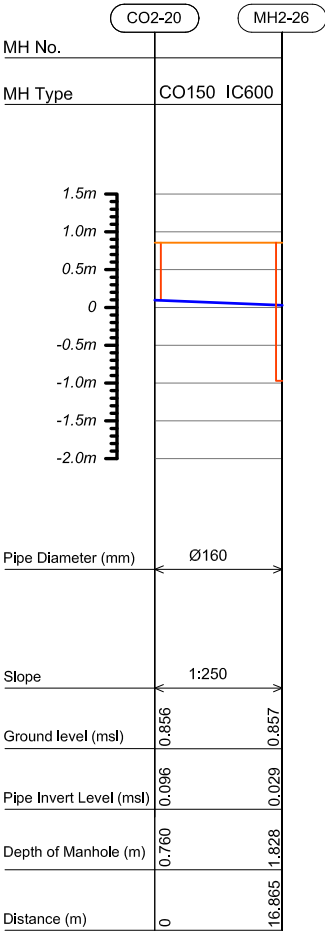
Profile 18



Profile 19



Profile 20



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Title: Profile 18, 19 & 20

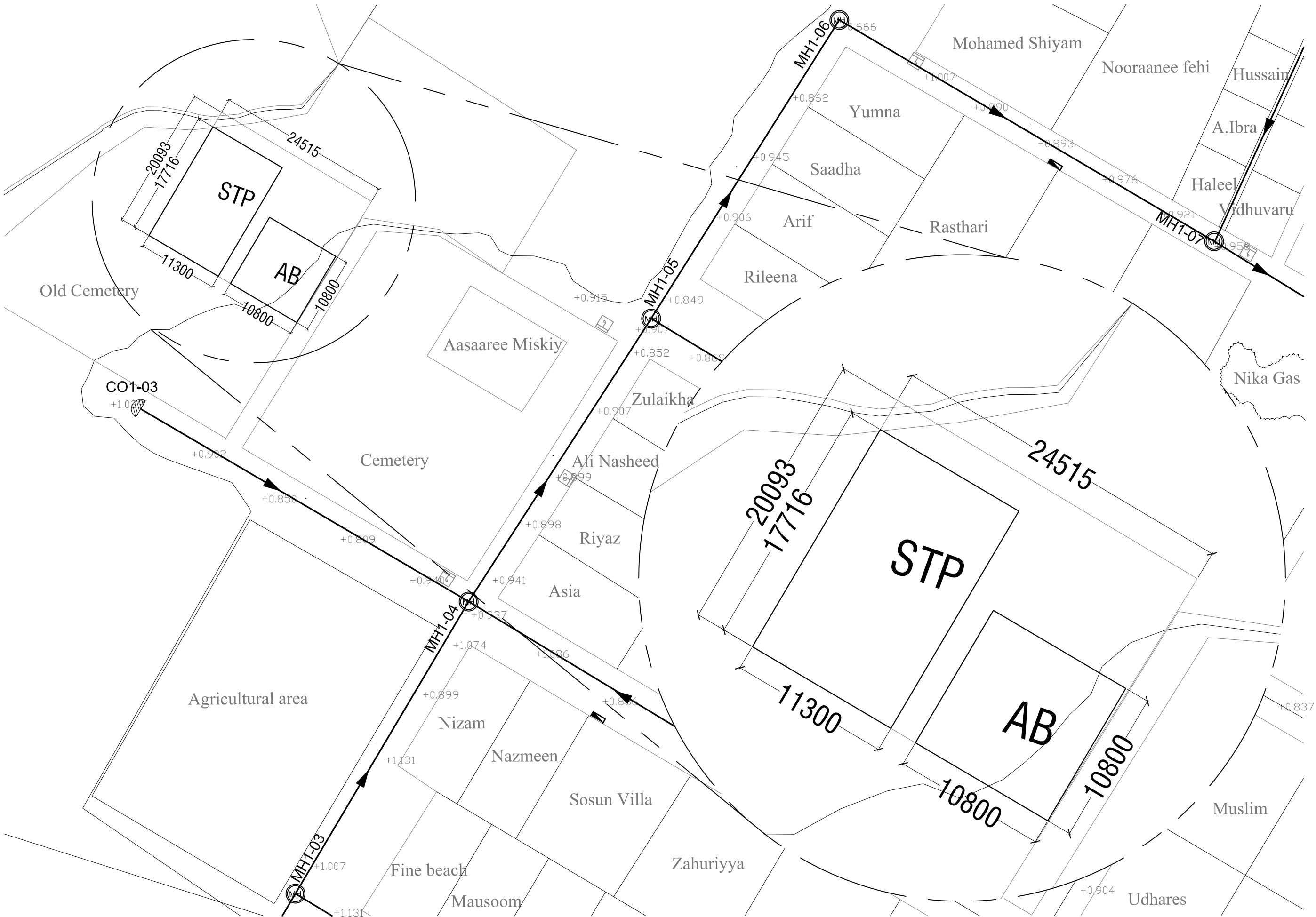
Page: A -33/43

CONSULTANCY SERVICES FOR SURVEY & DESIGN
OF SEWERAGE FACILITIES IN AA. MATHIVERI,
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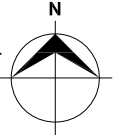
CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY
PROJECT NUMBER :
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AA. MATHIVERI SITE PLAN
SCALE 1:500



CONSULTANCY SERVICES FOR SURVEY & DESIGN
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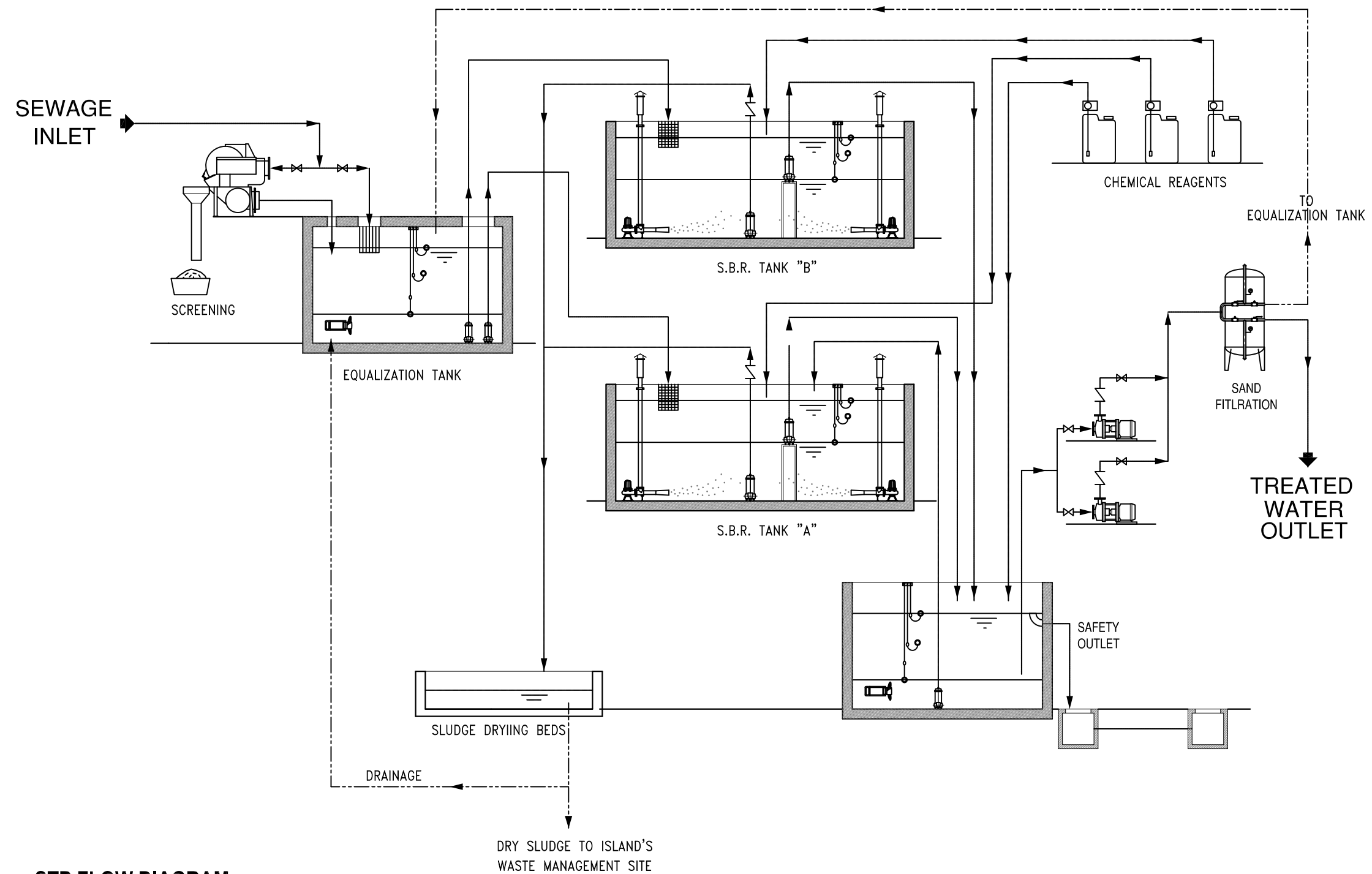
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Title: SITE PLAN

Page: A -34/43

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STP FLOW DIAGRAM

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OF SEWERAGE FACILITIES IN AA. MATHIVERI,
MALDIVES

CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY
PROJECT NUMBER: -
DATE: MARCH 2016
ENGINEER: - Mohamed Saif
CHECKED BY: - Ihsan Waheed
DRAWN BY: - Mohamed Saif

Rev no	Date
1	2016/03/01
2	2016/03/01
3	2016/03/01



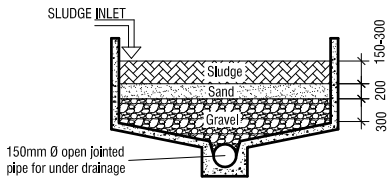
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Title: STP FLOW DIAGRAM

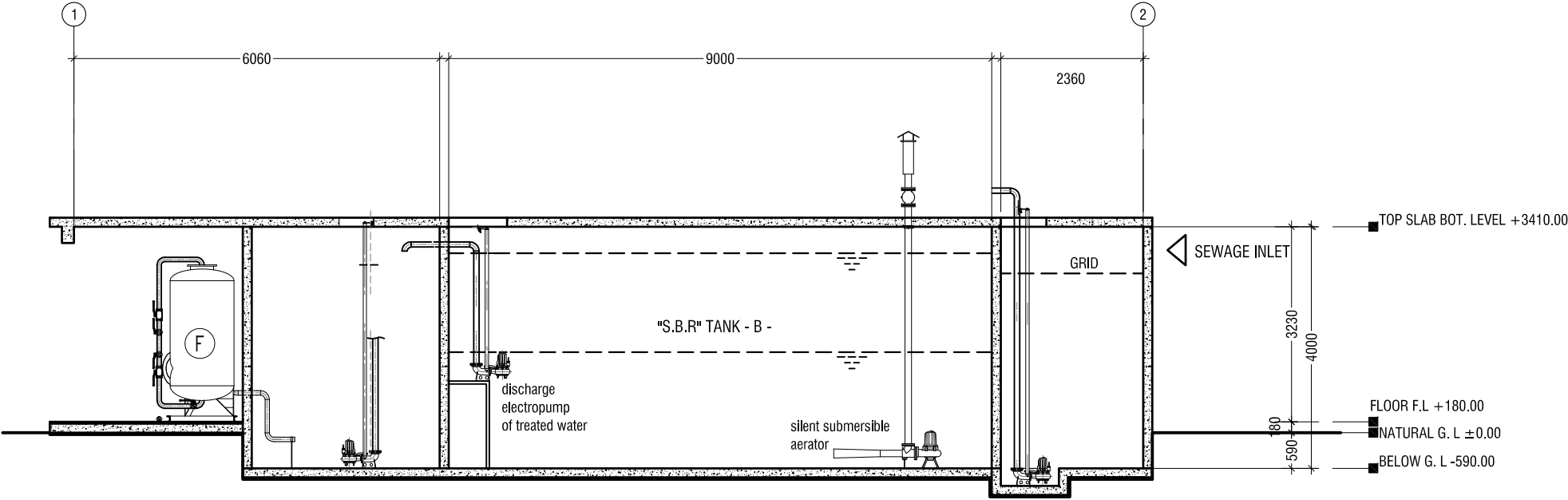
Page: A -35/43

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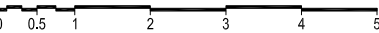
SLUDGE DRYING BED DETAIL

SCALE 1:100



SECTION S1 - S1

SCALE 1:100

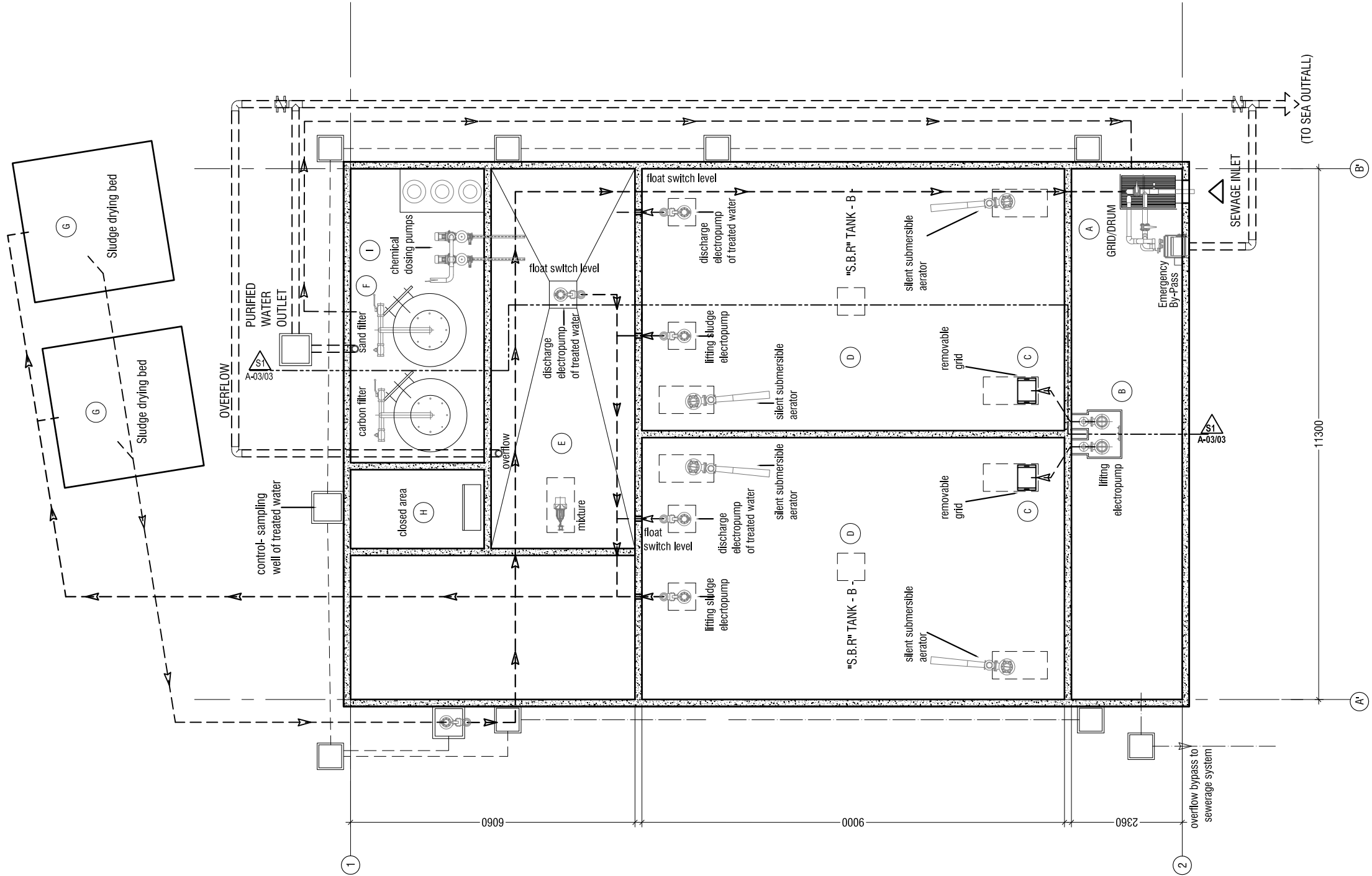


- Note:
- Sewerage Treatment Plant SBR 300m3/day.
 - Pumps, pipework and fittings to be installed in accordance with manufactureres recommendations.
 - 300mm thick C35 RC base. (T16 @ 150 C/C B/W T&B)
 - 300mm thick C35 RC wall. (T16 @ 125 C/C B/W 2LRS)
 - 150mm thick C35 RC top slab. (T12 @ 150 C/C B/W T&B)

CONSULTANCY SERVICES FOR SURVEY & DESIGN
OF SEWERAGE FACILITIES IN AA. MATHIVERI,
MALDIVES

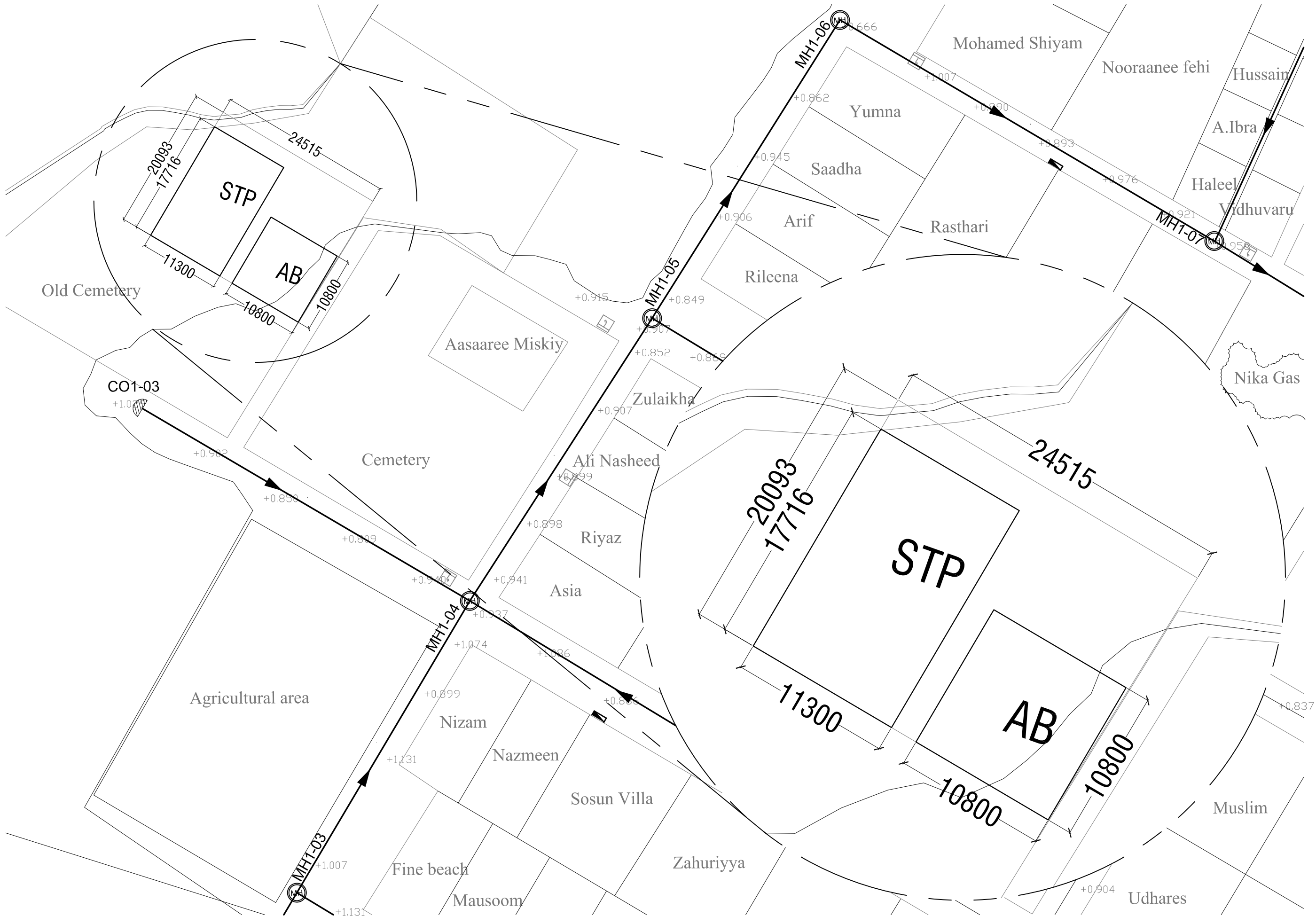
CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY
PROJECT NUMBER: -
DATE: MARCH 2016
ENGINEER: - Mohamed Saif
CHECKED BY: - Ihsan Waheed
DRAWN BY: - Mohamed Saif

Rev no	Date
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-	-
-	-

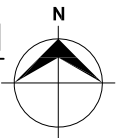


- A GRID/DRUM SCREEN & EMERGENCY BY-PASS
- B STORAGE AND LIFTING
- C REMOVABLE GRID
- D "SBR" REACTOR
- E DISINFECTION TANK
- F SAND AND CARBON FILTER
- G SLUDGE DRYING BED
- H CONTROL BOARD IN TECHNICAL ROOM
- I CHEMICAL PRODUCTS

GROUND FLOOR PLAN
SCALE 1:100



AA. MATHIVERI SITE PLAN
SCALE 1:500



CONSULTANCY SERVICES FOR SURVEY & DESIGN
OF SEWERAGE FACILITIES IN AA. MATHIVERI,
MALDIVES

CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY

PROJECT NUMBER: -

DATE: MARCH 2016

ENGINEER: - Ihsan Waheed

CHECKED BY: - Ihsan Waheed

DRAWN BY: - Ihsan Waheed



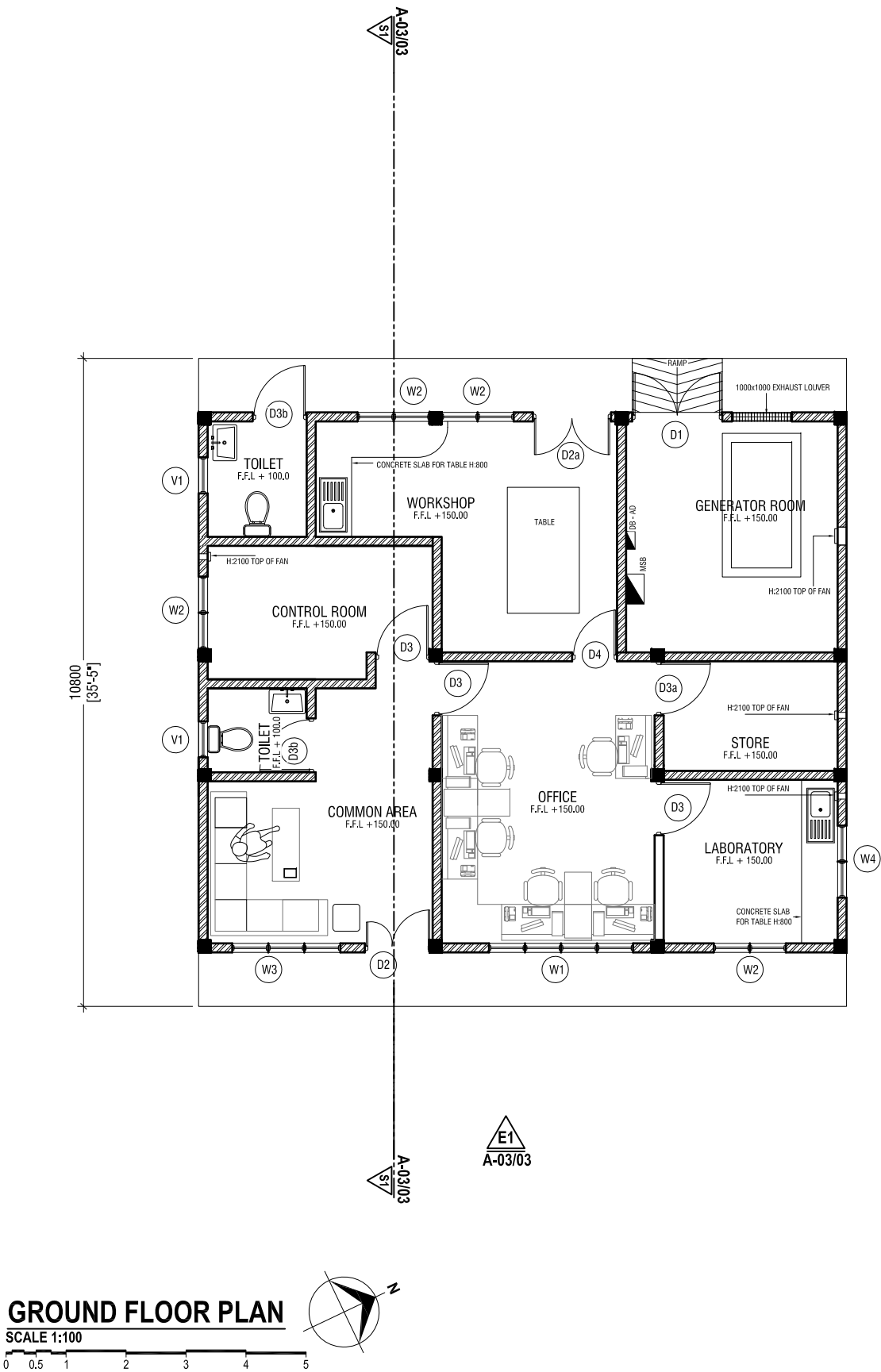
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Title: SITE PLAN

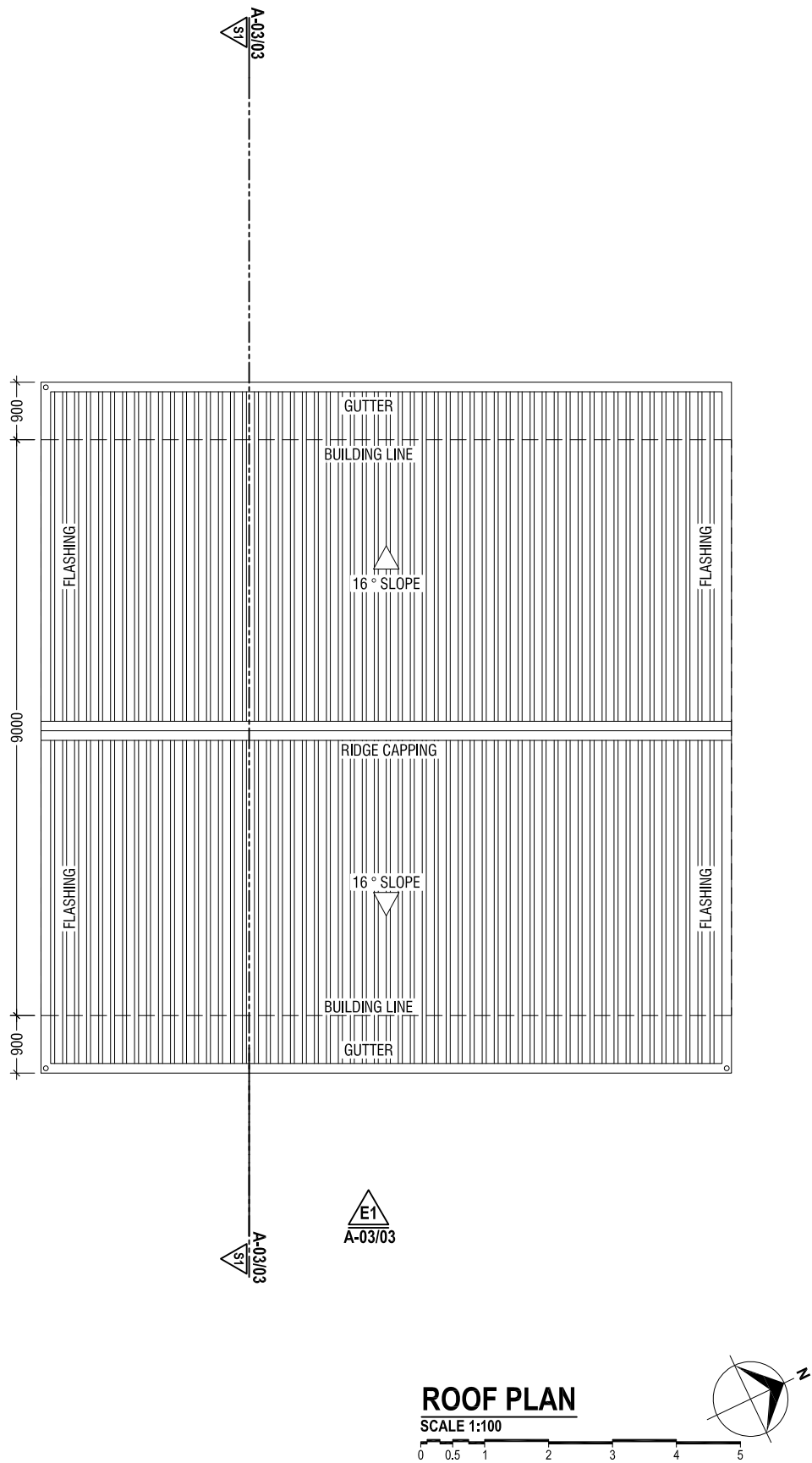
Page: A -38/43

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DOOR WINDOW SCHEDULE

TYPE	SIZE	QTY	DESCRIPTION
D1	1400x2100	01	TWO FLAP SWING DOOR WITH LOUVER
D2	1200x2100	01	TWO FLAP SWING DOOR
D2a	1200x2100	01	ONE FLAP SWING DOOR
D3	900x2100	03	ONE FLAP SWING DOOR
D3a	900x2100	01	ONE FLAP SWING DOOR
D3b	900x2100	02	ONE FLAP SWING DOOR
D4	750x2100	01	ONE FLAP SWING DOOR
W1	2400x1200	01	FOUR FLAP CASEMENT WINDOW
W2	1200x1200	04	TWO FLAP CASEMENT WINDOW
W3	1800x1200	01	THREE FLAP CASEMENT WINDOW
W4	1200x1200	01	FOUR FLAP CASEMENT WINDOW & TWO FX WINDOW
V1	600x400	02	CASEMENT VENTILATOR



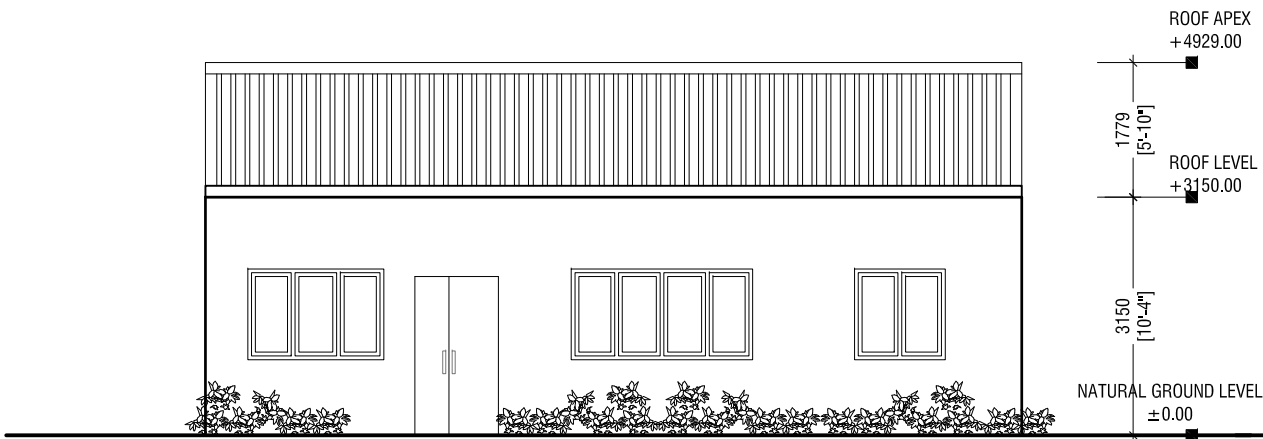
CONSULTANCY SERVICES FOR SURVEY & DESIGN
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CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY
PROJECT NUMBER: -
DATE: MARCH 2016
ENGINEER: - Ihsan Waheed
CHECKED BY: - Ihsan Waheed
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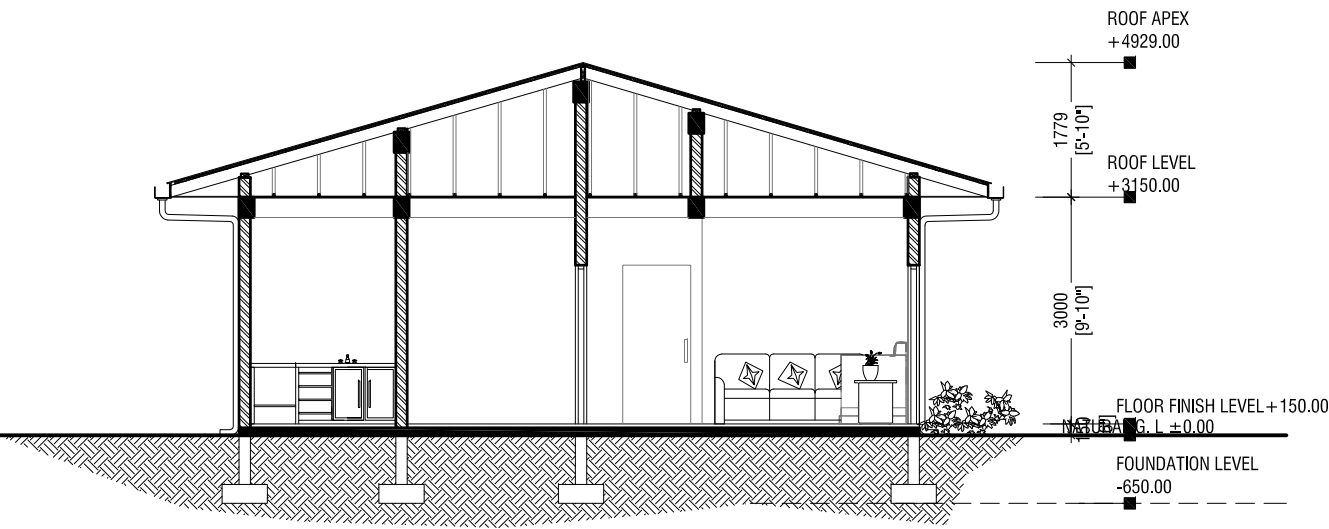
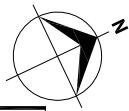
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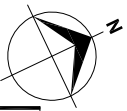
Title: Ground Floor Plan &
Roof Plan
Page: A -39/43



ELEVATION E1
SCALE 1:100



SECTION S1 - S1
SCALE 1:100



CONSULTANCY SERVICES FOR SURVEY & DESIGN
OF SEWERAGE FACILITIES IN AA. MATHVERI,
MALDIVES

CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY
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DATE: MARCH 2016
ENGINEER: - Ihsan Waheed
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DRAWN BY: - Irosha Shareef

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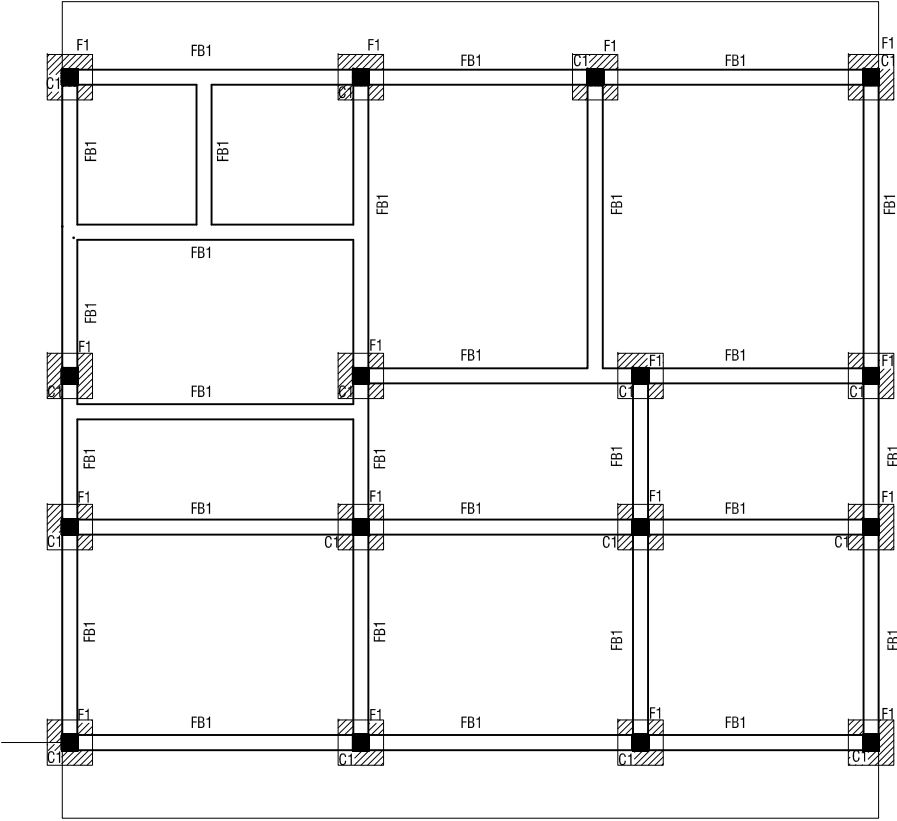
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Title: Elevation E1 & Section
S1
Page: A -40/43

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FOUNDATION PLAN

SCALE 1:100



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Title: Foundation Plan

Page: A -41/43

CONSULTANCY SERVICES FOR SURVEY & DESIGN
OF SEWERAGE FACILITIES IN AA. MATHIVERI,
MALDIVES

CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY

PROJECT NUMBER: -

DATE: MARCH 2016

ENGINEER: - Ihsan Waheed

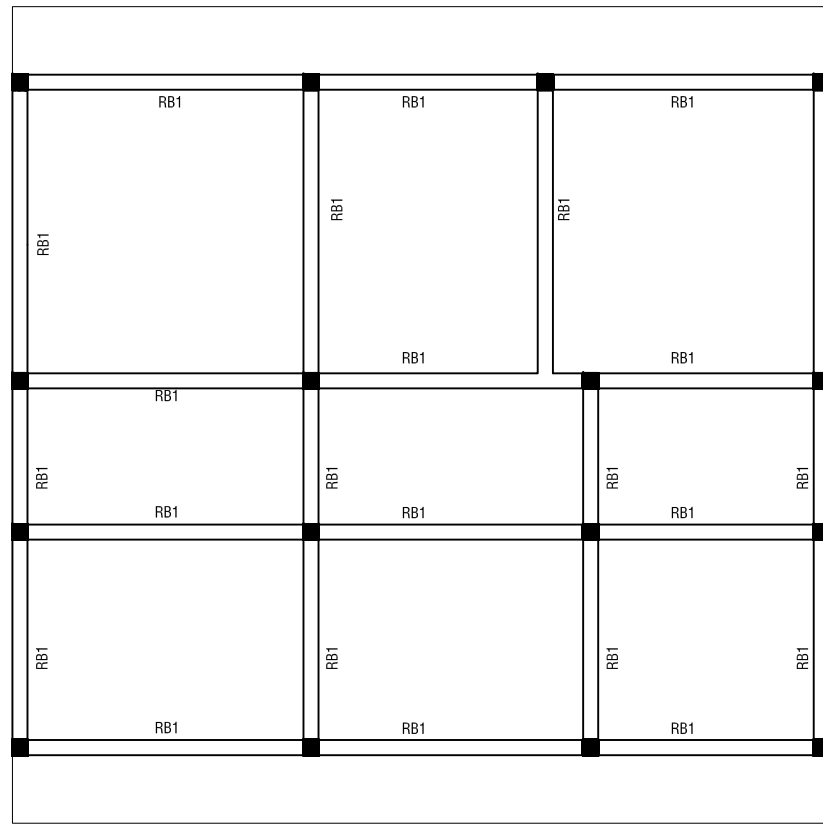
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DRAWN BY: - Idrissa Shareef

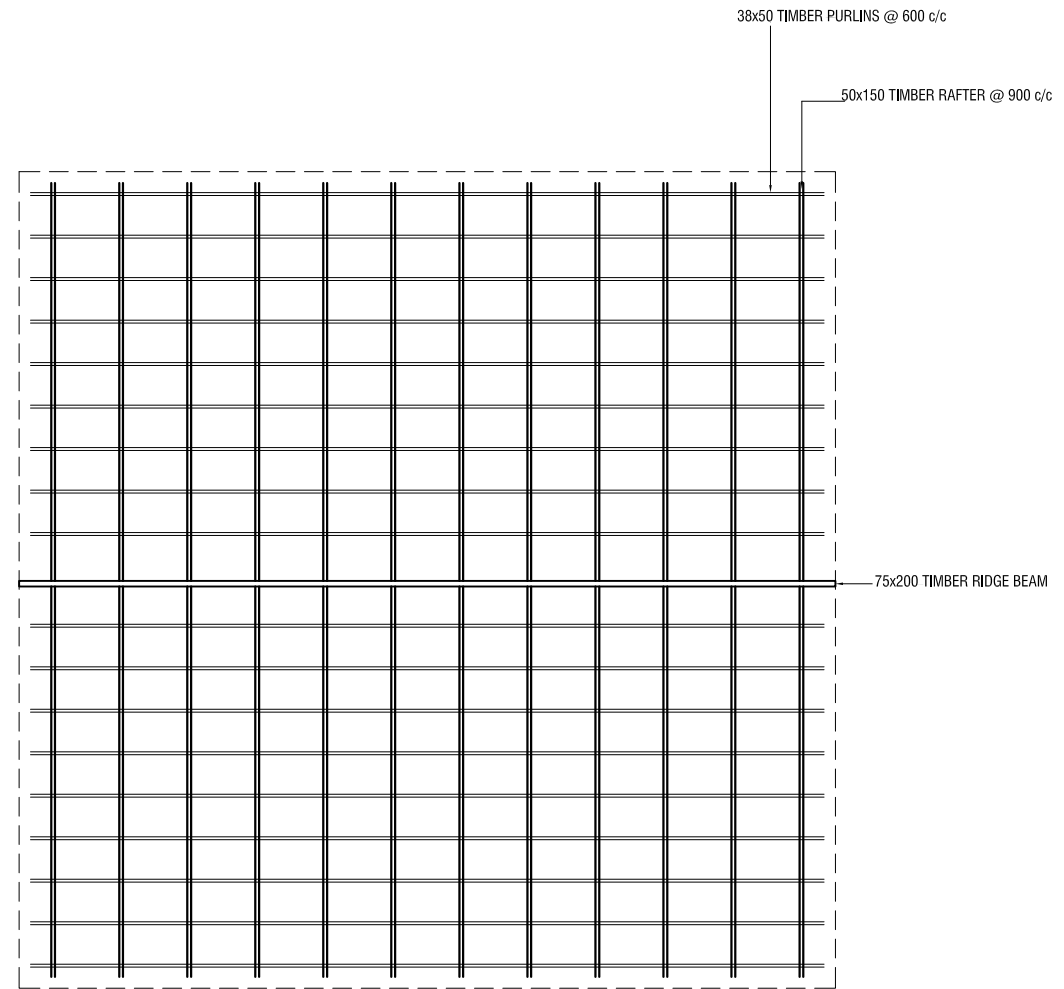
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SCALE 1:100



SCALE 1:100



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floor, H. Azum, Ameenemagu, Male*

Title: Roof beam and framing plan

Page: A -42/43

CONSULTANCY SERVICES FOR SURVEY & DESIGN
OF SEWERAGE FACILITIES IN AA. MATHIVERI,
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PROJECT NUMBER: -

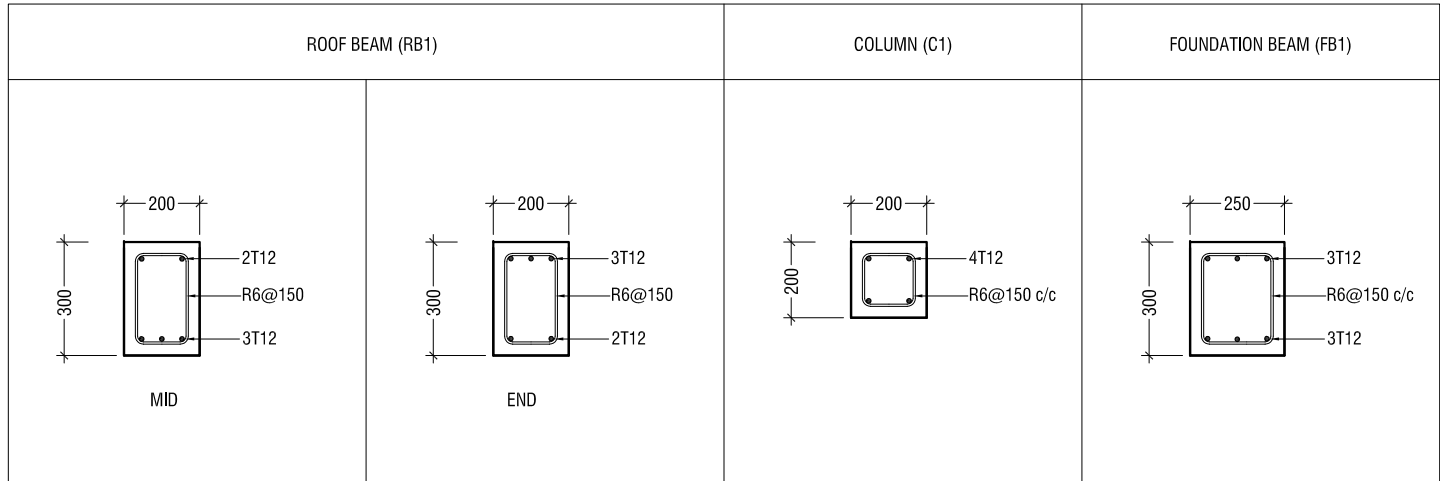
DATE: MARCH 2016
ENGINEER : - Jhsan Waheed

CHECKED BY : - Ihsan Waheed
DRAWING BY : Ihsan Waheed

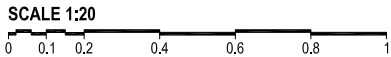
DRAWN BY :- IRASMA SHARDEEL

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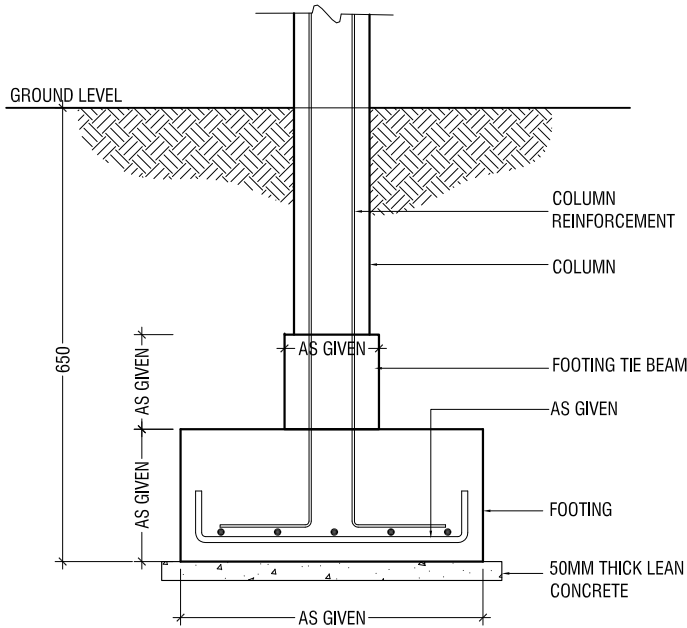
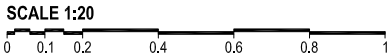
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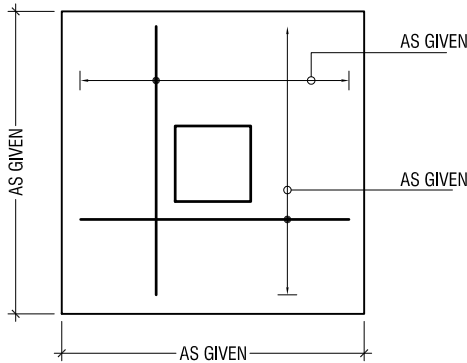
STRUCTURAL DETAILS



FOUNDATION DETAILS



TYPICAL FOUNDATION DETAIL



PLAN

FOOTING FADS

	FOOTING SIZE	REINFORCEMENT
F1	600 X 600 X 250	T10@150c/c BW (B)

FOUNDATION DEPTH - 650MM BELOW N.G.L

CONSULTANCY SERVICES FOR SURVEY & DESIGN
OF SEWERAGE FACILITIES IN AA. MATHIVERI,
MALDIVES

CLIENT: MINISTRY OF ENVIRONMENT AND ENERGY
PROJECT NUMBER: -
DATE: MARCH 2016
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Title: Structural Plan

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