

**This electronic collection of documents is provided
for the convenience of the user
and is Not a Certified Document –**

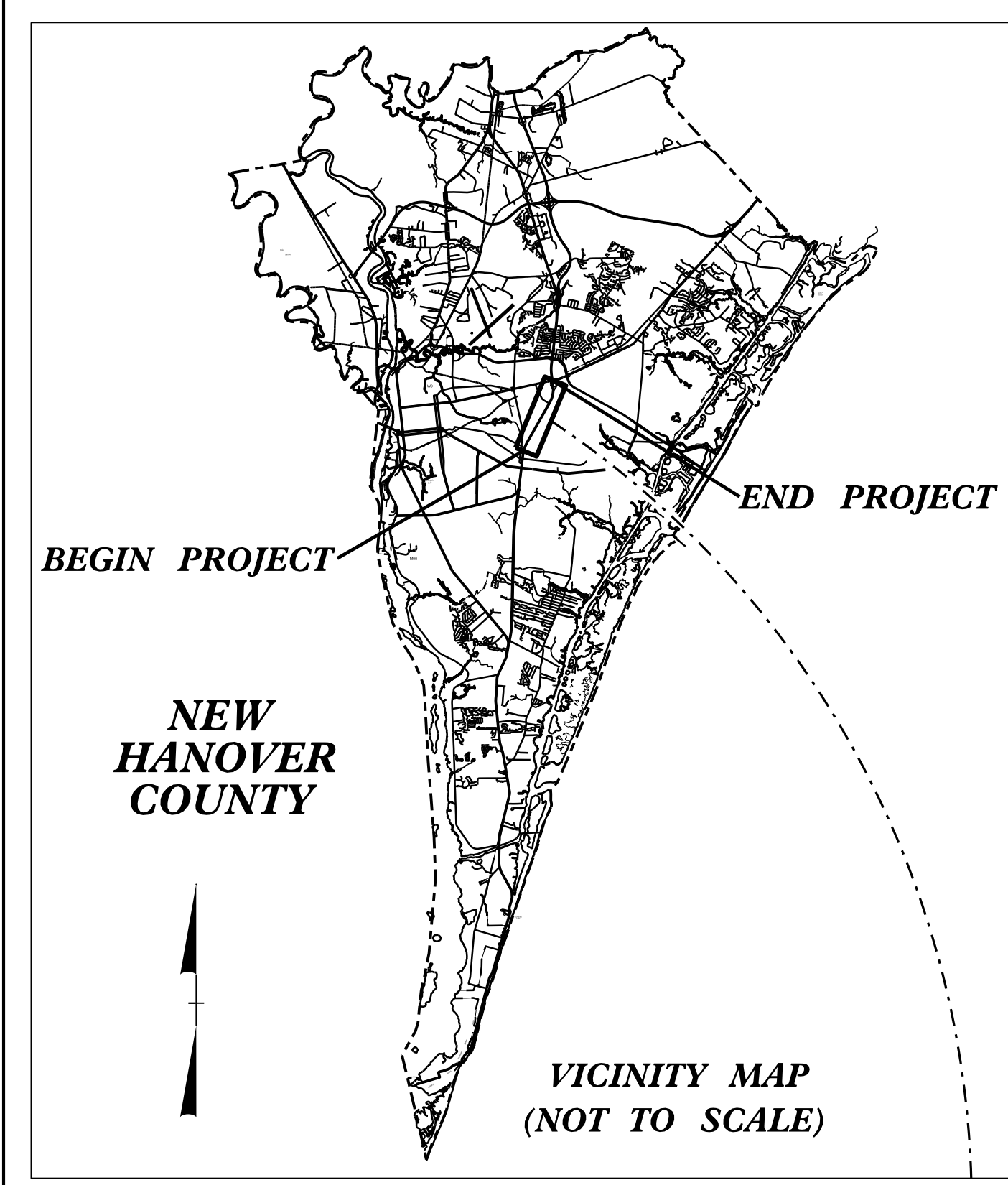
**The documents contained herein were originally issued
and sealed by the individuals whose names and license
numbers appear on each page, on the dates appearing
with their signature on that page.**

**This file or an individual page
shall not be considered a certified document.**

09/08/19
 25-MAY-2016 15:29
 J:\W-5203AA_Roadway\Proj\2017CPT.03.01.10651, Etc_Rdy_TSH_Combined.dgn
 \$\$\$USERNAME\$\$\$

CONTRACT: C203888 **TIP PROJECTS: W-5203AA & W-5601BB**

See Sheet 1-A For Index of Sheets



STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

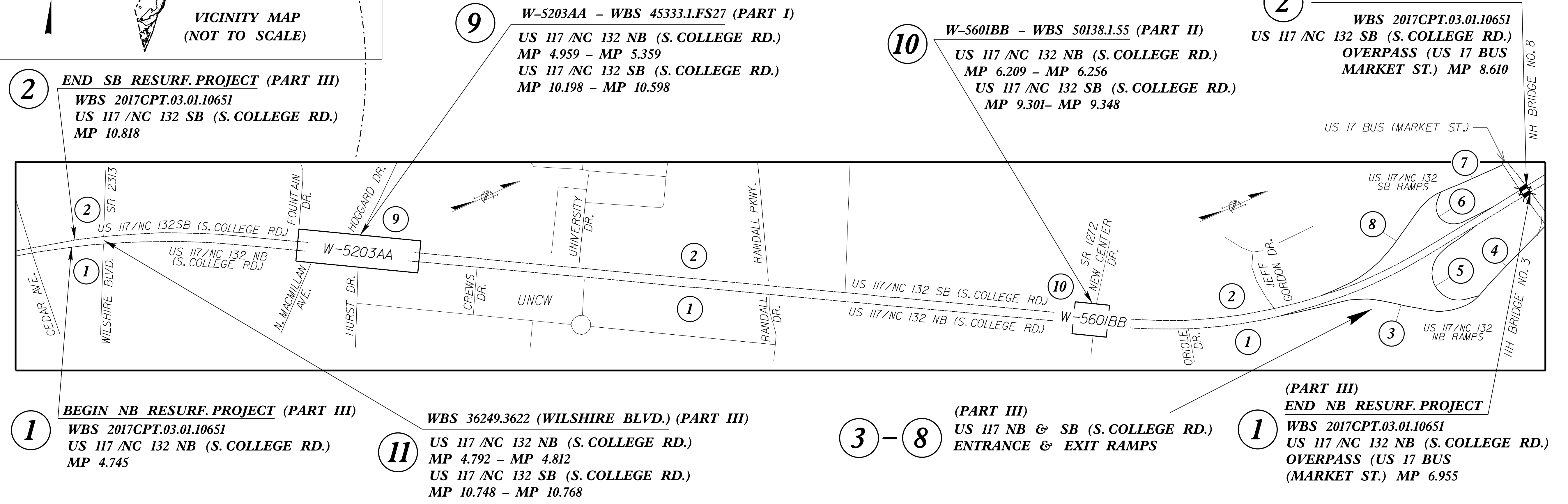
NEW HANOVER COUNTY

LOCATION: US 117/NC 132 (S. COLLEGE ROAD) FROM 0.5 MILES SOUTH OF WILSHIRE BOULEVARD TO US 17 BUS (MARKET STREET) IN WILMINGTON

TYPE OF WORK: GRADING, DRAINAGE, PAVING, MILLING, & SIGNALS, ETC.

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5203AA, W-5601BB, 2017CPT.03.01.10651, 36249.3622	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45333.1.FS27	HSIP-0117(029)	W-5203AA (P.E.)	
50138.1.55	HSIP-0117(034)	W-5601BB (P.E.)	
45333.3.27	HSIP-0117(029)	W-5203AA (CONST.)	
45333.3.27	HSIP-0117(029)	W-5601BB (CONST.)	
2017CPT.03.01.10651		CONST.(RESURF)	
36249.3622		CONST.(RESURF)	

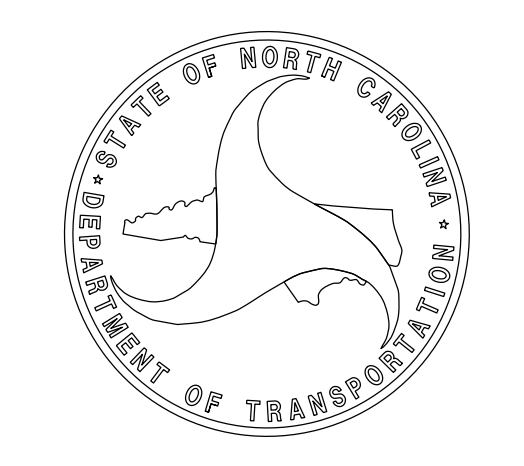
DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED



PROJECT LENGTH
 TOTAL LENGTH OF PROJECTS = 2.210 MI.

Prepared In the Office of:
DIVISION OF HIGHWAYS
 5501 Barbados Blvd., Castle Hayne, NC 28429

2012 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE:	PROJECT ENGINEER
LETTING DATE:	PROJECT DESIGN TECHNICIAN
AUGUST 16, 2016	PROJECT DESIGN TECHNICIAN



8/17/99

INDEX OF SHEETS	
SHEET NUMBER	SHEET
1	TITLE SHEET (W-5203AA / W-5601BB / 2017CPT.03.01.10651)
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
PART I	
1	TITLE SHEET (W-5203AA)
1C	SURVEY CONTROL SHEET
2A-1	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2C-1	DETAIL TO CONVERT EXISTING DROP INLET TO CATCH BASIN
2C-2	DETAIL TO CONVERT EXISTING DROP INLET TO JUNCTION BOX
3B-1	ROADWAY SUMMARIES
3D-1	DRAINAGE SUMMARIES
3G-1	GEOTECHNICAL SUMMARY TABLES
4 THRU 5	PLAN SHEETS
6 THRU 7	PROFILE SHEETS
TMP-1 THRU TMP-2B	TRAFFIC MANAGEMENT PLANS (W-5203AA / W-5601BB / 2017CPT.03.01.10651)
PMP-1 THRU PMP-3	PAVEMENT MARKING PLANS
EC-1 THRU EC-6	EROSION CONTROL PLANS
SIGN-1 THRU SIGN-3	SIGNING PLANS
SIG-1.0 THRU SIG-P3	SIGNAL PLANS (W-5203AA / W-5601BB / 2017CPT.03.01.10651)
UO-1 THRU UO-3	UTILITIES BY OTHERS PLANS
X-1A THRU X-1B	CROSS-SECTION TITLE & SUMMARY SHEETS
X-1 THRU X-11	CROSS-SECTIONS
PART II	
1	TITLE SHEET (W-5601BB)
1C	SURVEY CONTROL SHEET
2A-1	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2C-1	DETAIL TO CONVERT EXISTING DROP INLET TO JUNCTION BOX
3B-1	ROADWAY AND DRAINAGE SUMMARIES
4	PLAN SHEET
5	PROFILE SHEET
PMP-1 THRU PMP-2	PAVEMENT MARKING PLANS
EC-1 THRU EC-3	EROSION CONTROL PLANS
UO-1 THRU UO-2	UTILITIES BY OTHERS PLANS
X-1A THRU X-1B	CROSS-SECTION TITLE & SUMMARY SHEETS
X-1 THRU X-4	CROSS-SECTIONS
PART III	
1	TITLE SHEET (2017CPT.03.01.10651)
2 THRU 3	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
4 THRU 14	ROADWAY & SPECIAL DETAILS
15 THRU 21	SUMMARIES OF QUANTITIES
TMP-1 THRU TMP-2	TRAFFIC CONTROL DETAILS
EC-1 THRU EC-3	EROSION CONTROL DETAILS

GENERAL NOTES: 2012 SPECIFICATIONS
 EFFECTIVE: 01-17-2012
 REVISED: 10-31-2014

GRADE LINE:
GRADING AND SURFACING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AS DIRECTED 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. 225.05 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.

SUBSURFACE DRAINS:

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

DRIVEWAYS:

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.

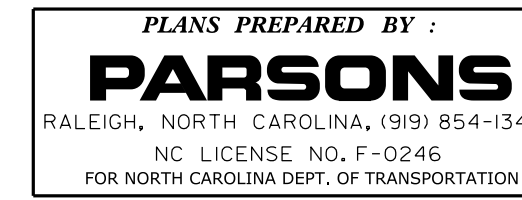
UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE POWER - DUKE ENERGY (MATT WYNNE), PHONE - AT&T (CHRIS BENTZ), PHONE - CENTURY LINK (TOM DENNY), PHONE - LEVEL 3 (PATRICK PROVOST), PHONE (CELLULAR) - CROWN CASTLE (RANDY OLIVER), TRAFFIC - CITY OF WILMINGTON (DENYS VIEKANOWITZ), CABLE - CHARTER COMM. (NICK BROWN), CABLE - TIME WARNER (ROBERT JOHN), WATER & SEWER - CAPE FEAR PUA (JIM TAYSON), GAS - PIEDMONT NATURAL GAS (ROSS WILCOX)

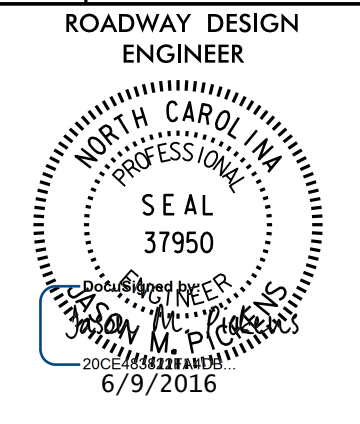
ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

CURB RAMPS

CURB RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS. CONSTRUCT ALL CURB RAMPS ACCORDANCE WITH STD 848.05 and/or 848.06.



PROJECT REFERENCE NO.	SHEET NO.
W-5203AA, W-5601BB 2017CPT.03.01.10651, 36249.3622	1A



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

2012 ROADWAY ENGLISH STANDARD DRAWINGS

EFF. 01-17-2012
 REV. 10-30-2012

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

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.03	Method of Clearing - Method III
225.02	Guide for Grading Subgrade - Secondary and Local
225.05	Method of Obtaining Super-elevation - Divided Highways
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
815.02	Subsurface Drain
840.00	Concrete Base Pad for Drainage Structures
840.01	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
840.45	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
848.04	Street Turnout
848.05	Curb Ramp - Proposed Curb & Gutter
848.06	Curb Ramp - Existing Curb & Gutter
852.01	Concrete Islands
852.05	Median Curb for Catch Basin - for Use with 1'-6" Curb and Gutter
852.06	Method for Placement of Drop Inlets in Concrete Islands
862.01	Guardrail Placement
862.02	Guardrail Installation

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EIP
Property Corner	-----
Property Monument	□ ECM
Parcel/Sequence Number	①23
Existing Fence Line	-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 ---
Existing Historic Property Boundary	--- HPB ---
Known Contamination Area: Soil	☠ ☠
Potential Contamination Area: Soil	?? ??
Known Contamination Area: Water	☠ ☠
Potential Contamination Area: Water	?? ??
Contaminated Site: Known or Potential	☠ ?

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	--- FLOW ---
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 RW Marker	▲ R/W
Proposed Control of Access Line with Concrete CA Marker	○ C/A
Existing Control of Access	○ C/A
Proposed Control of Access	○ C/A
Existing Easement Line	--- E ---
Proposed Temporary Construction Easement	--- E ---
Proposed Temporary Drainage Easement	--- TDE ---
Proposed Permanent Drainage Easement	--- PDE ---
Proposed Permanent Drainage / Utility Easement	--- DUE ---
Proposed Permanent Utility Easement	--- PUE ---
Proposed Temporary Utility Easement	--- TUE ---
Proposed Aerial Utility Easement	--- AUE ---
Proposed Permanent Easement with Iron Pin and Cap Marker	◆

ROADS AND RELATED FEATURES:

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

VEGETATION:

Single Tree	☀
Single Shrub	☀
Hedge	-----
Woods Line	-----

Orchard	☀ ☀ ☀ ☀
Vineyard	□ Vineyard

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	□ CONC
Bridge Wing Wall, Head Wall and End Wall	┌ CONC WW ┐
MINOR:	
Head and End Wall	┌ CONC HW ┐
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	□ CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	○ S
Storm Sewer	--- S ---

UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	○ P
Power Line Tower	□
Power Transformer	▣
U/G Power Cable Hand Hole	○
H-Frame Pole	●
U/G Power Line LOS B (S.U.E.*)	--- P ---
U/G Power Line LOS C (S.U.E.*)	--- P ---
U/G Power Line LOS D (S.U.E.*)	--- P ---

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	○ T
Telephone Pedestal	□
Telephone Cell Tower	⌋
U/G Telephone Cable Hand Hole	○ TH
U/G Telephone Cable LOS B (S.U.E.*)	--- T ---
U/G Telephone Cable LOS C (S.U.E.*)	--- T ---
U/G Telephone Cable LOS D (S.U.E.*)	--- T ---
U/G Telephone Conduit LOS B (S.U.E.*)	--- TC ---
U/G Telephone Conduit LOS C (S.U.E.*)	--- TC ---
U/G Telephone Conduit LOS D (S.U.E.*)	--- TC ---
U/G Fiber Optics Cable LOS B (S.U.E.*)	--- T FO ---
U/G Fiber Optics Cable LOS C (S.U.E.*)	--- T FO ---
U/G Fiber Optics Cable LOS D (S.U.E.*)	--- T FO ---

WATER:

Water Manhole	○ W
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
U/G Water Line LOS B (S.U.E.*)	--- W ---
U/G Water Line LOS C (S.U.E.*)	--- W ---
U/G Water Line LOS D (S.U.E.*)	--- W ---
Above Ground Water Line	--- A/G Water ---

TV:

TV Pedestal	□
TV Tower	⊗
U/G TV Cable Hand Hole	○ TH
U/G TV Cable LOS B (S.U.E.*)	--- TV ---
U/G TV Cable LOS C (S.U.E.*)	--- TV ---
U/G TV Cable LOS D (S.U.E.*)	--- TV ---
U/G Fiber Optic Cable LOS B (S.U.E.*)	--- TV FO ---
U/G Fiber Optic Cable LOS C (S.U.E.*)	--- TV FO ---
U/G Fiber Optic Cable LOS D (S.U.E.*)	--- TV FO ---

GAS:

Gas Valve	◇
Gas Meter	⊕
U/G Gas Line LOS B (S.U.E.*)	--- G ---
U/G Gas Line LOS C (S.U.E.*)	--- G ---
U/G Gas Line LOS D (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 ---
SS Forced Main Line LOS B (S.U.E.*)	--- FSS ---
SS Forced Main Line LOS C (S.U.E.*)	--- FSS ---
SS Forced Main Line LOS D (S.U.E.*)	--- FSS ---

MISCELLANEOUS:

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

See Sheet 1C For Survey Control Sheet

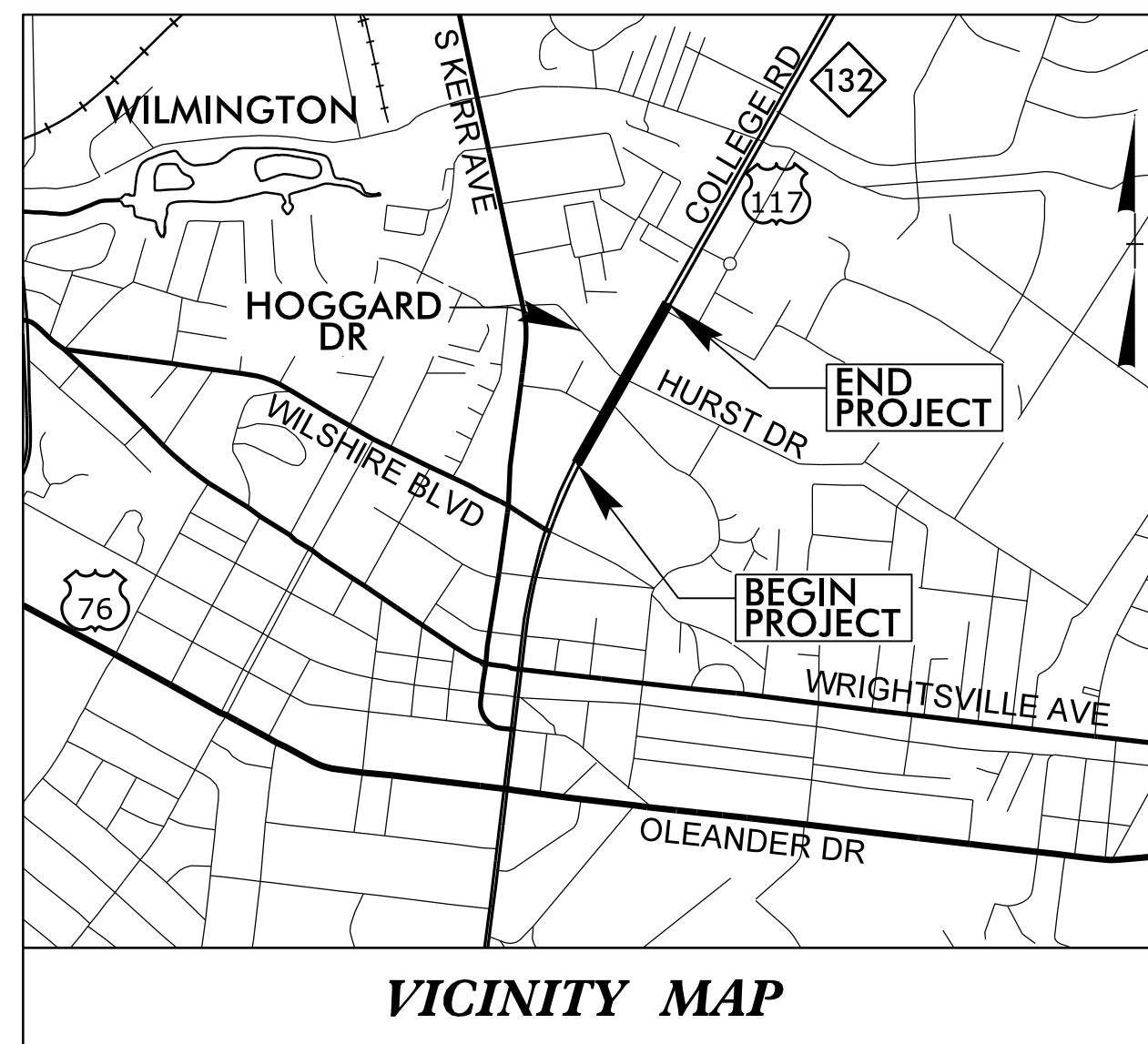
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5203AA	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45333.1.FS27	HSIP-0117(029)	PE	
45333.3.27	HSIP-0117(029)	CONST	

NEW HANOVER COUNTY

LOCATION: US 117 / NC 132 NB (COLLEGE RD.) MP 4.959 TO MP 5.359
& US 117 / NC 132 SB (COLLEGE RD.) MP 10.198 TO MP 10.598
IN THE CITY OF WILMINGTON

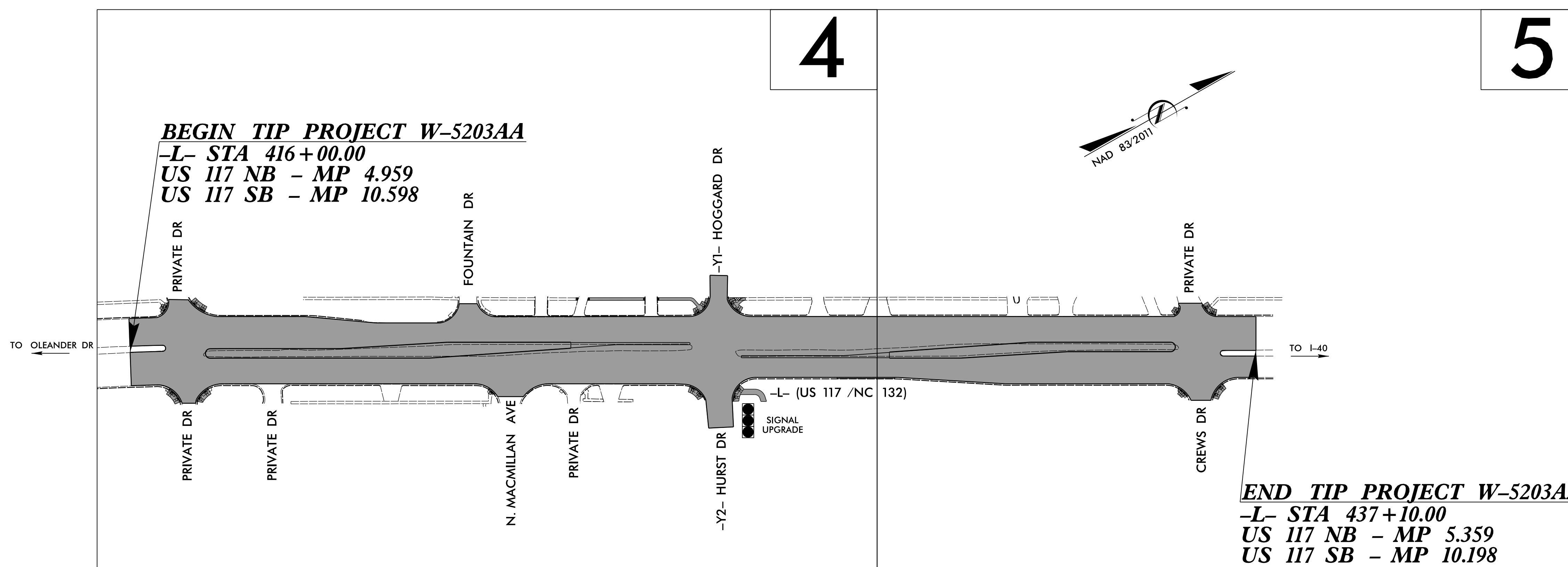
TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND SIGNALS



100% PLANS - MAY 10, 2016

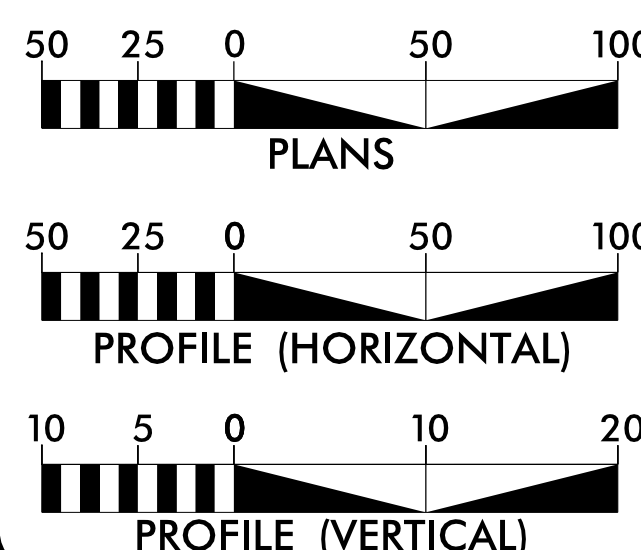
VICINITY MAP

PART I



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



DESIGN DATA

ADT 2013 = 51,000
V = 50 MPH
DHV = 10 %
D = 55 %
T = 12 % *
* TTST = 8% DUAL = 4%
FUNC CLASS = URBAN ARTERIAL
STATEWIDE TIER

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT W-5203AA = 0.400 MILES
TOTAL LENGTH OF TIP PROJECT W-5203AA = 0.400 MILES

Prepared for the North Carolina Department
of Transportation in the office of:



2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
LETTING DATE:
AUGUST 16, 2016

DAVID L. WILVER, PE
PROJECT ENGINEER

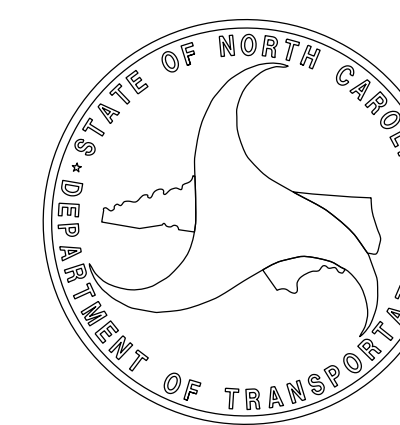
J. MATTHEW PICKENS, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

7/13/2016
SEAL 026971
SIGNATURE: Joshua G. Dalton, P.E.

ROADWAY DESIGN ENGINEER

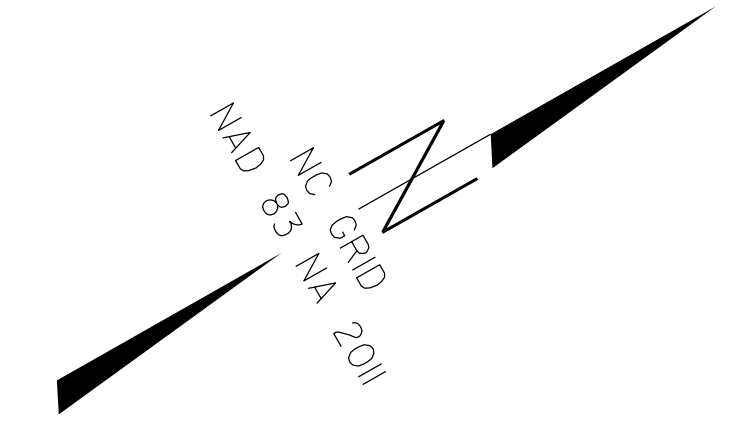
7/13/2016
SEAL 37950
SIGNATURE: Jason M. Pickens, P.E.



TIP PROJECT: W-5203AA

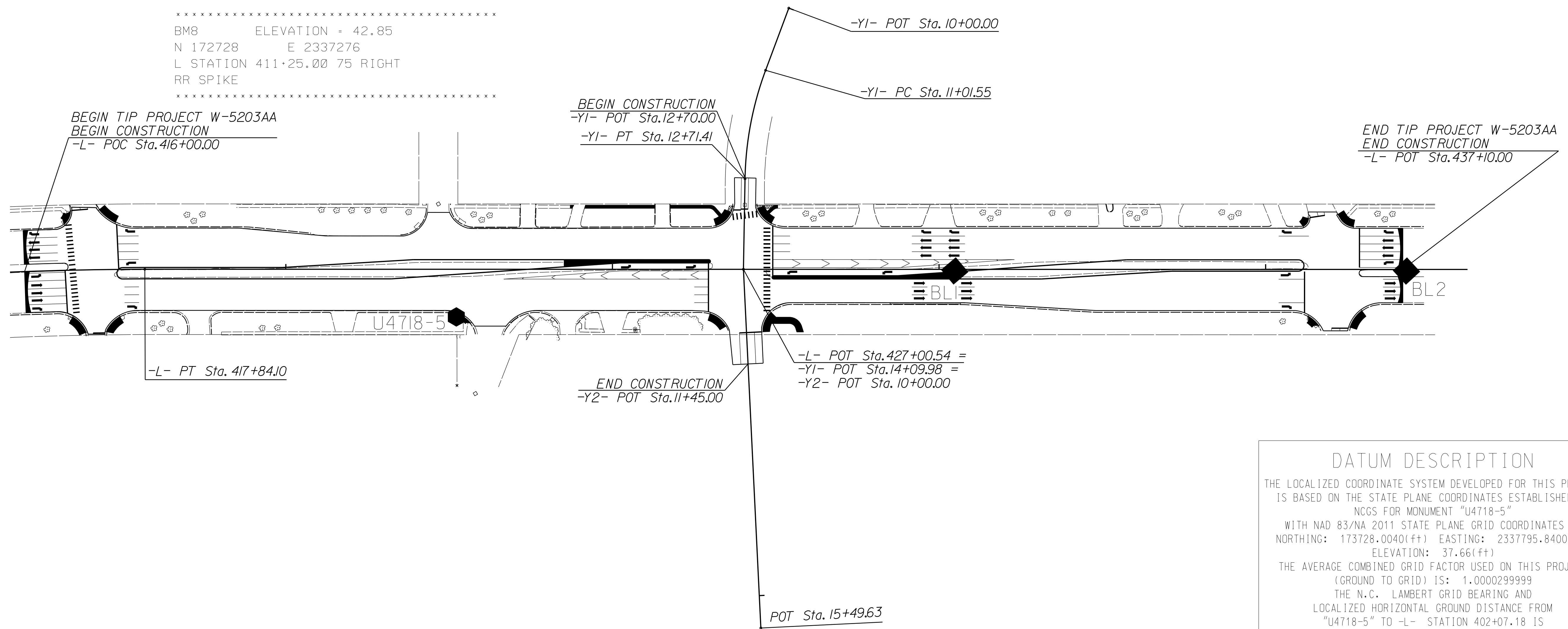
CONTRACT: C203888

SURVEY CONTROL W5203-AA



BL1	POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
	U47184	GPS CAP & REBAR	172847.2240	2337348.2870	39.53	412+64.47	93.77 RT
	U47185	GPS CAP & REBAR	173728.0040	2337795.8400	37.66	422+61.00	72.99 RT
	BL1	TRV CAP & REBAR	174426.3300	2338111.0210	39.11	430+23.88	2.25 RT
	BL2	TRV CAP & REBAR	175027.8370	2338452.7890	40.23	437+15.70	2.43 RT
	BL3	TRV CAP & REBAR	175654.7280	2338809.5430	41.34	444+37.00	3.10 RT
	BL4	TRV CAP & REBAR	176155.7930	2339084.5060	41.46	450+08.49	5.21 LT
	BL5	TRV CAP & REBAR	176824.4750	2339463.0440	42.06	457+76.88	6.23 LT
	BL6	TRV CAP & REBAR	177432.9570	2339895.7400	40.89	465+19.67	69.58 RT
	BL7	TRV CAP & REBAR	177915.9160	2340166.5630	39.69	470+73.37	66.60 RT
	BL8	TRV CAP & REBAR	178558.6930	2340532.1470	39.55	478+12.84	67.12 RT
	BL9	TRV CAP & REBAR	179057.8590	2340815.3870	40.74	483+86.76	66.94 RT
	W52031	GPS CAP & REBAR	179750.5280	2341086.9310	42.73	OUTSIDE PROJECT LIMITS	
	W52032	GPS CAP & REBAR	180673.1550	2341308.5100	42.21	OUTSIDE PROJECT LIMITS	

 BM8 ELEVATION = 42.85
 N 172728 E 2337276
 L STATION 411+25.00 75 RIGHT
 RR SPIKE



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "U4718-5" WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 173728.0040(±) EASTING: 2337795.8400(±) ELEVATION: 37.66(±)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 1.0000299999

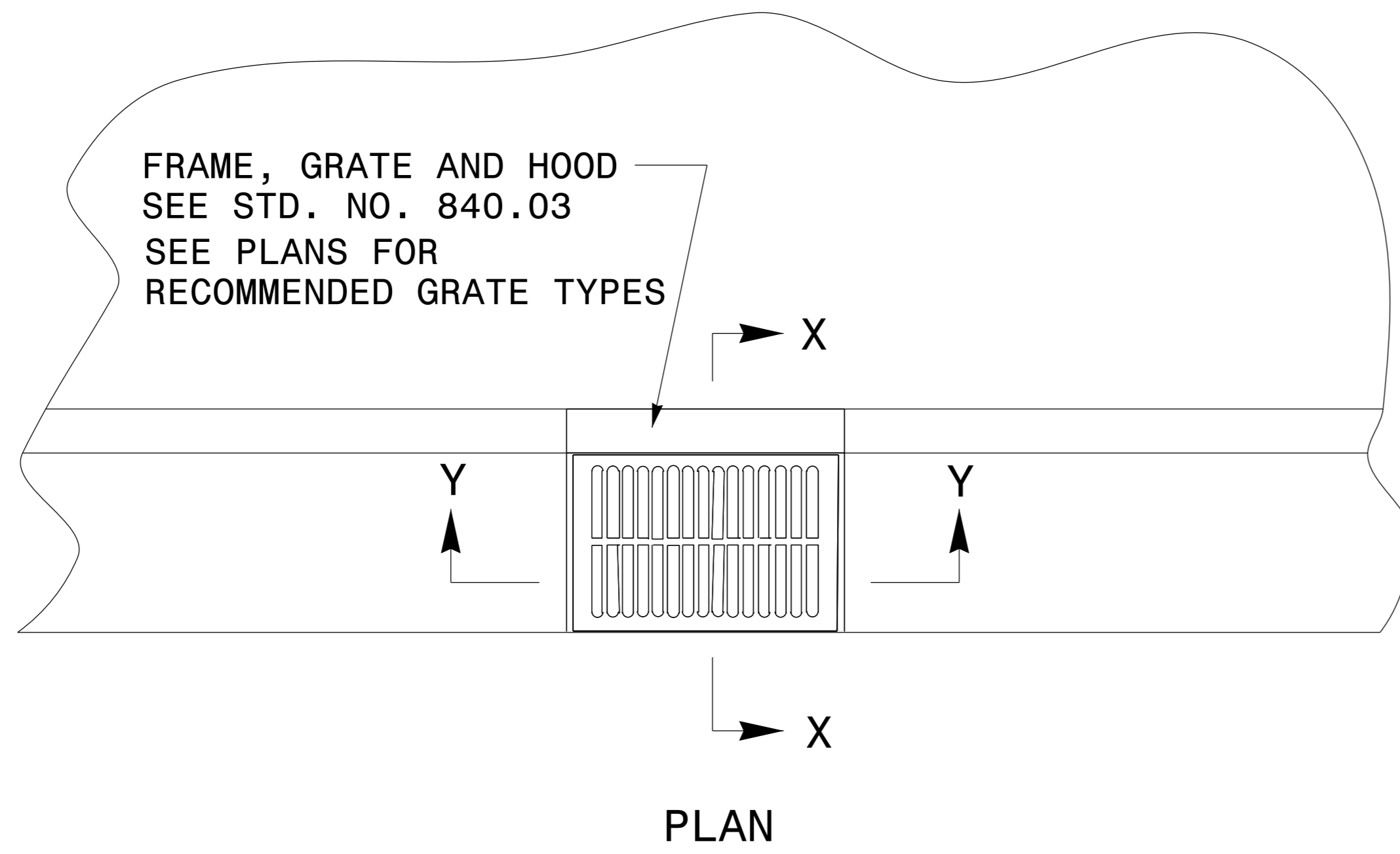
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "U4718-5" TO -L- STATION 402+07.18 IS S 37°03'38" W 555.71'

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

NOTE: DRAWING NOT TO SCALE

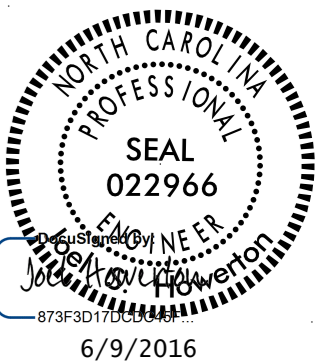
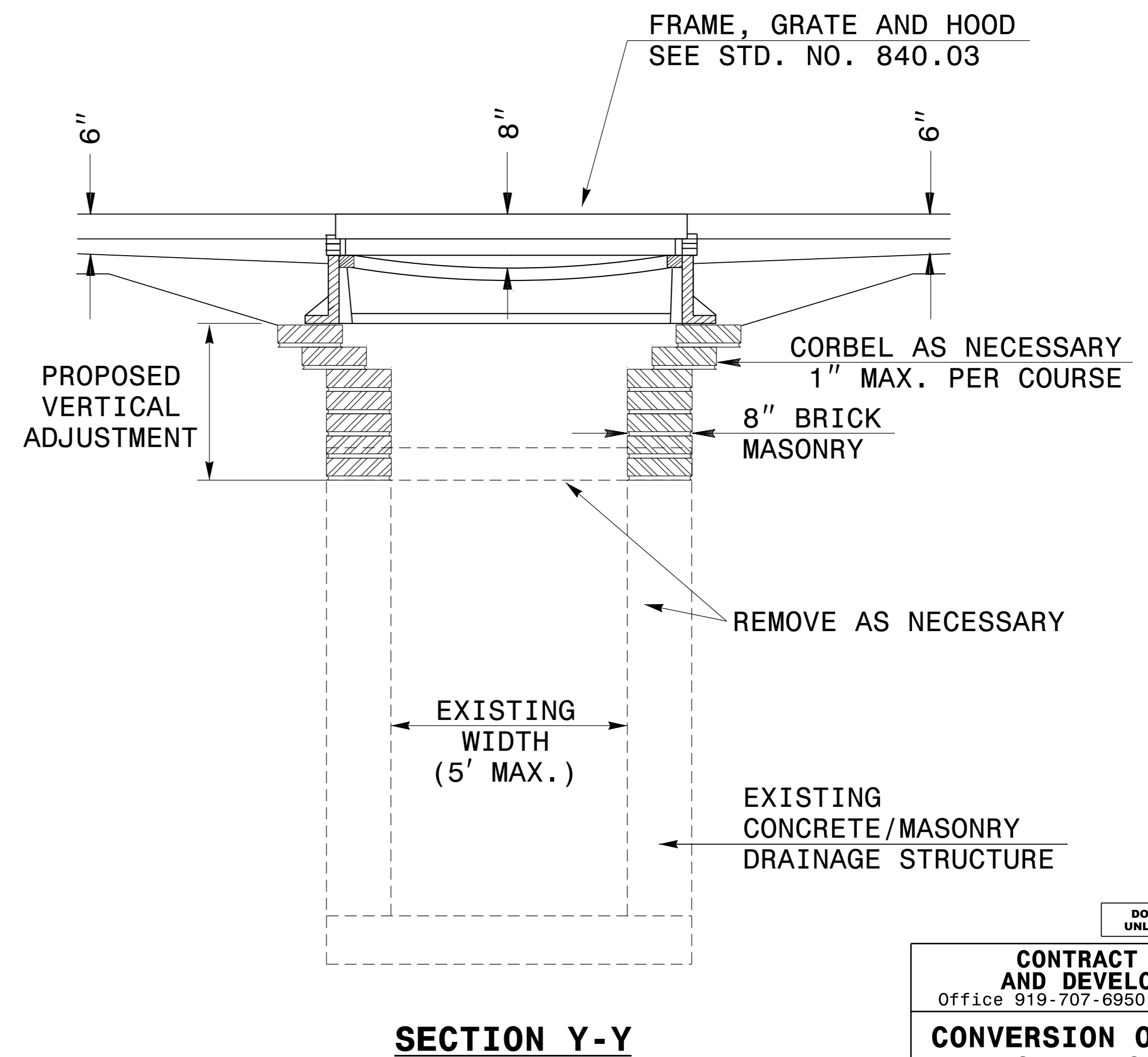
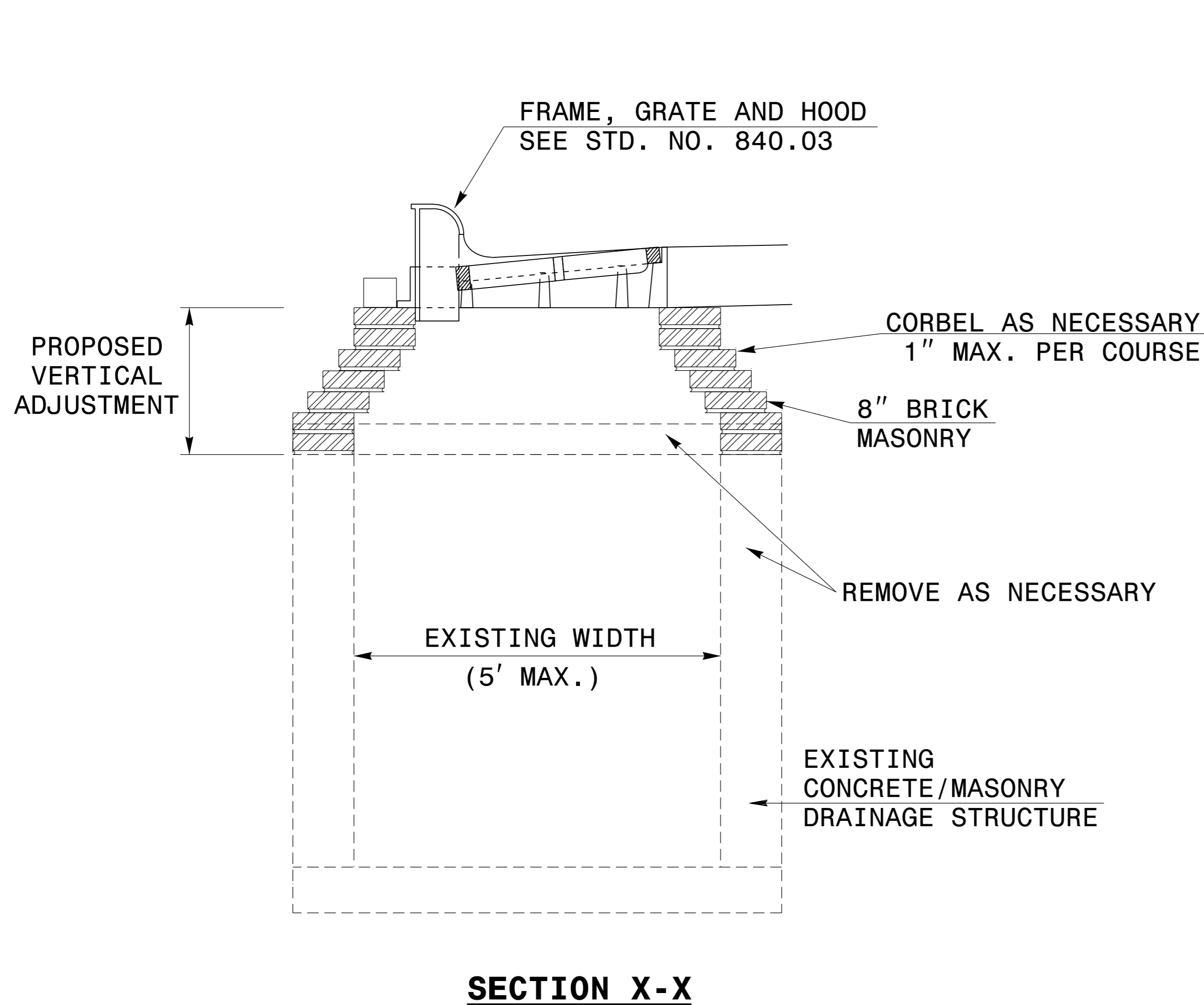
7622999

25 MAY 2016 15:30 \\proj\W5203AA_LS_1C-1\160308.dgn



GENERAL NOTES:

- THE ROADWAY PLANS INDICATE STRUCTURES TO BE CONVERTED.
- AFTER REMOVAL, STORE GRATES AND FRAMES AS DIRECTED BY THE ENGINEER.
- 4" SOLID CLAY BRICK, JUMBO BRICK, CONCRETE, OR 4" SOLID CONCRETE BLOCK MAY BE USED FOR VERTICAL ADJUSTMENT OF THE STRUCTURE.
- CONVERT IN ACCORDANCE WITH SECTION 859 OF THE STANDARD SPECIFICATIONS.



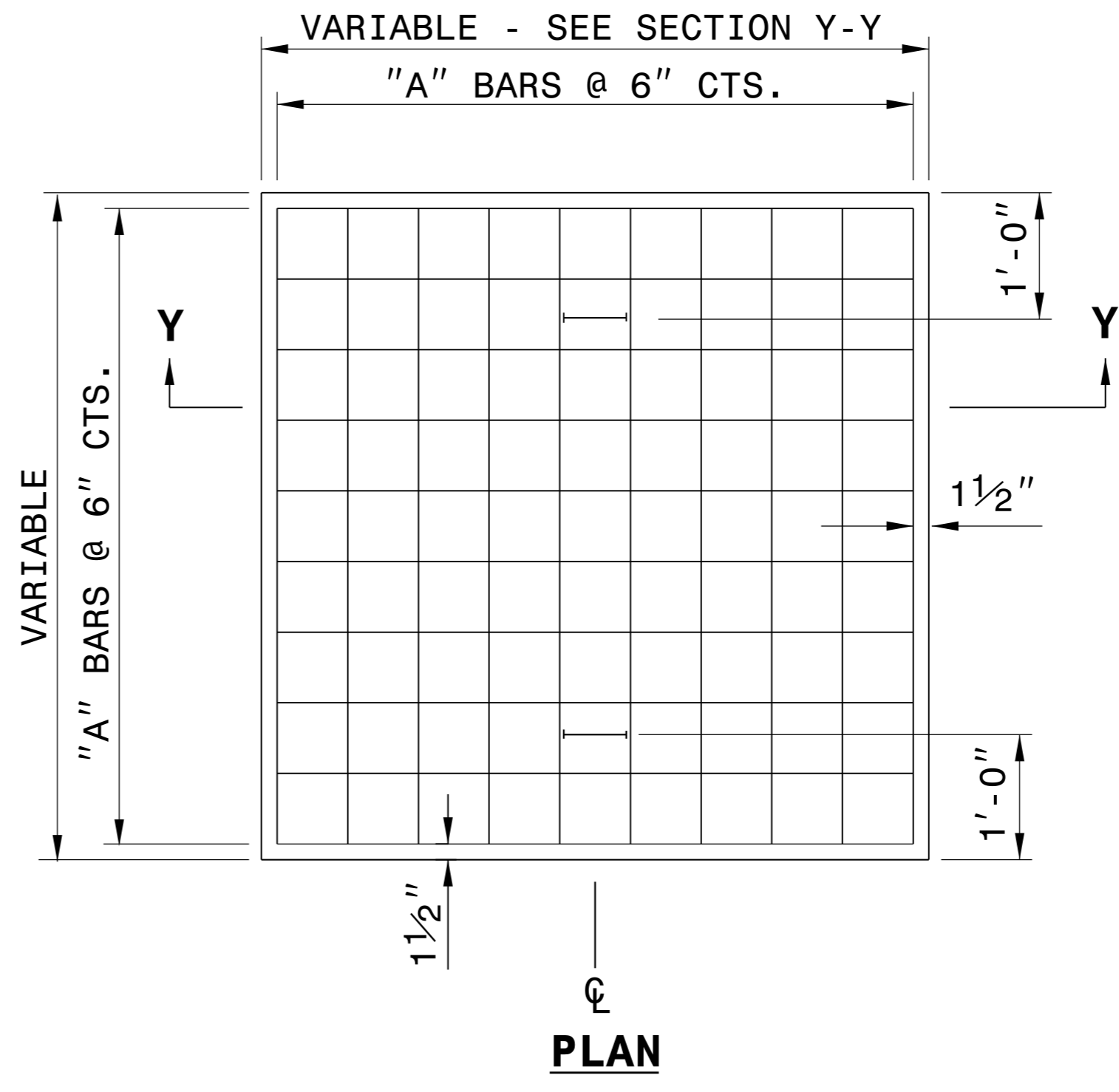
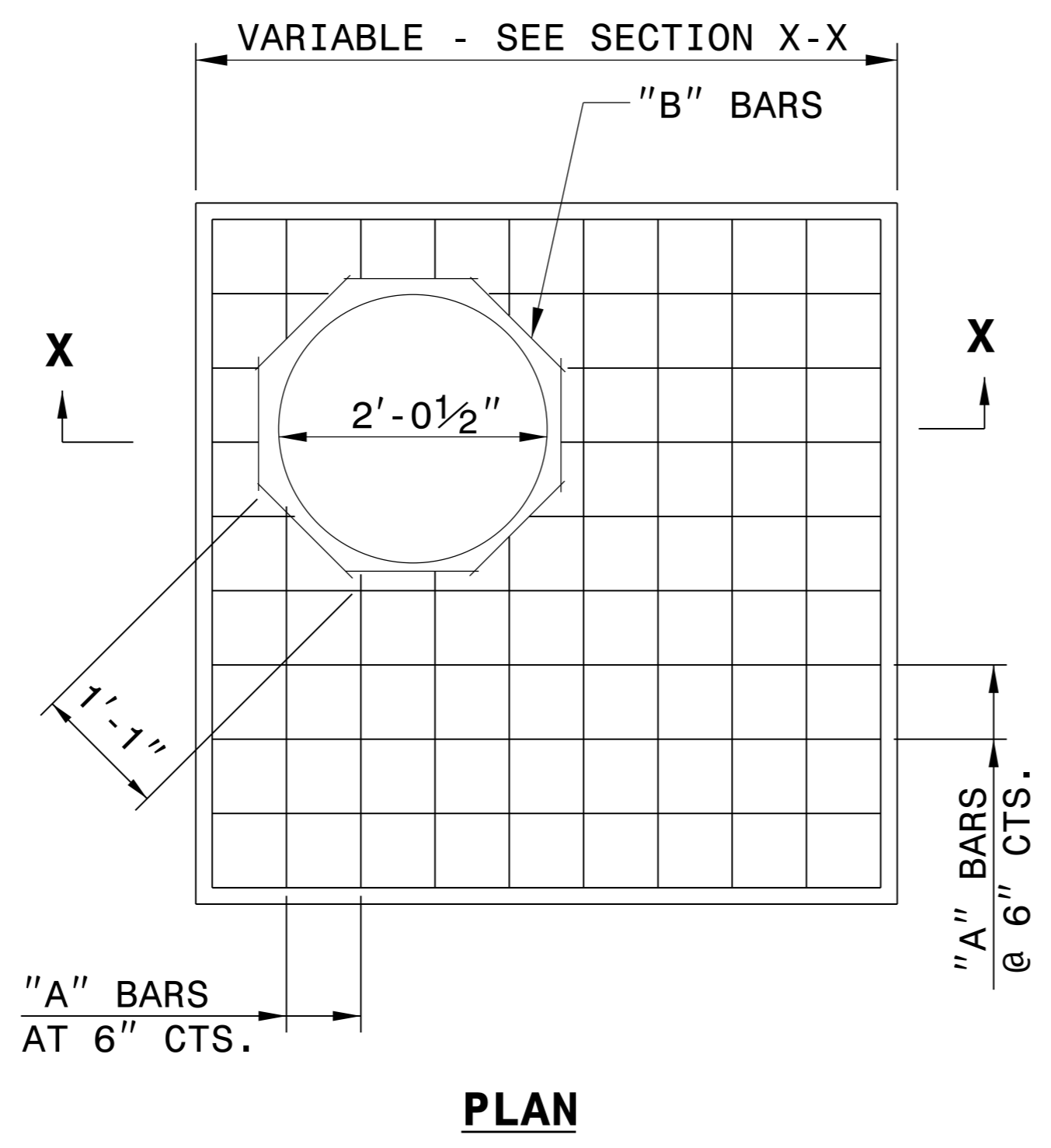
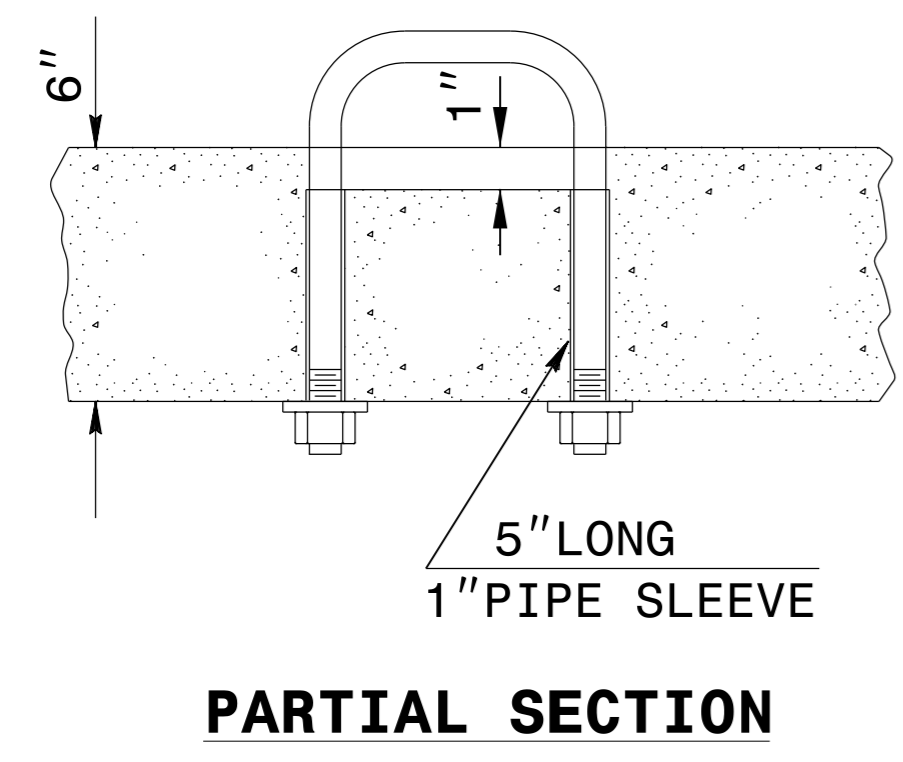
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

CONVERSION OF DROP INLET OR JUNCTION BOX TO CATCH BASIN

ORIGINAL BY: E.E. WARD DATE: 11-97
 MODIFIED BY: DATE: _____
 CHECKED BY: DATE: _____
 FILE SPEC.: DS37:usr\details\stand\jbtocb.dgn

5/14/99
C:\TIME\CON\CON\USER\NAME

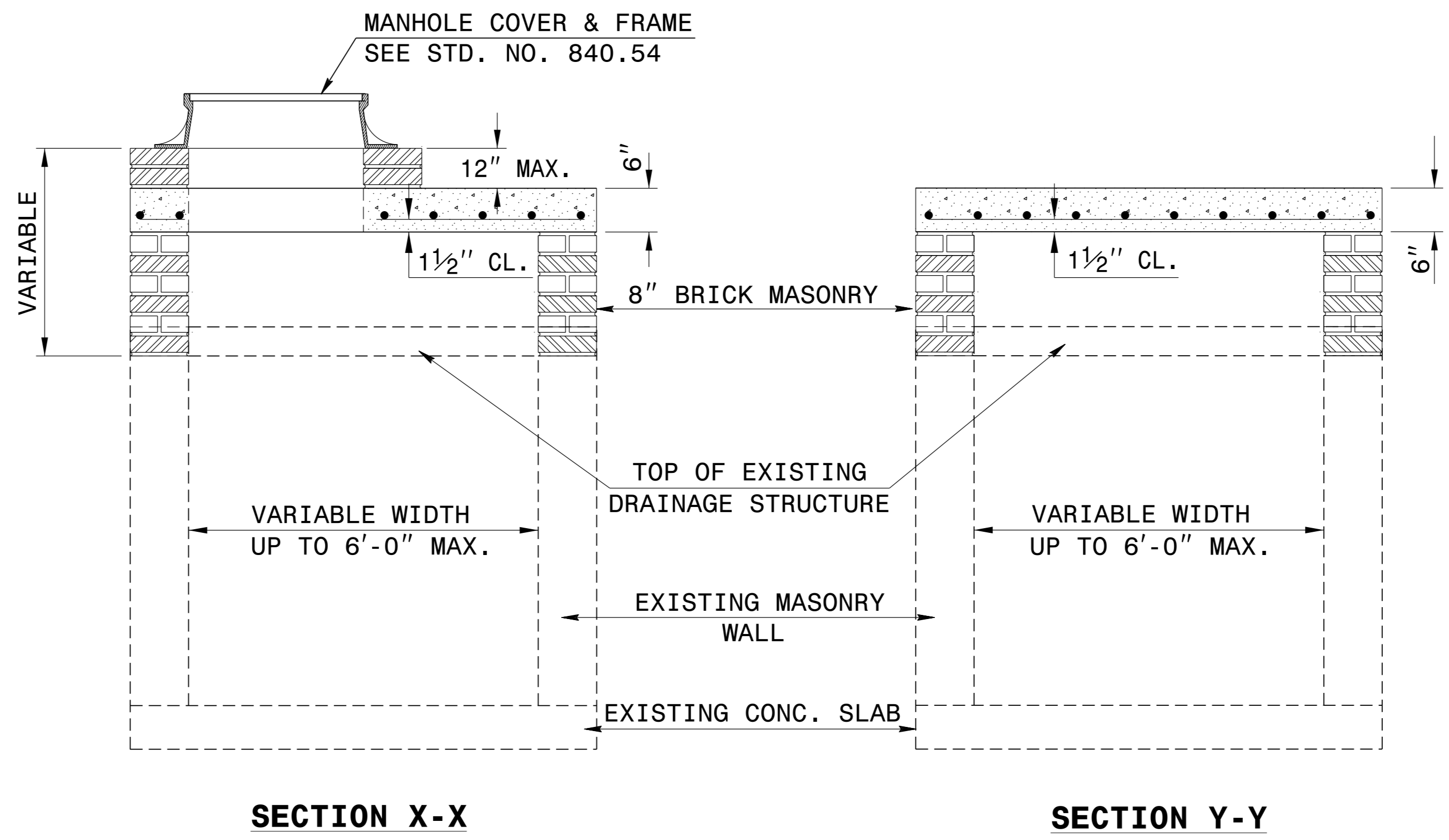
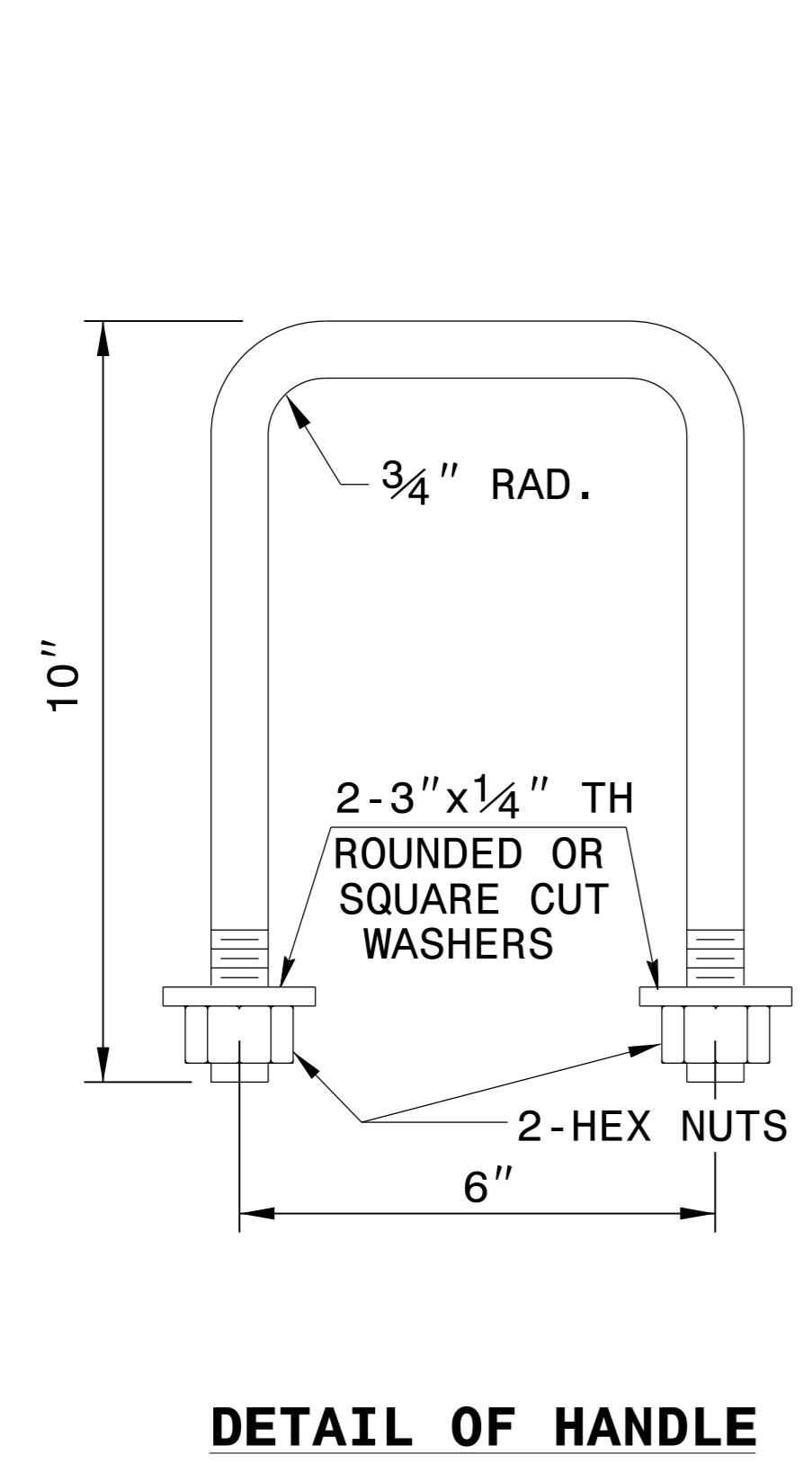


GENERAL NOTES:

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.

11/13/2016 10:58:11 AM
 ds174: /usr/details/stand/boxtojob.dgn



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

**CONTRACT STANDARDS
AND DEVELOPMENT UNIT**
 Office 919-707-6950 FAX 919-250-4119

**DETAIL TO CONVERT EXISTING
DI, CB, OTCB or GI
TO JUNCTION BOX
(MANHOLE OPTIONAL)**

ORIGINAL BY: T.S.S.	DATE: NOV. 1997
MODIFIED BY: T.S.S.	DATE: FEB. 2000
CHECKED BY:	DATE:
FILE SPEC.: ds174:/usr/details/stand/boxtojob.dgn	

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK

STATION	STATION	UNCL. EXCAV.	UNDERCUT	EMBANK.	BORROW	WASTE
W-5203AA						
-L- 416 + 00.00	-L- 437 + 10.00	610		688	78	
SUBTOTALS:		610		688	78	
W-5601BB						
-L- 482 + 00.00	-L- 484 + 50.00	23				23
SUBTOTALS:		23				23
SUBTOTALS:						
PROJECT TOTALS:		633		688	78	23
EST. SHOULDER MATERIAL (W-5203AA /W-5601BB)				388	388	
WASTE IN LIEU OF BORROW					-23	-23
PROJECT TOTAL		633		1,076	443	
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT					22	
GRAND TOTALS:		633		1,076	465	
SAY:		635			470	

UNDERCUT EXCAVATION (W-5203AA): 600 CY

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

5/28/99

25-MAY-2016 15:30
 C:\W-5203AA\Drawings\Proc\W-5203AA.RDY_SUM_03B-1.dgn
 USER:DLW

**STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS**

SUMMARY OF SUBSURFACE DRAINAGE

LINE	Station	Station	Location LT/RT/CL	Drain Type* UD/BD/SD	LF
	CONTINGENCY			SD	500
				TOTAL LF:	500

*UD = Underdrain
 *BD = Blind Drain
 *SD = Subsurface Drain

SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

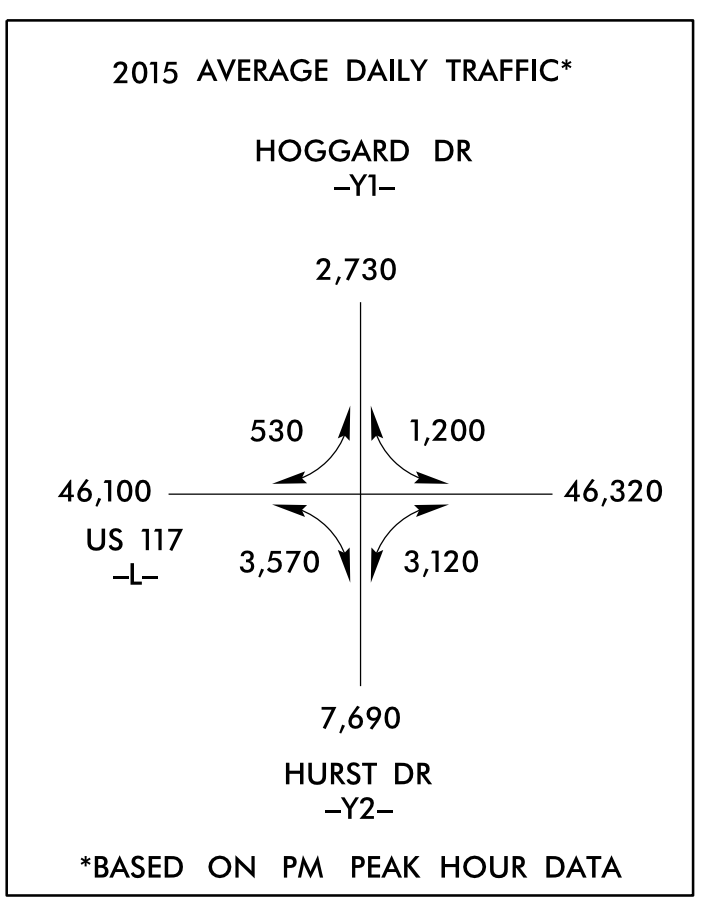
LINE	Station	Station	Aggregate Type* ASU/AST	Aggregate Thickness INCHES	Shallow Undercut CY	Class IV Subgrade Stabilization TONS	Geotextile for Soil Stabilization SY	Stabilizer Aggregate TONS	Class IV Aggregate Stabilization TONS
	CONTINGENCY		ASU		500	950	1500		
			TOTAL CY/TONS/SY:		500	950	1500**	0	0

*ASU = Aggregate Subgrade
 *AST = Aggregate Stabilization
 **Total square yards of "Geotextile for Soil Stabilization" is only the estimated quantity for ASU/AST and may only represent a portion of the geotextile quantity shown in the Item Sheets of the Proposal.

5/14/1999

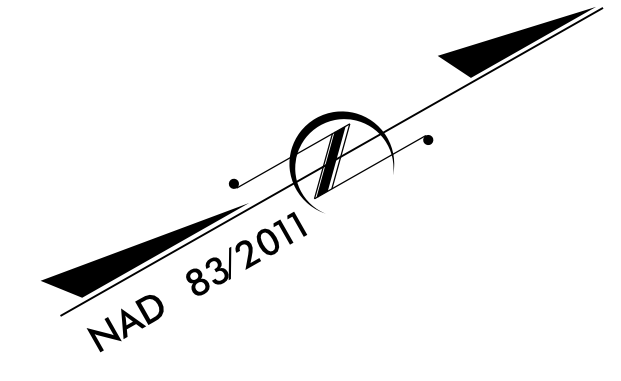
-L-
 PI Sta 412+73.27
 $\Delta = 10^\circ 14' 38.6" (RT)$
 $D = 1^\circ 00' 00.0"$
 $L = 1,024.41'$
 $T = 513.57'$
 $R = 5,729.58'$

-Y1-
 PI Sta 11+87.31
 $\Delta = 19^\circ 27' 52.3" (LT)$
 $D = 1^\circ 27' 33.0"$
 $L = 169.86'$
 $T = 85.76'$
 $R = 500.00'$

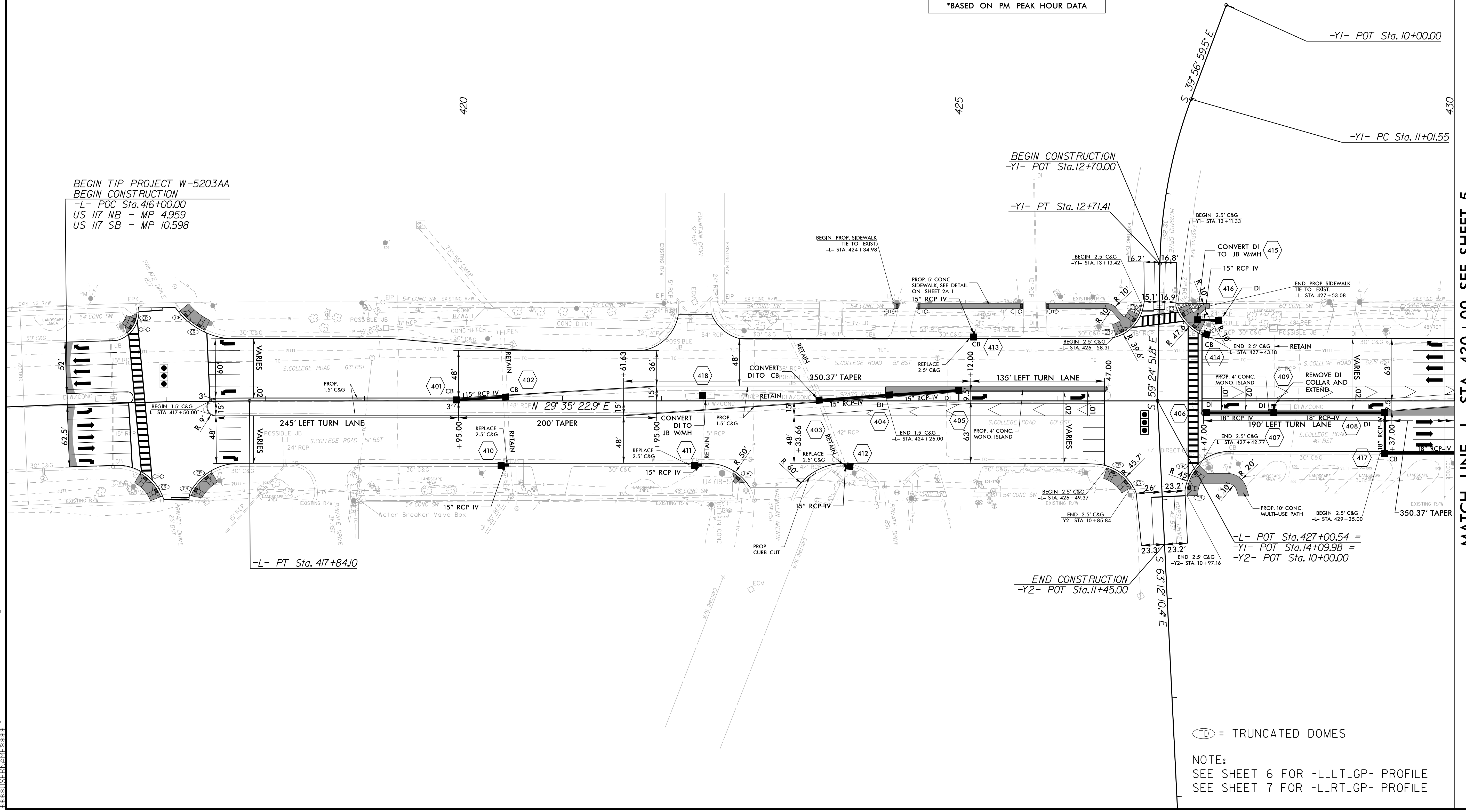


PLANS PREPARED BY:
PARSONS
 RALEIGH, NORTH CAROLINA, (919) 854-1345
 NC LICENSE NO. F-0246
 FOR NORTH CAROLINA DEPT. OF TRANSPORTATION
SUNGATE DESIGN GROUP, P.A.
 915 JONES FRANKLIN ROAD
 RALEIGH, NORTH CAROLINA 27606
 TEL (919) 859-2243 FAX (919) 859-4258
 ENG FIRM LICENSE NO. C480

PROJECT REFERENCE NO. W-5203AA	SHEET NO. 4
ROADWAY DESIGN ENGINEER SEAL 37950 JASON M. PERRY 6/9/2016	HYDRAULICS ENGINEER SEAL 026971 JAMES H. CRISTON 6/9/2016
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



BEGIN TIP PROJECT W-5203AA
 BEGIN CONSTRUCTION
 -L- POC Sta. 416+00.00
 US 117 NB - MP 4.959
 US 117 SB - MP 10.598



MATCH LINE -L- STA 430+00 SEE SHEET 5

(TD) = TRUNCATED DOMES

NOTE:
 SEE SHEET 6 FOR -L.LT.GP- PROFILE
 SEE SHEET 7 FOR -L.RT.GP- PROFILE

I:\W-5203AA\2016\5203AA_PSH_04.dgn
 25-MAY-2016 15:30
 SUNGATE DESIGN GROUP, P.A.

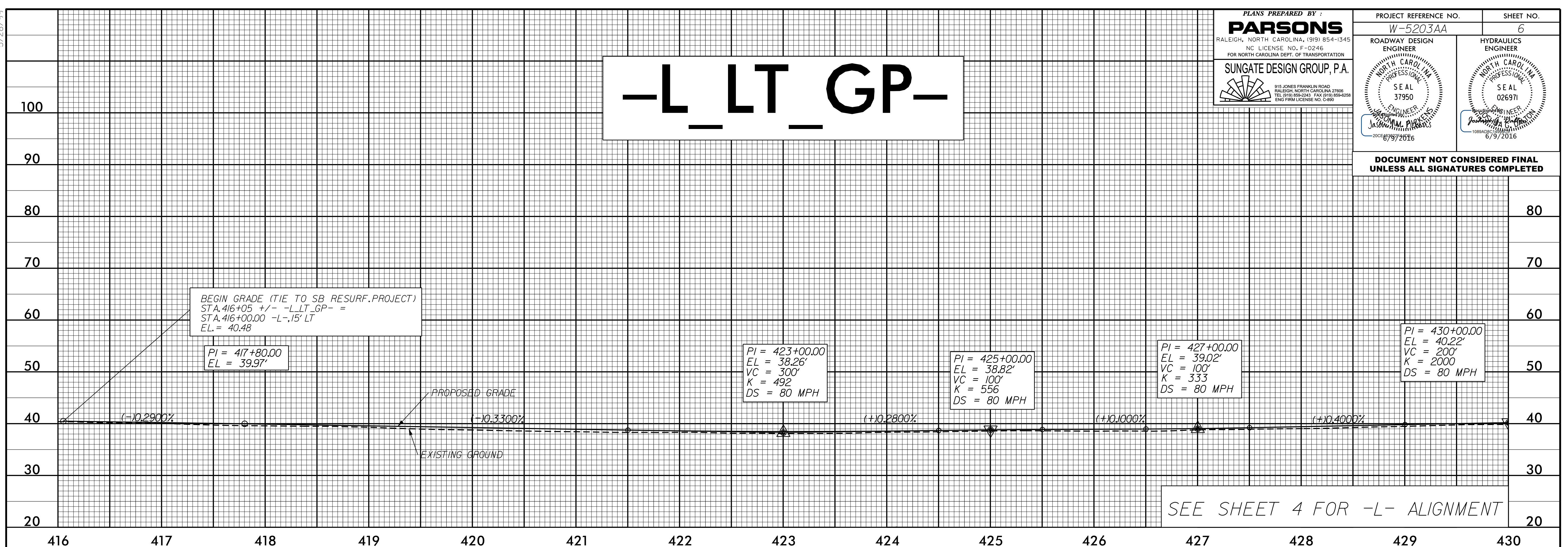
5/28/19

PLANS PREPARED BY:
PARSONS
 RALEIGH, NORTH CAROLINA, (919) 854-1345
 NC LICENSE NO. F-0246
 FOR NORTH CAROLINA DEPT. OF TRANSPORTATION
SUNGATE DESIGN GROUP, P.A.
 915 JONES FRANKLIN ROAD
 RALEIGH, NORTH CAROLINA 27606
 TEL (919) 859-2243 FAX (919) 859-8258
 ENG. FIRM LICENSE NO. C480

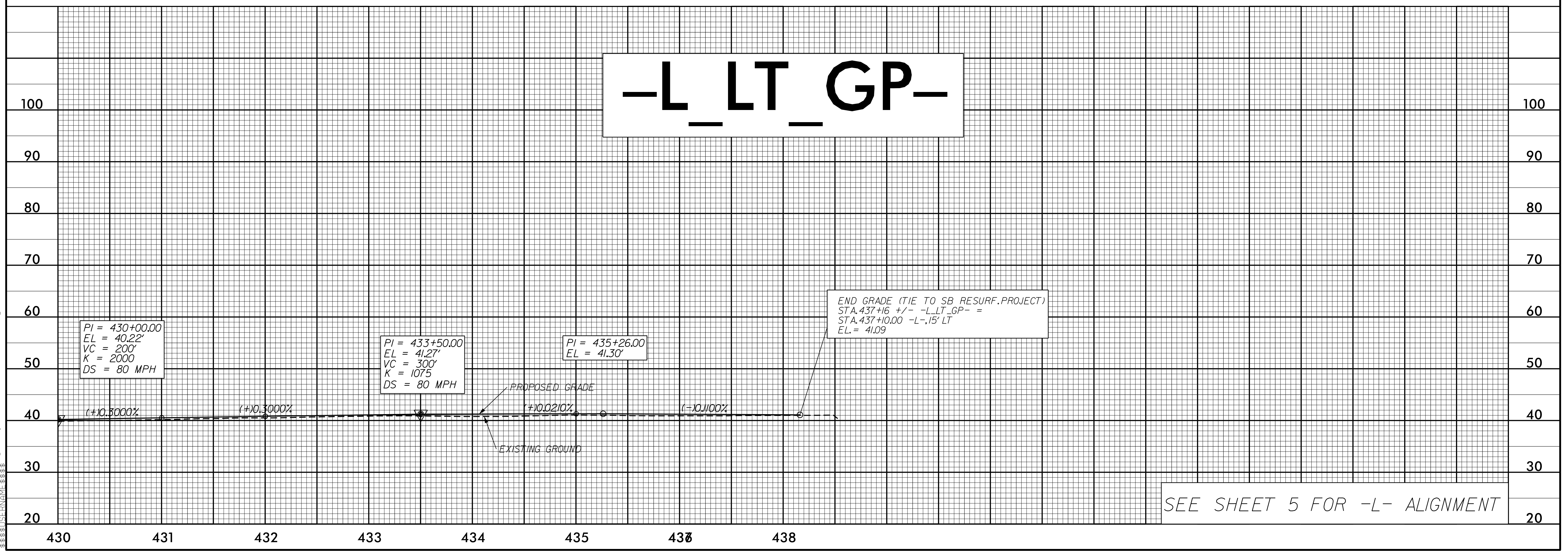
PROJECT REFERENCE NO. W-5203AA	SHEET NO. 6
ROADWAY DESIGN ENGINEER ENGINEER JASON M. PUGH 6/9/2016	HYDRAULICS ENGINEER ENGINEER JAMES H. PUGH 6/9/2016

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

-L_LT_GP-



-L_LT_GP-



C:\Users\jph30\OneDrive\Projects\W-5203AA\RDY_PFL_06.dgn

