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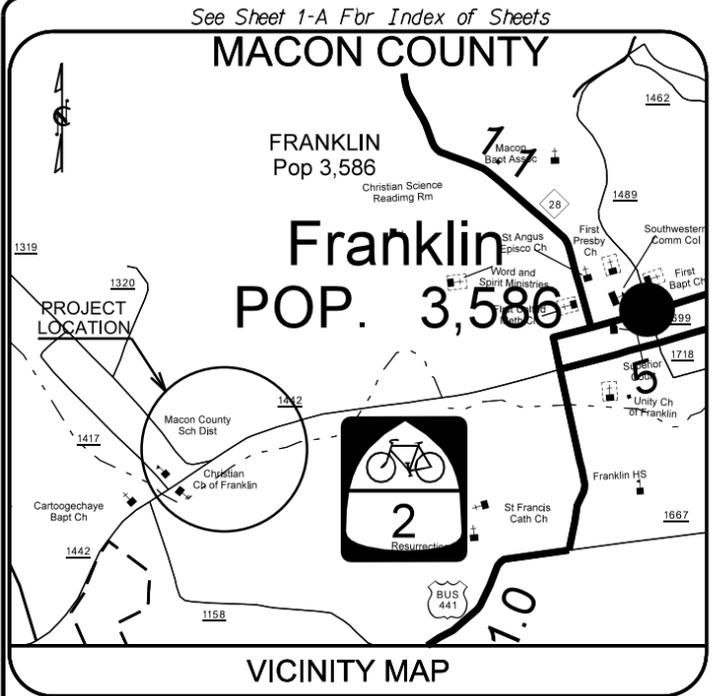
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09/08/99

22-JUL-2016 11:36 S:\Dist3\Macon\DN00527 W_Palmer St Drainage\palmer street utilities\design\hydrualics\PALMER_Rdy_dsn.dgn arbrown4 AT DI4CAD272166

CONTRACT: DN00527 WBS ELEMENT: 44780



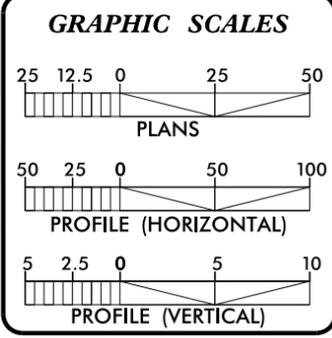
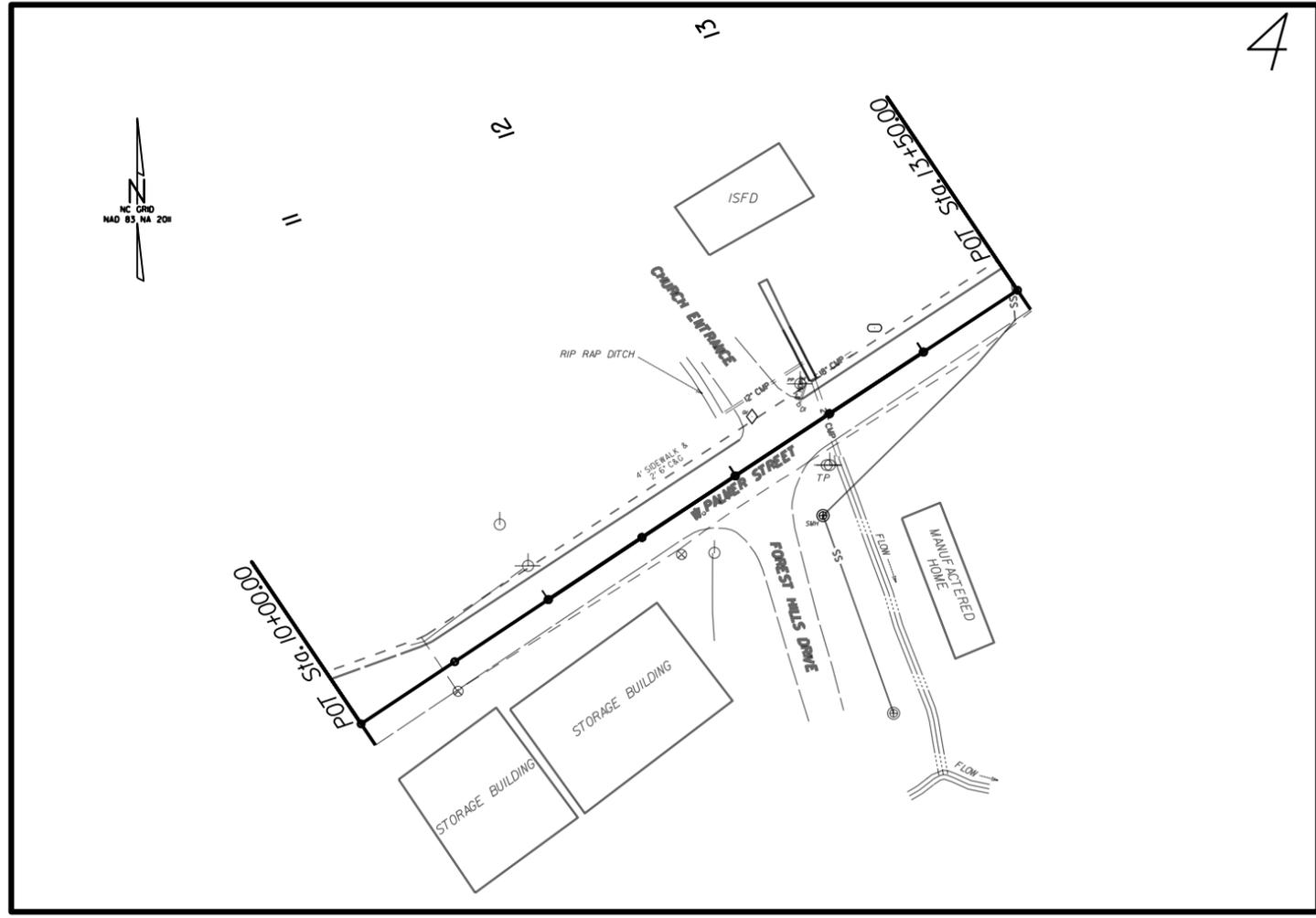
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

MACON COUNTY

LOCATION: ALONG SR-1442 PALMER STREET

TYPE OF WORK: PIPE INSTALLATION, HANDRAIL INSTALLATION

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	44780	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	



PROJECT LENGTH
0.07 MILES

Prepared In the Office of:
DIVISION OF HIGHWAYS
191 Robbinsville Rd., Andrews NC, 28901

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: _____

LETTING DATE: _____

ANDY RUSSELL, P.E.
PROJECT ENGINEER

ALAN R BROWN
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.

SIGNATURE: _____ P.E.



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

INDEX OF SHEETS

1	TITLE SHEET
2	INDEX OF SHEETS, GENERAL NOTES AND LIST OF STANDARDS
3	CONVENTIONAL SYMBOLS
3A	DRAINAGE SUMMARY
3B	PEDESTRIAN HANDRAIL DETAIL
4	PLAN SHEET
5	TEMPORARY STREAM DIVERSION DETAIL
EC1-EC4	EROSION CONTROL PLANS

GENERAL NOTES

GENERAL NOTES: 2012 SPECIFICATIONS
EFFECTIVE: 01-17-2012

- CARE SHALL BE TAKEN TO PREVENT DAMAGE TO EXISTING UTILITIES DURING CONSTRUCTION. ANY DAMAGE TO THESE UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY.

LIST OF ROADWAY STANDARDS

2012 ROADWAY 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 17, 2012 and the latest revision thereto 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
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
840.01	Brick Catch Basin
840.02	Concrete Catch Basin
840.03	Frame, Grates and Hood
840.14	Concrete Drop Inlet
840.15	Brick Drop Inlet
840.24	Frame with Grate
846.01	Concrete Curb, Gutter and Curb & Gutter
848.01	Concrete Sidewalk
DIVISION 11 - WORK ZONE TRAFFIC CONTROL	
1101.01	Detail Drawing for Two Way Undivided Work Zone Warning Signs
1101.02	Temporary Lane Closures
DIVISION 12 - PAVEMENT MARKINGS, MARKERS AND DELINEATION	
1205.01	Line Types and Offsets
DIVISION 16 - EROSION CONTROL AND ROADSIDE DEVELOPEMENT	
1605.01	Temporary Silt Fence
1606.01	Special Sediment Control Fence
1631.01	Matting Installation

12/05/11

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	⊙
Property Corner	-----
Property Monument	⊠
Parcel/Sequence Number	Ⓣ
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	⊠
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	W.B.
Proposed Wetland Boundary	W.B.
Existing Endangered Animal Boundary	E.A.B.
Existing Endangered Plant Boundary	E.P.B.
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	W.B.
Proposed Lateral, Tail, Head Ditch	-----
False Sump	⊠

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	⊙
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	-----
Proposed Temporary Construction Easement	-----
Proposed Temporary Drainage Easement	-----
Proposed Permanent Drainage Easement	-----
Proposed Permanent Drainage / Utility Easement	-----
Proposed Permanent Utility Easement	-----
Proposed Temporary Utility Easement	-----
Proposed Aerial Utility Easement	-----
Proposed Permanent Easement with Iron Pin and Cap Marker	⊙

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	-----
Proposed Slope Stakes Fill	-----
Proposed Curb Ramp	Ⓢ
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	⊠

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	⊙
Storm Sewer	-----

UTILITIES:

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

TELEPHONE:

Existing Telephone Pole	⊙
Proposed Telephone Pole	⊙
Telephone Manhole	⊙
Telephone Booth	⊠
Telephone Pedestal	⊠
Telephone Cell Tower	⊙
U/G Telephone Cable Hand Hole	⊙
Recorded U/G Telephone Cable	-----
Designated U/G Telephone Cable (S.U.E.*)	-----
Recorded U/G Telephone Conduit	-----
Designated U/G Telephone Conduit (S.U.E.*)	-----
Recorded U/G Fiber Optics Cable	-----
Designated U/G Fiber Optics Cable (S.U.E.*)	-----

WATER:

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

TV:

TV Satellite Dish	⊙
TV Pedestal	⊠
TV Tower	⊙
U/G TV Cable Hand Hole	⊙
Recorded U/G TV Cable	-----
Designated U/G TV Cable (S.U.E.*)	-----
Recorded U/G Fiber Optic Cable	-----
Designated U/G Fiber Optic Cable (S.U.E.*)	-----

GAS:

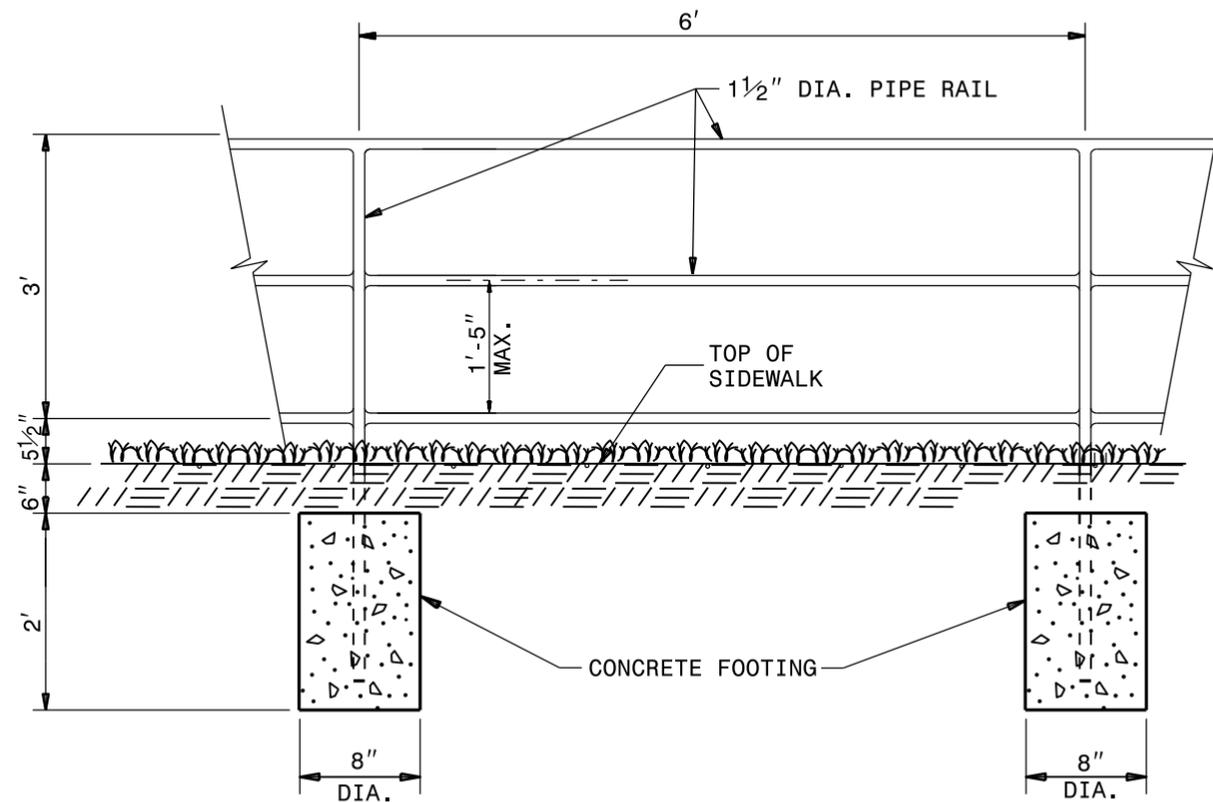
Gas Valve	◇
Gas Meter	⊙
Recorded U/G Gas Line	-----
Designated U/G Gas Line (S.U.E.*)	-----
Above Ground Gas Line	A/G Gas

SANITARY SEWER:

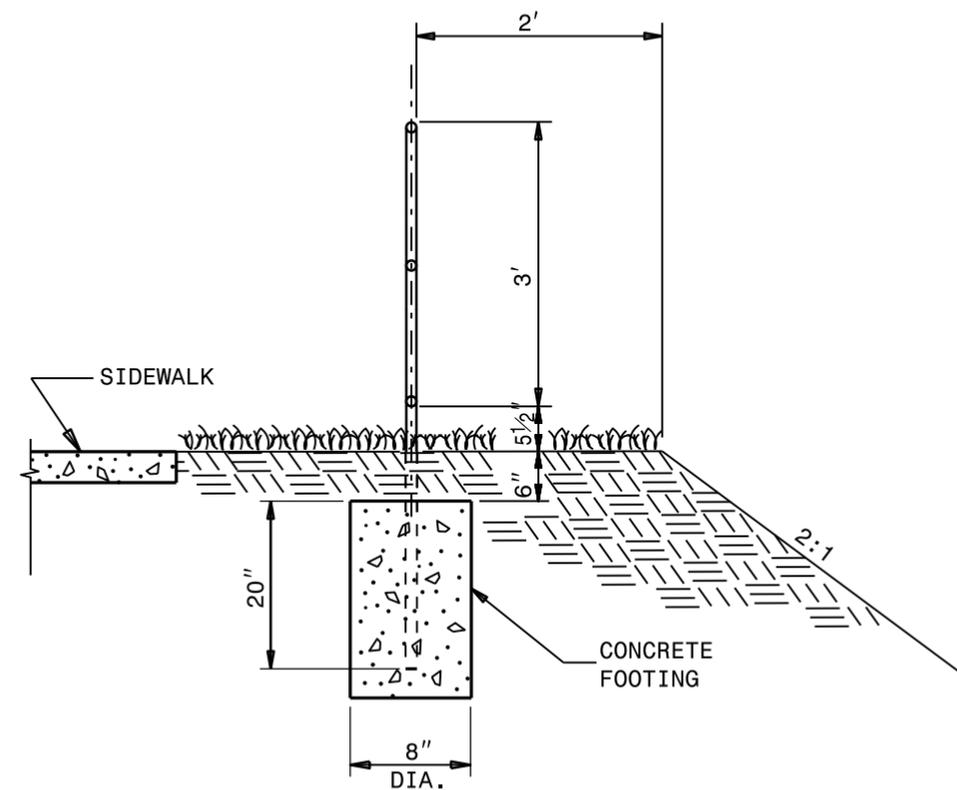
Sanitary Sewer Manhole	⊙
Sanitary Sewer Cleanout	⊙
U/G Sanitary Sewer Line	SS
Above Ground Sanitary Sewer	A/G Sanitary Sewer
Recorded SS Forced Main Line	FSS
Designated SS Forced Main Line (S.U.E.*)	FSS

MISCELLANEOUS:

Utility Pole	⊙
Utility Pole with Base	⊠
Utility Located Object	⊙
Utility Traffic Signal Box	⊠
Utility Unknown U/G Line	-----
U/G Tank; Water, Gas, Oil	⊠
Underground Storage Tank, Approx. Loc.	⊠
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.



ELEVATION OF PROPOSED PEDESTRIAN HANDRAIL



SECTION VIEW

NOTES:

CONSTRUCT PROPOSED STEEL PIPE RAIL OF 1 1/2" DIAMETER SCHEDULE 40 PLAIN END GALVANIZED STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A53.

REPAIR GALVANIZING IN ACCORDANCE WITH SECTION 1076 OF THE NCDOT STANDARD SPECIFICATIONS.

PAINT, IF REQUIRED BY THE ENGINEER, IN ACCORDANCE WITH SECTION 1080 OF THE STANDARD SPECIFICATIONS.

WELD IN ACCORDANCE WITH ARTICLE 1072-20 OF THE STANDARD SPECIFICATIONS.

USE CLASS 'B' CONCRETE FOR HANDRAIL FOOTINGS.

PLACEMENT OF HANDRAIL IN RELATION TO SHOULDER BREAK POINT AND SIDEWALK MAY BE MODIFIED AS DIRECTED BY THE ENGINEER.

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

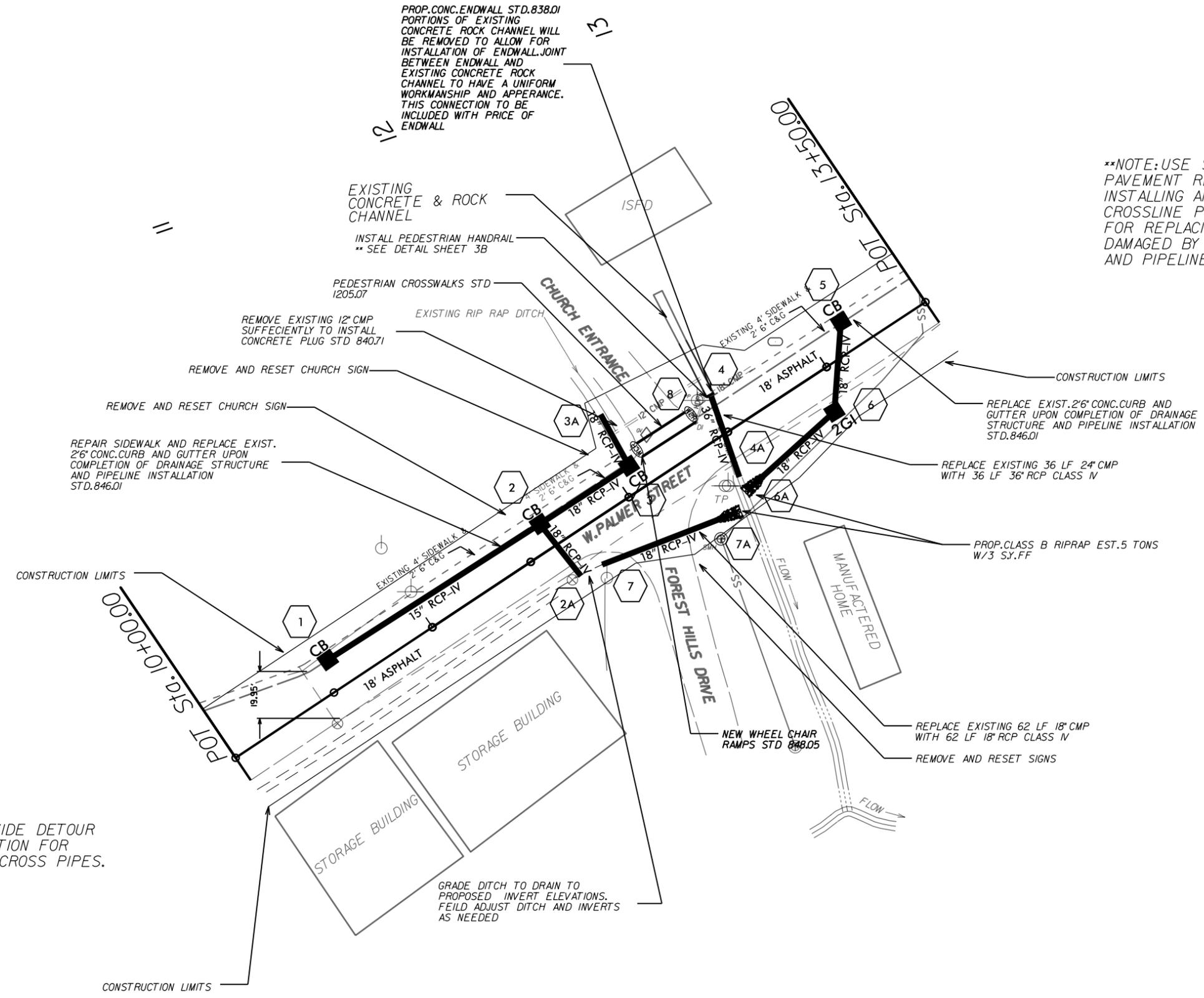
PROPOSED PEDESTRIAN SAFETY RAIL

ORIGINAL BY: E.E.WARD DATE: 12-99
MODIFIED BY: T.S.Spell DATE: 1-4-05
CHECKED BY: DATE:
FILE SPEC.: w:\howerton\handrail_adjacent_to_sidewalk.dgn

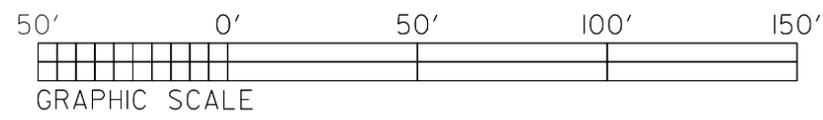


PROP. CONC. ENDWALL STD.838.01
 PORTIONS OF EXISTING
 CONCRETE ROCK CHANNEL
 WILL BE REMOVED TO ALLOW FOR
 INSTALLATION OF ENDWALL JOINT
 BETWEEN ENDWALL AND
 EXISTING CONCRETE ROCK
 CHANNEL TO HAVE A UNIFORM
 WORKMANSHIP AND APPEARANCE.
 THIS CONNECTION TO BE
 INCLUDED WITH PRICE OF
 ENDWALL

**NOTE: USE STD.654.01 FOR
 PAVEMENT REPAIRS UPON
 INSTALLING AND REMOVING
 CROSSLINE PIPES AND STD.848.01
 FOR REPLACING SIDEWALK WHERE
 DAMAGED BY DRAINAGE STRUCTURE
 AND PIPELINE INSTALLATION



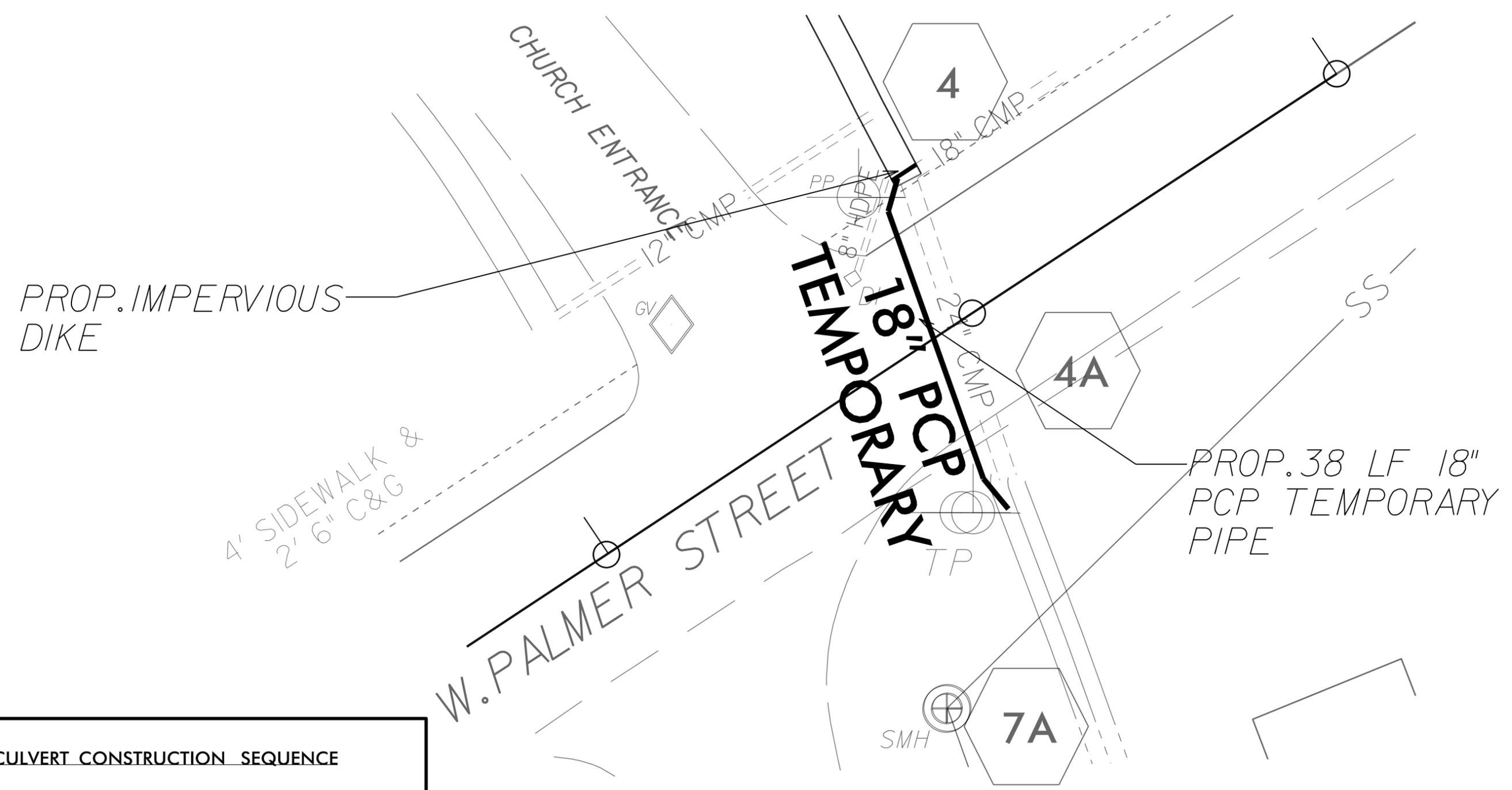
**NOTE: NCDOT TO PROVIDE DETOUR
 SIGNAGE AND INSTALLATION FOR
 FOR INSTALLATION OF CROSS PIPES.



08-AUG-2016 15:04 D:\000527 M. Palmer St Drainage\palmer street utilities2\palmer street utilities\hyddraulics\PALMER_Rdy.dsn.dgn
 S:\Dist3\Macon\1114112716

6/2/99

TEMPORARY STREAM DIVERSION



CULVERT CONSTRUCTION SEQUENCE

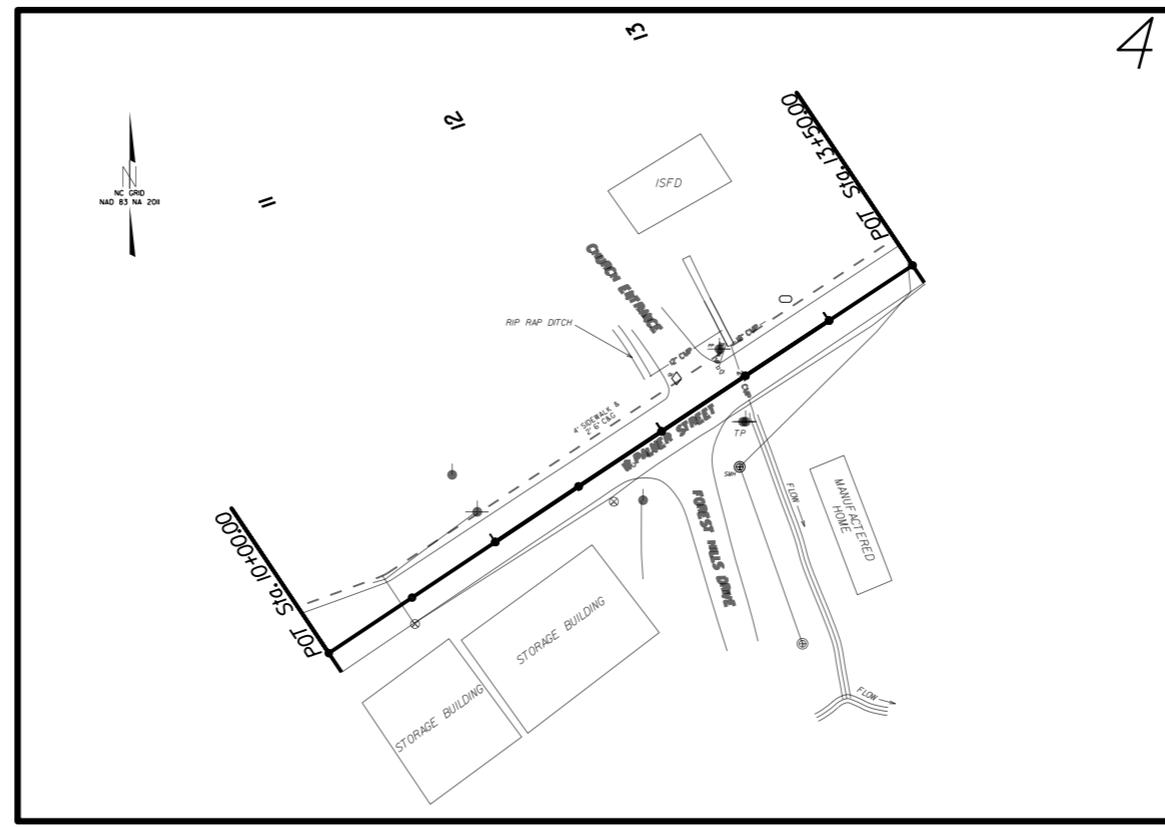
1. INSTALL IMPERVIOUS DIKE
2. REMOVE EXISTING 24" CMP
3. INSTALL TEMPORARY 15" PCP PIPE
4. INSTALL NEW 36 LF 36" RCP IV
5. RELOCATE IMPERVIOUS DIKE AND 15" PCP PIPE TO ALLOW WATER FLOW INTO PROPOSED 36" RCP IV
6. CONSTRUCT PROPOSED CONCRETE ENDWALL
7. BACKFILL PROPOSED 36" RCP IV
8. REMOVE TEMPORARY 15" PCP PIPE
9. REMOVE IMPERVIOUS DIKE

-L- STA. 12+48

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	44780	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS
 PLAN FOR PROPOSED
 HIGHWAY EROSION CONTROL
MACON COUNTY

LOCATION: ALONG SR-1442 PALMER STREET
 TYPE OF WORK: PIPE INSTALLATION, HANDRAIL INSTALLATION

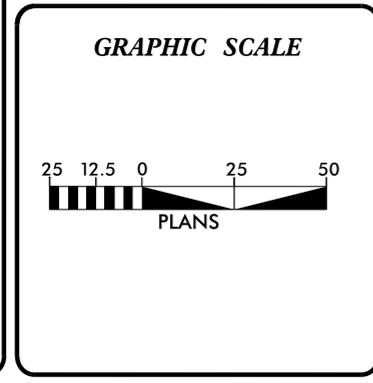


EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	---
1630.05	Temporary Diversion	--->---
1605.01	Temporary Silt Fence	--- --- ---
1606.01	Special Sediment Control Fence	---X---X---
1622.01	Temporary Berms and Slope Drains	---T---
1630.02	Silt Basin Type B	---[]---
1633.01	Temporary Rock Silt Check Type-A	---[]---
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	---[]---
1633.02	Temporary Rock Silt Check Type-B	---[]---
	Wattle / Coir Fiber Wattle	---[]---
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	---[]---
1634.01	Temporary Rock Sediment Dam Type-A	---[]---
1634.02	Temporary Rock Sediment Dam Type-B	---[]---
1635.01	Rock Pipe Inlet Sediment Trap Type-A	---[]---
1635.02	Rock Pipe Inlet Sediment Trap Type-B	---[]---
1630.04	Stilling Basin	---[]---
1630.06	Special Stilling Basin	---[]---
	Rock Inlet Sediment Trap:	
1632.01	Type A	---[]---
1632.02	Type B	---[]---
1632.03	Type C	---[]---
	Skimmer Basin	---[]---
	Tiered Skimmer Basin	---[]---
	Infiltration Basin	---[]---

WBS ELEMENT: 44780

CONTRACT: DN00527



DIVISION 14, DISTRICT 3
 DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.

Prepared in the Office of:
DIVISION 14, DISTRICT 3
 191 ROBBINSVILLE ROAD
 ANDREWS, NC 28901
 2012 STANDARD SPECIFICATIONS

Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1604.01 Railroad Erosion Control Detail	1632.01 Rock Inlet Sediment Trap Type A
1605.01 Temporary Silt Fence	1632.02 Rock Inlet Sediment Trap Type B
1606.01 Special Sediment Control Fence	1632.03 Rock Inlet Sediment Trap Type C
1607.01 Gravel Construction Entrance	1633.01 Temporary Rock Silt Check Type A
1622.01 Temporary Berms and Slope Drains	1633.02 Temporary Rock Silt Check Type B
1630.01 Riser Basin	1634.01 Temporary Rock Sediment Dam Type A
1630.02 Silt Basin Type B	1634.02 Temporary Rock Sediment Dam Type B
1630.03 Temporary Silt Ditch	1635.01 Rock Pipe Inlet Sediment Trap Type A
1630.04 Stilling Basin	1635.02 Rock Pipe Inlet Sediment Trap Type B
1630.05 Temporary Diversion	1640.01 Coir Fiber Baffle
1630.06 Special Stilling Basin	1645.01 Temporary Stream Crossing
1631.01 Matting Installation	

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DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

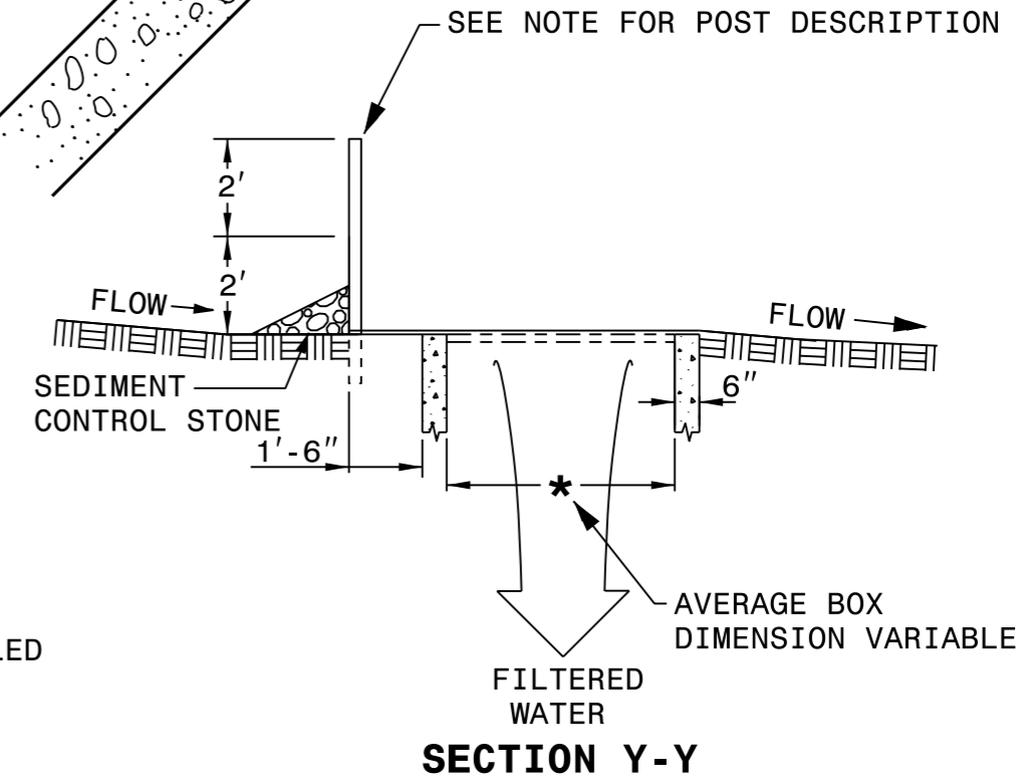
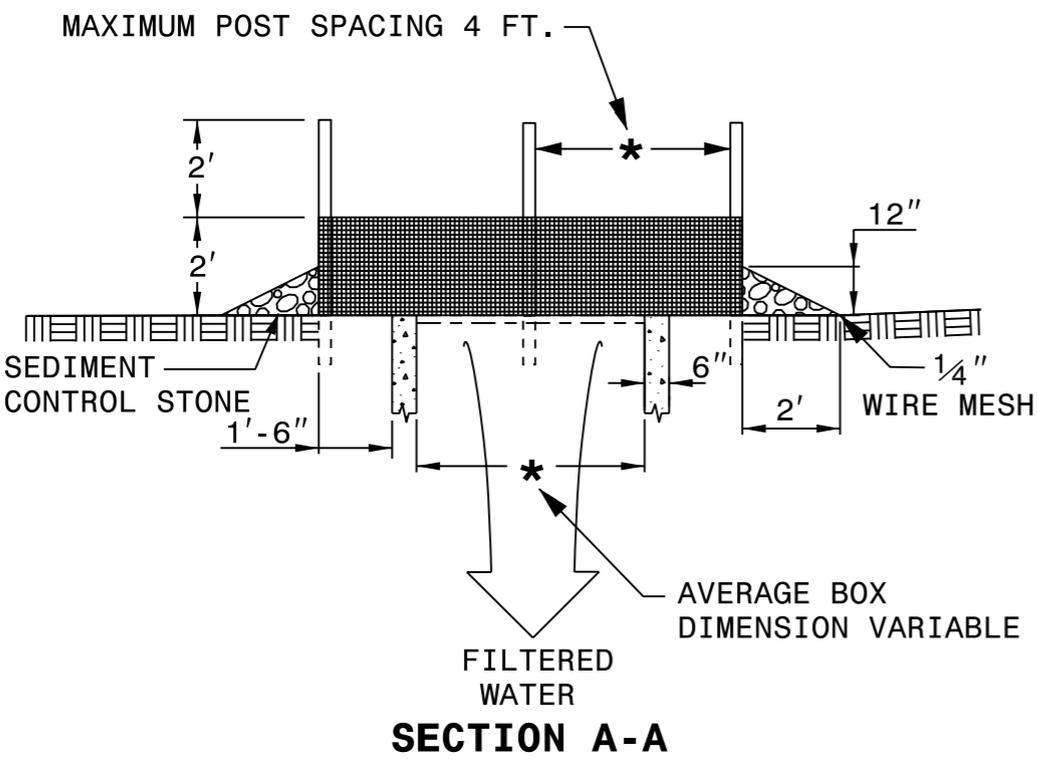
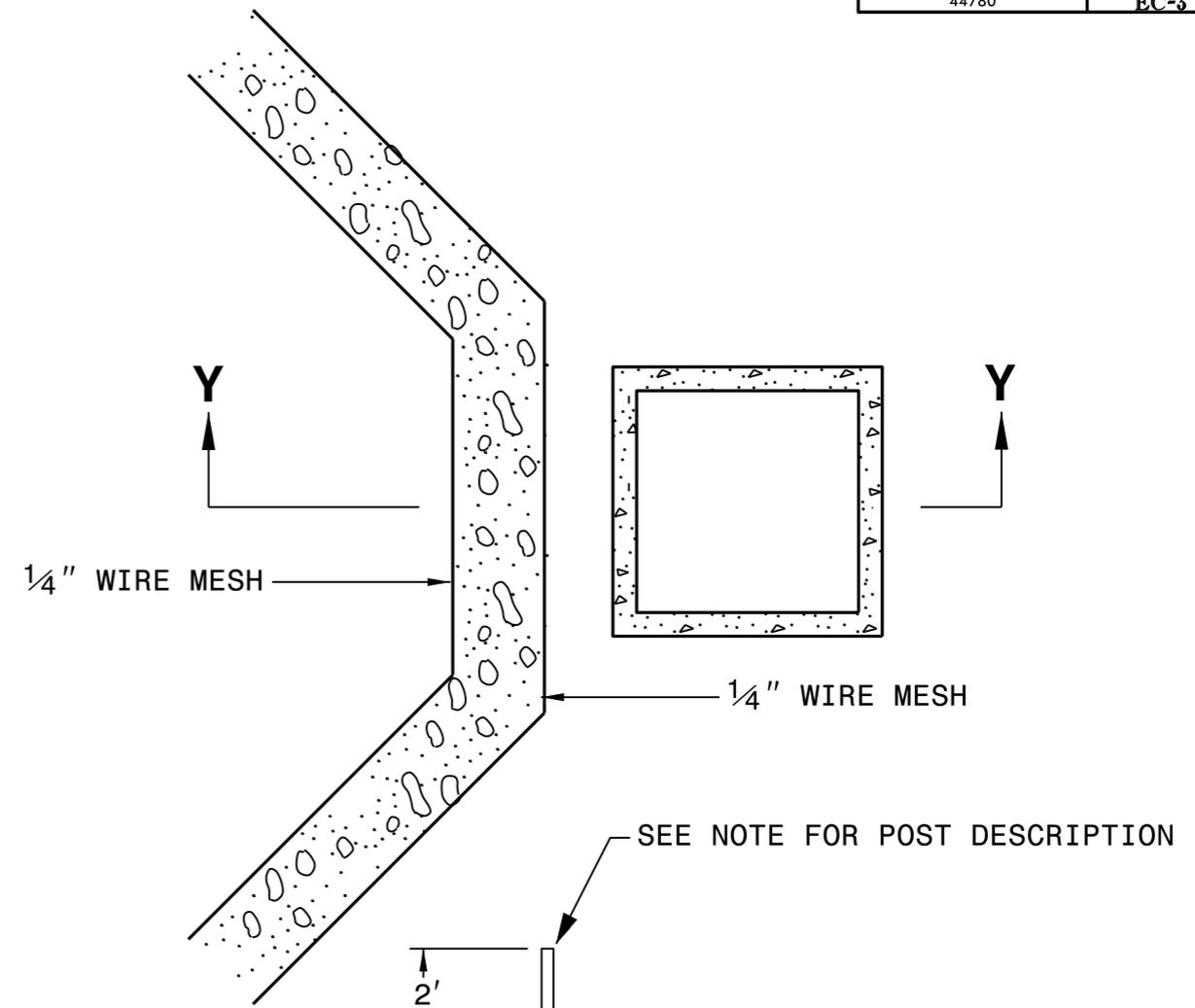
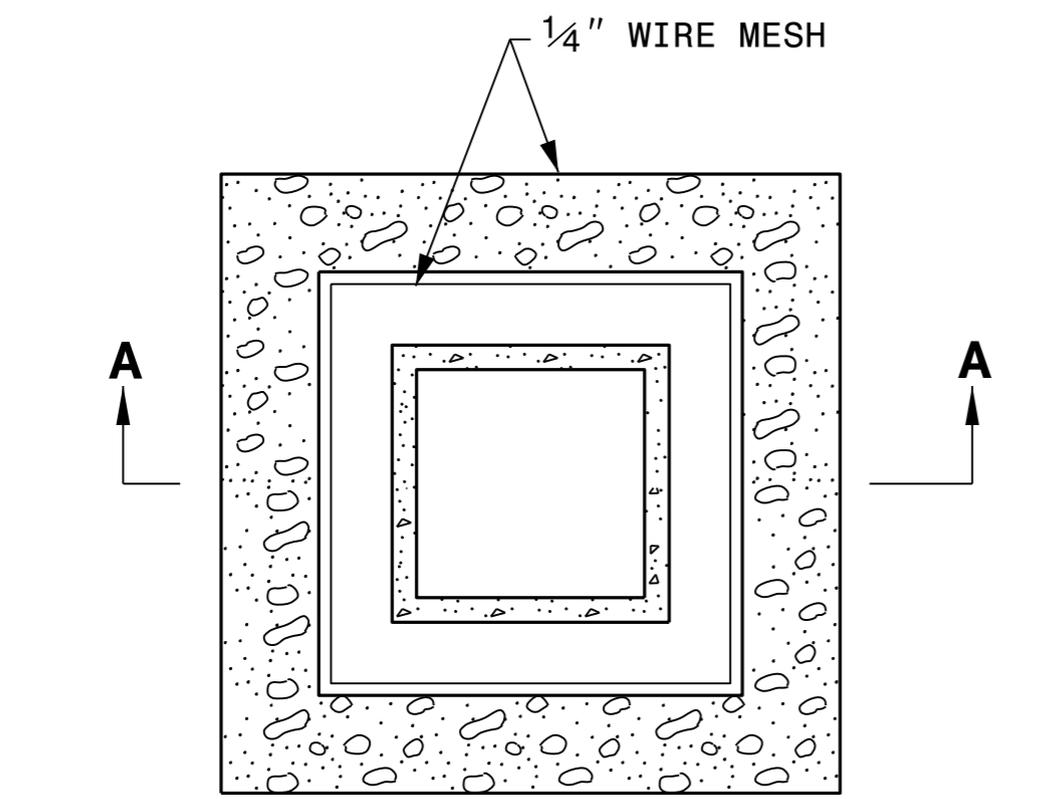
<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 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.

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

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

ENGLISH STANDARD DRAWING FOR
ROCK INLET SEDIMENT TRAP TYPE 'C'

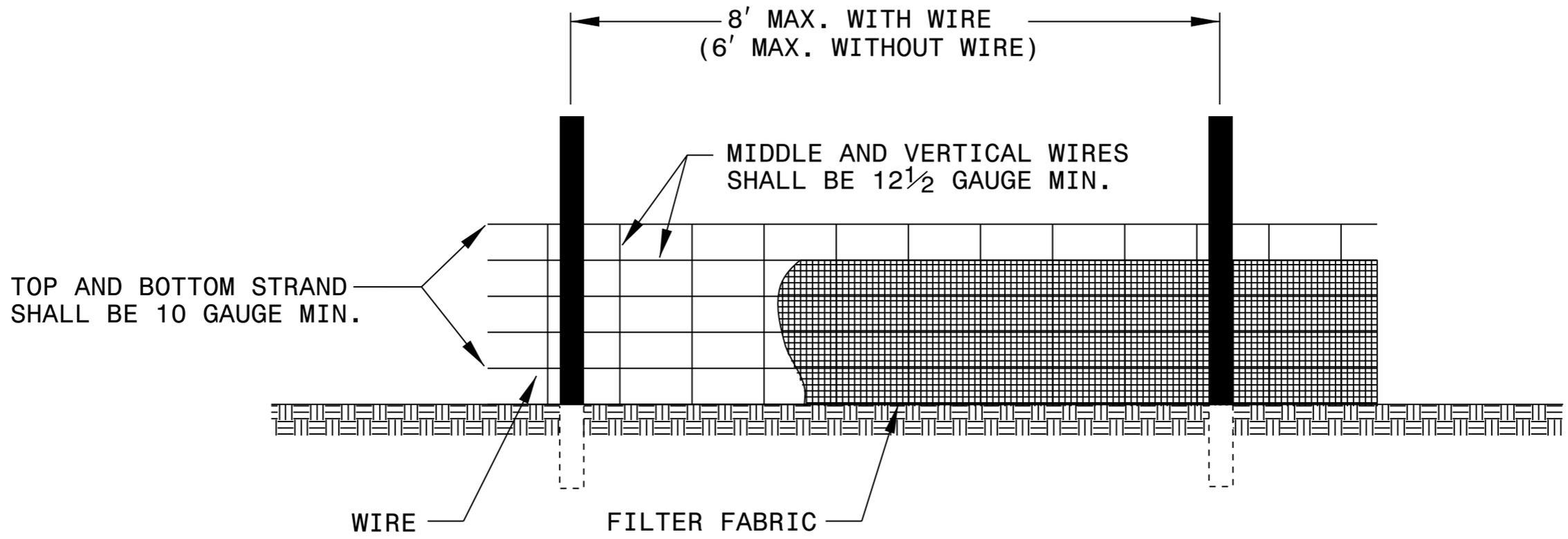
ENGLISH STANDARD DRAWING FOR
ROCK INLET SEDIMENT TRAP TYPE 'C'



NOTE
USE NO. 5 OR NO. 57 STONE FOR SEDIMENT CONTROL STONE.
USE 24 GAUGE MINIMUM WIRE MESH HARDWARE CLOTH WITH 1/4 INCH MESH OPENINGS.
PLACE TOP OF WIRE MESH A MINIMUM OF ONE FOOT BELOW THE SHOULDER OR ANY DIVERSION POINT.
INSTALL WIRE MESH UNDER SEDIMENT CONTROL STONE.
USE 5' STEEL POST, INSTALLED 1.5' DEEP MINIMUM, AND OF THE SELF-FASTENER ANGLE STEEL TYPE.
SPACE POST A MAXIMUM OF 4'.

MULTI-DIRECTIONAL FLOW

SINGLE-DIRECTIONAL FLOW

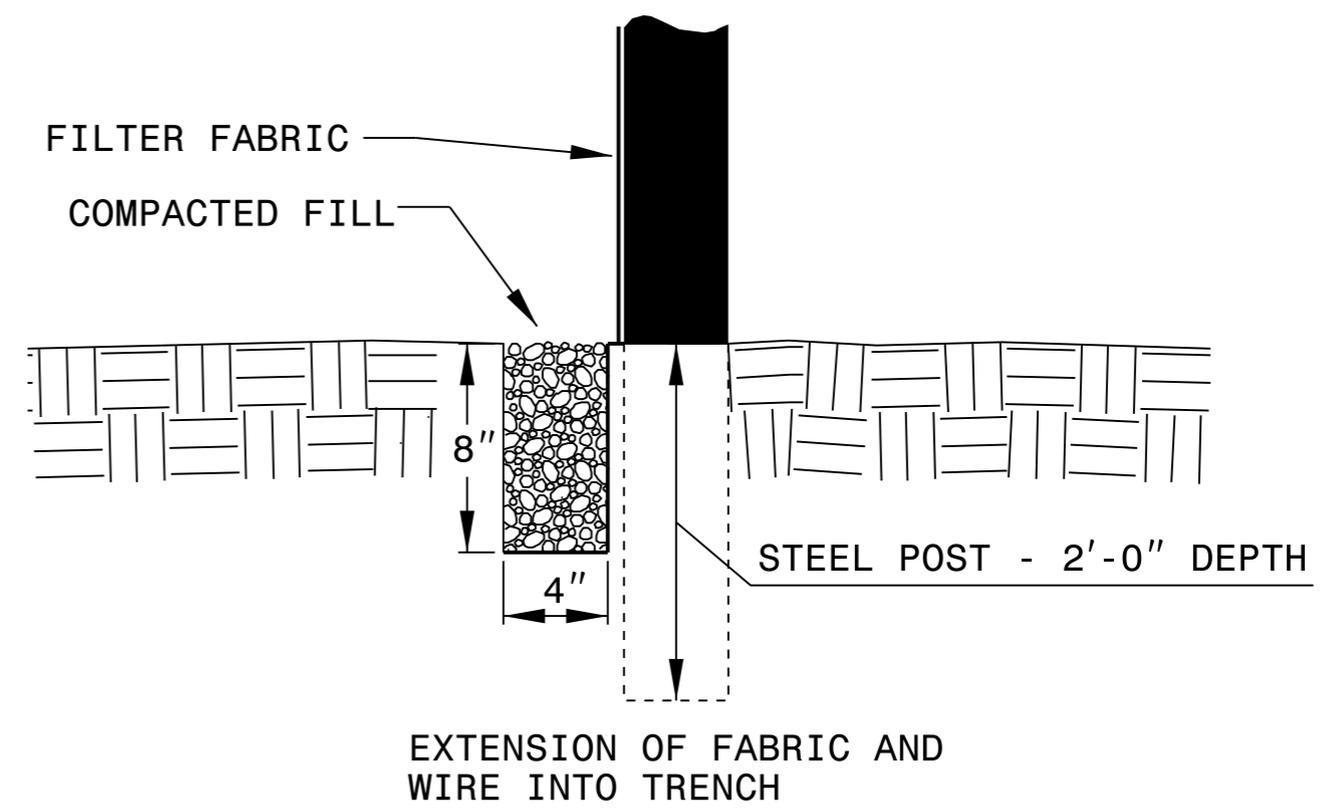


NOTES

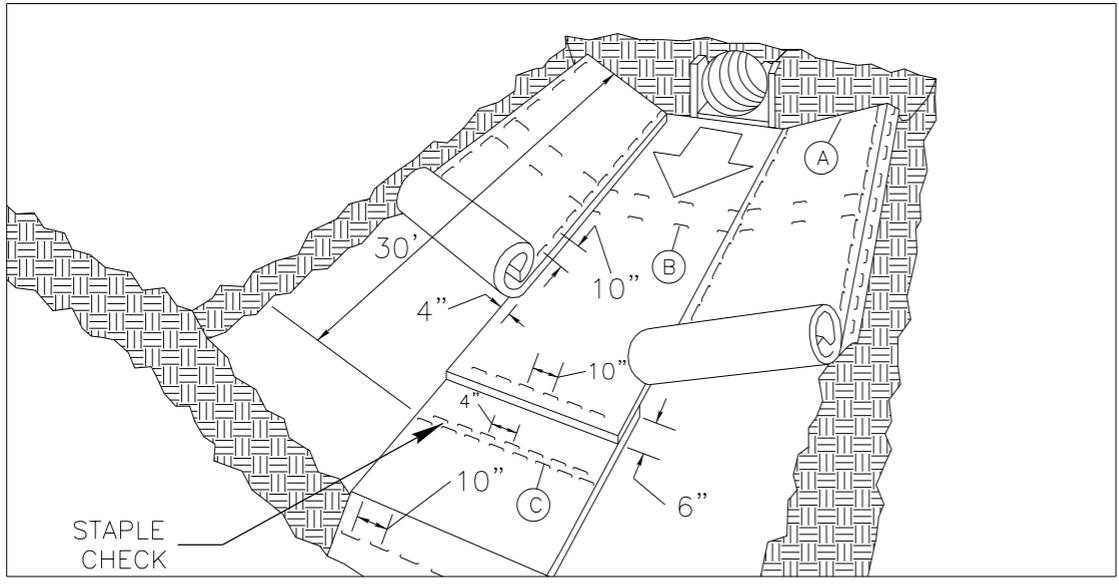
USE WIRE A MINIMUM OF 32" IN WIDTH AND WITH A MINIMUM OF 6 LINE WIRES WITH 12" STAY SPACING.

USE FILTER FABRIC A MINIMUM OF 36" IN WIDTH AND FASTEN ADEQUATELY TO THE WIRE AS DIRECTED BY THE ENGINEER.

PROVIDE 5'-0" STEEL POST OF THE SELF-FASTENER ANGLE STEEL TYPE.



MATTING INSTALLATION DETAIL



MATTING IN DITCHES

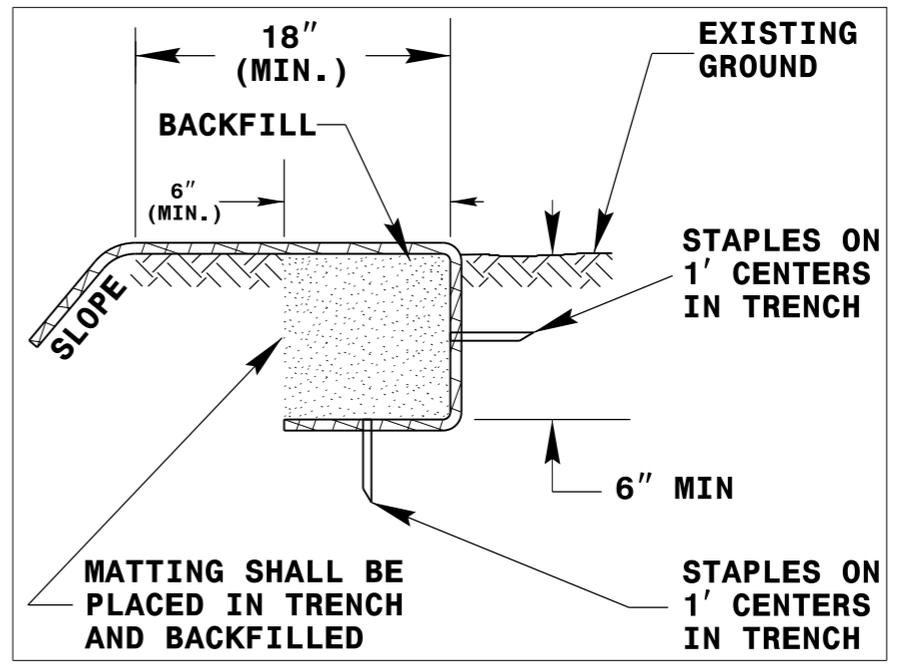
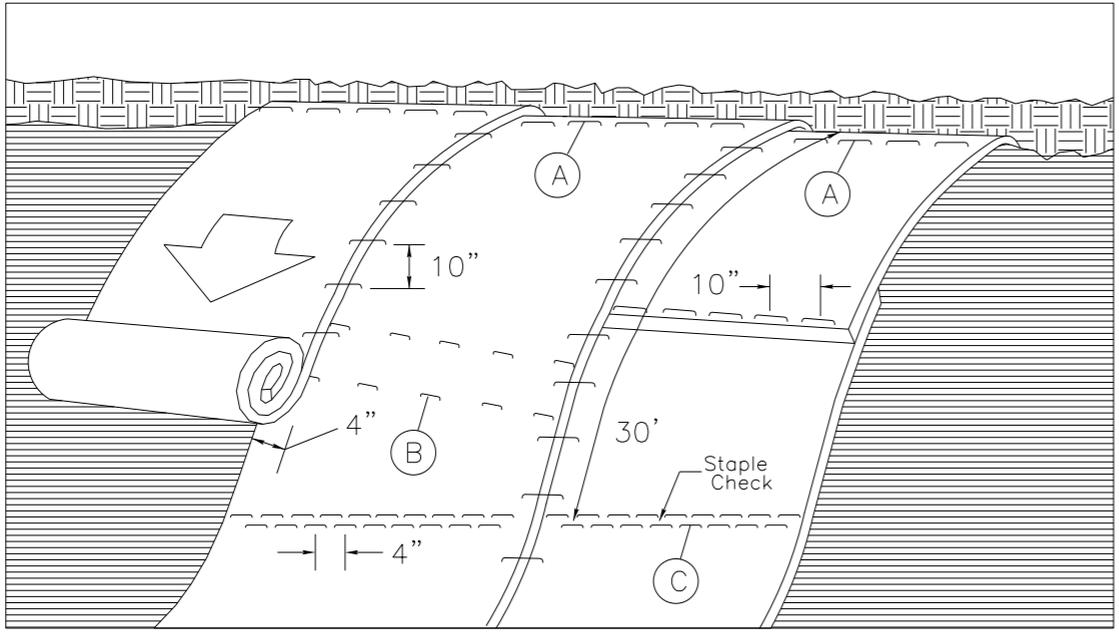


DIAGRAM (A)



MATTING ON SLOPES

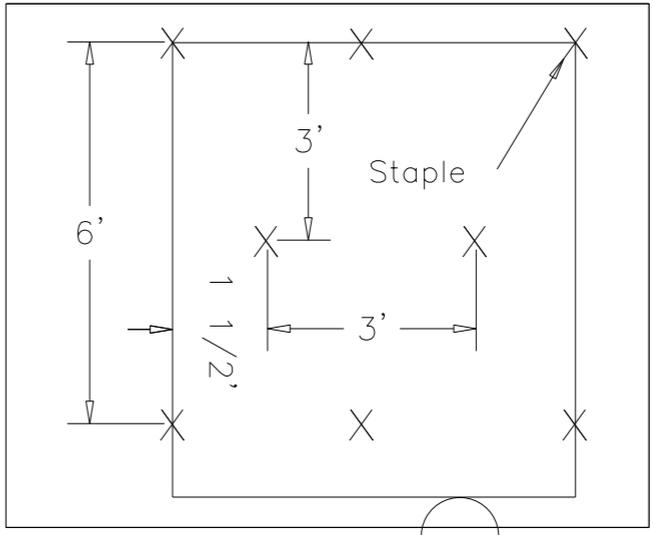


DIAGRAM B

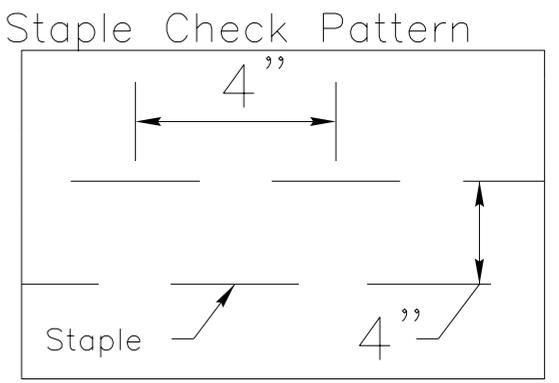


DIAGRAM (C)

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

GENERAL NOTES:

USE NO. 5 OR NO. 57 STONE FOR SEDIMENT CONTROL STONE.

USE HARDWARE CLOTH 24 GAUGE WIRE MESH WITH 1/4 INCH MESH OPENINGS.

INSTALL 5 FT. SELF FASTENER ANGLE STEEL POST 2 FT. DEEP MINIMUM.

SPACE POST A MAXIMUM OF 3 FT.

