

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

PACKAGE 6

WATER SUPPLY SYSTEM OF GA. DHEHVADHOO, MALDIVES

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



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GA.DHEHVADHOO WATER SUPPLY NETWORK LAYOUT

1:3000



Legend

- | | | | |
|---|--|---|--|
|  | Ø63 HDPE Water Main Distribution Pipe |  | Ø75 HDPE Water Main Distribution Pipe |
|  | Ø90 HDPE Water Main Distribution Pipe |  | Ø110 HDPE Water Main Distribution Pipe |
|  | Ø160 HDPE Water Main Distribution Pipe |  | Ø110 HDPE Brine Outfall Pipe |
|  | Gate Valves |  | Washout Valves |
|  | Junction | | |

Notes:

1. All levels are shown in meters.
2. All levels are shown from mean sea level.
3. This drawing to be read in conjunction with all other relevant drawing and specifications.
4. All pressure pipes and fittings shall be installed using electro-fusion and butt-fusion technologies.
5. All pressure pipes shall be laid in between 0.7m – 1.0m below natural ground level to achieve best fit alignment based on topographic survey.
6. All the service connections to the mains shall be made using electro-fusion saddle and coupler.
7. Minimum size of the main water supply network shall be OD 63mm PE100, PN10, SDR17 HDPE pipe.
8. Minimum size of the house service line shall be OD 25mm PE100, PN16, SDR11 HDPE pipe.
9. Minimum size of commercial and other institutional connection service line shall be 50mm, PN10, PN16, SDR11 HDPE pipe.



MAINS DISTRIBUTION

DIAMETER (mm)	LENGTH HDPE (m)	TYPE OF PIPE
63	3352	HDPE (PE100, PN10, SDR17)
75	1715	
110	902	
160	223	
Total	6192	
Gate Valves	- 19 nos	
Washout Valves	- 02 nos	

OUTFALL

DIAMETER (mm)	LENGTH HDPE (m)	TYPE OF PIPE
110	-266m (on land) -117m (offshore)	HDPE (PE100, PN10, SDR11)

PSM BENCHMARKS

- | | |
|---|--|
|  | PERMANENT SURVEY MARK P6_PBM_1
304273.609E, 61571.04N
1.510m From MSL |
|  | PERMANENT SURVEY MARK P6_PBM_2
304232.834E, 61556.021N
1.593m From MSL |

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:

Water Supply System in Ga. Dhehvdhoo

Client:

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



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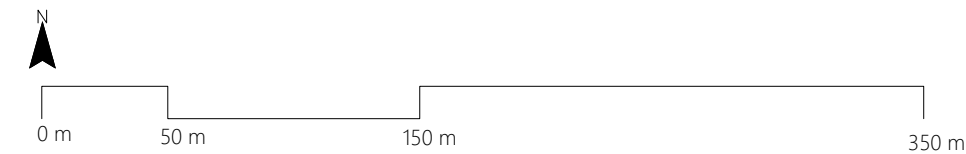
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Project No: EP-WS/2019/06

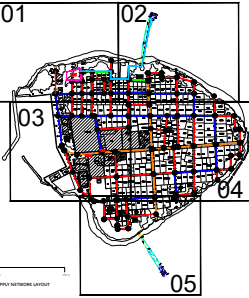
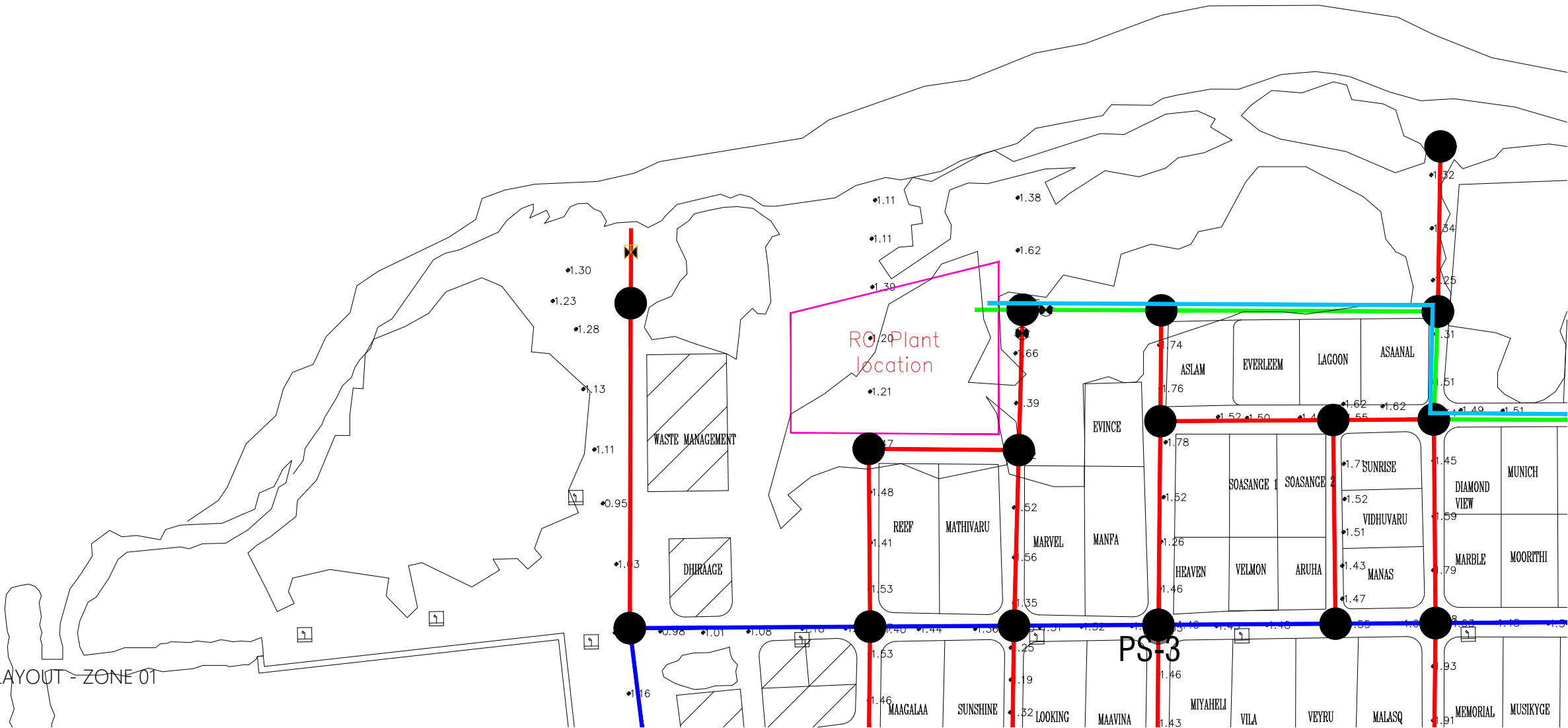
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1:3000

Title: Consultancy Services for Survey, Design and EIA works of Water Supply and Sewerage Facilities in 5 islands, Maldives - Package 6	
Sub Title: Water Supply System in Ga. Dhehvadhoo	
Client: Ministry of National Planning, Housing and Infrastructure, Republic of Maldives	
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Rev: R-01	Page: 02

WATER NETWORK LAYOUT - ZONE 01
1:1000



Legend

- Ø63 HDPE Water Main Distribution Pipe
- Ø90 HDPE Water Main Distribution Pipe
- Ø160 HDPE Water Main Distribution Pipe
- Ø75 HDPE Water Main Distribution Pipe
- Ø110 HDPE Water Main Distribution Pipe
- Ø110 HDPE Brine Outfall Pipe
- Gate Valves
- Junction
- Washout Valves

- Notes:
- All levels are shown in meters.
 - All levels are shown from mean sea level.
 - This drawing to be read in conjunction with all other relevant drawing and specifications.
 - All pressure pipes and fittings shall be installed using electro-fusion and butt-fusion technologies.
 - All pressure pipes shall be laid in between 0.7m - 1.0m below natural ground level to achieve best flat alignment based on topographic survey.
 - All the service connections to the mains shall be made using electro-fusion saddle and coupler.
 - Minimum size of the main water supply network shall be OD 63mm PE100, PN10, SDR17 HDPE pipe.
 - Minimum size of the house service line shall be OD 25mm PE100, PN16, SDR11 HDPE pipe.
 - Minimum size of commercial and other institutional connection service line shall be 50mm, PE100, PN16, SDR11 HDPE pipe.

MAINS DISTRIBUTION	
DIAMETER (mm)	LENGTH HDPE (m)
63	3352
75	1715
110	902
160	223
Total	6192
Gate Valves	- 19 nos
Washout Valves	- 02 nos

OUTFALL	
DIAMETER (mm)	LENGTH HDPE (m)
110	- 266m (on land) - 117m (offshore)
	HDPE (PE100, PN10, SDR11)

PSM BENCHMARKS	
PERMANENT SURVEY MARK P6_PBM_1 304273.609E, 61571.04N 1.510m From MSL	
PERMANENT SURVEY MARK P6_PBM_2 304232.834E, 61556.021N 1.593m From MSL	

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Water Supply System in Ga. Dheevadhoo

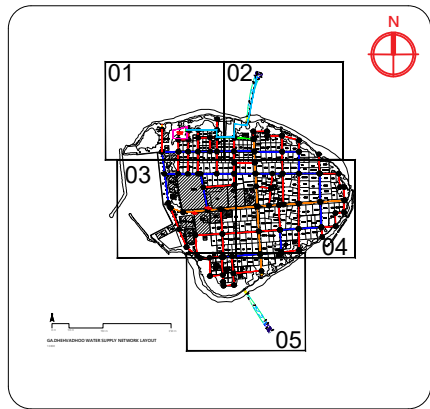
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Rev: R-01	Page: 03



Legend

- | | | | |
|---|--|---|--|
|  | Ø63 HDPE Water Main Distribution Pipe |  | Ø75 HDPE Water Main Distribution Pipe |
|  | Ø90 HDPE Water Main Distribution Pipe |  | Ø110 HDPE Water Main Distribution Pipe |
| | Ø160 HDPE Water Main Distribution Pipe | | Ø110 HDPE Brine Outfall Pipe |
|  | Gate Valves |  | Washout Valves |
|  | Junction | | |



Notes:

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7. Minimum size of the main water supply network shall be OD 63mm PE100, PN10, SDR17 HDPE pipe.
8. Minimum size of the house service line shall be OD 25mm PE100, PN6, SDR11 HDPE pipe.
9. Minimum size of commercial and other institutional connection service line shall be 50mm, PE100, PN6, SDR11 HDPE pipe.

MAINS DISTRIBUTION		
DIAMETER (mm)	LENGTH HDPE (m)	TYPE OF PIPE
63	3352	HDPE (PE100, PN10, SDR17)
75	1715	
110	902	
160	223	
Total	6192	

Gate Valves	- 19 nos
Washout Valves	- 02 nos
OUTFALL	

DIAMETER (mm)
110

- | PSM BENCHMARKS | |
|---|--|
|  | PERMANENT SURVEY MARK P6_PBM_1
304273.609E, 61571.04N
1.510m From MSL |
|  | PERMANENT SURVEY MARK P6_PBM_2
304232.834E, 61556.021N
1.593m From MSL |

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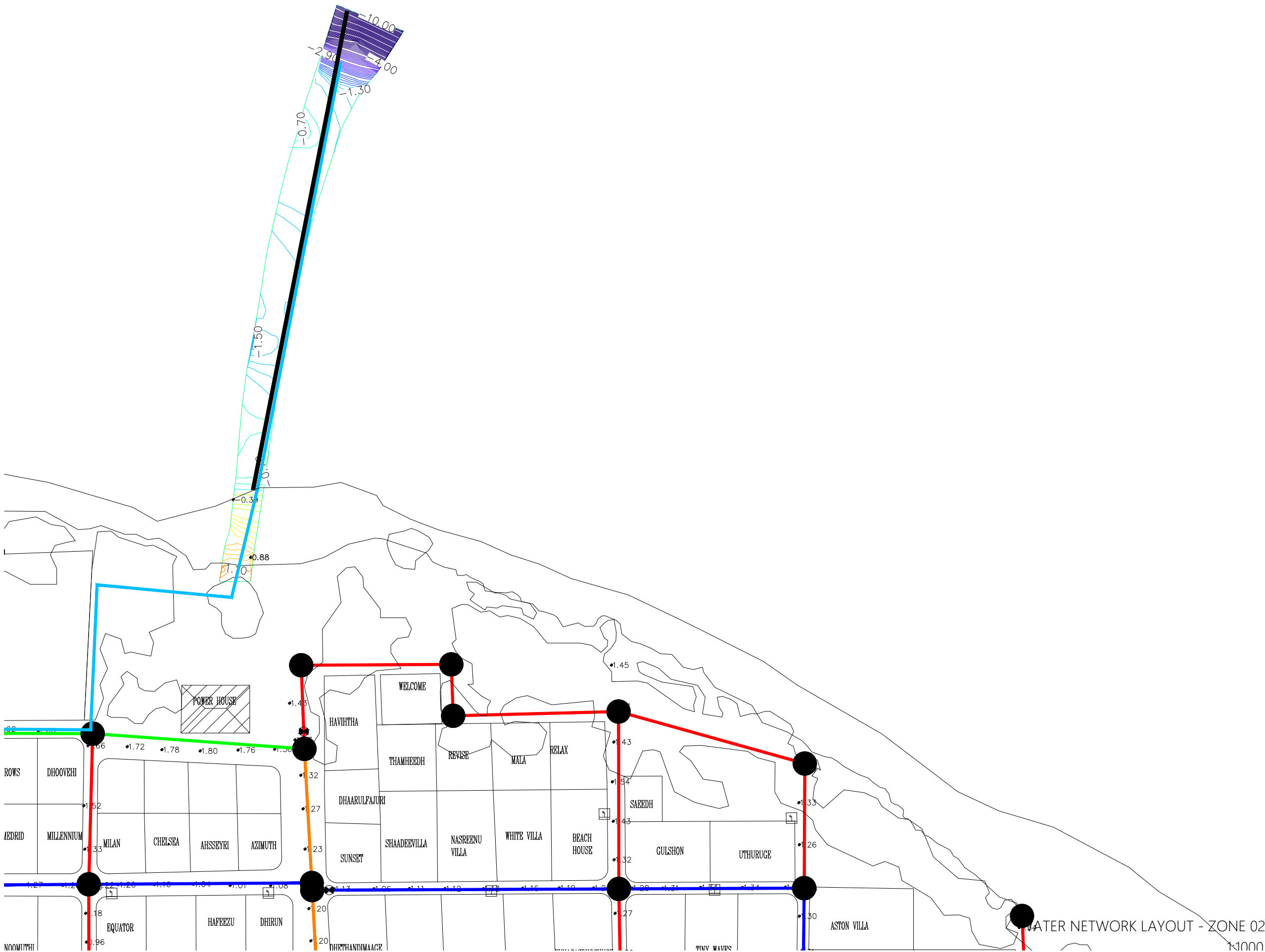
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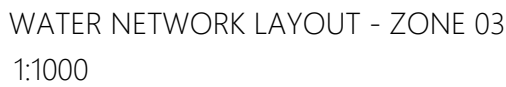
Water Supply System in Ga. Dhehvhadhoo

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



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Rev: R-01	Page: 04







- | MAINS DISTRIBUTION | | |
|-------------------------|-----------------|---------------------------|
| DIAMETER (mm) | LENGTH HDPE (m) | TYPE OF PIPE |
| 63 | 3352 | HDPE (PE100, PN10, SDR17) |
| 75 | 1715 | |
| 110 | 902 | |
| 160 | 223 | |
| Total | 6192 | |
| Gate Valves - 19 nos | | |
| Washout Valves - 02 nos | | |

OUTFALL		
DIAMETER (mm)	LENGTH HDPE (m)	TYPE OF PIPE
110	-266m (on land) -117m (offshore)	HDPE (PE100, PN10, SDR11)

PSM BENCHMARKS

- | | |
|---|---|
|  | PERMANENT SURVEY MARK P6_PBM_1
304273.609E, 61571.04N
1510m From MSL |
|  | PERMANENT SURVEY MARK P6_PBM_2
304232.834E, 61556.021N
1593m From MSL |

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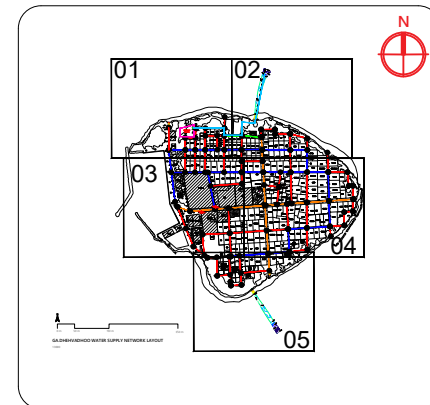


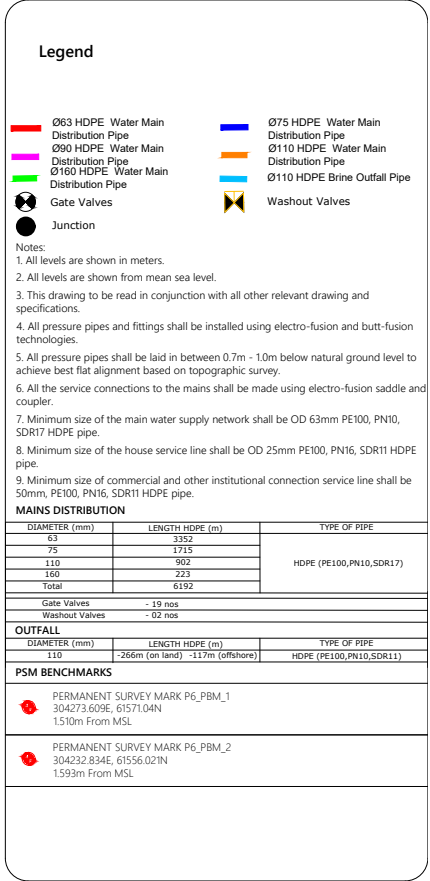
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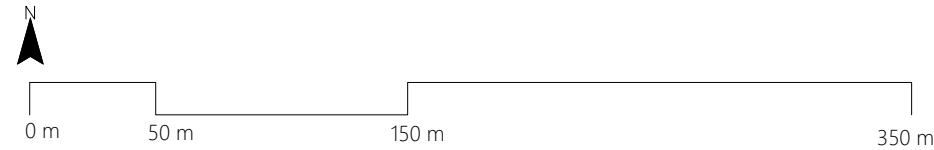
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R-01	05





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Project No: EP-WS/2019/06	
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GA.DHEHVADHOO RAINWATER COLLECTION
NETWORK LAYOUT

1:3000



Legend

- Ø160 HDPE Rainwater Flow Pipe
- Ø250 HDPE Rainwater Flow Pipe
- Ø325 HDPE Rainwater Flow Pipe
- Ø315 HDPE Rainwater Flow Pipe
- Junction

- Notes:
- All levels are shown in meters.
 - All levels are shown from mean sea level.
 - This drawing to be read in conjunction with all other relevant drawing and specifications.
 - All gravity pipes should be HDPE PE100, PN6, SDR26 pipes.
 - All gravity pipes are to be laid as per invert levels indicated. Any change based on site condition should be made based on approval from engineer.

RAINWATER FLOW PIPES

DIAMETER (mm)	LENGTH HDPE (m)	TYPE OF PIPE
160	245	HDPE (PE100, PN6, SDR26)
225	65	
250	119	
315	237	
Total	666	

PSM BENCHMARKS

- PERMANENT SURVEY MARK P6_PBM_1
304273.609E, 615710.04N
1510m From MSL
- PERMANENT SURVEY MARK P6_PBM_2
304232.834E, 61556.021N
1593m From MSL

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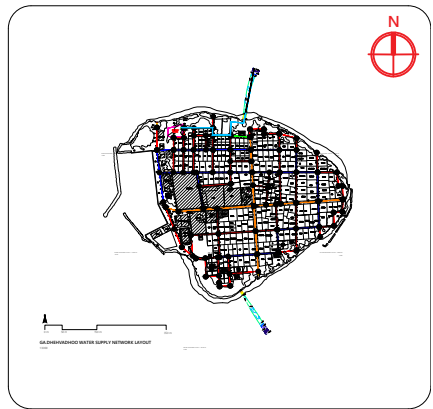
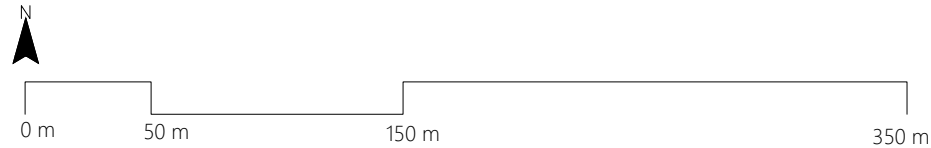


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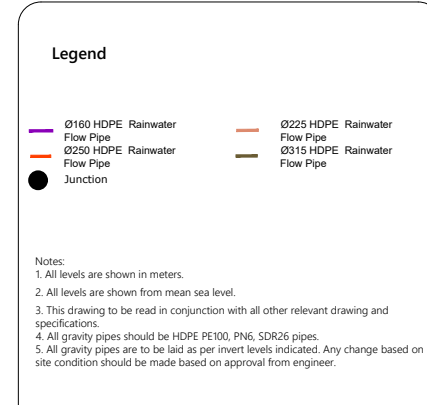




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Project No: EP-WS/2019/06	

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RAINWATER NETWORK LAYOUT - ZONE 01





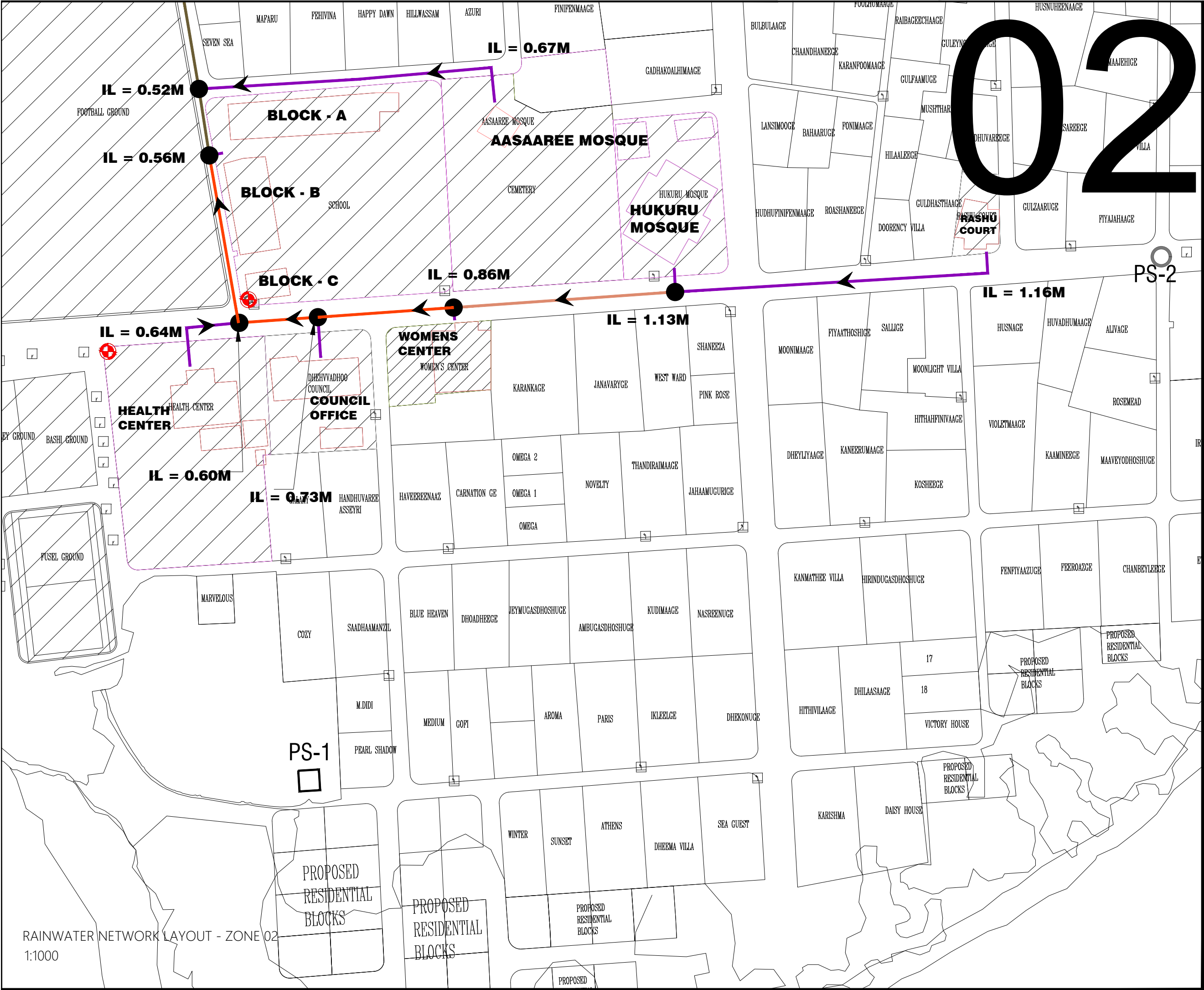
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Date: Aug 2020	SCALE (A3): 1:1000
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Legend

- Ø160 HDPE Rainwater Flow Pipe
- Ø250 HDPE Rainwater Flow Pipe
- Ø315 HDPE Rainwater Flow Pipe
- Ø225 HDPE Rainwater Flow Pipe
- Ø315 HDPE Rainwater Flow Pipe
- Junction

Notes:

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- All gravity pipes should be HDPE PE100, PN6, SDR26 pipes.
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DIAMETER (mm)	LENGTH HDPE (m)	TYPE OF PIPE
160	245	HDPE (PE100, PN6, SDR26)
225	65	
250	119	
315	237	
Total	666	

PSM BENCHMARKS

- PERMANENT SURVEY MARK P6_PBM_1
304273.609E, 61571.04N
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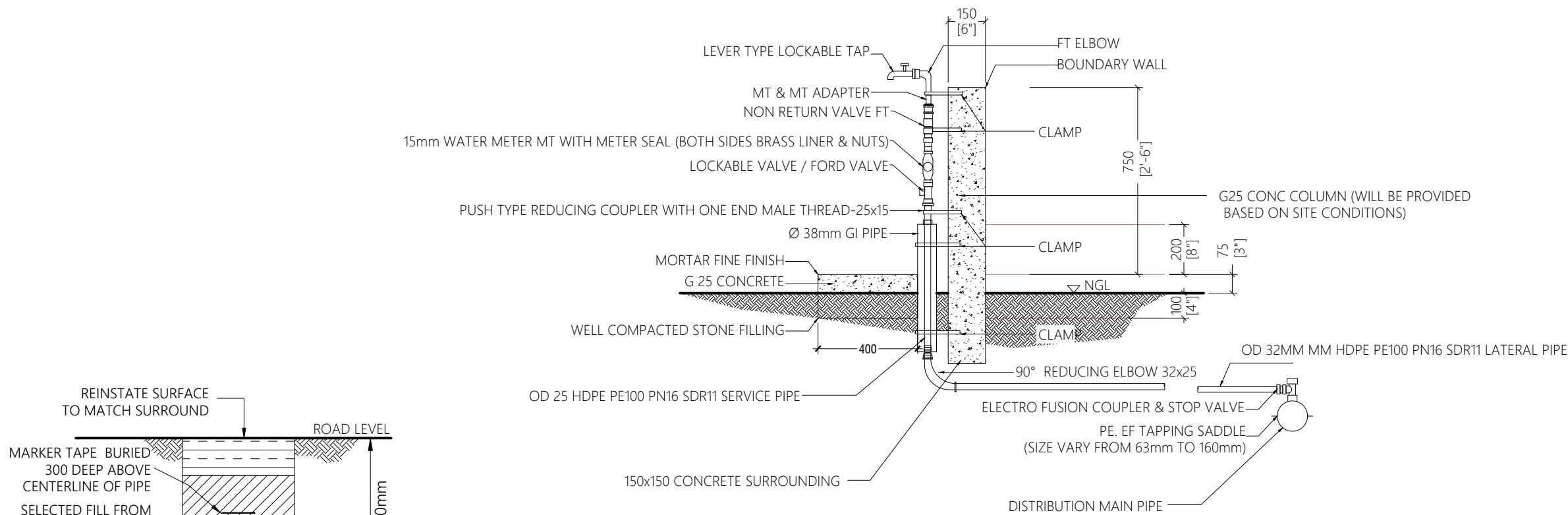
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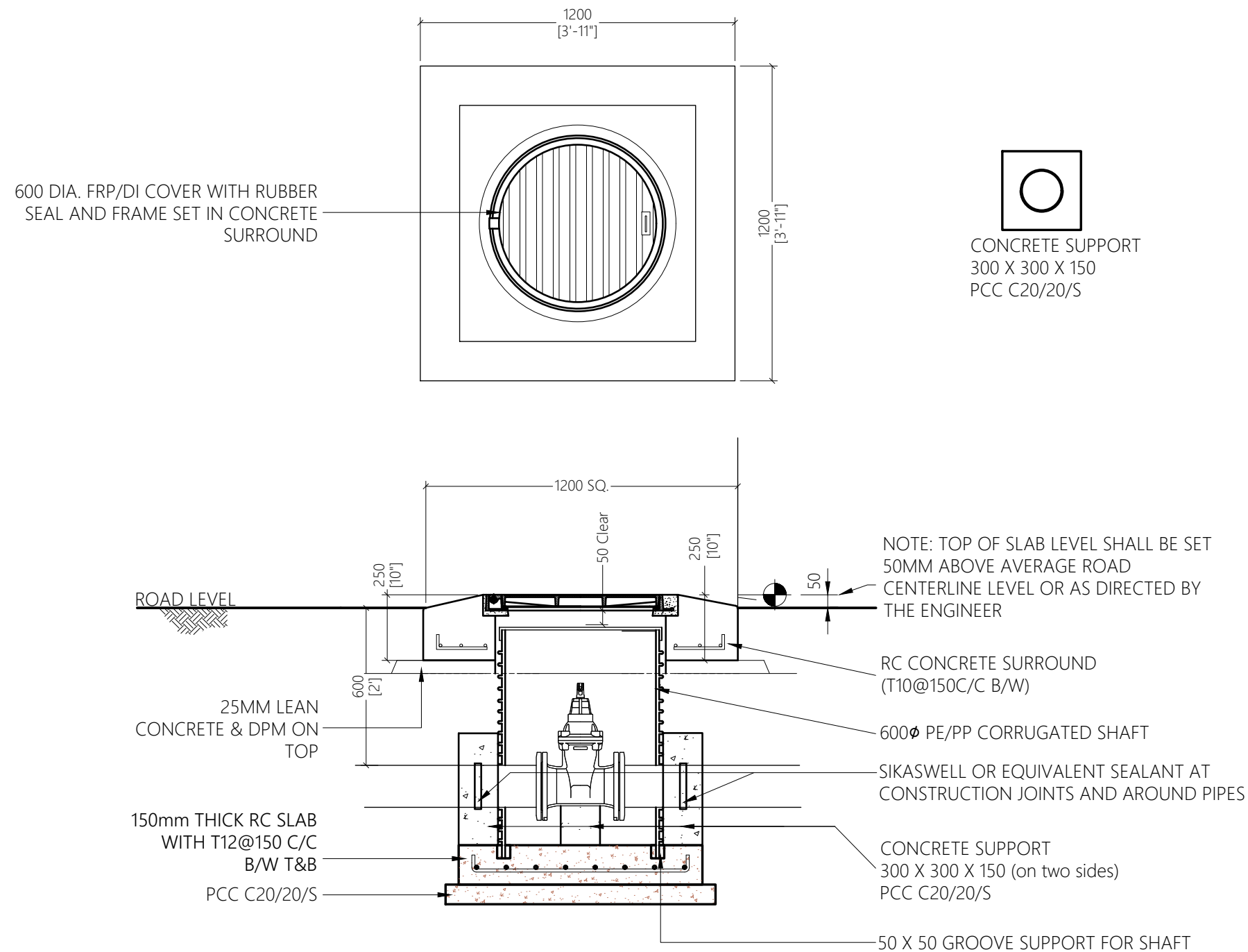
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SECTION - VALVE CHAMBER

VALVE CHAMBER DETAILS

1:20



Legend

Notes:

- All structural concrete shall be of grade C25.
- 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.

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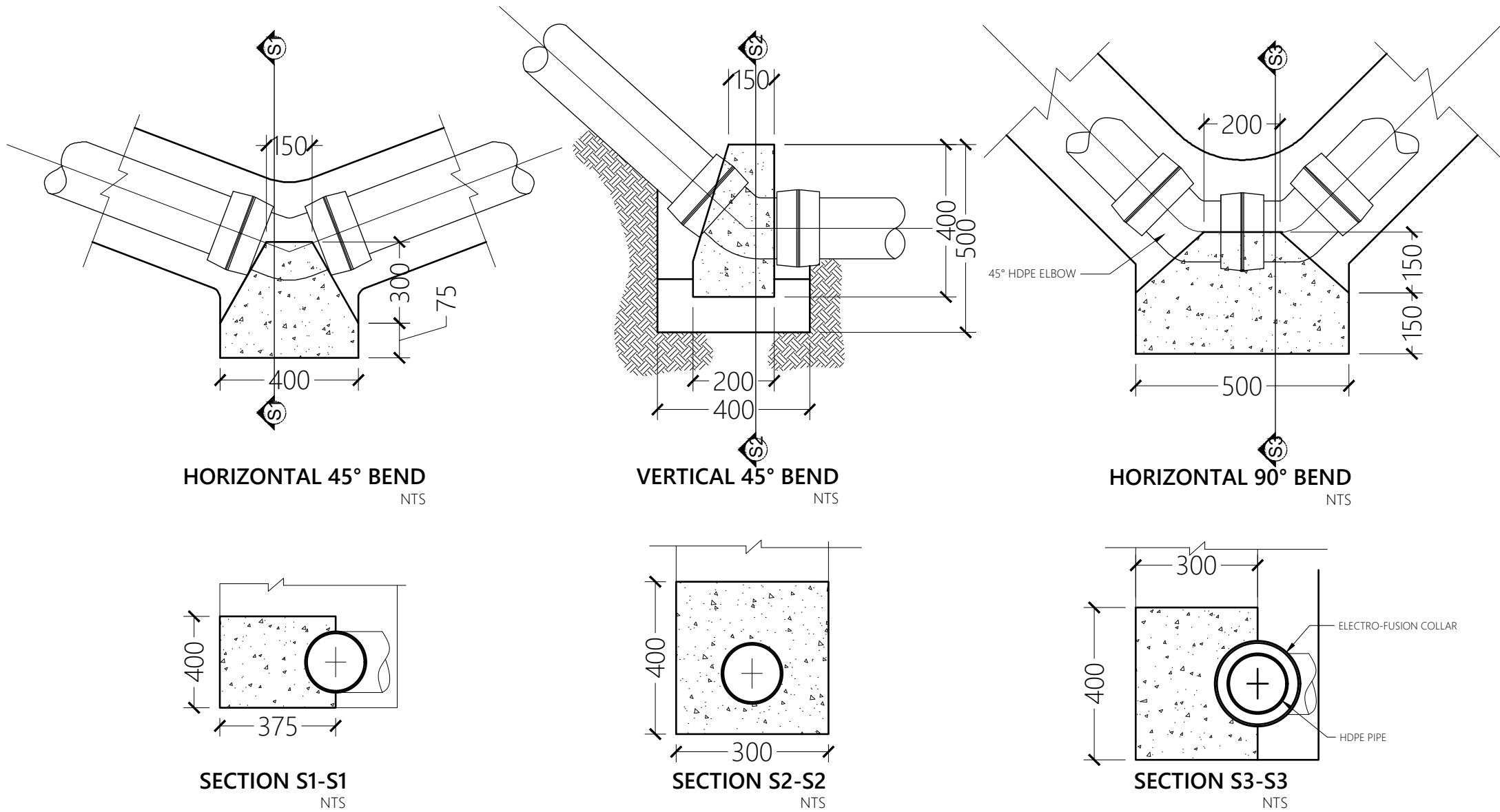
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Project No: EP-WS/2019/06

Rev: R-01 Page: W-02



THRUST BLOCK DETAILS

NTS



Legend

Notes:
-All structural concrete shall be of grade C25.
-All castings shall be done using sulphate resistant portland cement to BS 4027:1996.

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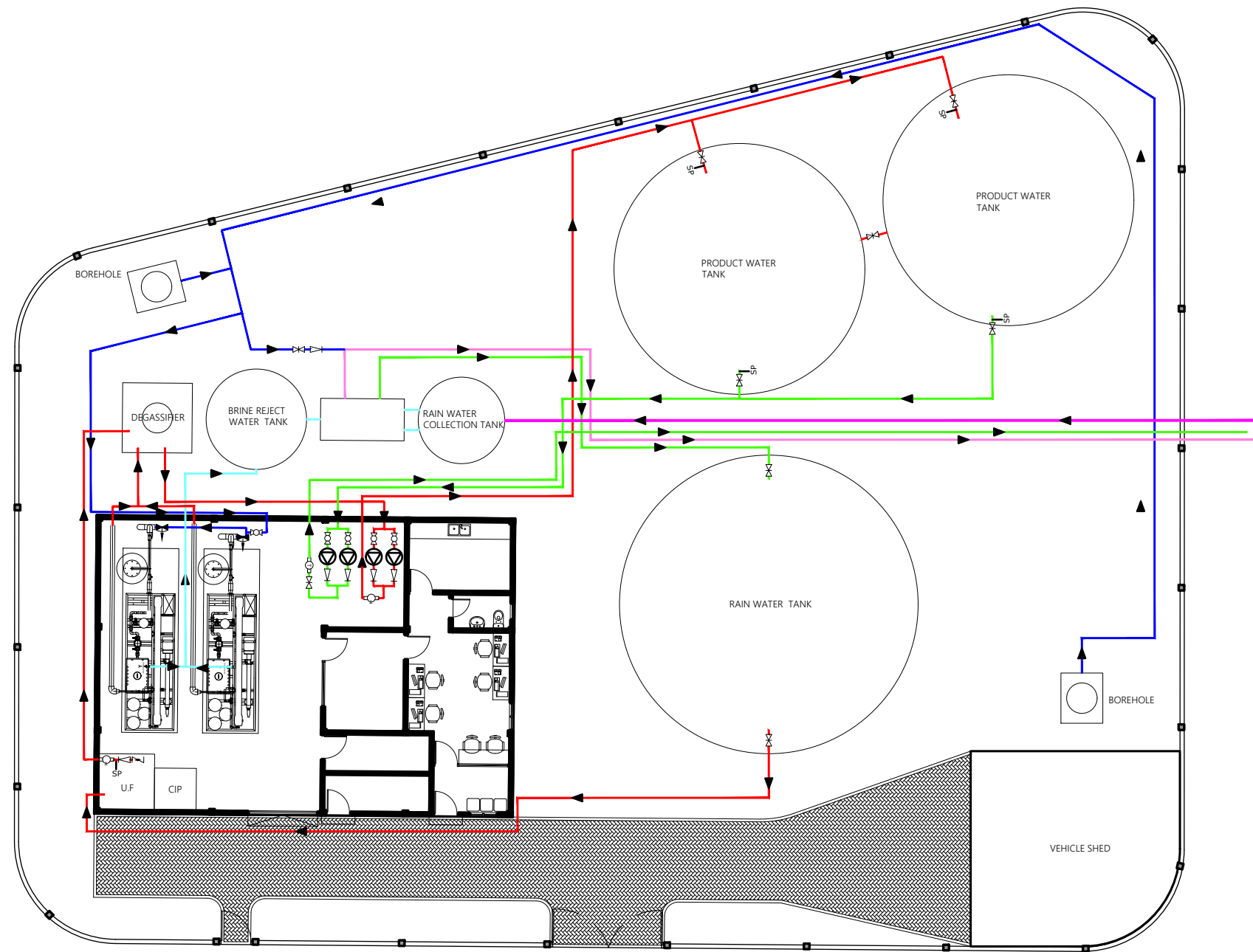
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Rev: R-01 Page: W-03



PUMP DETAILS

- Borehole Pump : 2 Nos
- Flow (Q) = 20.4 m³/hr
- Head (H) = 50 m
- High Pressure Pump : 2 Nos
- Flow (Q) = 10.2 m³/hr
- Pressure Range = 45-85 bar
- Transfer Pump : 2 Nos
- Flow (Q) = 8.6 m³/hr
- Head (H) = 16 m
- Distribution Pump Set : 2 Nos
- Flow (Q) = 14.4 m³/hr
- Head (H) = 35 m
- Brine Pump : 2 Nos
- Flow (Q) = 14.3 m³/hr
- Head (H) = 17 m
- Rain Water lift Well Pump : 2 Nos
- Flow (Q) = 60.96 m³/hr
- Head (H) = 22m
- UF Feed Pump : 2 Nos
- Flow (Q) = 2.5 m³/hr
- Head (H) = 35 m

- Gate Valve
- Check Valve
- Totalizer
- Pump
- Closed Gate Valve
- Sampling Point
- Butterfly Valve
- Ball Valve



INTERNAL PIPE LAYOUT

1:200

Legend

- Ø90 HDPE (PE100, PN10, SDR17)
- Ø63 HDPE (PE100, PN10, SDR17)
- Ø110 HDPE (PE100, PN10, SDR17)
- Ø160 HDPE (PE100, P10, SDR17)
- Ø110 HDPE (OUTFALL PE100, PN16, SDR11)
- Ø315 HDPE (RAINWATER PE100, PN6, SDR26)

Notes:

- All Pump sizes are based on 15 year demands.
- Rainwater collection Pump sizing is done considering Maximum Rainfall intensity of 50mm/hr.
- UF feed pump will be subject to Approved UF Plant suppliers approval.
- Both Feed Pump and High pressure pump capacity will need to be approved by the approved RO plant Supplier. The working pressure range will be established based on the approved suppliers requirements.
- Distribution Pump set should have Variable Frequency Drive.
- All pump control float switches and automated valves should be provided.

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

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

Sub Title:
Water Supply System in Ga. Dhehvadhoo

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

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Date: Aug 2020	SCALE (A3): 1:200
Project No: EP-WS/2019/06	
Rev: R-01	Page: W-04



IWRM PLANT P&I DETAIL A

NTS



Legend

Note:


- Borehole pumps to be controlled by Variable Frequency Drive (VFD)

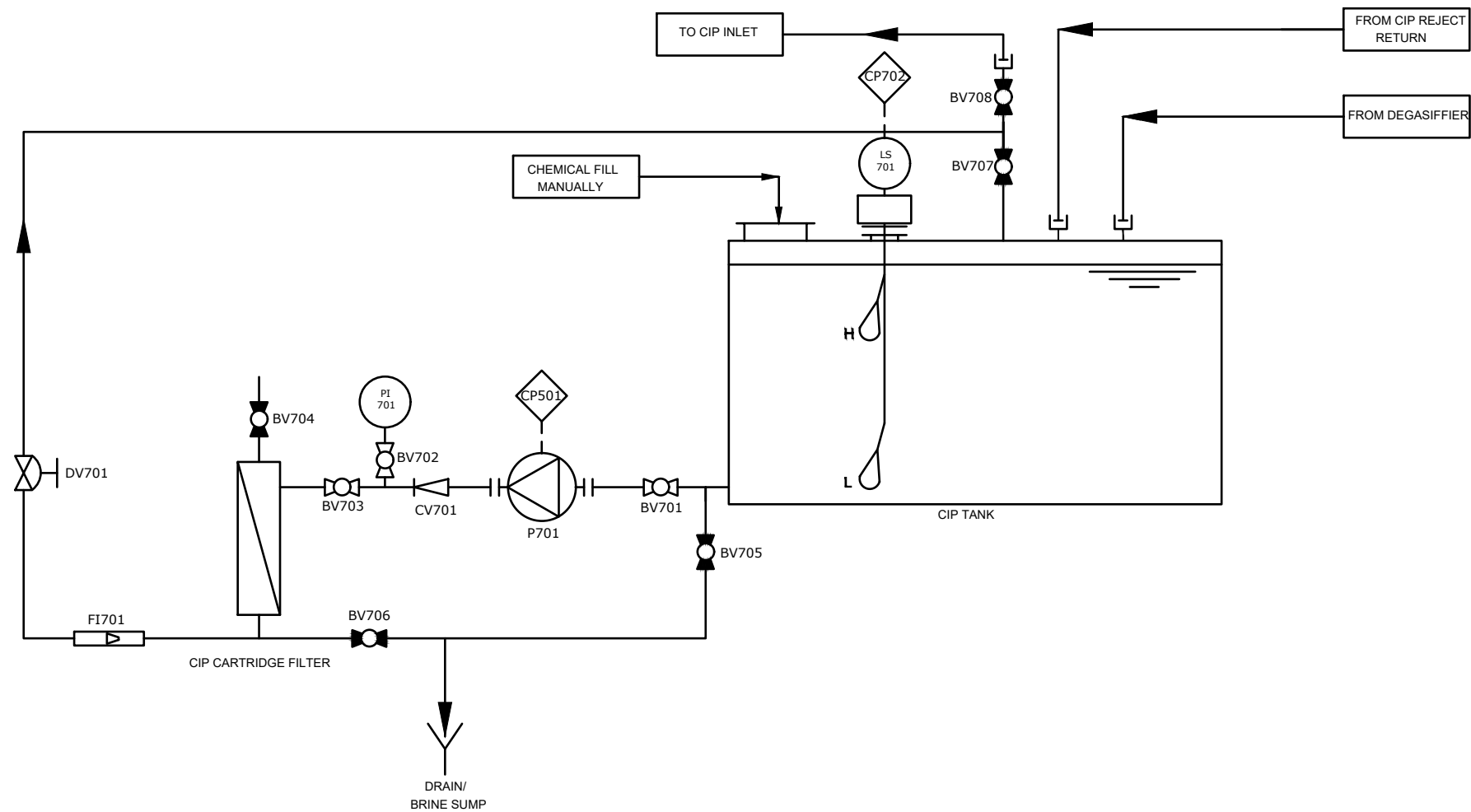
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REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

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

Sub Title:
Water Supply System in Ga. Dhehvhadhoo

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

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Rev: R-01	Page: W-06



DETAIL C

LEGEND										
ACTUATION		VALVES			FEATURES		CONDITION		ABBREVIATIONS	
	MANUALLY OPERATED		BUTTERFLY		MOTORIZED BALL		FLANGED CONNECTION		VALVE NORMALLY OPEN	LS - LEVEL SENSOR FT - FLOW TRANSMITTER PI - PRESSURE INDICATOR SP - SAMPLING POINT AR - AIR RELEASE P - PUMP PG - PRESSURE GAUGE PS - PRESSURE SENSOR CP - CONNECTION POINT LT - LEVEL TRANSMITTER QIT - CONDUCTIVITY INDICATOR PLC - PROGRAMMABLE LOGIC CONTROLLER
	DIAPHRAGM - SINGLE ACTING		BALL		TORTALIZER		TRAP		VALVE NORMALLY CLOSED	
	DIAPHRAGM - DOUBLE ACTING		DIAPHRAGM		GATE		DISCHARGE TO ATMOSPHERE			
	PNEUMATIC PISTON		3-WAY		CHECK VALVE		SAMPLING POINT			
			SLUICE		MOTORIZED 3 WAY		FLOW INDICATOR			

IWRM PLANT P&I DETAIL C

NTS

Title:
**Consultancy Services for Survey,
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Sub Title:
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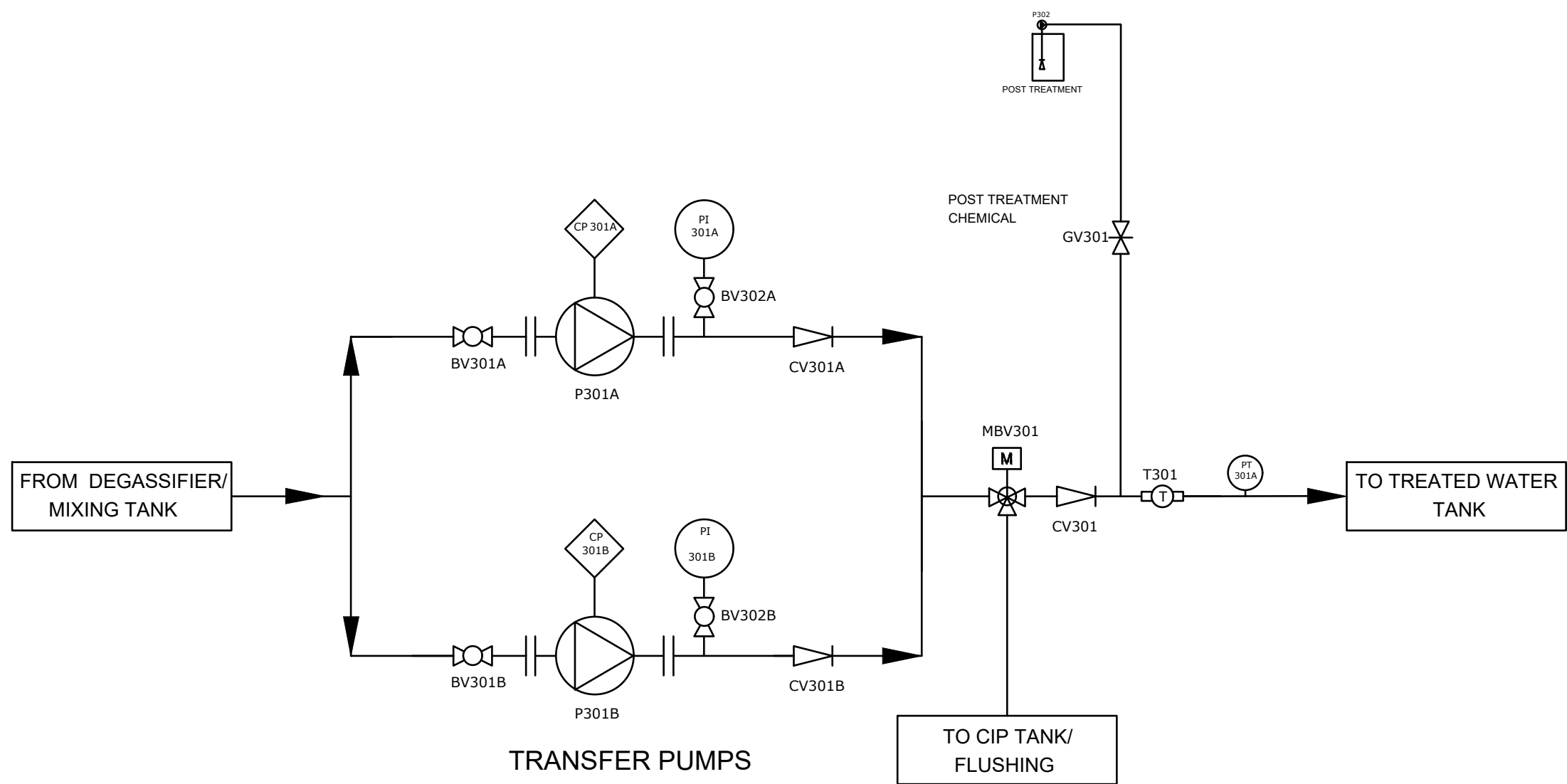
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Project No: EP-WS/2019/06

Rev: R-01	Page: W-08
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IWRM PLANT P&I DETAIL D

NTS




LEGEND										
ACTUATION		VALVES			FEATURES		CONDITION		ABBREVIATIONS	
	MANUALLY OPERATED		BUTTERFLY		MOTORIZED BALL		FLANGED CONNECTION		VALVE NORMALLY OPEN	LS - LEVEL SENSOR FT - FLOW TRANSMITTER PI - PRESSURE INDICATOR SP - SAMPLING POINT AR - AIR RELEASE P - PUMP PG - PRESSURE GAUGE PS - PRESSURE SENSOR CP - CONNECTION POINT LT - LEVEL TRANSMITTER QIT - CONDUCTIVITY INDICATOR PLC - PROGRAMMABLE LOGIC CONTROLLER
	DIAPHRAGM - SINGLE ACTING		BALL		TORTALIZER		TRAP		VALVE NORMALLY CLOSED	
	DIAPHRAGM - DOUBLE ACTING		DIAPHRAGM		GATE		DISCHARGE TO ATMOSPHERE			
	PNEUMATIC PISTON		3-WAY		CHECK VALVE		SAMPLING POINT			
	PNEUMATIC PISTON		SLUICE		MOTORIZED 3 WAY		FLOW INDICATOR			

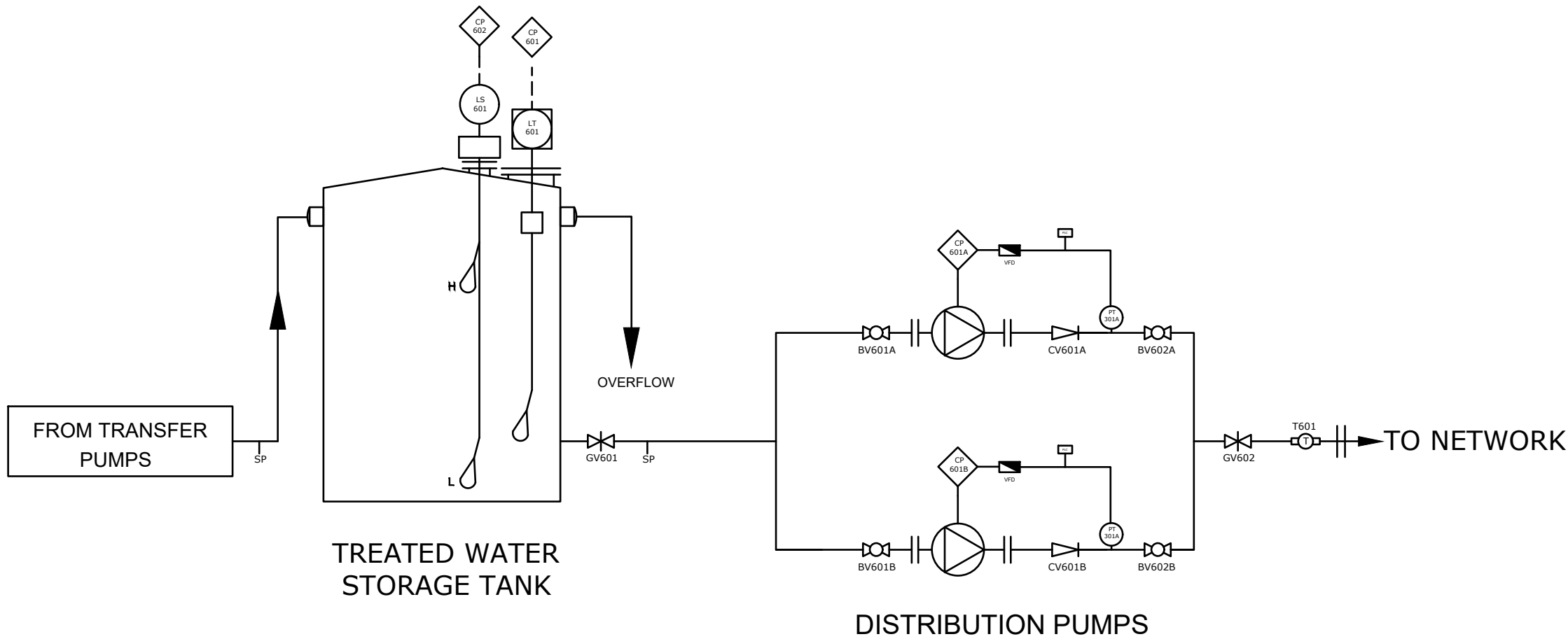
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**Consultancy Services for Survey,
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Rev: R-01	EP-WS/2019/06 Page: W-10



DETAIL F

LEGEND				
ACTUATION	VALVES		FEATURES	CONDITION
	MANUALLY OPERATED	BUTTERFLY	MOTORIZED BALL	VALVE NORMALLY OPEN
	DIAPHRAGM - SINGLE ACTING	BALL	TORTALIZER	VALVE NORMALLY CLOSED
	DIAPHRAGM - DOUBLE ACTING	DIAPHRAGM	GATE	
	PNEUMATIC PISTON	3-WAY	CHECK VALVE	
		SLUICE	MOTORIZED 3 WAY	
			FLANGED CONNECTION	
			TRAP	
			DISCHARGE TO ATMOSPHERE	
			SAMPLING POINT	
			FLOW INDICATOR	



IWRM PLANT P&I DETAIL F

NTS

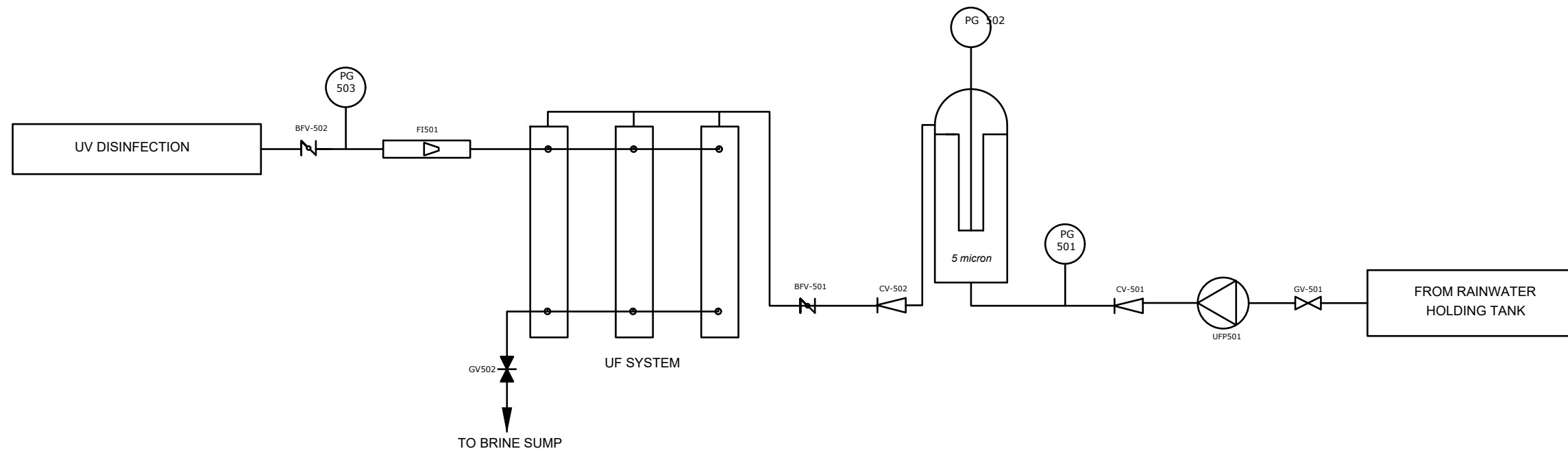
Title:
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Sub Title:
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Project No: EP-WS/2019/06			
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UV DISINFECTION



DETAIL G

LEGEND										
ACTUATION		VALVES			FEATURES		CONDITION		ABBREVIATIONS	
	MANUALLY OPERATED		BUTTERFLY		MOTORIZED BALL		FLANGED CONNECTION		VALVE NORMALLY OPEN	LS - LEVEL SENSOR FT - FLOW TRANSMITTER PI - PRESSURE INDICATOR SP - SAMPLING POINT AR - AIR RELEASE P - PUMP PG - PRESSURE GAUGE PS - PRESSURE SENSOR CP - CONNECTION POINT LT - LEVEL TRANSMITTER QIT - CONDUCTIVITY INDICATOR PLC - PROGRAMMABLE LOGIC CONTROLLER
	DIAPHRAGM - SINGLE ACTING		BALL		TORTALIZER		TRAP		VALVE NORMALLY CLOSED	
	DIAPHRAGM - DOUBLE ACTING		DIAPHRAGM		GATE		DISCHARGE TO ATMOSPHERE			
	PNEUMATIC PISTON		3-WAY		CHECK VALVE		SAMPLING POINT			
			SLUICE		MOTORIZED 3 WAY		FLOW INDICATOR			



Legend

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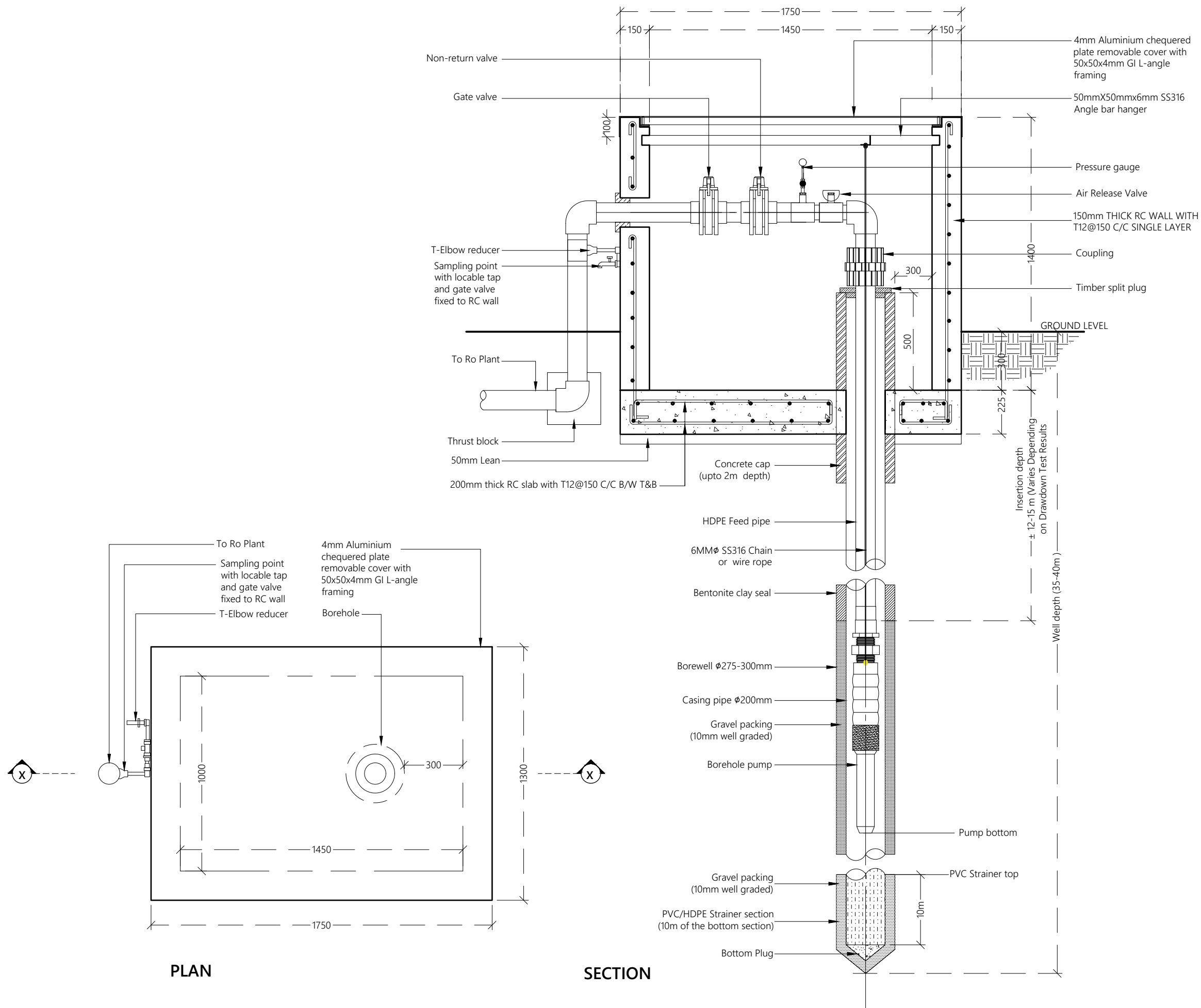
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Project No: EP-WS/2019/06

Rev: R-01	Page: W-12
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BOREHOLE DETAILS

NTS



Legend

- Notes:**
- All structural concrete shall be of grade C30.
 - 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.
 - All concrete cold joints shall casted with bonding agent
 - Casing pipe to be HDPE or PVC with a diameter of 200mm.
 - Contractor to submit well development methodology for approval by engineer.
 - Contractor to submit drill logs.
 - Contractor to submit drawdown test results for approval by engineer prior to pipe insertion.

REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.
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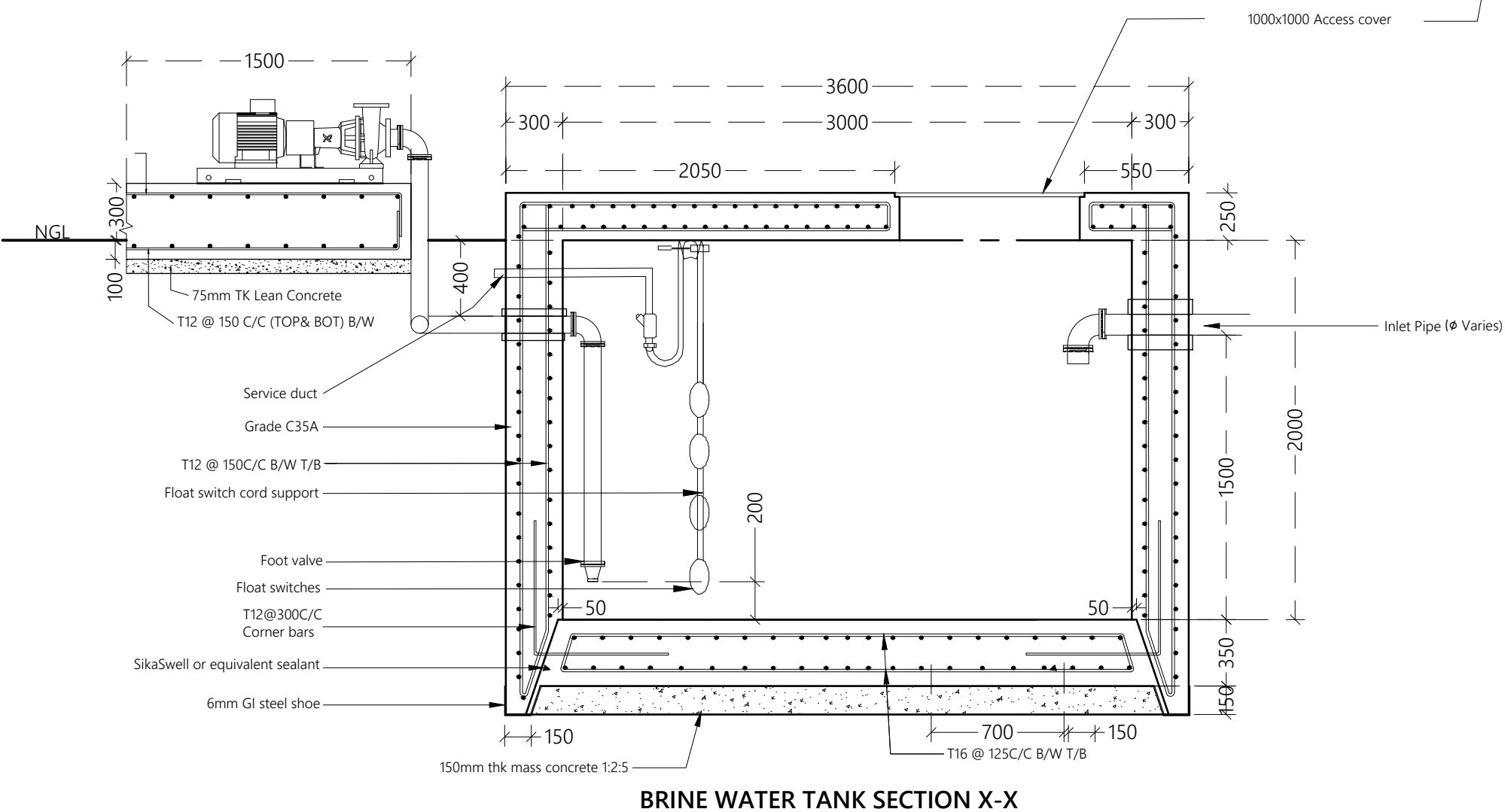
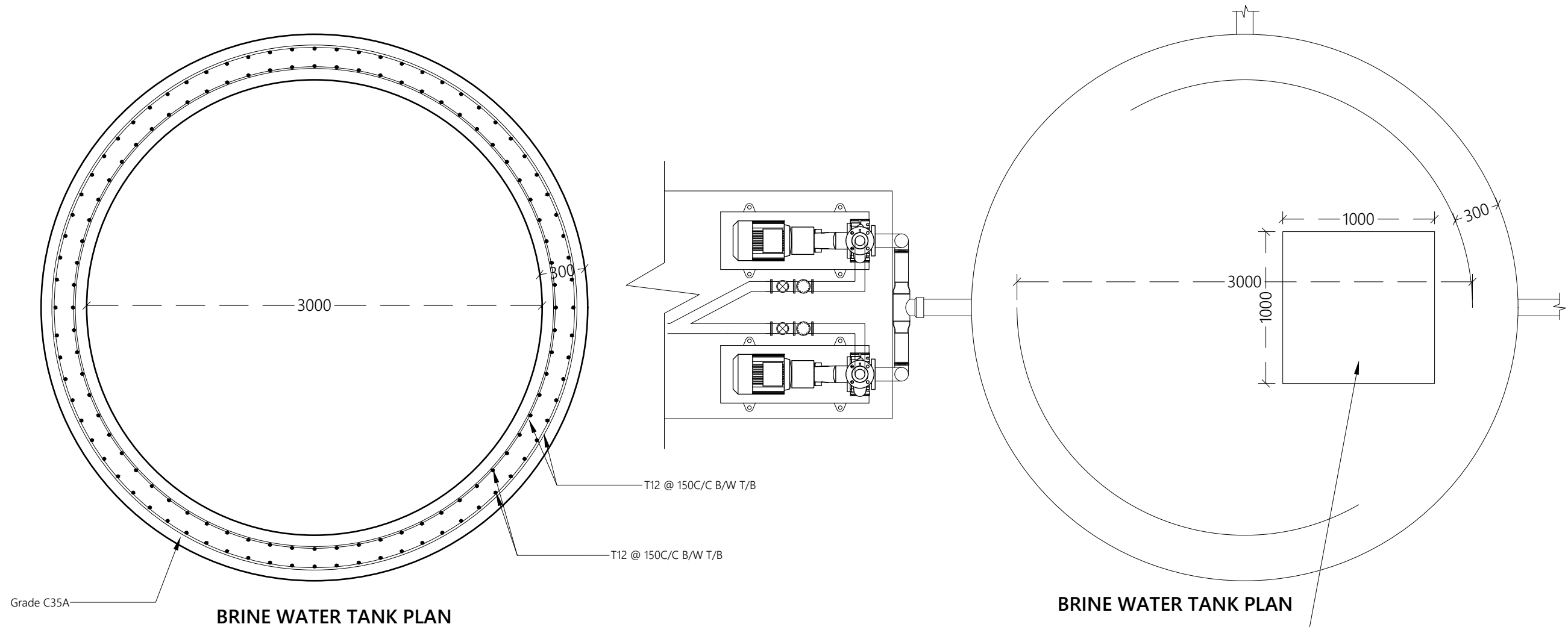


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Project No: EP-WS/2019/06	Page: R-01
	W-13



BRINE WATER TANK SECTION X-X

BRINE TANK DETAILS

1:30

Legend

Note:

- Pumps, pipe work, fittings and control panel shall be installed in accordance with manufacturers recommendations.
- Orientation of tanks and pipe work 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 (4T16@75C/C T&B) shall be provided around top slab opening.

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 5 islands, Maldives - Package 6

Sub Title:

Water Supply System in Ga. Dhehvadhoo

Client:

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Project No: EP-WS/2019/06

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Legend

Note:

- Pumps, pipe work, fittings and control panel shall be installed in accordance with manufacturers recommendations.
- Orientation of tanks and pipe work to suit location.
- The rainwater lift well will have a filter to prevent entry of debris and dirt.
- 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.
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Sub Title:

Water Supply System in Ga. Dhehavadhoo

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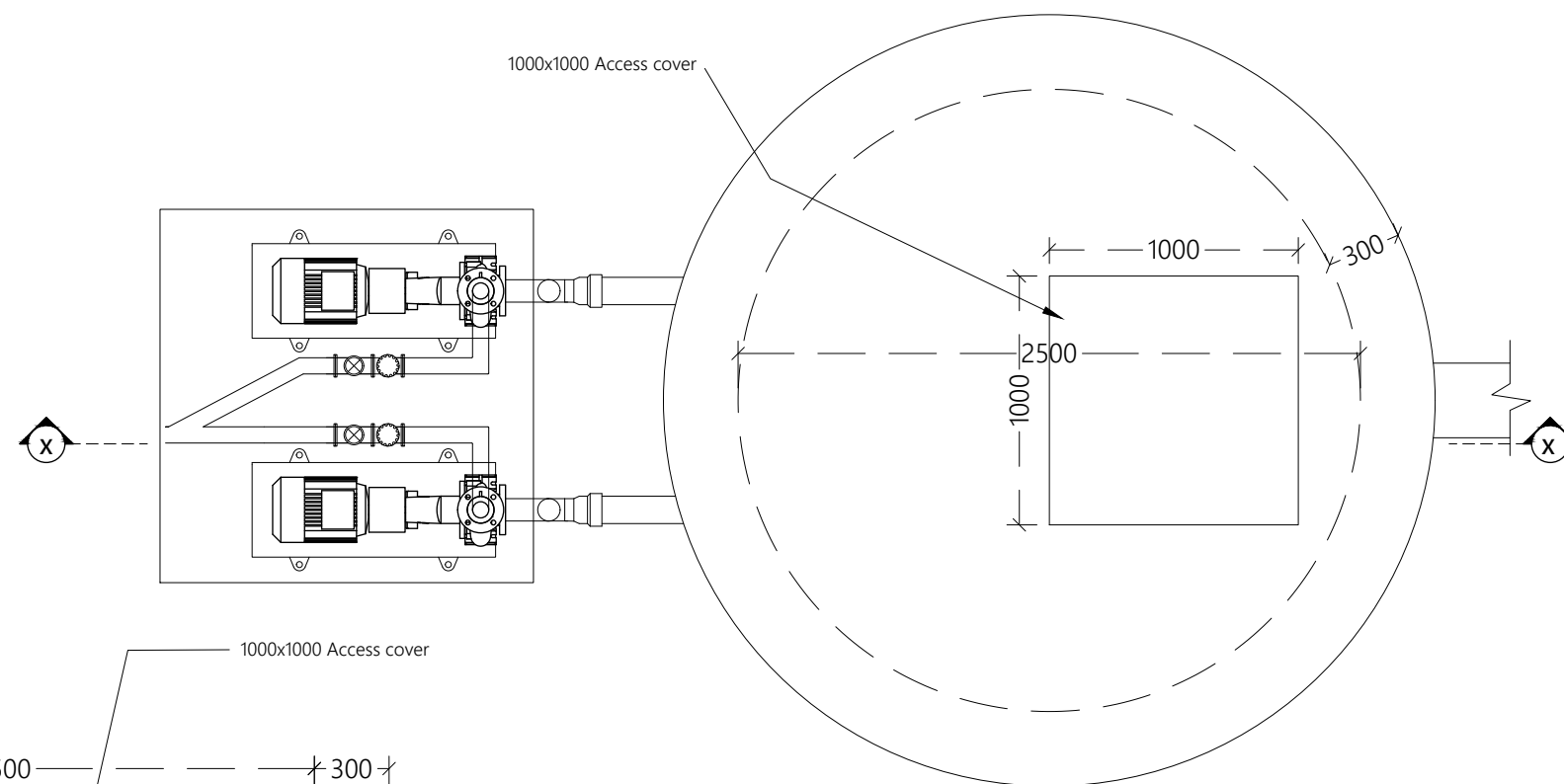
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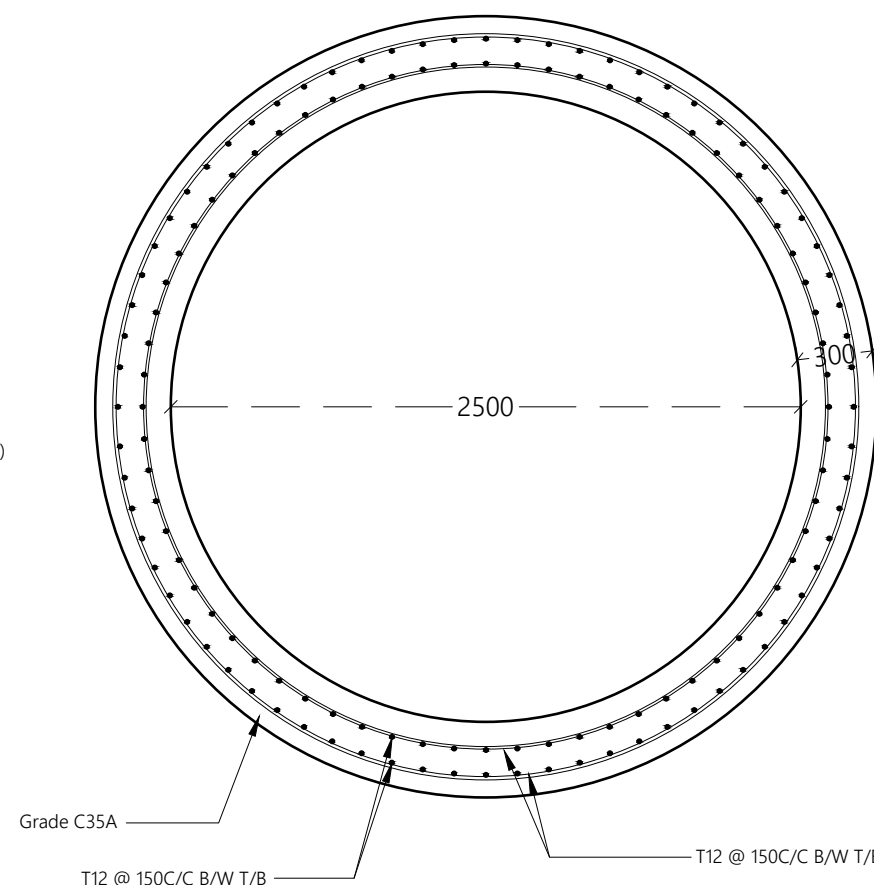
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Project No: EP-WS/2019/06	
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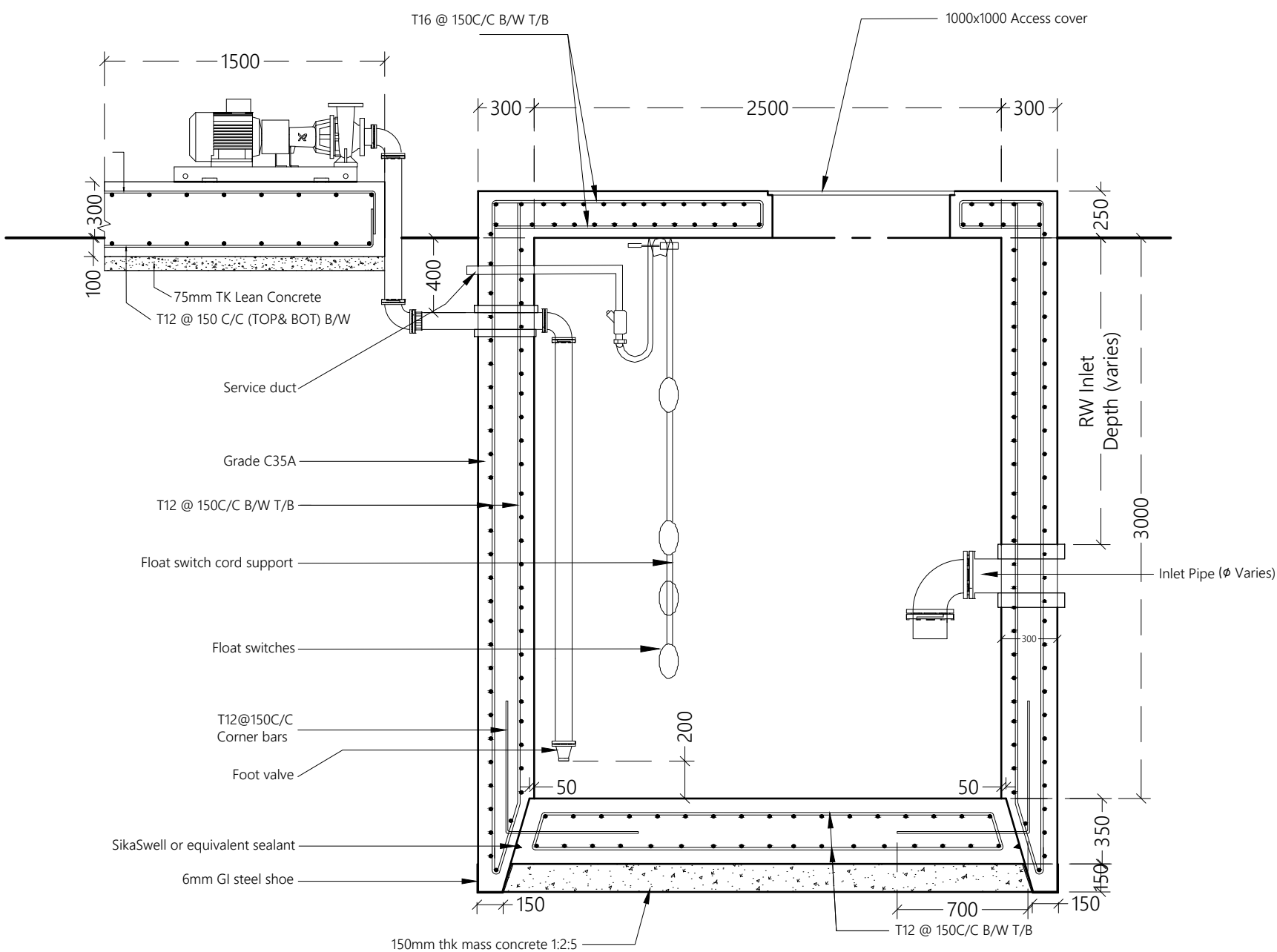
RAIN WATER LIFT WELL PLAN



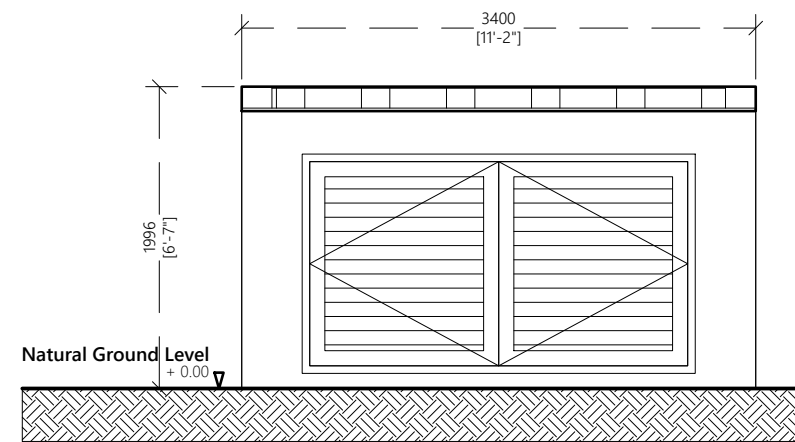
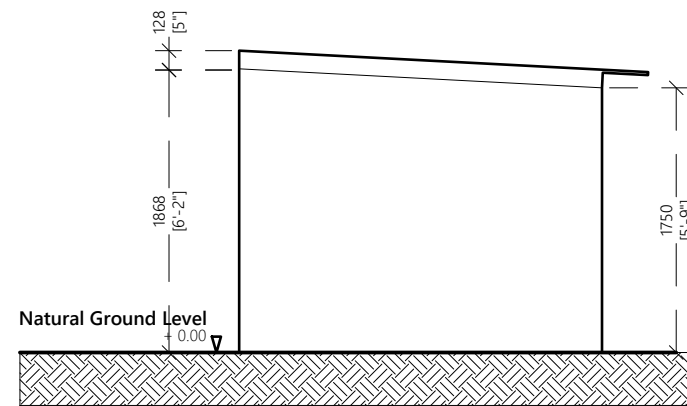
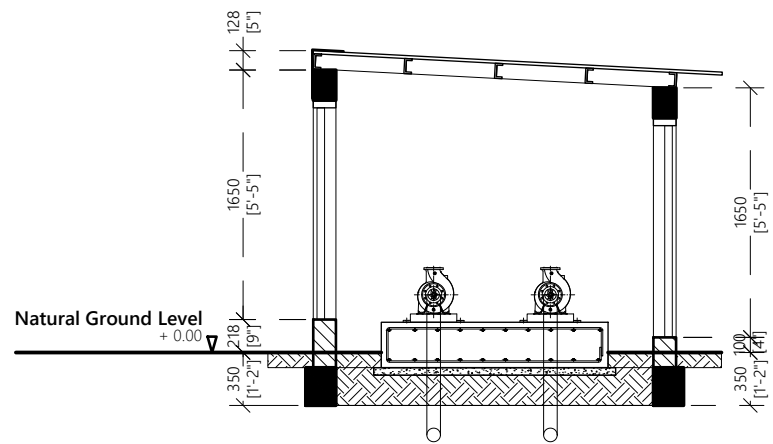
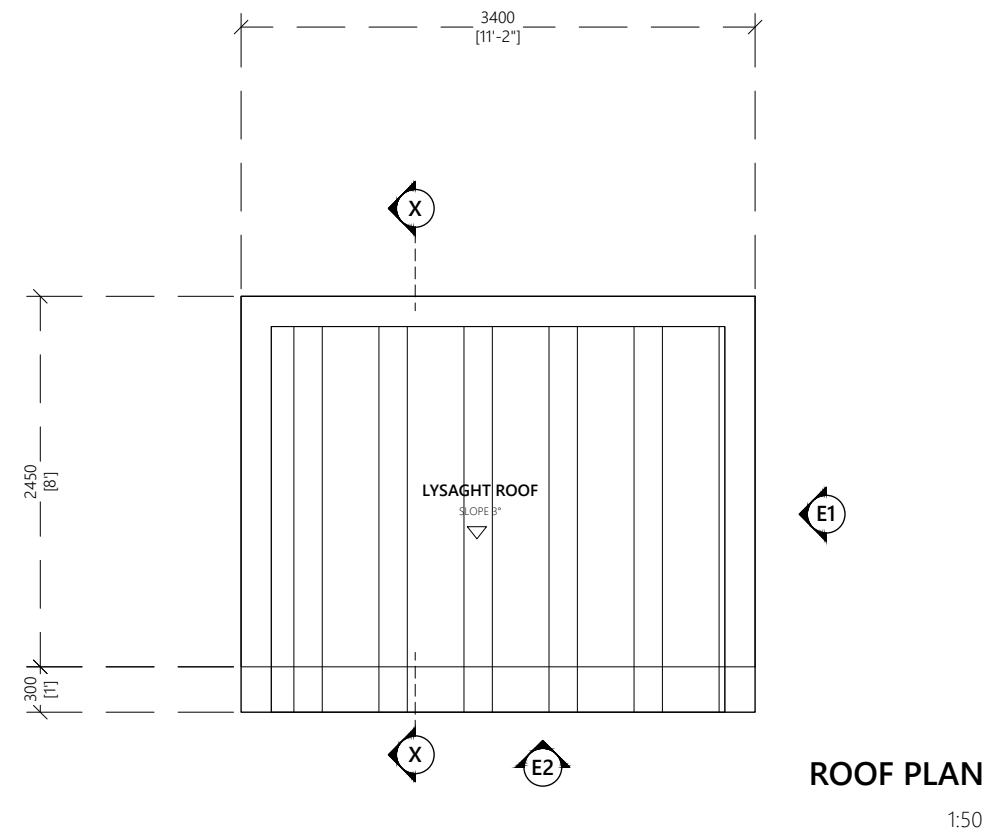
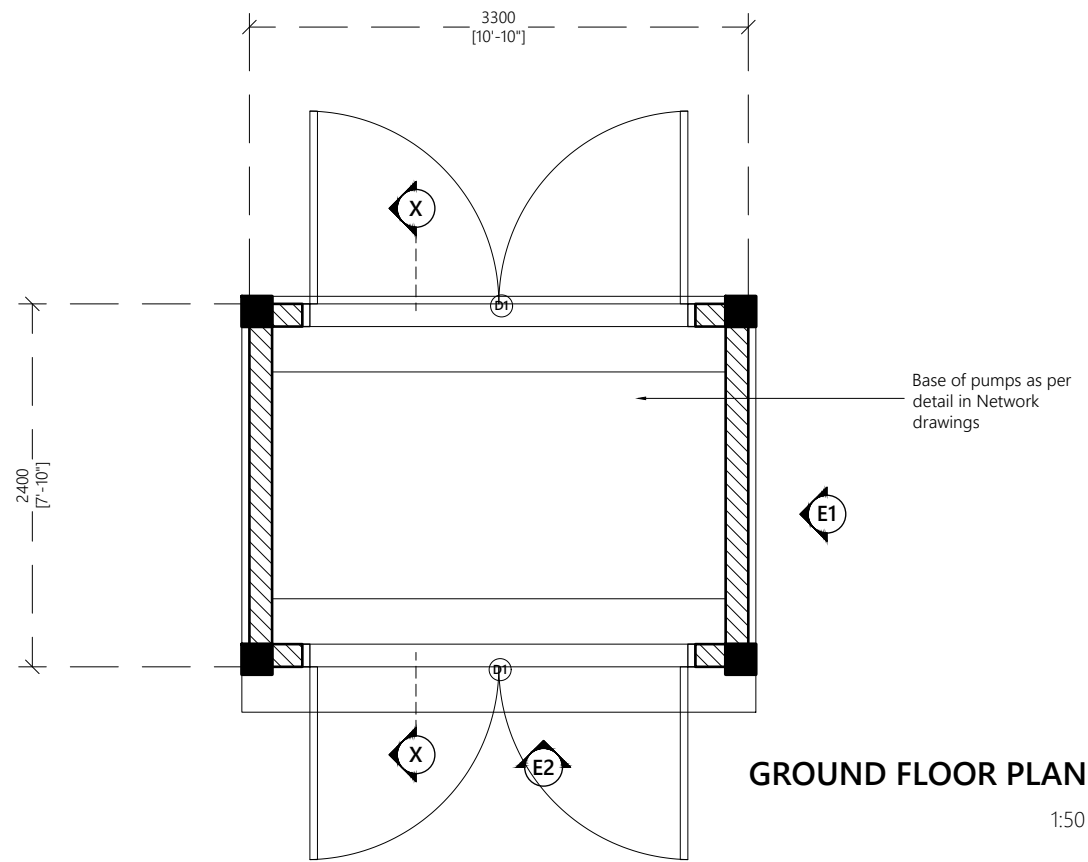
RAIN WATER LIFT WELL PLAN - STRUCTURAL

RAINWATER LIFT WELL DETAILS

1:30



RAIN WATER LIFT WELL SECTION X-X



PUMP SHED DETAILS



Legend

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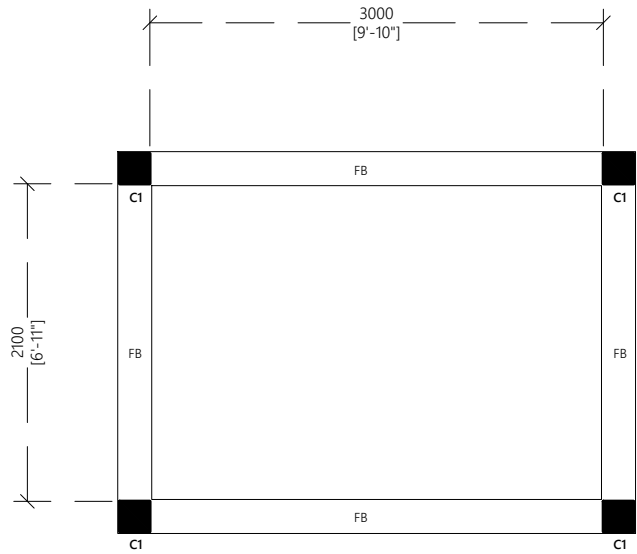
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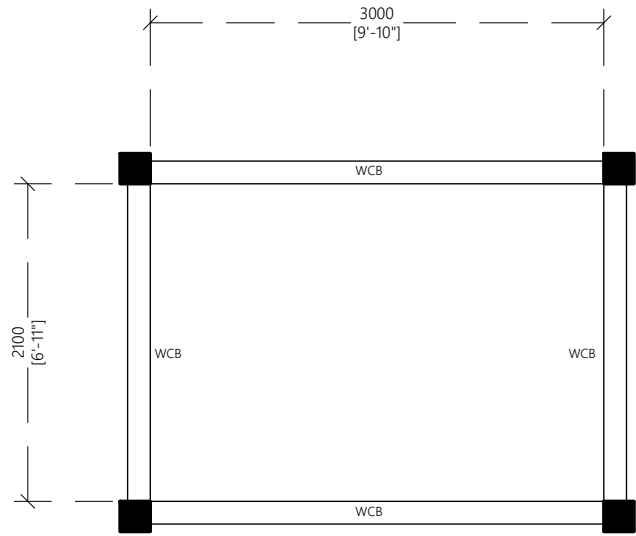
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GROUND FLOOR PLAN

1:100



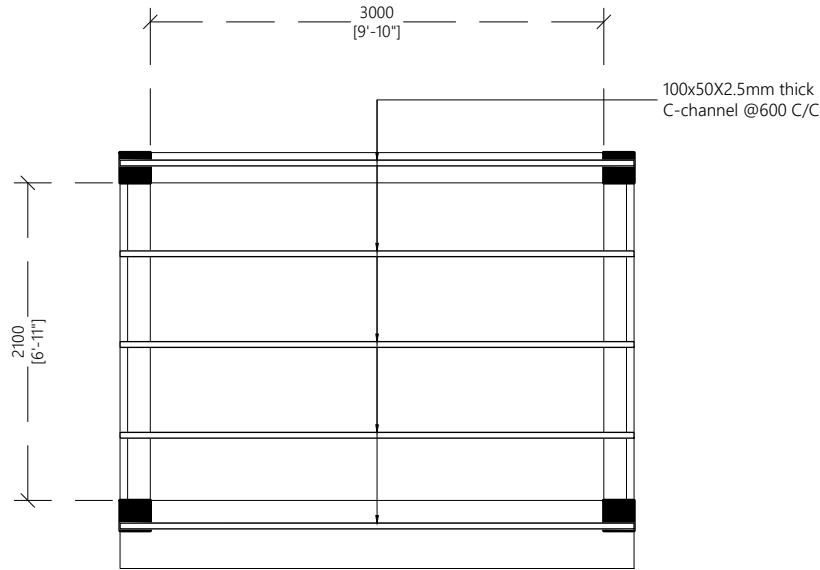
ROOF PLAN

1:100

Door ID		
Plan view		
Elevation view		<p>General Door Notes:</p> <p>Dimensions shown on DWG indicate effective openings of frame</p> <p>All frame depths are 100mm All dor panel thicknesses are 35mm All window manel thickness are 25mm Al frame edges shal be trimmed 3mm</p> <p>All wodden components should be wood stained finish</p> <p>All glazing should be of 6mm unless specified</p> <p>External units must comply the following weather conditions:- Wind pressure: 200 kg/sqm Water tightness: 25 kg/sqm</p> <p>All external frames / wall joints must be sealed with silicon sealant and the wedges trimmed with 12X12mm hardwood beading fixed to frames by brass nails</p> <p>All hardware should be provided for the performance of al functions of the units</p> <p>Hinges shall confirm to</p> <ol style="list-style-type: none">Door size more than 700X1900mm WD: 125mm X2 sets SD: 150mm X3 setsDoor size less than 700X1900mm WD: 100mm X2 sets SD: 125mm X2 sets <p>Locks shall be cylindrical with master key sets</p> <p>Door knobs shall be1000mm above FFL</p>
FFL		
Frame material	600 micron powder coated aluminum frames	
Panel material	600 micron powder coated aluminum louvered panel with side aluminum frames with allowance for handle and lock	
Openable area	-	

Door Schedule

1:100



ROOF PLAN

1:100

PUMP SHED DETAILS

Legend

Notes:

- Cover for foundation pads and foundation beams shall be 50mm
- Cover for columns shall be 40mm
- Cover for roof beams shall be 30mm
- Concrete shall be of grade C25
- All concrete cold joints shall casted with bonding agent
- Roof purlins shall be fixed to roof beam with hot-dip galvanized bolts and GI cleats

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

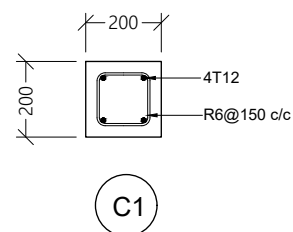
Sub Title:
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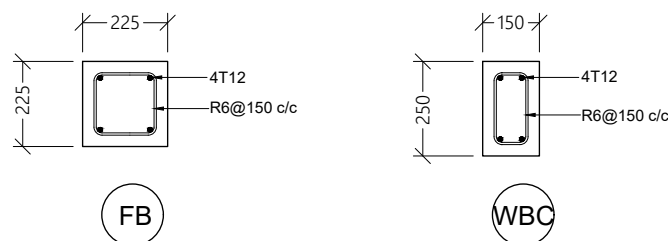
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Project No: EP-WS/2019/06	
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1:20



1:20

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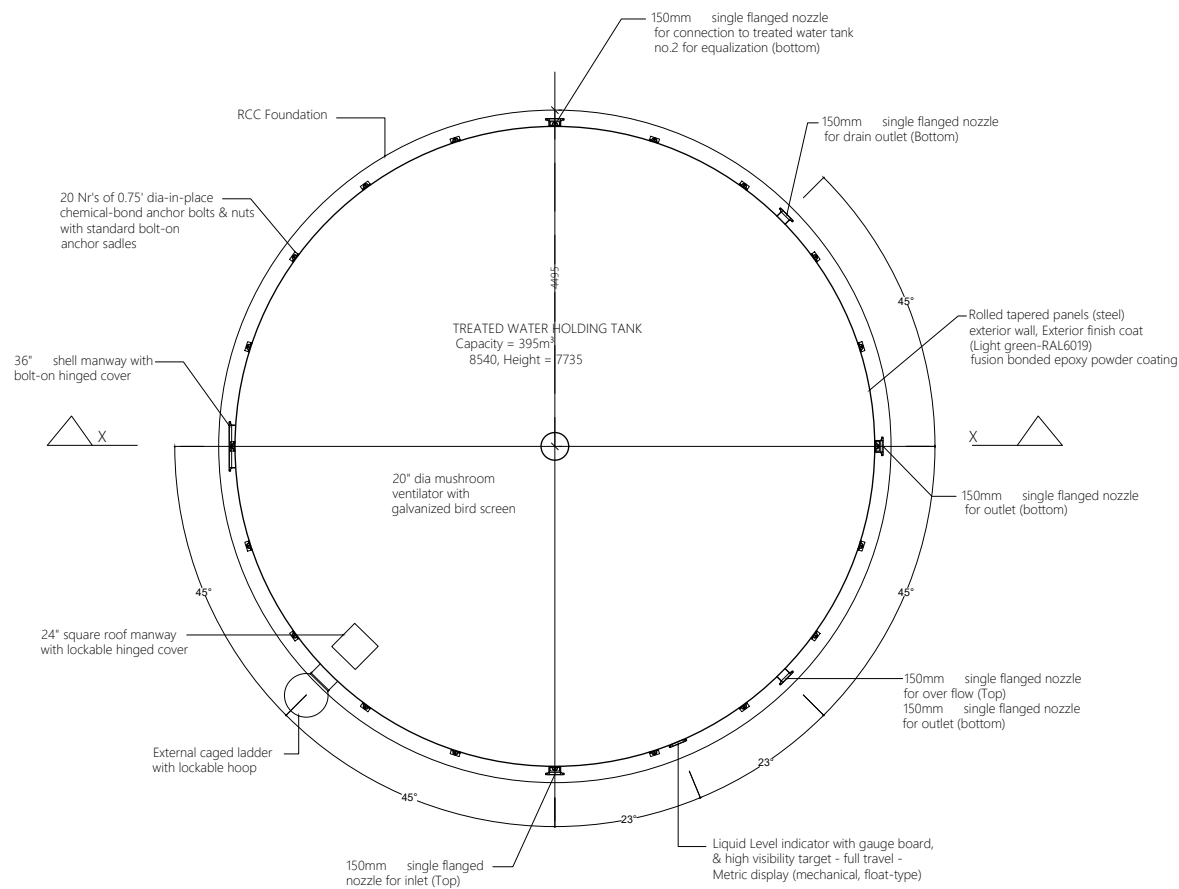
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Technical drawing of a 10,000-gallon chemical storage tank, showing elevation and structural details. The drawing includes the following components and dimensions:

- Dimensions:**
 - Overall diameter: 8540
 - Height: 7735
 - Foundation width: 8990
 - Foundation thickness: 432 (1'-5")
- Structural Details:**
 - Full deck perimeter guardrail
 - 150mm single flanged nozzle for inlet (Top)
 - 150mm single flanged nozzle for inlet (Top)
 - Liquid Level Indicator with gauge board & high visibility target - full travel - Metric display (mechanical, float-type)
 - 20 Nr's of 0.75" dia drill-in-place chemical-bond anchor bolts & nuts with standard bolt-on anchor saddles
 - 150mm single flanged nozzle for outlet (bottom)
 - 4 mil polythene sheets between foundation & fiberboard/tank bottom
 - Tank Foundation
- Accessories:**
 - 20" dia mushroom ventilator with galvanized bird screen
 - Rolled tapered panels (steel) exterior wall, Exterior finish coat (Light green-RAL6019) fusion bonded epoxy powder coating
 - External caged ladder with lockble hoop
 - 36" shell manway with bolt-on hinged cover
- Other Labels:**
 - 0°
 - 12
 - 2
 - +0.00(G.L.)

Diagram illustrating the cross-section detail of a tank wall and floor assembly, showing various layers and reinforcement details.

Labels and Dimensions:

- TANK FLOOR
- FIBRE BOARD 12.7MM TK. & 4 mil polythene sheet
- TOP OF FOUNDATION
- 175mm tk. RC slab (1:2:3)
- +300(F.L.)
- T10@150 c/c BW, Top & Bottom
- T10 rings @ 125 c/c + T10 hook @ 250 c/c
- Well Compacted hardcore Bearing capacity minimum 150Kpa
- 450mm x 900mm RCC Ring beam
- 6T20
- 50mm thick Lean Concrete (1:2:4)
- 600
- 450
- 300
- +0.00(G.L.)

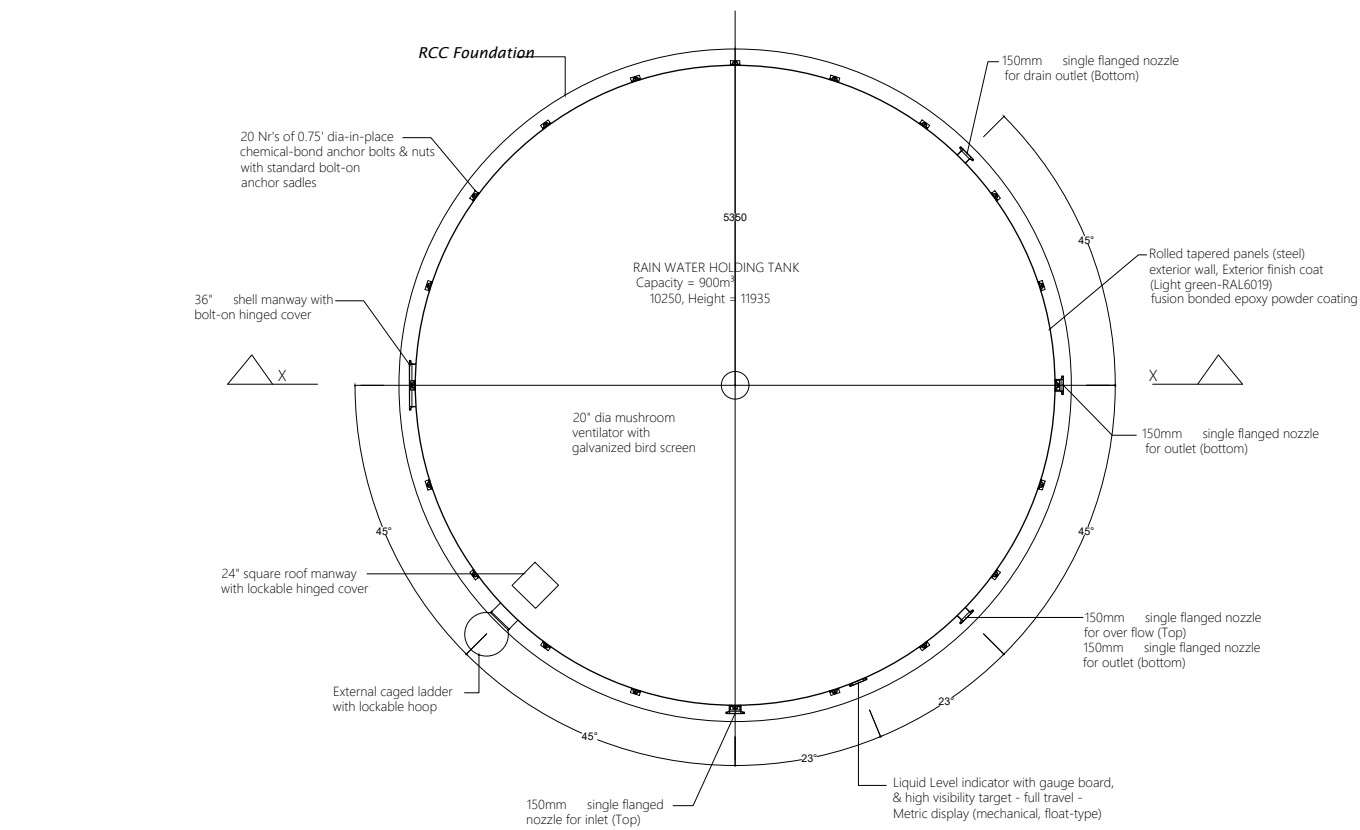
DETAIL

Note:-
Cover = 50mm
Lap length 50

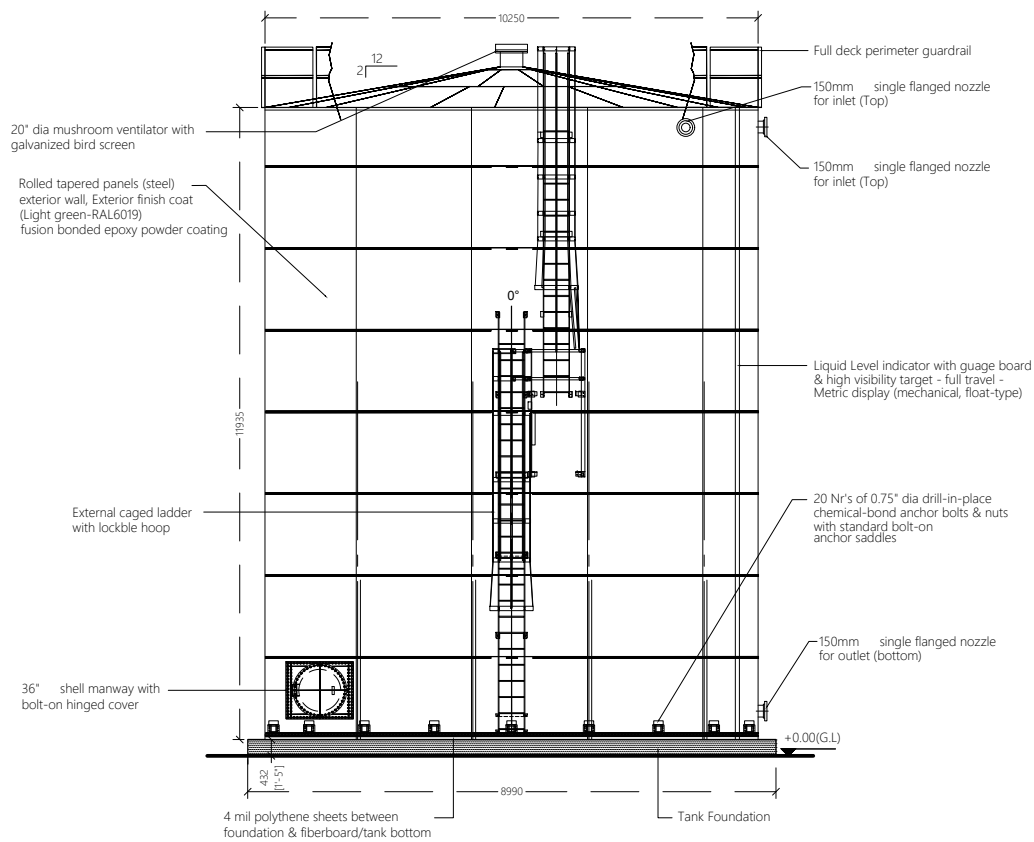
175mm tk. RC slab (1:2:3)

T10 rings @ 125 c/c
+T10 hook @ 250 c/c

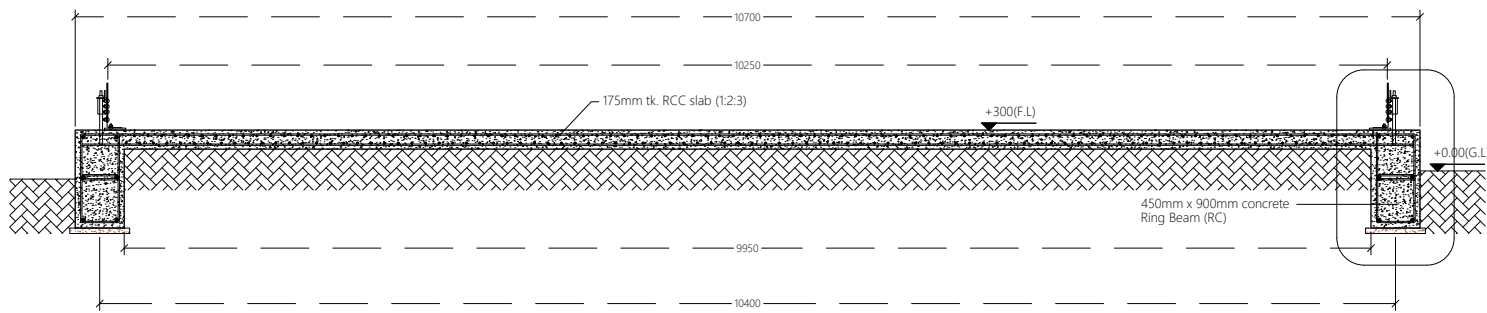
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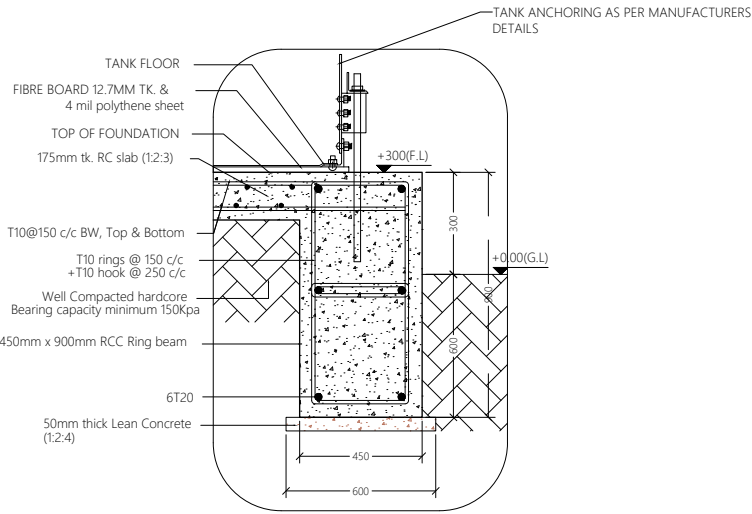
RAINWATER HOLDING TANK AND FOUNDATION- PLAN



RAINWATER HOLDING TANK AND FOUNDATION- ELEVATION



SECTION X-X



DETAIL

Note:-
Cover = 50mm
Lap length 50

RAINWATER HOLDING TANK DETAILS

NTS



Legend

Note:
-Orientation of tanks and pipe work to suit location.
-All structural concrete shall be of grade C30.
-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.
-All concrete cold joints shall casted with bonding agent.
-Tank foundation to be approved based on manufacturers recommendation.

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

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

Sub Title:
Water Supply System in Ga. Dhehvadhoo

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



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Husnuheena Magu, Male', Maldives



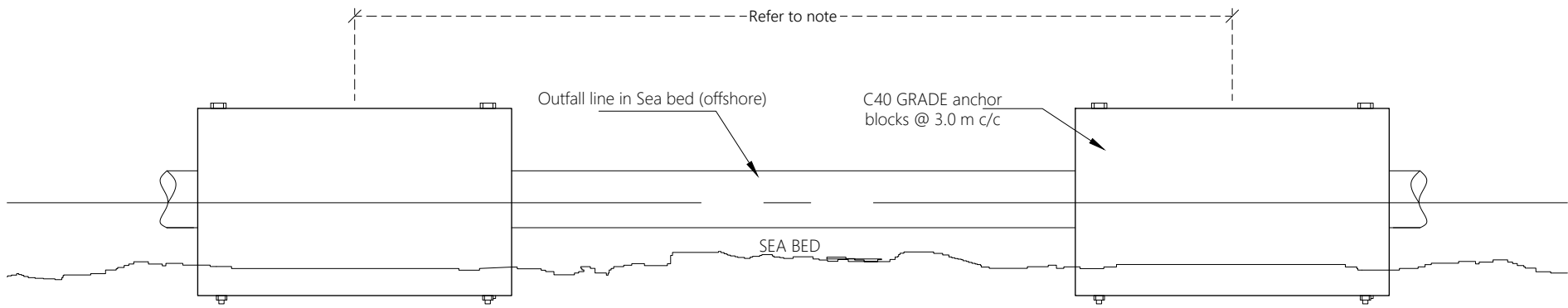
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Designed: F.I.A. Approved: I.W.

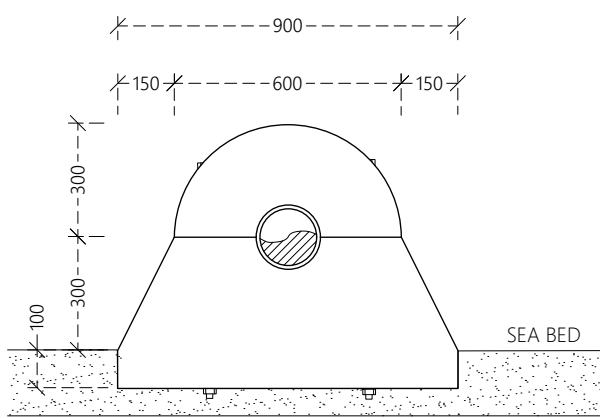
Date: Aug 2020 SCALE (A3): NTS

Project No: EP-WS/2019/06

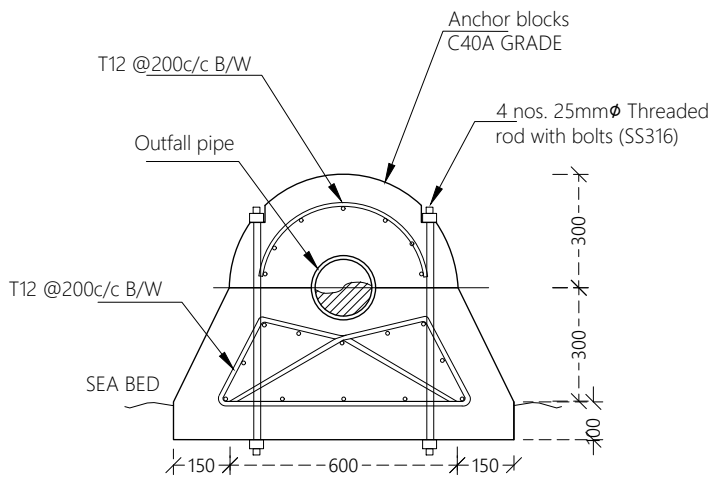
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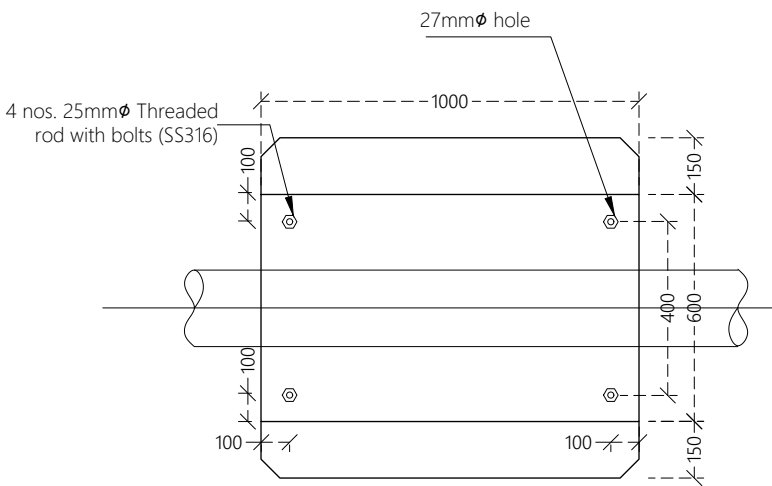
BALLAST BLOCK SIDE ELEVATION



BALLAST BLOCK FRONT ELEVATION



BALLAST BLOCK SECTION



BALLAST BLOCK PLAN

BALLAST BLOCK DETAILS

NTS



Legend

Notes:

- All backing rings for stub flanges, nuts and bolts shall be grade 316 stainless steel.
- All pipe work shall be bedded on 10mm thick neoprene rubber seat in semicircular recess matching the O.D. the pipe.
- Fabricate specific pipe clamps to provide firm clamping action according to pipe O.D.
- All structural concrete shall be of grade C40A.
- 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.
- 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.
- All pipe connections to be placed inside the ballast blocks.

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

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

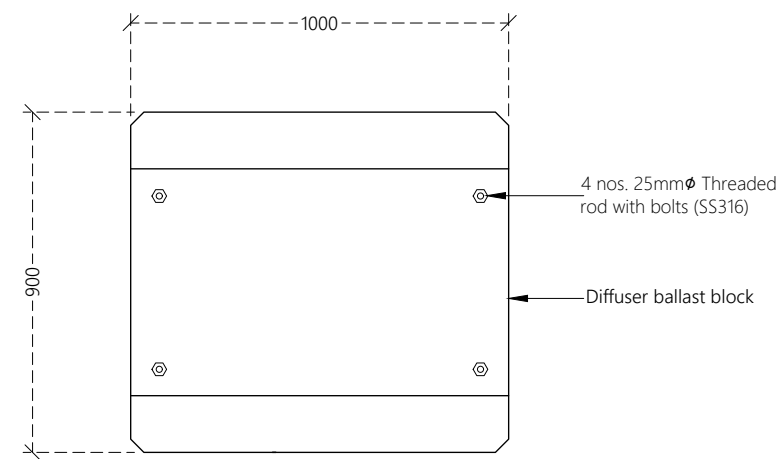
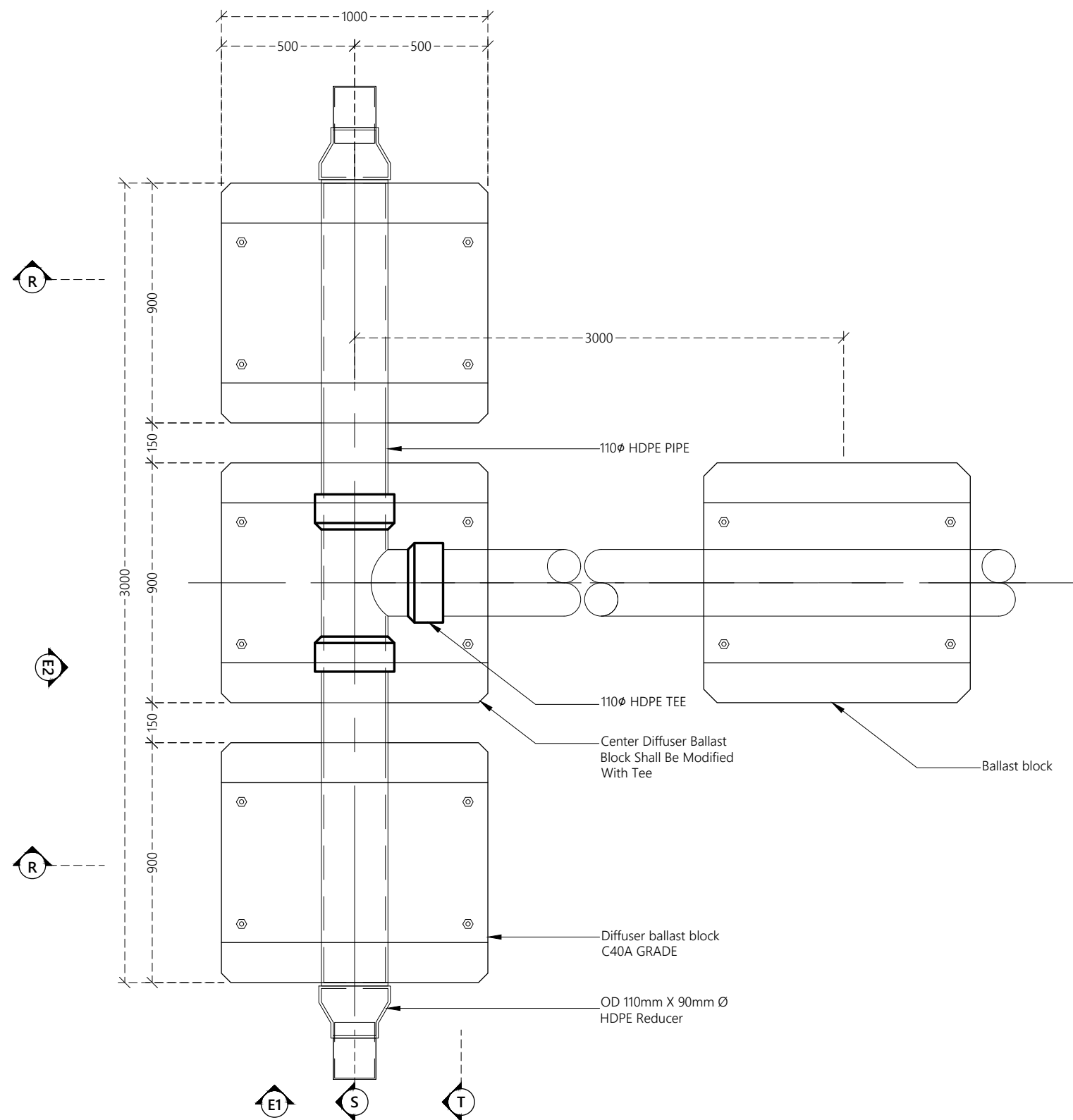
Sub Title:
Water Supply System in Ga. Dhehvaadhoo

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

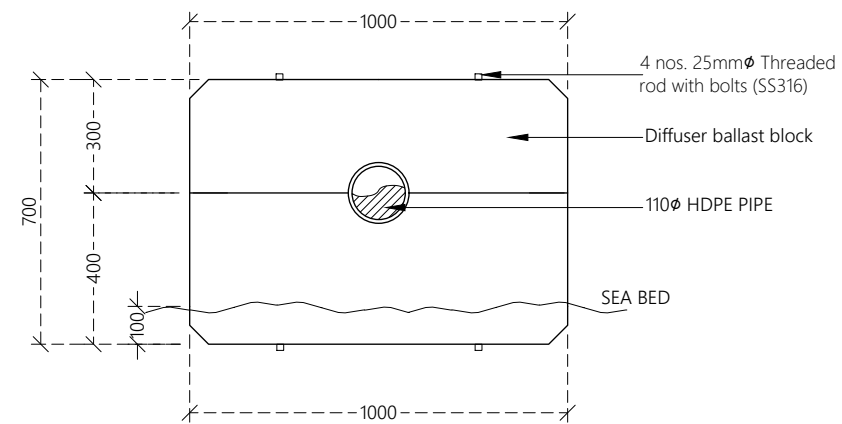
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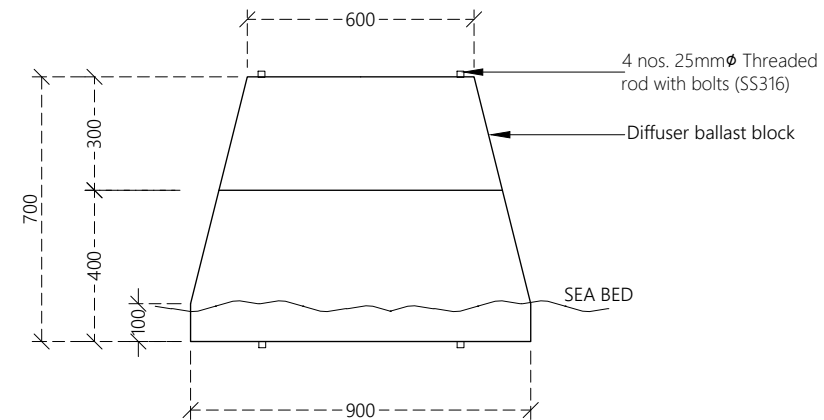
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Designed: F.I.A.	Approved: I.W.
Date: Aug 2020	SCALE (A3): NTS
Project No: EP-WS/2019/06	
Rev: R-01	Page: W-21



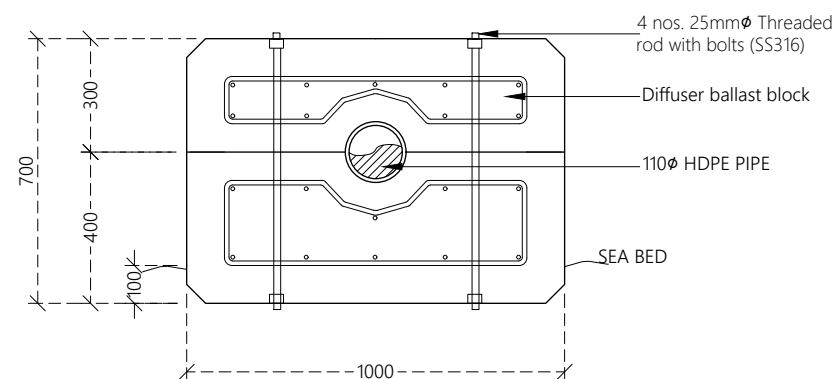
DIFFUSER BALLAST BLOCK PLAN



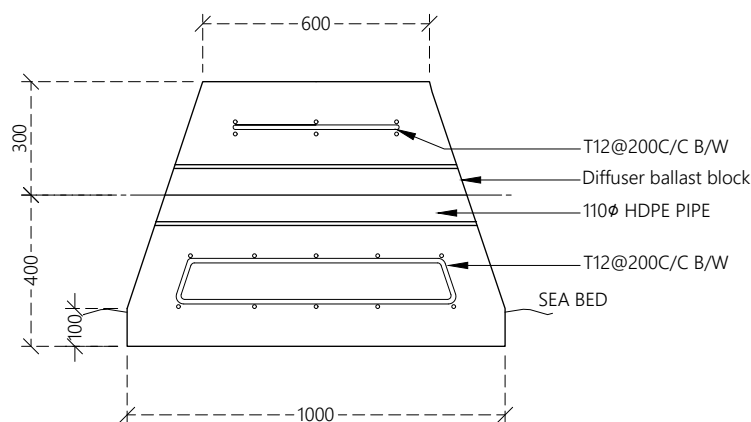
DIFFUSER BALLAST BLOCK FRONT ELEVATION - E1



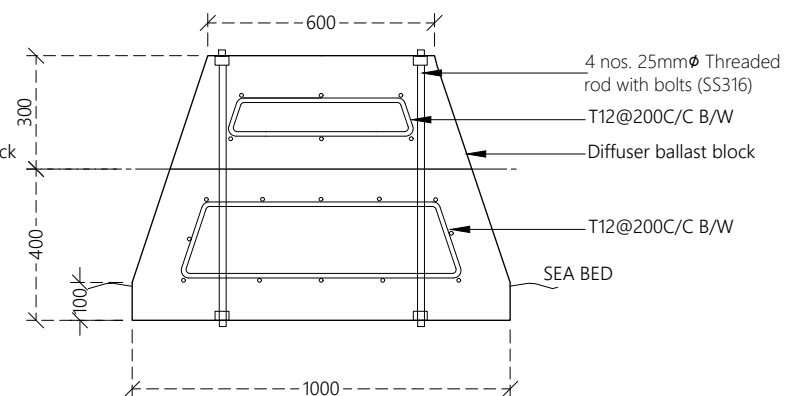
DIFFUSER BALLAST BLOCK FRONT ELEVATION - E2



DIFFUSER BALLAST BLOCK SECTION - R



DIFFUSER BALLAST BLOCK SECTION - S



DIFFUSER BALLAST BLOCK SECTION - T

DIFFUSER DETAILS

NTS



Legend

Notes:

- All backing rings for stub flanges , nuts and bolts shall be grade 316 stainless steel.
- All pipe work shall be bedded on 10mm thick neoprene rubber seat in semicircular recess matching the O.D. the pipe.
- Fabricate specific pipe clamps to provide firm clamping action according to pipe O.D.
- All structural concrete shall be of grade C40A.
- 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.
- 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.
R00	JUNE 2020	STAGE -1	PD	SBC	SD

Title:

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

Sub Title:

Water Supply System in Ga. Dhehavadhoo

Client:

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



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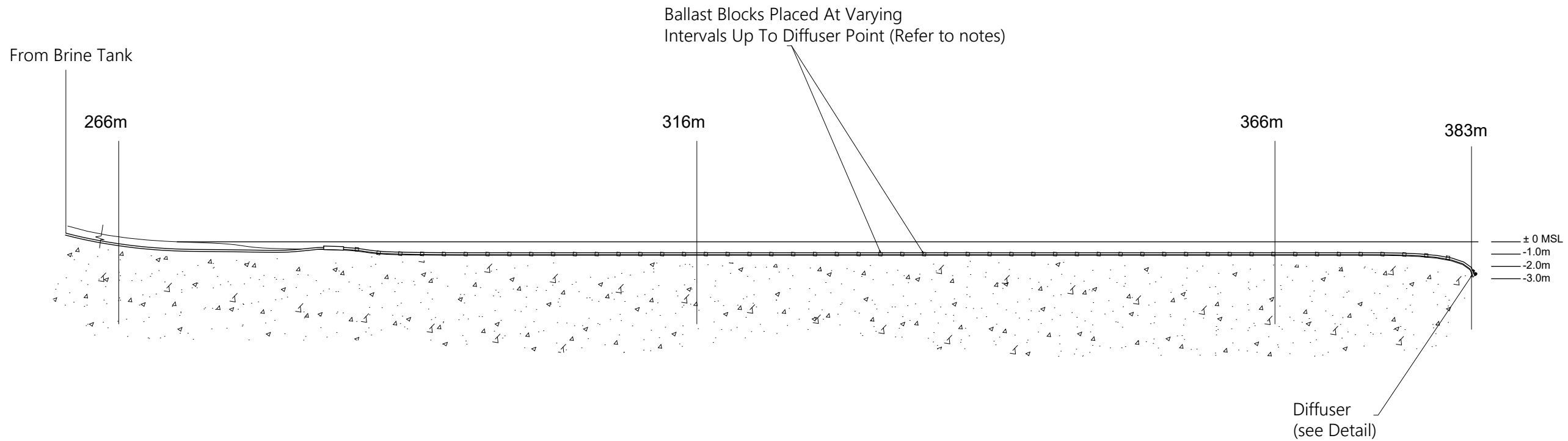
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Date: Aug 2020 SCALE (A3): 1:20

Project No: EP-WS/2019/06

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Notes:

- The contractor to undertake a detailed inspection of the outfall site to assess the profile and condition of the reef below sea level and to prepare his methodology for installation and fixing.
- 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.

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:
Water Supply System in Ga. Dhehvaadhoo

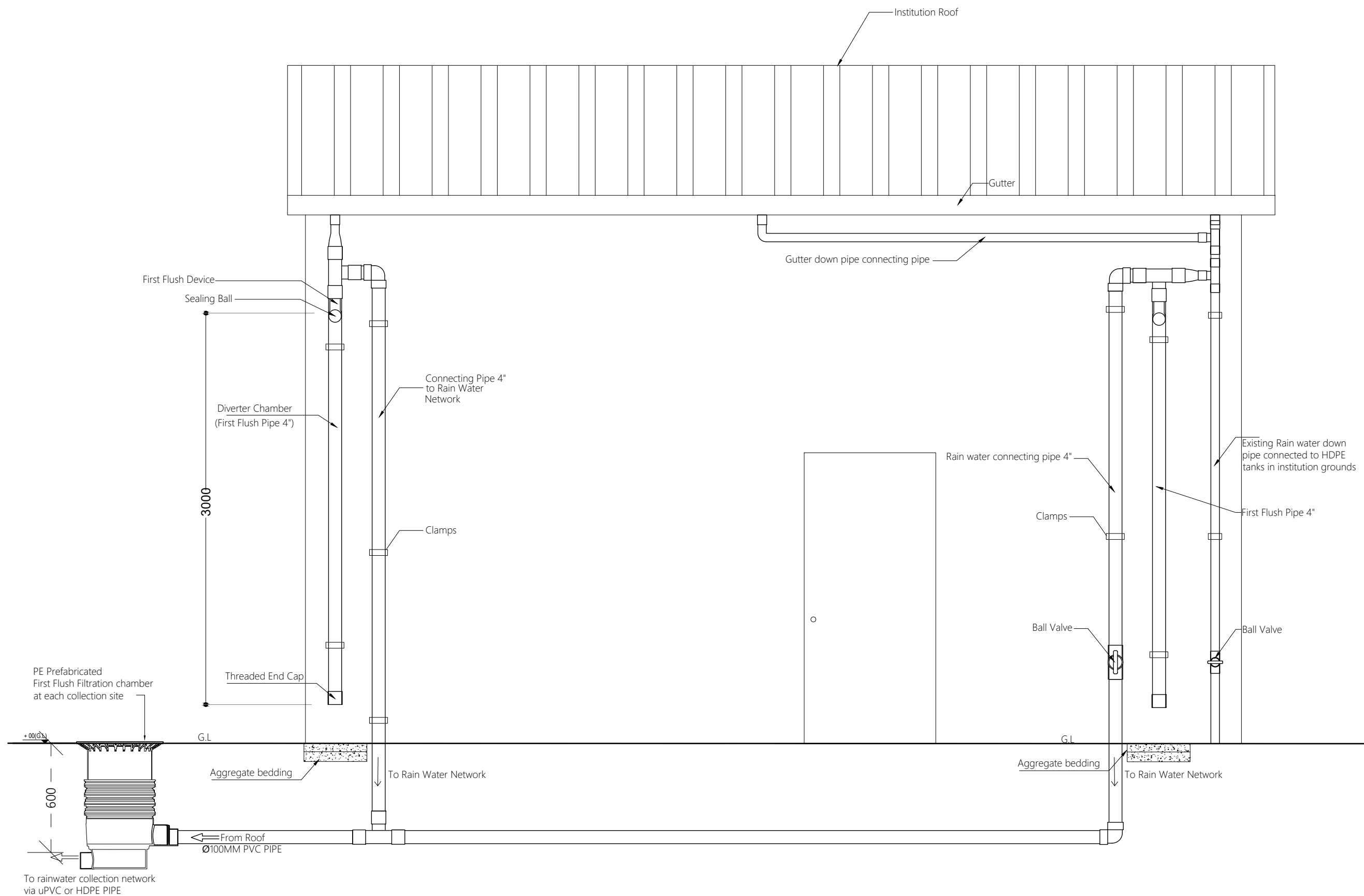
Client:
**Ministry of National Planning, Housing and
Infrastructure, Republic of Maldives**



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BRINE SEA OUTFALL DETAILS

NTS



NTS

Notes:

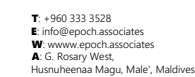
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| R00 | JUNE 2020 | STAGE -1 | PD | SBC | SI |
| REV.
NO. | Date | Revision Description | Drawn | Chkd | App |

Title:

Sub Title:

Water Supply System in Ga. Dhehvhadhoo

Client:

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

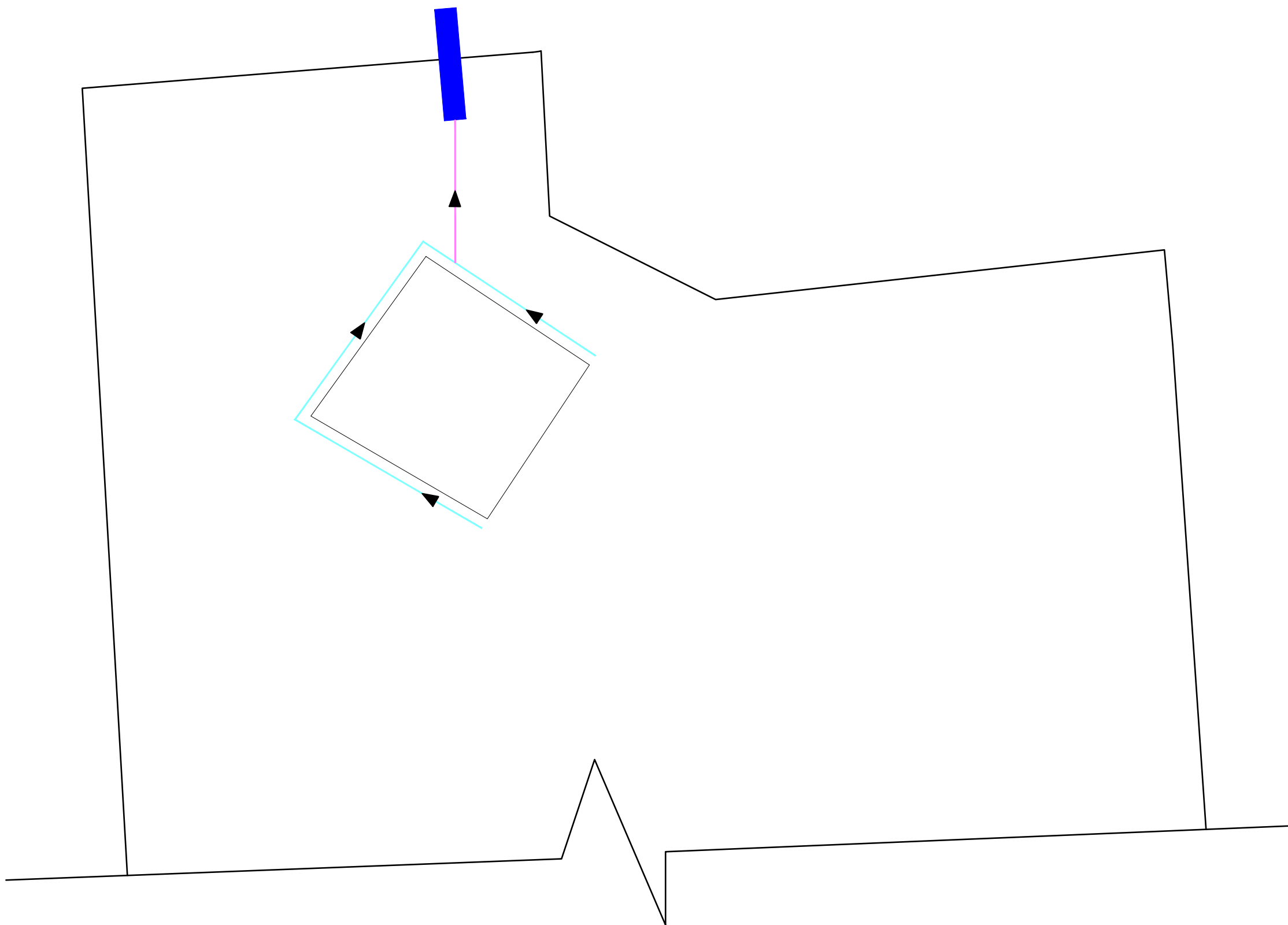
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Date: Aug 2020	SCALE (A3): 1:20
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Project No: EP-WS/2019/06

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Legend

— = PVC PIPES Ø160mm

———— = PVC PIPES Ø110mm

Notes:

Notes:
- Shop drawings to be produced based on site location for engineers approval.

-Approximate Network Length = 36m

-Approximate Gutter Length = 36m

-Approximate Pipe Network Length (Diameter 160mm) = 7m

-Approximate Pipe Network Length (Diameter 110mm) = 30m

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

Title:

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

Sub Title:

Water Supply System in Ga. Dhehvhadhoo

Client:

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

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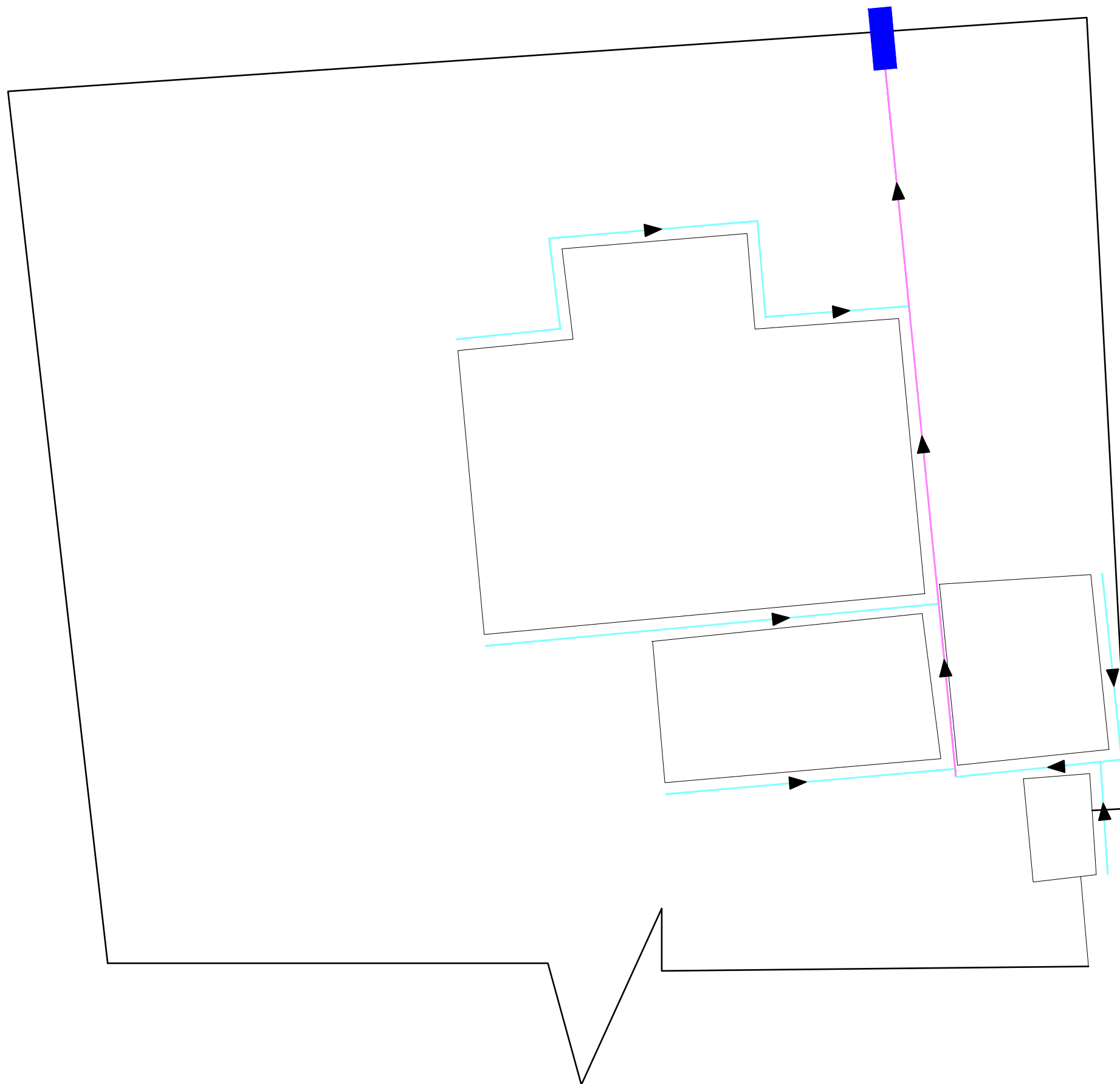
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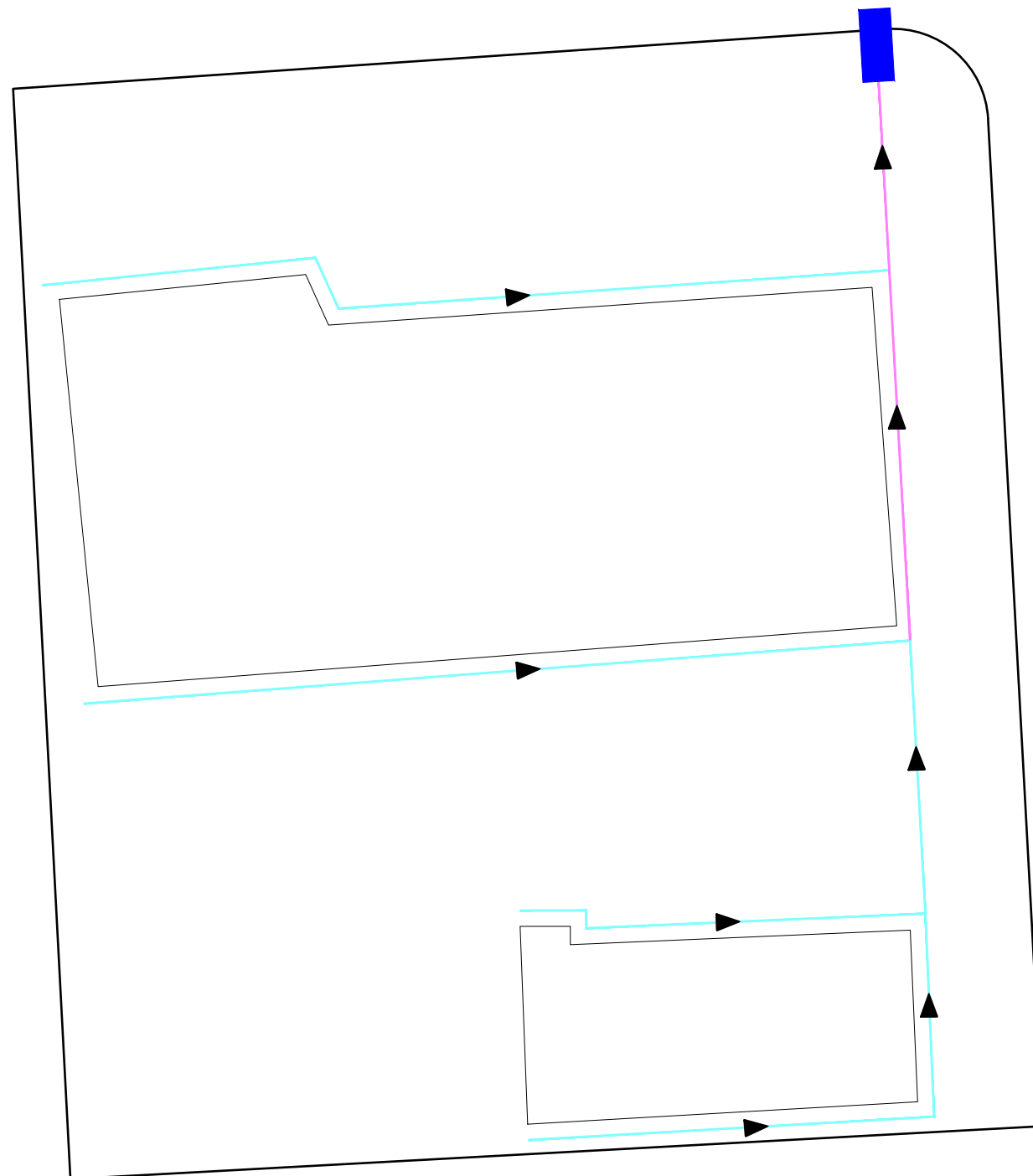
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INTERNAL NETWORK LAYOUT-ASAREE MOSQUE

1:200



INTERNAL NETWORK LAYOUT-HEALTH CENTER



Legend

———— = PVC PIPES Ø160mm

— = PVC PIPES Ø110mm

Notes:

Notes:

- Shop drawings to be produced based on site location for engineers approval.

-Approximate Network Length = 113m

-Approximate Gutter Length = 75m

-Approximate Pipe Network Length (Diameter 160mm) = 18m

-Approximate Pipe Network Length (Diameter 110mm) = 95m

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:

Water Supply System in Ga. Dhehvhadhoo

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SCALE (A3): 1:20

Project No: EP-WS/2019/06

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R-01Page:
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ARCHITECTURAL AND STRUCTURAL DRAWINGS OF

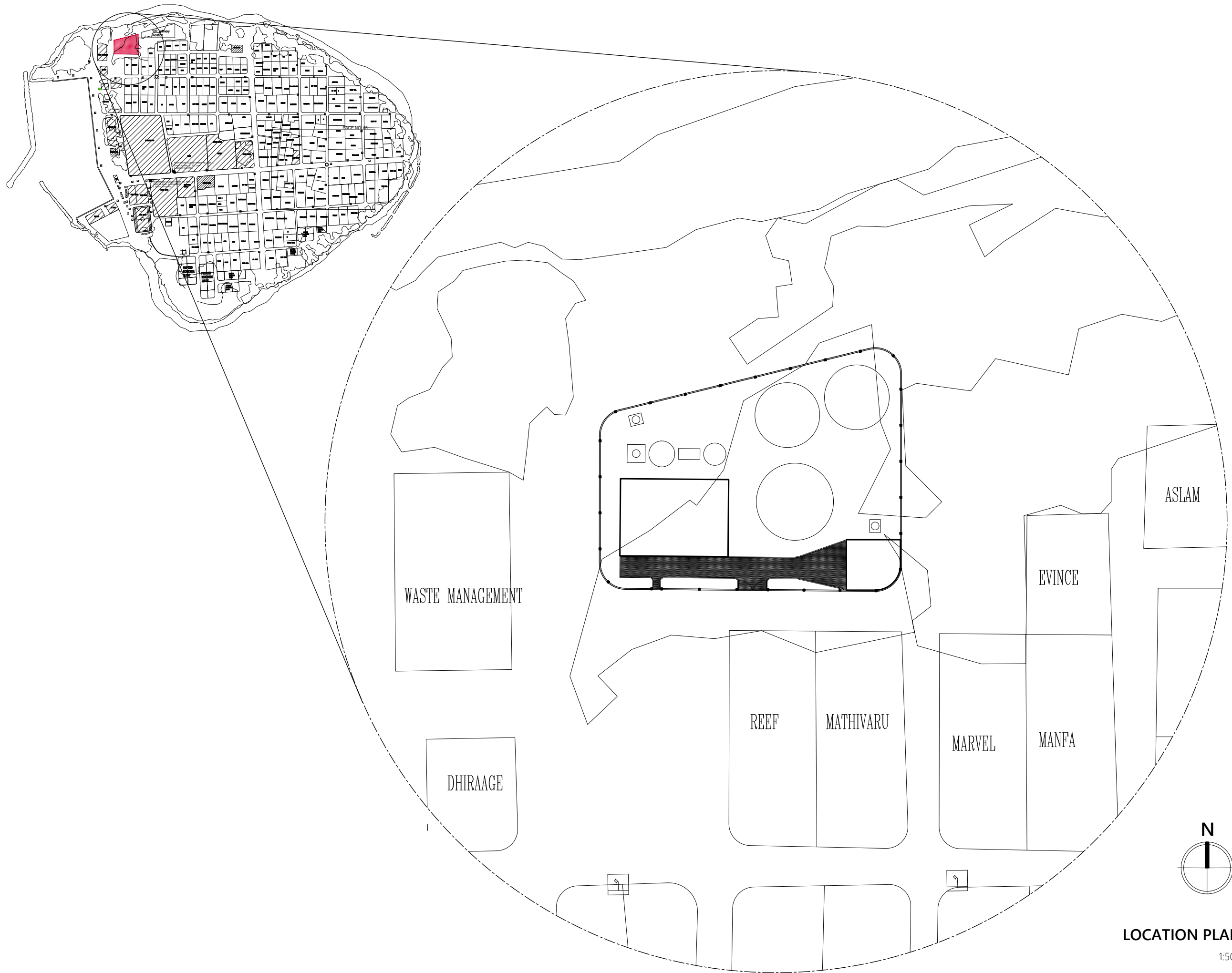
PROPOSED SINGLE STOREY BUILDING AT

RO PLANT ADMIN BUILDING AND VEHICLE SHED, GA.DHEVVADHOO

For Ministry of National Planning, Housing and Infrastructure

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Location Plan	A.1 (1)
Site Plan	A.1 (2)
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Roof Plan	A.6 (1)
Elevations	A.6 (2)
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STRUCTURAL DRAWINGS (VEHICLE SHED)	
Foundation Plan	S.4 (1)
Roof Truss Plan	S.4 (2)
Roof Framing Plan	S.D (4)



Legend

Note:

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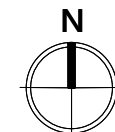
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**Consultancy Services for
Survey, Design and EIA works of
Water Supply and Sewerage
Facilities
in 6 Islands, Maldives – Package 6**
Sub Title:
Water Supply System in GA.Dhevvdhoo

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

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Date: Nov 2020	SCALE (A3): 1:500
Project No: EP-WS/2019/06	
Rev: R-01	Page: A.1 (1)



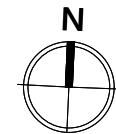
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ARCHITECTURAL AND STRUCTURAL DRAWINGS OF

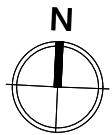
PROPOSED SINGLE STOREY BUILDING AT

RO PLANT ADMIN BUILDING, GA. DHEVVADHOO





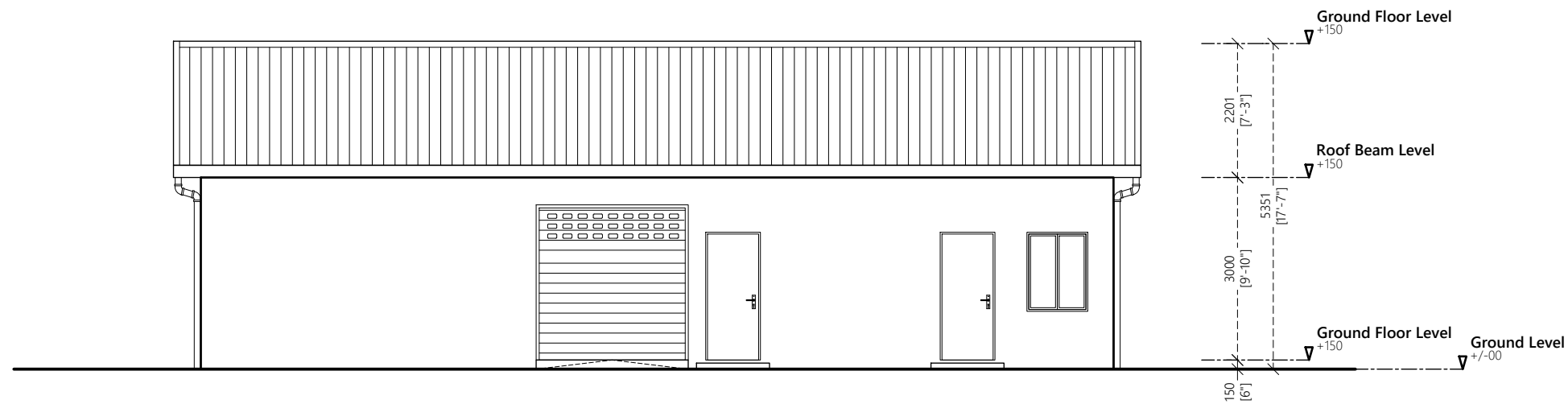
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<p>Designed: A.S.A.</p>	<p>Approved: M.H.</p>
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<p>Project No: EP-WS/2019/06</p>	
<p>Rev: R-01</p>	<p>Page: A.2 (1)</p>



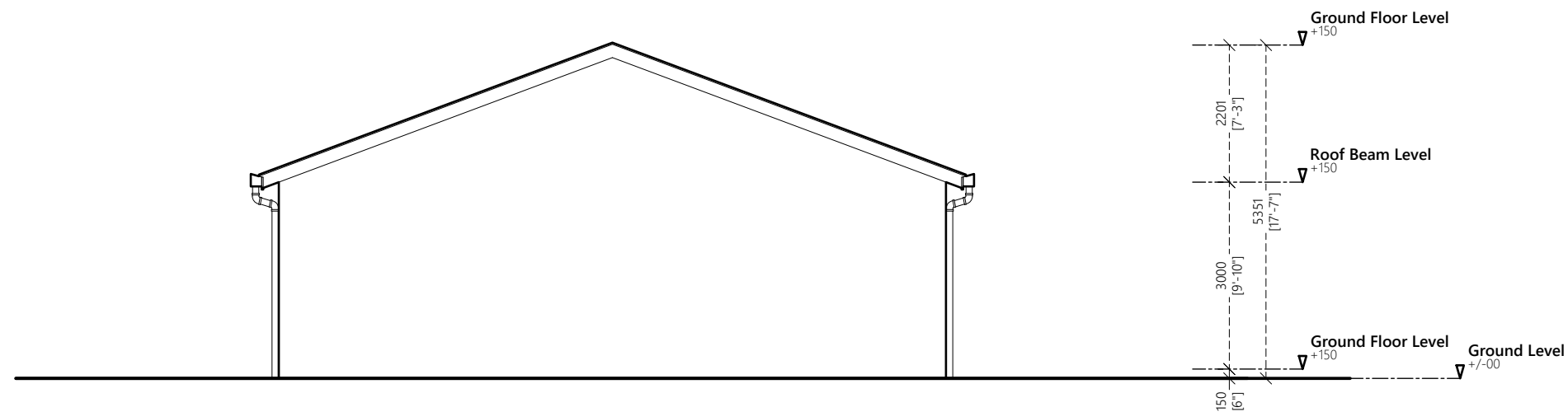
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Date: Nov 2020	SCALE (A3): 1:100
Project No: EP-WS/2019/06	
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ELEVATION E1

1:100



ELEVATION E2

1:100


Legend

Note:

R01	NOV 2020		A.S.A.	F.I.A.	M.H.
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Title:
**Consultancy Services for
Survey, Design and EIA works of
Water Supply and Sewerage
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in 6 Islands, Maldives – Package 6**
Sub Title:
Water Supply System in GA.Dhevadhoo

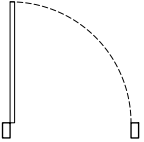
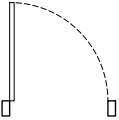
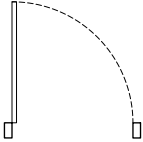
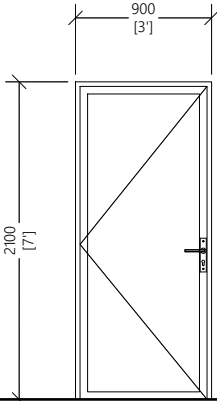
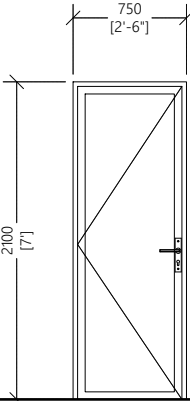
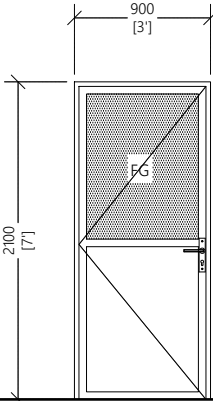
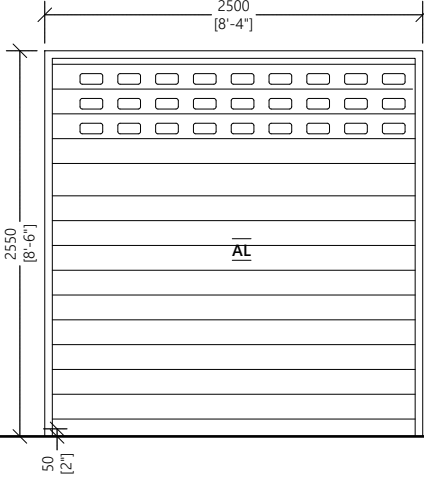
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Designed: A.S.A.	Approved: M.H.
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Project No: EP-WS/2019/06	
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R-01	A.3 (1)



1:100

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<p>Designed: A.S.A.</p>	<p>Approved: M.H.</p>
<p>Date: Nov 2020</p>	<p>SCALE (A3): 1:100</p>
<p>Project No: EP-WS/2019/06</p>	
<p>Rev: R-01</p>	<p>Page: A.4(1)</p>

Door ID	D1	D2	D3	GD1
Plan view				
Elevation view				
FFL				50 [2']
Frame material	Aluminum black powder coated	Aluminum black powder coated	Aluminum black powder coated	Aluminum framed roller shutter
Panel material	Aluminum cladding sheet	Aluminum cladding sheet	Aluminum cladding sheet & Fixed clear glass	Aluminium
Openable area	1.74	1.45	1.74	6.0

General Notes:

Dimensions shown on DWG indicate effective openings of frame

All frame depths are 100mm
All dor panel thicknesses are 35mm
All window manel thickness are 25mm
Al frame edges shal be trimmed 3mm

All wooden components should be wood stained finish

All glazing should be of 6mm unless specified

External units must comply the following weather conditions:-
Wind pressure: 200 kg/sqm
Water tightness: 25 kg/sqm

All external frames / wall joints must be sealed with silicon sealant and the wedges trimmed with 12X12mm hardwood beading fixed to frames by brass nails

All hardware should be provided for the performance of al functions of the units

- Hinges shall confirm to
- Door size more than 700X1900mm
WD: 125mm X2 sets
SD: 150mm X3 sets
 - Door size less than 700X1900mm
WD: 100mm X2 sets
SD: 125mm X2 sets

Locks shall be cylindrical with master key sets

Door knobs shall be1000mm above FFL

DOOR & WINDOW SCHEDULE -1

1:50

Legend

Note:

R01	NOV 2020		A.S.A.	F.I.A.	M.H.
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:
Consultancy Services for Survey, Design and EIA works of Water Supply and Sewerage Facilities in 6 Islands, Maldives – Package 6
Sub Title:
Water Supply System in GA.Dhevvadhoo

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



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Drawn: A.S.A.	Checked: F.I.A.
Designed: A.S.A.	Approved: M.H.
Date: Nov 2020	SCALE (A3): 1:50
Project No: EP-WS/2019/06	
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Door ID	DW 1	DW 2	W3
Plan view			
Elevation view			
FFL			
Frame material	Aluminum black powder coated	Aluminum black powder coated	Aluminum black powder coated
Panel material	Aluminum cladding sheet & Fixed clear glass	Aluminum cladding sheet & Fixed clear glass	Reflective Glass
Openable area	-	-	-

Door ID	V1
Plan view	
Elevation view	
FFL	
Frame material	Aluminum black powder coated
Panel material	Reflective Glass
Openable area	0.32

General Notes:

Dimensions shown on DWG indicate effective openings of frame

All frame depths are 100mm
All dor panel thicknesses are 35mm
All window manel thickness are 25mm
Al frame edges shal be trimmed 3mm

All wooden components should be wood stained finish

All glazing should be of 6mm unless specified

External units must comply the following weather conditions:-
Wind pressure: 200 kg/sqm
Water tightness: 25 kg/sqm

All external frames / wall joints must be sealed with silicon sealant and the wedges trimmed with 12X12mm hardwood beading fixed to frames by brass nails

All hardware should be provided for the performance of al functions of the units

Hinges shall confirm to
1. Door size more than 700X1900mm
WD: 125mm X2 sets
SD: 150mm X3 sets
2. Door size less than 700X1900mm
WD: 100mm X2 sets
SD: 125mm X2 sets

Locks shall be cylindrical with master key sets

Door knobs shall be1000mm above FFL

DOOR & WINDOW SCHEDULE -2

1:50

Legend

Note:

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Checked: F.I.A.

Designed: A.S.A.

Approved: M.H.

Date: Nov 2020

SCALE (A3): 1:50

Project No: EP-WS/2019/06

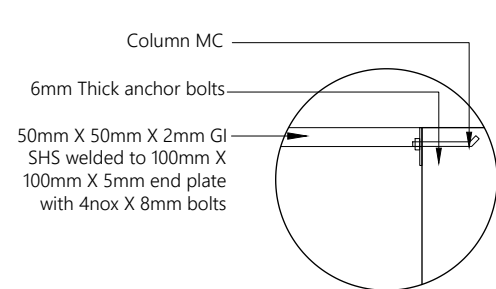
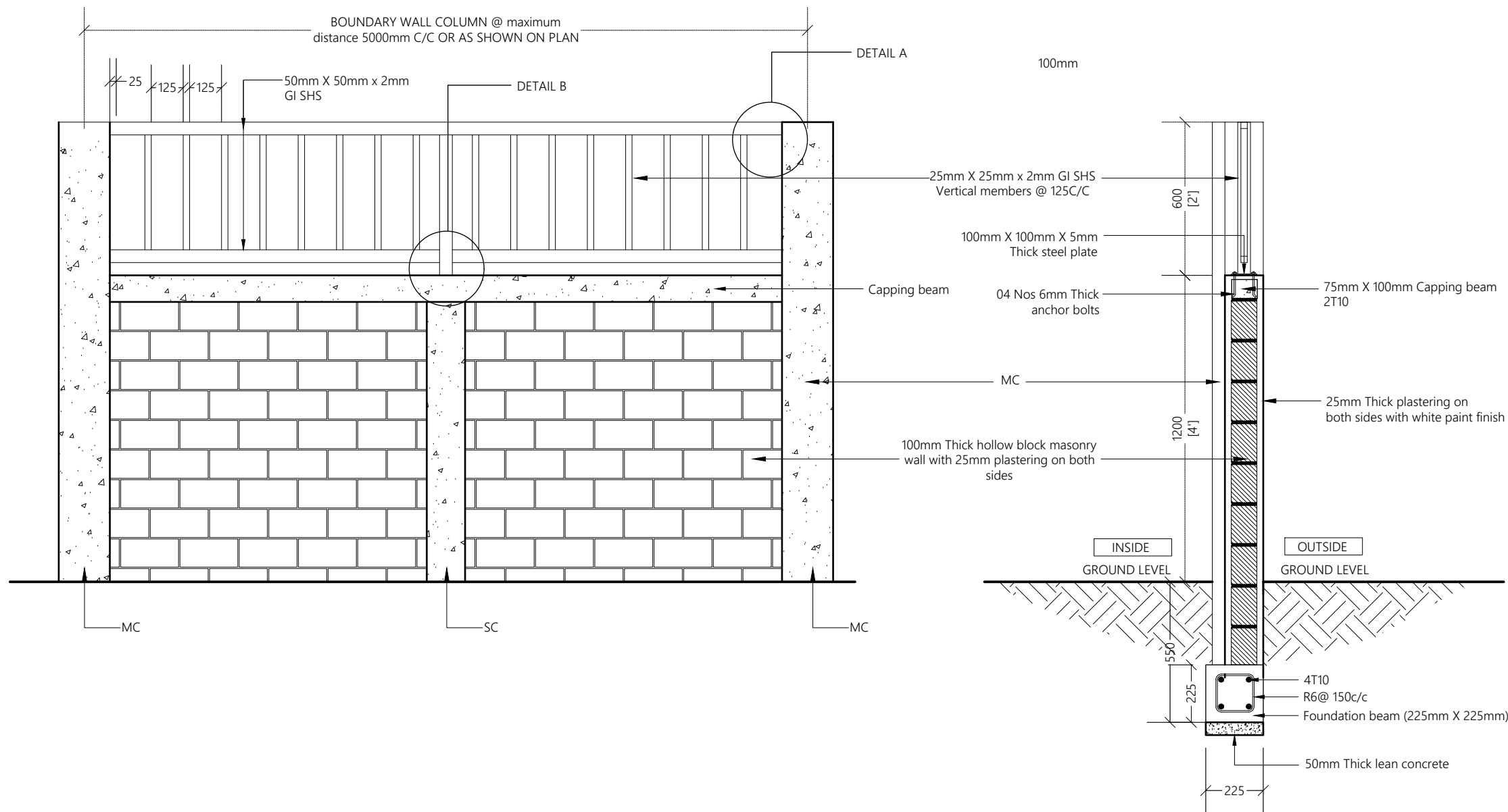
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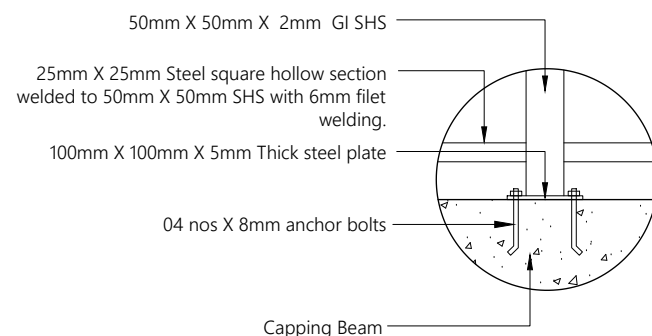
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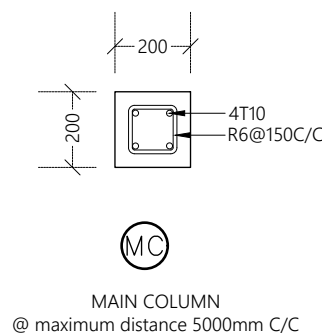
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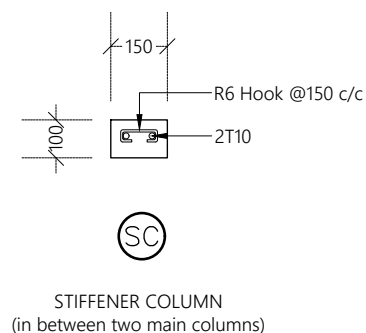
DETAIL A
1:10



DETAIL B
1:10



MAIN COLUMN
@ maximum distance 5000mm C/C



STIFFENER COLUMN
(in between two main columns)

- NOTE:**
- 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

BOUNDARY WALL DETAIL

1:20

Legend

Note:

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

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Sub Title:
Water Supply System in GA.Dhevadhoo

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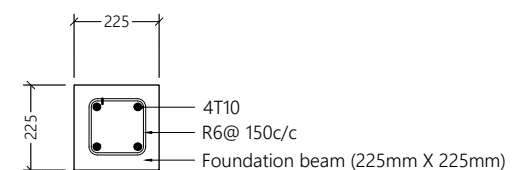
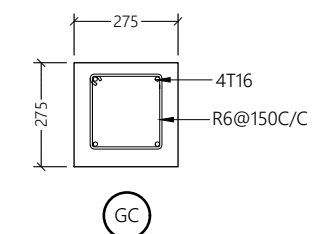
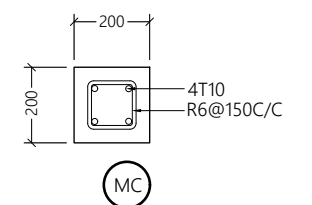
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<p>Designed: <u>A.S.A.</u></p>	<p>Approved: <u>M.H.</u></p>
<p>Date: <u>Nov 2020</u></p>	<p>SCALE (A3): <u>1:20</u></p>
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COLUMN LAYOUT PLAN

1:100

Legend

Note:

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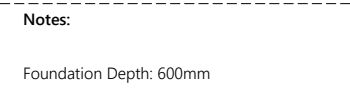
Sub Title:
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Client:

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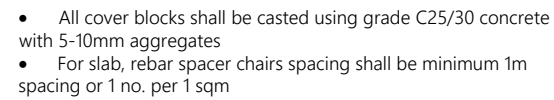
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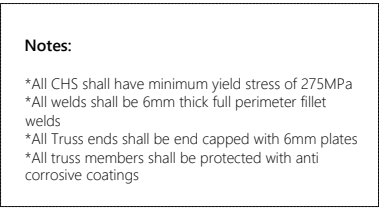
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1:50



Legend

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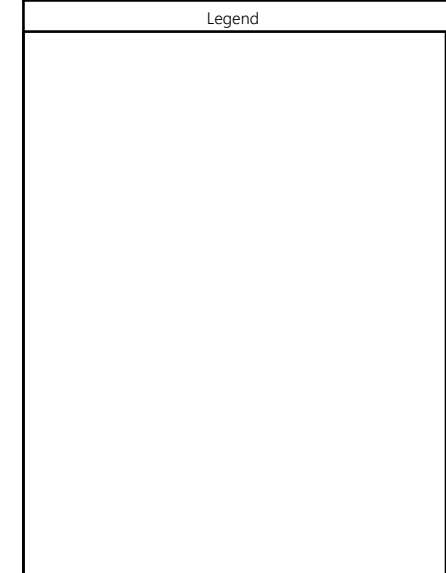
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SD (2)



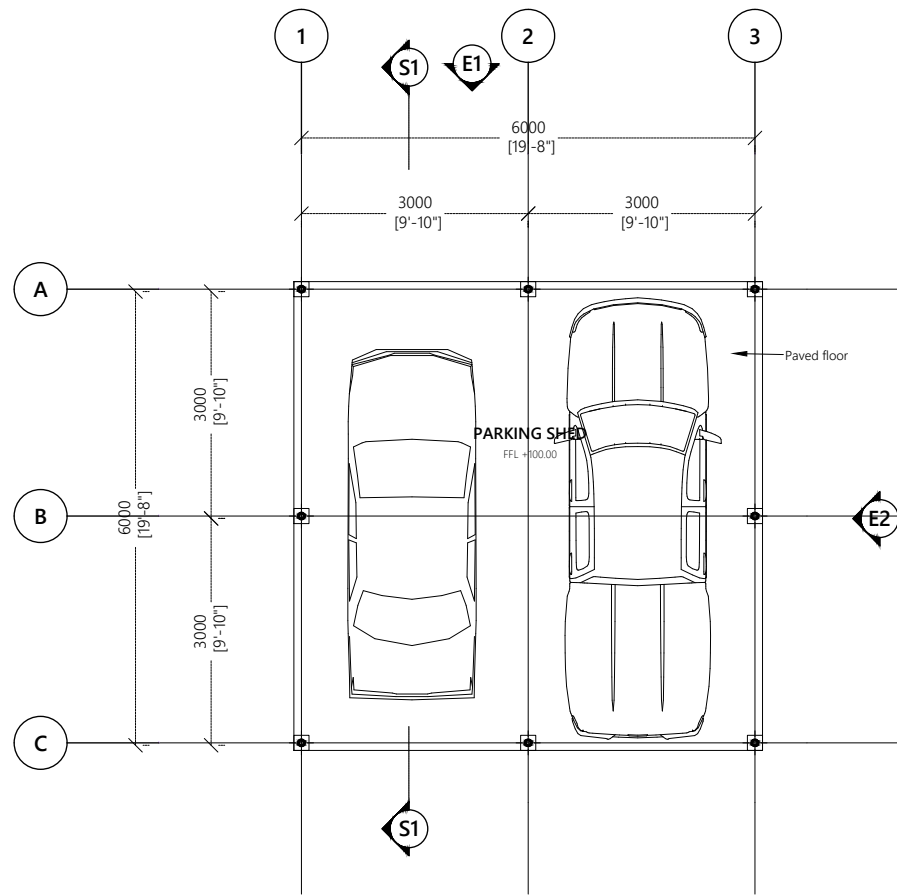
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ARCHITECTURAL AND STRUCTURAL DRAWINGS OF

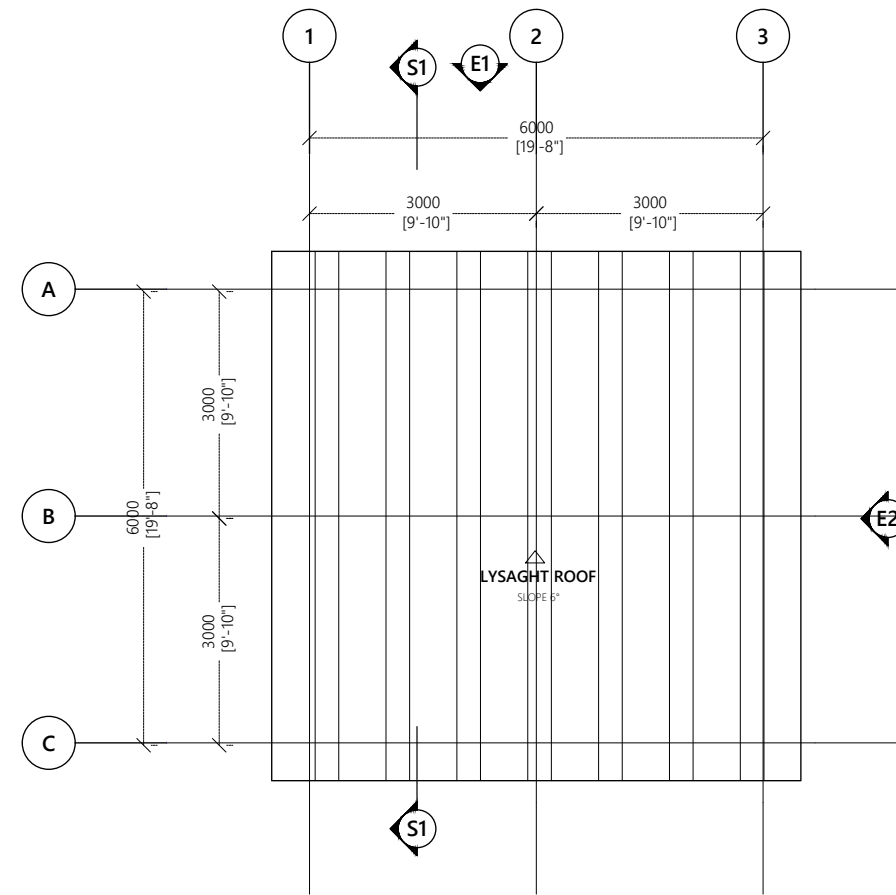
PROPOSED SINGLE STOREY BUILDING AT

RO PLANT VEHICLE SHED, GA. DHEVVADHOO



GROUND FLOOR PLAN

1:100



ROOF PLAN

1:100

Legend

Note:

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Title:



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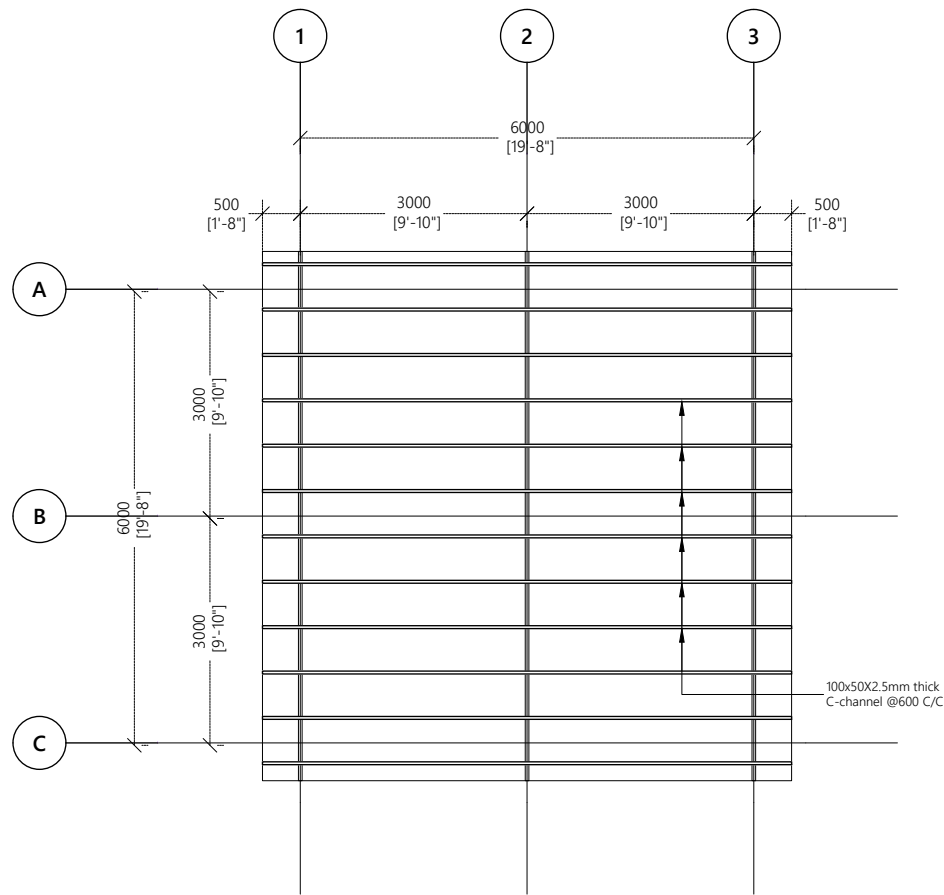
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ROOF FRAMING PLAN

1:100

Legend

Note:

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Date: Nov 2020

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BUILDING SERVICES DRAWINGS OF
PROPOSED SINGLE STOREY BUILDING AT
RO PLANT ADMIN BUILDING, GA.DHEVVADHOO

For Ministry of National Planning, Housing and Infrastructure

CONTENTS

BUILDING SERVICES DRAWINGS	
GROUND FLOOR POWER AND ACV LAYOUT	PAC-01
GROUND FLOOR FDP LAYOUT	FDP-01
GROUND FLOOR LIGHTING LAYOUT	EL-01
GROUND FLOOR PLUMBING LAYOUT	PL-01
GROUND FLOOR DRAINAGE LAYOUT	DR-01
ROOF DRAINAGE LAYOUT	DR-02
SITE LIGHTING LAYOUT	EL-02
VEHICLE PARKING AREA - PLUMBING LAYOUT	PL-02
VEHICLE PARKING AREA - DRAINAGE LAYOUT	DR-03

	13A Twin Socket
	13A Twin Socket With USB Ports
	15A Switched Socket @ H.L.
	15A Socket In Polycarbonate Box
	15A Switch @ 1200mm From F.F.L.
	13A Power Socket

HL. High Level

--- Main Incoming Cable For Power In 110Ø PVC Duct Below Ground Slab

 Telephone Outlet

 Emergency Light

M Electricity Meter

- All 13A Power Outlets For Kitchen Hood Or Under Cabinet Or Wardrobe Lights At 1800mm From F.F.L.
- All Twin Sockets At 300mm From F.F.L. Except Located At Kitchen Cupboard Area Which Shall Be At 1200mm From F.F.L.
- All Computer, TV And Telephone Points At 300mm From F.F.L.
- All 20A Switched Neon Indicator At 1200mm From F.F.L.

-  Refrigerant Pipes
-  25Ø Condensate Drain Pipe
 - ▶ 40Ø Condensate Drain Riser Pipe

CU Outdoor Condensing Unit

 Wall Mounted Exhaust Fan

 Fresh Air Intake Grille/screen



1:75

Legend

- All 13A Power Outlets For Kitchen Hood Or Under Cabinet Or Wardrobe Lights At 1800mm From F.F.L.
- All Twin Sockets At 300mm From F.F.L. Except Located At Kitchen Cupboard Area Which Shall Be At 1200mm From F.F.L.
- All Computer, TV And Telephone Points At 300mm From F.F.L.
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age*

R-01

PAC-01

Legend



DCP Extinguisher (load: 6kg) In Polycarbonate Enclosure



CO₂ Extinguisher (load: 2kg) In Polycarbonate Enclosure



H₂O Extinguisher (load: 9L) In Polycarbonate Enclosure



Manual Call Point



Smoke Detector



Heat Detector



Beacon



Sounder Bel



Fire Blanket

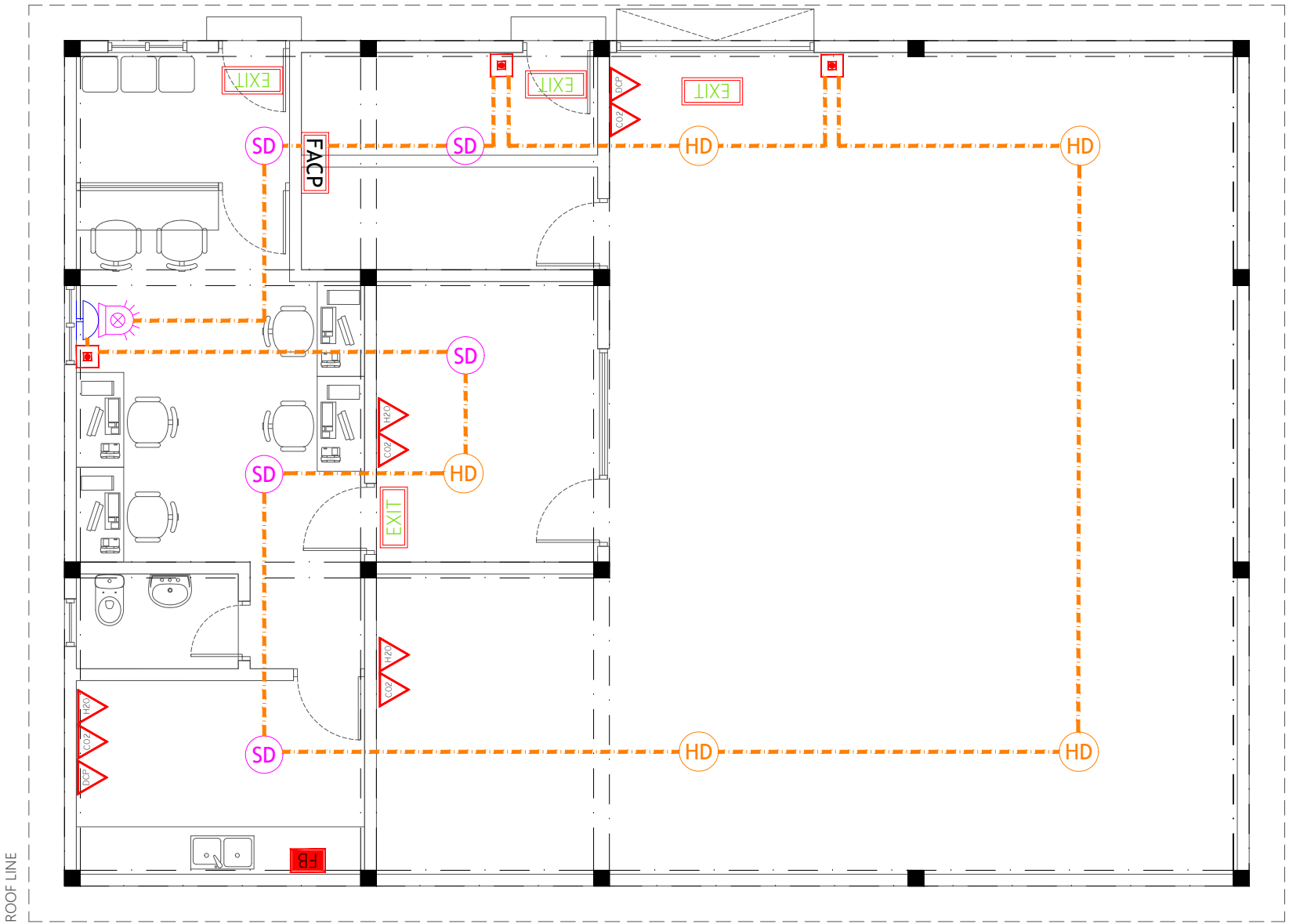
2.5mm² Fire Retardant Low Smoke (FRLS) Cables In FRLS Conduits



Fire Alarm Control Panel



Exit Sign



GROUND FLOOR FDP LAYOUT

1:75




Legend

Note:

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- Legend



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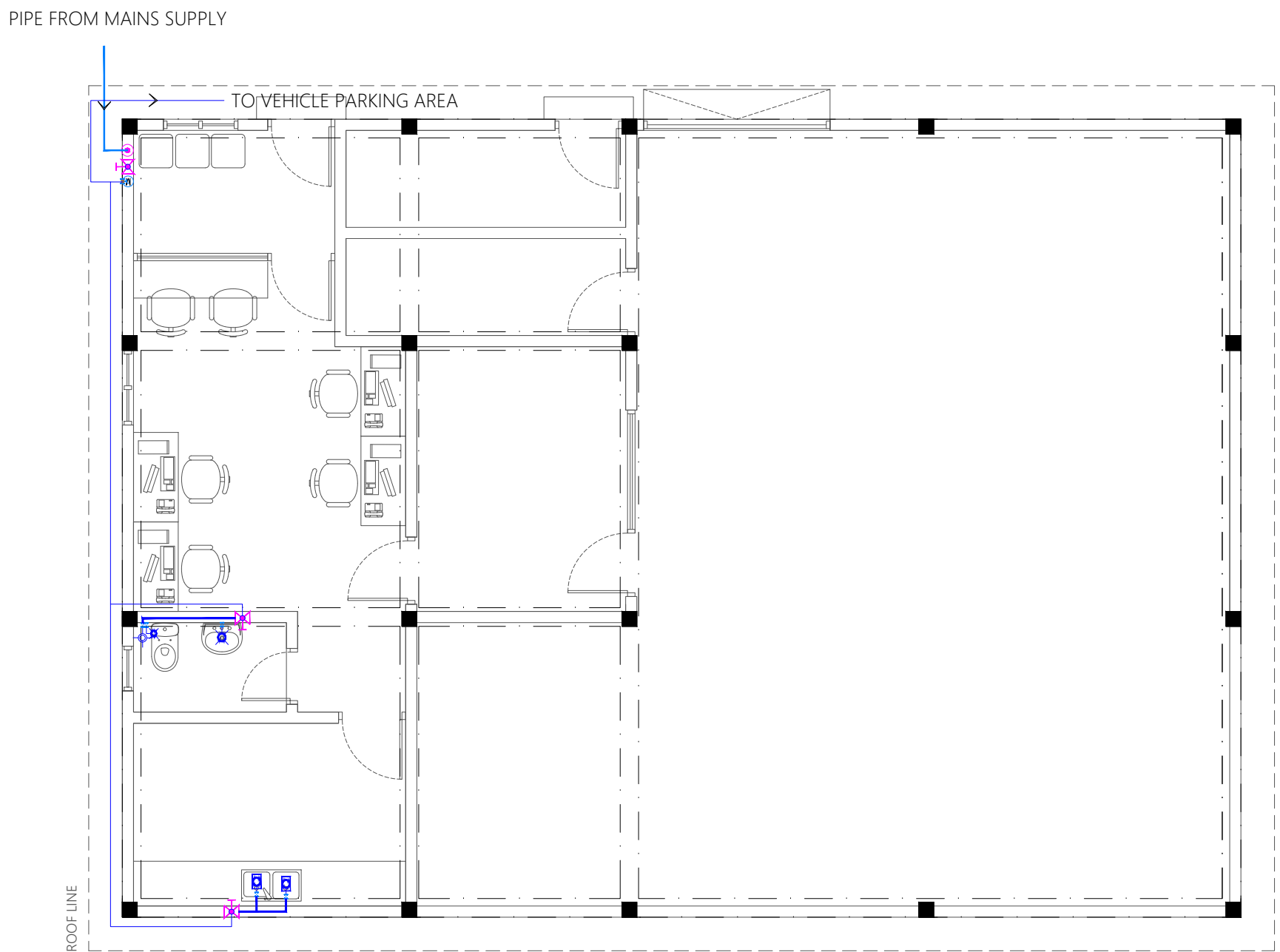
DBACK INFR
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1:75

Legend

- | | |
|--|---|
|  | 16Ø Cold Water Supply To Basin Faucet |
|  | 16Ø Cold Water Supply To Bidet Shower |
|  | 16Ø Cold Water Supply To Wall Tap |
|  | 16Ø Cold Water Supply To Cistern |
|  | Gate Valve |
|  | Rise In Wall |
|  | MWSC Meter |
|  | 25Ø Cold Water Supply Pipes Running Underground |
|  | 20Ø Cold Water Supply Pipes Running In Wall |



GROUND FLOOR PLUMBING LAYOUT

1:75



Legend

Note:

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- Notes: -

CONNECTED TO MAIN NETWORK

CONNECTED TO RAINWATER NETWORK

CONNECTED TO RAINWATER NETWORK

CONNECTED TO RAINWATER NETWORK

TO BRINE TANK

CONNECTED TO RAINWATER NETWORK

GROUND FLOOR DRAINAGE LAYOUT

1:75

Legend

Note:

- All Drainage Pipes Should Have At A Slope Of 1/150
- All Floor Drains Should Have 'P' Traps

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ge:


R-01


Legend


 Floor Drain


 Floor Gully


 82Ø Soil Pipe (uPVC Pipe)


 82Ø Soil Vent Pipe (uPVC Pipe)


 63Ø Waste Pipe (uPVC Pipe)


 63Ø Waste Vent Pipe (uPVC Pipe)


 40Ø Waste Pipe (uPVC Pipe)


 50Ø Manhole Vent Pipe (uPVC Pipe)

 110Ø Rain Water Pipes (uPVC Pipe)

 Gully Trap

 110Ø Rainwater Outlet

 Clean Out Point

 Bottle Trap


Notes: -

- All Drainage Pipes Should Have At A Slope Of 1/150
- All Floor Drains Should Have 'P' Traps



ROOF DRAINAGE LAYOUT

1:75



Legend

Note:

- All Drainage Pipes Should Have At A Slope Of 1/150
- All Floor Drains Should Have 'P' Traps

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FEEDBACK INFRA
Making Infrastructure Happen

Drawn: H.R.

Checked: M.R.

Designed: H.R.

Approved: M.R.

Date: Nov 2020

SCALE (A3): 1:75

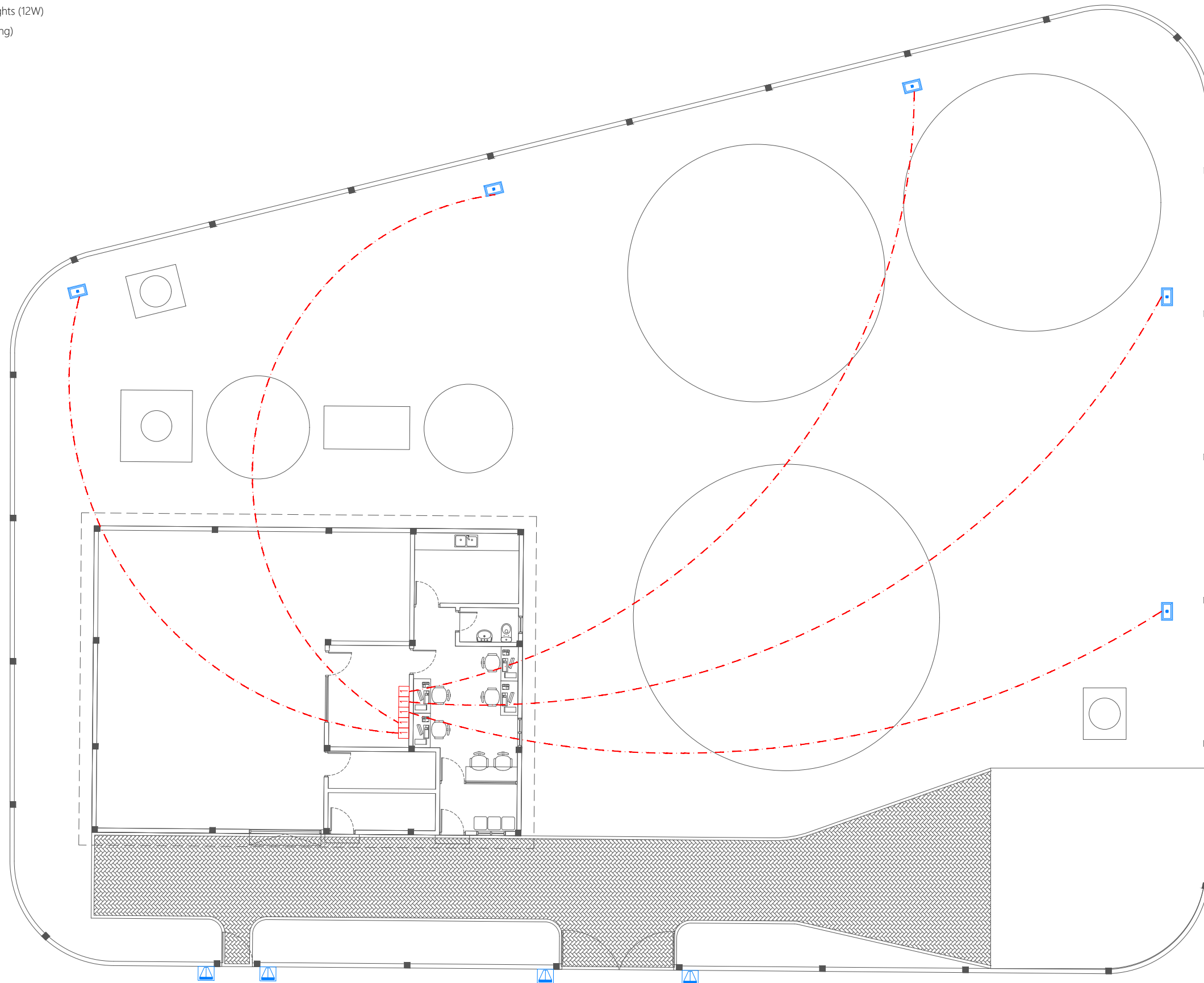
Project No: EP- WS/2019/06

Rev: R-01

Page: DR-02

1234

- 100W LED Flood Light IP65 @ 6m Light Post
- Solar Powered LED Gate Lights (12W)
- Light Switch (1 Gang - 4 Gang)



SITE LIGHTING LAYOUT

1:150

Legend

Note:

- All Drainage Pipes Should Have At A Slope Of 1/150
- All Floor Drains Should Have 'P' Traps

R01	NOV 2020		H.R.	M.R.	M.R.
REV. NO.	Date	Revision Description	Drawn	Chkd	Appd.

Title:

**Consultancy Services for
Survey, Design and EIA works of
Water Supply and Sewerage
Facilities
in 6 Islands, Maldives – Package 6**

Sub Title:

Water Supply System in GA.Dhevvdhoo

Client:

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	16Ø Cold Water Supply To Wall Tap
	Gate Valve
	Rise In Wall
	MWSC Meter
	25Ø Cold Water Supply Pipes Running Underground
	20Ø Cold Water Supply Pipes Running Along Wall




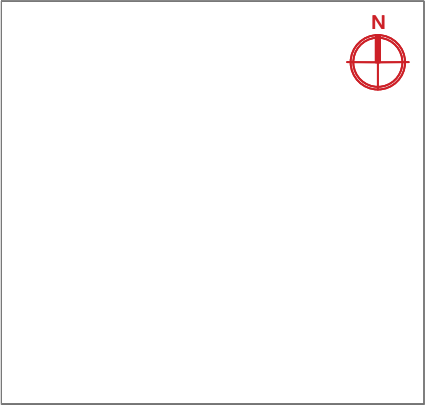
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