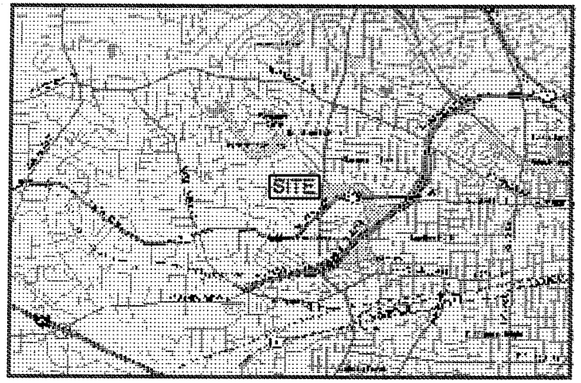
WBS ELEMENT: 34154.4.1 I-2201 WM

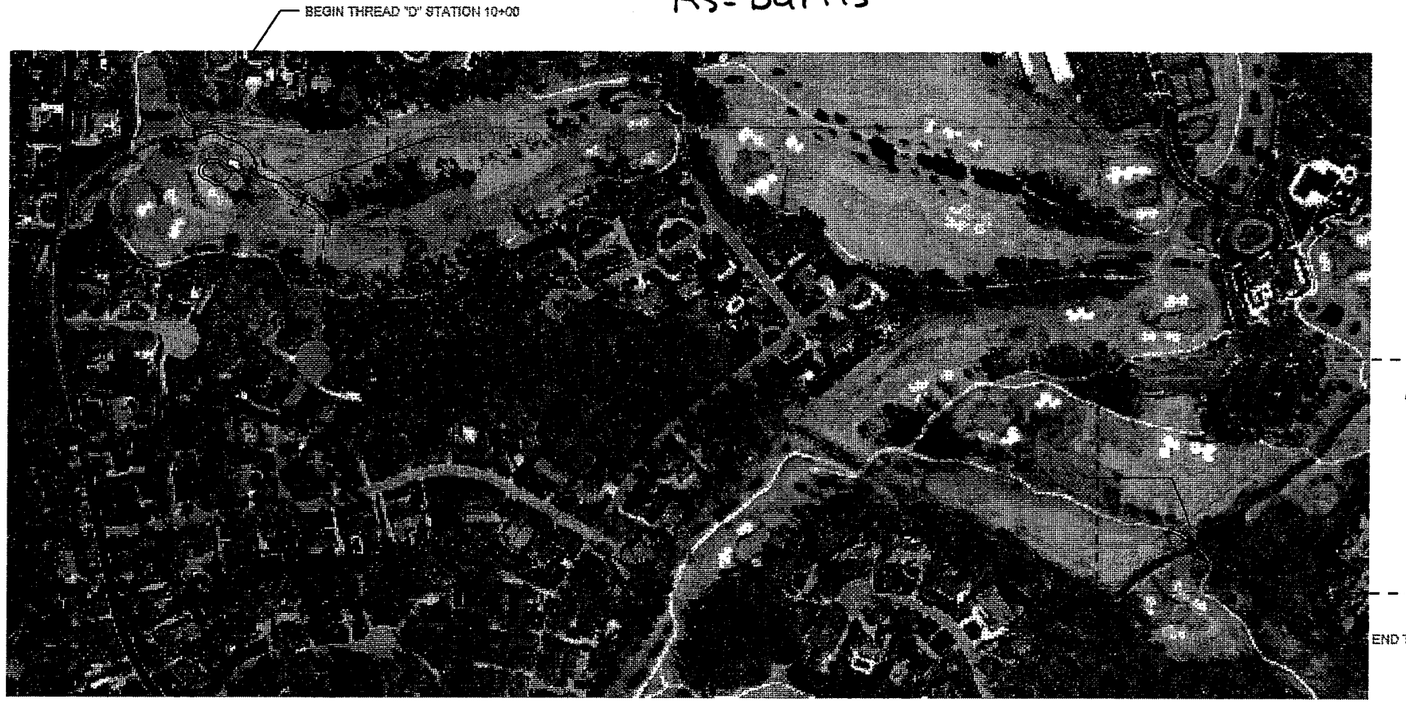


STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-2201 WM	1	12
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34151.4.1		CONST.	

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
GUILFORD COUNTY

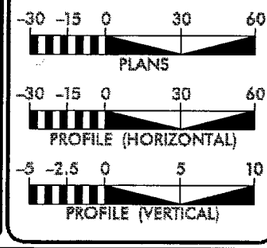
LOCATION: STARMOUNT FOREST COUNTRY CLUB
GREENSBORO, N.C.
TYPE OF WORK: STREAM REMEDIATION

As-Builts



NC 68/10 NAD 83

GRAPHIC SCALES



DESIGN DATA

PROJECT LENGTH

THREAD "B" REMEDIATION = 169 LINEAR FEET (LF)

THREAD "D" REMEDIATION = 314 LINEAR FEET (LF)

Prepared in the Office of:
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RALEIGH, NC 27609-5210
•ENGINEERS • PLANNERS • ECOLOGISTS
for the:
DIVISION OF HIGHWAYS

2002 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

LETTING DATE:

JAMES W. BLAKE, P.E.
PROJECT ENGINEER

GARY M. MRYNCZA, P.H.
PROJECT DESIGN ENGINEER

DESIGN ENGINEER

P.E.
SIGNATURE:

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

P.E.
STATE DESIGN ENGINEER

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR *DATE*

REVISIONS

I-2201WM	1A

INDEX OF SHEETS

ROADWAY STANDARD DRAWINGS:

(REV. JAN. 2002)

STD NO.	TITLE
1605.01	TEMPORARY SILT FENCE
1636.01	ROCK SILT SCREEN

GENERAL NOTES:

BEARING AND DISTANCES:
ALL BEARINGS ARE NAD '83 GRID BEARINGS.
ALL DISTANCES AND COORDINATES SHOWN ARE HORIZONTAL (GROUND) VALUES.
ALL INFORMATION IS BASED ON THE FOLLOWING NCGS CONTROL MONUMENTS.

"47W200"	N = 849,128.09	E = 1,749,702.74	ELEV.= 847.68'
"46W200"	N = 847,600.98	E = 1,749,550.19	ELEV.= 802.74'

GRADING:
-THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED OR FUTURE SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING, ENDING AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

SUBSURFACE PLANS:
-NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

UTILITIES:
-UTILITY LOCATIONS NOTED ON PLANS ARE FOR INFORMATIONAL PURPOSES ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ANY EXISTING UTILITIES. CONTACT 'NC ONE CALL', 1-800-632-4949, A MINIMUM OF 48 HOURS IN ADVANCE OF CONSTRUCTION, AS WELL AS NCDOT, FOR INFORMATION.

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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL SYMBOLS

ROADS & RELATED ITEMS

- Edge of Pavement
- Curb
- Prop. Slope Stakes Cut — C
- Prop. Slope Stakes Fill — F
- Prop. Woven Wire Fence
- Prop. Chain Link Fence
- Prop. Barbed Wire Fence
- Prop. Wheelchair Ramp — WCR
- Exist. Guardrail
- Prop. Guardrail
- Equality Symbol
- Pavement Removal

RIGHT OF WAY

- Baseline Control Point
- Existing Right of Way Marker
- Exist. Right of Way Line w/Marker
- Prop. Right of Way Line with Proposed R/W Marker (Iron Pin & Cap)
- Prop. Right of Way Line with Proposed (Concrete or Granite) R/W Marker
- Exist. Control of Access Line — CA
- Prop. Control of Access Line — CA
- Exist. Easement Line — E
- Prop. Temp. Construction Easement Line — E
- Prop. Temp. Drainage Easement Line — TDE
- Prop. Perm. Drainage Easement Line — PDE

HYDROLOGY

- Stream or Body of Water
- Flow Arrow
- Disappearing Stream
- Spring
- Swamp Marsh
- Shoreline
- Falls, Rapids
- Prop Lateral, Tail, Head Ditches — FLOW

STRUCTURES

MAJOR

- Bridge, Tunnel, or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR

- Head & End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Boxes — CB
- Paved Ditch Gutter

UTILITIES

- Exist. Pole
- Exist. Power Pole
- Prop. Power Pole
- Exist. Telephone Pole
- Prop. Telephone Pole
- Exist. Joint Use Pole
- Prop. Joint Use Pole
- Telephone Pedestal — T
- Cable TV Pedestal — C
- Hydrant
- Satellite Dish
- Exist. Water Valve
- Sewer Clean Out
- Power Manhole
- Telephone Booth
- Water Manhole — W
- Light Pole
- H-Frame Pole
- Power Line Tower
- Pole with Base
- Gas Valve
- Gas Meter
- Telephone Manhole
- Power Transformer
- Sanitary Sewer Manhole
- Storm Sewer Manhole — S
- Tank; Water, Gas, Oil
- Water Tank With Legs
- Traffic Signal Junction Box — S
- Fiber Optic Splice Box — F
- Television or Radio Tower
- Utility Power Line Connects to Traffic Signal Lines Cut Into the Pavement — TS — TS

- Water Line — W — W
- Sanitary Sewer — SS — SS
- Sanitary Sewer Force Main — FSS — FSS
- Gas Line — G — G
- Storm Sewer — S — S
- Power Line — P — P
- Telephone Cable — T — T
- U/G Telephone Conduit — TC — TC
- Unknown Utility — ?UTL — ?UTL
- Television Cable — TV — TV
- Fiber Optics Cable — FO — FO
- Exist. Water Meter — 0
- Drawn According to U/G Records — DATUR
- Abandoned According to U/G Records — AATUR
- End Of Information — E.O.I.

BOUNDARIES & PROPERTIES

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Property Line Symbol — PL
- Exist. Iron Pin — EIP
- Property Corner
- Property Monument — ECM
- Property Number — 123
- Parcel Number — 6
- Fence Line — WW & ISBW
- Existing Wetland Boundaries — WLB
- Proposed Wetland Boundaries — WLB
- Existing Endangered Animal Boundaries — EAB
- Existing Endangered Plant Boundaries — EPB

BUILDINGS & OTHER CULTURE

- Buildings
- Foundations
- Area Outline
- Gate

- Gas Pump Vent or U/G Tank Cap
- Church
- School
- Park
- Cemetery
- Dam
- Sign — S
- Well — W
- Small Mine
- Swimming Pool

TOPOGRAPHY

- Loose Surface
- Hard Surface
- Change in Road Surface
- Curb
- Right of Way Symbol — R/W
- Guard Post — GP
- Paved Walk
- Bridge
- Box Culvert or Tunnel
- Ferry
- Culvert
- Footbridge
- Trail, Footpath
- Light House

VEGETATION

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard — VINEYARD

RAILROADS

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch

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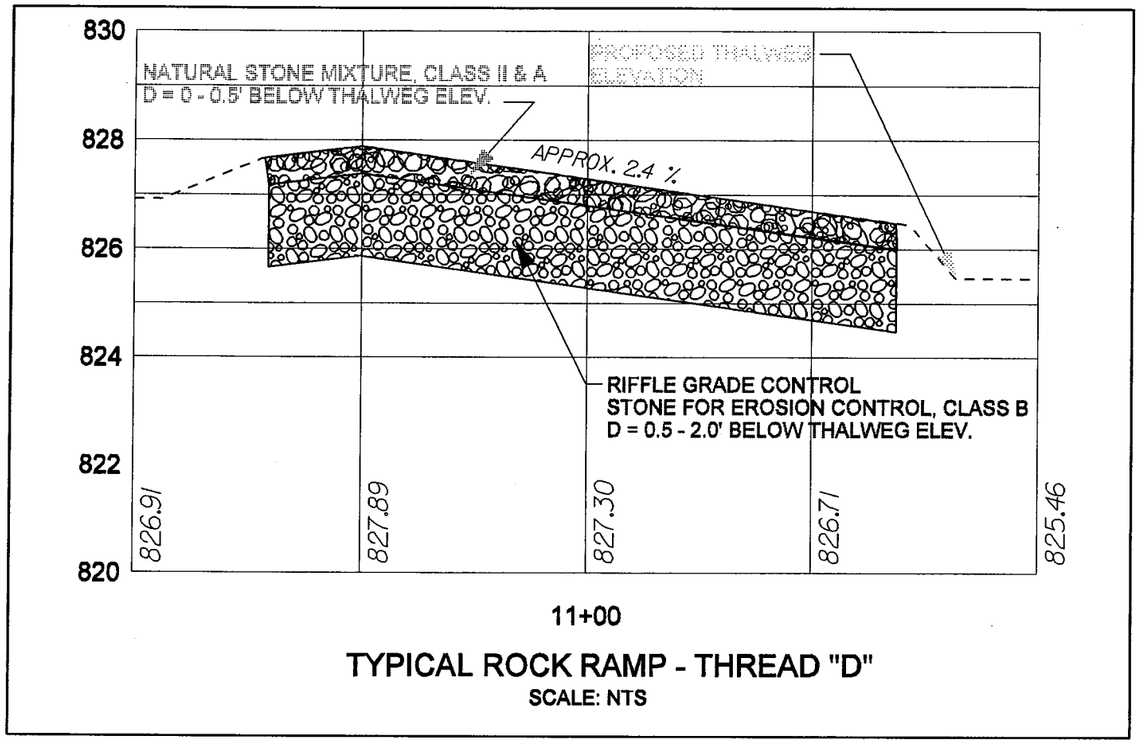
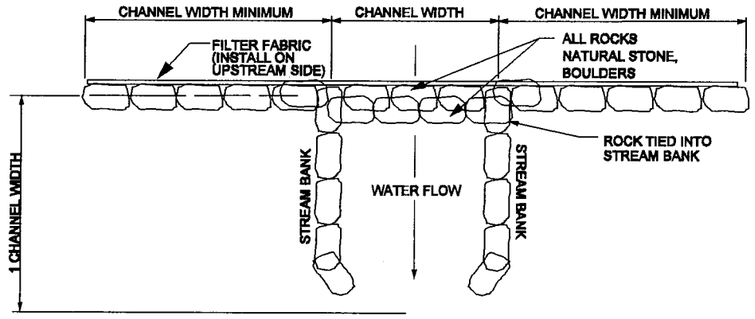


TYPICAL ROCK RAMP - THREAD "D"

SCALE: NTS

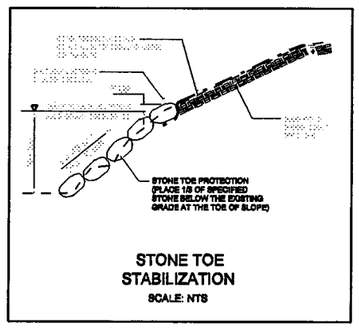
THE CONTRACTOR SHALL REMOVE ALL WOODEN STAKES THAT ARE NOT, AT THIS TIME, SECURING COIR FIBER ROLLS. THIS PROCEDURE SHOULD BE PERFORMED THROUGHOUT THE ENTIRE PROJECT AREA, AND SPECIFICALLY AS DIRECTED BY THE ONSITE CONSTRUCTION SUPERVISOR.

STAKES THAT ARE EMBEDDED IN THE BANKS AND LOW BENCHES OR THAT APPEAR TO BE CONTINUOUS WITH STABILIZED REACHES SHOULD BE LEFT IN PLACE.



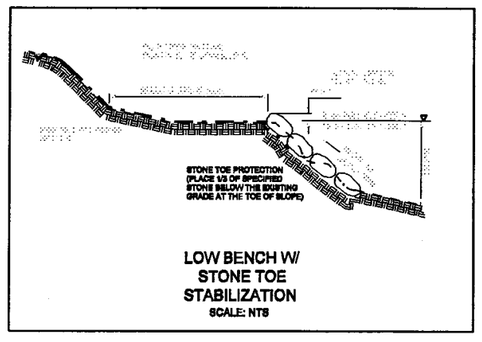
ROCK SILL GRADE CONTROL

SCALE: NTS



STONE TOE STABILIZATION

SCALE: NTS



LOW BENCH W/ STONE TOE STABILIZATION

SCALE: NTS

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I-2201 WM	3

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SUMMARY OF QUANTITIES

SECT.	QUANTITY	UNIT	ITEM DESCRIPTION
800	1	LS	MOBILIZATION
801	1	LS	CONSTRUCTION SURVEY
226	1	LS	GRADING
1660	2	AC	SEEDING AND MULCHING
1056	400	SY	FILTER FABRIC FOR DRAINAGE
1610	30	TON	SEDIMENT CONTROL STONE
1610	30	TON	STONE FOR EROSION CONTROL, CLASS A
1610	110	TON	STONE FOR EROSION CONTROL, CLASS B
1660	2	AC	TEMPORARY SEEDING
1665	1	TON	FERTILIZER TOPDRESSING
1660	2	AC	SUPPLEMENTAL SEEDING
1664	1,500	SY	SODDING
1664	1	1,000 GAL	WATERING
SP	20	TON	NATURAL STONE, CLASS A
SP	100	TON	NATURAL STONE, CLASS 2
SP	60	TON	NATURAL STONE, BOULDER
SP	2,000	SY	COIR FIBER MATTING
SP	1	LS	WOODEN STAKE REMOVAL
SP	1	LS	PUMP-AROUND OPERATION
SP	1,900	LF	SAFETY FENCE
SP	4	EA	SPECIAL STILLING BASIN

SUMMARY OF EARTHWORK - THREAD "B"
IN CUBIC YARDS

SITE EXCAVATION =	40 CY
SITE EMBANKMENT =	25 CY
NET WASTE =	15 CY

SUMMARY OF EARTHWORK - THREAD "D"
IN CUBIC YARDS

SITE EXCAVATION =	150 CY
SITE EMBANKMENT =	30 CY
NET WASTE =	120 CY

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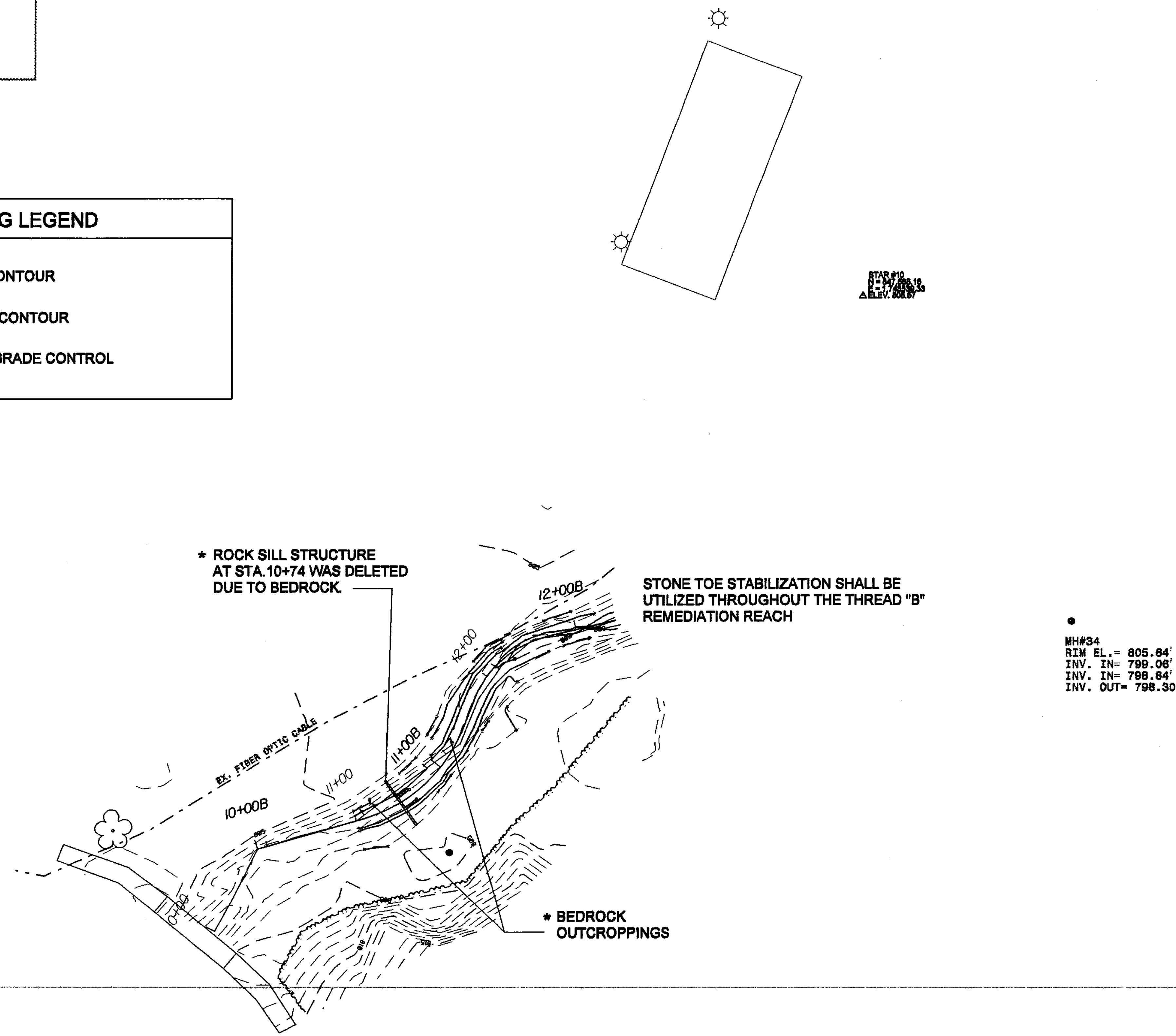
*THREAD "B" IS ALSO REFERRED TO AS "11 FAIRWAY" BY SFCC

GRADING LEGEND	
— — —	EXISTING CONTOUR
———	PROPOSED CONTOUR
(symbol)	ROCK SILL GRADE CONTROL



* AS-BUILT NOTES

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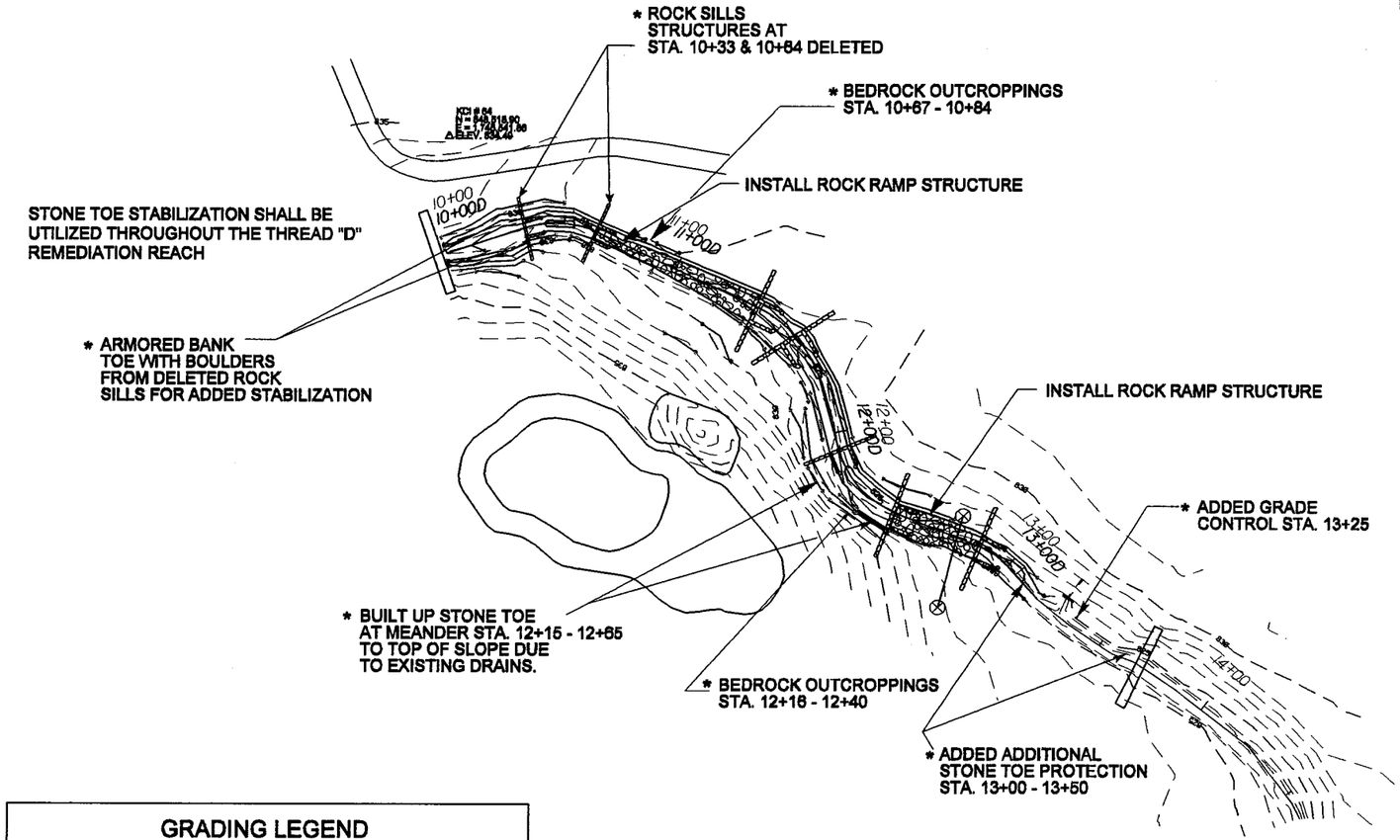
1-2201WM	5



DRIVE

STAUNTON

GRADING LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- ROCK SILL GRADE CONTROL

* AS-BUILT NOTES

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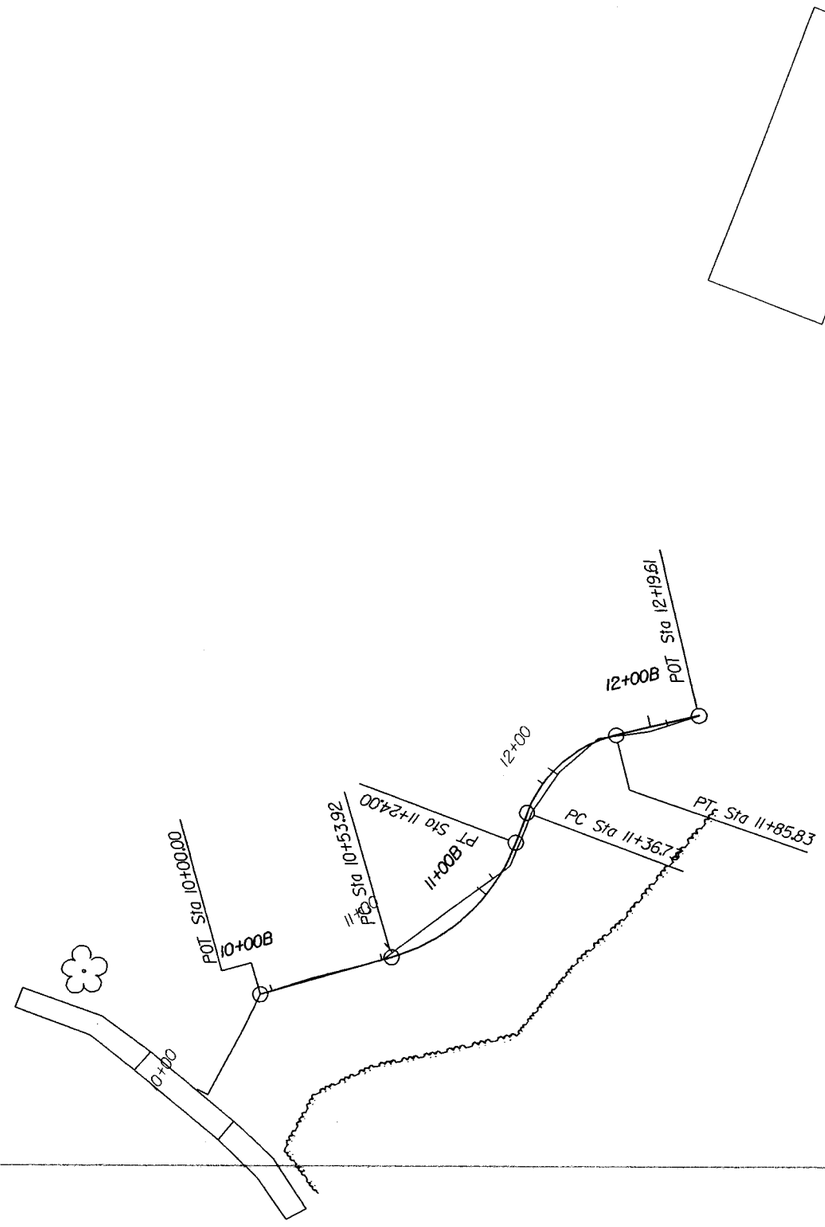

Point 10000 N 847,417.2380 E 1,748,245.6230 Sta 10+00.00

Course from 10000 to PC PROPB-1 N 73° 57' 14.88" E Dist 53.9248

Curve Data

Curve PROPB-1
P.I. Station 10+91.76 N 847,442.6004 E 1,748,333.8058
Delta = 53° 32' 09.25" (LT)
Degree = 76° 23' 39.74"
Tangent = 37.8326
Length = 70.0783
Radius = 75.0000
External = 9.0018
Long Chord = 67.5567
Mid. Ord. = 8.0372
P.C. Station 10+53.92 N 847,432.1432 E 1,748,297.4469
P.T. Station 11+24.00 N 847,478.0560 E 1,748,347.0042
C.C. N 847,504.2212 E 1,748,276.7164
Back = N 73° 57' 14.88" E
Ahead = N 20° 25' 05.64" E
Chord Bear = N 47° 11' 10.26" E

Course from PT PROPB-1 to PC PROPB-2 N 20° 25' 05.64" E Dist 12.7241

Curve Data

Curve PROPB-2
P.I. Station 11+63.46 N 847,515.0353 E 1,748,360.7701
Delta = 56° 15' 56.41" (RT)
Degree = 114° 35' 29.61"
Tangent = 26.7343
Length = 49.1011
Radius = 50.0000
External = 6.6985
Long Chord = 47.1517
Mid. Ord. = 5.9072
P.C. Station 11+36.73 N 847,489.9806 E 1,748,351.4433
P.T. Station 11+85.83 N 847,521.1928 E 1,748,386.7857
C.C. N 847,472.5371 E 1,748,398.3018
Back = N 20° 25' 05.64" E
Ahead = N 76° 41' 02.05" E
Chord Bear = N 48° 33' 03.84" E

Course from PT PROPB-2 to 10001 N 76° 41' 02.05" E Dist 33.7864

Point 10001 N 847,528.9748 E 1,748,419.6637 Sta 12+19.61

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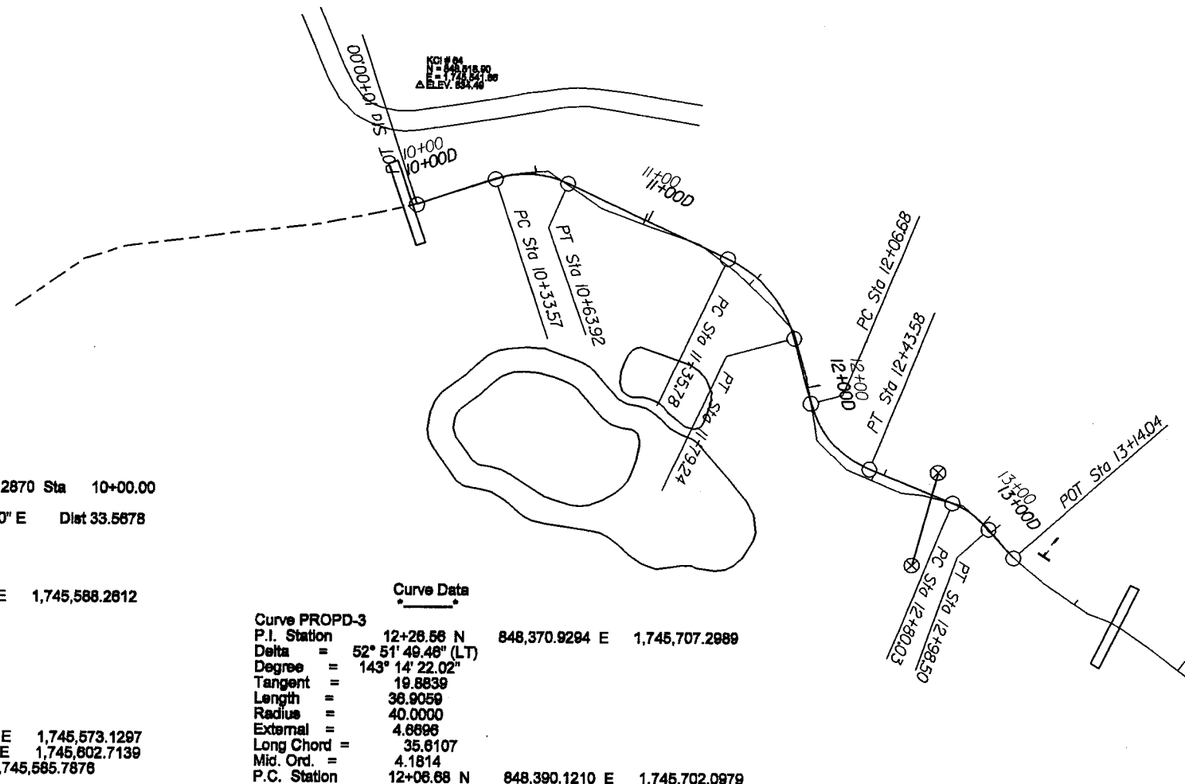

Point 20000 N 848,470.3140 E 1,745,541.2870 Sta 10+00.00

Course from 20000 to PC PROPD-1 N 71° 33' 06.50" E Dist 33.5678

Curve Data

Curve PROPD-1
P.I. Station 10+49.52 N 848,485.9841 E 1,745,588.2612
Delta = 43° 28' 55.92" (RT)
Degree = 143° 14' 22.02"
Tangent = 15.9512
Length = 30.3563
Radius = 40.0000
External = 3.0632
Long Chord = 29.6331
Mid. Ord. = 2.8453
P.C. Station 10+33.57 N 848,480.9364 E 1,745,573.1297
P.T. Station 10+63.92 N 848,479.2343 E 1,745,602.7139
C.C. N 848,442.9920 E 1,745,585.7876
Back = N 71° 33' 06.50" E
Ahead = S 64° 57' 57.58" E
Chord Bear = S 86° 42' 25.54" E

Course from PT PROPD-1 to PC PROPD-2 S 64° 57' 57.58" E Dist 71.8560

Curve Data

Curve PROPD-2
P.I. Station 11+58.99 N 848,439.0083 E 1,745,688.8498
Delta = 49° 48' 09.59" (RT)
Degree = 114° 35' 29.61"
Tangent = 23.2106
Length = 43.4810
Radius = 50.0000
External = 5.1247
Long Chord = 42.1057
Mid. Ord. = 4.6483
P.C. Station 11+35.78 N 848,448.8280 E 1,745,667.8195
P.T. Station 11+79.24 N 848,416.8037 E 1,745,694.9209
C.C. N 848,403.5252 E 1,745,646.6617
Back = S 64° 57' 57.58" E
Ahead = S 15° 09' 47.99" E
Chord Bear = S 40° 03' 52.78" E

Course from PT PROPD-2 to PC PROPD-3 S 15° 09' 47.99" E Dist 27.4380

Curve Data

Curve PROPD-3
P.I. Station 12+26.56 N 848,370.9294 E 1,745,707.2989
Delta = 52° 51' 49.46" (LT)
Degree = 143° 14' 22.02"
Tangent = 19.8839
Length = 36.9059
Radius = 40.0000
External = 4.6696
Long Chord = 35.6107
Mid. Ord. = 4.1814
P.C. Station 12+06.68 N 848,390.1210 E 1,745,702.0979
P.T. Station 12+43.58 N 848,363.4894 E 1,745,725.7385
C.C. N 848,400.5639 E 1,745,740.7052
Back = S 15° 09' 47.99" E
Ahead = S 68° 01' 37.44" E
Chord Bear = S 41° 35' 42.72" E

Course from PT PROPD-3 to PC PROPD-4 S 68° 01' 37.44" E Dist 36.4439

Curve Data

Curve PROPD-4
P.I. Station 12+89.43 N 848,348.3341 E 1,745,768.2573
Delta = 26° 27' 48.94" (RT)
Degree = 143° 14' 22.02"
Tangent = 9.4053
Length = 18.4751
Radius = 40.0000
External = 1.0909
Long Chord = 18.3113
Mid. Ord. = 1.0619
P.C. Station 12+80.03 N 848,349.8533 E 1,745,759.5351
P.T. Station 12+98.50 N 848,339.2968 E 1,745,774.4972
C.C. N 848,312.7588 E 1,745,744.5684
Back = S 68° 01' 37.44" E
Ahead = S 41° 33' 48.50" E
Chord Bear = S 54° 47' 42.97" E

Course from PT PROPD-4 to 20001 S 41° 33' 48.50" E Dist 15.5366

Point 20001 N 848,327.6720 E 1,745,784.8050 Sta 13+14.04

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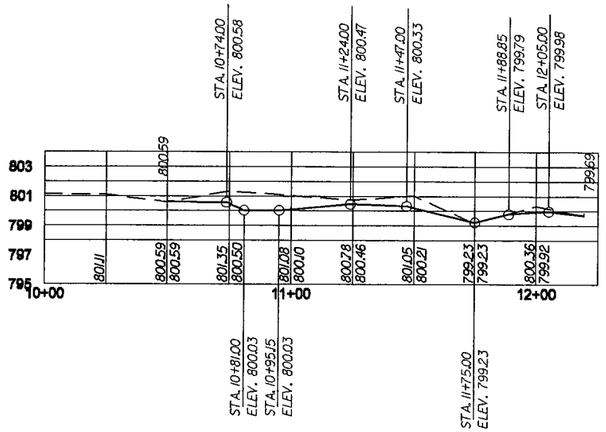
THREAD "B" PROFILE
STATION 10+50B to 12+19B

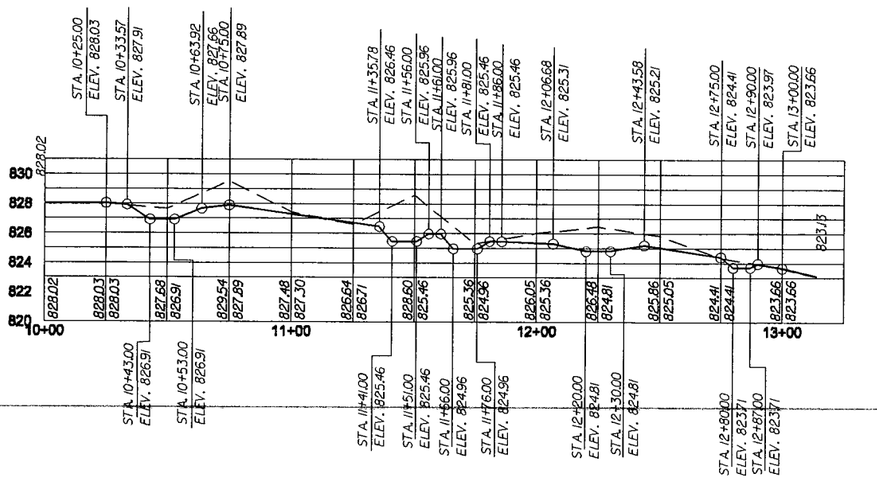


PROFILE LEGEND

PROPOSED THALWEG

EXISTING GROUND ALONG ALIGNMENT

THREAD "D" PROFILE
STATION 10+00D to 13+14D



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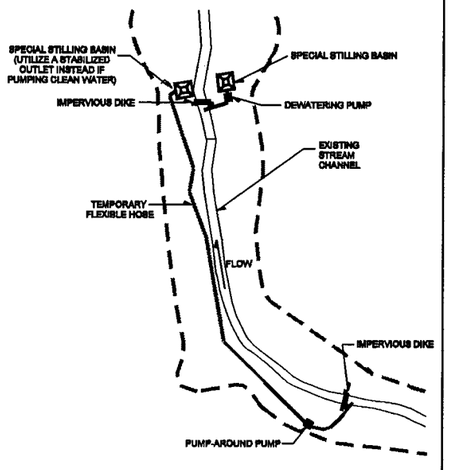
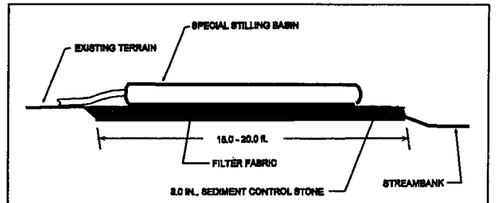
EXAMPLE OF PUMP-AROUND OPERATION



SEQUENCE OF DEWATERING OPERATIONS

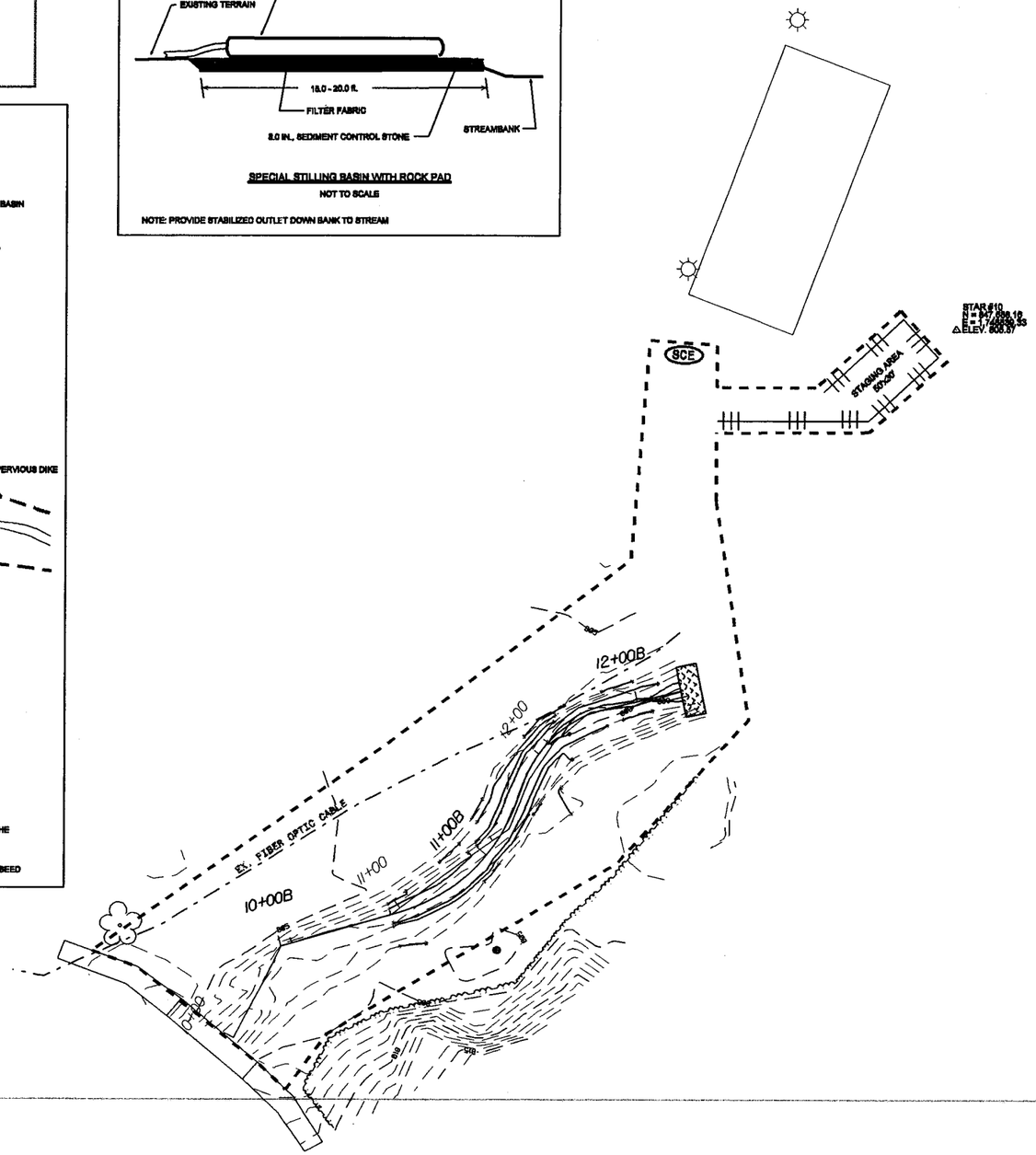
1. INSTALL SPECIAL STILLING BASIN(S).
2. INSTALL UPSTREAM PUMP AND TEMPORARY FLEXIBLE HOSE.
3. PLACE UPSTREAM IMPERVIOUS DIKE AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
4. PLACE DOWNSTREAM IMPERVIOUS DIKE AND PUMPING APPARATUS. DEWATER ENTRAPPED AREA. AREA TO BE DEWATERED SHALL BE EQUAL TO ONE DAY'S WORK.
5. PERFORM STREAM REMEDIATION WORK IN ACCORDANCE WITH THE PLANS.
6. EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES. REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSE. (DOWNSTREAM IMPERVIOUS DIKES FIRST).
7. ALL GRADING AND STABILIZATION MUST BE COMPLETED IN ONE DAY WITHIN THE PUMP AROUND AREAS BETWEEN THE IMPERVIOUS DIKES. THE IMPERVIOUS DIKE LOCATIONS AS SHOWN ON THIS SHEET ONLY SHOW THE UPPER AND LOWER EXTENT OF WORK FOR EACH STREAM SEGMENT. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE LOCATION OF THE IMPERVIOUS DIKE(S) FOR EACH DAY'S WORK.
8. REMOVE SPECIAL STILLING BASIN(S) AND STABILIZE DISTURBED AREA WITH SEED AND MULCH.



SPECIAL STILLING BASIN WITH ROCK PAD

NOT TO SCALE

NOTE: PROVIDE STABILIZED OUTLET DOWN BANK TO STREAM



NOTES:

1. THE LENGTH OF STREAM THAT IS ISOLATED AS A DAILY WORK AREA IS LEFT TO CONTRACTORS DISCRETION IN ACCORDANCE WITH THE FOLLOWING PROVISIONS: IT IS THE INTENT OF THIS CONTRACT THAT:-
   A. ALL PROJECT OPERATIONS WILL COMPLY WITH THE PROVIDED SEDIMENT EROSION CONTROL PLAN
   B. AT THE END OF EACH WORK DAY, EACH REACH OF STREAM MUST BE A COMPLETED WORK PRODUCT, I.E. ALL BANK AND CHANNEL MODIFICATIONS INCLUDING EXCAVATION, GRADING, AND FILL, AND ALL STABILIZATION TREATMENTS MUST BE FINISHED AS CALLED FOR IN THE PLANS AND AS DIRECTED BY THE ENGINEER.
   C. DUE TO THE ANTICIPATED DURATION AND SEQUENCE OF THE CONSTRUCTION ACTIVITIES, THE CONTRACTOR IS REQUIRED TO MINIMIZE, AS MUCH AS POSSIBLE, THE AMOUNT OF THE AREA THAT IS DISTURBED AT ONE TIME.
2. THE CONTRACTOR SHALL EXERCISE EVERY REASONABLE PRECAUTION THROUGHOUT THE CONSTRUCTION OF THE PROJECT TO PREVENT EROSION AND SILTATION. EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIAL PROVISIONS, NORTH CAROLINA SEDIMENT AND EROSION CONTROL GUIDELINES, DIVISION 16 OF THE NCDOT STANDARD SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER.
3. THE CONTRACTOR SHALL ONLY CONDUCT BANK AND STREAM WORK, INCLUDING ALL IN-STREAM, GRADING, STABILIZATION AND SEEDING AND MULCHING WORK, ON A SECTION OF STREAM THAT CAN BE ENTIRELY COMPLETED WITHIN A SINGLE DAY.
4. ALL EXCAVATION SHALL BE PERFORMED IN DRY OR ISOLATED SECTIONS OF THE CHANNEL.
5. A PUMP AROUND SHALL BE UTILIZED BY THE CONTRACTOR IN ALL PORTIONS OF THE STREAM TO DIVERT FLOW FROM AND DEWATER THE DESIGNATED AREA IN ORDER TO WORK. THE PUMP AROUND USED BY THE CONTRACTOR SHALL MEET ALL REQUIREMENTS SPECIFIED IN THE PROJECT SPECIAL PROVISIONS.
6. THE CONTRACTOR IS ALERTED TO THE FACT THAT THE PUMP AROUND IS NOT DESIGNED TO PASS THE 1-YEAR STORM. IN THE EVENT OF A STORM, THE CONTRACTOR WILL BE RESPONSIBLE FOR REMOVAL OR PROTECTION OF ANY EQUIPMENT, TOOLS, MATERIALS OR OTHER ITEMS NEEDED TO COMPLETE THE WORK THAT COULD BE AFFECTED BY STORM FLOWS. THE REMOVAL AND/OR REPLACEMENT OF ANY EQUIPMENT OR MATERIALS IS INCIDENTAL TO THE PUMP AROUND COST.
7. EACH SEDIMENT CONTROL DEVICE WILL BE REMOVED AFTER ALL WORK IN THE CORRESPONDING CONSTRUCTION PHASE HAS BEEN COMPLETED AND THE AREAS HAVE BEEN STABILIZED.

MH#34
RIM EL.= 805.64'
INV. IN= 799.06'
INV. IN= 798.84'
INV. OUT= 798.30'

NCDOT ROADWAY STANDARD DRAWINGS:

THE FOLLOWING STANDARDS, AS THEY APPEAR IN "ROADWAY STANDARD DRAWINGS", HIGHWAY DESIGN BRANCH, N.C. DEPARTMENT OF TRANSPORTATION, RALEIGH, NC, DATED JANUARY 2002, ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE ARE HEREBY CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1606.01	TEMPORARY SILT FENCE
1636.01	ROCK SILT SCREEN

SEDIMENTATION AND EROSION CONTROL LEGEND

- PROJECT BOUNDARY/ LIMITS OF DISTURBANCE
- SILT FENCE
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- ROCK SILT SCREEN (Std. Dwg. 1636.01)

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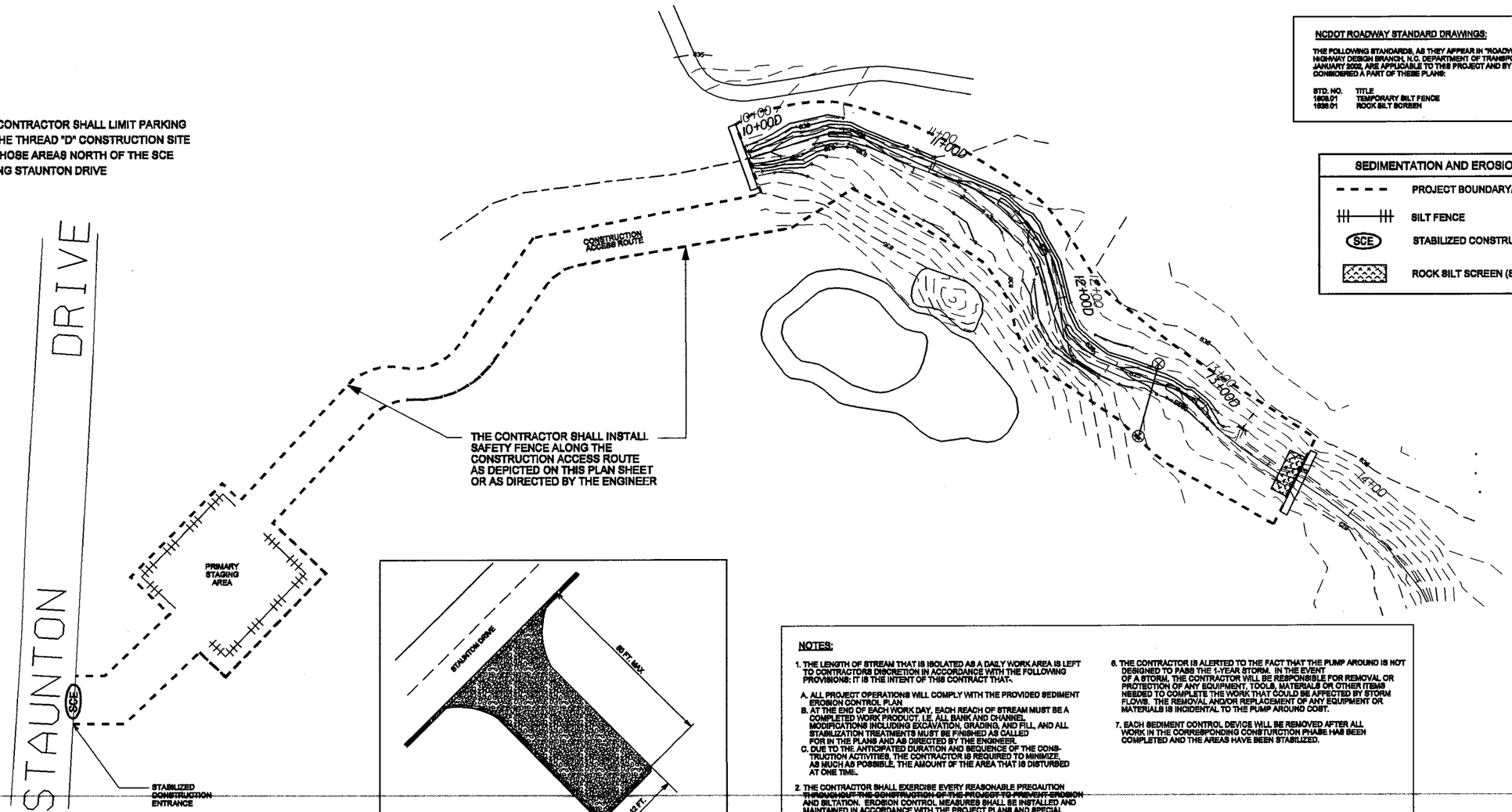
I-2201WM	EC-D

THE CONTRACTOR SHALL LIMIT PARKING AT THE THREAD "D" CONSTRUCTION SITE TO THOSE AREAS NORTH OF THE SCE ALONG STAUNTON DRIVE



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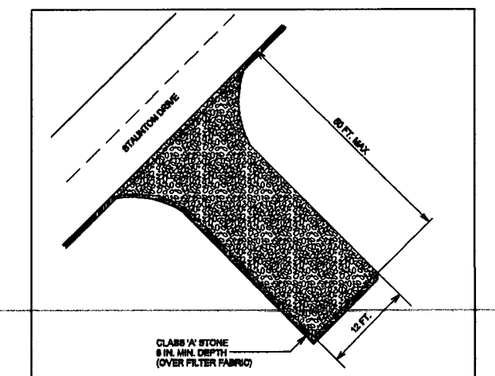
1636.01	ROCK SILT SCREEN

SEDIMENTATION AND EROSION CONTROL LEGEND

- PROJECT BOUNDARY/ LIMITS OF DISTURBANCE
- SILT FENCE
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- ROCK SILT SCREEN (Std. Dwg. 1636.01)



STABILIZED CONSTRUCTION ENTRANCE SCE

SCALE: NTS

NOTES:
1. TURNING RADIUS SUFFICIENT TO ACCOMODATE LARGE TRUCKS SHALL BE PROVIDED.
2. ENTRANCE(S) SHOULD BE LOCATED TO PROVIDE FOR UTILIZATION BY ALL CONSTRUCTION VEHICLES.
3. MUST BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR DIRECT FLOW OF MUD ONTO STREETS. PERIODIC TOPDRESSING WITH STONE WILL BE NECESSARY.
4. ANY MATERIAL TRACKED ONTO THE ROADWAY MUST BE CLEANED UP IMMEDIATELY.
5. GRAVEL CONSTRUCTION ENTRANCE SHALL BE LOCATED AT ALL POINTS OF INGRESS AND EGRESS UNTIL SITE IS STABILIZED. FREQUENT CHECKS OF THE DEVICE AND TIMELY MAINTENANCE MUST BE PROVIDED.

NOTES:

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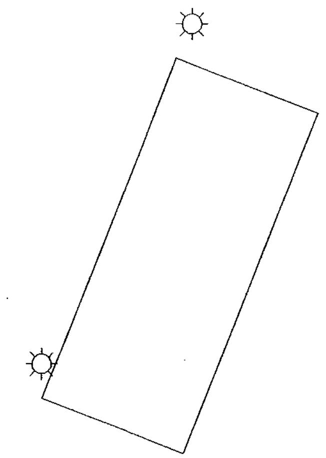
I-2201 WM	L-1

AS-BUILT PLANTINGS

"THREAD "B" IS ALSO REFERRED TO AS "11 FAIRWAY" BY SFCC



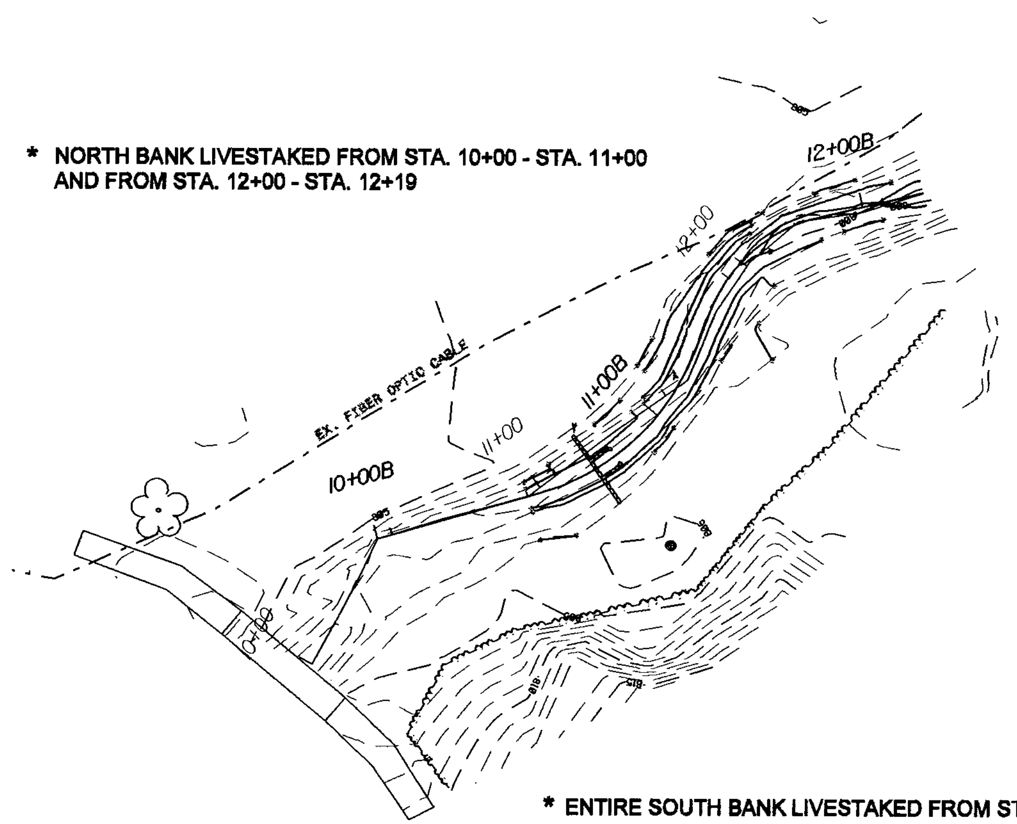
STAR #10
N = 847,888.16
E = 1,748,830.33
ELEV. 805.57

GRADING LEGEND

— - —	EXISTING CONTOUR
———	PROPOSED CONTOUR
⊤⊤	ROCK SILL GRADE CONTROL

MH#34
RIM EL.= 805.64'
INV. IN= 799.08'
INV. IN= 798.84'
INV. OUT= 798.30'

* NORTH BANK LIVESTAKED FROM STA. 10+00 - STA. 11+00 AND FROM STA. 12+00 - STA. 12+19



* ENTIRE SOUTH BANK LIVESTAKED FROM STA. 10+00 TO STA. 12+19

*** AS-BUILT NOTES**

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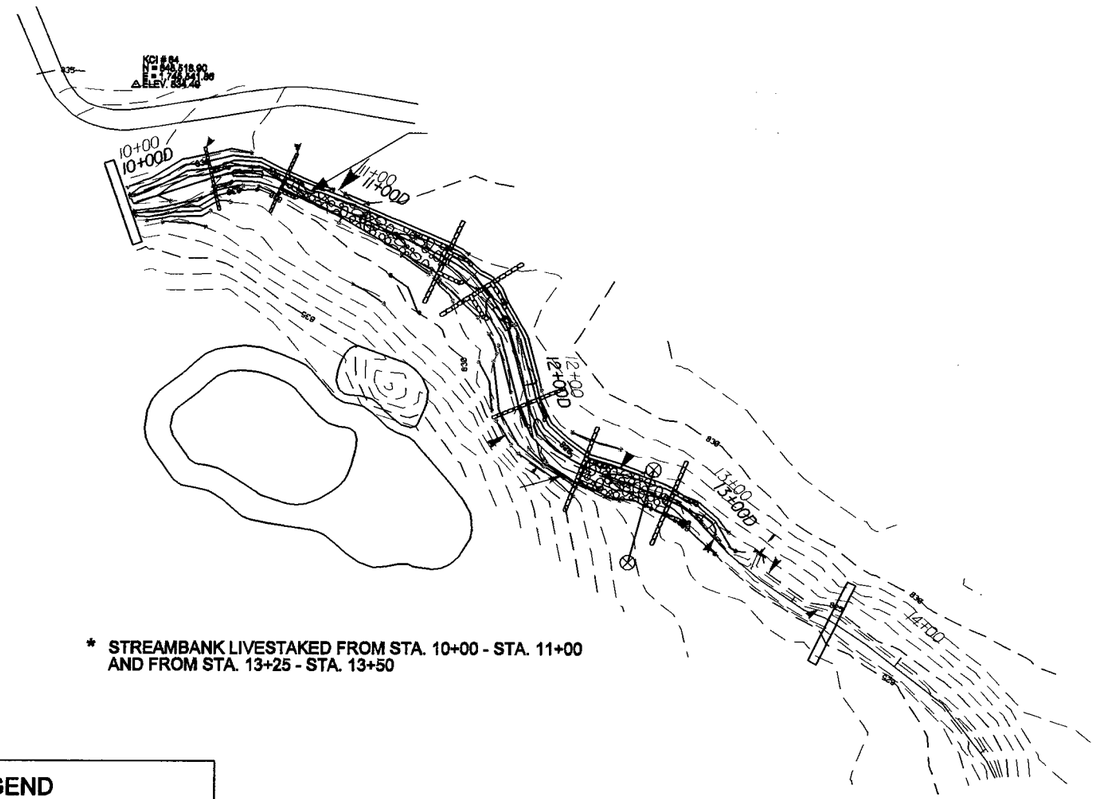
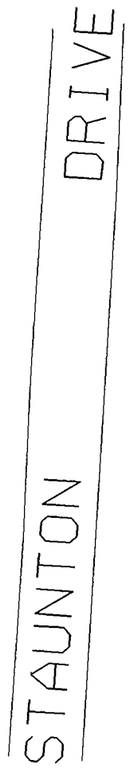
I-2201 WM	L-2

AS-BUILT PLANTINGS



* STREAMBANK LIVESTAKED FROM STA. 10+00 - STA. 11+00
AND FROM STA. 13+25 - STA. 13+50



KCI # 85
N = 848,284.13
E = 748,284.92
ELEV. 894.62

GRADING LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- ROCK SILL GRADE CONTROL

* AS-BUILT NOTES

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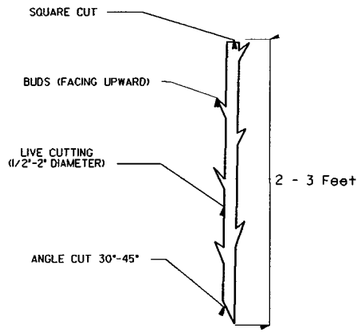
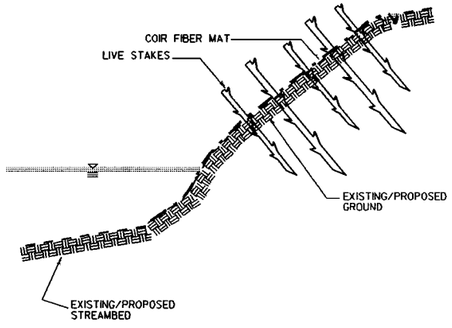
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-220WM	L-3	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

PLANTING DETAILS

LIVE STAKES PLANTING DETAIL

LIVE STAKE

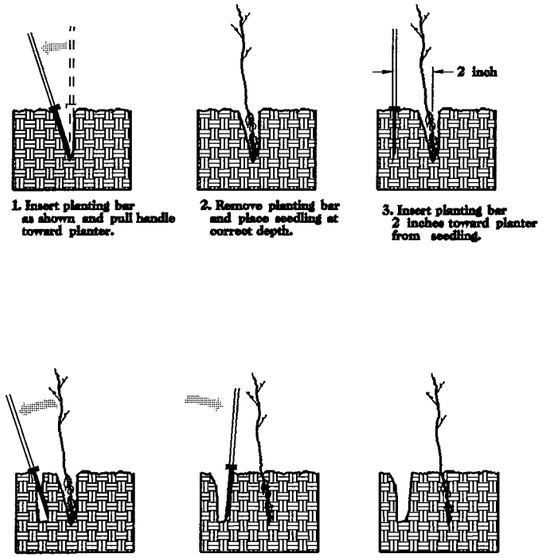




BANK STABILIZATION WITH LIVE STAKES

NOTE:
LIVE STAKES SHALL BE DRIVEN UNTIL APPROXIMATELY 3/4 OF LIVE STAKE IS WITHIN GROUND

BAREROOT PLANTING DETAIL
DIBBLE PLANTING METHOD
USING THE KBC PLANTING BAR



1. Insert planting bar as shown and pull handle toward planter.
2. Remove planting bar and place seedling at correct depth.
3. Insert planting bar 2 inches toward planter from seedling.
4. Pull handle of bar toward planter, firming soil at bottom.
5. Push handle forward firming soil at top.
6. Leave compaction hole open. Water thoroughly.

PLANTING NOTES:

PLANTING BAG
During planting, seedlings shall be kept in a moist canvas bag or similar container to prevent the root systems from drying.

KBC PLANTING BAR
Planting bar shall have a blade with a triangular cross section, and shall be 12 inches long, 4 inches wide and 1 inch thick at center.

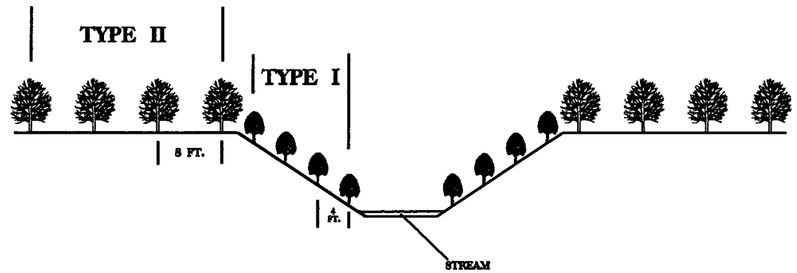
ROOT PRUNING
All seedlings shall be root pruned, if necessary, so that no roots extend more than 10 inches below the root collar.

☐ TYPE 1 STREAMBANK REFORESTATION SHALL BE PLANTED 3 FT. TO 5 FT. ON CENTER, RANDOM SPACING, AVERAGING 4 FT. ON CENTER, APPROXIMATELY 2724 PLANTS PER ACRE.

☐ TYPE 2 STREAMBANK REFORESTATION SHALL BE PLANTED 6 FT. TO 10 FT. ON CENTER, RANDOM SPACING, AVERAGING 8 FT. ON CENTER, APPROXIMATELY 680 PLANTS PER ACRE.

☐ NOTE: TYPE 1 AND TYPE 2 STREAMBANK REFORESTATION SHALL BE PAID FOR AS "STREAMBANK REFORESTATION"

STREAMBANK REFORESTATION TYPICAL



STREAMBANK REFORESTATION

MIXTURE, TYPE, SIZE, AND FURNISH SHALL CONFORM TO THE FOLLOWING:

TYPE 1

100% CORNUS AMOMUM	SILKY DOGWOOD	2 ft – 3 ft LIVE STAKES

TYPE 2

☐ SEE PLAN SHEETS FOR AREAS TO BE PLANTED

STREAMBANK REFORESTATION DETAIL SHEET

N.C.D.O.T. - ROADSIDE ENVIRONMENTAL UNIT