

PLANS FOR PROPOSED PUMP STATION  
IMPROVEMENTS TO

Rucks Park

NE 4 AVE AND NE 139 ST

MIAMI-DADE COUNTY PROJECT NO. 20200046

INDEX OF SHEETS

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- 23 S-102 - GENERATOR ROOM ELEVATION



SUMMARY OF QUANTITIES

Item No.	Description	Unit	Quantity
600-4	Pump Station Improvements	L.S.	1

Note: This Pump Station Improvements item will include but will not be limited to the installation of: One(1) Rosemount 5408A Radar Sensor; One(1) Senix Ultrasonic Sensor; One(1) Protex-Max Explosion Proof Process Meter Pump Local Controller; One(1) Four Port Serial Communication Module; Three(3) telemetry sensors with SCADA integration; Replace one(1) 43" X 32" louver; One(1) 3'X6'-8" Impact door with right hand swing out; One (1) 60" Sluice Gate with Auma Actuator; Mobilization; Demolition and Disposal of debris. Coordination of electrical service with Florida Power and Light; and all appurtenant work.

NOTE:

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.



PREPARED BY

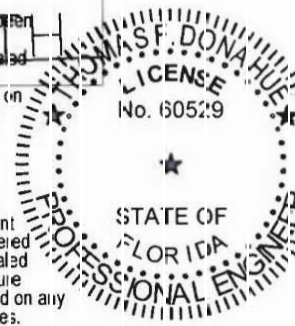


MIAMI-DADE COUNTY DEPARTMENT OF  
TRANSPORTATION AND PUBLIC WORKS  
ROADWAY ENGINEERING AND  
RIGHT OF WAY DIVISION  
STORMWATER DRAINAGE DESIGN SECTION

STEPHEN P. CLARK CENTER  
111 NW 1 ST, SUITE 1510  
MIAMI, FLORIDA 33128

This plan has been  
digitally  
signed and sealed  
by Thomas F.  
Donahue, P.E. on  
the date below  
using a Digital  
Signature.

Printed copies  
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signed and sealed  
and the signature  
must be verified on any  
electronic copies.



2023.04.27 11:45:59-04'00'  
ENGINEER RECORD

THOMAS F. DONAHUE, P.E.  
FLORIDA REGISTRATION P.E. No. 60529  
KEITH CIVIL ENGINEER



301 East Atlantic Boulevard  
Pompano Beach, Florida 33060-3643  
(954) 788-3400

Florida Engineering Business License: CA7928  
Florida Surveyor and Mapper Business License: LB6860  
Florida Landscape Architecture Business License: LC2600457

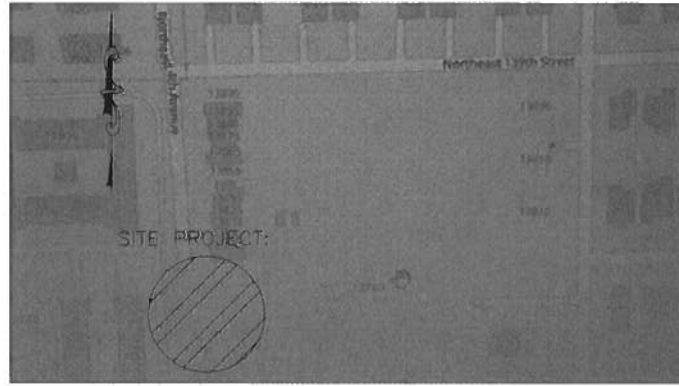
THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH AND ARE GOVERNED BY THE MIAMI-DADE COUNTY PUBLIC WORKS DEPARTMENT STANDARDS AND SPECIFICATIONS PARTS 1, 2 AND 3, THE MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS, THE FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND TRAFFIC DESIGN STANDARDS, AND THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, AS AMENDED BY CONTRACT DOCUMENTS.



DESIGN	DATE	CHECK	DATE
DATE	SEPTEMBER 2022	SHEET	1 OF 23

# TOPOGRAPHIC BOUNDARY SURVEY.

A PUMP STATION (RUCSK-PARK) ON A PORTION OF LAND LYING IN SOUTHWEST QUARTER OF SECTION 19, TOWNSHIP 52 SOUTH, RANGE 42 EAST, CITY OF NORTH MIAMI, MIAMI-DADE COUNTY, FLORIDA.



LOCATION MAP:  
SCALE: 1"=30 FEET.

### TREE TABLE:

THE TOTAL FINAL JOB POINT LIST DO NOT SHOWN ANY EXISTING TREES AFFECTING THE PROPERTY.

### LEGEND:

- △ CONTROL POINT
- ⊙ METAL PEDESTRIAN POLE
- EXISTING ELEVATIONS
- ⊙ SANITARY SEWER MANHOLE
- ⊙ STORM SEWER MANHOLE
- ⊙ MANHOLE UNKNOWN
- ⊙ CONCRETE LIGHT POLE
- ⊙ GAS VALVE
- ⊙ WATER VALVE
- ⊙ SEWER VALVE
- ⊙ VALVE UNKNOWN
- ⊙ SIGN
- ⊙ CATCH BASIN
- ⊙ HAND-HOLE TRAFFIC SIGNAL
- ⊙ SPRINKLER HEAD
- TREE (VARIOUS)
- ⊙ PALM TREE
- ⊙ HAND-HOLE FIBER OPTIC
- ⊙ MONITORING WELL
- ⊙ STANDPIPE
- ⊙ HANDHOLE UNKNOWN

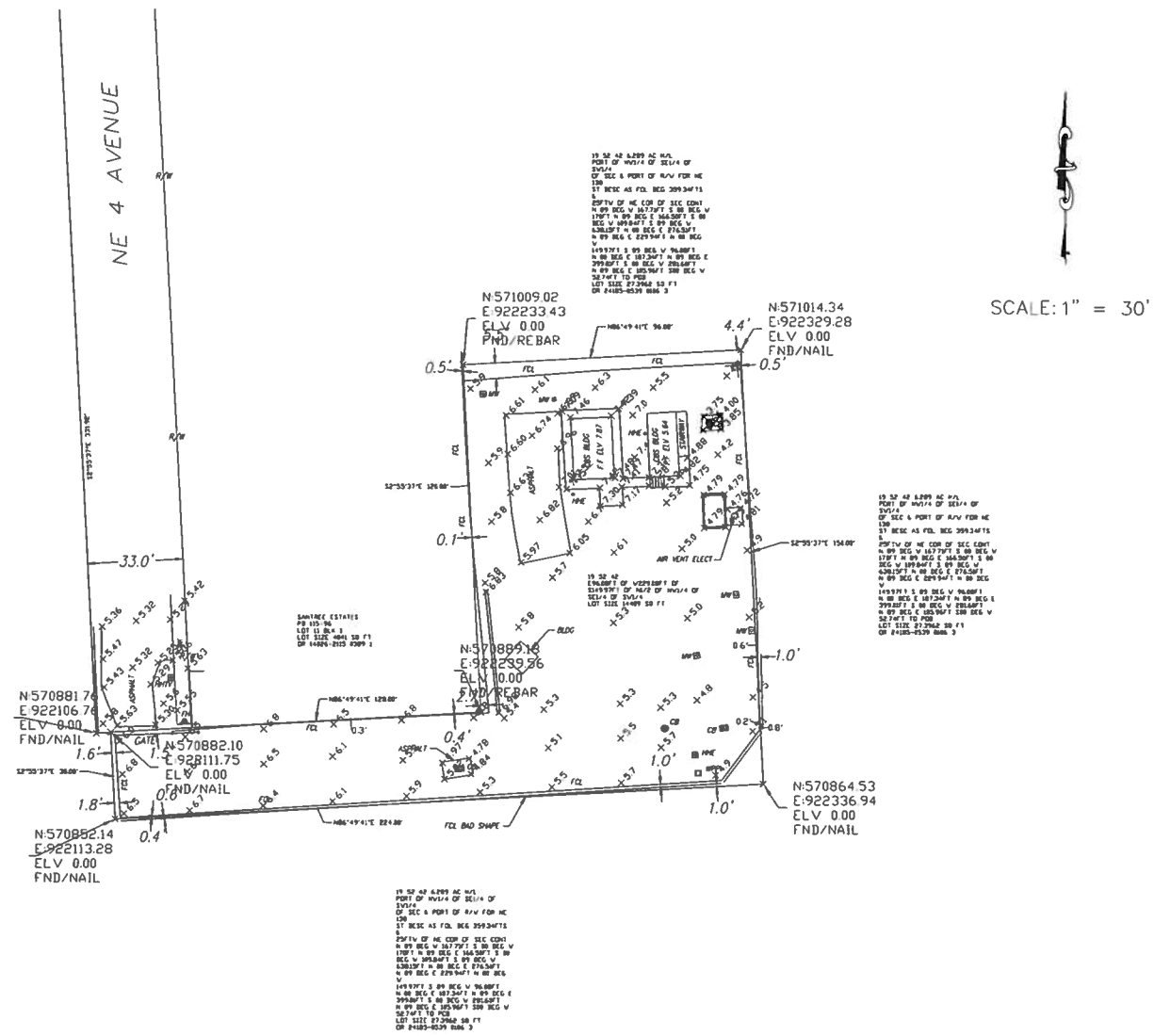
### ABBREVIATIONS AND MEANINGS:

- DTPW MIAMI-DADE COUNTY DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
- ⊙ CENTERLINE
- D APPROXIMATE DIAMETER OF TREE TRUNK
- H APPROXIMATE HEIGHT OF TREE
- M CITY OF MIAMI MONUMENT LINE
- P PALM
- PSM PROFESSIONAL SURVEYOR AND MAPPER
- R/W RIGHT-OF-WAY
- S APPROXIMATE DIAMETER OF TREE CANOPY
- T TREE

### LEGAL NOTES TO ACCOMPANY SPECIFIC PURPOSE SURVEY:

- THIS SURVEY MAP REPRESENTS A TOPOGRAPHIC BOUNDARY SURVEY.
- THE PURPOSE OF THIS SURVEY IS TO DEPICT THE LOCATION OF TOPOGRAPHIC FEATURES AND THE BOUNDARY SURVEY OF THE PUMP STATION LOCATED AT N.E. 4th AVENUE & N.E. 139th STREET. (RUSCK-PARK)
- THE SURVEY MAP AND REPORT OR THE COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL SEAL OF A FLORIDA LICENSED SURVEYOR & MAPPER.
- THIS SURVEY IS SUBJECT TO DEDICATIONS, LIMITATIONS, RESTRICTIONS, OR EASEMENTS OF RECORD; ALL EASEMENTS (IF ANY) WERE SUPPLIED BY THE CLIENT.
- SOURCES OF DATA: BASED ON A PROPERTY RECORDER LEGAL DESCRIPTION AND PLAT BOOK 115 PAGE 96 OF THE PUBLIC RECORDS OF MIAMI-DADE COUNTY, FLORIDA.
- ALL DISTANCE MEASUREMENTS WERE MADE IN UNITED STATES SURVEY FEET, UNLESS SHOWN OTHERWISE.
- THE PROJECT SITE IS LOCATED IN SECTION 19 TOWNSHIP 52 SOUTH, RANGE 42 EAST, IN MIAMI-DADE COUNTY, FLORIDA.
- THE BEARING BASIS FOR THIS SURVEY IS SOUTH 02°55'37" EAST (ASSUMED) ALONG THE CENTER LINE OF N.E. 4th AVENUE.
- ELEVATIONS SHOWN HEREON ARE REFERRED TO A RECORDED MIAMI-DADE COUNTY BENCH-MARK N-361, ELEVATION=10.52' N.G.V.D.--29.
- NO ATTEMPT WAS MADE TO LOCATE UNDERGROUND UTILITIES, FOOTINGS, BUILDINGS, EXCEPT AS SHOWN HEREON, IF ANY.
- AN OPINION OF TITLE FOR THE SUBJECT PARCEL WAS NOT PROVIDED; THE SOURCES OF DATA LISTED ABOVE WERE USED AS THE BASIS FOR THIS SURVEY.
- ARCHITECTS SHALL VERIFY ZONING REGULATIONS, RESTRICTIONS AND SETBACKS AND THEY WILL BE RESPONSIBLE FOR SUBMITTING PLOT PLANS WITH THE CORRECT INFORMATION FOR THE APPROVAL BY MIAMI-DADE COUNTY AUTHORITIES IN ALL CONSTRUCTION, UNLESS OTHERWISE NOTED.
- AERIAL BACKGROUND IMAGES ARE SHOWN FOR GRAPHICAL PURPOSES ONLY AND MAY NOT BE INDICATIVE OF EXISTING SITE CONDITIONS. AERIAL IMAGE ACQUISITION WAS COMPLETED ON JULY 30, 2020.
- THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"= 30' OR SMALLER. AT THE MAXIMUM INTENDED DISPLAYED SCALE, THE MAP'S POSITIONAL VALUE OCCUPIES 1/20" ON THE DISPLAY (EXCLUDING THE LOCATION MAP).
- ADDITIONS OR DELETIONS TO THE SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT THE WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.

SURVEY MAP AND REPORT OR THE COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL SEAL OF A FLORIDA LICENSED SURVEYOR & MAPPER



SCALE: 1" = 30'

THE SURVEY DEPICTED HERE IS NOT COVERED BY PROFESSIONAL LIABILITY INSURANCE.

I HEREBY CERTIFY :  
THAT THE ATTACHED "SPECIFIC PURPOSE SURVEY" OF THE PROPERTY SHOWN HEREON IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS RECENTLY SURVEYED AND DRAWN UNDER MY SUPERVISION AND DIRECTION. THIS SURVEY COMPLIES WITH THE STANDARDS OF PRACTICE AS SET FORTH IN RULES SJ-17.051 AND SJ-17.052 AS ADOPTED BY THE FLORIDA STATE BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS PURSUANT TO CHAPTER 472.027 FLORIDA STATUTES.

RICARDO, P.S.M.  
FLORIDA LICENSE NO-6283,  
FOR THE DTPW-TRANSPORTATION.

Project Manager:  
A. F. C.  
Checked: R.J.  
Revisions:  
N. Date  
Description:

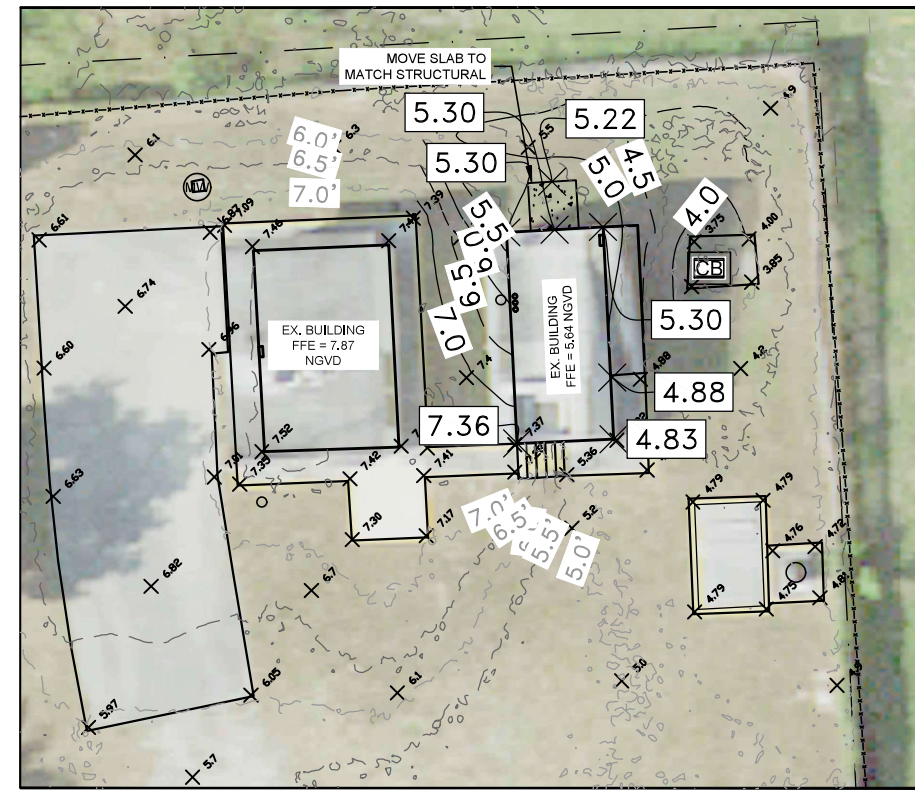
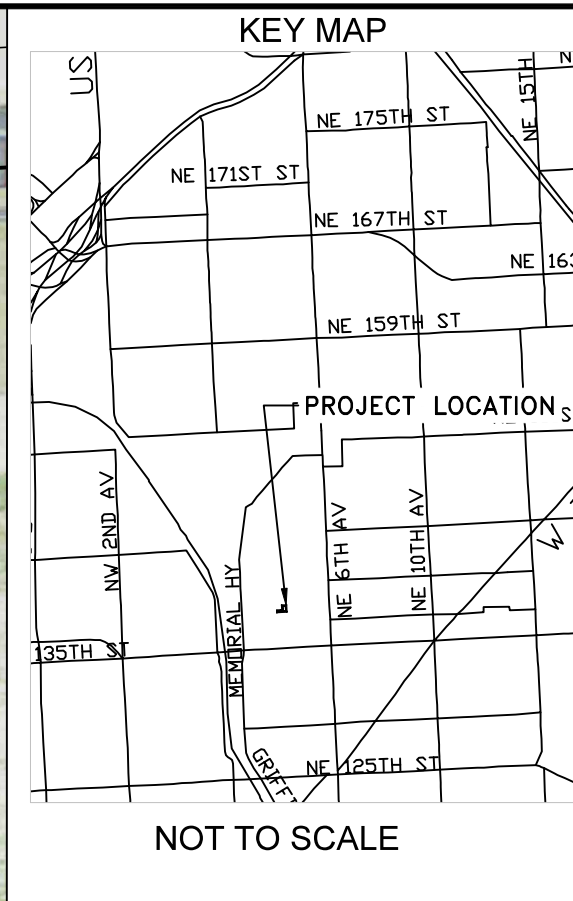
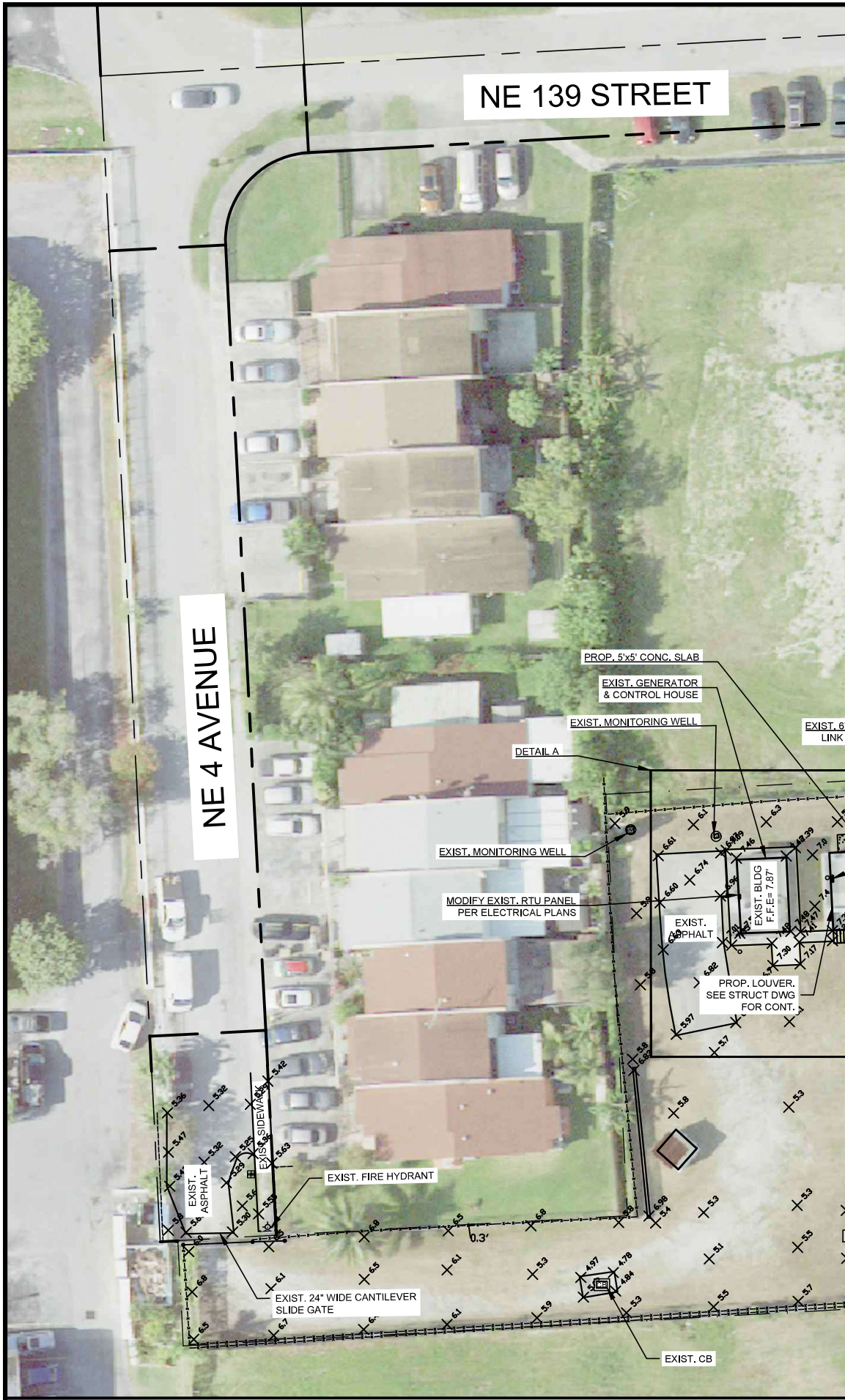
Miami Dade County  
Department of Transportation  
and Public Works  
Survey Section  
171 N.W. First Street, Suite 1100  
Miami, Florida 33128 (305)-375-8670



Project Title:  
**TOPOGRAPHIC BOUNDARY SURVEY:  
PUMP STATION AT N.E. 4th AVENUE,  
AND N.E. 139th STREET.**

Project N°	20200046
(RUCSK-PARK)	
Date	06/08/2021
Scale	1"=30'
Drawing N°	1 of 1
FIELD BOOK	N/A
PAGE	N/A





Rucks Park  
NE 4 Ave and NE 139 St  
PUMP STATION  
IMPROVEMENT PROJECT  
PROJECT NO. 20200046 SHEET 3 OF 23

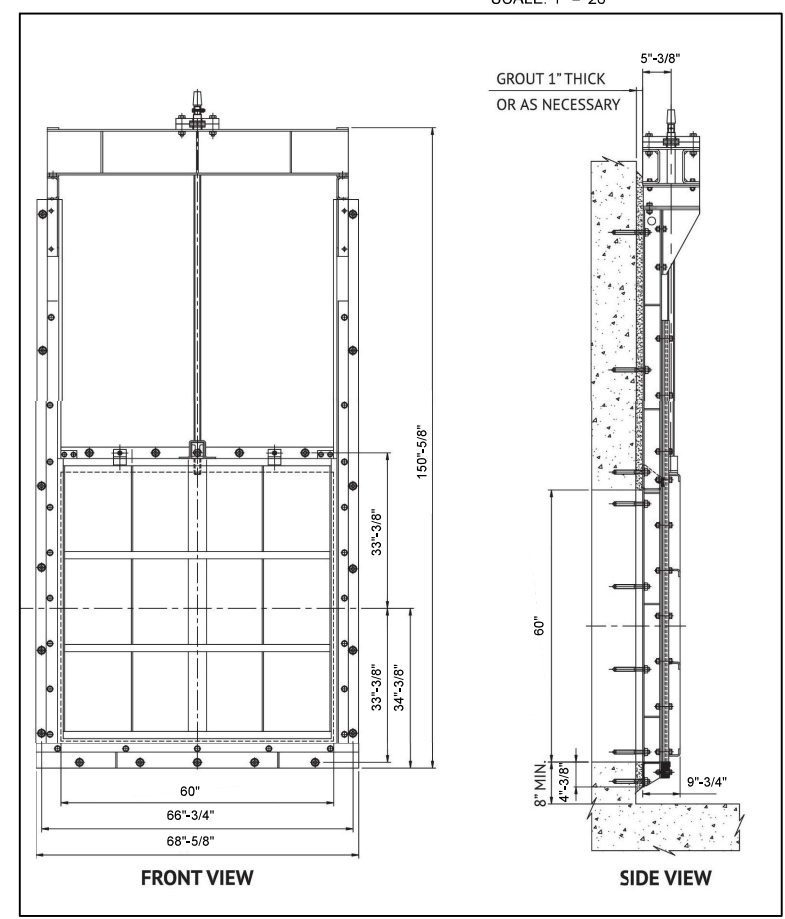
**GRAPHIC SCALE**  
0 40 80  
SCALE: 1" = 40'  
NOTE: PRINTED DRAWING SIZE MAY HAVE CHANGED FROM ORIGINAL. VERIFY SCALE USING BAR SCALE ABOVE.

**GENERAL ADA SLOPE NOTES:**

1. THE CONTRACTOR SHALL ENSURE THAT ALL ADA CRITERIA IS MET FOR THE CONSTRUCTION OF THE SITE IMPROVEMENTS INCLUDING BUT NOT LIMITED TO SIDEWALKS, RAMPS AND ADA PARKING STALLS.
2. ALL ADA PARKING STALLS SHALL NOT EXCEED 2% IN ANY DIRECTION.
3. SIDEWALKS SHALL NOT EXCEED 5% IN THE LONGITUDINAL DIRECTION AND CROSS-SECTIONAL SLOPES SHALL NEVER EXCEED 2%, UNLESS CLEARLY IDENTIFIED ON PLANS.
4. FOR ANY REASON THE CONTRACTOR FINDS ANY GRADING DISCREPANCIES THAT WOULD RESULT IN NOT BEING ABLE TO MEET ADA CRITERIA, IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO ADVISE THE ENGINEER AT ONCE AND PROVIDE ADEQUATE TIME TO DETERMINE PROPER COURSE OF ACTION. IF FOR ANY REASON IT IS DEEMED NECESSARY FOR AS-BUILT INFORMATION TO BE MADE AVAILABLE TO THE ENGINEER IN ORDER TO MAKE THE NECESSARY DECISIONS AND/OR PROVIDE DIRECTION, THIS INFORMATION SHALL BE PROVIDED BY THE CONTRACTOR.

**NOTE:**  
ELEVATIONS SHOWN HEREON ARE IN FEET AND BASED ON THE NORTH GEODETIC VERTICAL DATUM OF 1929 (NGVD 1929), BASED ON THE SURVEY PREPARED BY MIAMI-DADE COUNTY PUBLIC WORKS TO CONVERT NGVD 1929 ELEVATIONS TO NAVD 1988 FOR THE PROPERTY. 1.552 MUST BE SUBTRACTED TO THE NAVD 1988 ELEVATIONS.

**DETAIL A**  
GRAPHIC SCALE FOR DETAIL A  
0 20 40  
SCALE: 1" = 20'

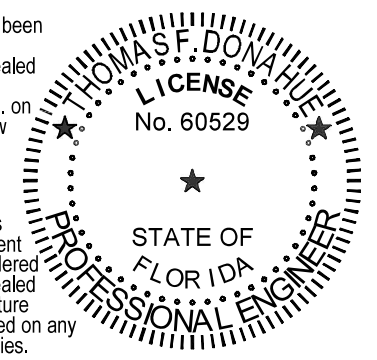


**DETAIL B**

301 East Atlantic Boulevard  
Pompano Beach, Florida 33060-6643  
(954) 788-3400

Florida Engineering Business License: CA7928  
Florida Surveyor and Mapper Business License: LB6860  
Florida Landscape Architecture Business License: LC26000457

This item has been digitally signed and sealed by Thomas F. Donahue, P.E. on the date below using a Digital Signature.



Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

2023.09.28 09:53:28-04'00'  
ENGINEER OF RECORD:

THOMAS F. DONAHUE, P.E.  
FLORIDA REGISTRATION P.E. No. 60529  
KEITH CIVIL ENGINEER

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Rucks Park  
NE 4 Ave and NE 139 St  
PUMP STATION  
IMPROVEMENT PROJECT

DESIGNED BY	NAME	DATE	DRAWN BY	NAME	DATE
	NM		VC/MD/JN		MAY 2023
CHECKED BY			CHECKED BY		
SUPERVISED BY:					

STEPHEN P. CLARK CENTER  
111 NW 153  
MIAMI, FLORIDA 33128



### GENERAL ELECTRICAL NOTES & SPECIFICATIONS

- THE "GENERAL CONDITIONS OF THE CONTRACT", CURRENT EDITION, PUBLISHED IN STANDARD FORM BY THE AMERICAN INSTITUTE OF ARCHITECTS SHALL BE PART OF THIS CONTRACT.
- IT IS NOT THE INTENT OF THESE PLANS AND SPECIFICATIONS TO SHOW EVERY AND ALL DETAILS OF CONSTRUCTION. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ITEMS REQUIRED FOR A COMPLETE ELECTRICAL INSTALLATION IN PROPER WORKING ORDER.
- ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE FLORIDA BUILDING CODE (2020), NATIONAL ELECTRICAL CODE (NEC 2017) AND THE LATEST STATE AND OTHER LOCAL CODES THAT APPLY.
- THE CONTRACTOR SHALL TAKE OUT PERMITS, PROCURE CERTIFICATES AND PAY ALL FEES CONNECTED WITH HIS WORK. PERMIT FEES WILL BE REIMBURSED WITH A DEDICATED ALLOWANCE.
- BIDDERS SHALL VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH ALL CONDITIONS SURROUNDING THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE BIDDERS TO VISIT THE SITE OF WORK AND ACQUAINT THEMSELVES WITH ALL AVAILABLE INFORMATION REGARDING THE EXISTING FACILITIES. FAILURE OF THE BIDDERS TO SO INFORM THEMSELVES OF EXISTING CONDITIONS AND TO INCLUDE IN THEIR PROPOSALS A SUM SUFFICIENT TO COVER SAME WILL NOT ENTITLE THEM TO AN EXTRA.
- THE CONTRACTOR IS REFERRED TO THE ARCHITECTURAL PLANS AND SPECIFICATIONS. SUCH PLANS AND SPECIFICATIONS ARE CONTRACT DOCUMENTS.
- DRAWINGS ARE DIAGRAMMATIC AND INTENDED TO SHOW APPROXIMATE LOCATIONS OF ALL ELECTRICAL ITEMS. EXACT CONDUIT ROUTING SHALL BE DETERMINED IN THE FIELD, UNLESS OTHERWISE NOTED (UON).
- CONTRACTOR SHALL SUBMIT REQUESTS FOR SUBSTITUTION IN WRITING TO THE ENGINEER, 10 WORKING DAYS PRIOR TO BIDDING DATE.
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL FOR ALL EQUIPMENT AND MATERIALS. SUBMIT A MINIMUM OF FOUR SETS TO THE A/E.
- GROUNDING SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (ARTICLE 250) AND REQUIREMENTS OF THE INSPECTING AUTHORITY. ALL CONNECTIONS TO GROUND RODS SHALL BE MADE WITH UL APPROVED ACCESSIBLE GROUND CLAMPS, UNLESS OTHERWISE NOTED.
- UPON COMPLETION OF WORK, THIS CONTRACTOR SHALL REMOVE ALL RUBBISH CAUSED BY HIS WORK AND SHALL THOROUGHLY CLEAN ALL ELECTRICAL EQUIPMENT.
- ALL WORK SHALL BE GUARANTEED FREE FROM DEFECTS FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE.
- ALL ITEMS OF ELECTRICAL EQUIPMENT ASSOCIATED WITH THE CONTROL OF ELECTRICAL CIRCUITS AND APPARATUS SHALL BE IDENTIFIED.
- ALL POWER AND LIGHTING CIRCUIT WIRING SHALL BE COLOR CODED AS FOLLOWS:

120/240V.  
PHASE "A" - BLACK  
PHASE "B" - RED  
PHASE "C" - BLUE  
NEUTRAL - WHITE  
GROUND - GREEN

- ALL CONDUCTORS SHALL BE COPPER, 600V. #10 AND SMALLER, SOLID TYPE THWN/THHN; #8 AND LARGER, STRANDED TYPE THWN/THHN.
- ALL CONDUCTORS FOR POWER LIMITED CABLES SHALL COMPLY WITH ARTICLES 725 & 760 OF N.E.C. LATEST EDITION.
- NOMINAL MOUNTING HEIGHT OF DEVICES IN EXPOSED CONCRETE BLOCK, TILE OR BRICK WALLS SHALL ALL OCCUR WITHIN A STRUCTURAL COURSE. A MIN. AMOUNT OF BLOCK, TILE OR BRICK WALLS SHALL BE CUT.
- ALL ELECTRICAL EQUIPMENT AND DEVICES SHALL BE INDUSTRIAL GRADE, HEAVY-DUTY, AND U.I. LISTED UNLESS SPECIFIED OTHERWISE. ALL ELECTRICAL EQUIPMENT, DEVICES, WIRE, ETC., SHALL BE LISTED FOR THE INTENDED USE, WITH UNDERWRITER'S LABORATORIES INC. (UL), WHERE STANDARDS HAVE BEEN ESTABLISHED BY UL. AS A MINIMUM, ALL EQUIPMENT SHALL MEET APPLICABLE STANDARDS, FOR THE TYPE OF EQUIPMENT AND THE INTENDED USE, OF THE FOLLOWING:  
A. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)  
B. ILLUMINATING ENGINEERS SOCIETY (IES)  
C. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)  
D. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)  
NOTE: THESE STANDARDS ARE SUBORDINATE TO STANDARDS SET BY U.I. AND LOCAL CODES.
- WIRING DEVICES SHALL BE SPECIFICATION GRADE. MINIMUM SIZE OF OUTLET BOXES SHALL BE 4" SQ. TRADE. OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS IN WET OR DAMP LOCATIONS AND SPECIAL ENCLOSURE FOR OTHER CLASSIFIED AREAS.
- ALL ELECTRICAL CONDUCTORS MUST BE IN CONDUIT. ALL CONDUITS SHALL BE INTERMEDIATE (IMC) OR RIGID GALVANIZED STEEL (RGS) EXCEPT THAT: (A) POLY VINYL CHLORIDE (PVC) CONDUITS MAY BE USED IN CONCRETE SLABS AND UNDERGROUND PROVIDED THAT ELBOWS AND RISERS ARE RGS; (B) ELECTRICAL METALLIC TUBING (EMT) MAY BE USED IN WALLS OR CEILINGS OF FINISHED AREAS WHERE NOT SUBJECT TO MECHANICAL DAMAGE, OR CORROSIVE CONDITIONS; (C) LIQUID TIGHT FLEXIBLE CONDUIT WHERE REQUIRED IN WET OR DAMP LOCATIONS; (D) FLEXIBLE METALLIC CONDUIT WHERE REQUIRED IN DRY LOCATIONS. ALL CONDUITS IN HAZARDOUS LOCATIONS SHALL MEET THE REQUIREMENTS OF NEC CHAPTER 5. THE USE OF ENT CONDUIT IS PROHIBITED.
- APPLY 2 COATS OF BITUMASTIC COATING TO ALL METALLIC CONDUITS INSTALLED UNDERGROUND.
- NO CONDUITS TO BE RUN IN DUCT WORK. A POLYESTER PULL CORD SHALL BE INSTALLED IN ALL EMPTY CONDUITS.
- SIZE ALL WIREWAYS ACCORDING TO N.E.C. ARTICLE 378-22.
- ALL RATED WALL/FLOOR PENETRATIONS ARE TO BE SEALED WITH A FIRE RATED SEALER, PER ASTM E814.
- ANY VARIATION FROM THE PLANS ARE TO BE PREVIOUSLY APPROVED BY THE ENGINEER IN WRITING.

### ELECTRICAL SYMBOL LEGEND

	CEILING LIGHT FIXTURE-UPPER CASE LETTER DESIGNATES FIXTURE TYPE, LOWER CASE LETTER DESIGNATES SWITCHING.
	FLUORESCENT LIGHT FIXTURE SEE FIXTURE SCHEDULE EMERGENCY LIGHT FIXTURE CONNECTED TO EMERGENCY LIGHTING CIRCUIT.
	DUAL HEAD EMERGENCY STAND-BY LIGHT, WITH BATTERY PACK, WALL MOUNTED. MT. UP 9'-0" A.F.F. TO CL OF OUTLET BOX.
	SINGLE POLE TOGGLE SWITCH, 20 AMP, 120/277V, SPECIFICATION GRADE. LETTER DENOTES LIGHTS ON SWITCH "A". MOUNT AT 48" A.F.F. TO CL OF OUTLET BOX UNLESS NOTED.
	DUPLEX RECEPTACLE; 20 A, 120 V, GROUNDING TYPE. MOUNTED 18" A.F.F. TO CL OF OUTLET BOX. (EXCEPT AS NOTED). HUBBELL 52621 U.O.N.
	DUPLEX RECEPTACLE; 20 A, 120 V, GROUNDING TYPE. VERIFY MOUNTING HEIGHT. HUBBELL 52621 U.O.N.
	DUPLEX GFI RECEPTACLE MOUNTED HORIZONTALLY; 20 A, 120 V, GROUNDING TYPE. MOUNTED UP AS NOTED ON PLANS. EXCEPT IN RESTROOMS NEXT TO SINKS WHERE IT SHALL BE MOUNTED AT 42" A.F.F. TO CL OF OUTLET.
	TELEPHONE/DATA OUTLET 4-11/16" X 4-11/16" 2-1/8" WITH BUSHED HOLE COVER PLATE-MOUNTED 18" A.F.F. TO C OF OUTLET (EXCEPT AS NOTED) PROVIDED 3/4" E.C. FROM EACH OUTLET TO PHONE (LOCAL) PULL BOX IN CL'G SPACE (EXCEPT AS NOTED.) TELECOMMUNICATIONS ROOM.
	SAFETY SWITCH - HEAVY DUTY NEMA CLASS "A" IN NEMA 1 ENCLOSURE, OUTDOOR TYPE NEMA 3R.
	DESIGNATES SWITCH RATING, "3" DESIGNATES POLES; "20" TIME DELAY FUSE; "30" SWITCH AMPS.
	120/208V., 3Ø, 4W. PANEL BOARD.
	EQUIPMENT JUNCTION BOX, FURNISHED WITH EQUIPMENT.
	WALL CEILING MOUNTED JUNCTION BOX. MINIMUM 4" X 4" X 1 1/2" WITH BLANK PLATE. MT. WALL BOX UP AS SHOWN ON PLAN.
	WALL/CEILING MOUNTED J.BOX FOR DATA OR POWER RESPECTIVELY. MT. WALL BOX UP AS SHOWN ON PLAN.

NOTE: NOT ALL SYMBOLS ARE NECESSARILY USED ON THIS PROJECT.

### ABBREVIATIONS

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION
(TYP.)	TYPICAL	MIN.	MINIMUM	V.
PNL.	PANEL	(MFR) MANUF.	MANUFACTURER	AMP.
LT.	LIGHT	GFI.	GROUND FAULT INTERRUPTER	LTG.
Ø	PHASE	M.C.B.	MAIN CIRCUIT BREAKER	H.P.
PVC	POLYVINYL-CHLORIDE	F/N	FULL NEUTRAL	J.B.
RGS	RIGID GALVANIZED STEEL	SURF.	SURFACE	GRS.

### SCOPE OF WORK:

SCOPE UNDER THIS PROJECT INCLUDES THE FOLLOWING:

- INSTALL NEW CONTROL UNIT.
- INSTALLING TWO (2) NEW WATER LEVEL SENSORS (RADAR AND ULTRASONIC). NEW SENSORS TO BE CONNECTED TO EXISTING REMOTE TERMINAL UNIT (RTU) AS PER DIAGRAM ON E-107. NEW SENSORS WILL BE INTEGRATED INTO EXISTING CONTROL SEQUENCE.
- NEW GATE AND THREE PHASE ACTUATOR WILL BE INSTALLED FED FROM NEW PANEL AS SHOWN ON PANEL SCHEDULE.
- ROOMS VENTILATION IS BEING IMPROVED.

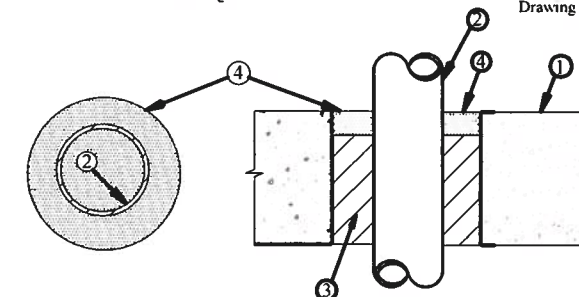
2 Hour Fire Rated Through Penetration Firestop for Single Metal Pipe through Concrete Floors and Walls using TREMstop IA



3735 Green Rd  
Beachwood, OH, 44122

F-Rating = 2 Hr  
T-Rating = 0 Hr

Drawing not to scale



- Pre-Rated Concrete Floors or Block Walls - Min 4-1 2" thickness
- Metallic Pipe - A) Steel Pipe - 12" diam (or smaller) Sch 10 (or heavier) steel pipe  
B) Iron Pipe - 12" diam (or smaller) cast or ductile iron pipe  
C) Conduit - 4" diam (or smaller) EMT or 6" diam steel conduit  
D) Copper Tubing - 6" diam (or smaller) Type L (or heavier) copper tubing  
E) Copper Pipe - 6" diam (or smaller) Regular (or heavier) copper pipe
- Packing Material - Min 4-1 4" thickness of mineral wool insulation (min 40 pcf) firmly packed into opening as a permanent form
- TREMstop IA - Min 1 4" thickness of sealant applied within annulus, flush with top surface of floor or both sides of wall assembly

UL cUL System No CAJ 1302



2 Hour Fire Rated Through Penetration Firestop for Multiple Metal Pipe through Concrete floors or walls using FYRE-SHIELD.

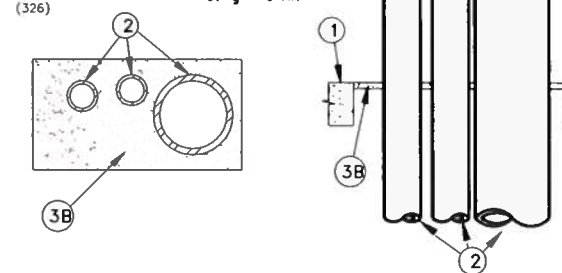


3735 Green Rd.  
Beachwood, OH, 44122

Drawing not to scale

CAJ1047  
(326)

F-rating = 2 Hr.  
T-rating = 0 Hr.



- Floor or Wall assembly = 4" thick concrete, Max. area of opening is 288 sq. in.
- Nom. 8" diam. (or smaller) Sch. 40 (or heavier) steel pipe  
• Nom. 4" diam. (or smaller) copper pipe.  
• Max. number of pipes with opening is three (3).
- A) Forming Material - (Not shown) - Nom. 1" thick polyurethane backer rod friction fitted into opening.  
B) Nom. 1/2" FYRE-SHIELD thickness installed within opening.

NOTE: Similar products of other manufacturers may be used if accepted equal.

NOTE: For wall apply FYRE-SHIELD to both surfaces of wall.

CONCRETE FLOORS OR WALLS PENETRATION DETAILS.

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Date: 2023.01.10 10:38:18 -05'00'

Zoila Morales, Electrical P.E.#64981

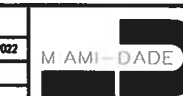
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CA 29121

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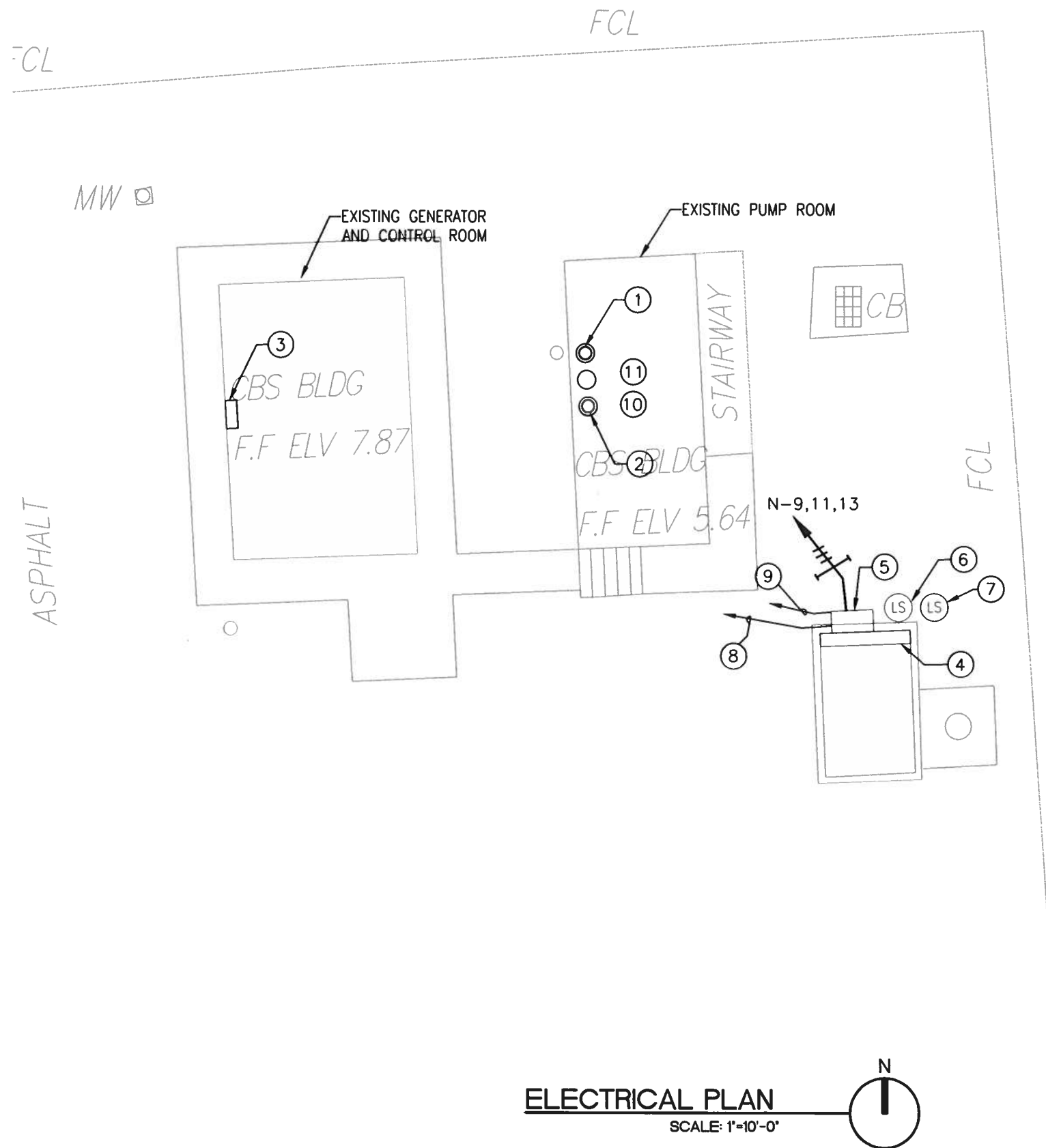
Rucks Park  
NE 4 Ave and NE 139 St  
PUMP STATION  
IMPROVEMENT PROJECT

NAME	DATE	NAME	DATE
DESIGNED BY Z.M.		DRAWN BY L.F. - M.T.	SEPT. 2022
CHECKED BY Z.M.		CHECKED BY Z.M.	
SUPERVISED BY: ZOILA MORALES			



DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS  
ROADWAY ENGINEERING AND RIGHT OF WAY DIVISION  
FLORIDA TURNPIKE CENTER  
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MIAMI, FLORIDA 33122

GENERAL ELECTRICAL NOTES, LEGEND AND DETAILS



**ELECTRICAL PLAN**  
SCALE: 1"=10'-0"

**CODED NOTES:**

- ① NEW ROSEMOUNT 5408 RADAR LEVEL TRANSMITTER LOAD CONTROL NON CONTACT WET WELL LEVEL MOUNTED AS PER MANUFACTURER SPECIFICATIONS. MINIMUM 1FT DISTANCE FROM TANK WALL INSTALLATION. CONNECT TO RTU VIA PROTEX-MAX EXPLOSION PROOF PROCESS METER PUMP LOCAL CONTROLLER PRECISION DIGITAL PD-6000-6R7. REFER TO DETAIL ON E-104. COORDINATE EXACT SENSOR LOCATION WITH OWNER AND CIVIL DRAWINGS.
- ② SENIX ULTRASONIC DISTANCE AND LEVEL SENSOR TF30 WITH SERIAL RS-485 INTERFACE FOR BACKUP LEVEL MEASUREMENT MOUNTED AS PER MANUFACTURER SPECIFICATIONS. USE A NEMA 4X (316SS) HOUSING FOR SENSOR AND TRANSMITTER, WITH POTTED CABLE CONNECTIONS. SIMPEL MODBUS RS485 FOR DIRECT CONNECTION TO SCADA; NO 4-20MA NEEDED. 2" NPT MOUNT INSTALLATION. COORDINATE EXACT SENSOR LOCATION WITH OWNER AND CIVIL DRAWINGS.
- ③ EXISTING RTU PANEL. INSTALL NEW FOUR-PORT COMMUNICATION MODULE WITH TWO RS-232 (EC 4/8 AND 4/9) AND TWO RS-485 PORTS (EC 6/10 AND 7/11). REFER TO DETAIL ON DRAWING E-107.
- ④ NEW 60 INCHES SLUICE GATE IN THE WET WELL TO BE OPERATED VIA NEW ELECTRIC ACTUATOR MONITORED BY EXISTING RTU THROUGH 1.5 HP AUMA ELECTRIC ACTUATOR. LOCATION AND SPECIFICATIONS AS PER CIVIL DRAWINGS.
- ⑤ NEW AUMA 3 PHASE 240 VOLT, 1.5 HP ACTUATOR SA16.2/AM02.1 IN NEMA 4X/6P MOTOR ENCLOSURE PROVIDED WITH LIMIT AND TORQUE SWITCHES BY PASS FOR BOTH DIRECTIONS AS PER MANUFACTURER SPECS AND SCHEMATIC WIRING ON DRAWINGS E-105 & E-106. OPEN-CLOSE LOCAL-REMOTE SIGNAL OUTPUT, OPEN-STOP-CLOSE SIGNAL INPUT, REMOTE SIGNAL READOUT AND ALARM OUTPUT. ACTUATOR TO PROVIDE OPEN/CLOSE SERVICE. PROVIDE CONTACTS FOR MONITORING GATE OPENED AND CLOSED STATUS AS WELL AS POSITION TRANSMITTER WITH 4-20MA D.C. OUTPUT. VENDOR TO VISIT THE SITE AND MAKE SURE TO INCLUDE ALL REQUIRED ACCESSORIES, INCLUDING STEM IF NEEDED, IN PRICE.
- ⑥ NEW WATERPROOF LIMIT SWITCH AT THE FULLY OPENED GATE POSITION.
- ⑦ NEW SUBMERSIBLE LIMIT SWITCH AT THE FULLY CLOSED GATE POSITION.
- ⑧ 1.25" CONDUIT WITH 8 # 18 TSP CABLE TO RTU PANEL. VERIFY WITH MANUFACTURER DIAGRAM.
- ⑨ 3/4" CONDUIT 8 # 18, 1 # 18 GROUND TO RTU PANEL. VERIFY WITH MANUFACTURER DIAGRAM.
- ⑩ PROVIDE PUMP SOFT STARTER IN NEMA 4X ENCLOSURE FOR CONTROLLING GATE ACTUATOR MOTOR. ENCLOSURE TO HAVE "HAND-OFF-AUTO" SELECTOR SWITCH ON COVER. INSTALL ADDITIONAL CONTACT BLOCKS TO PROVIDE ISOLATED CONTACTS FOR "HAND" AND "AUTO" POSITIONS.
- ⑪ PROVIDE PROTEX-MAX EXPLOSION PROOF PROCESS METER PUMP LOCAL CONTROLLER PRECISION DIGITAL PD6000-6R7 AS PER DIAGRAM ON DRAWING E-106.

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001940F,  
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Rucks Park  
NE 4 Ave and NE 139 St  
PUMP STATION  
IMPROVEMENT PROJECT

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Z.M.	Z.M.		L.F. - M.T.	L.F. - M.T.	SEPT. 2022
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DEPARTMENT OF TRANSPORTATION  
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ELECTRICAL PLAN

E-102

NEW EF-2, 120 V, 1PH ROOF MOUNTED EXHAUST FAN WITH FACTORY INSTALLED TOGGLE SWITCH IN NEMA 3R ENCLOSURE.

EXISTING ASCO AUTOMATIC TRANSFER SWITCH (ATS) SERIES 300: 230 A, 480 V, 3PH, TO REMAIN.

EXISTING 200A GENERATOR MAIN DISCONNECT TO REMAIN. REFER TO RISER ON DRAWING E-104.

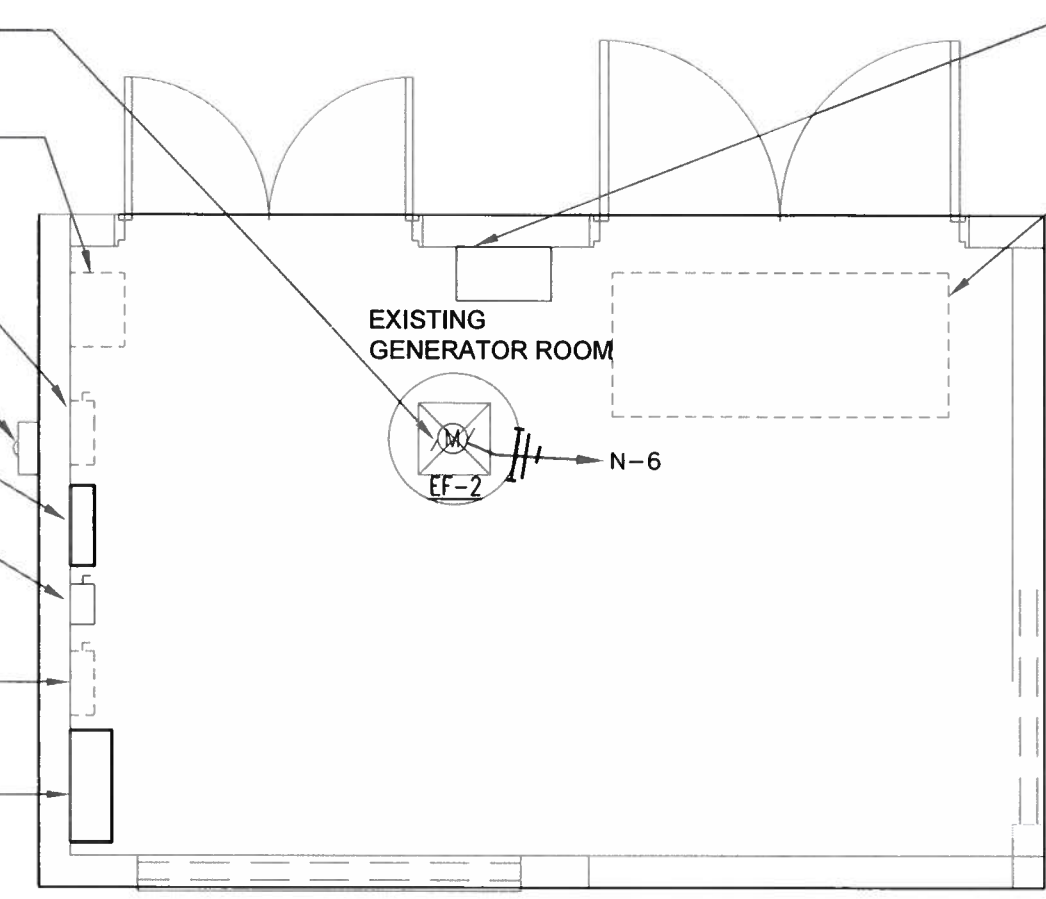
EXISTING FPL METER TO REMAIN.

NEW PANEL N TO REPLACE PANEL LT. REFER TO RISER ON DRAWING E-107.

EXISTING 60A DISCONNECT SWITCH FEEDING TRANSFORMER TO BE REPLACED. REFER TO RISER ON DRAWING E-107.

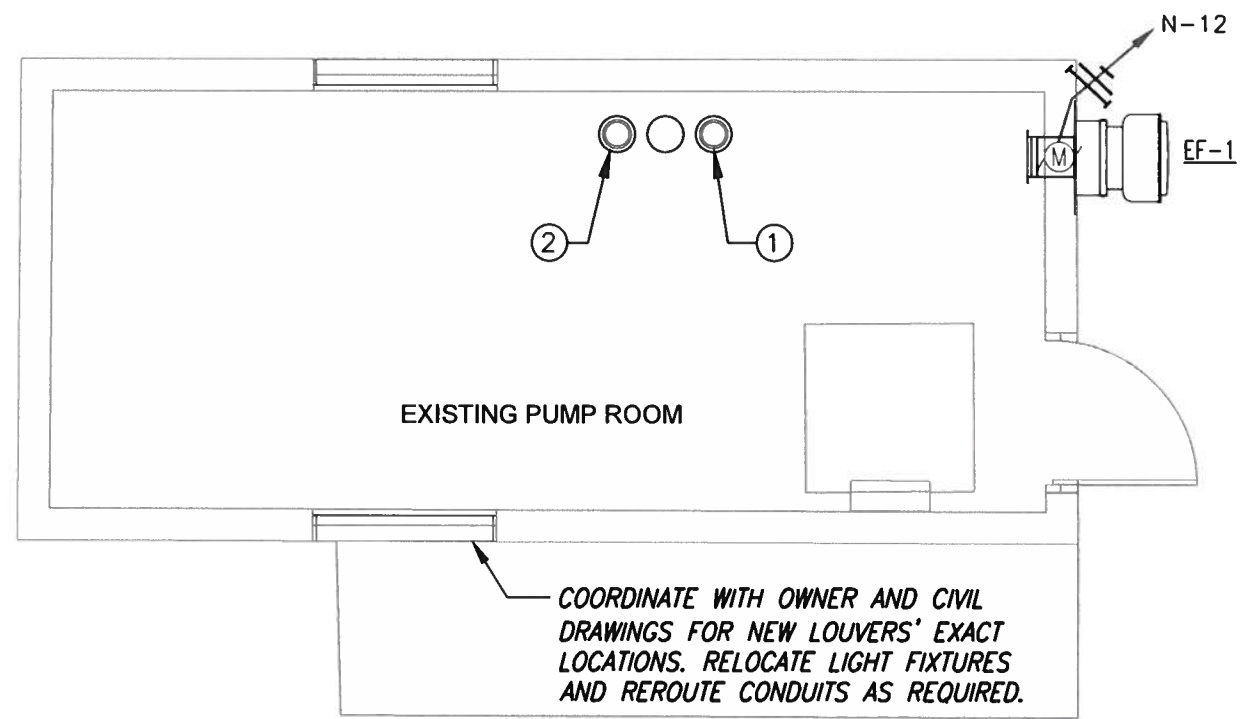
EXISTING 200A NORMAL POWER DISCONNECT TO REMAIN. REFER TO RISER ON DRAWING E-107.

NEW PUMP STATION CONTROL PANEL TO REPLACE EXISTING. SEE DRAWINGS E-109 & E-110 FOR DETAILS.



EXISTING REMOTE TERMINAL UNIT (RTU) TO REMAIN.

EXISTING FUEL OIL TANK WITH LEAK DETECTOR CONNECTED TO RTU TO REMAIN.



**GENERATOR AND PUMP ROOM ELECTRICAL PLAN**  
SCALE: 1/4"=1'-0"

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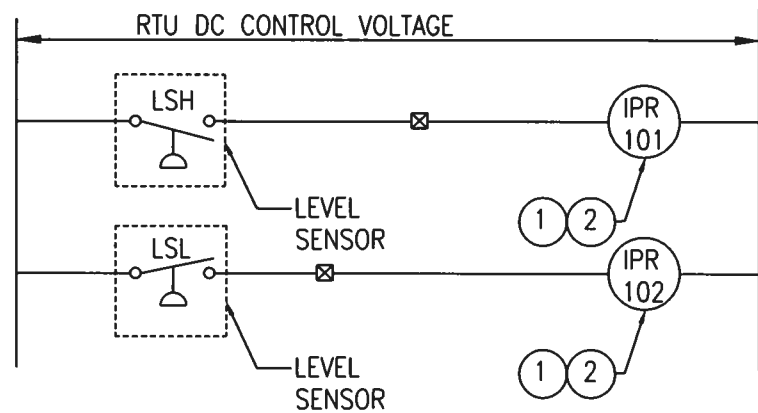
Rucks Park  
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PUMP STATION  
IMPROVEMENT PROJECT

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DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS  
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MIAMI, FLORIDA 33128

**GENERATOR AND PUMP ROOM ELECTRICAL PLAN**

E-103



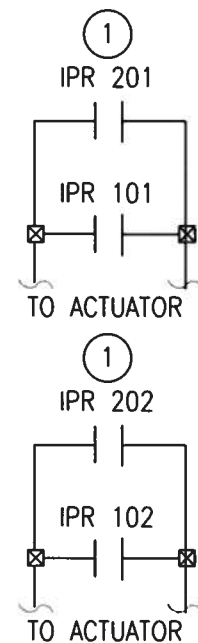
RTU LEVEL SWITCH WIRING  
N.T.S.

RTU WIRING INSTALLATION NOTES:

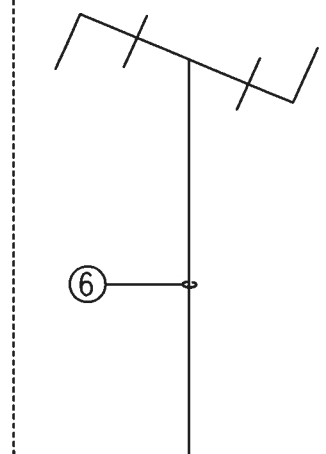
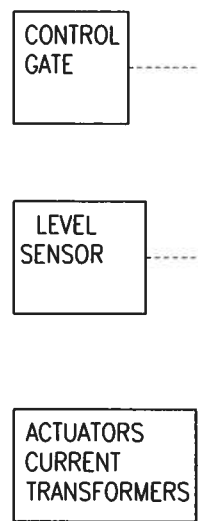
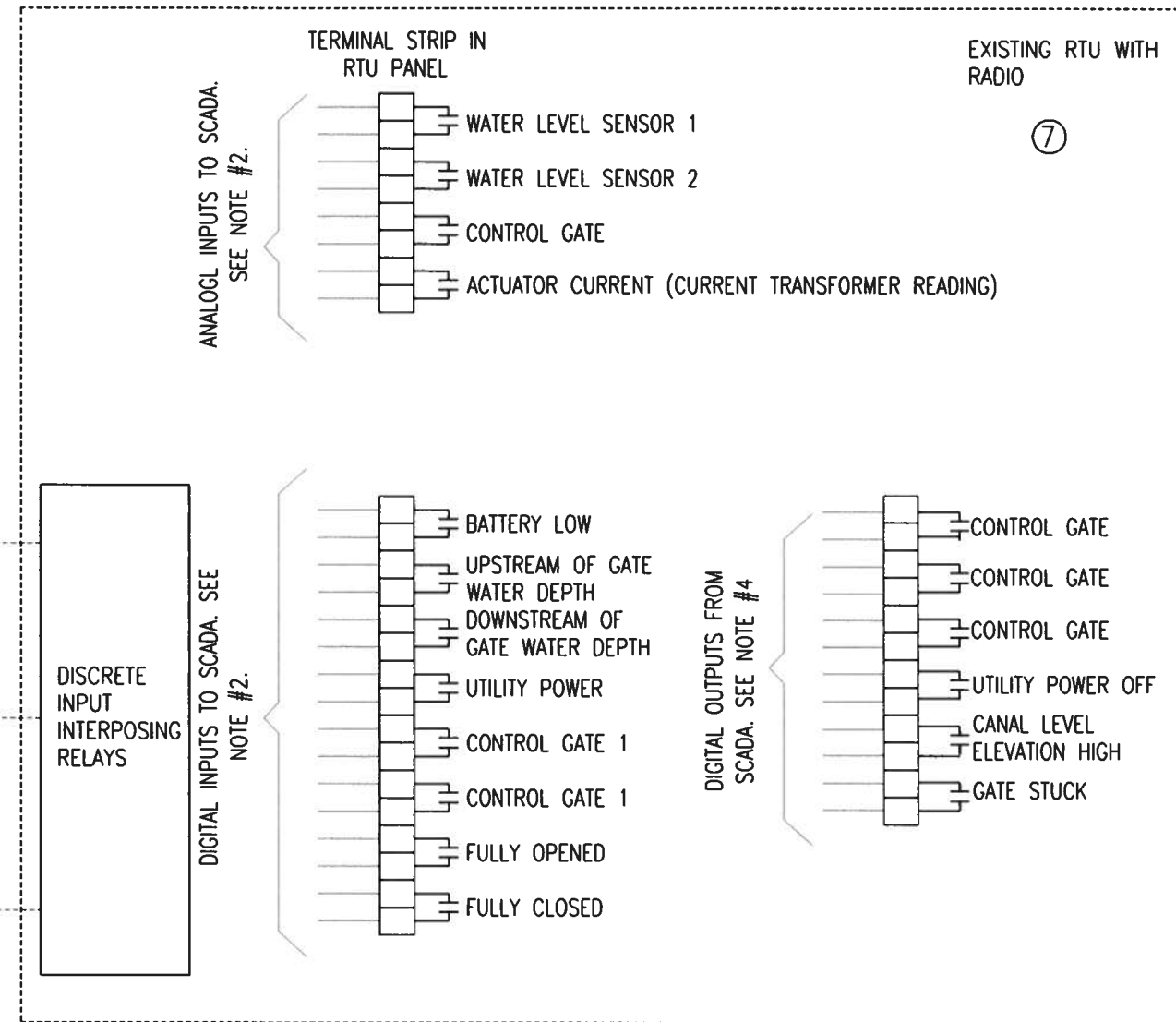
- 1-. WIRING TO SCADA RTU PANEL TO BE FURNISHED AND INSTALLED BY CONTRACTOR. TERMINATIONS TO BE PERFORMED BY CONTRACTOR'S ELECTRICIANS AS SPECIFIED BY MANUFACTURER AND REQUESTED BY OWNER.
- 2-. DIGITAL INPUTS TO SCADA SHALL BE WIRED WITH #18 TWISTED SHIELDED
- 3-. DIGITAL OUTPUTS FROM SCADA SHALL BE WIRED WITH #18 THHN STR. RED.
- 4-. 4-20 MILLIAMPERES DIRECT CURRENT SIGNAL CABLE SHALL BE BELDEN 9341 TWISTED PAIR OR EQUAL INSTALL IN A SEPARATE CONDUIT.

KEYED NOTES

- 1-INTERPOSING RELAYS FOR DISCRETE INPUTS AND OUTPUTS LOCATED IN RTU PANEL.
- 2-PROVIDE INTERPOSING RELAY WITH DPDT CONTACTS. CONNECT ONE SET RELAY CONTACTS TO RTU DISCRETE INPUT POINTS FOR CANAL LEVEL STATUS AND OTHER SET OF CONTACTS USED FOR GATE CONTROL.
- 3-INSERT INTERPOSING RELAY CONTACTS INTO CONTROL WIRING CIRCUITS AS INDICATED.
- 4-COORDINATE WITH GATE ACTUATOR MANUFACTURER FOR ALL DETAILS.
- 5-PROVIDE ADDITIONAL CONTACT BLOCKS AS REQUIRED FOR ALL INPUT/OUTPUTS.
- 6-EXISTING ANTENNA AND CABLE TO REMAIN.
- 7-EXISTING RTU TO REMAIN.



NEW MONITOR FUNCTIONS DIAGRAM



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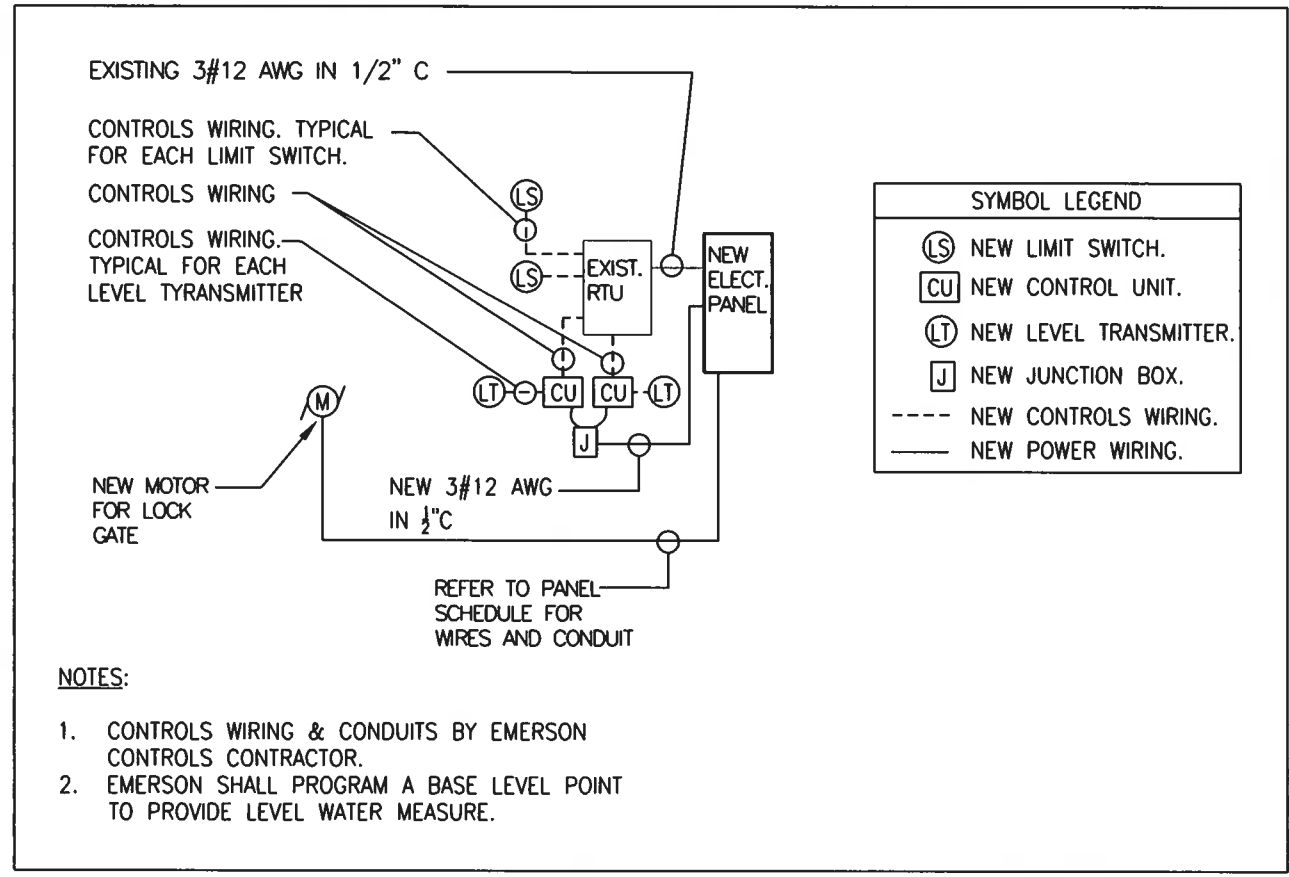
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PUMP STATION  
IMPROVEMENT PROJECT

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GATE CONTROL SCHEMATIC DIAGRAM  
N.T.S.

**CONTROLS SEQUENCE OF OPERATION:**

- GATE OPENS WHEN HI LEVEL FLOAT SWITCH REACHES SET POINT DETERMINED BY CIVIL ENGINEER/OWNER.
- GATE CLOSES WHEN LOW LEVEL FLOAT SWITCH REACHES ITS SET POINT DETERMINED BY CIVIL ENGINEER/OWNER.
- THERE SHALL BE A MANUAL OVERRIDE SWITCH IN THE ELECTRIC ACTUATOR TO CONTROL GATE OPERATION MANUALLY.
- LOCAL RECORDERS TO CONSTANTLY RECORD THE WATER LEVEL.

**NEW MONITOR FUNCTIONS:**

- WATER LEVEL: THERE WILL BE AN ULTRASONIC AND RADAR LEVEL SENSOR/TRANSMITTER INSTALLED CONSTANTLY MEASURING THE LEVEL OF WATER. EACH LEVEL TRANSMITTER IS CONNECTED TO THE RTU PANEL.
- GATE OPENED AND CLOSED: THERE WILL BE TWO LIMIT SWITCHES, ONE LOCATED AT THE FULLY OPENED GATE POSITION AND THE OTHER LOCATED AT THE FULLY CLOSED GATE POSITION. EACH LIMIT SWITCH SHALL BE CONNECTED TO THE RTU PANEL. THESE LIMIT SWITCHES WILL PROVIDE INFORMATION TO OWNER VIA RTU PANEL AS TO WHETHER GATE IS IN FULLY OPENED OR FULLY CLOSED POSITION. (DIGITAL INPUT)
- AC FAILURE (DIGITAL INPUT).
- BATTERY LOW (DIGITAL INPUT).

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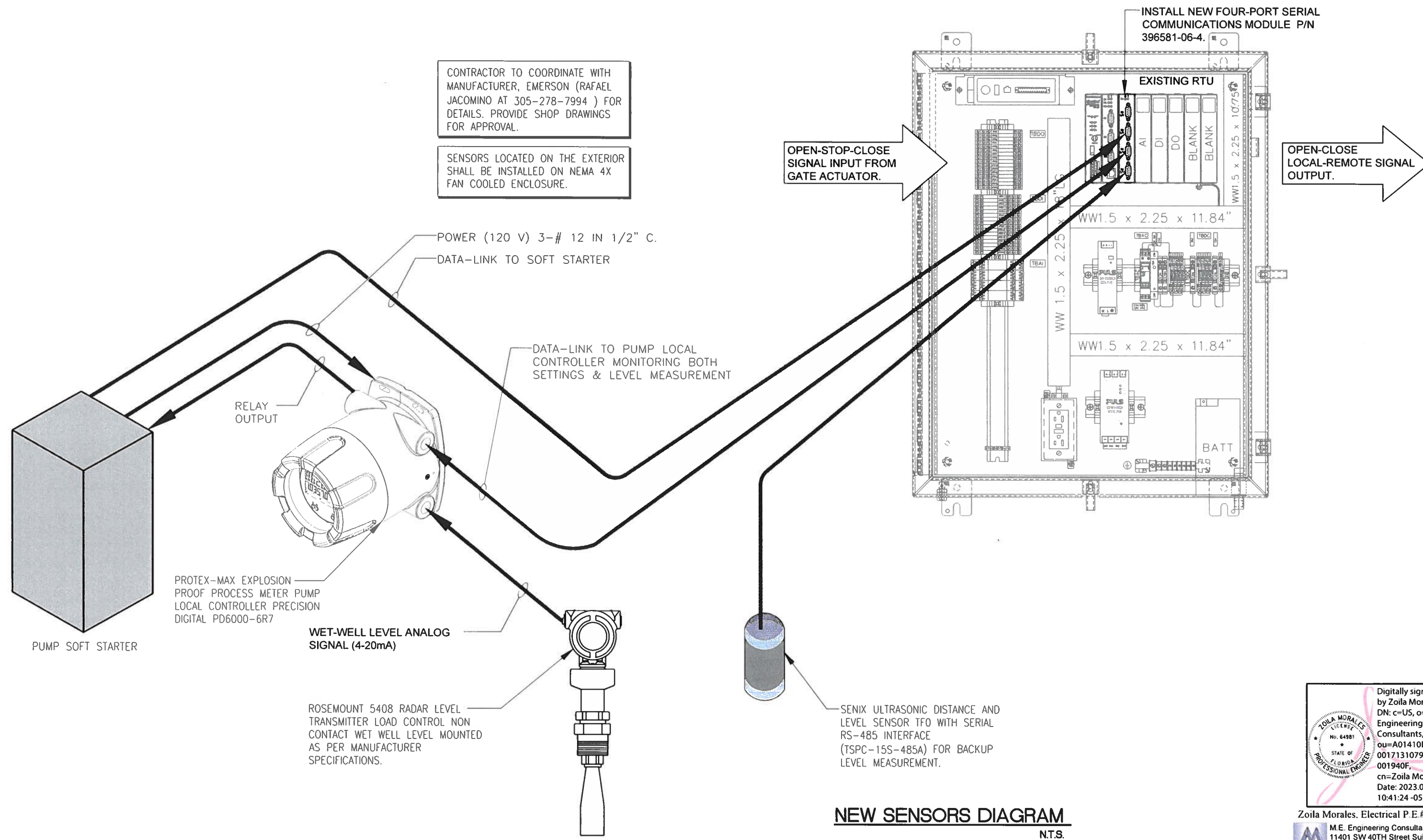
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**NEW SENSORS DIAGRAM**  
N.T.S.

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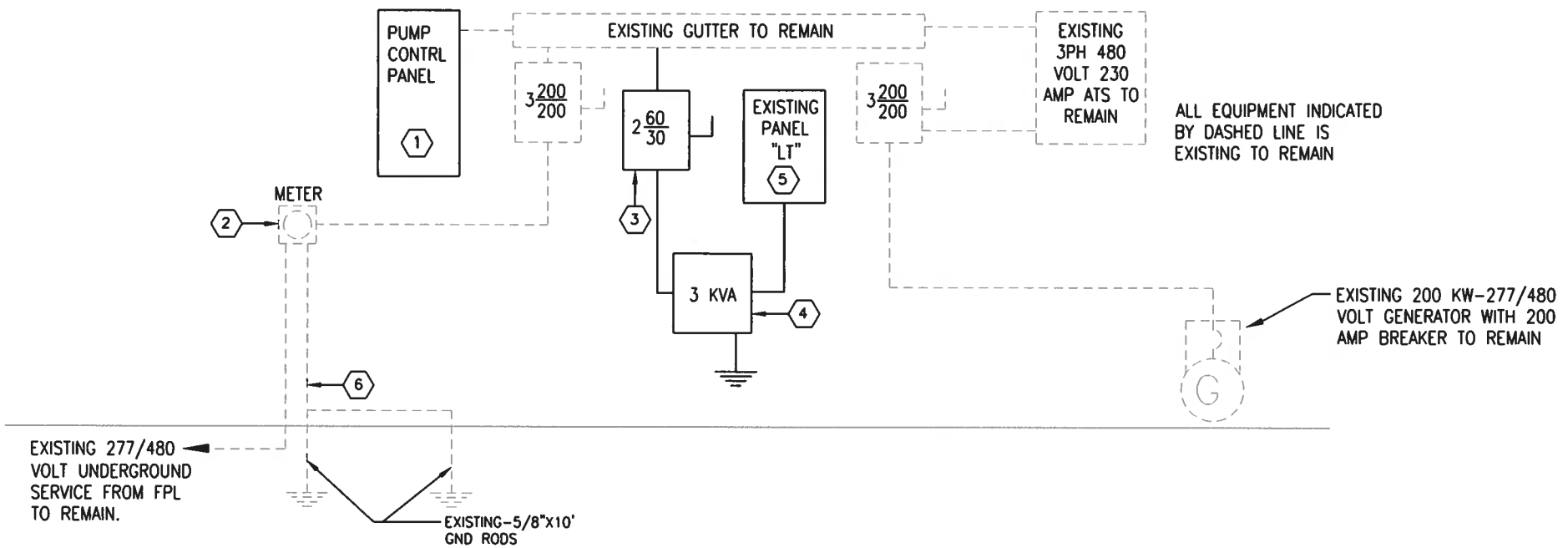
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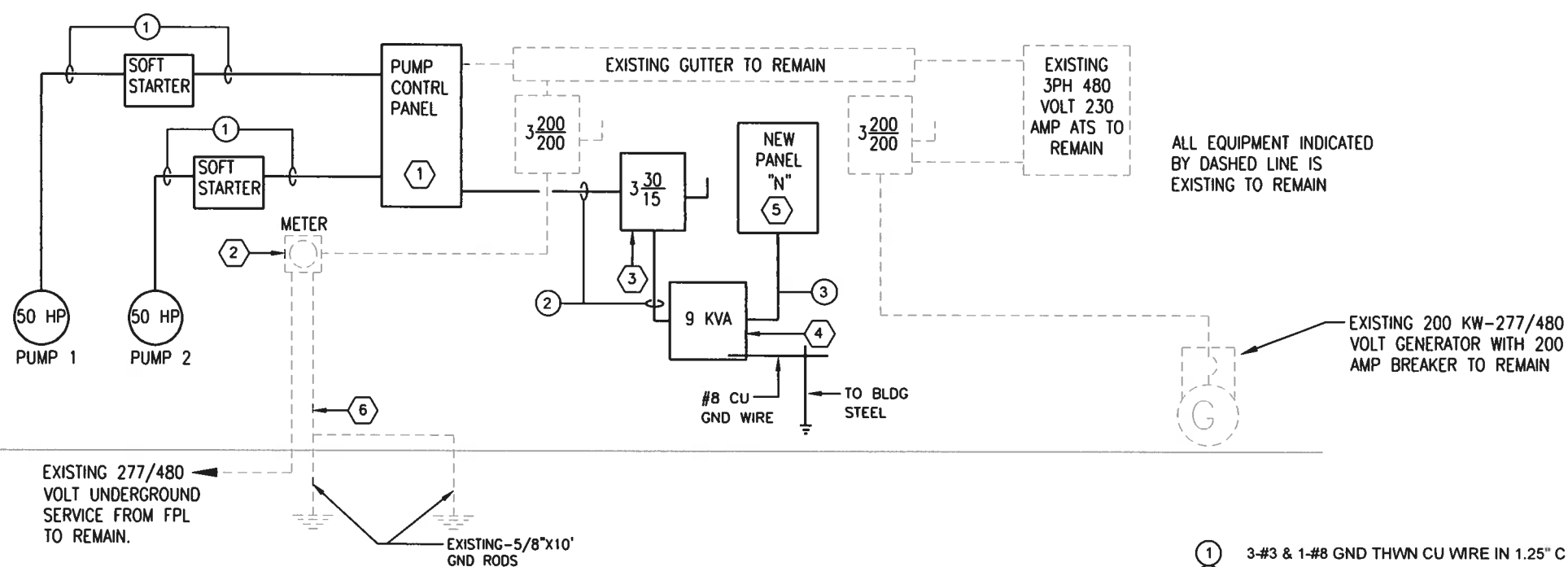
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**EXISTING ELECTRICAL RISER DIAGRAM**  
N.T.S.

**KEYED NOTES**

- ① EXISTING PUMP CONTROLLER TO BE REPLACED.
- ② EXISTING 200 AMP ELECTRICAL METER TO REMAIN.
- ③ EXISTING SINGLE PHASE 60 AMP DISCONNECT TO BE REPLACED.
- ④ EXISTING 3 KVA SINGLE PHASE 480:240 TRANSFORMER TO BE REPLACED. REFER TO NEW RISER ON THIS DRAWING.
- ⑤ EXISTING 60 AMP PANEL LT 120/240, 1PH, 3W WITH 60 AMP SERVICE ENTRANCE RATED MAIN BREAKER TO BE REPLACED. REFER TO NEW RISER ON THIS DRAWING.
- ⑥ EXISTING GROUNDING SYSTEM TO REMAIN. CONTRACTOR TO VERIFY THAT A # 6 CU GROUNDING ELECTRODE CONDUCTOR IS EXISTING AND CONNECTED TO GROUND RODS, COLD WATER METALLIC PIPE AND BUILDING FOUNDATION STEEL TO COMPLY WITH NEC REQUIREMENTS. TEST THE SYSTEM TO MAKE SURE THAT MAXIMUM RESISTANCE TO GROUND IS LIMITED TO 5 OHMS. ADDITIONAL GROUND RODS SHALL BE DRIVEN IF REQUIRED TO MAINTAIN THIS LEVEL.



**NEW ELECTRICAL RISER DIAGRAM**  
N.T.S.

**KEYED NOTES**

- ① NEW PUMP CONTROLLER TO REPLACE EXISTING. REFER TO DETAIL ON DRAWINGS E-109 & E-110.
- ② EXISTING 200 AMP ELECTRICAL METER TO REMAIN.
- ③ NEW THREE PHASE 30 AMP WITH 15 AMP FUSE DISCONNECT.
- ④ NEW 9 KVA THREE PHASE 480:240 TRANSFORMER TO REPLACE EXISTING SINGLE PHASE 3 KVA.
- ⑤ NEW 60 AMP PANEL N 120/240, 3PH, 4W WITH 30 AMP SERVICE ENTRANCE RATED MAIN BREAKER.
- ⑥ EXISTING GROUNDING SYSTEM TO REMAIN. CONTRACTOR TO VERIFY THAT A # 6 CU GROUNDING ELECTRODE CONDUCTOR IS EXISTING AND CONNECTED TO GROUND RODS, COLD WATER METALLIC PIPE AND BUILDING FOUNDATION STEEL TO COMPLY WITH NEC REQUIREMENTS. TEST THE SYSTEM TO MAKE SURE THAT MAXIMUM RESISTANCE TO GROUND IS LIMITED TO 5 OHMS. ADDITIONAL GROUND RODS SHALL BE DRIVEN IF REQUIRED TO MAINTAIN THIS LEVEL.

- ① 3-#3 & 1-#8 GND THWN CU WIRE IN 1.25" C
- ② 3-#12 & 1-#12 GND THWN CU WIRE IN 0.5" C
- ③ 4-#10 MCM & 1-# 8 GND THWN CU WIRE IN 1.5" C

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	Z.M.			Z.M.	

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ELECTRICAL RISERS  
DIAGRAMS



EQUAL TO: SQUARE D		<b>Panel LT</b>										VOLTS: 120/240V, 1Ø, 3W			
TYPE: NQOD		TO BE REMOVED										BUS: 60 Amp			
MOUNTING EXISTING												TYPE MAINS: 60A, MCB			
LOCATION: GENERATOR ROOM												AIC: 10K			
CKT #	DESCRIPTION	POLE	C.B. TRIP (AMPS)	WIRE	CON-DUIT	VA	"A" VA LOAD	"B" VA LOAD	VA	CON-DUIT	WIRE	C.B. TRIP (AMPS)	POLE	DESCRIPTION	CKT #
(A)- 1	GEN. ROOM LTS	1	20	E	E	128	628		500	E	E	20	1	R.T.U. PANEL	2
(A)- 3	GEN. ROOM RECEPT.	1	20	E	E	360		860	500	E	E	20	1	PUMP R. GEN. REC.	4
(A)- 5	GEN BATT. CHARGER	1	20	E	E	800	1,496		696	E	E	20	1	EXHAUST FAN	6
(A)- 7	MOTOR HEATER	1	20	E	E	500		1,000	500	E	E	20	1	OVERFLOW	8
(A)- 9	SPACE						500		500	E	E	20	1	OVERFLOW	10
(A)- 11	SPACE							0						SPACE	12
TOTALS							2,624	1,860							
CONNECTED LOAD (KVA):		4.5		DEMAND LOAD (KVA):		4.5		AMPS/PHASE:		18.7					

(A)- EXISTING CIRCUIT TO BE FED FROM NEW PANEL. REUSE CONDUIT AND WIRES  
E- EXISTING WIRE AND CONDUIT TO REMAIN EXTEND TO NEW PANEL N

EQUAL TO: SQUARE D		<b>Panel N</b>										VOLTS: 120/240V, 3Ø, 4W				
TYPE: NQOD NEMA 3R		NEW										BUS: 60 Amp				
MOUNTING SURFACE												TYPE MAINS: 30A, MCB				
LOCATION: EXTERIOR												AIC: 10K				
CKT #	DESCRIPTION	POLE	C.B. TRIP (AMPS)	WIRE	CON-DUIT	VA	"A" VA LOAD	"B" VA LOAD	"C" VA LOAD	VA	CON-DUIT	WIRE	C.B. TRIP (AMPS)	POLE	DESCRIPTION	CKT #
(A)- 1	GEN. ROOM LTS	1	20	E	E	128	628			500	E	E	20	1	R.T.U. PANEL	2
(A)- 3	GEN. ROOM RECEPT.	1	20	E	E	360		860		500	E	E	20	1	PUMP R. GEN. REC.	4
(A)- 5	GEN BATT. CHARGER	1	20	E	E	800			1,496	696	1/2"	#12	20	1	GEN ROOM EX. FAN	6
(A)- 7	MOTOR HEATER	1	20	E	E	500	1,000			500	E	E	20	1	OVERFLOW	8
(A)- 9						830		1,330		500	E	E	20	1	OVERFLOW	10
(B)- 11	NEWACTUATOR	3	15	#12	1/2"	830			1,358	528	1/2"	#12	20	1	PUMPROOM EX. FAN	12
(B)- 13						830	2,330			1,500	1/2"	#12	20	1	NOREN CABINET AC	14
(B)- 15	SPARE	1	20			200		200							SPACE	16
(B)- 17	SPACE								0						SPACE	18
(B)- 19	SPACE						0								SPACE	20
(B)- 21	SPACE							0							SPACE	22
(B)- 23	SPACE								0						SPACE	24
TOTALS							3,958	2,390	2,854							
CONNECTED LOAD (KVA):		6.3		DEMAND LOAD (KVA):		6.3		AMPS/PHASE:		26						

(A)- EXISTING LOAD CURRENTLY FED FROM SINGLE PHASE EXISTING PANEL LT BEING REPLACED WITH THIS ONE "PANEL N"  
(B)- NEW CIRCUIT BREAKER TO BRANCH WIRE AND CONDUIT TO FEED NEW LOAD  
E- EXISTING WIRE AND CONDUIT TO REMAIN



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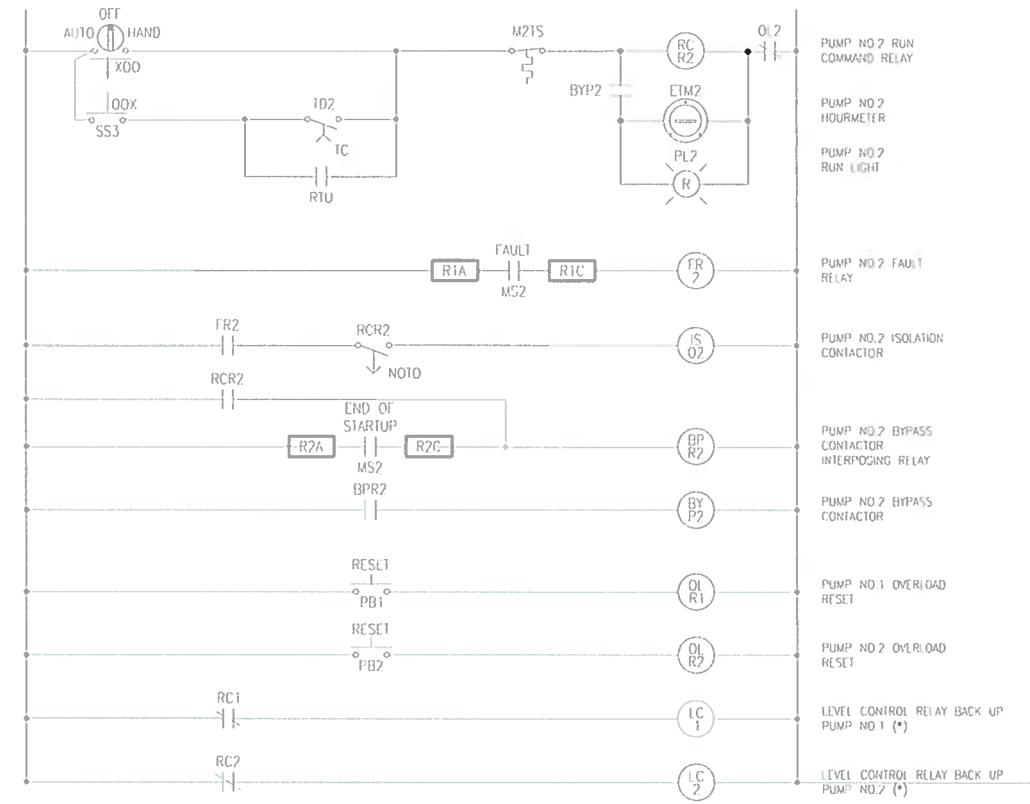
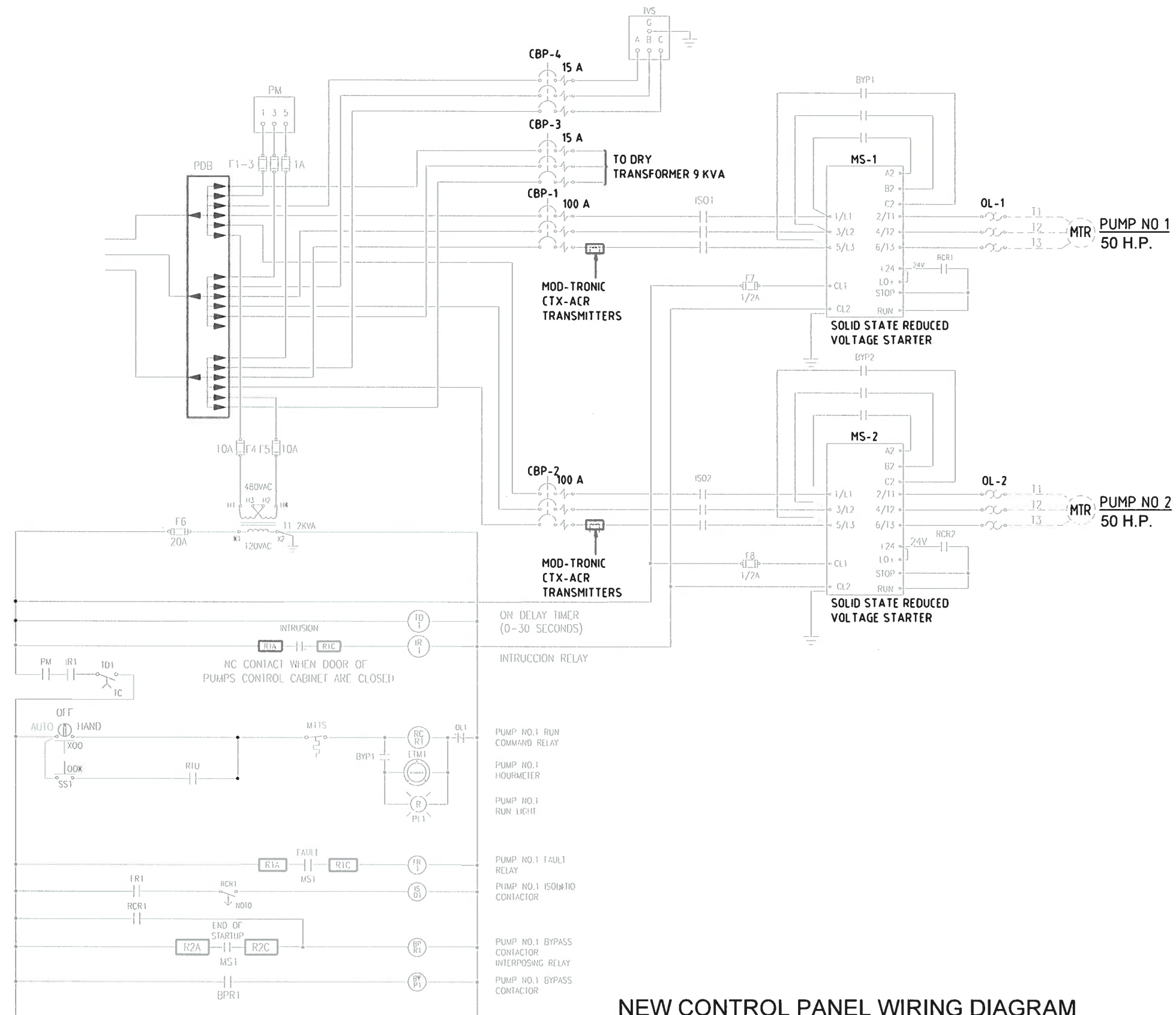
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DESIGNED BY	Z.M.	DATE		DRAWN BY	LF. - M.T.	DATE	SEPT. 2022
CHECKED BY	Z.M.			CHECKED BY	Z.M.		
SUPERVISED BY: ZOILA MORALES							

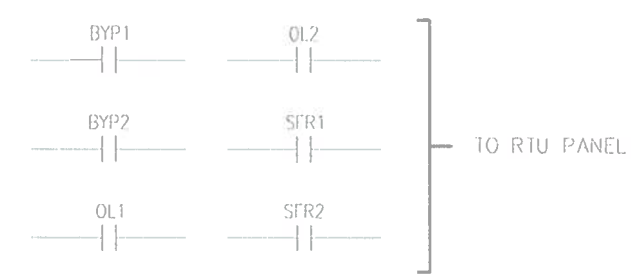


DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS  
ROADWAY ENGINEERING AND RIGHT OF WAY DIVISION  
115 NE 1 ST  
MIAMI, FLORIDA 33128

ELECTRICAL RISERS DIAGRAMS



(\*) IF THE RTU FAILS THE NORMALLY CLOSE CONTACT OF RELAY "RC1" & "RC2" ARE ENABLE THE BACKUP TO START AND / OR STOP THE PUMPS NO. 1 OR NO. 2



SPECIFIC NOTE:  
CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR THE PUMPS CONTROL CABINET & WIRING CONTROL FOR THE APPROVAL OF THE ENGINEER OF RECORD BEFORE ORDERING EQUIPMENT

**NEW CONTROL PANEL WIRING DIAGRAM**  
NOT TO SCALE

THE ENGINEER HAS MADE EVERY ATTEMPT TO SHOW THE APPROXIMATE LOCATION OF ALL ITEMS INCLUDING UNDERGROUND UTILITIES. HOWEVER, THE ENGINEER IS NOT RESPONSIBLE FOR SHOWING OR LOCATING EVERY ITEM CURRENTLY IN PLACE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY ITEM LOCATED, FLAGGED, AND IDENTIFIED PRIOR TO STARTUP OF CONSTRUCTION. ANY DAMAGE DONE TO ANY OF THE EXISTING ITEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL REPAIR ANY ITEM DAMAGED, CAUSED BY HIS ACTIONS, WITH NO ADDITIONAL COMPENSATION.

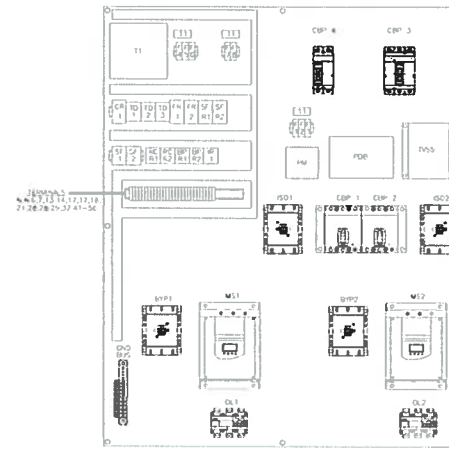
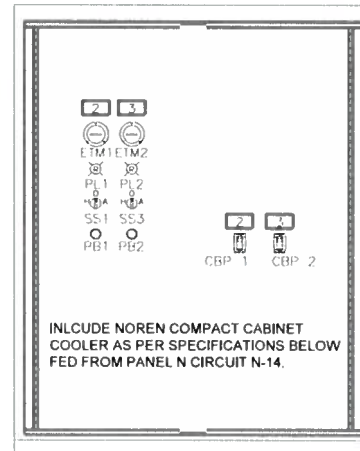
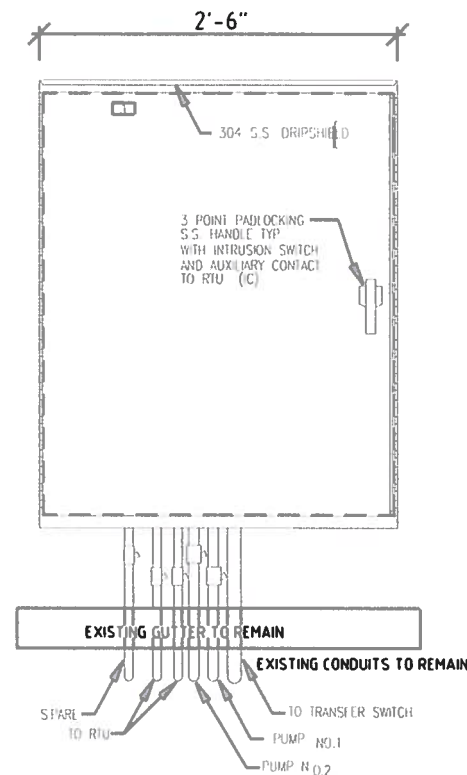
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DN: c=US, o=ME Engineering Consultants, ou=A01410D000, ou=00171310794480001940F, cn=Zoila Morales  
Date: 2023.01.10 10:45:58 -05'00'

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Rucks Park NE 4 Ave and NE 139 St PUMP STATION IMPROVEMENT PROJECT		DESIGNED BY: Z.M. CHECKED BY: Z.M. SUPERVISED BY: ZOILA MORALES	NAME: L.F. - M.T. DATE: SEPT. 2022	NAME: Z.M. DATE:	DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS ROADWAY ENGINEERING AND RIGHT OF WAY DIVISION STEPHEN P. CLARK CENTER 111 NW 3 ST MIAMI, FLORIDA 33122	NEW CONTROL PANEL WIRING DIAGRAM	E-109
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PANEL SHALL BE BUILT TO U.L. 508A SPECIFICATIONS AND SHALL BEAR THE U.L. 508 A LABEL.

PLAQUE #	DIMENSIONS	DESCRIPTION
1	1" x 3"	PUMPS CONTROL PANEL
2	1" x 3"	PUMP No 1
3	1" x 3"	PUMP No 2

**CONTROL PANEL DETAILS**  
NOT TO SCALE

**CONTROL PANEL SPECIFICATIONS:**

TWO DOORS FLOOR MOUNTED TYPE, NEMA 4X ENCLOSURE, UNPAINTED, 60" HEIGHT X 30" WIDE X 12" DEPTH (1/8 GAUGE); TWO FRONT DOORS WITH CYLINDRICAL LOCKS. THE CENTER LOCK ON EACH DOOR SHOULD BE A KEY LOCK, THE REST ARE SCREWDRIVER LOCKS. INTERNAL PANEL: MOUNTING LUGS 12" FLOOR STAND (BOLT ON), HOOKS MOUNTED ON EACH SIDE OF ENCLOSURE, PSOD STYLE ALUMINUM SHIELD TOP COVER WITH AC COMPACT CABINET COOLER AIR - TO - AIR FLUSH MOUNTED MODEL CC601-WL NEMA 4X (NOREN PRODUCT INCORPORATED), CUTOUT ON LEFT SIDE 3300 BTU, 120 VOLT.

ELECTRICAL CONTRACTOR SHALL SUBMIT TO ENGINEER OF RECORD SHOP DRAWINGS FOR THE LOCATION OF ELECTRICAL EQUIPMENTS ON WALL FOR APPROVAL PRIOR TO ORDERING EQUIPMENT.

EQUIPMENT		DESCRIPTION
SYMB	QTY	
T1	1	SOD CLASS 9070 12000D1 480/120V 2KVA TRANSFORMER
F1-F3	3	BUSSMANN FNO-1 500V 1A FUSES
F4-F5	2	BUSSMANN FNO-10 500V 10A FUSES
F6	1	BUSSMANN FNO-20 500V 20A FUSE
F7-F8	2	BUSSMANN FNM-1/2 250V 1/2A FUSES
	3	SOD CLASS 9080 GH10 END CLAMPS
	6	SOD CLASS 9080 GF6B END BARRIERS
F1-F8	8	SOD CLASS 9080 GF6 600V FUSIBLE TERMINALS
PB1,PB2	2	SOD CLASS 9001 KR1U PUSHBUTTON OPERATOR W/ 1 KA2 BLOCK
SS1,SS3	2	SOD CLASS 9001 KS43B 3 POS. SELECTOR SWITCH W/ 1 KA1 BLOCK
PL1,PL2	2	SOD CLASS 9001 KP1R31 120VAC RED PILOT LIGHTS
ETM1,ETM2	2	ENM T50B212 120VAC HOUR-METERS
FR1-FR2	2	IDEC SR3B-05 RELAY SOCKETS
SFR1-SFR2	2	POTTER & BRUMFIELD KUP14A45-120 120V 3PDT RELAYS
	2	IDEC SR3B-05 RELAY SOCKETS
	2	POTTER & BRUMFIELD KUP14A45-120 120V 3PDT RELAYS
CR1	1	IDEC SR3B-05 RELAY SOCKETS
	1	POTTER & BRUMFIELD KUP14A45-120 120V 3PDT RELAYS
TD1-TD3	3	SSAC TDM120AL ON DELAY SOLID STATE TIMERS
	3	OMRON PF083A RELAY SOCKETS
SF1-SF2	2	SSAC LLC5-4-A-A LEAK DETECTION RELAY
	2	OMRON PF083A RELAY SOCKETS
RCR1-RCR2	2	SOD TELEMECANIQUE LA3DR2 OFF DELAY TIMERS
BPR1-BPR2	2	SOD TELEMECANIQUE CA2DN40G6 600V 4P RELAYS
IR1	1	IDEC SR3B-05 RELAY SOCKETS
	1	POTTER & BRUMFIELD KUP14A45-120 120V 3PDT RELAYS
PM	1	DIVERSIFIED ELECTRONICS GLA-440-ALC PHASE MONITOR RELAY
IVSS	1	API TE/SXF 480V SURGE ARRESTER
PDB	1	FERRAZ 69133 POWER DISTRIBUTION BLOCK
	1	C.C.C.C. MECHANICAL INTERLOCK
BYP1,BYP2	2	SQUARE D SDO 3 V02 45A CONTACTORS
ISO1,ISO2	2	SQUARE D SDO 3 V02 45A CONTACTORS
	5	PANDUIT CB35 COPPER LUGS
	6	PANDUIT CB70 COPPER LUGS
GND. BUS	2	GLASTIC 2165-1B INSULATORS
	2	SOD CLASS 9080 GH10 END CLAMPS
	1	SOD CLASS 9080 GM6B END BARRIERS
TERMINALS	30	SOD CLASS 9080 GR6 600V BOX LUG TERMINALS
	1	3 PT. S.S. PADLOCKING HANDLE WITH INTRUSION SWITCH AND AUX CONTACT TO RTU
IC	1	3 POINT PADLOCKING S.S. HANDLE WITH INTRUSION SWITCH AND AUXILIARY CONTACT
A/C UNIT	1	COMPACT CABINET COOLER AIR - TO - AIR FLUSH - MOUNT MODEL CC601-WL, NEMA 4X, (NOREN PRODUCT INCORPORATED) CUTOUT ON LEFT SIDE 3300 BTU, 120 VOLTS

NOTE: REFER TO DRAWING E-110 FOR SPECIFICATIONS OF CBP1, CBP2, CBP3, CBP4, MS1, MS2, OL1 & OL2.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Rucks Park  
NE 4 Ave and NE 139 St  
PUMP STATION  
IMPROVEMENT PROJECT

NAME	DATE	NAME	DATE
DESIGNED BY: Z.M.		DRAWN BY: L.F. - M.T.	SEPT. 2022
CHECKED BY: Z.M.		CHECKED BY: Z.M.	
SUPERVISED BY: ZOILA MORALES			



DEPARTMENT OF TRANSPORTATION  
AND PUBLIC WORKS  
ROADWAY ENGINEERING AND  
RIGHT OF WAY DIVISION  
STEPHEN P. CLARK CENTER  
111 NW 1 ST  
MIAMI, FLORIDA 33122

NEW CONTROL PANEL  
DETAILS

E-110

Digitally signed  
by Zoila Morales  
DN: c=US, o=ME  
Engineering  
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ou=A01410D000  
00171310794480  
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### H.V.A.C. GENERAL NOTES:

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH FBC-2020. THE WORK THAT IS TO BE DONE UNDER THIS HEADING INCLUDES THE FURNISHING OF ALL LABOR, MATERIALS, EQUIPMENT, PERMITS, FEES, INSPECTIONS, TEST, INSURANCE, ETC. REQUIRED FOR THE COMPLETION OF THE AIR CONDITIONING SYSTEM SHOWN ON THE DRAWINGS AND/OR LISTED BELOW.
- OBTAIN FULL INFORMATION REGARDING PECULIARITIES AND LIMITATIONS OF SPACE AVAILABLE FOR INSTALLATION OF THE EQUIPMENT AND MATERIALS UNDER CONTRACT AND PROVIDE READY ACCESSIBILITY TO DAMPERS, VALVES AND OTHER APPURTENANCES INCLUDING ANY PART OF THE SYSTEM REQUIRED TO BE REACHED FOR BALANCING, TESTING, MAINTENANCE AND OPERATION.
- PLANS ARE GENERALLY DIAGRAMMATIC IN NATURE, AND ARE TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, PLUMBING, ELECTRICAL AND STRUCTURAL PLANS AND ALL PLANS RELATED TO PROJECT SHALL BE CONSIDERED AS ONE SET OF DOCUMENTS. DUCT AND PIPING OFFSETS, BENDS AND TRANSITIONS WILL BE REQUIRED TO PROVIDE AND INSTALL A COMPLETE FUNCTIONAL SYSTEM AND SHALL BE PROVIDED BY THE CONTRACTOR AS NECESSARY AT NO ADDITIONAL COST TO THE OWNER.
- ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION AND IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS. WORK SHALL ALSO BE COORDINATED WITH STRUCTURE AND AVAILABLE SPACE TO ENSURE FIT AND PROPER CLEARANCES ARE BEING PROVIDED. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT - ENGINEER IMMEDIATELY.
- CUT ALL OPENINGS AND CHASES REQUIRED TO ACCOMMODATE THE WORK UNDER THIS DIVISION, AND REPAIR ALL FLOORS, WALLS, ETC. DAMAGED BY WORK. ALL WORK PERFORMED UNDER THIS HEADING SHALL CONFORM IN EVERY RESPECT TO THE FINISH AND QUALITY OF MATERIALS AND WORKMANSHIP SPECIFIED UNDER APPROPRIATE SECTIONS FOR THE BUILDING.
- SUBMIT SHOP DRAWINGS OF ALL MATERIALS AND EQUIPMENT FOR APPROVAL PRIOR TO FABRICATION. DUCTWORK SHOP DRAWINGS SHALL BE SUBMITTED AT 1/4" = 1'-0" SCALE AND BE COORDINATED WITH OTHER TRADES.
- CONTRACTOR SHALL MAINTAIN AN "AS-BUILT" SET OF RECORD DRAWINGS ON SITE INDICATING ANY MODIFICATIONS TO THE DESIGNED SYSTEM LAYOUT. SET SHALL CLEARLY INDICATE ACTUAL INSTALLED CONDITIONS AND LOCATION OF ALL EQUIPMENT, PIPING, DUCTWORK, CONTROL DEVICES, ETC. RECORD SET SHALL BE ACCURATELY UPDATED WEEKLY BY THE CONTRACTOR. ACCURATE "AS-BUILT" SET SHALL BE SUPPLIED TO THE ARCHITECT/ENGINEER AT COMPLETION OF PROJECT.
- INTERRUPTIONS OF EXISTING FACILITIES AND/OR SERVICES SHALL BE KEPT TO A MINIMUM AND CONTRACTOR SHALL FURNISH ALL MATERIALS AND LABOR REQUIRED WHENEVER TEMPORARY CONNECTIONS ARE NECESSARY TO MAINTAIN CONTINUITY OF SERVICES. COORDINATE ALL INTERRUPTIONS OF SERVICES WITH THE OWNER'S REPRESENTATIVE 48 HOURS PRIOR TO SHUT DOWN.
- GUARANTEES:
  - ALL NEW EQUIPMENT FURNISHED UNDER THIS CONTRACT SHALL HAVE A 5 YEARS PRODUCT GUARANTEE FROM DATE OF START-UP.
  - CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN A 1 YEAR FROM DATE OF ACCEPTANCE.

FAN SCHEDULE		
UNIT DESIGNATION	EF-1	EF-2
AREA SERVED	PUMP ROOM	GENERATOR ROOM
LOCATION	WALL	ROOF
PERFORMANCE	FAN TYPE	WALL EXHAUSTER
	FAN WHEEL TYPE	CENTRIFUGAL
	TOTAL AIR CFM	600
	AIR TEMPERATURE, °F	90
	TOTAL STATIC PRESSURE, IN. OF H2O	0.2
	BHP	0.05
	FAN SPEED, RPM	1202
	DRIVE TYPE	DIRECT
	ESTIMATED DRIVE LOSS, %	---
	MOTOR	MOTOR TYPE
MOTOR SIZE, (HP)		1/6
ELECTRICAL SERVICE AVAILABLE, φ/Hz/V		1/60/120
ACCESS	COMPANION CURB (PREFAB)	YES
	CURB HEIGHT, IN	---
	FIRESTATS	---
OPERATING WEIGHT, LBS	64	72
SONES/dBA	5.6/49	10.9/62
DESIGN MANUFACTURER & MODEL NUMBER	GREENHECK CUE-095-VG	GREENHECK CUE-095-VG
FAN OPERATION	WALL MOUNTED THERMOSTAT. OPERATION SUPERVISED BY "SCADA" PANEL	WALL MOUNTED THERMOSTAT. OPERATION SUPERVISED BY "SCADA" PANEL

HVAC DESIGN REQUIRES	YES	NO
DUCT SMOKE DETECTOR		X
FIRE DAMPER'S		X
SMOKE DAMPER'S		X
FIRE RATED ENCLOSURE		X
FIRE RATED ROOF / FLOOR		X
FIRE STOPPING		X
EXIST. SMOKE CONTROL		X

- NOTES:
- EF-1 & EF-2 SHALL BE PROVIDED WITH MOTORIZED DAMPER.
  - FAN OPERATING BRAKE HORSEPOWER SHALL NOT EXCEED 85% OF THE MOTOR RATED HORSEPOWER.
  - FAN AND CURB ASSEMBLIES SHALL BE PROVIDED WITH MIAMI DADE APPROVAL N.O.A #21-0318.05.
  - PROVIDE DISCONNECT SWITCH.
  - PROVIDE VARI-GREEN EC MOTOR AND CONTROL.
  - PROVIDE MOTORIZED DAMPER.
  - FOR EF-1 PROVIDE WALL GRILLE.
  - EF-2 SHALL BE PROVIDED WITH AN OVERRIDE SWITCH/BUTTON, THIS BUTTON SHALL BE INTERLOCKED TO EXISTING CONTROL PANEL

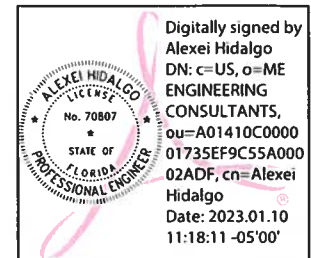
### WALL LOUVER SCHEDULE

TAG	QTY	MANUF. & MODEL	LOCATION	MATERIAL	COLOR	SIZE (WxH)	TYPE	FRAME DEPTH	AIR FLOW (CFM)	FPM	PD (IN WG.)	GENERAL NOTES
L-1	2	GREENHECK EVH-660D	SEE PLAN	EXTRUDED ALUMINUM	TO BE SELECTED BY ARCHITECT	43"x32"	INTAKE	6"	300	74	0.00	1.,2.

GENERAL NOTES:

- PROVIDE WITH EXTENDED SILL AND BIRD SCREENS.
- MIAMI DADE APPROVED (NOA#21-0526.07) HURRICANE LOUVER.

(\* ) EQUIVALENT MANUFACTURER: RUSKIN



Alexei Hidalgo, Mechanical P.E. #70807

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REVISIONS					
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Rucks Park  
NE 4 Ave and NE 139 St  
PUMP STATION  
IMPROVEMENT PROJECT

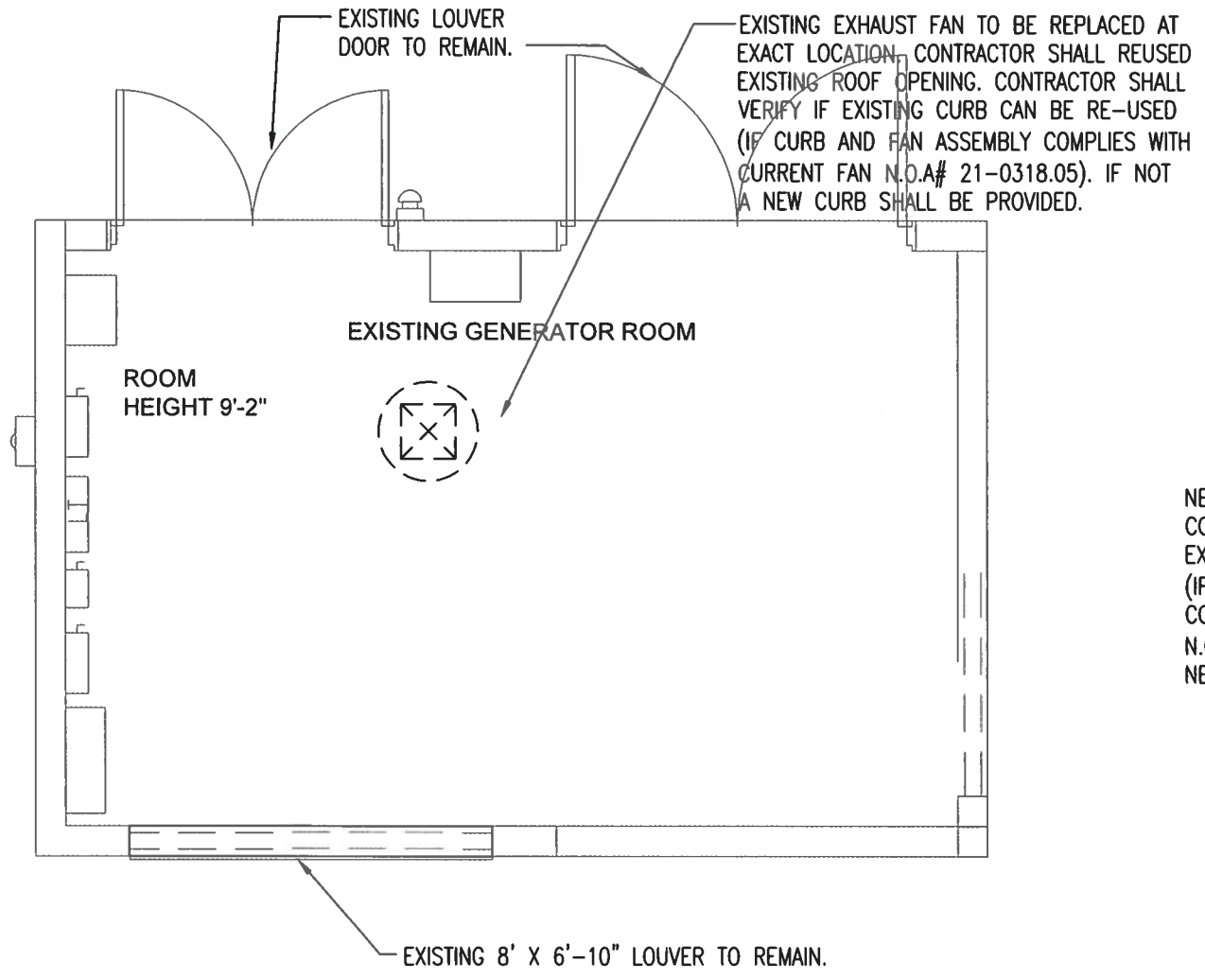
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ZM	ZM		CHECKED BY	ZM	

SUPERVISED BY: ZOLA MORALES

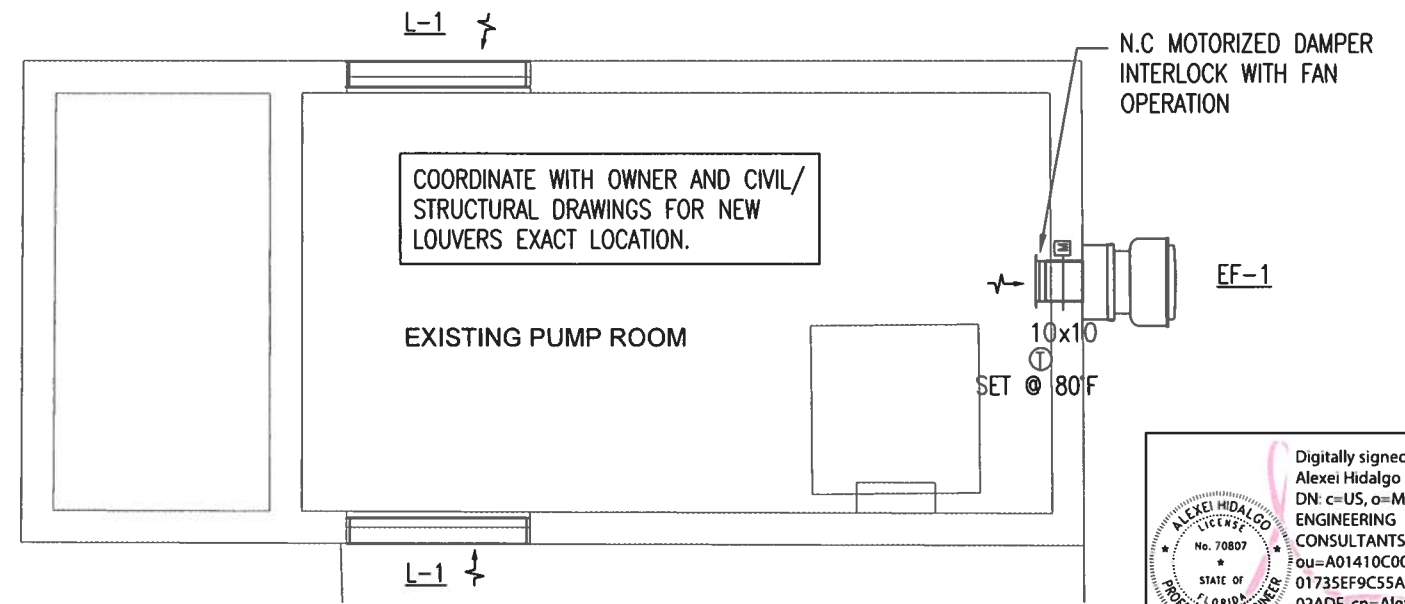
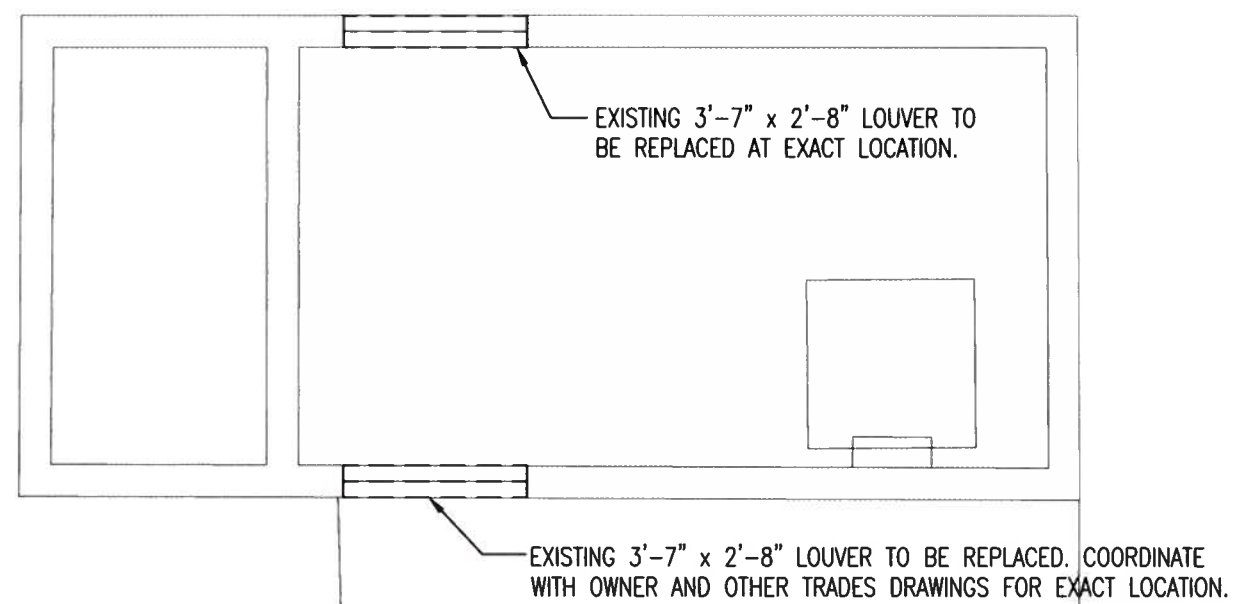
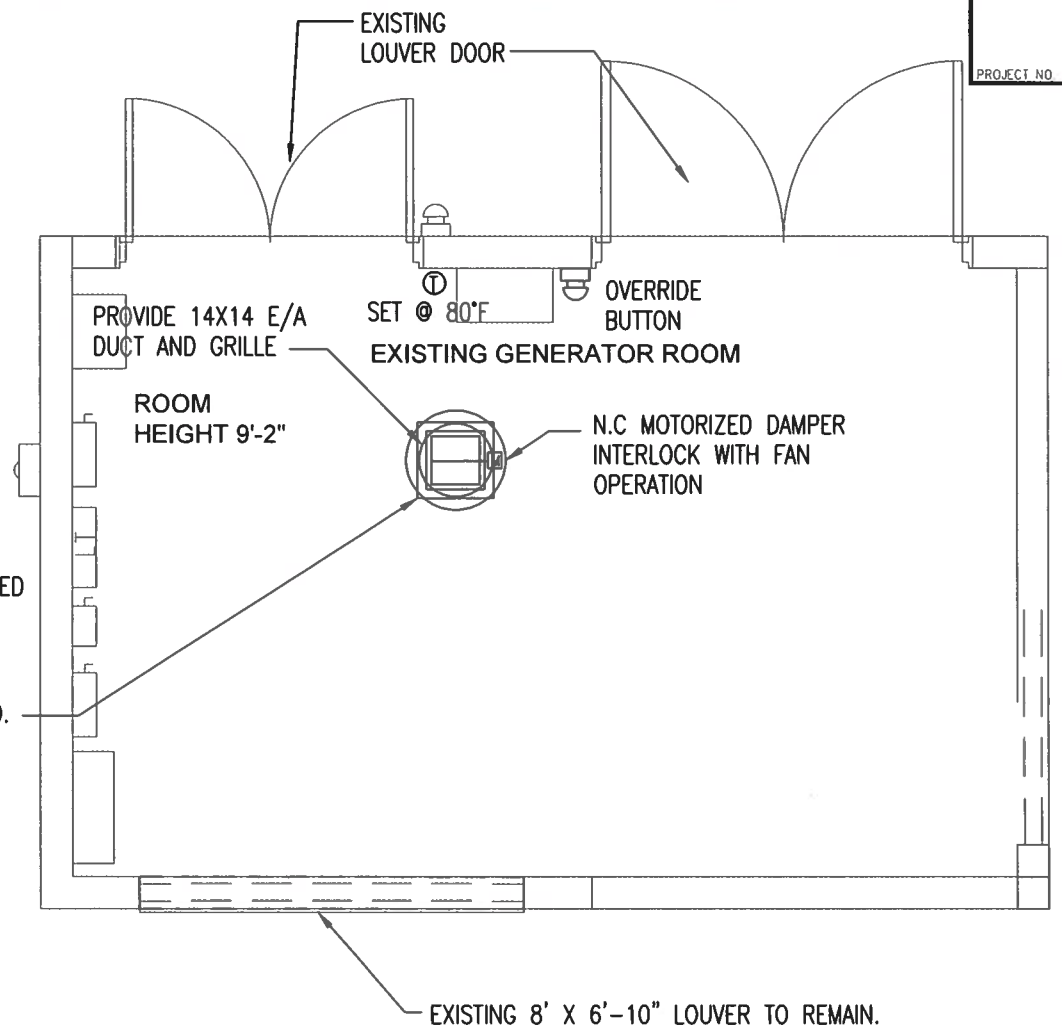


GENERAL MECHANICAL NOTES AND SCHEDULES





NEW EF-2  
CONTRACTOR SHALL VERIFY IF EXISTING CURB CAN BE RE-USED (IF CURB AND FAN ASSEMBLY COMPLIES WITH CURRENT FAN N.O.A# 21-0318.05). IF NOT A NEW CURB SHALL BE PROVIDED.



**GENERATOR PUMP ROOM DEMO MECHANICAL PLAN**  
SCALE: 1/4"=1'-0"

**GENERATOR AND PUMP ROOM NEW MECHANICAL PLAN**  
SCALE: 1/4"=1'-0"

Digitally signed by  
Alexei Hidalgo  
DN: c=US, o=ME  
ENGINEERING  
CONSULTANTS,  
ou=A01410C0000  
01735EF9C55A000  
02ADF, cn=Alexei  
Hidalgo  
Date: 2023.01.10  
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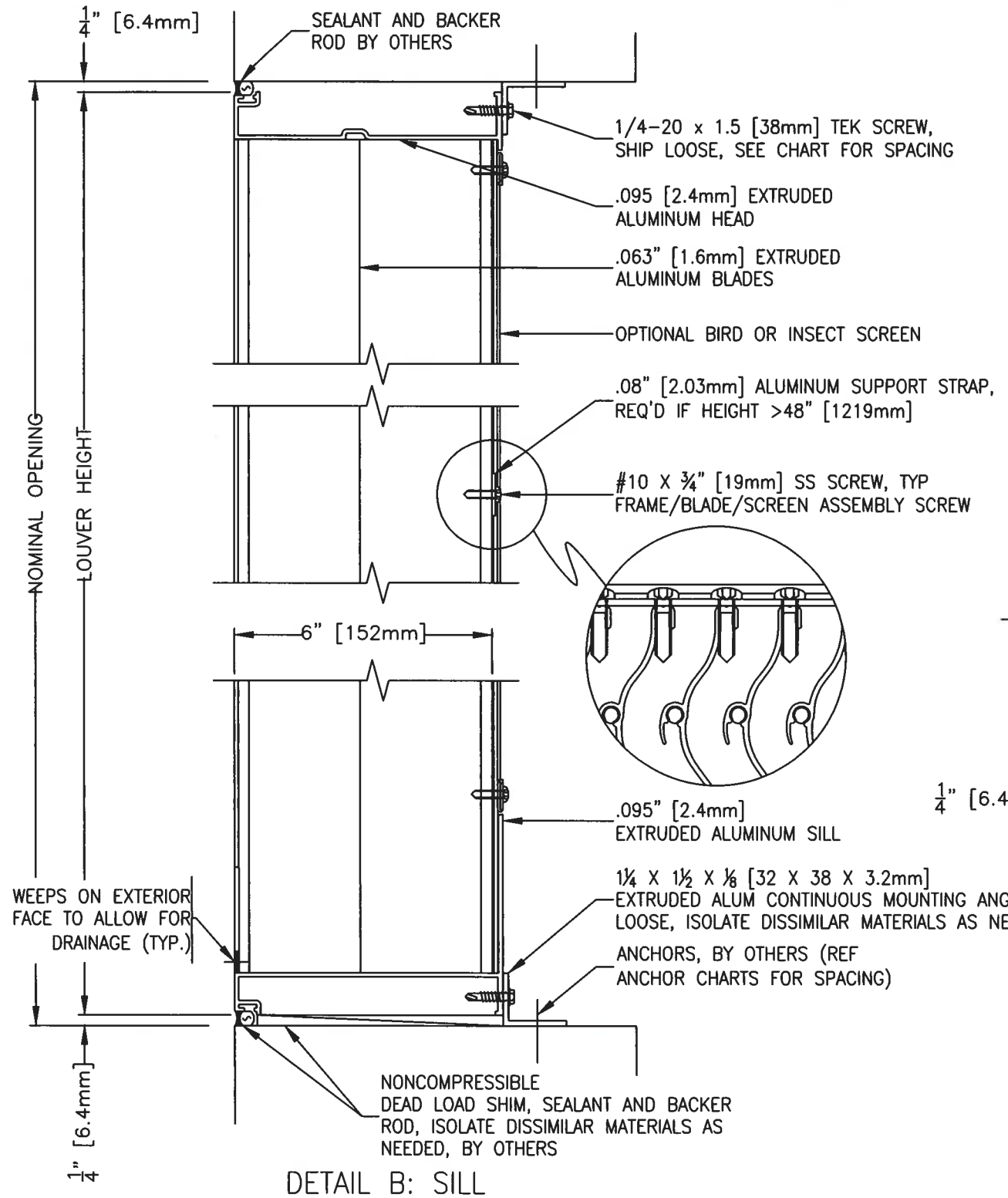
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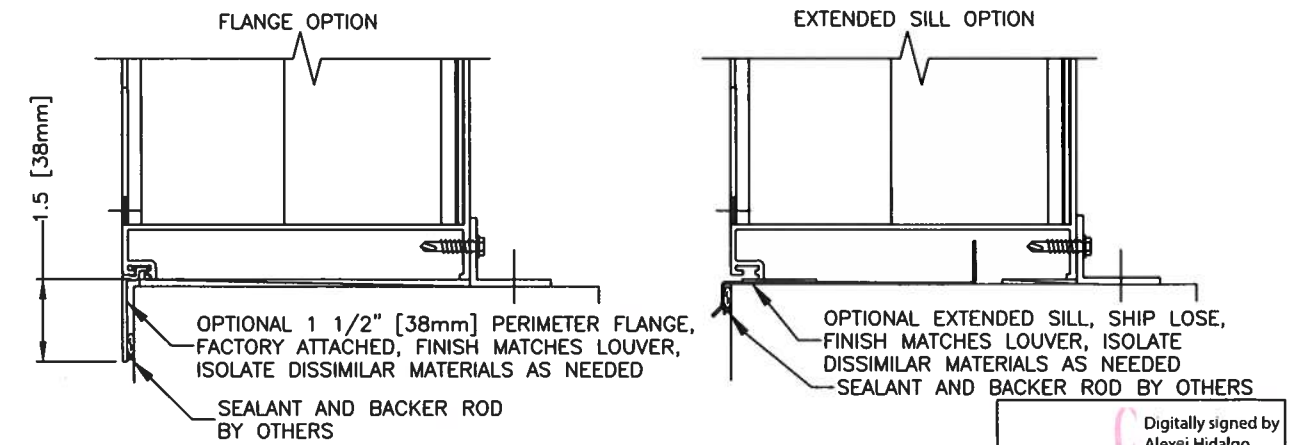
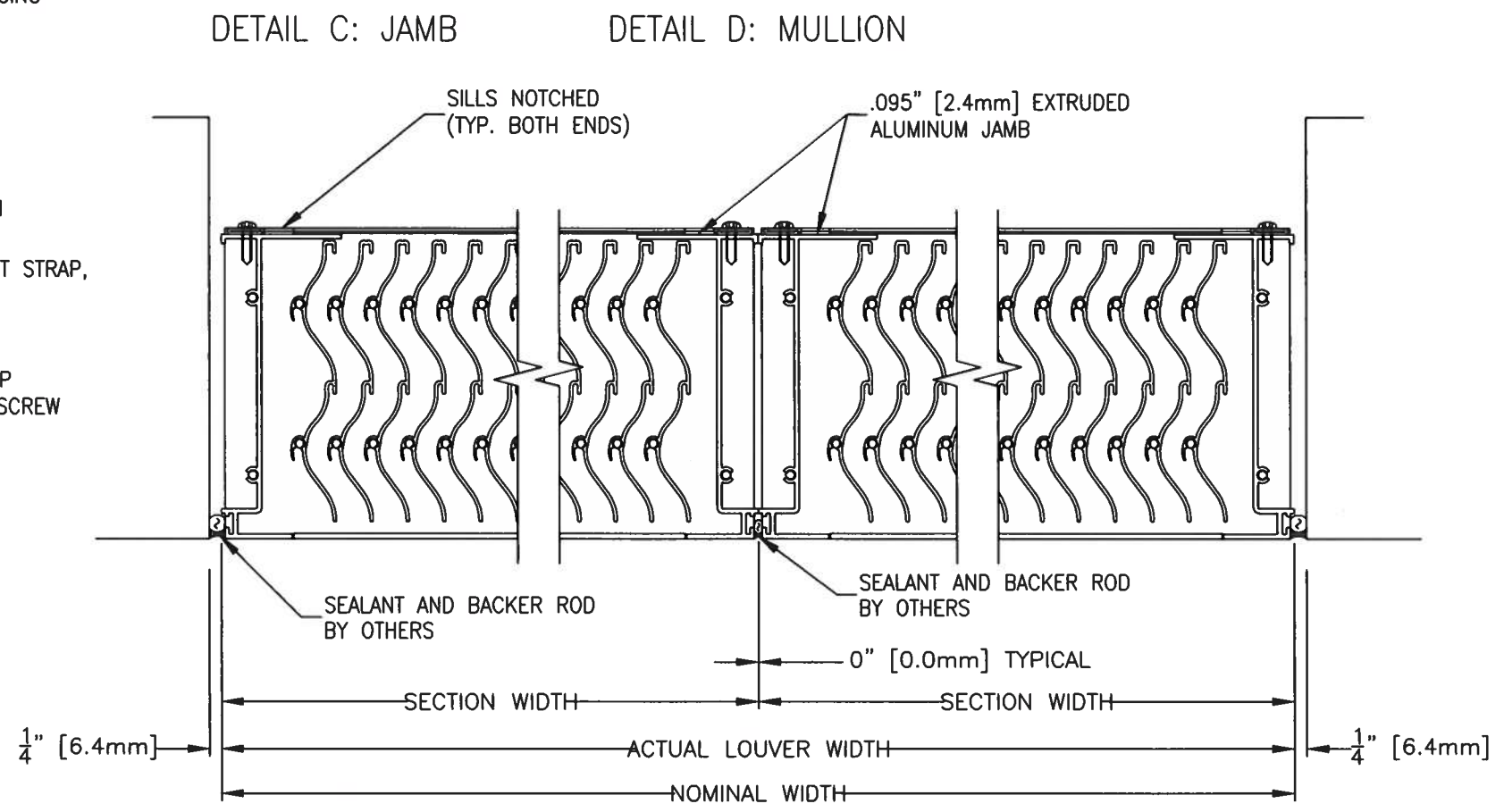
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SUPERVISED BY: ZOILA MORALES					

MIAMI-DADE  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC WORKS  
ROADWAY ENGINEERING AND  
RIGHT OF WAY DIVISION  
STEPHEN P. CLARK CENTER  
111 NW 8 ST  
MIAMI, FLORIDA 33128

PUMP CONTROL ROOM DEMO  
AND NEW MECHANICAL PLANS



DETAIL B: SILL



WEATHERPROOF MIAMI-DADE COUNTY APPROVED LOUVER TYPICAL OF "GREENHECK" MODEL No. EVH-660D (NOA 21-0526.07). LOUVER MUST BE MIAMI-DADE COUNTY TAS-100A/AMCA 550 (WIND DRIVEN RAIN WITHOUT MOTORIZED DAMPER) RATED.

### TYPICAL WEATHERPROOF LOUVER DETAIL

NO SCALE

Digitally signed by  
Alexei Hidalgo  
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ENGINEERING  
CONSULTANTS,  
ou=A01410C0000  
01735EF9C55A00  
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cn=Alexei Hidalgo  
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11:19:51 -05'00'

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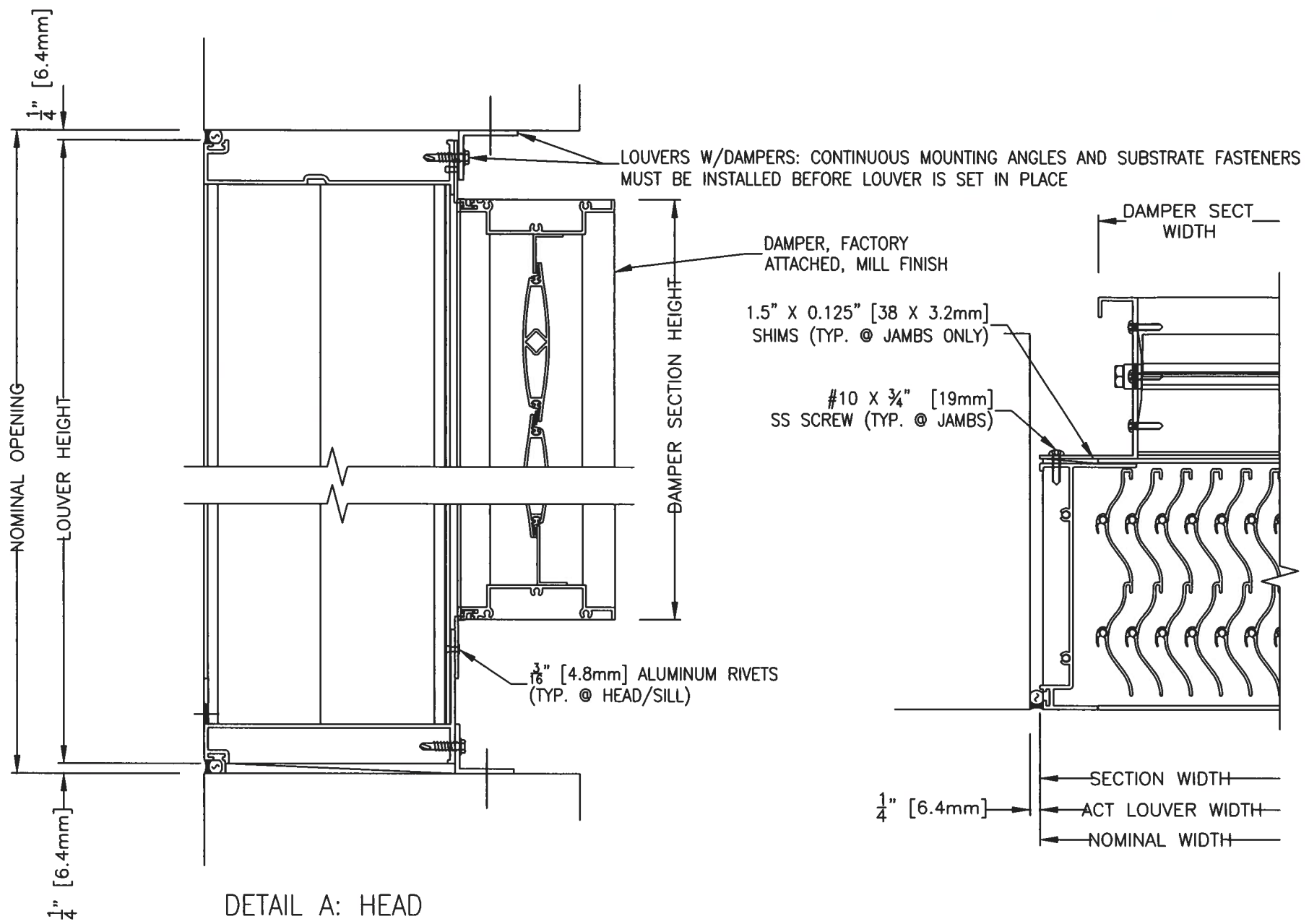
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SUPERVISED BY: ZOILA MORALES					



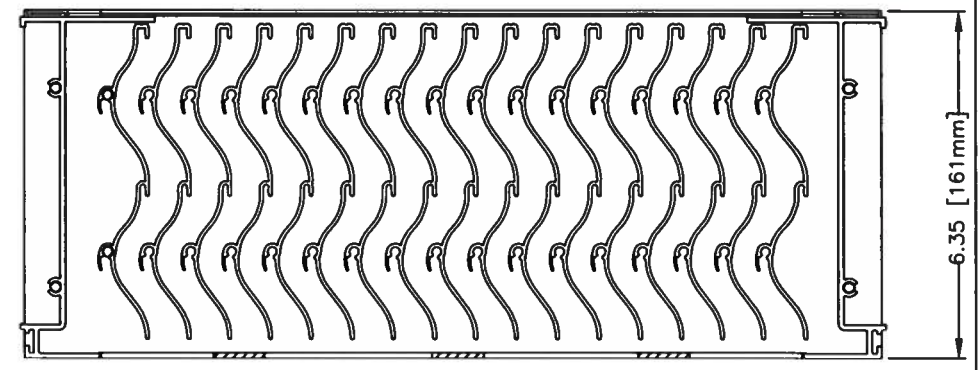
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC WORKS  
ROADWAY ENGINEERING AND  
RIGHT OF WAY DIVISION  
STEPHEN P. CLARK CENTER  
111 SW 1 ST  
MIAMI, FLORIDA 33120

TYPICAL WEATHERPROOF  
LOUVER DETAIL

M-103



DETAIL A: HEAD



CONCRETE OR CMU ANCHORING

1/4" TAPCON SCREW FASTENER TABLE

DESCRIPTION	1/4" TAPCON		
SUBSTRATE	CONCRETE OR CMU (GROUT FILLED)		
MINIMUM	3.192 KSI CONCRETE OR 3.192 KSI GROUT		
EDGE DISTANCE (MIN)	1 IN.	1-1/2 IN.	2-1/2 IN.
PENETRATION (MIN)	1-3/4 IN.		
LOUVER HEIGHT (IN.)	SPACING (IN.)		
>108 & ≤120	2	2	4
>96 & ≤108	2	4	4
>72 & ≤96	2	4	6
>48 & ≤72	4	6	6
>0 & ≤48	6	6	6

3/8" POWERS WEDGE BOLT FASTENER TABLE

DESCRIPTION	3/8" POWERS WEDGE BOLT				
SUBSTRATE	NORMAL WEIGHT CONCRETE			CMU (1.5 KSI GROUT FILLED)	
MINIMUM	2.5 KSI			6" WIDE, GRADE N, TYPE II, LIGHT/MEDIUM/NORMAL WEIGHT CMU CONFORMING TO ASTM C90	
EDGE DISTANCE (MIN)	2 IN.	3 IN.	4-1/2 IN.	1-1/2 IN.	2 IN.
PENETRATION (MIN)	2-1/8 IN.			2-1/2 IN.	
LOUVER HEIGHT (IN.)	SPACING (IN.)			SPACING (IN.)	
>108 & ≤120	4	6	6	NOT ALLOWED	NOT ALLOWED
>72 & ≤108	6	6	6	NOT ALLOWED	NOT ALLOWED
>36 & ≤72	6	6	6	NOT ALLOWED	6
>0 & ≤36	6	6	6	6	6

WOOD OR STEEL ANCHORING

LAG SCREW, SCREW, & BOLT W/NUT FASTENER TABLE

DESCRIPTION	3/8" LAG SCREW	1/4" LAG SCREW	1/4"-20 SCREW OR BOLT W/NUT	
SUBSTRATE	WOOD		STEEL	
MINIMUM	G=42		A36 STEEL OR Fy>=36 KSI	
EDGE DISTANCE (MIN)	1-1/2 IN.		1/2 IN.	
PENETRATION (MIN)	2-3/4 IN.		16GA (0.06 IN.)	3/16 IN.
LOUVER HEIGHT (IN.)	SPACING (IN.)		SPACING (IN.)	
>84 & ≤120	6	4	6	6
>0 & ≤84	6	6	6	6

CONTINUOUS ANGLE TO LOUVER FRAME SCREW

LOUVER HEIGHT (IN.)	SPACING (IN.)
>84	2
≤84	4

TYPICAL WEATHERPROOF LOUVER DETAIL

NO SCALE

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DN: c=US, o=ME ENGINEERING CONSULTANTS, ou=A01410C0000, ou=01735EF9C55A000, ou=02ADF, cn=Alexei Hidalgo  
Date: 2023.01.10 11:22:14 -05'00'

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REVISIONS

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MIAMI-DADE  
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS  
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111 NW 1 ST  
MIAMI, FLORIDA 33128

TYPICAL WEATHERPROOF LOUVER DETAIL



MODEL	FASTENER G		FASTENER H		FASTENER J		FASTENER K	
	QTY	DESCRIPTION	QTY	DESCRIPTION	QTY	DESCRIPTION	QTY	DESCRIPTION
CUE/CV-060-065-070-075-080-085-090-095	12 EA		4					
CUE/CV-099-100/101/HP-120/121-130/131-140/141/HP-160/161/HP	16 EA		4					
CUE/CV-180/HP-200	24 EA		6					
CUBE/CVB-098-099-100/101/HP-120/121-130/131-140/141/HP-160/161/HP/XP	16 EA	TCS 1/2 X 3/8 DACTONET COATED	4	RMET. 1/2 X 3/8 SEMI TUBULAR 5052 ALUM.	4	SCREW, 1/2 X 20 X 18-B/SS	4	PAL NUT, 1/2-20 SPRING STEEL
CUBE/CVB-180/HP-200/HP-240/HP	24 EA		6					
S-CUBE-100/101/HP-120/121-130/131-140/141/HP-160/161/HP	16 EA		4					
S-CUBE-200-240-300	24 EA		6					

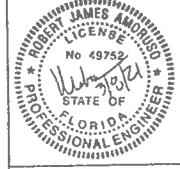
MODEL NAME EQUIVALENTS			
BRAND	GREENHECK	ACCUREX	VENCED
MODEL	CUE	XRUB	VUCB
NAME	CW	XSEB	VVCB
	CWB	XSEB	VVCB

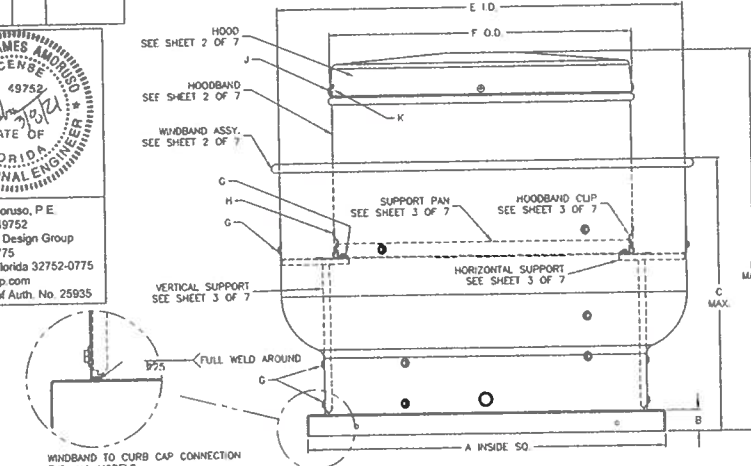
DESIGN LIMITS	
MAX DESIGN LOAD	1150 psf (5.6 Kpa)
MAX OVERALL ENCLOSURE DIA.	48.31 in. (1227 mm)
MAX OVERALL UNIT HEIGHT	44.50 in. (1130 mm)

ALL DIMENSIONS ARE IN INCHES

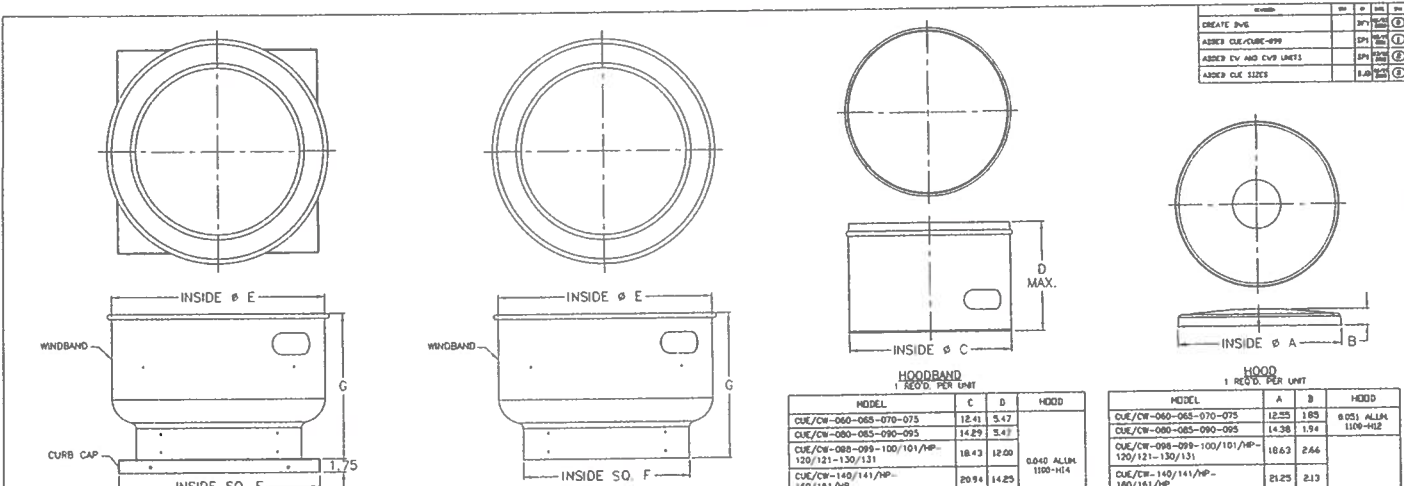
MODEL	A	B	C	D	E	F	WEIGHT (LBS)
CUE/CV-060	17.00	1.75	13.13	15.41	18.38	12.63	29
CUE/CV-065	17.00	1.75	13.13	15.41	18.38	12.63	29
CUE/CV-070	17.00	1.75	13.13	15.41	18.38	12.63	29
CUE/CV-075	17.00	1.75	13.13	15.41	18.38	12.63	29
CUE/CV-080	19.00	1.75	13.13	15.37	21.00	14.38	40
CUE/CV-085	19.00	1.75	13.13	15.37	21.00	14.38	40
CUE/CV-090	19.00	1.75	13.13	15.37	21.00	14.38	40
CUE/CV-095	19.00	1.75	15.19	17.31	21.00	14.38	40
CUE/CV-099	19.00	1.75	19.23	27.00	23.63	18.63	53
CUE/CV-100/101/HP	19.00	1.75	19.23	27.00	23.63	18.63	53
CUE-120/121 & CW-121	19.00	1.75	19.23	27.00	23.63	18.63	64
CUE-130/131 & CW-131	19.00	1.75	19.23	27.00	23.63	18.63	64
CUE-140/141/HP & CW-141/HP	22.00 OR 26.00	1.75	20.35	32.20	27.63	21.00	90
CUE-142HP	24.00	1.75	20.35	32.20	27.63	21.00	90
CUE-160/161/HP & CW-161/HP	22.00 OR 26.00	1.75	20.35	32.20	27.63	21.00	90
CUE-162HP	24.00	1.75	20.35	32.20	27.63	21.00	90
CUE-180/HP & CW-180/HP	30.00	1.75	22.72	31.57	35.50	25.20	142
CUE-200/HP & CW-200	30.00	1.75	22.72	31.57	35.50	25.20	142
CUBE/CVB-098	19.00	1.75	19.50	27.00	23.63	18.63	58
CUBE/CVB-099	19.00	1.75	19.50	27.00	23.63	18.63	58
CUBE/CVB-100/101/HP	19.00	1.75	19.50	27.00	23.63	18.63	58
CUBE-120/121 & CWB-121	19.00	1.75	19.50	27.00	23.63	18.63	66
CUBE-130/131 & CWB-131	19.00	1.75	19.50	27.00	23.63	18.63	66
CUBE-140/141/HP & CWB-141/HP	22.00 OR 26.00	1.75	20.35	32.20	27.63	21.00	84
CUBE-160/161/HP & CWB-161/HP	22.00 OR 26.00	1.75	20.35	32.20	27.63	21.00	87
CUBE-180/HP & CWB-180/HP	30.00	1.75	22.72	33.75	35.50	25.20	126
CUBE-200/HP & CWB-200	30.00	1.75	22.72	33.75	35.50	25.20	142
CUBE/CV-220/HP	34.00	1.75	27.25	40.00	40.88	29.20	174
CUBE-240/HP/XP & CVB-240/HP/XP	34.00	1.75	27.25	40.00	40.88	29.20	175
CUBE-300/HP/XP & CVB-300/HP/XP	40.00	1.75	30.84	44.50	48.31	36.02	313
S-CUBE-100/101/HP	19.00	1.75	19.50	27.00	23.63	18.63	58
S-CUBE-120/121	19.00	1.75	19.50	27.00	23.63	18.63	66
S-CUBE-130/131	19.00	1.75	19.50	27.00	23.63	18.63	66
S-CUBE-140/141/HP	22.00	1.75	20.35	32.20	27.63	21.00	84
S-CUBE-160/161/HP	22.00	1.75	20.35	32.20	27.63	21.00	87
S-CUBE-200	30.00	1.75	22.72	33.75	35.50	25.20	142
S-CUBE-240	34.00	1.75	27.25	40.00	40.88	29.20	175
S-CUBE-300/HP	40.00	1.75	30.84	44.50	48.31	36.02	313



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FBPE Cert. of Auth. No. 25935

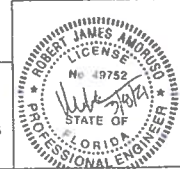


- NOTES:**
- MODELS CUE, CUBE, CW, and CWB HAVE BEEN SUCCESSFULLY TESTED IN ACCORDANCE WITH MIAMI DADE TEST PROTOCOL TAS-201 (LARGE MISSILE IMPACT), TAS-203 (CYCLIC WIND LOADING) AND TAS-202 (STATIC LOADING).
  - THIS APPROVAL IS FOR THE STRUCTURAL PERFORMANCE AND IMPACT RESISTANCE ONLY. INTERIOR MECHANISM AND/OR ELECTRICAL CIRCUITRY ARE OUTSIDE THE SCOPE OF THIS APPROVAL.
  - DESIGN TESTING AND INSTALLATION CONFORMS TO ASSC MANUAL OF STEEL CONSTRUCTION AND ALUMINUM DESIGN MANUAL.
  - FAN CURBS MUST BE ANCHORED TO ROOF FRAMING MEMBERS AND NOT TO THE ROOFING SYSTEM.
  - ROOF STRUCTURE MUST BE DESIGNED TO WITHSTAND THE WEIGHT AND LOADING TRANSMITTED BY ROOF TOP FANS. FASTENERS SHALL BE AS SPECIFIED AND INSTALLED AS DETAIL.
  - DESIGN TESTING AND INSTALLATION CONFORMS TO FLORIDA BUILDING CODE.
  - THIS PRODUCT HAS NOT BEEN TESTED FOR WATER PENETRATION ACCORDING TO FLORIDA BUILDING CODE, TAS 100(A), WIND DRIVEN RAIN TEST. IT CANNOT BE INSTALLED WITHIN THE RIDGE AREA FBC 1523.6.5.2.13



WINDBAND ASSY. T REQS. PER UNIT		CURB CAP		HOODBAND 1 REQS. PER UNIT		HOOD 1 REQS. PER UNIT	
MODEL	E	F	G	WINDBAND	MODEL	A	B
CUE-060-065-070-075	18.38	17.00	11.38	0.051 ALUM 1100-H02	CUE/CW-060-065-070-075	12.55	1.85
CUE-080-085-090	21.00	19.00	13.50	0.051 ALUM 1100-H02	CUE/CW-080-085-090-095	14.29	3.47
CUE-095	21.00	19.00	13.44	0.051 ALUM 1100-H02	CUE/CW-088-099-100/101/HP-120/121-130/131	18.63	2.66
CUE-098-099-100/101/HP-120/121-130/131	23.63	19.00	17.48	0.051 ALUM 1100-H02	CUE/CW-100/101/HP-120/121-130/131	18.63	2.66
CUE-140/141/HP-160/161/HP	27.63	22.00	18.60	0.063 ALUM 1100-H02	CUE/CW-140/141/HP-160/161/HP	21.25	2.13
CUE-142HP-162HP	27.63	24.00	18.60	0.063 ALUM 1100-H02	CUE-142HP-162HP	21.25	2.13
CUE-180/HP-200/HP	34.13	30.00	28.97	0.063 ALUM 1100-H02	CUE/CW-180/HP-200/HP	25.44	3.44
CUE-180/HP-200/HP	34.13	27.75	28.00	0.063 ALUM 1100-H02	CUE/CW-088-099-100/101/HP-120/121-130/131	18.63	2.66
CUE-220/HP-240/HP/XP	48.88	31.25	25.53	0.086 ALUM 1100-H02	CUE/CW-140/141/HP-160/161/HP	21.25	2.13
CWB-300/HP/XP	48.31	38.375	29.49	0.086 ALUM 1100-H02	CUE-142HP-162HP	21.25	2.13
CWB-180/HP-200/HP	34.13	27.75	28.00	0.063 ALUM 1100-H02	CUE/CW-180/HP-200/HP	25.44	3.44
CWB-140/141/HP-160/161/HP	27.63	22.00	18.60	0.063 ALUM 1100-H02	CUBE/CWB-180/HP-200/HP	25.44	3.44
CWB-100/101/HP-120/121-130/131	23.63	19.00	17.75	0.051 ALUM 1100-H02	CUBE/CWB-300/HP/XP	36.25	3.81
CWB-160/161/HP	27.63	22.00	18.60	0.051 ALUM 1100-H02	S-CUBE-100/101/HP-120/121-130/131	18.63	2.66
CWB-200	25.50	30.00	28.97	0.063 ALUM 1100-H02	S-CUBE-160/161/HP	18.63	2.66
S-CUBE-240	48.88	34.80	25.50	0.086 ALUM 1100-H02	S-CUBE-180/141/HP-160/161/HP	20.94	14.25
S-CUBE-300	48.31	40.00	29.29	0.086 ALUM 1100-H02	S-CUBE-200	25.13	18.00
					S-CUBE-240	29.81	18.00
					S-CUBE-300	35.94	23.50

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FBPE Cert. of Auth. No. 25935



**PRODUCT REVISED**  
as complying with the Florida Building Code  
NOA No. 21-0318.05  
Expiration Date 09/23/2024  
By Miami-Dade Product Control

ALL DIMENSIONS ARE IN INCHES  
CUE/CUBE-060-300  
SHEET 2 OF 8  
HSA3001

MIAMI-DADE COUNTY APPROVED FAN TYPICAL OF "GREENHECK" MODEL No. CUE-095-VG (NOA 21-0318.05).

**WIND LOAD CALCULATIONS (EF-1 AND EF-2)**

NO SCALE

Digitally signed by Alexei Hidalgo  
DN: c=US, o=ME ENGINEERING CONSULTANTS, ou=A01410C0000 01735EF9C55A000 02ADF, cn=Alexei Hidalgo  
Date: 2023.01.10 11:22:56 -05'00'

Alexei Hidalgo, Mechanical P.E. #70807  
M.E. Engineering Consultants, Inc.  
11401 SW 40TH Street Suite 301  
Ph (786)275-4635  
CA 29121

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Rucks Park  
NE 4 Ave and NE 139 St  
PUMP STATION  
IMPROVEMENT PROJECT

NAME	DATE	NAME	DATE
DESIGNED BY: ZM		DRAWN BY: L.F. - M.T.	SEP. 2022
CHECKED BY: ZM		CHECKED BY: ZM	
SUPERVISED BY: ZOLA MORALES			



WIND LOAD CALCULATIONS (EF-1 AND EF-2)  
M-105

**HORIZONTAL SUPPORT**

MODEL	H	J	K	QTY.	HORIZONTAL SUPPORT
CUE/CW-060-065-070-075	4.68	1.03	2.0	4	16 GA. GALV. G90
CUE/CW-080-085-090-095	4.68	1.03	2.0	4	16 GA. GALV. G90
CUE/CW-098-099-100/101/HP-120/121-130/131	5.18	1.03	2.0	4	16 GA. GALV. G90
CUE/CW-140/141/HP-160/161/HP	4.68	1.03	2.0	4	16 GA. GALV. G90
CUE-142HP-162HP	4.68	1.03	2.0	4	16 GA. GALV. G90
CUE/CW-180/HP-200/HP	5.72	1.03	2.0	6	16 GA. GALV. G90
CUBE/CWB-098-099-100/101/HP-120/121-130/131	5.18	1.03	2.0	4	16 GA. GALV. G90
CUBE/CWB-141/HP-161/HP/XP	4.68	1.03	2.0	4	16 GA. GALV. G90
CUBE/CWB-180/HP-200/HP	5.72	1.03	2.0	6	16 GA. GALV. G90
CUBE/CWB-220/HP-240/HP/XP	7.25	1.03	2.0	6	16 GA. GALV. G90
CUBE/CWB-300/HP/XP	7.94	1.55	2.5	6	14 GA. GALV. G90
S-CUBE-100/101/HP-120/121-130/131	5.18	1.03	2.0	4	16 GA. GALV. G90
S-CUBE-140/141/HP-160/161/HP	4.68	1.03	2.0	4	16 GA. GALV. G90
S-CUBE-200	5.72	1.03	2.0	6	16 GA. GALV. G90
S-CUBE-240	7.25	1.03	2.0	6	16 GA. GALV. G90
S-CUBE-300	7.94	1.55	2.5	6	14 GA. GALV. G90

**VERTICAL SUPPORT**

MODEL	L	H	N	QTY.	VERTICAL SUPPORT
CUE/CW-060-065-070-075-080-085-090	7.44	0.93	0.56	4	16 GA. GALV. G90
CUE/CW-095	8.88	0.93	0.56	4	16 GA. GALV. G90
CUE/CW-098-099-100/101/HP-120/121-130/131	9.47	0.93	0.56	4	16 GA. GALV. G90
CUE/CW-140/141/HP-160/161/HP	10.88	0.93	0.56	4	16 GA. GALV. G90
CUE/CW-160/161/HP-182HP	7.44	0.93	0.56	4	16 GA. GALV. G90
CUE/CW-180-200	12.78	0.93	0.56	6	16 GA. GALV. G90
CUE/CW-180HP	10.88	0.93	0.56	6	16 GA. GALV. G90
CUE-200/HP	12.78	0.93	0.56	6	16 GA. GALV. G90
CUBE/CWB-098-099-100/101/HP-120/121-130/131	9.47	0.93	0.56	4	16 GA. GALV. G90
CUBE/CWB-140/141/HP-160/161/HP	10.88	0.93	0.56	4	16 GA. GALV. G90
CUBE/CWB-160/161XP	8.63	0.93	0.56	4	16 GA. GALV. G90
CUBE/CWB-180/HP-200/HP	12.78	0.93	0.56	6	16 GA. GALV. G90
CUBE/CWB-220/HP-240/HP	17.60	0.93	0.56	6	16 GA. GALV. G90
CUBE/CWB-240XP	12.78	0.93	0.56	6	16 GA. GALV. G90
CUBE/CWB-300/HP	18.09	1.39	0.69	6	14 GA. GALV. G90
CUBE/CWB-300XP	13.12	1.39	0.69	6	14 GA. GALV. G90
S-CUBE-100/101/HP-120/121-130/131	9.47	0.93	0.56	4	16 GA. GALV. G90
S-CUBE-140/141/HP-160/161/HP	10.88	0.93	0.56	4	16 GA. GALV. G90
S-CUBE-200	12.78	0.93	0.56	6	16 GA. GALV. G90
S-CUBE-240	17.60	0.93	0.56	6	16 GA. GALV. G90
S-CUBE-300	18.09	1.39	0.69	6	14 GA. GALV. G90

**MOUNTING PLATE**  
1 REQ'D. PER UNIT

**HOODBAND CLIPS**

MODEL	R	S	T	SUPPORT PAN
CW-060-065-070-075	14.75	11.75	4	18 GA. GALV. G90
CW-080-085-090-095	17.88	15.00	4	18 GA. GALV. G90
CW/CWB-098-099-101-121-131	19.75	16.88	4	18 GA. GALV. G90
CW/CWB-140/141/HP-161/HP	22.13	19.38	4	18 GA. GALV. G90
CW/CWB-180/HP-200	27.75	25.00	6	18 GA. GALV. G90
CWB-220/HP-240/HP	31.25	28.38	6	18 GA. GALV. G90
CWB-300/HP	38.38	35.64	6	18 GA. GALV. G90

MODEL	TYPE	QTY.	HOODBAND CLIP
CUE/CW-060-065-070-075	R	3	16 GA. GALV. G90
CUE/CW-080-085-090-095	R	3	16 GA. GALV. G90
CUE/CW-098-099-100/101/HP-120/121-130/131	T	3	16 GA. GALV. G90
CUE/CW-140/141/HP-161/HP-182HP	R	4	16 GA. GALV. G90
CUE/CW-180/HP-200/HP	S	6	16 GA. GALV. G90
CUBE/CWB-098-099-100/101/HP-120/121-130/131	T	3	16 GA. GALV. G90
CUBE/CWB-140/141/HP-160/161/HP/XP	R	4	16 GA. GALV. G90
CUBE/CWB-180/HP-200/HP	S	6	16 GA. GALV. G90
CUBE/CWB-220/HP-240/HP/XP	R	6	16 GA. GALV. G90
CUBE/CWB-300/HP/XP	R	6	16 GA. GALV. G90
S-CUBE-100/101/HP-120/121-130/131	R	3	16 GA. GALV. G90
S-CUBE-140/141/HP-160/161/HP	R	4	16 GA. GALV. G90
S-CUBE-200	S	6	16 GA. GALV. G90
S-CUBE-240	R	6	16 GA. GALV. G90
S-CUBE-300	R	6	16 GA. GALV. G90

**SUPPORT PAN**  
1 REQ'D. PER UNIT

MODEL	P	Q	SUPPORT PAN
CUE/CW-060-065-070-075	12.31	1.75	18 GA. GALV. G90
CUE/CW-080-085-090-095	14.19	1.94	18 GA. GALV. G90
CUE/CW-098-099	18.38	3.94	18 GA. GALV. G90
CUE/CW-100/101/HP	18.38	3.19	18 GA. GALV. G90
CUE/CW-120/121	18.38	4.94	18 GA. GALV. G90
CUE/CW-130/131	18.38	4.44	18 GA. GALV. G90
CUE/CW-140/141/HP-160/161/HP	20.88	2.41	18 GA. GALV. G90
CUE-142HP-162HP	20.88	2.41	18 GA. GALV. G90
CUE/CW-180/HP-200/HP	25.06	3.48	18 GA. GALV. G90
CUBE/CWB-098-099-100/101/HP-120/121-130/131	18.38	2.75	18 GA. GALV. G90
CUBE/CWB-140/141/HP-160/161/HP/XP	20.88	1.5	18 GA. GALV. G90
CUBE/CWB-180/HP-200/HP	25.06	1.19	18 GA. GALV. G90
CUBE/CWB-220/HP-240/HP/XP	26.75	1.19	18 GA. GALV. G90
CUBE/CWB-300/HP/XP	35.88	1.19	18 GA. GALV. G90
S-CUBE-100/101/HP-120/121-130/131	18.38	2.75	18 GA. GALV. G90
S-CUBE-140/141/HP-160/161/HP	20.88	1.50	18 GA. GALV. G90
S-CUBE-200	25.06	1.19	18 GA. GALV. G90
S-CUBE-240	26.75	1.19	18 GA. GALV. G90
S-CUBE-300	35.88	1.19	18 GA. GALV. G90

**REVISIONS**

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DESIGNED BY: Z.M. DATE: SEPT, 2022  
 CHECKED BY: Z.M. DATE: SEPT, 2022  
 SUPERVISED BY: ZOLA MORALES

NAME: L.F. - M.T. DATE: SEPT, 2022  
 DRAWN BY: Z.M. DATE: SEPT, 2022

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS  
 ROADWAY ENGINEERING AND RIGHT OF WAY DIVISION  
 STEPHEN R. CLARK CENTER  
 111 NW 1 ST  
 MIAMI, FLORIDA 33128

WIND LOAD CALCULATIONS (EF-1 AND EF-2)

M-106

MIAMI-DADE COUNTY APPROVED FAN TYPICAL OF "GREENHECK" MODEL No. CUE-095-VG (NOA 21-0318.05).

### WIND LOAD CALCULATIONS (EF-1 AND EF-2)

NO SCALE

Digitally signed by Alexei Hidalgo  
 DN: c=US, o=ME ENGINEERING CONSULTANTS, ou=A01410C00001735EF9C55A00002ADF, cn=Alexei Hidalgo  
 Date: 2023.01.10 11:24:34 -05'00'

Alexei Hidalgo, Mechanical P.E.#70807

M.E. Engineering Consultants, Inc.  
 11401 SW 40TH Street Suite 301  
 Ph.(786)275-4635  
 CA 29121

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Rucks Park  
 NE 4 Ave and NE 139 St  
 PUMP STATION  
 IMPROVEMENT PROJECT

DESIGNED BY	NAME	DATE	DRAWN BY	NAME	DATE
Z.M.	Z.M.	SEPT, 2022	Z.M.	L.F. - M.T.	SEPT, 2022

**MIAMI-DADE**

WIND LOAD CALCULATIONS (EF-1 AND EF-2)



DATE	BY	DESCRIPTION

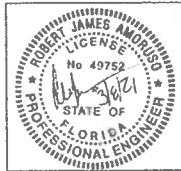
FAN TO CURB OR WALL BRACKET MOUNTING - LOCATION A

UNIT SIZE	FASTENERS	
	PER SIDE	TOTAL
CUE-060-065-070-075-080-085-090-095-098-099-100/101-120/121-130/131-140/141/HP-142HP-160/161/HP-162HP	3	12
CUBE-098-099-100/101/HP-120/121-130/131-140/141/HP-160/161/HP/XP	5	20
CUE-180/HP-200/HP	9	36
CUBE-180/HP-200/HP-220/HP-240/HP/XP		
CUBE-300/HP/XP		

FASTENERS ON EACH SIDE OF THE FAN ARE TO BE INSTALLED WITH ONE FASTENER 4 INCHES FROM EACH EDGE AND ONE FASTENER CENTERED. THE FASTENERS ARE TO BE EQUALLY SPACED 3/4 INCH SELF-DRILLING SCREWS WALL BRACKETS SHALL USE 1/2-20 S S BOLTS

CWB/CW MOUNTING - LOCATION C

UNIT SIZE	NO OF FASTENERS	
	PER SIDE	TOTAL
060-161	8	
180-300	12	

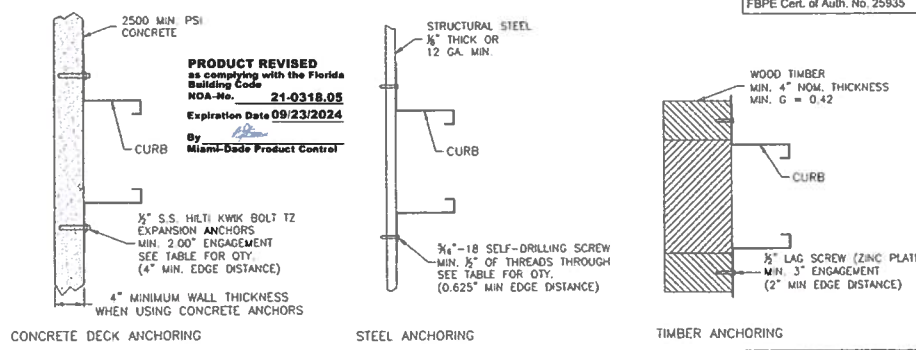


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PTC Product Design Group  
PO Box 520775  
Longwood, Florida 32752-0775  
info@ptc-corp.com  
FBPE Cert. of Auth. No. 25935

CURB OR WALL BRACKET TO WALL MOUNTING - LOCATION B

UNIT SIZE	CONCRETE ANCHORING NO. OF FASTENERS		STEEL DECK ANCHORING NO. OF FASTENERS		TIMBER ANCHORING NO. OF FASTENERS	
	PER SIDE	TOTAL	PER SIDE	TOTAL	PER SIDE	TOTAL
CUE/CUBE ≤ 161	2	8	2	8	2	8
CUE/CUBE > 161	3	12	3	12	4	16

FASTENERS NEED TO BE LOCATED ON ALL 4 SIDES OF FAN CURB, EITHER TOP AND BOTTOM OR LEFT AND RIGHT SIDES



DATE	BY	DESCRIPTION

MIAMI-DADE COUNTY APPROVED FAN TYPICAL OF "GREENHECK" MODEL No. CUE-095-VG (NOA 21-0318.05).  
**TYPICAL WALL MOUNTED EXHAUST FAN INSTALLATION DETAIL**  
NO SCALE

FAN TO CURB MOUNTING

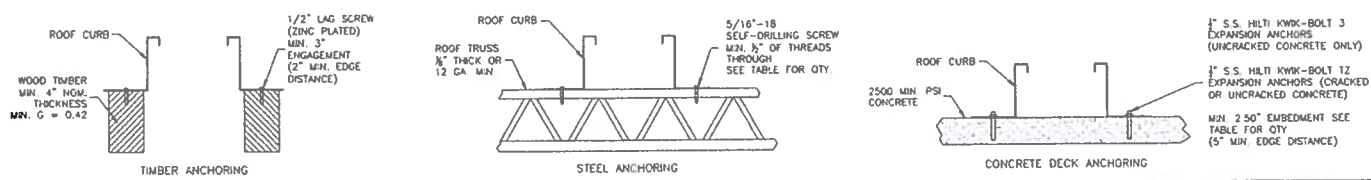
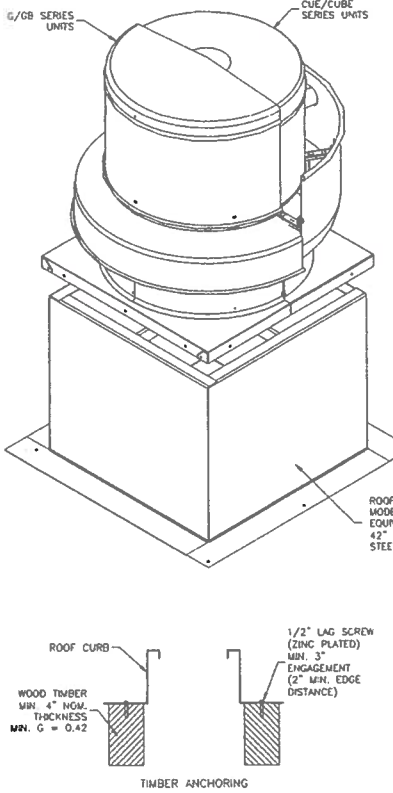
UNIT SIZE	FASTENERS	
	PER SIDE	TOTAL
CUE-060-065-070-075-080-085-090-095-098-099-100/101-120/121-130/131-141/141/HP-142HP-160/161/HP-162HP	3	12
CUBE-098-099-100/101/HP-120/121-130/131-140/141/HP-160/161/HP/XP	5	20
S-CUBE-140/141/HP-160/161/HP	9	36
C-060-065-070-075-080-085-090-095-097-098-099-100/101/103-120/121/123-130/131/133-140/141/143-160/163		
GB-071/097-081/098-091/099-100/101/HP-120/121-130/131-140/141/HP-160/161/HP		
CUE-180/HP-200/HP		
CUBE-180/HP-200/HP-220/HP-240/HP/XP		
S-CUBE-200-240		
C-160-180/183-203/HP		
GB-180/HP-200/HP-220/HP-240/HP		
CUBE-300/HP/XP		
S-CUBE-300		
GB-260-300/HP		

FASTENERS ON EACH SIDE OF THE FAN ARE TO BE INSTALLED WITH ONE FASTENER 4 INCHES FROM EACH EDGE AND ONE FASTENER CENTERED. THE FASTENERS ARE TO BE EQUALLY SPACED. 3/4 INCH SELF-DRILLING SCREWS.

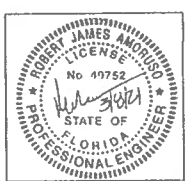
CURB TO DECK MOUNTING

UNIT SIZE	TIMBER ANCHORING NO. OF FASTENERS		STEEL DECK ANCHORING NO. OF FASTENERS		CONCRETE ANCHORING NO. OF FASTENERS	
	PER SIDE	TOTAL	PER SIDE	TOTAL	PER SIDE	TOTAL
CUE/CUBE ≤ 161 G/GB ≤ 141	3	12	3	12	3	12
CUE/CUBE > 161 G/GB > 141	4	16	4	16	3	12

FASTENERS NEED TO BE LOCATED ON ALL 4 SIDES OF FAN CURB



DATE	BY	DESCRIPTION



Robert J. Amoroso, P.E.  
FL P.E. No. 49752  
PTC Product Design Group  
PO Box 520775  
Longwood, Florida 32752-0775  
info@ptc-corp.com  
FBPE Cert. of Auth. No. 25935

**PRODUCT REVISED**  
as complying with the Florida Building Code  
NOA-No. 21-0318.05  
Expiration Date 09/23/2024  
By Miami-Dade Product Control

DATE	BY	DESCRIPTION

MIAMI-DADE COUNTY APPROVED FAN TYPICAL OF "GREENHECK" MODEL No. CUE-095-VG (NOA 21-0318.05).  
**TYPICAL ROOF MOUNTED EXHAUST FAN INSTALLATION DETAIL**  
NO SCALE

Digitally signed by Alexei Hidalgo  
DN: c=US, o=ME ENGINEERING CONSULTANTS, ou=A01410C0000, ou=01735EF9C55A0002ADF, cn=Alexei Hidalgo  
Date: 2023.01.10 11:25:38 -05'00'

Alexei Hidalgo, Mechanical P.E. #70807  
M.E. Engineering Consultants, Inc.  
11401 SW 40TH Street Suite 301  
Ph (786)275-4635  
CA 29121

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

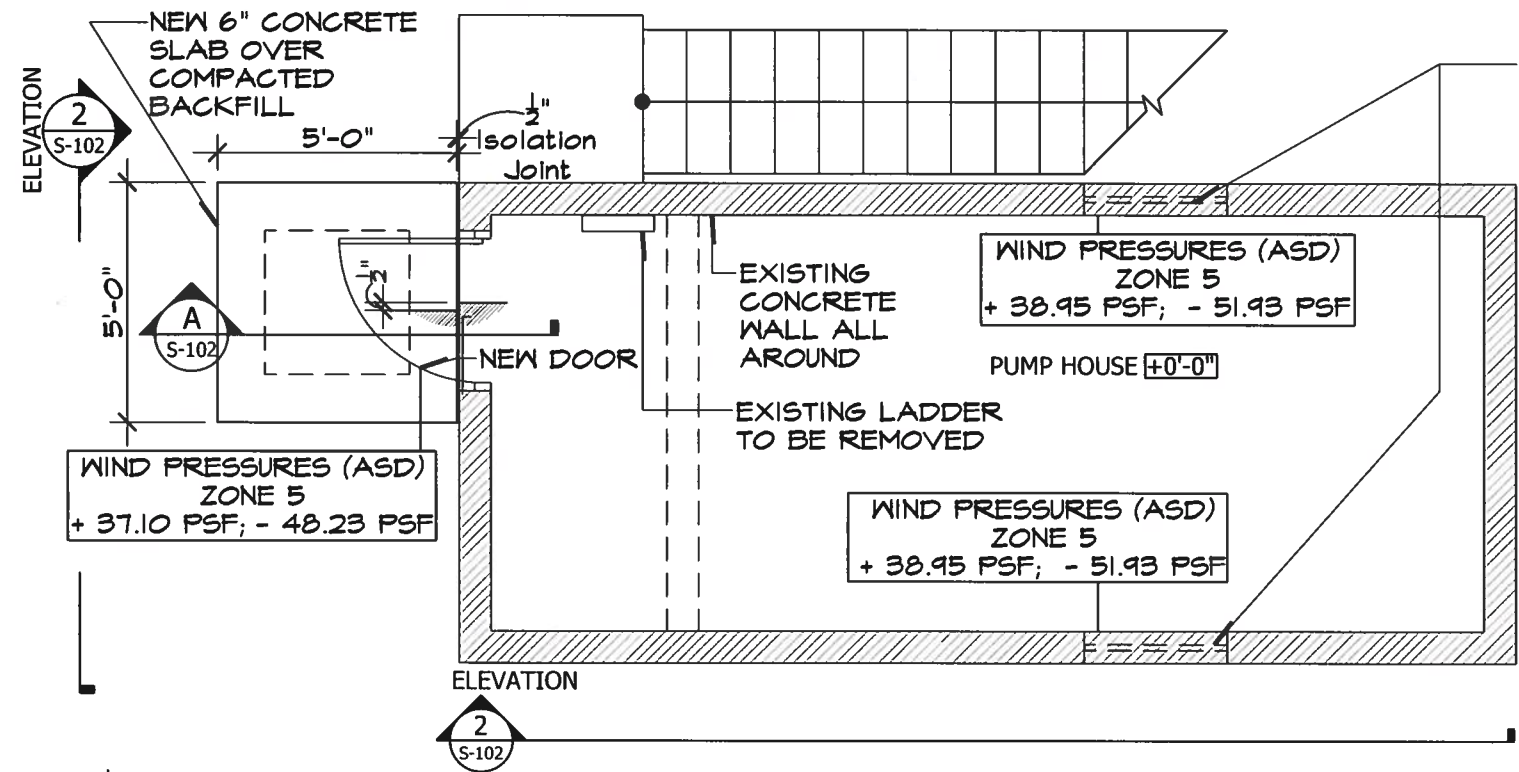
Rucks Park  
NE 4 Ave and NE 139 St  
PUMP STATION  
IMPROVEMENT PROJECT

DESIGNED BY	CHECKED BY	NAME	DATE	DRAWN BY	CHECKED BY	NAME	DATE
ZM	ZM	ZM	SEPT, 2022	L.F. - M.T.	ZM		

MIAMI-DADE DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS ROADWAY ENGINEERING AND RIGHT OF WAY DIVISION  
STEPHEN R. CLARK CENTER  
1000 N. ST  
MIAMI, FLORIDA 33128

WIND LOAD CALCULATIONS (EF-1 AND EF-2)





1. REPLACE EXISTING 43" x 32" LOUVER WITH A NEW ONE, SAME DIMENSIONS.
2. LOUVER FRAME ANCHORAGE TO MAIN STRUCTURE SHALL BE IN STRICT ACCORDANCE WITH THE UNIT'S NOTICE OF ACCEPTANCE - REFER TO PRODUCT CONTROL REQUIREMENTS.
3. LOUVER BY:
4. "GREENHECK FAN CORPORATION"; NOA No. 21-0526.07.
5. MAXIMUM WIND PRESSURE (ASD) LOUVER RATED :  
+ 150 PSF  
- 150 PSF
6. PRODUCT APPROVAL TO BE PROVIDED BY GC.

**PARTIAL PLAN - PUMP HOUSE**

Scale: 1/4" = 1'-0"

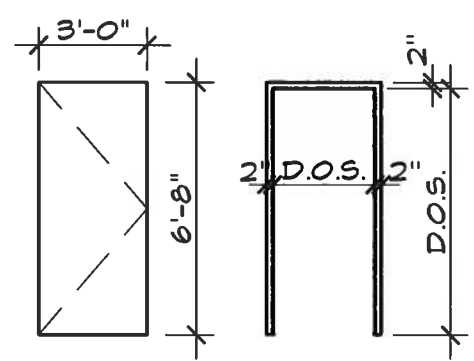
**GENERAL NOTES:**

1. ALL WORK SHALL BE IN ACCORDANCE TO THE FLORIDA BUILDING CODE, 2020 EDITION.
2. WIND PRESSURE DESIGN CRITERIA IN ACCORDANCE TO ASCE 7-2016
  - WIND VELOCITY = 175 MPH
  - EXPOSURE = C
  - CATEGORY = II
  - BUILDING HEIGHT = 20'-0"
3. NEW 3'-0" X 6'-8" IMPACT DOOR. DOOR HAS RIGHT HAND SWING OUT.
4. DOOR SHALL HAVE A 2 hr "UL" FIRE RATED; HARDWARE WHICH SATISFY THE REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION.
5. MEET AND MATCH EXISTING FINISHES.
6. DOOR FRAME ANCHORAGE TO MAIN STRUCTURE SHALL BE IN STRICT ACCORDANCE WITH THE UNIT'S NOTICE OF ACCEPTANCE (NOA) - REFER TO PRODUCT CONTROL REQUIREMENTS.
7. DOOR BY:  
, PRODUCT CONTROL APPROVAL TO BE PROVIDED BY GC.  
MAXIMUM WIND PRESSURE (ASD)  
  
LOUVER RATED AT : +150 PSF  
-150 PSF



**LOCATION PLAN**

Scale: N.T.S.



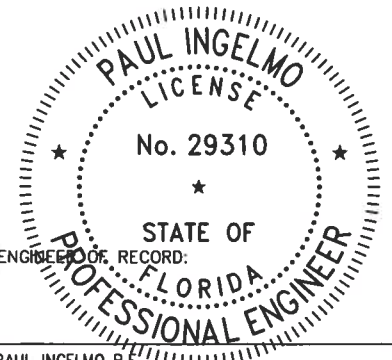
Scale: N.T.S.

**DOOR DETAIL AND SPECIFICATIONS**



**Paul Ingelmo**

Digitally signed  
by Paul Ingelmo  
Date: 2023.01.30  
12:07:04 -05'00'



PAUL INGELMO P.E.  
LICENSE NO. P.E. 29310 - C.A 26864  
INGELMO ASSOCIATES PA

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Rucks Park  
NE 4 Ave and NE 139 St  
PUMP STATION  
IMPROVEMENT PROJECT

DESIGNED BY	NAME	DATE	DRAWN BY	NAME	DATE
PI			IL		07-22-22

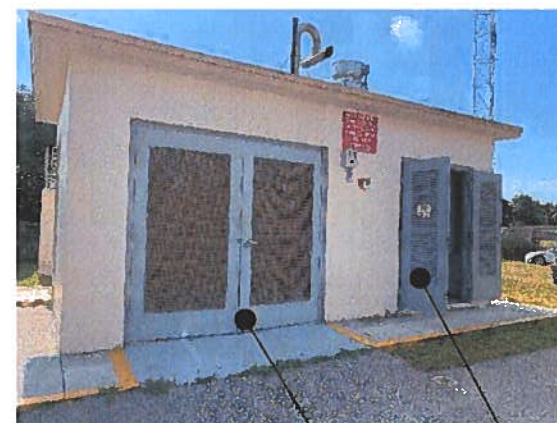
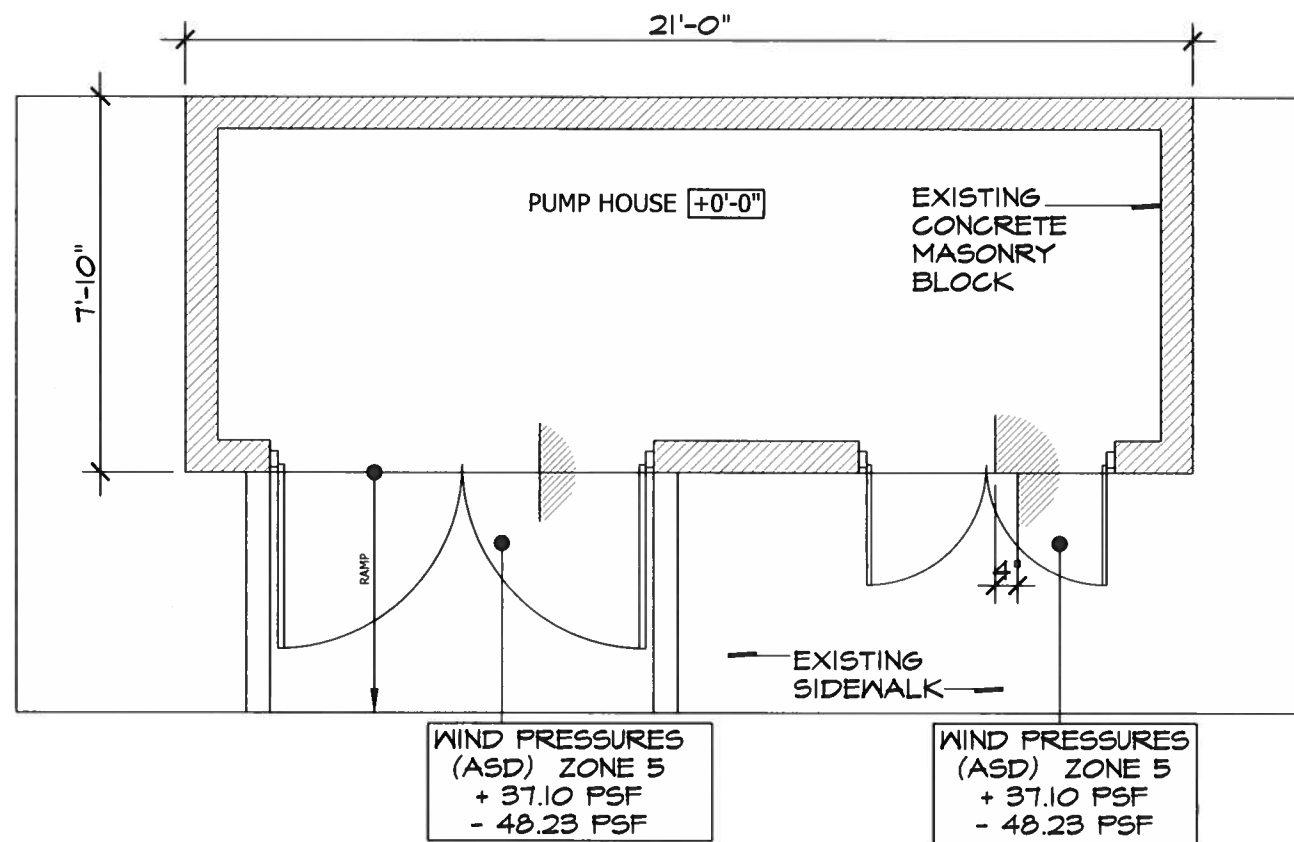


DEPARTMENT OF TRANSPORTATION  
AND PUBLIC WORKS  
ROADWAY ENGINEERING AND  
RIGHT OF WAY DIVISION  
STANDARD CLAUSE COVERED  
BY THE 2013  
MANUAL, FEBRUARY 2013

**PUMP HOUSE -  
STRUCTURAL PLAN  
LOCATION AND NOTES**

**S-100**





REPLACEMENT NOTES:

1. NEW DOORS MEET AND MATCH EXISTING SIZE.
2. DOORS SHALL BE OUTSWING, LOUVERED AND IMPACT RESISTANT, 1 3/4"-METAL.
3. GC TO VERIFY EXACT DIMENSIONS PRIOR TO ORDERING DOORS.
4. DOOR SHALL HAVE A SEPARATE "UL" LABEL INDICATING A MINIMUM OF 90 MIN. FIRE RATING.
5. DOOR OPENINGS HAVE CONCRETE HEADERS AND CONCRETE JAMBS.
6. PROVIDE A NEW WATER RESISTANT THRESHOLD.
7. GC TO SUBMIT SHOP DRAWINGS, PROVIDE NOA.

- EXISTING DOUBLE LOUVER DOOR 2 - 2'-6" x 7'-1" TO BE REPLACED
- EXISTING DOUBLE LOUVER DOOR 2 - 2'-9" x 7'-5" TO BE REPLACED



**GENERATOR AND PUMP ROOM**

Scale: 1/4" = 1'-0"

MAXIMUM WIND PRESSURE (ASD) - DOOR RATED AT : + PSF / - PSF

**GENERAL NOTES:**

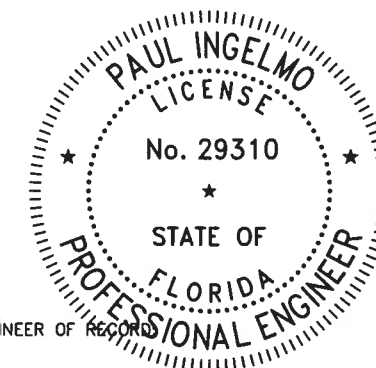
1. ALL WORK SHALL BE IN ACCORDANCE TO THE FLORIDA BUILDING CODE, 2020 EDITION.
2. WIND PRESSURE DESIGN CRITERIA IN ACCORDANCE TO ASCE 7-16
  - WIND VELOCITY = 175 MPH
  - EXPOSURE = C
  - CATEGORY = II
  - BUILDING HEIGHT =
  - ZONE FOR ALL DESIGN
3. DOOR FRAME ANCHORAGE TO MAIN STRUCTURE SHALL BE IN STRICT ACCORDANCE WITH THE UNIT'S NOTICE OF ACCEPTANCE - REFER TO PRODUCT CONTROL REQUIREMENTS.
4. DOOR BY:  
APPROVAL TO BE PROVIDED BY GC.



**LOCATION PLAN**

- NOTE:
1. PROVIDE SLUSH GATE AT EXISTING TRASH RACK, REFER TO CIVIL AND ELECTRICAL DRAWINGS.

Scale: N.T.S.



ENGINEER OF RECORD

PAUL INGELMO P.E.  
LICENSE NO. P.E. 29310 - C.A 26864  
INGELMO ASSOCIATES PA

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Rucks Park  
NE 4 Ave and NE 139 St  
PUMP STATION  
IMPROVEMENT PROJECT

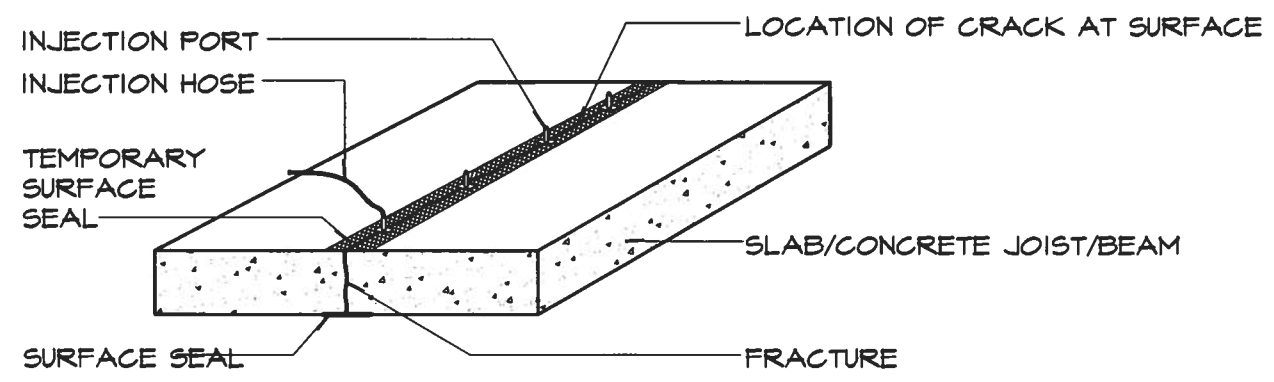
DESIGNED BY	NAME	DATE	DRAWN BY	NAME	DATE
PI			IL		07-22-22
CHECKED BY			CHECKED BY		
SUPERVISED BY					



DEPARTMENT OF TRANSPORTATION  
AND PUBLIC WORKS  
ROADWAY ENGINEERING AND  
RIGHT OF WAY DIVISION  
REVISED P. CLARE CENTER  
111 NW 101 ST  
MIAMI, FLORIDA 33125

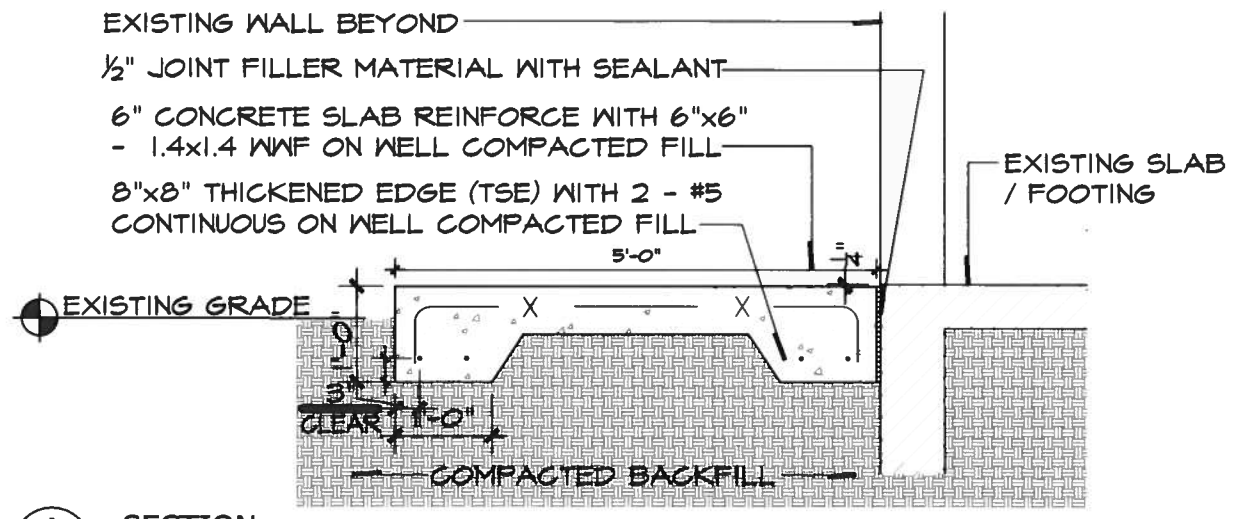
GENERATOR AND PUMP  
ROOM - STRUCTURAL  
PLAN LOCATION AND  
NOTES

S-101



**REPAIR PROCEDURES**

1. SURFACE SHALL BE CLEANED BY GRINDING, SANDBLASTING, OR WATERBLASTING TO ENSURE BOND OF SURFACE SEAL TO CRACK.
2. INJECTION PORTS SHALL BE PLACED ACCORDING TO THE SPECIFICATIONS.
3. THE SURFACE OF CRACK AND THE AREA AROUND EACH INJECTION PORT SHALL BE SEALED WITH AN EPOXY GEL OR HYDRAULIC CEMENT.
4. THE CRACK SHALL BE INJECTED WITH A LOW VISCOSITY EPOXY RESIN, SUCH AS SIMPSON ETI INJECTION EPOXY- ETI-LV; SIKADUR 52 INJECTION RESIN, SIKADUR 35 HI-MOD LV INJECTION RESIN OR EQUIVALENT.
5. AFTER COMPLETION OF INJECTION OPERATION, REMOVE SURFACE SEAL BY MECHANICAL MEANS.



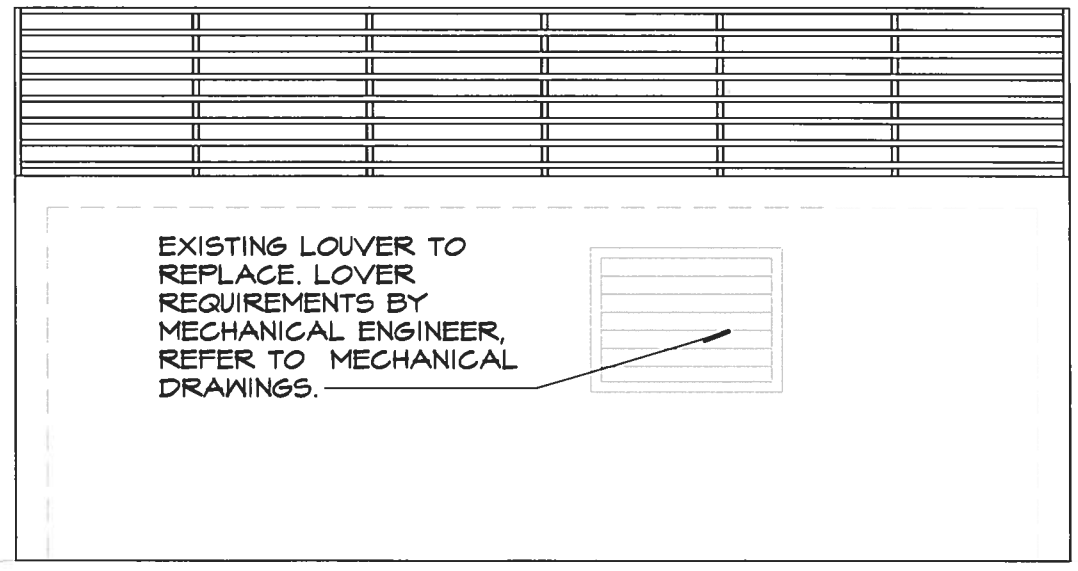
**A** SECTION  
S-102

Scale: 1/2"=1'-0"

**Crack Repair Procedure - EPOXY INJECTION**

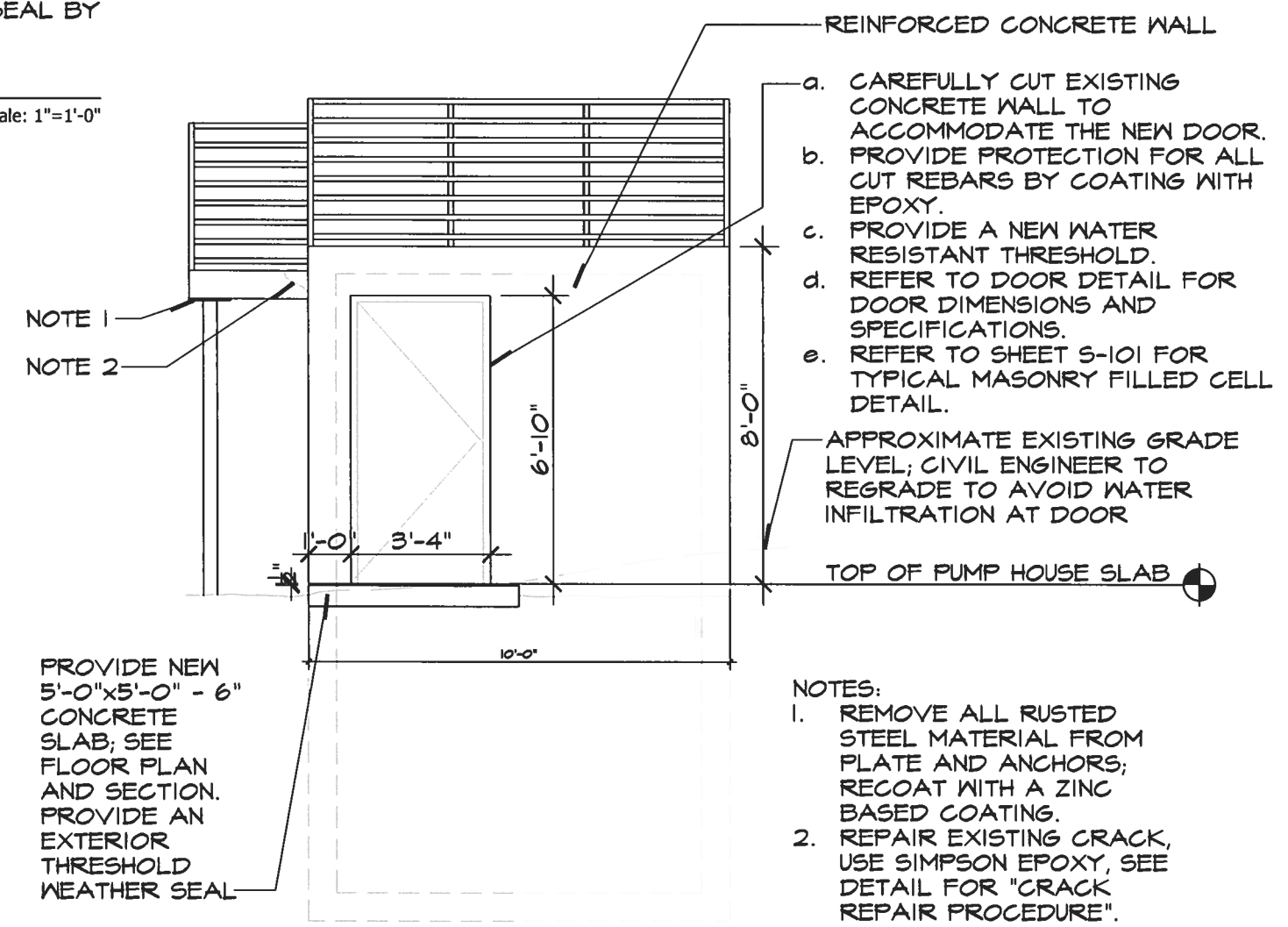
S-102

Scale: 1"=1'-0"



**1** ELEVATION  
S-102

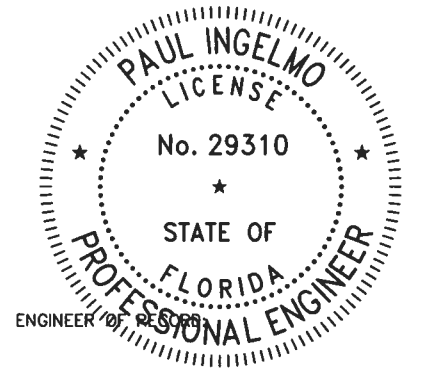
Scale: 1/2"=1'-0"



**2** ELEVATION  
S-102

Scale: 1/2"=1'-0"

- NOTES:
1. REMOVE ALL RUSTED STEEL MATERIAL FROM PLATE AND ANCHORS; RECOAT WITH A ZINC BASED COATING.
  2. REPAIR EXISTING CRACK, USE SIMPSON EPOXY, SEE DETAIL FOR "CRACK REPAIR PROCEDURE".



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INGELMO ASSOCIATES PA

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NE 4 Ave and NE 139 St  
PUMP STATION  
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DESIGNED BY	NAME	DATE	DRAWN BY	NAME	DATE
PI			A		07-22-22
CHECKED BY			CHECKED BY		
SUPERVISED BY					



DEPARTMENT OF TRANSPORTATION  
AND PUBLIC WORKS  
ROADWAY ENGINEERING AND  
RIGHT OF WAY DIVISION

SECTIONS AND DETAILS

S-102