

See Sheet 1-A For Index of Sheets

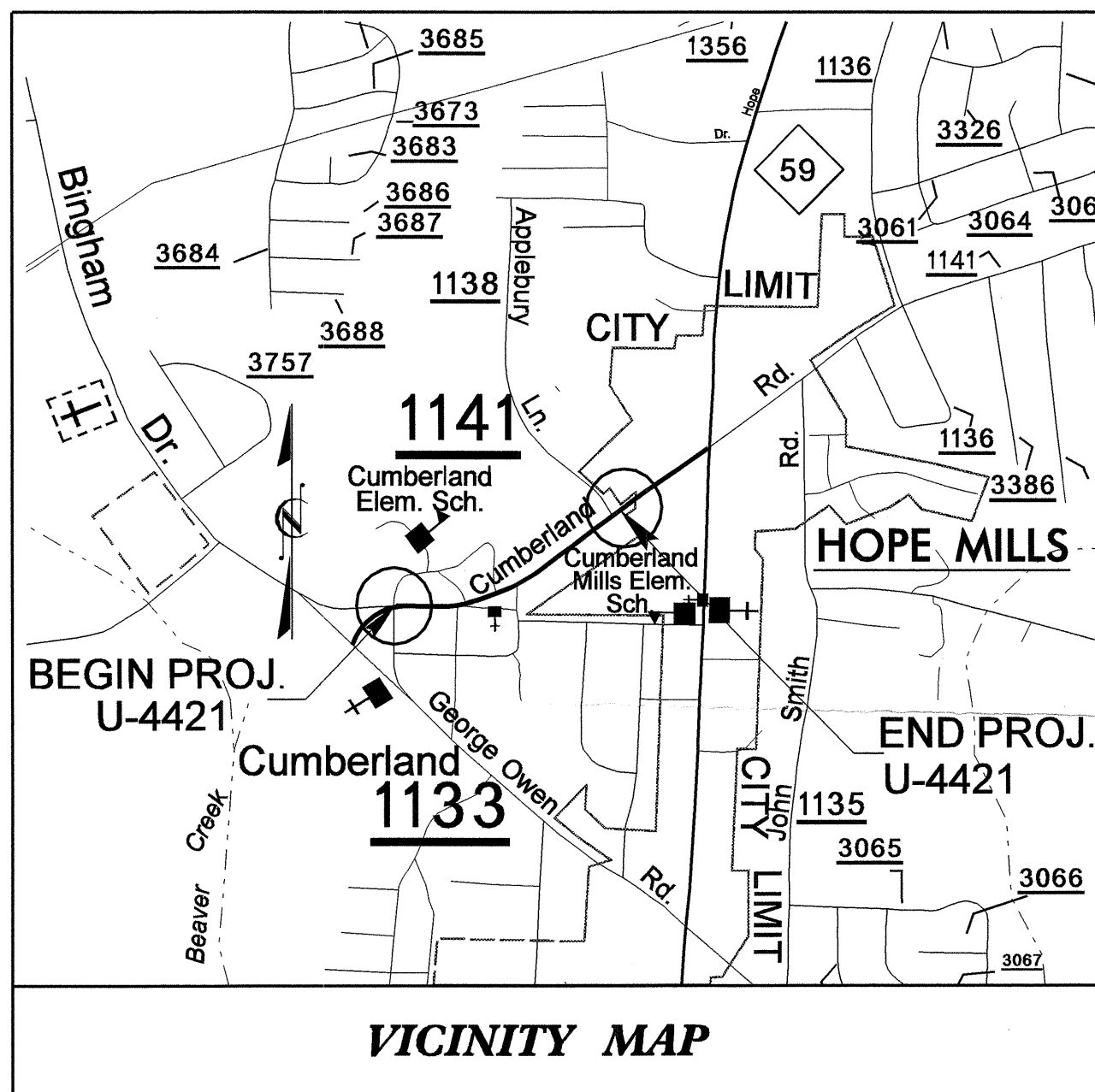
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-4421	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
35023.1.1	STP-1141(11)	PE	
35023.2.1	STP-1141(11)	RW & UTIL.	
35023.3.1	STP-1141(11)	CONSTR.	

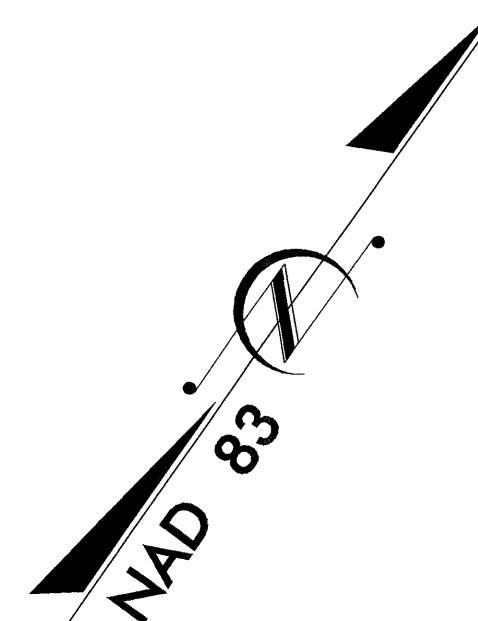
CUMBERLAND COUNTY

LOCATION: SR 1141 (CUMBERLAND ROAD), FROM SR 1133 (GEORGE OWEN ROAD) TO WEST OF NC 59 (HOPE MILLS ROAD)

TYPE OF WORK: GRADING, PAVING, DRAINAGE, WIDENING, RESURFACING AND CURB & GUTTER

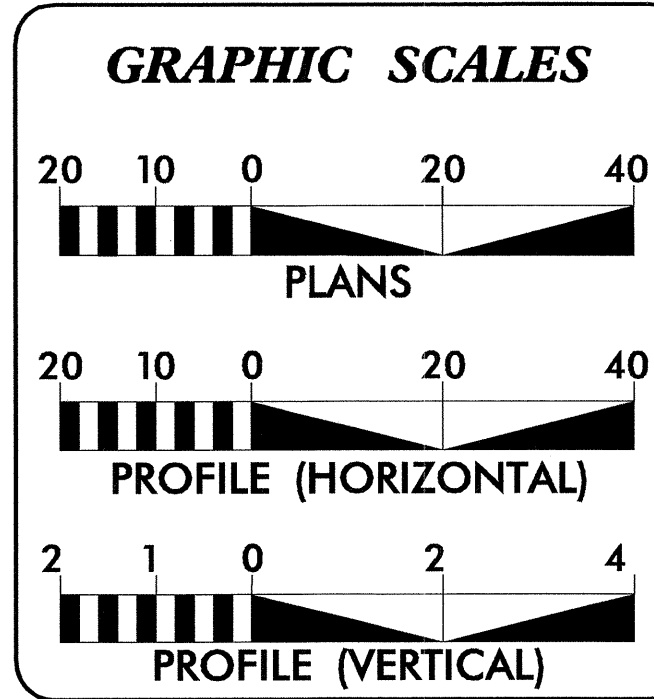
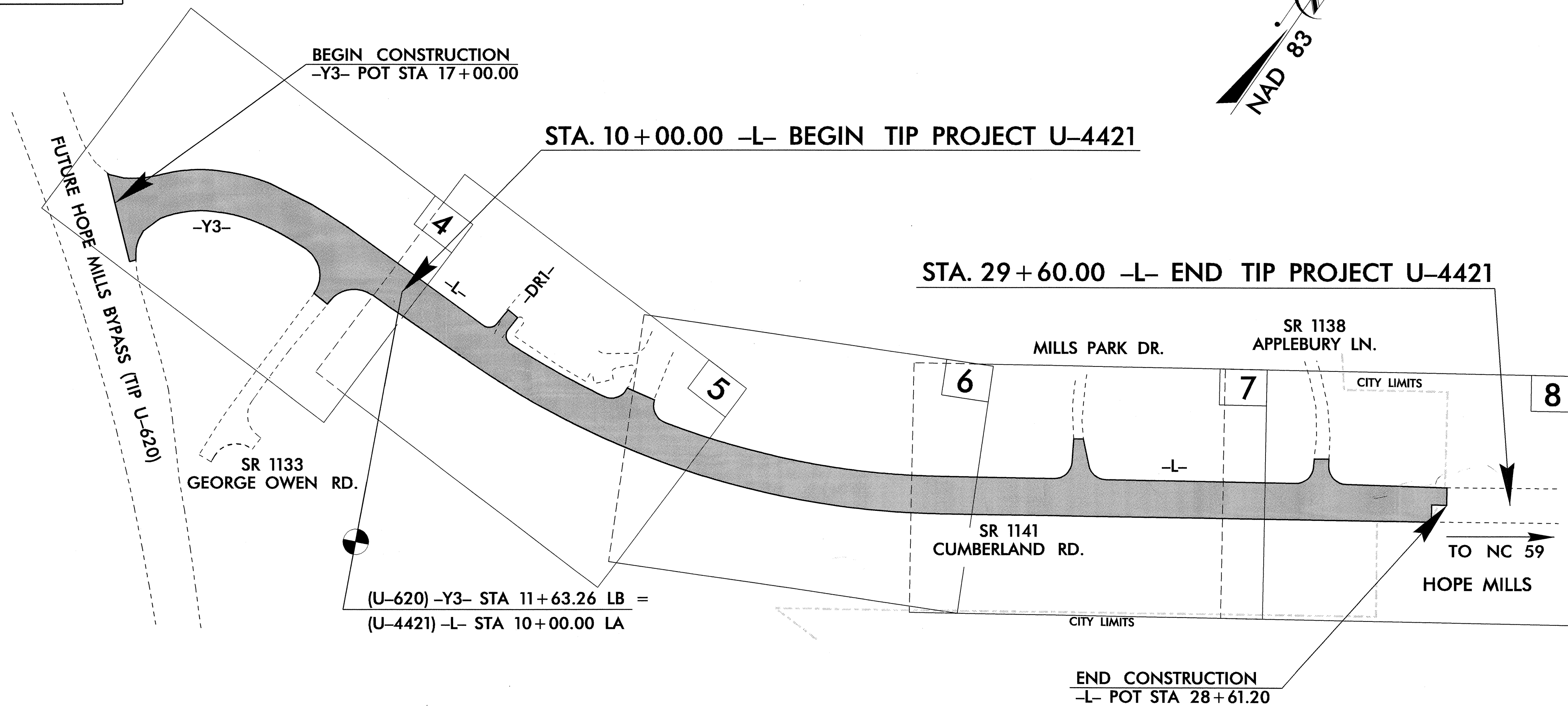


VICINITY MAP



TIP PROJECT: U-4421

CONTRACT: C201245



DESIGN DATA

ADT 2005 = 15,300
ADT 2025 = 24,300
DHV = 10 %
D = 60 %
T = 3 %*
V = 50 MPH
* { TTST 1%
DUAL 2%
URBAN MINOR ARTERIAL

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-4421 = 0.371 MILES
TOTAL LENGTH TIP PROJECT U-4421 = 0.371 MILES

Prepared In the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: JANUARY 30, 2004
LETTING DATE: MARCH 20, 2007

ROGER D. THOMAS, P.E.
PROJECT ENGINEER

SAMUEL L. ST. CLAIR
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

Signature: Stephen R. Morgan 1/4/07 P.E.
Professional Seal: STEPHEN R. MORGAN, SEAL 22100

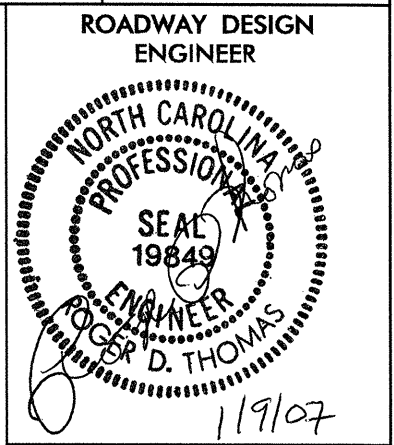
ROADWAY DESIGN ENGINEER

Signature: Roger D. Thomas 1/4/07 P.E.
Professional Seal: ROGER D. THOMAS, SEAL 19849

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

Professional Seal: STATE OF NORTH CAROLINA, DEPARTMENT OF TRANSPORTATION

Signature: Curt McMillen P.E.
STATE HIGHWAY DESIGN ENGINEER



SHEET NUMBER	INDEX OF SHEETS 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	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS
2-A	DETAIL TO CONVERT EXISTING DROP INLET OR CATCH BASIN TO JUNCTION BOX (MANHOLE OPTIONAL)
2-B	DETAIL TO CONVERT EXISTING CATCH BASIN OR JUNCTION BOX TO DROP INLET
2-C	GEOGRID REINFORCED SOIL SLOPE
2-D	DETAIL OF MANHOLE AND VALVE BOX ADJUSTMENTS
3	SUMMARY OF QUANTITIES
3-A THRU 3-B	LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48" & UNDER)
3-C	SUMMARIES OF EARTHWORK AND PAVEMENT REMOVAL
3-Z	PARCEL INDEX SHEET
4 THRU 8	PLAN SHEETS
9 THRU 10	PROFILE SHEETS
TCP-1 THRU TCP-9	TRAFFIC CONTROL PLANS
PM-1 THRU PM-5	PAVEMENT MARKING PLANS
EC-1 THRU EC-12	EROSION CONTROL PLANS
SIGN-1 THRU SIGN-5	SIGNING PLANS
UC-1 THRU UC-6	UTILITY CONSTRUCTION PLANS
UD-1 THRU UD-6	UTILITIES BY OTHERS
X-1A	CROSS-SECTION SUMMARY SHEET
X-1 THRU X-7	CROSS-SECTIONS

GENERAL NOTES: 2006 SPECIFICATIONS EFFECTIVE: 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 PROPOSED RESURFACING WILL BE PLACED AT THE TOP ELEVATION OF THE EXISTING PAVEMENT. 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.

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. NO. 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:
 PUBLIC WORKS COMMISSION, PROGRESS ENERGY - POWER, TIME WARNER - CABLE TV, OF FAYETTEVILLE, SPRINT - TELEPHONE, AND NC NATURAL GAS CORPORATION

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:
 CURB CUTS FOR FUTURE WHEELCHAIR RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS. THE CONSTRUCTION OF ALL CURB CUTS FOR FUTURE WHEELCHAIR RAMPS SHALL BE IN ACCORDANCE WITH STD. NO. 848.05

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
225.04	Method of Obtaining Superelevation - Two Lane Pavement
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation - Method 'A'
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
840.31	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
840.72	Pipe Collar
846.01	Concrete Curb, Gutter and Curb & Gutter
848.01	Concrete Sidewalk
848.02	Driveway Turnout
848.04	Street Turnout
848.05	Wheelchair Ramp
852.01	Concrete Islands
852.06	Method for Placement of Drop Inlets in Concrete Islands
866.01	Chain Link Fence - 4', 5' and 6' High Fence

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	⑩ 23
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

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	⊙
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	○
Swamp Marsh	⊕
Proposed Lateral, Tail, Head Ditch	--- FLD
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	○ R/W
Proposed Right of Way Line with Iron Pin and Cap Marker	○ R/W ▲
Proposed Right of Way Line with Concrete or Granite Marker	○ R/W ▲
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
Proposed Permanent Aerial Utility Easement	--- AUE

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
Proposed Wheel Chair Ramp Curb Cut	○ WCC
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	--- 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	--- W
Designated U/G Water Line (S.U.E.*)	--- W
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	--- 2UTL
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.

6/2/99

PROJECT REFERENCE NO.	SHEET NO.
U-4421	1C
Location and Surveys	

SURVEY CONTROL SHEET U-4421



LOCALIZED CONTROL COORDINATES

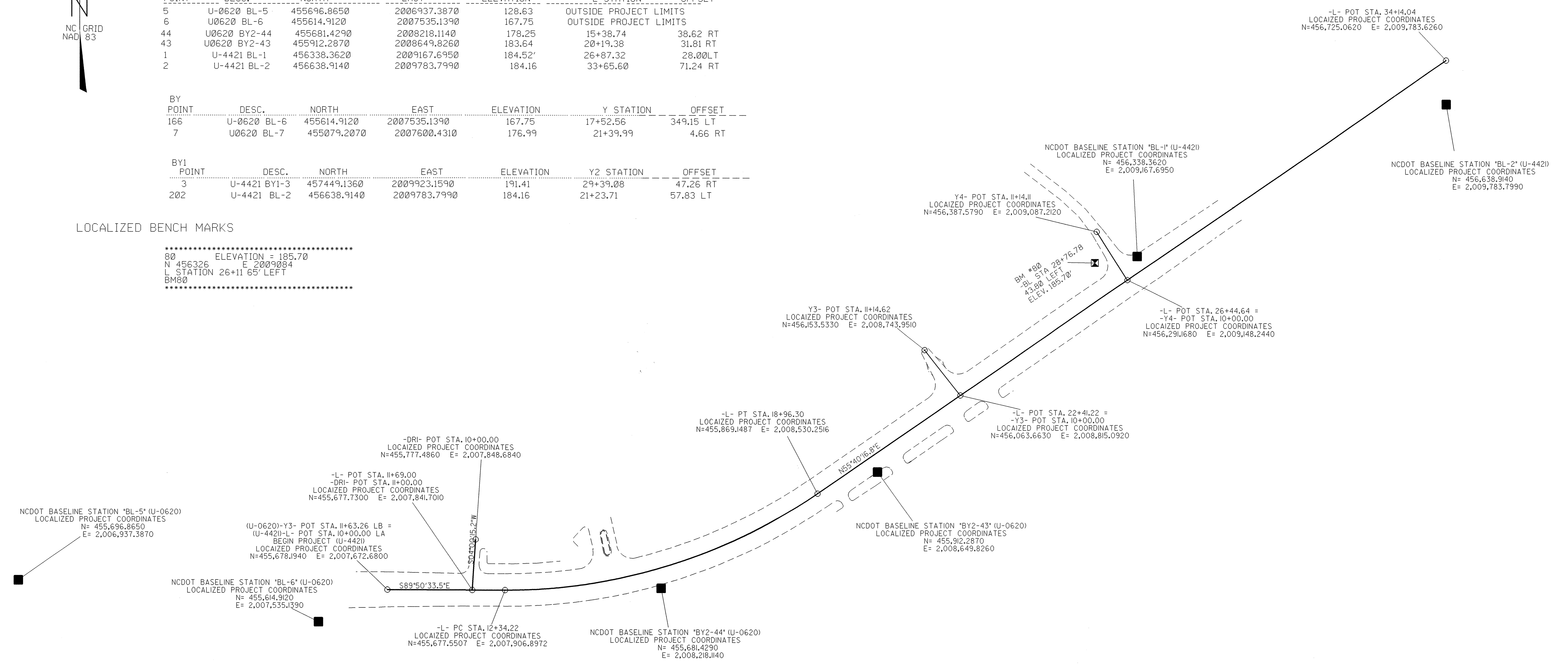
BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
5	U-0620 BL-5	455696.8650	2006937.3870	128.63		OUTSIDE PROJECT LIMITS
6	U0620 BL-6	455614.9120	2007535.1390	167.75		OUTSIDE PROJECT LIMITS
44	U0620 BY2-44	455681.4290	2008218.1140	178.25	15+38.74	38.62 RT
43	U0620 BY2-43	455912.2870	2008649.8260	183.64	20+19.38	31.81 RT
1	U-4421 BL-1	456338.3620	2009167.6950	184.52	26+87.32	28.00LT
2	U-4421 BL-2	456638.9140	2009783.7990	184.16	33+65.60	71.24 RT

BY POINT	DESC.	NORTH	EAST	ELEVATION	Y STATION	OFFSET
166	U-0620 BL-6	455614.9120	2007535.1390	167.75	17+52.56	349.15 LT
7	U0620 BL-7	455079.2070	2007600.4310	176.99	21+39.99	4.66 RT

BY1 POINT	DESC.	NORTH	EAST	ELEVATION	Y2 STATION	OFFSET
3	U-4421 BY1-3	457449.1360	2009923.1590	191.41	29+39.08	47.26 RT
202	U-4421 BL-2	456638.9140	2009783.7990	184.16	21+23.71	57.83 LT

LOCALIZED BENCH MARKS

.....
 80 ELEVATION = 185.70
 N 456326 E 2009084
 L STATION 26+11 65' LEFT
 BM80



DATUM DESCRIPTION
 THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "TASTEE"
 WITH NAD 83 STATE PLANE GRID COORDINATES OF NORTHING: 470471.294(ft) EASTING: 2011708.950(ft)
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99988238
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "TASTEE" TO -L- STATION 10+00.00 IS
 S 15° 15' 41.3" W AND 15,333.86'
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
 VERTICAL DATUM USED IS NGVD 29

NOTES:

- THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:
[HTTP://WWW.NCDOT.ORG/DOH/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT](http://www.ncdot.org/doh/preconstruct/highway/location/project)
- SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT.
 IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
- ⊙ INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.
- PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.
 NETWORK ESTABLISHED FROM NGS ONLINE POSITIONING USER SERVICE (OPUS)
 SEE GPS CALIBRATION SHEET FOR HORIZONTAL AND VERTICAL COORDINATE VALUES.

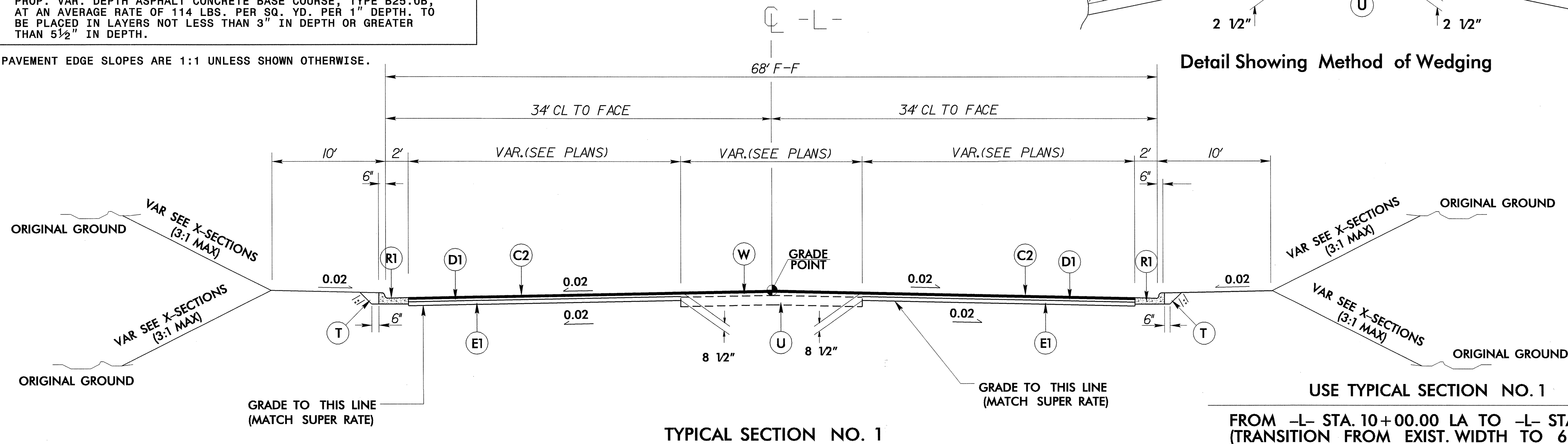
NOTE: DRAWING NOT TO SCALE

15-NOV-2008 2:16:44 PM
 4444601.DWG
 15-031209.dgn

PAVEMENT SCHEDULE

C1	PROP. APPROX. 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B AT AN AVERAGE RATE OF 140 LBS. PER SQ. YD.	R1	2'-6" CONCRETE CURB AND GUTTER.
C2	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.	R2	8"x 18" CONCRETE CURB.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.	T	EARTH MATERIAL.
D1	PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.	U	EXISTING PAVEMENT.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2 1/2" IN DEPTH OR GREATER THAN 4" IN DEPTH.	W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL)
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.		
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, 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.		

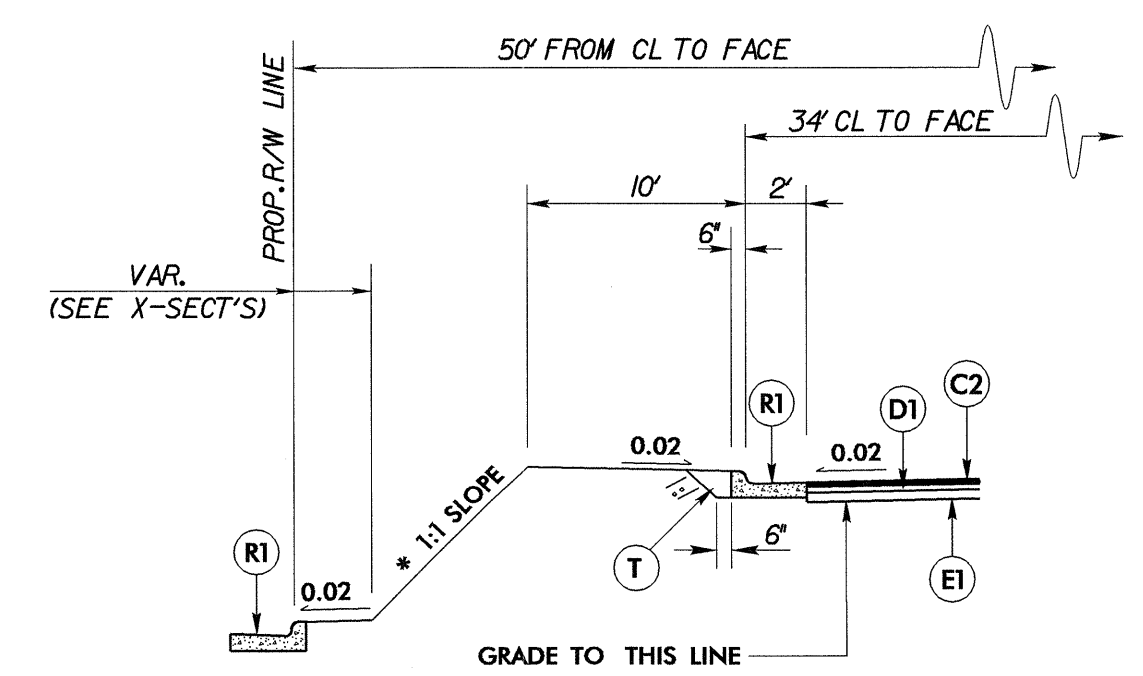
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



TYPICAL SECTION NO. 1

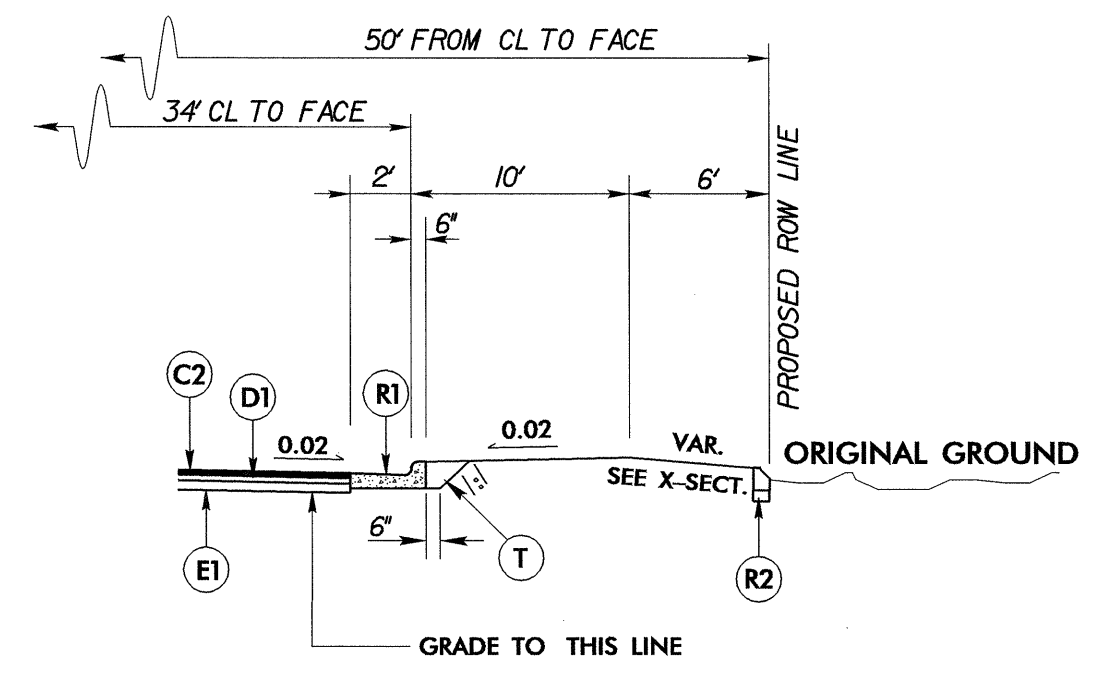
USE TYPICAL SECTION NO. 1
 FROM -L- STA. 10+00.00 LA TO -L- STA. 11+40.58
 (TRANSITION FROM EXIST. WIDTH TO 68' F-F)
 FROM -L- STA. 11+40.58 TO -L- STA. 26+97.00
 FROM -L- STA. 26+97.00 TO -L- STA. 28+61.20
 (TRANSITION FROM 68' F-F TO EXIST. WIDTH)

NOTE : RESURFACE FROM -Y3- STA 11+63.26 LB TO 17+00.00 WITH 1 1/4" OF S9.5B (C1)



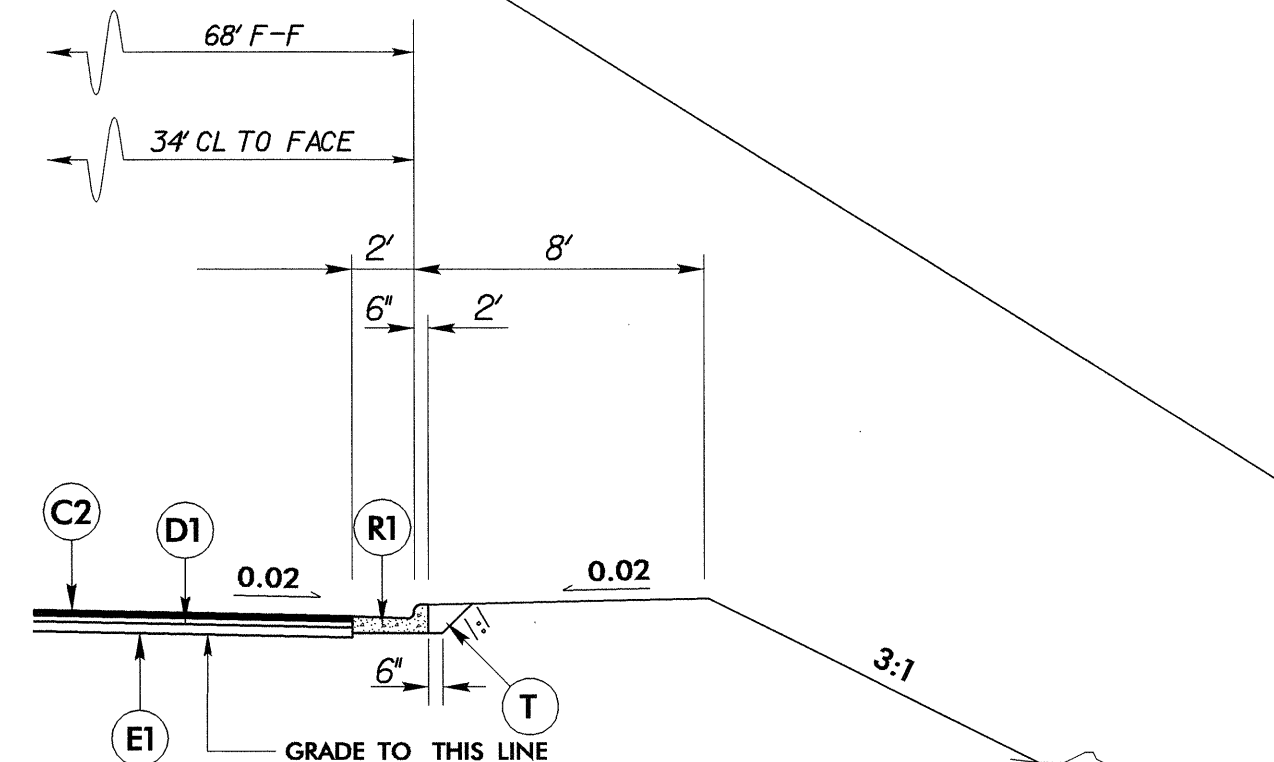
PARTIAL TYPICAL SECTION NO. 1A

USE PARTIAL TYPICAL SECTION NO. 1A IN CONJUNCTION WITH TYPICAL 1 AT THE FOLLOWING LOCATIONS:
 FROM -L- STA. 11+95 +/- LT. TO -L- STA. 13+50 +/- LT.
 * SEE PROJECT SPECIAL PROVISION - GEOGRID REINFORCED SLOPE



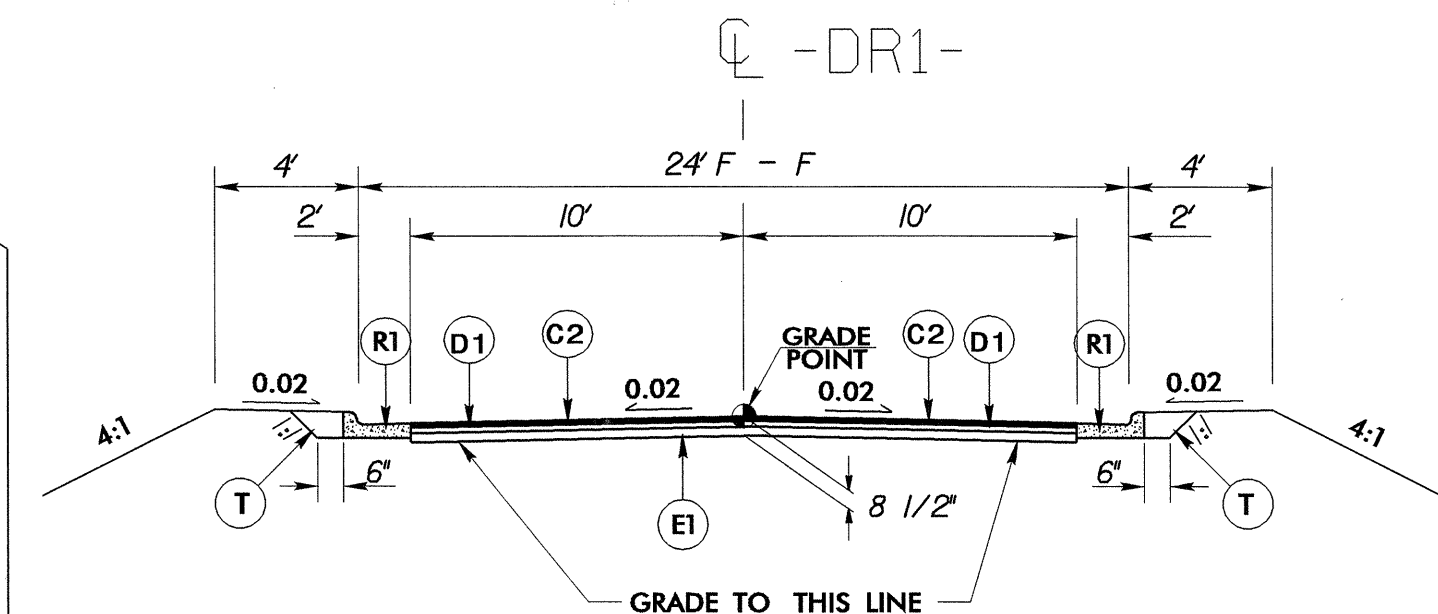
PARTIAL TYPICAL SECTION NO. 1B

USE PARTIAL TYPICAL SECTION NO. 1B IN CONJUNCTION WITH TYPICAL 1 AT THE FOLLOWING LOCATIONS:
 FROM -L- STA. 19+03 +/- RT. TO -L- STA. 20+87 +/- RT.
 FROM -L- STA. 21+62 +/- RT. TO -L- STA. 23+33 +/- RT.



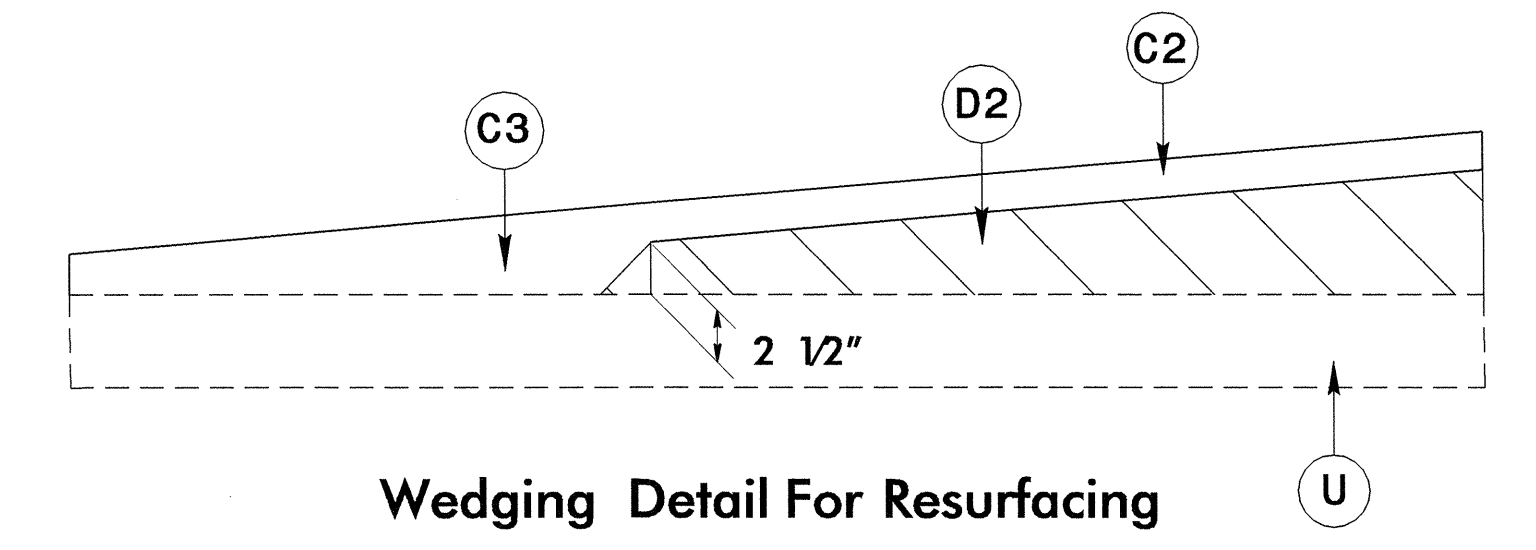
PARTIAL TYPICAL SECTION NO. 1C

USE PARTIAL TYPICAL SECTION NO. 1C IN CONJUNCTION WITH TYPICAL 1 AT THE FOLLOWING LOCATIONS:
 FROM -L- STA. 20+87 +/- RT. TO -L- STA. 21+62 +/- RT.

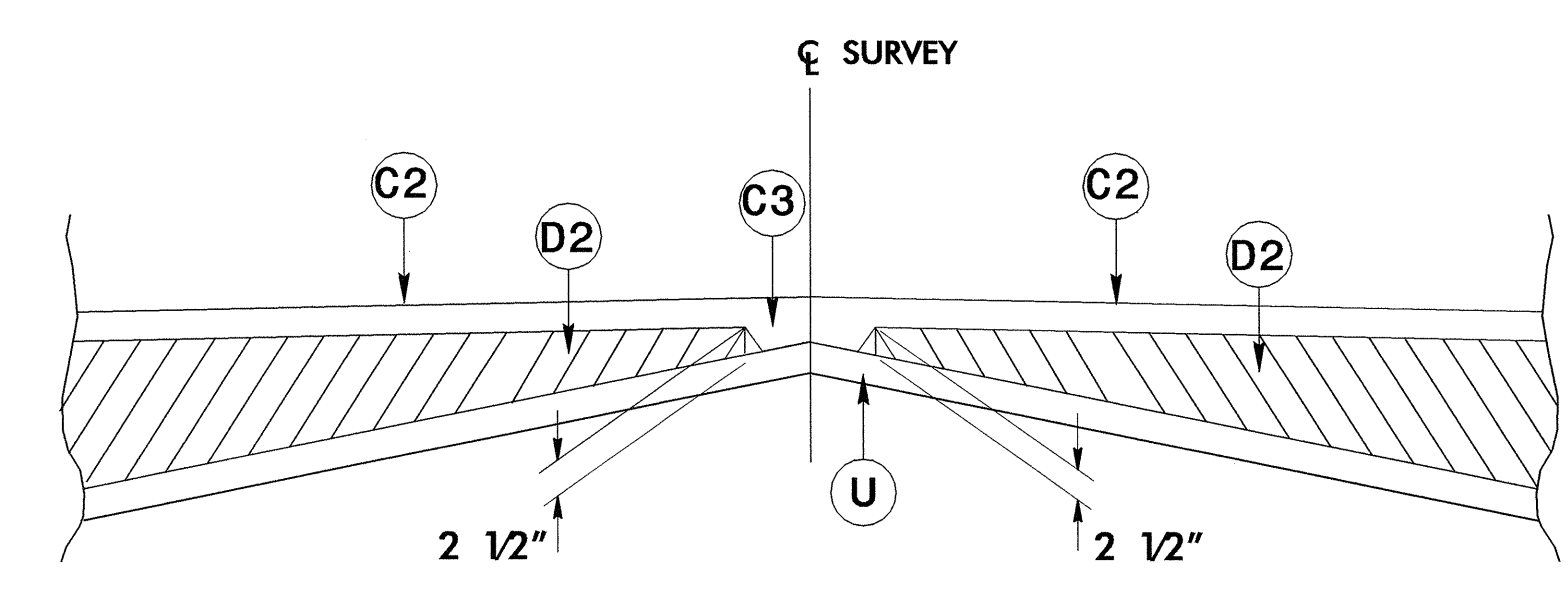


TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2 AT THE FOLLOWING LOCATIONS:
 FROM -DRI- STA. 10+15 TO -DRI- STA. 10+67.93

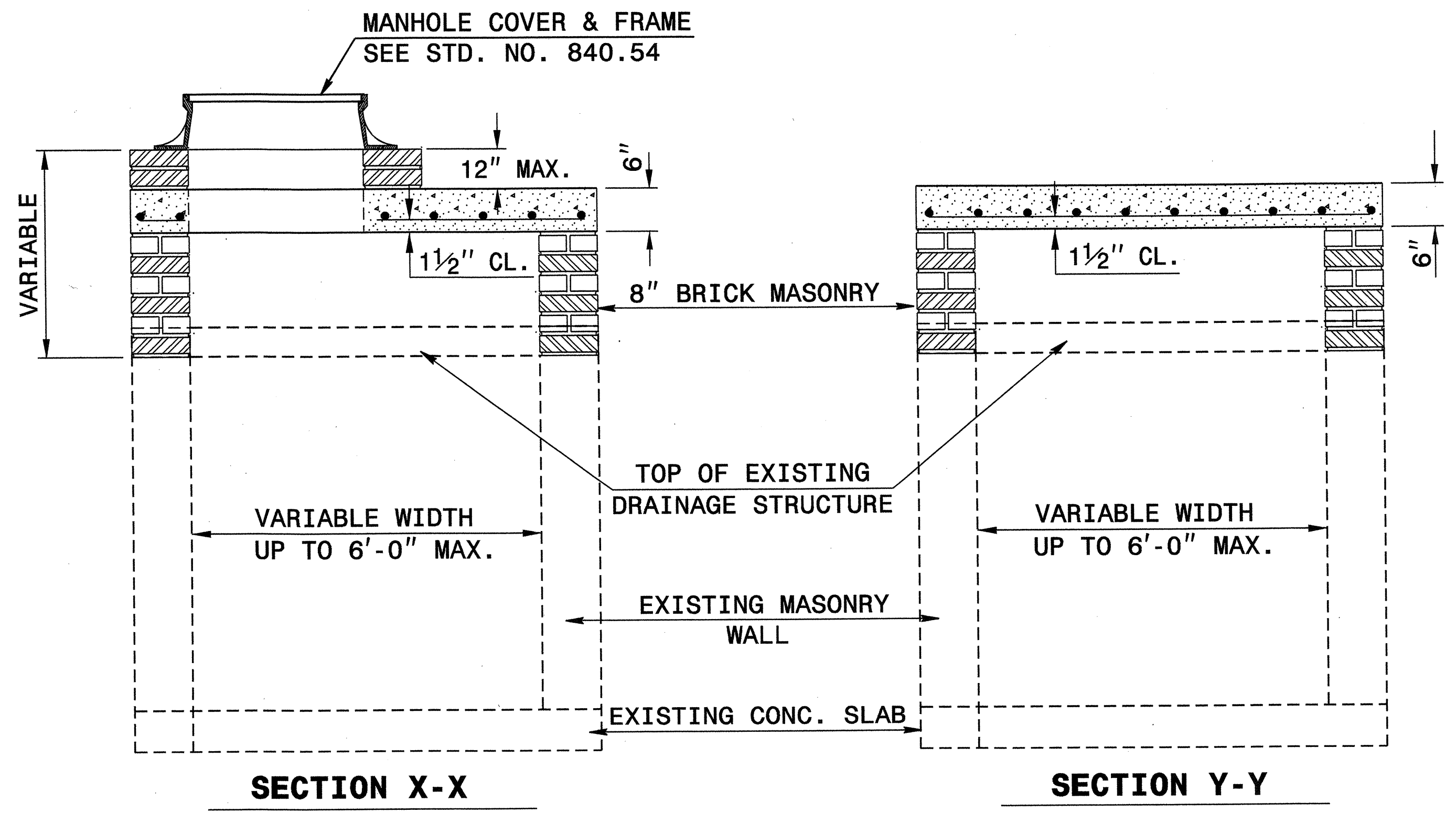
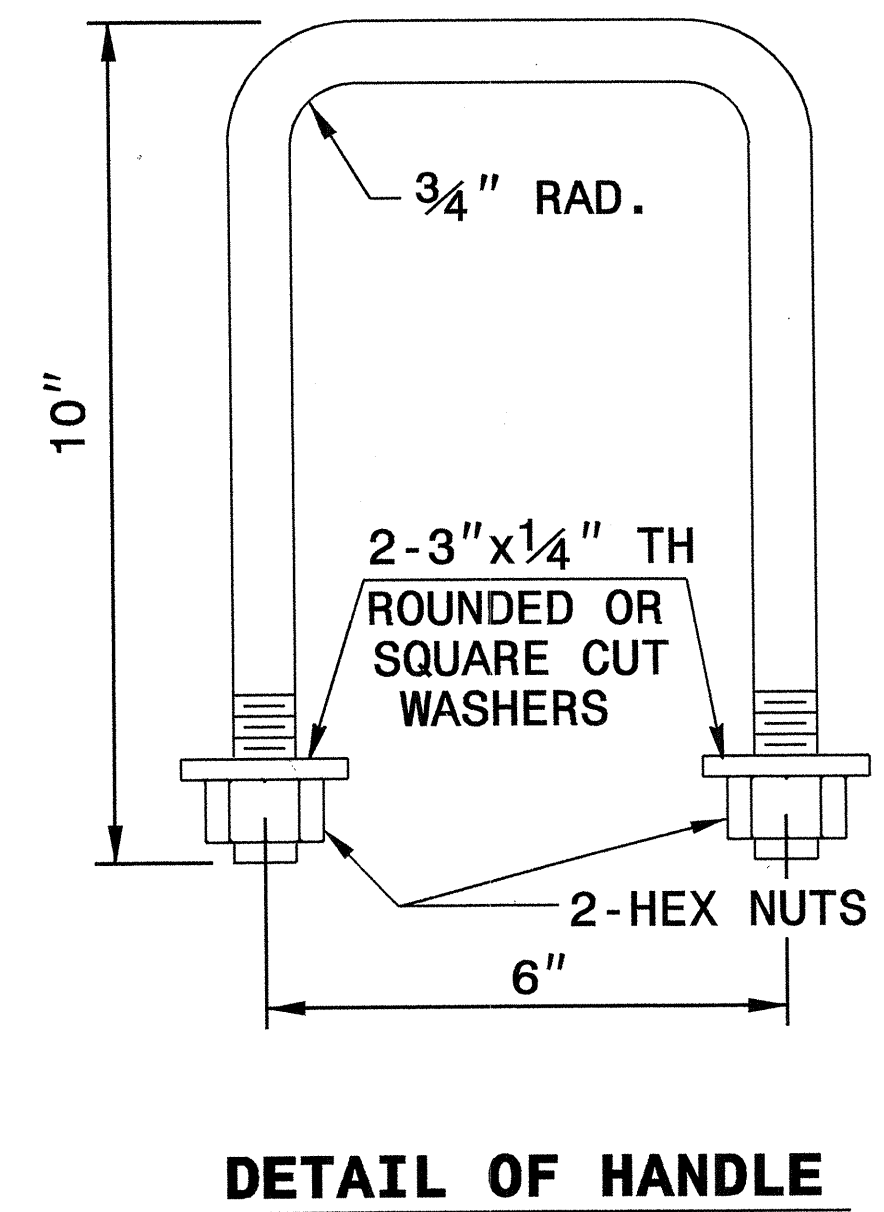
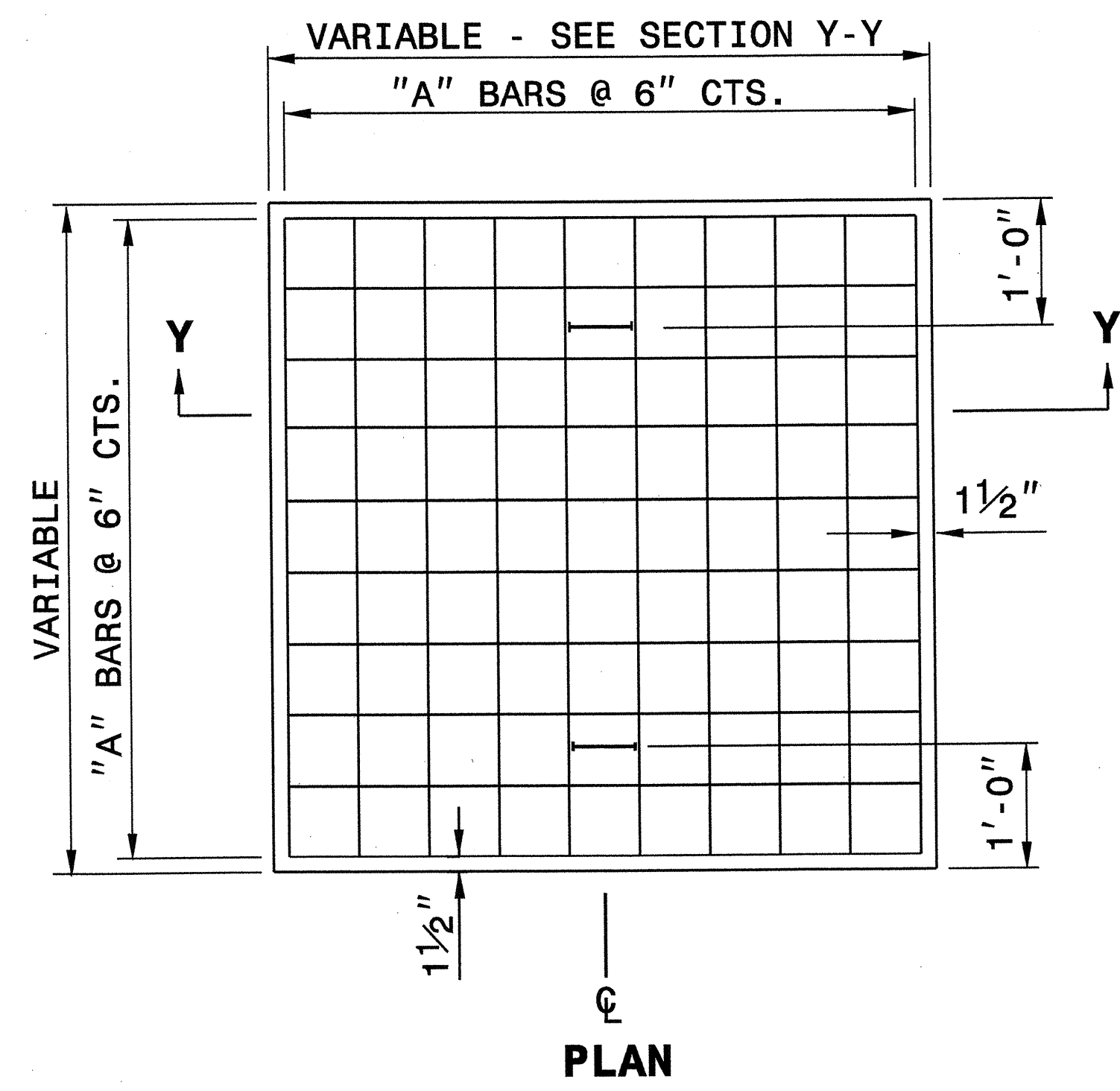
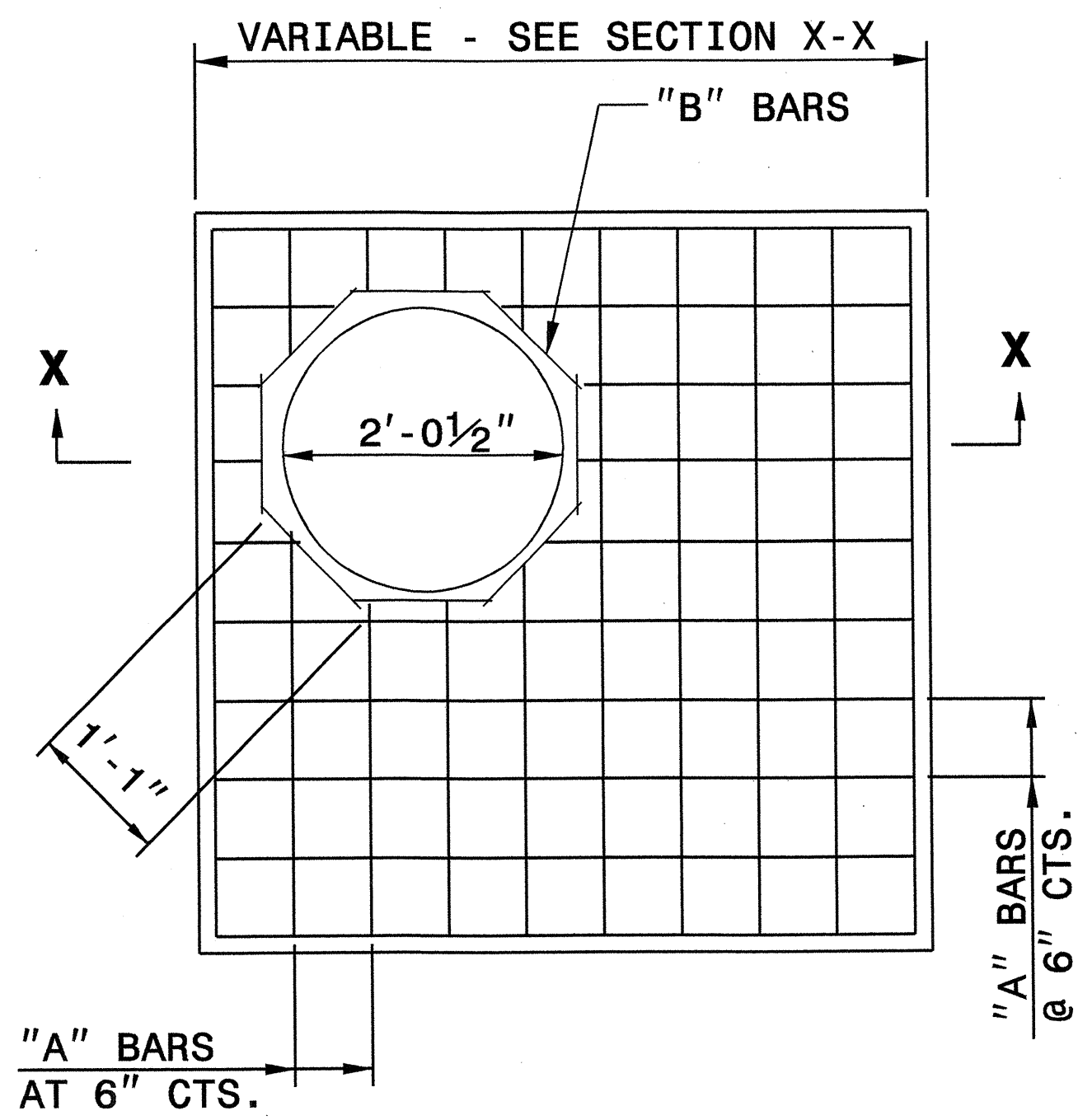
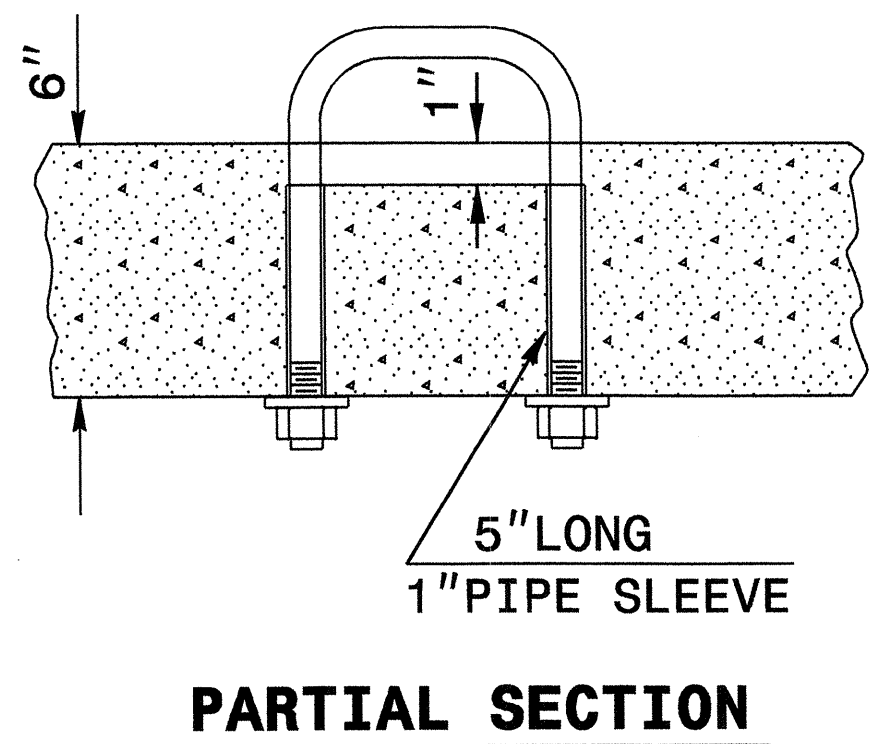


Wedging Detail For Resurfacing



Detail Showing Method of Wedging

PROJECT REFERENCE NO. U-4421	SHEET NO. 2
ROADWAY DESIGN ENGINEER SEAL 19839 PETER D. THOMAS	PAVEMENT DESIGN ENGINEER SEAL 22896 CLARK S. MORRISON
1/11/07	1/15/07



GENERAL NOTES:

CONSTRUCT IN ACCORDANCE WITH SECTION 859 OF THE STANDARD SPECIFICATIONS.

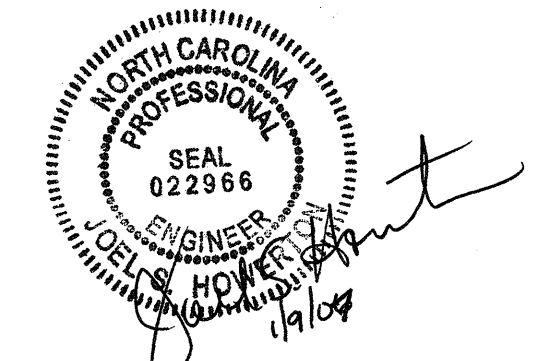
THE DIMENSIONS FOR THE EXISTING BOXES ARE APPROXIMATE AND MAY VARY SLIGHTLY.

DETAIL INTENDED FOR NON-TRAFFIC BEARING DRAINAGE STRUCTURES.

BILL OF MATERIALS				
REINFORCING STEEL				
CODE	SIZE	QTY.	LENGTH	REINF. STEEL LBS.
A	#4	20	4'-6"	60.12
B	#4	8	1'-1"	5.79
TOTAL				65.91 *
MASONRY				CU YDS
TOP SLAB CONCRETE CLASS "B"				.4326 *
BRICK MASONRY PER FT HT (MIN)				.4111

*** NOTE:**
 QUANTITIES BASED ON 3'-6" X 3'-6" DRAINAGE STRUCTURE. ADJUST QUANTITIES FOR LARGER STRUCTURES AND MANHOLE CONSTRUCTION.

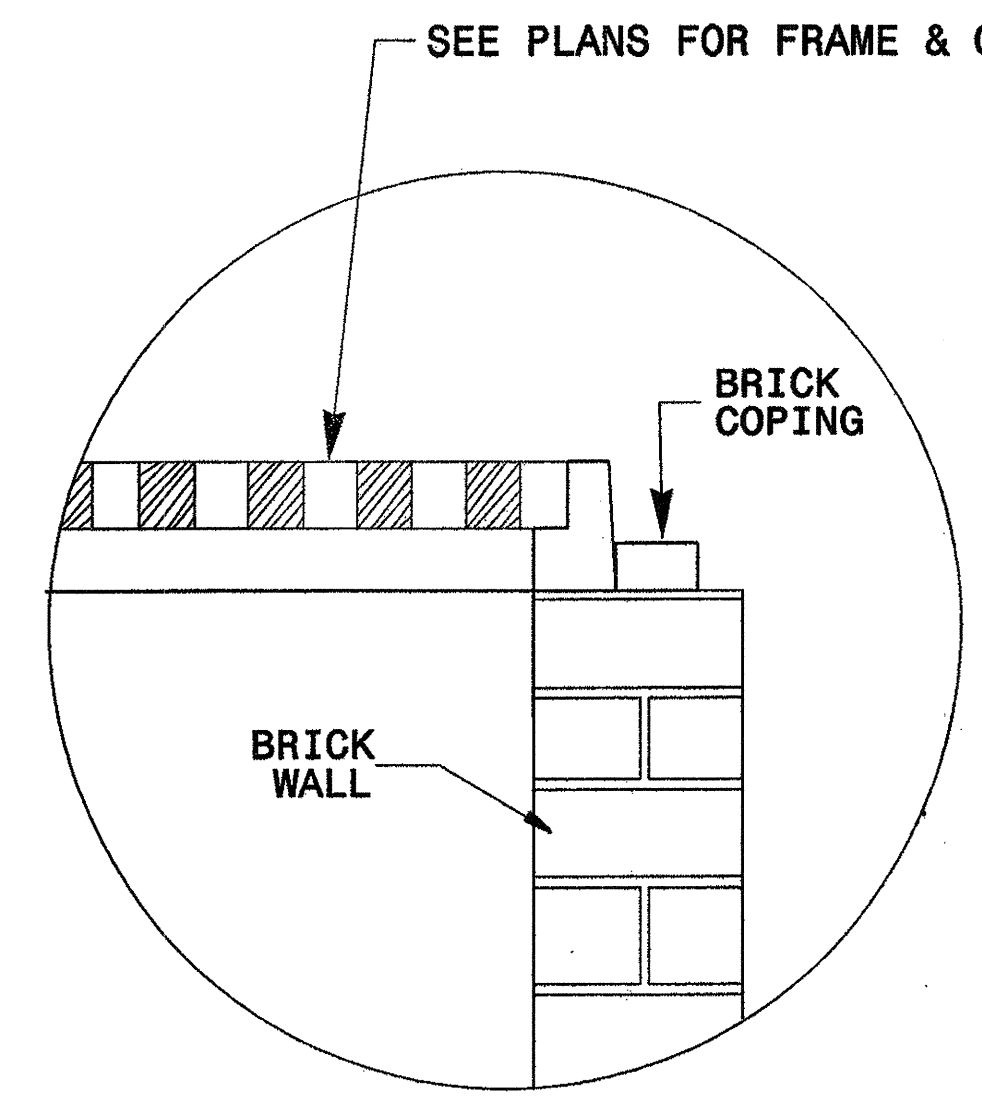
STR. NO. 13 & 18



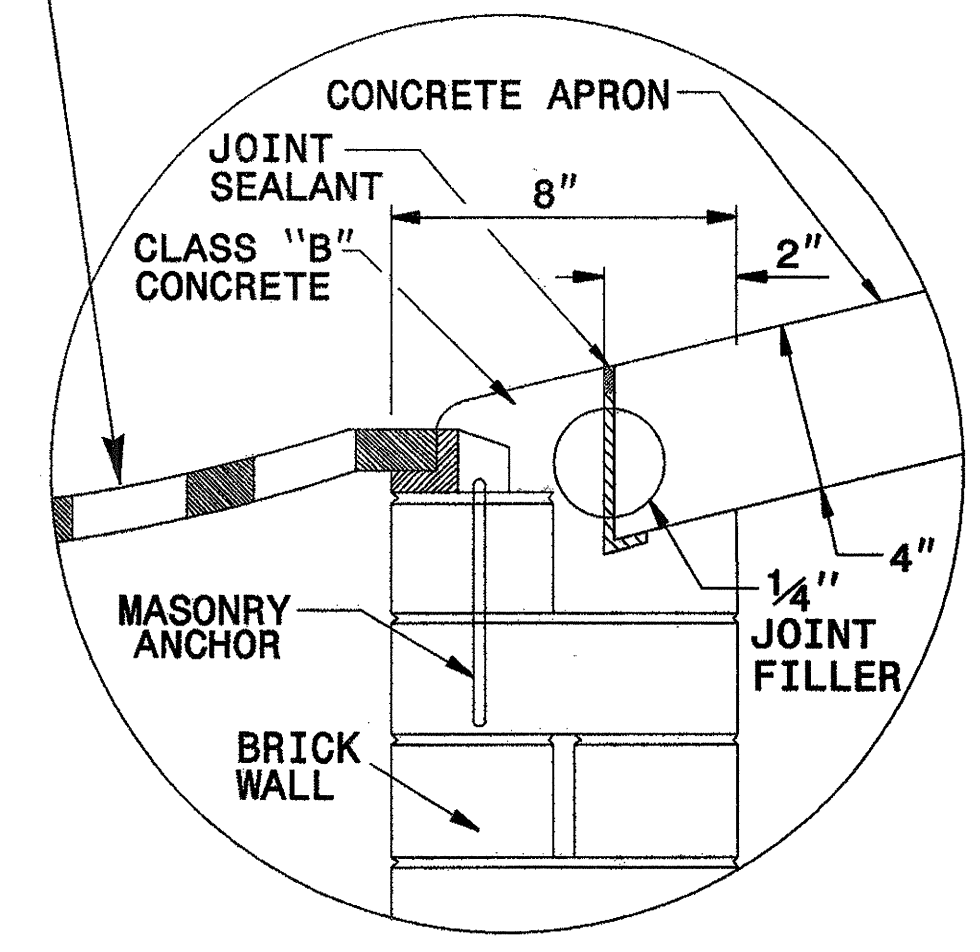
**DESIGN SERVICES UNIT
 STANDARDS AND SPECIAL DESIGN**
 Office 919-250-4128 FAX 919-250-4119

**DETAIL TO CONVERT EXISTING
 DROP INLET OR CATCH BASIN
 TO JUNCTION BOX
 (MANHOLE OPTIONAL)**

ORIGINAL BY: T.S.S. DATE: NOV. 1997
 MODIFIED BY: T.S.S. DATE: FEB. 2000
 CHECKED BY: [Signature] DATE: 7/6/04
 FILE SPEC.: ds174:\usr\details\stand\boxtojb.dgn



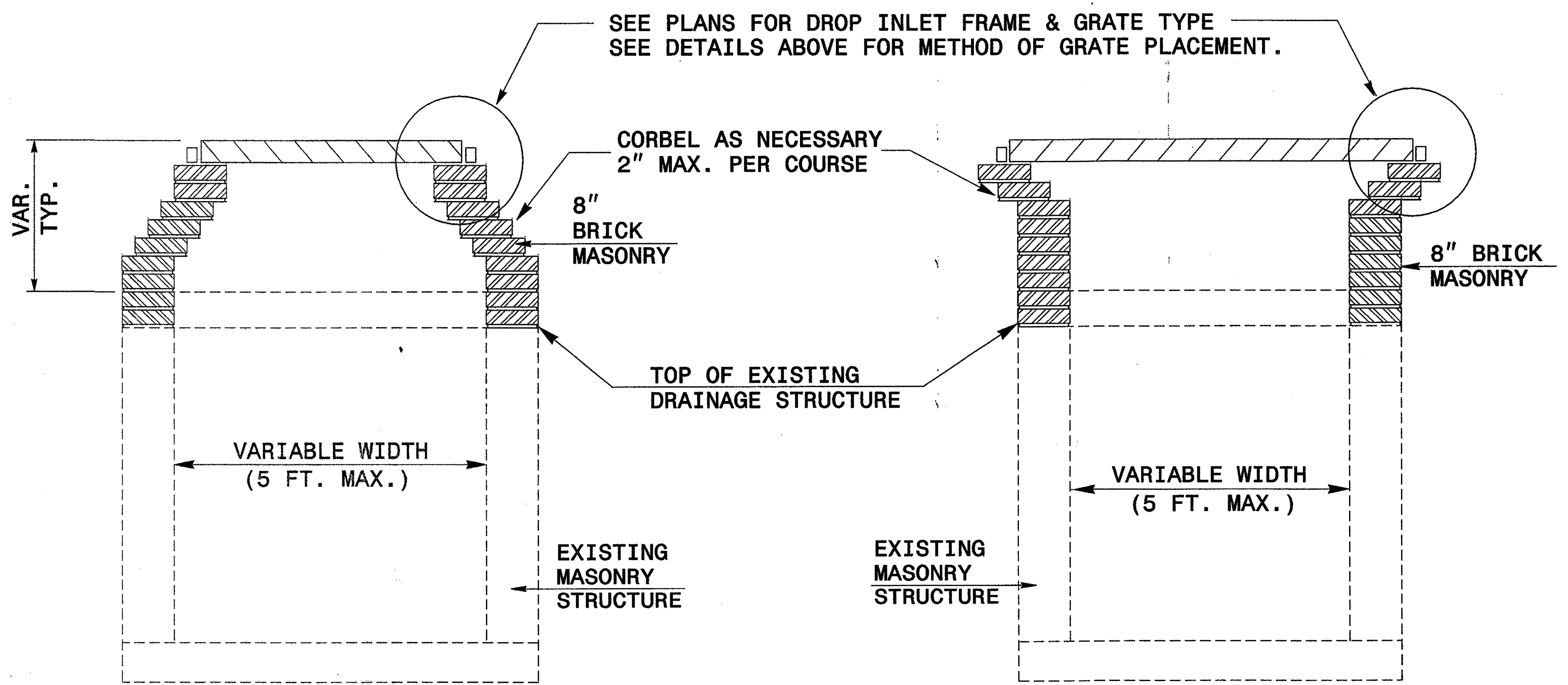
GRATE PLACEMENT DETAIL
FOR DROP INLETS



GRATE PLACEMENT DETAIL
FOR MEDIAN DROP INLETS

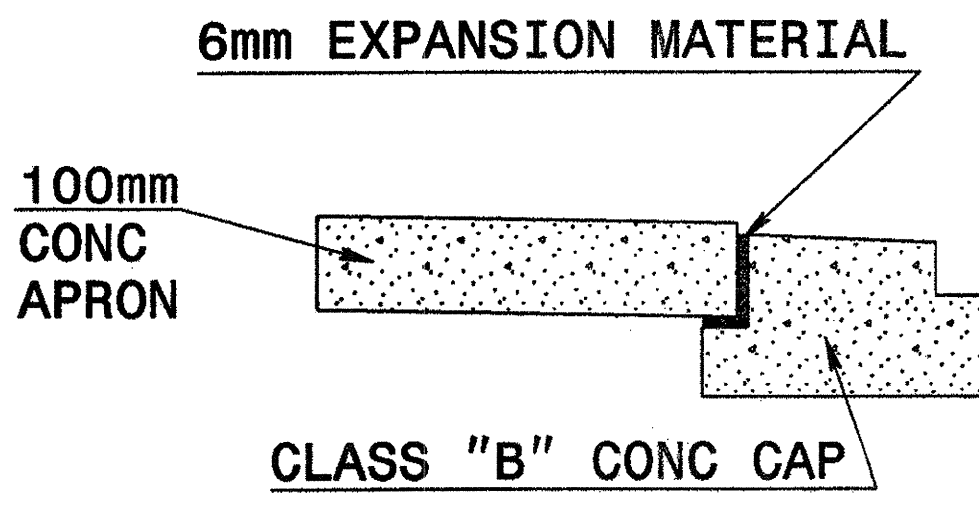
GENERAL NOTES:

- CONSTRUCT IN ACCORDANCE WITH SECTION 859 OF THE STANDARD SPECIFICATIONS.
- USE CLASS B CONCRETE.
- THE DIMENSIONS FOR THE EXISTING BOXES ARE APPROXIMATE AND MAY VARY SLIGHTLY.
- JUMBO BRICK WILL BE PERMITTED. CONCRETE BRICK OR 4" SOLID CONCRETE BLOCK MAY BE USED IN LIEU OF CLAY BRICK.
- INCLUDE 18" CONCRETE APRON IN UNIT PRICE BID PER EACH, CONVERT EXISTING CATCH BASIN TO DROP INLET.
- SPECIAL DESIGN IS REQUIRED FOR USE UNDER PAVEMENT.
- CONFIRM DIMENSIONS ON EACH INDIVIDUAL FRAME & GRATE PROPOSAL.
- SEE STD. DRAWING 840.25 FOR MASONRY ANCHORAGE.

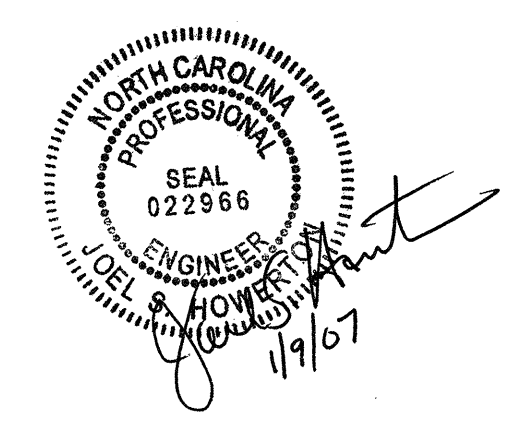


TYPICAL SECTION

TYPICAL SECTION



EXPANSION JOINT DETAIL



STR. NO. 42

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

DETAIL TO CONVERT
EXISTING CATCH BASIN OR
JUNCTION BOX TO DROP INLET

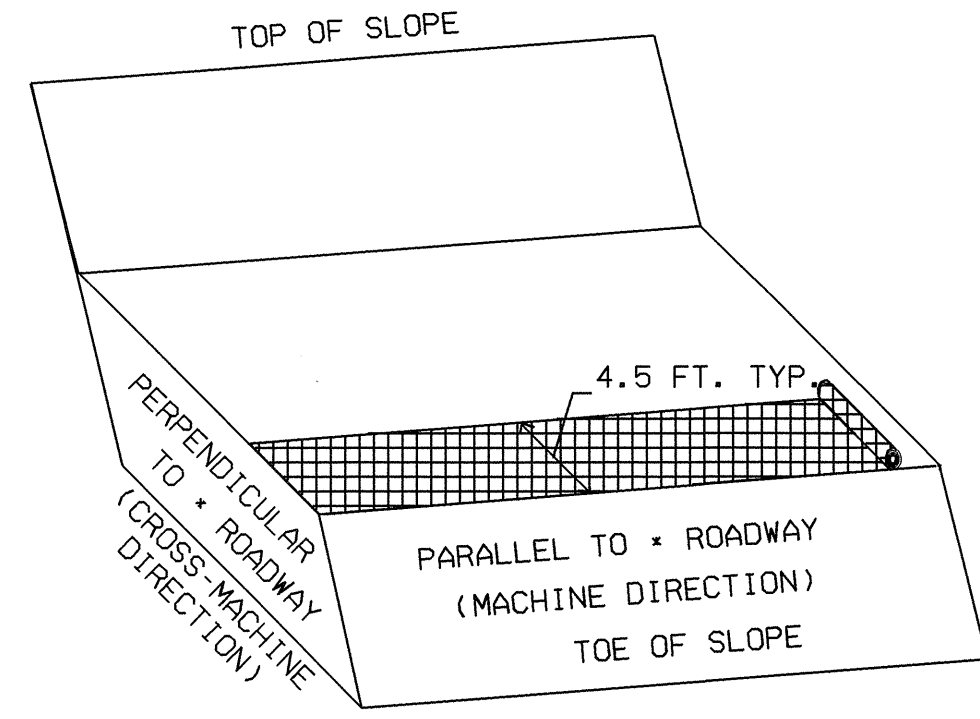
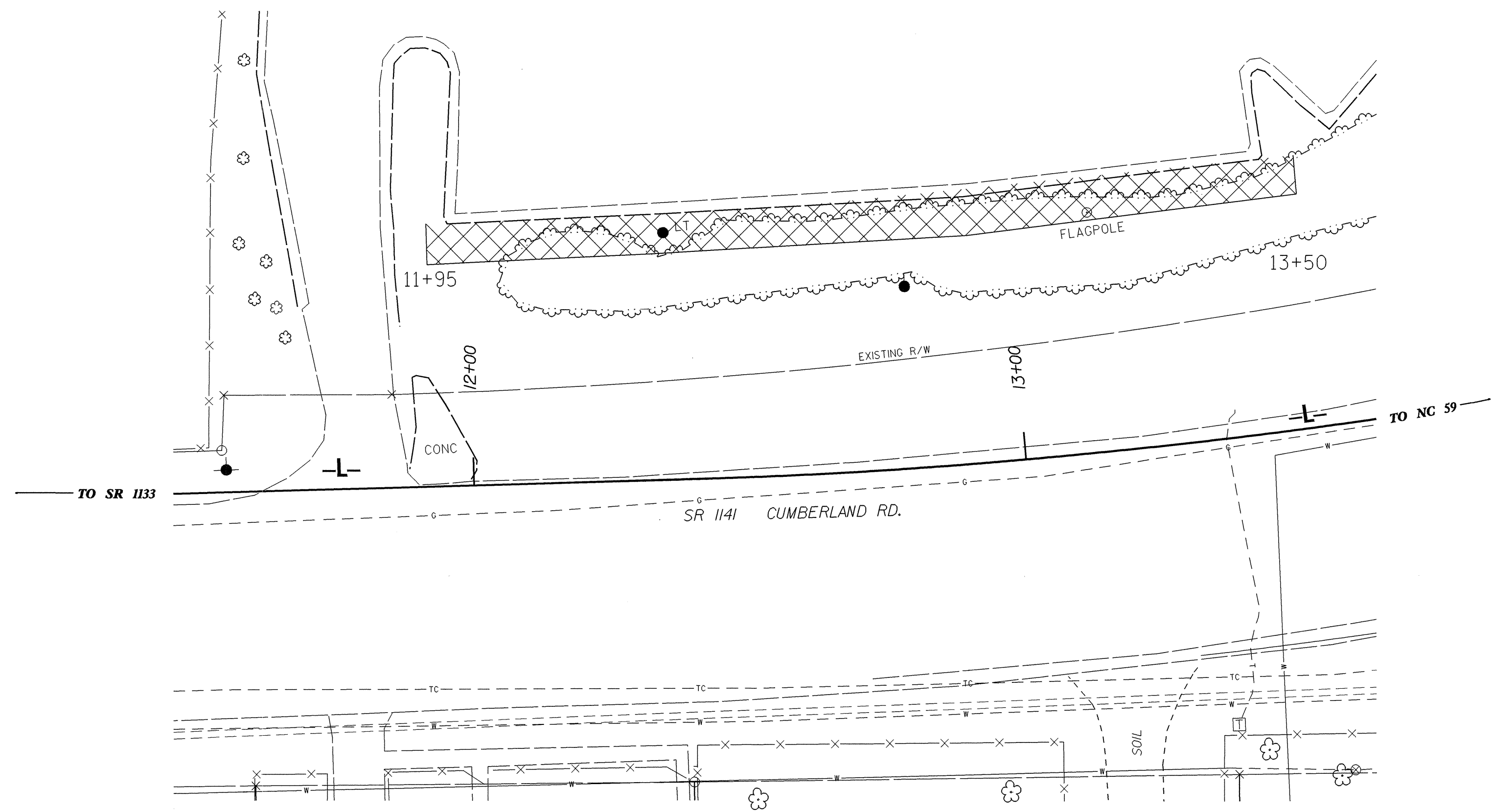
ORIGINAL BY: T.S.S. DATE: NOV. 1997
 MODIFIED BY: T.S.S. DATE: FEB. 2000
 CHECKED BY: [Signature] DATE: 2/00
 FILE SPEC.: d:\74-usr\detail\stand\cbtod102.dgn

5/14/99

5/14/99

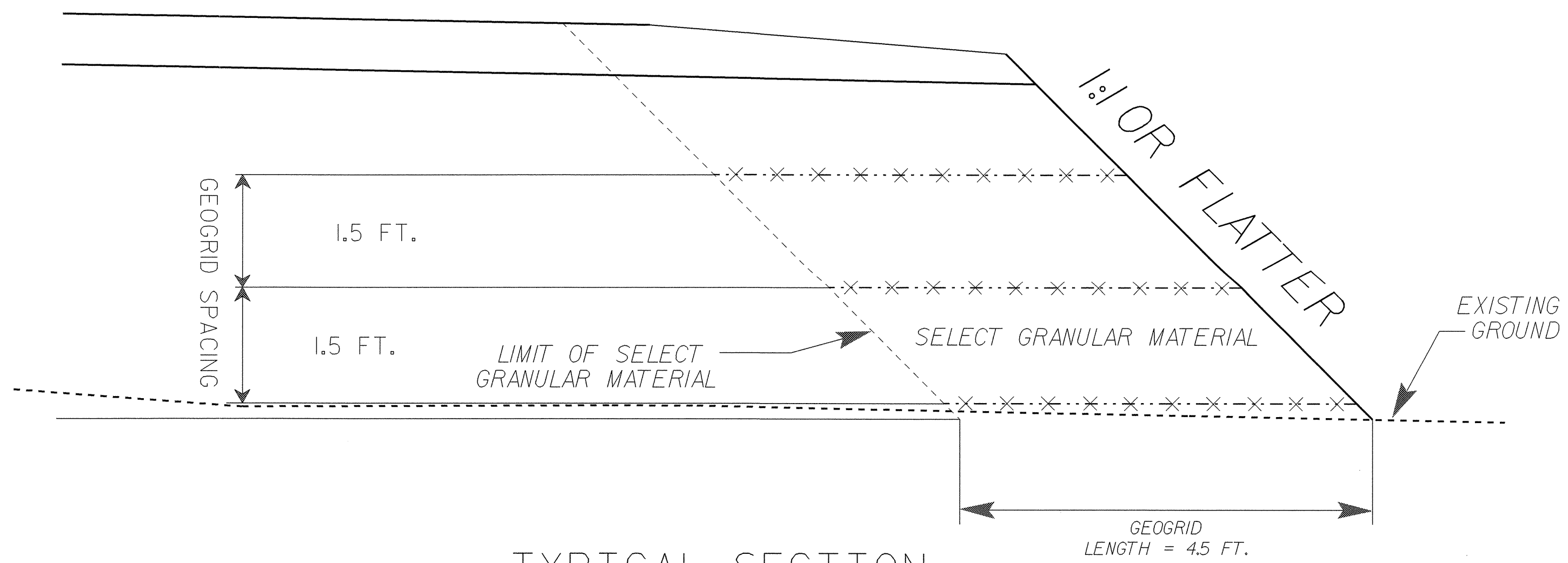
NOTES:

1. GEOGRID REINFORCEMENT SHALL BE PLACED FROM STA. 11+95 TO 13+50, WHERE SLOPE IS STEEPER THAN 2:1 (H:V).
2. LAYERS OF REINFORCEMENT MAY NEED TO BE ADDED OR SUBTRACTED AT THE TOP OF SLOPE AS THE EMBANKMENT HEIGHT VARIES THROUGH THE STEEPENED SECTION.
3. ADJACENT ROWS OF GEOGRID SHALL BE JOINED BY EITHER A SECURE MECHANICAL CONNECTION OR A MINIMUM OF 12 INCHES OF OVERLAP.
4. PERMANENT SOIL REINFORCEMENT MAT SLOPE PROTECTION SHALL BE PLACED ON THE SLOPE FROM STA. 11+95 TO 13+50, WHERE SLOPE IS STEEPER THAN 2:1 (H:V). SEE THE EROSION CONTROL PLANS FOR SPECIAL PROVISIONS.
5. THE FIRST LAYER OF GEOGRID SHALL BE PLACED ON LEVEL GROUND, NOT STEEPER THAN 5% GRADE.
6. SEE THE SPECIAL PROVISION FOR GEOGRID REINFORCED SLOPE FOR DETAILED REQUIREMENTS OF MATERIALS AND CONSTRUCTION.
7. SEE ROADWAY CROSS SECTIONS FOR LIMITS OF SLOPE.



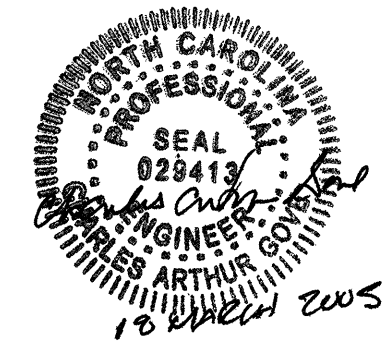
GEOGRID REINFORCEMENT DETAIL
SEE NOTE 3 CONCERNING OVERLAPS

ESTIMATED QUANTITIES:
 GEOGRID REINFORCEMENT: 240 SQ. YD.
 SELECT GRANULAR MATERIAL: 120 CU. YD.
 PERMANENT SOIL REINFORCEMENT MAT: 115 SQ. YD.



TYPICAL SECTION
N.T.S.

PROJECT U-4421
 CUMBERLAND COUNTY
 STATION 11+95 TO 13+50 -L-



DRAWN: WDF
DATE: 12/04
 DESIGN: CAG
DATE: 12/04
 CHECK: ENW
DATE: 12/04

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GEOGRID REINFORCED
 SOIL SLOPE

C:\Users\jgibson\Documents\Projects\U-4421\Drawings\2-C.dwg
 5/14/99 10:00 AM
 JGIBSON

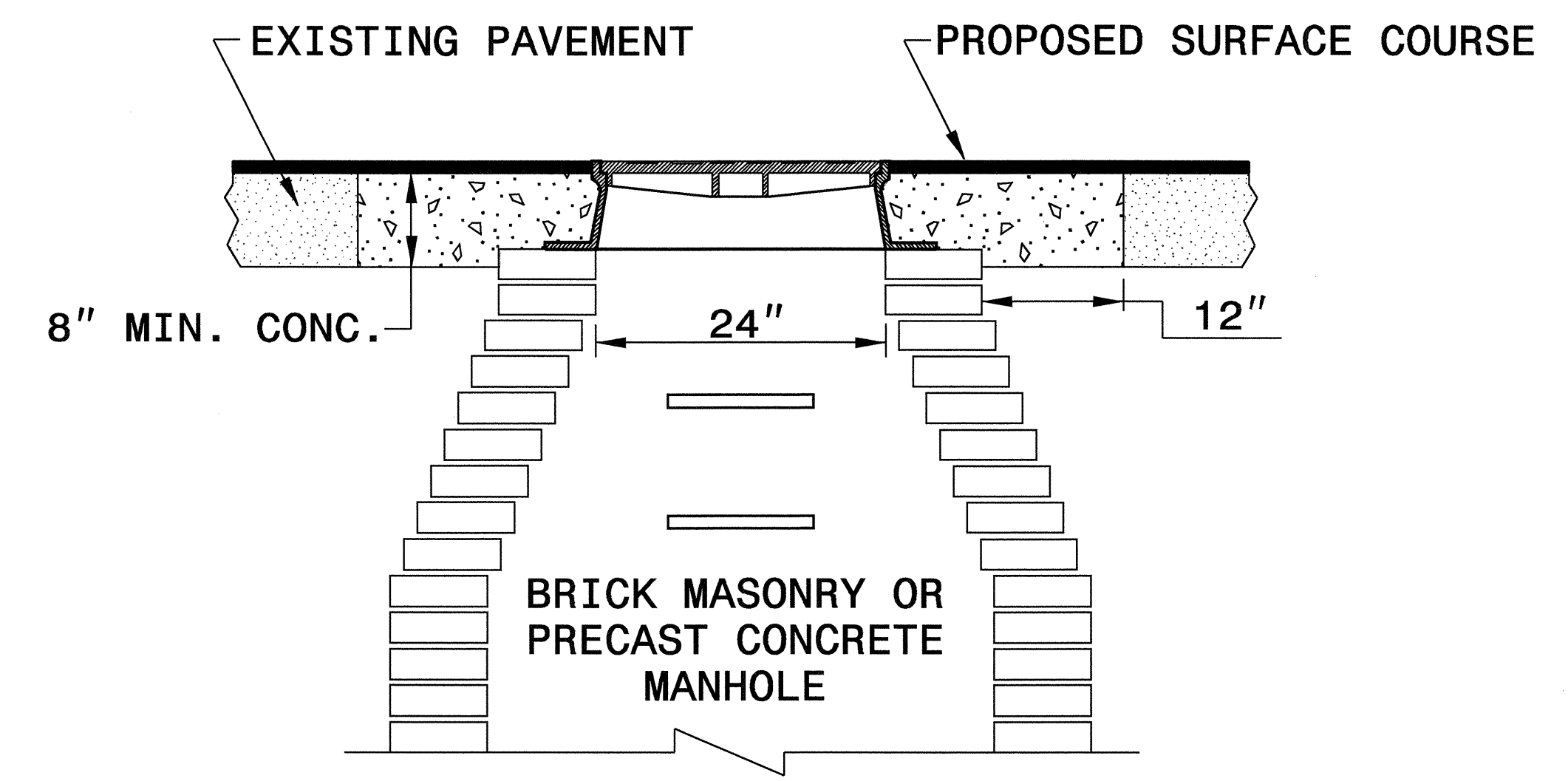
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
MANHOLE AND VALVE BOX ADJUSTMENTS

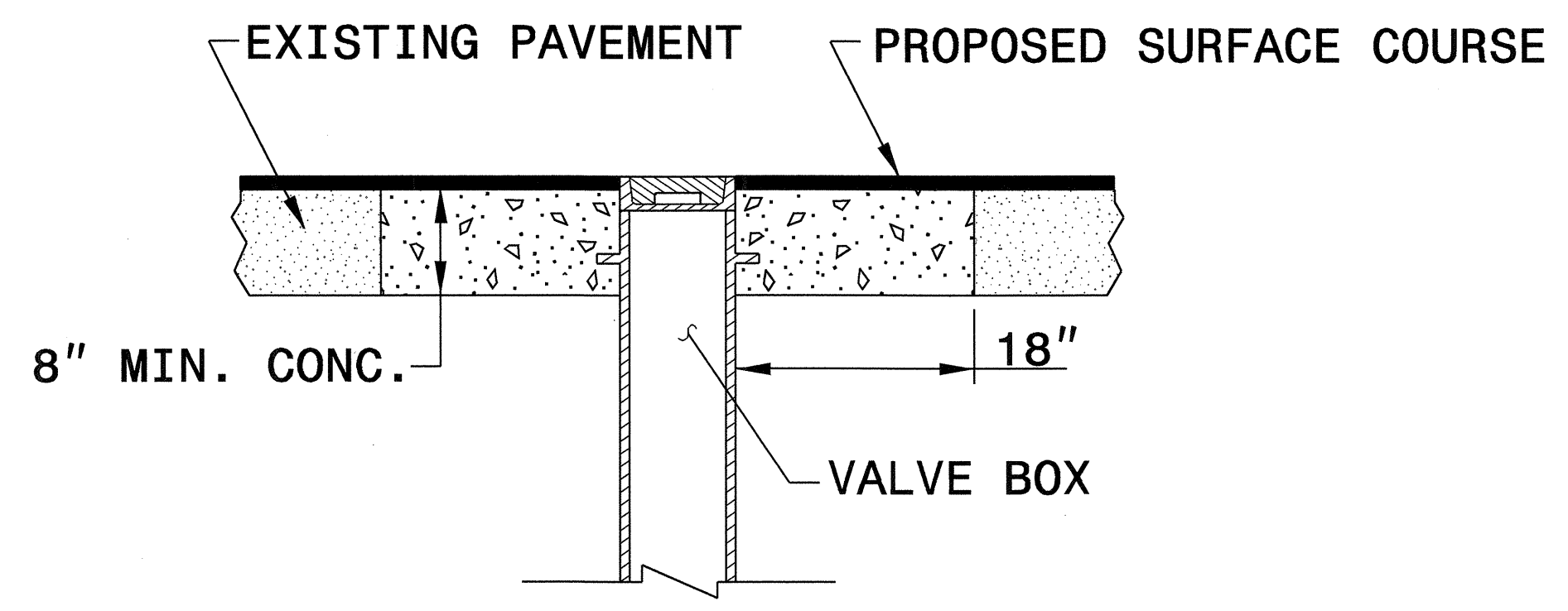
SHEET 1 OF 1
840D55

GENERAL NOTES:

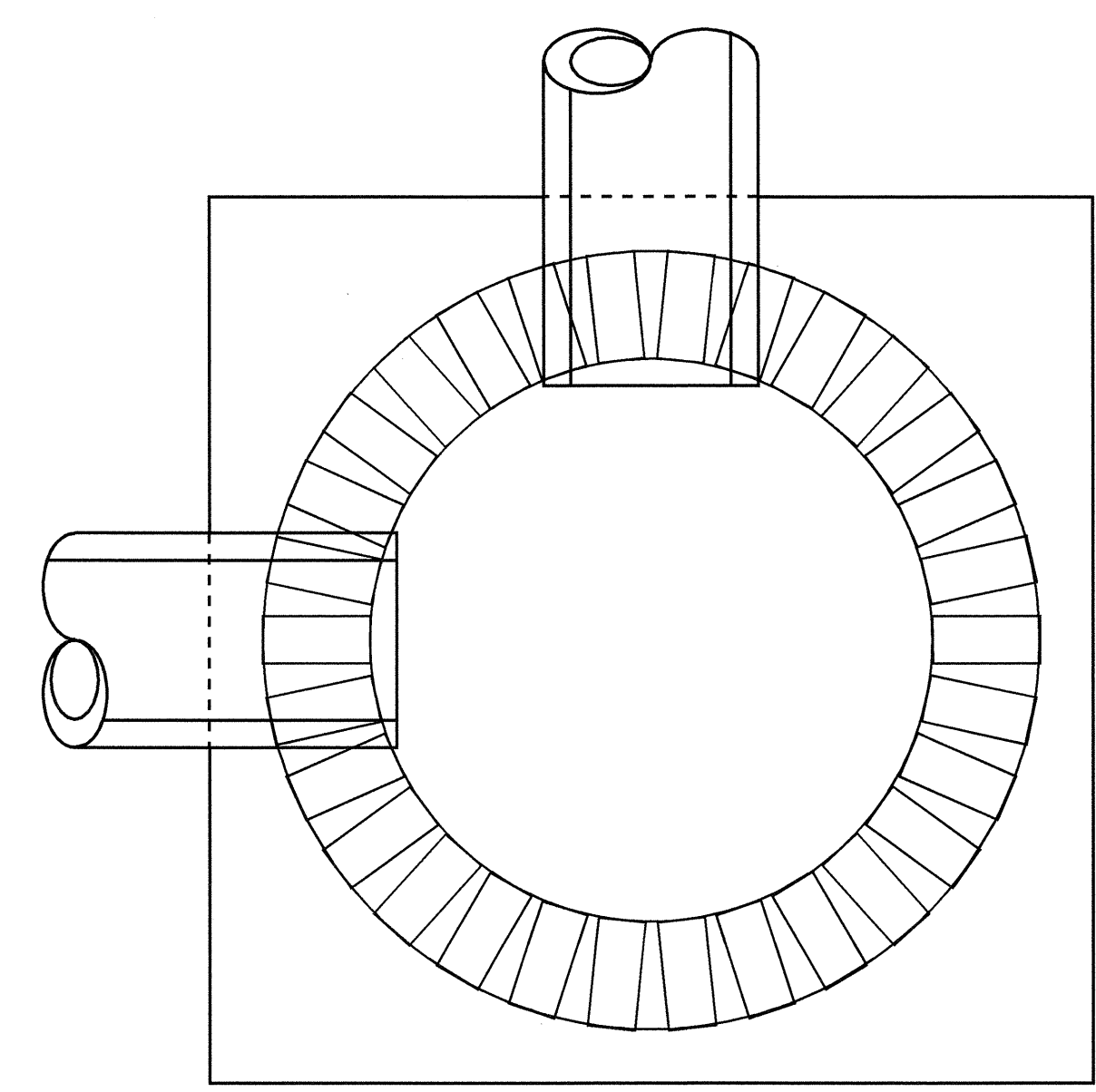
1. RAPID SET GROUT, MORTAR, OR CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI.
2. ALL FAULTY EXISTING BRICKWORK TO BE REMOVED AND REPLACED WITH NEW BRICK MASONRY.
3. EXCAVATION FOR THE ADJUSTMENT SHALL BE SHEER CUT ON ALL SIDES.
4. AREA BELOW 8" DEPTH CAN BE FILLED WITH 78M OR NO. 57 CLEAN STONE.
5. MORTAR SHALL BE MIXED TO NCDOT SPECIFICATIONS.
6. MORTAR JOINTS 1/2" +/- 1/8"



MANHOLE CONCRETE ENCASEMENT



VALVE BOX CONCRETE ENCASEMENT



ELEVATION VIEW

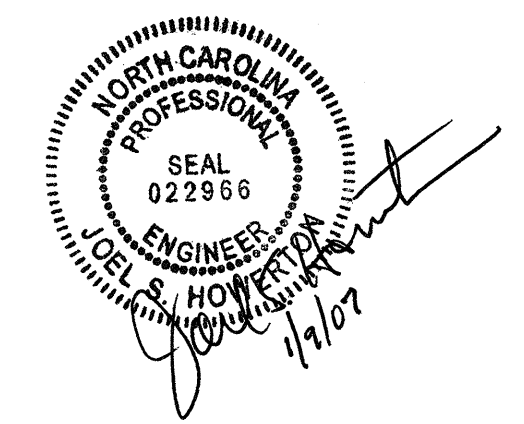
PLACE BRICK ACCORDING TO ELEVATION VIEW

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

I:\MAP-2005\4419
M:\Special Details\erickward\usr\details\stand\840d55.dgn
erickward AT PSU222293



**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: [Signature]	DATE: 3/14/05
FILE SPEC.: /usr/details/stand/840d55.dgn	

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C201245

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF QUANTITIES

ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
0000400000-N	801	Lump Sum		CONSTRUCTION SURVEYING
0043000000-N	226	Lump Sum		GRADING
0050000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUB-BING
0057000000-E	226	400	CY	UNDERCUT EXCAVATION
0080000000-E	SP	20	TON	CLASS IV SUBGRADE STABILIZATION
0195000000-E	265	520	CY	SELECT GRANULAR MATERIAL
0196000000-E	270	400	SY	FABRIC FOR SOIL STABILIZATION
0241000000-E	SP	240	SY	GENERIC GRADING ITEM GEOGRID REINFORCEMENT
0241000000-E	SP	115	SY	GENERIC GRADING ITEM PERM SOIL REINFORCEMENT MAT
0318000000-E	300	220	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRS
0372000000-E	310	500	LF	18" RC PIPE CULVERTS, CLASS III
0995000000-E	340	310	LF	PIPE REMOVAL
1220000000-E	545	400	TON	INCIDENTAL STONE BASE
1297000000-E	607	2,500	SY	MILLING ASPHALT PAVEMENT, **** DEPTH (2-1/2")
1489000000-E	610	3,500	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B
1498000000-E	610	2,250	TON	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0B
1519000000-E	610	2,000	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5B
1560000000-E	620	377	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22
1693000000-E	654	45	TON	ASPHALT PLANT MIX, PAVEMENT REPAIR
2022000000-E	815	23	CY	SUBDRAIN EXCAVATION
2033000000-E	815	17	CY	SUBDRAIN FINE AGGREGATE
2044000000-E	815	100	LF	6" PERFORATED SUBDRAIN PIPE
2055000000-E	815	3	EA	6" SUBDRAIN PIPE WYES, TEES, & ELBOWS
2077000000-E	815	6	LF	6" OUTLET PIPE (SUBDRAINS)
2132000000-N	816	1	EA	CONCRETE PAD FOR SHOULDER DRAIN PIPE OUTLET
2253000000-E	840	1	CY	PIPE COLLARS
2286000000-N	840	38	EA	MASONRY DRAINAGE STRUCTURES
2308000000-E	840	4	LF	MASONRY DRAINAGE STRUCTURES
2364000000-N	840	15	EA	FRAME WITH TWO GRATES, STD 840.16
2374000000-N	840	3	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (E)
2374000000-N	840	10	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (F)
2374000000-N	840	5	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (G)
2396000000-N	840	3	EA	FRAME WITH COVER, STD 840.54
2535000000-E	846	310	LF	***X*** CONCRETE CURB (8" X 18")
2549000000-E	846	3,150	LF	2'-6" CONCRETE CURB & GUTTER
2612000000-E	848	480	SY	6" CONCRETE DRIVEWAY
2655000000-E	852	100	SY	5" MONOLITHIC CONCRETE ISLANDS (KEYED IN)
2830000000-N	858	17	EA	ADJUSTMENT OF MANHOLES
2845000000-N	858	1	EA	ADJUSTMENT OF METER BOXES OR VALVE BOXES
2905000000-N	859	2	EA	CONVERT EXISTING DROP INLET TO JUNCTION BOX
2950000000-N	SP	1	EA	CONVERT EXISTING JUNCTION BOX TO DROP INLET
3536000000-E	866	75	LF	CHAIN LINK FENCE, 48" FABRIC
3542000000-E	866	6	EA	METAL LINE POSTS FOR 48" CHAIN LINK FENCE
3548000000-E	866	2	EA	METAL TERMINAL POSTS FOR 48" CHAIN LINK FENCE

ItemNumber	Sec #	Quantity	Unit	Description
3554000000-E	866	2	EA	METAL GATE POSTS FOR *** CHAIN LINK FENCE, DOUBLE GATE (48")
3565000000-E	866	1	EA	DOUBLE GATES, *** HIGH, ** WIDE, ** OPENING (48", 4', 8')
3656000000-E	876	300	SY	FILTER FABRIC FOR DRAINAGE
4072000000-E	903	249	LF	SUPPORTS, 3-LB STEEL U-CHANNEL
4096000000-N	904	1	EA	SIGN ERECTION, TYPE D
4102000000-N	904	23	EA	SIGN ERECTION, TYPE E
4155000000-N	907	12	EA	DISPOSAL OF SIGN SYSTEM, U-CHANNEL
4158000000-N	907	1	EA	DISPOSAL OF SIGN SYSTEM, WOOD
4400000000-E	1110	192	SF	WORK ZONE SIGNS (STATIONARY)
4405000000-E	1110	192	SF	WORK ZONE SIGNS (PORTABLE)
4415000000-N	1115	2	EA	FLASHING ARROW PANELS, TYPE C
4420000000-N	1120	2	EA	CHANGEABLE MESSAGE SIGN
4430000000-N	1130	94	EA	DRUMS
4435000000-N	1135	54	EA	CONES
4445000000-E	1145	24	LF	BARRICADES (TYPE III)
4455000000-N	1150	60	MD	FLAGGER
4480000000-N	1165	2	EA	TMIA
4650000000-N	1251	50	EA	TEMPORARY RAISED PAVEMENT MARKERS
4686000000-E	1205	5,193	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)
4710000000-E	1205	500	LF	THERMOPLASTIC PAVEMENT MARKING LINES (24", 120 MILS)
4725000000-E	1205	37	EA	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)
4770000000-E	1205	90	LF	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (4") 4
4795000000-E	1205	40	LF	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (24") 4
4810000000-E	1205	57,424	LF	PAINT PAVEMENT MARKING LINES (4")
4850000000-E	1205	1,513	LF	REMOVAL OF PAVEMENT MARKING LINES (4")
4900000000-N	1251	100	EA	PERMANENT RAISED PAVEMENT MARKERS
5325200000-E	1510	70	LF	2" WATER LINE
5325800000-E	1510	48	LF	8" WATER LINE (DI)
5325800000-E	1510	1,704	LF	8" WATER LINE (PVC)
5546000000-E	1515	4	EA	8" VALVE
5571800000-E	1515	2	EA	8" TAPPING VALVE
5606000000-E	1515	1	EA	2" BLOW OFF
5648000000-N	1515	17	EA	RELOCATE WATER METER
5672000000-N	1515	2	EA	RELOCATE FIRE HYDRANT
6000000000-E	1605	3,300	LF	TEMPORARY SILT FENCE
6006000000-E	1610	100	TON	STONE FOR EROSION CONTROL, CLASS A
6009000000-E	1610	180	TON	STONE FOR EROSION CONTROL, CLASS B
6012000000-E	1610	210	TON	SEDIMENT CONTROL STONE
6015000000-E	1615	2.5	ACR	TEMPORARY MULCHING
6018000000-E	1620	100	LB	SEED FOR TEMPORARY SEEDING
6021000000-E	1620	0.5	TON	FERTILIZER FOR TEMPORARY SEEDING
6024000000-E	1622	50	LF	TEMPORARY SLOPE DRAINS
6027000000-N	1622	2	EA	INLET PROTECTION AT TEMPORARY SLOPE DRAINS
6030000000-E	1630	170	CY	SILT EXCAVATION
6036000000-E	1631	360	SY	MATting FOR EROSION CONTROL
6042000000-E	1632	800	LF	1/4" HARDWARE CLOTH
6084000000-E	1660	2.5	ACR	SEEDING & MULCHING
6087000000-E	1660	1.5	ACR	MOWING

ItemNumber	Sec #	Quantity	Unit	Description
6090000000-E	1661	50	LB	SEED FOR REPAIR SEEDING
6093000000-E	1661	0.25	TON	FERTILIZER FOR REPAIR SEEDING
6096000000-E	1662	50	LB	SEED FOR SUPPLEMENTAL SEEDING
6108000000-E	1665	2	TON	FERTILIZER TOPDRESSING
6114000000-N	SP	1	HR	SPECIALIZED HAND MOWING
6117000000-N	SP	8	EA	RESPONSE FOR EROSION CONTROL
***** BEGIN SCHEDULE AA ***** ***** (3 ALTERNATES) *****				
0366000000-E AA1	310	1,560	LF	15" RC PIPE CULVERTS, CLASS III
*** OR ***				
0366000000-E AA2	310	1,328	LF	15" RC PIPE CULVERTS, CLASS III
0540000000-E AA2	SP	232	LF	**** ALUMINIZED CORRUGATED STEEL PIPE CULVERTS, **** THICK (15", 0.064")
*** OR ***				
0366000000-E AA3	310	1,328	LF	15" RC PIPE CULVERTS, CLASS III
0536000000-E AA3	SP	232	LF	**** HDPE PIPE CULVERTS (15")
***** END SCHEDULE AA *****				

5/28/99

15-NOV-2008 11:12 AM
C:\Users\jls.dgn
15-NOV-2008 11:12 AM
C:\Users\jls.dgn

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

*** SUMMARY OF EARTHWORK**
IN CUBIC YARDS

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT+%	BORROW	WASTE
-L- 10+00 TO 28+61.20	405		5200	4795	
SUBTOTAL =	405		5200	4795	
5% TO REPLACE TOPSOIL ON BORROW PIT				240	
PROJECT TOTAL =	405			5035	
SAY =	425 CY			5300 CY	

NOTE: Earthwork quantities are calculated by the Roadway Design Unit. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

CONTINGENCY ITEM FROM GEOTECHNICAL REPORT UNDERCUT = 400 CY

*** SUMMARY OF REMOVAL OF EXISTING ASPHALT PAVEMENT**
IN SQUARE YARDS

LINE	STATION TO STATION	LOCATION	PLANIMETER READING OR LENGTH	CONVERSION FACTOR OR WIDTH	SY
-L-	10+00 TO 11+25	LT	1776.0 SF	9 SF / 1 SY	197.3
-L-	10+00 TO 15+31	RT	3229.4 SF	9 SF / 1 SY	358.8
PAVEMENT REMOVAL CONTINGENCY ITEM FROM GEOTECHNICAL RECOMMENDATIONS DATED 10-21-04					250
				TOTAL =	806.1 SY
				SAY =	810 SY

***** APPROXIMATE QUANTITIES ONLY. UNCLASSIFIED EXCAVATION, BORROW EXCAVATION, FINE GRADING, CLEARING AND GRUBBING, AND REMOVAL OF EXISTING PAVEMENT WILL BE PAID FOR AT THE LUMP SUM PRICE FOR "GRADING".

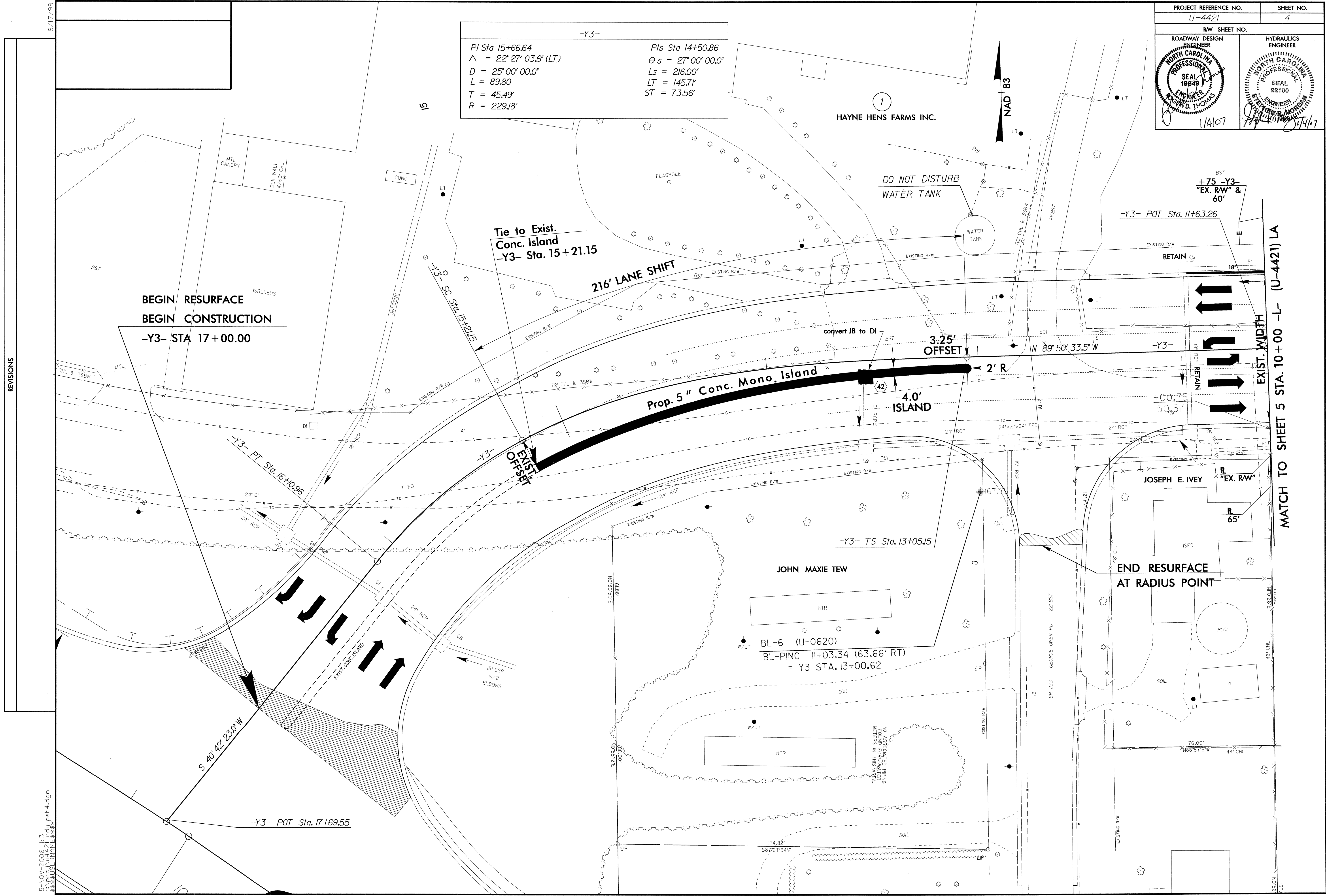
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
PARCEL INDEX

PARCEL No.	SHEET No.	PROPERTY OWNER NAME
1	4,5	HAYNE HENS FARM INC.
2	5	F.K.S., INCORPORATED
3	6	HTM INVESTMENTS
4	5	ALTON D. REGISTER
5	5	LILLIAN J. SWAIN
6	5	ROBERT H. HIGGINS
7	5	ELLIS EMPIE EHLE, JR.
8	5	NO CLAIM
9	5	NO CLAIM
10	6	HOLLIS L. LUDLUM
11	6	MARGIE WOODS
12	6	TIMOTHY R. HOLZER
13	6	EDWARD GABRISH
14	6,7	TIMOTHY HOLZER
15	6	HTM INVESTMENTS, INC.
16	6,7	CUMBERLAND BAPTIST CHURCH, INC.
18	7	TIMOTHY R. HOLZER
19	7	TIMOTHY R. HOLZER
20	7	FRANKLIN D. PLAYER
21	7	FRANKLIN D. PLAYER
22	7	FRANKLIN D. PLAYER
27	7	THITE MORETZ
28	8	ROBERTA B. BROWN
29	8	JOYCE PATE SMITH
30	8	HUBBARD PLAYER
31	8	FLORA V. BARFIELD
32	8	THITE MORETZ
33	8	JAMES C. MORETZ JR.
34	8	RACHEL BULLOCK
35	8	HTM INVESTMENTS, INC.

PARCEL No.	SHEET No.	PROPERTY OWNER NAME

-Y3-

PI Sta 15+66.64 Δ = 22° 27' 03.6" (LT) D = 25° 00' 00.0" L = 89.80 T = 45.49' R = 229.18'	PIs Sta 14+50.86 θs = 27° 00' 00.0" Ls = 216.00' LT = 145.71' ST = 73.56'
--	---



BEGIN RESURFACE
BEGIN CONSTRUCTION
-Y3- STA 17+00.00

Tie to Exist.
Conc. Island
-Y3- Sta. 15+21.15

216' LANE SHIFT

Prop. 5" Conc. Mono. Island

DO NOT DISTURB
WATER TANK

+75 -Y3-
"EX. RW" & 60'

-Y3- POT Sta. 11+63.26

3.25'
OFFSET

2' R

4.0'
ISLAND

+00.75
50.51'

JOSEPH E. IVEY
"EX. RW"

END RESURFACE
AT RADIUS POINT

BL-6 (U-0620)
BL-PINC 11+03.34 (63.66' RT)
= Y3 STA. 13+00.62

-Y3- POT Sta. 17+69.55

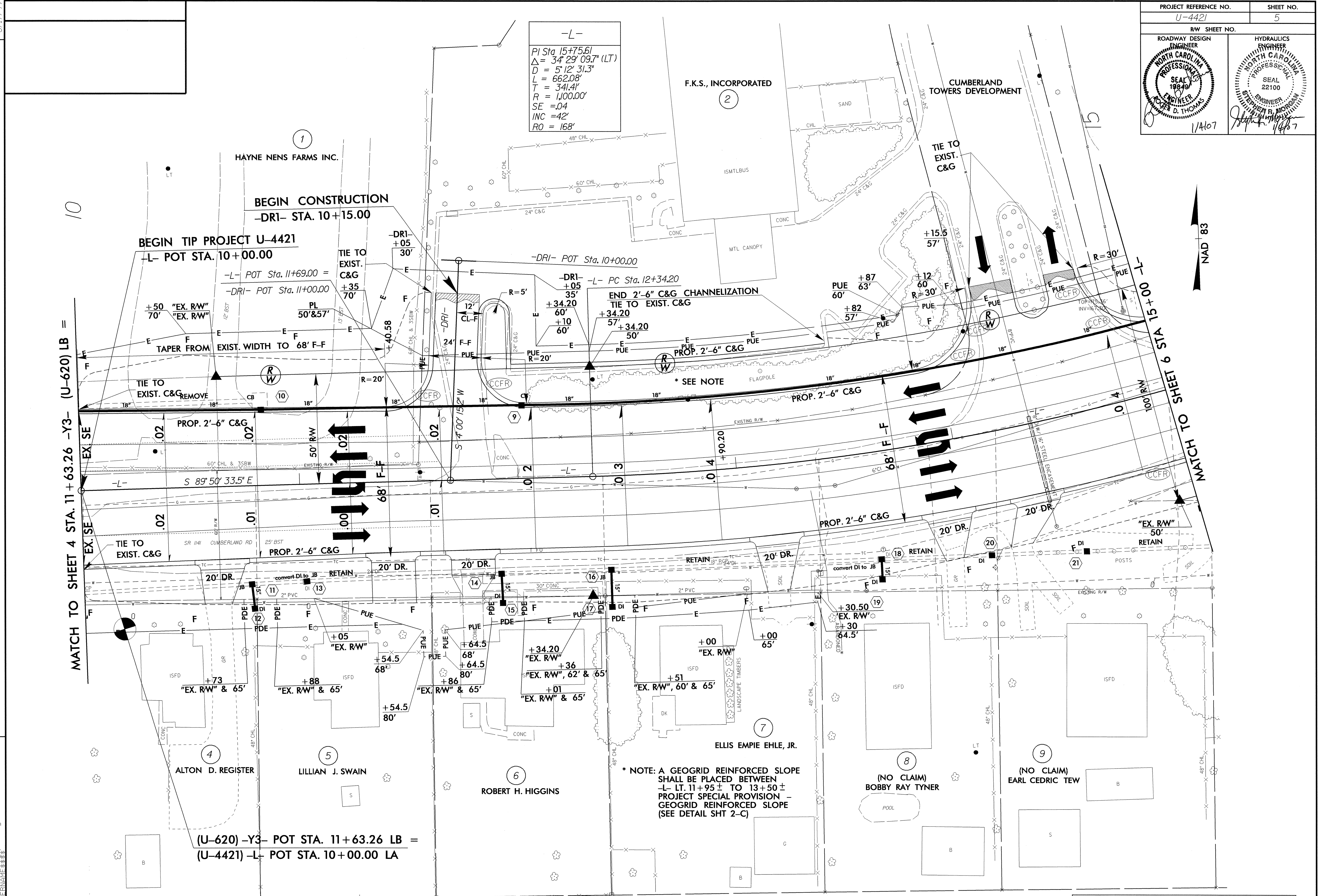
MATCH TO SHEET 5 STA. 10+00 -L- (U-4421) LA

REVISIONS

8/17/99

15-NOV-2008 2:13
S:\PROJECTS\U-4421\psh-4.dgn

-L-
 PI Sta 15+75.61
 $\Delta = 34^\circ 29' 09.7" (LT)$
 $D = 5^\circ 12' 31.3"$
 $L = 662.08'$
 $T = 341.4'$
 $R = 1,000.00'$
 $SE = .04$
 $INC = 42'$
 $RO = 168'$



NAD 83

MATCH TO SHEET 4 STA. 11+63.26 -Y3- (U-620) LB =

MATCH TO SHEET 6 STA 15+00 -L-

(U-620) -Y3- POT STA. 11+63.26 LB =
 (U-4421) -L- POT STA. 10+00.00 LA

* NOTE: A GEOGRID REINFORCED SLOPE SHALL BE PLACED BETWEEN -L- LT. 11+95 ± TO 13+50 ± PROJECT SPECIAL PROVISION - GEOGRID REINFORCED SLOPE (SEE DETAIL SHT 2-C)

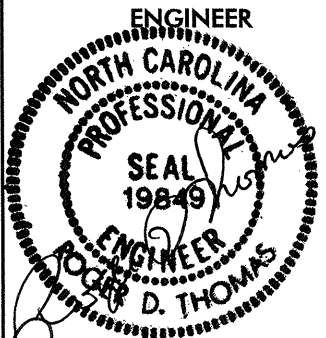
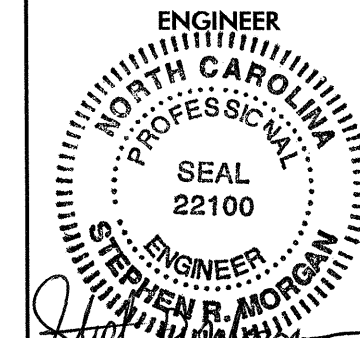
SEE SHEET 9 FOR -L- PROFILE
 SEE SHEET 10 FOR -DRI- PROFILE

21-DEC-2006 07:48
 9:33 AM C:\PROJECTS\U-4421\U-4421.dgn

REVISIONS

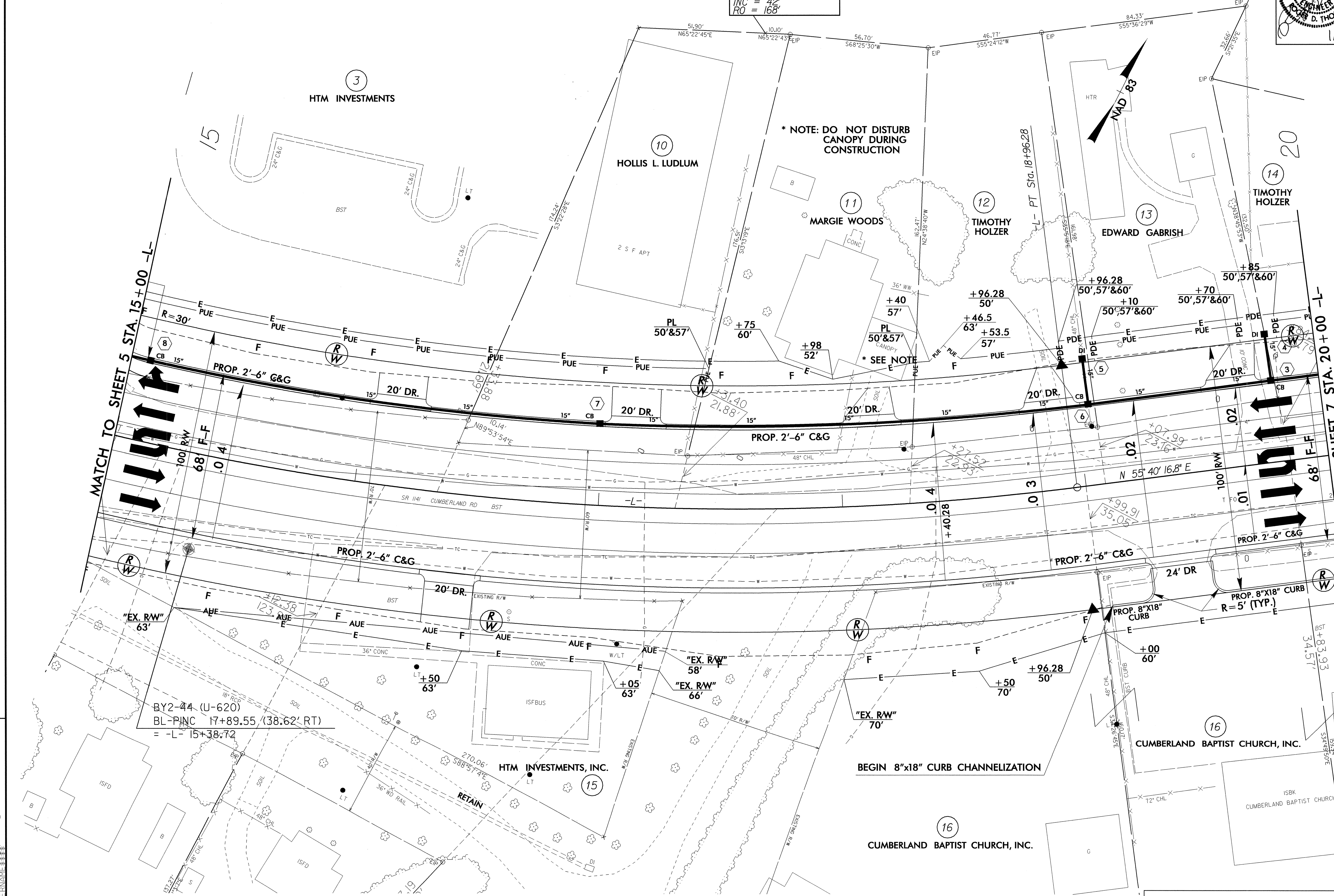
8/17/99

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
U-4421	6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	
11/107	

-L-

PI Sta 15+75.61
 $\Delta = 34^{\circ}29'09.7"$ (LT)
 $D = 5'12'31.3"$
 $L = 662.08'$
 $T = 341.4'$
 $R = 1,000.00'$
 $SE = .04$
 $INC = .42$
 $RO = .168$



3

10

11

12

13

14

MATCH TO SHEET 5 STA. 15+00 -L-

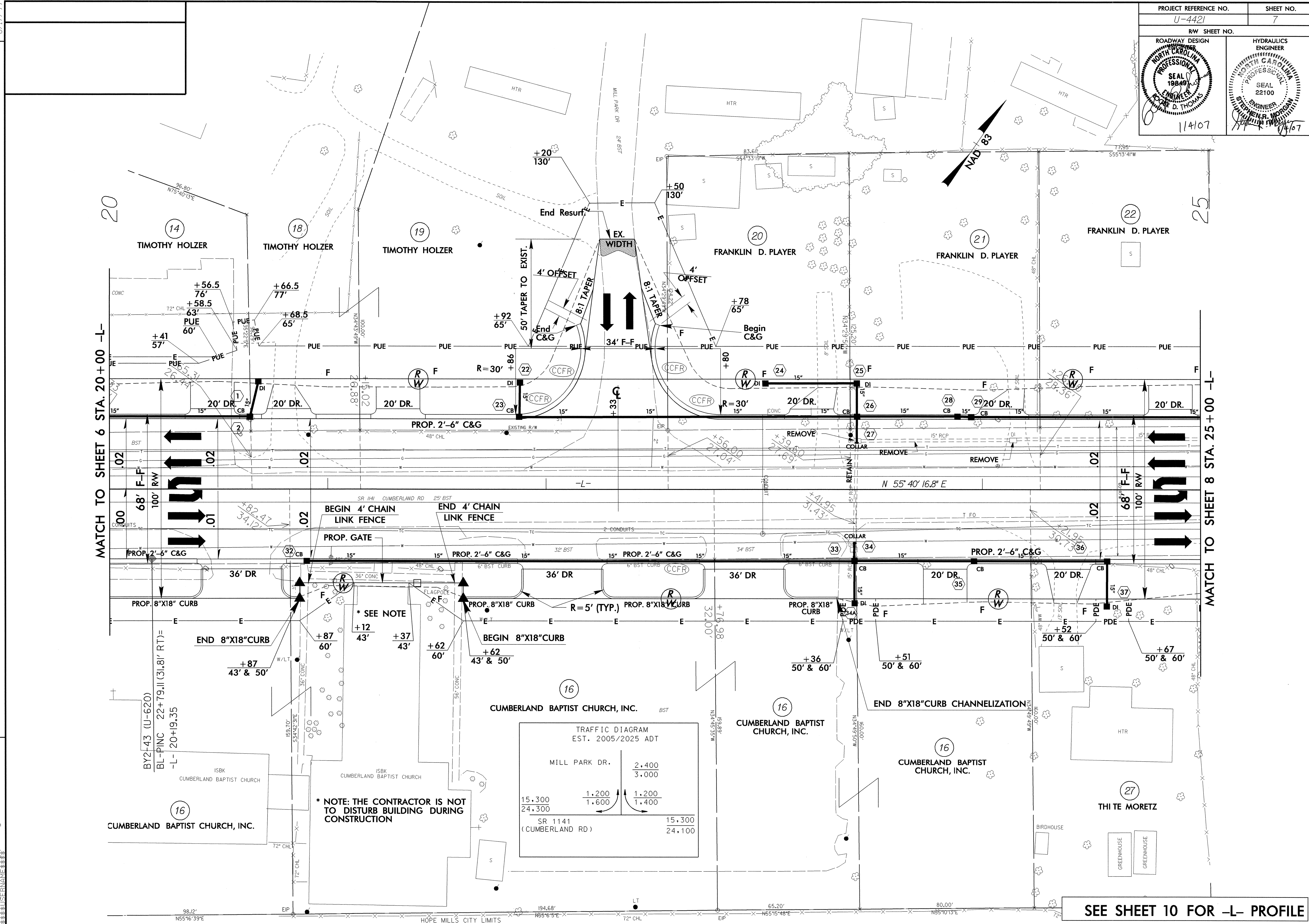
MATCH TO SHEET 7 STA. 20+00 -L-

BY2-44 (U-620)
 BL-PINC 17+89.55 (38.62' RT)
 = -L- 15+38.72

SEE SHEET 9 FOR -L- PROFILE

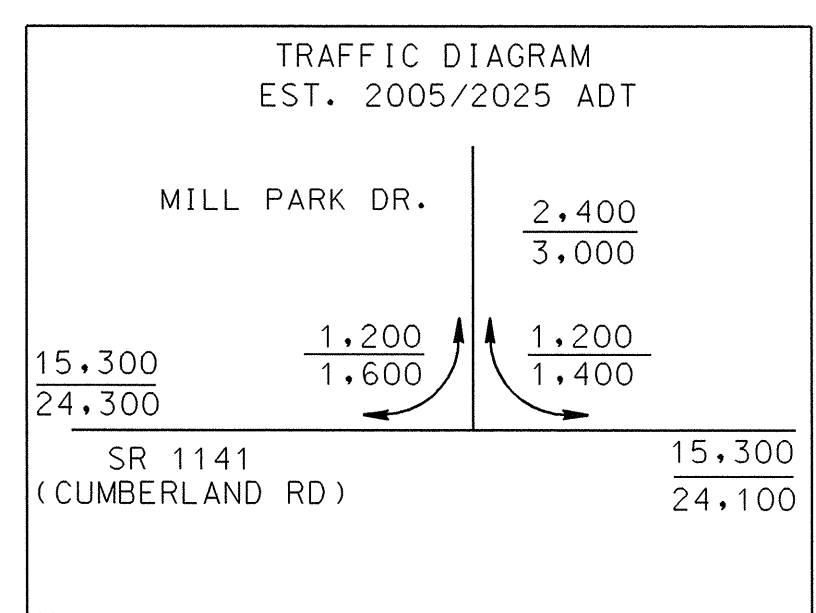
20-DEC-2006 15:40
 psah6.dgn
 8.53045761E-38

REVISIONS



MATCH TO SHEET 6 STA. 20+00 -L-

MATCH TO SHEET 8 STA. 25+00 -L-



* NOTE: THE CONTRACTOR IS NOT TO DISTURB BUILDING DURING CONSTRUCTION

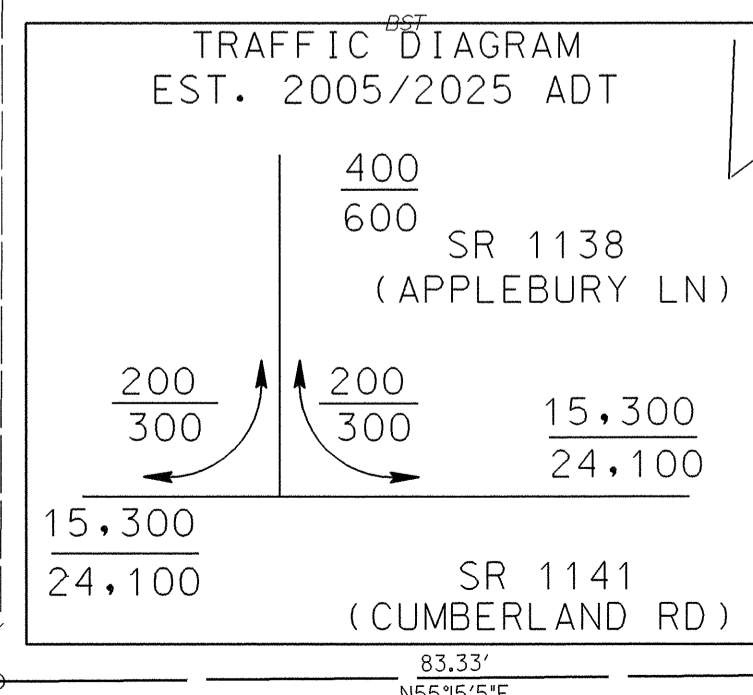
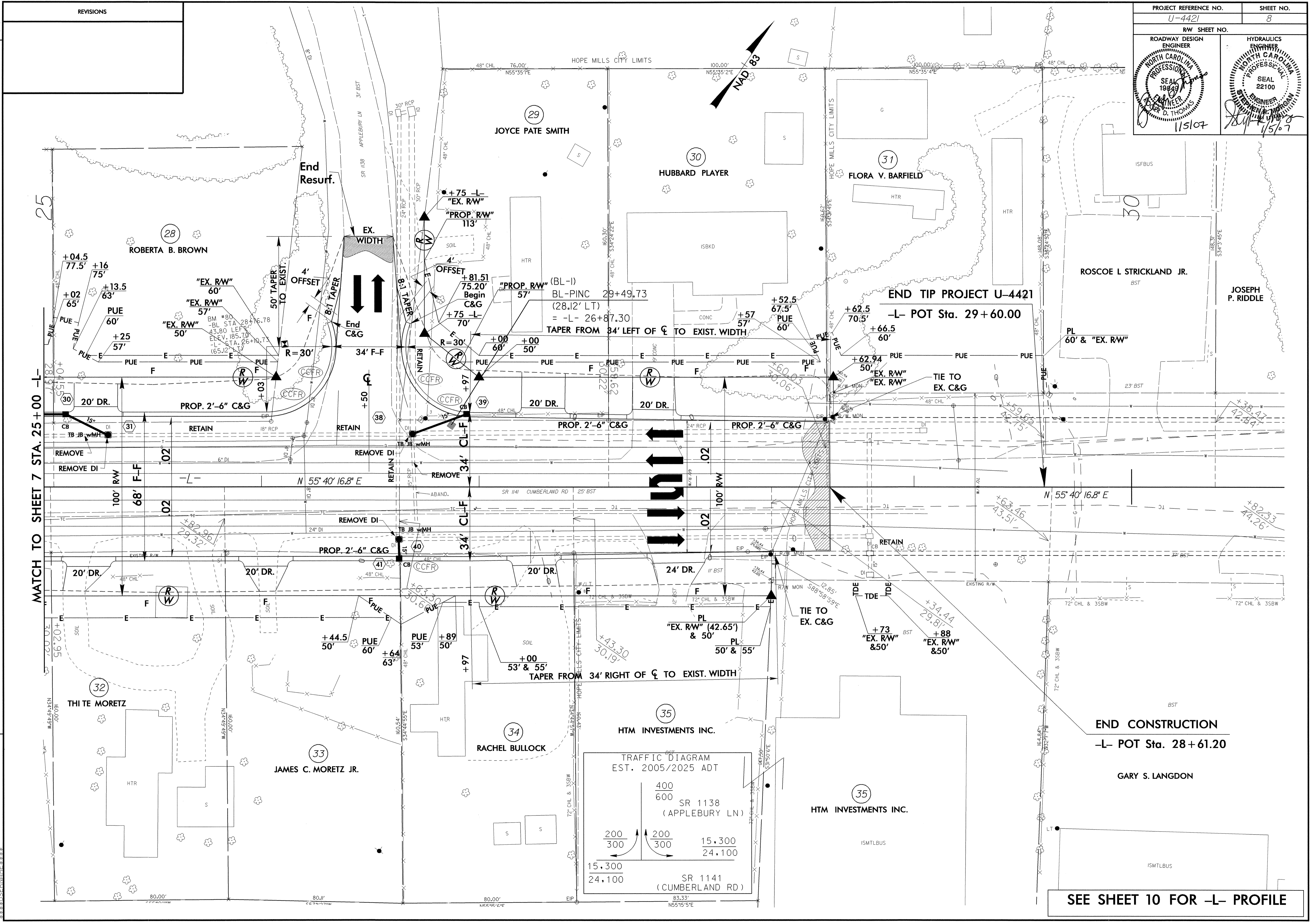
SEE SHEET 10 FOR -L- PROFILE

REVISIONS

8/17/99

20-DEC-2006 15:40
3388.DWG
3388.DWG

REVISIONS



END CONSTRUCTION
-L- POT Sta. 28 + 61.20

GARY S. LANGDON

SEE SHEET 10 FOR -L- PROFILE

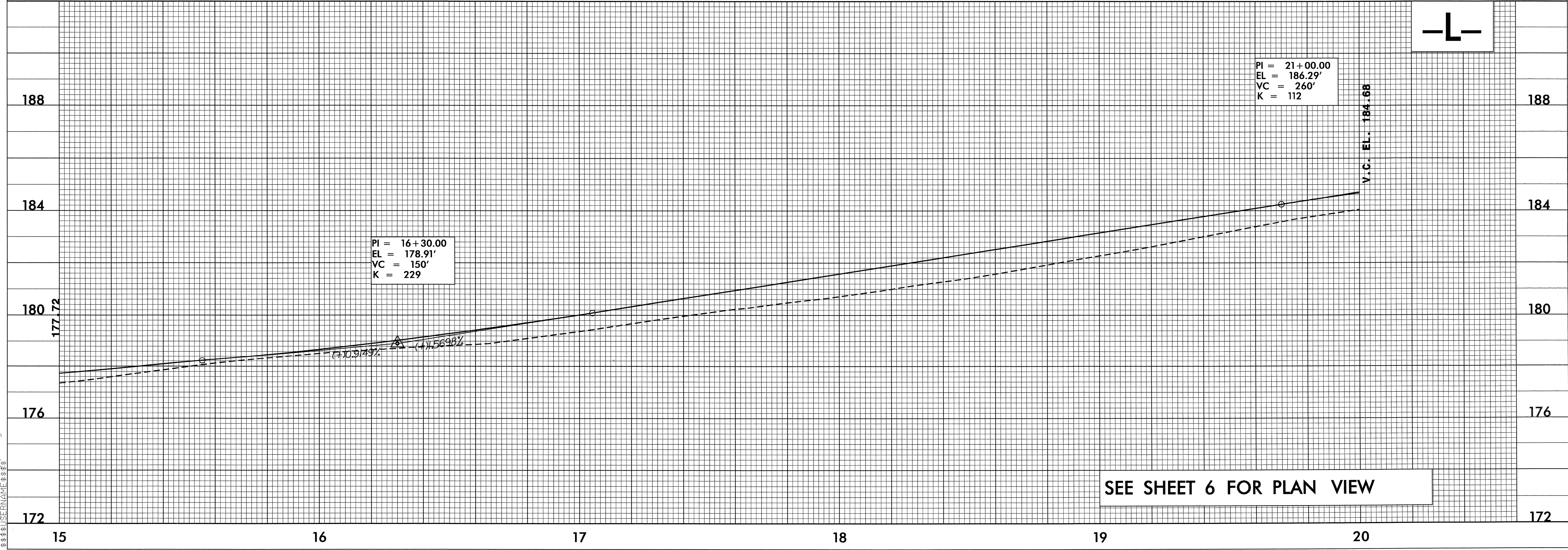
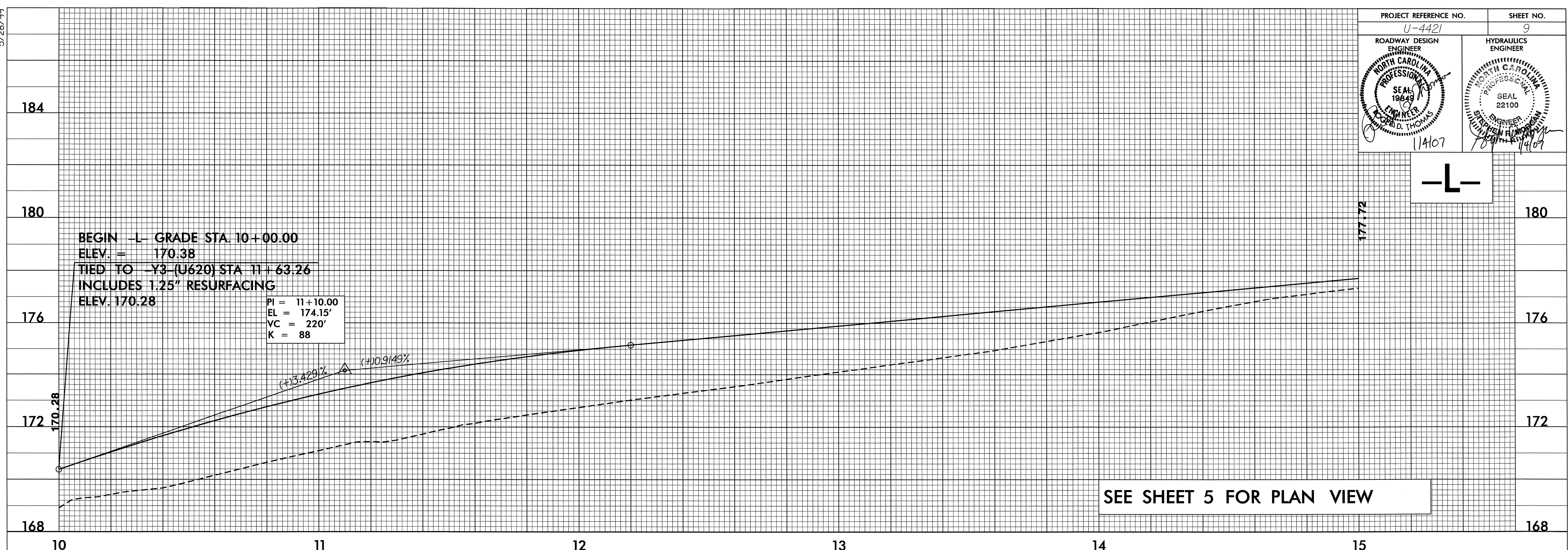
REVISIONS

MATCH TO SHEET 7 STA. 25 + 00 -L-

8/17/99
04-JAN-2007 15:47
C:\PROJ\4421\rdw\psrh8.dgn
USER:PSRH8

5/28/99

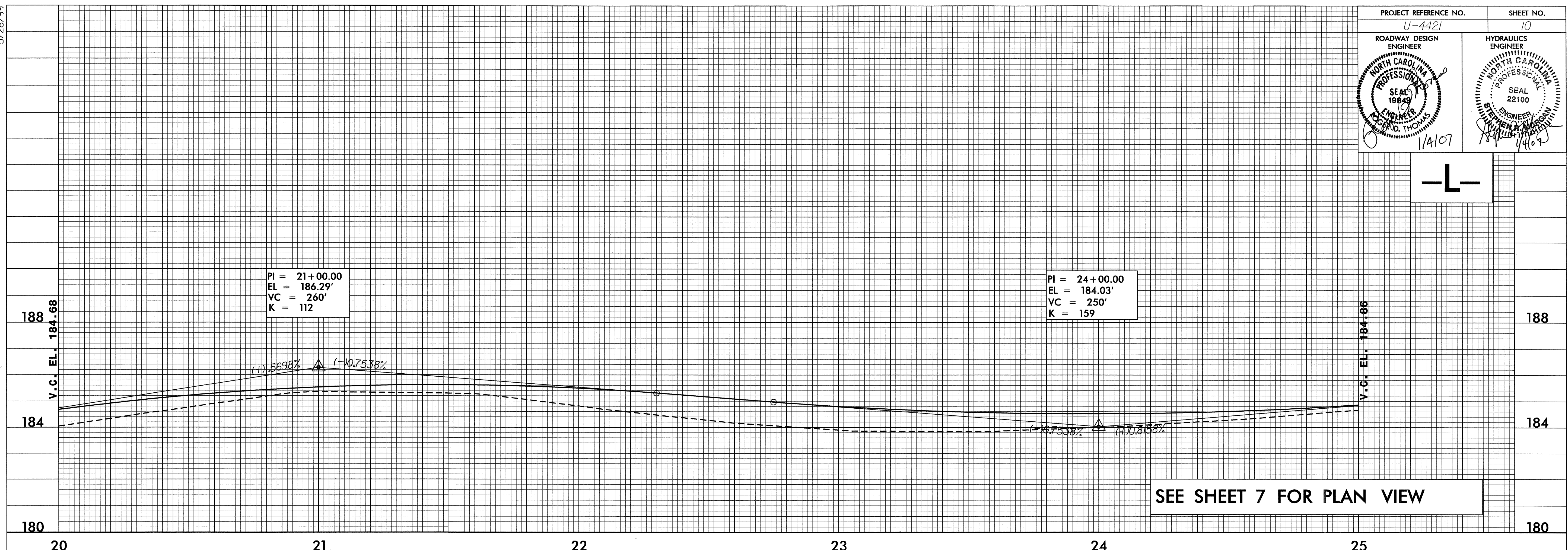
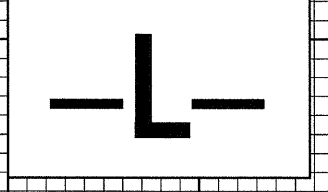
PROJECT REFERENCE NO. U-4421	SHEET NO. 9
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 19649 OSCAR D. THOMAS	HYDRAULICS ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 22100 [Signature]



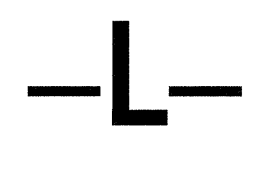
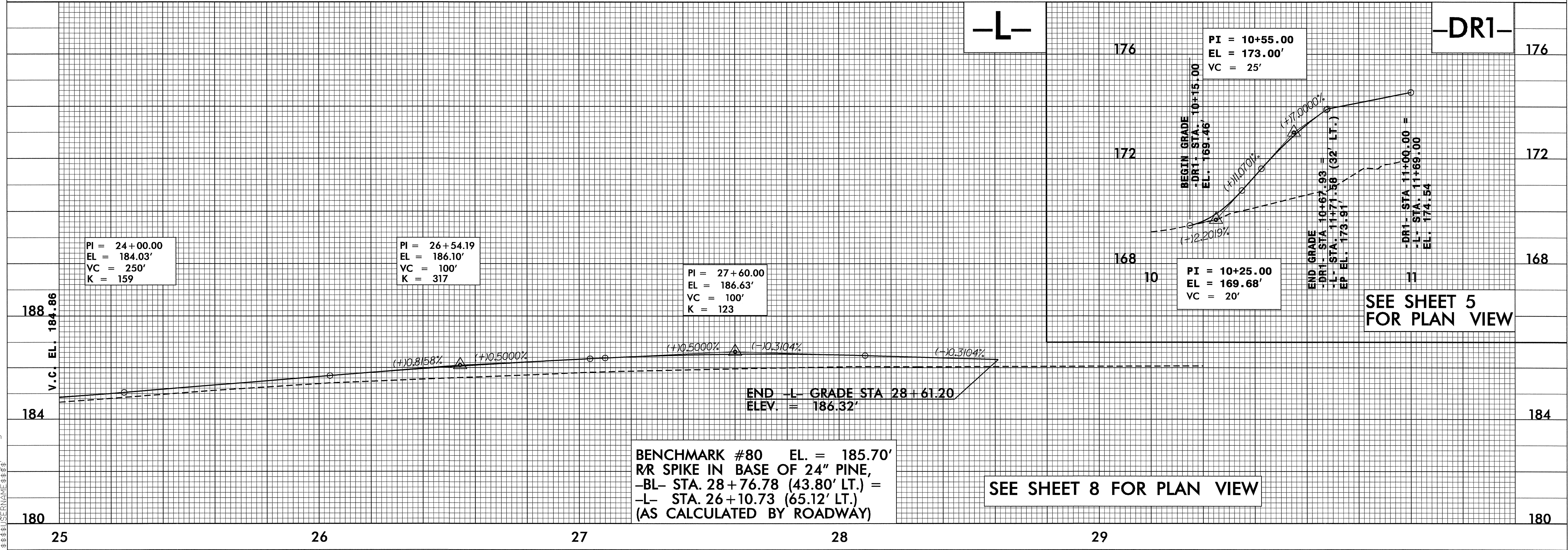
15 NOV 2006 11:13
S:\PROJECTS\U-4421\U-4421.dgn

5/28/99

PROJECT REFERENCE NO. U-4421	SHEET NO. 10
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
1/10/07	



SEE SHEET 7 FOR PLAN VIEW



PI = 10+55.00
EL = 173.00'
VC = 25'

BEGIN GRADE
-DRI- STA. 10+15.00
EL. 169.46

END GRADE
-DRI- STA 10+07.93 =
-L- STA. 11+71.58 (32' LT.)
EP EL. 173.91

PI = 10+25.00
EL = 169.68'
VC = 20'

-DRI- STA 11+00.00 =
-L- STA. 11+69.00
EL. 174.54

SEE SHEET 5 FOR PLAN VIEW

BENCHMARK #80 EL. = 185.70'
R/R SPIKE IN BASE OF 24" PINE,
-BL- STA. 28+76.78 (43.80' LT.) =
-L- STA. 26+10.73 (65.12' LT.)
(AS CALCULATED BY ROADWAY)

SEE SHEET 8 FOR PLAN VIEW

03-JAN-2007 14:46
S:\PROJECTS\2007\U-4421\10-DR1.dgn