

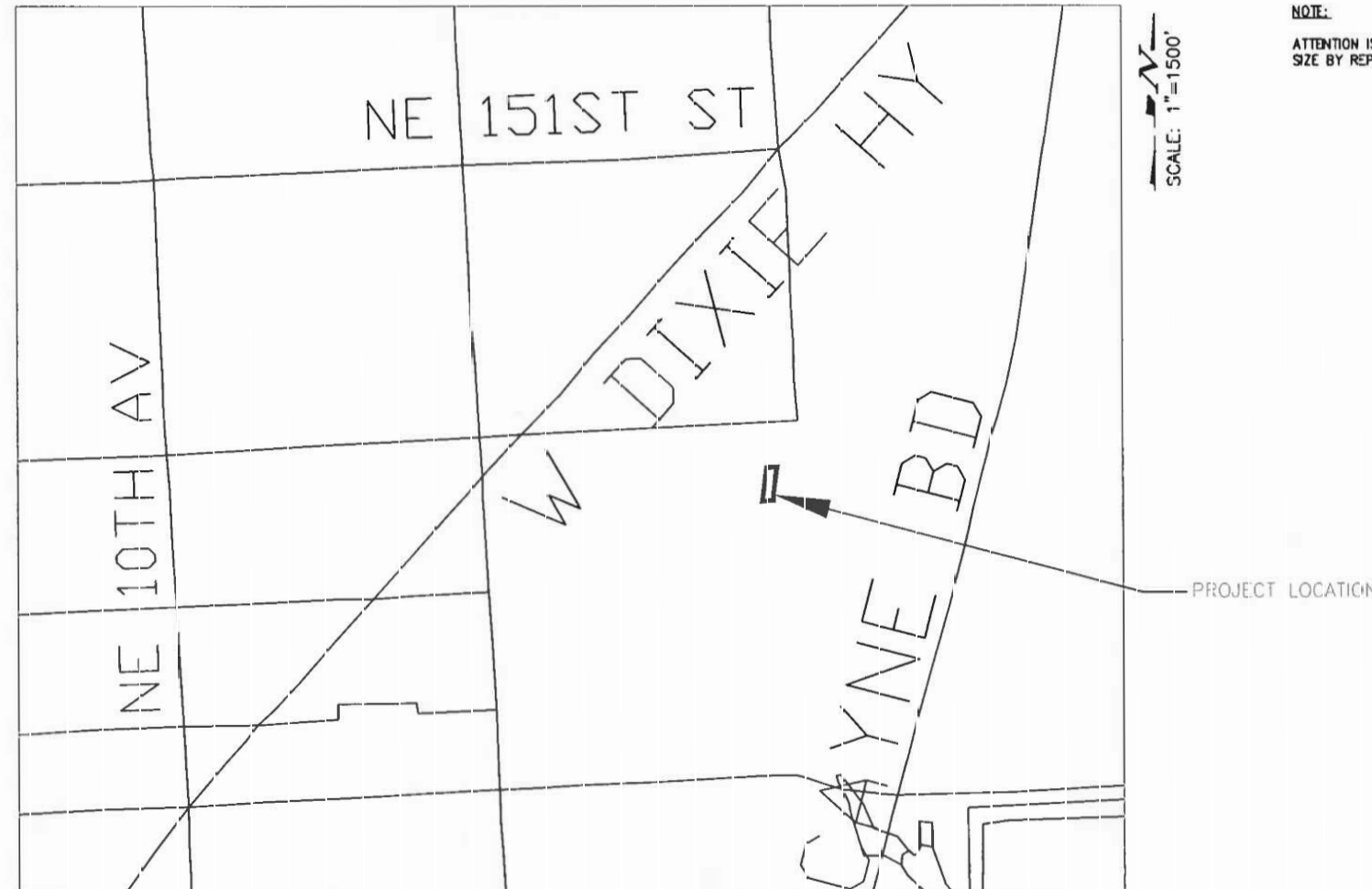
PLANS FOR PROPOSED PUMP  
STATION IMPROVEMENTS TO  
**Arch Creek 1**  
NE 18 AVE AND NE 143 ST

MIAMI-DADE COUNTY PROJECT NO. 20200043

INDEX OF SHEETS

SHT. No.	SHEET DESCRIPTION
1	- COVER SHEET
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4	E-101 - GENERAL ELECTRICAL NOTES, LEGEND & DETAILS
5	E-102 - ELECTRICAL SITE PLAN
6	E-103 - NEW SENSORS DIAGRAM

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.



**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 NOT BE LIMITED TO, INSTALLATION OF THE ROSEMOUNT 5408A RADAR SENSOR; THE SENIX ULTRASONIC SENSOR; THE PROTEX-MAX EXPLOSION PROOF PROCESS METER PUMP LOCAL CONTROLLER; THE FOUR PORT SERIAL COMMUNICATION MODULE; WALL LOUVER WINDOWS & DOORS; DOORS; THE EXHAUST FAN; MOBILIZATION; DEMOLITION AND DISPOSAL OF DEBRIS; COORDINATION OF ELECTRICAL SERVICE WITH FLORIDA POWER AND LIGHT; AND ALL APPURTENANT WORK.



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.

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 1ST ST, SUITE 1510  
MIAMI, FLORIDA 33128

ENGINEER (IF RECORD):

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 my  
electronic copy.

2023.02.01 17:51:07-05'00'

THOMAS F. DONAHUE, P.E.  
FLORIDA REGISTRATION P.E. NO. 611529  
KEITH CIVIL ENGINEER



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

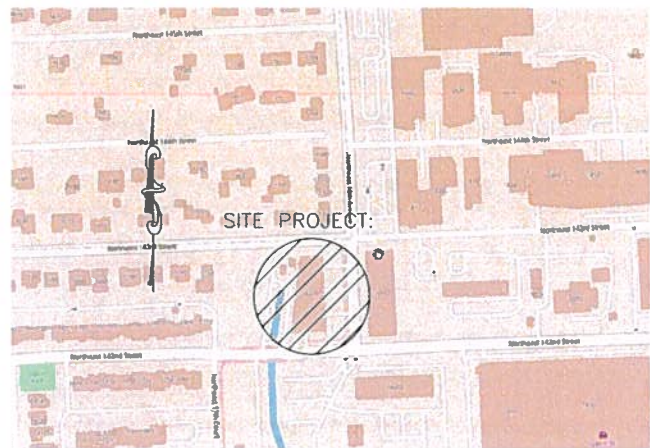
Florida Engineering Business License: CA7923  
Florida Surveyor and Mapper Business License: LE6860  
Florida Landscape Architecture Business License: LC6000457



DESIGN	NM	CHECK	TD
		DR./WN	VC./MD./JN
DATE	SEPTEMBER 2022	SHEET	1 OF 6

# TOPOGRAPHIC BOUNDARY SURVEY.

TRACTS-13 AND 14, AMENDED PLAT OF R.E. MCDONALD'S SUBDIVISION BOOK-2, PAGE-22.  
LYING IN SECTION 20, TOWNSHIP 52 SOUTH, RANGE 42 EAST.  
MIAMI-DADE COUNTY, FLORIDA



LOCATION MAP:  
SCALE: N.T.S.

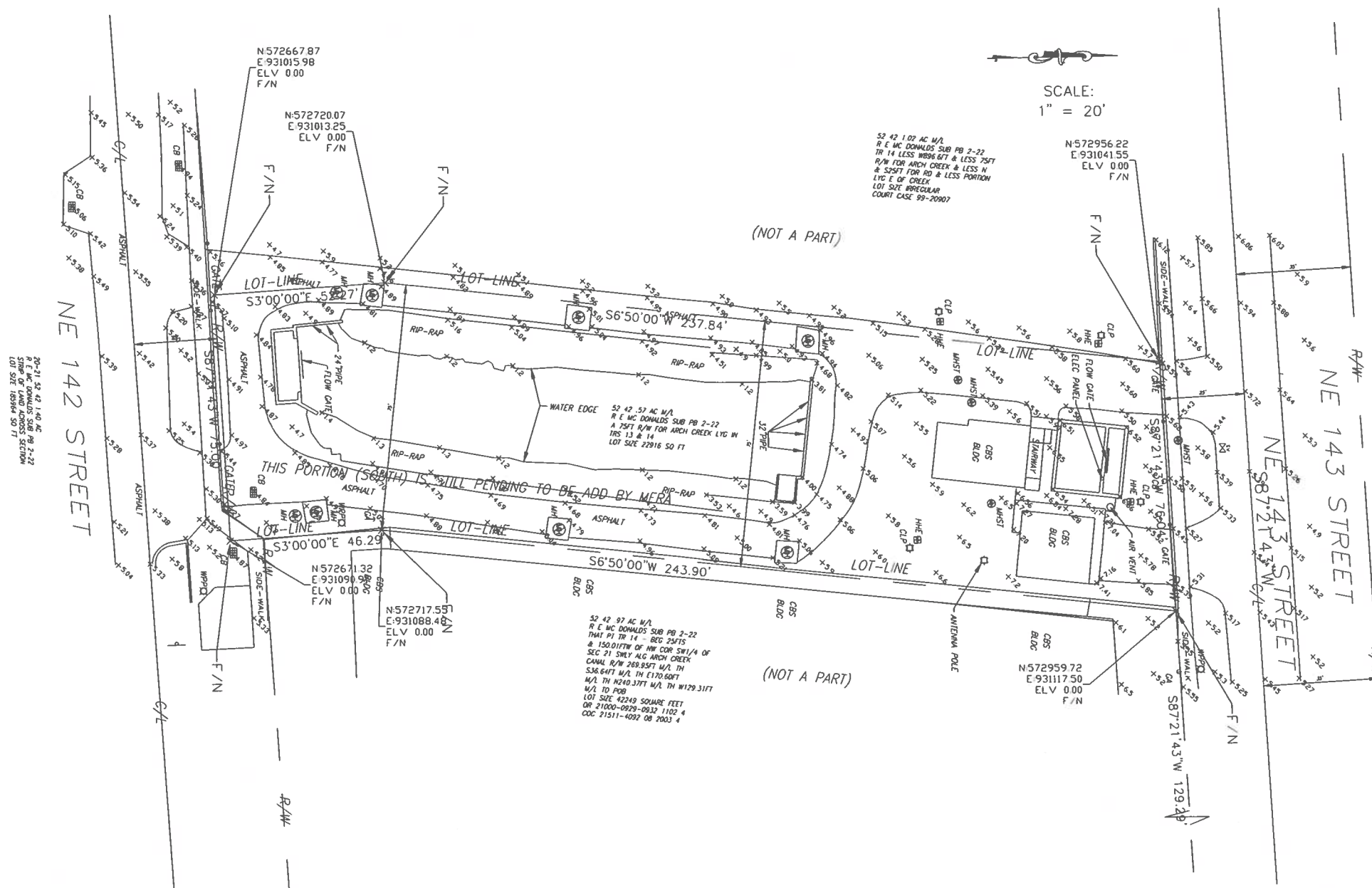
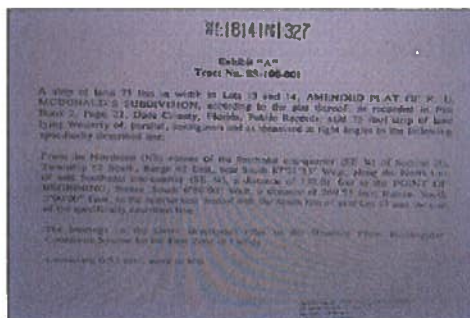
### ABBREVIATIONS AND MEANINGS:

- DTPW MIAMI-DADE COUNTY DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
- CL 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

### 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

### (LEGAL DESCRIPTION):



SCALE:  
1" = 20'

52 42 1.07 AC M/A  
R E MC DONALD'S SUB PD 2-22  
TR 14 LESS 1896.671 & LESS 75FT  
R/W FOR ARCH CREEK & LESS N  
& 525FT FOR RD & LESS PORTION  
LYE E OF CREEK  
LOT SIZE IRREGULAR  
COURT CASE 99-20907

(NOT A PART)

(NOT A PART)

### 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 143th ST & N.E 18th AVE. (ARCH CREEK-1)
- 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 2 PAGE 22 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 20, TOWNSHIP 52 SOUTH, RANGE 42 EAST, IN MIAMI-DADE COUNTY, FLORIDA.
- THE BEARING BASIS FOR THIS SURVEY IS NORTH 87°21'43" EAST ALONG THE CENTER LINE OS N.E 143th STREET.
- ELEVATIONS SHOWN HEREON ARE REFERRED TO A RECORDED MIAMI-DADE COUNTY BENCH-MARK S-35, ELEVATION=11.33' N.G.V.D.
- 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"= 40' OR SMALLER, AT THE MAXIMUM INTENDED DISPLAYED SCALE. THE MAP'S POSITIONAL VALUE OCCUPIES 1/30" 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.

### (TREE TABLE):

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

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.

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

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

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Project Title:  
**TOPOGRAPHIC BOUNDARY SURVEY:  
PUMP STATION AT N.E 143th ST.  
AND N.E 8th AVENUE.**

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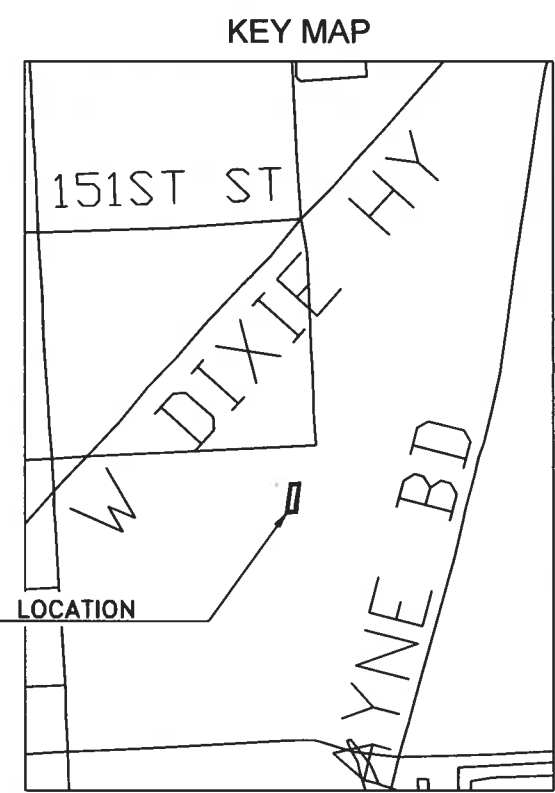
Project # 20200043  
ARCH-CREEK-1  
Date 06/02/2021 Scale 1"=20'  
Drawing # 1 of 1  
FIELD BOOK N/A PAGE N/A

Miami Dade County  
Department of Transportation  
and Public Works  
Survey Section  
111 N.W. First Street, Suite 1110  
Miami, Florida 33138 305-375-8877



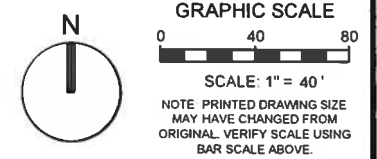
Project Title:  
**TOPOGRAPHIC BOUNDARY SURVEY:  
PUMP STATION AT N.E 143th ST.  
AND N.E 8th AVENUE.**

Project # 20200043  
ARCH-CREEK-1  
Date 06/02/2021 Scale 1"=20'  
Drawing # 1 of 1  
FIELD BOOK N/A PAGE N/A



NOT TO SCALE

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. 1.558 MUST BE SUBTRACTED TO THE NAVD 1988 ELEVATIONS.



- 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.

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

ENGINEER OF RECORD:

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

2023.02.01 17:55:30-05'00'

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Arch Creek 1 PUMP STATION  
NE 18th Ave & NE 143th St  
IMPROVEMENT PROJECT

DESIGNED BY	NAME	DATE	DRAWN BY	NAME	DATE

**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.L. 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.
  - AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
  - ILLUMINATING ENGINEERS SOCIETY (IES)
  - AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
  - NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

NOTE: THESE STANDARDS ARE SUBORDINATE TO STANDARDS SET BY U.L. 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**

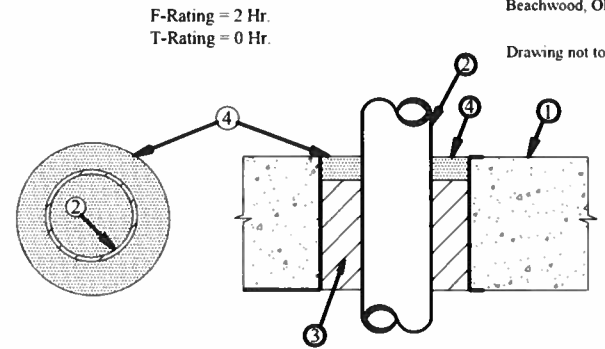
ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION
(TYP.)	TYPICAL	MIN.	MINIMUM	V.
PNL.	PANEL	(MFR) MANUF.	MANUFACTURER	AMP.
LT.	LIGHT	GFI.	GROUND FAULT INTERRUPTER	LTG.
Ø	PHASE	M.C.B.	MAIN CIRCUIT BREAKER	H.P.
PVC	POLYVINYL-CHLORIDE	F/N	FULL NEUTRAL	J.B.
RGS	RIGID GALVANIZED STEEL	SURF.	SURFACE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

**SCOPE OF WORK:**

SCOPE UNDER THIS PROJECT INCLUDES THE FOLLOWING:

- INSTALLING THREE (3) NEW WATER LEVEL SENSORS (RADAR AND ULTRASONIC). NEW SENSORS TO BE CONNECTED TO EXISTING REMOTE TERMINAL UNIT (RTU) AS PER DIAGRAM ON E-104. NEW SENSORS WILL BE INTEGRATED INTO EXISTING CONTROL SEQUENCE.

2 Hour Fire Rated Through Penetration Firestop for Single Metal Pipe through Concrete Floors and Walls using TREMstop 1A.



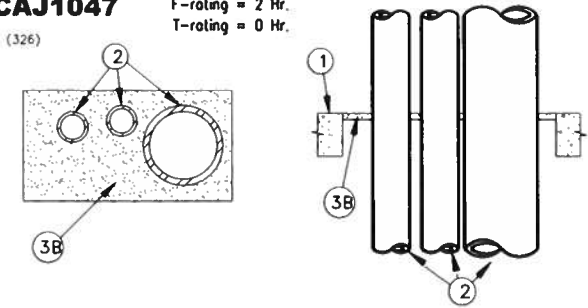
- Pre-Rated Concrete Floors or Block Walls = Min. 4-1/2" thickness.
- Metallic Pipe: A) Steel Pipe - 12" diam. (or smaller) Sch. 10 (or heavier) steel pipe; B) Iron Pipe - 12" diam. (or smaller) cast or ductile iron pipe; C) Conduit - 4" diam. (or smaller) EMT or 6" diam. steel conduit; D) Copper Tubing - 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. 4.0 pcf) firmly packed into opening as a permanent form.
- TREMstop 1A- 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

Classified UL System  
 2 Hour Fire Rated Through Penetration Firestop for Multiple Metal Pipe through Concrete floors or walls using FYRE-SHIELD.  
 TREMCO  
 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 poly-urethane 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.**

Digitally signed by Zoila Morales  
 DN: c=US, o=ME Engineering Consultants, ou=A01410D000 00171310794480 001940F, cn=Zoila Morales Date: 2023.01.10 10:23:55 -05'00'

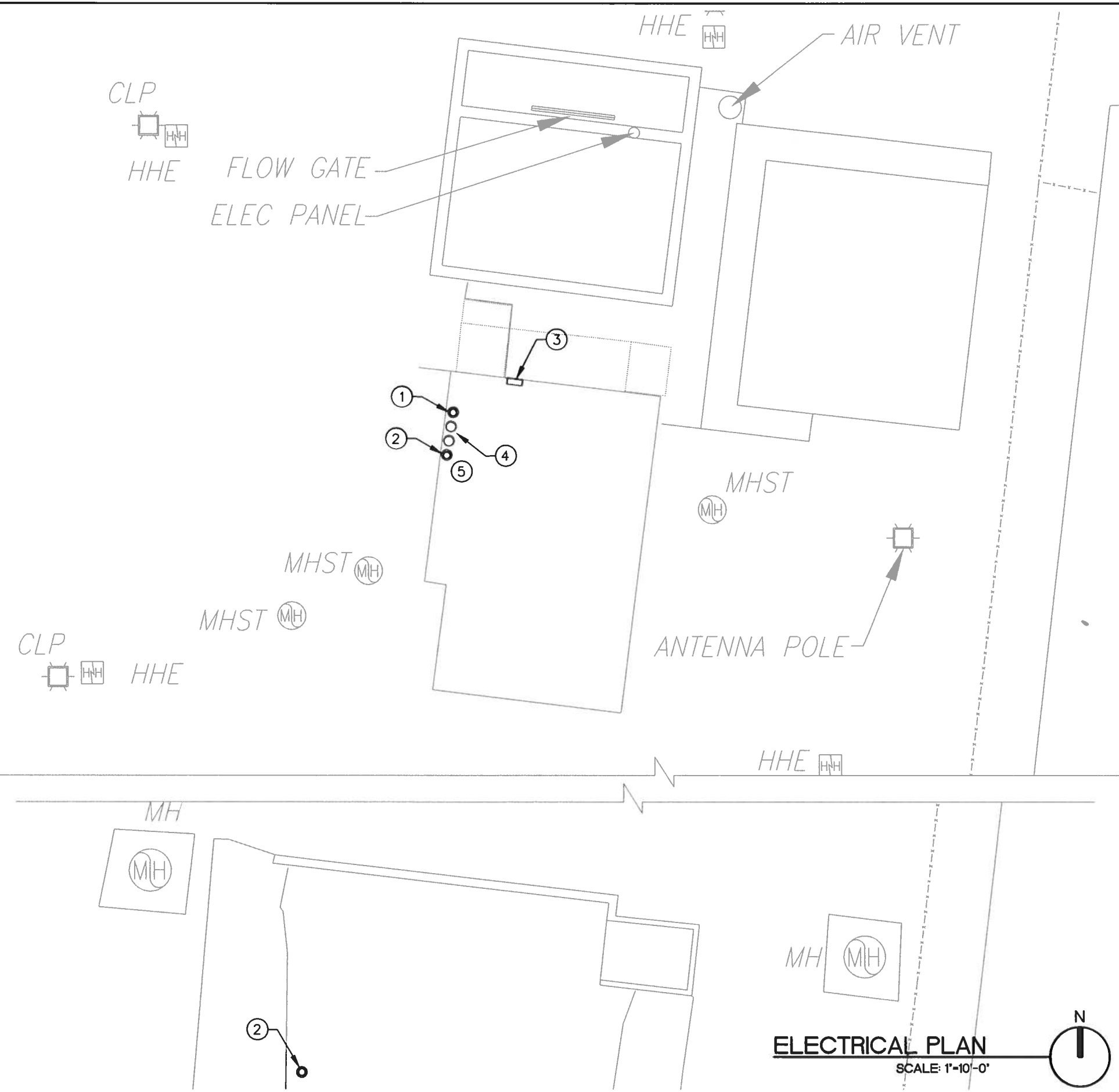
Zoila Morales, Electrical P.E. #64981  
 M.E. Engineering Consultants, Inc.  
 11401 SW 40TH Street Suite 301  
 Ph (786)275-4635  
 CA 29121

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Arch Creek 1 PUMP STATION  
 NE 18th Ave & NE 143th St  
 IMPROVEMENT PROJECT

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





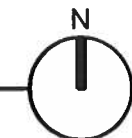
**CODED NOTES:**

- 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-104.
- ④ REMOVE EXISTING SENSORS ALONG WITH ASSOCIATED WIRES CONNECTING TO RTU. COORDINATE WITH OWNER (MIAMI DADE). RETURN SENSORS TO OWNER.
- ⑤ PROVIDE PROTEX-MAX EXPLOSION PROOF PROCESS METER PUMP LOCAL CONTROLLER PRECISION DIGITAL PD6000-6R7 AS PER DIAGRAM ON DRAWING E-104.

**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.

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



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 by Zoila Morales  
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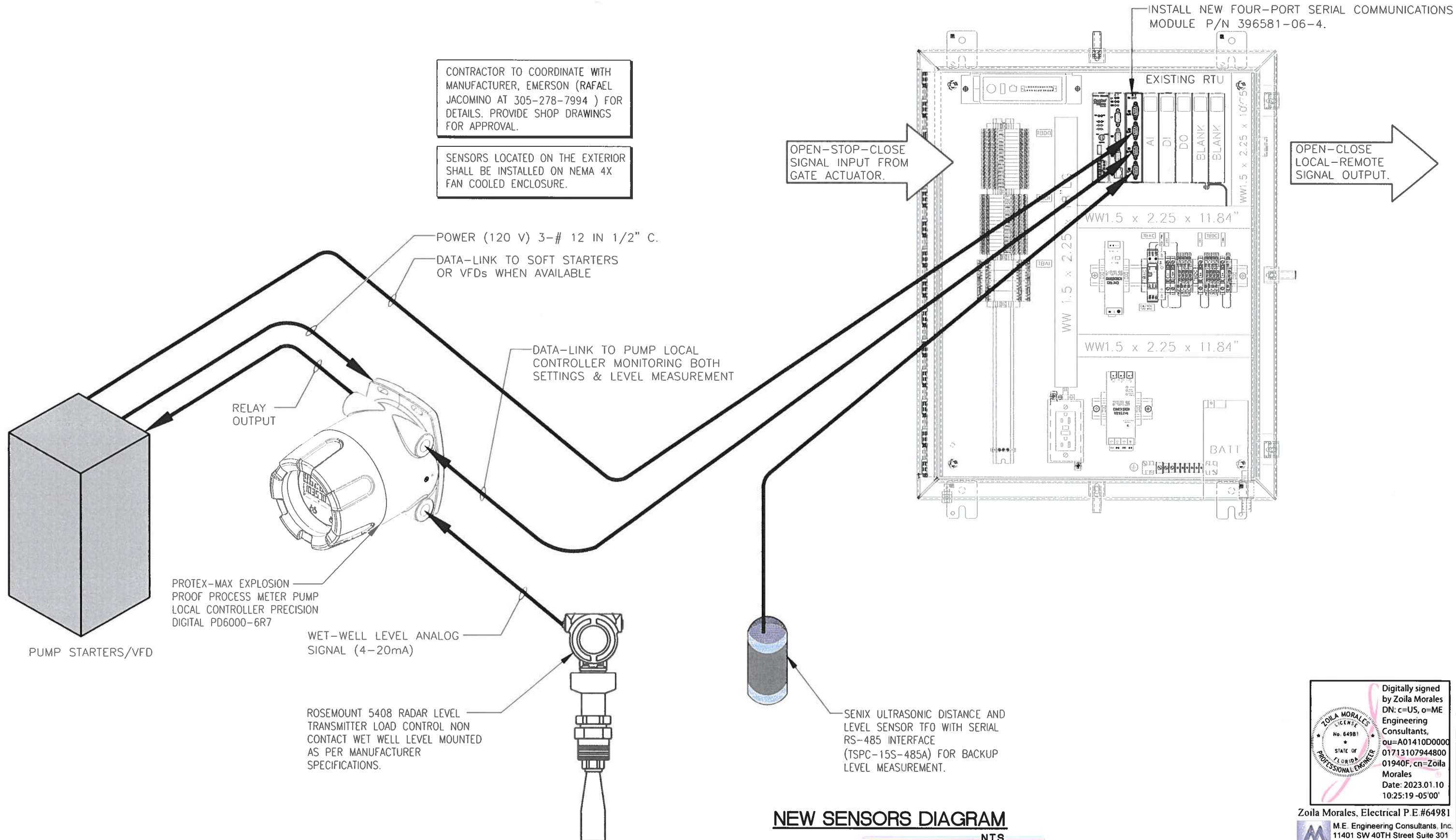
Zoila Morales, Electrical P.E. #64981  
 M.E. Engineering Consultants, Inc.  
 11401 SW 40TH Street Suite 301  
 Ph (786)275-4635  
 CA 29121

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Arch Creek 1 PUMP STATION  
 NE 18th Ave & NE 143th St  
 IMPROVEMENT PROJECT

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

MIAMI-DADE  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC WORKS  
 ROADWAY ENGINEERING AND  
 RIGHT OF WAY DIVISION  
 STEPHEN P. CLARK CENTER  
 115 NW 1 St  
 MIAMI, FLORIDA 33122



CONTRACTOR TO COORDINATE WITH MANUFACTURER, EMERSON (RAFAEL JACOMINO AT 305-278-7994 ) FOR DETAILS. PROVIDE SHOP DRAWINGS FOR APPROVAL.

SENSORS LOCATED ON THE EXTERIOR SHALL BE INSTALLED ON NEMA 4X FAN COOLED ENCLOSURE.

OPEN-STOP-CLOSE SIGNAL INPUT FROM GATE ACTUATOR.

OPEN-CLOSE LOCAL-REMOTE SIGNAL OUTPUT.

POWER (120 V) 3-# 12 IN 1/2" C.

DATA-LINK TO SOFT STARTERS OR VFDs WHEN AVAILABLE

DATA-LINK TO PUMP LOCAL CONTROLLER MONITORING BOTH SETTINGS & LEVEL MEASUREMENT

RELAY OUTPUT

PROTEX-MAX EXPLOSION PROOF PROCESS METER PUMP LOCAL CONTROLLER PRECISION DIGITAL PD6000-6R7

WET-WELL LEVEL ANALOG SIGNAL (4-20mA)

ROSEMOUNT 5408 RADAR LEVEL TRANSMITTER LOAD CONTROL NON CONTACT WET WELL LEVEL MOUNTED AS PER MANUFACTURER SPECIFICATIONS.

SENIX ULTRASONIC DISTANCE AND LEVEL SENSOR TFO WITH SERIAL RS-485 INTERFACE (TSPC-15S-485A) FOR BACKUP LEVEL MEASUREMENT.

**NEW SENSORS DIAGRAM**

N.T.S.

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