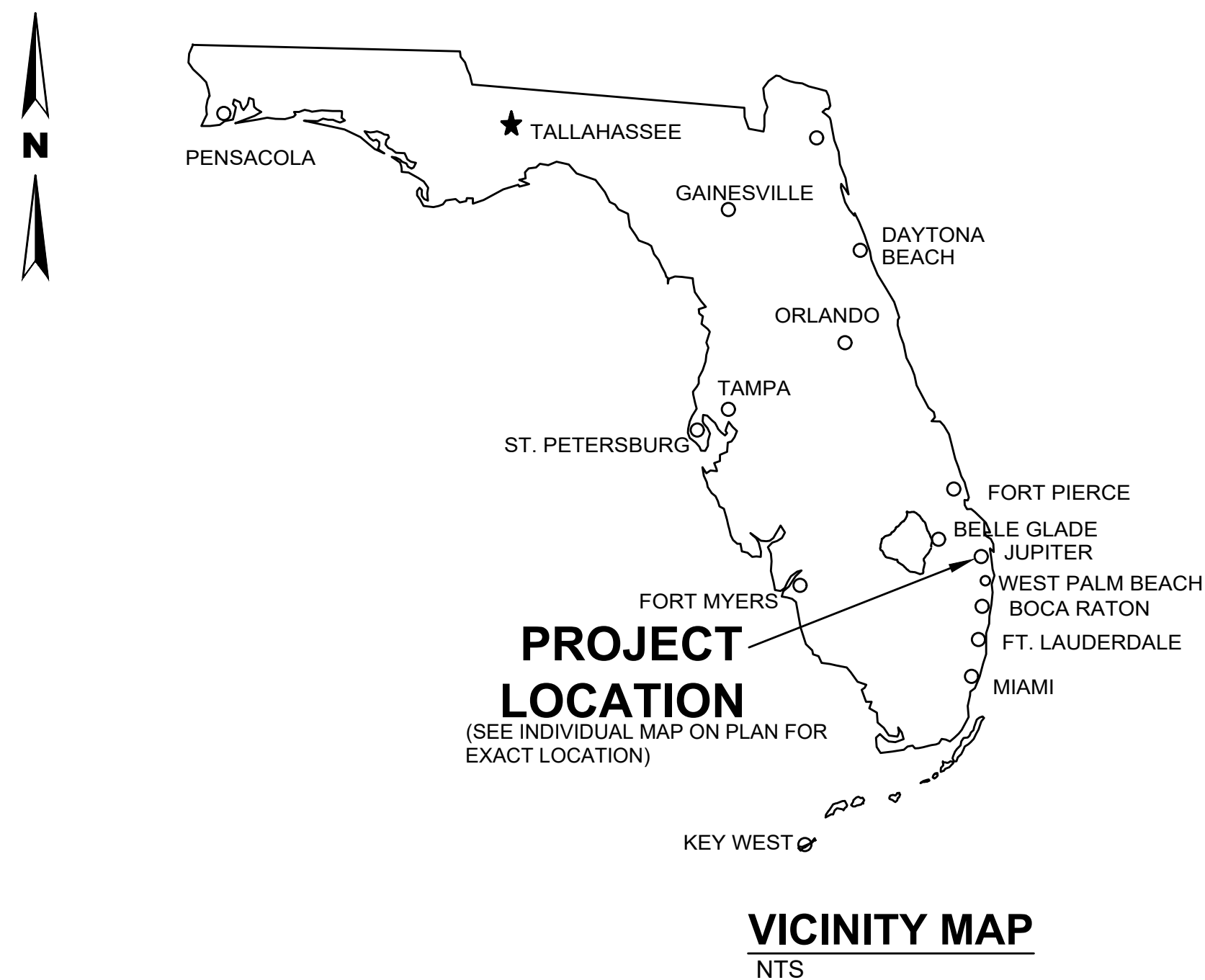




LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT WASTEWATER TREATMENT PLANT HEADWORKS STANDBY GENERATOR UPGRADES AND IMPROVEMENTS

GOVERNING BOARD

GORDON M. BOGGIE	CHAIRMAN
JAMES D.SNYDER	VICE CHAIRMAN
DR. MATT ROSTOCK	TREASURER
STEPHEN B. ROCKOFF	SECRETARY



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UTILITIES NOTIFICATION CENTER

REPRODUCTION:
ATTENTION IS DIRECTED TO THE FACT THAT THESE
PLANS MAY HAVE BEEN REDUCED IN SIZE BY
REPRODUCTION. THIS MUST BE CONSIDERED WHEN
OBTAINING SCALED DATA.

INDEX OF DRAWINGS

SHEET No.	DWG. No.	TITLE
0	E-100	COVER SHEET
1	E-101	ELECTRICAL PARTIAL FLOOR PLAN
2	E-102	MCC-8 SINGLE LINE DIAGRAM & LOAD CALCULATIONS
3	E-103	ELECTRICAL RISER DIAGRAM & PANEL SCHEDULES
4	E-104	ELECTRICAL SPECS & DETAILS

GENERATOR NOTE:

THE CONTRACTOR SHALL INCLUDE IN HIS BID AND THE WORK THE PROCUREMENT OF THE LOCAL GENERAC SERVICE REPRESENTATIVE TO PERFORM THE FOLLOWING FUNCTIONS:

1. SUPERVISE THE RELOCATION AND INSTALLATION OF THE OWNER-FURNISHED GENERATOR BY THE CONTRACTOR.
2. PREPARE THE GENERATOR FOR STARTUP AND TESTING INCLUDING THE VERIFICATION OF ALL WIRING CONNECTIONS, PROPER FLUID LEVELS, ETC. AND SUBMIT A COMPLETED PRE-STARTUP CHECKLIST APPROVED BY THE MANUFACTURER.
3. PERFORM A STARTUP OF THE GENERATOR AND INCLUDING THE SIMULATION OF A LOSS OF POWER AND ALL FUNCTIONS OF THE AUTOMATIC TRANSFER SWITCH.
4. PERFORM A 2 HR. LOAD BANK TEST USING A RESISTIVE LOAD BANK AND PROVIDE TEST RESULTS.

For information regarding this project, contact:

SEC Smith Engineering
Consultants, Inc.
State Auth. #8228
2161 Palm Beach Lakes Blvd., Suite 312
West Palm Beach, Florida 33409
(561) 616-3911 fax (561) 616-3912
www.smithengineeringconsultants.com

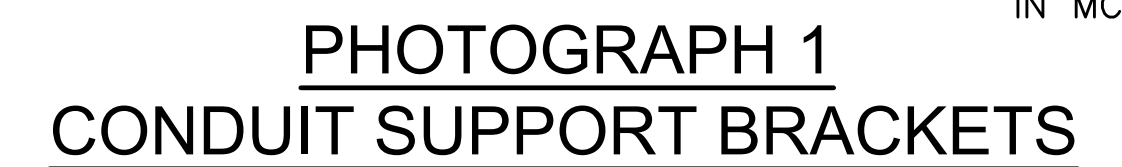
Larry M. Smith P.E.
No. 45997

BID SET - DECEMBER 2020


SEC JOB NO. S20061



- ① EXISTING MCC-8, 480/277, 3ø, 3W, 600AMPS.
- ② EXISTING PORTABLE GENERATOR POWER DISCONNECT 3 POLE, 200AMPS, 480VAC TO BE REMOVED INCLUDING THE PORTABLE GENERATOR PLUG.
- ③ NEW EMERGENCY GENERATOR DOUBLE THROW SWITCH, 480/277VAC, 3 POLE, 400AMPS.
- ④ NEW EMERGENCY A.T.S., 480VAC, 3 POLE, 225AMPS, NEMA 1 ENCLOSURE. (DISTRICT PROVIDED)
- ⑤ EXISTING PANEL 'L', 120/240VAC, 1ø, 3W, 225AMPS, 150AMP MCB.
- ⑥ EXISTING CONDUITS NOT PART OF THIS PROJECT.
- ⑦ CONDUIT CONNECTING NEW DOUBLE THROW SWITCH AND NEW PORTABLE GENERATOR PLUG CIRCUIT. REFER TO ELECTRICAL RISER DIAGRAM ON SHEET E-103 FOR FEEDER AND CONDUIT SIZES.
- ⑧ NEW GENERATOR PLUG, 480VAC, 3ø, 3W, 200AMPS, NEMA 3R WEATHERPROOF ENCLOSURE. MOUNT TO EXISTING COLUMN AT ACCESSIBLE HEIGHT.
- ⑨ CONDUIT CONNECTING NEW GENERATOR BATTERY CHARGER AND COOLENT HEATER CIRCUIT FROM EXISTING PANEL 'L'. REFER TO ELECTRICAL RISER DIAGRAM ON SHEET E-103 FOR FEEDER AND CONDUIT SIZES.
- ⑩ CONDUIT CONNECTING NEW A.T.S. AND GENERATOR POWER CIRCUIT. REFER TO ELECTRICAL RISER DIAGRAM ON SHEET E-103 FOR FEEDER AND CONDUIT SIZES.
- ⑪ CONDUIT CONNECTING NEW A.T.S. AND GENERATOR CONTROL CIRCUIT. REFER TO ELECTRICAL RISER DIAGRAM ON SHEET E-103 FOR FEEDER AND CONDUIT SIZES.
- ⑫ GENERATOR CONNECTION POINT FOR HEATER, BATTERY CHARGER. VERIFY IN FIELD IN ENCLOSURE.
- ⑬ CONTRACTOR SHALL REMOVE EXISTING WALL MOUNTED THERMOSTAT.



$1/4'' = 1' - 0''$

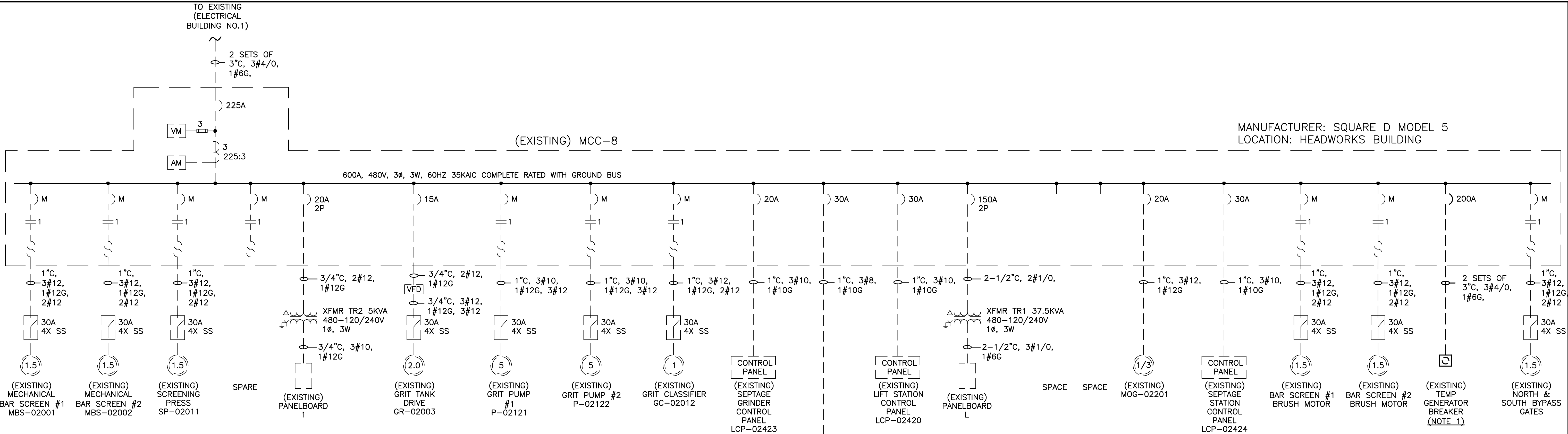


Drawing name: L-350			<div>CONFIDENTIAL</div> <div>DOCUMENT NOT FOR PUBLIC DISCLOSURE</div> <div>In accordance with: FS Chapter 281.301 FS Chapter 119.071 (3)(b) FS Chapter 153</div>		<div>WARNING</div> <div></div> <div>IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE</div>		<div>DATE: 12-11-20</div> <div>DESIGNED: SPH</div> <div>DRAWN: SPH</div> <div>CHECKED: LMS</div> <div>APPROVED:</div>		<div><div></div><div>Smith Engineering Consultants, Inc.</div><div>State Auth. #8228</div><div>2161 Palm Beach Lakes Blvd., Suite 312 West Palm Beach, Florida 33409 (561) 616-3911 fax (561) 616-3912 www.smithengineeringconsultants.com</div></div>		<div>LOXAHATCHEE RIVER</div> <div>ENVIRONMENTAL CONTROL DISTRICT</div> <div>HEADWORKS STANDBY GENERATOR</div> <div>UPGRADES AND IMPROVEMENTS</div>		<div>ELECTRICAL PARTIAL FLOOR PLAN</div> <div>E-101</div> <div>SEC JOB NO. S20061</div>		<div>DRAWING NO.</div> <div>E-101</div>	
NO.	DATE	BY	REVISION													

Dec 11, 2020 -- 10:15am

Layout Name: E-102

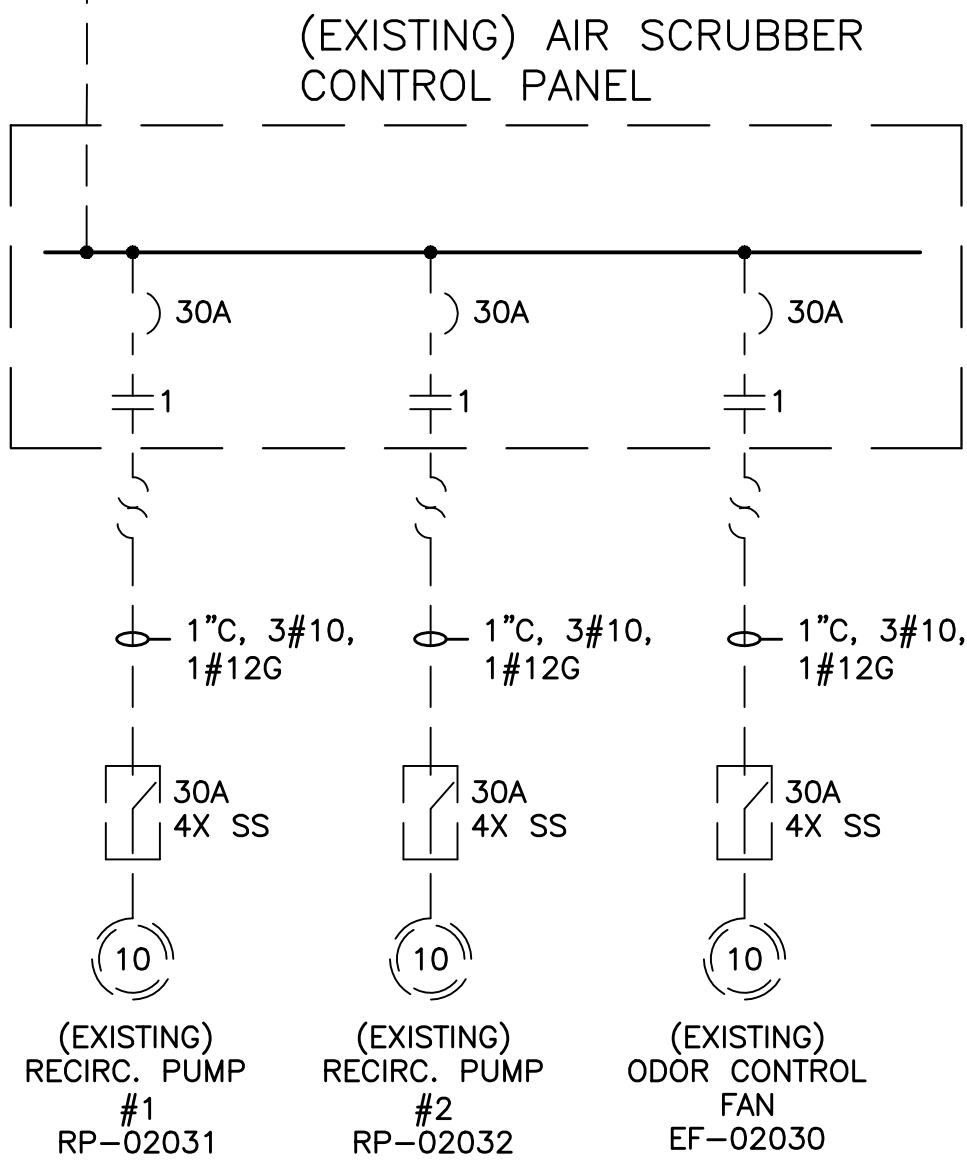
Drawing name: T:\SEC 2020\S20061 Lox River Dist. (ENCON) - WTP Generator Installation\Electrical Dwg\S20061 E-10.dwg



(EXISTING) MOTOR CONTROL CENTER NO. 8 SINGLE LINE DIAGRAM

MCC-8 KEYED NOTES

- A1 - SPACE
- A2 - TRANSFORMER TR1
- A3 - SPARE
- A4 - LIFT STATION #3 CONTROL PANEL LCP-02420
- A5 - MOG-02201
- A6 - SEPTAGE STATION CONTROL PANEL LCP-02424
- A7 - GRIT TANK DRIVE GR-02003
- B1 - TRANSFORMER TR2
- B2 - TEMPORARY GENERATOR BREAKER (RELABEL AS SPARE) (NOTE 1)
- B3 - ODOR CONTROL PANEL
- B4 - NORTH & SOUTH BYPASS SLIDE GATES
- B5 - BAR SCREEN #2 BRUSH MOTOR
- B6 - BAR SCREEN #1 BRUSH MOTOR
- C1 - SEPTAGE GRINDER CONTROL PANEL LCP-02423
- C2 - GRIT PUMP #2 P-02122
- C3 - GRIT PUMP #1 P-02121
- C4 - MECHANICAL BAR SCREEN #2 MBS-02002
- C5 - MECHANICAL BAR SCREEN #1 MBS-02001
- D1 - MAIN BREAKER
- D2 - SPACE
- D3 - GRIT CLASSIFIER GC-02012
- D4 - SCREENING PRESS SP-02011
- D5 - METERING (A & V METER)



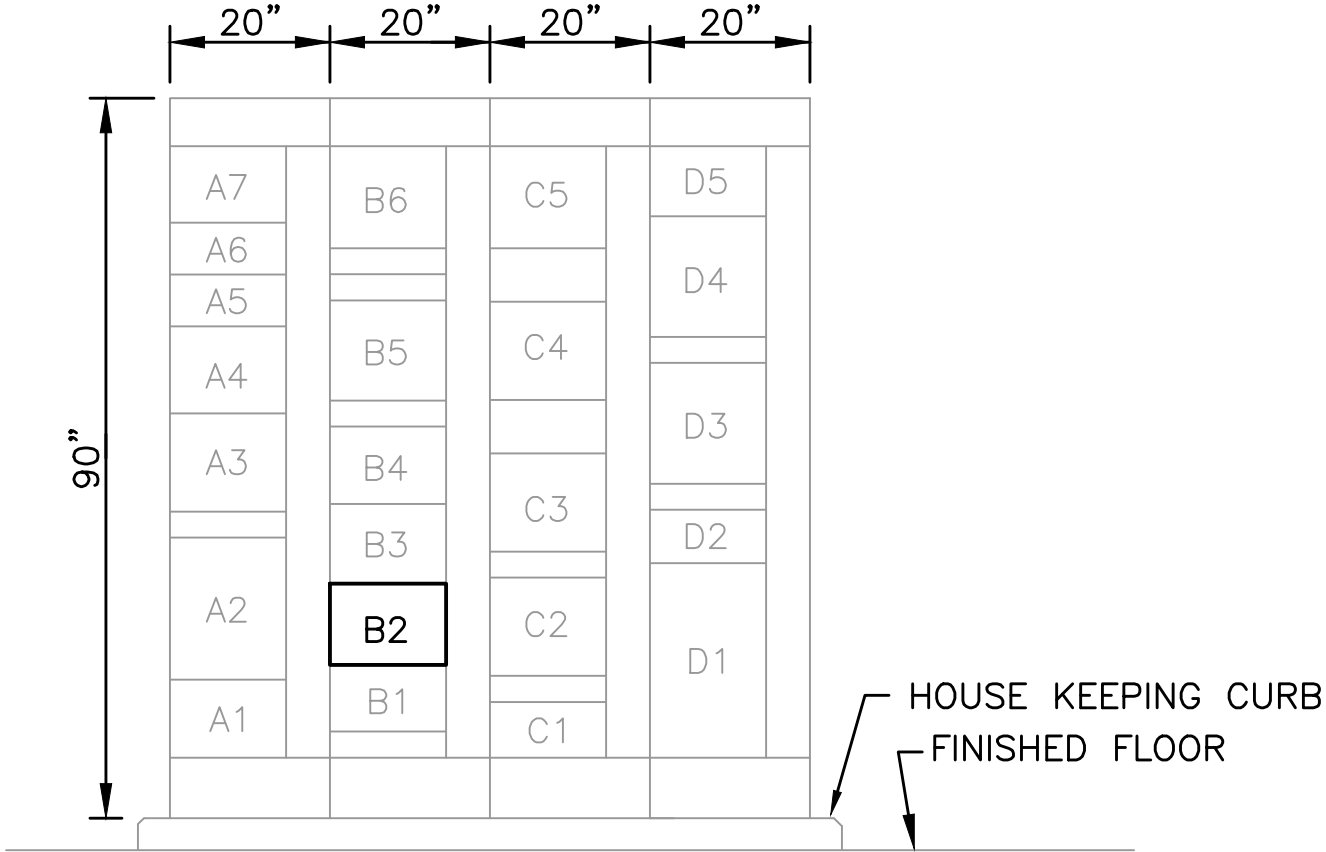
NOTES:

1- DISCONNECT AND BACKPULL WIRING AND CONDUIT FROM THIS BUCKET SPACE. RELABEL COVER AND CIRCUIT AS SPARE.

LOAD TABULATION (EXISTING) MCC#8 480V, 3Ø
FOR CALCULATION PURPOSE: 1HP = 1KVA

LOAD DESCRIPTION	CONNECTED (AMPS)	MAX. RUNNING (AMPS)	MAX. RUNNING EMERG. (AMPS)
BAR SCREEN #1	3.0A	3.0A	3.0A
BAR SCREEN #2	3.0A	3.0A	3.0A
SCREENING PRESS	3.0A	3.0A	3.0A
PANELBOARD 1/XFRM	10.4A	2.6A	2.6A
GRIT TANK DRIVE	3.4A	3.4A	3.4A
GRIT PUMP #1	7.6A	6.8A	6.8A
GRIT PUMP #2	7.6A	6.8A	6.8A
GRIT CLASSIFIER	2.1A	2.1A	2.1A
SEPTAGE STATION RECIEVING STATION	4.8A	4.3A	4.3A
AIR SCRUBBER CONTROL PANEL	42.0A	25.0A	25.0A
LIFT STATION CONTROL PANEL	15.2A	7.6A	7.6A
PANELBOARD L/XFRM	94.0A	50.0A	50.0A
SEPTAGE STATION RECIEVING STATION	5.0A	4.5A	4.5A
BAR SCREEN BRUSH MOTOR #1	3.0A	3.0A	3.0A
BAR SCREEN BRUSH MOTOR #2	3.0A	3.0A	3.0A
NORTH & SOUTH BYPASS GATES	3.0A	3.0A	3.0A
MOG-02201	2.1A	2.1A	2.1A

TOTAL FEEDER AMPACITY	212.2A	133.2A	133.2A
TOTAL FEEDER KVA	176.4KVA	110.7KVA	110.7KVA



(EXISTING) ELEVATION MOTOR CONTROL CENTER NO. 8
SCALE: 1/2"=1'-0"

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In accordance with:
FS Chapter 281.301
FS Chapter 119.071 (3)(b)
FS Chapter 153

WARNING

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

DATE: 12-11-20

DESIGNED: SPH

DRAWN: SPH

CHECKED: LMS

APPROVED:

LARRY M. SMITH, P.E.
NO. 45997
SEAL

SEC Smith Engineering Consultants, Inc.

State Auth. #8228

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LOXAHATCHEE RIVER
ENVIRONMENTAL CONTROL DISTRICT

HEADWORKS STANDBY GENERATOR
UPGRADES AND IMPROVEMENTS

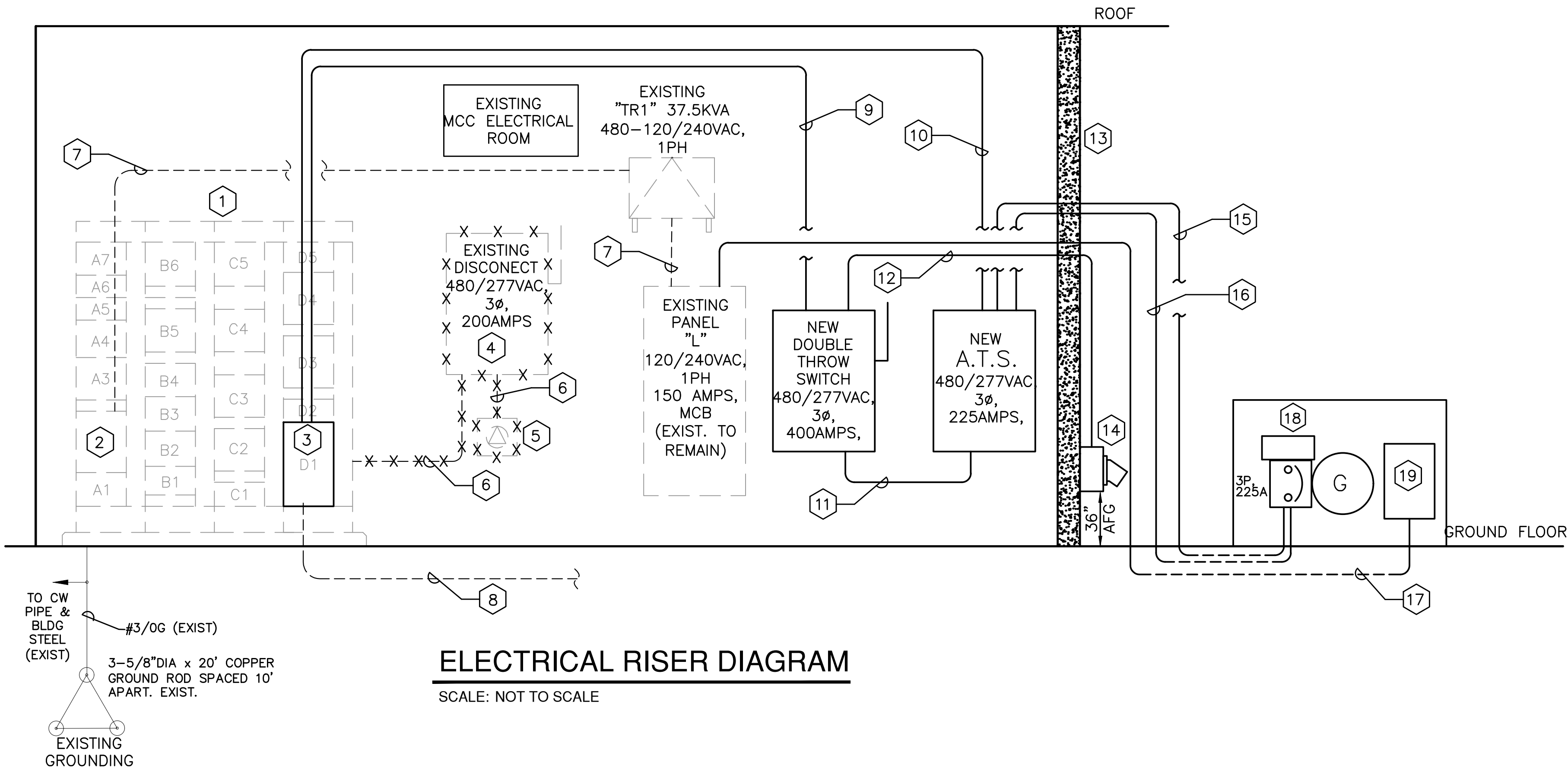
MCC-8 SINGLE LINE DIAGRAM & LOAD
CALCULATIONS

DRAWING NO.

E-102

SEC JOB NO. S20061

Drawing name: T:\SEC 2020\S20061 Lox River Dist. (ENCON) - WWP Generator Installation\Electrical Dwns\S20061 E-10.dwg
Layout Name: E-103
Plotted on: Dec 11, 2020 -- 10:15am



ELECTRICAL RISER DIAGRAM

SCALE: NOT TO SCALE

ELECTRICAL KEYED NOTES:

- 1 EXISTING MCC-8, 480/277VAC, 3Ø, 3W IN EXISTING MCC ROOM TO REMAIN.
- 2 EXISTING TRANSFORMER 'TR1' BREAKER FEEDING EXISTING PANEL 'L' TO REMAIN.
- 3 EXISTING 225AMP BREAKER AND EXISTING 2 SETS OF 3#4/0, 1#6G IN EXISTING 3"C FEEDING FROM ON SITE MAIN ELECTRICAL BUILDING, SHALL REMAIN. INSTALL POLARIS TAP AHEAD OF THE BREAKER AT CONNECTION POINT INSIDE THIS MCC BUCKET TO CONNECT NEW WIRING FROM NEW 400AMP DOUBLE THROW SWITCH COMPLETE IN PLACE.
- 4 EXISTING DISCONNECT MOUNTED OUTSIDE MCC ROOM TO BE REMOVED. REMOVE ALL WIRING AND CONDUIT TO THE SOURCE.
- 5 EXISTING PORTABLE GENERATOR PLUG TO BE COMPLETELY REMOVED.
- 6 EXISTING WIRING, CONDUIT AND LB CONNECTORS TO BE REMOVED.
- 7 EXISTING WIRING AND CONDUIT FEEDING TRANSFORMER 'TR1' TO REMAIN.
- 8 EXISTING CONDUIT AND CONDUCTORS (2 SETS OF 3#4/0, 1#6G IN EXISTING 3"C) FEEDING FROM ON SITE MAIN ELECTRICAL BUILDING TO REMAIN.
- 9 NEW 4-3/0, 1#2G IN 2"C FROM MCC-8 MAIN CIRCUIT BREAKER TO NEW DOUBLE THROW SWITCH.
- 10 NEW 4#3/0, 1#2G IN 2"C FROM MCC-8 MAIN CIRCUIT BREAKER TO NEW A.T.S. CONNECT TO EXISTING BUILDING SERVICE FEEDER VIA POLARIS TAPS.
- 11 NEW 4#3/0, 1#2G IN 2"C TO NEW DOUBLE THROW SWITCH.
- 12 NEW 4#3/0, 1#2G IN 2"C TO NEW GENERATOR PLUG.
- 13 EXISTING COLUMN.
- 14 NEW PORTABLE GENERATOR 225AMP PLUG MOUNTED ON OUTSIDE COLUMN AT 36" AFG. SEE SHEET E-101 FOR LOCATION. VERIFY RECEPTACLE WITH OWNER.
- 15 8-#14AWG FOR CONTROL WIRING FROM GENERATOR CONTROL PANEL TO A.T.S.
- 16 NEW 4#3/0, 1#2 GRND IN 2"C TO NEW A.T.S.
- 17 NEW 4#10, 1#10 G IN 1"C TO FEED GENERATOR BATTERY CHARGER AND JACKET WATER HEATER.
- 18 NEW DIESEL STANDBY GENERATOR, 130KW, (163KVA) 480/277V, 3Ø, 4 WIRE, DIESEL, WITH TIME DELAY, WITH SUB BASE FUEL TANK AND WEATHER ENCLOSURE, GENERAC POWER SYSTEM, INC. (OWNER-FURNISHED, CONTRACTOR TO INSTALL)
- 19 NEW GENERATOR CHARGER AND JACKET WATER CONNECTION POINT. VERIFY EXACT LOCATION IN GENERATOR ENCLOSURE.

PANEL "L"

(1)

MOUNTING: SURFACE						(EXISTING)				VOLT: 240/120V, 1Ø, 3W					
SHORT CIRCUIT RATING: 42K A/C						MCC ROOM				MAIN BUS AMPS: 225 A					
POLES: 30										MAIN BREAKER AMPS: 150					
FED FROM PANEL: MCC-8 VIA TRANSF. 'TR-1'						MANUFACTURER/TYPE: SQUARE D									
CKT	LOAD SERVED	POLE	TRIP	WIRE	COND	AMPS 'A'	AMPS 'B'	AMPS 'A'	AMPS 'B'	COND	WIRE	TRIP	POLE	LOAD SERVED	CKT
1	(EXISTING) CIRCUIT	1	20	12	3/4"	4.0		6.0		3/4"	12	20	1	(EXISTING) CIRCUIT	2
3	(EXISTING) CIRCUIT	1	20	12	3/4"		8.0		5.0	3/4"	12	20	1	(EXISTING) CIRCUIT	4
5	(EXISTING) CIRCUIT	1	20	12	3/4"	5.0		6.0		3/4"	12	20	1	(EXISTING) CIRCUIT	6
7	(EXISTING) CIRCUIT	1	20	12	3/4"		8.0		5.0	3/4"	12	20	1	(EXISTING) CIRCUIT	8
9	(EXISTING) CIRCUIT	1	20	12	3/4"	5.0		6.0		3/4"	12	20	1	(EXISTING) OFFICE	10
11	(EXISTING) CIRCUIT	1	20	12	3/4"		8.0		5.0	3/4"	12	20	1	(EXISTING) OFFICE	12
13	(EXISTING) CIRCUIT	1	20	12	3/4"	5.0		5.0		3/4"	12	20	1	(EXISTING) CIRCUIT	14
15	(EXISTING) CIRCUIT	1	20	12	3/4"		7.0		5.5	3/4"	12	20	1	(EXISTING) CIRCUIT	16
17	(EXISTING) CIRCUIT	1	20	12	3/4"	5.0		12.5		1"	10	20	1	GENERATOR HEATER	18
19	(EXISTING) CIRCUIT	1	20	12	3/4"		8.0		10.0	1"	10	20	1	GEN. BATTERY CHARGER	20
21	(EXISTING) CIRCUIT	1	20	12	3/4"	5.0				3/4"	12	20	1	SPACE	22
23	SPACE									3/4"	12	20	1	SPACE	24
25	SPACE							5.0		3/4"	12	20	1	(EXISTING) CIRCUIT	26
27	SPACE								6.0	3/4"	12	20	1	(EXISTING) CIRCUIT	28
29	(EXISTING) CIRCUIT	1	20	12	3/4"	9.0		9.0		3/4"	12	20	1	(EXISTING) CIRCUIT	30
CONNECTED AMPS =						38.0	39.0	49.5	36.5						
TOTAL CONNECTED AMPS =						87.5	75.5	19.6 KVA							
(1) MAX 3% VD ON BRANCH CIRCUITS AS PER FBC															

GENERATOR CALCULATIONS (480/277V, 3Ø, 3W)

MCC-8
(110.7KVA) = 110.7KVA
110,700 VA / (480V x 1.73) = 133.1 AMPS

THEREFORE THE 130KW (163KVA), 225A GENERATOR BREAKER IS ADEQUATE.

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In accordance with:
FS Chapter 281.301
FS Chapter 119.071 (3)(b)
FS Chapter 153

WARNING

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

DATE: 12-11-20

DESIGNED: SPH

DRAWN: SPH

CHECKED: LMS

APPROVED:

LARRY M. SMITH, P.E.
NO. 45997
SEAL

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LOXAHATCHEE RIVER
ENVIRONMENTAL CONTROL DISTRICT
HEADWORKS STANDBY GENERATOR
UPGRADES AND IMPROVEMENTS

ELECTRICAL RISER DIAGRAM & PANEL
SCHEDULES

DRAWING NO.

E-103

SEC JOB NO. S20061

GENERAL ELECTRICAL NOTES AND SPECIFICATIONS:

1. THE SCOPE OF WORK IS DESCRIBED IN THE DRAWINGS AND SPECIFICATIONS, PRIMARILY CONSIST OF THE FOLLOWING:
1.A. REMOVE EXISTING 200AMP GENERATOR DISCONNECT AND GENERATOR PLUG MOUNTED OUTSIDE EXISTING MCC ROOM.
1.B. INSTALL DISTRICT SUPPLIED 130KW DIESEL GENERATOR WITH SUB BASE FUEL TANK OUTSIDE OF EXISTING MCC ROOM.
1.C. INSTALL DISTRICT SUPPLIED A.T.S. INSIDE MCC ROOM.
1.D. PROVIDE AND INSTALL NEW DOUBLE THROW SWITCH INSIDE MCC ROOM.
1.E. PROVIDE AND INSTALL NEW PORTABLE GENERATOR PLUG ON COLUMN OUTSIDE MCC ROOM.
1.F. PROVIDE AND INSTALL NEW CONDUIT, PULL BOXES AND WIRING COMPLETE IN PLACE WHERE NEEDED.

2. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS (WITH EXCEPTION OF DIESEL GENERATOR AND ATS) AND LABOR TO INSTALL THE ELECTRICAL SYSTEMS AS INDICATED ON THE DRAWINGS. ITEMS NOT SHOWN BUT NECESSARY FOR COMPLETION OF THE WORK SHALL BE INCLUDED.

3. THE INSTALLATION SHALL BE IN ACCORDANCE WITH THE 2014 NATIONAL ELECTRICAL CODE, 2017 (6TH EDITION) FLORIDA BUILDING CODE AND ALL LOCAL CODES. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, INSPECTIONS AND APPROVALS AND SHALL COORDINATE HIS WORK WITH THE ENGINEER AND OWNER.

4. THE CONTRACTOR SHALL, BEFORE SUBMITTING HIS BID, VISIT THE SITE OF THE PROJECT AND BECOME FAMILIAR WITH THE EXISTING CONDITIONS. NO ALLOWANCE WILL BE MADE FOR EXISTING CONDITIONS OR FAILURE OF THE CONTRACTOR TO OBSERVE THEM.

5. GROUNDING SHALL BE INSTALLED IN ACCORDANCE WITH NEC, ARTICLE 250. THE GROUNDING SYSTEM TEST SHALL NOT EXCEED A 48 HOUR SPAN DRY RESISTANCE OF 10 OHMS. ADDITIONAL GROUNDING TO MEET THIS REQUIREMENT SHALL BE INSTALLED AT NO EXTRA COST. GROUNDING AND BONDING CONNECTIONS SHALL NOT BE PAINTED. AN EQUIPMENT GROUND WIRE SIZED PER NEC SHALL BE PULLED IN ALL ELECTRICAL CONDUITS, POWER AND CONTROL, WHETHER OR NOT INDICATED ON THE PLANS.

6. ALL NEW EQUIPMENT AND MATERIAL SHALL BE UNUSED AND U.L. LISTED.

7. THE CONTRACTOR IS RESPONSIBLE TO TEST ALL SYSTEMS AND REPAIR OR REPLACE ALL DEFECTIVE WORK TO THE SATISFACTION OF THE ENGINEER AND OWNER.

8. ALL EQUIPMENT FURNISHED AND INSTALLED BY THE CONTRACTOR SHALL BE GUARANTEED AGAINST DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF SUBSTANTIAL ACCEPTANCE.

9. COORDINATE ALL ELECTRICAL EQUIPMENT LOCATIONS AND VERIFY ALL OBSTRUCTIONS WITH ALL SUBCONTRACTORS AND EQUIPMENT SUPPLIERS PRIOR TO ANY INSTALLATION. THE DRAWINGS ARE NOT INTENDED TO SHOW THE EXACT LOCATION OF CONDUIT RUNS. THESE ARE TO BE COORDINATED WITH THE OTHER TRADES SO THAT CONFLICTS ARE AVOIDED PRIOR TO INSTALLATIONS.

10. ALL CONDUCTORS SHALL BE 600V, U.L. LISTED. POWER CABLES SHALL BE TYPE THHW/THWN. ALL CONDUCTING MEDIA SHALL BE COPPER. NO ALUMINUM ALLOWED.

11. ALL CIRCUITS SHALL BE IDENTIFIED IN JUNCTION BOXES, CONTROLLERS AND PANELBOARDS. IDENTIFICATION SHALL MATCH PANELBOARD SCHEDULES. EXPOSED RUNS OF CONDUITS SHALL BE INSTALLED WITH RUNS PARALLEL OR PERPENDICULAR TO WALLS, STRUCTURAL MEMBERS OR INTERSECTIONS OF VERTICAL PLANES AND CEILINGS, WITH RIGHT ANGLE TURNS CONSISTING OF SYMMETRICAL BENDS OR PULL BOXES AS INDICATED ON THE DRAWINGS. BENDS AND OFFSETS SHALL BE AVOIDED WHERE POSSIBLE.

12. ALL REFERENCES TO A PARTICULAR MANUFACTURER ARE GIVEN ON AN "APPROVED EQUAL" BASIS.

13. CONDUCTOR PULLING TENSIONS SHALL NOT EXCEED MANUFACTURER’S RECOMMENDATION. CONTRACTOR SHALL INSTALL PULL BOXES TO MEET MANUFACTURER’S REQUIREMENTS.

14. MINIMUM DISTANCE ALLOWED BETWEEN POWER CONDUITS AND INSTRUMENTATION CONDUITS SHALL BE:

VOLTAGE	DISTANCE
480V	2 FT
120V	1 FT

15. ALL LOCATIONS OF EQUIPMENT, PANELS ETC. ARE SHOWN FOR ILLUSTRATION PURPOSES. CONTRACTOR SHALL VERIFY EXACT LOCATION AND SIZE AND INSTALL AS SUCH WITH CORRESPONDING CONDUIT STUB-UPS.

16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONDUIT AND WIRING INSTALLATION FOR ALL VENDOR PROVIDED EQUIPMENT (PACKAGE SYSTEMS) INCLUDING OWNER SUPPLIED AND USER-CHOICE PANELS. IF THE SHOP DRAWINGS DIFFER FROM THE DESIGNED FACILITIES, THE CONTRACTOR SHALL REDESIGN THE FACILITIES AND SUBMIT THE REVISED DESIGN FOR THE ENGINEER’S APPROVAL ALONG WITH THE SHOP DRAWINGS. THERE SHALL BE NO ADDITIONAL COST TO THE OWNER FOR THE REDESIGN NOR FOR ANY ADDITIONAL CONDUITS AND WIRING.

17. PROVIDE DUCT SEAL IN ALL EXISTING AND NEW CONDUITS INSIDE SWITCHGEAR AND JUNCTION BOX.

18. DEMOLISH ALL ITEMS AS INDICATED ON DRAWINGS. TURN OVER TO THE OWNER AT THE OWNER’S DISCRETION AND PROPERLY DISPOSE OF ALL DEMOLITION ITEMS NOT WANTED BY THE OWNER.

19. ALL INSTALLATION AND EQUIPMENT SHALL COMPLY WITH N.E.C. STANDARD, EXCEPT IF OTHERWISE SHOWN IN DRAWINGS.

20. ALL CONDUIT PENETRATIONS SHALL BE AT THE BOTTOM OF ANY ENCLOSURE. SIDE PENETRATION IS ONLY ALLOWED WHEN CONNECTING SURGE PROTECTIVE DEVICE (SPD) AND PANEL AND AS INDICATED ON DRAWINGS.

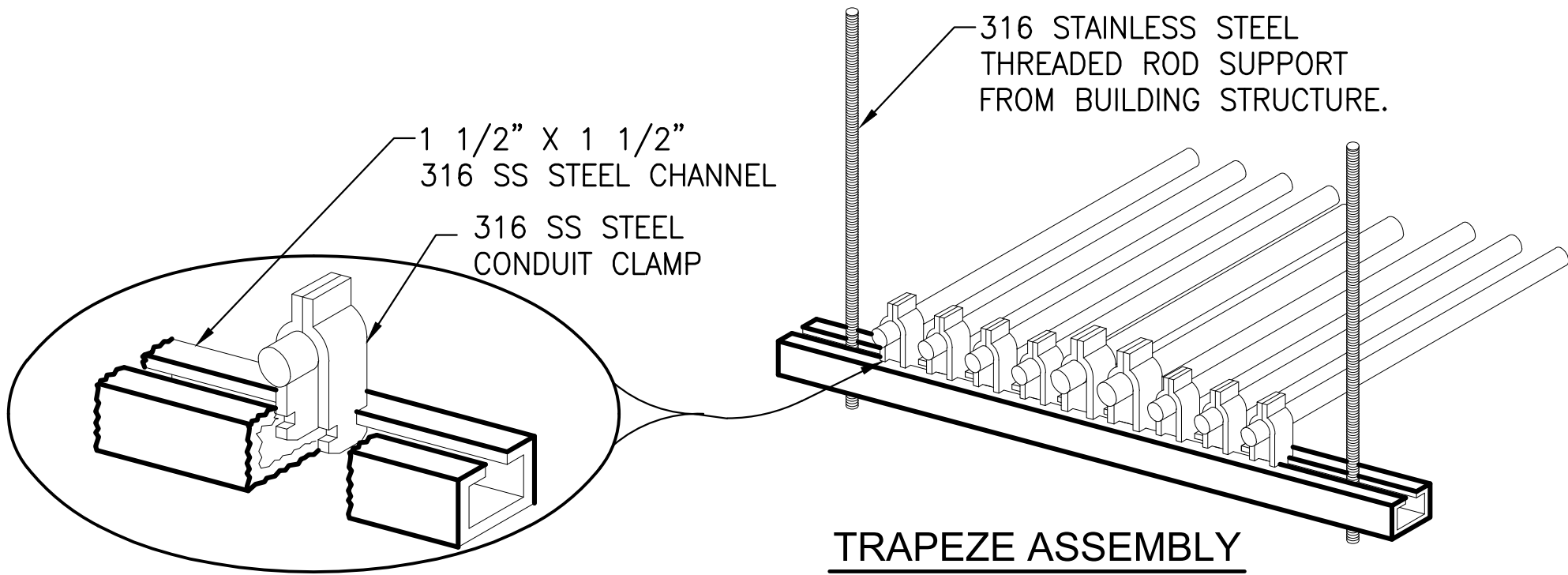
21. ALL MOUNTING HARDWARE SHALL BE 316 STAINLESS STEEL.

22. CONTRACTOR SHALL, WITHIN 30 DAYS AFTER THE DATE OF THE SYSTEM ACCEPTANCE, PROVIDE TO THE BUILDING OWNER RECORD DRAWINGS OF THE ACTUAL INSTALLATION INCLUDING A SINGLE LINE DIAGRAM OF THE ELECTRICAL DISTRIBUTION SYSTEM AND RELATED FLOOR PLANS INDICATING THE LOCATION AND AREA SERVED FOR THE DISTRIBUTION.

23. CONTRACTOR SHALL PROVIDE TO THE BUILDING OWNER AN OPERATING AND MAINTENANCE MANUAL IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION C405.6.4.2 OF THE 2017 FLORIDA BUILDING CODE – ENERGY CONSERVATION, INCLUDING ANY AMENDMENTS THERETO.

24. SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL WIRE, CONDUIT, DISCONNECT SWITCHES AND MISCELLANEOUS EQUIPMENT AND MATERIAL.

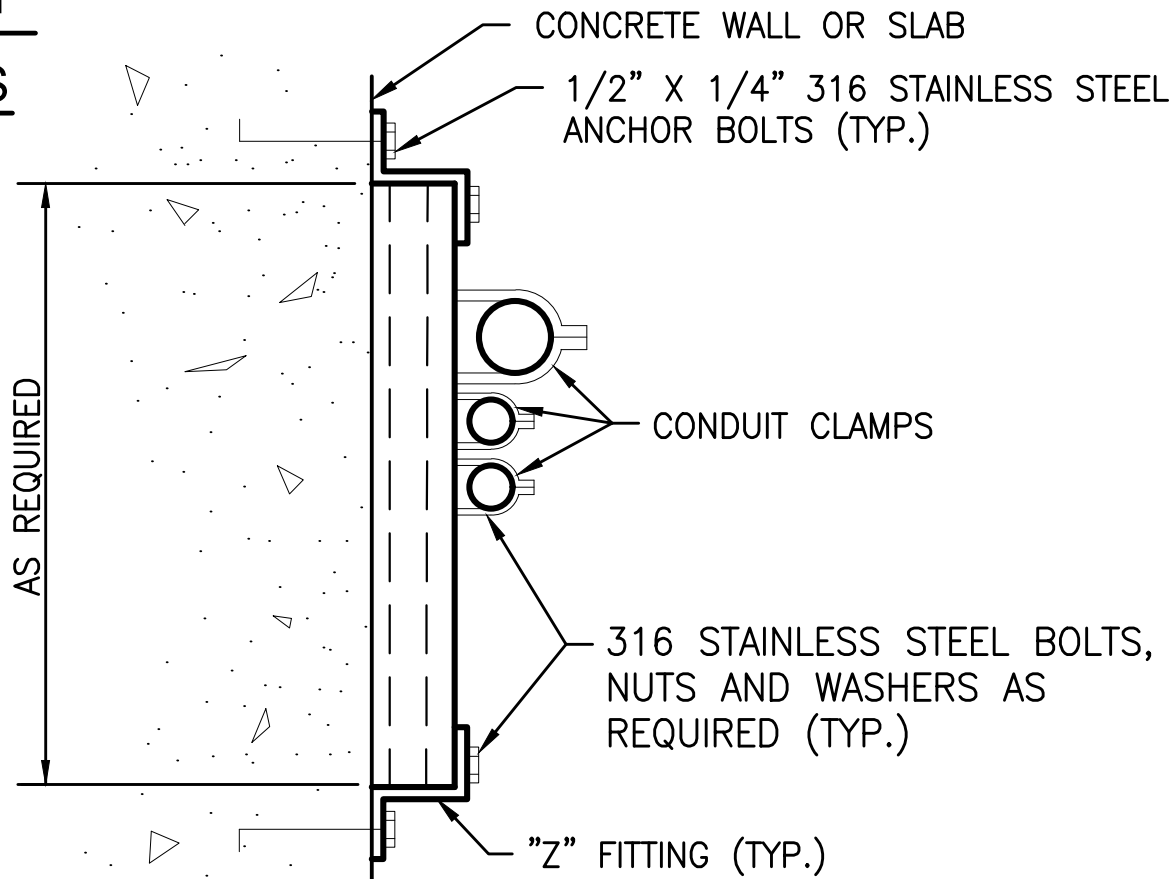
25. ALL EXPOSED CONDUIT SHALL BE RIGID ALUMINUM. UNDERGROUND CONDUIT SHALL BE PVC SCHEDULE 40.



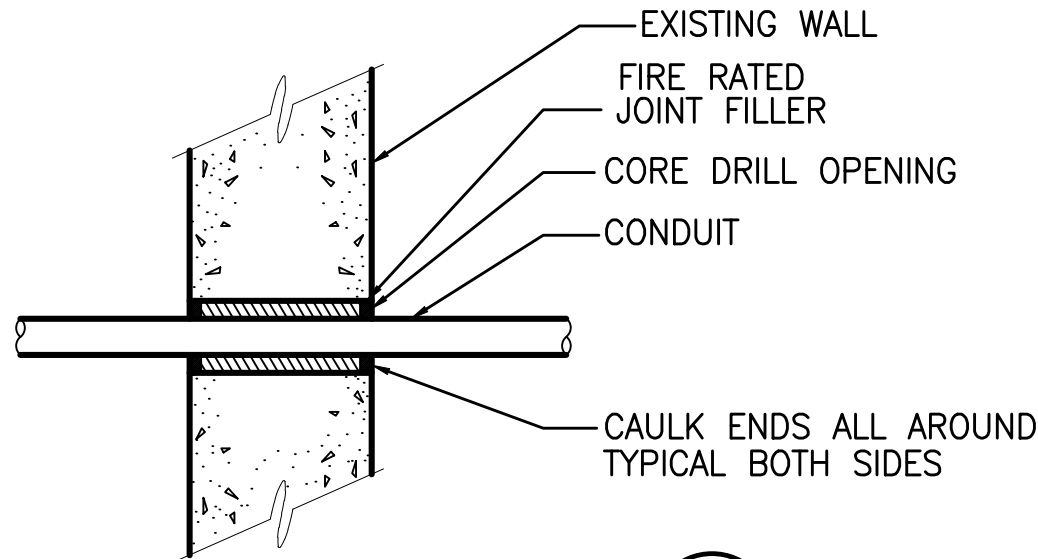
CONDUIT PIPE STRAP
MOUNTING DETAILS

NOTES:

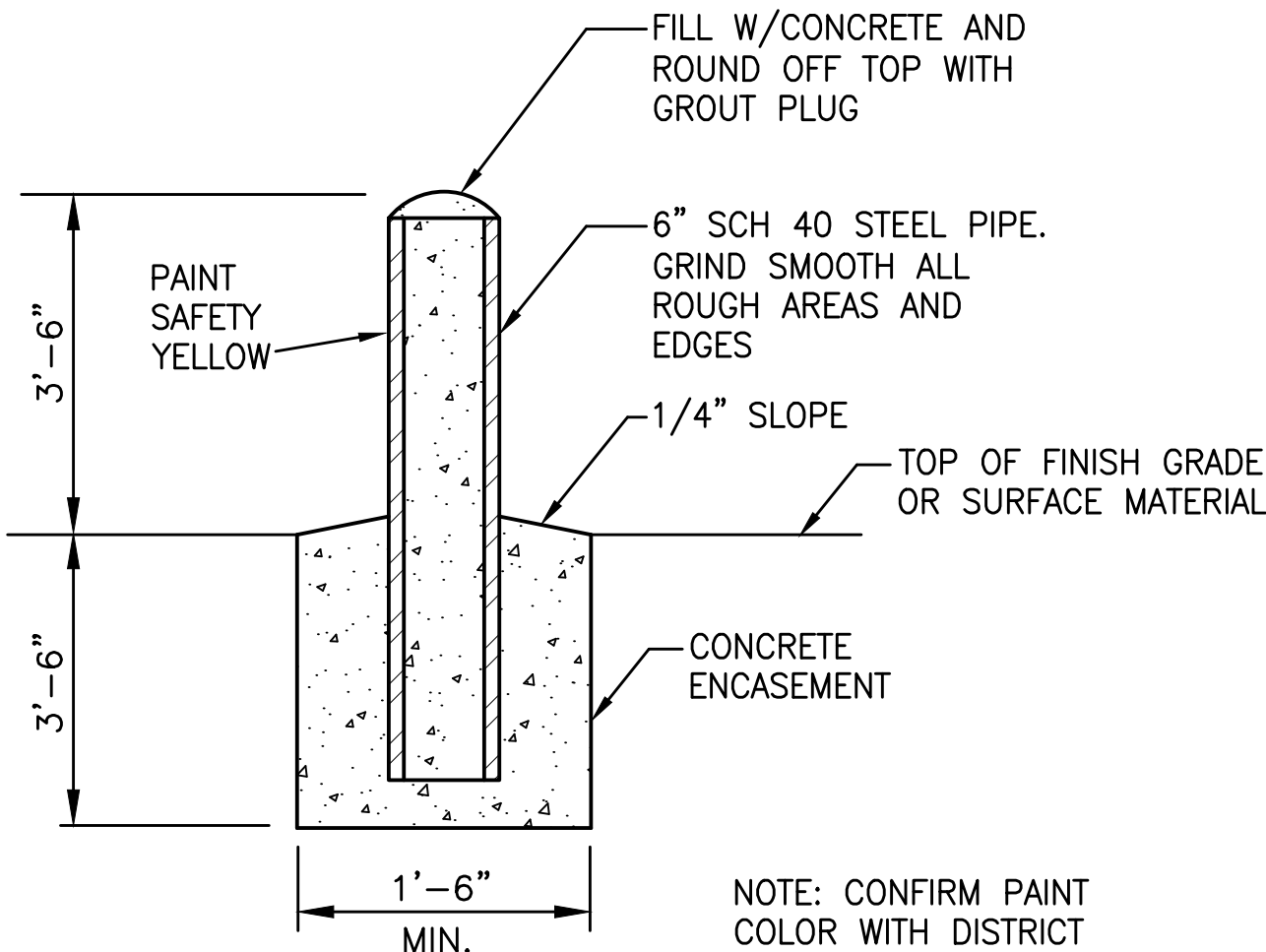
1. THIS DETAIL TYPICAL FOR BOTH VERTICAL AND HORIZONTAL MOUNTING.
2. CHANNEL AND ALL SUPPORT DEVICES TO BE 316 SS STEEL.
3. CHANNELS TO BE SPACED 5' MAXIMUM.



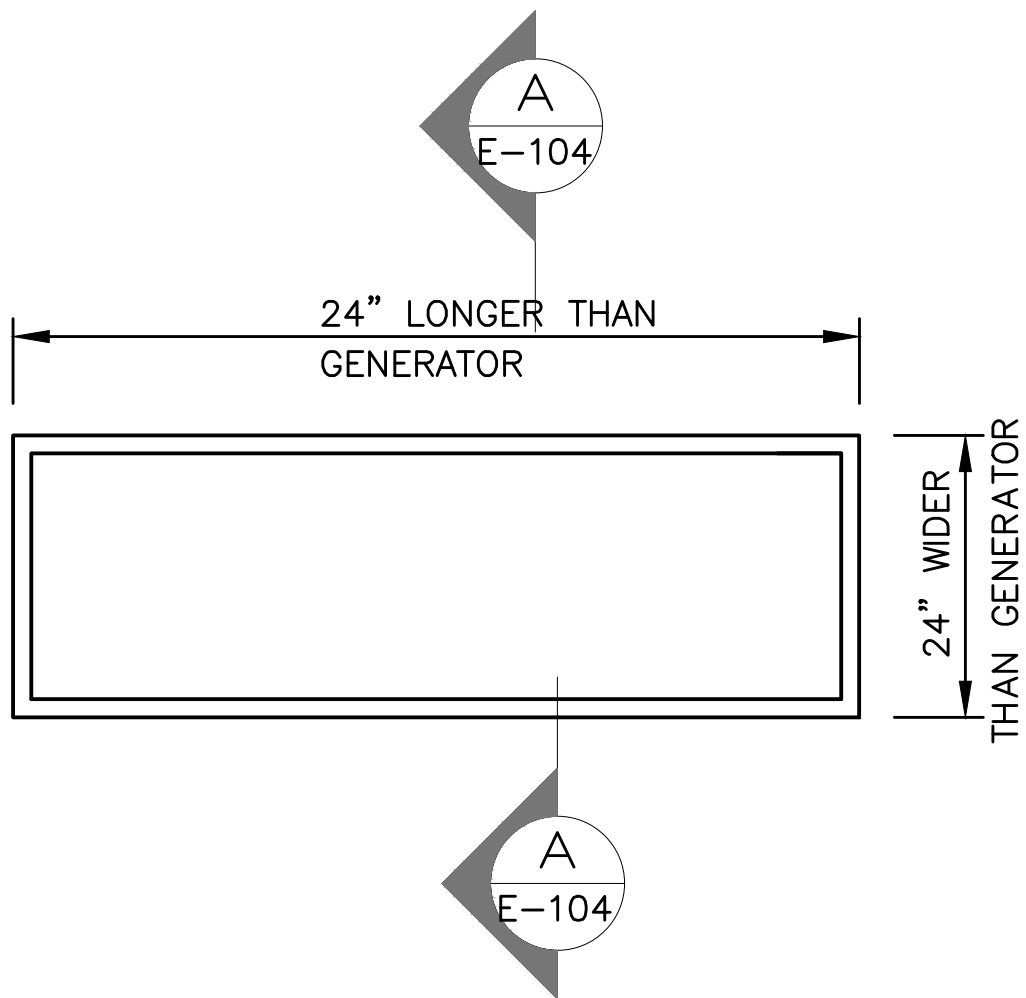
CONDUIT SUPPORT
NOT TO SCALE



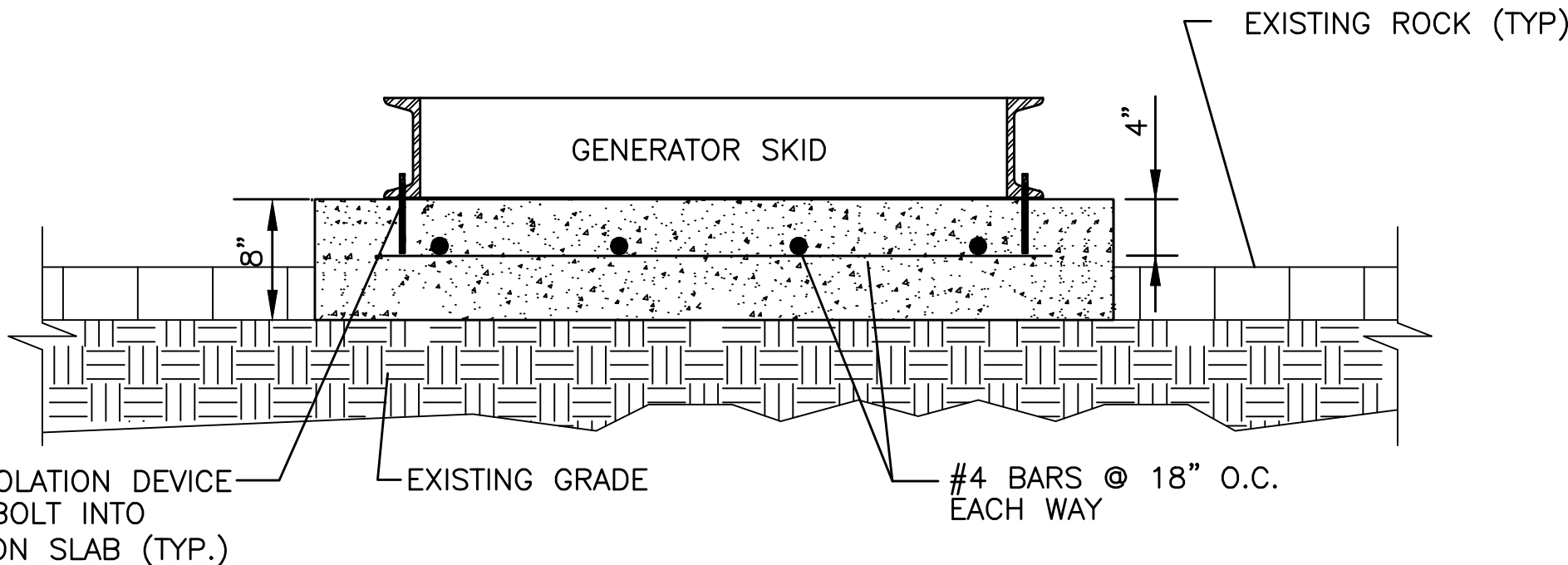
CONDUIT PENETRATION AT
EXISTING WALL OR SLAB
NOT TO SCALE



PIPE BOLLARD DETAIL
NOT TO SCALE



PLAN VIEW
N.T.S.



SECTION
N.T.S.

GENERATOR SIZE

DISTRICT SUPPLIED GENERATOR IS APPROXIMATELY 154"L X 40"W X 89"H. CONTRACTOR SHALL VERIFY DIMENSIONS PRIOR TO PROVIDING FOUNDATION SHOP DRAWING.

GENERATOR PAD DETAIL
NOT TO SCALE

WINDLOAD NOTE FOR GENERATOR

GENERATOR FOUNDATION AND MOUNTING SHALL BE SUITABLE FOR WIND LOAD IN ACCORDANCE WITH THE FLORIDA BUILDING CODE. THE CONTRACTOR SHALL INCLUDE WITH THE SHOP DRAWING SUBMITTAL, A WIND LOADING CALCULATION SEALED BY A STRUCTURAL ENGINEER REGISTERED IN FLORIDA SHOWING THAT THE PROPOSED INSTALLATION WILL MEET THE WIND LOADING REQUIREMENT.

Drawing name: T:\SEC 2020\S20061 Lex River Dist. (ENCON) - WWP Generator Installation\Electrical Dwg\S20061 E-10.dwg Layout Name: E-104 Plotted on: Dec 11, 2020 - 10:58am				CONFIDENTIAL DOCUMENT NOT FOR PUBLIC DISCLOSURE In accordance with: FS Chapter 281.301 FS Chapter 119.071 (3)(b) FS Chapter 153		WARNING 0 1/2 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE	DATE: 12-11-20 DESIGNED: SPH DRAWN: SPH CHECKED: LMS APPROVED:	LARRY M. SMITH, P.E. NO. 45997 SEAL	2161 Palm Beach Lakes Blvd., Suite 312 West Palm Beach, Florida 33409 (561) 616-3911 fax (561) 616-3912 www.smithengineeringconsultants.com	LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT HEADWORKS STANDBY GENERATOR UPGRADES AND IMPROVEMENTS	ELECTRICAL SPECS & DETAILS	DRAWING NO. E-104 SEC JOB NO. S20061
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