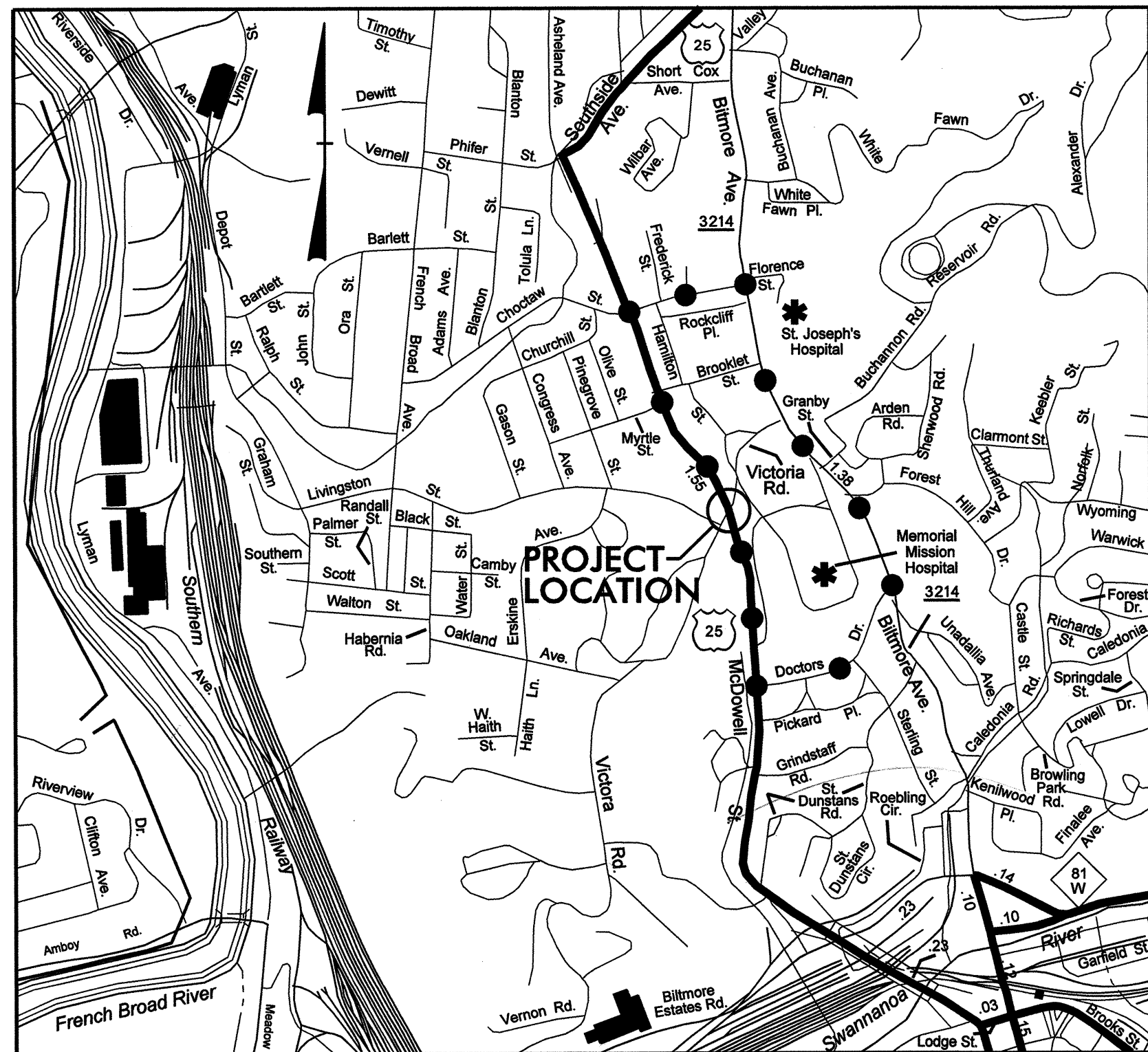


TIP PROJECT: U-4014

C203276

CONTRACT: C203276

See Sheet 1-A For Index of Sheets  
See Sheet 1-B For Conventional Plan Sheet Symbols



VICINITY MAP

●●● OFFSITE DETOUR ROUTE

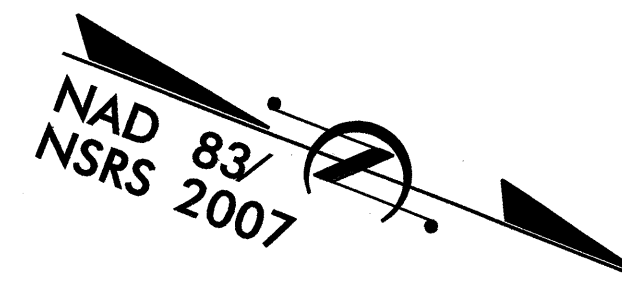
TO I-40

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**BUNCOMBE COUNTY**

**LOCATION: US 25 (McDOWELL STREET) TUNNEL  
UNDER VICTORIA ROAD IN ASHEVILLE**

**TYPE OF WORK: CONCRETE REPAIRS, WINGWALL EXTENSIONS,  
STONE VENEER, AND LIGHTING**

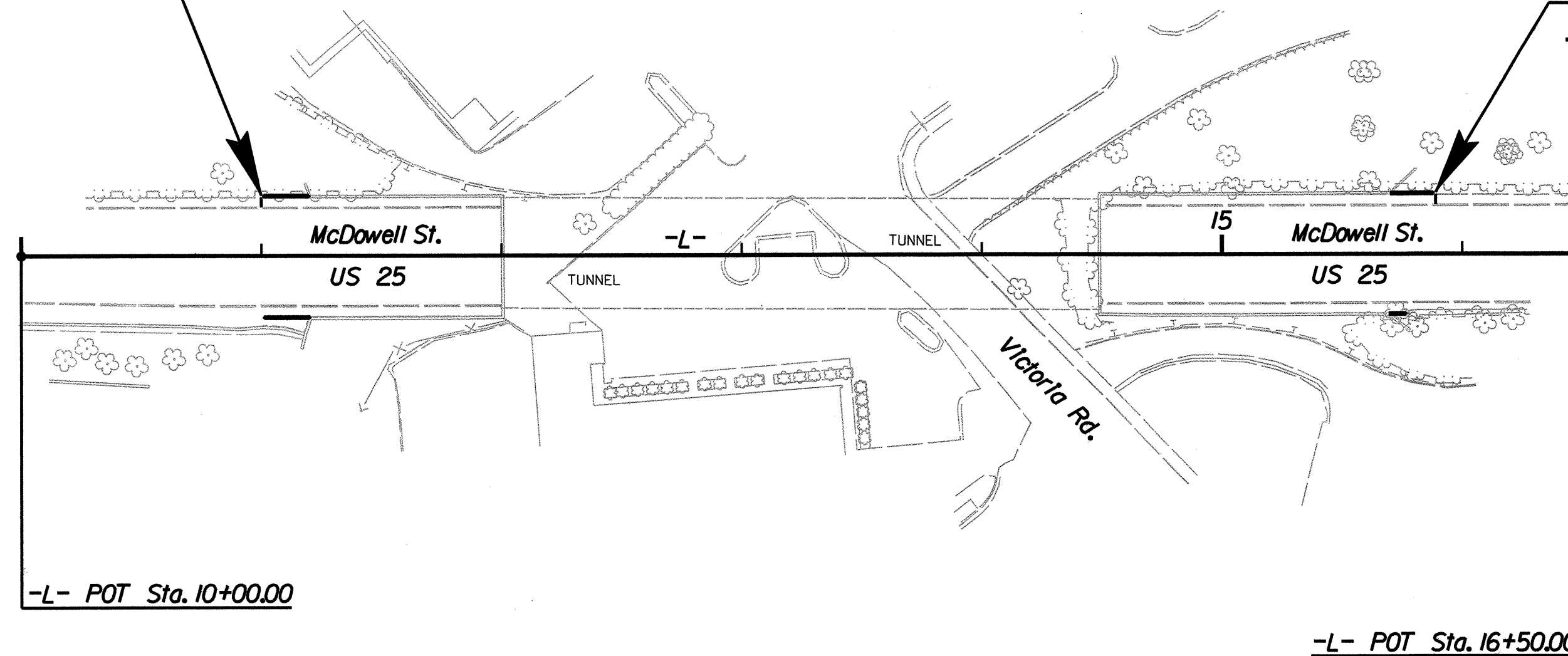


BEGIN STATE PROJECT U-4014

-L- STA. POT 11+00.00

END STATE PROJECT U-4014

-L- STA. POT 15+89.00



**HDR** HDR Engineering, Inc. of the Carolinas  
3733 National Drive, Suite 207 Raleigh, N.C. 27612  
N.C.B.E.L.S. License Number: F-0116

**DESIGN DATA**  
**US 25**  
ADT 2010 = 23,000  
ADT  
DHV = %  
D = %  
T = 12 %  
V = 35 MPH  
FUNC CLASS =  
PRINCIPAL URBAN ARTERIAL

**PROJECT LENGTH**  
LENGTH OF TUNNEL PROJECT U-4014 = 0.093 MILES

**DIVISION OF HIGHWAYS**  
55 Orange St., Asheville, NC 28801

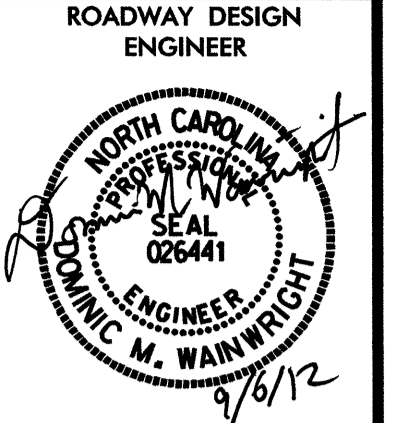
2012 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: AUGUST 26, 2011	DOMINIC WAINWRIGHT, PE PROJECT ENGINEER
LETTING DATE: FEBRUARY 19, 2013	RODNEY MONEY, PE PROJECT DESIGN ENGINEER
NCDOT CONTACT:	MIKE CALLOWAY DIVISION PROJECT MANAGER

STRUCTURAL ENGINEER  
NORTH CAROLINA PROFESSIONAL SEAL  
024928  
RODNEY E. MONEY  
P.E. 9/16/12

ROADWAY DESIGN ENGINEER  
NORTH CAROLINA PROFESSIONAL SEAL  
026441  
DOMINIC M. WAINWRIGHT  
P.E. 9/16/12

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-4014	1	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
39044.1.1		PE	
39044.2.1		ROW-UTIL.	
39044.3.1		CONST.	



INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
1-C	SURVEY CONTROL SHEET
2	CHAIN LINK FENCE ON RETAINING WALL DETAIL
3	SUMMARY OF QUANTITIES
3-A	RIGHT OF WAY AREA DATA
4	PLAN SHEET
TMP-1 THRU TMP-3	TRAFFIC MANAGEMENT PLAN
S-1 THRU S-30	STRUCTURE PLANS
E-1 THRU E-9	LIGHTING AND ELECTRICAL PLANS

GENERAL NOTES:

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

SELECTIVE UNDERGROWTH REMOVAL IN OVERGROWN AREAS ON THE TOP OF THE McDOWELL STREET TUNNEL SHALL BE PERFORMED AS DIRECTED BY THE ENGINEER ACCORDING TO SECTION 1651 OF THE STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.

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 8 - INCIDENTALS	
848.01	Concrete Sidewalk
866.01	Chain Link Fence (4', 5' and 6' High Fence)

8/17/99

9/5/2012 10:25:37 PM U:\4014\_rdy-tsh.dgn

Note: Not to Scale

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

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

**BOUNDARIES AND PROPERTY:**

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EP
Property Corner	-----
Property Monument	□ ECM
Parcel/Sequence Number	⑫③
Existing Fence Line	-x-x-x-
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

**BUILDINGS AND OTHER CULTURE:**

Gas Pump Vent or U/G Tank Cap	○
Sign	○ S
Well	○ W
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	-----
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 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 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 Wheel Chair Ramp	----- WCR
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	-----
Storm Sewer	----- S

**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	----- P
Designated U/G Power Line (S.U.E.*)	----- P

**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	----- 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	⊕
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	----- 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:**

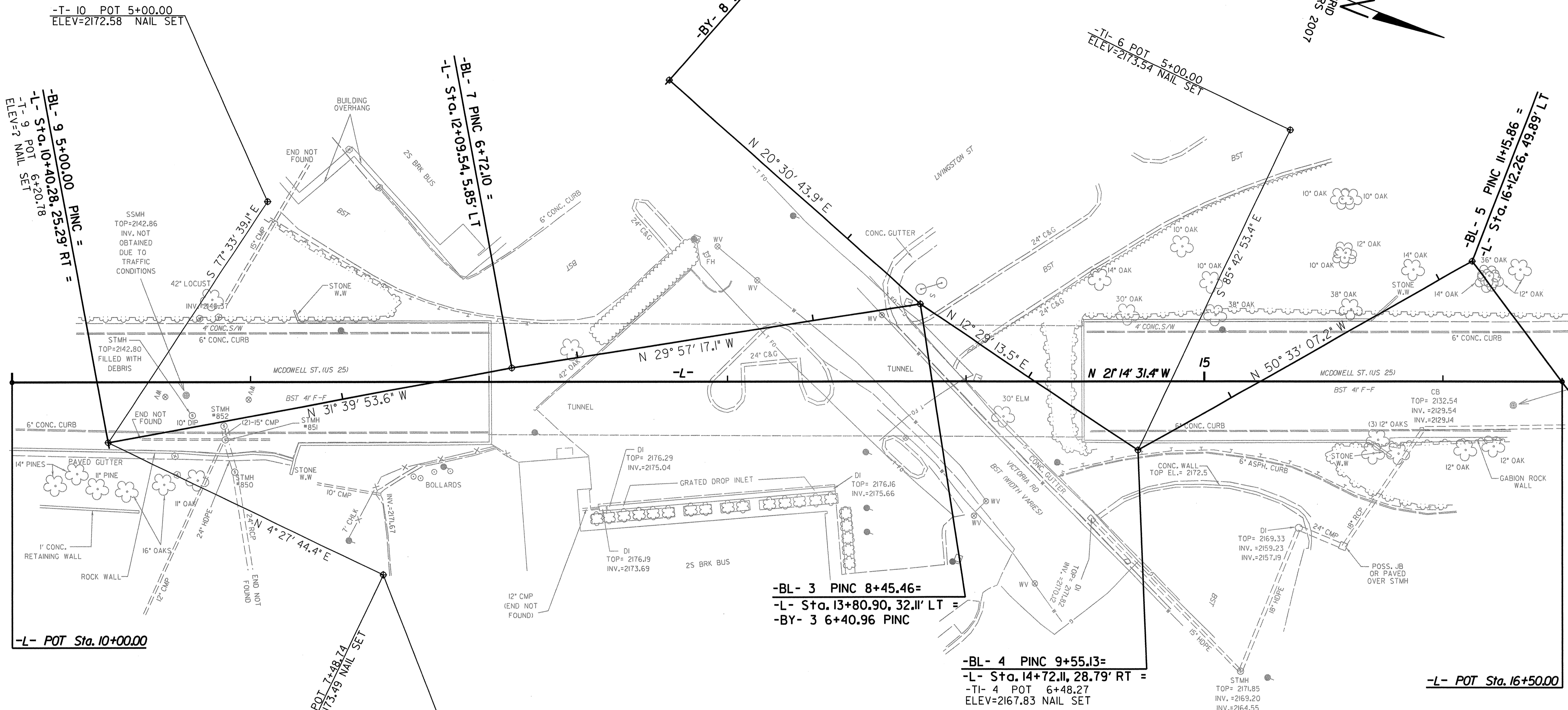
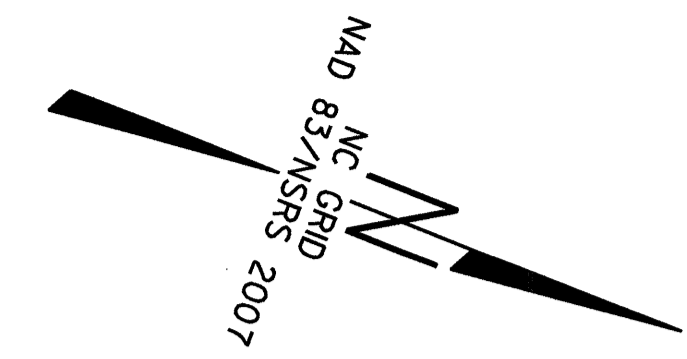
Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊕
Utility Unknown U/G Line	----- UTL
U/G Tank; Water, Gas, Oil	-----
A/G Tank; Water, Gas, Oil	-----
U/G Test Hole (S.U.E.*)	⊕
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.



# SURVEY CONTROL SHEET U-4014

PROJECT REFERENCE NO. U-4014	SHEET NO. I-C
---------------------------------	------------------

5/14/99

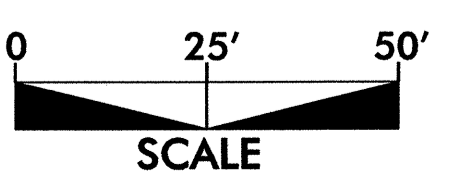


REVISIONS

STMH #850  
TOP= 2148.29  
INV. IN= 2144.29  
INV. OUT= 2141.29

STMH #851  
TOP= 2143.74  
12\"/>

STMH #852  
TOP= 2143.34  
INV. NOT  
OBTAINED  
DUE TO  
TRAFFIC  
CONDITIONS



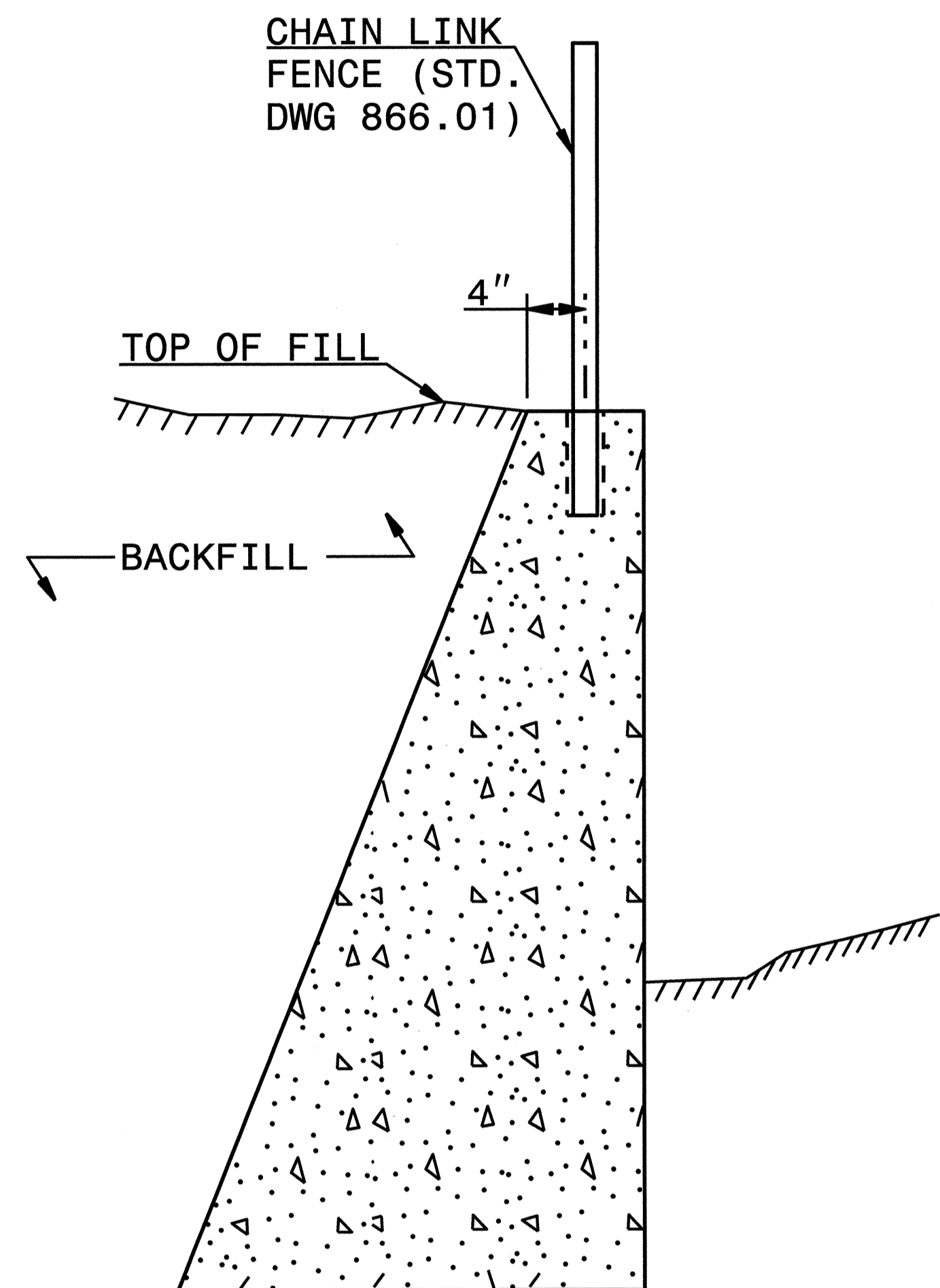
**NOTES:**

1. THE INITIAL COORDINATES FOR THIS PROJECT WERE PRODUCED FROM RTK GPS OBSERVATIONS (CLASS: 1cm HORIZONTAL AND 2cm VERTICAL) UTILIZING TWO (2) TRIMBLE R8 DUAL FREQUENCY RECEIVERS. NAD 83 (2007) COORDINATES FOR CONTROL POINT "T-2" WERE OBTAINED BY TIES TO NCGS MONUMENTS ASHESLAND AND MYRTLE.
2. ELEVATION DATUM IS NAVD 1988 DATUM AND IS BASED ON NCGS MONUMENT MYRTLE (PID AA 5637) WITH A PUBLISHED ELEVATION OF 2083.85 FEET.

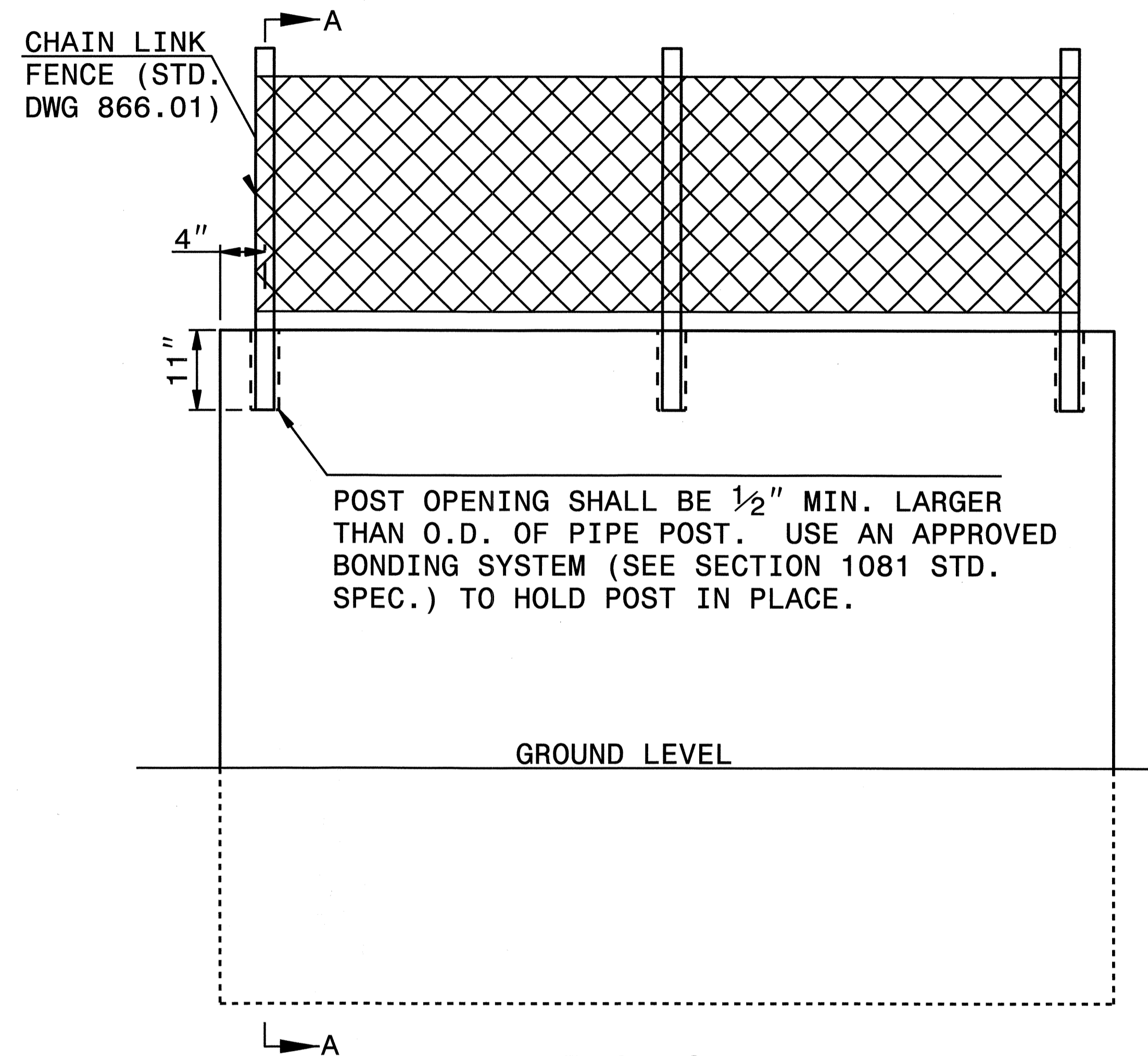
**DATUM DESCRIPTION**

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY JOYNER KEENEY, PLLC FOR MONUMENT "T-2" WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF NORTHING: 684,094.96(±) EASTING: 944,390.03(±) ELEVATION: 2186.01(±) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999794075 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "T-2" TO -L- STATION 10+00.00 IS S 5° 38' 12.46" W 486.032 FEET ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

9/5/2007 10:34:70 U:\4014\_SCS\_IC.dgn

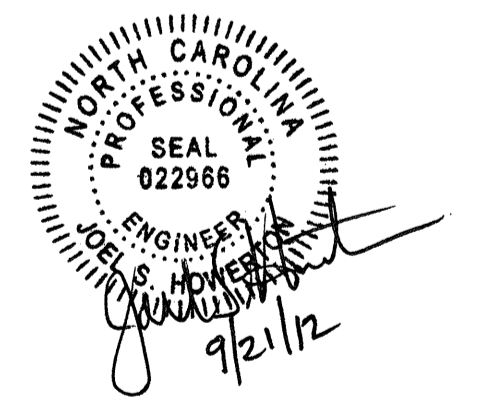


**SECTION A-A  
CONCRETE RETAINING WALL**



**ELEVATION VIEW  
OF RETAINING WALL**

EMBED CHAIN LINK FENCE 11" INTO PROPOSED WALL WITH EPOXY OR CONCRETE GROUT ANCHORING SYSTEM AS DIRECTED BY THE ENGINEER. PRE-MEASURE AND CENTER THE PROPOSED FENCE ON TOP OF WALL FOR POST SPACINGS. USE A ROTARY DRILL TO DRILL HOLES IN THE CONCRETE. NO IMPACT DRILLS WILL BE ALLOWED, TO ELIMINATE ANY POSSIBILITY OF STRUCTURAL DAMAGES TO THE PROPOSED WALL.



CONTRACT STANDARDS & DEVELOPMENT UNIT  
STANDARDS AND SPECIAL DESIGN  
Office 919-707-6950 FAX 919-250-4119

**CHAIN LINK FENCE ON  
RETAINING WALL**

ORIGINAL BY:	DATE:
MODIFIED BY: nbritt	DATE: 05-11-04
CHECKED BY:	DATE:
FILE SPEC.: details\nbritt\metricr2201modifiedflume.dgn	

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**SUMMARY OF QUANTITIES**

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C203276									
ItemNumber	Sec #	Quantity	Unit	Description	ItemNumber	Sec #	Quantity	Unit	Description
000100000-N	800	Lump Sum		MOBILIZATION	809700000-E	450	20.5	LF	PILE EXCAVATION NOT IN SOIL
000950000-E	SP	19,800	SF	GENERIC MISCELLANEOUS ITEM GRAFFITI RESISTANT COATING	812100000-N	412	Lump Sum		UNCLASSIFIED STRUCTURE EXCAVATION AT STATION ***** (13+25)
122000000-E	545	20	TON	INCIDENTAL STONE BASE	820300000-E	420	66.5	CY	CLASS A CONCRETE (RETAINING WALL)
273800000-E	SP	205	SY	GENERIC PAVING ITEM REMOVE AND REPLACE 4" CONC SIDEWALK	825200000-E	425	9,003	LB	REINFORCING STEEL (RETAINING WALL)
352400000-E	SP	583	LF	VINYL COATED CHAIN LINK FENCE, *** FABRIC (48")	866400000-E	SP	587	CF	SHOTCRETE REPAIRS
398400000-E	SP	9,000	SF	GENERIC WALL ITEM ANCHORED VENEER	867800000-E	SP	146	LF	EPOXY RESIN INJECTION
440000000-E	1110	450	SF	WORK ZONE SIGNS (STATIONARY)	8802014000-E	SP	435	SF	SOLDIER PILE RETAINING WALLS
440500000-E	1110	48	SF	WORK ZONE SIGNS (PORTABLE)					
441000000-E	1110	140	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)					
441500000-N	1115	1	EA	FLASHING ARROW BOARD					
442000000-N	1120	2	EA	PORTABLE CHANGEABLE MESSAGE SIGN					
444500000-E	1145	150	LF	BARRICADES (TYPE III)					
448000000-N	1165	1	EA	TMA					
451600000-N	1180	40	EA	SKINNY DRUM					
514500000-N	1408	1	EA	LIGHT CONTROL EQUIPMENT, TYPE RW ***** (120/240V)					
526000000-N	SP	Lump Sum		GENERIC LIGHTING ITEM CIRCUITRY					
527000000-N	SP	28	EA	GENERIC LIGHTING ITEM LUMINAIRE MOUNTING BRACKET					
527000000-N	SP	28	EA	GENERIC LIGHTING ITEM TUNNEL/WINGWALL LUMINAIRE					
600000000-E	1605	100	LF	TEMPORARY SILT FENCE					
607500000-E	1651	1	EA	SELECTIVE TREE REMOVAL, *** (15")					
607800000-E	1651	0.15	ACR	SELECTIVE UNDERGROWTH REMOVAL					
608400000-E	1660	0.25	ACR	SEEDING & MULCHING					
809600000-E	450	98	LF	PILE EXCAVATION IN SOIL					

6/21/08

COMPUTED BY: DMW DATE: 5-4-2012  
CHECKED BY: REM DATE: 7-3-2012

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. SHEET NO.  
U-4014 3-A

**RIGHT OF WAY AREA DATA**

PARCEL NO.	PROPERTY OWNERS NAMES	TOTAL ACREAGE	AREA TAKEN	AREA REMAINING RT.	AREA REMAINING LT.	CONST. EASE. (SQ. FT.)	PERM. DRAIN. EASE.	TEMP. DRAIN. EASE.
1	257 MCDOWELL STREET PARTNERSHIP	1.08				24		
2	BUNCOMBE COUNTY	0.01				60		
3	MEMORIAL MISSION HOSPITAL	25.34				157		
4	MISSION HEALTH SYSTEM	1.26				264		
5	WILLIAM R AYCOCK JR & OWEN E AYCOCK, ET AL	0.84				184		

9/5/08 3:47:04 PM RDY\_SUM.dgn



