

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

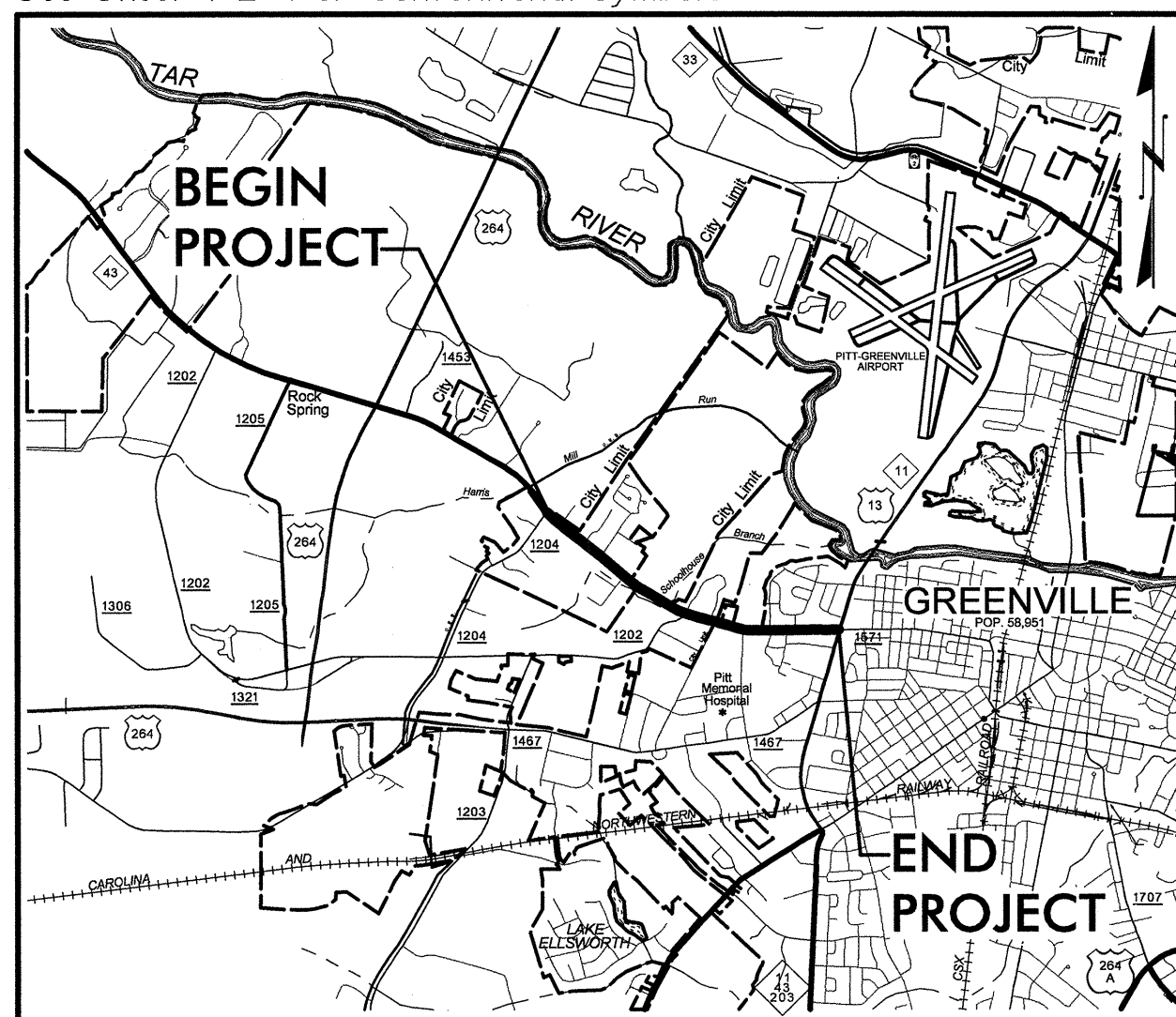
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PITT COUNTY

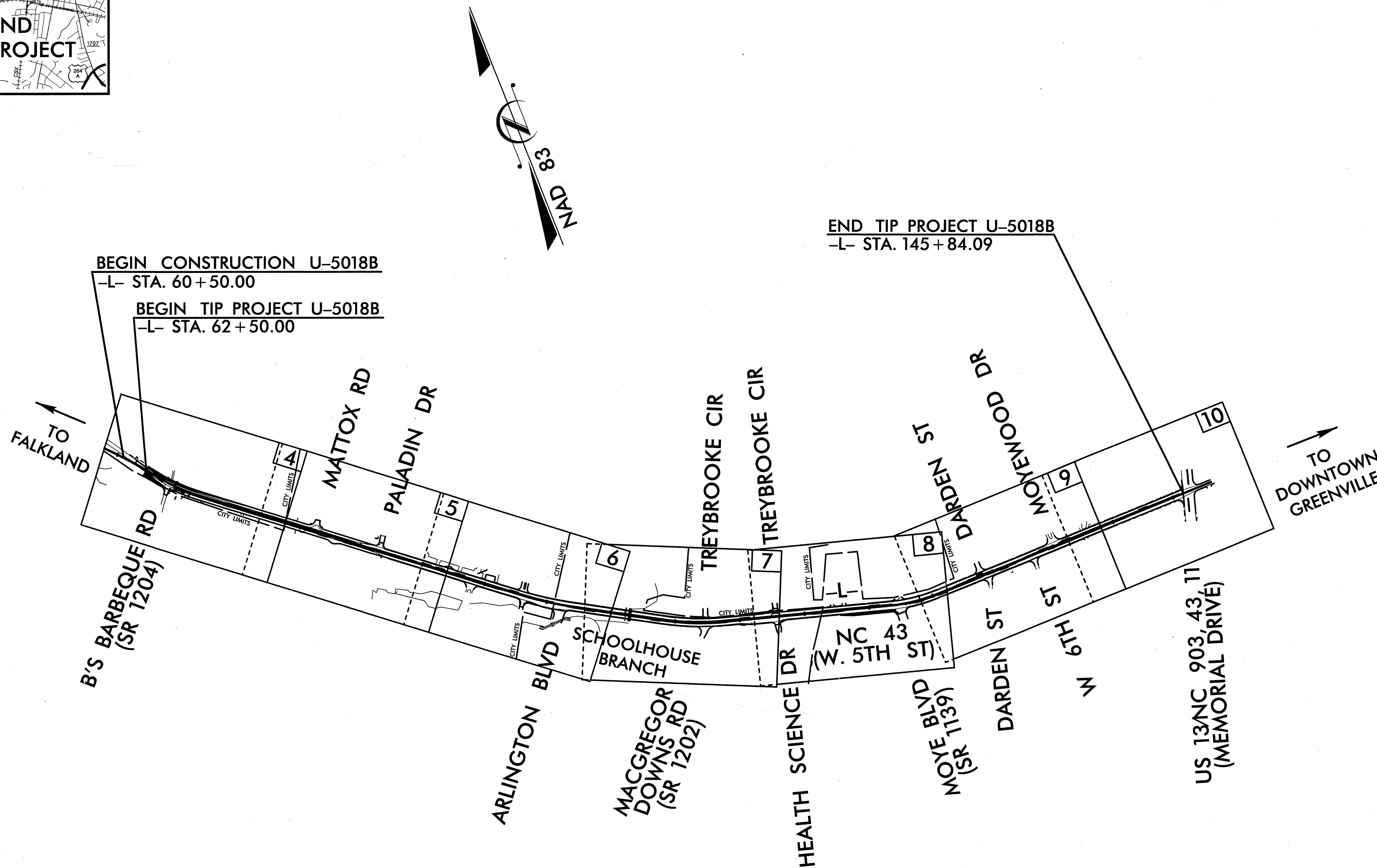
LOCATION: GREENVILLE - NC 43 FROM WEST OF SR 1204 (B'S BARBEQUE ROAD) TO US 13/NC 11 (MEMORIAL DRIVE)
TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND RETAINING WALL

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5018B	1	
WBS NO.	F.A. PROJ. NO.	DESCRIPTION	
41431.1.1		PE	
41431.2.1		RW	
41431.3.3		CONST.	

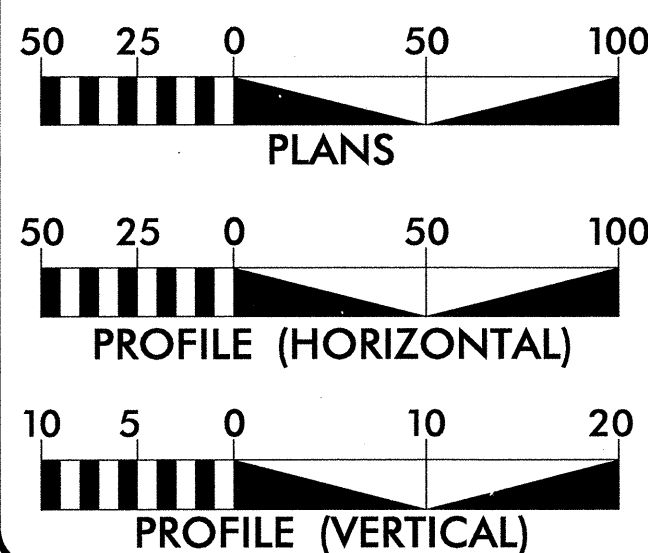
CONTRACT: C202134 TIP PROJECT: U-5018B



VICINITY MAP



GRAPHIC SCALES



DESIGN DATA

ADT 2007 = 19,700
ADT 2029 = 40,600
DHV = 10 %
D = 50 %
T = 6 % **
V = 50 MPH
(* ** TTST 2 % + DUAL 4 %)
* DESIGN EXCEPTION for SUPERELEVATION

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-5018B = 1.578 MILES
TOTAL LENGTH TIP PROJECT U-5018B = 1.578 MILES

Prepared In the Office of:
MULKEY
ENGINEERS & CONSULTANTS
FOR
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2006 STANDARD SPECIFICATIONS
RIGHT OF WAY DATE: TIM JORDAN, PE
PROJECT ENGINEER
LETTING DATE: JULY 21, 2009
JEFF RECK, PE
HYDRAULICS ENGINEER

NCDOT CONTACT: JOHN ROUSE, PE

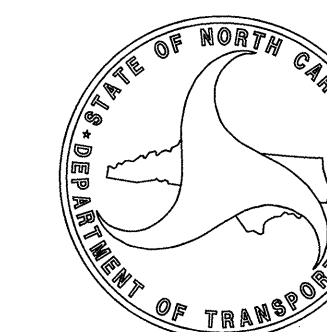
HYDRAULICS ENGINEER

Jeff Reck
SIGNATURE: [Seal] P.E. 5-7-09

ROADWAY DESIGN

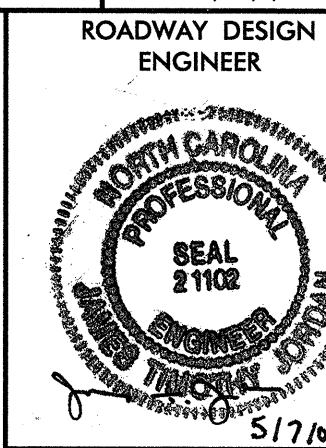
Tim Jordan
SIGNATURE: [Seal] P.E. 5/7/09

**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**



STATE HIGHWAY DESIGN ENGINEER

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INDEX OF SHEETS

Sheet #	Description
1	Title Sheet
1-A	Index of Sheets, General Notes, and List of Standards
1-B	Conventional Symbols
1-C	Survey Control Sheet
2 thru 2-A	Pavement Schedule, Wedging Detail, and Typical Sections
2-B thru 2-C	Precast Gravity Retaining Wall
2-D	Detail of Anchorage for Frames
2-E	Detail of 2-Bar Handrail
3	Summary of Quantities
3-A	Summary of Earthwork, Underdrain Summary & Summary of Pavement Removal
3-B thru 3-D	List of Pipe, Endwalls, Etc. (For Pipes 48" & Under)
3-E	Parcel Index Sheet
4 thru 10	Plans
11 thru 14	Profile
TCP-1 thru TCP-7	Traffic Control Plans
PM-1 thru PM-5	Pavement Marking Plans
EC-1 thru EC-17	Erosion Control Plans (no sheet EC-3)
UC-4 thru UC-12	Utility Construction Plans
UO-1 thru UO-7	Utilities by Others Plans
X-1	Cross-Section Summary Sheet
X-2 thru X-31	Cross-Sections

GENERAL NOTES: 2006 SPECIFICATIONS EFFECTIVE: 07-18-06
REVISED: 07-18-06

GRADING AND SURFACING OR RESURFACING AND WIDENING:
THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

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.

UNDERDRAINS:
UNDERDRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.03 AT LOCATIONS DIRECTED BY THE ENGINEER.

DRIVEWAYS:
DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.02 USING 3' RADII OR RADII AS SHOWN ON THE PLANS. LOCATIONS OF DRIVES WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

STREET TURNOUT:
STREET RETURNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 848.04 USING THE RADII NOTED ON PLANS.

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

UTILITIES:
UTILITY OWNERS ON THIS PROJECT ARE GUC (Electric), GUC (Gas), GUC (Water), Suddenlink, Embarq, Progress Energy

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.

RIGHT-OF-WAY MARKERS:
ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY OTHERS.

WHEELCHAIR RAMPS:
WHEELCHAIR RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS. THE CONSTRUCTION OF ALL WHEELCHAIR RAMPS SHALL BE IN ACCORDANCE WITH ROADWAY STANDARD NO. 848.05.

2006 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 July 18, 2006 are applicable to this project and by reference hereby are considered a part of these plans:

STD. NO.	TITLE
DIVISION 2 - EARTHWORK	
200.03	Method of Clearing - Method III
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 - Method 'A'
310.10	Driveway Pipe Construction
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
815.03	Pipe Underdrain and Blind Drain
816.04	Markers for Drainage Structure and Concrete Pad
840.00	Concrete Base Pad for Drainage Structures
840.01	Brick Catch Basin - 12" thru 54" Pipe
840.02	Concrete Catch Basin - 12" thru 54" Pipe
840.03	Frame, Grates and Hood - for Use on Standard Catch Basin
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
840.18	Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.24	Frames and Narrow Slot Sag Grates
840.27	Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.31	Concrete Junction Box - 12" thru 66" Pipe
840.32	Brick Junction Box - 12" thru 66" Pipe
840.34	Traffic Bearing Junction Box - for Use with Pipes 42" and Under
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
846.01	Concrete Curb, Gutter and Curb & Gutter
848.01	Concrete Sidewalk
848.02	Driveway Turnout - Radius Type
848.04	Street Turnout
848.05	Wheelchair Ramp - Curb Cut
852.01	Concrete Islands
852.04	Method for Placement of Drop Inlets in Grassed Median - Using 1'-6" Curb and Gutter
852.06	Method for Placement of Drop Inlets in Concrete Islands
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class 'B' Rip Rap

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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	○ EIP
Property Corner	_____
Property Monument	□ ECM
Parcel/Sequence Number	① 23
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	○
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	▭
False Sump	▭

RAILROADS:

Standard Gauge	_____
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 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 Utility Easement	-PUE-

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
Curb Cut for Future Wheel Chair Ramp	○ CCFR
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	_____

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:

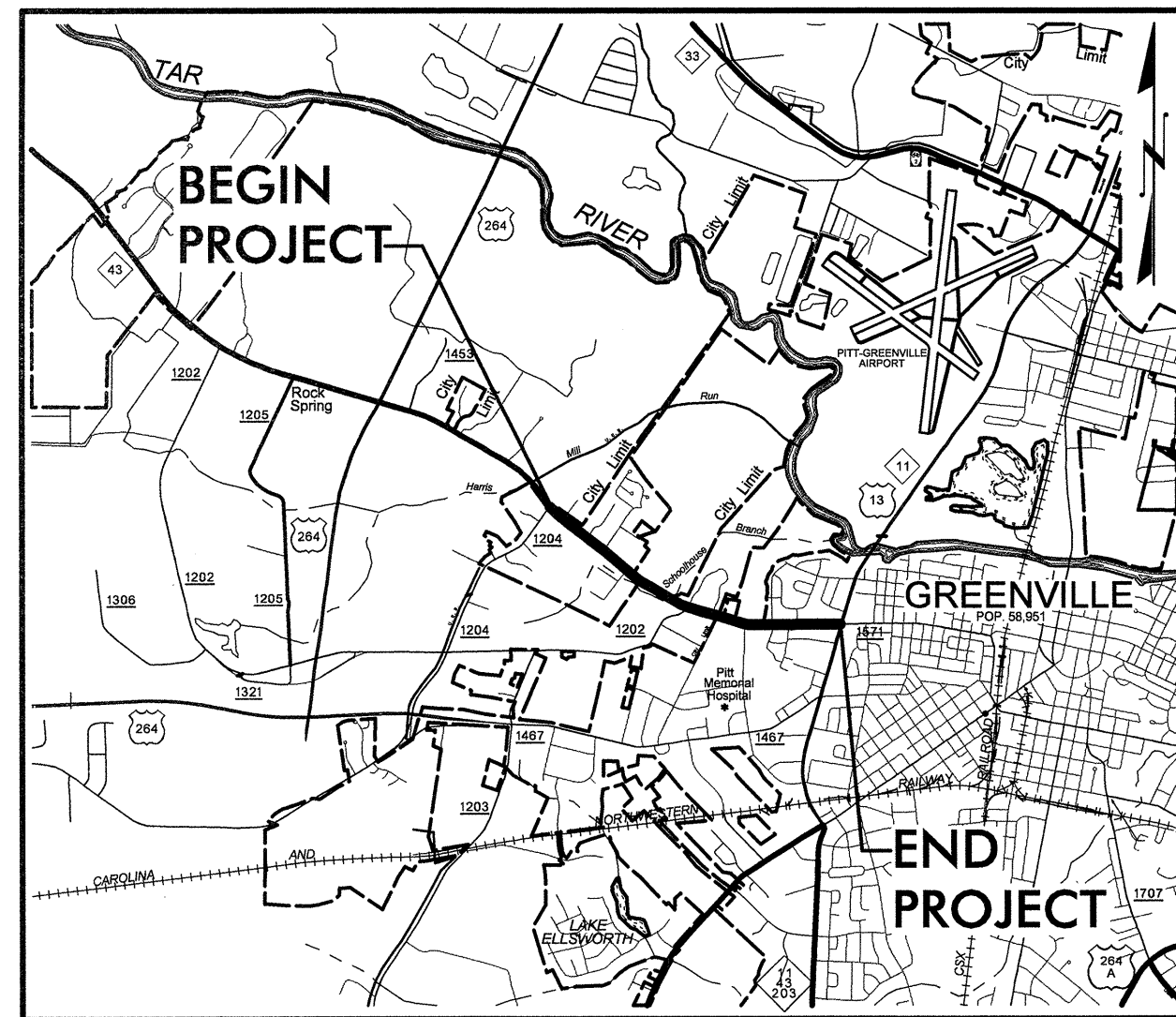
Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	_____
Above Ground Sanitary Sewer	_____ A/G Sanitary Sewer
Recorded SS Forced Main Line	_____
Designated SS Forced Main Line (S.U.E.*)	_____

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	▭
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.

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U-5018B



VICINITY MAP

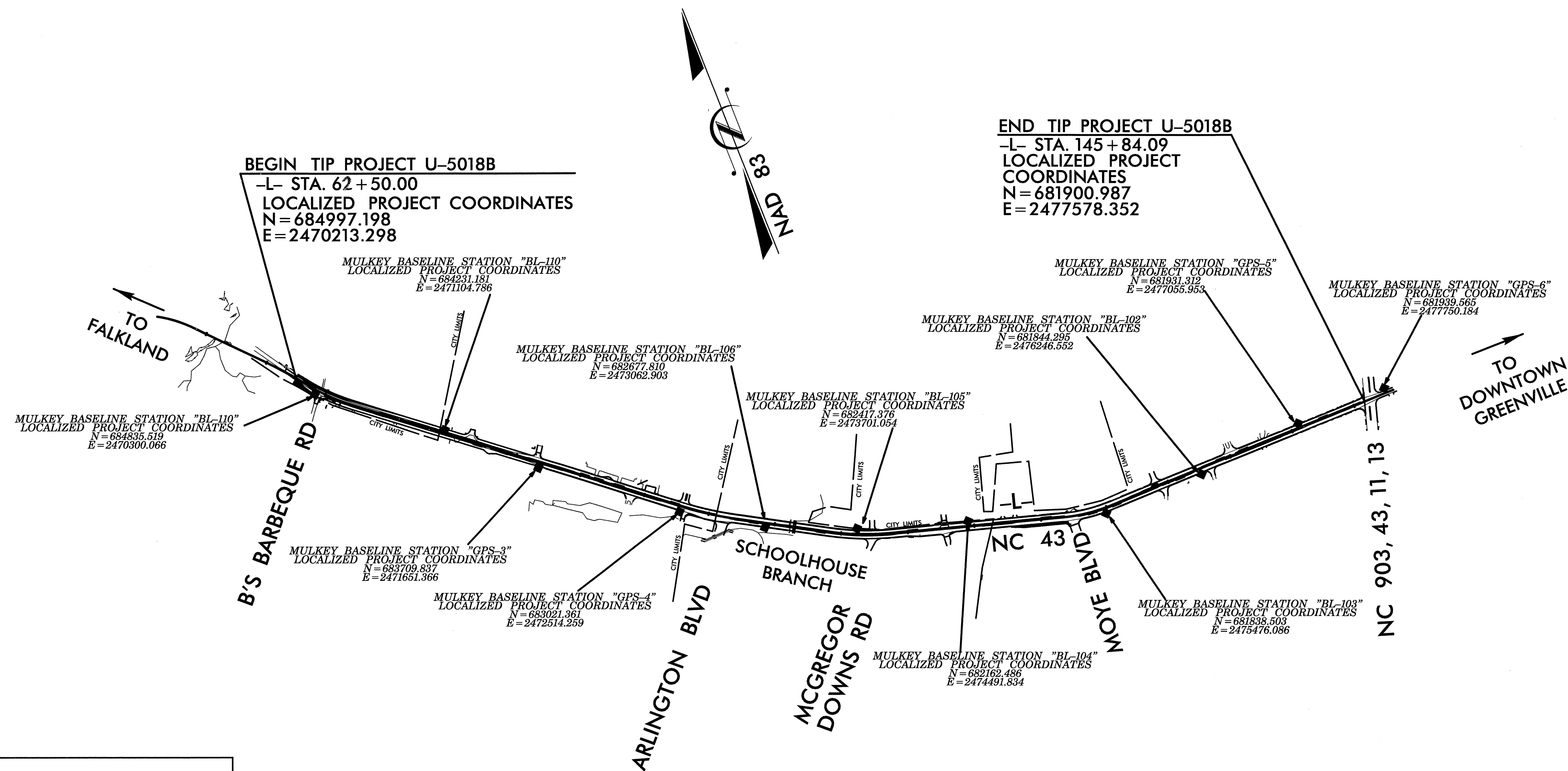
SURVEY CONTROL SHEET U-5018B

PITT COUNTY

LOCATION: GREENVILLE - NC 43 FROM WEST OF SR 1204 (B'S BARBEQUE ROAD) TO US 13/NC 11 (MEMORIAL DRIVE)

TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND RETAINING WALL

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5018B	1-C	
WBS NO.	F. A. PROJ. NO.	DESCRIPTION	
41431.1.1		PE	
41431.2.2		RW	
41431.3.3		CONST.	



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY OTHERS FOR MONUMENT "GPS-3"

WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF
 NORTHING: 683709.837(ft) EASTING: 2471651.366(ft)
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT
 (GROUND TO GRID) IS: 0.99989593

THE N.C. LAMBERT GRID BEARING AND
 LOCALIZED HORIZONTAL GROUND DISTANCE FROM
 "GPS-3" TO -L- STATION 62+50 IS
 N 48° 09' 54.2" W 1,930.11 FT

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
 VERTICAL DATUM USED IS NAVD 88

INDICATES CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY MULKEY ENGINEERS AND CONSULTANTS

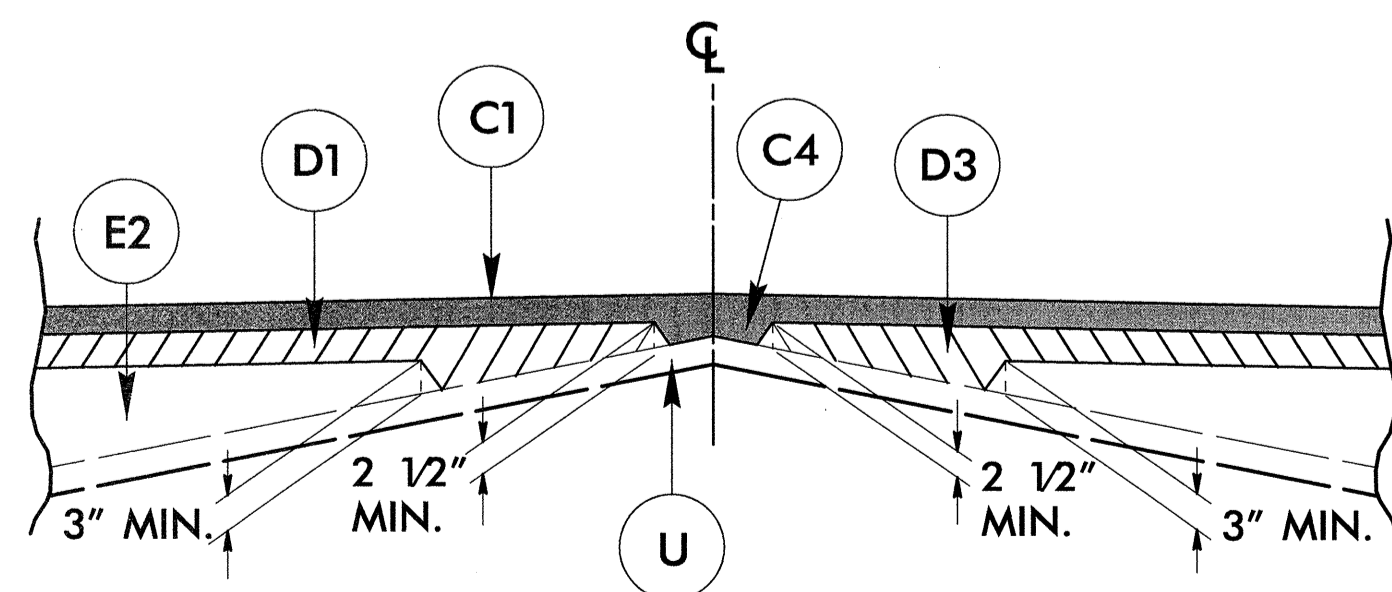
PROJECT CONTROL ESTABLISHED UTILIZING CONVENTIONAL SURVEY

NOTE: DRAWING NOT TO SCALE

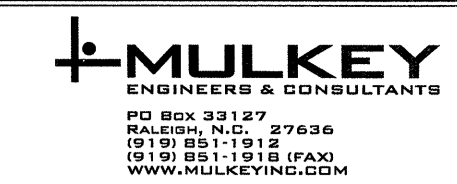
PAVEMENT SCHEDULE
(FINAL PAVEMENT DESIGN)

C1	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. APPROX. 3.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, TO BE PLACED IN TWO UNEQUAL LAYERS AS FOLLOWS: BOTTOM LAYER - 1.5" AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. TOP LAYER - 2" AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C4	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. APPROX. 3.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 399 LBS. PER SQ. YD.
D3	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2 1/4" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 7" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 399 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5 1/2" IN DEPTH.
R1	2'-6" CONCRETE CURB AND GUTTER.
R2	1'-6" CONCRETE CURB AND GUTTER.
R3	5" MONOLITHIC CONCRETE ISLAND. (KEYED IN)
S	4" CONCRETE SIDEWALK.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.

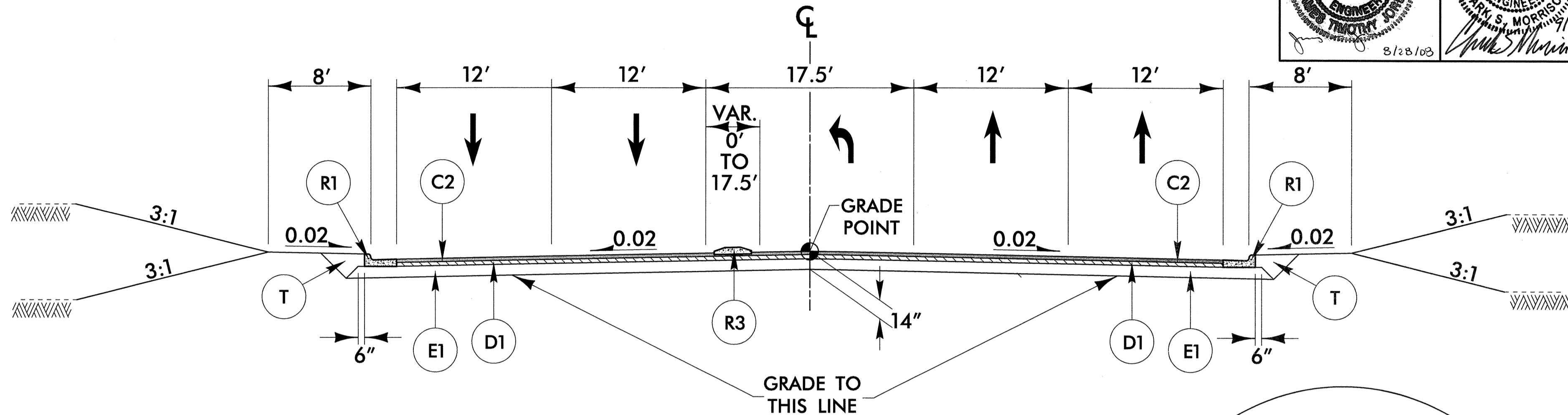
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



DETAIL SHOWING METHOD OF WEDGING

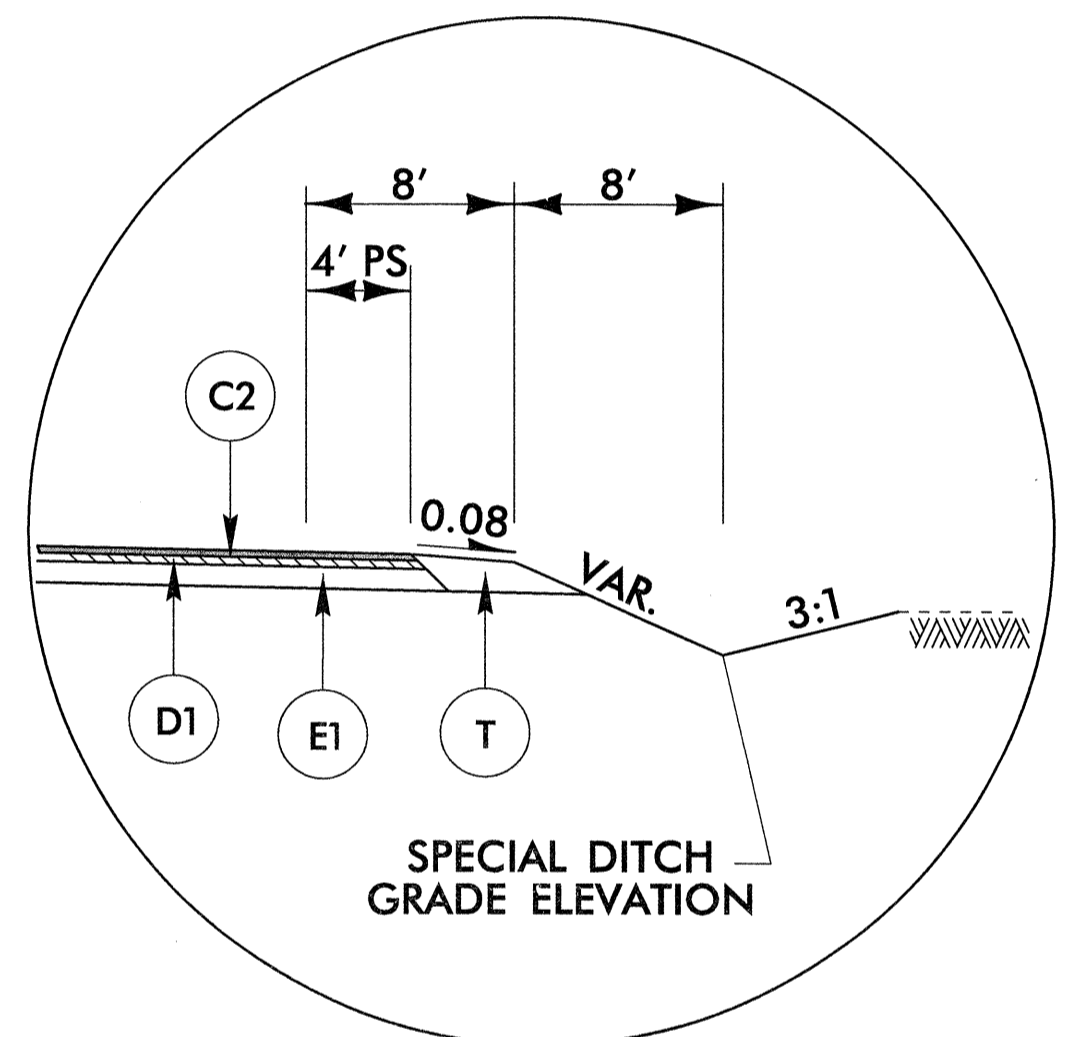


PROJECT REFERENCE NO. U-5018B	SHEET NO. 2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER



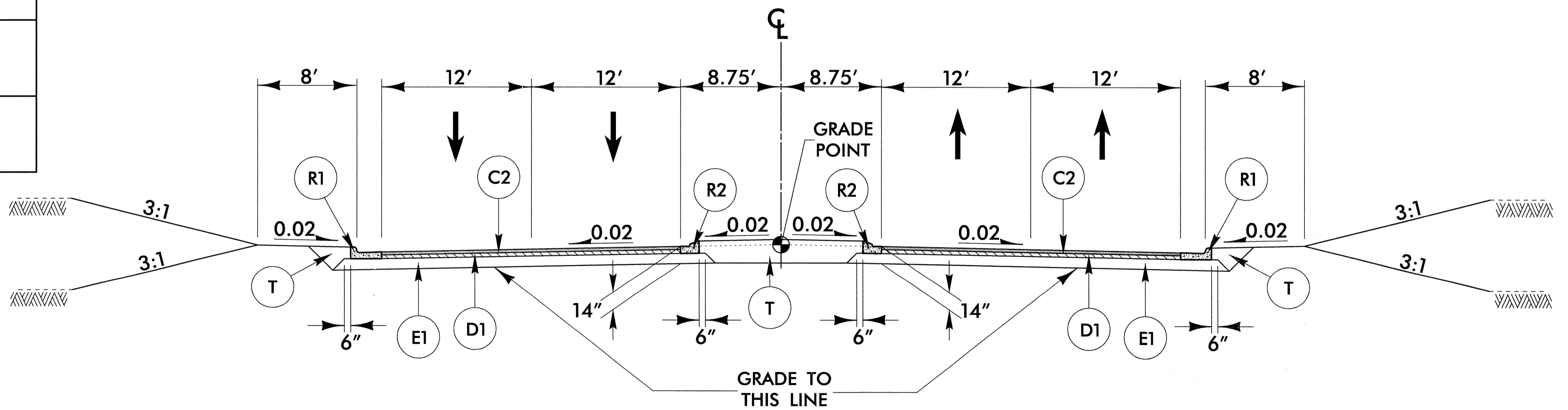
TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1 AT THE FOLLOWING LOCATIONS
 -L- STA. 64+00 TO STA. 71+00
 -L- STA. 77+50 TO STA. 80+00
 TRANSITION FROM EXISTING TO TYPICAL SECTION NO. 1
 -L- STA. 62+50 TO STA. 64+00



INSET

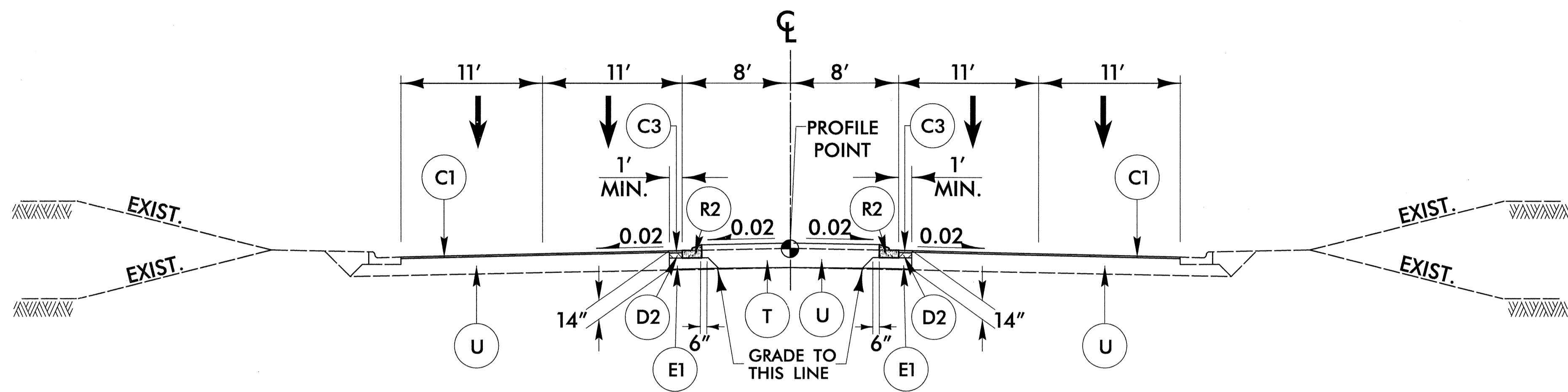
USE IN CONJUNCTION WITH TYPICAL SECTION NO. 1
 -L- STA. 62+50 TO STA. 64+30 RT



TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2 AT THE FOLLOWING LOCATIONS
 -L- STA. 71+00 TO STA. 77+50
 -L- STA. 80+00 TO STA. 81+00

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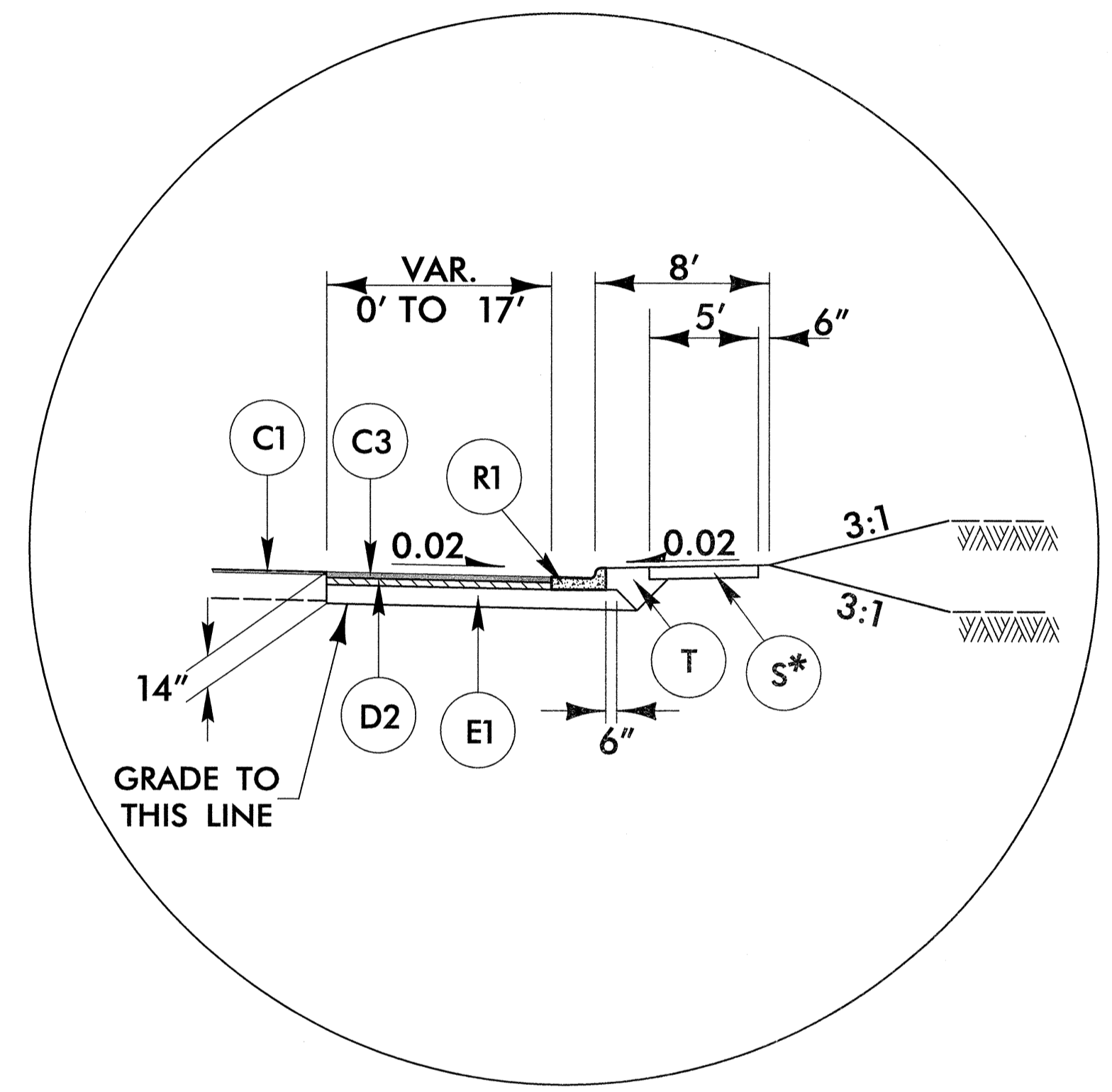


NOTE: EXISTING PAVEMENT IN MEDIAN TO BE REMOVED

TYPICAL SECTION NO. 3

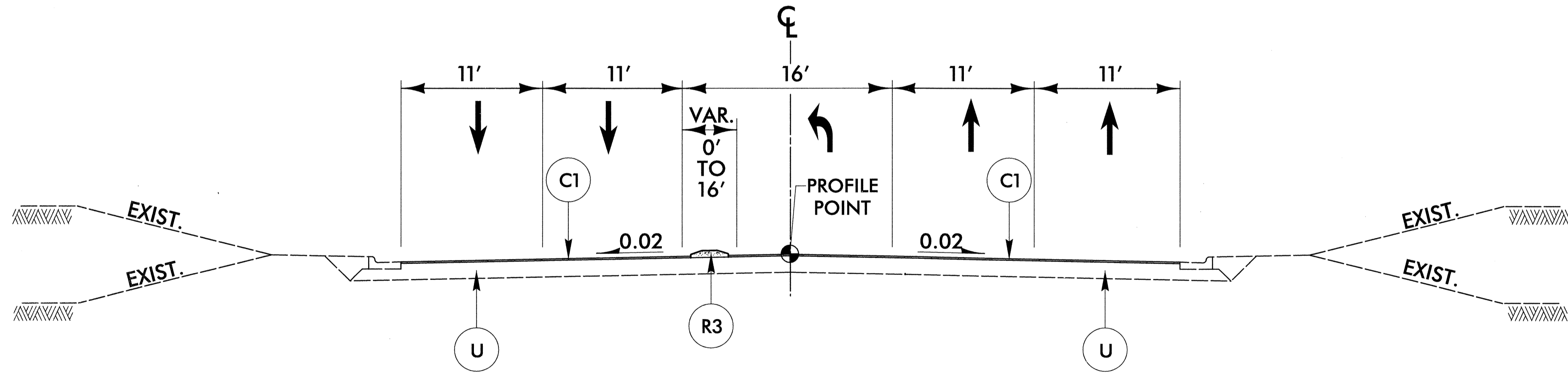
- USE TYPICAL SECTION NO. 3
AT THE FOLLOWING LOCATIONS
- TRANSITION FROM TYP NO. 2 TO TYP NO. 3
- L- STA. 81+00 TO STA. 82+00
 - L- STA. 82+00 TO STA. 84+50
 - L- STA. 87+50 TO STA. 92+00
 - L- STA. 105+00 TO STA. 109+90
 - L- STA. 115+60 TO STA. 118+75
 - L- STA. 127+00 TO STA. 129+00
 - L- STA. 135+60 TO STA. 140+00

NOTE: MILL 2" AND OVERLAY WITH C1



INSET

- USE IN CONJUNCTION WITH TYPICAL SECTION NO. 3 & 4
- L- STA. 86+50 TO STA. 87+50 LT
 - L- STA. 93+53 TO STA. 94+51 RT
 - L- STA. 111+90 TO STA. 112+60 LT
 - L- STA. 113+10 TO STA. 113+60 RT
 - * -L- STA. 117+75 TO STA. 122+10 RT

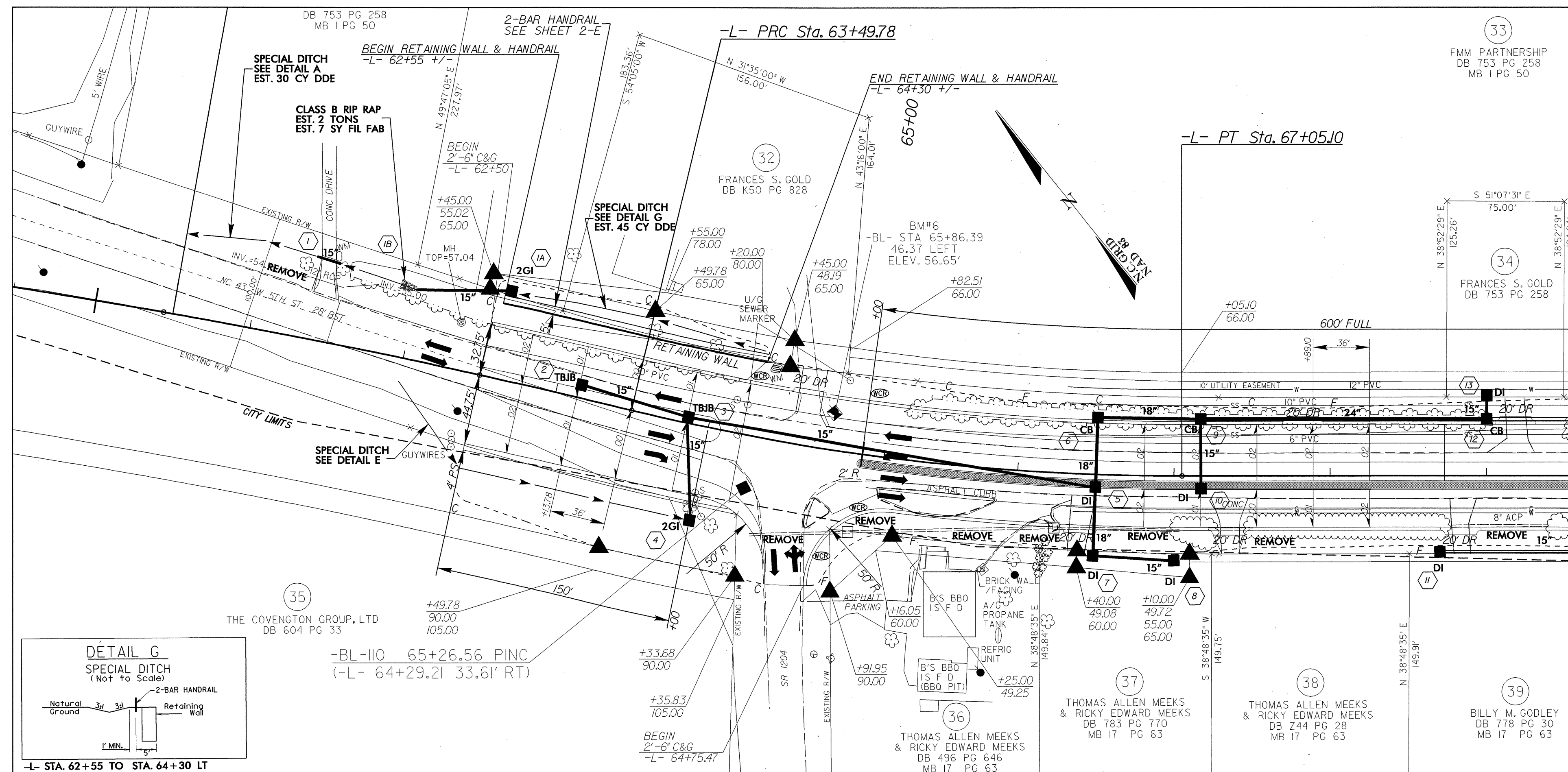


TYPICAL SECTION NO. 4

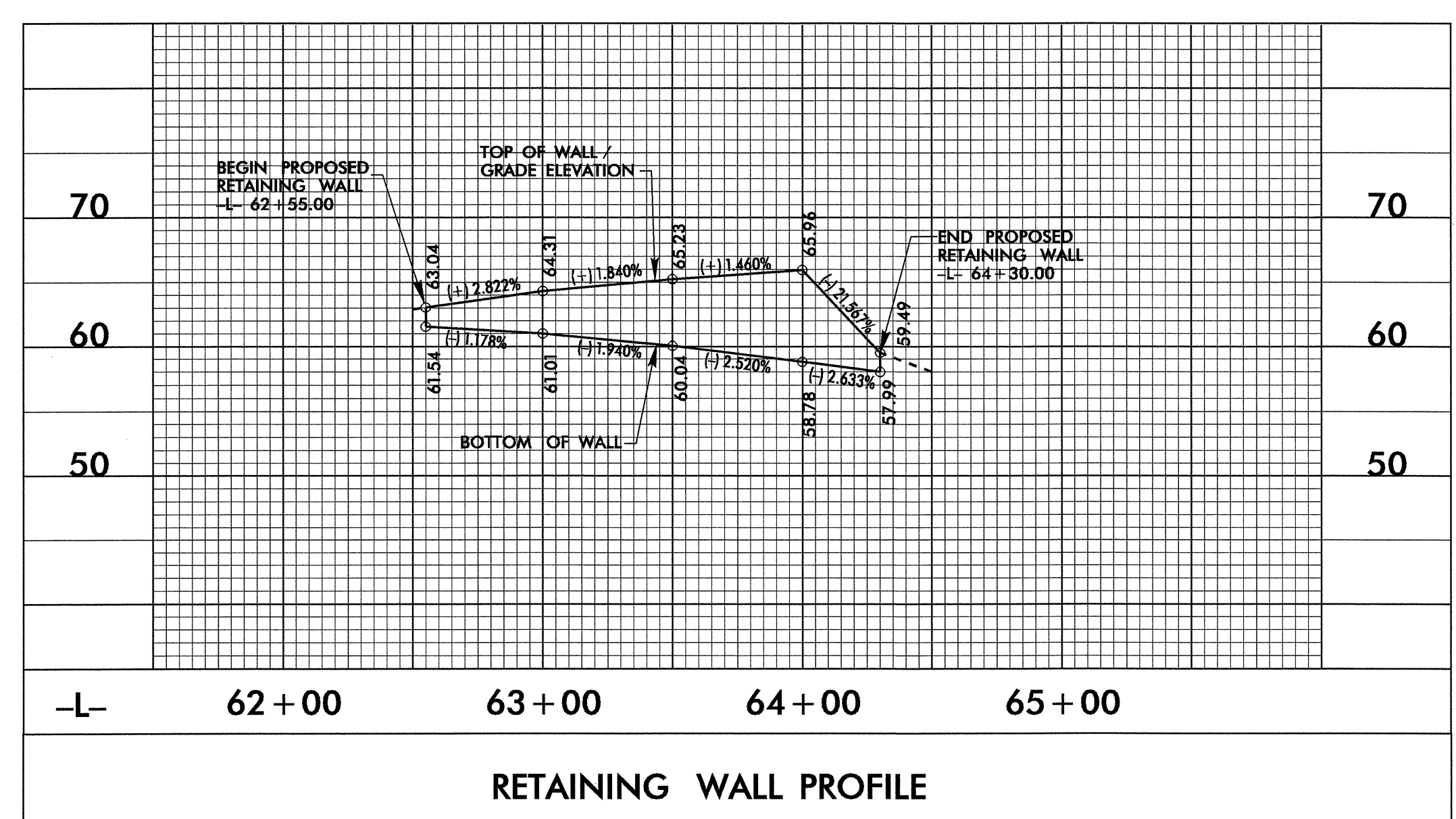
- USE TYPICAL SECTION NO. 4
AT THE FOLLOWING LOCATIONS
- L- STA. 84+50 TO STA. 87+50
 - L- STA. 92+00 TO STA. 105+00
 - L- STA. 109+90 TO STA. 115+60
 - L- STA. 118+75 TO STA. 127+00
 - L- STA. 129+00 TO STA. 135+60
 - L- STA. 140+00 TO STA. 145+84.09

NOTE: MILL 2" AND OVERLAY WITH C1

PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
C1	2" S9.5C
C3	3.5" S9.5C
D2	3.5" I19.0C
E1	7" B25.0C
R1	2'-6" C&G
R2	1'-6" C&G
R3	5" MONO. ISLAND
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT



RETAINING WALL LOCATION SKETCH



RETAINING WALL PROFILE

RETAINING WALL TYPICAL SECTION

-L- STA.	OFFSET FROM CL	ELEV. @ TOP OF WALL	ELEV. @ BOTTOM OF WALL	WALL HEIGHT
62+55	48.00' LT	63.04	61.54	1.50'
63+00	48.00' LT	64.31	61.01	3.30'
63+50	48.00' LT	65.23	60.04	5.19'
64+00	48.00' LT	65.96	58.78	7.18'
64+30	48.00' LT	59.49	57.99	1.50'

TOTAL BILL OF MATERIAL

"PRECAST GRAVITY RETAINING WALL"	760 SQUARE FEET
----------------------------------	-----------------

PREPARED BY: JINYOUNG PARK DATE: 5/7/09
 REVIEWED BY: JAMES R. BATTS DATE: 5/7/09

GEOTECHNICAL ENGINEERING UNIT

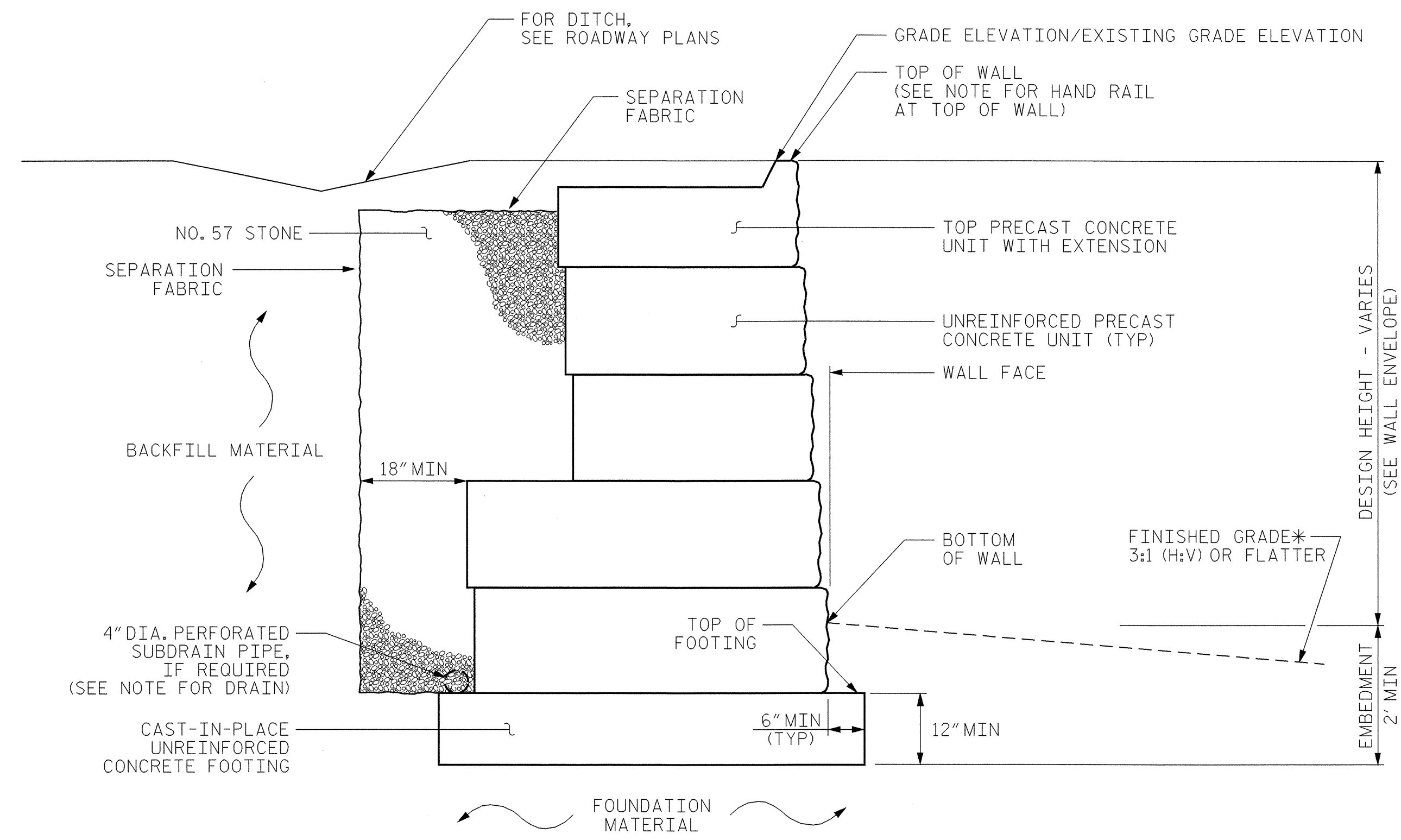
EASTERN REGIONAL OFFICE
 WESTERN REGIONAL OFFICE
 CONTRACT OFFICE

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PRECAST GRAVITY RETAINING WALL WITH TOP PRECAST UNIT

REVISIONS

NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		



**PRECAST GRAVITY WITH
TOP PRECAST UNIT TYPICAL SECTION**

*SEE ROADWAY TYPICAL SECTIONS FOR FINISHED GRADE DETAILS.

FOR PRECAST GRAVITY RETAINING WALLS, SEE PRECAST GRAVITY RETAINING WALLS PROVISION.

FOR DITCH ABOVE WALL, SEE ROADWAY PLANS.

A HAND RAIL IS REQUIRED AT RETAINING WALL NO.1. SEE ROADWAY PLANS FOR HAND RAIL DETAILS.

A SUBDRAIN PIPE IS REQUIRED FOR RETAINING WALL NO.1.

BEFORE BEGINNING PRECAST GRAVITY WALL DESIGN FOR RETAINING WALL NO.1, SURVEY EXISTING GROUND ELEVATIONS SHOWN ON THE WALL PROFILE VIEW (WALL ENVELOPE) AND SUBMIT A REVISED WALL ENVELOPE FOR REVIEW. DO NOT START WALL DESIGN OR CONSTRUCTION UNTIL THIS ENVELOPE IS ACCEPTED.

DESIGN RETAINING WALL NO.1 FOR WALL HEIGHTS EQUAL TO THE DESIGN HEIGHT PLUS DEPTH TO TOP OF FOOTING (DIFFERENCE BETWEEN GRADE ELEVATION AND TOP OF FOOTING ELEVATION).

DESIGN RETAINING WALL NO.1 FOR THE FOLLOWING:
 1) MINIMUM SERVICE LIFE = 75 YEARS
 2) ALLOWABLE BEARING CAPACITY = 2400 PSF
 3) MINIMUM EMBEDMENT = 2 FT
 4) IN-SITU ASSUMED MATERIAL PARAMETERS:

MATERIAL TYPE	UNIT WEIGHT (gamma) PCF	FRICTION ANGLE (phi) DEGREES	COHESION (c) PSF
BACKFILL	120	30	0
FOUNDATION	120	30	0

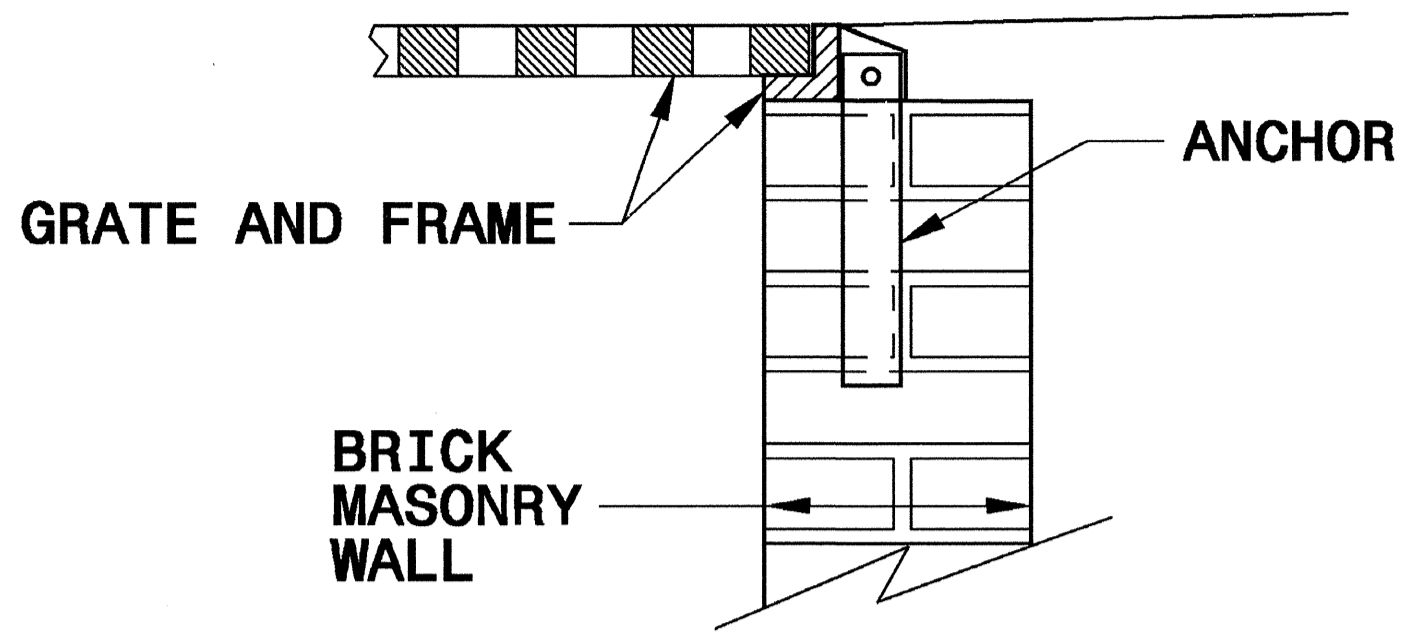
ADJUST DITCH WIDTH OR BACK SLOPE FOR VARYING GRADE ELEVATIONS ALONG RETAINING WALL NO.1 AND SUBMIT A DITCH DETAIL FOR REVIEW WHEN TOP OF WALL STEPS DOWN.

DO NOT PLACE CONCRETE FOR FOOTINGS FOR RETAINING WALL NO.1 UNTIL OBTAINING APPROVAL OF THE EXCAVATION DEPTH AND FOUNDATION MATERIAL.

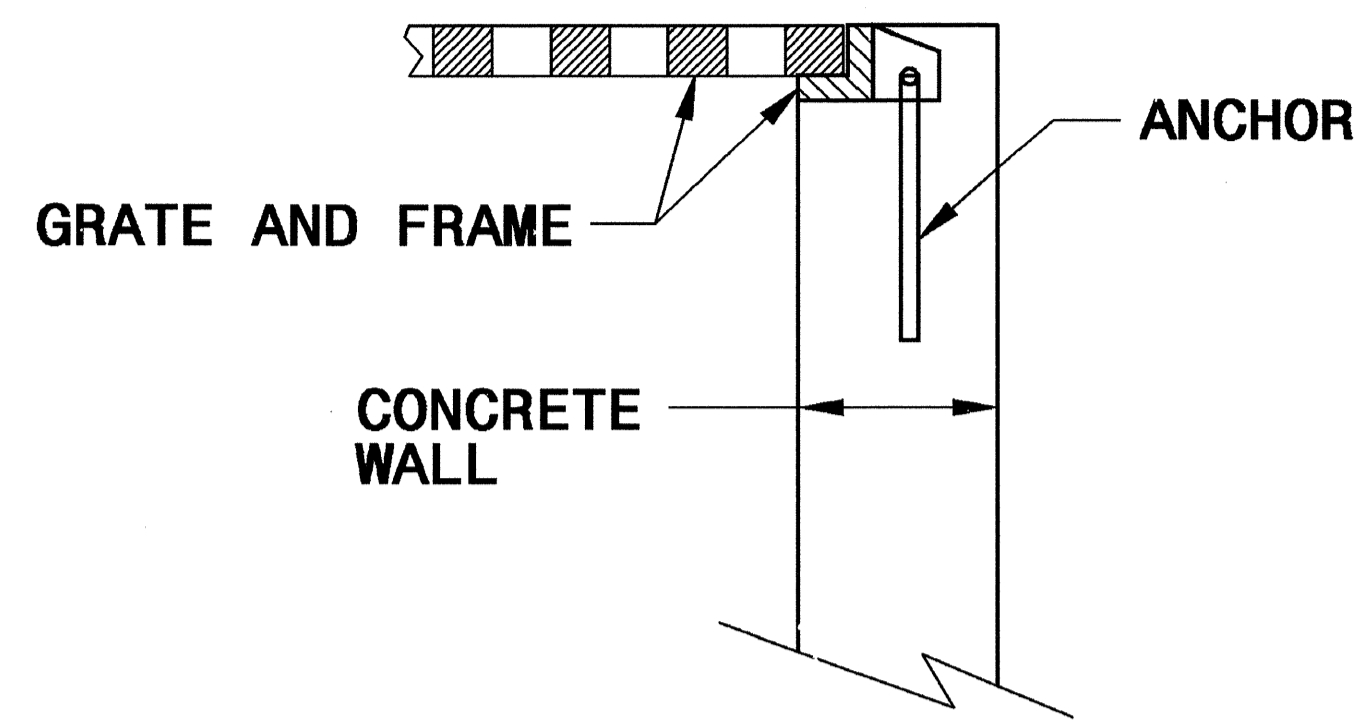
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
ANCHORAGE FOR FRAMES
BRICK/CONCRETE/PRECAST CONCRETE

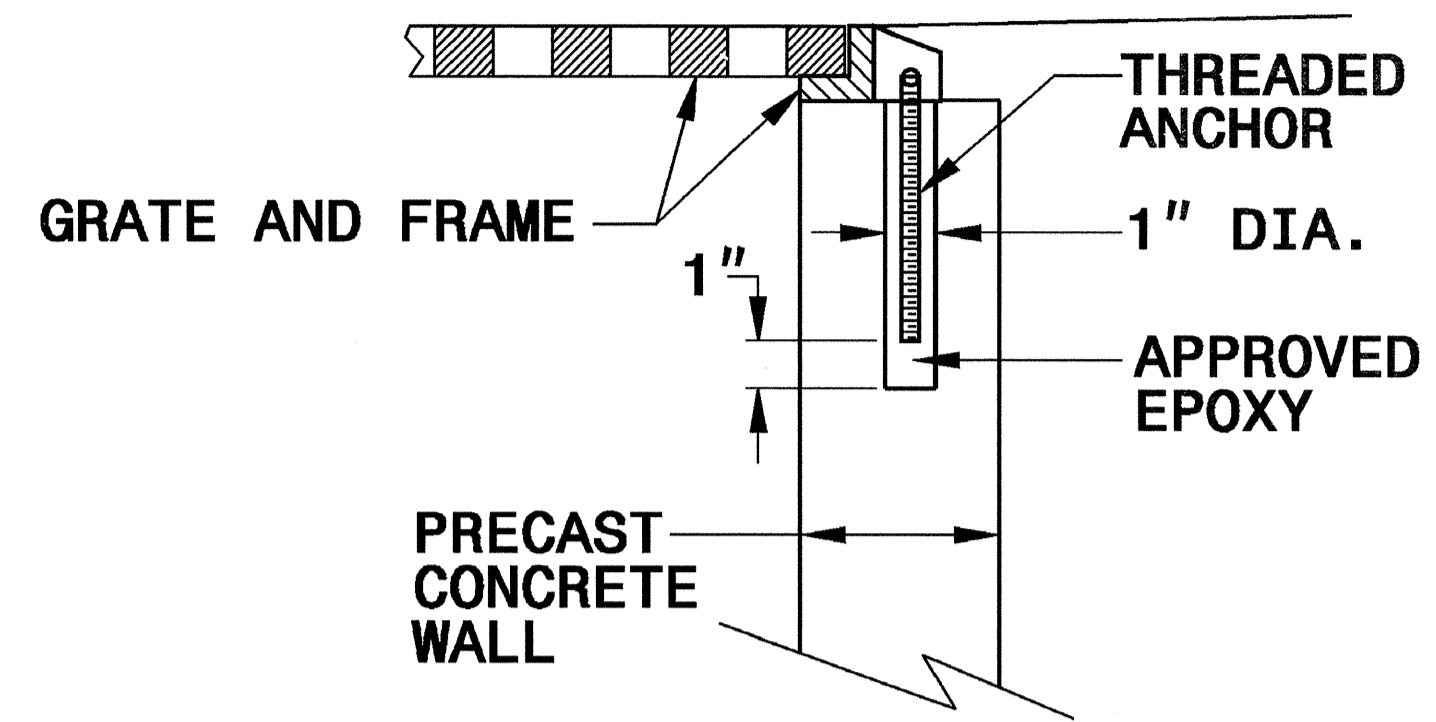
SHEET 1 OF 1
840D25



BRICK MASONRY CONSTRUCTION



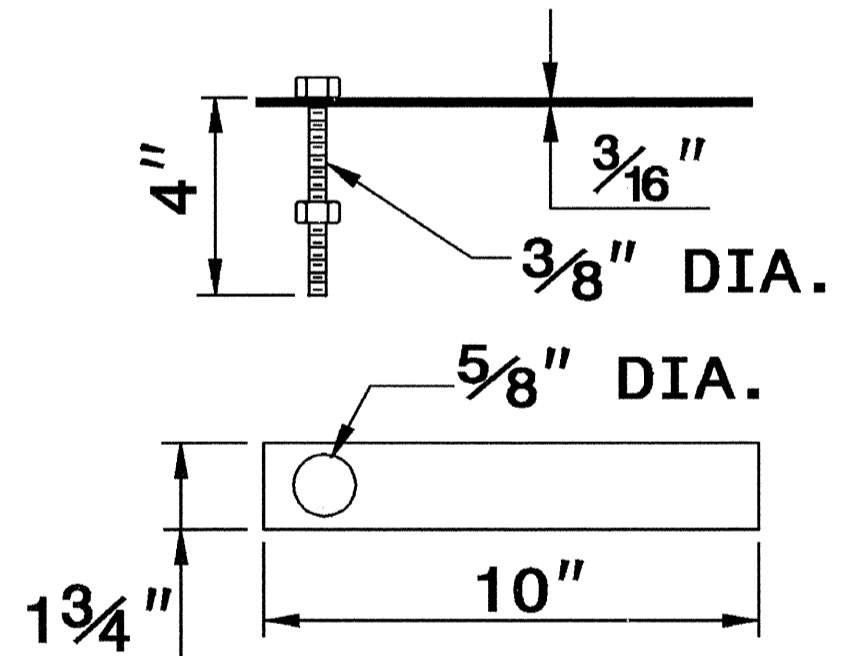
CONCRETE CONSTRUCTION



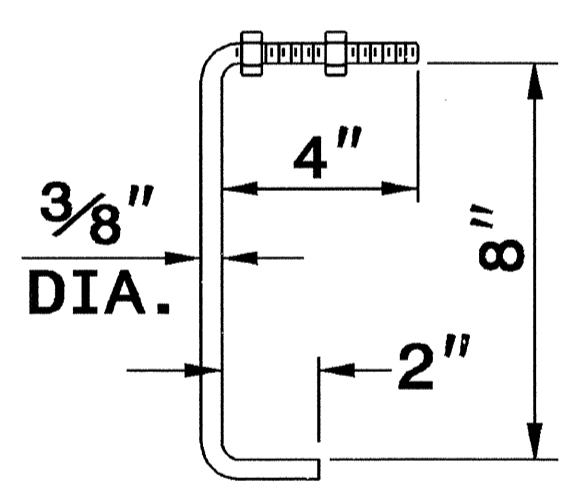
PRECAST CONCRETE CONSTRUCTION

DETAIL SHOWING ANCHORAGE OF FRAME FOR GRATED DROP INLET

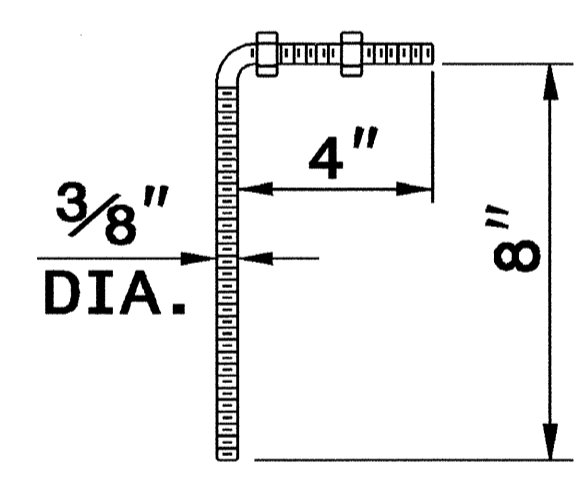
NOTE:
CONSTRUCT GRATED DROP INLET TO COINCIDE WITH NORMAL OR SUPERELEVATED SHOULDER OR PAVEMENT SLOPE.



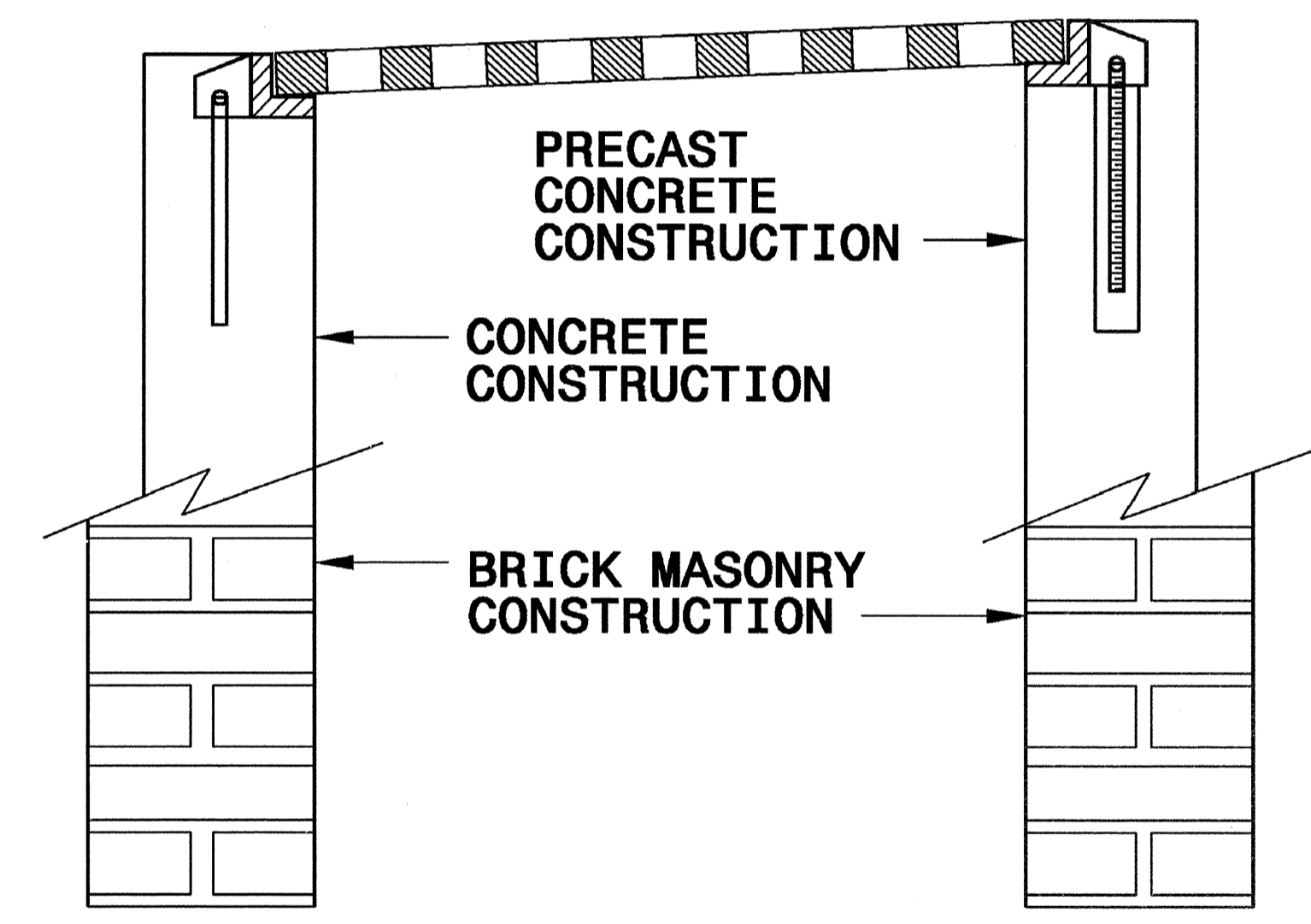
MASONRY ANCHOR
3/8" DIA. BOLT WITH PLATE



CONCRETE ANCHOR
3/8" DIA. BENT BAR



PRECAST CONCRETE ANCHOR
3/8" DIA. BENT BAR

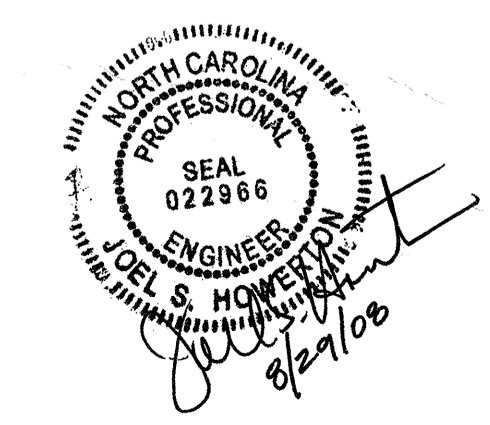


FRAME AND GRATE INSTALLATION FOR NORMAL CROWN AND SUPERELEVATED SECTIONS

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

ENGLISH DETAIL DRAWING FOR
ANCHORAGE FOR FRAMES
BRICK/CONCRETE/PRECAST CONCRETE

SHEET 1 OF 1
840D25

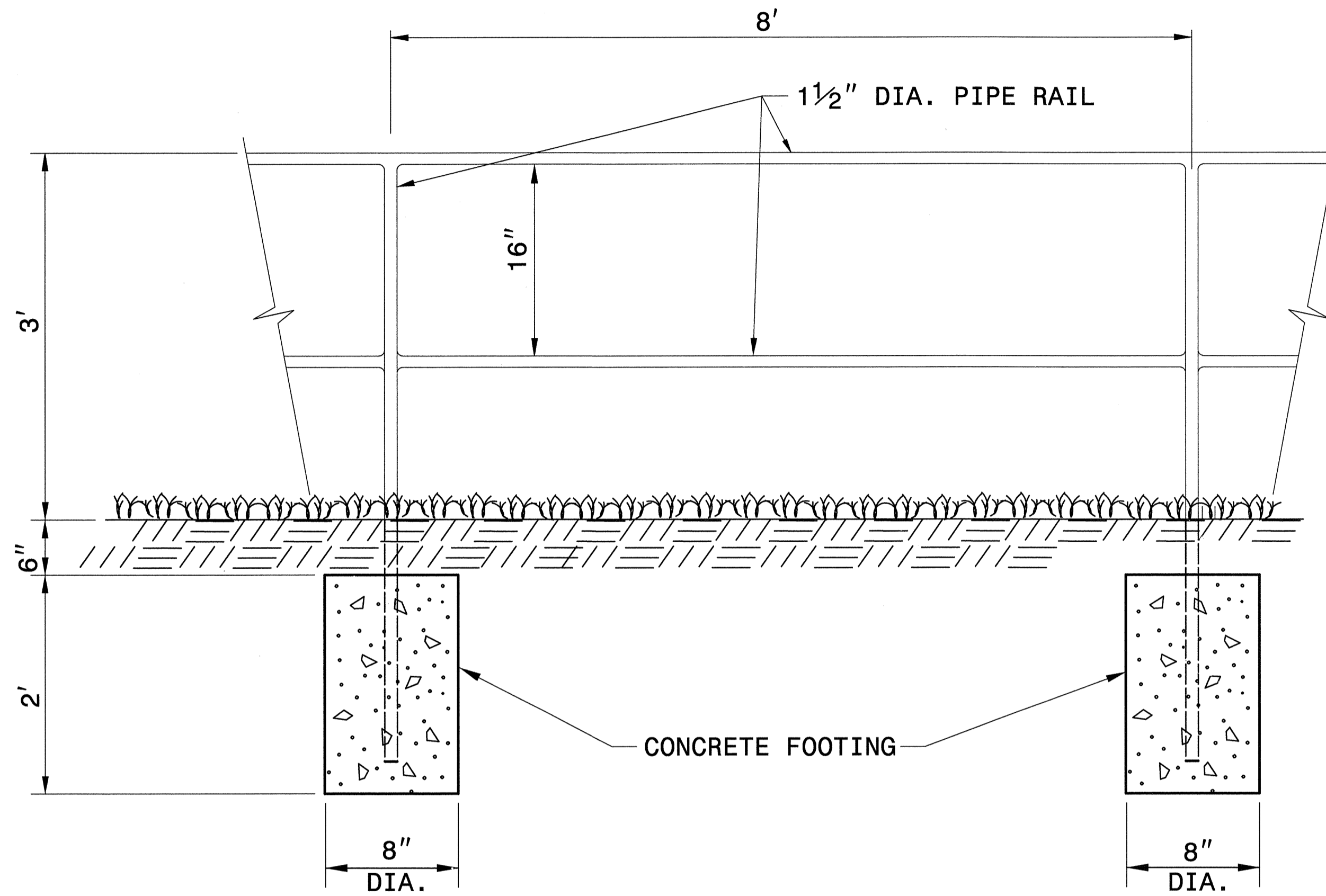


PROJECT SERVICES UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-250-4128 FAX 919-250-4119

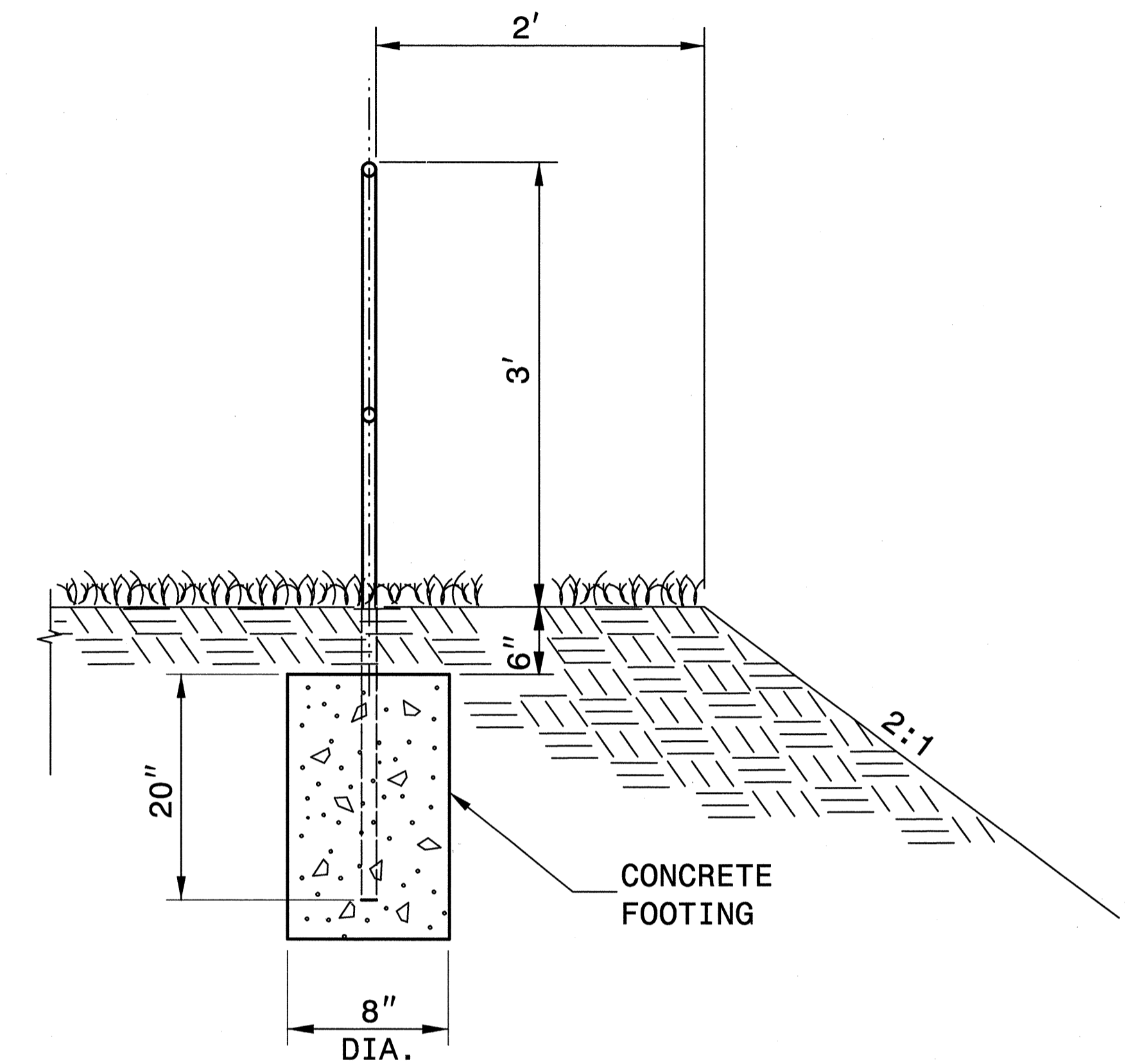
SEE PLATE FOR TITLE

ORIGINAL BY: 2006 STD 840.25 DATE: 07/18/06
MODIFIED BY: E.E. WARD DATE: 9/25/06
CHECKED BY: DATE:
FILE SPEC.:

8/15/2008
R:\300000\Proj\U5018B\U5018B_rdy_typ.dgn
1:38:57 PM



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.

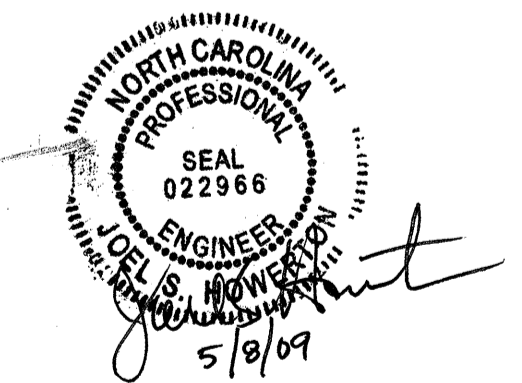
REPAIR GALVANIZING IN ACCORDANCE WITH SECTION 1076 OF THE NCDOT STANDARD SPECIFICATIONS.

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.



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

2-BAR HANDRAIL

ORIGINAL BY: E.F. WARD	DATE: 12-99
MODIFIED BY: T.S. Spe11	DATE: 1-4-05
CHECKED BY:	DATE:
FILE SPEC.: w:\details\stand\metric\retainwall_handrails.dgn	

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C202134

ItemNumber	Sec #	Quantity	Unit	Description
000010000-N	800	Lump Sum		MOBILIZATION
000040000-N	801	Lump Sum		CONSTRUCTION SURVEYING
004300000-N	226	Lump Sum		GRADING
005000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUB-BING
005700000-E	226	4,300	CY	UNDERCUT EXCAVATION
008000000-E	SP	250	TON	CLASS IV SUBGRADE STABILIZATION
013400000-E	240	75	CY	DRAINAGE DITCH EXCAVATION
019600000-E	270	4,550	SY	FABRIC FOR SOIL STABILIZATION
023400000-E	SP	4,550	CY	GENERIC GRADING ITEM SELECT MATERIAL, CLASS III
031800000-E	300	450	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRS
034300000-E	310	16	LF	15" SIDE DRAIN PIPE
037800000-E	310	748	LF	24" RC PIPE CULVERTS, CLASS III
070800000-E	310	32	LF	15" BIT COAT CS PIPE CULVERTS, TYPE B 0.064" THICK
099500000-E	340	1,380	LF	PIPE REMOVAL
122000000-E	545	200	TON	INCIDENTAL STONE BASE
129700000-E	607	4,500	SY	MILLING ASPHALT PAVEMENT, **** DEPTH (2")
149100000-E	610	7,010	TON	ASPHALT CONC BASE COURSE, TYPE B25.0C
150300000-E	610	3,350	TON	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0C
152300000-E	610	6,660	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5C
156000000-E	620	460	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22
156500000-E	620	405	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 70-22
169300000-E	654	550	TON	ASPHALT PLANT MIX, PAVEMENT REPAIR
202200000-E	815	952	CY	SUBDRAIN EXCAVATION
203300000-E	815	714	CY	SUBDRAIN FINE AGGREGATE
204400000-E	815	4,250	LF	6" PERFORATED SUBDRAIN PIPE
205500000-E	815	128	EA	6" SUBDRAIN PIPE WYES, TEES, & ELBOWS
206600000-N	815	9	EA	CONCRETE PAD FOR SUBDRAIN PIPE OUTLET
207700000-E	815	54	LF	6" OUTLET PIPE (SUBDRAINS)
228600000-N	840	59	EA	MASONRY DRAINAGE STRUCTURES
230800000-E	840	4	LF	MASONRY DRAINAGE STRUCTURES
236400000-N	840	33	EA	FRAME WITH TWO GRATES, STD 840.16
236600000-N	840	2	EA	FRAME WITH TWO GRATES, STD 840.24
237400000-N	840	8	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (F)
237400000-N	840	13	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (G)
239600000-N	840	3	EA	FRAME WITH COVER, STD 840.54
245100000-N	852	17	EA	CONCRETE TRANSITIONAL SECTION FOR DROP INLETS
254200000-E	846	6,000	LF	1'-6" CONCRETE CURB & GUTTER
254900000-E	846	4,425	LF	2'-6" CONCRETE CURB & GUTTER
259100000-E	848	265	SY	4" CONCRETE SIDEWALK
260500000-N	848	10	EA	CONCRETE WHEELCHAIR RAMPS
261200000-E	848	250	SY	6" CONCRETE DRIVEWAY
265500000-E	852	1,830	SY	5" MONOLITHIC CONCRETE ISLANDS (KEYED IN)
357500000-E	SP	175	LF	GENERIC FENCING ITEM 2-BAR HANDRAIL
364900000-E	876	47	TON	RIP RAP, CLASS B
365600000-E	876	122	SY	FILTER FABRIC FOR DRAINAGE
440000000-E	1110	328	SF	WORK ZONE SIGNS (STATIONARY)
440500000-E	1110	288	SF	WORK ZONE SIGNS (PORTABLE)

SUMMARY OF QUANTITIES

441500000-N	1115	2	EA	FLASHING ARROW PANELS, TYPE C
443000000-N	1130	110	EA	DRUMS
444500000-E	1145	80	LF	BARRICADES (TYPE III)
445500000-N	1150	500	MD	FLAGGER
448000000-N	1165	2	EA	TMIA
465000000-N	1251	20	EA	TEMPORARY RAISED PAVEMENT MARKERS
468600000-E	1205	6,961	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)
471000000-E	1205	195	LF	THERMOPLASTIC PAVEMENT MARKING LINES (24", 120 MILS)
472100000-E	1205	8	EA	THERMOPLASTIC PAVEMENT MARKING CHARACTER (120 MILS)
472500000-E	1205	52	EA	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)
481000000-E	1205	16,131	LF	PAINT PAVEMENT MARKING LINES (4")
482000000-E	1205	677	LF	PAINT PAVEMENT MARKING LINES (8")
484500000-N	1205	11	EA	PAINT PAVEMENT MARKING SYMBOL
490000000-N	1251	230	EA	PERMANENT RAISED PAVEMENT MARKERS
532560000-E	1510	18	LF	6" WATER LINE
532580000-E	1510	1,844	LF	8" WATER LINE
532620000-E	1510	400	LF	12" WATER LINE
554000000-E	1515	1	EA	6" VALVE
554600000-E	1515	3	EA	8" VALVE
557180000-E	1515	2	EA	8" TAPPING VALVE
557220000-E	1515	2	EA	12" TAPPING VALVE
558800000-E	1515	1	EA	** AIR RELEASE VALVE (10")
564800000-N	1515	12	EA	RELOCATE WATER METER
566600000-E	1515	2	EA	FIRE HYDRANT
567200000-N	1515	2	EA	RELOCATE FIRE HYDRANT
570930000-E	1520	1,133	LF	6" FORCE MAIN SEWER
570950000-E	1520	256	LF	10" FORCE MAIN SEWER
577600000-E	1525	1	EA	5" DIA UTILITY MANHOLE
579800000-E	1530	1,614	LF	ABANDON *** UTILITY PIPE (4")
580000000-E	1530	1,144	LF	ABANDON 6" UTILITY PIPE
580100000-E	1530	1,867	LF	ABANDON 8" UTILITY PIPE
580200000-E	1530	255	LF	ABANDON 10" UTILITY PIPE
580400000-E	1530	257	LF	ABANDON 12" UTILITY PIPE
582800000-N	1530	1	EA	REMOVE UTILITY MANHOLE
587140000-E	1550	50	LF	TRENCHLESS INSTALLATION OF 6" IN SOIL
587940000-E	SP	227	LF	4" GAS LINE
587960000-E	SP	1,348	LF	6" GAS LINE
588040000-E	SP	3	EA	4" GAS VALVE
588060000-E	SP	2	EA	6" GAS VALVE
588200000-N	SP	2	EA	GENERIC UTILITY ITEM RECONNECT 3/4" GAS SERVICE
600000000-E	1605	3,120	LF	TEMPORARY SILT FENCE
600600000-E	1610	60	TON	STONE FOR EROSION CONTROL, CLASS A
600900000-E	1610	80	TON	STONE FOR EROSION CONTROL, CLASS B
601200000-E	1610	240	TON	SEDIMENT CONTROL STONE
601500000-E	1615	2	ACR	TEMPORARY MULCHING
601800000-E	1620	100	LB	SEED FOR TEMPORARY SEEDING
602100000-E	1620	0.25	TON	FERTILIZER FOR TEMPORARY SEEDING
603000000-E	1630	150	CY	SILT EXCAVATION
603800000-E	SP	330	SY	PERMANENT SOIL REINFORCEMENT MAT
604200000-E	1632	1,060	LF	1/4" HARDWARE CLOTH
608400000-E	1660	1.5	ACR	SEEDING & MULCHING

ItemNumber	Sec #	Quantity	Unit	Description
608700000-E	1660	1	ACR	MOWING
609000000-E	1661	50	LB	SEED FOR REPAIR SEEDING
609300000-E	1661	0.25	TON	FERTILIZER FOR REPAIR SEEDING
609600000-E	1662	50	LB	SEED FOR SUPPLEMENTAL SEEDING
610800000-E	1665	1.25	TON	FERTILIZER TOPDRESSING
611400000-N	SP	2	HR	SPECIALIZED HAND MOWING
611700000-N	SP	8	EA	RESPONSE FOR EROSION CONTROL
8802031000-E	SP	760	SF	PRECAST GRAVITY RETAINING WALLS
***** BEGIN SCHEDULE AA ***** (ALTERNATES)				
036600000-E	310	3,140	LF	15" RC PIPE CULVERTS, CLASS III
037200000-E	310	184	LF	18" RC PIPE CULVERTS, CLASS III
038400000-E	310	88	LF	30" RC PIPE CULVERTS, CLASS III
*** OR ***				
036600000-E	310	2,872	LF	15" RC PIPE CULVERTS, CLASS III
037200000-E	310	168	LF	18" RC PIPE CULVERTS, CLASS III
038400000-E	310	68	LF	30" RC PIPE CULVERTS, CLASS III
053600000-E	SP	268	LF	**** HDPE PIPE CULVERTS (15")
053600000-E	SP	16	LF	**** HDPE PIPE CULVERTS (18")
053600000-E	SP	20	LF	**** HDPE PIPE CULVERTS (30")
*** OR ***				
036600000-E	310	2,872	LF	15" RC PIPE CULVERTS, CLASS III
037200000-E	310	168	LF	18" RC PIPE CULVERTS, CLASS III
038400000-E	310	68	LF	30" RC PIPE CULVERTS, CLASS III
054000000-E	SP	268	LF	**** ALUMINIZED CORRUGATED STEEL PIPE CULVERTS, **** THICK (15", 0.064")
054000000-E	SP	16	LF	**** ALUMINIZED CORRUGATED STEEL PIPE CULVERTS, **** THICK (18", 0.064")
054000000-E	SP	20	LF	**** ALUMINIZED CORRUGATED STEEL PIPE CULVERTS, **** THICK (30", 0.064")
***** END SCHEDULE AA *****				

DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA

SUMMARY OF EARTHWORK
 IN CUBIC YARDS

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT + %	BORROW	WASTE
-L- 60+50 TO 90+50	7225	4100	1820		9505
-L- 90+50 TO 120+50	1345		80		1265
-L- 120+50 TO 145+84.09	566				566
TOTAL	9136	4100	1900		11336
ADDITIONAL UNDERCUT		200			200
PROJECT TOTAL	9136	4300	1900		11536
GRAND TOTAL	9136				
SAY	9300				

EST. DDE = 75 CY
 EST. FABRIC FOR SOIL STABILIZATION = 4550 SY
 EST. SELECT GRANULAR MATERIAL = 4550 CY
 EST. SELECT MATERIAL, CLASS IV = 250 TON
 EST. SHOULDER BORROW = 60 CY

EMBANKMENT DOES NOT INCLUDE BACKFILL FOR UNDERCUT.
 SELECT GRANULAR MATERIAL WILL BE USED TO BACKFILL UNDERCUT
 AS PER GEOTECHNICAL REPORT DATED APRIL 2, 2009.

NOTE: Approximate quantities only. Unclassified excavation, Shoulder Borrow, Fine Grading, Clearing and Grubbing, and Removal of Existing Pavement will be paid for at the contract Lump Sum price for "Grading".

PAVEMENT REMOVAL SUMMARY

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	ASPHALT YD ²	CONCRETE YD ²
-L-	63+50	81+00	LT	1131	0
-L-	64+00	81+00	CL	0	3025
-L-	63+50	81+00	RT	1167	0
-L-	81+00	84+50	CL	78	622
-L-	87+50	92+00	CL	100	800
-L-	105+00	109+90	CL	109	871
-L-	115+60	118+75	CL	70	560
-L-	127+00	129+00	CL	44	356
-L-	135+60	140+00	CL	98	782
TOTAL:				2797	7016
SAY:				2825	7090

UNDERDRAIN SUMMARY

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	UNDERDRAIN LF
-L-	65+00	82+50	LT	1750
-L-	65+00	82+50	RT	1750
CONTINGENCY				750
TOTAL:				4250

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PARCEL INDEX SHEET

MULKEY
ENGINEERS & CONSULTANTS
PO Box 33127
Raleigh, N.C. 27636
919 851-1918
919 851-1918 (FAX)
WWW.MULKEYINC.COM

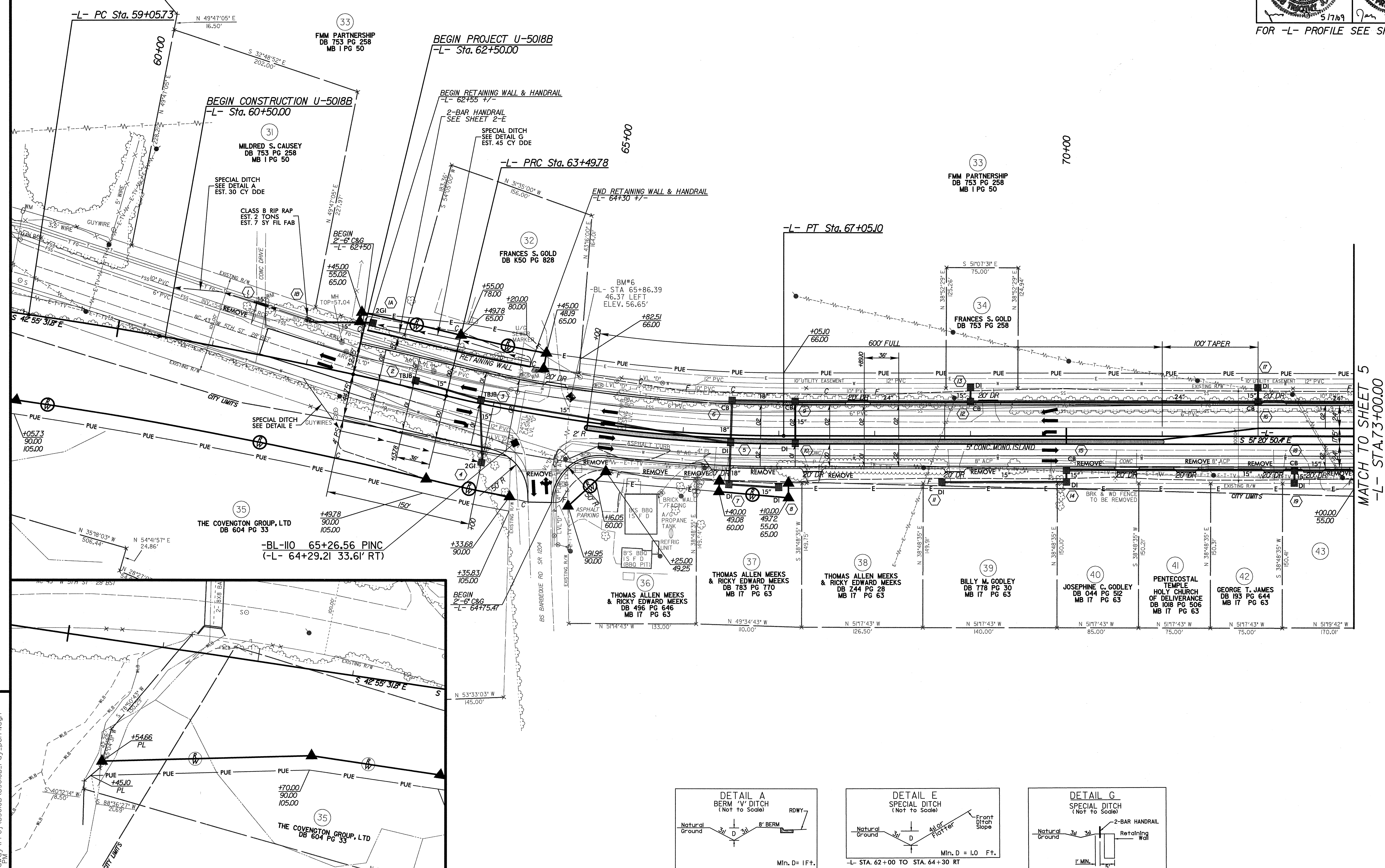
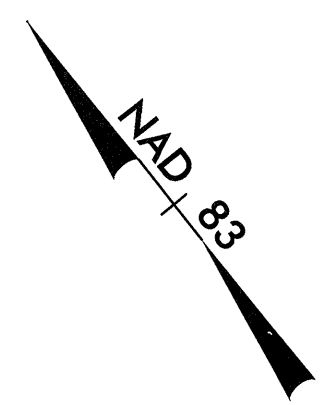
PROJECT REFERENCE NO.	SHEET NO.
U-5018B	3-E

PARCEL NO.	SHEET NO.	PROPERTY OWNERS NAME
31	4	MILDRED S. CAUSEY
32	4	FRANCES S. GOLD
33	4, 5	FMM PARTNERSHIP
34	4	FRANCES S. GOLD
35	4	THE COVENGTON GROUP, LTD.
36	4	THOMAS ALLEN MEEKS & RICKY EDWARD MEEKS
37	4	THOMAS ALLEN MEEKS & RICKY EDWARD MEEKS
38	4	THOMAS ALLEN MEEKS & RICKY EDWARD MEEKS
39	4	BILLY M. GODLEY
40	4	JOSEPHINE C. GODLEY
41	4	PENTECOSTAL TEMPLE HOLY CHURCH OF DELIVERANCE
42	4	GEORGE T. JAMES
43	4	
44	4, 5	PENTECOSTAL TEMPLE HOLY CHURCH OF DELIVERANCE
45	5	CHARLES D. WOODARD
46	5	THE CITY OF GREENVILLE
47	5	ROSE HILL ENTERPRISES, LLC
48	5	ROSE HILL ENTERPRISES, LLC
49	5	GREENVILLE DIALYSIS ASSOCIATES, LLC
50	5	EASTERN NEPHROLOGY REALTY COMPANY, LLC

PARCEL NO.	SHEET NO.	PROPERTY OWNERS NAME
51	5, 6	NSR COMPANY, LLC
52	6	CARL H. TYNDALL
53	6	BRIGHTON PARK APARTMENTS, LLC
54	6	REGGIE SPAIN CONSTRUCTION, LLC
55	6	PHILIP E. CARROLL
56	6, 7	PHILIP E. CARROLL
57	7, 8	JOHN J. FEREBEE
58	8	JOHN J. FEREBEE
59	5	STATE OF NORTH CAROLINA
60	5, 6	STATE OF NORTH CAROLINA
61	6	EAST CAROLINA CARE, II, LLC
62	6	STATE OF NORTH CAROLINA
63	6, 7	STATE OF NORTH CAROLINA
64		NOT USED
65	7	STATE OF NORTH CAROLINA
66	7	STATE OF NORTH CAROLINA
67	7, 8	STATE OF NORTH CAROLINA
68		UNKNOWN

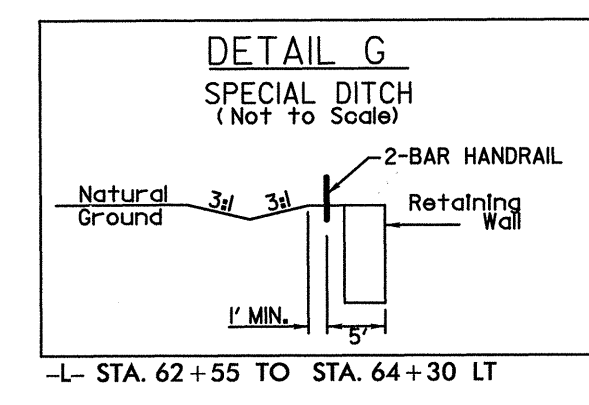
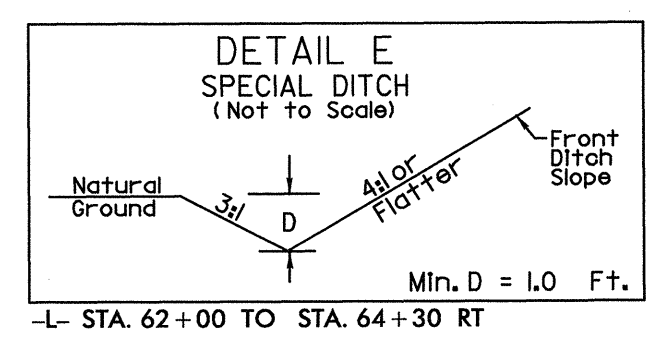
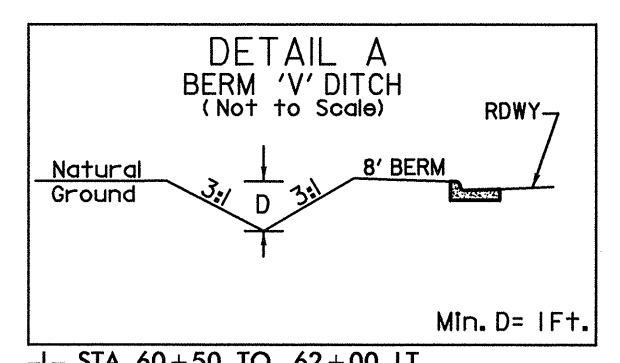
-L-

PI Sta 61+27.90 Δ = 5° 09' 00.9" (RT) D = 1° 09' 35.4" L = 444.05' T = 222.17' R = 4,940.00' SE = 02 RO = 72'	PI Sta 65+28.27 Δ = 13° 34' 19.5" (LT) D = 3° 49' 11.0" L = 355.32' T = 178.49' R = 1,500.00' SE = 02* RO = 72'
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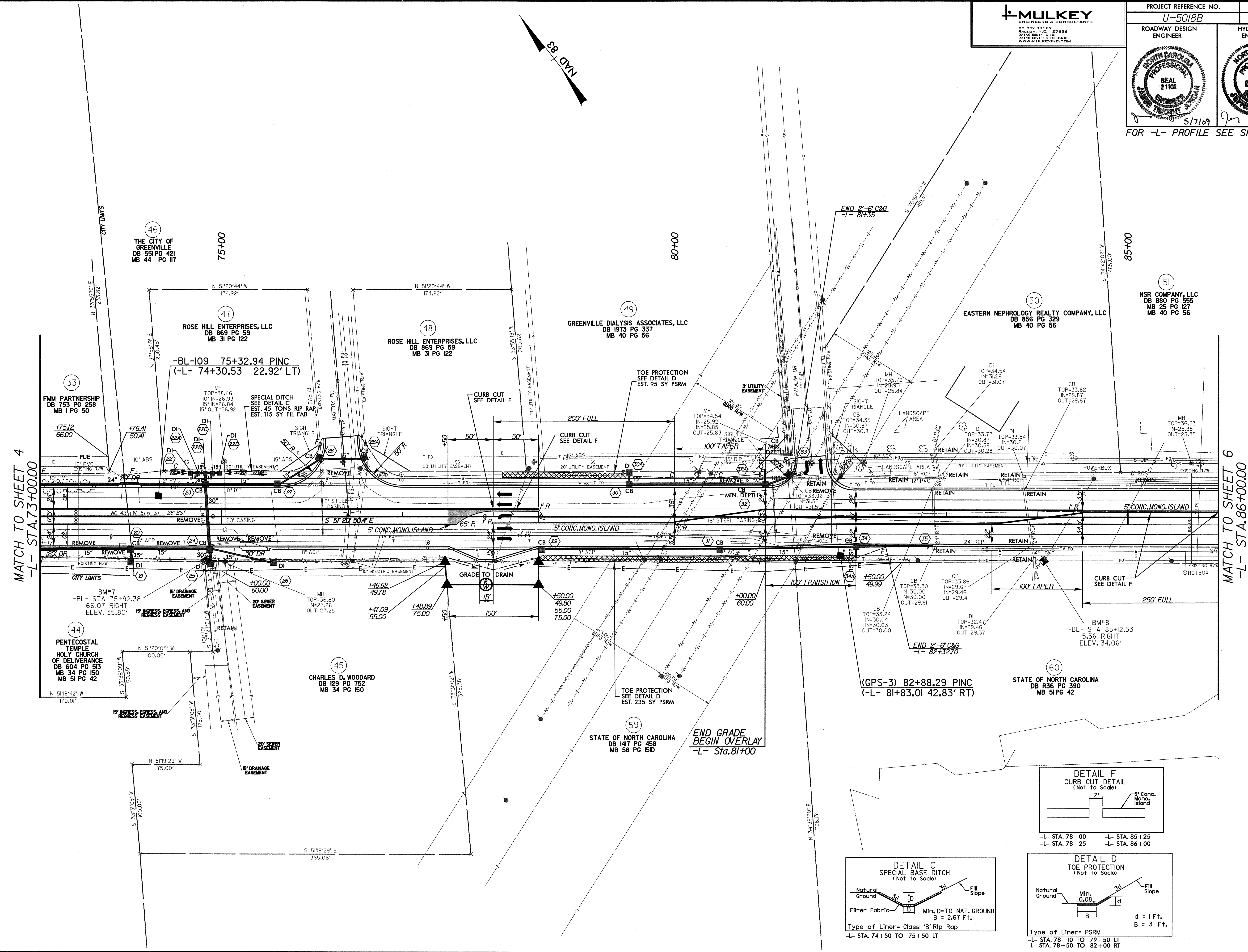
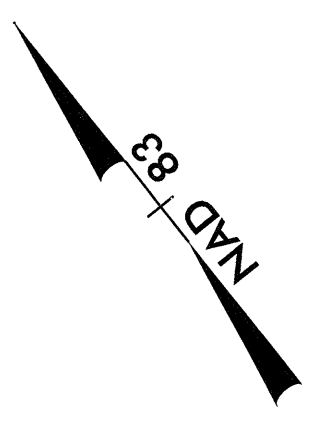
REVISIONS

MATCH TO SHEET 5
-L- STA. 73+00.00

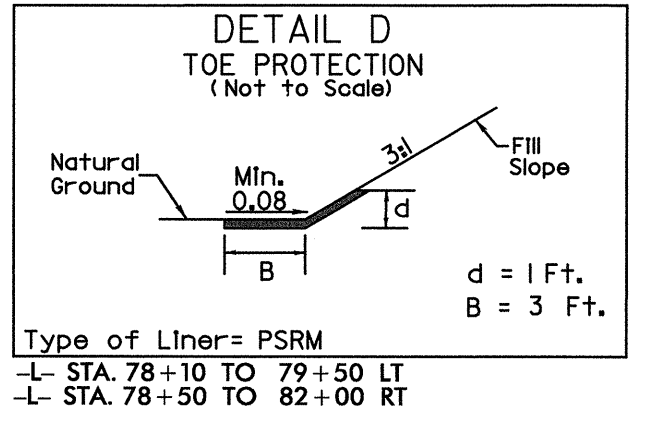
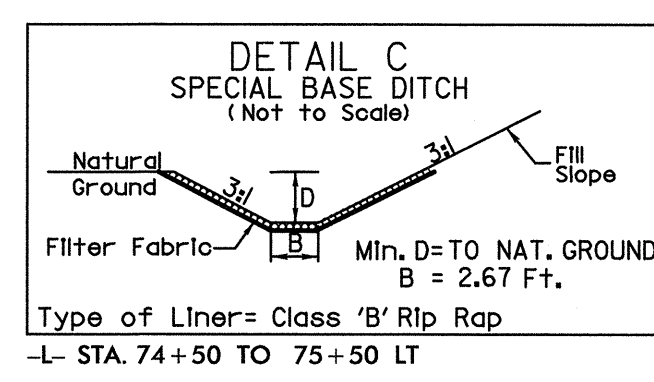
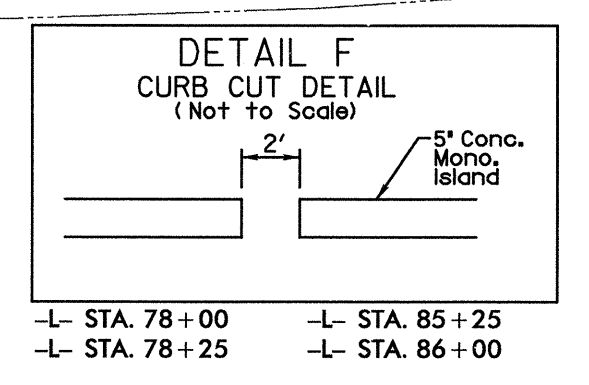


*DESIGN EXCEPTION

5/7/2009
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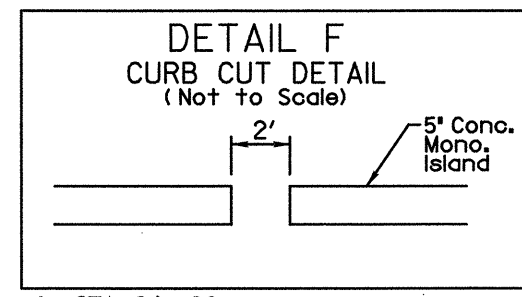
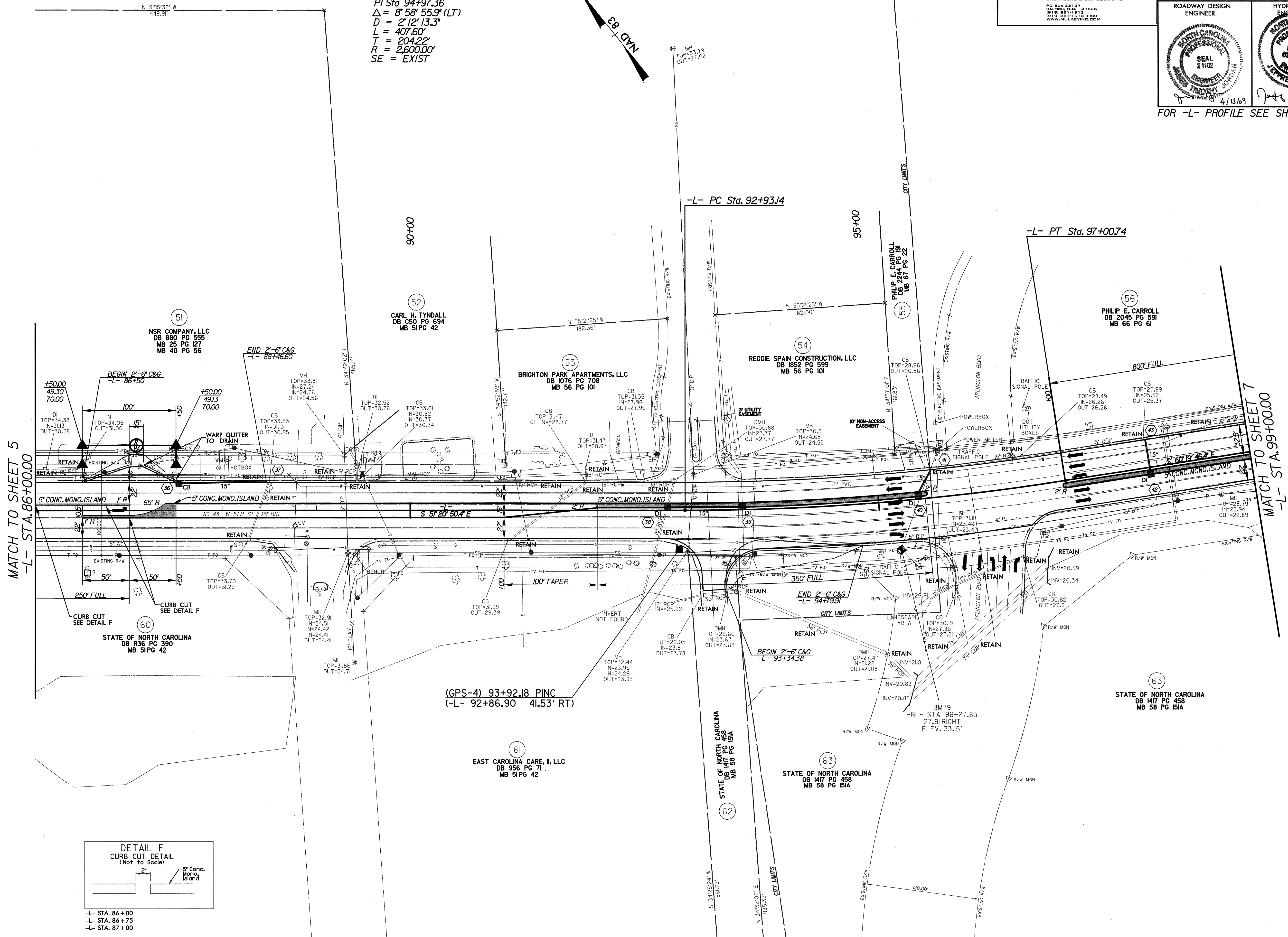
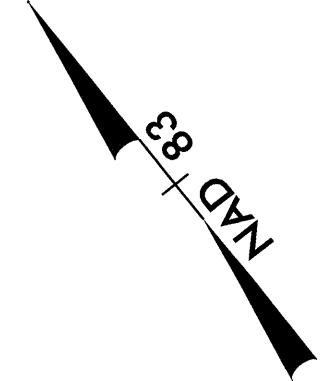
MATCH TO SHEET 6
-L- STA. 86+00.00



REVISIONS

5/17/2009
2:26:26 PM
C:\Users\jmulkey\Documents\Projects\U5018B\U5018B_rdy_psh5.dgn

-L-
PI Sta 94+97.36
 $\Delta = 8' 58' 55.9''$ (LT)
 $D = 2' 12' 13.3''$
 $L = 407.60'$
 $T = 204.22'$
 $R = 2,600.00'$
SE = EXIST

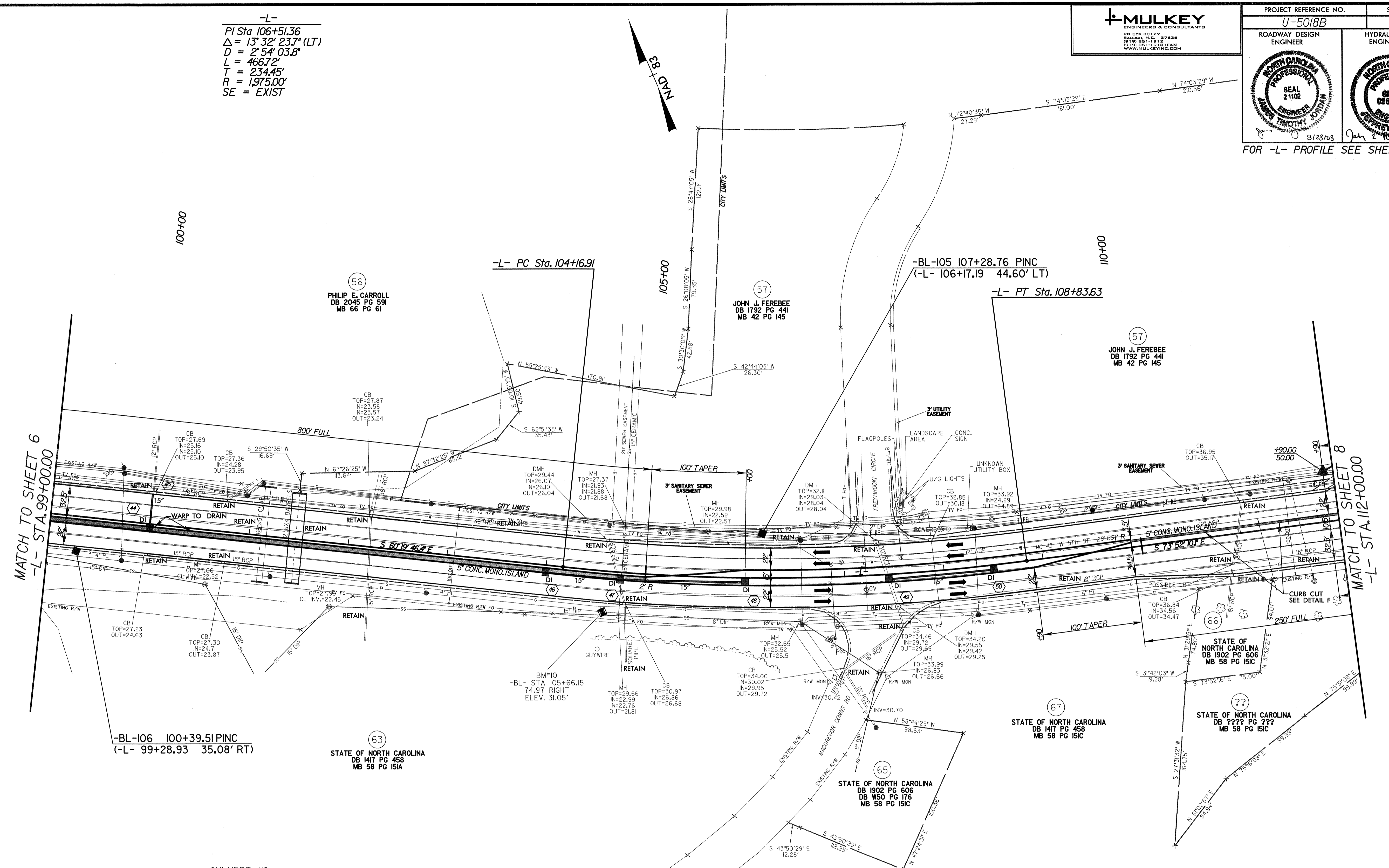


-L- STA. 86+00
-L- STA. 86+75
-L- STA. 87+00

REVISIONS

4/13/2009
R:\PROJECTS\U5018B\U5018B.dwg
R:\PROJECTS\U5018B\U5018B.dwg
R:\PROJECTS\U5018B\U5018B.dwg

-L-
PI Sta 106+51.36
 $\Delta = 13^{\circ} 32' 23.7" (LT)$
 $D = 2^{\circ} 54' 03.8"$
 $L = 466.72'$
 $T = 234.45'$
 $R = 1,975.00'$
SE = EXIST



-BL-106 100+39.51 PINC
(-L- 99+28.93 35.08' RT)

STATE OF NORTH CAROLINA
DB 1417 PG 458
MB 58 PG 151A

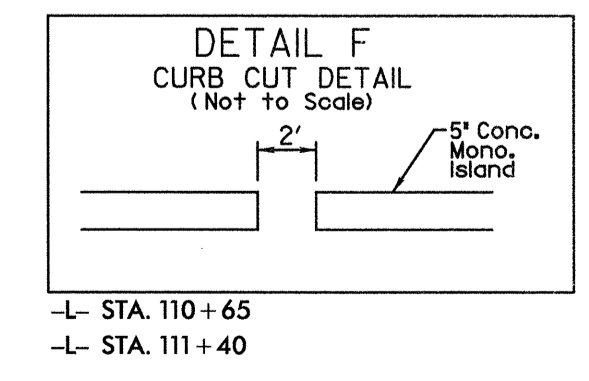
STATE OF NORTH CAROLINA
DB 1902 PG 606
DB W50 PG 176
MB 58 PG 151C

STATE OF NORTH CAROLINA
DB 1417 PG 458
MB 58 PG 151C

STATE OF NORTH CAROLINA
DB ??? PG ???
MB 58 PG 151C

CULVERT #2
TWO BARRELS

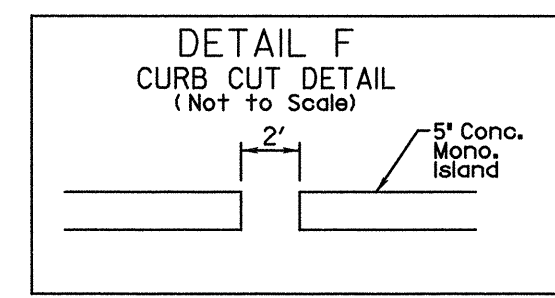
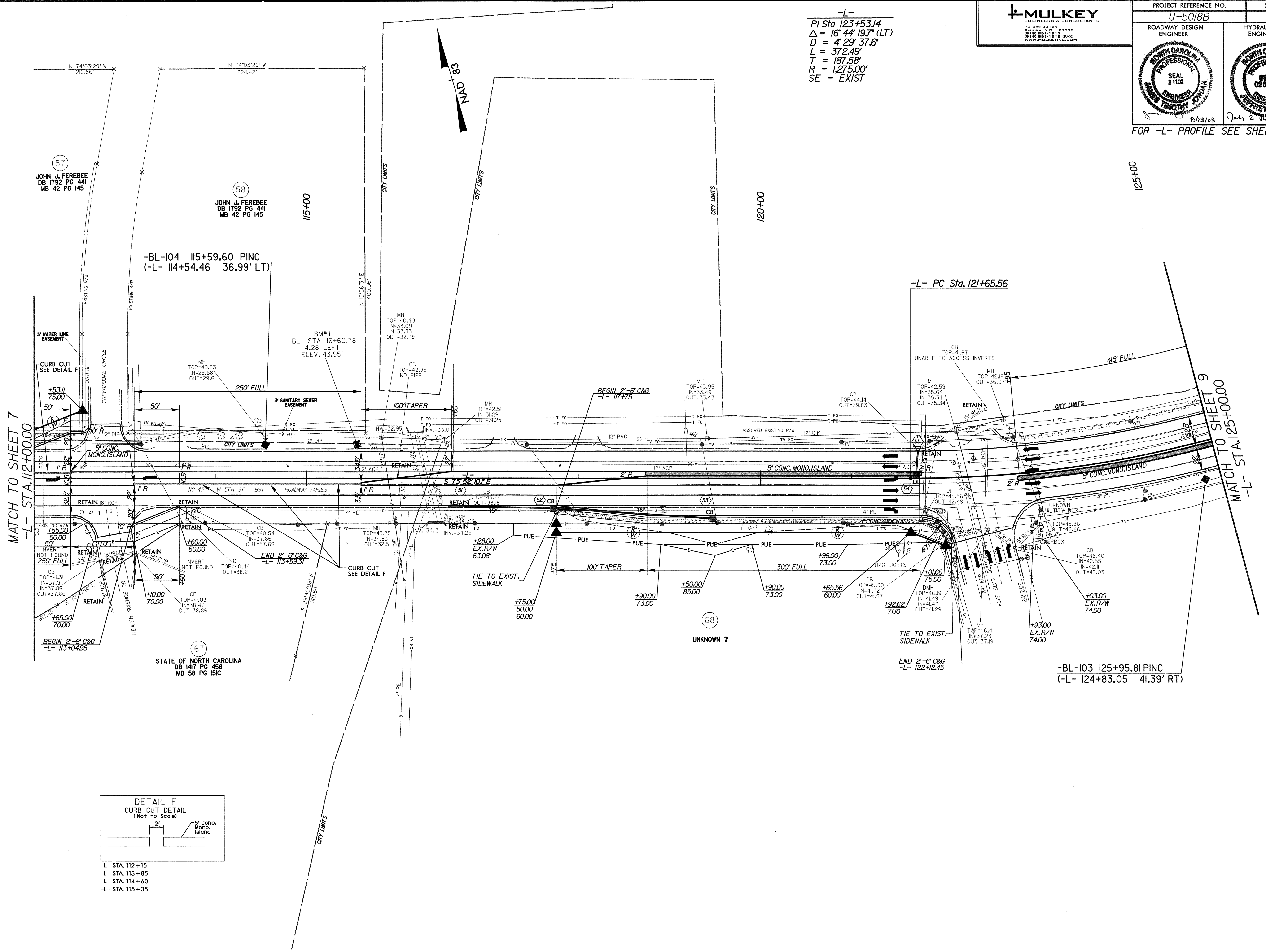
	NORTH	EAST	ELEV.
CUL1	682644.09	2473287.16	20.80
CUL2	682641.55	2473292.22	20.79
CUL3	682641.10	2473292.78	20.78
CUL4	682637.95	2473297.93	20.77
CE1			24.82
HW1			26.32
CUL5	682564.13	2473242.32	21.35
CUL6	682561.20	2473247.09	21.38
CUL7	682560.65	2473247.82	21.37
CUL8	682557.95	2473252.87	21.39
CE2			25.39
HW2			26.89



REVISIONS

8/21/2008
R:\Projects\U5018B\U5018B_L_rdy_dsh7.dgn
6:44:29 AM

-L-
PI Sta 123+53.14
 $\Delta = 16' 44" 19.7" (LT)$
 $D = 4' 29" 37.6"$
 $L = 372.49'$
 $T = 187.58'$
 $R = 1,275.00'$
SE = EXIST

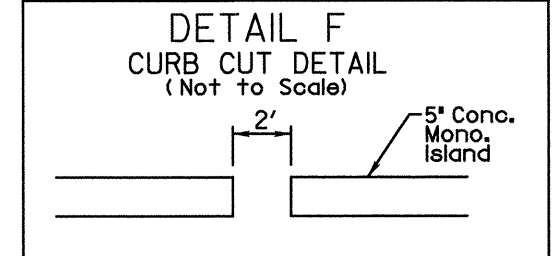
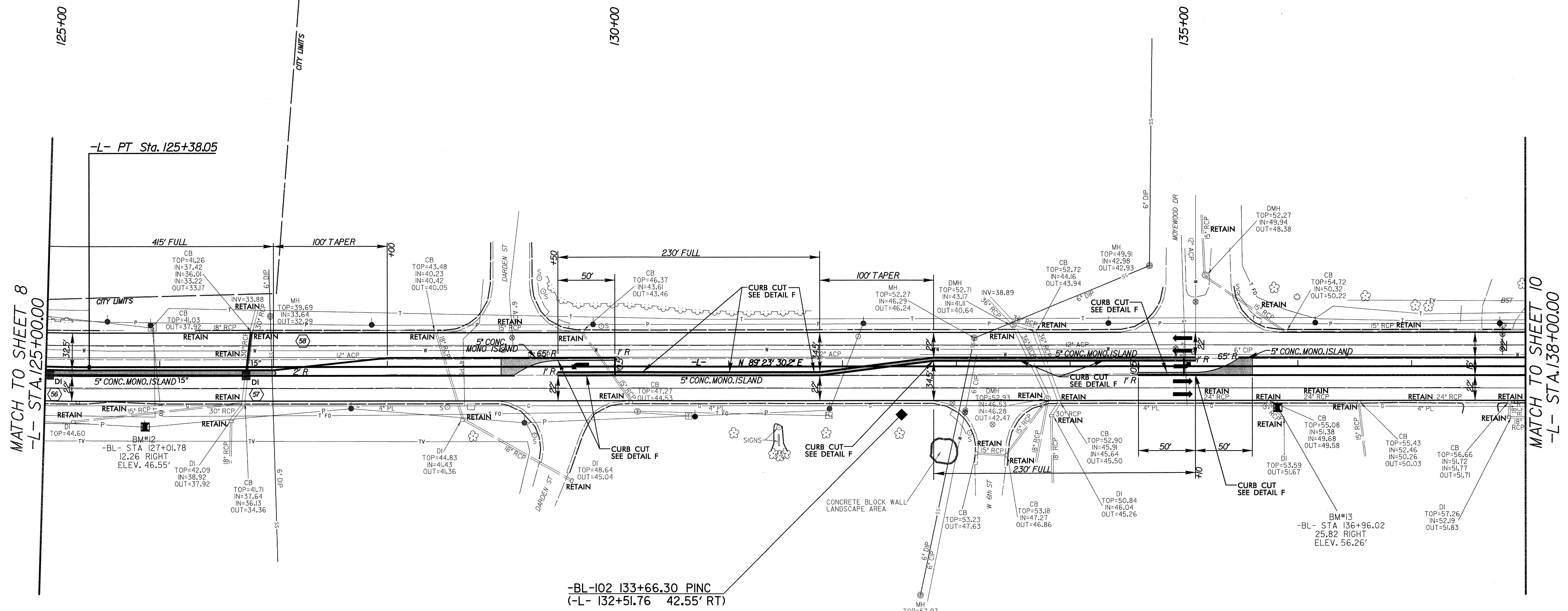


-L- STA. 112 + 15
-L- STA. 113 + 85
-L- STA. 114 + 60
-L- STA. 115 + 35

REVISIONS

8/21/2008
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6:44:53 AM

-L-
PI Sta 123+53.14
 $\Delta = 16' 44" 19.7 (LT)$
 $D = 4' 29" 37.6'$
 $L = 372.49'$
 $T = 187.58'$
 $R = 1,275.00'$
SE = EXIST

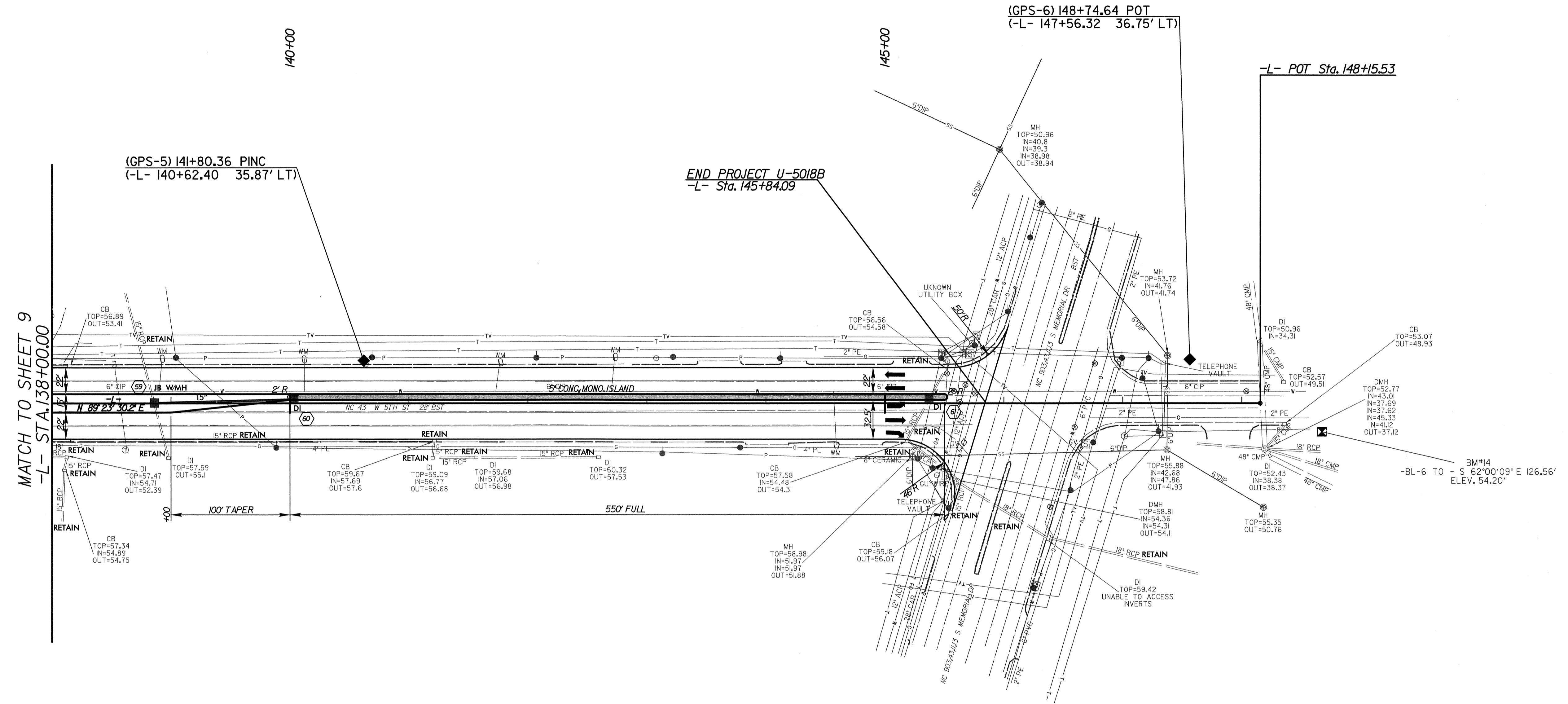


- L- STA. 129+50
- L- STA. 129+75
- L- STA. 130+25
- L- STA. 131+00
- L- STA. 131+75
- L- STA. 132+80
- L- STA. 133+55
- L- STA. 134+30
- L- STA. 134+85
- L- STA. 135+10

REVISIONS

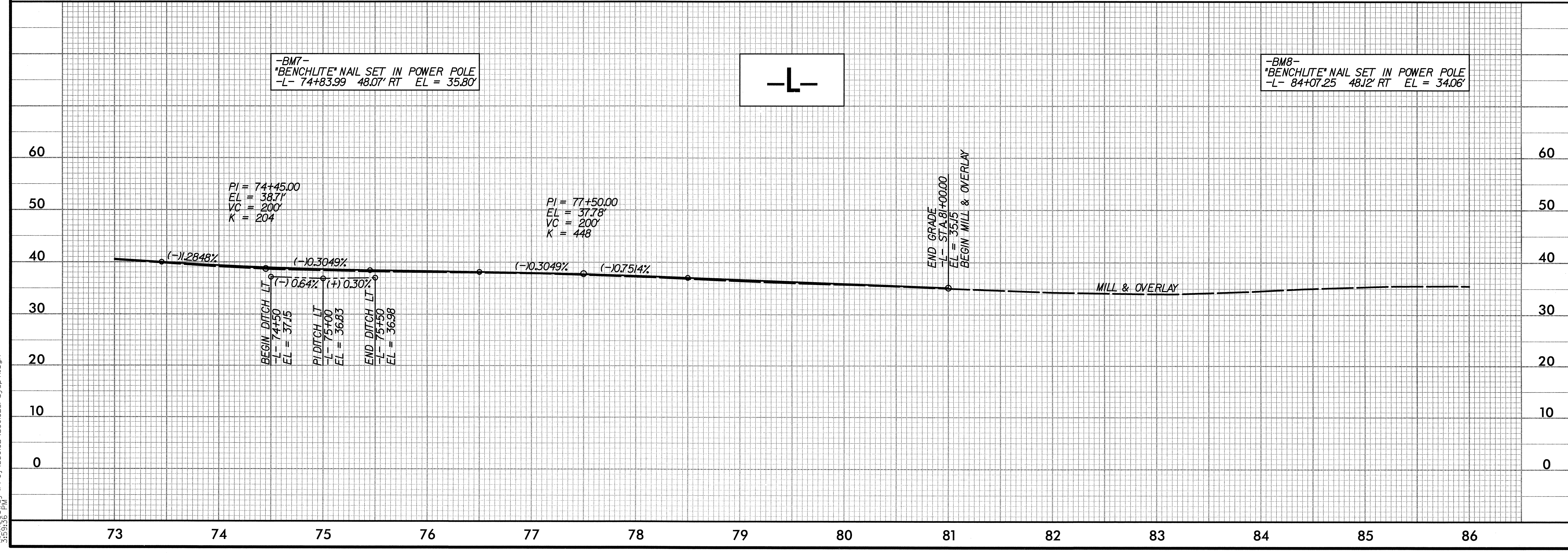
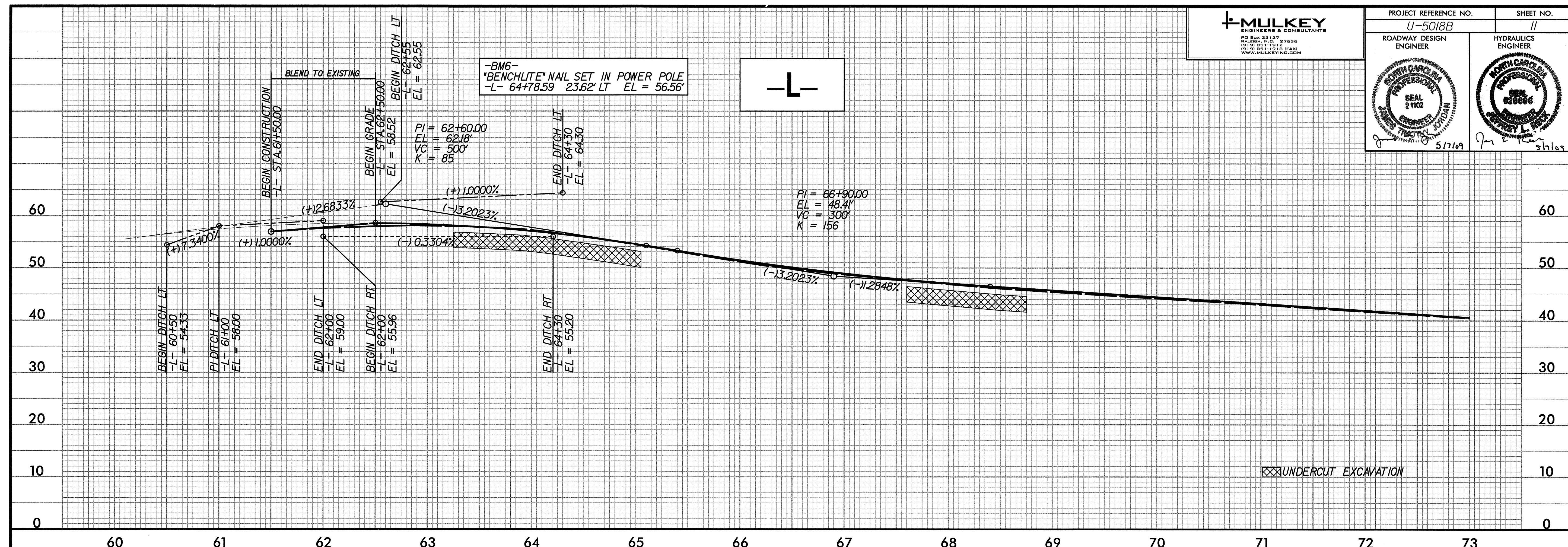
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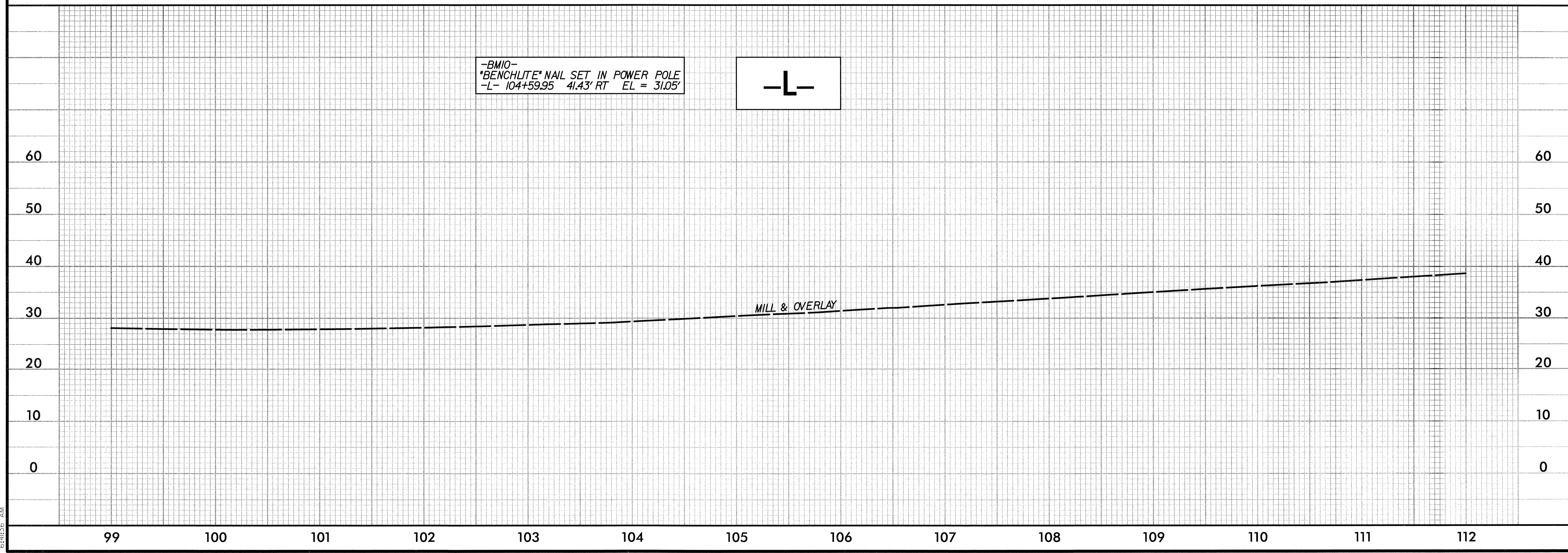
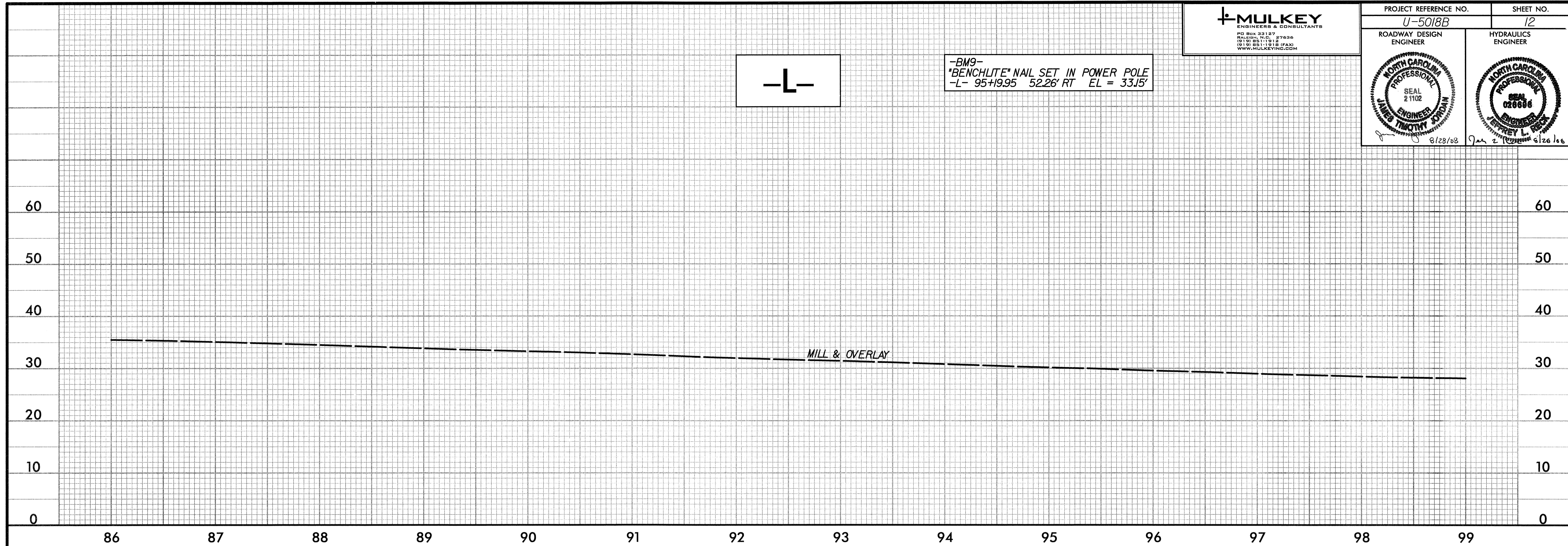
NAD 83



REVISIONS

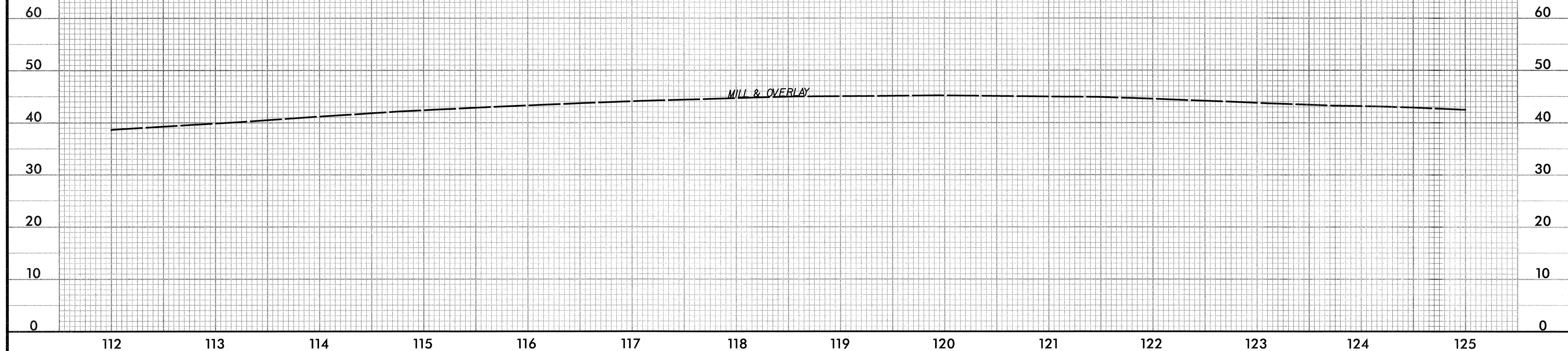
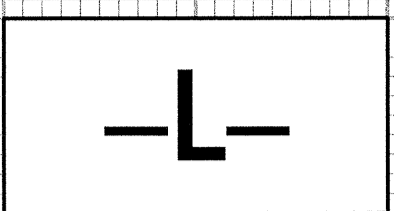
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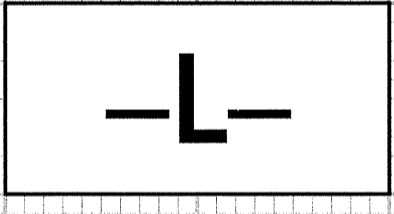


8/21/2008
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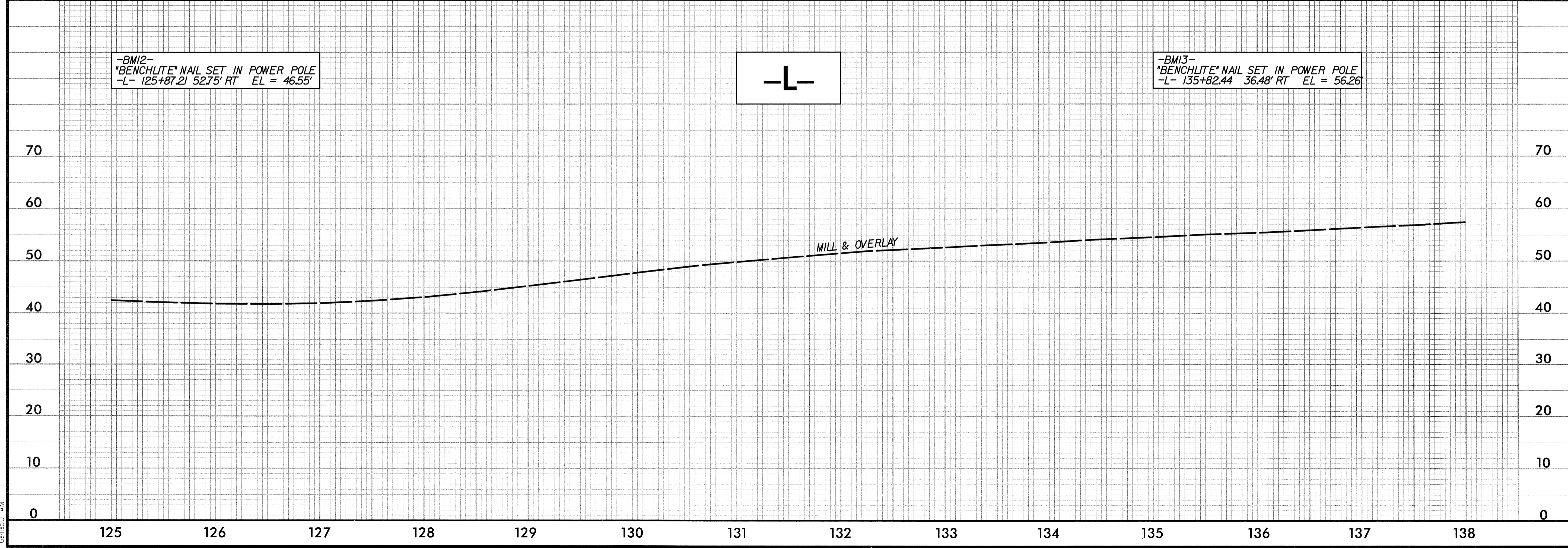
-BM11-
"BENCLITE" NAIL SET IN POWER POLE
-L- 115+55.73 37.58' LT EL = 43.95'

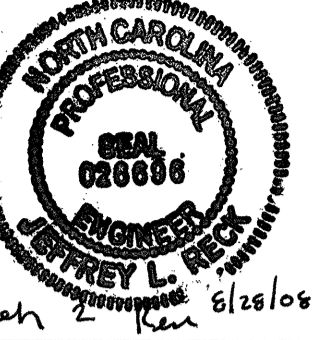


-BM12-
"BENCLITE" NAIL SET IN POWER POLE
-L- 125+87.21 52.75' RT EL = 46.55'



-BM13-
"BENCLITE" NAIL SET IN POWER POLE
-L- 135+82.44 36.48' RT EL = 56.26'





-L-

-BM14-
"BENCHLITE" NAIL SET IN POWER POLE
-L- 148+15.53 TO S 65°56'03" E 57.1' EL = 54.20'

