



LEGEND:-

SYMBOL	DESCRIPTION	QUANTITY
	PROPOSED 35sq.mm Cu/PVC/XLPE/PVC Cable	385m
	PROPOSED 70sq.mm Cu/PVC/XLPE/PVC Cable	637.4m
	EXISTING Cable	-
	DISTRIBUTION BOX	-
	EXISTING DISTRIBUTION BOX TO BE REPLACED	3 Nos.
	EXISTING DISTRIBUTION BOX TO BE MODIFIED	4 Nos.

NOTES:-

- THESE DRAWINGS ARE PRELIMINARY AND ARE FOR TENDERING PURPOSES ONLY.
- CONTRACTOR SHALL CARRY OUT DETAILED SITE SURVEY AND ENGINEERING / STUDY TO EVALUATE AND PROPOSE THE EXTENT OF REPLACEMENT / MODIFICATION REQUIRED IN THE EXISTING DISTRIBUTION NETWORK. THIS IS SUBJECT TO REVIEW AND APPROVAL BY THE EMPLOYER DURING THE ENGINEERING PHASE OF THE PROJECT.

PURPOSE OF SUBMISSION	REV	AUTHORISED BY	DATE	DRAWING TITLE	DESIGN : ESM	SCALE : N.T.S
INITIAL DOCUMENTS	A	GKH	28/03/16	NETWORK DIAGRAM FOR B05 NAIVAADHOO	DRAWN : DAI	DRW NO. : J431-GOPA-014-GR-E-D-0001-RevB
FIRST REVISION	B	GKH	17/04/16	PROJECT	LICENCE NO:	ISLAND NAME : NAIVAADHOO
				PREPARING OUTER ISLANDS SUSTAINABLE DEVELOPMENT	CLIENT: GOVERNMENT OF THE REPUBLIC OF MALDIVES	PAGE : 1/4
					DATE: : 17APR16	

NAIVAADHOO-EXISTING

From	To	No. of Runs	Cable Size (sq.mm)	Length (M)	Cable Current Capacity (A)	Cable Current Capacity After Deration (0.6) (A)	Power (kW)	Current (A)	Cable Loading (%)	Voltage (%) at DB Main Bus	Total Voltage Drop (%) in Cable Section	% Voltage Drop upto Distribution Boards	% Voltage Drop Acceptable (Less Than 5%)	Remarks
Naivaadhoo Feeder-1	DB-A1	1	4C x 35	134.2	180	108	25.78	45.93	42.50	98.50	1.50	1.50	YES	
DB-A1	DB-A2	1	4C x 35	115	180	108	20.27	36.83	34.10	97.47	1.03	2.53	YES	
DB-A2	DB-A3	1	4C x 35	101	180	108	15.02	27.67	25.60	96.79	0.68	3.21	YES	
DB-A3	DB-A4	1	4C x 35	108	180	108	9.94	18.47	17.10	96.31	0.48	3.69	YES	
DB-A4	DB-A5	1	4C x 35	103	180	108	4.94	9.25	8.60	96.08	0.23	3.92	YES	
Naivaadhoo Feeder-2	DB-B1	1	4C x 35	210	180	108	36.86	64.93	60.10	96.66	3.34	3.34	YES	
DB-B1	DB-B2	1	4C x 35	130.2	180	108	30.34	55.74	51.60	94.89	1.77	5.11	NO	
DB-B2	DB-B3	1	4C x 35	64	180	108	24.81	46.68	43.20	94.16	0.73	5.84	NO	
DB-B3	DB-B4	1	4C x 35	98.2	180	108	19.71	37.42	34.60	93.27	0.89	6.73	NO	
DB-B4	DB-B5	1	4C x 35	63.3	180	108	14.72	28.33	26.20	92.83	0.43	7.17	NO	
DB-B5	DB-B6	1	4C x 35	96.3	180	108	9.80	18.98	17.60	92.39	0.44	7.61	NO	
DB-B6	DB-B7	1	4C x 35	131.1	180	108	4.91	9.59	8.90	92.09	0.30	7.91	NO	
Naivaadhoo Feeder-3	DB-C1	1	4C x 35	200	180	108	20.49	36.60	33.90	98.22	1.78	1.78	YES	
DB-C1	DB-C2	1	4C x 35	69.2	180	108	15.01	27.48	25.40	97.76	0.46	2.24	YES	
DB-C2	DB-C3	1	4C x 35	75.4	180	108	9.96	18.34	17.00	97.43	0.33	2.57	YES	
DB-C3	DB-C4	1	4C x 35	87.1	180	108	4.96	9.18	8.50	97.23	0.19	2.77	YES	
Naivaadhoo Feeder-4	DB-D1	1	4C x 35	104	180	108	30.98	55.14	51.10	98.60	1.40	1.40	YES	
DB-D1	DB-D2	1	4C x 35	116.9	180	108	25.42	46.05	42.60	97.29	1.31	2.71	YES	
DB-D2	DB-D3	1	4C x 35	59.1	180	108	20.02	36.92	34.20	96.76	0.53	3.24	YES	
DB-D3	DB-D4	1	4C x 35	86.2	180	108	14.94	27.73	25.70	96.18	0.58	3.82	YES	
DB-D4	DB-D5	1	4C x 35	73.8	180	108	9.90	18.53	17.20	95.85	0.33	4.15	YES	
DB-D5	DB-D6	1	4C x 35	87.7	180	108	4.94	9.29	8.60	95.66	0.20	4.34	YES	
Naivaadhoo Feeder-5	DB-E1	1	4C x 35	134.2	180	108	5.02	9.04	8.40	99.71	0.29	0.29	YES	

	PURPOSE OF SUBMISSION	REV	AUTHORISED BY	DATE	DRAWING TITLE NETWORK DIAGRAM FOR B05 NAIVAADHOO	DESIGN : ESM	SCALE : N.T.S
	INITIAL DOCUMENTS	A	GKH	28/03/16		DRAWN : DAI	DRW NO. : J431-GOPA-014-GR-E-D-0001-RevB
	FIRST REVISION	B	GKH	17/04/16	PROJECT PREPARING OUTER ISLANDS SUSTAINABLE DEVELOPMENT	CLIENT: GOVERNMENT OF THE REPUBLIC OF MALDIVES	ISLAND NAME : NAIVAADHOO
						DATE: : 17APR16	PAGE : 2/4

NAIVAADHOO-PROPOSED

From	To	No. of Runs	Cable Size (sq.mm)	Length (M)	Cable Current Capacity (A)	Cable Current Capacity After Deration (0.6) (A)	Power (kW)	Current (A)	Cable Loading (%)	Voltage (%) at DB Main Bus	Total Voltage Drop (%) in Cable Section	% Voltage Drop upto Distribution Boards	% Voltage Drop Acceptable (Less Than 5%)	Remarks
Naivaadhoo Feeder-1	DB-A1	1	4C x 35	134.2	180	108	25.778	45.93	42.5	98.5	1.5	1.50	YES	
DB-A1	DB-A2	1	4C x 35	115	180	108	20.268	36.83	34.1	97.47	1.03	2.53	YES	
DB-A2	DB-A3	1	4C x 35	101	180	108	15.021	27.67	25.6	96.79	0.68	3.21	YES	
DB-A3	DB-A4	1	4C x 35	108	180	108	9.938	18.47	17.1	96.31	0.48	3.69	YES	
DB-A4	DB-A5	1	4C x 35	103	180	108	4.941	9.246	8.6	96.08	0.23	3.92	YES	
Naivaadhoo Feeder-2	DB-B1	1	4C x 70	210	265	159	36.076	64.34	40.5	98.2	1.8	1.80	YES	Existing 4C x 35 sq.mm LV Cable Replaced with New 4C x 70 sq.mm LV Cable
DB-B1	DB-B2	1	4C x 70	130.2	265	159	30.294	55.24	34.7	97.24	0.96	2.76	YES	Existing 4C x 35 sq.mm LV Cable Replaced with New 4C x 70 sq.mm LV Cable
DB-B2	DB-B3	1	4C x 70	64	265	159	25.01	46.17	29	96.85	0.39	3.15	YES	Existing 4C x 35 sq.mm LV Cable Replaced with New 4C x 70 sq.mm LV Cable
DB-B3	DB-B4	1	4C x 70	98.2	265	159	19.953	37.01	23.3	96.37	0.48	3.63	YES	Existing 4C x 35 sq.mm LV Cable Replaced with New 4C x 70 sq.mm LV Cable
DB-B4	DB-B5	1	4C x 35	63.3	180	108	14.912	27.81	25.8	95.94	0.43	4.06	YES	
DB-B5	DB-B6	1	4C x 35	96.3	180	108	9.906	18.58	17.2	95.51	0.43	4.49	YES	
DB-B6	DB-B7	1	4C x 35	131.1	180	108	4.936	9.312	8.6	95.21	0.3	4.79	YES	
Naivaadhoo Feeder-3	DB-C1	1	4C x 35	200	180	108	20.488	36.6	33.9	98.22	1.78	1.78	YES	
DB-C1	DB-C2	1	4C x 35	69.2	180	108	15.012	27.48	25.4	97.76	0.46	2.24	YES	
DB-C2	DB-C3	1	4C x 35	75.4	180	108	9.957	18.34	17	97.43	0.33	2.57	YES	
DB-C3	DB-C4	1	4C x 35	87.1	180	108	4.96	9.177	8.5	97.23	0.19	2.77	YES	
Naivaadhoo Feeder-4	DB-D1	1	4C x 35	104	180	108	30.978	55.14	51.1	98.6	1.4	1.40	YES	
DB-D1	DB-D2	1	4C x 35	116.9	180	108	25.415	46.05	42.6	97.29	1.31	2.71	YES	
DB-D2	DB-D3	1	4C x 35	59.1	180	108	20.017	36.92	34.2	96.76	0.53	3.24	YES	
DB-D3	DB-D4	1	4C x 35	86.2	180	108	14.935	27.73	25.7	96.18	0.58	3.82	YES	
DB-D4	DB-D5	1	4C x 35	73.8	180	108	9.897	18.53	17.2	95.85	0.33	4.15	YES	
DB-D5	DB-D6	1	4C x 35	87.7	180	108	4.937	9.286	8.6	95.66	0.2	4.34	YES	
Naivaadhoo Feeder-5	DB-E1	1	4C x 35	134.2	180	108	5.015	9.035	8.4	99.71	0.29	0.29	YES	

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NAIVAADHOO-PROPOSED PV FEEDER

From	To	No. of Runs	Cable Size (sq.mm)	Length (M)	Losses (%)
POWER HOUSE	DB-A1	1	4C X35	134	1.26%
DB-A1	SCHOOL-PV	1	4C X35	65	
DB-A2	DB-A3	1	4C X35	101	
DB-A3	DB-A4	1	4C X35	108	
DB-A4	DB-A5	1	4C X35	103	
POWER HOUSE	DB-D1	1	4C X35	104	1.19%
DB-D1	POWER HOUSE-PV	1	4C X35	125	
DB-D1	DB-D2	1	4C X35	117	
DB-D2	DB-D3	1	4C X35	59	
DB-D3	DB-D4	1	4C X35	86	
DB-D4	DB-D5	1	4C X35	74	
DB-D5	DB-D6	1	4C X35	88	0.92%
POWER HOUSE	DB-E1	1	4C X70	134	
DB-E1	COUNCIL-PV	1	4C X35	65	
DB-E1	HEALTH CENTRE-PV	1	4C X35	65	
DB-E1	MOSQUE-PV	1	4C X35	65	

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