ADDENDUM 2 - TP#5C.3- Electrical Sheet Drawings

ELECTRICAL GENERAL NOTES:

1. ALL WORKS TO BE PERFORMED IN ACCORDANCE WITH THE BERMUDA BUILDING CODE, WITH PARTICULAR ATTENTION TO NFPA 70 (NEC 2011) AND NFPA 72 FOR LIFE SAFETY.
2. THE DRAWINGS INDICATE SIZE AND GENERAL LOCATION OF WORK. EXACT LOCATION AND ELEVATION OF ALL EQUIPMENT SHALL BE FIELD COORDINATED PRIOR TO COMMENCEMENT OF WORK.
3. ANY DAMAGES TO EXISTING STRUCTURAL WALLS, FLOORS, CEILINGS, ENTRY DOORS, ETC CAUSED BY THE CONTRACTOR SHALL BE REPAIRED AT NO ADDITIONAL EXPENSE.
4. ALL ELECTRICAL POWER SHALL BE DISCONNECTED PRIOR TO START OF DEMOLITION.
5. PANEL DIRECTORIES SHALL BE PROVIDED FOLLOWING COMPLETITION OF WORK.
6. ELECTRICAL PANEL COVERS SHALL NOT BE LEFT OFF AT ANY TIME UNLESS MEN ARE WORKING ON SITE.
7. ELECTRICAL CONTRACTOR SHALL VISIT AND EXAMINE THE EXISTING AREAS AFFECTED BY THE SCOPE OF WORK AND BECOME FAMILIAR WITH THE EXISTING CONDITIONS. CONTRACTOR SHALL INCLUDE ALL FORESEEN DIFFICULTIES INTO PRICING.
8. ALL EQUIPMENT CALLED TO BE DEMOLISHED OR REMOVED SHALL HAVE ELECTRICAL CIRCUITING CUT BACK TO SOURCE UNLESS OTHERWISE NOTED.
9. ALL RELOCATED ELECTRICAL EQUIPMENT SHALL HAVE ELECTRICAL CONDUIT AND WIRE EXTENDED AS REQURIED TO NEW EQUIPMENT LOCATION UNLESS OTHERWISE NOTED.
10. ALL EQUIPMENT AND MATERIALS SHALL BE NEW UNLESS OTHERWISE NOTED.
11. ALL INSTALLATION OF PIPE, FIXTURES & EQUIPMENT SHALL BE AS PER THE MANUFACTURER'S RECOMMENDED INSTALLATION PRACTICE
12. PIPE ENDS SHALL BE CUT SQUARE AND DEBURRED INSIDE & OUTSIDE BEFORE BEING FITTED & BUSHINGS SHALL BE USED AT BOX ENTRIES.
13. SERVICE ACCESS DOORS SHALL BE PROVIDED FOR ALL FIXTURES, PIPE FITTINGS & EQUIPMENT WHERE REQUIRED FOR SERVICING.
14. ALL RECEPTACLES PROVIDED SHALL BE GFI-TYPE UNLESS OTHERWISE NOTED
15. PROVIDE & INSTALL CONDUIT FOR LOW VOLTAGE CIRCUITS AS SHOWN.
16. ALL CONDUITS, WIRING AND ALL OTHER ASSOCIATED ELECTRICAL EQUIPMENT SHALL BE PROVIDED EXCEPT WHERE SPECIFIED. ALL CONDUIT SHALL BE PVC TYPE. MINIMUM CONDUIT SIZE SHALL BE 1/2".
17. COORDINATE WITH OTHER TRADES FOR EXACT FINAL LOCATIONS OF ALL EQUIPMENT REQUIRING ELECTRICAL FEEDERS. COORDINATION SHALL HAPPEN PRIOR TO COMMENCEMENT OF WORK
18. ALL RELATED CIVIL WORKS SHALL BE PROVIDED BY CIVIL TRADES.
19. ALL DIMENSIONS ARE IN FEET & INCHES UNLESS OTHERWISE STATED.
20. PENETRATIONS THROUGH FIRE RATED PARTITIONS (INCLUDING FLOOR SLABS) SHALL BE TREATED WITH APPROPRIATE FIRE STOPPING MEASURES AS REQUIRED BY THE BUILDING CODE.
21. THESE DRAWINGS ARE BASED ON CURRENT KNOWLEDGE. CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES ON SITE TO ENSURE COMPATIBILITY WITH SITE CONDITIONS.
22. ITEMS OF MATERIAL & EQUIPMENT NOT SPECIFICALLY NOTED AS PROVIDED BT BLDC ON THE DRAWINGS OR MENTIONED IN THE SPECIFICATIONS BUT WHICH ARE NECESSARY TO MAKE A COMPLETE & OPERATING INSTALLATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR
23. ELECTRICAL CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS FOLLOWING COMPLETION OF WORK.
24. AT COMPLETION OF PROJECT, ELECTRICAL CONTRACTOR SHALL PERFORM A TEST OF THE EMERGENCY LIGHTING SYSTEM. CONFIRMATION OF FUNCTIONALITY SHALL BE PROVIDED TO THE ENGINEER OF RECORD.

MECHANICAL POWER NOTES:

1. THE INTENTION OF THESE ELECTRICAL DRAWINGS ARE TO SHOW THE GENERAL LAYOUT OF MECHANICAL AND/OR PLUMBING EQUIPMENT AND RESPECTIVE ELECTRICAL CONNECTIONS WITH ASSOCIATED DEVICES. THESE DRAWINGS SHALL BE UTILIZED FOR CIRCUITING PURPOSES ONLY.
2. CIRCUITS ARE DESIGNATED BY NUMBER SHOWN ADJACENT TO EQUIPMENT OR BY PANEL SCHEDULE. WIRING IS ONLY SHOWN UNDER SPECIAL CIRCUMSTANCES. ALL CONDUIT, WIRE, BOXES, AND FITTINGS REQUIRED TO ENERGIZE THE EQUIPMENT SHOWN IN THE PANEL SCHEDULES SHALL BE INCLUDED IN BID PRICING.
3. CIRCUIT NUMBERS ARE FOR REFERENCE ONLY. FIELD CONDITIONS PREVAIL.
4. ELECTRICAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PRIOR TO INSTALLATION OF EQUIPMENT FOR ENGINEER REVIEW AND APPROVAL. REFER TO SPECIFICATIONS FOR SHOP DRAWING LIST.

CONDUIT & CONDUCTOR SCHEDULE NOTES:

1. TABLES AS SHOWN ARE MEANT TO ILLUSTRATE A POINT-TO-POINT WIRING DIAGRAM OF LINE AND LOW VOLTAGE EQUIPMENT FOR REFERENCE ONLY. MANUFACTURERS INSTALLATION INSTRUCTIONS & FIELD CONDITIONS PREVAIL
2. ALL FIBER CONDUITS SHOWN ARE REPRESENTATIVE OF THE FIBER-IN AND FIBER-OUT OF THE ASSOCIATED PUMP STATION AND CORRESPONDS TO THE OVERALL TELEMETRY FIBER PLAN ON TENDER PACKAGE 4 DRAWING SET, E5005. SCOPE IS ILLUSTRATIVE OF CONDUIT PATHS ONLY, FIBER CABLE TO BE PART OF SEPARATE PACKAGE
3. AWARDED CONTRACTOR SHALL UTILIZE SITE PLAN DRAWINGS TO APPROXIMATE ALL DISTANCES FOR CONDUIT AND WIRE AND SHALL INCLUDE CALCULATED RUNS IN BID PRICE.
4. SCADA I/O WITHIN EACH PUMP PACKAGE CONTROL PANEL SHALL BE PURCHASED WITH SUFFICIENT QUANTITY OF ANALOG & DIGITAL I/O POINTS TO ACCOMODATE EQUIPMENT SHOWN. CONTROL PANELS SHALL BE PURCHASED WITH SERIAL FIBER I/O FOR FUTURE FIBER CONNECTION

RES 3:
- GENERAC #SD080
- 80kVA, 60HZ, 120/208V 3PH
- CONTRACTOR SHALL PROVIDE 10'x4' CONCRETE PAD FOR MOUNTING OF GENERATOR. REFER TO C5408 FOR EXACT LOCATION

RES 9:
- GENERAC PROTECTOR SERIES #RD015
- 15kVA, 60HZ, 120/208V 3PH
- CONTRACTOR SHALL PROVIDE 7'x4' CONCRETE PAD FOR MOUNTING OF GENERATOR. REFER TO C5404 FOR EXACT LOCATION

2 / E5001 GENERATOR SPECIFICATIONS
1/2" = 1'-0"

ELECTRICAL ONE-LINE NOTES:

1. THE INTENTION OF THE ELECTRICAL ONE-LINE IS TO ILLUSTRATE A POINT-TO-POINT DIAGRAM OF THE ELECTRICAL SERVICE FOR CONTRACTORS REFERENCE. IT IS NOT AN EXHAUSTIVE DIAGRAM OF ALL ELECTRICAL CONNECTIONS WITHIN THE SCOPE OF WORK.
2. ALL FEEDER SIZING SHALL BE DICTATED BY THE RELEVANT CONDUIT SCHEDULE.
3. ALL DISTANCE TAKE-OFFS FOR EQUIPMENT SHALL BE TAKEN FROM RELEVANT PLAN-VIEW DRAWINGS SHOWING EQUIPMENT LAYOUT
4. ALL CONNECTIONS SHOWN SHALL BE IN RIGID PVC CONDUIT UNLESS OTHERWISE NOTED

ELECTRICAL LEGEND

	1'X4' LINEAR LED LIGHTING FIXTURE
	LIGHT W/ EMERGENCY BATTERY (MIN. 90 MINUTES)
S	SMOKE DETECTOR
H	HEAT DETECTOR
ABC	ABC FIRE EXTINGUISHER
LC	SIEMENS HYDRORANGER 200HMI CONTROLLER
DL	ELECTRIC LOCK
	INTRUSION SWITCH
$	LIGHT SWITCH
M	BELCO METER
FTU	BELCO FEEDER TERMINAL UNIT

ONE LINE LEGEND

	EXISTING TO REMAIN/RELOCATE
	EXISTING TO REMOVE
	NEW

ABBREVIATIONS

RM	EXISTING TO REMOVE
RE	EXISTING TO RELOCATE
N	NEW
E	EXISTING TO REMAIN
EP	ELECTRICAL PANEL
KVA	KILA-VOLT AMPERES
KW	KILOWATTS
W	WATTS
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUG ONLY
MCC	MOTOR CONTROL CENTER
VFD	VARIABLE FREQUENCY DRIVE
EM	EMERGENCY
XFMR	TRANSFORMER
A	AMPERE
V	VOLT
ATS	AUTOMATIC TRANSFER SWITCH
MTS	MANUAL TRANSFER SWITCH
RP	RECEPTACLE PANEL
FTU	FEEDER TERMINAL UNIT

TRANSFORMER GROUNDING

15 kVA	1#8 AWG
30 kVA	1#6 AWG
45 kVA	1#4 AWG
75 kVA	1#2 AWG
112.5 kVA	1#1/0 AWG
150 kVA	1#2/0 AWG
225 kVA	1#3/0 AWG

1 / E5001 NOTES & SYMBOLS LIST (TP-5C)
1/4" = 1'-0"

GENERAL NOTES:

2	REVISED FOR TENDER	02/25/2022
1	ISSUED FOR TENDER	12/17/2021

RAMBOLL

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PREPARED BY	CHECKED BY	APPROVED BY
JB	JB	JB

PROJECT NAME

BLDC WATER & WASTEWATER TENDER PACKAGE 5C

1 LONGFIELD ROAD, ST. GEORGES, BERMUDA

SHEET TITLE

ELECTRICAL NOTES & SYMBOLS

ISSUED FOR REVISED FOR TENDER

SCALE	SHEET SIZE
As indicated	24" x 36"

PROJECT NO	SHEET NO	REVISION
19063	E5001	2