

**CONTACT INFORMATION**

CITY OF VALDOSTA  
UTILITIES DEPT. - DARRYL MUSE 229-259-3592

LEA  
CIVIL DESIGNER - DALE ARROWOOD, CPESC  
PROJECT ENGINEER - CLAYTON MILLIGAN, PE  
PRINCIPAL-IN-CHARGE - JEFF LOVELL, PE

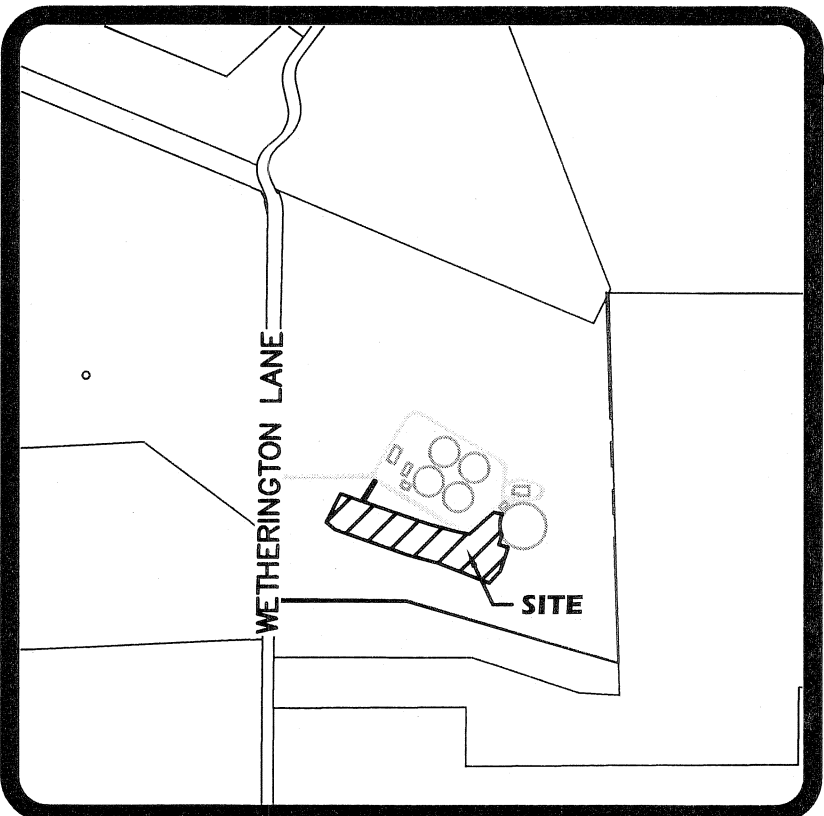
24-HOUR CONTACT  
DARRYL MUSE  
229-259-3592

CONTRACTOR SHALL SCHEDULE AN  
EROSION CONTROL INSPECTION WITH THE  
DESIGN PROFESSIONAL WITHIN 7 DAYS OF  
BEGINNING CONSTRUCTION.

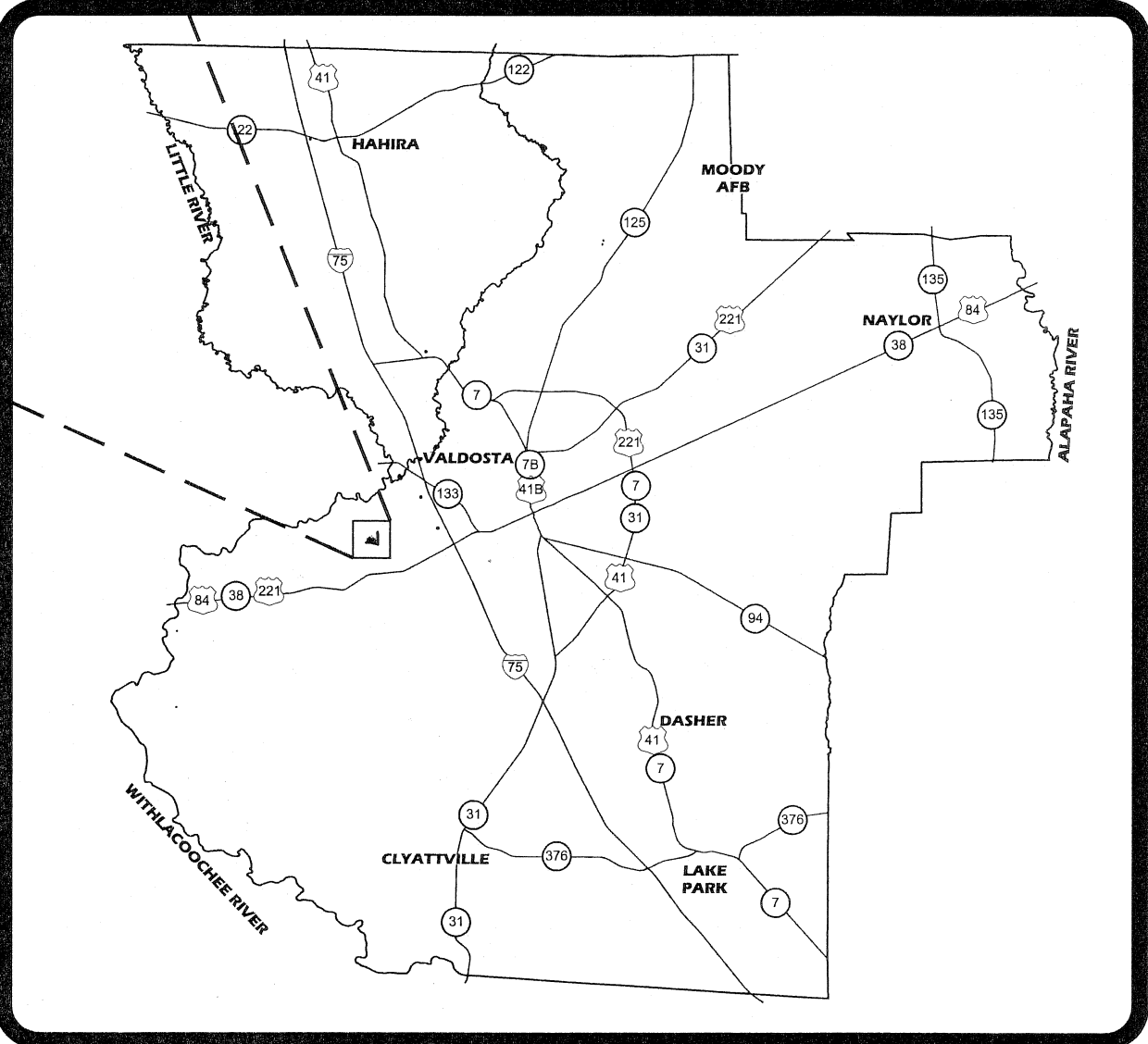
# WITHLACOOCHEE WWTP SECONDARY EQUALIZATION BASIN FOR VALDOSTA

A City Without Limits

LEA PROJECT NUMBER 0026-33  
SUBMITTAL DATE: OCTOBER 31, 2019  
LOWNDES COUNTY, GEORGIA



1" = 1000'



**LOCATION MAP**  
N.T.S.

**DRAWING INDEX**

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CITY OF VALDOSTA  
WITHLACOOCHEE WWTP  
SECONDARY  
EQUALIZATION BASIN  
LAND LOT 63 OF THE 11TH LAND DISTRICT  
LOWNDES COUNTY - STATE OF GEORGIA

REVISIONS	DATE	DESCRIPTION



Know what's below.  
Call before you dig.  
IF YOU DIG GEORGIA...  
CALL US FIRST!  
UTILITIES PROTECTION CENTER  
IT'S THE LAW  
www.gaupc.com

SCALE: N.T.S.

DESIGNED BY: MCM

CHECKED BY: JSL

SUBMITTAL DATE: 10/31/19

JOB NO. 0026-33

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GSWCC LEVEL II CERT. #49262

**COVER**

**C-1**

1 OF 17 SHEETS



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CLEARING AND GRADING NOTES:

1. CONTRACTOR TO FILL ALL HOLES CREATED BY THE REMOVAL OF STRUCTURES, FENCES, AND TREES AND RETURN THOSE AREAS TO NATURAL GRADE.
2. THE CONTRACTOR SHALL COMPLY WITH APPLICABLE CODES, ORDINANCES, RULES, REGULATIONS AND LAWS OF LOCAL, MUNICIPAL, STATE OR FEDERAL AUTHORITIES HAVING JURISDICTION OVER THE PROJECT. ALL REQUIRED PERMITS OF A TEMPORARY NATURE SHALL BE OBTAINED FOR CONSTRUCTION OPERATIONS BY THE CONTRACTOR.
3. GRUBBING SHALL CONSIST OF COMPLETELY REMOVING ROOTS, STUMPS, TRASH AND OTHER DEBRIS FROM ALL GRADED AREAS SO THAT TOPSOIL IS FREE OF ROOTS AND DEBRIS. TOPSOIL IS TO BE LEFT SUFFICIENTLY CLEAN SO THAT FURTHER PICKING AND RAKING WILL NOT BE REQUIRED.
4. ALL STUMPS, ROOTS, FOUNDATIONS AND PLANKING EMBEDDED IN THE GROUND SHALL BE REMOVED AND DISPOSED OF. PILING AND BUTTS OF UTILITY POLES SHALL BE REMOVED TO A MINIMUM DEPTH OF TWO FEET BELOW THE LIMITS OF EXCAVATION FOR STRUCTURES, TRENCHES AND ROADWAYS OR TWO FEET BELOW FINISH GRADE, WHICHEVER IS LOWER.
5. SURFACE ROCKS AND BOULDERS SHALL BE GRUBBED FROM THE SOIL AND REMOVED FROM THE SITE IF NOT SUITABLE AS RIP RAP.
6. ANY WORK PERTAINING TO UTILITY POLES SHALL COMPLY WITH THE REQUIREMENTS OF THE APPROPRIATE UTILITY.
7. THE DEBRIS RESULTING FROM THE CLEARING AND GRUBBING OPERATION SHALL BE HAULED TO A DISPOSAL SITE SECURED BY THE CONTRACTOR AND SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL REQUIREMENTS OF FEDERAL, STATE, COUNTY AND MUNICIPAL REGULATIONS. NO DEBRIS OF ANY KIND SHALL BE DEPOSITED IN ANY STREAM OR BODY OF WATER, OR IN ANY STREET OR ALLEY. NO DEBRIS SHALL BE DEPOSITED UPON ANY PRIVATE PROPERTY EXCEPT WITH WRITTEN CONSENT OF THE PROPERTY OWNER. A COPY OF WRITTEN CONSENT SHALL BE PROVIDED TO THE OWNER FOR PERMANENT RECORDS. IN NO CASE SHALL ANY MATERIAL OR DEBRIS BE LEFT ON THE PROJECT, SHOWN ONTO ABUTTING PRIVATE PROPERTIES OR BURIED ON THE PROJECT.
8. CONTRACTOR SHALL REMOVE TOPSOIL TO ITS ENTIRE DEPTH FROM ALL AREAS TO BE GRADED AND/OR FILLED. CONTRACTOR SHALL STOCKPILE OR REMOVE THE TOPSOIL FROM THE SITE AT OWNER'S DIRECTION.
9. ROADWAYS, BASIN, AND SPECIAL FILL AREAS TO BE GRADED AND COMPACTED TO THE FINISHED SUBGRADE OR GRADES AS SHOWN ON THE PLANS.
10. IF UNSUITABLE MATERIAL IS ENCOUNTERED WITHIN THE ROADWAY, BASIN, OR ANY SPECIAL FILL AREA, IT SHALL BE REMOVED FROM THE ENTIRE PROPOSED PAVED AREA OR FILL AREA AND REPLACED WITH SELECT BACKFILL WHICH IS SUITABLE FOR ROADWAY CONSTRUCTION AS PER 'GDOT' REQUIREMENTS AND ANY SPECIAL REQUIREMENTS OF THE CITY, OWNER, ENGINEER, AND ANY AFFECTED GOVERNMENTAL AGENCIES.
11. FILL AND BACKFILL MATERIAL SHALL BE COMPACTED TO 95% STD. PROCTOR DENSITY AT OPTIMUM MOISTURE  $\pm 2\%$  UNLESS SPECIFIED OTHERWISE ON THE PLAN.
12. ALL GRADING OPERATIONS SHALL BE DONE IN SUCH A MANNER SO AS TO PROVIDE POSITIVE DRAINAGE AT ALL TIMES.
13. ALL GRADES SHOWN ON PLANS ARE FINAL GRADE.

SURVEY PROVIDED BY:



NOTE:

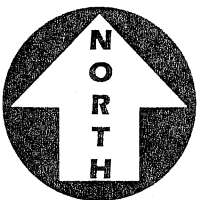
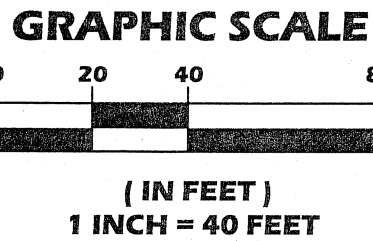
1. THERE ARE NO STATE WATERS LOCATED WITHIN 200' OF THE SITE.
2. GEORGIA UPC LOCATE TICKET #08299-300-354-000 DESIGN.



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CITY OF VALDOSTA  
WITHLACOOCHEE WWTP  
SECONDARY  
EQUALIZATION BASIN  
LAND LOT 63 OF THE 11TH LAND DISTRICT  
LOWMEDES COUNTY - STATE OF GEORGIA

REVISIONS	
DATE	DESCRIPTION



SCALE:	1"=40'
DESIGNED BY:	MCM
CHECKED BY:	JSL
SUBMITTAL DATE:	10/31/19
JOB NO.	0026-33
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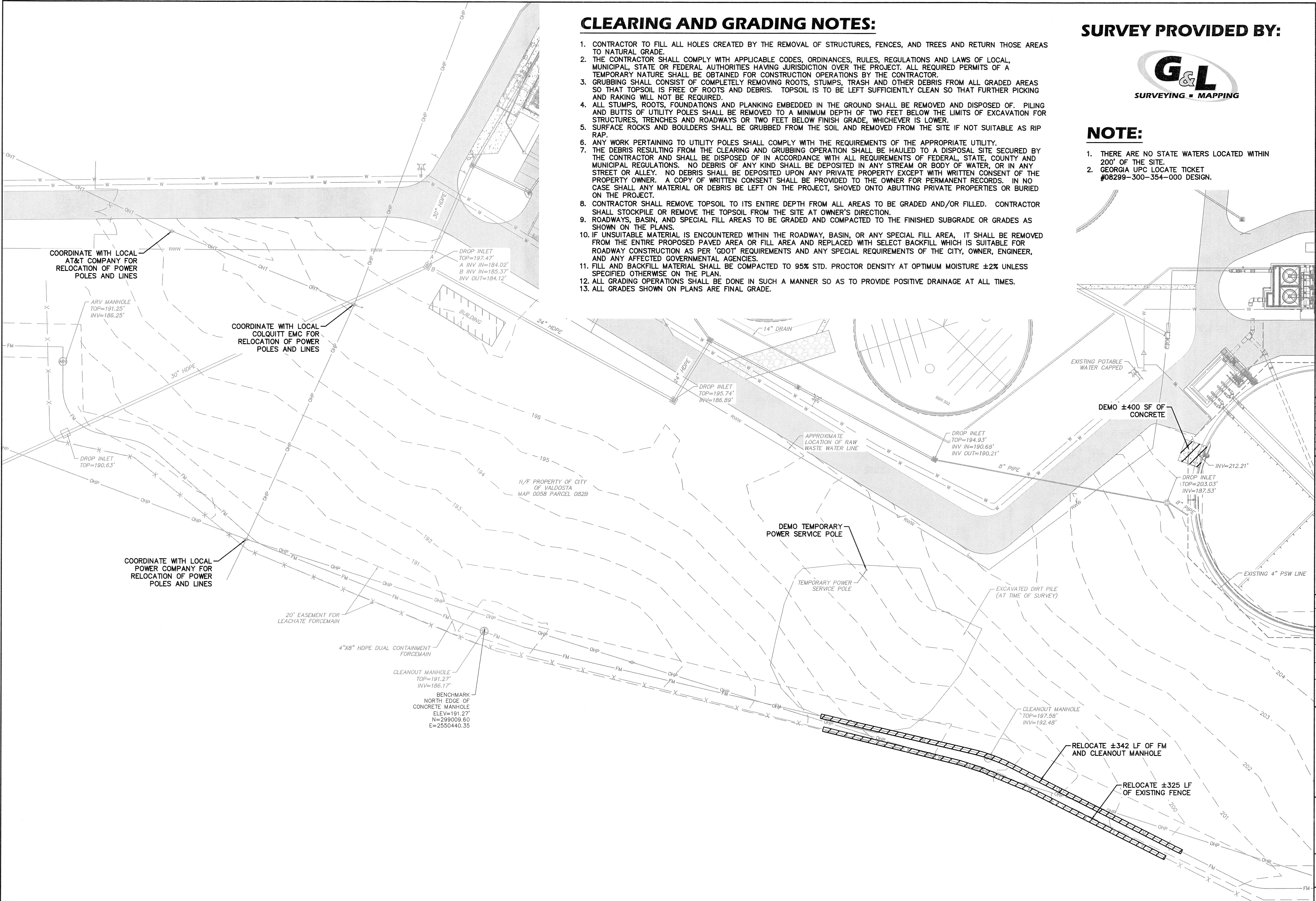


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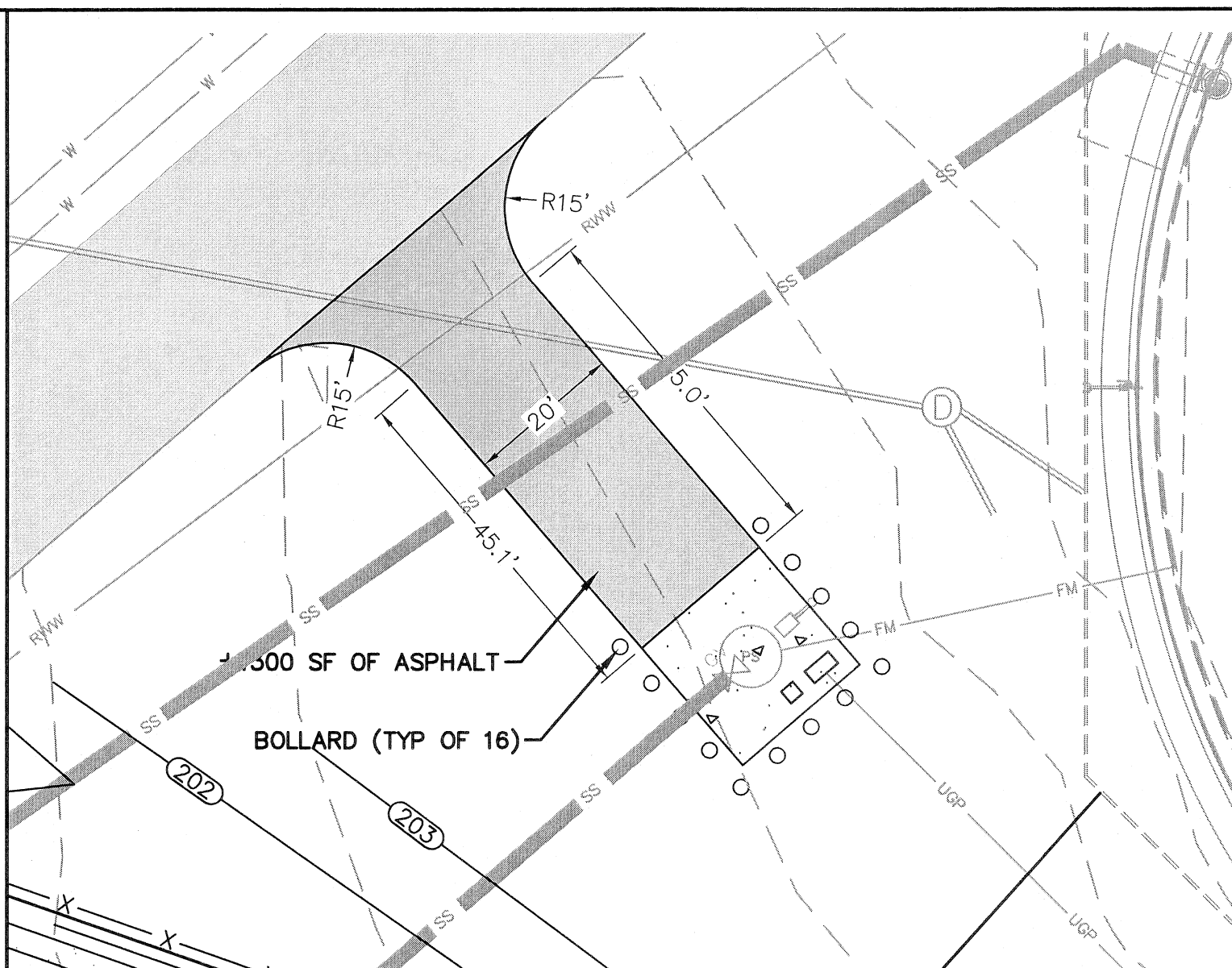
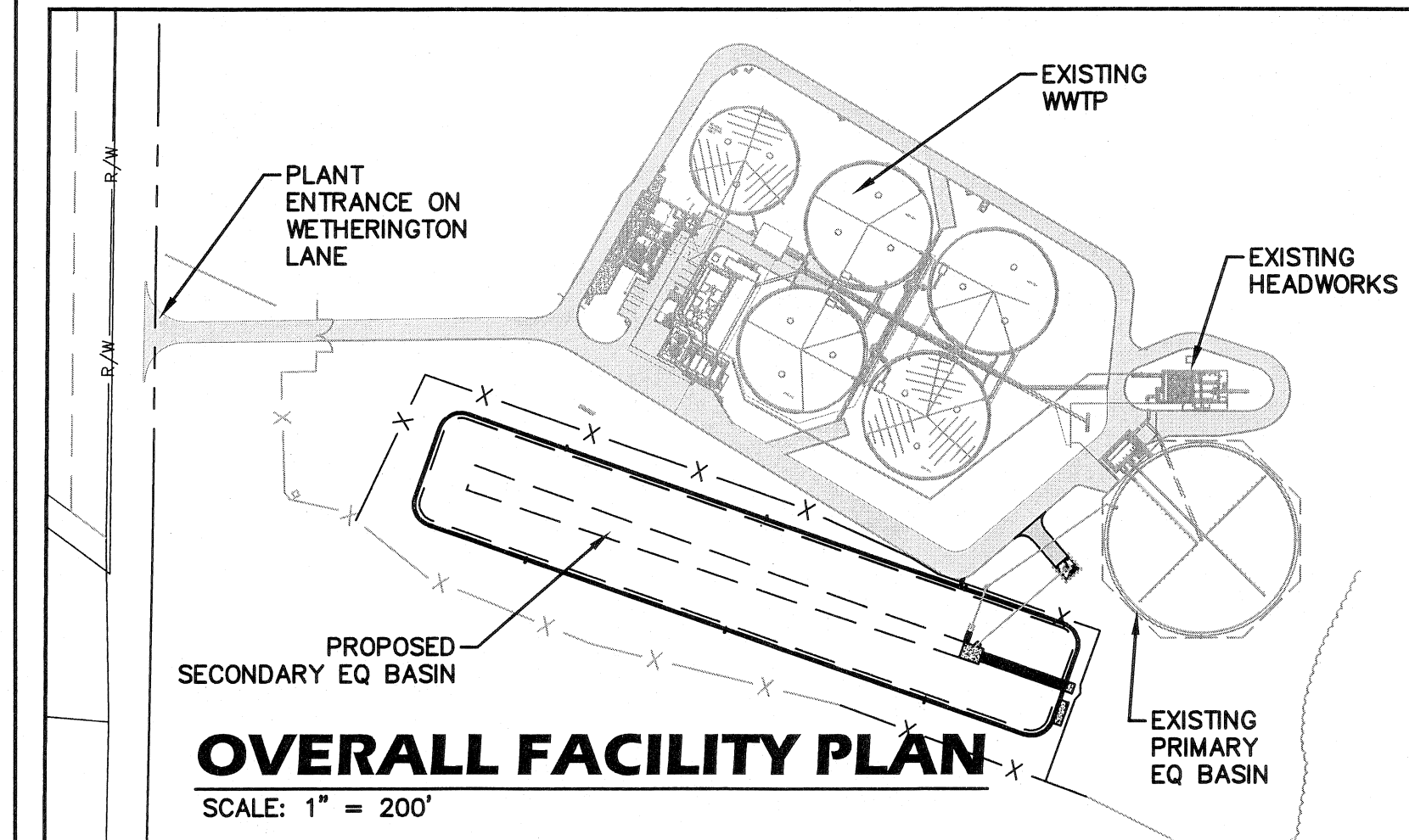
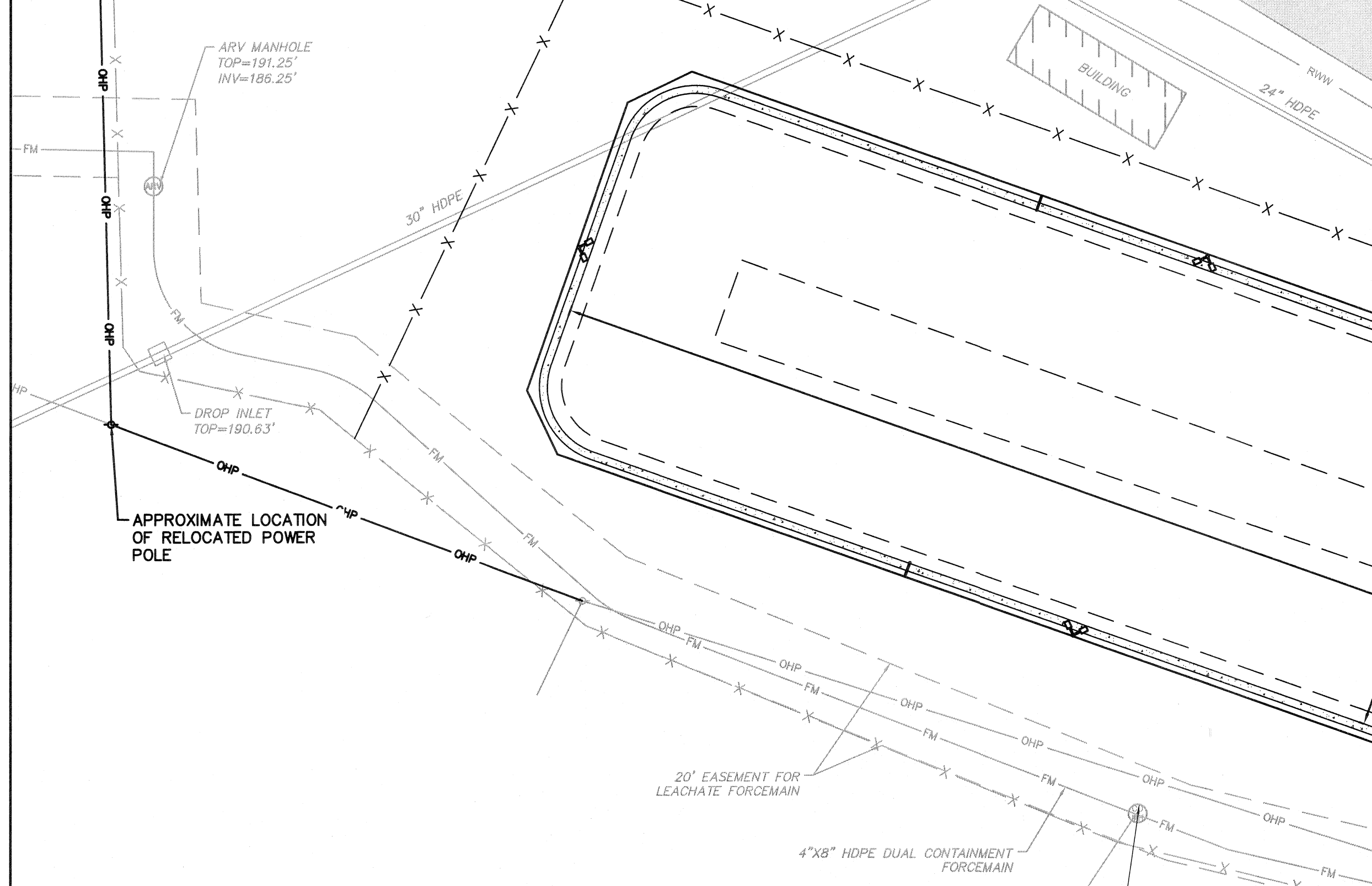
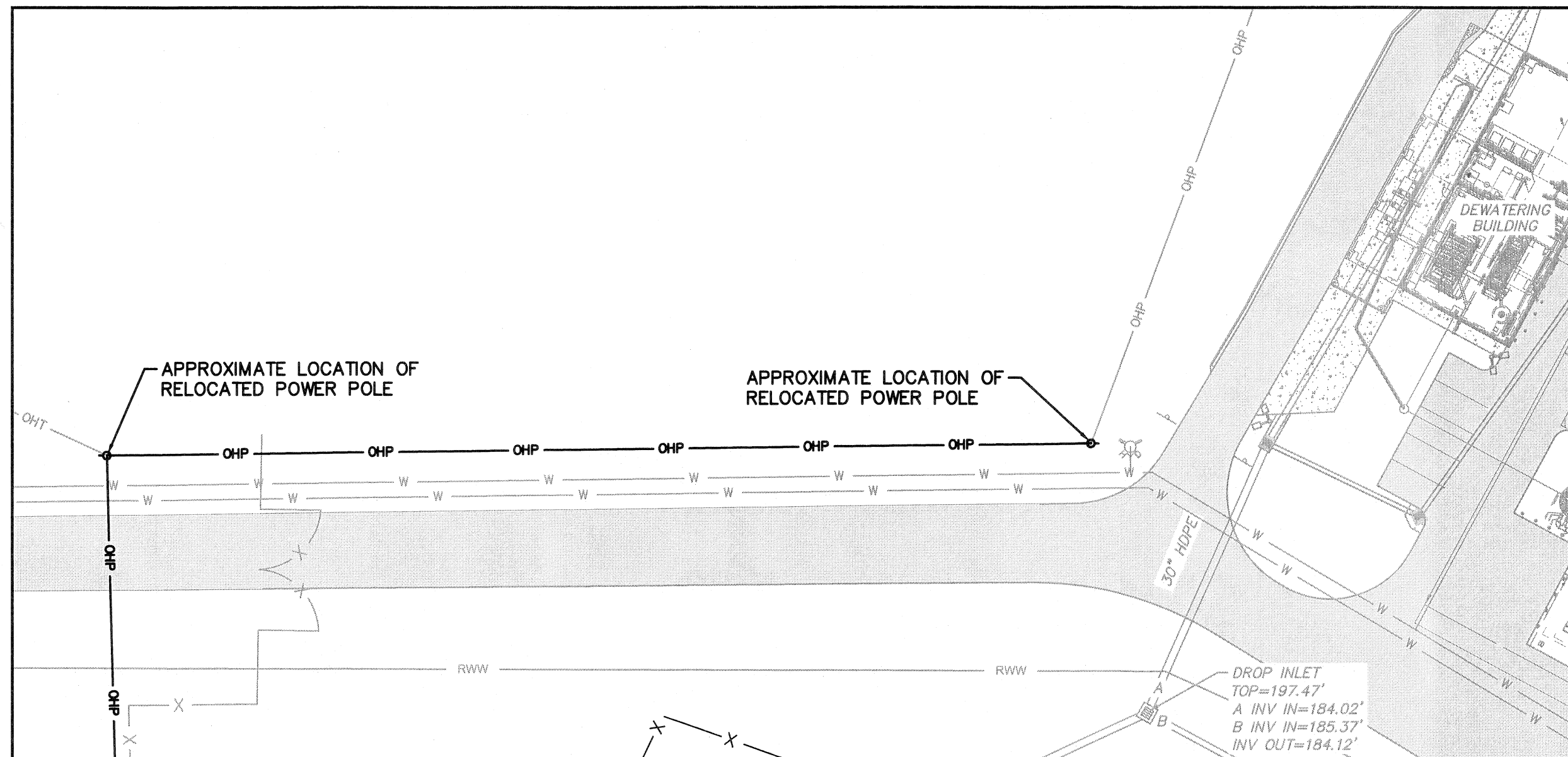
EXISTING SITE  
SURVEY

C-2

2 OF 17 SHEETS





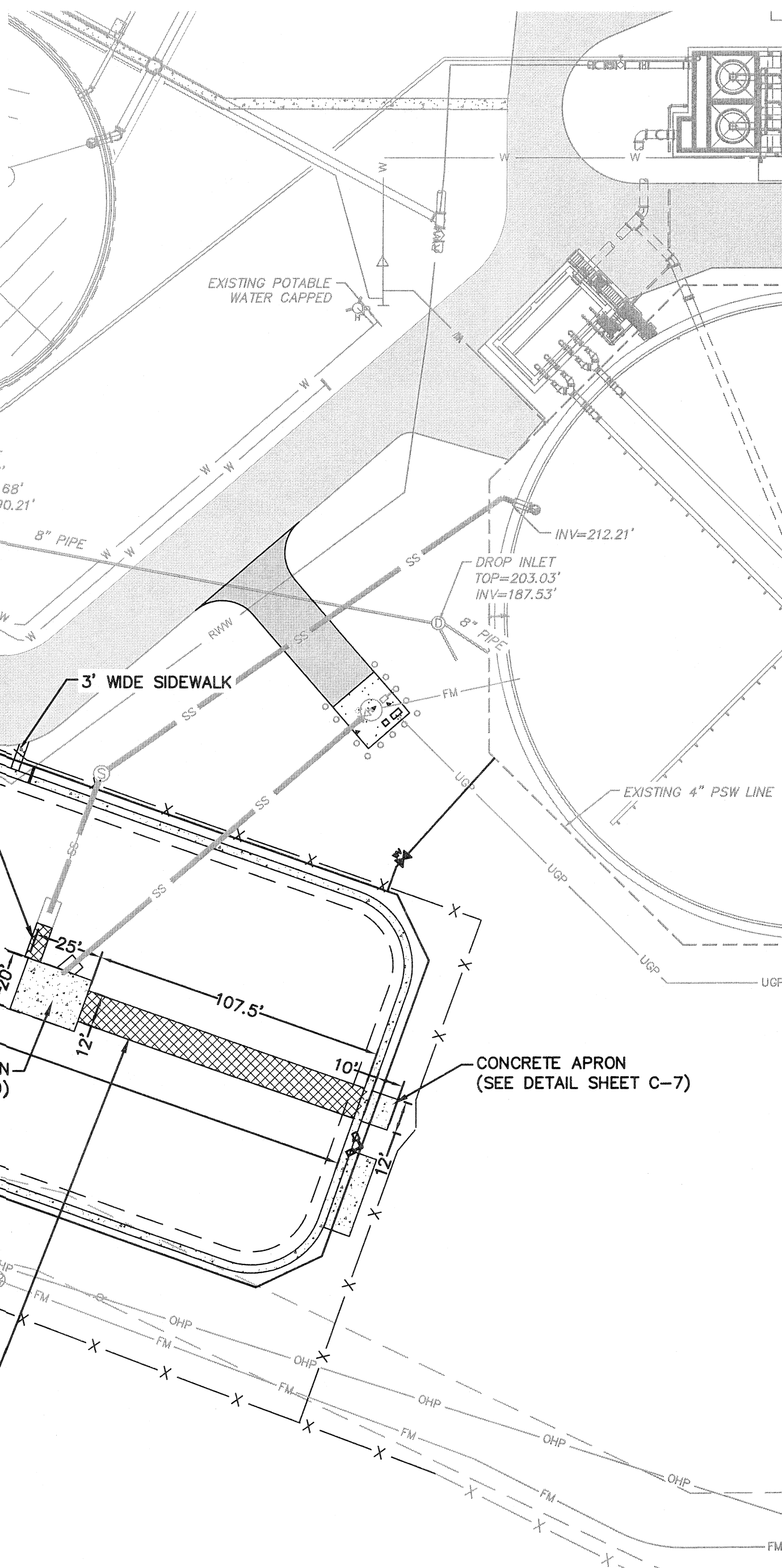


## DETAILED PUMP STATION AREA

SCALE: 1" = 20'

## GENERAL CONSTRUCTION NOTES:

1. AN AS-BUILT SURVEY IS REQUIRED.
2. WHILE WORKING WITHIN THE CONSTRUCTION LIMITS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEARING & GRUBBING AND THE REMOVAL OF ALL DEBRIS.
3. CONTRACTOR SHALL HAVE ALL EROSION CONTROL MEASURES IN PLACE PRIOR TO CONSTRUCTION.
4. CONTRACTOR TO NOTIFY UTILITY PROTECTION CENTER A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION.
5. CONTRACTOR TO VERIFY ALL HORIZONTAL & VERTICAL LOCATIONS OF ALL EXISTING AND PROPOSED STRUCTURES PRIOR TO CONSTRUCTION.
6. CONTRACTOR TO NOTIFY ENGINEER OF ANY CONFLICTS IN THE PLANS PRIOR TO AND DURING CONSTRUCTION. FAILURE TO NOTIFY ENGINEER WILL RESULT IN CONTRACTOR RESPONSIBILITY TO REPAIR AT OWN EXPENSE.
7. CONTRACTOR RESPONSIBLE FOR ALL DAMAGED UTILITIES DURING CONSTRUCTION.
8. PEDESTRIAN AND LOCAL TRAFFIC SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. SAFETY DEVICES AND FLAGGERS WILL BE PROVIDED AT CONTRACTOR EXPENSE.
9. CONTRACTOR TO PROVIDE ALL CONSTRUCTION STAKING.
10. ALL WORK SHALL BE IN ACCORDANCE WITH CITY OF VALDOSTA STANDARDS AND SPECIFICATIONS.
11. ALL EXTENSIONS AND ADDITIONS TO THE SYSTEM SHALL BE PERFORMED BY A GEORGIA LICENSED UTILITY CONTRACTOR.
12. A MINIMUM OF 18" OF VERTICAL AND 10' OF HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN ALL UTILITIES.
13. ALL T'S AND BENDS SHALL BE DUCTILE IRON.

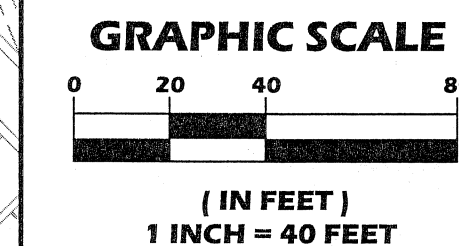


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## CITY OF VALDOSTA WITHLACOOCHEE WWTP SECONDARY EQUALIZATION BASIN

LAND LOT 63 OF THE 11TH LAND DISTRICT  
LOWNDES COUNTY - STATE OF GEORGIA

REVISIONS	DATE	DESCRIPTION
	02-13-20	REV #1



SCALE: 1"=40'

DESIGNED BY: MCM

CHECKED BY: JSL

SUBMITTAL DATE: 10/31/19

JOB NO. 0026-33

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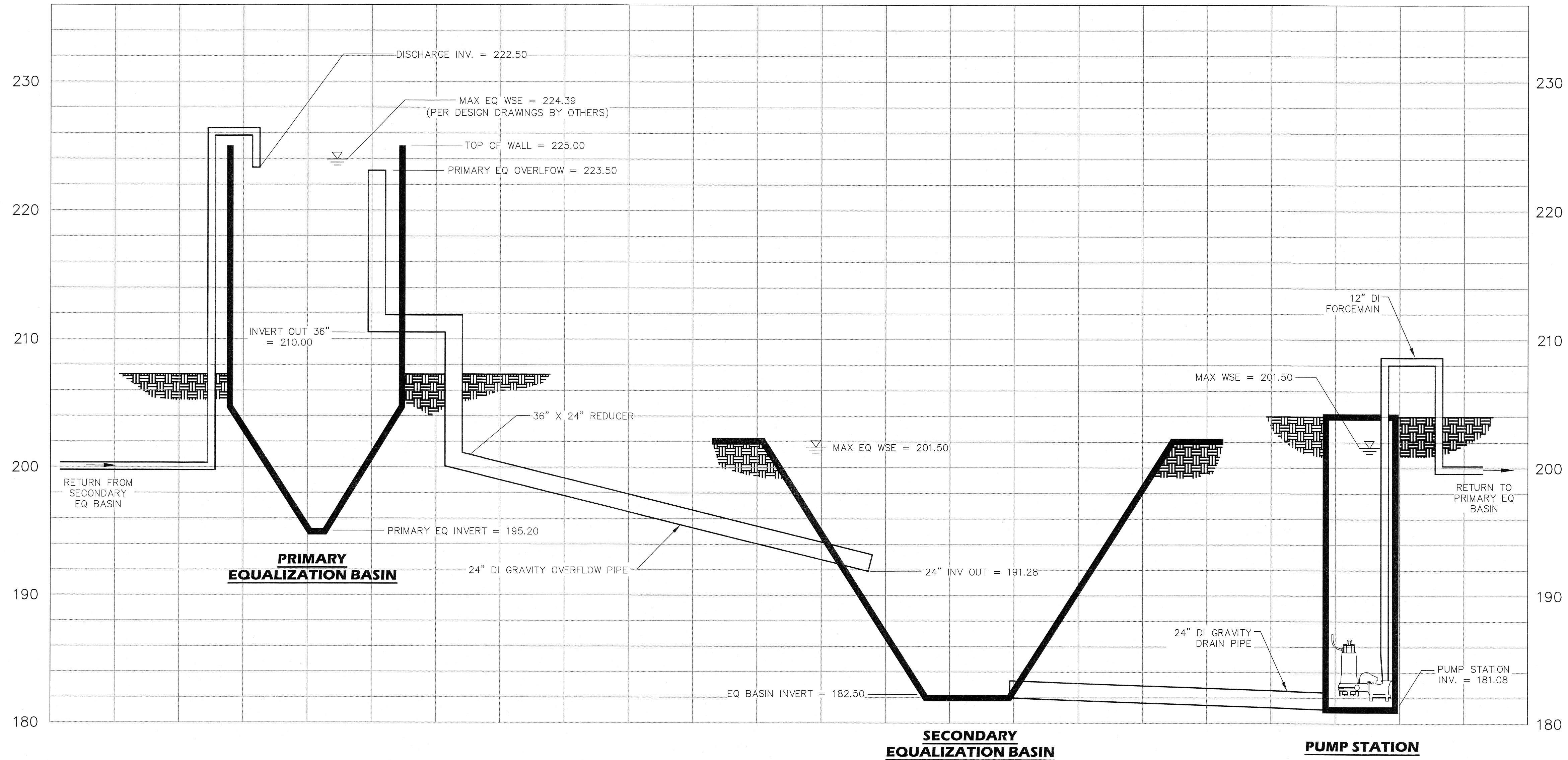
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## SITE AND UTILITY PLAN

C-3

3 OF 17 SHEETS





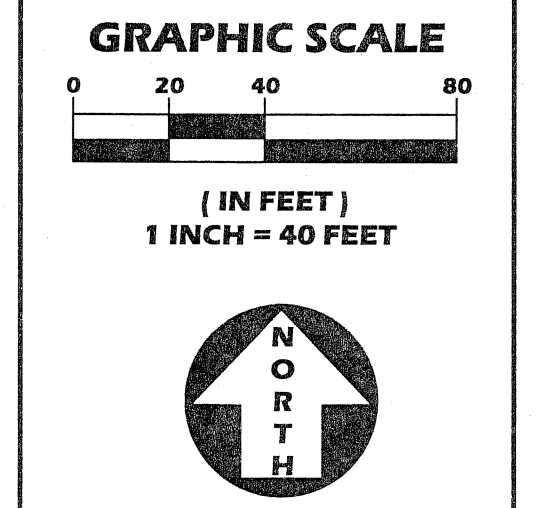
**HYDRAULIC PROFILE**  
NTS



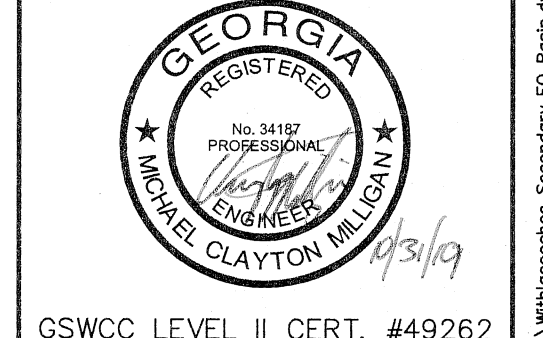
GA CORP# 0419099  
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**CITY OF VALDOSTA**  
**WITHLACOOCHEE WWTP**  
**SECONDARY**  
**EQUALIZATION BASIN**  
LAND LOT 63 OF THE 11TH LAND DISTRICT  
LOWNDES COUNTY - STATE OF GEORGIA

REVISIONS	
DATE	DESCRIPTION



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**HYDRAULIC  
PROFILE**

**C-4**

4 OF 17 SHEETS

S:\0026-33 (City of Valdosta, Secondary EQ Basin)\Withlacoochee Secondary EQ Basin.dwg 10/31/2019 2:17 PM





**CITY OF VALDOSTA  
WITHLACOCHEE WWTP  
SECONDARY  
EQUALIZATION BASIN**

AND LOT 63 OF THE 11TH LAND DISTRICT  
LOWNDES COUNTY - STATE OF GEORGIA

REVISIONS	
DATE	DESCRIPTION

A horizontal number line with tick marks at 0, 20, 40, and 80. The segment between 20 and 40 is shaded with a dark gray stippled pattern.

( IN FEET )  
1 INCH = 40 FEET



**SCALE:** 1"=40'

DESIGNED BY: MCM

**CHECKED BY:** JSL

SUBMITTAL DATE: 10/31/19

**JOB NO.** 0026-33

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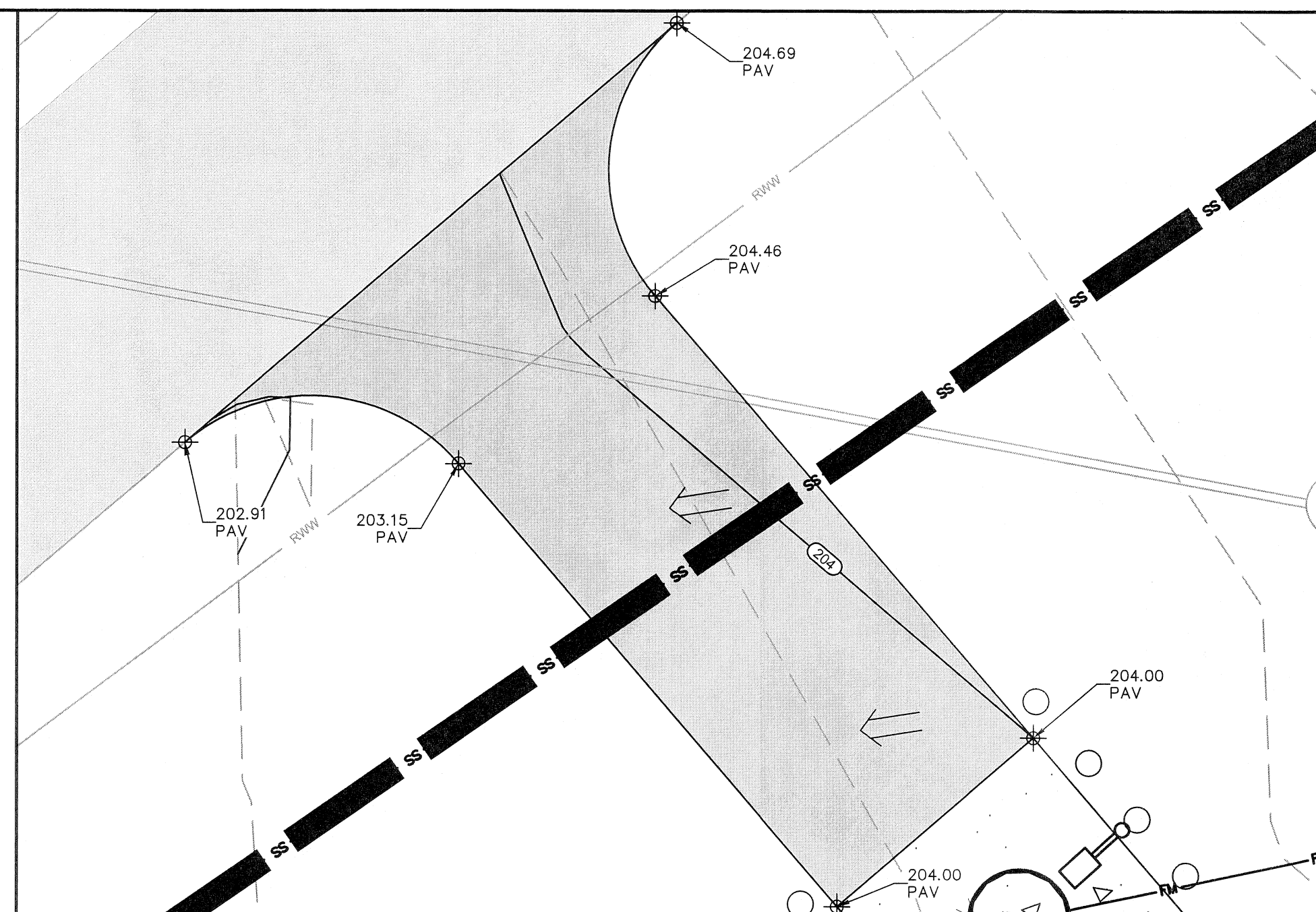


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## GRADING AND DRAINAGE PLAN

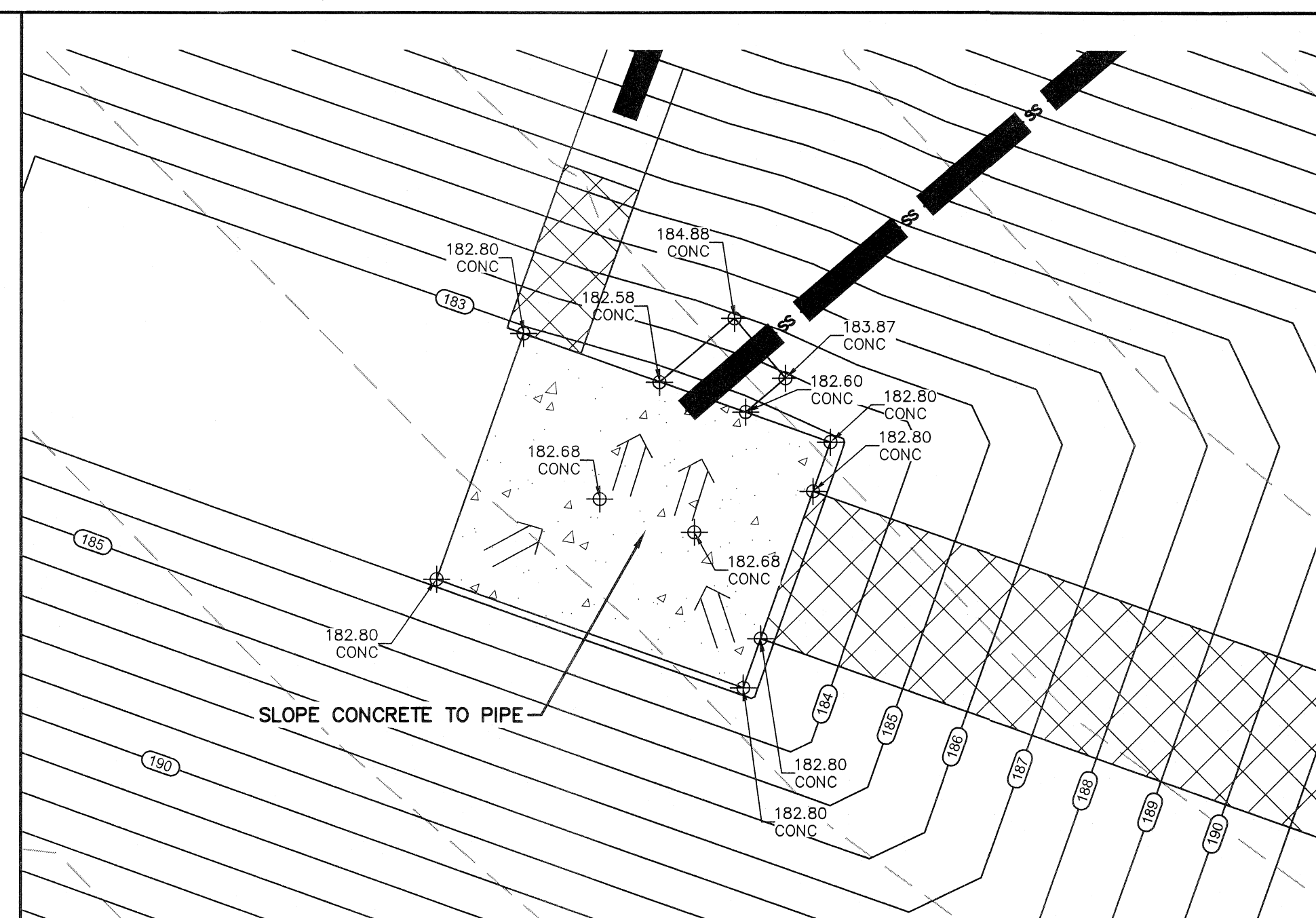
C-5

5 OF 17 SHEETS



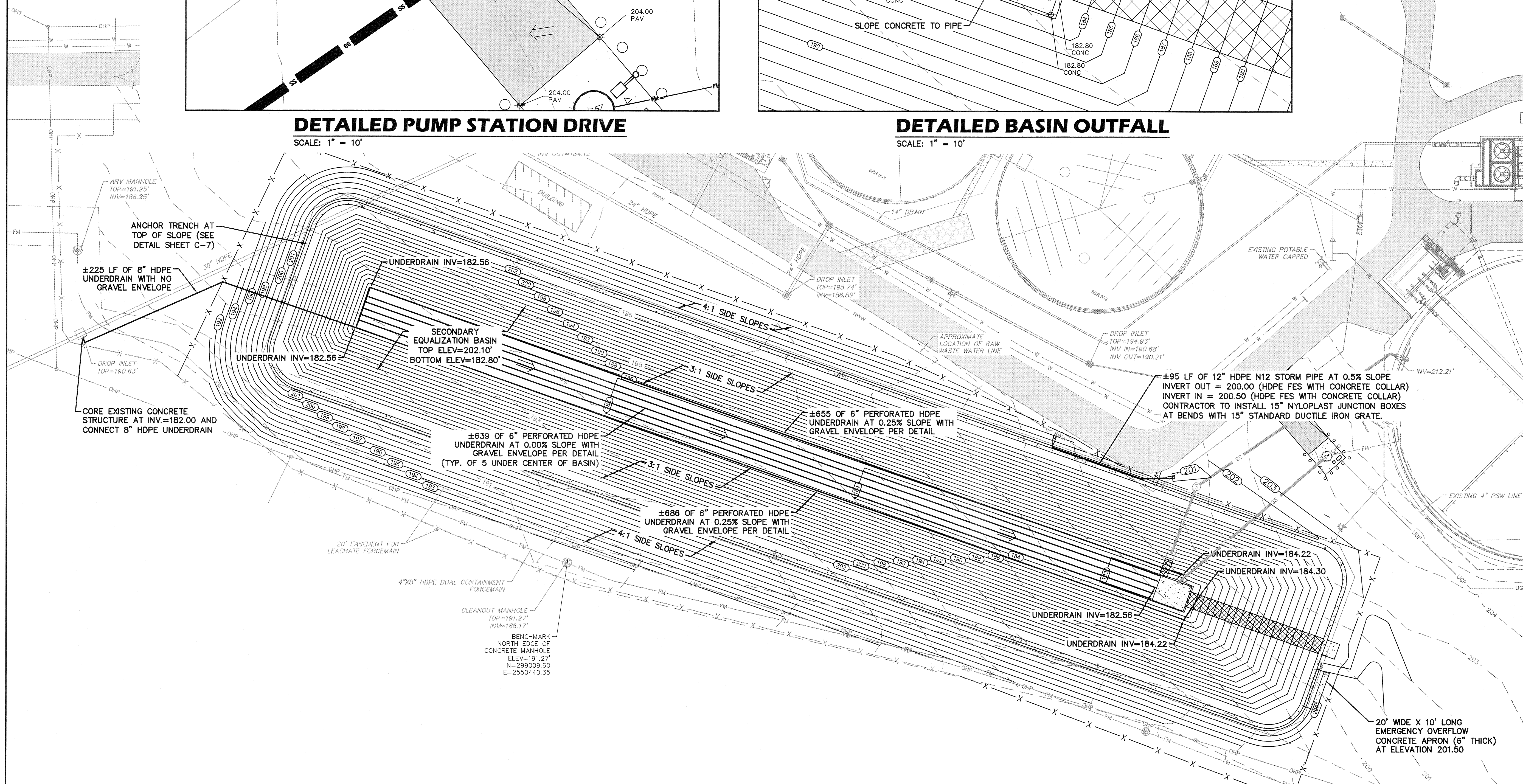
## DETAILED PUMP STATION DRIVE

SCALE: 1" = 10'



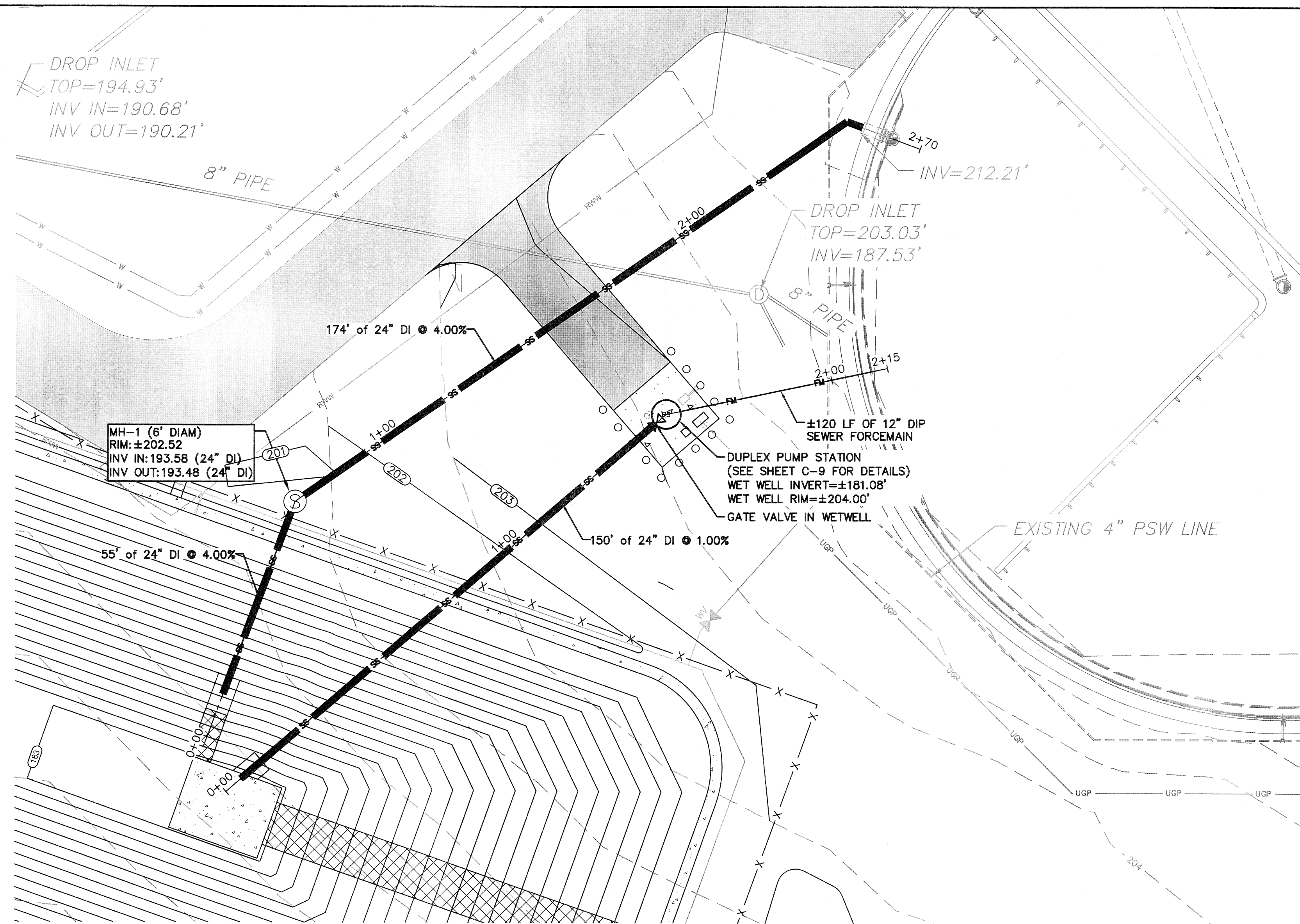
## DETAILED BASIN OUTFALL

SCALE: 1" = 10'



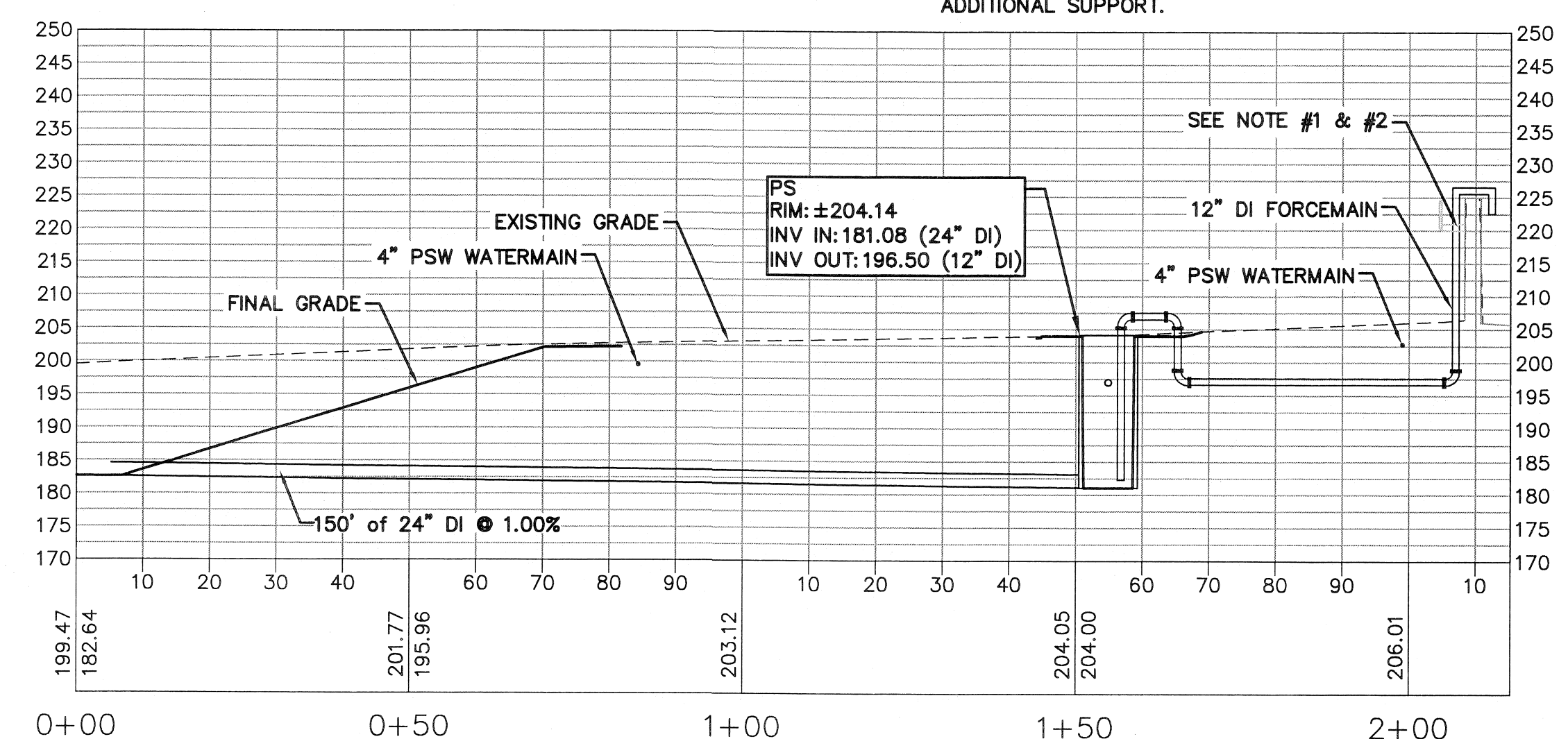
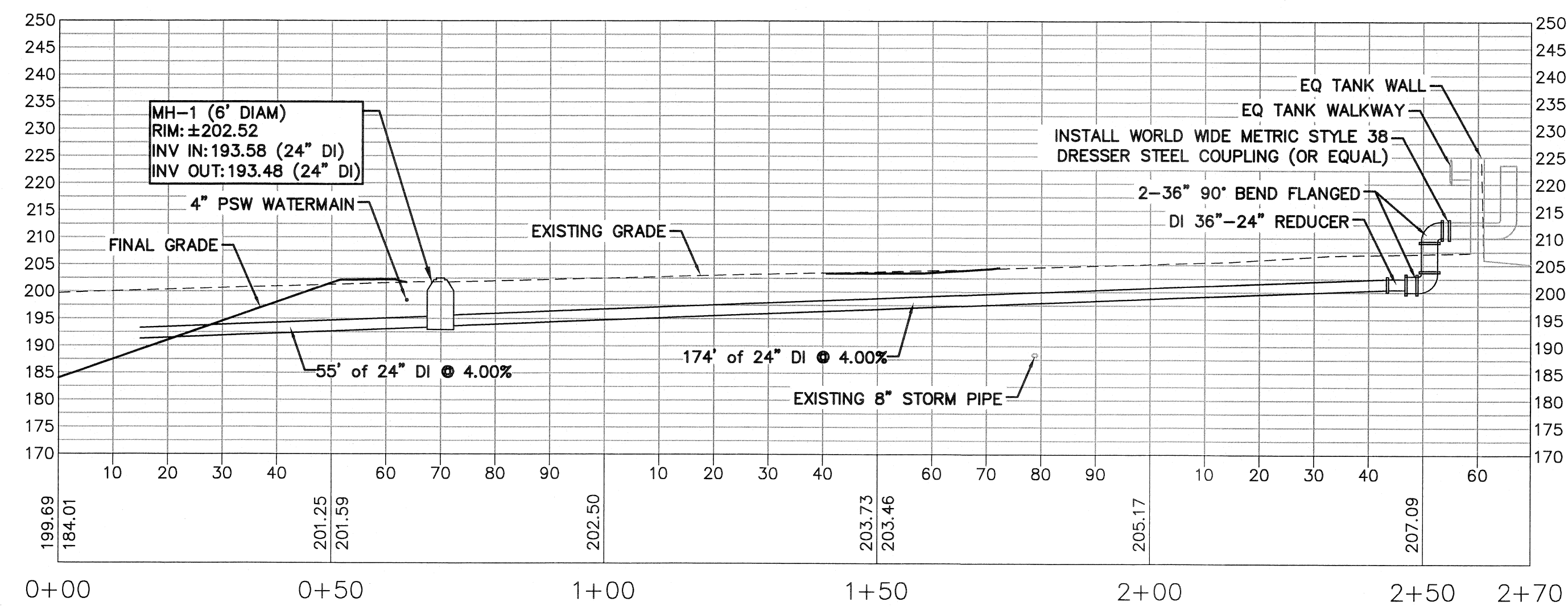
20' WIDE X 10' LONG  
EMERGENCY OVERFLOW  
CONCRETE APRON (6" THICK)  
AT ELEVATION 201.50





#### NOTES:

1. CONTRACTOR TO CORE CONCRETE WALKWAY FOR INSTALLATION OF 12" FORCEMAIN.
2. SEE SHEET C-9 FOR VERTICAL PIPE SUPPORT DETAIL. PIPE TO BE SECURED TO THE WALL OF THE TANK PER DETAIL AT TWO LOCATIONS ON THE WALL A MINIMUM OF 10' APART. CONTRACTOR TO PROVIDE SHOP DRAWINGS & COORDINATE WITH TANK MANUFACTURER FOR EXACT LOCATION OF ATTACHMENT TO AVOID COMPROMISING PRE-STRESSED BANDS IN THE WALL. PIPE TO BE SECURED AT THE TOP OF THE WALL WITH ONE ADDITIONAL SUPPORT.



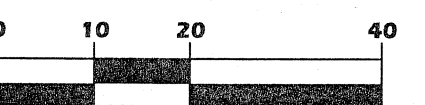
GA CORP# 0419099  
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## CITY OF VALDOSTA WITHLACOOCHEE WWTP SECONDARY EQUALIZATION BASIN

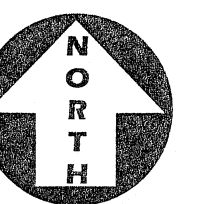
LAND LOT 63 OF THE 11TH LAND DISTRICT  
LOWMEDES COUNTY - STATE OF GEORGIA

REVISIONS	DATE	DESCRIPTION

#### GRAPHIC SCALE



( IN FEET )  
1 INCH = 20 FEET (HOR)  
1 INCH = 20 FEET (VERT)



SCALE: 1"=20'

DESIGNED BY: MCM

CHECKED BY: JSL

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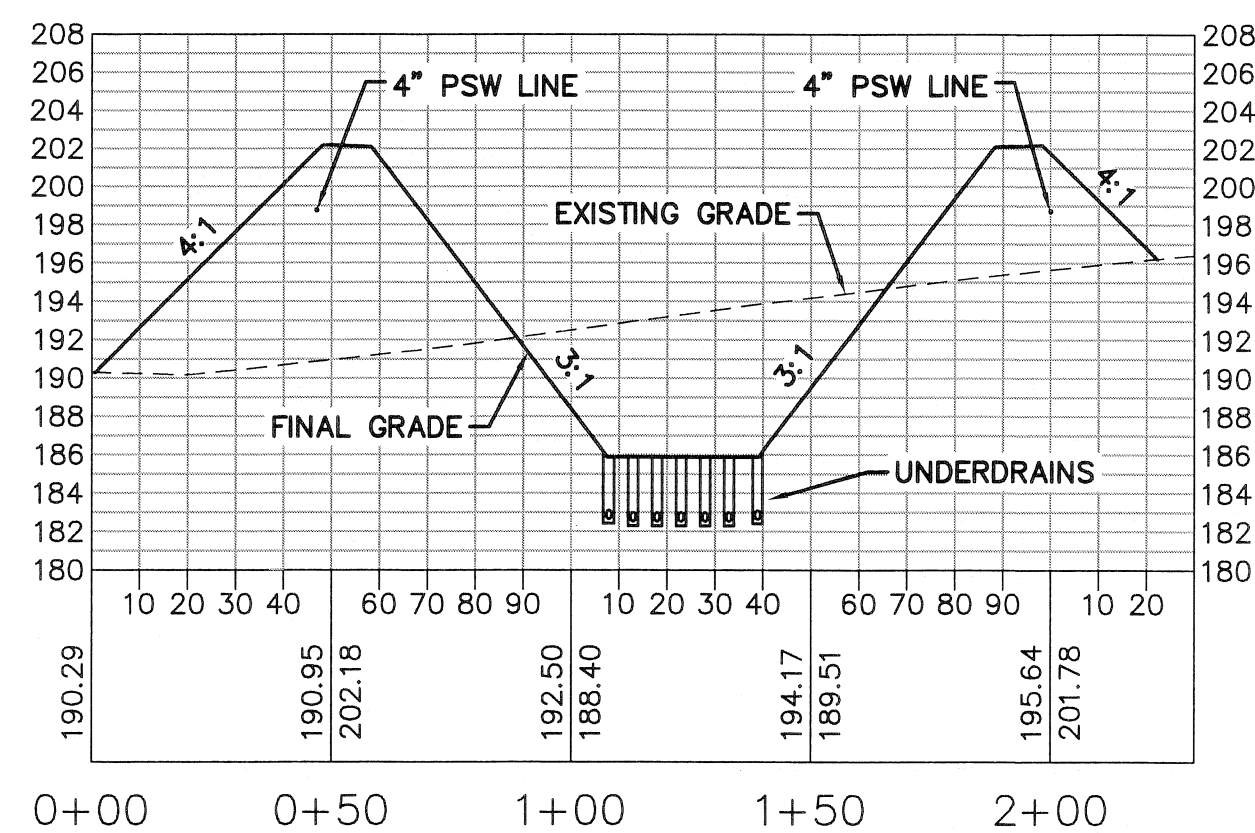
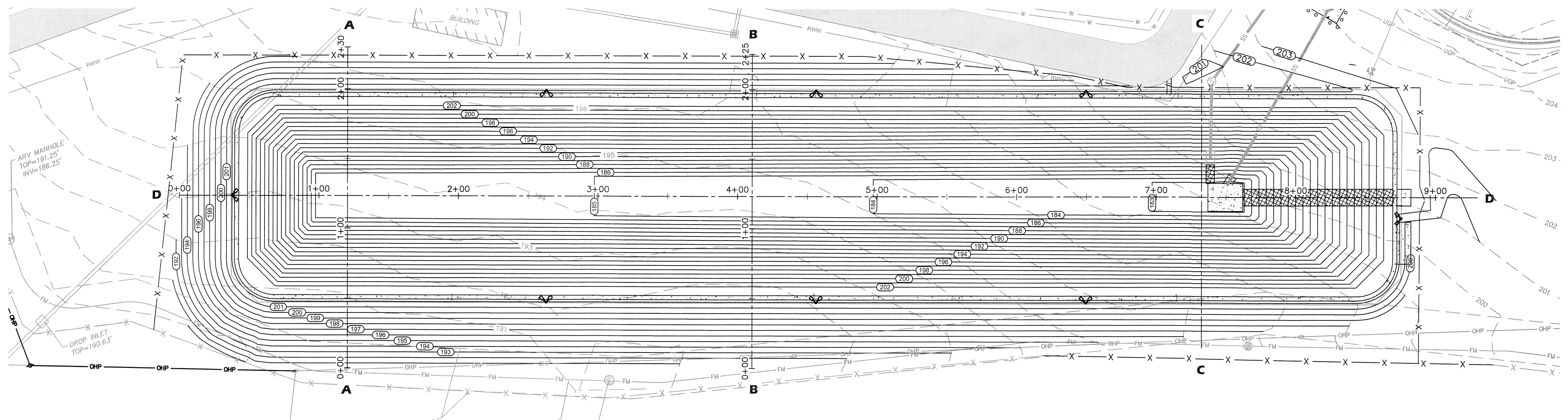
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#### PIPING PLAN AND PROFILES

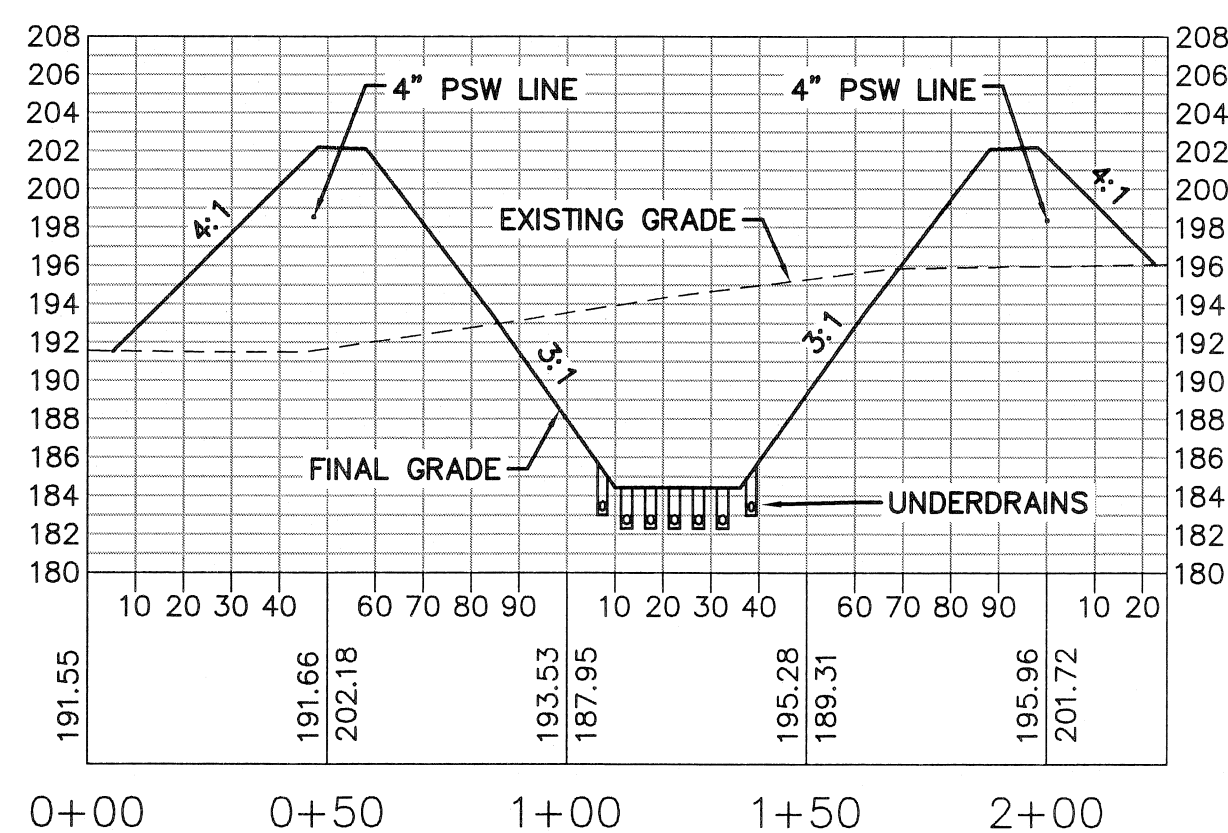
**C-6**

6 OF 17 SHEETS

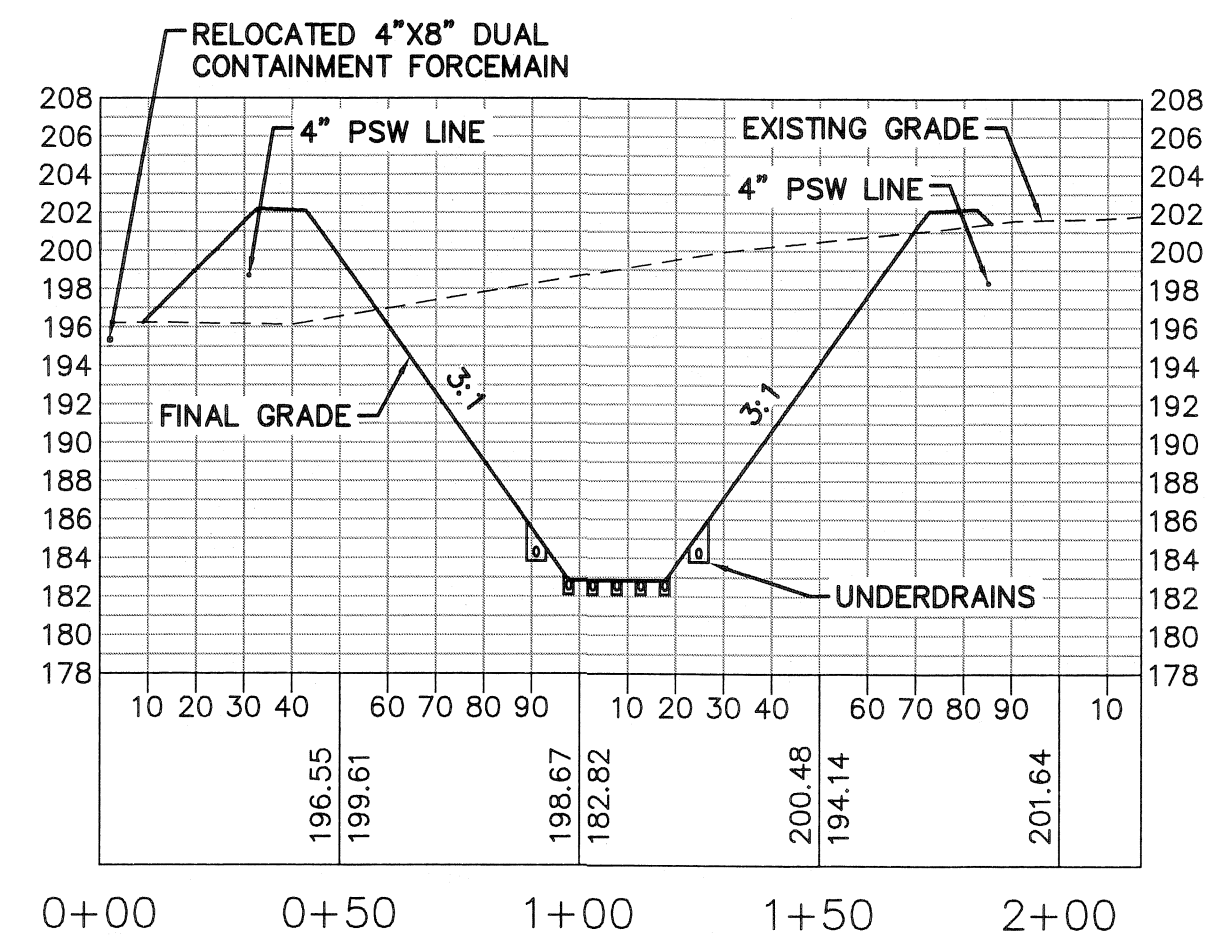




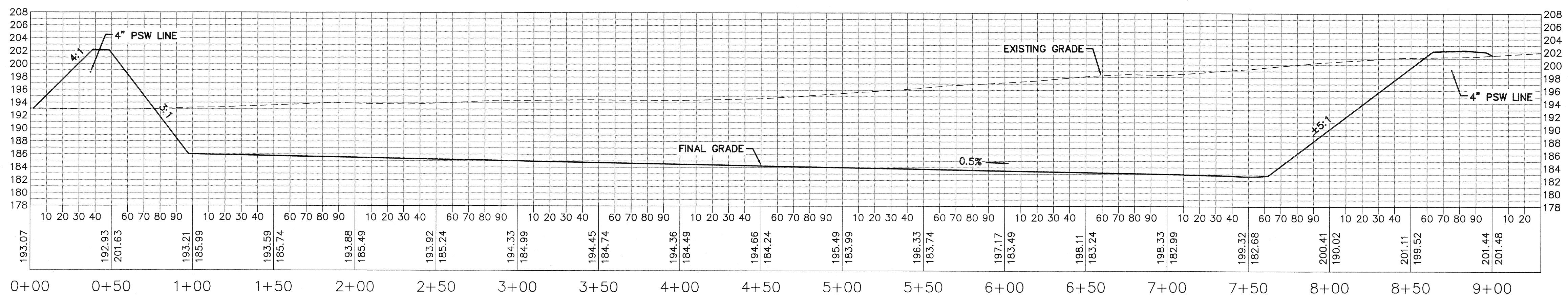
**CROSS SECTION A-A**



**CROSS SECTION B-B**



**CROSS SECTION C-C**



**CROSS SECTION D-D**

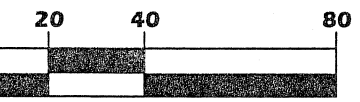


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**WITHLACOOCHEE WWT**  
**SECONDARY**  
**EQUALIZATION BASIN**  
LAND LOT 63 OF THE 11TH LAND DISTRICT  
LOWNDES COUNTY - STATE OF GEORGIA

REVISIONS	
DATE	DESCRIPTION

**GRAPHIC SCALE**



(IN FEET)  
1 INCH = 40 FEET (HOR)  
1 INCH = 10 FEET (VERT)



SCALE: 1"=40'

DESIGNED BY: MCM

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**BASIN CROSS SECTIONS**

**C-7**

7 OF 17 SHEETS

S:\0026-33 (City of Valdosta, Secondary EQ Basin)\Withlacoochee Secondary EQ Basin.dwg 10/31/2019 2:17 PM



WATER CANNON COPPERHEAD-TILLER STYLE WITH CJ SERIES  
(BRASS) 500 GPM SELECT O-STREAM-MASTER STREAM  
MONITOR NOZZLE AS MANUFACTURED BY ELKHART OR EQUAL

QUICK DISCONNECT

4" GATE VALVE

ALL EXPOSED PSW PIPING TO BE  
PAINTED PER PAINTING SCHEDULE

3'

1'

BACKFILL TRENCH

3'

GEOMEMBRANE (SEE NOTE #1)

GEOSYNTHETIC CLAY LINER (SEE NOTE #2)

GEOCOMPOSITE (SEE NOTE #3)

3000 PSI CONCRETE WITH MINIMUM 1.5  
LBS/CY POLYPROPYLENE FIBER  
REINFORCEMENT PER ASTM C1116, SEC 4.1.3.  
(SEE NOTE #5)

4" DUCTILE IRON TEE

4" DUCTILE IRON  
PSW WATERMAIN

RE-COMPACTED SOIL LAYER  
(SEE NOTE #4)

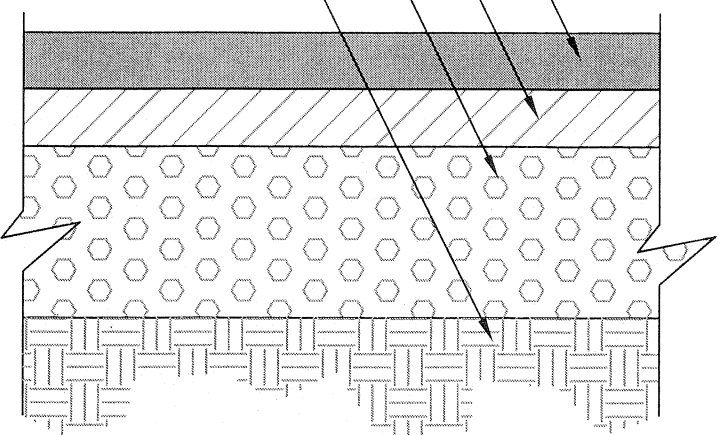
## NOTES:

1. BOTTOM LINER SYSTEM GEOMEMBRANE SHALL BE 60 MIL. (MINIMUM THICKNESS) HIGH DENSITY POLYETHYLENE CONDUCTIVE GEOMEMBRANE (ALLOWS FOR SPARK TESTING).
2. GEOSYNTHETIC CLAY LINER WITH A MAXIMUM PERMEABILITY OF  $3 \times 10^{-9}$  CM/SEC.
3. GEOCOMPOSITE SHALL BE A BONDED 200 MIL GEONET WITH DOUBLE SIDED NON-WOVEN FABRIC GEOTEXTILE (MINIMUM WEIGHT OF 8 OZ/YD<sup>2</sup>).
4. 24" SOIL COMPACTED TO 95% STANDARD PROCTOR.
5. PROVIDE 1" DEEP TOOLED CONTRACTION JOINT EVERY X' UNLESS NOTED OTHERWISE, WHERE X = WIDTH OF SIDEWALK.

## COMPOSITE LINER DETAIL

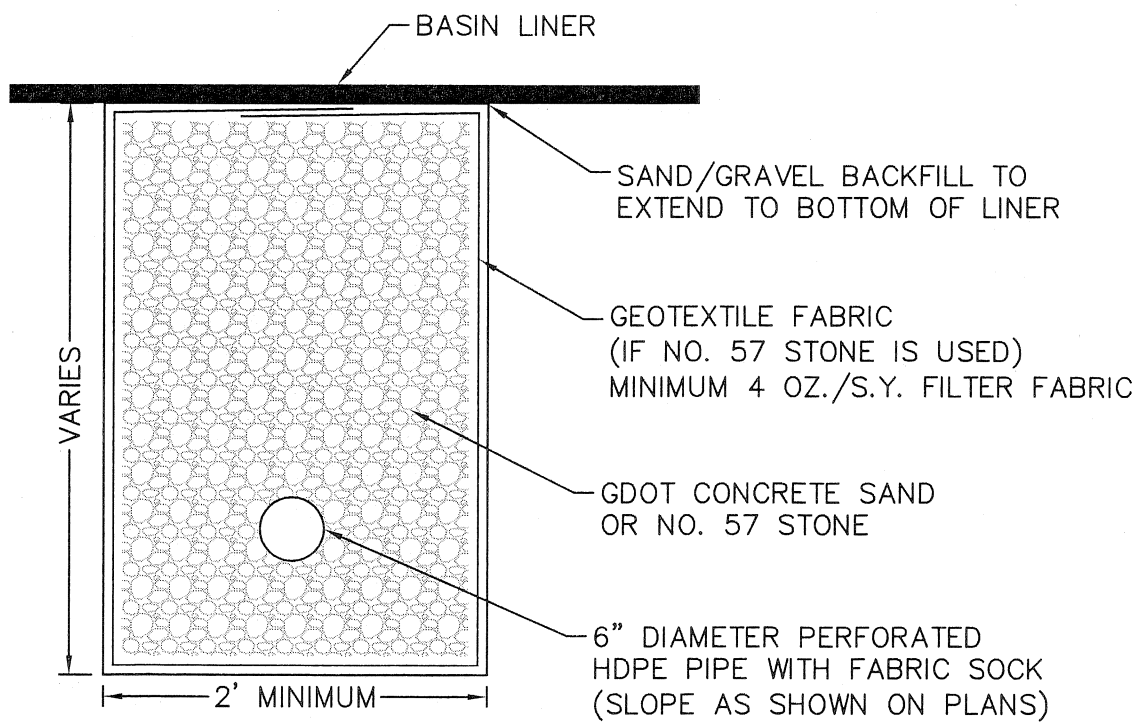
N.T.S.

1.5" 12.5MM SUPERPAVE ASPHALT  
2" 12.5MM SUPERPAVE ASPHALT  
6" GRADED AGGREGATE BASE  
COMPACTED SUBGRADE



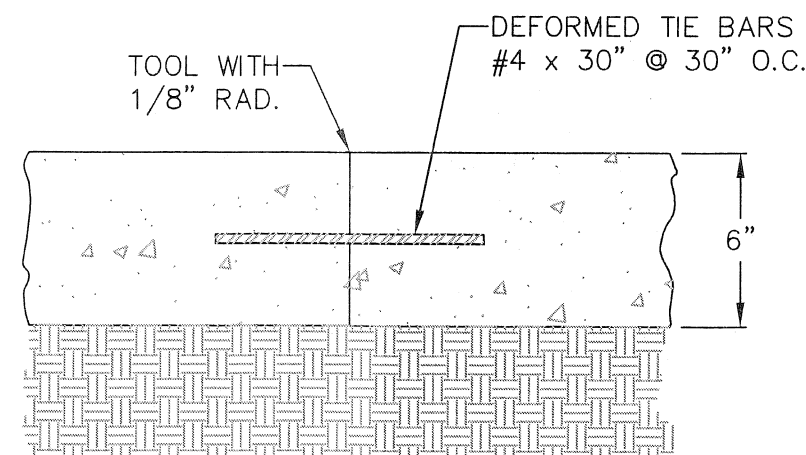
## TYPICAL PAVING SECTION

N.T.S.



## UNDERDRAIN DETAIL

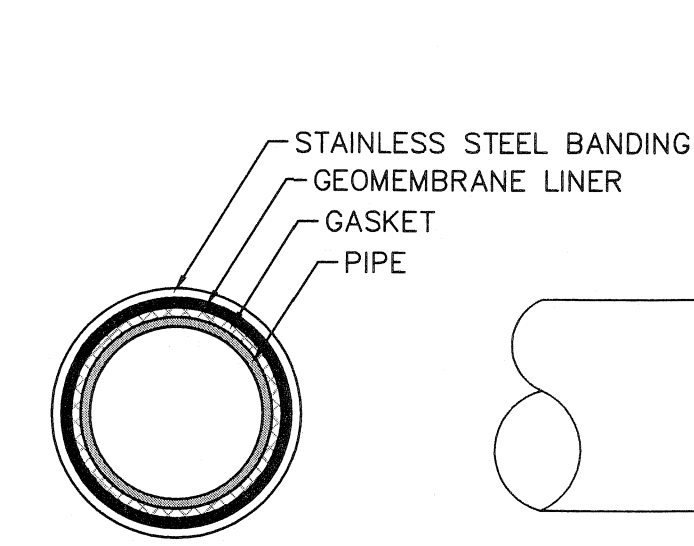
N.T.S.



## CONCRETE PAVING DETAIL

N.T.S.

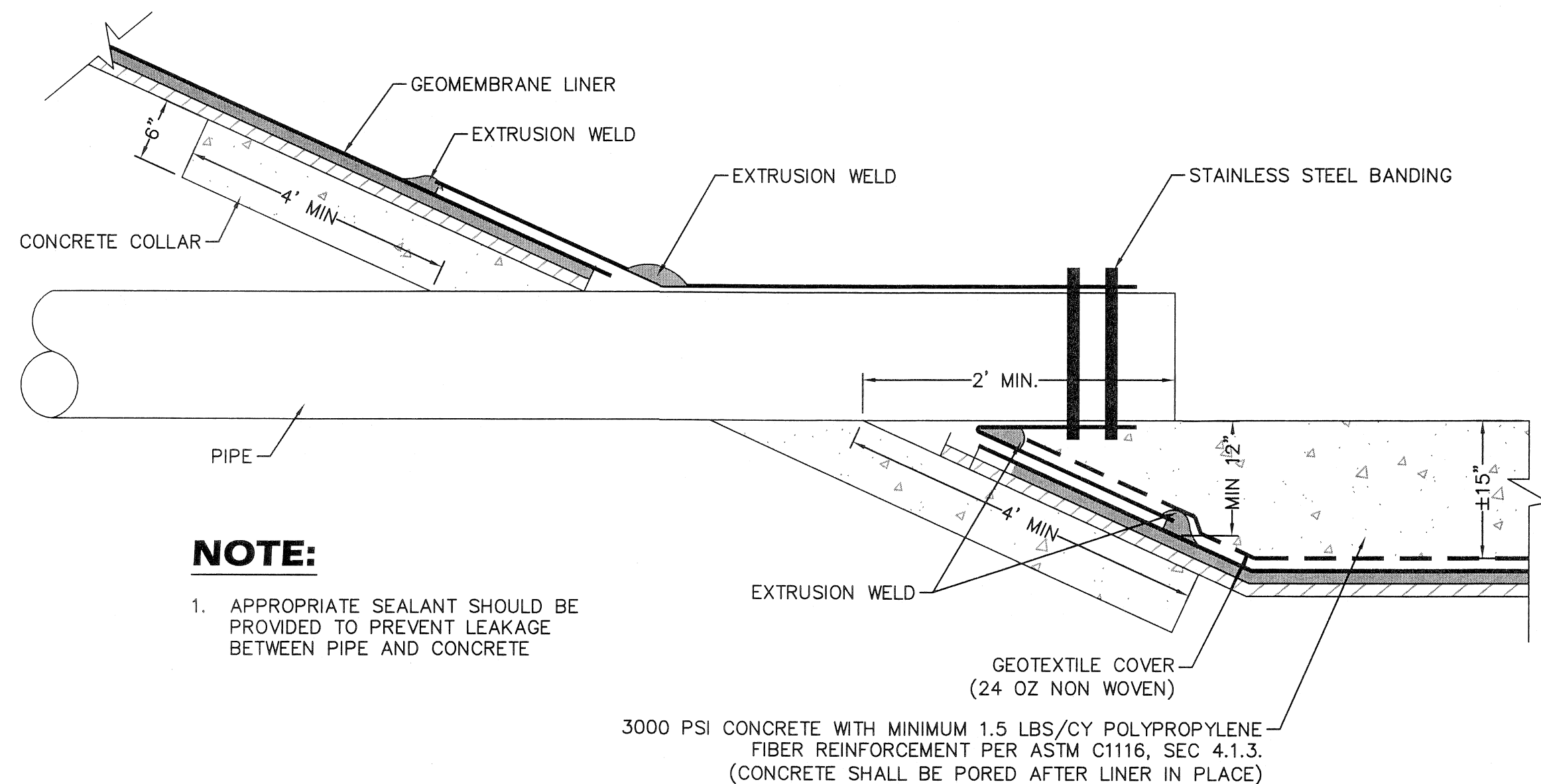
- CONCRETE PAVING
1. ALL CONCRETE USED IN PARKING LOT, UNLESS OTHERWISE INDICATED, SHALL HAVE A COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.
  2. PREPARE THE SUBGRADE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS FOR RIGID PAVEMENTS. SUBGRADE SOIL DENSITY TESTING MUST BE COMPLETED AND VERIFIED BY THE GEOTECHNICAL ENGINEER PRIOR TO CONCRETE PLACEMENT.
  3. IMPORTED SOIL USE FOR BACKFILL SHOULD BE FREE OF HEAVY CLAY, SILTS, STONES, PLANT ROOT OR OTHER FOREIGN MATERIAL GREATER THAN 1 1/2" IN DIAMETER IN ORDER TO ACHIEVE ADEQUATE COMPACTION AROUND ANY FIXED OBJECT IN GROUND. ALTERNATE WILL BE TO USE FLOWABLE FILL.
  4. LAYOUT CONTROL JOINT BY STARTING AT THE EDGE OF BUILDING AND WORK TOWARD EDGE OF PAVEMENT
  5. KEEP ALL JOINTS CONTINUOUS
  6. CONTROL JOINTS SHALL BE FORMED OR SAWED WITHIN 12 HOURS FROM TIME OF PLACEMENT; PAVEMENT- MAXIMUM SPACING SHALL BE 2.5 TIMES THICKNESS IN UNIT OF FEET AND LESS THAN 15 FEET IN LENGTH (E.G. T=4 INCH SPACING AT 10'x10')
  7. CURE CONCRETE IMMEDIATELY AFTER FINISHING OPERATION IS COMPLETED BY USING ONE OF THE FOLLOWING METHODS: WATER, PIGMENTED WATER-BASED CURING COMPOUND OR VISQUEEN AND BURLAP.



## SECTION A-A

## PIPE PENETRATION SEAL

N.T.S.

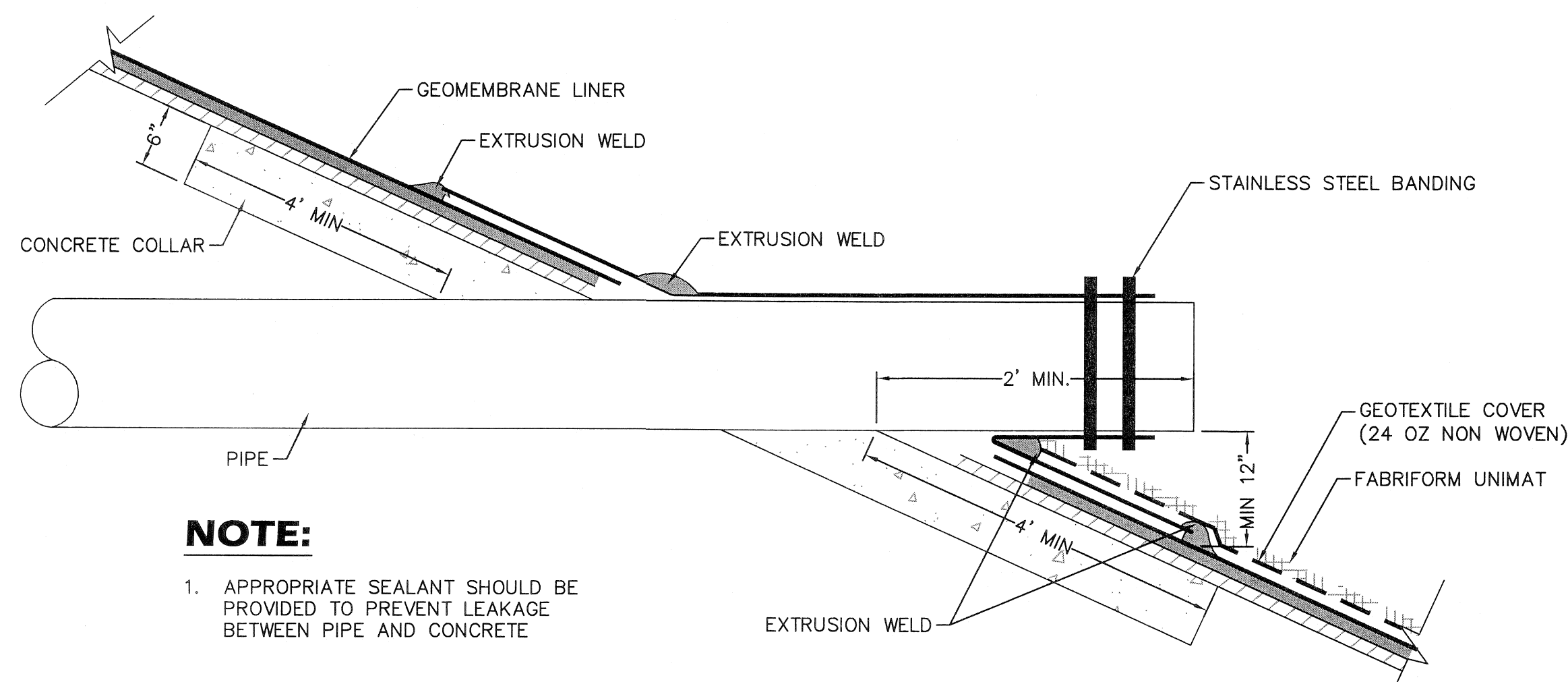


## NOTE:

1. APPROPRIATE SEALANT SHOULD BE PROVIDED TO PREVENT LEAKAGE BETWEEN PIPE AND CONCRETE

## INFLOW PIPE PENETRATION DETAIL (TO PUMP STATION)

N.T.S.



## NOTE:

1. APPROPRIATE SEALANT SHOULD BE PROVIDED TO PREVENT LEAKAGE BETWEEN PIPE AND CONCRETE

## OUTFLOW PIPE PENETRATION DETAIL (FROM EXISTING EQ BASIN)

N.T.S.



GA CORP# 0419099  
FL CORP# F04000002135  
P.O. Box 2830  
3998 Inner Perimeter Road  
Valdosta, GA 31604  
Telephone: 229-253-0900  
Fax: 229-253-1842  
E-mail: lea@lea-pc.com

**CITY OF VALDOSTA**  
**WITHLACOOCHEE WWTP**  
**SECONDARY**  
**EQUALIZATION BASIN**  
LAND LOT 43 OF THE 11TH LAND DISTRICT  
LOWNDES COUNTY - STATE OF GEORGIA

REVISIONS	
DATE	DESCRIPTION

SCALE: N.T.S.

DESIGNED BY: MCM

CHECKED BY: JSL

SUBMITTAL DATE: 10/31/19

JOB NO. 0026-33

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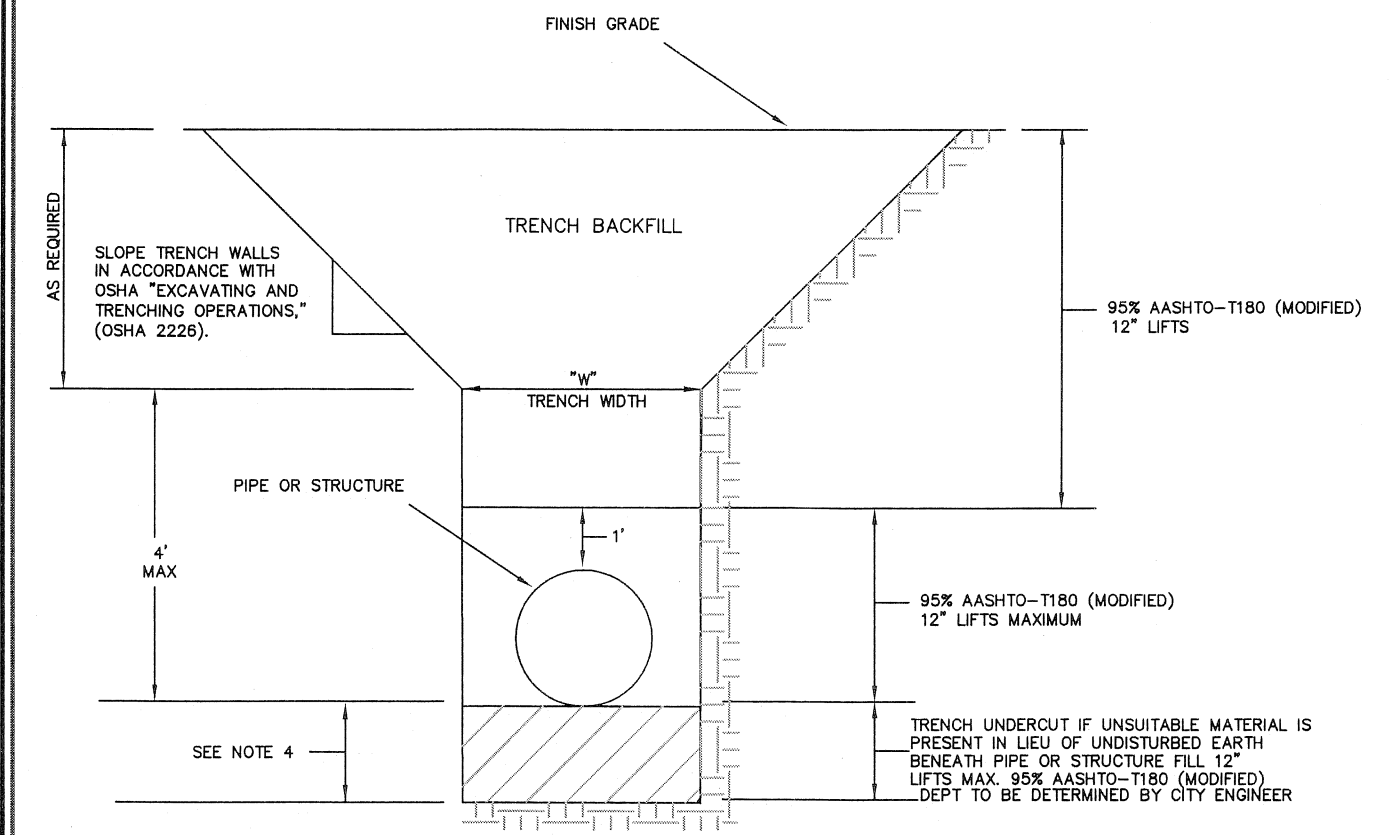
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**CONSTRUCTION**  
**DETAILS (1 OF 2)**

**C-8**

8 OF 17 SHEETS





**NOTES**

- DENSITY TESTS TO BE TAKEN AT EACH 12" OF COMPACTED FILL, NOT MORE THAN 500 FEET APART OR AS DIRECTED BY A GEOTECHNICAL ENGINEER.
- IF THE CONTRACTOR HAS COMPACTION EQUIPMENT WITH WHICH THE REQUIRED DENSITY CAN BE OBTAINED IN THICKER LIFTS THAN PERMITTED ABOVE AND UPON SATISFACTORY EVIDENCE THAT THE PROPOSED EQUIPMENT WILL PRODUCE WORK EQUAL IN QUALITY TO THAT PRODUCED BY THE SPECIFIED METHODS, THE ENGINEER MAY PERMIT PLACEMENT OF GRANULAR MATERIAL SOIL GROUPS A-1, A-2, OR A-3 IN LIFTS UP TO A MAXIMUM OF TWO FEET COMPACTED THICKNESS. THE CONTRACTOR WILL BE REQUIRED TO FURNISH EQUIPMENT AND LABOR TO EXCAVATE AND BACKFILL TEST PITS TO BE RUN FOR THE PERFORMANCE OF DENSITY TESTS.
- USE OF THICK LIFT COMPACTION PROCEDURES WILL NOT BE ALLOWED FOR THE FIRST STAGE BACKFILLING (BENEATH THE MANHOLES) OF PIPE AND ON SIDES OF PIPE.
- REFER TO PROJECT PLANS AND SPECIFICATIONS AND GDOT STANDARD SPECIFICATIONS FOR ROAD CONSTRUCTION, UNSUITABLE MATERIAL FOR UNDERCUTTING REQUIREMENTS.
- REFER TO PROJECT PLANS AND SPECIFICATIONS AND GDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE REPLACEMENT.

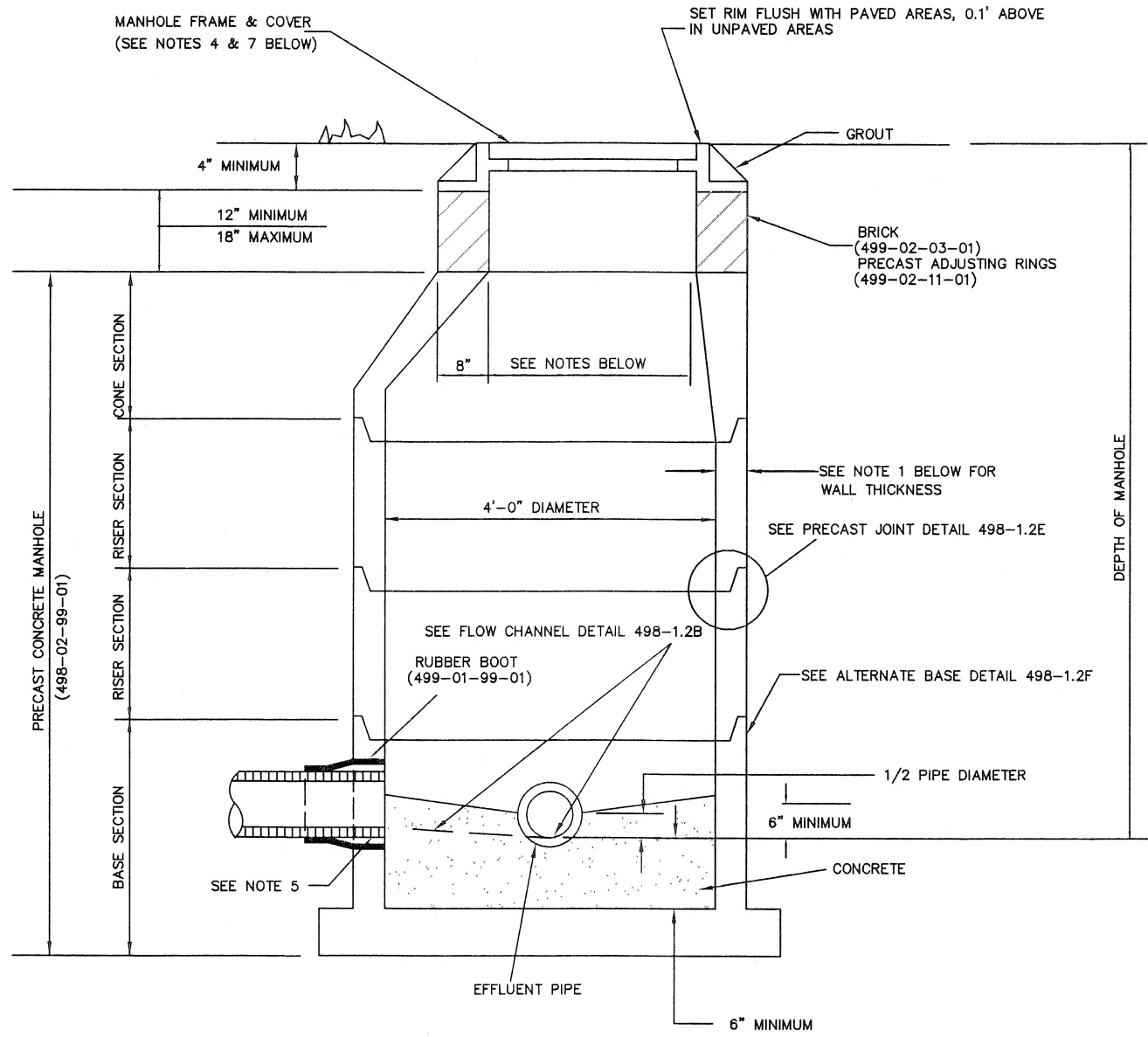
SPECIFICATION	DATE REVISED:	SECTION
CITY OF VALDOSTA		SH. 1 OF 1
CITY OF VALDOSTA STANDARD DETAIL		A
TRENCH BACKFILL NOT WITHIN STREET RIGHTS OF WAY	478-5.2	

THRUST RESTRAINT TABLE FOR DIP HORIZONTAL FITTINGS					
NOMINAL PIPE DIAMETER	TEE, 90 BEND	45 BEND	22.5 BEND	11.25 BEND	PLUG
4-6	40'	20'	20'	20'	80'
8	60'	40'	20'	20'	100'
12	80'	40'	20'	20'	140'
16	120'	60'	40'	20'	180'
18	140'	80'	40'	20'	220'
24-30	160'	80'	40'	20'	300'
36	180'	80'	40'	20'	360'

**NOTES**

- MINIMUM RESTRAINED LENGTH SHALL BE ALWAYS 20 FEET.
- IN LINE VALVES AND THROUGH RUN OF TEES OUTSIDE LIMITS OF RESTRAINED JOINTS FRO OTHER FITTINGS NEED NOT BE RESTRAINED UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
- RESTRAINED JOINTS CAN BE USED IN LIEU OF THRUST BLOCKS.

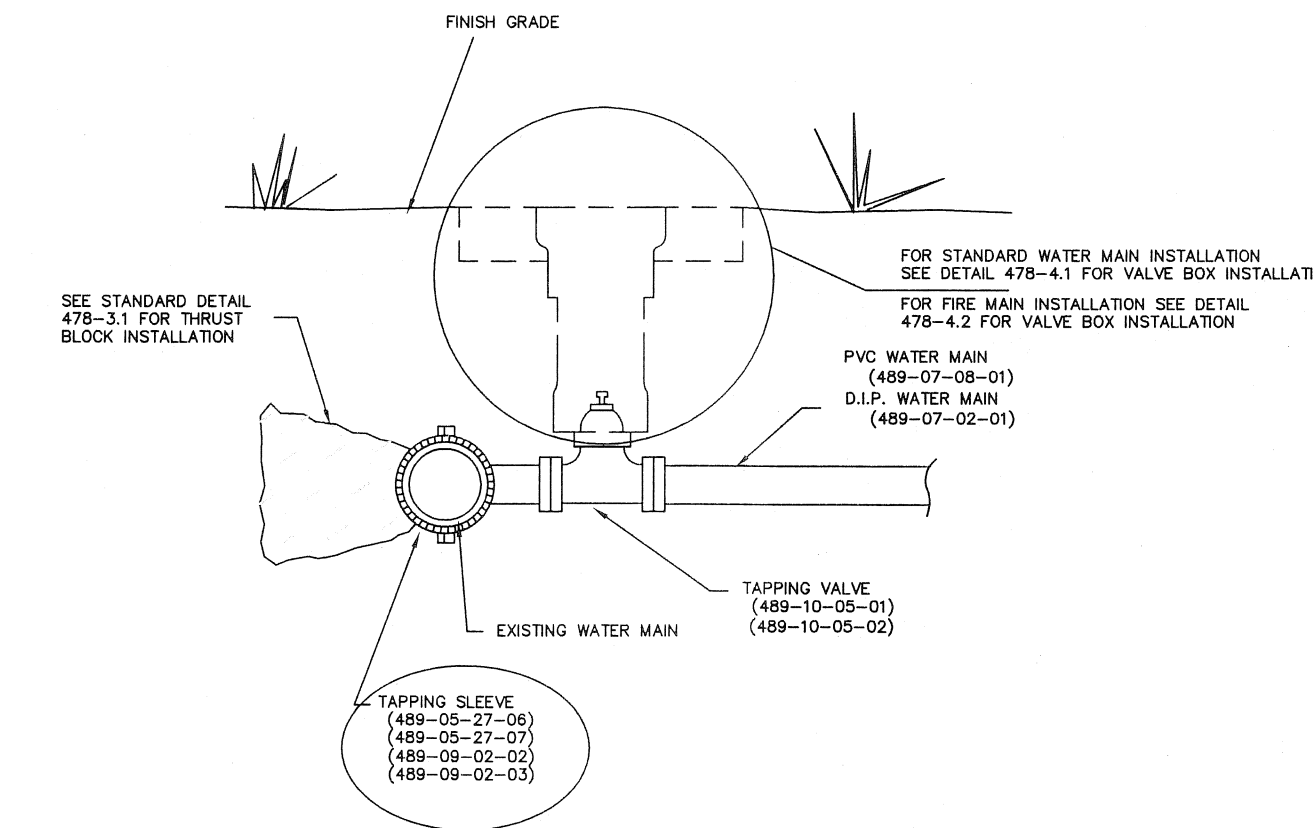
SPECIFICATION	DATE REVISED:	SECTION
CITY OF VALDOSTA		SH. 1 OF 1
CITY OF VALDOSTA STANDARD DETAIL		C
RESTRAINED JOINT SYSTEM	478-3.1	



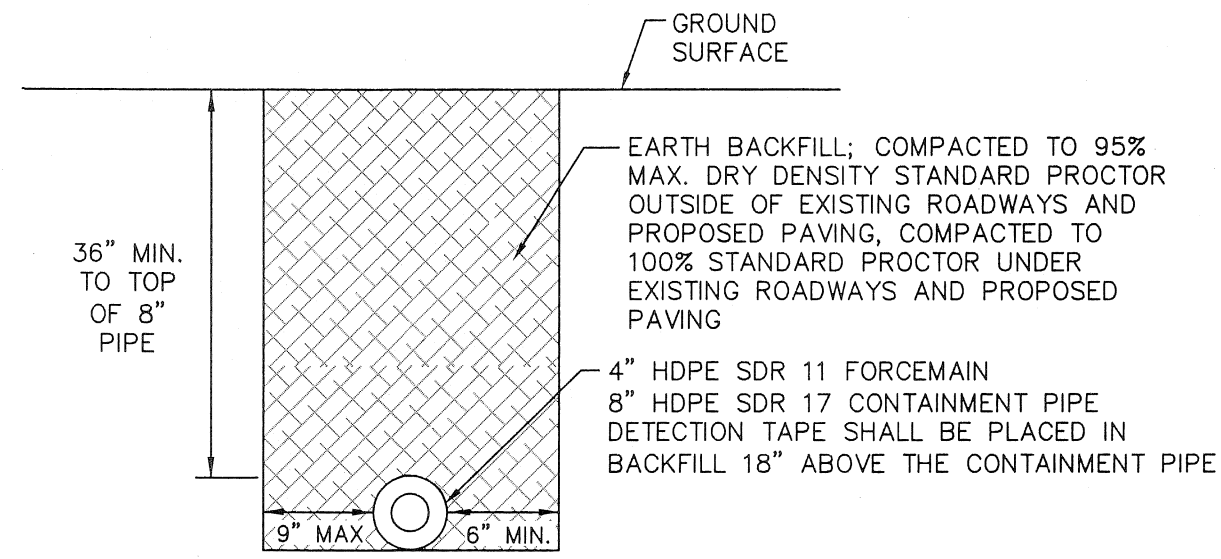
**NOTES**

- MINIMUM WALL THICKNESS SHALL BE FIVE INCHES (5") OR 1/12 THE INSIDE DIAMETER, WHICHEVER IS GREATER.
- ALL MANHOLES THAT WILL BE MAINTAINED BY THE CITY OF VALDOSTA SHALL BE LINED. MANHOLE LINING SHALL BE HDPE (499-02-99-06).
- THE EXTERIOR AREAS SHALL BE COATED WITH TWO (2) COATS OF BITUMASTIC SEALER.
- MANHOLES SHALL BE FURNISHED WITH FACTORY INSTALLED BOOTS (499-01-99-01) TO CONNECT SEWER PIPES TO MANHOLES.
- MANHOLE TO BE INSTALLED WITH 24" STANDARD RING AND COVER UNLESS OTHERWISE SPECIFIED.
- FILL ANNULAR VOID BETWEEN PIPE AND RUBBER BOOT WITH GROUT AND FLUSH WITH MANHOLE WALL.
- LIMEROCK WILL BE PLACED AROUND RING & COVER TO BOTTOM OF ASPHALT.
- MANHOLE COVERS IN PAVEMENT SHALL BE STANDARD OR HINGED (499-02-09-03) WHERE SPECIFIED.
- EACH MANHOLE INSTALLED SHALL HAVE ONE COMPACTION DENSITY TEST PER 491.4.1.1 IN SPECIFICATIONS, 100% STANDARD PROCTOR.

SPECIFICATION	DATE REVISED:	SECTION
CITY OF VALDOSTA		SH. 1 OF 1
CITY OF VALDOSTA STANDARD DETAIL		B
PRECAST CONCRETE MANHOLE 5" TO 12" DEPTH	498-1.1	

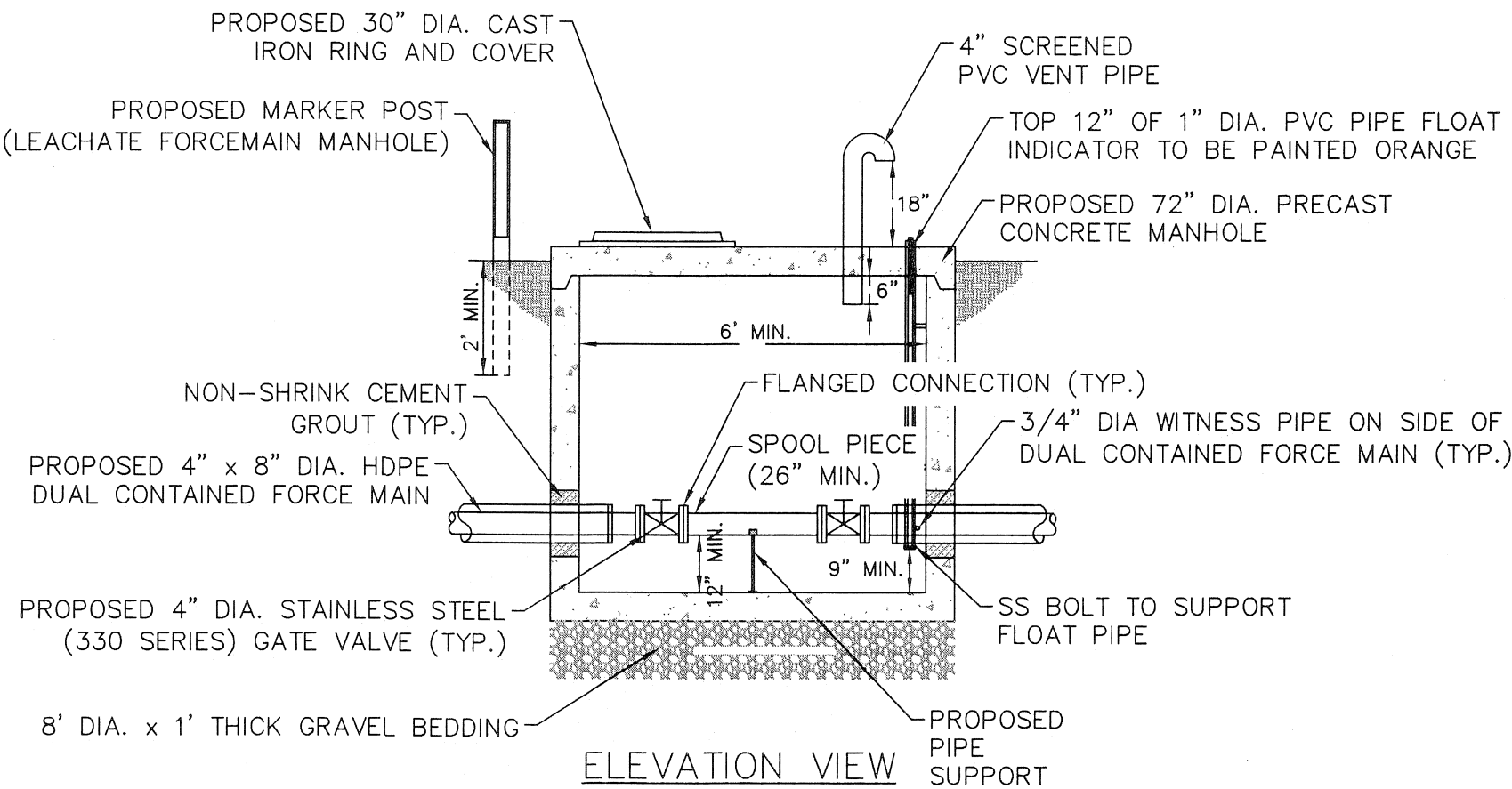
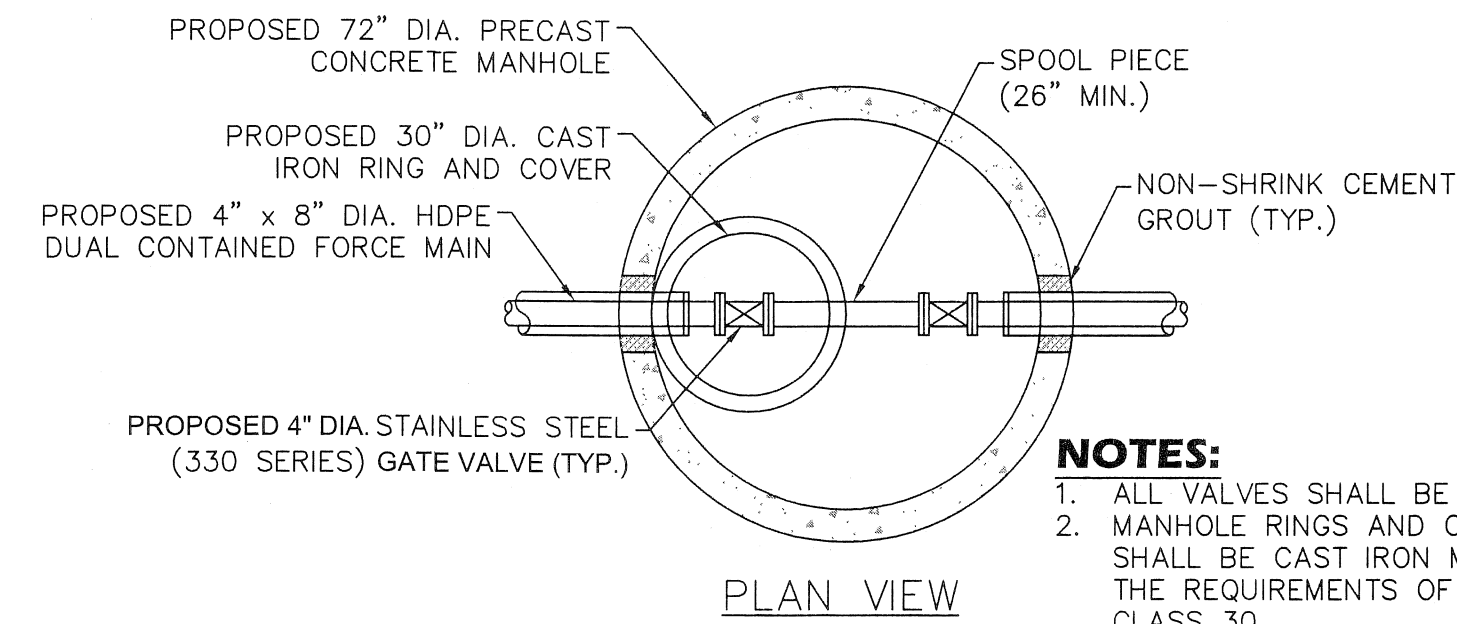


SPECIFICATION	DATE REVISED:	SECTION
CITY OF VALDOSTA		SH. 1 OF 1
CITY OF VALDOSTA STANDARD DETAIL		B
WATER MAIN TAP 3" AND ABOVE	488-3.2	



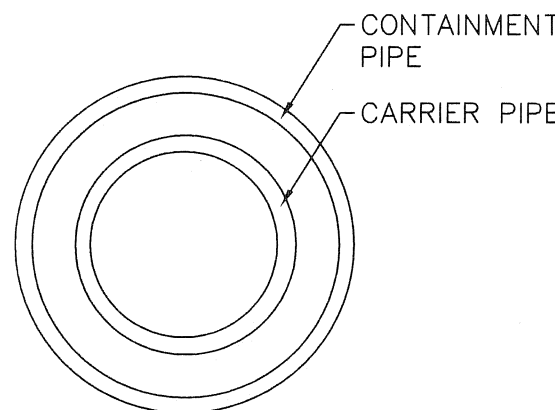
**LEACHATE FORCEMAIN  
BEDDING / TRENCH DETAIL**

N.T.S.



**IN-LINE LEACHATE FORCE  
MAIN CLEANOUT MANHOLE**

N.T.S.



PIPE DIMENSIONS	
CARRIER PIPE	CONTAINMENT PIPE
2"	4"
3"	6"
4"	8"
6"	10"
8"	12"

**NOTE:**

- ALL HDPE PIPE SHALL BE BUTT FUSED.
- SUPPORT SPACERS SHALL BE SECURED TO THE CARRIER PIPE AT 4' INTERVALS AND SHALL NOT RESTRICT LONGITUDINAL MOVEMENT BETWEEN CARRIER AND CONTAINMENT PIPES.
- SPACERS SHALL NOT RESTRICT POSSIBLE FLOW OF FLUID FROM THE CARRIER PIPE.
- ALL HDPE PIPE SHALL BE TESTED AND CERTIFIED AT 5 PSI FOR 2 HOURS BY MANUFACTURER/INSTALLER PRIOR TO BACKFILLING.

**DUAL CONTAINMENT HDPE PIPE**

N.T.S.



GA CORP# 0419099  
FL CORP# F04000002135  
P.O. Box 2830  
3998 Inner Perimeter Road  
Valdosta, GA 31604  
Telephone: 229-253-0900  
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E-mail: lea@lea-pc.com

**CITY OF VALDOSTA**  
**WITHLACOOCHEE WWTP**  
**SECONDARY**  
**EQUALIZATION BASIN**  
LAND LOT 63 OF THE 11TH LAND DISTRICT  
LOWNDES COUNTY - STATE OF GEORGIA

REVISIONS	
DATE	DESCRIPTION

SCALE: N.T.S.

DESIGNED BY: MCM

CHECKED BY: JSL

SUBMITTAL DATE: 10/31/19

JOB NO. 0026-33

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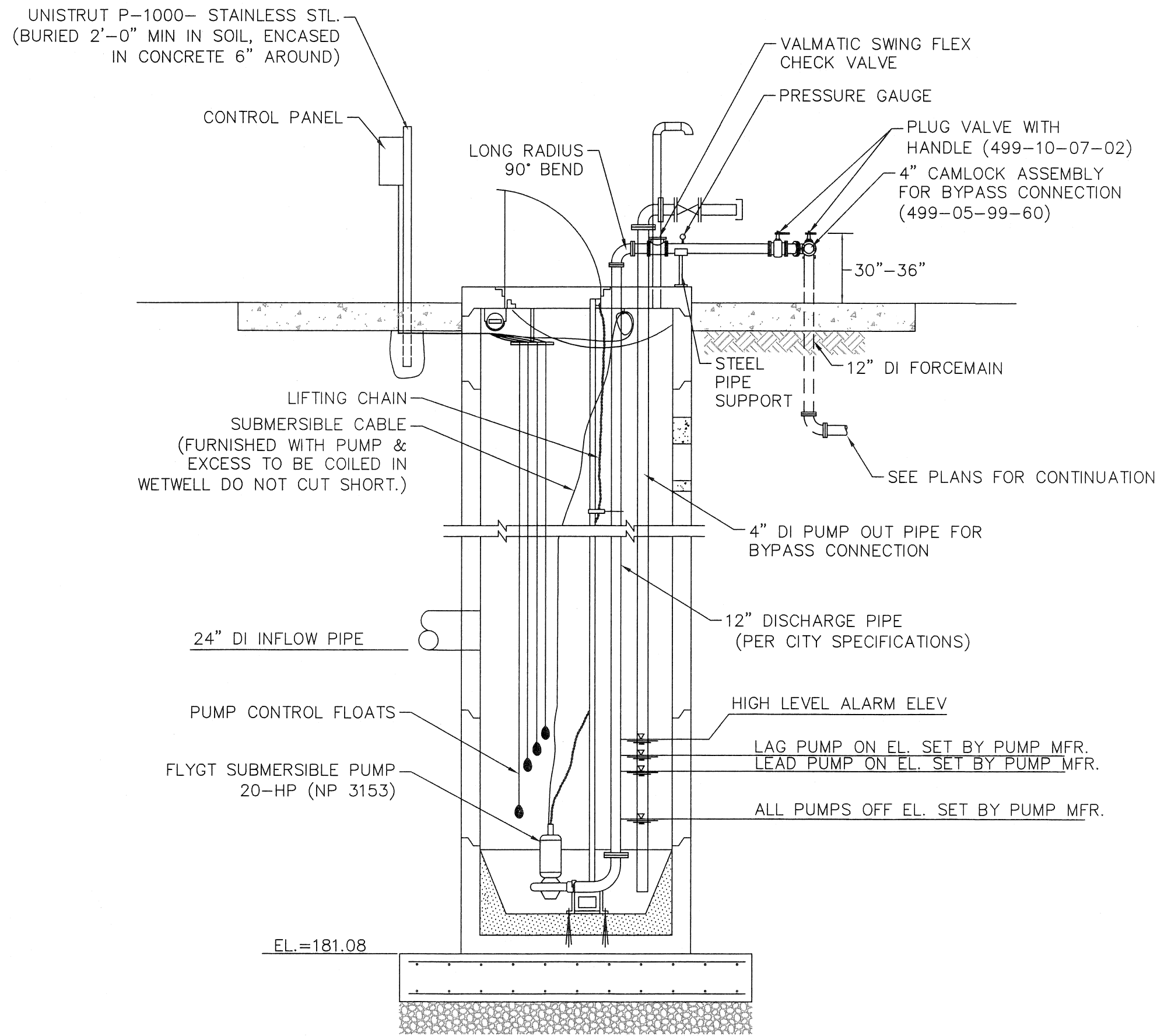
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**CONSTRUCTION  
DETAILS  
(2 OF 2)**

**C-9**  
9 OF 17 SHEETS

S:\0026-33 (City of Valdosta, Secondary EQ Basin)\Withlacoochee Secondary EQ Basin.dwg 10/31/2019 2:17 PM



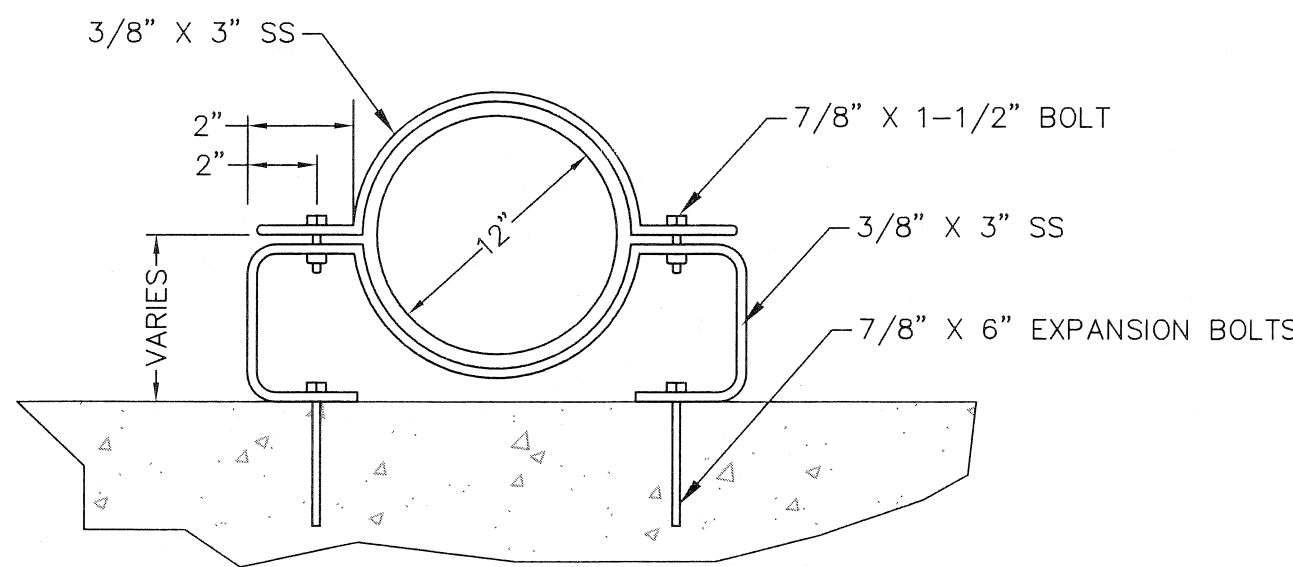


PUMP STATION WET WELL

SECTION A-A

PUMP STATION (8' DIAMETER WETWELL)

N.T.S.

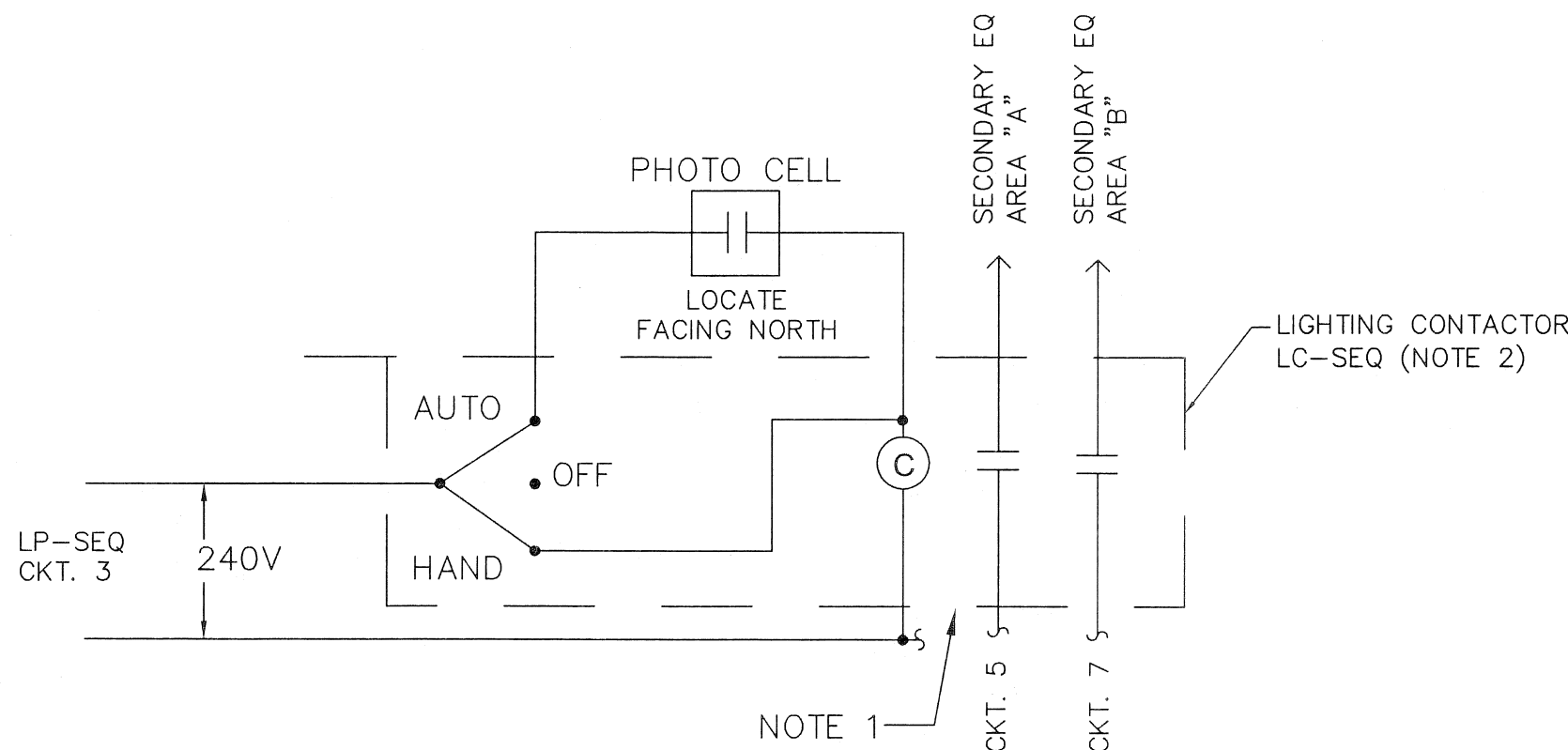
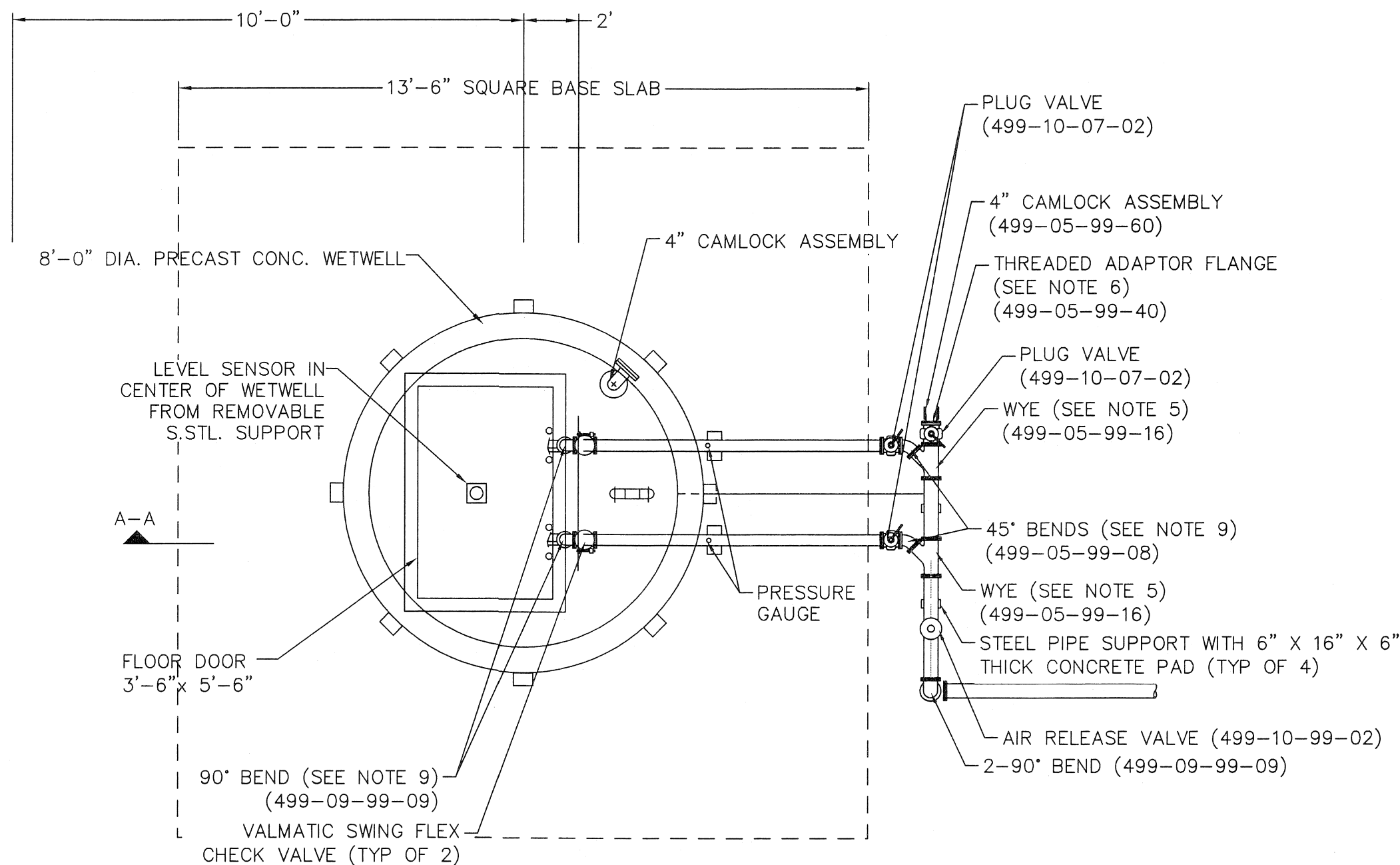


VERTICAL PIPE SUPPORT

N.T.S.

NOTE:

1. WET WELL, UNDER SIDE OF SLAB, AND ALL EXPOSED INTERIOR SURFACES AND JOINTS TO BE COATED OR LINED AS CALLED FOR IN THE PROJECT SPECIFICATIONS.
2. ALL ABOVEGROUND FITTINGS TO BE FLANGED.
3. USE NON-SHRINK GROUT WHEN ASSEMBLING PRECAST SECTIONS IN LIEU OF PREMOLDED PLASTIC JOINT SEALER.
4. FILL ANNULAR VOID BETWEEN PIPE AND RUBBER BOOT WITH GROUT AND FLUSH WITH THE STRUCTURE WALL.
5. BRANCH LINE OF WYE TO BE SAME DIAMETER AS DISCHARGE PIPE. MAIN LINE TO BE SAME DIAMETER AS FORCE MAIN.
6. ADAPTOR FLANGE TO BE SAME DIAMETER AS FORCE MAIN AND FURNISHED WITH NPT THREADS FOR CAMLOCK ASSEMBLY.
7. ALL ABOVE GROUND PIPE, FITTINGS AND FASTENERS TO BE PAINTED AS SPECIFIED IN SECTION 499.11.99.04. PIPING IN WETWELL SHALL BE COATED AS SPECIFIED IN SECTION 499-11-99-05.
8. GUIDE RAILS, LIFTING CHAINS AND OTHER PUMP APPURTENANCES TO BE FURNISHED BY PUMP MANUFACTURER OR DESIGNATED REPRESENTATIVE.
9. ALL PIPE FITTINGS AND PIPE TO BE FLANGED JOINT.
10. ALL ABOVEGROUND CONDUIT TO BE RIGID ALUMINUM OR PVC COATED STEEL CONDUIT. BELOW GROUND CONDUIT TO BE PVC.
11. WETWELL TO BE SUBJECTED TO A WATER TEST IN ACCORDANCE WITH SECTION 491.4.6.
12. CONTRACTOR SHALL CONDUCT A PRE-LIFT STATION CONSTRUCTION MEETING ON-SITE WITH CITY PERSONNEL FOR FINAL APPROVAL OF THE EQUIPMENT LOCATIONS.

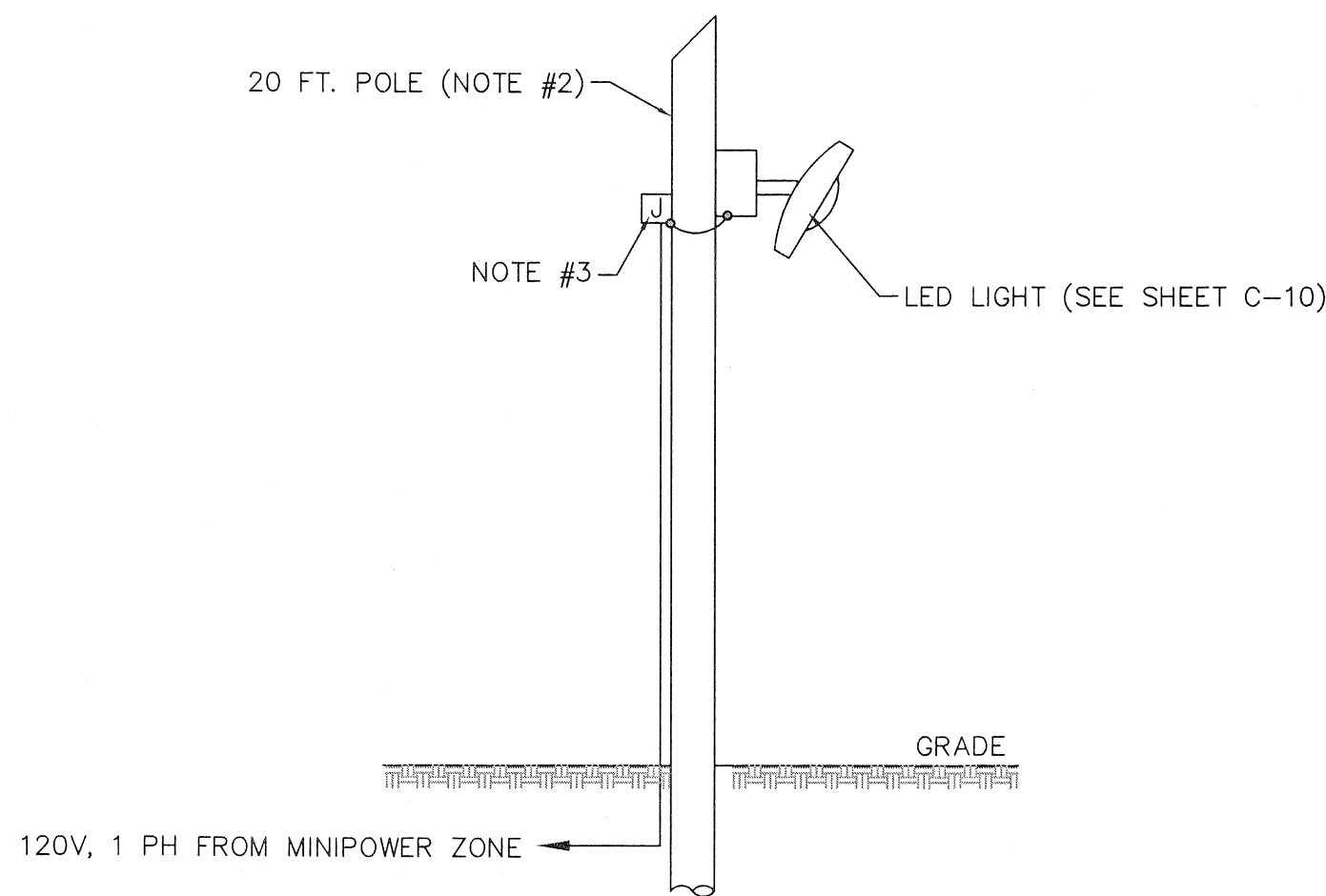


NOTES:

1. MECHANICALLY-HELD HEAVY-DUTY LIGHTING CONTACTOR. PROVIDE MINIMUM OF 3 SPARES, TAG THE CONDUCTORS ON THE LINE SIDE OF THE LIGHTING CONTACTOR WITH THEIR RESPECTIVE CIRCUIT NUMBER.
2. INSTALL LIGHTING CONTROL IN NEMA 1, 12 GAUGE GALVANIZED STEEL CABINET, FINISHED IN GRAY ENAMEL WITH HINGED DOOR AND LOCKING HANDLE. THE CONTACTOR SHALL BE 2 POLES, 240V COIL VOLTAGE EATON CLASS ECC03 OR APPROVED EQUAL.

PHOTOCELL/TIME SWITCH LIGHTING CONTROL SCHEMATIC

N.T.S.



NOTES:

1. AREA LIGHT COMPLETE WITH BRACKET SUITABLE FOR POLE MOUNT AND ARM.
2. PRESSURE SALT TREATED SOUTHERN PINE UTILITY GRADE POLE, STRAIGHT AND TRUE WITH NO KNOTS, SPLITS OR OFFSETS, CANTED TOP, STAMPED AND DATED, AND SET IN GROUND PLUMB TO UTILITY STANDARDS.
3. EXTEND 2#12 & 1#10 GND IN 3/4" RIGID GALVANIZED CONDUIT UP POLE. INSTALL NEMA 3R BOX AND CONNECT TO AREA LIGHT FIXTURE.

LIGHTING POLE DETAIL

N.T.S.



GA CORP# 0419099  
FL CORP# F04000002135  
P.O. Box 2830  
3998 Inner Perimeter Road  
Valdosta, GA 31604  
Telephone: 229-253-0900  
Fax: 229-253-1842  
E-mail: lea@lea-pc.com

CITY OF VALDOSTA  
WITHLACOOCHEE WWTP  
SECONDARY  
EQUALIZATION BASIN  
LAND LOT 63 OF THE 11TH LAND DISTRICT  
LOWNDES COUNTY - STATE OF GEORGIA

REVISIONS	
DATE	DESCRIPTION

SCALE: N.T.S.

DESIGNED BY: MCM

CHECKED BY: JSL

SUBMITTAL DATE: 10/31/19

JOB NO. 0026-33

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PUMP STATION DETAILS

C-10

10 OF 17 SHEETS



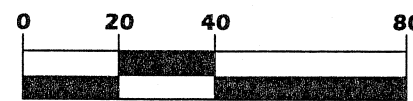


GA CORP# 0419099  
FL CORP# F04000002135  
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3998 Inner Perimeter Road  
Valdosta, GA 31604  
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CITY OF VALDOSTA  
WITHLACOOCHEE WWTP  
SECONDARY  
EQUALIZATION BASIN  
LAND LOT 63 OF THE 11TH LAND DISTRICT  
LOWNDES COUNTY, STATE OF GEORGIA

REVISIONS	
DATE	DESCRIPTION
02-13-20	REV #1

GRAPHIC SCALE



( IN FEET )  
1 INCH = 40 FEET



SCALE: 1"=40'

DESIGNED BY: MCM

CHECKED BY: JSL

SUBMITTAL DATE: 10/31/19

JOB NO. 0026-33

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ELECTRICAL  
DETAILS

C-11

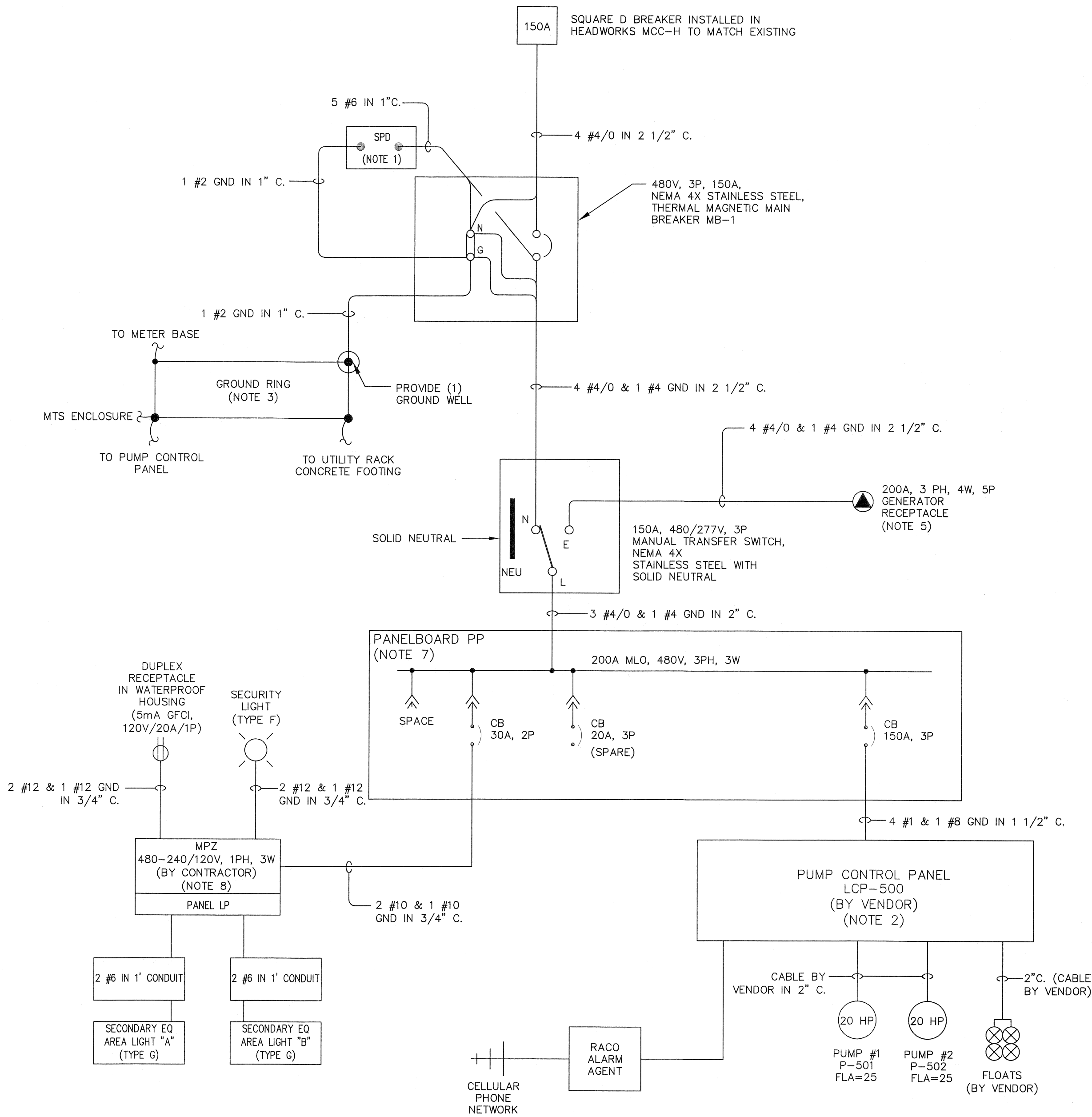
11 OF 17 SHEETS

NOTES:

1. THE CONTRACTOR SHALL PROVIDE SURGE PROTECTION DEVICE (SPD) IN NEMA 4X ENCLOSURE. SPD SHALL BE TOTAL PROTECTION SOLUTIONS CAT# TK-ST1203Y480-F-XX WITH DISCONNECT SWITCH.
2. CONTROL PANEL SHALL BE SUPPLIED BY PUMP VENDOR. PANEL TO INCLUDE FLYGT MULTISMART CONTROL WITH TEMPERATURE RECORDER AND AIR CONDITIONER. SEE SPECIFICATION FOR DETAILS.
3. THE CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE GROUND GRID AROUND THE UTILITY RACK AND WET WELL AND MAKE CONNECTIONS TO THE MAIN BREAKER AND THE CONTROL PANEL. THE GRID SHALL CONSIST OF BARE COPPER GROUND CONDUCTOR, 4-3/4" DIAMETER 10' GROUND RODS AND CADWELD CONNECTIONS TO GROUND RODS.
4. THE CONTRACTOR SHALL FURNISH AND INSTALL SEAL-OFF FITTINGS IN ALL CONDUITS THAT PENETRATE THE WET WELL.
5. CONTRACTOR SHALL SUPPLY AND INSTALL GENERATOR RECEPTACLE. CONTRACTOR SHALL COORDINATE THE EXACT GENERATOR RECEPTACLE TYPE AND SIZE WITH THE CITY'S PORTABLE GENERATOR (RUSSELL-STOLL MODEL JRF2044FR).
6. CONTRACTOR SHALL SUPPLY AND INSTALL RACO ALARM AGENT ON CELLULAR NETWORK TO MATCH EXISTING IN USE BY CITY. SEE SPECIFICATION FOR DETAILS.
7. CONTRACTOR SHALL SUPPLY AND INSTALL PANELBOARD. PANELBOARD SHALL BE RATED FOR 480V/3Ø IN A NEMA 4X ENCLOSURE. PROVIDE BREAKERS AS SHOWN ON ONE LINE DIAGRAM.
8. CONTRACTOR SHALL SUPPLY AND INSTALL A 10kVA, 480V-240/120V, 1Ø MINIPOWER ZONE MPZ. MINIPOWER ZONE SHALL BE SCHNEIDER ELECTRIC MODEL NO. MPZ10S40F OR ENGINEER APPROVED EQUAL IN NEMA 4X ENCLOSURE.
9. CONTRACTOR TO FOLLOW CITY OF VALDOSTA ELECTRICAL SPECS UNLESS OTHERWISE SPECIFIED ON DRAWINGS.

LIGHTING/RECEPTACLE SCHEDULE

SYMBOL	DESCRIPTION	LAMP/VOLTAGE	MOUNTING
F	LED STANCHION MOUNT LED: EVERMORE #EM-FL-B-100W	120V/1PH	STANCHION
⌚	DUPLEX RECEPTACLE INCLUDES BACK BOX, RECEPTACLE (WP DENOTES TO BE INCLUDED WITH WEATEHRPROOF COVER)	115VAC/1PH	
G	LED EVERMORE #EM-FL-B-200W	240V/1PH	STANCHION

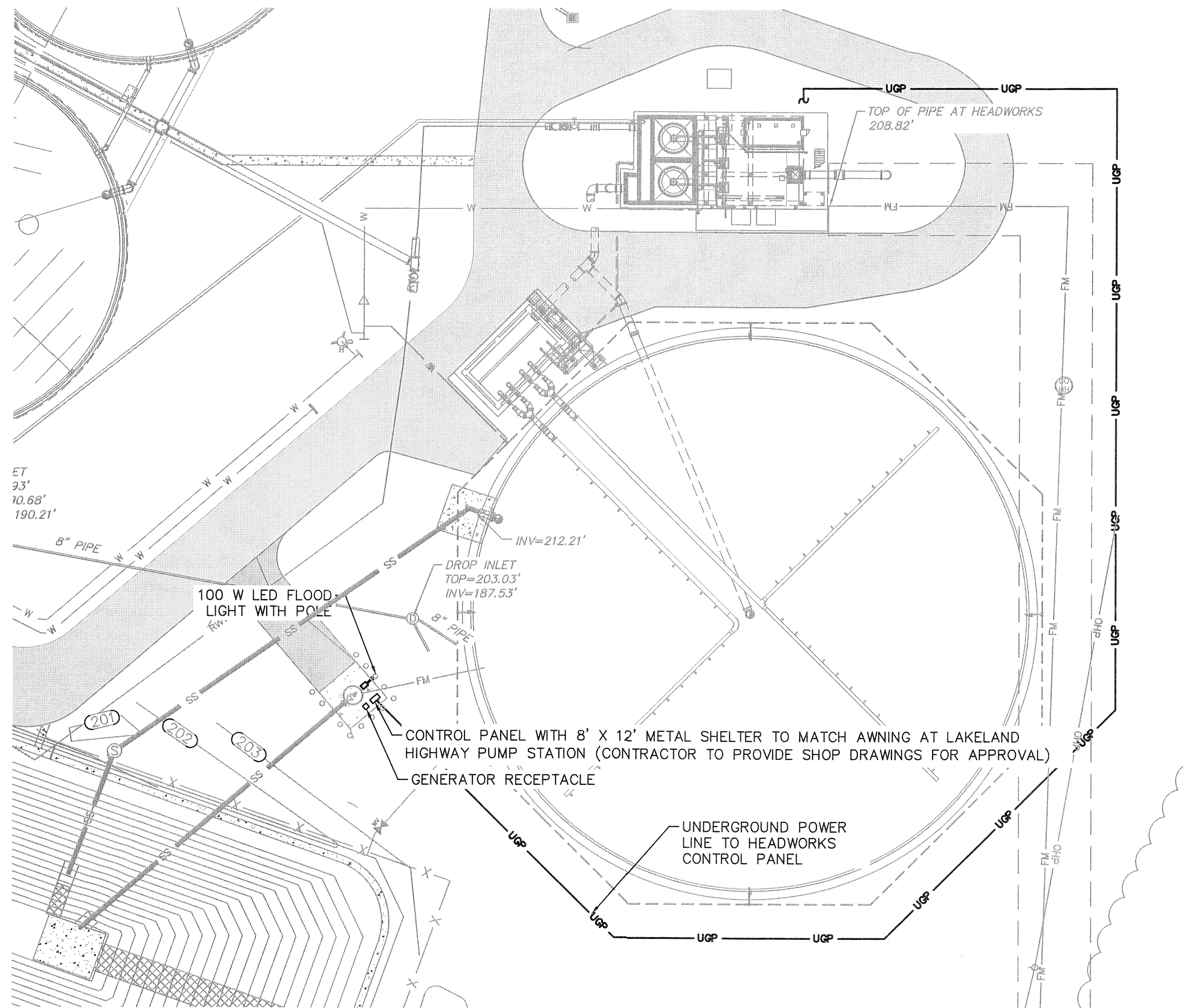


PUMP STATION ONE-LINE DIAGRAM

N.T.S.

PANEL LP - SECONDARY EQUALIZATION BASIN (SEQ)

VOLTAGE (L-N):		120V		ENCLOSURE TYPE: NEMA 4X							
VOLTAGE (L-L):		240V		MOUNTING: SURFACE							
PHASES, WIRES:		1ø 3W		AIC RATING (A): 18000							
MINIMUM BUS CAPACITY (A):		200A		NOTES: <u>MPZ-10KVA</u>							
MAIN O.C. DEVICE (A):		200 A MAIN BREAKER									
CKT NOK	DESCRIPTION	TRIP AMPS	POLE	PHASE LOADS (AMP)				POLE	TRIP AMPS	DESCRIPTION	CKT NOK
				A	B						
1	SECURITY LIGHT	20	1	2	3	-	-	1	20	RECEPTACLE	2
3	LIGHTING CONTACTOR	20	2	1	-	1	-				4
5	SEQ AREA LIGHT "A"	20	2	5	-	5	-				6
7				-	5	-	5	2	20	SEQ AREA LIGHT "B"	8
9	SPARE	20	1	-	-	-	-	1	20	RECEPTACLE	10





## SITE SUMMARY

**24 HOUR CONTACT:** Darryl Muse, 229-259-3592

**PRIMARY PERMITTEE:**

City of Valdosta  
1016 Myrtle Street  
Valdosta, GA 31601  
dmuse@valdostacity.com  
229-253-3592

**TOTAL SITE AREA (ACRES):** 74.8 Acres  
**TOTAL DISTURBED AREA (ACRES):** 5.1 Acres

**SITE NAME and DESCRIPTION OF CONSTRUCTION ACTIVITY:**

Withlacoochee Secondary Equalization Basin  
The proposed site is located at 3182 Wetherington Lane (DECIMAL DEGREES) in Lowndes County, Georgia. The site is currently a grass field. There are no jurisdictional wetlands on the site. The site slopes generally from the north. The proposed work includes clearing, grading, excavation of basin, and installation of utilities. The site is not within a 100-year flood plain. The site is in Land Lot 63 of the 12 Land District. The project is proposed to begin in September 2019 with project completion estimated in February 2020.

**NAME OF INITIAL RECEIVING WATER:**

- Withlacoochee River

**WATER QUALITY SAMPLING LOCATIONS:**

Location – Upstream/downstream of site in unnamed Tributary of Spring Branch.

A maximum increase of 25 NTUs in the downstream sample when compared to the upstream sample.

- Warm Water Fishery
- Construction Site Size: 5.1 ACRES
- Surface water drainage area: 0-4.99 mi<sup>2</sup>

**RUNOFF COEFFICIENT OR PEAK FLOW:**

PRE-DEVELOPMENT= 0.15  
POST-DEVELOPMENT= 0.15

## GENERAL ESPC NOTES

- THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.**
- 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 SEDIMENT SOURCE.**
- ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.**
- 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 without first acquiring the necessary variances and permits.
- The design professional who prepared the ES&PC plan is to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation.
- Amendments/revisions to the ES&PC plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional.
- Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit.
- This ES&PC plan is in compliance with waste disposal, sanitary sewer, or septic tank regulations.
- All construction shall be in accordance with Lowndes County standards and specifications.
- All erosion control measures shall be inspected by the contractor daily. Any damages observed shall be repaired by the end of that day.
- Contractor shall be responsible for installing the minimum required erosion control measures as shown on plans. Contractor is also responsible for ensuring compliance with NPDES law.
- The contractor is to verify all elevations of proposed structures as shown to ensure positive drainage prior to any construction.
- ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY FIELD INSPECTOR.**
- Upon completion of the project and receipt of certificate of occupancy, the contractor shall remove all temporary erosion control measures and dispose of them unless noted on plans.

## EROSION AND SEDIMENT CONTROLS

**SEQUENCE OF MAJOR ACTIVITIES:** Initial sediment storage requirements and perimeter control BMPs

- Clearing, grubbing, rough grading
- Maintenance of best management practices on-going throughout project
- Installation of utilities
- Excavating and grading of basin
- Final grading
- Final BMPs

**BUFFER ENCROACHMENTS:**

- There is not a buffer variance required for this project.

**SEDIMENT BASINS:**

"For common drainage locations a temporary (or permanent) sediment basin providing at least 1800 cubic feet (67 cubic yards) of storage per acre drained, or equivalent control measures, shall be provided until final stabilization of the site." Implementation and maintenance of sediment basins shall be conducted according to paragraph IV.D.3.a.(3) of Permit GAR 100001.

**STABILIZATION MEASURES**

A stabilized construction exit (Co) shall be provided to help reduce vehicle tracking of sediments. Paved streets used to access the site and those within shall be swept as needed to remove any excess mud, dirt or rock tracked from the site. Dump trucks hauling material from the construction site shall be covered with tarpaulins. Silt fencing (Sd1) shall be utilized downstream of all disturbed areas. Temporary sediment traps (Sa2) shall be installed around all stormwater structures. Check dams (Cd) shall be installed in areas of concentrated flow. Dust control (Du) shall be utilized on all disturbed areas. Temporary and permanent grassing (Ds2, Ds3) shall be applied according to the schedule shown in the specifications for the practice. Stabilization measures shall be initiated as soon as practicable but in no case later than 14 days after construction has temporarily or permanently ceased.

**POST-CONSTRUCTION BMPs**

Stormwater detention ponds and vegetated swales are permanent measures that will be installed to control pollutants after construction operations are complete. Velocity dissipation devices will be placed at discharge locations and along the length of any outflow channel in order to provide a non-erosive flow so that the natural physical and biological characteristics and functions of the water course are maintained and protected. The installation of these devices may be subject to Section 404 of the federal Clean Water Act.

## OTHER CONTROLS

**TIMING OF CONTROLS/MEASURES:**

All control measures shall be implemented according to the construction schedule shown in the Sequence of Major Activities section.

**NON-STORMWATER DISCHARGES:**

It is expected that the following non-stormwater discharges will occur from the site during the construction period

- Water from water line flushings and fire hydrants.
- Pavement wash waters (where no spills or leaks of toxic or hazardous materials have occurred).
- Uncontaminated ground water (from dewatering excavation).

All non-stormwater discharges shall be directed to a sediment basin prior to discharge.

**POTENTIAL POLLUTANTS:**

The following potential pollutants typically identified with construction may be present on-site. Pollution prevention measures implemented as part of this plan will reduce the potential for collection of these pollutants with stormwater.

- Petroleum products
- Construction debris
- Silt
- Fertilizers
- Paints and related materials
- Chlorinated water line flushings
- Sanitary waste

**SPILL PREVENTION:**

Material management practices:  
Good Housekeeping: The following good housekeeping practices shall be followed on-site during the construction project.

- An effort shall be made to store only enough of any product utilized on-site as is required to do the job.
- All materials stored on-site shall be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
- 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 to stormwater will not result in 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).

- Products shall be kept in their original containers with the original manufacturer's label.
- Substances shall not be mixed with one another unless recommended by the manufacturer.
- Whenever possible, all of a product shall be used up before disposing of the container.
- Manufacturer's recommendations for proper use and disposal shall be followed.
- The site superintendent shall inspect daily to ensure proper use and disposal of materials on-site.

**Hazardous Products:**

- Hazardous products used on-site shall be kept in original containers unless they are not resealable.
- Original labels and safety data sheets (SDSs) shall be retained on site.
- Surplus hazardous products shall be disposed of according to Federal, State, and Local guidelines.

**Fertilizers:**

- Fertilizers used for enhancement of stabilization measures shall be applied according to applicable rate schedules.
- Fertilizers shall be "worked" into the soil to minimize exposure to stormwater.
- Fertilizer materials stored on-site shall be managed in a manner to reduce the potential for stormwater contamination.

**Paints:**

- Paint materials on-site shall be stored in tightly sealed containers.
- Excess paint and paint waste shall be disposed of according to applicable Federal, State, and Local guidelines.

**SPILL CONTROL PRACTICES:**

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices shall be followed for spill prevention and cleanup:

- Manufacturers' recommended methods for spill cleanup shall be clearly posted and site personnel shall be made aware of the procedures and the location of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup shall be kept in material storage area on-site.
- All spills shall be cleaned up immediately after discovery.
- Spills of toxic or material shall be reported to the appropriate Federal, State, or local government agency, regardless of the size.
- The spill prevention plan shall be adjusted to include measures to prevent spills from reoccurring and how to clean up the spill if there is another one. A description of the spill, what caused it, and the clean up measures shall also be included.

The site superintendent responsible for the day-to-day operations shall be the spill prevention and cleanup coordinator.

**WASTE DISPOSAL:**

- Waste Materials:**  
All trash and construction debris from the site shall be deposited in a dumpster. The dumpster shall be emptied when full. No construction waste materials shall be buried on-site. All personnel shall be instructed regarding the correct procedure for waste disposal. All waste disposal practices shall be conducted in accordance with State and/or local waste disposal regulations.
- Hazardous Waste:**  
All hazardous waste materials shall be disposed of in the manner specified by State or local regulation or by the manufacturer. Site personnel shall be instructed in these practices and the Project Superintendent, the individual who manages day-to-day site operations, shall be responsible for seeing that these practices are followed.
- Sanitary Waste:**  
Sanitary waste generated from portable units shall be emptied as required to provide for sanitary conditions. All sanitary waste disposal practices shall be conducted in accordance with State and/or local waste disposal regulations.

## INSPECTIONS AND RECORD KEEPING

The following is the complete requirements of inspections and record keeping as stated in Part IV.D.4.a of the Permit:

**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 submitted.

(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 monitored 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 region.

(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.D.4.a.(4). These inspections must be conducted until a Notice of Termination is submitted.

(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 includes 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 site 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 certification that the best management practices are in compliance with the Erosion, Sedimentation and Pollution Control Plan. The report shall be signed in accordance with Part V.G.2. of this permit.

## SAMPLING FREQUENCY AND REPORTING OF RESULTS

The following is the complete requirements of inspections and record keeping as stated in Part IV.D.6.d and Part IV.E of the Permit:

**Part IV.D.6.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 stormwater discharge to a monitored receiving water and/or from a monitored outfall location within in 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 stormwater discharge.

(3). Sampling by the permittee shall occur for the following qualifying events:

- 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 stormwater 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 selected as the sampling location.
- 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 stormwater discharge that occurs during normal business hours as defined in 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.
- 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;
- 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 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 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.

**Part IV.E Reporting**

- 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 submitted 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 stormwater 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 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:
  - The rainfall amount, date, exact place and time of sampling or measurements;
  - The name(s) of the certified personnel who performed the sampling and measurements;
  - The date(s) analyses were performed;
  - The time(s) analyses were initiated;
  - The name(s) of the certified personnel who performed the analyses;
  - References and written procedures, when available, for the analytical techniques or methods used;
  - The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results;
  - Results which exceed 1000 NTU shall be reported as "exceeds 1000 NTU;" and
  - Certification statement that sampling was conducted as per the Plan.
- 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.

## RETENTION OF RECORDS

The following is the complete requirements of retention of records as stated in Part IV.F of the Permit:

**Part IV.F 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 copy of all Notices of Intent submitted to EPD;
  - A copy of the Erosion, Sedimentation and Pollution Control Plan required by this permit;
  - The design professional's report of the results of the inspection conducted in accordance with Part IV.A.5. of this permit;
  - A copy of all sampling information, results, and reports required by this permit;
  - A copy of all inspection reports generated in accordance with Part IV.D.4.a. of this permit;
  - A copy of all violation summaries and violation summary reports generated in accordance with Part III.D.2. of this permit; and
  - Daily rainfall information collected in accordance with Part IV.D.4.a.(2). of this permit

2. 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.

## SAMPLING PROCEDURES AND ANALYTICAL TESTING METHODS

- 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; 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.

**Sample Type**

- 1.1. Sample containers should be labeled prior to collecting the samples.
- 1.2. Samples should be well mixed before transferring to a secondary container.
- 1.3. 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.
- 1.4. 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 collected 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.
2. Sampling Points
  - 2.1. Ideally the samples should be taken from the horizontal and vertical center of the receiving water(s) or the stormwater outfall channel(s).
  - 2.2. Core should be taken to avoid stirring the bottom sediments in the receiving water(s) or in the outfall stormwater channel.
  - 2.3. The sampling container should be held so that the opening faces upstream.
  - 2.4. The samples should be kept free from floating debris.

## NOTICE OF TERMINATION

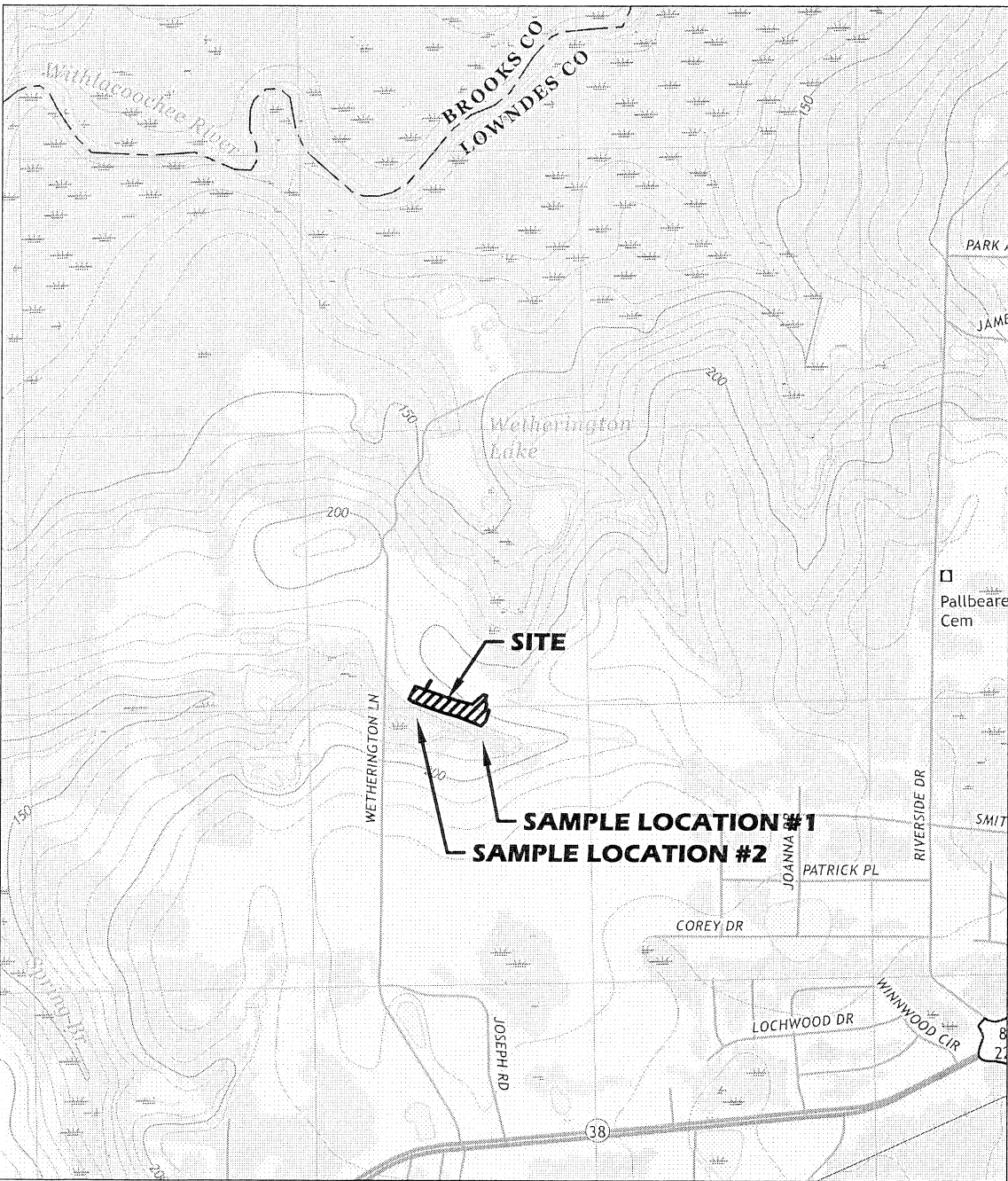
Upon final stabilization, A Notice of Termination shall be submitted to GA EPD in accordance with Permit GAR 100001 on forms provided by EPD (if available) or in the format outlined in the permit.

## DESIGN PROFESSIONAL CERTIFICATION

I, Clayton Milligan, have visited the site prior to the design of this erosion and sediment control plan and the plans submitted are designed in accordance with the Manual for Erosion and Sediment Control in Georgia (current edition) with the best of my ability

"I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and 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 Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, provides for the sampling of the receiving water(s) or the sampling of the storm water outfalls and that the designed system of Best Management Practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GAR 100001."

*Clayton Milligan*  
Clayton Milligan, P.E.  
Level II Certification # 00000049262  
GA PE# 34187



## USGS MAP

N.T.S.

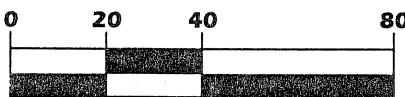


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**CITY OF VALDOSTA**  
**WITHLACOOCHEE WWTP**  
**SECONDARY**  
**EQUALIZATION BASIN**  
**LAND LOT 63 OF THE 11TH LAND DISTRICT**  
**LOWNDES COUNTY - STATE OF GEORGIA**

REVISIONS	
DATE	DESCRIPTION

### GRAPHIC SCALE



( IN FEET )  
1 INCH = 40 FEET



<b>SCALE:</b>	<b>1"=40'</b>
<b>DESIGNED BY:</b>	<b>MCM</b>
<b>CHECKED BY:</b>	<b>JSL</b>
<b>SUBMITTAL DATE:</b>	<b>10/31/19</b>
<b>JOB NO.</b>	<b>0026-33</b>
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GSWCC LEVEL II CERT. #49262

### ESPC NARRATIVE

# C-12

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## VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Ds2	DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)		Ds2	ESTABLISHING A TEMPORARY VEGETATIVE COVER WITH FAST GROWING SEEDINGS ON DISTURBED AREAS.
Du	DUST CONTROL ON DISTURBED AREAS		Du	CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITE, ROADWAYS AND SIMILAR SITES.

## STRUCTURAL PRACTICES

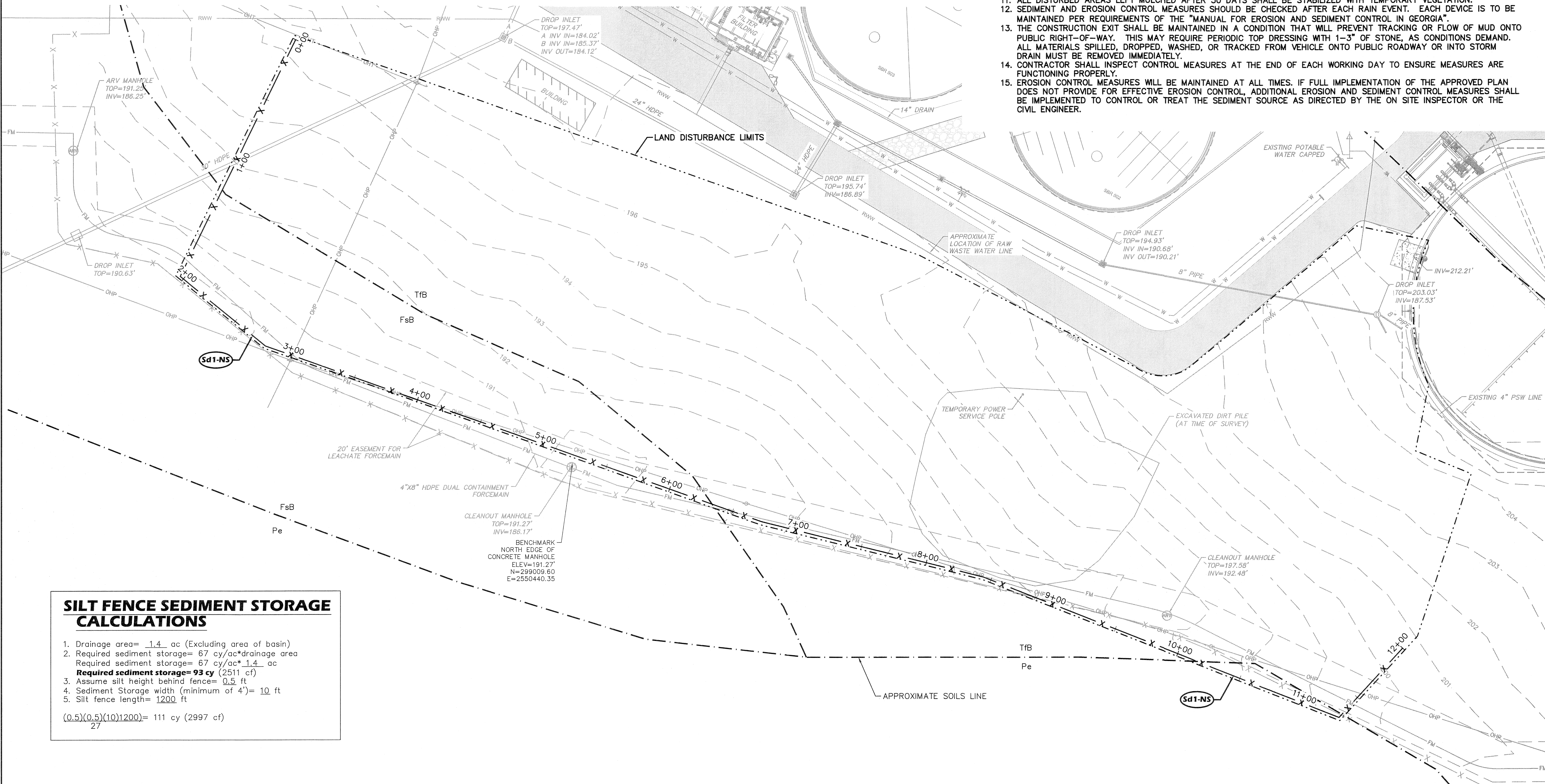
CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Co	CONSTRUCTION EXIT		Co (Label)	A CRUSHED STONE PAD LOCATED AT THE CONSTRUCTION SITE EXIT TO PROVIDE A PLACE FOR REMOVING MUD FROM TIRES THEREBY PROTECTING PUBLIC STREETS.
Sd1	SEDIMENT BARRIER		Sd1 (Type) (Indicate type)	A BARRIER TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. IT MAY BE SANDBAGS, BALES OF STRAW OR HAY, BRUSH, LOGS AND POLES, OR SILT FENCE.

## SOIL LEGEND

MAP UNIT SYMBOL	DESCRIPTION
FsB	Fuquay loamy sand, 0 to 5 percent slopes
TfB	Tifton loamy sand 2 to 5 percent slopes
TfB	Pelham loamy sand, 0 to 2 percent slopes, frequently flooded

## INITIAL PHASE EROSION CONTROL NOTES:

- THE CONTRACTOR SHALL MINIMIZE THE AREAS TO BE DISTURBED SIMULTANEOUSLY.
- A COPY OF THE APPROVED LAND DISTURBANCE PLAN AND PERMIT SHALL BE PRESENT ON THE SITE AT ALL TIMES.
- THE CONTRACTOR SHALL VERIFY WITH ENGINEER THE NOTICE OF INTENT HAS BEEN SUBMITTED TO EPD PRIOR TO CONSTRUCTION.
- PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY, THE LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY AND ACCURATELY MARKED WITH STAKES, RIBBONS, OR OTHER APPROPRIATE MEANS. THE LOCATION AND EXTENT OF ALL AUTHORIZED LAND DISTURBANCE ACTIVITY SHALL BE MARKED FOR THE DURATION OF THE CONSTRUCTION ACTIVITY. NO LAND DISTURBANCE SHALL OCCUR OUTSIDE THE APPROVED LIMITS INDICATED ON THE APPROVED PLANS.
- PRIOR TO ANY OTHER CONSTRUCTION, A STABILIZED CONSTRUCTION EXIT SHALL BE CONSTRUCTED AT EACH POINT OF EXIT FROM THE SITE ONTO ANY PUBLIC ROADWAY USED DURING CONSTRUCTION.
- IMMEDIATELY AFTER THE ESTABLISHMENT OF CONSTRUCTION EXITS, ALL PERIMETER EROSION CONTROL AND STORMWATER MANAGEMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE INITIAL PHASE EROSION CONTROL PLAN.
- TREE PROTECTION FENCING SHOULD BE INSTALLED PRIOR TO THE START OF ANY LAND DISTURBANCE ACTIVITY AND MAINTAINED UNTIL FINAL LANDSCAPE IS INSTALLED. THE TREE PROTECTION FENCING SHOULD BE INSPECTED DAILY. ANY FAILURES OF SAID FENCING SHOULD BE REPAIRED IMMEDIATELY.
- AFTER INSTALLATION OF INITIAL EROSION CONTROL MEASURES, THE SITE CONTRACTOR SHALL SCHEDULE AN INSPECTION BY THE PROJECT DESIGN PROFESSIONAL. NO OTHER CONSTRUCTION ACTIVITIES SHALL OCCUR UNTIL THE PROJECT DESIGN PROFESSIONAL APPROVES THE INSTALLATION OF SAID EROSION CONTROL MEASURES. IF UNFORESEEN CONDITIONS EXIST IN THE FIELD THAT WARRANT ADDITIONAL EROSION CONTROL MEASURES, THE CONTRACTOR MUST CONSTRUCT ANY ADDITIONAL EROSION CONTROL DEVICES DEEMED NECESSARY BY THE SITE INSPECTION.
- AFTER APPROVAL OF THE INITIAL EROSION CONTROL INSTALLATION, THE CONTRACTOR MAY PROCEED WITH CLEARING AND GRUBBING ACTIVITIES. AS CLEARING PERMITS, THE CONTRACTOR SHALL CONSTRUCT TEMPORARY SEDIMENT PONDS AND DIVERSION DIKES AS SHOWN ON THE INITIAL PHASE EROSION CONTROL PLAN TO CONTROL EROSION AND STORMWATER RUN OFF.
- ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.
- ALL DISTURBED AREAS LEFT MULCHED AFTER 30 DAYS SHALL BE STABILIZED WITH TEMPORARY VEGETATION.
- SEDIMENT AND EROSION CONTROL MEASURES SHOULD BE CHECKED AFTER EACH RAIN EVENT. EACH DEVICE IS TO BE MAINTAINED PER REQUIREMENTS OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".
- THE CONSTRUCTION EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 1-3" OF STONE, AS CONDITIONS DEMAND. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLE ONTO PUBLIC ROADWAY OR INTO STORM DRAIN MUST BE REMOVED IMMEDIATELY.
- CONTRACTOR SHALL INSPECT CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
- 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 SEDIMENT SOURCE AS DIRECTED BY THE ON SITE INSPECTOR OR THE CIVIL ENGINEER.



## SILT FENCE SEDIMENT STORAGE CALCULATIONS

- Drainage area= 1.4 ac (Excluding area of basin)
- Required sediment storage= 67 cy/ac\*drainage area  
Required sediment storage= 67 cy/ac\* 1.4 ac  
**Required sediment storage= 93 cy (2511 cf)**
- Assume silt height behind fence= 0.5 ft
- Sediment Storage width (minimum of 4')= 10 ft
- Silt fence length= 1200 ft

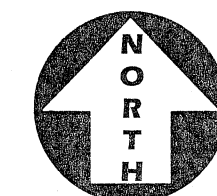
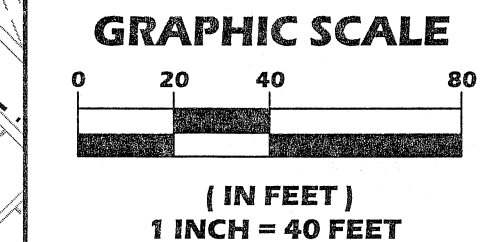
$$(0.5)(0.5)(10)(1200) = 111 \text{ cy (2997 cf)}$$



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FL CORP# F04000002135  
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**CITY OF VALDOSTA**  
**WITHLACOCHEE WWTP**  
**SECONDARY**  
**EQUALIZATION BASIN**  
LAND LOT 63 OF THE 11TH LAND DISTRICT  
LOWNEDES COUNTY - STATE OF GEORGIA

REVISIONS	DATE	DESCRIPTION



SCALE: 1"=40'

DESIGNED BY: MCM

CHECKED BY: JSL

SUBMITTAL DATE: 10/31/19

JOB NO. 0026-33

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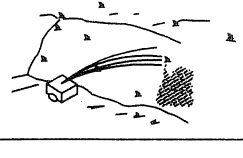

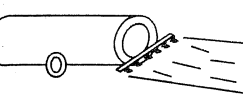
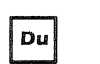
INITIAL ESPC PLAN

**C-13**

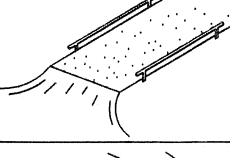


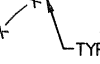
13 OF 17 SHEETS



## VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Ds2	DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)			ESTABLISHING A TEMPORARY VEGETATIVE COVER WITH FAST GROWING SEEDINGS ON DISTURBED AREAS.
Du	DUST CONTROL ON DISTURBED AREAS			CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITE, ROADWAYS AND SIMILAR SITES.

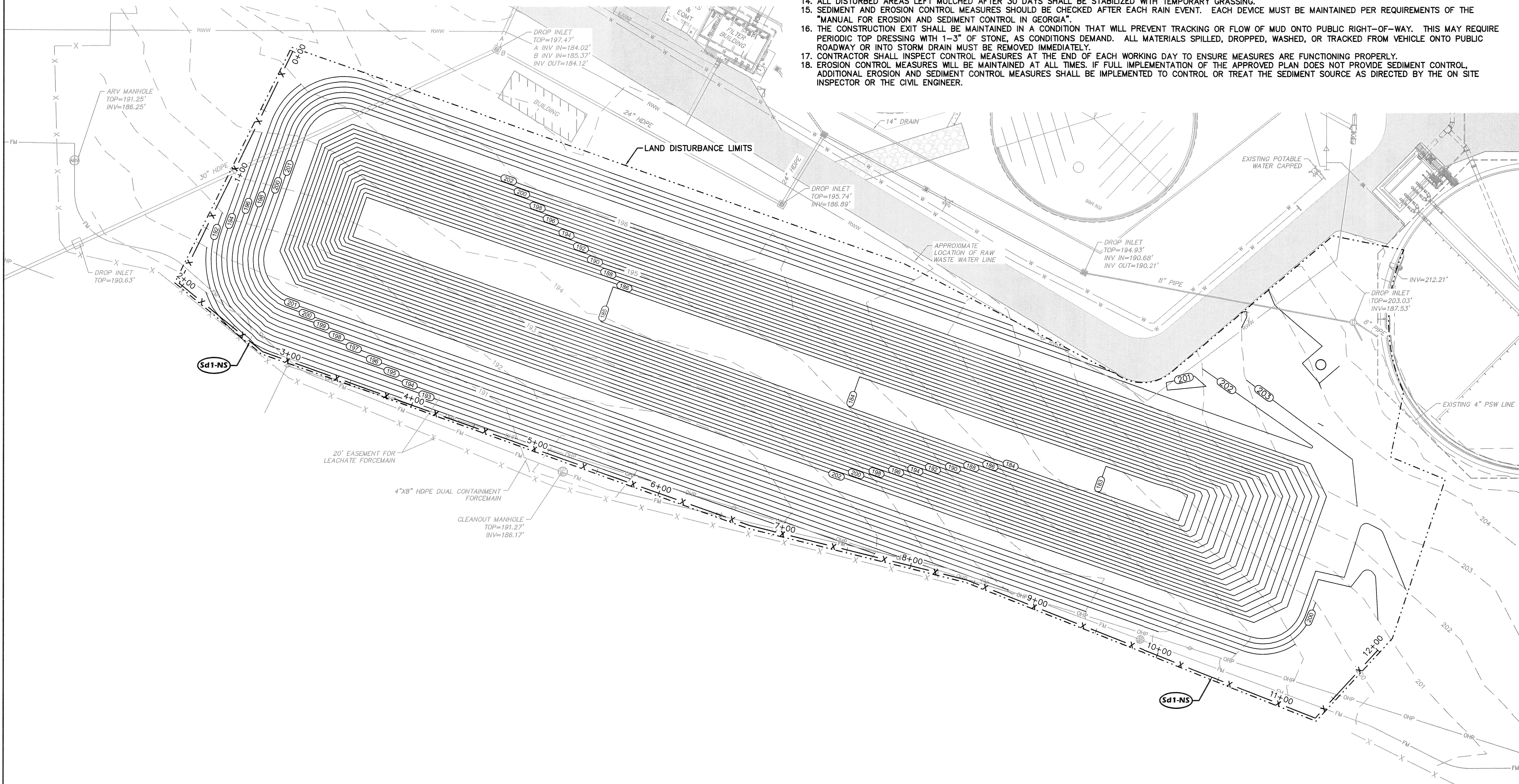
## STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Co	CONSTRUCTION EXIT			A CRUSHED STONE PAD LOCATED AT THE CONSTRUCTION SITE EXIT TO PROVIDE A PLACE FOR REMOVING MUD FROM TIRES THEREBY PROTECTING PUBLIC STREETS.
Sd1	SEDIMENT BARRIER			A BARRIER TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. IT MAY BE SANDBAGS, BALES OF STRAW OR HAY, BRUSH, LOGS AND POLES, OR SILT FENCE. (Indicate type)

## INTERMEDIATE PHASE

### EROSION CONTROL NOTES:

- DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN CAREFUL SCHEDULING AND PERFORMANCE TO ENSURE THAT LAND STRIPPED OF ITS NATURAL GROUND COVER IS EXPOSED ONLY IN SMALL QUANTITIES AND THEREFORE LIMITED DURATIONS, BEFORE PERMANENT EROSION PROTECTION IS ESTABLISHED.
- SEDIMENT SHALL NOT BE WASHED INTO INLETS. IT SHALL BE REMOVED FROM THE SEDIMENT TRAPS AND DISPOSED OF AND STABILIZED SO THAT IT WILL NOT ENTER THE INLETS AGAIN.
- EROSION CONTROL DEVICES SHALL BE INSTALLED IMMEDIATELY AFTER GROUND DISTURBANCE OCCURS. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE APPROVED PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE PROPOSED DRAINAGE PATTERNS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE DESIGN PROFESSIONAL IMMEDIATELY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING BARRIERS AT THE TOE OF ALL SLOPES UNDER CONSTRUCTION. THESE BARRIERS SHALL BE AS SHOWN IN THE PLANS. THESE BARRIERS MAY BE RELOCATED AND REUSED AFTER PERMANENT SLOPE STABILIZATION BECOMES FULLY ESTABLISHED. AS THEY ARE RELOCATED, ANY DEFECTIVE MATERIALS IN THE BARRIER SHALL BE REPLACED. IN ADDITION, ALL DEBRIS AND SILT AT THE PREVIOUS LOCATION SHALL BE REMOVED.
- CUT AND FILL SLOPES ARE NOT TO EXCEED 2H:1V.
- ALL SLOPES STEEPER THAN 2.5:1 AND WITH A HEIGHT OF TEN FEET OR GREATER, AND CUTS AND FILLS WITHIN STREAM BUFFERS, SHALL BE STABILIZED WITH SOD. SEE SEPARATE DETAILS FOR ADDITIONAL INFORMATION.
- TYPE "NS" SILT FENCE SHALL BE PLACED AT THE TOE OF ALL DIRT STOCKPILE AREAS.
- INLET SEDIMENT PROTECTION MEASURES SHALL BE INSTALLED ON ALL STORM STRUCTURES AS THEY ARE CONSTRUCTED.
- STORM DRAIN OUTLET PROTECTION SHALL BE PLACED AT ALL OUTLET HEADWALLS AS SOON AS THE HEADWALL IS CONSTRUCTED.
- CHECK DAMS SHALL BE INSTALLED IN AREAS OF CONCENTRATED FLOWS AS SHOWN ON THE PLAN.
- ALL DRAINAGE SWALES SHALL BE APPLIED WITH VEGETATIVE COVER AS SOON AS FINAL GRADE IS ACHIEVED.
- ALL GRADED AREAS SHALL BE APPLIED WITH VEGETATIVE COVER AS SOON AS FINAL GRADE IS ACHIEVED.
- ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.
- ALL DISTURBED AREAS LEFT MULCHED AFTER 30 DAYS SHALL BE STABILIZED WITH TEMPORARY GRASSING.
- SEDIMENT AND EROSION CONTROL MEASURES SHOULD BE CHECKED AFTER EACH RAIN EVENT. EACH DEVICE MUST BE MAINTAINED PER REQUIREMENTS OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".
- THE CONSTRUCTION EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 1-3" OF STONE, AS CONDITIONS DEMAND. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLE ONTO PUBLIC ROADWAY OR INTO STORM DRAIN MUST BE REMOVED IMMEDIATELY.
- CONTRACTOR SHALL INSPECT CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
- EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE SEDIMENT CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE AS DIRECTED BY THE ON SITE INSPECTOR OR THE CIVIL ENGINEER.

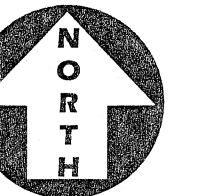


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**CITY OF VALDOSTA**  
**WITHLACOOCHEE WWTP**  
**SECONDARY**  
**EQUALIZATION BASIN**  
LAND LOT 63 OF THE 11TH LAND DISTRICT  
LOWMEDES COUNTY - STATE OF GEORGIA

REVISIONS	
DATE	DESCRIPTION

**GRAPHIC SCALE**  
0 20 40 80  
( IN FEET )  
1 INCH = 40 FEET



SCALE: 1"=40'

DESIGNED BY: MCM

CHECKED BY: JSL

SUBMITTAL DATE: 10/31/19

JOB NO. 0026-33

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**INTERMEDIATE**  
**ESPC PLAN**

**C-14**

14 OF 17 SHEETS



VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Ds3	DISTURBED AREA STABILIZATION (WITH PERM SEEDING)			ESTABLISHING PERMANENT VEGETATIVE COVER SUCH AS TREES, SHRUBS, VINES, GRASSES, OR LEGUMES ON DISTURBED AREAS.

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Sd1	SEDIMENT BARRIER			A BARRIER TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. IT MAY BE SANDBAGS, BALES OF STRAW OR HAY, BRUSH, LOGS AND POLES, OR SILT FENCE. (Indicate type)

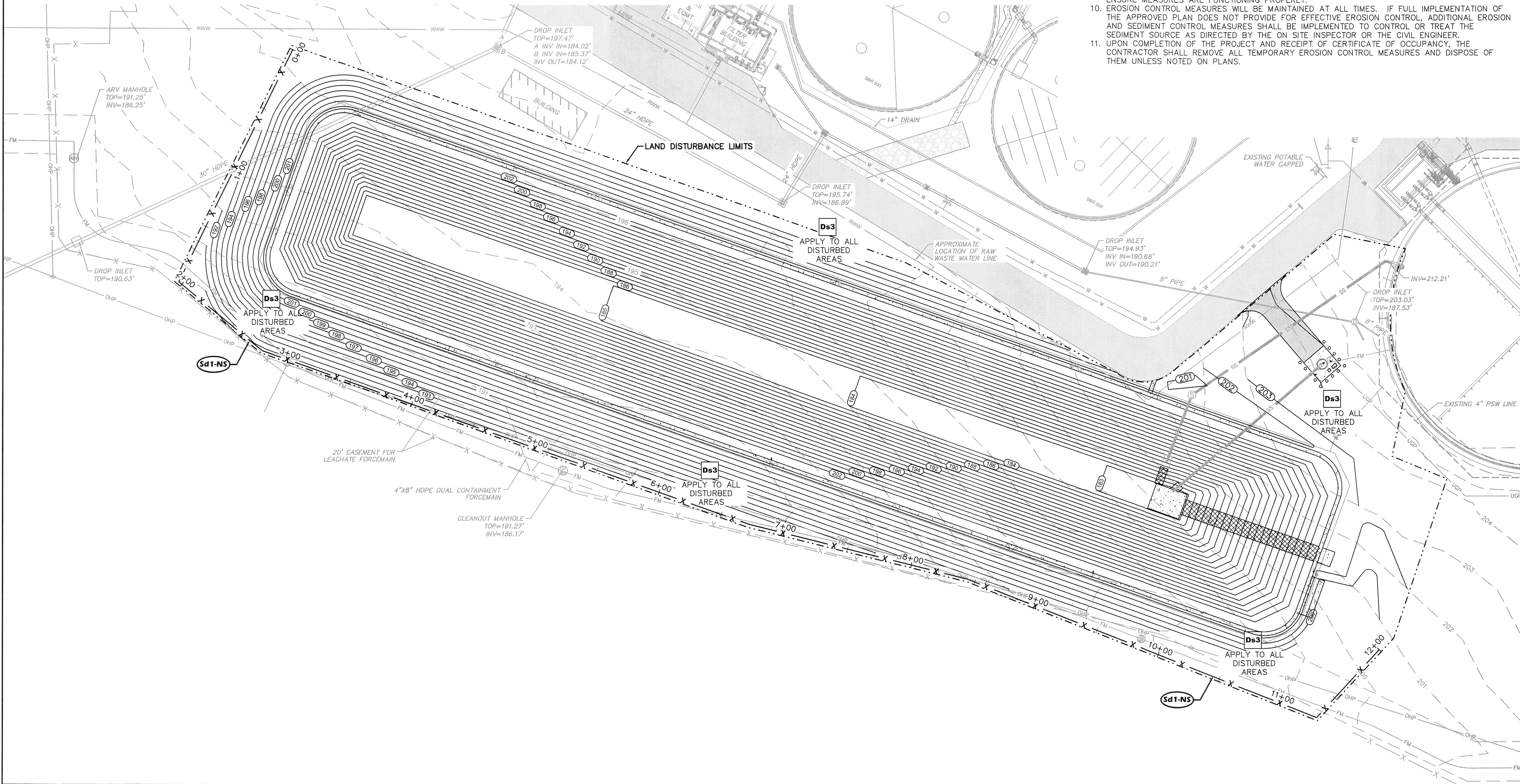
SILT FENCE SEDIMENT STORAGE CALCULATIONS

- Drainage area= 1.4 ac (Excluding area of basin)
- Required sediment storage= 67 cy/ac\*drainage area  
Required sediment storage= 67 cy/ac\*1.4 ac  
**Required sediment storage= 93 cy (2511 cf)**
- Assume silt height behind fence= 0.5 ft
- Sediment Storage width (minimum of 4')= 10 ft
- Silt fence length= 1200 ft

$(0.5)(0.5)(10)(1200) = 111 \text{ cy (2997 cf)}$

FINAL PHASE  
EROSION CONTROL NOTES:

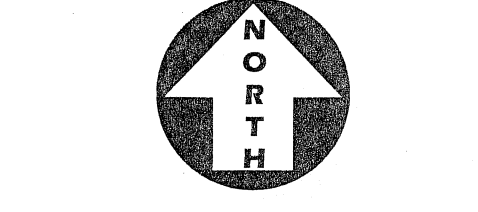
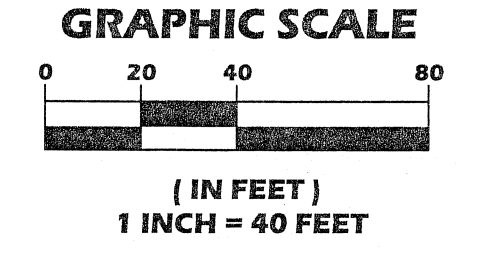
- SEDIMENT SHALL NOT BE WASHED INTO INLETS. IT SHALL BE REMOVED FROM THE SEDIMENT TRAPS AND DISPOSED OF AND STABILIZED SO THAT IT WILL NOT ENTER THE INLETS AGAIN.
- MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 14 DAYS OF LAND DISTURBANCE.
- ALL DISTURBED AREAS LEFT MULCHED AFTER 30 DAYS SHALL BE STABILIZED WITH TEMPORARY GRASSING.
- THE CONTRACTOR SHALL MAINTAIN ALL SEDIMENT PONDS AND EROSION CONTROL MEASURES UNTIL PERMANENT GROUND COVER IS ESTABLISHED. SEDIMENT SHALL BE CLEANED OUT OF THE PONDS WHEN IT REACHES THE ONE-THIRD POINT ON THE RISER.
- AFTER CURBING, GRADED AGGREGATE BASE, AND PAVEMENT HAS BEEN INSTALLED, ALL INLET SEDIMENT TRAPS ON SINGLE AND DOUBLE WING CATCH BASINS ALONG WITH ANY CURB INLETS SHALL BE REMOVED AND REPLACED WITH CURB FILTER INLET PROTECTION.
- ALL ROADWAY AND PARKING SHOULDERS SHOULD BE APPLIED WITH VEGETATIVE COVER AS SOON AS FINAL GRADE IS ACHIEVED BEHIND CURBS.
- SEDIMENT AND EROSION CONTROL MEASURES SHOULD BE CHECKED AFTER EACH RAIN EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE.
- AFTER THE CONSTRUCTION EXIT IS PAVED, THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLE ONTO PUBLIC ROADWAY OR INTO STORM DRAIN MUST BE REMOVED IMMEDIATELY.
- CONTRACTOR SHALL INSPECT CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
- 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 SEDIMENT SOURCE AS DIRECTED BY THE ON SITE INSPECTOR OR THE CIVIL ENGINEER.
- UPON COMPLETION OF THE PROJECT AND RECEIPT OF CERTIFICATE OF OCCUPANCY, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND DISPOSE OF THEM UNLESS NOTED ON PLANS.



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WITHLACOOCHEE WWTP  
SECONDARY  
EQUALIZATION BASIN  
LAND LOT 63 OF THE 11TH LAND DISTRICT  
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FINAL  
ESPC PLAN

C-15  
15 OF 17 SHEETS



Du

## DUST CONTROL ON DISTURBED AREAS

### DEFINITION

CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITES, ROADS AND DEMOLITION SITES.

### PURPOSE

TO PREVENT SURFACE AND AIR MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES AND REDUCE THE PRESENCE OF AIRBORNE SUBSTANCES WHICH MAY BE HARMFUL OR INJURIOUS TO HUMAN HEALTH, WELFARE, OR SAFETY, OR TO ANIMALS OR PLANT LIFE.

### CONDITIONS

THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO SURFACE AND AIR MOVEMENT OF DUST WHERE ON AND OFF-SITE DAMAGE MAY OCCUR WITHOUT TREATMENT.

### METHODS AND MATERIALS

- A. TEMPORARY METHODS
- MULCHES: SEE STANDARD DS1 – DISTURBED AREA STABILIZATION (WITH MULCHING ONLY) IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, CURRENT EDITION. SYNTHETIC RESINS MAY BE USED INSTEAD OF ASPHALT TO BIND MULCH MATERIAL. TACKIFIERS, BINDERS, AND RESINS SUCH AS CURASOL OR TERRATACK SHOULD BE USED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- VEGETATIVE COVER: SEE STANDARD DS2 – DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING).
- SPRAY-ON ADHESIVES: THESE ARE USED ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS). KEEP TRAFFIC OFF THESE AREAS.
- TILLAGE: THIS PRACTICE IS DESIGNED TO ROUGHEN AND BRING CLODS TO THE SURFACE. IT IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE WIND EROSION STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12 INCHES APART; SPRING-TOOTHED HARROWS, AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
- IRRIGATION: THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS WET. REPEAT AS NEEDED.
- BARRIERS: SOLID BOARD FENCES, SNOWFENCES, BURLAP FENCES, CRATE WALL, BALES OF HAY AND SIMILAR MATERIALS CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 15 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING WIND EROSION.
- B. PERMANENT METHODS
- PERMANENT VEGETATION: SEE STANDARD DS3 – DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION). EXISTING TREES AND LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.
- TOPSOILING: THIS ENTAILS COVERING THE SURFACE WITH LESS EROSION SOIL MATERIAL.
- STONE: COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

ADHESIVE	WATER DILUTION	TYPE OF NOZZLE	APPLICATION RATE (Gallons/Acre)
ANIONIC ASPHALT EMULSION	7:1	COARSE SPRAY	1,200
LATEX EMULSION	12.5:1	FINE SPRAY	235
RESIN-IN-WATER EMULSION	4:1	FINE SPRAY	300

Ds2

## DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)

### DEFINITION

THE ESTABLISHMENT OF TEMPORARY VEGETATIVE COVER WITH FAST GROWING SEEDLINGS FOR SEASONAL PROTECTION ON DISTURBED OR DENUDED AREAS.

### PURPOSE

- TO REDUCE RUNOFF AND SEDIMENT DAMAGE OF DOWNSTREAM RESOURCES
- TO PROTECT THE SOIL SURFACE FROM EROSION
- TO IMPROVE WILDLIFE HABITAT
- TO IMPROVE AESTHETICS
- TO IMPROVE TILTH, INFILTRATION AND AERATION AS WELL AS ORGANIC MATTER FOR PERMANENT PLANTINGS.

### CONDITIONS

THIS PRACTICE IS APPLICABLE ON AREAS SUBJECT TO EROSION FOR UP TO SIX MONTHS OR UNTIL THE ESTABLISHMENT OF FINISHED GRADE OR PERMANENT VEGETATIVE COVER. TEMPORARY VEGETATIVE MEASURES SHOULD BE COORDINATED WITH PERMANENT MEASURES TO ENSURE ECONOMICAL AND EFFECTIVE STABILIZATION.

### SPECIFICATIONS

1. GRADING AND SHAPING
  - 1.1. EXCESSIVE WATER RUN-OFF MUST BE CONTROLLED BY PLANNED AND INSTALLED EROSION CONTROL PRACTICES SUCH AS CLOSED DRAINS, DITCHES, DIKES, DIVERSIONS, SEDIMENT BASINS AND OTHERS.
  - 1.2. NO SHAPING OR GRADING IS REQUIRED IF SLOPES CAN BE STABILIZED BY HAND-SEEDED VEGETATION OR IF HYDRAULIC SEEDING EQUIPMENT IS TO BE USED.
2. SEEDBED PREPARATION
  - 2.1. WHEN A HYDRAULIC SEEDER IS USED, SEEDBED PREPARATION IS NOT REQUIRED.
  - 2.2. WHEN USING CONVENTIONAL OR HAND-SEEDED, SEEDBED PREPARATION IS NOT REQUIRED IF THE SOIL MATERIAL IS LOOSE AND NOT SEALED BY RAIN.
  - 2.3. WHEN SOIL HAS BEEN SEALED BY RAINFALL OR CONSISTS OF SMOOTH UNDISTURBED CUT SLOPES, THE SOIL SHALL BE PITTED, TRENCHED OR OTHERWISE SCARIFIED TO PROVIDE A PLACE FOR SEED TO LODGE AND GERMINATE.
3. LIME AND FERTILIZER
  - 3.1. AGRICULTURAL LIME IS REQUIRED UNLESS SOIL TESTS INDICATE OTHERWISE. APPLY AGRICULTURAL LIME AT A RATE OF ONE TON PER ACRE. GRADED AREAS REQUIRE LIME APPLICATION.
  - 3.2. SOILS CAN BE TESTED TO DETERMINE IF FERTILIZER IS NEEDED. ON REASONABLY FERTILE SOILS OR SOIL MATERIAL, FERTILIZER IS NOT REQUIRED.
  - 3.3. ON SOILS OF VERY LOW FERTILITY, USE 500 TO 700 POUNDS OF 10-10-10 FERTILIZER OR THE EQUIVALENT PER ACRE (12-16 LBS./1,000SQ.FT.). IF THE SITE WILL PERMIT, APPLY BEFORE LAND PREPARATION AND DISK, RIP OR CHISEL TO INCORPORATE.
4. SEEDING: SELECT A GRASS OR GRASS-LEGUME MIXTURE SUITABLE TO THE AREA AND SEASON OF THE YEAR.
5. IRRIGATION
  - 5.1. DURING TIMES OF DROUGHT, WATER SHALL BE APPLIED AT A RATE NOT CAUSING RUNOFF AND EROSION.
  - 5.2. THE SOIL SHALL BE THOROUGHLY WETTED TO A DEPTH THAT WILL ENSURE GERMINATION OF THE SEED.
  - 5.3. SUBSEQUENT APPLICATIONS SHOULD BE MADE WHEN NEEDED.

SPECIES	ALONE		IN MIXTURE		PLANTING DATES **
	RATE PER 1,000 SQ.FT.	RATE PER ACRE *	RATE PER 1,000 SQ.FT.	RATE PER ACRE *	
Barley	3.3 lbs.	3 bushels	0.6 lbs.	1/2 bushel	9/1-12/31
Annual Lespedeza	0.9 lbs.	40 lbs.	0.2 lbs.	10 lbs.	1/15-3/15
Weeping Lovegrass	0.1 lbs.	4 lbs.	0.05 lbs.	2 lbs.	2/14-6/15
Browntop Millet	0.9 lbs.	40 lbs.	0.2 lbs.	10 lbs.	4/1-7/15
Pearl Millet	1.1 lbs.	50 lbs.	NOT RECOMMENDED FOR MIXTURES		4/1-8/31
Oats	2.9 lbs.	4 bushels	0.7 lbs.	1 bushel	9/1-11/30
Rye	3.9 lbs.	3 bushels	0.6 lbs.	1/2 bushel	9/1-2/28
Ryegrass	0.9 lbs.	40 lbs.	NOT TO BE USED IN MIXTURES		8/15-3/31
Sudangrass	1.4 lbs.	60 lbs.	NOT RECOMMENDED FOR MIXTURES		3/1-7/31
Triticale	3.3 lbs.	3 bushels	0.6 lbs.	1/2 bushel	1/1-1/31, 9/15-10/15, 12/15-12/31
Wheat	4.1 lbs.	3 bushels	0.7 lbs.	1/2 bushel	10/15-1/31

\* UNUSUAL SITE CONDITIONS MAY REQUIRE HEAVIER SEEDING RATES  
\*\* SEEDING DATES MAY NEED TO BE ALTERED TO FIT TEMPERATURE VARIATIONS AND CONDITIONS.

Ds3

## DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)

### DEFINITION

THE PLANTING OF PERENNIAL VEGETATION SUCH AS TREES, SHRUBS, VINES, GRASSES, OR LEGUMES ON EXPOSED AREAS FOR FINAL PERMANENT STABILIZATION. PERMANENT PERENNIAL VEGETATION SHALL BE USED TO ACHIEVE FINAL STABILIZATION.

### PURPOSE

- TO PROTECT THE SOIL FROM EROSION
- TO REDUCE DAMAGE FROM SEDIMENT AND RUNOFF TO DOWNSTREAM AREAS.
- TO IMPROVE WILDLIFE HABITAT AND VISUAL RESOURCES.
- TO IMPROVE AESTHETICS.

### REQUIREMENT FOR REGULATORY COMPLIANCE

THIS PRACTICE SHALL BE APPLIED IMMEDIATELY TO ROUGH GRADED AREAS THAT WILL BE UNDISTURBED FOR LONGER THAN SIX MONTHS. THIS PRACTICE OR SODDING SHALL BE APPLIED TO ALL AREAS AT FINAL GRADE. FINAL STABILIZATION MEANS THAT ALL SOIL DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED, AND THAT FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES AND AREAS LOCATED OUTSIDE THE WASTE DISPOSAL LIMITS OF A LANDFILL CELL THAT HAS BEEN CERTIFIED BY EPD FOR WASTE DISPOSAL, 100% OF THE SOIL SURFACE IS UNIFORMLY COVERED IN PERMANENT VEGETATION WITH A DENSITY OF 70% OR GREATER, OR LANDSCAPED 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). FINAL STABILIZATION APPLIES TO EACH PHASE OF CONSTRUCTION. FOR LINEAR 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. UNTIL THIS STANDARD IS SATISFIED AND PERMANENT CONTROL MEASURES AND FACILITIES ARE OPERATIONAL, INTERIM STABILIZATION MEASURES AND TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES SHALL NOT BE REMOVED.

### CONDITIONS

PERMANENT PERENNIAL VEGETATION IS USED TO PROVIDE A PROTECTIVE COVER FOR EXPOSED AREAS INCLUDING CUTS, FILLS, DAMS, AND OTHER DENUDED AREAS.

### CONSTRUCTION SPECIFICATIONS

1. GRADING AND SHAPING
  - 1.1. GRADING AND SHAPING MAY NOT BE REQUIRED WHERE HYDRAULIC SEEDING AND FERTILIZING EQUIPMENT IS TO BE USED. VERTICAL BANKS SHALL BE SLOPED TO ENABLE PLANT ESTABLISHMENT.
  - 1.2. WHEN CONVENTIONAL SEEDING AND FERTILIZING ARE TO BE DONE, GRADE AND SHAPE WHERE FEASIBLE AND PRACTICAL, SO THAT EQUIPMENT CAN BE USED SAFELY AND EFFICIENTLY DURING SEEDBED PREPARATION, SEEDING, MULCHING, AND MAINTENANCE OF VEGETATION.
2. LIME AND FERTILIZER
  - 2.1. AGRICULTURAL LIME IS REQUIRED AT THE RATE OF ONE TO TWO TONS PER ACRE UNLESS SOIL TESTS INDICATE OTHERWISE. GRADED AREAS REQUIRE LIME APPLICATION. IF LIME IS APPLIED WITHIN SIX MONTHS OF PLANTING PERMANENT PERENNIAL VEGETATION, ADDITIONAL LIME IS NOT REQUIRED. AGRICULTURAL LIME SHALL BE WITHIN THE SPECIFICATIONS OF THE GEORGIA DEPARTMENT OF AGRICULTURE.
  - 2.2. LIME SPREAD BY CONVENTIONAL EQUIPMENT SHALL BE "GROUND LIMESTONE". GROUND LIMESTONE IS DOLOMITIC LIMESTONE GROUND SO THAT 90 PERCENT OF THE MATERIAL WILL PASS THROUGH A 10-MESH SIEVE, NOT LESS THAN 50 PERCENT WILL PASS THROUGH A 50-MESH SIEVE AND NOT LESS THAN 25 PERCENT WILL PASS THROUGH A 100-MESH SIEVE.
  - 2.3. AGRICULTURAL LIME SPREAD BY HYDRAULIC SEEDING EQUIPMENT SHALL BE "FINELY GROUND LIMESTONE". FINELY GROUND LIMESTONE IS DOLOMITIC LIMESTONE GROUND SO THAT 98 PERCENT OF THE MATERIAL WILL PASS THROUGH A 20-MESH SIEVE AND NOT LESS THAN 70 PERCENT WILL PASS THROUGH A 100-MESH SIEVE.
  - 2.4. WHEN HYDRAULIC SEEDING EQUIPMENT IS USED, THE INITIAL FERTILIZER SHALL BE MIXED WITH SEED, INOCULANT (IF NEEDED), AND WOOD CELLULOSE OR WOOD PULP FIBER MULCH AND APPLIED IN A SLURRY. THE INOCULANT, IF NEEDED, SHALL BE MIXED WITH THE SEED PRIOR TO BEING PLACED INTO THE HYDRAULIC SEEDER. THE SLURRY MIXTURE WILL BE SPREAD UNIFORMLY OVER THE AREA WITHIN ONE HOUR AFTER BEING PLACED IN THE HYDROSEEDER.
  - 2.5. FINELY GROUND LIMESTONE WILL BE MIXED WITH WATER AND APPLIED IMMEDIATELY AFTER MULCHING IS COMPLETED OR IN COMBINATION WITH THE TOP DRESSING.
  - 2.6. WHEN CONVENTIONAL PLANTING IS TO BE DONE, LIME AND FERTILIZER SHALL BE APPLIED UNIFORMLY IN ONE OF THE FOLLOWING WAYS:
    - 3.3.1. APPLY BEFORE LAND PREPARATION SO THAT IT WILL BE MIXED WITH THE SOIL DURING SEEDBED PREPARATION.
    - 3.3.2. MIX WITH THE SOIL USED TO FILL THE HOLES, DISTRIBUTE IN FURROWS.
    - 3.3.3. BROADCAST AFTER STEEP SURFACES ARE SCARIFIED, PITTED OR TRENCHED.
    - 3.3.4. A FERTILIZER PELLET SHALL BE PLACED AT ROOT DEPTH IN THE CLOSING HOLE BESIDE EACH PINE TREE SEEDLING.
3. PLANT SELECTION
  - 4.1. PLANTS SHALL BE SELECTED ON THE BASIS OF SPECIES CHARACTERISTICS, SITE AND SOIL CONDITIONS, PLANNED USE AND MAINTENANCE OF THE AREA; TIME OF YEAR OF PLANTING, METHOD OF PLANTING; AND THE NEEDS AND DESIRES OF THE LAND USER.
  - 4.2. SOME PERENNIAL SPECIES ARE EASILY ESTABLISHED AND CAN BE PLANTED ALONE. EXAMPLES OF THESE ARE COMMON BERMUDA AND WEEPING LOVEGRASS.
  - 4.3. OTHER PERENNIALS SUCH AS BAHIA GRASS AND SERICEA LESPEDEZA, ARE SLOW TO BECOME ESTABLISHED AND SHOULD BE PLANTED WITH ANOTHER PERENNIAL SPECIES. THE ADDITIONAL SPECIES WILL PROVIDE QUICK COVER AND AMPLE SOIL PROTECTION UNTIL THE TARGET PERENNIAL SPECIES BECOME ESTABLISHED.
  - 4.4. PLANT SELECTION MAY ALSO INCLUDE ANNUAL COMPANION CROPS. ANNUAL COMPANION CROPS SHOULD BE USED ONLY WHEN THE PERENNIAL SPECIES ARE NOT PLANTED DURING THEIR OPTIMUM PLANTING PERIOD. A COMMON MIXTURE IS BROWN TOP MILLET WITH COMMON BERMUDA IN MID-SUMMER. CARE SHOULD BE TAKEN IN SELECTING COMPANION CROP SPECIES AND SEEDING RATES BECAUSE ANNUAL CROPS WILL COMPETE WITH PERENNIAL SPECIES FOR WATER, NUTRIENT AND GROWING SPACE. A HIGH SEEDING RATE OF THE COMPANION CROP MAY PREVENT THE ESTABLISHMENT OF PERENNIAL SPECIES.
  - 4.5. RYEGRASS SHALL NOT BE USED IN ANY SEEDING MIXTURES CONTAINING PERENNIAL SPECIES DUE TO ITS ABILITY TO OUT-COMPETE DESIRED SPECIES CHOSEN FOR PERMANENT PERENNIAL COVER.
5. SEEDBED PREPARATION
  - 5.1. SEEDBED PREPARATION MAY NOT BE REQUIRED WHERE HYDRAULIC SEEDING AND FERTILIZING EQUIPMENT IS USED. WHEN CONVENTIONAL SEEDING IS TO BE USED, SEEDBED PREPARATION WILL BE DONE AS FOLLOWS FOR BROADCAST PLANTINGS:
    - 5.2. TILLAGE AT A MINIMUM, SHALL ADEQUATELY LOOSEN THE SOIL TO A DEPTH OF 4 TO 6 INCHES; ALLEVIATE COMPACTION; INCORPORATE LIME AND FERTILIZER; SMOOTH AND FIRM THE SOIL; ALLOW FOR THE PROPER PLACEMENT OF SEED, SPRINGS, OR PLANTS; AND ALLOW FOR THE ANCHORING OF STRAW OR HAY MULCH IF A DISK IS USED.
    - 5.3. TILLAGE MAY BE DONE WITH ANY SUITABLE EQUIPMENT.
    - 5.4. TILLAGE SHOULD BE DONE ON THE CONTOUR WHERE FEASIBLE.
    - 5.5. ON SLOPES TOO STEEP FOR THE SAFE OPERATION OF TILLAGE EQUIPMENT, THE SOIL SURFACE WILL BE PITTED OR TRENCHED ACROSS THE SLOPE WITH APPROPRIATE HAND TOOLS TO PROVIDE TWO PLACES 6 TO 8 INCHES APART IN WHICH SEED MAY LODGE AND GERMINATE. HYDRAULIC SEEDING MAY ALSO BE USED.
6. PLANTING
  - 6.1. HYDRAULIC SEEDING: MIX THE SEED, INOCULANT, FERTILIZER, AND WOOD CELLULOSE OR WOOD PULP FIBER MULCH WITH WATER AND APPLY IN A SLURRY UNIFORMLY OVER THE AREA TO BE TREATED. APPLY WITHIN ONE HOUR AFTER THE MIXTURE IS MADE.
  - 6.2. CONVENTIONAL SEEDING: SEEDING WILL BE DONE ON A FRESHLY PREPARED AND FIRMED SEEDBED. FOR BROADCAST PLANTING, USE A CULTIPACKER-SEEDER, DRILL, ROTARY SEEDER, OTHER MECHANICAL SEEDER, OR HAND SEEDING TO DISTRIBUTE THE SEED UNIFORMLY OVER THE AREA TO BE TREATED. COVER THE SEED LIGHTLY WITH 3/8 TO 1/4 INCH OF SOIL FOR SMALL SEED AND 1/2 TO 1 INCH FOR LARGE SEED WHEN USING A CULTIPACKER OR OTHER SUITABLE EQUIPMENT.
  - 6.3. NO-TILL SEEDING: NO-TILL SEEDING IS PERMISSIBLE INTO ANNUAL COVER CROPS WHEN PLANTING IS DONE FOLLOWING MATURITY OF THE COVER CROP OR IF THE TEMPORARY COVER STAND IS SPARSE ENOUGH TO ALLOW ADEQUATE GROWTH OF THE PERMANENT (PERENNIAL) SPECIES. THE SEED MUST BE UNIFORMLY DISTRIBUTED AND PLANTED AT THE PROPER DEPTH.
7. MULCHING
  - 7.1. MULCH IS REQUIRED FOR ALL PERMANENT VEGETATION APPLICATIONS. MULCH APPLIED TO SEEDED AREAS SHALL ACHIEVE 75% SOIL COVER. SELECT THE MULCHING MATERIAL FROM THE FOLLOWING AND APPLY AS INDICATED.
    - 7.2. DRY STRAW OR DRY HAY OF GOOD QUALITY AND FREE OF WEED SEEDS CAN BE USED. DRY STRAW SHALL BE APPLIED AT THE RATE OF 2 TONS PER ACRE. DRY HAY SHALL BE APPLIED AT A RATE OF 2 1/2 TONS PER ACRE. SERICEA LESPEDEZA HAY SHALL BE APPLIED AT THE RATE OF 3 TONS PER ACRE.
    - 7.3. WOOD CELLULOSE MULCH OR WOOD PULP FIBER SHALL BE USED WITH HYDRAULIC SEEDING. IT SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE. DRY STRAW OR DRY HAY SHALL BE APPLIED (AT THE RATE INDICATED ABOVE) AFTER HYDRAULIC SEEDING.
    - 7.4. ONE THOUSAND POUNDS OF WOOD CELLULOSE OR WOOD PULP FIBER, WHICH INCLUDES A TACKIFIER, SHALL BE USED WITH HYDRAULIC SEEDING ON SLOPES 3/4:1 OR STEEPER.
    - 7.5. WHEN USING TEMPORARY EROSION CONTROL BLANKETS OR BLOCK SOD, MULCH IS NOT REQUIRED.
    - 7.6. BITUMINOUS TREATED ROVING MAY BE APPLIED ON PLANTED AREAS ON SLOPES, IN DITCHES OR DRY WATERWAYS TO PREVENT EROSION. BITUMINOUS TREATED ROVING SHALL BE APPLIED WITHIN 24 HOURS AFTER AN AREA HAS BEEN PLANTED. APPLICATION RATES AND MATERIALS MUST MEET GEORGIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.
    - 7.7. WOOD CELLULOSE AND WOOD PULP FIBERS SHALL NOT CONTAIN GERMINATION OR GROWTH INHIBITING FACTORS. THEY SHALL BE EVENLY DISPERSED WHEN AGITATED IN WATER. THE FIBERS SHALL CONTAIN A DYE TO ALLOW VISUAL METERING AND AID IN UNIFORM APPLICATION DURING SEEDING.
  8. IRRIGATION
    - 8.1. IF WATER IS APPLIED, IT MUST BE AT A RATE NOT CAUSING RUNOFF AND EROSION. THOROUGHLY WET THE SOIL TO A DEPTH THAT WILL ENSURE GERMINATION OF THE SEED.
  9. USE AND MANAGEMENT
    - 9.1. MOW SERICEA LESPEDEZA ONLY AFTER FROST TO ENSURE THAT THE SEEDS ARE MATURE. MOW BETWEEN NOVEMBER AND MARCH.
    - 9.2. BERMUDAGRASS AND BAHIAGRASS MAY BE MOWED AS DESIRED. MAINTAIN AT LEAST 6 INCHES OF TOP GROWTH UNDER ANY USE AND MANAGEMENT. MODERATE USE OF TOP GROWTH IS BENEFICIAL AFTER ESTABLISHMENT.
    - 9.3. EXCLUDE TRAFFIC UNTIL THE PLANTS ARE WELL ESTABLISHED.

SPECIES	ALONE		WITH OTHER PERENNIALS		PLANTING DATES **
	RATE PER 1,000 SQ.FT.	RATE PER ACRE *	RATE PER 1,000 SQ.FT.	RATE PER ACRE *	
Pensacola Bahia	1.4 lbs.	60 lbs.	0.7 lbs.	30 lbs.	1/1-12/31
Common Bermuda (Hulled seed)	0.2 lbs.	10 lbs.	0.7 lbs.	6 lbs.	2/14-6/30
Common Bermuda (Unhulled seed)	0.2 lbs.	10 lbs.	0.1 lbs.	6 lbs.	11/1-1/31
Sericea Lespedeza (scarified)	1.4 lbs.	60 lbs.	1.4 lbs.	60 lbs.	2/14-6/15
Sericea Lespedeza (unscarified)	1.7 lbs.	75 lbs.	1.7 lbs.	75 lbs.	1/1-12/31
Lespedeza (scarified)	1.4 lbs.	60 lbs.	1.4 lbs.	60 lbs.	2/14-5/31
Weeping Lovegrass	0.1 lbs.	4 lbs.	0.05 lbs.	2 lbs.	2/1-6/15
Panicgrass, Atlantic Coastal	0.5 lbs.	20.0 lbs.	0.5 lbs.	20.0 lbs.	2/1-4/30
Sunflower 'Aztec'	0.2 lbs.	10 lbs.	0.2 lbs.	10 lbs.	4/1-5/31

\* UNUSUAL SITE CONDITIONS MAY REQUIRE HEAVIER SEEDING RATES.  
\*\* SEEDING DATES MAY NEED TO BE ALTERED TO FIT TEMPERATURE VARIATIONS AND CONDITIONS.  
\*\*\* PLANT WITH TEMPORARY COVER SUCH AS WINTER ANNUALS.  
\*\*\*\* DROUGHT TOLERANT. GROWS WELL WITH SERICEA LESPEDEZA ON ROADBANKS.

SPECIES	YEAR	ANALYSIS OR EQUIVALENT N-P-K	RATE	TOP DRESSING RATE
Cool season grasses	First	6-12-12	1500 lbs/ac.	50-100 lbs/ac. 1/2
	Second	6-12-12	1000 lbs/ac.	-
	Maintenance	10-10-10	400 lbs/ac.	30 lbs/ac.
Cool season grasses and legumes	First	6-12-12	1500 lbs/ac.	0-50 lbs/ac. 1/
	Second	0-10-10	1000 lbs/ac.	-
	Maintenance	0-10-10	400 lbs/ac.	-
Warm season grasses	First	6-12-12	1500 lbs/ac.	50-100 lbs/ac. 2/3
	Second	6-12-12	800 lbs/ac.	50-100 lbs/ac. 2/
	Maintenance	10-10-10	400 lbs/ac.	30 lbs/ac.
Warm season grasses and legumes	First	6-12-12	1500 lbs/ac.	50 lbs/ac. 3/
	Second	0-10-10	1000 lbs/ac.	-
	Maintenance	0-10-10	400 lbs/ac.	-

- 1/ APPLY IN SPRING FOLLOWING SEEDING.
- 2/ APPLY IN SPLIT APPLICATIONS WHEN HIGH RATES ARE USED.
- 3/ APPLY WHEN PLANTS GROW TO A HEIGHT OF 2 TO 4 INCHES.



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CITY OF VALDOSTA  
WITHLACOOCHEE WWTP  
SECONDARY  
EQUALIZATION BASIN  
LAND LOT 63 OF THE 11TH LAND DISTRICT  
LOWNDES COUNTY - STATE OF GEORGIA

#### REVISIONS

DATE	DESCRIPTION
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SCALE: N.T.S.

DESIGNED BY: MCM

CHECKED BY: JSL

SUBMITTAL DATE: 10/31/19

JOB NO. 0026-33

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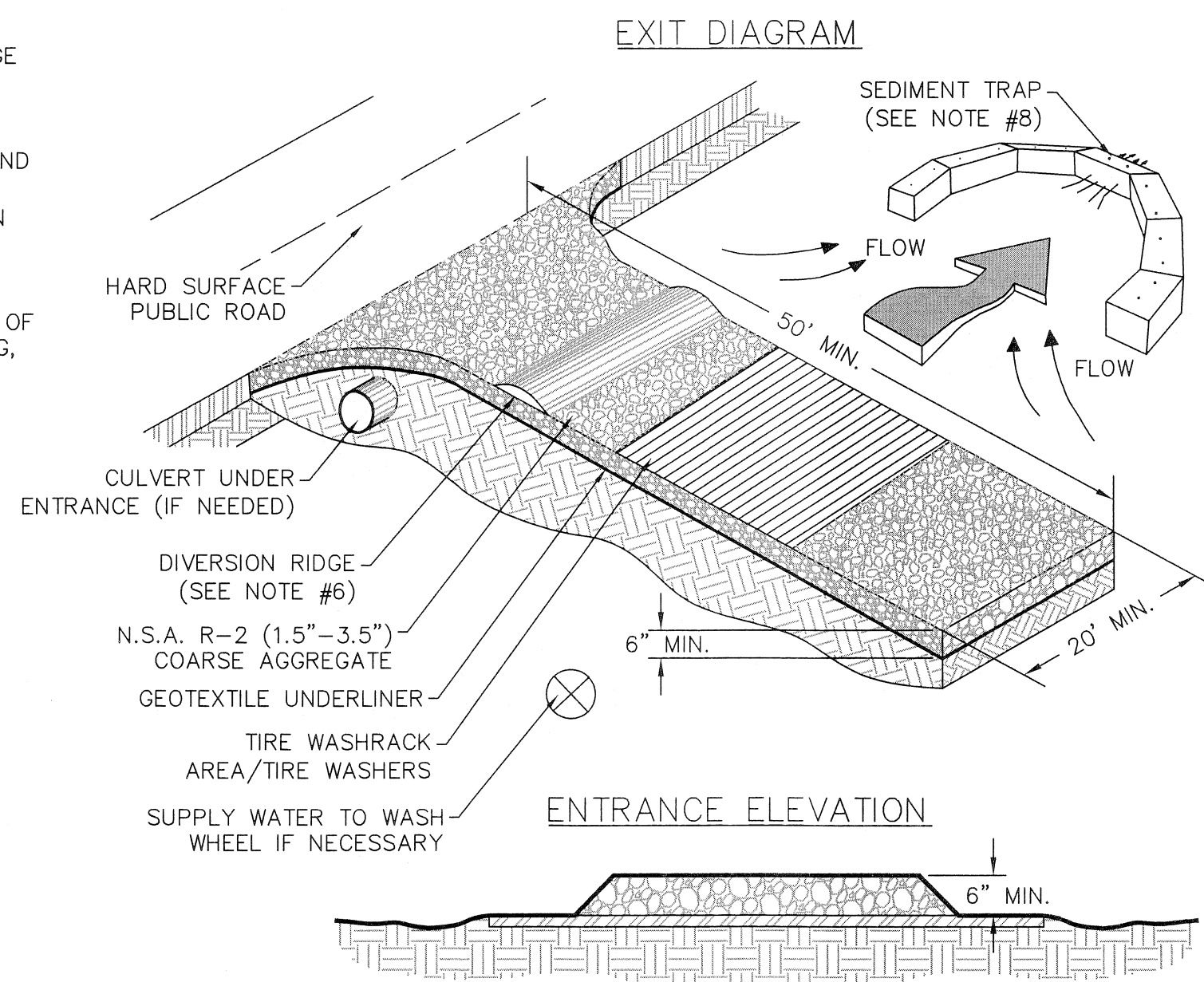
ESPC DETAILS  
(1 OF 2)

C-16

16 OF 17 SHEETS



1. NOTES:
2. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
3. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
4. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE).
5. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
6. PAD WIDTH SHALL EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
7. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.
8. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
9. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
10. WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON GRADE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVES MUD AND DIRT.
11. MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.



**SIDE VIEW**

30" MIN.

28"

6"

2"

18" MIN.

ENTRENCHED SILT FENCE

FLOW

**FRONT VIEW**

6' MAX. O.C.

30" MIN.

28"

6"

18" MIN.

FABRIC

TRENCH

**NOTES:**

1. USE 1.5" X 1.5" OAK POSTS, 3" DIAMETER SOFTWOOD DOWELS, 2" X 4" SOFTWOOD BOARDS, OR 1.15 LB/FT (MIN.) STEEL POSTS.

## A line drawing of a concrete mixer truck. The truck is shown from the side, facing right. It has a large, rounded concrete drum in the center, which is tilted downwards to the left. A chute extends from the bottom of the drum, pouring a thick, curved line of concrete into a rectangular trench. The truck has two large wheels on the back and one smaller wheel on the front. The ground is represented by a series of horizontal lines, and the trench is a simple rectangular cutout in the ground.

NOTE:

1. ADVISE CONCRETE TRUCK DRIVERS OF THE DESIGNATED WASH-OUT AREAS BEFORE THEY START THE JOB.
2. EXCAVATE PIT LARGE ENOUGH TO CONTAIN WASHDOWN WATER. THIS MUST BE AWAY FROM STORM DRAINS AND WATERWAYS.
3. WASHDOWN CHUTE, HOPPER, AND REAR OF VEHICLE ONLY. DO NOT WASH OUT DRUM
4. ENSURE THAT ALL WASHDOWN WATER STAYS IN PIT.
5. DISPOSE OF SETTLED, HARDENED CONCRETE IN GARBAGE WITH OTHER CONSTRUCTION DEBRIS.
6. NEVER DISPOSE OF WASHDOWN WATER IN STREETS, STORM DRAINS, OR STREAMS.
7. CONCRETE WASHDOWN AREA MUST INCLUDE A LEAKPROOF LINER.

CONSTRUCTION SCHEDULE													
ACTIVITY	SEP 2019	OCT 2019	NOV 2019	DEC 2019	JAN 2020	FEB 2020	MAR 2020	APR 2020	MAY 2020	JUN 2020	JUL 2020	AUG 2020	SEP 2020
CLEARING & GRUBBING													
EROSION CONTROL DEVICES													
EQ BASIN GRADING													
WATER SEWER UTILITIES													
FINE GRADING													
TEMPORARY GRASSING AND TYPE OF GRASS													
FINAL GRASSING													

PEARL MILLET (APR-JUN)  
KIDNEYBEAN ANNUAL (SEP-JAN)

SEE NOTE BELOW

NOTE: FINAL GRASSING SHALL CONSIST OF SODDING ALL DISTURBED AREAS AFTER BUILDING CONSTRUCTION IS COMPLETED. IN AREAS NOT SODDED, THE FOLLOWING GRASSES SHALL BE PLANTED UNTIL PERMANENT VEGETATIVE COVER CAN BE ESTABLISHED:  
BROWNTOP MILLET—JUNE THROUGH OCTOBER  
UNHULLED BERMUDA—NOVEMBER THROUGH JANUARY  
HULLED BERMUDA—FEBRUARY THROUGH MAY



**CITY OF VALDOSTA  
WITHLACOOCHEE WWTP  
SECONDARY  
EQUALIZATION BASIN**

**LAND LOT 63 OF THE 11TH LAND DISTRICT  
LOWNDES COUNTY - STATE OF GEORGIA**

REVISIONS	
DATE	DESCRIPTION

<b>SCALE:</b>	<b>N.T.S.</b>
<b>DESIGNED BY:</b>	<b>MCM</b>
<b>CHECKED BY:</b>	<b>JSL</b>
<b>SUBMITTAL DATE:</b>	<b>10/31/19</b>
<b>JOB NO.</b>	<b>0026-33</b>

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**ESPC DETAILS**  
**(2 OF 2)**

**C-17**