STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	11C.003013	1	8

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

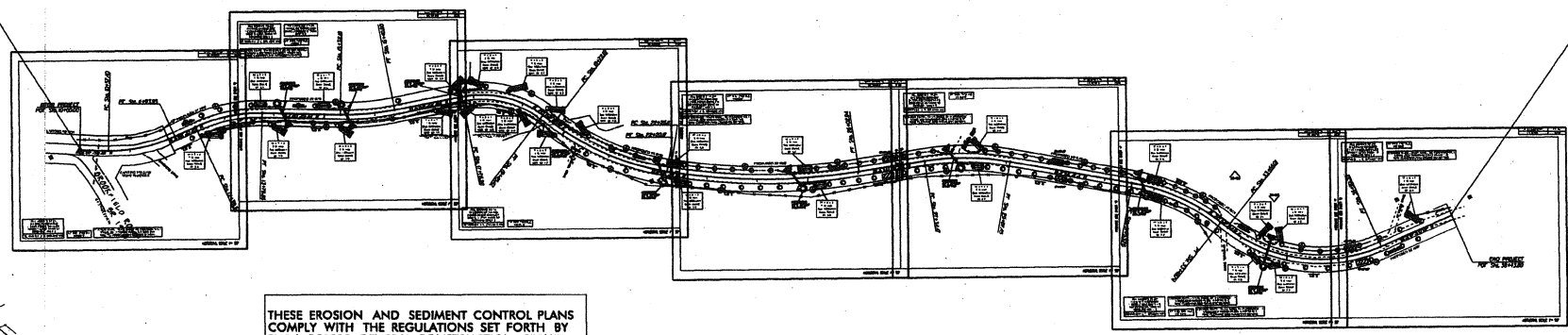
ALLEGHANY COUNTY

LOCATION: SR 1403 INDEPENDENCE RD FROM THE INTERSECTION OF SR 1418 STA. 10+00 TO END OF PROJECT STA. 38+43.80

TYPE OF WORK: GRADE, DRAIN, BASE, PAVE – 0.54 MILES

BEGIN PROJECT
POT Sta. 10+00.00

END PROJECT
POT Sta. 38+43.80



"BROOKFIELD ROAD"
SR 1418

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG1000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY

SITE DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 20' IN LENGTH
ALL OTHER AREAS FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES

DISCLAIMER

THIS MAP IS NOT A CERTIFIED SURVEY AND HAS NOT BEEN REVIEWED BY A LOCAL GOVERNMENT AGENCY FOR COMPLIANCE WITH ANY APPLICABLE LAND DEVELOPMENT REGULATIONS. THE PROPERTY SHOWN ON THIS MAP WAS LOCATED FOR THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION FOR HIGHWAY DESIGN PURPOSES. SOME ERROR MAY EXIST BETWEEN THE GRAPHICAL AND ACTUAL GROUND LOCATIONS OF PROPERTY LINES. THIS MAP IS TO BE USED AS A GRAPHICAL REPRESENTATION OF THE NCDOT'S INTENT TO ACQUIRE PROPERTY FOR RIGHT OF WAY PURPOSES, AND IN NO WAY REPRESENTS AN ACTUAL BOUNDARY SURVEY OF THIS PROPERTY.

GRAPHIC SCALES

DESIGN DATA

PROJECT LENGTH

0.54 MILES

Prepared In the Office of:
DIVISION OF HIGHWAYS
DIVISION 11, DISTRICT 1, ELKIN
P.O. BOX 558 ELKIN, NC 28621

RIGHT OF WAY DATE: NOVEMBER 11, 2008

LETTING DATE:

M.A. PETTYJOHN, P.E.
DIVISION ENGINEER

B.W. WHITAKER, P.E.
DISTRICT ENGINEER

DIVISION ENGINEER
SIGNATURE: P.E.

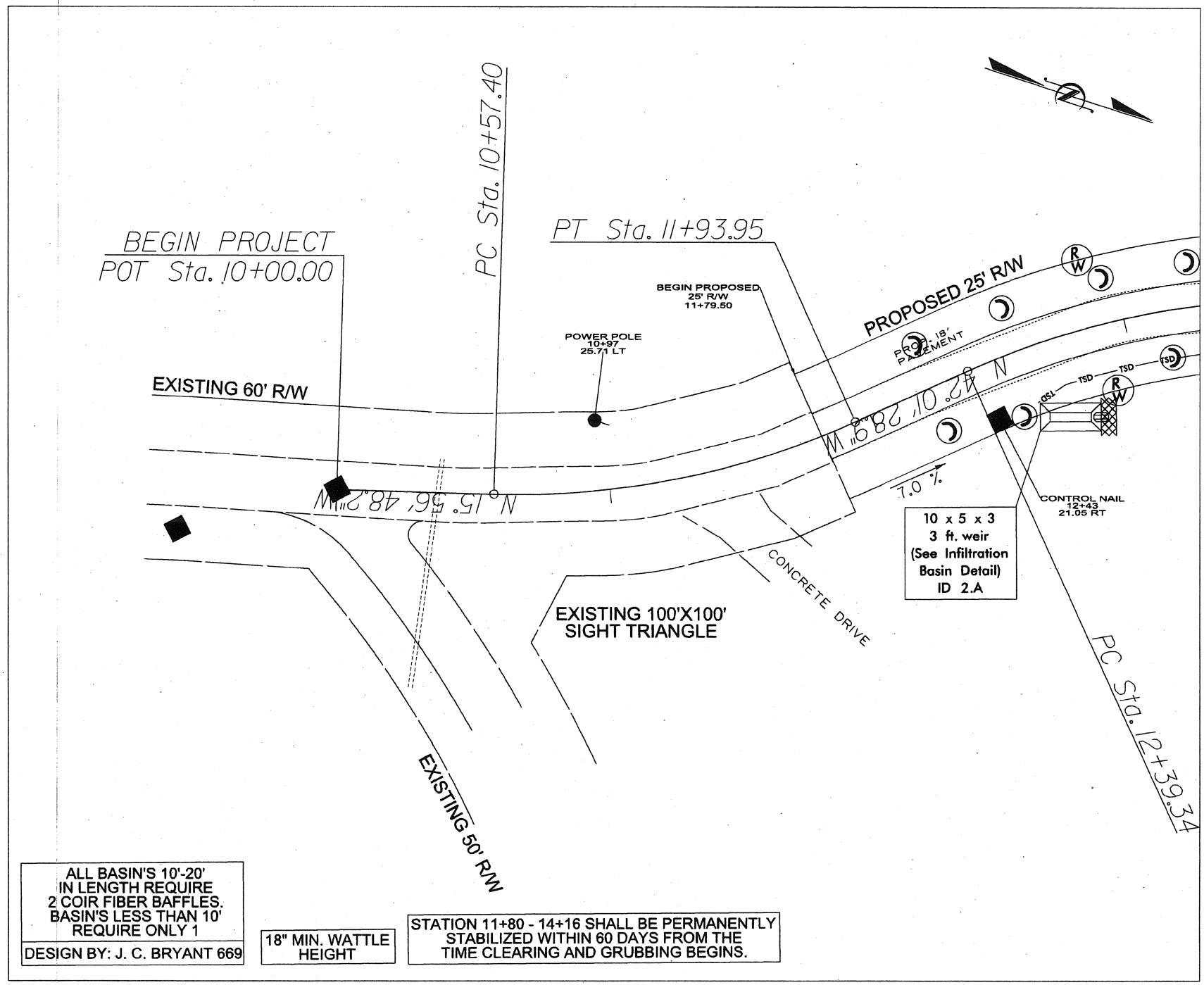
DISTRICT ENGINEER
SIGNATURE: P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
STATE DESIGN ENGINEER P.E.

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR DATE

PROJECT REFERENCE NO.	SHEET NO.
11C.003013	EC02



ALL BASIN'S 10'-20' IN LENGTH REQUIRE 2 COIR FIBER BAFFLES. BASIN'S LESS THAN 10' REQUIRE ONLY 1

DESIGN BY: J. C. BRYANT 669

18" MIN. WATTLE HEIGHT

STATION 11+80 - 14+16 SHALL BE PERMANENTLY STABILIZED WITHIN 60 DAYS FROM THE TIME CLEARING AND GRUBBING BEGINS.

PROJECT REFERENCE NO.	SHEET NO.
11C.003013	EC03

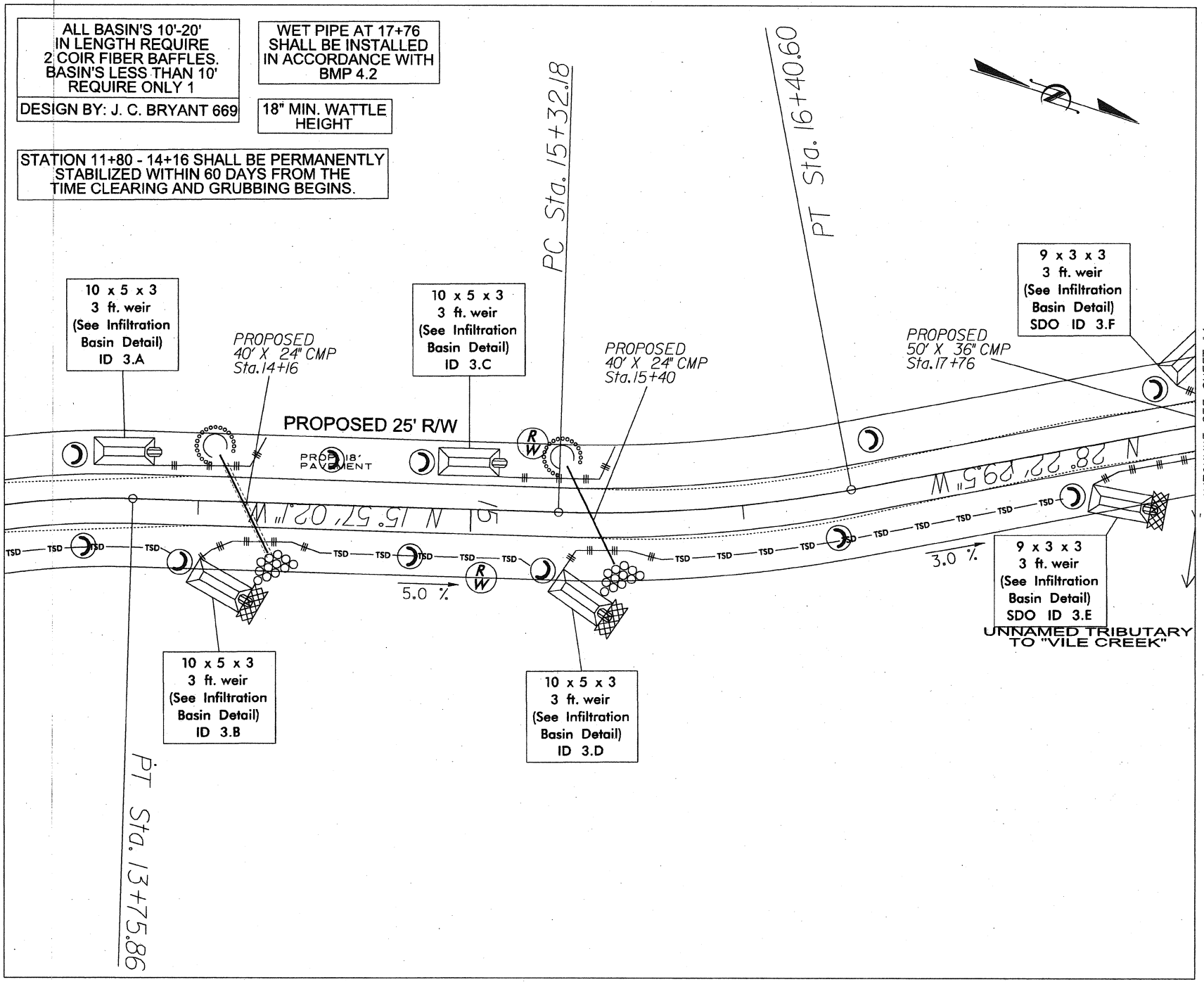
ALL BASIN'S 10'-20' IN LENGTH REQUIRE 2 COIR FIBER BAFFLES. BASIN'S LESS THAN 10' REQUIRE ONLY 1

DESIGN BY: J. C. BRYANT 669

WET PIPE AT 17+76 SHALL BE INSTALLED IN ACCORDANCE WITH BMP 4.2

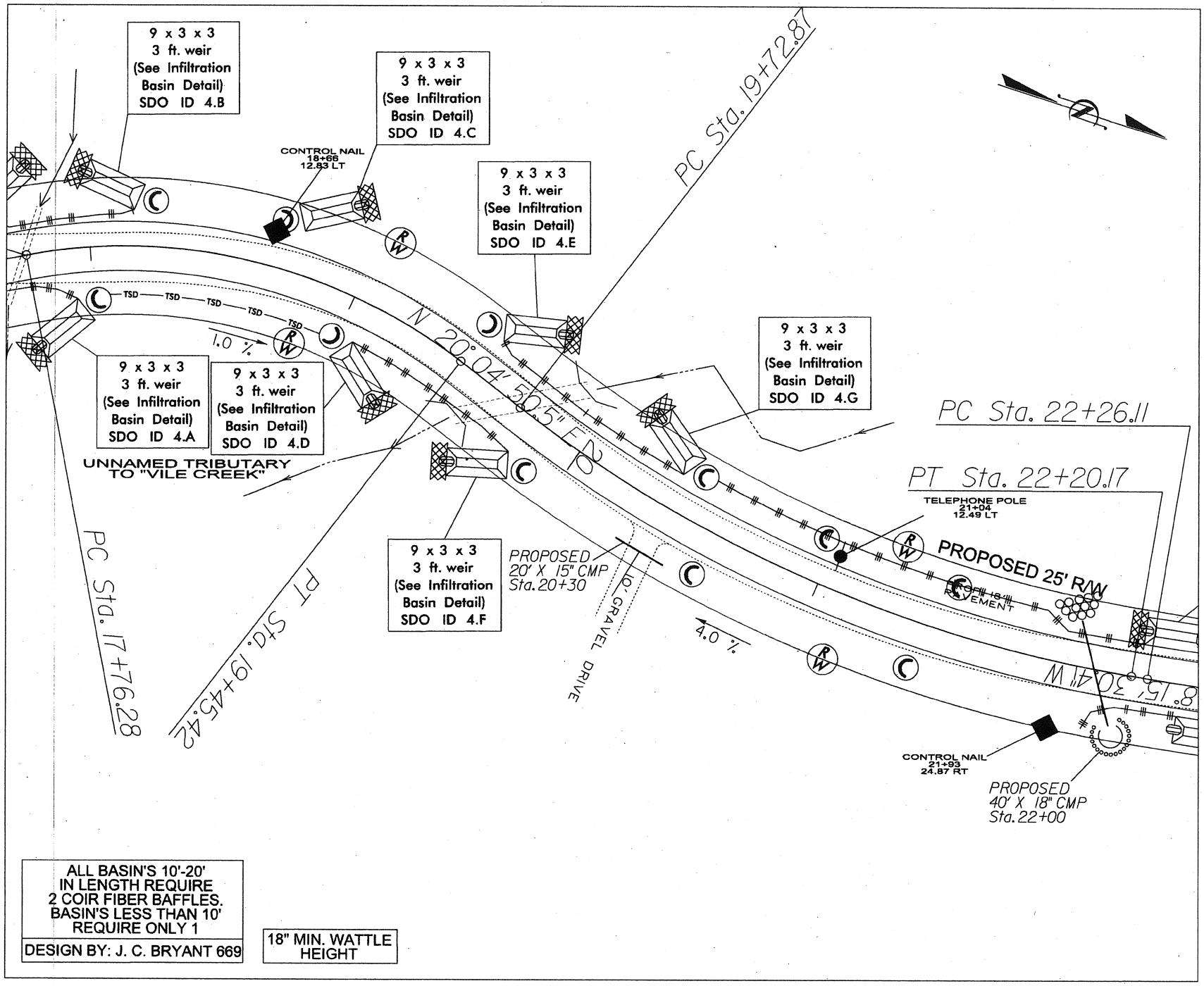
18" MIN. WATTLE HEIGHT

STATION 11+80 - 14+16 SHALL BE PERMANENTLY STABILIZED WITHIN 60 DAYS FROM THE TIME CLEARING AND GRUBBING BEGINS.



HORIZONAL SCALE 1"= 50'

PROJECT REFERENCE NO.	SHEET NO.
11C.003013	EC04



ALL BASIN'S 10'-20' IN LENGTH REQUIRE 2 COIR FIBER BAFFLES. BASIN'S LESS THAN 10' REQUIRE ONLY 1

DESIGN BY: J. C. BRYANT 669

18" MIN. WATTLE HEIGHT

HORIZONAL SCALE 1"= 50'

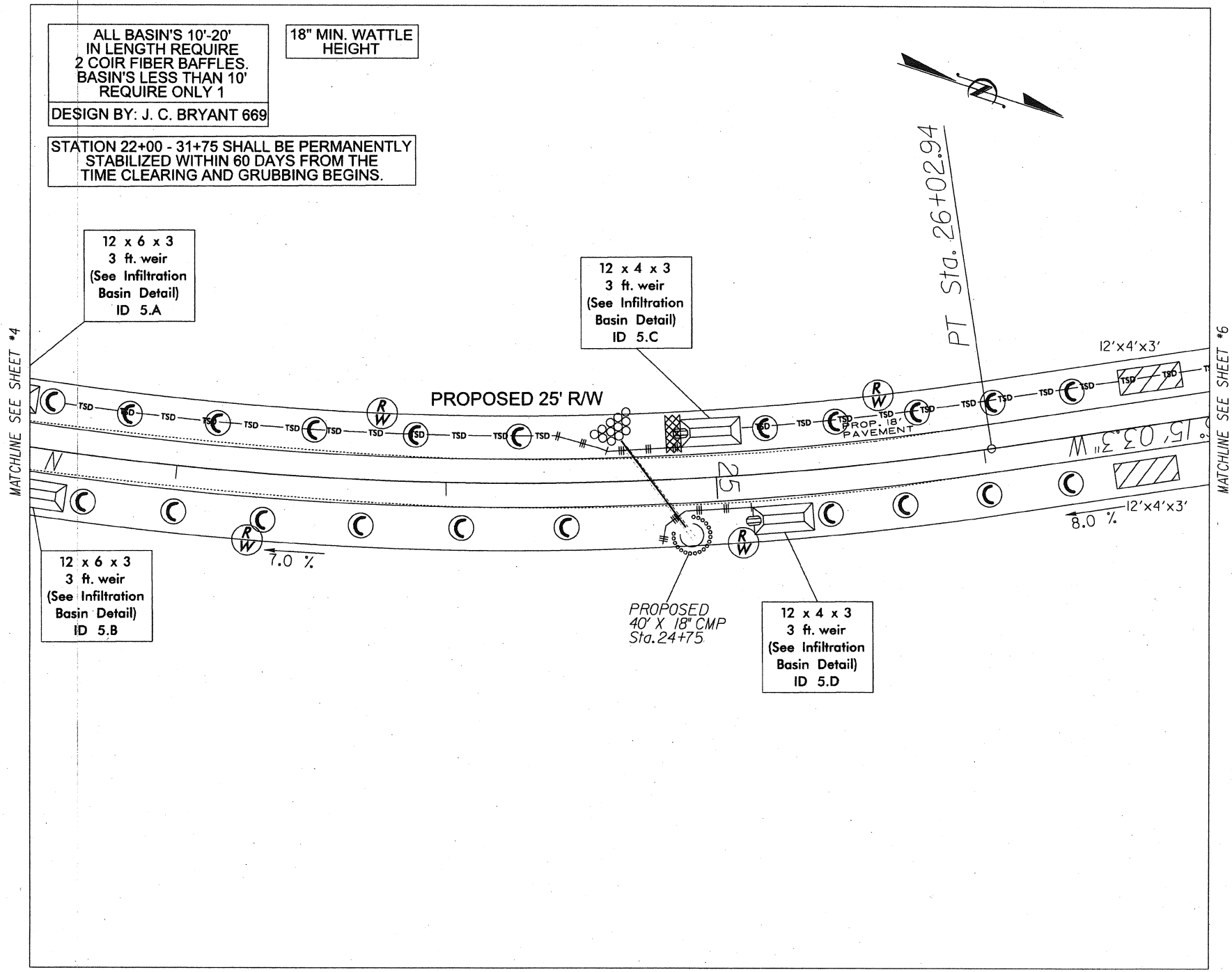
PROJECT REFERENCE NO.	SHEET NO.
11C.003013	EC05

ALL BASIN'S 10'-20' IN LENGTH REQUIRE 2 COIR FIBER BAFFLES. BASIN'S LESS THAN 10' REQUIRE ONLY 1

DESIGN BY: J. C. BRYANT 669

18" MIN. WATTLE HEIGHT

STATION 22+00 - 31+75 SHALL BE PERMANENTLY STABILIZED WITHIN 60 DAYS FROM THE TIME CLEARING AND GRUBBING BEGINS.



HORIZONAL SCALE 1"= 50'

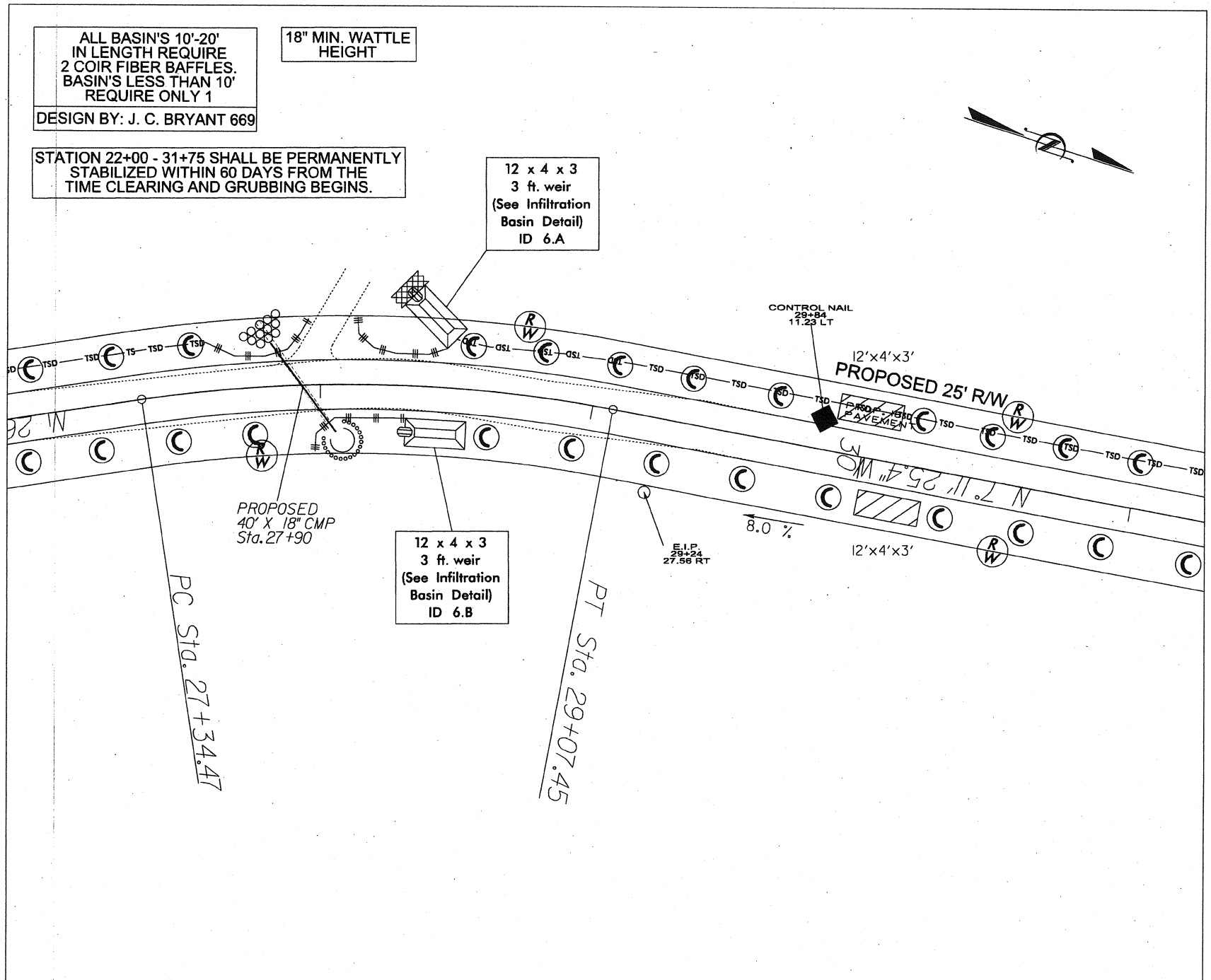
PROJECT REFERENCE NO.	SHEET NO.
11C.003013	EC06

ALL BASIN'S 10'-20' IN LENGTH REQUIRE 2 COIR FIBER BAFFLES. BASIN'S LESS THAN 10' REQUIRE ONLY 1

DESIGN BY: J. C. BRYANT 669

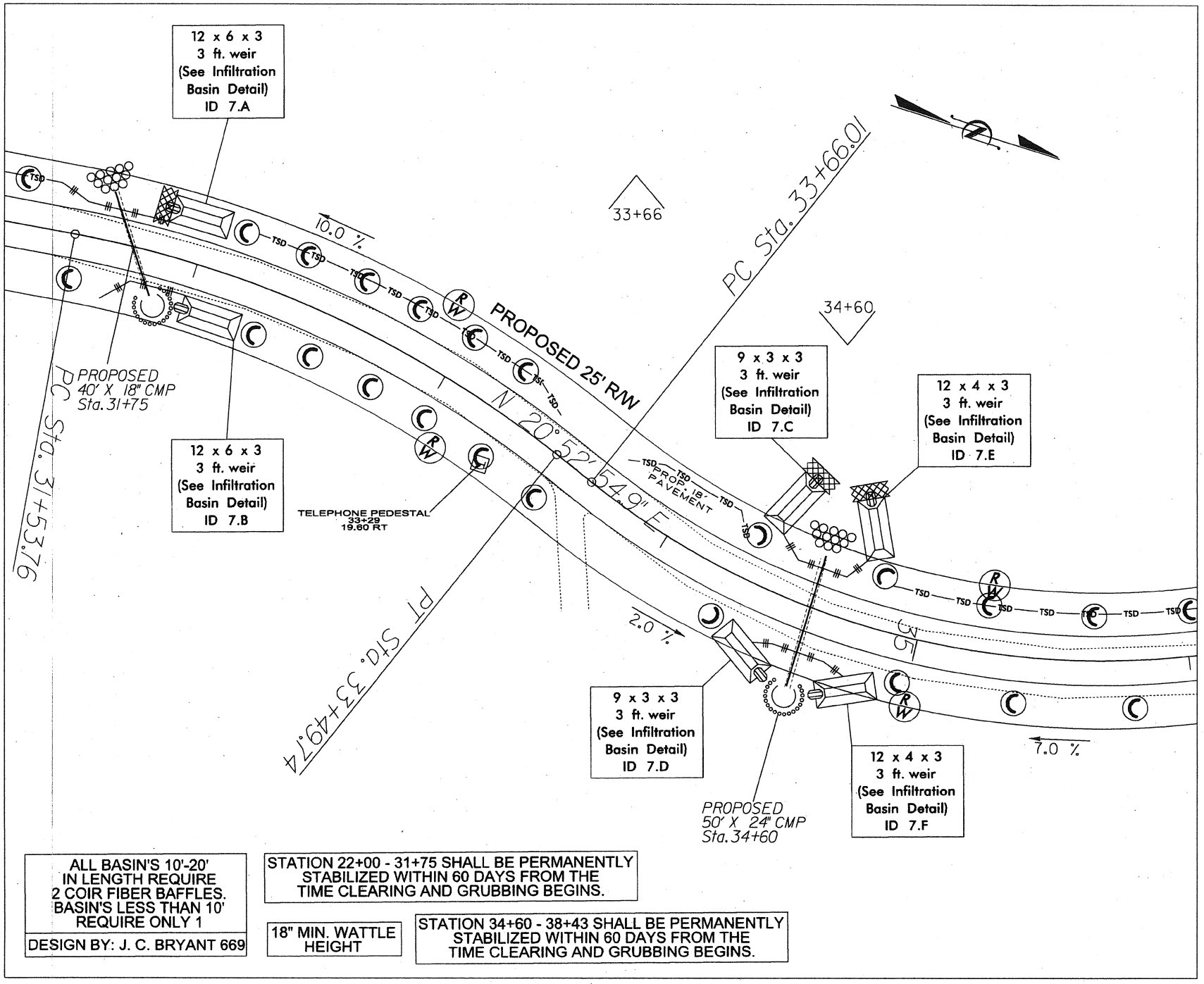
18" MIN. WATTLE HEIGHT

STATION 22+00 - 31+75 SHALL BE PERMANENTLY STABILIZED WITHIN 60 DAYS FROM THE TIME CLEARING AND GRUBBING BEGINS.



HORIZONAL SCALE 1"= 50'

PROJECT REFERENCE NO.	SHEET NO.
11C.003013	EC07



ALL BASIN'S 10'-20' IN LENGTH REQUIRE 2 COIR FIBER BAFFLES. BASIN'S LESS THAN 10' REQUIRE ONLY 1

DESIGN BY: J. C. BRYANT 669

STATION 22+00 - 31+75 SHALL BE PERMANENTLY STABILIZED WITHIN 60 DAYS FROM THE TIME CLEARING AND GRUBBING BEGINS.

18" MIN. WATTLE HEIGHT

STATION 34+60 - 38+43 SHALL BE PERMANENTLY STABILIZED WITHIN 60 DAYS FROM THE TIME CLEARING AND GRUBBING BEGINS.

HORIZONAL SCALE 1"= 50'

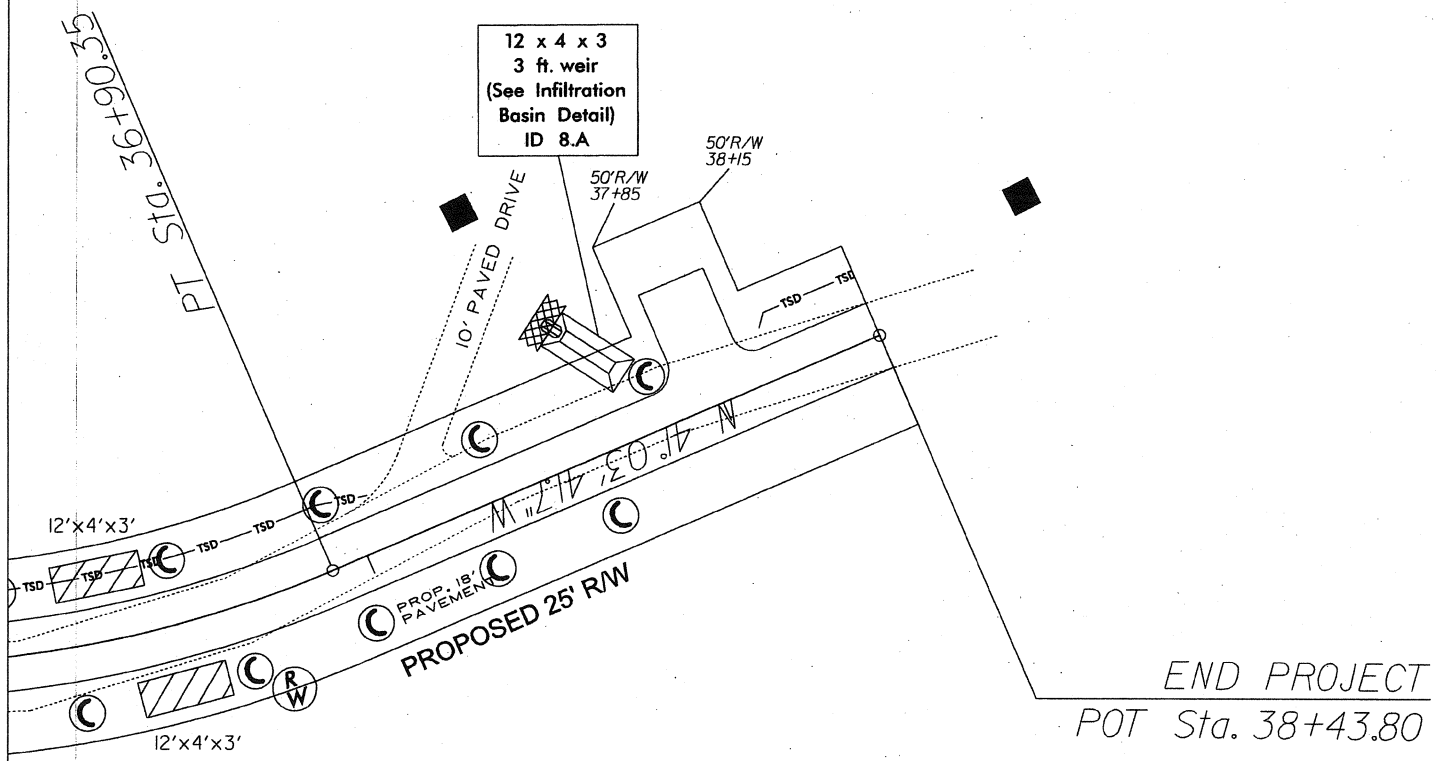
PROJECT REFERENCE NO.	SHEET NO.
11C.003013	EC08

ALL BASIN'S 10'-20' IN LENGTH REQUIRE 2 COIR FIBER BAFFLES. BASIN'S LESS THAN 10' REQUIRE ONLY 1

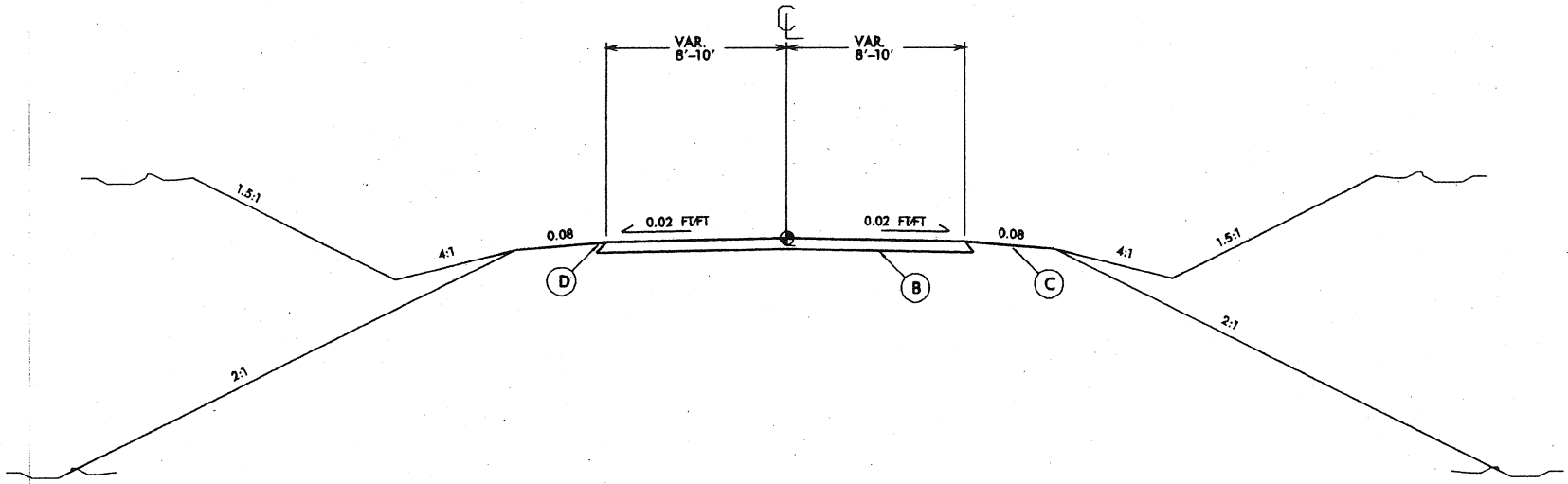
DESIGN BY: J. C. BRYANT 669

18" MIN. WATTLE HEIGHT

STATION 34+60 - 38+43 SHALL BE PERMANENTLY STABILIZED WITHIN 60 DAYS FROM THE TIME CLEARING AND GRUBBING BEGINS.



HORIZONAL SCALE 1"= 50'



B 8" (compacted) ABC

C Shoulder varies: Cut side = 4' shoulder on .08 ft/ft transition to a 4:1 slope for a distance of 4' to center of the ditch line

Fill side = 6' to shoulder break

D Base should be 1' wider than overall proposed road width

PROJECT: IIC.003013
ROAD: SR 1403 "INDEPENDENCE RD."
COUNTY: ALLEGHANY
TYPE: WET PIPE SURVEY
PLAN SCALE: NO SCALE
SHEET 1 OF 1
DATE: JANUARY 27, 2012
STREAM NAME: UNNAMED TRIBUTARY

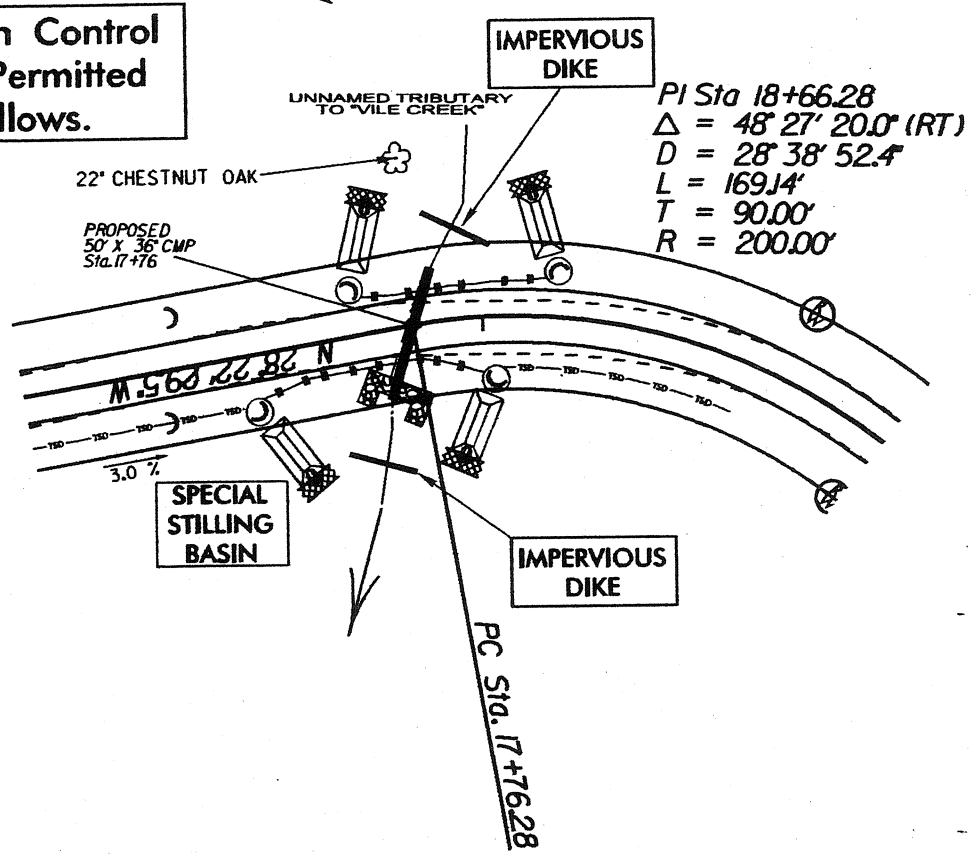
RATING:
3' AVERAGE STREAM WIDTH

CENTERLINE
PROPOSED R/W
PROPOSED EDGE OF PAVEMENT
EXISTING EDGE OF ROADWAY
NEW PIPE
EXISTING PIPE

Std. #	Description	Symbol
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1630.03	Temporary Silt Ditch	
1630.05	Temporary Diversion	
1630.06	Special Stilling Basin	
1632.03	Rock Inlet Sediment Trap Type C	
1632.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
	Temporary Rock Silt Check Type-B	
	Wattle	
	Wattle with Polyacrylamide (PAM)	
1634.02	Temporary Rock Sediment Dam Type-B	
1636.01	Rock Pipe Inlet Sediment Trap Type-A	

DESIGN BY: J. D. WOOD 718

Place Matting for Erosion Control on Slopes Adjacent to Permitted Wetlands as Work Allows.



ELEVATION AT INLET: 963.44'

TBM SET IN BASE OF 22" CHESTNUT OAK ELEVATION: 971.85'

PIPE TO BE LAID ON A 118° SKEW WITH 4.5% FALL
EXISTING PIPE SIZE: 24" X 40'
NEW PIPE SIZE: 36" X 50'

DEWATERING WILL BE PERFORMED ACCORDING TO BMP FOR PUMPING OPERATIONS

STOCKPILE AREA IN ROADWAY WITH SILT FENCE LOCATED ON LOWER SIDE

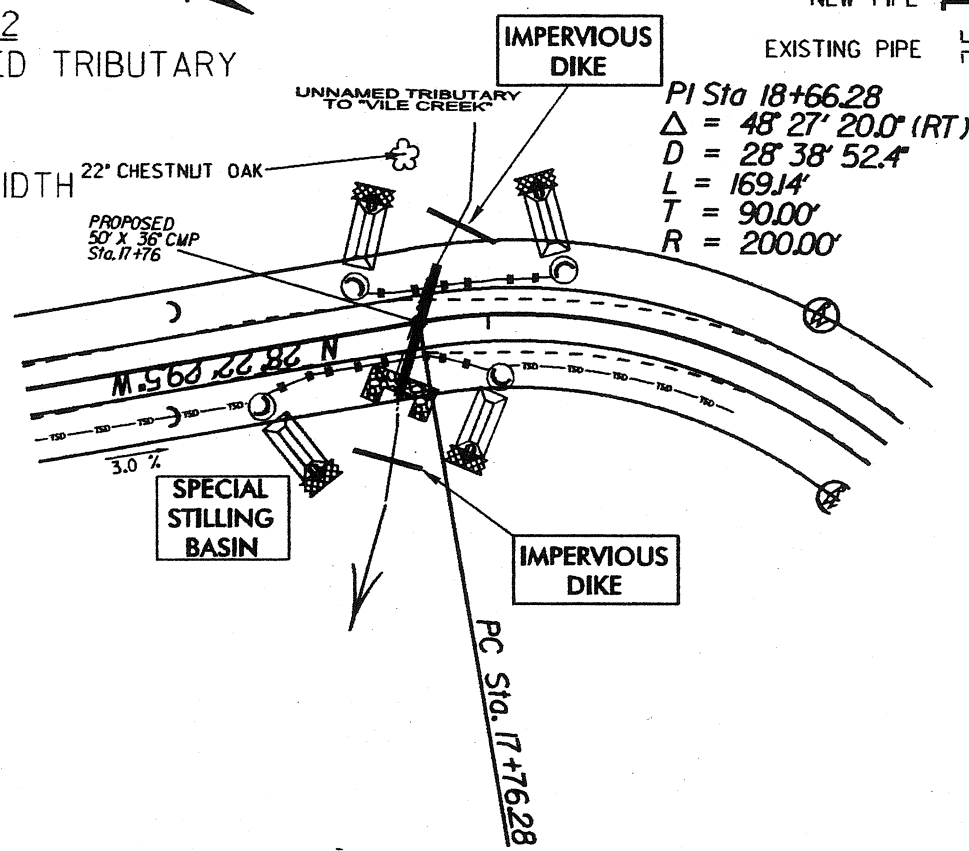
INSTALL PIPE(S) IN JURISDICTIONAL AREAS ACCORDING TO NC DOT BEST MANAGEMENT PRACTICES (4.2) FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

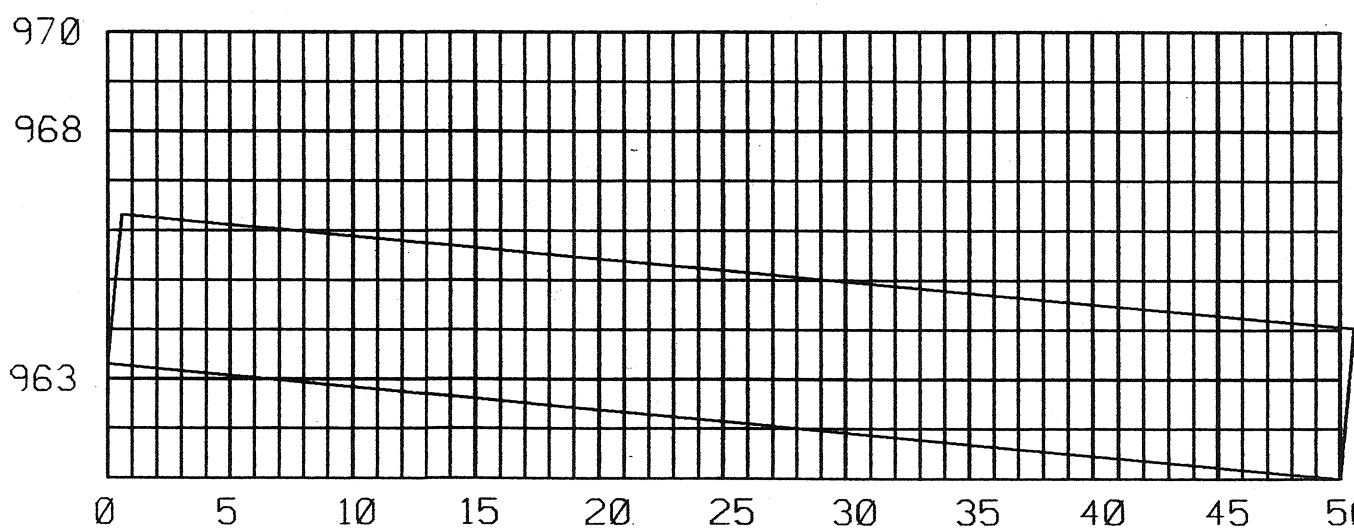
SURVEY DATE: 01/26/2012
CONDUCTED BY: JW, JB
DRAWN BY: J. WOOD

PROJECT: IIC.003013
ROAD: SR 1403 "INDEPENDENCE RD."
COUNTY: ALLEGHANY
TYPE: WET PIPE SURVEY
PLAN SCALE: NO SCALE
SHEET 1 OF 1
DATE: JANUARY 27, 2012
STREAM NAME: UNNAMED TRIBUTARY

RATING: __
3' AVERAGE STREAM WIDTH

CENTERLINE
PROPOSED R/W
PROPOSED EDGE OF PAVEMENT
EXISTING EDGE OF ROADWAY
NEW PIPE
EXISTING PIPE





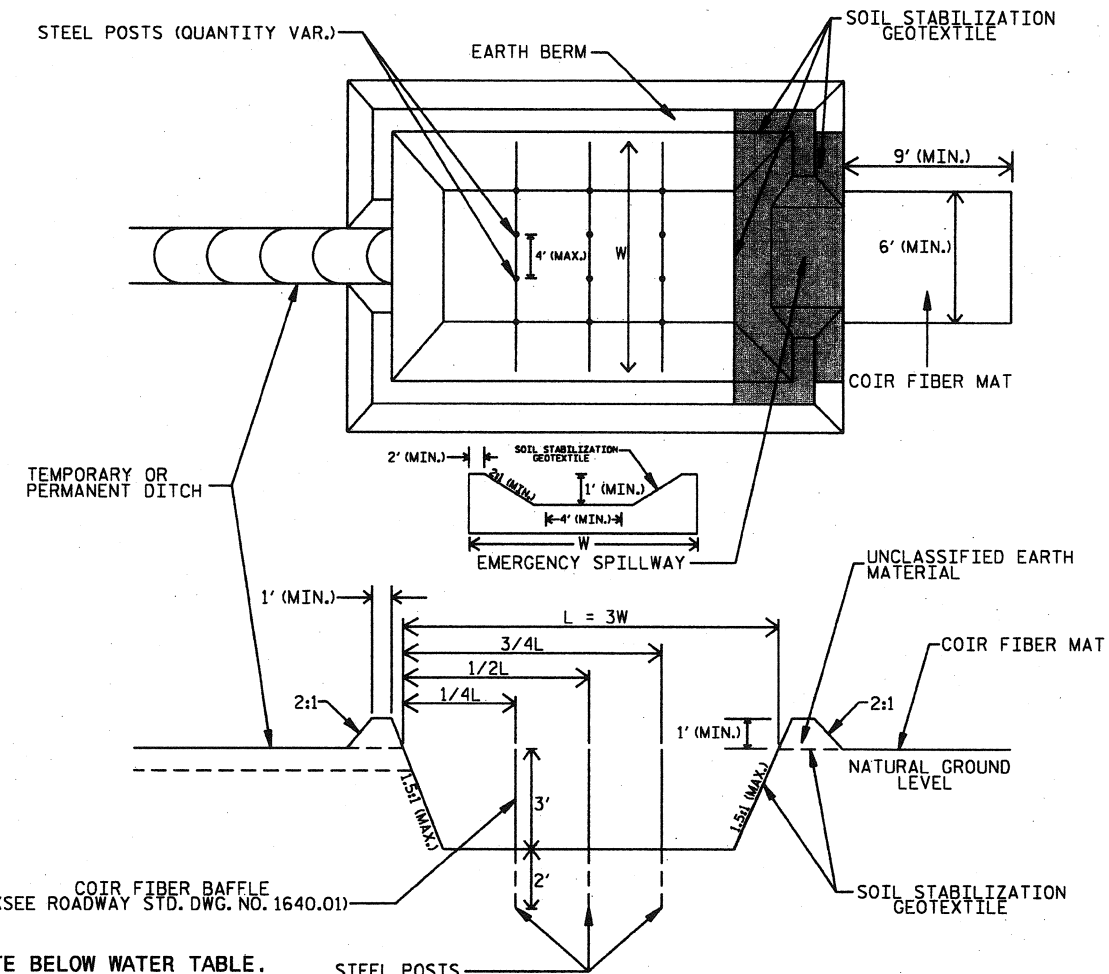
PROPOSED 4.5% SLOPE

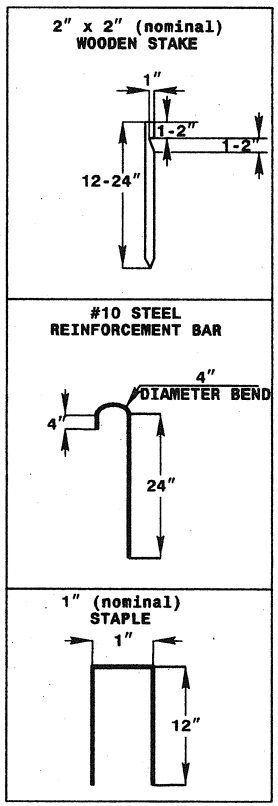
Temporary erosion control devices are not shown, but will be installed as needed

SURVEY DATE: 01/26/2012
CONDUCTED BY: JW, JB
DRAWN BY: J. WOOD

INFILTRATION BASIN WITH BAFFLES DETAIL

PROJECT REFERENCE NO.	SHEET NO.
B-4415	EC-2C
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER





COIR FIBER MAT ANCHOR OPTIONS

NOTES

1. DO NOT EXCAVATE BELOW WATER TABLE.
2. LIMIT EARTH BERM HEIGHT TO 3 FT.
3. AVOID COMPACTING BOTTOM OF BASIN.
4. FOR BASIN DEPTH OF 3 FT., THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
5. DETERMINE EMERGENCY SPILLWAY LENGTH (FT.) USING Q/0.8, WHERE Q IS FLOW RATE (CFS) INTO BASIN.

NOT TO SCALE

	2*3	3	3*4	4	4	4*5	5*6	6*7	7	7	7*8
Construction Line (-L-,-Y-,etc.)	L	L	L	L	L	L	L	L	L	L	L
Left or Right (LT.,RT.,Median)	LT/RT	LT/RT	LT/RT	LT/RT	LT/RT	LT/RT	LT/RT	LT/RT	LT/RT	LT/RT	LT/RT
Upper Station No.	1180	1416	1540	1776	1973	2200	2475	2790	3175	3366	3460
Upper Station Elevation (ft.)	994.72	980.29	974.74	968.63	969.63	979.06	999	1023.12	1054	1074	1072
Lower Station No.	1416	1540	1776	1973	2200	2475	2790	3175	3366	3460	3843
Lower Station Elevation (ft.)	980.29	974.74	968.63	969.63	979.06	999	1023.12	1054	1074	1072	1098
	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Actual Ditch Depth (ft.)	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Frontslope Grade (i.e. 2 for 2:1)	4	4	4	4	4	4	4	4	4	4	4
Backslope Grade (i.e. 2 for 2:1)	4	2	2	2	2	2	2	2	2	2	2
Base Width (ft., 0 for V-Ditches)	0	0	0	0	0	0	0	0	0	0	0
Measured Ditchline Length (ft.)	236	124	236	197	227	275	315	385	191	94	383
Ditch Grade (%)	6.11	4.48	2.59	0.51	4.15	7.25	7.66	8.02	10.47	2.13	6.79
Velocity (ft/s)	4.72	3.97	3.02	1.34	3.82	5.05	5.19	5.31	6.07	2.73	4.88
Shear Stress in Ditch (lb/ft^2)	1.26	0.92	0.53	0.1	0.86	1.49	1.58	1.65	2.16	0.44	1.4
Ditch Liner Requirement	PSRM	PSRM	MATTING	None	PSRM	RIPRAP	RIPRAP	RIPRAP	RIPRAP	MATTING	PSRM
Matting Quantity (yd^2)	0	0	300	0	0	0	0	0	0	120	0
PSRM Matting Quantity (yd^2)	390	160	0	0	290	0	0	0	0	0	485