CONTRACT DOCUMENTS

For the construction of the

ST. JOHN THE BAPTIST PARISH CLARIFIER UPGRADE

ST. JOHN THE BAPTIST PARISH

PARISH PRESIDENT

NATALIE ROBOTTOM

DIRECTOR OF UTILITIES

BLAKE FOGLEMAN

PARISH COUNCIL

LARRY SORAPURU, JR., COUNCILMAN AT LARGE - DISTRICT A
JACLYN HOTARD, COUNCILWOMAN AT LARGE - DISTRICT B
KURT BECNEL, COUNCILMAN - DISTRICT I
JULIA REMONDET, COUNCILWOMAN - DISTRICT II
LENNIX MADERE, JR., COUNCILMAN - DISTRICT III
MARVIN PERRILLOUX, COUNCILMAN - DISTRICT IV
MICHAEL WRIGHT, COUNCILMAN - DISTRIVT V
LARRY SNYDER, COUNCILMAN - DISTRICT VI
THOMAS MALIK, COUNCILMAN - DISTRICT VII

STATE OF LOUISIANA
JARROD C. TRAMONTE
License No. 31541
PROFESSIONAL ENGINEER
IN
ENVIRONMENTAL ENGINEERING
2/8/18

Prepared for the

EDGARD WATER TREATMENT PLANT LOUISIANA

VOLUME 2 OF 2
DRAWINGS

INDEX OF DRAWINGS

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ELECTRICAL

E-1 CLARIFIER REHABILITATION ELECTRICAL PLAN AND DIAGRAMS

For information regarding
this project, contact:

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ch2m

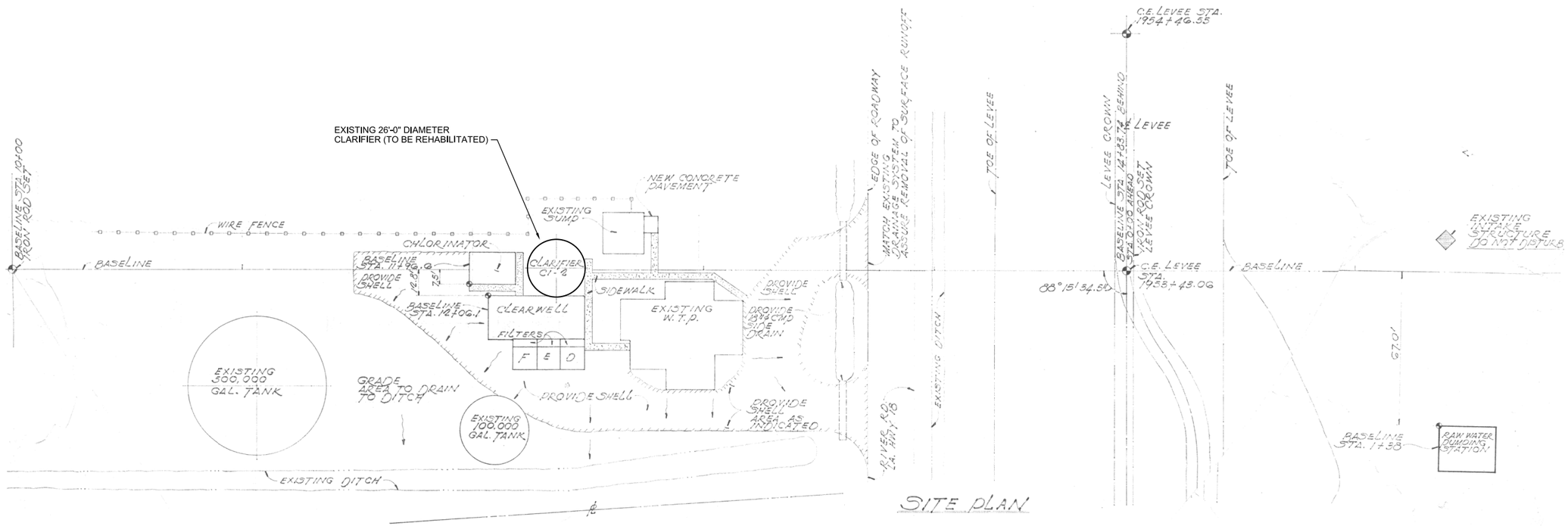
Project No. 693543

FEBRUARY 2018

BID DOCUMENTS

LEGEND:

DIP	DUCTILE IRON PIPE
GALV	GALVANIZED
SHT	SHEET
PVC	POLYVINYL CHLORIDE
PSI	POUNDS PER SQUARE INCH
AWWA	AMERICAN WATER WORKS ASSOCIATION
ASTM	ASTM INTERNATIONAL
VFD	VARIABLE FREQUENCY DRIVE
MCC	MOTOR CONTROL CENTER
C	CONDUIT
G	GAUGE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
GFI	GROUND FAULT INTERUPTER
EXST	EXISTING
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
Ⓐ	CONNECTION POINT
GRS	GALVANIZED RIGID STEEL CONDUIT
LP	LIGHTING PANEL
UL	UNDERWRITERS LABORATORY



SITE PLAN

NOTES:

1. BASEMAPS ARE FROM DRAWINGS FOR "EDGARD WATER TREATMENT PLANT EXPANSION" PROJECT, DATED DECEMBER, 1984. ALL FEATURES SHOWN ARE EXISTING.
2. INFORMATION PROVIDED ON BASEMAPS IS FOR INFORMATION ONLY. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, AND COORDINATES AS REQUIRED.
3. CONTRACTOR TO COORDINATE WITH PARRISH FOR ONSITE STAGING AREA.

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2/8/18

NO.	DATE	REVISION	BY	APVD

DSGN J TRAMONTE | DR C HAMMER | CHK D GARCIA | APVD J TRAMONTE

EDGARD WATER TREATMENT PLANT
CLARIFIER UPGRADES
ST. JOHN THE BAPTIST PARISH
EDGARD LOUISIANA

CIVIL
SITE PLAN

1" = X'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

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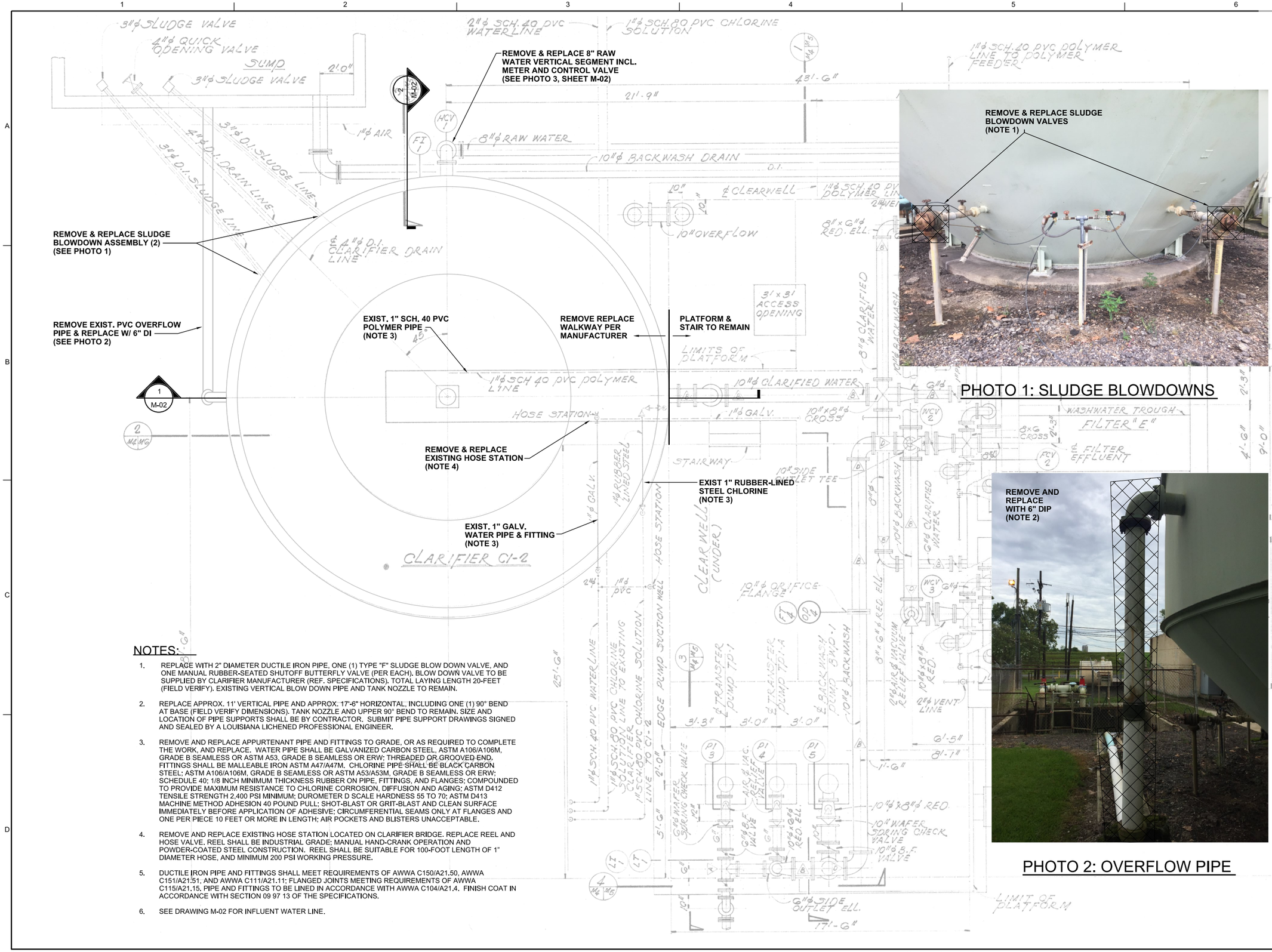

PHOTO 1: SLUDGE BLOWDOWNS

PHOTO 2: OVERFLOW PIPE

NOTES:

1. REPLACE WITH 2" DIAMETER DUCTILE IRON PIPE, ONE (1) TYPE "F" SLUDGE BLOW DOWN VALVE, AND ONE MANUAL RUBBER-SEATED SHUTOFF BUTTERFLY VALVE (PER EACH). BLOW DOWN VALVE TO BE SUPPLIED BY CLARIFIER MANUFACTURER (REF. SPECIFICATIONS). TOTAL LAYING LENGTH 20-FEET (FIELD VERIFY). EXISTING VERTICAL BLOW DOWN PIPE AND TANK NOZZLE TO REMAIN.
2. REPLACE APPROX. 11' VERTICAL PIPE AND APPROX. 17'-6" HORIZONTAL, INCLUDING ONE (1) 90° BEND AT BASE (FIELD VERIFY DIMENSIONS). TANK NOZZLE AND UPPER 90° BEND TO REMAIN. SIZE AND LOCATION OF PIPE SUPPORTS SHALL BE BY CONTRACTOR. SUBMIT PIPE SUPPORT DRAWINGS SIGNED AND SEALED BY A LOUISIANA LICHENED PROFESSIONAL ENGINEER.
3. REMOVE AND REPLACE APPURTENANT PIPE AND FITTINGS TO GRADE, OR AS REQUIRED TO COMPLETE THE WORK, AND REPLACE. WATER PIPE SHALL BE GALVANIZED CARBON STEEL, ASTM A106/A106M, GRADE B SEAMLESS OR ASTM A53, GRADE B SEAMLESS OR ERW; THREADED OR GROOVED END. FITTINGS SHALL BE MALLEABLE IRON ASTM A47/A47M. CHLORINE PIPE SHALL BE BLACK CARBON STEEL; ASTM A106/A106M, GRADE B SEAMLESS OR ASTM A53/A53M, GRADE B SEAMLESS OR ERW; SCHEDULE 40; 1/8 INCH MINIMUM THICKNESS RUBBER ON PIPE, FITTINGS, AND FLANGES; COMPOUNDED TO PROVIDE MAXIMUM RESISTANCE TO CHLORINE CORROSION, DIFFUSION AND AGING; ASTM D412 TENSILE STRENGTH 2,400 PSI MINIMUM; DUROMETER D SCALE HARDNESS 55 TO 70; ASTM D413 MACHINE METHOD ADHESION 40 POUND PULL; SHOT-BLAST OR GRIT-BLAST AND CLEAN SURFACE IMMEDIATELY BEFORE APPLICATION OF ADHESIVE; CIRCUMFERENTIAL SEAMS ONLY AT FLANGES AND ONE PER PIECE 10 FEET OR MORE IN LENGTH; AIR POCKETS AND BLISTERS UNACCEPTABLE.
4. REMOVE AND REPLACE EXISTING HOSE STATION LOCATED ON CLARIFIER BRIDGE. REPLACE REEL AND HOSE VALVE. REEL SHALL BE INDUSTRIAL GRADE; MANUAL HAND-CRANK OPERATION AND POWDER-COATED STEEL CONSTRUCTION. REEL SHALL BE SUITABLE FOR 100-FOOT LENGTH OF 1" DIAMETER HOSE, AND MINIMUM 200 PSI WORKING PRESSURE.
5. DUCTILE IRON PIPE AND FITTINGS SHALL MEET REQUIREMENTS OF AWWA C150/A21.50, AWWA C151/A21.51, AND AWWA C111/A21.11; FLANGED JOINTS MEETING REQUIREMENTS OF AWWA C115/A21.15. PIPE AND FITTINGS TO BE LINED IN ACCORDANCE WITH AWWA C104/A21.4. FINISH COAT IN ACCORDANCE WITH SECTION 09 97 13 OF THE SPECIFICATIONS.
6. SEE DRAWING M-02 FOR INFLUENT WATER LINE.

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DSGN J TRAMONTE | DR J TRAMONTE | CHK C HAMER | APVD D GARCIA

EDGARD WATER TREATMENT PLANT
CLARIFIER UPGRADES
ST. JOHN THE BAPTIST PARISH
EDGARD LOUISIANA

MECHANICAL
CLARIFIER REHABILITATION PLAN

1" = X'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

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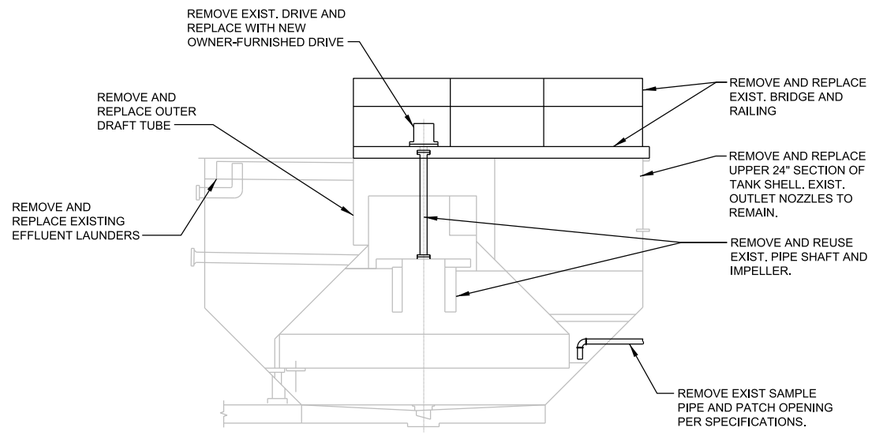


1 / M-02 SECTIONAL ELEVATION
SCALE: 1/4" = 1'-0"

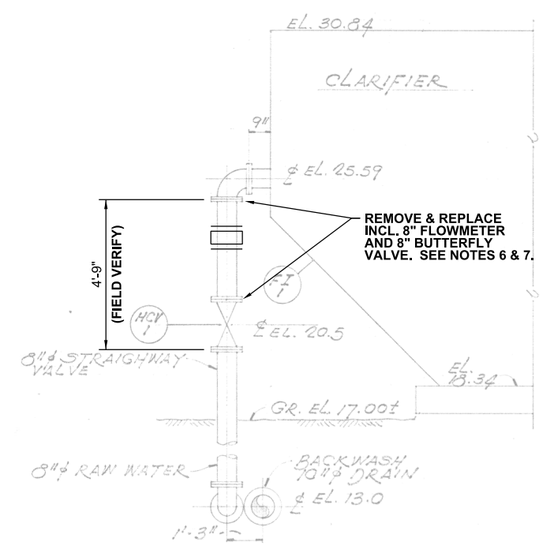
CLARIFIER NOTES:

1. REMOVE ITEMS AS SHOWN. ITEMS DESIGNATED FOR REUSE SHALL BE STORED ON SITE IN A LOCATION DESIGNATED BY THE OWNER. OTHER ITEMS SHALL BE REMOVED FROM SITE AND BECOME PROPERTY OF CONTRACTOR.
2. CLEAN SURFACE OF TANK AND ALL INTERIOR ITEMS NOT DESIGNATED FOR REMOVAL IN ACCORDANCE WITH THE SPECIFICATIONS.
3. REPAIR / PATCH TANK SHELL AS REQUIRED. EXTENTS OF PATCHING SHALL BE DETERMINED BY VISUAL INSPECTION AND / OR TESTING (BY CONTRACTOR), AND SHALL BE APPROVED BY ENGINEER. PATCHING SHALL INCLUDE REMOVAL OF RUST AND WELDING OF STEEL PATCHES ON BOTH SIDES OF THE DEFICIENT AREA. PERFORM WELDING IN ACCORDANCE WITH DIVISION 5 OF THE SPECIFICATIONS.
4. COAT INTERIOR AND EXTERIOR SURFACES OF TANK, AND APPURTENANT PIPING, IN ACCORDANCE WITH SECTION 09 97 13 OF THE SPECIFICATIONS.
5. REPLACE INTERNAL COMPONENTS, WALKWAY, AND DRIVE PER MANUFACTURER SPECIFICATIONS. MOUNTING, FABRICATION, AND ERECTION OF MECHANICAL COMPONENTS SHALL BE IN ACCORDANCE WITH APPROVED MANUFACTURER SHOP DRAWINGS.

RAW WATER LINE NOTES:

6. FLOWMETER:
   Mc CROMETER: ULTRA MAG MODEL UMO 6-08
   ELECTRONIC FLOWMETER: FLANGED END CONNECTIONS, REMOTE MOUNTED CONVERTER, CONTRACTOR TO CONFIRM CUSTOM CABLE LENGTH, PIPE SIZE (NOMINAL) 8-INCH.
7. BUTTERFLY VALVE SHALL CONFORM TO AWWA C504, CLASS 150B. VALVE SHALL BE SHORT BODY TYPE WITH FLANGED ENDS; CAST-IRON BODY, CAST OR DUCTILE IRON DISC, TYPE 304 STAINLESS STEEL SHAFTS, BUNA N RUBBER SEAT, AND STAINLESS STEEL SEATING SURFACE. PROVIDE EPOXY LINING AND COATING IN COMPLIANCE WITH AWWA C550.

PHOTO 3: RAW WATER LINE



2 / M-02 SECTION
SCALE: 3/8" = 1'-0"

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J TRAMONTE	C HAMER	D GARCIA	J TRAMONTE

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EDGARD WATER TREATMENT PLANT
CLARIFIER UPGRADES
ST. JOHN THE BAPTIST PARISH
EDGARD LOUISIANA

MECHANICAL

CLARIFIER REHABILITATION
SECTION AND DETAILS

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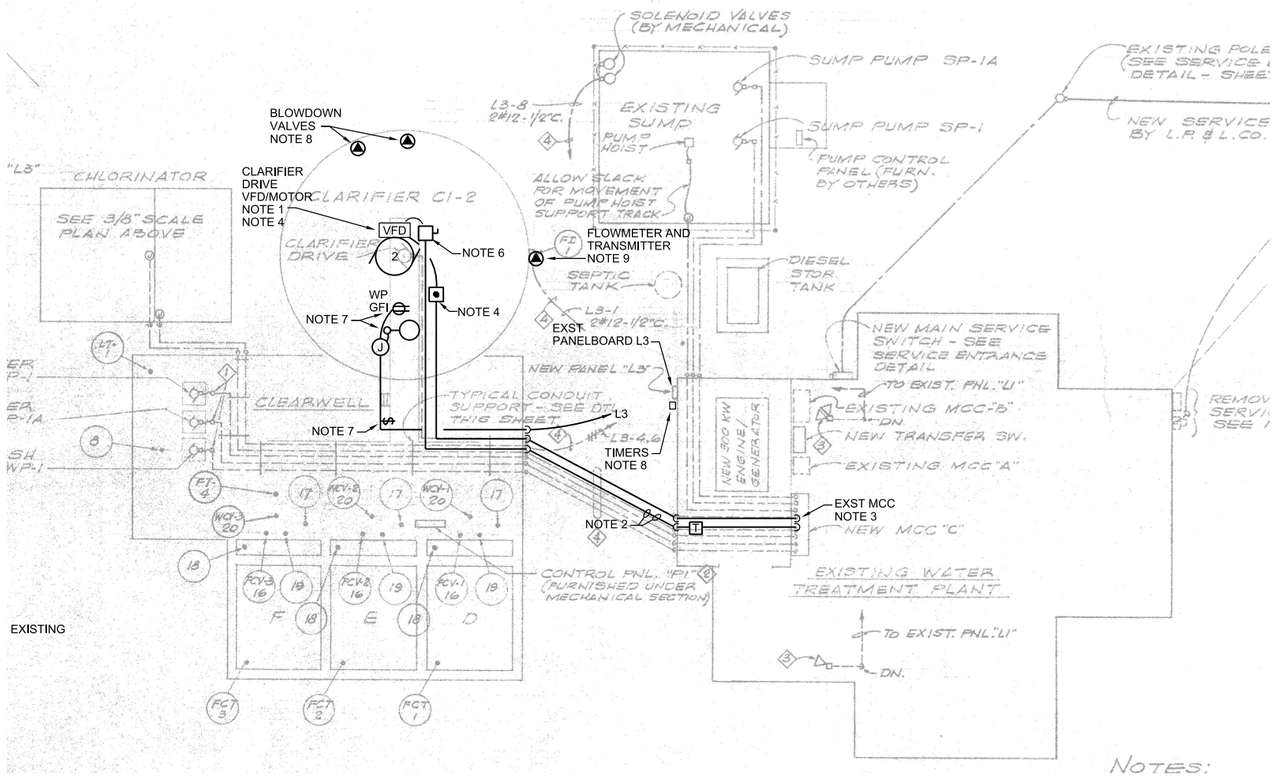
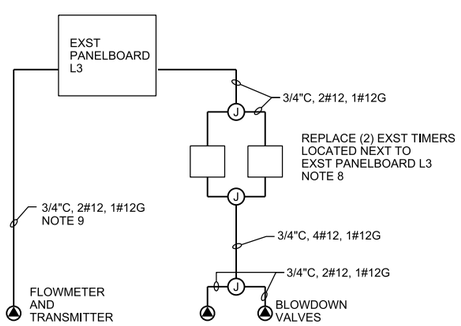
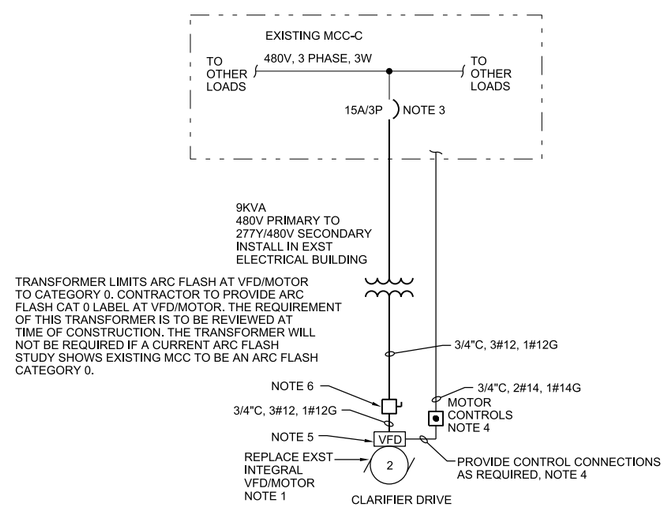


SITE PLAN

NTS



WIRING DIAGRAM



PARTIAL ONE LINE DIAGRAM

GENERAL NOTES:

1. PROVIDE THE WORK IN ACCORDANCE WITH NFPA 70, NATIONAL ELECTRICAL CODE (NEC). WHERE REQUIRED BY THE AUTHORITY HAVING JURISDICTION (AHJ), MATERIAL AND EQUIPMENT SHALL BE LABELED OR LISTED BY A NATIONALLY RECOGNIZED TESTING LABORATORY OR OTHER ORGANIZATION ACCEPTABLE TO THE AHJ, IN ORDER TO PROVIDE A BASIS FOR APPROVAL UNDER THE NEC. MATERIALS AND EQUIPMENT MANUFACTURED WITHIN THE SCOPE OF STANDARDS PUBLISHED BY UNDERWRITERS LABORATORIES, INC., SHALL CONFORM TO THOSE AND SHALL HAVE AN APPLIED UL LISTING MARK OR LABEL.
2. CONDUIT SHALL BE RIGID GALVANIZED STEEL, MEETING THE REQUIREMENTS OF A NATIONALLY RECOGNIZED TESTING LABORATORY. FOR CONNECTIONS TO MOTOR AND SOLENOIDS, USE FLEXIBLE METAL LIQUID TIGHT, GALVANIZED STEEL WITH EXTRUDED PVC JACKET.
3. CONDUCTORS SHALL BE STRANDED COPPER WITH 600V XHHW-2 INSULATION.
4. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

REFERENCED NOTES:

1. CONTRACTOR TO REMOVE EXISTING CLARIFIER DRIVE MECHANISM AND REPLACE WITH NEW OWNER FURNISHED CLARIFIER MECHANISM. NEW CLARIFIER AND MOTOR WITH INTEGRAL VFD FURNISHED BY OWNER, INSTALLED BY CONTRACTOR.
2. CONTRACTOR TO PROVIDE NEW WIRING FROM EXISTING MCC TO NEW CLARIFIER MOTOR.
3. CONTRACTOR TO REPLACE EXISTING CLARIFIER MCP AND OVERLOADS WITH NEW 15A/3P THERMAL MAGNETIC CIRCUIT BREAKER. EXISTING CONTROL TRANSFORMER TO REMAIN. REPLACEMENT CB TO HAVE SAME AIC AS EXISTING MCC.
4. CONTRACTOR TO PROVIDE CONNECTIONS FROM OWNER FURNISHED SPEED CONTROL TO OWNER FURNISHED INTEGRAL VFD/MOTOR. COORDINATE WITH OWNER FOR WIRING REQUIREMENTS. MOUNT SPEED CONTROL ON HANDRAIL NEAR MOTOR. OWNER TO FURNISH SPEED CONTROL SUITABLE FOR A WET ENVIRONMENT. CONTRACTOR TO PROVIDE 120VAC FROM EXISTING CLARIFIER STARTER CONTROL TRANSFORMER.
5. OWNER FURNISHED INTEGRAL VFD/MOTOR SHALL PROVIDE THERMAL MOTOR PROTECTION. CONTRACTOR TO VERIFY INTEGRAL VFD/MOTOR IS CONFIGURED TO PROVIDE FOR THERMAL MOTOR PROTECTION TO UL508C.
6. PROVIDE NEW MOTOR DISCONNECT SWITCH: 600V, 30A, 3 POLE, NON-FUSED IN A NEMA 4X ALUMINUM ENCLOSURE. LOCATE ON HANDRAIL NEAR CLARIFIER MOTOR.
7. PROVIDE NEW STANCHION MOUNTED LIGHT, LIGHT SWITCH, RECEPTACLE AND ASSOCIATED WIRING. LIGHT: STANCHION MOUNT, LED, 6000 LUMEN OUTPUT, 98 WATT INPUT, 120VAC, NEMA 4X, CROUSE-HINDS CHAMP VMV9L SERIES, OR EQUAL. MOUNT ON 1" GRS CONDUIT STANCHION SUPPORTED FROM HANDRAIL. LIGHT SWITCH: 120VAC, 20A, 1 POLE IN A RAINTIGHT CAST ENCLOSURE. RECEPTACLE: INDUSTRIAL GRADE, WEATHER RESISTANT, GFCI, DUPLEX 15A, 125V, NEMA 5-15R, DUPLEX IN A CAST ENCLOSURE AND RAINTIGHT COVER. PROVIDE 3/4"C, 2#12, 1#12G TO EXISTING CB IN PANELBOARD L3. MOUNT SWITCH AND RECEPTACLE ON HANDRAIL.
8. REPLACE EXISTING TIMERS TO SOLENOID OPERATORS FOR BLOWDOWN VALVES. TIMERS SUPPLIED BY CLARIFIER SUPPLIER. PROVIDE MOUNTING AND NEW WIRING FROM TIMERS TO EXISTING PANELBOARD AND TO VALVE OPERATORS.
9. PROVIDE POWER WIRING FROM EXST LP3 TO FLOWMETER AND TRANSMITTER AS SHOWN.

STATE OF LOUISIANA
MARC P. GOSLOW
REG. No. 22445
REGISTERED
PROFESSIONAL ENGINEER
ELECTRICAL ENGINEERING
2/9/18

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