

RECORD DRAWINGS
~~CONTRACT DRAWINGS~~

SOUTHEAST WATER RECLAMATION FACILITY (SEWRF) SEPTAGE/ GREASE RECEIVING STATION

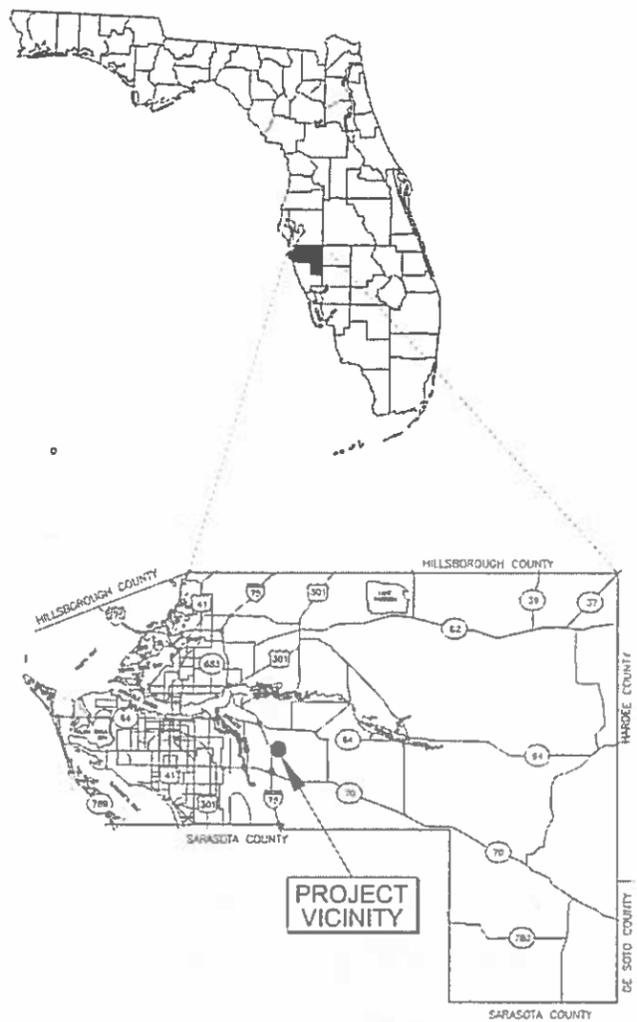
MANATEE COUNTY, FLORIDA
 COUNTY PROJECT No. 6083480



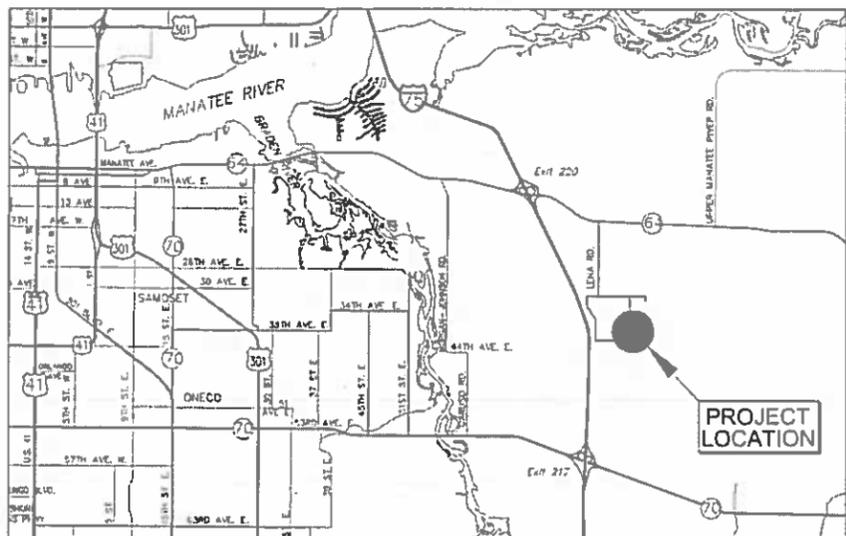
RECORD DRAWING
 THIS RECORD DRAWING SHOWS THE REPORTED LOCATION OF WORK IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS. THIS RECORD DRAWING IS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR AND SURVEYOR. CARDNO CANNOT AND DOES NOT WARRANTY ITS ACCURACY.

CONTRACTOR RECORD DRAWINGS ATTACHED IN BACK FOR INFORMATION ONLY

NOTE: THE CONTRACT DRAWINGS WERE ORIGINALLY APPROVED FOR CONSTRUCTION AND SEALED IN MARCH 2015 BY DAVID O'CONNOR, A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF FLORIDA, FL PE NO 56803.



VICINITY MAP
 NOT TO SCALE



LOCATION MAP
 NOT TO SCALE

AS-BUILT
Hyatt Survey Services, Inc.
 11807 6TH AVENUE EAST BRADENTON, FLORIDA 34212
 PH: (941) 766-4883 FAX: (941) 766-1843 LP No. 17263

3331 LENA ROAD BRADENTON, FLORIDA 34206
 SECTION 1, TOWNSHIP 35-S, RANGE 18-E
 PARCEL: 567110051
 MANATEE COUNTY, FLORIDA

SURVEYOR'S CERTIFICATION:
 I HEREBY CERTIFY THAT THIS SURVEY IS A TRUE AND ACCURATE REPRESENTATION OF A FIELD SURVEY MADE UNDER MY RESPONSIBLE CHARGE, IN CONJUNCTION WITH INFORMATION SUPPLIED BY THE CONTRACTOR, AND THAT TO THE BEST OF MY KNOWLEDGE MEETS THE STANDARDS OF PRACTICE AS SET FORTH BY THE BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN RULE CHAPTER 6J-17 OF THE FLORIDA ADMINISTRATIVE CODE.

THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL SEALED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
RUSSELL P. HYATT, P.S.M.
 FLORIDA SURVEYORS REGISTRATION NO. 5303

PLANS PREPARED BY:



CLEARWATER
 300 PARK PLACE BLVD, STE 300, CLEARWATER, FL 33759 TEL: (727) 534-3005 (800) 861-4314 www.clearwater.com Certificate of Authorization No. 28915

DAVID A. O'CONNOR, PE
 LIC. NO. 56803

ELECTRICAL PLANS PREPARED BY:



STRUCTURAL PLANS PREPARED BY:



NO.	DESCRIPTION	BY	DATE
	RECORD DRAWING	RFN	12/2017

Always call first two full business days before you dig

Sunshine811.com

PROJECT NO: 00193-009-02
 DATE: MARCH 2015
 SHEET NO: G-1

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SHEET LIST TABLE

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**SEWRF
SEPTAGE/ GREASE
RECEIVING STATION**



MANATEE COUNTY
DEPARTMENT OF PUBLIC WORKS
UTILITIES DEPARTMENT
4410 66th Street West Bradenton, Florida 34210
(941) 792-8811



DAVID A. O'CONNOR, PE DATE
LIC. NO.: 56803

DESIGNED DOC
DRAWN ALS
O.C.
APPROVED

**RECORD DRAWINGS
SHEET INDEX**

PROJECT NO:
00193-009-02
DATE:
MARCH 2015
SHEET NO:
G-2

GENERAL NOTES

- MATERIALS USED IN THE CONSTRUCTION OF THIS PROJECT SHALL BE NEW AND CONFORM TO THE MANATEE COUNTY DEPARTMENT OF PUBLIC WORKS UTILITIES DEPARTMENT AND THE LATEST LOCAL JURISDICTION STANDARDS, UNLESS OTHERWISE NOTED.
- WHERE REFERENCED STANDARDS CONFLICT, OR WHERE THERE ARE DISCREPANCIES BETWEEN THE PROJECT MANUAL (TECH SPECS) AND CONTRACT DRAWINGS, THE MORE STRINGENT STANDARD SHALL APPLY.
- THE CONTRACTOR SHALL CALL "SUNSHINE STATE ONE CALL 811" A MINIMUM OF 2-DAYS AND A MAXIMUM OF 5-DAYS PRIOR TO START OF CONSTRUCTION.
- THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD AT (727) 639-5567 IMMEDIATELY ON ANY CONFLICTS ARISING DURING CONSTRUCTION.
- ALL WORK PERFORMED SHALL COMPLY WITH THE REGULATIONS AND ORDINANCES OF THE VARIOUS GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE WORK.
- THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE CONSTRUCTION SAFETY. SPECIAL PRECAUTIONS MAY BE REQUIRED IN THE VICINITY OF POWER LINES AND OTHER UTILITIES.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTROL AND PREVENT EROSION AND THE TRANSPORTATION OF SEDIMENT TO SURFACE DRAINS AND OUTFALLS.
- ALL SECTION CORNERS OR PROPERTY CORNERS DISLOCATED OR DISTURBED BY THE CONSTRUCTION ACTIVITIES SHALL BE RESET BY A REGISTERED LAND SURVEYOR AT THE CONTRACTORS EXPENSE.
- UNLESS SHOWN OTHERWISE, FINAL GRADE IS TO GENERALLY BE THE SAME AS EXISTING GRADE. ALL DISTURBED LANDSCAPED AND/OR GRASSED AREAS SHALL BE RESTORED IN-KIND.
- ALL SODDING, SEEDING AND MULCHING SHALL INCLUDE WATERING AND FERTILIZATION AND CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THESE AREAS UP TO AND INCLUDING THE INITIAL MOWING.
- ALL VOIDS AFTER PLACEMENT OF SOD SHALL BE FILLED WITH PREPARED SOIL MIX. THE SOD SHALL BE ROLLED TO MEET THE PROPOSED GRADES, SOD PLACED ON SLOPES (3:1 OR STEEPER) SHALL BE PEGGED.
- ALL EXCESS SOIL RESULTING FROM CONSTRUCTION ACTIVITIES THAT IS NOT CLAIMED BY THE OWNER SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND PROPERLY DISPOSED OF OFFSITE BY THE CONTRACTOR.
- AREAS OF EXPOSED EARTH RESULTING FROM CONSTRUCTION SHALL BE SODDED IN KIND UNLESS OTHERWISE NOTED ON PLANS.
- THE LOWEST PIPE SHALL BE INSTALLED FIRST WHERE UTILITIES CROSS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TESTING OF ALL MAINS IN ACCORDANCE WITH CURRENT STANDARDS OF LOCAL JURISDICTION. CONTRACTOR SHALL NOTIFY THE LOCAL JURISDICTION AND THE OWNER OR HIS AUTHORIZED REPRESENTATIVE AT LEAST 48 HOURS IN ADVANCE OF PERFORMING TESTS.
- THE CONTRACTOR SHALL PROVIDE ALL SHEETING, SHORING AND BRACING REQUIRED TO PROTECT ADJACENT STRUCTURES AND TO MINIMIZE TRENCH WIDTH. WHERE A SEPARATE PAY ITEM IS NOT PROVIDED, THE COST OF ALL SHEETING AND BRACING REQUIRED SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE ITEM OF WORK FOR WHICH SHEETING, SHORING AND BRACING IS ANTICIPATED TO BE REQUIRED IN ACCORDANCE WITH "TRENCH SAFETY ACT".
- ALL CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 3,000 PSI (28 DAY STRENGTH), UNLESS OTHERWISE NOTED ON DRAWINGS. ACCESS DRIVES SHALL MEET H - 20 TRAFFIC LOADING REQUIREMENTS.
- LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF THE PREPARATION OF THESE PLANS, BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. THE CONTRACTOR SHALL VERIFY THE LOCATION, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES AFFECTING HIS WORK PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL VERIFY IN THE FIELD THE LOCATION AND ELEVATION OF ALL EXISTING UTILITY CONNECTION POINTS PRIOR TO STARTING CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY THE ENGINEER AND OWNER OF ANY DISCREPANCIES FOUND.
- ALL POTABLE, FIRE AND IRRIGATION SYSTEM COMPONENTS SHALL REMAIN OPERATIONAL DURING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO THESE SYSTEMS IMMEDIATELY.
- THE CONTRACTOR SHALL ENSURE THAT EXCAVATIONS ARE FREE OF DEBRIS AND ORGANIC MATERIAL PRIOR TO BACKFILLING.

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A NPDES NOI PERMIT FROM EPA, AS WELL AS PREPARING AND MAINTAINING A STORMWATER POLLUTION PREVENTION PLAN FOR BOTH ON-SITE AND OFF-SITE IMPROVEMENTS. THE CONTRACTOR SHALL BECOME FAMILIAR WITH AND COMPLY WITH ALL REQUIREMENTS OF THE EPA NPDES PERMIT FOR THIS PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY STORMWATER DISCHARGE PERMIT AND/OR DEWATERING PLAN, AND SHALL BE RESPONSIBLE TO COMPLY WITH ALL CONDITIONS SET FORTH IN THE PERMIT.
- THE CONTRACTOR SHALL TAKE ALL REASONABLE MEANS TO ELIMINATE THE TRANSPORT OF DUST FROM THE PROJECT SITE. SPECIAL MEASURES, SUCH AS PERIODICALLY APPLYING WATER TO THE WORK SITE TO PREVENT DUST SHALL BE INCORPORATED INTO THE CONTRACTORS WORK PLAN.
- MAINTAIN ACCESS TO AND OPERATION OF ALL EXISTING PLANT OPERATIONS UNTIL NEW OPERATIONS HAVE BEEN ACCEPTED BY OWNER AND ENGINEER.
- SURVEY PREPARED BY:
HYATT SURVEY SERVICES, INC.
11007 8TH AVENUE EAST, BRADENTON, FLORIDA 34212
(941) 748.4693
- GEOTECHNICAL INVESTIGATION PREPARED BY:
MC SQUARED, INC. (MC2)
5808-A BRECKENRIDGE PARKWAY, TAMPA, FLORIDA 33610
(813) 623.3399
- VERTICAL AND HORIZONTAL CLEARANCES FOR WATER, SEWER, FORCE MAIN, AND RECLAIMED WATER MAINS SHALL MEET FDEP MINIMUM SEPARATION.
- ALL PLANT SERVICE WATER SPIGOTS (HOSE BIBS, IRRIGATION SYSTEM) SHALL HAVE APPROPRIATE SAFETY PLACARDS.
- UNLESS OTHERWISE NOTES, ALL STAINLESS STEEL SHALL BE TYPE 316L.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SAFEKEEPING OF EQUIPMENT AND MATERIALS LEFT ON-SITE DURING CONSTRUCTION
- PIPE DEFLECTION AT THE JOINTS SHALL NOT EXCEED 75% OF MANUFACTURER'S RECOMMENDATION.
- THE CONTRACTOR SHALL EXCAVATE TO CONFIRM THE LOCATIONS OF EXISTING UTILITIES ADJACENT TO OR CROSSING PROPOSED LINework BEFORE STARTING CONSTRUCTION.
- ALL BELOW GROUND DUCTILE IRON PIPE SHALL BE ENCASED IN A POLYETHYLENE WRAP IN ACCORDANCE WITH AWWA C105.
- ALL EXISTING FENCE DISTURBED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED AND REINSTALLED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER UNLESS SHOWN TO BE REMOVED ON CONSTRUCTION PLANS.
- OTHER CONSTRUCTION PROJECTS MAY BE ONGOING AT THE FACILITY DURING THE TIME OF THIS PROJECT. THE CONTRACTOR SHALL COOPERATE WITH OTHER CONTRACTORS THAT MAY BE ON SITE. THE CONTRACTOR SHALL COORDINATE ALL WORK THROUGH THE PLANT SUPERINTENDENT.
- THE CONTRACTOR SHALL RECEIVE A DESIGNATED AREA FOR STORAGE OF MATERIALS. THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR THE SECURITY AND SAFEKEEPING OF CONTRACTOR'S OWN TOOLS AND PROJECT MATERIALS STORED ON SITE.
- THE CONTRACTOR SHALL MAINTAIN ON-SITE ONE FULL-SIZE SET OF CONTRACT DRAWINGS RED-LINED TO DOCUMENT CONFIRMATION OF ALL PROPOSED WORK AND ANY DEVIATIONS FROM PROPOSED WORK. THESE RED-LINED DRAWINGS SHALL BE MADE AVAILABLE TO OWNER AND ENGINEER UPON REQUEST.
- THE CONTRACTOR SHALL PROVIDE CERTIFIED "RECORD DRAWINGS" DRAWINGS, SIGNED AND SEALED BY A PROFESSIONAL LAND SURVEYOR, THE RECORD DRAWINGS SHALL SHOW CONFIRMATION OF ALL PROPOSED WORK AND ANY DEVIATIONS FROM THE PROPOSED WORK. THE CONTRACTOR SHALL PROVIDE FIVE HARD COPIES AND ONE ELECTRONIC AUTOCAD COPY OF THE "RECORD DRAWINGS" DRAWINGS TO THE ENGINEER.

SURVEY NOTES

- THIS IS NOT A BOUNDARY SURVEY.
- THE SURVEY IS REFERENCED TO A PROJECTION OF THE FLORIDA STATE PLANE COORDINATE SYSTEM (WEST ZONE NAD 1983/2007 ADJUSTMENT).
- ALL ELEVATIONS REFER TO NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).
- THE FOLLOWING BENCHMARK WAS RECOVERED AND UTILIZED FOR THIS SURVEY: RAILROAD SPIKE IN THE NE SIDE OF A POWER POLE WITH A PK NAIL AND MANATEE COUNTY BM DISK ABOVE IT, 45± WEST OF SW CORNER PHASE 1 LENA LANDFILL (NGVD 1929 ELEVATION 38.671'). FOR CONVERSION TO NAVD 1988 ELEVATIONS, A VALUE OF (-0.96') SHOULD BE APPLIED. THIS VALUE WAS DERIVED USING CORPSCON 6 AND IS APPROXIMATE.
- SITE LIES WITHIN FLOOD ZONES "A" AND "X" AS SCALED FROM THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP: COMMUNITY PANEL NUMBER 120153 0352 C DATED JULY 15, 1992. SUBJECT TO FIELD VERIFICATION.
- THIS SURVEY IS SUBJECT TO PERTINENT EASEMENTS, RIGHTS-OF-WAY AND RESTRICTIONS OF RECORD, IF ANY.

HORIZONTAL/VERTICAL CONTROL

DESIGNATION (SEE PLAN)	NORTHING	EASTING	ELEVATION
BM # 200 (PKND LB 7203)	1139596.539	510507.125	37.66'
BM # 204 (PKND LB 7203)	1139279.956	510481.022	35.81'
BM # 208 (PKND LB 7203)	1139366.878	511102.444	37.17'

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MANATEE COUNTY
DEPARTMENT OF PUBLIC WORKS
UTILITIES DEPARTMENT
4410 66th Street West Bradenton, Florida 34210
(941) 792-8811



Cardno
Shaping the Future
CLEARWATER
380 PARK PLACE BLVD, STE 300, CLEARWATER, FL 33759 TEL:
(727) 531- 3505 (800) 861-8314
www.cardno.com Certificate of Authorization No. 29915

DAVID A. O'CONNOR, PE DATE
LIC, NO.: 56803

DESIGNED _____ DOC
DRAWN _____ ALS
Q.C. _____
APPROVED _____

**RECORD DRAWINGS
GENERAL NOTES**

PROJECT NO:
00193-009-02
DATE:
MARCH 2015
SHEET NO:
G-3

GENERAL ABBREVIATIONS

@	AT	JT.	JOINT
AC	ACRES	LG.	LONG
AC	ASPHALTIC CONCRETE	LN.	LANE
ABD	ABANDONED	LP	LIGHT POLE
AL./ALUM.	ALUMINUM	MAX.	MAXIMUM
ANCH.	ANCHOR	MB	MAILBOX
APPROX.	APPROXIMATE	MCC	MOTOR CONTROL CENTER
ASPH	ASPHALT	MES	MITERED END SECTION
AVE.	AVENUE	MON.	MONUMENT
BLDG.	BUILDING	NG	NATURAL GROUND
BLVD.	BOULEVARD	N.T.S.	NOT TO SCALE
BM	BENCHMARK	NO.	NUMBER
BOT./BOTT.	BOTTOM	Ø	DIAMETER / PHASE
C	CHANNEL	OPNG.	OPENING
C.	CONDUIT	PKND	PK NAIL W/ DISK
C.B.	CATCH BASIN	PLCS.	PLACES
CHKR	CHECKERED	POT	POTABLE
CIR.	CIRCLE	PP	POWER POLE
CLF	CHAIN LINK FENCE	PROP.	PROPOSED
CL	CENTERLINE	P.V.	PLUG VALVE
CMP	CORRUGATED METAL PIPE	PVMT	PAVEMENT
COL.	COLUMN	R.	RADIUS / RISER / RELAY
CONN.	CONNECTOR / CONNECTION	RCP	REINFORCED CONCRETE PIPE
CONC.	CONCRETE	REF.	REFERENCE
C.P.	CONTROL PANEL	REINF.	REINFORCED / REINFORCING
CU.	COPPER	REQ'D	REQUIRED
D.	DEEP / DRAIN	RESTR.	RESTRAINED
DBL.	DOUBLE	RFH	RECLAIM FIRE HYDRANT
DHW.	DESIGN HIGH WATER	RW: R/W	RIGHT-OF-WAY
DISCH.	DISCHARGE	SAN.	SANITARY
DLW.	DESIGN LOW WATER	SEC.	SECTION
DN.	DOWN	SGL	SINGLE
DR.	DRIVE	SPRK	SPRINKLER
DRWY	DRIVEWAY	SQ.	SQUARE
E.W.	EACH WAY	SN	SIGN
EA.	EACH	ST.	STREET
EL./ELEV.	ELEVATION	STL.	STEEL
ELEC.	ELECTRICAL CONDUIT	S.U.E.	SUBSURFACE UTILITY ENGINEERING
ETC.	AND SO FORTH	SW:SWK	SIDEWALK
EXIST.	EXISTING	SYM.	SYMMETRICAL
EXP.	EXPANSION	TOB	TOP OF BANK (DITCH)
FF.	FOOT	T.&B.	TOP & BOTTOM
FT.	FINISHED FLOOR	TEL	TELEPHONE
FTG.	FOOTING	TEMP.	TEMPORARY
GALV.	GALVANIZED	THK	THICK
GDRL	GUARDRAIL	TOS	TOE OF SLOPE (DITCH)
GEN	GENERATOR	TYP.	TYPICAL
GI	GRATED INLET	UG	UNDERGROUND GAS
GPM	GALLONS PER MINUTE	UP	UTILITY POLE
GRTG.	GRATING	UT	UNDERGROUND TELEPHONE
GRND	GROUND	VERT.	VERTICAL
G.S.	GALVANIZED STEEL	W	WIDE FLANGE / WIDE / WATT / WATER
GR./GRD.	GRADE	W/	WITH
GWP	GUY WIRE POLE	W/L	WATER LINE
HDWALL	HEADWALL	W.L.	WATER LEVEL
H.R.	HANDRAIL	WM	WATER MAIN
HWH	HOT WATER HEATER	W.M.	WATER METER
I.E.	INVERT ELEVATION	W.P.	WEATHER PROOF
IN.	INCH	W.S.	WALL SLEEVE / WATER STOP / WATER SERVICE
INV.	INVERT		
IP	IRON PIPE		
IR	IRON ROD		
J.B.	JUNCTION BOX		

FLOW ABBREVIATIONS

AD	AIR DUCT
AL	ALUM
BE	BURIED ELECTRIC
BW	BACKWASH
CA	COMPRESSED AIR
CLE	CLARIFIER EFFLUENT
CL2G	CHLORINE GAS
CL2S	CHLORINE SOLUTION
DR	DRAIN
FBW	SAND FILTER BACKWASH
FE	SAND FILTER EFFLUENT
FEQ	FLOW EQUALIZATION
FM	FORCE MAIN
GR	GRIT
HW	HOT WATER
IRR	IRRIGATION
LC	LEACHATE COLLECTION
MHE	MANHOLE ELECTRIC
ML	MIXED LIQUOR
OF	OVERFLOW
OF P	OVERFLOW POLYMER
PO	POLYMER
PDFM	PLANT DRAIN FORCE MAIN
PSW	PLANT SERVICE WATER
PW	POTABLE WATER
RAS	RETURN ACTIVATED SLUDGE
RCW	RECLAIMED WATER
REJ	REJECT
RML	RECIRCULATED MIXED LIQUOR
RW	RECLAIMED WATER
SAM	SAMPLE
SC	SCUM
STORM	STORMWATER COLLECTION
SPW	STORAGE POND WATER
SS	SANITARY SEWER
SW	SPRAY WATER
SWV	SANITARY WATER VALVE
TS	THICKENED SLUDGE
UN	UNDERDRAIN
UNK	UNKNOWN
WAS	WASTE ACTIVATED SLUDGE
WW	WASTEWATER

PIPING ABBREVIATIONS

ABD	ABANDONED
CO	CLEANOUT
CORP	CORPORATION
CV	CHECK VALVE
DI	DUCTILE IRON
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
ELEC	ELECTRICAL
EXIST	EXISTING
FH	FIRE HYDRANT
FL	FLANGED
GV	GATE VALVE
HB	HOSE BIBB
HDPE	HIGH DENSITY POLYETHYLENE
MH	MANHOLE
MJ	MECHANICAL JOINT
PE	PLAIN END
PS	PUMP STATION
PVC	POLYVINYLCHLORIDE
RED	REDUCER
SCH	SCHEDULE
SS	STAINLESS STEEL
TBR	TO BE REMOVED
UE	UNDERGROUND ELECTRIC
V	VALVE
VERT	VERTICAL

LEGEND

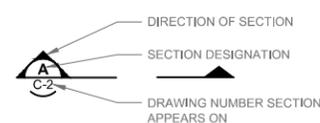
EXISTING		PROPOSED
	PIPELINE	
	GATE VALVE	
	BUTTERFLY VALVE	
	BALL VALVE	
	PLUG VALVE	
	REDUCER	
	AIR RELEASE VALVE	
	GAS VALVE	
	MANHOLE	
	CATCH BASIN	
	FIRE HYDRANT	
	TOP OR TOE OF BANK	
	CHAIN LINK FENCE	
	R/W OR PROPERTY LINE	
	PIPING, STRUCTURES OR EQUIPMENT TO BE REMOVED	
	BENCHMARK	
	FIRE HYDRANT	
	LIGHT POLE	
	VALVE	
	SANITARY WATER VALVE	
	RECLAIMED WATER METER	
	SANITARY MANHOLE	
	ELECTRIC MANHOLE	
	BOLLARD	
	POWER POLE	
	UTILITY RISER	
	IRRIGATION HEAD	
	S.U.E. TEST HOLE LOCATION	
	CONCRETE PAVEMENT	
	CONCRETE PAD	
	PAINTED STRIPING	
	PROPOSED GRADE	
	SURFACE FLOW ARROW	
	STRUCTURE COLUMN	
	SILT FENCE	
	YARD HYDRANT	
	HOSE RACK	

DRAFTING LEGEND

SECTION DESIGNATION



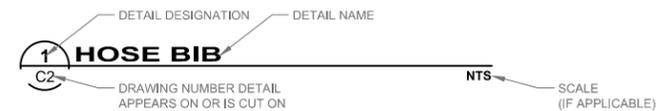
SECTION DESIGNATION



DETAIL DESIGNATION



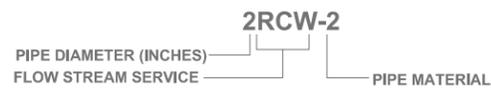
DETAIL DESIGNATION



PIPE IDENTIFICATION



Pipe Material Number	Pipe Material Abbreviation
-1	DI
-2	PVC



NOTE:
THE LEGEND LISTED REPRESENT A COMPREHENSIVE STANDARD GUIDE INTENDED FOR GENERAL USE. THEREFORE, NOT ALL OF THE SYMBOLS AND ABBREVIATIONS CONTAINED ON THIS SHEET ARE NECESSARILY USED ON THIS PARTICULAR CONTRACT.

RECORD DRAWING
THIS RECORD DRAWING SHOWS THE REPORTED LOCATION OF WORK IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED CONSTRUCTION PLANS. THIS RECORD DRAWING IS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR AND SURVEYOR. CARDNO CANNOT AND DOES NOT WARRANT ITS ACCURACY.

NO.	DESCRIPTION	BY	DATE
	RECORD DRAWING	RFN	12/2017

**SEWRP
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RECEIVING STATION**

MANATEE COUNTY
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UTILITIES DEPARTMENT
4410 66th Street West Bradenton, Florida 34210
(941) 792-8811

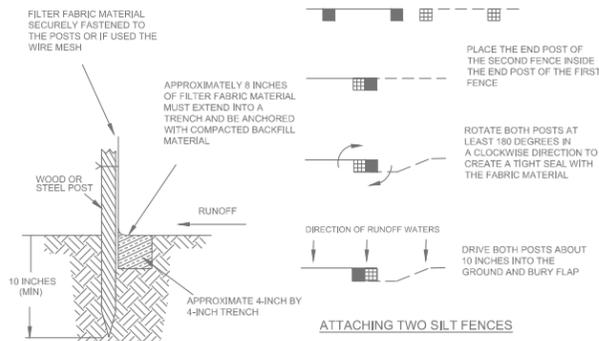
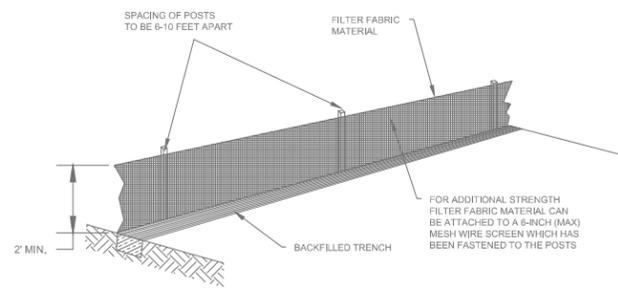
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DAVID A. O'CONNOR, PE
LIC. NO.: 56803

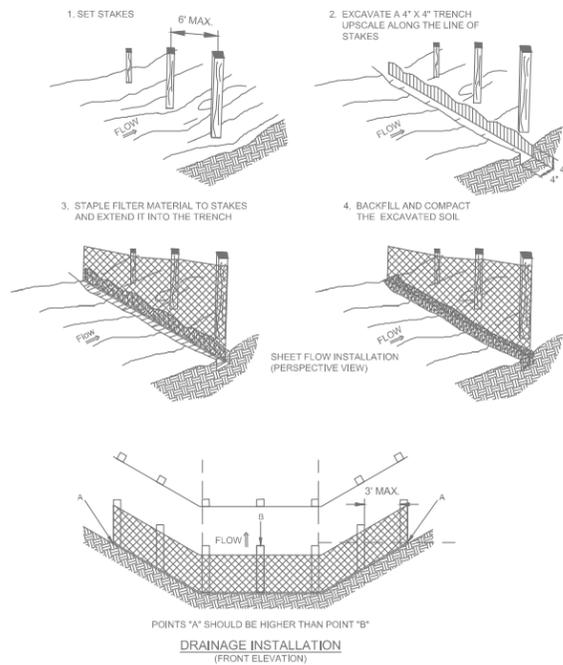
DESIGNED DOC
DRAWN ALS
Q.C.
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**RECORD DRAWINGS
LEGEND AND ABBREVIATIONS**

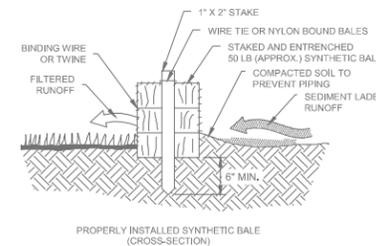
PROJECT NO:
00193-009-02
DATE:
MARCH 2015
SHEET NO:
G-4



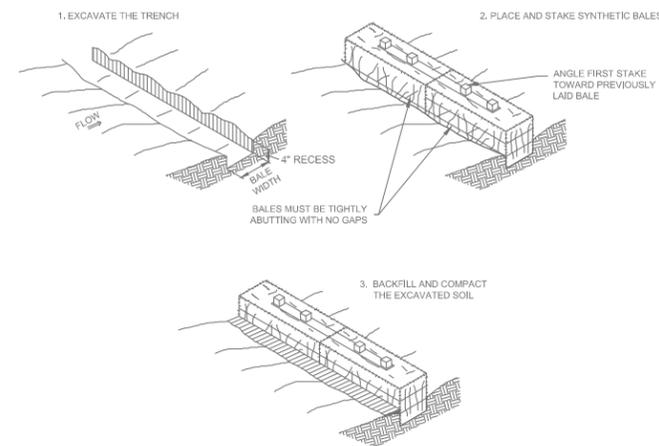
INSTALLING A FILTER FABRIC SILT FENCE
NOT TO SCALE



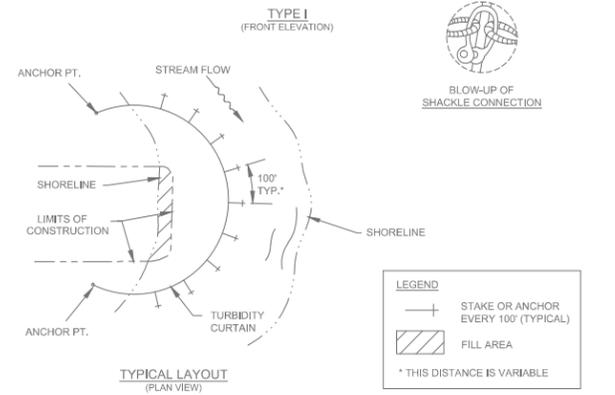
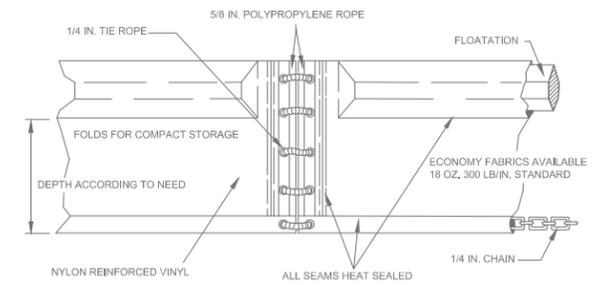
DRAINAGE INSTALLATION
(FRONT ELEVATION)



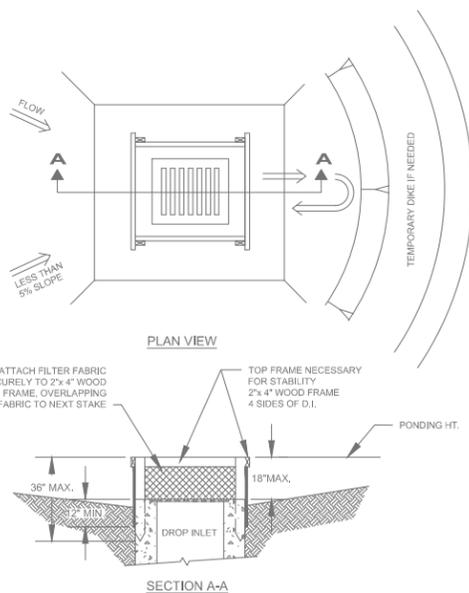
PROPERLY INSTALLED SYNTHETIC BALE
(CROSS-SECTION)



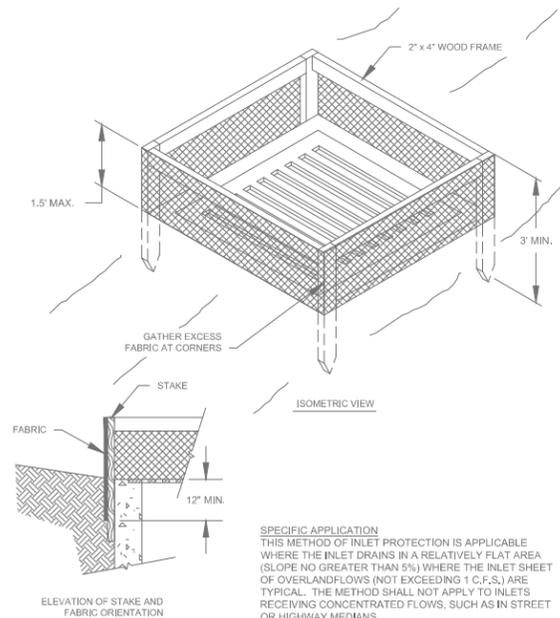
TEMPORARY SYNTHETIC BALE SEDIMENT BARRIER
NOT TO SCALE



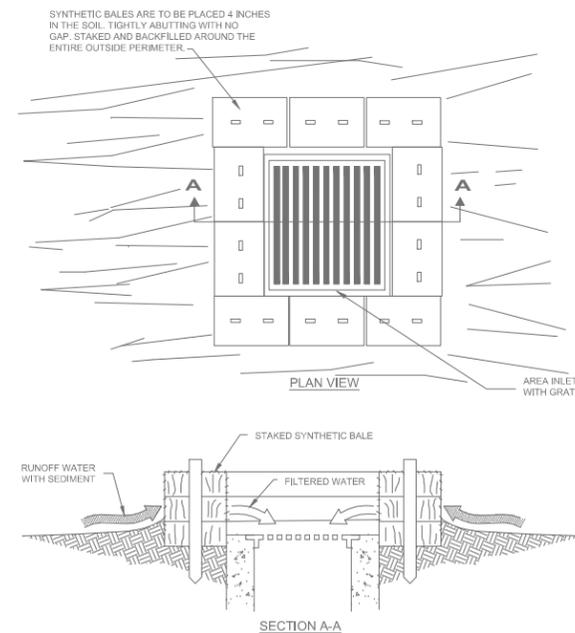
TEMPORARY FLOATING TURBIDITY BARRIER
NOT TO SCALE



TEMPORARY SEDIMENT BARRIER AT DROP INLET
NOT TO SCALE



SPECIFIC APPLICATION
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS IN A RELATIVELY FLAT AREA (SLOPE NO GREATER THAN 5%) WHERE THE INLET SHEET OF OVERLAND FLOWS (NOT EXCEEDING 1 C.F.S.) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.



THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPES NO GREATER THAN 5%) WHERE SHEET OR OVERLAND FLOWS (NOT EXCEEDING 0.5 CFS) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS STREET OR HIGHWAY MEDIANS.

TEMPORARY SYNTHETIC BALE SEDIMENT BARRIER AT STORM DRAIN DROP INLET
NOT TO SCALE

EROSION CONTROL NOTES

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTROL AND PREVENT EROSION AND THE TRANSPORTATION OF SEDIMENT TO SURFACE DRAINS AND OUTFALLS.
- THE CONTRACTOR SHALL PROVIDE SILT BARRIERS TO CONTROL EROSION AND SEDIMENTATION FROM TAKING PLACE OUTSIDE THE LIMITS OF THE PROJECT. THE SILT BARRIERS SHALL BE PLACED IN ACCORDANCE WITH THE REQUIREMENTS OF FDOT INDEX NO. 102, 103 AND 104 OR AS DIRECTED BY THE CITY ENGINEER.
- REQUIRED EROSION CONTROL MEASURES SHALL REMAIN INTACT THROUGHOUT CONSTRUCTION. FAILURE TO INSTALL OR PROPERLY MAINTAIN REQUIRED EROSION CONTROL WILL RESULT IN ENFORCEMENT ACTION WHICH MAY INCLUDE CITATIONS AS PROVIDED BY APPLICABLE LOCAL ORDINANCE AND CHAPTERS 40D-4 AND 40D-40, F.A.C. INITIATION OF CIVIL PENALTY PROCEDURES PURSUANT TO SECTION 373.129, F.A.C. CAN RESULT IN A PENALTY NOT TO EXCEED \$10,000 PER OFFENSE WITH EACH DATE DURING WHICH SUCH VIOLATION OCCURS CONSTITUTING A SEPARATE OFFENSE.
- ALL WORK PERFORMED SHALL COMPLY WITH THE REGULATIONS AND ORDINANCES OF THE VARIOUS GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE WORK.
- CONTRACTOR SHALL CONSTRUCT TURBIDITY BARRIERS APPROXIMATELY 25 FEET DOWNSTREAM OF END SECTIONS AT POND LOCATIONS SHOWN ON PLAN SHEETS. CONTRACTOR TO INSPECT AND MAINTAIN EACH TURBIDITY BARRIER DAILY.
- CONTRACTOR MAY USE OTHER ACCEPTABLE EROSION CONTROL DEVICES AROUND INLETS AS APPROVED BY THE ENGINEER.

RECORD DRAWING

THIS RECORD DRAWING SHOWS THE REPORTED LOCATION OF WORK IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED CONSTRUCTION PLANS. THIS RECORD DRAWING IS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR AND SURVEYOR. CARDNO CANNOT AND DOES NOT WARRANTY ITS ACCURACY.

NO.	DESCRIPTION	BY	DATE
	RECORD DRAWING	RFN	12/2017

SEWRF SEPTAGE/ GREASE RECEIVING STATION

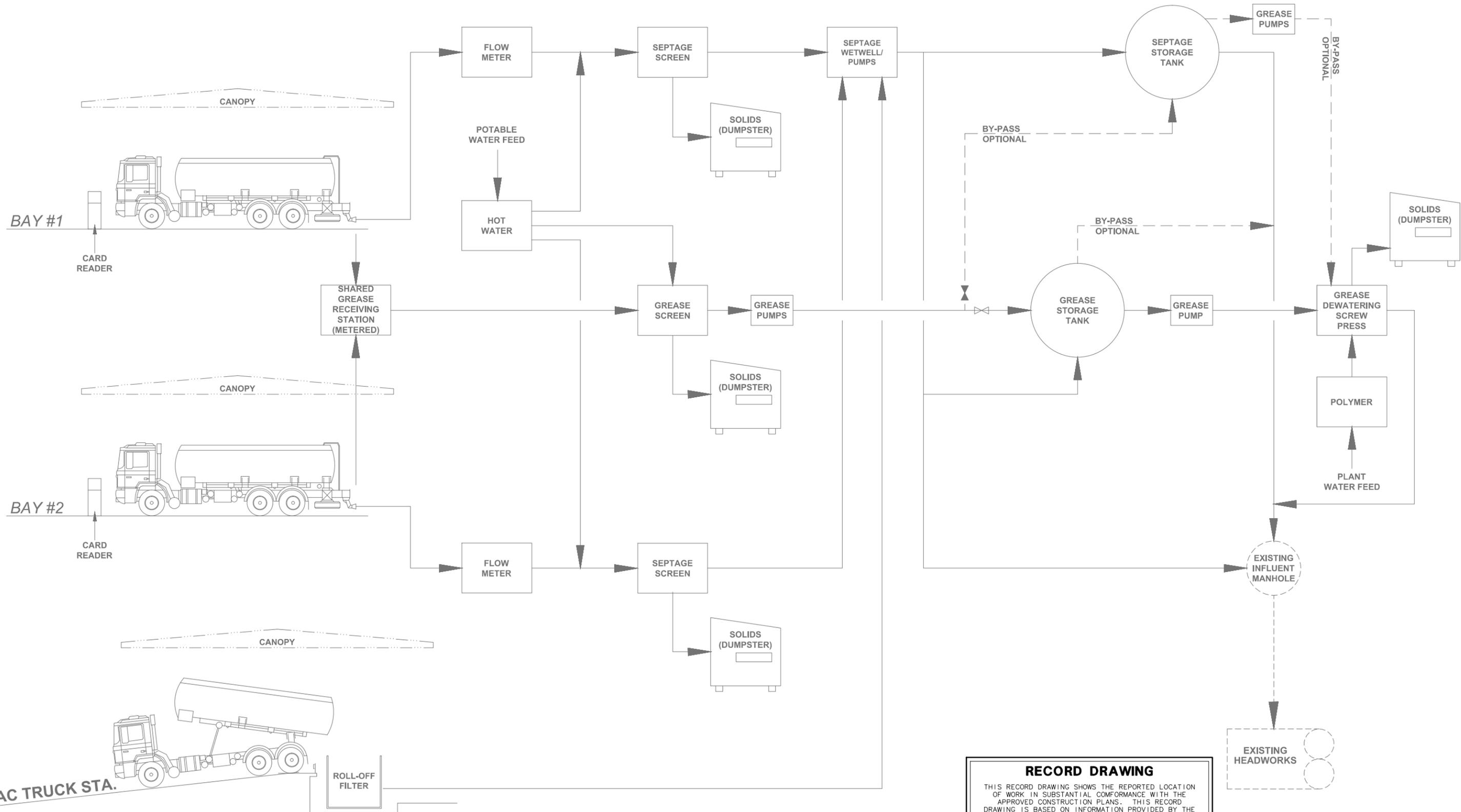
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DRAWN ALS
O.C.
APPROVED
DAVID A. O'CONNOR, PE DATE
LIC. NO.: 56803

RECORD DRAWINGS
EROSION CONTROL
DETAILS AND NOTES

PROJECT NO:
00193-009-02
DATE:
MARCH 2015
SHEET NO:
G-5



RECORD DRAWING

THIS RECORD DRAWING SHOWS THE REPORTED LOCATION OF WORK, IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS. THIS RECORD DRAWING IS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR AND SURVEYOR. CARDNO CANNOT AND DOES NOT WARRANTY ITS ACCURACY.

NO.	DESCRIPTION	BY	DATE
	RECORD DRAWING	RFN	12/2017

**SEWRF
SEPTAGE/ GREASE
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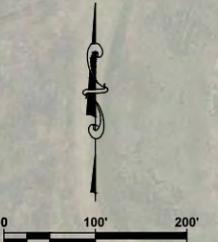
DAVID A. O'CONNOR, PE DATE
LIC. NO.: 56803

DESIGNED	DOC
DRAWN	ALS
Q.C.	
APPROVED	

**RECORD DRAWINGS
PROCESS SCHEMATIC**

PROJECT NO:	00193-009-02
DATE:	MARCH 2015
SHEET NO:	G-6

FILE: J:\00193\00193009\02\ACAD\Record Drawings\CAD\Sheets\PROCESS SCHEMATIC-ASB.dwg LAST SAVED: Fri, 12/08/17-9:25a PLOTTED: Fri, 12/08/17-11:48a BY: Frank.Notte



NOTE:
2012 AERIAL PHOTOGRAPHY SHOWN

RECORD DRAWING
THIS RECORD DRAWING SHOWS THE REPORTED LOCATION OF WORK IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS. THIS RECORD DRAWING IS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR AND SURVEYOR. CARDNO CANNOT AND DOES NOT WARRANT ITS ACCURACY.

NO.	DESCRIPTION	BY	DATE
	RECORD DRAWING	RFN	12/2017

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SEPTAGE/ GREASE
RECEIVING STATION**

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UTILITIES DEPARTMENT
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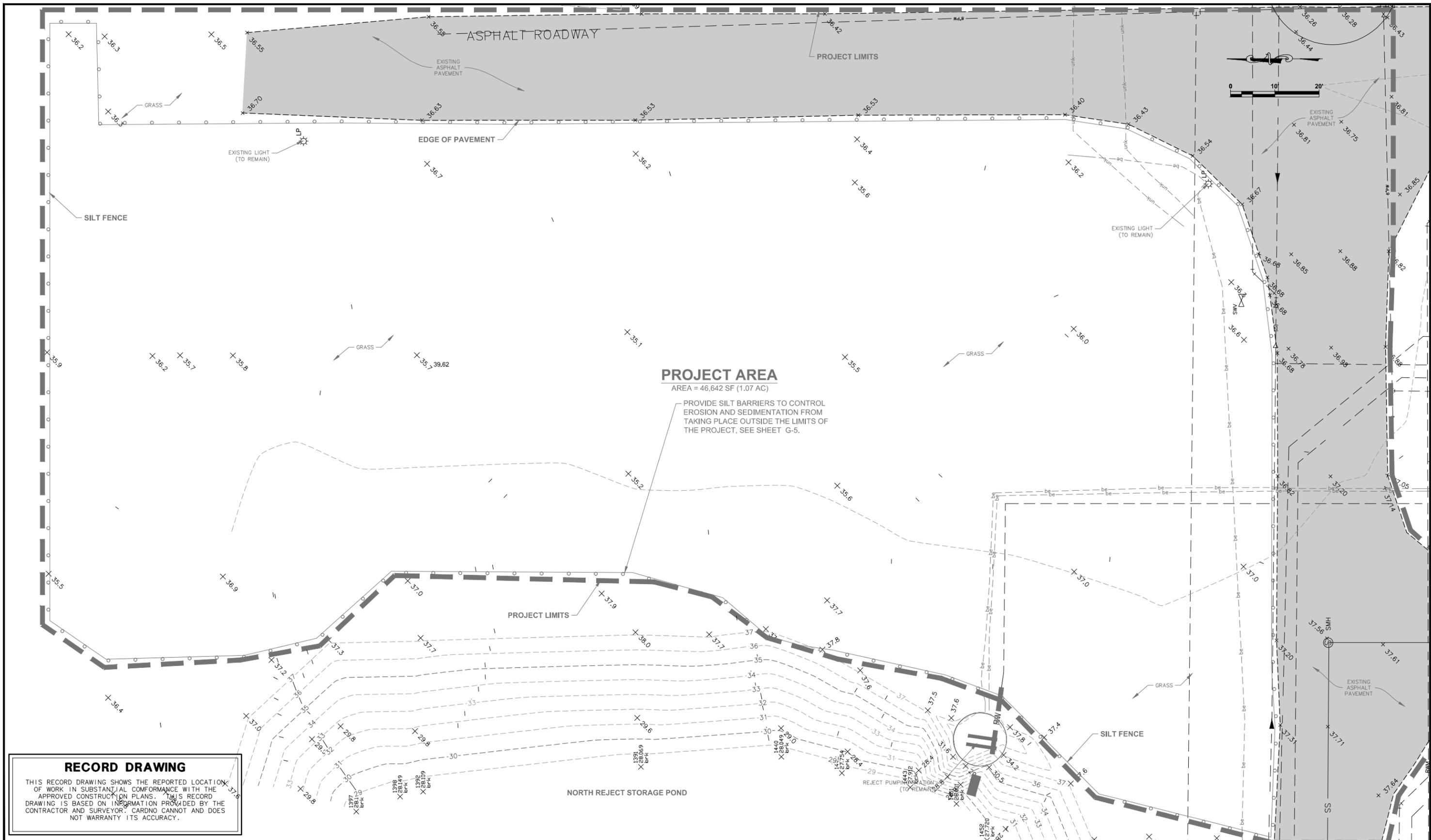
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DESIGNED _____ DATE _____
DRAWN _____
Q.C. _____
APPROVED _____
DAVID A. O'CONNOR, PE
LIC. NO.: 56803

DESIGNED DOC
DRAWN ALS
Q.C.
APPROVED

**RECORD DRAWINGS
OVERALL PROJECT AREA**

PROJECT NO:
00193-009-02
DATE:
MARCH 2015
SHEET NO:
G-7



RECORD DRAWING

THIS RECORD DRAWING SHOWS THE REPORTED LOCATION OF WORK IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS. THIS RECORD DRAWING IS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR AND SURVEYOR. CARDNO CANNOT AND DOES NOT WARRANT ITS ACCURACY.

NO.	DESCRIPTION	BY	DATE
	RECORD DRAWING	RFN	12/2017

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 RECEIVING STATION**

MANATEE COUNTY
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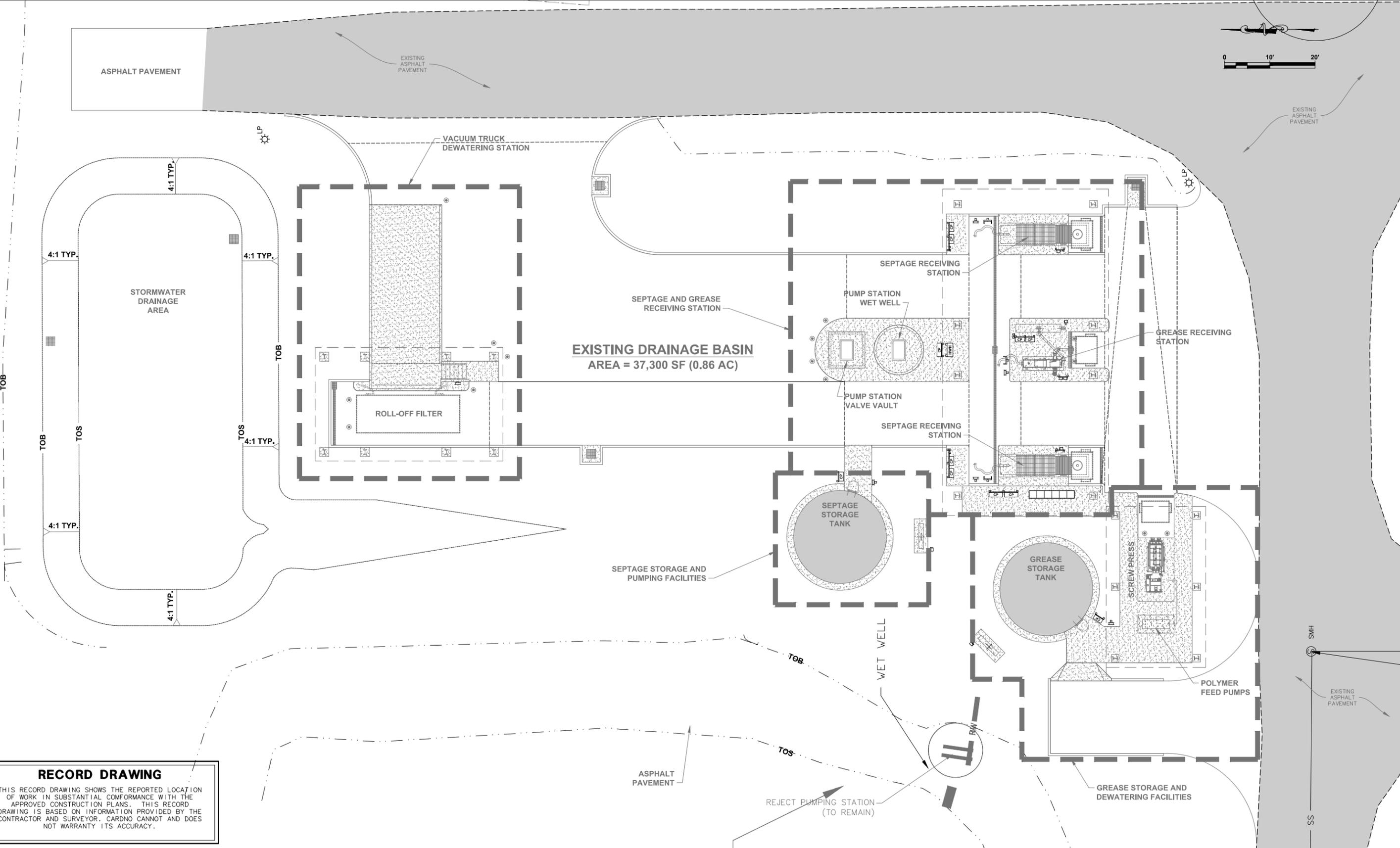
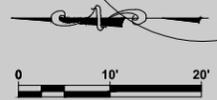
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DAVID A. O'CONNOR, PE
 LIC. NO.: 56803

DESIGNED DOC
 DRAWN ALS
 Q.C.
 APPROVED

**RECORD DRAWINGS
 EXISTING SITE AND EROSION
 CONTROL PLAN**

PROJECT NO:
 00193-009-02
 DATE:
 MARCH 2015
 SHEET NO:
C-1



RECORD DRAWING
 THIS RECORD DRAWING SHOWS THE REPORTED LOCATION OF WORK IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS. THIS RECORD DRAWING IS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR AND SURVEYOR. CARDNO CANNOT AND DOES NOT WARRANTY ITS ACCURACY.

NO.	DESCRIPTION	BY	DATE
	RECORD DRAWING	RFN	12/2017

**SEWRF
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 RECEIVING STATION**

MANATEE COUNTY
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 UTILITIES DEPARTMENT
 4410 66th Street West Bradenton, Florida 34210
 (941) 792-8811

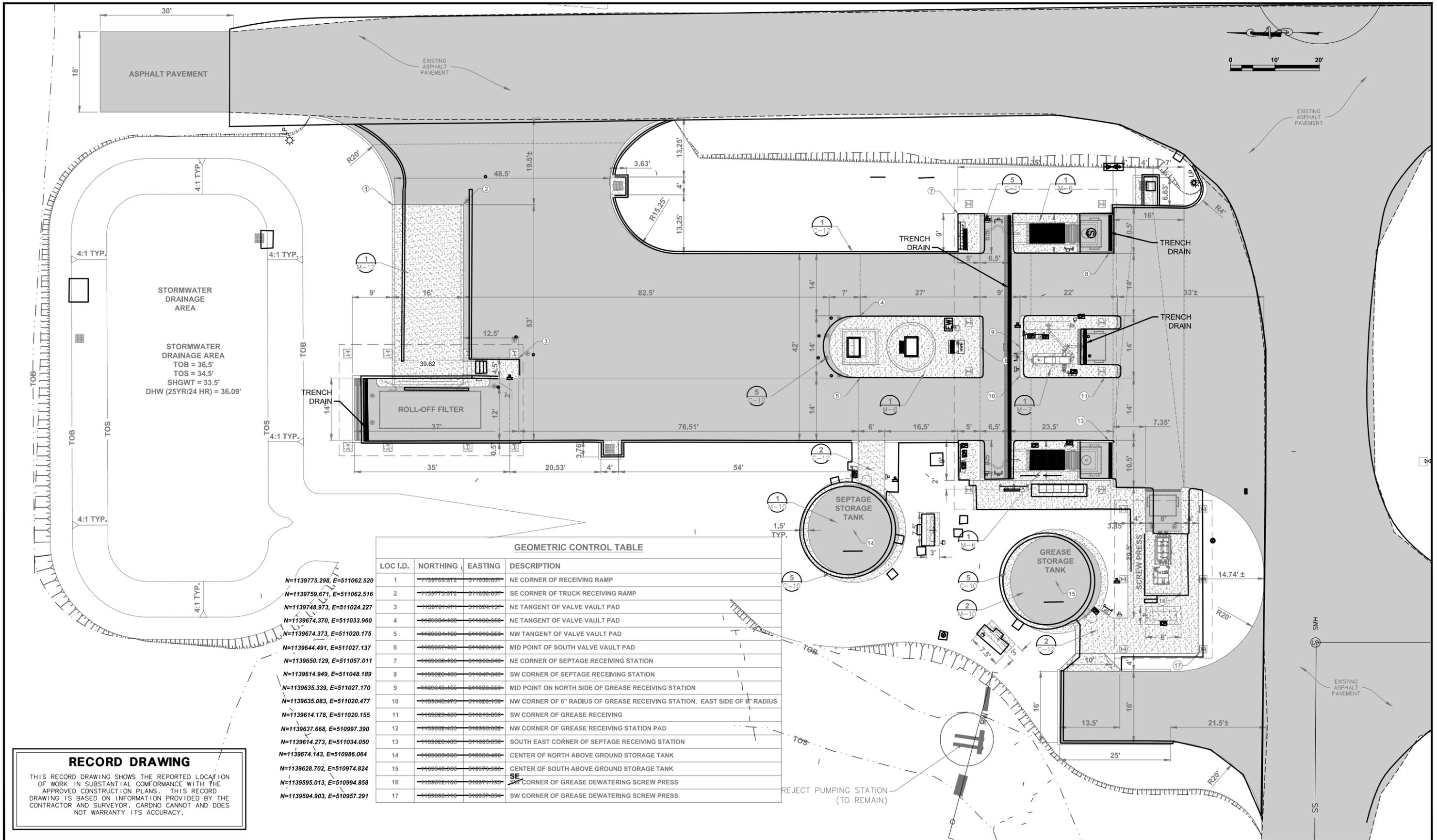
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DAVID A. O'CONNOR, PE DATE
 LIC. NO.: 56803

DESIGNED DOC
 DRAWN ALS
 Q.C.
 APPROVED

**RECORD DRAWINGS
 SITE LAYOUT AND FACILITIES PAY
 ITEMS PLAN**

PROJECT NO:
 00193-009-02
 DATE:
 MARCH 2015
 SHEET NO:
C-2



- N=1139775.298, E=511062.520
- N=1139759.671, E=511062.516
- N=1139748.973, E=511024.227
- N=1139674.370, E=511033.960
- N=1139674.373, E=511020.175
- N=1139644.491, E=511027.137
- N=1139650.129, E=511057.011
- N=1139614.949, E=511048.189
- N=1139635.339, E=511027.170
- N=1139635.083, E=511020.477
- N=1139614.178, E=511020.155
- N=1139637.668, E=510997.390
- N=1139614.273, E=511034.050
- N=1139674.143, E=510986.064
- N=1139628.702, E=510974.824
- N=1139595.013, E=510994.858
- N=1139594.903, E=510957.291

GEOMETRIC CONTROL TABLE

LOC I.D.	NORTHING	EASTING	DESCRIPTION
1	1139759.671	511062.516	NE CORNER OF RECEIVING RAMP
2	1139748.973	511024.227	SE CORNER OF TRUCK RECEIVING RAMP
3	1139674.370	511033.960	NE TANGENT OF VALVE VAULT PAD
4	1139674.373	511020.175	NW TANGENT OF VALVE VAULT PAD
5	1139644.491	511027.137	MID POINT OF SOUTH VALVE VAULT PAD
6	1139650.129	511057.011	NE CORNER OF SEPTAGE RECEIVING STATION
7	1139614.949	511048.189	SW CORNER OF SEPTAGE RECEIVING STATION
8	1139635.339	511027.170	MID POINT ON NORTH SIDE OF GREASE RECEIVING STATION
9	1139635.083	511020.477	NW CORNER OF 6" RADIUS OF GREASE RECEIVING STATION. EAST SIDE OF 6" RADIUS
10	1139614.178	511020.155	SW CORNER OF GREASE RECEIVING
11	1139637.668	510997.390	NW CORNER OF GREASE RECEIVING STATION PAD
12	1139614.273	511034.050	SOUTH EAST CORNER OF SEPTAGE RECEIVING STATION
13	1139674.143	510986.064	CENTER OF NORTH ABOVE GROUND STORAGE TANK
14	1139628.702	510974.824	CENTER OF SOUTH ABOVE GROUND STORAGE TANK
15	1139595.013	510994.858	SE CORNER OF GREASE DEWATERING SCREW PRESS
16	1139594.903	510957.291	SW CORNER OF GREASE DEWATERING SCREW PRESS
17			

RECORD DRAWING
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NO.	DESCRIPTION	BY	DATE
	RECORD DRAWING	RFN	12/2017
	REVISED LABELS	DES	06/2015

**SEWRF
 SEPTAGE/ GREASE
 RECEIVING STATION**

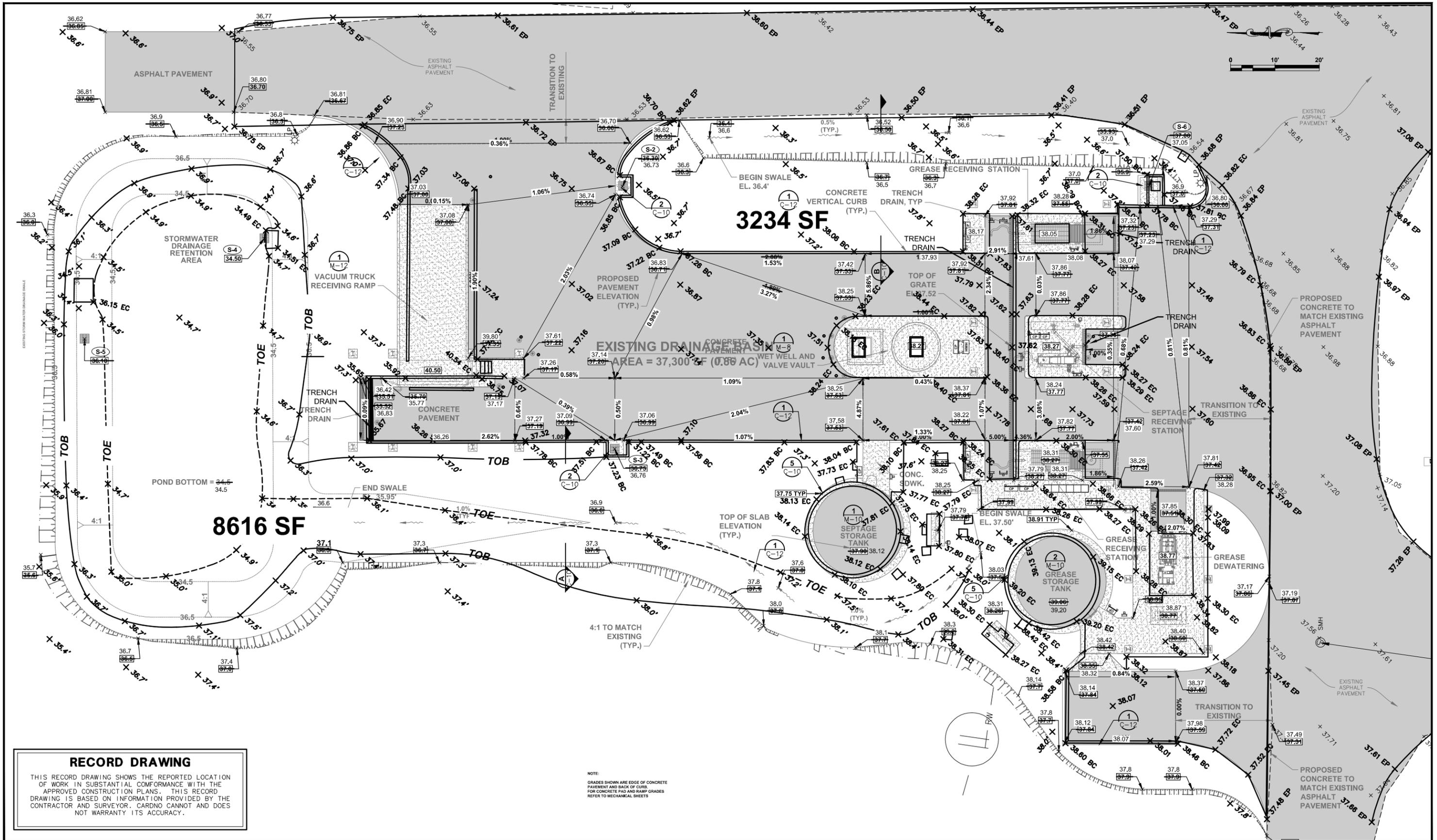
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 DRAWN ALS
 Q.C.
 APPROVED
 DAVID A. O'CONNOR, PE DATE
 LIC. NO.: 56803

**RECORD DRAWINGS
 PROPOSED SITE PLAN**

PROJECT NO:
 00193-009-02
 DATE:
 MARCH 2015
 SHEET NO:
C-3



RECORD DRAWING
 THIS RECORD DRAWING SHOWS THE REPORTED LOCATION OF WORK IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS. THIS RECORD DRAWING IS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR AND SURVEYOR. CARDNO CANNOT AND DOES NOT WARRANT ITS ACCURACY.

NOTE:
 GRADES SHOWN ARE EDGE OF CONCRETE PAVEMENT AND BACK OF CURB. FOR CONCRETE PAD AND RAMP GRADES REFER TO MECHANICAL SHEETS.

NO.	DESCRIPTION	BY	DATE
	RECORD DRAWING	RFN	12/2017
	REVISED GRADING	DES	06/2015

**SEWRF
 SEPTAGE/ GREASE
 RECEIVING STATION**

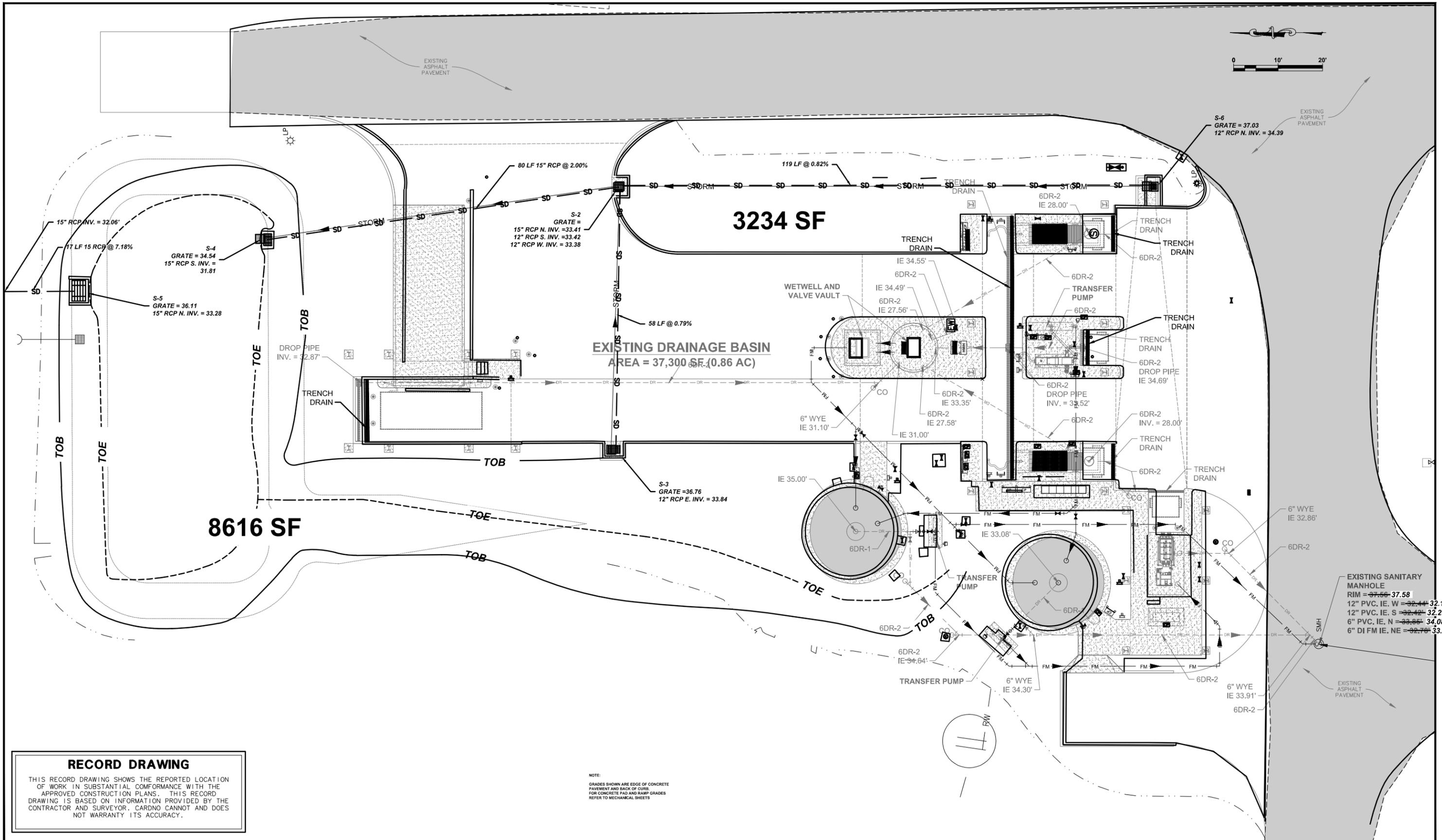
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 DRAWN ALS
 Q.C.
 DATE
 APPROVED

**RECORD DRAWINGS
 PAVING AND GRADING PLAN**

PROJECT NO:
 00193-009-02
 DATE:
 MARCH 2015
 SHEET NO:
C-4



RECORD DRAWING

THIS RECORD DRAWING SHOWS THE REPORTED LOCATION OF WORK IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS. THIS RECORD DRAWING IS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR AND SURVEYOR. CARDNO CANNOT AND DOES NOT WARRANT ITS ACCURACY.

NO.	DESCRIPTION	BY	DATE
	RECORD DRAWING	RFN	12/2017
	REVISED DRAIN PIPING	DES	06/2015

**SEWRP
SEPTAGE/ GREASE
RECEIVING STATION**



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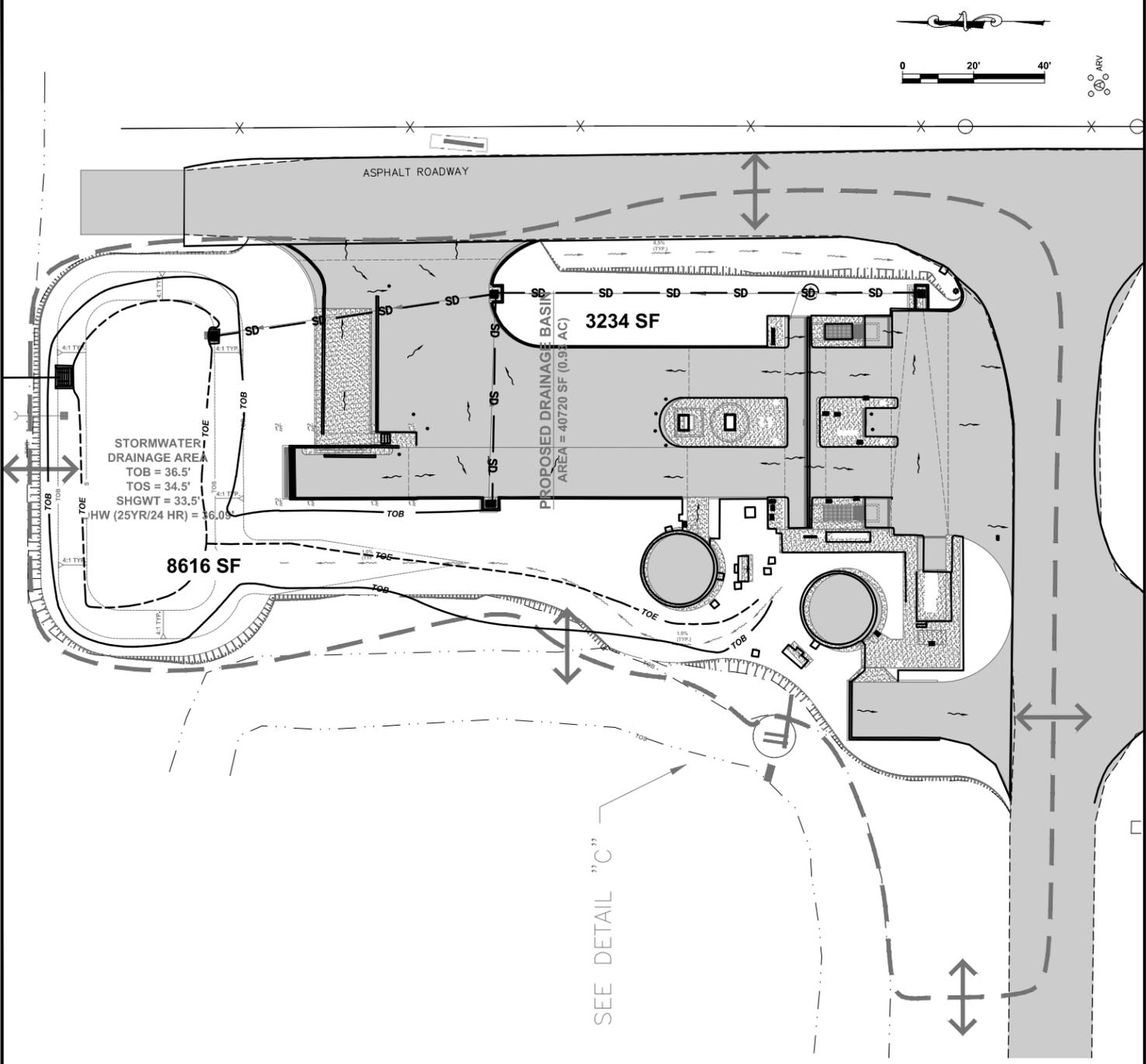
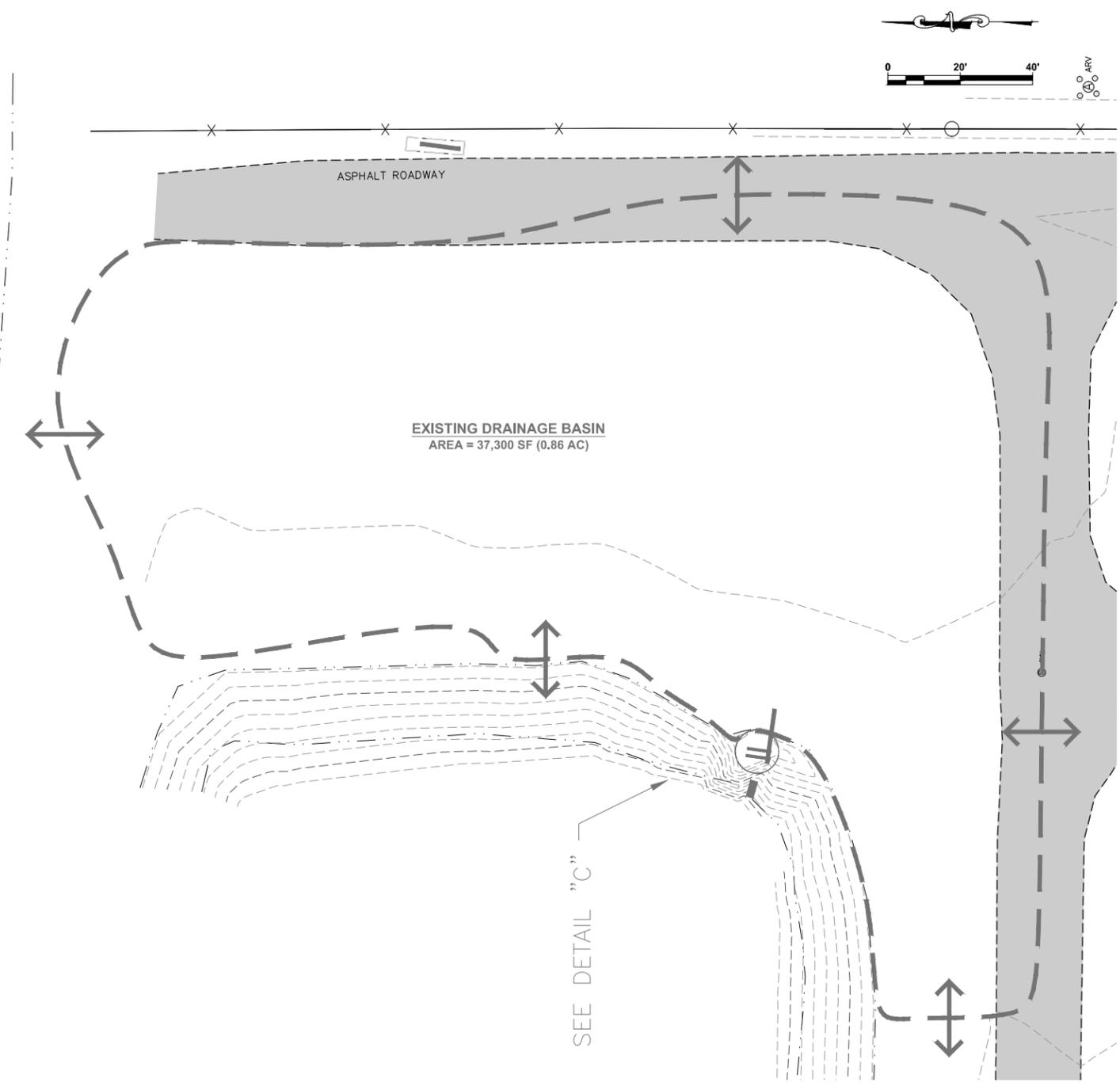
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LIC. NO.: 56803

DESIGNED	DOC
DRAWN	ALS
Q.C.	
APPROVED	

**RECORD DRAWINGS
PLANT DRAIN PIPING PLAN**

PROJECT NO:	00193-009-02
DATE:	MARCH 2015
SHEET NO:	C-5



RECORD DRAWING

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NO.	DESCRIPTION	BY	DATE
	RECORD DRAWING	RFN	12/2017

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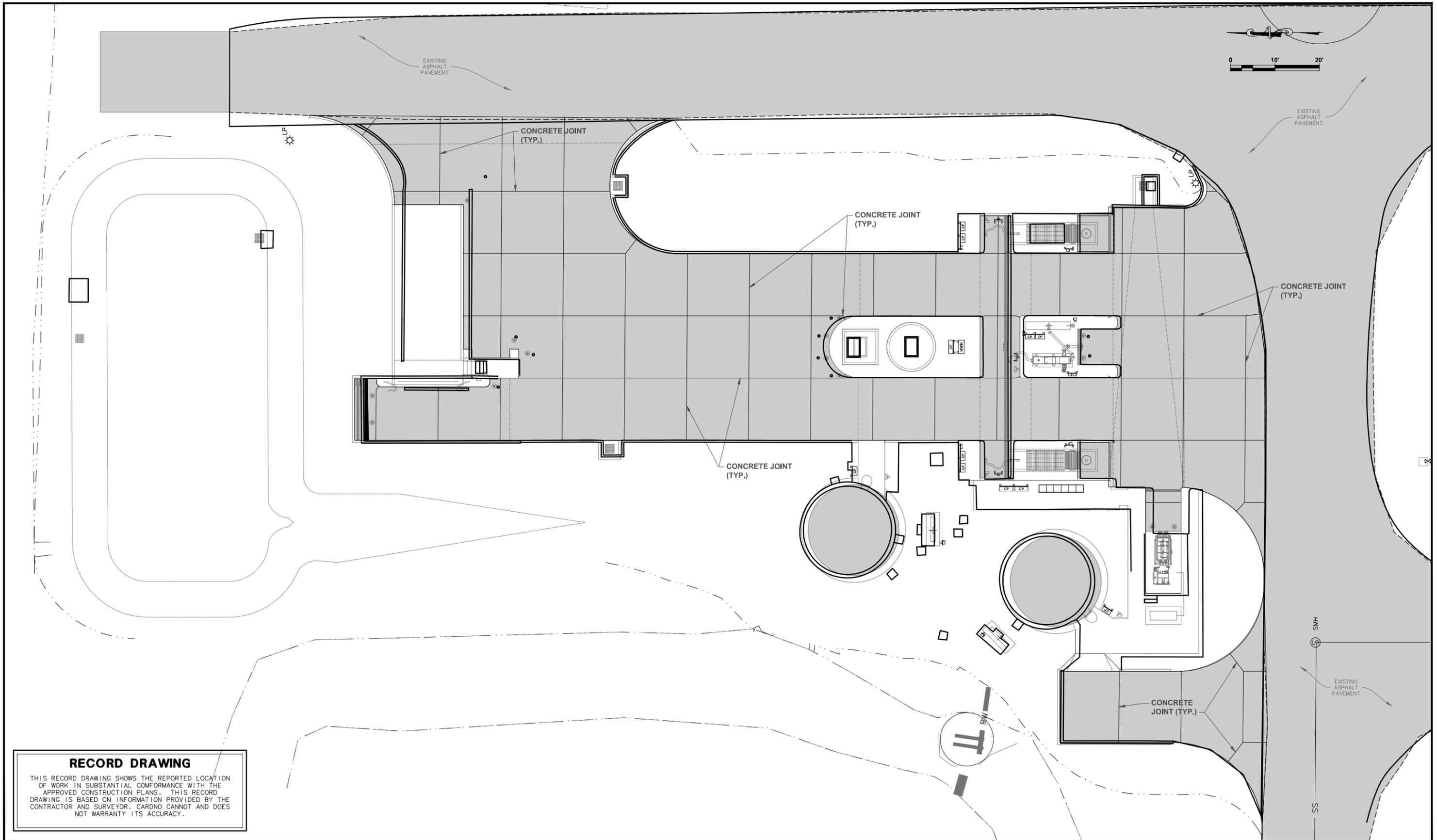
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LIC. NO.: 56803

DESIGNED	DOC
DRAWN	ALS
Q.C.	
APPROVED	

**RECORD DRAWINGS
SITE DRAINAGE BASINS**

PROJECT NO:
00193-009-02
DATE:
MARCH 2015
SHEET NO:
C-6



RECORD DRAWING
 THIS RECORD DRAWING SHOWS THE REPORTED LOCATION OF WORK IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS. THIS RECORD DRAWING IS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR AND SURVEYOR. CARDNO CANNOT AND DOES NOT WARRANT ITS ACCURACY.

NO.	DESCRIPTION	BY	DATE
	RECORD DRAWING	RFN	12/2017

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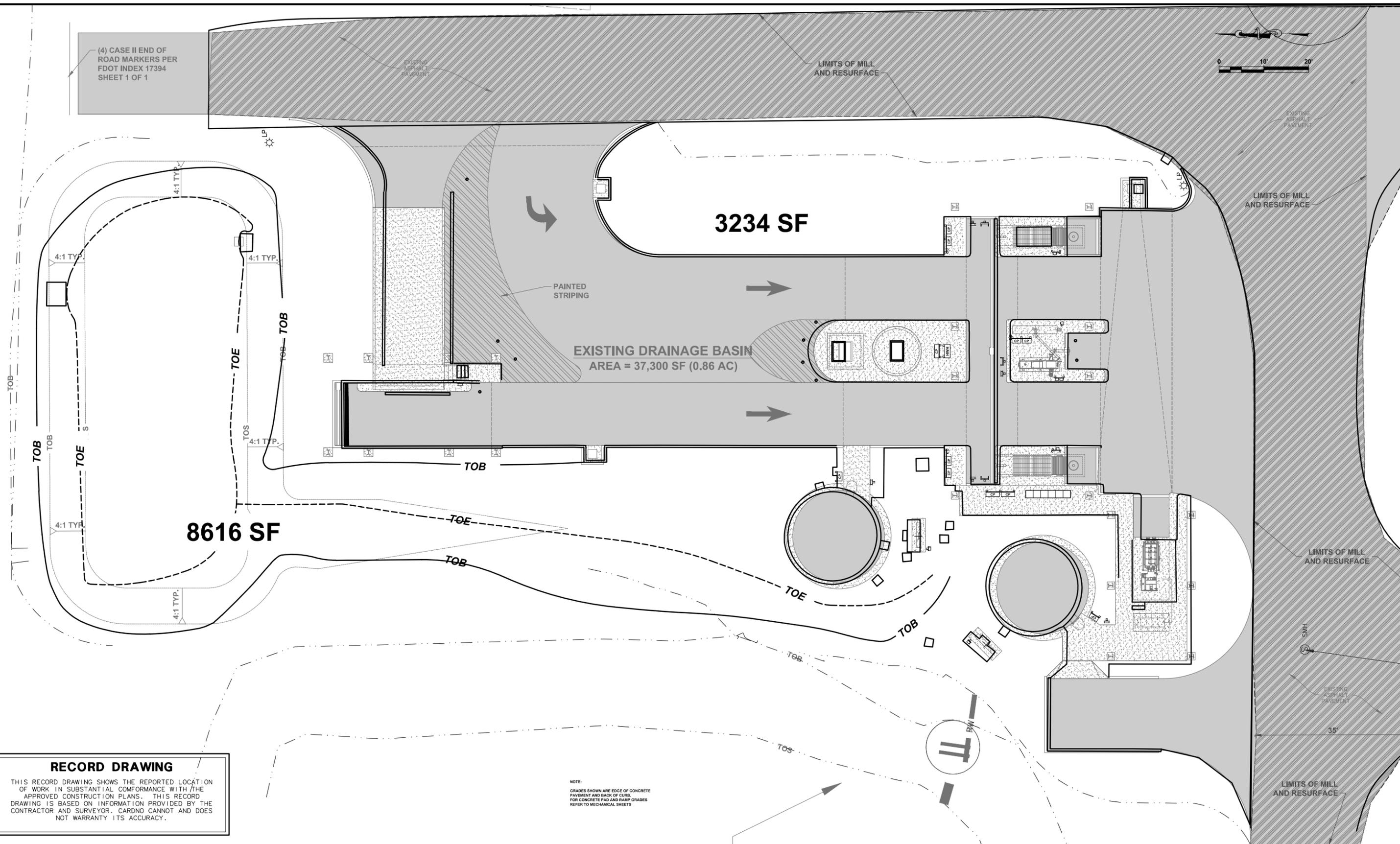
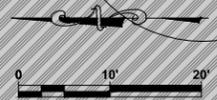
DAVID A. O'CONNOR, PE DATE
 LIC. NO.: 56803

DESIGNED DOC
 DRAWN ALS
 Q.C.
 APPROVED

**RECORD DRAWINGS
 CONCRETE CONSTRUCTION JOINT
 PLAN**

PROJECT NO:
 00193-009-02
 DATE:
 MARCH 2015
 SHEET NO:
C-7

(4) CASE II END OF ROAD MARKERS PER FDOT INDEX 17394 SHEET 1 OF 1



RECORD DRAWING
 THIS RECORD DRAWING SHOWS THE REPORTED LOCATION OF WORK IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS. THIS RECORD DRAWING IS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR AND SURVEYOR. CARDNO CANNOT AND DOES NOT WARRANT ITS ACCURACY.

NOTE:
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 FOR CONCRETE PAD AND RAMP GRADES REFER TO MECHANICAL SHEETS

NO.	DESCRIPTION	BY	DATE
	RECORD DRAWING	RFN	12/2017

**SEWRF
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 RECEIVING STATION**

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 4410 66th Street West Bradenton, Florida 34210
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DAVID A. O'CONNOR, PE DATE
 LIC. NO.: 56803

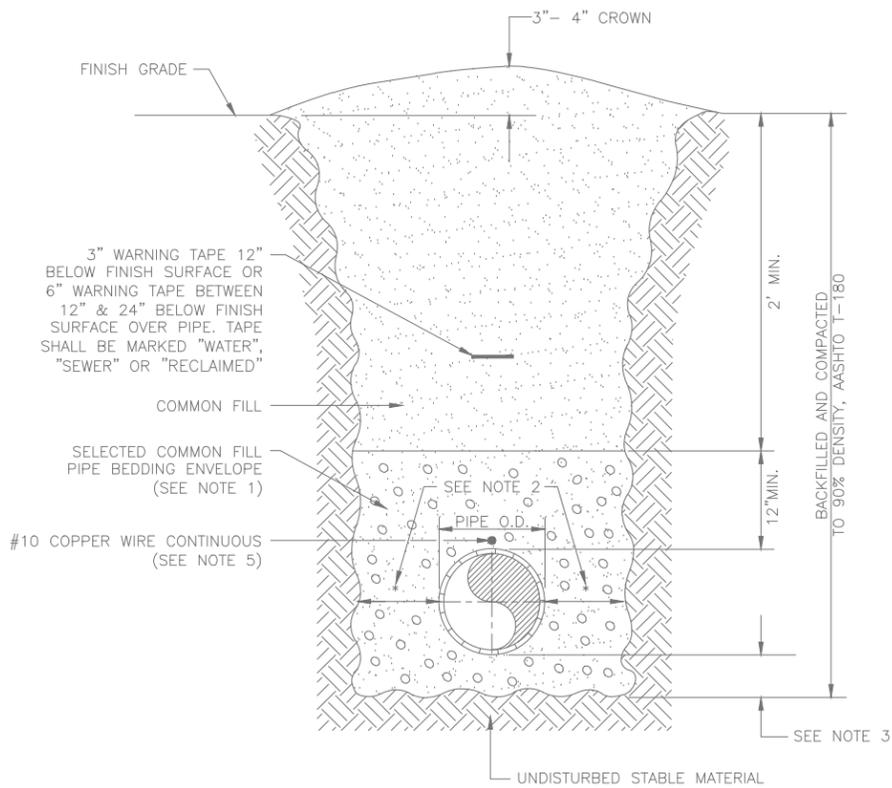
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**RECORD DRAWINGS
 PAVMENT REPLACEMENT,
 MARKINGS AND SIGNAGE PLAN**

PROJECT NO:
 00193-009-02
 DATE:
 MARCH 2015
 SHEET NO:
C-8

NOTES:

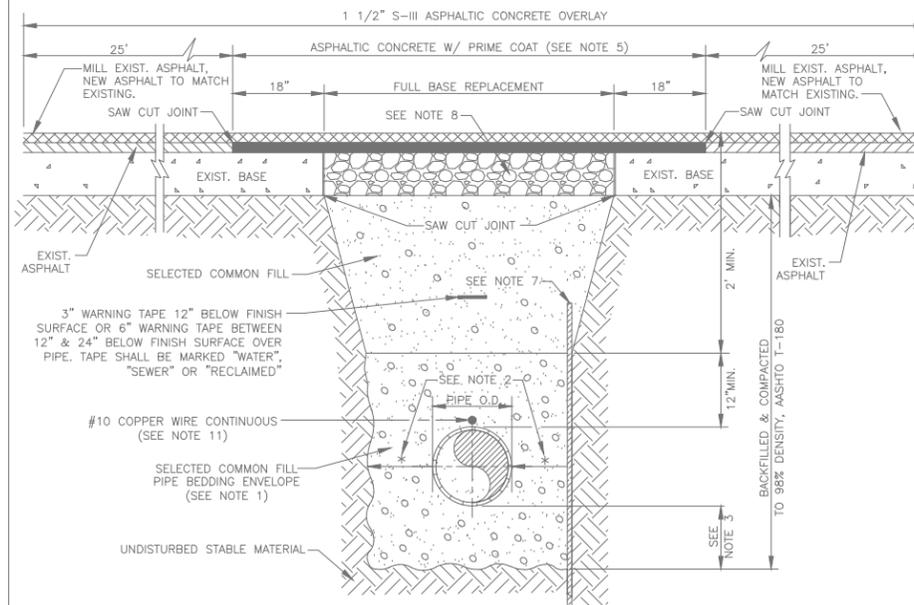
1. USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. PROVIDE ADEQUATE CLEARANCE TO PLACE AND COMPACT STAGE 1 BEDDING MATERIAL IN TRENCH AREA BELOW PIPE SPRINGLINE. PIPE EMBEDMENT MUST BE COMPACTED OUT TO THE TRENCH WALL OR 2.5 TIMES THE PIPE OD, WHICHEVER IS LESS.
3. TYPICALLY 4" TO 6".
4. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
5. TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.



MANATEE COUNTY PUBLIC WORKS DEPARTMENT		TRENCH WITH UNIMPROVED SURFACE TYPE A-1 PIPE BEDDING	UG-11
REV. BY	DATE	MAY 10, 2011	PAGE 111
WRT/KE	03/11	DATE OF APPROVAL	

NOTES:

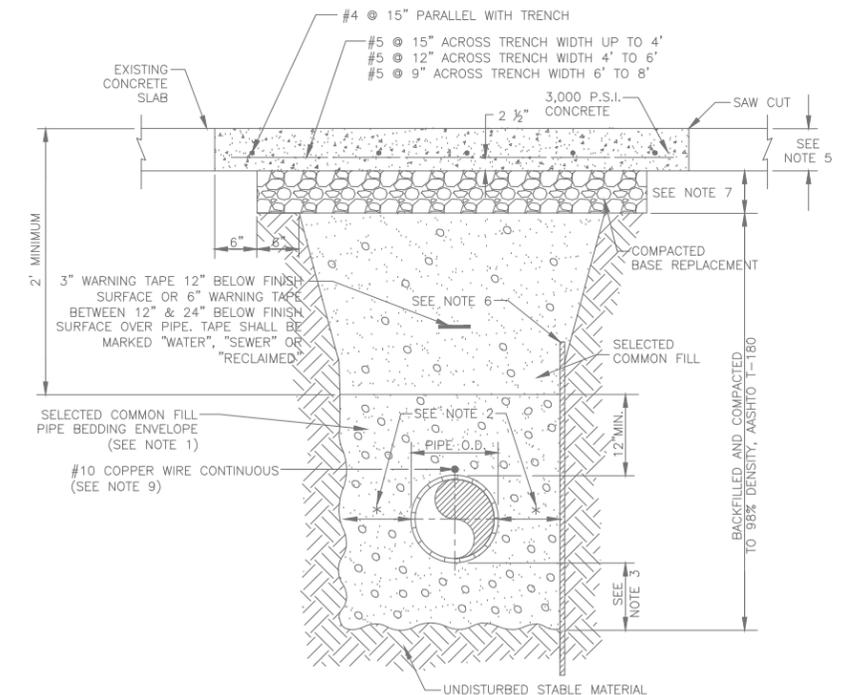
1. USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. PROVIDE ADEQUATE CLEARANCE TO PLACE AND COMPACT STAGE 1 BEDDING MATERIAL IN TRENCH AREA BELOW PIPE SPRINGLINE. PIPE EMBEDMENT MUST BE COMPACTED OUT TO THE TRENCH WALL OR 2.5 TIMES THE PIPE OD, WHICHEVER IS LESS.
3. TYPICALLY 4" TO 6".
4. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
5. ASPHALTIC CONCRETE STRUCTURE COURSE WITH PRIME COAT SHALL BE THE SAME DEPTH AND TYPE AS EXISTING OR A MINIMUM OF 1 1/4 INCH, WHICHEVER IS GREATER.
6. MILL 25' BACK FROM TRENCH SAW CUT. ADJUST MILLING PER INDIVIDUAL SITE TO NOT IMPACT BASE. BUTT JOINT TO EXIST ASPHALT. FINAL OVERLAY LIMITS ARE FROM EDGE OF PAVEMENT TO EDGE OF PAVEMENT. FINAL OVERLAY TO MATCH EXISTING WITH NO DISCERNABLE "BUMP" AT JOINT. MILLING LIMITS THAT IMPACT INTERSECTION SHALL BE ADDRESSED ON A CASE BY CASE BASIS AND APPROVED BY MANATEE COUNTY.
7. SHEETING ORDERED LEFT IN PLACE TO BE CUT OFF 24" BELOW FINISHED GRADE OR 12" BELOW SUBGRADE.
8. BASE SHALL BE 8" MINIMUM THICKNESS CRUSHED CONCRETE.
9. TEMPORARY PATCHES WILL BE INSTALLED TO PROVIDE A SMOOTH ALL WEATHER SURFACE AT ALL TIMES. PERMANENT REPLACEMENT TO BE MADE AS SOON AS POSSIBLE.
10. RESTORE SIGNAGE & MARKING WITH THERMOPLASTIC PER FDOT STANDARDS, LATEST EDITION.
11. TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.
12. NOTES 5, THRU 10, ARE MINIMUM REQUIREMENTS FOR A TRENCH IN A ROAD. REFER TO LATEST EDITION OF MANATEE COUNTY HIGHWAY AND TRAFFIC STANDARDS FOR ADDITIONAL REQUIREMENTS.



MANATEE COUNTY PUBLIC WORKS DEPARTMENT		TRENCH WITH ASPHALT PAVEMENT SURFACE TYPE A-1 PIPE BEDDING	UG-12
REV. BY	DATE	MAY 10, 2011	PAGE 112
WRT/KE	03/11	DATE OF APPROVAL	

NOTES:

1. USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. PROVIDE ADEQUATE CLEARANCE TO PLACE AND COMPACT STAGE 1 BEDDING MATERIAL IN TRENCH AREA BELOW PIPE SPRINGLINE. PIPE EMBEDMENT MUST BE COMPACTED OUT TO THE TRENCH WALL OR 2.5 TIMES THE PIPE OD, WHICHEVER IS LESS.
3. TYPICALLY 4" TO 6".
4. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
5. THICKNESS TO MATCH EXISTING OR BE 8" MINIMUM, WHICHEVER IS GREATER.
6. SHEETING ORDERED LEFT IN PLACE TO BE CUT OFF 24" BELOW FINISHED GRADE OR 12" BELOW SUBGRADE.
7. BASE SHALL BE 8" MINIMUM THICKNESS CRUSHED CONCRETE.
8. TEMPORARY PATCHES WILL BE INSTALLED TO PROVIDE A SMOOTH ALL WEATHER SURFACE AT ALL TIMES. PERMANENT REPLACEMENT TO BE MADE AS SOON AS POSSIBLE.
9. TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.
10. NOTES 5, THRU 8, ARE MINIMUM REQUIREMENTS. REFER TO MANATEE COUNTY HIGHWAY AND TRAFFIC STANDARDS FOR ADDITIONAL REQUIREMENTS.



MANATEE COUNTY PUBLIC WORKS DEPARTMENT		TRENCH WITH CONCRETE PAVEMENT SURFACE TYPE A-1 PIPE BEDDING	UG-13
REV. BY	DATE	MAY 10, 2011	PAGE 113
CLB/BR	11/10	DATE OF APPROVAL	

RECORD DRAWING

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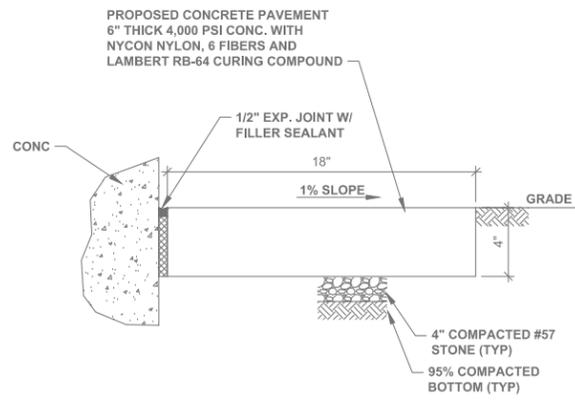
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DAVID A. O'CONNOR, PE DATE
LIC. NO.: 56803

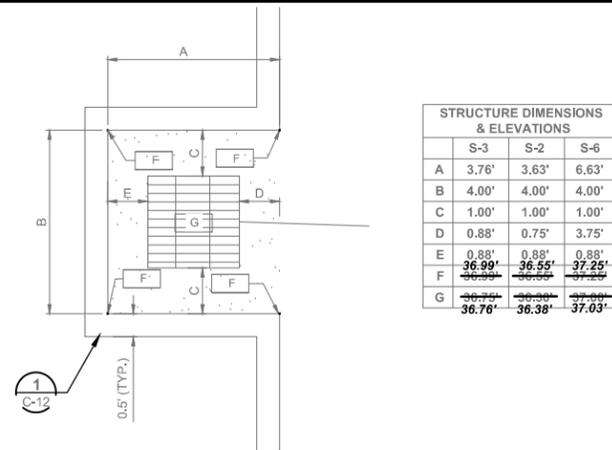
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O.C.
APPROVED

**RECORD DRAWINGS
CIVIL DETAILS (1)**

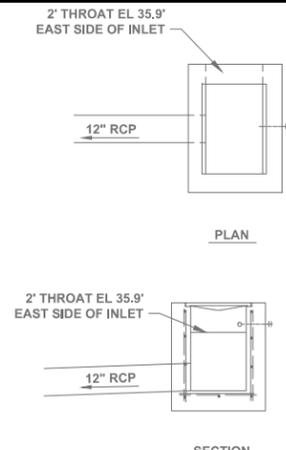
PROJECT NO:
00193-009-02
DATE:
MARCH 2015
SHEET NO:
C-9



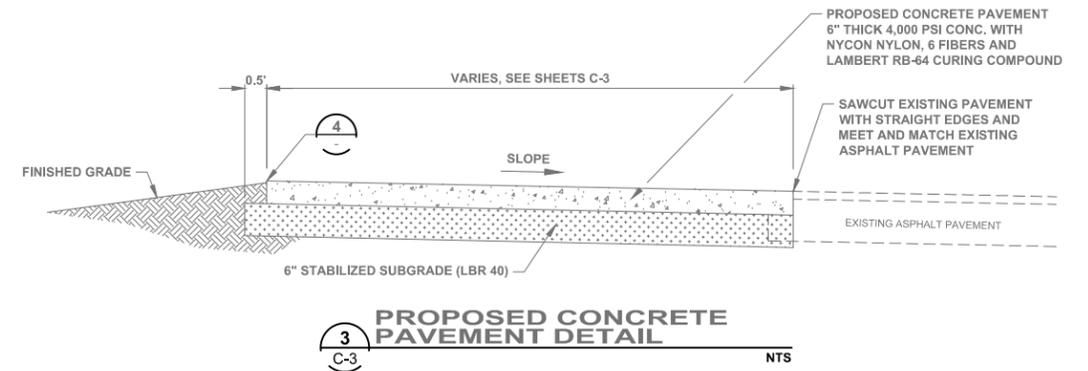
1 LANDSCAPE APRON DETAIL
NTS
C-3



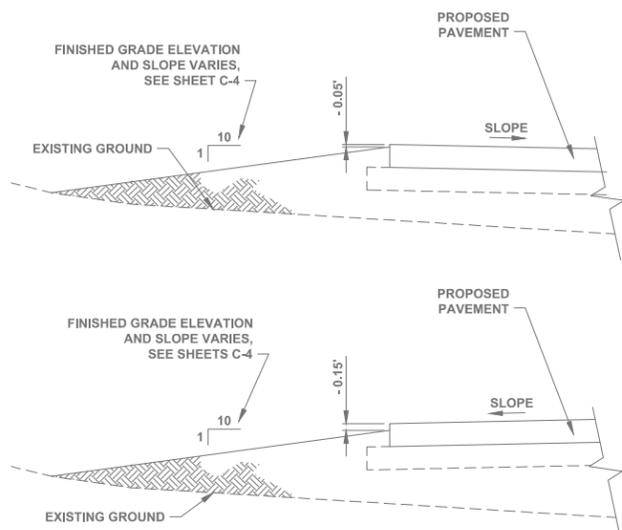
2 DRAINAGE STRUCTURE DETAILS AND ELEVATIONS
NTS
C-12



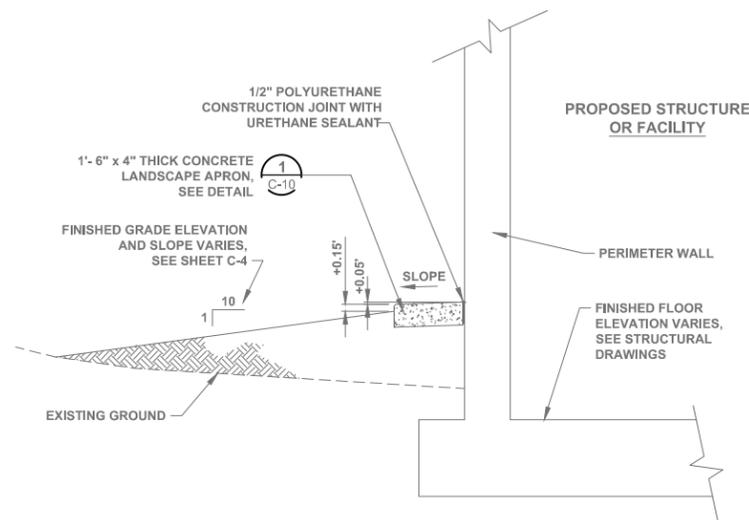
STRUCTURE S-1 MODIFIED
FDOT TYPE C STRUCTURE



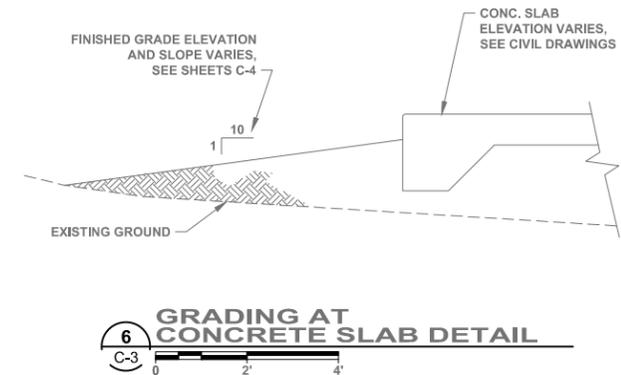
3 PROPOSED CONCRETE PAVEMENT DETAIL
NTS
C-3



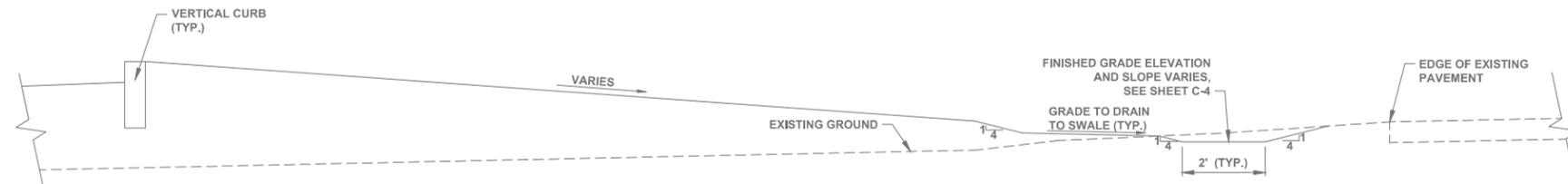
4 GRADING AT PROPOSED CONC. PAVEMENT DETAIL
C-3



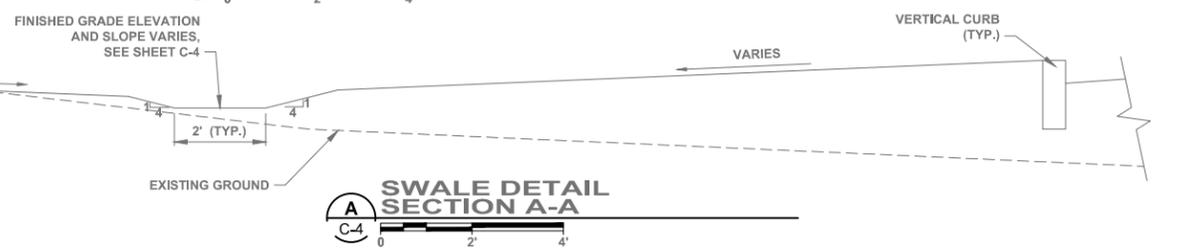
5 GRADING AT STRUCTURES DETAIL
C-3



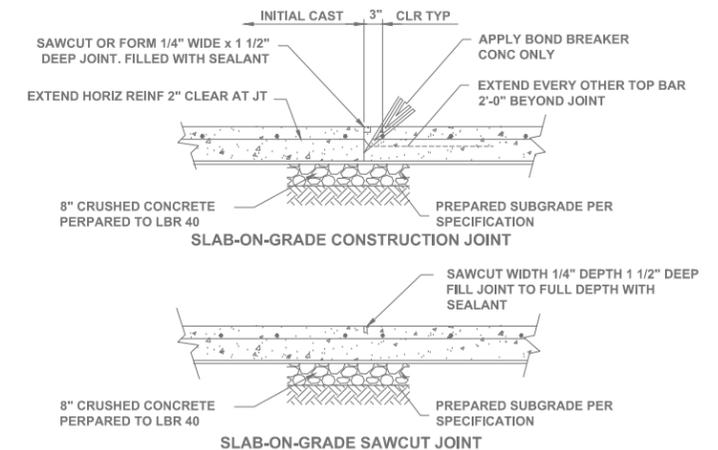
6 GRADING AT CONCRETE SLAB DETAIL
C-3



B SWALE DETAIL SECTION B-B
C-4



A SWALE DETAIL SECTION A-A
C-4



NOTE:
ALLOW 48 HOURS BETWEEN PLACEMENT OF INITIAL CAST AND SUBSEQUENT CASTS.

7 TYPICAL CONCRETE JOINT DETAIL
NTS

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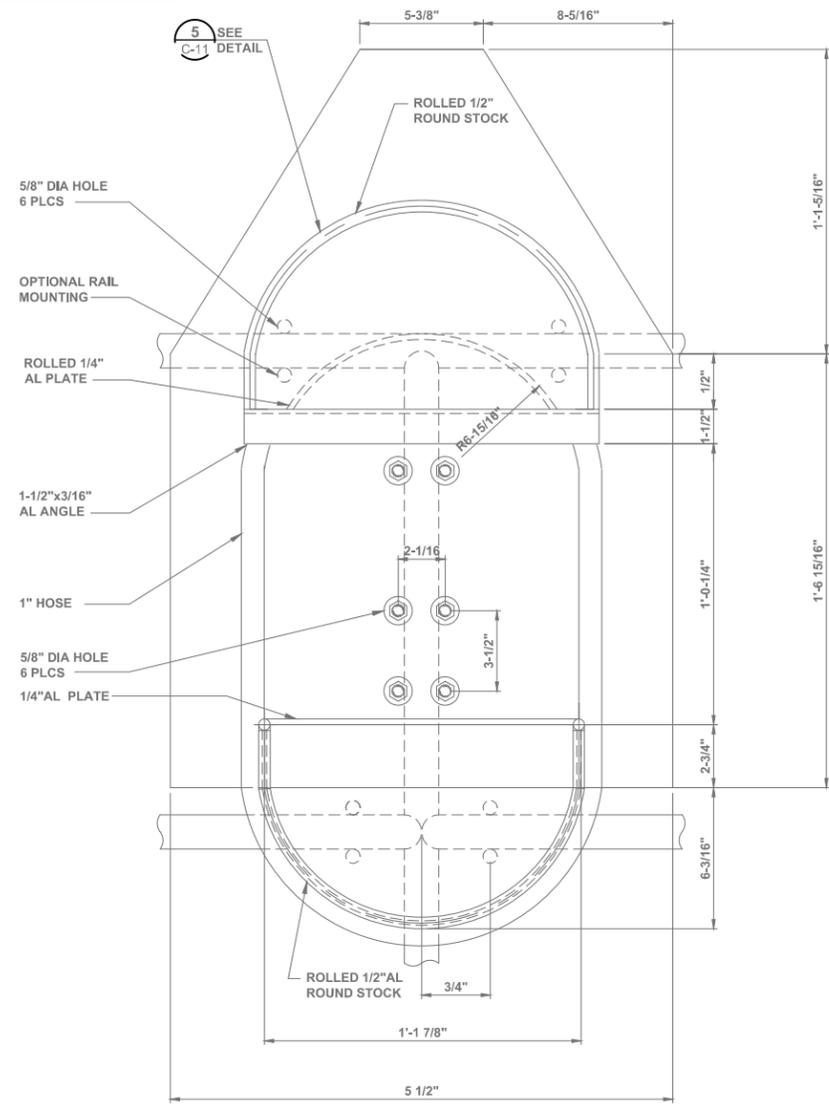
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DAVID A. O'CONNOR, PE
LIC. NO.: 56803

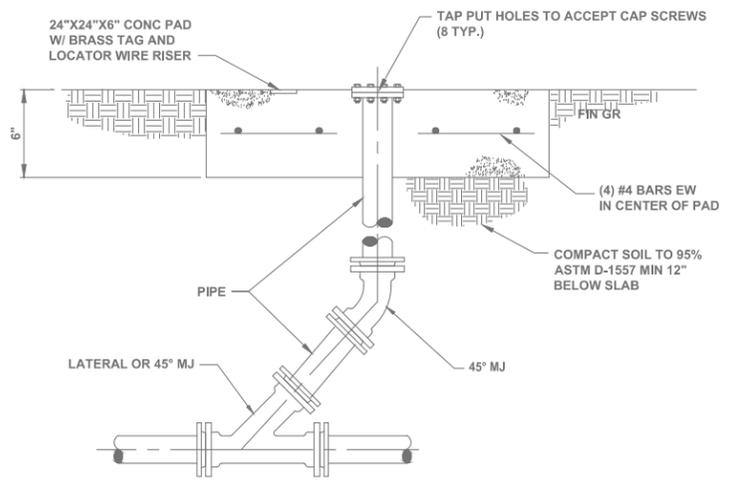
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**RECORD DRAWINGS
CIVIL DETAILS (2)**

PROJECT NO:
00193-009-02
DATE:
MARCH 2015
SHEET NO:
C-10

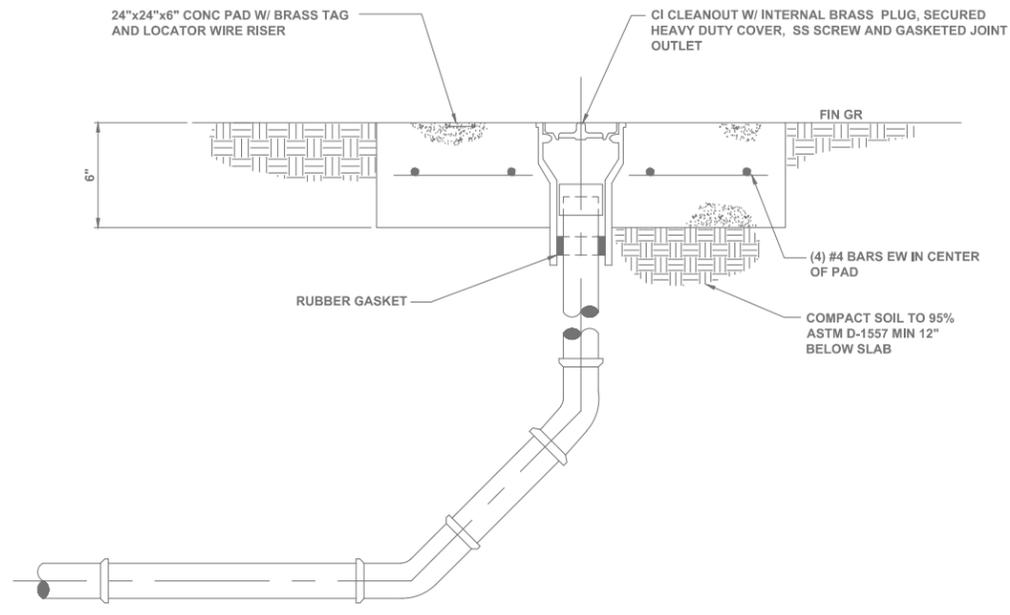


1 TYPICAL PSW RAIL MOUNTED RACK DETAIL
NTS

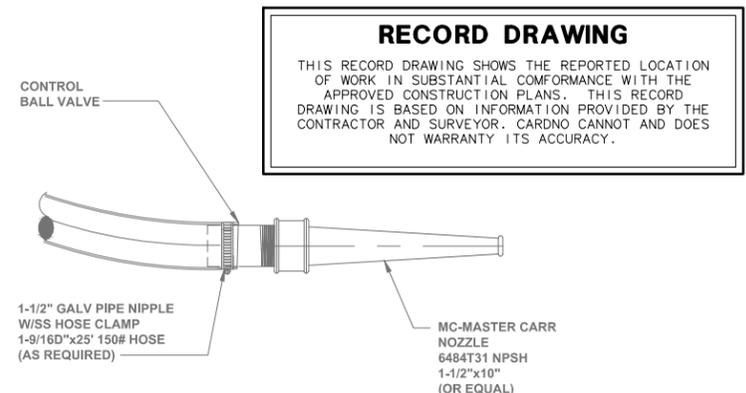


NOTES:
 1. PROVIDE PIPE RESTRAINTS AS NEEDED.
 2. TOP FLANGE SHALL BE PAINTED YELLOW. ONE STAINLESS STEEL TAG MEASURING 1 1/2"x3" SHALL BE PERMANENTLY ATTACHED AND SHALL BE ENGRAVED WITH THE FOLLOWING STATEMENT:
 "CAUTION, PRESSURIZED CLEAN OUT, GRANGER NO. 2CEA8 OR EQUAL"

2 PRESSURIZED CLEANOUT DETAIL
NTS

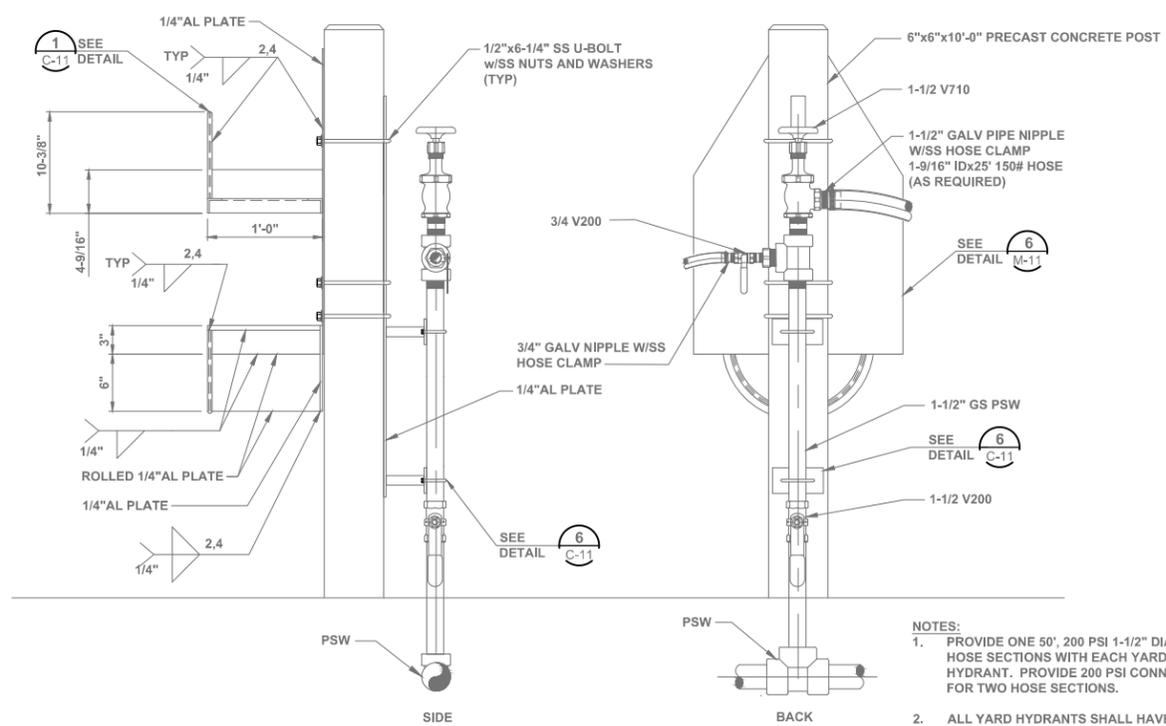


3 GRAVITY CLEANOUT DETAIL
NTS



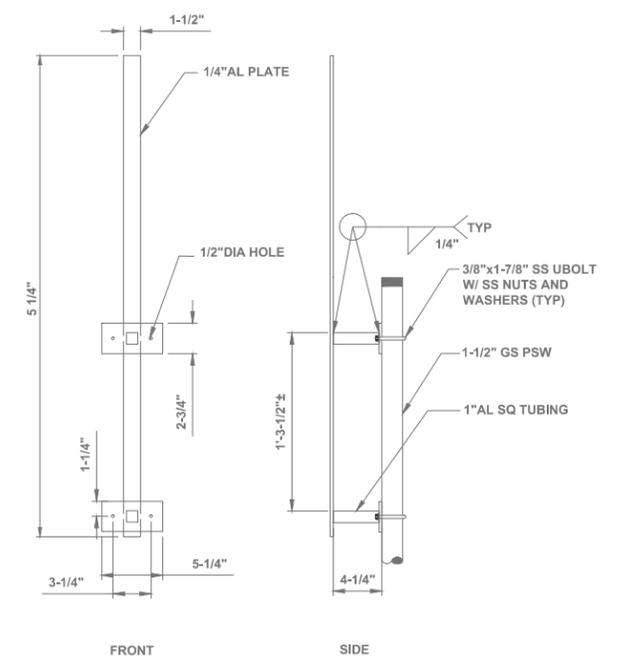
RECORD DRAWING
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4 TYPICAL NOZZLE DETAIL
NTS



NOTES:
 1. PROVIDE ONE 50', 200 PSI 1-1/2" DIAMETER HOSE SECTIONS WITH EACH YARD HYDRANT. PROVIDE 200 PSI CONNECTORS FOR TWO HOSE SECTIONS.
 2. ALL YARD HYDRANTS SHALL HAVE WARNING SIGN STATING "NON-POTABLE WATER - DO NOT DRINK".
 3.

5 TYPICAL YARD HYDRANT AND RACK DETAIL
NTS



6 TYPICAL YARD HYDRANT BRACKET MOUNTING DETAIL
NTS

NO.	DESCRIPTION	BY	DATE
	RECORD DRAWING	RFN	12/2017

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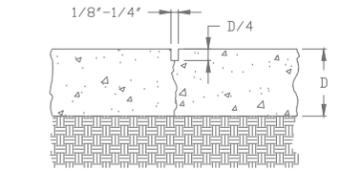
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DAVID A. O'CONNOR, PE
 LIC. NO.: 56803

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**RECORD DRAWINGS
CIVIL DETAILS (3)**

PROJECT NO:	00193-009-02
DATE:	MARCH 2015
SHEET NO:	C-11



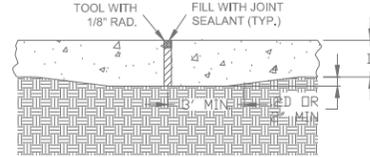
TYPE 'A' UNDOWELED CONTRACTION (CONTROL) JOINT
NTS

UNDOWELED TRANSVERSE CONTRACTION OR LONGITUDINAL JOINT, SAWED OR PRE-MOLDED. DO NOT DOWEL PAVEMENTS LESS THAN 7" THICK



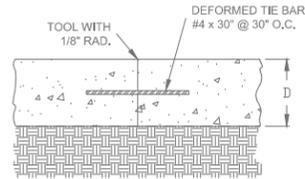
TYPE 'C' CONSTRUCTION JOINT
NTS

LONGITUDINAL KEYWAY CONSTRUCTION JOINT FOR PAVEMENT 6 INCHES OR GREATER, TYPE C-1 STRAIGHT BUTT TYPE JOINT USED FOR PAVEMENTS LESS THAN 6 INCHES.



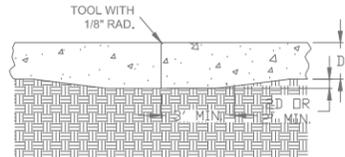
TYPE 'D' BUTT JOINT
NTS

ISOLATION JOINT FOR PAVEMENTS LESS THAN 8" THICK.



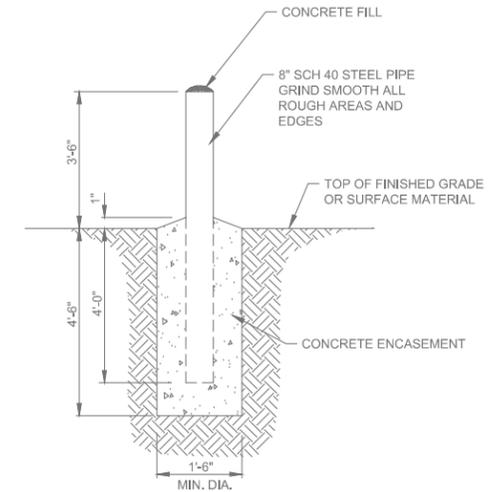
TYPE 'B' TIED JOINT
NTS

TIED LONGITUDINAL CONSTRUCTION OR CONTRACTION JOINT WHERE REQUIRED. NOTE: DO NOT TIE MORE THAN THREE LANES TOGETHER.



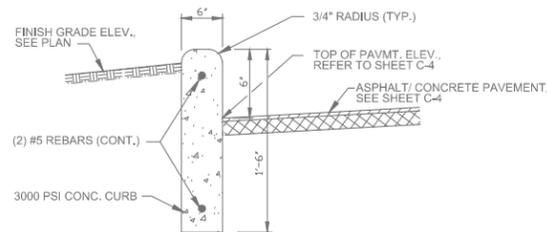
TYPE 'C-1' BUTT JOINT
NTS

IN LIEU OF THICKENING EDGES, OVERALL PAVEMENT THICKNESS MAY BE INCREASED AS FOLLOW: 6 INCHES OR LESS, ADD 0.5 INCH, MORE THAN 6 INCHES, ADD 1 INCH.

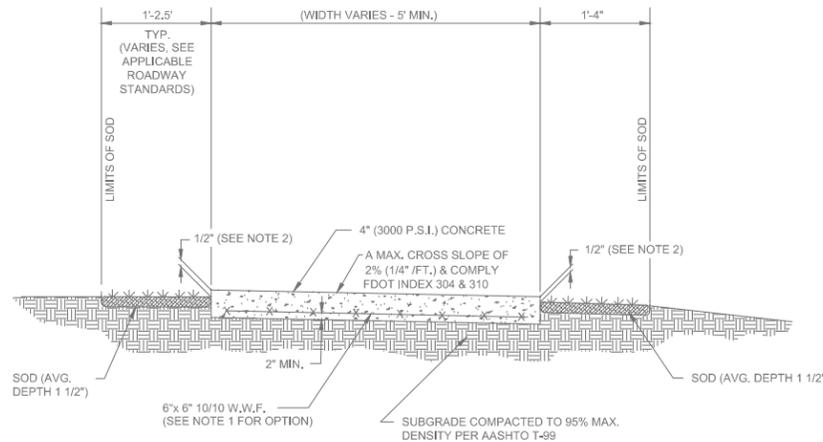


5 TYPICAL BOLLARD DETAIL
NTS

4 CONCRETE JOINT DETAIL
NTS

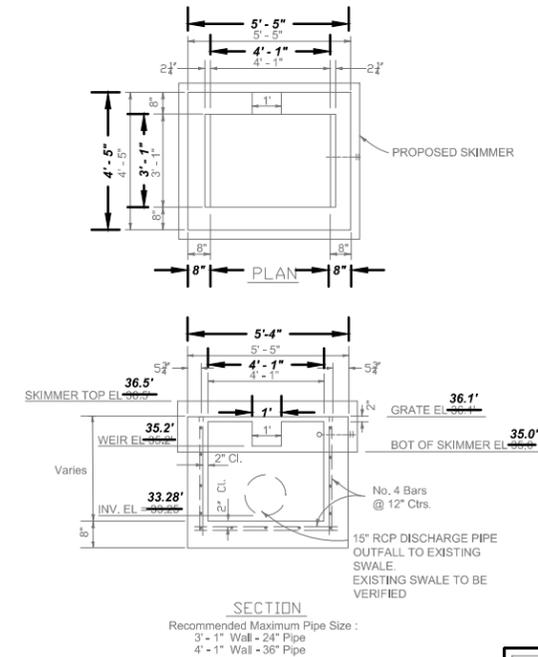


1 CONCRETE VERTICAL CURB DETAIL
NTS



- NOTES:
1. IN LIEU OF WIRE WOVEN FABRIC CONTRACTOR MAY USE CONCRETE REINFORCED WITH FIBERMESH AS AN ACCEPTABLE ALTERNATE.
 2. SPECIAL ATTENTION SHALL BE GIVEN TO THE GRADED SOD PLACEMENT TRENCH. THE GRADING BY THE CONTRACTOR SHALL PROVIDE A 1/2" DROP FROM THE SIDEWALK TO THE TOP OF THE SOD.
 3. SIDEWALKS ABUTTING DRAINAGE STRUCTURES SHALL BE LEVEL WITH THE TOP OF THE STRUCTURE.

2 CONCRETE SIDEWALK DETAIL
NTS



3 MODIFIED FDOT TYPE D S-5 CONTROL STRUCTURE
NTS

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	RECORD DRAWING	RFN	12/2017

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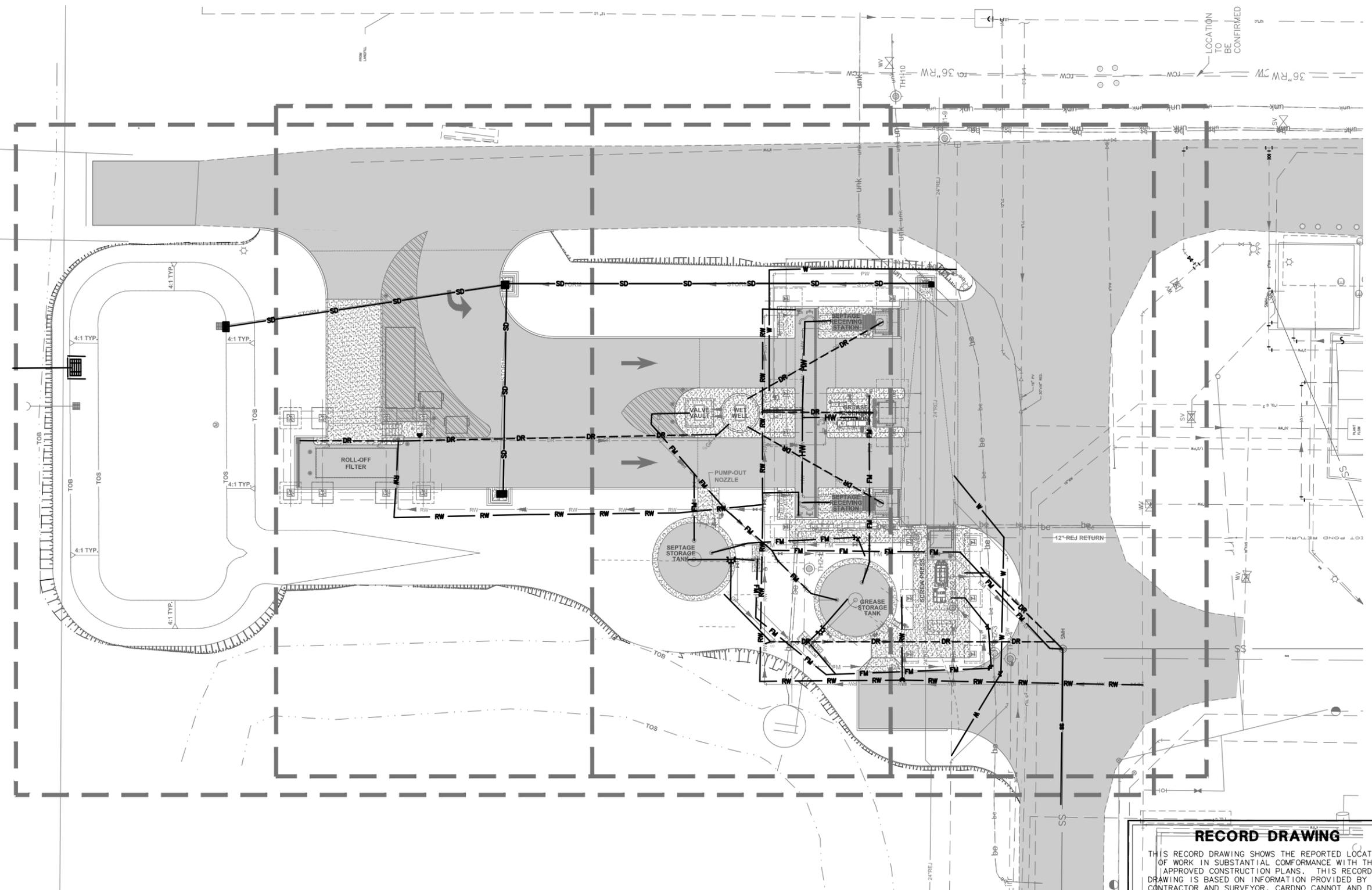
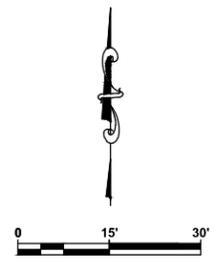
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DAVID A. O'CONNOR, PE DATE
LIC. NO.: 56803

RECORD DRAWINGS
CIVIL DETAILS (4)

PROJECT NO:
00193-009-02
DATE:
MARCH 2015
SHEET NO:
C-12



RECORD DRAWING

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TRACER WIRE WAS INSTALLED, TESTED, AND PASSED ON AUGUST 3, 2017

NO.	DESCRIPTION	BY	DATE
	RECORD DRAWING	RFN	12/2017

**SEWRF
SEPTAGE/ GREASE
RECEIVING STATION**



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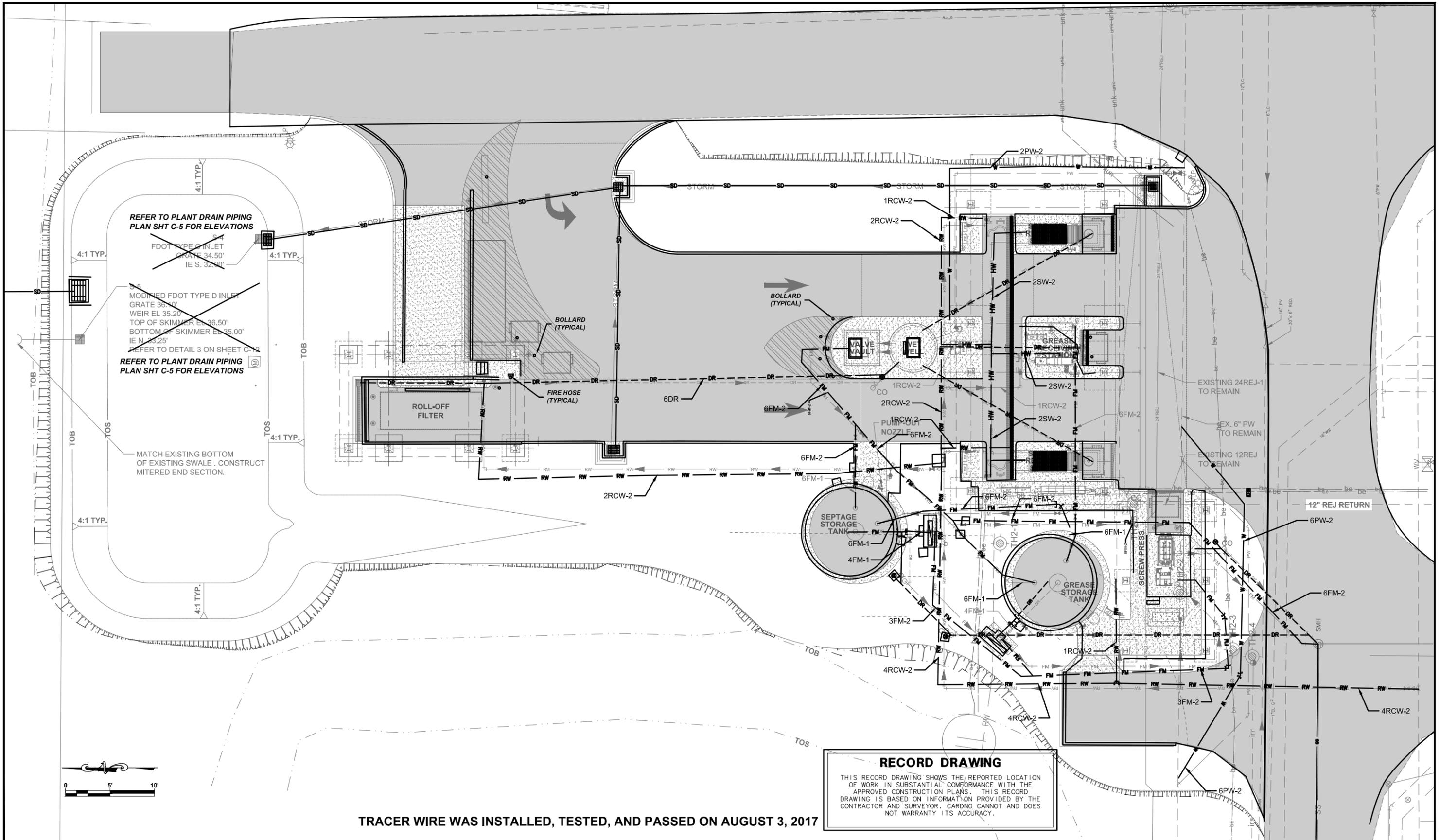
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DAVID A. O'CONNOR, PE DATE
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**RECORD DRAWINGS
YARD PIPING KEY SHEET**

PROJECT NO:
00193-009-02
DATE:
MARCH 2015
SHEET NO:
M-1



NO.	DESCRIPTION	BY	DATE
	RECORD DRAWING	RFN	12/2017
	REVISED PIPING SIZE AND MATERIALS	DES	06/2015

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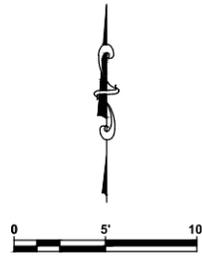

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**RECORD DRAWINGS
OVERALL YARD PIPING**

PROJECT NO:
00193-009-02
DATE:
MARCH 2015
SHEET NO:
M-2



2" 90° BEND
 N=1139770.744
 E=510997.124
 T.O.P. = 33.82'

GRATE
 N=1139795.675
 E=511005.706
 INV. = 35.16'

GRATE
 N=1139796.061
 E=511019.395
 INV. = 35.14'

2RCW-2

2RCW-2

REFER TO PLANT DRAIN PIPING
 PLAN SHT C-5 FOR ELEVATIONS

FIRE HOSE
 (TYPICAL)

BOLLARD
 (TYPICAL)

80 LF
 15" RCP
 @ 1.8%

STORM

REFER TO PLANT DRAIN PIPING
 PLAN SHT C-5 FOR ELEVATIONS

6DR

RECORD DRAWING

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TRACER WIRE WAS INSTALLED, TESTED, AND PASSED ON AUGUST 3, 2017

**SEWRF
 SEPTAGE/ GREASE
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MANATEE COUNTY
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 UTILITIES DEPARTMENT
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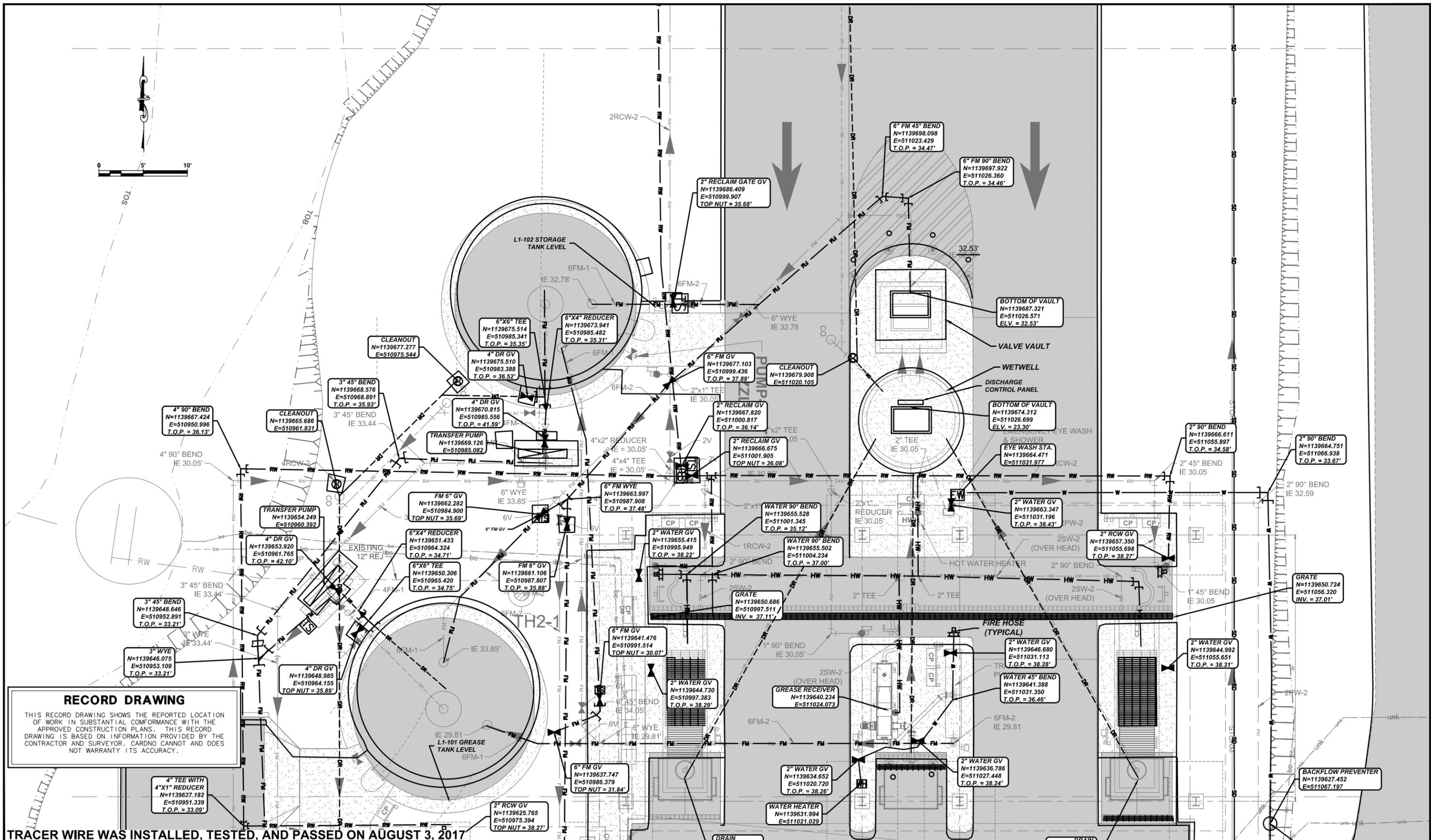
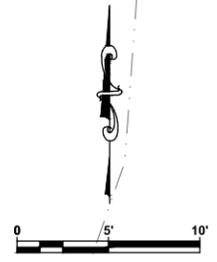
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 DRAWN ALS
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**RECORD DRAWINGS
 YARD PIPING (1)**

PROJECT NO:
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 SHEET NO:
M-3



RECORD DRAWING
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TRACER WIRE WAS INSTALLED, TESTED, AND PASSED ON AUGUST 3, 2017

NO.	DESCRIPTION	BY	DATE
	RECORD DRAWING	RFN	12/2017
	REVISED PIPING SIZE AND MATERIALS	DES	06/2015

**SEWRF
 SEPTAGE/ GREASE
 RECEIVING STATION**

MANATEE COUNTY
 DEPARTMENT OF PUBLIC WORKS
 UTILITIES DEPARTMENT
 4410 66th Street West Bradenton, Florida 34210
 (941) 792-8811

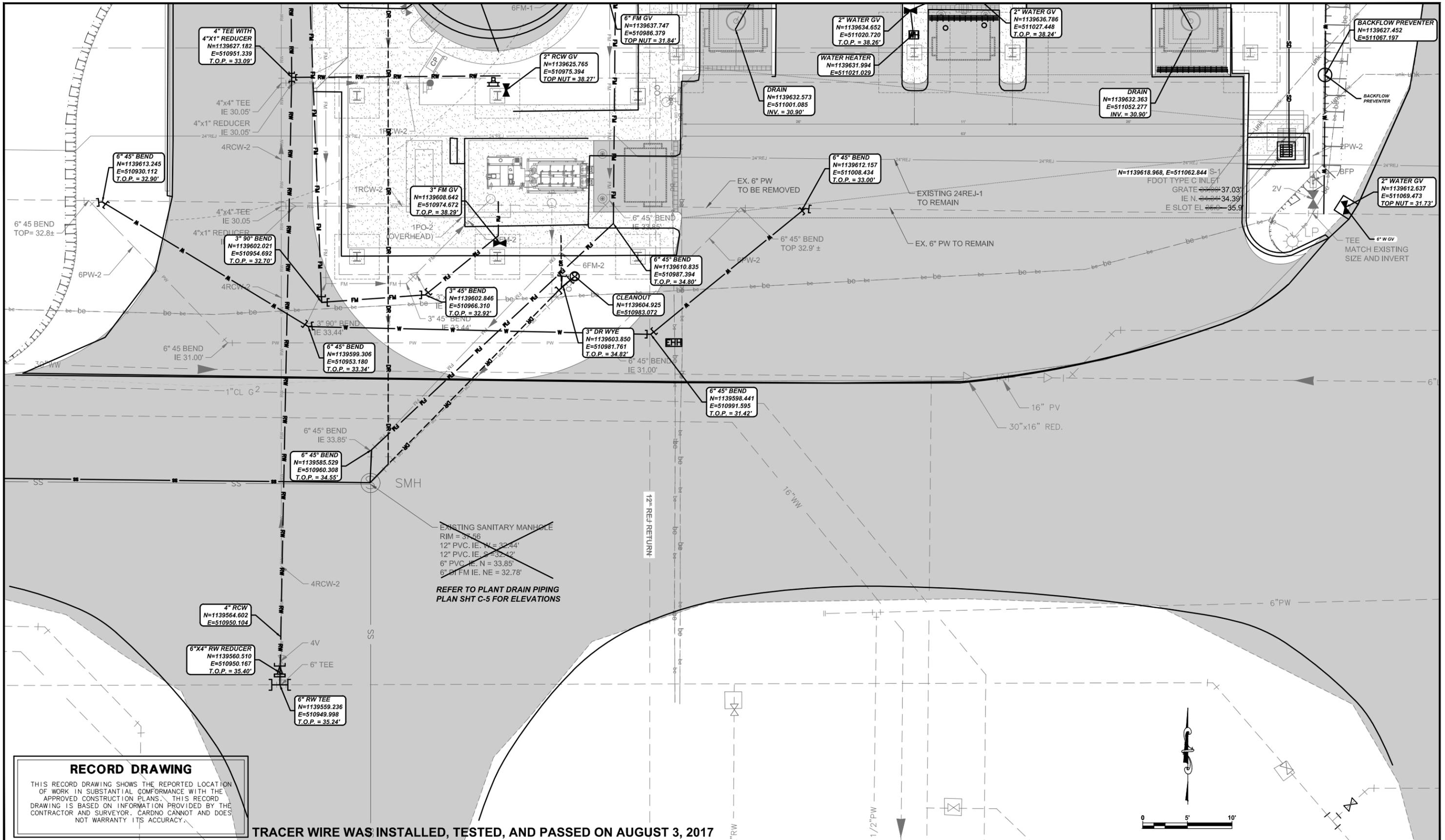
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 CLEARWATER
 380 PARK PLACE BLVD, STE 300, CLEARWATER, FL 33759 TEL:
 (727) 531-3505 (800) 861-8314
 www.cardno.com Certificate of Authorization No. 29915

DESIGNED DOC
 DRAWN ALS
 Q.C.
 DATE APPROVED
 DAVID A. O'CONNOR, PE
 LIC. NO.: 56803

**RECORD DRAWINGS
 YARD PIPING (2)**

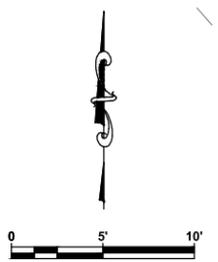
PROJECT NO:
 00193-009-02
 DATE:
 MARCH 2015
 SHEET NO:
M-4

FILE: J:\00193\00193009\02\ACAD\Record Drawings\CAD\Sheets\PLAN SHEETS-YARD PIPING-ASB.dwg LAST SAVED: Mon, 12/11/17-1:16p PLOTTED: Mon, 12/11/17-1:22p BY: Frank Nolte



RECORD DRAWING
 THIS RECORD DRAWING SHOWS THE REPORTED LOCATION OF WORK IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS. THIS RECORD DRAWING IS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR AND SURVEYOR. CARDNO CANNOT AND DOES NOT WARRANTY ITS ACCURACY.

TRACER WIRE WAS INSTALLED, TESTED, AND PASSED ON AUGUST 3, 2017



NO.	DESCRIPTION	DES	DATE
	RECORD DRAWING	RFN	12/2017
	REVISED PIPING SIZE AND MATERIALS	BY	06/2015

**SEWRF
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 RECEIVING STATION**



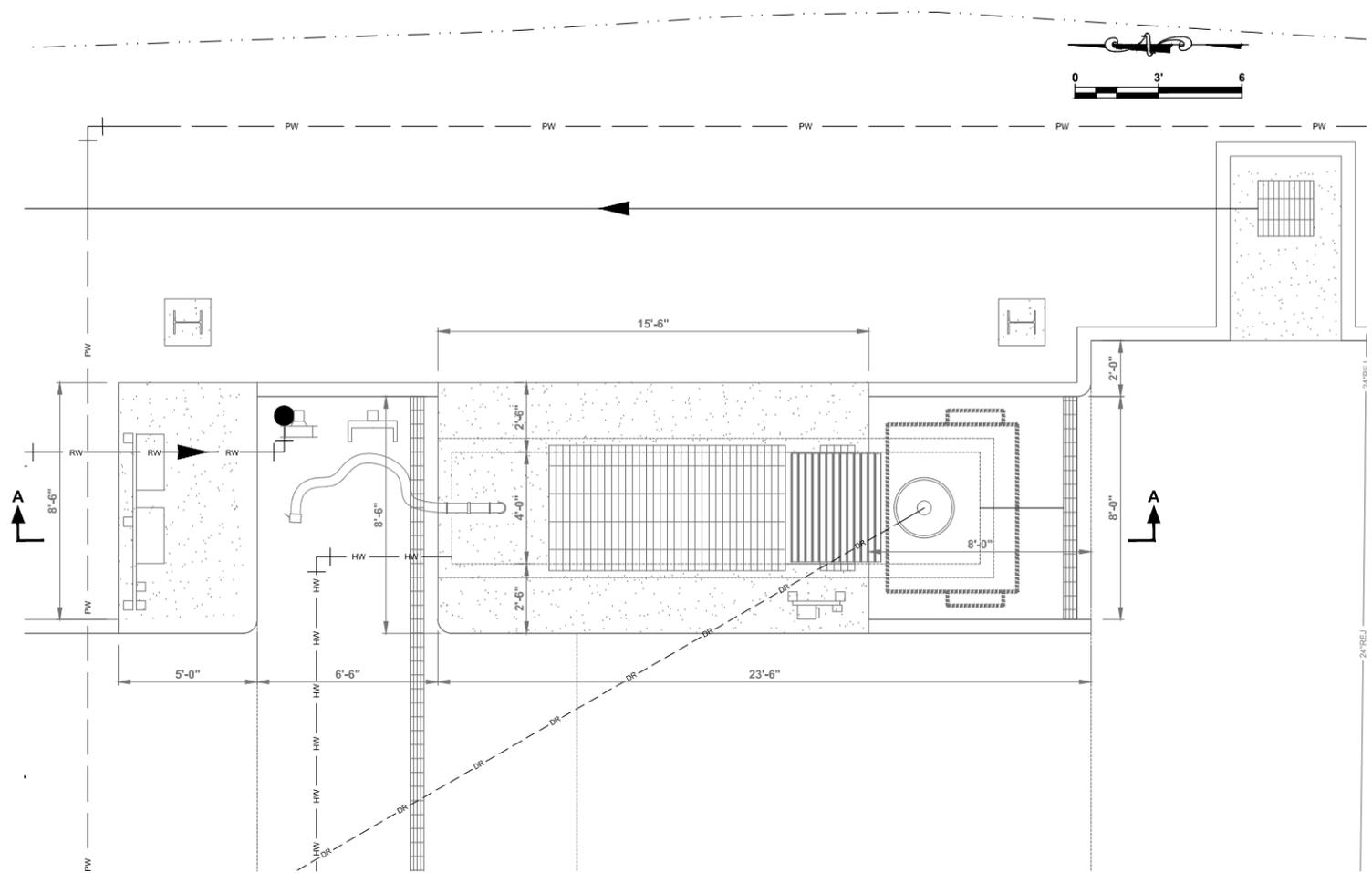
DAVID A. O'CONNOR, PE
 LIC. NO.: 56803

DESIGNED DOC
 DRAWN ALS
 Q.C.
 APPROVED

**RECORD DRAWINGS
 YARD PIPING (3)**

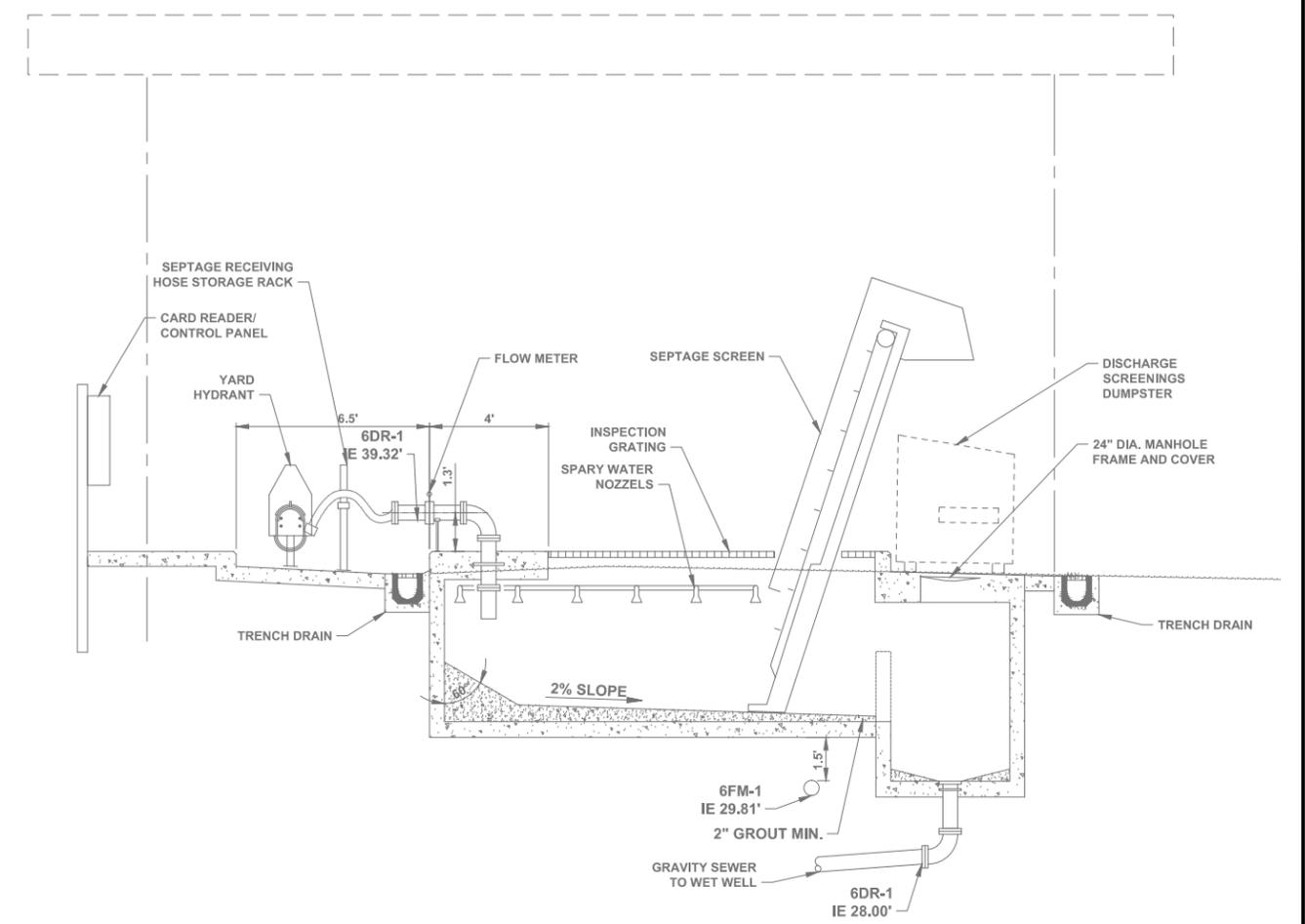
PROJECT NO:
 00193-009-02
 DATE:
 MARCH 2015
 SHEET NO:
M-5

FILE: J:\00193\00193009\02\ACAD\Record Drawings\CAD\Sheets\PLAN SHEETS-YARD PIPING-ASB.dwg LAST SAVED: Mon, 12/11/17-1:16p PLOTTED: Mon, 12/11/17-1:23p BY: Frank Nolte



1 PLAN VIEW
 C-3 SCALE AS SHOWN

NOTE:
 1. WESTERLY SEPTAGE RECEIVING STATION SIMILAR.



SECTION A-A
 NOTE:
 1. WESTERLY SEPTAGE RECEIVING STATION SIMILAR. NTS

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NO.	DESCRIPTION	BY	DATE
	RECORD DRAWING	RFN	12/2017

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 RECEIVING STATION**

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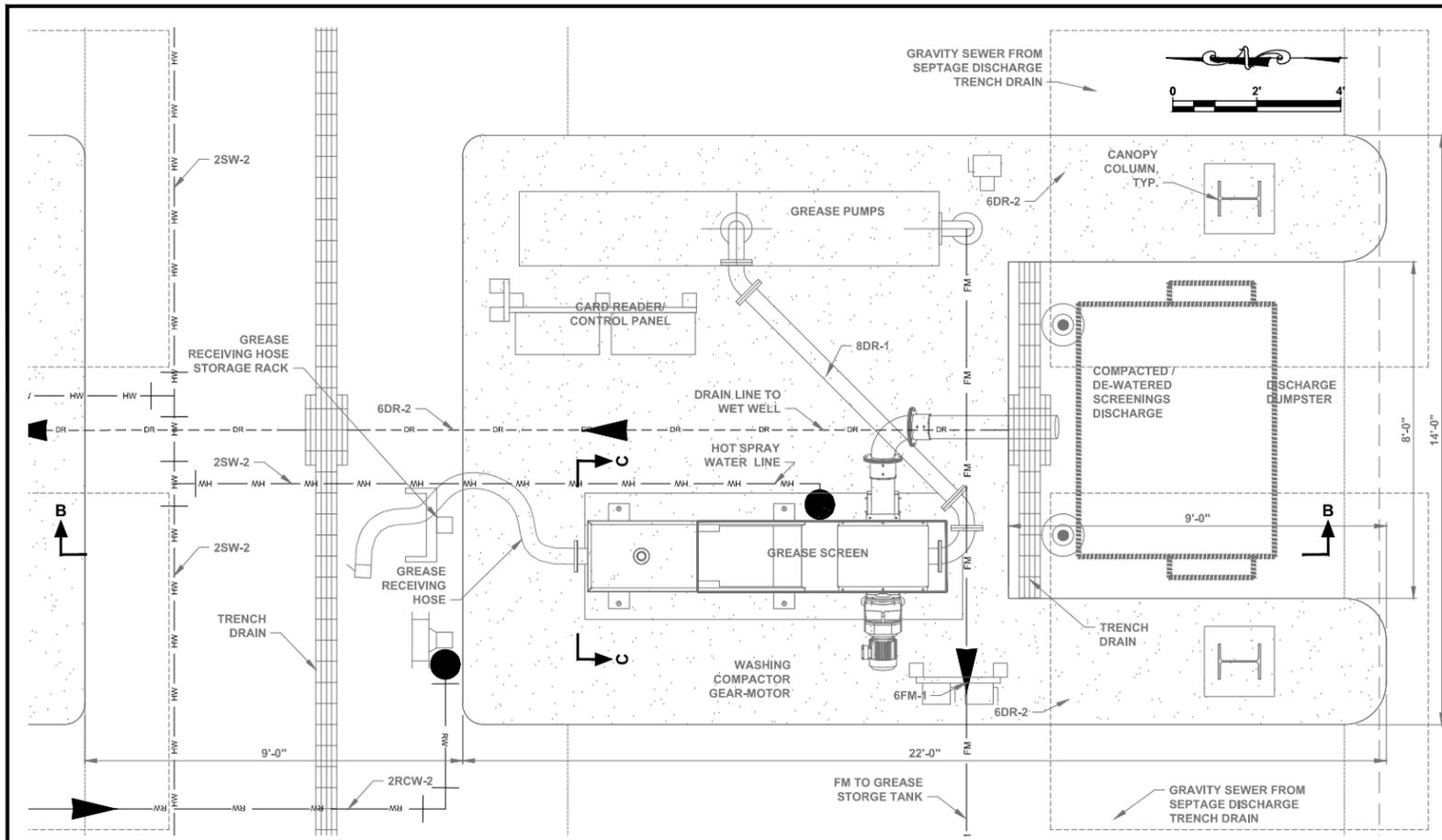
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DAVID A. O'CONNOR, PE DATE
 LIC. NO.: 56803

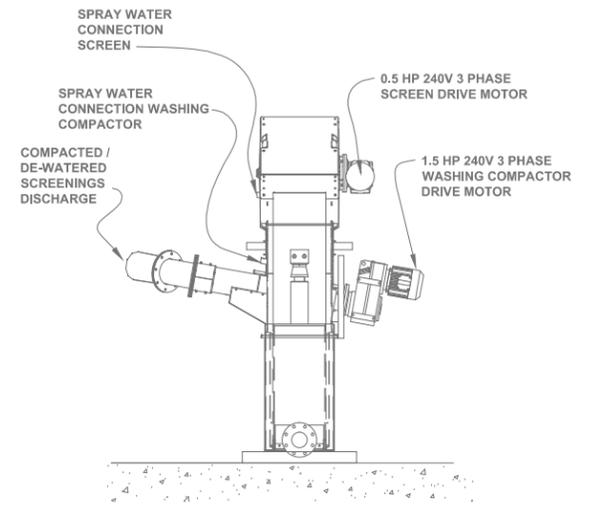
DESIGNED DOC
 DRAWN ALS
 Q.C.
 APPROVED

**RECORD DRAWINGS
 SEPTAGE RECEIVING STATION
 PLAN AND SECTION**

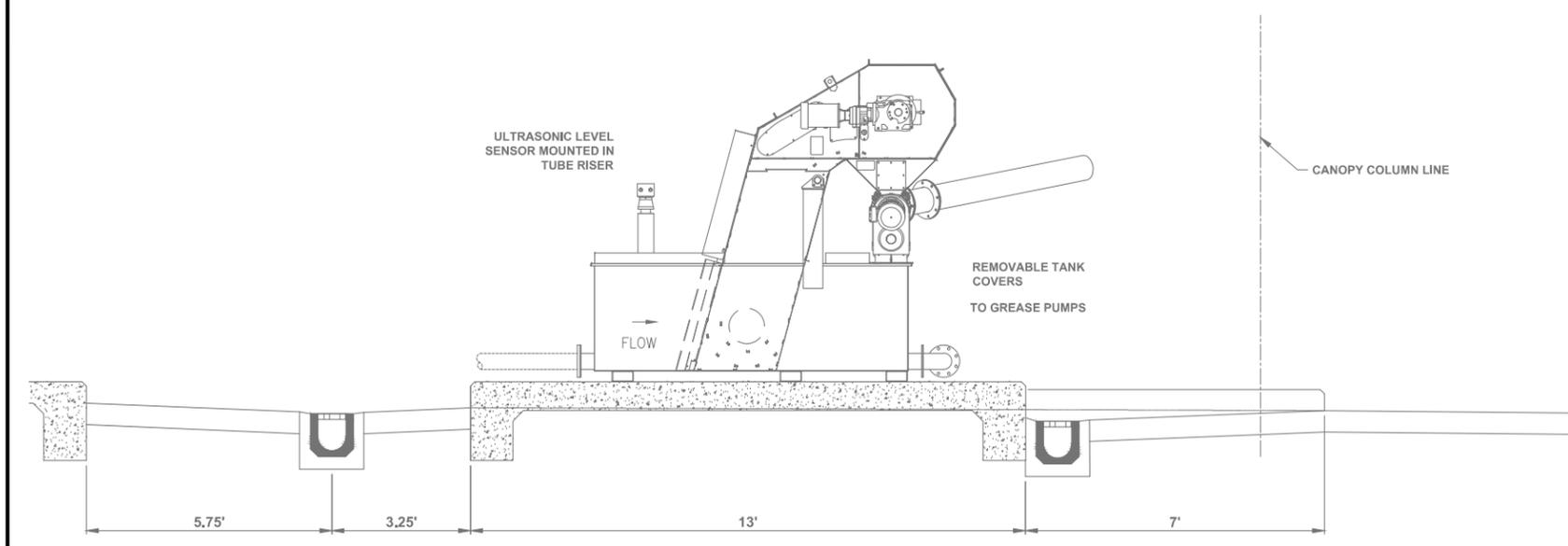
PROJECT NO:
 00193-009-02
 DATE:
 MARCH 2015
 SHEET NO:
M-6



1 PLAN VIEW
SCALE AS SHOWN



SECTION C-C
NTS



SECTION B-B
NTS

RECORD DRAWING
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NO.	DESCRIPTION	BY	DATE
	RECORD DRAWING	RFN	12/2017

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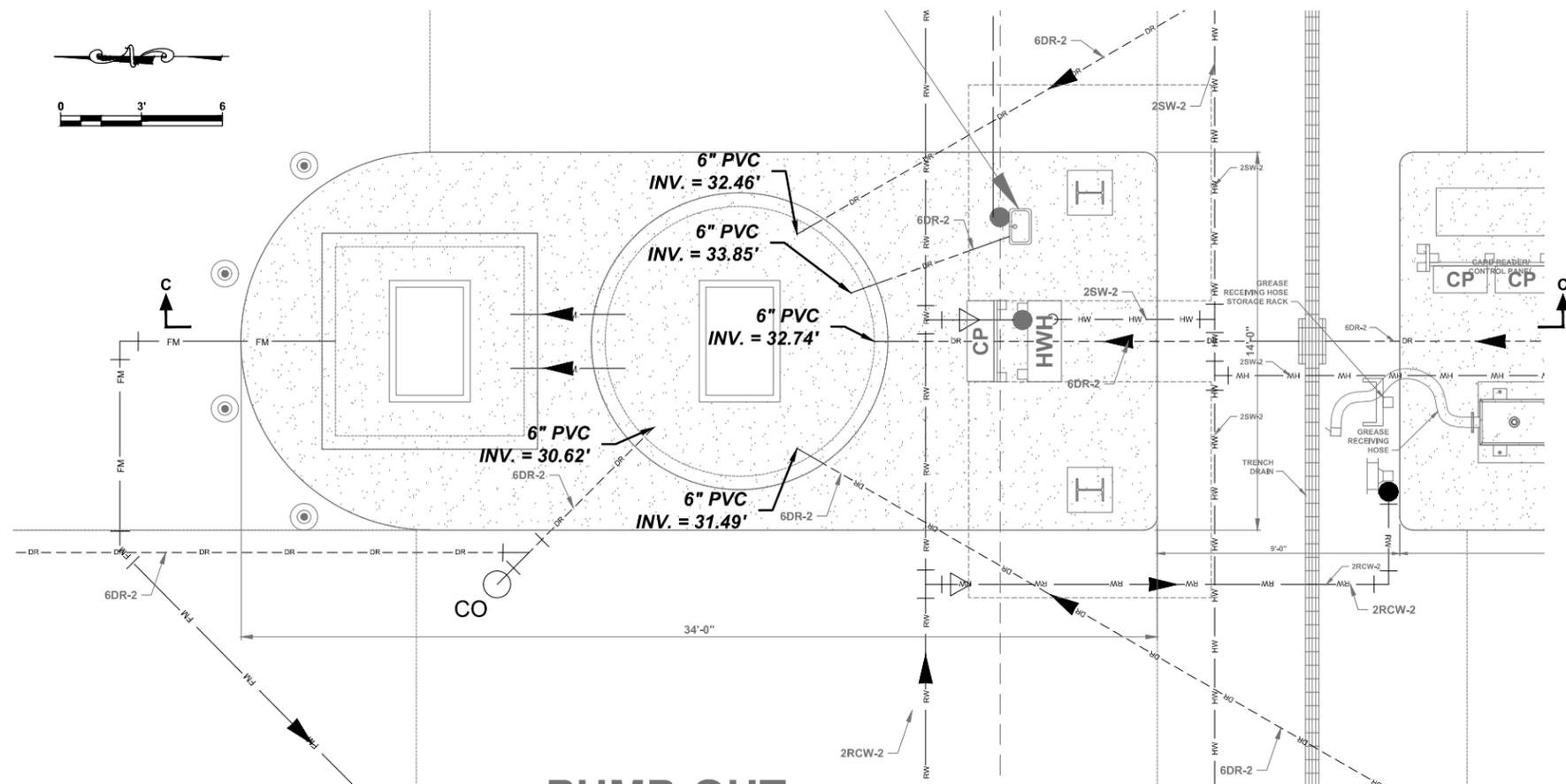
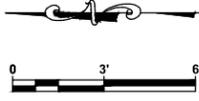
DAVID A. O'CONNOR, PE
LIC. NO.: 56803

DESIGNED	DOC
DRAWN	ALS
Q.C.	
APPROVED	

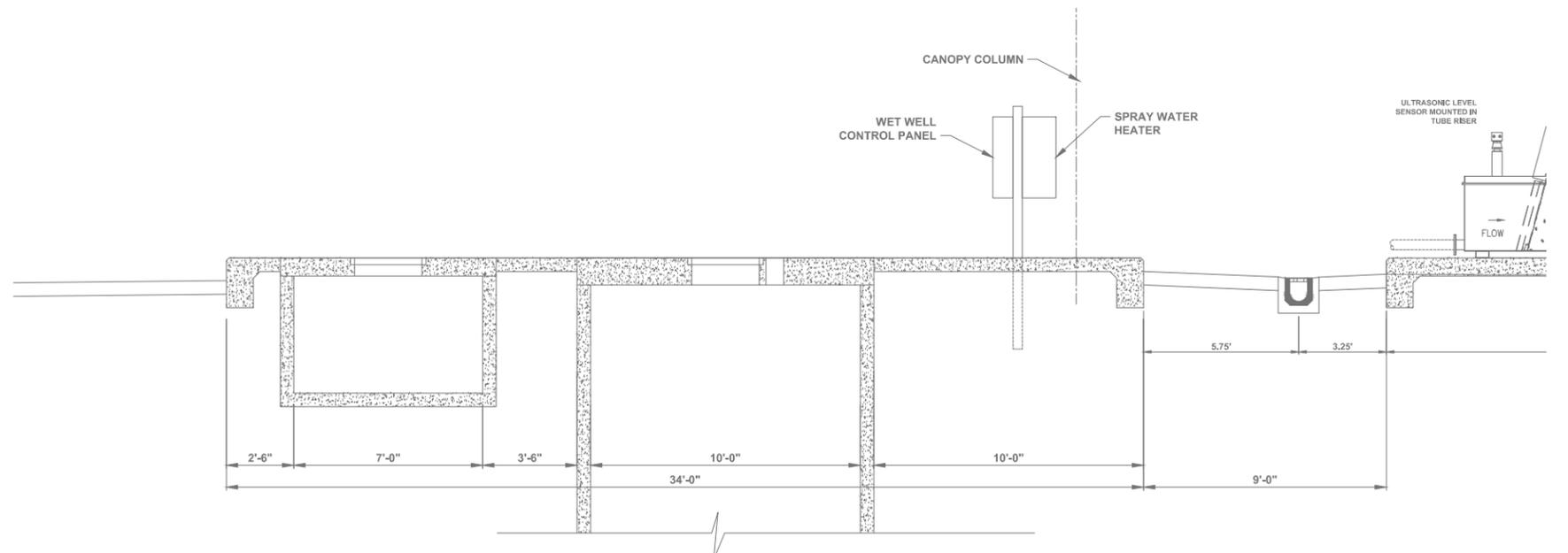
**RECORD DRAWINGS
GREASE RECEIVING STATION
PLAN AND SECTION**

PROJECT NO:	00193-009-02
DATE:	MARCH 2015
SHEET NO:	M-7

FILE: J:\00193\00193009-02\ACAD\Record Drawings\CAD\Sheets\PLAN AND SECTION-ASB.dwg LAST SAVED: Fri, 12/08/17-4:17p PLOTTED: Fri, 12/08/17-4:21p BY: Frank.Notte



1
C-3
PLAN VIEW
SCALE AS SHOWN



SECTION C-C
NTS

RECORD DRAWING

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NO.	DESCRIPTION	BY	DATE
	RECORD DRAWING	RFN	12/2017

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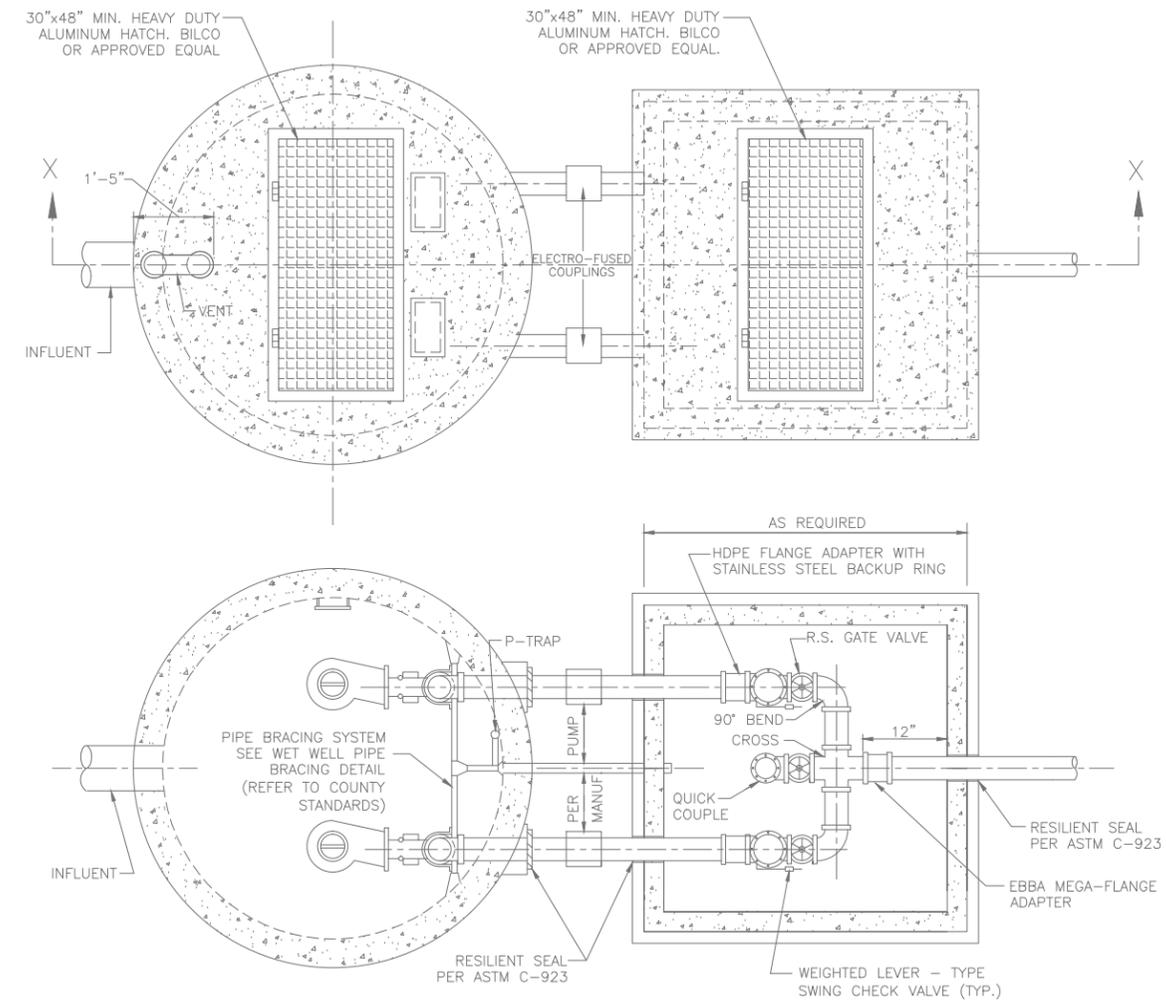
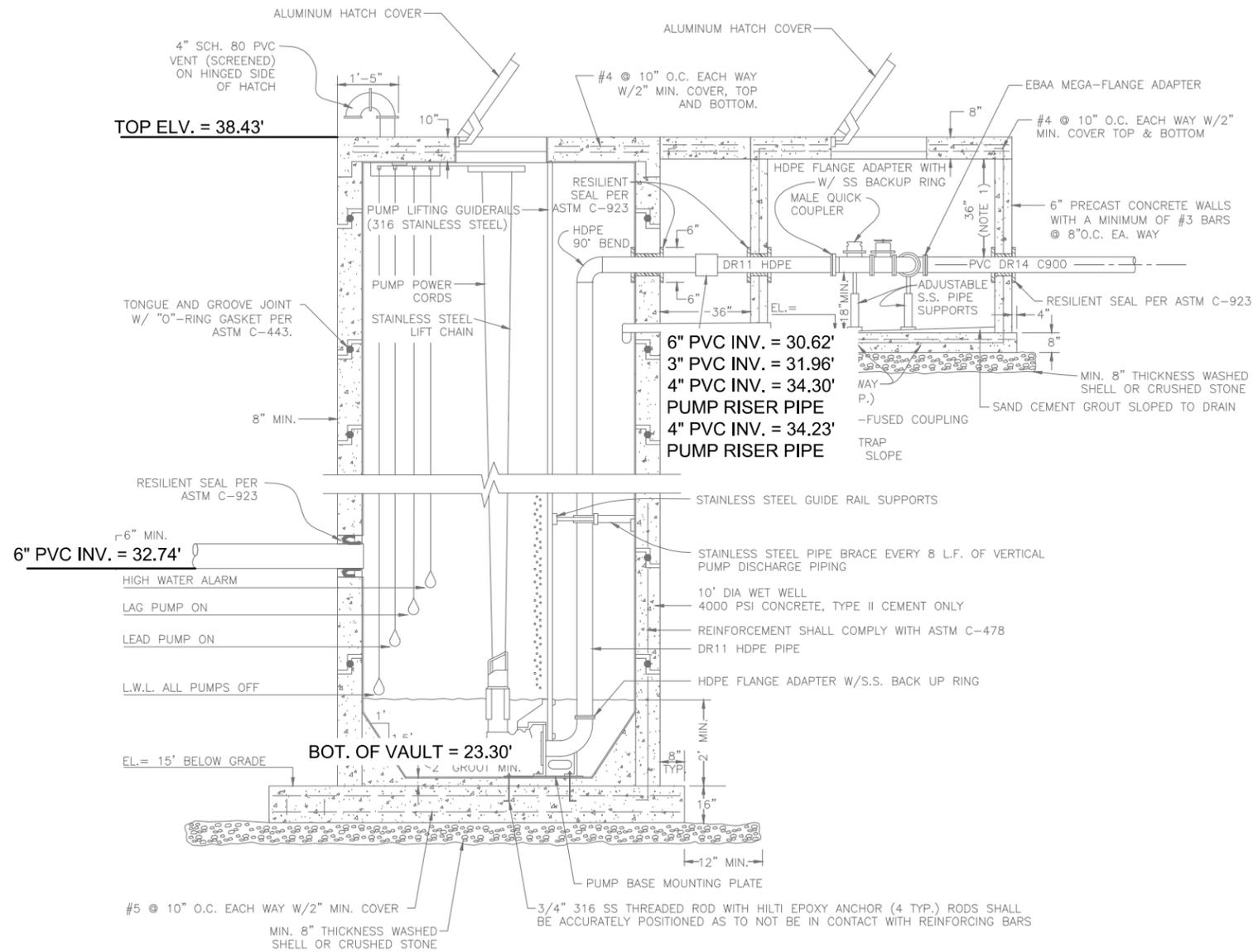
DAVID A. O'CONNOR, PE DATE
LIC. NO.: 56803

DESIGNED DOC
DRAWN ALS
Q.C.
APPROVED

**RECORD DRAWINGS
WET WELL AND VALVE VAULT
PLAN AND SECTION**

PROJECT NO:
00193-009-02
DATE:
MARCH 2015
SHEET NO:
M-8

FILE: J:\00193\00193009\02\ACAD\Record Drawings\CAD\Sheets\PLAN AND SECTION\ASB.dwg LAST SAVED: Fri, 12/08/17 4:17p PLOTTED: Fri, 12/08/17 4:22p BY: Frank.Notte



1 PUMPING STATION DETAIL
NTS

NOTE: SEE PLAN SHEETS FOR ORIENTATION.

RECORD DRAWING
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TRACER WIRE WAS INSTALLED, TESTED, AND PASSED ON AUGUST 3, 2017

NO.	DESCRIPTION	BY	DATE
	RECORD DRAWING	RFN	12/2017

**SEWRf
SEPTAGE/ GREASE
RECEIVING STATION**

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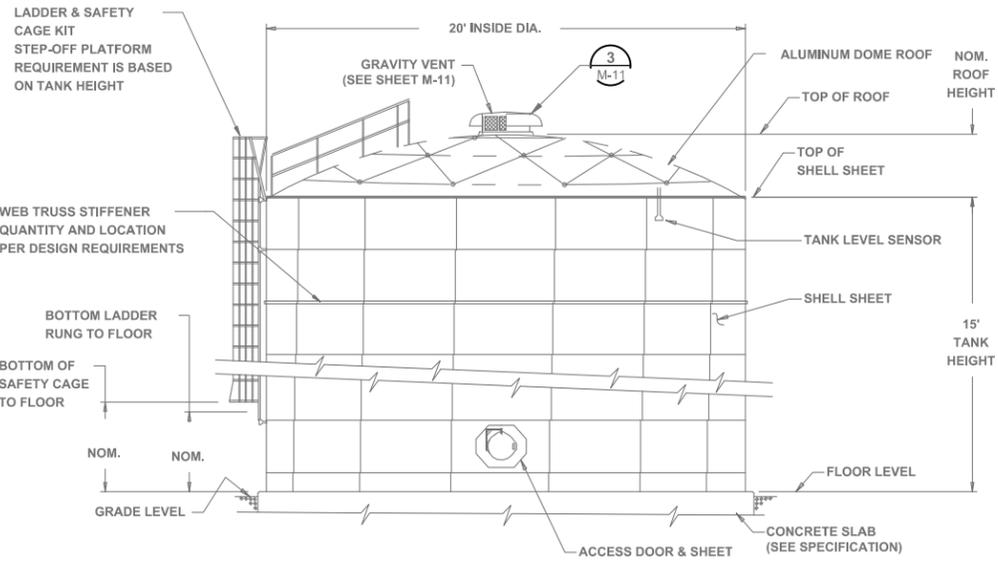
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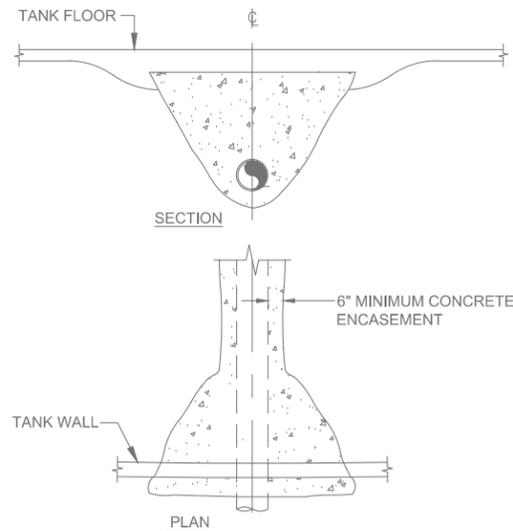
DESIGNED DOC
DRAWN ALS
Q.C.
APPROVED

**RECORD DRAWINGS
PUMP STATION DETAILS**

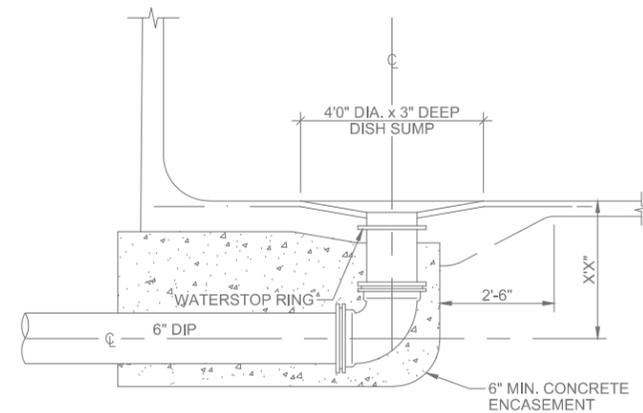
PROJECT NO:
00193-009-02
DATE:
MARCH 2015
SHEET NO:
M-9



STORAGE TANKS ELEVATION VIEW

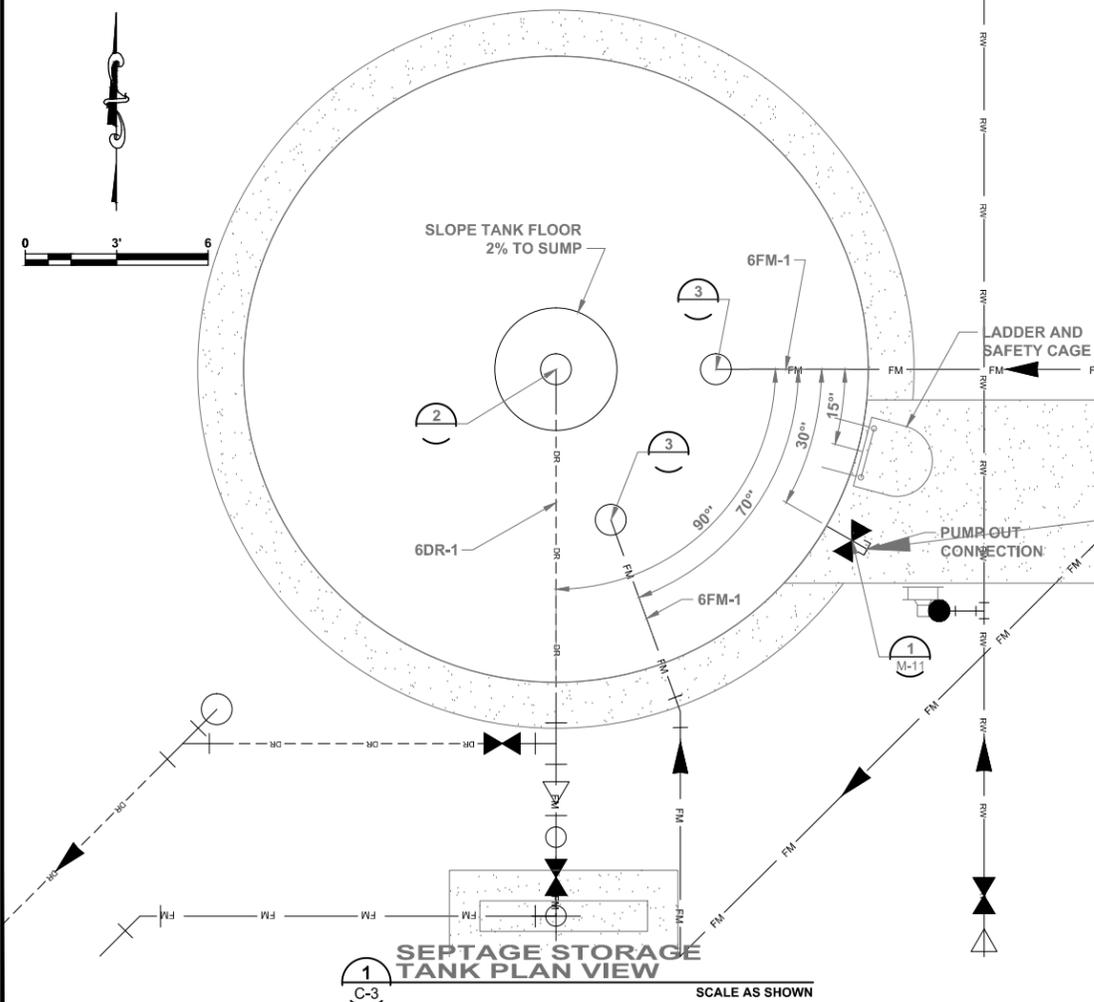


1 TYPICAL PIPE ENCASEMENT AT TANK WALL DETAIL
NTS

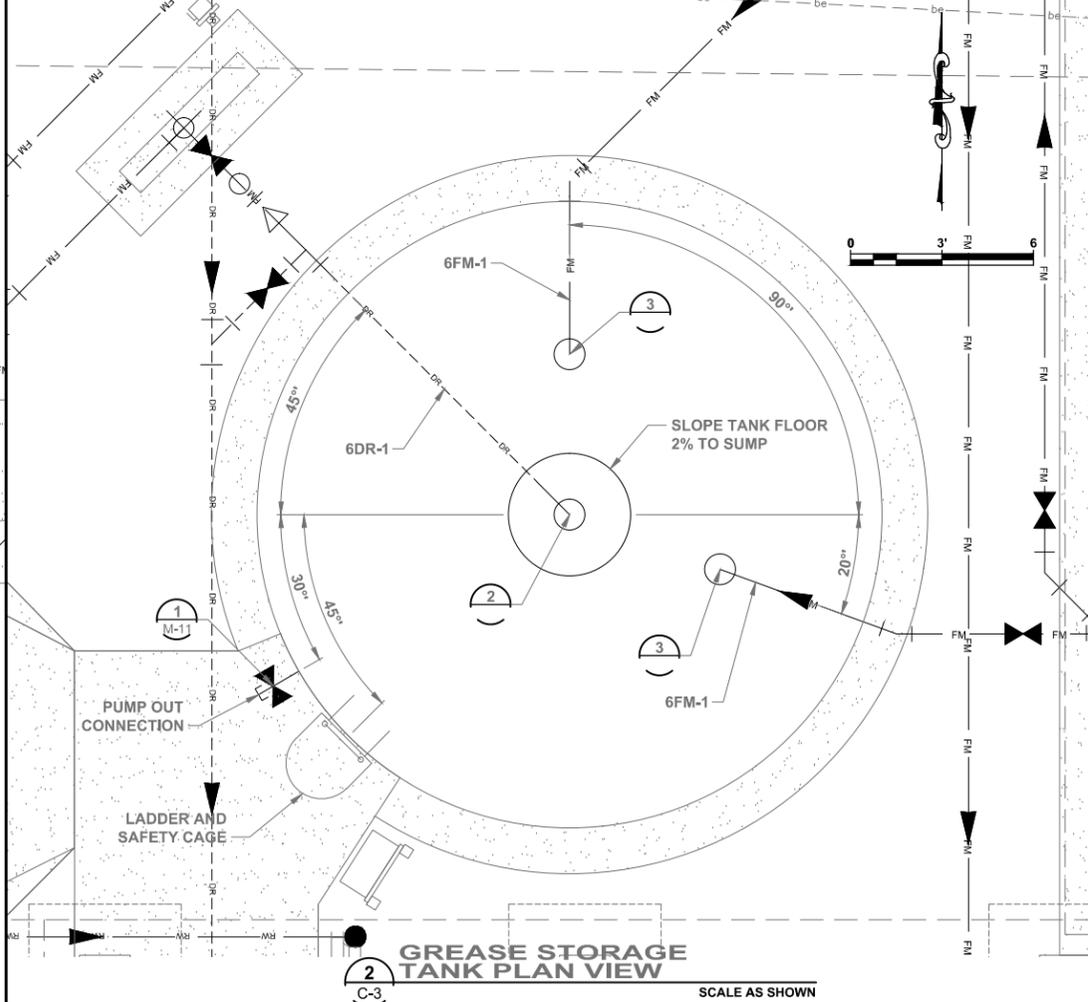


NOTE:
1. DIP PIPE TO EXTEND 5' OUTSIDE OF TANK SLAB.

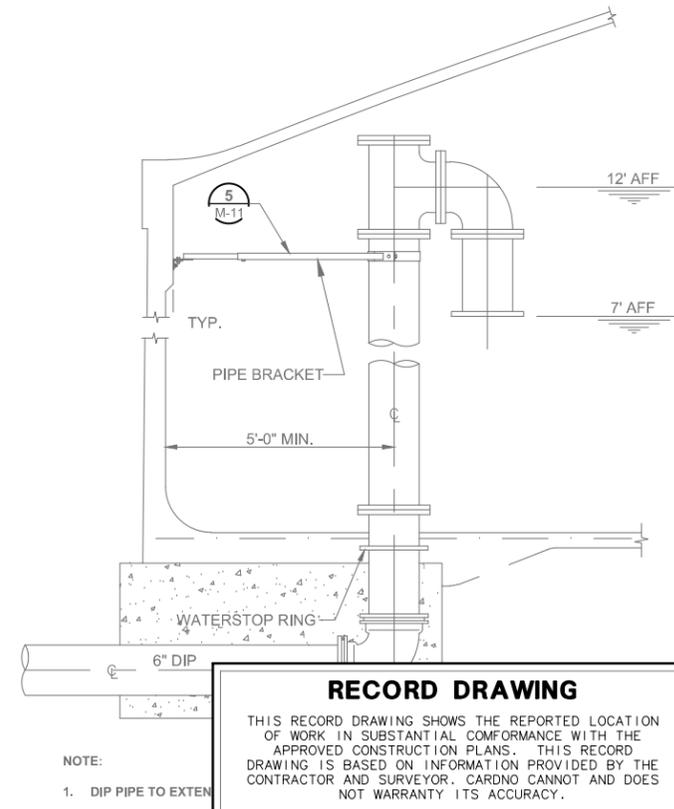
2 TYPICAL DRAIN AND OUTLET PIPE DETAIL
NTS



1 SEPTAGE STORAGE TANK PLAN VIEW
SCALE AS SHOWN



2 GREASE STORAGE TANK PLAN VIEW
SCALE AS SHOWN



NOTE:
1. DIP PIPE TO EXTEN

3 TYPICAL INLET PIPE DETAIL
NTS

RECORD DRAWING	RFN	12/2017
ADDED DETAILS	DES	06/2015
NO.	DESCRIPTION	BY DATE

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SEPTAGE/ GREASE
RECEIVING STATION**

MANATEE COUNTY
DEPARTMENT OF PUBLIC WORKS
UTILITIES DEPARTMENT
4410 66th Street West Bradenton, Florida 34210
(941) 792-8811

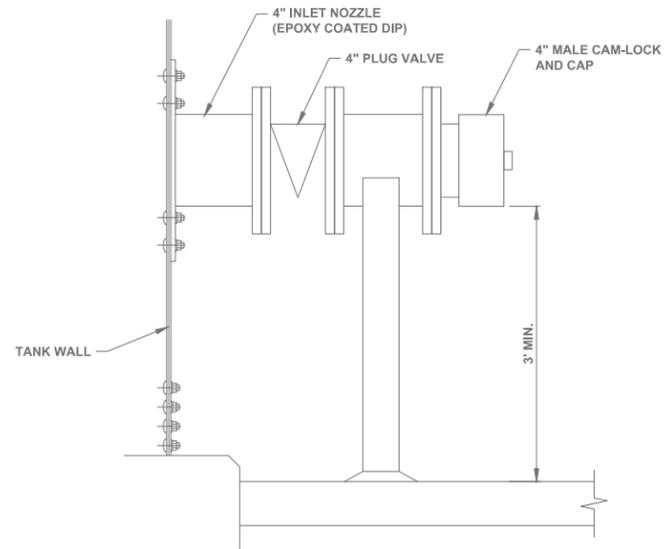
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DAVID A. O'CONNOR, PE
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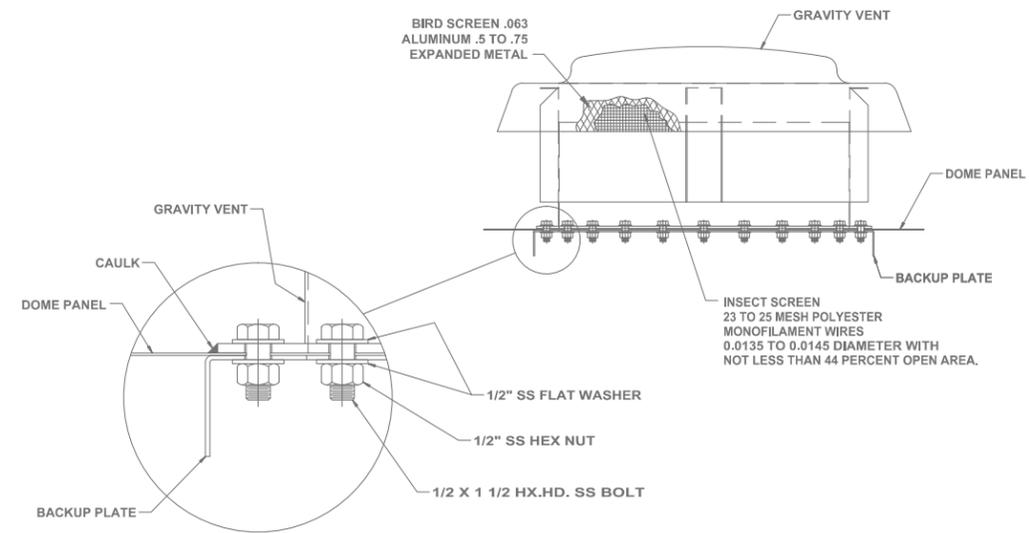
DESIGNED	DOC
DRAWN	ALS
Q.C.	
APPROVED	

**RECORD DRAWINGS
STORAGE TANKS ELEVATION AND
CONNECTION DETAILS**

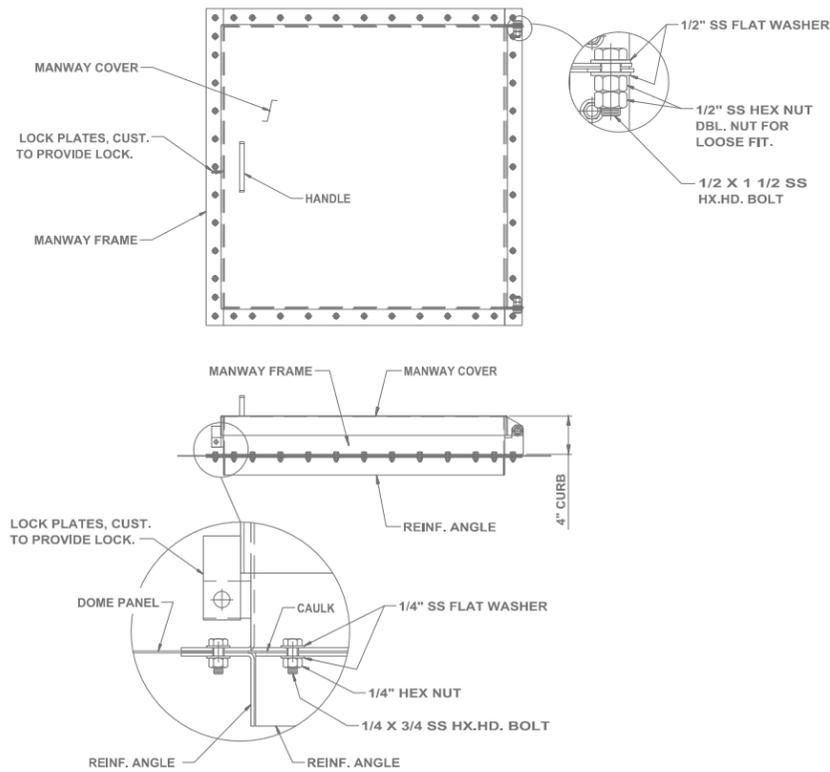
PROJECT NO:
00193-009-02
DATE:
MARCH 2015
SHEET NO:
M-10



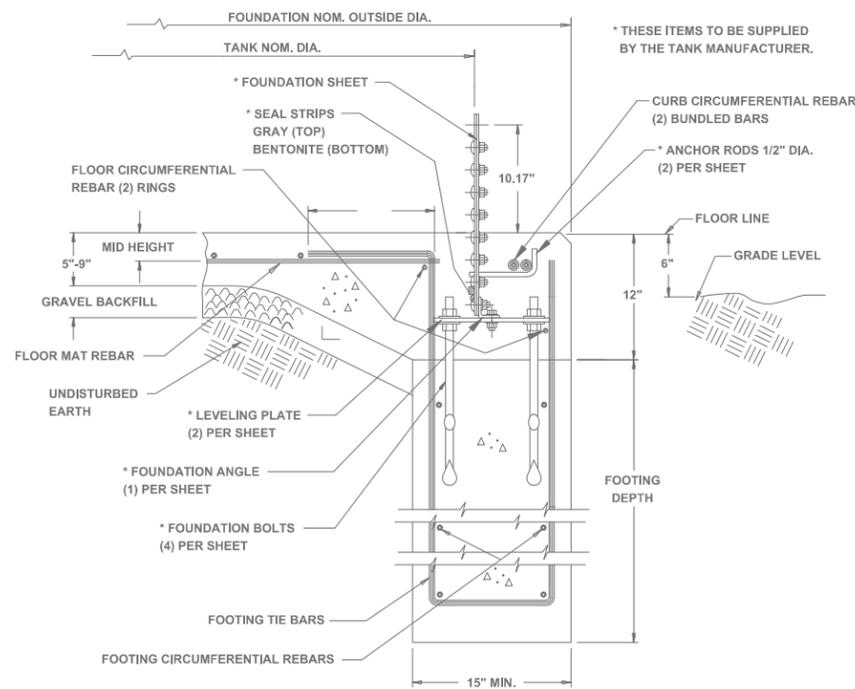
1 TYPICAL PUMP OUT CONNECTION DETAIL
NTS



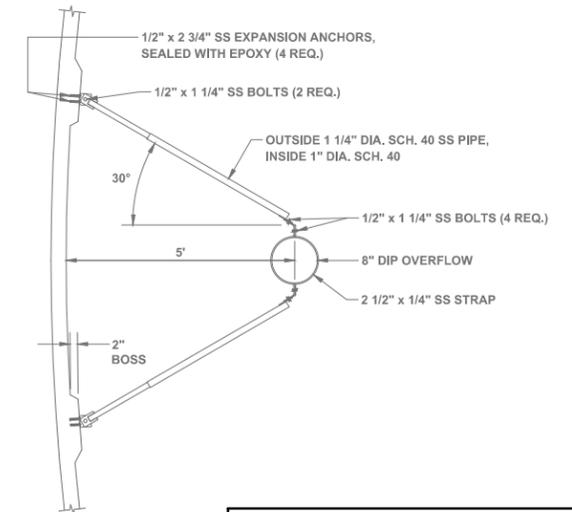
3 24" GRAVITY VENT ASSEMBLY
NTS



2 30" SQUARE ALUMINUM MANWAY
NTS



4 TYPICAL SECTION THROUGH TANK FOOTING
NTS



5 PIPE BRACKET
NTS

RECORD DRAWING
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	RECORD DRAWING	RFN	12/2017

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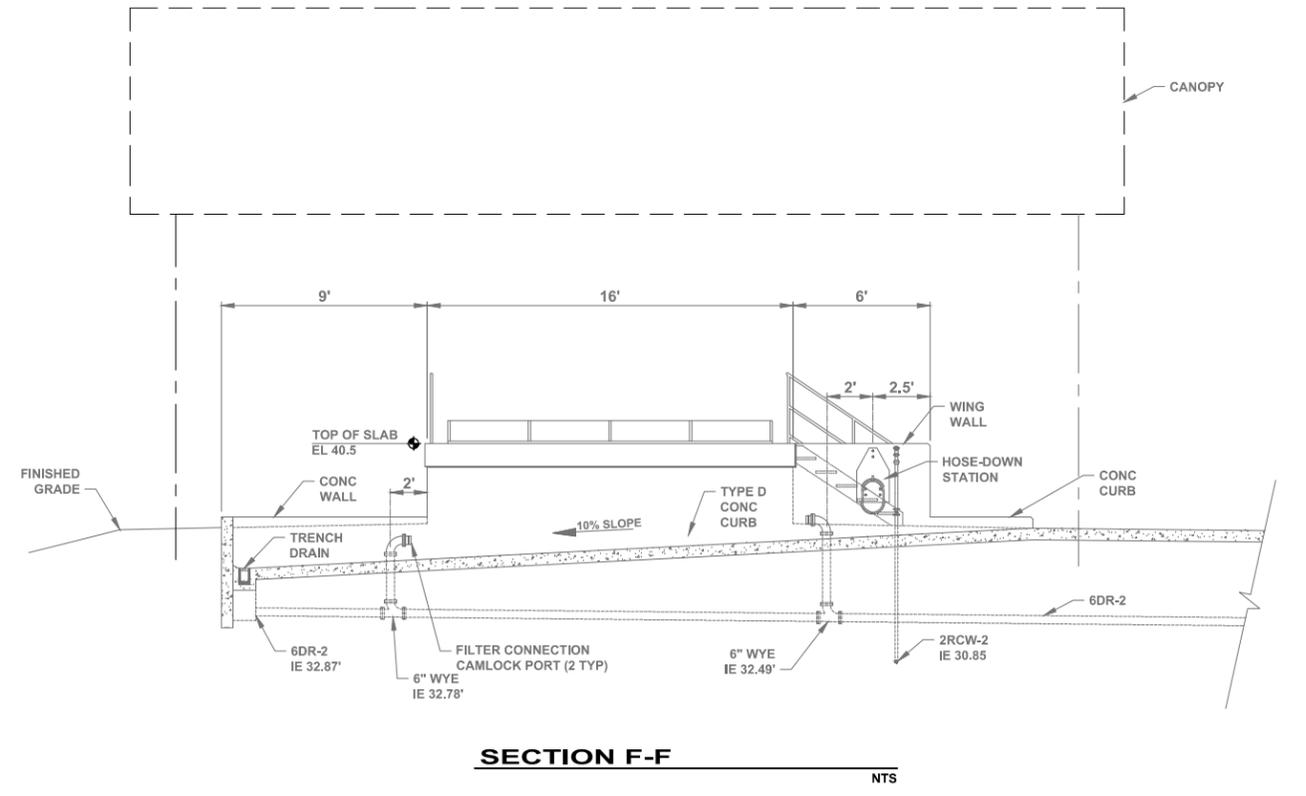
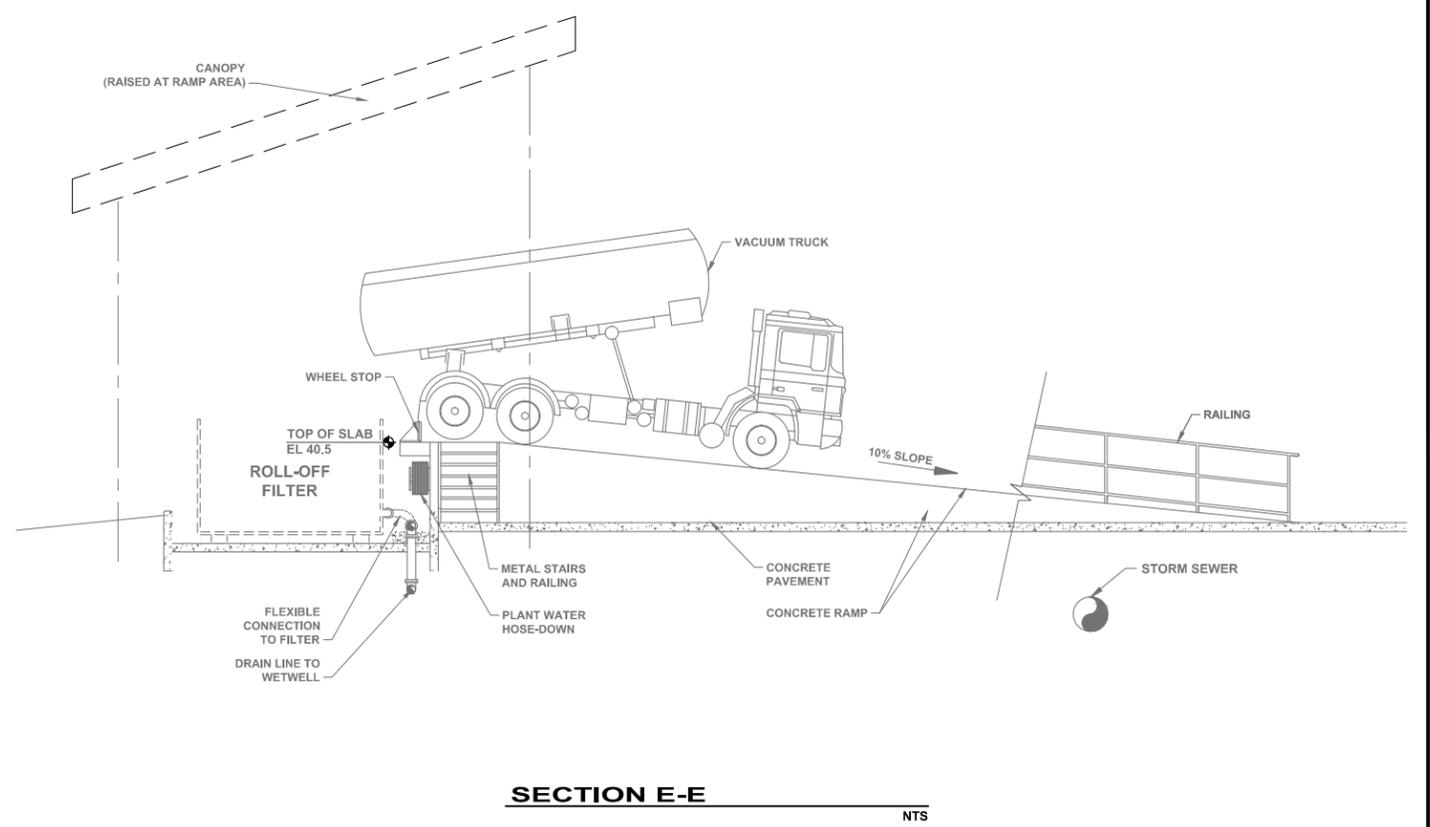
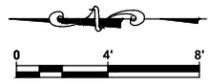
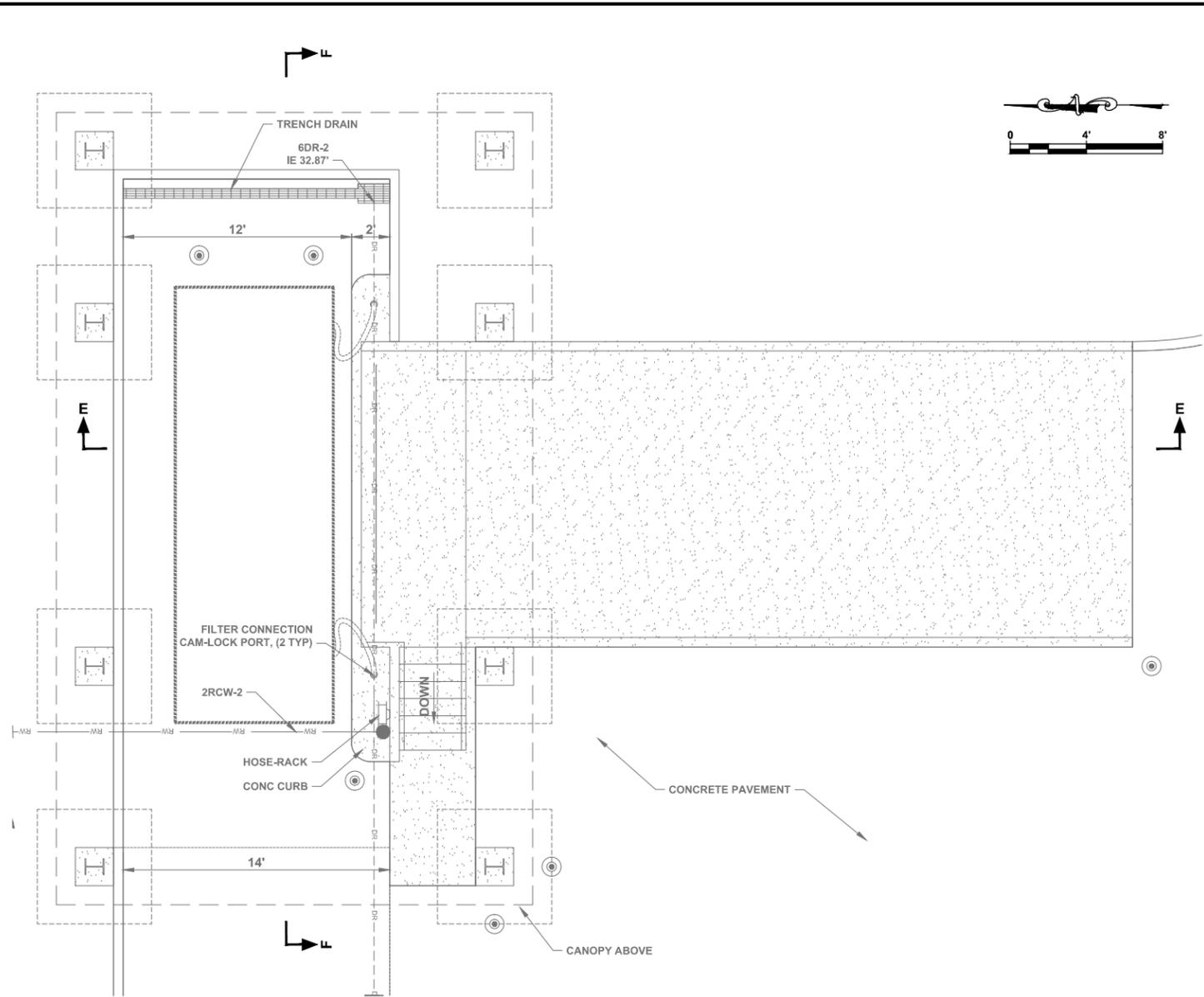
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DAVID A. O'CONNOR, PE DATE
LIC. NO.: 56803

DESIGNED	DOC
DRAWN	ALS
Q.C.	
APPROVED	

**RECORD DRAWINGS
STORAGE TANK DETAILS**

PROJECT NO:	00193-009-02
DATE:	MARCH 2015
SHEET NO:	M-11



RECORD DRAWING

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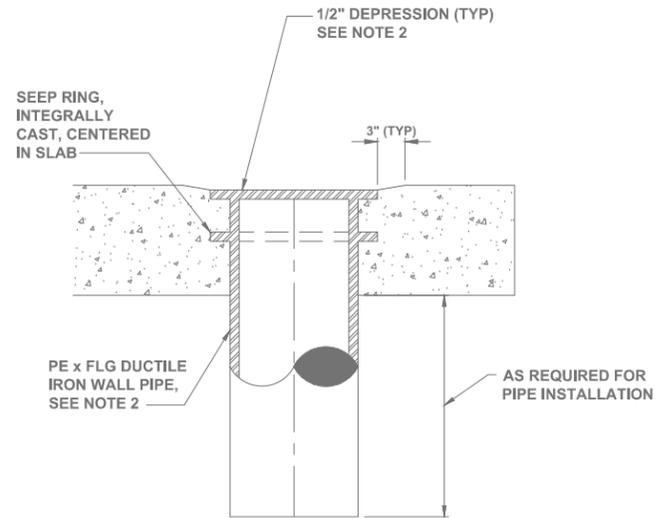
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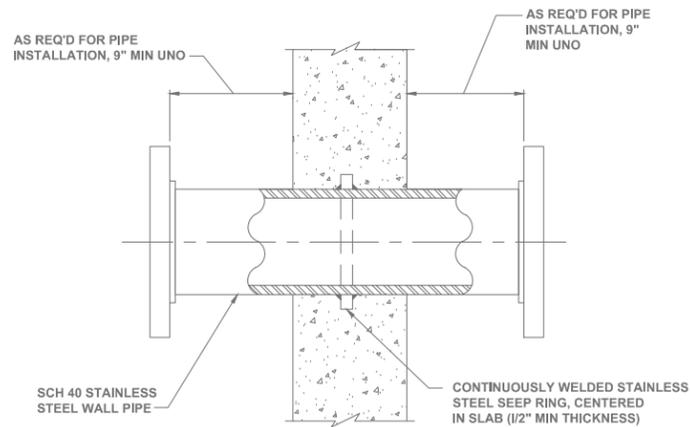
**RECORD DRAWINGS
VACUUM TRUCK RECEIVING RAMP
PLAN AND SECTIONS**

PROJECT NO:
00193-009-02
DATE:
MARCH 2015
SHEET NO:
M-12



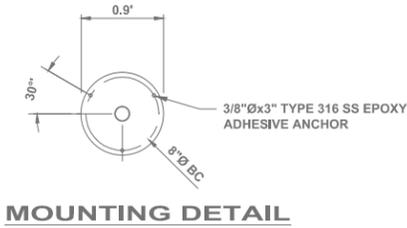
- NOTES:
1. COAT FLOOR PIPE WITH SPECIFIED PAINT SYSTEM PRIOR TO CONCRETE PLACEMENT.
 2. DRILL AND TAP FLANGE TO RECEIVE THREADED BOLTS.

1
TYPICAL FLOOR PIPES
(FLUSH MOUNTED) DETAIL
NTS

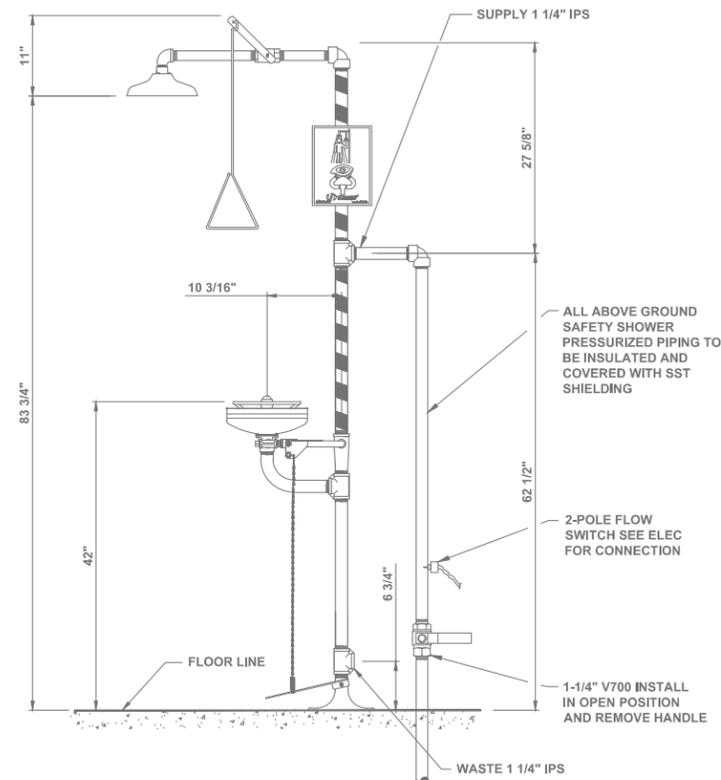


- NOTE:
1. COAT WALL PIPE WITH SPECIFIED PAINT SYSTEM PRIOR TO CONCRETE PLACEMENT.

2
TYPICAL STAINLESS
STEEL WALL PIPE DETAIL
NTS



MOUNTING DETAIL



- NOTES:
1. DIMENSIONS MAY VARY 1/2"±.
 2. SS-1 EMERGENCY SHOWER AND EYE WASH STATIONS SHALL BE HAWS MODEL 8336 (OR EQUAL). ALL ASSOCIATED PIPING SHALL BE SCH 80 PVC UNO.
 3. SS-2 EMERGENCY SHOWER AND EYE WASH STATIONS SHALL BE HAWS MODEL 8300CRP. ALL ASSOCIATED PIPING SHALL BE SCH 40 GS UNO.
 4. MOUNTING PER MANUFACTURER'S RECOMMENDATIONS.
 5. PROVIDE 3/4" THICK (NOMINAL) NON-SHRINK NON-METALLIC EPOXY GROUT AS NECESSARY TO PROVIDE LEVEL/ PLUMB INSTALLATION.

3
EMERGENCY SHOWER
AND EYEWASH DETAIL
NTS

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DAVID A. O'CONNOR, PE DATE
LIC. NO.: 56803

DESIGNED	DOC
DRAWN	ALS
Q.C.	
APPROVED	

**RECORD DRAWINGS
MECHANICAL STANDARD DETAILS**

PROJECT NO:	00193-009-02
DATE:	MARCH 2015
SHEET NO:	M-13

GENERAL STRUCTURAL NOTES

DESIGN CRITERIA

CODES:
 2010 FLORIDA BUILDING CODE
REINFORCED CONCRETE:
 WATER RETAINING STRUCTURES: ACI 350-08 "CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES"
 ALL OTHER STRUCTURES: ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
 STRUCTURAL STEEL: AISC MANUAL OF STEEL CONSTRUCTION 13TH EDITION
 THE ALUMINUM ASSOCIATION, ALUMINUM DESIGN MANUAL 2005

DESIGN LIVE LOADS:

- PROCESS RELATED STRUCTURES	
WALKWAYS, STAIRWAYS AND LANDINGS	100 PSF
ELEVATED SLABS	200 PSF
PROCESS SLABS ON GRADE	300 PSF, UNO
- CANOPY STRUCTURES	
ROOF	20 PSF
SUPERIMPOSED DEADLOADS:	
- CANOPY ROOF	5 PSF
- FLOORS	AS NOTED

WIND LOADS:

- ULTIMATE DESIGN WIND SPEED, V_{ult} (3-SECOND GUST)	155 MPH
- NOMINAL DESIGN WIND SPEED, V_{50}	120 MPH
- RISK CATEGORY	II
- EXPOSURE CATEGORY	C
- DESIGN PRESSURES: PER ASCE 7-10	
SEPTAGE/GREASE RECEIVING CANOPY:	
- ENCLOSURE CLASSIFICATION	OPEN
- INTERNAL PRESSURE COEFFICIENT, C_{pi}	±0.0
ROLL-OFF FILTER CANOPY:	
- ENCLOSURE CLASSIFICATION	OPEN
- INTERNAL PRESSURE COEFFICIENT, C_{pi}	±0.00
SCREW PRESS CANOPY:	
- ENCLOSURE CLASSIFICATION	OPEN
- INTERNAL PRESSURE COEFFICIENT, C_{pi}	±0.00

FOUNDATIONS

- ALLOWABLE BEARING PRESSURE FOR SPREAD FOOTINGS OVER SUBSURFACE PREPARED AS PER SPECIFICATIONS : 1500 PSF

GEOTECHNICAL REPORT

- GEOTECHNICAL REPORT BY ANY INTERPRETATION OF THE CONTENTS OF THE GEOTECHNICAL REPORT IS THE RESPONSIBILITY OF THE CONTRACTOR.

FLOTATION CONSIDERATION

STRUCTURES WERE DESIGNED TO BE NON-BUOYANT AFTER THEY ARE PLACED INTO OPERATION. THEREFOR THE STRUCTURES MAY BE BUOYANT DURING CONSTRUCTION. GENERAL CONTRACTOR SHALL PROTECT ALL STRUCTURES FROM FLOTATION DURING CONSTRUCTION REGARDLESS OF GROUND WATER LEVELS UNTIL STRUCTURES ARE PLACED INTO OPERATION.

GENERAL CONDITIONS

ALL STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE MECHANICAL, CIVIL, ARCHITECTURAL, ELECTRICAL, HVAC AND SHOP DRAWINGS AND SPECIFICATIONS.

THE CONTRACTOR SHALL REVIEW AND VERIFY DIMENSIONS SHOWN IN ALL PLANS AND REVIEW ALL FIELD CONDITIONS THAT MAY AFFECT THE INSTALLATION OF THE FACILITY. SHOULD DISCREPANCIES APPEAR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING TO OBTAIN ENGINEER'S CLARIFICATION BEFORE COMMENCING WITH THE WORK.

FOR ALL ITEMS EMBEDDED IN OR PASSED THROUGH CONCRETE, THE CONTRACTOR SHALL INITIALLY REFER TO MECHANICAL, HEATING, AND VENTILATION DRAWINGS FOR TYPE, SIZE, LOCATION, AND SPECIAL INSTALLATION REQUIREMENTS FOR THESE ITEMS.

THE CONTRACTOR SHALL TAKE ANY AND ALL NECESSARY MEASURES TO PROTECT EXISTING STRUCTURES FROM DAMAGE WHEN WORKING IN AND AROUND EXISTING STRUCTURES PERFORMING WORK SUCH AS DEMOLITION, FOUNDATION EXCAVATION, AND OTHERS.

SIZE AND LOCATION OF EQUIPMENT PADS AND ANCHOR BOLTS SHALL BE PER EQUIPMENT MANUFACTURERS REQUIREMENTS.

ANY EQUIPMENT THAT MAY INDUCE VIBRATION TO THE STRUCTURE SHALL BE ADEQUATELY ISOLATED FROM THE STRUCTURES.

ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT, EXCEPT WHERE A DIFFERENT DETAIL IS SHOWN.

STANDARD DETAILS APPLY TO ALL SIMILAR SITUATIONS ON THE PROJECT EXCEPT WHERE A DIFFERENT DETAIL IS SHOWN.

REINFORCING STEEL

REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60 REQUIREMENTS. WELDED WIRE FABRIC, ASTM A185, ALL ACCESSORIES SHALL BE IN CONFORMANCE WITH ACI 318 REQUIREMENTS. REINFORCING STEEL SHALL HAVE THE FOLLOWING CLEAR COVER UNLESS OTHERWISE NOTED:

- CONCRETE CAST AGAINST EARTH	3"
- FORMED SURFACES IN CONTACT WITH SOIL, SEWAGE, WATER OR EXPOSED TO WEATHER	2"
- FORMED SURFACES NOT EXPOSED TO WEATHER OR IN CONTACT WITH SOIL:	
- SLABS, WALLS, AND JOIST	3/4"
- BEAMS AND COLUMNS	1 1/2"

LAP SPICES SHALL BE AS SHOWN ON THE DRAWINGS. FOR LAP SPICES NOT SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL OBTAIN ENGINEER'S APPROVAL.

THE CONTRACTOR SHALL PREPARE PLACING DRAWINGS AND SCHEDULES IN CONFORMANCE WITH ACI 318 REQUIREMENTS.

UNLESS OTHERWISE NOTED, THE MINIMUM REINFORCING FOR ALL CONCRETE WALL AND SLABS SHALL BE AS FOLLOWS:

THICKNESS	MINIMUM REINFORCING					
	6"	8"	10"	12"-16"	18"-22"	24"
REINF. EACH WAY	#4@12"	#5@12"	#4@12"	#5@12"	#6@12"	#7@12"
LOCATION	CENTER	CENTER	EF	EF	EF	EF

PRE-ENGINEERED METAL BUILDING

FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS REQUIRED TO DESIGN, FABRICATE, DELIVER TO JOB SITE AND ERECT THE PRE-ENGINEERED METAL BUILDING AS SHOWN ON THE DRAWINGS.

SUBMIT TO THE ENGINEER COMPLETE PLANS SHOWING SUPERSTRUCTURE COLUMN LINES SET TO COORDINATE WITH CONCRETE DIMENSIONS SHOWN. INDICATE ANCHOR BOLT SIZE AND LOCATIONS AND FOUNDATION REACTIONS IN KIPS AT ALL COLUMNS.

SUBMIT LETTER AND CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA CERTIFYING THAT THE STRUCTURAL FRAMING AND COVERING PANELS PROPOSED MEET THE DESIGN CRITERIA.

PRIOR TO FOUNDATION CONSTRUCTION, PRE-ENGINEERED METAL BUILDING SUBMITTAL MUST BE APPROVED. CONSTRUCTION DETAILS MAY BE VARIED TO SUITE MANUFACTURER'S STANDARD DESIGN.

ROOF DEAD LOAD:	SELF WEIGHT
SUPERIMPOSED DEAD LOAD:	8 PSF
ROOF LIVE LOAD:	20 PSF

ALL BUILDING COLUMNS SHALL BE DESIGNED AS "PIN" CONNECTED. COLUMN ENDS SHALL NOT TRANSFER MOMENTS TO FOUNDATION.

COLUMN AND BASE PLATE SIZE SHALL ALLOW FOR A MINIMUM ANCHOR BOLT DISTANCE OF 8" TO ANY VERTICAL EDGE OF CONCRETE UNLESS SPECIFICALLY APPROVED BY ENGINEER. THE MINIMUM ANCHOR ROD EMBEDMENT DEPTH IS 1'-0".

MANUFACTURERS:

BUTLER MANUFACTURING COMPANY, KANSAS CITY, MISSOURI; VARCO PRUDEN BUILDINGS, MEMPHIS, TENNESSEE; OR EQUAL.

MATERIALS:

FRAMING - PRIMARY AND SECONDARY FRAMING SHALL CONSIST OF SHOP FABRICATED WELDED UP PLATE SECTION COLUMNS AND ROOF BEAMS COMPLETE WITH NECESSARY SPLICE, BASE, CAP, COMPRESSION, AND STIFFENER PLATES WITH BOLT CONNECTION HOLES FOR FIELD ASSEMBLY. PURLINS AND GUTTS SHALL BE 8-IN MIN. DEEP "Z" SECTIONS. RAFTER STRUTS SHALL BE 8-IN MIN. DEEP "C" SECTIONS. LATERAL BRACING SHALL BE DESIGNED BY THE BUILDING MANUFACTURER. ALL BOLTS FOR STRUCTURAL FRAMING CONNECTIONS SHALL BE HIGH STRENGTH BOLTS CONFORMING TO ASTM A325.

WALL SYSTEM - EXTERIOR WALL PANELS SHALL BE BUTLERB PANELS AS FURNISHED BY BUTLER MANUFACTURING COMPANY OR EQUAL. PANEL MATERIAL SHALL BE ASTM A448, GRADE C, 28 GAUGE GALVANIZED STEEL G90 COATING CONFORMING TO ASTM A525. FURNISH EXTERIOR AND INTERIOR TRIM AS REQUIRED FOR ALL DOORS, FLASHINGS, CLOSURES.

ROOF SYSTEM - THE BUILDING ROOF PANELS SHALL BE PRECISION ROLL FORMED MR-20 PANELS AS FURNISHED BY BUTLER MANUFACTURING COMPANY OR EQUAL. PANEL MATERIAL AS SPECIFIED SHALL BE 20 GAUGE GALVANIZED STEEL (60,000 PSI YIELD) G90 COATING CONFORMING TO ASTM A525. GUTTERS, DOWNSPOUTS AND TRIM PIECES ARE TO BE STANDARD PRODUCTS INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS.

FASTENERS - FASTENERS FOR WALL AND ROOF SYSTEM SHALL BE HOT DIPPED GALVANIZED AND FURNISHED WITH AN INTEGRAL GALVANIZED STEEL-BACKED NEOPRENE WASHER. ALL EXPOSED FASTENERS SHALL BE PREPAINTED TO MATCH WALL COLOR.

ANCHOR BOLTS - ANCHOR BOLTS SHALL BE F1554 GRADE 36 HOT DIPPED GALV. HEAVY HEX HEADED. ANCHOR BOLTS SHALL BE DESIGNED BY THE BUILDING MANUFACTURER AND FURNISHED BY THE CONTRACTOR.

PAINTING:

ALL STRUCTURAL STEEL SHALL BE SHOP PREPARED AND FIELD PAINTED PRIOR TO ERECTION. PRIOR TO PAINTING, ALL STEEL SHALL BE CLEANED OF LOOSE RUST, LOOSE MILL SCALE, OIL AND OTHER FOREIGN MATERIAL. SEE SPECIFICATION.

PAIN COLOR TO BE APPROVED BY THE OWNER.

CONCRETE

ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318 REQUIREMENTS (LATEST EDITION)

ALL CONCRETE SHALL BE AIR-ENTRAINED WITH 4000 PSI COMPRESSIVE STRENGTH AT 28 DAYS UNLESS OTHERWISE NOTED.

WATER REDUCING AGENT SHALL BE IN ACCORDANCE WITH ASTM C494

ALL CONCRETE SURFACES EXPOSED TO AIR UNLESS OTHERWISE NOTED IN SPECIFICATIONS, SHALL BE TREATED WITH AN APPROPRIATE CURING COMPOUND AS SOON AS CEMENT FINISHING IS COMPLETED OR FORMS ARE REMOVED.

ALL EXPOSED CORNERS SHALL HAVE A MINIMUM CHAMFER OF 3" UNLESS OTHERWISE NOTED.

THE CONTRACTOR SHALL OBTAIN ENGINEER'S APPROVAL FOR THE LOCATIONS OF CONSTRUCTION JOINTS THAT ARE NOT SHOWN ON THE DRAWINGS.

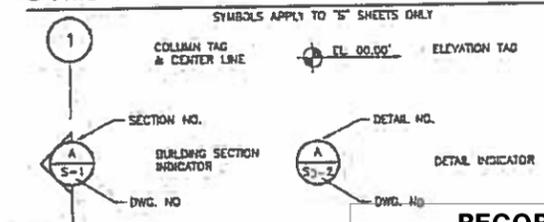
REDLINE DRAWINGS
 PREPARED BY:
VOGEL BROS. BUILDING CO.
 OCTOBER 2017

ABBREVIATIONS

STRUCTURAL ABBREVIATIONS APPLY TO "S" SHEETS ONLY

AL, ALU, ALUM	ALUMINUM	EL	ELEVATIONS	WAT'L	WATER	SPECS	SPECIFICATIONS
ADDT'L	ADDITIONAL	EXP	EACH WAY	WAX	WAX	SS	STAINLESS STEEL
BLD	BUILDING	EXP	EXPANSION	WEN	WEN	STD	STANDARD
BOT	BOTTOM	FE	FIRE EXTINGUISHER	WID	WID	STL	STEEL
CJ	CONTROL JOINT	FR	FAR FACE	WIS	WIS	RENF	REINFORCEMENT
CMU	CONCRETE MASONRY UNIT	FTD	FIBER REINFORCED PLASTIC	WIS	WIS	TS	TOP AND BOTTOM
CONST JT	CONSTRUCTION JOINT	HTG	HORIZONTAL	WIS	WIS	T/STRUCTURE	TOP OF STRUCTURE
CONT	CONTINUOUS	HP	HIGH POINT	WIS	WIS	TYR	TYPICAL
DA	DIAMETER	ID	INSIDE DIAMETER	DC	DC	UNO	UNLESS NOTED OTHERWISE
DD	DITTO	JT	JOINT	PLF	PLF	VERT	VERTICAL
DWG	DRAWING	LP	LOW POINT	PT	PT	WVF	WELDED WIRE FABRIC
EF	EACH FACE	MANUF	MANUFACTURER	PROJ	PROJ		
EJ	EXPANSION JOINT			PSF	PSF		
				PSI	PSI		
				SJ	SJ		

SYMBOLS



RECORD DRAWING

THIS RECORD DRAWING SHOWS THE REPORTED LOCATION OF WORK IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS. THIS RECORD DRAWING IS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR AND SURVEYOR. CARDNO CANNOT AND DOES NOT WARRANTY ITS ACCURACY.

ENGINEERING TECHNOLOGIES, INC.
 3551 W. LAKE MARY BLVD., SUITE 210
 LAKE MARY, FL 32746
 PHONE (407) 322-0500
 ET PROJECT NO. 12-233

**SEWRF
 SEPTAGE/ GREASE
 RECEIVING STATION**

MANATEE COUNTY
 DEPARTMENT OF PUBLIC WORKS
 UTILITIES DEPARTMENT
 4410 69th Street West Bradenton, Florida 34210
 (941) 792-8811

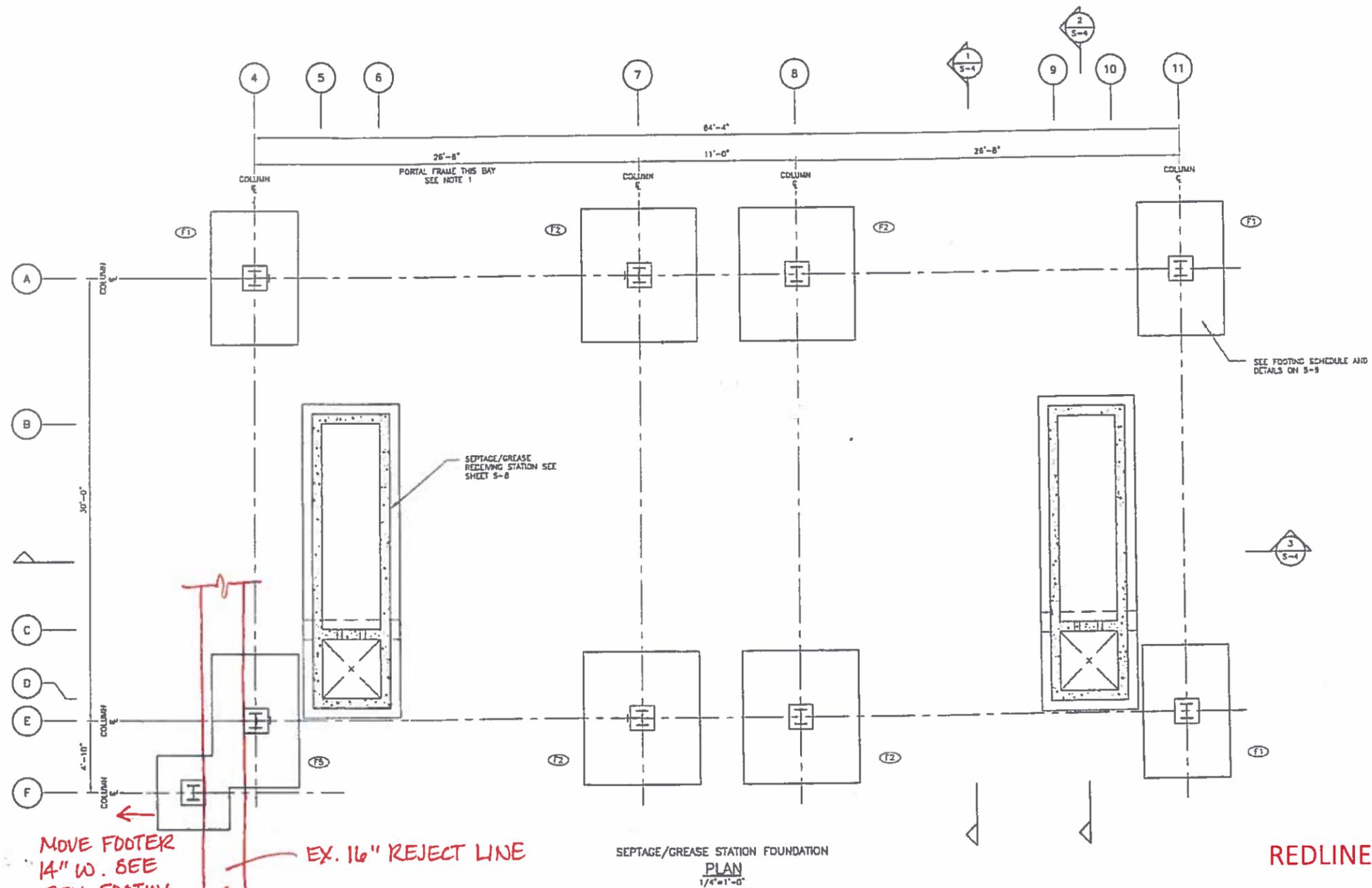
Cardno
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 CLEARWATER
 380 PARK PLACE BLVD, STE 300 CLEARWATER FL 34619
 TEL: (727) 871-3333 (800) 814-8244
 www.cardno.com CardNo. of Authorization No. 229 03

JOHN VINCENT SOBCHAK
 LICENSE
 No. 71407
 STATE OF
 FLORIDA
 PROFESSIONAL ENGINEER

DESIGNED	JS
DRAWN	JS
C.C.	BE
APPROVED	JS

**RECORD DRAWINGS
 GENERAL STRUCTURAL
 NOTES**

PROJECT NO.	00193-009-02
DATE:	MARCH 2015
SHEET NO.:	S-1



SEPTAGE/GREASE STATION FOUNDATION
 PLAN
 1/4"=1'-0"

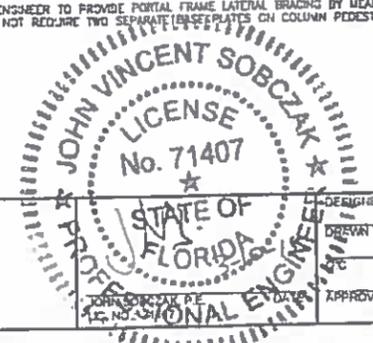
NOTES:
 1. SPECIALTY ENGINEER TO PROVIDE PORTAL FRAME LATERAL BRACING BY MEANS THAT DOES NOT REQUIRE TWO SEPARATE BRACE PLATES ON COLUMN PEDESTAL.

MOVE FOOTER 14" W. SEE REV. FOOTING DESIGN (RFI-31)

EX. 16" REJECT LINE

REDLINE DRAWINGS

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 OCTOBER 2017



ENGINEERING TECHNOLOGIES, INC.
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 LAKE MARY, FL 32746
 PHONE: (407) 322-0500
 ET PROJECT NO. - 12-233

RECORD DRAWING
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NO	DESCRIPTION	BY	DATE
	RECORD DRAWING		12/2017

**SEWRF
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 300 PARK PLACE BLVD. STE. 300, CLEARWATER, FL 33729
 TEL: (727) 821-3800 (813) 861-8214
 www.gardno.com Certificate of Authorization No. 20819

DESIGNED	JS
DRAWN	JS
CHECKED	JS
APPROVED	JS

RECORD DRAWINGS
 SEPTAGE/GREASE STATION
 CANOPY FOUNDATION PLAN

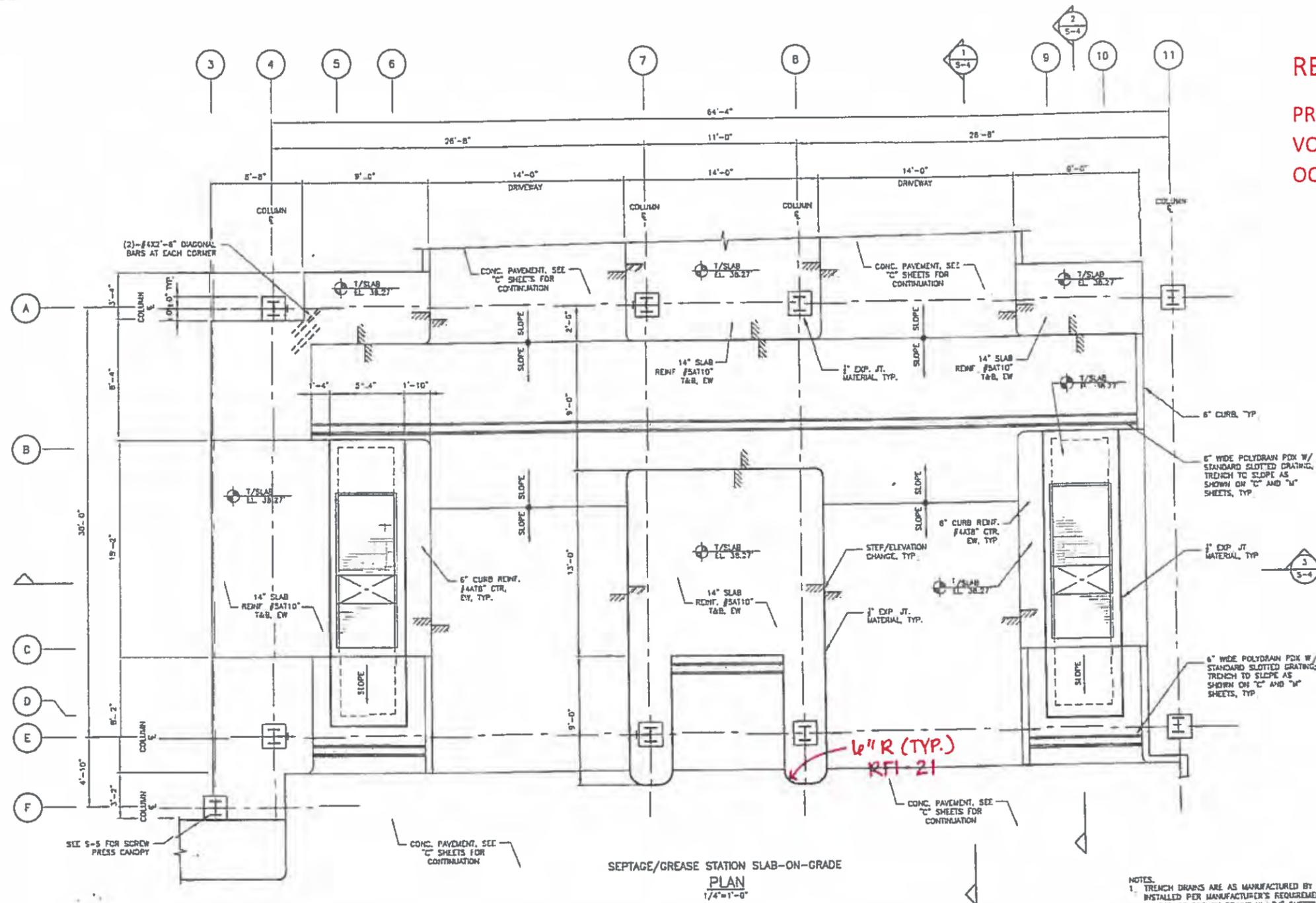
PROJECT NO	00193-009-02
DATE	MARCH 2015
SHEET NO	S-2

REDLINE DRAWINGS

PREPARED BY:

VOGEL BROS. BUILDING CO.

OCTOBER 2017



SEPTAGE/GREASE STATION
SLAB-ON-GRADE
PLAN
1/4"=1'-0"

NOTES:
1. TRENCH DRAINS ARE AS MANUFACTURED BY ABT, INC. TRENCH DRAIN SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS. COORDINATE DEPTH AND SLOPES OF TRENCH DRAINS W/ "M" SHEETS.

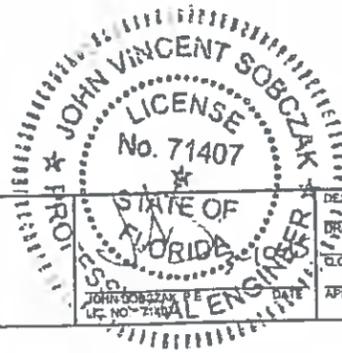
6" R (TYP.)
RFI 21

ENGINEERING TECHNOLOGIES, INC.
3551 W. LAKE MARY BLVD., SUITE 310
LAKE MARY, FL 32748
PHONE: (407) 322-0500
ET PROJECT NO. - 12 233

SEWRF
SEPTAGE/ GREASE
RECEIVING STATION

MANATEE COUNTY
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UTILITIES DEPARTMENT
4410 65th Street West Bradenton, Florida 34210
(941) 792-8811

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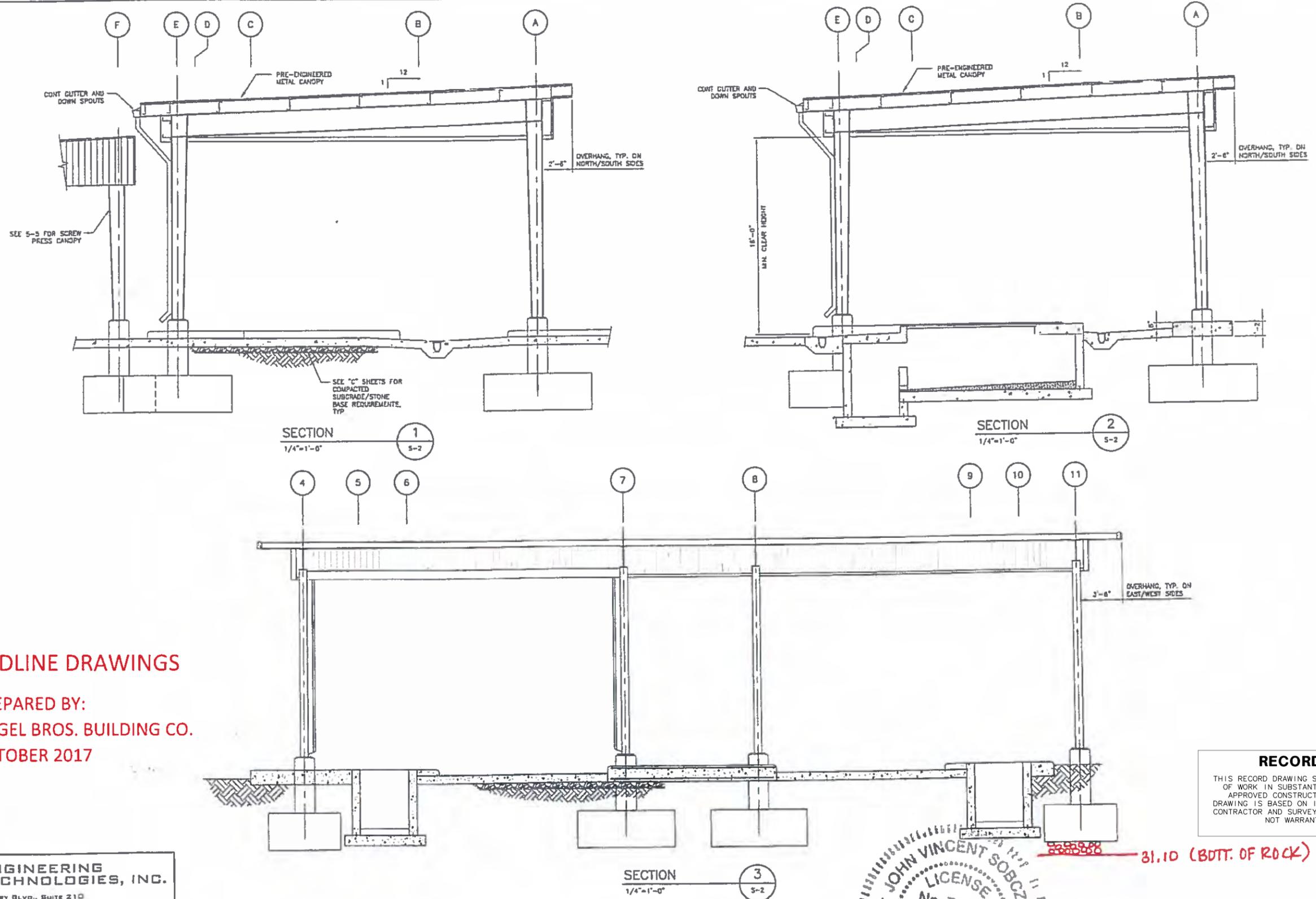
DESIGNED
DRAWN
CHECKED
APPROVED

RECORD DRAWING
THIS RECORD DRAWING SHOWS THE REPORTED LOCATION OF WORK IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS. THIS RECORD DRAWING IS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR AND SURVEYOR. CARDNO CANNOT AND DOES NOT WARRANTY ITS ACCURACY.

RECORD DRAWINGS
SEPTAGE/GREASE STATION
CANOPY SLAB-ON-GRADE PLAN

PROJECT NO:
00193-009-02
DATE
MARCH 2015
SHEET NO
S-3

NO	DESCRIPTION	DATE
	RECORD DRAWING	12/2017



REDLINE DRAWINGS
 PREPARED BY:
 VOGEL BROS. BUILDING CO.
 OCTOBER 2017

RECORD DRAWING
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31.10 (BOTT. OF ROCK)

JOHN VINCENT SOBczA
 LICENSE
 No. 71407
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER

DESIGNED	BY
DRAWN	BY
CHECKED	BY
APPROVED	BY

ENGINEERING TECHNOLOGIES, INC.
 3551 W. LAKE MARY BLVD., SUITE 210
 LAKE MARY, FL 32746
 PHONE: (407) 322-0500
 ET PROJECT NO. 12-233

SEWRF SEPTAGE/ GREASE RECEIVING STATION

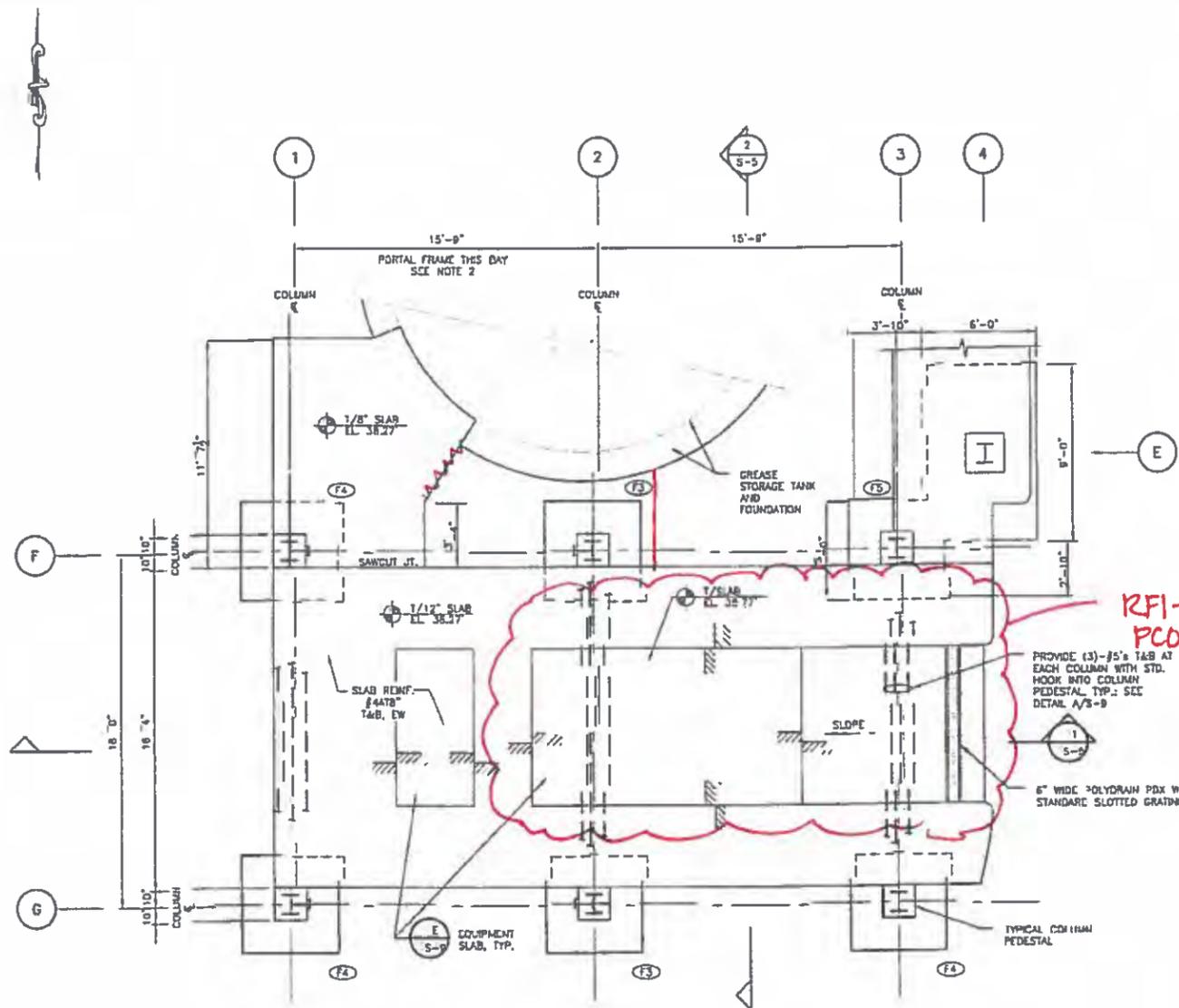
MANATEE COUNTY
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 UTILITIES DEPARTMENT
 4410 86th Street West Bradenton, Florida 34210
 (841) 762 6811

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RECORD DRAWINGS
SEPTAGE/GREASE STATION
CANOPY SECTIONS

PROJECT NO: 00193-009-02
 DATE: MARCH 2015
 SHEET NO: S-4

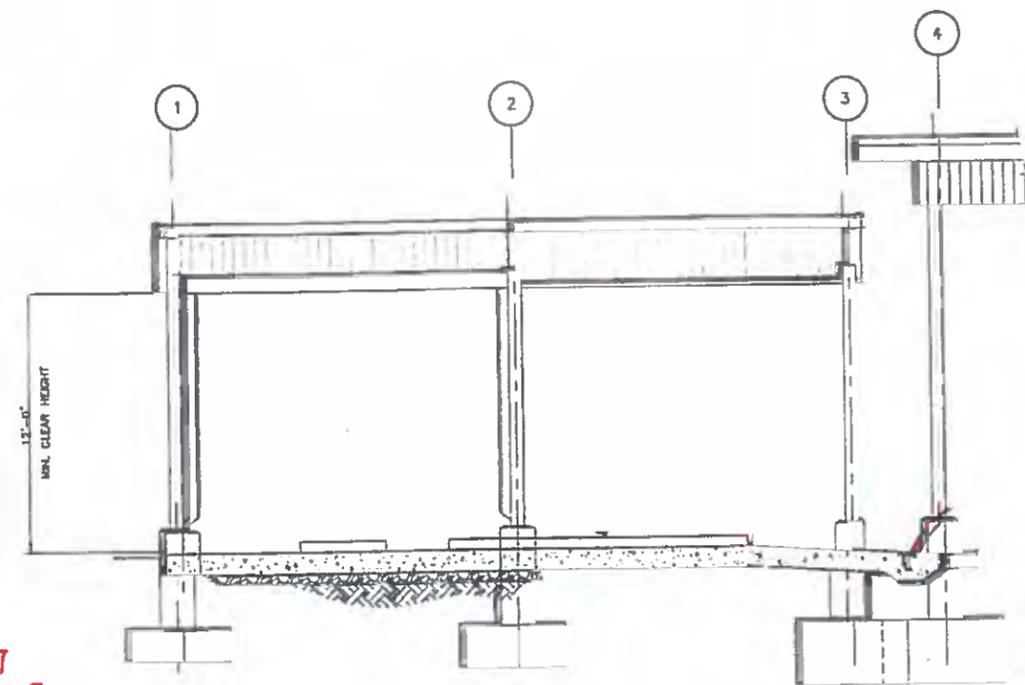
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	RECORD DRAWING		12/2017



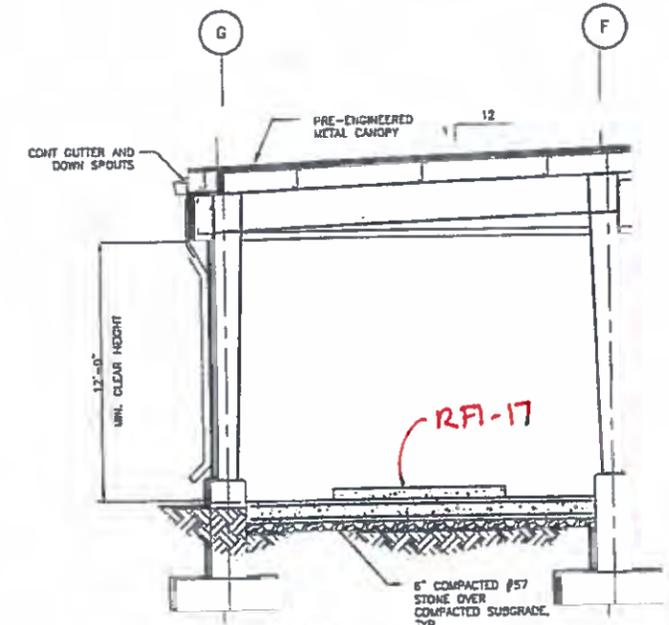
SCREW PRESS FOUNDATION
PLAN
 1/4"=1'-0"

- NOTES:
- TRENCH DRAINS ARE AS MANUFACTURED BY ABT, INC. TRENCH DRAIN SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS. COORDINATE DEPTH AND SLOPES OF TRENCH DRAINS W/ "M" SHEETS.
 - SPECIALTY ENGINEER TO PROVIDE PORTAL FRAME LATERAL BRACING BY MEANS THAT DOES NOT REQUIRE TWO SEPARATE BASE PLATES ON COLUMN PEDESTAL.

RFI-17
 PCO-003



SECTION
 1-1
 1/4"=1'-0"



2
 S-5

RECORD DRAWING

THIS RECORD DRAWING SHOWS THE REPORTED LOCATION OF WORK IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS. THIS RECORD DRAWING IS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR AND SURVEYOR. CARDNO CANNOT AND DOES NOT WARRANTY ITS ACCURACY.

REDLINE DRAWINGS

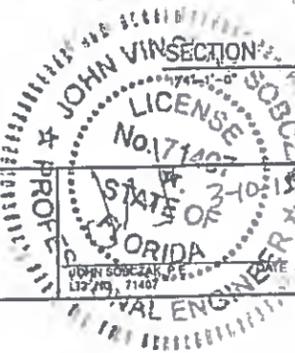
PREPARED BY:
VOGEL BROS. BUILDING CO.
 OCTOBER 2017

ENGINEERING TECHNOLOGIES, INC.
 3551 W. LAKE MARY BLVD., SUITE 210
 LAKE MARY, FL 32746
 PHONE: (407) 322-0600
 ET PROJECT NO. - 12-233

SEWRF SEPTAGE/ GREASE RECEIVING STATION

MANATEE COUNTY
 DEPARTMENT OF PUBLIC WORKS
 UTILITIES DEPARTMENT
 4410 60th Street West Bradenton, Florida 34210
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 280 PARK PLACE BLVD. STE 303 CLEARWATER, FL 33768
 TEL: (727) 831-3800 (800) 881-4314
 www.cardno.com Certificate of Authorization No. 22878

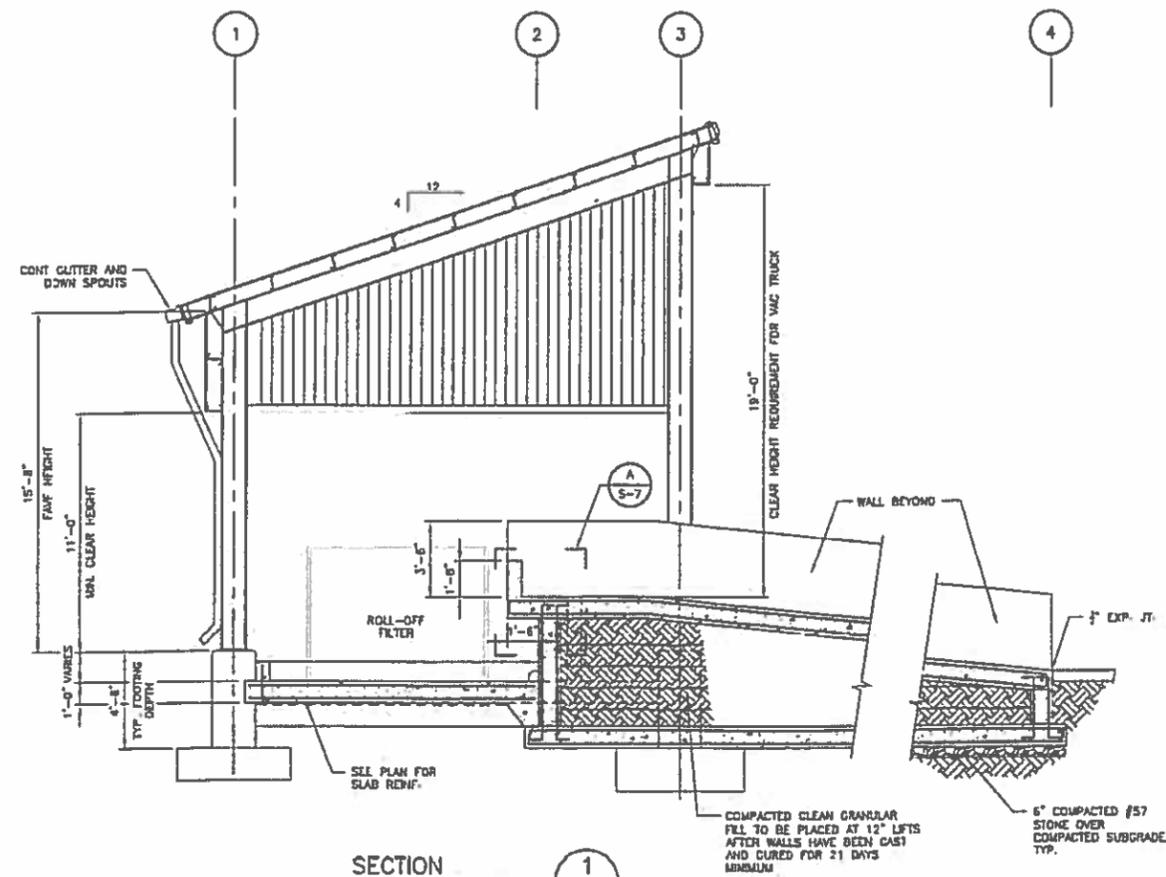


DESIGNED JS
 DRAWN JS
 QC JS
 APPROVED JS

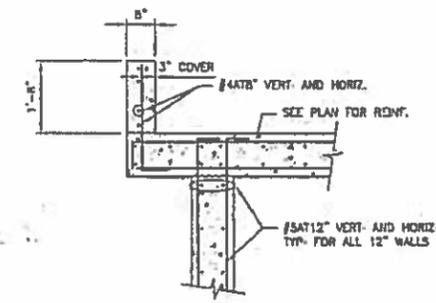
RECORD DRAWINGS
SCREW PRESS CANOPY
PLAN AND SECTIONS

PROJECT NO
 00193-009-02
 DATE
 MARCH 2015
 SHEET NO
 S-5

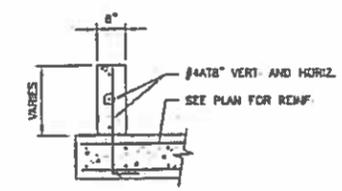
NO	DESCRIPTION	BY	DATE
	RECORD DRAWING		12/2017



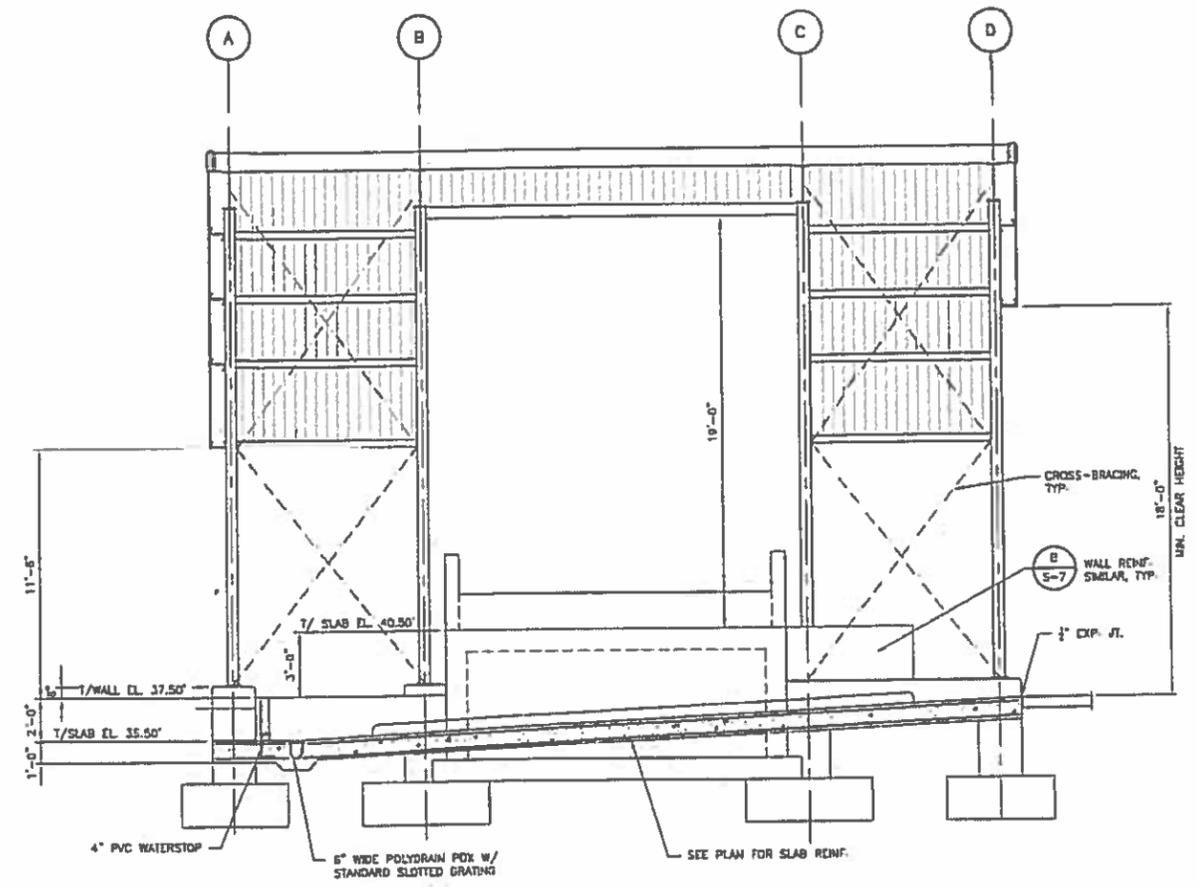
SECTION 1
1/4"=1'-0"



DETAIL A
3/4"=1'-0"



DETAIL B
3/4"=1'-0"



SECTION 3
1/4"=1'-0"

REDLINE DRAWINGS
 PREPARED BY:
VOGEL BROS. BUILDING CO
 OCTOBER 2017

RECORD DRAWING
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 3551 W. LAKE MARY BLVD., SUITE 210
 LAKE MARY, FL 32746
 PHONE: (407) 322-0500
 ET PROJECT NO. - 12-233

**SEWRF
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 280 PALM PLACE BLVD STE 208 CLEARWATER, FL 33769
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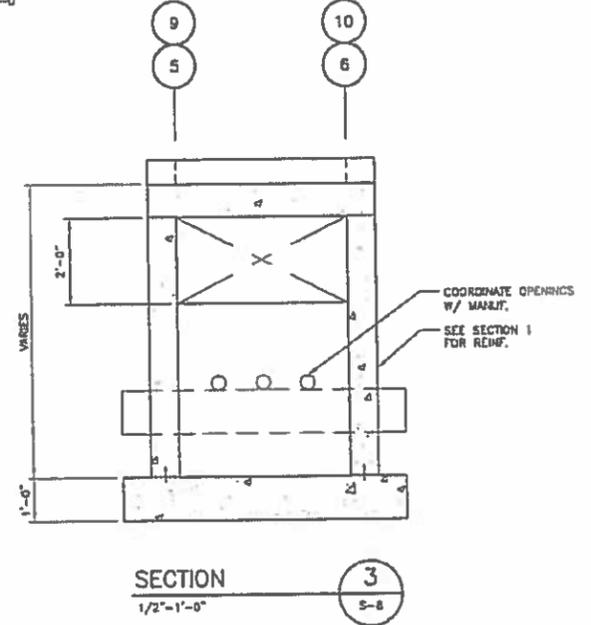
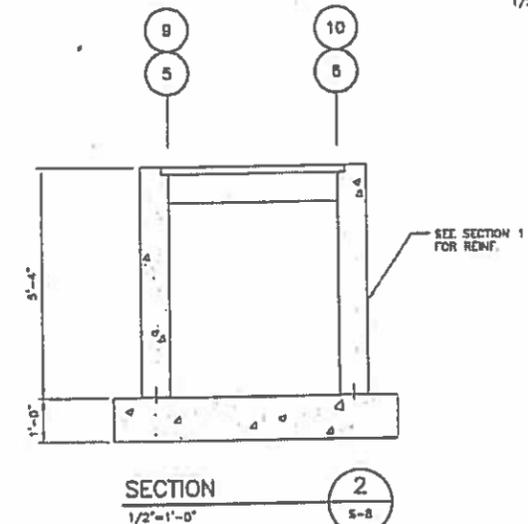
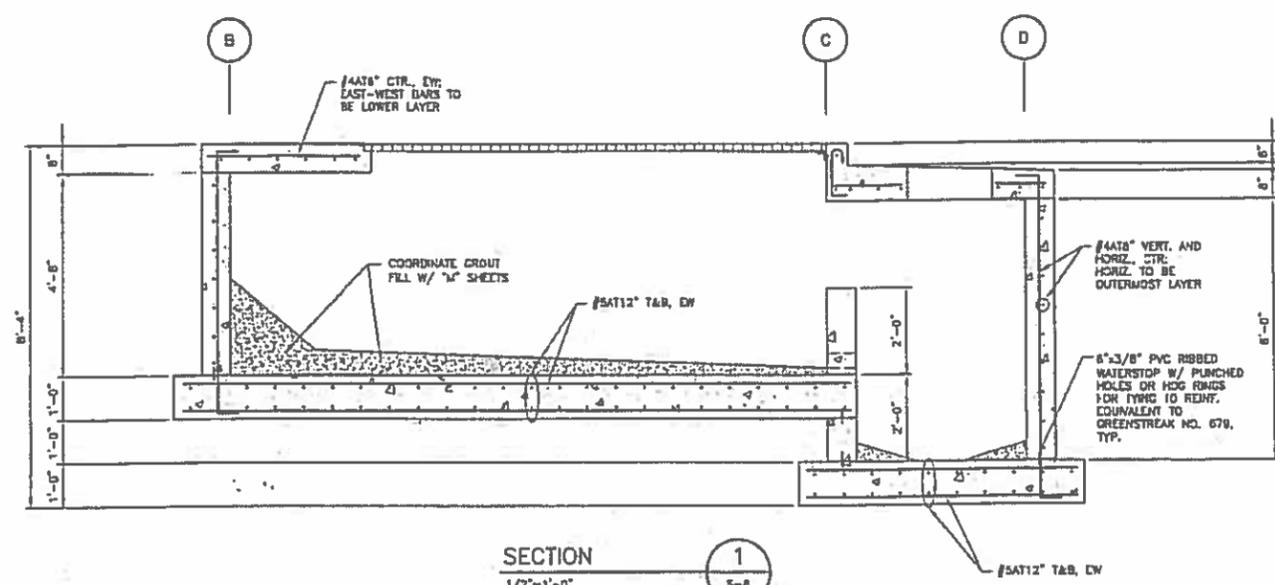
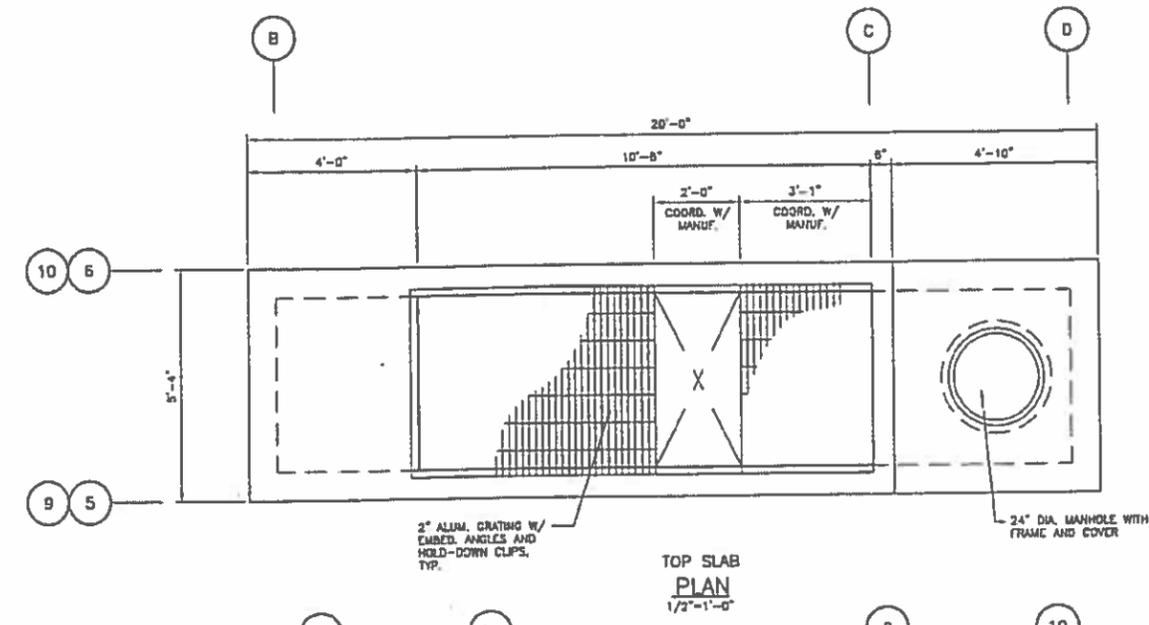
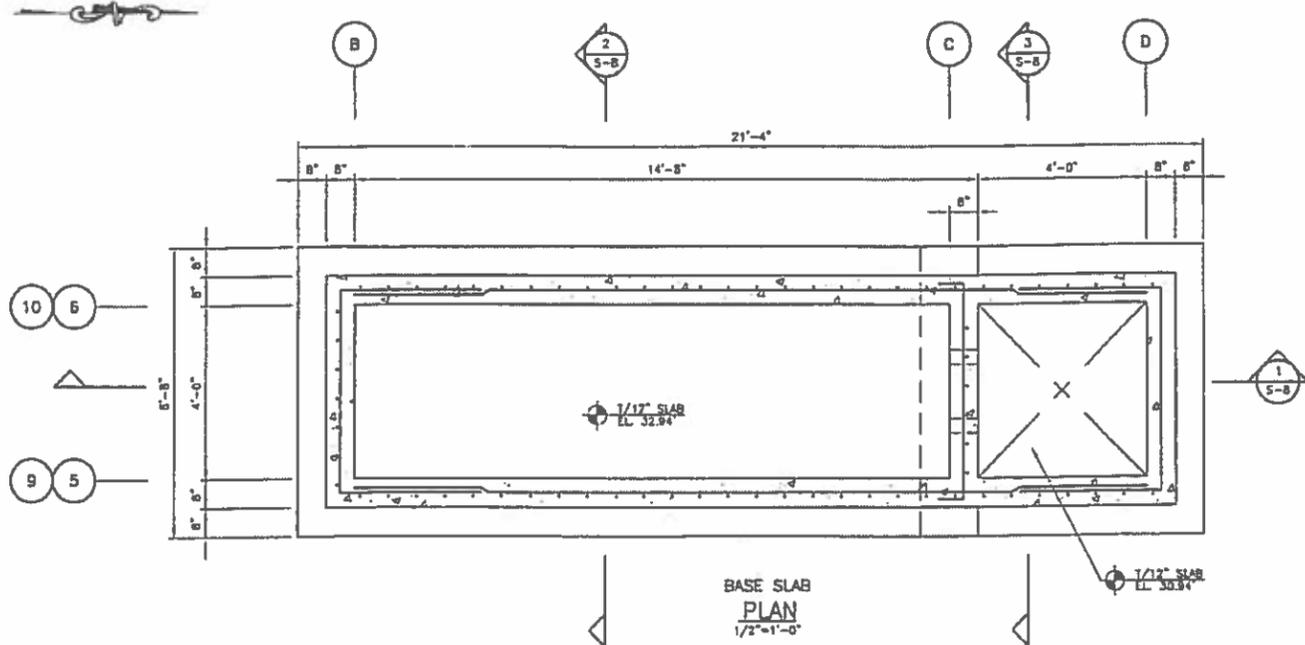


DESIGNED	JS
DRAWN	JS
CHECKED	BE
APPROVED	JS

RECORD DRAWINGS
ROLL-OFF FILTER CANOPY
SECTIONS AND DETAILS

PROJECT NO.	00193-009-02
DATE	MARCH 2015
SHEET NO.	S-7

NO	DESCRIPTION	BY	DATE
	RECORD DRAWING		12/2017



RECORD DRAWING
 THIS RECORD DRAWING SHOWS THE REPORTED LOCATION OF WORK IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS. THIS RECORD DRAWING IS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR AND SURVEYOR. CARDNO CANNOT AND DOES NOT WARRANTY ITS ACCURACY.

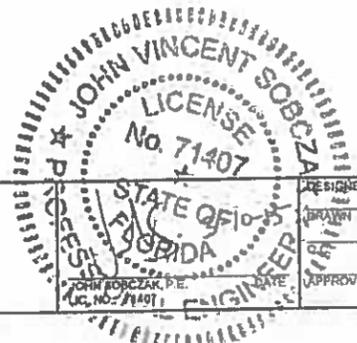
ENGINEERING TECHNOLOGIES, INC.
 2551 W. LAKE MARY BLVD., SUITE 210
 LAKE MARY, FL 32746
 PHONE (407) 323-0500
 LT PROJECT NO. - 12-233

NO	DESCRIPTION	BY	DATE
	RECORD DRAWING		12/2017

SEWRF SEPTAGE/GREASE RECEIVING STATION

MANATEE COUNTY
 DEPARTMENT OF PUBLIC WORKS
 UTILITIES DEPARTMENT
 4410 66th Street West Bradenton, Florida 34210
 (941) 792-8811

Cardno
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 263 PARK PLACE BLVD., STE. 303, CLEARWATER, FL 34629
 TEL. (727) 831-3333 (800) 861-4394
 www.cardno.com Certificate of Authorization No. 22019



DESIGNED	JG
DRAWN	JG
CHECKED	BE
APPROVED	JG

RECORD DRAWINGS
SEPTAGE/GREASE RECEIVING STATION PLANS AND SECTIONS

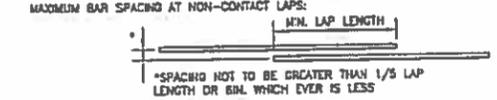
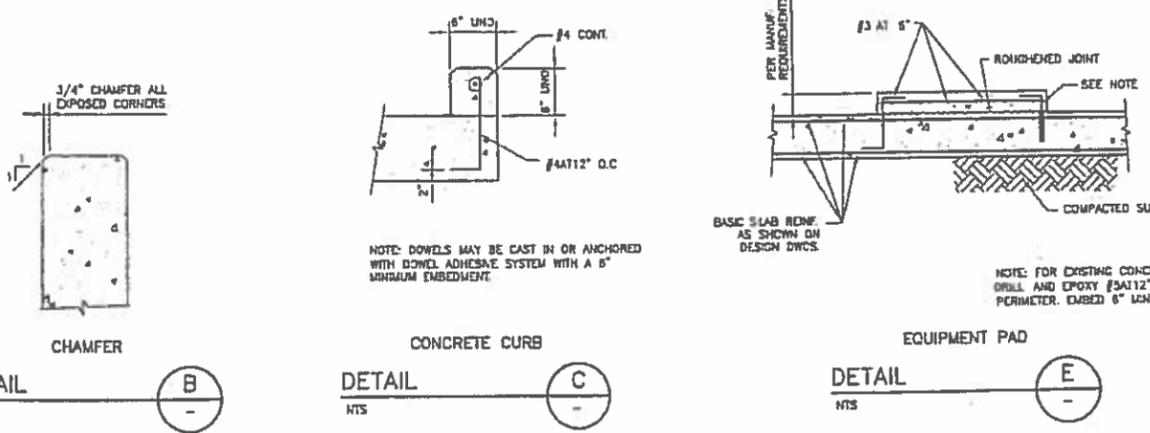
PROJECT NO: 00193-009-02
 DATE: MARCH 2015
 SHEET NO: S-8

REDLINE DRAWINGS
 PREPARED BY:
VOGEL BROS. BUILDING CO
 OCTOBER 2017

INDIVIDUAL FOOTING SCHEDULE						
FOOTING	FOOTING				REINFORCEMENT	REMARKS
	LENGTH	WIDTH	THICKNESS	PIER DEPTH		
F-1	9'-0"	6'-0"	3'-0"	4'-8"	#7A16" 1&B, EW	
F-2	9'-0"	6'-0"	3'-0"	4'-8"	#7A16" 1&B, EW	
F-3	5'-0"	5'-0"	2'-0"	4'-8"	#7A12" 1&B, EW	
F-4	5'-0"	5'-0"	1'-6"	4'-5"	#7A12" 1&B, EW	
F-5	SEE PLAN	SEE PLAN	3'-0"	4'-5"	#7A16" 1&B, EW	COMBINED FOOTING
F-6	6'-0"	6'-0"	2'-0"	4'-5"	#7A12" 1&B, EW	

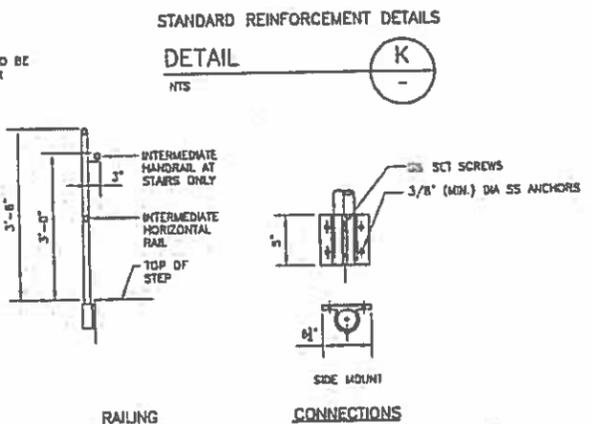
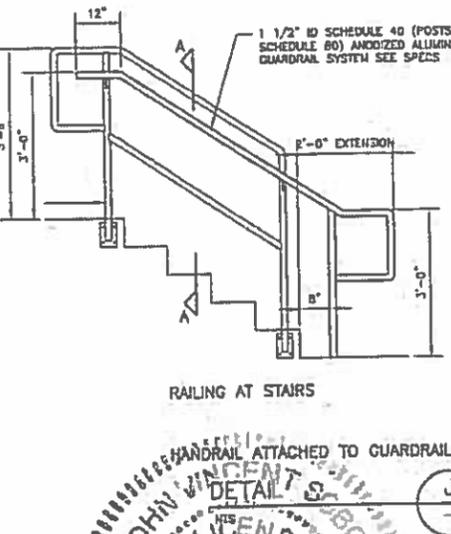
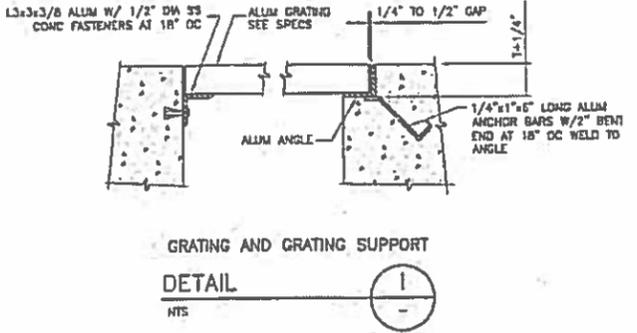
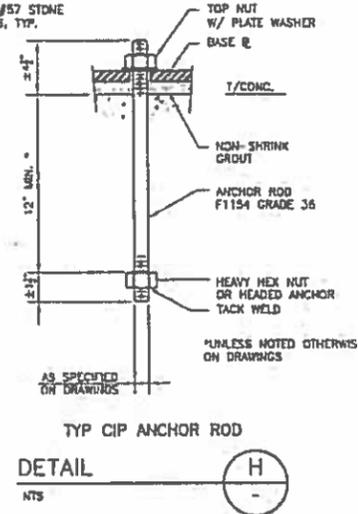
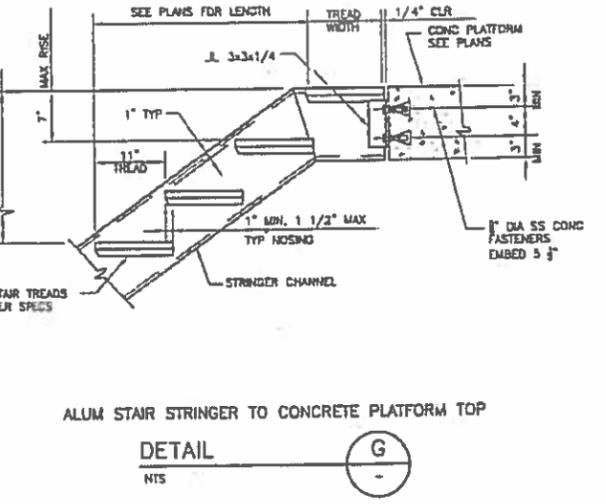
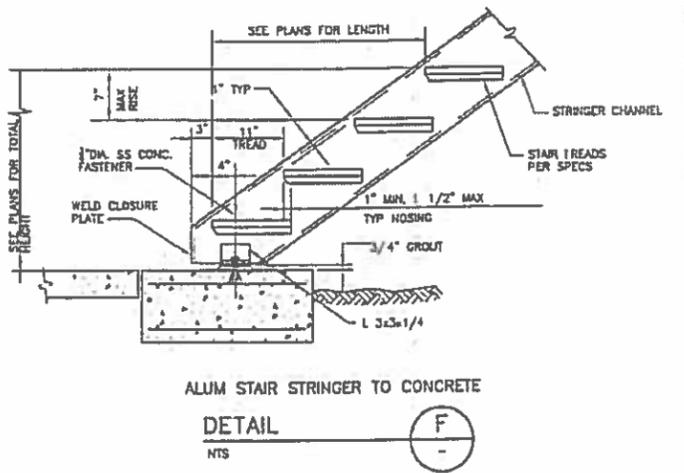
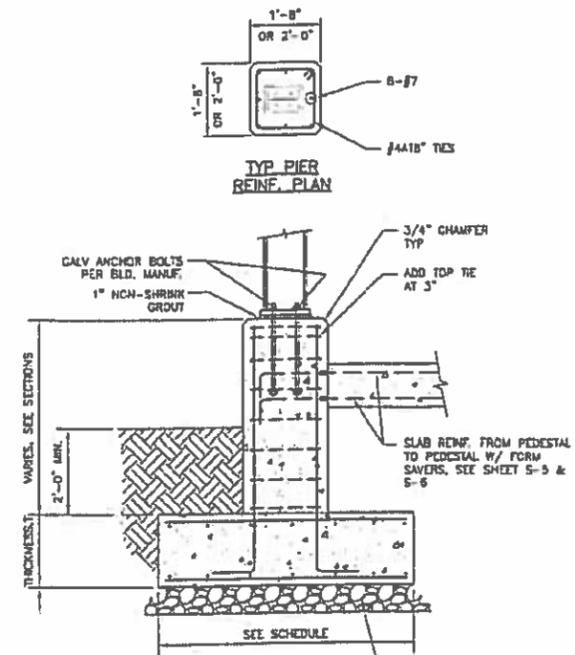
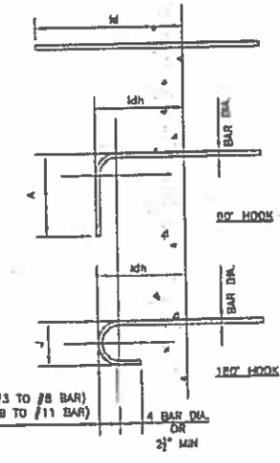
REBAR MINIMUM TENSION DEVELOPMENT & LAP LENGTHS					
CONCRETE STRENGTH $f'_c = 4,000$ PSI OR GREATER					
BAR SIZE	DEVELOPMENT LENGTH, l_d		LAP LENGTH (CLASS B SPLICE)		BAR SIZE
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	
#3	1'-7"	1'-3"	2'-0"	1'-7"	#3
#4	2'-1"	1'-7"	2'-8"	2'-0"	#4
#5	2'-7"	2'-0"	3'-4"	2'-7"	#5
#6	3'-1"	2'-4"	4'-0"	3'-1"	#6
#7	4'-5"	3'-8"	5'-10"	4'-5"	#7
#8	5'-2"	3'-11"	6'-5"	5'-2"	#8
#9	5'-10"	4'-6"	7'-6"	5'-10"	#9
#10	6'-6"	5'-0"	8'-5"	6'-6"	#10
#11	7'-3"	5'-7"	9'-6"	7'-3"	#11

NOTES:
 1. GRADE 60 UNCOATED REINFORCEMENT
 2. SPLICE LENGTHS GIVEN ABOVE ARE TO BE USED UNLESS NOTED OTHERWISE ON DESIGN DRAWINGS.



STANDARD HOOK DEVELOPMENT LENGTH			
BAR SIZE	90° STD HOOK "A"	180° STD HOOK "B"	DEVELOPMENT LENGTH, l_{dh}
#3	6"	3"	6"
#4	6"	4"	7"
#5	10"	5"	8"
#6	1'-0"	6"	10"
#7	1'-2"	7"	1'-0"
#8	1'-4"	8"	1'-2"
#9	1'-7"	11"	1'-3"
#10	1'-10"	1'-12"	1'-5"
#11	2'-0"	1'-22"	1'-7"

*FOR STD HOOK BAR GEOMETRY NOT SHOWN REFER TO MINIMUM ACI REQUIREMENTS



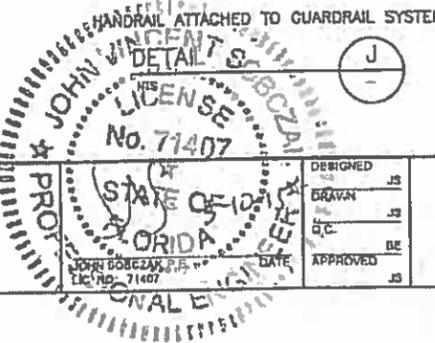
REDLINE DRAWINGS
 PREPARED BY:
VOGEL BROS. BUILDING CO.
 OCTOBER 2017

ENGINEERING TECHNOLOGIES, INC.
 2551 W. LAKE MARY BLVD., SUITE 210
 LAKE MARY, FL 32746
 PHONE (407) 323-0800
 ET PROJECT NO. 12-033

SEWRF SEPTAGE/ GREASE RECEIVING STATION

MANATEE COUNTY
 DEPARTMENT OF PUBLIC WORKS
 UTILITIES DEPARTMENT
 4410 66th Street West Bradenton, Florida 34210
 (841) 712-8811

Cardno
 Shaping the Future
 CLEARWATER
 2600 WYOMING PLACE BELVO STE 302 CLEARWATER, FL 33759
 TEL: (727) 821-3255 (800) 881-6314
 www.cardno.com Certificate of Authorization No. 29917



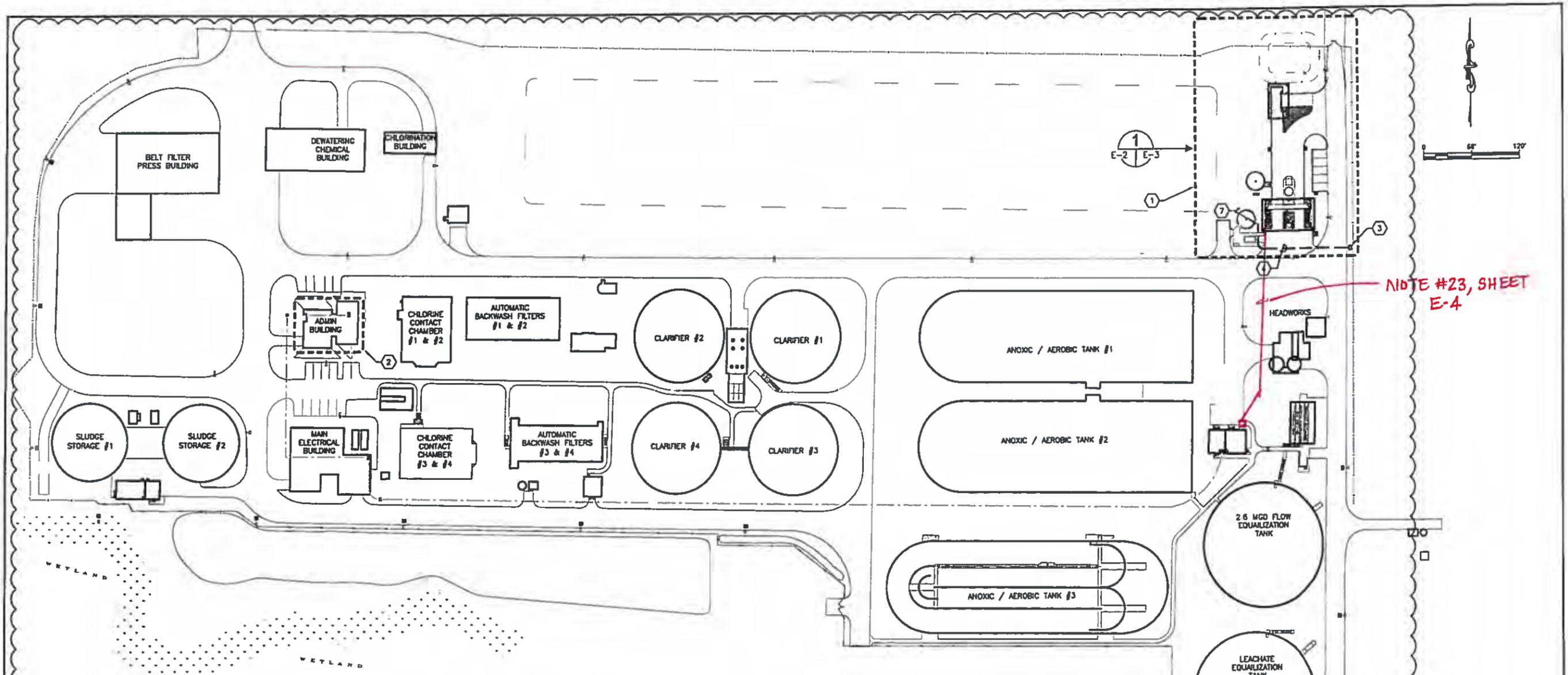
DESIGNED JS
 DRAWN JS
 CHECKED JS
 APPROVED JS

RECORD DRAWINGS
STRUCTURAL DETAILS

PROJECT NO: 00 153-009-02
 DATE: MARC H2015
 SHEET NO: S-9

NO.	DESCRIPTION	BY	DATE
	RECORD DRAWING		12/2017

RECORD DRAWING
 THIS RECORD DRAWING SHOWS THE REPORTED LOCATION OF WORK IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS. THIS RECORD DRAWING IS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR AND SURVEYOR. CARDNO CANNOT AND DOES NOT WARRANTY ITS ACCURACY.



NOTE #23, SHEET E-4

ELECTRICAL SITE PLAN
SCALE : 1" = 60'-0"

- KEYED NOTES:**
- ① NEW SEPTAGE / GREASE RECEIVING STATIONS. REFER TO PLAN DETAIL ON SHEET E-3 FOR NEW WORK REQUIRED.
 - ② EXISTING ADMINISTRATION BUILDING. EXISTING 12 COUNT SINGLE-MODE FIBER OPTIC CABLE TERMINATES IN PATCH PANEL LOCATED IN TELEPHONE ROOM. REFER TO PLAN DETAIL ON SHEET E-10 FOR NEW WORK REQUIRED.
 - ③ APPROXIMATE LOCATION OF EXISTING HANDHOLE. EXISTING 12 COUNT SINGLE-MODE FIBER OPTIC CABLE IS UNTERMINATED IN EXISTING HANDHOLE. CONTRACTOR SHALL INSTALL 3M FIBER OPTIC SPLICE CLOSURE 2178-KS9 AND FUSION SPLICE A NEW 12 COUNT SINGLE-MODE FIBER OPTIC CABLE TO THE NEW SEPTAGE RECEIVING STATION FIBER OPTIC CABINET.
 - ④ CONTRACTOR TO PROVIDE AND INSTALL NEW 2" CONDUIT AND INSTALL NEW 12 COUNT SINGLE-MODE FIBER OPTIC CABLE FROM EXISTING HANDHOLE TO NEW SEPTAGE RECEIVING STATION FIBER OPTIC CABINET.

ELECTRICAL REDLINE DRAWINGS

PREPARED BY:
B.L. SMITH ELECTRIC, INC.
OCTOBER 2017

RECORD DRAWING
THIS RECORD DRAWING SHOWS THE REPORTED LOCATION OF WORK IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS. THIS RECORD DRAWING IS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR AND SURVEYOR. CARDNO CANNOT AND DOES NOT WARRANTY ITS ACCURACY.

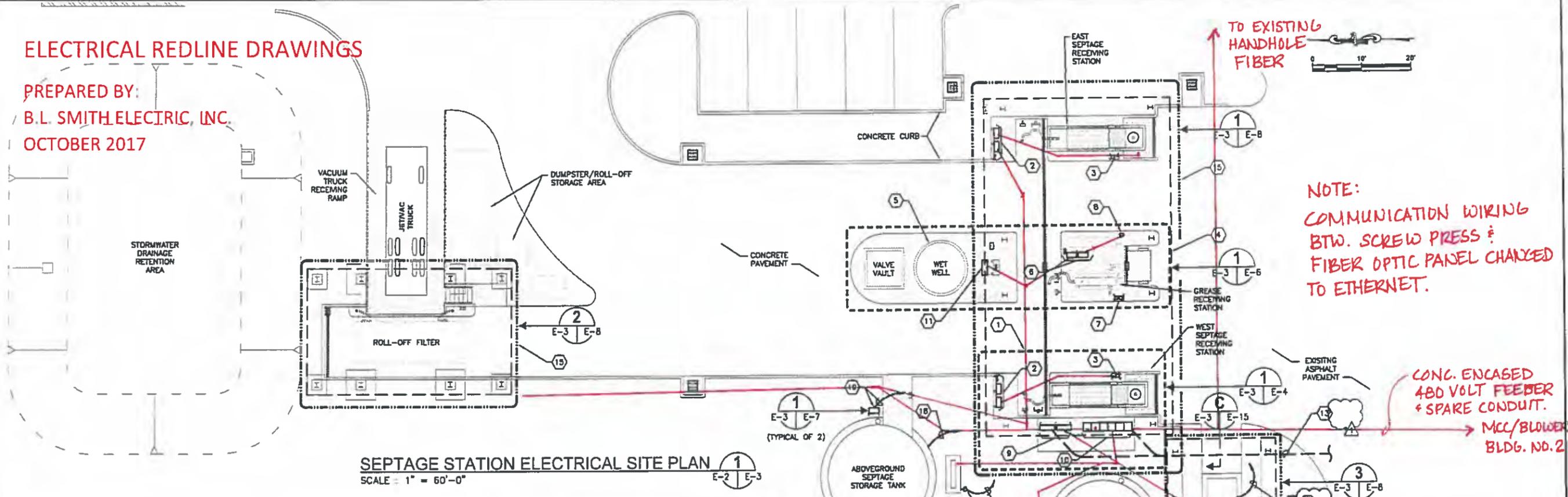


RECORD DRAWING FIBER OPTIC COMMUNICATIONS REVISION NO. DESCRIPTION BY DATE		SEWRF SEPTAGE/ GREASE RECEIVING STATION 12/2017 TDT 10-8-18		MANATEE COUNTY DEPARTMENT OF PUBLIC WORKS UTILITIES DEPARTMENT 4410 60th Street West Bradenton, Florida 34210 (941) 782-8811		 300 Park Place Blvd. Suite 300, Clearwater, Florida, 33759 www.cardnotbe.com - 727.531.3505 Certificate of Authorization No. 3843		TRISTY THOMAS, PE DATE DATE L.C. NO.: 47079		RECORD DRAWINGS ELECTRICAL SITE PLAN		PROJECT NO: 00193-009-02 DATE: MARCH 2015 SHEET NO: E-2	
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PLT: C:\pwork\Projects\2013\2013-0331\F10227\Rev 1-15-18.dwg LAST SAVE: Mon, 08/28/18 10:51:07 AM User: 30004-16-01-01-01-01-01

ELECTRICAL REDLINE DRAWINGS

PREPARED BY:
B.L. SMITH ELECTRIC, INC.
 OCTOBER 2017



NOTE:
 COMMUNICATION WIRING
 BTW. SCREW PRESS &
 FIBER OPTIC PANEL CHANGED
 TO ETHERNET.

**CONC. ENCASED
 480 VOLT FEEDER
 & SPARE CONDUIT.**
 MCC/BLOWER
 BLDG. NO. 2

- KEYED NOTES:**
- 1 NEW WEST SEPTAGE RECEIVING STATION. REFER TO PLAN DETAIL ON SHEET E-4 FOR NEW WORK REQUIRED.
 - 2 NEW SEPTAGE RECEIVING STATION EQUIPMENT RACK CONTAINING HAULER ACCESS CONTROL PANEL, SEPTAGE UNIT CONTROL PANEL, INTERCOM AND LIGHT SWITCH.
 - 3 NEW RAKE MOTOR DISCONNECT AND RAKE HOA CONTROLS.
 - 4 NEW GREASE RECEIVING STATION. REFER TO PLAN DETAIL ON SHEET E-6 FOR NEW WORK REQUIRED.
 - 5 NEW PUMP STATION. REFER TO PLAN DETAIL ON SHEET E-6 FOR NEW WORK REQUIRED.
 - 6 NEW GREASE RECEIVING STATION EQUIPMENT RACK CONTAINING HAULER ACCESS CONTROL PANEL, SCREEN COMPACTOR CONTROL PANEL, INTERCOM AND LIGHT SWITCH.
 - 7 NEW SCREEN AND COMPACTOR MOTOR DISCONNECTS.
 - 8 NEW GREASE PUMP MOTOR DISCONNECT.
 - 9 NEW PLC CONTROL CABINET AND FIBER OPTIC PATCH PANEL. REFER ALSO TO ELEVATION 'A' ON SHEET E-7.
 - 10 NEW SEPTAGE RECEIVING STATION MOTOR CONTROL CENTER (MCC-SEP). REFER ALSO TO ELEVATION 'A' ON SHEET E-11.
 - 11 NEW PUMP STATION CONTROL PANEL. REFER TO SHEET E-6.
 - 12 REFER TO SHEET E-8 FOR CANOPY LIGHTING FIXTURE LAYOUT AND CAMERA PLACEMENT.
 - 13 CONTRACTOR TO PROVIDE AND INSTALL NEW 2" AND EXTEND EXISTING 12 COUNT SINGLE-MODE FIBER FROM EXISTING HANDHOLE TO NEW SEPTAGE RECEIVING STATION FIBER OPTIC PATCH PANEL AND TERMINATE. REFER ALSO TO SHEET E-2.
 - 14 NOTE REMOVED.
 - 15 REFER TO SHEET E-8 FOR CANOPY LIGHTING FIXTURE LAYOUT.
 - 16 PROVIDE AND INSTALL 600V, 30A, 3-POLE, NON-FUSED DISCONNECT IN NEMA 4X SS ENCLOSURE FOR TRANSFER PUMP LOCAL DISCONNECTING MEANS.
 - 17 PROVIDE AND INSTALL NEW TRANSFER PUMP 480V FEEDER. 3-#12 THWN CU + 1-#12 THWN CU GND 3/4" C. TO DEWATERING UNIT. PROVIDE FLEXIBLE SEALTITE CONNECTION TO TRANSFER PUMP MOTOR.
 - 18 PROVIDE AND INSTALL 600V, 30A, 3-POLE, NON-FUSED DISCONNECT IN NEMA 4X SS ENCLOSURE FOR GREASE TANK MIXER DISCONNECTING MEANS. MOUNT DISCONNECT AT TOP OF TANK, ADJACENT TO MIXER MOTOR. COORDINATE MIXER LOCATION WITH MECHANICAL DRAWINGS. ALSO PROVIDE AND INSTALL NEW GREASE TANK MIXER 480V FEEDER. 3-#12 THWN CU + 1-#12 THWN CU GND + 4-#12 THWN CU IN 3/4" C. TO MCC-SEP.
 - 19 PROVIDE AND INSTALL NEW TANK LEVEL REMOTE ELECTRONICS (COORDINATE EXACT LOCATION WITH MECHANICAL DRAWINGS). REFER ALSO TO DETAIL ON SHEET E-7. PROVIDE AND INSTALL 2/C-#18 TWISTED SHIELDED (BELDEN 8760), IN 3/4" C. TO PLC CONTROL CABINET FOR 4-20 mA TANK LEVEL SIGNAL.
 - 20 PROVIDE AND INSTALL NEW DEWATERING PRESS CONTROL PANEL 480V FEEDER. 3-#12 THWN CU + 1-#12 THWN CU GND 3/4" C. TO MCC-SEP. COORDINATE EXACT LOCATION WITH DEWATERING EQUIPMENT SUPPLIER. CONTRACTOR SHALL ALSO PROVIDE AND INSTALL TWO (2) : 2/C-#18 TWISTED SHIELDED CABLES (BELDEN 8760) IN 1" C. TO MCC-SEP FOR TRANSFER PUMP No. 1 AND TRANSFER PUMP No. 2 4-20 mA VFD SPEED CONTROL SIGNALS. PROVIDE AND INSTALL 30-#12 + 1-#12 GND IN 1-1/4" C. FROM DEWATERING SCREEN PRESS CONTROL PANEL TO NEW PLC CONTROL CABINET FOR DEWATERING RUNNING, DEWATERING ALARM, POLYMER RUNNING, POLYMER ALARM, TRANSFER PUMP No. 1 RUNNING, TRANSFER PUMP No. 1 FAULT, TRANSFER PUMP No. 1 IN HAND, TRANSFER PUMP No. 1 IN AUTO, TRANSFER PUMP No. 2 RUNNING, TRANSFER PUMP No. 2 FAULT, TRANSFER PUMP No. 2 IN HAND AND TRANSFER PUMP No. 2 IN AUTO SIGNALS (INCLUDES 6 SPARES).
 - 21 PROVIDE AND INSTALL TWO (2) 2/C-#18 TWISTED SHIELDED CABLES IN 1" C. FROM DEWATERING SCREEN PRESS CONTROL PANEL TO NEW PLC CONTROL CABINET FOR TRANSFER PUMP No. 1 SPEED REFERENCE AND TRANSFER PUMP No. 2 SPEED REFERENCE RESPECTIVELY.

GENERAL NOTES :

- 1. NOT ALL CONDUIT/CONDUCTORS SHOWN FOR CLARITY. REFERENCE OTHER SHEETS AS REQUIRED.

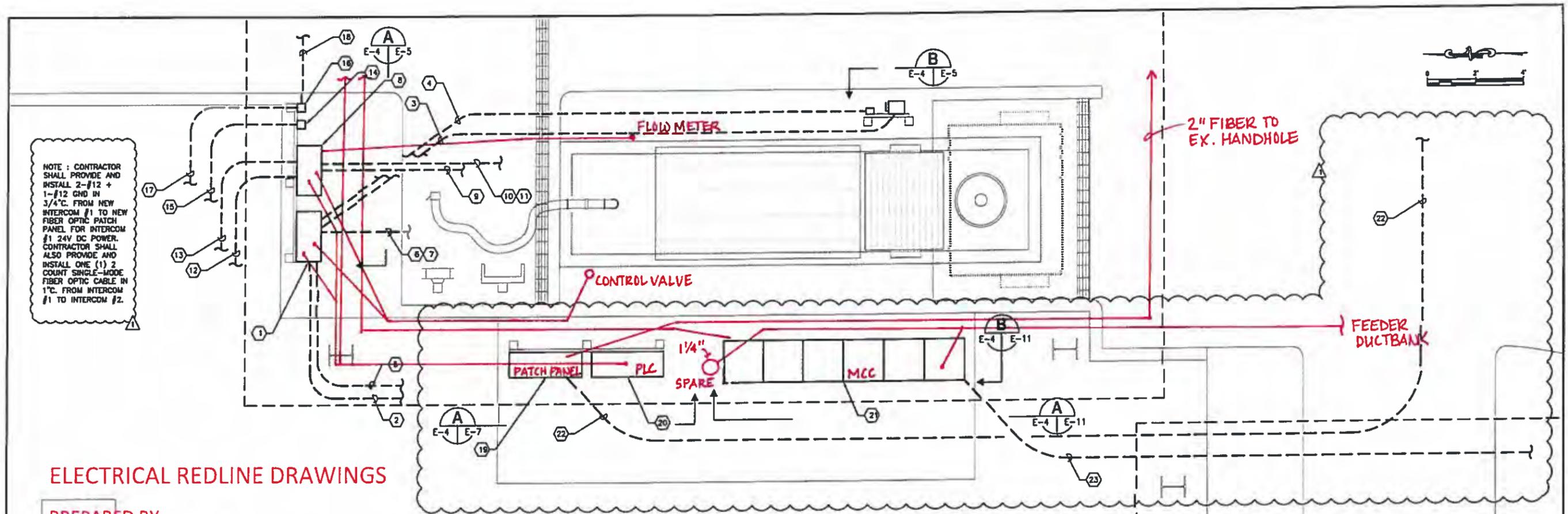
RECORD DRAWING

THIS RECORD DRAWING SHOWS THE REPORTED LOCATION OF WORK IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS. THIS RECORD DRAWING IS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR AND SURVEYOR. CARDNO CANNOT AND DOES NOT WARRANTY ITS ACCURACY.

NOTE:
 RED LINES ILLUSTRATE CONDUIT UNDERGROUND ROUTING
 PER KEYED NOTES REFERENCED ON THIS PAGE.



RECORD DRAWING FIBER OPTIC COMMUNICATIONS REVISION NO. DESCRIPTION BY DATE		12/2017 TDT 10-6-18		SEWRF SEPTAGE/ GREASE RECEIVING STATION		MANATEE COUNTY DEPARTMENT OF PUBLIC WORKS UTILITIES DEPARTMENT 4410 66th Street West Bradenton, Florida 34210 (841) 792-8811		CLEARWATER 260 PARK PLACE BLVD, SUITE 300, CLEARWATER, FL 33799 TEL: (727) 531-2008 (800) 861-6314 www.cardno.com Certificate of Authorization No. 22815		DESIGNED TDT DRAWN EAK G.C. APPROVED THOMAS THOMAS, PE DATE LIC. NO.: 47079		RECORD DRAWINGS SEPTAGE RECEIVING ELECTRICAL SITE PLAN		PROJECT NO: 00193-009-02 DATE: MARCH 2015 SHEET NO: E-3	
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NOTE: CONTRACTOR SHALL PROVIDE AND INSTALL 2-#12 + 1-#12 GND IN 3/4" C. FROM NEW INTERCOM #1 TO NEW FIBER OPTIC PATCH PANEL FOR INTERCOM #1 24V DC POWER. CONTRACTOR SHALL ALSO PROVIDE AND INSTALL ONE (1) 2 COUNT SINGLE-MODE FIBER OPTIC CABLE IN 1" C. FROM INTERCOM #1 TO INTERCOM #2.

ELECTRICAL REDLINE DRAWINGS

PREPARED BY:
B.L. SMITH ELECTRIC, INC.
 OCTOBER 2017

WEST SEPTAGE RECEIVING STATION ELECTRICAL PLAN

SCALE: 1" = 2'-0"



NOTE: WEST SEPTAGE RECEIVING STATION AND EAST SEPTAGE RECEIVING STATION ELECTRICAL PLANS ARE SIMILAR, ONLY MIRRORED PER LOCATION.

NOTE:
 RED LINES ILLUSTRATE CONDUIT UNDERGROUND ROUTING PER KEYED NOTES REFERENCED ON THIS PAGE.

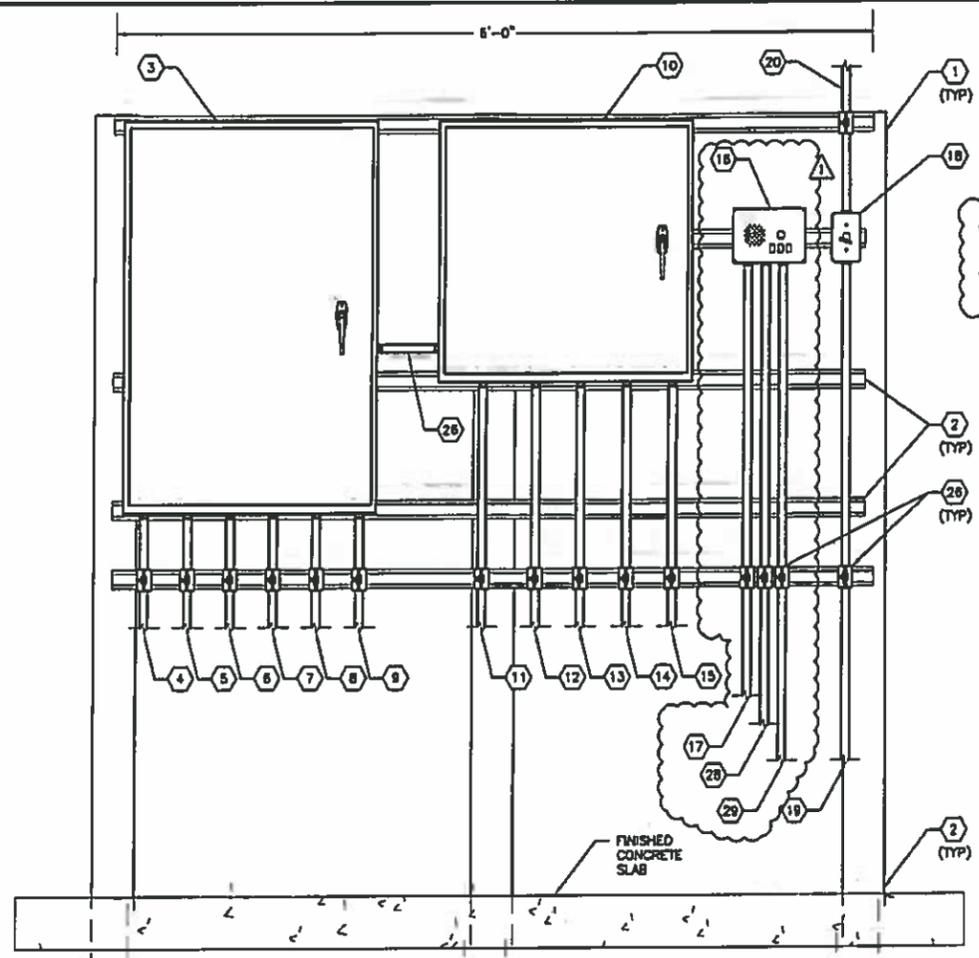
RECORD DRAWING
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- KEYED NOTES:**
- ① SEPTAGE RECEIVING STATION RAKE CONTROL PANEL. CONTROL PANEL TO BE PROVIDED BY RAKE MANUFACTURER.
 - ② PROVIDE AND INSTALL 3-#12 + 1-#12 GND IN 3/4" C. FROM RAKE CONTROL PANEL TO NEW SEPTAGE MOTOR CONTROL CENTER (MCC-SEP) FOR RAKE CONTROL PANEL 480V POWER.
 - ③ PROVIDE AND INSTALL 3-#12 + 1-#12 GND IN 3/4" C. FROM RAKE CONTROL PANEL TO RAKE DISCONNECT FOR RAKE 480V POWER.
 - ④ PROVIDE AND INSTALL 8-#14 + 1-#14 GND IN 3/4" C. FROM PB STATION TO RAKE CONTROL PANEL. CONTRACTOR TO VERIFY CONDUCTOR QUANTITIES WITH RAKE MANUFACTURER.
 - ⑤ REFER TO SEPTAGE UNIT WIRING SCHEMATIC ON SHEET E-13 FOR REVISIONS.
 - ⑥ REFER TO SEPTAGE UNIT WIRING SCHEMATIC ON SHEET E-13 FOR REVISIONS.
 - ⑦ REFER TO SEPTAGE UNIT WIRING SCHEMATIC ON SHEET E-13 FOR REVISIONS.
 - ⑧ PROVIDE AND INSTALL NEW SEPTAGE RECEIVING STATION HAULER ACCESS CONTROL PANEL.
 - ⑨ REFER TO SEPTAGE UNIT WIRING SCHEMATIC ON SHEET E-13 FOR REVISIONS.
 - ⑩ REFER TO SEPTAGE UNIT WIRING SCHEMATIC ON SHEET E-13 FOR REVISIONS.
 - ⑪ REFER TO SEPTAGE UNIT WIRING SCHEMATIC ON SHEET E-13 FOR REVISIONS.
 - ⑫ PROVIDE AND INSTALL 2-#12 + 1-#12 GND IN 3/4" C. FROM HAULER ACCESS CONTROL PANEL TO NEW SEPTAGE RECEIVING STATION TO PANELBOARD 'LPS' FOR ACCESS CONTROL PANEL 120V POWER.
 - ⑬ PROVIDE AND INSTALL ETHERNET CAT 5e CABLE IN 1" C. FROM HAULER ACCESS CONTROL PANEL TO NEW FIBER OPTIC PATCH PANEL.
 - ⑭ PROVIDE AND INSTALL NEW INTERCOM STATION. STATION SHALL LITELINK INCK-4001 WITH ENCLOSURE.
 - ⑮ PROVIDE AND INSTALL ONE (1) 2 COUNT SINGLE-MODE FIBER OPTIC CABLE IN 1" C. FROM INTERCOM #1 TO FIBER OPTIC PATCH PANEL.
 - ⑯ PROVIDE AND INSTALL 120V, 15A, SINGLE-POLE SWITCH IN WEATHERPROOF FS BOX FOR WEST SEPTAGE RECEIVING STATION LIGHT CONTROL. PROVIDE AND INSTALL SINGLE-GANG WEATHERPROOF SWITCH COVER BELL #5121-0.
 - ⑰ PROVIDE AND INSTALL 2-#12 + 1-#12 GND IN 3/4" C. FROM LIGHT SWITCH TO PANELBOARD 'LPS' FOR WEST SEPTAGE RECEIVING STATION LIGHTING 120V POWER.
 - ⑱ PROVIDE AND INSTALL 2-#12 + 1-#12 GND IN 3/4" C. FROM LIGHT SWITCH TO NEW SEPTAGE RECEIVING STATION LIGHTING FIXTURES. CONTRACTOR TO FIELD ROUTE CONDUIT AS REQUIRED.
 - ⑳ PROVIDE AND INSTALL NEW FIBER OPTIC PATCH PANEL. REFER TO ELEVATION ON SHEET E-7.
 - ㉑ PROVIDE AND INSTALL NEW PLC CONTROL CABINET. REFER TO ELEVATION ON SHEET E-7.
 - ㉒ PROVIDE AND INSTALL NEW MOTOR CONTROL CENTER, MCC-SEP. REFER TO ELEVATION ON SHEET E-11.
 - ㉓ CONTRACTOR TO PROVIDE AND INSTALL NEW 2" CONDUIT AND EXTEND EXISTING 12 COUNT SINGLE-MODE FIBER OPTIC CABLE FROM EXISTING HANDHOLE TO NEW SEPTAGE RECEIVING STATION FIBER OPTIC CABINET AND TERMINATE. REFER ALSO TO SHEET E-2.
 - ㉔ CONTRACTOR TO PROVIDE AND INSTALL NEW DUCTBANK TO MCC/BLOWER BUILDING No. 2 FOR 480V, 3# POWER FEEDER. REFER ALSO TO SHEET E-2.

RECORD DRAWING FIBER OPTIC COMMUNICATIONS REVISION NO. DESCRIPTION BY DATE		12/2017 TDY 10-6-16	SEWRF SEPTAGE/ GREASE RECEIVING STATION	MANATEE COUNTY DEPARTMENT OF PUBLIC WORKS UTILITIES DEPARTMENT 4410 66th Street West Bradenton, Florida 34209 (941) 792-5811	Cardno Shaping the Future CLEARWATER 380 PARKPLACE BLVD, STE 300, CLEARWATER, FL 34618 (727) 571-2528 (800) 891-6134 www.cardno.com Certificate of Authorization No. 22915	DESIGNED: TDY DRAWN: EAK D.C. DATE APPROVED:	RECORD DRAWINGS WEST SEPTAGE RECEIVING STATION ELECTRICAL PLAN	PROJECT NO: 00193-009-02 DATE: MARCH 2015 SHEET NO: E-4
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FILE: C:\Projects\Projects\13024-02011150422\FIN 11-15-16 ELLIOTT SCALE: 3/8"=1'-0" DATE: 10-26-16 BY: P. Q. TEL: 1096 16-1-2008 17: 072014



**SEPTAGE RECEIVING STATION
EQUIPMENT ELEVATION**
SCALE : N.T.S.

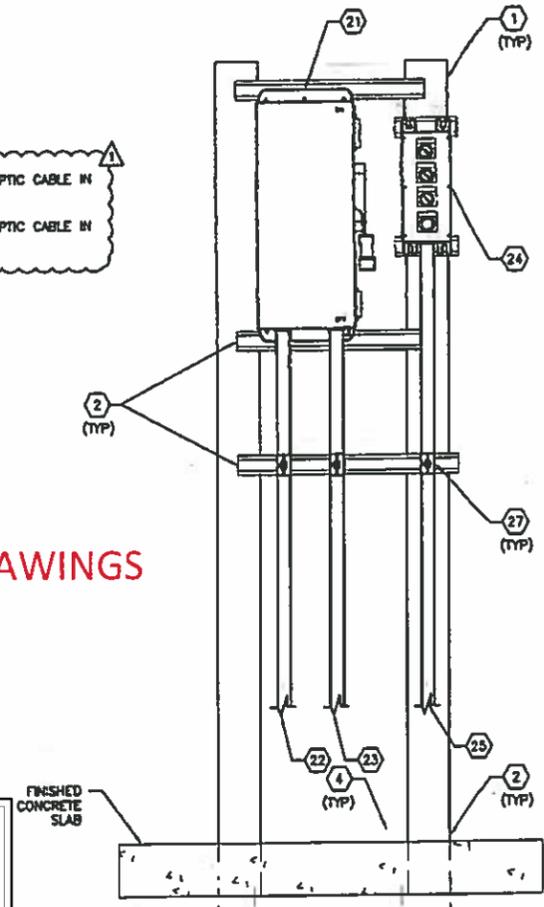
A
E-4 | E-5

- 20 PROVIDE AND INSTALL ONE (1) 2 COUNT SINGLE-MODE FIBER OPTIC CABLE IN 1" CONDUIT FROM FIBER OPTIC PATCH PANEL TO INTERCOM #1.
- 29 PROVIDE AND INSTALL ONE (1) 2 COUNT SINGLE-MODE FIBER OPTIC CABLE IN 1" CONDUIT FROM INTERCOM #1 TO INTERCOM #2.

ELECTRICAL REDLINE DRAWINGS
PREPARED BY:
B.L. SMITH ELECTRIC, INC.
OCTOBER 2017

RECORD DRAWING
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NOTE:
EAST SEPTAGE RECEIVING STATION EQUIPMENT RACK AND GREASE RECEIVING STATION EQUIPMENT RACKS ARE SIMILAR, WITH ONLY ADJUSTMENTS TO EQUIPMENT LAYOUT



**SEPTAGE RECEIVING STATION
RAKE EQUIPMENT ELEVATION**
SCALE : N.T.S.

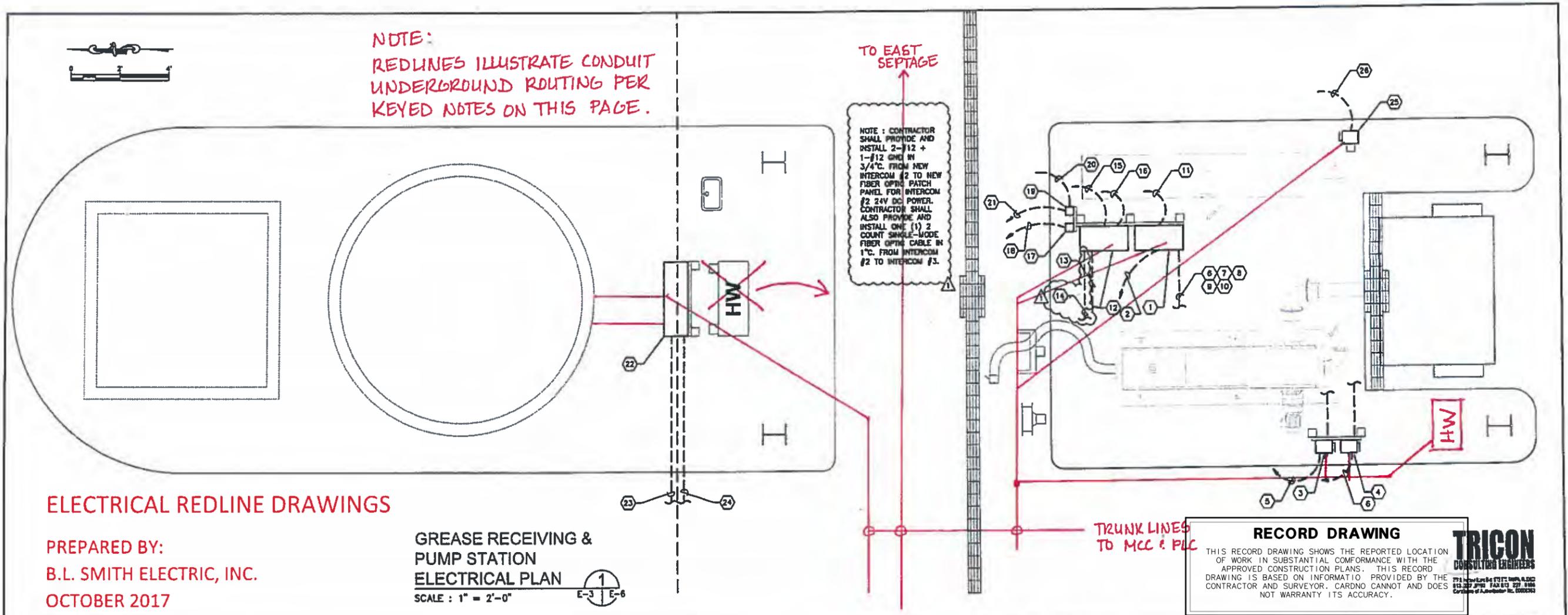
B
E-4 | E-5



KEYED NOTES:

- 1 PROVIDE AND INSTALL 4" SQUARE, 8'-0" LONG CONCRETE POST. POST TO BE EMBEDDED A MINIMUM OF 3'-0" INTO CONCRETE SLAB.
- 2 PROVIDE AND INSTALL 1-5/8" X 1-5/8" 316 STAINLESS STEEL UNISTRUT. ALL MOUNTING HARDWARE SHALL BE 316 STAINLESS STEEL UNISTRUT BOLTS SHALL BE INSTALLED THROUGH CONCRETE POST
- 3 SEPTAGE RECEIVING STATION RAKE CONTROL PANEL. CONTROL PANEL TO BE PROVIDED BY RAKE MANUFACTURER.
- 4 PROVIDE AND INSTALL 3-#12 + 1-#12 GND IN 3/4" CONDUIT FROM RAKE CONTROL PANEL TO NEW SEPTAGE MOTOR CONTROL CENTER (MCC-SEP) FOR RAKE CONTROL PANEL 480V POWER.
- 5 PROVIDE AND INSTALL 3-#12 + 1-#12 GND IN 3/4" CONDUIT FROM RAKE CONTROL PANEL TO RAKE DISCONNECT FOR RAKE 480V POWER.
- 6 REFER TO SEPTAGE UNIT WIRING SCHEMATIC ON SHEET E-13 FOR REVISIONS.
- 7 REFER TO SEPTAGE UNIT WIRING SCHEMATIC ON SHEET E-13 FOR REVISIONS.
- 8 REFER TO SEPTAGE UNIT WIRING SCHEMATIC ON SHEET E-13 FOR REVISIONS.
- 9 REFER TO SEPTAGE UNIT WIRING SCHEMATIC ON SHEET E-13 FOR REVISIONS.
- 10 PROVIDE AND INSTALL NEW SEPTAGE RECEIVING STATION HAULER ACCESS CONTROL PANEL.
- 11 REFER TO SEPTAGE UNIT WIRING SCHEMATIC ON SHEET E-13 FOR REVISIONS.
- 12 REFER TO SEPTAGE UNIT WIRING SCHEMATIC ON SHEET E-13 FOR REVISIONS.
- 13 REFER TO SEPTAGE UNIT WIRING SCHEMATIC ON SHEET E-13 FOR REVISIONS.
- 14 PROVIDE AND INSTALL 2-#12 + 1-#12 GND IN 3/4" CONDUIT FROM HAULER ACCESS CONTROL PANEL TO NEW SEPTAGE RECEIVING STATION TO PANELBOARD 'LPS' FOR ACCESS CONTROL PANEL 120V POWER.
- 15 PROVIDE AND INSTALL ETHERNET CAT 5e CABLE IN 1" CONDUIT FROM HAULER ACCESS CONTROL PANEL TO NEW FIBER OPTIC PATCH PANEL.
- 16 PROVIDE AND INSTALL NEW INTERCOM STATION SHALL BE LITELINK INCK-4001 WITH ENCLOSURE.
- 17 PROVIDE AND INSTALL 2-#12 + 1-#12 GND IN 3/4" CONDUIT FROM NEW INTERCOM #1 TO NEW FIBER OPTIC PATCH PANEL FOR INTERCOM #1 24V DC POWER.
- 18 PROVIDE AND INSTALL 120V, 15A, SINGLE-POLE SWITCH IN WEATHERPROOF FS BOX FOR WEST SEPTAGE RECEIVING STATION LIGHT CONTROL. PROVIDE AND INSTALL SINGLE-GANG WEATHERPROOF SWITCH COVER. BELL #5121-0.
- 19 PROVIDE AND INSTALL 2 #12 + 1-#12 GND IN 3/4" CONDUIT FROM LIGHT SWITCH TO PANELBOARD 'LPS' FOR WEST SEPTAGE RECEIVING STATION LIGHTING 120V POWER. (TYPICAL FOR EAST SEPTAGE AND GREASE STATION).
- 20 PROVIDE AND INSTALL 2-#12 + 1-#12 GND IN 3/4" CONDUIT FROM LIGHT SWITCH TO NEW SEPTAGE RECEIVING STATION LIGHTING FIXTURES. CONTRACTOR TO FIELD ROUTE CONDUIT AS REQUIRED.
- 21 PROVIDE AND INSTALL 30A, 600V, 3-POLE NON-FUSED DISCONNECT IN NEMA 4X SS ENCLOSURE FOR BAR SCREEN DRIVE DISCONNECTING MEANS. DISCONNECT SHALL BE PROVIDED WITH INTERLOCKED AUXILIARY CONTACT FOR MANUFACTURER'S RAKE OVERTEMP CIRCUIT. COORDINATE AUXILIARY CONTACT RATING REQUIREMENTS WITH BAR SCREEN SYSTEM MANUFACTURER.
- 22 PROVIDE AND INSTALL 3-#12 + 1 #12 GND IN 3/4" CONDUIT TO RAKE CONTROL PANEL FOR DRIVE MOTOR 480V POWER.
- 23 PROVIDE AND INSTALL 3-#12 + 1 #12 GND IN 3/4" CONDUIT TO RAKE MOTOR. PROVIDE FLEXIBLE SEALTITE CONNECTION TO MOTOR.
- 24 RAKE LOCAL PUSHBUTTON STATION. SUPPLIED BY MANUFACTURER, INSTALLED BY CONTRACTOR.
- 25 PROVIDE AND INSTALL 8-#14 + 1 #14 GND IN 3/4" CONDUIT FROM PB STATION TO RAKE CONTROL PANEL. CONTRACTOR TO VERIFY CONDUCTOR QUANTITIES WITH RAKE MANUFACTURER.
- 26 PROVIDE AND INSTALL 2-#12 + 1-#12 GND IN 3/4" CONDUIT FROM HAULER ACCESS CONTROL PANEL TO RAKE CONTROL PANEL FOR PERMISSIVE SIGNAL.
- 27 PROVIDE AND INSTALL STAINLESS STEEL CONDUIT CLAMPS AND HARDWARE.

<p>SEWRF SEPTAGE/ GREASE RECEIVING STATION</p>		<p>MANATEE COUNTY DEPARTMENT OF PUBLIC WORKS UTILITIES DEPARTMENT 4410 68th Street West Bradenton, Florida 34210 (941) 792-8811</p>	<p>Cardno Shaping the Future CLEARWATER 380 PARK PLACE BLVD, STE 300, CLEARWATER, FL 33759 TEL: (727) 614-3333 (800) 961-6214 www.cardno.com Certificate of Authorization No. 28915</p>	<p>DESIGNED: TDT DRAWN: EAK D.C. DATE: APPROVED: TIMOTHY THOMAS PE LIC. NO. 47979</p>	<p>RECORD DRAWINGS WEST SEPTAGE RECEIVING STATION EQUIPMENT ELEVATIONS</p>	<p>PROJECT NO: 00193-009-02 DATE: MARCH 2015 SHEET NO: E-5</p>
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ELECTRICAL REDLINE DRAWINGS

PREPARED BY:
B.L. SMITH ELECTRIC, INC.
 OCTOBER 2017

GREASE RECEIVING & PUMP STATION ELECTRICAL PLAN
 SCALE: 1" = 2'-0"
 E-3 | 1 | E-6

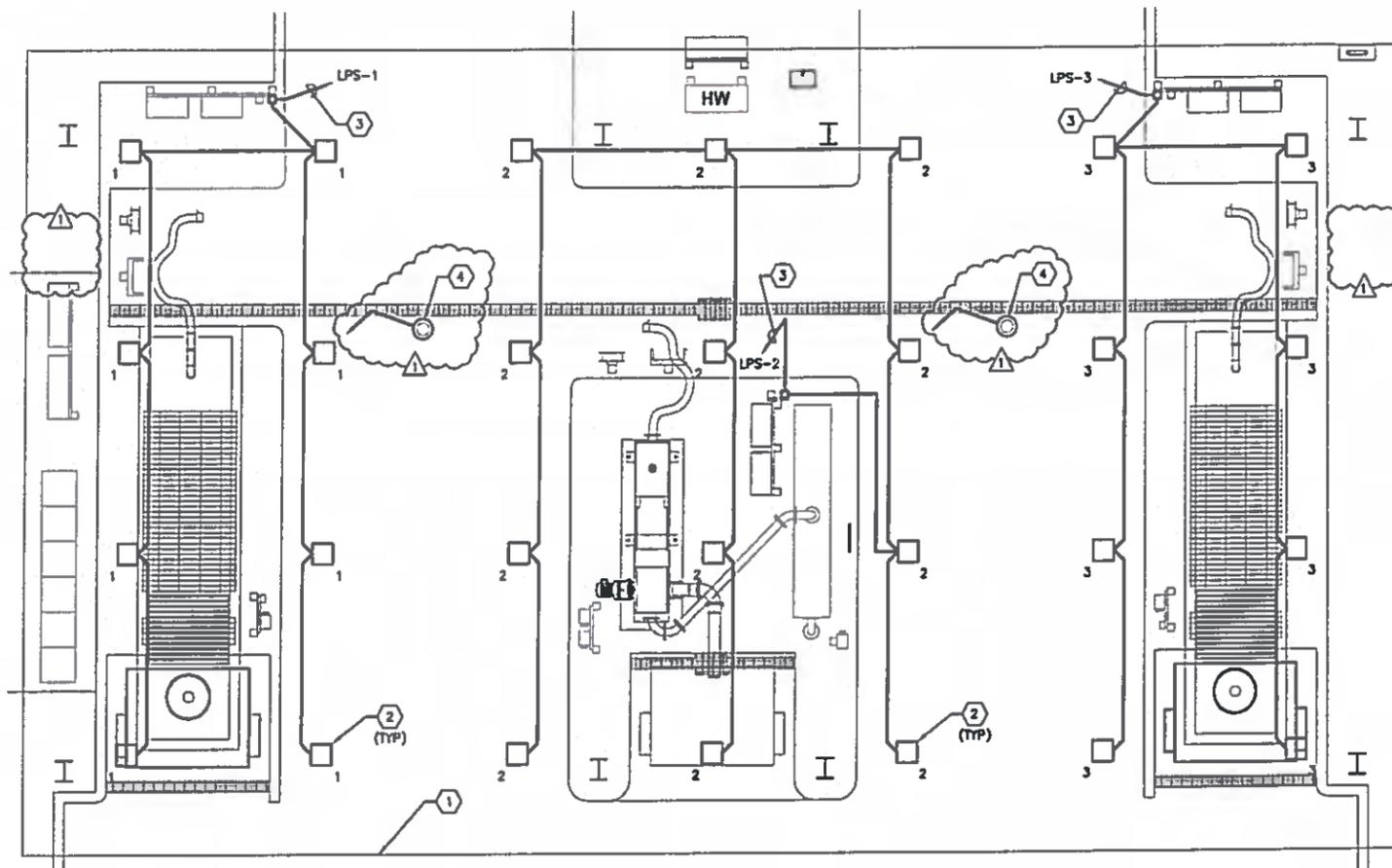
RECORD DRAWING

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TRICON CONSULTING ENGINEERS
 1711 South County Road 101, Suite 100, Altamonte Springs, FL 32714
 (407) 327-9700 FAX (407) 327-9886
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- KEYED NOTES:**
- ① GREASE RECEIVING STATION CONTROL PANEL. CONTROL PANEL TO BE PROVIDED BY MANUFACTURER.
 - ② PROVIDE AND INSTALL 3-#12 + 1-#12 GND IN 3/4" C. FROM SCREEN/COMPACTOR CONTROL PANEL TO MOTOR CONTROL CENTER (MCC-SEP) FOR SCREEN/COMPACTOR CONTROL PANEL 480V POWER.
 - ③ PROVIDE AND INSTALL 30A, 600V, 3-POLE NON-FUSED DISCONNECT IN NEMA 4X SS ENCLOSURE FOR SCREEN DRIVE DISCONNECTING MEANS. DISCONNECT SHALL BE PROVIDED WITH INTERLOCKED AUXILIARY CONTACT FOR MANUFACTURER'S SCREEN OVERTEMP CIRCUIT. COORDINATE AUXILIARY CONTACT RATING REQUIREMENTS WITH SCREEN SYSTEM MANUFACTURER.
 - ④ PROVIDE AND INSTALL 30A, 600V, 3-POLE NON-FUSED DISCONNECT IN NEMA 4X SS ENCLOSURE FOR COMPACTOR DISCONNECTING MEANS. DISCONNECT SHALL BE PROVIDED WITH INTERLOCKED AUXILIARY CONTACT FOR MANUFACTURER'S COMPACTOR OVERTEMP CIRCUIT. COORDINATE AUXILIARY CONTACT RATING REQUIREMENTS WITH COMPACTOR SYSTEM MANUFACTURER.
 - ⑤ PROVIDE AND INSTALL 3-#12 + 2-#12 (MOTOR THERMOSTAT) + 1-#12 GND IN 3/4" C. FROM SCREEN DISCONNECT TO CONTROL PANEL. PROVIDE FLEXIBLE SEALTITE CONNECTION TO MOTOR.
 - ⑥ PROVIDE AND INSTALL 3-#12 + 2-#12 (MOTOR THERMOSTAT) + 1-#12 GND IN 3/4" C. FROM COMPACTOR DISCONNECT TO CONTROL PANEL. PROVIDE FLEXIBLE SEALTITE CONNECTION TO MOTOR.
 - ⑦ REFER TO SCREEN/COMPACTOR WIRING SCHEMATIC ON SHEET E-13 FOR REVISIONS.
 - ⑧ REFER TO SCREEN/COMPACTOR WIRING SCHEMATIC ON SHEET E-13 FOR REVISIONS.
 - ⑨ REFER TO SCREEN/COMPACTOR WIRING SCHEMATIC ON SHEET E-13 FOR REVISIONS.
 - ⑩ REFER TO SCREEN/COMPACTOR WIRING SCHEMATIC ON SHEET E-13 FOR REVISIONS.
 - ⑪ REFER TO SCREEN/COMPACTOR WIRING SCHEMATIC ON SHEET E-13 FOR REVISIONS.
 - ⑫ PROVIDE AND INSTALL NEW GREASE RECEIVING STATION HAULER ACCESS CONTROL PANEL.
 - ⑬ REFER TO SCREEN/COMPACTOR WIRING SCHEMATIC ON SHEET E-13 FOR REVISIONS.
 - ⑭ REFER TO SCREEN/COMPACTOR WIRING SCHEMATIC ON SHEET E-13 FOR REVISIONS.
 - ⑮ PROVIDE AND INSTALL 2-#12 + 1-#12 GND IN 3/4" C. FROM HAULER ACCESS CONTROL PANEL TO NEW SEPTAGE RECEIVING STATION TO PANELBOARD "LPS" FOR ACCESS CONTROL PANEL 120V POWER.
 - ⑯ PROVIDE AND INSTALL ETHERNET CAT 5e CABLE IN 1" C. FROM HAULER ACCESS CONTROL PANEL TO NEW FIBER OPTIC PATCH PANEL.
 - ⑰ PROVIDE AND INSTALL NEW INTERCOM STATION. STATION SHALL LITELINK INCK-4001 WITH ENCLOSURE.
 - ⑱ PROVIDE AND INSTALL ONE (1) 2 COUNT SINGLE-MODE FIBER OPTIC CABLE IN 1" C. FROM INTERCOM #1 TO INTERCOM #2.
 - ⑲ PROVIDE AND INSTALL 120V, 15A, SINGLE-POLE SWITCH IN WEATHERPROOF FS BOX FOR GREASE RECEIVING STATION LIGHT CONTROL. PROVIDE AND INSTALL SINGLE-GANG WEATHERPROOF SWITCH COVER. BELL #5121-0.
 - ⑳ PROVIDE AND INSTALL 2-#12 + 1-#12 GND IN 3/4" C. FROM LIGHT SWITCH TO PANELBOARD "LPS" FOR GREASE RECEIVING STATION LIGHTING 120V POWER.
 - ㉑ PROVIDE AND INSTALL 2-#12 + 1-#12 GND IN 3/4" C. FROM LIGHT SWITCH TO NEW GREASE RECEIVING STATION LIGHTING FIXTURES. CONTRACTOR TO FIELD ROUTE CONDUIT AS REQUIRED.
 - ㉒ PUMPING STATION CONTROL STATION. REFER TO SPECIFICATION 11305 FOR REQUIREMENTS. MOUNT ON 4" SQUARE CONCRETE POSTS WITH 1-5/8" STAINLESS STEEL UNISTRUT (REFER TO TYPICAL CABINET MOUNTING DETAILS ON SHEET E-5).
 - ㉓ PROVIDE AND INSTALL 3-#4 THIN CU + 1-#8 THIN CU GND IN 1-1/4" C. FROM NEW PUMP STATION CONTROL PANEL TO MCC-SEP FOR CONTROL PANEL 480V FEEDER.
 - ㉔ PROVIDE AND INSTALL 4-#12 + 1-#12 GND IN 3/4" C. FROM NEW PUMP STATION CONTROL PANEL TO NEW PLC CONTROL CABINET FOR WET WELL HIGH LEVEL SCADA ALARM AND GREASE STORAGE TANK PERMISSIVE.
 - ㉕ PROVIDE AND INSTALL 30A, 600V, 3-POLE NON-FUSED DISCONNECT IN NEMA 4X SS ENCLOSURE FOR GREASE PUMP DISCONNECTING MEANS. MOUNT ON 4" SQUARE CONCRETE POST WITH 1-5/8" STAINLESS STEEL UNISTRUT (REFER TO TYPICAL DISCONNECT MOUNTING DETAIL ON SHEET E-5).
 - ㉖ PROVIDE AND INSTALL 3-#12 THIN CU + 1-#12 THIN CU GND IN 3/4" C. FROM NEW GREASE PUMP DISCONNECT TO MCC-SEP FOR GREASE PUMP 480V FEEDER. PROVIDE FLEXIBLE SEALTITE CONNECTION TO MOTOR. COORDINATE MOTOR CONNECTION WITH GREASE PUMP SUPPLIER.

SEWRF SEPTAGE/ GREASE RECEIVING STATION		MANATEE COUNTY DEPARTMENT OF PUBLIC WORKS UTILITIES DEPARTMENT 4410 66th Street West Bradenton, Florida 34210 (941) 792-8811	Cardno Shaping the Future CLEARWATER 330 PINE PLAZA BLVD STE 302 CLEARWATER FL 33786 TEL: (727) 831-3025 (800) 841-6214 www.cardno.com CardState of A, Permit No. 29115	DESIGNED: <u>TDT</u> DRAWN: <u>EAK</u> D.C.: APPROVED: _____ DATE: _____ YIMOTHY THOMAS, PE LIC. NO.: 47078	RECORD DRAWINGS GREASE RECEIVING SEPTAGE LIST STATION ELECTRICAL SITE PLAN	PROJECT NO: 00193-009-02 DATE: MARCH 2015 SHEET NO: E-6
RECORD DRAWING 12/2017	FIBER OPTIC COMMUNICATIONS REVISION TDT 10-6-16 BY DATE					



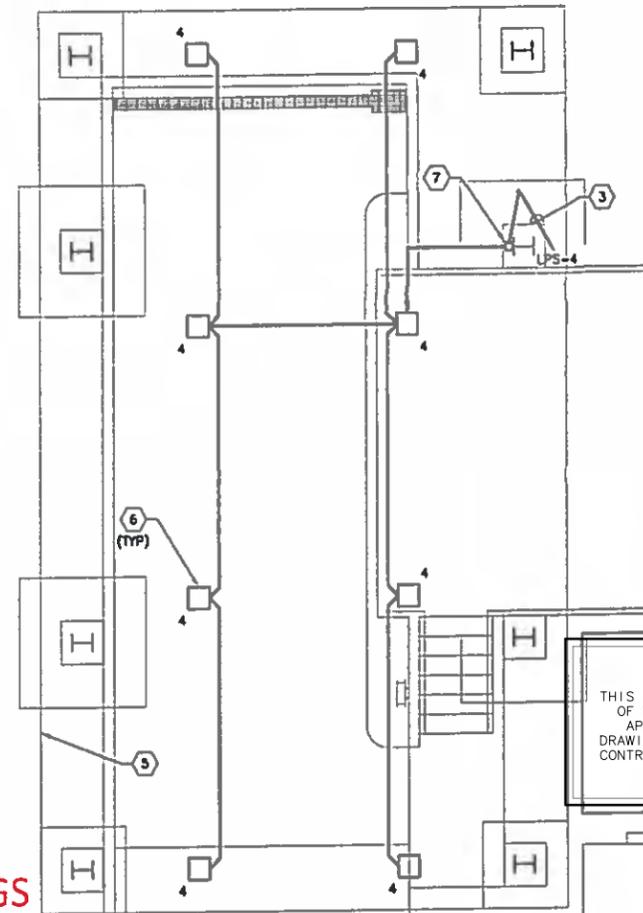
SEPTAGE AND GREASE RECEIVING STATION LIGHTING PLAN

SCALE : 1" = 2'-0"



ELECTRICAL REDLINE DRAWINGS

PREPARED BY:
B.L. SMITH ELECTRIC, INC.
OCTOBER 2017



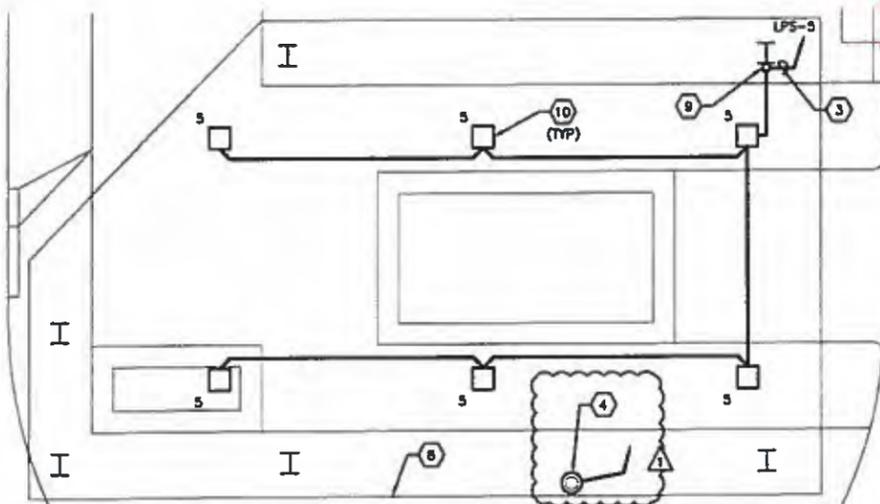
VACUUM TRUCK RECEIVING RAMP LIGHTING PLAN

SCALE : 1" = 2'-0"



RECORD DRAWING
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NOTE:
LIGHTS ARE INSTALLED
6" BELOW ROOF PURLINS
(TYP.)



DEWATERING LIGHTING PLAN

SCALE : 1" = 2'-0"



KEYED NOTES:

- ① EDGE OF SEPTAGE/GREASE RECEIVING STATION CANOPY. SEE NOTE
- ② PROVIDE AND INSTALL NEW LED CANOPY LIGHTING FIXTURE. LITHONIA VRC SERIES. LIGHTING FIXTURES TO BE INSTALLED 14'-0" ABOVE FINISHED GRADE.
- ③ PROVIDE AND INSTALL 2-#12 + 1-#12 GND IN 3/4" C. TO NEW PANELBOARD 'LPS' (IN MCC-SEP) FOR 120V LIGHTING CIRCUIT.
- ④ PROVIDE AND INSTALL NEW IP CAMERAS. TWO AT GREASE STATION/SEPTAGE UNITS AND 1 AT DEWATERING EQUIPMENT. COORDINATE INSTALLATION AND LOCATIONS WITH MANATEE COUNTY. PROVIDE 1" C. WITH CAT 6 CABLE TO FIBER OPTIC PATCH PANEL.
- ⑤ EDGE OF VACUUM TRUCK RECEIVING STATION CANOPY. SEE NOTE
- ⑥ PROVIDE AND INSTALL NEW LED CANOPY LIGHTING FIXTURE. LITHONIA VRC SERIES. LIGHTING FIXTURES TO BE INSTALLED 14'-0" ABOVE TRUCK RECEIVING STATION.
- ⑦ PROVIDE AND INSTALL 120V, 15A, SINGLE-POLE SWITCH IN WEATHERPROOF FS BOX FOR VACUUM TRUCK RECEIVING STATION LIGHT CONTROL. PROVIDE AND INSTALL SINGLE-GANG WEATHERPROOF SWITCH COVER. BELL #5121-0.
- ⑧ EDGE OF DEWATERING STATION CANOPY.
- ⑨ PROVIDE AND INSTALL 120V, 15A, SINGLE-POLE SWITCH IN WEATHERPROOF FS BOX FOR DEWATERING STATION LIGHT CONTROL. PROVIDE AND INSTALL SINGLE-GANG WEATHERPROOF SWITCH COVER. BELL #5121-0. SEE NOTE
- ⑩ PROVIDE AND INSTALL NEW LED CANOPY LIGHTING FIXTURE. LITHONIA VRC SERIES. LIGHTING FIXTURES TO BE INSTALLED 14'-0" ABOVE DEWATERING FINISHED FLOOR.



RECORD DRAWING	12/2017
FIBER OPTIC COMMUNICATIONS REVISION	TDT 10-8-18
NO.	DESCRIPTION

SEWRF
SEPTAGE/ GREASE
RECEIVING STATION



MANATEE COUNTY
DEPARTMENT OF PUBLIC WORKS
UTILITIES DEPARTMENT
4410 58th Street West Bradenton, Florida 34210
(941) 792-8811

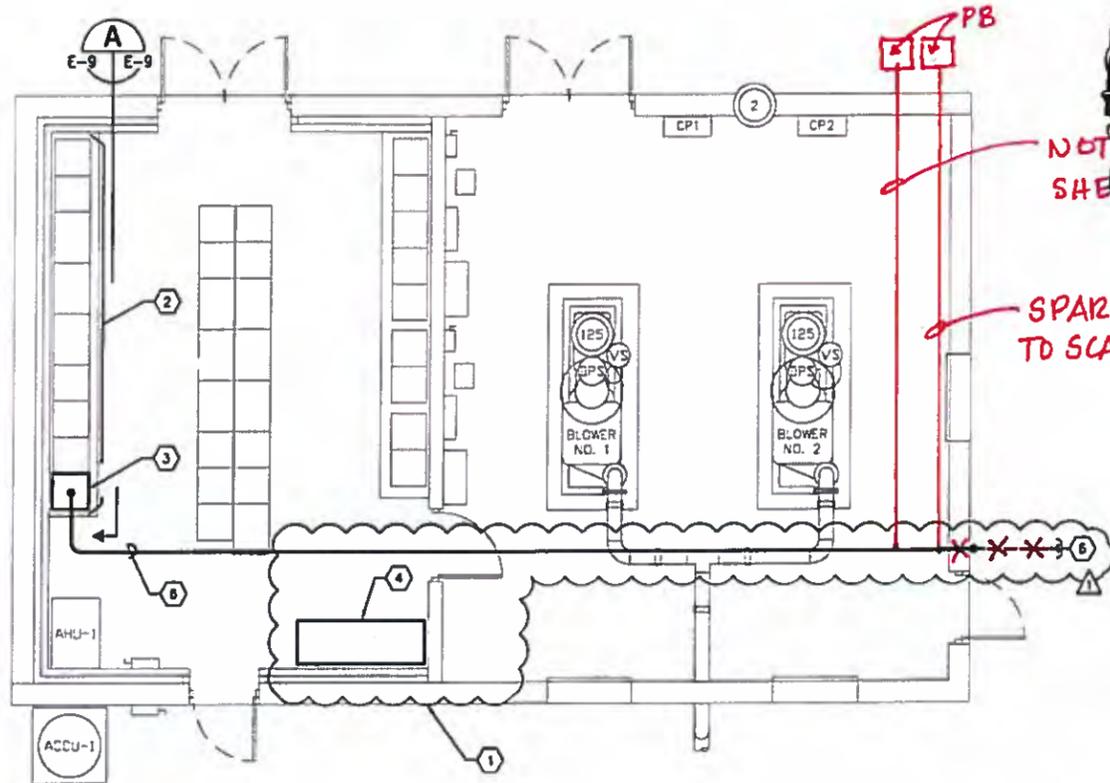


TRISTY THOMAS PE
LIC. NO.: 47079

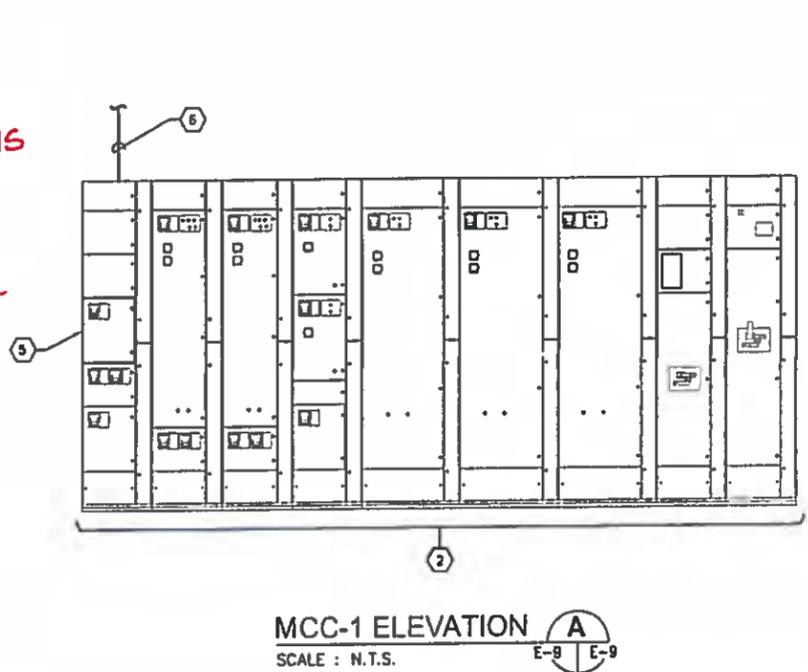
DESIGNED	TDT
DRAWN	EAK
C.C.	
APPROVED	

RECORD DRAWINGS
SEPTAGE RECEIVING AND VACUUM
TRUCK RACK LIGHTING PLAN

PROJECT NO.	00193-009-02
DATE	MARCH 2015
SHEET NO.	E-8



MCC/BLOWER BUILDING No. 2
FLOOR PLAN
 SCALE : 1/4" = 1'-0" 1
E-2 E-9



MCC-1 ELEVATION A
E-9 E-9
 SCALE : N.T.S.

NOTE #6, THIS SHEET

SPARE CONDUIT TO SCADA

- KEYED NOTES:**
- 1 EXISTING MCC/BLOWER BUILDING NO. 2.
 - 2 EXISTING MOTOR CONTROL CENTER (MCC-1). MCC-1 IS A CUTLER-HAMMER FREEDOM 2100 UNIT.
 - 3 EXISTING SPARE CUBICLES IN MCC-1. REFER TO MCC-1 ELEVATION ON THIS SHEET.
 - 4 EXISTING SCADA PANEL 2. NO WORK REQUIRED.
 - 5 EXISTING 18" SPARE CUBICLE IN MCC-1. CONTRACTOR SHALL PROVIDE NEW 3-POLE, 480V, 200A CIRCUIT BREAKER TO FEED THE NEW SEPTAGE RECEIVING STATION. CONTRACTOR SHALL PROVIDE ALL ACCESSORIES AS NECESSARY INCLUDING, BUT NOT LIMITED TO : NEW DOOR, NEW THROUGH-DOOR CIRCUIT BREAKER OPERATOR, NEW BUCKET, STABS, ETC.
 - 6 PROVIDE AND INSTALL 3-#3/0 THWN CU + 1-#8 THWN CU GND IN 2" C. TO THE NEW SEPTAGE STATION. REFER ALSO TO SHEETS E-2 AND E-12.
 - 7 NOTE REMOVED.

ELECTRICAL REDLINE DRAWINGS

PREPARED BY:
B.L. SMITH ELECTRIC, INC.
 OCTOBER 2017

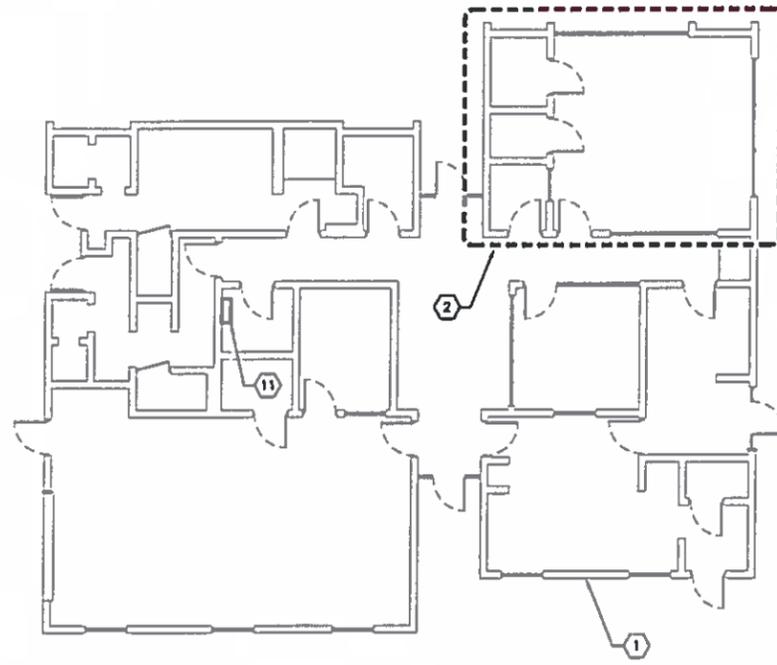
RECORD DRAWING

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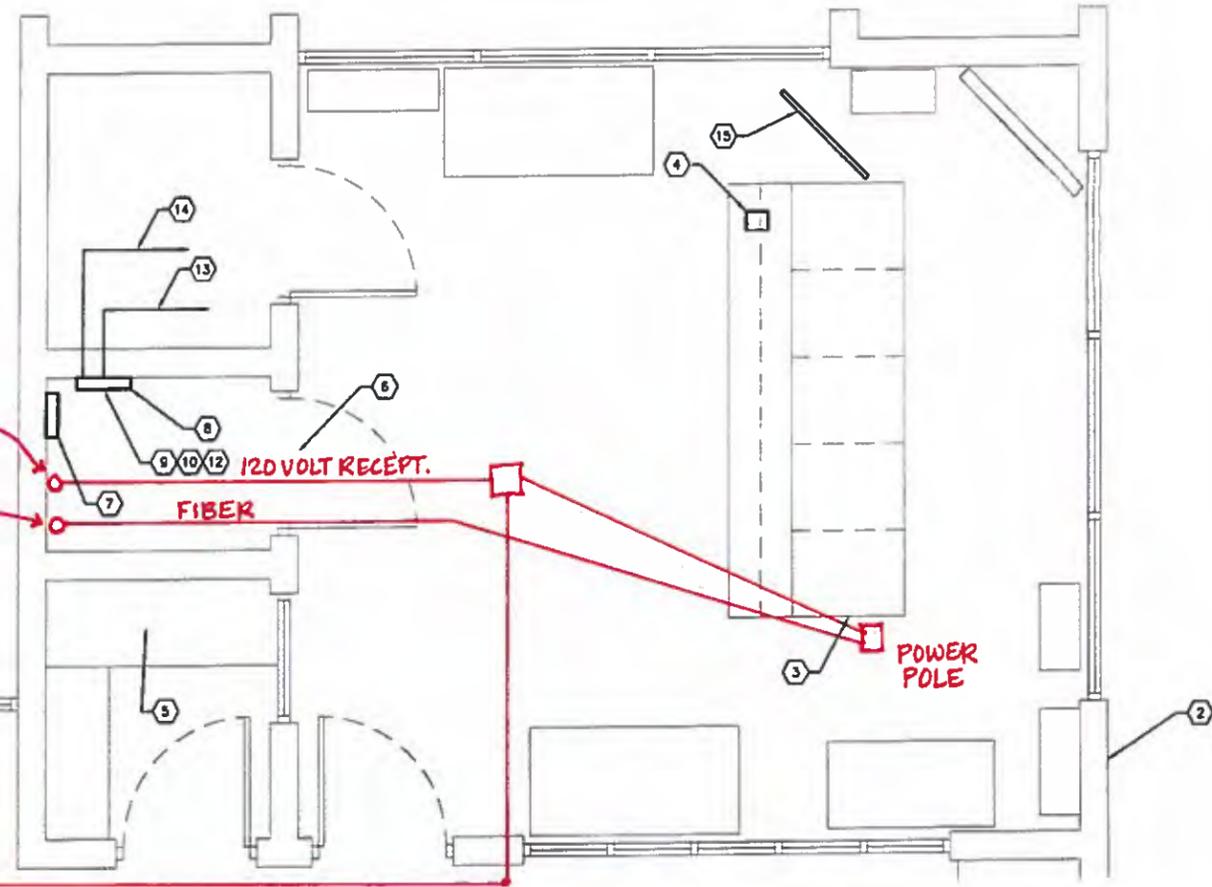
RECORD DRAWING FIBER OPTIC COMMUNICATIONS REVISION NO. DESCRIPTION BY DATE	SEWRF SEPTAGE/ GREASE RECEIVING STATION	 MANATEE COUNTY DEPARTMENT OF PUBLIC WORKS UTILITIES DEPARTMENT 4410 68th Street West Bradenton, Florida 34210 (941) 792-8811	 Cardno Shaping the Future CLEARWATER 380 PARK PLACE BLVD, STE 300, CLEARWATER, FL 33798 TEL: (727) 631-2628 (800) 861-6334 www.cardno.com CardNo. of Authorization No. 23915	YUSUFY THOMAS, P.E. DATE APPROVED LIC. NO.: 47978	RECORD DRAWINGS MCC-BLOWER BUILDING NO. 2 FLOOR PLAN	PROJECT NO: 00193-009-02 DATE: MARCH 2015 SHEET NO: E-9
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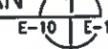
ADMINISTRATION BUILDING FLOOR PLAN

SCALE : N.T.S.



CONTROL ROOM FLOOR PLAN

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



NOTE #12, THIS SHEET

NOTE #14, THIS SHEET

NOTE #12, THIS SHEET

TO ELEC. ROOM

ELECTRICAL REDLINE DRAWINGS

PREPARED BY:
B.L. SMITH ELECTRIC, INC.
OCTOBER 2017

KEYED NOTES:

- 1 EXISTING ADMINISTRATION BUILDING.
- 2 EXISTING CONTROL ROOM WITHIN ADMINISTRATION BUILDING.
- 3 EXISTING CONSOLE CONTAINING SCADA COMPUTERS, PLC, ETC. CONTRACTOR SHALL PROVIDE AND INSTALL NEW 120VAC-24VDC POWER SUPPLY WITH 5 AMPERE OUTPUT, PHOENIX CONTACT #2866750. ALSO PROVIDE AND INSTALL 8 PORT ETHERNET SWITCH, HIRSCHMANN SPIDER 8TX. NEW POWER SUPPLY SHALL BE UTILIZED TO PROVIDE 24VDC POWER TO NEW 8 PORT SWITCH AND NEW INTERCOM STATION (REFER TO NOTE #4 FOR INTERCOM STATION REQUIREMENTS). PROVIDE 24VDC POWER SUPPLY INPUT POWER FROM UPS SOURCE. REFER ALSO TO SHEET E-9.
- 4 PROVIDE AND INSTALL NEW INTERCOM STATION. STATION SHALL BE LITELINK INCK-4001. INTERCOM SHALL BE FLUSH MOUNTED ON EXISTING CONSOLE. COORDINATE EXACT LOCATION WITH MANATEE COUNTY.
- 5 PROPOSED LOCATION FOR NEW HAULER ACCESS PERSONAL COMPUTER (PC).
- 6 EXISTING TELEPHONE ROOM WITHIN ADMINISTRATION BUILDING.
- 7 EXISTING FIBER OPTIC PATCH PANEL. PATCH PANEL CONTAINS TERMINATED 12 COUNT SINGLE-MODE FIBER OPTIC CABLE WHICH EXTENDS TO EXISTING HANDHOLE. REFER TO NOTE #5 ON SHEET E-2 FOR HANDHOLE. CONTRACTOR SHALL PROVIDE AND INSTALL NEW FIBER OPTIC PATCH PANELS AS REQUIRED FOR EQUIPMENT IN NOTE #9 AND #13 ON THIS SHEET.
- 8 EXISTING MANATEE COUNTY CISCO ETHERNET SWITCH. REFER TO SHEET 1-9 FOR REQUIRED MODIFICATIONS.
- 9 PROVIDE AND INSTALL ONE (1) NEW FIBER OPTIC MEDIA CONVERTER FOR PLC COMMUNICATIONS. OSMITRON 4701-1 WITH 1-MODULE 120V AC CHASSIS. NEW MEDIA CONVERTER SHALL BE DIN-RAIL MOUNTED ON WALL BELOW EXISTING ETHERNET SWITCH IN NOTE #8.
- 10 PROVIDE AND INSTALL 350VA UPS FOR MEDIA CONVERTER 120V POWER. APC BE350G. INSTALL UPS ON EXISTING SHELF (BELOW MEDIA CONVERTERS, MODIFY SHELF WIDTH IF NECESSARY TO ACCOMMODATE NEW UPS WIDTH).
- 11 EXISTING 120/208V PANELBOARD 'LC'. CONTRACTOR SHALL UTILIZE EXISTING SPARE SINGLE-POLE, 20A CIRCUIT BREAKER IN PANELBOARD TO SUPPLY NEW UPS 120V POWER (CIRCUIT 32, 41 OR 42).
- 12 CONTRACTOR TO PROVIDE AND INSTALL NEW 20A DUPLEX RECEPTACLE FOR NEW UPS IN NOTE #10. PROVIDE AND INSTALL 2-#12 CU + 1-#12 CU GND IN 3/4" TO PANELBOARD 'LC'.
- 13 PROVIDE AND INSTALL NEW DUPLEX SINGLE-MODE FIBER OPTIC PATCH CORD FROM EXISTING PATCH PANEL TO NEW INTERCOM IN NOTE #4. INSTALL PATCH CORD IN 1" C. CONTRACTOR MAY UTILIZE EXISTING COMMUNICATIONS POLE FROM CEILING TO CONSOLE IF THE POLE WILL ACCOMMODATE THE NEW FIBERPATCH CORD.
- 14 PROVIDE AND INSTALL NEW CAT 5e ETHERNET CABLE FROM PLC COMMUNICATIONS FIBER OPTIC MEDIA CONVERTER TO NEW ETHERNET SWITCH IN NOTE #3. INSTALL ETHERNET CABLE IN 1" C. CONTRACTOR MAY UTILIZE EXISTING COMMUNICATIONS POLE FROM CEILING TO CONSOLE IF THE POLE WILL ACCOMMODATE THE NEW ETHERNET CABLE.
- 15 PROVIDE AND INSTALL NEW 55" LED MONITOR. COORDINATE LOCATION AND MOUNTING WITH MANATEE COUNTY.

RECORD DRAWING

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RECORD DRAWING	12/2017		
FIBER OPTIC COMMUNICATIONS REVISION	TDY 10-5-16		
NO.	DESCRIPTION	BY	DATE

SEWRF SEPTAGE/ GREASE RECEIVING STATION

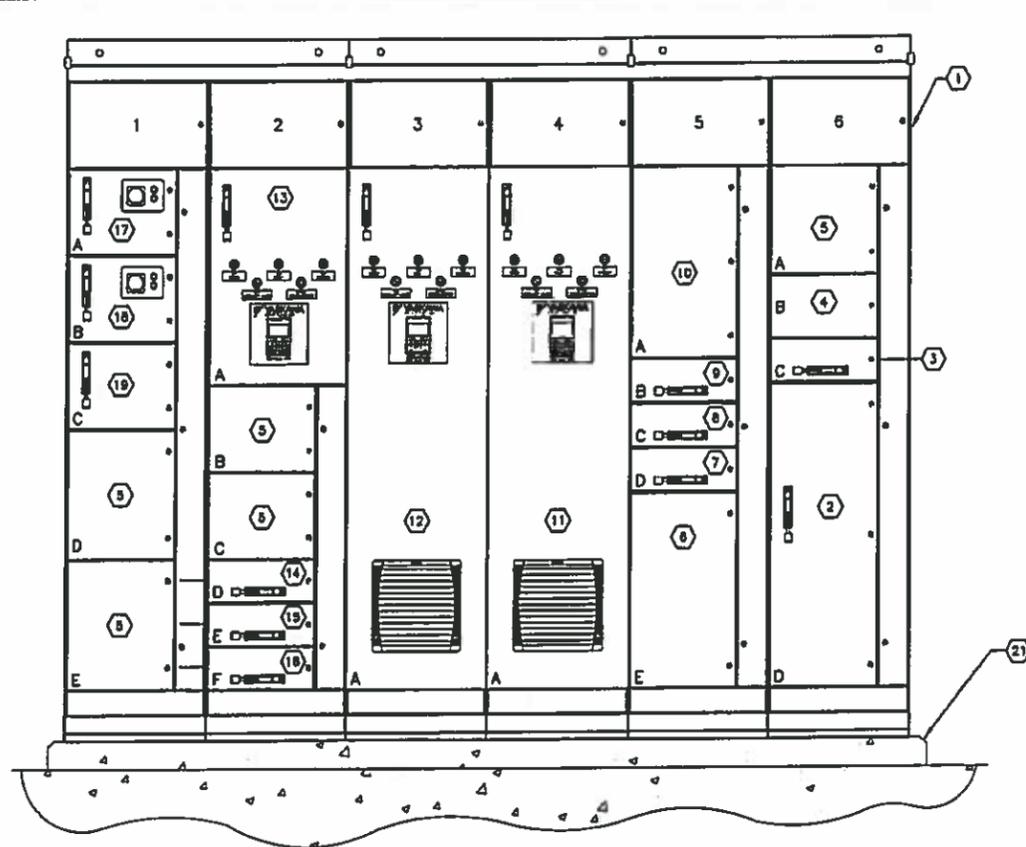


JUDITH THOMAS, PE
LIC. NO.: 47078

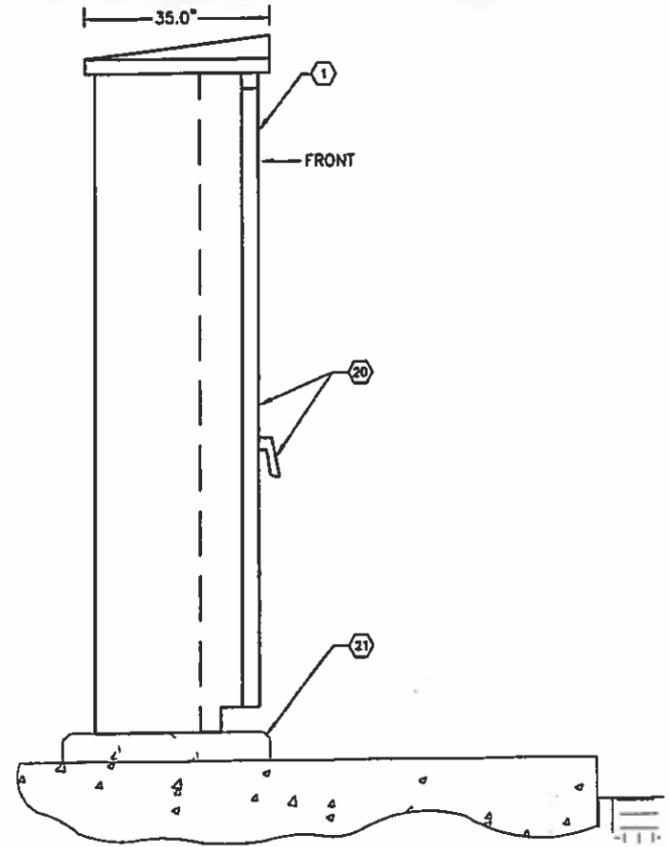
DESIGNED	TDY
DRAWN	EAK
C.C.	
APPROVED	

RECORD DRAWINGS
SEPTAGE RECEIVING STATION
ADMINISTRATION BUILDING FLOOR PLAN

PROJECT NO:	D0193-009-02
DATE:	MARCH 2015
SHEET NO:	E-10



SEPTAGE AND GREASE
RECEIVING STATION
MCC FRONT ELEVATION **(A)**
SCALE : 1" = 2'-0" **E-4 | E-11**
NOTE : MCC SHOWN WITH OUTER ENCLOSURE
DOORS REMOVED



SEPTAGE AND GREASE
RECEIVING STATION
MCC SIDE ELEVATION **(B)**
SCALE : 1" = 2'-0" **E-4 | E-11**

KEYED NOTES:

- ① NEW SEPTAGE RECEIVING STATION MOTOR CONTROL CENTER MCC IN NEMA 3R ENCLOSURE. REFER ALSO TO ONE-LINE DIAGRAM ON SHEET E-12.
- ② 200A, 480V, 3-POLE MAIN CIRCUIT BREAKER.
- ③ 30A, 480V, 3-POLE CIRCUIT BREAKER FOR SURGE PROTECTION DEVICE (SPD).
- ④ SURGE PROTECTION DEVICE (SPD).
- ⑤ SPACE
- ⑥ 15 KVA, 3#, 480V-120/208V TRANSFORMER.
- ⑦ 40A, 480V, 3-POLE CIRCUIT BREAKER FOR 15 KVA TRANSFORMER.
- ⑧ 20A, 480V, 3-POLE CIRCUIT BREAKER FOR NEW EAST SEPTAGE STATION CONTROL PANEL.
- ⑨ 20A, 480V, 3-POLE CIRCUIT BREAKER FOR NEW WEST SEPTAGE STATION CONTROL PANEL.
- ⑩ NEW 120/208V, 3#, 4-WIRE PANELBOARD WITH 100A M.C.B. PANELBOARD DESIGNATION 'LPS'. REFER TO SHEET E-15 FOR SCHEDULE.

- ⑪ NEW 7.5 HP, 480V, VFD FOR NEW TRANSFER PUMP No. 1. : NO LONGER TO BE USED.
- ⑫ NEW 7.5 HP, 480V, VFD FOR NEW TRANSFER PUMP No. 2. : NO LONGER TO BE USED.
- ⑬ NEW 40.0 HP, 480V, VFD FOR NEW GREASE PUMP.
- ⑭ SPARE 20A, 480V, 3-POLE CIRCUIT BREAKER.
- ⑮ 20A, 480V, 3-POLE CIRCUIT BREAKER FOR DEWATERING PRESS CONTROL PANEL.
- ⑯ 20A, 480V, 3-POLE CIRCUIT BREAKER FOR NEW GREASE STATION CONTROL PANEL.
- ⑰ STARTER FOR NEW GREASE TANK MIXER No. 1.
- ⑱ STARTER FOR NEW GREASE TANK MIXER No. 2.
- ⑲ 70A, 480V, 3-POLE CIRCUIT BREAKER FOR NEW WET WELL CONTROL PANEL.
- ⑳ PROVIDE GASKETED RAIN TIGHT DOOR WITH LOCKING HANDLE.
- ㉑ PROVIDE 4" CONCRETE HOUSKEEPING PAD WITH CHAMFERED EDGES.

ELECTRICAL REDLINE DRAWINGS

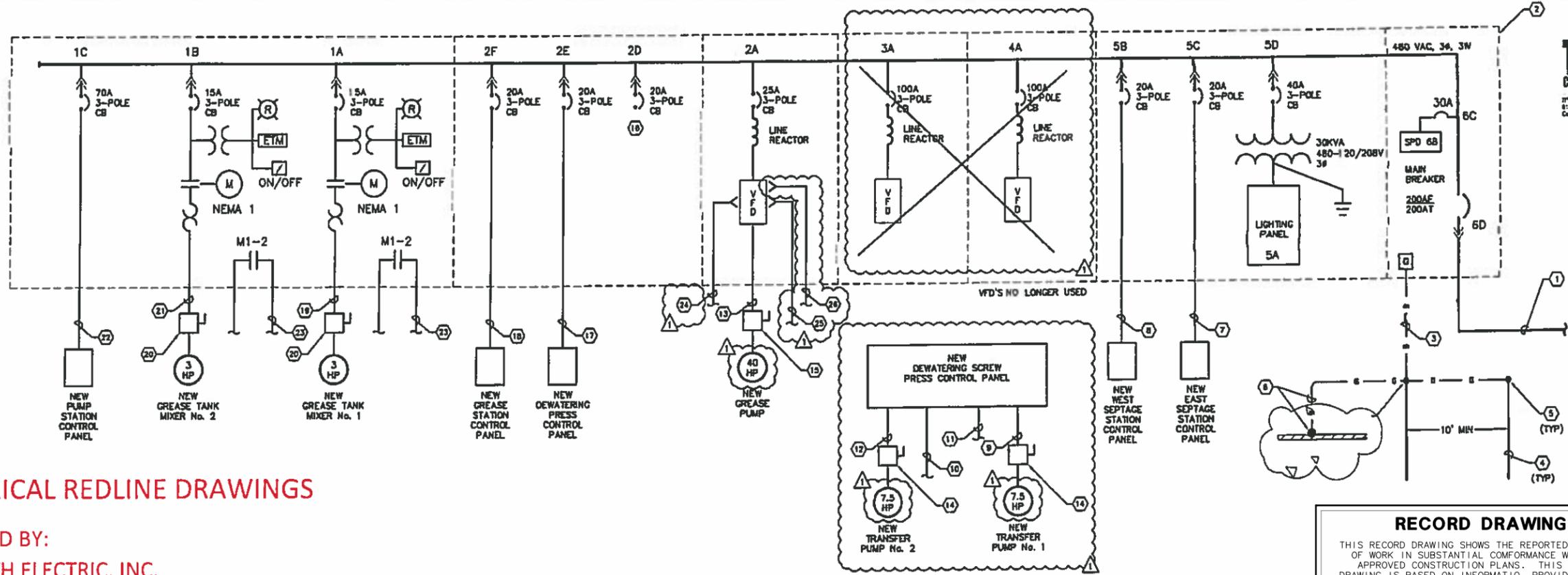
PREPARED BY:
B.L SMITH ELECTRIC, NC
OCTOBER 2017

RECORD DRAWING

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RECORD DRAWING FIBER OPTIC COMMUNICATIONS REVISION NO. DESCRIPTION BY DATE		2/2017 TDT 10-6-18	SEWRF SEPTAGE/ GREASE RECEIVING STATION	MANATEE COUNTY DEPARTMENT OF PUBLIC WORKS UTILITIES DEPARTMENT 4410 86th Street West Bradenton, Florida 34210 (941) 782-8811	Cardno Shaping the Future CLEARWATER 380 PARK PLACE BLVD STE 200, CLEARWATER, FL 33758 TEL: (727) 541-3225 (800) 814-0114 www.cardno.com Lic#State of Florida No. 29015	TIMOTHY THOMAS, PE L.I.C. NO. : 47079	DESIGNED TDT DRAWN EAK D.C. APPROVED	RECORD DRAWINGS SEPTAGE RECEIVING STATION MCC ELEVATION	PROJECT NO: 00193-009-02 DATE: MARCH 2015 SHEET NO: E-11
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ELECTRICAL REDLINE DRAWINGS

PREPARED BY:
B.L. SMITH ELECTRIC, INC.
OCTOBER 2017

SEPTAGE RECEIVING STATION ONE LINE DIAGRAM

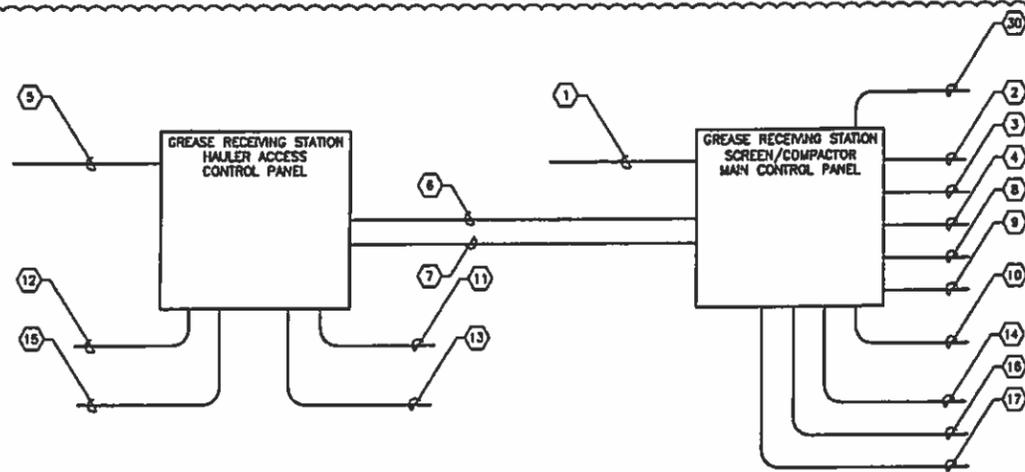
SCALE : N.T.S.

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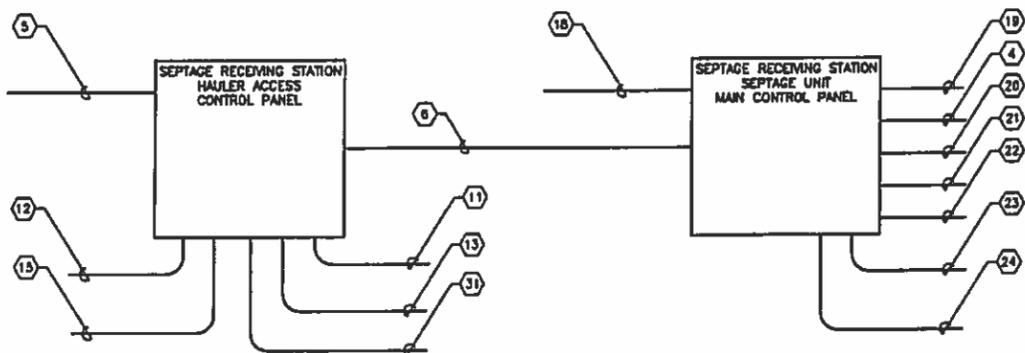
KEYED NOTES:

- 1 PROVIDE AND INSTALL NEW SEPTAGE RECEIVING STATION MOTOR CONTROL FEEDER. 3-#3/0 THWN CU + 1-#8 THWN CU GND IN 2" C. REFER ALSO TO SHEETS E-2 AND E-R
- 2 PROVIDE AND INSTALL NEW SEPTAGE RECEIVING STATION MOTOR CONTROL CENTER ('MCC-SEP').
- 3 PROVIDE AND INSTALL #1 BARE CU GROUNDING ELECTRODE CONDUCTOR IN 1-1/2" C..
- 4 PROVIDE AND INSTALL 5/8" X 20'-0" GROUNDING ELECTRODE.
- 5 PROVIDE AND INSTALL EXOTHERMIC WELDS.
- 6 PROVIDE AND INSTALL #1 BARE CU GROUNDING CONDUCTOR AND EXOTHERMICALLY WELD TO REBAR IN NEW SEPTAGE STATION CONCRETE SLAB.
- 7 PROVIDE AND INSTALL NEW EAST SEPTAGE STATION CONTROL PANEL FEEDER. 3-#12 THWN CU + 1-#12 THWN CU GND IN 3/4"C.
- 8 PROVIDE AND INSTALL NEW WEST SEPTAGE STATION CONTROL PANEL FEEDER. 3-#12 THWN CU + 1-#12 THWN CU GND IN 3/4"C.
- 9 PROVIDE AND INSTALL NEW TRANSFER PUMP No. 1 FEEDER. 3-#12 THWN CU + 1-#12 THWN CU GND IN 3/4"C. TO DEWATERING SCREW PRESS CONTROL PANEL.
- 10 PROVIDE AND INSTALL 30-#12 THWN CU + 1-#12 THWN CU GND IN 1-1/4" FROM DEWATERING SCREW PRESS CONTROL PANEL CONDUIT TO NEW PLC CONTROL CABINET FOR (4-#12 VFD 1 & 2 RUNNING, 4-#12 VFD 1 & 2 FAULT, 4-#12 VFD 1 & 2 IN HAND, 4-#12 VFD 1 & 2 IN AUTO, 6 SPARES).
- 11 PROVIDE AND INSTALL TWO (2) 2/C-#18 TWISTED SHIELDED CABLE (BELDEN 8780) IN 1" CONDUIT FROM DEWATERING SCREW PRESS CONTROL PANEL TO NEW PLC CONTROL CABINET FOR VFD 1 & 2 4-20mA SPEED REFERENCE SIGNAL.
- 12 PROVIDE AND INSTALL NEW TRANSFER PUMP No. 2 FEEDER. 3-#12 THWN CU + 1-#12 THWN CU GND IN 3/4"C. TO DEWATERING SCREW PRESS CONTROL PANEL.
- 13 PROVIDE AND INSTALL NEW GREASE PUMP FEEDER. 3-#8 THWN CU + 1-#8 THWN CU GND + 4-#12 THWN CU (MOTOR HEATER/THERMALS) IN 1"C.
- 14 PROVIDE AND INSTALL 600V, 30A, 3-POLE, NON-FUSED DISCONNECT IN NEMA 4X SS ENCLOSURE FOR GREASE PUMP LOCAL DISCONNECTING MEANS.
- 15 PROVIDE AND INSTALL 600V, 60A, 3-POLE, NON-FUSED DISCONNECT IN NEMA 4X SS ENCLOSURE FOR GREASE PUMP LOCAL DISCONNECTING MEANS. THE DISCONNECT SHALL BE PROVIDED WITH AUXILIARY CONTACTS TO DISCONNECT THE MOTOR HEATER AND THERMAL SWITCH CIRCUITS WHEN THE SWITCH DISCONNECTS THE MOTOR PHASE CONDUCTORS.
- 16 SPARE CIRCUIT BREAKER.
- 17 PROVIDE AND INSTALL NEW DEWATERING PRESS CONTROL PANEL FEEDER. 3-#12 THWN CU + 1-#12 THWN CU GND IN 3/4"C.
- 18 PROVIDE AND INSTALL NEW GREASE STATION CONTROL PANEL FEEDER. 3-#12 THWN CU + 1-#12 THWN CU GND IN 3/4"C.
- 19 PROVIDE AND INSTALL NEW GREASE TANK MIXER No. 1 FEEDER. 3-#12 THWN CU + 1-#12 THWN CU GND IN 3/4"C.
- 20 PROVIDE AND INSTALL 600V, 30A, 3-POLE, NON-FUSED DISCONNECT IN NEMA 4X SS ENCLOSURE FOR GREASE TANK MIXER DISCONNECTING MEANS. MOUNT DISCONNECT AT TOP OF TANK, ADJACENT TO MIXER MOTOR.
- 21 PROVIDE AND INSTALL NEW GREASE TANK MIXER No. 2 FEEDER. 3-#12 THWN CU + 1-#12 THWN CU GND IN 3/4"C.
- 22 PROVIDE AND INSTALL NEW PUMP STATION CONTROL PANEL FEEDER. 3-#4 THWN CU + 1-#8 THWN CU GND IN 1-1/4"C.
- 23 PROVIDE AND INSTALL 2-#12 THWN CU + 1-#12 THWN CU GND IN 3/4" C. TO PLC CONTROL CABINET FOR GREASE STORAGE TANK MIXER OR SEPTAGE STORAGE TANK MIXER RUNNING SIGNAL.
- 24 PROVIDE AND INSTALL 2-#12 THWN CU + 1-#12 THWN CU GND IN 3/4" CONDUIT TO SCREEN/COMPACTOR CONTROL PANEL TO FOR 40 HP GREASE PUMP VFD FOR VFD RUN SIGNAL.
- 25 PROVIDE AND INSTALL 12-#12 THWN CU + 1-#12 THWN CU GND IN 3/4" CONDUIT TO NEW PLC CONTROL CABINET FOR (2-#12 VFD RUNNING, 2-#12 VFD FAULT, 2-#12 VFD BY HAND, 2-#12 VFD IN AUTO, 4 SPARES). ALSO PROVIDE AND INSTALL 2/C-#18 TWISTED SHIELDED CABLE (BELDEN 8780) IN 1-1/4" CONDUIT TO NEW PLC CONTROL CABINET FOR VFD 4-20mA SPEED REFERENCE SIGNAL.
- 26 PROVIDE AND INSTALL 2/C-#18 TWISTED SHIELDED CABLE (BELDEN 8780) IN 1-1/4" CONDUIT TO SCREEN/COMPACTOR CONTROL CABINET FOR VFD 4-20mA SPEED CONTROL SIGNAL.

<p>SEWRF SEPTAGE/ GREASE RECEIVING STATION</p>	<p>MANATEE COUNTY DEPARTMENT OF PUBLIC WORKS UTILITIES DEPARTMENT 4410 68th Street West Bradenton, Florida 34210 (941) 782-5511</p>	<p>Cardno CLEARWATER 380 PARK PLACE BLVD, STE 300 CLEARWATER, FL 33798 TEL: (727) 581-2626 (800) 661-4014 www.cardno.com Certificate of Authorization No. 20015</p>	<p>DESIGNED: _____ DRAWN: _____ D.C.: _____ APPROVED: _____</p>	<p>RECORD DRAWINGS SEPTAGE RECEIVING STATION ONE LINE DIAGRAM</p>	<p>PROJECT NO.: 00193-009-02 DATE: MARCH 2015 SHEET NO.: E-12</p>
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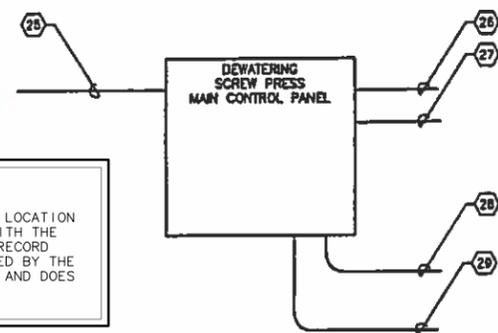
GREASE STATION WIRING SCHEMATIC



TYPICAL SEPTAGE UNIT WIRING SCHEMATIC

ELECTRICAL REDLINE DRAWINGS

PREPARED BY:
B.L. SMITH ELECTRIC, INC.
 OCTOBER 2017



DEWATERING SCREW PRESS WIRING SCHEMATIC

RECORD DRAWING

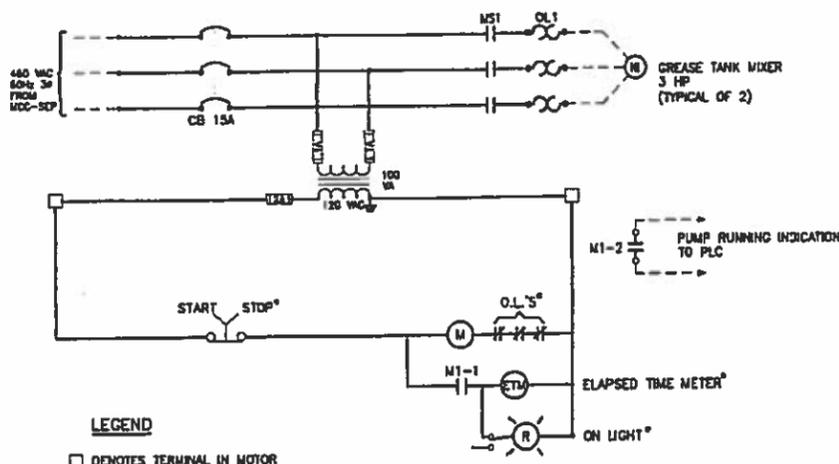
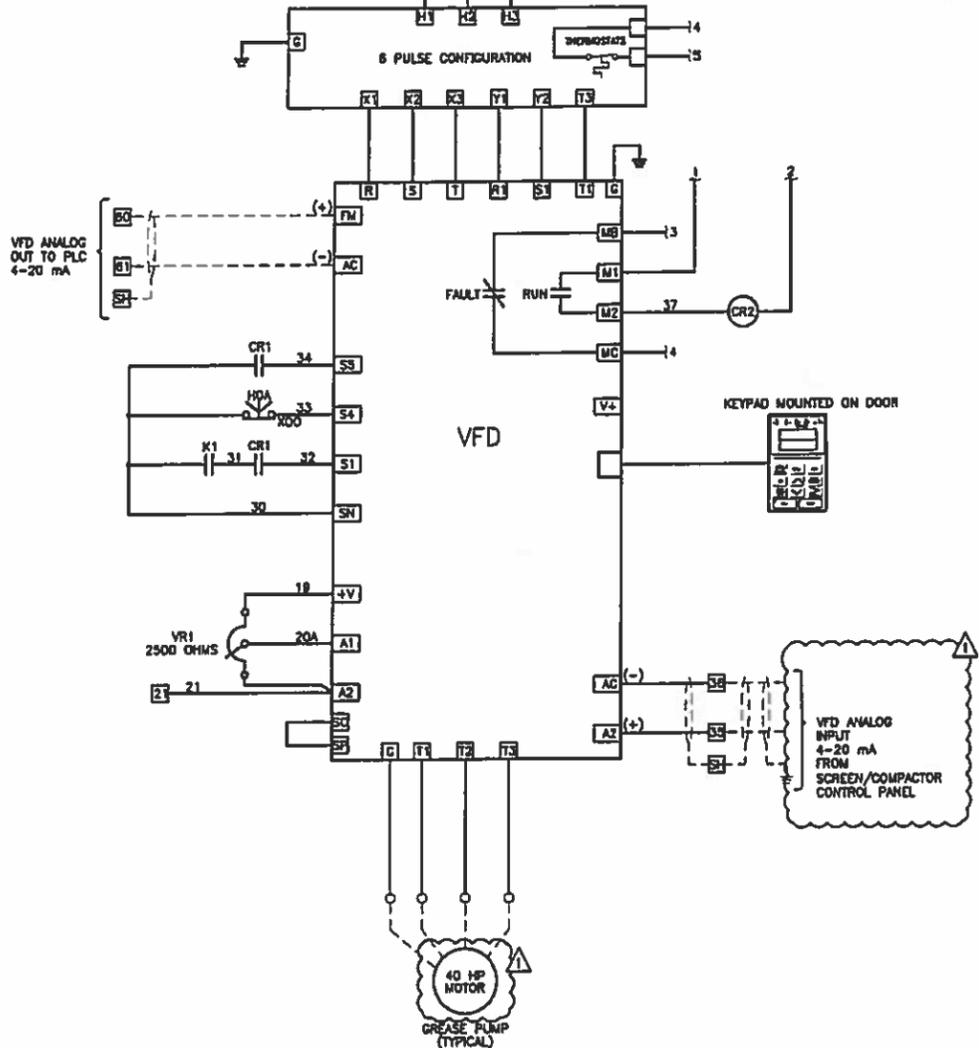
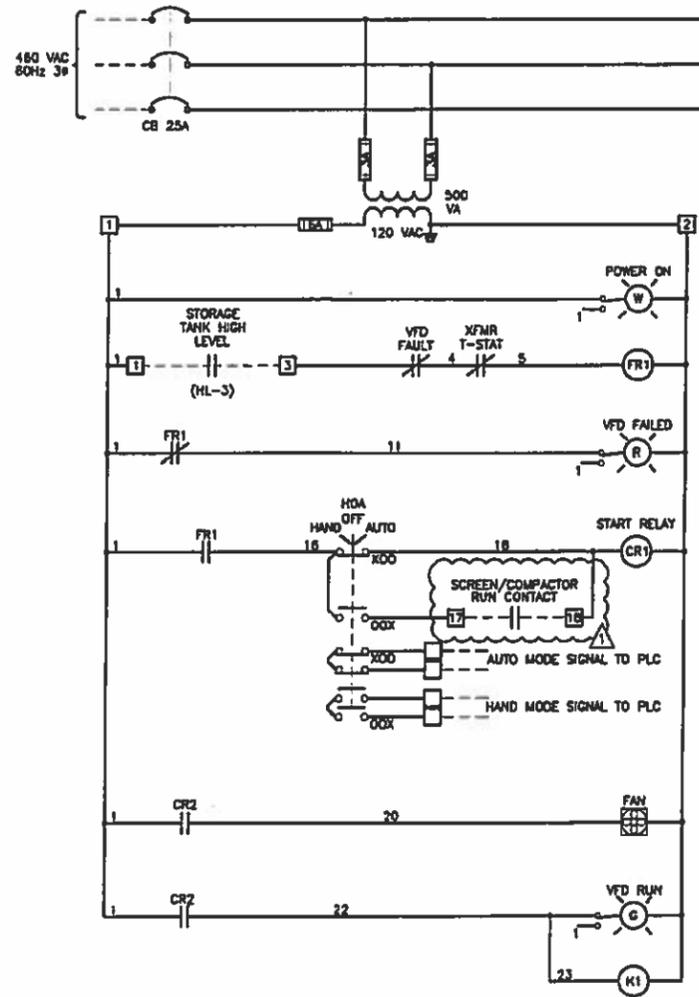
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77 S. HAWAIIAN BLVD. SUITE 200, TAMPA, FL 33606
 813.227.9198 FAX 813.227.9200
 Certificate of Authorization No. EC000285

- KEYED NOTES:**
- 1 PROVIDE AND INSTALL 3-#12 + 1-#12 GND IN 3/4" CONDUIT FROM SCREEN/COMPACTOR CONTROL PANEL TO MOTOR CONTROL CENTER (MCC-SEP) FOR SCREEN/COMPACTOR CONTROL PANEL 480V POWER.
 - 2 PROVIDE AND INSTALL 3-#12 + 2-#12 (MOTOR THERMOSTAT) + 1-#12 GND IN 3/4" CONDUIT FROM SCREEN DISCONNECT TO CONTROL PANEL. PROVIDE FLEXIBLE SEALTITE CONNECTION TO MOTOR.
 - 3 PROVIDE AND INSTALL 3-#12 + 2-#12 (MOTOR THERMOSTAT) + 1-#12 GND IN 3/4" CONDUIT FROM COMPACTOR DISCONNECT TO CONTROL PANEL. PROVIDE FLEXIBLE SEALTITE CONNECTION TO MOTOR.
 - 4 PROVIDE AND INSTALL 2-#12 + 1-#12 GND IN 3/4" CONDUIT FROM SCREEN TORQUE SWITCH TO CONTROL PANEL.
 - 5 PROVIDE AND INSTALL 2-#12 + 1-#12 GND IN 3/4" CONDUIT FROM HAULER ACCESS CONTROL PANEL TO NEW SEPTAGE RECEIVING STATION TO PANELBOARD 'LPS' FOR ACCESS CONTROL PANEL 120V POWER.
 - 6 PROVIDE AND INSTALL 4-#12 + 1-#12 GND IN 3/4" CONDUIT FROM HAULER ACCESS CONTROL PANEL TO NEW SCREEN/COMPACTOR CONTROL PANEL (2-#12 FOR HAULER STATION IN USE CONTACT, 2-#12 FOR CONTROL PANEL PERMISSIVE).
 - 7 PROVIDE AND INSTALL 6-#12 + 1-#12 GND IN 3/4" CONDUIT FROM HAULER ACCESS CONTROL PANEL TO INLET VALVE FOR OPEN/CLOSE CONTROL AND INLET VALVE STATUS.
 - 8 PROVIDE AND INSTALL 2-#12 + 1-#12 GND IN 3/4" CONDUIT FROM SCREEN/COMPACTOR CONTROL PANEL TO PRESS SPRAY WASH SOLENOID VALVE FOR SOLENOID VALVE OPEN/CLOSE CONTROL.
 - 9 PROVIDE AND INSTALL 2-#12 + 1-#12 GND IN 3/4" CONDUIT FROM SCREEN/COMPACTOR CONTROL PANEL TO PRESS DRAIN FLUSH SOLENOID VALVE FOR SOLENOID VALVE OPEN/CLOSE CONTROL.
 - 10 PROVIDE AND INSTALL ULTRASONIC LEVEL SENSOR CABLE IN 3/4" CONDUIT. CABLE REQUIREMENTS FOR ULTRASONIC LEVEL SENSOR BY SCREEN/COMPACTOR CONTROL PANEL MANUFACTURER. COORDINATE EXACT CONDUIT LOCATION WITH SCREEN/COMPACTOR MANUFACTURER.
 - 11 PROVIDE AND INSTALL pH SENSOR CABLE IN 3/4" CONDUIT. CABLE REQUIREMENTS FOR pH SENSOR BY HAULER ACCESS CONTROL PANEL MANUFACTURER. COORDINATE EXACT CONDUIT LOCATION WITH SCREEN/COMPACTOR MANUFACTURER.
 - 12 PROVIDE AND INSTALL ETHERNET CAT 5e CABLE IN 1" CONDUIT FROM HAULER ACCESS CONTROL PANEL TO NEW FIBER OPTIC PATCH PANEL.
 - 13 PROVIDE AND INSTALL 2/C-#18 TWISTED SHIELDED CABLE IN 3/4" CONDUIT FROM HAULER ACCESS CONTROL PANEL TO GREASE STATION FLOW METER.
 - 14 PROVIDE AND INSTALL 10-#12 + 1-#12 GND IN 3/4" CONDUIT FROM SCREEN/COMPACTOR CONTROL PANEL TO NEW PLC CONTROL CABINET FOR SCREEN RUNNING, SCREEN FAULT, PRESS RUNNING, PRESS FAULT AND GREASE TANK HIGH LEVEL PERMISSIVE SIGNALS.
 - 15 PROVIDE AND INSTALL 2-#12 + 1-#12 GND IN 3/4" CONDUIT FROM HAULER ACCESS CONTROL PANEL TO NEW PLC CONTROL CABINET FOR GREASE HIGH pH ALARM SIGNAL.
 - 16 PROVIDE AND INSTALL 2/C-#18 TWISTED SHIELDED CABLE (BELDEN 8780) IN 1-1/4" CONDUIT FROM NEW SCREEN/COMPACTOR CONTROL PANEL TO MOTOR CONTROL CENTER (MCC-SEP) CUBICLE 2A FOR 40 HP GREASE PUMP VFD SPEED CONTROL.
 - 17 PROVIDE AND INSTALL 2-#12 THIN CU + 1-#12 THIN CU GND IN 3/4" CONDUIT FROM SCREEN/COMPACTOR CONTROL PANEL TO MOTOR CONTROL CENTER (MCC-SEP) CUBICLE 2A FOR 40 HP GREASE PUMP VFD FOR VFD RUN SIGNAL.
 - 18 PROVIDE AND INSTALL 3-#12 + 1-#12 GND IN 3/4" CONDUIT FROM SEPTAGE UNIT CONTROL PANEL TO MOTOR CONTROL CENTER (MCC-SEP) FOR SEPTAGE CONTROL PANEL 480V POWER.
 - 19 PROVIDE AND INSTALL 3-#12 + 2-#12 (MOTOR THERMOSTAT) + 1-#12 GND IN 3/4" CONDUIT FROM SCREEN DRIVE DISCONNECT TO CONTROL PANEL. PROVIDE FLEXIBLE SEALTITE CONNECTION TO MOTOR.
 - 20 PROVIDE AND INSTALL 8-#14 + 1-#14 GND IN 3/4" CONDUIT FROM PB STATION TO SEPTAGE UNIT CONTROL PANEL. CONTRACTOR TO VERIFY CONDUCTOR QUANTITIES WITH MAKE MANUFACTURER.
 - 21 PROVIDE AND INSTALL 2-#12 + 1-#12 GND IN 3/4" CONDUIT FROM SEPTAGE UNIT CONTROL PANEL TO PRESS SPRAY WASH SOLENOID VALVE FOR SOLENOID VALVE OPEN/CLOSE CONTROL.
 - 22 PROVIDE AND INSTALL 2-#12 + 1-#12 GND IN 3/4" CONDUIT FROM SEPTAGE UNIT CONTROL PANEL TO PRESS DRAIN FLUSH SOLENOID VALVE FOR SOLENOID VALVE OPEN/CLOSE CONTROL.
 - 23 PROVIDE AND INSTALL 4-#12 + 1-#12 GND IN 3/4" CONDUIT FROM SEPTAGE UNIT CONTROL PANEL TO START LEVEL FLOAT SWITCH AND HIGH LEVEL FLOAT SWITCH.
 - 24 PROVIDE AND INSTALL 6-#12 + 1-#12 GND IN 3/4" CONDUIT FROM SEPTAGE UNIT CONTROL PANEL TO NEW PLC CONTROL CABINET FOR SCREEN RUNNING, SCREEN FAULT AND PRESS HIGH LEVEL SIGNALS.
 - 25 PROVIDE AND INSTALL 3-#12 + 1-#12 GND IN 3/4" CONDUIT FROM DEWATERING SCREW PRESS CONTROL PANEL TO MOTOR CONTROL CENTER (MCC-SEP) FOR DEWATERING SCREW PRESS CONTROL PANEL 480V POWER.
 - 26 PROVIDE AND INSTALL 3-#12 + 1-#12 GND IN 3/4" CONDUIT FROM DEWATERING SCREW PRESS CONTROL PANEL TO TRANSFER PUMP No. 1 FOR TRANSFER PUMP No. 1 480V POWER.
 - 27 PROVIDE AND INSTALL 3-#12 + 1-#12 GND IN 3/4" CONDUIT FROM DEWATERING SCREW PRESS CONTROL PANEL TO TRANSFER PUMP No. 2 FOR TRANSFER PUMP No. 2 480V POWER.
 - 28 PROVIDE AND INSTALL 30-#12 + 1-#12 GND IN 1-1/4" CONDUIT FROM DEWATERING SCREW PRESS CONTROL PANEL TO NEW PLC CONTROL CABINET FOR DEWATERING RUNNING, DEWATERING ALARM, POLYMER RUNNING, POLYMER ALARM, TRANSFER PUMP No. 1 RUNNING, TRANSFER PUMP No. 1 IN HAND, TRANSFER PUMP No. 1 IN AUTO, TRANSFER PUMP No. 2 RUNNING, TRANSFER PUMP No. 2 FAULT, TRANSFER PUMP No. 2 IN HAND AND TRANSFER PUMP No. 2 IN AUTO SIGNALS (INCLUDES 8 SPARES).
 - 29 PROVIDE AND INSTALL TWO (2) 2/C-#18 TWISTED SHIELDED CABLES IN 1" CONDUIT FROM DEWATERING SCREW PRESS CONTROL PANEL TO NEW PLC CONTROL CABINET FOR TRANSFER PUMP No. 1 SPEED REFERENCE AND TRANSFER PUMP No. 2 SPEED REFERENCE RESPECTIVELY.
 - 30 PROVIDE AND INSTALL 7-#12 + 1-#12 GND IN 3/4" CONDUIT FROM SCREEN/COMPACTOR CONTROL PANEL TO INLET VALVE FOR VALVE CONTROL AND STATUS MONITORING.
 - 31 PROVIDE AND INSTALL 4-#12 + 1-#12 GND IN 3/4" CONDUIT FROM SEPTAGE UNIT CONTROL PANEL TO INLET VALVE FOR VALVE CONTROL AND STATUS MONITORING.

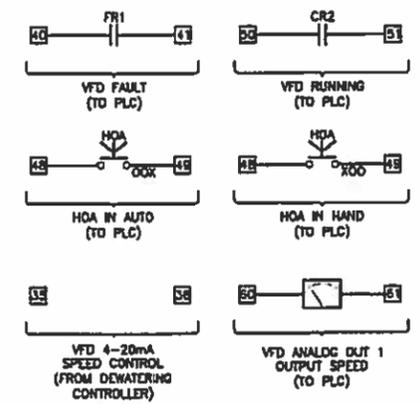
RECORD DRAWING		12/2017					DESIGNED		TDT		PROJECT NO.
FIBER OPTIC COMMUNICATIONS REVISION		TDT					10-6-18	DRAWN			EAK
NO.		DESCRIPTION	BY	DATE	4410 50th Street West Bradenton, Florida 34210 (941) 792-8811		CLEARWATER 380 PARK PLACE BLVD. STE 200 CLEARWATER, FL 33709 TEL: (772) 834-2800 (772) 834-2814 www.cardno.com Certificate of Authorization No. 29816		DATE	TIMOTHY THOMAS, PE L.C. NO.: 47079	SHEET NO. E-13



LEGEND

- DENOTES TERMINAL IN MOTOR STARTER FOR FIELD CONNECTION.
- DEVICE LOCATED ON MCC
- DENOTES FIELD WIRING

TYPICAL GREASE TANK MIXER WIRING SCHEMATIC
SCALE : N.T.S.



GREASE PUMP WIRING SCHEMATIC
SCALE : N.T.S.

ELECTRICAL REDLINE DRAWINGS

PREPARED BY:
B.L. SMITH ELECTRIC, INC.
OCTOBER 2017

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RECORD DRAWING NO. _____ DESCRIPTION _____ DATE _____		SEWRF SEPTAGE/ GREASE RECEIVING STATION 12/2017 TDT 10-8-16 BY DATE		MANATEE COUNTY DEPARTMENT OF PUBLIC WORKS UTILITIES DEPARTMENT 4410 68th Street West Bradenton, Florida 34210 (841) 782-8811		Cardno Shaping the Future CLEARWATER 380 PARK PLACE BLVD, STE 300, CLEARWATER, FL 33769 TEL: (727) 631-3558 (800) 861-4214 www.cardno.com Certificate of Authorization No. 22918		DESIGNED: _____ DRAWN: _____ D.C.: _____ APPROVED: _____ YUDITH THOMAS, PE DATE _____ LIC. NO.: 47079		RECORD DRAWINGS SEPTAGE RECEIVING STATION GREASE PUMP AND MIXER WIRING SCHEMATIC		PROJECT NO: 00193-009-02 DATE: MARCH 2015 SHEET NO: E-14	
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FILE: C:\Projects\Projects-2013\25-65\11130427\Final 1-8-16\16ELECTRICAL 1-8.dwg LAST SAVED: Mon, 09/20/16 2:10p PLOT16.D Tht, 10/06/16 7:25a BY: TDT 2017

DUCTBANK 'A' SECTION REMOVED



DUCTBANK SECTION 'B'
SCALE : N.T.S.

DUCTBANK 'B' SCHEDULE :

A. 2" C. WITH 3-3/0 THWN CU + 1-#6 THWN CU GND.

Power feed duct bank to Blower Bldg.
encased per this detail

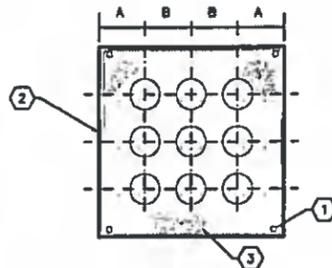
HANDHOLE DETAIL REMOVED



DUCTBANK SECTION 'C'
SCALE : N.T.S.

DUCTBANK 'C' SCHEDULE :

A. 2" C. WITH 3-3/0 THWN CU + 1-#6 THWN CU GND.
B. 2" C. WITH 12 COUNT SINGLE-MODE FIBER OPTIC CABLE.



KEYED NOTES:

- 1 #4 REBARS (TYPICAL).
- 2 #4 HOOP AT 24" O.C.
- 3 CONCRETE ENCASUREMENT

DUCTBANK CONDUIT SPACING DIMENSION SCHEDULE			
COND SIZE	DN 'A'	DIMENSION 'B'	
		1-1/4"	2"
1-1/4"	3-3/4"	3-3/8"	3-5/8"
2"	4"	3-5/8"	4"

GENERAL NOTES :

1. DUCTBANK SHALL BE INSTALLED AT A MINIMUM OF 24" BELOW FINISHED GRADE.
2. CONCRETE SHALL BE 3000 PSI MINIMUM COMPRESSION STRENGTH.
3. DUCTBANKS MAY BE REARRANGED FOR CONVENIENCE OF EGRESS.

EXISTING PANEL SCHEDULE

PANEL 'LPS' : SQUARE D CO. ; 120/208 VOLTS, 3φ, 4W ; 100 AMP MAIN ; 42K ARC RATING ; INSTALLED IN MCC TOP AT 3'-6" AFF											
EQUIPMENT SERVED	CIRCUIT BREAKER			KVA/PHASE			CIRCUIT BREAKER			EQUIPMENT SERVED	
	POLE	AMPS	FRAME	A	B	C	POLE	AMPS	FRAME		
WEST SEPTAGE LIGHTING	1	20	OOB	0.5			1	2	0.8	GREASE CANOPY LIGHTING	
EAST SEPTAGE LIGHTING	1	20	OOB		0.5		3	4	0.5	VACUUM TRUCK LIGHTING	
DEWATERING CANOPY LIGHTING	1	20	OOB			0.4	5	6	0.5	WEST SEPTAGE HAULER ACCESS	
PLC CONTROL CABINET	1	20	OOB	0.5			7	8	0.5	GREASE HAULER ACCESS	
PLC CONTROL CABINET	1	20	OOB		0.3		9	10	0.5	EAST SEPTAGE HAULER ACCESS	
FIBER OPTIC CABINET	1	20	OOB			0.8	11	12		SPARE	
FIBER OPTIC CABINET	1	20	OOB	0.4			13	14		SPARE	
SPACE							15	16		SPARE	
SPACE							17	18		SPARE	
SPACE							19	20		SPARE	
SPACE							21	22		SPACE	
SPACE							23	24		SPACE	
SPACE							25	26		SPACE	
SPACE							27	28		SPACE	
SPACE							29	30		SPACE	
SUB-TOTAL KVA				1.4	0.8	1.2		1.3	1.0	0.5	TOTAL DEMAND LOAD = 6.2 KVA

ELECTRICAL REDLINE DRAWINGS

PREPARED BY:
B.L. SMITH ELECTRIC, INC
OCTOBER 2017

RECORD DRAWING

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<p>RECORD DRAWING</p> <p>NO. DESCRIPTION</p>		<p>12/2017</p> <p>10-8-16</p>	<p>SEWRF SEPTAGE/ GREASE RECEIVING STATION</p>	<p>MANATEE COUNTY DEPARTMENT OF PUBLIC WORKS UTILITIES DEPARTMENT</p> <p>4410 66th Street West Bradenton, Florida 34210 (941) 792-8811</p>	<p>Cardno CLEARWATER</p> <p>380 PARK PLACE BLVD. STE 300 CLEARWATER, FL 33788 TEL: (727) 521-3508 (800) 961-6244</p>	<p>DESIGNED TDT</p> <p>DRAWN EAK</p> <p>C.C.</p> <p>APPROVED</p>	<p>RECORD DRAWINGS SEPTAGE RECEIVING STATION DETAILS AND PANEL SCHEDULE</p>	<p>PROJECT NO: 00193-009-02</p> <p>DATE: MARCH 2015</p> <p>SHEET NO: E-15</p>
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1 L.L.C. \Projects\Project-201902-4202\71324227\Rev 1 6-25-18\ELE -NICAL E-8.dwg LAST SAVED: Mon, 6-25-2018 10:06:28 AM BY: TDT

FUNCTION SYMBOL SCHEDULE

IDENTIFICATION LETTERS				
	FIRST LETTER		SUCCEEDING LETTERS	
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION
A	ANALYSIS		ALARM	
B	BURNER, COMBUSTION		PROGRAMMER	
C	CONDUCTIVITY			CLOSED
D	DENSITY	DIFFERENTIAL		
E	VOLTAGE		SENSOR (PRIMARY ELEMENT)	
F	FLOW RATE	RATIO (FRACTION)		
G	GAGING		GLASS VIEWING DEVICE	
H	HAND			HIGH
I	CURRENT (ELECTRICAL)		INDICATE	
J	POWER	SCAN		
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION
L	LEVEL		LIGHT (PILOT)	LOW
M	MOTOR	MOMENTARY		MIDDLE, INTERMEDIATE
N	VIBRATION		IGNITOR	ISOLATOR
O	OPERATION	OFFSET	ORIFICE, RESTRICTION	OPEN
P	PRESSURE, VACUUM		POINT (TEST) CONNECTION	
Q	QUANTITY, EVENT	INTEGRATE, TOTALIZE	INTEGRATE	
R	RADIATION		RECORD, PRINT	
S	SPEED, FREQUENCY	SAFETY		SWITCH
T	TEMPERATURE			TRANSMIT
U	MULTIVARIABLE	TREND	MULTIFUNCTION	MULTIFUNCTION
V	VISCOSITY	VACUUM		VALVE, DAMPER, LOUVER, GATE
W	WEIGHT, FORCE, TORQUE		WELL	
X	UNCLASSIFIED		UNCLASSIFIED	UNCLASSIFIED
Y			RELAY, COMPUTE, CONVERT	
Z	POSITION		FINAL CONTROL ELEMENT	UNCLASSIFIED

LINE DESIGNATIONS

INSTRUMENTATION SIGNAL — — —
 ELECTRICAL POWER — — —
 DATA LINK — D — D —
 RADIO LINK — R — R —
 FIBER OPTIC DATA — F — F —

MISCELLANEOUS NOTATIONS

S/D = SHUTDOWN
 O/R = OVERRIDE
 MCS = MASTER CONTROL STATION
 VFD = VARIABLE FREQUENCY DRIVE
 PCC = PROCESS CONTROL CABINET
 LCP = LOCAL CONTROL PANEL
 ES = ELECTRICAL SUPPLY (120VAC)

CONTROLLER NOTATION

PV = PROCESS VARIABLE INPUT
 SP = SET POINT INPUT
 C = CONTROL OUTPUT

EQUIPMENT NOTATION

B = BLOWER OR FAN
 E = ENGINE
 G = GENERATOR
 F = FILTER
 GS = GRINDER/SCREEN
 K = COMPRESSOR
 H = HOIST
 ME = MECHANICAL EQUIPMENT
 MX = MIXER
 P = PUMP
 T = TANK OR SUMP

INPUT/OUTPUT NOTATIONS

AI = ANALOG INPUT
 AO = ANALOG OUTPUT
 DI = DISCRETE INPUT
 DO = DISCRETE OUTPUT

HAND SWITCH NOTATION

HOA = HAND-OFF-AUTO
 S/S = START/STOP
 SEL = SELECTOR
 O/C = OPEN/CLOSE
 O/O = ON/OFF
 LOS = LOCKOUT-START
 LOR = LOCAL-OFF-REMOTE
 OAC = OPEN-AUTO CLOSE
 CAO = CLOSED-AUTO OPEN

VALVE DESIGNATIONS

MOV = MOTOR OPERATED VALVE

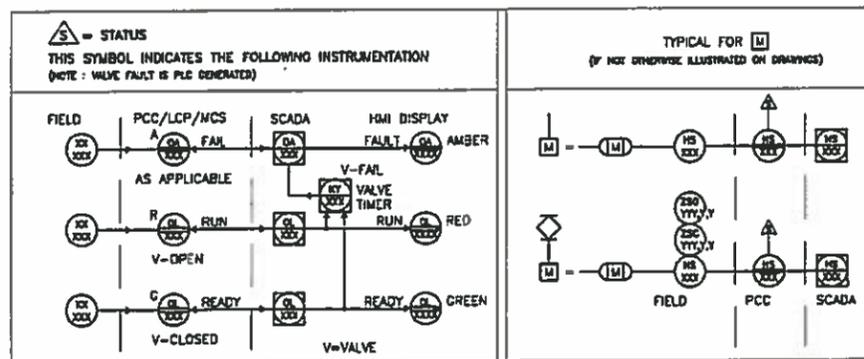
GENERAL ABBREVIATIONS

SCADA = SUPERVISORY CONTROL AND DATA ACQUISITION
 PLC = PROGRAMMABLE LOGIC CONTROL
 SA = SURGE SUPPRESSOR DEVICE

◇ INTERLOCK
 1-3 CONTINUATION OF SIGNAL OR DATA TO/FROM SHEET NUMBER INDICATED

BASIC SYMBOLS

SINGLE FUNCTION	MULTIPLE FUNCTION	
○	○ ○	FIELD MOUNTED INSTRUMENT OR DEVICE
○	○ ○	FRONT OF PANEL MOUNTED INSTRUMENT ON LCP, PCC, MCS, OR VFD
○	○ ○	REAR OF PANEL MOUNTED INSTRUMENT ON LCP, PCC, MCS, OR VFD
○	○ ○	FRONT OF PANEL MOUNTED INSTRUMENT ON MAIN PANEL
○	○ ○	REAR OF PANEL MOUNTED INSTRUMENT ON MAIN PANEL
□	□ □	PLC AND/OR COMPUTER SOFTWARE COMPONENT (OPERATOR ACCESSIBLE UNDER NORMAL CONDITIONS) OR
□	□ □	PLC AND/OR COMPUTER GENERATED COMPONENT (NOT OPERATOR ACCESSIBLE UNDER NORMAL CONDITIONS)
□	□ □	DATA FLOW SYSTEMS RTU INPUT/OUTPUT



ELECTRICAL REDLINE DRAWINGS

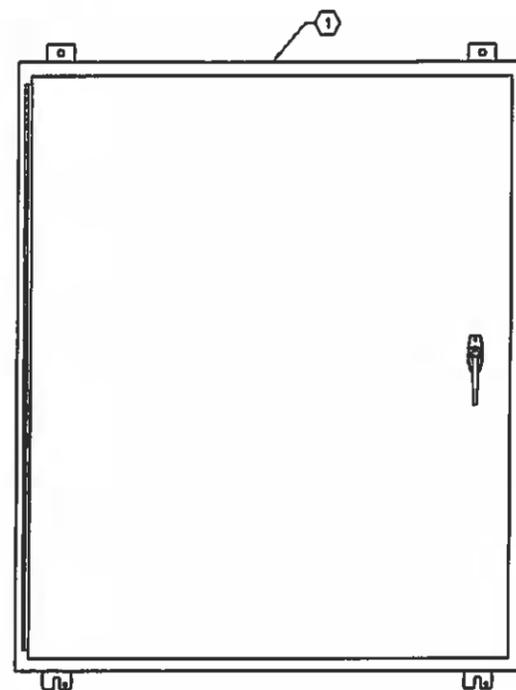
PREPARED BY:
 B.L SMITH ELECTRIC, INC.
 OCTOBER 2017

RECORD DRAWING

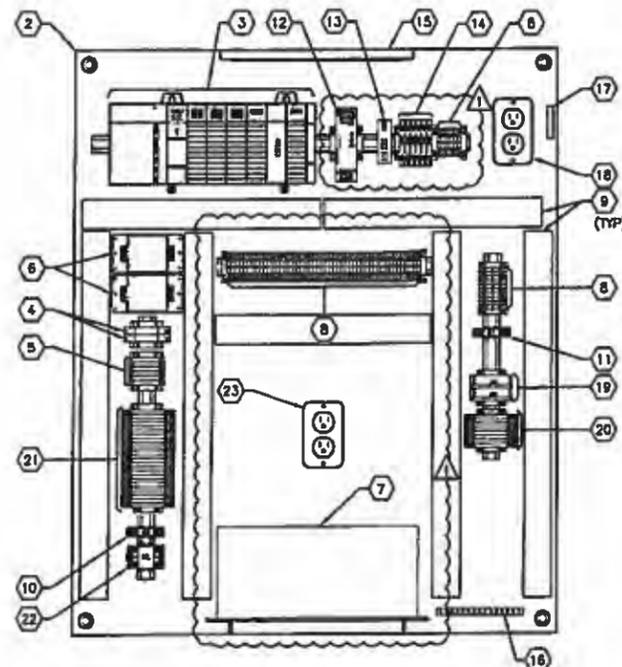
* THIS RECORD DRAWING SHOWS THE REPORTED LOCATION OF WORK IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS. THIS RECORD DRAWING IS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR AND SURVEYOR. CARDNO CANNOT AND DOES NOT WARRANTY ITS ACCURACY.



<p>RECORD DRAWING 12/2017</p> <p>FIBER OPTIC COMMUNICATIONS REVISION TDT 10-6-18</p>		<p>SEWRF SEPTAGE/ GREASE RECEIVING STATION</p>		<p>MANATEE COUNTY DEPARTMENT OF PUBLIC WORKS UTILITIES DEPARTMENT</p> <p>4410 86th Street West Bradenton, Florida 34210 (941) 782-8811</p>		<p>Cardno TBE</p> <p>380 Park Plaza Blvd., Suite 300, Clearwater, Florida, 33759 www.cardno.com - 727.331.3503 Certificate of Authorization No. 3843</p>		<p>DESIGNED TDT DRAWN EAK Q.C. APPROVED</p>		<p>RECORD DRAWINGS INSTRUMENTATION AND CONTROLS LEGEND</p>		<p>PROJECT NO: 00193-009-02 DATE: MARCH 2015 SHEET NO: 1-1</p>	
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EXTERIOR LAYOUT



BACKPANEL LAYOUT

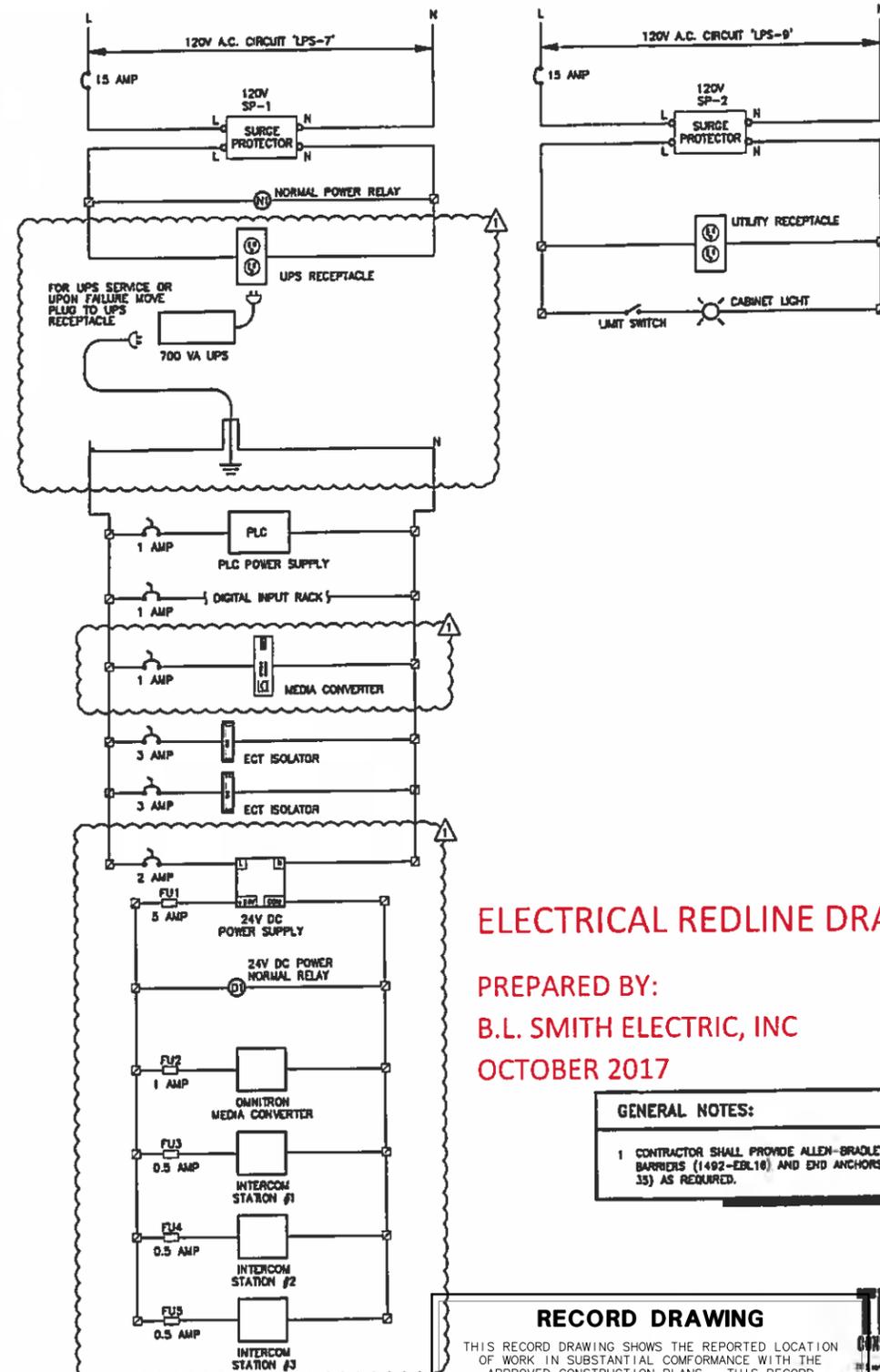
SEPTAGE RECEIVING STATION
PLC CONTROL CABINET ELEVATION

SCALE : N.T.S.



KEYED NOTES:

- 1 PROVIDE AND INSTALL 42" X 36" X 12", 316 STAINLESS STEEL ENCLOSURE. INCLUDE BACKPANEL, PAD-LOCKABLE 3-POINT LATCH, DEADFRONT INTERIOR DOOR AND DOOR-STOP KIT.
- 2 PROVIDE AND INSTALL CONTROL CABINET 42" X 36" BACKPANEL.
- 3 PROVIDE ALLEN-BRADLEY PLC, PROCESSOR: 1747-LB52; THREE (3) A/C INPUT MODULES: 1746-IA16; A/C OUTPUT MODULE: 1746-OB; ANALOG INPUT MODULE: 1746-NB; POWER SUPPLY: 1746-P2; 7-SLOT RACK: 1746-A7; BLANK FILLER: 1746-N2.
- 4 PROVIDE AND INSTALL 120V CIRCUIT BREAKERS, 15 AMPERE SQUARE-D QOU115 AS REQUIRED.
- 5 PROVIDE AND INSTALL 120V, THERMAL CIRCUIT BREAKERS. REFER TO POWER WIRING DIAGRAM FOR QUANTITY/SIZE. ALL THERMAL CIRCUIT BREAKERS SHALL BE PHOENIX CONTACT TCP TYPE.
- 6 PROVIDE AND INSTALL 120V SURGE PROTECTION DEVICE, EDCO HSP121BT-1RU.
- 7 PROVIDE AND INSTALL APC SMART-UPS 750VA LCD 120V US. PROVIDE SHELF TO KEEP UPS OFF BOTTOM OF ENCLOSURE.
- 8 PROVIDE AND INSTALL DIN-RAIL MOUNTED TERMINAL BLOCKS, ALLEN-BRADLEY 1492-W10.
- 9 PROVIDE AND INSTALL 2"x2" PANDUIT (OR EQUAL) WIRING SYSTEM WITH COVERS.
- 10 PROVIDE AND INSTALL SQUARE-D 8501 R SERIES RELAY, SINGLE-POLE, 120V AC COIL FOR NORMAL AC POWER LOSS SIGNAL. PROVIDE RELAY BASE AND HOLD DOWN SPRING FOR RELAY PROVIDED.
- 11 PROVIDE AND INSTALL SQUARE-D 8501 R SERIES RELAY, SINGLE-POLE, 24V DC COIL FOR 24V DC POWER LOSS SIGNAL. PROVIDE RELAY BASE AND HOLD DOWN SPRING FOR RELAY PROVIDED.
- 12 PROVIDE AND INSTALL 120VAC-24VDC POWER SUPPLY WITH 5 AMPERE OUTPUT. PHOENIX CONTACT #2866750.
- 13 PROVIDE AND INSTALL FIBER OPTIC MEDIA CONVERTER FOR PLC COMMUNICATIONS SYSTEM. OMNITRON 4701-1 WITH 1-MODULE 120V CHASSIS.
- 14 PROVIDE AND INSTALL FUSE TERMINAL BLOCKS FOR DC POWER SUPPLY, MEDIA CONVERTER AND INTERCOMS. PHOENIX CONTACT UK TYPE AS REQUIRED.
- 15 PROVIDE AND INSTALL 120V, 6W, CABINET LIGHT, PRESCOLITE UCS12-1-08-PH-120-WSW. PROVIDE F8T5/CW LAMP AND BRACKET TO MOUNT FIXTURE TO BACKPANEL.
- 16 PROVIDE AND INSTALL EDQUIPMENT GROUND ASSEMBLY.
- 17 PROVIDE AND INSTALL LIMIT SWITCH FOR CABINET LIGHT, CUTLER HAMMER E47BCC08.
- 18 PROVIDE AND INSTALL UTILITY DUPLEX GF1 RECEPTACLE, HUBBELL, GFR5352A OR EQUAL.
- 19 PROVIDE AND INSTALL SIGNAL ISOLATOR/LOOP POWER UNITS, MOORE INDUSTRIES TYPE ECT, WITH 2-WIRE TRANSMITTER EXCITATION OPTION FOR PRESSURE TRANSMITTER LOOP POWER.
- 20 PROVIDE AND INSTALL ANALOG SURGE PROTECTION DEVICES AS REQUIRED. MTL CATALOG # SD32.
- 21 PROVIDE AND INSTALL DIGITAL SURGE PROTECTION DEVICES AS REQUIRED. MTL CATALOG # SD150X.
- 22 PROVIDE AND INSTALL SQUARE-D 8501 R SERIES RELAY, 4-POLE, 120V AC COIL FOR HIGH TANK ALARM INTERLOCKS. PROVIDE RELAY BASE AND HOLD DOWN SPRING FOR RELAY PROVIDED.
- 23 PROVIDE AND INSTALL UPS DUPLEX GF1 RECEPTACLE, HUBBELL, GFR5352A OR EQUAL.



PLC CONTROL CABINET
POWER WIRING DIAGRAM

ELECTRICAL REDLINE DRAWINGS

PREPARED BY:
B.L. SMITH ELECTRIC, INC
OCTOBER 2017

GENERAL NOTES:

- 1 CONTRACTOR SHALL PROVIDE ALLEN-BRADLEY END BARRIERS (1492-EBL10) AND END ANCHORS (1492-EA35) AS REQUIRED.

RECORD DRAWING

THIS RECORD DRAWING SHOWS THE REPORTED LOCATION OF WORK IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS. THIS RECORD DRAWING IS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR AND SURVEYOR. CARDNO CANNOT AND DOES NOT WARRANTY ITS ACCURACY.



RECORD DRAWING	12/2017		
FIBER OPTIC COMMUNICATIONS REVISION	TDT 10-8-18		
NO.	DESCRIPTION	BY	DATE

SEWRF
SEPTAGE/ GREASE
RECEIVING STATION

MANATEE COUNTY
DEPARTMENT OF PUBLIC WORKS
UTILITIES DEPARTMENT
4410 58th Street West Bradenton, Florida 34210
(841) 792-8811

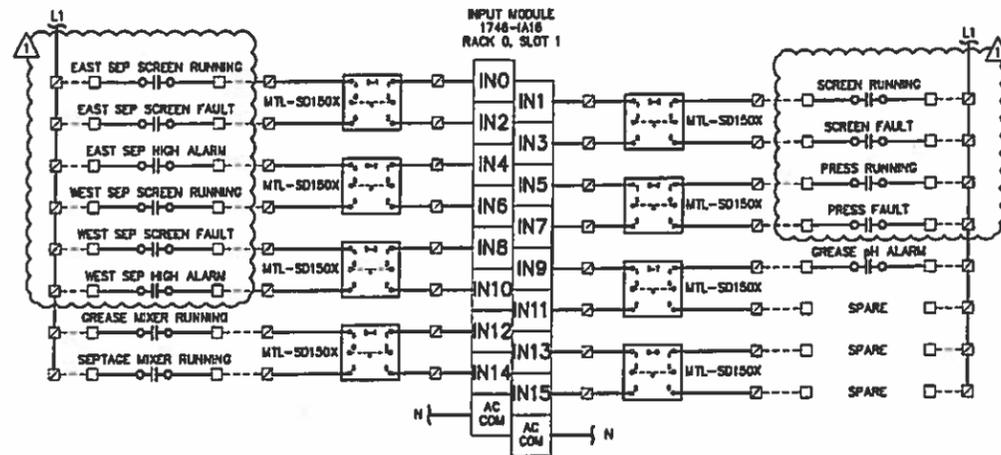
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(727) 535-2606 (800) 881-4214
www.cardno.com Certificate of Authorization No. 22918

YIMOTHY THOMAS PE DATE
LIC. NO.: 47078

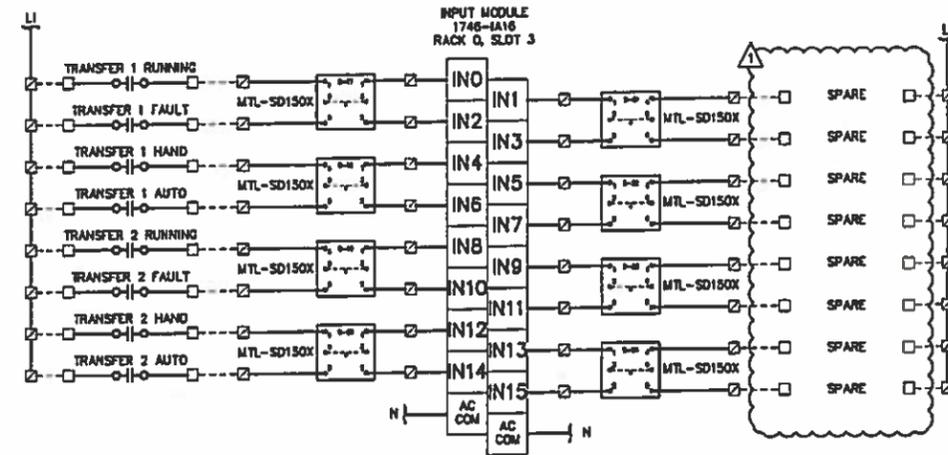
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DRAWN	EAK
C.C.	
APPROVED	

RECORD DRAWINGS
SEPTAGE STATION PLC CONTROL
CABINET DETAILS

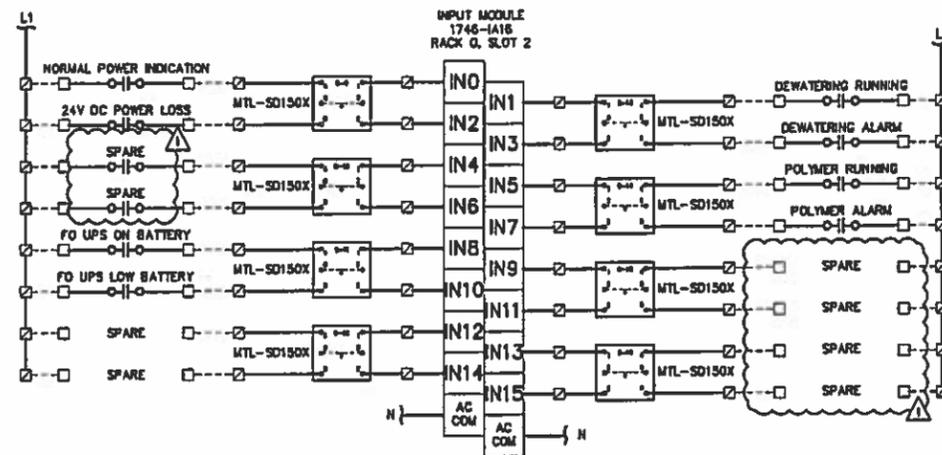
PROJECT NO:	00193-009-02
DATE:	MARCH 2015
SHEET NO:	1-2



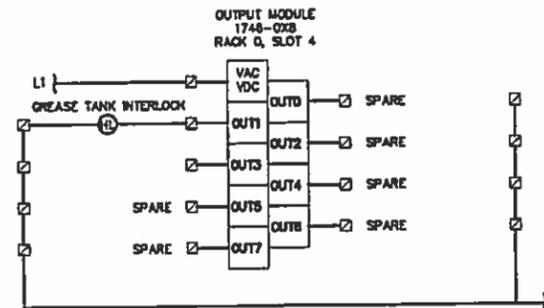
PLC - DISCRETE INPUT CARD WIRING DIAGRAM



PLC - DISCRETE INPUT CARD WIRING DIAGRAM



PLC - DISCRETE INPUT CARD WIRING DIAGRAM



PLC - DISCRETE OUTPUT CARD WIRING DIAGRAM

ELECTRICAL REDLINE DRAWINGS

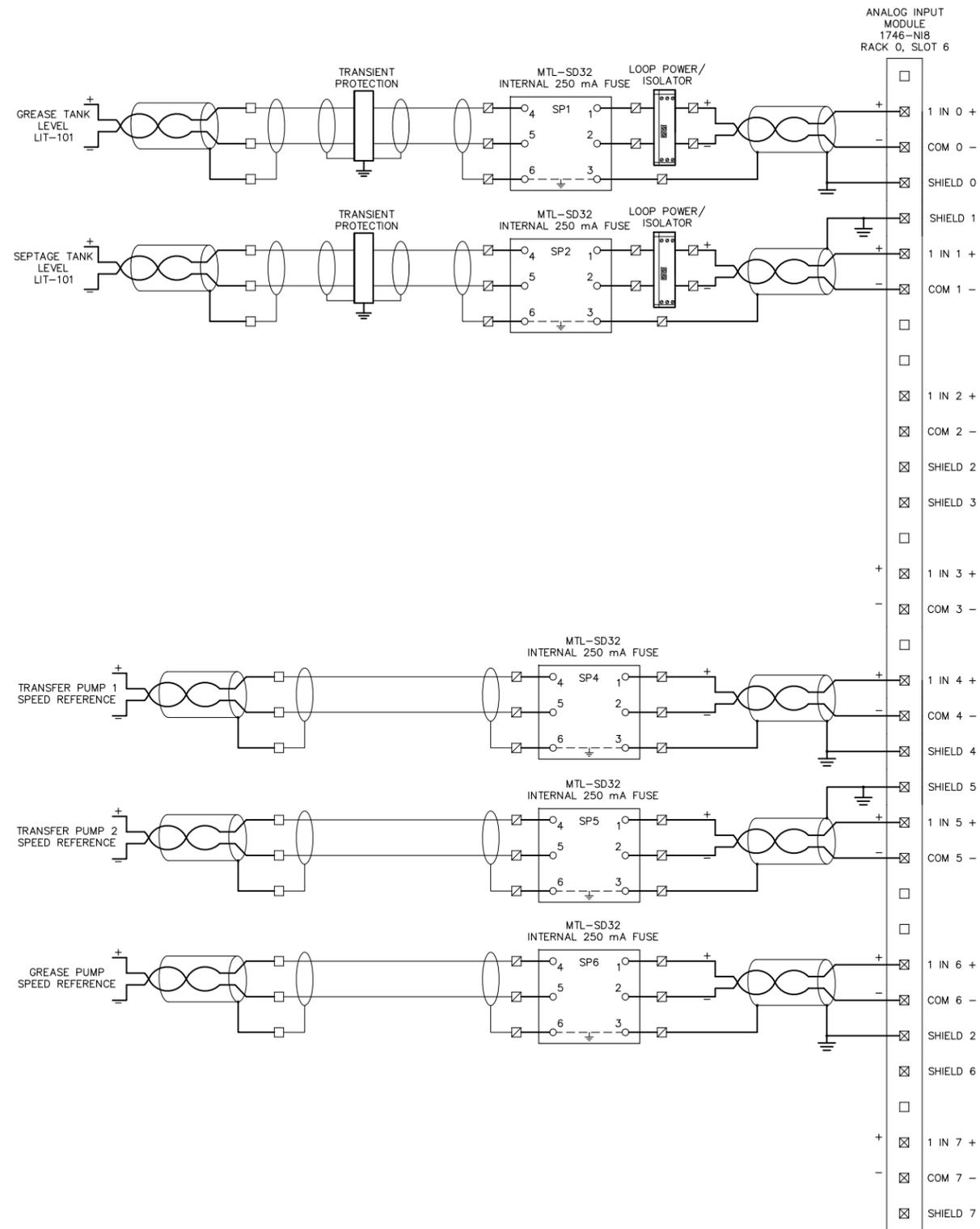
PREPARED BY:
B.L. SMITH ELECTRIC, INC.
OCTOBER 2017

RECORD DRAWING
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<p>RECORD DRAWING</p> <p>FIBER OPTIC COMMUNICATIONS REVISION</p> <p>NO. DESCRIPTION</p>		<p>12/2017</p> <p>TDI 10-6-16</p> <p>BY DATE</p>	<p>SEWRF SEPTAGE/ GREASE RECEIVING STATION</p>	<p>MANATEE COUNTY</p> <p>DEPARTMENT OF PUBLIC WORKS</p> <p>UTILITIES DEPARTMENT</p> <p>4410 66th Street West Bradenton, Florida 34210</p> <p>(941) 762-8811</p>	<p>Cardno</p> <p>Shaping the Future</p> <p>CLEARWATER</p> <p>380 PARK PLACE BLVD. SUITE 303, CLEARWATER, FL 33759 TEL: (727) 371-2008 (800) 861-4034</p> <p>www.cardno.com Certificate of Authorization No. 29118</p>	<p>DESIGNED: TDT</p> <p>DRAWN: EAK</p> <p>C.C.</p> <p>DATE APPROVED</p>	<p>SEPTAGE STATION PLC CONTROL CABINET DISCRETE WIRING DIAGRAMS</p>	<p>PROJECT NO: 00193-009-02</p> <p>DATE: MARCH 2015</p> <p>SHEET NO: I-3</p>
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FILE: C:\Projects\Projects-2017\2017-05\171304277\Rev 1 9-28-16\984C 1-3.dwg USER: BAVEZ Date: 10/26/16 11:30p PLOTTED: Thu, 10/26/16 7:46:00 BY: TDT2017



PLC - ANALOG INPUT CARD WIRING DIAGRAM

RECORD DRAWING
 THIS RECORD DRAWING SHOWS THE REPORTED LOCATION OF WORK IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS. THIS RECORD DRAWING IS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR AND SURVEYOR. CARDNO CANNOT AND DOES NOT WARRANTY ITS ACCURACY.



RECORD DRAWINGS

NO.	DESCRIPTION	BY	DATE
	RECORD DRAWING	TDT	12/2017
	FIBER OPTIC COMMUNICATIONS REVISION	TDT	10-6-16

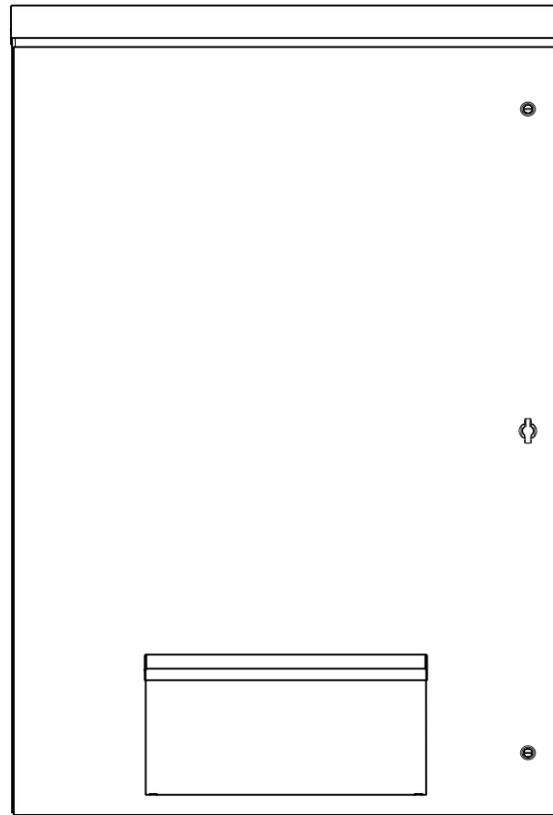
**SEWRf
 SEPTAGE/ GREASE
 RECEIVING STATION**



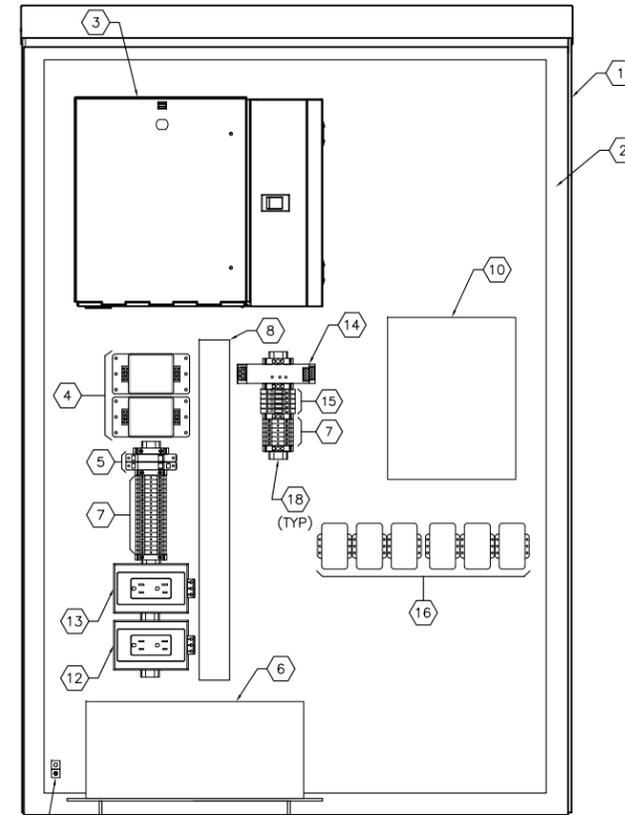
DESIGNED: TDT
 DRAWN: EAK
 Q.C.:
 APPROVED:
 TIMOTHY THOMAS, PE DATE
 LIC. NO.: 47079

**SEPTAGE STATION PLC CONTROL
 CABINET ANALOG WIRING
 DIAGRAMS**

PROJECT NO: 00193-009-02
 DATE: MARCH 2015
 SHEET NO: I-4



ENCLOSURE & DEADFRONT LAYOUT



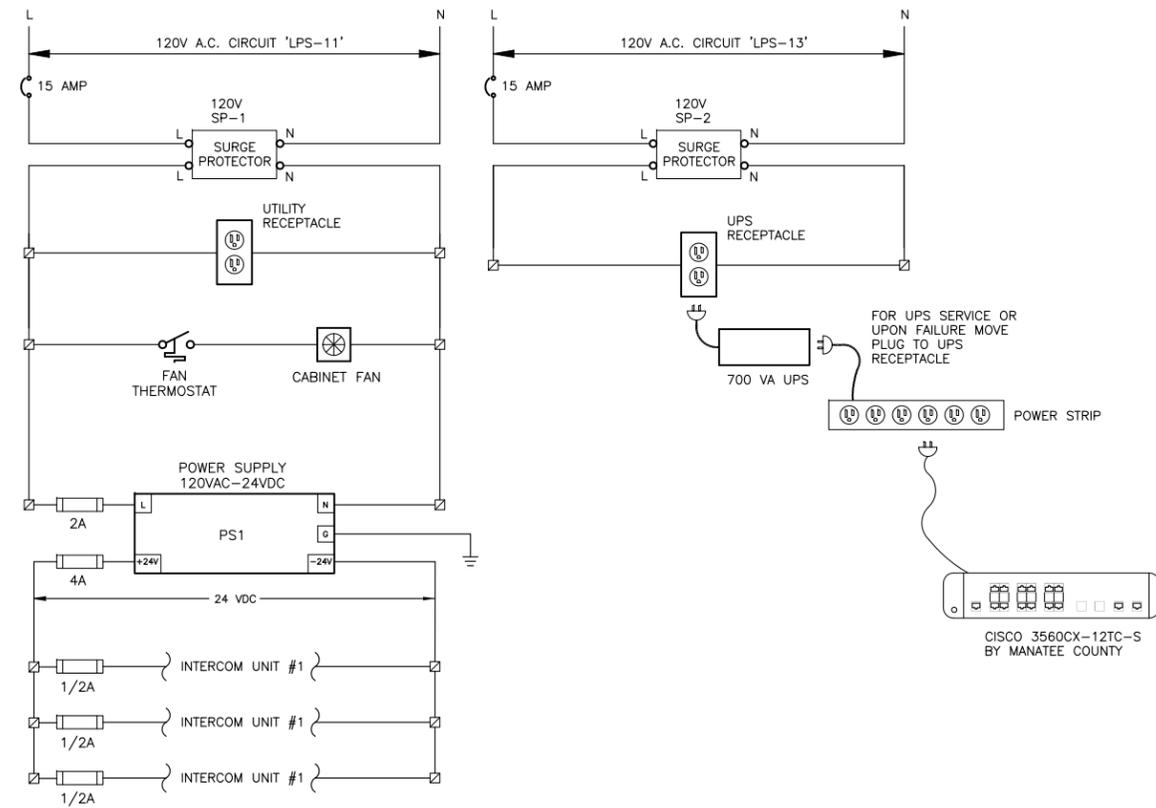
BACK PANEL LAYOUT ENCLOSURE & DEADFRONT LAYOUT

**SEPTAGE RECEIVING STATION
FIBER OPTIC CABINET ELEVATION**

SCALE : N.T.S.



ADMINISTRATION BUILDING FIBER OPTIC CABINET
HAS BEEN DELETED FROM THE PROJECT



KEYED NOTES:

1 PROVIDE AND INSTALL 53" X 36" X 16", OMEGA SCE-53VR3616.	10 NEW CISCO 3560CX-12TC-S TO BE PROVIDED AND INSTALLED BY MANATEE COUNTY.
2 PROVIDE AND INSTALL OMEGA SCE-48P36 BACKPANEL.	11 NOT USED.
3 PROVIDE WALL MOUNT CONNECTOR AND SPLICE HOUSING SIZED TO ACCOMMODATE FIBER OPTIC CABLE AND FIBER COUNT. CORNING WCH-02P OR APPROVED EQUAL. PROVIDE SPLICE TRAYS, SPLICE TRAY HOLDERS, STRAIN RELIEF KIT AND ALL REQUIRED ACCESSORIES.	12 PROVIDE AND INSTALL 120V, 20A DUPLEX RECEPTACLE. PHOENIX CONTACT #5600525, FOR UPS.
4 PROVIDE AND INSTALL 120V SURGE PROTECTION DEVICES. EDCO HSP121BT-1RU.	13 PROVIDE AND INSTALL 120V, 20A DUPLEX UTILITY RECEPTACLE. PHOENIX CONTACT #5600525.
5 PROVIDE AND INSTALL 120V CIRCUIT BREAKERS. 15 AMPERE SQUARE-D Q0U115.	14 PROVIDE AND INSTALL 120VAC-24VDC POWER SUPPLY 'PS1' WITH 3.5 AMPERE OUTPUT FOR INTERCOM SYSTEM 24V DC POWER. PHOENIX CONTACT #2866747.
6 PROVIDE AND INSTALL APC SMART-UPS 750VA LCD 120V US. PROVIDE SHELF TO KEEP UPS OFF BOTTOM OF ENCLOSURE.	15 PROVIDE AND INSTALL FUSED TERMINAL BLOCK WITH LED INDICATOR, 24VDC. SQUARE D AB1FUSE435U5XB.
7 PROVIDE AND INSTALL DIN-RAIL MOUNTED TERMINAL BLOCKS, ALLEN-BRADLEY 1492-W10.	16 PROVIDE AND INSTALL CAT 6 ETHERNET CABLE SURGE PROTECTION DEVICES. DITEK DTK-MRJPOE.
8 PROVIDE AND INSTALL 2"x2" PANDUIT (OR EQUAL) WIRING SYSTEM WITH COVERS.	17 PROVIDE EQUIPMENT GROUND LUG.
9 NOT USED.	18 PROVIDE ALUMINUM DIN-RAIL.

GENERAL NOTES:

- CONTRACTOR SHALL PROVIDE ALLEN-BRADLEY END BARRIERS (1492-EBL16) AND END ANCHORS (1492-EA 35) AS REQUIRED.

**SEPTAGE RECEIVING STATION
FIBER OPTIC CABINET
WIRING SCHEMATIC**

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FIBER OPTIC COMMUNICATIONS REVISION		TDT 10-6-16				DATE: MARCH 2016		
NO.	DESCRIPTION	BY	DATE			APPROVED	SEPTAGE STATION AND ADMIN FIBER OPTIC CABINET DETAILS	SHEET NO: I-5

ENTIRE SHEET REMOVED

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△	FIBER OPTIC COMMUNICATIONS REVISION	TDT	10-6-16

**SEWRF
SEPTAGE/ GREASE
RECEIVING STATION**



MANATEE COUNTY
DEPARTMENT OF PUBLIC WORKS
UTILITIES DEPARTMENT
4410 66th Street West Bradenton, Florida 34210
(941) 792-8811



CLEARWATER
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TIMOTHY THOMAS, PE DATE
LIC. NO.: 47079

DESIGNED	TDT
DRAWN	EAK
Q.C.	
APPROVED	

**RECORD DRAWINGS
SCADA PANEL 2 CONTROL
CABINET DETAILS**

PROJECT NO:
00193-009-02
DATE:
MARCH 2015
SHEET NO:
I-6

ENTIRE SHEET REMOVED

RECORD DRAWING

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Certificate of Authorization No. 00006363

RECORD DRAWINGS

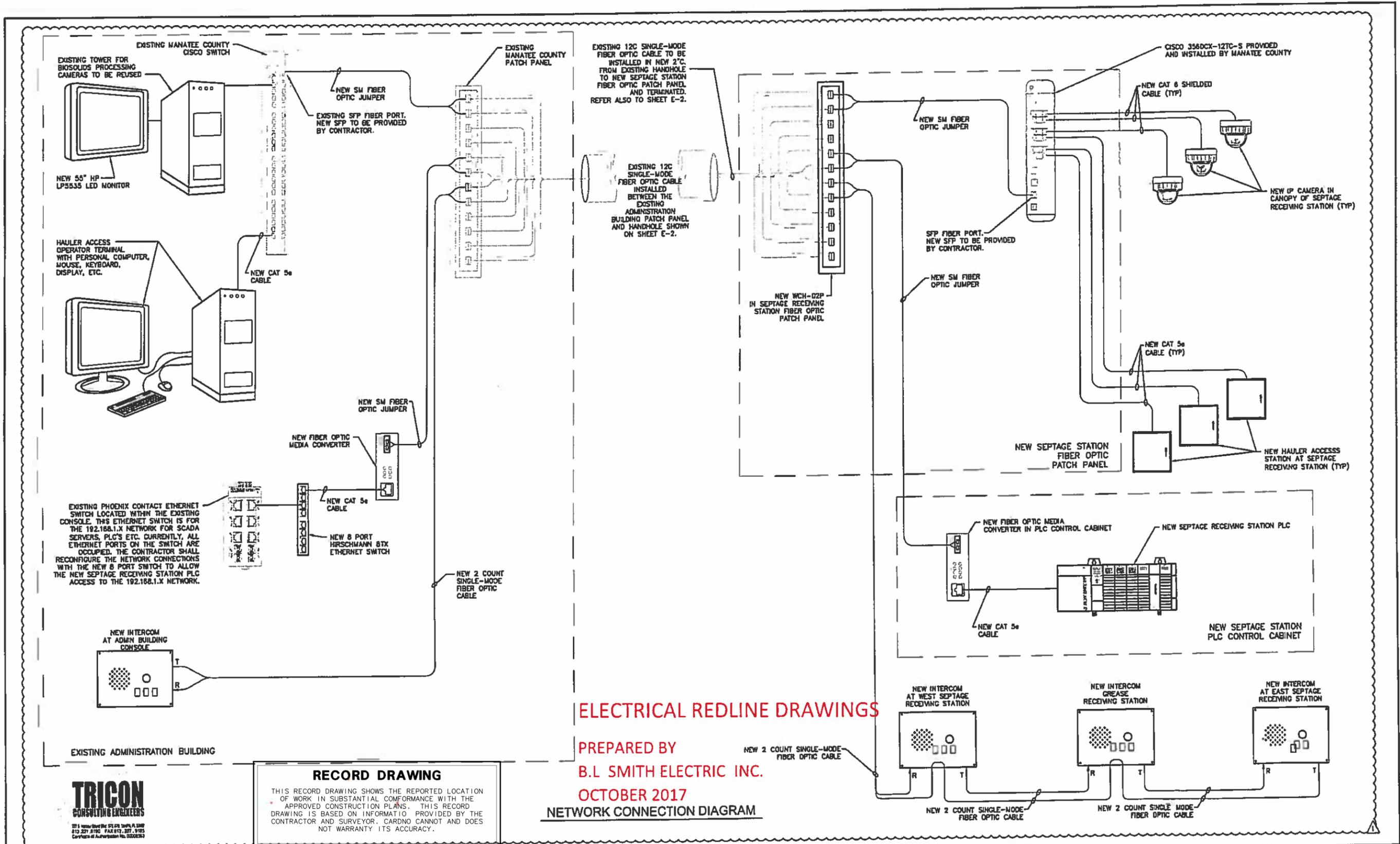
			SEWRF SEPTAGE/ GREASE RECEIVING STATION		 MANATEE COUNTY DEPARTMENT OF PUBLIC WORKS UTILITIES DEPARTMENT 4410 66th Street West Bradenton, Florida 34210 (941) 792-8811		 Cardno Shaping the Future CLEARWATER 380 PARK PLACE BLVD, STE 300, CLEARWATER, FL 33759 TEL: (727) 531-3505 (800) 861-8314 www.cardno.com Certificate of Authorization No. 29915		DESIGNED TDT DRAWN EAK Q.C. APPROVED _____		PROPOSED SCADA SYSTEM FIBER OPTIC COMMUNICATION TOPOLOGY		PROJECT NO: 00193-009-02 DATE: MARCH 2015 SHEET NO: I-7	
RECORD DRAWING			12/2017											
FIBER OPTIC COMMUNICATIONS REVISION			TDT 10-6-16											
NO.	DESCRIPTION		BY	DATE										

ENTIRE SHEET REMOVED

RECORD DRAWING
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				SEWRF SEPTAGE/ GREASE RECEIVING STATION		 MANATEE COUNTY DEPARTMENT OF PUBLIC WORKS UTILITIES DEPARTMENT 4410 66th Street West Bradenton, Florida 34210 (941) 792-8811		 Cardno TBE 380 Park Place Blvd., Suite 300, Clearwater, Florida, 33759 www.cardnotbe.com - 727.531.3505 Certificate of Authorization No. 3843		DESIGNED _____ DOC _____ DRAWN _____ ALS _____ Q.C. _____ APPROVED _____		RECORD DRAWINGS FIBER OPTIC CONNECTION DIAGRAMS		PROJECT NO: 00193-009-02 DATE: MARCH 2015 SHEET NO: I-8	
RECORD DRAWING		12/2017													
FIBER OPTIC COMMUNICATIONS REVISION		TDT 10-6-16													
NO.	DESCRIPTION	BY	DATE												



ELECTRICAL REDLINE DRAWINGS

PREPARED BY
B.L SMITH ELECTRIC INC.
 OCTOBER 2017
NETWORK CONNECTION DIAGRAM

RECORD DRAWING

THIS RECORD DRAWING SHOWS THE REPORTED LOCATION OF WORK IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS. THIS RECORD DRAWING IS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR AND SURVEYOR. CARDNO CANNOT AND DOES NOT WARRANT ITS ACCURACY.



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NO.	DESCRIPTION	BY	DATE
1	RECORD DRAWING		12/2017
2	FIBER OPTIC COMMUNICATIONS REVISION	TDT	10-8-16

SEWRF SEPTAGE/ GREASE RECEIVING STATION



MANATEE COUNTY
 DEPARTMENT OF PUBLIC WORKS
 UTILITIES DEPARTMENT
 4410 88th Street West Bradenton, Florida 34210
 (941) 792-8611



380 Park Place Blvd., Suite 300, Clearwater, Florida, 33759
 www.cardnotebe.com 727.531.3505
 Certificate of Authorization No. 3843

DESIGNED: DOC
 DRAWN: ALS
 D.C.
 APPROVED: T. THOMAS
 DATE: 10/10/17
 T. THOMAS PE
 LIC. NO.: 47078

RECORD DRAWINGS CONNECTION DIAGRAM AND COMMUNICATION RISER

PROJECT NO: 00193-009-02
 DA E.
 MARCH 2015
 SHEET NO: 1-9