09/08/99

TIP PROJECT:

CONTRACT: C203173

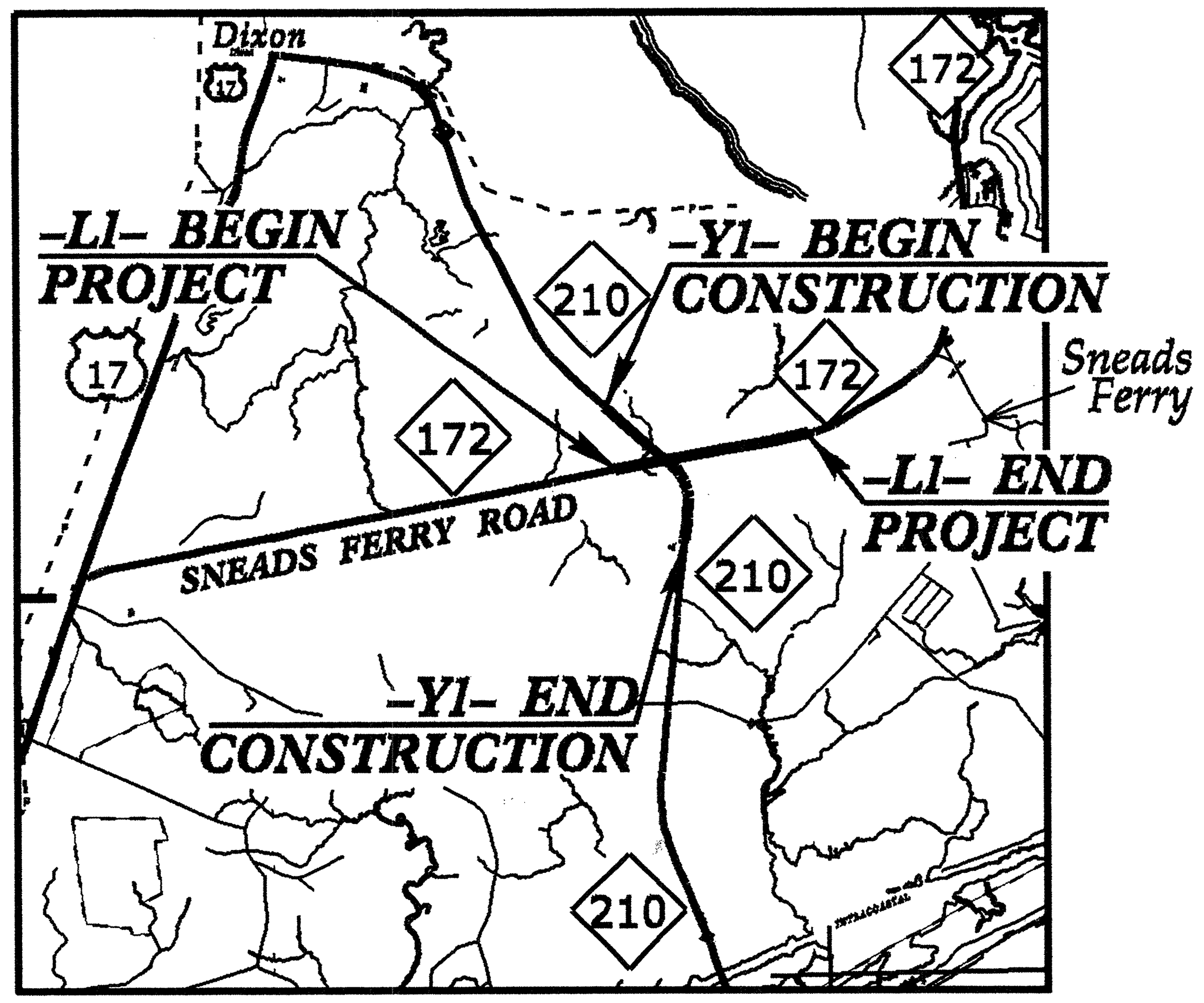
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	43518.3.1	1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
43518.1.1		P.E.
43518.3.1		CONST.

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ONSLOW COUNTY

See Sheet 1-A For Index of Sheets

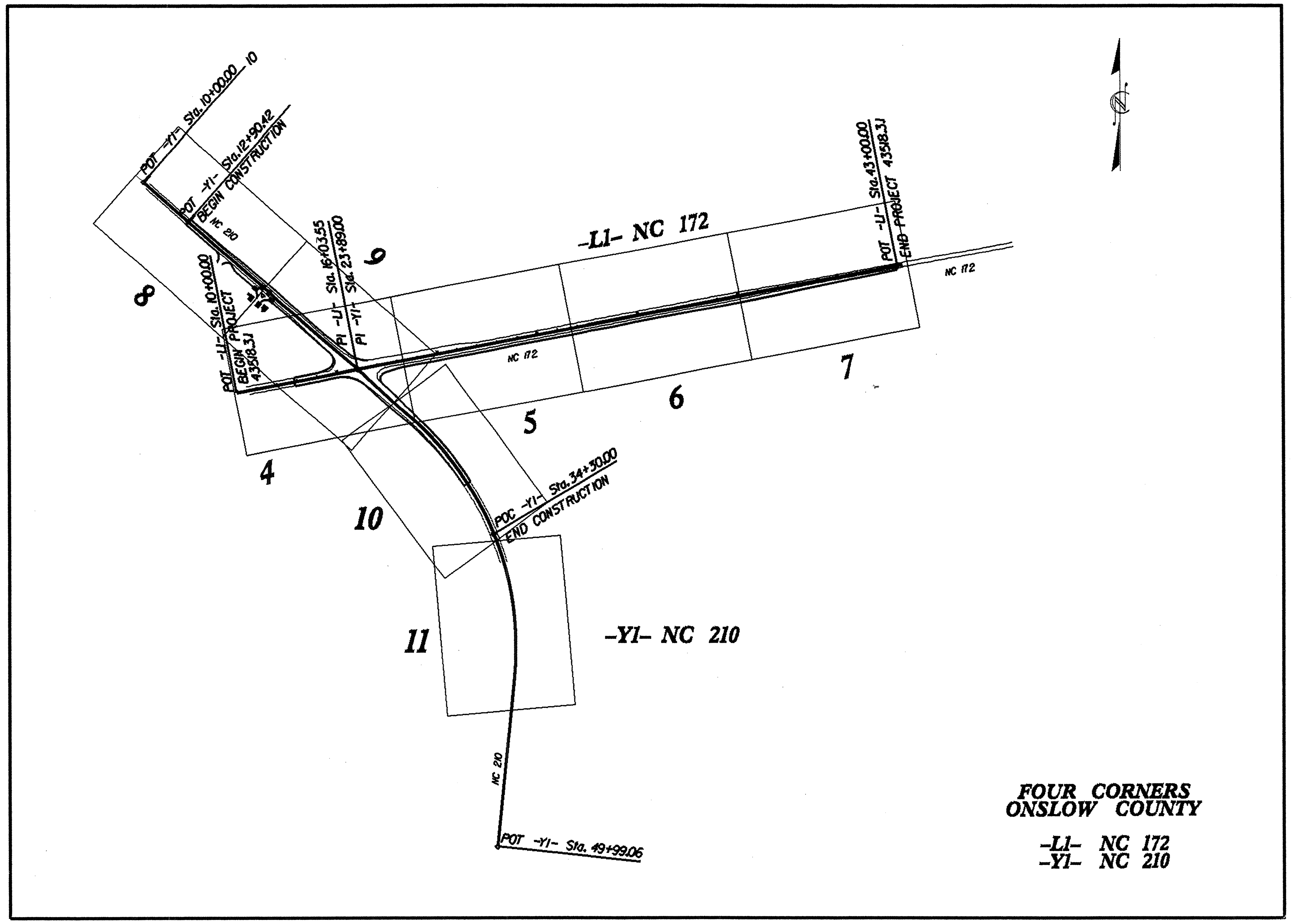


VICINITY MAP

NOT TO SCALE

LOCATION: NC 210 and NC 172 in the Town of Sneads Ferry in Onslow County.

TYPE OF WORK: Grading, Paving, Widening, Drainage, and Signals.



GRAPHIC SCALES

30 15 0 30 60
PLANS

30 15 0 30 60
PROFILE (HORIZONTAL)

3 1.5 0 3 6
PROFILE (VERTICAL)

PROJECT LENGTH

MAP NO. 1 (-L1- NC 172) = 0.571 MI.

MAP NO. 2 (-Y1- NC 210) = 0.351 MI.

TOTAL = 0.922 MI.

Prepared In the Office of:

DIVISION OF HIGHWAYS

5501 Barbados Blvd., Castle Hayne, NC 28429

2012 STANDARD SPECIFICATIONS

LETTING DATE:
AUGUST 21, 2012

SCOTT E. COOKE, PE
PROJECT ENGINEER

CMS
PROJECT DESIGN TECHNICIAN

DNL
PROJECT DESIGN TECHNICIAN

MPK
PROJECT DESIGN TECHNICIAN

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

P.E.

STATE HIGHWAY DESIGN ENGINEER

27-JUL-2012 09:46
R:\RDY\DONE_ONSLOW\NC172_NC210_DualLefts\ROADWAY\Proj\NC172_NC210_Rdy_tsh_NEW.dgn
mkimmel AT D3CAD257156

8/17/99

2012 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2012 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
310.10	Driveway Pipe Construction
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
815.02	Subsurface Drain
840.00	Concrete Base Pad for Drainage Structures
840.04	Concrete Open Throat Catch Basin - 12" thru 48" Pipe
840.05	Brick Open Throat Catch Basin - 12" thru 48" Pipe
840.14	Concrete Drop Inlet - 12" thru 30" Pipe
840.15	Brick Drop Inlet - 12" thru 30" Pipe
840.16	Drop Inlet Frame and Grates - for use with Std. Dwg 840.14 and 840.15
840.24	Frames and Narrow Slot Sag Grates
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.35	Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.66	Drainage Structure Steps
840.72	Pipe Collar
846.01	Concrete Curb, Gutter and Curb & Gutter
852.01	Concrete Islands
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class 'B' Rip Rap
1515.01	Water Meter

GENERAL NOTES:

2012 SPECIFICATIONS
EFFECTIVE: 01-17-12
REVISED: 11/01/11

SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:

ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01.

SIDE ROADS:

THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

SUBSURFACE DRAINS:

SUBSURFACE DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.02 AT LOCATIONS DIRECTED BY THE ENGINEER.

TEMPORARY SHORING:

SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104-7.

SUBSURFACE PLANS:

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

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE ONSWASA WATER, CENTURY LINK TELEPHONE, CHARTER CABLE, TIME WARNER CABLE,JONES ONSLOW POWER, AND NORTH TOPSAIL SEWAGE

INDEX OF SHEETS

04/16/11

Note: Not to Scale

***S.U.E. = Subsurface Utility Engineering**

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
43518.3.1	1-B

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — EIP
- Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary — WLB
- Proposed Wetland Boundary — WLB
- Existing Endangered Animal Boundary — EAB
- Existing Endangered Plant Boundary — EPB
- Known Soil Contamination: Area or Site
- Potential Soil Contamination: Area or Site

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign
- Well
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream — JS
- Buffer Zone 1 — BZ 1
- Buffer Zone 2 — BZ 2
- Flow Arrow
- Disappearing Stream
- Spring
- Wetland
- Proposed Lateral, Tail, Head Ditch — FLOW
- False Sump

RAILROADS:

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

RIGHT OF WAY:

- Baseline Control Point
- Existing Right of Way Marker
- Existing Right of Way Line
- Proposed Right of Way Line
- Proposed Right of Way Line with Iron Pin and Cap Marker
- Proposed Right of Way Line with Concrete or Granite R/W Marker
- Proposed Control of Access Line with Concrete C/A Marker
- Existing Control of Access
- Proposed Control of Access
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Proposed Temporary Drainage Easement — TDE
- Proposed Permanent Drainage Easement — PDE
- Proposed Permanent Drainage / Utility Easement — DUE
- Proposed Permanent Utility Easement — PUE
- Proposed Temporary Utility Easement — TUE
- Proposed Aerial Utility Easement — AUE
- Proposed Permanent Easement with Iron Pin and Cap Marker

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Curb Ramp — CR
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

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

EXISTING STRUCTURES:

MAJOR:

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

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole — P
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole
- H-Frame Pole
- Recorded U/G Power Line — P
- Designated U/G Power Line (S.U.E.*) — P

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole — T
- Telephone Booth
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — H
- Recorded U/G Telephone Cable — T
- Designated U/G Telephone Cable (S.U.E.*) — T
- Recorded U/G Telephone Conduit — TC
- Designated U/G Telephone Conduit (S.U.E.*) — TC
- Recorded U/G Fiber Optics Cable — T FO
- Designated U/G Fiber Optics Cable (S.U.E.*) — T FO

WATER:

- Water Manhole — W
- Water Meter
- Water Valve
- Water Hydrant
- Recorded U/G Water Line — W
- Designated U/G Water Line (S.U.E.*) — W
- Above Ground Water Line — A/G Water

TV:

- TV Satellite Dish
- TV Pedestal — C
- TV Tower
- U/G TV Cable Hand Hole — H
- Recorded U/G TV Cable — TV
- Designated U/G TV Cable (S.U.E.*) — TV
- Recorded U/G Fiber Optic Cable — TV FO
- Designated U/G Fiber Optic Cable (S.U.E.*) — TV FO

GAS:

- Gas Valve
- Gas Meter
- Recorded U/G Gas Line — G
- Designated U/G Gas Line (S.U.E.*) — G
- Above Ground Gas Line — A/G Gas

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- Recorded SS Forced Main Line — FSS
- Designated SS Forced Main Line (S.U.E.*) — FSS

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line — ?UTL
- U/G Tank; Water, Gas, Oil
- Underground Storage Tank, Approx. Loc. — UST
- A/G Tank; Water, Gas, Oil
- Geoenvironmental Boring
- U/G Test Hole (S.U.E.*)
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

5/14/99

ALIGNMENT /CONTROL SHEET

Point#	North(Y)	East(X)	Elev(Z)
Pt 1,	N 294529.9460,	E 2470944.9310,	Z 39.7130
Pt 2,	N 295206.7910,	E 2470592.7330,	Z 40.5410
Pt 3,	N 294125.3170,	E 2471819.4330,	Z 42.1740
Pt 4,	N 295218.2740,	E 2474241.4940,	Z 45.8130
Pt 5,	N 295026.9480,	E 2473568.9620,	Z 46.9680
Pt 6,	N 294961.6160,	E 2472815.8240,	Z 47.2510
Pt 7,	N 294750.3790,	E 2472079.0310,	Z 46.8150
Pt 8,	N 294699.8290,	E 2471313.8840,	Z 45.9410

Beginning chain L1 description

Point 7 N 294,520.9455 E 2,470,694.9307 Sta 10+00.00

Course from 7 to 8 N 79° 14′ 05.85″E Dist 603.5499

Point 8 N 294,633.6777 E 2,471,287.8589 Sta 16+03.55

Course from 8 to 9 N 79° 14′ 05.85″E Dist 2,721.4501

Point 9 N 295,141.9955 E 2,473,961.4153 Sta 43+25.00

Ending chain L1 description

Beginning chain Y1 description

Point 5 N 295,550.0430 E 2,470,244.0500 Sta 10+00.00

Course from 5 to 6 S 48° 26′ 07.98″E Dist 847.4527

Point 6 N 294,987.7902 E 2,470,878.1225 Sta 18+47.45

Course from 6 to 1 S 49° 09′ 53.85″E Dist 540.3063

Point 1 N 294,634.4929 E 2,471,286.9157 Sta 23+87.76

Course from 1 to TS SP1B S 47° 14′ 26.56″E Dist 314.4844

Spiral SP1B Type 1 Spiral Element

Angle	3° 37′ 10.92″(RT)	P	0.9843	BK S	47° 14′ 26.56″E
LS	187.0000	K	93.4876	AH S	43° 37′ 15.64″E
R	1,480.0000	LT	124.6927	CB S	46° 02′ 03.07″E
YS	3.9368	ST	62.3570	Defl	1° 12′ 23.49″
XS	186.9254	LC	186.9668	Deg	3° 52′ 16.81″

Spiral Coordinates

Point	North	East	Station
TS	294,420.9833	2,471,517.8140	27+02.24
PI	294,336.3269	2,471,609.3650	28+26.94
SC	294,291.1854	2,471,652.3842	28+89.24
CC	293,270.1555	2,470,580.9842	

Curve Data

Curve SP1

P.I. Station	35+16.25	N	293,837.2851	E	2,472,084.9451
Delta =	45° 55′ 12.16″(RT)				
Degree =	3° 52′ 16.81″				
Tangent =	627.0044				
Length =	1,186.1549				
Radius =	1,480.0000				
External =	127.3377				
Long Chord =	1,154.6627				
Mid. Ord. =	117.2497				
P.C. Station	28+89.24	N	294,291.1854	E	2,471,652.3842
P.T. Station	40+75.40	N	293,210.7854	E	2,472,059.7929
C.C.		N	293,270.1555	E	2,470,580.9842
Back	= S 43° 37′ 15.64″E				
Ahead	= S 2° 17′ 56.52″W				
Chord Bear	= S 20° 39′ 39.56″E				

Spiral SP1A Type 2 Spiral Element

Angle	3° 37′ 10.92″(RT)	P	0.9843	BK S	2° 17′ 56.52″W
LS	187.0000	K	93.4876	AH S	5° 55′ 07.44″W
R	1,480.0000	LT	124.6927	CB S	4° 42′ 43.95″W
YS	3.9368	ST	62.3570	Defl	1° 12′ 23.49″
XS	186.9254	LC	186.9668	Deg	3° 52′ 16.81″

Spiral Coordinates

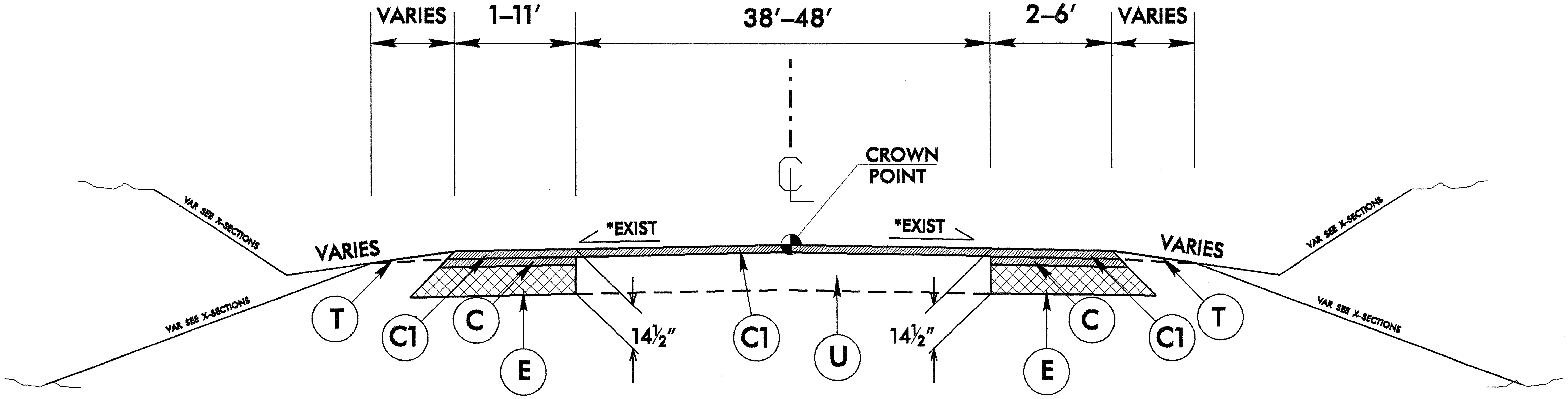
Point	North	East	Station
CS	293,210.7854	2,472,059.7929	40+75.40
PI	293,148.4786	2,472,057.2914	41+37.76
ST	293,024.4506	2,472,044.4334	42+62.40
CC	293,270.1555	2,470,580.9842	

Course from ST SP1A to 4 S 5° 55′ 20.70″W Dist 736.6599

Point 4 N 292,291.7226 E 2,471,968.4236 Sta 49+99.06

Ending chain Y1 description

PROJECT REFERENCE NO.	SHEET NO.
43518.3.1	2



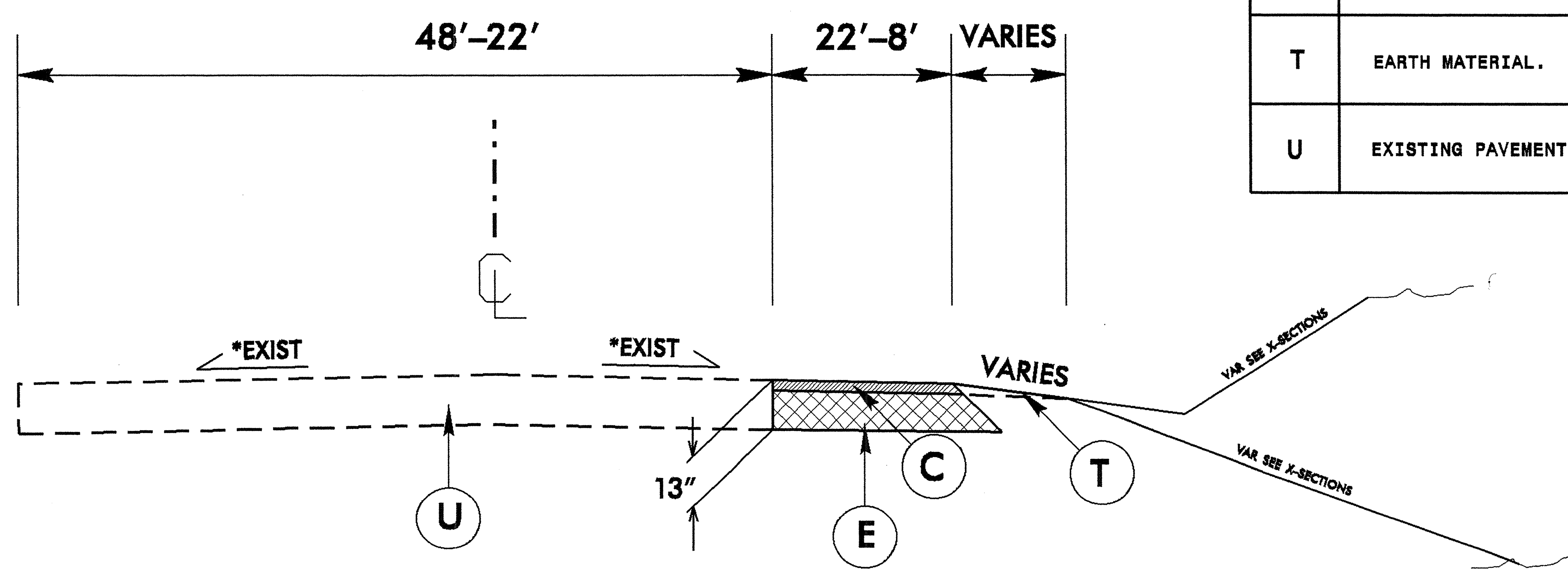
TYPICAL NO. 1

NC 172

–L1– STA.
12+89 TO 17+36

* SEE PLANS FOR SUPERELEVATION

PAVEMENT SCHEDULE	
C	PROP. APPROX. 2″ ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C1	PROP. APPROX. 1½″ ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
E	PROP. APPROX. 11″ ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.



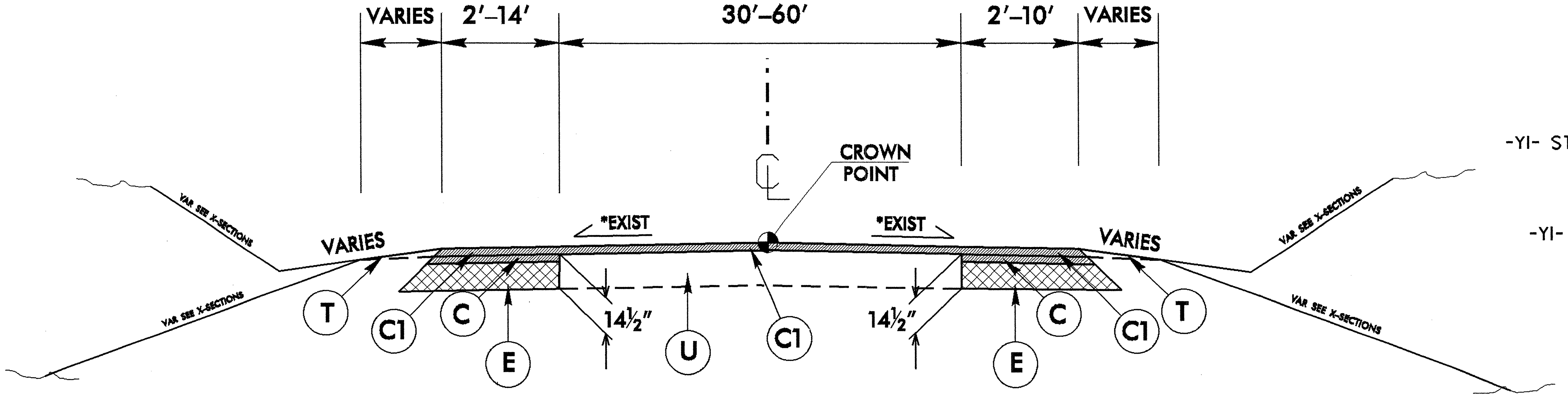
TYPICAL NO. 2

NC 172

–L1– STA.
17+36 TO 42+98

NOT TO SCALE

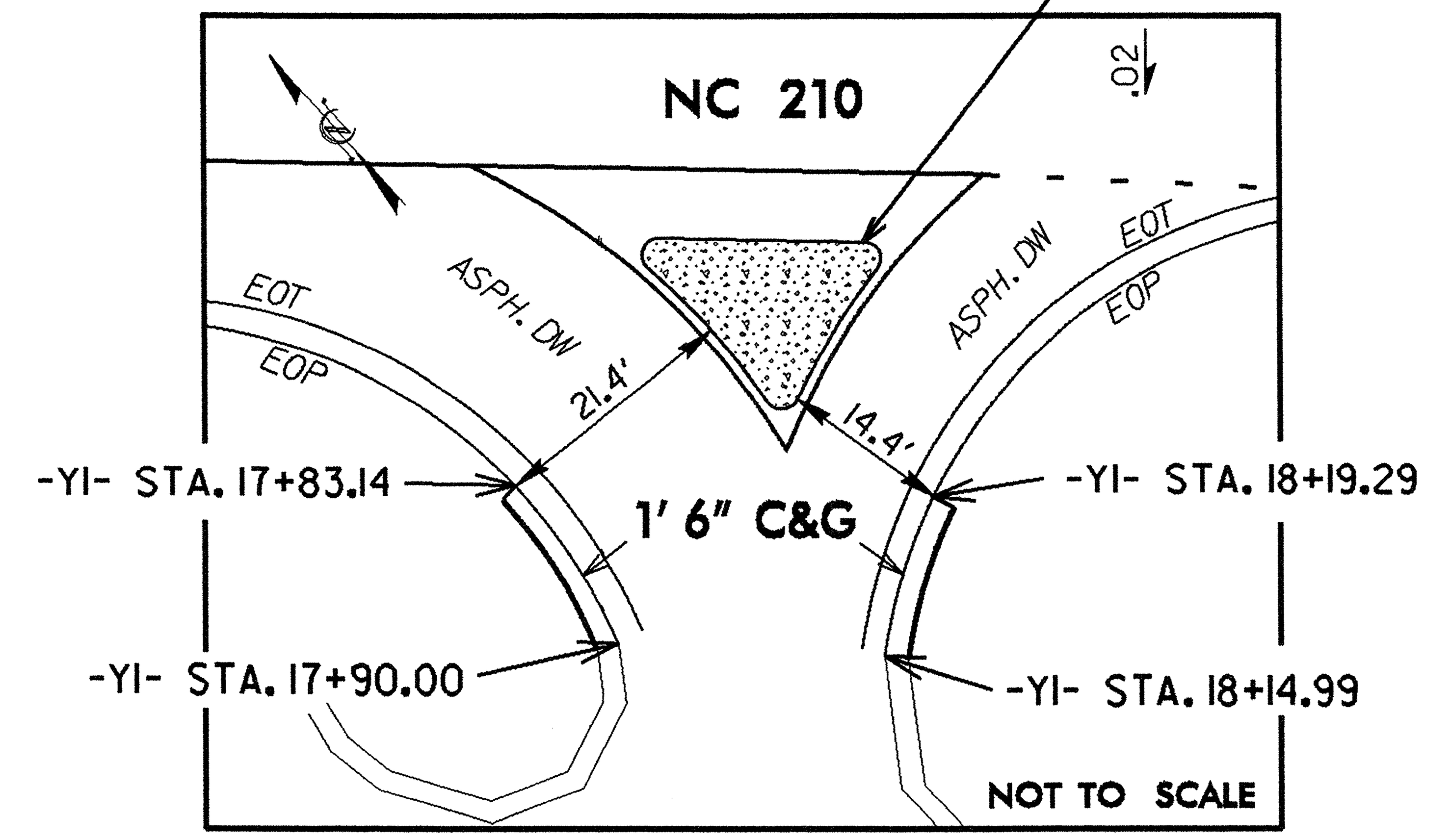
PROJECT REFERENCE NO.	SHEET NO.
43518.3.1	2-A



TYPICAL NO. 3

NC 210
-Y1- STA.
12+90 TO 22+83

SEE -YI- CONCRETE ISLAND DETAIL (SHEET NO. 2-D)

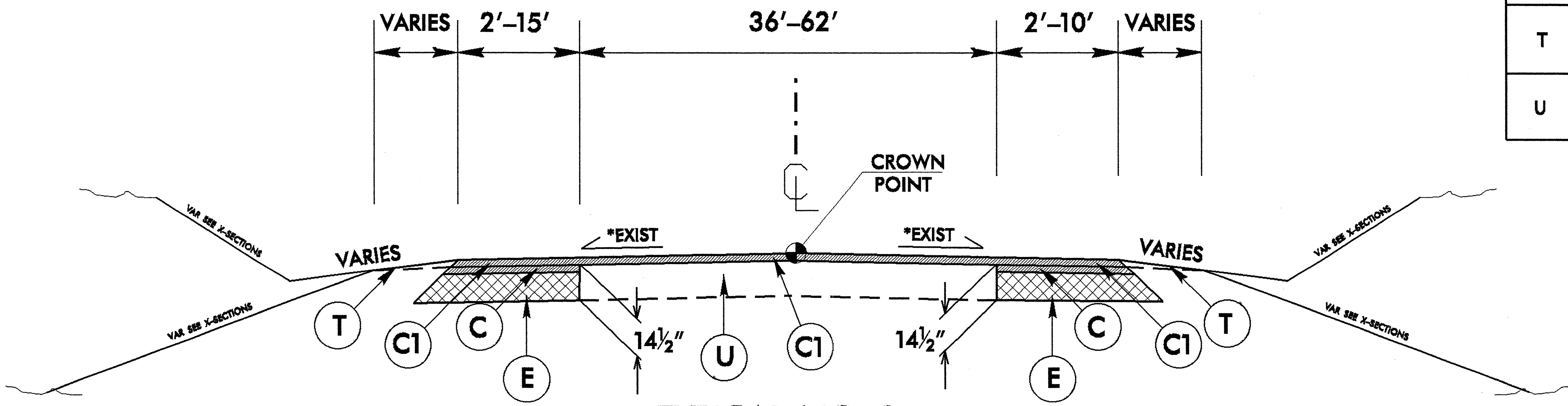


-Y1- CURB & GUTTER DETAIL

SEE PLAN SHEETS NO. 8 & 9

* SEE PLANS FOR SUPERELEVATION

PAVEMENT SCHEDULE	
C	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
E	PROP. APPROX. 11" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.



TYPICAL NO. 3

NC 210
-Y1- STA.
24+87 TO 31+65

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
43518.3.1	2-B

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR

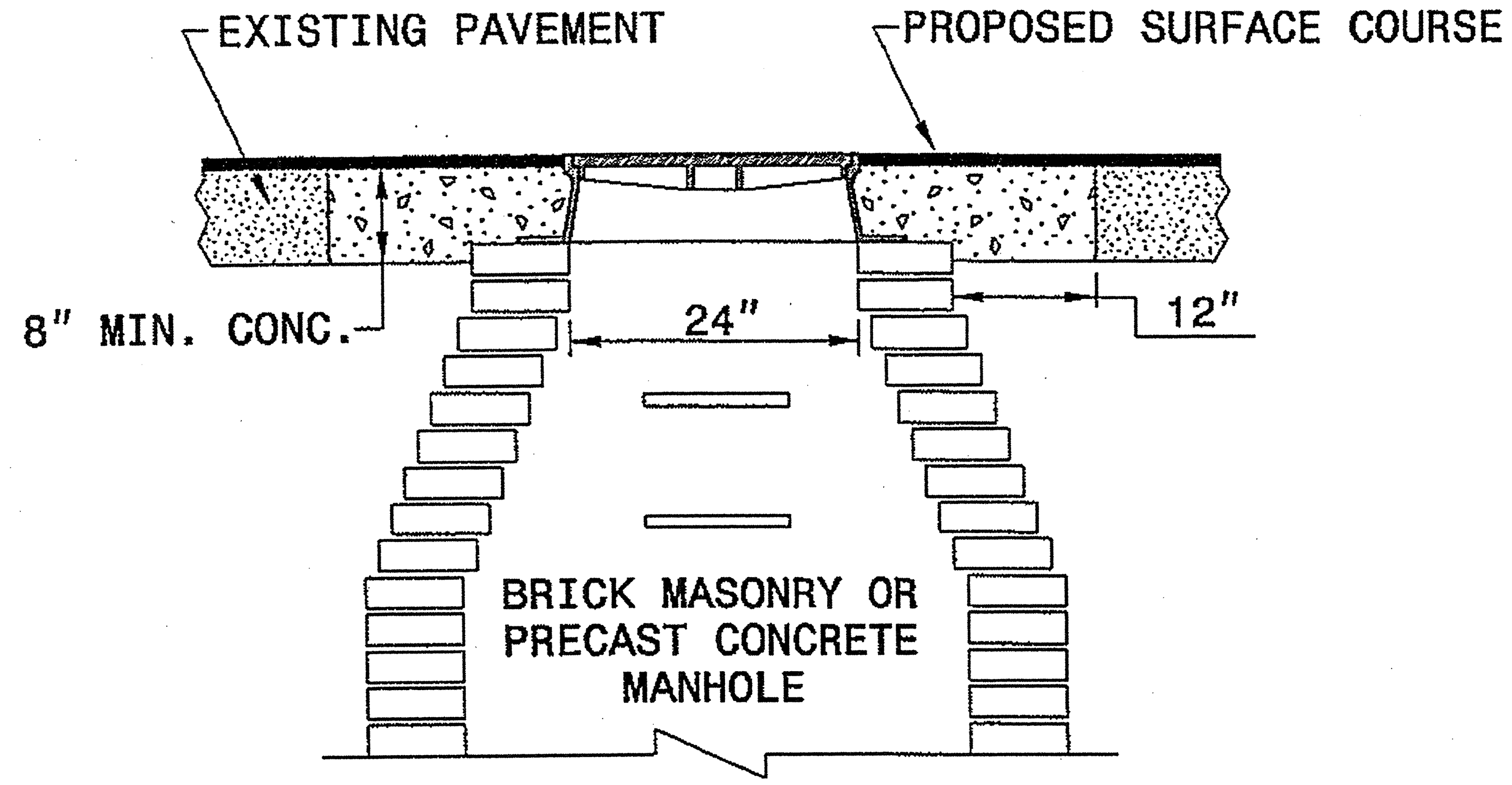
MANHOLE AND VALVE BOX ADJUSTMENTS

SHEET 1 OF 1

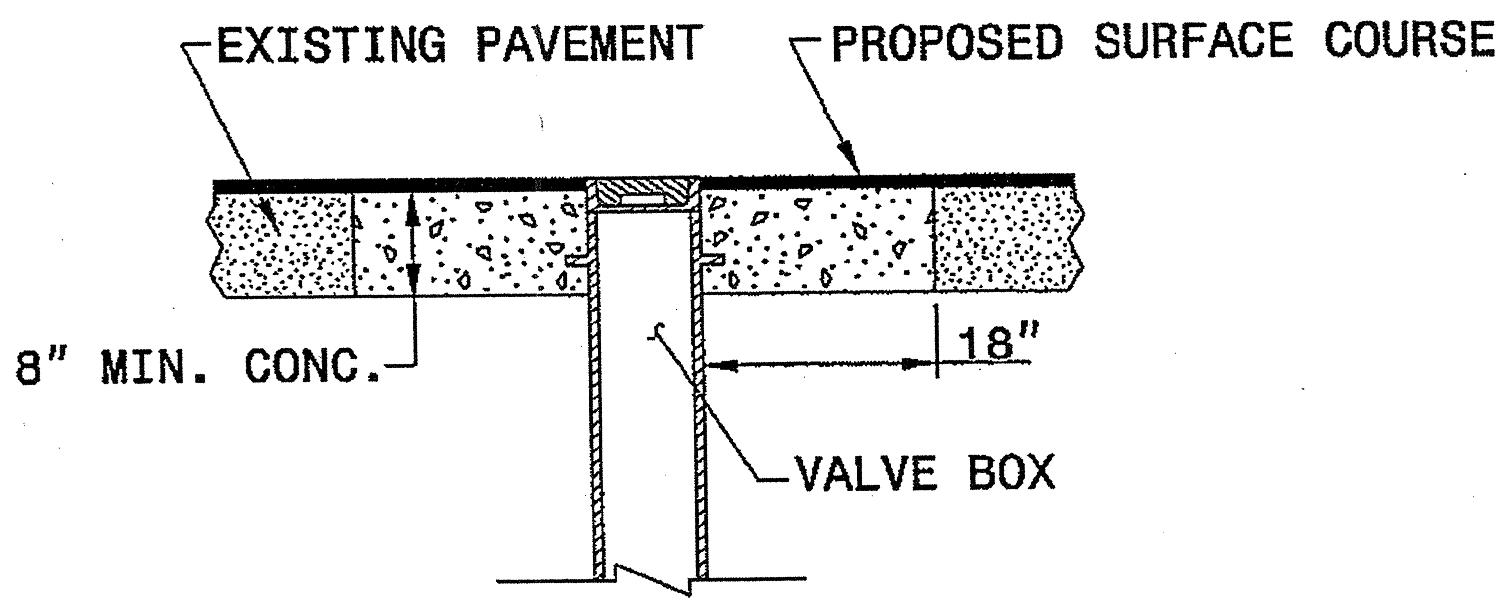
840D55

GENERAL NOTES:

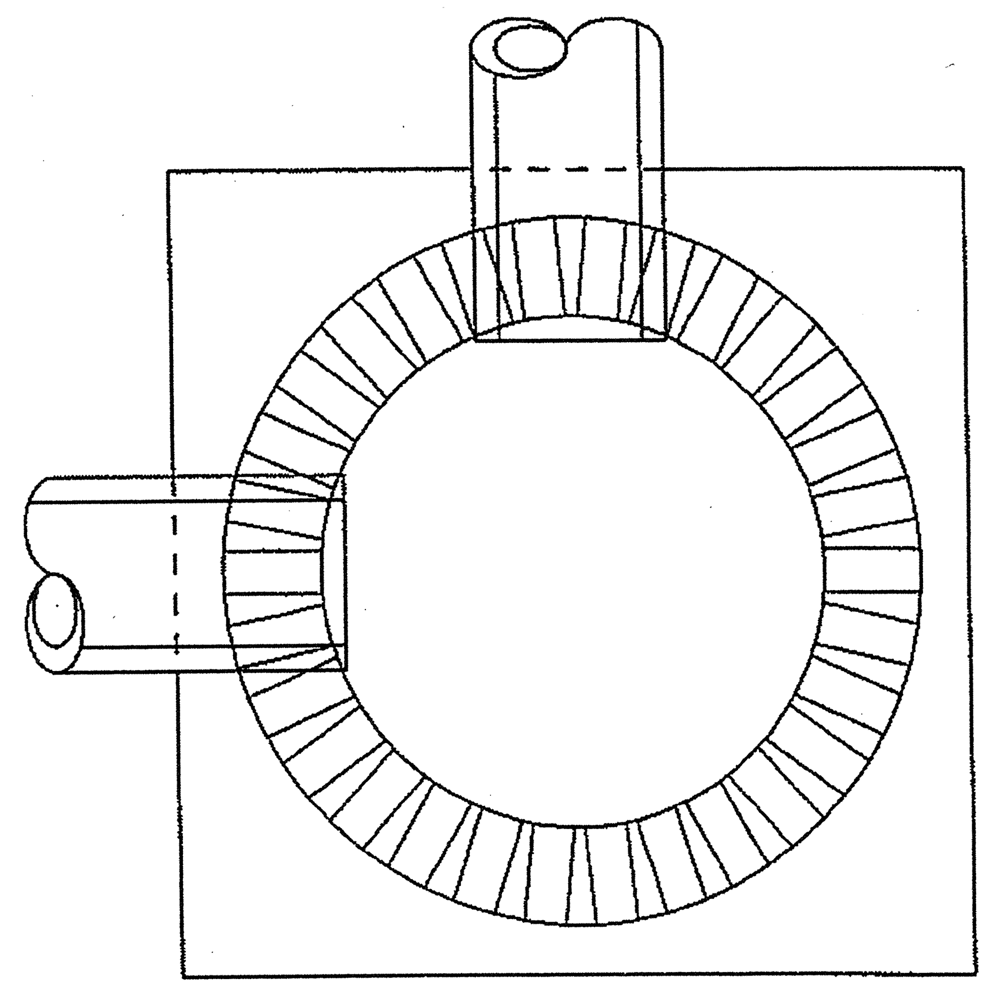
1. USE RAPID SET GROUT, MORTAR, OR CONCRETE WITH A MINIMUM COMPRESSIVE STRENGHT OF 4000 PSI.
2. REMOVE ALL FAULTY EXISTING BRICKWORK AND REPLACE WITH NEW BRICK MASONRY.
3. SHEER CUT EXCAVATION FOR THE ADJUSTMENT ON ALL SIDES.
4. FILL AREA BELOW 8" DEPTH WITH 78M OR NO. 57 CLEAN STONE.
5. MIX MORTAR TO NCDOT SPECIFICATIONS.
6. MORTAR JOINTS ½" +/- ⅛"



MANHOLE CONCRETE ENCASEMENT



VALVE BOX CONCRETE ENCASEMENT



ELEVATION VIEW

PLACE BRICK ACCORDING TO ELEVATION VIEW

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR

MANHOLE AND VALVE BOX ADJUSTMENTS

SHEET 1 OF 1

840D55

PROJECT SERVICES UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-250-4128 FAX 919-250-4119

SEE PLATE FOR TITLE

ORIGINAL BY: ________ DATE: ________
MODIFIED BY: E.E. WARD DATE: ________
CHECKED BY: ________ DATE: ________
FILE SPEC.: /usr/details/stand/840d55.dgn

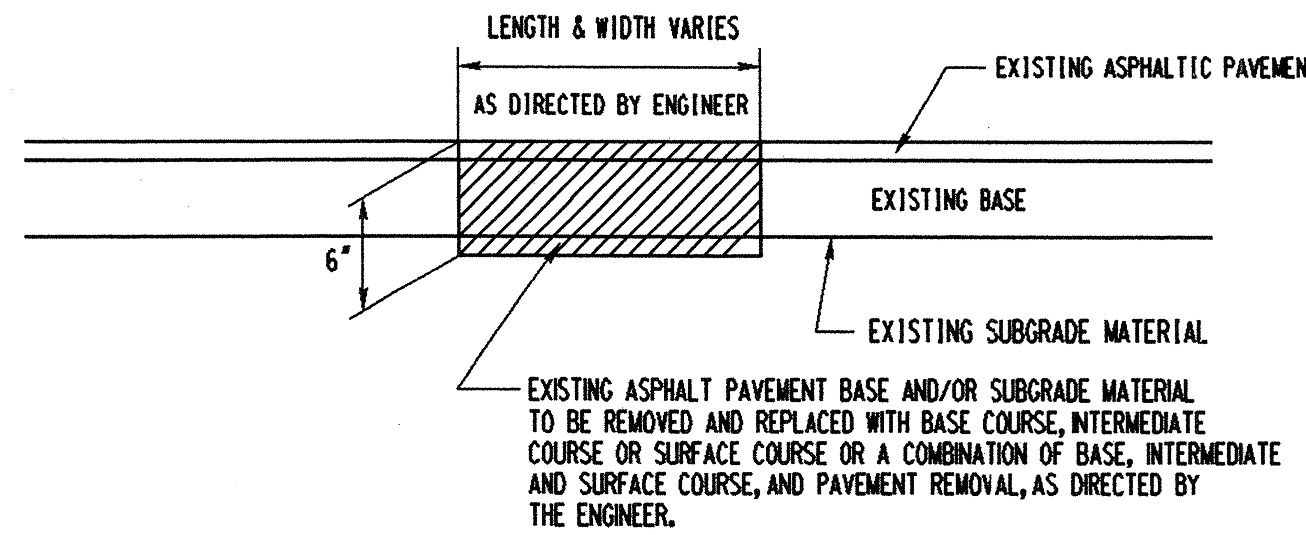
07-DEC-2005 14:25
S:\Contracts\Contracts\Special Details\ericward\usr\details\stand\840d55.dgn
ericward AT PS222293

PROJECT REFERENCE NO.	SHEET NO.
43518.3J	2-C

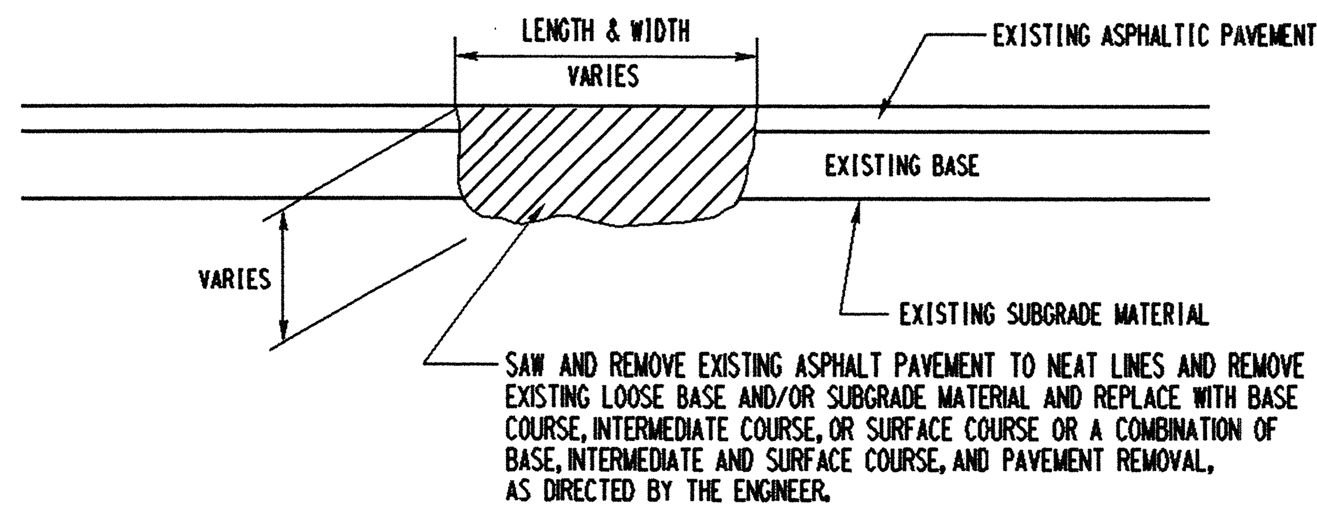
8/17/99

REVISIONS

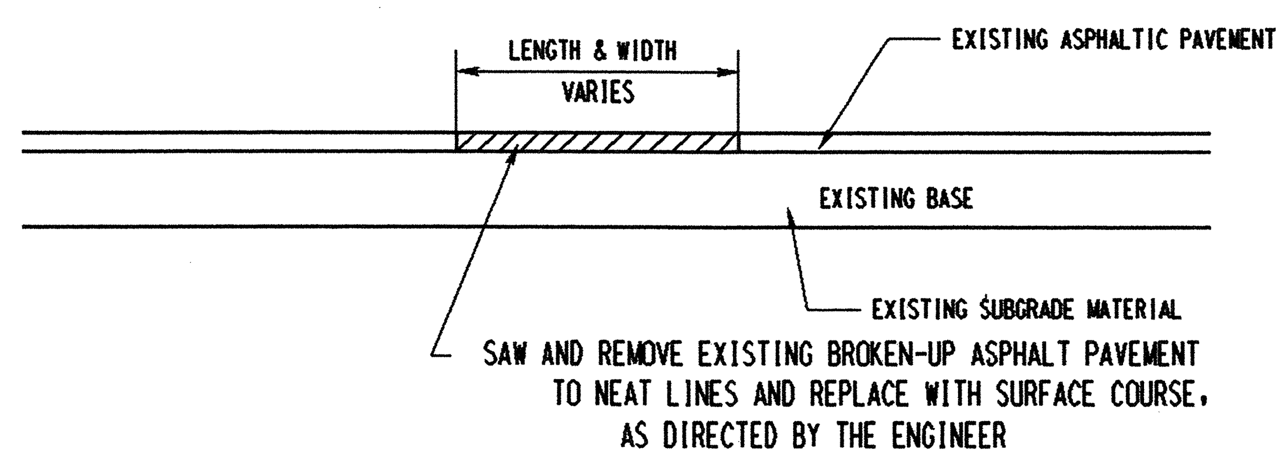
DETAILS OF REPAIRING EXISTING PAVEMENT PRIOR TO RESURFACING FOR FULL DEPTH AND MILLING



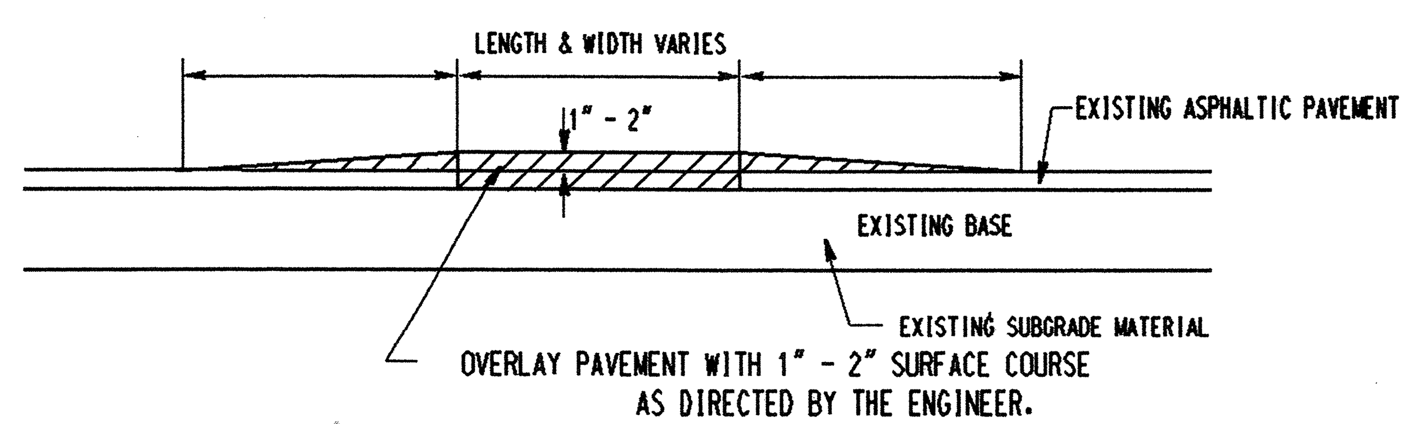
DETAIL NO. 1



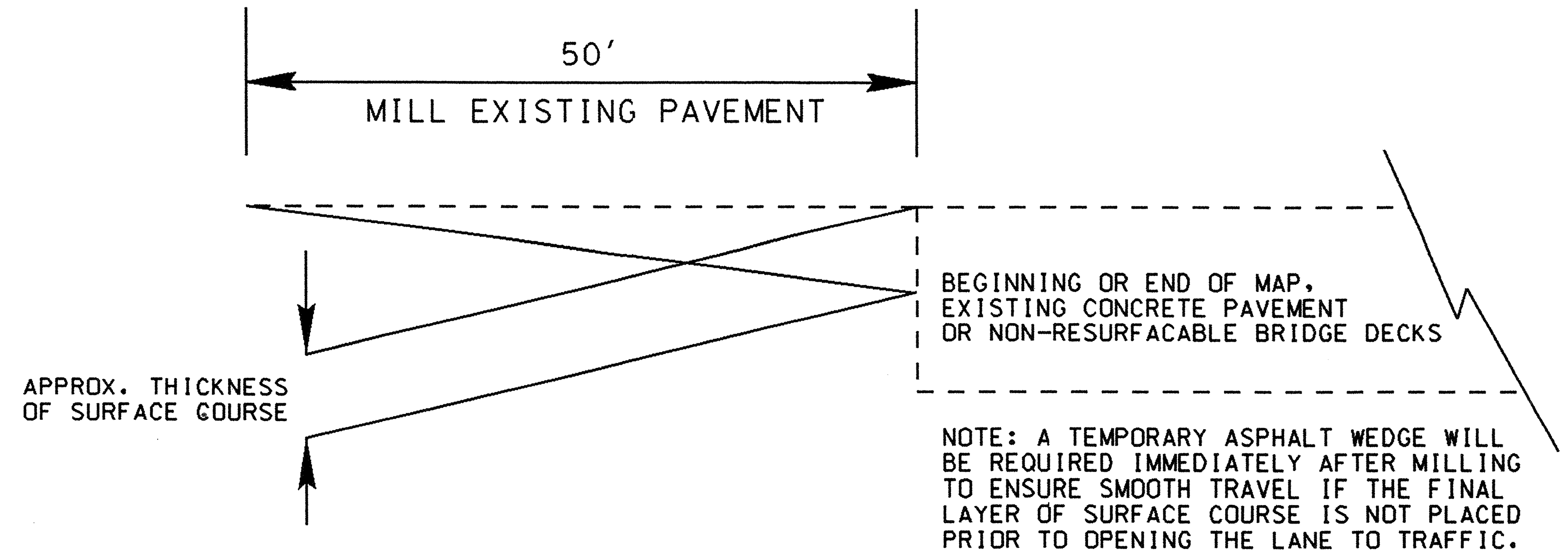
DETAIL NO. 2



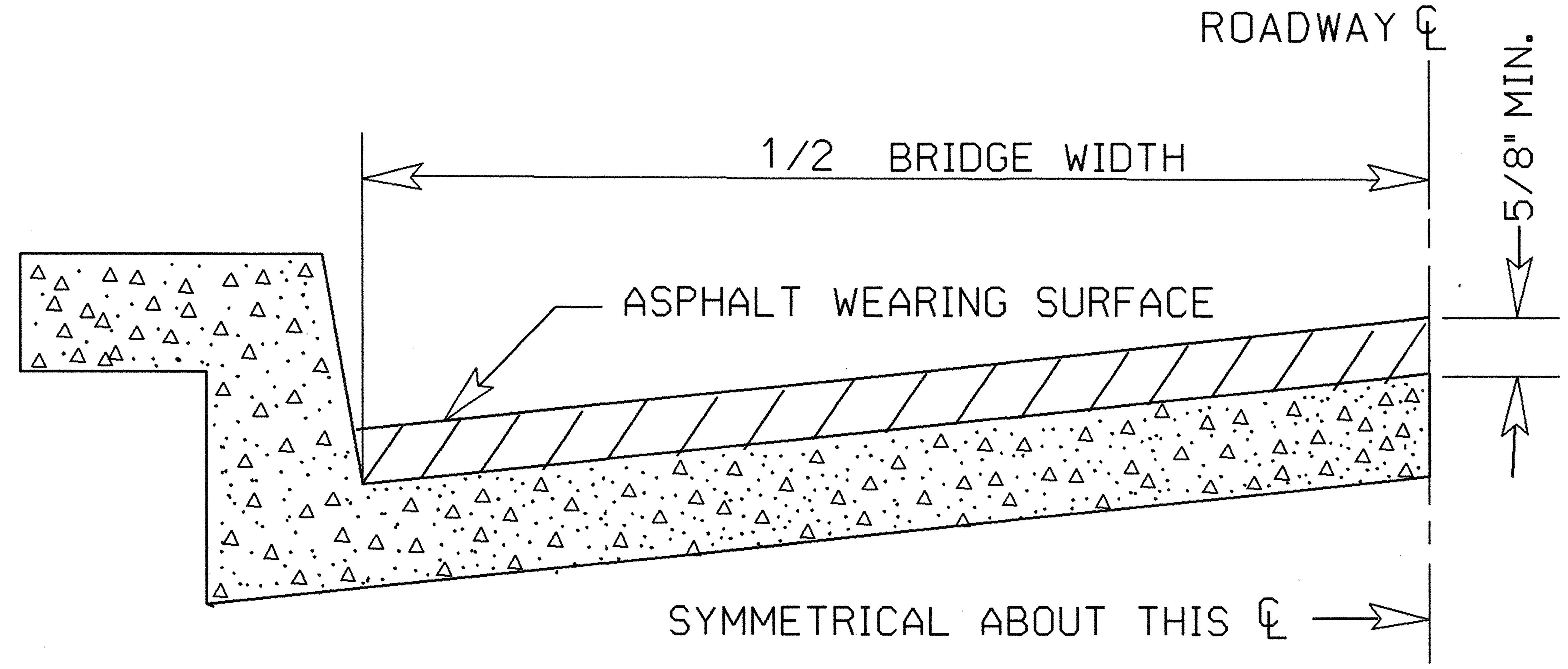
DETAIL NO. 3



DETAIL NO. 4



NOTE: A TEMPORARY ASPHALT WEDGE WILL BE REQUIRED IMMEDIATELY AFTER MILLING TO ENSURE SMOOTH TRAVEL IF THE FINAL LAYER OF SURFACE COURSE IS NOT PLACED PRIOR TO OPENING THE LANE TO TRAFFIC.



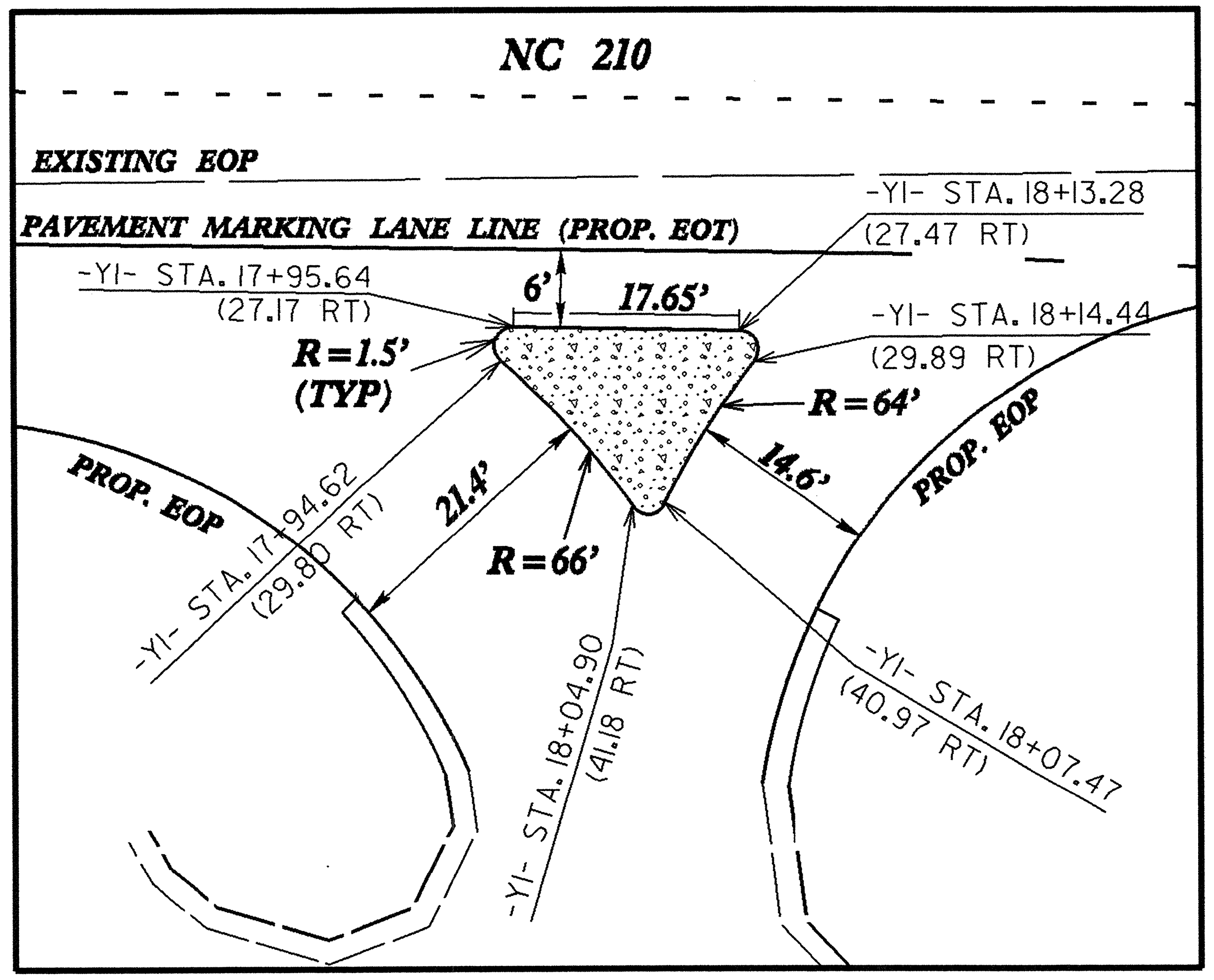
BRIDGE HALF TYPICAL SECTION

FOR BRIDGES WITH FLOOR DRAINS, CARE SHALL BE EXERCISED IN PLACING THE WEARING SURFACE AROUND FLOOR DRAINS SO AS NOT TO HINDER EFFECTIVE DRAINAGE. ALL DRAINS SHALL BE LEFT OPEN.

THE PROPOSED WEARING SURFACE SHALL VARY IN THICKNESS AS NECESSARY TO PROVIDE A SMOOTH RIDING SURFACE. A THICKNESS OF NOT LESS THAN 5/8" SHALL BE PROVIDED. THE MAXIMUM THICKNESS SHALL PREFERABLY BE 1-1/2" UNLESS IT IS IMPRACTICAL TO PROVIDE A SMOOTH RIDING SURFACE OTHERWISE.

PROJECT REFERENCE NO.	SHEET NO.
43518.3.1	2-D

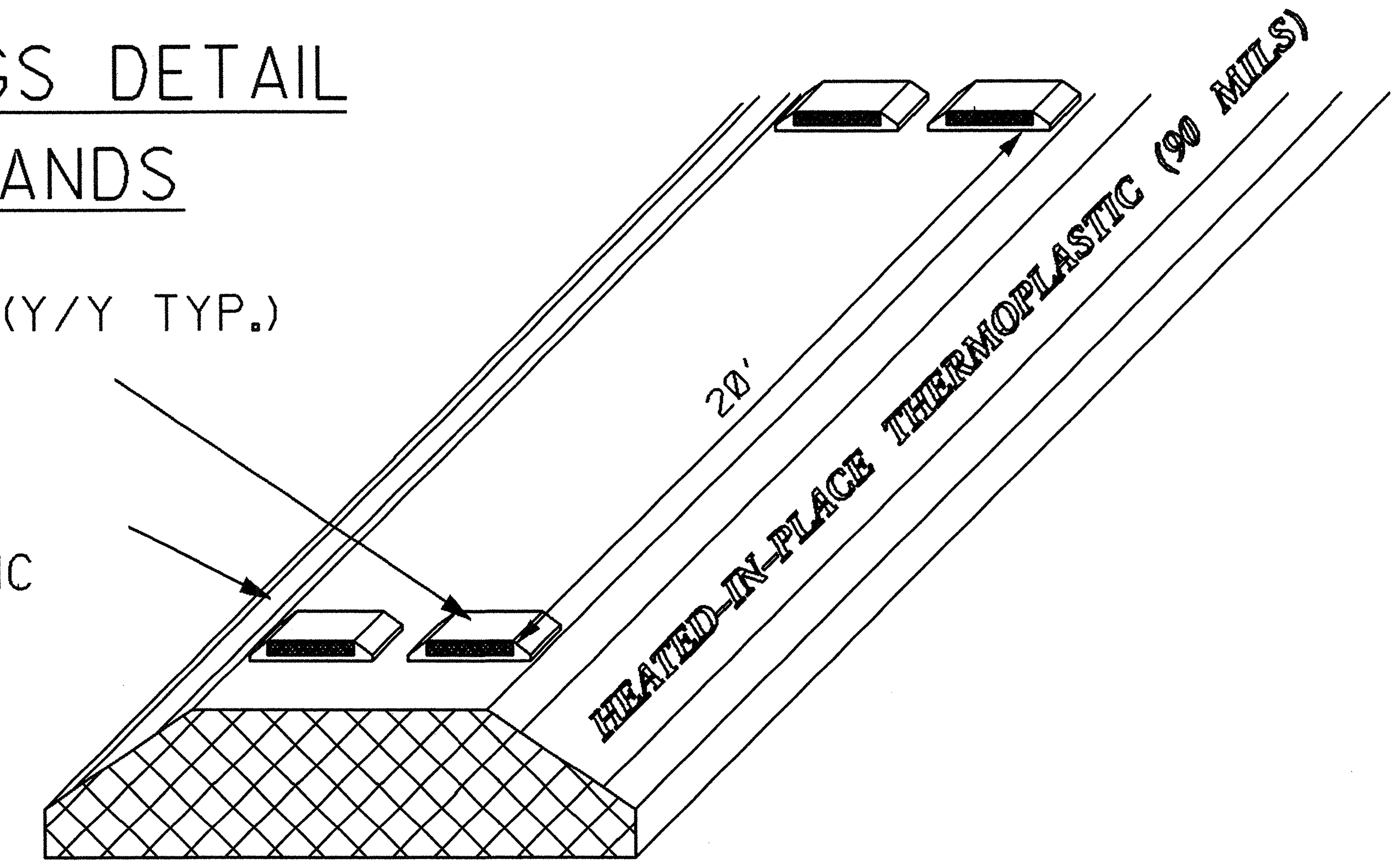
CONCRETE ISLAND & PAVEMENT MARKING DETAILS



-Y1- CONCRETE ISLAND DETAIL

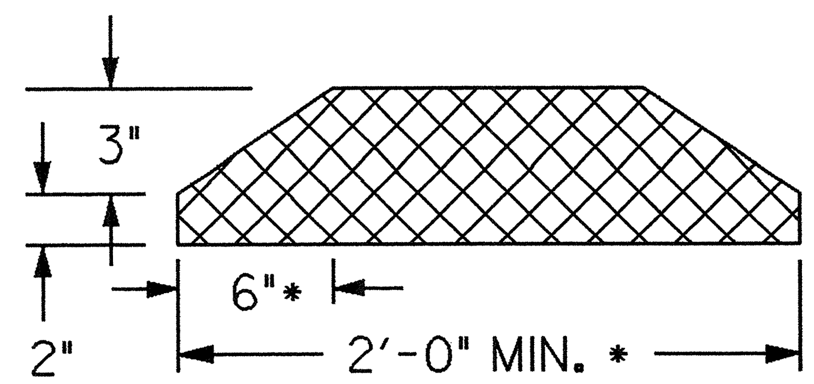
SEE PLAN SHEETS NO. 8 & 9

PAVEMENT MARKINGS DETAIL FOR CONCRETE ISLANDS



MONOLITHIC CONCRETE ISLAND

(SEE STANDARD DRAWINGS 852.01, 852.02, & 852.06 FOR DETAILS.)



*DIMENSIONS FOR ISLANDS LESS THAN 4'-0"

APPLY PORTLAND CEMENT CONCRETE SEALER (FTILOW-VOC SEALER)TO SIDES OF MEDIAN PRIOR TO PLACEMENT OF 4" YELLOW THERMOPLASTIC (90 MILS)

NOT TO SCALE

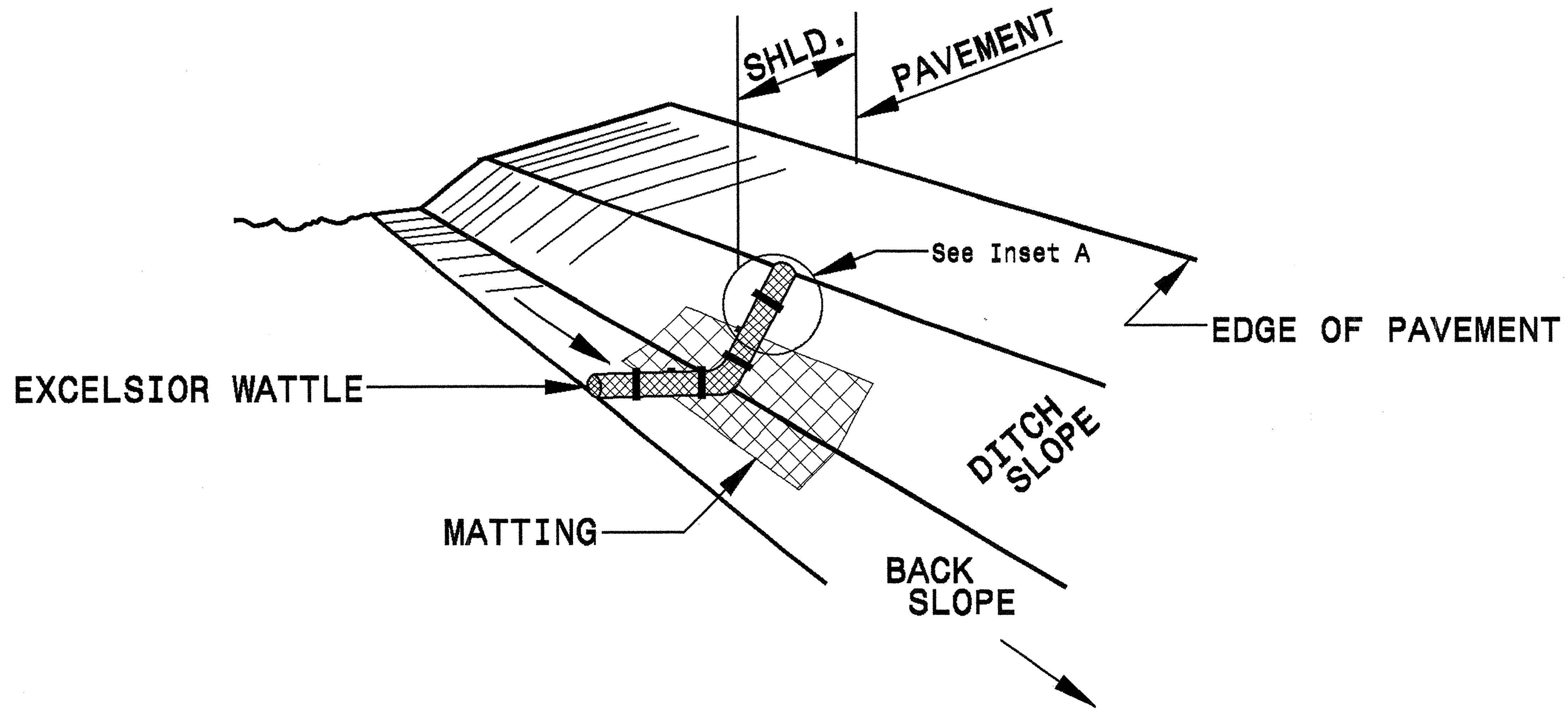
8/17/99

REVISIONS

25-JUL-2018 15:20
R:\ROADWAY\Proj\NC172_NC210_DualLefts\ROADWAY\Proj\NC172_NC210_Rdy_misc psh.dgn

PROJECT REFERENCE NO.	SHEET NO.
43518.3.1	2-E

WATTLE DETAIL



ISOMETRIC VIEW

NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

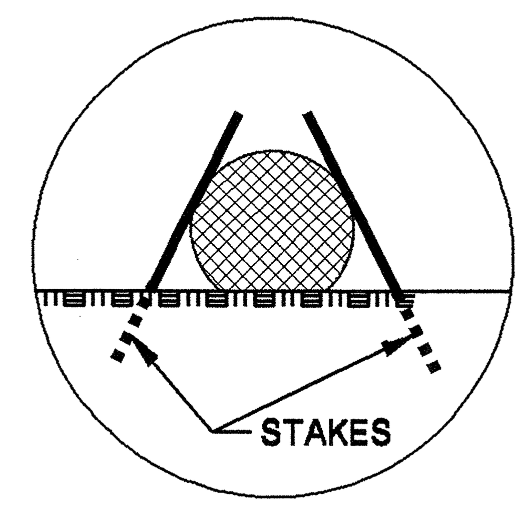
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

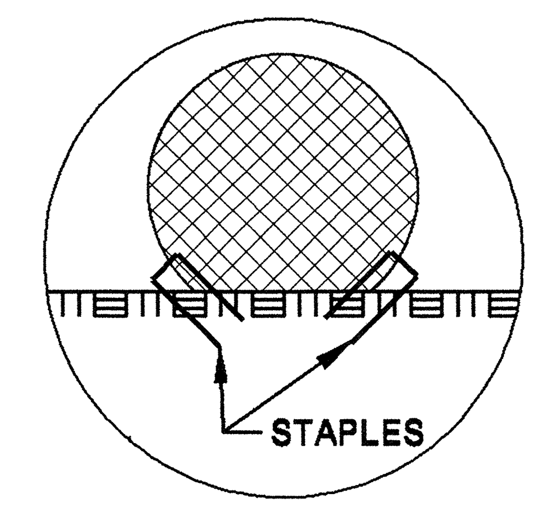
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

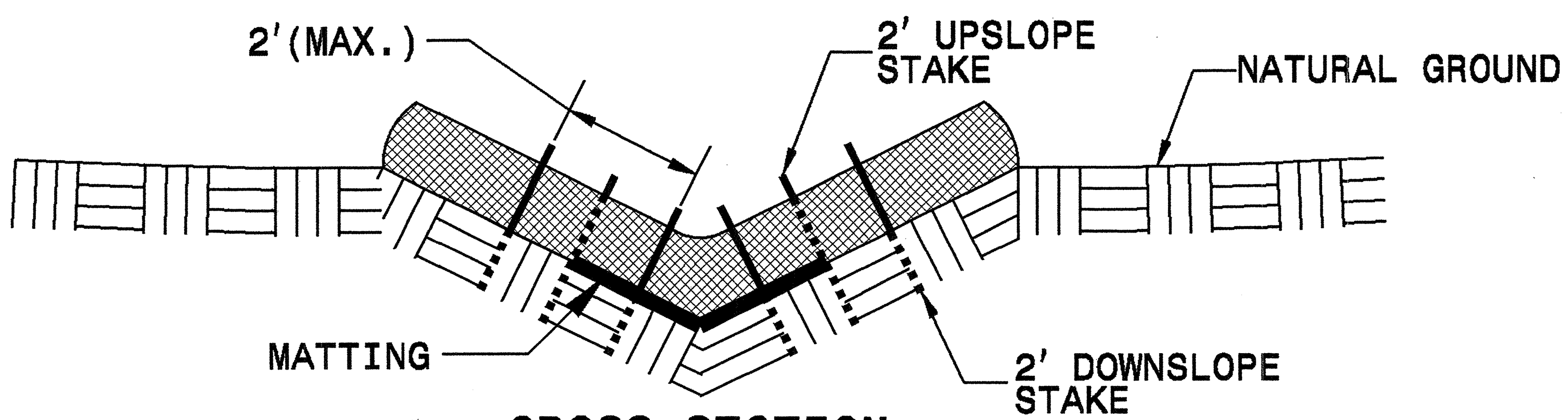
INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



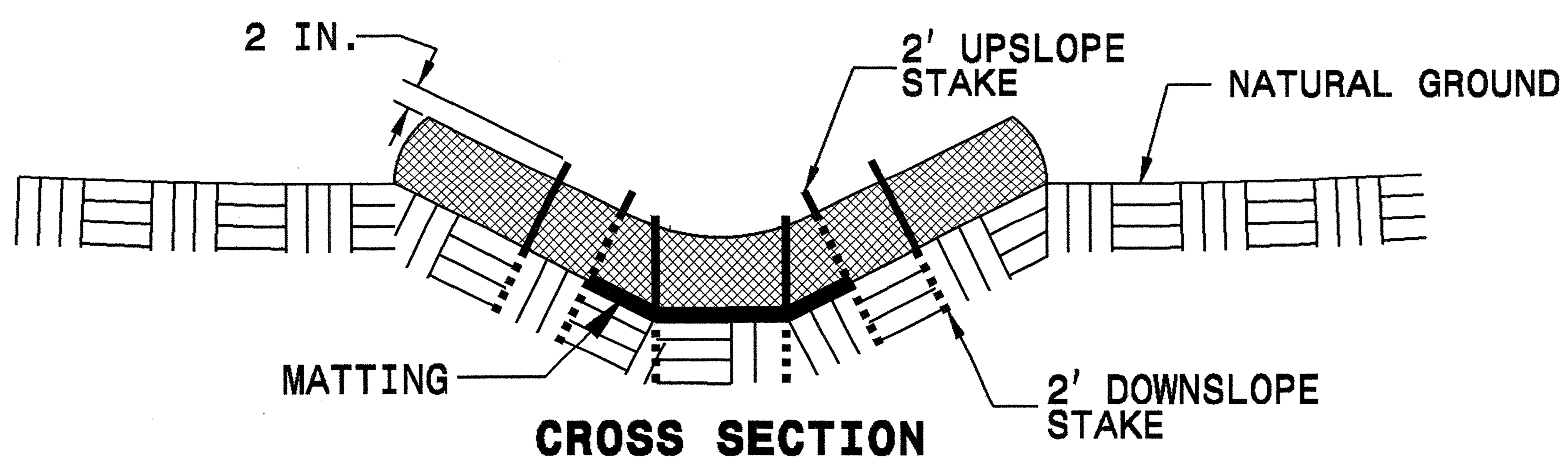
INSET A



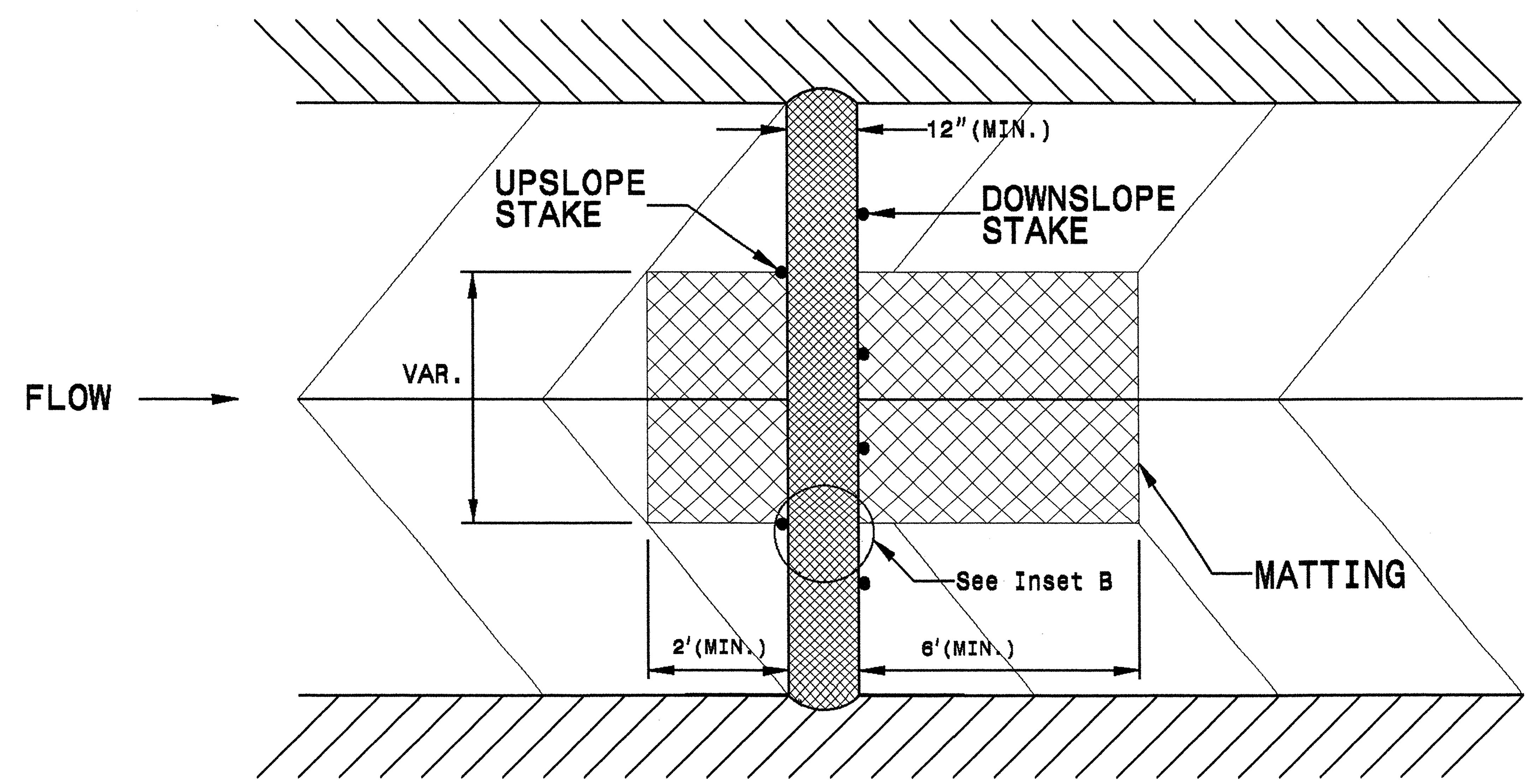
INSET B



CROSS SECTION VEE DITCH



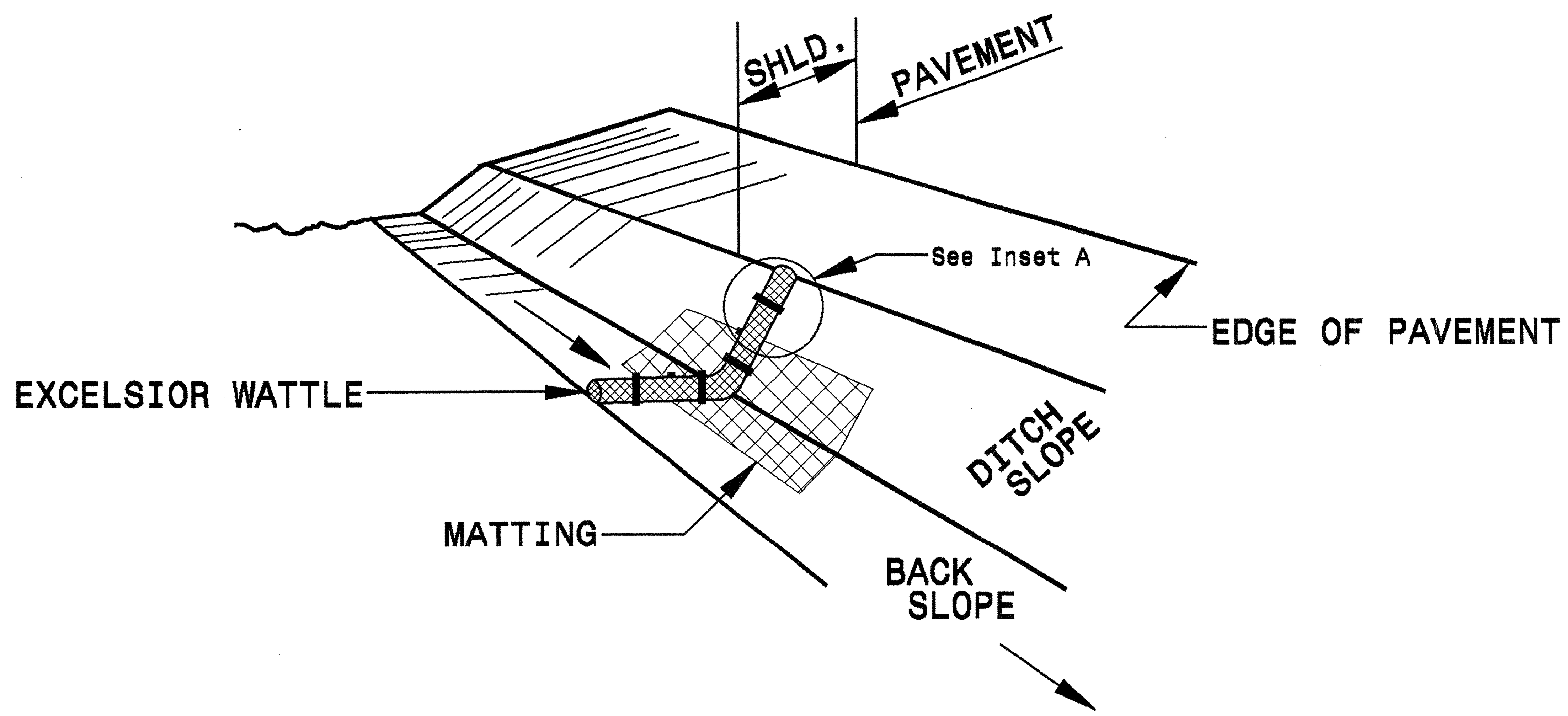
CROSS SECTION TRAPEZOIDAL DITCH



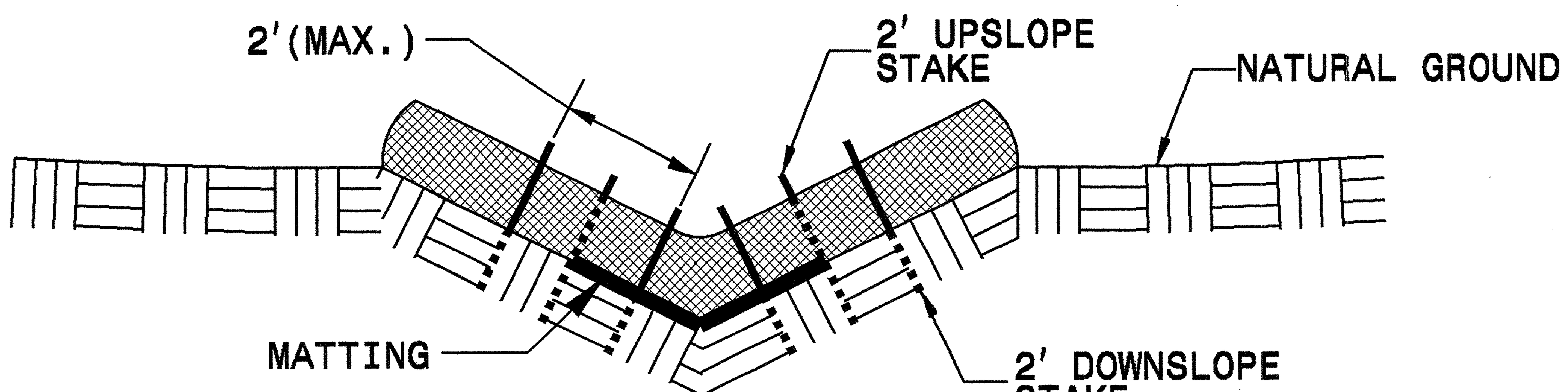
TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
43518.3.1	2-F

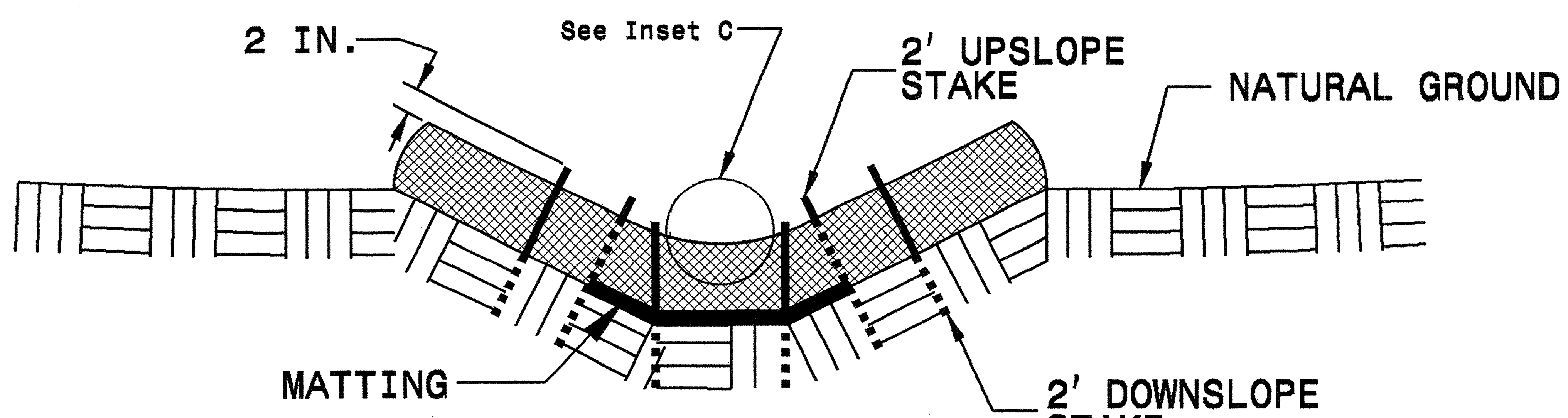
WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

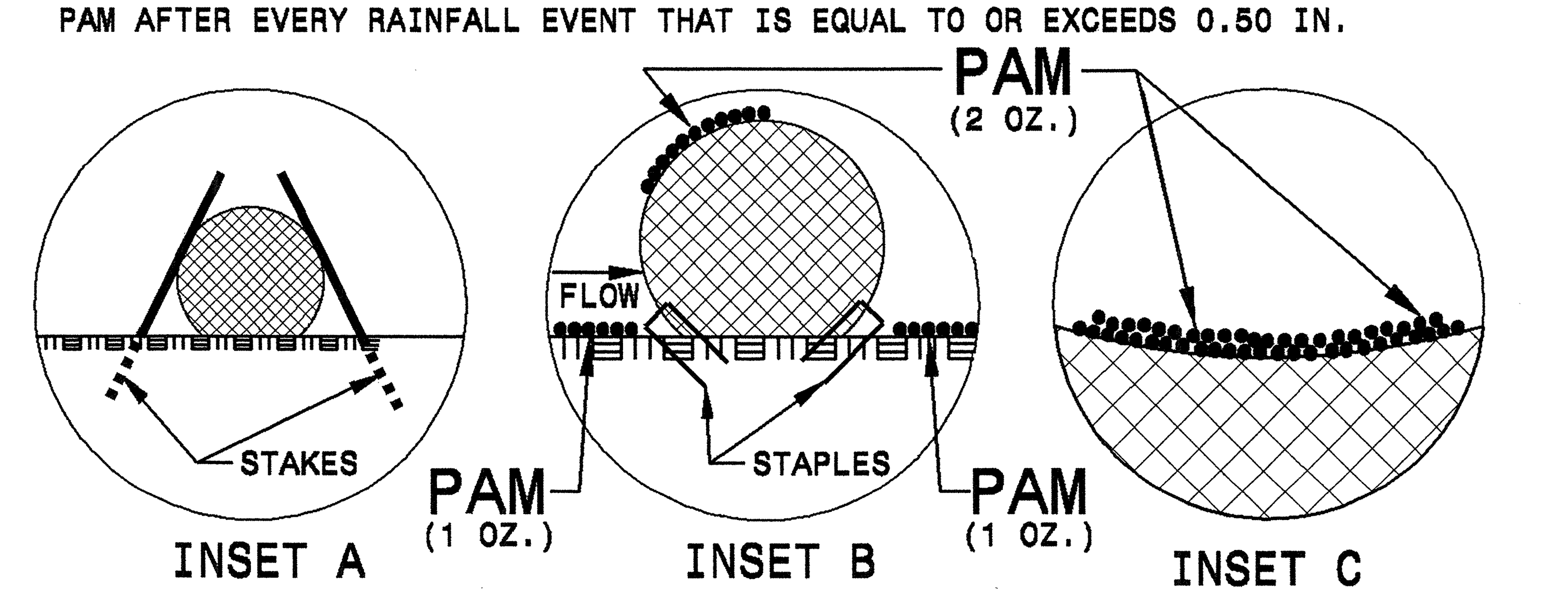
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

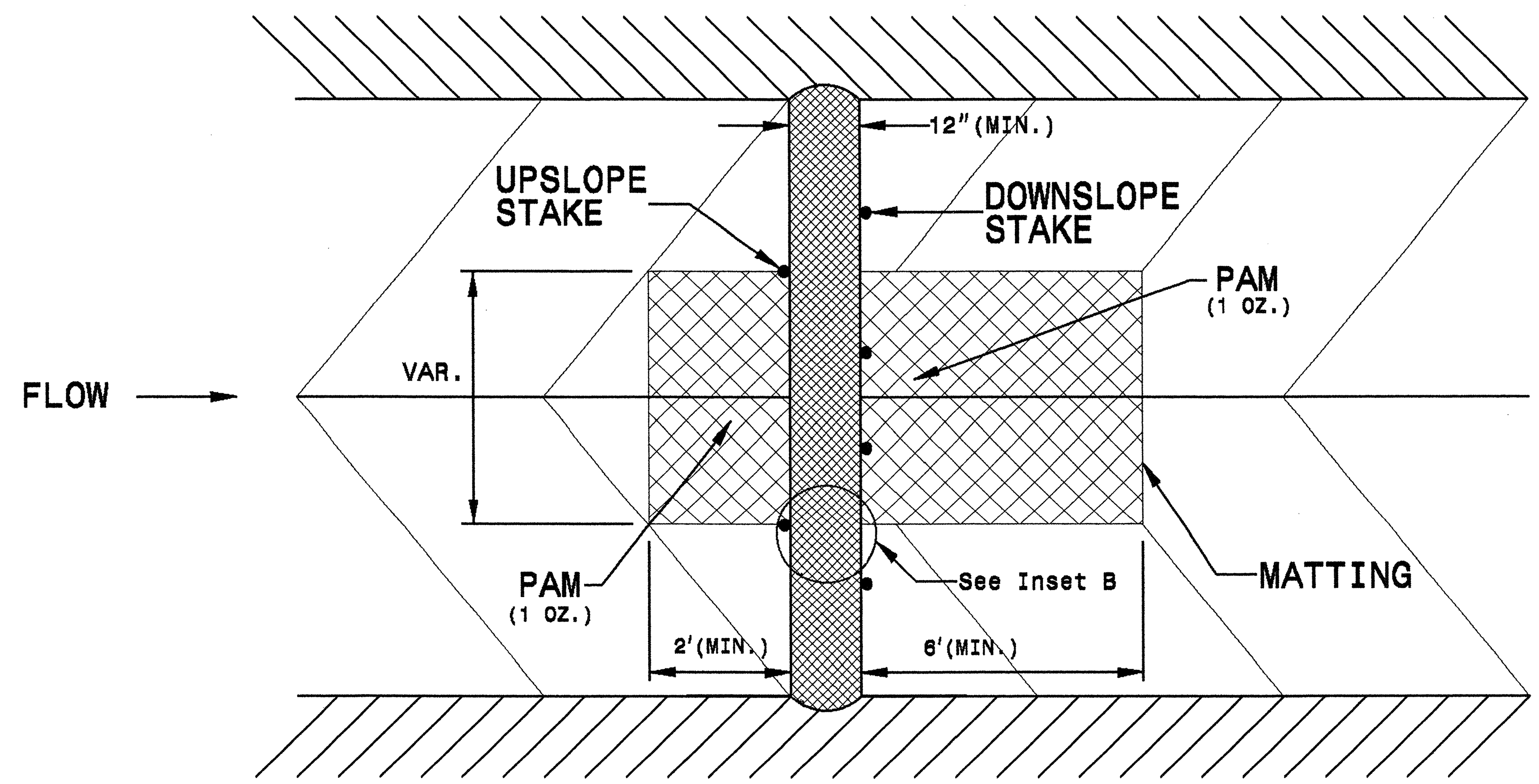
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

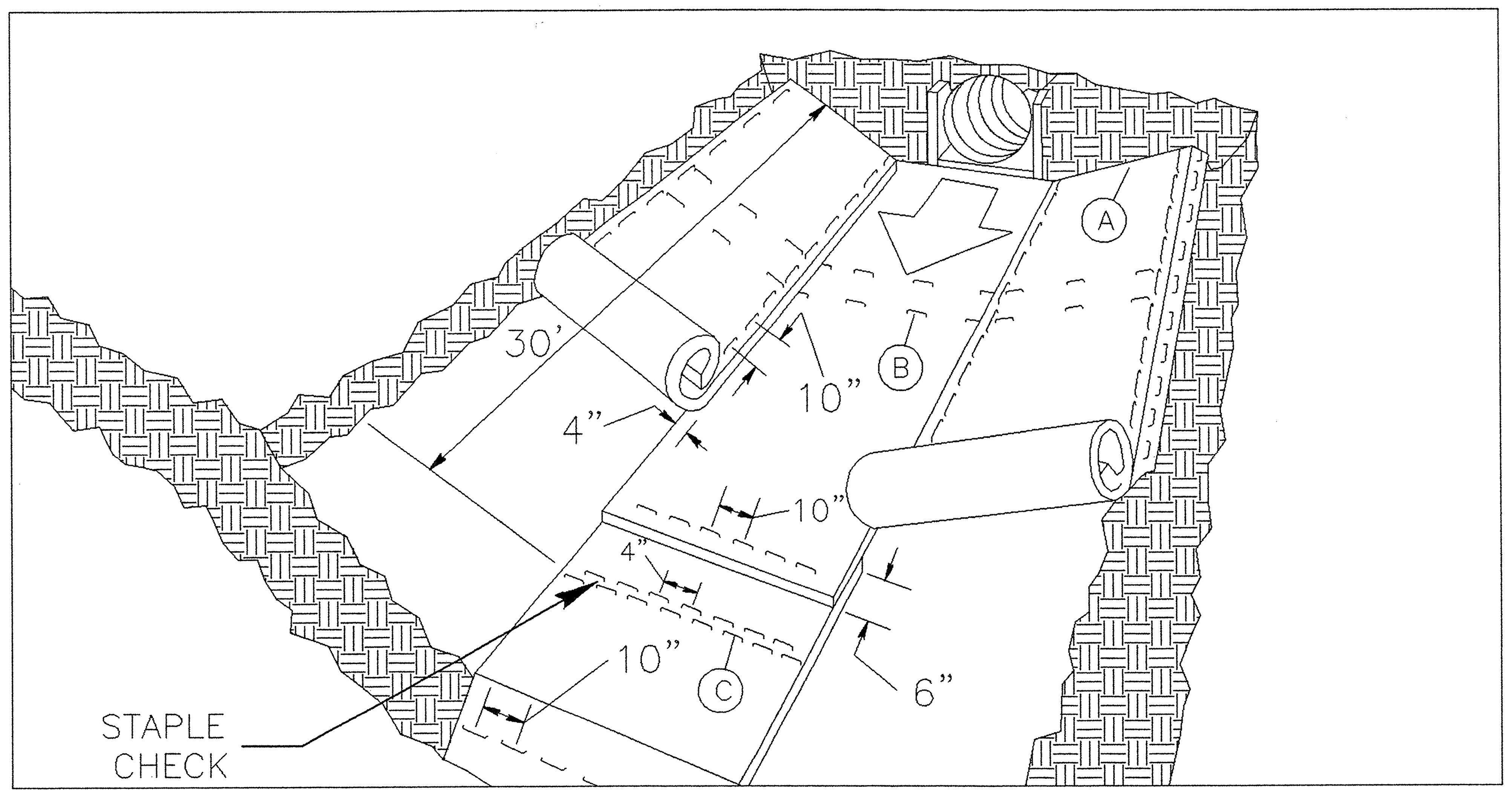
INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.





TOP VIEW

MATTING INSTALLATION DETAIL



MATTING IN DITCHES

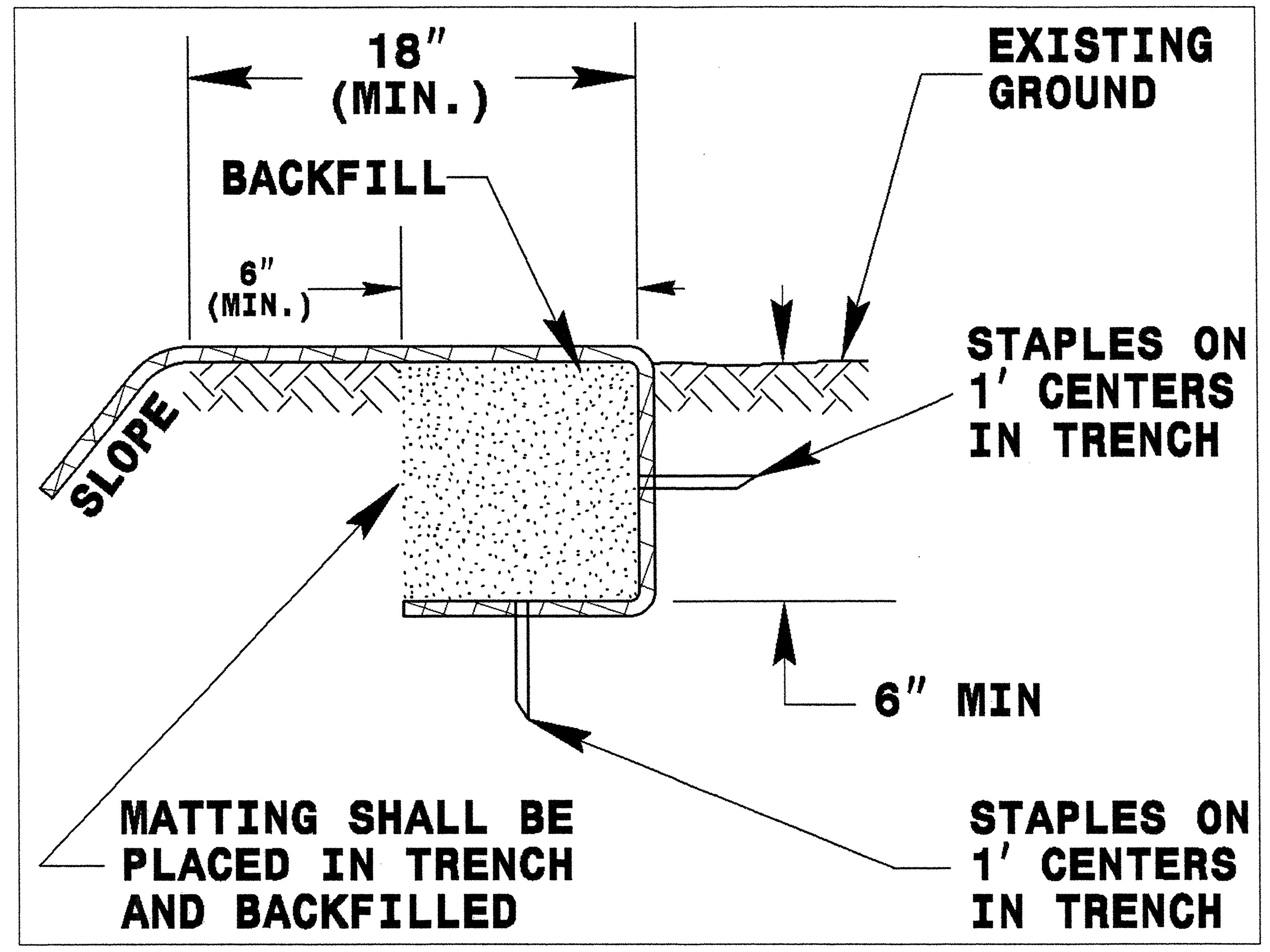
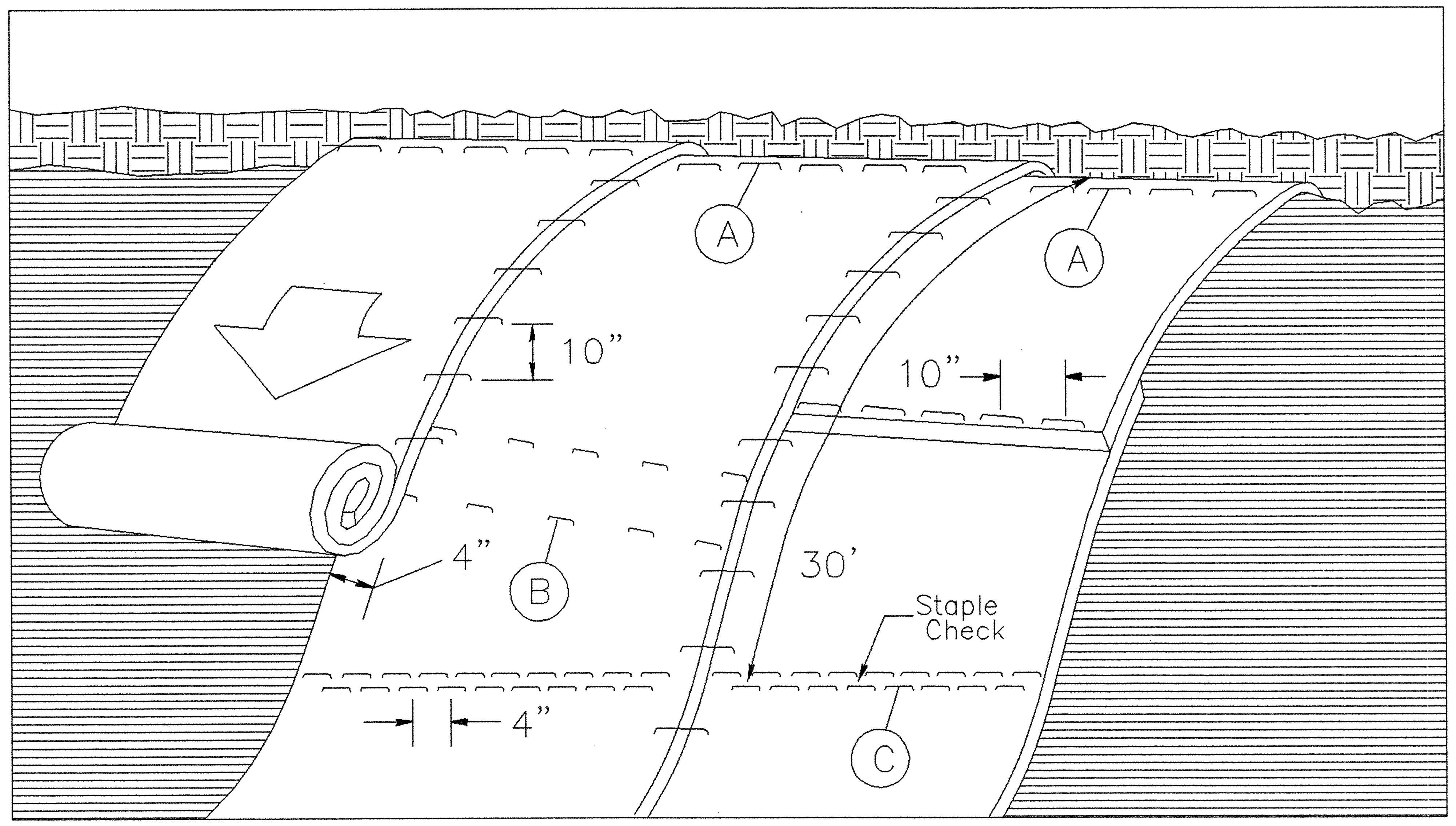


DIAGRAM A



MATTING ON SLOPES

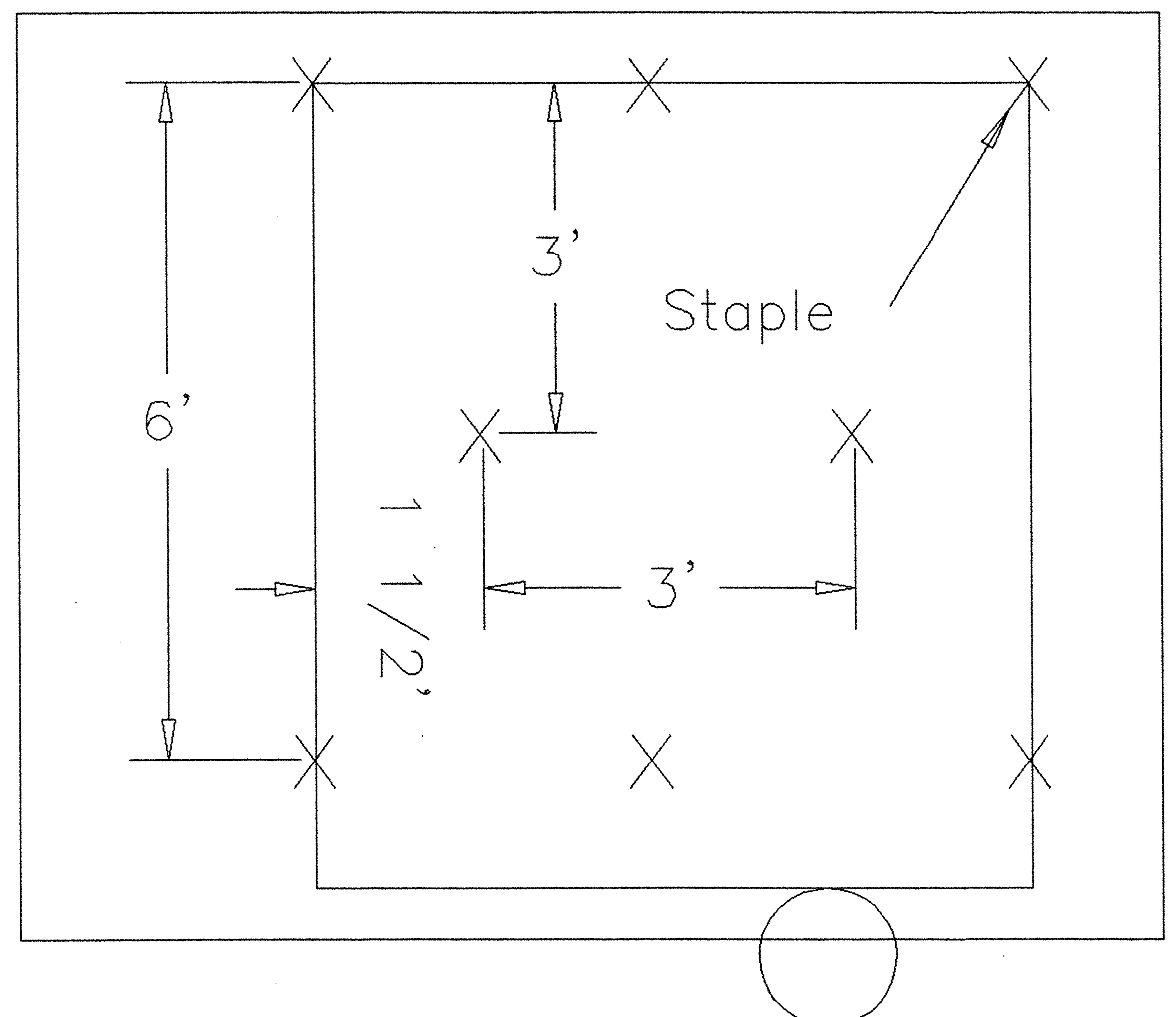


DIAGRAM B

Staple Check Pattern

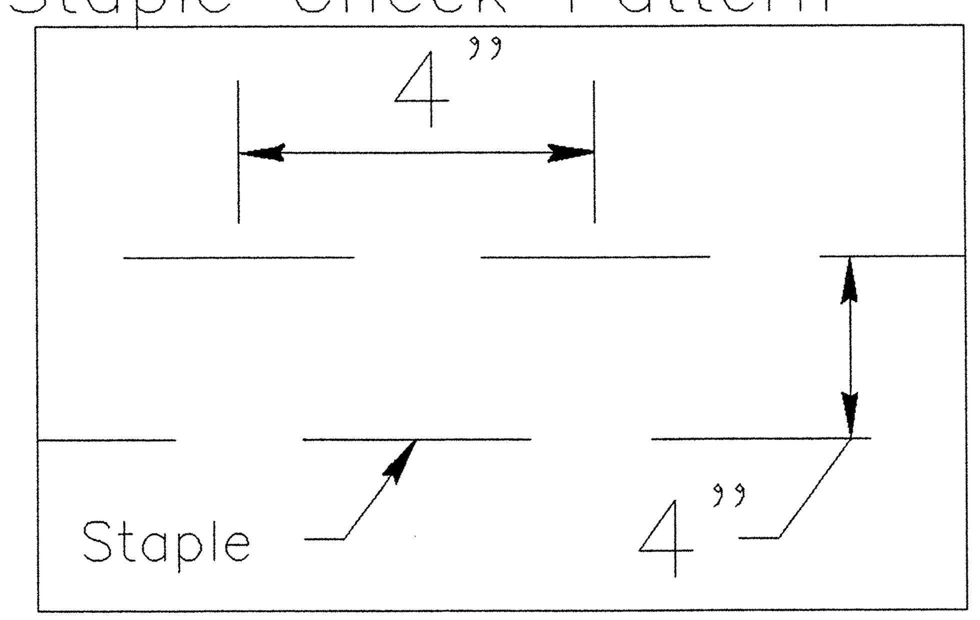


DIAGRAM C

NOTES:

THIS DETAIL APPLIES TO STRAW, EXCELSIOR, AND PERMANENT SOIL REINFORCEMENT MAT (PSRM) INSTALLATION.

STAPLES SHALL BE NO. 11 GAUGE STEEL WIRE FORMED INTO A "U" SHAPE WITH A MINIMUM THROAT WIDTH OF 1 INCH AND NOT LESS THAN 6 INCHES IN LENGTH.

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
43518.3.1	2-H

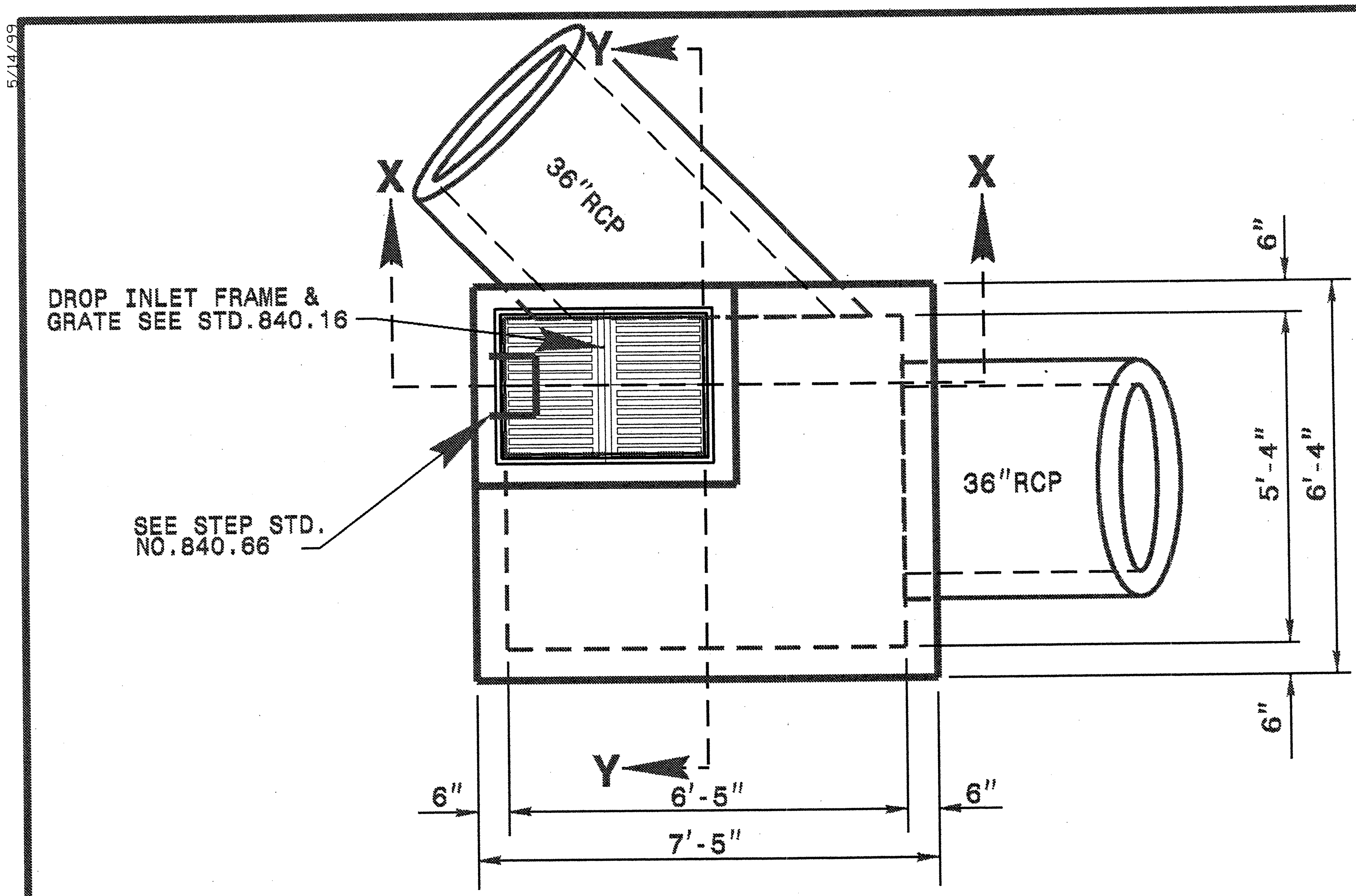
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

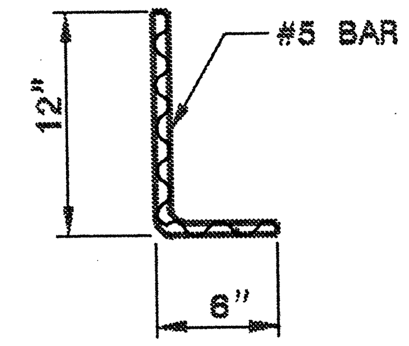
SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

PROJECT REFERENCE NO.	SHEET NO.
U-3810	2-I

5/14/99



PLAN



DOWEL

GENERAL NOTES:

USE CLASS "B" CONCRETE THROUGHOUT.

PROVIDE ALL DROP INLETS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.

OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #5 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.

USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.

IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.

ADJUST REINFORCING STEEL AS DIRECTED BY THE ENGINEER.

FOR 8'-0" IN HEIGHT OR LESS USE 6" WALLS AND BOTTOM SLAB. OVER 8'-0" TO 16'-0" IN HEIGHT USE 8" WALLS AND BOTTOM SLAB. ADJUST QUANTITIES ACCORDINGLY.

CHAMFER ALL EXPOSED CORNERS 1".

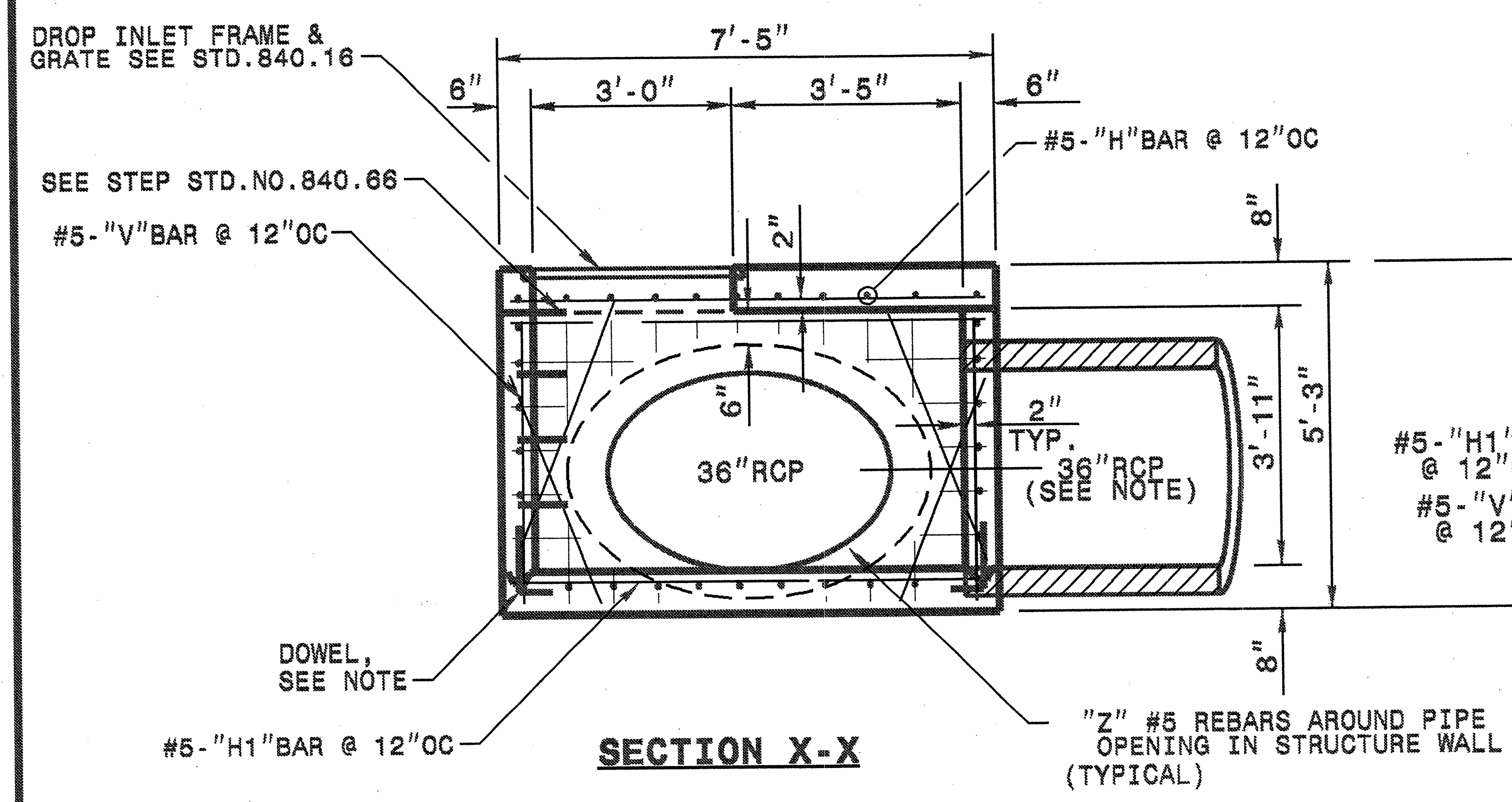
MINIMUM OF 2" COVERAGE ON ALL REBAR.

DIMENSIONS OF DROP INLET MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.

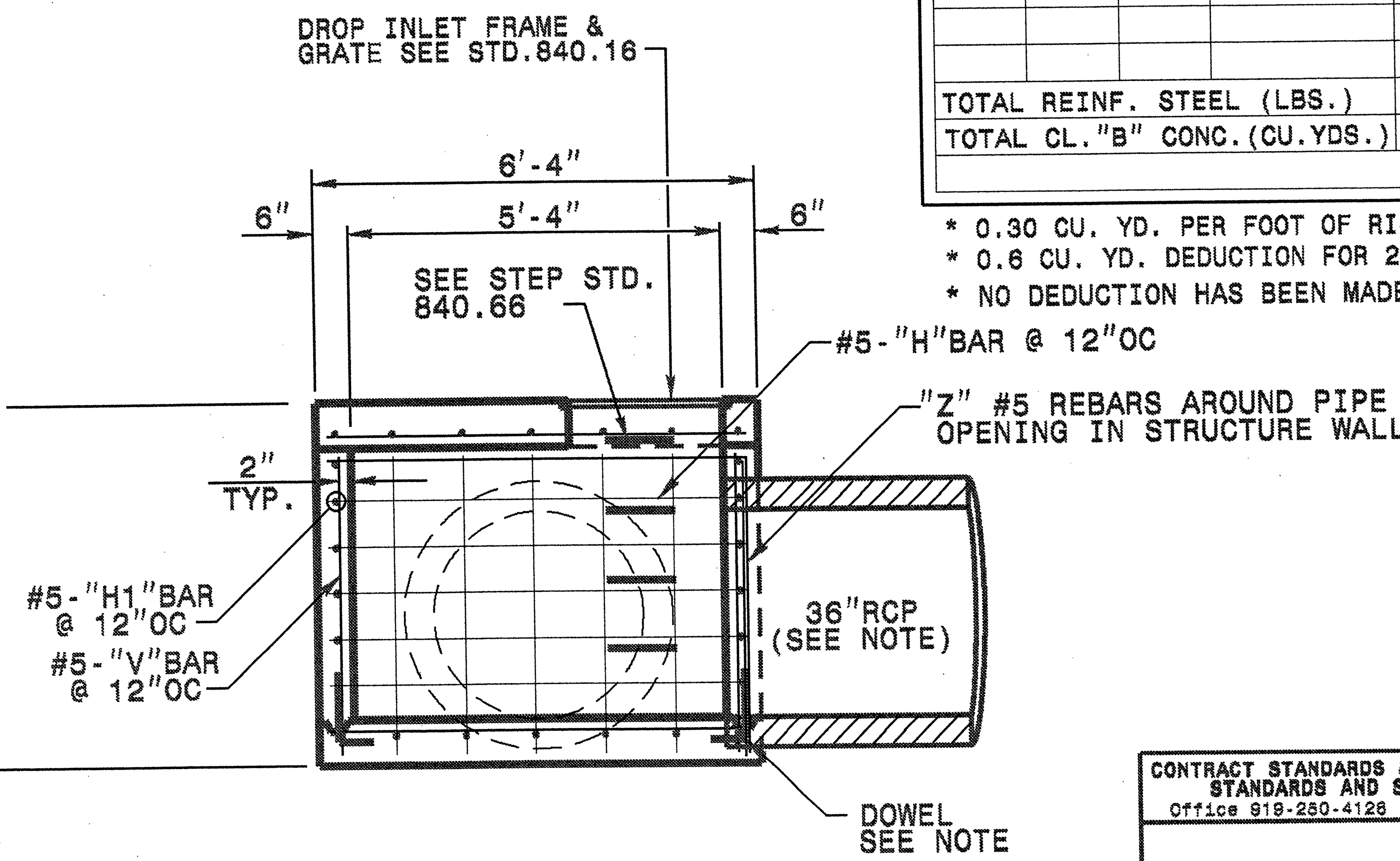
BILL OF MATERIALS

BAR	NO.	SIZE	LENGTH	WEIGHT
H	34	#5	6'-0"	307
H1	26	#5	7'-1"	277
V	32	#5	4'-3"	205
Z	8	#5	4'-0"	48
TOTAL REINF. STEEL (LBS.)				837
TOTAL CL."B" CONC.(CU.YDS.)				4.2

* 0.30 CU. YD. PER FOOT OF RISER HEIGHT
* 0.6 CU. YD. DEDUCTION FOR 2-36" RC PIPE
* NO DEDUCTION HAS BEEN MADE FOR PIPES



SECTION X-X



SECTION Y-Y

CONTRACT STANDARDS & DEVELOPMENT UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-250-4128 FAX 919-250-4119

SPECIAL DROP INLET

ORIGINAL BY: rnbritt DATE: 08-01-12
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: details/nbritt/english/hydro/di42.dgn

PROJECT NO.	SHEET NO.	TOTAL NO.
43518.3.1	3	

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	FINAL SURFACE TESTING REQUIRED	LENGTH MI	WIDTH FT	CONSTRUCTION SURVEYING LS	UNDERCUT EXC. CY	GRADING LS	BORROW EXC. CY	SELECT GRANULAR MAT. CY	GEOTEXTILE FOR SOIL STABILIZATION SY	FOUND. COND. MAT., MINOR STRS TON	FOUND. COND. GEOTEXTILE SY	15" RCP CULVERTS, CL. III LF	18" RCP CULVERTS, CL. III LF	24" RCP CULVERTS, CL. III LF	30" RC PIPE CULVERTS, CLASS III LF	36" RCP CULVERTS, CL. III LF	PIPE REMOVAL LF	PIPE CLEAN-OUT EA	INC. STONE BASE TONS	1 1/2" MILLING SY	BASE COURSE, B25.0C TONS	SURFACE COURSE, S9.5C TONS
43518	Onslow	1	NC 172	PROJECT WIDE-NC 172 L1 12+89-42+98/NC 210 Y1 12+90-31+65	-	NO	0	38	1	2,500	1	550	2,700	2,500													
		"	"	(L1 12+89-17+36) FROM 0.06 MI. SW OF NC 172/NC 210 INTERSECTION TO 0.02 MI. NE OF NC 172/NC 210 INTERSECTION	1	NO	0.085	38							10	20	36				54	36.00	3	75	555	121	233
		"	"	(L1 17+36-43+00) FROM 0.02 MI. NE OF NC 172/NC 210 INTERSECTION TO 0.51 MILES NE OF NC 172/NC 210 INTERSECTION	2	NO	0.486	48							220	680	72	208	568	1,022	156	1,064.00		350		2,904	542
TOTAL FOR MAP NO. 1							**0.571**		**1**	**2,500**	**1**	**550**	**2,700**	**2,500**	**230**	**700**	**108**	**208**	**568**	**1,022**	**210**	**1,100.00**	**3**	**425**	**555**	**3,025**	**775**
43518	Onslow	2	NC 210	(Y1 12+90-22+83) FROM 0.21 MI. NW OF NC 172/NC 210 INTERSECTION TO 0.02 MI NW OF NC 172/NC 210 INTERSECTION	3	NO	0.188	45							50	130	88	124	72	96		331.00		80	167	1,014	815
		"	"	(Y1 24+87-33+50) FROM 0.02 MI. SE OF NC 172/NC 210 INTERSECTION TO 0.15 MI. SE OF NC 172/NC 210 INTERSECTION	4	NO	0.163	57							100	290		42			759	528.00	1	260	200	490	532
TOTAL FOR MAP NO. 2							**0.351**								**150**	**420**	**88**	**166**	**72**	**96**	**759**	**859.00**	**1**	**340**	**367**	**1,504**	**1,347**
TOTAL FOR PROJ NO. 43518							**0.922**		**1**	**2,500**	**1**	**550**	**2,700**	**2,500**	**380**	**1,120**	**196**	**374**	**640**	**1,118**	**969**	**1,959.00**	**4**	**765**	**922**	**4,529**	**2,122**
GRAND TOTAL							**0.922**		**1**	**2,500**	**1**	**550**	**2,700**	**2,500**	**380**	**1,120**	**196**	**374**	**640**	**1,118**	**969**	**1,959.00**	**4**	**765**	**922**	**4,529**	**2,122**

PROJECT NO.	SHEET NO.	TOTAL NO.
43518.3.1	3-A	

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	FINAL SURFACE TESTING REQUIRED	LENGTH MI	WIDTH FT	ASPHALT BINDER FOR PLANT MIX TON	ASHPALT PLANT MIX PAVEMENT REPAIR TONS	PATCHING EXISTING PAVEMENT (FULL DEPTH) TONS	PATCHING EXISTING PAVEMENT (MILL) TON	SUBDRAIN EXC. CY	GEOTEXTILE FOR SUBSURFACE DRAINS SY	SUBDRAIN COARSE AGGREGATE CY	6" PERFORATED SUBDRAIN PIPE LF	SUBDRAIN PIPE OUTLET EA	6" OUTLET PIPE LF	PIPE COLLARS CY	MASONRY DRAINAGE STRUCTURE EA	MASONRY DRAINAGE STRUCT LF	FRAME WITH TWO GRATES, STD 840.16 EA	FRAME WITH TWO GRATES, STD 840.24 EA	1'-6" 6" CONCRETE CURB & GUTTER LF	DRIVEWAYS SY	5" MONOLITHIC CONCRETE ISLANDS(SURFACE MOUNTED) SY	ADJ. OF METER OR VALVE BOX EA	RIP RAP, CLASS B TON	GEOTEXTILE FOR DRAINAGE SY
43518	Onslow	1	NC 172	PROJECT WIDE-NC 172 L1 12+89-42+98/NC 210 Y1 12+90-31+65	-	NO	0	38			100	100	448	2,000	336	2,000	4	24											
		"	"	(L1 12+89-17+36) FROM 0.06 MI. SW OF NC 172/NC 210 INTERSECTION TO 0.02 MI. NE OF NC 172/NC 210 INTERSECTION	1	NO	0.085	38	19											1	0.3	1							
		"	"	(L1 17+36-43+00) FROM 0.02 MI. NE OF NC 172/NC 210 INTERSECTION TO 0.51 MILES NE OF NC 172/NC 210 INTERSECTION	2	NO	0.486	48	161	20										18	14.9	12	5		20		13		
TOTAL FOR MAP NO. 1							**0.571**		**180**	**20**	**100**	**100**	**448**	**2,000**	**336**	**2,000**	**4**	**24**		**19**	**15.2**	**13**	**5**		**20**		**13**		
43518	Onslow	2	NC 210	(Y1 12+90-22+83) FROM 0.21 MI. NW OF NC 172/NC 210 INTERSECTION TO 0.02 MI NW OF NC 172/NC 210 INTERSECTION	3	NO	0.188	45	93											2		2		30	90	20	6	120	314.00
		"	"	(Y1 24+87-33+50) FROM 0.02 MI. SE OF NC 172/NC 210 INTERSECTION TO 0.15 MI. SE OF NC 172/NC 210 INTERSECTION	4	NO	0.163	57	53										0.90	9	2.6	9					2	11	28.00
TOTAL FOR MAP NO. 2							**0.351**		**146**										**0.90**	**11**	**2.6**	**11**	**0**	**30**	**90**	**20**	**8**	**131**	**342.00**
TOTAL FOR PROJ NO. 43518							**0.922**		**326**	**20**	**100**	**100**	**448**	**2,000**	**336**	**2,000**	**4**	**24**	**0.90**	**30**	**17.8**	**24**	**5**	**30**	**110**	**20**	**21**	**131**	**342.00**
GRAND TOTAL							**0.922**		**326**	**20**	**100**	**100**	**448**	**2,000**	**336**	**2,000**	**4**	**24**	**0.90**	**30**	**17.8**	**24**	**5**	**30**	**110**	**20**	**21**	**131**	**342.00**

PROJECT NO.	SHEET NO.	TOTAL NO.
43518.3.1	3-B	

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	FINAL SURFACE TESTING REQUIRED	LENGTH MI	WIDTH FT	PORTABLE LIGHTING LS	1" WATER LINE LF	RELOCATE WATER METER EA	3/4" WATER LINE LF	TEMPORARY SILT FENCE LF	SEDIMENT CONTROL STONE TON	TEMPORARY MULCHING ACR	SEED FOR TEMPORARY SEEDING LBS	SAFETY FENCE LF	SILT EXCAVATION CY	MATTING FOR EROSION CONTROL SY	1/4" HARDWARE CLOTH LF	WATTLE LF	POLYACRYLAMIDE (PAM) LB	SEED & MULCHING AC	SEED FOR REPAIR SEEDING LB	FERTILIZER FOR REPAIR SEEDING TON	SIGNAL CABLE LF	VEHICLE SIGNAL HEAD (12", 3 SECTION) EA
43518	Onslow	1	NC 172	PROJECT WIDE-NC 172 L1 12+89-42+98/NC 210 Y1 12+90-31+65	-	NO	0	38	1.00																	450	5
		"	"	(L1 12+89-17+36) FROM 0.06 MI. SW OF NC 172/NC 210 INTERSECTION TO 0.02 MI. NE OF NC 172/NC 210 INTERSECTION	1	NO	0.085	38		20.00	1.00	20.00	95		0.25	13			1,105		32	10	0.25	13	0.10		
		"	"	(L1 17+36-43+00) FROM 0.02 MI. NE OF NC 172/NC 210 INTERSECTION TO 0.51 MILES NE OF NC 172/NC 210 INTERSECTION	2	NO	0.486	48		520.00	36.00	520.00	45	80	1.20	65		30		400	16	5	1.20	65	0.50		
TOTAL FOR MAP NO. 1							**0.571**		**1.00**	**540.00**	**37.00**	**540.00**	**140**	**80**	**1.45**	**78**		**30**	**1,105**	**400**	**48**	**15**	**1.45**	**78**	**0.60**	**450**	**5**
43518	Onslow	2	NC 210	(Y1 12+90-22+83) FROM 0.21 MI. NW OF NC 172/NC 210 INTERSECTION TO 0.02 MI NW OF NC 172/NC 210 INTERSECTION	3	NO	0.188	45		150.00	8.00	150.00	20	30	1.00	50	240	11	1,240	150	100	20	1.00	50	0.40		
		"	"	(Y1 24+87-33+50) FROM 0.02 MI. SE OF NC 172/NC 210 INTERSECTION TO 0.15 MI. SE OF NC 172/NC 210 INTERSECTION	4	NO	0.163	57		320.00	20.00	320.00		45	0.80	40		20	625	220	40	10	0.80	40	0.30		
TOTAL FOR MAP NO. 2							**0.351**			**470.00**	**28.00**	**470.00**	**20**	**75**	**1.80**	**90**	**240**	**31**	**1,865**	**370**	**140**	**30**	**1.80**	**90**	**0.70**		
TOTAL FOR PROJ NO. 43518							**0.922**		**1.00**	**1,010.00**	**65.00**	**1,010.00**	**160**	**155**	**3.25**	**168**	**240**	**61**	**2,970**	**770**	**188**	**45**	**3.25**	**168**	**1.30**	**450**	**5**
GRAND TOTAL							**0.922**		**1.00**	**1,010.00**	**65.00**	**1,010.00**	**160**	**155**	**3.25**	**168**	**240**	**61**	**2,970**	**770**	**188**	**45**	**3.25**	**168**	**1.30**	**450**	**5**

PROJECT NO.	SHEET NO.	TOTAL NO.
43518.3.1	3-C	

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	FINAL SURFACE TESTING REQUIRED	LENGTH MI	WIDTH FT	MESSENGER CABLE (3/8") LF	UNPAVED TRENCHING (1 CONDUIT, 2") LF	DIRECTIONAL DRILL (1 CONDUIT, 2") LF	JUNCTION BOX (STANDARD SIZE) EA	WOOD POLE EA	GUY ASSEMBLY EA	INDUCTIVE LOOP LF	LEAD-IN CABLE (14-2) LF
43518	Onslow	1	NC 172	PROJECT WIDE-NC 172 L1 12+89-42+98/NC 210 Y1 12+90-31+65	-	NO	0	38	210	60	1,200	13	1	2	1,400	5,000
		"	"	(L1 12+89-17+36) FROM 0.06 MI. SW OF NC 172/NC 210 INTERSECTION TO 0.02 MI. NE OF NC 172/NC 210 INTERSECTION	1	NO	0.085	38								
		"	"	(L1 17+36-43+00) FROM 0.02 MI. NE OF NC 172/NC 210 INTERSECTION TO 0.51 MILES NE OF NC 172/NC 210 INTERSECTION	2	NO	0.486	48								
TOTAL FOR MAP NO. 1							**0.571**		**210**	**60**	**1,200**	**13**	**1**	**2**	**1,400**	**5,000**
43518	Onslow	2	NC 210	(Y1 12+90-22+83) FROM 0.21 MI. NW OF NC 172/NC 210 INTERSECTION TO 0.02 MI NW OF NC 172/NC 210 INTERSECTION	3	NO	0.188	45								
		"	"	(Y1 24+87-33+50) FROM 0.02 MI. SE OF NC 172/NC 210 INTERSECTION TO 0.15 MI. SE OF NC 172/NC 210 INTERSECTION	4	NO	0.163	57								
TOTAL FOR MAP NO. 2							**0.351**									
TOTAL FOR PROJ NO. 43518							**0.922**		**210**	**60**	**1,200**	**13**	**1**	**2**	**1,400**	**5,000**
GRAND TOTAL							**0.922**		**210**	**60**	**1,200**	**13**	**1**	**2**	**1,400**	**5,000**

PROJECT NO.	SHEET NO.	TOTAL NO.
43518.3.1	3-D	

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	LENGTH	WIDTH	4399000000-N	4685000000-E		4686000000-E		4700000000-E	4710000000-E	4725000000-E					4726000000-E	4810000000-E	4850000000-E	4875000000-N	4900000000-N	4905000000-N	
							TEMPORARY TRAFFIC CONTROL LS	4" X 90 M WHITE THERMO LF	4" X 90 M YELLOW THERMO LF	4" X 120 M WHITE THERMO LF	4" X 120 M YELLOW THERMO LF	12" X 90 M YELLOW THERMO LF	24" X 120 M WHITE THERMO LF	THERMO LT ARROW 90 M EA	THERMO STR & RT ARROW 90 M EA	MERGE ARROW 90 M EA	THERMO RT ARROW 90 M EA	THERMO STR ARROW 90 M EA	HEATED-IN-PLACE THERMOPLASTIC PAVEMENT MARKING LINES LF	4" WHITE PAINT LF	4" LINE REMOVAL LF	REMOVAL OF PAVEMENT MARKING SYMBOLS & CHARACTERS EA	YELLOW & YELLOW MARKERS EA	SNOW PLOWABLE MARKERS (Y/Y) EA	SNOW PLOWABLE MARKERS (C/R) EA
43518	Onslow	1	NC 172	PROJECT WIDE-NC 172 L1 12+89-42+98/NC 210 Y1 12+90-31+65	0	38	1																		
		"	"	(L1 12+89-17+36) FROM 0.06 MI. SW OF NC 172/NC 210 INTERSECTION TO 0.02 MI. NE OF NC 172/NC 210 INTERSECTION	0.085	38		518		130	984		103	1	1							4		20	10
		"	"	(L1 17+36-43+00) FROM 0.02 MI. NE OF NC 172/NC 210 INTERSECTION TO 0.51 MILES NE OF NC 172/NC 210 INTERSECTION	0.486	48		2,594		661						5				2,594	2,594				46
TOTAL FOR MAP NO. 1					**0.571**		**1**	**3,112**		**791**	**984**		**103**	**1**	**1**	**5**				**2,594**	**2,594**	**4**		**20**	**56**
43518	Onslow	2	NC 210	(Y1 12+90-22+83) FROM 0.21 MI. NW OF NC 172/NC 210 INTERSECTION TO 0.02 MI NW OF NC 172/NC 210 INTERSECTION	0.188	45		2,262	38	582	3,208	270	54	6	2		1		56				9	40	57
		"	"	(Y1 24+87-33+50) FROM 0.02 MI. SE OF NC 172/NC 210 INTERSECTION TO 0.15 MI. SE OF NC 172/NC 210 INTERSECTION	0.163	57		1,496		552	2,728	208	57	1			3	2						34	28
TOTAL FOR MAP NO. 2					**0.351**			**3,758**	**38**	**1,134**	**5,936**	**478**	**111**	**7**	**2**		**4**	**2**	**56**				**9**	**74**	**85**
TOTAL FOR PROJ NO. 43518					**0.922**		**1**	**6,870**	**38**	**1,925**	**6,920**	**478**	**214**	**8**	**3**	**5**	**4**	**2**	**56**	**2,594**	**2,594**	**4**	**9**	**94**	**141**
								6,908		**8,845**				**22**										**235**	
GRAND TOTAL					**0.922**		**1**	**6,870**	**38**	**1,925**	**6,920**	**478**	**214**	**8**	**3**	**5**	**4**	**2**	**56**	**2,594**	**2,594**	**4**	**9**	**94**	**141**
								6,908		**8,845**				**22**										**235**	

COMPUTED BY: DNL DATE: 7/20/2012

CHECKED BY: DATE:

RD248621

PROJECT NO.	SHEET NO.
43518.3.1	3-E

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

STATION / SIZE / THICKNESS OR GAUGE	LOCATION (LT, RT, OR CL)	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL
-L1- 10+99.53	29.33' (RT)		0401		34.90	35.00	
-L1- 17+31.18	93.35 (RT)		0402	44.25	38.93		
-L1- 17+31.18	93.35 (RT)	0402	0403		38.93	39.12	
-L1- 17+55.90	43.15 (RT)		0403	45.50	39.12		
-L1- 17+55.90	43.15 (RT)	0403	0501		39.12	39.67	
-L1- 19+15.97	39.71 (RT)		0501	47.00	39.67		
-L1- 19+15.97	39.71 (RT)	0501	0502		39.67	40.00	
-L1- 19+98.09	33.33 (RT)		0502	47.50	40.00		
-L1- 19+98.09	33.33 (RT)	0502	0503		40.00	40.24	
-L1- 20+71.22	35.24 (RT)		0503	48.00	40.24		
-L1- 20+71.22	35.24 (RT)	0503	0504		40.24	40.45	
-L1- 21+35.88	40.18 (RT)		0504	48.00	40.45		
-L1- 21+35.88	40.18 (RT)	0504	0505		40.45	40.71	
-L1- 22+11.01	39.26 (RT)		0505	47.50	40.71		
-L1- 22+11.01	39.26 (RT)	0505	0506		40.71	41.12	
-L1- 23+31.06	40.68 (RT)		0506	47.00	41.12		
-L1- 23+31.06	40.68 (RT)	0506	0507		41.12	41.47	
-L1- 24+34.13	40.49 (RT)		0507	47.00	41.47		
-L1- 24+34.13	40.49 (RT)	0507	0508		41.47	41.75	
-L1- 25+17.63	41.12 (RT)		0508	47.00	41.75		
-L1- 25+17.63	41.12 (RT)	0508	0509		41.75	42.20	
-L1- 26+41.72	34.14 (RT)		0509	46.50	42.20		
-L1- 26+41.72	34.14 (RT)	0509	0601		42.20	42.44	
-L1- 27+14.81	37.69 (RT)		0601	46.50	42.44		
-L1- 27+14.81	37.69 (RT)	0601	0602		42.44	43.07	
-L1- 28+98.58	37.08 (RT)		0602	46.50	43.07		
-L1- 28+98.99	29.91 (LT)	0603	0602		44.80	43.07	
-L1- 28+98.58	37.08 (RT)	0602	0604		43.07	43.55	
-L1- 30+38.81	38.54 (RT)		0604	46.50	43.55		
-L1- 30+38.81	38.54 (RT)	0604	0605		43.55	44.05	
-L1- 31+86.54	38.77 (RT)		0605	46.75	44.05		
SHEET TOTALS							

STATION	DRAINAGE PIPE (RCP, CSP, CAAP, HDPE, or PVC) 12"	15"	18"	24"	30"	36"	42"	48"	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	C.S. PIPE 12" .064	15" .064	18" .064	24" .064	30" .079	36" .079	42" .109	48" .109	R.C. PIPE CLASS III 12"	15"	18"	24"	30"	36"	42"	48"	R.C. PIPE CLASS IV 12"	15"	18"	24"	30"	36"	42"	48"	** " R.C. PIPE (CLASS V)	***" RC PIPE CULVERTS, CONTRACTOR DESIGN	***" RC PIPE CULVERTS, CONTRACTOR DESIGN	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE
-L1- 10+99.53																						36																			
-L1- 17+31.18																																									
-L1- 17+31.18																										54															
-L1- 17+55.90																																									
-L1- 17+55.90																										156															
-L1- 19+15.97																																									
-L1- 19+15.97																									80																
-L1- 19+98.09																																									
-L1- 19+98.09																									68																
-L1- 20+71.22																																									
-L1- 20+71.22																									61																
-L1- 21+35.88																																									
-L1- 21+35.88																									72																
-L1- 22+11.01																																									
-L1- 22+11.01																									116																
-L1- 23+31.06																																									
-L1- 23+31.06																									100																
-L1- 24+34.13																																									
-L1- 24+34.13																									80																
-L1- 25+17.63																																									
-L1- 25+17.63																									128																
-L1- 26+41.72																																									
-L1- 26+41.72																									70																
-L1- 27+14.81																																									
-L1- 27+14.81																									180																
-L1- 28+98.58																																									
-L1- 28+98.99																									67																
-L1- 28+98.58																								136																	
-L1- 30+38.81																																									
-L1- 30+38.81																								144																	
-L1- 31+86.54																																									
SHEET TOTALS																						36		280	1022	210															

STATION	ENDWALLS STD. 838.01 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YARDS R.C.P.	C.S.P.	QUANTITIES FOR DRAINAGE STRUCTURES PER EACH (0' THRU 5.0')	*TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. "A" + (1.3 X COL."B") LIN. FT. A 5.0' THRU 10.0'	B 10.0' AND ABOVE	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G	CONCRETE TRANSITIONAL SECTION DROP INLET	CATCH BASIN	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATE STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR 840.26	G.D.I. TYPE "B" STD. 840.18 OR 840.27	G.D.I. TYPE "D" STD. 840.19 OR 840.28	G.D.I. FRAME WITH GRATE STD. 840.20	G.D.I. FRAME WITH TWO GRATES STD. 840.22	G.D.I. (N.S.) FRAME WITH GRATE STD. 840.24	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24	J.B. STD. 840.31 OR 840.32	2 O.T.C.B. STD. 840.04 OR 840.05	T.B.G.D.I. STD. 840.35	Special Drop Inlet See Detail Sheet 2-I	DRAINAGE PIPE ELBOWS NO. & SIZE	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	CONC. COLLARS CL. "B" C.Y. STD. 840.72	PIPE REMOVAL LIN. FT.	REMARKS
-L1- 10+99.53																													
-L1- 17+31.18			1	0.3									1											1					
-L1- 17+31.18																													
-L1- 17+55.90			1	1.4									1											1					
-L1- 17+55.90																													
-L1- 19+15.97			1	2.3																		1							
-L1- 19+15.97																													
-L1- 19+98.09			1	2.5																1			1						
-L1- 19+98.09																													
-L1- 20+71.22			1	2.6																1			1						
-L1- 20+71.22																													
-L1- 21+35.88			1	2.6																1			1						
-L1- 21+35.88																													
-L1- 22+11.01			1	1.8																1			1						
-L1- 22+11.01																													
-L1- 23+31.06			1	0.9									1											1					
-L1- 23+31.06																													
-L1- 24+34.13			1	0.5									1											1					
-L1- 24+34.13																													
-L1- 25+17.63			1	0.3									1											1					
-L1- 25+17.63																													
-L1- 26+41.72			1																	1			1						
-L1- 26+41.72																													
-L1- 27+14.81			1										1											1					
-L1- 27+14.81																													
-L1- 28+98.58			1										1											1					
-L1- 28+98.99																													
-L1- 28+98.58																													
-L1- 30+38.81			1										1											1					
-L1- 30+38.81																													
-L1- 31+86.54			1										1											1					
SHEET TOTALS			15	15.2									9							5		1	5	9					

ABBREVIATIONS

C.B.	CATCH BASIN
N.D.I.	NARROW DROP INLET
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
G.D.I.(N.S.)	(NARROW SLOT)
J.B.	JUNCTION BOX
M.H.	MANHOLE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX

RD248621

COMPUTED BY: DNL DATE: 7/20/2012

CHECKED BY: DATE:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
43518.3.1	3-F

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

STATION	LOCATION (LT, RT, OR CL)	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	R.C. PIPE CLASS III 15"	R.C. PIPE CLASS III 18"	R.C. PIPE CLASS III 24"	R.C. PIPE CLASS III 30"	R.C. PIPE CLASS III 36"	QUANTITIES FOR DRAINAGE STRUCTURES PER EACH (0' THRU 5.0')	LIN. FT. A 5.0' THRU 10.0'	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATE STD. 840.16	Special Drop Inlet See Detail Sheet 2-I	CONC. COLLARS CL. "B" C.Y. STD. 840.72	REMARKS
-L1- 31+86.54	38.77 (RT)	0605	0606		44.05	44.55				120									
-L1- 33+09.10	39.26 (RT)		0606	47.50	44.55								1			1	1		
-L1- 33+09.10	39.26 (RT)	0606	0607		44.55	45.05				168									
-L1- 34+80.08	38.72 (RT)		0607	47.50	45.05								1			1	1		
-L1- 34+80.08	38.72 (RT)	0607	0701		45.05	45.47			120										
-L1- 36+03.78	39.93 (RT)		0701	47.50	45.47								1		1	1			
-L1- 36+03.78	39.93 (RT)	0701	0702		45.47	45.67			56										
-L1- 36+62.98	39.17 (RT)		0702	47.50	45.67								1		1	1			
-L1- 36+62.98	39.17 (RT)	0702	0703		45.67	45.78			32										
-L1- 37+60.82	41.43 (RT)		0704		45.96	46.04		24											
-L1- 39+02.35	38.65 (RT)		0705		46.28	46.33		24											
-L1- 39+49.58	37.98 (RT)		0706		46.38	46.40		24											
-Y1- 18+39.44	35.88 (RT)		0901	40.75	36.90								1		1	1			
-Y1- 18+85.66	37.33 (RT)	0901	0902		36.90	40.00		44											
-Y1- 18+67.77	38.52 (LT)	0903	0904		39.00	39.50					96								
-Y1- 19+63.90	38.88 (LT)		0904	42.50	39.50								1			1	1		
-Y1- 20+08.69	38.63 (RT)		0905		40.60	40.90		44											
-Y1- 19+63.90	38.88 (LT)	0904	0906		39.50	40.00				72									
-Y1- 21+58.93	36.93 (LT)		0907		41.20	41.10			56										
-Y1- 22+29.74	38.99 (LT)		0908		41.50	41.80			68										
-Y1- 25+76.59	45.42 (RT)		0909	42.75	40.40								1		1	1		0.45	
-Y1- 25+84.02	43.29 (RT)	0909	0910		40.40	40.00			7										
-Y1- 26+40.03	42.78 (RT)	1001	1002		39.80	39.80			35									0.45	
-Y1- 26+79.62	40.00 (RT)		1002	42.30	39.80								1		1	1			
-Y1- 27+92.61	42.56 (RT)		1003	41.75	38.00								1		1	1			
-L1- 17+31.18	93.35 (RT)	0402	1004		38.93	38.47						132							
-Y1- 26+75.27	40.66 (LT)		1004	44.00	38.47								1	0.5		1	1		
SHEET TOTALS								160	374	360	96	132	10	0.5	6	10	4	0.9	

Other column headings (no entries on this sheet): SIZE; THICKNESS OR GAUGE; DRAINAGE PIPE (RCP, CSP, CAAP, HDPE, or PVC) 12" 15" 18" 24" 30" 36" 42" 48"; DO NOT USE RCP; DO NOT USE CSP; DO NOT USE CAAP; DO NOT USE HDPE; C.S. PIPE 12" 15" 18" 24" 30" 36" 42" 48" (.064 .064 .064 .064 .079 .079 .109 .109); R.C. PIPE CLASS III 12" 42" 48"; R.C. PIPE CLASS IV 12" 15" 18" 24" 30" 36" 42" 48"; ** " R.C. PIPE (CLASS V); **** RC PIPE CULVERTS, CONTRACTOR DESIGN; **** RC PIPE CULVERTS, CONTRACTOR DESIGN; 15" SIDE DRAIN PIPE; 18" SIDE DRAIN PIPE; ENDWALLS STD. 838.01 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YARDS R.C.P. C.S.P.; "TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL.'B')" B 10.0' AND ABOVE; C.B. STD. 840.01 OR STD. 840.02; FRAME, GRATES, AND HOOD STANDARD 840.03 TYPE OF GRATE E F G; CONCRETE TRANSITIONAL SECTION DROP INLET, CATCH BASIN; G.D.I. TYPE "A" STD. 840.17 OR 840.26; G.D.I. TYPE "B" STD. 840.18 OR 840.27; G.D.I. TYPE "D" STD. 840.19 OR 840.28; G.D.I. FRAME WITH GRATE STD. 840.20; G.D.I. FRAME WITH TWO GRATES STD. 840.22; G.D.I. (N.S.) FRAME WITH GRATE STD. 840.24; G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24; J.B. STD. 840.31 OR 840.32; 2 O.T.C.B. STD. 840.04 OR 840.05; T.B.G.D.I. STD. 840.35; DRAINAGE PIPE ELBOWS NO. & SIZE; CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71; PIPE REMOVAL LIN. FT.

ABBREVIATIONS

C.B.	CATCH BASIN
N.D.I.	NARROW DROP INLET
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
G.D.I.(N.S.)	(NARROW SLOT)
J.B.	JUNCTION BOX
M.H.	MANHOLE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX

RD248621

COMPUTED BY: DNL DATE: 7/20/2012

CHECKED BY: DATE:

PROJECT NO.	SHEET NO.
43518.3.1	3-G

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

STATION	LOCATION (LT, RT, OR CL)	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	R.C. PIPE CLASS III 15"	R.C. PIPE CLASS III 18"	R.C. PIPE CLASS III 24"	R.C. PIPE CLASS III 30"	R.C. PIPE CLASS III 36"	QUANTITIES FOR DRAINAGE STRUCTURES PER EACH (0' THRU 5.0')	*TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL.'B') LIN. FT. A 5.0' THRU 10.0'	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATE STD. 840.16	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24	2 O.T.C.B. STD. 840.04 OR 840.05	T.B.G.D.I. STD. 840.35	Special Drop Inlet See Detail Sheet 2-I	CONC. COLLARS CL. "B" C.Y. STD. 840.72
-Y1- 26+75.27	40.66 (LT)	1004	1005		38.47	38.33					40									
-Y1- 27+18.74	41.55 (LT)		1005	43.00	38.33							1			1				1	
-Y1- 27+18.74	41.55 (LT)	1005	1006		38.33	36.80					152									
-Y1- 28+71.83	47.36 (LT)		1006	41.50	36.80							1			1				1	
-Y1- 28+71.83	47.36 (LT)	1006	1007		37.80	36.50					65									
-Y1- 29+37.81	49.73 (LT)		1007	42.70	36.50							1	1.2		1				1	
-Y1- 29+37.81	49.73 (LT)	1007	1008		37.50	36.10					60									
-Y1- 30+00.70	53.36 (LT)		1008	42.00	36.10							1	0.9		1				1	
-Y1- 30+00.70	53.36 (LT)	1008	1009		37.10	35.00					190									
-Y1- 31+88.15	56.30 (LT)		1009	39.75	35.00							1			1				1	
-Y1- 31+88.15	56.30 (LT)	1009	1010		35.00	34.60					120									
SHEET 3-G SUB TOTAL											627	5	2.1		5				5	
SHEET 3-E SUB TOTAL							36		280	1022	210	15	15.2		9	5	1	5	9	
SHEET 3-F SUB TOTAL							160	374	360	96	132	10	0.5	6	10				4	0.9
GRAND TOTALS							196	374	640	1118	969	30	17.8	6	24	5	1	5	18	0.9

Other column headings on the form (no entries): SIZE; THICKNESS OR GAUGE; SLOPE CRITICAL; DRAINAGE PIPE (RCP, CSP, CAAP, HDPE, or PVC) 12" 15" 18" 24" 30" 36" 42" 48", DO NOT USE RCP, DO NOT USE CSP, DO NOT USE CAAP, DO NOT USE HDPE; C.S. PIPE 12" 15" 18" 24" 30" 36" 42" 48" (.064 .064 .064 .064 .079 .079 .109 .109); R.C. PIPE CLASS III 12", 42", 48"; R.C. PIPE CLASS IV 12" 15" 18" 24" 30" 36" 42" 48"; ** R.C. PIPE (CLASS V); **** RC PIPE CULVERTS, CONTRACTOR DESIGN; **** RC PIPE CULVERTS, CONTRACTOR DESIGN; 15" SIDE DRAIN PIPE; 18" SIDE DRAIN PIPE; ENDWALLS STD. 838.01 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YARDS R.C.P., C.S.P.; B 10.0' AND ABOVE; C.B. STD. 840.01 OR STD. 840.02; FRAME, GRATES, AND HOOD STANDARD 840.03 TYPE OF GRATE E F G; CONCRETE TRANSITIONAL SECTION DROP INLET, CATCH BASIN; G.D.I. TYPE "A" STD. 840.17 OR 840.26; G.D.I. TYPE "B" STD. 840.18 OR 840.27; G.D.I. TYPE "D" STD. 840.19 OR 840.28; G.D.I. FRAME WITH GRATE STD. 840.20; G.D.I. FRAME WITH TWO GRATES STD. 840.22; G.D.I. (N.S.) FRAME WITH GRATE STD. 840.24; J.B. STD. 840.31 OR 840.32; DRAINAGE PIPE ELBOWS NO. & SIZE; CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71; PIPE REMOVAL LIN. FT.; REMARKS

ABBREVIATIONS

C.B.	CATCH BASIN
N.D.I.	NARROW DROP INLET
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
G.D.I.(N.S.)	(NARROW SLOT)
J.B.	JUNCTION BOX
M.H.	MANHOLE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX

COMPUTED BY: DNL DATE: 7-25-2012
CHECKED BY: DATE:

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
43518.3.1	3-H

PAVEMENT REMOVAL & EARTHWORK SUMMARIES

PAVEMENT REMOVAL SUMMARY

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	YD^2
-Y1-	15+65	16+17	RT	30
			TOTAL:	30
			SAY:	35

SUMMARY OF EARTHWORK

STATION	STATION	UNCL. EXCAV. (C.Y.)	EMBANK. +% (C.Y.)	BORROW (C.Y.)	WASTE (C.Y.)
(LT) -L1- 12+89	-L1- 17+36	108	19		89
(RT) -L1- 12+89	-L1- 17+36	39	171	132	
(LT) -L1- 17+36	-L1- 43+00				
(RT) -L1- 17+36	-L1- 43+00	1,651	418		1,233
SUBTOTALS:		1,798	608	132	1,322
(LT) -Y1- 12+90	-Y1- 22+83	365	335		30
(RT) -Y1- 12+90	-Y1- 22+83	439	204		235
(LT) -Y1- 24+87	-Y1- 31+65	178	520	342	
(RT) -Y1- 24+87	-Y1- 31+65	168	235	67	
SUBTOTALS:		1,150	1,294	409	265
PROJECT TOTALS:		2,948	1,902	541	1,587
GRAND TOTALS:		2,948	1,902	541	1,587
SAY:		3,000	–	550	–

Note: Approximate quantities only. Unclassified Excavation, Fine Grading, Clearing and Grubbing and Removal of Existing Pavement will be paid for at the contract lump sum price for "Grading."

6/21/00

31-JUL-2012 07:21
S:\Contracts\Contracts\Resurfacing Projects\Division 3\onslow\Revised Files\MicroStation Files\NC172_NC210_Rdy_misc_psh.dgn
$$$$USERNAME$$$$

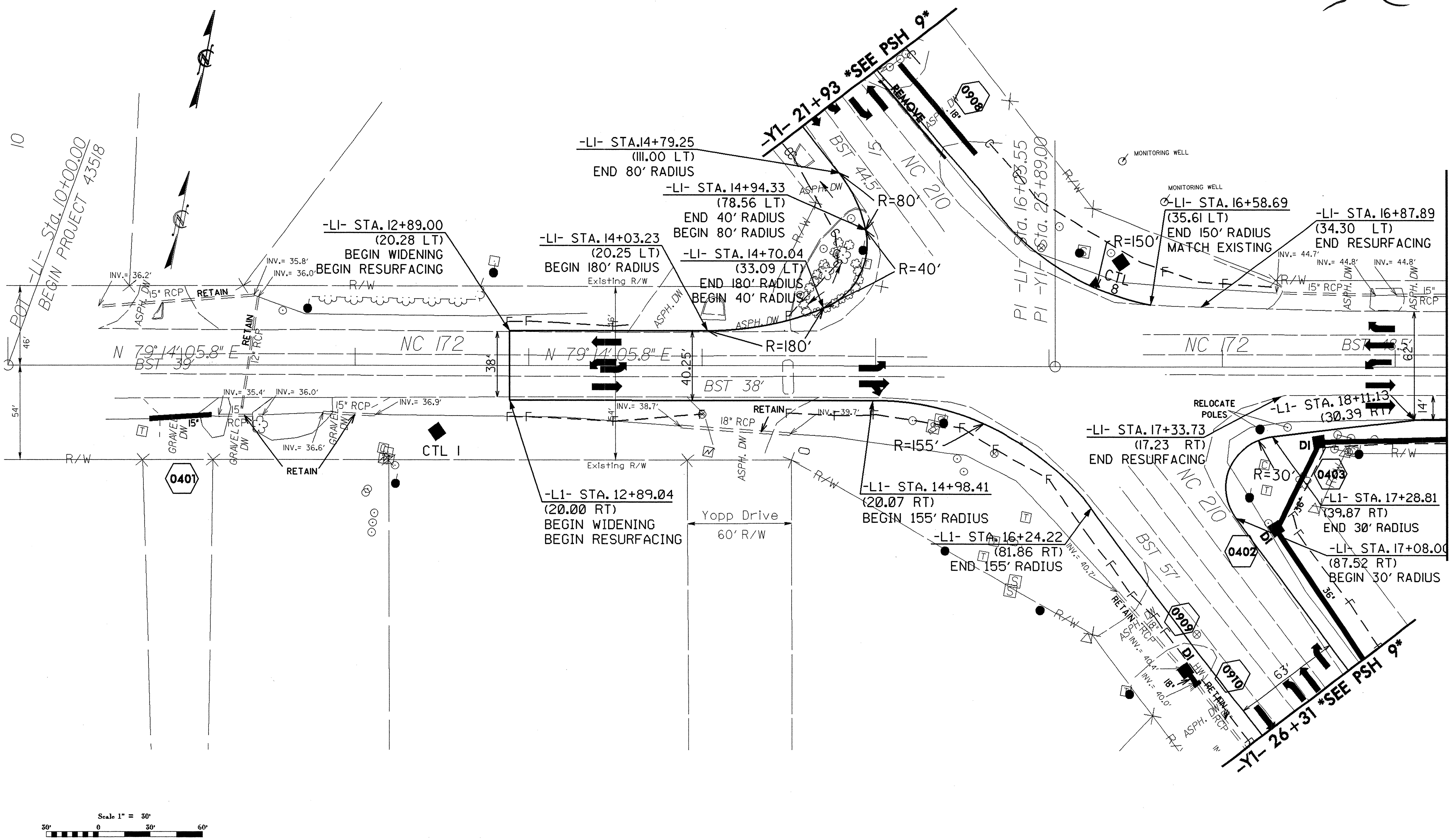
PROJECT REFERENCE NO.	SHEET NO.
43518.3.1	4

NORTH CAROLINA PROFESSIONAL SEAL 024905 ENGINEER SCOTT EVANS COOKE

DIVISION DESIGN ENGINEER HYDRAULICS ENGINEER

REVISIONS

8/17/99



-L1- NC 172

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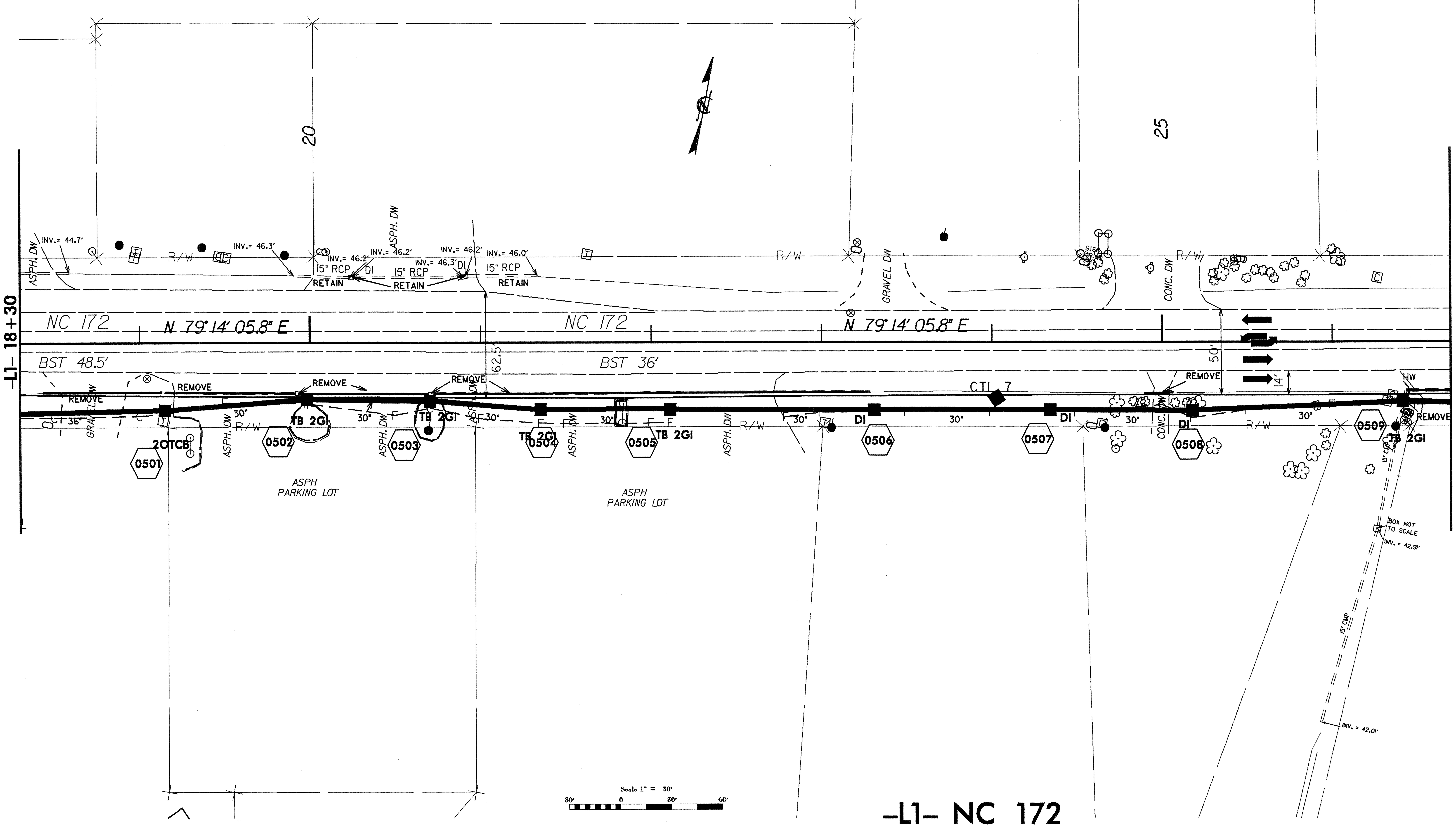
PROJECT REFERENCE NO.	SHEET NO.
43518.3.1	5

NORTH CAROLINA PROFESSIONAL SEAL 024905 ENGINEER SCOTT COOK EVANS

DIVISION DESIGN ENGINEER /HYDRAULICS ENGINEER

REVISIONS

8/17/99



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PROJECT REFERENCE NO.
43518.3.1
SHEET NO.
6
NORTH CAROLINA PROFESSIONAL SEAL 024905 ENGINEER SCOTT EVANS COOKE
DIVISION DESIGN ENGINEER/HYDRAULICS ENGINEER
REVISIONS
8/17/99
-L1- 26+70
-L1- 35+10
NC 172
BST 36'
N 79°14' 05.8" E
R/W
DUNN RD.
SUGAR LANE
RETAIN
18" RCP
15" RCP
15" CMP
18" CMP
INV.= 45.0'
INV.= 45.1'
INV.= 45.5'
INV.= 46.5'
INV.= 46.4'
INV.= 47.4'
INV.= 46.2'
INV.= 47.3'
INV. = 46.97'
INV. = 47.16'
INV. = 47.57'
INV. = 47.28'
INV. = 47.02'
INV. = 47.05'
CTL 6
REMOVE
HW
ASPH. DW
CONC. DW
SOIL DW
DI
30"
24"
49.8'
14'
0601
0602
0603
0604
0605
0606
0607
30
35
-L1- NC 172
Scale 1" = 30'
30' 0 30' 60'
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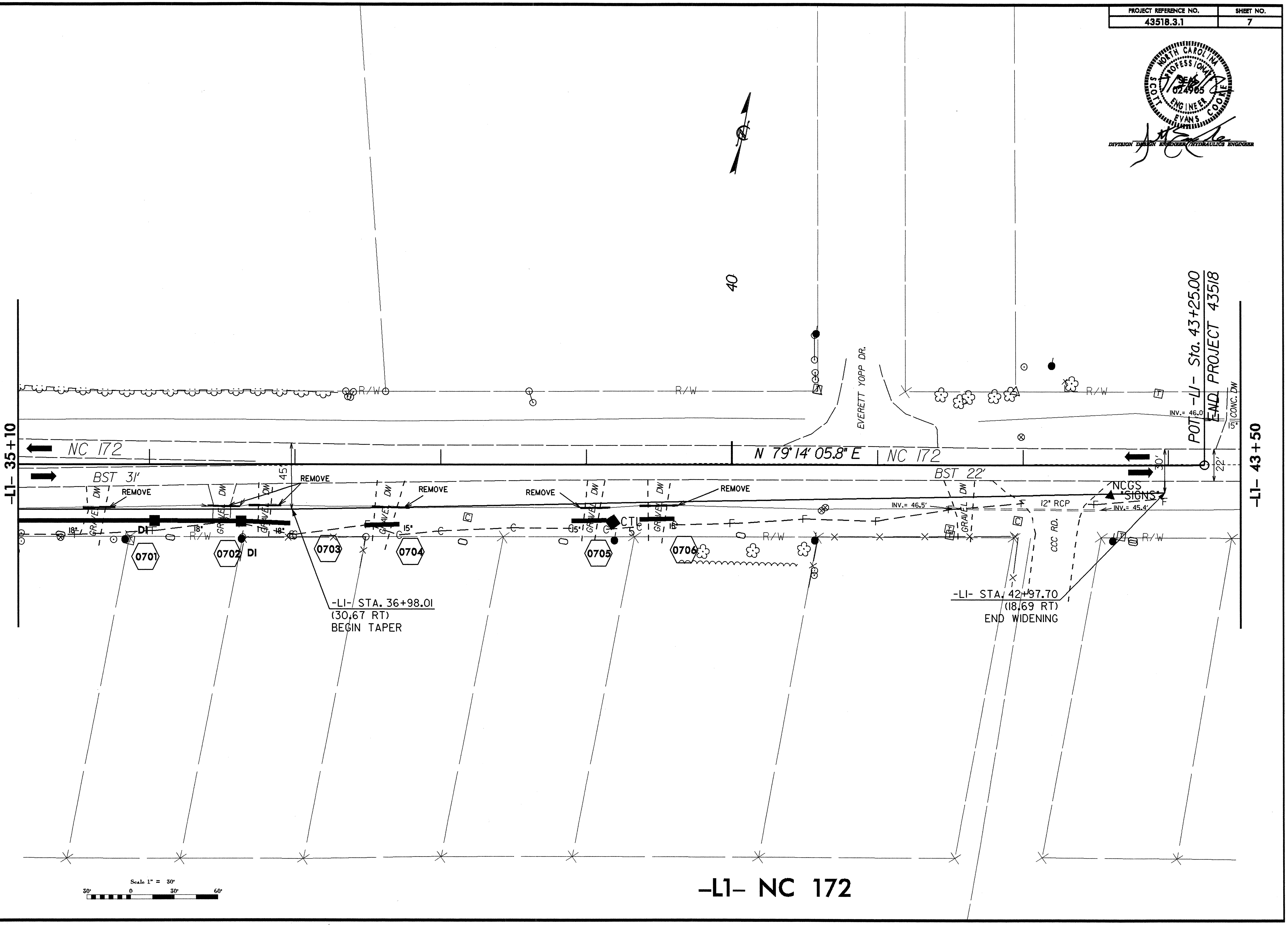
PROJECT REFERENCE NO.	SHEET NO.
43518.3.1	7



DIVISION DESIGN ENGINEER/HYDRAULICS ENGINEER

Scale 1" = 30'

-L1- NC 172

REVISIONS

8/17/99

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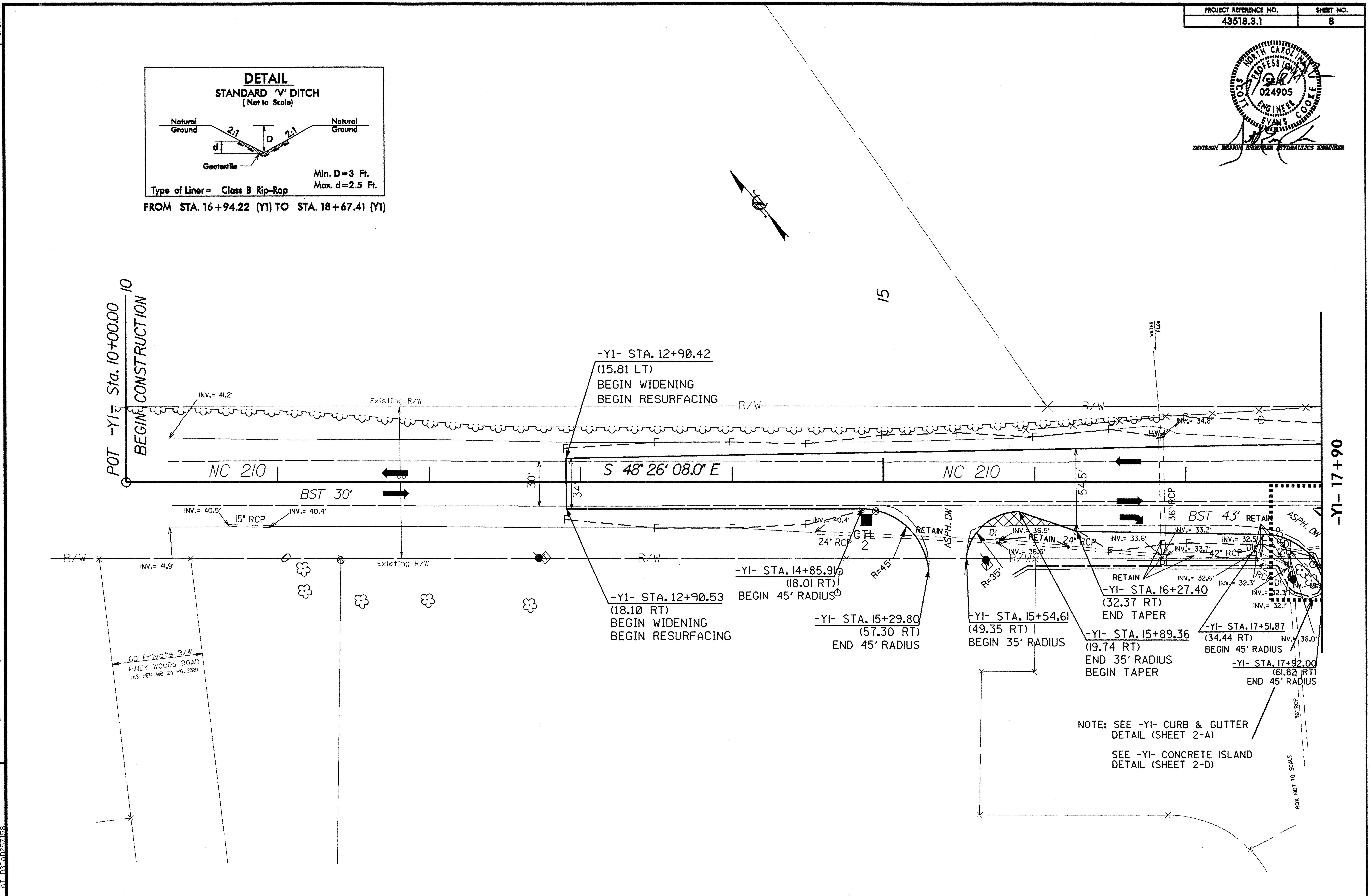
PROJECT REFERENCE NO.
43518.3.1
SHEET NO.
8
NORTH CAROLINA PROFESSIONAL SEAL 024905 ENGINEER SCOTT EVANS COOKE
DIVISION DESIGN ENGINEER HYDRAULICS ENGINEER
DETAIL
STANDARD 'V' DITCH
(Not to Scale)
Natural Ground
Natural Ground
2:1
2:1
D
d
Geotextile
Min. D=3 Ft.
Max. d=2.5 Ft.
Type of Liner= Class B Rip-Rap
FROM STA. 16+94.22 (Y1) TO STA. 18+67.41 (Y1)
POT -Y1- Sta. 10+00.00
BEGIN CONSTRUCTION
10
15
-Y1- STA. 12+90.42
(15.81 LT)
BEGIN WIDENING
BEGIN RESURFACING
Existing R/W
R/W
INV.= 41.2'
NC 210
S 48° 26' 08.0" E
NC 210
BST 30'
BST 43'
INV.= 40.5'
15" RCP
INV.= 40.4'
INV.= 41.9'
Existing R/W
24" RCP
CTL 2
RETAIN
ASPH. DW
R=45'
R=35'
-Y1- STA. 12+90.53
(18.10 RT)
BEGIN WIDENING
BEGIN RESURFACING
-Y1- STA. 14+85.91
(18.01 RT)
BEGIN 45' RADIUS
-Y1- STA. 15+29.80
(57.30 RT)
END 45' RADIUS
-Y1- STA. 15+54.61
(49.35 RT)
BEGIN 35' RADIUS
-Y1- STA. 15+89.36
(19.74 RT)
END 35' RADIUS
BEGIN TAPER
-Y1- STA. 16+27.40
(32.37 RT)
END TAPER
-Y1- STA. 17+51.87
(34.44 RT)
BEGIN 45' RADIUS
-Y1- STA. 17+92.00
(61.82 RT)
END 45' RADIUS
42" RCP
36" RCP
54.5'
34'
30'
WATER FLOW
HW
DI
-Y1- 17+90
60' Private R/W
PINEY WOODS ROAD
(AS PER MB 24 PG. 238)
NOTE: SEE -Y1- CURB & GUTTER DETAIL (SHEET 2-A)
SEE -Y1- CONCRETE ISLAND DETAIL (SHEET 2-D)
NOT TO SCALE
REVISIONS
8/17/99
Scale 1" = 30'
30' 0 30' 60'

-Y1- NC 210

PROJECT REFERENCE NO.	SHEET NO.
43518.3.1	9

PROJECT REFERENCE NO.	SHEET NO.
43518.3.1	10

-Y1- NC 210

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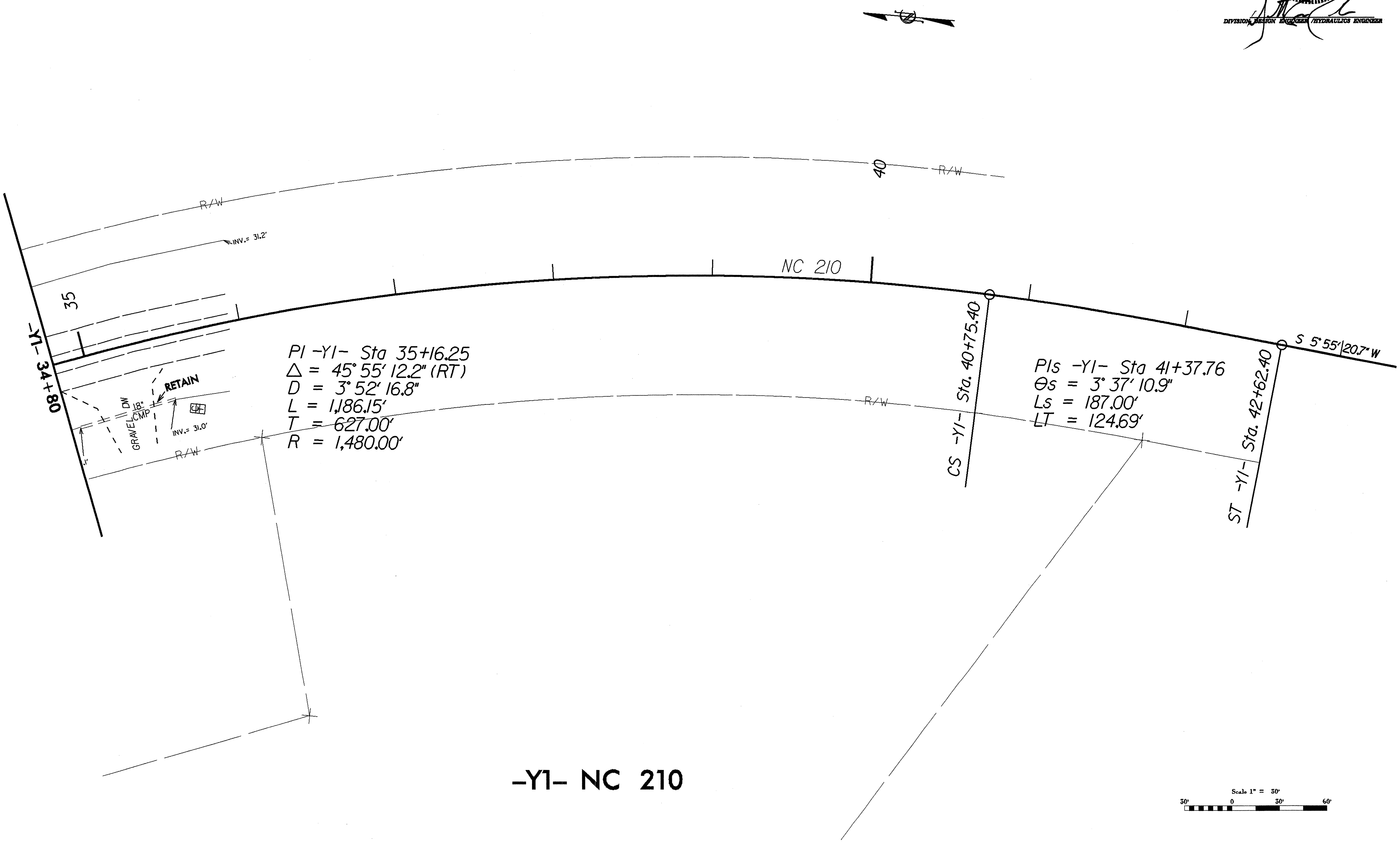
PROJECT REFERENCE NO.	SHEET NO.
43518.3.1	11

NORTH CAROLINA PROFESSIONAL SEAL 024905 ENGINEER SCOTT EVANS COOKE

DIVISION DESIGN ENGINEER /HYDRAULICS ENGINEER

REVISIONS

8/17/99



-Y1- NC 210

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