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**BALLENTINE  
ASSOCIATES, P.A.**  
221 PROVIDENCE ROAD, CHAPEL HILL, N.C. 27514  
(919) 929 - 0481

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OWNER INFORMATION  
SHERYL-MAR CO. LLC.  
 87 NORWOOD ROAD  
 CHAPEL HILL, NC 27516

OWNERS REPRESENTATIVE:  
 JIM HODGIN  
 PH. 910-210-0920  
 FAX  
 EMAIL: [jimhodgin@hotmail.com](mailto:jimhodgin@hotmail.com)

ISSUED	DATE
TO SHERYL- MAR	25 MAR 16
CHATHAM UTILITIES & NCDOT	12 APR 16
CHATHAM UTILITIES	5 MAY 16
CHATHAM STORMWATER #2	17 JUN 16
NCDOT SUBMITTAL #2	19 JUL 16

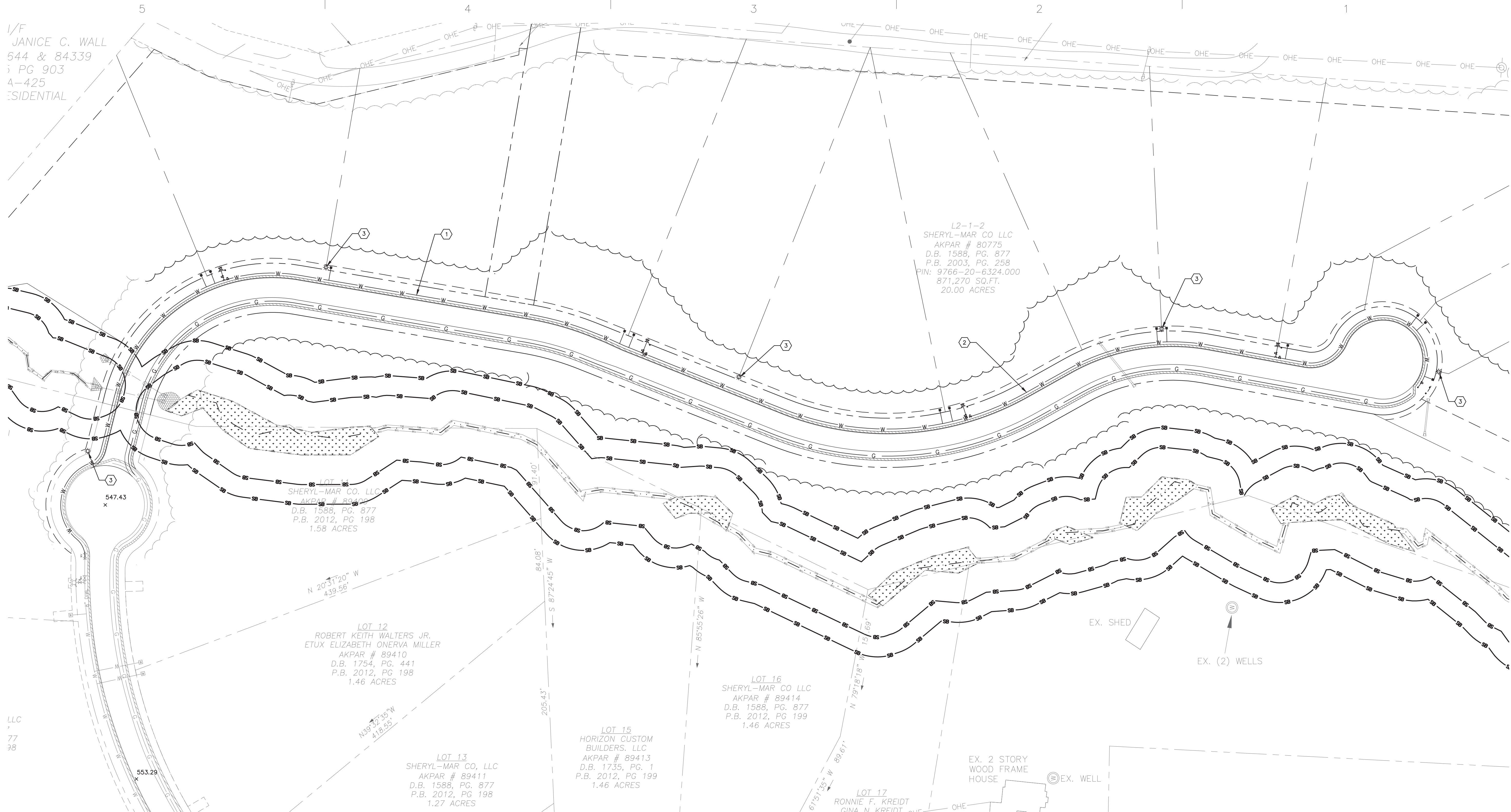
**BROOKSIDE AT FIELDSTONE**

**CHATHAM COUNTY, NORTH CAROLINA**

**CONSTRUCTION DRAWINGS**

JOB NUMBER: 113022.00
DATE: 25 MAR 2016
SCALE: AS NOTED
DRAWN BY: DBB
REVIEWED BY: GJR

**SHEET**  
**C1101**
















## PLAN KEY NOTES

- 1 WATER MAIN PLAN & PROFILE - NORTH
- 2 WATER MAIN PLAN & PROFILE - SOUTH
- 3 STREET LIGHT

## UTILITY PLAN NOTES

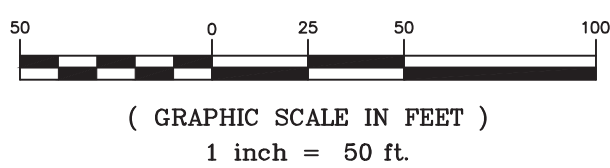
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CHATHAM COUNTY AND NCDEQ REQUIREMENTS, STANDARDS AND SPECIFICATIONS.
2. CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES (PRIVATE AND PUBLIC) AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR CONFLICTS. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES DURING CONSTRUCTION.
3. WATER UTILITIES:
  - 3.1. ALL WATER UTILITIES SHALL BE PER CHATHAM COUNTY PUBLIC WATER STANDARD SPECIFICATIONS AND DETAILS.
  - 3.2. CONTRACTOR SHALL SUBMIT PRODUCT DATA FOR WATER MAIN PIPES, FITTINGS AND APPURTENANCES.
  - 3.3. MINIMUM UTILITY VERTICAL SEPARATION DISTANCES:  
STORM SEWER AND WATER – 18"
4. ELECTRICAL:
  - 4.1. CONTRACTOR SHALL CONTACT ERVIN SUMMERS WITH DUKE ENERGY AT (336) 634-4633 TO COORDINATE ELECTRICAL SERVICE LINES.
  - 4.1.1. ELECTRICAL SUBCONTRACTOR SHALL PROVIDE TRENCHING, BACKFILLING AND COMPACTING FOR ALL ELECTRICAL CONDUITS.
  - 4.1.2. ELECTRICAL SUBCONTRACTOR SHALL PROVIDE CONCRETE TRANSFORMER PAD(S) IN ACCORDANCE WITH LOCAL REQUIREMENTS. ACTUAL PAD SIZE MAY VARY CONTINGENT ON FINAL TRANSFORMER SIZE SELECTED BY POWER COMPANY.
  - 4.1.3. ELECTRICAL SUBCONTRACTOR TO PROVIDE AND INSTALL SCH 40 PVC CONDUIT(S) UNDER ROADWAY AS NEEDED. MINIMUM DEPTH OF PRIMARY AND SECONDARY CONDUITS/CABLING SHALL BE MIN. 30" OR AS REQUIRED BY POWER COMPANY, WHICHEVER IS GREATER.
5. GAS:
  - 5.1. GAS SERVICE TO BE DESIGNED, SIZED & INSTALLED BY GAS COMPANY. CONTACT WARREN DUNCAN WITH PSNC AT (919) 367-2715 FOR COORDINATION.
6. TELECOM:
  - 6.1. AT&T: SARAH BITTING – (919) 918-4132.

## DRAWING LEGEND

SYMBOL/ABBREVIATION	EXISTING	PROPOSED	DESCRIPTION
			FIRE HYDRANT
			WATER VALVE
		•	VALVE MARKER POST
			WATER METER
			UTILITY POLE
		✱	STREET LIGHT
—W—	—W—	—W—	WATER LINE
—G—	—G—	—G—	GAS LINE
—SD—	—SD—	—SD—	STORM DRAIN PIPE
—OHE—	—OHE—	—OHE—	OVERHEAD UTILITY LINE
			UNDERGROUND UTILITY CORRIDOR
— — —	— — —	— — —	PROPERTY LINE
— — —	— — —	— — —	RIGHT-OF-WAY LINE
× 550.00			BENCH MARK



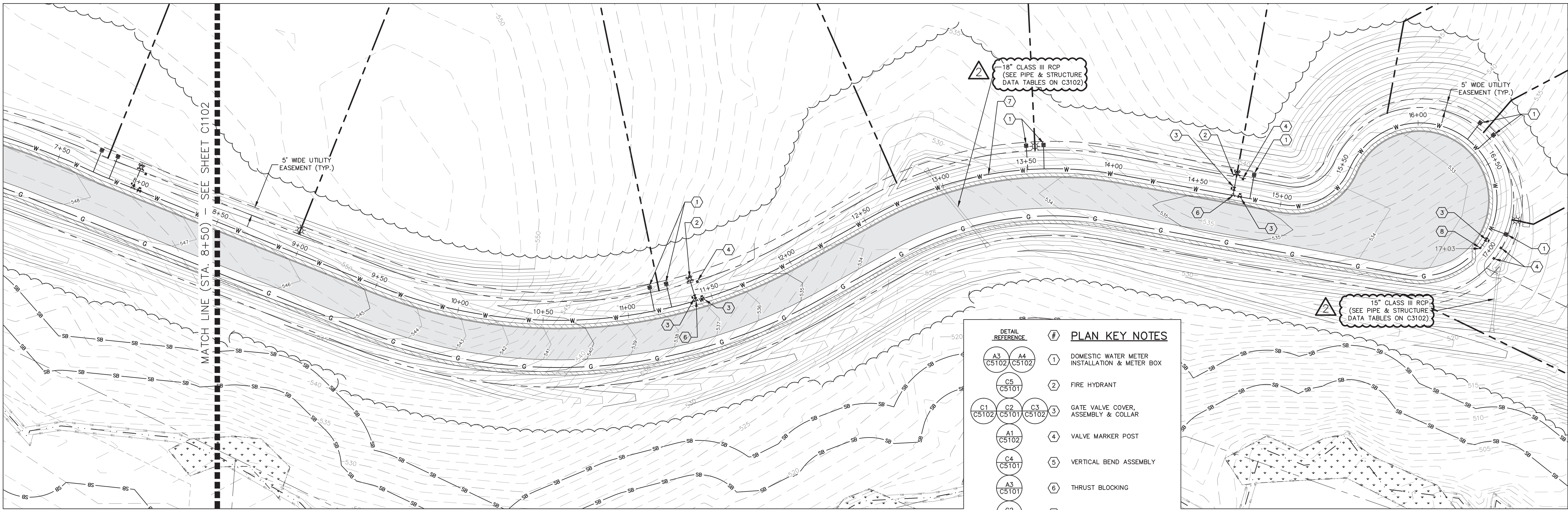
## UTILITY PLAN











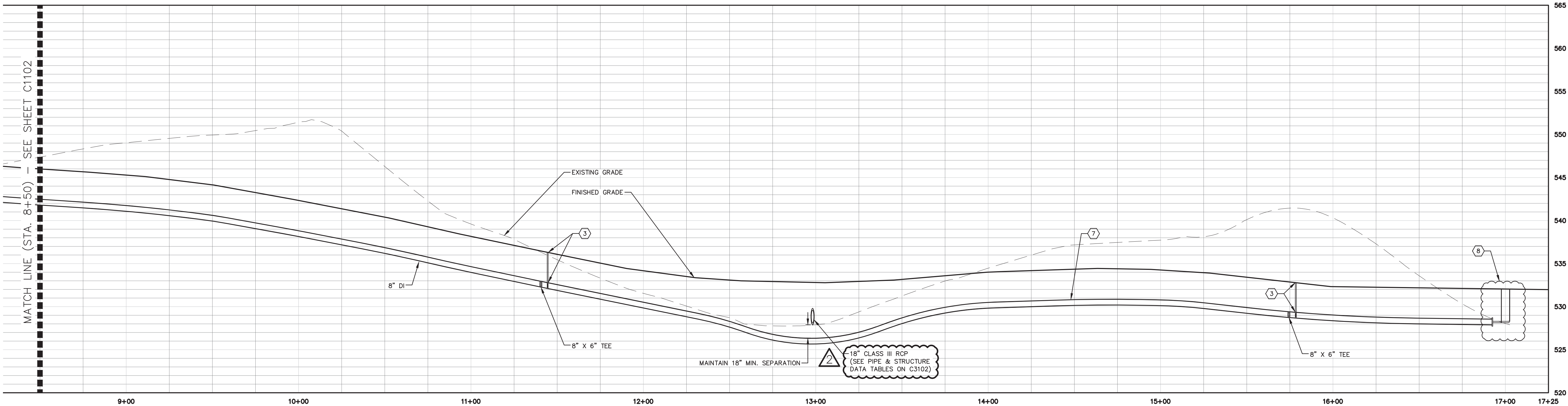
C3  
C1103

**WATER MAIN PLAN – SOUTH**

1" = 30'

NO GRID  
NAD 83

DETAIL REFERENCE	#	PLAN KEY NOTES
A3 C5102 C5101	1	DOMESTIC WATER METER INSTALLATION & METER BOX
C5 C5101	2	FIRE HYDRANT
C1 C5102 C2 C5101 C3 C5102	3	GATE VALVE COVER, ASSEMBLY & COLLAR
A1 C5102	4	VALVE MARKER POST
C4 C5101	5	VERTICAL BEND ASSEMBLY
A3 C5101	6	THRUST BLOCKING
C2 C5101	7	DI WATER MAIN TRENCH
C1 C5101	8	2" BLOWOFF ASSEMBLY



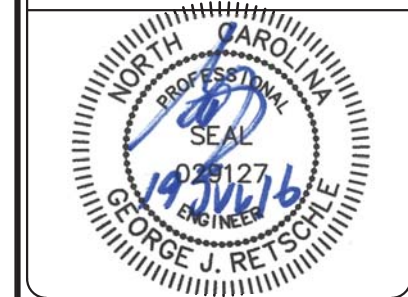
A3  
C1103

**WATER MAIN PROFILE – SOUTH**

SCALE: H: 1" = 30'  
V: 1" = 6'

**WATER MAIN  
PLAN & PROFILE  
SOUTH**

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DATE	5 MAY 16
REVISIONS	19 JUL 16
NUM	1
ISSUED	PER CHATHAM CO. UTILITIES COMMENTS
DATE	5 MAY 16
REVISIONS	19 JUL 16
NUM	1
ISSUED	PER NCDOT COMMENTS

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**OWNERS REPRESENTATIVE:**  
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**BROOKSIDE AT FIELDSTONE**  
**CHATHAM COUNTY, NORTH CAROLINA**  
**CONSTRUCTION DRAWINGS**

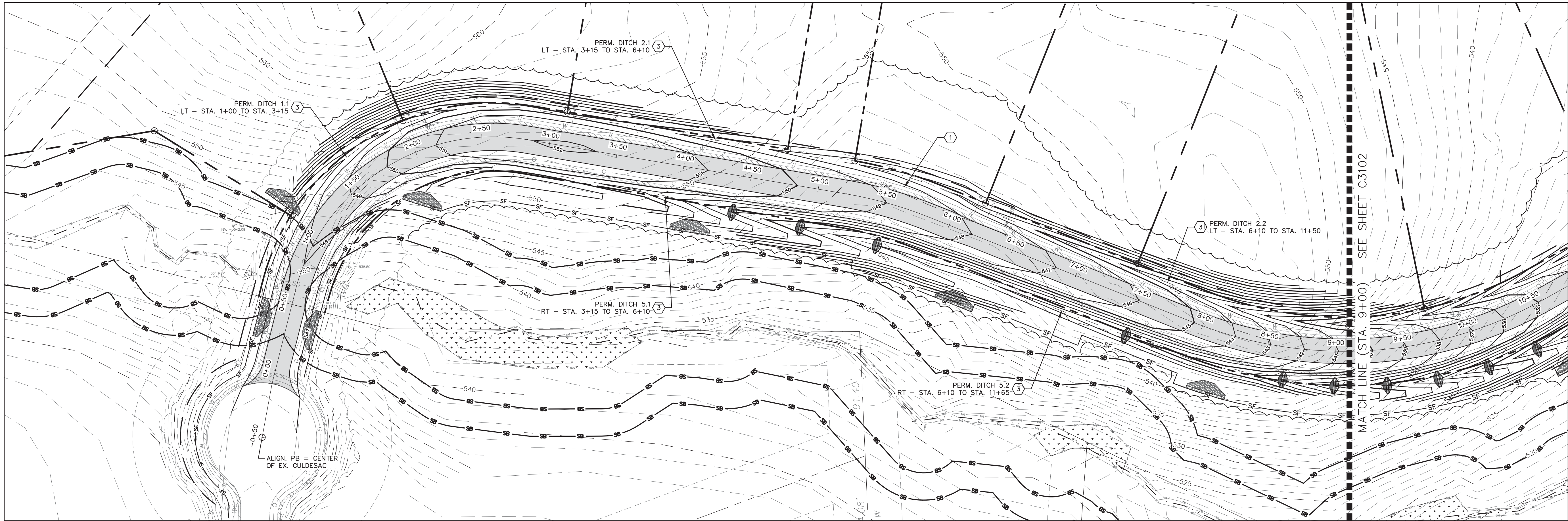
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REVIEWED BY: GJR

**SHEET  
C1103**



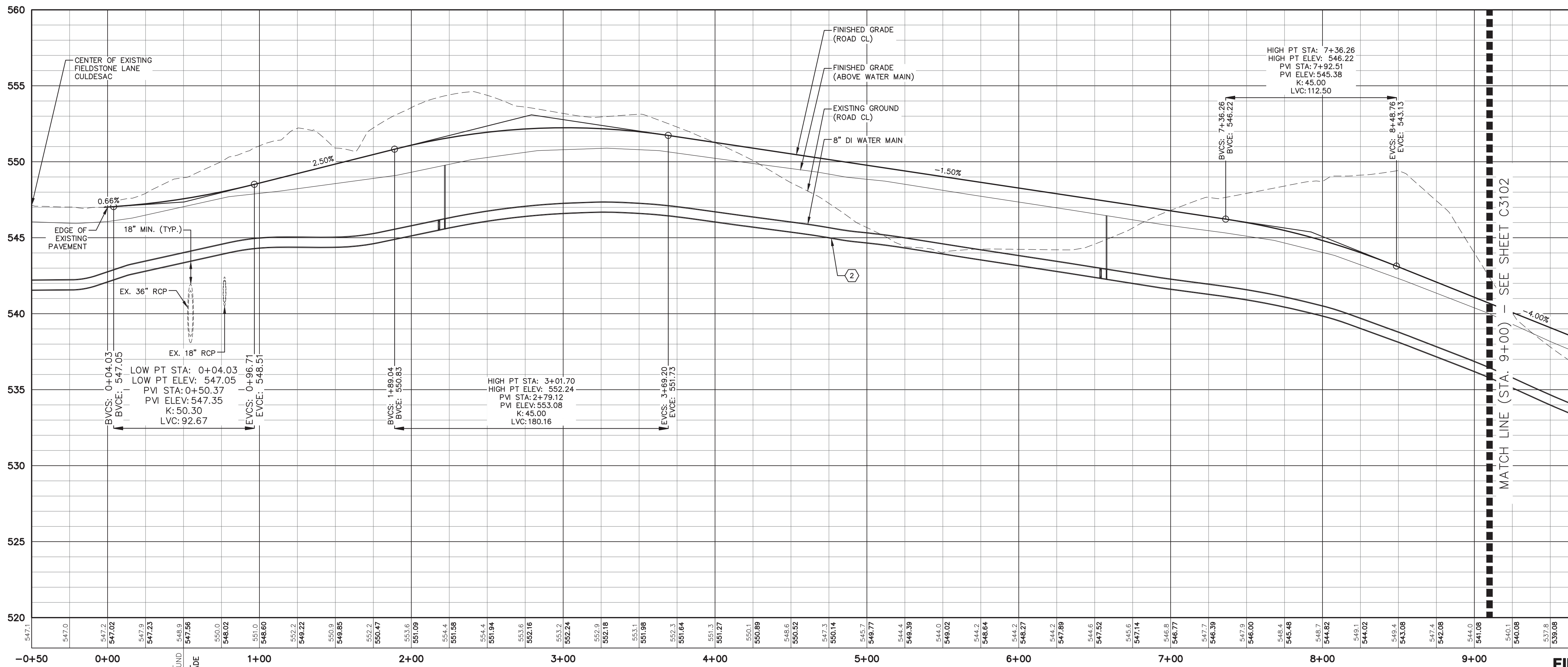






FIELDSTONE LANE PLAN - NORTH

SCALE: 1" = 30'



FIELDSTONE LANE PROFILE - NORTH

SCALE: H 1" = 30'  
V 1" = 4'

FIELDSTONE LANE  
PLAN & PROFILE - NORTH

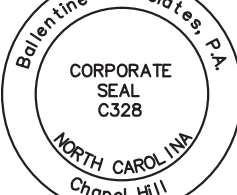
DETAIL REFERENCE	#	PLAN KEY NOTES
C3 C1102	1	WATER MAIN PLAN - NORTH
A3 C1102	2	WATER MAIN PROFILE - NORTH
A1 C5302	3	PERMANENT DITCH SECTION & LINING SCHEDULE

BROOKSIDE AT FIELDSTONE

CHATHAM COUNTY, NORTH CAROLINA

CONSTRUCTION DRAWINGS

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DATE	REVISIONS	NUM
19 JUL 16	PER NCDOT COMMENTS	1

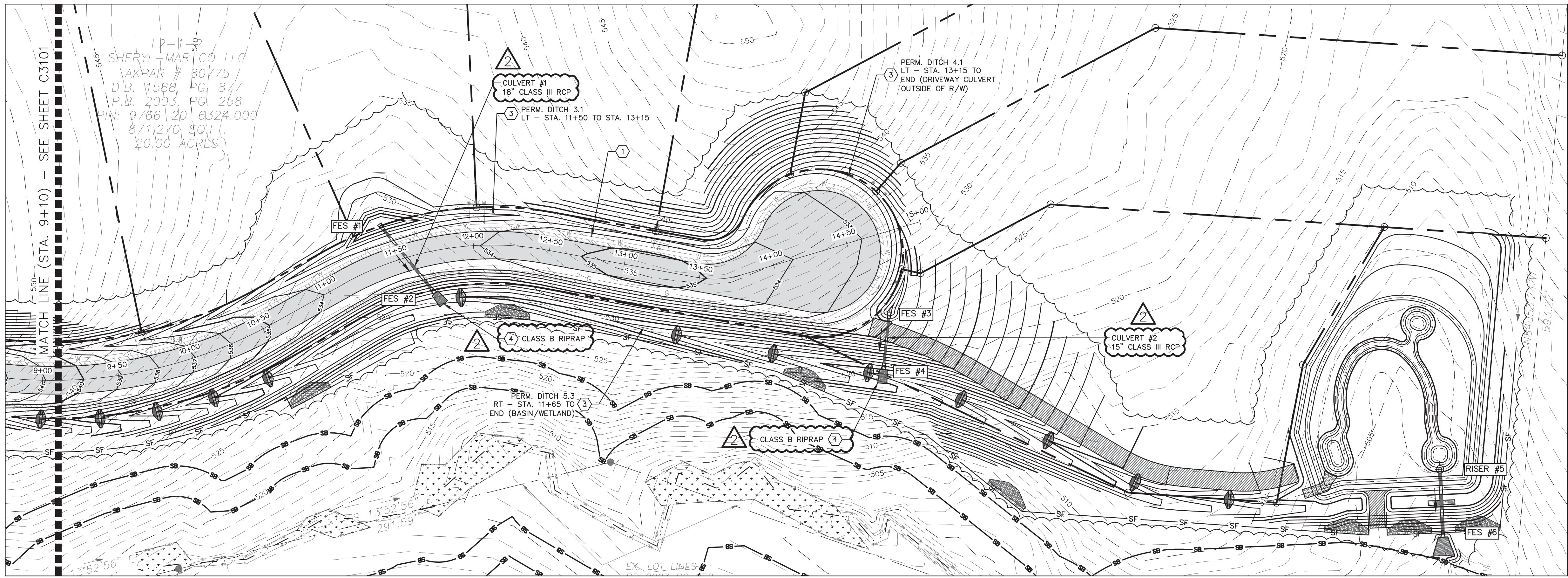
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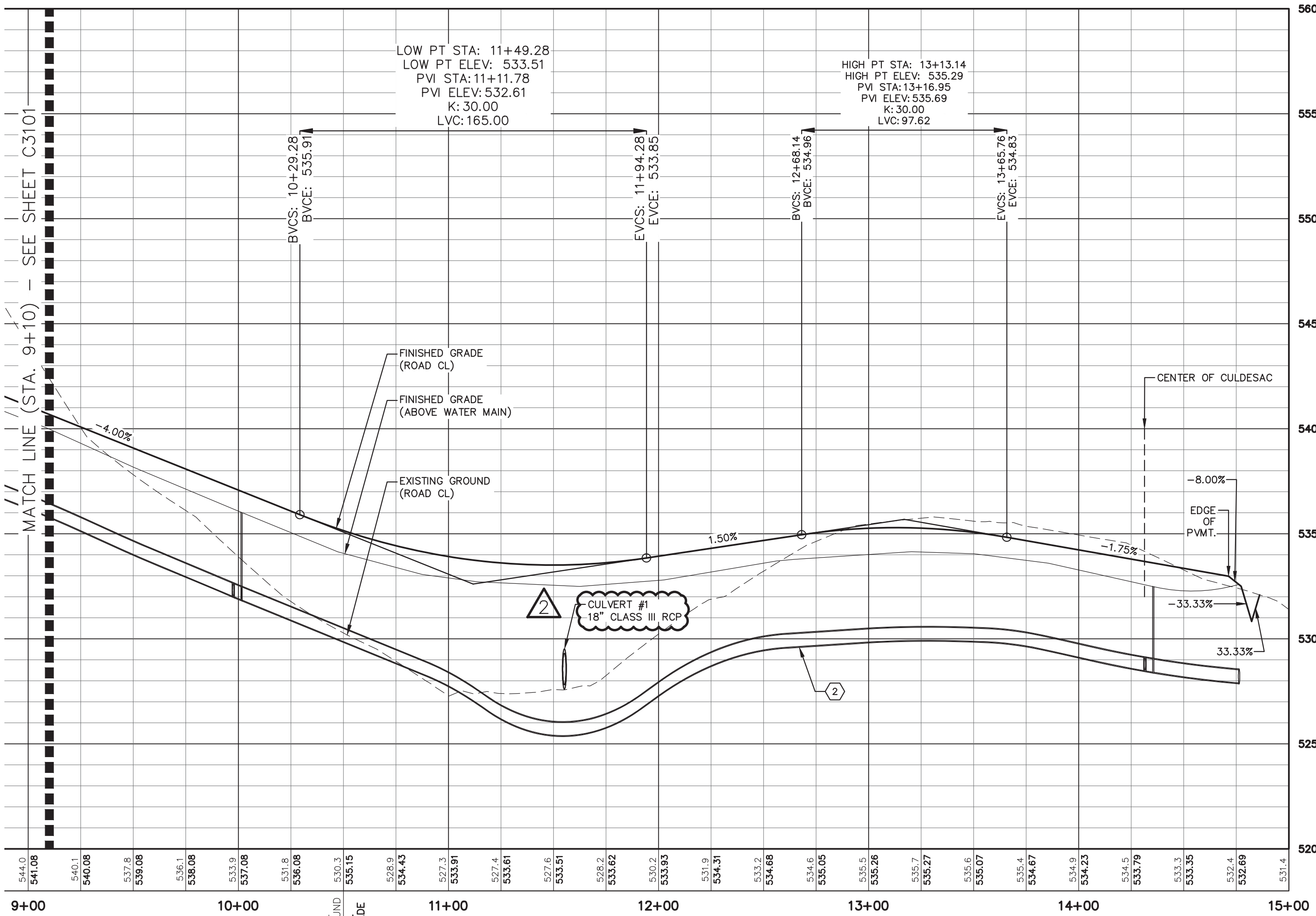
SHEET  
C3101





FIELDSTONE LANE PLAN - SOUTH

SCALE: 1" = 30'



FIELDSTONE LANE PROFILE - SOUTH

SCALE: H 1" = 30'  
V 1" = 4'

STRUCTURE TABLE		
STR. ID	*RIM ELEV. (FT)	STRUCTURE TYPE
FES #1	528.50	FLARED END SECTION
FES #2	527.00	FLARED END SECTION
FES #3	526.50	FLARED END SECTION
FES #4	520.00	FLARED END SECTION
FES #6	500.50	FLARED END SECTION
RISER #5	507.50	OUTLET STRUCTURE

\*FLARED END SECTIONS RIM = INV.  
\*OUTLET STRUCTURE RIM = TOP

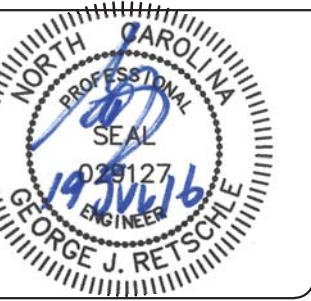
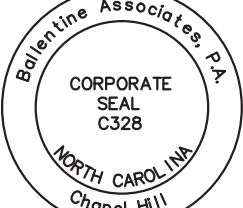
PIPE TABLE						
US STR	DS STR	DIAMETER (IN)	MATERIAL	US INV. ELEV. (FT)	DS INV. ELEV. (FT)	*LENGTH (FT) SLOPE (FT/FT)
FES #1	FES #2	18	RCP	528.50	527.00	58 0.0259
FES #3	FES #4	15	RCP	526.50	520.00	38 0.1711
RISER #5	FES #6	24	RCP	500.50	500.00	42 0.0119

\*INCLUDES LENGTHS OF PIPES AND FLARED END SECTIONS

- DETAIL REFERENCE
- #1 WATER MAIN PLAN - SOUTH
  - #2 WATER MAIN PROFILE - SOUTH
  - #3 PERMANENT DITCH SECTION & LINING SCHEDULE
  - #4 RIPRAP APRON

FIELDSTONE LANE  
PLAN & PROFILE - SOUTH

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DATE	REVISIONS	NUM
17 JUN 16	PER CHATHAM SW & EC COMMENTS	1
19 JUL 16	PER NCDOT COMMENTS	2

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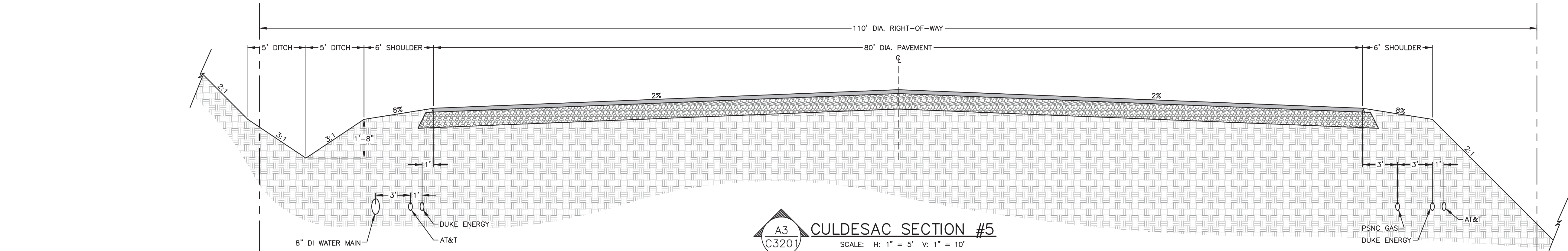
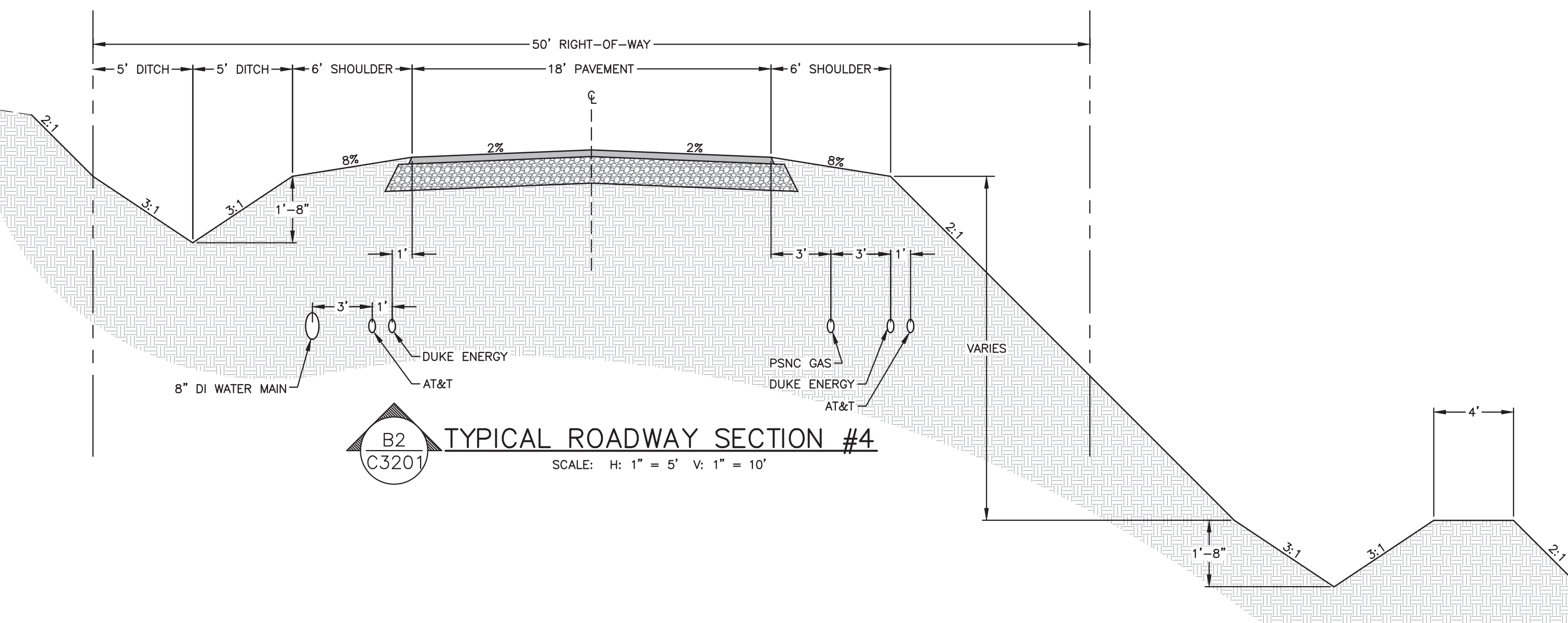
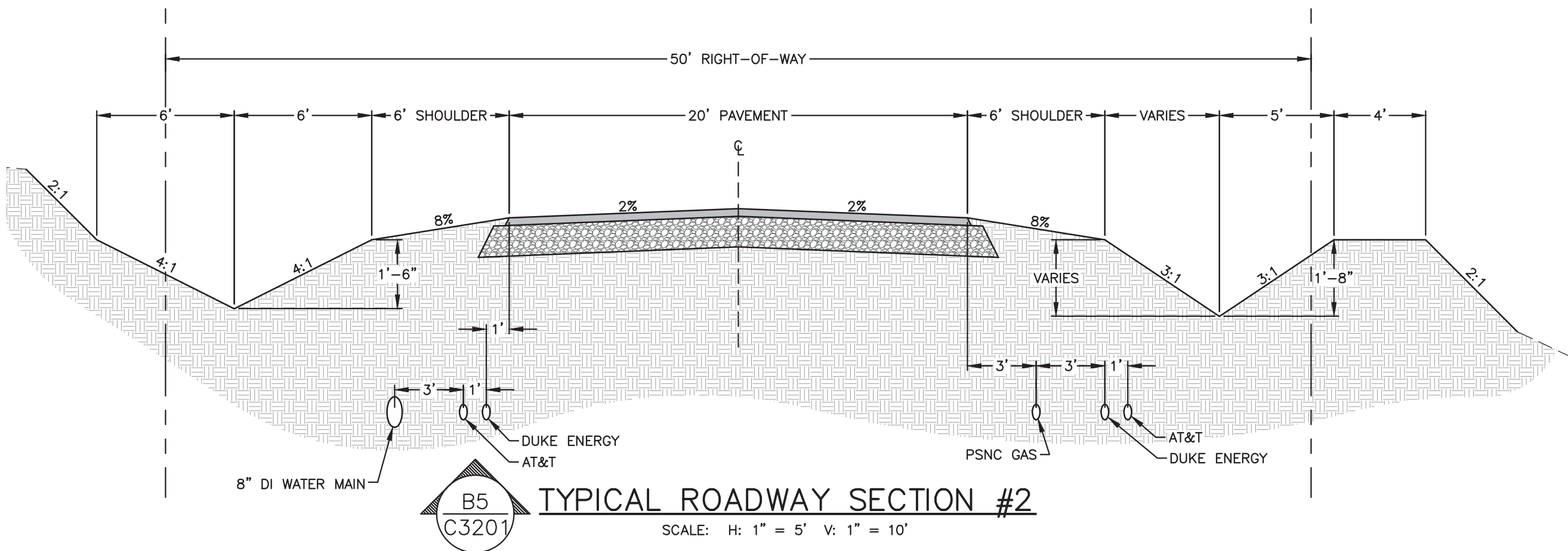
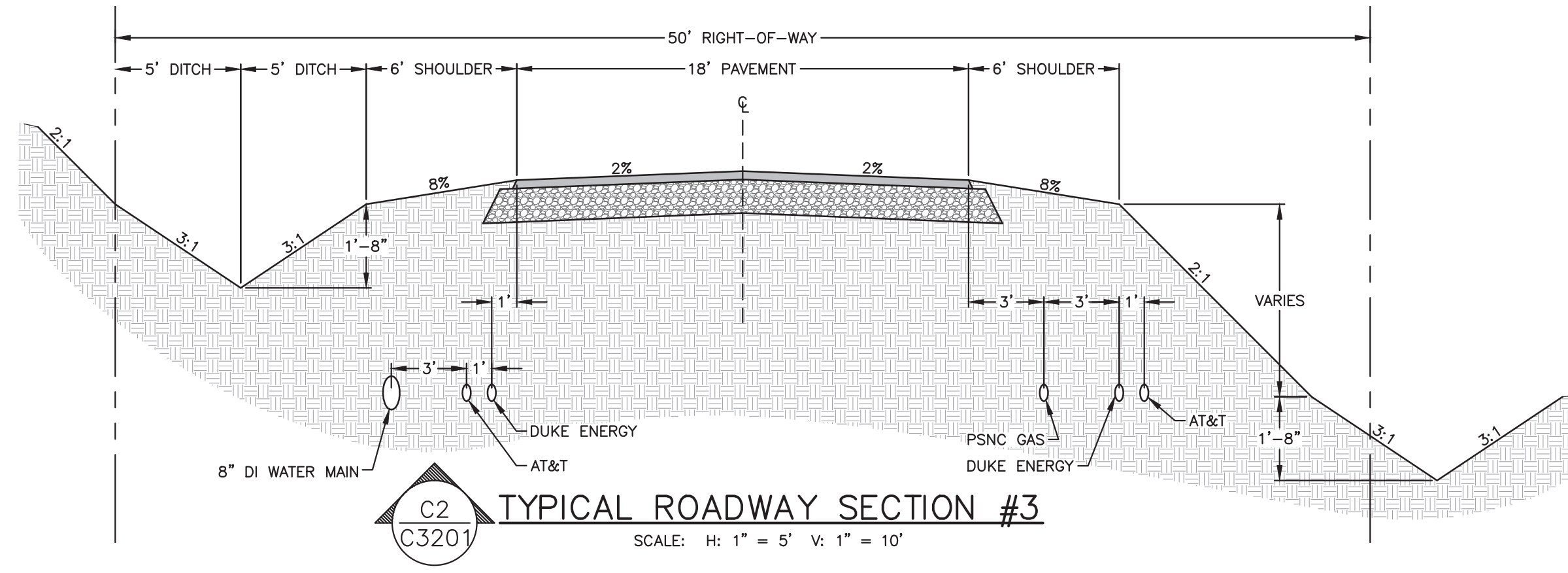
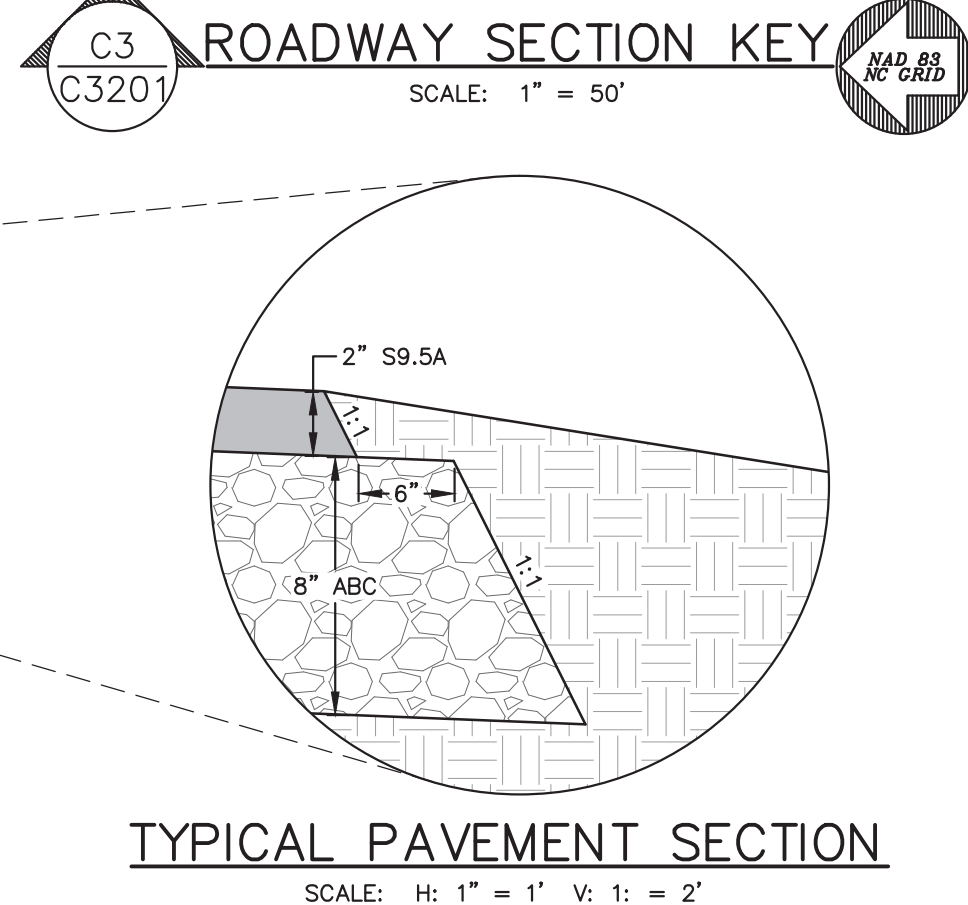
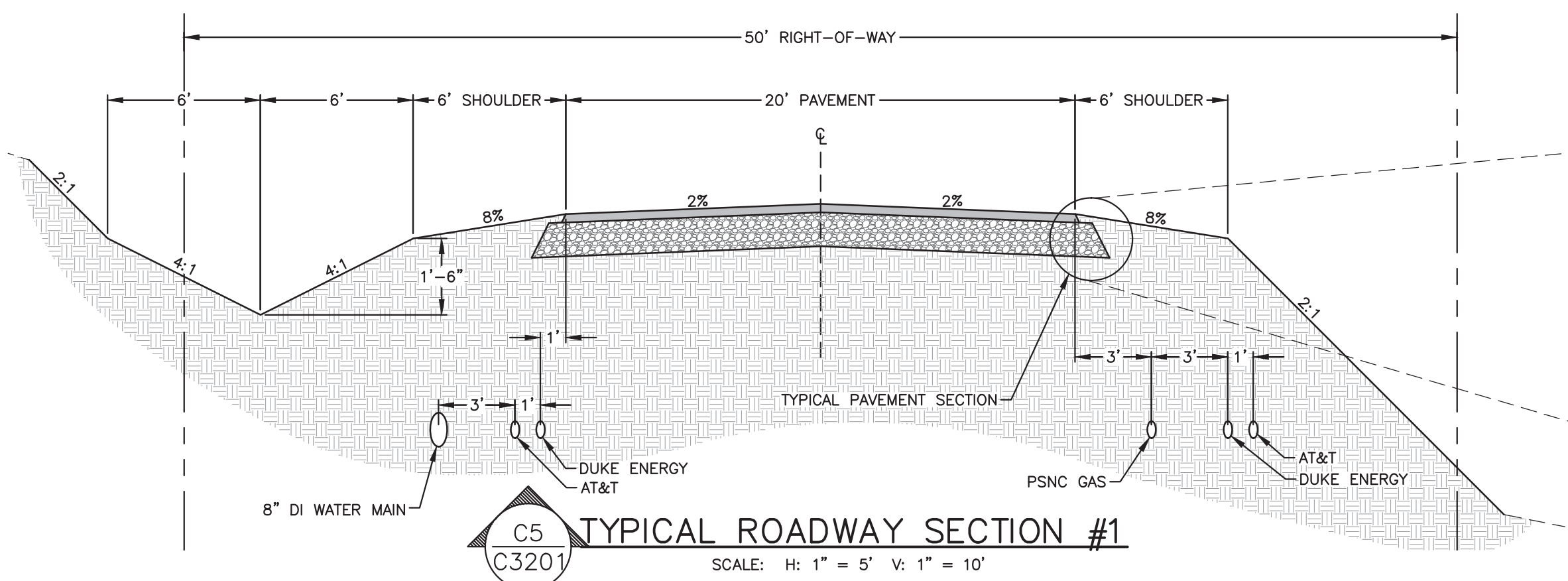
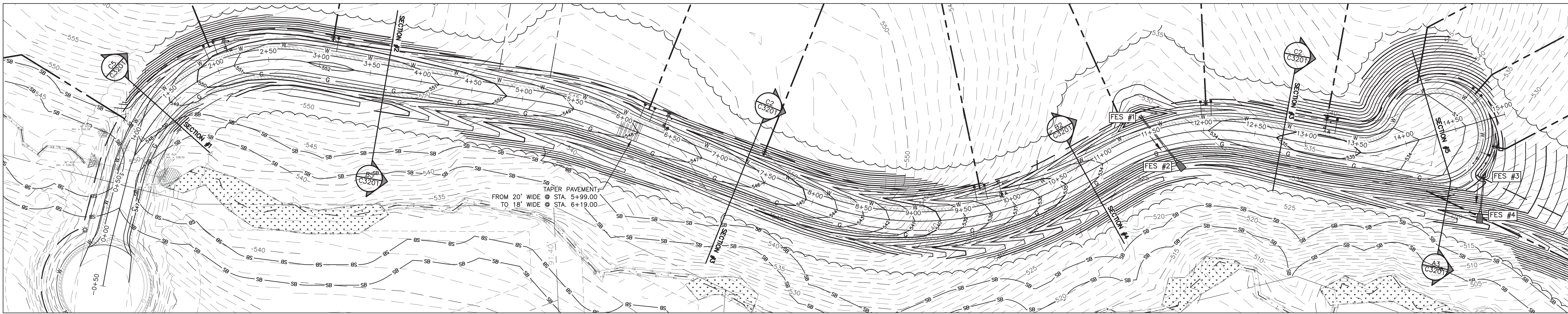
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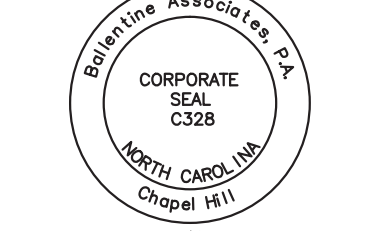
SHEET  
C3102





**FIELDSTONE LANE  
TYPICAL SECTIONS**

**BALLENTINE  
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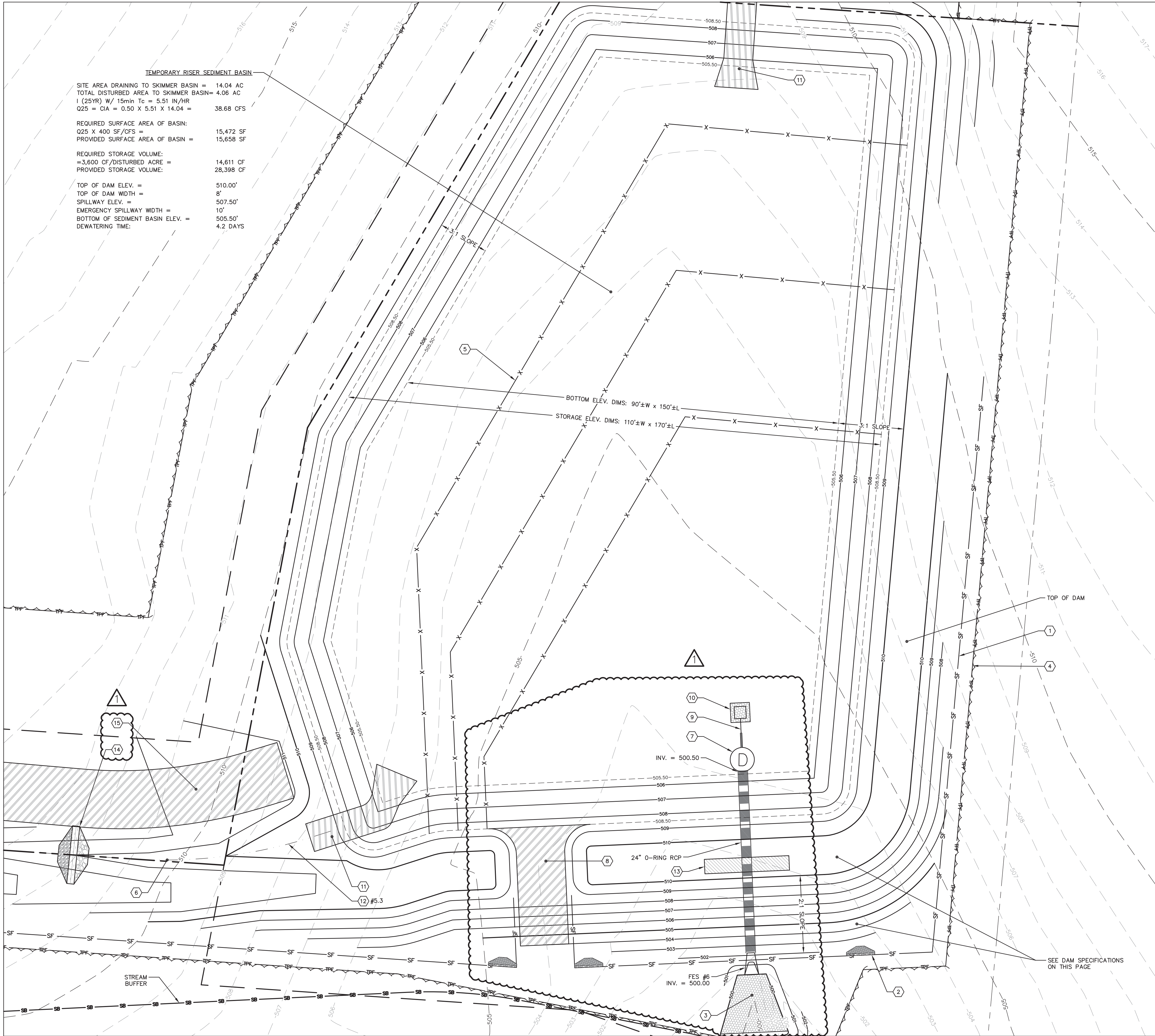
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**SHEET  
C3201**



N:\Projects\113022.00 Fieldstone Phase 3\1\_Dwg\BA-Model Files\C4201-Basin-Wetland Enlargement-Fieldstone P3.dwg, 01/17/2016 6:18:03 PM, dwb



A4  
C4201  
TEMPORARY BASIN ENLARGEMENT  
1" = 10'



### DAM CONSTRUCTION SPECIFICATIONS:

- CONTROLLED FILL, AS SPECIFIED BY THE GEOTECHNICAL ENGINEER, IN THE DAM EMBANKMENT SECTION SHALL BE PLACED IN 6-INCH LOOSE LAYERS, AND SHALL BE COMPACTED TO A DENSITY OF NO LESS THAN 95% STANDARD PROCTOR MAXIMUM DENSITY AT A MOISTURE OF + OR - 2% OF THE OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D698.
- ALL VISIBLE ORGANIC DEBRIS SUCH AS ROOTS AND LIMBS SHALL BE REMOVED FROM THE FILL MATERIAL PRIOR TO THE COMPACTING OF THE REQUIRED DENSITY. SOILS WITH ORGANIC MATTER CONTENT EXCEEDING 5% BY WEIGHT SHALL NOT BE USED. STONES GREATER THAN 3-INCH (IN ANY DIRECTION) SHALL BE REMOVED FROM THE FILL PRIOR TO COMPACTING.
- FILL MATERIAL PLACED AT DENSITIES LOWER THAN SPECIFIED MINIMUM DENSITIES OR AT MOISTURE CONTENTS OUTSIDE THE SPECIFIED RANGES OR OTHERWISE NOT CONFORMING TO SPECIFIED REQUIREMENTS SHALL BE REMOVED AND REPLACED WITH ACCEPTABLE MATERIALS.
- ANY FILL LAYER THAT IS SMOOTH DRUM ROLLED TO REDUCE MOISTURE PENETRATION DURING A STORM EVENT SHALL BE PROPERLY SCARIFIED PRIOR TO THE PLACEMENT OF THE NEXT SOIL LIFT.
- SURFACE WATER AND STREAM FLOW SHALL BE CONTINUOUSLY CONTROLLED THROUGHOUT CONSTRUCTION AND THE PLACEMENT OF CONTROLLED FILL.
- FOUNDATION AREAS MAY REQUIRE UNDERCUTTING OF COMPRESSIBLE AND/OR UNSUITABLE SOILS. ALL SUCH UNDERCUTTING SHALL BE PERFORMED AT THE DISCRETION OF THE GEOTECHNICAL ENGINEER AND SHALL BE MONITORED AND DOCUMENTED. IN NO CASE SHALL THERE BE AN ATTEMPT TO STABILIZE ANY PORTIONS OF THE FOUNDATION SOILS WITH CRUSHED STONE.
- TREATMENT OF SEEPAGE AREAS, SUBGRADE PREPARATION, FOUNDATION DEWATERING, AND ROCK FOUNDATION PREPARATION (I.E., TREATMENT WITH SLUSH GROUTING, DENTAL CONCRETE, ETC.) MAY BE REQUIRED AT THE DISCRETION OF THE GEOTECHNICAL ENGINEER. ALL SUCH ACTIVITIES SHALL BE CLOSELY MONITORED AND DOCUMENTED BY THE GEOTECHNICAL ENGINEER.
- FILL ADJACENT TO THE OUTLET STRUCTURE AND PRINCIPAL SPILLWAY PIPE SHALL BE PLACED SO THAT LIFTS ARE AT THE SAME LEVEL ON BOTH SIDES OF THE STRUCTURES.
- EARTHWORK COMPACTED WITHIN 3 FEET OF ANY STRUCTURE SHALL BE ACCOMPLISHED BY MEANS OF HAND TAMPERS, MANUALLY DIRECTED POWER TAMPERS, PLATE COMPACTORS, OR MINIATURE SELF-PROPELLED ROLLERS.
- COMPACTING BY MEANS OF DROP WEIGHTS FROM A CRANE OR HOIST SHALL NOT BE PERMITTED.

### PLAN KEY NOTES

DETAIL REFERENCE	#	PLAN KEY NOTES
A3 C5301	1	TEMPORARY SILT FENCE
C3 C5301	2	TEMPORARY SILT FENCE STONE OUTLET
A5 C5301	3	RIPRAP APRON
A1 C5301	4	TEMPORARY TREE PROTECTION FENCE
C4 C5302	5	COIR FIBER BAFFLES
A4 C5301	6	EROSION CONTROL MATTING INSTALLATION
A2 C4202	7	RISER STRUCTURE #5 EROSION CONTROL PHASE
C2 C4202	8	EMERGENCY SPILLWAY SECTION
A5 C5302	9	TEMPORARY 4" SKIMMER WITH 2.3" ORIFICE
A3 C5302	10	CLASS "B" STONE PAD BELOW SKIMMER (4'L X 4'W X 1' MIN. TH.)
A1 C5302	11	DITCH OUTLET AT SKIMMER BASIN/STORMWATER WETLAND
C3 C4204	12	PERMANENT DITCH SECTION & LINING SCHEDULE
C3 C4204	13	DRAINAGE DIAPHRAGM
C3 C4204	14	TEMPORARY CHECK DAM
C3 C4204	15	12' WIDE PERMANENT GRASS STORMWATER ACCESS (SEE SPECIFICATION ON C1301)

### DRAWING LEGEND

SYMBOL/ABBREVIATION	PROPOSED	DESCRIPTION
EXISTING		
-280-	-280-	MAJOR CONTOUR
-282-	-282-	MINOR CONTOUR
---	---	PROPERTY LINE
~~~~~	~~~~~	TREE LINE
---	---	STORM DRAINAGE PIPE
---	---	TREE PROTECTION FENCE
---	---	SILT FENCE
---	---	SILT FENCE STONE OUTLET
---	---	STORM DRAIN JUNCTION BOX
---	---	FLARED END SECTION
---	---	RIPRAP APRON
---	---	STREAM BUFFER
---	---	TEMPORARY CHECK DAM

### TEMPORARY SEDIMENT BASIN ENLARGEMENT

**BALLENTINE ASSOCIATES PA**  
221 PRODUCE ROAD, CHAPEL HILL, NC 27514  
(919) 929-0481  
(919) 489-4799  
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CORPORATE SEAL C528

NORTH CAROLINA

CHAPL HILL

REGISTERED PROFESSIONAL ENGINEER

NO. 17456

EXPIRATION DATE 12/31/2016

STATE OF NORTH CAROLINA

ENGINEER

JOSEPH J. RETZKE

DATE	17 JUN 16
REVISIONS	PER CHATHAM SW & EC COMMENTS
NUM	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
OWNER INFORMATION	SHERY-MAR CO. LLC 87 NORWOOD ROAD CHAPEL HILL, NC 27516
OWNERS REPRESENTATIVE:	JIM HODGIN TEL: 910-210-0920 FAX: 910-210-0920 EMAIL: jimhodgin@hotmail.com
DATE	15 APR 16
ISSUED	CHATHAM EROSION CONTROL CHATHAM STORMWATER CHATHAM SW & EC #2
DATE	29 APR 16
ISSUED	CHATHAM SW & EC #2
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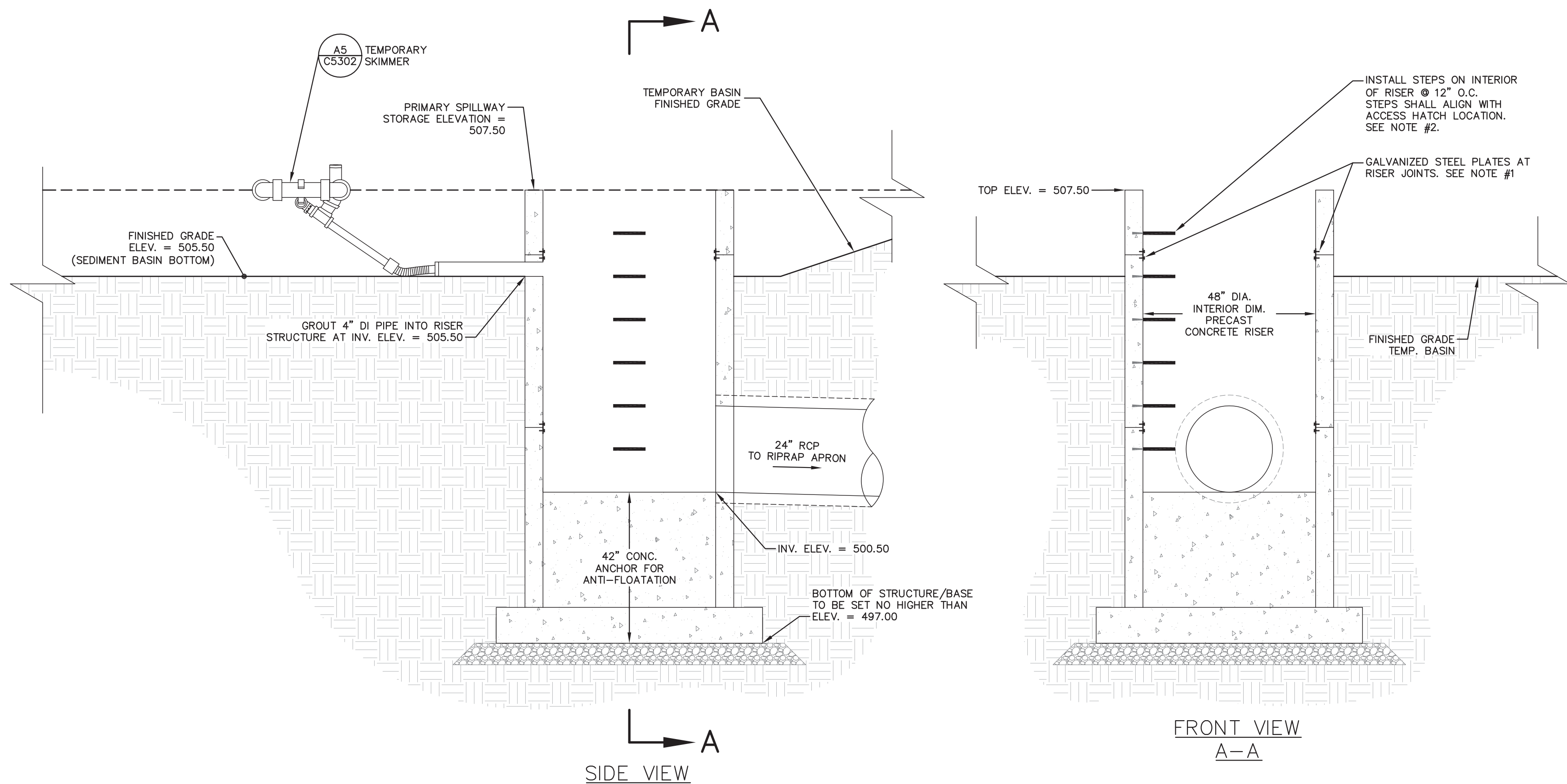
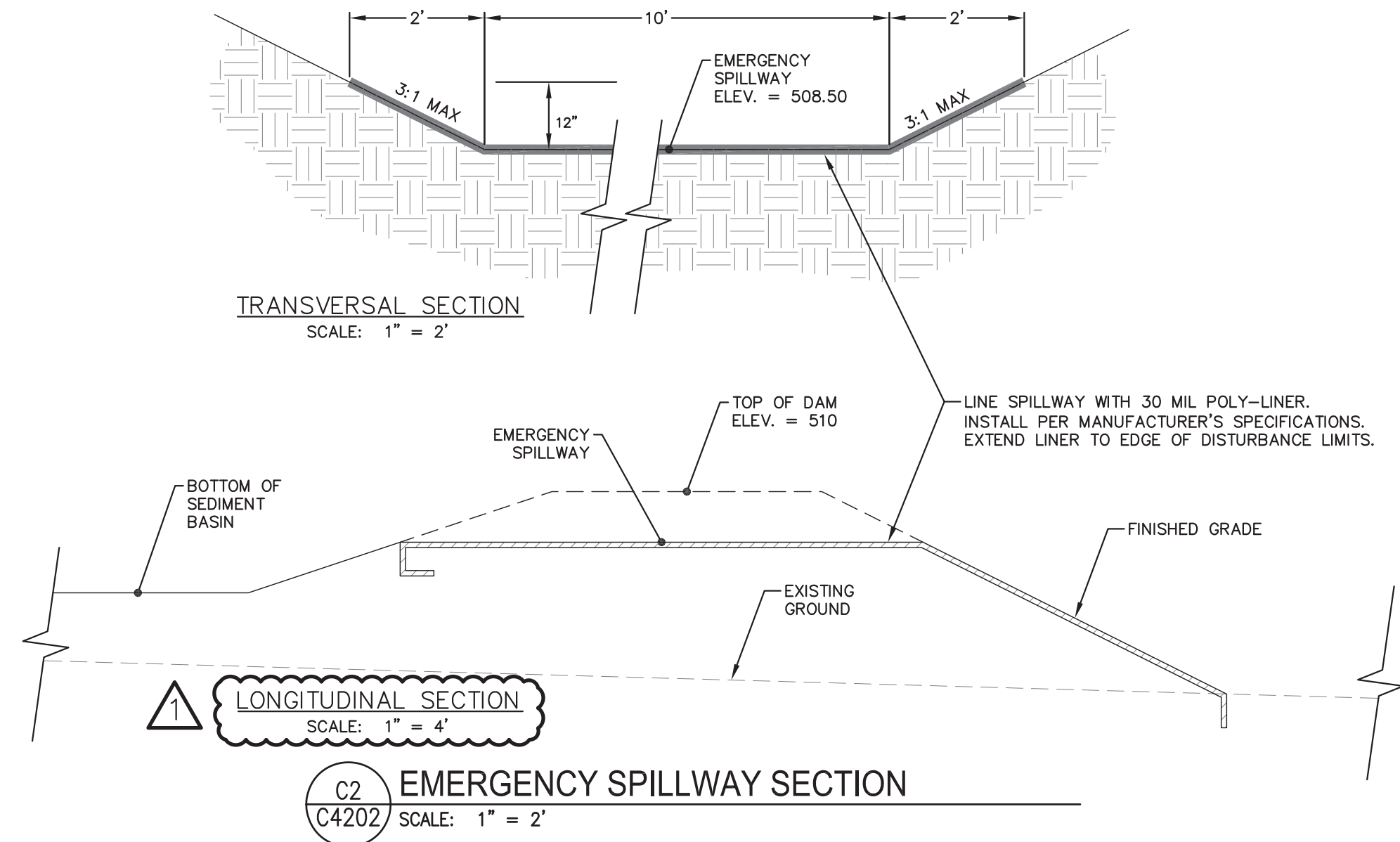
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CHATHAM STORMWATER	29 APR 16
CHATHAM SW & EC #2	17 JUN 16

**BROOKSIDE AT FIELDSTONE**  
**CHATHAM COUNTY, NORTH CAROLINA**

JOB NUMBER: 113022.00  
DATE: 25 MAR 2016  
SCALE: AS NOTED  
DRAWN BY: DBB  
REVIEWED BY: GJR

**SHEET**  
**C4202**



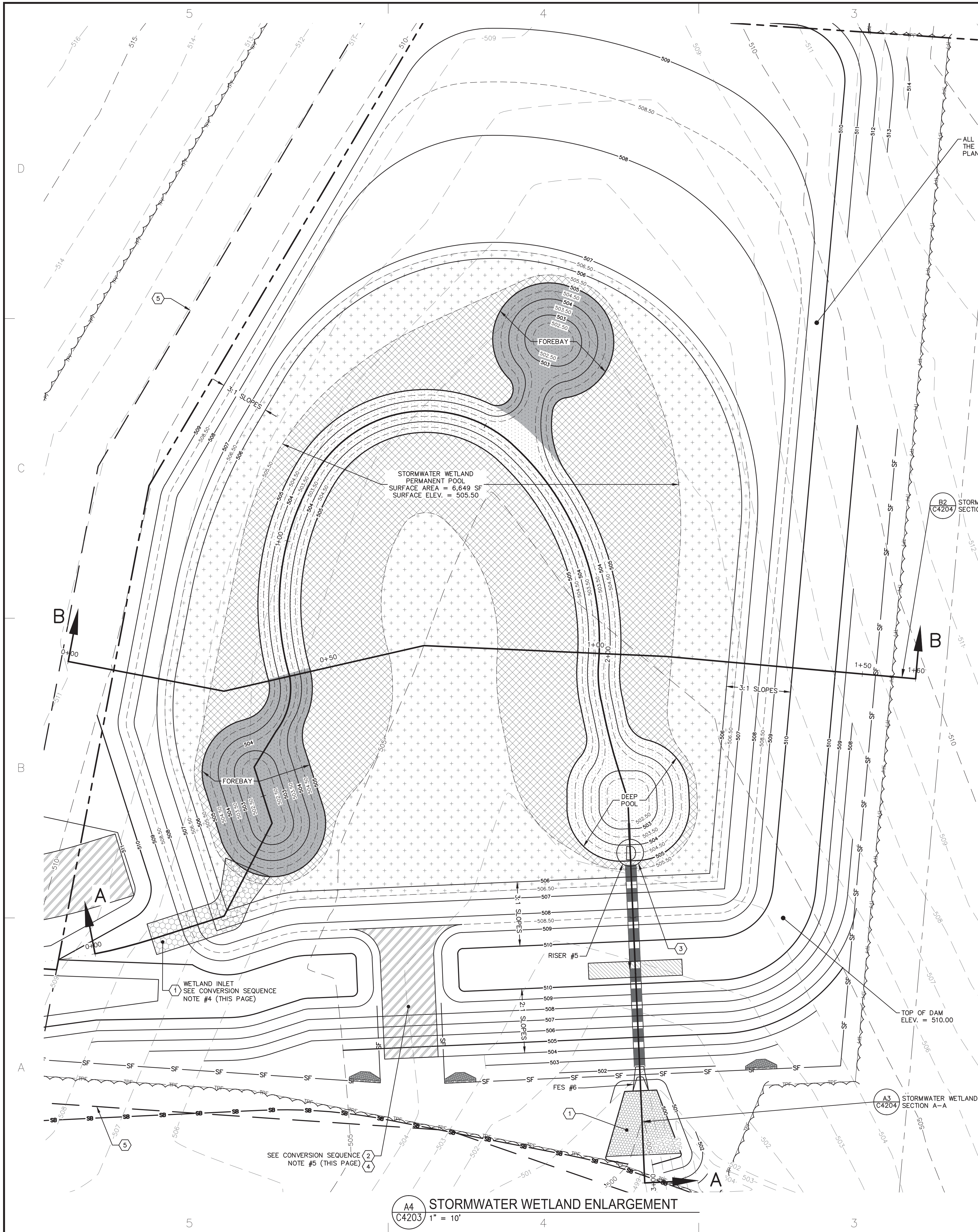
- NOTES:
1. TO PREVENT FLOATION, BOLT A GALVANIZED STEEL PLATE ACROSS EACH RISER JOINT IN THE FOLLOWING LOCATIONS (TYP.). PLATES SHALL BE 8" L X 1/4" TH. USE (A) 1/2" X 3" GALVANIZED BOLTS @ EACH PLATE. USE WATERTIGHT JOINTS CONFORMING TO ASTM C1433.
  2. INSTALL STEPS ON INTERIOR OF RISER @ 12" O.C. (TYP.) CONFORMING TO NCDOT STANDARD 840.66. LOCATION OF STEPS SHALL ALIGN WITH THE ACCESS DOOR ON THE PERMANENT RISER TRASH RACK (REFER TO DETAIL C5/C4204).

RISER STRUCTURE #5  
EROSION CONTROL PHASE

## TEMPORARY SEDIMENT BASIN DETAILS



N:\Projects\113022.00 Fieldstone Phase 3\1\_Dwg\BA-Model Files\C4203\_Basin Wetland Enlargement\Sections Fieldstone Ph3.dwg, 7/13/2016 4:44:32 PM, saved



ALL DISTURBED EMBANKMENTS AROUND THE STORMWATER WETLAND SHALL BE PLANTED WITH CENTIPEDE SOD.

#### PLAN KEY NOTES

- | DETAIL REFERENCE | # | PLAN KEY NOTES                                   |
|------------------|---|--------------------------------------------------|
| A3<br>C5302      | 1 | DITCH OUTLET AT SKIMMER BASIN/STORMWATER WETLAND |
| A4<br>C5301      | 2 | EROSION CONTROL MATTING INSTALLATION             |
| A2<br>C4202      | 3 | RISER #5 CONVERSION DETAILS                      |
| C2<br>C4202      | 4 | EMERGENCY SPILLWAY SECTION                       |
|                  | 5 | STORMWATER EASEMENT                              |

#### PLANTING NOTES

- TO PREVENT CLOGGING, NO ZONE 1 DEEP WATER PLANTS SHOULD BE PLANTED WITHIN 10' OF THE OUTLET STRUCTURE DEEP POOL AREA.
- A TOP SOIL GROWTH MEDIUM AVERAGING 4 INCHES WILL BE USED THROUGHOUT THE STORMWATER WETLAND (EXCEPT FOR IN DEEP POOLS).
- EVEN WITH GOOD ENGINEERING AND CAREFUL CONSTRUCTION, A PREDICTABLE NORMAL WATER LEVEL MAY BE HARD TO ACHIEVE, SO TO ATTAIN MAXIMUM PLANT DIVERSITY IN THE STORMWATER WETLAND WE SHALL RE-EVALUATE PLANTINGS AFTER A YEAR AND ADJUST ACCORDINGLY.
- FERTILIZATION: THE USE OF FERTILIZER IS NOT RECOMMENDED EXCEPT TO INITIALLY ESTABLISH VEGETATION. THE FERTILIZER USED SHALL BE A LOW PHOSPHORUS FERTILIZER.
- PLANTING NON-GRASS GROUND COVER:
  - THE GROUND COVER PLANTING HOLES SHALL BE DUG THROUGH THE MULCH WITH ONE OF THE FOLLOWING: HAND TROWEL, SHOVEL, BULB PLANTER, OR HOE (THIS DOES NOT APPLY TO LEGUMES OR GRASSES).
  - BEFORE PLANTING, BIODEGRADABLE POTS SHALL BE SPLIT, AND NON-BIODEGRADABLE POTS SHALL BE REMOVED. ROOT SYSTEMS OF ALL POTTED PLANTS SHALL BE SPLIT OR CRUMBED.
  - THE GROUND COVER SHALL BE PLANTED SO THAT THE ROOTS ARE SURROUNDED BY THE SOIL BELOW THE MULCH. POTTED PLANTS SHALL BE SET SO THAT THE TOP OF THE POT IS EVEN WITH THE EXISTING GRADE. THE ROOTS OF BARE ROOT PLANTS SHALL BE COVERED TO THE CROWN.
  - BEFORE PLANTING, APPLY A PRE-EMERGENT HERBICIDE TO THE MULCHED AND PLANTED GROUND COVER BED.
  - THE ENTIRE GROUND COVER BED SHALL BE THOROUGHLY WATERED.
- PLANTING GRASS GROUND COVER:
  - GRASSES AND LEGUME SEED SHALL BE TILLED INTO THE SOIL TO A DEPTH OF AT LEAST 2 INCHES BY EITHER HARROWING OR DISCING.
  - FERTILIZER SHALL BE APPLIED AT THE SAME RATE AND UTILIZING THE SAME PROCESS FOR NON-GRASS GROUND COVER.
  - GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING TECHNIQUES.

#### STORMWATER WETLAND PLANTING SCHEDULE

BOTANICAL NAME	COMMON NAME	SIZE (MIN.)	SPACING (MIN.)	WATER DEPTH BELOW PPE	QTY
DEEP POOL SUBMERGED AND FLOATING (ZONE 1)					
<i>Nymphaea odorata</i>	Fragrant Water Lily		2'-4' O.C.	6"-12"	30
<i>Nelumbo lutea</i>	American Lotus		2'-4' O.C.	12"-24"	30
SHALLOW WATER EMERGENT (ZONE 2)					
<i>Acorus subcordatum</i>	Sweetflag	4" pot	2' O.C.	3"-6"	220
<i>Iris virginica</i>	Blue Flag Iris	4" pot	2' O.C.	3"-6"	220
<i>Ludwigia spp.</i>	Primrose Willow	4" pot	2' O.C.	3"-6"	220
<i>Pontederia cordata</i>	Pickersweed	4" pot	2' O.C.	3"-6"	220
<i>Saururus cernuus</i>	Lizard's Tail	4" pot	2' O.C.	3"-6"	220
TOTAL SHALLOW WATER:					1100
SHALLOW LAND HERBACEOUS (ZONE 3)					
<i>Asclepias incarnata</i>	Swamp Milkweed	4" pot	2' O.C.	ABOVE PPE	230
<i>Chelone glabra</i>	White Turtlehead	4" pot	2' O.C.	ABOVE PPE	230
<i>Kosteletzkya virginica</i>	Seashore Mallow	4" pot	2' O.C.	ABOVE PPE	230
<i>Lobelia cardinalis</i>	Cardinal Flower	4" pot	2' O.C.	ABOVE PPE	230
<i>Lobelia siphilitica</i>	Great Blue Lobelia	4" pot	2' O.C.	CLOSE TO PPE	230
TOTAL SHALLOW LAND HERBACEOUS:					1150
MINIMUM WETLAND PLANTING REQUIREMENTS:					
		SF	QUANTITY		
DEEP POOL AREA REQ: N/A; 1 PLANT/50 SF RECOMMENDED		2444	60		
SHALLOW WATER AREA (LOW MARSH) REQ: 50 HERBACEOUS/200 SF (4" CONTAINER)		4205	1100		
SHALLOW LAND AREA (HIGH MARSH) REQ: 50 HERBACEOUS/200 SF (4" CONTAINER)		4415	1150		

#### STORMWATER CERTIFICATION STATEMENT

THE DESIGN OF ALL STORMWATER MANAGEMENT FACILITIES AND PRACTICES WILL CONTROL AND TREAT THE RUNOFF FROM THE 1 YEAR - 1 HOUR STORM OVER THE TOTAL DRAINAGE AREA. THE DESIGNS AND PLANS ARE SUFFICIENT TO COMPLY WITH APPLICABLE STANDARDS AND POLICIES FOUND IN THE NCDEQ STORMWATER BMP DESIGN MANUAL. AND, THE DESIGNS AND PLANS ENSURE COMPLIANCE WITH CHATHAM COUNTY'S STORMWATER ORDINANCE.

#### STORMWATER WETLAND NOTES

- IT IS CRITICAL TO THE LONG TERM SUCCESS OF THE WETLAND THAT THE GRADING BE PERFORMED CAREFULLY AND THAT THE FINAL GRADES WITHIN THE WETLAND BE AS CLOSE AS POSSIBLE TO THOSE SHOWN ON THIS DRAWING. THE ALLOWABLE GRADING TOLERANCE WITHIN THE WETLAND IS 0.10 FEET. THE PERMANENT OUTLET ORIFICE HAS BEEN DESIGNED TO FACILITATE ADJUSTMENT OF THE PERMANENT POOL ELEVATION.
- WETLAND CONVERSION SHOULD BE PERFORMED QUICKLY (WITHIN ONE OR TWO WEEK'S TIME), AND DURING FORECASTED DRY WEATHER TO THE EXTENT PRACTICABLE.
- AREA WITHIN THE 506.50 CONTOUR SHALL BE LINED WITH AN 8" CLAY LINER. BASED ON A SUBSURFACE INVESTIGATION PERFORMED AS PART OF THE WETLAND DESIGN, THE NATIVE SOILS THAT WILL NEED TO BE EXCAVATED TO CREATE THE DEEP POOLS ARE GENERALLY SUITABLE FOR USE AS A CLAY LINER. THE OWNER'S GEOTECHNICAL ENGINEER WILL EVALUATE THESE SOILS AS THEY ARE BEING EXCAVATED AND WILL DETERMINE THEIR SUITABILITY FOR USE IN THE LINER (MAX. PERMEABILITY OF CLAY LINER SHALL BE 0.01 IN/HR.). SHOULD THERE BE A SHORTAGE OF SUITABLE CLAY MATERIAL THAT CAN BE EXCAVATED FROM WITHIN THE SITE, THE CONTRACTOR SHALL IMPORT SUITABLE CLAY MATERIAL AS PART OF A CONTRACT ALLOWANCE.
- A 4" DEEP PLANTING SOIL MEDIA WILL BE ADDED ABOVE THE CLAY LINER TO REACH THE FINAL PROPOSED ELEVATIONS OF THE WETLAND (EXCEPT FOR IN DEEP POOL AREAS).

#### SKIMMER BASIN TO WETLAND CONVERSION SEQUENCE

- REMOVE BAFFLES AND SEDIMENT.
- STABILIZE ALL UPSTREAM DRAINAGE AREAS.
- FINE GRADE STORMWATER WETLAND TO SUBGRADE ELEVATIONS (TO BOTTOM OF CLAY LINER).
- REMOVE EROSION CONTROL PHASE POLYMER AT PRIMARY INLET AND REPLACE WITH 24" DEEP CLASS A RIPRAP.
- REMOVE EROSION CONTROL PHASE POLYMER AT SPILLWAY AND REPLACE WITH STRAW BLANKET N.A. GREEN S150 OR APPROVED EQUAL.
- REMOVE SKIMMER AND INSTALL 4" X 1.25" ECCENTRIC REDUCER. DO NOT GLUE REDUCER IN PLACE UNTIL AS-BUILT HAS BEEN REVIEWED.
- PERFORM AS-BUILT SURVEY OF THE STORMWATER WETLAND (INCLUDING OUTLET STRUCTURE) AND PROVIDE SURVEY DATA TO THE DESIGN ENGINEER FOR REVIEW/APPROVAL (SEE STORMWATER WETLAND NOTE #1 ON THIS SHEET).
- MAKE ANY NECESSARY IMPROVEMENTS/ADJUSTMENTS AS DIRECTED BY THE ENGINEER. ADJUSTMENTS MIGHT INCLUDE ROTATING THE 4" X 2" ECCENTRIC REDUCER TO FINE-TUNE THE PERMANENT POOL ELEVATION IN RELATION TO THE AS-BUILT GRADES.
- UPON ENGINEER'S ACCEPTANCE OF SUBGRADE ELEVATIONS & OUTLET STRUCTURES, INSTALL CLAY LINER, PLANTING SOILS, AND WETLAND PLANTINGS. WETLAND PLANTS SHALL BE INSTALLED BY A PROFESSIONAL LANDSCAPE CONTRACTOR.
- FINE GRADE, SEED AND STABILIZE ANY REMAINING DISTURBED AREAS AROUND THE OUTSIDE OF THE WETLAND AREA.
- UPON COMPLETION OF SITE WORK, CONTACT THE PROJECT ENGINEER FOR A FINAL INSPECTION AND TO BEGIN THE CERTIFICATION PROCESS. CERTIFICATIONS WILL NOT BE ISSUED IF THE BMP ELEMENTS DO NOT MEET OR EXCEED THE REQUIREMENTS CONTAINED IN THE CONSTRUCTION DOCUMENTS. SHOULD REMEDIAL WORK BE REQUIRED, ALL COSTS ASSOCIATED WITH REMEDIAL WORK INCLUDING RE-SURVEY AND RE-INSPECTIONS SHALL BE BORNE BY THE CONTRACTOR.
- THE CONTRACTOR SHALL MAINTAIN A ONE-YEAR 80% CARE AND REPLACEMENT WARRANTY FOR ALL PLANTINGS. THE PERIOD OF CARE AND REPLACEMENT SHALL BEGIN AFTER INSPECTION AND APPROVAL OF THE COMPLETE INSTALLATION OF PLANTS AND CONTINUED FOR ONE YEAR. PLANT REPLACEMENTS SHALL BE IN ACCORDANCE WITH THE MAINTENANCE SCHEDULE.

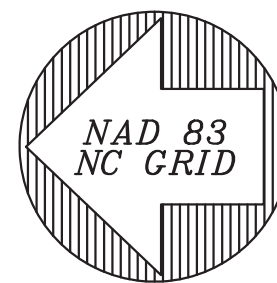
#### WETLAND SURFACE SUMMARY

ZONE 1 - DEEP POOL FOREBAY (6"-36" DEEP):	*1,110 SF	= 10.0%
ZONE 1 - DEEP POOL NON-FOREBAY (6"-36" DEEP):	*1,334 SF	= 12.1%
ZONE 2 - SHALLOW WATER (LOW MARSH) (0"-6" DEEP):	4,205 SF	= 38.0%
ZONE 3 - SHALLOW LAND (HIGH MARSH) (0"-12" ABOVE PERMANENT POOL):	4,415 SF	= 39.9%
TOTAL:	11,064 SF	= 100%

\* INCLUDES ALL AREAS 6"-18" DEEP

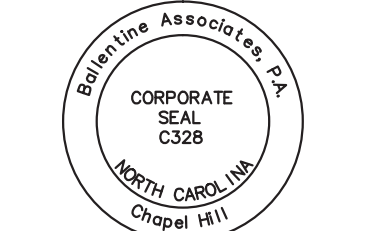
#### DRAWING LEGEND

SYMBOL/ABBREVIATION	EXISTING	PROPOSED	DESCRIPTION
-280-	-280-	-280-	MAJOR CONTOUR
-282-	-282-	-282-	MINOR CONTOUR
-282.50-	-282.50-	-282.50-	0.5' CONTOUR
---	---	---	PROPERTY LINE
---	---	---	TREE LINE
---	---	---	STORM DRAINAGE PIPE
---	---	---	TREE PROTECTION FENCE
---	---	---	SILT FENCE
---	---	---	SILT FENCE STONE OUTLET
---	---	---	FLARED END SECTION
---	---	---	RIPRAP APRON
---	---	---	STREAM BUFFER



#### STORMWATER WETLAND ENLARGEMENT

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DATE	REVISIONS	NUM
17 JUN 16	1	1
13 JUL 16	2	2
	3	3
	4	4
	5	5
	6	6
	7	7
	8	8
	9	9
	10	10
	11	11
	12	12

OWNER INFORMATION  
SHERYL-MAR CO. LLC  
87 NORWOOD ROAD  
CHAPEL HILL, NC 27516  
OWNERS REPRESENTATIVE:  
JIM HODGINS  
PH: 910-210-0920  
FAX: 910-210-0920  
EMAIL: jmhodgins@hotmail.com

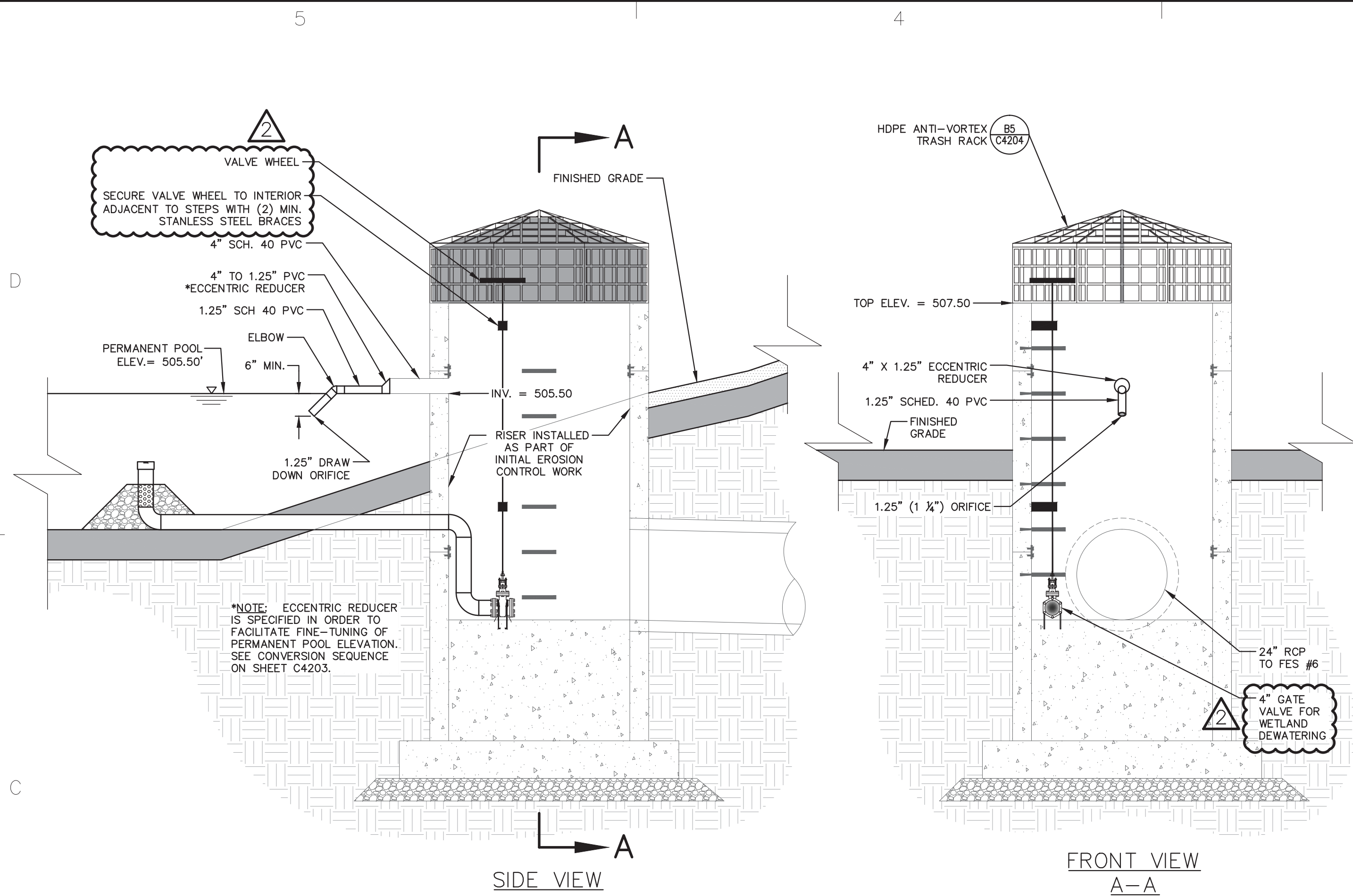
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29 APR 16	1
17 JUN 16	2
	3
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	11
	12

**BROOKSIDE AT FIELDSTONE**  
CHATHAM COUNTY, NORTH CAROLINA  
**CONSTRUCTION DRAWINGS**

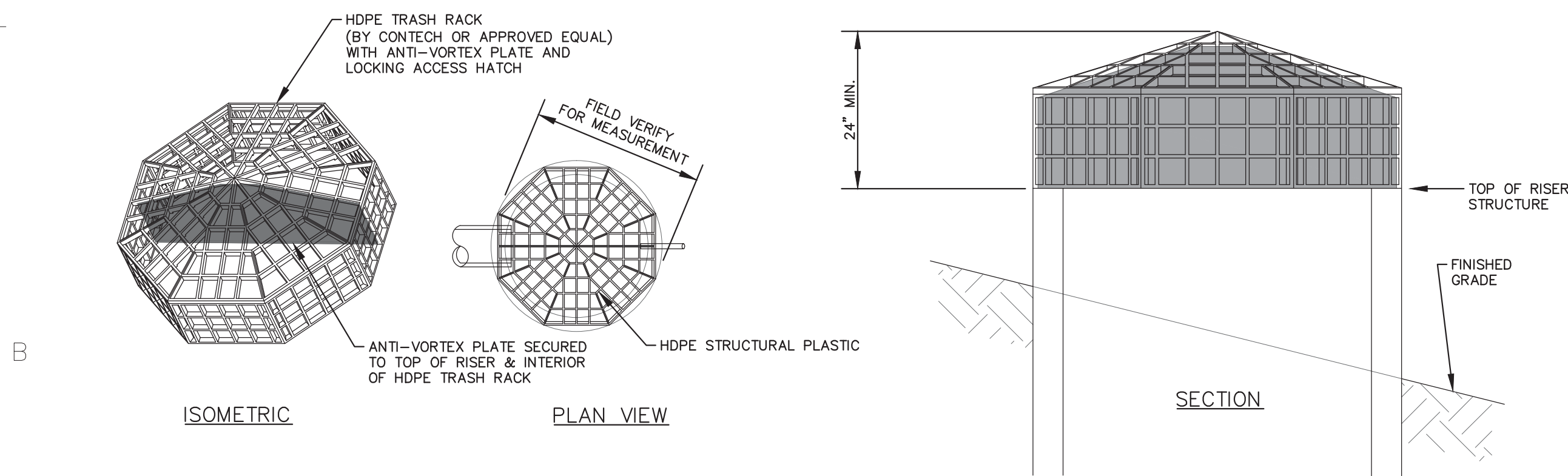
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DATE: 25 MAR 2016  
SCALE: AS NOTED  
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REVIEWED BY: GJR

**SHEET**  
**C4203**

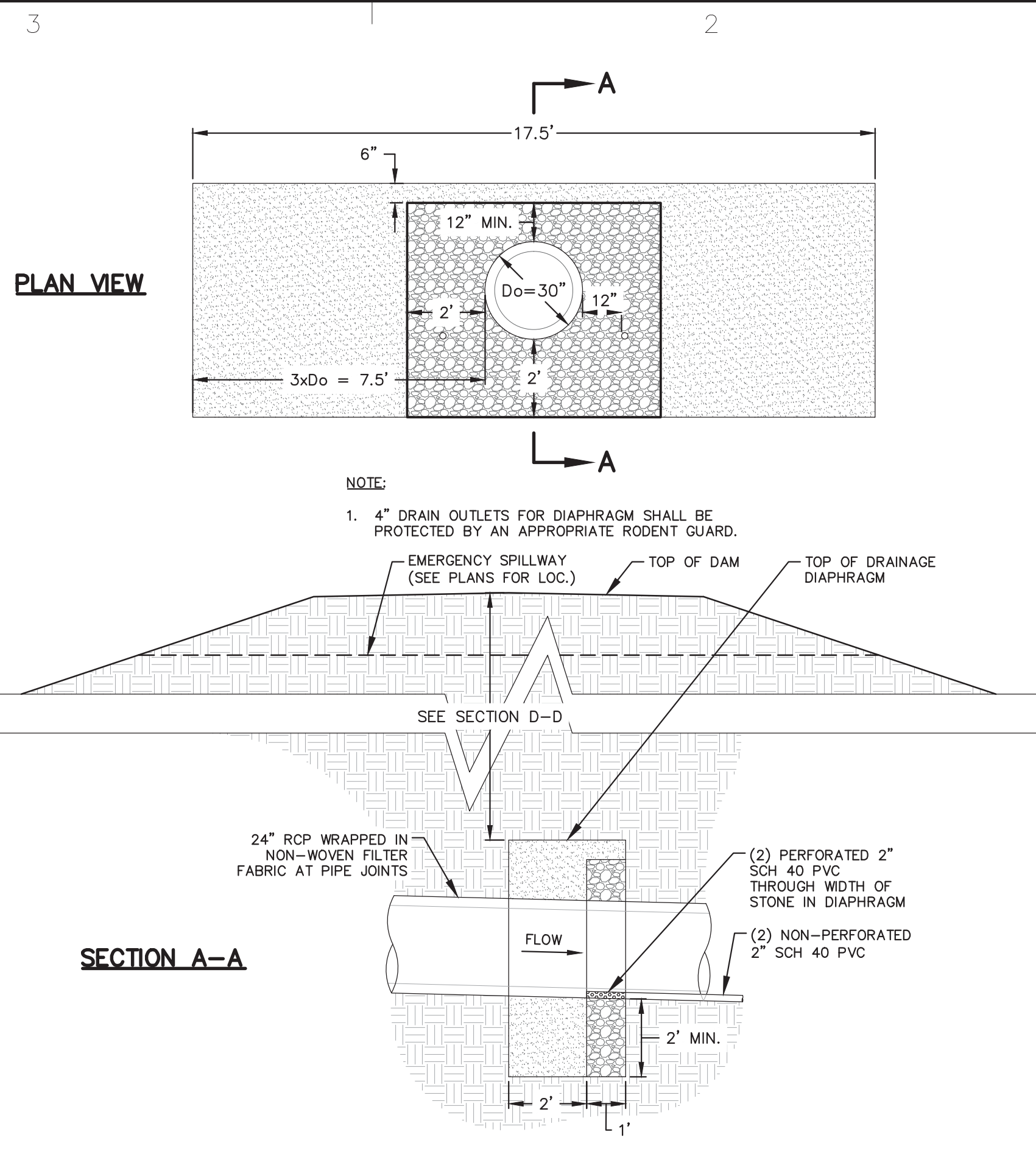




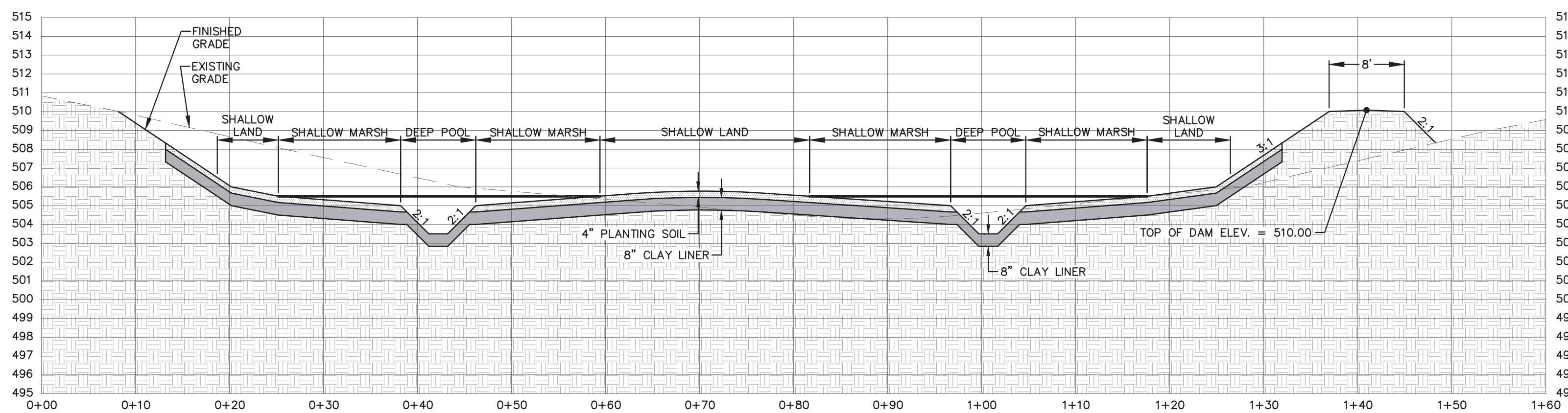
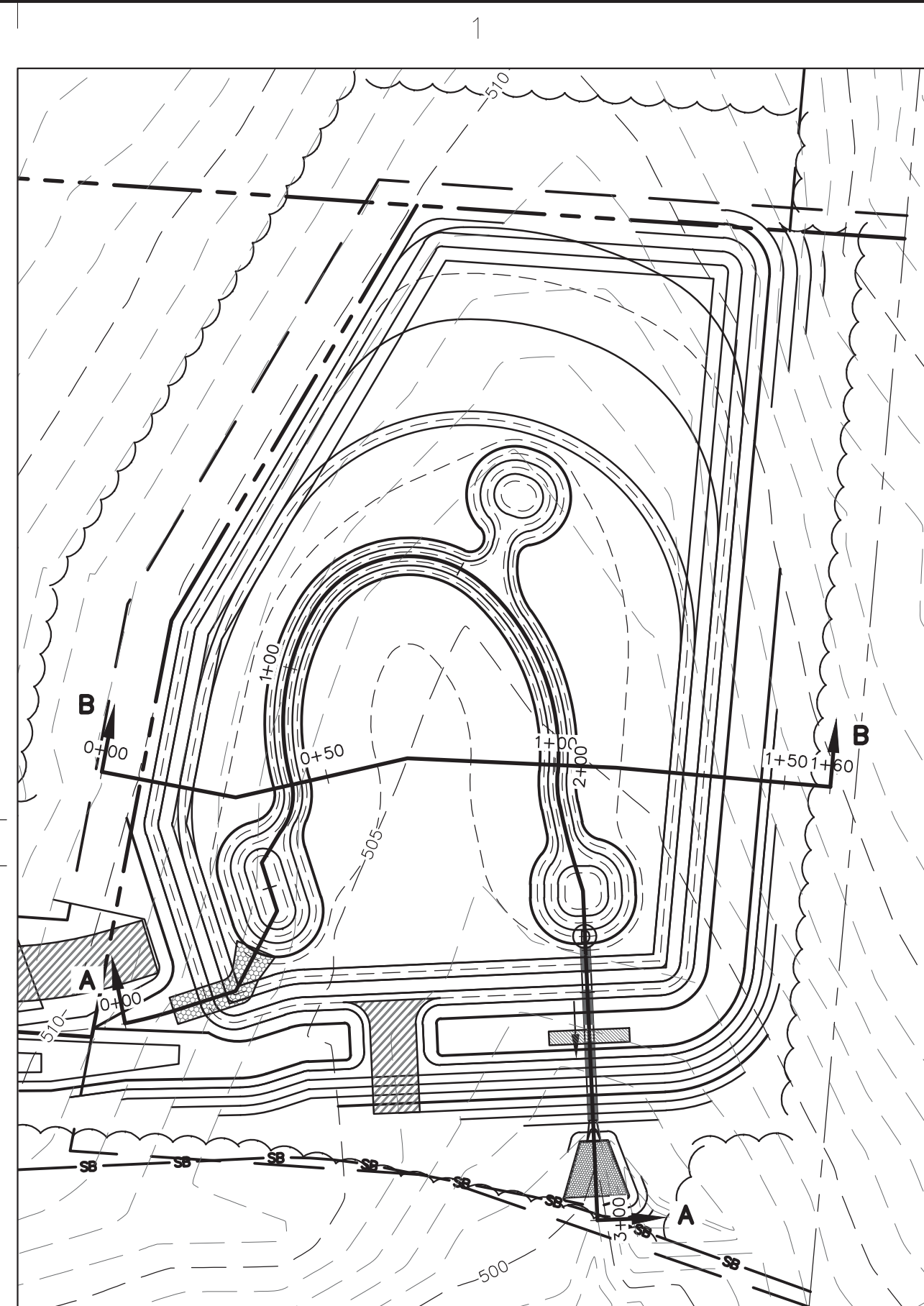
**C5**  
**C4204**  
**RISER #5 CONVERSION DETAILS**  
 SCALE: 1" = 2'



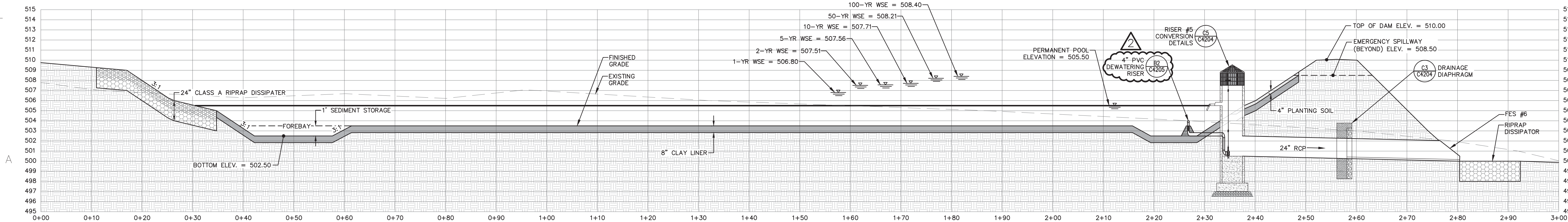
**B5**  
**C4204**  
**HDPE ANTI-VORTEX TRASH RACK**  
 SCALE: N.T.S.



**C3**  
**C4204**  
**DRAINAGE DIAPHRAGM**  
 SCALE: 1" = 3'



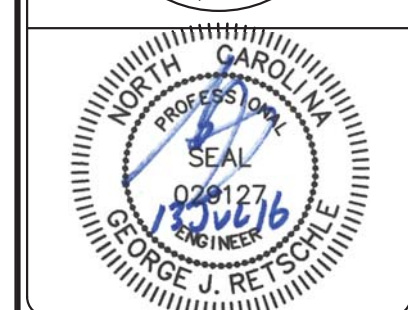
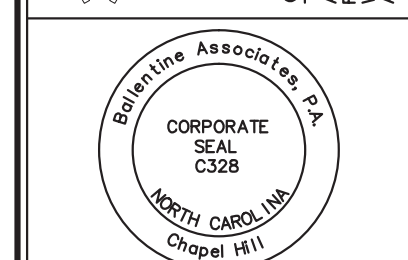
**B2**  
**C4204**  
**STORMWATER WETLAND SECTION B-B**  
 SCALE: H: 1" = 10' V: 1" = 5'



**A3**  
**C4204**  
**STORMWATER WETLAND SECTION A-A**  
 SCALE: H: 1" = 10' V: 1" = 5'

**STORMWATER WETLAND SECTIONS & DETAILS**

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DATE	REVISIONS
17 JUN 16	PER CHATHAM STORMWATER COMMENTS
13 JUL 16	PER CHATHAM STORMWATER COMMENTS

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 SHERYL-MAR CO., LLC  
 87 NORWOOD ROAD  
 CHAPEL HILL, NC 27516  
**OWNERS REPRESENTATIVE:**  
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 P.H. 910-210-0920  
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 EMAIL: jimhodgins@hotmail.com

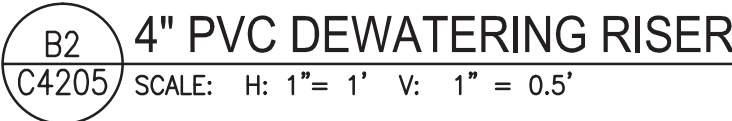
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29 APR 16	CHATHAM STORMWATER
17 JUN 16	CHATHAM STORMWATER #2
13 JUL 16	CHATHAM STORMWATER #3

**BROOKSIDE AT FIELDSTONE**  
 CHATHAM COUNTY, NORTH CAROLINA  
**CONSTRUCTION DRAWINGS**

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 DRAWN BY: DBB  
 REVIEWED BY: GJR

**SHEET**  
**C4204**





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EMAIL [jmhodgin@hotmail.com](mailto:jmhodgin@hotmail.com)

ISSUED	DATE
CHATHAM STORMWATER #3	13 JUL 16

**BROOKSIDE AT FIELDSTONE**  
**CHATHAM COUNTY, NORTH CAROLINA**  
**CONSTRUCTION DRAWINGS**

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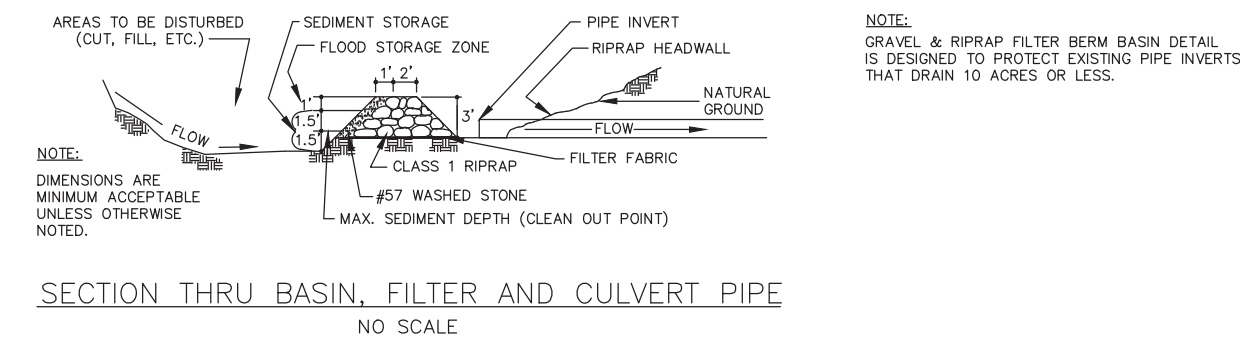
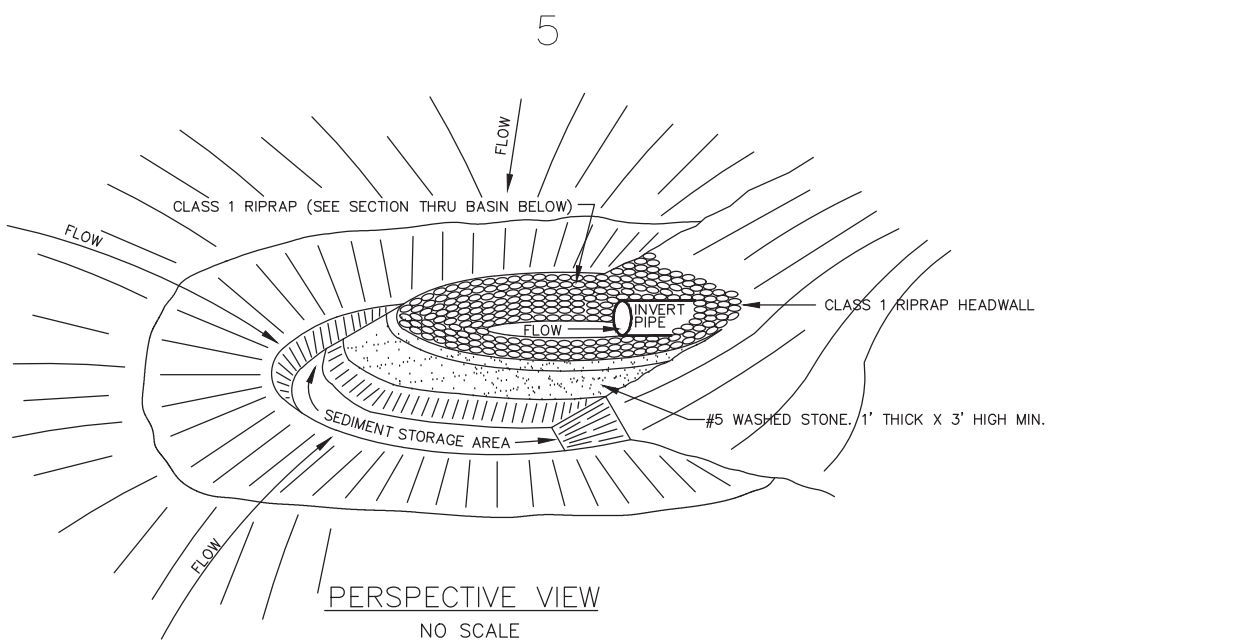












**MAINTENANCE:**

INSPECT INLET PROTECTION WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT AND MAKE NECESSARY REPAIRS IMMEDIATELY:

- AT EACH OCCURRENCE WHEN THE SEDIMENT HAS ACCUMULATED & REDUCED STORAGE CAPACITY TO 1/2, REMOVE SEDIMENT AND RESTORE THE STORAGE AREA TO ITS ORIGINAL DIMENSIONS.
- PLACE THE SEDIMENT THAT IS REMOVED IN THE DESIGNATED DISPOSAL AREA AND REPLACE THE CONTAMINATED PART OF THE GRAVEL FACING.
- CHECK THE STRUCTURE FOR DAMAGE.
- ANY RIPRAP DISPLACED FROM THE STONE HORSESHOE MUST BE REPLACED IMMEDIATELY.
- AFTER ALL THE SEDIMENT-PRODUCING AREAS HAVE BEEN PERMANENTLY STABILIZED, REMOVE THE STRUCTURE AND ALL THE UNSTABLE SEDIMENT. SMOOTH THE AREA TO BLEND WITH THE ADJOINING AREAS AND PROVIDE PERMANENT GROUND COVER (SURFACE STABILIZATION).

### C5 GRAVEL & RIPRAP HORSESHOE INLET PROTECTION

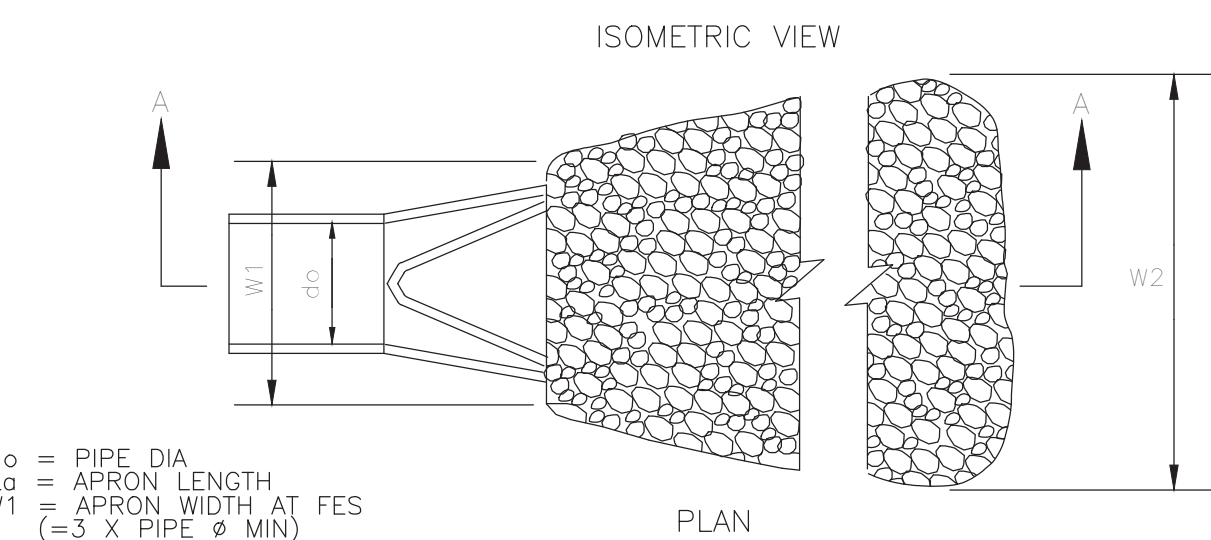
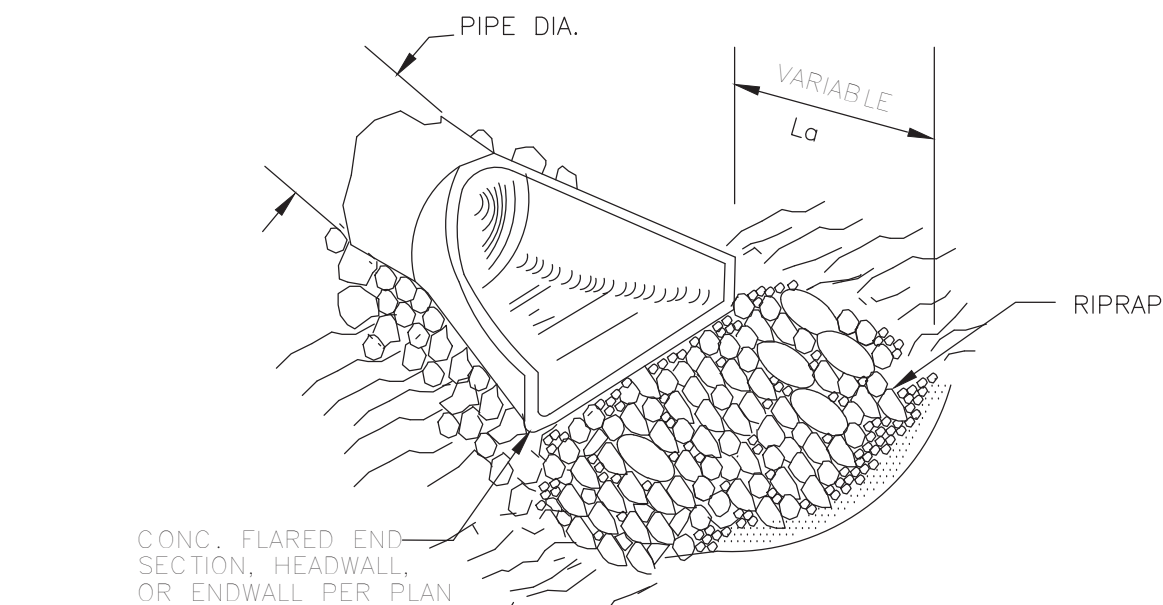
C5301 N.T.S.

APRON LOCATION	"do" (ft.)	"La" (ft.)	"W1" (ft.)	"W2" (ft.)	RIPRAP CLASS	"d" (in.)	COMMENTS
FES #2	1.5	9.0	5.0	6.0	B	24	EXTEND "La" TO TOP OF BERM AS NEEDED
FES #4	1.25	9.0	5.0	6.0	B	24	EXTEND "La" TO TOP OF BERM AS NEEDED
FES #6	2.0	12.0	6.0	14.0	B	24	

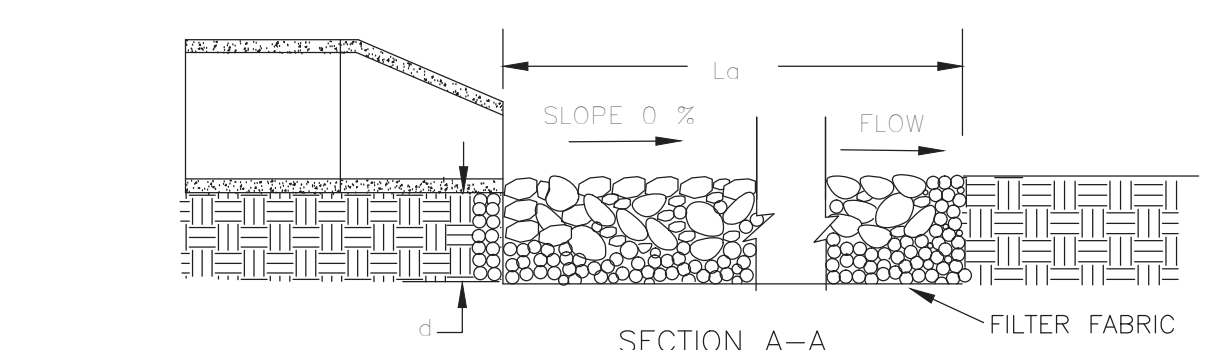
NOTE: FILTER FABRIC SHALL BE INSTALLED UNDER ALL RIPRAP ON THIS PROJECT

NCDOT GRADATION TABLE  
ACCEPTANCE CRITERIA FOR RIPRAP  
AND STONE FOR EROSION CONTROL  
REQUIRED STONE SIZES - INCHES

CLASS	MINIMUM	MIDRANGE	MAXIMUM
A	2	4	6
B	5	8	12
1	5	10	17
2	9	14	23f



do = PIPE DIA.  
La = APRON LENGTH  
W1 = APRON WIDTH AT FES  
(= 3 X PIPE Ø MIN.)  
W2 = APRON WIDTH AT END  
FOR FLAT AREA: W2 = do + La  
FOR CHANNEL: W2 = do + 0.4 La  
d = APRON DEPTH

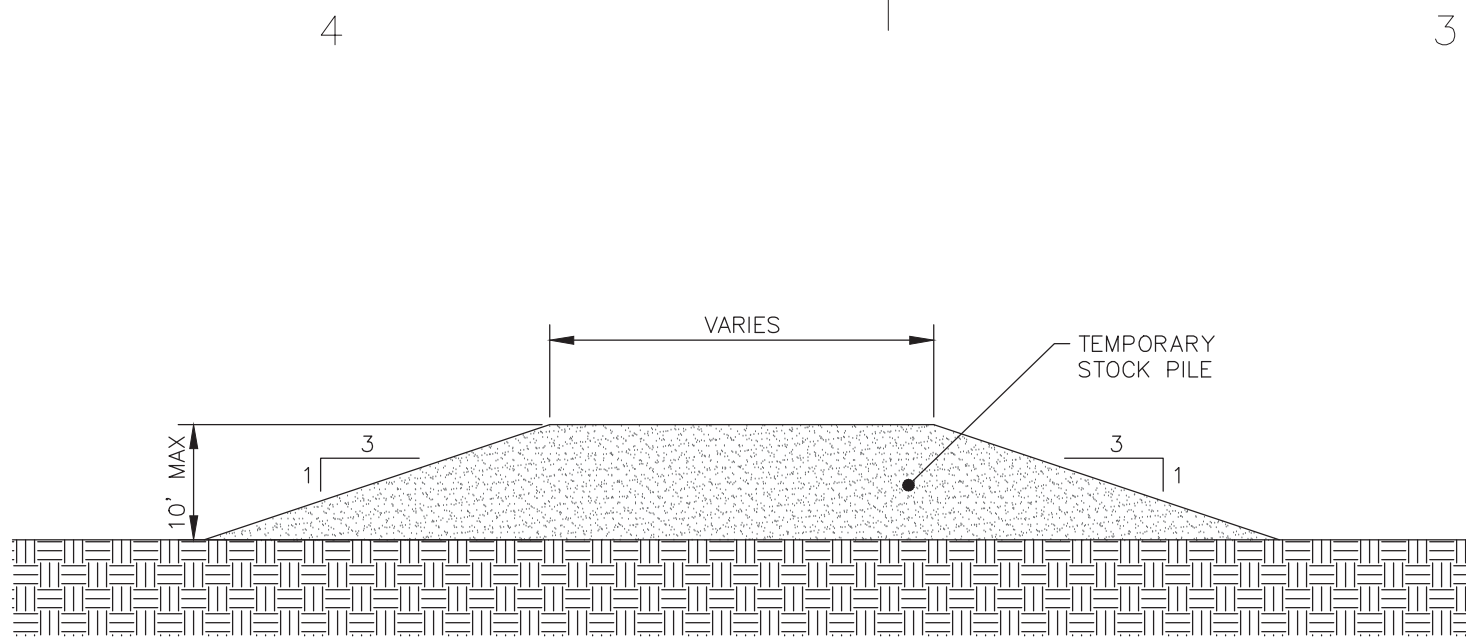


**MAINTENANCE:**

INSPECT RIPRAP OUTLET STRUCTURES WEEKLY AND AFTER SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

### A5 RIPRAP APRON

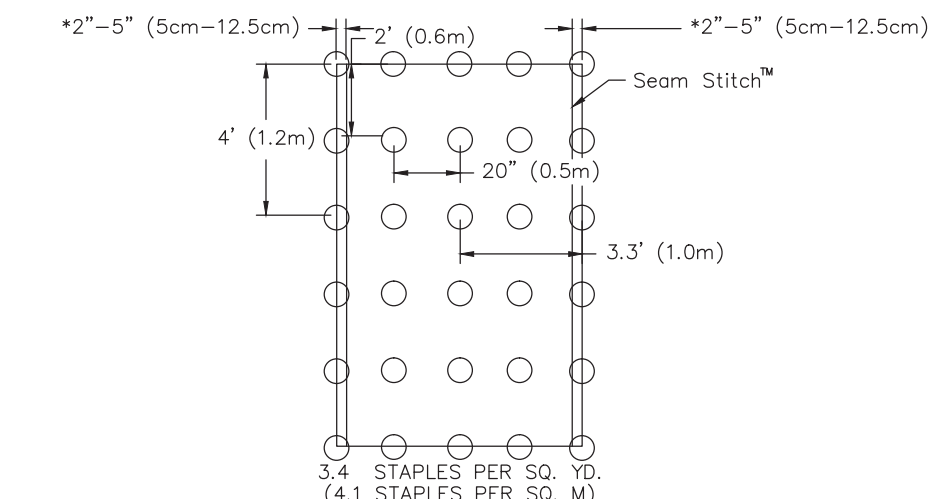
A5301 N.T.S.



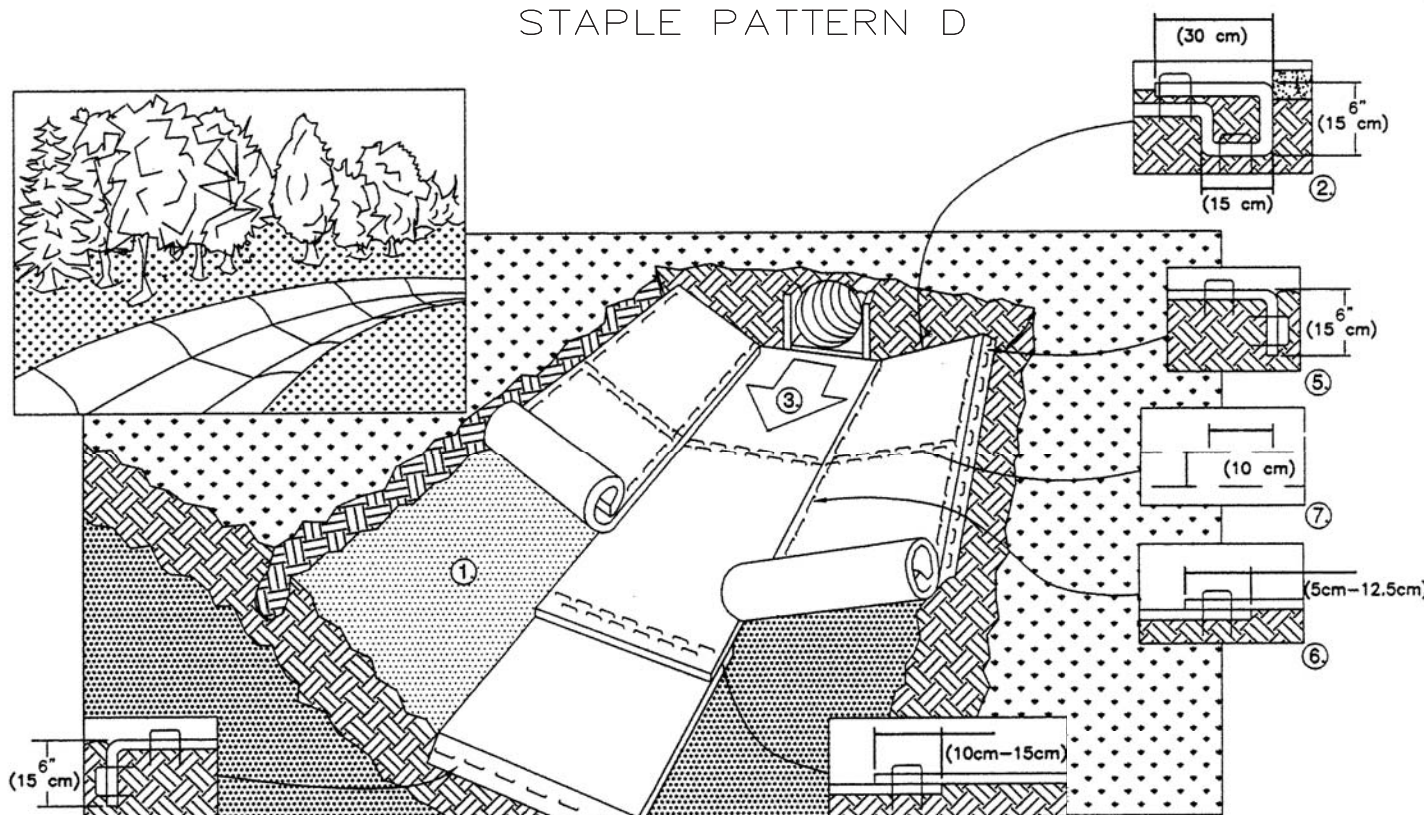
- NOTES:**
1. TEMPORARY STOCK PILES SHALL HAVE A MAXIMUM HEIGHT OF 10' WITH SIDE SLOPES NO STEEPER THAN 3:1.
  2. ESTABLISH TEMPORARY GROUND COVER WITHIN 14 DAYS AS DEPICTED ON THE GROUND STABILIZATION REQUIREMENTS CHART ON SHEET C1301.

### D4 TEMPORARY STOCKPILE AREA DETAIL

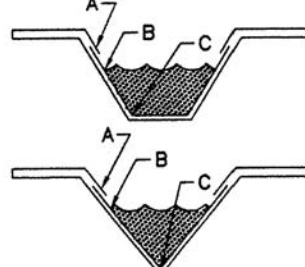
D4301 N.T.S.



For blankets with the optional North American Green Dot System place staples/stakes through each of the WHITE colored dots.



1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED PER SEEDING SPECIFICATIONS.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING PRE-MARKED BLANKETS, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE MARKS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN AS REQUIRED BY THE MANUFACTURER.
4. PLACE CONSECUTIVE BLANKETS END OVER END (SHINGLE STYLE) WITH A 4"-6" (10cm-15cm) OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10cm) APART AND 4" (10cm) ON CENTER TO SECURE BLANKETS.
5. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT BLANKETS MUST BE OVERLAPPED APPROXIMATELY 2"-5" (5cm-12.5cm) (DEPENDING ON BLANKET TYPE) AND STAPLED. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE BLANKET BEING OVERLAPPED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT (9m-12m) INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10cm) APART AND 4" (10cm) ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.



**CRITICAL POINTS**  
A. OVERLAPS AND SEAMS  
B. PROJECTED WATER LINE  
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

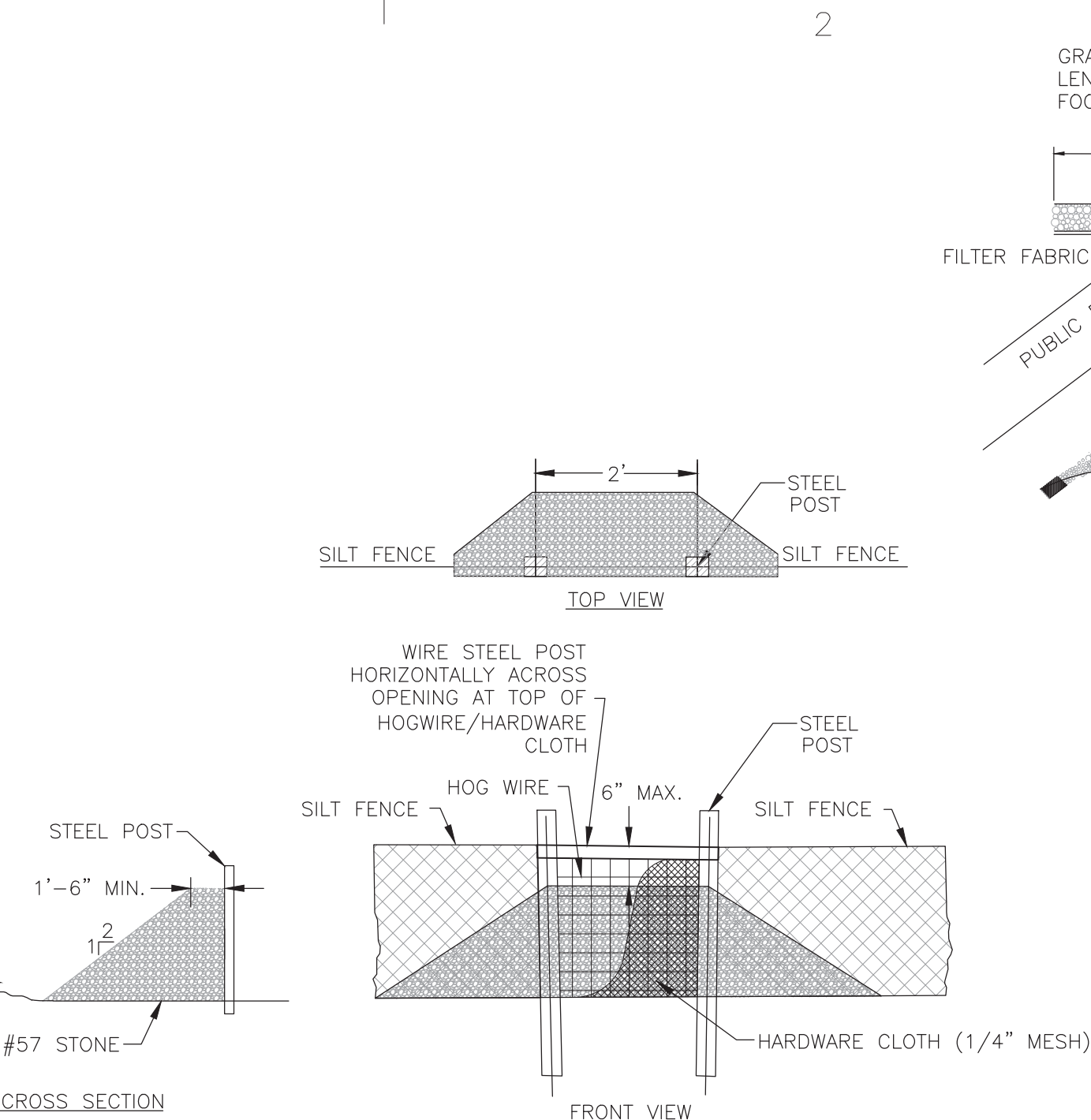
**NOTE:**  
• HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.  
• IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 cm) MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.

**MAINTENANCE:**

- INSPECT ROLLED EROSION CONTROL PRODUCTS (RECP) AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAIN FALL EVENT REPAIR IMMEDIATELY.
- GOOD CONTACT WITH THE GROUND MUST BE MAINTAINED, AND EROSION MUST NOT OCCUR BENEATH THE RECP.
- ANY AREAS OF THE RECP THAT ARE DAMAGED OR NOT IN CLOSE CONTACT WITH THE GROUND SHALL BE REPAIRED AND STAPLED.
- IF EROSION OCCURS DUE TO POORLY CONTROLLED DRAINAGE, THE PROBLEM SHALL BE FIXED AND THE ERODED AREA PROTECTED.
- MONITOR AND REPAIR THE RECP AS NECESSARY UNTIL GROUND COVER IS ESTABLISHED.

### A4 EROSION CONTROL MATTING INSTALLATION (TYP.)

A4301 N.T.S.

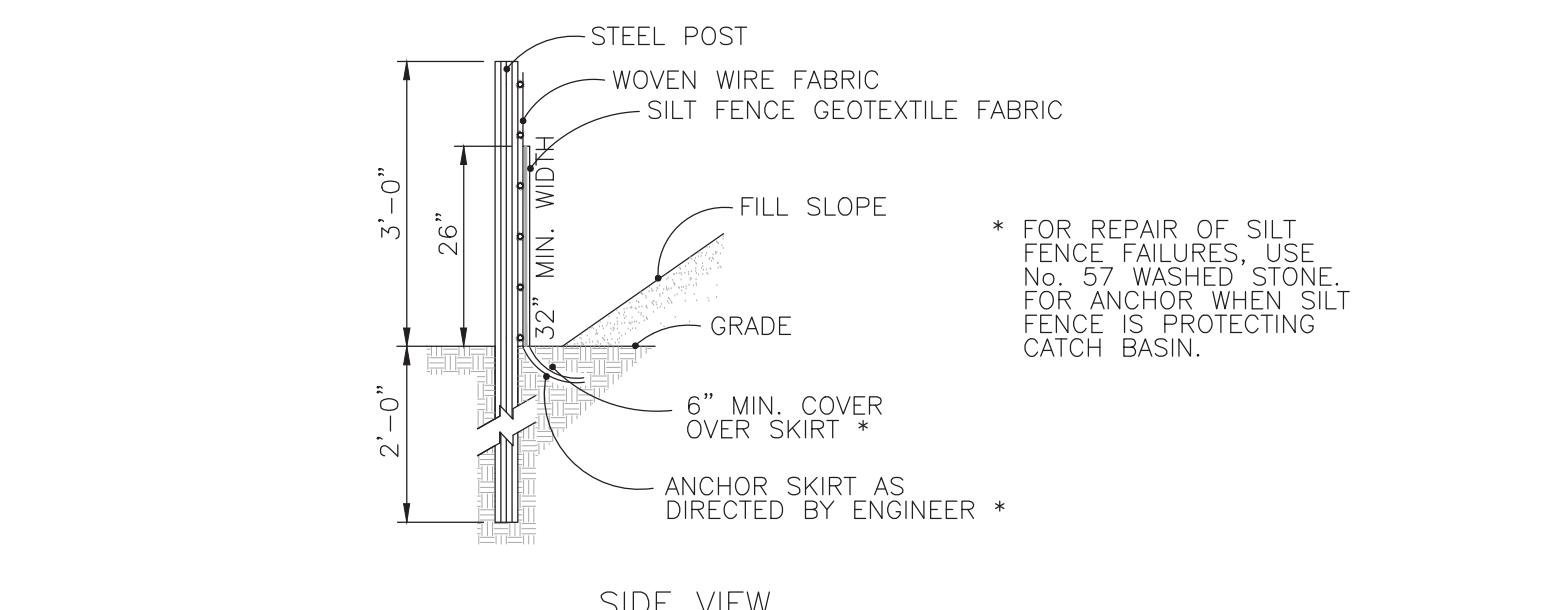
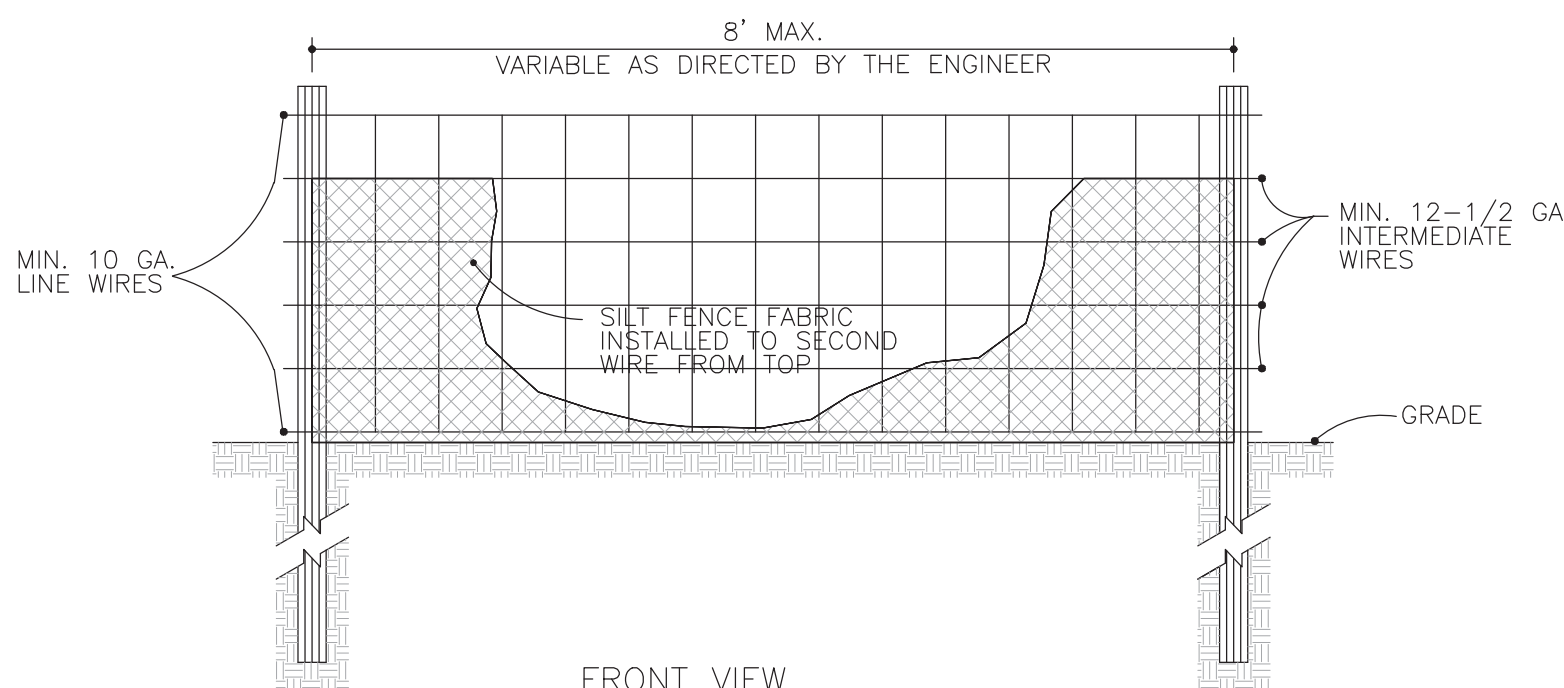


**MAINTENANCE:**

- **SILT FENCE STONE OUTLET:**  
• INSPECT SILT FENCE STONE OUTLET WEEKLY OR AFTER EACH SIGNIFICANT RAINFALL EVENT (1/2 INCH OR GREATER). MAKE ANY REQUIRED REPAIRS IMMEDIATELY.  
• REMOVE SEDIMENT DEPOSITS AS NECESSARY, RESTORE TO ITS ORIGINAL DIMENSIONS AND REPLACE STONE THAT IS IMPAIRED BY SEDIMENT.
- **COIR FIBER WATTLE:**  
• INSPECT WATTLE WEEKLY OR AFTER EACH SIGNIFICANT RAINFALL EVENT (1/2 INCH OR GREATER). REMOVE ACCUMULATED SEDIMENT AND ANY DEBRIS.  
• REPLACE WATTLE IF CLOGGED OR TORN. REINSTALL WATTLE IF UNDERMINED OR DISLODGED.

### C3 TEMPORARY SILT FENCE STONE OUTLET

C3301 N.T.S.



**NOTE:**

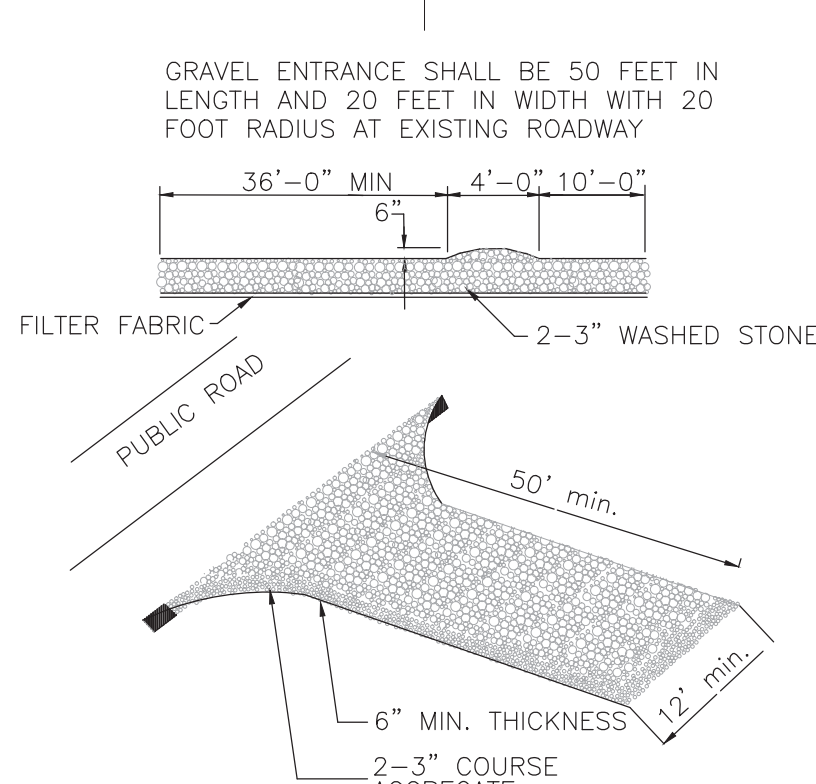
- USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW
- END OF SILT FENCE NEEDS TO BE TURNED UPHILL.

**MAINTENANCE:**

- INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
- SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
- REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.
- REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

### A3 TEMPORARY SILT FENCE

A3301 N.T.S.



**DESIGN CRITERIA**

AGGREGATE SIZE - USE 2-3 INCH WASHED STONE  
DIMENSION OF GRAVEL PAD  
THICKNESS - 6 INCHES MINIMUM  
WIDTH - 12 FT. MINIMUM OR FULL WIDTH AT ACCESS POINTS OF THE VEHICULAR ENTRANCE AND EXIT AREA, WHICHEVER IS GREATER  
LENGTH - 50 FT. MINIMUM.

LOCATION - LOCATE CONSTRUCTION ENTRANCES AND EXITS TO LIMIT SEDIMENT FROM LEAVING THE SITE AND TO PROVIDE FOR MAXIMUM UTILITY BY ALL CONSTRUCTION VEHICLES. AVOID STEEP GRADES AND ENTRANCES AT CURVES IN PUBLIC ROADS.

CONTRACTOR SHALL INSTALL ADDITIONAL GRAVEL CONSTRUCTION ENTRANCES NOT INDICATED ON THE PLANS REQUIRED FOR STAGING AND/OR BORROW AREAS AND MAINTAIN AT NO ADDITIONAL EXPENSE TO THE OWNER.

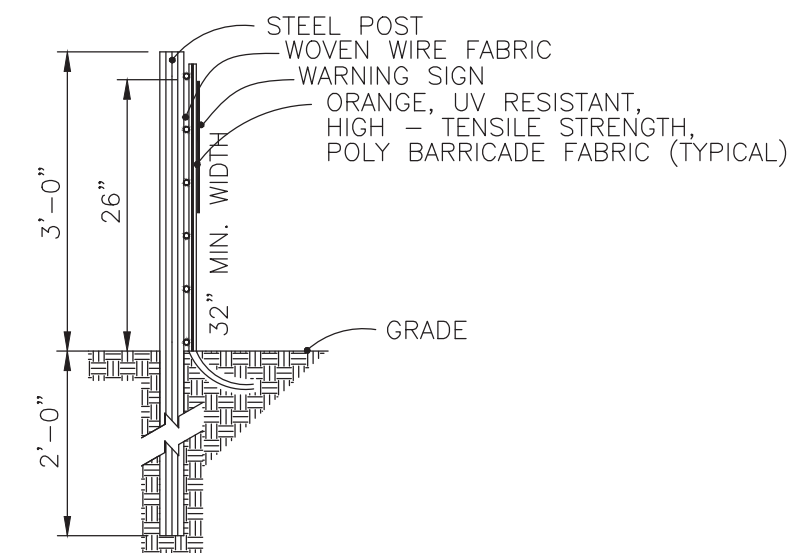
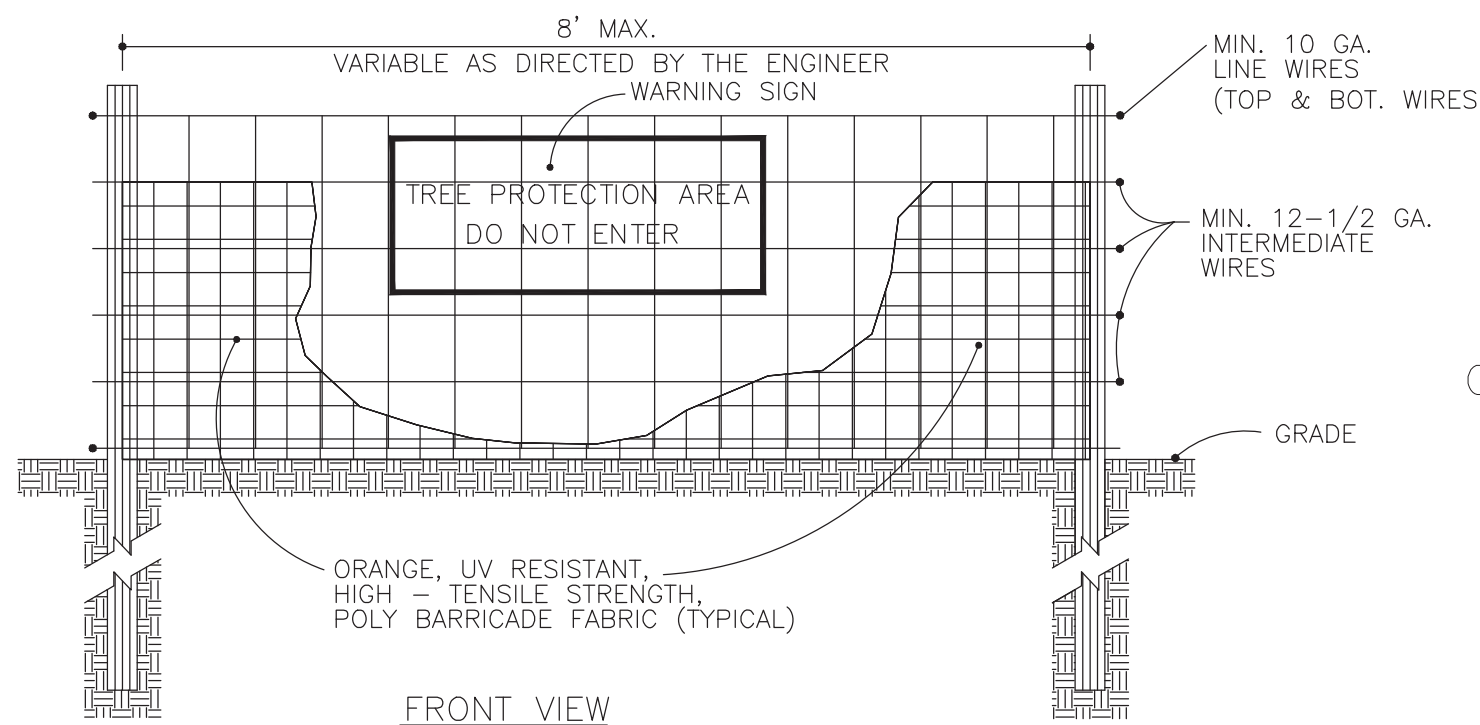
CONTRACTOR SHALL SUPPLEMENT AND MAINTAIN GRAVEL CONSTRUCTION ENTRANCES AT HIS EXPENSE UNTIL FINAL ACCEPTANCE.

**MAINTENANCE:**

MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH 2-INCH STONE. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS.

### D1 TEMPORARY CONSTRUCTION EXIT

D1301 N.T.S.



**WARNING SIGN DETAIL**

**NOTES:**

1. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL.
2. LETTERS TO BE 3" HIGH MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED.
3. SIGNS SHALL BE PLACED AT 50' MAXIMUM INTERVALS.
4. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER.
5. FOR TREE PROTECTION AREAS LESS THAN 200' IN PERIMETER, PROVIDE NO LESS THAN ONE SIGN PER PROTECTION AREA.
6. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC.
7. MAINTAIN TREE PROTECTION FENCE THROUGHOUT DURATION OF PROJECT.
8. ADDITIONAL SIGNS MAY BE REQUIRED BY TOWN OF ARDEN INSPECTIONS DEPARTMENT BASED ON ACTUAL FIELD CONDITIONS.
9. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER.

**MAINTENANCE:**

CONTINUE TO CARE FOR THE SITE UNTIL THE NEW OWNER TAKES POSSESSION. TAKE THESE STEPS AFTER ALL MATERIALS AND EQUIPMENT HAVE BEEN REMOVED FROM THE SITE:

- REMOVE TREE PROTECTION ZONE FENCES.
- PRUNE ANY DAMAGED TREES. IN SPITE OF PRECAUTIONS, SOME DAMAGE TO PROTECTED TREES MAY OCCUR. IN SUCH CASES, REPAIR ANY DAMAGE TO THE CROWN, TRUNK, OR ROOT SYSTEM IMMEDIATELY.
- REPAIR ROOTS BY CUTTING OFF THE DAMAGED AREAS AND PAINTING THEM WITH TREE PAINT. SPREAD PEAT MOSS OR MOIST TOPSOIL OVER EXPOSED ROOTS.
- REPAIR DAMAGE TO BARK BY TRIMMING AROUND THE DAMAGED AREA AS SHOWN IN FIGURE 6.05D, TAPER THE CUT TO PROVIDE DRAINAGE, AND PAINT WITH TREE PAINT.
- CUT OFF ALL DAMAGED TREE LIMBS ABOVE THE TREE COLLAR AT THE TRUNK OR MAIN BRANCH.
- USE THREE SEPARATE CUTS AS SHOWN IN FIGURE 6.05D TO AVOID PEELING BARK FROM HEALTHY AREAS OF THE TREE.
- CONTINUE MAINTENANCE CARE. PAY SPECIAL ATTENTION TO ANY STRESSED, DISEASED, OR INSECT-INFESTED TREES. REDUCE TREE STRESS CAUSED BY UNINTENDED CONSTRUCTION DAMAGE BY OPTIMIZING PLANT CARE WITH WATER, MULCH, AND FERTILIZER WHERE APPROPRIATE. CONSULT YOUR TREE EXPERT IF NEEDED.
- INFORM THE PROPERTY OWNER ABOUT THE MEASURES EMPLOYED DURING CONSTRUCTION, WHY THOSE MEASURES WERE TAKEN, AND HOW THE EFFORT CAN BE CONTINUED.

### A1 TEMPORARY TREE PROTECTION FENCE

A1301 N.T.S.

## EROSION CONTROL DETAILS

**BALLENTINE ASSOCIATES, P.A.**  
221 PRODUCE ROAD, CHAPEL HILL, NC 27514  
PH: 919-275-1274  
FAX: 919-275-1275  
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DATE	19 JUL 16
REVISIONS	
PER NCDOT COMMENTS	
NUM	

**OWNER INFORMATION**  
SHERYL-MAR CO. LLC  
87 NORWOOD ROAD  
CHAPEL HILL, NC 27516  
**OWNERS REPRESENTATIVE:**  
JIM HODGIN  
PH: 910-210-0920  
FAX: 910-210-0920  
EMAIL: jmhodgin@hotmail.com

DATE	25 MAR 16
ISSUED	TO SHERYL-MAR
DATE	12 APR 16
ISSUED	CHATHAM UTILITIES & NCDOT
DATE	15 APR 16
ISSUED	CHATHAM EROSION CONTROL
DATE	23 APR 16
ISSUED	CHATHAM STORMWATER
DATE	17 JUN 16
ISSUED	CHATHAM SW & EC #2
DATE	19 JUL 16
ISSUED	NCDOT SUBMITTAL #2

**BROOKSIDE AT FIELDSTONE**  
CHATHAM COUNTY, NORTH CAROLINA  
**CONSTRUCTION DRAWINGS**

JOB NUMBER: 113022.00  
DATE: 25 MAR 2016  
SCALE: AS NOTED  
DRAWN BY: DBB  
REVIEWED BY: GJR

**SHEET**  
**C5301**



