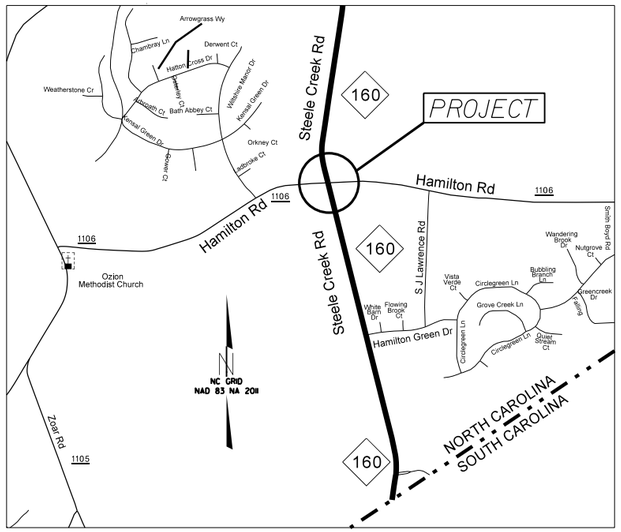
TIP: U-5762

PROJECT: 50175.3.1

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	50175.3.1	1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
50175.1.1		P.E.
50175.2.1		R/W
50175.3.1		CONST.

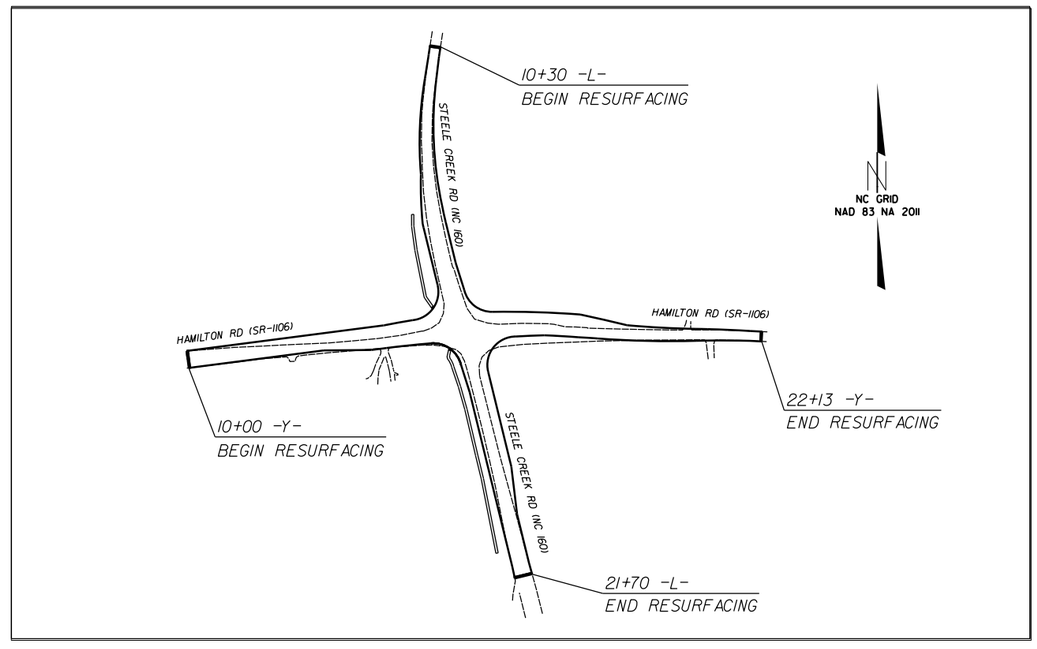
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
MECKLENBURG COUNTY



VICINITY MAP NOT TO SCALE

LOCATION: *INTERSECTION OF STEELE CREEK RD. (NC 160) AND HAMILTON RD. (SR-1106)*

TYPE OF WORK: *GRADING, DRAINAGE, PAVING, PAVEMENT REMOVAL, CONCRETE SIDEWALK, AND THERMOPLASTIC PAVEMENT MARKINGS.*



GRAPHIC SCALES

0 50 100 PLANS

0 50 100 PROFILE (HORIZONTAL)

0 5 10 PROFILE (VERTICAL)

DESIGN DATA

ADT =
ADT =
DHV = %
D = %
T = %
V = MPH

PROJECT LENGTH

LENGTH OF ROADWAY PROJECT : 50175.3.1 = 0.45 MILES

TOTAL LENGTH OF STATE PROJECT : 50175.3.1 = 0.45 MILES

Prepared in the Office of:

DIVISION OF HIGHWAYS
DIVISION TEN
DIVISION DESIGN / CONSTRUCT UNIT

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

LETTING DATE:

DONALD HARWARD
PROJECT ENGINEER

DONALD HARWARD
PROJECT DESIGN ENGINEER

DIVISION OF HIGHWAYS DIVISION 10 STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION MOBILITY DESIGN CONSTRUCT UNIT

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 034357 ENGINEER SEAN MICHAEL EPPERSON

DocuSigned by:
A92E75CC0FFB43B...
SIGNATURE

31-OCT-2018 14:20
S:\DDC\RDY\Mecklenburg\NC160_hamiltonetsr
cburris AT DIV10-307040

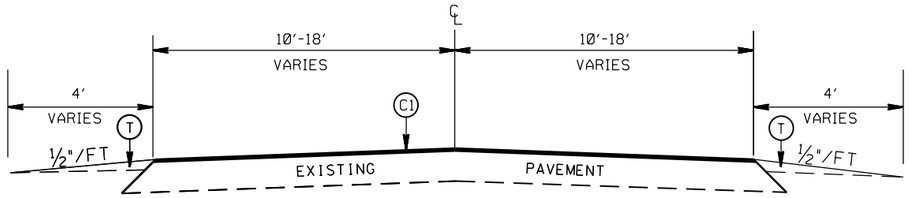
PROJECT NO.	SHEET NO.
50175.3.1	2
F.A. PROJECT NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 034357 ENGINEER SENIT MICHAEL EPPERSON

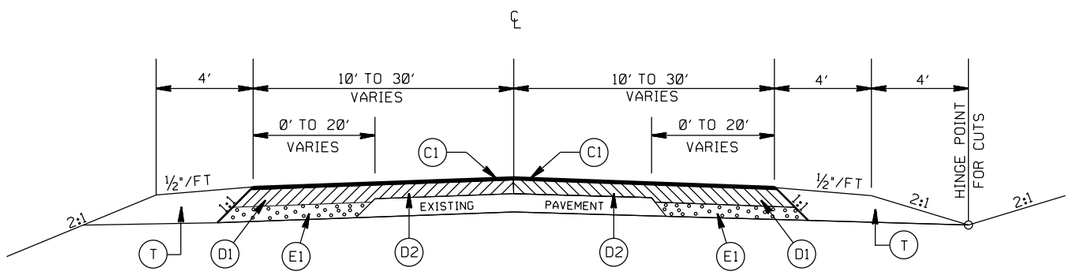
DocuSigned by:

A92E75CC0FFB43B...



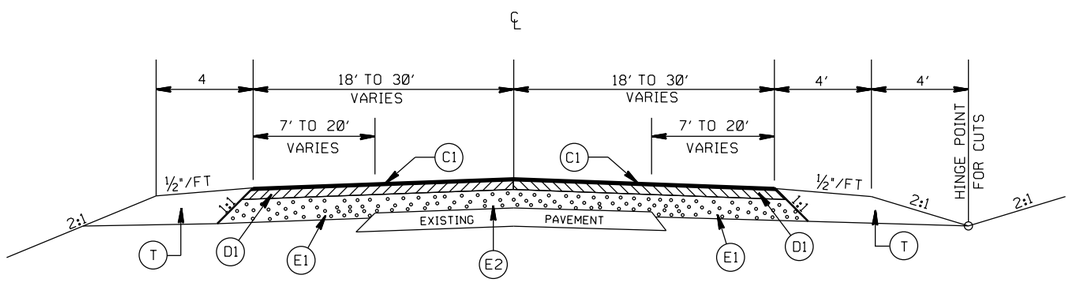
TYPICAL SECTION NO. 1

STA. 10+30 TO 10+55 -L-
STA. 21+45 TO 21+70 -L-
STA. 21+88 TO 22+13 -Y-



TYPICAL SECTION NO. 2

STA. 10+55 TO 14+50 -L-
STA. 18+00 TO 21+45 -L-
STA. 19+37 TO 21+88 -Y-



TYPICAL SECTION NO. 3

STA. 14+50 TO 16+00 -L-
STA. 17+00 TO 18+00 -L-

PAVEMENT SCHEDULE

C1	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D1	PROP. APPROX. 2.5" ASPHALT CONC. INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
D2	PROP. VARIABLE DEPTH ASPHALT CONC. INTERMEDIATE COURSE.
E1	PROP. APPROX. 8" ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
E2	PROP. VARIABLE DEPTH ASPHALT CONC. BASE COURSE.
T	EARTH MATERIAL

INSTALLING RIGHT AND LEFT TURN LANES
ON NC 160 AND
HAMILTON RD.(SR-1106)

			REVISIONS	
SCALE	N/A			
DATE	7-2018			
DWG. BY	JDH			
DESIGN BY	JDH			
APPROVED	JDH			

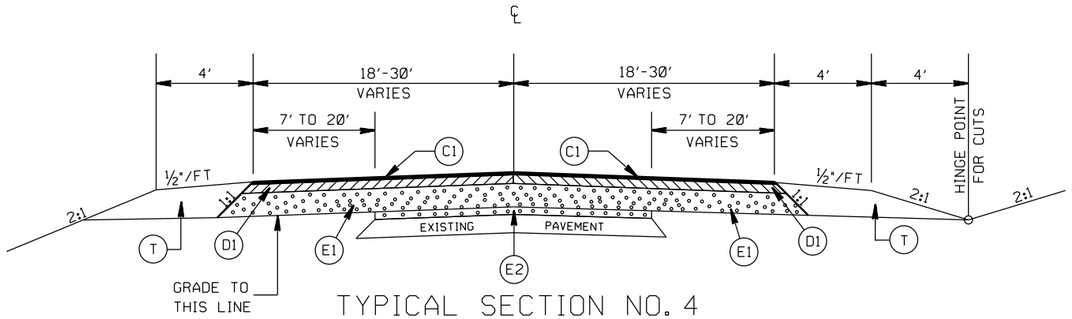
PROJECT NO.	SHEET NO.
50175.3.1	2A
F.A. PROJECT NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 034357 ENGINEER SEAN MICHAEL EPPERSON

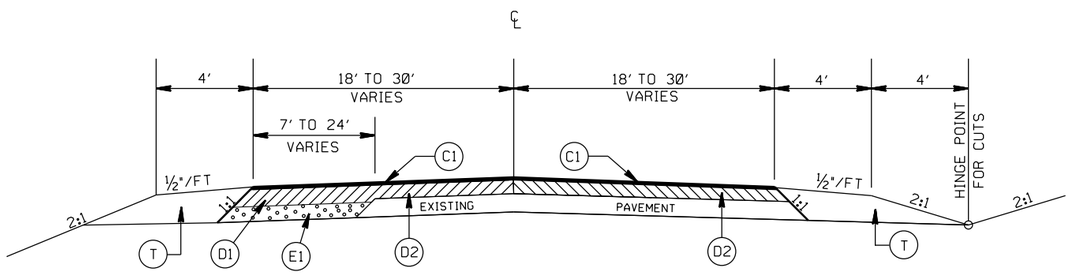
DocuSigned by:

A92E75CC0FFB43B...



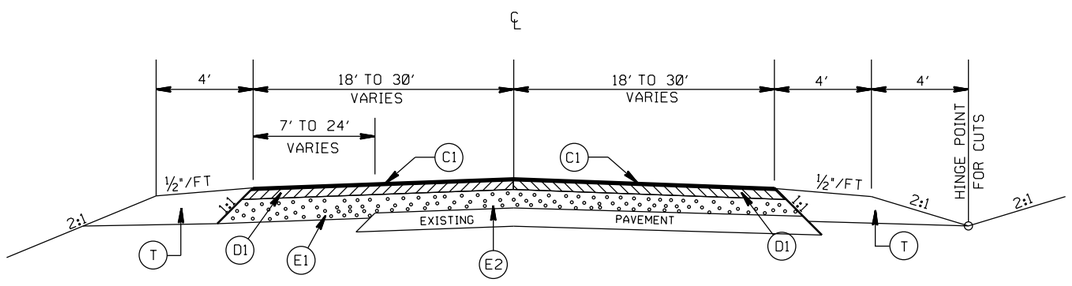
TYPICAL SECTION NO. 4

STA. 16+00 TO 17+00 -L-
STA. 15+00 TO 16+50 -Y-



TYPICAL SECTION NO. 5

STA. 10+00 TO 11+00 -Y-
STA. 17+50 TO 19+37 -Y-



TYPICAL SECTION NO. 6

STA. 11+00 TO 12+00 -Y-
STA. 13+50 TO 15+00 -Y-
STA. 16+50 TO 17+50 -Y-

PAVEMENT SCHEDULE

C1	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D1	PROP. APPROX. 2.5" ASPHALT CONC. INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
D2	PROP. VARIABLE DEPTH ASPHALT CONC. INTERMEDIATE COURSE.
E1	PROP. APPROX. 8" ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
E2	PROP. VARIABLE DEPTH ASPHALT CONC. BASE COURSE.
T	EARTH MATERIAL

INSTALLING RIGHT AND LEFT TURN LANES
ON NC 160 AND
HAMILTON RD.(SR-1106)

		REVISIONS	
SCALE	N/A		
DATE	7-2018		
DWG. BY	JDH		
DESIGN BY	JDH		
APPROVED	JDH		

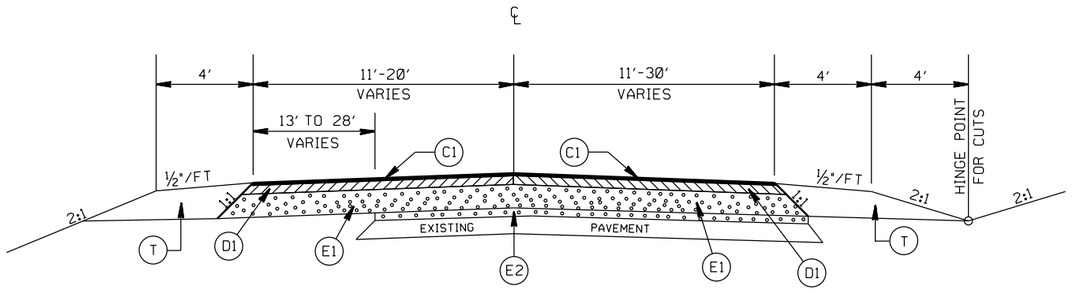
PROJECT NO.	SHEET NO.
50175.3.1	2B
F.A. PROJECT NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 034357 ENGINEER SEAN MICHAEL EPPERSON

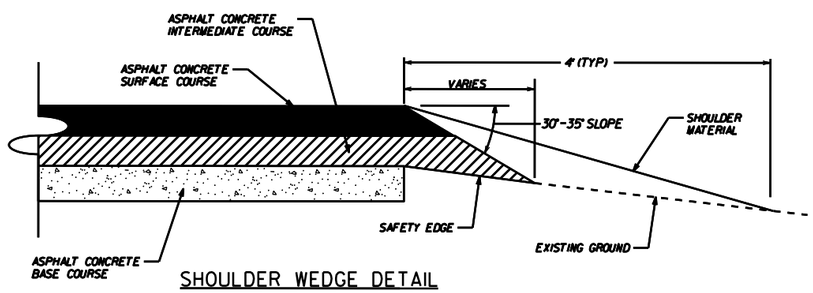
DocuSigned by:

A92E75CC0FFB43B...



TYPICAL SECTION NO. 7

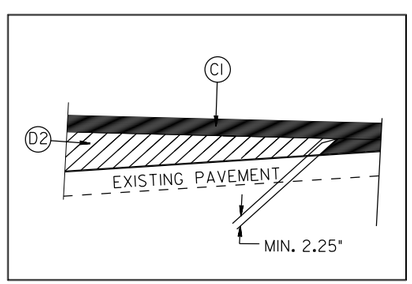
STA. 12+00 TO 13+50 -Y-



SHOULDER WEDGE DETAIL

PAVEMENT SCHEDULE

C1	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D1	PROP. APPROX. 2.5" ASPHALT CONC. INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
D2	PROP. VARIABLE DEPTH ASPHALT CONC. INTERMEDIATE COURSE.
E1	PROP. APPROX. 8" ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
E2	PROP. VARIABLE DEPTH ASPHALT CONC. BASE COURSE.
T	EARTH MATERIAL



WEDGING DETAIL

INSTALLING RIGHT AND LEFT TURN LANES ON NC 160 AND HAMILTON RD.(SR-1106)

		REVISIONS	
SCALE	N/A		
DATE	7-2018		
DWG. BY	JDH		
DESIGN BY	JDH		
APPROVED	JDH		

COMPUTED BY: JDH DATE: 07/18
CHECKED BY: JSM DATE: 07/18

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
50175.3.1	3

NOTE: Invert Elevations are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

RIGHT OF WAY AREA DATA

PARCEL NO.	PROPERTY OWNERS NAMES	TOTAL ACREAGE	AREA TAKEN	AREA REMAINING RT.	AREA REMAINING LT.	TEMP. CONST. EASE.	PERM. DRAIN. EASE.	PERM. UTILITY EASE.
1	THAI TRAN		0.218 AC.			2,118 SQ.FT.		7,248 SQ.FT.
2	REUNION HOA INC.		0.011 AC.			381 SQ.FT.		1,505 SQ.FT.
3	FRANCES G. & ELIZABETH QUERY					1,498 SQ.FT.	397 SQ.FT.	
4	FRANCES QUERY		0.252 AC.			4,524 SQ.FT.		51 SQ.FT.
5	FRANK G. STROUP		0.078 AC.			1,518 SQ.FT.		219 SQ.FT.
6	FRANK G. STROUP		0.021 AC.			1,881 SQ.FT.		
7	FRANK G. STROUP		0.117 AC.			1,988 SQ.FT.		5,425 SQ.FT.
8	STEELE CREEK LANDING HOME OWNERS							328 SQ.FT.

SUMMARY OF QUANTITIES

SUMMARY					SUMMARY				
DESC.NO.	SECT.NO.	QUANTITY	UNIT	ITEM DESCRIPTION	DESC.NO.	SECT.NO.	QUANTITY	UNIT	ITEM DESCRIPTION

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48" & UNDER)

STATION / SIZE / THICKNESS OR GAUGE	LOCATION (LT,RT, OR CL)	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	DRAINAGE PIPE (RCP, CSP, CAAP, HDPE, or PVC) 12"	15"	18"	24"	30"	36"	42"	48"	C.S. PIPE (UNLESS NOTED OTHRWISE) 12"	15"	18"	24"	30"	36"	42"	48"
THICKNESS OR GAUGE																.064	.064	.064	.064	.079	.079	.109	.109
14+13 -Y-	RT	401			700.25	699.39			26'														
15+39 -Y-	RT	402	403		695.59	694.00																	
15+15 -Y-	RT	403		696.90	694.00	693.90																	
15+07 -Y-	CL	403	404		693.90	692.20																	
15+00 -Y-	LT	404		695.10	692.20	690.90																	
15+13 -Y-	LT	404	405		690.90	690.50																	
14+52 -L-	CL	406			686.77	684.46																	
18+75 -Y-	RT	407			695.90	696.19																	
19+99 -Y-	RT	408			697.02	697.10																	
20+13 -Y-	RT	409			?	?																	
21+05 -Y-	RT	410			697.93	698.31																	
20+56 -Y-	LT	411			697.93	698.31																	
TOTALS									26'														

STATION	C.B. 12"	C.B. 15"	C.B. 18"	C.B. 24"	C.B. 30"	C.B. 36"	C.B. 42"	C.B. 48"	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	24" SIDE DRAIN PIPE	ENDWALLS STD. 838.01, STD. 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE) R.C.P.	ENDWALLS CU. YDS. C.S.P.	QUANTITIES FOR DRAINAGE STRUCTURES PER EACH (0' THRU 5.0')	LIN. *FT. A 5.0' THRU 10.0'	LIN. *FT. B 10.0' AND ABOVE	* TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. "A" + (1.3 X COL. "B")	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME & GRATE STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR 840.26	G.D.I. TYPE "B" STD. 840.18 OR 840.27	G.D.I. TYPE "D" STD. 840.19 OR 840.28	G.D.I. FRAME WITH GRATE STD. 840.22	G.D.I. FRAME WITH TWO GRATES STD. 840.22	G.D.I. (N.S.) FRAME WITH GRATE STD. 840.24	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24	J.B. STD. 840.31 OR 840.32	M.H. FRAME & COVER STD. 840.54	T.B.D.I. STD. 840.35	T.B.D.I. FRAME WITH GRATE STD. 840.36	CORR. STEEL ELBOWS NO. & SIZE	CONC. COLLARS CL. "B" C.Y. STD 840.72	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	PIPE REMOVAL LIN.FT.	REMARKS
14+13 -Y-																																					24'
15+39 -Y-			48'																																		
15+15 -Y-														1										1		1											
15+07 -Y-			68'																																		
15+00 -Y-														1										1		1											
15+13 -Y-			40'																																		
14+52 -L-				76'																																	53'
18+75 -Y-		56'																																			48'
19+99 -Y-		26'																																			26'
20+13 -Y-		4'																																0.45			
21+05 -Y-		20'																																			20'
20+56 -Y-		20'																																0.40			20'
TOTALS		126'	156'		76'									2										2		2								0.85			138'

NO PAY ITEM

ABBREVIATIONS

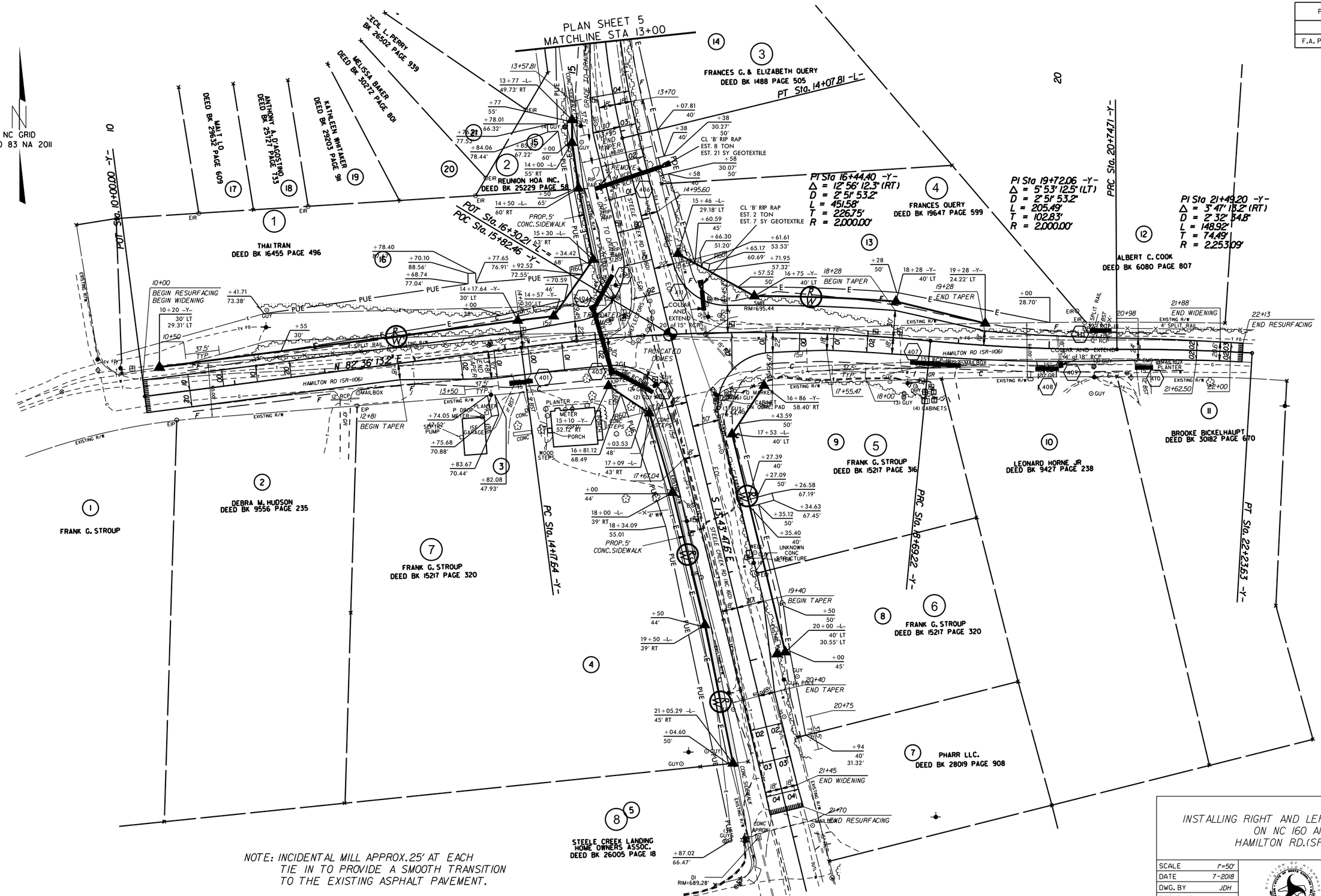
C.B.	CATCH BASIN
N.D.I.	NARROW DROP INLET
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
G.D.I. (N.S.)	GRATED DROP INLET (NARROW SLOT)
J.B.	JUNCTION BOX
M.H.	MANHOLE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX

6/21/00

20-JUL-2018 11:03
S:\DDC\RDY\Mecklenburg\NC160_hamilton\sum\nc160_hamilton_me4_sum.dgn
dbarnes at TIMVIEW27/26

PROJECT NO.	SHEET NO.
50175.3.1	4
F.A. PROJECT NO.	

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 034357 ENGINEER SEAN MICHAEL EPPERSON
DocuSigned by:
A92E75CC0FFB43B...



INSTALLING RIGHT AND LEFT TURN LANES
ON NC 160 AND
HAMILTON RD.(SR-1106)

		REVISIONS	
SCALE	1"=50'		
DATE	7-2018		
DWG. BY	JDH		
DESIGN BY	JDH		
APPROVED	JDH		

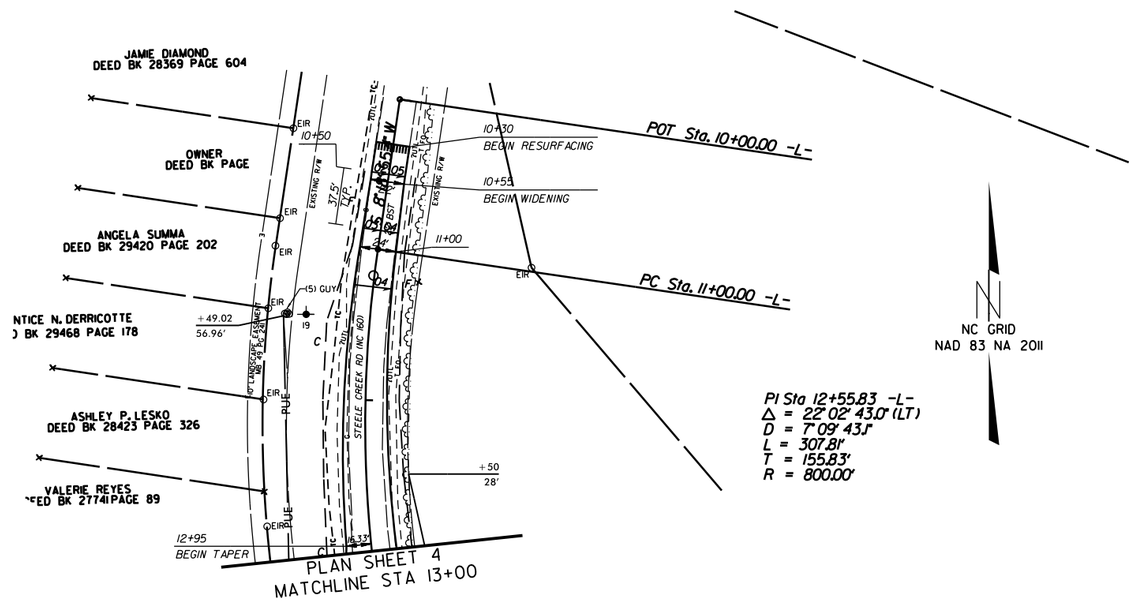
PROJECT NO.	SHEET NO.
50175.3.1	5
F.A. PROJECT NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 034357 ENGINEER SEAN MICHAEL EPPERSON

DocuSigned by:

A92E75CC0FFB43B...



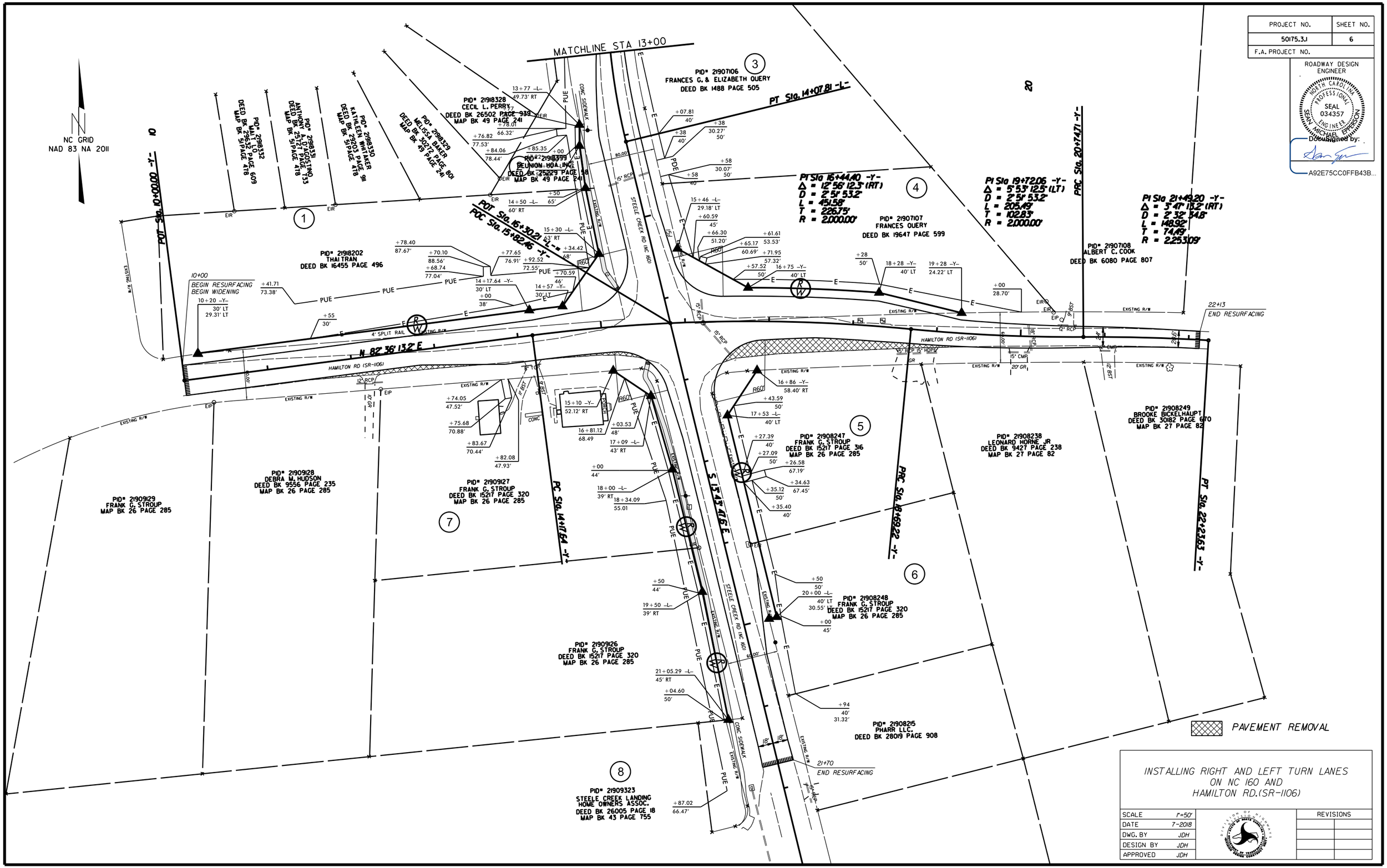
NOTE: INCIDENTAL MILL APPROX. 25' AT EACH TIE IN TO PROVIDE A SMOOTH TRANSITION TO THE EXISTING ASPHALT PAVEMENT.

INSTALLING RIGHT AND LEFT TURN LANES
ON NC 160 AND
HAMILTON RD. (SR-1106)

		REVISIONS	
SCALE	1"=50'		
DATE	7/2018		
DWG. BY	JDH		
DESIGN BY	JDH		
APPROVED	JDH		

PROJECT NO.	SHEET NO.
50175.3.1	6
F.A. PROJECT NO.	

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 034357 ENGINEER SEAN MICHAEL EPPERSON
DocuSigned by:
A92E75CC0FFB43B...



INSTALLING RIGHT AND LEFT TURN LANES
ON NC 160 AND
HAMILTON RD.(SR-1106)

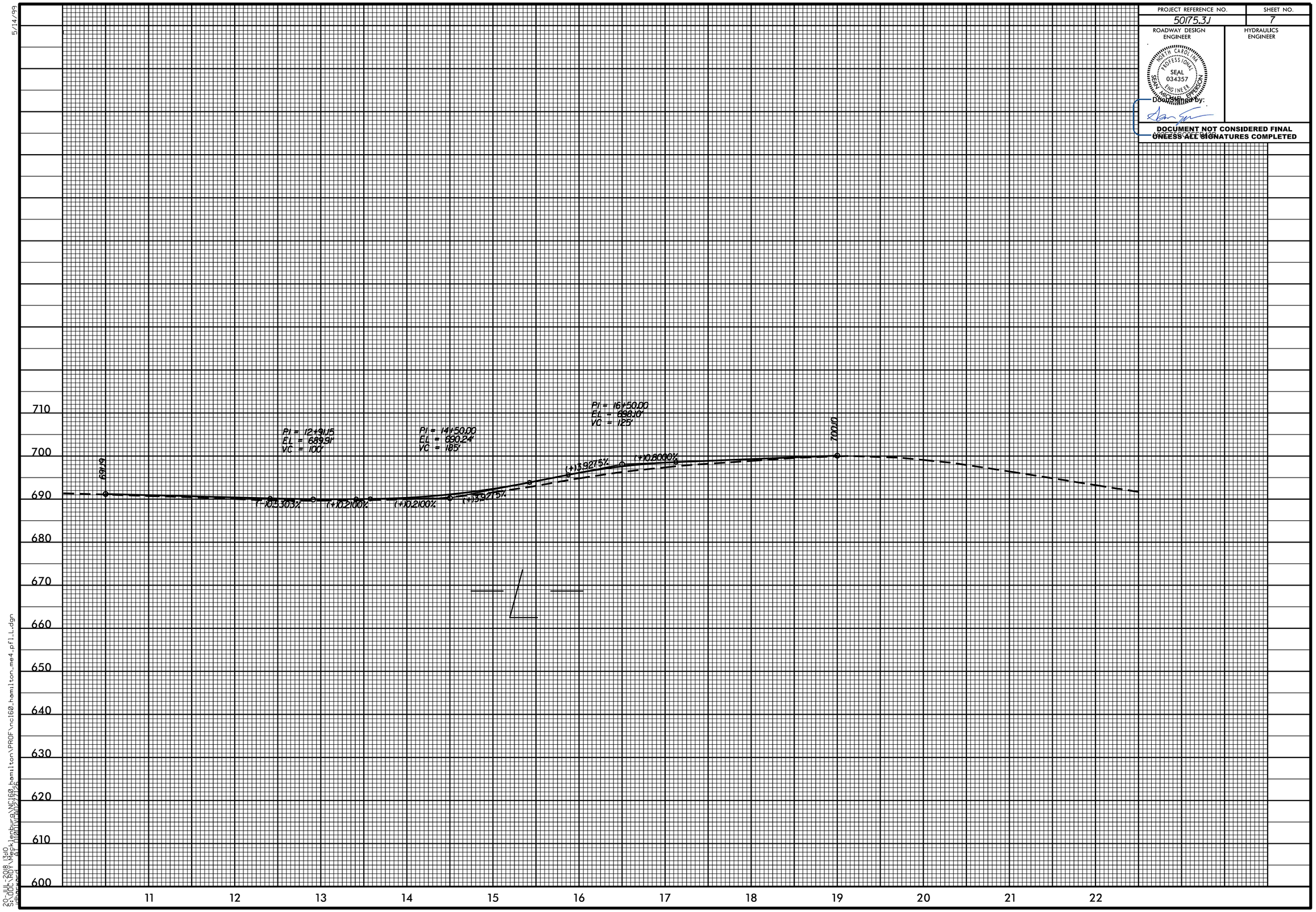
		REVISIONS	
SCALE	1"=50'		
DATE	7-2018		
DWG. BY	JDH		
DESIGN BY	JDH		
APPROVED	JDH		

PROJECT REFERENCE NO.	SHEET NO.
50175.3.1	7
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 034357 ENGINEER

Documents not considered final unless all signatures completed

Documents not considered final unless all signatures completed



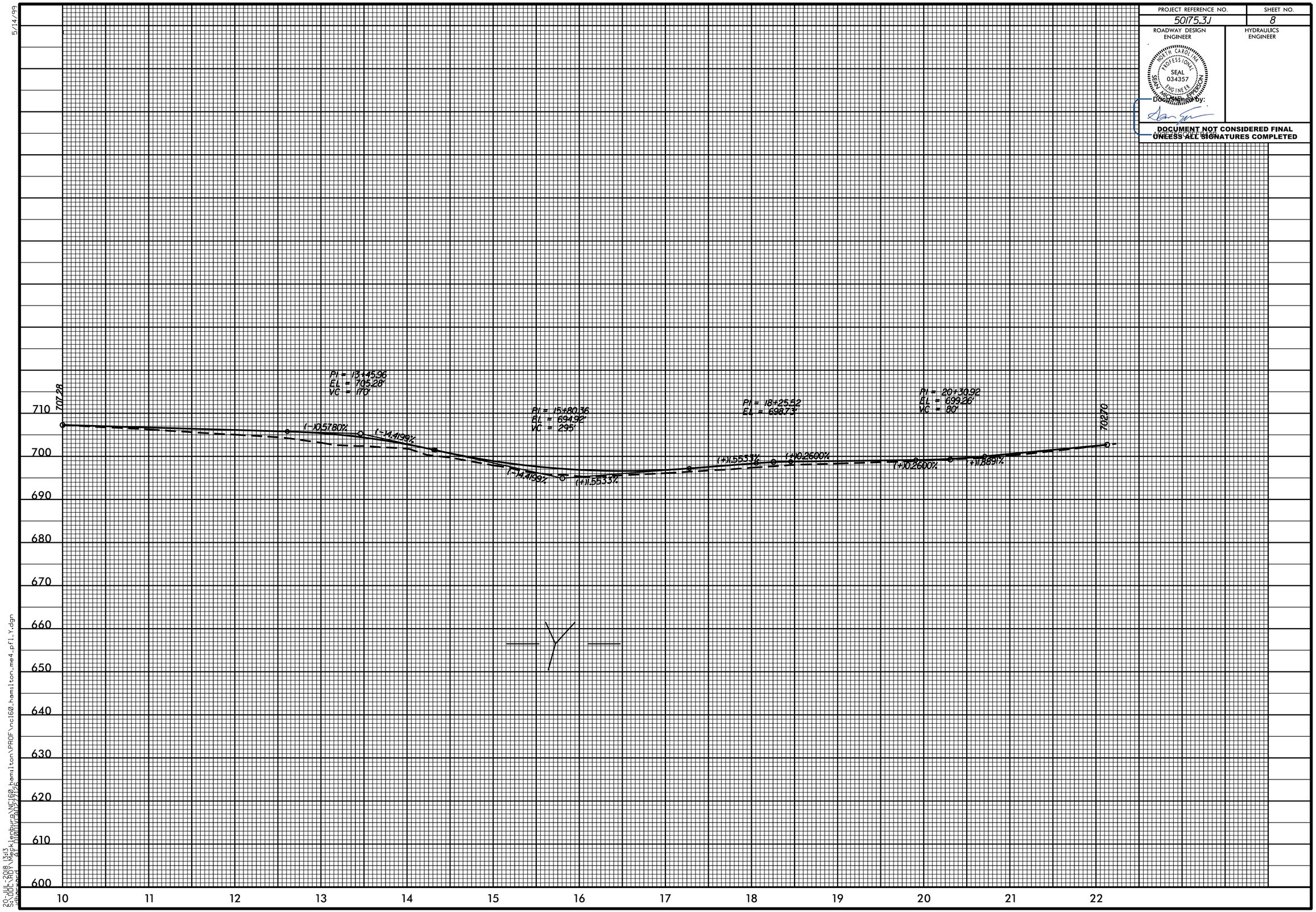
5/14/99

20-JUL-2018 13:10
S:\DOC\RDY\Mecklenburg\NC160_hamilton\PROF\nc160_hamilton_me4_pfl_L.dgn
dbarnard at DMVLAN27126

PROJECT REFERENCE NO.	SHEET NO.
50175.3.1	8
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 034357 ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



5/14/99

20-JUL-2018 13:13
S:\DOC\RDY\Mecklenburg\NC160_hamilton\PROF\nc160_hamilton_me4_pfl_Y.dgn
dbarnard at DMVLAN27126

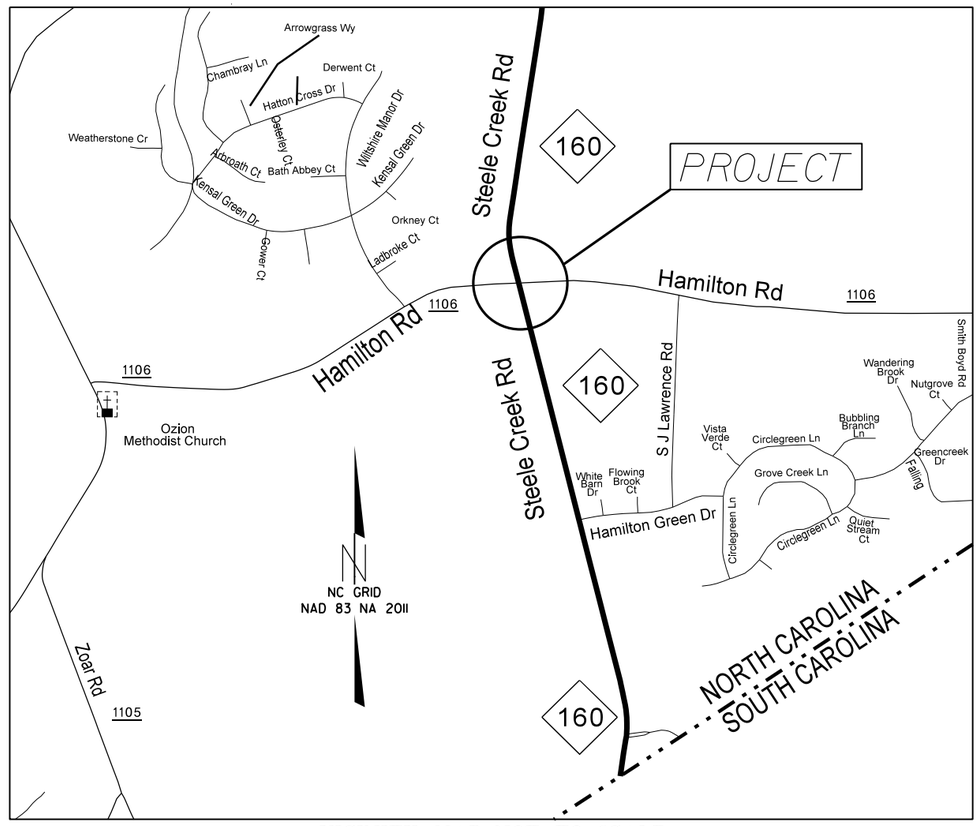
TIP PROJECT: U-5762

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5762	EC-1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL



VICINITY MAP NOT TO SCALE

EROSION AND SEDIMENT CONTROL MEASURES

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

THIS PROJECT CONTAINS EROSION CONTROL PLANS FOR CLEARING AND GRUBBING PHASE OF CONSTRUCTION.

GRAPHIC SCALE

0
PLANS

0
PROFILE (HORIZONTAL)

0
PROFILE (VERTICAL)

ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

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

Prepared In the Office of:

DDC UNIT DIVISION 10
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

2018 STANDARD SPECIFICATIONS

Designed by:

DONALD HARWARD — *NAME*
3028 — *LEVEL III CERTIFICATION NO.*

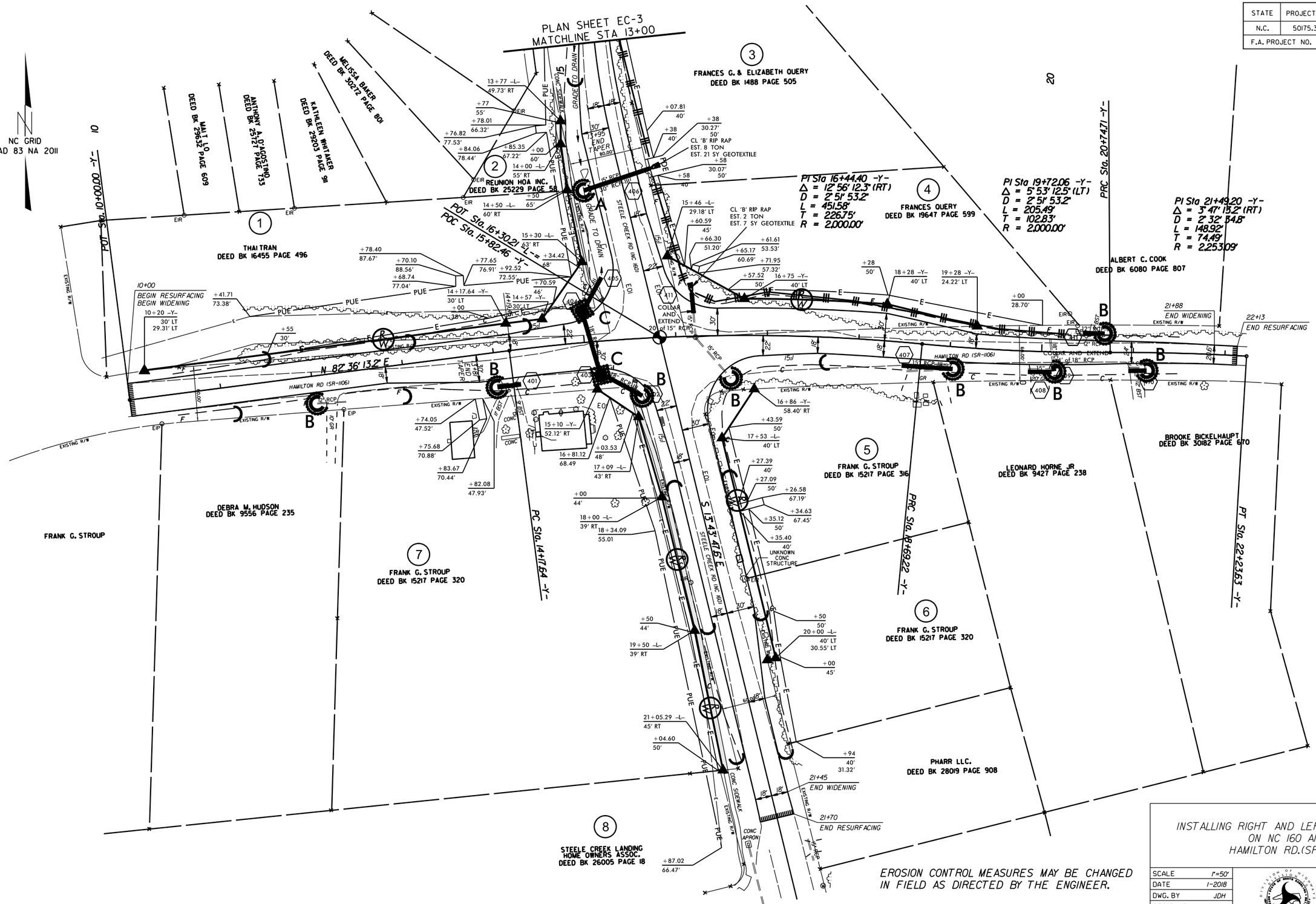
Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"– Roadway Design Unit – N. C. Department of Transportation – Raleigh, N. C., dated January 2018 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

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

3:07:07 PM
C:\Users\dharward\AppData\Local\Temp\wcl60_hamilton_Erosion Titlesheet.dgn

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	50175.3.1	EC-2	
F.A. PROJECT NO.			

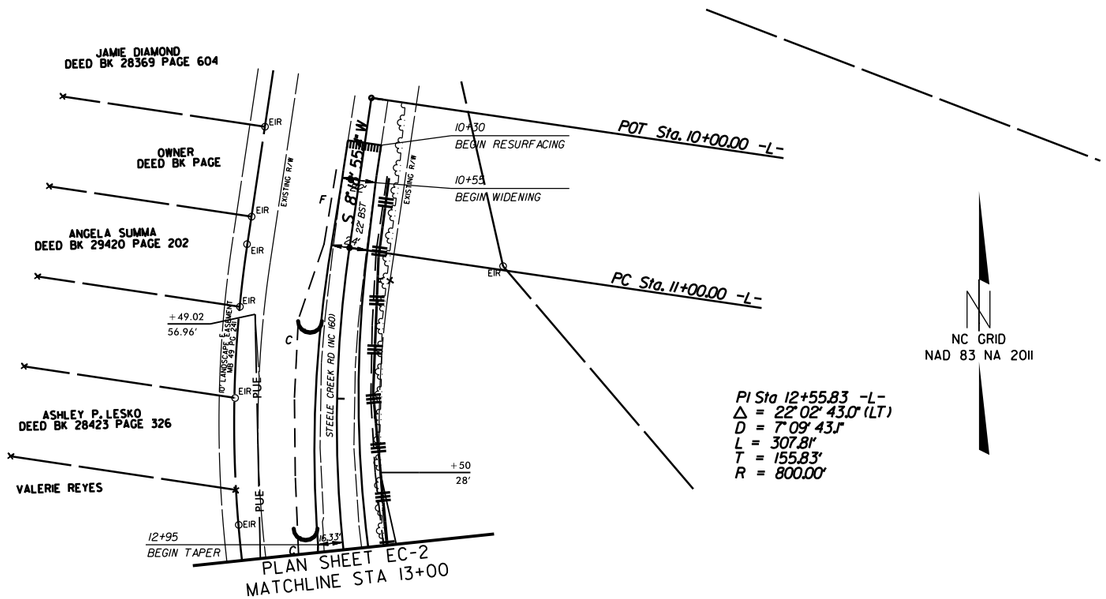


EROSION CONTROL MEASURES MAY BE CHANGED IN FIELD AS DIRECTED BY THE ENGINEER.

INSTALLING RIGHT AND LEFT TURN LANES ON NC 160 AND HAMILTON RD.(SR-1106)

		REVISIONS	
SCALE	1"=50'		
DATE	1-2018		
DWG. BY	JDH		
DESIGN BY	JDH		
APPROVED	JDH		

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	50175.3.1	EC-3	
F.A. PROJECT NO.			



EROSION CONTROL MEASURES MAY BE CHANGED IN FIELD AS DIRECTED BY THE ENGINEER.

INSTALLING RIGHT AND LEFT TURN LANES
ON NC 160 AND
HAMILTON RD.(SR-1106)

			REVISIONS	
SCALE	1"=50'			
DATE	1/2018			
DWG. BY	JDH			
DESIGN BY	JDH			
APPROVED	JDH			

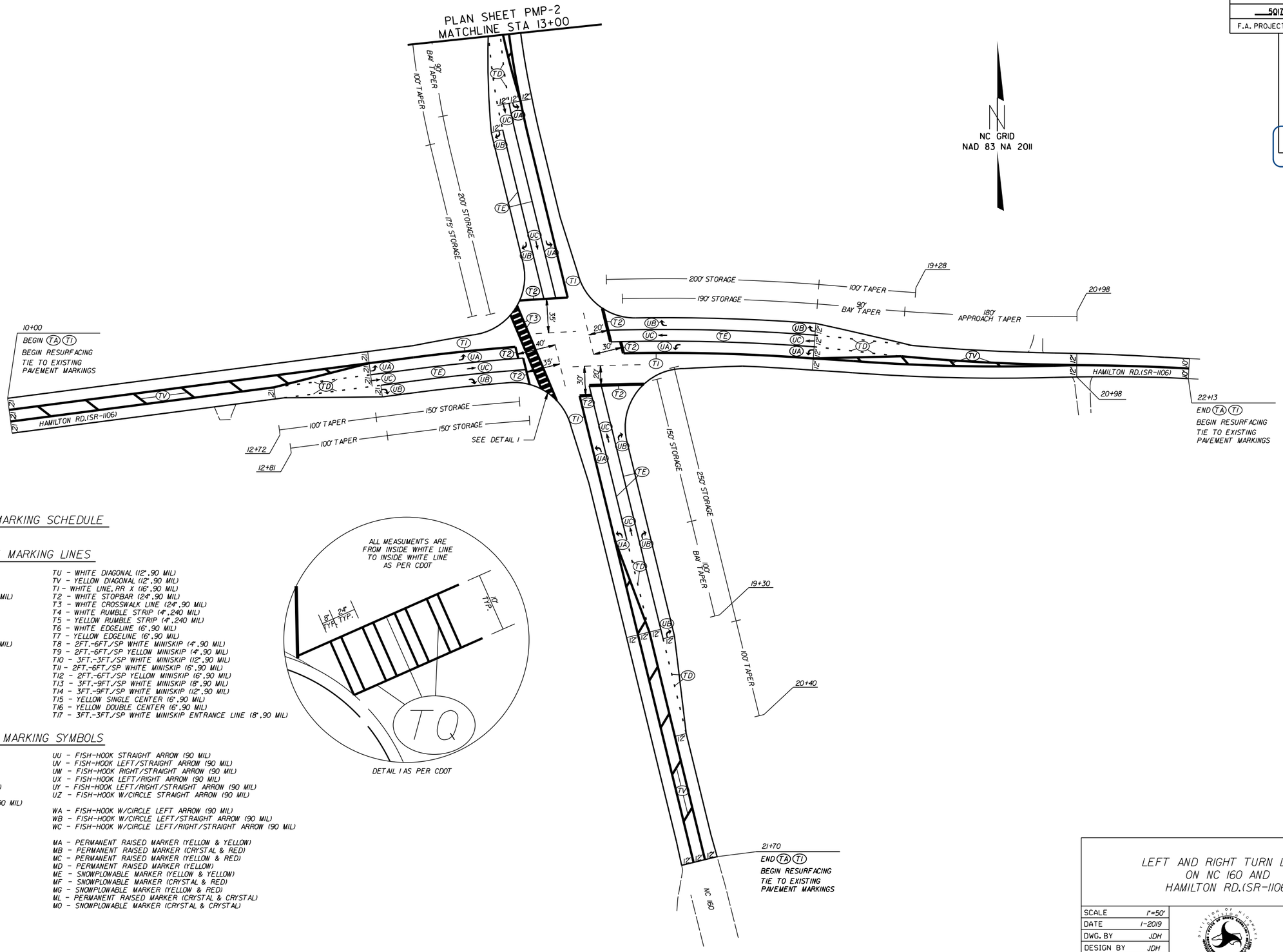
PROJECT NO.	SHEET NO.
50175.3.1	PMP-1
F.A. PROJECT NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 034357 ENGINEER SEAN MICHAEL EPPERSON

DocuSigned by:

A92E75CC0FFB43B...



PAVEMENT MARKING SCHEDULE

PAVEMENT MARKING LINES

TA - WHITE EDGELINE (4",90 MIL)
TB - YELLOW EDGELINE (4",90 MIL)
TC - 10FT.WHITE SKIP (4",90 MIL)
TD - 3FT.-9FT./SP WHITE MINISKIP (4",90 MIL)
TE - WHITE SOLID LANE LINE (4",90 MIL)
TF - 10FT.YELLOW SKIP (4",90 MIL)
TH - YELLOW SINGLE CENTER (4",90 MIL)
TI - YELLOW DOUBLE CENTER (4",90 MIL)
TJ - 10FT.WHITE SKIP (6",90 MIL)
TK - 3FT.-9FT./SP WHITE MINISKIP (6",90 MIL)
TL - WHITE SOLID LANE LINE (6",90 MIL)
TM - 10FT.YELLOW SKIP (6",90 MIL)
TN - WHITE GORELINE (8",90 MIL)
TO - WHITE DIAGONAL (8",90 MIL)
TP - YELLOW DIAGONAL (8",90 MIL)
TQ - WHITE CROSSWALK LINE (8",90 MIL)
TR - WHITE SOLID LANE LINE (8",90 MIL)
TS - WHITE GORELINE (12",90 MIL)
TT - WHITE SOLID LANE LINE (12",90 MIL)
TU - WHITE DIAGONAL (12",90 MIL)
TV - YELLOW DIAGONAL (12",90 MIL)
T1 - WHITE LINE,RR X (16",90 MIL)
T2 - WHITE STOPBAR (24",90 MIL)
T3 - WHITE CROSSWALK LINE (24",90 MIL)
T4 - WHITE RUMBLE STRIP (4",240 MIL)
T5 - YELLOW RUMBLE STRIP (4",240 MIL)
T6 - WHITE EDGELINE (6",90 MIL)
T7 - YELLOW EDGELINE (6",90 MIL)
T8 - 2FT.-6FT./SP WHITE MINISKIP (4",90 MIL)
T9 - 2FT.-6FT./SP YELLOW MINISKIP (4",90 MIL)
T10 - 3FT.-3FT./SP WHITE MINISKIP (12",90 MIL)
T11 - 2FT.-6FT./SP WHITE MINISKIP (6",90 MIL)
T12 - 2FT.-6FT./SP YELLOW MINISKIP (6",90 MIL)
T13 - 3FT.-9FT./SP WHITE MINISKIP (8",90 MIL)
T14 - 3FT.-9FT./SP WHITE MINISKIP (12",90 MIL)
T15 - YELLOW SINGLE CENTER (6",90 MIL)
T16 - YELLOW DOUBLE CENTER (6",90 MIL)
T17 - 3FT.-3FT./SP WHITE MINISKIP ENTRANCE LINE (8",90 MIL)

DETAIL 1 AS PER CDOT

PAVEMENT MARKING SYMBOLS

UA -LEFT TURN ARROW (90 MIL)
UB - RIGHT TURN ARROW (90 MIL)
UC - STRAIGHT ARROW (90 MIL)
UD - COMBO.LEFT/STRAIGHT ARROW (90 MIL)
UE - COMBO.RIGHT/STRAIGHT ARROW (90 MIL)
UF - COMBO.LEFT/RIGHT ARROW (90 MIL)
UG - COMBO.LEFT/RIGHT/STRAIGHT ARROW (90 MIL)
UH - HANDICAP PARKING (90 MIL)
UI - ALPHANUMERIC CHAR. (90 MIL)
UJ - BICYCLE SYMBOL (90 MIL)
UK - BICYCLE STRAIGHT ARROW (90 MIL)
UL - BICYCLE CHAR. (90 MIL)
UM - 12"YIELD LINE TRIANGLE (90 MIL)
UN - 24"YIELD LINE TRIANGLE (90 MIL)
UO - BICYCLE LEFT ARROW (90 MIL)
UP - MERGE ARROW (90 MIL)
UQ - RAMP ARROW SYMBOL (90 MIL)
UR - SHARROW (90 MIL)
US - BICYCLE LOOP DETECTOR (90 MIL)
UT - U-TURN ARROW (90 MIL)
UU - FISH-HOOK STRAIGHT ARROW (90 MIL)
UV - FISH-HOOK LEFT/STRAIGHT ARROW (90 MIL)
UW - FISH-HOOK RIGHT/STRAIGHT ARROW (90 MIL)
UX - FISH-HOOK LEFT/RIGHT ARROW (90 MIL)
UY - FISH-HOOK LEFT/RIGHT/STRAIGHT ARROW (90 MIL)
UZ - FISH-HOOK W/CIRCLE STRAIGHT ARROW (90 MIL)

WA - FISH-HOOK W/CIRCLE LEFT ARROW (90 MIL)
WB - FISH-HOOK W/CIRCLE LEFT/STRAIGHT ARROW (90 MIL)
WC - FISH-HOOK W/CIRCLE LEFT/RIGHT/STRAIGHT ARROW (90 MIL)

MA - PERMANENT RAISED MARKER (YELLOW & YELLOW)
MB - PERMANENT RAISED MARKER (CRYSTAL & RED)
MC - PERMANENT RAISED MARKER (YELLOW & RED)
MD - PERMANENT RAISED MARKER (YELLOW)
ME - SNOWPLOWABLE MARKER (YELLOW & YELLOW)
MF - SNOWPLOWABLE MARKER (CRYSTAL & RED)
MG - SNOWPLOWABLE MARKER (YELLOW & RED)
ML - PERMANENT RAISED MARKER (CRYSTAL & CRYSTAL)
MO - SNOWPLOWABLE MARKER (CRYSTAL & CRYSTAL)

LEFT AND RIGHT TURN LANES
ON NC 160 AND
HAMILTON RD.(SR-1106)

		REVISIONS	
SCALE	1"=50'		
DATE	1-2019		
DWG. BY	JDH		
DESIGN BY	JDH		
APPROVED	JDH		

PROJECT NO.	SHEET NO.
50175.3.1	PMP-2
F.A. PROJECT NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 034357 ENGINEER SEAN MICHAEL EPPERSON

DocuSigned by:

A92E75CC0FFB43B...

PAVEMENT MARKING SCHEDULE

PAVEMENT MARKING LINES

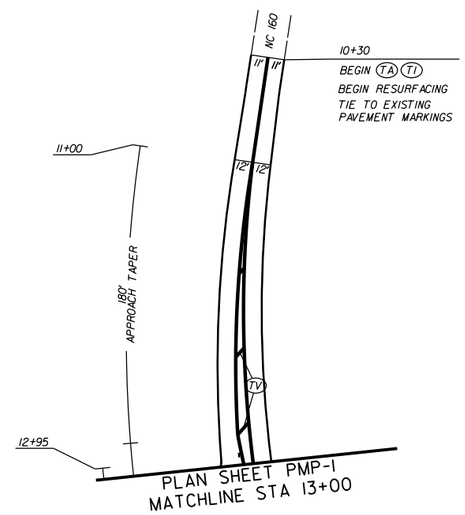
TA - WHITE EDGELINE (4",90 MIL)
TB - YELLOW EDGELINE (4",90 MIL)
TC - 10FT.WHITE SKIP (4",90 MIL)
TD - 3FT.-9FT./SP WHITE MINISKIP (4",90 MIL)
TE - WHITE SOLID LANE LINE (4",90 MIL)
TF - 10FT.YELLOW SKIP (4",90 MIL)
TH - YELLOW SINGLE CENTER (4",90 MIL)
TI - YELLOW DOUBLE CENTER (4",90 MIL)
TJ - 10FT.WHITE SKIP (6",90 MIL)
TK - 3FT.-9FT./SP WHITE MINISKIP (6",90 MIL)
TL - WHITE SOLID LANE LINE (6",90 MIL)
TM - 10FT.YELLOW SKIP (6",90 MIL)
TN - WHITE GORELINE (8",90 MIL)
TO - WHITE DIAGONAL (8",90 MIL)
TP - YELLOW DIAGONAL (8",90 MIL)
TQ - WHITE CROSSWALK LINE (8",90 MIL)
TR - WHITE SOLID LANE LINE (8",90 MIL)
TS - WHITE GORELINE (12",90 MIL)
TT - WHITE SOLID LANE LINE (12",90 MIL)
TU - WHITE DIAGONAL (12",90 MIL)
TV - YELLOW DIAGONAL (12",90 MIL)
T1 - WHITE LINE.RR X (16",90 MIL)
T2 - WHITE STOPBAR (24",90 MIL)
T3 - WHITE CROSSWALK LINE (24",90 MIL)
T4 - WHITE RUMBLE STRIP (4",240 MIL)
T5 - YELLOW RUMBLE STRIP (4",240 MIL)
T6 - WHITE EDGELINE (6",90 MIL)
T7 - YELLOW EDGELINE (6",90 MIL)
T8 - 2FT.-6FT./SP WHITE MINISKIP (4",90 MIL)
T9 - 2FT.-6FT./SP YELLOW MINISKIP (4",90 MIL)
T10 - 3FT.-3FT./SP WHITE MINISKIP (12",90 MIL)
T11 - 2FT.-6FT./SP WHITE MINISKIP (6",90 MIL)
T12 - 2FT.-6FT./SP YELLOW MINISKIP (6",90 MIL)
T13 - 3FT.-9FT./SP WHITE MINISKIP (8",90 MIL)
T14 - 3FT.-9FT./SP WHITE MINISKIP (12",90 MIL)
T15 - YELLOW SINGLE CENTER (6",90 MIL)
T16 - YELLOW DOUBLE CENTER (6",90 MIL)
T17 - 3FT.-3FT./SP WHITE MINISKIP ENTRANCE LINE (8",90 MIL)

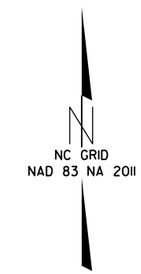
PAVEMENT MARKING SYMBOLS

UA -LEFT TURN ARROW (90 MIL)
UB - RIGHT TURN ARROW (90 MIL)
UC - STRAIGHT ARROW (90 MIL)
UD - COMBO.LEFT/STRAIGHT ARROW (90 MIL)
UE - COMBO.RIGHT/STRAIGHT ARROW (90 MIL)
UF - COMBO.LEFT/RIGHT ARROW (90 MIL)
UG - COMBO.LEFT/RIGHT/STRAIGHT ARROW (90 MIL)
UH - HANDICAP PARKING (90 MIL)
UI - ALPHANUMERIC CHAR.(90 MIL)
UJ - BICYCLE SYMBOL (90 MIL)
UK - BICYCLE STRAIGHT ARROW (90 MIL)
UL - BICYCLE CHAR.(90 MIL)
UM - 12"YIELD LINE TRIANGLE (90 MIL)
UN - 24"YIELD LINE TRIANGLE (90 MIL)
UO - BICYCLE LEFT ARROW (90 MIL)
UP - MERGE ARROW (90 MIL)
UQ - RAMP ARROW SYMBOL (90 MIL)
UR - SHARROW (90 MIL)
US - BICYCLE LOOP DETECTOR (90 MIL)
UT - U-TURN ARROW (90 MIL)
UU - FISH-HOOK STRAIGHT ARROW (90 MIL)
UV - FISH-HOOK LEFT/STRAIGHT ARROW (90 MIL)
UW - FISH-HOOK RIGHT/STRAIGHT ARROW (90 MIL)
UX - FISH-HOOK LEFT/RIGHT ARROW (90 MIL)
UY - FISH-HOOK LEFT/RIGHT/STRAIGHT ARROW (90 MIL)
UZ - FISH-HOOK W/CIRCLE STRAIGHT ARROW (90 MIL)

WA - FISH-HOOK W/CIRCLE LEFT ARROW (90 MIL)
WB - FISH-HOOK W/CIRCLE LEFT/STRAIGHT ARROW (90 MIL)
WC - FISH-HOOK W/CIRCLE LEFT/RIGHT/STRAIGHT ARROW (90 MIL)

MA - PERMANENT RAISED MARKER (YELLOW & YELLOW)
MB - PERMANENT RAISED MARKER (CRYSTAL & RED)
MC - PERMANENT RAISED MARKER (YELLOW & RED)
MD - PERMANENT RAISED MARKER (YELLOW)
ME - SNOWPLOWABLE MARKER (YELLOW & YELLOW)
MF - SNOWPLOWABLE MARKER (CRYSTAL & RED)
MG - SNOWPLOWABLE MARKER (YELLOW & RED)
ML - PERMANENT RAISED MARKER (CRYSTAL & CRYSTAL)
MO - SNOWPLOWABLE MARKER (CRYSTAL & CRYSTAL)





LEFT AND RIGHT TURN LANES
ON NC 160 AND
HAMILTON RD.(SR-1106)

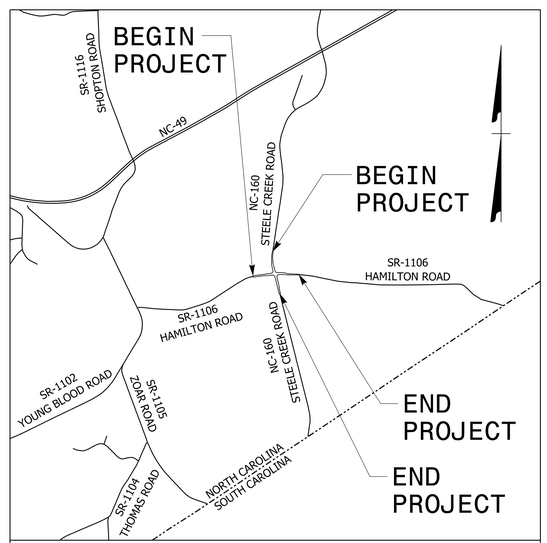
SCALE	1"=50'		REVISIONS
DATE	1-2019		
DWG. BY	JDH		
DESIGN BY	JDH		
APPROVED	JDH		

DocuSign Envelope ID: 42BEDDEB-E32C-43F6-9793-5A026EA21040

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

MECKLENBURG COUNTY



VICINITY MAP

LOCATION: INTERSECTION OF NC 160 (STEELE CREEK ROAD) AND SR 1106 (HAMILTON ROAD)

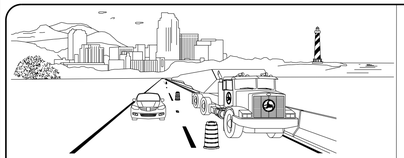
INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES, AND LOCAL NOTES)
TMP-2	TEMPORARY TRAFFIC CONTROL PHASING
TMP-3	TEMPORARY TRAFFIC CONTROL PHASE I DETAIL
TMP-4	TEMPORARY TRAFFIC CONTROL PHASE II DETAIL

SHEET NO.
TMP-1

TIP PROJECT: U-5762

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



WORK ZONE SAFETY & MOBILITY
"from the MOUNTAINS to the COAST"

PREPARED FOR:

NCDOT DIVISION 10

CONTACT: DONALD GRIFFITH
716 W MAIN STREET
ALBEMARLE, NC 28001

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

Plans Prepared By:
DRMP
DRMP, Inc.
8000 Regency Parkway, Suite 175
Cary, NC 27518
NC License No. C-2213 (919) 650-1038

LISA M. MOON, P.E.
ADAM J. DAVIS, P.E.

APPROVED: Lisa M Moon

DATE: 10/3/2017

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

10/3/2017
R:\15_016.004_Division_10_Support\2 - STIP Projects\U-5762\CADD\U5762_TC_TCP_TSH.dgn
User:rlawton

DocuSign Envelope ID: 42BEDDEB-E32C-43F6-9793-5A026EA21040

PROJ. REFERENCE NO.	SHEET NO.
B-5762	TMP-1A

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - CONTRACT STANDARDS AND DEVELOPMENT UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMP. SHORING (LOCATION PURPOSES ONLY)
- WORK AREA
- REMOVAL
- WEDGING

SIGNALS

EXISTING PROPOSED TEMPORARY

PAVEMENT MARKINGS

EXISTING LINES
TEMPORARY LINES

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM SKINNY DRUM TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW BOARD
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

- CRYSTAL/CRYSTAL
- CRYSTAL/RED
- YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

PAVEMENT MARKING SYMBOLS

TEMPORARY PAVEMENT MARKING

PAINT

PA	WHITE EDGE LINE	(4")
PD	3 FT. - 9 FT./SP WHITE MINISKIP	(4")
PE	WHITE SOLID LANE LINE	(4")
PI	YELLOW DOUBLE CENTER	(4")
PV	YELLOW DIAGONAL	(12")
PQ	WHITE CROSSWALK LINE	(8")
P2	WHITE STOP BAR	(24")
QA	LEFT TURN ARROW	
QB	RIGHT TURN ARROW	
QC	STRAIGHT ARROW	

Plans Prepared By:

DRMP

DRMP, Inc.
8000 Regency Parkway, Suite 175
Cary, NC 27518
NC License No. C-2213 (919) 650-1038

APPROVED: Lisa M. Moon

DATE: 10/3/2017

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

ROADWAY STANDARD DRAWINGS & LEGEND

10/3/2017
R:\15-0116.004_Division_10_Support\2 - STIP Projects\U-5762\CADD\U5762_TC_TCP_TSH.dgn
User:rlawton

DocuSign Envelope ID: 42BEDDEB-E32C-43F6-9793-5A026EA21040

PROJ. REFERENCE NO.	SHEET NO.
B-5762	TMP-1B

MANAGEMENT STRATEGIES

THIS PROJECT HAS BEEN PHASED TO MAINTAIN THE EXISTING TRAFFIC PATTERN WHILE CONSTRUCTION TAKES PLACE AWAY FROM TRAFFIC WHEN POSSIBLE OR AT NIGHT UNDER FLAGGING. WEDGING OVER THE EXISTING ROADWAY WILL OCCUR UNDER FLAGGING TO RAISE THE SURFACE TO FINAL GRADE.

TRAFFIC WILL BE SHIFTED TO THE FINAL PATTERN USING AN ICT TO MINIMIZE IMPACT ON NC 160 AND HAMILTON ROAD. REMOVAL OF EXISTING PAVEMENT AND FINALIZING GRADE ALONG THE SHOULDER WILL TAKE PLACE WHILE TRAFFIC REMAINS IN FINAL PATTERN.

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
NC 160 (STEELE CREEK ROAD)	MONDAY THROUGH SUNDAY
SR 1106 (HAMILTON ROAD)	6:00 A.M. TO 8:00 P.M.

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME

NC 160 (STEEL CREEK ROAD)
SR 1106 (HAMILTON ROAD)

HOLIDAY

1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 8:00 P.M. DECEMBER 31ST TO 8:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 8:00 P.M. THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 8:00 P.M. THURSDAY AND 8:00 P.M. MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 8:00 P.M. FRIDAY TO 8:00 P.M. TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 8:00 P.M. THE DAY BEFORE INDEPENDENCE DAY AND 8:00 P.M. THE DAY AFTER INDEPENDENCE DAY. IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 8:00 P.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 8:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
6. FOR LABOR DAY, BETWEEN THE HOURS OF 8:00 P.M. FRIDAY AND 8:00 P.M. TUESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 8:00 P.M. TUESDAY TO 8:00 P.M. MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 8:00 P.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 8:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

LANE AND SHOULDER CLOSURE REQUIREMENTS

C) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.

D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.

E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

G) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

H) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

PAVEMENT EDGE DROP OFF REQUIREMENTS

I) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

J) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 350 IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

K) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

L) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

M) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

N) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 350 IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES

O) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

P) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES DRUMS PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

PAVEMENT MARKINGS AND MARKERS

Q) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
NC-160 (STEELE CREEK ROAD)	PAINT	NONE
SR-1106 (HAMILTON ROAD)	PAINT	NONE

R) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.

S) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

T) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

MISCELLANEOUS

U) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.

Plans Prepared By:
DRMP
DRMP, Inc.
8000 Regency Parkway, Suite 175
Cary, NC 27518
NC License No. C-2213 (919) 650-1038

APPROVED: Lisa M. Moon

DATE: 10/3/2017

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

TRANSPORTATION OPERATIONS PLAN

10/3/2017
R:\15-0116.004_Division_10_Support\2 - STIP Projects\U-5762\CADD\U5762_TC_TCP_TOP.dgn
User:rlawton

DocuSign Envelope ID: 42BEDDEB-E32C-43F6-9793-5A026EA21040

PROJ. REFERENCE NO.	SHEET NO.
B-5762	TMP-2

PHASING

THE CHARLOTTE DEPARTMENT OF TRANSPORTATION (CDOT) WILL PERFORM CONSTRUCTION OF TRAFFIC SIGNALS INCLUDING EQUIPMENT INSTALLATION, EQUIPMENT REMOVAL, PROGRAMMING, AND ASSOCIATED TRAFFIC CONTROL. COORDINATE WITH CDOT FOR THIS WORK.

PHASE I

STEP 1:
INSTALL WORK ZONE ADVANCE WARNING SIGNS. SEE RSD 1101.01, SHEET 3 OF 3. POSITION "ROAD WORK AHEAD" SIGNS APPROXIMATELY 1600' FROM CONSTRUCTION LIMITS ON EACH APPROACH TO ACCOMMODATE FLAGGERS AND SIGNS FOR TEMPORARY LANE CLOSURES.

STEP 2:
AWAY FROM TRAFFIC AND USING RSD 1101.02, SHEETS 1 AND 2 OF 14, AND LAW ENFORCEMENT AS NECESSARY, BEGIN CONSTRUCTION OF THE FOLLOWING UP TO EDGE AND ELEVATION, AS SHOWN ON TMP-3:
- -L- FROM STA 10+30+/- TO STA 21+70+/-
- -Y- FROM STA 10+00+/- TO STA 22+13+/-

COORDINATE WITH UTILITY COMPANIES AND CDOT FOR REMOVAL OF POLES WITHIN CONSTRUCTION AREA. CDOT SHALL INSTALL THE TEMPORARY SIGNAL, TRANSFER SIGNAL CONTROL FROM THE EXISTING SIGNAL TO THE TEMPORARY SIGNAL, AND REMOVE ALL EXISTING SIGNAL EQUIPMENT, INCLUDING SIGNAL POLES AND JOINT-USE POLES IF CDOT IS LAST UTILITY ON POLE. CDOT WILL PROVIDE ANY TRAFFIC CONTROL NECESSARY IN CONJUNCTION WITH THE TRAFFIC SIGNAL CONSTRUCTION.

STEP 3:
AWAY FROM TRAFFIC AND USING RSD 1101.02, SHEETS 1, 2, AND 11 OF 14 AS NECESSARY, COMPLETE CONSTRUCTION OF THE FOLLOWING, UP TO EDGE AND ELEVATION, AS SHOWN ON TMP-3:
- -L- FROM STA 10+30+/- TO STA 21+70+/-
- -Y- FROM STA 10+00+/- TO STA 22+13+/-

STEP 4:
AWAY FROM TRAFFIC AND USING RSD 1101.02, SHEETS 1, 2, AND 11 OF 14, AND LAW ENFORCEMENT AS NECESSARY, COMPLETE CONSTRUCTION OF THE FOLLOWING, UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE, WEDGING AS NECESSARY TO MEET APPROPRIATE GRADE AND PROVIDE POSITIVE DRAINAGE, AS SHOWN ON TMP-3:
- -L- FROM STA 10+30+/- TO STA 21+70+/-
- -Y- FROM STA 10+00+/- TO STA 22+13+/-

APPLY EACH LAYER OF ASPHALT, ALTERNATING -L- AND -Y- LINES, TO MINIMIZE THE BUMP CREATED FOR VEHICLES CROSSING -L- AND MAINTAIN TRAFFIC OPERATIONS THRU THE INTERSECTION.

COORDINATE WITH CDOT FOR INSTALLATION OF THE FINAL SIGNAL FOR UPCOMING TRAFFIC SHIFT.

THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK REQUIRED IN PHASE I, STEP 5 WITHIN A SINGLE WEEKEND PERIOD BETWEEN 8:00 PM FRIDAY AND 6:00 AM MONDAY. [SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES]

STEP 5:
USING RSD 1101.02, SHEETS 1, 2, AND 11 OF 14, AND LAW ENFORCEMENT AS NECESSARY, COMPLETE THE FOLLOWING:
- -APPLY TEMPORARY PAVEMENT MARKINGS, AS SHOWN ON TMP-4:
  - -L- FROM STA 10+30+/- TO STA 21+70+/-
  - -Y- FROM STA 10+00+/- TO STA 22+13+/-
- -INSTALL FINAL SIGNS
- -SHIFT TRAFFIC TO FINAL PATTERN

COORDINATE WITH CDOT TO COMPLETE INSTALLATION OF FINAL SIGNAL. CONTRACTOR AND CDOT SHALL COORDINATE TRAFFIC CONTROL NEEDS FOR FINAL SIGNAL INSTALLATION. CDOT SHALL INSTALL ALL FINAL SIGNAL EQUIPMENT, PROVIDING ADDITIONAL TRAFFIC CONTROL AS NECESSARY. CDOT SHALL, IN COORDINATION WITH THE CONTRACTOR'S WORK, ACTIVATE THE FINAL SIGNAL AND REMOVE ANY UNUSED SIGNAL EQUIPMENT.

PHASE II

STEP 1:
AWAY FROM TRAFFIC AND USING RSD 1101.02, SHEETS 1 AND 2 OF 14 AS NECESSARY, AND LAW ENFORCEMENT, COMPLETE THE FOLLOWING:
- -REMOVE EXISTING PAVEMENT AND FINALIZE SHOULDER GRADE ALONG -Y- FROM STA 11+58+/- TO STA 19+38+/-, AS SHOWN ON TMP-4.

STEP 2:
USING RSD 1101.02 SHEETS 1,2, AND 11 OF 14 AS NECESSARY, AND LAW ENFORCEMENT, COMPLETE THE FOLLOWING WORK:
- -PLACE FINAL LAYER OF SURFACE COURSE ON:
  - -L- FROM STA 10+30+/- TO STA 21+70+/-
  - -Y- FROM STA 10+00+/- TO STA 22+13+/-
- -PLACE FINAL PAVEMENT MARKINGS AND MARKERS ON THE PROJECT PER THE PAVEMENT MARKING PLANS.

Plans Prepared By:
DRMP
DRMP, Inc.
8000 Regency Parkway, Suite 175
Cary, NC 27518
NC License No. C-2213 (919) 650-1038

APPROVED: Lisa M. Moon
DATE: 10/3/2017
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

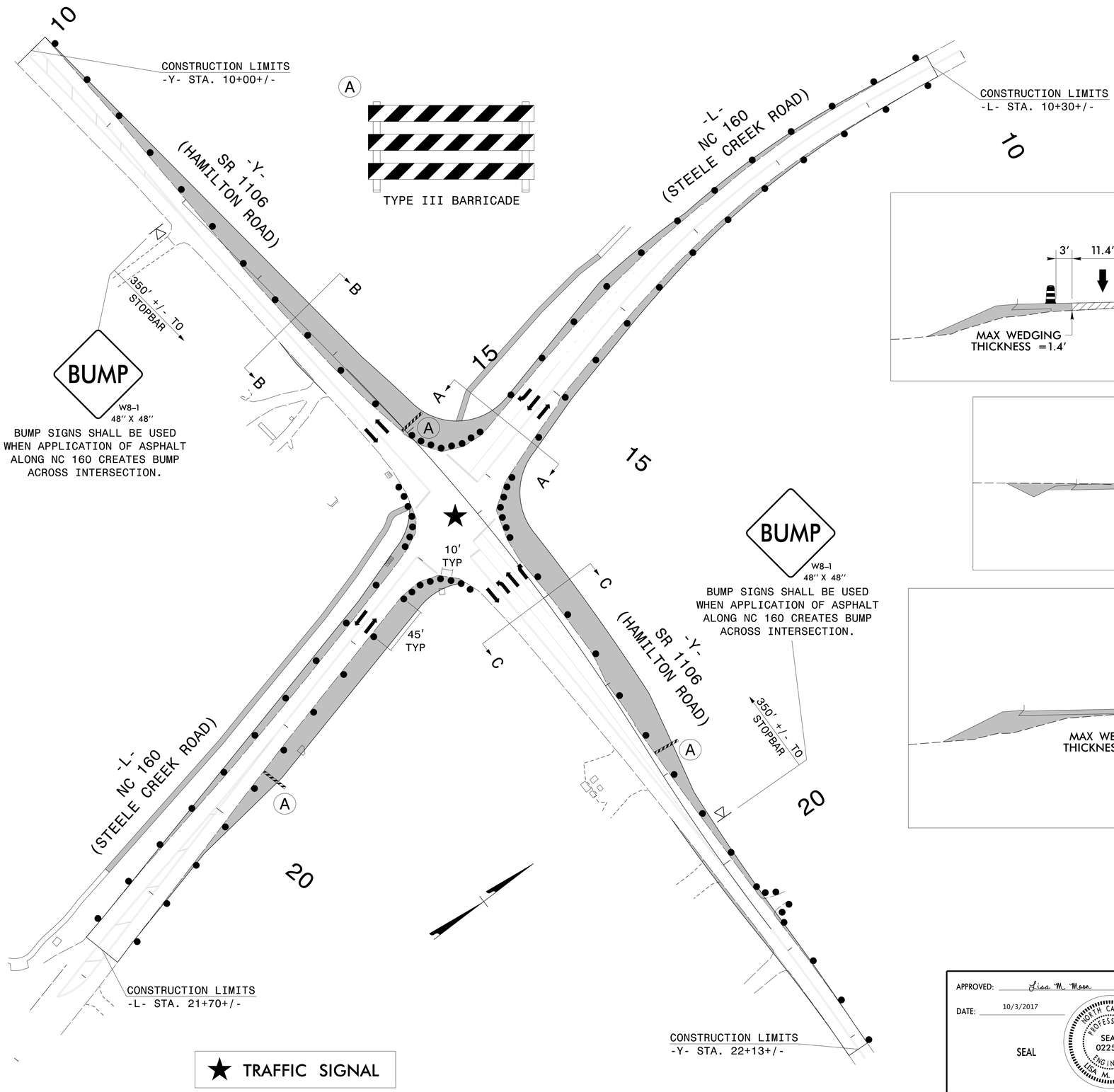
DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

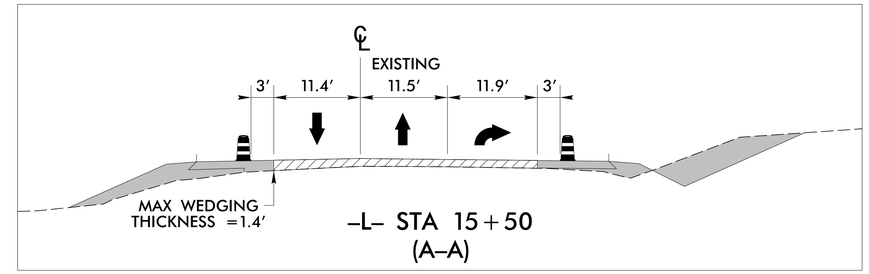
TEMPORARY TRAFFIC CONTROL PHASING

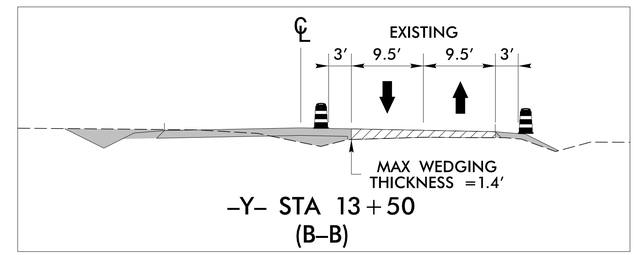
10/3/2017
R:\15-0116.004_Division_10_Support\2 - STIP Projects\U-5762\CADD\U5762_TC_TCP_TOP.dgn
User:rlawton

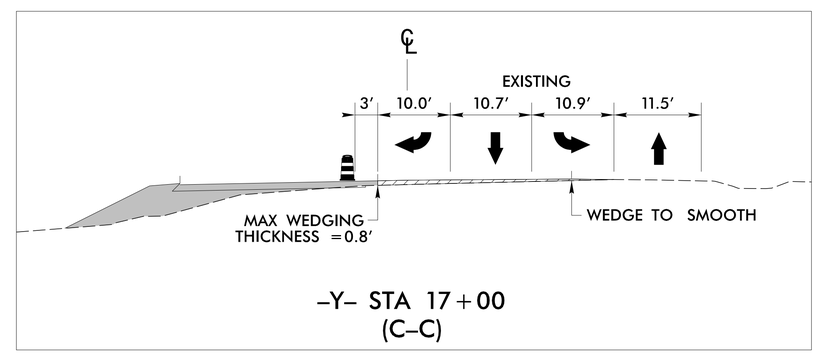
DocuSign Envelope ID: 42BEDDEB-E32C-43F6-9793-5A026EA21040

PROJ. REFERENCE NO.	SHEET NO.
B-5762	TMP-3









Plans Prepared By:

DRMP

DRMP, Inc.
8000 Regency Parkway, Suite 175
Cary, NC 27518
NC License No. C-2213 (919) 650-1038

APPROVED: Lisa M. Moon

DATE: 10/3/2017

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

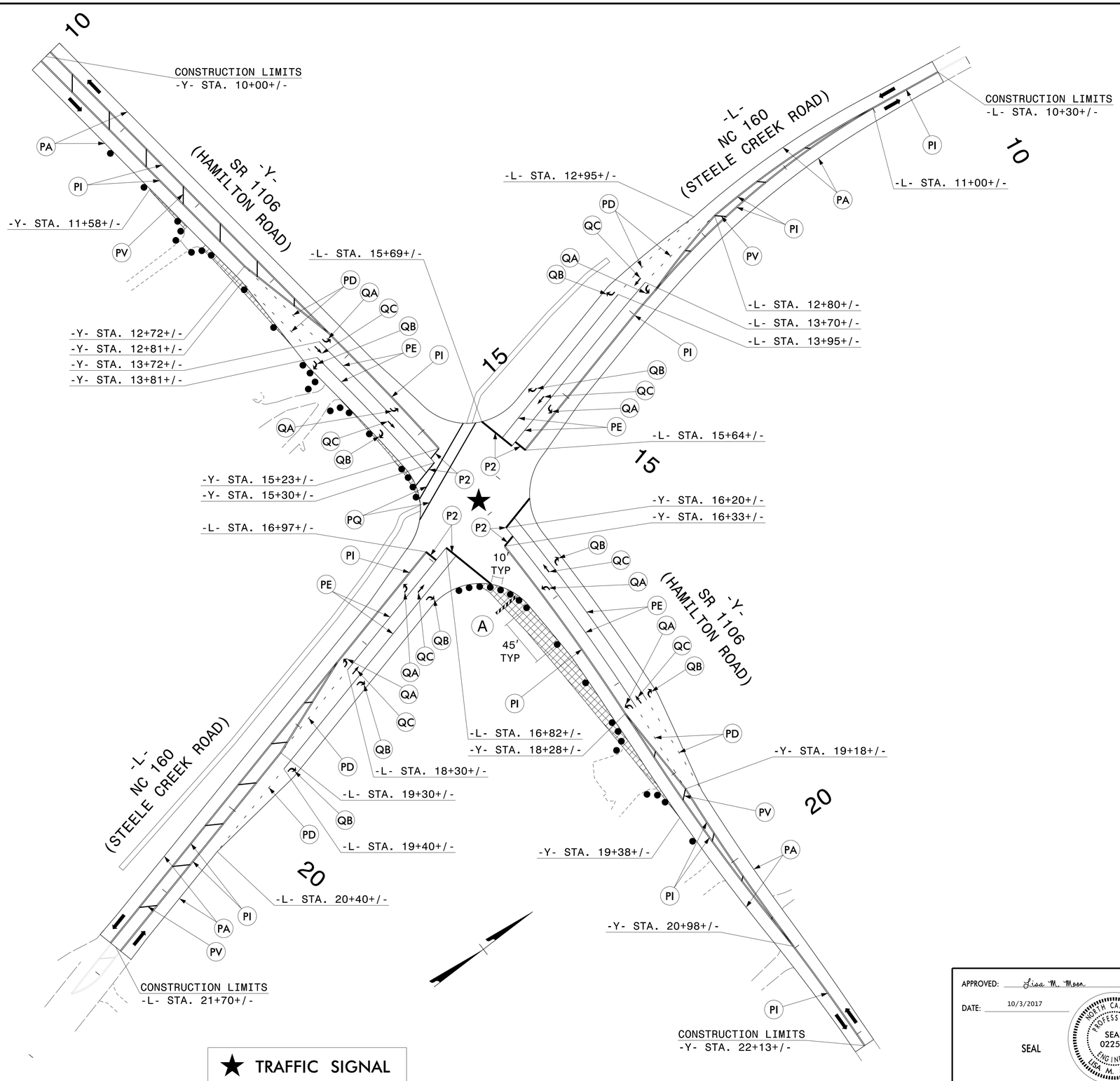
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

TEMPORARY
TRAFFIC CONTROL
PHASE I
DETAIL

10/3/2017
R:\15016.004_Division_10_Support\2 - STIP Projects\U-5762\CADD\U5762_TC_TCP_PSH1.dgn
User:rlawton

DocuSign Envelope ID: 42BEDDEB-E32C-43F6-9793-5A026EA21040

PROJ. REFERENCE NO.	SHEET NO.
B-5762	TMP-4



★ TRAFFIC SIGNAL

A

TYPE III BARRICADE

Plans Prepared By:

DRMP

DRMP, Inc.
8000 Regency Parkway, Suite 175
Cary, NC 27518
NC License No. C-2213 (919) 650-1038

APPROVED: Lisa M. Moon

DATE: 10/3/2017

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

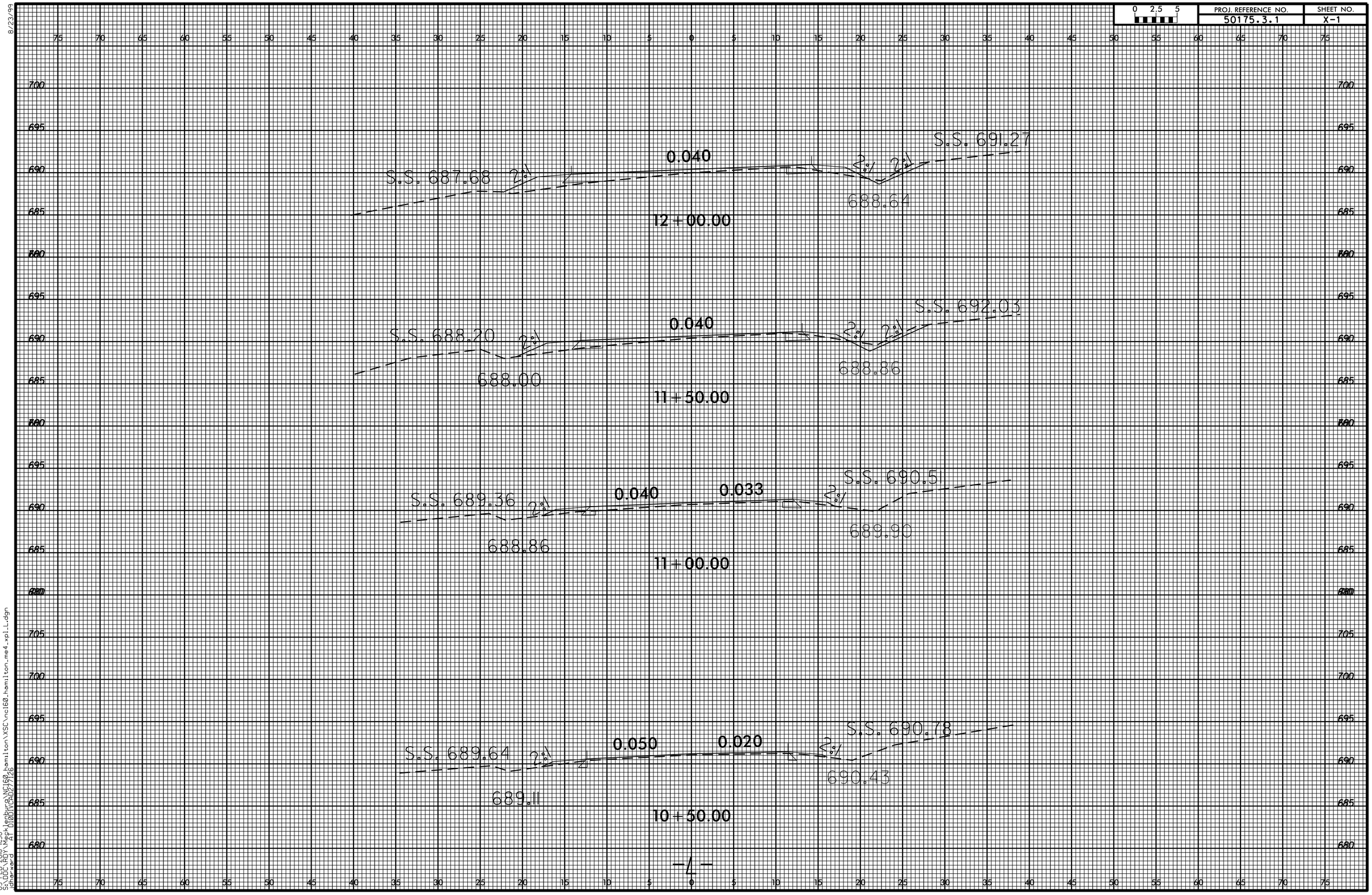
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TEMPORARY TRAFFIC CONTROL PHASE II DETAIL

10/3/2017
R:\15-0116.004_Division_10_Support\2 - STIP Projects\U-5762\CADD\U5762_TC_TCP_PSH2.dgn
User:rlawton

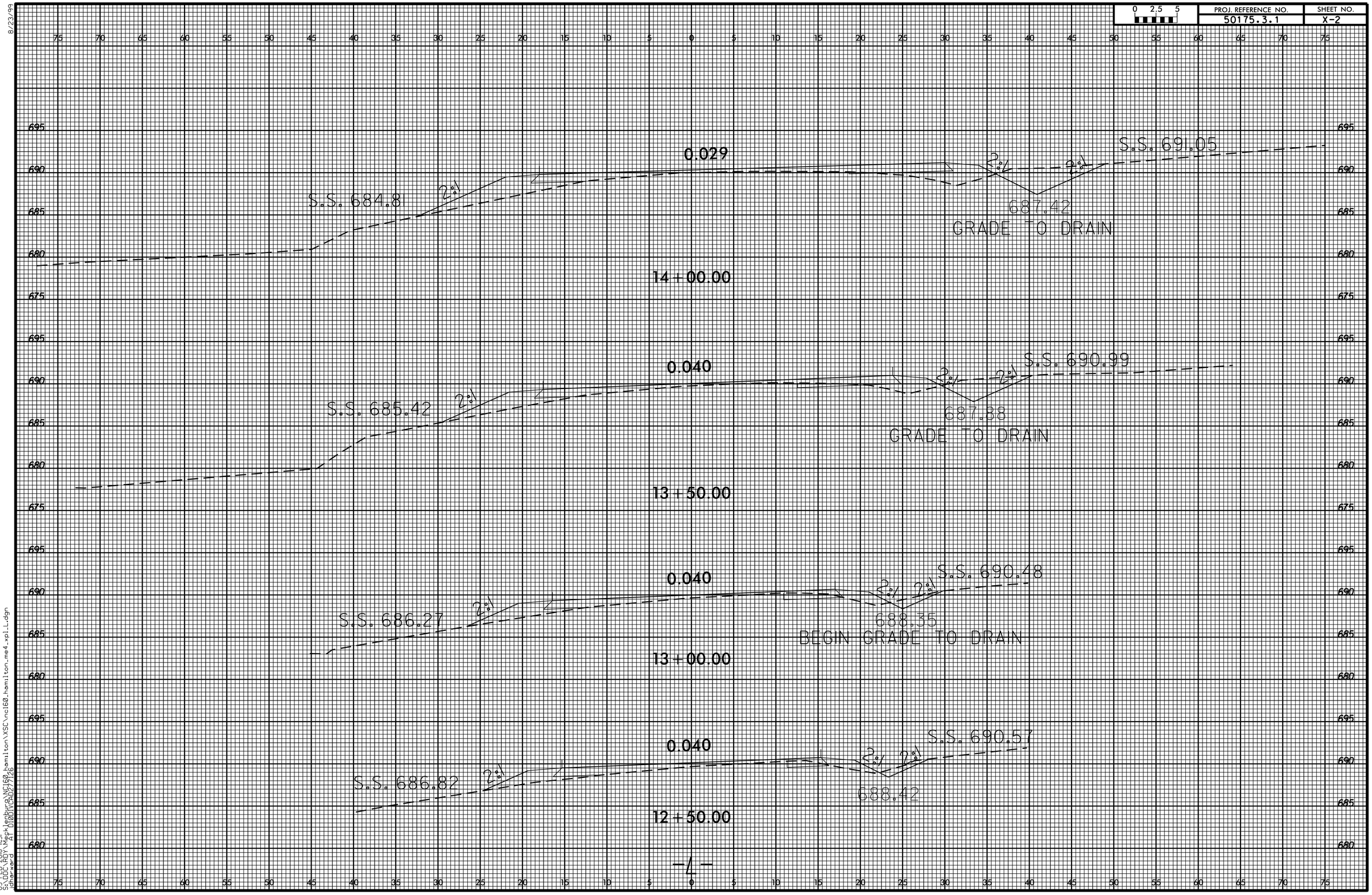
0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	50175.3.1	X-1



8/23/99

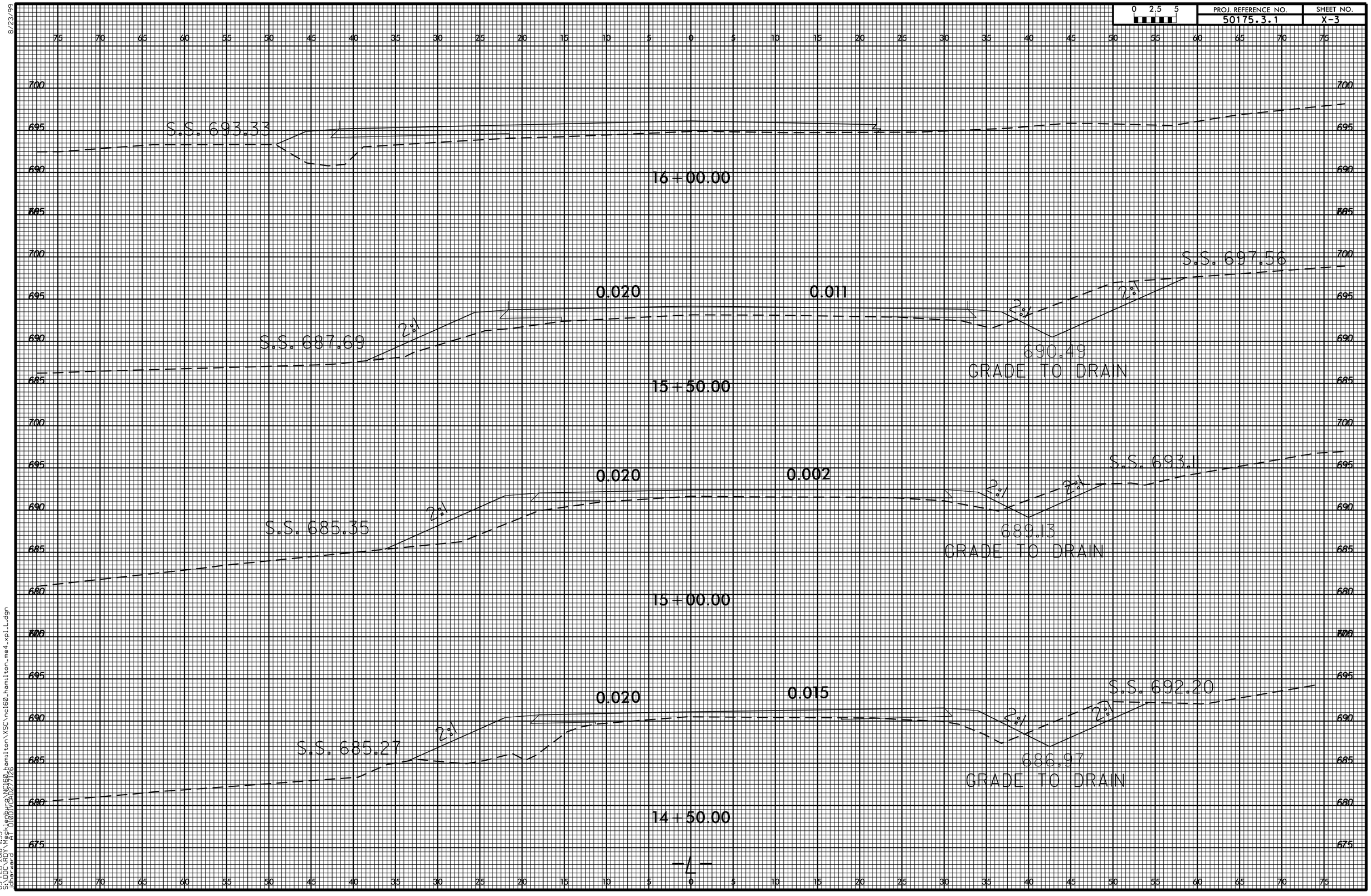
05-FEB-2018 11:50
S:\DOC\RDY\Mark_Lenburg\NC160_hamilton\XSC\nc160_hamilton_me4-xpl_L.dgn
dhaward 41 D101VCAD27.126

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	50175.3.1	X-2



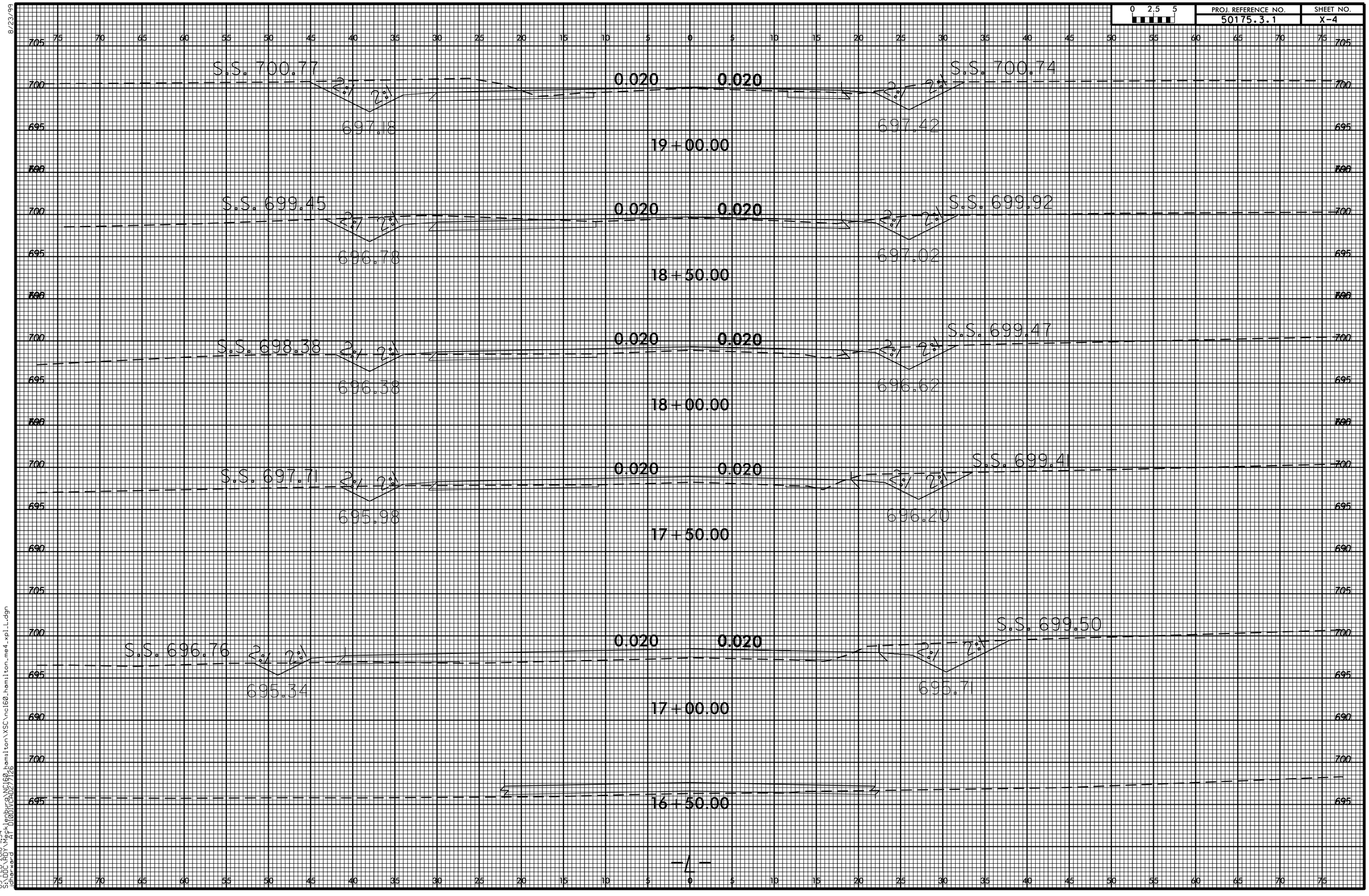
8/23/99

05-FEB-2018 11:51
S:\DOCUMENTS\Projects\hamilton\XSC\nc160_hamilton_me4-xpl_L.dgn
dhayward
41 D101VCAD27.126



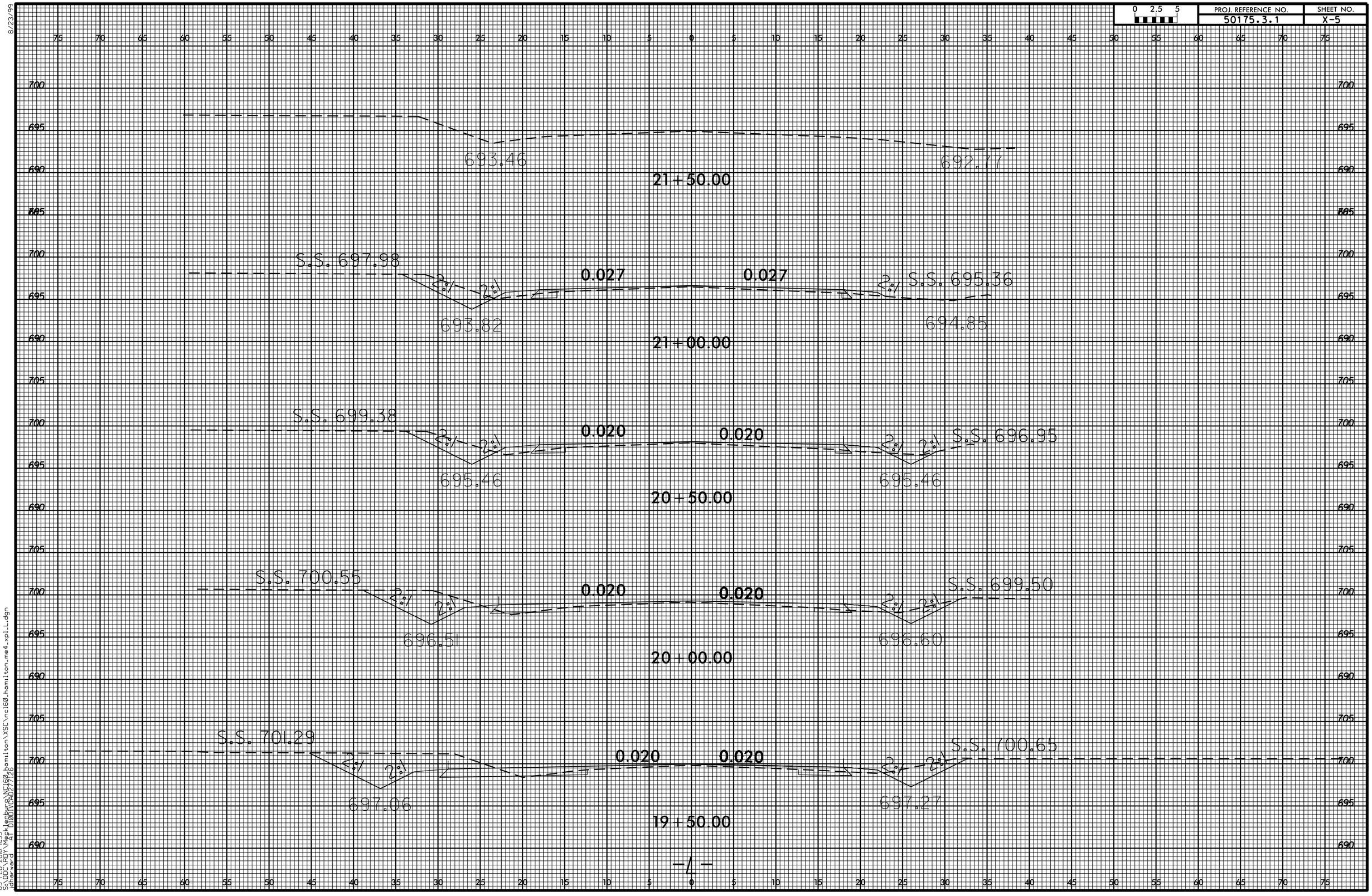
8/23/99
05-FEB-2018 11:53
S:\DOC\RDY\Mark_Lenburg\NC160_hamilton\XSC\nc160_hamilton_me4-xpl_L.dgn
dhaward 41 D101VCAD27.126

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	50175.3.1	X-4

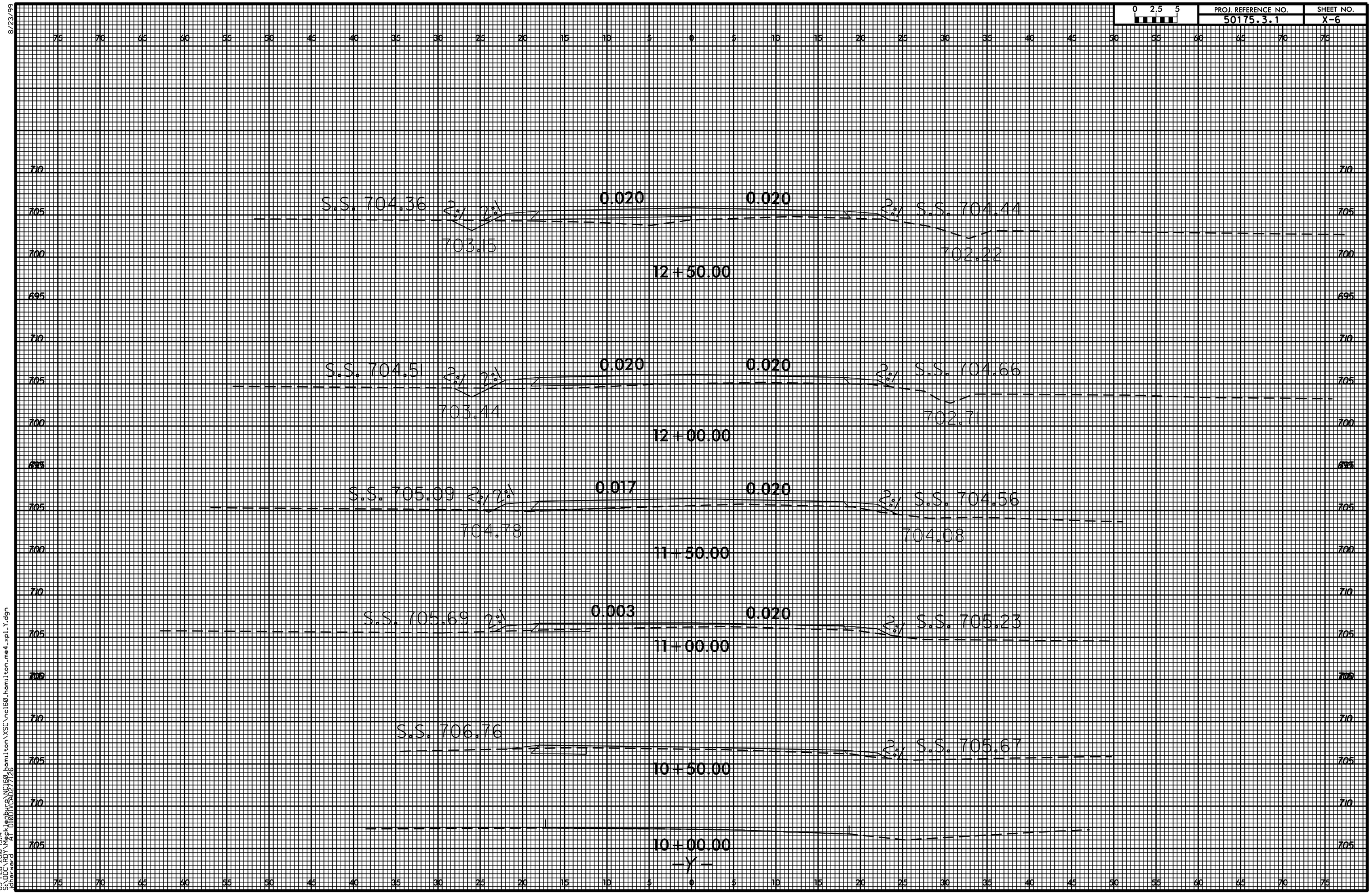


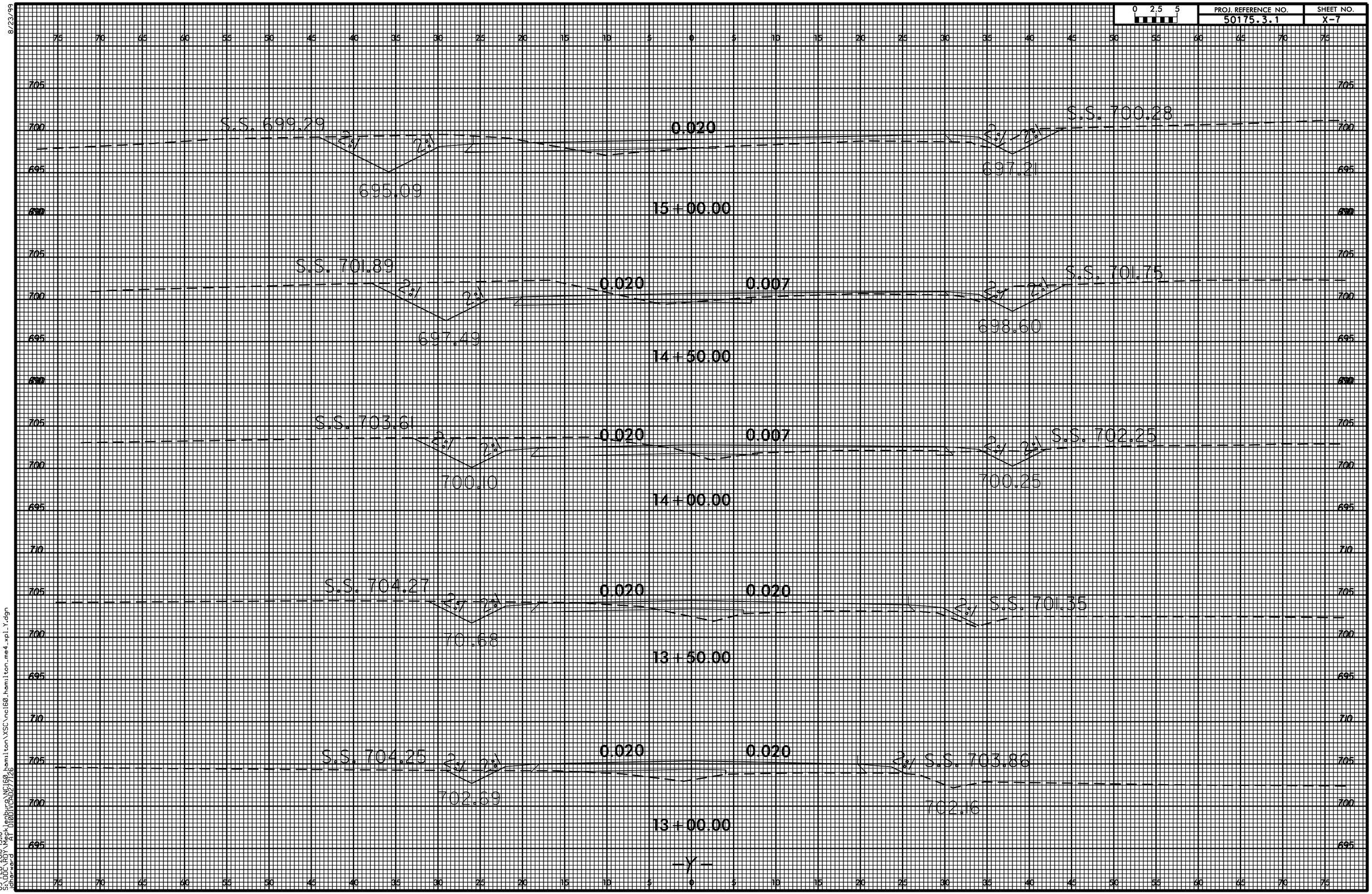
05-FEB-2018 11:54
S:\DOCNRDY\Mark_Lenburg\NC160_hamilton\XSC\nc160_hamilton_me4-xpl_L.dgn
dhaward 41 D101VCAD27.26

8/23/99

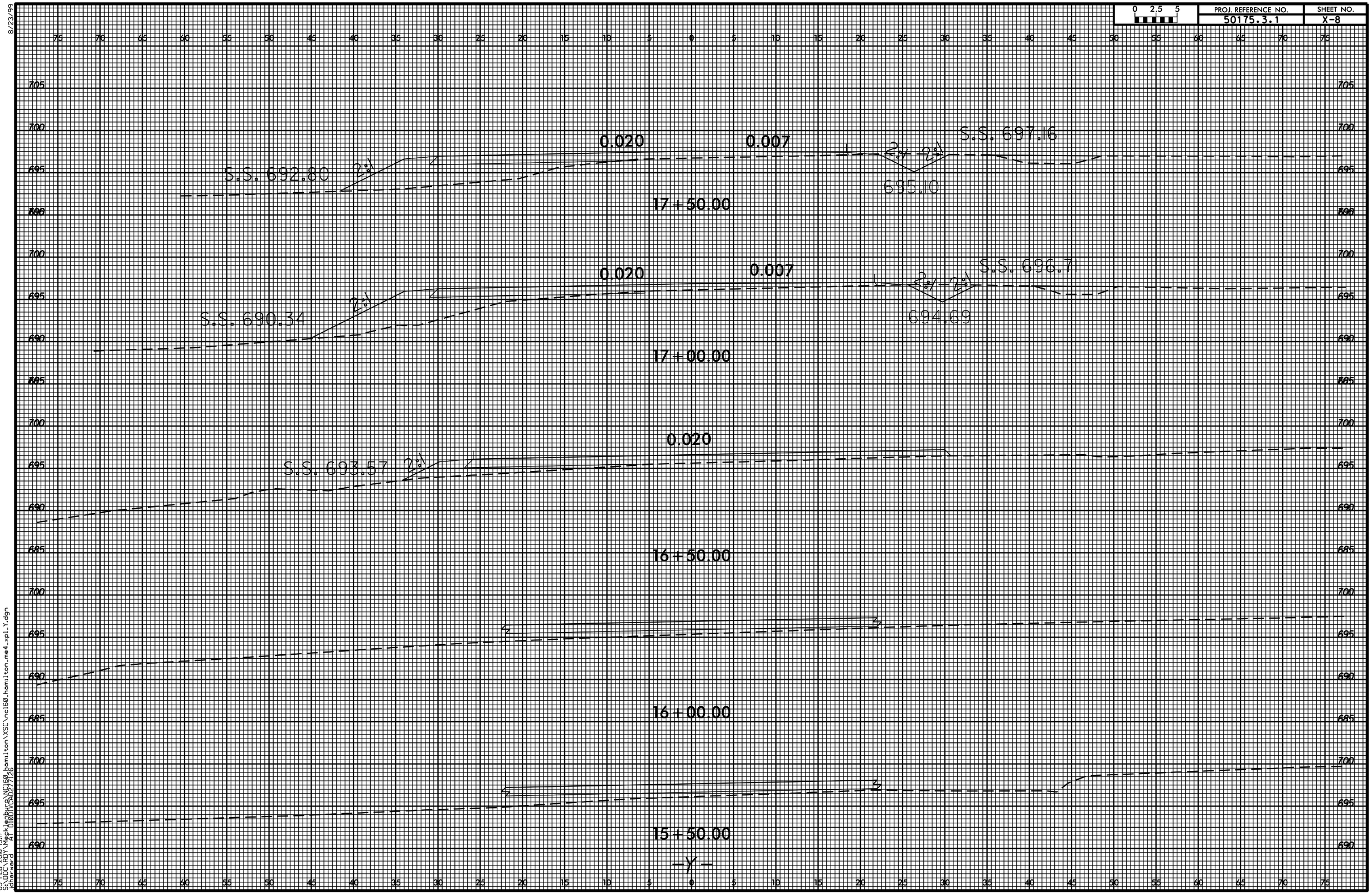


05-FEB-2018 11:55
S:\DOCNRDY\Mark_Lenburg\NC160_hamilton\XSC\nc160_hamilton_me4-xpl_L.dgn
dhoward 41 D101VCAD27.126
8/23/99

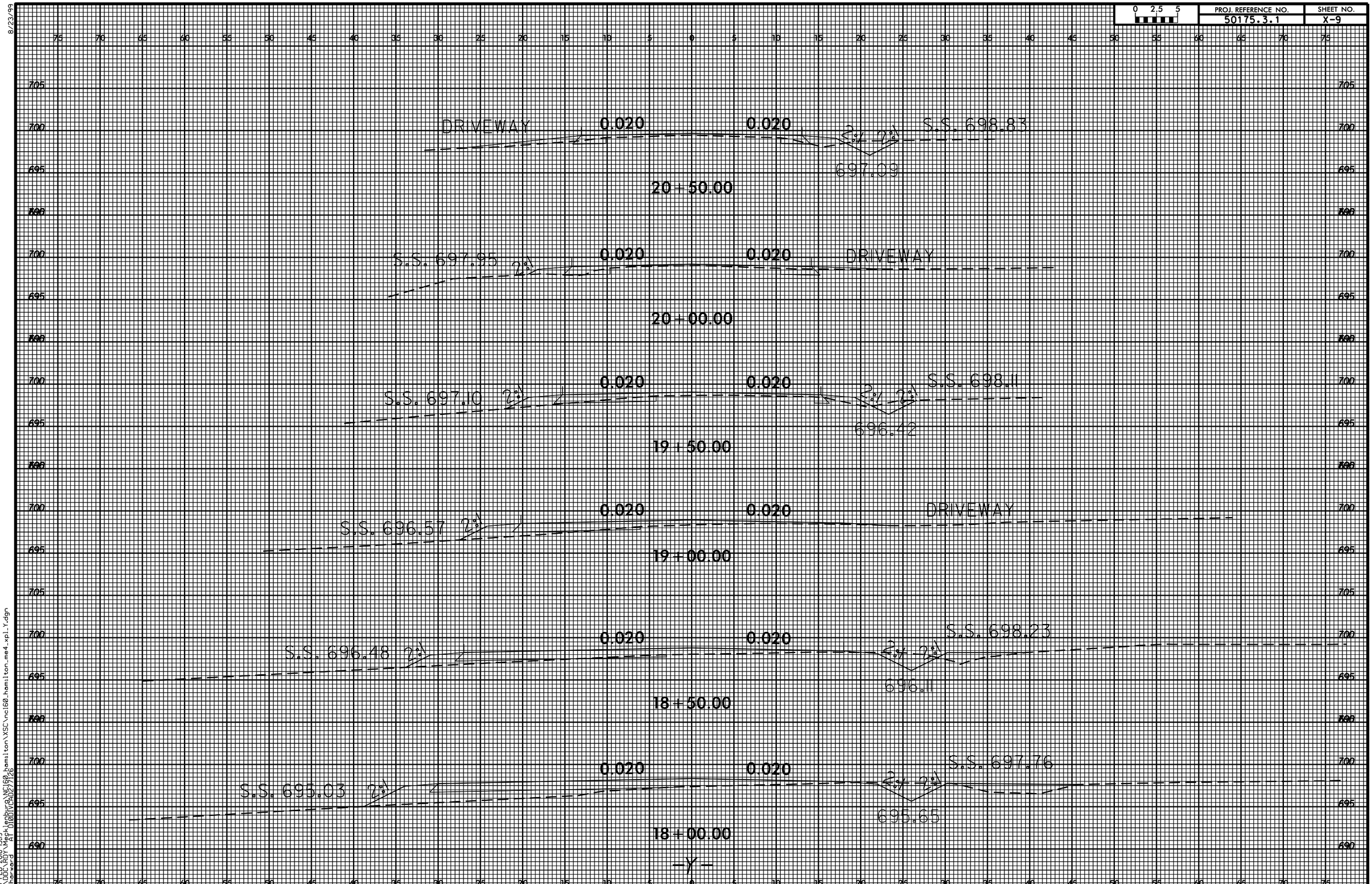

0 2.5 5
PROJ. REFERENCE NO.
50175.3.1
SHEET NO.
X-6
S.S. 704.36
2:1
2:1
703.15
0.020
0.020
2:1
S.S. 704.44
702.22
12+50.00
S.S. 704.5
2:1
2:1
703.44
0.020
0.020
2:1
S.S. 704.66
702.71
12+00.00
S.S. 705.09
2:1
2:1
704.78
0.017
0.020
2:1
S.S. 704.56
704.08
11+50.00
S.S. 705.69
2:1
0.003
0.020
2:1
S.S. 705.23
11+00.00
S.S. 706.76
2:1
S.S. 705.67
10+50.00
10+00.00
-Y-
8/23/99
05-FEB-2018 13:14
S:\DOC\RDY\Meck_Lenburg\W6160_hamilton\XSC\vnc160_hamilton_me4.xpl_Y.dgn
AT DIDOIVCAD27726
rdheward



8/23/99
05-FEB-2018 13:16
S:\DOC\RDY\Meck_Lenburg\W6160_hamilton\XSC\ncl60_hamilton_me4_xpl_Y.dgn
idehoward AT DIDOIVCAD27726



8/23/99
05-FEB-2018 13:17
S:\DOC\RDY\Meck_Lenburg\W6160_hamilton\XSC\vnc160_hamilton_me4_xpl_Y.dgn
idehoward AT DIDOTIVCAD27726

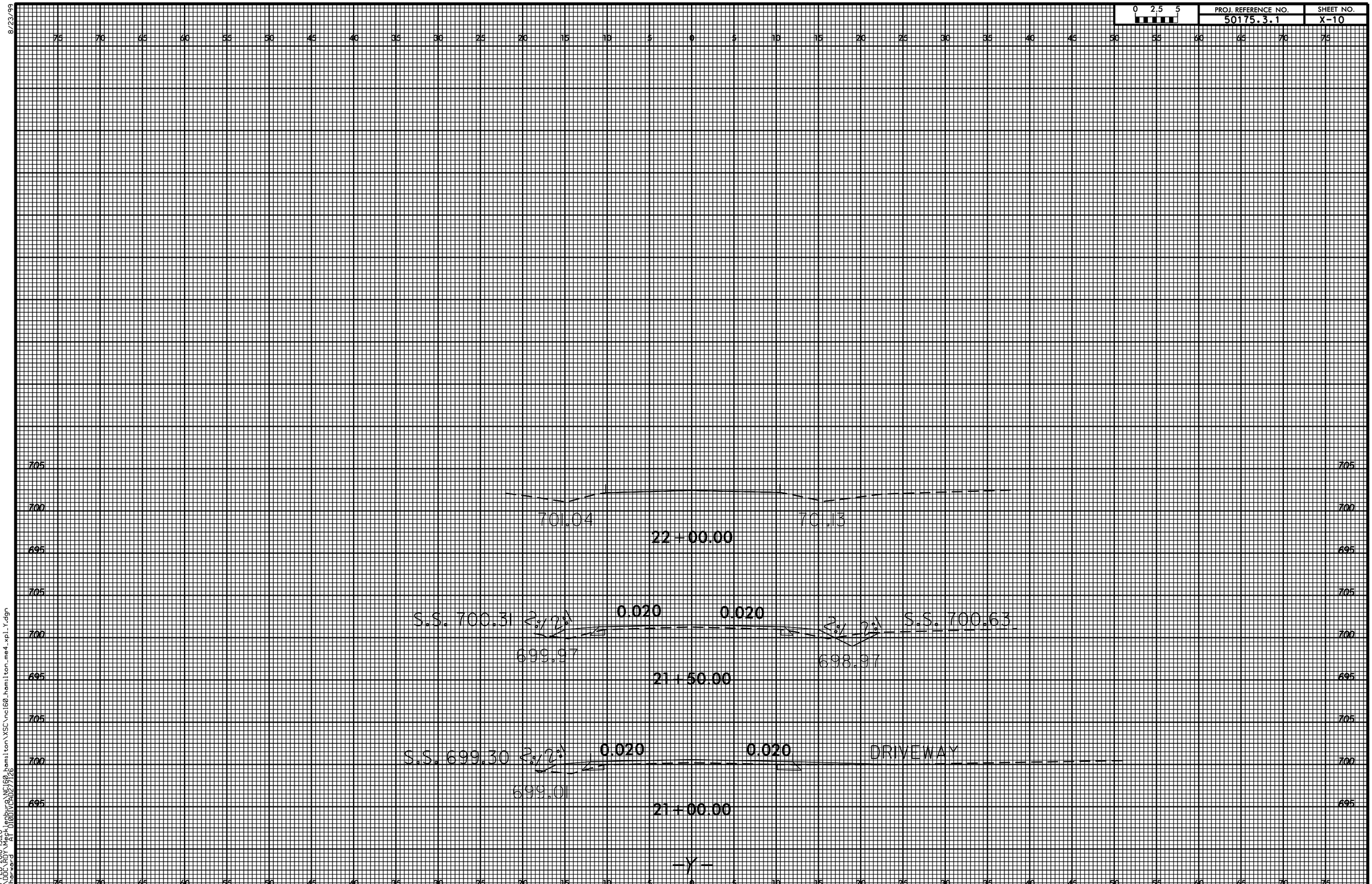


8/23/99

05-FEB-2018 13:19
S:\DOC\RDY\Meck_Lenburg\W6160_hamilton\XSC\vnc160_hamilton_me4_xpl_Y.dgn
rdhoward AT DIDOTIVCAD27726

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	50175.3.1	X-10



05-FEB-2018 13:20
S:\DOC\RDY\Meck_lenburg\W6160_hamilton\XSC\ncl60_hamilton_me4_xpl_Y.dgn
idhoward AT DIDOTVCAD27126