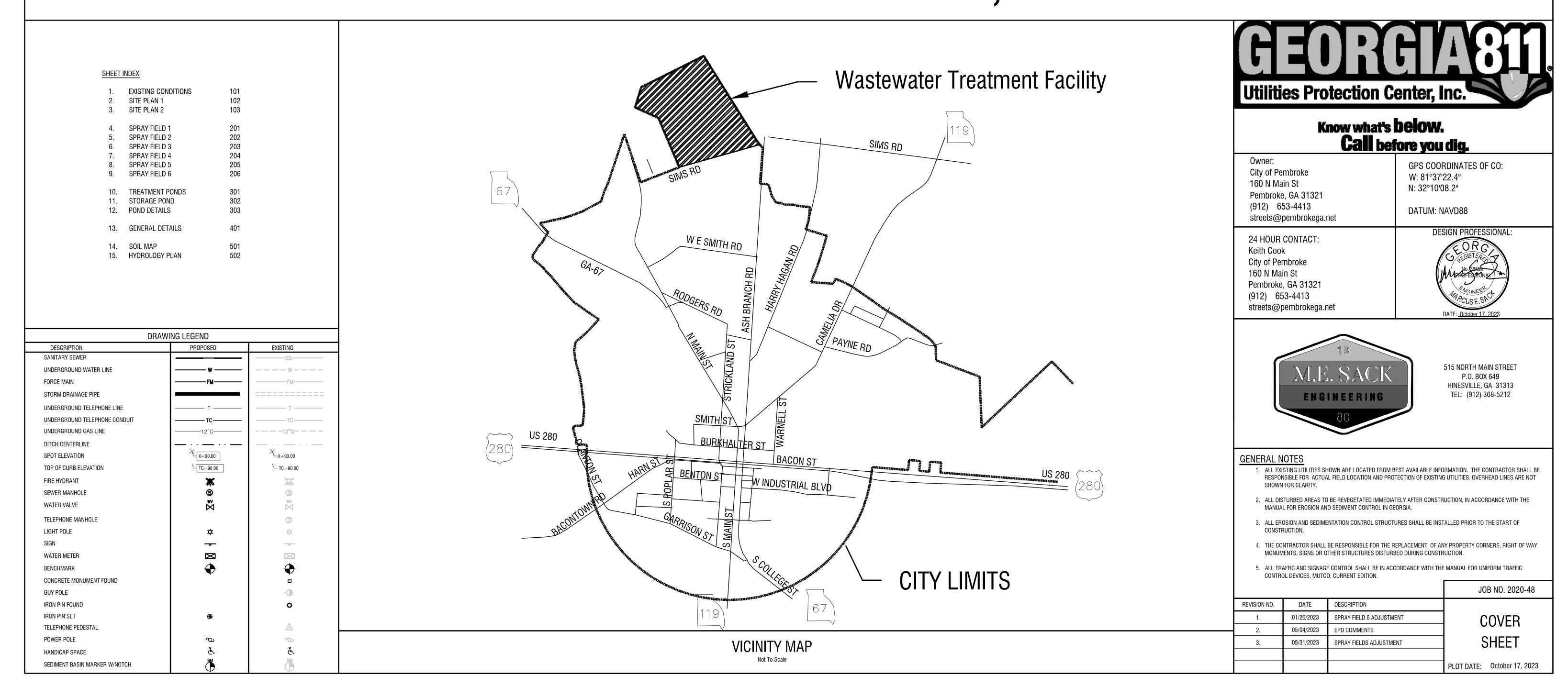
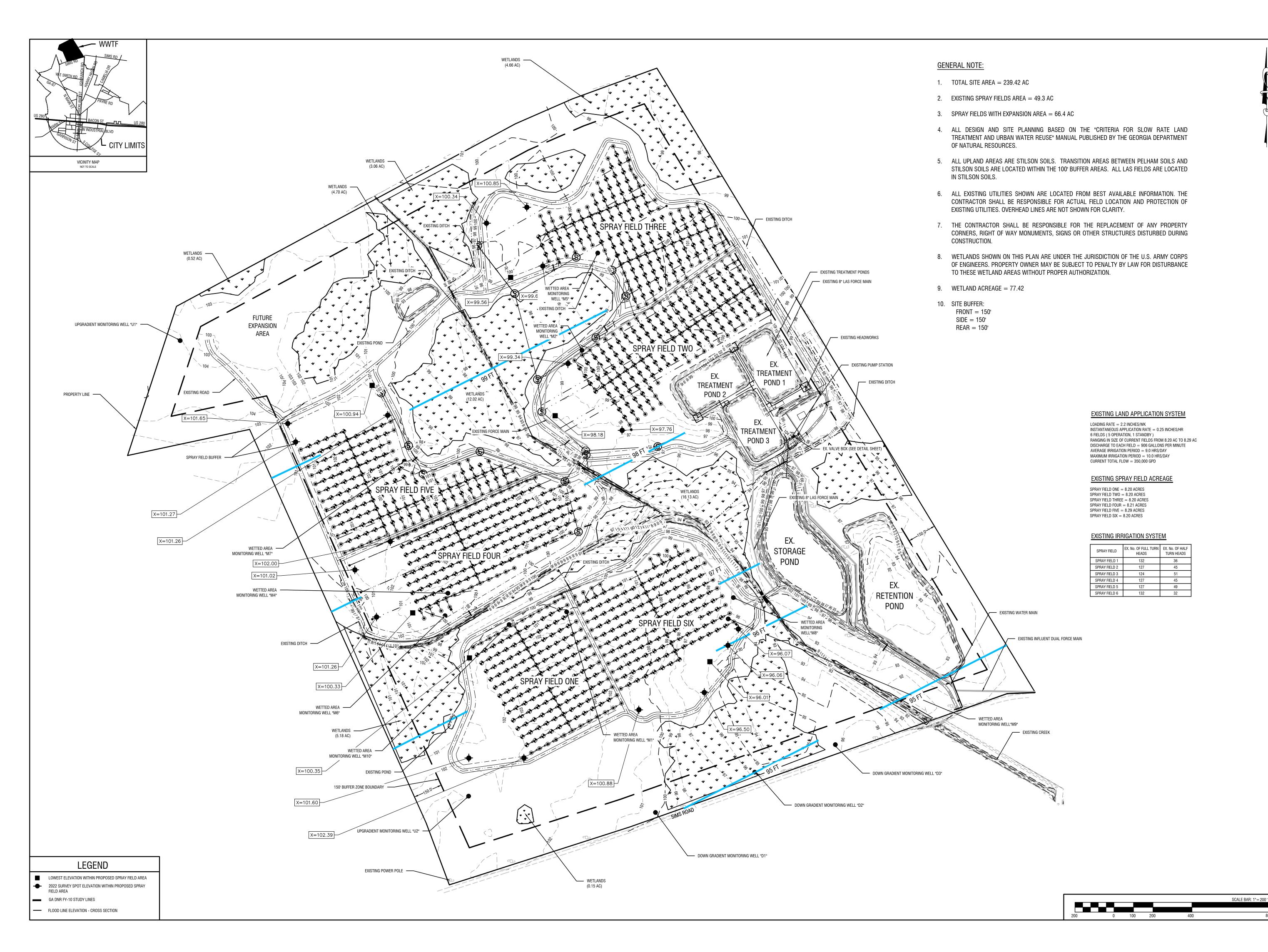
## LAND APPLICATION SYSTEM EXPANSION FOR CITY OF PEMBROKE BRYAN COUNTY, GEORGIA DATE: SEPTEMBER 23, 2022





REVISIONS:

1. SF 6 ADJUSTMENT

2. EPD COMMENTS

3. SPRAY FIELDS ADJ.

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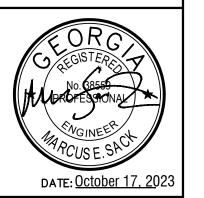
MARCUS E. SACK

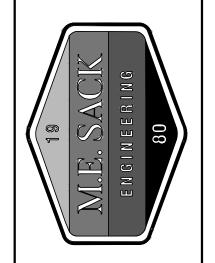
GSWCC LEVEL II # 70248

EXPIRES: 06/14/2023

MARCUS@MESACK.COM

515 NORTH MAIN STREET P.O. BOX 649 HINESVILLE, GA 31313 TEL: (912) 368-5212





MUNICIPALITY: CITY OF PEMBROKE

COUNTY: BRYAN

Owner:
City of Pembroke
160 N Main St
Pembroke, GA 31321
(912) 653-4413
streets@pembrokega.net

24 HOUR CONTACT:
Keith Cook
160 N Main St
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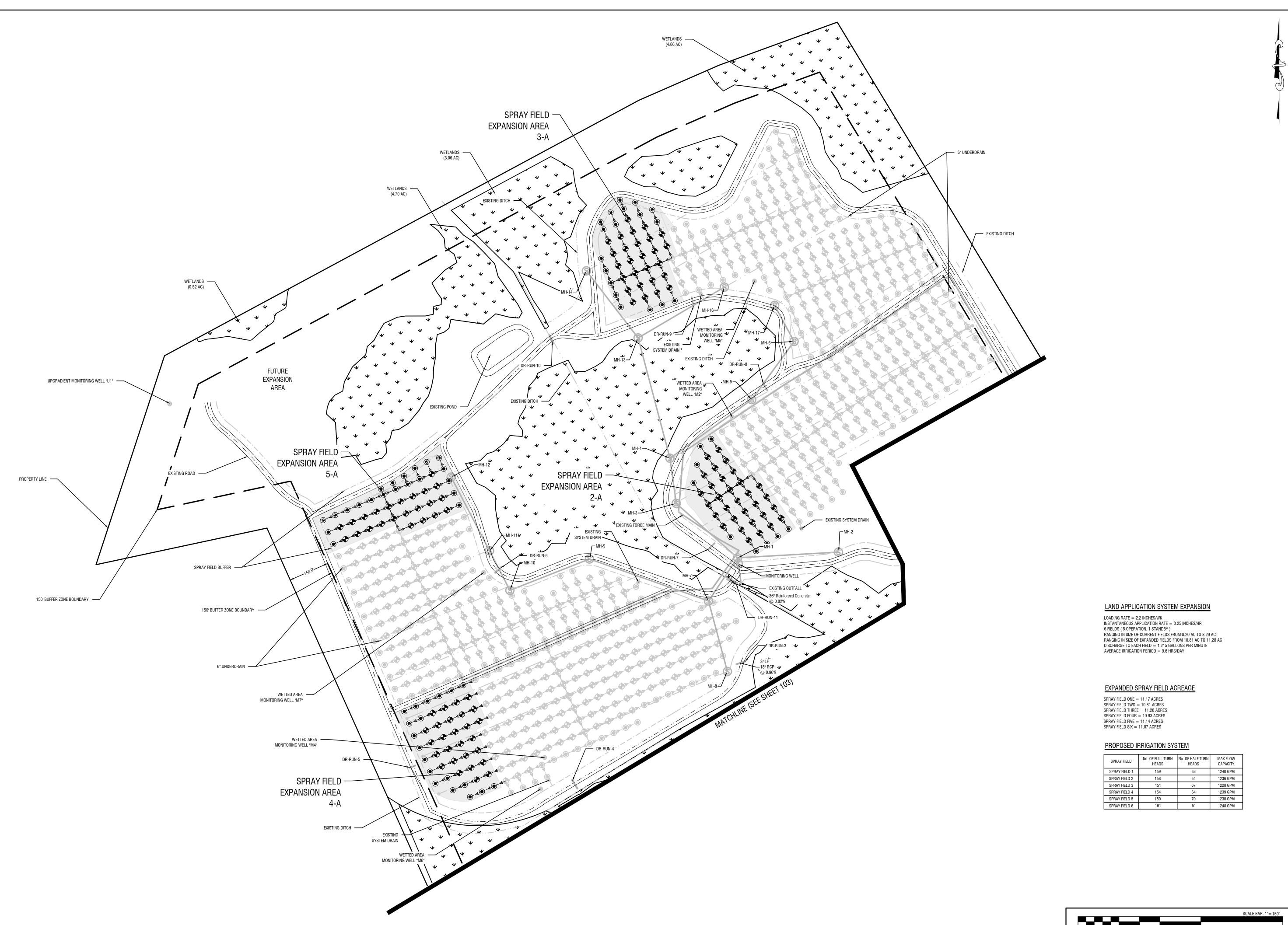
LAND APPLICATION SYSTEM EXPANSION

EXISTING CONDITIONS

101

FILE NO: 2020-48

PLOT DATE: October 17, 2023

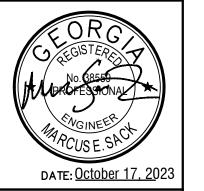


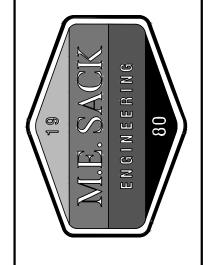
1. SF 6 ADJUSTMENT 2. EPD COMMENTS SPRAY FIELDS ADJ.

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MUNICIPALITY: CITY OF PEMBROKE

Owner: City of Pembroke 160 N Main St Pembroke, GA 31321 (912) 653-4413 streets@pembrokega.net

24 HOUR CONTACT: Keith Cook 160 N Main St Pembroke, GA 31321 (912) 653-4413 streets@pembrokega.ne

LAND APPLICATION SYSTEM EXPANSION

SITE PLAN 1

ILE NO: 2020-48 PLOT DATE: October 17, 2023

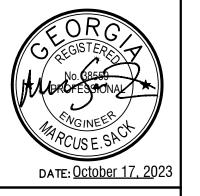


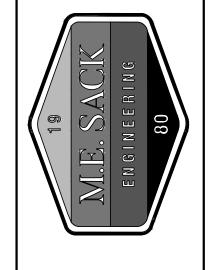
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LAND APPLICATION SYSTEM EXPANSION

SITE PLAN 2

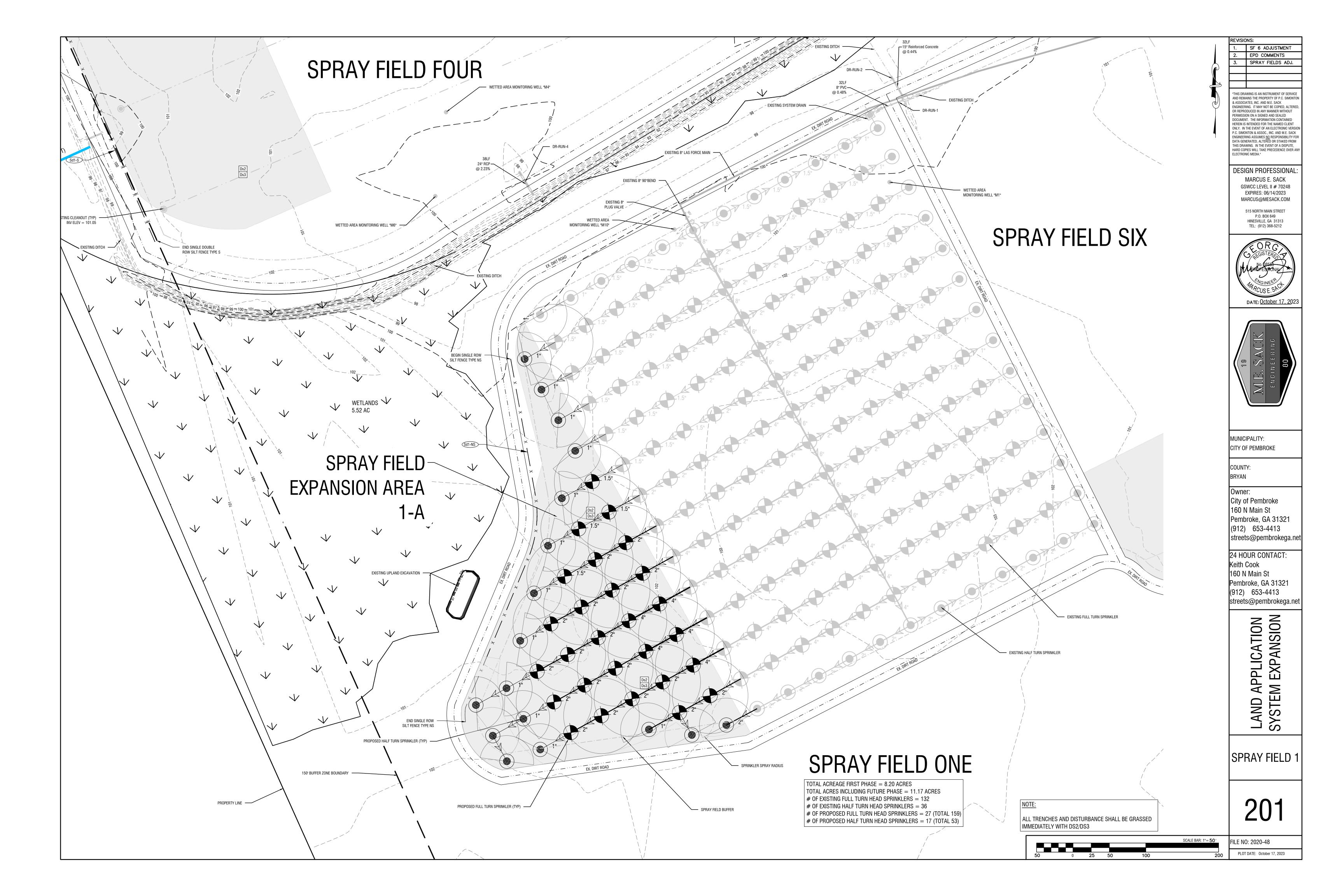
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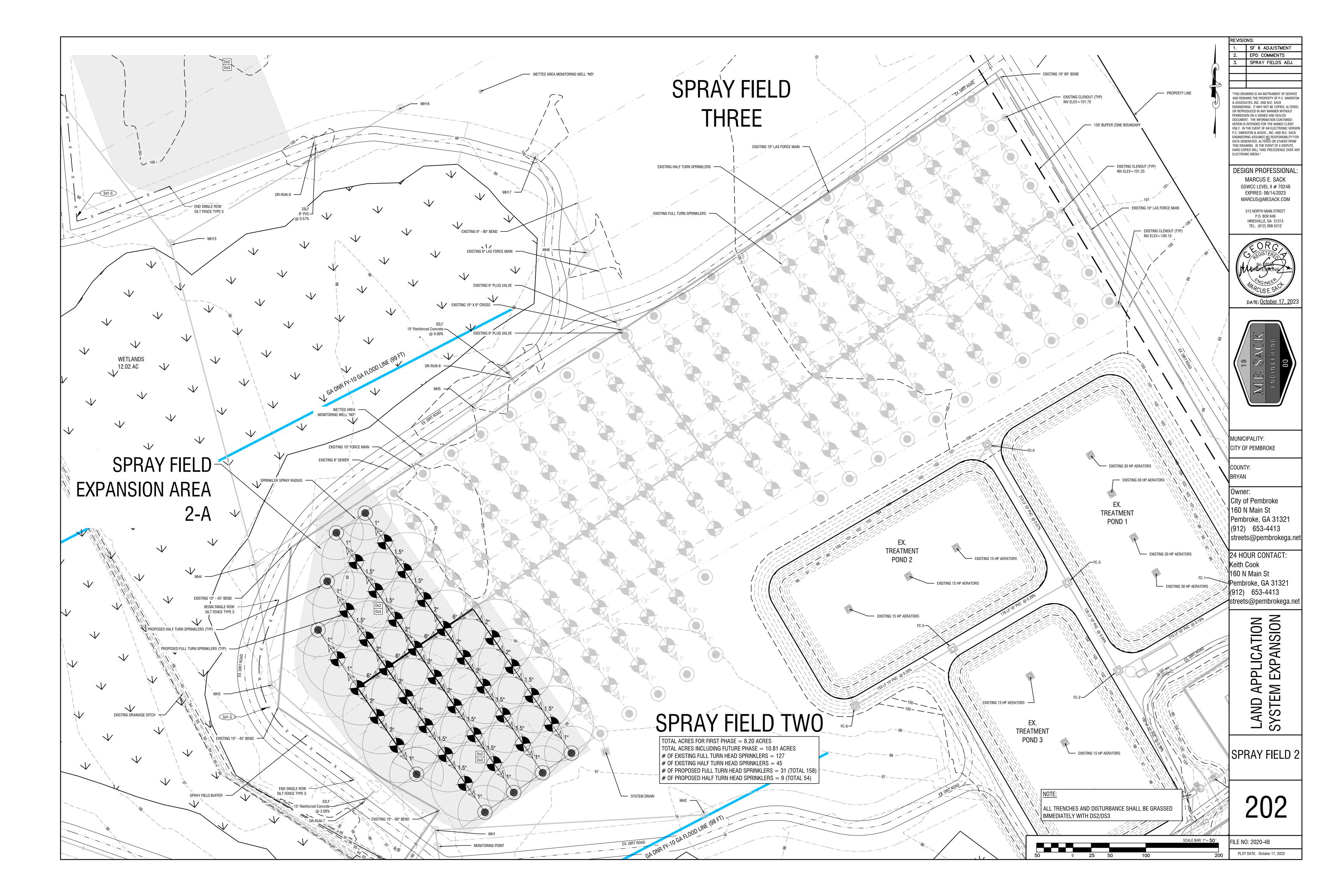
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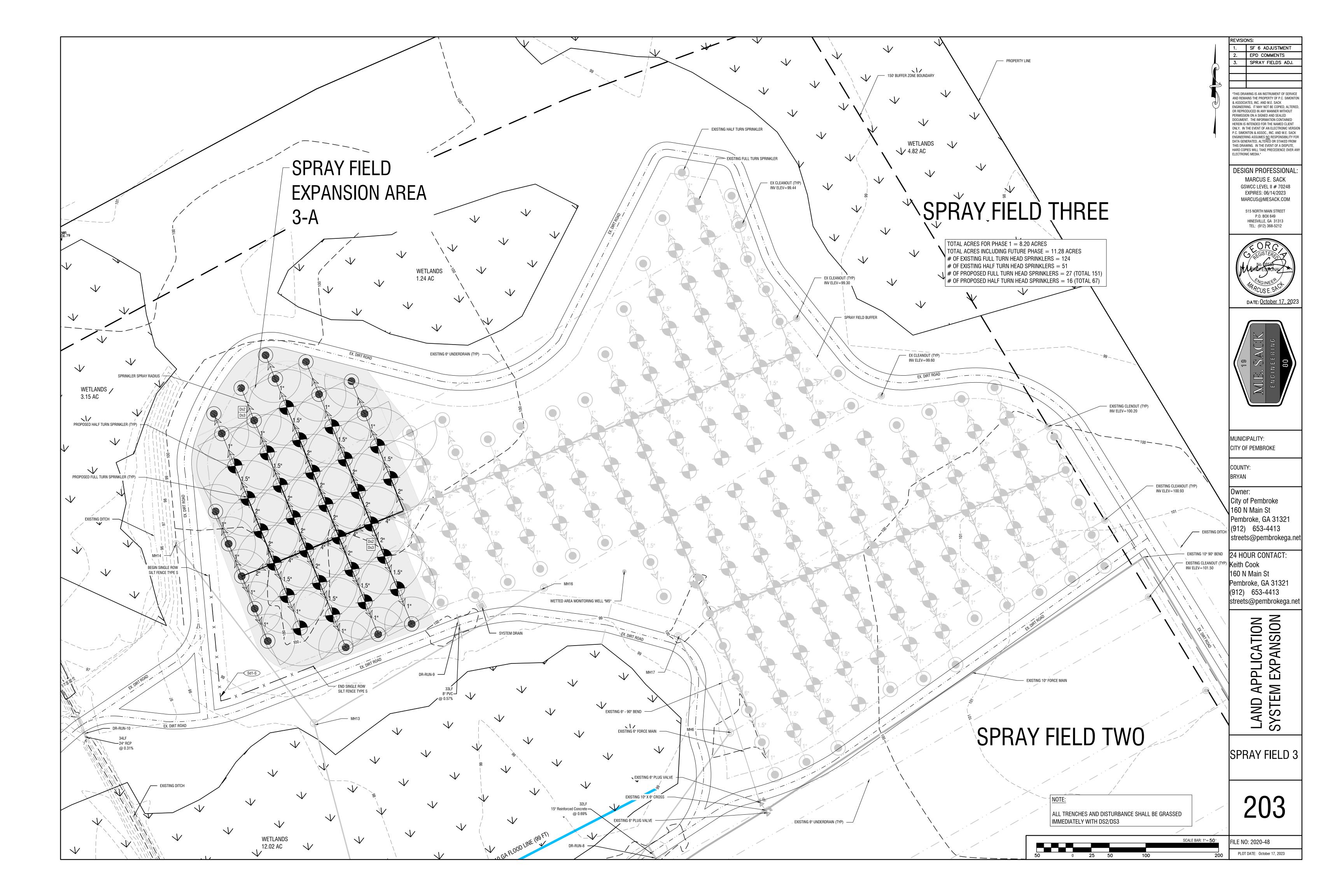
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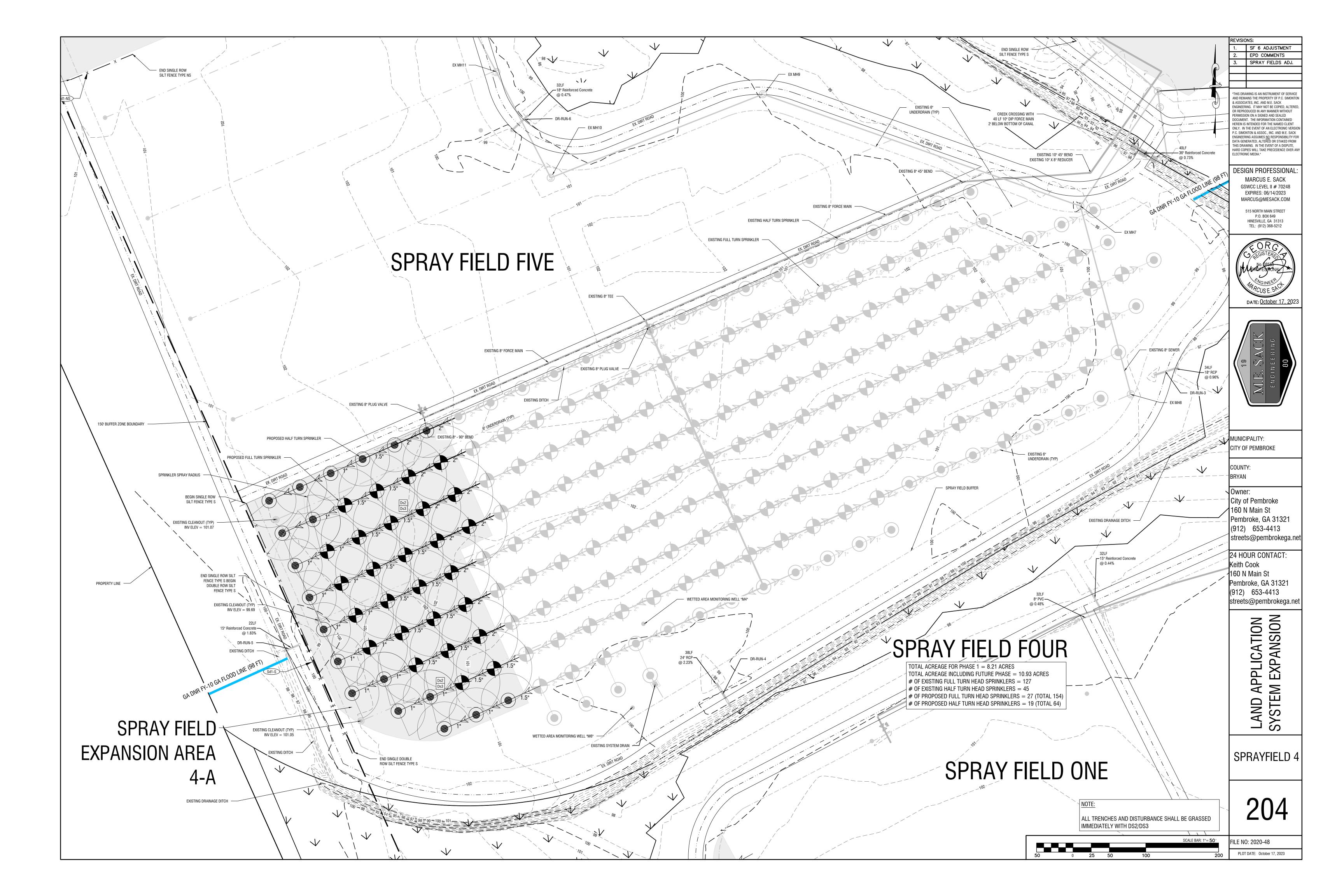
1239 GPM 1230 GPM

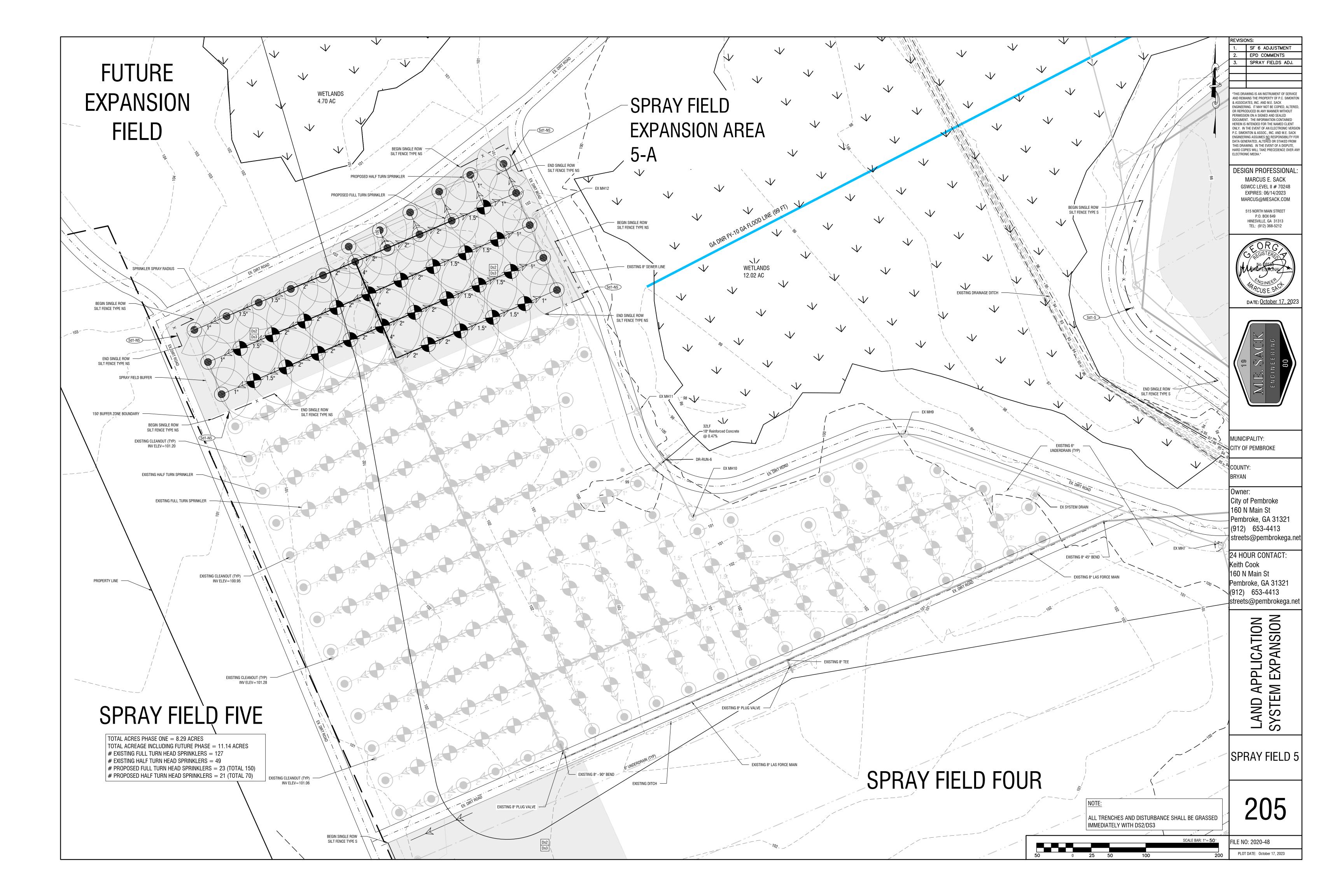
> ILE NO: 2020-48 PLOT DATE: October 17, 2023

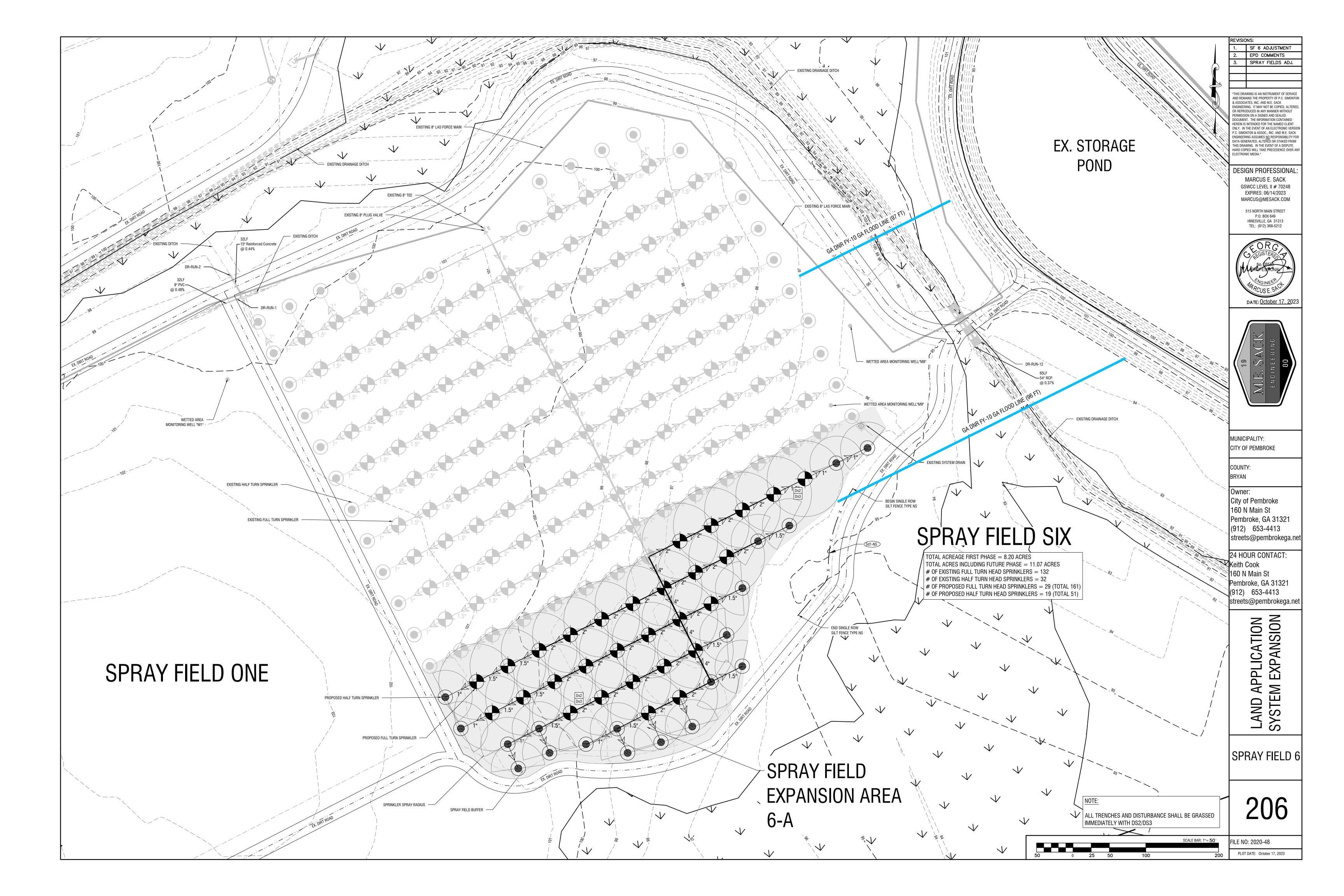


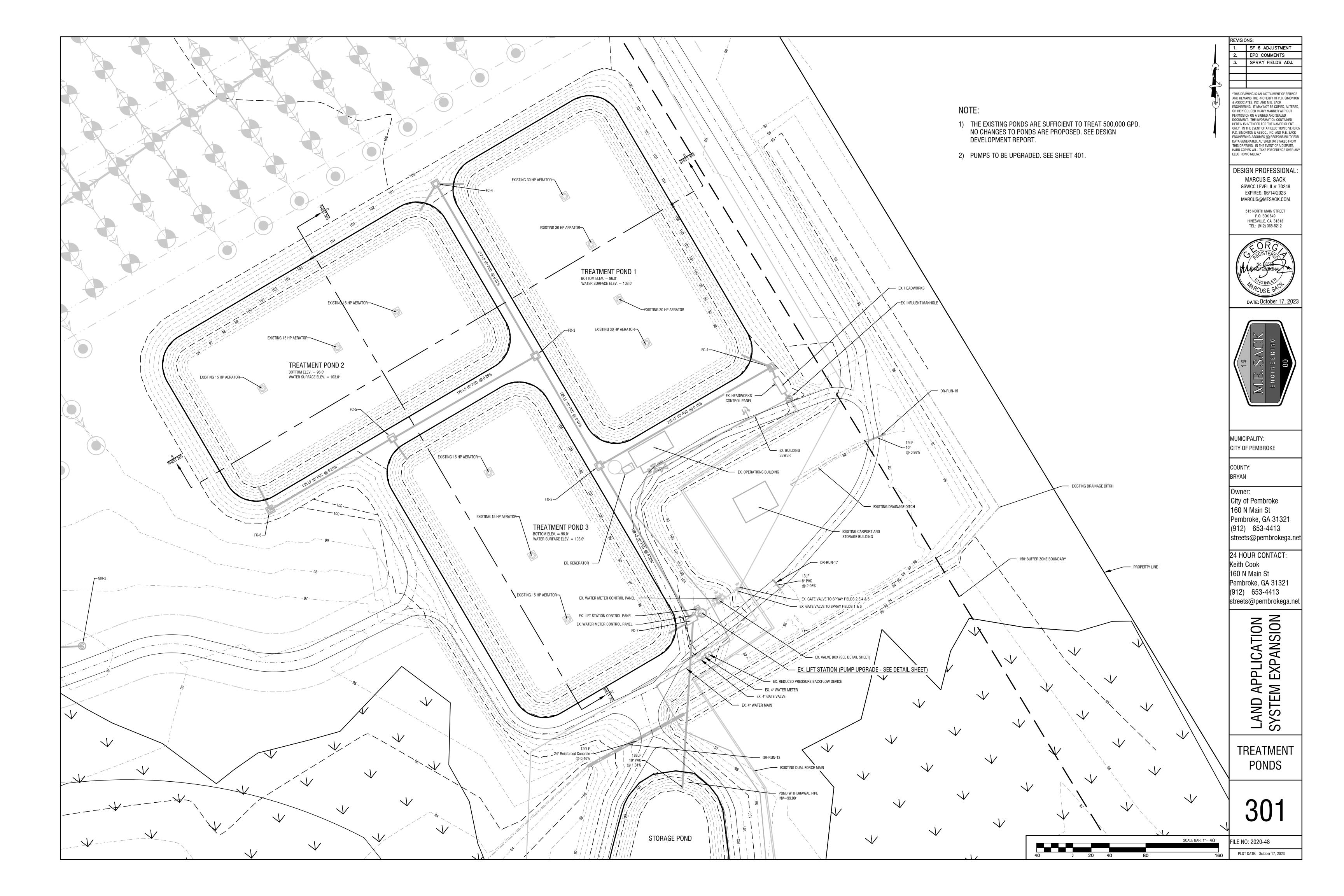


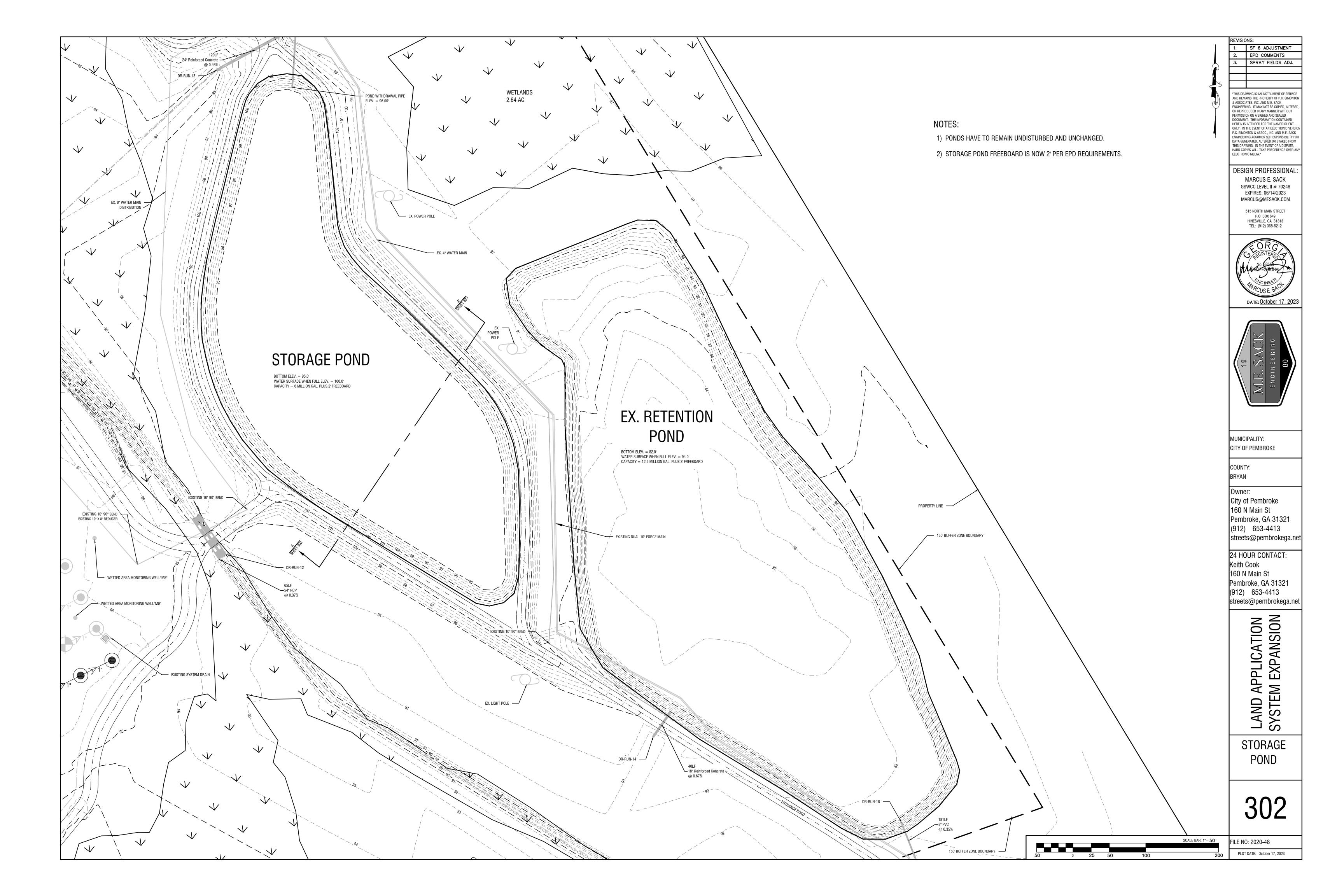


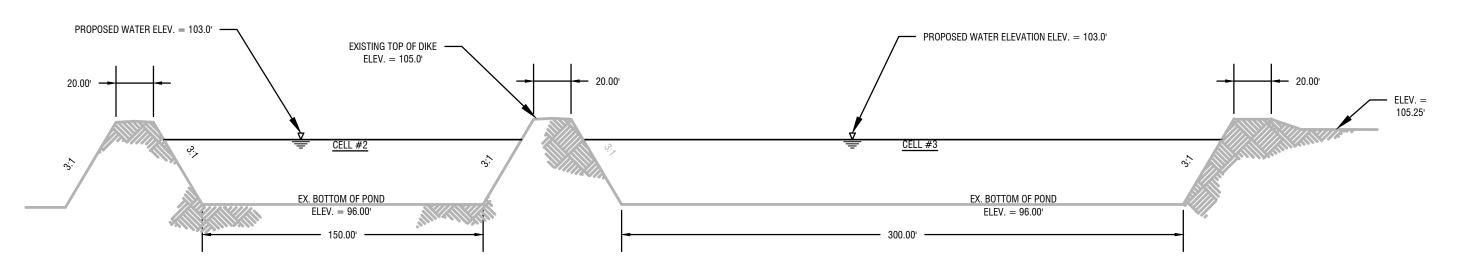




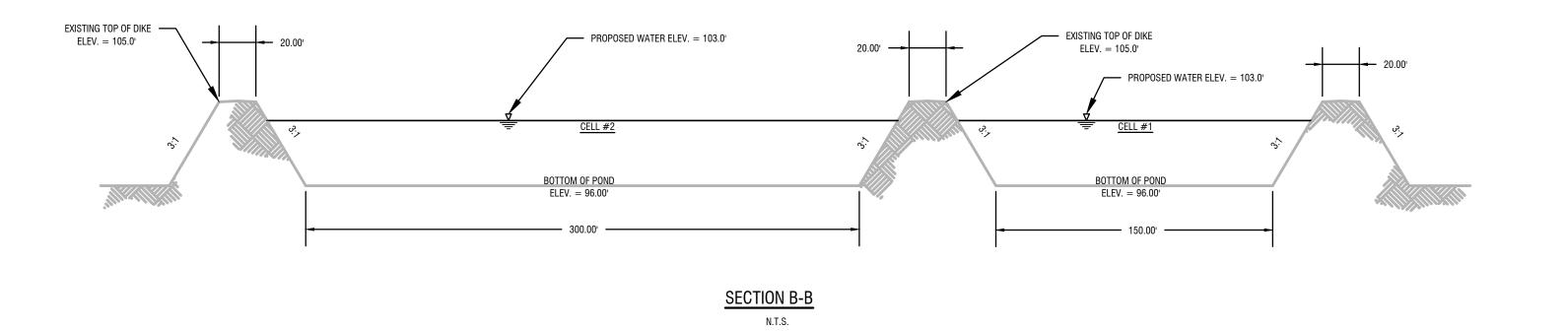








## SECTION C-C



AERATORS			
POND	HP REQUIRED	STANDY	TOTAL
POND 1	3-30HP	1-30HP	4-10HP
POND 2	2-15HP	1-15HP	3-15HP
POND 3	2-15HP	1-15HP	3-15HP

HYI	DRAULIC RETENTION TIME	
POND	VOLUME	HRT AT ADF
POND 1	2.90 MG	5.81 DAYS
POND 2	2.90 MG	5.81 DAYS
POND 3	2.90 MG	5.81 DAYS
NOTE: POND HRT CALCULATED AT AVERAGE DAILY FLOW OF 0.50 MGD	TOTAL	17.43 DAYS

1) ALL PONDS HAVE TO REMAIN UNDISTURBED AND UNCHANGED.

2) STORAGE AND TREATMENT PONDS FREEBOARD IS NOW 2' PER EPD

NOTES:

REQUIREMENTS.

POND #1 COMPLETE MIX USE 30HP/MIL GAL 30x2.9 = 87HP

POND AERATOR DESIGN

POND #2 PARTIAL MIX USE 10HP/MIL GAL 10x2.9 = 29HP

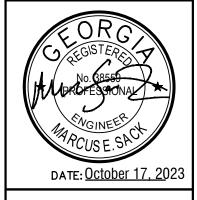
POND #3 PARTIAL MIX USE 10HP/MIL GAL 10x2.9 = 29HP SF 6 ADJUSTMENT
 EPD COMMENTS
 SPRAY FIELDS ADJ.

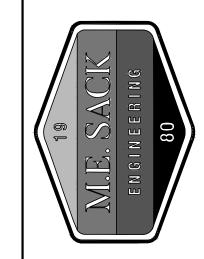
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DESIGN PROFESSIONAL:

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BRYAN

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LAND APPLICATION SYSTEM EXPANSION

POND DETAILS

303

FILE NO: 2020-48

PLOT DATE: October 17, 2023

EXISTING TOP OF DIKE
ELEV. = 102.00'

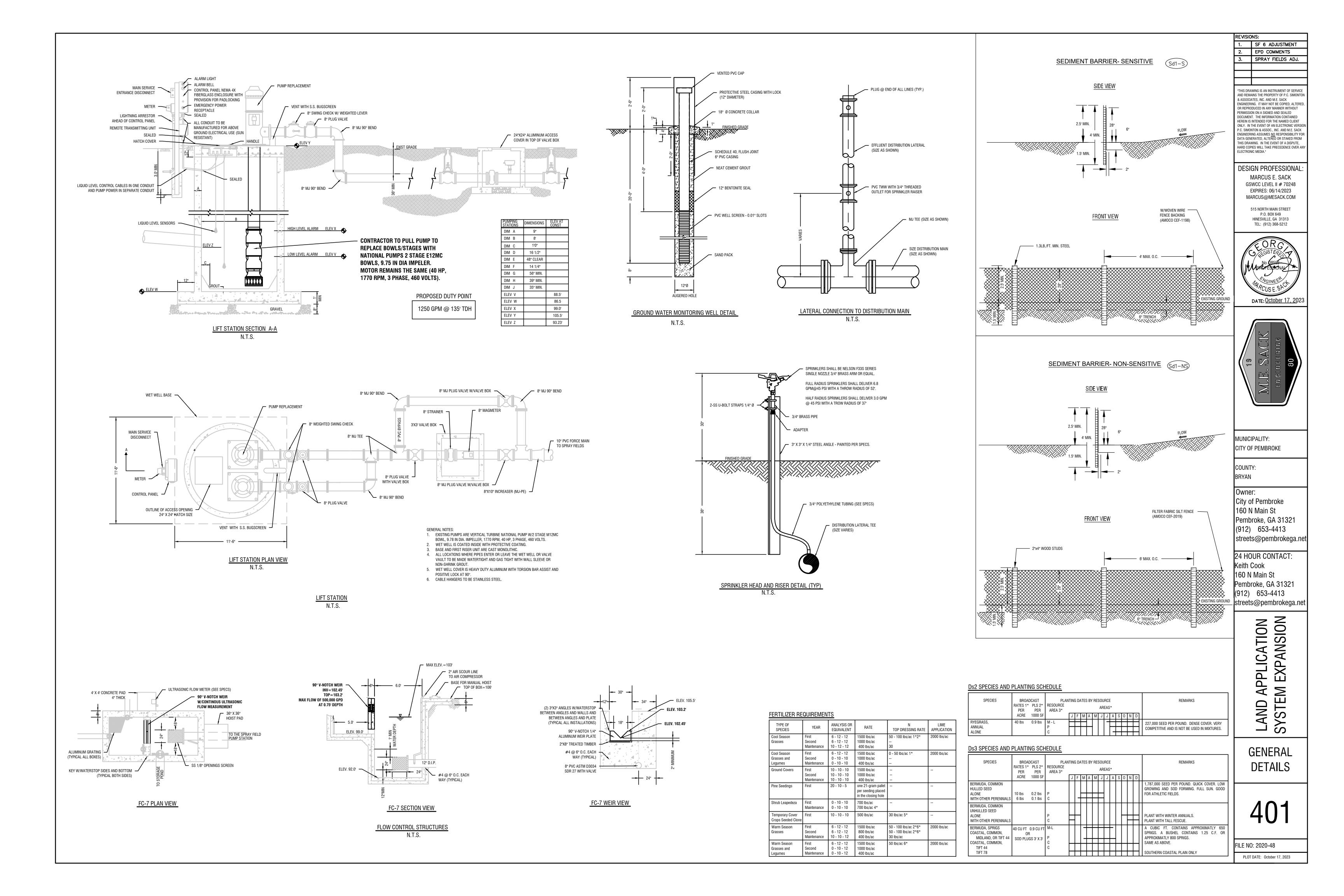
EXISTING BOTTOM OF POND
ELEV. = 95.00'

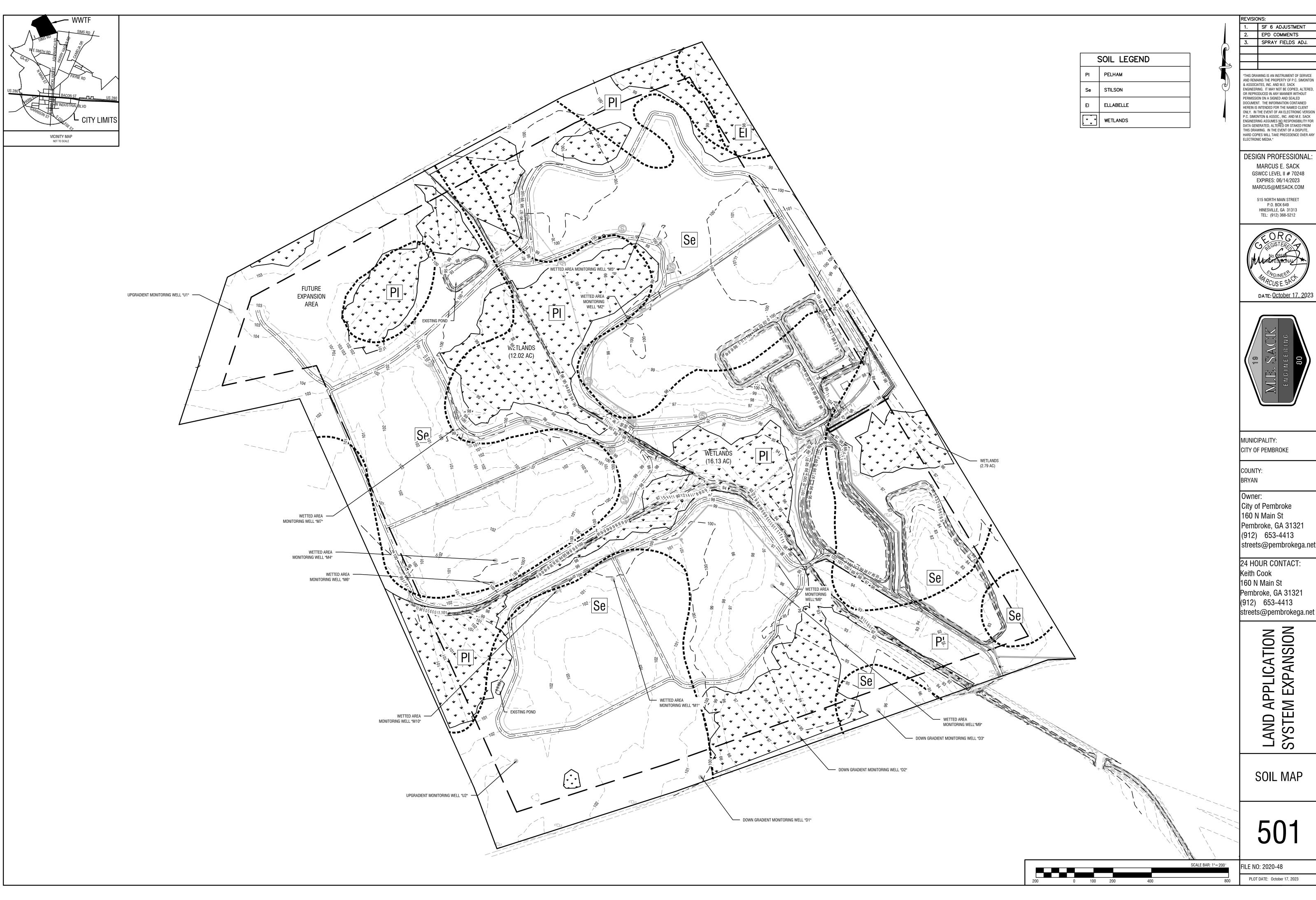
GALV. 4" X 4" WOVEN WIRE

FABRIC BURIED 2" BELOW FACE OF DIKE ON WEST SIDE

PROPOSED WATER ELEV. @ 0.5 MGD= 100.00'

SECTION A-A



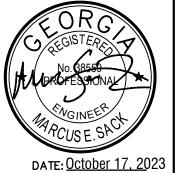


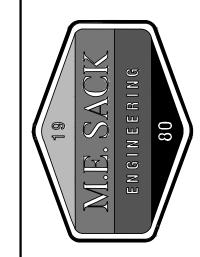
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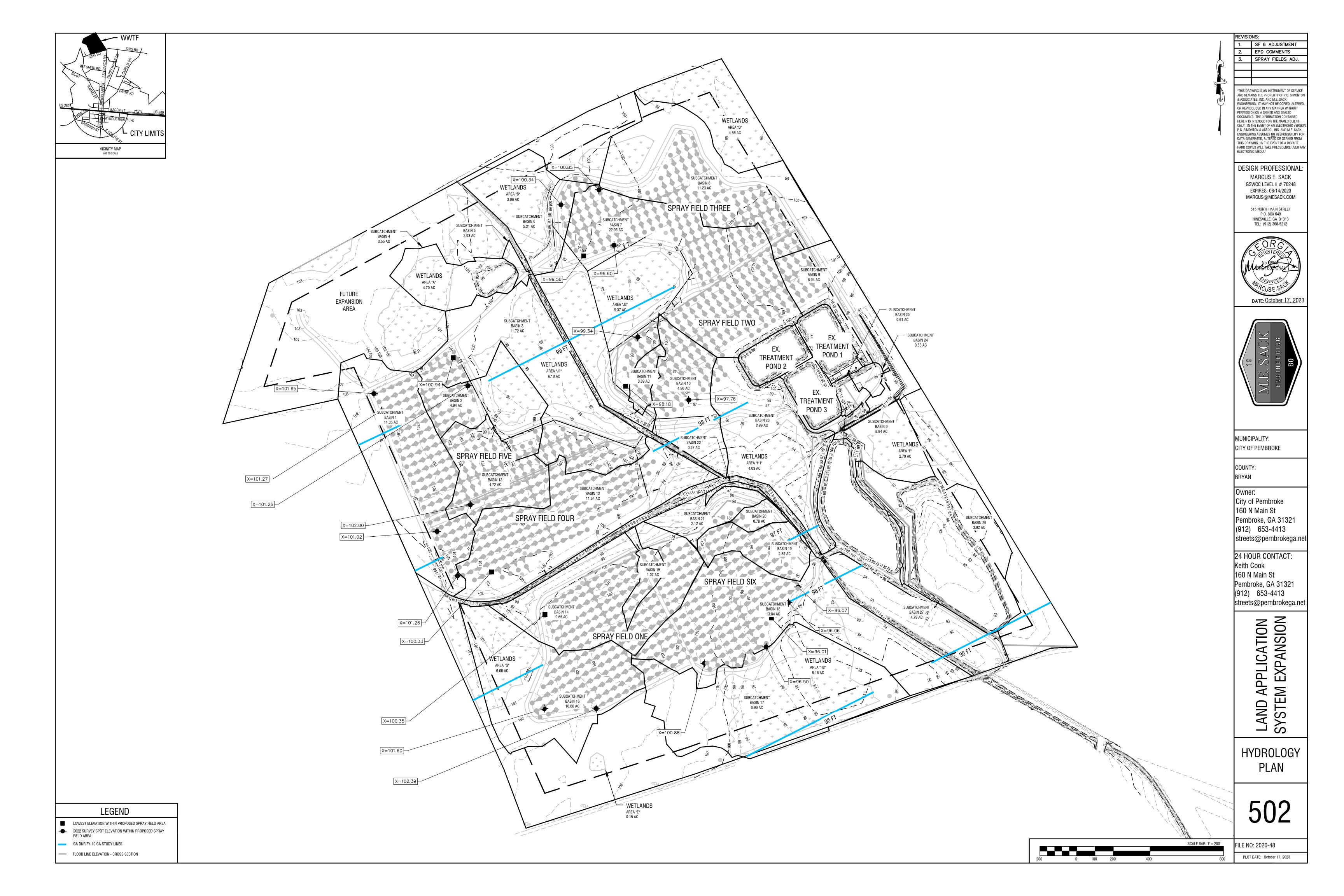


CITY OF PEMBROKE

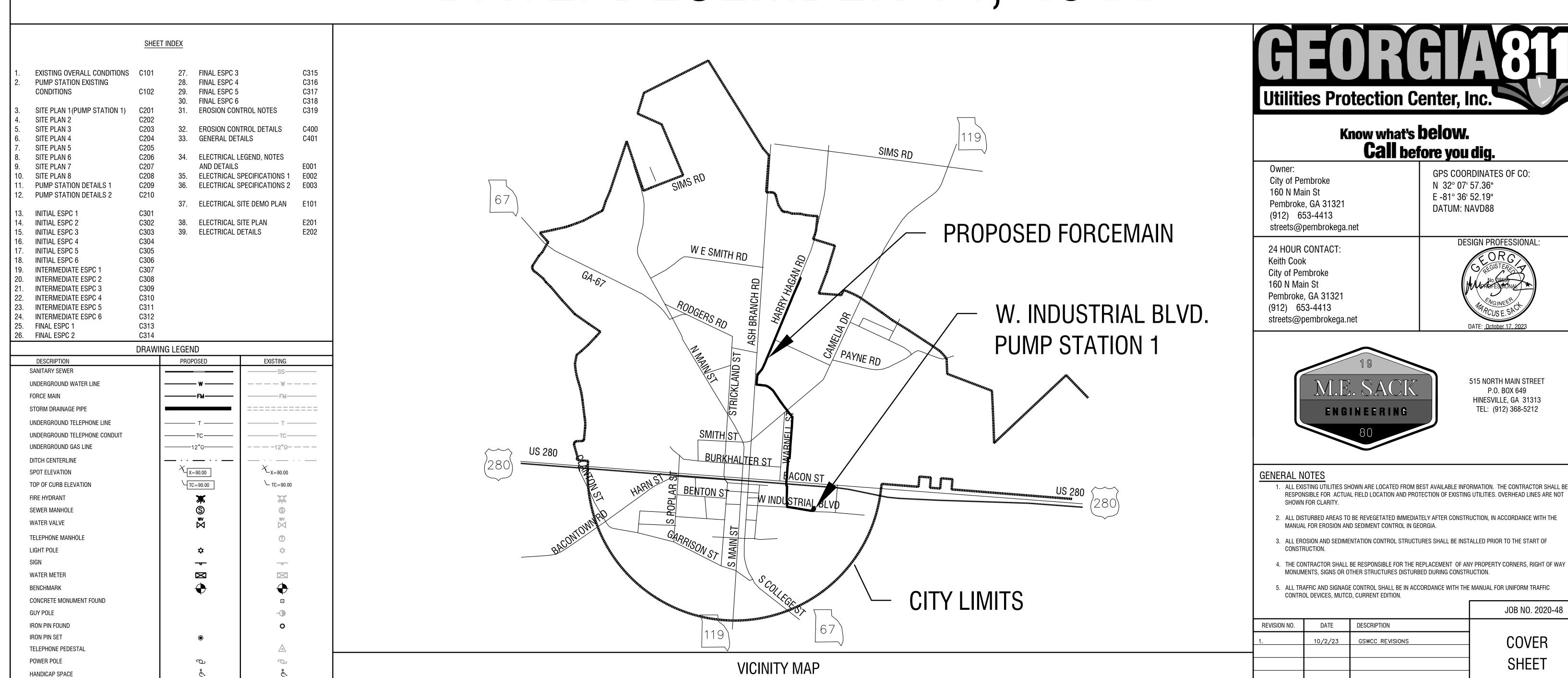
City of Pembroke 160 N Main St Pembroke, GA 31321 (912) 653-4413

24 HOUR CONTACT: Pembroke, GA 31321 (912) 653-4413

LAND APPLICATION SYSTEM EXPANSION



## PUMP STATION IMPROVEMENTS FOR CITY OF PEMBROKE BRYAN COUNTY, GEORGIA DATE: DECEMBER 14, 2022



SEDIMENT BASIN MARKER W/NOTCH

515 NORTH MAIN STREET

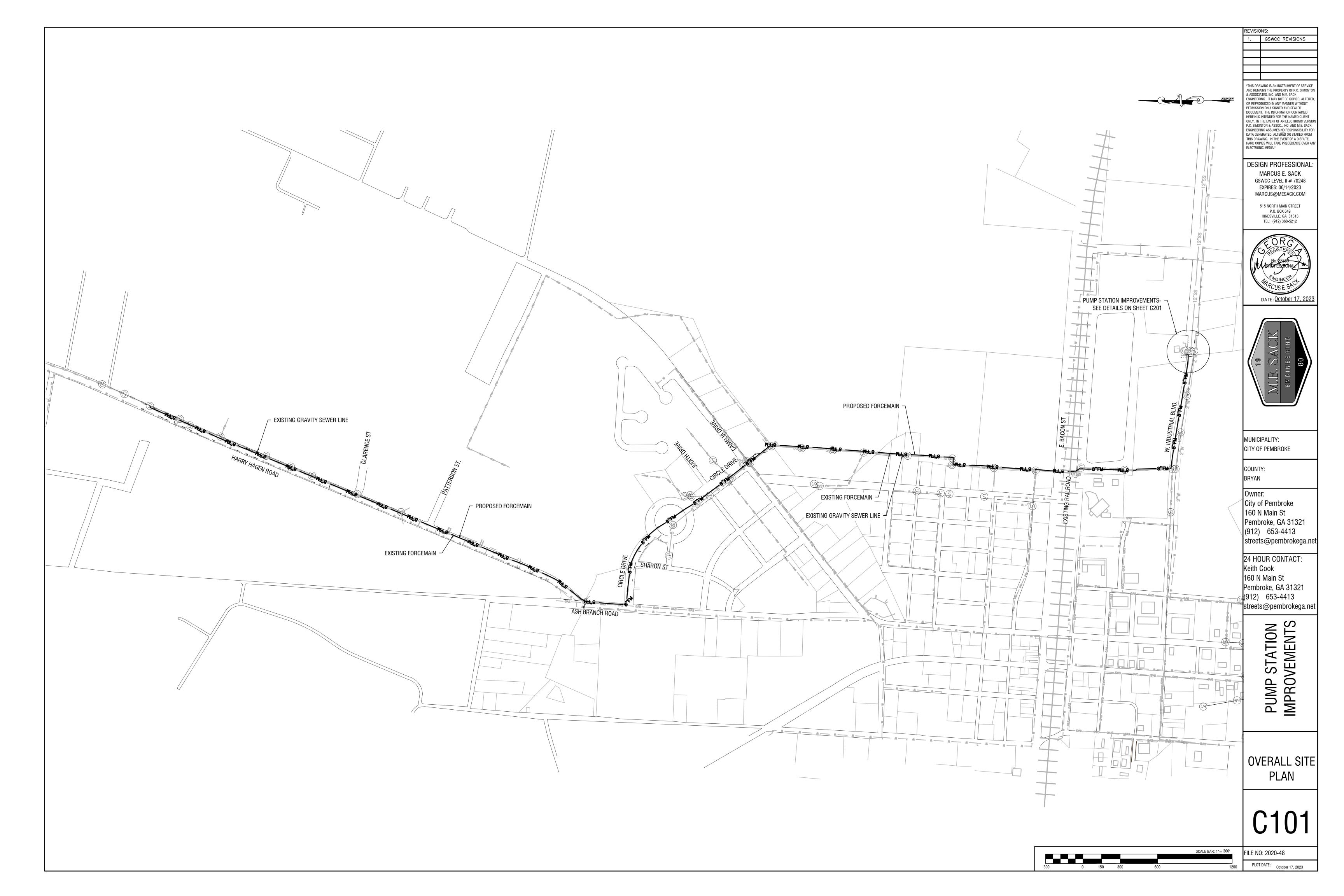
P.O. BOX 649 HINESVILLE, GA 31313 TEL: (912) 368-5212

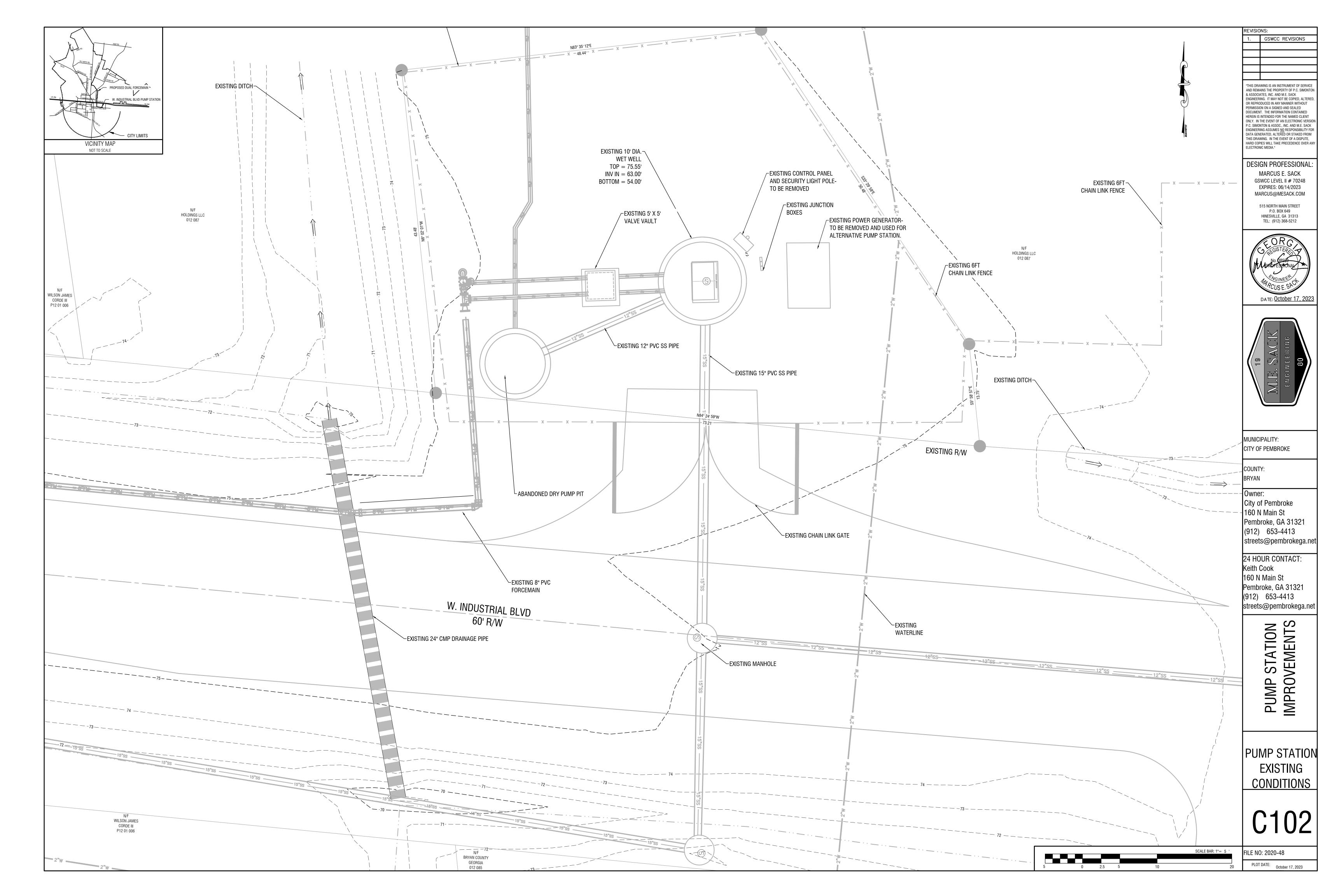
JOB NO. 2020-48

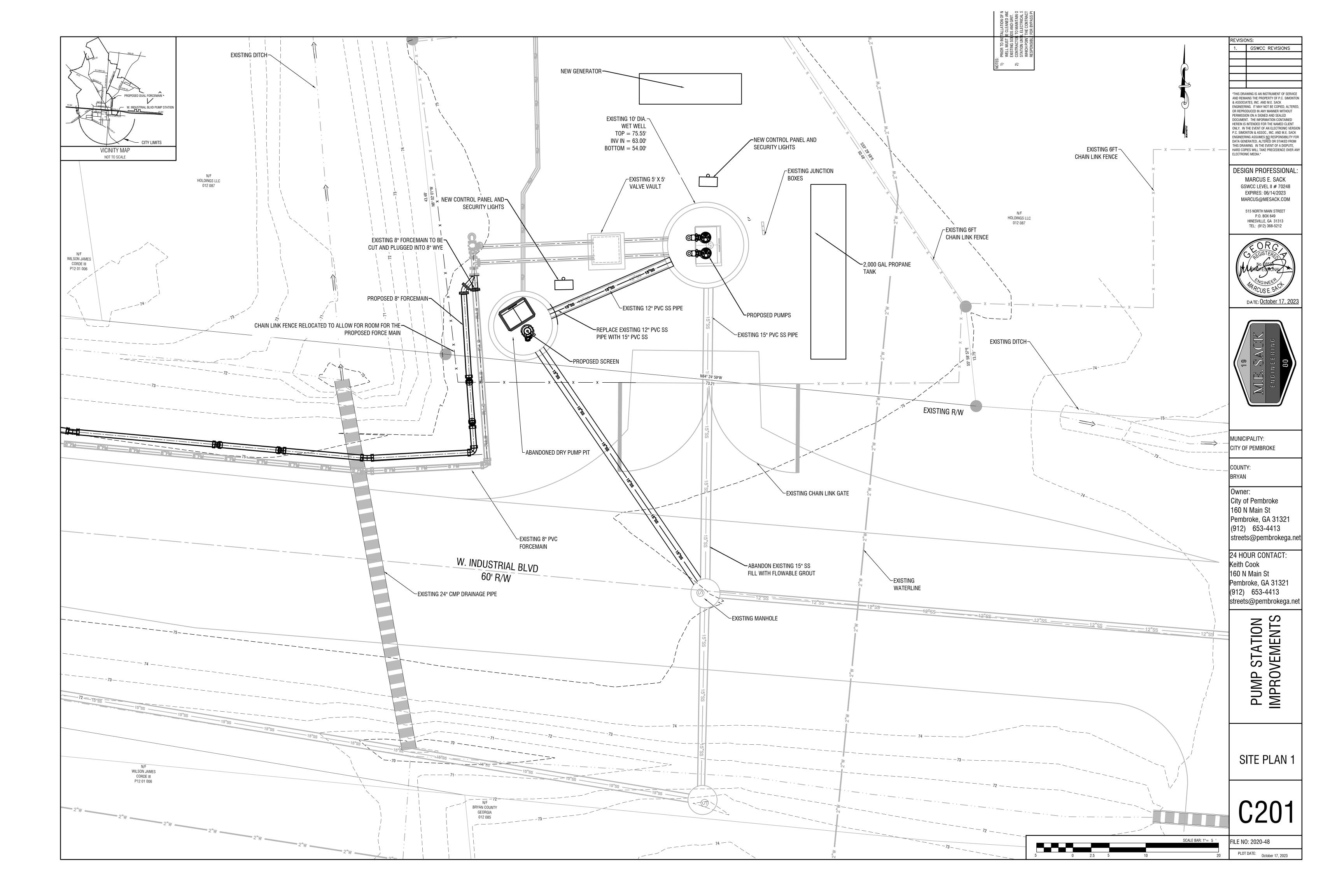
COVER

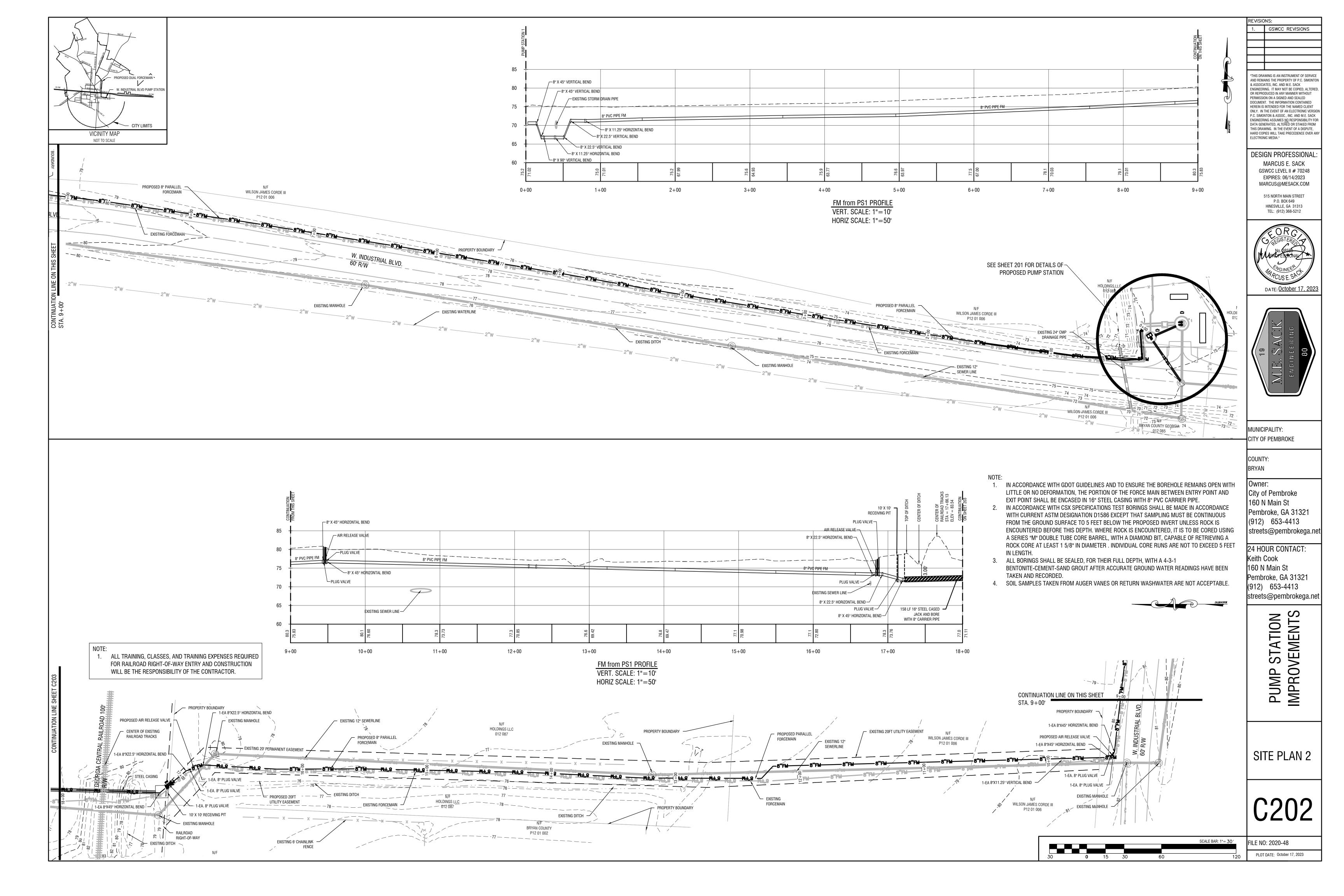
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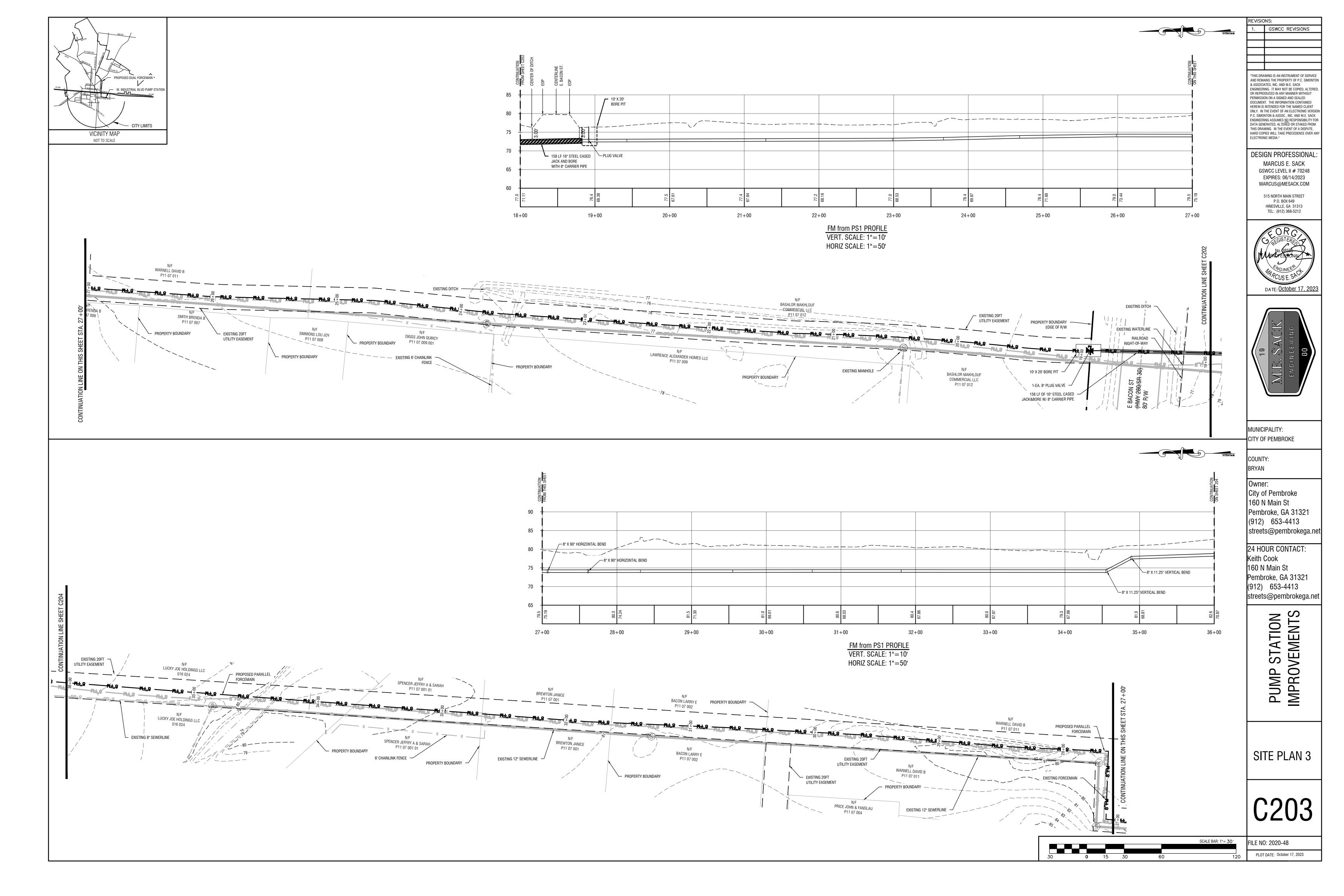
PLOT DATE: October 17, 2023

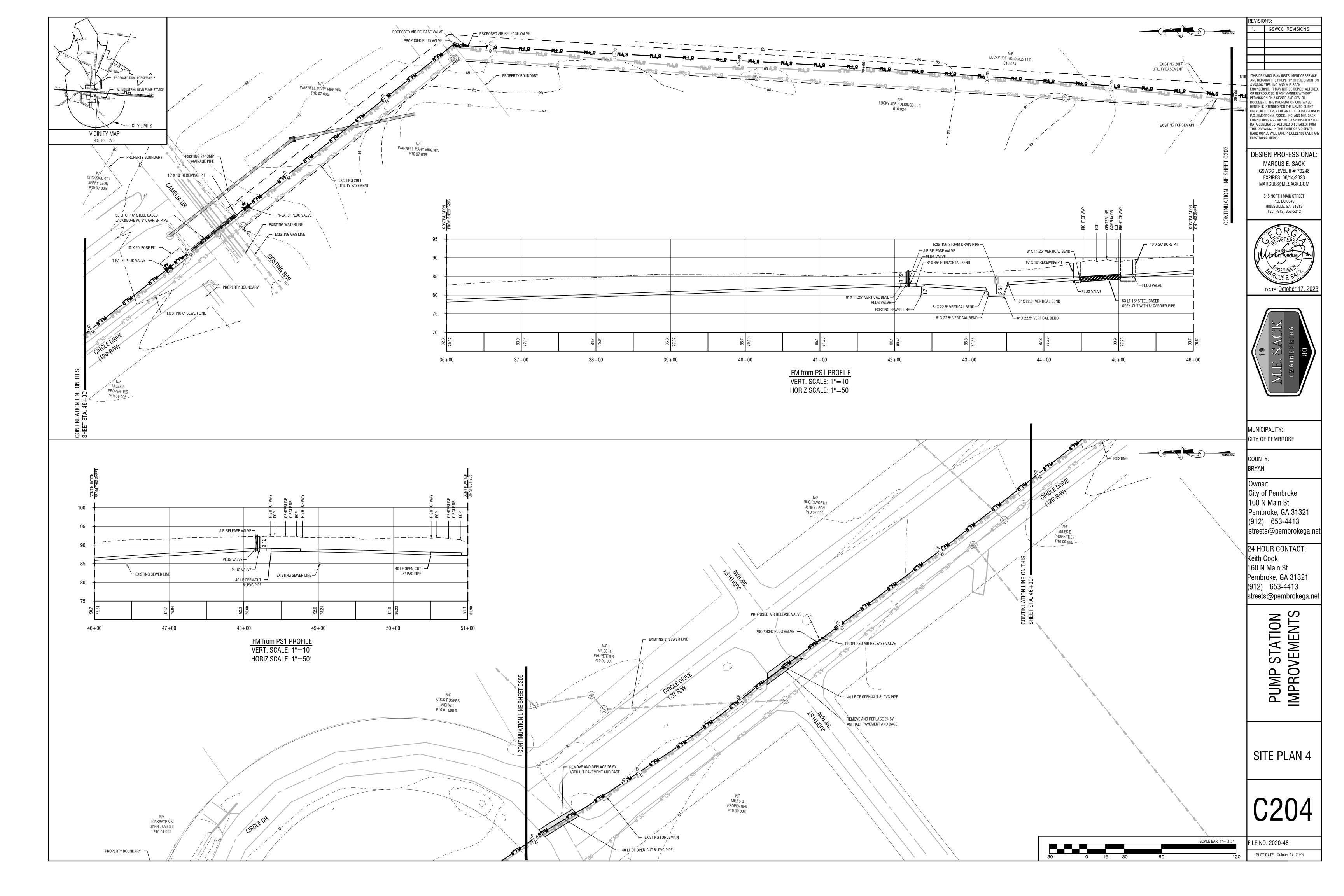


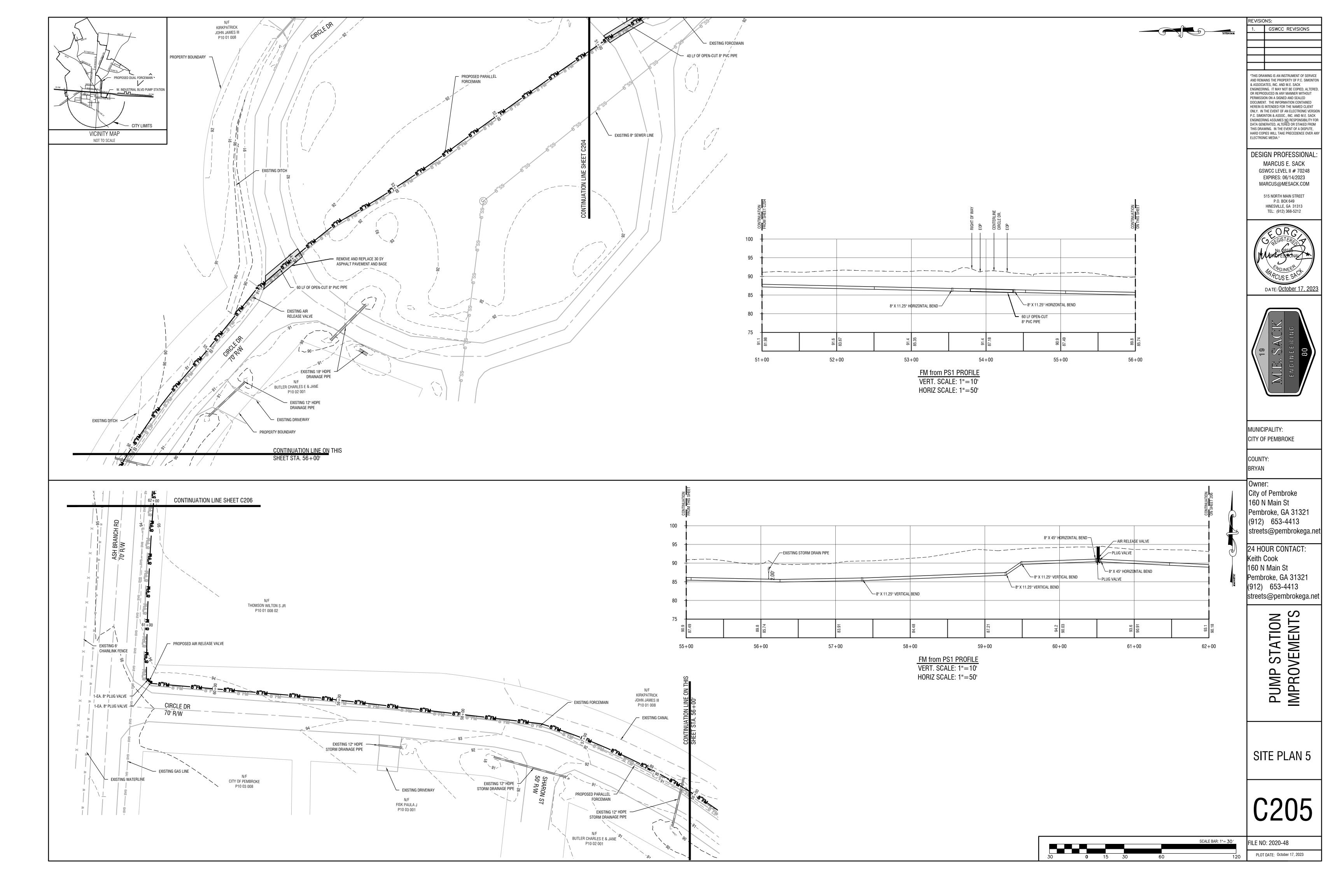


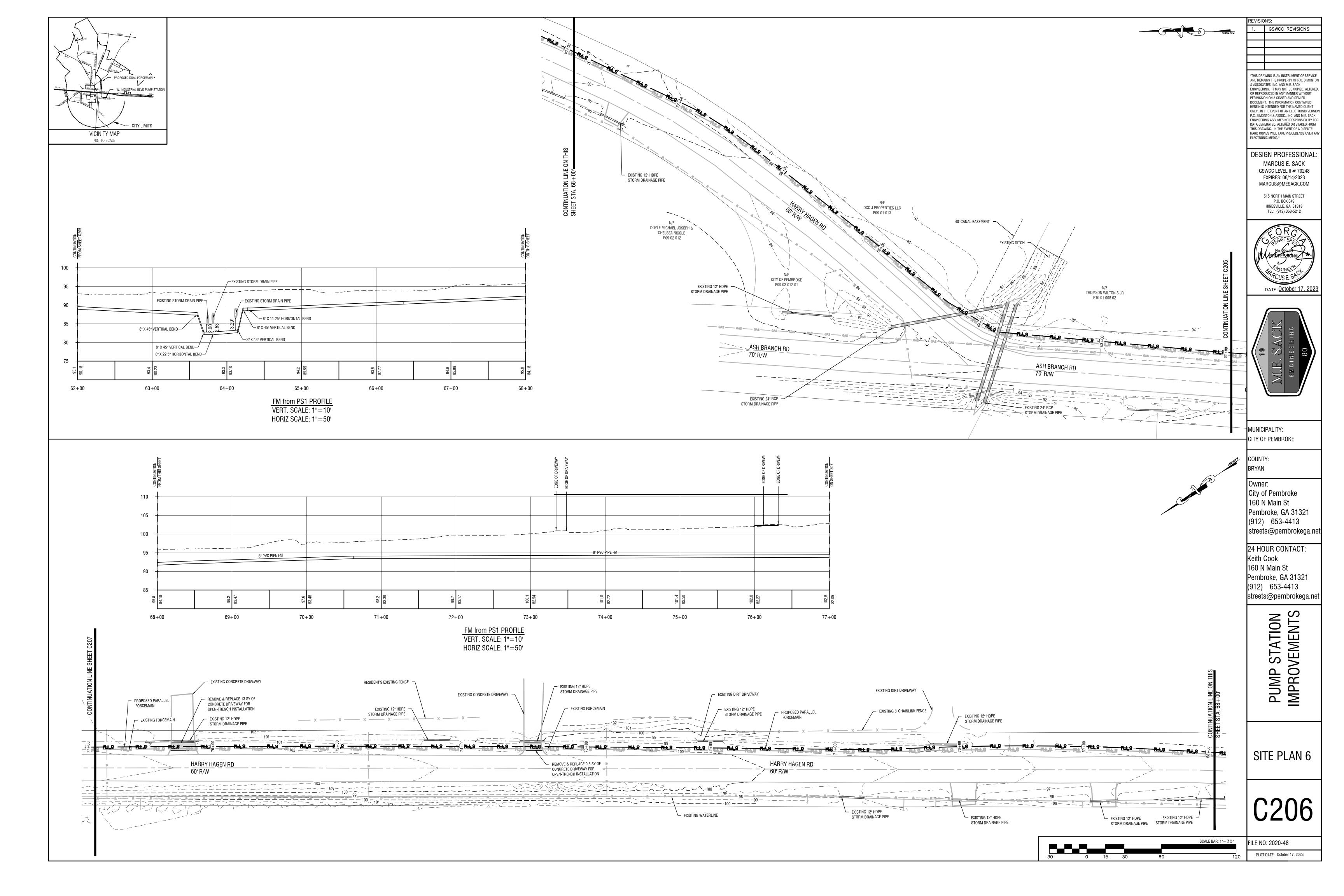


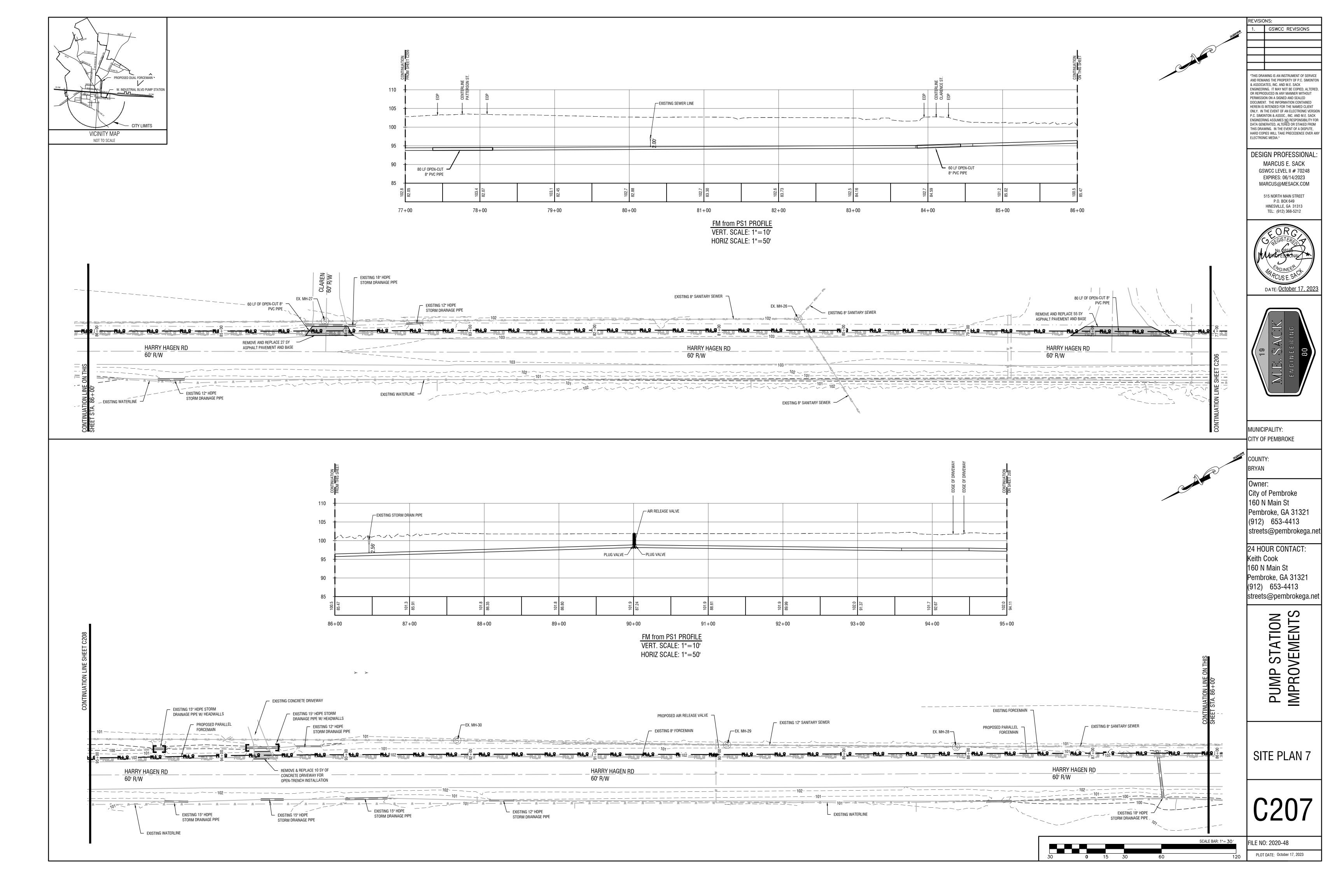


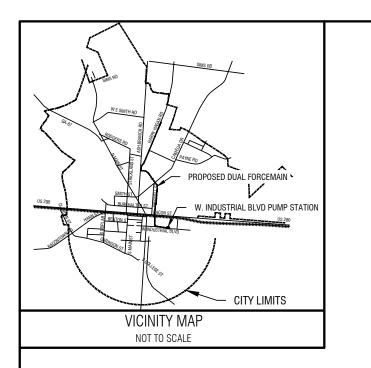


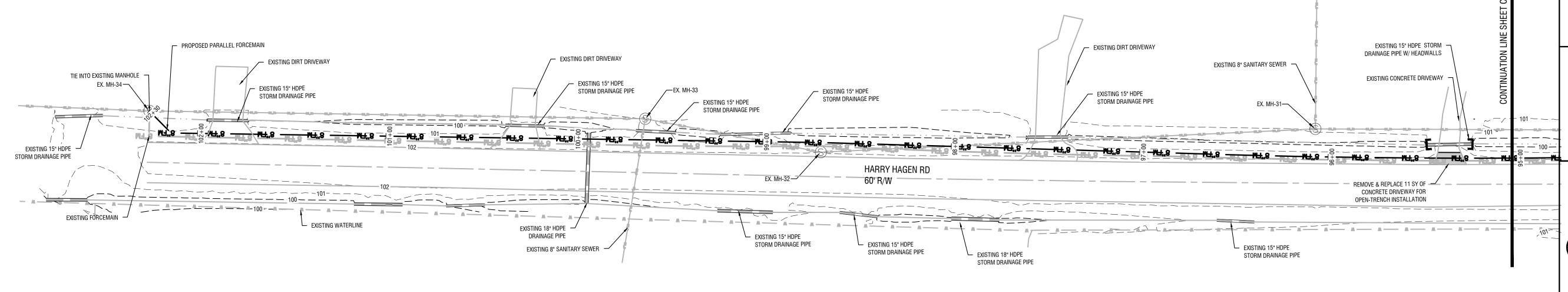


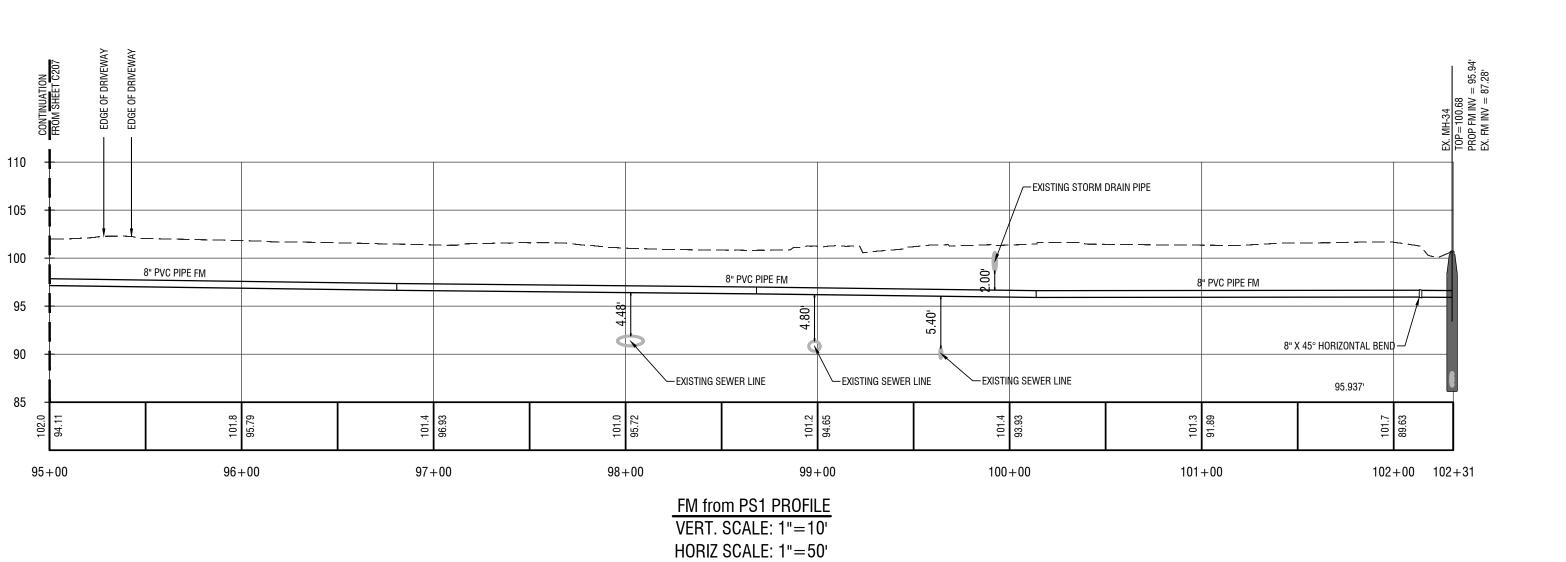












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GSWCC LEVEL II # 70248

EXPIRES: 06/14/2023

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MUNICIPALITY: CITY OF PEMBROKE

JNTY:

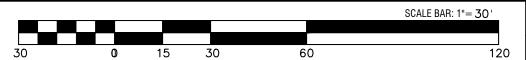
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PUMP STATION IMPROVEMENTS

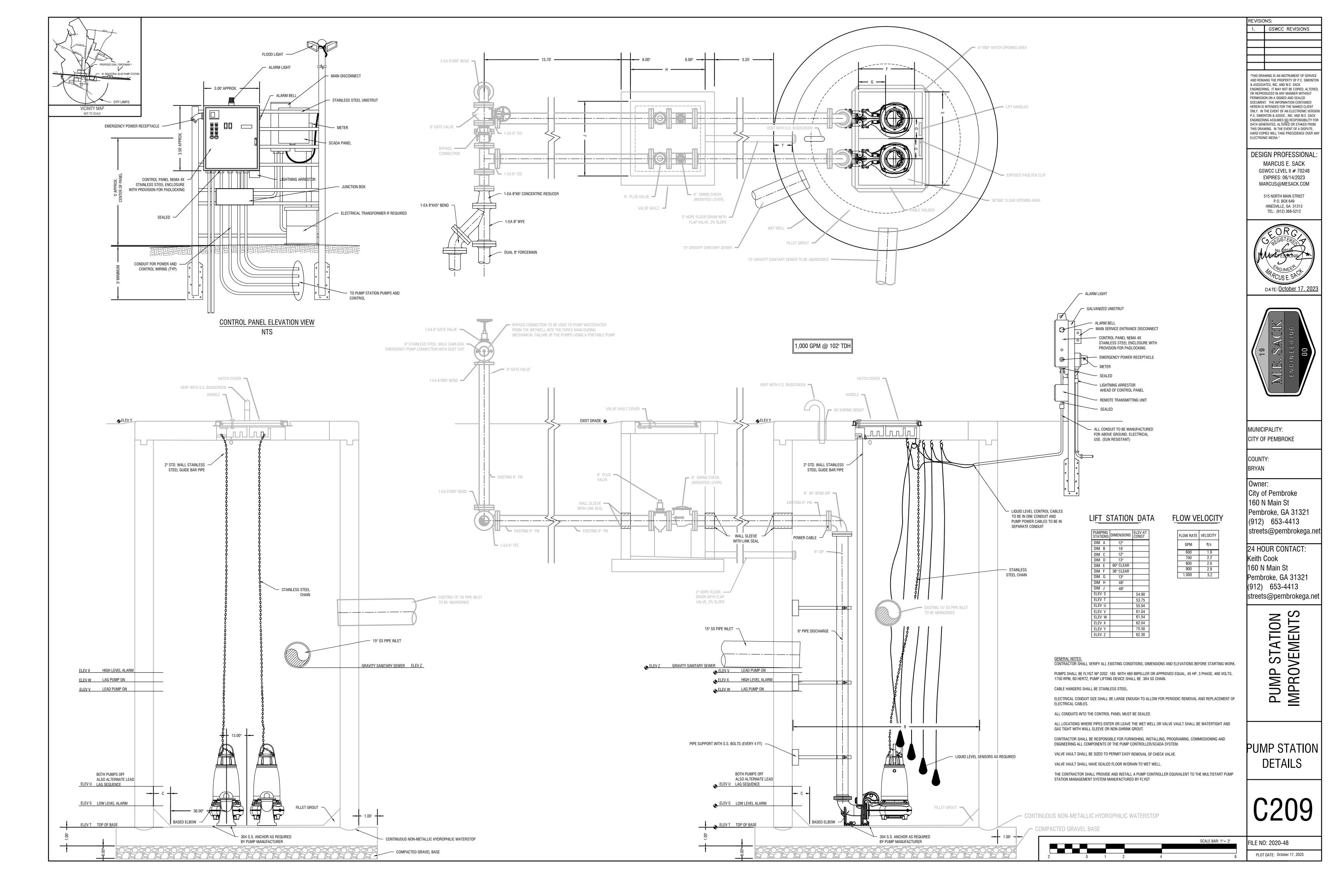
SITE PLAN 8

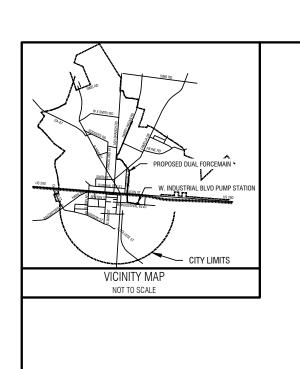
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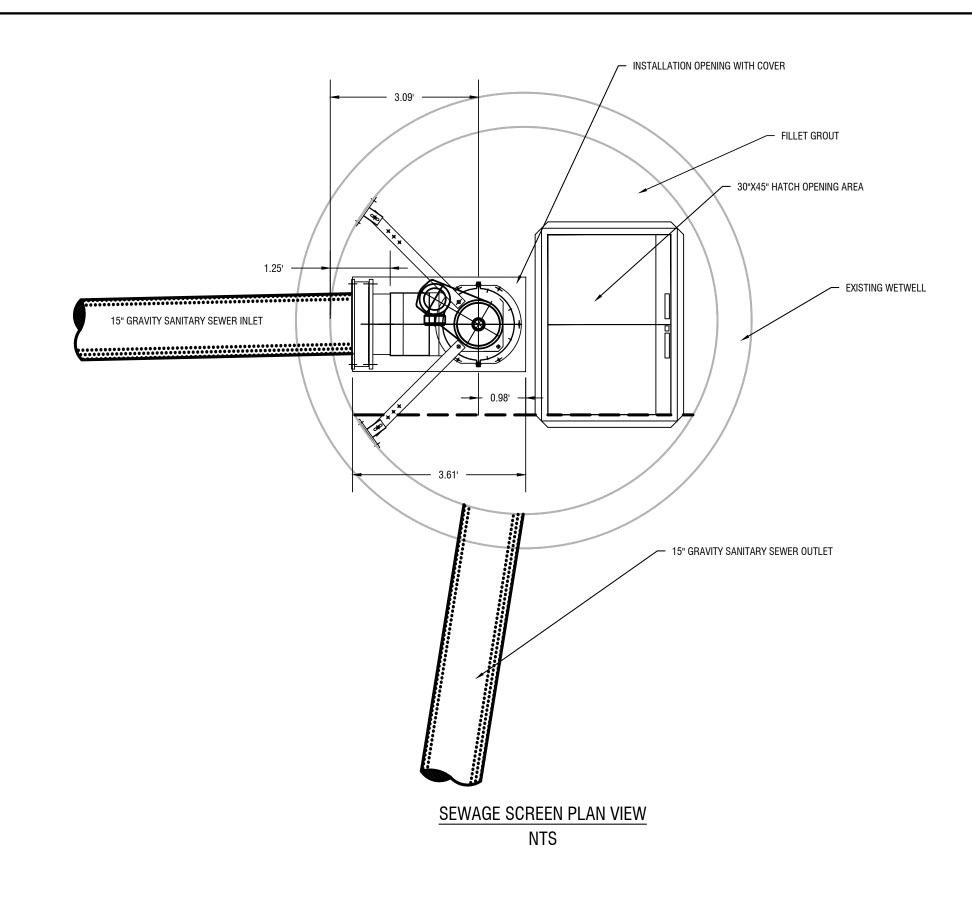


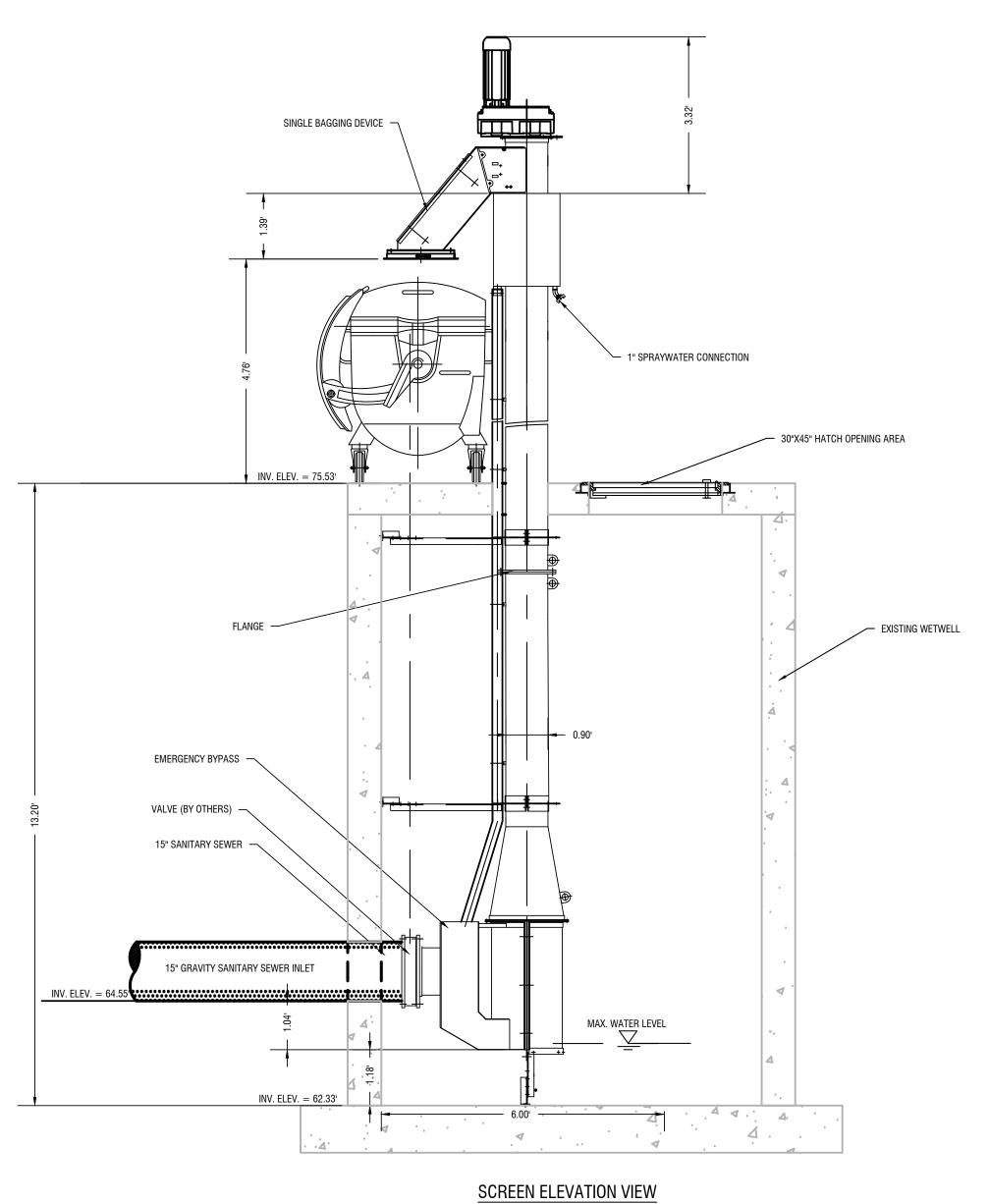
FILE NO: 2020-48

PLOT DATE: October 17, 2023

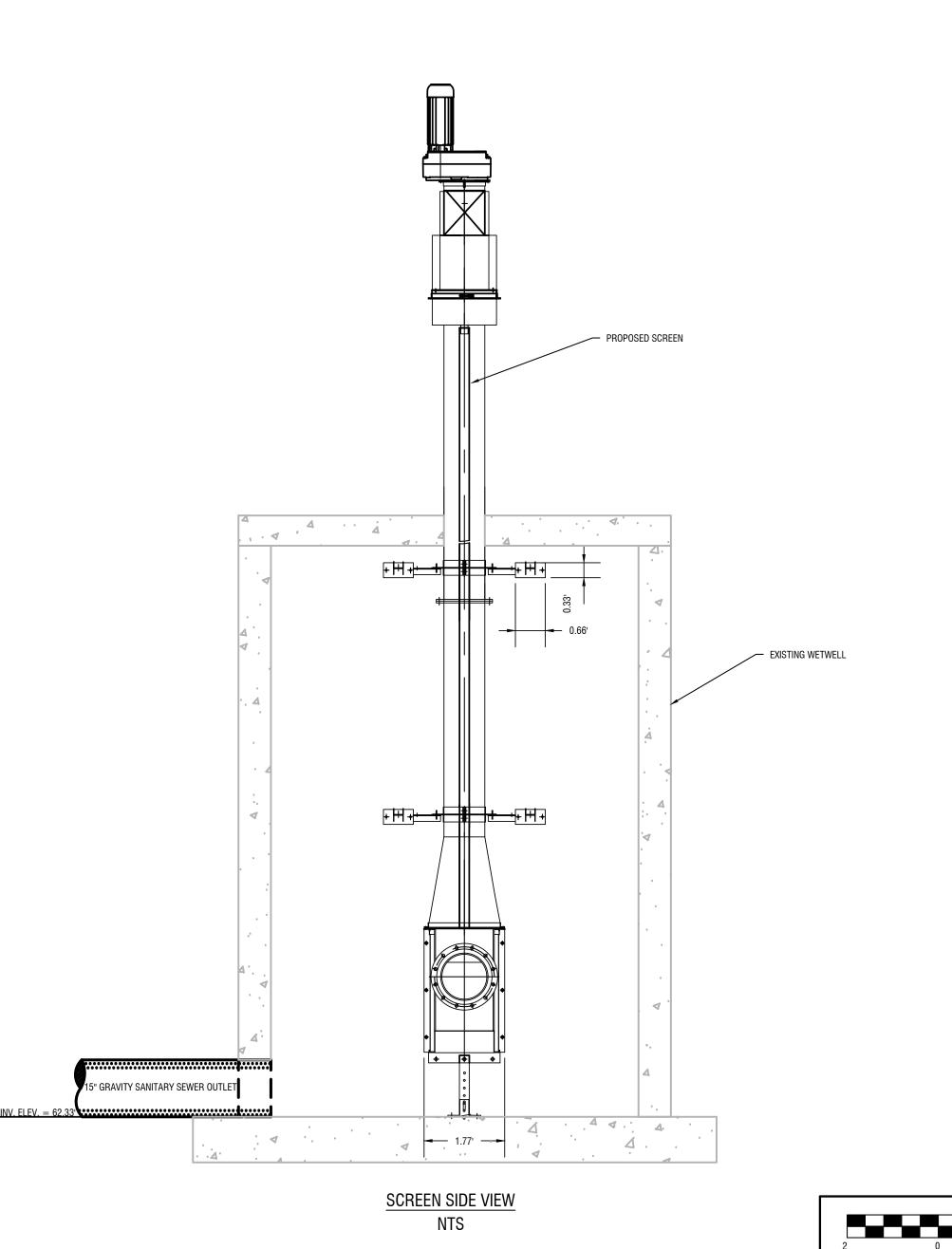








NTS



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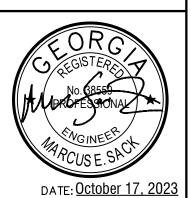
MARCUS E. SACK

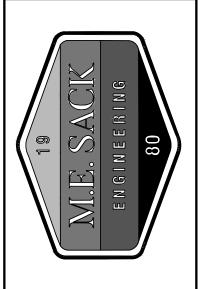
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EXPIRES: 06/14/2023

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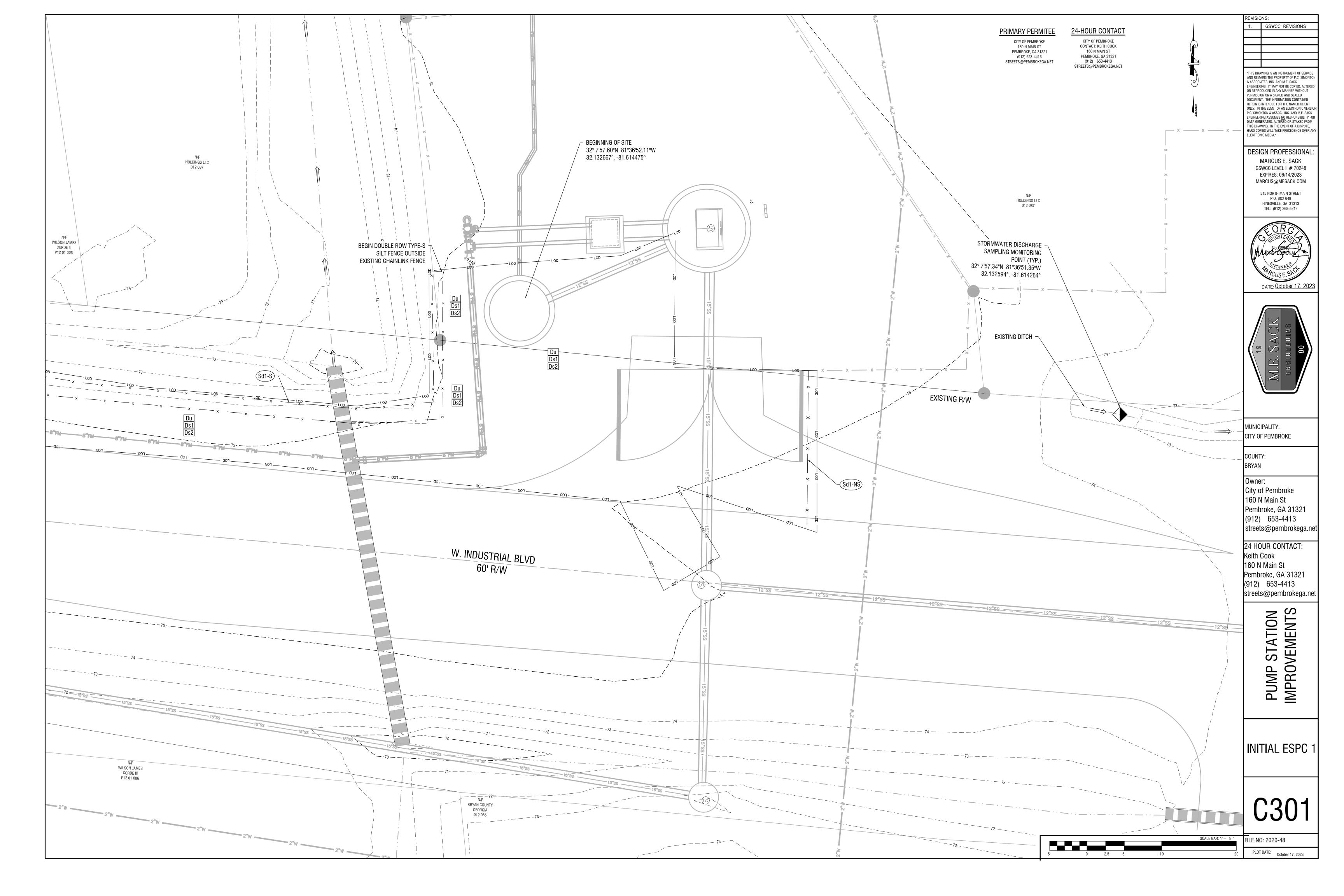
PUMP STATION DETAILS

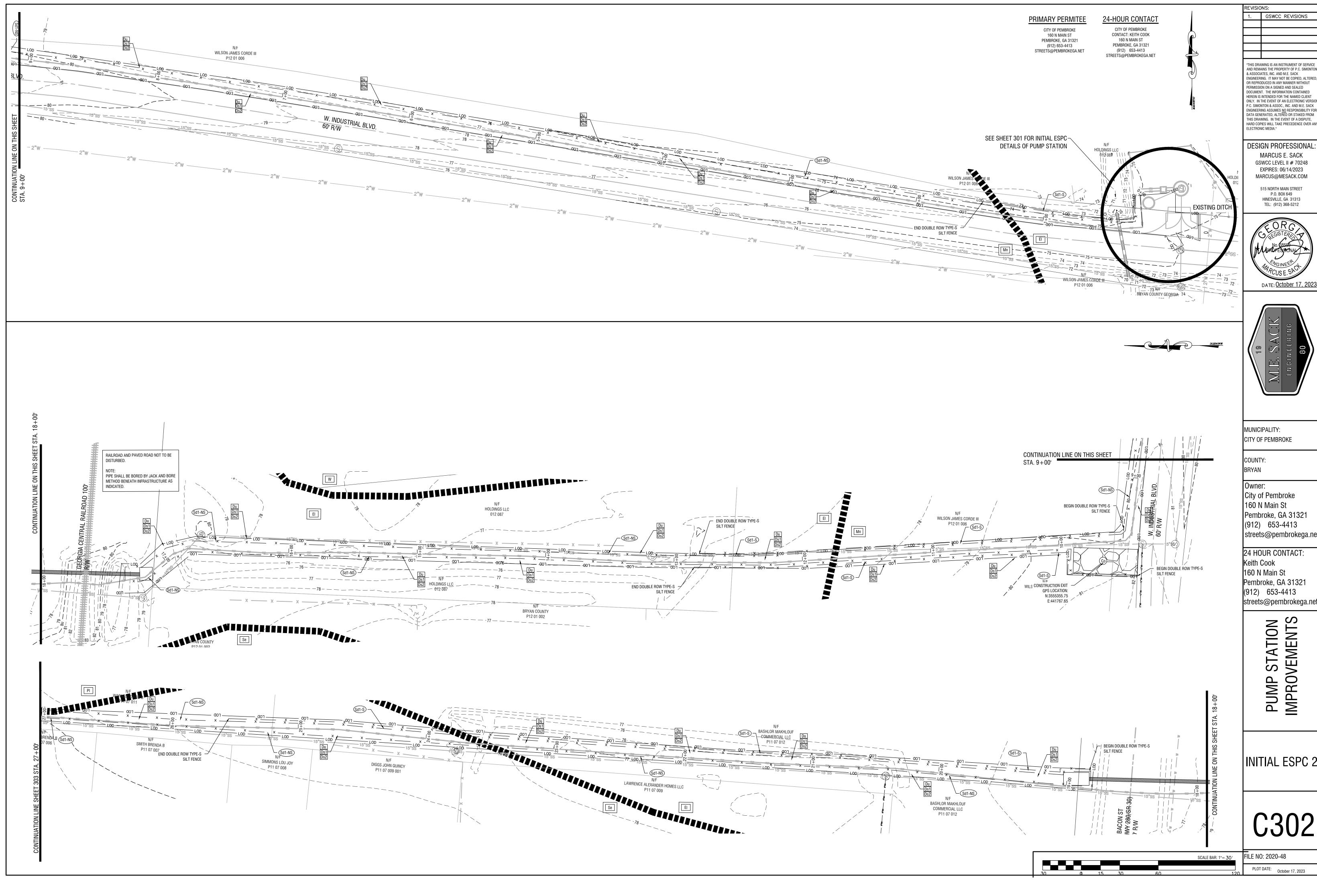
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FILE NO: 2020-48

PLOT DATE: October 17, 2023

SCALE BAR: 1"= 2'





GSWCC REVISIONS

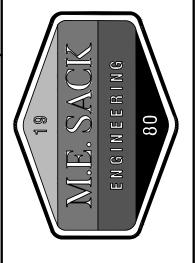
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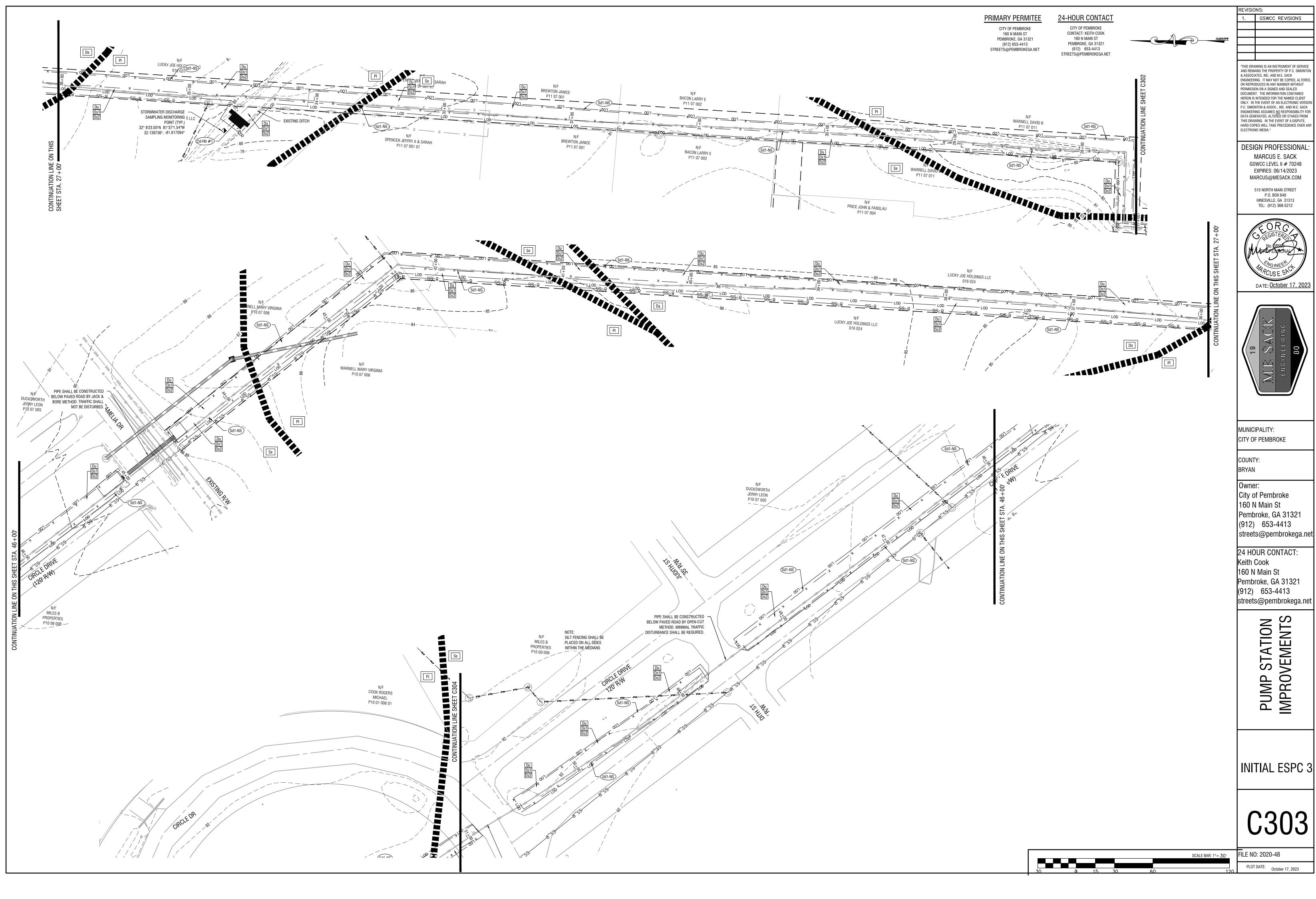
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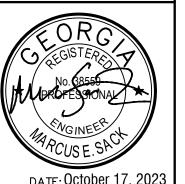


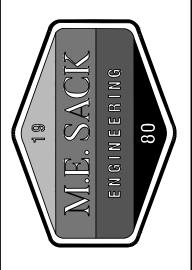
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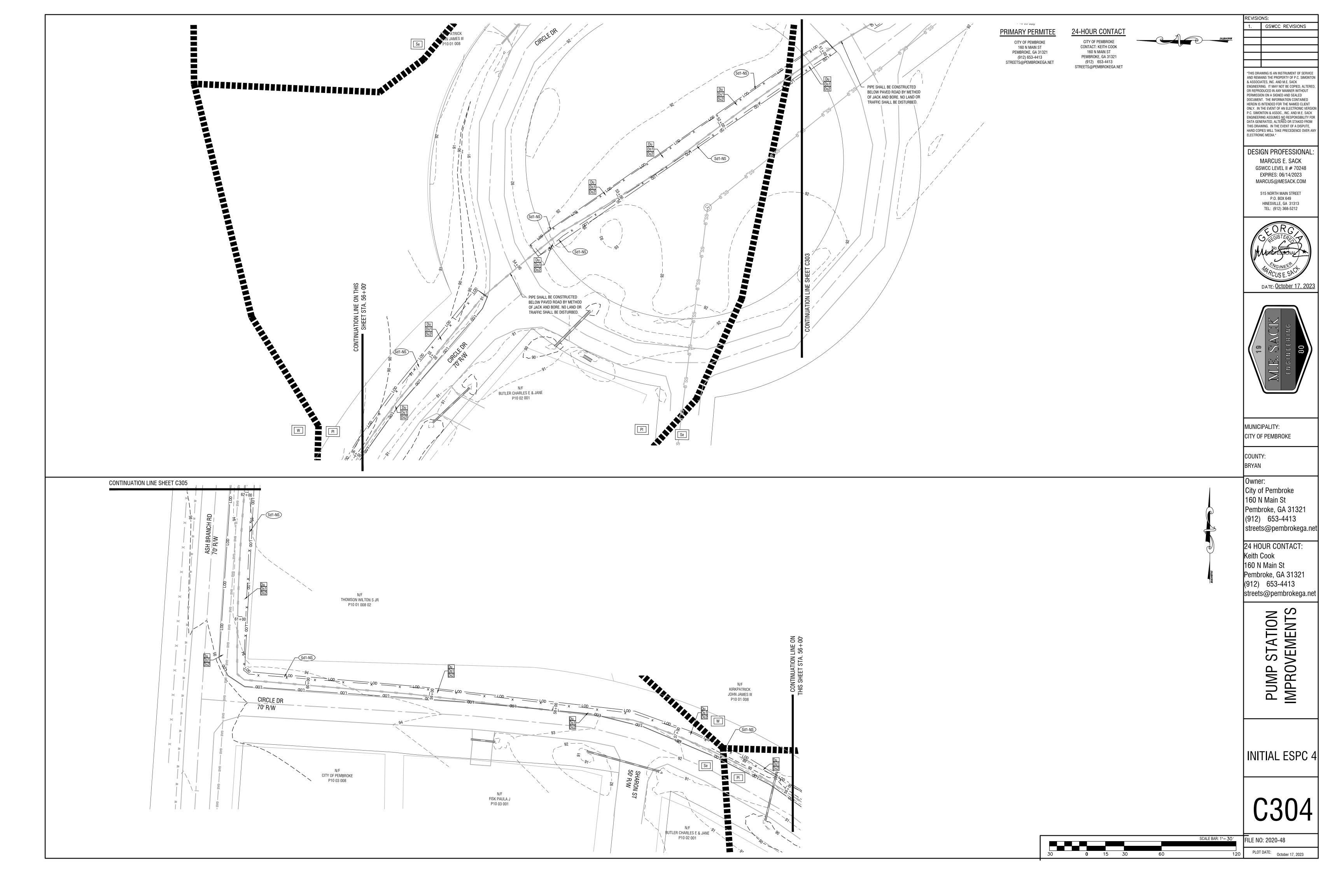
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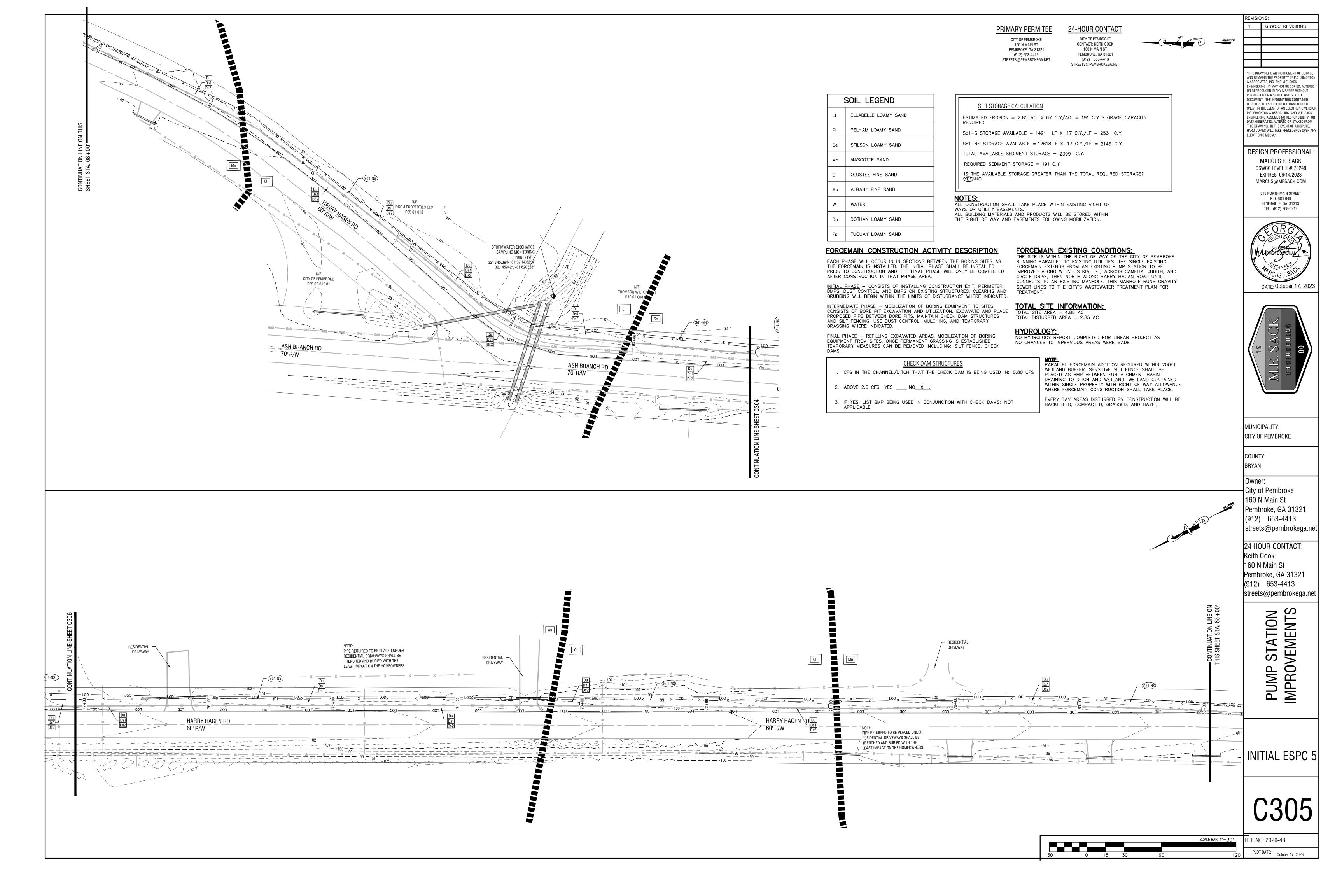
INITIAL ESPC 2

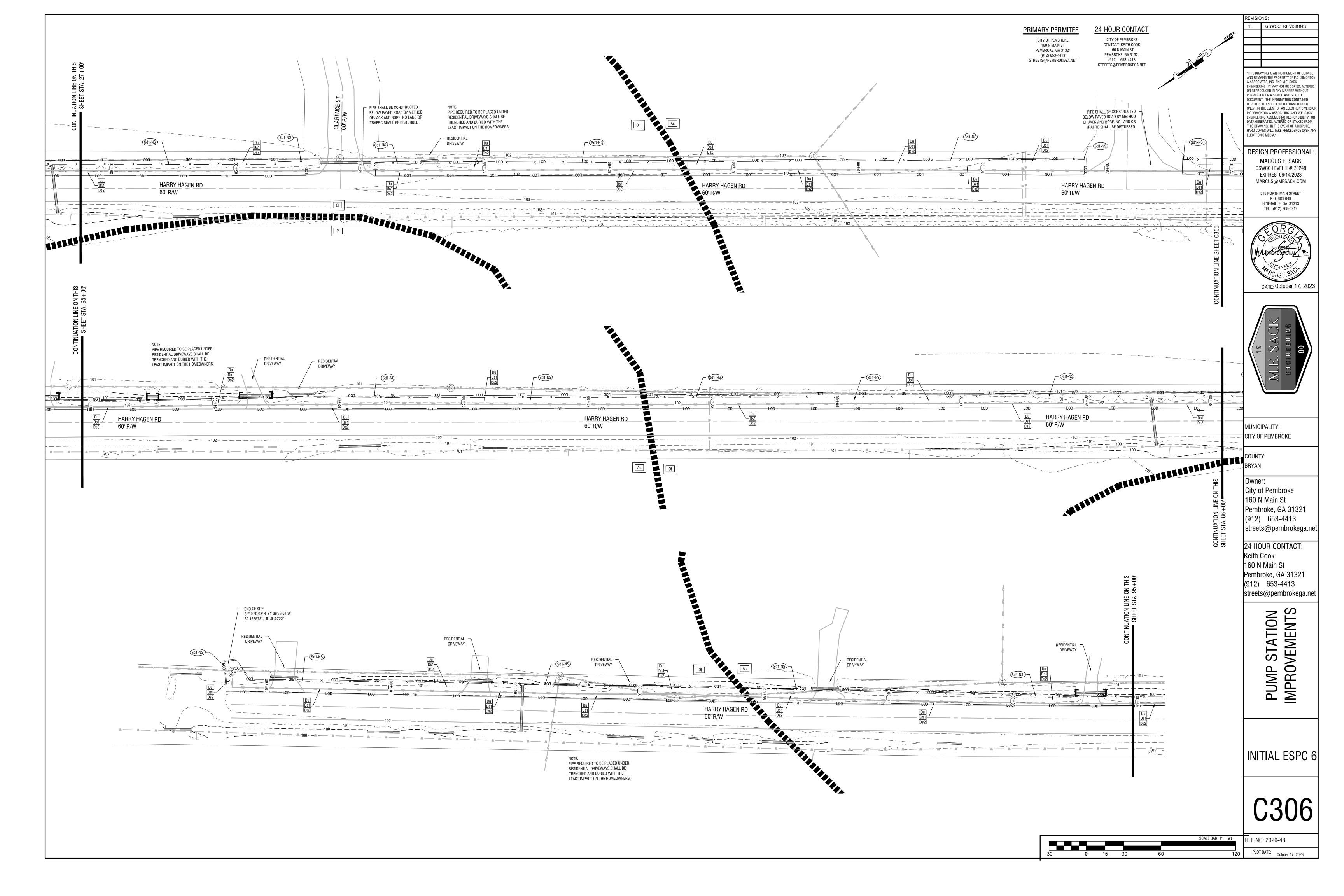


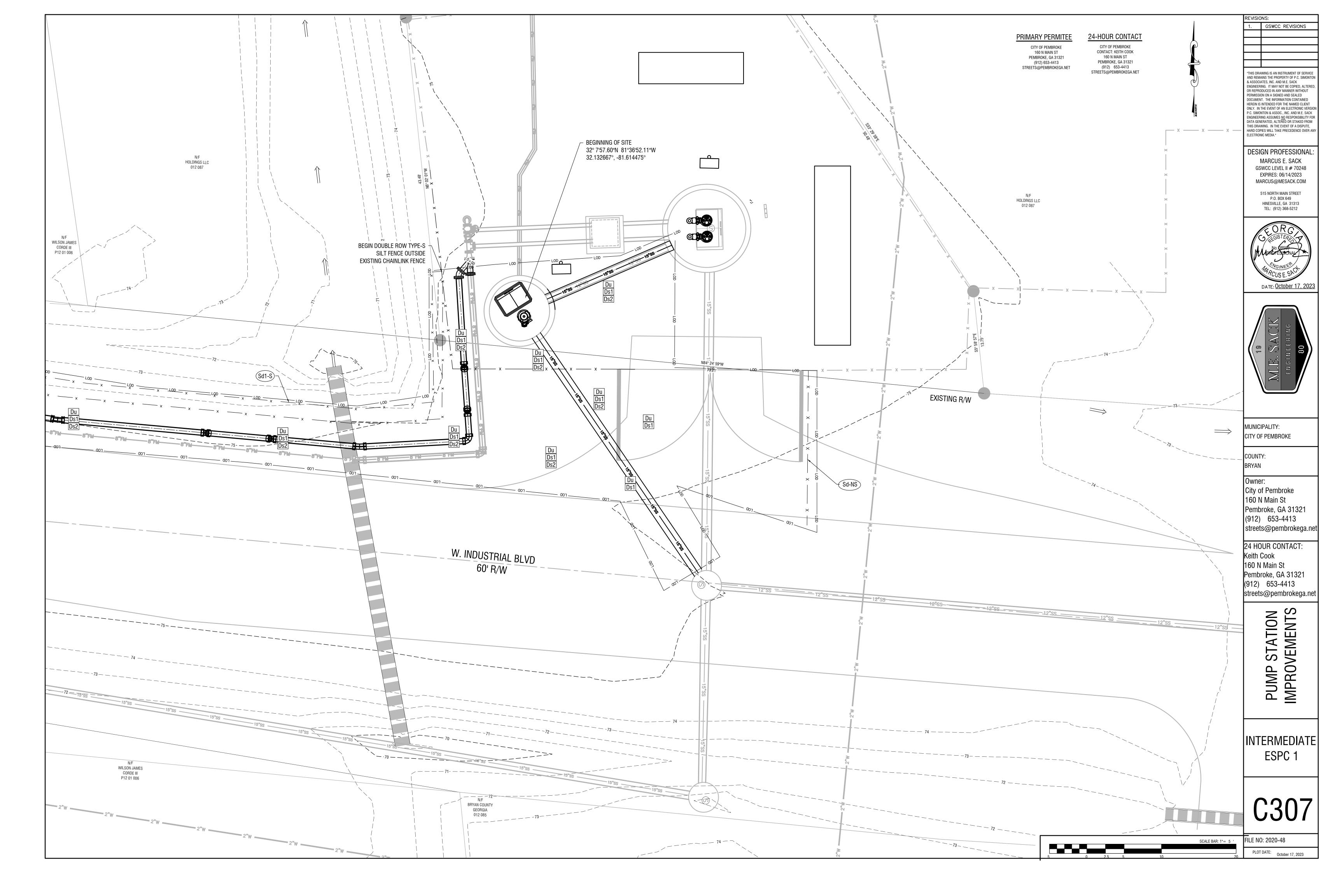


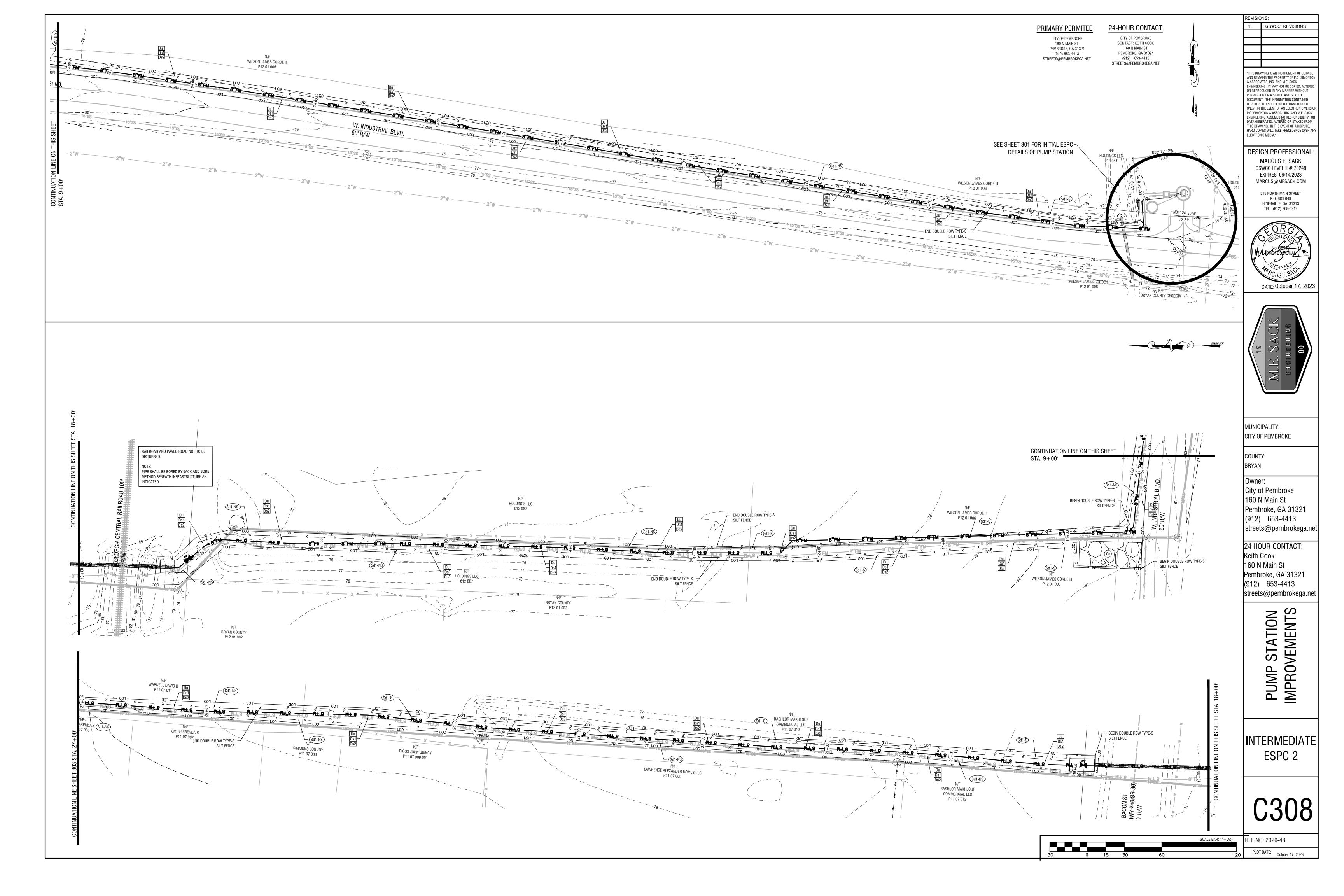


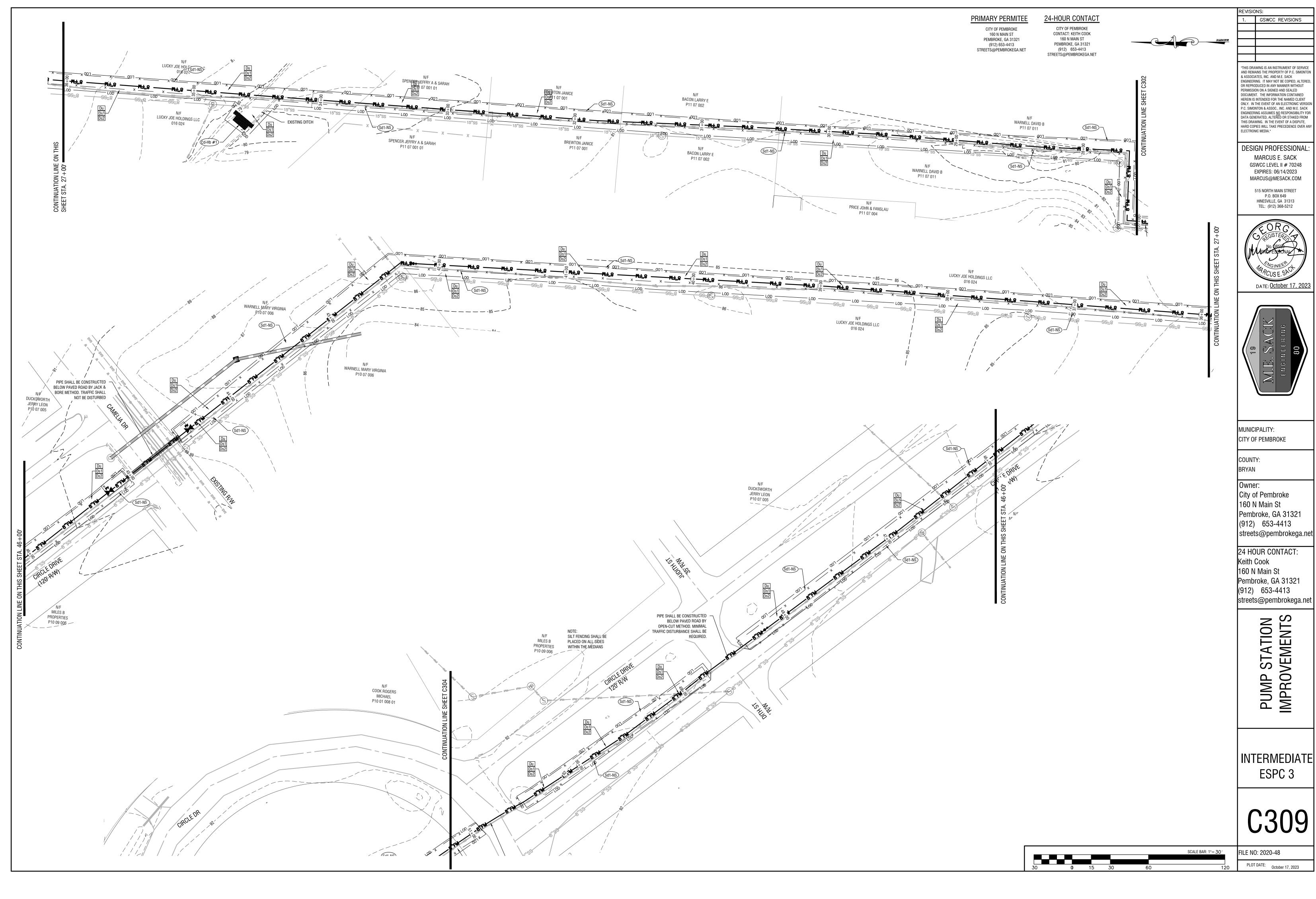


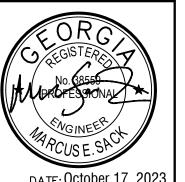


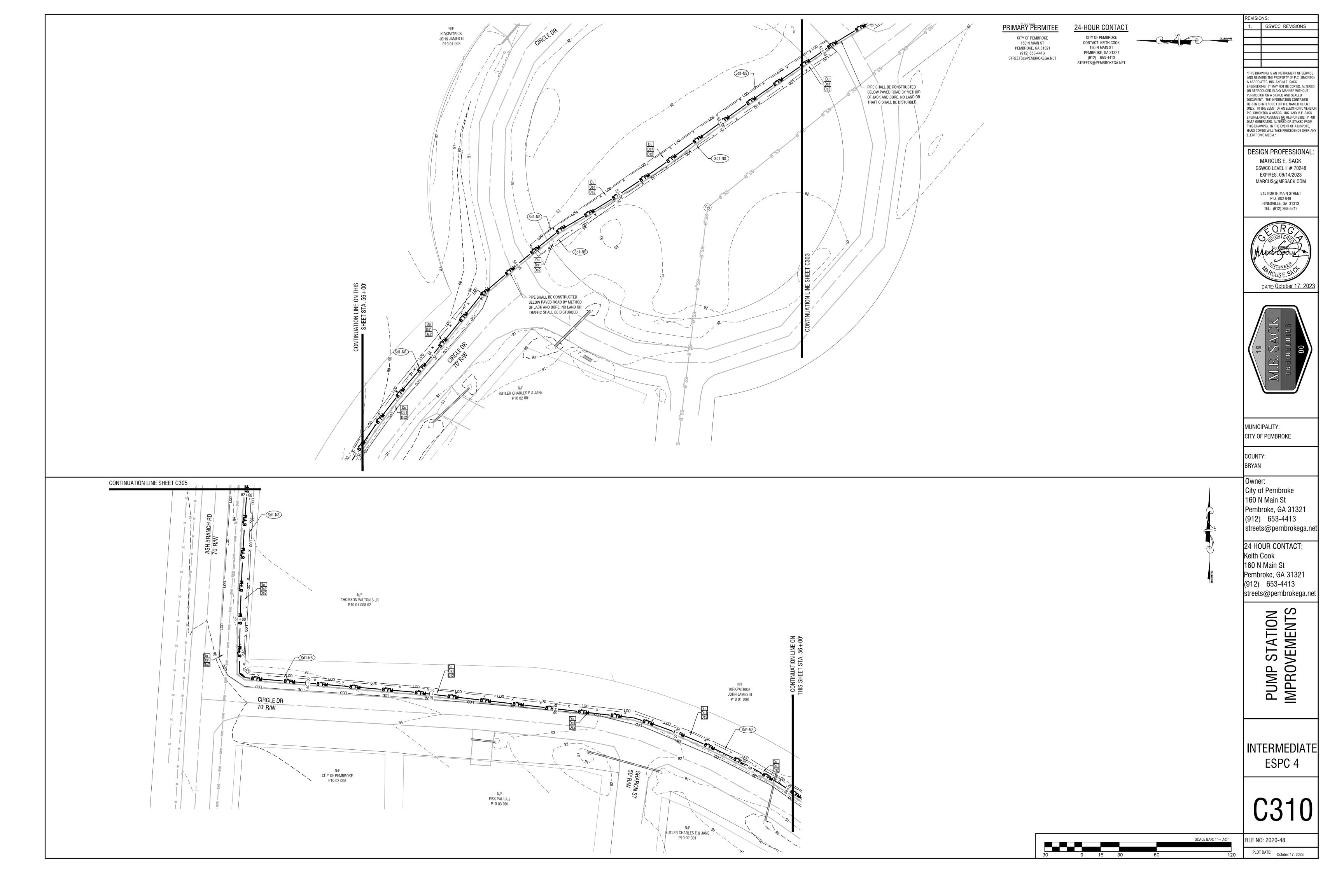


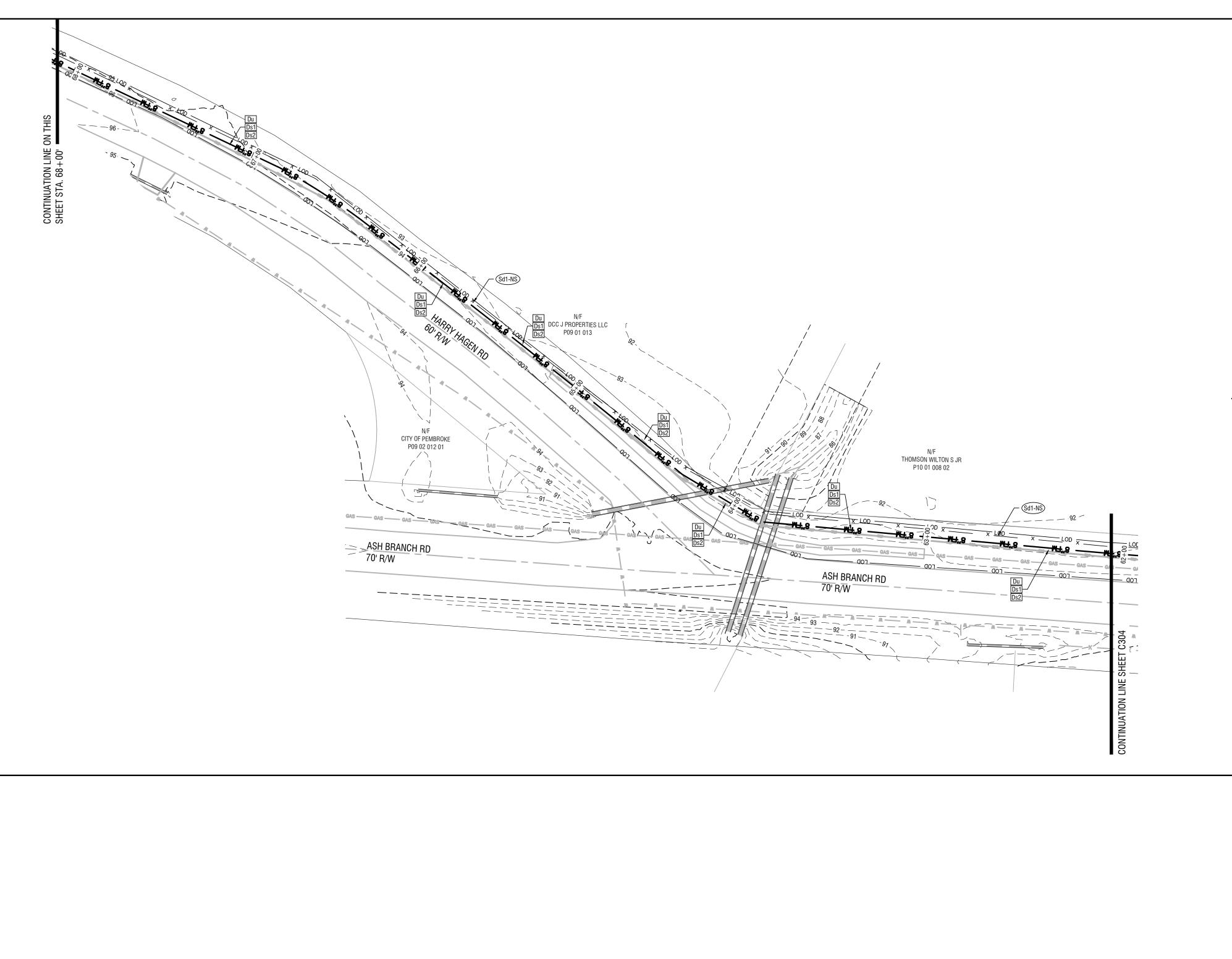












PRIMARY PERMITEE

CITY OF PEMBROKE 160 N MAIN ST PEMBROKE, GA 31321 (912) 653-4413 STREETS@PEMBROKEGA.NET

ALL BUILDING MATERIALS AND PRODUCTS WILL BE STORED WITHIN

THE RIGHT OF WAY AND EASEMENTS FOLLOWING MOBILIZATION.

24-HOUR CONTACT CITY OF PEMBROKE CONTACT: KEITH COOK 160 N MAIN ST PEMBROKE, GA 31321 (912) 653-4413 STREETS@PEMBROKEGA.NET



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GSWCC LEVEL II # 70248

EXPIRES: 06/14/2023 MARCUS@MESACK.COM

GSWCC REVISIONS

515 NORTH MAIN STREET P.O. BOX 649 HINESVILLE, GA 31313 TEL: (912) 368-5212

DATE: October 17, 202

MUNICIPALITY: CITY OF PEMBROKE

COUNTY:

Owner: City of Pembroke 160 N Main St Pembroke, GA 31321 (912) 653-4413 streets@pembrokega.ne

24 HOUR CONTACT: Keith Cook 160 N Main St Pembroke, GA 31321 (912) 653-4413 streets@pembrokega.ne

PUMP STATION IMPROVEMENTS

INTERMEDIATE ESPC 5

FILE NO: 2020-48 PLOT DATE: October 17, 2023

SCALE BAR: 1"= 30 '

SOIL LEGEND SILT STORAGE CALCULATION ELLABELLE LOAMY SAND ESTIMATED EROSION = 2.85 AC. X 67 C.Y/AC. = 191 C.Y STORAGE CAPACITY Sd1-S STORAGE AVAILABLE = 1491 LF X .17 C.Y./LF = 253 C.Y. Sd1-NS STORAGE AVAILABLE = 12618 LF X .17 C.Y./LF = 2145 C.Y. TOTAL AVAILABLE SEDIMENT STORAGE = 2399 C.Y. REQUIRED SEDIMENT STORAGE = 191 C.Y. IS\_THE AVAILABLE STORAGE GREATER THAN THE TOTAL REQUIRED STORAGE? NOTES:
ALL CONSTRUCTION SHALL TAKE PLACE WITHIN EXISTING RIGHT OF WATER

PELHAM LOAMY SAND STILSON LOAMY SAND MASCOTTE SAND OLUSTEE FINE SAND ALBANY FINE SAND

DOTHAN LOAMY SAND FUQUAY LOAMY SAND

W

#### FORCEMAIN EXISTING CONDITIONS: FORCEMAIN CONSTRUCTION ACTIVITY DESCRIPTION

WAYS OR UTILITY EASEMENTS.

EACH PHASE WILL OCCUR IN IN SECTIONS BETWEEN THE BORING SITES AS THE FORCEMAIN IS INSTALLED. THE INITIAL PHASE SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND THE FINAL PHASE WILL ONLY BE COMPLETED AFTER CONSTRUCTION IN THAT PHASE AREA.

INITIAL PHASE — CONSISTS OF INSTALLING CONSTRUCTION EXIT, PERIMETER SEWER LINES TREATMENT. GRUBBING WILL BEGIN WITHIN THE LIMITS OF DISTURBANCE WHERE INDICATED.

INTERMEDIATE PHASE - MOBILIZATION OF BORING EQUIPMENT TO SITES. CONSISTS OF BORE PIT EXCAVATION AND UTILIZATION. EXCAVATE AND PLACE PROPOSED PIPE BETWEEN BORE PITS. MAINTAIN CHECK DAM STRUCTURES AND SILT FENCING. USE DUST CONTROL, MULCHING, AND TEMPORARY GRASSING WHERE INDICATED.

FINAL PHASE — REFILLING EXCAVATED AREAS. MOBILIZATION OF BORING EQUIPMENT FROM SITES. ONCE PERMANENT GRASSING IS ESTABLISHED TEMPORARY MEASURES CAN BE REMOVED INCLUDING: SILT FENCE, CHECK

#### CIRCLE DRIVE, THEN NORTH ALONG HARRY HAGAN ROAD UNTIL IT CONNECTS TO AN EXISTING MANHOLE. THIS MANHOLE RUNS GRAVITY SEWER LINES TO THE CITY'S WASTEWATER TREATMENT PLAN FOR

TOTAL SITE INFORMATION: TOTAL SITE AREA = 4.88 AC TOTAL DISTURBED AREA = 2.85 AC

NO HYDROLOGY REPORT COMPLETED FOR LINEAR PROJECT AS NO CHANGES TO IMPERVIOUS AREAS WERE MADE.

NOTE:
PARALLEL FORCEMAIN ADDITION REQUIRED WITHIN 200FT

WHERE FORCEMAIN CONSTRUCTION SHALL TAKE PLACE.

EVERY DAY AREAS DISTURBED BY CONSTRUCTION WILL BE

WETLAND BUFFER. SENSITIVE SILT FENCE SHALL BE

PLACED AS BMP BETWEEN SUBCATCHMENT BASIN DRAINING TO DITCH AND WETLAND. WETLAND CONTAINED WITHIN SINGLE PROPERTY WITH RIGHT OF WAY ALLOWANCE

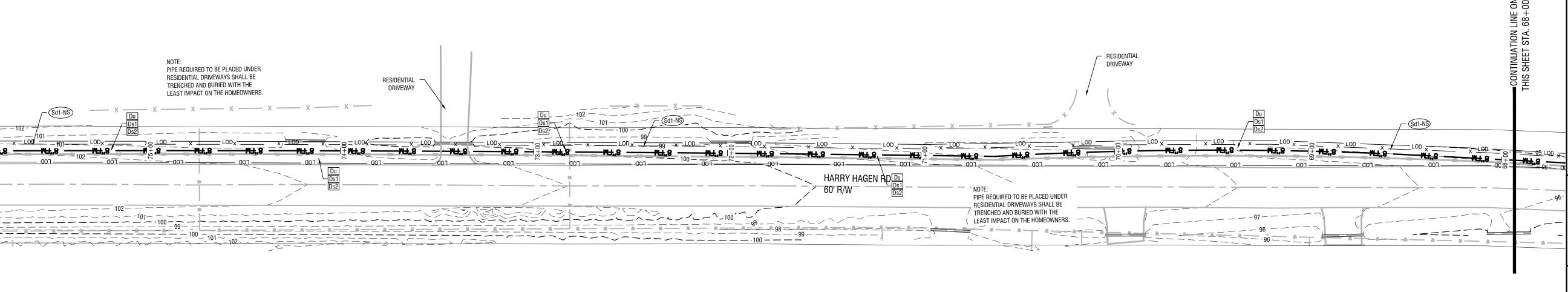
BACKFILLED, COMPACTED, GRASSED, AND HAYED.

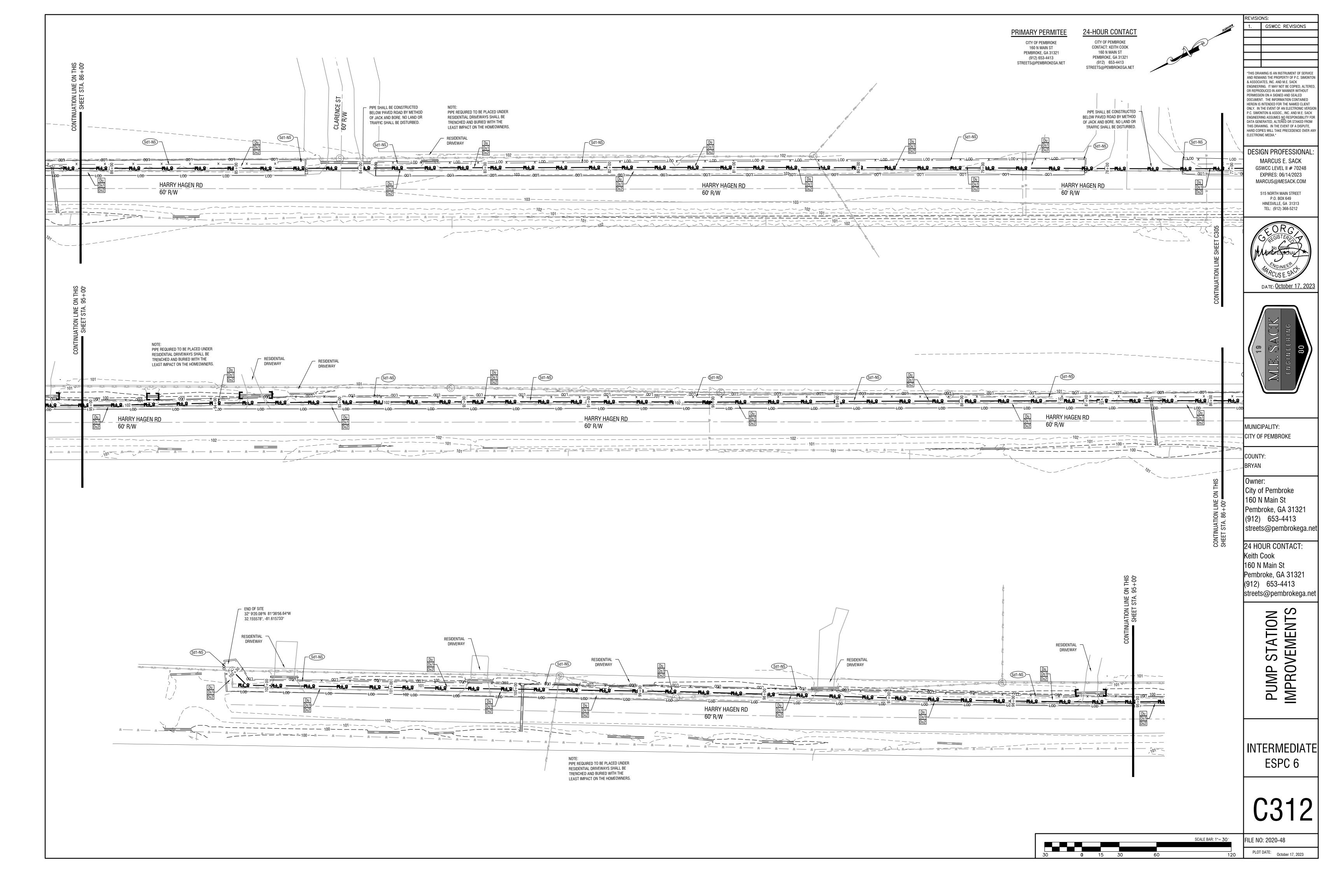
RUNNING PARALLEL TO EXISTING UTILITIES. THE SINGLE EXISTING

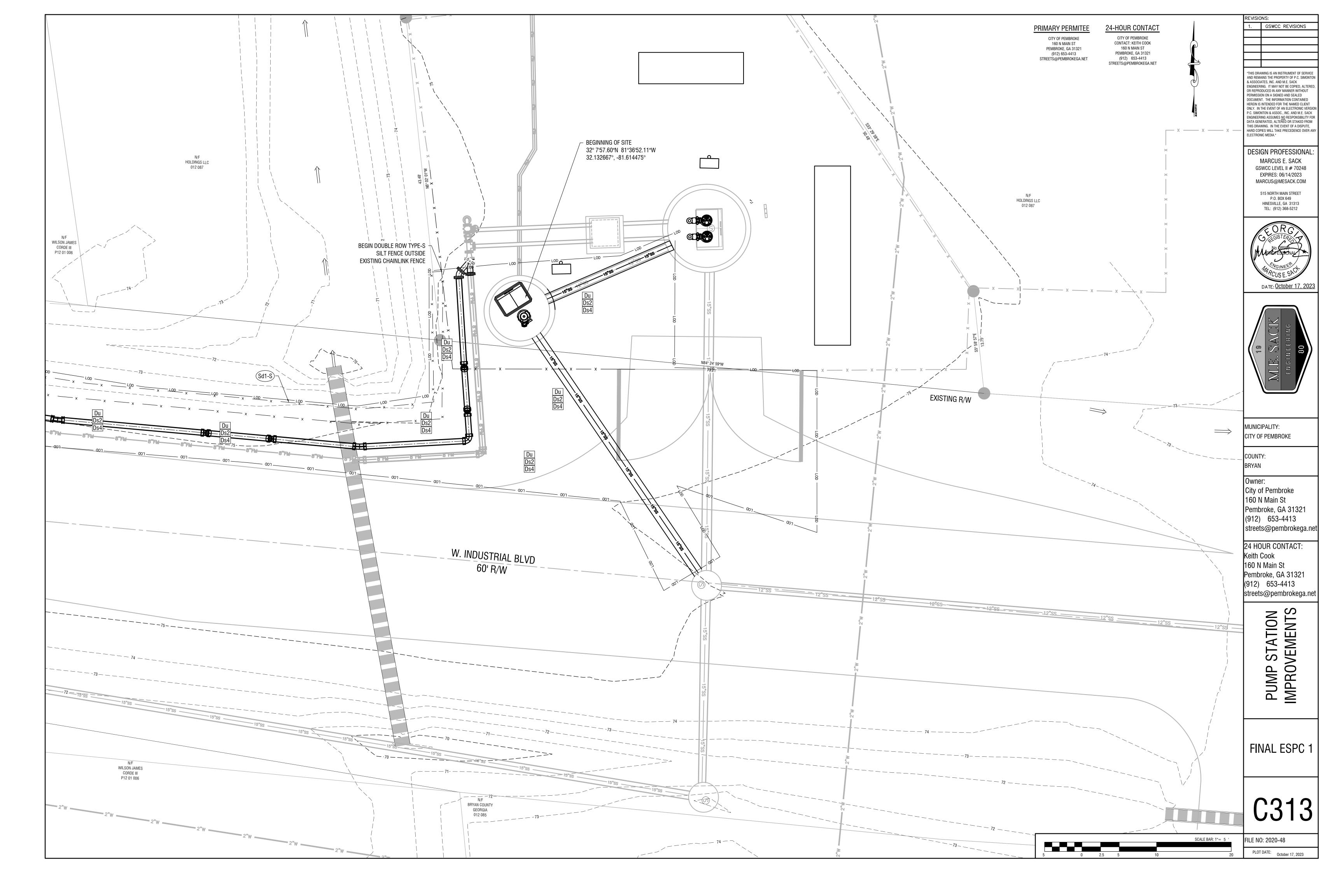
FORCEMAIN EXTENDS FROM AN EXISTING PUMP STATION TO BE IMPROVED ALONG W. INDUSTRIAL ST, ACROSS CAMELIA, JUDITH, AND

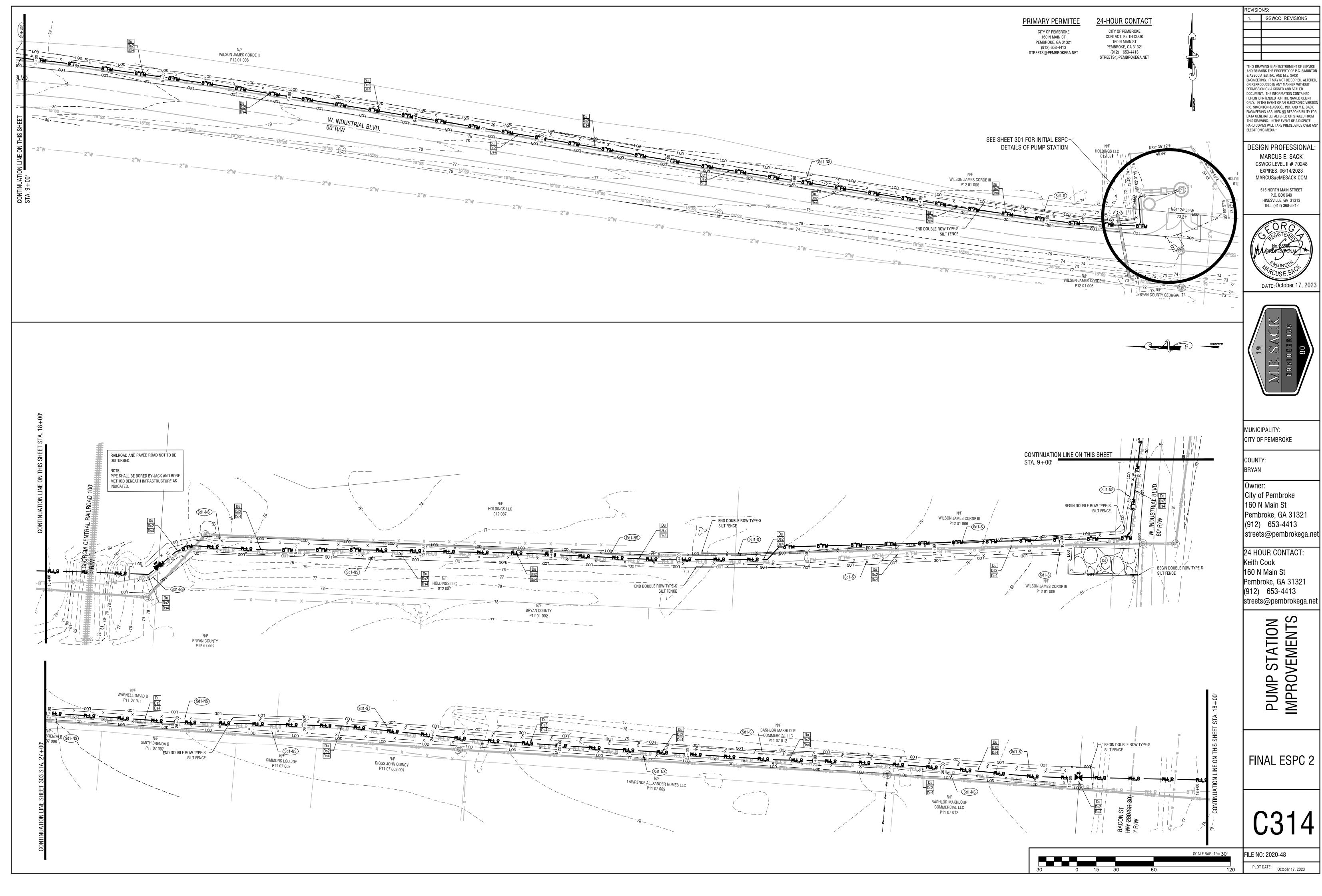
CHECK DAM STRUCTURES 1. CFS IN THE CHANNEL/DITCH THAT THE CHECK DAM IS BEING USED IN: 0.80 CFS

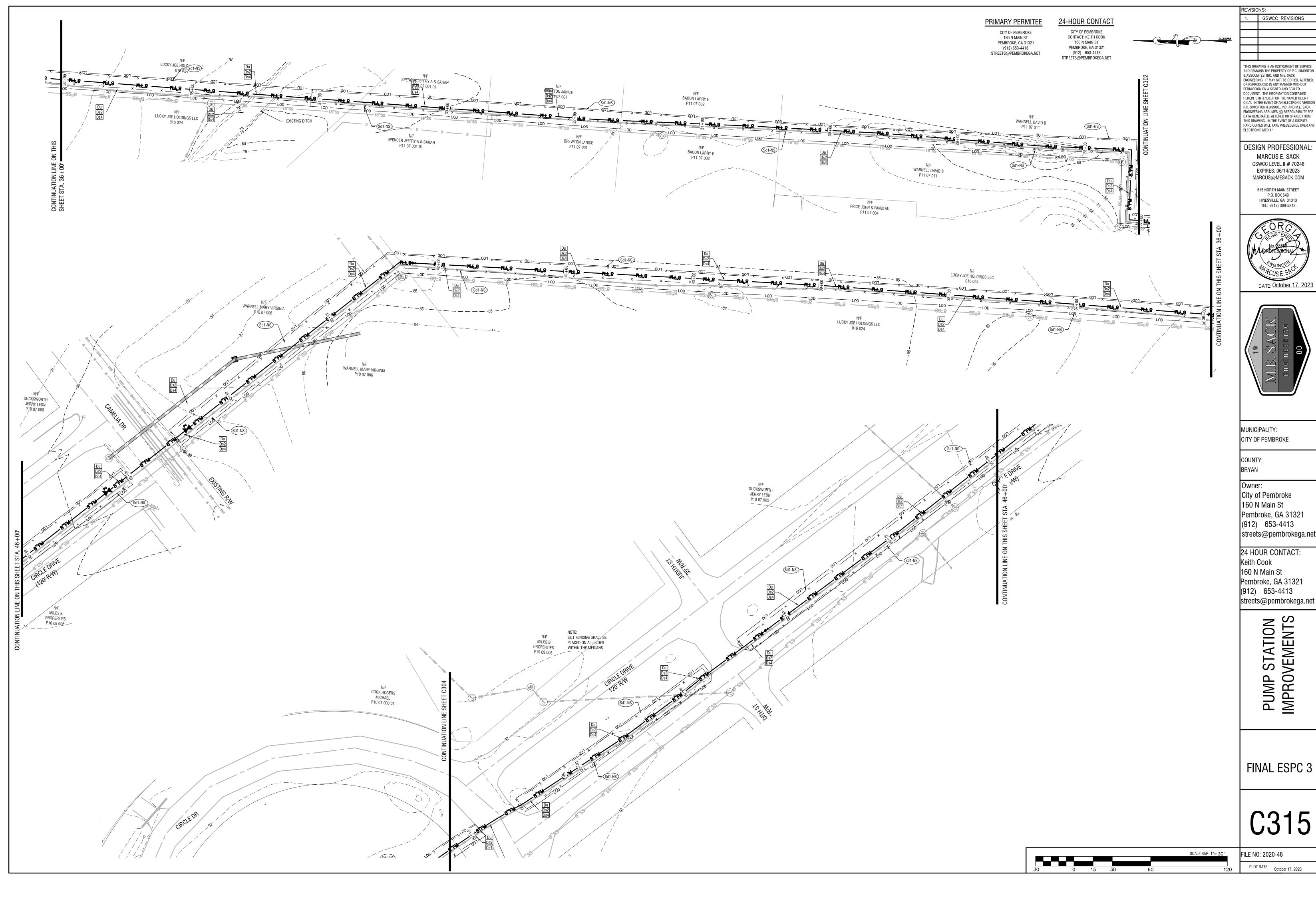
2. ABOVE 2.0 CFS: YES \_\_\_\_\_ NO\_\_X\_\_. 3. IF YES, LIST BMP BEING USED IN CONJUNCTION WITH CHECK DAMS: NOT APPLICABLE

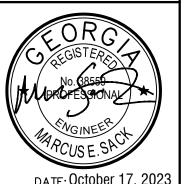


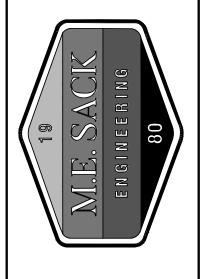


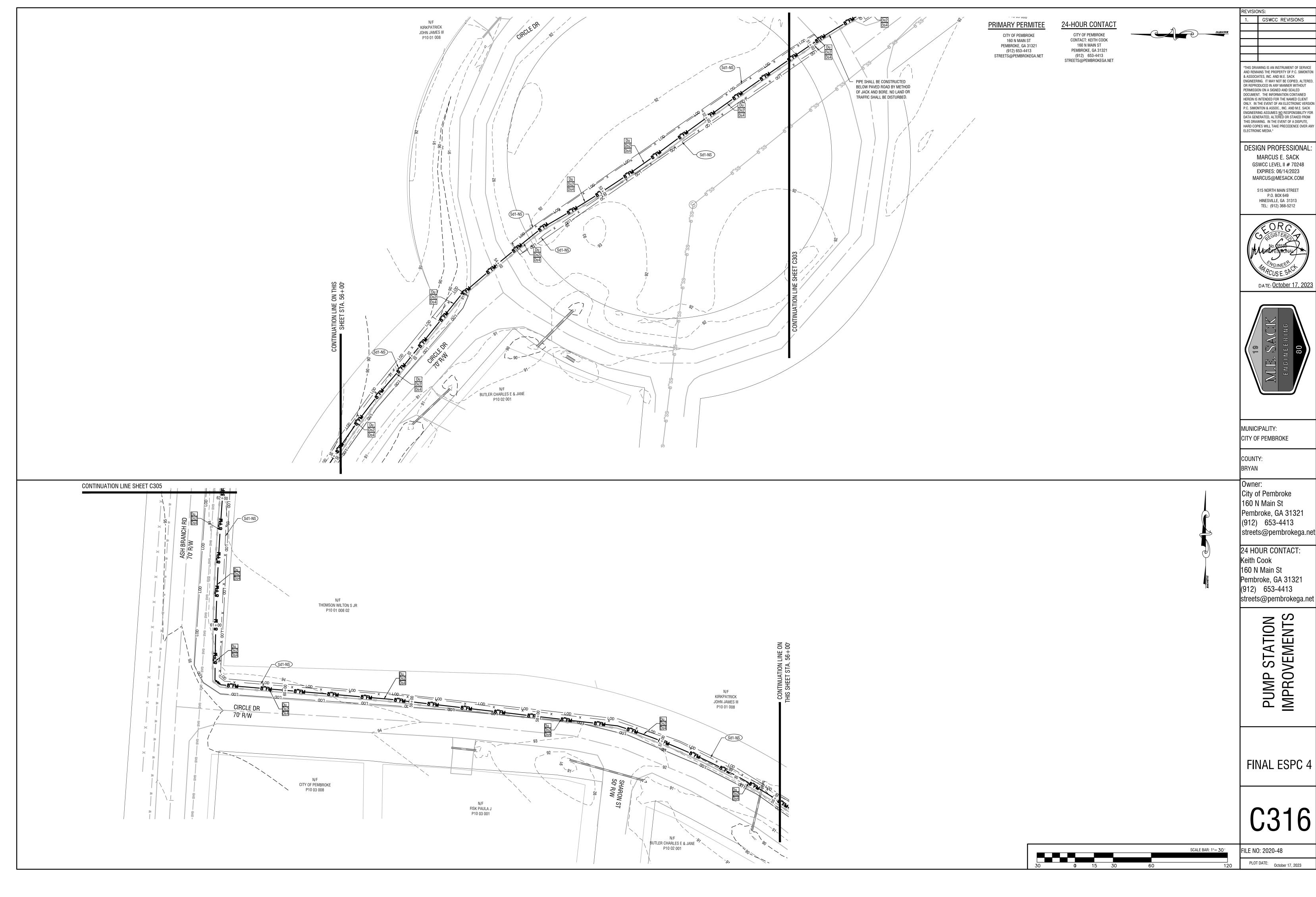


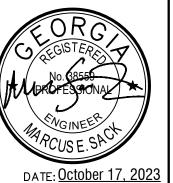


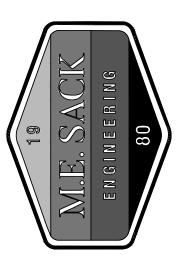


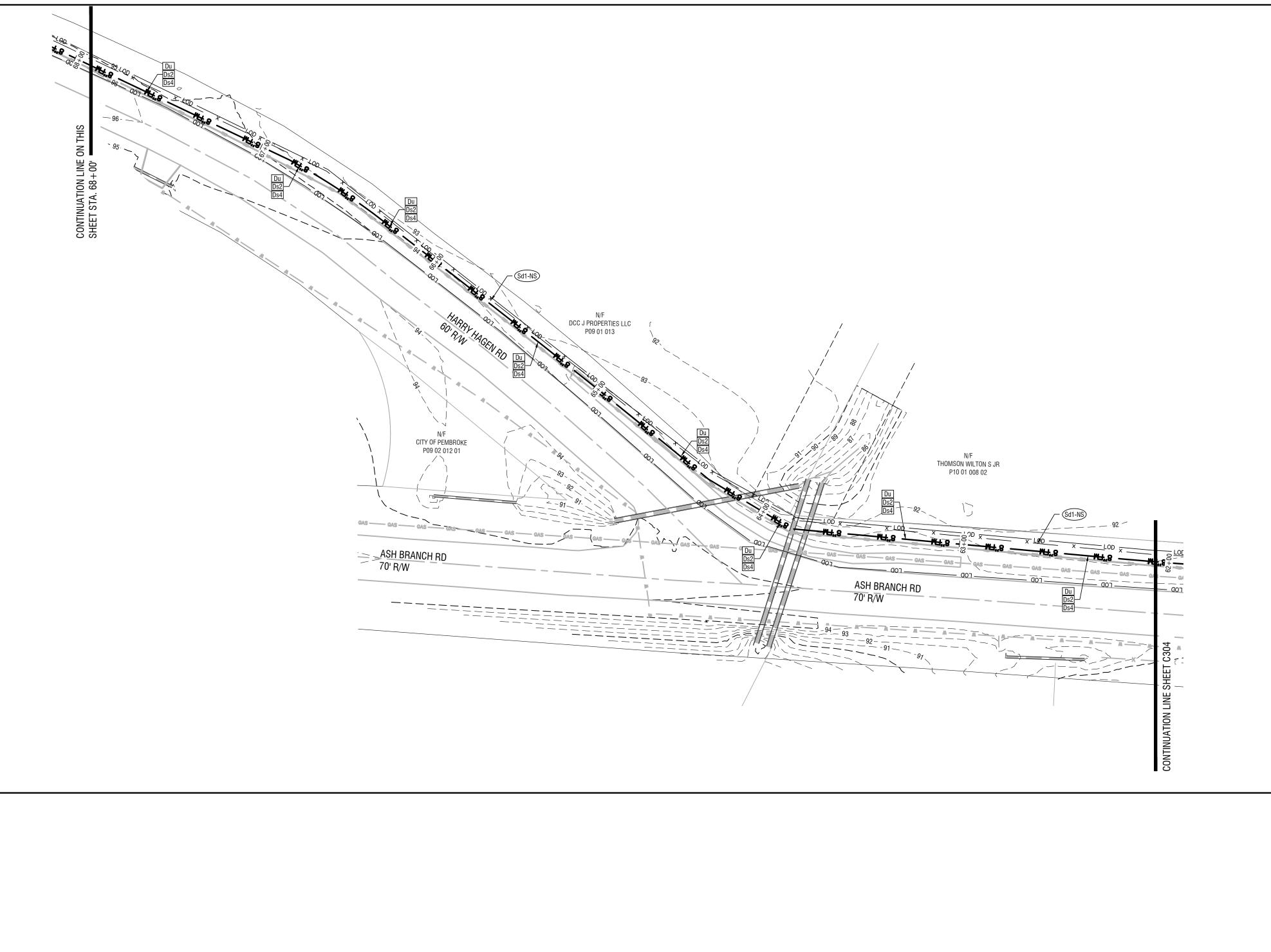












PIPE REQUIRED TO BE PLACED UNDER RESIDENTIAL DRIVEWAYS SHALL BE

TRENCHED AND BURIED WITH THE

LEAST IMPACT ON THE HOMEOWNERS.

RESIDENTIAL -

DRIVEWAY

PRIMARY PERMITEE

SILT STORAGE CALCULATION

CITY OF PEMBROKE 160 N MAIN ST PEMBROKE, GA 31321 (912) 653-4413 STREETS@PEMBROKEGA.NET

ESTIMATED EROSION = 2.85 AC. X 67 C.Y/AC. = 191 C.Y STORAGE CAPACITY

IS\_THE AVAILABLE STORAGE GREATER THAN THE TOTAL REQUIRED STORAGE?

Sd1-S STORAGE AVAILABLE = 1491 LF X .17 C.Y./LF = 253 C.Y.

Sd1-NS STORAGE AVAILABLE = 12618 LF X .17 C.Y./LF = 2145 C.Y.

TOTAL AVAILABLE SEDIMENT STORAGE = 2399 C.Y.

NOTES:
ALL CONSTRUCTION SHALL TAKE PLACE WITHIN EXISTING RIGHT OF

ALL BUILDING MATERIALS AND PRODUCTS WILL BE STORED WITHIN

THE RIGHT OF WAY AND EASEMENTS FOLLOWING MOBILIZATION.

REQUIRED SEDIMENT STORAGE = 191 C.Y.

24-HOUR CONTACT CITY OF PEMBROKE CONTACT: KEITH COOK 160 N MAIN ST

STREETS@PEMBROKEGA.NET

PEMBROKE, GA 31321 (912) 653-4413

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PUMP STATION IMPROVEMENTS

FINAL ESPC 5

PLOT DATE: October 17, 2023

TLE NO: 2020-48

SCALE BAR: 1"= 30 '

SOIL LEGEND ELLABELLE LOAMY SAND PELHAM LOAMY SAND STILSON LOAMY SAND MASCOTTE SAND OLUSTEE FINE SAND ALBANY FINE SAND W WATER

DOTHAN LOAMY SAND

# FUQUAY LOAMY SAND FORCEMAIN CONSTRUCTION ACTIVITY DESCRIPTION

WAYS OR UTILITY EASEMENTS.

EACH PHASE WILL OCCUR IN IN SECTIONS BETWEEN THE BORING SITES AS THE FORCEMAIN IS INSTALLED. THE INITIAL PHASE SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND THE FINAL PHASE WILL ONLY BE COMPLETED AFTER CONSTRUCTION IN THAT PHASE AREA.

INITIAL PHASE — CONSISTS OF INSTALLING CONSTRUCTION EXIT, PERIMETER SEWER LINES TREATMENT. GRUBBING WILL BEGIN WITHIN THE LIMITS OF DISTURBANCE WHERE INDICATED.

INTERMEDIATE PHASE - MOBILIZATION OF BORING EQUIPMENT TO SITES. CONSISTS OF BORE PIT EXCAVATION AND UTILIZATION. EXCAVATE AND PLACE PROPOSED PIPE BETWEEN BORE PITS. MAINTAIN CHECK DAM STRUCTURES AND SILT FENCING. USE DUST CONTROL, MULCHING, AND TEMPORARY GRASSING WHERE INDICATED.

FINAL PHASE — REFILLING EXCAVATED AREAS. MOBILIZATION OF BORING EQUIPMENT FROM SITES. ONCE PERMANENT GRASSING IS ESTABLISHED TEMPORARY MEASURES CAN BE REMOVED INCLUDING: SILT FENCE, CHECK

CHECK DAM STRUCTURES

1. CFS IN THE CHANNEL/DITCH THAT THE CHECK DAM IS BEING USED IN: 0.80 CFS

2. ABOVE 2.0 CFS: YES \_\_\_\_\_ NO\_\_X\_\_.

PIPE REQUIRED TO BE PLACED UNDER \_ RESIDENTIAL DRIVEWAYS SHALL BE TRENCHED AND BURIED WITH THE LEAST IMPACT ON THE HOMEOWNERS.

HARRY HAGEN RD

3. IF YES, LIST BMP BEING USED IN CONJUNCTION WITH CHECK DAMS: NOT APPLICABLE

FORCEMAIN EXISTING CONDITIONS:

RUNNING PARALLEL TO EXISTING UTILITIES. THE SINGLE EXISTING FORCEMAIN EXTENDS FROM AN EXISTING PUMP STATION TO BE IMPROVED ALONG W. INDUSTRIAL ST, ACROSS CAMELIA, JUDITH, AND CIRCLE DRIVE, THEN NORTH ALONG HARRY HAGAN ROAD UNTIL IT CONNECTS TO AN EXISTING MANHOLE. THIS MANHOLE RUNS GRAVITY SEWER LINES TO THE CITY'S WASTEWATER TREATMENT PLAN FOR

#### TOTAL SITE INFORMATION: TOTAL SITE AREA = 4.88 AC

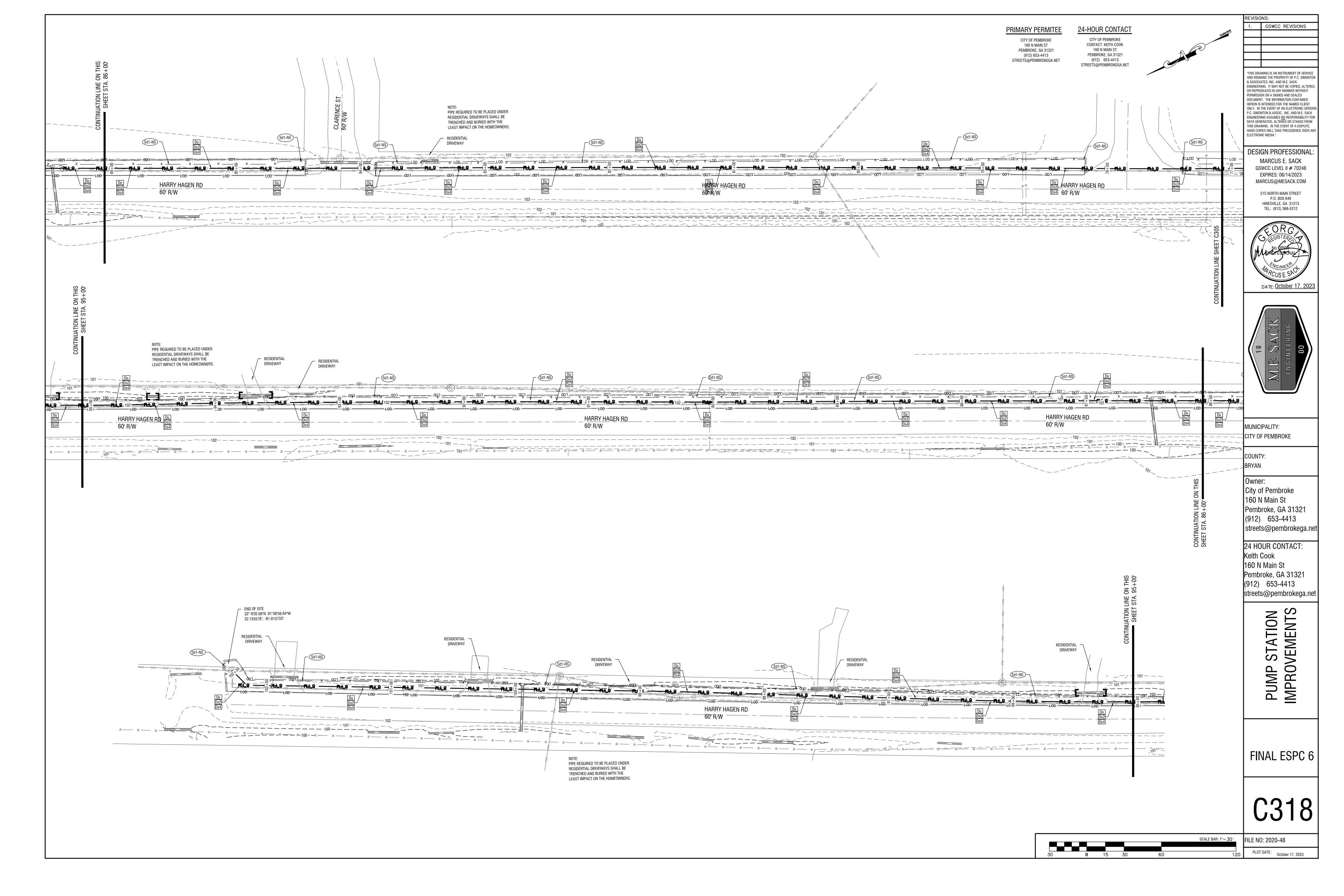
TOTAL DISTURBED AREA = 2.85 AC

NO HYDROLOGY REPORT COMPLETED FOR LINEAR PROJECT AS NO CHANGES TO IMPERVIOUS AREAS WERE MADE.

NOTE:
PARALLEL FORCEMAIN ADDITION REQUIRED WITHIN 200FT

WETLAND BUFFER. SENSITIVE SILT FENCE SHALL BE PLACED AS BMP BETWEEN SUBCATCHMENT BASIN DRAINING TO DITCH AND WETLAND. WETLAND CONTAINED WITHIN SINGLE PROPERTY WITH RIGHT OF WAY ALLOWANCE WHERE FORCEMAIN CONSTRUCTION SHALL TAKE PLACE.

EVERY DAY AREAS DISTURBED BY CONSTRUCTION WILL BE BACKFILLED, COMPACTED, GRASSED, AND HAYED.



### 4. INSPECTIONS.

A. PERMITTEE REQUIREMENTS. (1). EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A PRIMARY PERMITTEE'S SITE, CERTIFIED PERSONNEL PROVIDED BY THE PRIMARY PERMITTEE SHALL INSPECT: (A)

ALL AREAS AT THE PRIMARY PERMITTEE'S SITE WHERE PETROLEUM PRODUCTS ARE STORED, USED, OR HANDLED FOR SPILLS AND LEAKS FROM VEHICLES AND EQUIPMENT AND (B) ALL LOCATIONS AT THE PRIMARY PERMITTEE'S SITE WHERE VEHICLES ENTER OR EXIT THE SITE FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING. THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS

(2). MEASURE AND RECORD RAINFALL WITHIN DISTURBED AREAS OF THE SITE THAT HAVE NOT MET FINAL STABILIZATION ONCE EVERY 24 HOURS EXCEPT ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY AND NON-WORKING FEDERAL HOLIDAY. THE DATA COLLECTED FOR THE PURPOSE OF COMPLIANCE WITH THIS PERMIT SHALL BE REPRESENTATIVE OF THE MENTIONED ACTIVITY. MEASUREMENT OF RAINFALL MAY BE SUSPENDED IF ALL AREAS OF THE SITE HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE

(3). CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT THE FOLLOWING AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES RAINFALL OR GREATER (UNLESS SUCH STORM ENDS AFTER 5:00 PM ON ANY FRIDAY OR ON ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY OR ANY NON-WORKING FEDERAL HOLIDAY IN WHICH CASE THE INSPECTION SHALL BE COMPLETED BY THE END OF THE NEXT BUSINESS DAY AND/OR WORKING DAY, WHICHEVER OCCURS FIRST): (A) DISTURBED AREAS OF THE PRIMARY PERMITTEE'S CONSTRUCTION SITE; (B) AREAS USED BY THE PRIMARY PERMITTEE FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION: AND (C) STRUCTURAL CONTROL MEASURES. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN APPLICABLE TO THE PRIMARY PERMITTEE'S SITE SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S). FOR AREAS OF A SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION, THE PERMITTEE MUST COMPLY WITH PART IV.F.4.A.(4). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF

(4). CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT AT LEAST ONCE PER MONTH DURING THE TERM OF THIS PERMIT (I.E., UNTIL A NOTICE OF TERMINATION HAS BEEN SUBMITTED) THE AREAS OF THE SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION. THESE AREAS SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM AND THE RECEIVING WATER(S). EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE. THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S).

(5). BASED ON THE RESULTS OF EACH INSPECTION, THE SITE DESCRIPTION AND THE POLLUTION PREVENTION AND CONTROL MEASURES IDENTIFIED IN THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, THE PLAN SHALL BE REVISED AS APPROPRIATE NOT LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. IMPLEMENTATION OF SUCH CHANGES SHALL BE MADE AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION.

(6). A REPORT OF EACH INSPECTION THAT INDICATES THE NAME(S) OF CERTIFIED PERSONNEL MAKING EACH INSPECTION, THE DATE(S) OF EACH INSPECTION, CONSTRUCTION PHASE (I.E., INITIAL INTERMEDIATE OR FINAL), MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, AND ACTIONS TAKEN IN ACCORDANCE WITH PART IV.D.4.A.(5). OF THE PERMIT SHALL BE MADE AND RETAINED AT THE SITE OR BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION UNTIL THE ENTIRE SITE OR THAT PORTION OF A CONSTRUCTION PROJECT THAT HAS BEEN PHASED HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORTS SHALL BE READILY AVAILABLE BY END OF THE SECOND BUSINESS DAY AND/OR WORKING DAY AND SHALL IDENTIFY ALL INCIDENTS OF BEST MANAGEMENT PRACTICES THAT HAVE NOT BEEN PROPERLY INSTALLED AND/OR MAINTAINED AS DESCRIBED IN THE PLAN. WHERE THE REPORT DOES NOT IDENTIFY ANY INCIDENTS, THE INSPECTION REPORT SHALL CONTAIN A STATEMENT THAT THE BEST MANAGEMENT PRACTICES ARE IN COMPLIANCE WITH THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PAR V.G.2. OF THIS PERMIT.

. MAINTENANCE. THE PLAN SHALL INCLUDE A DESCRIPTION OF PROCEDURES TO ENSURE THE TIMELY MAINTENANCE OF VEGETATION, EROSION AND SEDIMENT CONTROL MEASURES AND OTHER PROTECTIVE

6. SAMPLING REQUIREMENTS. THIS PERMIT REQUIRES THE MONITORING OF NEPHELOMETRIC TURBIDITY IN RECEIVING WATER(S) OR OUTFALLS IN ACCORDANCE WITH THIS PERMIT. THE FOLLOWING PROCEDURES CONSTITUTE EPD'S GUIDELINES FOR SAMPLING TURBIDITY.

# A. SAMPLING REQUIREMENTS SHALL INCLUDE THE FOLLOWING:

(1). A USGS TOPOGRAPHIC MAP, A TOPOGRAPHIC MAP OR A DRAWING (REFERRED TO AS A TOPOGRAPHIC MAP) THAT IS A SCALE EQUAL TO OR MORE DETAILED THAN A 1:24000 MAP SHOWING THE LOCATION OF THE SITE OR THE INFRASTRUCTURE CONSTRUCTION; (A) THE LOCATION OF ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES AS SHOWN ON A USGS TOPOGRAPHIC MAP, AND A OTHER PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES LOCATED DURING MANDATORY FIELD VERIFICATION, INTO WHICH THE STORM WATER IS DISCHARGED AND (B) THE RECEIVING WATER AND/OR OUTFALL SAMPLING LOCATIONS FOR EACH REPRESENTATIVE STORMWATER OUTFALL. WHEN THE PERMITTEE HAS CHOSEN TO USE A USGS TOPOGRAPHIC MAP AND THE RECEIVING WATER(S) IS NOT SHOWN ON THE USGS TOPOGRAPHIC MAP, THE LOCATION OF THE RECEIVING WATER(S) MUST BE HAND-DRAW ON THE USGS TOPOGRAPHIC MAP FROM WHERE THE STORM WATER(S) ENTERS THE RECEIVING WATER(S) TO THE POINT WHERE THE RECEIVING WATER(S) COMBINES WITH THE FIRST BLUE LINE STREAM SHOWN ON THE USGS TOPOGRAPHIC MAP;

(2). A WRITTEN NARRATIVE OF SITE SPECIFIC ANALYTICAL METHODS USED TO COLLECT, HANDLE AND ANALYZE THE SAMPLES INCLUDING QUALITY CONTROL/QUALITY ASSURANCE PROCEDURES. THIS NARRATIVE MUST INCLUDE PRECISE SAMPLING METHODOLOGY FOR EACH SAMPLING LOCATION;

(3). WHEN THE PERMITTEE HAS DETERMINED THAT SOME OR ALL OUTFALLS WILL BE SAMPLED, A RATIONALE MUST BE INCLUDED ON THE PLAN FOR THE NTU LIMIT(S) SELECTED FROM APPENDIX B. THIS RATIONALE MUST INCLUDE THE SIZE OF THE CONSTRUCTION SITE, THE CALCULATION OF THE SIZE OF THE SURFACE WATER DRAINAGE AREA, AND THE TYPE OF RECEIVING WATER(S) (I.E., TROUT STREAM OR SUPPORTING WARM WATER FISHERIES): AND

(4). ANY ADDITIONAL INFORMATION EPD DETERMINES NECESSARY TO BE PART OF THE PLAN. EPD WILL PROVIDE WRITTEN NOTICE TO THE PERMITTEE OF THE INFORMATION NECESSARY AND THE TIME LINE FOR SUBMITTAL.

B. SAMPLE TYPE. ALL SAMPLING SHALL BE COLLECTED BY "GRAB SAMPLES" AND THE ANALYSIS OF THESE SAMPLES MUST BE CONDUCTED IN ACCORDANCE WITH METHODOLOGY AND TEST PROCEDURES ESTABLISHED BY 40 CFR PART 136 (UNLESS OTHER TEST PROCEDURES HAVE BEEN APPROVED): THE GUIDANCE DOCUMENT TITLED "NPDES STORM WATER SAMPLING GUIDANCE DOCUMENT, EPA 833-B-92-001" AND GUIDANCE DOCUMENTS THAT MAY BE PREPARED BY THE EPD.

# (1). SAMPLE CONTAINERS SHOULD NOT BE LABELED PRIOR TO COLLECTING THE SAMPLES.

(2). SAMPLES SHOULD BE WELL MIXED BEFORE TRANSFERRING TO A SECONDARY CONTAINER.

(3). LARGE MOUTH, WELL CLEANED AND RINSED GLASS OR PLASTIC JARS SHOULD BE USED FOR COLLECTING SAMPLES. THE JARS SHOULD BE CLEANED THOROUGHLY TO AVOID CONTAMINATION.

(4). MANUAL, AUTOMATIC OR RISING STAGE SAMPLING MAY BE UTILIZED. SAMPLES REQUIRED BY THIS PERMIT SHOULD BE ANALYZED IMMEDIATELY, BUT IN NO CASE LATER THAN 48 HOURS AFTER COLLECTION. HOWEVER, SAMPLES FROM AUTOMATIC SAMPLERS MUST BE COLLECTING NO LATER THAN THE NEXT BUSINESS DAY AFTER THEIR ACCUMULATION. UNLESS FLOW THROUGH AUTOMATED ANALYSIS IS UTILIZED. IF AUTOMATIC SAMPLING IS UTILIZED AND THE AUTOMATIC SAMPLER IS NOT ACTIVATED DURING THE QUALIFYING EVENT, THE PERMITTEE MUST UTILIZE MANUAL SAMPLING OR RISING STAGE SAMPLING DURING THE NEXT QUALIFYING EVENT. DILUTION OF SAMPLES IS NOT REQUIRED. SAMPLES MAY BE ANALYZED DIRECTLY WITH A PROPERLY CALIBRATED TURBIDIMETER. SAMPLES ARE NOT REQUIRED TO BE COOLED.

(5), SAMPLING AND ANALYSIS OF THE RECEIVING WATER(S) OR OUTFALLS BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED TO EPD AS SPECIFIED IN PART IV.E. C. SAMPLING POINTS.

(1). FOR CONSTRUCTION ACTIVITIES THE PRIMARY PERMITTEE MUST SAMPLE ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES SHOWN ON THE USGC TOPOGRAPHIC MAP AND ALL OTHER FIELD VERIFIED PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES, OR ALL OUTFALLS INTO SUCH STREAMS AND OTHER WATER BODIES, OR A COMBINATION THEREOF. HOWEVER, PROVIDED FOR IN AND IN ACCORDANCE WITH PART IV.D.6.c.(2). OF THIS PERMIT, PRIMARY PERMITTEES ON AN INFRASTRUCTURE CONSTRUCTION PROJECT MAY SAMPLE THE REPRESENTATIVE PERENNIAL AND INTERMITTENT STREAMS, OTHER WATER BODIES OR OUTFALLS, OR A COMBINATION THEREOF, SAMPLES TAKEN FOR THE PURPOSE OF COMPLIANCE WITH THIS PERMIT SHALL BE REPRESENTATIVE OF THE MONITORED ACTIVITY AND REPRESENTATION OF THE WATER QUALITY OF THE RECEIVING WATER(S) AND/OR THE STORM WATER OUTFALLS USING THE FOLLOWING MINIMUM GUIDELINES:

(A). THE UPSTREAM SAMPLE FOR EACH RECEIVING WATER(S) MUST BE TAKEN IMMEDIATELY ACTIVITY (I.E., THE DISCHARGE FARTHEST UPSTREAM AT THE SITE) BUT DOWNSTREAM OF ANY OTHER STORM WATER DISCHARGES NOT ASSOCIATED WITH THE PERMITTED ACTIVITY. WHERE APPROPRIATE, SEVERAL UPSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE UPSTREAM TURBIDITY VALUE.

(B). THE DOWNSTREAM SAMPLE FOR EACH RECEIVING WATER(S) MUST BE TAKEN DOWNSTREAM OF THE CONFLUENCE OF THE LAST STORM WATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E. THE DISCHARGE FARTHEST DOWNSTREAM AT THE SITE) BUT UPSTREAM OF ANY OTHER STORM WATER DISCHARGE NOT ASSOCIATED WITH THE PERMITTED ACTIVITY. WHERE APPROPRIATE SEVERAL DOWNSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE

# DOWNSTREAM TURBIDITY VALUE.

(C). IDEALLY THE SAMPLES SHOULD BE TAKEN FROM THE HORIZONTAL AND VERTICAL CENTER OF THE RECEIVING WATER(S) OR THE STORM WATER OUTFALL CHANNEL(S).

(D). CARE SHOULD BE TAKEN TO AVOID STIRRING THE BOTTOM SEDIMENTS IN THE RECEIVING WATER(S) OR IN THE OUTFALL STORM WATER CHANNEL

(E). THE SAMPLING CONTAINER SHOULD BE HELD SO THAT THE OPENING FACES UPSTREAM.

(F). THE SAMPLES SHOULD BE KEPT FREE FROM FLOATING DEBRIS.

(G). PERMITTEES DO NOT HAVE TO SAMPLE SHEETFLOW THAT FLOWS ONTO UNDISTURBED NATURAL AREAS OR AREAS STABILIZED BY THE PROJECT, FOR PURPOSES OF THIS SECTION, STABILIZED SHALL MEAN, FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES, 100% OF THE SOIL SURFACE IS UNIFORMLY COVERED IN PERMANENT VEGETATION WITH A DENSITY OF 70% OR GREATER, OR LANDSCAPE ACCORDING TO THE PLAN (UNIFORMLY COVERED WITH LANDSCAPING MATERIALS IN PLANNED LANDSCAPED AREAS). OR EQUIVALENT PERMANENT STABILIZATION MEASURES AS DEFINED IN THE MANUAL (EXCLUDING A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET CROP PERENNIALS APPROPRIATE FOR THE REGION). FOR INFRASTRUCTURE CONSTRUCTION PROJECTS ON LAND USED FOR AGRICULTURAL OR SILVICULTURAL PURPOSES, FINAL STABILIZATION MAY BE ACCOMPLISHED BY STABILIZING THE DISTURBED LAND FOR ITS AGRICULTURAL OR SILVICULTURAL USE.

(H). ALL SAMPLING PURSUANT TO THIS PERMIT MUST BE DONE IN SUCH A WAY (INCLUDING GENERALLY ACCEPTED SAMPLING METHODS, LOCATIONS, TIMING, AND FREQUENCY) AS TO ACCURATELY REFLECT WHETHER STORM WATER RUNOFF FROM THE CONSTRUCTION SITE IS IN COMPLIANCE WITH THE STANDARD SET FORTH IN PARTS III.D.3. OR III.D.4., WHICHEVER IS APPLICABLE

(2). FOR INFRASTRUCTURE CONSTRUCTION PROJECTS, THE PERMITTEE IS NOT REQUIRED TO SAMPLE A PERENNIAL OR INTERMITTENT STREAM OR OTHER WATER BODIES (OR THE ASSOCIATED OUTFALL, IF APPLICABLE) IF THE DESIGN PROFESSIONAL PREPARING THE PLAN CERTIFIES THAT AN INCREASE IN THE TURBIDITY OF A SPECIFIC IDENTIFIED RECEIVING WATER TO BE SAMPLED WILL BE REPRESENTATIVE OF THE INCREASE IN THE TURBIDITY OF A SPECIFIC IDENTIFIED UN-SAMPLED RECEIVING WATER. A WRITTEN JUSTIFICATION AND DETAILED ANALYSIS SHALL BE PREPARED BY THE DESIGN PROFESSIONAL JUSTIFYING SUCH PROPOSED SAMPLING. A SUMMARY CHART OF THE JUSTIFICATION AN ANALYSIS FOR THE REPRESENTATIVE SAMPLING MUST BE INCLUDED ON THE PLAN. THE JUSTIFICATION AND ANALYSIS SHALL INCLUDE THE LOCATION AND DESCRIPTION OF THE SPECIFIED SAMPLED AND UN-SAMPLED RECEIVING WATER AND SHALL CONTAIN A DETAILED COMPARISON AND DISCUSSION OF EACH SUCH RECEIVING WATER IN THE FOLLOWING AREAS:

#### (A). SITE LAND DISTURBANCES AND CHARACTERISTICS;

(B). RECEIVING WATER WATERSHED SIZES AND CHARACTERISTICS; AND

(C). SITE AND WATERSHED RUNOFF CHARACTERISTICS UTILIZING THE METHODS IN APPENDIX A-1 (UNITED STATES DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE'S TR-55, URBAN HYDROLOGY FOR SMALL WATERSHEDS) OF THE MOST RECENT VERSION OF THE "MANUAL FOR EROSION AND SEDIMENTATION CONTROL IN GEORGIA" FOR THE VARIOUS PRECIPITATION EVENTS AND ANY OTHER SUCH CONSIDERATIONS NECESSARY TO SHOW THAT THE INCREASE IN THE TURBIDITY OF A SPECIFIC IDENTIFIED SAMPLED RECEIVING WATER WILL BE REPRESENTATIVE OF THE INCREASES IN THE TURBIDITY OF A SPECIFIC IDENTIFIED UN-SAMPLED RECEIVING WATERS.

3). FOR INFRASTRUCTURE CONSTRUCTION PROJECTS, WHEN THE PERMITTEE DETERMINES THAT SOME RECEIVING WATER(S) WILL NOT BE SAMPLED DUE TO REPRESENTATIVE SAMPLING, THE DESIGN PROFESSIONAL MAKING THIS DETERMINATION AND PREPARING THE PLAN MUST INCLUDE AND SIGN THE FOLLOWING CERTIFICATION IN THE PLAN:

"I CERTIFY THAT THE PERMITTEE'S EROSION. SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR THE MONITORING OF: (A) ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES SHOWN ON THE USGS TOPOGRAPHIC MAP AND ALL OTHER FIELD VERIFIED PERENNIAL AND INTERMITTENT STEAMS AND OTHER WATER BODIES. OR (B) WHERE ANY SUCH SPECIFIC IDENTIFIED PERENNIAL OR INTERMITTENT STREAM AND OTHER WATER BODY IS NOT PROPOSED TO BE SAMPLED. I HAVE DETERMINED IN MY PROFESSIONAL JUDGMENT, UTILIZING THE FACTORS REQUIRED IN THE GENERAL NPDES PERMIT NO. GAR 100002, THAT THE INCREASE IN THE TURBIDITY OF EACH SPECIFIC IDENTIFIED SAMPLED RECEIVING WATER WILL BE REPRESENTATIVE OF THE INCREASE IN THE TURBIDITY OF A SPECIFIC IDENTIFIED UN-SAMPLED RECEIVING WATER.

(4), FOR INFRASTRUCTURE CONSTRUCTION PROJECTS, IF AT ANY TIME DURING THE LIFE OF THE PROJECT A SELECTED RECEIVING WATER NO LONGER REPRESENTS ANOTHER RECEIVING WATER, THEN THE PERMITTEE SHALL SAMPLE THE LATTER RECEIVING WATER UNTIL SELECTION OF AN ALTERNATIVE REPRESENTATIVE RECEIVING WATER.

(5). FOR INFRASTRUCTURE CONSTRUCTION PROJECTS, IF AT ANY TIME DURING THE LIFE OF THE PROJECT A RECEIVING WATER IS DETERMINED NOT TO BE REPRESENTED AS CERTIFIED IN THE PLAN, THE PERMITTEE SHALL SAMPLE THAT RECEIVING WATER UNTIL A NOTICE OF TERMINATION IS SUBMITTED OR UNTIL THE APPLICABLE PHASE IS STABILIZED IN ACCORDANCE WITH THIS PERMIT.

(6). FOR INFRASTRUCTURE CONSTRUCTION PROJECTS, MONITORING OBLIGATIONS SHALL CEASE FOR ANY PHASE OF THE PROJECT THAT HAS BEEN STABILIZED IN ACCORDANCE WITH PART IV.D.6.C.(1).(G).

# D. SAMPLING FREQUENCY.

(1) THE PRIMARY PERMITTEE MUST SAMPLE IN ACCORDANCE WITH THE PLAN AT LEAST ONCE FOR EACH RAINFALL EVENT DESCRIBED BELOW, FOR A QUALIFYING EVENT. THE PERMITTEE SHALL SAMPLE AT THE BEGINNING OF ANY STORM WATER DISCHARGE TO A MONITORED RECEIVING WATER AND/OR FROM A MONITORED OUTFALL LOCATION WITHIN FORTY-FIVE (45) MINUTES OR AS SOON AS POSSIBLE

(2). HOWEVER, WHERE MANUAL AND AUTOMATIC SAMPLING ARE IMPOSSIBLE (AS DEFINED IN THIS PERMIT), OR ARE BEYOND THE PERMITTEE'S CONTROL, THE PERMITTEE SHALL TAKE SAMPLES AS SOON AS POSSIBLE, BUT IN NO CASE MORE THAN TWELVE (12) HOURS AFTER THE BEGINNING OF THE STORM

# (3). SAMPLING BY THE PERMITTEE SHALL OCCUR FOR THE FOLLOWING QUALIFYING EVENTS:

(A). FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORM WATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS AS DEFINED IN THIS PERMIT AFTER ALL CLEARING AND GRUBBING OPERATIONS HAVE BEEN COMPLETED, BUT PRIOR TO COMPLETION OF MASS GRADING OPERATIONS, IN THE DRAINAGE AREA OF THE LOCATION SELECTE3D AS THE SAMPLING

(B). IN ADDITION TO (A) ABOVE, FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0,5 INCH WITH A STORM WATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS AS DEFINED BY THIS PERMIT EITHER 90 DAYS AFTER THE FIRST SAMPLING EVENT OR AFTER ALL MASS GRADING OPERATIONS HAVE BEEN COMPLETED, BUT PRIOR TO SUBMITTAL OF A NOT, IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATION, WHICHEVER COMES FIRST;

(C). AT THE TIME OF SAMPLING PERFORMED PURSUANT TO (A) AND (B) ABOVE, IF BMPS IN ANY AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL ARE NOT PROPERLY DESIGNED. INSTALLED AND MAINTAINED. CORRECTIVE ACTION SHALL BE DEFINED AND IMPLEMENTED WITHIN TWO (2) BUSINESS DAYS, AND TURBIDITY SAMPLES SHALL BE TAKEN FROM DISCHARGES FROM THAT AREA OF THE SITE FOR EACH SUBSEQUENT RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH DURING NORMAL BUSINESS HOURS\* UNTIL THE SELECTED TURBIDITY STANDARD IS ATTAINED, OR UNTIL POST-STORM EVENT INSPECTIONS DETERMINE THAT BMPS ARE PROPERLY DESIGNED, INSTALLED AND MAINTAINED;

(D). WHERE SAMPLING PURSUANT TO (A), (B) OR (C) ABOVE IS REQUIRED BUT NOT POSSIBLE (OR NOT REQUIRED BECAUSE THERE WAS NO DISCHARGE). THE PERMITTEE. IN ACCORDANCE WITH PART IV.D.4.A.(6), MUST INCLUDE A WRITTEN JUSTIFICATION IN THE INSPECTION REPORT OF WHY SAMPLING WAS NOT PERFORMED. PROVIDING THIS JUSTIFICATION DOES NOT RELIEVE THE PERMITTEE OF ANY SUBSEQUENT SAMPLING OBLIGATIONS UNDER (A), (B) OR (C) ABOVE; AND

(E). EXISTING CONSTRUCTION ACTIVITIES, I.E., THOSE THAT ARE OCCURRING ON OR BEFORE THE EFFECTIVE DATE OF THIS PERMIT, THAT HAVE MET THE SAMPLING REQUIRED BY (A) ABOVE SHALL SAMPLE IN ACCORDANCE WITH (B). THOSE EXISTING CONSTRUCTION ACTIVITIES THAT HAVE MET THE SAMPLING REQUIRED BY (B) ABOVE SHALL NOT BE REQUIRED TO CONDUCT ADDITIONAL SAMPLING OTHER THAN AS REQUIRED BY (C) ABOVE. \*NOTE THAT THE PERMITTEE MAY CHOOSE TO MEET THE REQUIREMENTS OF (A) AND (B) ABOVE BY

COLLECTING TURBIDITY SAMPLES FROM ANY RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND

ALLOWS FOR SAMPLING AT ANY TIME OF THE DAY OR WEEK. NON-STORM WATER DISCHARGES. EXCEPT FOR FLOWS FROM FIRE FIGHTING ACTIVITIES, SOURCES OF NON-STORM WATER LISTED IN PART III.A.2. OF THIS PERMIT THAT ARE COMBINED WITH STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY MUST BE IDENTIFIED IN THE PLAN. THE PLAN SHALL IDENTIFY AND ENSURE THE IMPLEMENTATION OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORM WATER COMPONENT(S) OF THE DISCHARGE.

THE APPLICABLE PERMITTEES ARE REQUIRED TO SUBMIT THE SAMPLING RESULTS TO THE EPD AT THE ADDRESS SHOWN IN PART II.C. BY THE FIFTEENTH DAY OF THE MONTH FOLLOWING THE REPORTING PERIOD. REPORTING PERIODS ARE MONTHS DURING WHICH SAMPLES ARE TAKEN IN ACCORDANCE WITH THIS PERMIT. SAMPLING RESULTS SHALL BE IN A CLEARLY LEGIBLE FORMAT. UPON WRITTEN NOTIFICATION, EPD MAY REQUIRE THE APPLICABLE PERMITTEE TO SUBMIT THE SAMPLING RESULTS ON A MORE FREQUENT BASIS. SAMPLING AND ANALYSIS OF ANY STORM WATER DISCHARGE(S) OR THE RECEIVING WATER(S) BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED IN A SIMILAR MANNER TO THE EPD. THE SAMPLING REPORTS MUST BE SIGNED IN ACCORDANCE WITH PART V.G.2. SAMPLING REPORTS MUST BE SUBMITTED TO EPD USING THE UPSTREAM OF THE CONFLUENCE OF THE FIRST STORM WATER DISCHARGE FROM THE PERMITTED ELECTRONIC SUBMITTAL SERVICE PROVIDED BY EPD. SAMPLING REPORTS MUST BE SUBMITTED TO EPD UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI.

- ALL SAMPLING REPORTS SHALL INCLUDE THE FOLLOWING INFORMATION:
- a. THE RAINFALL AMOUNT, DATE, EXACT PLACE AND TIME OF SAMPLING OR MEASUREMENTS; b. THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE SAMPLING AND MEASUREMENTS;
- c. THE DATE(S) ANALYSES WERE PERFORMED

d. THE TIME(S) ANALYSES WERE INITIATED;

- e. THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE ANALYSES;
- f. REFERENCES AND WRITTEN PROCEDURES, WHEN AVAILABLE, FOR THE ANALYTICAL TECHNIQUES OR METHODS USED

- g. THE RESULTS OF SUCH ANALYSES, INCLUDING THE BENCH SHEETS, INSTRUMENT READOUTS, COMPUTER DISKS OR TAPES, ETC., USED TO DETERMINE THESE RESULTS;
  - h. RESULTS WHICH EXCEED 1000 NTU SHALL BE REPORTED AS "EXCEEDS 1000 NTU;" AND
  - i. CERTIFICATION STATEMENT THAT SAMPLING WAS CONDUCTED AS PER THE PLAN.

3. ALL WRITTEN CORRESPONDENCE REQUIRED BY THIS PERMIT SHALL BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL (OR SIMILAR SERVICE) TO THE APPROPRIATE DISTRICT OFFICE OF THE EPD ACCORDING TO THE SCHEDULE IN APPENDIX A OF THIS PERMIT. THE PERMITTEE SHALL RETAIN A COPY OF THE PROOF OF SUBMITTAL AT THE CONSTRUCTION SITE OR THE PROOF OF SUBMITTAL SHALL BE READILY AVAILABLE AT A DESIGNATED LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI. IF ANY ELECTRONIC SUBMITTAL IS PROVIDED BY EPD THEN THE WRITTEN CORRESPONDENCE MAY BE SUBMITTED ELECTRONICALLY; IF REQUIRED, A PAPER COPY MUST ALSO BE SUBMITTED BY RETURN RECEIPT

### CERTIFIED MAIL OR SIMILAR SERVICE. RETENTION OF RECORDS.

THE PRIMARY PERMITTEE SHALL RETAIN THE FOLLOWING RECORDS AT THE CONSTRUCTION SITE OR THE RECORDS SHALL BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI;

a. A COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD;

b. A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN REQUIRED BY THIS PERMIT; c. THE DESIGN PROFESSIONAL'S REPORT OF THE RESULTS OF THE INSPECTION CONDUCTED IN ACCORDANCE WITH PART IV.A.5. OF THIS PERMIT;

d. A COPY OF ALL SAMPLING INFORMATION, RESULTS, AND REPORTS REQUIRED BY THIS PERMIT;

e. A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.A. OF THIS PERMIT f. A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART III.D.2. OF THIS PERMIT;

g. DAILY RAINFALL INFORMATION COLLECTED IN ACCORDANCE WITH PART IV.D.4.A.(2). OF THIS PERMIT.

COPIES OF ALL NOTICES OF INTENT, NOTICES OF TERMINATION, INSPECTION REPORTS, SAMPLING REPORTS (INCLUDING ALL CALIBRATION AND MAINTENANCE RECORDS AND ALL ORIGINAL STRIP CHART RECORDINGS FOR CONTINUOUS MONITORING INSTRUMENTATION) OR OTHER REPORTS REQUESTED BY THE EPD, EROSION, SEDIMENTATION AND POLLUTION CONTROL PLANS, RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT TO BE COVERED BY THIS PERMIT AND ALL OTHER RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED BY THE PERMITTEE WHO EITHER PRODUCED OR USED IT FOR A PERIOD OF AT LEAST THREE YEARS FROM THE DATE THAT THE NOT IS SUBMITTED IN ACCORDANCE WITH PART VI. OF THIS PERMIT. THESE RECORDS MUST BE MAINTAINED AT THE PERMITTEE'S PRIMARY PLACE OF BUSINESS OR AT A DESIGNATED ALTERNATIVE LOCATION ONCE THE CONSTRUCTION ACTIVITY HAS CEASED AT THE PERMITTED SITE. THIS PERIOD MAY BE EXTENDED BY REQUEST OF THE EPD AT ANY TIME UPON WRITTEN NOTIFICATION TO THE PERMITTEE

### PART V. STANDARD PERMIT CONDITIONS

EACH PERMITTEE MUST COMPLY WITH ALL APPLICABLE CONDITIONS OF THIS PERMIT. ANY PERM NONCOMPLIANCE CONSTITUTES A VIOLATION OF THE GEORGIA WATER QUALITY CONTROL ACT (O.C.G.A. §§12-5-20 ET SEQ.) AND IS GROUNDS FOR ENFORCEMENT ACTION; FOR PERMIT TERMINATION; OR FOR DENIAL OF A PERMIT RENEWAL APPLICATION. FAILURE OF A PRIMARY PERMITTEE TO COMPLY WITH ANY APPLICABLE TERM OR CONDITION OF THIS PERMIT SHALL NOT RELIEVE ANY OTHER PRIMARY PERMITTEE FORM COMPLIANCE WITH THEIR APPLICABLE TERMS AND CONDITIONS OF THIS PERMIT

EACH PERMITTEE MUST DOCUMENT IN THEIR RECORDS ANY AND ALL KNOWN VIOLATIONS OF THIS PERMIT AT HIS/HER SITE WITHIN SEVEN (7) DAYS OF HIS/HER KNOWLEDGE OF THE VIOLATION. A SUMMARY OF THESE VIOLATIONS MUST BE SUBMITTED TO EPD BY THE PERMITTEE AT THE ADDRESS SHOWN IN PART II.C. WITHIN FOURTEEN (14) DAYS OF HIS/HER DISCOVERY OF THE VIOLATION.

PENALTIES FOR VIOLATIONS OF PERMIT CONDITIONS. THE FEDERAL CLEAN WATER ACT AND THE GEORGIA WATER QUALITY CONTROL ACT (O.C.G.A. §§12-5-20, ET SEQ.) PROVIDE THAT ANY PERSON WHO FALSIFIES, TAMPERS WITH. OR KNOWINGLY RENDERS INACCURATE ANY MONITORING DEVICE OR METHOD REQUIRED TO BE MAINTAINED UNDER THIS PERMIT, MAKES ANY FALSE STATEMENT, REPRESENTATION, OR CERTIFICATION IN ANY RECORD OR OTHER DOCUMENT SUBMITTED OR REQUIRED TO BE MAINTAINED UNDER THIS PERMIT, INCLUDING MONITORING REPORTS OR REPORTS OF COMPLIANCE OR NONCOMPLIANCE SHALL, UPON CONVICTION BE PUNISHED BY A FINE OR BY IMPRISONMENT, OR BY BOTH. THE FEDERAL CLEAN WATER ACT AND THE GEORGIA WATER QUALITY CONTROL ACT ALSO PROVIDE PROCEDURES FOR IMPOSING CIVIL PENALTIES WHICH MAY BE LEVIED FOR VIOLATIONS OF THE ACTS, ANY PERMIT CONDITION OR LIMITATION ESTABLISHED PURSUANT TO THE ACTS, OF NEGLIGENTLY OR INTENTIONALLY FAILING OR REFUSING TO COMPLY WITH ANY FINAL OR EMERGENCY ORDER OF

CONTINUATION OF THE EXPIRED GENERAL PERMIT. THIS PERMIT EXPIRES ON THE DATE SHOWN ON THE COVER PAGE OF THIS PERMIT. HOWEVER, AN EXPIRED GENERAL PERMIT CONTINUES IN FORCE AND EFFECT UNTIL A NEW GENERAL PERMIT IS ISSUED, FINAL AND EFFECTIVE.

NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE. IT SHALL NOT BE A DEFENSE FOR THE PERMITTEE IN AN ENFORCEMENT ACTION THAT IT WOULD HAVE BEEN NECESSARY TO HALT OR REDUCE THE PERMITTED ACTIVITY IN ORDER TO MAINTAIN COMPLIANCE WITH THE CONDITIONS OF THIS PERMIT

DUTY TO MITIGATE. THE PERMITTEE SHALL TAKE ALL REASONABLE STEPS TO MINIMIZE OR PREVENT ANY DISCHARGE IN VIOLATION OF THIS PERMIT WHICH HAS A REASONABLE LIKELIHOOD OF ADVERSELY AFFECTING HUMAN HEALTH OR THE ENVIRONMENT.

DUTY TO PROVIDE INFORMATION. THE PERMITTEE SHALL FURNISH TO THE DIRECTOR; A STATE OR OCAL AGENCY APPROVING SOIL EROSION AND SEDIMENTATION CONTROL PLANS, GRADING PLANS, OR STORM. WATER MANAGEMENT PLANS; OR IN THE CASE OF A STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY WHICH DISCHARGES THOUGH A MUNICIPAL SEPARATE STORM SEWER SYSTEM WITH AN NPDES PERMIT TO THE LOCAL GOVERNMENT OPERATING THE MUNICIPAL SEPARATE STORM SEWER SYSTEM, ANY INFORMATION WHICH IS REQUESTED TO DETERMINE COMPLIANCE WITH THIS PERMIT. IN THE CASE OF INFORMATION SUBMITTED TO THE EPD SUCH INFORMATION SHALL BE CONSIDERED PUBLIC INFORMATION AND AVAILABLE UNDER THE GEORGIA OPEN RECORDS ACT.

OTHER INFORMATION. WHEN THE PERMITTEE BECOMES AWARE THAT HE FAILED TO SUBMIT ANY RELEVANT FACTS OR SUBMITTED INCORRECT INFORMATION IN THE NOTICE OF INTENT OR IN ANY OTHER REPORT REQUIRED TO BE SUBMITTED TO THE EPD, THE PERMITTEE SHALL PROMPTLY SUBMIT SUCH FACTS OR

SIGNATORY REQUIREMENTS. ALL NOTICES OF INTENT, NOTICE OF TERMINATIONS, INSPECTION REPORTS, SAMPLING REPORTS OR OTHER REPORTS REQUESTED BY THE EPD SHALL BE SIGNED AS FOLLOWS:

ALL NOTICES OF INTENT AND NOTICES OF TERMINATION SHALL BE SIGNED AS FOLLOWS: a. FOR A CORPORATION: BY A RESPONSIBLE CORPORATE OFFICER. FOR THE PURPOSE OF THIS PERMIT, A RESPONSIBLE CORPORATE OFFICER MEANS: (1) A PRESIDENT, SECRETARY, TREASURER, OR VICE-PRESIDENT OF THE CORPORATION IN CHARGE OF A PRINCIPAL BUSINESS FUNCTION, OR ANY OTHER PERSON WHO PERFORMS SIMILAR POLICY- OR DECISION-MAKING FUNCTIONS FOR THE CORPORATION; OR (2) THE MANAGER OF ONE OR MORE MANUFACTURING. PRODUCTION OR OPERATING FACILITIES PROVIDED THE MANAGER IS AUTHORIZED TO MAKE MANAGEMENT DECISIONS WHICH GOVERN THE OPERATION OF THE REGULATED FACILITY INCLUDING HAVING THE EXPLICIT OR IMPLICIT DUTY OF MAKING MAJOR CAPITAL INVESTMENT RECOMMENDATIONS, AND INITIATING AND DIRECTING OTHER COMPREHENSIVE MEASURES TO ASSURE LONG TERM ENVIRONMENTAL COMPLIANCE WITH ENVIRONMENTAL LAWS AND REGULATIONS; THE MANAGER CAN ENSURE THE NECESSARY SYSTEMS ARE ESTABLISHED OR ACTIONS TAKEN TO GATHER COMPLETE AND ACCURATE INFORMATION FOR PERMIT APPLICATION REQUIREMENTS; AND WHERE AUTHORITY TO SIGN DOCUMENTS HAS BEEN ASSIGNED OR DELEGATED TO THE MANAGER IN ACCORDANCE WITH CORPORATE PROCEDURES:

b. FOR A PARTNERSHIP OR SOLE PROPRIETORSHIP: BY A GENERAL PARTNER OR THE PROPRIETOR,

RESPECTIVELY; OR c. FOR A MUNICIPALITY, STATE, FEDERAL, OR OTHER PUBLIC FACILITY: BY EITHER A PRINCIPAL EXECUTIVE

OFFICER OR RANKING ELECTED OFFICIAL; AND d. CHANGES TO AUTHORIZATION. IF AN AUTHORIZATION UNDER PART II.B. IS NO LONGER ACCURATE, A CHANGE OF INFORMATION NOI SATISFYING THE REQUIREMENTS OF PART II.B. MUST BE SUBMITTED TO THE

EPD PRIOR TO OR TOGETHER WITH ANY INSPECTION REPORTS, SAMPLING REPORTS, OR OTHER REPORTS REQUESTED BY THE EPD TO BE SIGNED BY A PERSON DESCRIBED ABOVE OR BY A DULY AUTHORIZED REPRESENTATIVE OF THAT PERSON. ALL INSPECTION REPORTS, SAMPLING REPORTS, OR OTHER REPORTS REQUESTED BY THE EPD SHALL BE

SIGNED BY A PERSON DESCRIBED ABOVE OR BY A DULY AUTHORIZED REPRESENTATIVE OF THAT PERSON. A PERSON IS A DULY AUTHORIZED REPRESENTATIVE ONLY IF:

a. THE AUTHORIZATION IS MADE IN WRITING BY A PERSON(S) DESCRIBED ABOVE AND SUBMITTED TO THE

b. THE AUTHORIZATION SPECIFIES EITHER AN INDIVIDUAL OR A POSITION HAVING RESPONSIBILITY FOR SPECIFIED OPERATION(S) OF THE REGULATED FACILITY OR ACTIVITY, SUCH AS THE POSITION OF MANAGER. OPERATOR. SUPERINTENDENT. OR POSITION OF EQUIVALENT RESPONSIBILITY OR AN INDIVIDUAL OR POSITION HAVING OVERALL RESPONSIBILITY FOR ENVIRONMENTAL MATTERS FOR THE COMPANY. (A DULY AUTHORIZED REPRESENTATIVE MAY BE EITHER A NAMED INDIVIDUAL OR ANY

INDIVIDUAL OCCUPYING A NAMED POSITION); AND c. CERTIFICATION. REPORTS DELINEATED IN PART V.G.2. SHALL BE SIGNED BY THE PERMITTEE OR DULY AUTHORIZED REPRESENTATIVE AND SHALL MAKE THE FOLLOWING CERTIFICATION:

"I CERTIFY UNDER PENALTY OF LAW THAT THIS REPORT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT CERTIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION. THE INFORMATION SUBMITTED IS. TO THE BEST OF M' KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND

OIL AND HAZARDOUS SUBSTANCE LIABILITY. NOTHING IN THIS PERMIT SHALL BE CONSTRUED TO PRECLUDE THE INSTITUTION OF ANY LEGAL ACTION OR RELIEVE THE PERMITTEE FROM ANY RESPONSIBILITIES, LIABILITIES, OR PENALTIES TO WHICH THE PERMITTEE IS OR MAY BE SUBJECT UNDER THE GEORGIA HAZARDOUS WASTE MANAGEMENT ACT, O.C.G.A § 12-8-60, ET SEQ. OR UNDER CHAPTER 14 OF TITLE 12 OF THE OFFICIAL CODE OF GEORGIA ANNOTATED; NOR IS THE OPERATOR RELIEVED FROM ANY RESPONSIBILITIES, LIABILITIES OR PENALTIES TO WHICH THE PERMITTEE IS OR MAY BE SUBJECT UNDER SECTION 311 OF THE CLEAN WATER ACT OR SECTION 106 OF COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT.

I. PROPERTY RIGHTS. THE ISSUANCE OF THIS PERMIT DOES NOT CONVEY ANY PROPERTY RIGHTS OF ANY SORT, NOR ANY EXCLUSIVE PRIVILEGES, NOR DOES IT AUTHORIZE ANY INJURY TO PRIVATE PROPERTY NOR ANY INVASION OF PERSONAL RIGHTS, NOR ANY INFRINGEMENT OF FEDERAL, STATE OR LOCAL LAWS OR REGULATIONS. J. SEVERABILITY. THE PROVISIONS OF THIS PERMIT ARE SEVERABLE, AND IF ANY PROVISION OF THIS

PERMIT, OR THE APPLICATION OF ANY PROVISION OF THIS PERMIT TO ANY CIRCUMSTANCE, IS HELD INVALID, THE APPLICATION OF SUCH PROVISION TO OTHER CIRCUMSTANCES, AND THE REMAINDER OF THIS PERMIT SHALL NOT BE AFFECTED THEREBY

K. OTHER APPLICABLE ENVIRONMENTAL REGULATIONS AND LAWS. NOTHING IN THIS PERMIT SHALI BE CONSTRUED TO PRECLUDE THE INSTITUTION OF ANY LEGAL ACTION OR RELIEVE THE PERMITTEE FROM ANY RESPONSIBILITIES, LIABILITIES, OR PENALTIES ESTABLISHED PURSUANT TO ANY APPLICABLE STATE LAW OF REGULATION UNDER AUTHORITY PRESERVED BY SECTION 510 OF THE CLEAN WATER ACT. NOTHING IN THIS PERMIT, UNLESS EXPLICITLY STATED, EXEMPTS THE PERMITTEE FROM COMPLIANCE WITH OTHER APPLICABLE LOCAL, STATE AND FEDERAL ORDINANCES, RULES, REGULATIONS, AND LAWS. FURTHERMORE, IT IS NOT A DEFENSE TO COMPLIANCE WITH THIS PERMIT THAT A LOCAL GOVERNMENT AUTHORITY HAS APPROVED THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN OR FAILED TO TAKE ENFORCEMENT ACTION AGAINST THE PERMITTEE FOR VIOLATIONS OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, OR OTHER PROVISIONS OF THIS PERMIT

NO CONDITION OF THIS PERMIT SHALL RELEASE THE PERMITTEE FROM ANY RESPONSIBILITY OR REQUIREMENTS UNDER OTHER ENVIRONMENTAL STATUTES OR REGULATIONS.

L. PROPER OPERATION AND MAINTENANCE. THE PERMITTEE SHALL AT ALL TIMES PROPERLY OPERATE AND MAINTAIN ALL FACILITIES AND SYSTEMS OF TREATMENT AND CONTROL (AND RELATED APPURTENANCES) WHICH ARE INSTALLED OR USED BY THE PERMITTEE TO ACHIEVE COMPLIANCE WITH THE CONDITIONS OF THIS PERMIT AND WITH THE REQUIRED PLANS. PROPER OPERATION AND MAINTENANCE ALSO INCLUDES ADEQUATE LABORATORY CONTROLS AND APPROPRIATE QUALITY ASSURANCE PROCEDURES. PROPER OPERATION AND MAINTENANCE REQUIRES THE OPERATION OF BACKUP OR AUXILIARY FACILITIES OR SIMILAR SYSTEMS, INSTALLED BY A PERMITTEE ONLY WHEN NECESSARY TO ACHIEVE COMPLIANCE WITH THE CONDITIONS OF THE PERMIT.

1. INSPECTION AND ENTRY. THE PERMITTEE SHALL ALLOW THE DIRECTOR OR AN AUTHORIZED BMPS ARE REQUIRED FOR THE REMEDIATION OF ALL PETROLEUM SPILLS AND LEAKS. REPRESENTATIVE OF EPA, EPD OR, IN THE CASE OF A CONSTRUCTION SITE WHICH DISCHARGES THROUGH A SILT FENCING AND PERMANENT SEDIMENT BASIN IS BEING USED TO DETER POLLUTANTS DURING CONSTRUCTION. AFTER CONSTRUCTION STORMWATER MUNICIPAL SEPARATE STORM SEWER SYSTEM, WITH AN NPDES PERMIT, AN AUTHORIZED REPRESENTATIVE OF THE WILL BE CONVEYED TO AN EXISTING RETENTION POND WHERE SEDIMENT AND POLLUTANTS WILL SETTLE FOR. MUNICIPAL OPERATOR OF THE SEPARATE STORM SEWER SYSTEM RECEIVING THE DISCHARGE, UPON THE PRESENTATION OF CREDENTIALS AND OTHER DOCUMENTS AS MAY BE REQUIRED BY LAW. TO: ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

ENTER UPON THE PERMITTEE'S PREMISES WHERE A REGULATED FACILITY OR ACTIVITY IS LOCATED OF CONDUCTED OR WHERE RECORDS MUST BE KEPT UNDER THE CONDITIONS OF THIS PERMIT; AND HAVE ACCESS TO AND COPY AT REASONABLE TIMES, ANY RECORDS THAT MUST BE KEPT UNDER THE

CONDITIONS OF THIS PERMIT: AND INSPECT AT REASONABLE TIMES ANY FACILITIES OR EQUIPMENT (INCLUDING MONITORING AND CONTROL

N. PERMIT ACTIONS. THIS PERMIT MAY BE REVOKED AND REISSUED, OR TERMINATED FOR CAUSE INCLUDING BUT NOT LIMITED TO CHANGES IN THE LAW OR REGULATIONS. THE FILING OF A REQUEST BY THE PERMITTEE FOR TERMINATION OF THE PERMIT, OR A NOTIFICATION OF PLANNED CHANGES OR ANTICIPATED NONCOMPLIANCE, DOES NOT STAY ANY PERMIT CONDITION.

### PRODUCT SPECIFIC PRACTICES

PETROLEUM BASED PRODUCTS - CONTAINERS FOR PRODUCTS SUCH AS FUELS LUBRICANTS. AND TARS WILL B INSPECTED DAILY FOR LEAKS AND SPILLS. THIS INCLUDES ON-SITE VEHICLE AND MACHINERY DAILY INSPECTIONS AND REGULAR PREVENTATIVE MAINTENANCE OF SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREAS WILL BE LOCATED AWAY FROM STATE WATER, NATURAL DRAINS AND STORM WATER DRAINAGE INLETS. IN ADDITION, TEMPORARY FUELING TANKS SHALL HAVE A SECONDARY CONTAINMENT LINER TO PREVENT/MINIMIZE SI CONTAMINATION. DISCHARGE OF OILS, FUELS AND LUBRICANTS IS PROHIBITED. PROPER DISPOSAL METHODS WILL INCLUDE COLLECTION IN A SUITABLE CONTAINER AND DISPOSAL AS REQUIRED BY LOCAL AND STATE

PAINTS/FINISHES/SOLVENTS - ALL PRODUCTS WILL BE STORED IN TIGHTLY SEALED ORIGINAL CONTAINERS WHE NOT IN USE. EXCESS PRODUCT WILL NOT BE DISCHARGED TO THE STORM WATER COLLECTION SYSTEM. EXCESS PRODUCT, MATERIALS USED WITH THESE PRODUCTS AND PRODUCT CONTAINERS WILL BE DISPOSED OF ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

CONCRETE TRUCK WASHING - NO CONCRETE TRUCKS WILL BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ONSITE.

FERTILIZER/HERBICIDES - THESE PRODUCTS WILL BE APPLIED AT RATES THAT DO NOT EXCEED TH MANUFACTURER'S SPECIFICATIONS OR ABOVE THE GUIDELINES SET FORTH IN THE CROP ESTABLISHMENT OR IN THE GSWCC MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA. ANY STORAGE OF THESE MATERIALS WILL BE UNDER ROOF IN SEALED CONTAINERS.

BUILDING MATERIALS - NO BUILDING OR CONSTRUCTION MATERIALS WILL BE BURIED OR DISPOSED OF ONSITE. ALL SUCH MATERIAL WILL BE DISPOSED OF IN PROPER WASTE DISPOSAL PROCEDURES.

NO WASTE WILL BE DISPOSED OF INTO STORM WATER INLETS OR WATERS OF THE STATE.

WASTE MATERIALS ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN A SECURELY LIDDED META DUMPSTER. THE DUMPSTER WILL MEET ALL SOLID WASTE MANAGEMENT REGULATIONS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE DEPOSITED IN THE  $\,$  DUMPSTER. THE DUMPSTER WILL BE EMPTIED A MINIMUM OF ONCE PER WEEK OR, MORE OFTEN IF NECESSARY AND TRASH WILL BE HAULED AS REQUIRED BY LOCAL REGULATIONS. NO CONSTRUCTION WASTE WILL BE BURIED ONSITE. ALL PERSONNEL WILL BE INSTRUCTED ON PROPER PROCEDURES FOR WASTE DISPOSAL. A NOTICE STATING THESE PRACTICES WILL BE POSTED AT THE JOBSITE AND THE CONTRACTOR WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.

HAZARDOUS WASTES ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL, STATE, AND/OR FEDERAL REGULATIONS AND BY THE MANUFACTURER OF SUCH PRODUCTS. THE JOB SITE SUPERINTENDENT, WHO WILL ALSO BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED. WI NSTRUCT SITE PERSONNEL IN THESE PRACTICES. MATERIAL SAFETY DATA SHEETS (MSDS'S) FOR EACH Substance with Hazardous properties that is used on the Job Site will be obtained and used fo THE PROPER MANAGEMENT OF POTENTIAL WASTES THAT MAY RESULT FROM THESE PRODUCTS. AN MSDS WI BE POSTED IN THE IMMEDIATE AREA WHERE SUCH PRODUCT IS STORED AND/OR USED AND ANOTHER COPY OF EACH MSDS WILL BE MAINTAINED IN THE ESPCP FILE AT THE JOB SITE CONSTRUCTION TRAILER OFFICE. EAC EMPLOYEE WHO MUST HANDLE A SUBSTANCE WITH HAZARDOUS PROPERTIES WILL BE INSTRUCTED ON THE  $\,$  U OF MSDS SHEETS AND THE SPECIFIC INFORMATION IN THE APPLICABLE MSDS FOR THE PRODUCT HE/SHE IS USING PARTICULARLY REGARDING SPILL CONTROL TECHNIQUES. THE CONTRACTOR WILL IMPLEMENT THE SPI PREVENTION CONTROL AND COUNTERMEASURES (SPCC) PLAN FOUND WITHIN THIS ESPCP AND WILL TRAIN AL PERSONNEL IN THE PROPER CLEANUP AND HANDLING OF SPILLED MATERIALS. NO SPILLED HAZARDOU MATERIALS OR HAZARDOUS WASTES WILL BE ALLOWED TO COME IN CONTACT. WITH STORMWATER DISCHARGES IF SUCH CONTACT OCCURS. THE STORMWATER DISCHARGE WILL BE CONTAINED ON SITE UNTIL APPROPRIATE MEASURES IN COMPLIANCE WITH SATE AND FEDERAL REGULATIONS ARE TAKEN TO DISPOSE OF SUCH CONTAMINATED STORMWATER. IT SHALL BE THE RESPONSIBILITY OF THE JOB SITE SUPERINTENDENT TO PROPERLY TRAIN ALL PERSONNEL IN THE USE OF THE SPCC PLAN.

SANITARY WASTES A MINIMUM OF ONE PORTABLE SANITARY UNIT WILL BE PROVIDED FOR EVERY TEN (10 WORKERS ON THE SITE. ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM O ONE TIME PER WEEK BY A LICENSE PORTABLE FACILITY PROVIDER. IN COMPETE COMPLIANCE WITH LOCAL AND STATE REGULATIONS. ALL SANITARY WASTE UNITS WILL BE LOCATED IN ONE AREA WHERE THE LIKELIHOOD OF THE UNIT CONTRIBUTING TO STORM WATER DISCHARGE IS NEGLIGIBLE. ADDITIONAL CONTAINMENT BMP'S MUS BE IMPLEMENTED. SUCH AS GRAVEL BAGS OR SPECIALLY DESIGNED PLASTIC SKID CONTAINERS AROUND TH BASE TO PREVENT WASTES FROM CONTRIBUTING TO STORM WATER DISCHARGES. THE LOCATION OF SANITARY WASTE UNITS MUST BE IDENTIFIED ON THE EROSION CONTROL PLAN GRADING PHASE, SHEET C-4B. BY THE CONTRACTOR ONCE THE LOCATIONS HAVE BEEN DETERMINED. SANITARY SEWER WILL BE PROVIDED BY MUNICIPAL AUTHORITY/SEPTIC SYSTEM AT THE COMPLETION OF THIS PROJECT.

FOR BUILDING MATERIALS, BUILDING PRODUCTS, CONSTRUCTION WASTES, TRASH, LANDSCAPE MATERIALS FERTILIZERS. PESTICIDES. HERBICIDES. DETERGENTS. SANITARY WASTE AND OTHER MATERIALS PRESENT ON THE SITE, PROVIDE COVER (E.G., PLASTIC SHEETING, TEMPORARY ROOFS) TO MINIMIZE THE EXPOSURE OF THESE PRODUCTS TO PRECIPITATION AND TO STORMWATER, OR A SIMILARLY EFFECTIVE MEANS DESIGNED TO MINIMIZE THE DISCHARGE OF POLLUTANTS FROM THESE AREAS. MINIMIZATION OF EXPOSURE IS NOT REQUIRED IN CASES WHERE EXPOSURE TO PRECIPITATION AND STORMWATER WILL NO RESULT IN A DISCHARGE OF POLLUTANTS, OR WHERE EXPOSURE OF A SPECIFIC MATERIAL OR PRODUCT POSES LITTLE RISK TO STORMWATER CONTAMINATION (SUCH AS FINAL PRODUCTS AND MATERIALS INTENDED FOR OUTDOOR USE).

CONTACTED WITHIN 24 HOURS.

LOCAL, STATE AND MANUFACTURER'S RECOMMEND METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND PROCEDURES WILL BE MADE AVAILABLE TO SITE PERSONNEL. MATERIAL AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREAS. TYPICAL MATERIALS AND **EQUIPMENT INCLUDES, BUT IS NOT LIMITED** 

GREATER THAN 560 GALLONS BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, CAT LITTER, SAN SAWDUST AND PROPERLY LABELED PLASTIC AND METAL WASTE CONTAINERS. \*SPILL PREVENTION PRACTICES AND PROCEDURES WILL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS. \*ALL SPILLS WILL BE CLEANED UP IMMEDIATELY UPON DISCOVERY. ALL SPILLS WILL BE REPORTED AS REQUIRED BY LOCAL, STATE AND FEDERAL REGULATIONS.

\*FOR SPILLS THAT IMPACT SURFACE WATER (LEAVE A SHEEN ON SURFACE WATER), THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-424-8802. \*FOR SPILLS OF AN UNKNOWN AMOUNT, THE NATIONAL CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-424-8802. \*FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE GEORGIA EPD WILL B

\*FOR SPILLS LESS THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE SPILL WILL BE CLEANED UP AND LOCAL AGENCIES WILL BE CONTACTED AS REQUIRED. THE CONTRACTOR SHALL NOTIFY THE LICENSED PROFESSIONAL WHO PREPARED THIS PLAN IF MORE THE 1320 GALLONS OF PETROLEUM IS STORED ONSITE (THIS INCLUDES CAPACITIES OF EQUIPMENT) OR IF ANY ONE

PIECE OF EQUIPMENT HAS A CAPA. THE CONTRACTOR WILL NEED A SPILL PREVENTION CONTAINMENT AND

COUNTERMEASURES PLAN PREPARED BY THAT LICENSED PROFESSIONAL

**DESIGN PROFESSIONAL** MARCUS E SACK, P.E M.E. SACK ENGINEERING MARCUS@MESACK.COM GSWCC LEVEL II CERTIFICATION #: 70248

THE DESIGN PROFESSIONAL.

EXPIRES: 06-14-23

WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

PRIMARY PERMITER CONTACT: KEITH COOK 160 N MAIN ST PEMBROKE, GA 31321 (912) 653-4413 STREETS@PEMBROKEGA.NET

"EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE

"THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES PRIOR TO

NON EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT

OF WRESTED VEGETATION OR WITHIN 25 FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE

THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN SHALL INSPECT THE INSTALLATIONS OF BMP'S WITHIN 7 DAYS AFTER INSTALLATION OF

AMENDMENTS/REVISIONS TO THE ES&PC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMPS WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY

THE CONSTRUCTION ACTIVITY INCLUDES LINEAR INFRASTRUCTURE IMPROVEMENTS MADE TO SEWER SYSTEM PUMP STATION, FORCEMAIN, AND RELATED

SECONDARY PERMITTEES ARE UNKNOWN AT THIS TIME BUT IT IS THE RESPONSIBILITY OF THE DEVELOPER TO PROVIDE APPLICABLE PORTIONS OF

THE NATURE OF THE CONSTRUCTION ACTIVITY WOULD BE CATEGORIZED AS LINEAR INFRASTRUCTURE IMPROVEMENTS TO PIPING AND A PUMP

DURING THE CONSTRUCTION SILT FENCE WILL BE USED TO CONTROL THE ESCAPE OF SEDIMENT. DURING THE INTERMEDIATE AND FINAL PHASE, SILT

(1) I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND

FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS. THE DESIGNED SYSTEM OF BEST

(2) I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATION DESCRIBED HERE—IN BY

(3) CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR THE MONITORING OF: (A)

UTILIZING THE FACTORS REQUIRED IN THE GENERAL NPDES PERMIT NO. GAR 100002. THAT THE INCREASE IN THE TURBIDITY OF EACH

SPECIFIC IDENTIFIED SAMPLED RECEIVING WATER WILL BE REPRESENTATIVE OF THE INCREASE IN THE TURBIDITY OF A SPECIFIC IDENTIFIED

THESE DISCREPANCIES MUST BE ADDRESSED IMMEDIATELY AND A RE-INSPECTION SCHEDULED. WORK SHALL NOT PROCEED ON THE SITE

COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE

DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE GEORGIA SOIL AND WATER

WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.

THE PROJECT'S STORM WATERS ARE INITIALLY RECEIVED BY MILL CREEK, FROM THERE THE WATERS DRAIN TO THE OGEECHEE RIVER.

ES&PC PLAN IS IN COMPLIANCE WITH WASTE DISPOSAL, SANITARY SEWER, OR SEPTIC TANK REGULATIONS

ALL WETLANDS ON SITE AND STATE WATERS WITHIN 200' OF THIS SITE HAVE BEEN DELINEATED.

ES&PC PLANS TO ANY SECONDARY PERMITTEE PRIOR TO THEIR CONSTRUCTION COMMENCEMENT.

FENCE, AND GRASSING WILL BE USED TO CONTROL THE ESCAPE OF SEDIMENT.

MÝSELF OR MY AUTHORIZED AGENT UNDER MY DIRECT SUPERVISION.

EXPIRES: 06/14/2026

DESIGN PROFESSIONAL 7-DAY VISIT CERTIFICATION

I CERTIFY THE SITE IS IN COMPLIANCE WITH THE ES&PC

UNTIL DESIGN PROFESSIONAL CERTIFICATION IS OBTAINED.

LEAST 14 DAYS PRIOR TO BEGINNING CONSTRUCTION ACTIVITY.

SECONDARY PERMITTEES

GSWCC LEVEL 1A CERTIFICATION

GSWCC LEVEL 1A CERTIFICATION

GSWCC LEVEL 1A CERTIFICATION

(SUPPORTING WARM WATER FISHERIES

COMPANY:

ADDRESS:

ADDRESS:

COMPANY:

ADDRESS:

COMPANY:

ADDRESS:

ADDRESS:

1.00-10

∽ 100.01+

GSWCC LEVEL II DESIGN PROFESSIONAL CERTIFICATION #

INSPECTION REVEALED THE FOLLOWING DISCREPANCIES FROM THE ES&PC PLAN:

THIS MASTER LIST TO BE COMPLETED, SIGNED, AND KEPT IN THE ON SITE CONSTRUCTION TRAILER.

FAX:

APPENDIX B:NEPHELOMETRIC TURBIDITY UNIT (NTU) TABLES

SECONDARY PERMITTEES SIGN WHEN RECEIVING PLANS. ALL SECONDARY PERMITTEES MUST SUBMIT SECONDARY NOI AT

SURFACE WATER DRAINAGE AREA, SQUARE MILES

136 AND THE GUIDANCE DOCUMENT TITLED "NPDES STORM WATER SAMPLING GUIDANCE DOCUMENT. EPA 833-B-92-001."

INCLUDING UNNAMED TRIBUTARIES, MILL CREEK, AND THE OGEECHEE RIVER WHICH SUPPORTS WARM WATER FISHERIES

400

100

99 5-9.99 10-24.99 25-49.99 50-99.99 100-249.99 250-499.99 500+

750

DESIGN PROFESSIONAL CERTIFICATION

UN-SAMPLED RECEIVING WATER.

DATE OF INSPECTION

PLAN ON THE DATE INSPECTED.

MARCUS E. SACK

E&SC #: 70248

24-HOUR CONTACT KEITH COOK 160 N MAIN ST PEMBROKE, GA 31321 (912) 653-4413 STREETS@PEMBROKEGA.NET

HIS DRAWING IS AN INSTRUMENT OF SERVICE ND REMAINS THE PROPERTY OF P.C. SIMONT ASSOCIATES, INC. AND M.E. SACK

GSWCC REVISIONS

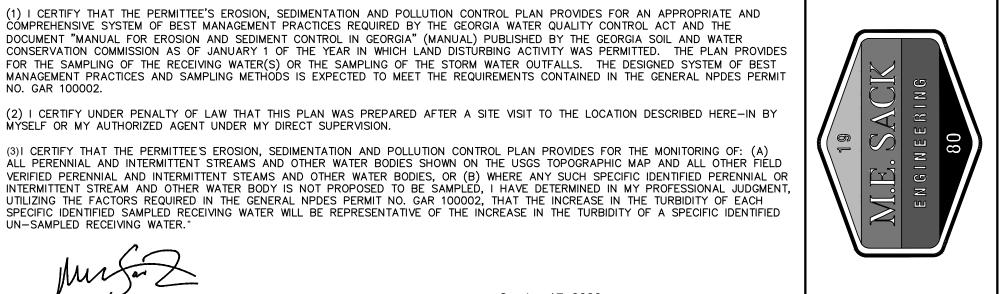
REVISIONS:

NGINEERING. IT MAY NOT BE COPIED, ALTERE RMISSION ON A SIGNED AND SEALED DCUMENT. THE INFORMATION CONTAINED HEREIN IS INTENDED FOR THE NAMED CLIENT NLY. IN THE EVENT OF AN ELECTRONIC VERSI C. SIMONTON & ASSOC., INC. AND M.E. SACK igineering assumes no responsibility f ATA GENERATED, ALTERED OR STAKED FROM HIS DRAWING. IN THE EVENT OF A DISPUTE ARD COPIES WILL TAKE PRECEDENCE OVER AN ELECTRONIC MEDIA."

DESIGN PROFESSIONAL MARCUS E. SACK GSWCC LEVEL II # 70248 EXPIRES: 06/14/2023 MARCUS@MESACK.COM

> 515 NORTH MAIN STREET P.O. BOX 649 HINESVILLE, GA 31313 TEL: (912) 368-5212





MUNICIPALITY: CITY OF PEMBROKE

NOTE: THE DESIGN PROFESSIONAL WHO PREPARED THE

INITIAL SEDIMENT STORAGE REQUIREMENTS AND

INSTALLATION.

SIGNATURE

SIGNATURE

750

300

150

STORM WATER SAMPLES ARE TO BE ANALYZED IN ACCORDANCE WITH METHODOLOGY AND TEST PROCEDURES ESTABLISHED BY 40 CFR PART

STORM WATER IS TO BE SAMPLED FOR NEPHELOMETRIC TURBIDITY UNITS (NTU) AT THE OUTFALL LOCATION. A DISCHARGE OF STORM WATER

RUNOFF FROM DISTURBED AREAS WHERE BEST MANAGEMENT PRACTICES HAVE NOT BEEN PROPERLY DESIGNED, INSTALLED, AND MAINTAINED

EXCEEDING 75, THE VALUE THAT WAS SELECTED FROM APPENDIX B IN PERMIT NO. GAR 10000 02. THE NTU IS BASED UPON THE DISTURBED

ACREAGE OF 0.75 ACRES FOR THE PROJECT SITE, THE SURFACE WATER DRAINAGE AREA OF  $\ge 0.01$  SQUARE MILES, AND RECEIVING WATER

SHALL CONSTITUTE A SEPARATE VIOLATION FOR EACH DAY ON WHICH SLICH CONDITION RESULTS IN THE TURRIDITY OF THE DISCHARGE

750

750

300

100

WILL UPSTREAM AND DOWN

IF MARKED YES THE CHAR

DOWNSTREAM NTU VALUE

WILL BE 25 NTU GREATER

THAN THE UPSTREAM

WILL NOT BE UTILIZED AND

STREAM SAMPLING BE

THE ALLOWABLE

PERIMETER CONTROL BMP's WITHIN 7 DAYS AFTER

ES&PC PLAN IS TO INSPECT THE INSTALLATION OF THE

wner: City of Pembroke 160 N Main St Pembroke, GA 31321 912) 653-4413

treets@pembrokega.ne

4 HOUR CONTACT: eith Cook 60 N Main St Pembroke, GA 31321 (912) 653-4413 treets@pembrokega.ne<sup>.</sup>

> 9  $\mathbb{E}\mathbb{M}$ 0 MPR

**EROSION** 

ILE NO: 2020-48 PLOT DATE: October 17, 2023

# GEORGIA UNIFORM CODING SYSTEM

# FOR SOIL EROSION AND SEDIMENT CONTROL PRACTICES

GEORGIA SOIL AND WATER CONSERVATION COMMISSION

# STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM		J	A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION	90	<b>7</b>	Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT		(LAREL)	A crushed stone pad located at the construction site exit to provide a place for removing mud from tires thereby protecting public streets.
Cr	CONSTRUCTION ROAD STABILIZATION		ن نون	A travelway constructed as part of a construction plan including access roads, subdivision roads, parking areas and other on—site vehicle transportation routes.
Dc	STREAM DIVERSION CHANNEL	=-	<b>*</b>	A temporary channel constructed to convey flow around a construction site while a permanent structure is being constructed.
Di	DIVERSION			An earth channel or dike located above, below or across a slope to divert runoff. This may be a temporary or permanent structure.
Dn1)	TEMPORARY DOWNDRAIN STRUCTURE		(LABEL)	A flexible conduit of heavy—duty fabric or other material designed to safely conduct surface runoff down a slope. This is temporary and inexpensive.
Dn2	PERMANENT DOWNDRAIN STRUCTURE		Dn2 (LABEL)	A paved chute, pipe, sectional conduit or similar material designed to safely conduct surface runoff down a slope.
Fr	FILTER RING			A temporary stone barrier constructed at storm drain inlets and pond outlets.
Ga	GABION			Rock filter baskets which are hand—placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE		(LAREL)	Permanent structures installed to protect channels or waterways where otherwise the slope would be sufficient for the running water to form gullies.
Lv	LEVEL SPREADER		$\rightarrow$	A structure to convert concentrated flow of water into less erosive sheet flow. This should be constructed only on undisturbed soils.
Rd	ROCK FILTER DAM		5	A permanent or temporary stone filter dam installed across small streams or drainageways.
Re	RETAINING WALL		Re (LABEL)	A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETRO FITTING		(LABEL)	A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.
Sd1)	SEDIMENT BARRIER		(INDICATE TYPE)	A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw or hay, brush, logs and poles, gravel, or a silt fence.
Sd2	INLET SEDIMENT TRAP	* ( 2 )		An impounding area created by excavating around a storm drain drop inlet. The excavated area will be filled and stabilized on completion of construction activities.
Sd3	TEMPORARY SEDIMENT BASIN		(LABEL)	A basin created by excavation or a dam across a waterway. The surface water runoff is temporarily stored allowing the bulk of the sediment to drop out.
Sd4	TEMPORARY SEDIMENT TRAP			A small temporary pond that drains a disturbed area so that sediment can settle out. The principle feature distinguishing a temporary sediment trap from a temporary sediment basin is the lack of a pipe or riser.
Sk	FLOATING SURFACE SKIMMER		(LABEL)	A buoyant device that releases/drains water from the surface of sediment ponds, traps, or basins at a controlled rate of flow.
Spb	SEEP BERM		(LABEL)	Linear control device constructed as a diversion perpendicular to the direction of runoff to enhance dissipation and infiltration, while creating multiple sedimentation chambers with the employment of intermediate dikes.

# STRUCTURAL PRACTICES

	CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
•					
	Sr	TEMPORARY STREAM CROSSING		(ABEL)	A temporary bridge or culvert—type structure protecting a stream or watercourse from damage by crossing construction equipment.
	(šť)	STORMDRAIN OUTLET PROTECTION		(S1)	A paved or short section of riprap channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.
	(su	SURFACE ROUGHENING		⊢Su →	A rough soil surface with horizontal depressions on a contour or slopes left in a roughened condition after grading.
	Tc	TURBIDITY CURTAIN		To	A floating or staked barrier installed within the water (it may also be referred to as a floating boom, silt barrier, or silt curtain).
	(Tp)	TOPSOILING		(SHOW STRIPING AND STORAGE AREAS)	The practice of stripping off the more fertile soil, storing it, then spreading it over the disturbed area after completion of construction activities.
	Tr	TREE PROTECTION	0	(DENOTE TREE CENTERS)	To protect desirable trees from injury during construction activity.
	Wt	VEGETATED WATERWAY OR STORMWATER CONVEYANCE CHANNEL			Paved or vegetative water outlets for diversions, terraces, berms, dikes or similar structures.

# **VEGETATIVE PRACTICES**

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE		Bf (LABEL)	Strip of undisturbed original vegetation, enhanced or restored existing vegetation or the reestablishment of vegetation surrounding an area of disturbance or bordering streams.
Cs	COASTAL DUNE STABILIZATION (WITH VEGETATION)	Jenese e estates estat	Cs	Planting vegetation on dunes that are denuded artificially constructed, or re-nourished.
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)		Ds1	Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion retarding cover.
Ds2	DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)		Ds2	Establishing a temporary vegetative cover with fast growing seedings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (WITH PERM SEEDING)	100 B	Ds3	Establishing a permanent vegetative cover such as trees, shrubs, vines, grasses, or legumes on disturbed areas.
Ds4	DISTURBED AREA STABILIZATION (SODDING)		Ds4	A permanent vegetative cover using sods on highly erodable or critically eroded lands.
Du	DUST CONTROL ON DISTURBED AREAS		Du	Controlling surface and air movement of dust on construction site, roadways and similar sites.
FI-Co	FLOCCULANTS AND COAGULANTS		FI-Co	Substance formulated to assist in the solids/liquid separation of suspended particles in solution.
Sb	STREAMBANK STABILIZATION (USING PERM VEGETATION)		Sb	The use of readily available native plant materials to maintain and enhance streambanks, or to prevent, or restore and repair small streambank erosion problems.
Ss	SLOPE STABILIZATION		Ss	A protective covering used to prevent erosion and establish temporary or permanent vegetation on steep slopes, shore lines, or channels.
Тас	TACKIFIERS AND BINDERS		Тас	Substance used to anchor straw or hay mulch by causing the organic material to bind together.

GaSWCC (Amended - 2013)

# Ds1 DISTURBED AREA STABILIZATION (W/MULCHING ONLY)

This standard applies to grades or cleared areas which may be subjected to erosion for 6 months or less, where seeding may not have a suitable growing season to produce an erosion retardant cover, but which can

Site Preparation

1. Grade, as needed and feasible, to permit the use of equipment for applying and anchoring mulch. 2. Install needed erosion control measures as required such as dikes, diversions, berms, terraces and

2. Wood waste, chips, sawdust or bark - spread 2 to 3 inches deep (about 6 to 9 tons per acre). 3. Erosion control matting or netting, such as excelsior, jute, textile and plastic matting and netting applied in accordance with manufacturers recommendations. 4. Cutback asphalt, slow curing - applied at 1200 gallons per acre (or 1/4 gallon per sq. yd.)

2. Spread wood waste uniformly on slopes that are 3:1 and flatter. No anchoring is needed. 3. Commercial matting and netting. Follow manufacturer's specification included with the material. 4. Apply asphalt so area has uniform appearance. (Note: Use in areas of pedestrian traffic could cause problems or "tracking in" or damage to shoes, clothing, etc.)

To conserve moisture and control weeds in nurseries, ornamental beds, around shrubs, and on bar areas

Mulching Materials

Use one of the materials given below and apply at thickness indicated.

3. Wood waste (sawdust, bark, chips) 4" to 8"

5. Completely cover area with black polyethylene film and hold in place by placing soil on the outer edge.

PURPOSE

A. To prevent surface and air movement of dust from exposed surfaces. B. To reduce the presence of airborne substances which may be harmful or injurious to human health, welfare, or safety, or to animals or plant life.

. Irrigation. This is generally done as an emergency treatment. Site is sprinkled with water until the surface 2. Mulching - See Ds1- Disturbed Area Stabilization ( with Mulching only)

SPECIFICATIONS Establishing permanent vegetative using sods on highly erodible or critically eroded lands.

<u>Site Preparation</u>

1. Bring soil surface to final grade. Clear surface of trash, woody debris, stones and clods larger than 1". help guarantee a stand. Don't use topsoil recently treated with herbicides or soil sterilants.

Applying Sods

1. Sod should be machine cut and contain 3/4" (+ or - 1/4") of soil, not including shoots or thatch. 3. Sod should be cut and installed within 36 hours of digging.

# SOD PLANTING REQUIREMENTS

GRASS	VARIETIES	RESOURCE AREA	GROWING SEASON	<ol> <li>Apply in spring following seeding.</li> <li>Apply in split application</li> </ol>
1. BERMUDAGRASS	Common Tifway Tifgreen Tiflawn	M-L,P,C P,C P,C P,C	Warm Weather	when high rates are used. 3. Apply in 3 sp applications. 4. Apply when plants a
2. TALL FESCUE	Kentucky 31	M-L, P	Cool Weather	pruned. 5. Apply to grass specionly. 6. Apply when plants gro

TYPES OF SPECIES	PLANTING YEAR	FERTILIZER (N-P-K)	RATE (LBS.ACRE)	NIRTOGEN TOP DRESSING RATE (LBS./ACRE)
COOL SEASON GRASSES	FIRST SECOND MAINTENANCE	6-12-12 6-12-12 10-10-10	1500 1000 400	50-1000  30
WARM SEASON GRASSES	FIRST SECOND MAINTENANCE	6-12-12 6-12-12 10-10-10	1500 800400	50-1000 50-100 30

# SPECIFICATIONS A. For temporary protection of critical areas without seeding.

3. As needed and feasible, loosen compact soil to a minimum depth of 3 inches.

Mulching Materials

1. Dry straw or hay - spread at a rate of 2 1/2 tons per acre.

5. Polyethylene film - secured over banks or stockpiled soil material for temporary protection.

Applying and Anchoring Mulch

1. Apply straw or hay mulch uniformly by hand or mechanically. Anchor as appropriate and feasible. It may be pressed into the soil with a disk harrow with the disk set straight or with a special "packer disk." The disk may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. the edges of the disk should be dull enough not to cut the mulch but press it into the soil leaving much of it in an erect position. Straw hay mulch spread with special blower-type equipment may be anchored with emulsified asphalt (Grade AE-5 or SS-1). The asphalt emulsion must be sprayed onto the mulch as it is ejected from the machine. Use 100 gallons of water per

4. Shredded residues (crops, leaves, etc.) 4" to 8"

When using organic mulches, apply 20-30 pounds of nitrogen in addition to the normal amount needed for plant growth to offset the tie up of N by decomposition of mulch.

# Ou DUST CONTROL ON DISTURBED AREAS

3. Vegetative Cover - See Ds2 - Disturbed Area Stabilization

Permanent Methods

1. Permanent Vegetation - See Ds3 - Disturbed Area Stabilization (with Permanent Vegetation)

# Ds4 DISTURBED AREA STABILIZATION (W/SODDING)

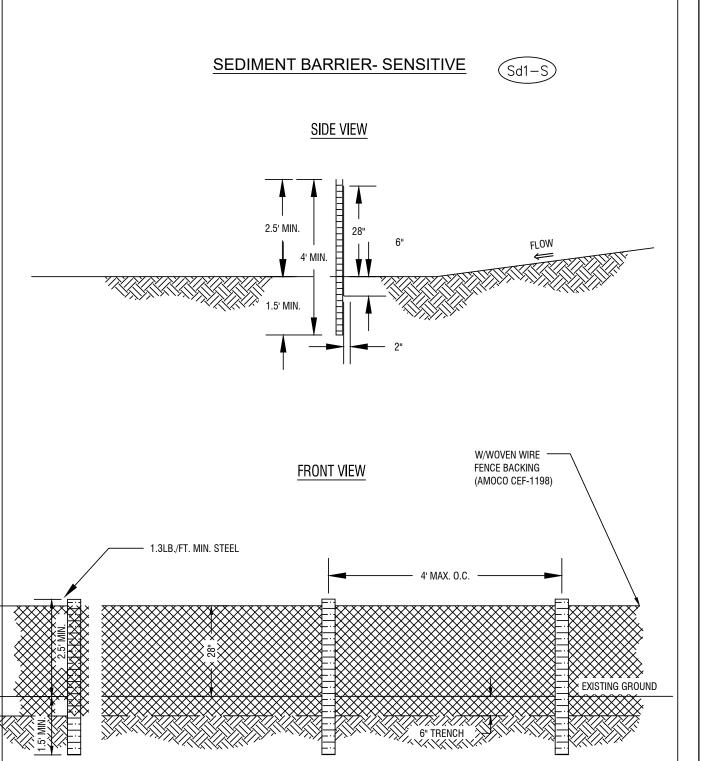
Apply sod to soil surfaces only and not frozen surfaces, or gravel type soils. Topsoil properly applied will 2. Mix fertilizer into surface. Fertilizer based on soil tests. Agriculture lime should be applied based on soil tests or at a rate of 1 to 2 tons per acre.

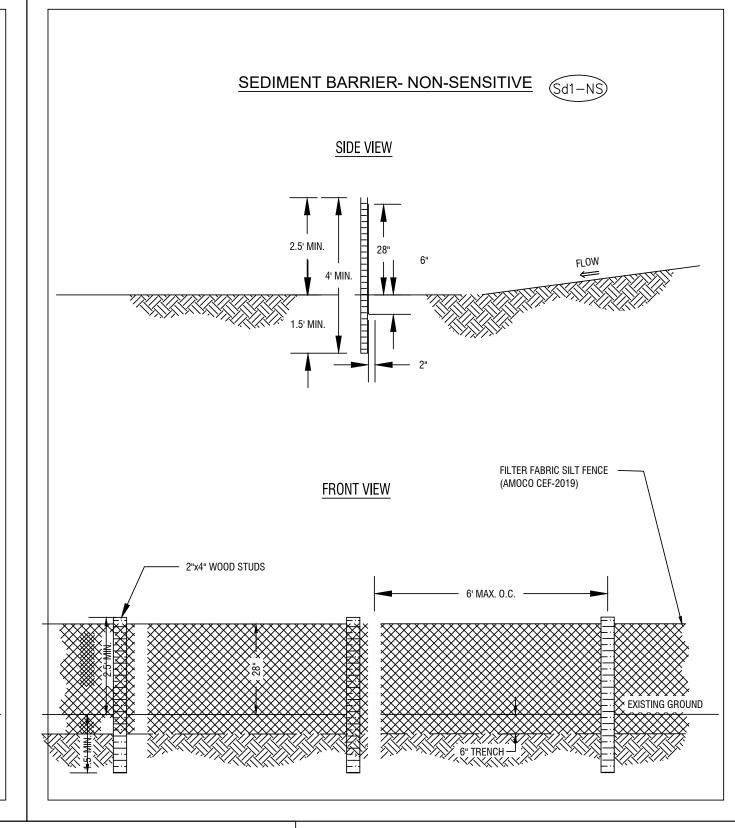
2. Sod should be cut to the desired size within + or - 5%. Torn or uneven pads should be rejected. 4. Avoid planting when subject to frost heave or hot weather if irrigation is not available.

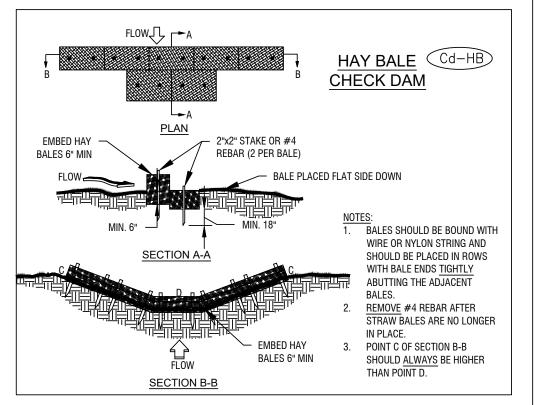
GRASS	VARIETIES	RESOURCE AREA	GROWING SEASON	<ol> <li>Apply in spring following seeding.</li> <li>Apply in split applications</li> </ol>
1. BERMUDAGRASS	Common Tifway Tifgreen Tiflawn	Tifway P,C Warm Tifgreen P,C Weather Tiflawn P,C		when high rates are used. 3. Apply in 3 split applications. 4. Apply when plants are
2. TALL FESCUE	Kentucky 31			pruned. 5. Apply to grass species only.
				6. Apply when plants grow

# FERTILIZER REQUIREMENTS FOR SOD

TYPES OF SPECIES	PLANTING YEAR	FERTILIZER (N-P-K)	RATE (LBS.ACRE)	NIRTOGEN TOP DRESSING RATE (LBS./ACRE)
COOL SEASON GRASSES	FIRST SECOND MAINTENANCE	6-12-12 6-12-12 10-10-10	1500 1000 400	50-1000  30
WARM SEASON GRASSES	FIRST SECOND MAINTENANCE	6-12-12 6-12-12 10-10-10	1500 800400	50-1000 50-100 30







M.E. SACK ENGINEERING

515 N. MAIN ST. HINESVILLE, GEORGIA 31313

(912) 368-5212

PUMP STATION CONSTRUCTION SCHEDULE

W. INDUSTRIAL ST. PUMP STATION

PEMBROKE, GA

SEPTEMBER 2023

EXCAVATION, REMOVAL AND REPLACEMENT OF PIPING 

> ESTABLISH BYPASS CONNECTION

EXCAVATION, REMOVAL, AND REPLACEMENT OF VALVE VAULT

BACKFILL AND SITE RESTORATION

CLEARING AND GRUBBING

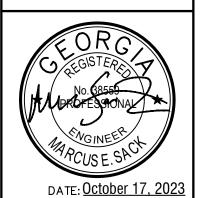
PREPARE BYPASS EQUIPMENT

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. GSWCC REVISIONS

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CITY OF PEMBROKE

Owner: City of Pembroke 160 N Main St Pembroke, GA 31321 (912) 653-4413 streets@pembrokega.net

24 HOUR CONTACT: Keith Cook 160 N Main St Pembroke, GA 31321 (912) 653-4413 streets@pembrokega.net

PUMP STATION IMPROVEMENTS

M.E. SACK ENGINEERING

515 N. MAIN ST.

HINESVILLE, GEORGIA 31313 (912) 368-5212

FORCEMAIN CONSTRUCTION SCHEDULE

W. INDUSTRIAL ST. PUMP STATION

PEMBROKE, GA

HDD SITES EXCAVATION, PREPARATION, AND RESTORATION

JAN

2024

HORIZONTAL DIRECTIONAL DRILLING

PIPE EXCAVATION, PLACEMENT, AND BACKFILL

FEB

2024

MARCH

2024

DEC

DEC

2023

2023

CLEARING AND GRUBBING WITHIN LIMITS OF DISTURBANCES

CLEARING & INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND MAINTENANCE OF BMP CLEARING & INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND MAINTENANCE OF BMP

**EROSION DETAILS** 

ILE NO: 2020-48 PLOT DATE: October 17, 2023

Ds2 SPECIES AND PLANTING SCHEDULE

SPECIES	BROADCAST RATES 1* PLS 2* PER PER	PLAN RESOURCE AREA 3*	ITING	G DA	ATES	BY			RCE EAS	-					REMARKS
	ACRE 1000 SF		J	F	М	Α	M	J	J	Α	S	0	N	D	
RYEGRASS, ANNUAL ALONE	40 lbs 0.9 lbs	M - L P C													227,000 SEED PER POUND. DENSE COVER. VERY COMPETITIVE AND IS NOT BE USED IN MIXTURES.

# Ds3 SPECIES AND PLANTING SCHEDULE

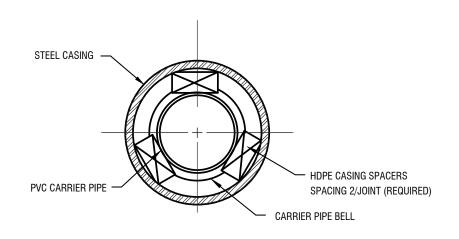
SPECIES	BROAI RATES 1* PER	DCAST PLS 2* PER	PLAN RESOURCE AREA 3*	ITIN	G D/	ATES	S BY	/ RES		RCE EAS						REMARKS
	ACRE	1000 SF		J	F	М	Α	М	J	J	Α	S	0	N	D	
BERMUDA, COMMON HULLED SEED ALONE WITH OTHER PERENNIALS	10 lbs 6 lbs	0.2 lbs 0.1 lbs	P C		_											1,787,000 SEED PER POUND. QUICK COVER. LOV GROWING AND SOD FORMING. FULL SUN. GOO FOR ATHLETIC FIELDS.
BERMUDA, COMMON UNHULLED SEED ALONE WITH OTHER PERENNIALS			P C													PLANT WITH WINTER ANNUALS. PLANT WITH TALL FESCUE.
BERMUDA, SPRIGS COASTAL, COMMON, MIDLAND, OR TIFT 44 COASTAL, COMMON,	40 CU FT OF SOD PLU	R	M-L P C			_										A CUBIC FT. CONTAINS APPROXIMATLY 65 SPRIGS. A BUSHEL CONTAINS 1.25 C.F. OI APPROXIMATLY 800 SPRIGS. SAME AS ABOVE.
TIFT 44 TIFT 78			С	L												SOUTHERN COASTAL PLAIN ONLY

# FERTILIZER REQUIREMENTS

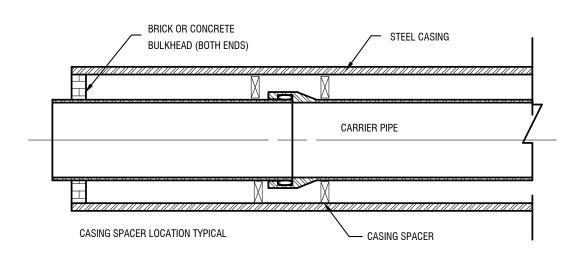
TYPE OF SPECIES	YEAR	ANALYSIS OR EQUIVALENT	RATE	N TOP DRESSING RATE	LIME APPLICATION
Cool Season Grasses	First Second Maintenance	6 - 12 - 12 6 - 12 - 12 10 - 12 - 12	1500 lbs/ac 1000 lbs/ac 400 lbs/ac	50 - 100 lbs/ac 1*2*  30	2000 lbs/ac
Cool Season Grasses and Legumes	First Second Maintenance	6 - 12 - 12 0 - 10 - 10 0 - 10 - 10	1500 lbs/ac 1000 lbs/ac 400 lbs/ac	0 - 50 lbs/ac 1*  	2000 lbs/ac
Ground Covers	First Second Maintenance	10 - 10 - 10 10 - 10 - 10 10 - 10 - 10	1500 lbs/ac 1000 lbs/ac 400 lbs/ac		
Pine Seedings	First	20 - 10 - 5	one 21-gram pallet per seeding placed in the closing hole		
Shrub Leapedeza	First Maintenance	0 - 10 - 10 0 - 10 - 10	700 lbs/ac 700 lbs/ac 4*		
Temporary Cover Crops Seeded Clone	First	10 - 10 - 10	500 lbs/ac	30 lbs/ac 5*	
Warm Season Grasses	First Second Maintenance	6 - 12 - 12 6 - 12 - 12 10 - 10 - 12	1500 lbs/ac 800 lbs/ac 400 lbs/ac	50 - 100 lbs/ac 2*6* 50 - 100 lbs/ac 2*6* 30 lbs/ac	2000 lbs/ac
Warm Season Grasses and Legumes	First Second Maintenance	6 - 12 - 12 0 - 10 - 12 0 - 10 - 12	1500 lbs/ac 1000 lbs/ac 400 lbs/ac	50 lbs/ac 6*	2000 lbs/ac

MULCHING RATES FOR PERMANENT COVER							
TYPE OF MULCH	RATE PER ACRE	NOTES					
Dry straw	2 Tons	Free of weed seeds					
Dry hay	2.5 Tons	Free of weed seeds					
Wood Cellulose	500 lbs. 1000 lbs.	Slope less than 3/4:1 Slope greater than 3/4:1					
Wood Pulp Fiber	500 lbs. 1000 lbs.	Slope less than 3/4:1 Slope greater than 3/4:1					
Sericea Lespedeza Hay	3 Tons	Containing mature seeds					
Pine Straw or Bark	3 inches thick	For bedding Not for seeding					
Bituminous treated roving	See DOT specs.	Use on slopes, in ditches, or dry waterways.					

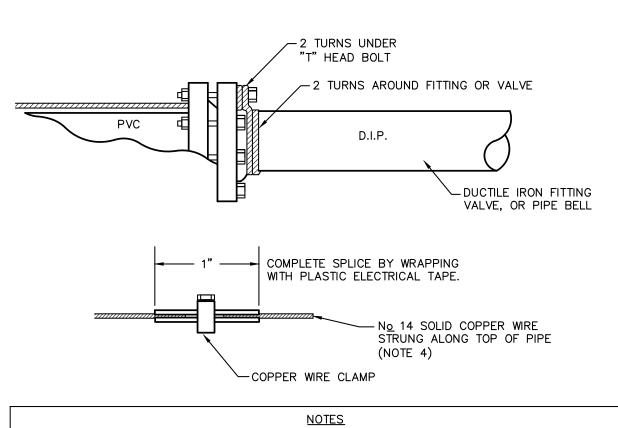
<sup>1.</sup> Mulching is not required for temporary grassing. 2. Mulch shall be applied to cover 75% of the soil surface. 3. Sod does not require mulch.



SECTION



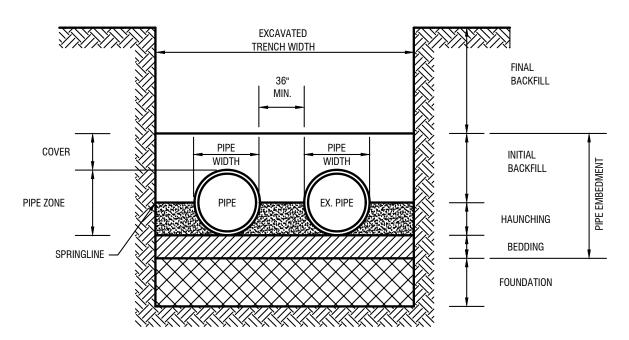
ELEVATION CASING DETAILS



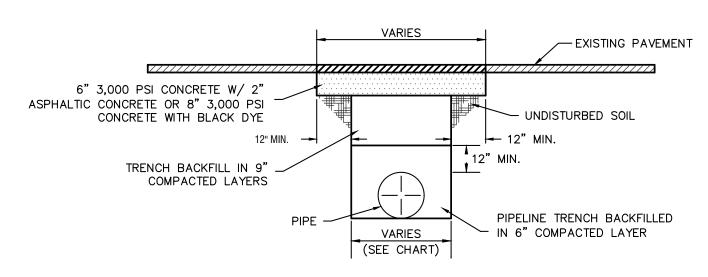
1. USE No 14 AWG SOLID PLASTIC COATED COPPER WIRE.

- 2. STRIP 2" OF COATING AND WRAP WIRE 2 TURNS UNDER "T" HEAD BOLT ON TOP OF DUCTILE IRON FITTING (VALVE). NEXT WRAP WIRE 2 TURNS AROUND BELL OF FITTING (VALVE) AND WIND WITH A CONTINUOS LENGTH WITH AT LEAST 4 WRAPS PER LENGTH OF PVC PIPE TO NEXT DUCTILE IRON FITTING. TERMINATE AT FITTING IN SIMILAR MANNER AS NOTED ABOVE.
- 3. ALL SPLICES MUST BE MADE BY USING COPPER WIRE SPLICE "U" BOLT ASSEMBLIES AND THEN WRAPPING WITH ELECTRICAL TAPE.
- 4. IN LIEU OF "WRAPPING" TRACER WIRE AROUND PVC PIPE, WIRE MAY BE STRUNG ALONG TOP OF PIPE PROVIDED IT IS TAPED TO THE PIPE EVERY 5 FEET TO INSURE POSITION USING BACKFILL.

# TRACER WIRE INSTALLATION DETAIL FOR PVC PIPE



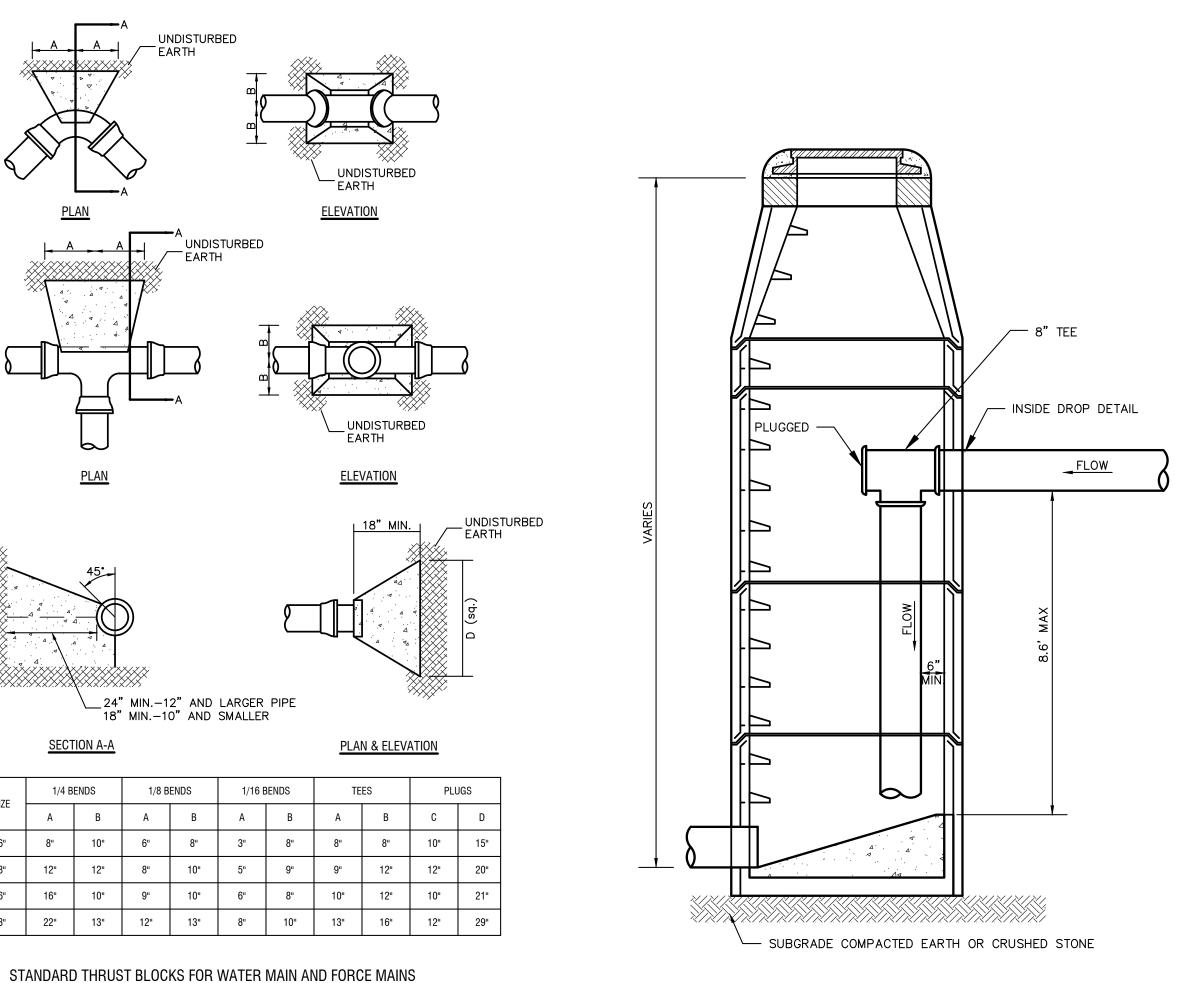
PARALLEL FORCEMAIN PIPE BEDDING DETAIL



PIPE DIAMETER	MAXIMUM TRENCH WIDTH 0 — 6' CUT DEPTH	MAXIMUM PAYMENT WIDTH 0 — 6' CUT DEPTH
6" TO 15"	16" + DIA.	40" + DIA.
18" TO 21"	20" + DIA.	44" + DIA.
24" TO 30"	24" + DIA.	48" + DIA.
33" TO 42"	36" + DIA.	60" + DIA.
48"+	36" + DIA.	60" + DIA.

NOTE MAXIMUM PAYMENT WIDTH FOR CUT DEPTH OVER 6 FEET SHALL BE 8 FEET UNLESS NOTED OTHERWISE ON PLANS.

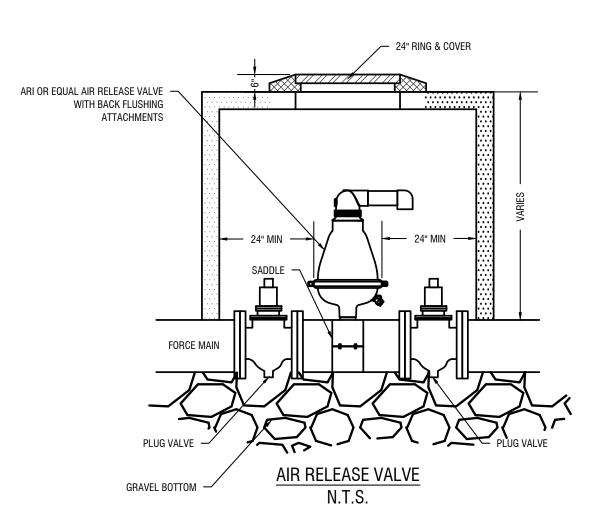
PAVEMENT REMOVAL & REPLACEMENT

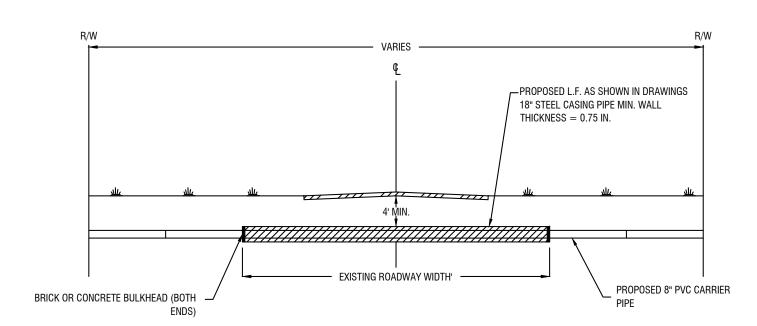


TO BE USED IN CONJUNCTION WITH JOINT RESTRAINT

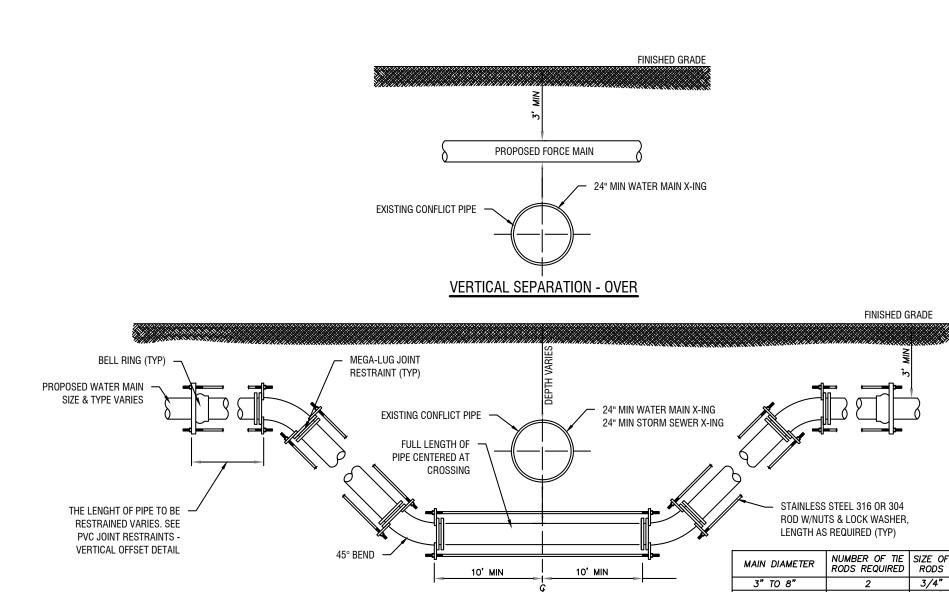
N.T.S.

FORCEMAIN TIE INTO EXISTING MANHOLE N.T.S.





TYPICAL ROADWAY SERVICE BORE DEPTH N.T.S.



GENERAL NOTES:

WATER MAINS AND WATER SERVICE LINES CROSSING HOUSE SEWERS, STORM SEWERS OR SANITARY SEWER SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL SEPARATION OF AT LEAST 24" BETWEEN THE BOTTOM OF THE WATER MAIN AND THE TOP OF THE SEWER. AT CROSSINGS, ONE FULL LENGTH OF WATER PIPE SHALL BE LOCATED SO BOTH JOINTS WILL BE AS FAR AS POSSIBLE.

**VERTICAL SEPARATION - UNDER** 

WHEN LOCAL CONDITIONS PREVENT A VERTICAL SEPARATION OF 24", THE SEWER PASSING OVER OR UNDER WATER MAINS SHALL BE CONSTRUCTED OF MATERIALS AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS OF CONSTRUCTION EXTENDING ON EACH SIDE OF THE CROSSING UNTIL AT LEAST 10' SEPARATES THE TWO PIPES AND SHALL BE PRESSURE TESTED TO ASSURE WATER-TIGHTNESS PRIOR TO BACKFILLING. THE LENGTH OF WATER PIPE MUST BE CENTERED AT THE POINT OF CROSSING SO THAT THE JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER.

IN CASE THAT A SEWER LATERAL PASSES ABOVE WATER MAIN, THE SEWER LATERAL MUST BE ENCASED IN A CARRIER PIPE CONSTRUCTED OF WATER MAIN MATERIALS, EXTENDING EACH SIDE OF THE CROSSING UNTIL AT LEAST 10 FEET SEPARATES THE TWO PIPES.

WATER SERVICE LINES SHOULD GO OVER ANY SANITARY SEWER LINE AND MAINTAIN THE 24" VERTICAL SEPARATION

ADEQUATE STRUCTURAL SUPPORT FOR THE SEWERS TO PREVENT EXCESSIVE DEFLECTION OF JOINTS AND SETTLING ON AND BREAKING THE WATER MAINS.

UTILITY SEPARATION DETAIL

1. GSWCC REVISIONS

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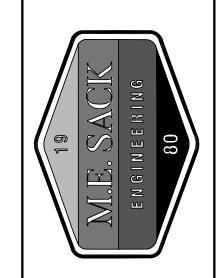
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MUNICIPALITY: CITY OF PEMBROKE

COUNTY:

Owner:
City of Pembroke
160 N Main St
Pembroke, GA 31321
(912) 653-4413

streets@pembrokega.net

24 HOUR CONTACT:
Keith Cook
160 N Main St
Pembroke, GA 31321
(912) 653-4413
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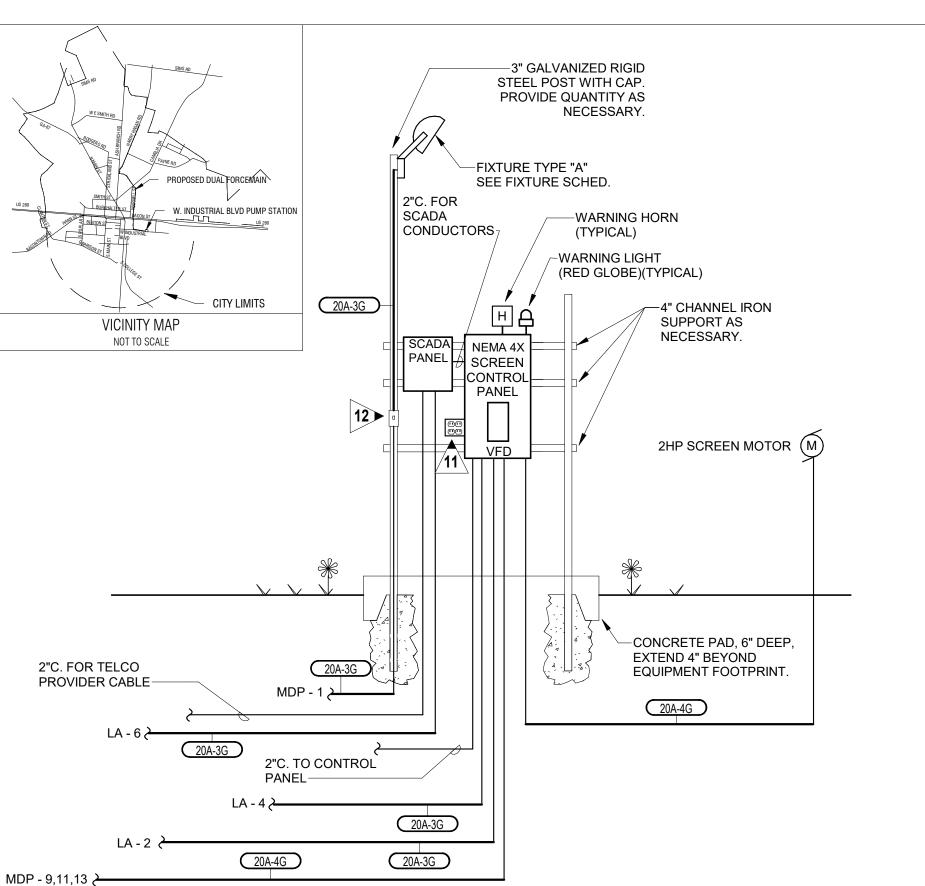
PUMP STATION IMPROVEMENTS

GENERAL DETAILS

C401

FILE NO: 2020-48

PLOT DATE: October 17, 2023



POWER RISER DIAGRAM - SCREEN

E001 NO SCALE

LIGHTING FIXTURE SCHEDULE DESCRIPTION WATTS LUMENS TEMP MANUFACTURERS L.E.D. FLOODLIGHT, BLACK FINISH TENON MOUNTED ON TOP OF 12' 6800 5000 K LITHONIA, STONCO, LUMARK ABOVE GRADE RACK POST.

# **KEYED NOTES:**

- SEE SCREEN POWER RISER DIAGRAM FOR ADDITIONAL CONNECTIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING INSTALLING, TESTING, AND COMMISSIONING THE NEW PROPANE PAD MOUNTED GENERATOR SHOWN. GENERATOR SHALL BE SIZED AS INDICATED AND SHALL BE PROVIDED WITH THE FOLLOWING FEATURES:
  - A. WEATHER ENCLOSED CRITICAL SILENCER. B. LOCKABLE EMERGENCY STOP SWITCH.
  - . RUN RELAY D. 1500 WATT, 120 VOLT BLOCK HEATER
  - E. ALL ENGINE FLUIDS ADDED
  - F. RODENT GUARDS
  - G. NFPA 110 LITERATURE H. 5 YEAR COMPREHENSIVE LIMITED WARRANTY.
  - CONTRACTOR SHALL FULLY INSTALL AND TEST GENERATOR FOR FULL OPERATION AND COMMISSIONING INSTRUCT OWNER TO OPERATION OF SUCH AND TURN OVER ALL O&M, AND WARRANTY MANUALS.
- CONTRACTOR TO PROVIDE CONCRETE PAD SIZED ACCORDINGLY FOR PROPANE GENERATOR SHOWN. SEE
- NEW UTILITY POLE MOUNTED TRANSFORMERS TO BE PROVIDED AND INSTALLED BY GEORGIA POWER.
- NEW WEATHERHEAD TO BE PROVIDED AND INSTALLED BY DIVISION 26. 10' OF SLACK CONDUCTORS SHALL BE PROVIDED FOR GEORGIA POWER TO CONNECT TO POLE MOUNTED UTILITY TRANSFORMER.
- METER BASE MOUNTED ON 4" CHANNEL IRON.

3/4"x10' COPPER CLAD-

GROUND ROD, CADWELD

CONNECTION (TYPICAL)

- 400 AMP DISCONNECT FUSED DOWN TO 225 AMPS, DISCONNECT SHALL BE NEMA 4X RATED.
- 225 AMP, 3 POLE, NEMA 4X, SOLID NEUTRAL TIME DELAYED AUTOMATIC TRANSFER SWITCH.
- PANEL SHALL HAVE A TRANSIENT VOLTAGE SURGE SUPPRESSOR AS INDICATED BY THE NUMBERED T.V.S.S. SYMBOL ON PANEL. SEE T.V.S.S. SCHEDULE TO COORDINATE APPROPRIATELY RATED T.V.S.S.
- 15KVA NEMA 4X RATED TRANSFORMER. 480V PRIMARY/120-208V SECONDARY. TRANSFORMER SHALL BE OF THE BRAND GEAR BEING PROVIDED.
- QUAD GFCI RECEPTACLE IN A DIE-CAST WEATHERPROOF JUNCTION BOX WITH WEATHERPROOF INTERMATIC, DIE-CAST, "IN-USE" COVER.
- PROVIDE DIE-CAST WEATHERPROOF JUNCTION BOX WITH LIGHT SWITCH AND WEATHERPROOF COVER TO CONTROL TYPE "A" LIGHT FIXTURE.

PURPOSED REMOTE GENERATOR "EPO" PUSHBUTTON LOCATION. PROVIDE PAD LOCKABLE NEMA 4X BOX WITH HINGED GASKETED COVER. COORDINATE FINAL LOCATION WITH OWNDER PRIOR TO ROUGH-IN. PROVIDE RED PHENOLIC PLATE WITH ENGRAVED WHITE LETTERING THAT READS "GENERATOR SHUT-OFF PUSHBUTTON."

# **GENERAL NOTES:**

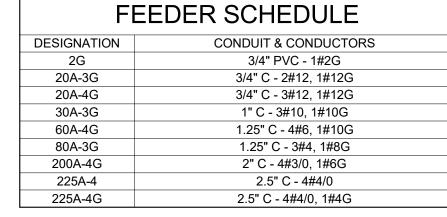
- 1. RACK IS SHOWN FOR DIAGRAMMATIC PURPOSES ONLY. CONTRACTOR SHALL SIZE RACK PER EQUIPMENT DIMENSIONS ALONG WITH OWNER FURNISHED EQUIPMENT. CONTRACTOR MAY ELECT TO MOUNT EQUIPMENT BACK TO BACK DUE TO SPACE CONSTRAINTS.
- 2. ALL ELECTRICAL ENCLOSURES SHALL BE NEMA 4X RATED.
- 3. ALL EXPOSED CONDUIT SHALL BE GALVANIZED RIGID STEEL.
- 4. COORDINATE EXACT LOCATION OF PUMPS WITH PUMP PROVIDER PRIOR TO ROUGH IN.
- 5. ALL CONDUCTORS SHALL BE COPPER.
- 6. DO NOT SCALE DRAWINGS TO LOCATE EQUIPMENT OR OUTLETS.
- 7. MOUNTING HEIGHTS AS INDICATED ON THE DRAWINGS SHALL BE FROM THE FINISHED FLOOR TO THE CENTER LINE OF THE OUTLET BOX.
- 8. THE ELECTRICAL DRAWINGS ARE ONLY A PART OF THE CONTRACT DOCUMENTS. ALL OF THE DRAWINGS AND SPECIFICATIONS MUST BE REVIEWED FOR THEIR INTERRELATIONSHIP AND REQUIRED COORDINATION BETWEEN DISCIPLINES.
- 9. ALL RECEPTACLES AND SWITCHES SHALL BE OUTDOOR RATED AND WEATHER PROOF.

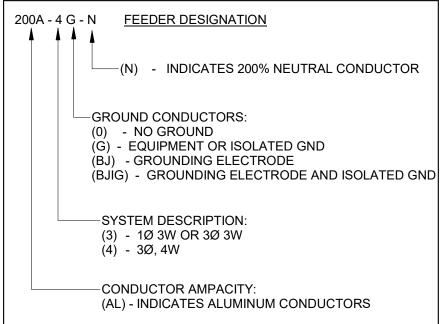
# **LEGEND LIGHTING AND POWER**

CONDUIT RUN CONCEALED UNDERGROUND.

PANELBOARD, SEE SCHEDULE.

DISCONNECT SWITCH, SIZE AS NOTED ON DRAWINGS. FUSED PER MANUFACTURER'S NAME PLATE DATA OF EQUIPMENT SERVED.





	T.V.S.S. SCHEDULE	
TYPE	DESCRIPTION	NOTES
1	DISTRIBUTION PANEL (277/480 VOLTS, 3 PHASE) - 100,000 AMP RATED	1
2	DISTRIBUTION PANEL (120/208 VOLTS, 3 PHASE) - 80,000 AMP RATED	1

1. SEE SPECIFICATIONS FOR DETAILS

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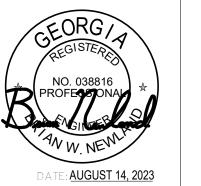
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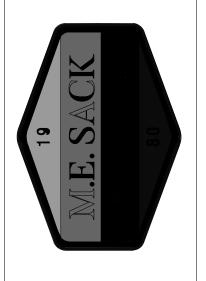
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COUNTY

**BRYAN** 

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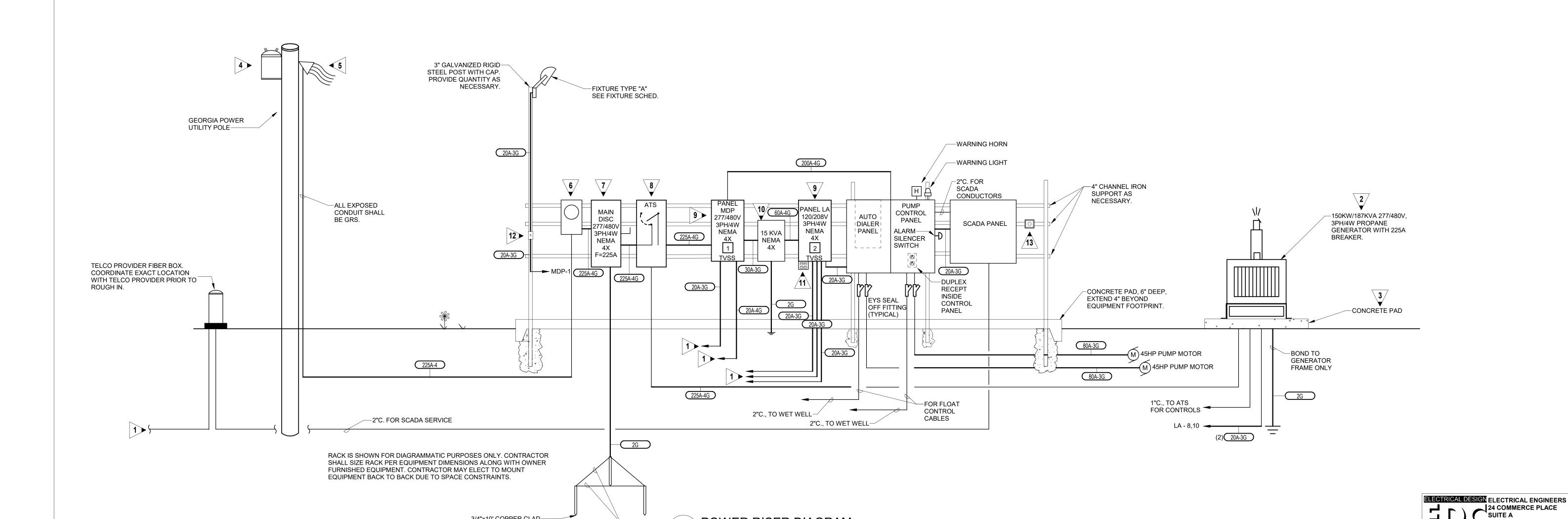
PUMP STATION IMPROVEMENTS

ELECTRICAL LEGEND, NOTES, AND DETAILS

FILE NO: 2020-48 PLOT DATE: August 14, 2023

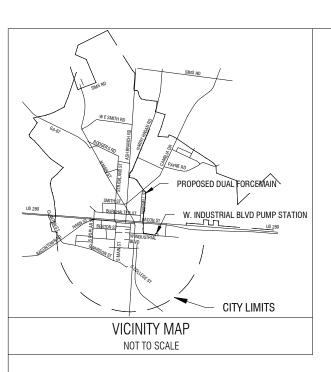
SAVANNAH, GA 30901

PH: (912) 225-4832 CONSULTANTS, INC. EDC PROJECT #: S23009



**POWER RISER DIAGRAM** 

E001 NO SCALE



# **SPECIFICATIONS:**

SECTION 16000 - GENERAL

1.01 WORK INCLUDED

DRAWING REVIEW

- A. THIS DIVISION OF THE SPECIFICATIONS (16000) COVERS THE COMPLETE EXTERIOR ELECTRICAL SYSTEM FOR ALL WORK SHOWN ON THE DRAWINGS AS SPECIFIED HEREIN PROVIDING ALL MATERIAL, LABOR AND EQUIPMENT REQUIRED FOR THE INSTALLATION OF THE ELECTRICAL SYSTEMS COMPLETE AND IN OPERATING CONDITION.
- B. INCLUDE IN THE ELECTRICAL WORK ALL THE NECESSARY SUPERVISION AND THE ISSUING OF ALL COORDINATING INFORMATION TO ANY OTHER TRADES WHO ARE SUPPLYING WORK TO ACCOMMODATE THE ELECTRICAL INSTALLATIONS.
- C. THE DRAWINGS FOR ELECTRICAL WORK UTILIZE SYMBOLS AND SCHEMATIC DIAGRAMS WHICH HAVE NO DIMENSIONAL SIGNIFICANCE. THE WORK SHALL THEREFORE, BE INSTALLED TO FULFILL THE DIAGRAMMATIC INTENT EXPRESSED ON THE ELECTRICAL DRAWINGS.
- D. SUBMIT FOR APPROVAL BY THE ENGINEER ALL MATERIALS AND EQUIPMENT TO BE INCORPORATED IN THE
- E. SUBMIT ONLY SHOP DRAWINGS WHICH COMPLY WITH THE CONTRACT DOCUMENTS.
- F. MARK EACH INDIVIDUAL SUBMITTAL ITEM TO SHOW SPECIFICATION SECTION WHICH PERTAINS TO THE ITEM.
- G. WHEN SHOP DRAWINGS ARE REVIEWED, SOME ERRORS MAY BE DETECTED BUT OTHERS MAY BE OVERLOOKED. THIS DOES NOT GRANT THE CONTRACTOR PERMISSION TO PROCEED IN ERROR. REGARDLESS OF ANY INFORMATION CONTAINED IN THE SHOP DRAWINGS, THE REQUIREMENTS OF THE DRAWINGS AND

SPECIFICATIONS SHALL BE FOLLOWED AND ARE NOT WAIVED OR SUPERSEDED IN ANY WAY BY THE SHOP

- H. ONE COMPLETE SET OF ELECTRICAL DRAWINGS SHALL BE RESERVED FOR AS-BUILT DRAWINGS. ANY APPROVED DEVIATION FROM THE CONTRACT DRAWINGS SHALL BE RECORDED ON THESE DRAWINGS.
- I. COMPLETED AS-BUILT DRAWINGS SHALL BE PRESENTED TO THE ARCHITECT PRIOR TO FINAL INSPECTION.
- J. PROVIDE AT THE TIME OF FINAL INSPECTION THREE SETS OF MAINTENANCE AND OPERATING INSTRUCTION FOR: LIGHTING AND POWER PANELBOARD, FUSES, WIRING DEVICES
- K. ALL ELECTRICAL WORK SHALL MEET OR EXCEED THE LATEST REQUIREMENTS OF THE FOLLOWING CODES AND/OR OTHER AUTHORITIES EXERCISING JURISDICTION OVER THE ELECTRICAL CONSTRUCTION WORK AND THE
- a. THE NATIONAL ELECTRICAL CODE (NFPA 70) 2020 EDITION
- b. THE NATIONAL ELECTRICAL SAFETY CODE (ANSI C-2)
- c. THE LIFE SAFETY CODE (NFPA 101) 2018 EDITION
- d. THE INTERNATIONAL BUILDING CODE 2018 EDITION e. REGULATIONS OF THE LOCAL UTILITY COMPANY WITH RESPECT TO METERING AND SERVICE ENTRANCE. MUNICIPAL AND STATE ORDINANCES GOVERNING ELECTRICAL WORK.
- L. ALL REQUIRED PERMITS AND INSPECTION CERTIFICATES SHALL BE OBTAINED, AND MADE AVAILABLE AT THE COMPLETION OF THE WORK. PERMITS, INSPECTIONS, AND CERTIFICATION FEES SHALL BE PAID FOR AS A PART
- OF THE ELECTRICAL WORK. M. THIS CONTRACTOR SHALL SCHEDULE HIS WORK AND IN EVERY WAY POSSIBLE COOPERATE WITH ALL OTHER
- CONTRACTORS ON THE JOB TO AVOID DELAYS, INTERFERENCES, AND UNNECESSARY WORK. HE SHALL NOTIFY THEM OF ALL OPENINGS, HANGERS, EXCAVATIONS, ETC., SO THAT PROPER PROVISIONS SHALL BE MADE FOR HIS N. THIS CONTRACTOR SHALL DO ALL CUTTING AND EXCAVATING NECESSARY FOR THE COMPLETE INSTALLATION OF HIS WORK, BUT HE SHALL NOT CUT THE WORK OF ANY OTHER CONTRACTOR WITHOUT FIRST CONSULTING THE
- ARCHITECT. HE SHALL REPAIR ANY WORK DAMAGED BY HIM OR HIS WORKMEN, EMPLOYING THE SERVICES OF THE CONTRACTOR WHOSE WORK IS DAMAGED. SAW CUT EXISTING SLAB AS REQUIRED FOR ROUTING CONDUITS AND FLOOR BOXES NOTED TO BE INSTALLED IN EXISTING FLOORS. RESTORE TO ORIGINAL FINISH. O. RACEWAYS, FIXTURES, DEVICES, AND OTHER ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN A NEAT AND
- WORKMANLIKE MANNER AND IN ACCORDANCE WITH RECOGNIZED GOOD PRACTICE FOR A FIRST CLASS INSTALLATION.
- P. THE ENGINEER OR HIS REPRESENTATIVE SHALL HAVE THE AUTHORITY TO REJECT ANY WORKMANSHIP NOT COMPLYING WITH THE CONTRACT DOCUMENTS.
- Q. THE ELECTRICAL CONTRACTOR SHALL PERSONALLY OR THROUGH AN AUTHORIZED LICENSED AND COMPETENT ELECTRICIAN, CONSTANTLY SUPERVISE THE WORK FROM BEGINNING TO COMPLETE AND FINAL INSPECTION.
- R. CONSULT OWNER AND UTILITY COMPANIES FOR UNDERGROUND LINES BEFORE ANY UNDERGROUND WORK IS STARTED. CONTRACTORS SHALL BE RESPONSIBLE FOR ANY DAMAGE.
- S. ALL EMPTY CONDUITS SHALL HAVE A PULL STRING INSTALLED. ALL FLUSH RECESSED BOXES SHALL HAVE BLANK PLATES INSTALLED.
- T. THE CONTRACTOR SHALL PERFORM ALL EXCAVATION TO INSTALL CONDUIT STRUCTURES AND EQUIPMENT SPECIFIED IN THIS DIVISION OF THE SPECIFICATIONS.
- U. TRENCH EXCAVATION. THE BOTTOM OF THE TRENCHES SHALL BE GRADED TO PROVIDE UNIFORM BEARING AND SUPPORT FOR EACH SECTION OF THE CONDUIT ON UNDISTURBED SOIL AT EVERY POINT ALONG ITS ENTIRE LENGTH. OVER DEPTHS SHALL BE BACKFILLED WITH LOOSE, GRANULAR, MOIST EARTH, TAMPED. REMOVED UNSTABLE SOIL THAT IS NOT CAPABLE OF SUPPORTING THE CONDUIT AND REPLACE WITH SPECIFIED MATERIAL.
- V. BACKFILLING. THE TRENCHES SHALL BE BACKFILLED WITH THE EXCAVATED MATERIALS APPROVED FOR BACKFILLING, CONSISTING OF FARTH, LOAM, SANDY CLAY, AND GRAVEL OR SOFT SHALE, FREE FROM LARGE CLODS OF EARTH OR STONES. DEPOSITED IN 6" LAYERS AND TAMPED UNTIL THE CONDUIT HAS A COVER OF NOT LESS THAN THE ADJACENT EXISTING GROUND BUT NOT GREATER THAN 2" ABOVE EXISTING GROUND.
- W. ALL EQUIPMENT REQUIRING ELECTRICAL POWER CONNECTIONS SHALL BE CONNECTED UNDER THIS DIVISION OF THESE SPECIFICATIONS.
- X. ELECTRICAL CIRCUITS TO EQUIPMENT FURNISHED UNDER OTHER SECTIONS OF THESE SPECIFICATIONS ARE BASED ON DESIGN LOADS. IF ACTUAL EQUIPMENT FURNISHED HAS LOADS OTHER THAN DESIGN LOADS ELECTRICAL CIRCUITS AND PROTECTIVE DEVICES SHALL BE REVISED TO BE COMPATIBLE WITH EQUIPMENT FURNISHED AT NO ADDITIONAL COST TO THE OWNER. ANY REVISIONS MUST HAVE PRIOR APPROVAL BY THE
- Y. REMOVE OIL, DIRT, GREASE AND FOREIGN MATERIALS FROM ALL RACEWAYS, FITTINGS, BOXES, PANELBOARD TRIMS AND CABINETS TO PROVIDE A CLEAN SURFACE FOR PAINTING. TOUCH-UP SCRATCHED OR MARRED SURFACES OF LIGHTING FIXTURES, PANELBOARD AND CABINET TRIMS, MOTOR CONTROL CENTER, SWITCHBOARD OR EQUIPMENT ENCLOSURES WITH PAINT FURNISHED BY THE EQUIPMENT MANUFACTURERS SPECIFICALLY FOR THAT PURPOSE.
- Z. THE ELECTRICAL SERVICE AND TELEPHONE/CATV SERVICE FOR THIS PROJECT HAS BEEN COORDINATED BETWEEN THE ENGINEER AND THE UTILITY COMPANY. HOWEVER, BEFORE INSTALLING SERVICE CONDUIT (UNDERGROUND OR MAST), CONTRACTOR SHALL CONTACT UTILITY COMPANY AND VERIFY VOLTAGE, LOCATION AND TYPE OF SERVICE. PRIOR TO ROUGH-IN, COORDINATE AN ON-SITE MEETING WITH EACH UTILITY COMPANY TO REVIEW EXACT REQUIREMENTS. SUBMIT LETTER OF COORDINATION TO ENGINEER FOR REVIEW.
- AA. ALL SYSTEMS AND COMPONENT PARTS SHALL BE GUARANTEED FOR ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE COMPLETE PROJECT. DEFECTS FOUND DURING THIS GUARANTEED PERIOD SHALL BE PROMPTLY CORRECTED AT NO ADDITIONAL COST TO THE OWNER.

# SECTION 16010 - LIGHTING AND POWER PANELBOARDS

- A. COMPLETE PANELBOARD SHOP DRAWINGS SHALL BE SUBMITTED, LISTING AS A MINIMUM THE FOLLOWING ITEMS: VOLTAGE RATING, BUS ASSEMBLY RATING, MAIN BREAKER RATING BY CAPACITY, NUMBER OF POLES AND INTERRUPTING RATING IN RMS SYMMETRICAL AMPERES, SURFACE OR FLUSH MOUNTING, LISTING OF BRANCH BREAKERS BY CAPACITY NUMBER OF POLES AND INTERRUPTING RATING IN RMS SYMMETRICAL AMPERES, SCHEDULE SIMILAR TO THAT SHOWN ON THE DRAWINGS, DEPICTING BRANCH BREAKER ARRANGEMENT AND BREAKER SIZES AND GIVING FULL EXPLANATION FOR ANY DIFFERENCE BETWEEN THE TWO., LUG SIZES AS REQUIRED FOR FEEDERS SHOWN ON DRAWINGS.
- B. FOR THE PURPOSE OF SELECTING QUALITY AND TYPES OF PANELS, EQUIPMENT AS MANUFACTURED BY SQUARE "D" COMPANY HAS BEEN SPECIFIED. FOLLOWING MANUFACTURERS MEETING THESE SPECIFICATIONS ARE ACCEPTABLE: G. E., SIEMENS, CUTLER HAMMER
- C. FURNISH AND INSTALL CIRCUIT BREAKER LIGHTING AND POWER PANELBOARDS AS INDICATED IN THE PANELBOARD SCHEDULE AND WHERE SHOWN ON THE PLANS. PANELBOARDS SHALL BE OF THE DEAD-FRONT SAFETY TYPE, EQUIPPED WITH THERMAL MAGNETIC MOLDED CASE CIRCUIT BREAKERS WITH FRAME AND TRIP RATING AS SHOWN IN THE SCHEDULE.
- D. CIRCUIT BREAKERS SHALL BE HACR RATED, QUICK-MAKE, QUICK-BREAK, THERMAL-MAGNETIC, TRIP-INDICATING, AND HAVE COMMON TRIP ON ALL MULTI-POLE BREAKERS. TRIP INDICATION SHALL BE CLEARLY SHOWN BY THE BREAKER HANDLE TAKING POSITION BETWEEN ON AND OFF, WHEN THE BREAKER IS TRIPPED. BRANCH CIRCUIT BREAKERS FEEDING CONVENIENCE OUTLETS SHALL HAVE SENSITIVE INSTANTANEOUS TRIP SETTING OF NOT MORE THAN 10 TIMES THE TRIP RATING OF THE BREAKERS. CONNECTION TO BUS IN ALL PANELS SHALL BE BOLTED. ALL BREAKERS SHALL BE 20 AMPERE TRIP, UNLESS OTHERWISE SHOWN. ALL BREAKERS SHALL BE MINIMUM FOR 120/208 VOLTS 25,000 A.I.C. SYM. UNLESS OTHERWISE NOTED.
- E. A STEEL CIRCUIT DIRECTORY FRAME PERMANENTLY ATTACHED (SPOT WELDED) AT FACTORY (NOT GLUED), AND CARD WITH A CLEAR PLASTIC COVERING SHALL BE PROVIDED ON THE INSIDE OF THE DOOR. THE DIRECTORY CARD SHALL PROVIDE A SPACE AT LEAST 1/4" HIGH X 3" LONG FOR EACH CIRCUIT.
- F. ALL PANELS SHALL BE EQUIPPED WITH A COPPER EQUIPMENT GROUNDING BAR. THE BAR SHALL HAVE LUGS OF SUFFICIENT SIZE TO HANDLE ALL GROUNDING CONDUCTORS.
- G. WIRING IN PANELBOARDS SHALL BE NEATLY GROUPED AND SECURED WITH TY-WRAPS.
- H. ELECTRICAL PANELS SHALL NOT BE USED AS WIREWAYS OR JUNCTION BOXES FOR CONTROL CONDUCTORS.

# SECTION 16020 - RACEWAYS

- A. ACCEPTABLE MANUFACTURERS OF RIGID STEEL CONDUIT ARE: ALLIED TUBE AND CONDUIT CO., WHEATLAND TUBE
- B. ACCEPTABLE MANUFACTURER'S OF POLYVINYL CHLORIDE (PVC) CONDUIT ARE: CERTAINTEED, GEORGIA PIPE,
- C. ALL METALLIC CONDUIT SHALL BE STEEL, OF STANDARD PIPE DIMENSIONS, SMOOTH INSIDE AND OUT, AND SHALL BE GALVANIZED. WHERE THE WORD "CONDUIT" IS USED HEREINAFTER IT SHALL MEAN EITHER RIGID STEEL CONDUIT, LIQUID TIGHT FLEXIBLE STEEL CONDUIT OR SCHEDULE 40 PLASTIC CONDUIT. INTERMEDIATE GRADE CONDUIT IS NOT
- D. GALVANIZED RIGID STEEL CONDUIT SHALL BE USED IN ALL AREAS WHERE IT WILL BE EXPOSED TO PHYSICAL DAMAGE. SCHEDULE 40 PLASTIC CONDUIT SHALL BE USED UNDERGROUND AND IN SLAB-ON-GRADE. IN NO CASE SHALL PLASTIC CONDUIT BE EXPOSED; SWITCH TO RIGID STEEL CONDUIT WHEN TURNING UP EXPOSED. ANY EXPOSED CONDUIT SHALL BE GALVANIZED RIGID STEEL ONLY.

### E. GALVANIZED RIGID STEEL CONDUIT COUPLINGS AND CONNECTIONS:

a. INSTALL STANDARD, CONDUIT-THREADED FITTINGS. b. FOR CONNECTION TO SHEET METAL BOXES, CABINETS AND OTHER SHEET METAL ENCLOSURES, INSTALL LOCKNUTS ON THE INSIDE AND OUTSIDE OF THE ENCLOSURE FOR EACH CONNECTION. SEE SECTION 16110 OF THESE SPECIFICATIONS.

# F. INSTALLATION OF PLASTIC CONDUIT:

- a. SHALL BE A MINIMUM OF 2'-0" BELOW FINISHED GRADE WHEN NOT COVERED BY CONCRETE.
- b. SHALL HAVE PROPERLY SIZED BOND WIRE INSTALLED WITH ALL CIRCUITS.
- c. BENDS AND TURNS SHALL BE KEPT TO A BARE MINIMUM. d. ALL CONDUIT AND FITTINGS SHALL BE SOLVENT WELDED.
- e. PLASTIC CONDUIT MAYBE TURNED UP CONCEALED IN MASONRY AND GYPSUM BOARD WALLS. PVC CONDUIT
- SHALL BE ALLOWED TO BE ROUTED CONCEALED IN WALLS TO A MAXIMUM HEIGHT OF 48" A.F.F. f. DO NOT INSTALL CONDUIT IN SLAB. ALL CONDUIT SHALL BE INSTALLED A MINIMUM OF 6" BELOW SLAB. CONDUITS SHALL NOT BE BUNCHED TOGETHER. MAINTAIN 1" CLEARANCE BETWEEN CONDUITS.
- g. ALL 90° ELBOWS USED FOR FEEDER CONDUITS ROUTED TO SERVICE TRANSFORMERS, MAIN SWITCHGEAR AND PANELBOARDS SHALL BE GALVANIZED RIGID STEEL. 90° PVC ELBOWS FOR FEEDER CONDUITS SHALL NOT BE

# G. INSULATED BUSHINGS:

- a. INSTALL NYLON INSULATED BUSHINGS ON THE END OF ALL RIGID CONDUIT.
- b. THE INSULATING MATERIAL SHALL BE DESIGNED FOR RUGGED, LONG SERVICE. c. BUSHINGS WHICH CONSIST OF ONLY INSULATING MATERIAL WILL NOT BE ACCEPTED.
- d. FITTINGS WHICH INCORPORATE INSULATED BUSHINGS WILL BE CONSIDERED FOR APPROVAL IN LIEU OF FITTINGS WITH SEPARATE BUSHINGS.
- H. ALL COUPLINGS AND CONNECTIONS IN LOCATION WHERE WATER OR OTHER LIQUID OR VAPOR MIGHT CONTACT THE CONDUIT SHALL ALSO BE WATERTIGHT.
- I. CLOSE EMPTY CONDUIT AS COMPLETE RUNS BEFORE PULLING IN THE CABLES AND WIRES.

# SECTION 16030 - CONDUCTORS

- A. ACCEPTABLE MANUFACTURERS ARE: GENERAL, SOUTHWIRE, ESSEX OR APPROVED EQUAL
- B. ALL WIRING SHALL BE MANUFACTURED IN THE UNITED STATES.

# C. RATINGS AND SIZES:

- a. SHALL BE NOT LESS THAN INDICATED ON THE DRAWINGS AND NOT LESS THAN REQUIRED BY THE NEC. b. MINIMUM SIZE SHALL BE NO. 12 AWG COPPER PROVIDED THE MAXIMUM VOLTAGE DROPS IN THE CONTROL CIRCUITS WILL NOT ADVERSELY AFFECT THE OPERATION OF THE CONTROLS.
- c. CONDUCTOR SIZES INDICATED ON THE DRAWINGS ARE FOR COPPER CONDUCTORS

# D. CONDUCTORS AND GROUND WIRES:

- SHALL BE COPPER.
- b. SIZE NO. 8 AWG AND LARGER SHALL BE STRANDED. c. SIZE NO. 10 AWG AND SMALLER SHALL BE SOLID.
- E. CONDUCTOR INSULATION: CONDUCTOR INSULATION SHALL BE THE NEC TYPE THHN.
- F. WIRE SHALL BE FACTORY COLOR CODED IN SIZE NO. 6 AND SMALLER. COLOR SHALL BE BY INTEGRAL PIGMENTATION WITH A SEPARATE COLOR FOR EACH PHASE, NEUTRAL AND GROUNDING CONDUCTOR. COLOR CODE PER PHASE SHALL BE CONTINUOUS THROUGHOUT THE PROJECT.
- G. ALL WIRING SHALL BE IN CONDUIT UNLESS SPECIFICALLY NOTED OTHERWISE
- H. OUTER JACKETS SHALL FOLLOW N.E.C. REQUIREMENT.
- a. DEDICATED NEUTRALS SHALL BE PROVIDED FOR ALL MULTI-WIRE BRANCH CIRCUITS AND OUTER JACKET SHALL BE PROVIDED WITH APPROPRIATE COLORED TRACER, WHITE WITH BLACK TRACER, COLORS SHALL BE PERMANENT AND SHALL WITHSTAND CLEANINGS.

# **SECTION 16110 - GROUNDING**

- A. THE WORK REQUIRED UNDER THIS SECTION OF THE SPECIFICATIONS CONSISTS OF FURNISHING, INSTALLATION AND CONNECTIONS OF THE SECONDARY GROUNDING SYSTEMS. THE ELECTRICAL SYSTEM SHALL BE A 3 PHASE, 4 WIRE GROUNDED WYE DELTA SYSTEM SUPPLEMENTED WITH EQUIPMENT GROUNDING SYSTEM. EQUIPMENT GROUNDING SYSTEM SHALL BE ESTABLISHED WITH EQUIPMENT GROUNDING CONDUCTORS; THE USE OF METALLIC RACEWAYS FOR EQUIPMENT GROUNDING IS NOT ACCEPTABLE.
- B. ALL MATERIALS SHALL BE UL LISTED AND BEAR A UL LABEL.
- C. GROUNDING ELECTRODE CONDUCTOR SHALL BE BARE OR GREEN INSULATED COPPER CONDUCTOR SIZED AS INDICATED ON THE DRAWINGS.
- D. EQUIPMENT GROUNDING CONDUCTORS SHALL BE GREEN INSULATED TYPE THHN CONDUCTORS SIZED AS INDICATED ON THE DRAWINGS. WHERE SIZE IS NOT INDICATED ON THE DRAWINGS, CONDUCTOR SIZE SHALL BE DETERMINED FROM THE NATIONAL ELECTRICAL CODE TABLE OF SIZES OF EQUIPMENT GROUNDING CONDUCTORS.
- E. BONDING JUMPERS SHALL BE FLEXIBLE COPPER BONDING JUMPERS SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE TABLE ON SIZES OF EQUIPMENT GROUNDING ELECTRODE CONDUCTORS.
- F. EACH RECEPTACLE AND SWITCH DEVICE SHALL BE FURNISHED WITH A GROUNDING SCREW CONNECTED TO THE METALLIC DEVICE FRAME. BOND EQUIPMENT GROUNDING CONDUCTOR TO EACH OUTLET BOX. FOR ISOLATED GROUND RECEPTACLES, BOND EQUIPMENT GROUNDING CONDUCTOR TO BOX, AND ISOLATED GROUND CONDUCTOR TO DEVICE GROUNDING SCREW.
- G. GROUND RODS SHALL BE 3/4" X 10'-0" COPPER CLAD STEEL. CONNECTION TO ALL GROUND RODS SHALL BE BY EXOTHERMIC WELD.
- H. GROUND ALL NON-CURRENT CARRYING PARTS OF THE ELECTRICAL SYSTEM, I.E., WIREWAYS, EQUIPMENT ENCLOSURES AND FRAMES, JUNCTION AND OUTLET BOXES, MACHINE FRAMES AND OTHER CONDUCTIVE ITEMS IN CLOSE PROXIMITY WITH ELECTRICAL CIRCUITS, TO PROVIDE A LOW IMPEDANCE PATH FOR POTENTIAL GROUNDED
- SERVICE ENTRANCE AND SEPARATELY DERIVED ELECTRICAL SYSTEMS, GROUNDING ELECTRODE SYSTEM.
- a. THE NEUTRAL CONDUCTOR OF THE ELECTRICAL SERVICE SERVING THE PREMISES WIRING SYSTEM SHALL BE GROUNDED TO THE GROUND BUS BAR IN THE SERVICE EQUIPMENT, THE GROUND ROD SYSTEM, AND OTHER GROUNDING ELECTRODES SPECIFIED HEREIN OR INDICATED ON THE DRAWINGS. GROUNDING ELECTRODE CONDUCTORS SHALL BE INSTALLED IN RIGID, NON-METALLIC CONDUIT TO POINT OF GROUND CONNECTION. UNLESS SUBJECT TO PHYSICAL DAMAGE IN WHICH CASE THEY SHALL BE INSTALLED IN GALVANIZED RIGID STEEL. WHERE METALLIC CONDUIT IS PERMITTED, BOND CONDUIT AT BOTH ENDS TO GROUNDING ELECTRODE CONDUCTOR WITH A UL BONDING BUSHING.
- J. BONDING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
- K. INSTALL GROUND RODS WHERE INDICATED ON THE DRAWINGS WITH THE TOP OF THE GROUND RODS 12" BELOW
- GROUNDING CONDUCTORS SHALL BE PROVIDED IN ALL BRANCH CIRCUIT RACEWAYS AND CABLES. GROUNDING CONDUCTORS SHALL BE THE SAME AWG SIZE AS BRANCH CIRCUIT CONDUCTORS.
- M. A GROUNDING CONDUCTOR SHALL BE INSTALLED IN ALL FLEXIBLE CONDUIT INSTALLATIONS. FOR BRANCH CIRCUITS, GROUNDING CONDUCTOR SHALL BE SIZED TO MATCH BRANCH CIRCUIT CONDUCTORS.
- N. A FEEDER SERVING SEVERAL PANELBOARDS SHALL HAVE A CONTINUOUS GROUNDING CONDUCTOR WHICH SHALL BE CONNECTED TO EACH RELATED CABINET GROUNDING BAR.
- O. UPON COMPLETION OF THE GROUND ROD INSTALLATION, GROUNDING RESISTANCE READING SHALL BE TAKEN BEFORE CONNECTION IS MADE TO THE BUILDING COLD WATER PIPING SYSTEM. GROUND RESISTANCE READINGS SHALL NOT BE TAKEN WITHIN FORTY-EIGHT HOURS OF RAINFALL. RESULTS OF GROUND RESISTANCE READINGS SHALL BE FORWARDED, IN WRITING, IMMEDIATELY TO THE ENGINEER AND OWNER.

### SECTION 16120 - EQUIPMENT IDENTIFICATION

- A. LAMINATED PLASTIC PLATES WITH 3/16" HIGH WHITE LETTER ETCHED ON BLACK BACKGROUND.
- B. PLATES SHALL BE PERMANENTLY MOUNTED UTILIZING POP RIVETS OR A PERMANENT MASTIC/EPOXY.
- C. PAINTED, STENCILED OR INDENTED TAPE IDENTIFICATION IS NOT ACCEPTABLE.
- D. ALL ELECTRICAL APPARATUS SUCH AS WIRING TROUGHS, PANELBOARDS, INDIVIDUAL CIRCUIT BREAKERS, TRANSFORMERS AND DISCONNECT SWITCHES SHALL HAVE LAMINATED PLASTIC IDENTIFICATION PLATES. IDENTIFICATION SHALL MATCH LABELING SHOWN ON PLANS.
- E. A "STEEL" CIRCUIT DIRECTORY FRAME PERMANENTLY ATTACHED AT FACTORY (NOT GLUED), AND A DIRECTORY CARD WITH A PLASTIC COVERING SHALL BE PROVIDED ON THE INSIDE OF EACH PANEL DOOR. THE DIRECTORY SHALL BE TYPED TO IDENTIFY THE LOAD FED BY EACH CIRCUIT AND THE AREAS SERVED. SPACES OR ROOM NUMBERS SHOWN ON THE DRAWINGS ARE NOT NECESSARILY THE FINAL NUMBERS TO BE ASSIGNED TO THESE AREAS. THE CONTRACTORS SHALL BEFORE COMPLETION OF THE PROJECT OBTAIN FROM THE ARCHITECT FINAL SPACE OR ROOM NUMBERS SO THAT IT CAN BE TYPED ONTO DIRECTORY.
- F. CIRCUIT BREAKERS AND DISCONNECTS SHALL IDENTIFY DESIGNATION OF THE EQUIPMENT SERVED, CIRCUIT AND PANEL FROM WHICH IT IS SERVED AS WELL AS VOLTAGE/PHASE OF CIRCUIT.
- G. ON ALL PANELBOARDS THE EXTERIOR IDENTIFICATION PLATE SHALL MATCH THAT ON THE DRAWINGS AND THE PANEL AND CIRCUIT NUMBER SERVING THE PANEL SHALL BE DESIGNATED WITHIN THE PANEL.

# SECTION 16190 ENGINE GENERATOR SET

- A. PROVIDE LABOR AND MATERIAL NECESSARY TO INSTALL A PROPANE GAS STANDBY ENGINE-GENERATOR SET OF THE LATEST COMMERCIAL TYPE AND DESIGN AS SPECIFIED HEREIN.
- B. THE CONTRACTOR SHALL FURNISH INFORMATION SHOWING MANUFACTURERS' MODEL NUMBER. DIMENSIONS, AND WEIGHTS FOR THE ENGINE, GENERATOR, AND MAJOR AUXILIARY EQUIPMENT.
- C. THE FOLLOWING MANUFACTURERS MEETING THESE SPECIFICATIONS ARE ACCEPTABLE: ONAN,

CATERPILLAR/OLYMPIAN, DETROIT PROPANE/WILLIAMS, KOHLER AND GENERAC.

- D. THE CONTRACTOR SHALL SUBMIT COPIES OF PERTINENT DRAWINGS AND SCHEMATIC DIAGRAMS FOR APPROVAL AND SHALL INCLUDE THE FOLLOWING:
- 1. ENGINE GENERATOR SET INCLUDING PLANS AND ELEVATIONS OR RISER VIEWS CLEARLY INDICATING ENTRANCE POINTS FOR EACH OF THE INTERCONNECTIONS REQUIRED.
- ENGINE GENERATOR/EXCITER CONTROL CUBICLE.
- FUEL CONSUMPTION RATE CURVES AT VARIOUS LOADS, VENTILATION AND COMBUSTION CFM REQUIREMENTS EXHAUST MUFFLERS AND VIBRATION ISOLATORS.
- BATTERY CHARGER, BATTERY, AND BATTERY RACKS. AUTOMATIC LOAD TRANSFER SWITCH.
- ACTUAL ELECTRICAL DIAGRAMS INCLUDING SCHEMATIC DIAGRAMS AND INTERCONNECTION WIRING DIAGRAMS
- FOR ALL EQUIPMENT TO BE PROVIDED.
- 8. LEGENDS FOR ALL DEVICES ON ALL DIAGRAMS 9. SEQUENCE OF OPERATION EXPLANATIONS FOR ALL PORTIONS OF ALL SCHEMATIC WIRING DIAGRAMS.

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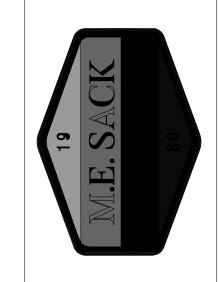
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GSWCC LEVEL II # 70248

EXPIRES: 06/14/2023





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> TIS EM  $\triangleleft$ MPR

ECTRICAL DESIGN ELECTRICAL ENGINEERS

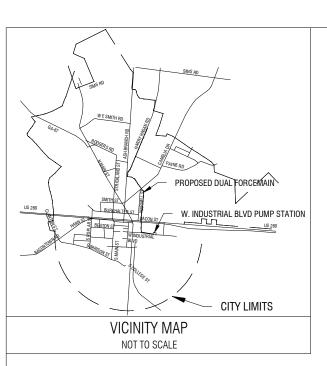
ONSULTANTS, INC. EDC PROJECT #: S23009

24 COMMERCE PLACE

ISAVANNAH, GA 30901

PH: (912) 225-4832

FILE NO: 2020-48 PLOT DATE: August 14, 2023



# **SPECIFICATIONS:**

- E. ENGINE: THE ENGINE SHALL BE 1800 RPM, WATER-COOLED IN LINE OR VEE TYPE FOUR-STROKE CYCLE COMPRESSION IGNITION PROPANE GAS. THE ENGINE SHALL BE EQUIPPED WITH LUBE OIL AND INTAKE AIR FILTERS, LUBE OIL COOLER, ENGINE DRIVEN WATER PUMP, AND UNIT MOUNTED INSTRUMENTS, WATER TEMPERATURE GAUGE, LUBRICATION OIL PRESSURE GAUGE, AND BATTERY CHARGING AMMETER.
- 1. GOVERNOR A GEAR DRIVEN HYDRAULIC GOVERNOR SHALL MAINTAIN FREQUENCY REGULATION NOT TO EXCEED 3% (1.8 HERTZ) FROM NO LOAD TO
- FULL RATED LOAD.

  2. MOUNTING THE UNITS SHALL BE MOUNTED ON A STRUCTURAL STEEL SUB-BASE AND SHALL BE PROVIDED WITH SUITABLE SPRING-TYPE ISOLATORS.
- AND SHALL BE PROVIDED WITH SUITABLE SPRING-TYPE ISOLATORS.

  3. SAFETY DEVICES SAFETY SHUT-OFF FOR HIGH WATER TEMPERATURE, LOW OIL

  DESSUIPE OVER SPEED AND ENGINE OVER CRANK SHALL BE DROVIDED.
- PRESSURE, OVER-SPEED, AND ENGINE OVER-CRANK SHALL BE PROVIDED.

  4. GUARDS GUARDS SHALL BE PROVIDED OVER ALL EXPOSED MOVING PARTS AS REQUIRED BY OSHA.
- F. THE GENERATOR SHALL BE RATED FOR CONTINUOUS STAND-BY SERVICE. SEE ELECTRICAL RISER DIAGRAM FOR EXACT SIZE.
- G. THE GENERATOR SHALL BE A THREE PHASE, 60 HERTZ, SINGLE BEARING, ROTATING FIELD, SYNCHRONOUS TYPE BUILT TO NEMA STANDARDS. A VOLTAGE REGULATOR SHALL BE PROVIDED TO MATCH THE CHARACTERISTICS OF THE GENERATOR AND ENGINE. VOLTAGE REGULATION SHALL BE + 2% FROM NO LOAD TO FULL RATED LOAD. READILY ACCESSIBLE VOLTAGE DROP, VOLTAGE LEVEL AND VOLTAGE GAIN CONTROLS SHALL BE PROVIDED. VOLTAGE LEVEL ADJUSTMENTS SHALL BE A MINIMUM OF + 5%. GENERATOR AND EXCITER SHALL BE INHERENTLY CAPABLE OF PARALLEL OPERATION WITH OTHER POWER SOURCES OF EQUIVALENT ELECTRICAL CHARACTERISTICS, AND STATOR SHALL INCLUDE A TWELVE LEAD, RE-CONNECTABLE BUSS BAR SYSTEM FOR EASY LOAD CONNECTION. ENTIRE GENERATOR ASSEMBLY SHALL BE UL2200 LISTED.
- H. RADIATOR A RADIATOR WITH BLOWER TYPE FAN SHALL BE SIZED TO MAINTAIN SAFE OPERATION 110 DEGREES F AMBIENT TEMPERATURE. AIR FLOW RESTRICTION FROM THE RADIATOR SHALL NOT EXCEED 0.5" HO. THE ENGINE COOLING SYSTEM SHALL BE PRE-TREATED BY THE SYSTEM SUPPLIER FOR THE INHIBITION OF INTERNAL CORROSION, AND FREEZING.
- I. HOUSING SHALL CONSIST OF A WEATHER PROOF ENCLOSURE TO COMPLETELY ENCLOSE THE ENGINE GENERATOR AND ACCESSORIES. HOUSING SHALL PROTECT THE ENGINE GENERATOR FROM THE ENVIRONMENT, YET BE CONDUCTIVE TO EASY MAINTENANCE. HOUSING SHALL HAVE REMOVABLE SWING OUT DOORS ON EACH SIDE AND LOCKABLE REAR DOOR FOR ACCESS TO METERS AND CONTROLS. SIDE DOORS SHALL HAVE A MEANS TO PAD LOCK. CONSTRUCTION OF HOUSING SHALL BE OF A MINIMUM 14 GAUGE SHEET STEEL AND PAINTED MANUFACTURERS STANDARD COLOR.
- J. EXHAUST MUFFLER SHALL BE MOUNTED ON TOP OF HOUSING. THE EXHAUST MUFFLER SHALL BE A CRITICAL GRADE MUFFLER. MUFFLER SHALL BE FACTORY INSTALLED SO THAT ITS WEIGHT IS NOT SUPPORTED BY THE ENGINE. A FLEXIBLE EXHAUST FITTING SHALL BE SUPPLIED AND INSTALLED BETWEEN THE MUFFLER AND EXHAUST MANIFOLD. ALL ACCESSORIES SHALL BE FACTORY INSTALLED. THIS INCLUDES FLANGES, MUFFLER, TAIL PIPE AND RAIN CAP.

### K. AUTOMATIC STARTING SYSTEM:

- 1. STARTING MOTOR A DC ELECTRIC STARTING SYSTEM WITH POSITIVE ENGAGEMENT SHALL BE FURNISHED. THE MOTOR VOLTAGE SHALL BE AS RECOMMENDED BY THE ENGINE MANUFACTURER.
- 2. AUTOMATIC CONTROL FULLY AUTOMATIC GENERATOR SET START-STOP CONTROLS IN THE GENERATOR CONTROL PANEL SHALL BE PROVIDED. CONTROLS SHALL PROVIDE SHUTDOWN FOR LOW OIL PRESSURE, HIGH WATER TEMPERATURE, OVER SPEED, OVER CRANK. CONTROLS SHALL INCLUDE A 30 SECOND SINGLE CRANKING CYCLE LIMIT WITH LOCKOUT.
- 3. JACKET WATER HEATER A UNIT MOUNTED THERMAL CIRCULATION TYPE WATER HEATER INCORPORATING A THERMOSTATIC SWITCH SHALL BE FURNISHED TO MAINTAIN ENGINE JACKET WATER TO 70 DEGREES F. THE HEATER SHALL BE 120 VOLT, SINGLE PHASE, 60 HERTZ. PROVIDE PRESSURE SWITCH ACTUATED BY OIL PRESSURE TO SHUT DOWN HEATER WHEN OIL PRESSURE REACHES RUNNING PRESSURE
- 4. BATTERY CHARGING ALTERNATOR A BELT DRIVEN BATTERY CHARGING ALTERNATOR RATED 24 VOLTS, 35 AMP DC SHALL BE PROVIDED WITH TRANSISTORIZED VOLTAGE REGULATOR.
- 5. BATTERIES A LEAD ACID STORAGE BATTERY SET OF THE HEAVY DUTY PROPANE STARTING TYPE SHALL BE PROVIDED. BATTERY VOLTAGE SHALL BE COMPATIBLE WITH THE STARTING SYSTEM. THE BATTERY SET SHALL BE RATED NO LESS THAN 220 AMP-HOURS. NECESSARY CABLES AND CLAMPS SHALL BE PROVIDED.
- BATTERY RACKS BATTERY RACKS SHALL BE PROVIDED FOR EACH BATTERY AND SHALL CONFORM TO NEC 480 7 (A) (1). THEY SHALL BE CONSTRUCTED OF METAL AND SO TREATED AS TO BE RESISTANT TO DETERIORATING ACTION BY BATTERY ELECTROLYTE. FURTHER, CONSTRUCTION SHALL BE SUCH THAT NONCONDUCTING INSULATION MATERIAL DIRECTLY SUPPORTS THE CELLS.
   BATTERY CHARGER A CURRENT LIMITING BATTERY CHARGER SHALL BE FURNISHED TO AUTOMATICALLY RECHARGE BATTERIES. CHARGERS SHALL FLOAT AT 2.17 VOLTS PER CELL. IT SHALL INCLUDE OVERLOAD PROTECTION,
- FLOAT AT 2.17 VOLTS PER CELL. IT SHALL INCLUDE OVERLOAD PROTECTION, SILICON DIODE FULL WAVE RECTIFIERS, VOLTAGE SURGE SUPPRESSOR, DC AMMETER, DC VOLT- METER, AND FUSED AC INPUT. AC INPUT VOLTAGE SHALL BE 120 VOLTS, SINGLE PHASE. AMPERAGE OUTPUT SHALL BE NO LESS THAN 6 AMPERES.
- M. TYPE A GENERATOR MOUNTED NEMA 4X TYPE VIBRATION ISOLATED 14 GAUGE STEEL CONTROL PANEL SHALL BE PROVIDED. PANEL SHALL CONTAIN, BUT NOT BE LIMITED TO, THE FOLLOWING EQUIPMENT:
- 1. FREQUENCY METER, 3 ½ INCH, DIAL TYPE.
- VOLTMETER, 3 ½ INCH, 2% ACCURACY.
   AMMETER, 3 ½ INCH, 2 % ACCURACY.
- 4. AMMETER VOLTMETER PHASE SELECTOR SWITCH.
- 5. AUTOMATIC STARTING CONTROLS AS SPECIFIED.6. VOLTAGE LEVEL ADJUSTMENT RHEOSTAT.
- 7. DRY CONTACTS FOR REMOTE ALARM WIRED TO TERMINAL STRIPS.
- 8. INDIVIDUAL FAULT INDICATOR LIGHTS FOR LOW OIL PRESSURE, HIGH WATER TEMPERATURE, OVER SPEED, AND OVER CRANK.
- THREE POSITION FUNCTION SWITCH MARKED, RUN-STOP AND REMOTE.
   RUNNING TIME METER, OIL PRESSURE, BATTERY CHARGING AMMETER, AND WATER TEMPERATURE GAUGES.
- N. TYPE A MAIN LINE, MOLDED CASE CIRCUIT BREAKER MOUNTED UPON AND SIZED TO THE OUTPUT OF THE GENERATOR SHALL BE INSTALLED AS A LOAD CIRCUIT INTERRUPTING AND PROTECTION DEVICE. IT SHALL OPERATE BOTH MANUALLY FOR NORMAL SWITCHING FUNCTIONS AND AUTOMATICALLY DURING OVERLOAD AND SHORT CIRCUIT CONDITIONS. THE TRIP UNIT FOR EACH POLE SHALL HAVE ELEMENTS PROVIDING INVERSE TIME DELAY DURING OVERLOAD CONDITIONS AND INSTANTANEOUS MAGNETIC TRIPPING FOR SHORT CIRCUIT PROTECTION. THE CIRCUIT BREAKER SHALL MEET STANDARDS ESTABLISHED BY UNDERWRITERS LABORATORIES NATIONAL ELECTRIC MANUFACTURER'S ASSOCIATION, AND NATIONAL ELECTRICAL CODE.

#### O. AUTOMATIC LOAD TRANSFER SWITCH:

- 1. THE AMPERAGE RATING OF THE AUTOMATIC LOAD TRANSFER SWITCH SHALL BE AS INDICATED IN THE ELECTRICAL RISER DIAGRAM.
- 2. EACH AUTOMATIC TRANSFER SWITCH SHALL BE MECHANICALLY HELD ON BOTH THE EMERGENCY AND THE NORMAL SIDE, AND RATED FOR CONTINUOUS DUTY IN AN UNVENTILATED ENCLOSURE. THE SWITCH SHALL BE DOUBLE THROW WITH THE MAIN CONTACTS RIGIDLY AND MECHANICALLY INTERLOCKED TO INSURE ONLY TWO POSSIBLE POSITIONS: NORMAL OR EMERGENCY. A MANUAL OPERATOR MUST BE PROVIDED TO ENABLE MANUAL OPERATION.
- 3. RATING AND PERFORMANCE: THE AUTOMATIC LOAD TRANSFER CONTROL SHALL BE RATED FOR CONTINUOUS DUTY WHEN ENCLOSED IN A NON-VENTILATED NEMA 1 ENCLOSURE. IT SHALL BE RATED FOR ALL CLASSES OF LOAD INCLUDING INDUCTIVE AND NON-INDUCTIVE AT 600 VOLTS AND TUNGSTEN LAMP LOAD AT 250 VOLTS. THE TRANSFER SWITCH PORTION OF THE CONTROL SHALL BE DESIGNED, BUILT, AND TESTED TO CLOSE ON AN INRUSH CURRENT UP TO AND INCLUDING TWENTY (20) TIMES THE CONTINUOUS RATING OF THE SWITCH WITHOUT WELDING OR EXCESSIVE BURNING OF THE CONTACTS. THE TRANSFER SWITCH SHALL BE CAPABLE OF SWITCHING LOAD UP TO AND INCLUDING FIFTEEN (15) TIMES THE CONTINUOUS RATING OF THE SWITCH AND CAPABLE OF ENDURING SIX THOUSAND (6000) CYCLES OF OPERATION, AT RATED CURRENT, AT A RATE OF SIX (6) CYCLES PER MINUTE, WITHOUT FAILURE. ONE CYCLE SHALL CONSIST OF ONE COMPLETE OPENING AND CLOSURE OF BOTH SETS OF CONTACTS ON AN INRUSH CURRENT OF TEN (10) TIMES THE CONTINUOUS RATING OF THE SWITCH. THE TRANSFER SWITCH SHALL HAVE TIME DELAY IN NEUTRAL TRANSITION (TDN).
- 4. TRANSFER SWITCH SHALL BE NEMA 4X RATED AND LISTED UNDER U.L.1008, AND APPROVED BY CANADIAN STANDARDS ASSOCIATION. SWITCHES UTILIZING REVERSING CONTRACTOR MECHANISMS AS A MEANS TO TRANSFER LOAD ARE DISALLOWED AND WILL NOT BE CONSIDERED.
- 5. ACCESSORIES TO TRANSFER SWITCHES; ALL AUTOMATIC LOAD TRANSFER SWITCHES SHALL INCLUDE THE FOLLOWING ACCESSORIES:
- a. ENGINE STARTING CONTACTS TO PROVIDE FOR GENERATOR STARTING FROM EACH UNIT INDEPENDENT OF THE OTHER.
- b. FULL PHASE PROTECTION. THREE PHASE RELAYS SHALL BE FIELD ADJUSTABLE, CLOSE DIFFERENTIAL TYPE WITH 92-95% PICKUP AND 82-85% DROP OUT. RELAYS ARE TO BE CONNECTED ACROSS LIVE LINES.
- c. TEST SWITCH, TO SIMULATE A POWER OUTAGE.
  d. ADJUSTABLE TIME DELAY ON ENGINE STARTING TO OVER-RIDE MOMENTARY
- OUTAGES AND NUISANCE VOLTAGE DIPS.

  e. ADJUSTABLE TIME DELAY ON TRANSFER OF LOAD TO EMERGENCY SOURCE.

  ADJUSTABLE TIME DELAY TO OPEN TRANSFER SWITCH CONTACT TO ALLOW
- MOTOR LOADS TO DECAY.

  f. ADJUSTABLE TIME DELAY ON RETRANSFER TO LOAD TO NORMAL WITH 5 MINUTE COOL-DOWN TIMER WHEREIN THE GENERATOR SET RUNS UNLOADED AFTER
- TRANSFER TO LINE.
  g. PLANT EXERCISER TO START AND RUN THE GENERATOR SET WITH OR WITHOUT LOAD EACH 168 HOURS FOR A 30 MINUTE INTERVAL. SELECTOR SWITCH WILL BE
- PROVIDED FOR WITH LOAD OR WITHOUT LOAD TESTING.

  h. ONE AUXILIARY CONTACT CLOSED ON EMERGENCY AND ONE AUXILIARY
- CONTACT OPEN ON EMERGENCY.

  i. PILOT LIGHTS TO INDICATE THE NORMAL AND EMERGENCY POSITION OF THE
- TRANSFER SWITCH.
  j. ISOLATED (UNGROUNDED NEUTRAL BAR).
- k. DISCONNECT PLUG.I. TIME DELAY NEUTRAL, PROGRAMMED TRANSITION, OR IN PHASE MONITOR.
- P. TRANSIENT VOLTAGE SURGE PROTECTION SHALL BE PROVIDED PROTECTING ALL LOW VOLTAGE CIRCUITS SERVING THE TRANSFER SWITCH AND THE ANNUNCIATOR. EDCO OR EQUAL.

# Q. TESTING

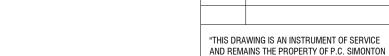
- 1. PRIOR TO ACCEPTANCE OF THE INSTALLATION, EQUIPMENT SHALL BE TESTED TO SHOW IT IS FREE OF ANY DEFECTS AND WILL START AUTOMATICALLY AND BE SUBJECTED TO FULL LOAD TEST THROUGH THE USE OF EXISTING LOADS AND, DRY TYPE LOAD BANKS SUPPLIED FOR THIS PURPOSE AT THE JOB SITE BY THE GENERATOR SET SUPPLIER.
- LOAD BANK TESTING SHALL BE DONE IN THE PRESENCE OF THE OWNER'S ENGINEER OR HIS APPOINTED REPRESENTATIVE ONLY AFTER THE UNIT IS PERMANENTLY INSTALLED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. IF TESTING IS COMPLETED WITHOUT BENEFIT OF ENGINEERS PRESENCE, TESTING SHALL BE DONE AGAIN IN HIS PRESENCE. TESTING SHALL BE FOR A PERIOD OF FOUR (4) HOURS UNDER FULL LOAD.
- R. PRIOR TO THE FINAL INSPECTION, DELIVER 4 COPIES OF THE FOLLOWING ITEMS TO THE
- A CERTIFICATE BY THE MANUFACTURER OF THE ENGINE-GENERATOR SET THAT THE AUXILIARY ELECTRICAL POWER SYSTEM HAS BEEN PROPERLY INSTALLED, ADJUSTED AND TESTED.
- 2. CERTIFIED COPIES OF ALL OF THE FACTORY AND CONSTRUCTION SITE TEST DATA SHEETS AND REPORTS FOR THE ENGINE-GENERATOR SET AND MAJOR AUXILIARIES.
- 3. COMPLETE OPERATING AND MAINTENANCE MANUALS FOR THE ENGINEGENERATOR SET AND AUXILIARIES INCLUDING WIRING DIAGRAMS, TECHNICAL DATA
  SHEETS AND INFORMATION FOR ORDERING REPLACEABLE PARTS:
- a. INCLUDE COMPLETE INTERCONNECTION DIAGRAMS WHICH INDICATE ALL
- COMPONENTS OF THE SYSTEM.
  b. INCLUDE COMPLETE DIAGRAMS OF THE INTERNAL WIRING FOR EACH OF THE
- ITEMS OF EQUIPMENT.
  c. THE DIAGRAMS SHALL HAVE THEIR TERMINALS IDENTIFIED TO FACILITATE INSTALLATION, OPERATION AND MAINTENANCE.
- S. LAMINATE OR MOUNT UNDER PLEXIGLAS A SET OF OPERATING INSTRUCTIONS FOR THE SYSTEM AND INSTALL IT UNDER A NEAT FRAME, ADJACENT TO TRANSFER SWITCH.
- T. THE COMPLETE STANDBY ELECTRICAL SYSTEM FURNISHED UNDER THIS SECTION SHALL BE GUARANTEED AGAINST DEFECTIVE PARTS AND WORKMANSHIP UNDER TERMS OF THE MANUFACTURER'S AND DEALER'S STANDARD WARRANTY. BUT, IN NO EVENT SHALL IT BE FOR A PERIOD OF LESS THAN FIVE (5) YEARS OR 3000 HOURS FROM DATE OF FINAL TESTING AND ACCEPTANCE OF THE SYSTEM AND SHALL INCLUDE LABOR, PARTS AND TRAVEL TIME FOR NECESSARY REPAIRS AT THE JOB SITE. WARRANTY INFORMATION SHALL BE SUBMITTED ALONG WITH CONSTRUCTION SITE TEST DATA SHEETS. THIS INFORMATION SHALL LIST STARTING AND ENDING DATES AND WHO IS TO BE CONTACTED FOR WARRANTY SERVICE.

# SECTION 16160 TRANSIENT VOLTAGE SURGE SUPPRESSORS

- A. FOR THE PURPOSE OF SELECTING QUALITY AND TYPE OF TVSS UNITS, EQUIPMENT AS MANUFACTURED BY CURRENT TECHNOLOGY INC. HAS BEEN SPECIFIED. THE FOLLOWING MANUFACTURERS MEETING THESE SPECIFICATIONS ARE ACCEPTABLE: SURGE SUPPRESSION, INC., LIEBERT, CLIPPER POWER SYSTEMS
- B. THE MANUFACTURER SHALL PROVIDE A LIMITED FIVE-YEAR WARRANTY, FROM THE DATE OF INSTALLATION, AGAINST FAILURE WHEN INSTALLED IN COMPLIANCE WITH APPLICABLE NATIONAL/LOCAL ELECTRICAL CODES AND THE MANUFACTURER'S RECOMMENDED INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS.
- C. THESE SPECIFICATIONS DESCRIBE THE ELECTRICAL AND MECHANICAL REQUIREMENTS FOR A HIGH-ENERGY SUPPRESSION FILTER SYSTEM UTILIZING TRANSIENT VOLTAGE SURGE SUPPRESSION (TVSS) FOR APPLICATION IN CATEGORY C (MAIN SERVICE ENTRANCE) AND CATEGORY B (DISTRIBUTION PANELS) AREAS AS DEFINED BY THE IEEE C62.41 STANDARD.
- D. BASED ON ANSI/IEEE C62.41-1991'S STANDARD 8/20 MICROSECOND CURRENT WAVEFORM, AND IN ACCORDANCE WITH NEMA PUBLICATION NO. LS 1-1992, THE TESTED SINGLE-PULSE SURGE CURRENT CAPACITY, IN AMPS, OF THE UNIT SHALL BE NO LESS THAN THE FOLLOWING: MAIN SERVICE PANEL TOTAL RATING: 100,000 VA, DISTRIBUTION PANELS TOTAL RATING:80.000 VA.
- E. TVSS SHALL BE INTERNALLY MOUNTED IN PANEL.

# SECTION 16220 - CONSTRUCTION REVIEWS INSPECTION AND TESTING

- A. THE ENGINEER OR HIS REPRESENTATIVE SHALL OBSERVE AND REVIEW THE INSTALLATION OF ALL ELECTRICAL SYSTEMS SHOWN ON THE DRAWINGS AND AS SPECIFIED HEREIN.
- B. BEFORE COVERING OR CONCEALING ANY CONDUIT BELOW GRADE OR SLAB, IN WALL OR ABOVE CEILING, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT HE CAN REVIEW THE INSTALLATION.
- C. AT THE TIME OF THE CONTRACTOR'S FINAL INSPECTION, ALL SYSTEMS SHALL BE CHECKED AND TESTED FOR PROPER INSTALLATION AND OPERATION BY THE CONTRACTOR IN THE PRESENCE OF THE ARCHITECT OR HIS REPRESENTATIVE.
- D. THE CONTRACTOR SHALL FURNISH THE PERSONNEL, TOOLS AND EQUIPMENT REQUIRED TO INSPECT AND TEST ALL SYSTEMS.
- E. FOLLOWING IS A LIST OF ITEMS THAT THE CONTRACTOR MUST DEMONSTRATE TO THE ARCHITECT OR HIS REPRESENTATIVE AS COMPLYING WITH THE PLANS AND SPECIFICATIONS. PLEASE NOTE THAT THIS LIST DOES NOT NECESSARILY REPRESENT ALL ITEMS TO BE COVERED IN THE FINAL INSPECTION, BUT SHOULD GIVE THE CONTRACTOR AN IDEA OF WHAT IS TO BE REVIEWED.
  - SEDVICE CROLIND SHOW CONNECTION TO CROLIND ROL
- a. SERVICE GROUND, SHOW CONNECTION TO GROUND ROD.b. DEMONSTRATE THAT MAIN SERVICE EQUIPMENT IS PROPERLY BONDED.
- c. DEMONSTRATE THAT ALL PANELS HAVE BREAKERS AS SPECIFIED, GROUND BAR, COPPER BUS, TYPED DIRECTORY
- FOR CIRCUIT IDENTIFICATION AND THAT THEY ARE FREE OF TRASH.
- d. DEMONSTRATE THAT ALL CONDUITS ARE SUPPORTED AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.
  e. DEMONSTRATE THAT ALL OUTLET BOXES ARE SUPPORTED AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.
  f. DEMONSTRATE THAT ALL DEVICES ARE PROPERLY SECURED TO BOXES, THAT DEVICE PLATES ARE PROPERLY
- ALIGNED AND ARE NOT BEING USED TO SECURE DEVICE.
  g. UTILIZING A WOODHEAD NO. 1750 TESTING DEVICE, DEMONSTRATE THAT ALL 125 VOLT RECEPTACLES ARE PROPERLY CONNECTED.



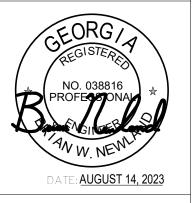
ENGINEERING. IT MAY NOT BE COPIED, ALTERED, OR REPRODUCED IN ANY MANNER WITHOUT PERMISSION ON A SIGNED AND SEALED DOCUMENT. THE INFORMATION CONTAINED HEREIN IS INTENDED FOR THE NAMED CLIENT ONLY. IN THE EVENT OF AN ELECTRONIC VERSION P.C. SIMONTON & ASSOC., INC. AND M.E. SACK ENGINEERING ASSUMES NO RESPONSIBILITY FOR DATA GENERATED, ALTERED OR STAKED FROM THIS DRAWING. IN THE EVENT OF A DISPUTE, HARD COPIES WILL TAKE PRECEDENCE OVER ANY

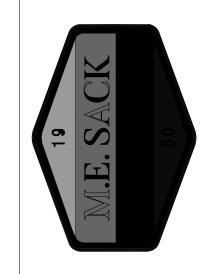
& ASSOCIATES, INC. AND M.E. SACK

# DESIGN PROFESSIONAL

MARCUS E. SACK
GSWCC LEVEL II # 70248
EXPIRES: 06/14/2023
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MUNICIPALITY: CITY OF PEMBROKE

COLINITY

BRYAN

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PUMP STATION IMPROVEMENTS

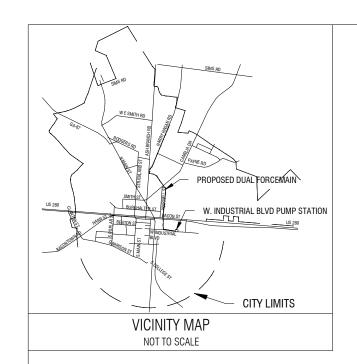
ELECTRICAL SPECIFICATIONS



LUUC

FILE NO: 2020-48

PLOT DATE: 07/19/23



# **DEMOLITION NOTES:**

1. DO NOT SCALE DRAWINGS TO LOCATE EQUIPMENT.

- 2. THE ELECTRICAL SITE PLAN DOES NOT SHOW ALL THE EXISTING UTILITIES OR EXISTING UNDERGROUND EQUIPMENT. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ALL TRADES AND LOCATE ALL EXISTING UNDERGROUND SERVICES WITH EXISTING CONDITIONS. CONTRACTOR IS TO CLEARLY INDICATE LOCATIONS OF EXISTING UTILITIES PRIOR TO THE START OF EXCAVATING. ELECTRICAL CONTRACTOR SHALL ROUTE NEW UNDERGROUND UTILITIES ABOVE OR BELOW EXISTING UTILITIES AND EQUIPMENT AS ALLOWED PER N.E.C. REQUIREMENTS.
- 3. THE CONTRACTOR SHALL FIELD VERIFY EXACT ROUTINGS OF EXISTING RACEWAYS BEFORE STARTING ANY WORK AND NOTIFY THE CIVIL ENGINEER OF ANY KNOWN DISCREPANCIES.
- 4. THE CONTRACTOR SHALL REMOVE ALL EXISTING ELECTRICAL EQUIPMENT, CONDUITS, CONDUCTORS, ETC. NOT INTENDED FOR REUSE.
- 5. ALL EXISTING EQUIPMENT REMOVED FROM SERVICE AND NOT INTENDED FOR REUSE SHALL REMAIN THE PROPERTY OF OWNER AND SHALL BE STORED OR DISPOSED OF AS DIRECTED BY THE OWNER.

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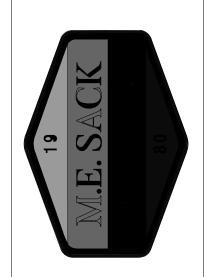
DESIGN PROFESSIONAL:

ESIGN PROFESSIONAL MARCUS E. SACK GSWCC LEVEL II # 70248 EXPIRES: 06/14/2023

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COUNTY: BRYAN

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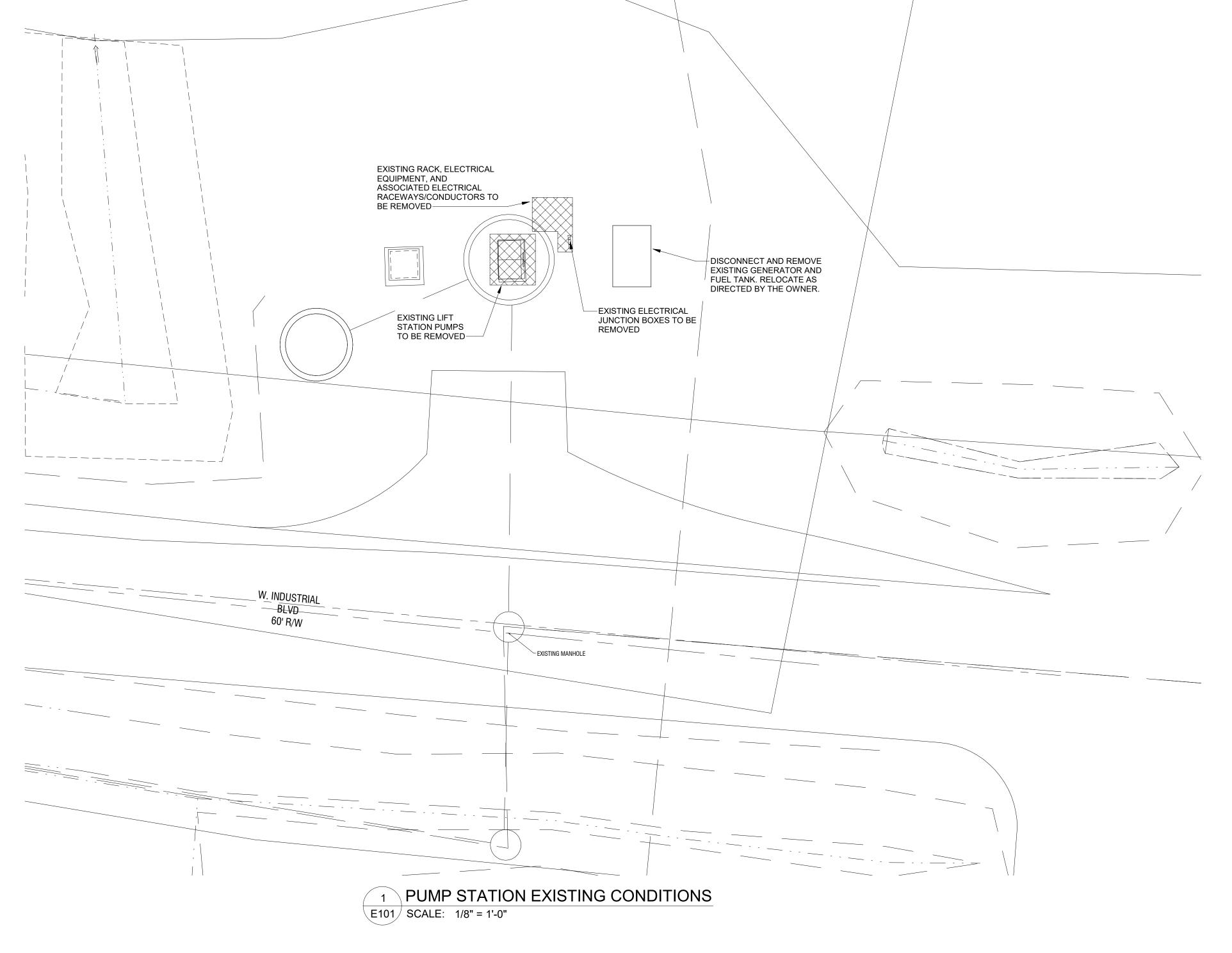
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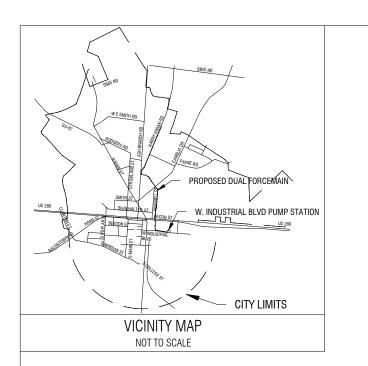
ELECTRICAL SITE DEMOLITION PLAN

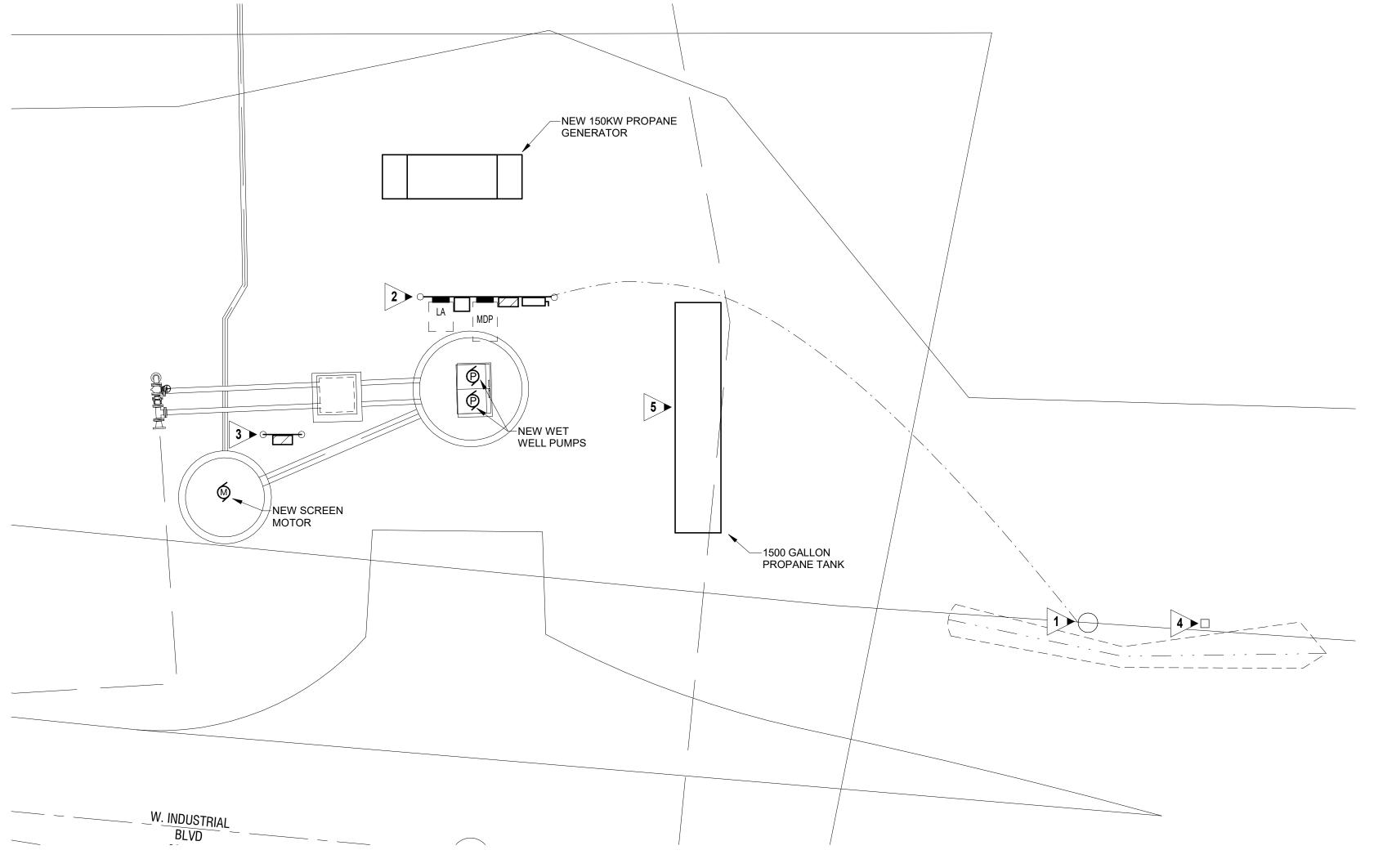
E101

ELECTRICAL DESIGN ELECTRICAL ENGINEERS
24 COMMERCE PLACE
SUITE A
SAVANNAH, GA 30901
PH: (912) 225-4832
EDC PROJECT #: S23009

PLOT DATE: August 14, 2023







1 ELECTRICAL SITE PLAN E201 SCALE: 1/8" = 1'-0"

			PAI	NEL	.BC	)AF	KD:	MI	JP						
LOCATION	:					VOL	TAGE:	480Y	′/277 \	/. 3 ø 4	1 W.				
MOUNTING	: SURF	ACE NE	NEMA 1 A.I.C. RATING: 25,000 AMPS SYMMETRICAL												
MAIN DEVICE	: 225.0	A MAIN	СВ			SPE	CIAL:	NEM	A 4X						
BUS AMPS	· 225 Al	MPS				FFD F	ROM:								
2007	. 22070				'										
LOAD NAME	NOTE	BKR	Р	СКТ		`		3		:	СКТ	Р	BKB	NOTE	LOAD NAME
LIGHTS	NOIL	20 A	1	1	0.1	0.1	-		,	,	2	1	20 A	NOIL	LIGHTS
		207	'	3	0.1	0.1	44.3	1.4			4	'	20 /		LIGITIC
PUMP CONTROL		200 A	3	5			11.0		44.3	0.7	6	3	25 A		T-PS
PANEL			-	7	44.3	0.3				<u> </u>	8				
SCREEN CONTROL		30 A	3	9			0.8	0.0			10				SPARE
PANEL				11					0.8	0.0	12	3 30	30 A		
				13	0.8	0.0					14				
SPARE		20 A	1	15			0.0	0.0			16	1	20 A		SPARE
SPARE		20 A	1	17					0.0	0.0	18	1	20 A		SPARE
SPARE		20 A	1	19	0.0	0.0					20	1	20 A		SPARE
SPARE		20 A	1	21			0.0	0.0		0.0	22	1	20 A		SPARE
SPARE		20 A	1	23	0.0	0.0			0.0	0.0	24	1	20 A		SPARE
SPACE				25 27	0.0	0.0	0.0	0.0			26 28	3	40.4		T.V.S.S
SPACE SPACE				29			0.0	0.0	0.0	0.0	30	3	40 A		1.V.5.5
SPACE				LOAD:	46 1	<u>/</u> //Λ	461	۸/۸			30				
	AMPS:	16		46 kVA 167.9 A		46 kVA 165 A									
LOAD CLASSIFICATION CONNEC						EMAN	1		TIMATED		PANEL TOTALS				
RECEPTACLES			720 VA		100.00%		%	720 VA							
MTR		135271 VA		124.77%		%	168771 VA			CONNECTED LOAD: 137921 VA					
ITES			256 VA		125.00%		%	319 VA		ESTIMATED DEMAND			DEMAND:	171480 VA	
												CONNECTED CURRENT:			165.9 A
										E	ST. DE	MAND (	CURRENT:	206.3 A	
NOTES:															•

		PA	NEL	.BC	)AF	RD:	LA	\											
:					VOI 1	ΓΔGF:	208Y	/120 \	/ 3 ø 4	4 W									
	ACE NE	ΜΔ1																	
		ß																	
BUS AMPS: 60 AMPS									FED FROM: T-PS										
NOTE	BKR	Р	СКТ		A B		С		CKT	Р	BKR	NOTE	LOAD NAME						
		-		0.5	0.5						•			SCREEN CONTROL					
						0.4	0.4			•	•			SCREEN RCPT.					
								0.2	0.2	_	•			SCREEN LV					
		-		0.4	0.0									JACKET HEATER					
			1 -			0.0	0.0				•			BATTERY CHARGER					
								0.0	0.0		•			SPARE					
	20 A	1		0.0	0.0						•			SPARE					
		_				0.0	0.0							SPARE					
	40 A	3						0.0	0.0	_	•			SPARE					
		<u></u>								20	1	20 A		SPARE					
ТС					OTAL AMPS: 12 A														
LOAD CLASSIFICATION CONNEC					EMAN	D	<b>ESTIMATED</b>			PANEL TOTALS									
RECEPTACLES 720 VA						6	720 VA												
											CC	NNECT	ED LOAD	): 2420 VA					
											ESTI	MATED	DEMAND	): 2420 VA					
											CONNE	CTED (	CURRENT	: 6.7 A					
										E	ST. DE	MAND (	CURRENT	: 6.7 A					
	1									1									
	SURFA: 60.0 A: 60 AM	SURFACE NE  60.0 A MAIN 0  60 AMPS  NOTE BKR  20 A  20 A  20 A  20 A  20 A  20 A  T  T  TON  CO	SURFACE NEMA1  SOURFACE NEMA1	SURFACE NEMA1  SOURFACE NEMA1  SOURFACE NEMA1  SOURFACE NEMA1  SOURFACE NEMA1  SOURFACE NEMA1  CONNECTED  CONNECTED	SURFACE NEMA1  SOURFACE NEMA1  CONNECTED  A.I.  A.I.	VOLT   AI.C. RA	VOLTAGE:   SURFACE NEMA1   A.I.C. RATING:   60.0 A MAIN CB   SPECIAL:   FED FROM:	VOLTAGE: 208Y   A.I.C. RATING: 10,00	A.I.C. RATING: 10,000 AM 60.0 A MAIN CB FED FROM: T-PS  NOTE BKR P CKT A B 20 A 1 1 0.5 0.5	VOLTAGE: 208Y/120 V. 3 Ø 4 A.I.C. RATING: 10,000 AMPS SY SPECIAL: NEMA 4X FED FROM: T-PS  NOTE BKR P CKT A B C 20 A 1 1 0.5 0.5	VOLTAGE: 208Y/120 V. 3 ø 4 W.  SURFACE NEMA1  60.0 A MAIN CB  FED FROM: T-PS  NOTE BKR P CKT A B C CKT  20 A 1 1 0.5 0.5 2  20 A 1 3 0.4 0.4 4  20 A 1 5 0.2 0.2 6  20 A 1 7 0.4 0.0 8  20 A 1 11 0.5 0.5 0.0 10  20 A 1 11 0.0 0.0 0.0 10  20 A 1 11 0.0 0.0 0.0 12  20 A 1 11 0.0 0.0 0.0 12  20 A 1 11 0.0 0.0 0.0 16  40 A 3 17 0 0.0 0.0 16  40 A 3 17 0 0.0 0.0 18  TOTAL LOAD: 1 kVA 1 kVA 0 kVA  TOTAL AMPS: 12 A 6.5 A 3 A  DN CONNECTED DEMAND ESTIMATED  720 VA 100.00% 720 VA	VOLTAGE: 208Y/120 V. 3 Ø 4 W.  SURFACE NEMA1  AI.C. RATING: 10,000 AMPS SYMMETRICAL  SPECIAL: NEMA 4X  FED FROM: T-PS  NOTE BKR P CKT A B C CKT P  20 A 1 1 0.5 0.5 2 2 1  20 A 1 3 0.4 0.4 4 1  20 A 1 5 0.2 0.2 6 1  20 A 1 7 0.4 0.0 8 1  20 A 1 9 0.0 0.0 0.0 10 10  20 A 1 11 0 0.0 0.0 12 1  20 A 1 13 0.0 0.0 12 1  20 A 1 13 0.0 0.0 14 14 1  40 A 3 17 0 0.0 0.0 18 1  TOTAL LOAD: 1 kVA 1 kVA 0 kVA  TOTAL AMPS: 12 A 6.5 A 3 A  DN CONNECTED DEMAND ESTIMATED  720 VA 100.00W6  TOONNECTED DEMAND ESTIMATED  CONNECTED CONNECTED  CONNECTED CONNECTED  CONNECTED CONNECTED  CONNECTED DEMAND ESTIMATED  CONNECTED CONNECTED  CONNECTED CONNECTED CONNECTED  CONNECTED CONNE	VOLTAGE: 208Y/120 V. 3 Ø 4 W.	VOLTAGE: 208Y/120 V. 3 Ø 4 W.  SURFACE NEMA1  AI.C. RATING: 10,000 AMPS SYMMETRICAL  60.0 A MAIN CB  SPECIAL: NEMA 4X  FED FROM: T-PS  NOTE BKR P CKT A B C CKT P BKR NOTE  20 A 1 1 0.5 0.5 2 2 1 20 A  20 A 1 3 0.4 0.4 4 1 20 A  20 A 1 5 0.4 0.4 4 1 20 A  20 A 1 5 0.4 0.0 8 1 20 A  20 A 1 7 0.4 0.0 8 1 20 A  20 A 1 9 0.0 0.0 10 10 1 20 A  20 A 1 11 0.0 0.0 0.0 12 1 20 A  20 A 1 11 0 0.0 0.0 12 1 20 A  20 A 1 13 0.0 0.0 14 14 1 20 A  40 A 3 17 0 0.0 0.0 16 1 20 A  TOTAL LOAD: 1 kVA 1 kVA 0 kVA  TOTAL AMPS: 12 A 6.5 A 3 A  DN CONNECTED DEMAND ESTIMATED PANEL TOTAL					

# **SITE SPECIFIC NOTES:**

- 1. DO NOT SCALE DRAWINGS TO LOCATE EQUIPMENT.
- 2. THE ELECTRICAL SITE PLAN DOES NOT SHOW ALL THE EXISTING UTILITIES OR EXISTING UNDERGROUND EQUIPMENT. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ALL TRADES AND LOCATE ALL EXISTING UNDERGROUND SERVICES WITH EXISTING CONDITIONS. CONTRACTOR IS TO CLEARLY INDICATE LOCATIONS OF EXISTING UTILITIES PRIOR TO THE START OF EXCAVATING. ELECTRICAL CONTRACTOR SHALL ROUTE NEW UNDERGROUND UTILITIES ABOVE OR BELOW EXISTING UTILITIES AND EQUIPMENT AS ALLOWED PER N.E.C. REQUIREMENTS.
- 3. THE ELECTRICAL SITE PLAN DOES NOT SHOW ALL LANDSCAPING OR PLANTING ARRANGEMENTS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH EXISTING CONDITIONS AND CIVIL DRAWINGS TO AVOID CONFLICTS WITH LANDSCAPING FEATURES AND PLANTING REQUIREMENTS.
- ELECTRICAL SITE PLAN DOES NOT SHALL ALL EQUIPMENT OR EXACT DETAILS. REFER TO POWER RISER DIAGRAMS FOR DETAILED INFORMATION REGARDING FEEDERS, PANELS, QUANTITY, PLACEMENT, CONNECTIONS, ETC.

# **KEYED NOTES:**

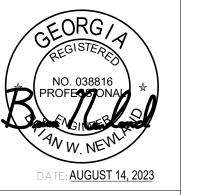
- 1 APPROXIMATE LOCATION OF GEORGIA POWER UTILITY POLE.
- 2 SEE DETAIL 1/E001 FOR DETAILED RACK LAYOUT.
- 3 SEE DETAIL 2/E001 FOR DETAILED RACK LAYOUT.
- 4 APPROXIMATE LOCATION OF TELCO PROVIDER FIBER BOX.
- NEW PROPANE TANK PROVIDED AND INSTALLED BY CUSTOMER'S PROPANE VENDOR. PROPANE VENDOR TO SIZE TANK FOR 72 HOUR RUN TIME AT 100%.

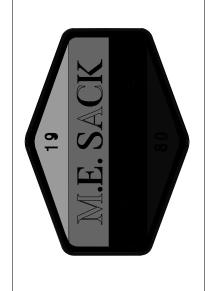
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DESIGN PROFESSIONAL:

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MUNICIPALITY: CITY OF PEMBROKE

COUNTY: BRYAN

Owner:
City of Pembroke
160 N Main St
Pembroke, GA 31321
(912) 653-4413
streets@pembrokega.net

24 HOUR CONTACT:
Keith Cook
160 N Main St
Pembroke, GA 31321
(912) 653-4413
streets@pembrokega.net

PUMP STATION IMPROVEMENTS

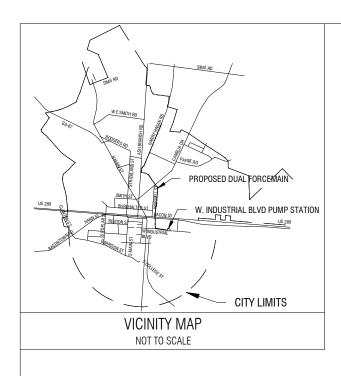
ELECTRICAL SITE PLAN

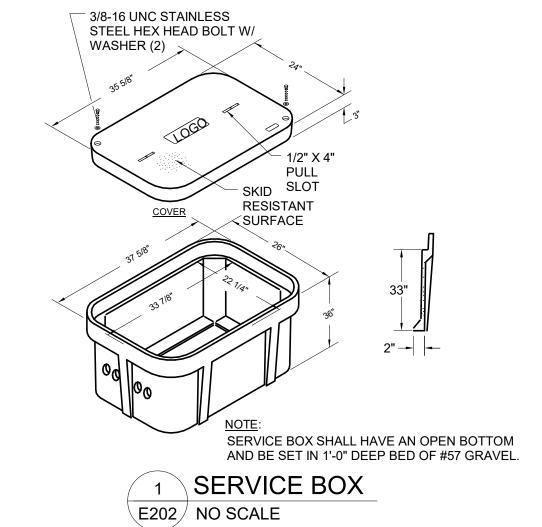
E201

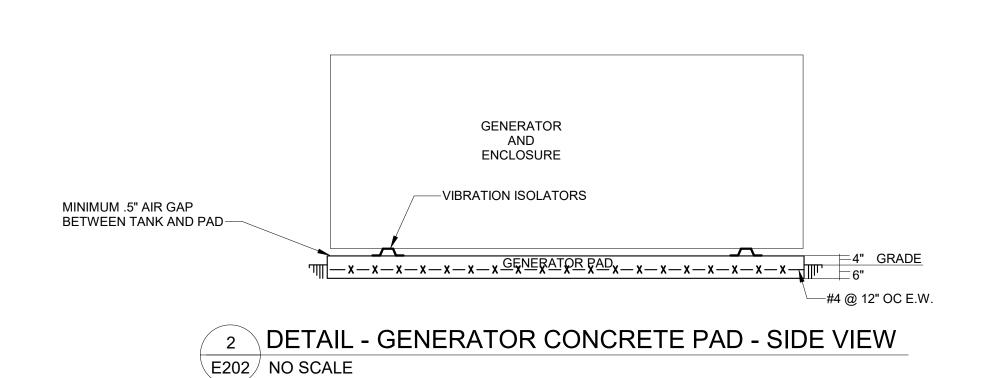
FILE NO: 2020-48

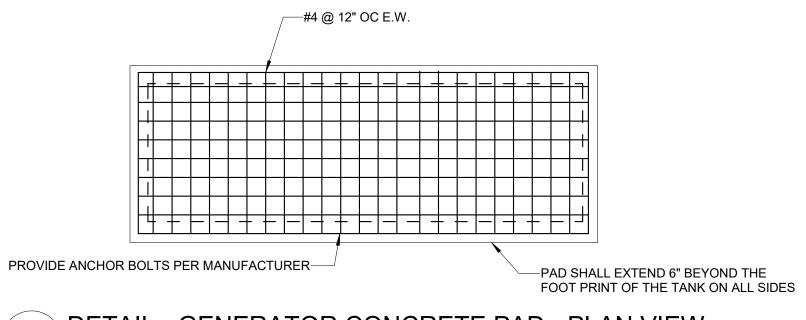
PLOT DATE: August 14, 2023

ELECTRICAL DESIGN ELECTRICAL ENGINEERS
24 COMMERCE PLACE
SUITE A
SAVANNAH, GA 30901
PH: (912) 225-4832
EDC PROJECT #: S23009



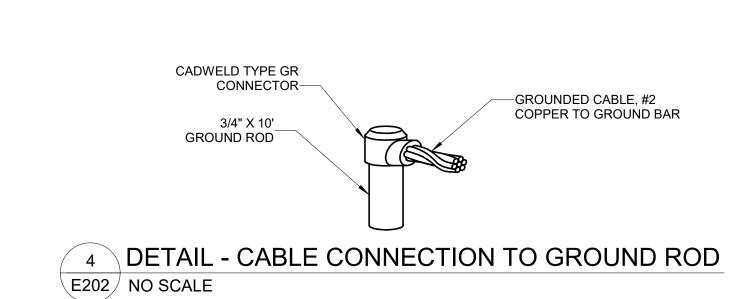


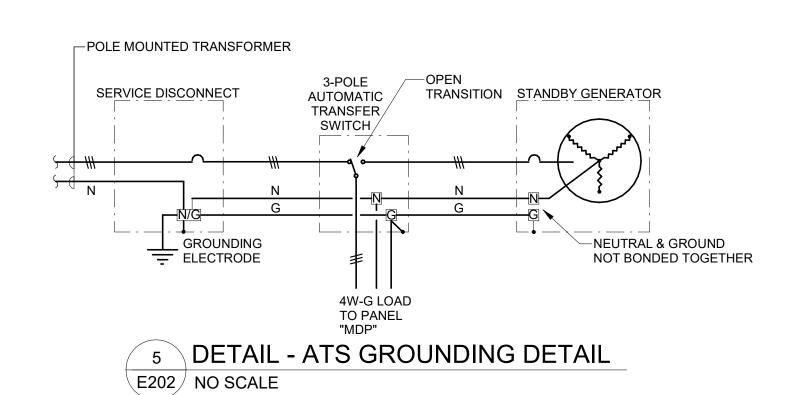


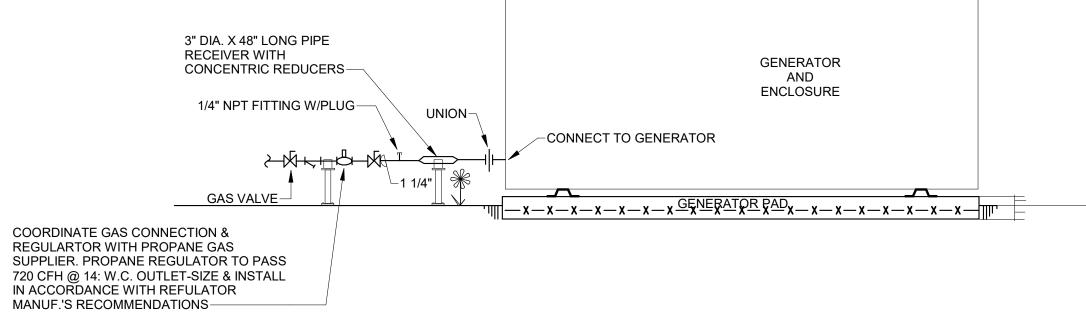


DETAIL - GENERATOR CONCRETE PAD - PLAN VIEW E202 NO SCALE

> PROPANE GAS PIPING: PROVIDE SCH. 40 BLACK STEEL WITH 125LB. MALLEABLE IRON SCREW PATTERN FITTINGS. PAINT EXTERIOR EXPOSED GAS PIPINH WITH ONE COAT OF PRIMER AND TWO COATS OF YELLOW ENAMEL PAINT. PROPANE GAS SYSTEM SHALL COMPLY WITH THE INTERNATIONAL FUEL GAS CODE AND NFPA 58.







6 DETAIL - GENERATOR GAS PIPE CONNECTION

E202 NO SCALE

ELECTRICAL DESIGN ELECTRICAL ENGINEERS
24 COMMERCE PLACE
SUITE A
SAVANNAH, GA 30901
PH: (912) 225-4832
EDC PROJECT #: S23009

ELECTRICAL

DETAILS

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DATE: **AUGUST 14, 2023** 

MUNICIPALITY:

COUNTY

BRYAN

Owner:

CITY OF PEMBROKE

City of Pembroke

Pembroke, GA 31321

streets@pembrokega.net

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PUMP STATION IMPROVEMENTS

Keith Cook

160 N Main St

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ELECTRONIC MEDIA."

FILE NO: 2020-48 PLOT DATE: August 14, 2023