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Arborist Services

50 Warm Springs Circle
Roswell - Georgia - 30075
(770)641-1942 - www.aecd.com

TOPOGRAPHIC AND BOUNDARY SURVEY

SUN VALLEY - PHASE I

ROSWELL FULTON COUNTY GEORGIA



NO.	REVISIONS	DATE

PROJECT NO: 13-3454
CIVIL DRAWN BY: LAF, JM
CIVIL DESIGNED BY: LAF
LANDSCAPE DRAWN BY:
LANDSCAPE DESIGNED BY:
CHECKED BY: CJF
DATE - 05-15-15

SHEET

C1.1

80 0 80 160
1"=80'



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AYOUT PLAN

SUN VALLEY - PHASE I

ROSWELL FULTON COUNTY GEORGIA

DATE 7/1/15
REVISIONS CITY COMMENTS
COPRIGHT BY AEC INC

PROJECT NO: 13-3454
CIVIL DRAWN BY: LAF, JLM
CIVIL DESIGNED BY: LAF
LANDSCAPE DRAWN BY:
LANDSCAPE DESIGNED BY:
CHECKED BY: CJ
DATE - 05-15-15

SHEET

C2.0

GEORGIA81
Utilities Protection Center, Inc.

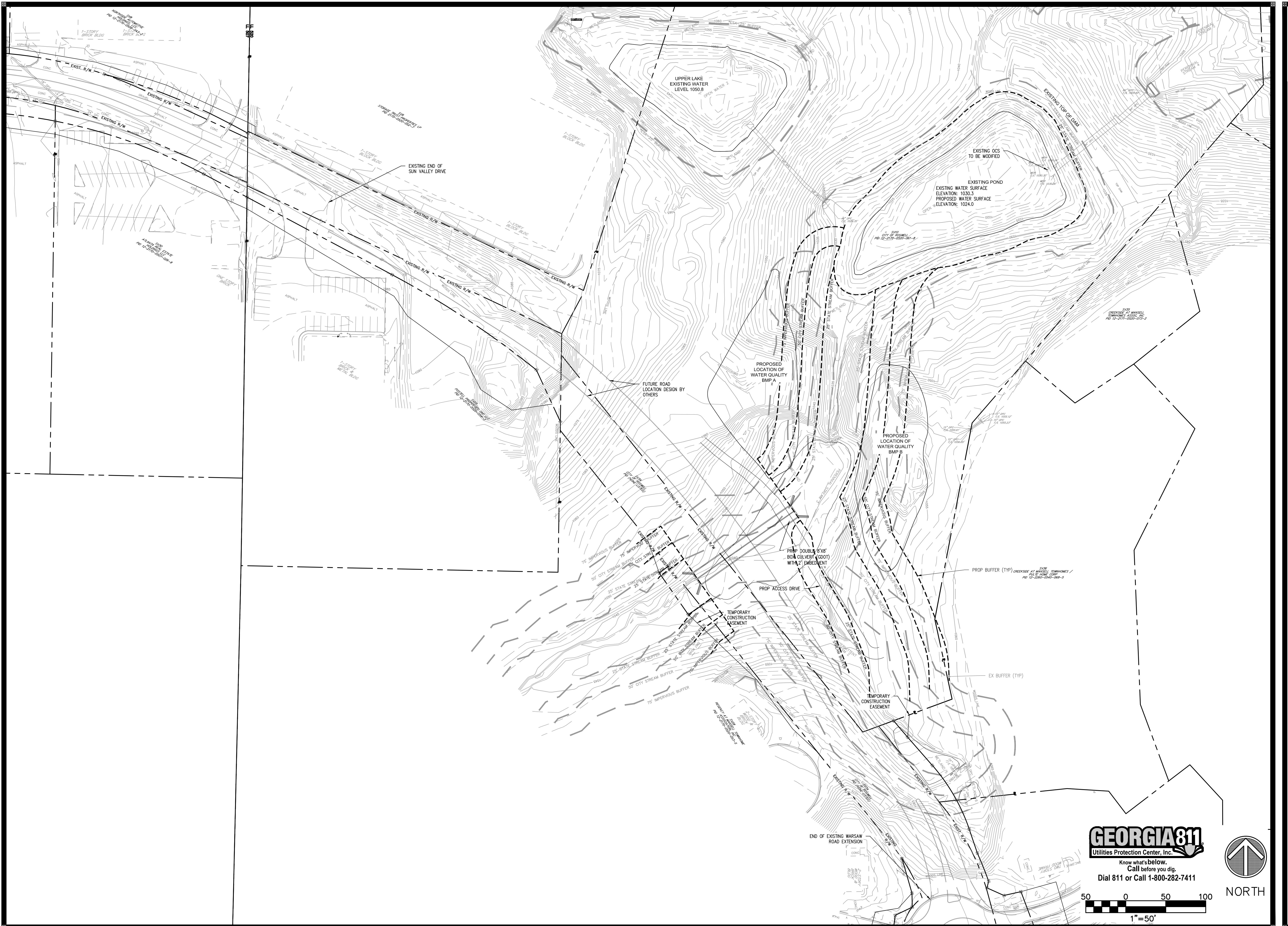
Know what's below.
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NORTH

50 0 50 100
1"=50'



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OVERALL TEMPORARY GRADING PLAN

SUN VALLEY - PHASE I ROSWELL FULTON COUNTY GEORGIA

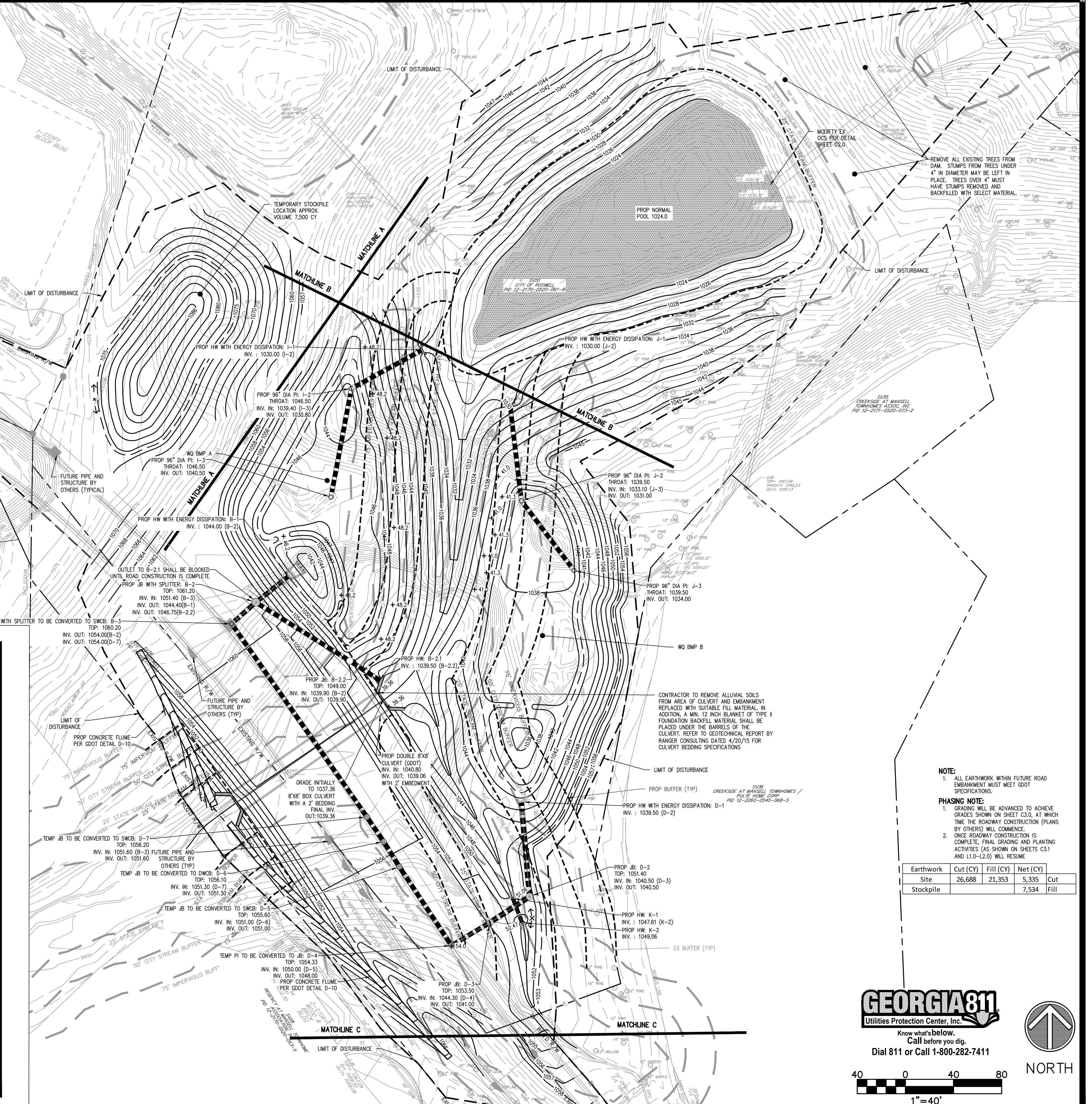
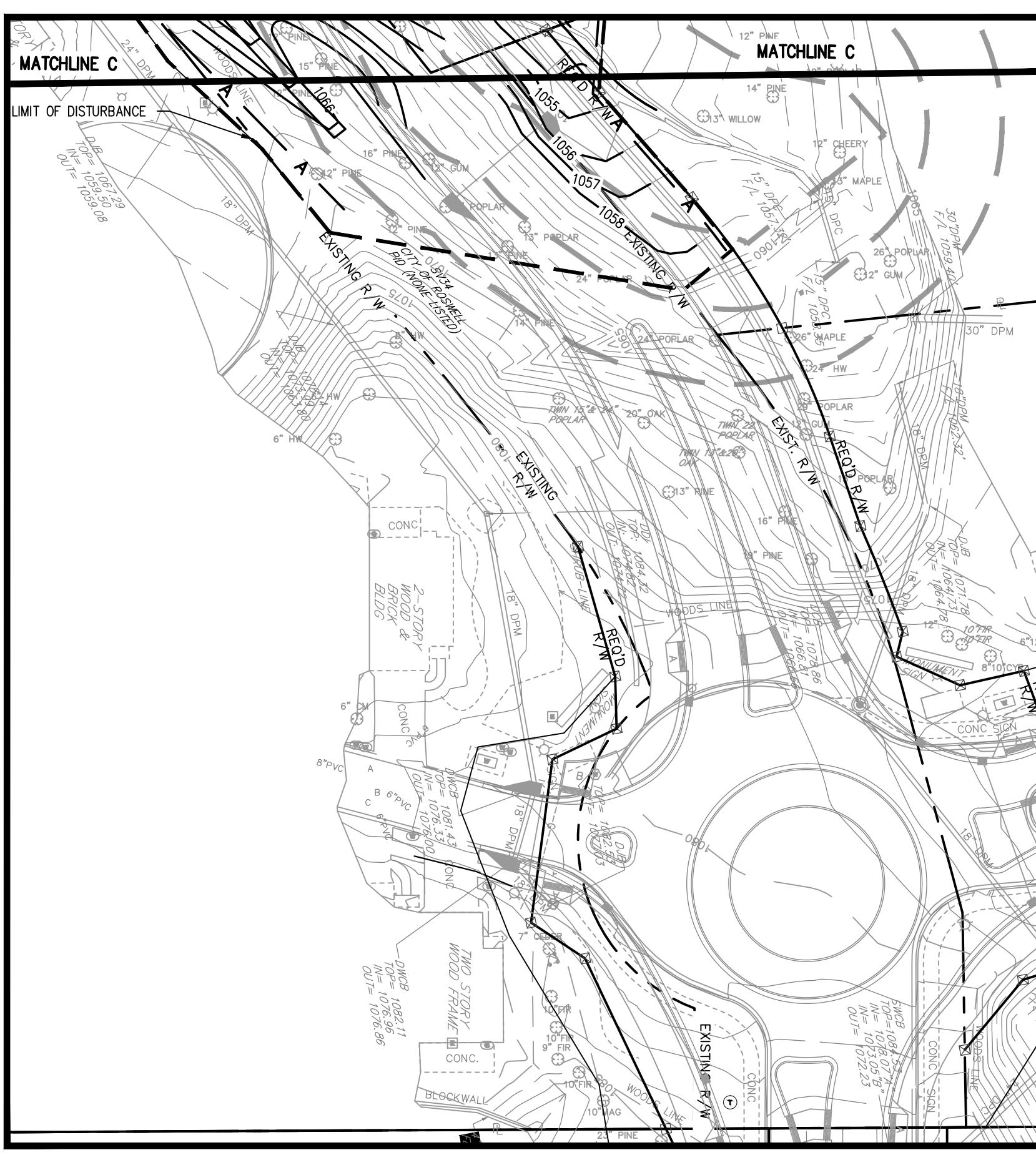
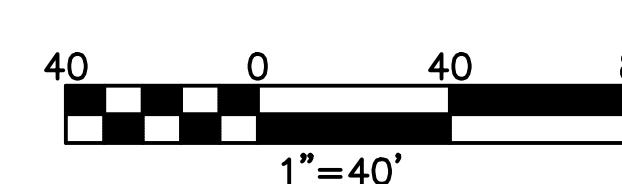
DATE
7/1/15REVISIONS
CITY COMMENTS
COPRIGHT BY AEC INCPROJECT NO: 13-3454
CIVIL DRAWN BY: LAF, JLM
CIVIL DESIGNED BY: LAF
LANDSCAPE DRAWN BY:
LANDSCAPE DESIGNED BY:
CHECKED BY: CJF
DATE: 05-15-15

SHEET

C3.0

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OVERALL FINAL GRADING PLAN

SUN VALLEY - PHASE I ROSWELL FULTON COUNTY GEORGIA

DATE: 7/1/15
REVISIONS: 1
CITY COMMENTS: 1
COPRIGHT BY AEC INC

PROJECT NO: 13-3454
CIVIL DRAWN BY: LAF, JLM
CIVIL DESIGNED BY: LAF
LANDSCAPE DRAWN BY:
LANDSCAPE DESIGNED BY:
CHECKED BY: CJF
DATE: 05-15-15

SHEET

C3.1

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40 0 40 80
1" = 40'

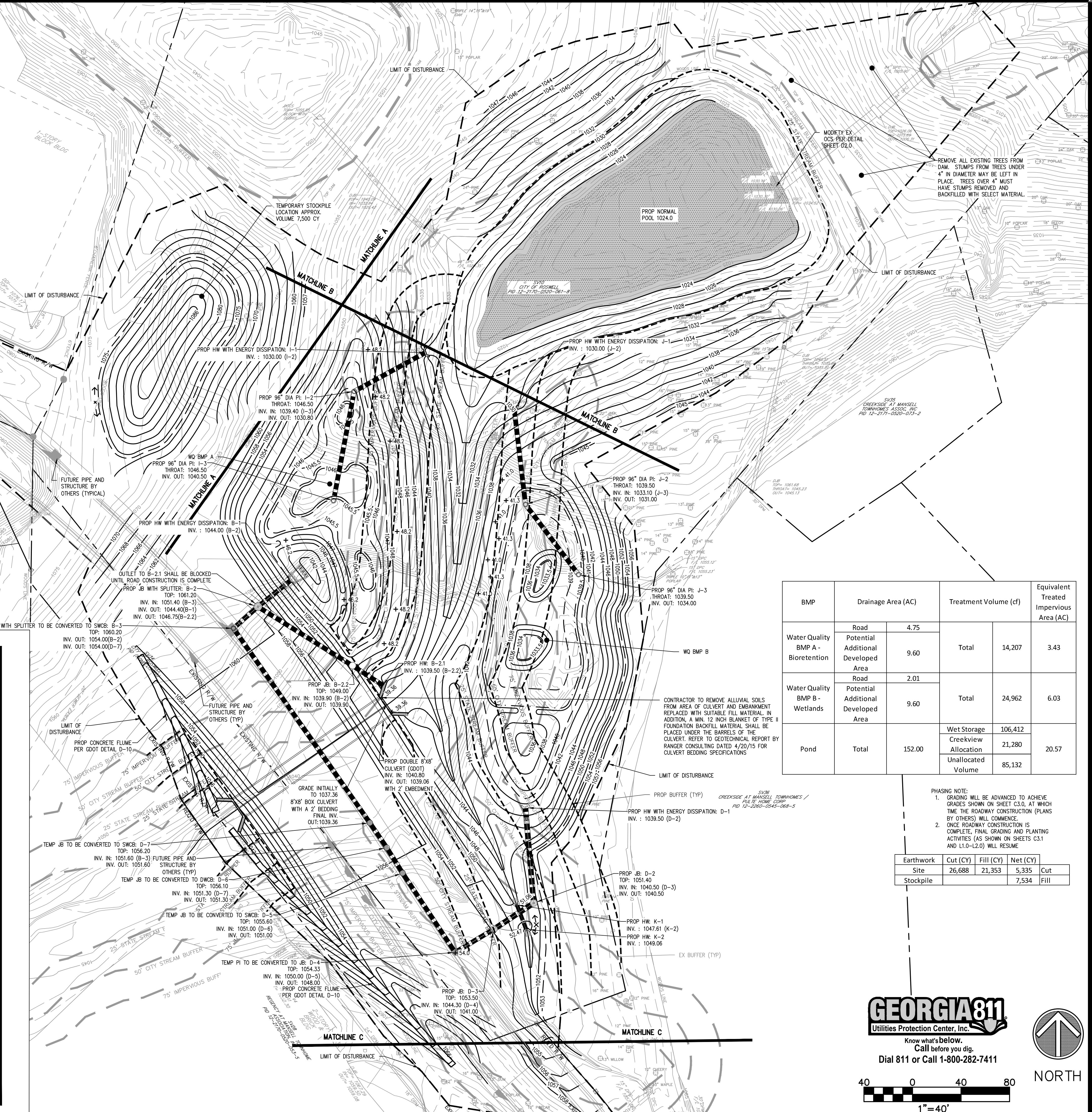
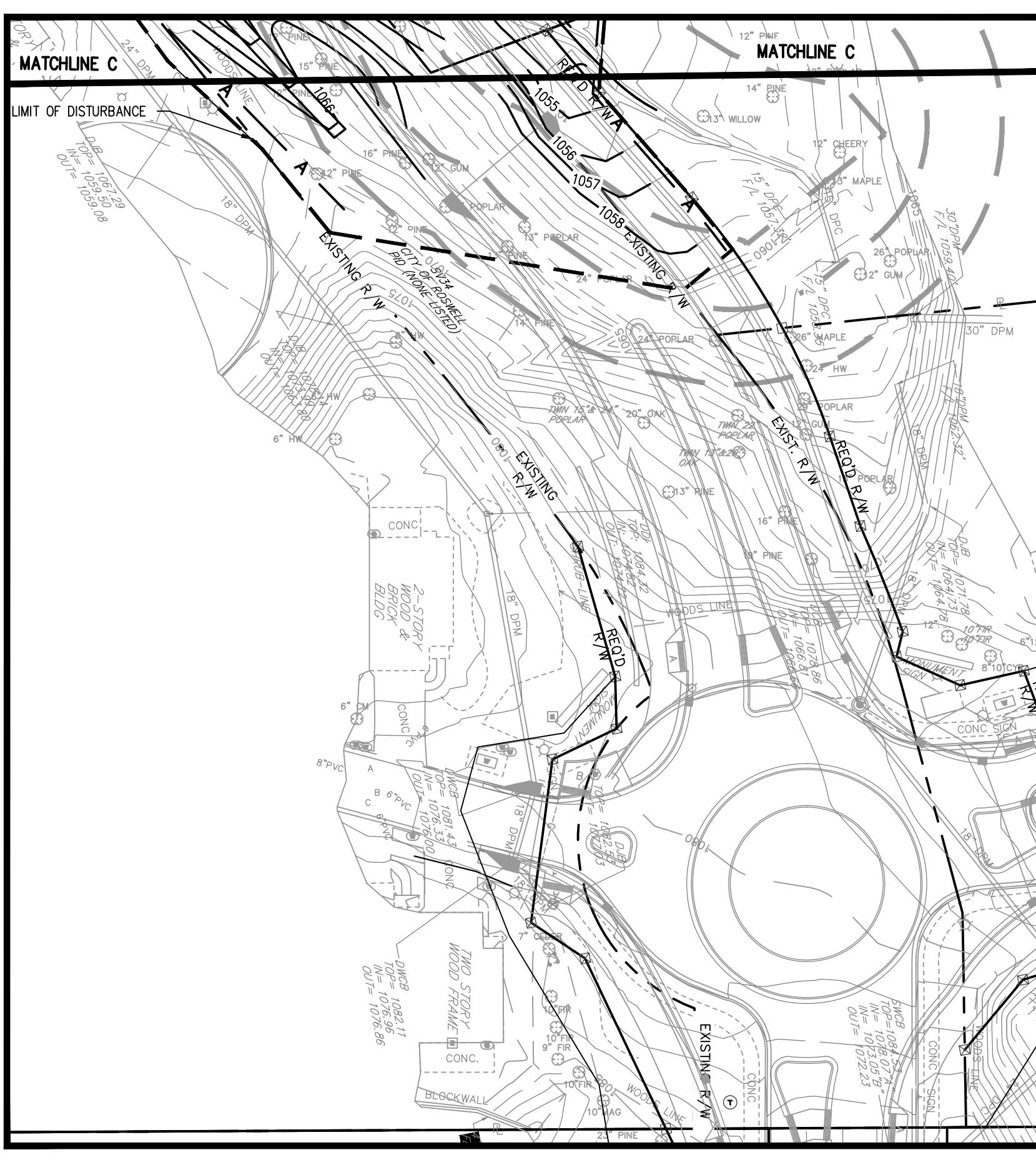
NORTH

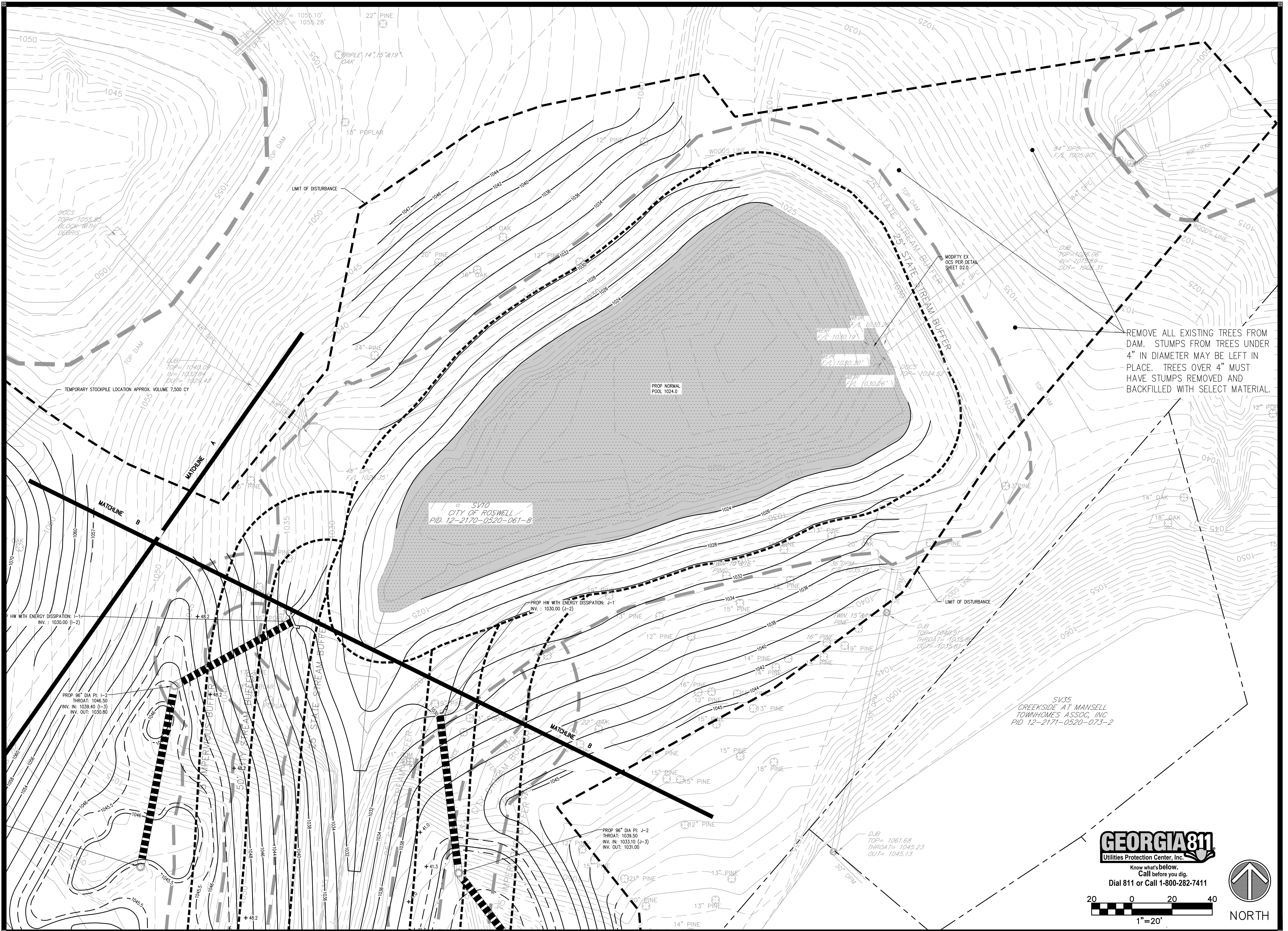
BMP	Drainage Area (AC)	Treatment Volume (cf)		Equivalent Treated Impervious Area (AC)
		Road	Total	
Water Quality BMP A - Bioretention	9.60	4.75	14,207	3.43
Water Quality BMP B - Wetlands	9.60	2.01	24,962	6.03
Pond	152.00	106,412	21,280	20.57
		Creekview Allocation	Unallocated Volume	
		106,412	85,132	

PHASING NOTE:
1. GRADING WILL BE ADVANCED TO ACHIEVE GRADES SHOWN ON SHEET C3.0, AT WHICH TIME THE ROADWAY CONSTRUCTION (PLANS BY OTHERS) WILL COMMENCE.
2. ONCE ROADWAY CONSTRUCTION IS COMPLETE, FINAL GRADING AND PLANTING ACTIVITIES (AS SHOWN ON SHEETS C3.1 AND L1.0-L2.0) WILL RESUME.

Earthwork	Cut (CY)	Fill (CY)	Net (CY)
Site	26,688	21,353	5,335 Cut

Stockpile	7,534	Fill





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DETAILED GRADING PLAN

SUN VALLEY - PHASE I

REVISIONS	DATE 7/1/15	COMMENTS	REMARKS

PROJECT NO.: 13-3454
VIL DRAWN BY: LAF, JLM
VIL DESIGNED BY: LAF
LANDSCAPE DRAWN BY:
LANDSCAPE DESIGNED BY:
CHECKED BY: CJF
DATE - 05-15-15

C3.2

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DETAILED GRADING PLAN

SUN VALLEY - PHASE I

ROSWELL FULTON COUNTY GEORGIA

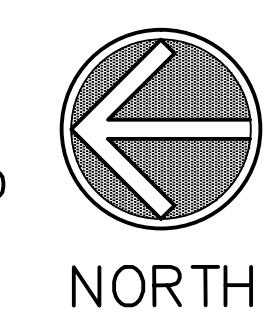
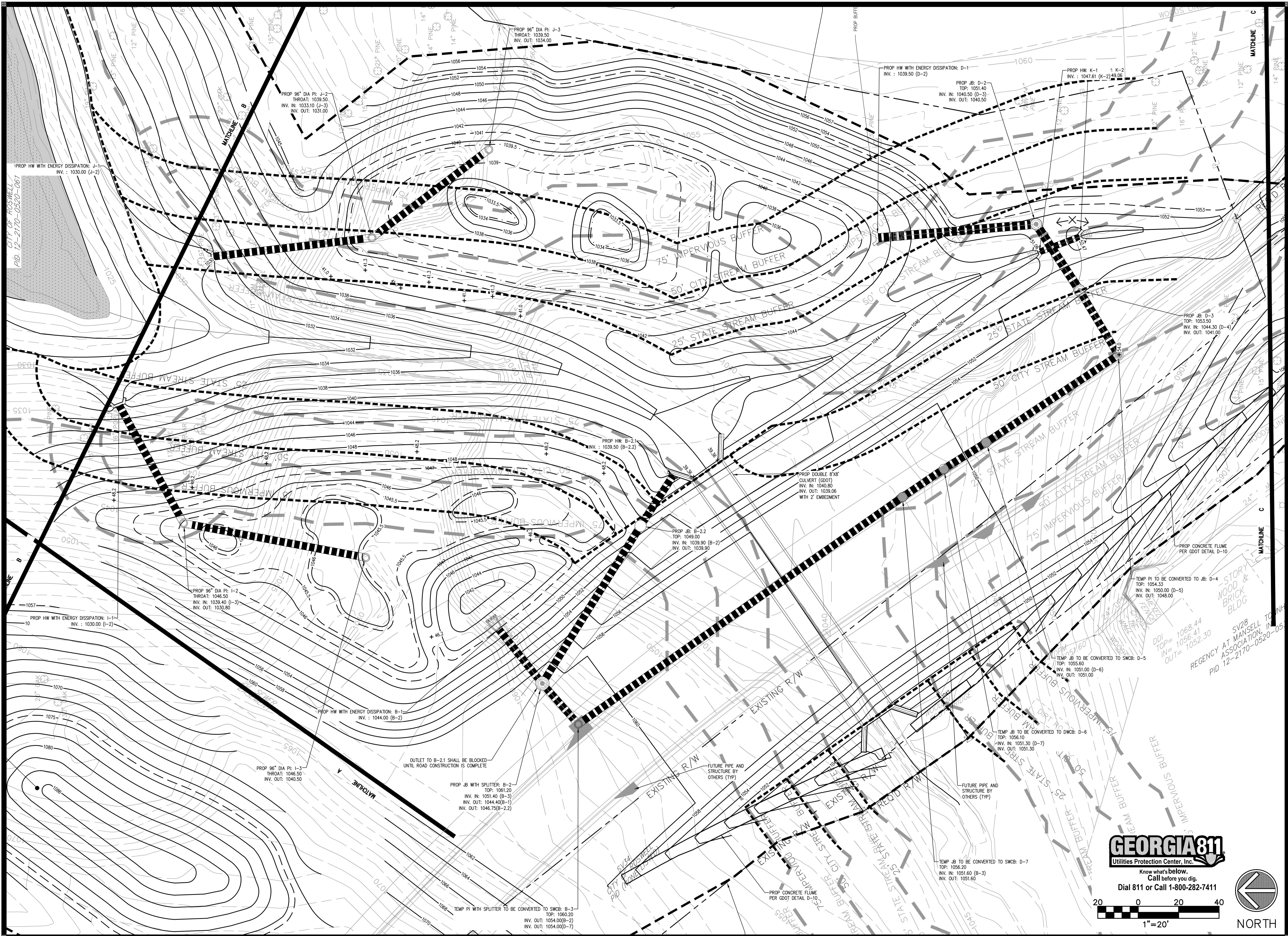
DATE
7/17/15REVISIONS
CITY COMMENTS
1

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CIVIL DESIGNED BY LAF
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LANDSCAPE DESIGNED BY:
CHECKED BY: CJ
DATE - 05-15-15

SHEET

C3.3

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20 0 20 40
NORTH



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STORM DRAINAGE PROFILES

SUN VALLEY - PHASE I

ROSWELL FULTON COUNTY GEORGIA

NO.	REVISIONS	CITY COMMENTS	DATE
1			7/1/15

PROJECT NO: 13454
CIVIL DRAWN BY: LAF, JLM
LANDSCAPE DRAWN BY: LAF
LANDSCAPE DESIGNED BY:
CHECKED BY: CJF
DATE: 05-15-15

SHEET

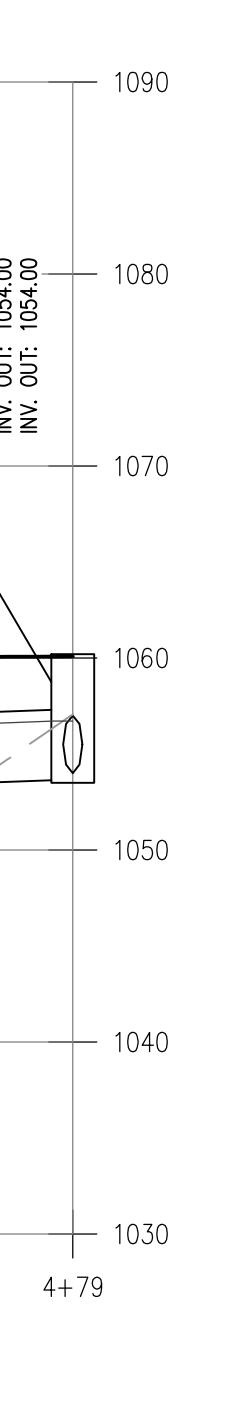
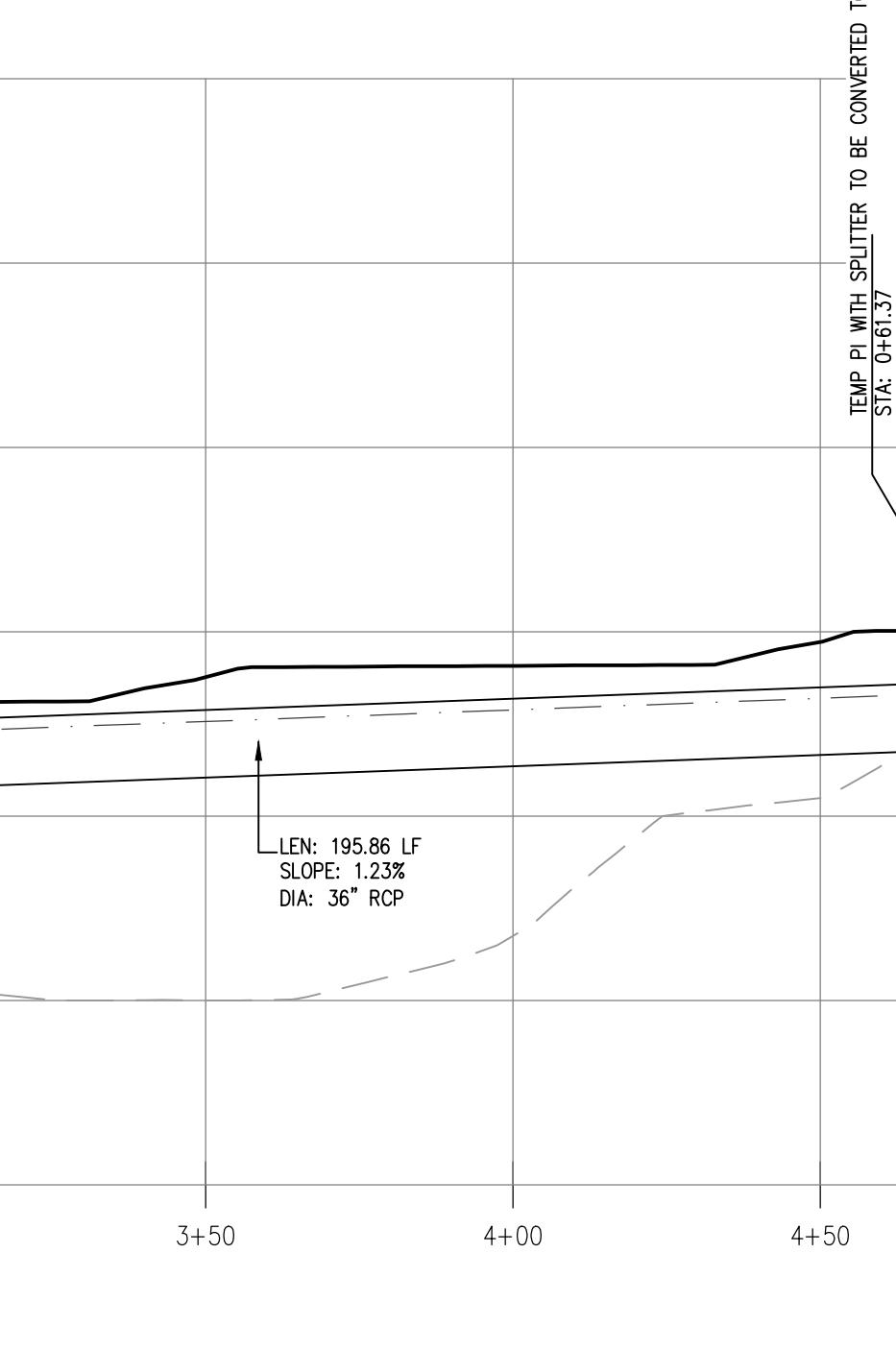
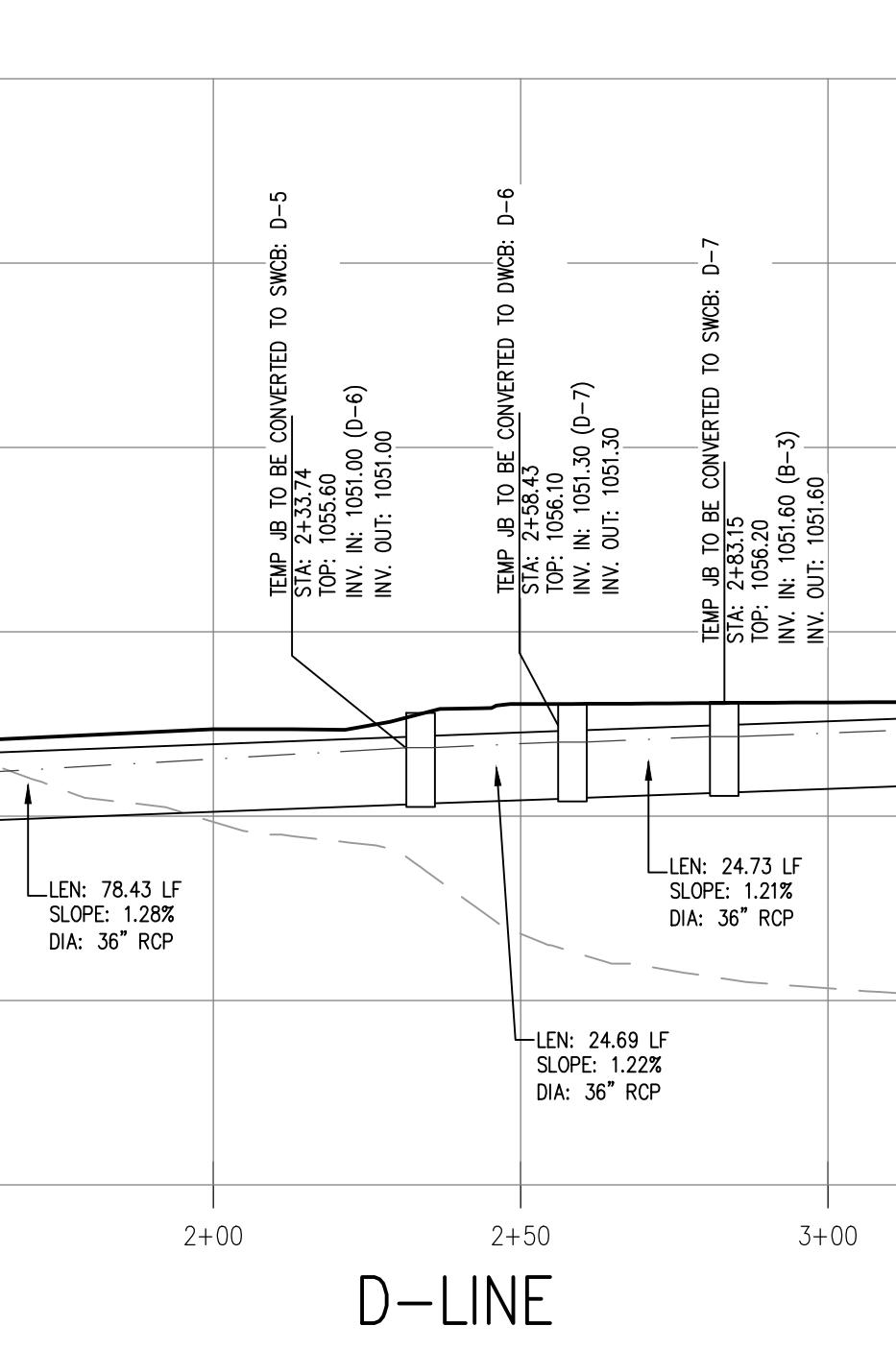
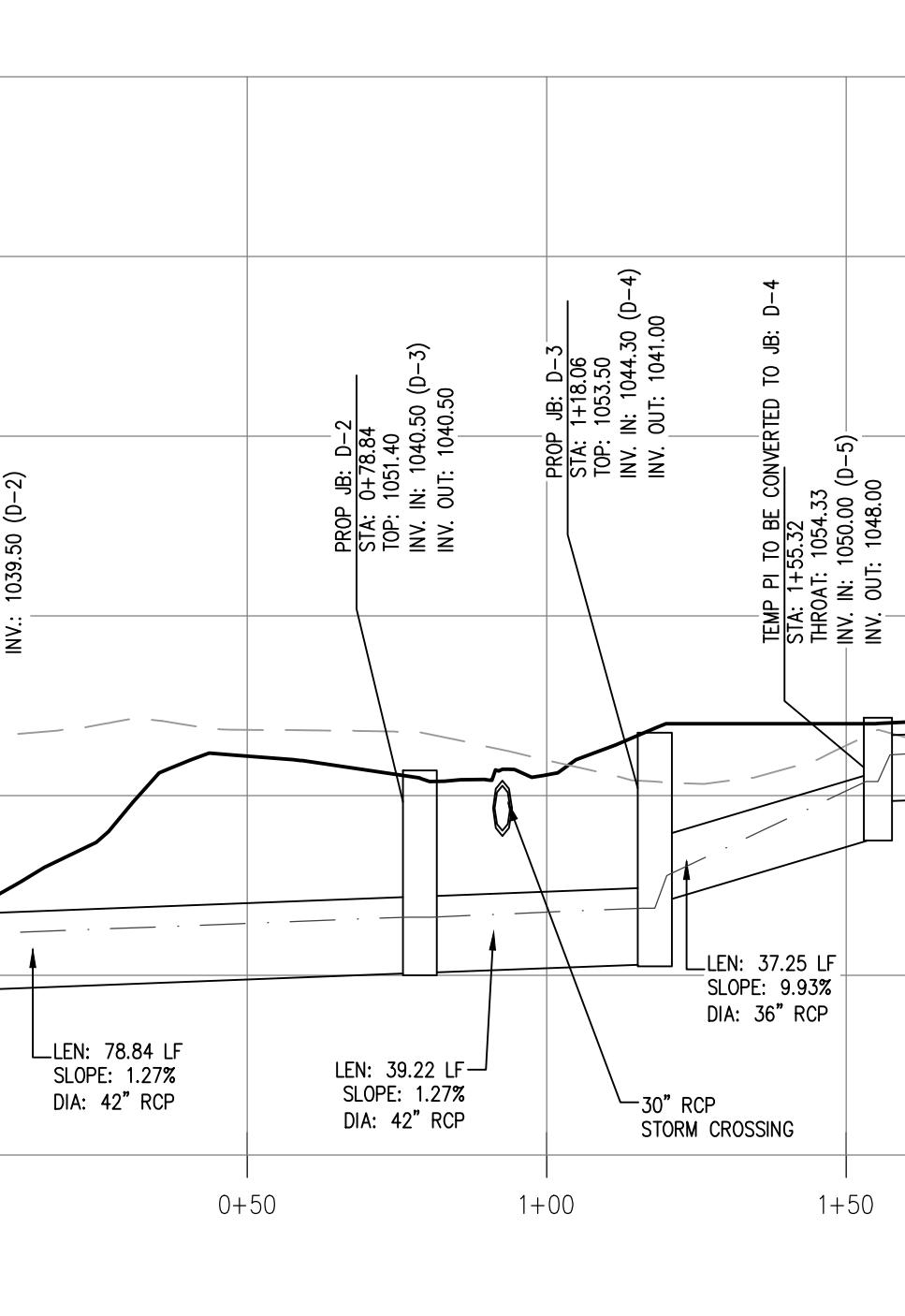
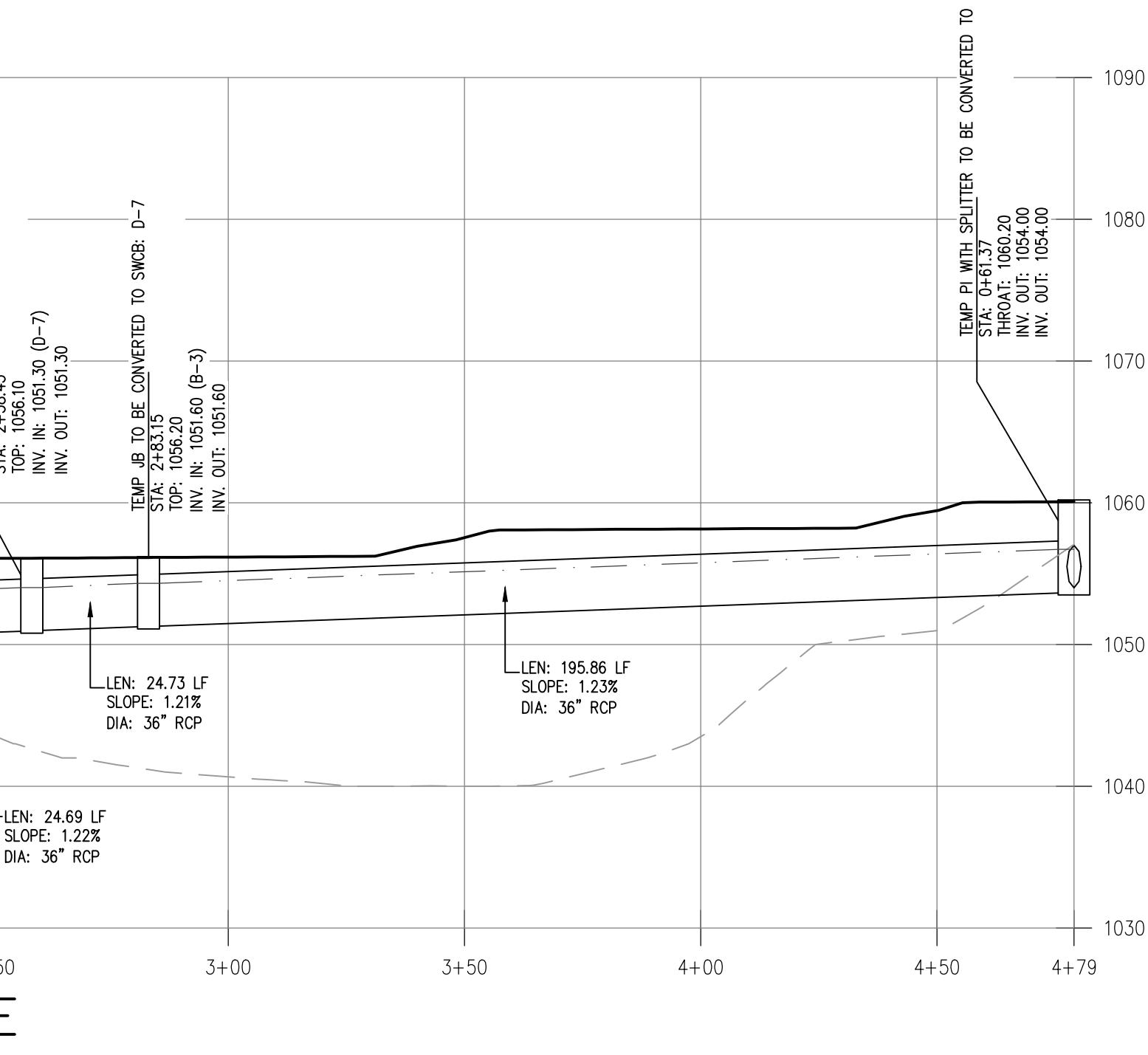
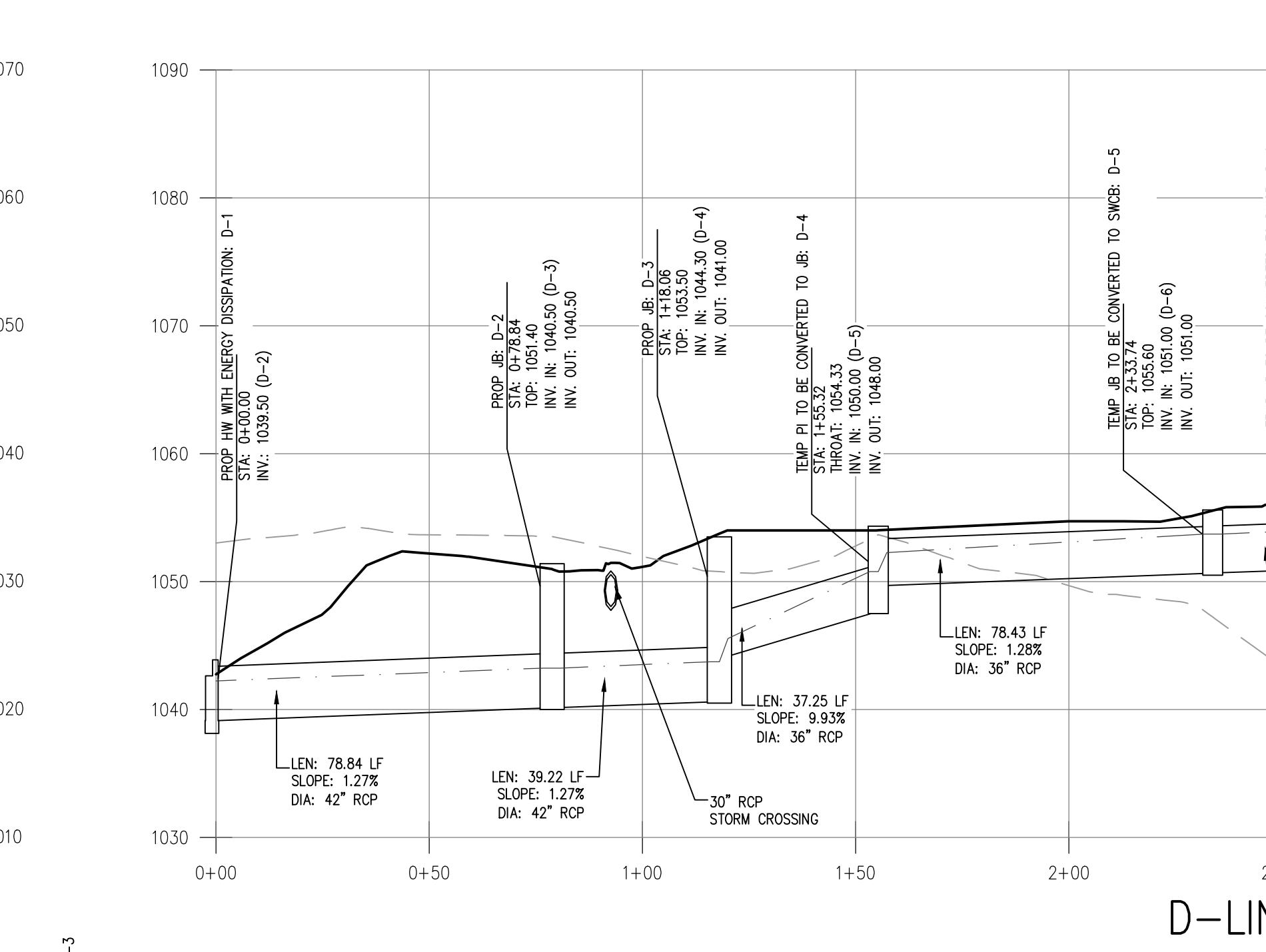
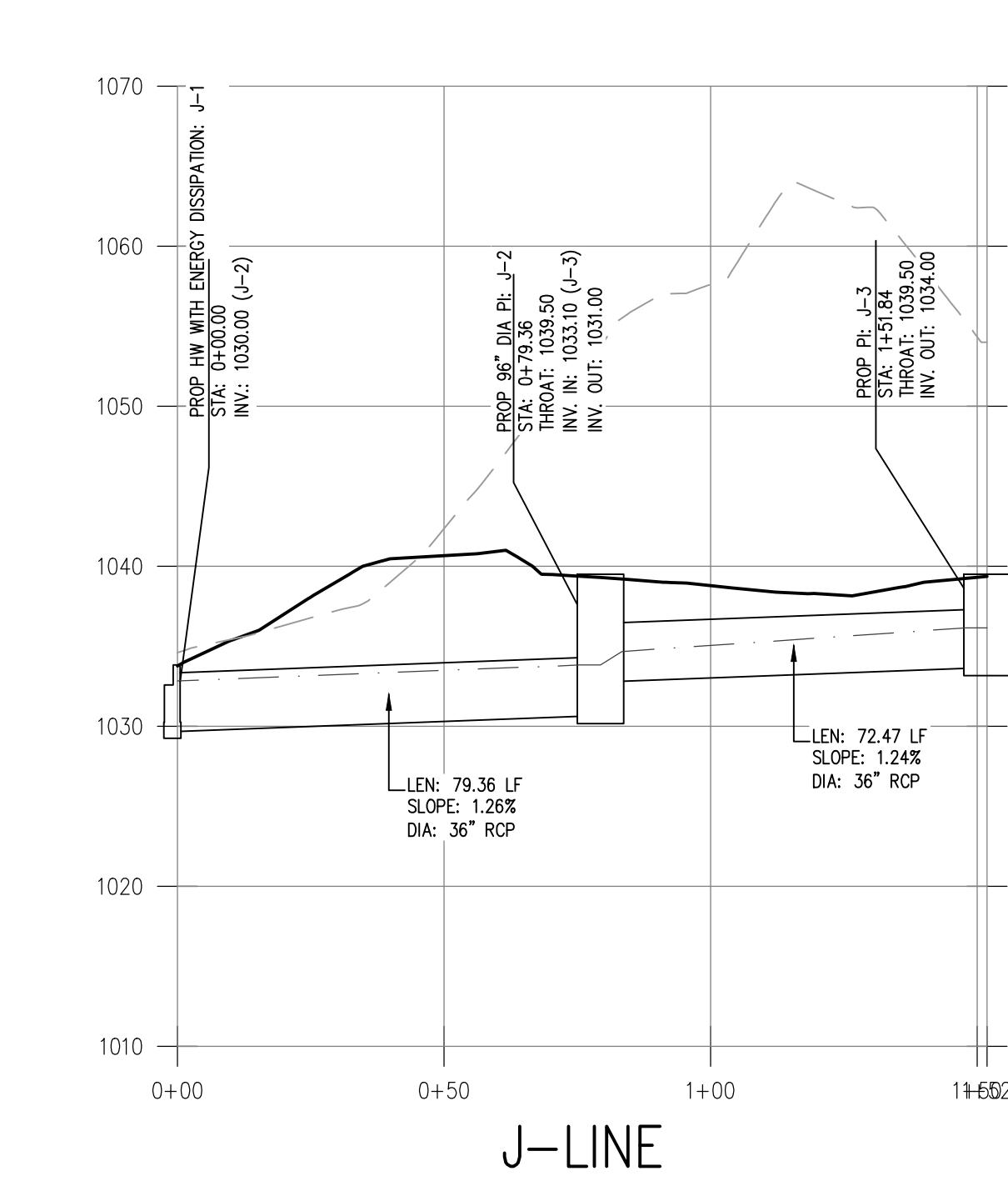
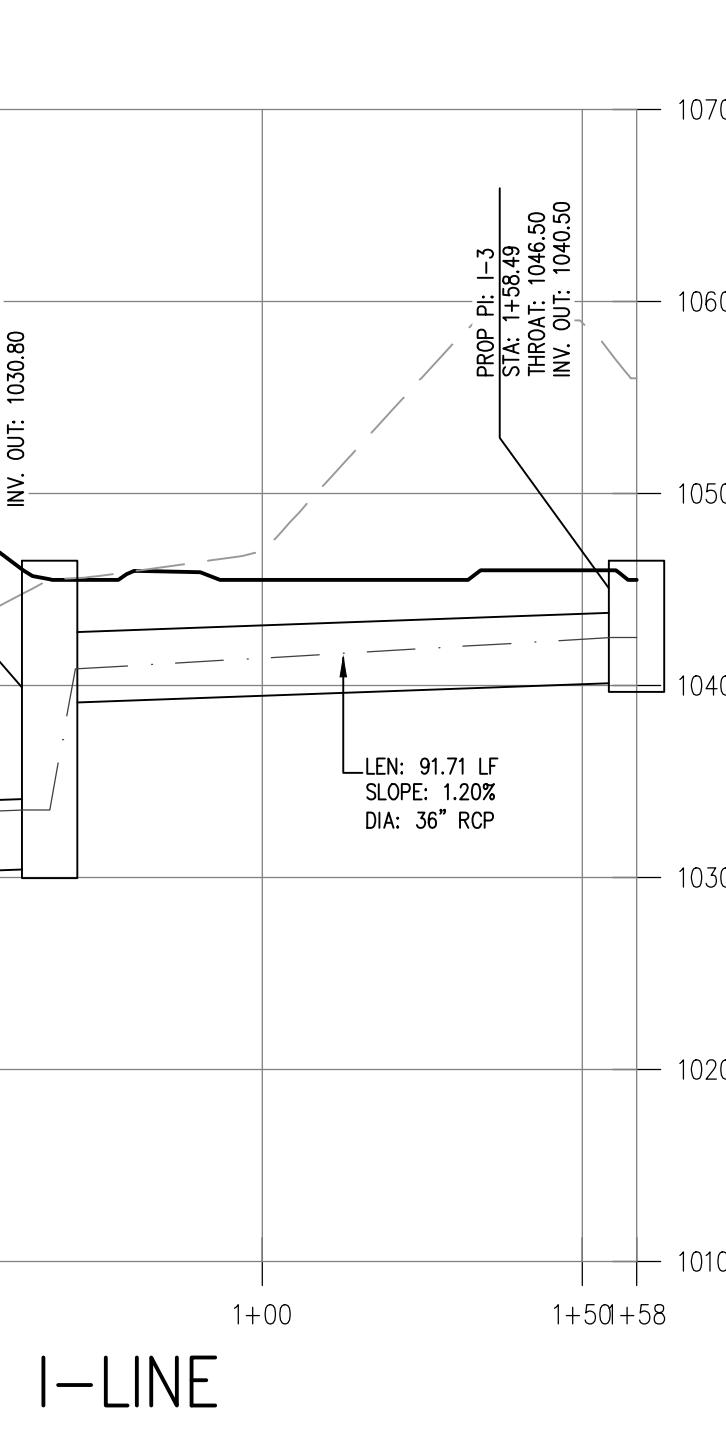
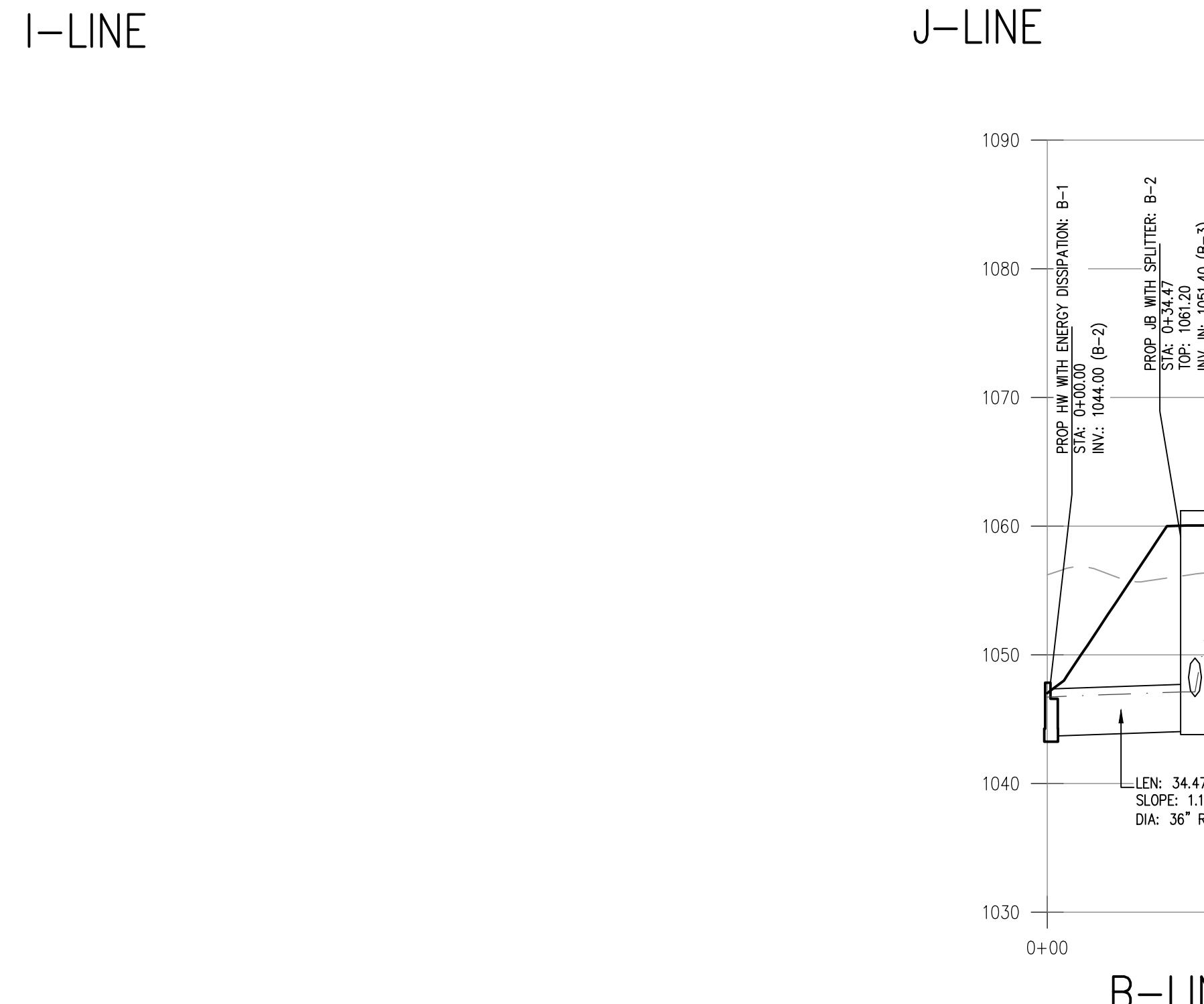
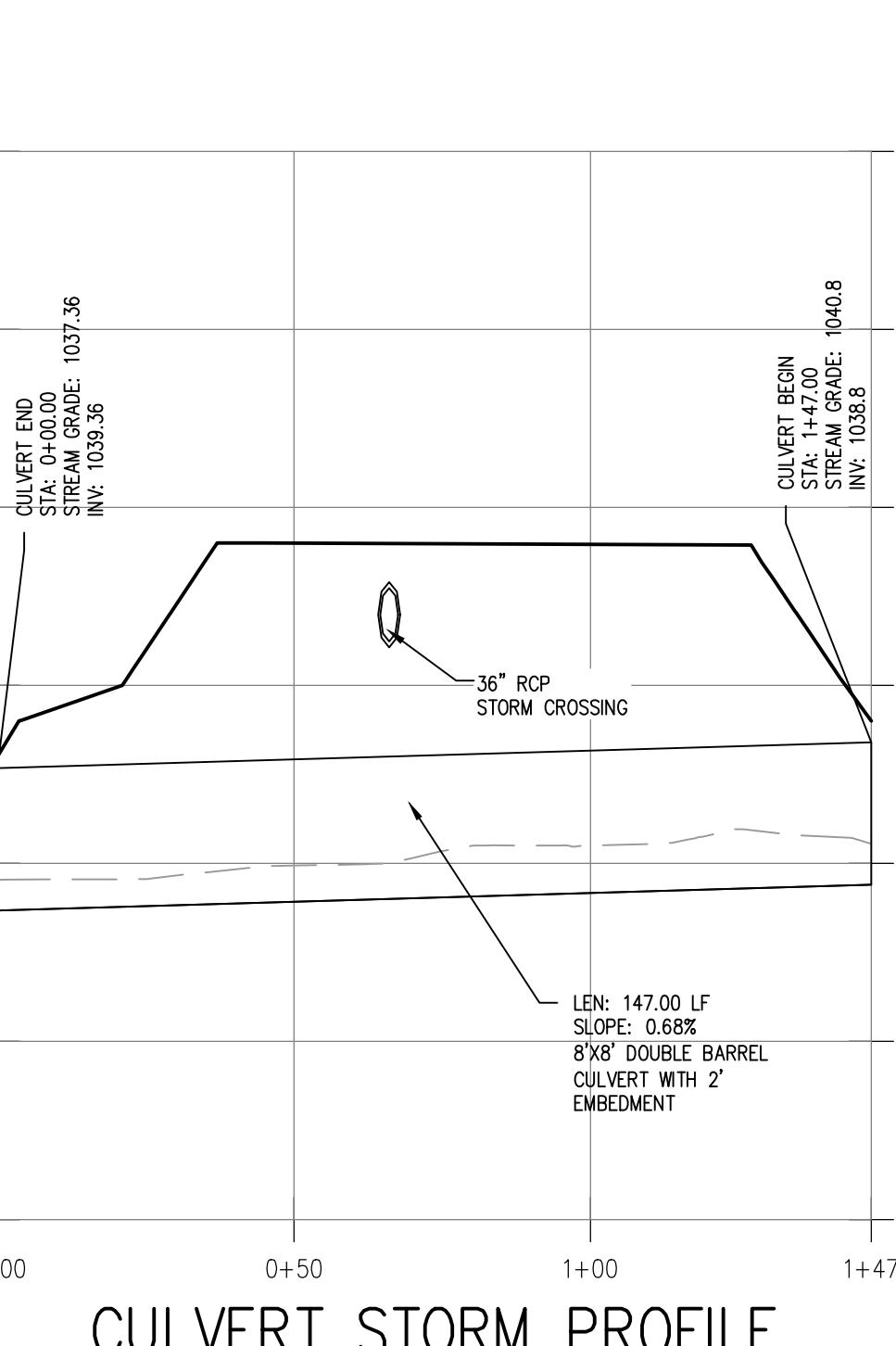
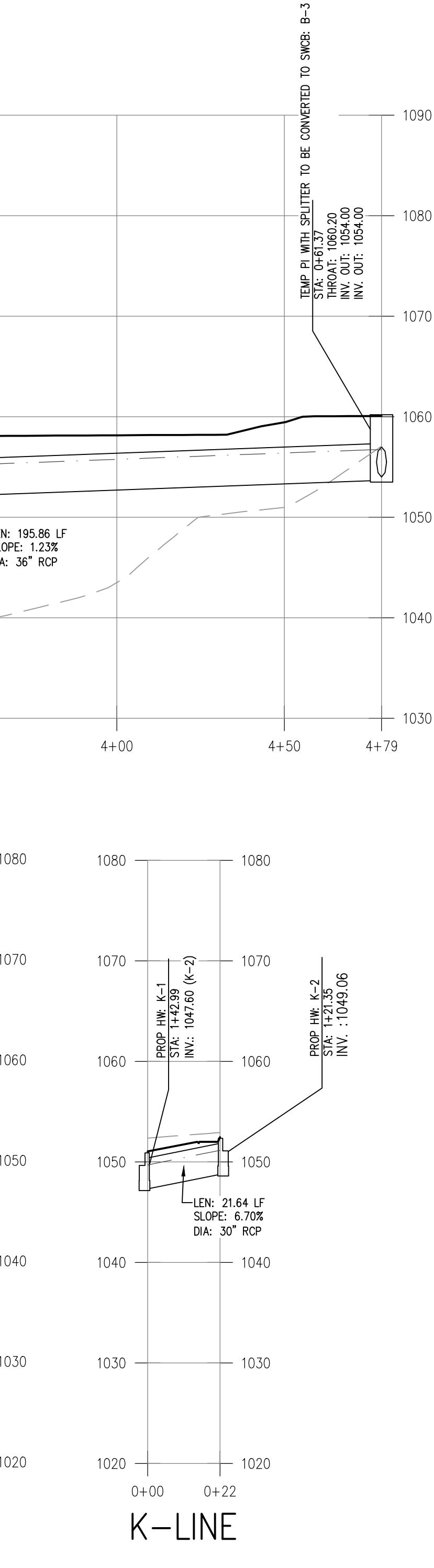
C4.0

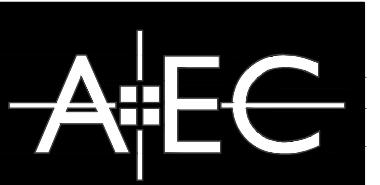
25 YEAR PIPE CHART

Line	ToLine	LineLength	Incr.Area	TotalArea	RunoffCoef	IncrCx A	TotalCx A	InletTime	TimeCond	Rnfallnt	TotalRunoff	AdnFlow	TotalFlow	CapacFull	Veloc	PipeSize	PipeSlope	Inv ElevDn	Inv ElevUp	HGLdn	HGLup	Grnd/RimDn	Grnd/RimUp	Line ID	
1	Outfall	78.839	0	0	0	0	0	0	5.7	0	0	81.77	175.26	8.92	48	1.27	1039.5	1040.5	1042.24	1043.24	1041.71	1051.4	D-2 TO D-1		
2	1	39.223	0	0	0	0	0	0	5.6	0	0	81.77	175.7	8.92	48	1.27	1040.5	1041	1043.24	1043.74	1051.4	1053.5	D-3 TO D-2		
3	2	37.253	0	0	0	0	0	5	5.5	0	0	6.77	81.77	227.7	20.75	36	9.93	1044.3	1048	1045.54	1050.79	1053.5	1065	D-4 TO D-3	
4	3	78.426	0	0	0	0	0	0	5.4	0	0	0	75	81.59	12.12	36	1.28	1050	1051	1052.27	1053.72	1065	1064.36	D-5 TO D-4	
5	4	24.685	0	0	0	0	0	0	5.3	0	0	0	75	79.6	11.14	36	1.22	1051	1051.3	1053.72	1054.02	1064.36	D-6 TO D-5		
6	5	24.725	0	0	0	0	0	0	5.3	0	0	0	75	79.58	11.14	36	1.21	1051.3	1051.6	1054.02	1054.32	1064.3	1064.35	D-7 TO D-6	
7	6	195.863	0	0	0	0	0	0	5	5	0	0	75	75	79.98	11.14	36	1.23	1051.6	1054	1054.32	1056.72	1064.35	1067.64	B-3 TO D-7
8	Outfall	34.47	0	0	0	0	0	0	5	0	0	0	75	77.83	11.14	36	1.16	1044	1044.4	1046.72	1047.12	1047.83	1061.2	B-2 TO B-1	
9	8	26.896	0	0	0	0	0	0	5	5	0	0	75	75	224.64	19.87	36	9.67	1051.4	1054	1052.59	1056.72	1061.2	1067.64	B-3 TO B-2
10	Outfall	29.627	0	0	0	0	0	0	5.1	0	0	0	75	83.99	11.14	36	1.35	1039.5	1039.9	1042.22	1042.62	1044.42	1049	B-2.2 TO B-2.1	
11	10	91.902	0	0	0	0	0	0	5	5	0	0	75	75	197.26	11.14	36	7.45	1039.9	1046.75	1042.62	1049.47	1049	1061.2	B-2 TO B-2.2
12	Outfall	21.639	0	0	0	0	0	0	5	5	0	0	38.68	38.68	115.01	8.79	30	6.7	1047.61	1049.71	1051.16	1049.82	1051.27	K-2 TO K-1	
13	Outfall	66.777	0	0	0	0	0	0	5	5.3	0	0	37.5	75	79.08	11.14	36	1.2	1030	1030.8	1032.72	1033.52	1033.83	1046.5	I-2 TO I-1
14	13	91.713	0	0	0	0	0	0	5	5	0	0	37.5	37.5	79.13	9.29	36	1.2	1039.4	1040.5	1040.85	1042.49	1046.5	1046.5	I-3 TO I-2
15	Outfall	79.365	0	0	0	0	0	0	5	5.2	0	0	43.44	86.88	81.1	12.59	36	1.26	1030	1032.83	1033.83	1033.83	1039.5	J-2 TO J-1	
16	15	72.474	0	0	0	0	0	0	5	5	0	0	43.44	43.44	80.52	9.82	36	1.24	1033.1	1034	1034.67	1036.15	1039.5	J-3 TO J-2	

VERTICAL SCALE: 1"=10'
HORIZONTAL SCALE: 1"=30'

EXISTING GRADE
PROPOSED GRADE
25 YR STORM HGL





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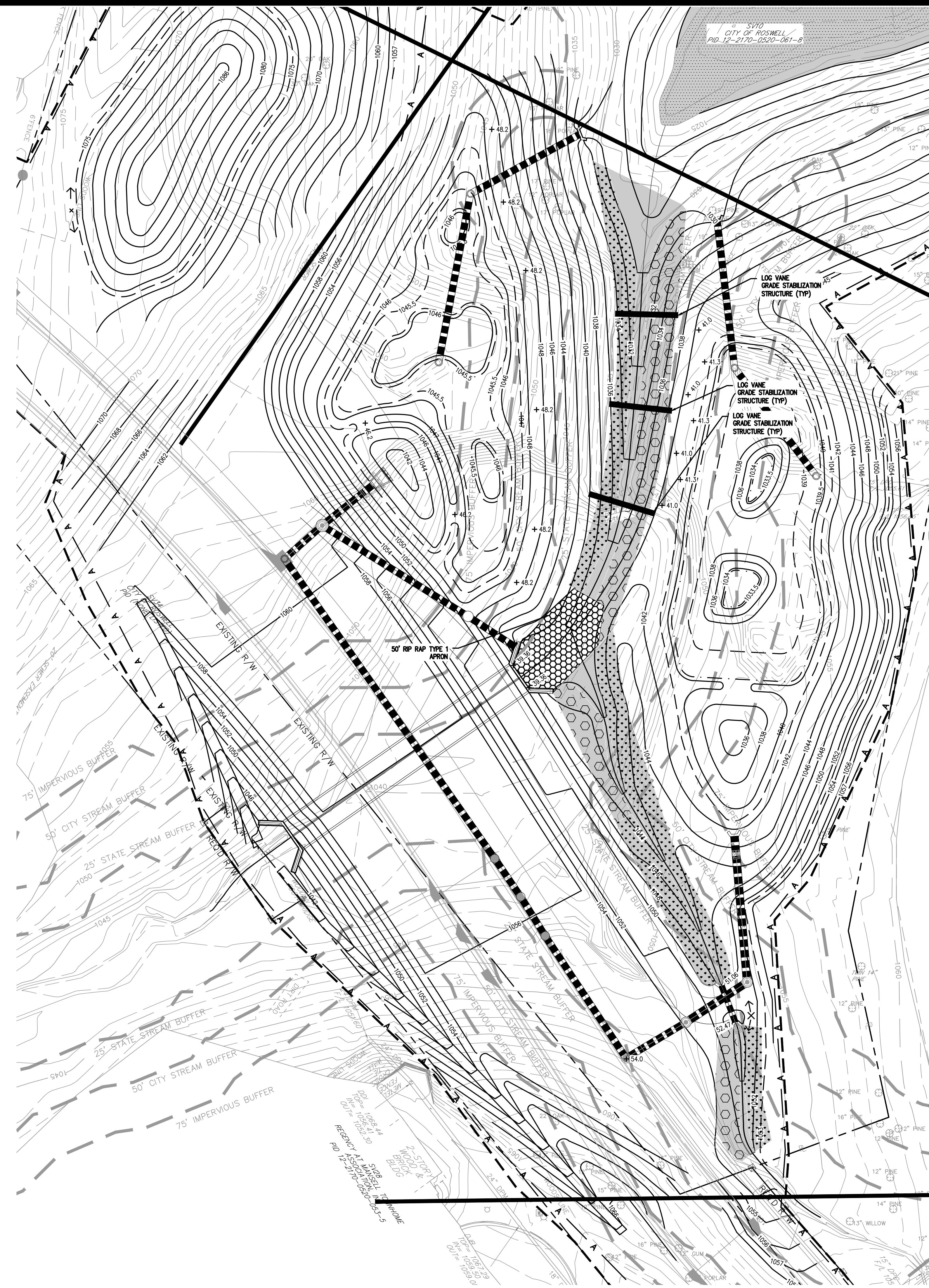
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STREAM RESTORATION PLAN

SUN VALLEY - PHASE I

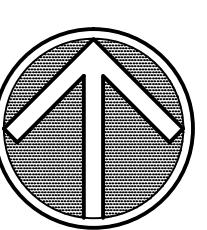
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Civil Designed by: LAF
Landscape Drawn by: LAF
Landscape Designed by: LAF
Checked by: CJ
Date - 05-15-15

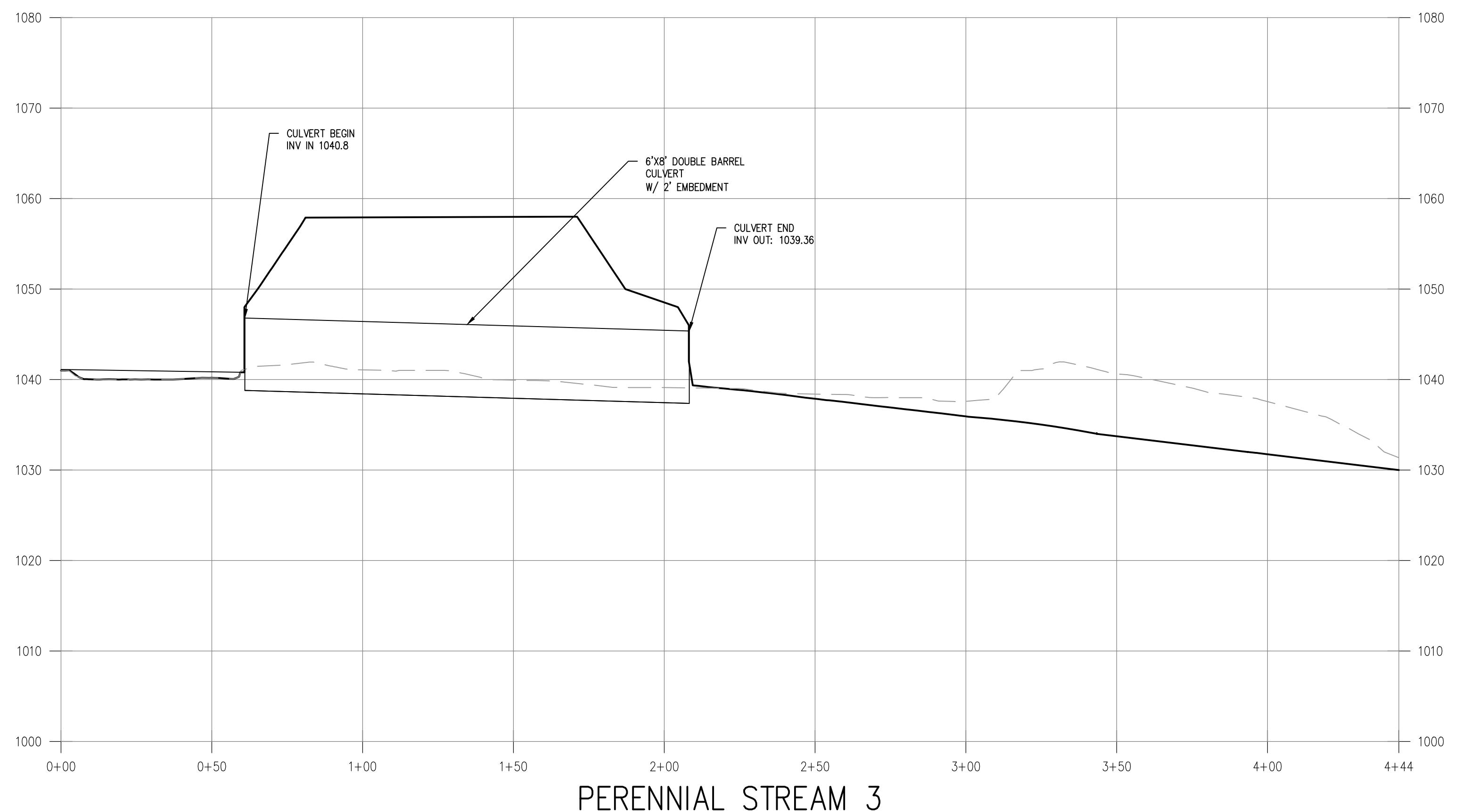
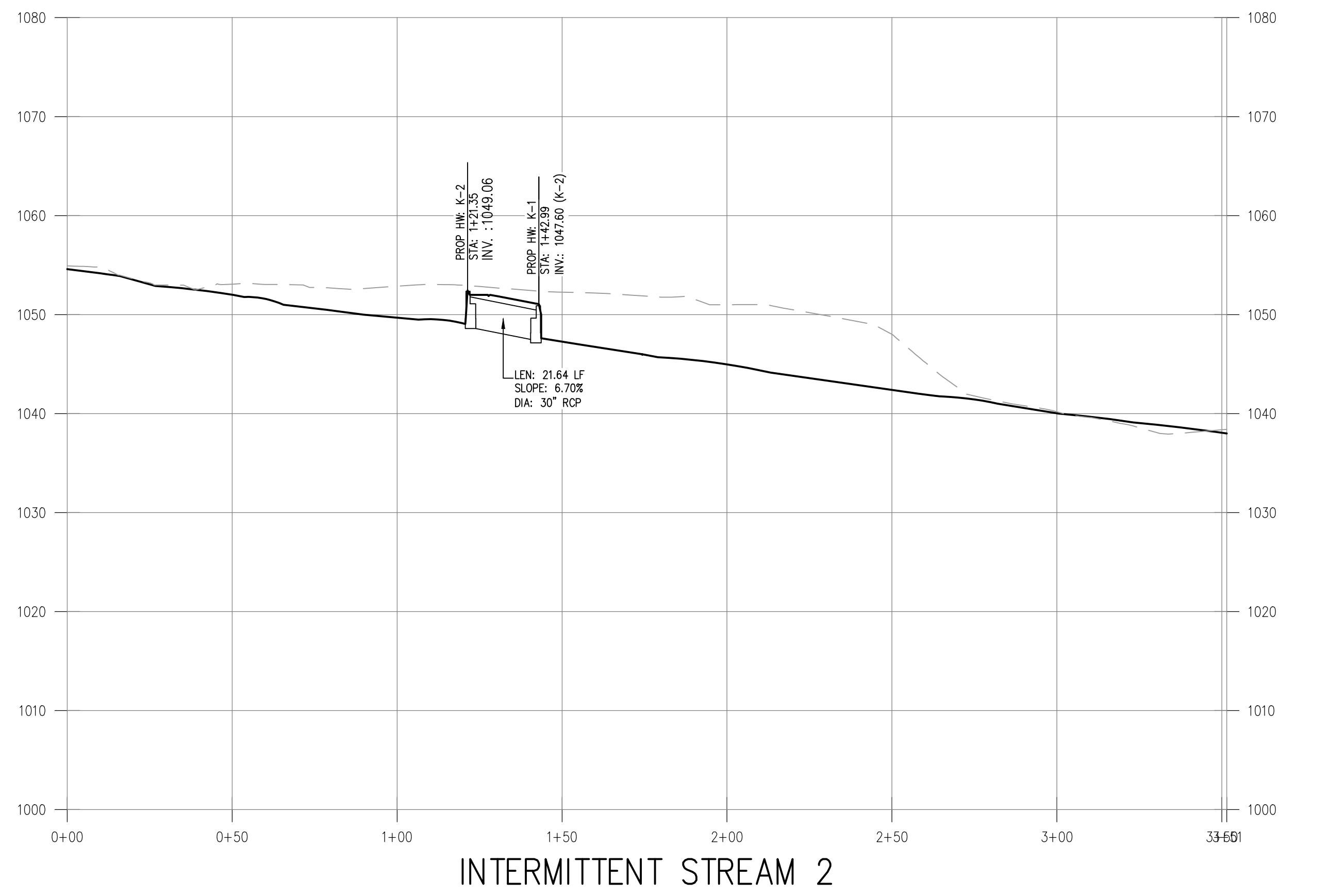


NORTH

NO.	REVISIONS	CITY COMMENTS	DATE
1			7/1/15

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CIVIL DRAWN BY: LAF, JLM
CIVIL DESIGNED BY: LAF
LANDSCAPE DRAWN BY: LAF
LANDSCAPE DESIGNED BY: LAF
CHECKED BY: CJ
DATE - 05-15-15

1" = 30'
30 0 30 60
SHEET
C4.1

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PHASE I**
ROSWELL FULTON COUNTY GEORGIA

EXISTING GRADE
PROPOSED GRADE

VERTICAL SCALE: 1"=10'
HORIZONTAL SCALE: 1"=30'

NO.	REVISIONS	CITY COMMENTS	DATE
1			7/1/15

PROJECT NO: 13-3454
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SHEET

C4.2



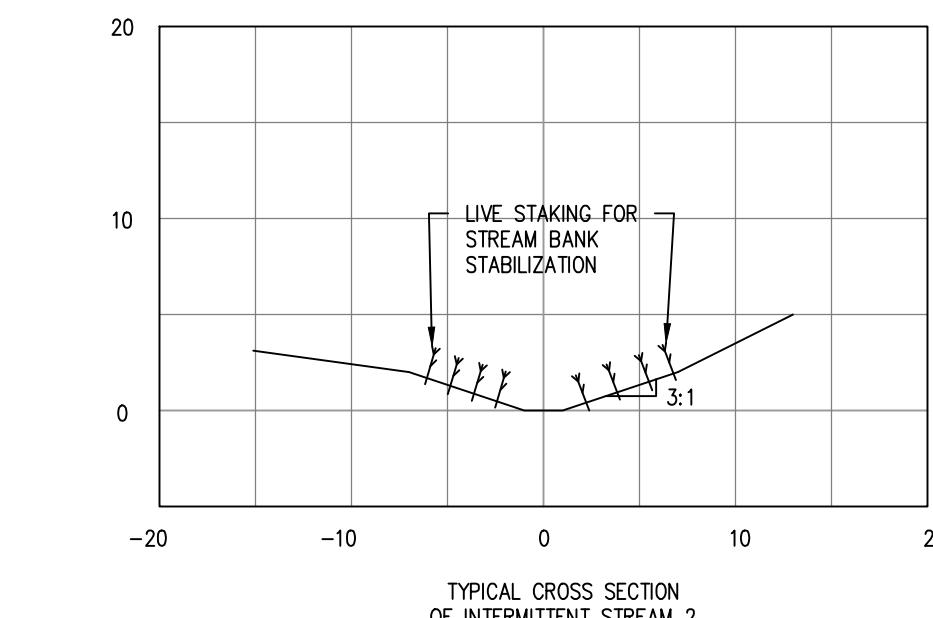
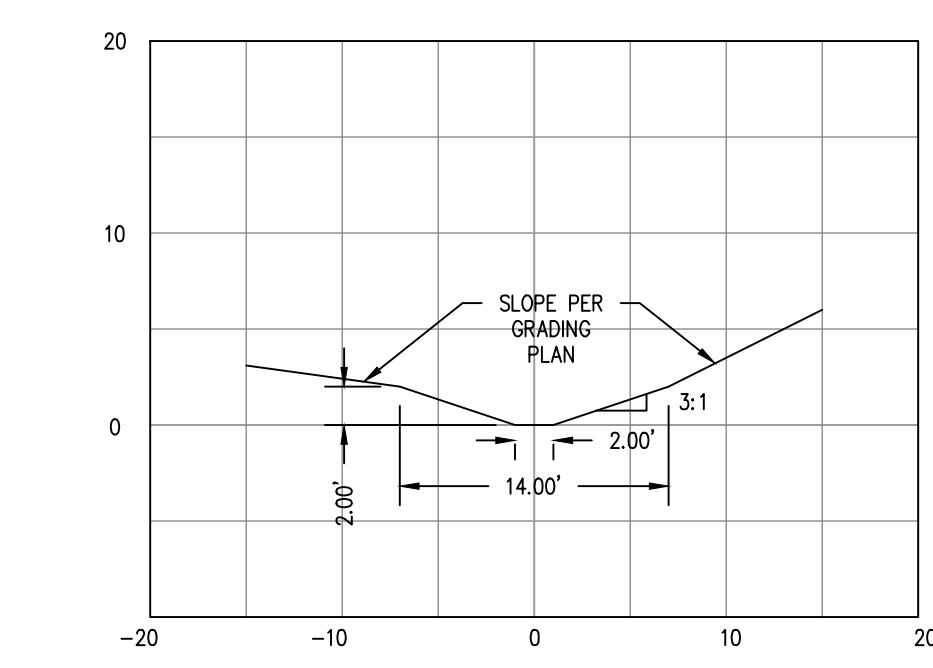
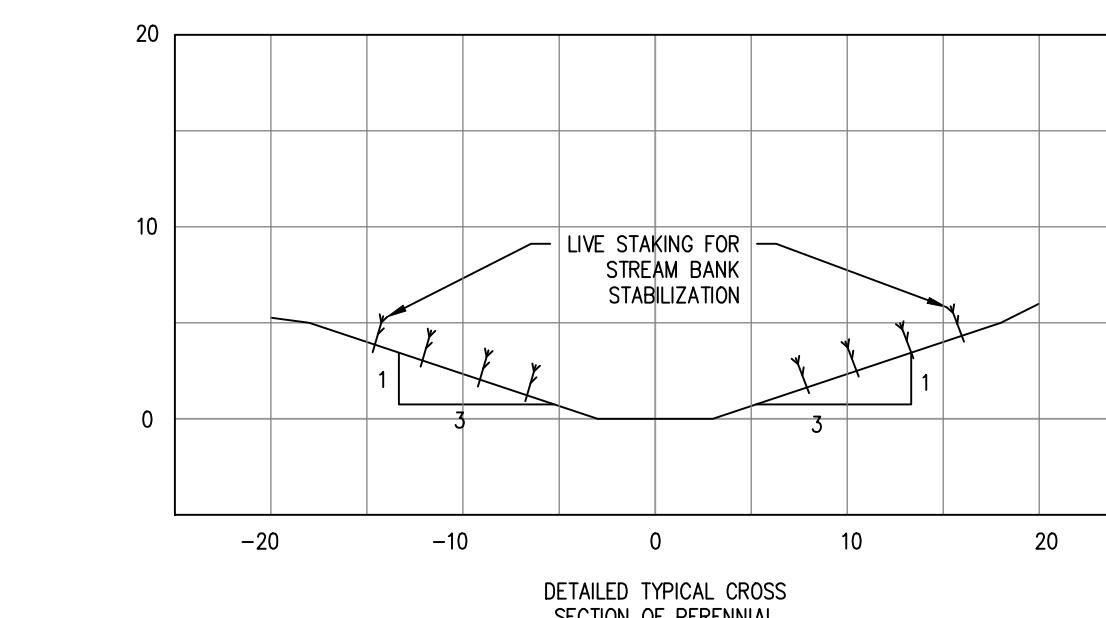
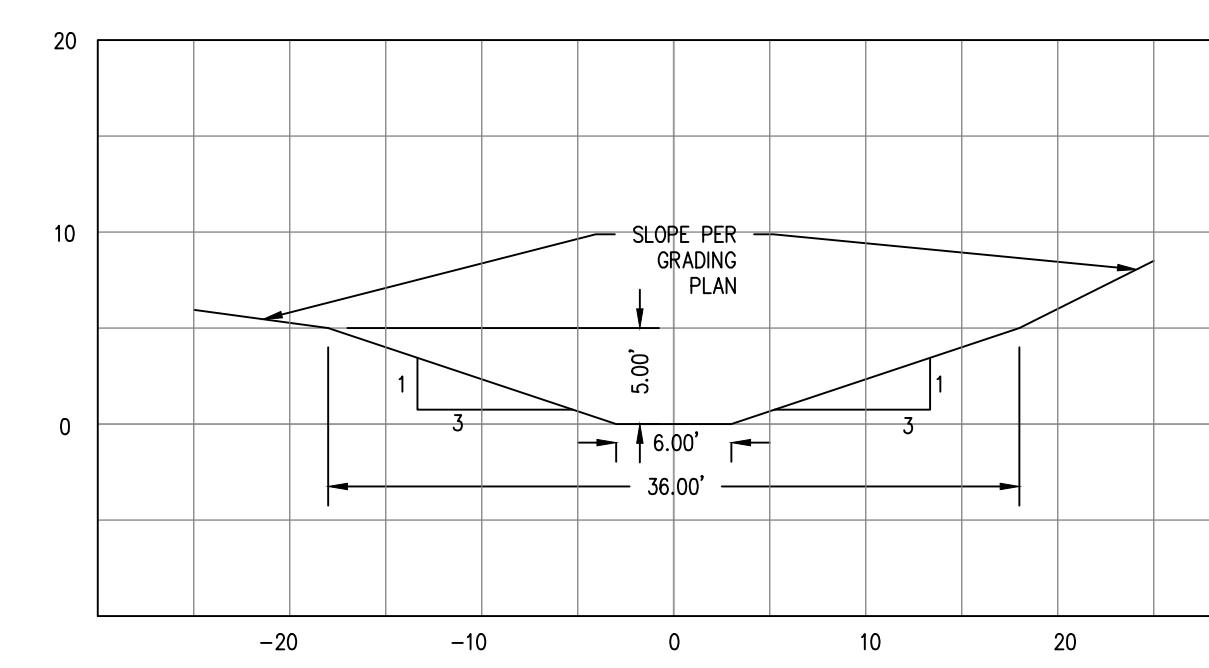
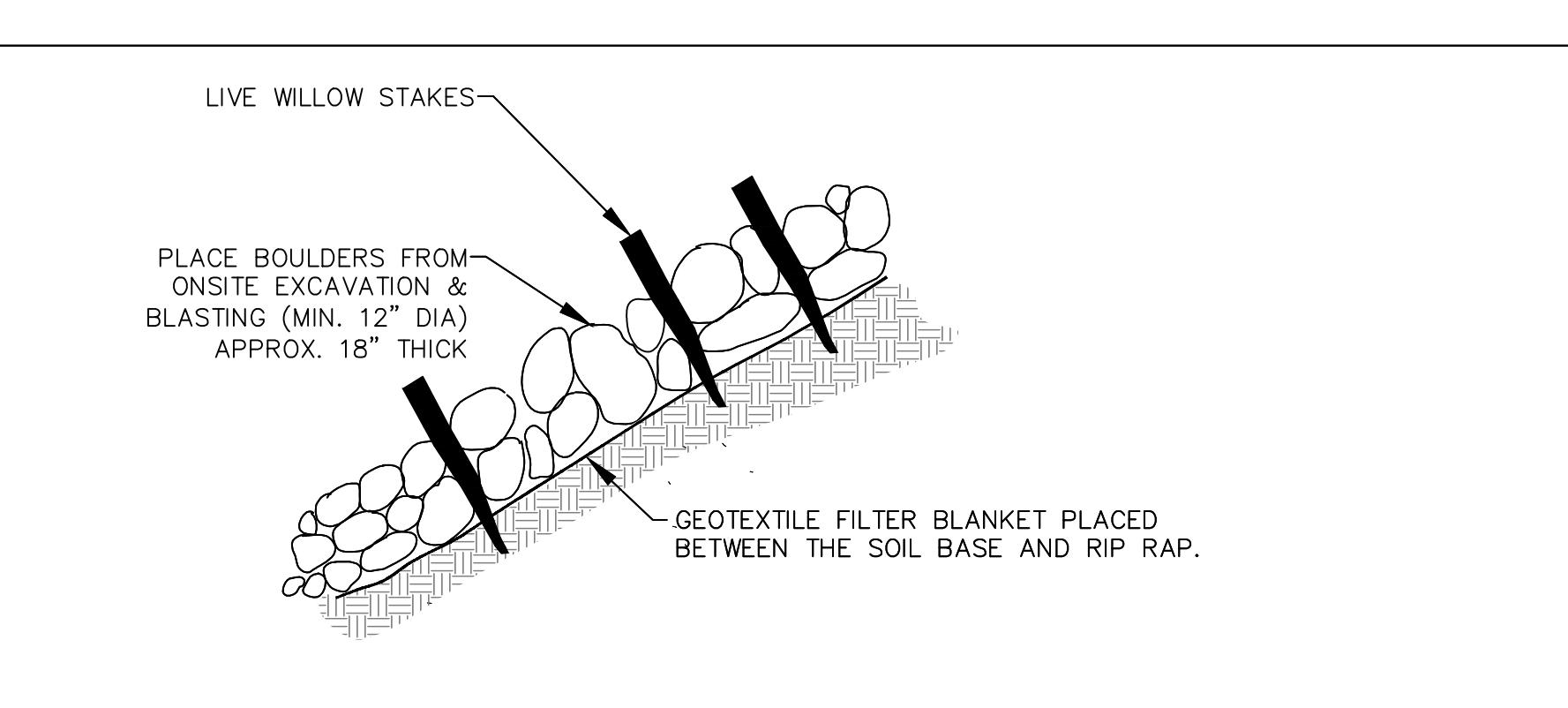
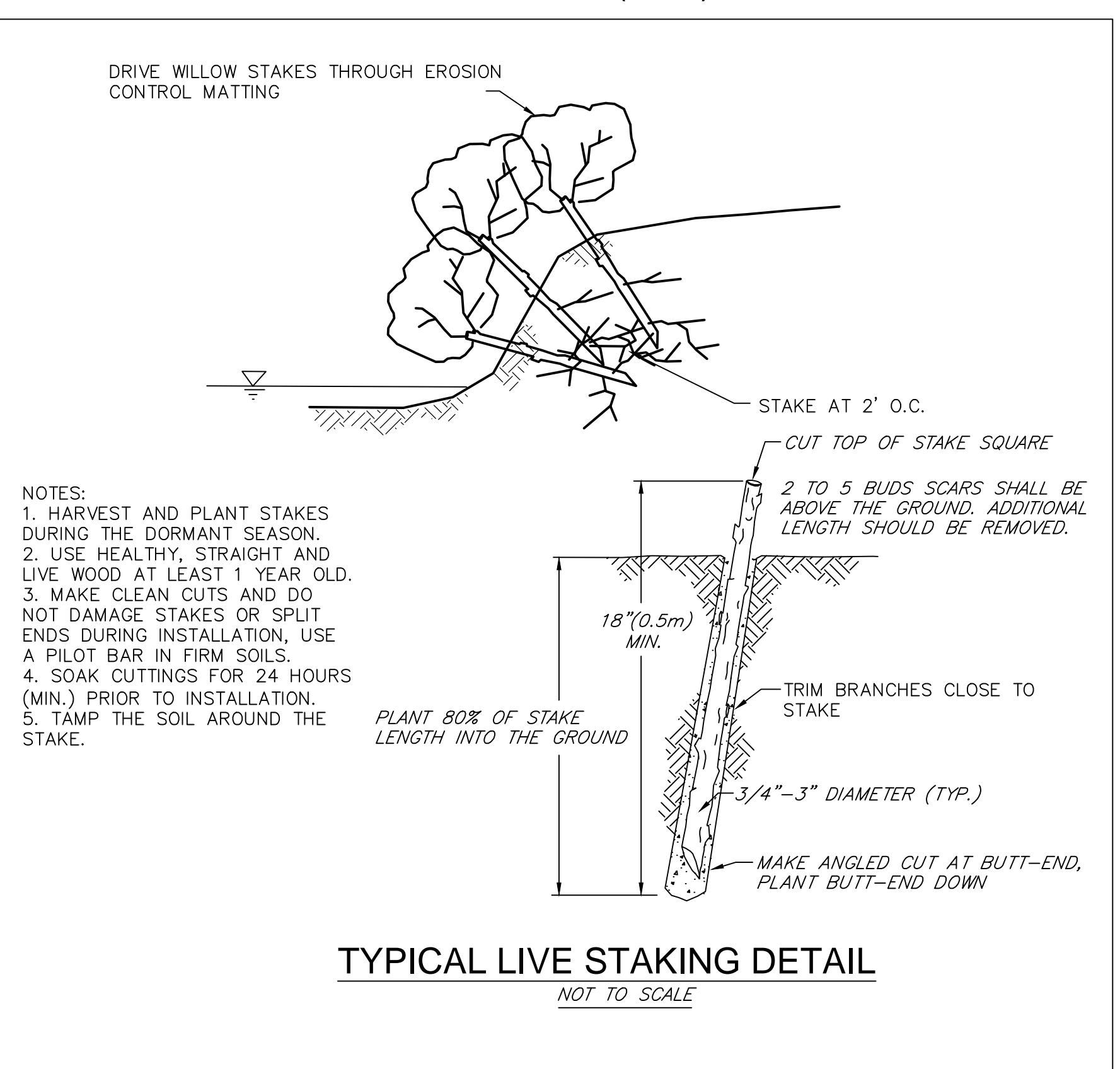
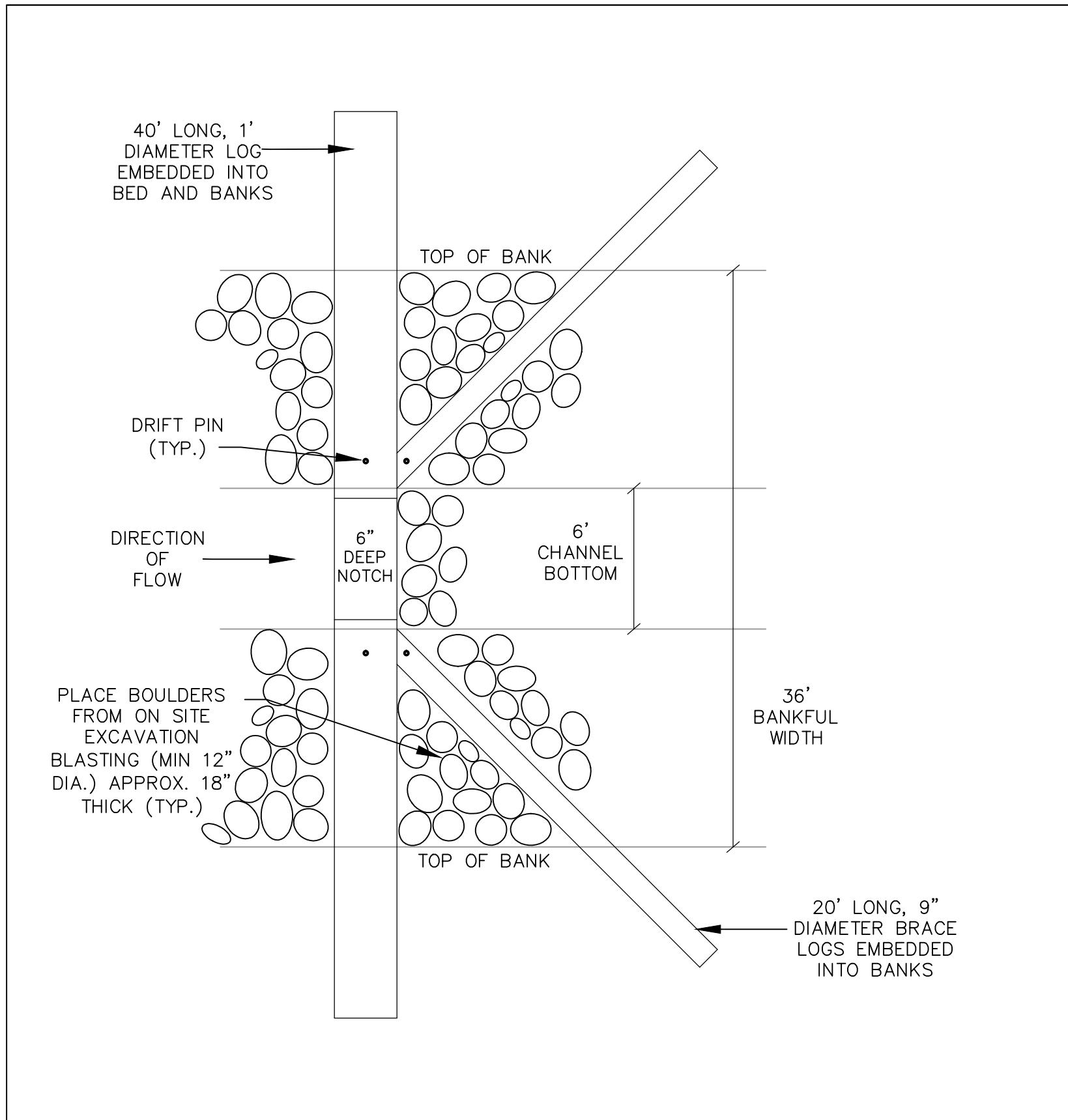
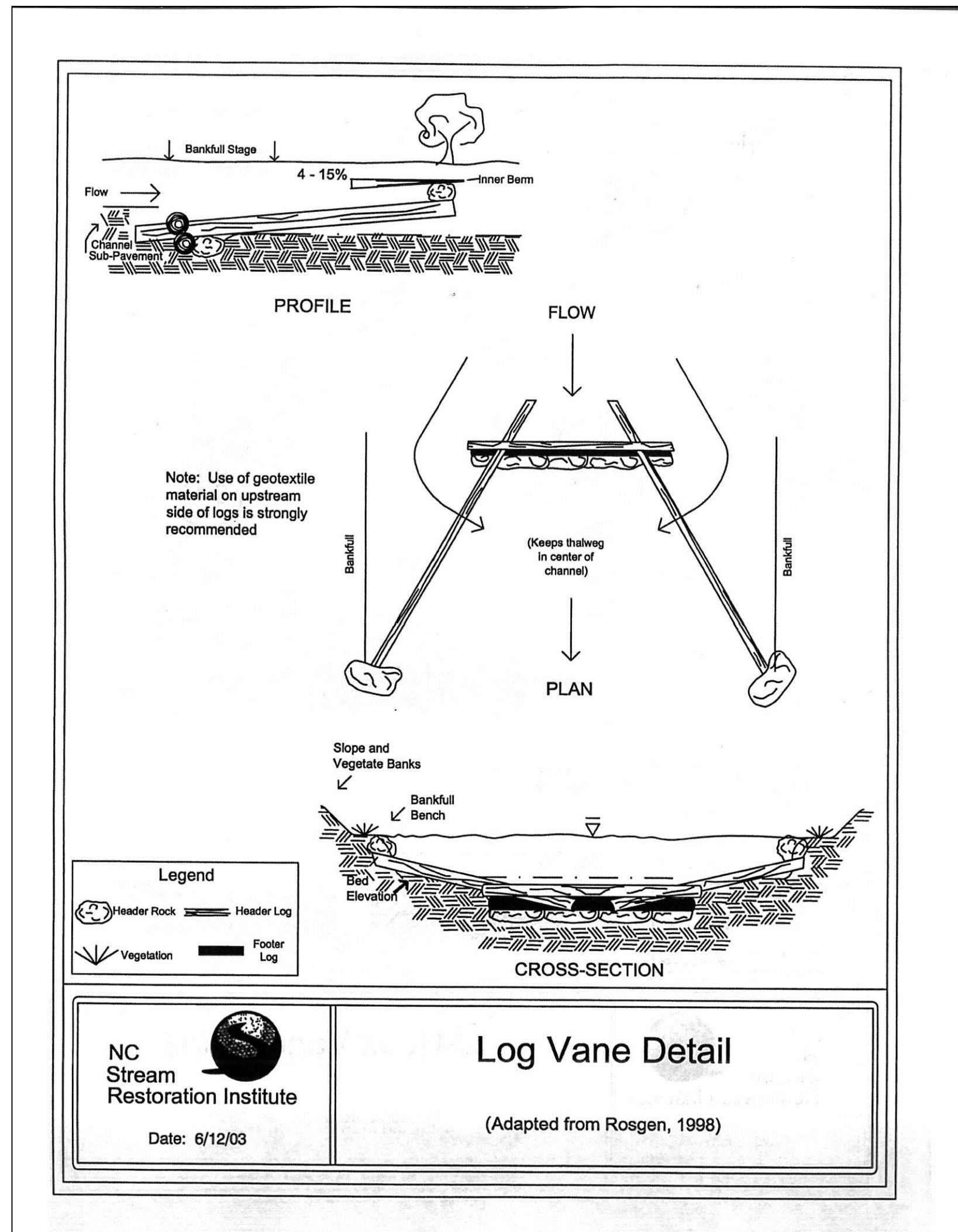
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STREAM RESTORATION DETAILS AND CROSS SECTIONS



10 0 10 20
1"=10'

RIPARIAN BUFFER RE-VEGETATION PLAN:
THE FOLLOWING IS A NARRATIVE OF THE STREAM BUFFER RE-VEGETATION PLAN PROPOSED AT THE SUN VALLEY DRIVE REMEDIATION PROJECT. THESE ACTIONS ARE TO RESTORE THE STREAM BUFFER WHICH WILL BE DISTURBED DURING CONSTRUCTION ACTIVITY.

THE FOLLOWING MEASURES SHALL BE IMPLEMENTED AS SOON AS POSSIBLE AFTER STREAM CHANNEL AND BANKS HAVE BEEN REMEDIATED AND ALL EROSION CONTROL MEASURES ARE IMPLEMENTED. REFER TO THE SEDIMENT AND EROSION CONTROL SHEETS.

1. STABILIZE THE DISTURBED BUFFER WITH SEED AND WHEAT STRAW IN AREAS INDICATED AS ZONE A ON ABOVE PLANS. HERBACEOUS SEED MIXES MAY BE HAND SEEDED, BROADCAST, OR HYDROSEEDED. BELOW ARE RECOMMENDED HERBACEOUS SEED MIXES:

TEMPORARY MIX

SPECIES	COMMON NAME	MIX
LOLUM MULTIFLORUM	ANNUAL RYE	0.60
AVENA SATIVA	OATS	0.40
TOTAL RATE		1.00 25 LBS/AC

PERMANENT MIX

SPECIES	COMMON NAME	MIX
ELYMUS HYSITIX	BOTTLEBRUSH GRASS	0.20
ELYMUS VIRGINICUS	VIRGINIA WILD RYE	0.25
JUNCUS EFFUSUS	SOFT RUSH	0.10
CAREX VULPINOIDEA	FOX SEDGE	0.05
PANICUM VIRGATUM	SWITCHGRASS	0.10
PANICUM CLANDESTINUM	DEER TONGUE	0.10
SORGHASTRUM NUTANS	INDIAN GRASS	0.10
SCHIZACHYRUM SCOPARIUM	LITTLE BLUESTEM	0.10
TOTAL RATE		1.00 15LBS/AC

2. AFTER SEEDING AND EROSION CONTROL MEASURES ARE INSTALLED, INSTALL RIPARIAN BUFFER TREES AND SHRUBS IN 1 GALLON TO 3 GALLONS CONTAINERS AT A MINIMUM SPACING OF 12' ON CENTER IN ZONE A. TREE AND SHRUB SPECIES WILL BE A MINIMUM SIZE OF 1 GALLON CONTAINERIZED AND PLANTED AT A MINIMUM RATE OF 360 TREES PER ACRE OR 12'X12' SPACING. REFER TO PLANTING DETAILS SHEET L3.0. BELOW IS A LIST OF NATIVE TREE AND SHRUB SPECIES RECOMMENDED FOR PLANTING IN THE BUFFER. PLOT DATA TO BE USED FOR REPLANTING.

SCIENTIFIC NAME	COMMON NAME
Liquidambar styraciflua	SWEETGUM
Acer rubra	RED MAPLE
Liquidambar tulipifera	YELLOW POPLAR
Carpinus caroliniana	IRONWOOD
Quercus alba	WHITE OAK
Fagus grandifolia	AMERICAN BEECH
Oxydendrum arboreum	SOURWOOD
Quercus phellos	WILLOW OAK
Cornus florida	DOGWOOD
Ilex decidua	DECIDUOUS HOLLY

3. RE-SEED ANY DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION OF THE PLANT MATERIAL. REFER ABOVE SEEDING MIX.
4. TREE, SHRUB, AND HERBACEOUS SEED MIXES ARE SUBJECT TO CHANGE BASED ON TIME OF PLANTING AND SEEDING AND LOCAL AVAILABILITY.

STREAM BANK RE-VEGETATION PLAN:
THE FOLLOWING IS A NARRATIVE OF THE STREAM BANK RE-VEGETATION PLAN PROPOSED AT THE SUN VALLEY DRIVE REMEDIATION PROJECT. THESE ACTIONS ARE TO RESTORE THE STREAM BANKS PREVIOUSLY DISTURBED.

1. THE STREAM BANKS SHOULD BE GRADED AS INDICATED ON THE TYPICAL CROSS SECTIONS ON SHEET C4.3.
2. EROSION CONTROL MATTING SHALL BE APPLIED ON ALL LINE DISTURBED STREAM BANKS WITH EROSION CONTROL MAT LANDLOCK 450 OR EQUIVALENT PER MANUFACTURER'S RECOMMENDATIONS.
3. STABILIZE THE DISTURBED BANKS WITH SEED AND WHEAT STRAW. BELOW ARE RECOMMENDED HERBACEOUS SEED MIXES:

TEMPORARY MIX
SPECIES LOLUM MULTIFLORUM AVENA SATIVA TOTAL RATE COMMON NAME ANNUAL RYE OATS MIX 0.60 0.40 1.00 25 LBS/AC
PERMANENT MIX
SPECIES ELYMUS HYSITIX ELYMUS VIRGINICUS JUNCUS EFFUSUS CAREX VULPINOIDEA PANICUM VIRGATUM PANICUM CLANDESTINUM SORGHASTRUM NUTANS SCHIZACHYRUM SCOPARIUM TOTAL RATE COMMON NAME BOTTLEBRUSH GRASS VIRGINIA WILD RYE SOFT RUSH FOX SEDGE SWITCHGRASS DEER TONGUE INDIAN GRASS LITTLE BLUESTEM 1.00 15LBS/AC
PERMANENT MIX
SPECIES ELYMUS HYSITIX ELYMUS VIRGINICUS JUNCUS EFFUSUS CAREX VULPINOIDEA PANICUM VIRGATUM PANICUM CLANDESTINUM SORGHASTRUM NUTANS SCHIZACHYRUM SCOPARIUM TOTAL RATE COMMON NAME BOTTLEBRUSH GRASS VIRGINIA WILD RYE SOFT RUSH FOX SEDGE SWITCHGRASS DEER TONGUE INDIAN GRASS LITTLE BLUESTEM 1.00 15LBS/AC
1.00 15LBS/AC

3. RE-SEED ANY DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION OF THE PLANT MATERIAL. REFER ABOVE SEEDING MIX.

IN ADDITION TO PERMITTING THROUGH THE CITY OF ROSWELL, A NATION WIDE PERMIT FROM THE U.S. ARMY CORPS OF ENGINEERS AND A STREAM BUFFER VARIANCE FROM THE GEORGIA DEPARTMENT OF NATURAL RESOURCES WILL BE APPLIED FOR AND OBTAINED PRIOR TO BEGINNING ANY CONSTRUCTION.

CONSTRUCTION NOTES:

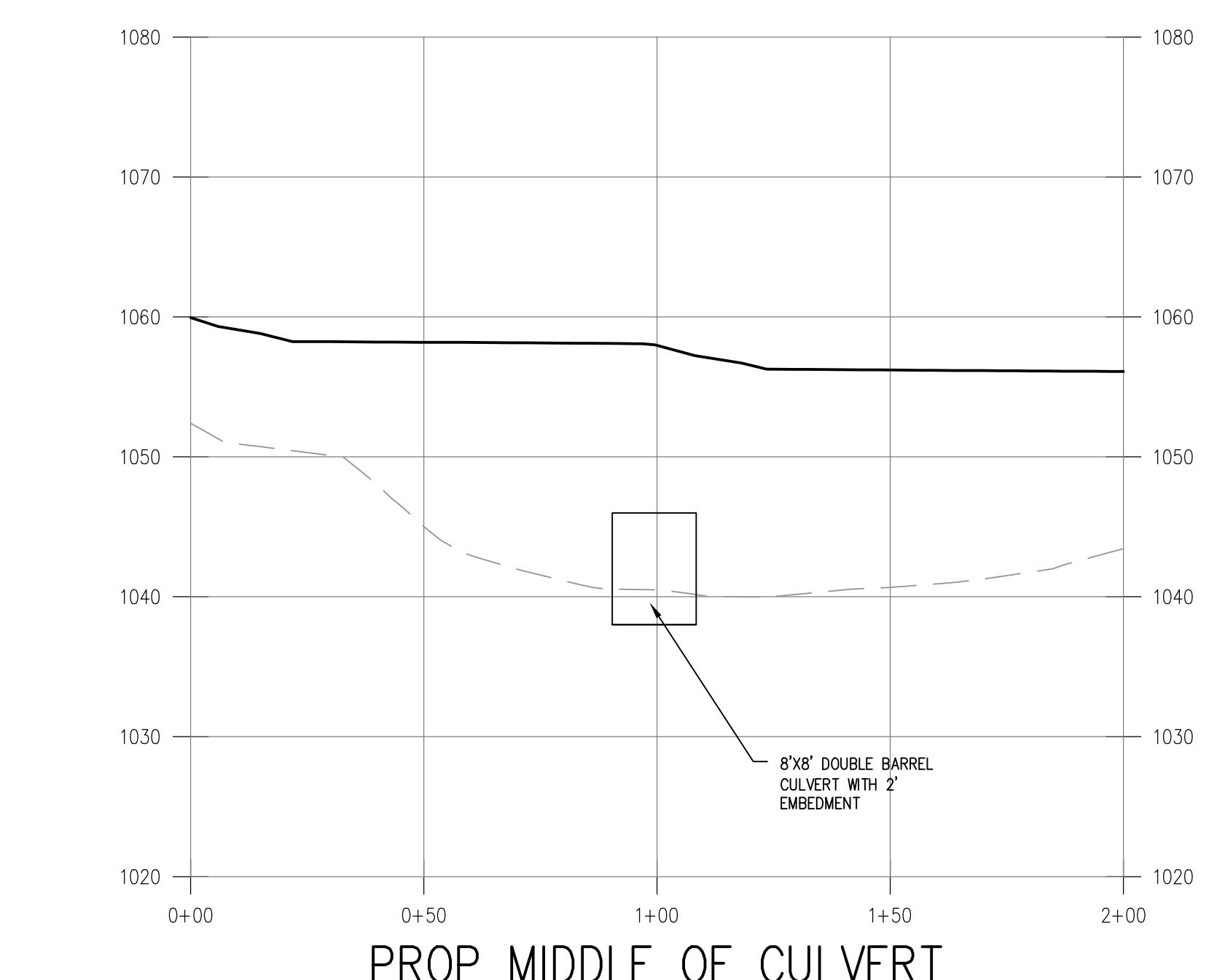
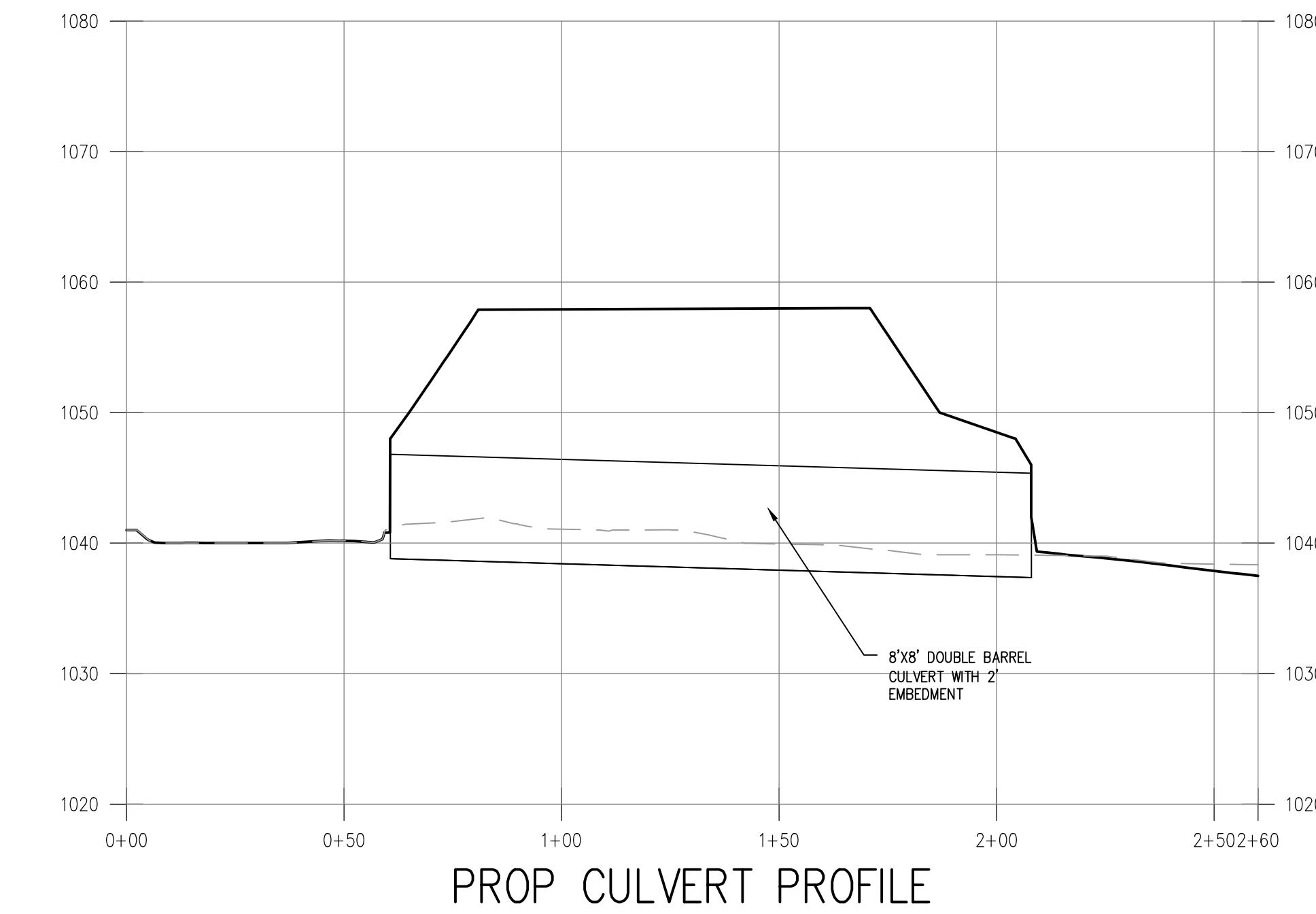
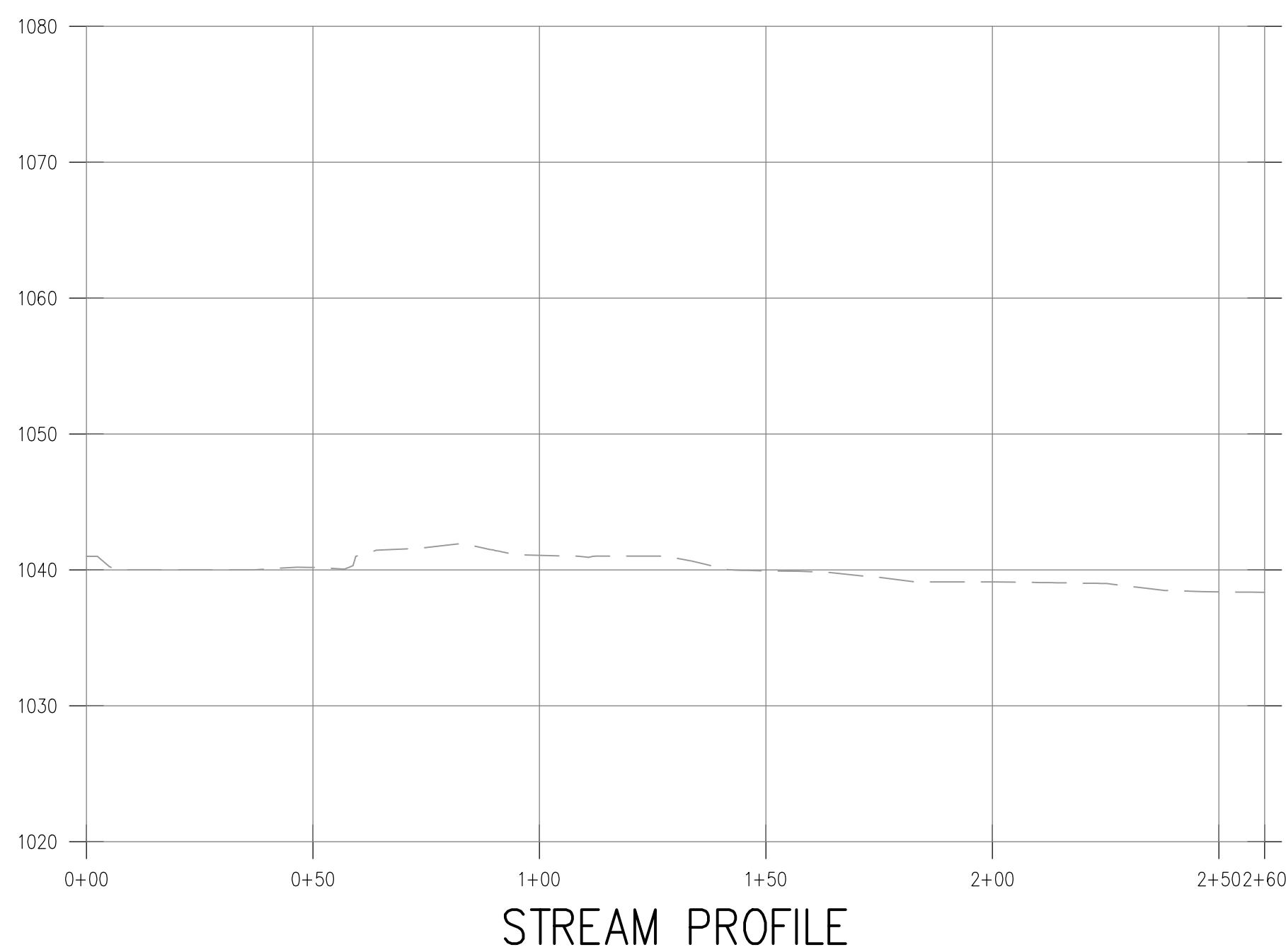
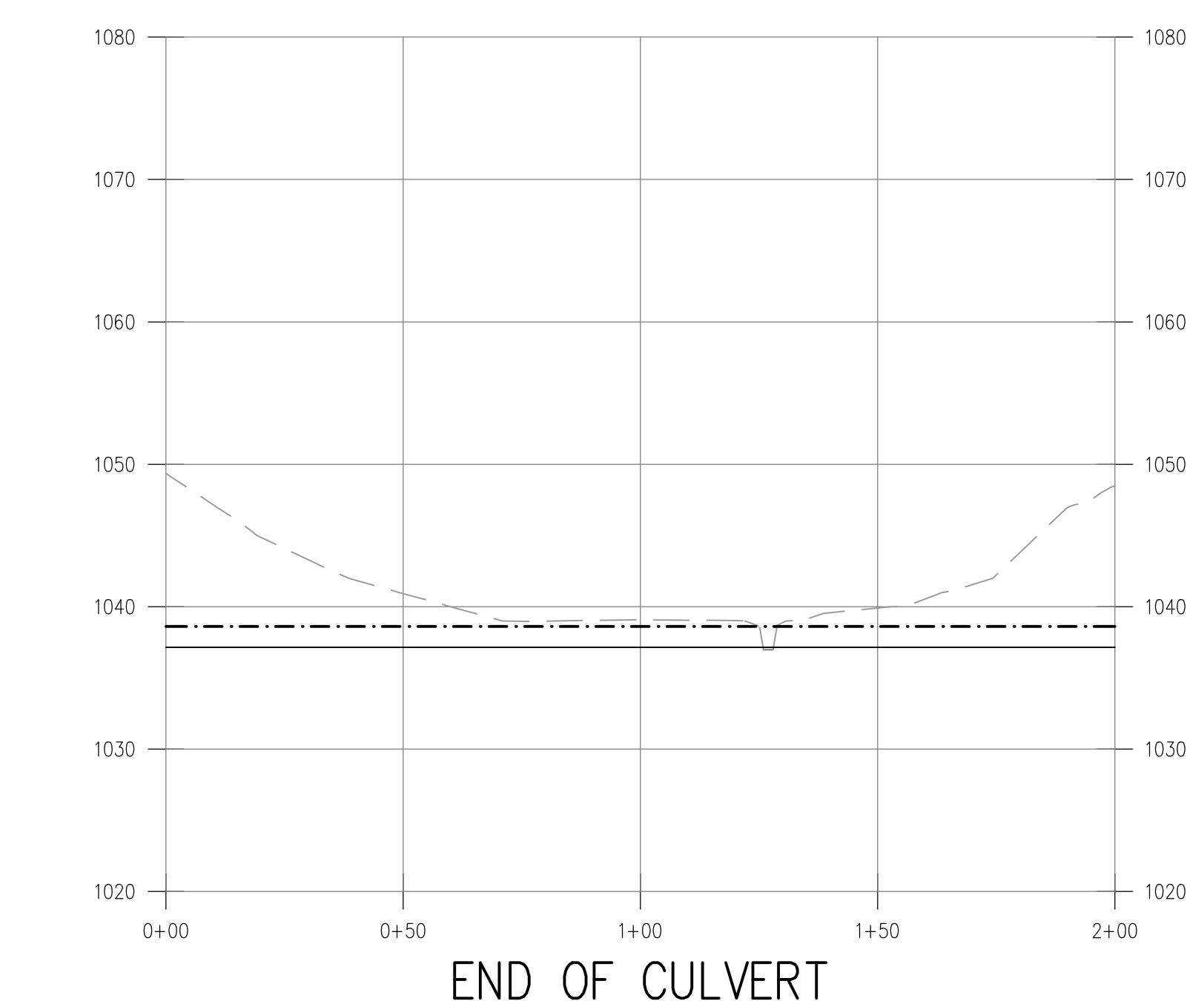
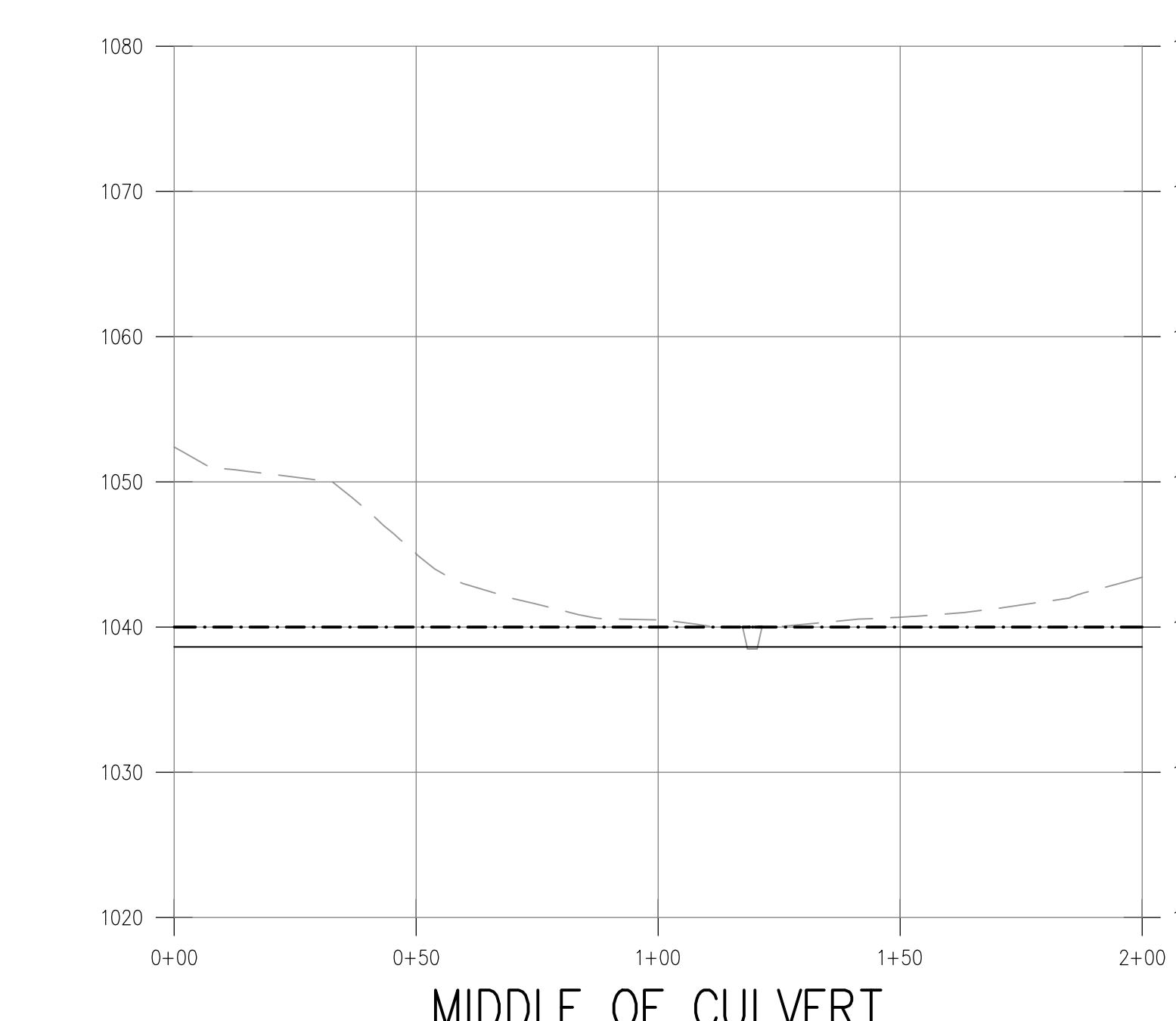
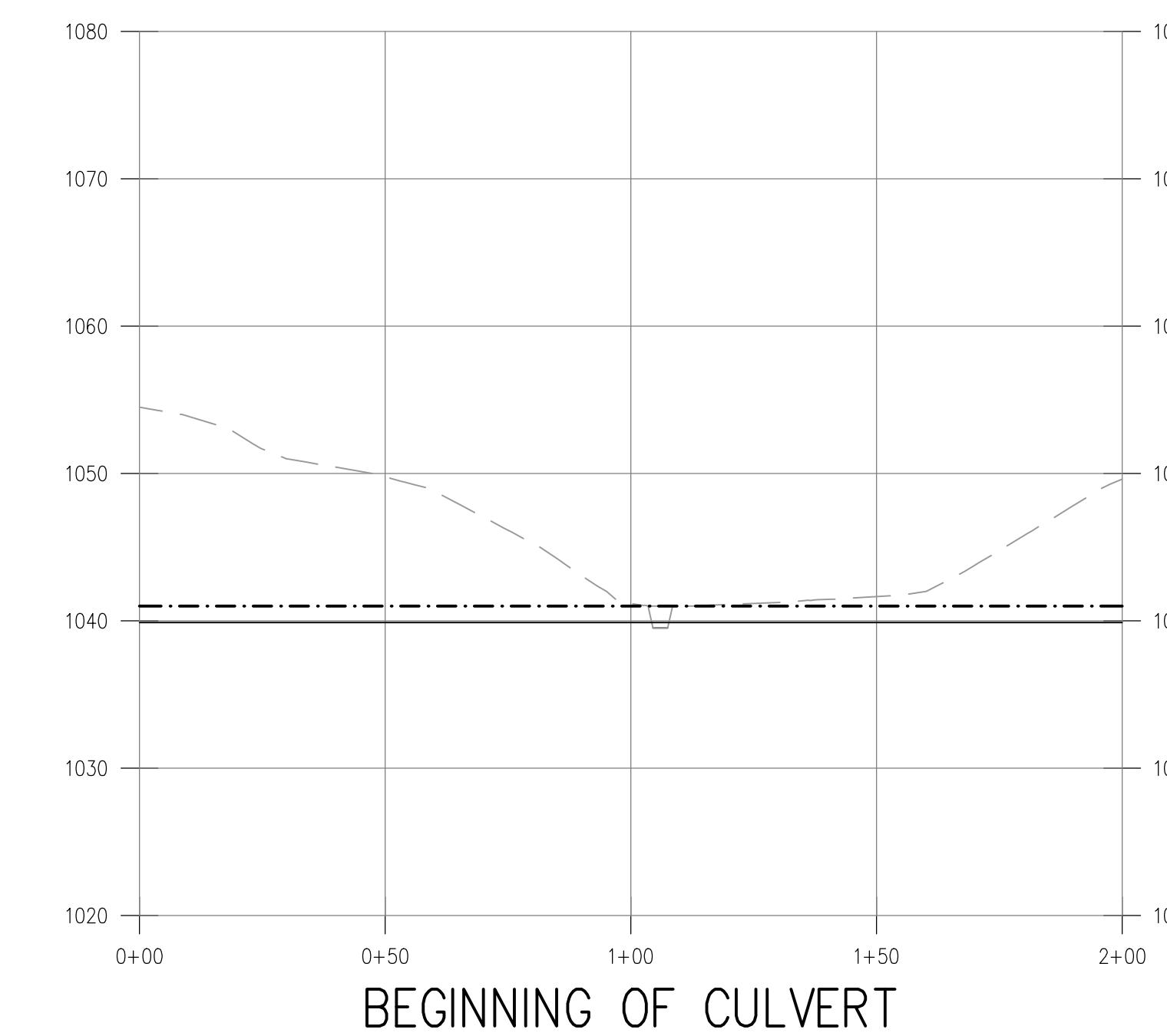
1. OVERSTORY, UNDERSTORY, AND HERBACEOUS VEGETATION MAY BE EITHER TEMPORARILY OR PERMANENTLY DISTURBED/REMOVED AS A RESULT OF REMEDIATION ACTIVITIES.

2. ANY MATERIALS HARVESTED DURING REMEDIATION CONSTRUCTION MAY BE USED FOR IN-CHANNEL STRUCTURES OR FOR STREAM CHANNEL STABILIZATION PURPOSES.
3. GRADING SUBJECT TO CHANGE BASED ON FIELD CONDITIONS OR IDENTIFICATION OF NECESSARY CHANGES DETERMINED DURING CONSTRUCTION.
4. SEE SHEET C4.0 FOR DETAILED GRADING PLAN.
5. SEE SHEET C4.3 FOR STREAM RESTORATION DETAILS.

DATE: 7/1/15
REVISIONS: CITY COMMENTS: 1
COPRIGHT AEC INC

PROJECT NO: 13454
CIVIL DRAWN BY: LAF, JLM
CIVIL DESIGNED BY: LAF
LANDSCAPE DRAWN BY: LAF
LANDSCAPE DESIGNED BY: LAF
CHECKED BY: CJF
DATE: 05-15-15

SHEET C4.3

**AEC**Civil Engineering
Land Planning
Landscape ArchitectureWater Resources
Property Services
Arborist Services50 Warm Springs Circle
Roswell • Georgia • 30075
(770)641-1942 • www.aecad.com**CULVERT CROSS
SECTIONS AND PROFILE****SUN VALLEY -
PHASE I**
ROSWELL FULTON COUNTY GEORGIA

- · · · BANK FULL
- WATER LEVEL
- · · · EXISTING GRADE
- PROPOSED GRADE

VERTICAL SCALE: 1"=10'
HORIZONTAL SCALE: 1"=30'

NO. 1
REVISIONS
CITY COMMENTS
COPRIGHT BY AEC INC

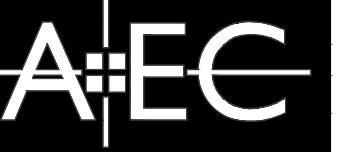
PROJECT NO. 13-3454
CIVIL DRAWN BY: LAF, JLM
CIVIL DESIGNED BY: LAF
LANDSCAPE DRAWN BY:
LANDSCAPE DESIGNED BY:
CHECKED BY: CJ
DATE - 05-15-15

SHEET

C4.4



Ga SWCC #29494 Exp 12/19/15



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Arborist Services

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EROSION CONTROL PLAN PHASE 1A

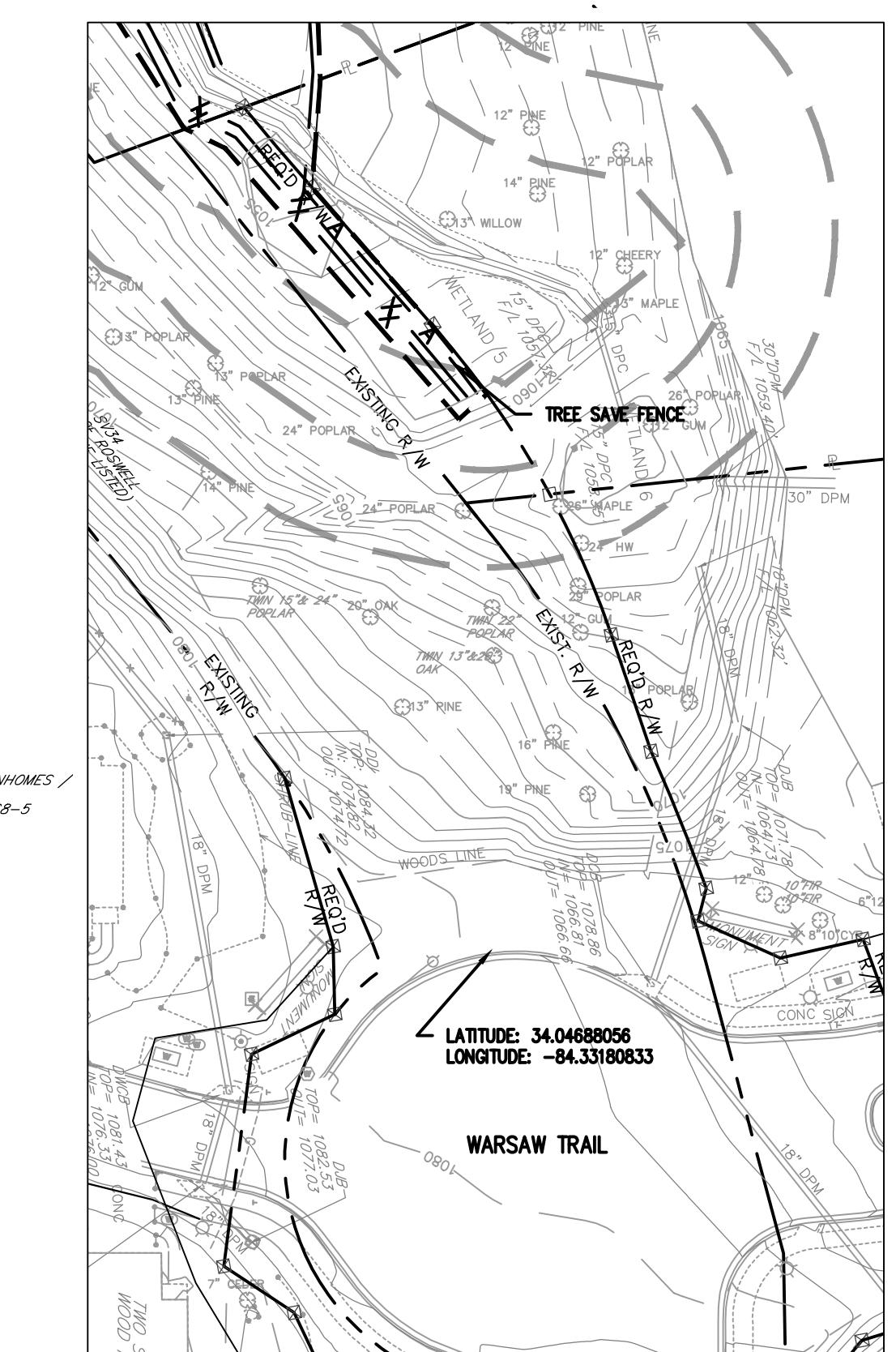
SUN VALLEY - PHASE I ROSWELL FULTON COUNTY GEORGIA

DATE: 7/1/15
REVISIONS: 1
CITY COMMENTS: COPRIGHT BY AEC INC

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CIVIL DESIGNED BY: LAF
LANDSCAPE DRAWN BY:
LANDSCAPE DESIGNED BY:
CHECKED BY: CJ
DATE: 05-15-15

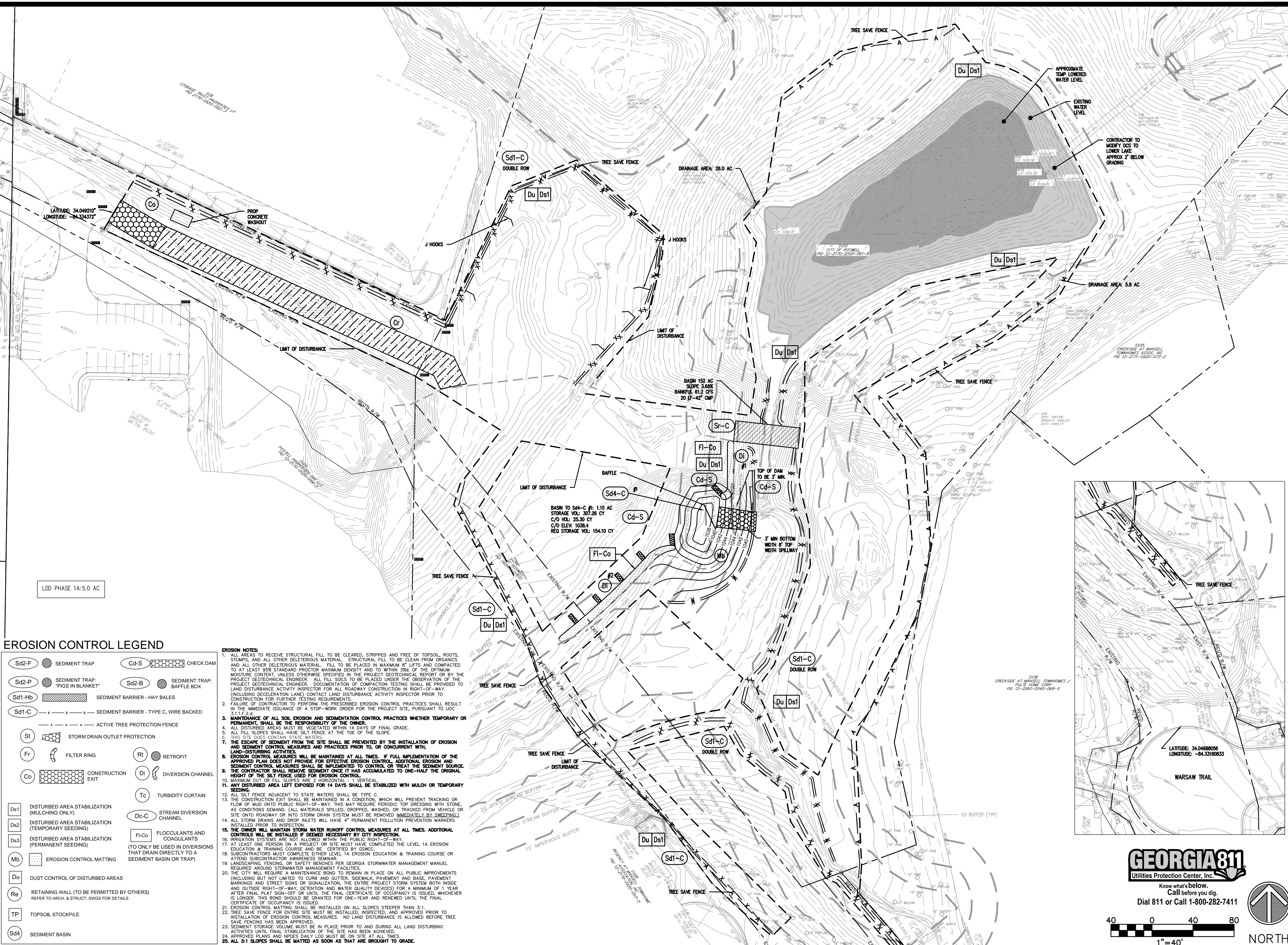
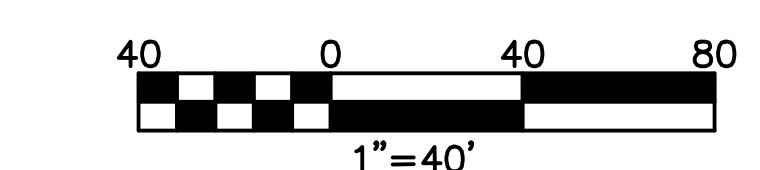
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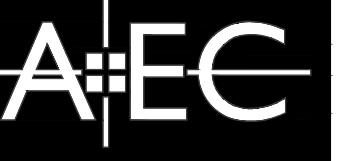
GEORGIA 811
Utilities Protection Center, Inc.

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Ga SWCC #29494 Exp 12/19/15



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EROSION CONTROL PLAN PHASE I C

SUN VALLEY - PHASE I ROSWELL FULTON COUNTY GEORGIA

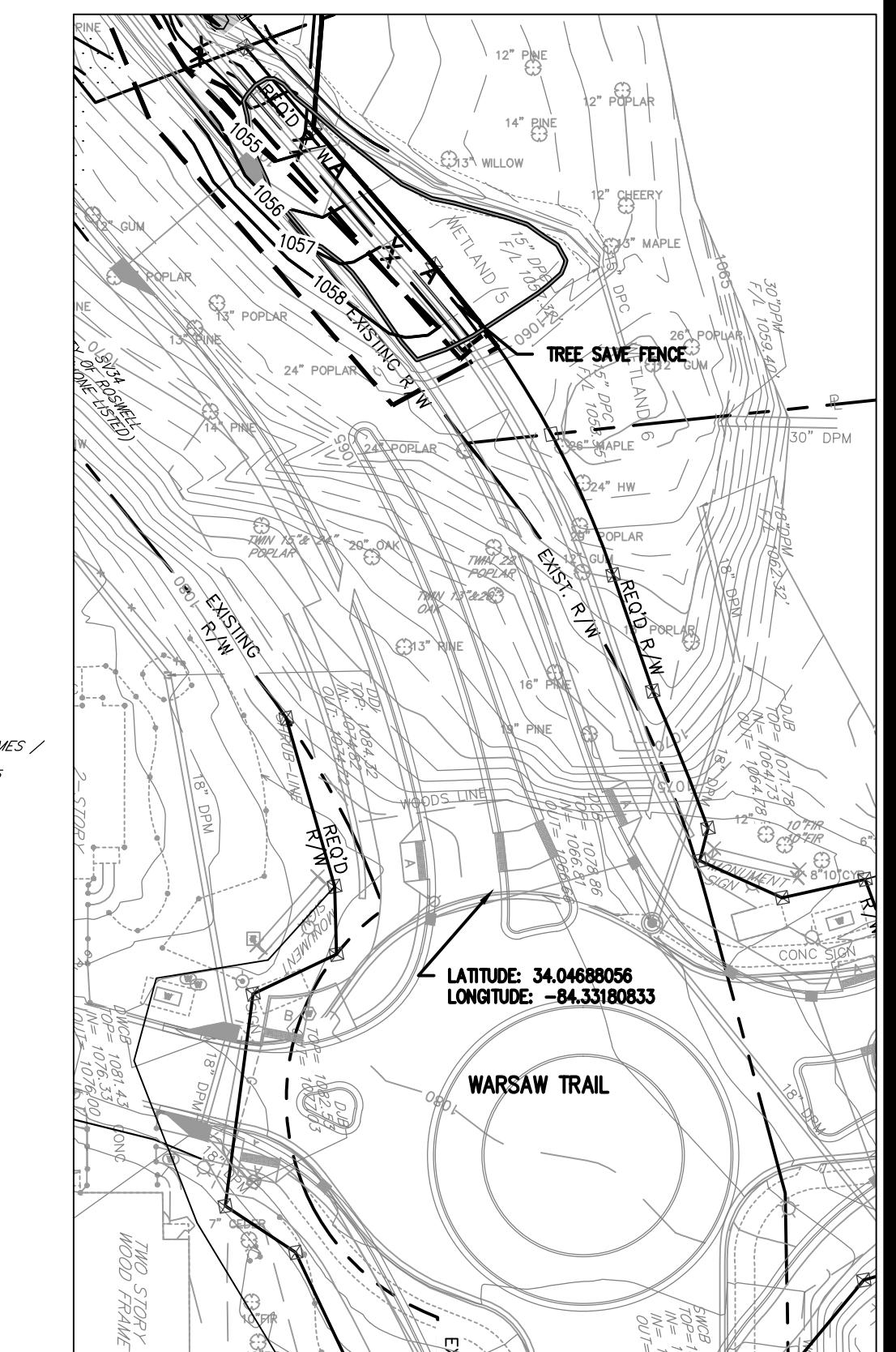
DATE
7/1/15

REVISIONS
CITY COMMENTS
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PROJECT NO.: 13-3454
CIVIL DRAWN BY: LAF, JLM
CIVIL DESIGNED BY: LAF
LANDSCAPE DRAWN BY:
LANDSCAPE DESIGNED BY:
CHECKED BY: CJ
DATE: 05-15-15

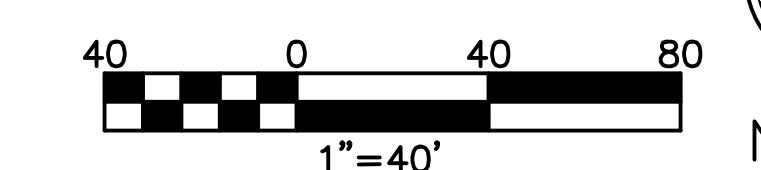
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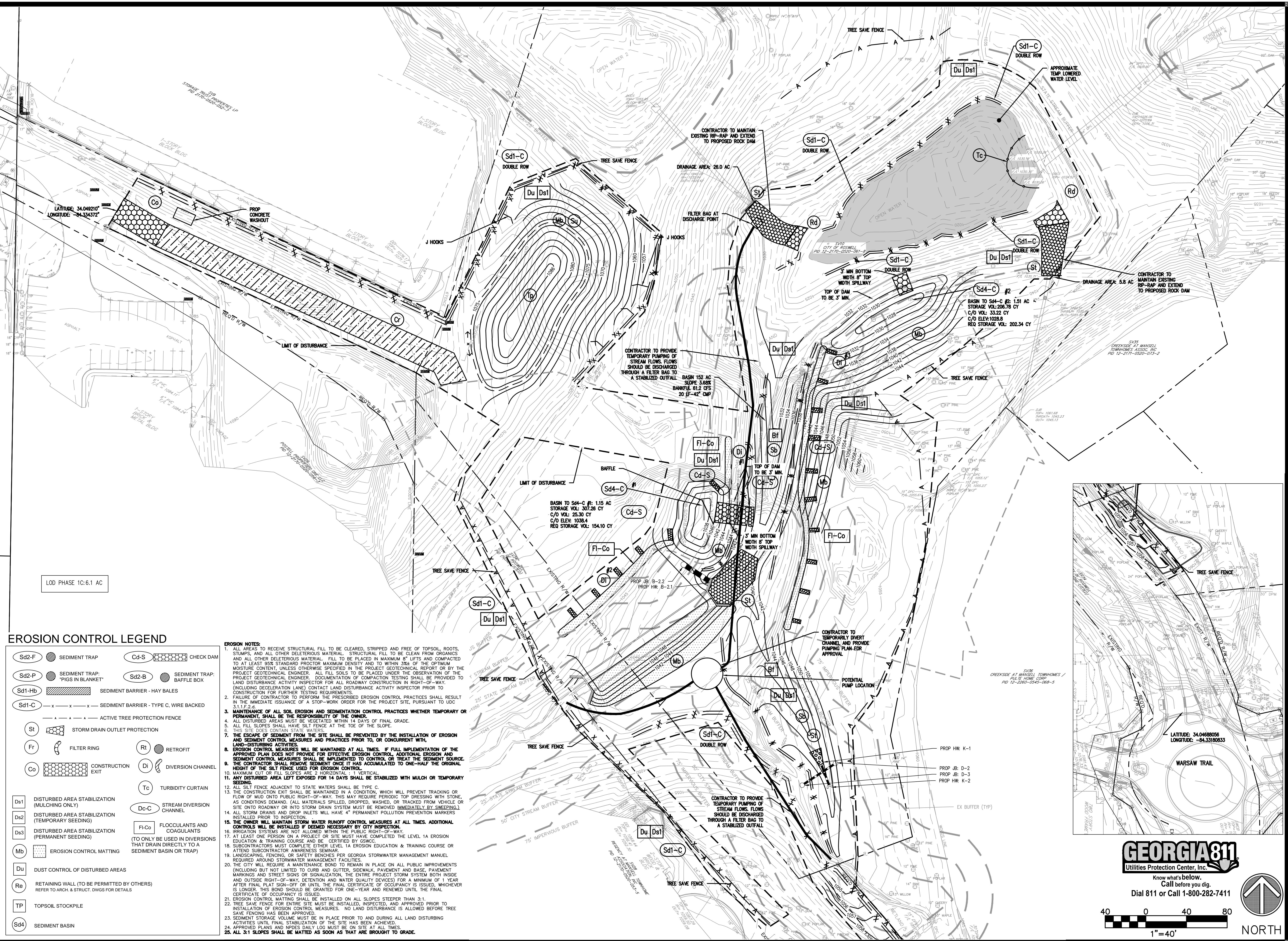


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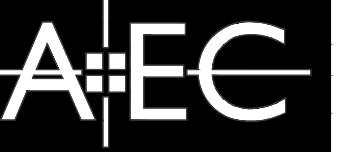
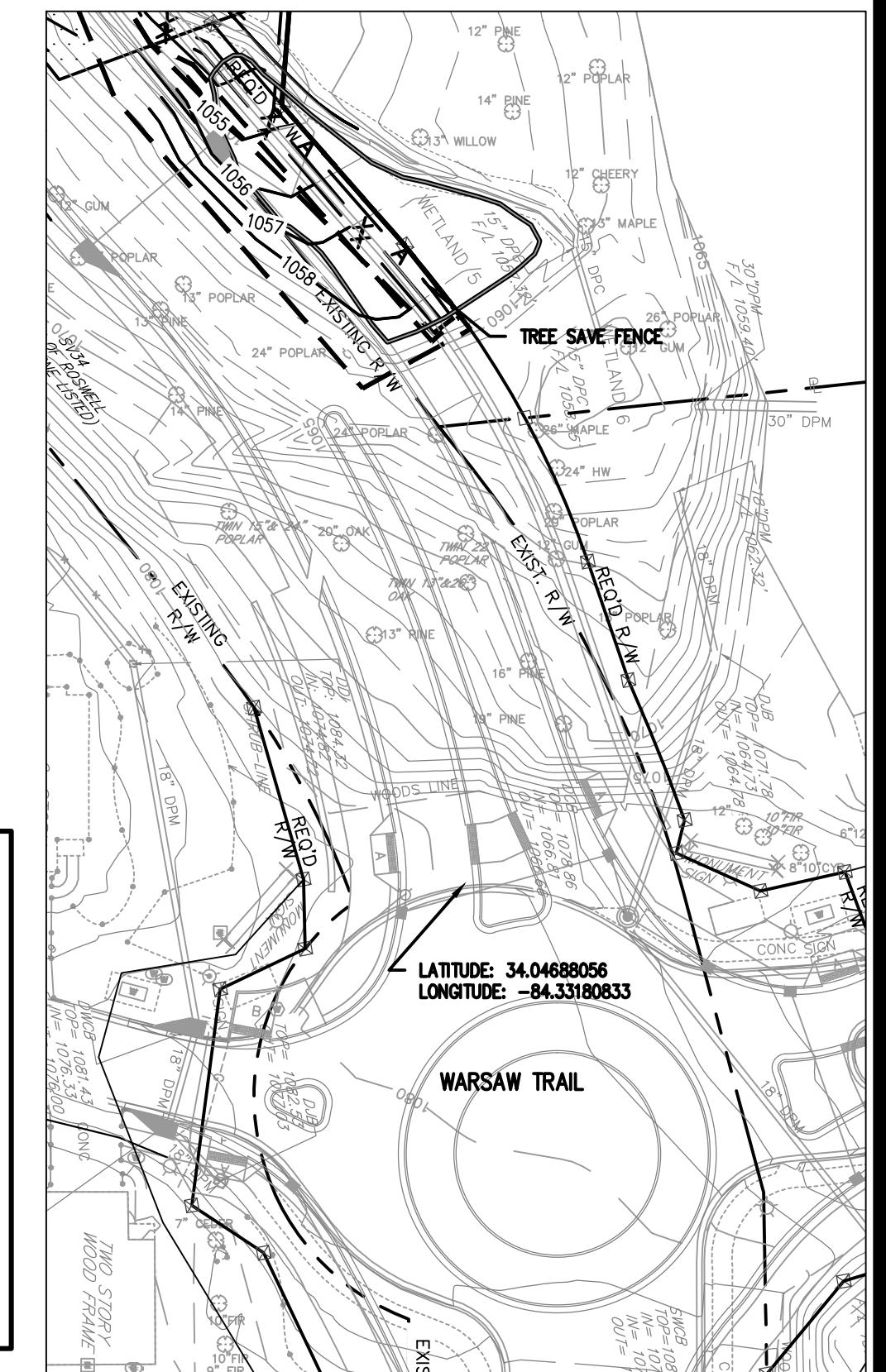
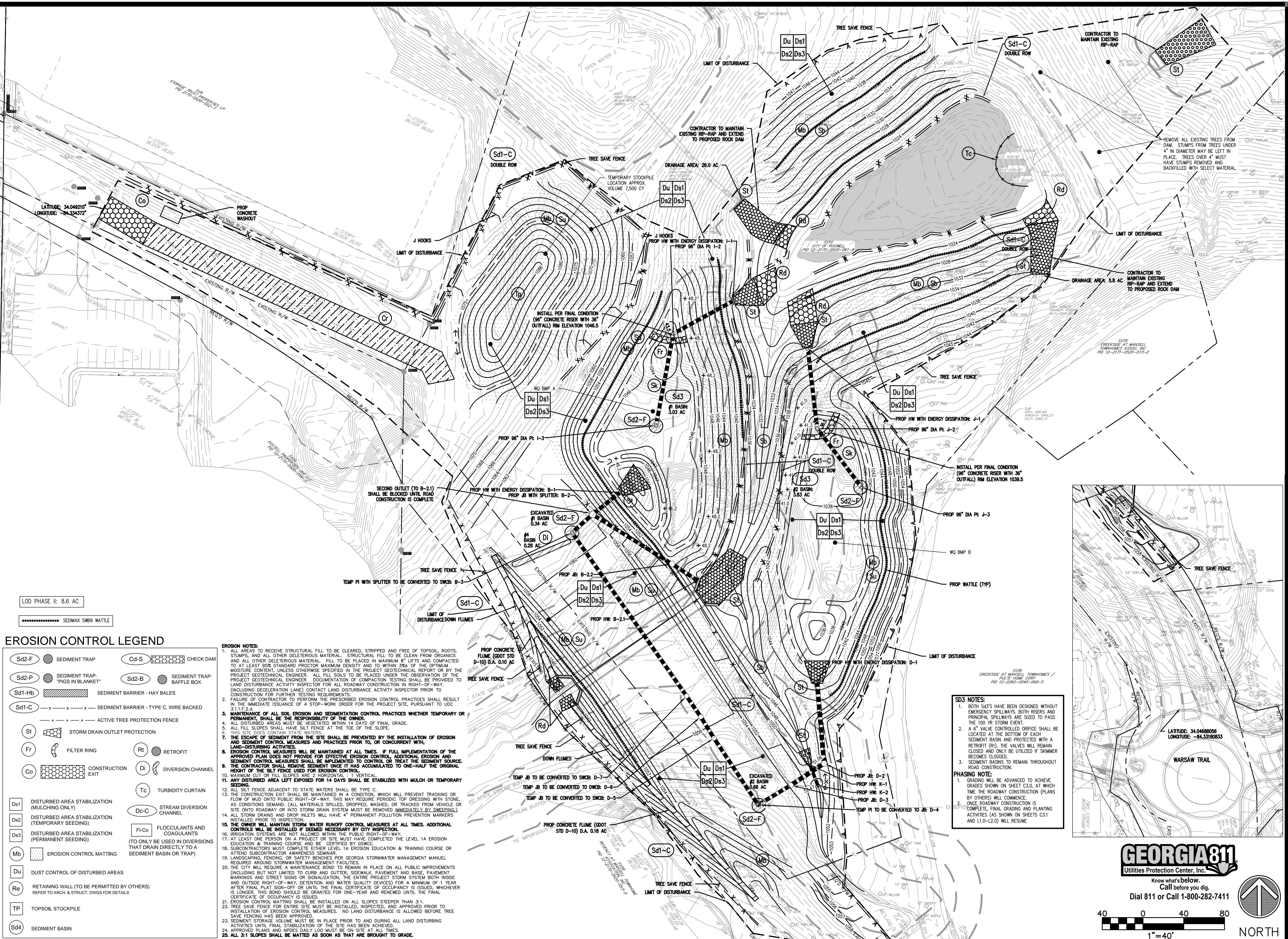


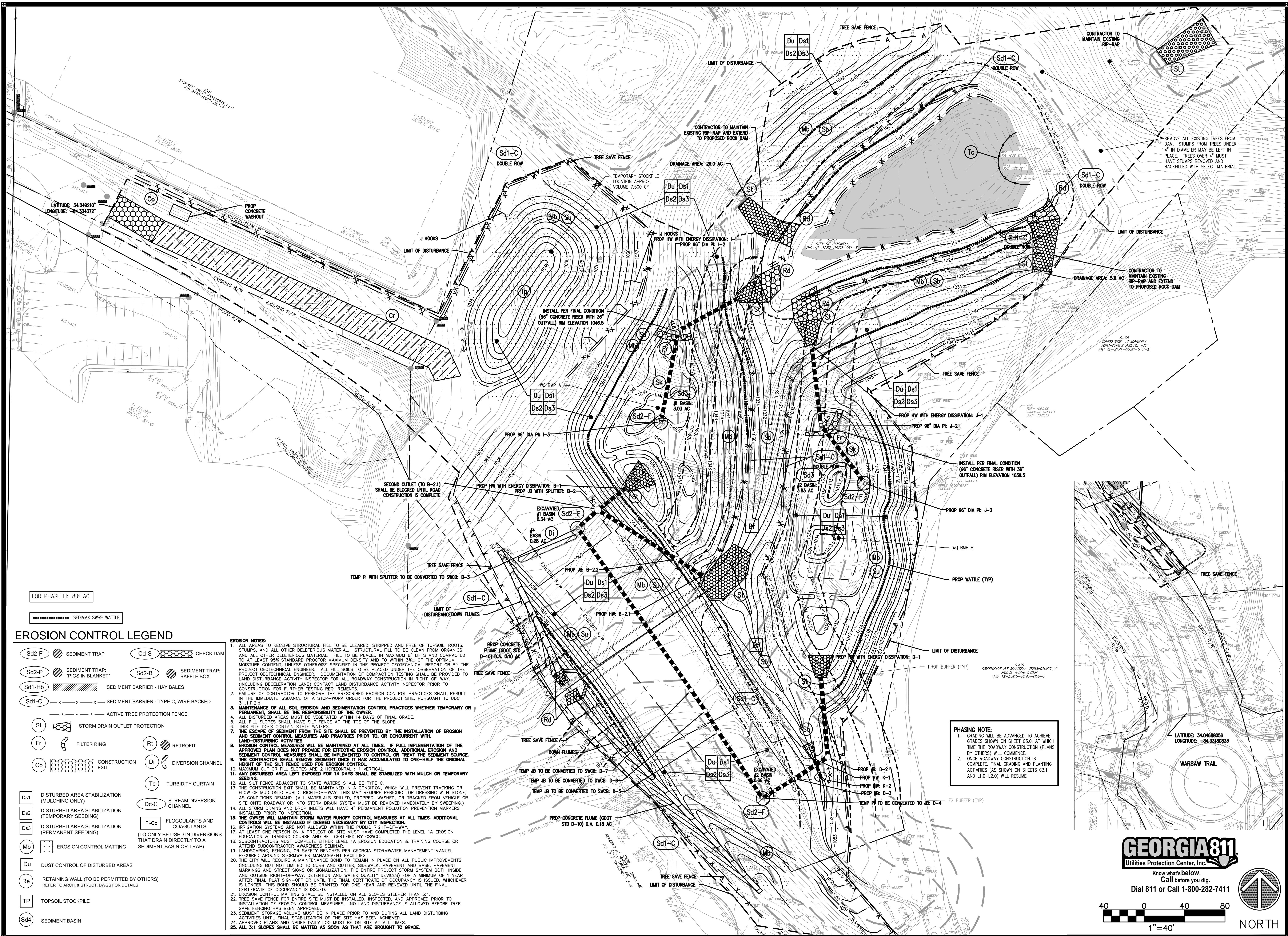
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1"=40'
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Civil Engineering
Land Planning
Landscape ArchitectureWater Resources
Property Services
Arborist Services50 Warm Springs Circle
Roswell • Georgia • 30075
(770)641-1942 • www.aecd.comEROSION CONTROL
PLAN PHASE 2SUN VALLEY -
PHASE I
ROSWELL FULTON COUNTY GEORGIADATE
7/1/15REVISIONS
1
CITY COMMENTS
COPRIGHT BY AEC INCPROJECT NO. 13-3454
CIVIL DRAWN BY LAF, JLM
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DATE: 05-15-15SHEET
C5.3GEORGIA 81
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SUN VALLEY - PHASE I

EROSION CONTROL PLAN PHASE 3

SUN VALLEY - PHASE I

CT NO.: 13-3454
DRAWN BY: LAF, JLM
DESIGNED BY: LAF
SCAPE DRAWN BY:
SCAPE DESIGNED BY:
CHECKED BY: CJF
- 05-15-15

SHEET
C54

STAND ALONE EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN (ESPCP)

General Note: All measures outlined in this plan are to be in accordance with the "Manual for Erosion and Sediment Control in Georgia," latest edition and General NPDES Permit GAR 100001.

Project Name: Sun Valley

Location: Roswell, Fulton County, Georgia

Latitude: 34.049210° Land Lot(s): 520

Longitude: -84.334372° District Number(s): District, Section

Note: latitude and longitude are location of main construction entrance.

A. Narrative, Notes and Other Information

Project Description and nature of construction activities: The project will consist of altering an existing pond, construction of a water quality pond, constructing a wetlands area, and filling over a culvert.

B. Owner
CITY OF ROSWELL
PO Box 1208
Roswell, GA 30075
Contact: ROB DELL-ROSS
(678)878-5657

Operator
TBD

C. 24-hour Local Erosion and Sedimentation Control Contact:
ROB DELL-ROSS
(678)878-5657

D. Total AREA / Disturbed AREA
Estimated Total Site Area: 23.0 Acres
Total Disturbed Area: 8.6 Acres

E. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND DISTURBING ACTIVITIES.

F. 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.

G. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING WITH MULCH.

H. CONTRACTOR/PERMITTEE TO CONTACT THE DESIGN PROFESSIONAL IMMEDIATELY UPON LAND DISTURBANCE. THE DESIGN PROFESSIONAL SHALL PERFORM AN INSPECTION OF EROSION CONTROL MEASURES WITHIN 7 CALENDAR DAYS OF CONTRACTOR COMPLETING THE INSTALLATION OF THE INITIAL PERIMETER AND SEDIMENT STORAGE CONTROLS.

I. ANY CHANGE IN EROSION CONTROL MEASURES WITH A HYDRAULIC COMPONENT REQUIRE THE ESPCP TO BE REVISED AND RECERTIFIED BY THE DESIGN PROFESSIONAL.

J. Stormwater management runoff coefficient or peak discharge flow of the site prior to and after construction.

Basin	Area (Acres)	CN	25-Year Runoff (cfs)
Pre A	152	73	464.4
Post A	152	74	403.34

J. Upstream Conditions
Currently, the upstream property is a mixture of developed as residential (multifamily and single family), commercial, and undeveloped stream and cemetery.

K. Downstream Conditions

Downstream from the site is a Foe Killer Creek, a tributary to Big Creek.

L. Name of Receiving Waters

The following receiving waters are not designated as trout streams:

1. Foe Killer Creek - Tributary to Big Creek

M. Extent of Wetlands Area

0.0 total acres impacted (no soil disturbance proposed in delineated wetland areas).

N. Site Map: See Attached

O. Monitoring Point(s)

Stormwater turbidity levels for this project shall not increase by more than 75 nephelometric turbidity units (NTU) between corresponding upstream/downstream sample locations. This limit is based upon Appendix B of GAR100001 for waters supporting warm water fisheries with a given site size of 2.68 acres and a surface water drainage area of square miles. This project has one (1) representative upstream/downstream monitoring point locations. One (1) upstream and downstream sample will be collected to measure for turbidity increase. The upstream sample(s) should be taken upstream of the existing detention pond that is part of the original Providence development. The downstream sample(s) should be taken at the point where the stream leaves the property.

P. Site Soil Conditions

The following table describes existing site soil characteristics. Soils information taken from the U.S. Department of Agriculture Natural Resources Conservation Service soil survey map for Roswell, Fulton County, Georgia. Refer to Soils Map on this sheet for more information.

Q. Critical Areas

1. All slopes over 3:1 slope shall have erosion control matting.

2. All Wetland and Stream Buffer Areas shall have erosion control BMPs applied per the ESPCP.

R. Impaired Stream Segment

There are no sediment/Bio-F/Bio-M impaired stream basins per Georgia's most current 305(b)/303(d) list within one (1) mile downstream of the site. Therefore, no impaired stream BMPs are required.

CONSTRUCTION SCHEDULE - OCTOBER 2015 Start													END OF PROJECT
ACTIVITY	WEEK												END OF PROJECT
	1	2	3	4	5	6	7	8	9	10	11	12	
SEDIMENT CONTROL	x	x	x	x	x	x	x	x	x	x	x	x	x
EROSION CONTROL MAINTENANCE	x	x	x	x	x	x	x	x	x	x	x	x	x
TEMP. GRASSING	x	x	x	x	x	x	x	x	x	x	x	x	x
PERM. GRASSING													
ROAD CONSTRUCTION	x	x	x	x	x	x	x	x	x	x	x	x	x
PERMANENT VEGETATION													
REMOV. TEMP. BARRIERS								x	x	x	x	x	x

III. Materials and Safety

Note: This section is provided for informational purposes only. All Material Safety and Spill Prevention Control Contingency (SPCC) plans are to be in accordance with policies and procedures already in place.

A. Significant Materials Expected at Site Inventory:
- Lime - Concrete mix - Steel reinforcing bars and related materials - HDPE Pipe
- Lumber - Paints - Diesel fuel and lubricating oils - Ductile iron pipe
- Fertilizers - Steel pipe - Reinforced concrete pipe

B. Spill Prevention and Response Procedures
Spill prevention and response includes "Good Housekeeping" as well as specific practices for certain products and established procedures for responding to spills which do occur.

C. Practices for Products, "Good Housekeeping"
1. Materials - An effort will be made to store only enough material required to do the job.

2. Storage - All materials stored on-site will be stored in a neat, orderly manner in their appropriate containers and stored in a covered area. If storage in a covered area is not possible the materials will be covered with polyethylene or polypropylene sheeting to protect them from the elements.

3. Mixing - Substances will not be mixed with one another unless recommended by the manufacturer.

4. Labeling - Products will be kept in their original containers with the original manufacturer's label affixed to each container.

5. Disposal - Whenever possible, all a product will be used before disposing of the container. Manufacturer recommendation for proper use and disposal will be followed.

6. Inspections - The site superintendent will inspect the site regularly to ensure proper use and disposal of materials on-site.

7. Spoil materials - Any excavated earth that will not be used for fill material and all demolished pavement will be hauled off site immediately and disposed of properly.

D. Specific Product Practices
1. Petroleum Products - All on-site vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. If petroleum products will be present at the site, they will be

stored in tightly sealed containers, which are clearly labeled. If fuel is stored onsite, a fuel storage area shall be provided. See Fuel Storage Detail. Any asphalt substances used on-site will be applied according to the manufacturer recommendations.

- Concrete Trucks - Concrete trucks must washout in a designated area. Refer to Concrete Truck Washout Detail.
- Vehicle/Equipment Washing - Soaps or solvents used in washing must be collected and may not be discharged.
- Construction Materials - Wastewater from construction materials may not be discharged.
- Paints - All containers will be tightly sealed and stored when not required for use. Excess paint will not be poured into the storm sewer system but will be properly disposed of according to manufacturer instructions or State and local regulations.
- Fertilizers - Fertilizers used will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to storm water. The fertilizer will be stored in a covered area and any partially used bags will be transferred to a sealable plastic bin to avoid spills.

E. Spill Control and Response Practices
The owner or the site superintendent will designate a spill prevention and response team. In addition, the following practices will be followed for spill cleanup:

- Information - Manufacturers recommended methods for spill cleanup will be clearly posted, and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.
- Equipment - Materials and equipment necessary for spill cleanup will be present on the site at all times. Equipment and materials will include but not be limited to brooms, shovels, rags, gloves, goggles, absorbent materials (sand, sawdust, etc.) and plastic or metal trash containers specifically for this purpose. The materials and equipment necessary for spill cleanup will be dependent upon the nature and quantity of the material stored on-site.
- Response - Care shall be taken to prevent and contain any petroleum spills. In the event of a spill, appropriate remediation measures shall be immediately undertaken. Those measures shall include removal of the contaminated soil, replacement of said soil, placing of petroleum tanks on above ground pad with surrounding berms to provide secondary containment to prevent leakage into any storm water system.
- Safety - The spill area will be kept well ventilated, and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- Reporting - Spills of toxic of hazardous material (if present on site) will be reported to the appropriate state or local government agency, regardless of the size.
- Record keeping - The spill prevention plan will be modified to include measures to prevent this type of spill from reoccurring as well as improved methods for cleaning up future spills should they occur. A description of each spill, what caused it, and the cleanup measures used will be maintained with the plan. Any spill over 25 gallons must be reported to the Spill Response Center. Contact the National Response Center 24-hour spill reporting hotline at (800) 424-8802, the Region 4 (Southeast) 24-hour spill reporting number at (404) 562-8700 OR Georgia's Environmental Agency at (404) 657-5947.

IV. NPDES Information

The following information shall comply with the NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT TO DISCHARGE STORM WATER ASSOCIATED WITH CONSTRUCTION ACTIVITY INTO THE WATERS OF THE STATE OF GEORGIA. Specifically, the NPDES General Permit No. GAR 100001, Authorization To Discharge Under The National Pollutant Discharge Elimination System Storm Water Discharges Associated With Construction Activity For Stand Alone Construction Projects, further referred to as the general permit or the permit. A full copy of the permit is available online at www.gaqep.org

Deadlines for Notification (to be filed by primary permittee)

Owners or Operators or both who intend to obtain coverage under this general permit for storm water discharges from a construction site (where construction activities begin after issuance of this permit), shall submit a Notice of Intent (NOI) in accordance with the requirements of this Part at least fourteen (14) days prior to the commencement of construction activities.

See General Permit No. 100001 for further deadlines and exemptions

The Notice of Intent Shall be Submitted by the following procedure (to be filed by primary permittee)

NOIs are to be submitted by **return receipt certified mail** (or similar service) to both the appropriate EPD District Office according to the schedule in Appendix A of this permit and to the Local Issuing Authority in jurisdictions authorized to issue a Land Disturbance Activity permit for the permittee's construction site pursuant to O.C.G.A. 12-7-1, et seq. If an electronic submittal service is provided by EPD then the NOI may be submitted electronically; if required, a paper copy must also be submitted by return receipt certified mail or similar service. 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 alternative location from commencement of construction until such time as a Notice of Termination (NOT) is submitted in accordance with Part VI.

Applicable Fees (to be paid by primary permittee)

Any applicable fees shall be submitted by the primary permittee in accordance with Rules and Regulations for Water Quality Control (Rules) promulgated by the Board of Natural Resources. By submitting an NOI for coverage under this permit the primary permittee agrees to pay any fees required, now or in the future, by such Rules authorized under O.C.G.A. Section 12-5-23(a)(5)(A), which allows the Board of Natural Resources to establish a fee system. Fees may be assessed on land disturbing activity proposed to occur on or after the effective date of this permit and shall be paid in accordance with such Rules.

Plans (to be completed by primary permittee)

Keeping Plans Current: The primary permittee(s) shall amend their Plan whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on BMPs with a hydraulic component (i.e., those BMPs where the design is based upon rainfall intensity, duration and return frequency of storms) or if the Plan proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified under Part IV.D.3. of this permit. Amendments to the Plan must be certified by a design professional as provided in this permit.

Inspections (to be completed by primary permittee)

(A) Permittee requirements.

- 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:
 - 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
 - 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 rainfall once every 24 hours except any non-working Saturday, non-working Sunday and non-working Federal holiday until a Notice of Termination is submitted. 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):

- disturbed areas of the primary permittee's construction site;
- areas used by the primary permittee for storage of materials that are exposed to precipitation; and
- 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) Disposal - Whenever possible, all a product will be used before disposing of the container. Manufacturer recommendation for proper use and disposal will be followed.

(5) Inspections - The site superintendent will inspect the site regularly to ensure proper use and disposal of materials on-site.

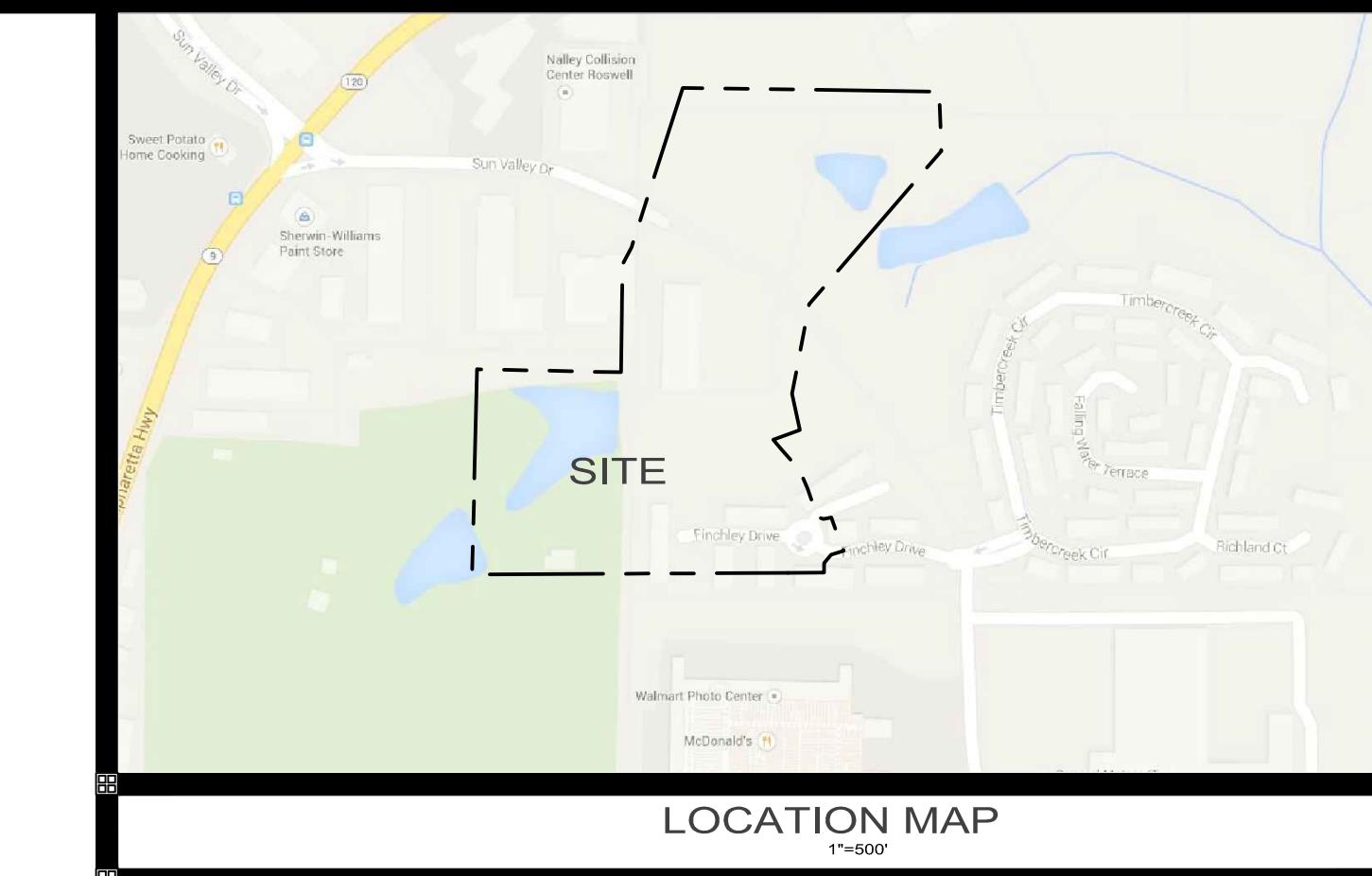
(6) Spoil materials - Any excavated earth that will not be used for fill material and all demolished pavement will be hauled off site immediately and disposed of properly.

(7) Specific Product Practices

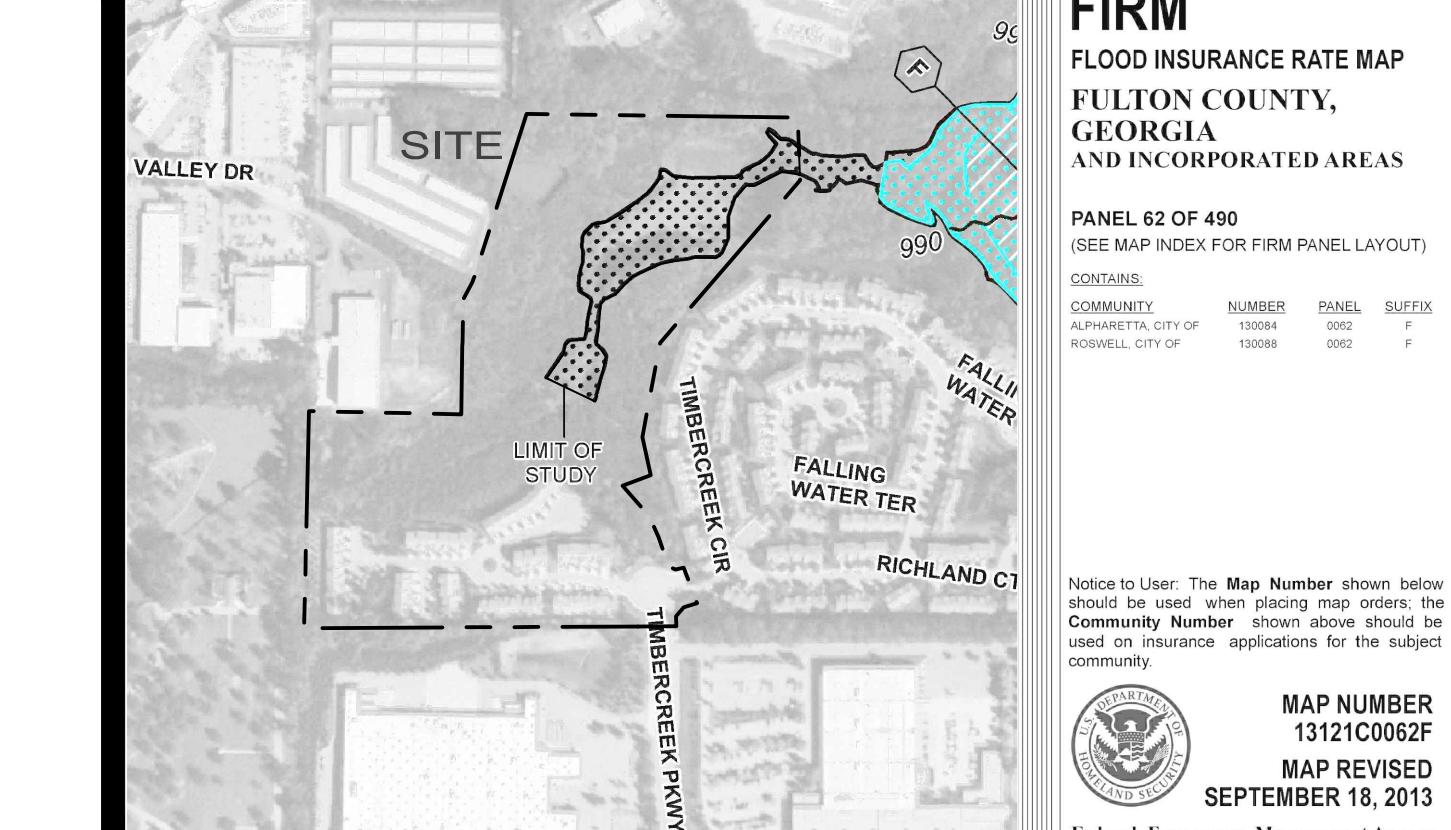
1. Petroleum Products - All on-site vehicles will be monitored for leaks and receive regular preventive

maintenance to reduce the chance of leakage. If petroleum products will be present at the site, they will be

(Continued on Sheet C8.1)



LOCATION MAP



STAND ALONE EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN (ESPCP)

General Note: All measures outlined in this plan are to be in accordance with the "Manual for Erosion and Sediment Control in Georgia," latest edition.

Project Name: Sun Valley

Location: Roswell, Fulton County, Georgia

Latitude: 34.049210° Land Lot(s): 520
Longitude: -84.334372° District Number(s): District, Section

Note: Latitude and longitude are location of main construction entrance.

IV. NPDES INFORMATION (Continued from Sheet C8.0)

(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 is submitted to EPD) 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 project that has been phased has undergone final stabilization, and a Notice of Termination is submitted to EPD. Such reports shall be readily available by end of the second business day and/or working day and shall identify all incidents of best management practices that have not been properly installed and/or maintained as described in the Plan. Where the report does not identify any incidents, the inspection report shall contain a statement that the best management practices are in compliance with the Erosion, Sedimentation and Pollution Control Plan. The report shall be signed in accordance with Part V.G.2 of this permit.

Maintenance

A description of procedures to ensure the timely maintenance of vegetation, erosion and sediment control measures and other protective measures identified in the site plan in good and effective operating condition.

Stormwater Sampling Shall be Conducted (to be completed by primary permittee)
Permit GAR100001 requires the monitoring of nephelometric turbidity in receiving water(s) or outfalls in accordance with permit GAR100001. The sampling requirements shall not apply to any land disturbance associated with the construction of single-family homes which are not part of a subdivision or planned common development unless five (5) acres or more will be disturbed.

The Following Sample Methods are Permitted

All sampling shall be collected by "grab samples" and the analysis of these samples must be conducted in accordance with methodology and test procedures established by 40 CFR Part 136 (unless other test procedures have been approved); the guidance document titled "NPDES Storm Water Sampling Guidance Document, EPA 833-B-92-001" and guidance documents that may be prepared by the EPD.

(1) Sample containers should be labeled prior to collecting the samples.
(2) Samples should be well mixed before transferring to a secondary container.
(3) Large mouth, well cleaned and rinsed glass or plastic jars should be used for collecting samples. The jars should be cleaned thoroughly to avoid contamination.
(4) Manual, automatic or rising stage sampling may be utilized. Samples required by this permit should be analyzed immediately, but in no case later than 48 hours after collection. However, samples from automatic samplers must be 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. Dilution of samples is not required. Samples may be analyzed directly with a properly calibrated turbidimeter. Samples are not required to be cooled.
(5) Sampling and analysis of the receiving water(s) or outfalls beyond the minimum frequency stated in this permit must be reported to EPD as specified in Part IV.E of the permit.

Stormwater Sampling Points

Stormwater sampling shall be conducted at the points as indicated within this ESPCP.

Sampling Frequency (to be completed by primary permittee)

(1) The primary permittee must sample in accordance with the Plan at least once for each rainfall event described below. For a qualifying event, the permittee shall sample at the beginning of any storm water discharge to a monitored receiving water and/or from a monitored outfall location within forty-five (45) minutes or as soon as possible.
(2) However, where manual and automatic sampling are impossible (as defined in this permit), or are beyond the permittee's control, the permittee shall take samples as soon as possible, but in no case more than twelve (12) hours after the beginning of the storm water discharge.
(3) Sampling by the permittee shall occur for the following qualifying events:
(a) For each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a storm water discharge that occurs during normal business hours as defined in this permit, after all clearing and grubbing operations have been completed, but prior to completion of mass grading operations, in the drainage area of the location selected as the representative sampling location;
(b) In addition to (a) above, for each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a storm water discharge that occurs during normal business hours as defined 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 representative sampling location, whichever comes first;
(c) At the time of sampling performed pursuant to (a) and (b) above, if BMPs in any area of the site that discharges to a receiving water or from an outfall are not properly designed, installed and maintained, corrective action shall be defined and implemented within two (2) business days, and turbidity samples shall be taken from discharges from that area of the site for each subsequent rain event that reaches or exceeds 0.5 inch during normal business hours until the selected turbidity standard is attained, or until post-storm event inspections determine that BMPs are properly designed, installed and maintained;
(d) Where sampling pursuant to (a), (b) or (c) above is required but not possible (or not required because there was no discharge), the permittee, in accordance with Part IV.D.4.a.(6), must include a written justification in the inspection report of why sampling was not performed. Providing this justification does not relieve the permittee of any subsequent sampling obligations under (a), (b) or (c) above; and
(e) Existing construction activities, i.e., those that are occurring on or before the effective date of this permit, that have met the sampling required by (a) above shall sample in accordance with (b). Those existing construction activities that have met the sampling required by (b) above shall not be required to conduct additional sampling other than as required by (c) above.

*Note that the Permittee may choose to meet the requirements of (a) and (b) above by collecting turbidity samples from any rain event that reaches or exceeds 0.5 inch and allows for sampling at any time of the day or week.

Reporting (to be completed by Owner or Operator or both)

1. The applicable permittees are required to submit the sampling results to the EPD at the address shown in Part 11.C. by the fifteenth (15th) day of the month following the reporting period. Reporting periods are months during which samples are taken in accordance with this permit. Sampling results shall be in a clearly legible format. Upon written notification, EPD may require the applicable permittee to submit the sampling results on a more frequent basis. Sampling and analysis of any storm water discharge(s) or the receiving water(s) beyond the minimum frequency stated in this permit must be reported in a similar manner to the EPD. The sampling reports must be signed in accordance with Part V.G.2. Sampling reports must be submitted to EPD until such time as a NOT is submitted in accordance with Part VI.

2. All sampling reports shall include the following information:
a. The rainfall amount, date, exact place and time of sampling or measurements;
b. The name(s) of the certified personnel who performed the sampling and measurements;
c. The date(s) analyses were performed;
d. The time(s) analyses were initiated;
e. The name(s) of the certified personnel who performed the analyses;
f. References and written procedures, when available, for the analytical techniques or methods used;
g. The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results;
h. Results which exceed 1,000 NTU shall be reported as "exceeds 1,000 NTU;"
i. Certification statement that sampling was conducted as per the Plan.

3. All written correspondence required by this permit shall be submitted by return receipt certified mail (or similar service) to the appropriate District Office of the EPD according to the schedule in Appendix A of this permit. The permittee shall retain a copy of the proof of submittal at the construction site or the proof of submittal shall be readily available at a designated location from commencement of construction until such time as a NOT is submitted in accordance with Part VI. If an electronic submittal is provided by EPD then the written correspondence may be submitted electronically; if required, a paper copy must also be submitted by return receipt certified mail or similar service.

Retention of Records (to be completed by Owner or Operator or both)

1. The primary permittee shall retain the following records at the construction site or the records shall be readily available at a designated alternate location from commencement of construction until such time as a NOT is submitted in accordance with Part VI:
a. A copy of all Notices of Intent submitted to EPD;
b. A copy of the Erosion, Sedimentation and Pollution Control Plan required by this permit;
c. The design professional's report of the results of the inspection conducted in accordance with Part IV.A.5. of this permit;
d. A copy of all sampling information, results, and reports required by this permit;
e. A copy of all inspection reports generated in accordance with Part IV.D.4.a. of this permit;
f. A copy of all violation summaries and violation summary reports generated in accordance with Part 111.D.2. of this permit; and
g. 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 to the EPD at any time upon written notification to the permittee.

Notice of Termination Eligibility

1. For construction activities, by the permittee where the entire stand alone development has undergone final stabilization, all storm water discharges associated with construction activity that are authorized by this permit have ceased, the site is in compliance with this permit and all temporary BMPs have been removed. For construction activities where the primary permittee has elected to submit NOIs for separate phases of the stand alone development, the phase or phases of the stand alone development on the NOT shall correspond to the phase or phases on the NOI.
2. By the Owner or Operator when the Owner or Operator of the site changes. Where storm water discharges will continue after the identity of the Owner or Operator changes, the permittee must, prior to filing the Notice of Termination, notify any subsequent Owner or Operator of the permitted site as to the requirements of this permit.

The Notice of Termination Shall be Submitted by the following procedure (to be completed primary permittee)

All Notices of Termination by this permit shall be submitted by **return receipt certified mail** (or similar service) to the appropriate EPD District Office according to the schedule in Appendix A of this permit and to the Local Issuing Authority in jurisdictions authorized to issue a Land Disturbance Activity permit for the permittee's construction site pursuant to O.C.G.A. 12-7-1, et seq. If an electronic submittal service is provided by the EPD then the Notice of Termination may be submitted electronically; if required, a paper copy must also be submitted by return receipt certified mail or similar service.

V. Certifications

Design Professional's Certifications

"I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan (ESPCP) 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 State Soil and Water Conservation Commission as of January 1st 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 Georgia NPDES Permit No. GAR 100001 and that the ESPCP was prepared in accordance with Part IV of that permit."

"I certify under penalty of law that this Plan was prepared after a site visit to the locations described herein by myself or my authorized agent, under my supervision."

Design Professional's Signature: _____ Date: _____

Design Professional's GWSCC Level II Certification Number.: 29494 Expiration Date: 12/19/15

7-Day BMP Inspection by Design Professional

The below statement is to be signed by the Design Professional after construction has begun and initial BMPs have been installed and inspected.

The Design Professional was notified on _____ that installation of the initial sediment storage requirements and perimeter control BMPs had been completed. An inspection of these initial sediment storage and perimeter control BMPs was performed on _____. A copy of the inspection letter can be obtained from the Owner/Operator or the Design Professional.

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST INFRASTRUCTURE CONSTRUCTION PROJECTS

Project Name: Sun Valley Address: _____
City/County: Roswell/Fulton County Date on Plans: _____

TO BE SHOWN ON ESPC PLAN

1 The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1 of the year in which the land-disturbing activity was permitted.
(The completed Checklist must be submitted with the ESPC Plan or the Plan will not be reviewed)

2 Level II certification number issued by the Commission, signature and seal of the certified design professional.
(Signature, seal and Level II number must be on sheet pertaining to ESPC Plan or the Plan will not be reviewed)

3 The name and phone number of the 24-hour local contact responsible for erosion, sedimentation and pollution controls.

4 Provide the name, address and phone number of primary permittee.

5 Note total and disturbed acreage of the project or phase under construction.

6 Provide the GPS locations of the beginning and end of the infrastructure project. Give the Latitude and Longitude in decimal degrees.

7 Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.

8 Description of the nature of construction activity.

9 Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.

10 Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, etc. which may be affected.

11 Design professional's certification statement and signature that the site was visited prior to development of the ESPC Plan as stated on page 15 of the permit.

12 Design professional's certification statement and signature that the permittee's ESPC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated on page 15 of the permit.

13 Design professional certification statement and signature that the permittee's ESPC Plan provides for representative sampling as stated on page 20 of permit as applicable.

14 Clearly note the statement that "The design professional who prepared the ESPC Plan is to inspect the installation of the initial sediment storage requirements, perimeter control BMPs, and sediment basins in accordance with part IV.A.5. within 7 days after installation."

15 Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation without first acquiring the necessary variances and permits."

16 Clearly note the statement that "Amendments/revisions to the ESPC Plan which have a significant effect on BMPs with a hydraulic or design component they must be certified by the design professional and must be approved by the city of Roswell."

17 Clearly note the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a section 404 permit."

18 Clearly note statement that "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."

19 Clearly note statement that "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."

20 Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."

21 Any construction activity which discharges storm water into an Impaired Stream Segment, or within 1 linear mile upstream of and within the same watershed as, any portion of an Beta Impaired Stream Segment must comply with Part III C. of the Permit. Include the completed Appendix I listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment.

22 If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in item 21 above) at least six months prior to submittal of NOI, the ESPC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan."

23 BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Washout of the drum at the construction site is prohibited."

24 Provide BMPs for the remediation of all petroleum spills and leaks.

25 Description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed."

26 Description of the practices that will be used to reduce the pollutants in storm water discharges."

27 Description and chart or timeline of the intended sequence of major activities which disturb soils for the major portions of the site (i.e., initial perimeter and sediment storage BMPs, clearing and grubbing activities, excavation activities, utility activities, temporary and final stabilization).

28 Provide complete requirements of inspections and record keeping by the primary permittee.

29 Provide complete requirements of sampling frequency and reporting of sampling results."

30 Provide complete details for retention of records as per Part IV.F. of the permit."

31 Description of analytical methods to be used to collect and analyze the samples from each location."

32 Appendix B rationale for NTU values at all outfall sampling points where applicable."

33 Delinete all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged and also provide a summary chart of the justification and analysis for the representative sampling as applicable."

34 A description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the plan may combine all of the BMPs into a single phase."

35 Graphic scale and North arrow.

36 Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following:

Existing Contours: USGS 1:2000 Topographical Sheets
Proposed Contours: 1" 400' Centerline Profile

37 Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by EPD or the Georgia Soil and Water Conservation Commission). Please refer to the Alternative BMP Guidance Document found at www.gawcc.org.

38 Delination of the applicable 25-foot or 50-foot undisturbed buffers adjacent to State waters and any additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact.

39 Delination of on-site wetlands and all State waters located on and within 200 feet of the project site.

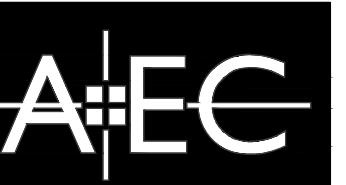
40 Delination and acreage of contributing drainage basins on the project site.

41 Delinete on-site drainage and off-site watersheds using USGS 1:2000 topographical sheets.

42 An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.



Ga SWCC #23494 Exp 12/19/15

Civil Engineering
Land Planning
Landscape ArchitectureWater Resources
Property Services
Arborist Services50 Warm Springs Circle
Roswell • Georgia • 30075
(770)641-1942 • www.aacad.com

EROSION CONTROL DETAILS

SUN VALLEY - PHASE I
ROSWELL FULTON COUNTY GEORGIADATE: 7/1/15
REVISIONS: 1
CITY COMMENTS: COPRIGHT AEC INCPROJECT NO: 13454
CIVIL DRAWN BY: LAF, JLM
CIVIL DESIGNED BY: LAF
LANDSCAPE DRAWN BY: LAF
LANDSCAPE DESIGNED BY: LAF
CHECKED BY: CJ
DATE: 05-15-15
SHEET: SHEET 1

DI.0

INSTALLATION:

1. INSTALL WHERE SHEET FLOW CONDITIONS EXIST.
2. WHERE NO SEDIMENT TRAP/STORMWATER DISPOSAL SYSTEM IS PRESENT, MAXIMUM SLOPE SHALL NOT EXCEED THOSE IN THE TABLE. ALSO, THE DRAINAGE AREA IS NOT TO EXCEED 1/4 ACRE PER 100 FT. OF SILT FENCE.
3. APPROVED SILT FENCE FABRICS ARE LISTED IN THE GEORGIA DEPARTMENT OF TRANSPORTATION QUALIFIED PRODUCTS LIST #36 (QPL-36). VERIFY FABRIC BY INSPECTION OF FABRIC NAME PRINTED EVERY 100 FEET OF SILT FENCE.
4. INSTALL ACCORDING TO APPROVED PLAN, AS SHOWN.
5. INSTALL ALONG CONTOURS WITH ENDS POINTING UPHILL.
6. INSTALL WHERE SHEET FLOW AREAS OF CONCENTRATED FLOW.
7. DRAINAGE AREA NOT TO EXCEED 1/4 ACRE PER 100 FT. OF SILT FENCE.
8. VERIFY FABRIC BY INSPECTION OF FABRIC NAME PRINTED EVERY 100 FEET OF SILT FENCE.
9. START POST INSTALLATION AT THE CENTER OF THE LOWEST POINT WITH REMAINING POSTS SPACED ACCORDING TO FIGURE.
10. PROTECT A RIPRAP, FILTER FABRIC, OR OTHER OUTLET PROTECTION DEVICE FOR ANY POINT WHERE FABRIC IS TOP THE SEDIMENT FENCE. ENSURE THAT THE MAXIMUM HEIGHT OF THE FENCE AT A PROTECTED, REINFORCED OUTLET DOES NOT EXCEED 1 FT. AND THAT SUPPORT POST SPACING DOES NOT EXCEED 4 FT.
11. USE MINIMUM 18" OVERLAP AT FABRIC ENDS.
12. USE A DOUBLE ROW OF TYPE "C" SILT FENCE ALONG STREAM BUFFERS AND OTHER SENSITIVE AREAS.
13. A TRENCH 6" IN DEPTH SHALL BE EXCAVATED WITH EQUIPMENT SUCH AS A TRENCHING MACHINE OR MOTOR GRADER, OR, IF EQUIPMENT CANNOT BE OPERATED ON THE SITE, BY HAND.
14. POST INSTALLATION SHALL START AT THE CENTER OF THE LOW POINT (IF APPLICABLE) WITH THE REMAINING POSTS SPACED A MAXIMUM OF 4 FEET APART. POSTS SHALL BE INSTALLED IN A LINE AT LEAST 18 INCHES APART. WHERE AN 18 INCH DEPTH IS IMPOSSIBLE TO ACHIEVE, POSTS SHALL BE ADEQUATELY SECURED TO PREVENT OVERTURNING OF THE FENCE DUE TO SEDIMENT LOADING.
15. FILTER FABRIC SHALL BE ATTACHED TO THE POST BY WIRE, CORD, POCKETS, STAPLES, NAILS, OR OTHER ACCEPTABLE MEANS. THE FILTER FABRIC SHALL BE INSTALLED IN SUCH A MANNER THAT 8 INCHES OF FABRIC IS LEFT AT THE BOTTOM TO BE BURIED AND A MAXIMUM OVERLAP OF 18 INCHES IS PROVIDED AT ALL SPLICE JOINTS. THE FABRIC SHALL BE TENSIONED IN THE TRENCH SUCH THAT 4 TO 6 INCHES OF FABRIC IS AGAINST THE SIDE OF THE TRENCH WITH 2 TO 4 INCHES OF FABRIC ACROSS THE BOTTOM IN THE UPSTREAM DIRECTION.

POSTS AND WOVEN WIRE SUPPORT:

POSTS SHALL BE WELDED AND HAVE A MINIMUM LENGTH OF 5 FEET. POSTS SHALL BE "U" OR "C" SHAPED AND HAVE A MINIMUM WEIGHT OF 3 POUNDS PER FOOT. THE POSTS SHALL HAVE PROJECTIONS FOR FASTENING THE WOVEN WIRE AND FILTER FABRIC. MAXIMUM POSTS SPACING SHALL BE 4 FEET. A WOVEN WIRE SUPPORT FENCE SHALL BE USED WITH TYPE "C" FENCE. FILTER FABRIC SHALL BE AT LEAST 36 INCHES HIGH AND SHALL HAVE AT LEAST 6 HORIZONTAL WIRES. VERTICAL WIRES SHALL HAVE A MAXIMUM SPACING OF 12 INCHES. THE TOP AND BOTTOM WIRES SHALL BE AT LEAST 10 GAUGE AND ALL OTHER WIRES SHALL BE AT LEAST 12 1/2 GAUGE.

FILTER FABRIC FOR TYPE "C" FENCES:

APPROVED SILT FENCE FABRIC ARE LISTED IN THE GEORGIA DEPARTMENT OF TRANSPORTATION QUALIFIED PRODUCTS LIST #36 (QPL-36).

SILT FENCE SEDIMENT BARRIER
NOT TO SCALE TYPE C ONLY

CRITERIA FOR SILT FENCE PLACEMENT

LAND SLOPE (PERCENT)	MAX. SLOPE LENGTH BEHIND FENCE (FEET)
< 2	100
2 TO 5	75
5 TO 10	50
10 TO 20	25
> 20*	15

* IN AREAS WHERE THE SLOPE IS GREATER THAN 20%, A FLAT AREA LENGTH OF 10 FEET BETWEEN THE TOE OF THE SLOPE TO THE FENCE SHOULD BE PROVIDED.

NOTE: USE A DOUBLE ROW OF SILT FENCE AS SHOWN ON PLANS AND ALONG STREAM BUFFERS AND OTHER SENSITIVE AREAS.

Maintenance:

1. INSPECT BARRIERS AT THE END OF EACH WORKING DAY, OR AFTER EACH RAIN, AND REPAIR OR CLEAN AS NECESSARY.
2. REMOVE SEDIMENT FROM BARRIER ONCE IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE BARRIER.
3. PROPERLY DISPOSE OF SEDIMENT AND STABILIZE IT WITH VEGETATION.
4. REPLACE FILTER FABRIC AS DETERMINED.
5. DESIGN LIFE OF GEOTEXTILE SHOULD BE APPROXIMATELY 6 MONTHS.
6. MAINTAIN UNTIL THE PROJECT IS VEGETATED OR OTHERWISE STABILIZED.
7. REMOVE BARRIERS AND ACCUMULATED SEDIMENT AND STABILIZE THE EXPOSED AREA WHEN THE PROJECT IS STABILIZED.

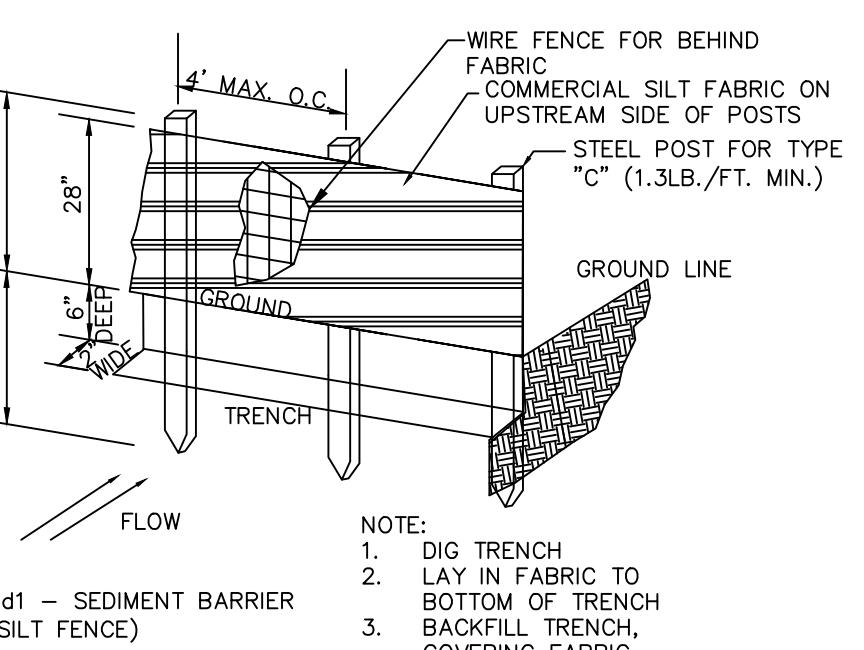
THE FABRIC SHALL MEET THE FOLLOWING PHYSICAL OR DIMENSIONAL REQUIREMENTS.

FABRIC REQUIREMENTS FOR TYPE-C

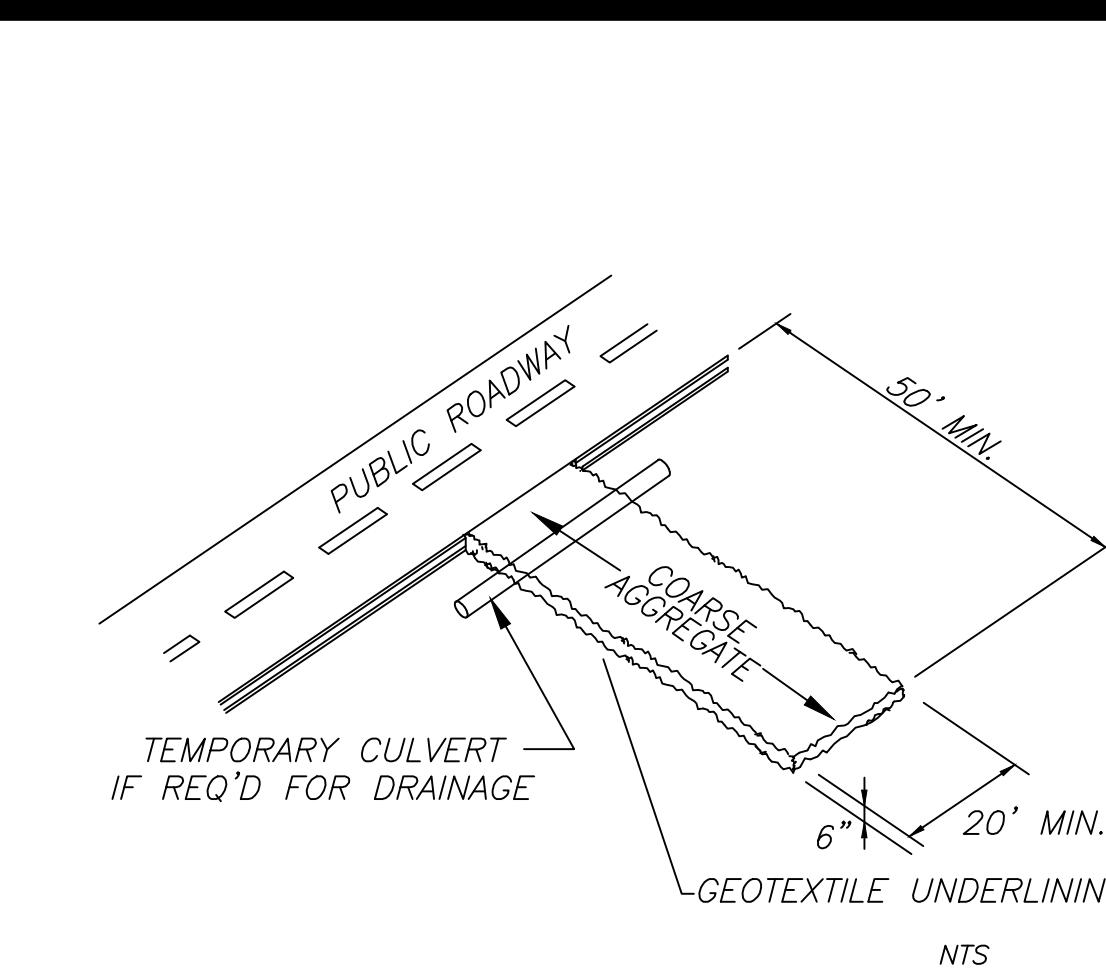
TENSILE STRENGTH (LBS. MIN.) (1) (ASTM D-4632)	WRAP-120 FILL-180
ELONGATION (%MAX.) (ASTM D-4632)	40
AOS (APPARENT OPENING SIZE) (MAX. SIEVE SIZE) (ASTM D-4751)	NO. 30
FLOW RATE, GAL/MIN/FT2 (GDT-87)	70
ULTRAVIOLET STABILITY (2) (ASTM D-4632 AFTER 300 HOURS. WEATHERING IN ACCORDANCE WITH ASTM D-4355)	80
BURSTING STRENGTH, (PSI MIN) (ASTM D-3786 DIAPHRAGM BURSTING STRENGTH TESTER)	175
MINIMUM FABRIC WIDTH (IN)	36

(1) MINIMUM ROLL AVERAGE OF FIVE SPECIMENS

(2) PERCENT OF REQUIRED INITIAL MINIMUM TENSILE STRENGTH.



NOTE: 1. DIG TRENCH
2. LAY IN FABRIC TO BOTTOM OF TRENCH
3. BACKFILL TRENCH, COVERING FABRIC.



(Co) CONSTRUCTION EXIT
NOT TO SCALE

DESIGN CRITERIA:

FORMAL DESIGN IS NOT REQUIRED. THE FOLLOWING STANDARDS SHALL BE USED.

AGGREGATE SIZE:

STONE WILL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5 TO 3.5 INCH STONE).

PAD THICKNESS:

THE GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6 INCHES.

PAD WIDTH:

AT A MINIMUM, THE WIDTH SHOULD EQUAL FULL WIDTH OF ALL POINTS OF VEHICULAR EGRESS, BUT NOT LESS THAN 20 FEET WIDE.

WASHING:

IF THE ACTION OF THE VEHICLE TRAVELING OVER THE GRAVEL PAD DOES NOT SUFFICIENTLY REMOVE THE MUD, THE TIRES SHOULD BE WASHED PRIOR TO ENTRANCE INTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND PROVISIONS THAT INTERCEPT THE SEDIMENT-LADEN RUNOFF AND DIRECT IT INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

CONSTRUCTION SPECIFICATIONS:

IT IS RECOMMENDED THAT THE ENTRANCE AREA BE EXCAVATED TO A DEPTH OF 3 INCHES AND BE CLEARED OF ALL VEGETATION AND ROOTS.

DIVERSION RIDGE:

ON SITES WHERE THE GRADE TOWARD THE PAVED AREA IS GREATER THAN 2%, A DIVERSION RIDGE 6 TO 8 INCHES HIGH WITH 3:1 SIDE SLOPES SHALL BE CONSTRUCTED ACROSS THE FOUNDATION APPROXIMATELY 15 FEET ABOVE THE ROAD.

GEOTEXTILE:

THE GEOTEXTILE UNDER LINER MUST BE PLACED THE FULL LENGTH AND WIDTH OF THE ENTRANCE. GEOTEXTILE SELECTION SHALL BE BASED ON AASHTO M288-98 SPECIFICATIONS.

- 1) FOR SUB-GRADES WITH A CBR GREATER THAN OR EQUAL TO 3 OR SHEAR STRENGTH GREATER THAN 90 kPa, GEOTEXTILE MUST MEET REQUIREMENTS OF SECTION AASHTO M288-96 SECTION 7.3, STABILIZATION REQUIREMENTS.
- 2) FOR SUB-GRADES WITH A CBR BETWEEN 1 AND 3 OR SHEAR STRENGTH BETWEEN 30 AND 90 kPa, GEOTEXTILE MUST MEET REQUIREMENTS OF SECTION AASHTO M299-96 SECTION 7.4, STABILIZATION REQUIREMENTS.

MAINTENANCE:

THE EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 1.5 - 3.5 INCH STONE, AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEAN OUT OF ANY STRUCTURES TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES OR SITE ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

CONSTRUCTION SPECIFICATIONS

MATERIALS:

TOPSOIL SHOULD BE FRIABLE AND LOAMY, FREE OF DEBRIS, OBJECTIONAL WEEDS AND STONES, AND CONTAIN NO TOXIC SUBSTANCE THAT MAY BE HARMFUL TO PLANT GROWTH. THE PH RANGE OF 5.0-7.5 IS ACCEPTABLE. SOLUBLE SALTS SHOULD NOT EXCEED 500 PPM.

TESTING:

FIELD EXPLORATION SHOULD BE MADE TO DETERMINE WHETHER THE QUANTITY AND QUALITY OF SURFACE SOIL JUSTIFIES STRIPPING.

STRIPPING:

STRIPPING SHOULD BE CONFINED TO THE IMMEDIATE CONSTRUCTION AREA. A 4 TO 6 INCH STRIPPING DEPTH IS COMMON, BUT MAY VARY DEPENDING ON THE PARTICULAR SOIL.

TOPSOIL PH:

IF PH VALUE IS LESS THAN 6.0, LIME SHALL BE ADDED AND INCORPORATED WITH THE TOPSOIL TO ADJUST THE PH TO 6.5 OR HIGHER. TOPSOILS CONTAINING SOLUBLE SALTS GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.

STOCKPILES:

THE LOCATION OF TOPSOIL STOCKPILES SHOULD NOT OBSTRUCT NATURAL DRAINAGE OR CAUSE OFF-SITE ENVIRONMENTAL DAMAGE.

STABILIZATION:

STOCKPILES SHALL BE CONTAINED BY SEDIMENT BARRIERS TO PREVENT SEDIMENTATION ON ADJACENT AREAS. STOCKPILES SHALL BE STABILIZED IN ACCORDANCE WITH SPECIFICATIONS D-91 AND D-92 - DISTURBED AREA STABILIZATION (WITH MULCHING) AND (WITH TEMPORARY GRASSING), RESPECTIVELY, OR Pm - POLYACRYLAMIDE OR Tb - TACKIFIERS AND BINDERS.

SITE PREPARATION (WHERE TOPSOIL IS TO BE ADDED)

TOPSOILING:

WHEN TOPSOILING, MAINTAIN NEEDED EROSION CONTROL PRACTICES SUCH AS DIVERSIONS, GRADES, DRAINS, ETC. FOR THE DURATION OF THE WORK.

GRADING:

GRADES ON THE AREAS TO BE TOPOSOILED WHICH HAVE BEEN PREVIOUSLY ESTABLISHED SHALL BE MAINTAINED.

LIMING:

SOC TESTS SHOULD BE USED TO DETERMINE THE PH OF THE SOIL WHERE THE PH OF THE SOIL IS LESS THAN 6.0. LIME SHOULD BE SPREAD AT THE RATE OF 100 POUNDS PER 1,000 SQUARE FEET. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURE.

BONDING:

USE ONE OF THE FOLLOWING METHODS TO INSURE BINDING OF TOPSOIL AND SUBSOIL:

1. IMMEDIATELY AFTER THE AREAS TO BE TOPOSOILED HAVE BEEN BROUGHT TO GRADE AND IMMEDIATELY PRIOR TO DUMPING AND SPREADING THE TOPSOIL, THE SUBGRADE SHALL BE LOOSENE D BY DISCING OR SCARIFYING TO A DEPTH OF AT LEAST 3 INCHES.
2. TRACKING: PASSING A BULLDOZER OVER THE ENTIRE SURFACE AREA OF THE SLOPE TO LEAVE HORIZONTAL DEPRESSIONS.

APPLYING TOPSOIL:

1. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING SOIL STRUCTURE.
2. A UNIFORM APPLICATION OF 5 INCHES (UNSETTLED) IS RECOMMENDED, BUT MAY BE ADJUSTED AT THE DISCRETION OF THE ENGINEER OR LANDSCAPE ARCHITECT.

TOPSOILING:

STEP 1: CUT TERMINAL SLOT.

TRANSVERSE CHECK SLOT INSTALLATION:

STEP 1: CUT CHECK SLOT. TEMPORARILY STAKE MAT UNDER MODERATE TENSION.

UPSTREAM TERMINAL INSTALLATION:

STEP 1: CUT TERMINAL SLOT.

DOWNSTREAM TERMINAL INSTALLATION:

STEP 2: STAKE MAT INTO SLOT.

TRANSVERSE CHECK SLOT INSTALLATION:

STEP 2: WORK UPSTREAM ACROSS CHECK SLOT LAP BACK 15'.

DOWNSTREAM TERMINAL INSTALLATION:

STEP 3: TUCK MAT LAP INTO SLOT AND STAKE.

TRANSVERSE CHECK SLOT INSTALLATION:

STEP 3: BACKFILL AND COMPACT.

UPSTREAM TERMINAL INSTALLATION:

STEP 4: BACKFILL AND PROGRESS UPSTREAM. OUT TURN TERMINAL STAKE WHEN NO LONGER NEEDED FOR TENSIONING.

TRANSVERSE CHECK SLOT INSTALLATION:

STEP 4: BACKFILL AND PROGRESS UPSTREAM. OUT TURN TERMINAL STAKE WHEN NO LONGER NEEDED FOR TENSIONING.

DOWNSTREAM TERMINAL INSTALLATION:

STEP 4: BACKFILL AND PROGRESS UPSTREAM. OUT TURN TERMINAL STAKE WHEN NO LONGER NEEDED FOR TENSIONING.

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EROSION CONTROL DETAILS

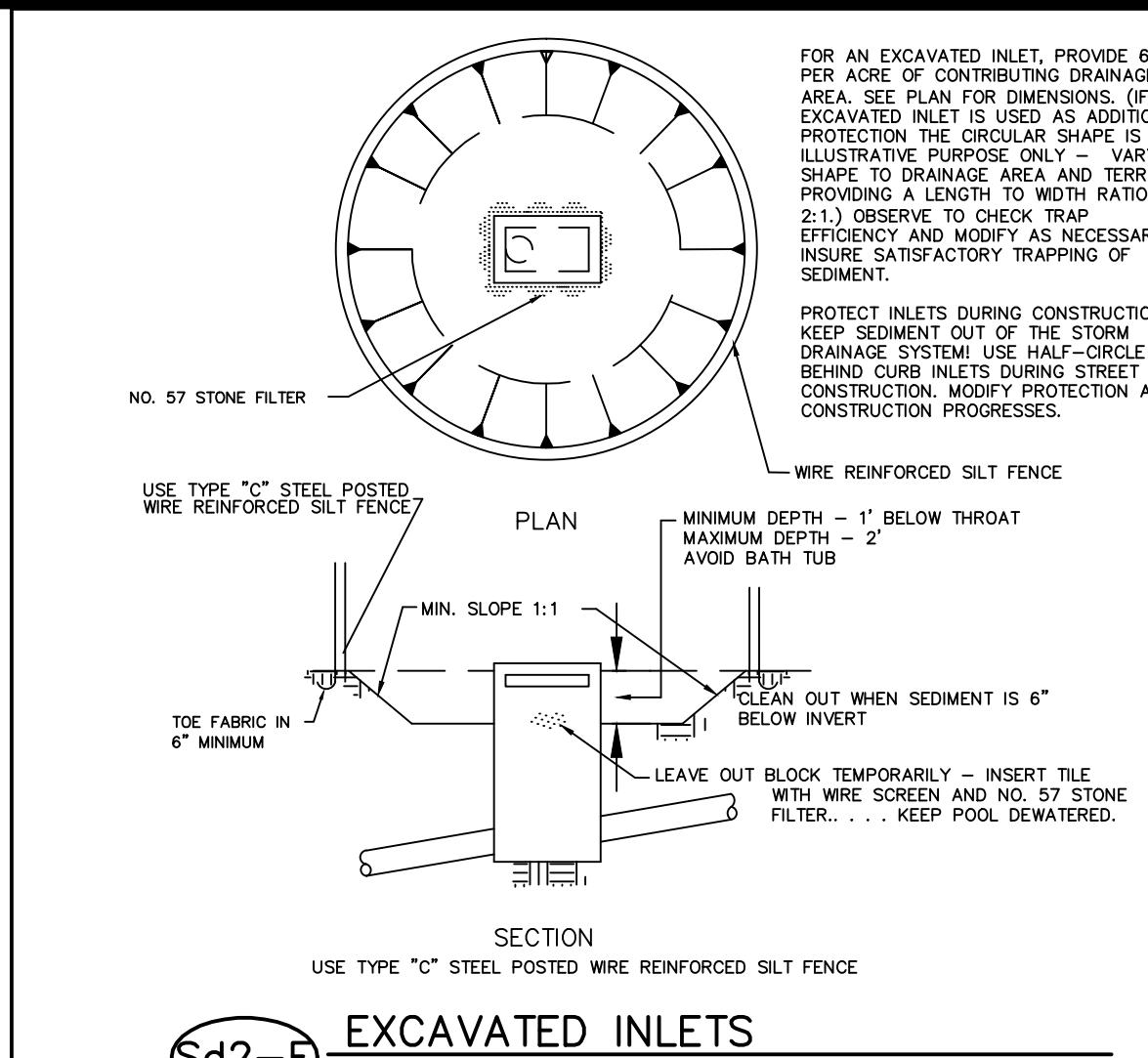
SUN VALLEY - PHASE I ROSWELL FULTON COUNTY GEORGIA

NO.	REVISIONS	CITY COMMENTS	DATE
1			7/1/15

PROJECT NO: 13454
CIVIL DRAWN BY: LAF, JLM
CIVIL DESIGNED BY: LAF
LANDSCAPE DRAWN BY:
LANDSCAPE DESIGNED BY:
CHECKED BY: CJ
DATE: 05-15-15

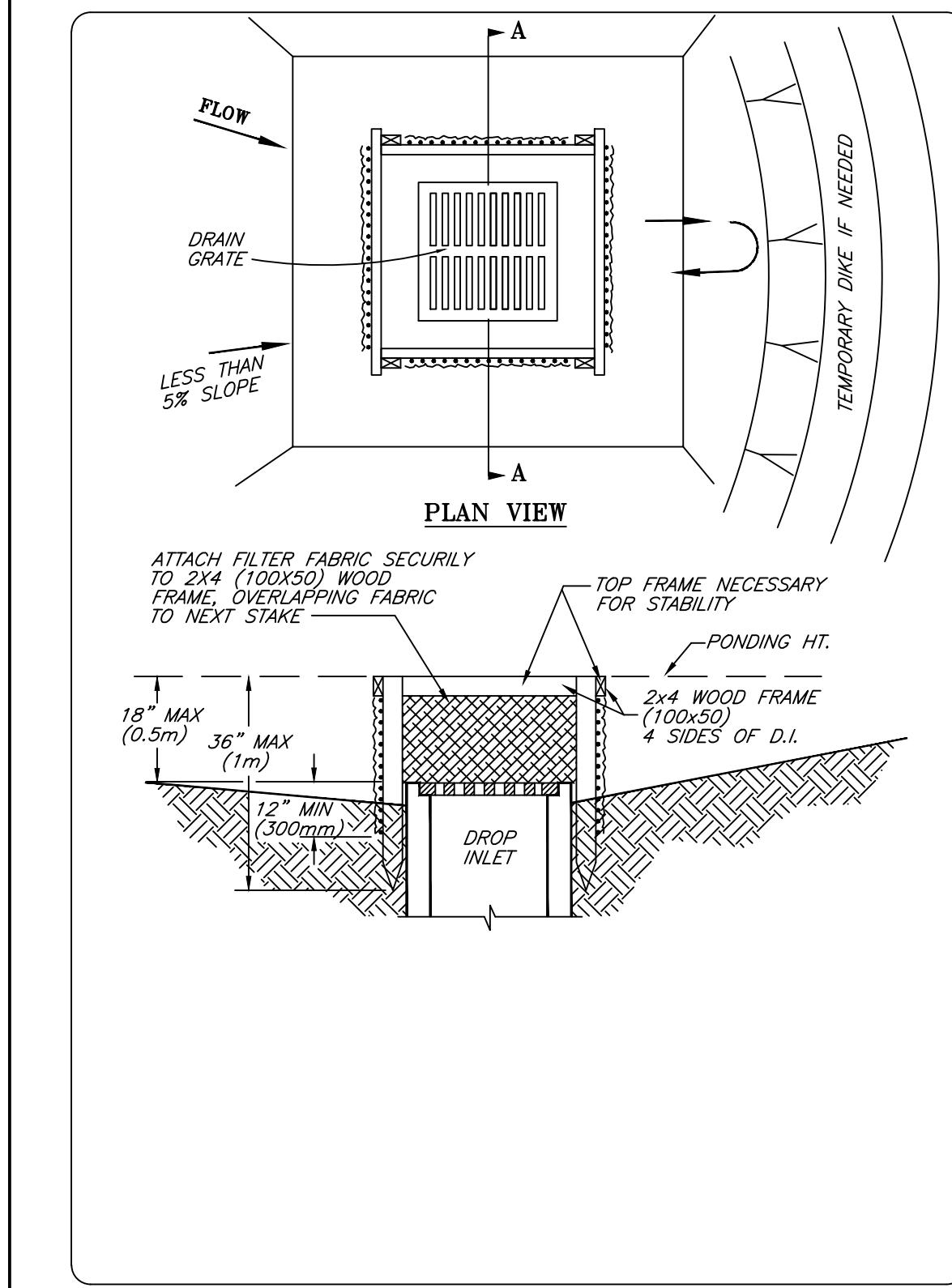
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EXCAVATED INLETS NOT TO SCALE

NOTE: See Calculations this sheet for actual dimensions for phase 2 erosion control.



FOR AN EXCAVATED INLET, PROVIDE 67 CY PER ACRE OF CONTRIBUTING DRAINAGE AREA. THE INLET SHOULD BE CIRCULAR. AN EXCAVATED INLET IS USED AS ADDITIONAL PROTECTION. THE CIRCULAR SHAPE IS FOR ILLUMINATING THE INLET. THE INLET MAY PROVE TO ORNAMENTAL AREA AND TERRAIN, PROVIDED A LENGTH TO WIDTH RATIO OF 2:1. OBSERVE CHECK TRAP EFFICIENCY AND MODIFY AS NECESSARY TO INSURE SATISFACTORY TRAPPING OF SEDIMENT.

PROTECT INLETS DURING CONSTRUCTION. KEEP SEDIMENT OUT OF THE STORM DRAINAGE SYSTEM. USE HALF-CIRCLE BERM TO PROTECT INLET. MODIFY PROTECTION AS CONSTRUCTION PROGRESSES.

WIRE REINFORCED SILT FENCE

PLAN

MIN. SLOPE 1:1

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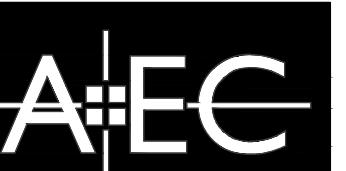
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EROSION CONTROL DETAILS

SUN VALLEY - PHASE I

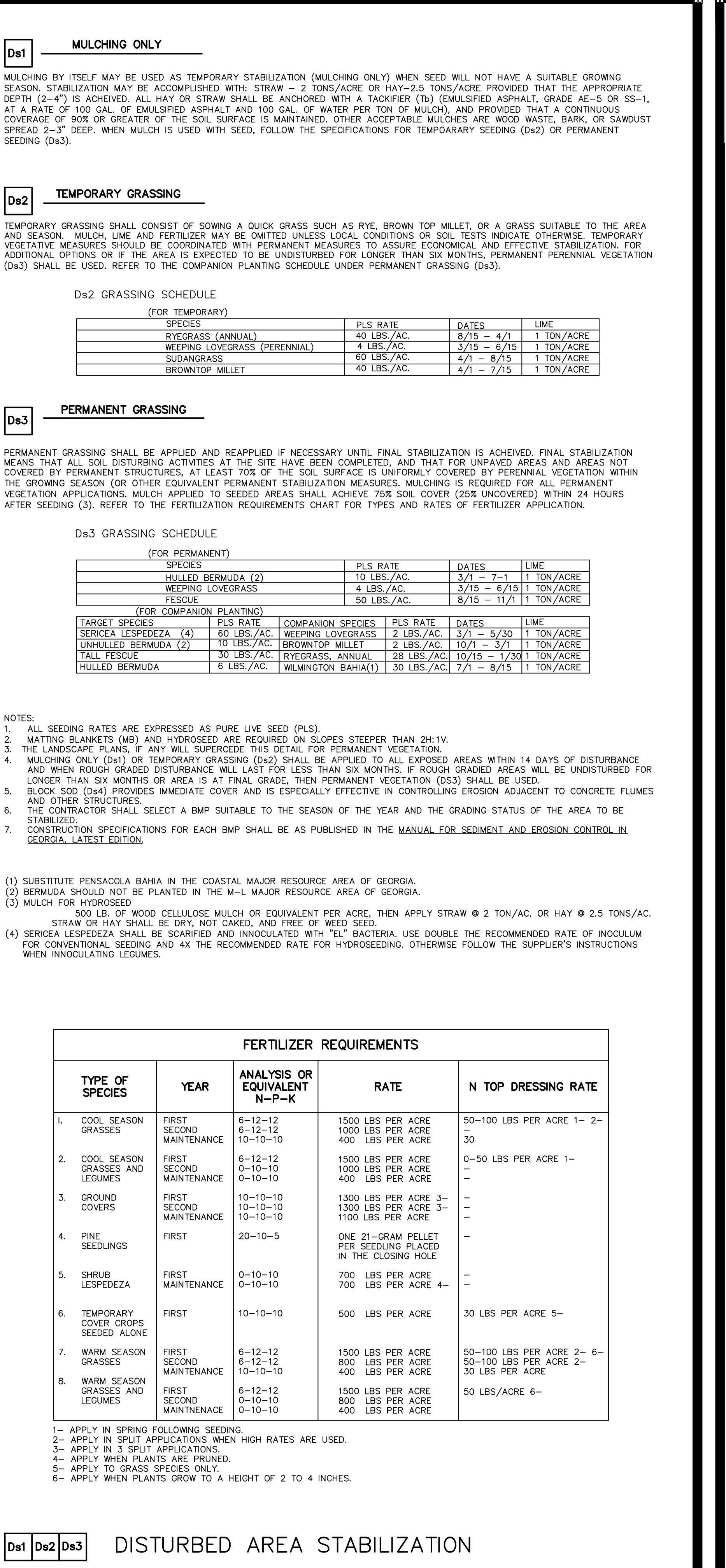
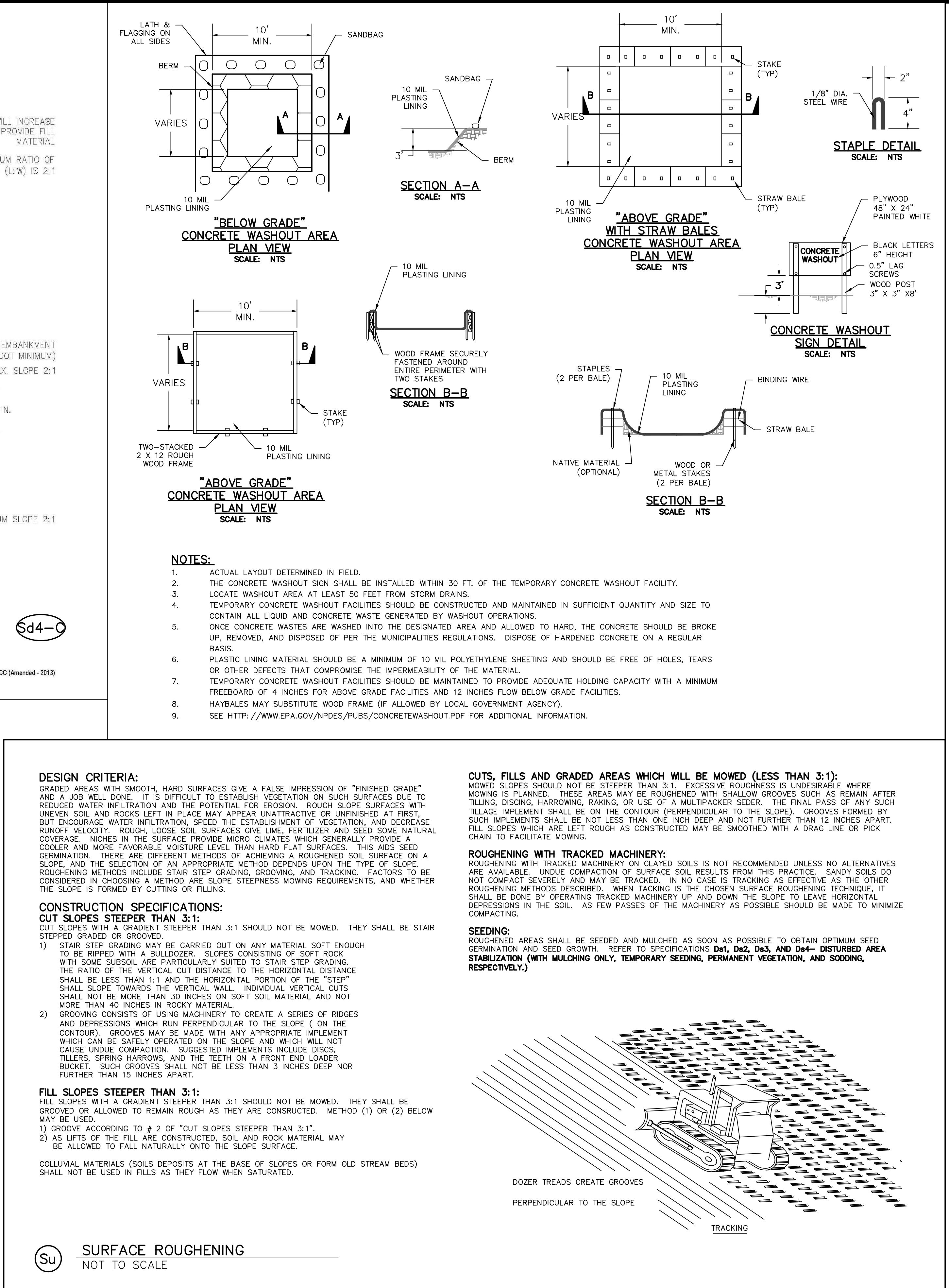
ROSWELL FULTON COUNTY GEORGIA

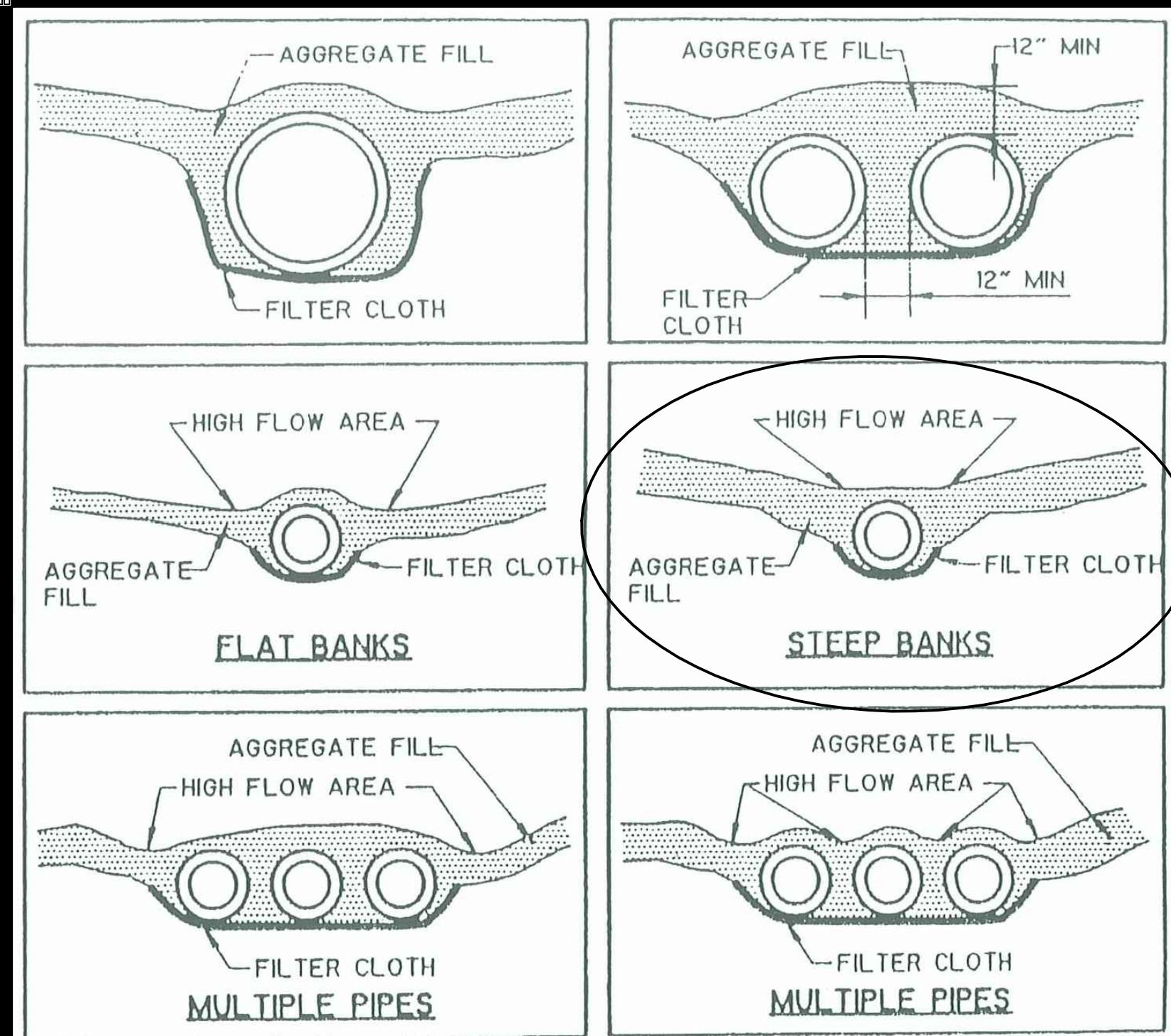
NO.	DATE	REVISIONS	CITY COMMENTS
1	7/1/15		COPRIGHT AEC INC

PROJECT NO: 13454
CIVIL DRAWN BY: LAF, JLM
CIVIL DESIGNED BY: LAF
LANDSCAPE DRAWN BY:
LANDSCAPE DESIGNED BY:
CHECKED BY: CJ
DATE: 05-15-15

SHEET

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CONFIGURATION OF TEMPORARY CULVERT CROSSING

(Sr-C)

TEMPORARY CULVERT CROSSING
 1. THE INVERT ELEVATION OF THE CULVERT SHALL BE INSTALLED ON THE NATURAL STREAMBED GRADE.
 2. THE CULVERT(S) SHALL EXTEND A MINIMUM OF ONE FOOT BEYOND THE UPSTREAM AND DOWNSTREAM TOE OF THE AGGREGATE PLACED AROUND THE CULVERT. IN NO CASE SHALL THE CULVERT EXCEED 40 FEET IN LENGTH.
 3. THE CULVERT(S) SHALL BE COVERED WITH A MINIMUM OF 12 INCHES OF COMPAKTED AGGREGATE FILL.
 MAINTENANCE:
 THE STRUCTURE SHALL BE INSPECTED AFTER EVERY RAINFALL AND AT LEAST ONCE A WEEK, WHETHER IT HAS RAINED OR NOT, AND ALL DAMAGES REPAIRED IMMEDIATELY. THE STRUCTURE SHALL BE REMOVED IMMEDIATELY AFTER CONSTRUCTION IS FINISHED, AND THE STREAMBED AND BANKS MUST BE STABILIZED. REFER TO SPECIFICATION Bf - BUFFER ZONE.

GENERAL NOTES:
 1. Not to scale.
 2. This type of crossing can be installed in both a wet or dry weather stream condition where the drainage area exceeds 10 acres.
 3. Remove during cleanup.

NOTES:
 1. HANG STAKES AND PLANT STAKES DURING THE DORMANT SEASON.
 2. USE HEALTHY, STRAIGHT AND LIVE WOOD AT LEAST 1 YEAR OLD.
 3. MAKE CLEAN CUTS AND DO NOT DAMAGE STAKES DURING PLANTING. FOR INSTALLATION, USE A PILOT BAR IN FIRM SOILS.
 4. SOAK CUTTINGS FOR 24 HOURS (MIN.) PRIOR TO INSTALLATION.
 5. TAMP THE SOIL AROUND THE STAKE.

NOT TO SCALE

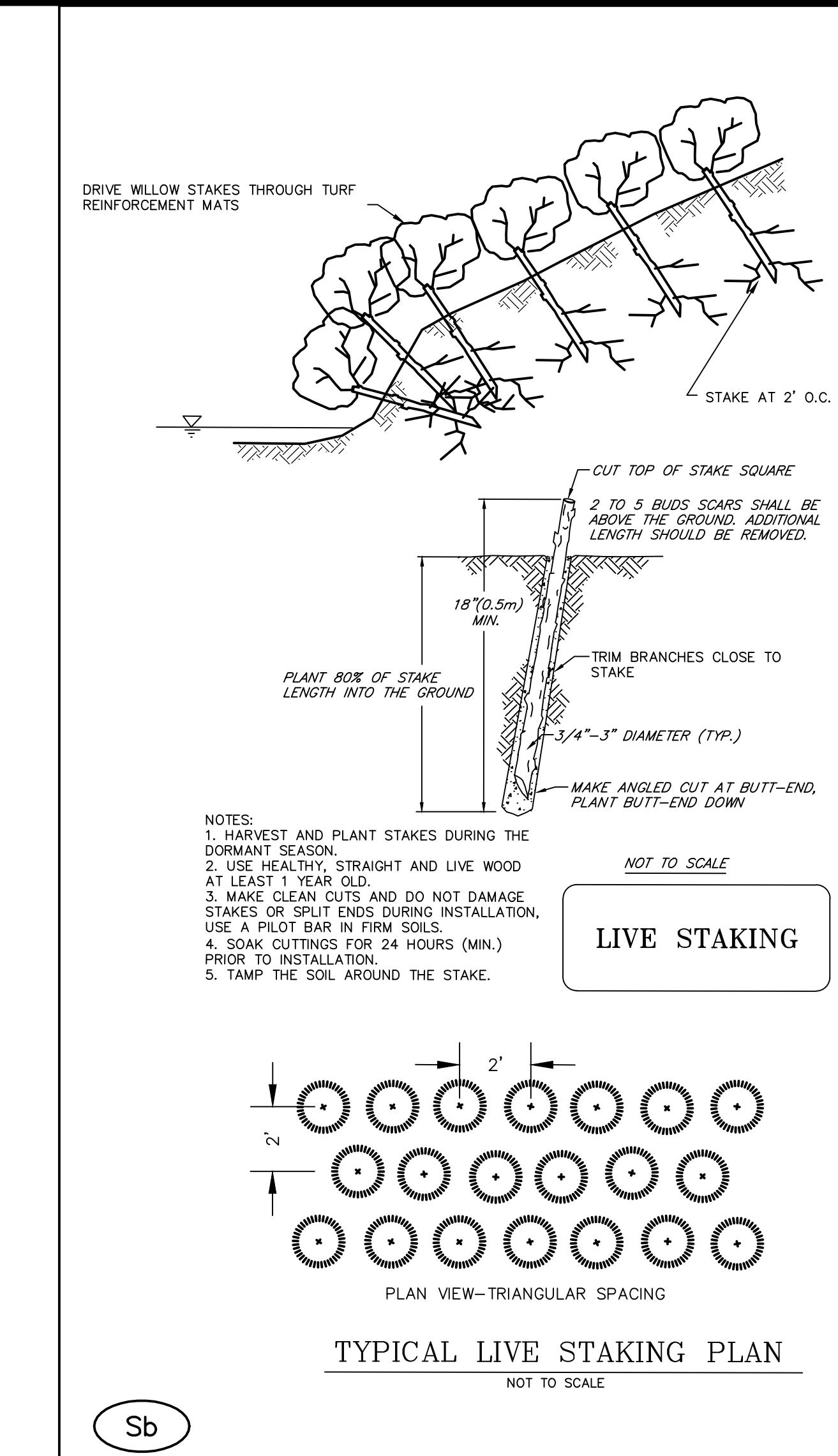
LIVE STAKING

NOT TO SCALE

PLAN VIEW - TRIANGULAR SPACING

TYPICAL LIVE STAKING PLAN

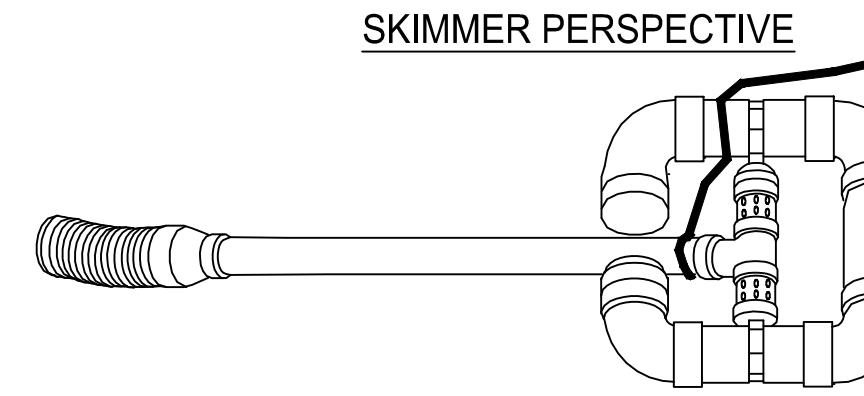
NOT TO SCALE



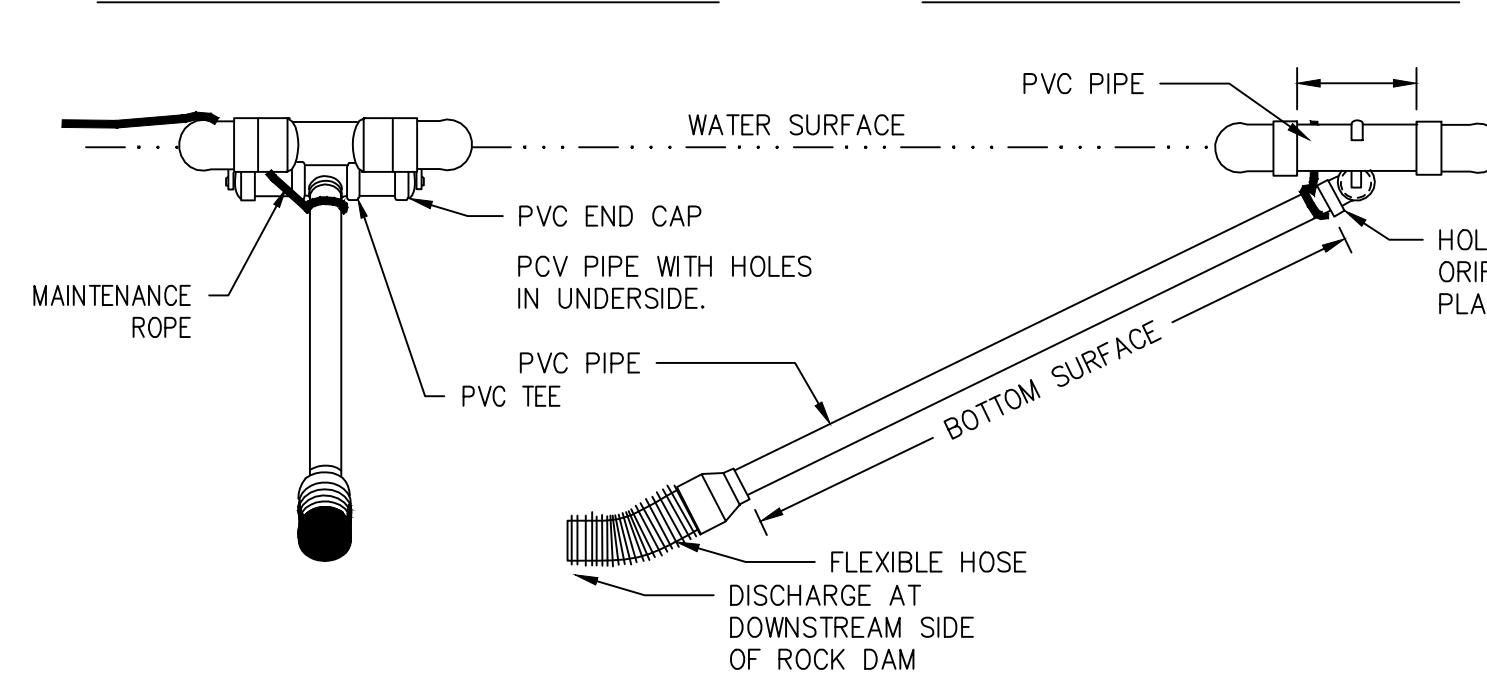
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TEMPORARY SEDIMENT TRAP

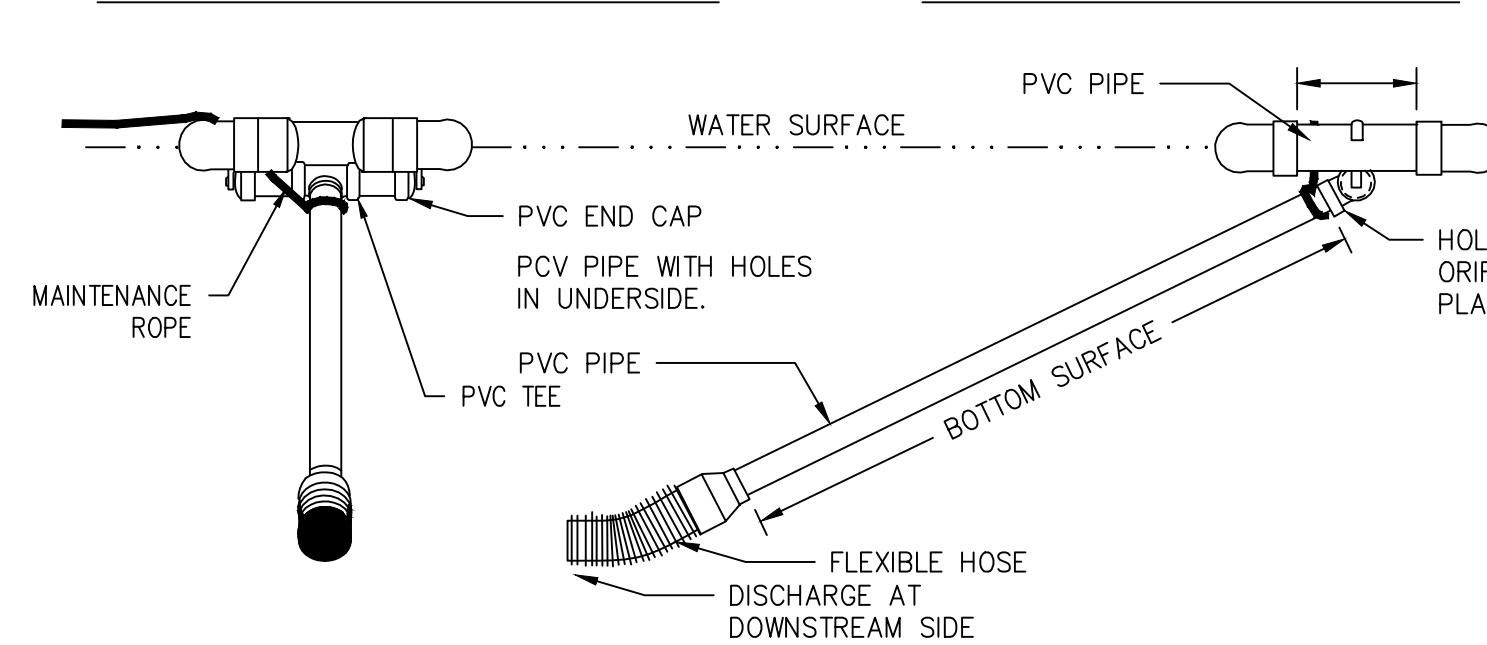
NOTE:
 SKIMMER CONFIGURATION SHOWN IS TYPICAL. THE DESIGNER/ENGINEER MAY SUBMIT AN ALTERNATE SKIMMER DETAIL FOR REVIEW.



SKIMMER PERSPECTIVE



SKIMMER FRONTAL SECTION VIEW



SKIMMER SIDE SECTION VIEW

When a FLOATING SURFACE SKIMMER is used, show the following information along with each sediment pond, trap or basin being used on the site:

1. Pond, trap or basin size, length* (top and bottom) width* (top and bottom) and depth =
 Temporary Pond Sd3 #1
 Length: 168' top, 34' bottom
 Width: 71' top, 32' bottom
 Depth: 4 feet

2. Time to Drain (hrs) = 72 hours
 3. Skimmer Dimensions (orifice and head size)** 1.5" Diameter orifice, 2.0" Skimmer size
 Faircloth or other approved by engineer

*feet, ** inches

1. Pond, trap or basin size, length* (top and bottom) width* (top and bottom) and depth =
 Temporary Pond Sd2 #2
 Length: 250' top, 50' bottom
 Width: 90' top, 22' bottom
 Depth: 3 feet

2. Time to Drain (hrs) = 72 hours
 3. Skimmer Dimensions (orifice and head size)** 1.5" Diameter orifice, 2.0" Skimmer size
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*feet, ** inches

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 Width: 90' top, 22' bottom
 Depth: 3 feet

2. Time to Drain (hrs) = 72 hours
 3. Skimmer Dimensions (orifice and head size)** 1.5" Diameter orifice, 2.0" Skimmer size
 Faircloth or other approved by engineer

*feet, ** inches

1. Pond, trap or basin size, length* (top and bottom) width* (top and bottom) and depth =
 Temporary Pond Sd2 #2
 Length: 250' top, 50' bottom
 Width: 90' top, 22' bottom
 Depth: 3 feet

2. Time to Drain (hrs) = 72 hours
 3. Skimmer Dimensions (orifice and head size)** 1.5" Diameter orifice, 2.0" Skimmer size
 Faircloth or other approved by engineer

*feet, ** inches

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 Temporary Pond Sd2 #2
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 3. Skimmer Dimensions (orifice and head size)** 1.5" Diameter orifice, 2.0" Skimmer size
 Faircloth or other approved by engineer

*feet, ** inches

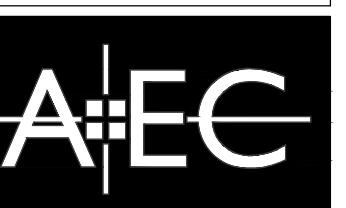
1. Pond, trap or basin size, length* (top and bottom) width* (top and bottom) and depth =
 Temporary Pond Sd2 #2
 Length: 250' top, 50' bottom
 Width: 90' top, 22' bottom
 Depth: 3 feet

2. Time to Drain (hrs) = 72 hours
 3. Skimmer Dimensions (orifice and head size)** 1.5" Diameter orifice, 2.0" Skimmer size
 Faircloth or other approved by engineer



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EROSION CONTROL DETAILS

SUN VALLEY - PHASE I ROSWELL FULTON COUNTY GEORGIA

NO.	REVISIONS	CITY COMMENTS	DATE
1			7/1/15

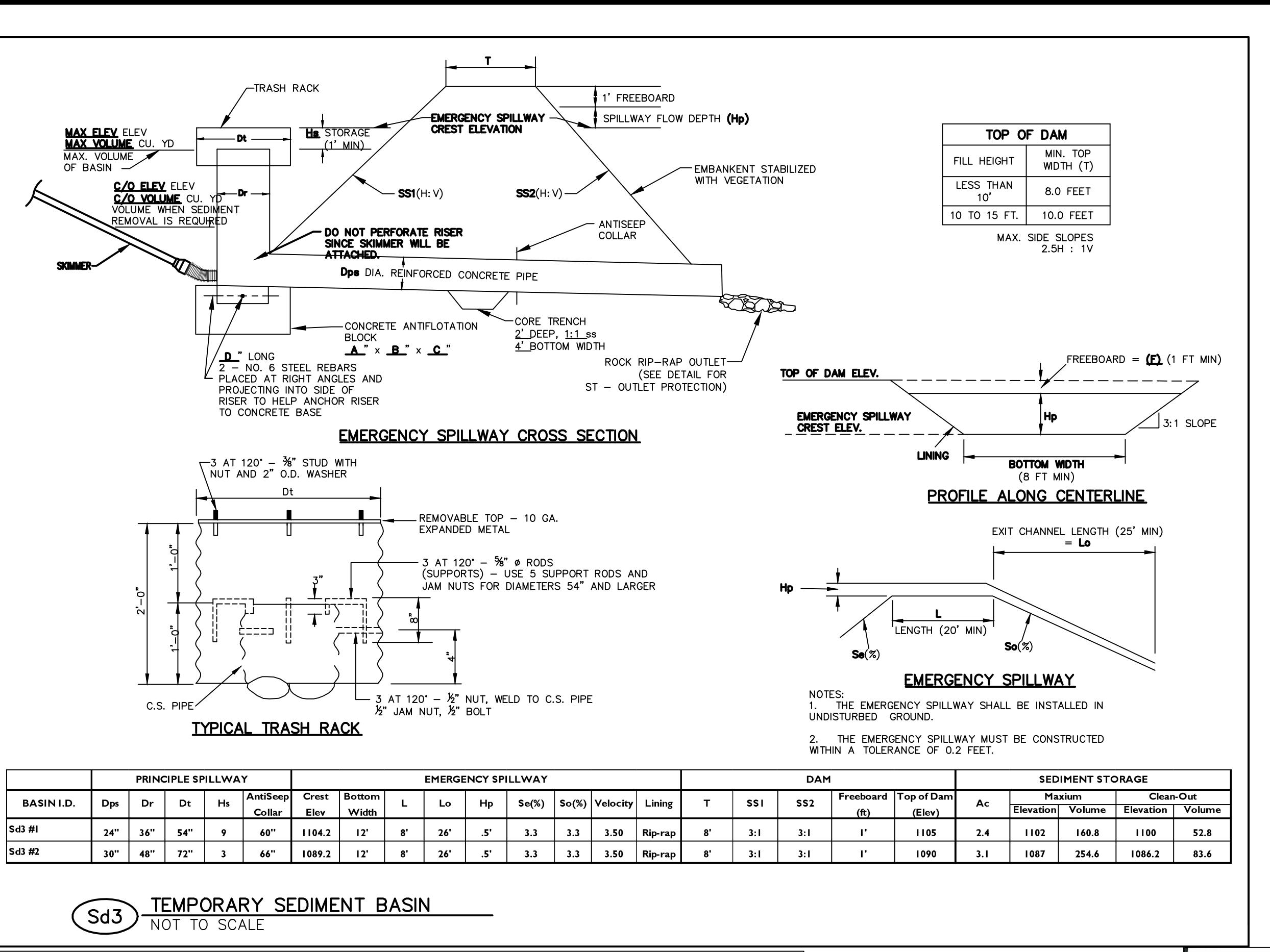
PROJECT NO.: 13454
CIVIL DRAWN BY: LAF, JLM
CIVIL DESIGNED BY: LAF
LANDSCAPE DRAWN BY: LAF
LANDSCAPE DESIGNED BY: LAF
CHECKED BY: CJ
DATE: 05-15-15

SHEET

DI.4

TEMPORARY SEDIMENT BASIN DESIGN SHEET			
Computed by: Laf	Date: 5/15/2015	Checked by: _____	_____
Project Name: Sun Vally	Basin No.: Sd3 #1	Total area to basin: 3.03 Ac	Disturbed area to basin: 3.03 Ac
Volume			
1. Compute minimum required storage volume (Vs)	Vs = 67 cfs * disturbed area		
Vs = 20.3 cfs * disturbed area	Vs = 67 cfs * disturbed area		
2. Compute volume of basin at clean-out (Vc)	Vc = 22 cfs * disturbed area		
Vc = 66.7 cfs * disturbed area	Vc = 22 cfs * disturbed area		
3. Determine elevation corresponding to minimum required storage volume, Vs	Min. riser crest elevation 1046.5 ft (determined by stage/storage relationship)		
4. Determine elevation corresponding to clean-out volume, Vc	Clean-out elevation = 1044.7 ft (determined by stage/storage relationship)		
Note: clean-out elevation shall be clearly marked on the riser or by a post near riser			
5. Compute length of riser	Riser length = Minimum elevation of riser crest - lowest elev of pipe at riser		
Riser length = 1046.5 ft - 1030.9 ft	Riser length = 15.6 ft		
Stormwater Runoff			
6. Compute peak discharge from a 2-yr, 24-hr storm event	Q _{2-yr} = 12.49 cfs (Attach a runoff computation sheet)		
7. Compute peak discharge from 25-yr, 24-hr storm event	Q _{25-yr} = 17.11 cfs (Attach a runoff computation sheet)		
Surface Area/Configuration Design			
8. Compute minimum basin surface area (S _{min})	S _{min} = 0.01 ac/ft ² * Q _{2-yr}		
S _{min} = 0.1249 ac = 5441 sf	S _{min} = 0.1249 ac = 5441 sf		
9. Check available area at riser crest	Available Area = 11000 sf (determined by stage/storage relationship)		
Available area S _{min} ? Yes X No	Available area S _{min} ? Yes X No		
10. Compute required length to achieve 2:1 L:W:Ration	Average width = 70 ft		
Required length = 2*average width	Required length = 140 ft		
Available length = 200 ft	Available length = 180 ft		
2:1 L:W:R ratio satisfied? Yes X No	2:1 L:W:R ratio satisfied? Yes X No		
If no, refer to figure 6-22.2 for baffle designs. Note any required baffles on E&SC plan and include calculations and details for baffles.			
Principal Spillway (ps)			
11. Determine minimum principal spillway capacity	Q _{max} = 0.2 = 1249 cfs		
12. Compute the vertical distance between the centerline of the outlet pipe and the emergency spillway crest (H) H = 2 ft	H = 8.5 ft		
13. Compute the total pipe length of the principal spillway, L, using Figure 6-22.3	L = [A(B+C)/2(Zu+Zd)] + T + E		
A = 1048.0 Zu = 4.00	B = 1030.9 Zd = 3.00	C = 1030.00 T = 8.00	E = 1.00
Contractor to refer to plans for Length	L = 131.85 ft		
14. Determine diameter of principal spillway (Dps) and flow through principal spillway (Q) from Table 6-22.1 using H and Q _{max}	Dps = 30 in Q = 71.2 cfs (value from BPR Nomograph)		
15. Compute actual flow through principal spillway, using Table 6-22.1 to determine the correct factor for pipe length, L.	Qps = 71.20 cfs > Q _{2-yr} = 19.11		
16. Compute riser diameter (Dr)	Autodesk Hydraulics used to determine flow rate within the P.S. is sufficient.		
Dr = 45 in	Dr = 45 in		
Dr = 96 in	Dr = 96 in		
17. Compute trash rack diameter (Dt)	Dt = 1.4*Dr		
Dt = 134.4 in	Dt = 134.4 in		
Dt = 144 in	Dt = 144 in		
18. Determine minimum distance between the riser crest and the emergency spillway crest, h, using table 6-22.2, Dr, and Qps	h = 1.0 ft Q = 48.7 < 71.20 therefore, PS controls		
19. Determine the volume of concrete per vertical foot of riser height needed, from Table 6-22.3 to prevent flotation.	Required volume of concrete per vertical foot = cft/ft		
20. Compute total volume of concrete required	Total required volume conc required volume*riser length		
Total required volume = 0.00 cft	Total required volume = 0.00 cft		
21. Assume base thickness, B (usually 18")	B = 12 in = 1.0 ft		
B = 12 in = 1.0 ft	Required SA = 0.0 sf		
22. Compute required surface area	Required SA = total volume / B		
Required SA = 0.0 sf	Required SA = 0.0 sf		
23. Compute riser base length (l) and width (w) (assume square base).	l = w = (required SA) ^{1/2}		
l = w = 0.0 ft = 0.0 in	N/A: Install structure per typical standards.		
Anti-Seep Collar Design	24. Determine if anti-seep collar is required. If yes to any of the following conditions, a collar is required:		
The settled height of the dam is greater than 15 feet.	The principal spillway diameter (Dps) is smooth pipe larger than 8".		
X The principal spillway diameter (Dps) is corrugated metal pipe larger than 12".	X The principal spillway diameter (Dps) is corrugated metal pipe larger than 12".		
25. Determine if anti-seep collar is required.	X 18-inch projection (for heads (H) less than or equal to 10 feet).		
X 24-inch projection (for heads (H) greater than 10 feet).	24-inch projection (for heads (H) greater than 10 feet).		
Emergency Spillway (es)			
26. Compute minimum capacity of emergency spillway (Qes)	Qes = Q _{2-yr} - Qps		
Qes = -52.09 cfs	Use Q _{2-yr} = 17.1 cfs		
27. Determine stage (H _p), bottom width (b), velocity (V), and minimum exit slope (S) using Table 6-22.4 and Qes.	H _p = ft b = ft		
V = ips	V = ips		
28. Actual entrance channel slope, Se = %	Se = %		
29. Actual exit channel slope, So = %	So = %		
Note: If So is steeper than S (from Table 6-22.4), then the velocity in the exit channel will increase.			
a) Calculate the new exit velocity (Vo)			
Vo = V/(Se) ^{0.5}	Vo = #DIV/0! ips > 5.0ips; therefore, use Rip-rap		
Refer to Channel Stabilization (Ch) to determine proper lining for emergency spillway			
Grass	Rip-rap Concrete		
Design Elevations			
30. Riser crest elevation : 1046.5 ft	31. Compute minimum emergency spillway crest elevation		
Min. emergency spillway crest + riser crest elevation + h	Min. emergency spillway crest + riser crest elevation + h		
Min. emergency spillway crest 1047.5 ft	Min. emergency spillway crest 1040.5 ft		
32. Determine design high water elevation.	Design high water elevation = min. emergency spillway crest + stage elevation (H _p)		
Design high water elevat. 1048.0 ft	Design high water elevat. 1041.0 ft		
33. Determine elevation of top of dam	Elevation of top of dam = design high water elevation + 1 ft freeboard		
Elevation of top of dam = 1049.0 ft (Settled)	Elevation of top of dam = 1042.0 ft (Settled)		
Elevation of top of dam = 1049.2 ft (Constructed)	(Use 1041.3 for Settled)		
Please note that design values determined by this sheet represent the minimum requirements for a temporary sediment basin.			

TEMPORARY SEDIMENT BASIN DESIGN SHEET			
Computed by: Laf	Date: 5/15/2015	Checked by: _____	_____
Project Name: Sun Vally	Basin No.: Sd3 #2	Total area to basin: 3.83 Ac	Disturbed area to basin: 3.83 Ac
Volume			
1. Compute minimum required storage volume (Vs)	Vs = 67 cfs * disturbed area		
Vs = 20.3 cfs * disturbed area	Vs = 67 cfs * disturbed area		
2. Compute volume of basin at clean-out (Vc)	Vc = 22 cfs * disturbed area		
Vc = 66.7 cfs * disturbed area	Vc = 22 cfs * disturbed area		
3. Determine elevation corresponding to minimum required storage volume, Vs	Min. riser crest elevation 1046.5 ft (determined by stage/storage relationship)		
4. Determine elevation corresponding to clean-out volume, Vc	Clean-out elevation = 1044.7 ft (determined by stage/storage relationship)		
Note: clean-out elevation shall be clearly marked on the riser or by a post near riser			
5. Compute length of riser	Riser length = Minimum elevation of riser crest - lowest elev of pipe at riser		
Riser length = 1046.5 ft - 1030.9 ft	Riser length = 15.6 ft		
Stormwater Runoff			
6. Compute peak discharge from a 2-yr, 24-hr storm event	Q _{2-yr} = 12.49 cfs (Attach a runoff computation sheet)		
7. Compute peak discharge from 25-yr, 24-hr storm event	Q _{25-yr} = 17.11 cfs (Attach a runoff computation sheet)		
Surface Area/Configuration Design			
8. Compute minimum basin surface area (S _{min})	S _{min} = 0.01 ac/ft ² * Q _{2-yr}		
S _{min} = 0.1249 ac = 5441 sf	S _{min} = 0.1249 ac = 5441 sf		
9. Check available area at riser crest	Available Area = 11000 sf (determined by stage/storage relationship)		
Available area S _{min} ? Yes X No	Available area S _{min} ? Yes X No		
10. Compute required length to achieve 2:1 L:W:Ration	Average width = 70 ft		
Required length = 2*average width	Required length = 140 ft		
Available length = 200 ft	Available length = 180 ft		
2:1 L:W:R ratio satisfied? Yes X No	2:1 L:W:R ratio satisfied? Yes X No		
If no, refer to figure 6-22.2 for baffle designs. Note any required baffles on E&SC plan and include calculations and details for baffles.			
Principal Spillway (ps)			
11. Determine minimum principal spillway capacity	Q _{max} = 0.2 = 1249 cfs		
12. Compute the vertical distance between the centerline of the outlet pipe and the emergency spillway crest (H) H = 2 ft	H = 8.5 ft		
13. Compute the total pipe length of the principal spillway, L, using Figure 6-22.3	L = [A(B+C)/2(Zu+Zd)] + T + E		
A = 1048.0 Zu = 4.00	B = 1030.9 Zd = 3.00	C = 1030.00 T = 8.00	E = 1.00
Contractor to refer to plans for Length	L = 131.85 ft		
14. Determine diameter of principal spillway (Dps) and flow through principal spillway (Q) from Table 6-22.1 using H and Q _{max}	Dps = 30 in Q = 71.2 cfs (value from BPR Nomograph)		
15. Compute actual flow through principal spillway, using Table 6-22.1 to determine the correct factor for pipe length, L.	Qps = 71.20 cfs > Q _{2-yr} = 19.11		
16. Compute riser diameter (Dr)	Autodesk Hydraulics used to determine flow rate within the P.S. is sufficient.		
Dr = 45 in	Dr = 45 in		
Dr = 96 in	Dr = 96 in		
17. Compute trash rack diameter (Dt)	Dt = 1.4*Dr		
Dt = 134.4 in	Dt = 134.4 in		
Dt = 144 in	Dt = 144 in		
18. Determine minimum distance between the riser crest and the emergency spillway crest, h, using table 6-22.2, Dr, and Qps	h = 1.0 ft Q = 48.7 < 71.20 therefore, PS controls		
19. Determine the volume of concrete per vertical foot of riser height needed, from Table 6-22.3 to prevent flotation.	Required volume of concrete per vertical foot = cft/ft		
20. Compute total volume of concrete required	Total required volume conc required volume*riser length		
Total required volume = 0.00 cft	Total required volume = 0.00 cft		
21. Assume base thickness, B (usually 18")	B = 12 in = 1.0 ft		
B = 12 in = 1.0 ft	Required SA = 0.0 sf		
22. Compute required surface area	Required SA = total volume / B		
Required SA = 0.0 sf	Required SA = 0.0 sf		
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Anti-Seep Collar Design	24. Determine if anti-seep collar is required. If yes to any of the following conditions, a collar is required:		
The settled height of the dam is greater than 15 feet.	The principal spillway diameter (Dps) is smooth pipe larger than 8".		
X The principal spillway diameter (Dps) is corrugated metal pipe larger than 12".	X The principal spillway diameter (Dps) is corrugated metal pipe larger than 12".		
25. Determine if anti-seep collar is required.	X 18-inch projection (for heads (H) less than or equal to 10 feet).		
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Vo = V/(Se) ^{0.5}	Vo = #DIV/0! ips > 5.0ips; therefore, Grass (Ch) is okay.		
Refer to Channel Stabilization (Ch) to determine proper lining for emergency spillway			
Grass	Rip-rap Concrete		
Design Elevations			
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Min. emergency spillway crest + riser crest elevation + h	Min. emergency spillway crest + riser crest elevation + h		
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Elevation of top of dam = 1049.0 ft (Settled)	Elevation of top of dam = 1042.0 ft (Settled)		
Elevation of top of dam = 1049.2 ft (Constructed)	(Use 1041.3 for Settled)		
Please note that design values determined by this sheet represent the minimum requirements for a temporary sediment basin.			





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16-25053
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EROSION CONTROL DETAILS

SUN VALLEY - PHASE I

DATE
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PROJECT NO.: 13-3454
CIVIL DRAWN BY: LAF, JLM
CIVIL DESIGNED BY: LAF
LANDSCAPE DRAWN BY: LAF
LANDSCAPE DESIGNED BY: LAF
CHECKED BY: CJ
DATE: 05-15-15

SHEET

DI.5

CONSTRUCTION SPECIFICATIONS

MATERIALS

TOPSOIL SHOULD BE FRIABLE AND LOAMY, FREE OF DEBRIS, OBSTACLES, WEEDS AND STONES, AND CONTAIN NO TOXIC SUBSTANCE THAT MAY BE HARMFUL TO PLANT GROWTH. A PH RANGE OF 5.0-7.5 IS ACCEPTABLE. SOLUBLE SALTS SHOULD NOT EXCEED 500 PPM.

TESTING

FIELD EXPLORATION SHOULD BE MADE TO DETERMINE WHETHER THE QUANTITY AND QUALITY OF SURFACE SOIL JUSTIFIES STRIPPING.

STRIPPING

STRIPPING SHOULD BE CONFINED TO THE IMMEDIATE CONSTRUCTION AREA. A 4 TO 6 INCH STRIPPING DEPTH IS COMMON, BUT MAY VARY DEPENDING ON THE PARTICULAR SOIL.

TOPSOIL PH

IF PH VALUE IS LESS THAN 6.0, LIME SHALL BE APPLIED AND INCORPORATED WITH THE TOPSOIL TO ADJUST THE PH TO 6.5 OR HIGHER. TOPSOILS CONTAINING SOLUBLE SALTS GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.

STOCKPILES

THE LOCATION OF TOPSOIL STOCKPILES SHOULD NOT OBSTRUCT NATURAL DRAINAGE OR CAUSE OFF-SITE ENVIRONMENTAL DAMAGE.

STABILIZATION

STOCKPILES SHALL BE CONTAINED BY SEDIMENT BARRIERS TO PREVENT SEDIMENTATION ON ADJACENT AREAS. STOCKPILES SHALL BE STABILIZED IN ACCORDANCE WITH SPECIFICATIONS D-1 AND D-2 - DISTURBED AREA STABILIZATION (WITH MULCHING) AND (WITH TEMPORARY CRASSING), RESPECTIVELY, OR Pm - POLYACRYLAMIDE OR Tb - TACKIFIERS AND BINDERS.

SITE PREPARATION (WHERE TOPSOIL IS TO BE ADDED)

WHEN SOILS ARE PREPARED, MAINTAIN NEEDED EROSION CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, BERMS, DIKES, LEVEL SPREADERS, WATERWAYS, SEDIMENT BASINS, ETC.

GRADING

GRADES ON THE AREAS TO BE TOPSOILED WHICH HAVE BEEN PREVIOUSLY ESTABLISHED SHALL BE MAINTAINED.

LIMING

SOIL TESTS SHOULD BE USED TO DETERMINE THE PH OF THE SOIL. WHERE THE PH OF THE SUBSOIL IS 5.0 OR LESS OR COMPOSED OF HEAVY CLAYS, AGRICULTURAL LIMESTONE SHALL BE SPREAD AT THE RATE OF 100 POUNDS PER 1,000 SQUARE FEET. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURE.

BONDING

USE ONE OF THE FOLLOWING METHODS TO INSURE BONDING OF TOPSOIL AND SUBSOIL:

1. **TILING:** AFTER THE AREAS TO BE TOPSOILED HAVE BEEN BROUGHT TO GRADE, AND IMMEDIATELY PRIOR TO DUMPING AND SPREADING THE TOPSOIL, THE SUBGRADE SHALL BE LOOSENERED BY DISCING OR SCARIFYING TO A DEPTH OF AT LEAST 3 INCHES TO PERMIT BONDING OF THE TOPSOIL TO THE SUBGRADE.

2. **TRACKING:** PASSING A BULLDOZER OVER THE ENTIRE SURFACE AREA OF THE SLOPE TO LEAVE HORIZONTAL DEPRESSIONS.

APPLYING TOPSOIL

1. THE SOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING SOIL STRUCTURE.

2. A UNIFORM APPLICATION OF 5 INCHES (UNSETTLED) IS RECOMMENDED, BUT MAY BE ADJUSTED AT THE DISCRETION OF THE ENGINEER OR LANDSCAPE ARCHITECT.

TOPSOILING

Buffer Zone



DEFINITION

A strip of undisturbed, original vegetation, enhanced or restored existing vegetation or the re-establishment of vegetation surrounding an area of disturbance or bordering streams, ponds, wetlands, lakes and coastal waters.

PURPOSE

To provide a buffer zone serving one or more of the following purposes:

- Reduce storm runoff velocities
- Act as screen for "visual pollution"
- Reduce construction noise
- Improve aesthetics on the disturbed land
- Filtering and infiltrating runoff
- Cooling rivers and streams by creating shade provide food and cover for wildlife and aquatic organisms
- Flood protection
- Protect channel banks from scour and erosion

CONDITIONS

A natural strip of vegetation should be preserved and, if needed, supplemented to form the buffer zone. There are two types of buffer zones.

General Buffers

A width should be selected to permit the zone to serve the purpose(s) as listed above. Supplemental plantings may be used to increase the effectiveness of the buffer zone.

Vegetated Stream Buffers

The structure of vegetated stream buffers should be considered to determine if the buffer must be enhanced to achieve the necessary goals.

The size of the stream as well as the topography of the area must be considered to determine the appropriate width of the vegetated stream buffer. A vegetated stream buffer of 50 feet or greater can protect waters from excess sedimentation. The buffer should be increased 2 feet in width for every 1% slope (measured along a line perpendicular to the stream bank). Surface water pollution can be reduced with a 100 foot or wider vegetative buffer.

GENERAL

A strip of undisturbed, original land surrounding the disturbed site. It can be useful not only

GCUCC (Amended - 2013)

6-67

6-68

GSWCC (Amended - 2013)

6-69

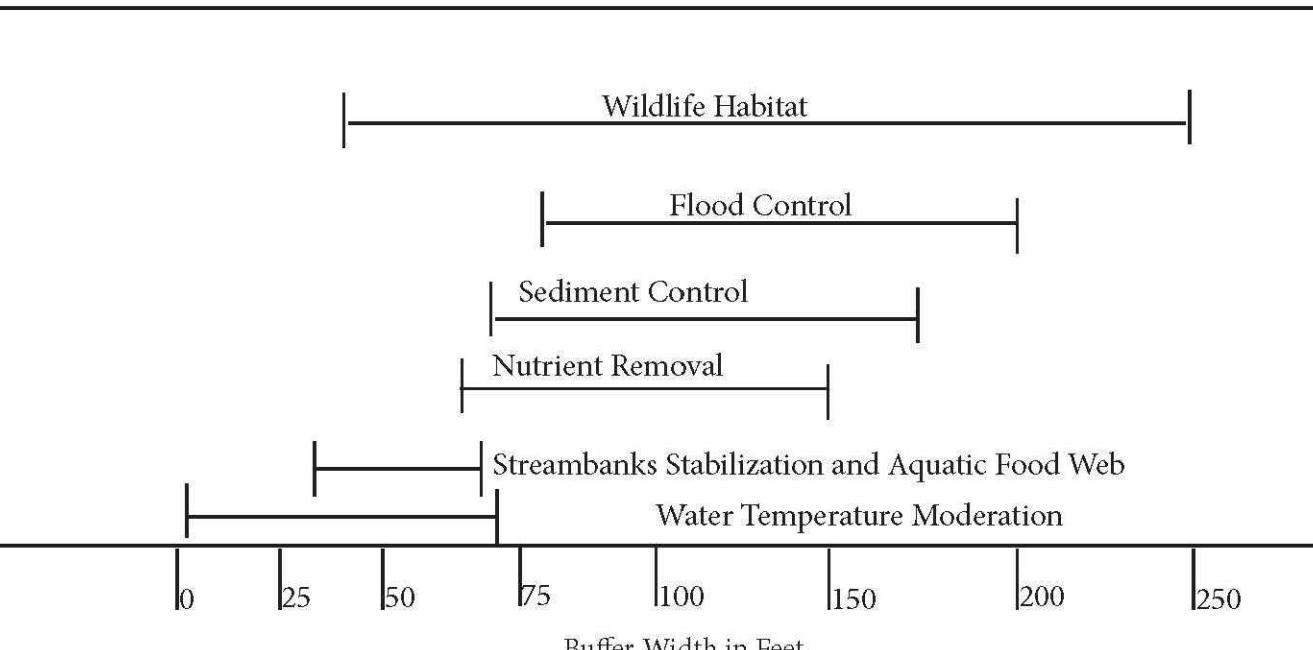


Figure 6-1.1 - Range of Minimum Width for Meeting Specific Buffer Objectives
(Palone and Todd, draft)

soil control grasses and legumes may be used in denuded areas for quick stabilization. Refer to specification Ds3 - Disturbed Area Stabilization (With Permanent Vegetation). Availability, cost, associated risk, equipment, planting procedures, and planting density must be considered when choosing planting types.

Soil preparation and maintenance are essential for the establishment of planted vegetation. Soil fertility, weed control, herbaceous cover, as well as additional associated products may be required.

OPERATIONS AND MAINTENANCE

Areas closest to the stream should be maintained with minimal impact.

WATERING

During periods of drought as well as during the initial year, watering may be necessary in all buffer areas planted for enhancement.

WEED CONTROL

Weeds can be removed by hand or with careful spraying.

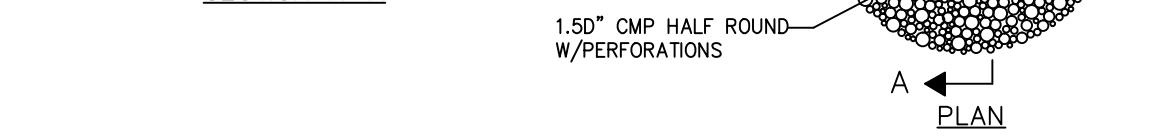
REPLANTING

It is imperative that the structure of the vegetated stream buffer be maintained. If the buffer has been planted, it is suggested that the area be monitored to determine if plant material must be replaced. See Tables 6-1.1 and 6-1.2 for suggested plant species. Provisions for the protection of new plantings from destruction or damage from beavers shall be incorporated into the plan.

FERTILIZER

If appropriate vegetation is chosen, it is unlikely that fertilizer will be necessary.

Local Contacts:
USDA Natural Resources Conservation Service
Georgia Forestry Commission



CONDITIONS

STANDARD APPLIES UNDER THE FOLLOWING CONDITIONS:
1. **NOT TO BE USED IN DETENTION BASINS OR LIVE STREAMS** OR IN BASINS WITH A TOTAL CONTRIBUTING DRAINAGE AREA OF 30 ACRES OR MORE.

2. SHALL ONLY BE USED IN DETENTION BASINS LARGE ENOUGH TO STORE 67 CUBIC YARDS OF SEDIMENT.

3. SHALL BE CONSIDERED A TEMPORARY STRUCTURE AND WILL BE REMOVED AS SOON AS PROJECT IS PERMANENTLY STABILIZED. ALL ACCUMULATED SEDIMENT SHALL BE REMOVED, AND THE POND SHALL BE BROUGHT TO FINAL GRADE (IF POSSIBLE), PRIOR TO THE REMOVAL OF THE RETROFIT.

DESIGN CRITERIA

1. THE HEIGHT OF THE RETROFIT SHOULD BE APPROXIMATELY ONE-HALF THE HEIGHT OF THE STORMWATER STRUCTURE.

2. THE POND MUST BE CAPABLE OF STORING THE REQUIRED VOLUME OF SEDIMENT IN ADDITION TO THE REQUIRED STORMWATER VOLUME. THE REQUIRED SEDIMENT STORAGE VOLUME SHALL BE ACHIEVED BY EITHER EXCAVATING THE BASIN OR RAISING THE OUTLET STRUCTURE'S INVERT TO ACHIEVE 67 CUBIC YARD CAPACITY. THE TOTAL POND CAPACITY IS LOST DURING THE CONSTRUCTION AND RETROFIT PHASE.

3. FOR EFFECTIVE TRAPPING EFFICIENCY, THE SEDIMENT DELIVERY INLETS SHOULD BE AT THE UPPER END OF THE BASIN.

4. FOR MAXIMUM TRAPPING EFFICIENCY, THE LENGTH-WIDTH RATIO OF THE BASIN SHALL BE AT LEAST 2:1. IF THE LENGTH-WIDTH RATIO IS NOT AT LEAST 2:1, THE FLOW LENGTH SHALL BE INCREASED WITH THE USE OF BAFFLES INSTALLED WITHIN THE BASIN.

CONSTRUCTION SPECIFICATIONS

APPLY FLOE LOGS ONLY ON AREAS WITH LESS THAN 30 ACRE TOTAL DRAINAGE AREA.

B. NEVER TO BE USED ON EXPOSED PIPE ENDS OR MINGLED HEADWALLS.

C. DIAMETER OF HALF-ROUND PIPE SHOULD BE 1.5 TIMES THE DIAMETER OF THE PRINCIPAL PIPE OUTLET OR WIDER THAN THE GREATEST WIDTH OF THE CONCRETE WEIR.

D. PERFORATIONS AND STONE SIZES ARE SHOWN IN FIGURE.

E. SHALL BE FIXED BY SPECIFIED MEANS (BOLTS, ETC.) TO CONCRETE OUTLET STRUCTURE.

ALL DISTURBED AREAS SHALL BE VEGETATED IMMEDIATELY AFTER CONSTRUCTION WITH PERMANENT VEGETATION. REFER TO Ds3 AND Ds4 - DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION) AND DISTURBED AREA STABILIZATION (WITH SODDING) AND M6 - MATTING AND BLANKETS.

Maintenance

RETROFIT STRUCTURES SHALL BE KEPT CLEAR OF TRASH AND DEBRIS. THIS WILL REQUIRE CONTINUOUS

MONITORING AND MAINTENANCE, WHICH INCLUDES SEDIMENT REMOVAL WHEN ONE-THIRD OF THE SEDIMENT

STORAGE CAPACITY HAS BEEN LOST. STRUCTURES ARE TEMPORARY AND SHALL BE REMOVED WHEN DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.

PERFORATED HALF-ROUND PIPE WITH STONE FILTER (RETROFIT)

Rt-P
NOT TO SCALE

CONDITIONS:

FLOE LOGS
THIS TEMPORARY PRACTICE IS NOT INTENDED FOR APPLICATION TO SURFACE WATER OF THE STATE. IT IS INTENDED FOR APPLICATION WITHIN CONSTRUCTION STORM WATER DITCHES AND STORM DRAINES WHICH FEED INTO PRE-CONSTRUCTED SEDIMENT PONDS OR BASINS.

DUST CONTROL

THIS TEMPORARY PRACTICE IS INTENDED FOR DIRECT SOIL SURFACE APPLICATION TO SITES WHERE THE TIMELY ESTABLISHMENT OF VEGETATION MAY NOT BE FEASIBLE OR WHERE VEGETATIVE COVER IS ABSENT OR INADEQUATE.

FEDERAL, STATE AND LOCAL LAW

ANIONIC PAM APPLICATION SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS RULES OR REGULATIONS GOVERNING ANIONIC PAM. THE OPERATOR IS RESPONSIBLE FOR SECURING REQUIRED PERMITS. THIS STANDARD DOES NOT CONTAIN THE TEXT OF THE FEDERAL, STATE OR LOCAL LAWS GOVERNING ANIONIC PAM.

PLANNING CONSIDERATIONS

ANIONIC PAM IS AVAILABLE IN EMULSIONS, POWDERS, AND GEL BARS OR LOGS. IT IS REQUIRED THAT OTHER BEST MANAGEMENT PRACTICES BE USED IN COMBINATION WITH ANIONIC PAM.

OPERATION AND MAINTENANCE

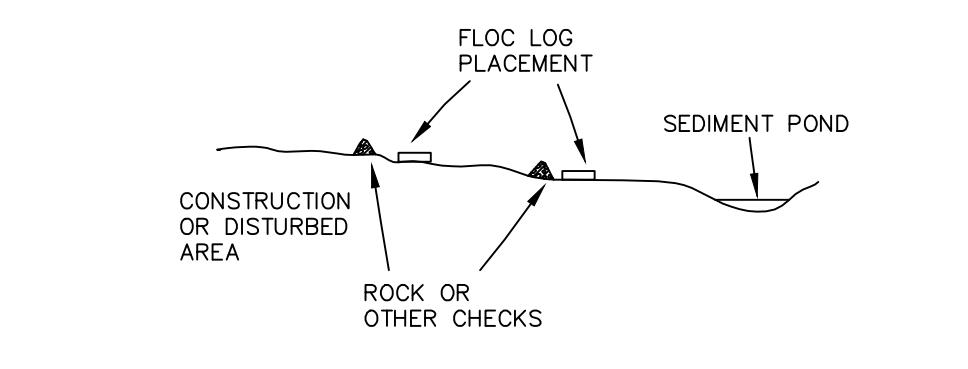
MAINTENANCE WILL CONSIST OF REAPPLYING ANIONIC PAM TO DISTURBED AREAS, INCLUDING HIGH TRAFFIC AREAS WHICH INTERFERE IN THE PERFORMANCE OF THIS PRACTICE.

Flocculants and Coagulants

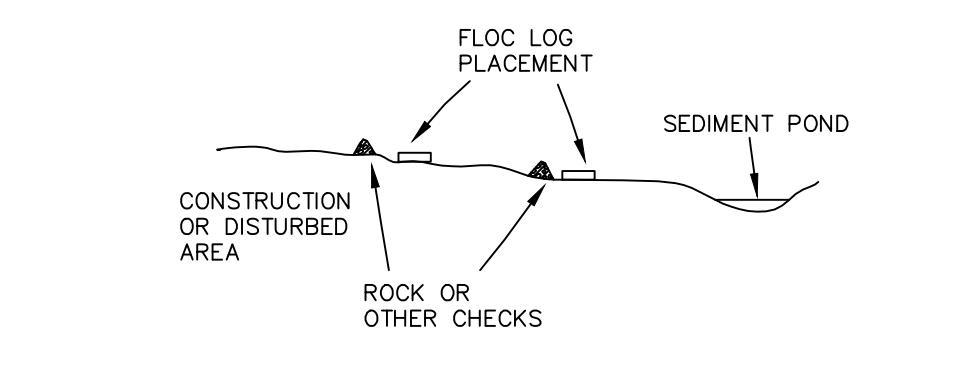
REFERRED TO AS PAM

CRITERIA:

1. APPLICATION RATES SHALL CONFORM TO MANUFACTURER'S GUIDELINES FOR APPLICATION.
2. ONLY THE ANIONIC FORM OF PAM SHALL BE USED. CATIONIC PAM IS TOXIC AND SHALL NOT BE USED.
3. PAM AND PAM MIXTURES SHALL BE ENVIRONMENTALLY BENIGN, HARMLESS TO FISH, WILDLIFE, AND PLANTS. PAM AND PAM MIXTURES SHALL BE NON-COMBUSTIBLE.
4. ANIONIC PAM, IN PURE FORM, SHALL HAVE LESS THAN OR EQUAL TO 0.05% ACRYLIC MONOMER BY WEIGHT, AS ESTABLISHED BY THE FOOD AND DRUG ADMINISTRATION AND THE ENVIRONMENTAL PROTECTION AGENCY.
5. TO MAINTAIN TESTS OF THE PAM AND 0.5% OF THE ANIONIC MONOMER, THE MAXIMUM APPLICATION RATE OF PAM FOR THE FORM SHALL NOT EXCEED 200 POUNDS PER ACRE/YEAR. DO NOT OVER APPLY PAM. EXCESSIVE APPLICATION OF PAM CAN LOWER INFILTRATION RATE OR SUSPEND SOILS IN WATER, RATHER THAN PROMOTING SETTLING.
6. USERS OF ANIONIC PAM SHALL OBTAIN AND FOLLOW ALL MATERIAL SAFETY DATA SHEET REQUIREMENTS AND MANUFACTURER'S RECOMMENDATIONS.
7. ADDITIONAL PAM AS A COUNTERACTANT OR SOLUBILITY PROMOTER OR INHIBITOR, ETC. TO PAM SHALL NOT BE TOXIC.
8. THE MANUFACTURER OR SUPPLIER SHALL PROVIDE WRITTEN APPLICATION METHODS FOR PAM AND PAM MIXTURES. THE APPLICATION METHOD SHALL INSURE UNIFORM COVERAGE TO THE TARGET AND AVOID DRIFT TO NON-TARGET AREAS INCLUDING WATERS OF THE STATE. THE MANUFACTURER OR SUPPLIER SHALL ALSO PROVIDE WRITTEN INSTRUCTIONS TO INSURE PROPER SAFETY, STORAGE, AND MIXING OF THE PRODUCT.



Floe Log Placement
Sediment Pond
Construction or Disturbed Area
Rock or Other Checks



Floe Log Placement
Sediment Pond
Construction or Disturbed Area
Rock or Other Checks

Tc

Figure 6-36.1



CONSTRUCTION DETAILS

ROSSWELL PHASE I

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NO.: 13-3454
DRAWN BY: LAF, JLM
CHECKED BY: LAF
TYPE DRAWN BY:
TYPE DESIGNED BY:
DRAWN BY: CJF
DATE: 5-15-15

D2.I

OUTLET HEADWALL

FRONT ELEVATION

INLET HEADWALL

FRONT ELEVATION

SECTION A-A

SECTION A-A

D = INSIDE DIAMETER OF PIPE

SECTION B-B (SINGLE PIPE LINE)

SECTION B-B (SINGLE PIPE LINE)

SECTION B-B (MULTIPLE PIPE LINE)

SECTION C-C

ADDITIONAL BAR DETAIL

TABLE NO. 1 - QUANTITIES FOR HEADWALLS

D	CU. YDS. CONCRETE (PAY QUANTITIES)				LBS. STEEL (GIVEN FOR INFORMATION ONLY)			
	FOR SINGLE LINE		ADD FOR ADD'L LINE		FOR SINGLE LINE		ADD FOR EACH ADD'L LINE	
D	INLET	OUTLET	INLET	OUTLET	INLET	OUTLET	INLET	OUTLET
15"	0.87	0.93	0.60	0.66	102	113	73	83
18"	1.10	1.16	0.85	0.93	106	117	93	104
24"	1.61	1.69	1.29	1.37	127	138	124	134
30"	2.21	2.32	1.83	1.96	170	180	154	164
36"	2.92	3.05	2.49	2.63	238	254	196	212
42"	3.73	3.87	3.00	3.17	290	306	231	247
48"	4.62	4.80	3.58	3.74	335	351	265	281
54"	5.63	5.83	4.17	4.38	407	428	319	340
60"	6.72	6.95	4.82	5.01	456	477	360	391
72"	9.22	9.48	6.24	6.46	623	649	475	494
84"	14.84	15.9	9.05	9.29	1517	1539	1017	1044
96"	18.88	19.27	11.13	11.41	2118	2150	1323	1350

NOTE: QUANTITIES SHOWN WILL BE ACTUAL PAY QUANTITIES FOR CLASS 'A' CONCRETE, INCLUDING REINFORCED STEEL. NO ADJUSTMENT WILL BE MADE FOR AS BUILT QUANTITIES.

D - INSIDE DIAMETER OF PIPE CULVERT

H = D + 10" MIN. FOR C.M. PIPE
H = D + PIPE WALL THICKNESS + 8" FOR CONC. PIPE
(13/12 D + 9" TYP.)

T = 8" FOR D = 72" OR LESS
T = 10" FOR D = OVER 72"

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
TAPERED
INLET HEADWALL - OUTLET HEADWALL
(BUILT-IN-PLACE)

NO SCALE

DES. _____ (SUBMITTED) _____
DRW. _____ STATE ROAD & AIRPORT DESIGN ENGR.
TRA. _____ (APPROVED) _____
CHK. _____ CHIEF ENGINEER

REV. & REDR. OCT., 1999

NUMBER 1125

CLEAR SPAN	CLEAR HEIGHT	DIMENSIONS										REINFORCING STEEL										CLEAR HEIGHT	CLEAR SPAN			
		DESIGN NO. 1		DESIGN NO. 2		FOR ALL DESIGNS						FOR 4 WINGWALLS & 2 PARAPETS														
		H	W ₁	H	W ₁	W ₂	M	R	DOUBLE	TRIPLE	X	SIZE	'E" BARS AT 12" C. TO C.										K 5/8" DIA.			
7'	DOUBLES AND TRIPLES	4'	5'-3"	3'-1 1/2"	5'-5"	3'-3 1/2"	2'-1 1/2"	9'-0"	17'-0"	24'-10"	0	5/8" DIA.	NUMBER 8	8	8	8							10	10	4'	
		5'	6'-3"	3'-8 1/2"	6'-5"	3'-10 1/2"	2'-6 1/2"	10'-6"	17'-4"	25'-2"	0	5/8" DIA.	NUMBER 8	8	8	8	8						16'-8"	24'-6"	5'	
		6'	7'-3"	4'-4"	7'-5"	4'-6"	2'-11"	12'-0"	17'-4"	25'-2"	0	5/8" DIA.	LENGTH 9'-7"	7'-10"	7'-2"	6'-5"	5'-9"	5'-0"					10	10	6'	
		7'	8'-3 1/2"	4'-11 1/2"	8'-5 1/2"	5'-1 1/2"	3'-4"	13'-6"	17'-8"	25'-6"	0	5/8" DIA.	LENGTH 10'-7"	9'-10"	9'-1"	8'-5"	7'-8"	6'-3"	5'-10"					17'-0"	24'-10"	7'
8'	DOUBLES AND TRIPLES	4'	5'-4"	3'-0 1/2"	5'-6"	3'-2 1/2"	2'-3 1/2"	9'-0"	19'-0"	27'-10"	0	5/8" DIA.	NUMBER 8	8	8	8	8						10	10	4'	
		5'	6'-4"	3'-7 1/2"	6'-6 1/2"	3'-10"	2'-8 1/2"	10'-6"	19'-4"	28'-2"	0	5/8" DIA.	LENGTH 8'-8"	7'-11"	7'-3"	6'-7"	5'-11"	5'-2"					10	10	5'	
		6'	7'-4"	4'-3"	7'-6 1/2"	4'-5 1/2"	3'-1"	12'-0"	19'-4"	28'-2"	0	5/8" DIA.	LENGTH 9'-8"	8'-11"	8'-3"	7'-6"	6'-10"	6'-1"	5'-9"					10	10	6'
		7'	8'-4"	4'-10"	8'-6 1/2"	5'-0 1/2"	3'-6"	13'-6"	19'-8"	28'-6"	0	5/8" DIA.	LENGTH 10'-8"	9'-11"	9'-3"	8'-6"	7'-10"	7'-1"	6'-0"					10	10	7'
9'	DOUBLES AND TRIPLES	8'	9'-4 1/2"	5'-5 1/2"	9'-6 1/2"	5'-7 1/2"	3'-11"	15'-0"	19'-10"	28'-10"	1'-0"	7/8" DIA.	NUMBER 8	8	8	8	8	8	8					19'-4"	28'-2"	8'
		4'	5'-5"	3'-2"	5'-7 1/2"	3'-4 1/2"	2'-3"	9'-6"	21'-0"	30'-10"	0	5/8" DIA.	LENGTH 7'-9"	7'-1"	6'-5"	5'-9"	5'-1"	4'-3"					10	10	4'	
		5'	6'-5"	3'-9"	6'-7 1/2"	3'-11 1/2"	2'-8"	11'-0"	21'-4"	31'-2"	0	5/8" DIA.	NUMBER 8	8	8	8	8	8	8					20'-8"	30'-6"	5'
		6'	7'-5"	4'-4"	7'-7 1/2"	4'-6 1/2"	3'-1"	12'-6"	21'-4"	31'-2"	0	5/8" DIA.	LENGTH 9'-9"	9'-0"	8'-4"	7'-8"	7'-0"	6'-4"	5'-7"					10	10	6'
10'	DOUBLES AND TRIPLES	7'	8'-5"	4'-11 1/2"	8'-8"	5'-2 1/2"	3'-5 1/2"	14'-0"	21'-8"	31'-6"	0	5/8" DIA.	LENGTH 10'-9"	10'-0"	9'-4"	8'-8"	7'-11"	7'-3"	6'-2"					10	10	7'
		8'	9'-5 1/2"	5'-7"	9'-8"	5'-9 1/2"	3'-10 1/2"	15'-6"	21'-10"	31'-10"	1'-0"	7/8" DIA.	LENGTH 12'-11"	12'-0"	11'-2"	10'-4"	9'-6"	8'-7"	7'-9"					10	10	8'
		9'	10'-5 1/2"	6'-0"	10'-8"	6'-2 1/2"	4'-5 1/2"	16'-6"	22'-0"	32'-0"	1'-6"	7/8" DIA.	LENGTH 14'-4"	13'-4"	12'-5"	11'-6"	10'-8"	9'-10"	8'-10"					21'-8"	31'-6"	9'
		10'	11'-5 1/2"	6'-7"	11'-8 1/2"	6'-9"	4'-10 1/2"	18'-0"	22'-4"	32'-4"	2'-0"	7/8" DIA.	LENGTH 15'-10"	14'-10"	13'-11"	12'-0"	11'-1"	10'-1"	9'-3"	8'-3"	7'-4"	18'-11"	16'-3"	13'-5"	10'	

TRIPLE BOX

END ELEVATION

SECTION A-A

ELEVATION OF WING

HALF PLAN

DOUBLE BOX

DESIGN DATA

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD REINFORCED CONCRETE BOX CULVERTS
DOUBLE 7' X 4' TO TRIPLE 9' X 10'
FOR DEPTHS OF FILL UP TO 20 FEET

NO SCALE

REVISION DATE

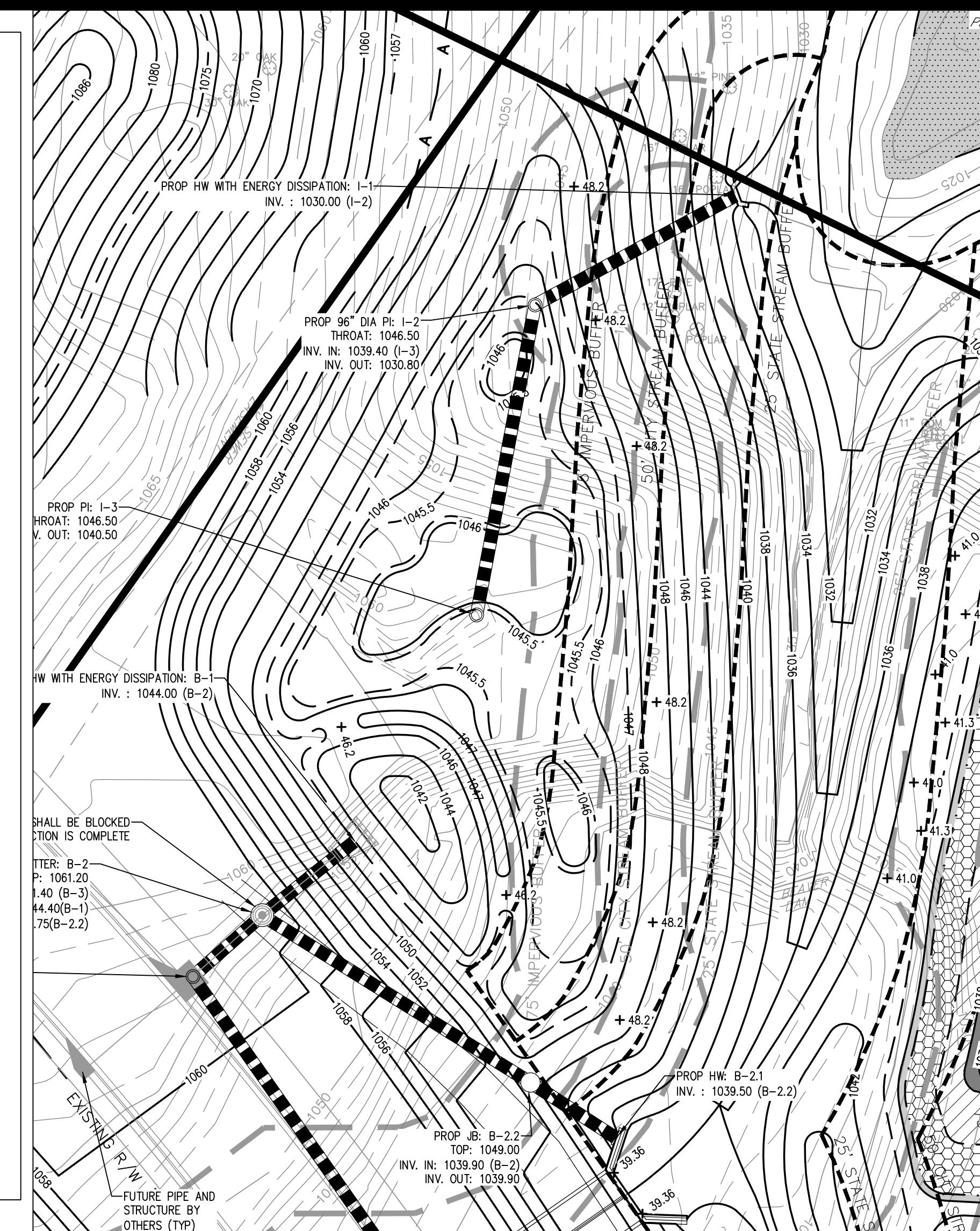
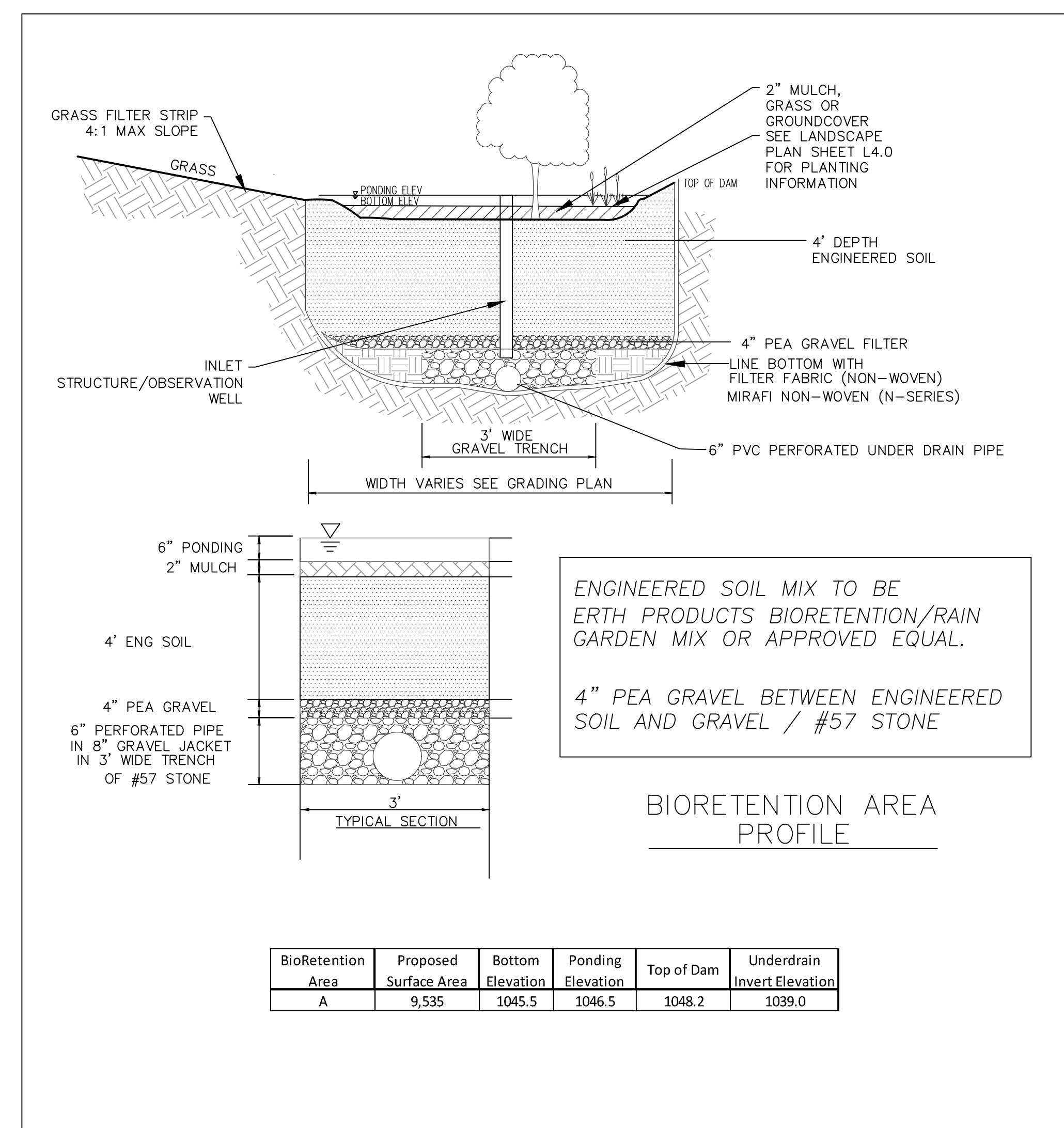
REV. & REDR. NOV., 2001

DES. (SUBMITTED) DRW. (STATE ROAD & AIRPORT DESIGN ENGR.) TRA. (APPROVED) CHK. (CHIEF ENGINEER)

NUMBER 2326

SHEET 2 OF 2

Detailed description: The figure contains several technical drawings of reinforced concrete box culverts. It includes an overall plan view, end elevation, and cross-sections for Double, Triple, and Quadruple boxes. Each section shows dimensions like clear span, height, and width, as well as reinforcement details like bar sizes and locations. A 'Design Data' section specifies A.A.S.H.O. 1957, T58, H20, S16-44, and Military loading. A 'Revision' table is at the bottom.



WATER QUALITY DETAILS

SUN VALLEY - PHASE I

ROSWELL FULTON COUNTY GEORGIA

NO.	REVISIONS	CITY COMMENTS	DATE
1			7/1/15

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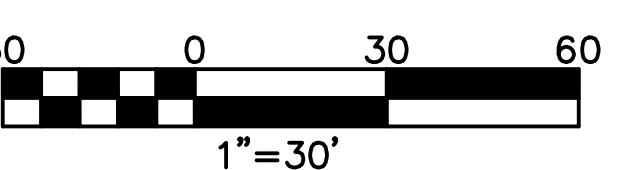
PROJECT NO: 13-3454
CIVIL DRAWN BY: LAF, JLM
LANDSCAPE DRAWN BY:
LANDSCAPE DESIGNED BY:
CHECKED BY: CJ
DATE - 05-15-15

SHOOTER

D3.0

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1"=30'

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OVERALL PLANTING PLAN

SUN VALLEY - PHASE I

ROSWELL FULTON COUNTY GEORGIA

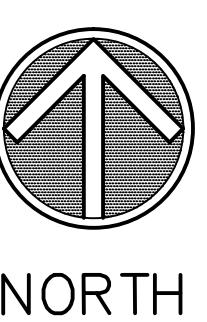
PLANT KEY	
DWARF TICKSEED	WILDFLOWER MIX-BLK EYED SUSAN, PURPLE CONEFLOWER, BUTTERFLY MILKWEED, COREOPSIS, GAURA
DUCK POTATO	DAYLILLY ORANGE AND YELLOW DAYLILLY
SWAMP LILY	WATERLILLY
GOLDEN CANNA	BLUEBERRY
SWAMP HIBISCUS	BUTTERFLY BUSH
SOUTHERN BLUE FLAG IRIS	HAWTHORNE
LOVEGRASS	EMBERGERY HOLLY
JOE PYE WEED	PINK MULY GRASS
UPLAND SEA OATS	FERNTHIA
BROOM SEDGE	AMERICAN HOLLY
YELLOW INDIAN GRASS	WILLOW OAK
SWITCHGRASS	WILLOW TREE

DATE _____
REVISIONS _____
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CIVIL DESIGNED BY LAF
LANDSCAPE DRAWN BY JAP
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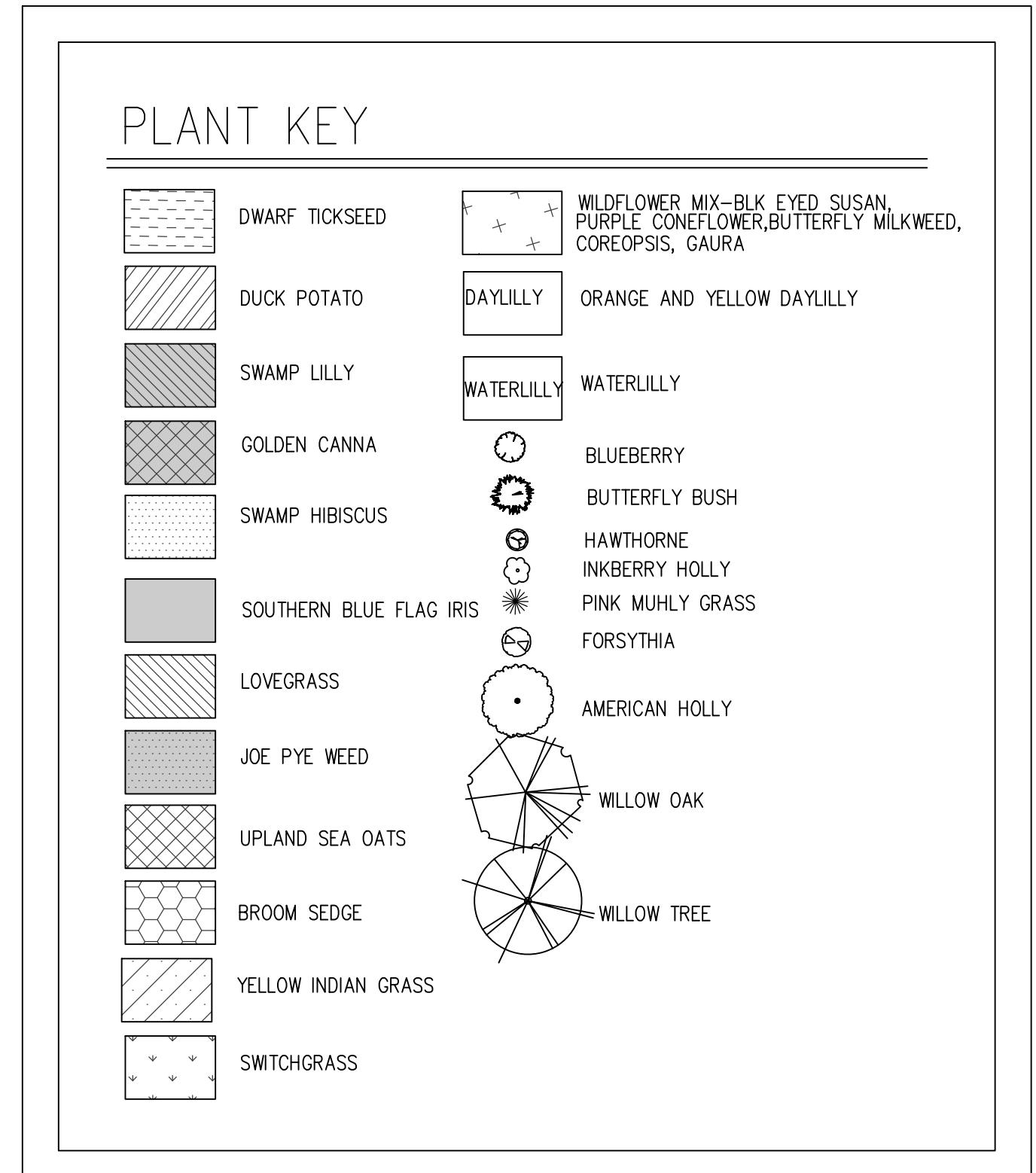
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CIVIL DESIGNED BY: LAF
LANDSCAPE DRAWN BY: JAP
LANDSCAPE DESIGNED BY: JAP
CHECKED BY: SLR
DATE - 5/15/15

20 0 20 40

1"=20'

NORTH

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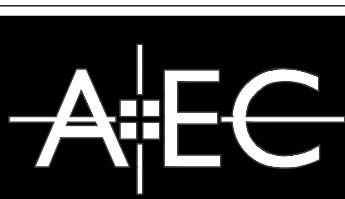
SHEET

1



WETLAND PLANTINGS						
Quantity	Square Feet	Size	Botanical Name	Common Name	Type	Spacing
8		6-8' ht	<i>Ilex opaca</i>	American Holly	Tree	As Shown
5		2" Cal.	<i>Salix babylonica</i>	Weeping Willow	Tree	As Shown
4		2" Cal.	<i>Quercus phellos</i>	Willow Oak	Tree	As Shown
34		3 Gal	<i>Forsythia x intermedia</i>	Forsythia	Shrub	As Shown
46		3 Gal	<i>Ilex glabra</i>	Inkberry	Shrub	As Shown
1133		Seed	<i>Andropogon virginicus</i>	Broomsedge	Grass	Seed
1880		Seed	<i>Chasmanthium latifolium</i>	Upland Sea Oats	Grass	Seed
2094		Seed	<i>Eragrostis curvula</i>	Weeping Lovegrass	Grass	Seed
2677		Seed	<i>Panicum virginatum</i>	Switchgrass	Grass	Seed
215	8635	1 Pnt	<i>Canna</i>	Canna Lily	Perennial	Random spacing (Min. 24" O.C. Average)
105	958	1 Pnt	<i>Crinum americanum</i>	Swamp Lily	Perennial	Random spacing (Min. 36" O.C. Average)
209	839	1 Pnt	<i>Coreopsis tinctoria</i>	Dwarf Tickseed	Perennial	Random spacing (Min. 24" O.C. Average)
198	1101	1 Pnt	<i>Eupatorium purpureum</i>	Joe Pye Weed	Perennial	Random spacing (Min. 30" O.C. Average)
395	1580	1 Pnt	<i>Hibiscus coccineus</i>	Swamp Hibiscus/ Scarlet Rose Mallow	Perennial	Random spacing (Min. 24" O.C. Average)
642	1460	1 Pnt	<i>Iris virginica</i>	Southern Blue Flag Iris	Perennial	Random spacing (Min. 18" O.C. Average)
494	1124	1 Pnt	<i>Sagittaria latifolia</i>	Duck Potato/ Broadleaf Arrowhead	Perennial	Random spacing (Min. 18" O.C. Average)
	6738	Seed	Wildflower Mix	Blk. Eye Susan, Gaura, Coneflower, Milkweed, Etc.	Perennial	Seed
94	378	4" pot		Waterlilly	Perennial	Random spacing (Min. 24" O.C. Average)

BIORETENTION PLANTINGS						
Quantity	Square Feet	Size	Botanical Name	Common Name	Type	Spacing
5		6-8' ht	<i>Ilex opaca</i>	American Holly	Tree	As Shown
11		3 Gal	<i>Buddleia davidii</i>	Butterfly Bush	Shrub	As Shown
19		3 Gal	<i>Forsythia x intermedia</i>	Forsythia	Shrub	As Shown
17		3 Gal	<i>Ilex glabra</i>	Inkberry	Shrub	As Shown
17		3 Gal	<i>Vaccinium corymbosum</i>	Highbush Blueberry	Shrub	As Shown
1440		Seed	<i>Andropogon virginicus</i>	Broomsedge	Grass	Seed
16855		Seed	<i>Chasmanthium latifolium</i>	Upland Sea Oats	Grass	Seed
1463		Seed	<i>Eragrostis curvula</i>	Weeping Lovegrass	Grass	Seed
43		1 Gal	<i>Muhlenbergia capillaris</i>	Pink Muhly Grass	Grass	As Shown
218	1984	1 Pnt	<i>Crinum americanum</i>	Swamp Lily	Perennial	Random spacing (Min. 36" O.C. Average)
163	652	1 Pnt	<i>Coreopsis tinctoria</i>	Dwarf Tickseed	Perennial	Random spacing (Min. 24" O.C. Average)
266	1483	1 Pnt	<i>Eupatorium purpureum</i>	Joe Pye Weed	Perennial	Random spacing (Min. 30" O.C. Average)
354	1416	1 Pnt	<i>Hibiscus coccineus</i>	Swamp Hibiscus/ Scarlet Rose Mallow	Perennial	Random spacing (Min. 24" O.C. Average)
399	907	1 Pnt	<i>Iris virginica</i>	Southern Blue Flag Iris	Perennial	Random spacing (Min. 18" O.C. Average)
663	1507	1 Pnt	<i>Sagittaria latifolia</i>	Duck Potato/ Broadleaf Arrowhead	Perennial	Random spacing (Min. 18" O.C. Average)
4310		Seed	Wildflower Mix	Blk. Eye Susan, Gaura, Coneflower, Milkweed, Etc.	Perennial	Seed
205	820	1 Pnt	<i>Hemerocallis</i> spp	Wild Daylily	Perennial	Random spacing (Min. 24" O.C. Average)



Civil Engineering
Land Planning
Landscape Architecture

Water Resources
Property Services
Arborist Services

50 Warm Springs Circle
Roswell ▪ Georgia ▪ 30075
(770)641-1942 ▪ www.aecatl.com

BIORETENTION & WETLAND PLANTINGS

JOIN WELL - PHASE I WELL FULTON COUNTY GEORGIA

1

100

COPYRIGHT BY AEC, INC.

NO.: 13-3454
OWN BY: LAF, JLM
GNED BY: LAF
DE DRAWN BY: JAP
DE DESIGNED BY: JAP
BY: SLR
15/15

SHEET

12

L12

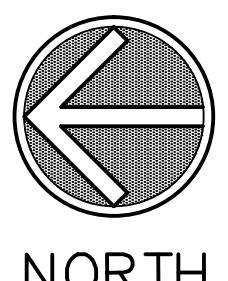
The logo for Georgia 811 features the word "GEORGIA" in large, bold, black letters, with "811" in a slightly smaller, bold, black font to its right. A registered trademark symbol (®) is located at the top right of "811". Below "GEORGIA" is the tagline "Call Before You Dig" in a smaller, black, sans-serif font. At the bottom of the logo is a horizontal bar containing the text "Utilities Protection Center, Inc." in a black, sans-serif font. To the right of this text is a graphic of a hand holding a shovel, with the shovel's head pointing towards the "Utilities Protection Center, Inc." text.

**Know what's below.
Call before you dig.**

Dial 811 or Call 1-800-282-7411

Blair 911 or Call 1-800-252-7171

1" = 20'



NORTH

1"=20'



AEC

Civil Engineering Water Resources
Land Planning Property Services
Landscape Architecture Arborist Services

50 Warm Springs Circle
Roswell • Georgia • 30075
(770)641-1942 • www.aecad.com

PLANT LIST & DETAILS

SUN VALLEY - PHASE I

ROSWELL FULTON COUNTY GEORGIA

DATE: _____
REVISIONS: _____
COPRIGHT: AEC INC

PROJECT NO: 13-3454
CIVIL DRAWN BY: LAF, JLM
CIVIL DESIGNED BY: LAF
LANDSCAPE DRAWN BY: JAP
LANDSCAPE DESIGNED BY: JAP
CHECKED BY: SLR
DATE: 5/1/15

L2.0

POND & LITTORAL SHELF PLANTINGS

Quantity	Square Feet	Size	Botanical Name	Common Name	Type	Spacing
15		6'-8' ht	Ilex opaca	American Holly	Tree	As Shown
46		3 Gal	Buddleia davidii	Butterfly Bush	Shrub	As Shown
61		3 Gal	Forsythia x intermedia	Forsythia	Shrub	As Shown
16		3 Gal	Ilex glabra	Inkberry	Shrub	As Shown
44		3 Gal	Raphiolepis indica	Indian Hawthorne	Shrub	As Shown
65		3 Gal	Vaccinium corymbosum	Highbush Blueberry	Shrub	As Shown
38665	Seed	Andropogon virginicus	Broomsedge	Grass	Seed	
1422	Seed	Chasmanthium latifolium	Upland Sea Oats	Grass	Seed	
58	1 Gal	Muhlenbergia capillaris	Pink Muhy Grass	Grass	As Shown	
1049	Seed	Panicum virgatum	Switchgrass	Grass	Seed	
3627	Seed	Sorghastrum nutans	Yellow Indian Grass	Grass	Seed	
248	992	1 Pnt	Canna	Canna Lily	Perennial	Random spacing (Min. 24" O.C. Average)
60	545	1 Pnt	Crinum americanum	Swamp Lily	Perennial	Random spacing (Min. 36" O.C. Average)
305	1220	1 Pnt	Coreopsis tinctoria	Dwarf Tickseed	Perennial	Random spacing (Min. 24" O.C. Average)
747	4153	1 Pnt	Eupatorium purpureum	Joe Pye Weed	Perennial	Random spacing (Min. 30" O.C. Average)
342	1389	1 Pnt	Hibiscus coccineus	Swamp Hibiscus/ Scarlet Rose Mallow	Perennial	Random spacing (Min. 24" O.C. Average)
604	1374	1 Pnt	Iris virginica	Southern Blue Flag Iris	Perennial	Random spacing (Min. 18" O.C. Average)
633	1440	1 Pnt	Sagittaria latifolia	Duck Potato/ Broadleaf Arrowhead	Perennial	Random spacing (Min. 18" O.C. Average)
14725	Seed	Wildflower Mix	Blk. Eye Susan, Gaura, Coneflower, Milkweed, Etc.	Perennial	Seed	
671	2.687	1 Pnt	Hemerocallis spp	Wild Daylily	Perennial	Random spacing (Min. 24" O.C. Average)

BIORETENTION PLANTINGS

Quantity	Square Feet	Size	Botanical Name	Common Name	Type	Spacing
5		6'-8' ht	Ilex opaca	American Holly	Tree	As Shown
11		3 Gal	Buddleia davidii	Butterfly Bush	Shrub	As Shown
19		3 Gal	Forsythia x intermedia	Forsythia	Shrub	As Shown
17		3 Gal	Ilex glabra	Inkberry	Shrub	As Shown
17		3 Gal	Vaccinium corymbosum	Highbush Blueberry	Shrub	As Shown
1440	Seed	Andropogon virginicus	Broomsedge	Grass	Seed	
16855	Seed	Chasmanthium latifolium	Upland Sea Oats	Grass	Seed	
1463	Seed	Eragrostis curvula	Weeping Lovegrass	Grass	Seed	
43	1 Gal	Muhlenbergia capillaris	Pink Muhy Grass	Grass	As Shown	
218	1984	1 Pnt	Crinum americanum	Swamp Lily	Perennial	Random spacing (Min. 36" O.C. Average)
163	653	1 Pnt	Coreopsis tinctoria	Dwarf Tickseed	Perennial	Random spacing (Min. 24" O.C. Average)
214	1195	1 Pnt	Eupatorium purpureum	Joe Pye Weed	Perennial	Random spacing (Min. 30" O.C. Average)
354	1416	1 Pnt	Hibiscus coccineus	Swamp Hibiscus/ Scarlet Rose Mallow	Perennial	Random spacing (Min. 24" O.C. Average)
399	907	1 Pnt	Iris virginica	Southern Blue Flag Iris	Perennial	Random spacing (Min. 18" O.C. Average)
591	1344	1 Pnt	Sagittaria latifolia	Duck Potato/ Broadleaf Arrowhead	Perennial	Random spacing (Min. 18" O.C. Average)
4310	Seed	Wildflower Mix	Blk. Eye Susan, Gaura, Coneflower, Milkweed, Etc.	Perennial	Seed	
205	820	1 Pnt	Hemerocallis spp	Wild Daylily	Perennial	Random spacing (Min. 24" O.C. Average)

WETLAND PLANTINGS

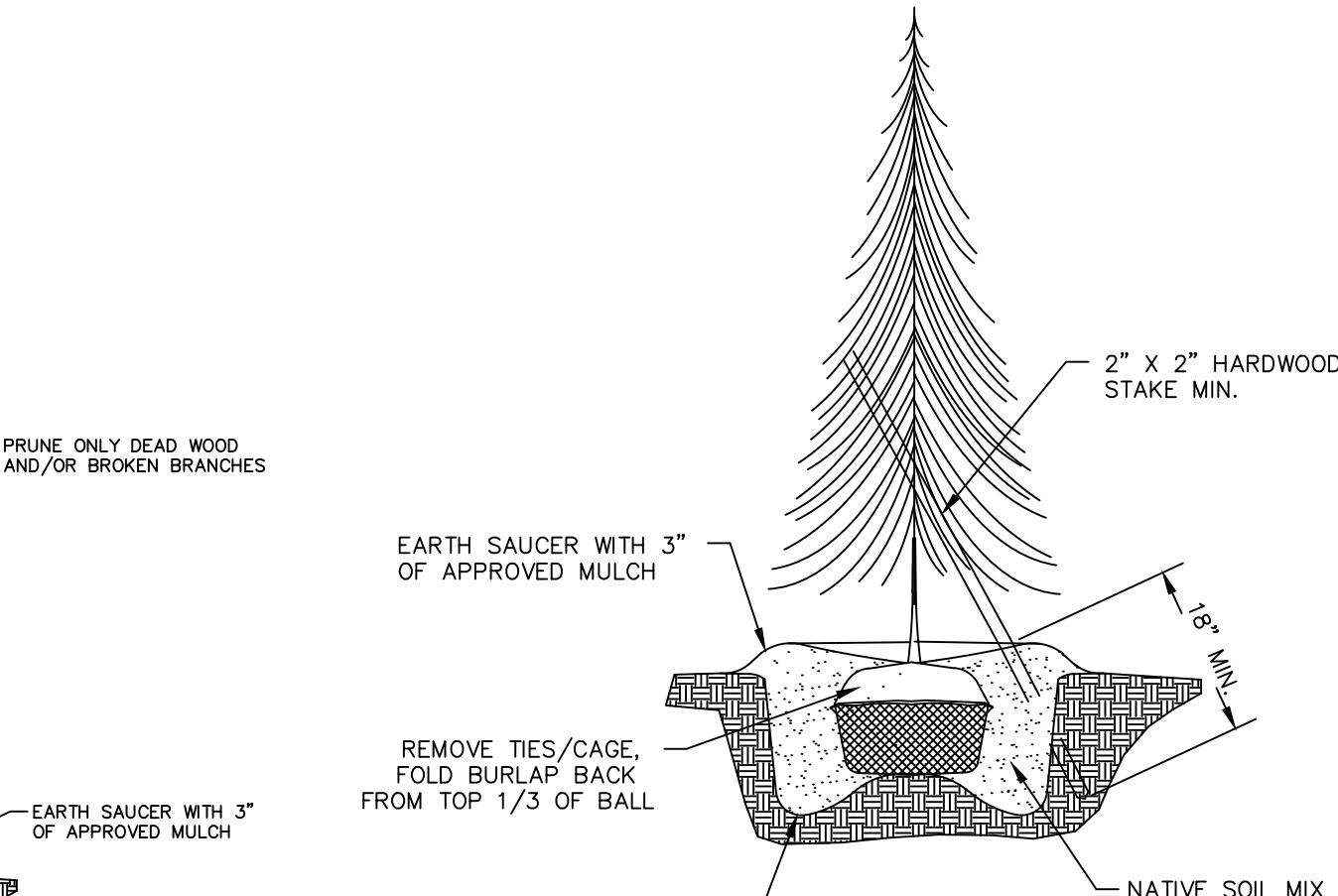
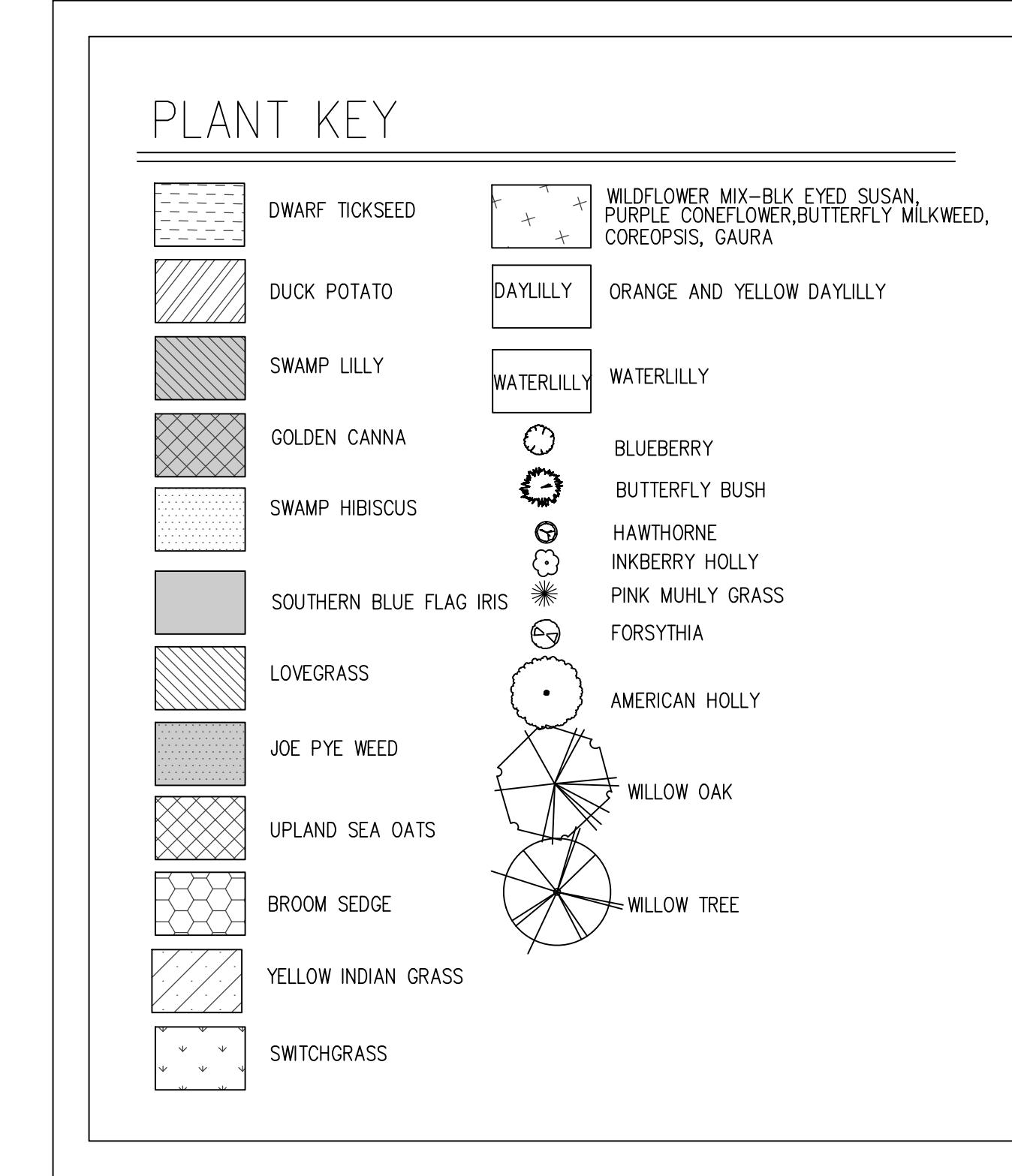
Quantity	Square Feet	Size	Botanical Name	Common Name	Type	Spacing
8		6'-8' ht	Ilex opaca	American Holly	Tree	As Shown
5		2" Cal.	Salix babylonica	Weeping Willow	Tree	As Shown
4		2" Cal.	Quercus phellos	Willow Oak	Tree	As Shown
34		3 Gal	Forsythia x intermedia	Forsythia	Shrub	As Shown
46		3 Gal	Ilex glabra	Inkberry	Shrub	As Shown
1133	Seed	Andropogon virginicus	Broomsedge	Grass	Seed	
1880	Seed	Chasmanthium latifolium	Upland Sea Oats	Grass	Seed	
2094	Seed	Eragrostis curvula	Weeping Lovegrass	Grass	Seed	
2677	Seed	Panicum virgatum	Switchgrass	Grass	Seed	
215	8635	1 Pnt	Canna	Canna Lily	Perennial	Random spacing (Min. 24" O.C. Average)
105	958	1 Pnt	Crinum americanum	Swamp Lily	Perennial	Random spacing (Min. 36" O.C. Average)
209	839	1 Pnt	Coreopsis tinctoria	Dwarf Tickseed	Perennial	Random spacing (Min. 24" O.C. Average)
198	1101	1 Pnt	Eupatorium purpureum	Joe Pye Weed	Perennial	Random spacing (Min. 30" O.C. Average)
395	1580	1 Pnt	Hibiscus coccineus	Swamp Hibiscus/ Scarlet Rose Mallow	Perennial	Random spacing (Min. 24" O.C. Average)
642	1460	1 Pnt	Iris virginica	Southern Blue Flag Iris	Perennial	Random spacing (Min. 18" O.C. Average)
494	1124	1 Pnt	Sagittaria latifolia	Duck Potato/ Broadleaf Arrowhead	Perennial	Random spacing (Min. 18" O.C. Average)
6738	Seed	Wildflower Mix	Blk. Eye Susan, Gaura, Coneflower, Milkweed, Etc.	Perennial	Seed	
94	378	4" pot	Waterlily	Waterlily	Perennial	Random spacing (Min. 24" O.C. Average)

GENERAL NOTES:

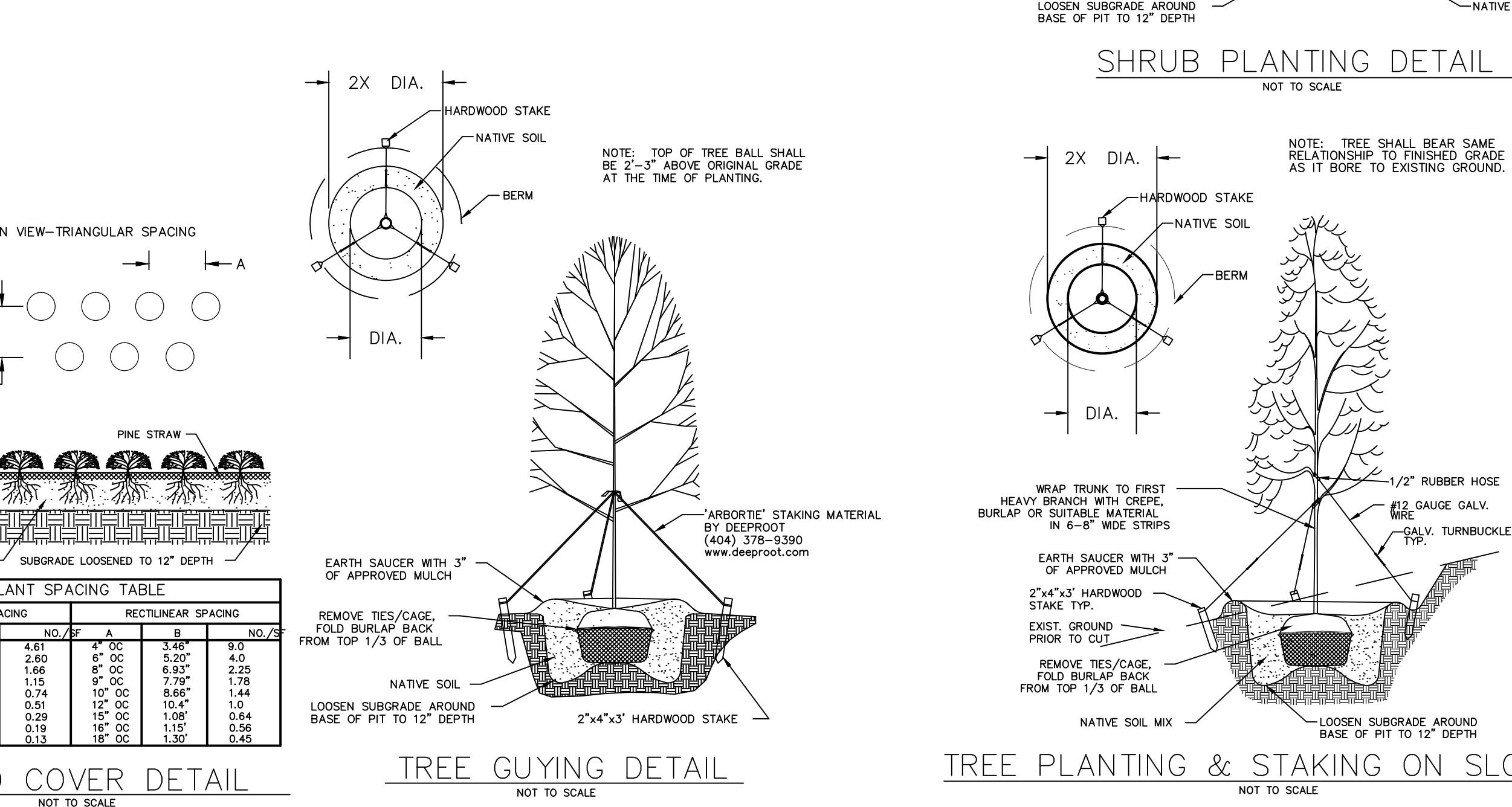
- PRIOR TO CONSTRUCTION, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES & SHALL AVOID DAMAGE TO ALL UTILITIES DURING THE COURSE OF THE WORK. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY & ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC. WHICH OCCURS AS A RESULT OF THE LANDSCAPE CONSTRUCTION.
- LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ACCURATE PLANT COUNTS PRIOR TO PRICING OF TREE, SHRUBS, PERENNIALS, ANNUALS, GROUND COVERS, SOD, SEED AND PINE STRAW. QUANTITIES ARE GIVEN FOR CONVENIENCE ONLY. LANDSCAPE CONTRACTOR SHALL VERIFY PLANT COUNT FROM PLAN, AND SHALL PROVIDE AND INSTALL ALL PLANT MATERIAL SHOWN ON THE PLAN. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES.
- ALL PLANT MATERIAL CHOSEN MUST BE FREE OF DISEASE AND PESTS, BE OF GOOD QUALITY AND WELL SHAPED AND BRANCHED.
- ALL TREES IN LAWN AREA TO HAVE A 4' DIAMETER MULCH BED.
- NO PLANTING BED EDGE SHALL BE CLOSER THAN 21" FROM THE BACK OF CURB OR SIDEWALK.
- PLANTING BED LINES, TREE, SHRUB, GROUNDCOVER, & SEASONAL COLOR PLACEMENT SHALL BE APPROVED BY THE PROJECT LANDSCAPE ARCHITECT OR OWNERS REPRESENTATIVE, PRIOR TO INSTALLATION.
- LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING POSITIVE DRAINAGE AT 2% MINIMUM IN ALL PLANTED AREAS.
- O. C. = ON CENTER, & S.A.S = SPACE AS SHOWN.
- ALL PLANTS MUST BE CONTAINER-GROWN OR BALLED & BURLAPPED (B&B) AS INDICATED IN THE PLANT LIST.
- ALL TREES MUST BE STRAIGHT TRUNKED, FULL HEADED & MEET ALL REQUIREMENTS SPECIFIED.
- ALL PLANTS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT & THE OWNER BEFORE, DURING & AFTER INSTALLATION.
- ALL TREES MUST BE GUYED OR STAKED AS SHOWN IN THE DETAILS.
- ALL PLANTS & PLANTING AREAS MUST BE COMPLETELY MULCHED AND WATER IMMEDIATELY AFTER PLANTING AS SPECIFIED.
- THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR FULLY MAINTAINING ALL PLANTINGS (INCLUDING, BUT NOT LIMITED TO: WATERING, SPRAYING, MULCHING, FERTILIZING, ETC.) UNTIL THE WORK IS ACCEPTED IN TOTAL BY THE LANDSCAPE ARCHITECT & THE OWNER.
- THE LANDSCAPE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE (1) YEAR BEGINNING AT THE DATE OF FINAL ACCEPTANCE. THE LANDSCAPE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS BEFORE OR AT THE END OF THE GUARANTEE PERIOD (AS PER DIRECTION OF THE OWNER).
- THE OWNER AGREES TO PERFORM ALL LANDSCAPE MAINTENANCE (INCLUDING WATERING) THROUGHOUT THE ONE YEAR GUARANTEE PERIOD UNLESS OTHERWISE DETERMINED.
- THE LANDSCAPE ARCHITECT WILL APPROVE THE STAKED LOCATION OF ALL PLANT MATERIAL PRIOR TO INSTALLATION.
- AFTER BEING DUG AT THE NURSERY SOURCE, ALL TREES IN LEAF SHALL BE ACCLIMATED FOR TWO (2) WEEKS UNDER A MIST SYSTEM PRIOR TO INSTALLATION.
- ANY PLANT MATERIAL WHICH DIES, TURNS BROWN OR DEFOLIATES (PRIOR TO TOTAL ACCEPTANCE OF THE WORK) SHALL BE PROMPTLY REMOVED FROM THE SITE & REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, SIZE AND MEETING ALL PLANT LIST SPECIFICATIONS.
- STANDARDS SET FORTH IN 'AMERICAN STANDARDS FOR NURSERY STOCK' REPRESENT GUIDELINE SPECIFICATIONS ONLY AND CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIAL.

BIORETENTION NOTES:

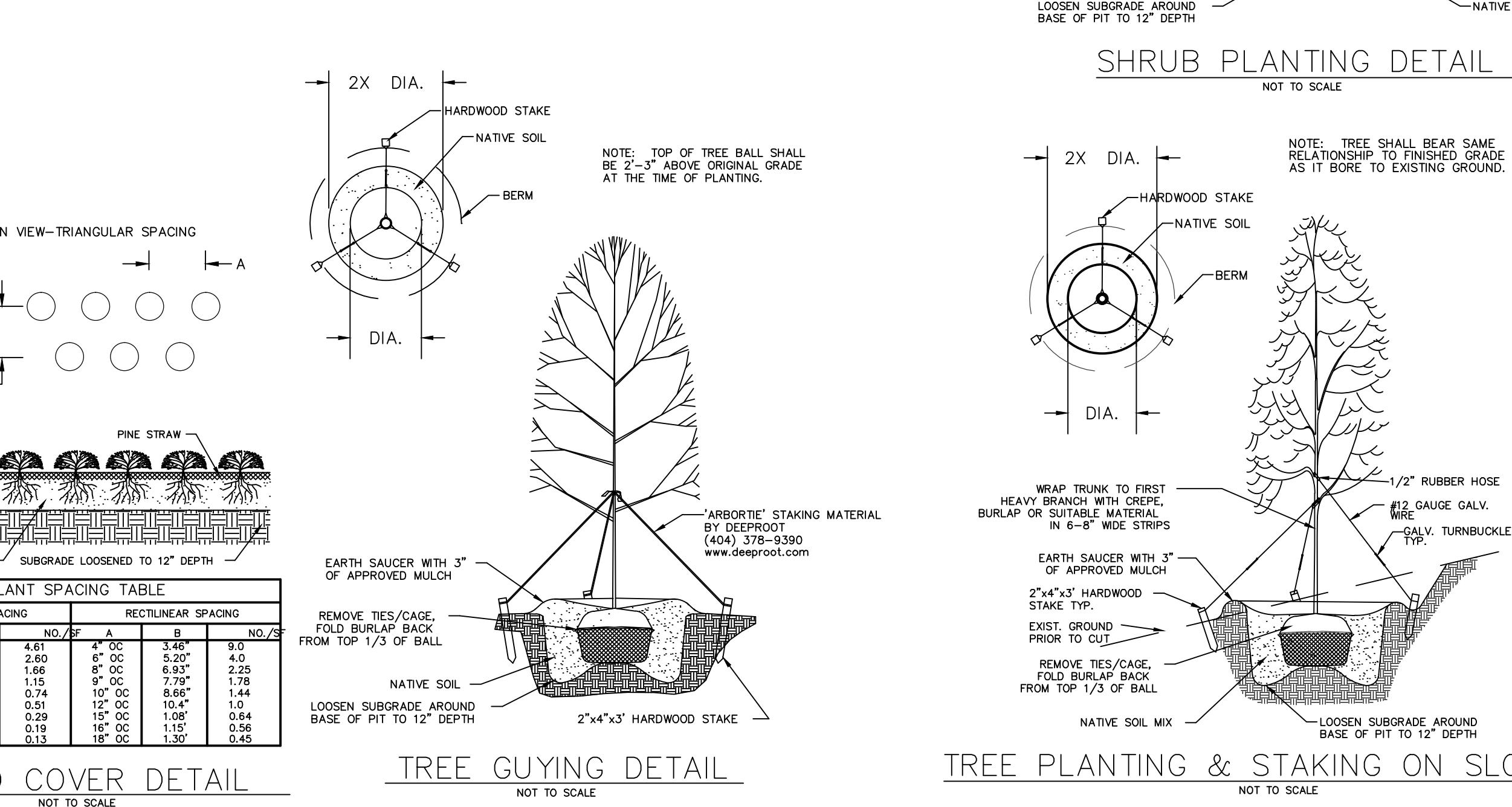
- SOIL SHALL BE COMRISED OF ANDY LOAM, LOAMY SAND, LOAM OR A LOAM/SAND MIX (MIN. 35-60% SAND, BY VOLUME)
- SOIL SHOULD FALL WITHIN THE SM, ML, OR SC CLASSIFICATIONS OF THE USCS
- SOIL SHALL HAVE PERMEABILITY OF AT LEAST 1.0 FEET PER DAY (0.5" HOUR) IS REQUIRED
- SOIL SHOULD BE FREE OF STONES, STUMPS, ROOTS OR OTHER WOODY MATERIAL OVER 1" DIAMETER.
- BRUSH OR SEEDS FROM NOXIOUS WEEDS, SUCH AS JOHNSON GRASS, MUGWORT, NUTSEDGE AND CANADIAN THISTLE SHOULD NOT BE PRESENT IN THE SOILS
- PLACEMENT OF THE PLANTING SOILS SHOULD BE IN LIFTS OF 12"-18", LOOSELY COMPAKTED (TAMPED LIGHTLY WITH A DOZER OR A BACKHOE BUCKET).
- THE MULCH SHOULD BE SATNDARD LANDSCAPE STYLE, SINGLE OR DOUBLE, SHREDDED HARDWOOD MULCH OR CHIPS
- THE MULCH LAYER SHOULD BE WELL AGED (STOCKPILED OR STORED FOR AT LEAST 12 MONTHS), UNIFORM IN COLOR, AND FREE OF OTHER MATERIALS, SUCH AS WEEDS, SOILS, ROOTS, ETC.
- THE MULCH SHOULD BE APPLIED TO A MAXIMUM DEPTH OF 3 INCHES
- GRASS CLIPPINGS SHOULD NOT BE USED AS A MULCH MATERIAL



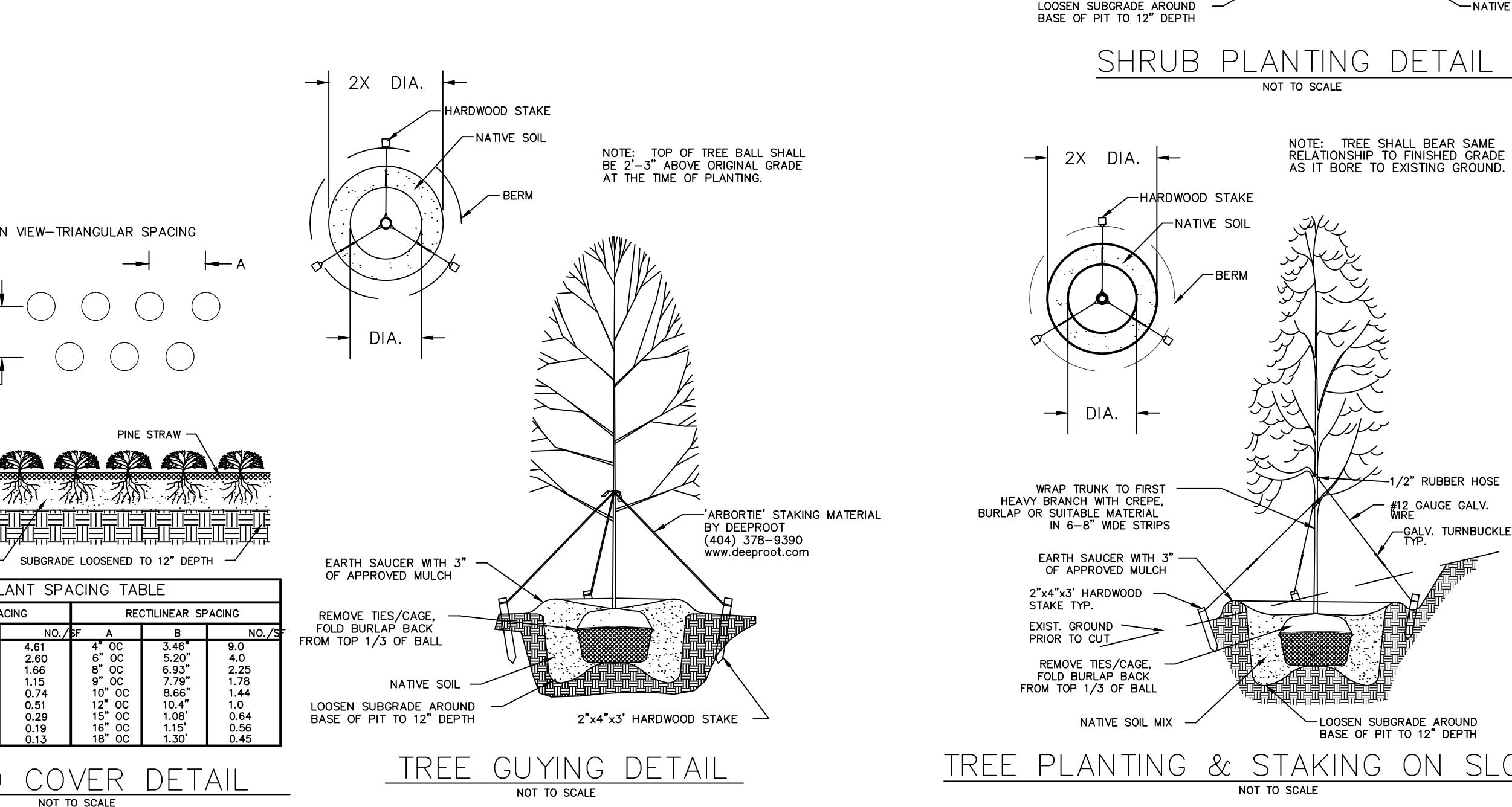
CONIFER PLANTING DETAIL



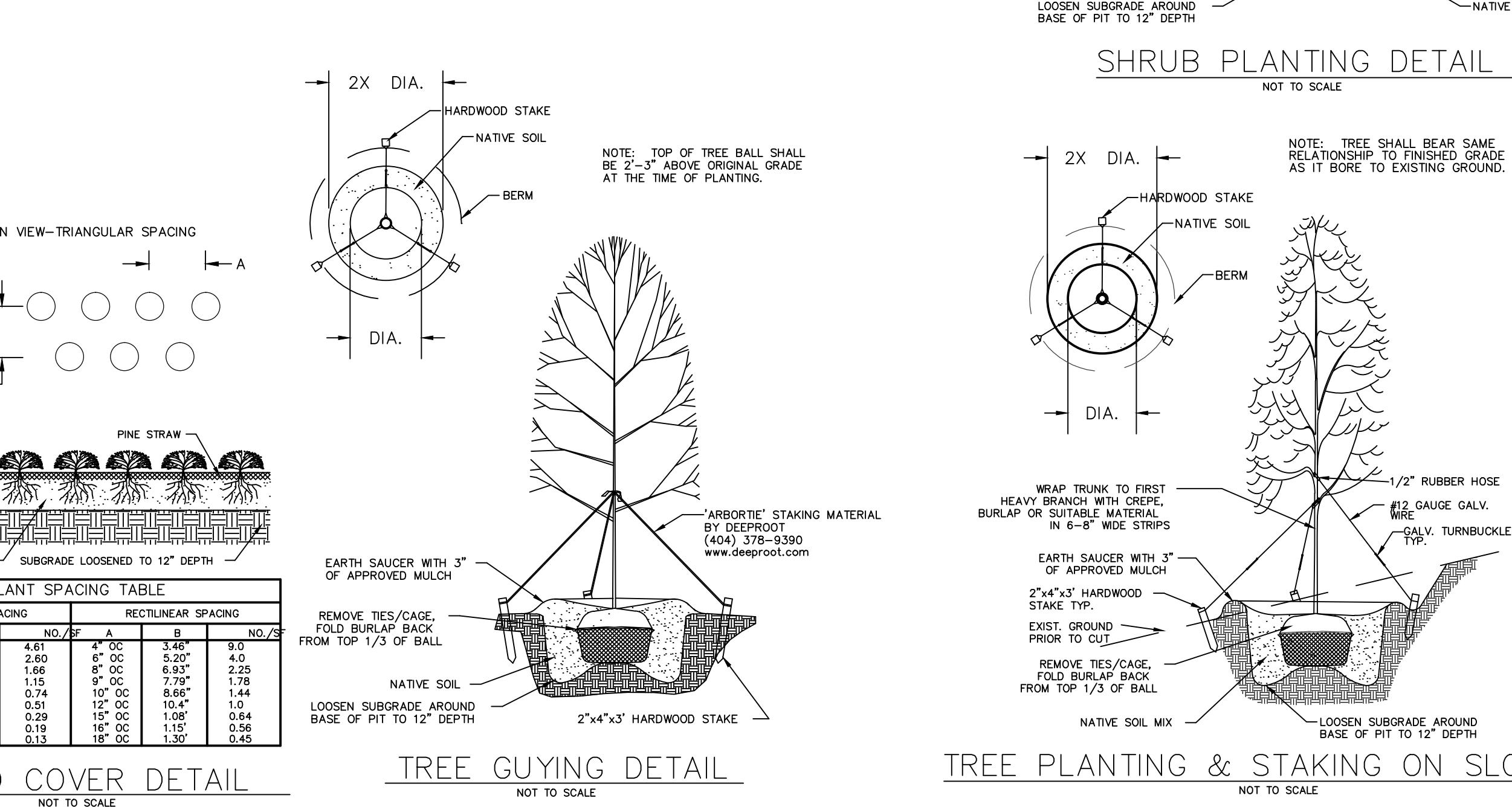
SHRUB PLANTING DETAIL



TREE GUYING DETAIL



TREE PLANTING & STAKING ON SLOPES

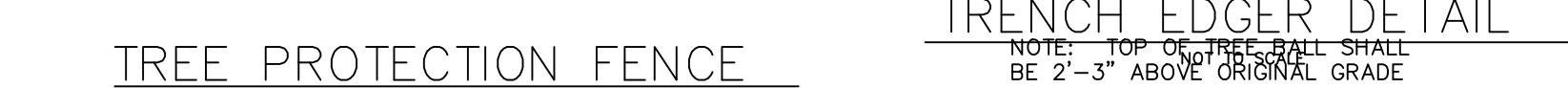


MULTIPLE STEM PLANTING DETAIL

TYPICAL ISLAND BED SECTION



TREE PROTECTION FENCE



TRENCH EDGER DETAIL