



Formerly P.C. Simonton & Associates, Inc.

Addendum No. Four

Date: August 12, 2020
Project: Floquip Drainage Project, MES No. 2020-14
Engineer: M.E. Sack Engineering
Hinesville, Georgia



The original plans, specifications, and bid documents are amended to include the following:

Bid Items:

- Replace the previous Bid Items, P-2, with the enclosed Bid Items. Note that the line item for Connect to Existing has been revised and separated into two line items for each size required, and RPZ's were revised to RPZ Assemblies.

Plan Set:

- Replace sheets C101, C200 – C202, C300, and C301 with the enclosed of the same.
 - On sheet C101, the 10" Gate Valve at Connection to Existing 16" waterline has been relocated closer to Jones Street.
 - Skimmer has been replaced by a slotted board dam on sheets C200 – C202, and skimmer detail removed on sheet C300.
 - On sheet C301, the RPZ enclosure has been changed to stainless steel, and a detail has been provided for the meter assembly and vault.

Specifications:

- Replace the previous Section 01150 with the enclosed Section 01150. Note that 2.12 has been revised to RPZ Assembly.

Clarifications:

- Erosion Control plans call out a skimmer, details do not call out a size. Please advise as to anticipated bid configuration.

Answer: This addendum removes the use of a skimmer and replaces it with a slotted board dam.

- Sheet C101 notes 10" METER TO BE PROVIDED BY SNF. Is SNF providing entire meter assembly? If not, how much of the meter assembly shall be provided by contractor? Can a detail be provided of meter assembly and vault?

Answer: Meter only is being provided by SNF. This addendum provides a detail of meter assembly and vault.



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- There are 2 EA Connect to Existing Waterline, but only 1 EA on bid documents. The connections will be substantially different in price due to the different sizes. Please advise.
Answer: This addendum revises the Estimated Quantity for Connect to Existing.
- Sheet C101 calls for Stainless Steel RPZ Enclosures, but sheet C301 call for concrete. Please advise.
Answer: The enclosures shall be stainless steel; this addendum revises sheet C301.
- Each RPZ is going to have (2) valves associated with them. Should line items 25/26 be reduced to 1 EA instead of 3 EA?
Answer: The price of the valves cannot be broken out of the RPZ. This addendum corrects the Bid Items, removing the valves such that the RPZ is now an assembly inclusive of the valves.
- Also, regarding line item 25, the 3rd gate valve is associated with the hot tap which is technically a “connect to existing water line”. There is only quantity of 1 “connect to existing” on the bid schedule.
Answer: Bid Items are now updated to show two Connect to Existing.

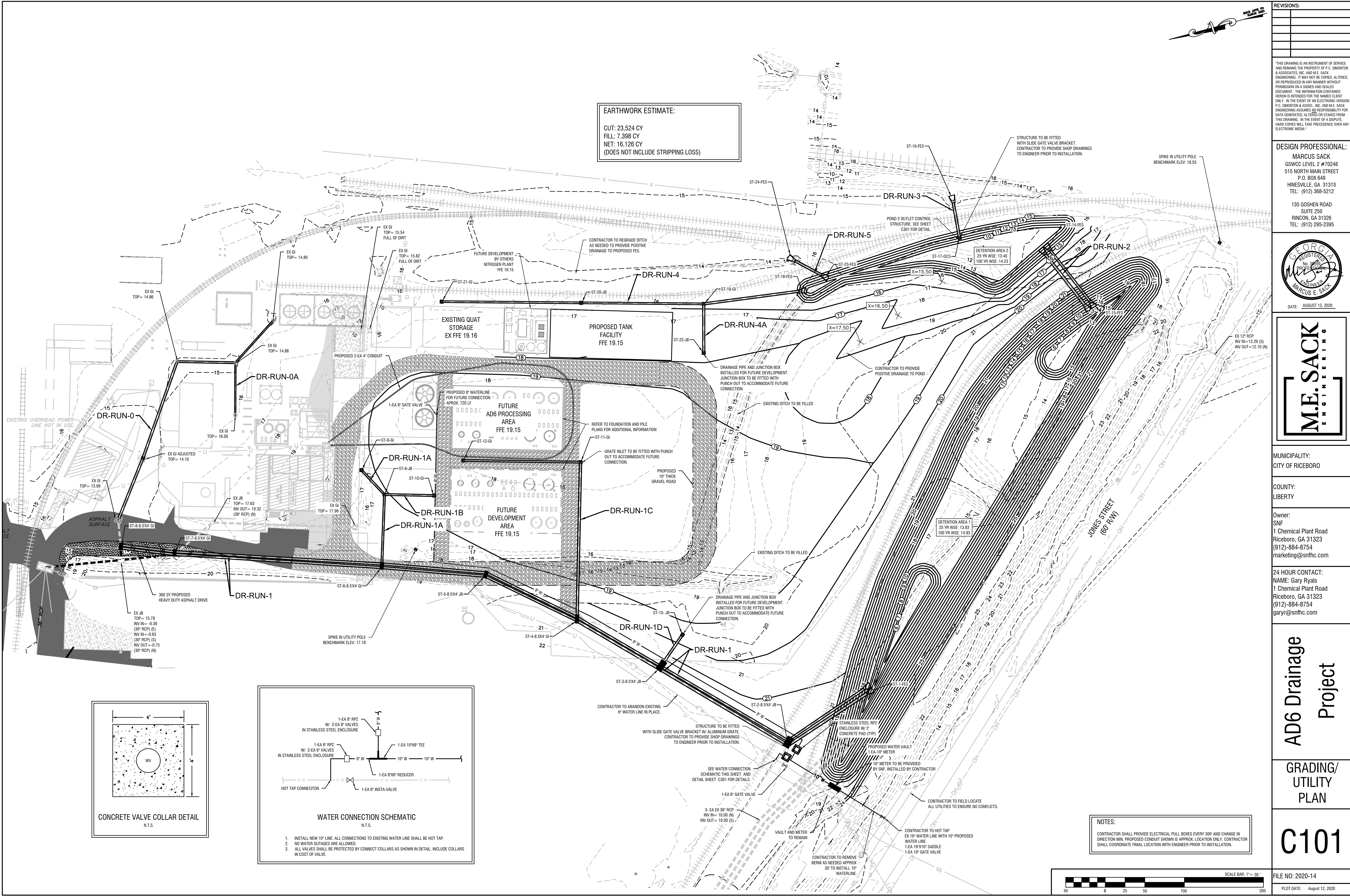
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**AD6 Drainage Project
for
FLOQUIP**

Bid Items

Item	Estimated					
No.	Quantity	Units	Description	Unit Price	Total Price	
1	82	SY	Asphalt/ Base Removal			
2	442	SY	8" Graded Aggregate Base			
3	442	SY	2" 9.5mm Superpave Asphalt			
4	5,550	SY	10" Recycled Concrete Drive (Graded Base)			
5	10	EA	Flared End Section			
6	7	EA	4'x4' Grate Inlet			
7	3	EA	4'x4' Junction Box			
8	4	EA	8.5'x4' Grate Inlet			
9	3	EA	8.5'x4' Junction Box			
10	1	EA	Outlet Control Structure			
11	138	LF	18" Reinforced Concrete Pipe			
12	750	LF	24" Reinforced Concrete Pipe			
13	2090	LF	30" Reinforced Concrete Pipe			
14	868	LF	36" Reinforced Concrete Pipe			
15	1	LS	Final Grading			
16	7,398	CY	Cut/Fill			
17	16,126	CY	Haul Off			
18	1	EA	6" Connect to Existing Waterline			
19	1	EA	16" Connect to Existing Waterline			
20	720	LF	8" PVC Watermain			
21	151	LF	10" PVC Watermain			
22	1	EA	Water Vault			
23	1	EA	6" RPZ Assembly			
24	1	EA	8" RPZ Assembly			
25	1	EA	10" Meter Assembly			
26	1	EA	6" Gate Valve			
27	1	EA	8" Gate Valve			
28	1	EA	10" Gate Valve			
29	1	EA	6" Insta-Valve			
30	1	TN	Ductile Iron Fittings			
31	40	LF	Chain Link Fence			
32	2,910	LF	Orange Fence			
33	1	LS	Erosion Control			
34	1	LS	Grassing			
35	1	LS	Structure Removal/Replacement			
36	1	LS	Clearing & Grubbing			
37	1	LS	Electrical Complete			
38	1	LS	Mobilization (5% Max)			
					Total Bid	
					Alternate Bid	
1	7,398	CY	Select Fill*			
2	23,524	CY	Haul Off*			
					Total Bid	

*If chosen, the Alternate will affect base bid



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REGISTERED PROFESSIONAL ENGINEER
 M.E. SACK
 DATE: AUGUST 12, 2020

M.E. SACK ENGINEERING

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COUNTY:
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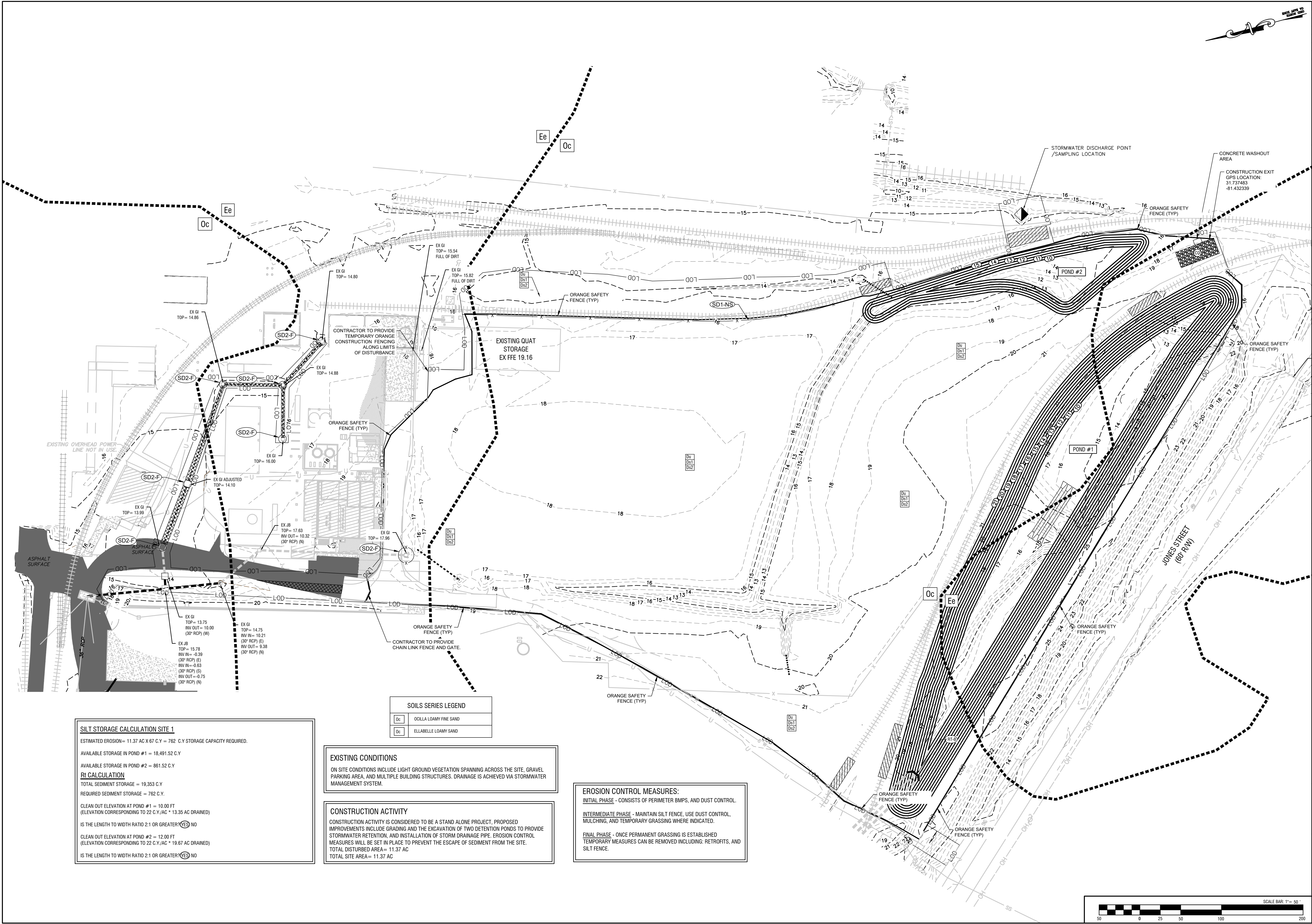
AD6 Drainage Project

GRADING/UTILITY PLAN

C101

FILE NO: 2020-14

PLOT DATE: August 12, 2020



SILT STORAGE CALCULATION SITE 1

ESTIMATED EROSION = 11.37 AC X 67 C.Y. = 762 C.Y. STORAGE CAPACITY REQUIRED.

AVAILABLE STORAGE IN POND #1 = 18,491.52 C.Y.

AVAILABLE STORAGE IN POND #2 = 861.52 C.Y.

Rt CALCULATION

TOTAL SEDIMENT STORAGE = 19,353 C.Y.

REQUIRED SEDIMENT STORAGE = 762 C.Y.

CLEAN OUT ELEVATION AT POND #1 = 10.00 FT
(ELEVATION CORRESPONDING TO 22 C.Y./AC * 13.35 AC DRAINED)

IS THE LENGTH TO WIDTH RATIO 2:1 OR GREATER ☒ YES ☐ NO

CLEAN OUT ELEVATION AT POND #2 = 12.00 FT
(ELEVATION CORRESPONDING TO 22 C.Y./AC * 19.67 AC DRAINED)

IS THE LENGTH TO WIDTH RATIO 2:1 OR GREATER ☒ YES ☐ NO

SOILS SERIES LEGEND

Oc	OCCILLA LOAMY FINE SAND
Ee	ELLABELLE LOAMY SAND

EXISTING CONDITIONS

ON SITE CONDITIONS INCLUDE LIGHT GROUND VEGETATION SPANNING ACROSS THE SITE, GRAVEL PARKING AREA, AND MULTIPLE BUILDING STRUCTURES. DRAINAGE IS ACHIEVED VIA STORMWATER MANAGEMENT SYSTEM.

CONSTRUCTION ACTIVITY

CONSTRUCTION ACTIVITY IS CONSIDERED TO BE A STAND ALONE PROJECT. PROPOSED IMPROVEMENTS INCLUDE GRADING AND THE EXCAVATION OF TWO DETENTION PONDS TO PROVIDE STORMWATER RETENTION, AND INSTALLATION OF STORM DRAINAGE PIPE. EROSION CONTROL MEASURES WILL BE SET IN PLACE TO PREVENT THE ESCAPE OF SEDIMENT FROM THE SITE.

TOTAL DISTURBED AREA = 11.37 AC

TOTAL SITE AREA = 11.37 AC

EROSION CONTROL MEASURES:

INITIAL PHASE - CONSISTS OF PERIMETER BMPs, AND DUST CONTROL.

INTERMEDIATE PHASE - MAINTAIN SILT FENCE. USE DUST CONTROL, MULCHING, AND TEMPORARY GRASSING WHERE INDICATED.

FINAL PHASE - ONCE PERMANENT GRASSING IS ESTABLISHED TEMPORARY MEASURES CAN BE REMOVED INCLUDING: RETROFITS, AND SILT FENCE.

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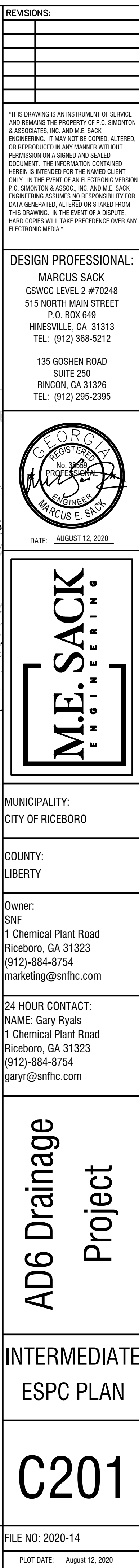
AD6 Drainage Project

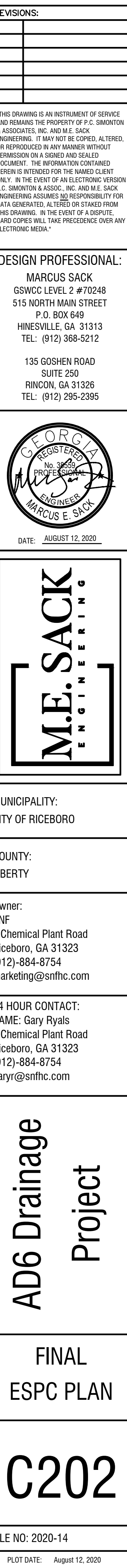
INITIAL ESPC PLAN

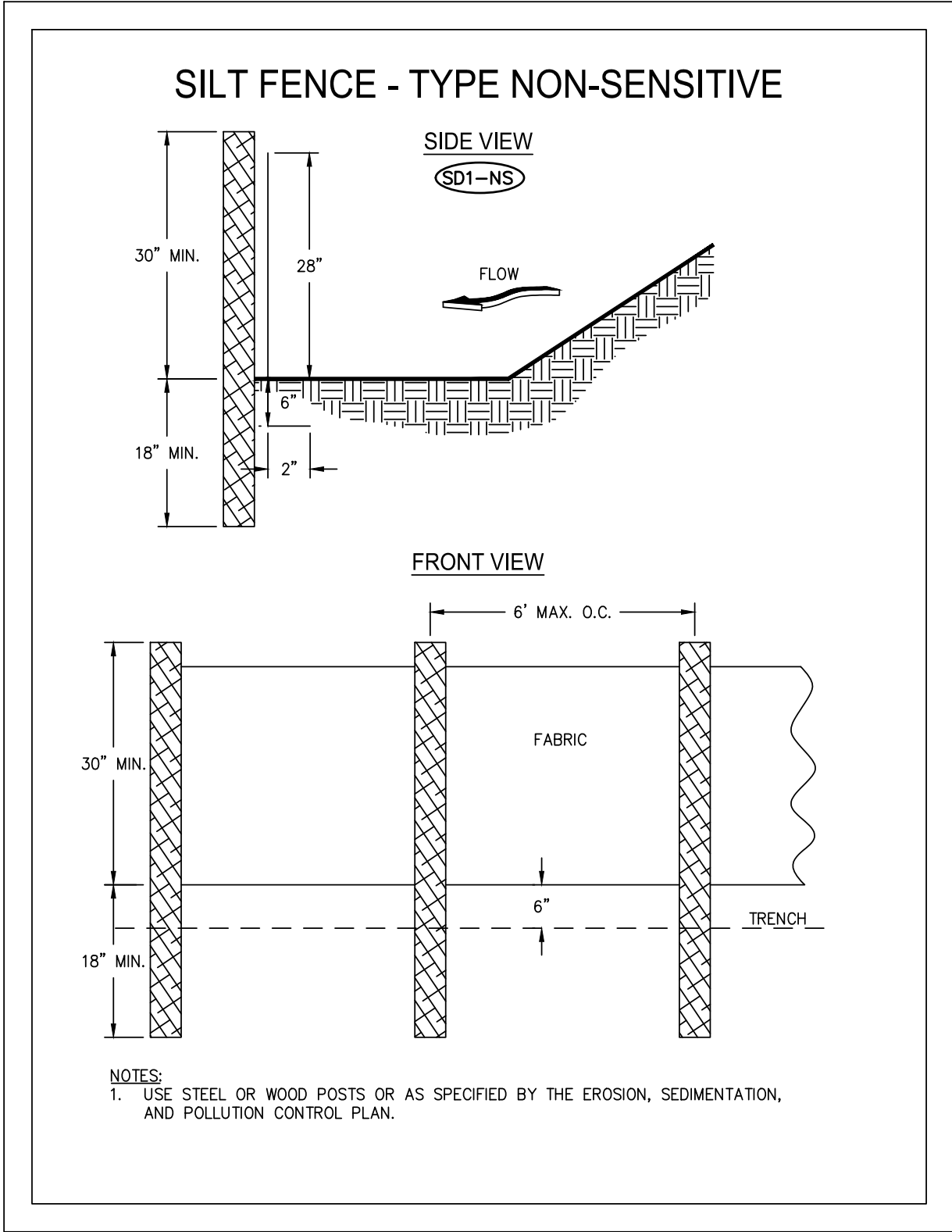
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FILE NO: 2020-14

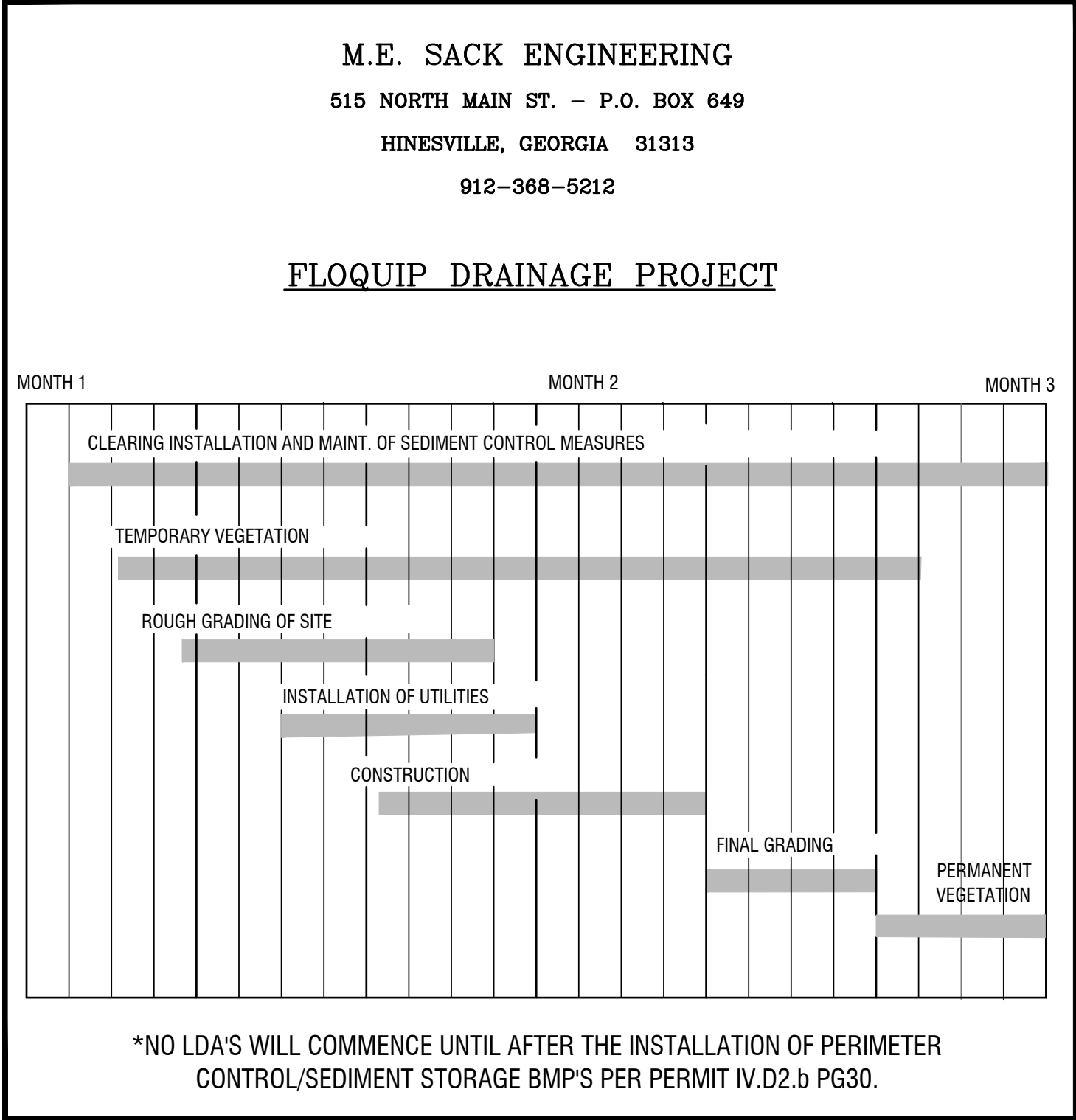
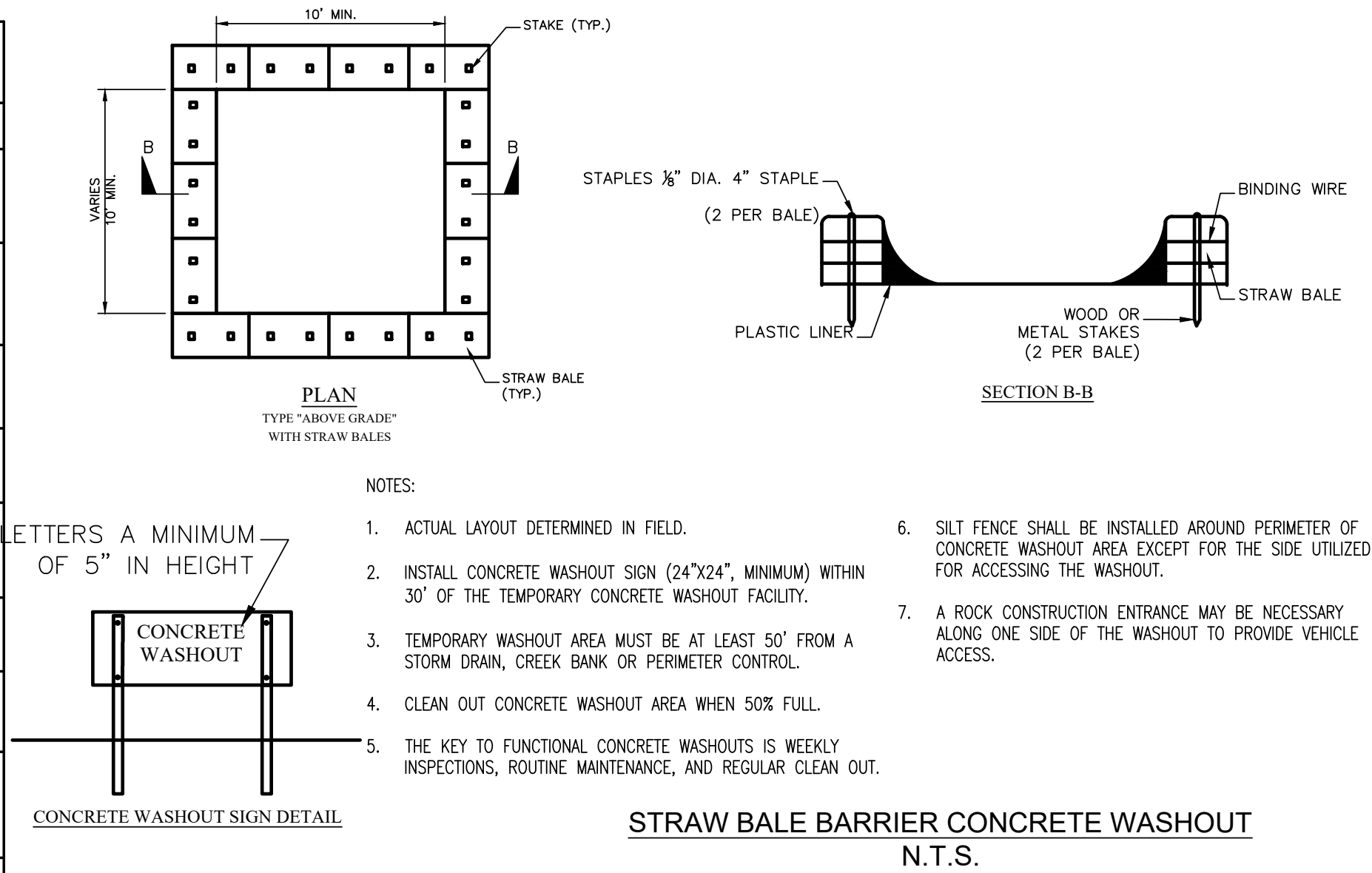
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LEGEND FOR EROSION AND SEDIMENT CONTROL PRACTICES		
CODE	PRACTICE	DESCRIPTION
CO	CONSTRUCTION EXIT	A STONE PAD LOCATED AT THE JOB SITE EXIT TO REMOVE MUD AND DEBRIS FROM TIRES AND PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC ROADS.
SD1-NS	SILT FENCE 36" WIDE	A TEMPORARY SEDIMENT BARRIER CONSISTING OF A FILTER FABRIC STRETCHED ACROSS AND ATTACHED TO SUPPORTING POSTS AND ENTRENCHED. 6 MO. OR LONGER PROJECT LIFE.
SD1-S	SILT FENCE 36" WIRE BACKED	SD1-S HAS 6 MO. OR LONGER PROJECT LIFE. WIRE BACKING IS NECESSARY BECAUSE FABRIC ALLOWS 3 TIMES THE FLOW RATE OF TYPE A SILT FENCE.
	INLET SEDIMENT TRAP	TEMPORARY DEVICE TO PREVENT SILT FROM ENTERING STORM DRAINAGE SYSTEMS, PRIOR TO PERMANENT STABILIZATION OF THE DISTURBED AREA.
SD2-P	"PIGS IN BLANKET"	CURB INLET PROTECTION "PIGS IN BLANKET" SHOULD BE USED ONCE PAVEMENT IS ALREADY IN PLACE.
SD2-F	FILTER FABRIC AND FRAME	FILTER FABRIC WRAPPED AROUND A FRAME FOR USE IN AN AREA WHERE SITE IS RELATIVELY FLAT(<5%)
SD	STORM DRAIN OUTLET PROTECTION	OUTLET FOR PROTECTION FROM EROSION CAUSED BY WATER TURBULENCE OR HIGH VELOCITIES.
DS1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)	APPLYING PLANT RESIDUES OR OTHER SUITABLE MATERIALS NOT PRODUCED ON THE SITE TO THE SOIL SURFACE SUCH AS GRAIN, STRAW, HAY, PINE NEEDLES, WOOD WASTE, AND SHREDDED RESIDUES.
DS2	DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDINGS)	ESTABLISHING TEMPORARY VEGETATIVE COVER SUCH AS RYE, SUDANGRASS, WHEAT, OR RYEGRASS, PAVED OR ROCK SECTION BELOW A STORM DRAIN ON DISTURBED AREAS.
DS3	DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)	ESTABLISHING PERMANENT VEGETATIVE COVER SUCH AS TREES, SHRUBS, VINES, GRASSES, SOD, OR LEGUMES ON DISTURBED AREAS.
Tm	TURBIDITY MONITORING POINT	LOCATION FOR MONITORING TURBIDITY IN STORM WATER RUNOFF.



Du DUST CONTROL ON DISTURBED AREAS

PURPOSE

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

Temporary Methods

1. Irrigation. This is generally done as an emergency treatment. Site is sprinkled with water until the surface is wet.
2. Mulching - See Ds1- Disturbed Area Stabilization (with Mulching only)
3. Vegetative Cover - See Ds2 - Disturbed Area Stabilization (with Temporary Seeding)

Permanent Methods

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

DS2 SPECIES AND PLANTING SCHEDULE

SPECIES	BROADCAST RATES 1/- PLS 2/ PER ACRE 1000 S.F.		PLANTING DATES BY RESOURCE		REMARKS
	PER ACRE	PER 1000 S.F.	RESOURCE AREA 3/	AREAS *	
RYEGRASS, ANNUAL ALONE	40 lbs.	0.9 lb.	M-L P C	J F M A M J J A S O N D	227,000 SEED PER POUND. DENSE COVER. VERY COMPETITIVE AND IS NOT TO BE USED IN MIXTURES.

* (DARK LINES REPRESENT OPTIMUM DATES, GRAY LINES INDICATE PERMISSIBLE BUT MARGINAL DATES.)

MULCHING RATES FOR PERMANENT COVER

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

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

FERTILIZER REQUIREMENTS

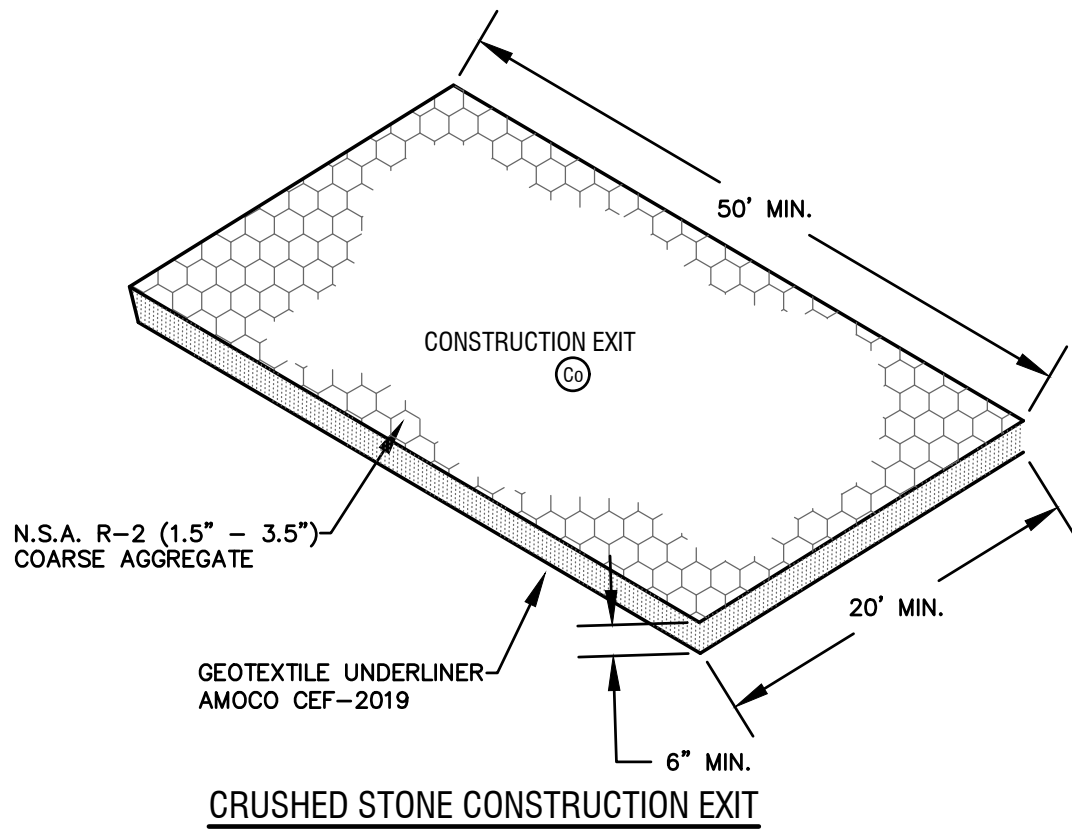
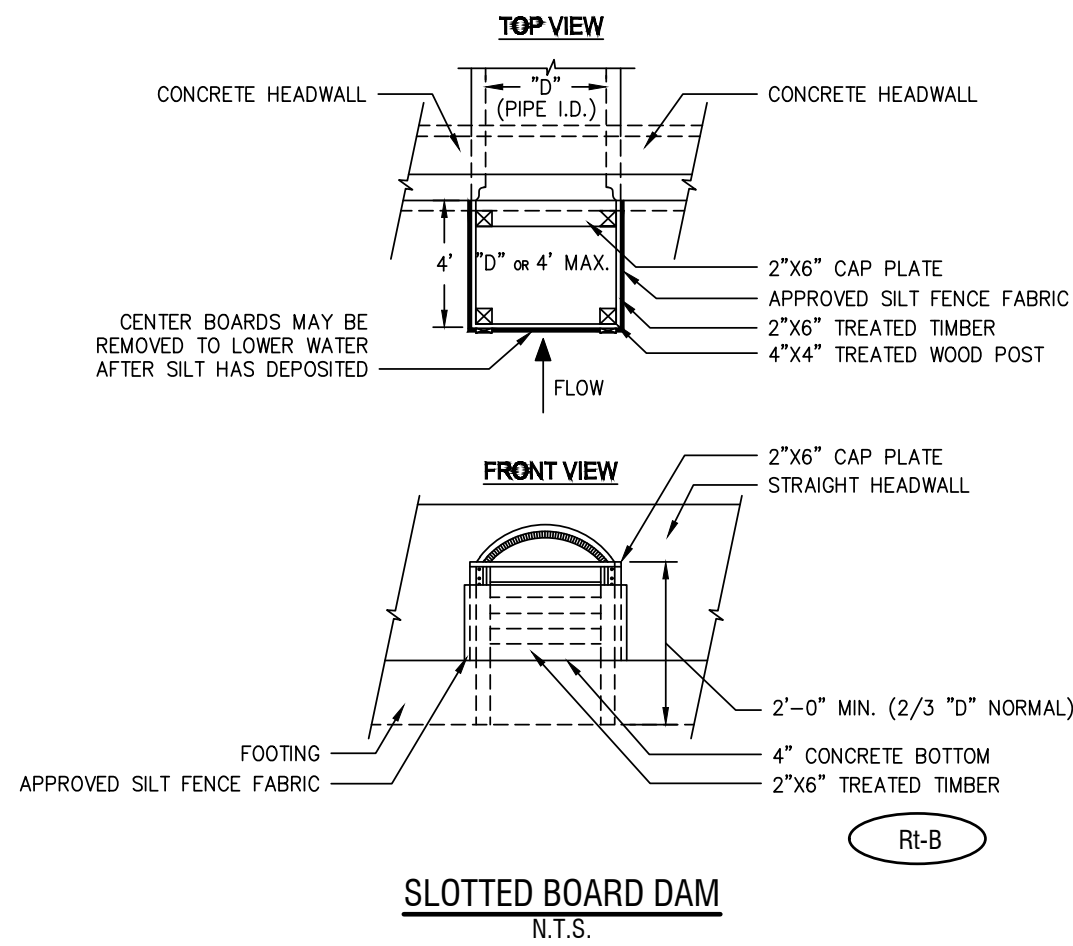
TYPE OF SPECIES	YEAR	ANALYSIS OR EQUIVALENT	RATE	N TOP DRESSING RATE	LIME APPLICATION
Cool season grasses	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 lbs./ac. 1000 lbs./ac. 400 lbs./ac.	50-100 lbs./ac. 1/ 2/ - 30	2000 lbs./ac.
Cool season grasses legumes	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 lbs./ac. 1000 lbs./ac. 400 lbs./ac.	0-50 lbs./ac. 1/ -	2000 lbs./ac.
Ground covers	First Second Maintenance	10-10-10 10-10-10 10-10-10	1500 lbs./ac. 1000 lbs./ac. 400 lbs./ac.	- -	-
Pine seedlings	First	20-10-5	one 21-gram pallet per seedling placed in the closing hole	-	-
Shrub leapedeza	First Maintenance	0-10-10 0-10-10	700 lbs./ac. 700 lbs./ac. 4/	-	-
Temporary cover crops seeded alone	First	10-10-10	500 lbs./ac.	30 lbs./ac. 5/	-
Warm season grasses	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 lbs./ac. 800 lbs./ac. 400 lbs./ac.	50-100 lbs./ac. 2/ 6/ 50-100 lbs./ac. 2/ 30 lbs./ac	2000 lbs./ac.
Warm season grasses and legumes	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 lbs./ac. 1000 lbs./ac. 400 lbs./ac.	50 lbs./ac. 6/	2000 lbs./ac.

- 1/ Apply in spring following seeding.
- 2/ Apply in split applications when high rates are used.
- 3/ Apply in 3 split applications.
- 4/ Apply when plants are pruned.
- 5/ Apply to grass species only.
- 6/ Apply when plants grow to height of 2 to 4 inches.

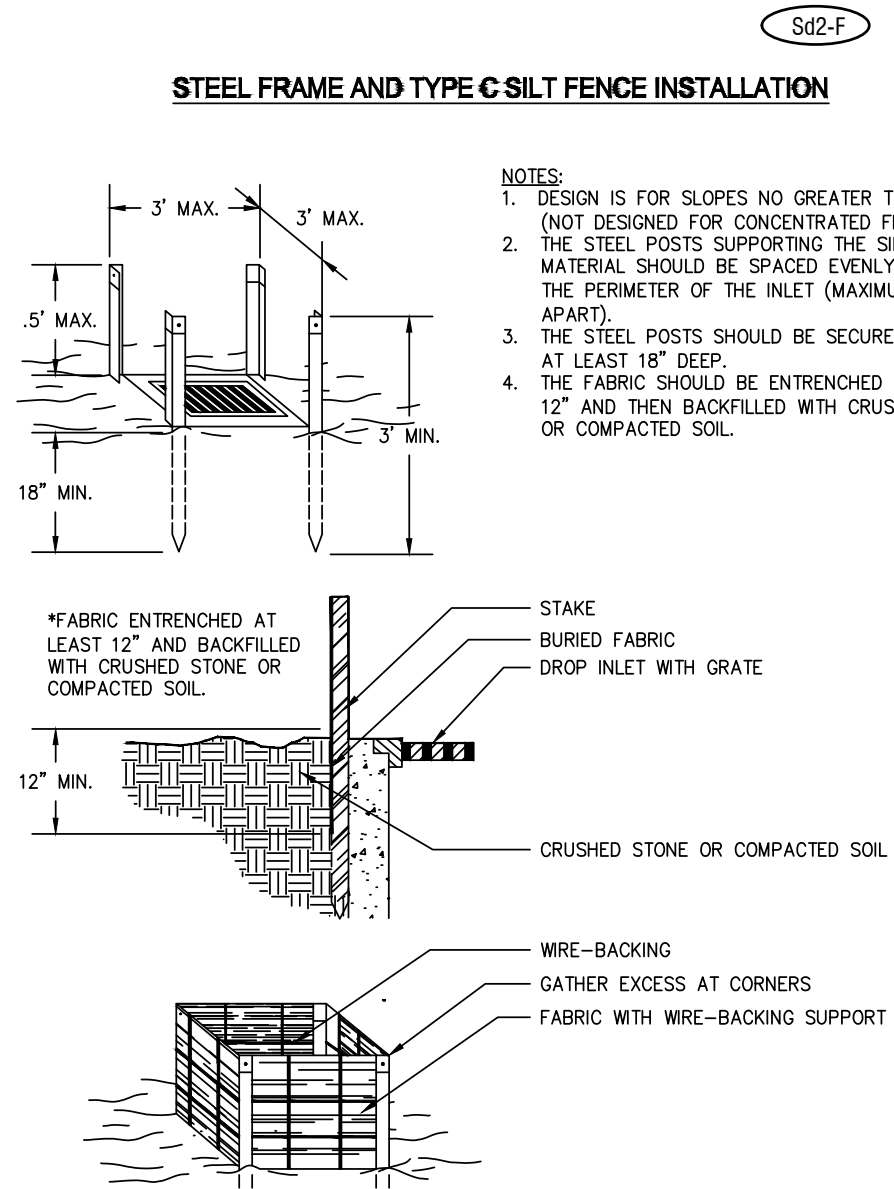
Ds3 SPECIES AND PLANTING SCHEDULE

SPECIES	BROADCAST RATES 1/- PLS 2/ PER ACRE 1000 S.F.		PLANTING DATES BY RESOURCE		SPECIFICATIONS
	PER ACRE	PER 1000 S.F.	RESOURCE AREA 3/	AREAS *	
BERMUDA, COMMON HULLLED SEED ALONE	10 LBS. 0.2 LB.	C	J F M A M J J A S O N D		1,787,000 SEED PER POUND. QUICK COVER. LOW GROWING AND SOD FORMING. FULL SUN. GOOD FOR ATHLETIC FIELDS.
BERMUDA, COMMON UNHULLLED SEED WITH TEMPORARY COVER WITH OTHER PERENNIALS	10 LBS. 0.2 LB. 6 LBS. 0.1 LB.	C	J F M A M J J A S O N D		PLANT WITH WINTER ANNUALS. PLANT WITH TALL FESCUE.
BERMUDA SPRINGS COASTAL, COMMON MIDLAND, OR TIF 44 TIFT 78	40 CU. FT. 0.9 CU. FT. 4 PLUGS 3' X 3'	M-L P C	J F M A M J J A S O N D		A CUBIC FT. CONTAINS APPROXIMATELY 650 SPRIGS. A BUSHEL CONTAINS 1.25 C.F. OR APPROXIMATELY 800 SPRIGS. SAME AS ABOVE. SOUTHERN COASTAL PLAIN ONLY

* (DARK LINES REPRESENT OPTIMUM DATES, GRAY LINES INDICATE PERMISSIBLE BUT MARGINAL DATES.)



FABRIC AND SUPPORTING FRAME FOR INLET PROTECTION

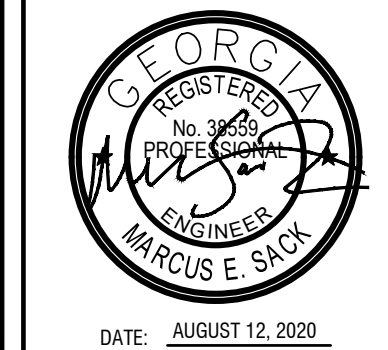


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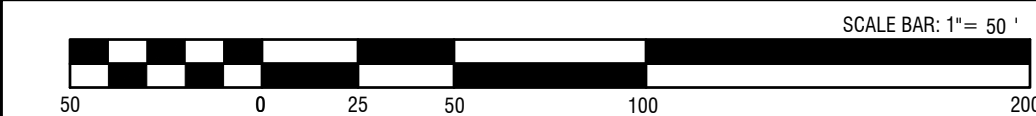
AD6 Drainage Project

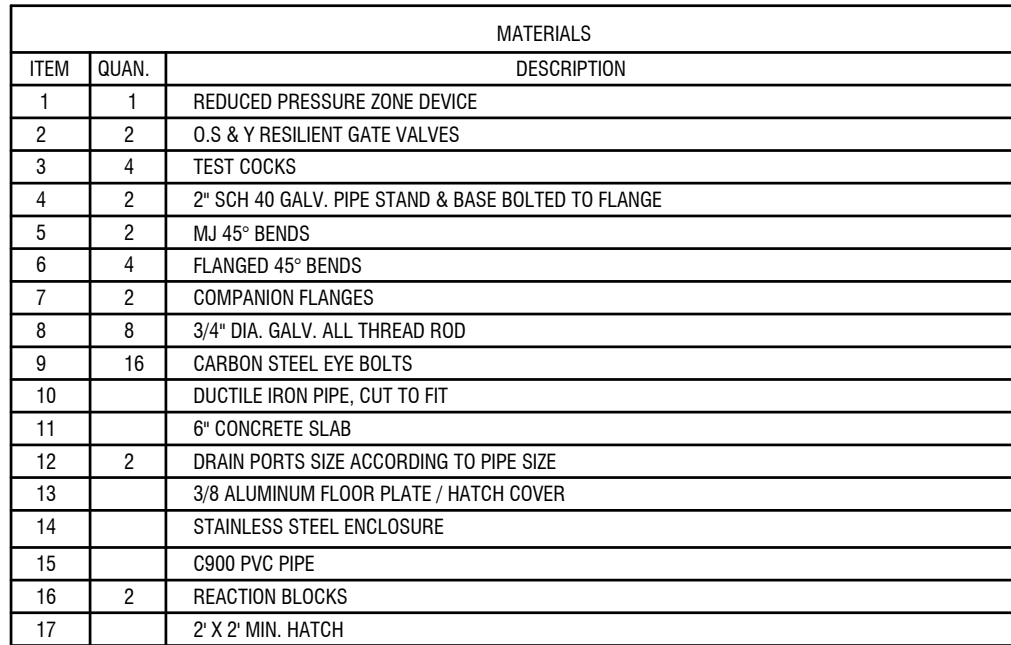
DETAILS

C300

FILE NO: 2020-14

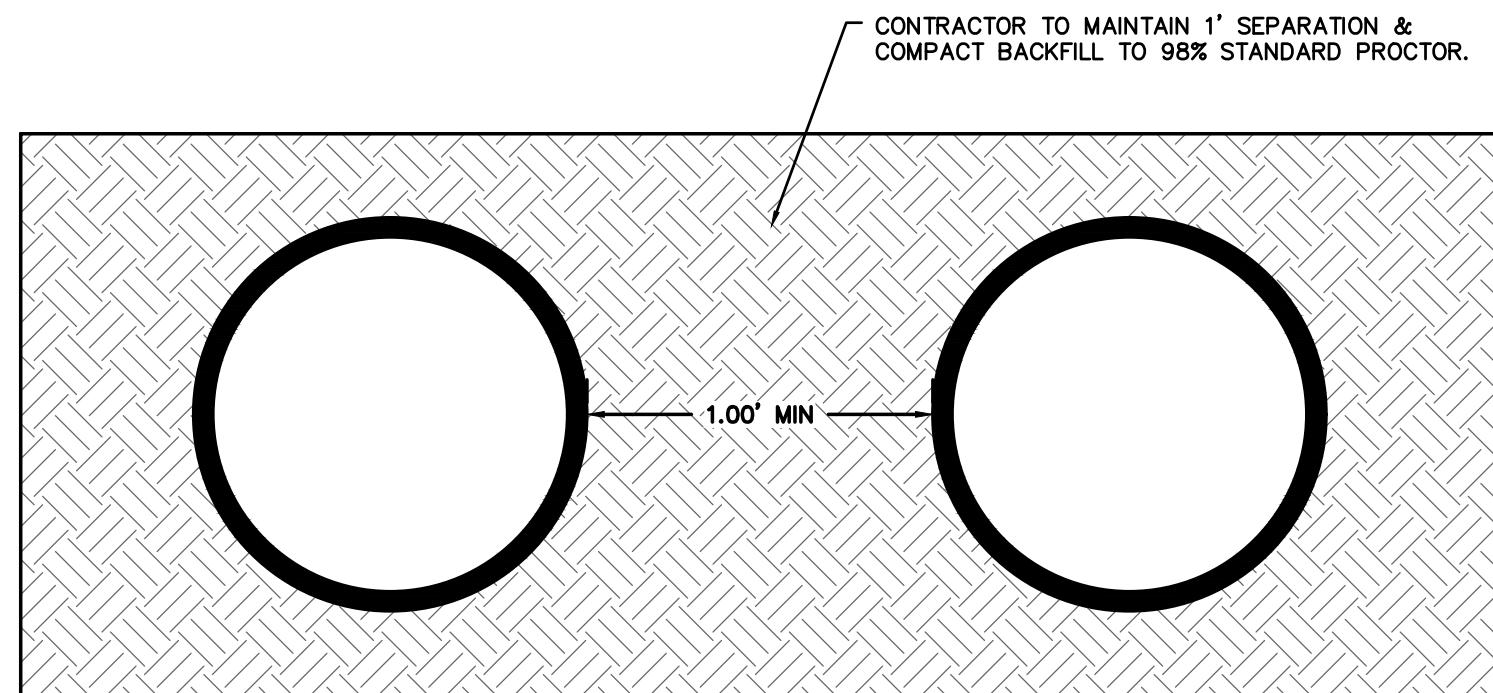
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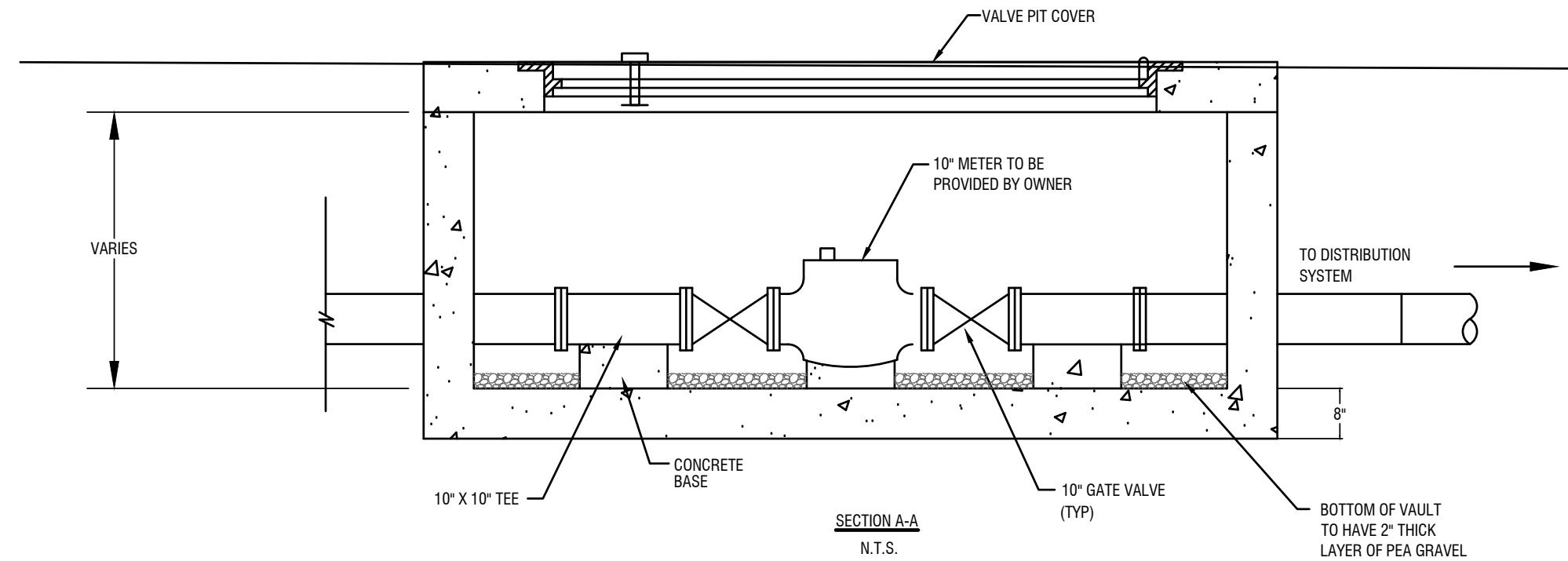
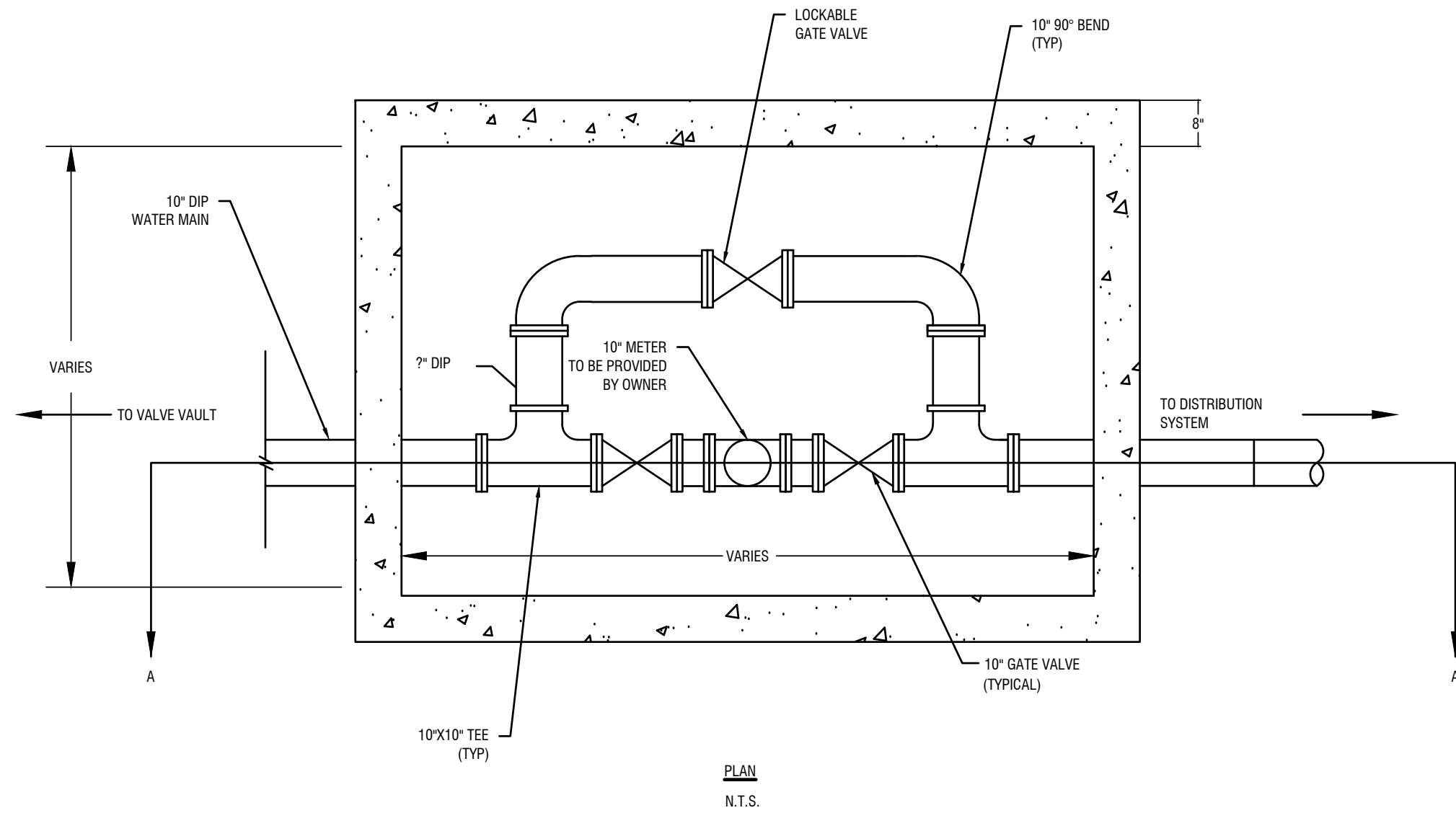


- ### REDUCED PRESSURE DETECTOR ASSEMBLY

N.T.S

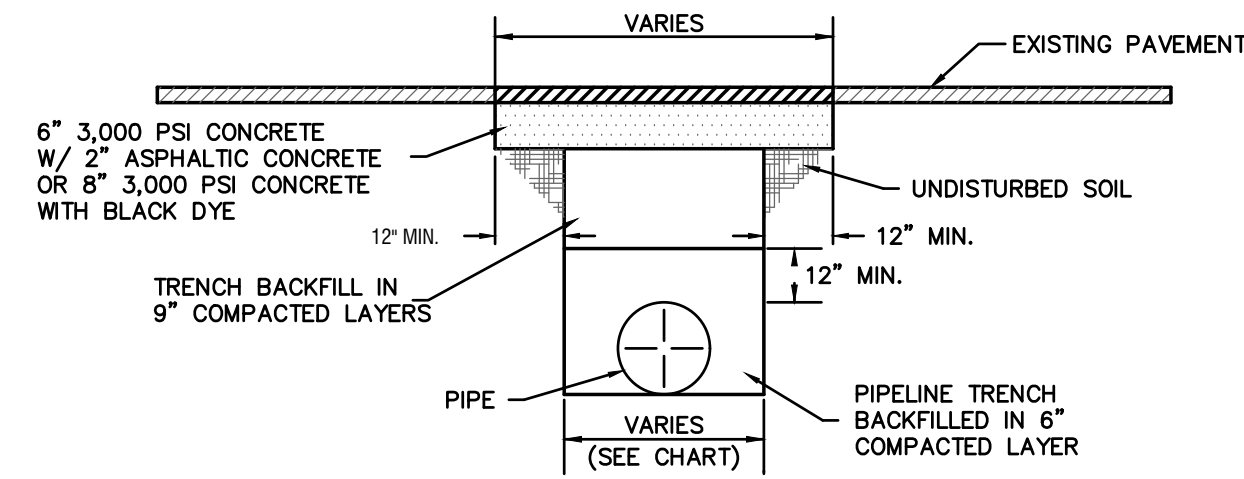
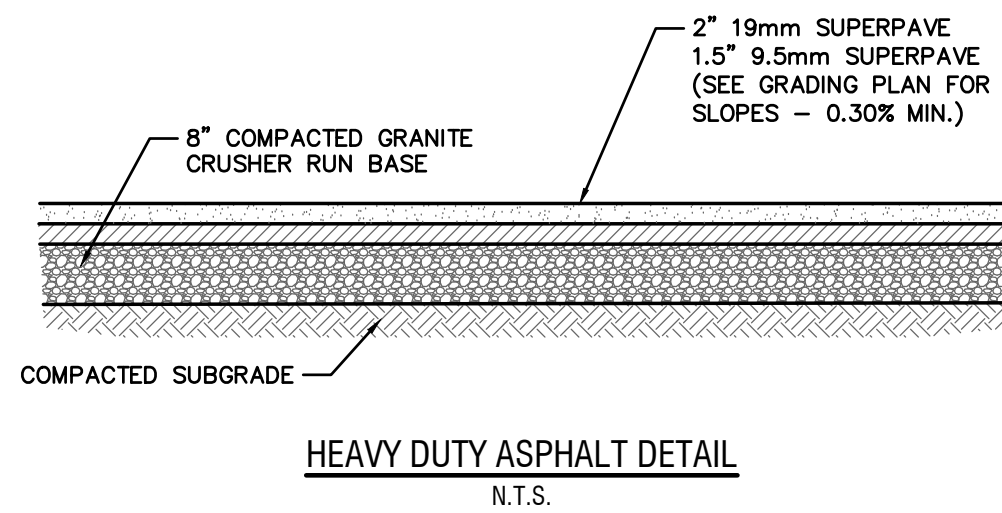
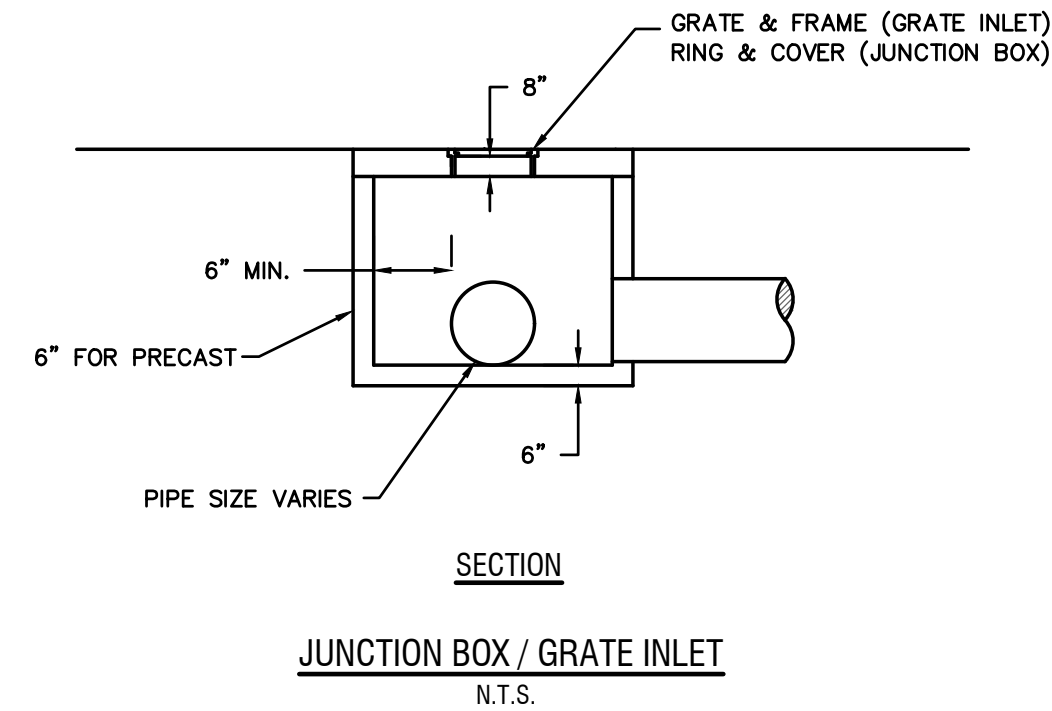


TYPICAL DOUBLE RUN PIPE BEDDING DETAIL
N.T.S.



- NOTES:
1. ALL PIPING THROUGH METER VAULT SHALL BE DUCTILE IRON PIPE.
 2. METER VAULT SHALL HAVE A 8" MIN. THICK REINFORCED LID WITH A STEEL HATCH.
 3. THE STEEL HATCH SHALL PROVIDE A MIN. OPENING OF 36"x36" AND SHALL HAVE A TORSION BAR ASSIST AND POSITIVE LOCK AT 90°. HATCH SHALL ALSO HAVE PADLOCKING CAPABILITIES. (LOADING 300 P.S.I.)
 4. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS BASED ON METER ASSEMBLY REQUIREMENTS.

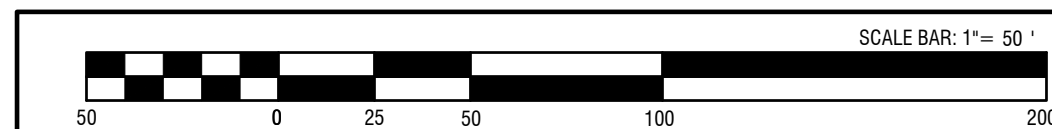
METER VAULT DETAIL
N.T.S.





PIPE DIAMETER	MAXIMUM TRENCH WIDTH 0 – 6" CUT DEPTH	MAXIMUM PAYEMENT WIDTH 0 – 6" CUT DEPTH
6" to 15"	16" + DIA.	40" + DIA.
18" to 21"	20" + DIA.	44" + DIA.
24" to 30"	24" + DIA.	48" + DIA.
33" to 42"	36" + DIA.	60" + DIA.
48" +	36" + DIA.	60" + DIA.

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

PAVEMENT REMOVAL & REPLACEMENT
N.T.S.



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COUNTY: LIBERTY	
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DETAILS	
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SECTION 01150
MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 QUANTITIES

- A. Quantities: Quantities listed in the Proposal are approximate only and are intended to serve as a guide in comparing bids and may be increased or decreased without invalidating the unit price bid.
- B. Payment: Contractor shall be paid for actual in place quantities as determined by the Engineer field measurements.
- C. Discrepancies: In case of discrepancies between the figures shown in the unit prices and totals, the unit prices shall apply, and the totals shall be corrected to agree with the unit price.

PART 2 - MEASUREMENT AND PAYMENT

2.01 PAVEMENT REMOVAL AND REPLACEMENT

- A. Measurement: Measurement shall be made on the basis of each square yard of pavement restored in accordance with the Contract Documents based on the centerline length of the pipe and the width of the pavement restored or the width of the trench specified plus two feet, whichever is less.
- B. Payment: Payment will be made on the basis of the unit price stated in the bid. the work shall include, but is not limited to:
 - 1. Marking, cutting, and removal of pavement material as necessary.
 - 2. Trench maintenance and crusher run stone as required to maintain level traffic surface during construction period and compaction of trench.
 - 3. Finish and install asphalt patch in accordance with City of Riceboro Standard Specifications if on city street or in accordance with plans.
 - 4. Complete surface restoration and cleanup.

2.02 GRANITE ROADWAY BASE

- A. Measurement: Measurement shall be made on the basis of the number of square yards of graded aggregate base applied to the parking lot and roadway at the specified thickness as shown on the construction plans. Irregular areas such as turnouts, filler strips and intersections will be measured to the closest square yard. Prior to installation of the asphalt all areas will be checked for proper thickness.
- B. Payment: Payment will be made on the basis of the number of square yards of granite crusher run (graded aggregated) base at the specified thickness applied to the roadway at the unit price stated in the bid. The price shall include all labor, equipment and material to complete the task. Work shall include, but not be limited to, the furnishing, hauling, placing and compaction of the crusher run base in order

to bring the base to the lines, grades, and cross sections shown on the construction plans or established by the Engineer.

2.03 ASPHALT PAVING

- A. Measurement: Measurement will be made on the basis of each square yard of asphalt in place, in accordance with the construction plans and accepted by the Engineer. Actual weight will be determined by weighing on a certified motor truck scale and presenting a notarized copy of the recorded weight to the Engineer.
- B. Payment: Payment will be made on the basis of the number of square yards of asphalt in place in accordance with the unit price bid as stated in the contract. Work shall include, but is not limited to, the furnishing, hauling, placing and compaction of the asphalt in order to bring the pavement to the lines, grades and cross sections as designated on the construction plans and as determined by the Engineer. The unit price bid shall also include surface cleaning, prime, tack and pavement and handicap striping. All striping will be in accordance with MUTCD and local specifications.

2.04 RECYCLED CONCRETE DRIVE

- A. Measurement: Measurement shall be made on the basis of the number of square yards of recycled concrete applied to the roadway at the specified thickness as shown on the construction plans. Irregular areas such as turnouts, filler strips and intersections will be measured to the closest square yard. Prior to installation of the asphalt all areas will be checked for proper thickness.
- B. Payment: Payment will be made on the basis of the number of square yards of recycled concrete at the specified thickness applied to the roadway at the unit price stated in the bid. The price shall include all labor, equipment and material to complete the task. Work shall include, but not be limited to, the furnishing, hauling, placing and compaction of the recycled concrete in order to bring the drive to the lines, grades, and cross sections shown on the construction plans and specifications.

2.05 DRAINAGE STRUCTURE (Catch Basins, Yard Drain, Junction Box, Headwall, Concrete Flumes, Flared End Section, Pipe End Treatments, Interference Box, Outlet Structures)

- A. Measurement: Measurement will be made on the basis of each drainage structure installed at the elevation and location designated on the construction plans.
- B. Payment: Payment will be made on the basis of each structure installed at the unit price bid. The unit price bid shall include furnishing all labor, materials and necessary equipment to complete the item of work. Work shall include, but not be limited to, excavation, necessary shoring and sheeting, dewatering, forming, form wrecking, foundations as required, furnishing and installing the structure, placement of grates, manhole rings and covers as applicable, grouting around pipe, 6" stub for future underdrain connection, backfill, compaction, grading, complete surface restoration and cleanup.

2.06 DRAINAGE PIPE

- A. Measurement: Measurement will be made on the basis of each linear foot of drainage pipe installed at the elevation, grade and alignment as designated on the construction plans.

- B. Payment: Payment will be made on the basis of each linear foot of drainage pipe installed at the elevation, grade and alignment as designated on the construction plans at the unit price bids as stated in the contract. Work shall include, but not be limited to, all excavation, trenching, necessary shoring and sheeting, all pipe bedding, furnishing and installing pipe, backfill, compaction, complete surface restoration and cleanup.

2.07 GRADING

- A. Measurement: Measurement will be made on the basis of the percent complete of the item of work. All cut and fill quantities are based on the difference between initial topographic data and proposed contours shown on the plans.
- B. Payment: Payment will be made at the price bid for each item. Work shall include all equipment, labor and material to complete each task. This item will include, but is not limited to, excavation, material transportation and placement, grading to the lines and grades shown on the plans, compaction and stabilization.

2.08 HAUL OFF

- A. Measurement shall be made on the basis of number of cubic feet of dirt/earth hauled off site.
- B. Payment will be made at the unit price bid per cubic foot of dirt/earth hauled off site in accordance with the plans and specifications. Price shall include all labor, equipment, and materials necessary to complete the task. The task shall include, but is not limited to, the transport of excess dirt/earth from the construction site to an acceptable land legal repository off site.

2.09 CONNECTIONS TO EXISTING WATERMAINS

- A. Measurement: Measurement shall be made on the basis of each connection made to an existing watermain.
- B. Payment: Payment shall be made on the basis of unit price bid. Unit price bid shall include furnishing all materials, labor and equipment required to complete the connection. Work shall include, but not be limited to, all trenching and excavation, pressure testing, backfill, disinfection, surface restoration and cleanup, furnishing and installing tapping sleeves & tapping valves if noted on the plans, cutting and removing existing pipe where necessary, fittings, and other accessories required to complete the connection.

2.10 WATERMAINS

- A. Measurement: Measurement will be made along the centerline of the pipe trench and through fittings and specials. No deduction in length will be made for fittings or specials.
- B. Payment: Payment will be made on the basis of unit price bid per linear foot for a specific line size. Unit price bid shall include all materials, labor and equipment necessary to complete the installation of the watermain. Work shall include, but not be limited to, trenching and excavation, necessary shoring and sheeting, furnishing and installing pipe, tracer wire, marker tape, backfilling and compaction, concrete

blocking, bedding, pressure testing, disinfection, complete surface restoration and cleanup.

2.11 WATER VAULT

- A. Measurement shall be made on the basis of each unit installed in accordance with the construction plans and specifications.
- B. Payment: Payment will be made at the unit price bid. Unit price bid shall include furnishing all labor, materials and equipment necessary to complete the task. The task shall include, but not be limited to, furnishing, placing, and installing concrete vault to include all fittings, supports necessary to properly operate the unit. Contractor to install water vault to ensure water will drain to adjacent pond. Contractor shall submit shop drawings to engineer for approval prior to construction.

2.12 RPZ ASSEMBLY

- A. Measurement shall be made on the basis of each unit installed in accordance with the construction plans and specifications.
- B. Payment: Payment will be made at the unit price bid. Unit price bid shall include furnishing all materials, labor and equipment necessary to complete the installation of the reduced pressure zone. Work shall include, but is not limited to, furnishing, placing, testing and installing RPZ assembly to include all fittings, stands and supports necessary to properly operate the unit per manufactures requirements.

2.13 10" WATER METER

- A. Measurement shall be made on the basis of each unit installed in accordance with the construction plans and specifications.
- B. Payment will be made at the unit price bid. Unit price bid shall include furnishing all materials, labor and equipment necessary to complete the installation of the 10" water meter. Work shall include, but not be limited to, furnishing all fittings, hardware, pipe, pipe cutting, approved water meter by the City of Riceboro, installation, coordination with the City of Riceboro, and cleanup.

2.14 GATE VALVES

- A. Measurement: Measurement shall be made on the basis of each unit installed in accordance with the construction plans and specifications.
- B. Payment: Payment will be made at the unit price bid for a specific valve size. Unit price bid shall include furnishing all materials, labor and equipment necessary to complete the installation of the gate valve. Work shall include, but not be limited to, excavation, necessary shoring, sheeting, backfilling, concrete valve box collar, furnishing and installing gate valves, valve boxes, pressure testing, disinfection and complete surface restoration and cleanup.

2.15 INSTA-VALVE

- A. Measurement: Measurement shall be made on the basis of each unit installed in accordance with the construction plans and specifications.

- B. Payment: Payment will be made at the unit price bid for a specific valve size. Unit price bid shall include furnishing all materials, labor, and equipment necessary to complete the installation of the insta-valve. Work shall include, but not be limited to, excavation, necessary shoring, sheeting, backfilling, concrete valve box collar, furnishing and installing insta-valves, valve boxes, pressure testing, disinfection and complete surface restoration and cleanup

2.16 DUCTILE IRON FITTINGS

- A. Measurement: Measurement will be made on the basis of each ton of fittings installed based on weight of the fitting and the accessory kit.
- B. Payment: Payment will be made at the unit price bid per ton of fittings installed in accordance with the plans or directed by the engineer. Price shall include all labor, equipment and materials to complete the task. Work shall include, but is not limited to, furnishing the fitting, all bolts, accessories, trench, excavation, thrust blocking, pressure testing, surface restoration and stabilization.

2.17 CHAIN LINK FENCE

- A. Measurement: Measurement shall be made on the on the basis of each linear foot of chain link fence installed as shown on the plan. The size and type of chain link fence will be shown on the plans.
- B. Payment: Payment will be made on the basis of the unit price stated in the bid. The price shall include all labor, materials and equipment necessary to complete the task. The task shall include, but is not limited to, the placement, fastening, and installation of the chain link fence, gate, fence stands, latches, locks, and appurtenances necessary for a freestanding fence and 12' gate for egress/ingress.

2.18 ORANGE FENCING

- A. Measurement: Measurement shall be made on the on the basis of each linear foot of orange fence installed as shown on the plan. The size and type of orange fencing will be shown on the plans.
- B. Payment: Payment will be made on the basis of the unit price stated in the bid. The price shall include all labor, materials and equipment necessary to complete the task. The task shall include, but is not limited to, the placement, fastening, and installation of the orange fence and fence posts to secure the perimeter of the construction site.

2.19 EROSION CONTROL

- A. Measurement: Measurement shall be made on the basis of the percentage completed item in accordance with the plans, specifications and bid documents.
- B. Payment: Payment will be in accordance with the price stated in the bid. The unit price shall include all labor, materials and equipment necessary to prevent erosion from the site. Work shall include, but not be limited to, installation of all fencing, rock, geofabric, signage, grassing both temporary and permanent, fertilization, water quality monitoring, and other erosion control activities shown on the plans in accordance with the plans, details and state requirements found in the Manual for Erosion and Sediment Control in Georgia.

2.20 GRASSING

- A. Measurement: Measurement shall be made on the basis of the completed item in accordance with the construction plans and bid items.
- B. Payment: Payment will be made in accordance with the price stated in the bid. The unit price shall include, but is not limited to, furnishing all labor, materials and equipment necessary for the satisfactory growth of grass on all disturbed areas in accordance with plans and specifications. Work shall include, but not be limited to, furnishing all materials, fertilizer, soil samples, grass seed, raking, leveling, watering, maintenance and final surface restoration. Final payment will not occur until permanent grass is established.

2.21 STRUCTURE RELOCATION/ REMOVAL

- A. Measurement: Measurement shall be made on the basis of the percentage completed item in accordance with the plans, specifications and bid documents.
- B. Payment: Payment will be made on the basis of the completed item of work. The lump sum price shall include furnishing all labor, materials and equipment necessary to complete the task. The task shall include, but is not limited to, demolition and/or removal of any storm pipe, drainage structures, fencing or other material that may impede construction or that will not be used as part of this project, disposal at an approved site, backfill, compaction and surface restoration.

2.22 CLEARING & GRUBBING

- A. Measurement: Measurement shall be made on the basis of the percentage complete of the task in accordance with the plans and specifications.
- B. Payment: Payment will be made at the lump sum stated in the bid. The price bid shall include furnishing all labor, materials and equipment necessary to complete this item. Work shall include, but is not limited to, removal of all trees, shrubs and undergrowth that presently exist, preventing the construction of this project. All material removed including vegetation, roots and organic mat shall be removed from the site and disposed of at a permitted site. The contractor shall take special care not to disturb the roots of trees that are marked to remain. Trees to be saved shall be marked and approved by the engineer prior. Trees to be saved shall have the appropriate tree protection installed.

2.23 ELECTRICAL COMPLETE

- A. Measurement: Measurement shall be made on the basis of the completed item in accordance with the construction plans and bid items.
- B. Payment: Payment will be made at the lump sum stated in the bid. The price bid shall include furnishing all labor, materials and equipment necessary to complete the task. The task shall include, but is not limited to, trenching, excavation, backfill compaction, 4" conduit, fittings, joints, connections, pull boxes, cleanup and surface restoration.

2.24 MOBILIZATION

- A. Payment will be made for the price as stated in the Contract once the Contractor has established his construction yard, and met the requirements established in the Contract Documents. Mobilization will be recognized complete once the Contractor has provided a construction schedule and moved his equipment and a substantial amount of material to the job site. Construction must be underway and progressing. Payment for mobilization will be limited to a maximum amount not to exceed 5% of the bid price.