



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

March 05, 2020

Addendum No. 1

RE: Contract # C204352

WBS # 50401.3.GV1

FA# NHPP-040-4(161)220

Alamance County (I-5711)

I-40/I-85 AND SR-1007 (MEBANE OAKS RD) IN MEBANE.

March 17, 2020 Letting

To Whom It May Concern:

Reference is made to the plans and proposal form furnished to you on this project.

The following revisions have been made to the Roadway plans.

Sheet No.	Revision
5	2 notes added. (DO NOT DISTURB SIGN & DO NOT DISTURB FLAG POLE)
TMP-1 thru TMP-8A	The entire Traffic Management Plan set has been revised.

Please void the above listed existing Sheets in your plans and staple the revised Sheets thereto.

The following revisions have been made to the Structure plans.

Sheet No.	Revision
S-4	The note referencing "Left Widening" has been removed.

Please void the above listed existing Sheet in your plans and staple the revised Sheet thereto.

The following revisions have been made to the proposal:

Page No.	Revisions
Proposal Cover	Note added that reads "Includes Addendum No. 1 Dated 03-05-2020"
G-6	The Project Special Provision entitled INTERMEDIATE CONTRACT TIME NUMBER 13 AND LIQUIDATED DAMAGES has been revised.

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
CONTRACT STANDARDS AND DEVELOPMENT
1591 MAIL SERVICE CENTER
RALEIGH, NC 27699-1591

Telephone: (919) 707-6900
Fax: (919) 250-4127
Customer Service: 1-877-368-4968

Location:
1020 BIRCH RIDGE DR.
RALEIGH, NC 27610

Website: www.ncdot.gov

Please void the above listed existing Pages in your proposal and staple the revised Pages thereto.

On the item sheets the following pay item revisions have been made:

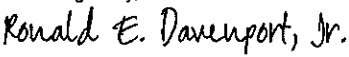
<u>Item</u>	<u>Description</u>	<u>Old Quantity</u>	<u>New Quantity</u>
0092-4400000000-E-1110	WORK ZONE SIGNS (STATIONARY)	460 SF	524 SF
0102-4447000000-E-SP	PEDESTRIAN CHANNELIZING DEVICES	56 LF	72 LF

The Contractor's bid must include these pay item revisions.

The electronic bidding file has been updated to reflect these revisions. Please download the Addendum File and follow the instructions for applying the addendum. Bid Express will not accept your bid unless the addendum has been applied.

The contract will be prepared accordingly.

Sincerely,

DocuSigned by:

 F81B6038A47A442...

Ronald E. Davenport, Jr., PE
 State Contract Officer

RED/jjr
 Attachments

cc: Mr. Lamar Sylvester, PE
 Mr. Mike Mills, PE
 Mr. Chris Peoples, PE
 Mr. Jon Weathersbee, PE
 Mr. Ken Kennedy, PE
 Project File (2)

Mr. Ray Arnold, PE
 Ms. Jaci Kincaid
 Ms. Lori Strickland
 Mr. Mike Gwyn
 Ms. Penny Higgins
 Mr. Mitchell Dixon
 Mr. Kyle Kempf

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH, N.C.

PROPOSAL

INCLUDED ADDENDUM No.1 DATED 03-05-2020

DATE AND TIME OF BID OPENING: **MARCH 17, 2020 AT 2:00 PM**

CONTRACT ID C204352
WBS 50401.3.GV1

FEDERAL-AID NO. NHPP-040-4(161)220
COUNTY ALAMANCE
T.I.P. NO. I-5711
MILES 0.605
ROUTE NO. I 40
LOCATION I-40/I-85 AND SR-1007 (MEBANE OAKS RD) IN MEBANE.

TYPE OF WORK GRADING, DRAINAGE, PAVING, ITS, AND STRUCTURES.

NOTICE:

ALL BIDDERS SHALL COMPLY WITH ALL APPLICABLE LAWS REGULATING THE PRACTICE OF GENERAL CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA WHICH REQUIRES THE BIDDER TO BE LICENSED BY THE N.C. LICENSING BOARD FOR CONTRACTORS WHEN BIDDING ON ANY NON-FEDERAL AID PROJECT WHERE THE BID IS \$30,000 OR MORE, EXCEPT FOR CERTAIN SPECIALTY WORK AS DETERMINED BY THE LICENSING BOARD. BIDDERS SHALL ALSO COMPLY WITH ALL OTHER APPLICABLE LAWS REGULATING THE PRACTICES OF ELECTRICAL, PLUMBING, HEATING AND AIR CONDITIONING AND REFRIGERATION CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA. NOTWITHSTANDING THESE LIMITATIONS ON BIDDING, THE BIDDER WHO IS AWARDED ANY FEDERAL - AID FUNDED PROJECT SHALL COMPLY WITH CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA FOR LICENSING REQUIREMENTS WITHIN 60 CALENDAR DAYS OF BID OPENING.

BIDS WILL BE RECEIVED AS SHOWN BELOW:

THIS IS A ROADWAY & STRUCTURE PROPOSAL

5% BID BOND OR BID DEPOSIT REQUIRED

INTERMEDIATE CONTRACT TIME NUMBER 12 AND LIQUIDATED DAMAGES:

(2-20-07) (Rev. 6-18-13)

108

SPI G14 H

The Contractor shall complete the work required of **Phase 1C, Steps #1 thru #3** as shown on Sheet **TMP-3** and shall place and maintain traffic on same.

The time of availability for this intermediate contract time is **8:00 PM** the **Friday** the Contractor elects to begin the work.

The completion time for this intermediate contract time is **6:00 AM** the following **Monday**, that is **fifty-eight (58) consecutive hours** after the Contractor begins this work.

The liquidated damages are **One Thousand Two Hundred and Fifty Dollars (\$ 1,250.00)** per fifteen **(15)** minute time period.

INTERMEDIATE CONTRACT TIME NUMBER 13 AND LIQUIDATED DAMAGES:

(2-20-07) (Rev. 6-18-13)

108

SPI G14 H

The Contractor shall complete the work required of **Phase III, Steps #5 thru #7** as shown on Sheet **TMP-3A** and shall place and maintain traffic on same.

The time of availability for this intermediate contract time is **8:00 PM** the **Friday** the Contractor elects to begin the work.

The completion time for this intermediate contract time is **6:00 AM** the following **Monday**, that is **fifty-eight (58) consecutive hours** after the Contractor begins this work.

The liquidated damages are **One Thousand Two Hundred and Fifty Dollars (\$ 1,250.00)** per fifteen **(15)** minute time period.

INTERMEDIATE CONTRACT TIME NUMBER 14 AND LIQUIDATED DAMAGES FOR FAILURE TO REPAIR A DAMAGED NCDOT ITS FIBER OPTIC COMMUNICATIONS CABLE AND RESTORE COMMUNICATION:

The Contractor shall repair all existing fiber optic communication cables damaged during construction. The Contractor shall immediately report damages to the Engineer and the NCDOT Regional ITS Engineer at (336) 315-7080. The Contractor shall repair all damages within twenty-four (24) hours at no cost to the Department. The Contractor shall bring all affected ITS fiber optic communication cables back on line within the same twenty-four (24) hours. A "damaged" ITS fiber optic communications cable is any fiber optic communications cable that is determined damaged due to an accidental or unscheduled outage event.

Liquidated Damages for failure to repair a damaged NCDOT ITS fiber optic communications cable and restore communications within twenty-four (24) hours are Five Hundred Dollars (\$ 500.00) per hour, or any portion thereof.

County : Alamance

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
ROADWAY ITEMS						
0001	0000100000-N	800	MOBILIZATION	Lump Sum	L.S.	
0002	0000400000-N	801	CONSTRUCTION SURVEYING	Lump Sum	L.S.	
0003	0030000000-N	SP	TYPE II MODIFIED APPROACH FILL, STATION ***** (27+02.26 -L-)	Lump Sum	L.S.	
0004	0036000000-E	225	UNDERCUT EXCAVATION	950 CY		
0005	0043000000-N	226	GRADING	Lump Sum	L.S.	
0006	0050000000-E	226	SUPPLEMENTARY CLEARING & GRUB- BING	1 ACR		
0007	0195000000-E	265	SELECT GRANULAR MATERIAL	500 CY		
0008	0196000000-E	270	GEOTEXTILE FOR SOIL STABILIZA- TION	1,500 SY		
0009	0199000000-E	SP	TEMPORARY SHORING	140 SF		
0010	0255000000-E	SP	GENERIC GRADING ITEM HAULING & DISPOSAL OF PETRO- LEUM CONTAMINATED SOIL	50 TON		
0011	0318000000-E	300	FOUNDATION CONDITIONING MATE- RIAL, MINOR STRUCTURES	430 TON		
0012	0320000000-E	300	FOUNDATION CONDITIONING GEO- TEXTILE	1,800 SY		
0013	0343000000-E	310	15" SIDE DRAIN PIPE	960 LF		
0014	0344000000-E	310	18" SIDE DRAIN PIPE	124 LF		
0015	0345000000-E	310	24" SIDE DRAIN PIPE	280 LF		
0016	0348000000-E	310	*** SIDE DRAIN PIPE ELBOWS (15")	6 EA		
0017	0378000000-E	310	24" RC PIPE CULVERTS, CLASS III	44 LF		
0018	0448200000-E	310	15" RC PIPE CULVERTS, CLASS IV	1,648 LF		

County : Alamance

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0019	0448300000-E	310	18" RC PIPE CULVERTS, CLASS IV	240 LF		
0020	0448400000-E	310	24" RC PIPE CULVERTS, CLASS IV	584 LF		
0021	0995000000-E	340	PIPE REMOVAL	2,034 LF		
0022	1099500000-E	505	SHALLOW UNDERCUT	350 CY		
0023	1099700000-E	505	CLASS IV SUBGRADE STABILIZATION	650 TON		
0024	1220000000-E	545	INCIDENTAL STONE BASE	1,000 TON		
0025	1297000000-E	607	MILLING ASPHALT PAVEMENT, **** DEPTH (1-1/2")	21,400 SY		
0026	1297000000-E	607	MILLING ASPHALT PAVEMENT, **** DEPTH (3")	19,150 SY		
0027	1330000000-E	607	INCIDENTAL MILLING	2,110 SY		
0028	1491000000-E	610	ASPHALT CONC BASE COURSE, TYPE B25.0C	7,100 TON		
0029	1503000000-E	610	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0C	4,800 TON		
0030	1519000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5B	5,700 TON		
0031	1523000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5C	1,200 TON		
0032	1524200000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5D	2,100 TON		
0033	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	1,145 TON		
0034	1577000000-E	620	POLYMER MODIFIED ASPHALT BINDER FOR PLANT MIX	120 TON		
0035	1693000000-E	654	ASPHALT PLANT MIX, PAVEMENT REPAIR	1,000 TON		

County : Alamance

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0036	1840000000-E	665	MILLED RUMBLE STRIPS (ASPHALT CONCRETE)	6,900 LF		
0037	2264000000-E	840	PIPE PLUGS	0.029 CY		
0038	2286000000-N	840	MASONRY DRAINAGE STRUCTURES	56 EA		
0039	2308000000-E	840	MASONRY DRAINAGE STRUCTURES	2.4 LF		
0040	2363000000-N	840	FRAME WITH TWO GRATES, STD 840.**** (840.15)	4 EA		
0041	2364000000-N	840	FRAME WITH TWO GRATES, STD 840.16	4 EA		
0042	2365000000-N	840	FRAME WITH TWO GRATES, STD 840.22	1 EA		
0043	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (E)	8 EA		
0044	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (F)	22 EA		
0045	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (G)	21 EA		
0046	2451000000-N	852	CONCRETE TRANSITIONAL SECTION FOR DROP INLET	3 EA		
0047	2535000000-E	846	***X*** CONCRETE CURB (8" X 12")	30 LF		
0048	2549000000-E	846	2'-6" CONCRETE CURB & GUTTER	7,920 LF		
0049	2591000000-E	848	4" CONCRETE SIDEWALK	2,260 SY		
0050	2605000000-N	848	CONCRETE CURB RAMPS	60 EA		
0051	2612000000-E	848	6" CONCRETE DRIVEWAY	80 SY		
0052	2627000000-E	852	4" CONCRETE ISLAND COVER	140 SY		

County : Alamance

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0053	2647000000-E	852	5" MONOLITHIC CONCRETE ISLANDS (SURFACE MOUNTED)	140 SY		
0054	2655000000-E	852	5" MONOLITHIC CONCRETE ISLANDS (KEYED IN)	600 SY		
0055	2710000000-N	854	CONCRETE BARRIER TRANSITION SECTION	2 EA		
0056	2724000000-E	857	PRECAST REINFORCED CONCRETE BARRIER, SINGLE FACED	140 LF		
0057	2800000000-N	858	ADJUSTMENT OF CATCH BASINS	1 EA		
0058	3030000000-E	862	STEEL BEAM GUARDRAIL	700 LF		
0059	3045000000-E	862	STEEL BEAM GUARDRAIL, SHOP CURVED	175 LF		
0060	3145000000-E	862	EXTRA LENGTH GUARDRAIL POST (** STEEL) (8')	41 EA		
0061	3150000000-N	862	ADDITIONAL GUARDRAIL POSTS	5 EA		
0062	3195000000-N	862	GUARDRAIL END UNITS, TYPE AT-1	3 EA		
0063	3215000000-N	SP	GUARDRAIL ANCHOR UNITS, TYPE III	2 EA		
0064	3287000000-N	SP	GUARDRAIL END UNITS, TYPE TL-3	3 EA		
0065	3317000000-N	SP	GUARDRAIL ANCHOR UNITS, TYPE B-77	2 EA		
0066	3360000000-E	863	REMOVE EXISTING GUARDRAIL	605 LF		
0067	3503000000-E	866	WOVEN WIRE FENCE, 47" FABRIC	700 LF		
0068	3509000000-E	866	4" TIMBER FENCE POSTS, 7'-6" LONG	35 EA		
0069	3515000000-E	866	5" TIMBER FENCE POSTS, 8'-0" LONG	28 EA		
0070	3649000000-E	876	RIP RAP, CLASS B	30 TON		

County : Alamance

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0071	3656000000-E	876	GEOTEXTILE FOR DRAINAGE	1,415 SY		
0072	4048000000-E	902	REINFORCED CONCRETE SIGN FOUNDATIONS	2 CY		
0073	4054000000-E	902	PLAIN CONCRETE SIGN FOUNDATIONS	1 CY		
0074	4057000000-E	SP	OVERHEAD FOOTING	36 CY		
0075	4060000000-E	903	SUPPORTS, BREAKAWAY STEEL BEAM	1,886 LB		
0076	4066000000-E	903	SUPPORTS, SIMPLE STEEL BEAM	317 LB		
0077	4072000000-E	903	SUPPORTS, 3-LB STEEL U-CHANNEL	900 LF		
0078	4082100000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE AT STA ***** (23+15 -L-)	Lump Sum	L.S.	
0079	4082100000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE AT STA ***** (30+75 -L-)	Lump Sum	L.S.	
0080	4096000000-N	904	SIGN ERECTION, TYPE D	4 EA		
0081	4102000000-N	904	SIGN ERECTION, TYPE E	51 EA		
0082	4108000000-N	904	SIGN ERECTION, TYPE F	2 EA		
0083	4109000000-N	904	SIGN ERECTION, TYPE *** (OVERHEAD) (A)	4 EA		
0084	4110000000-N	904	SIGN ERECTION, TYPE *** (GROUND MOUNTED) (A)	6 EA		
0085	4110000000-N	904	SIGN ERECTION, TYPE *** (GROUND MOUNTED) (B)	1 EA		
0086	4116100000-N	904	SIGN ERECTION, RELOCATE TYPE **** (GROUND MOUNTED) (GM RESTAURANT LOGO SIGNS)	1 EA		
0087	4149000000-N	907	DISPOSAL OF SIGN SYSTEM, OVERHEAD	1 EA		

County : Alamance

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0088	4152000000-N	907	DISPOSAL OF SIGN SYSTEM, STEEL BEAM	2 EA		
0089	4155000000-N	907	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	56 EA		
0090	4158000000-N	907	DISPOSAL OF SIGN SYSTEM, WOOD	2 EA		
0091	4192000000-N	907	DISPOSAL OF SUPPORT, U-CHANNEL	1 EA		
0092	4400000000-E	1110	WORK ZONE SIGNS (STATIONARY)	524 SF		
0093	4405000000-E	1110	WORK ZONE SIGNS (PORTABLE)	624 SF		
0094	4410000000-E	1110	WORK ZONE SIGNS (BARRICADE MOUNTED)	142 SF		
0095	4415000000-N	1115	FLASHING ARROW BOARD	6 EA		
0096	4420000000-N	1120	PORTABLE CHANGEABLE MESSAGE SIGN	6 EA		
0097	4422000000-N	1120	PORTABLE CHANGEABLE MESSAGE SIGN (SHORT TERM)	40 DAY		
0098	4430000000-N	1130	DRUMS	580 EA		
0099	4434000000-N	SP	SEQUENTIAL FLASHING WARNING LIGHTS	40 EA		
0100	4435000000-N	1135	CONES	60 EA		
0101	4445000000-E	1145	BARRICADES (TYPE III)	96 LF		
0102	4447000000-E	SP	PEDESTRIAN CHANNELIZING DEVICES	72 LF		
0103	4455000000-N	1150	FLAGGER	480 DAY		
0104	4465000000-N	1160	TEMPORARY CRASH CUSHIONS	7 EA		
0105	4470000000-N	1160	REMOVE & RESET TEMPORARY CRASH CUSHION	3 EA		
0106	4480000000-N	1165	TMA	4 EA		

County : Alamance

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0107	4485000000-E	1170	PORTABLE CONCRETE BARRIER	3,205 LF		
0108	4490000000-E	1170	PORTABLE CONCRETE BARRIER (ANCHORED)	1,150 LF		
0109	4505000000-E	1170	REMOVE & RESET PORTABLE CONC- RETE BARRIER (ANCHORED)	410 LF		
0110	4600000000-N	SP	GENERIC TRAFFIC CONTROL ITEM AUDIBLE WARNING DEVICES	6 EA		
0111	4600000000-N	SP	GENERIC TRAFFIC CONTROL ITEM PEDESTRIAN TRANSPORT SERVICE (PER TRIP)	1,500 EA		
0112	4650000000-N	1251	TEMPORARY RAISED PAVEMENT MARKERS	570 EA		
0113	4685000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)	16,168 LF		
0114	4688000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (6", 90 MILS)	9,832 LF		
0115	4695000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (8", 90 MILS)	3,152 LF		
0116	4700000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (12", 90 MILS)	1,259 LF		
0117	4720000000-E	1205	THERMOPLASTIC PAVEMENT MARKING CHARACTER (90 MILS)	3 EA		
0118	4725000000-E	1205	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)	84 EA		
0119	4726110000-E	1205	HEATED-IN-PLACE THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)	24 EA		
0120	4770000000-E	1205	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (4") (II)	1,902 LF		
0121	4770000000-E	1205	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (4") (IV)	310 LF		

County : Alamance

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0122	4805000000-N	1205	COLD APPLIED PLASTIC PAVEMENT MARKING SYMBOL, TYPE ** (II)	12	EA	
0123	4805000000-N	1205	COLD APPLIED PLASTIC PAVEMENT MARKING SYMBOL, TYPE ** (IV)	2	EA	
0124	4810000000-E	1205	PAINT PAVEMENT MARKING LINES (4")	33,600	LF	
0125	4815000000-E	1205	PAINT PAVEMENT MARKING LINES (6")	33,000	LF	
0126	4820000000-E	1205	PAINT PAVEMENT MARKING LINES (8")	1,820	LF	
0127	4825000000-E	1205	PAINT PAVEMENT MARKING LINES (12")	400	LF	
0128	4835000000-E	1205	PAINT PAVEMENT MARKING LINES (24")	730	LF	
0129	4840000000-N	1205	PAINT PAVEMENT MARKING CHARACTER	36	EA	
0130	4845000000-N	1205	PAINT PAVEMENT MARKING SYMBOL	109	EA	
0131	4850000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (4")	5,200	LF	
0132	4855000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (6")	22,000	LF	
0133	4860000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (8")	800	LF	
0134	4870000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (24")	120	LF	
0135	4875000000-N	1205	REMOVAL OF PAVEMENT MARKING SYMBOLS & CHARACTERS	18	EA	
0136	4891000000-E	1205	GENERIC PAVEMENT MARKING ITEM THERMOPLASTIC PAVEMENT MARKING LINES (24", 90 MILS)	4,183	LF	
0137	4900000000-N	1251	PERMANENT RAISED PAVEMENT MARKERS	35	EA	

County : Alamance

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0138	4905000000-N	1253	SNOWPLOWABLE PAVEMENT MARKERS	422 EA		
0139	5070000000-N	SP	STANDARD FOUNDATION ***** (TYPE R1)	3 EA		
0140	5155000000-E	1409	ELECTRICAL DUCT, TYPE BD, SIZE ***** (2")	155 LF		
0141	5160000000-E	1409	ELECTRICAL DUCT, TYPE JA, SIZE ***** (3")	45 LF		
0142	5160000000-E	1409	ELECTRICAL DUCT, TYPE JA, SIZE ***** (4")	135 LF		
0143	5185000000-E	1410	** #2 W/G FEEDER CIRCUIT (2)	310 LF		
0144	5215000000-E	1410	** #4 W/G FEEDER CIRCUIT IN ***** CONDUIT (2, 1.5")	650 LF		
0145	5220000000-E	1410	** #2 W/G FEEDER CIRCUIT IN ***** CONDUIT (2, 1.5")	330 LF		
0146	5240000000-N	1411	ELECTRICAL JUNCTION BOXES ***** (IG18)	3 EA		
0147	5240000000-N	1411	ELECTRICAL JUNCTION BOXES ***** (LS18)	3 EA		
0148	5255000000-N	1413	PORTABLE LIGHTING	Lump Sum	L.S.	
0149	5260000000-N	SP	GENERIC LIGHTING ITEM LUMINAIRE STORAGE	Lump Sum	L.S.	
0150	5270000000-N	SP	GENERIC LIGHTING ITEM RELOCATE LIGHT STANDARD	1 EA		
0151	5270000000-N	SP	GENERIC LIGHTING ITEM REMOVE LIGHT STANDARD FOUNDATION	1 EA		
0152	5270000000-N	SP	GENERIC LIGHTING ITEM REMOVE SINGLE ARM LIGHT STANDARD	1 EA		

County : Alamance

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0153	5325800000-E	1510	8" WATER LINE	10 LF		
0154	5326200000-E	1510	12" WATER LINE	325 LF		
0155	5329000000-E	1510	DUCTILE IRON WATER PIPE FITTINGS	3,115 LB		
0156	5540000000-E	1515	6" VALVE	1 EA		
0157	5546000000-E	1515	8" VALVE	1 EA		
0158	5558000000-E	1515	12" VALVE	4 EA		
0159	5571000000-E	1515	*** TAPPING SLEEVE & VALVE (2")	1 EA		
0160	5648000000-N	1515	RELOCATE WATER METER	8 EA		
0161	5649000000-N	1515	RECONNECT WATER METER	2 EA		
0162	5653100000-E	1515	RELOCATE *** DCV BACKFLOW PREVENTION ASSEMBLY (1")	3 EA		
0163	5653100000-E	1515	RELOCATE *** DCV BACKFLOW PREVENTION ASSEMBLY (2")	3 EA		
0164	5672000000-N	1515	RELOCATE FIRE HYDRANT	3 EA		
0165	5673000000-E	1515	FIRE HYDRANT LEG	80 LF		
0166	5686000000-E	1515	*** WATER SERVICE LINE (1")	70 LF		
0167	5686000000-E	1515	*** WATER SERVICE LINE (2")	95 LF		
0168	5691200000-E	1520	6" SANITARY GRAVITY SEWER	10 LF		
0169	5691300000-E	1520	8" SANITARY GRAVITY SEWER	165 LF		
0170	5775000000-E	1525	4' DIA UTILITY MANHOLE	3 EA		
0171	5801000000-E	1530	ABANDON 8" UTILITY PIPE	134 LF		

County : Alamance

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0172	5828000000-N	1530	REMOVE UTILITY MANHOLE	2 EA		
0173	5882000000-N	SP	GENERIC UTILITY ITEM 12" INSERT VALVE	2 EA		
0174	6000000000-E	1605	TEMPORARY SILT FENCE	7,270 LF		
0175	6006000000-E	1610	STONE FOR EROSION CONTROL, CLASS A	525 TON		
0176	6009000000-E	1610	STONE FOR EROSION CONTROL, CLASS B	420 TON		
0177	6012000000-E	1610	SEDIMENT CONTROL STONE	715 TON		
0178	6015000000-E	1615	TEMPORARY MULCHING	7 ACR		
0179	6018000000-E	1620	SEED FOR TEMPORARY SEEDING	500 LB		
0180	6021000000-E	1620	FERTILIZER FOR TEMPORARY SEED- ING	2.5 TON		
0181	6024000000-E	1622	TEMPORARY SLOPE DRAINS	200 LF		
0182	6029000000-E	SP	SAFETY FENCE	200 LF		
0183	6030000000-E	1630	SILT EXCAVATION	550 CY		
0184	6036000000-E	1631	MATTING FOR EROSION CONTROL	8,355 SY		
0185	6042000000-E	1632	1/4" HARDWARE CLOTH	2,890 LF		
0186	6071012000-E	SP	COIR FIBER WATTLE	90 LF		
0187	6071020000-E	SP	POLYACRYLAMIDE (PAM)	60 LB		
0188	6071030000-E	1640	COIR FIBER BAFFLE	20 LF		
0189	6084000000-E	1660	SEEDING & MULCHING	6 ACR		
0190	6087000000-E	1660	MOWING	6 ACR		
0191	6090000000-E	1661	SEED FOR REPAIR SEEDING	100 LB		

County : Alamance

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0192	6093000000-E	1661	FERTILIZER FOR REPAIR SEEDING	0.25 TON		
0193	6096000000-E	1662	SEED FOR SUPPLEMENTAL SEEDING	150 LB		
0194	6108000000-E	1665	FERTILIZER TOPDRESSING	4.5 TON		
0195	6114500000-N	1667	SPECIALIZED HAND MOWING	10 MHR		
0196	6117000000-N	SP	RESPONSE FOR EROSION CONTROL	25 EA		
0197	6117500000-N	SP	CONCRETE WASHOUT STRUCTURE	12 EA		
0198	6132000000-N	SP	GENERIC EROSION CONTROL ITEM FABRIC INSERT INLET PROTECTION DEVICE	40 EA		
0199	6132000000-N	SP	GENERIC EROSION CONTROL ITEM FABRIC INSERT INLET PROTECTION DEVICE CLEANOUT	100 EA		
0200	7048500000-E	1705	PEDESTRIAN SIGNAL HEAD (16", 1 SECTION W/COUNTDOWN)	35 EA		
0201	7060000000-E	1705	SIGNAL CABLE	23,800 LF		
0202	7120000000-E	1705	VEHICLE SIGNAL HEAD (12", 3 SECTION)	104 EA		
0203	7132000000-E	1705	VEHICLE SIGNAL HEAD (12", 4 SECTION)	20 EA		
0204	7144000000-E	1705	VEHICLE SIGNAL HEAD (12", 5 SECTION)	7 EA		
0205	7229000000-N	SP	APS DETECTOR STATION	8 EA		
0206	7230000000-N	SP	CENTRAL CONTROL UNIT APS DETECTOR STATION	1 EA		
0207	7252000000-E	1710	MESSENGER CABLE (1/4")	950 LF		
0208	7264000000-E	1710	MESSENGER CABLE (3/8")	5,300 LF		
0209	7279000000-E	1715	TRACER WIRE	2,500 LF		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0210	7288000000-E	1715	PAVED TRENCHING (*****) (1, 2")	375 LF		
0211	7300000000-E	1715	UNPAVED TRENCHING (*****) (1, 2")	2,225 LF		
0212	7300000000-E	1715	UNPAVED TRENCHING (*****) (2, 2")	1,400 LF		
0213	7300000000-E	1715	UNPAVED TRENCHING (*****) (3, 2")	100 LF		
0214	7301000000-E	1715	DIRECTIONAL DRILL (*****) (1, 2")	75 LF		
0215	7301000000-E	1715	DIRECTIONAL DRILL (*****) (2, 2")	1,150 LF		
0216	7324000000-N	1716	JUNCTION BOX (STANDARD SIZE)	48 EA		
0217	7348000000-N	1716	JUNCTION BOX (OVER-SIZED, HEAVY DUTY)	20 EA		
0218	7360000000-N	1720	WOOD POLE	19 EA		
0219	7372000000-N	1721	GUY ASSEMBLY	41 EA		
0220	7396000000-E	1722	1/2" RISER WITH WEATHERHEAD	2 EA		
0221	7408000000-E	1722	1" RISER WITH WEATHERHEAD	5 EA		
0222	7420000000-E	1722	2" RISER WITH WEATHERHEAD	22 EA		
0223	7430000000-N	1722	HEAT SHRINK TUBING RETROFIT KIT	5 EA		
0224	7432000000-E	1722	2" RISER WITH HEAT SHRINK TUBING	3 EA		
0225	7444000000-E	1725	INDUCTIVE LOOP SAWCUT	7,025 LF		
0226	7456000000-E	1726	LEAD-IN CABLE (*****) (14-2)	31,375 LF		
0227	7481000000-N	SP	SITE SURVEY	5 EA		

County : Alamance

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0228	7481240000-N	SP	CAMERA WITHOUT INTERNAL LOOP EMULATOR PROCESSING UNIT	17 EA		
0229	7481260000-N	SP	EXTERNAL LOOP EMULATOR PROCESSING UNIT	5 EA		
0230	7481280000-N	SP	RELOCATE CAMERA SENSOR UNIT	23 EA		
0231	7516000000-E	1730	COMMUNICATIONS CABLE (**FIBER) (12)	5,425 LF		
0232	7528000000-E	1730	DROP CABLE	450 LF		
0233	7540000000-N	1731	SPLICE ENCLOSURE	5 EA		
0234	7541000000-N	1731	MODIFY SPLICE ENCLOSURE	3 EA		
0235	7552000000-N	1731	INTERCONNECT CENTER	6 EA		
0236	7566000000-N	1733	DELINEATOR MARKER	11 EA		
0237	7575142010-N	1736	900MHZ SERIAL/ETHERNET SPREAD SPECTRUM RADIO	8 EA		
0238	7575142060-N	SP	MODIFY RADIO INSTALLATION	1 EA		
0239	7575160000-E	1734	REMOVE EXISTING COMMUNICATIONS CABLE	3,175 LF		
0240	7575180000-N	1735	CABLE TRANSFER	1 EA		
0241	7576000000-N	SP	METAL STRAIN SIGNAL POLE	20 EA		
0242	7613000000-N	SP	SOIL TEST	20 EA		
0243	7614100000-E	SP	DRILLED PIER FOUNDATION	120 CY		
0244	7636000000-N	1745	SIGN FOR SIGNALS	61 EA		
0245	7642100000-N	1743	TYPE I POST WITH FOUNDATION	17 EA		
0246	7642200000-N	1743	TYPE II PEDESTAL WITH FOUNDATION	15 EA		

County : Alamance

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0247	7648000000-N	1746	RELOCATE EXISTING SIGN	1	EA	
0248	7684000000-N	1750	SIGNAL CABINET FOUNDATION	8	EA	
0249	7686000000-N	1752	CONDUIT ENTRANCE INTO EXISTING FOUNDATION	35	EA	
0250	7696000000-N	1751	CONTROLLERS WITH CABINET (*****) (TYPE 2070LX, BASE MOUNTED)	9	EA	
0251	7744000000-N	1751	DETECTOR CARD (TYPE 170)	83	EA	
0252	7901000000-N	1753	CABINET BASE EXTENDER	9	EA	
0253	7960000000-N	SP	METAL POLE FOUNDATION REMOVAL	1	EA	
0254	7972000000-N	SP	METAL POLE REMOVAL	1	EA	
0255	7980000000-N	SP	GENERIC SIGNAL ITEM ETHERNET EDGE SWITCH	9	EA	
0256	7980000000-N	SP	GENERIC SIGNAL ITEM JUNCTION BOX MARKER	6	EA	
0257	7980000000-N	SP	GENERIC SIGNAL ITEM REMOVE RADIO INSTALLATION	8	EA	
0258	7990000000-E	SP	GENERIC SIGNAL ITEM BACK PULL FIBER OPTIC CABLE	425	LF	

WALL ITEMS

0259	8801000000-E	SP	MSE RETAINING WALL NO **** (1)	1,160	SF	
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STRUCTURE ITEMS

0260	8105540000-E	411	3'-6" DIA DRILLED PIERS IN SOIL	65	LF	
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County : Alamance

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0261	8105640000-E	411	3'-6" DIA DRILLED PIERS NOT IN SOIL	124 LF		
0262	8113000000-N	411	SID INSPECTIONS	3 EA		
0263	8114000000-N	411	SPT TESTING	6 EA		
0264	8115000000-N	411	CSL TESTING	3 EA		
0265	8147000000-E	420	REINFORCED CONCRETE DECK SLAB	15,562 SF		
0266	8161000000-E	420	GROOVING BRIDGE FLOORS	25,401.6 SF		
0267	8182000000-E	420	CLASS A CONCRETE (BRIDGE)	297.4 CY		
0268	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (27+02.26 -L-)	Lump Sum	L.S.	
0269	8217000000-E	425	REINFORCING STEEL (BRIDGE)	52,536 LB		
0270	8224000000-E	425	EPOXY COATED REINFORCING STEEL (BRIDGE)	911 LB		
0271	8238000000-E	425	SPIRAL COLUMN REINFORCING STEEL (BRIDGE)	7,630 LB		
0272	8280000000-E	440	APPROX LBS STRUCTURAL STEEL	441,500 LS		
0273	8328200000-E	450	PILE DRIVING EQUIPMENT SETUP FOR *** STEEL PILES (HP 12 X 53)	16 EA		
0274	8364000000-E	450	HP12X53 STEEL PILES	360 LF		
0275	8391000000-N	450	STEEL PILE POINTS	16 EA		
0276	8482000000-E	460	THREE BAR METAL RAIL	422.5 LF		
0277	8524000000-E	SP	*** CHAIN LINK FENCE (104")	427.83 LF		
0278	8531000000-E	462	4" SLOPE PROTECTION	635 SY		

County : Alamance

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0279	8559000000-E	SP	CLASS II, SURFACE PREPARATION	4.2 SY		
0280	8657000000-N	430	ELASTOMERIC BEARINGS	Lump Sum	L.S.	
0281	8664000000-E	SP	SHOTCRETE REPAIRS	6.4 CF		
0282	8678000000-E	SP	EPOXY RESIN INJECTION	112 LF		
0283	8692000000-N	SP	FOAM JOINT SEALS	Lump Sum	L.S.	
0284	8727000000-N	SP	ELECTRICAL CONDUIT SYSTEM FOR SIGNALS AT STA***** (27+02.26 -L-)	Lump Sum	L.S.	
0285	8881000000-E	SP	GENERIC STRUCTURE ITEM POLYESTER POLYMER CONCRETE MATERIALS	62.1 CY		
0286	8892000000-E	SP	GENERIC STRUCTURE ITEM EPOXY COATING	647.4 SF		
0287	8893000000-E	SP	GENERIC STRUCTURE ITEM CONCRETE DECK REPAIR FOR POLY- ESTER POLYMER CONCRETE OVERLAY	4.2 SY		
0288	8893000000-E	SP	GENERIC STRUCTURE ITEM PLACING & FINISHING POLYESTER POLYMER CONCRETE OVERLAY	2,234.5 SY		
0289	8893000000-E	SP	GENERIC STRUCTURE ITEM SCARIFYING BRIDGE DECK	1,464.5 SY		
0290	8893000000-E	SP	GENERIC STRUCTURE ITEM SHOTBLASTING BRIDGE DECK	2,234.5 SY		

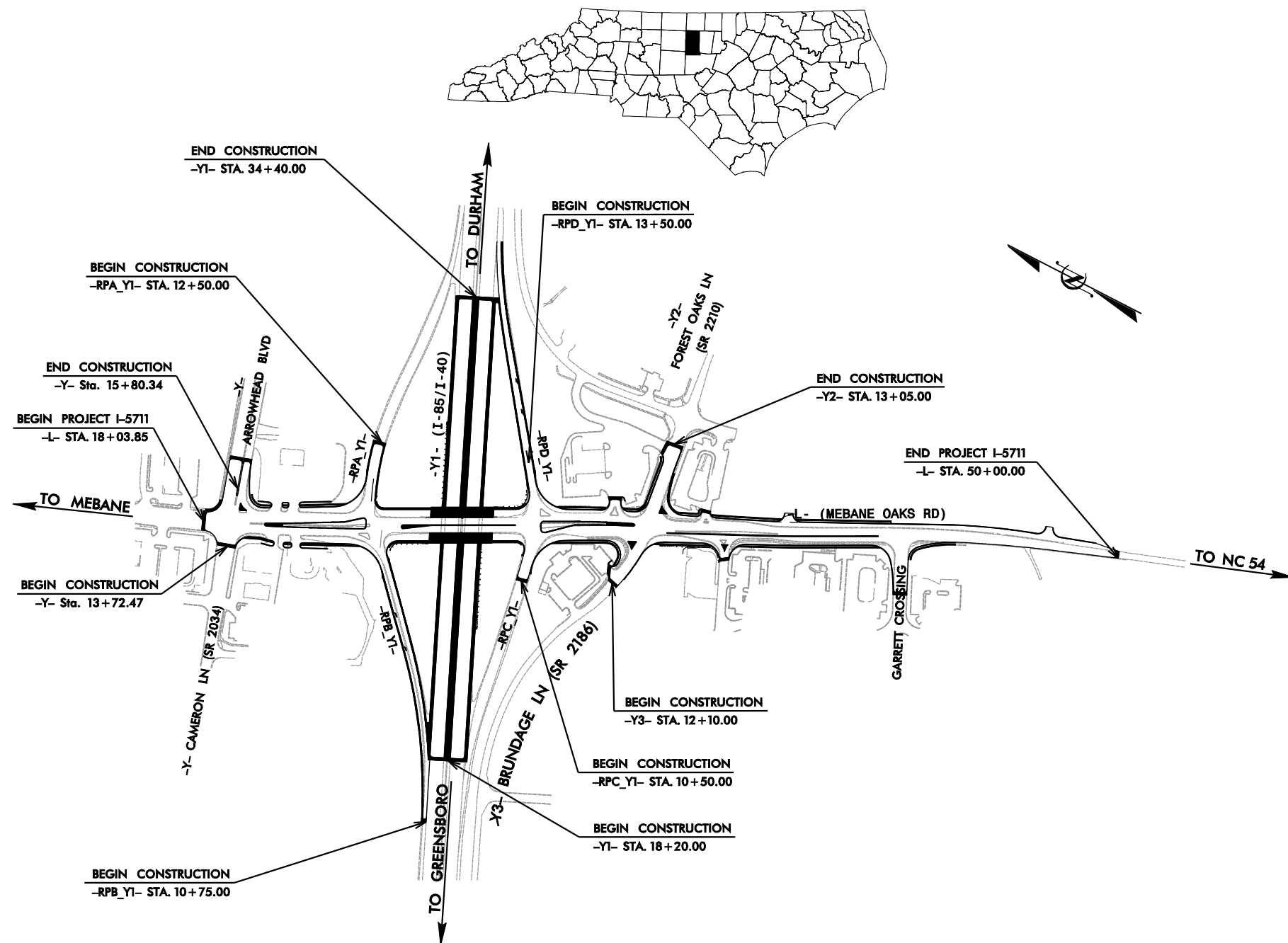
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Total Amount Of Bid For Entire Project :

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

ALAMANCE COUNTY



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 AND TMP-1C	TRANSPORTATION OPERATIONS PLAN
TMP-1D	PCB TYPICAL
TMP-2	-Y1- OFFSITE DETOUR ROUTE
TMP-2A	PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS
TMP-2B	TEMPORARY SHORING DATA
TMP-3 AND TMP-3A	PROJECT PHASING
TMP-4	PHASE IA OVERVIEW
TMP-4A THRU TMP-4D	PHASE IA DETAILS
TMP-5	PHASE IB OVERVIEW
TMP-5A THRU TMP-5C	PHASE IB DETAILS
TMP-5D	PHASE IC DETAILS
TMP-6	PHASE II OVERVIEW
TMP-6A THRU TMP-6B	PHASE II DETAILS
TMP-6C THRU TMP-6D	PHASE IIA DETAILS
TMP-7	PHASE III OVERVIEW
TMP-7A THRU TMP-7B	PHASE III DETAILS
TMP-7C THRU TMP-7D	PHASE III DETAILS, STEPS 5-7
TMP-8 AND TMP-8A	TEMPORARY TRAFFIC CONTROL CROSS SECTIONS

SHEET NO.
TMP-1

I-5711

TIP PROJECT:



PLANS PREPARED BY:

TIM AREY, P.E.

NCDOT CONTACTS:

KENNETH C. THORNEWELL P.E.
PROJECT ENGINEER

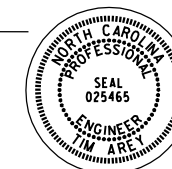
MIKE STEELMAN
PROJECT DESIGN ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

Prepared In the Office of:
PROGRESSIVE
DESIGN GROUP, INC.
ENGINEERS • CONSULTANTS

APPROVED: Tim Arey
DATE: 2/26/2020

SEAL



ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - 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
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
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
1170.01	POSITIVE PROTECTION
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1205.03	PAVEMENT MARKINGS - EXITS AND ENTRANCE RAMP
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.12	PAVEMENT MARKINGS - BRIDGES
1205.13	PAVEMENT MARKINGS - LANE REDUCTIONS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

LEGEND

GENERAL

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

- WORK AREA
- ON-GOING CONSTRUCTION
- REMOVAL
- WORK AREA WITH A DELAY OF ENTRY (SEE SPECIAL PROVISIONS)

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 SCHEDULE

PAVEMENT MARKINGS PAINT(4")

- PA WHITE EDGELINE
- PB YELLOW EDGELINE
- PC 10 FT. WHITE SKIP
- PD 3 FT. - 9 FT./SP WHITE MINISKIP
- PE WHITE SOLID LANE LINE
- PI YELLOW DOUBLE CENTER

PAVEMENT MARKINGS PAINT(6")

- P6 WHITE EDGELINE
- P7 YELLOW EDGELINE
- PJ 10 FT. WHITE SKIP
- PK 3 FT. - 9 FT./SP WHITE MINISKIP

PAVEMENT MARKINGS PAINT(8")

- PN WHITE GORELINE
- PQ WHITE CROSSWALK LINE

PAVEMENT MARKINGS PAINT(12")

- PS WHITE GORELINE
- QM YIELD LINE TRIANGLE

PAVEMENT MARKINGS PAINT(24")

- P2 WHITE STOPBAR

PAVEMENT MARKING SYMBOLS (PAINT)

- QA LEFT TURN ARROW
- QB RIGHT TURN ARROW
- QC STRAIGHT ARROW
- QE COMBO. STRAIGHT/RIGHT ARROW
- QI ALPHANUMERIC CHARACTER
- QP MERGE ARROW

PAVEMENT MARKINGS COLD APPLIED PLASTIC TAPE(4")

- CC 10 FT. WHITE SKIP
- CD 3 FT. - 9 FT./SP WHITE MINISKIP
- CE WHITE SOLID LANE LINE

PAVEMENT MARKING SYMBOLS (COLD APPLIED PLASTIC TAPE)

- DC STRAIGHT ARROW

<p>PLAN PREPARED IN THE OFFICE OF:</p> <p>PROGRESSIVE DESIGN GROUP, INC.</p> <p>ENGINEERS • CONSULTANTS</p>	<p>APPROVED: <i>Tim Arey</i></p> <p>DATE: 2/26/2020</p> <p>SEAL</p>			<p>ROADWAY STANDARD DRAWINGS & LEGEND</p>
	<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>			

PROJECT NOTES

MANAGEMENT STRATEGIES

THE PROJECT WILL BE CONSTRUCTED USING A COMBINATION OF STAGED CONSTRUCTION AND LANE CLOSURES IN ACTIVE ROADWAY LOCATIONS. LANE SHIFTING ALONG I-85 WILL BE UTILIZED FOR CENTER PIER CONSTRUCTION AND ACCESS TO DRIVEWAYS ALONG ALL ROADWAYS ARE TO BE MAINTAINED AT ALL TIMES UNLESS OTHERWISE SHOWN IN THESE PLANS OR DIRECTED BY THE ENGINEER.

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:

<u>ROAD NAME</u>	<u>DAY AND TIME RESTRICTIONS</u>
-Y1- (I-40 / I-85), 1 OF 4 LANES	6:00AM-8:00PM MONDAY THRU SUNDAY
-Y1- (I-40 / I-85), 2 OF 4 LANES	6:00AM-10:00PM MONDAY THRU SUNDAY
-Y1- (I-40 / I-85), 3 OF 4 LANES	6:00AM-MIDNIGHT MONDAY THRU SUNDAY
ALL I-40 / I-85 RAMPS	6:00AM-8:00PM MONDAY THRU SUNDAY
-Y2-, -Y3-	6:00AM-9:00AM, 4:00PM-6:00PM MONDAY THRU FRIDAY
-L- (MEBANE OAKS RD)	6:00AM-9:00AM, 4:00PM-6:00PM MONDAY THRU FRIDAY
	9:00AM-6:00PM SATURDAY AND SUNDAY

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

ROAD NAME
I-40 / I-85, ALL RAMPS, AND -L- UNLESS OTHERWISE NOTED

HOLIDAY

- FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.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.
- FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 8:00 P.M. MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 8:00 P.M. TUESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.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 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 8:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.

- FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 8:00 P.M. TUESDAY.
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 8:00 P.M. MONDAY, FOR I-85 ONLY.
- FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 8:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS, FOR I-85 ONLY.
- FOR THANKSGIVING THROUGH THE CHRISTMAS HOLIDAY PERIOD BEGINNING ON THE TUESDAY OF THE WEEK OF THANKSGIVING AND ENDING ON THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS, FOR ALL RAMPS AND -L- ONLY:
6:00AM-9:00AM, 4:00PM-6:00PM, MONDAY THRU THURSDAY
6:00AM-8:00PM, FRIDAY THRU SUNDAY
- FOR FOOTBALL AND BASKETBALL GAMES AT UNC IN CHAPEL HILL BETWEEN 3 HOURS BEFORE THE START AND 2 HOURS AFTER THE END OF THE FOOTBALL AND BASKETBALL GAMES AT UNC IN CHAPEL HILL.

C) DO NOT CLOSE ROADS AS FOLLOWS:

<u>ROAD NAME</u>	<u>DAY AND TIME RESTRICTIONS</u>
-Y1- (I-40 / I-85)	6:00AM-1:00AM MONDAY THRU SUNDAY

D) DO NOT STOP TRAFFIC AS FOLLOWS:

<u>ROAD NAME</u>	<u>DAY & TIME RESTRICTIONS</u>	<u>DURATION & OPERATION</u>
-L- (MEBANE OAKS RD)	6:00AM-1:00AM	30 MIN CLOSURE
-Y1- (I-40 / I-85)	MONDAY THRU SUNDAY	FOR OVERHEAD
AND ALL RAMPS		SIGN INSTALLATION

E) DO NOT CONDUCT MULTI-VEHICLE HAULING AS FOLLOWS
EGRESS FROM RAMPS WILL BE ALLOWED:

<u>ROAD NAME</u>	<u>DAY AND TIME RESTRICTIONS</u>
-Y1- I-40 / I-85	6:00AM-9:00AM, 4:00PM-6:00PM
AND ALL RAMPS	MONDAY THRU FRIDAY

F) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

LANE AND SHOULDER CLOSURE REQUIREMENTS

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

- 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 MANAGEMENT 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.
- 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.
- PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

PAVEMENT EDGE DROP OFF REQUIREMENTS

M) 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.

N) 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) 300 ft IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

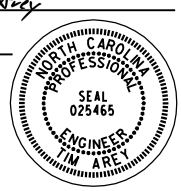

TRAFFIC PATTERN ALTERATIONS

O) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

- 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.
- PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.

<p style="font-size: small;">PLAN PREPARED IN THE OFFICE OF:</p> <p style="text-align: center;">PROGRESSIVE DESIGN GROUP, INC.</p> <p style="text-align: center;">ENGINEERS • CONSULTANTS</p>	<p>APPROVED: <i>Tim Arty</i></p> <p>DATE: 2/26/2020</p> <p style="text-align: center;">SEAL</p>			<h2 style="margin: 0;">TRANSPORTATION OPERATIONS PLAN</h2>
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED				

PROJECT NOTES

GENERAL NOTES

R) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.

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

T) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 300 ft IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC BARRIER

U) INSTALL TEMPORARY BARRIER ACCORDING TO THE TRANSPORTATION MANAGEMENT PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN THAT LOCATION UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE.

ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE TEMPORARY BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE / RESET TEMPORARY BARRIER AT NO COST TO THE DEPARTMENT UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS, TEMPORARY BARRIER IS PROTECTING A HAZARD, OR AS DIRECTED BY THE ENGINEER.

INSTALL TEMPORARY BARRIER WITH THE TRAFFIC FLOW BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE TEMPORARY BARRIER AGAINST THE TRAFFIC FLOW BEGINNING WITH THE DOWNSTREAM SIDE OF TRAFFIC.

INSTALL AND SPACE DRUMS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH) TO CLOSE OR KEEP THE SECTION OF THE ROADWAY CLOSED UNTIL THE TEMPORARY BARRIER CAN BE PLACED OR AFTER THE TEMPORARY BARRIER IS REMOVED.

V) PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER AT ALL TIMES DURING THE INSTALLATION AND REMOVAL OF THE BARRIER BY EITHER A TRUCK MOUNTED ATTENUATOR (MAXIMUM 72 HOURS) OR A TEMPORARY CRASH CUSHION.

PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER FROM ONCOMING TRAFFIC AT ALL TIMES BY A TEMPORARY CRASH CUSHION UNLESS THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER IS OFFSET FROM ONCOMING TRAFFIC AS FOLLOWS OR AS SHOWN IN THE PLANS: (SEE ALSO 1101.05)

POSTED SPEED LIMIT	MINIMUM OFFSET
40 OR LESS	15 FT
45 - 50	20 FT
55	25 FT
60 MPH or HIGHER	30 FT

TRAFFIC CONTROL DEVICES

W) 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.

X) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

Y) 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

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

<u>ROAD NAME</u>	<u>MARKING</u>	<u>MARKER</u>
ALL ROADS	PAINT	TEMPORARY RAISED
BRIDGE DECKS	COLD APPLIED PLASTIC (TYPE IV - REMOVABLE TAPE)	TEMPORARY RAISED

AA) 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.

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

CC) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

DD) TRACE THE EXISTING AND PROPOSED MONOLITHIC ISLAND LOCATIONS WITH PROPER COLOR PAVEMENT MARKINGS PRIOR TO REMOVAL AND INSTALLATION. PLACE DRUMS TO DELINEATE ANY EXISTING AND PROPOSED MONOLITHIC ISLANDS AFTER REMOVAL AND BEFORE INSTALLATION

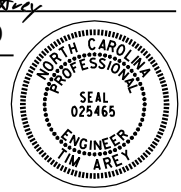
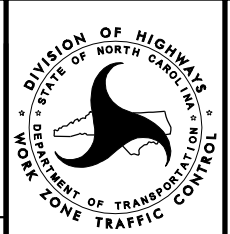
MISCELLANEOUS

EE) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER. THE DEPARTMENT WILL PROVIDE POLICE CONTROL AT INTERSECTIONS WHEN REQUIRED. PROVIDE PORTABLE LIGHTING FOR LAW ENFORCEMENT WHEN THEY ARE CONTROLLING TRAFFIC AT INTERSECTIONS AT NIGHTTIME.

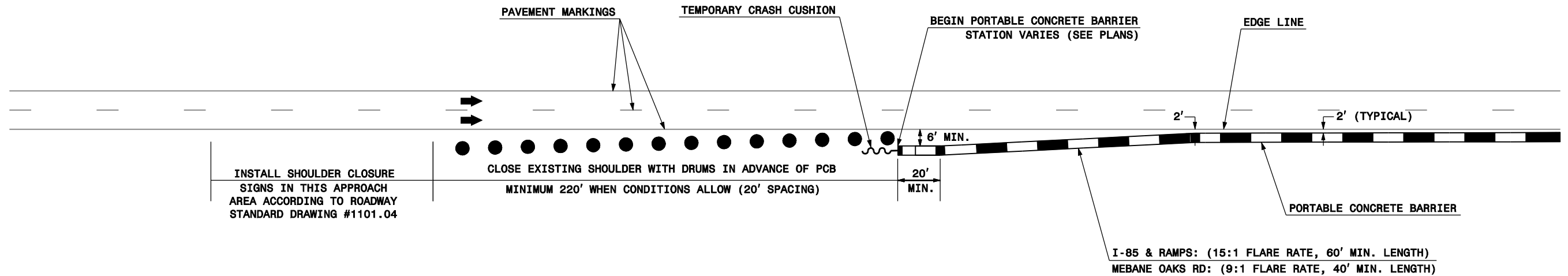
FF) ALL CURB RAMP LOCATIONS SHALL BE DERIVED FROM STATIONING SHOWN ON PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER IN COORDINATION WITH THE SIGNING AND DELINEATION UNIT.

GG) CONTRACTOR SHALL MAINTAIN SIDEWALK ACCESS AT ALL TIMES AS STATED IN THE PHASING. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY SIDEWALKS (CONCRETE, ASPHALT, OR OTHER SUITABLE MATERIAL AS APPROVED BY THE ENGINEER) AT ALL LOCATIONS WHERE THE OPEN PEDESTRIAN TRAVELWAY HAS BEEN REMOVED FOR CONSTRUCTION OPERATIONS (UTILITIES, DRAINAGE, ETC.).

USE THE PEDESTRIAN TRANSPORT SERVICE WHEN CLOSING SIDEWALK. SEE PEDESTRIAN TRANSPORT SERVICE SPECIAL PROVISION.

<p style="font-size: small;">PLAN PREPARED IN THE OFFICE OF:</p> <p style="text-align: center;">PROGRESSIVE DESIGN GROUP, INC.</p> <div style="display: flex; justify-content: center; gap: 5px;"> <div style="width: 15px; height: 15px; background-color: #ccc;"></div> <div style="width: 15px; height: 15px; background-color: #ccc;"></div> <div style="width: 15px; height: 15px; background-color: #ccc;"></div> <div style="width: 15px; height: 15px; background-color: #ccc;"></div> <div style="width: 15px; height: 15px; background-color: #ccc;"></div> <div style="width: 15px; height: 15px; background-color: #000;"></div> </div> <p style="font-size: x-small; text-align: center;">ENGINEERS • CONSULTANTS</p>	<p>APPROVED: <i>Tim Arey</i></p> <p>DATE: 2/26/2020</p> <p style="text-align: center;">SEAL</p> <div style="text-align: center;">  </div>	<div style="text-align: center;">  </div>	<p style="font-size: large; font-weight: bold;">TRANSPORTATION OPERATIONS PLAN</p>
<p style="font-size: small; font-weight: bold;">DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>			

LEADING EDGE LAYOUT FOR PORTABLE CONCRETE BARRIER

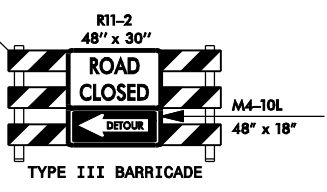
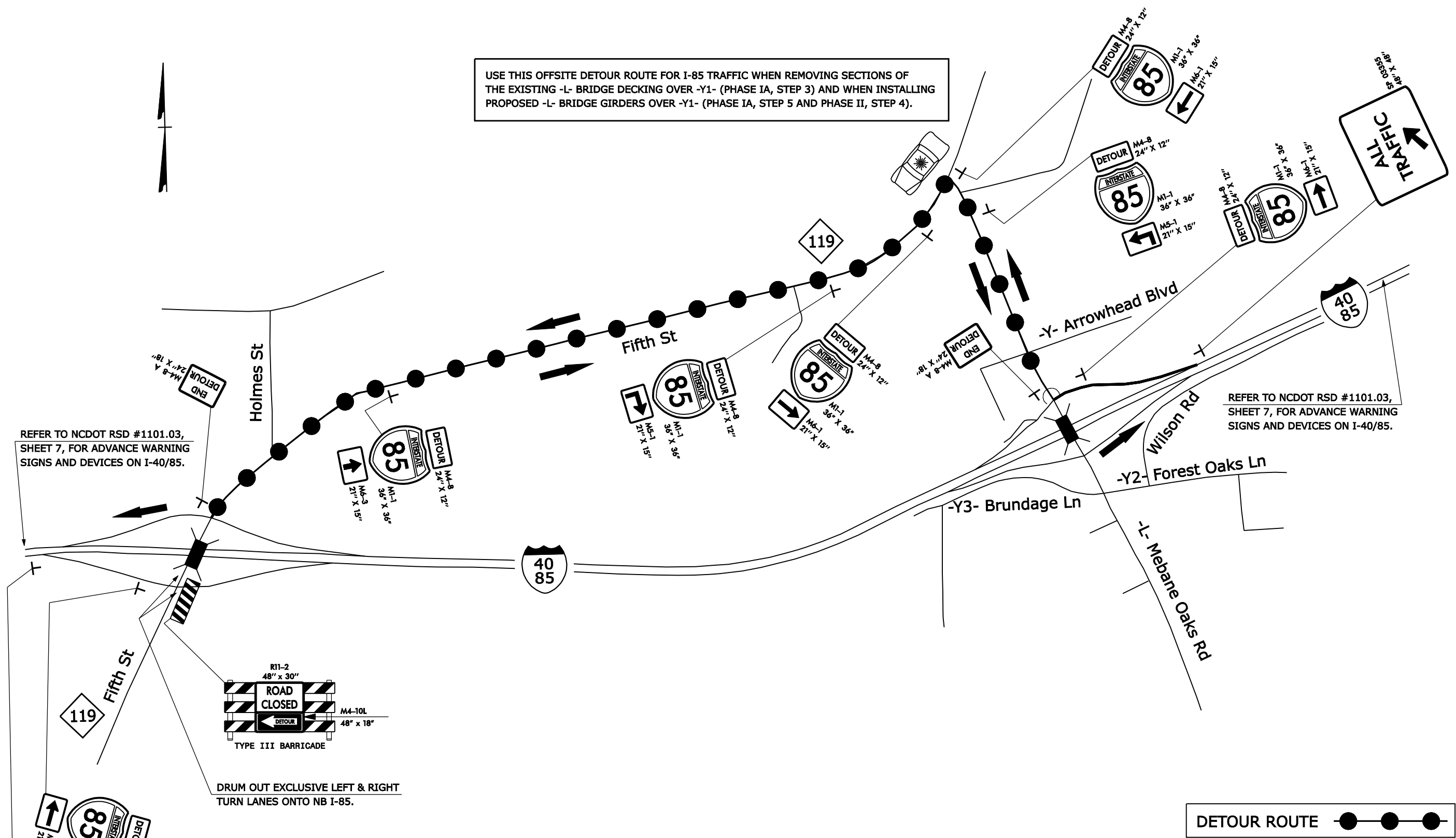


<p>PLAN PREPARED IN THE OFFICE OF:</p> <p>PROGRESSIVE DESIGN GROUP, INC.</p> <p>ENGINEERS • CONSULTANTS</p>	<p>APPROVED: <i>Tim Arzy</i></p> <p>DATE: 2/26/2020</p>	<p>DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL</p>	<p>TRANSPORTATION MANAGEMENT PLAN PCB TYPICAL</p>
	<p>SEAL</p> <p>SEAL 025465 ENGINEER TIM ARZY</p>		
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>			

USE THIS OFFSITE DETOUR ROUTE FOR I-85 TRAFFIC WHEN REMOVING SECTIONS OF THE EXISTING -L- BRIDGE DECKING OVER -Y1- (PHASE IA, STEP 3) AND WHEN INSTALLING PROPOSED -L- BRIDGE GIRDERS OVER -Y1- (PHASE IA, STEP 5 AND PHASE II, STEP 4).

REFER TO NCDOT RSD #1101.03, SHEET 7, FOR ADVANCE WARNING SIGNS AND DEVICES ON I-40/85.

REFER TO NCDOT RSD #1101.03, SHEET 7, FOR ADVANCE WARNING SIGNS AND DEVICES ON I-40/85.



DRUM OUT EXCLUSIVE LEFT & RIGHT TURN LANES ONTO NB I-85.



<p>PLAN PREPARED IN THE OFFICE OF:</p> <p>PROGRESSIVE DESIGN GROUP, INC.</p> <p>ENGINEERS • CONSULTANTS</p>	<p>APPROVED: <i>Tim Arey</i></p> <p>DATE: 2/26/2020</p> <p>SEAL</p> <p>SEAL 025465 ENGINEER TIM AREY</p>	<p>DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL</p>	<p>TRANSPORTATION MANAGEMENT PLAN OFFSITE DETOUR ROUTE</p>
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DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

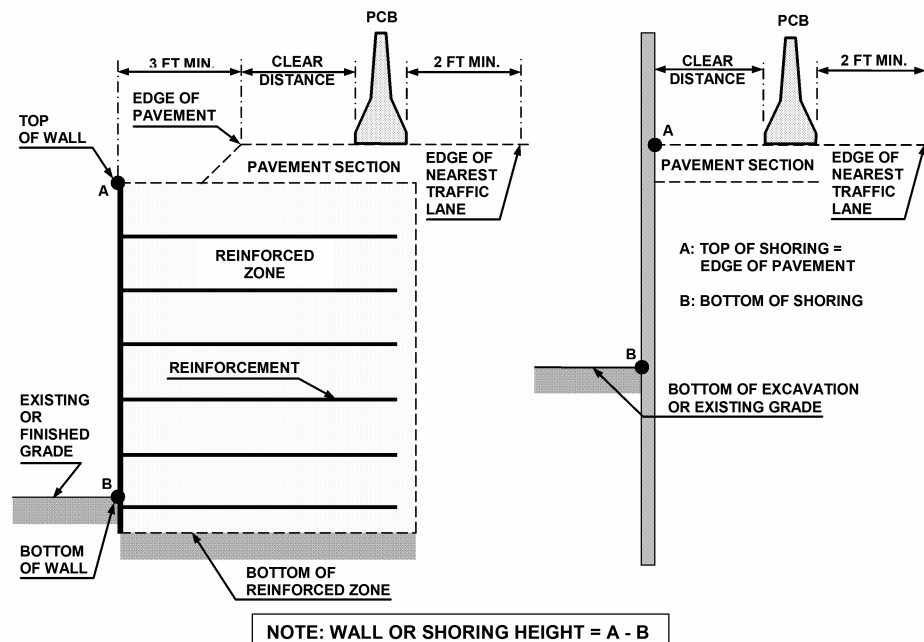


FIGURE A

NOTES

- 1- REFER TO THE TRAFFIC CONTROL PLANS FOR TEMPORARY SHORING LOCATIONS AND NOTES.
- 2- REFER TO THE "TEMPORARY SHORING" PROJECT SPECIAL PROVISION FOR INFORMATION ABOUT TEMPORARY SHORING AND PORTABLE CONCRETE BARRIER (PCB).
- 3- PCB IS REQUIRED IF TEMPORARY SHORING IS LOCATED WITHIN THE CLEAR ZONE IN ACCORDANCE WITH THE AASHTO ROADSIDE DESIGN GUIDE. DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE. (CONTACT NCDOT PAVEMENT MANAGEMENT UNIT FOR APPLICABLE PAVEMENT DESIGN).
- 4- BASED ON THE CLEAR DISTANCE, OFFSET, DESIGN SPEED AND PAVEMENT TYPE, CHOOSE AN UNANCHORED OR ANCHORED PCB FROM THE TABLE SHOWN IN FIGURE B. CLEAR DISTANCE IS DEFINED AS SHOWN IN FIGURE A AND OFFSET IS DEFINED AS SHOWN IN FIGURE B.
- 5- AT THE CONTRACTOR'S OPTION OR IF THE MINIMUM REQUIRED CLEAR DISTANCE IS NOT AVAILABLE, SET PCB NEXT TO AND UP AGAINST THE TRAFFIC SIDE OF THE TEMPORARY SHORING EXCEPT FOR BARRIER ABOVE TEMPORARY WALLS. PCB WITH THE MINIMUM REQUIRED CLEAR DISTANCE IS REQUIRED ABOVE TEMPORARY WALLS.
- 6- USE NCDOT PORTABLE CONCRETE BARRIER (PCB) IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1170.01 AND SECTION 1170 OF THE STANDARD SPECIFICATIONS.
- 7- PCB REQUIREMENTS FOR TEMPORARY WALLS APPLY TO TEMPORARY MECHANICALLY STABILIZED EARTH (MSE) WALLS AND TEMPORARY SOIL NAIL WALLS.
- 8- SET PCB WITH A MINIMUM HORIZONTAL DISTANCE OF 2 FT BETWEEN THE FRONT FACE OF THE BARRIER AND THE EDGE OF THE NEAREST TRAFFIC LANE AS SHOWN IN FIGURE A UNLESS OTHERWISE SHOWN IN THE PLANS AND OR AS APPROVED BY THE ENGINEER.
- 9- FOR PCB ABOVE AND BEHIND TEMPORARY WALLS, PROVIDE A MINIMUM DISTANCE OF 3 FT BETWEEN THE EDGE OF PAVEMENT AND THE WALL FACE AS SHOWN IN FIGURE A. IF THESE MINIMUM REQUIRED DISTANCES ARE NOT AVAILABLE, CONTACT THE ENGINEER.
- 10- TABLE SHOWN IN FIGURE B IS BASED ON NCDOT RESEARCH PROJECT NO. 2005-010 WITH VEHICLE TYPE USED FOR NCHRP 350 CRASH TESTS. BARRIER DEFLECTIONS AND RESULTING MINIMUM REQUIRED CLEAR DISTANCES MIGHT VARY SIGNIFICANTLY FOR LARGER HEAVIER VEHICLES, RUNS OF BARRIER LESS THAN 200 FT IN LENGTH AND WET OR DRY PAVEMENT.

Barrier Type	Pavement Type	Offset * ft	Design Speed, mph							
			<30	31-40	41-50	51-60	61-70	71-80		
Unanchored PCB	Asphalt	<8	24	26	29	32	36	40		
		8-14	26	28	31	35	38	42		
		14-20	27	29	34	36	39	43		
		20-26	28	31	35	38	40	44		
		26-32	29	32	36	39	42	45		
		32-38	30	34	38	41	43	46		
		38-44	31	34	41	43	45	48		
	Concrete	44-50	31	35	41	43	46	49		
		50-56	32	36	42	44	47	50		
		>56	32	36	42	45	47	51		
		<8	17	18	21	22	25	26		
		8-14	19	20	23	25	26	29		
		14-20	22	22	24	26	28	31		
		20-26	23	24	26	27	30	34		
Anchored PCB	Asphalt	26-32	24	25	27	28	32	35		
		32-38	24	26	27	30	33	36		
		38-44	25	26	28	30	34	37		
		44-50	26	26	28	32	35	37		
		50-56	26	26	28	32	35	38		
		>56	26	27	29	32	36	38		
		All Offsets	24 for All Design Speeds							
		Anchored PCB	Concrete (including bridge approach slabs)	All Offsets	12 for All Design Speeds					

* See Figure Below

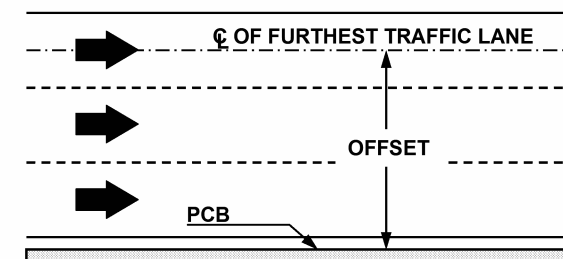


FIGURE B

PLAN PREPARED IN THE OFFICE OF: PROGRESSIVE DESIGN GROUP, INC. ENGINEERS • CONSULTANTS	APPROVED: <i>Tim Arrey</i> DATE: 2/26/2020	DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL	PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS
	SEAL NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 025465 TIM ARREY		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

TEMPORARY SHORING NO. 1

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DESIGN TEMPORARY SHORING FROM STATION 25+65 +/- -L-, 27 FT. RT. TO STATION 26+00 +/- -L-, 27 FT. RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, . = 120 PCF
 UNIT WEIGHT OF SOIL BELOW WATER TABLE, .* = 60 PCF
 FRICTION ANGLE, f = 30
 COHESION, c = 0 PSF
 GROUNDWATER ELEVATION = 637 FT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 25+65 +/- -L-, 27 FT. RT. TO STATION 26+00 +/- -L-, 27 FT. RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 25+65 +/- -L-, 27 FT. RT. TO STATION 26+00 +/- -L-, 27 FT. RT MAY NOT PENETRATE BELOW ELEVATION 640 FT. DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

AT THE CONTRACTOR*S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 25+65 +/- -L-, 27 FT. RT. TO STATION 26+00 +/- -L-, 27 FT. RT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

TEMPORARY SHORING NO. 2

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DESIGN TEMPORARY SHORING FROM STATION 28+10 +/- -L-, 27 FT. RT. TO STATION 28+45 +/- -L-, 27 FT. RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

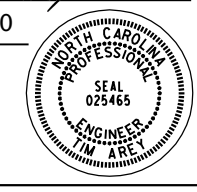
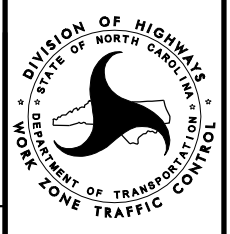
UNIT WEIGHT OF SOIL ABOVE WATER TABLE, . = 120 PCF
 UNIT WEIGHT OF SOIL BELOW WATER TABLE, .* = 60 PCF
 FRICTION ANGLE, f = 30
 COHESION, c = 0 PSF
 GROUNDWATER ELEVATION = 637 FT.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 28+10 +/- -L-, 27 FT. RT. TO STATION 28+45 +/- -L-, 27 FT. RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 28+10 +/- -L-, 27 FT. RT. TO STATION 28+45 +/- -L-, 27 FT. RT MAY NOT PENETRATE BELOW ELEVATION 640 FT. DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

AT THE CONTRACTOR*S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 28+10 +/- -L-, 27 FT. RT. TO STATION 28+45 +/- -L-, 27 FT. RT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

<p>PLAN PREPARED IN THE OFFICE OF:</p> <p>PROGRESSIVE DESIGN GROUP, INC.</p> <p>ENGINEERS • CONSULTANTS</p>	<p>APPROVED: <i>Tim Arey</i></p> <p>DATE: 2/26/2020</p> <p>SEAL</p>  <p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>		<p>TEMPORARY SHORING DATA</p>
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PROJECT PHASING

PHASE IA

STEP 1: INSTALL ADVANCE WORK ZONE WARNING SIGNS ON ALL ROADWAYS WITHIN THE PROJECT LIMITS ACCORDING TO ROADWAY STANDARD DRAWING NO. 1101.01.

STEP 2: USING ROADWAY STANDARD DRAWING NO. 1101.02 SHEET 1 OR 3 OF 15 BEGIN CONSTRUCTION ON THE FOLLOWING:
 -L-(LEFT SIDE): FROM THE -Y- INTERSECTION TO THE -RPAY1- INTERSECTION AND FROM THE -RPDY1- INTERSECTION TO THE -Y2- INTERSECTION AS SHOWN ON SHEETS TMP-4A AND TMP-4B.
 -L-(RIGHT SIDE): FROM THE -RPDY1- INTERSECTION TO THE -Y3- INTERSECTION AS SHOWN ON SHEET TMP-4B.
 -Y2-: IN THE LOCATIONS SHOWN ON SHEET TMP-4B.
 -Y3-: IN THE LOCATIONS SHOWN ON SHEET TMP-4B.

MODIFY THE EXISTING TRAFFIC SIGNALS AT THE -L-/-RPAY1- AND -L-/-RPDY1- INTERSECTIONS, REVISE THE PAVEMENT MARKINGS ON -L- BETWEEN -RPAY1- AND -RPDY1- TO THE PATTERN SHOWN ON SHEET TMP-4B AND INSTALL ANCHORED PORTABLE CONCRETE BARRIER AND TEMPORARY CRASH CUSHIONS ALONG THE RIGHT SIDE OF -L- IN THE LOCATIONS SHOWN ON SHEET TMP-4B. ANCHOR THE PORTABLE CONCRETE BARRIER TO THE EXISTING BRIDGE DECK.

STEP 3: BEHIND PORTABLE CONCRETE BARRIER, SAW CUT AND REMOVE THE PORTION OF THE EXISTING -L- BRIDGE OVER -Y1- SHOWN ON CROSS SECTION C-C, SHEET TMP-8. THIS OPERATION SHOULD TAKE PLACE ONLY WITHIN THE TIME RESTRICTIONS DICTATED ON GENERAL NOTE 'C', SHEET TMP-1B BY PLACING ALL -Y1- THRU TRAFFIC IN AN ALL TRAFFIC EXIT PATTERN. USE THE OFFSITE DETOUR ROUTE/SIGNING SHOWN ON SHEET TMP-2 FOR -Y1- TRAFFIC.

BEGIN CONSTRUCTION ON -L-(RIGHT SIDE) FROM THE -RPBY1- INTERSECTION TO THE -RPCY1- INTERSECTION AS SHOWN ON SHEET TMP-4B.

COMPLETE THE WORK REQUIRED OF PHASE IA, STEP 4A THRU STEP 4E IN 60 CONSECUTIVE CALENDAR DAYS. SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

STEP 4: USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 4 OF 15, COMPLETE THE FOLLOWING:

- MILL THE RUMBLE STRIPS OFF OF THE EXISTING I-85 NORTHBOUND AND SOUTHBOUND OUTSIDE SHOULDER IN THE LOCATIONS WHERE THE NEW TEMPORARY PAVEMENT MARKINGS WILL BE TRAVERSING ONTO THE SHOULDER AS SHOWN ON SHEETS TMP-4B THRU TMP-4D. REPLACE THE MILLED SECTIONS OF ROADWAY WITH SURFACE COURSE AS SHOWN IN THE ROADWAY DESIGN PLAN TYPICALS.
- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON NORTHBOUND AND SOUTHBOUND -Y1- AND PLACE NORTHBOUND AND SOUTHBOUND -Y1- TRAFFIC INTO THE PATTERNS SHOWN ON SHEETS TMP-4B THRU TMP-4D.
- INSTALL TEMPORARY CRASH CUSHIONS, PORTABLE CONCRETE BARRIER AND DRUMS ON NORTHBOUND AND SOUTHBOUND -Y1- IN THE LOCATIONS SHOWN ON SHEETS TMP-4B THRU TMP-4D.
- CONSTRUCT THE CENTER SUPPORTS FOR THE PROPOSED -L- BRIDGE OVER -Y1- ON BOTH SIDES OF THE EXISTING -L- BRIDGE OVER -Y1- AND REPLACE ANY PERMANENT MEDIAN BARRIER ALONG I-85 THAT WAS REMOVED FOR THE CENTER SUPPORT CONSTRUCTION.
- REMOVE THE PORTABLE CONCRETE BARRIER AND TEMPORARY CRASH CUSHIONS LOCATED IN THE MEDIAN OF NORTHBOUND AND SOUTHBOUND -Y1-. PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON NORTHBOUND AND SOUTHBOUND -Y1- BACK TO THE ORIGINAL PATTERN AND PLACE NORTHBOUND AND SOUTHBOUND -Y1- TRAFFIC BACK TO THE ORIGINAL PATTERN.

STEP 5: BEHIND PORTABLE CONCRETE BARRIER, BEGIN CONSTRUCTION ON THE PROPOSED SHOULDER PIERS, END BENTS AND DECK FOR THE PROPOSED RIGHT SIDE -L- BRIDGE WIDENING OVER -Y1- (INCLUDING THE PPC OVERLAY FOR THE NEW BRIDGE WIDENING DECK) AS SHOWN ON SHEET TMP-4B. GIRDER HANGING OPERATIONS SHOULD TAKE PLACE ONLY WITHIN THE TIME RESTRICTIONS DICTATED ON GENERAL NOTE 'C', SHEET TMP-1B BY PLACING ALL -Y1- THRU TRAFFIC IN AN ALL TRAFFIC EXIT PATTERN USE THE OFFSITE DETOUR ROUTE/SIGNING SHOWN ON SHEET TMP-2 FOR -Y1- TRAFFIC.

BEHIND PORTABLE CONCRETE BARRIER, BEGIN CONSTRUCTION ON THE PROPOSED SHOULDER PIERS FOR THE PROPOSED LEFT SIDE -L- BRIDGE WIDENING OVER -Y1- AS SHOWN ON SHEET TMP-4B.

PHASE IB

STEP 1: UTILIZING A FLAGGING OPERATION TO STOP TRAFFIC ON -RPBY1-, REVISE THE PAVEMENT MARKINGS ON -RPBY1- IN THE LOCATIONS SHOWN ON SHEET TMP-5B AND INSTALL PORTABLE CONCRETE BARRIER AND TEMPORARY CRASH CUSHION ALONG THE LEFT SIDE OF -RPBY1- IN THE LOCATIONS SHOWN ON SHEET TMP-5B.

STEP 2: CONSTRUCT THE PROPOSED -RPBY1- LEFT SIDE WIDENING IN THE LOCATIONS SHOWN ON SHEET TMP-5B.

USING ROADWAY STANDARD DRAWING NO. 1101.02 SHEET 1 OR 3 OF 15, BEGIN CONSTRUCTION ON THE FOLLOWING:
 -L-(RIGHT SIDE): FROM THE -Y- INTERSECTION TO THE -RPBY1- INTERSECTION AND FROM THE -Y3- INTERSECTION TO THE ENDING PROJECT LIMITS AS SHOWN ON SHEETS TMP-5B AND TMP-5C.
 -L-(LEFT SIDE): FROM THE -Y2- INTERSECTION TO THE ENDING PROJECT LIMITS AS SHOWN ON SHEETS TMP-5B AND TMP-5C.


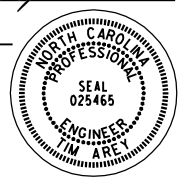
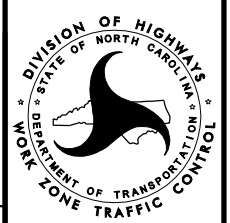
PHASE IC

COMPLETE THE WORK REQUIRED OF PHASE IC, STEPS 1 THRU 3 IN 58 CONSECUTIVE HOURS BEGINNING AT 8:00PM ON A FRIDAY AND COMPLETING BY 6:00AM THE FOLLOWING MONDAY. SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

STEP 1: USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 4 OF 15 CLOSE THE OUTSIDE LANE ON SOUTHBOUND I-85 AS SHOWN ON SHEET TMP-5D. INSTALL CHANGEABLE MESSAGE SIGNS AND DRUMS ON -RPBY1- IN THE PATTERN SHOWN ON SHEET TMP-5D.

STEP 2: UTILIZING A FLAGGING OPERATION TO STOP TRAFFIC ON -RPBY1-, EXTEND THE PORTABLE CONCRETE BARRIER ALONG -RPBY1- TO THE LOCATION SHOWN ON SHEET TMP-5D. CONSTRUCT THE REMAINING SECTION OF PROPOSED -RPBY1- BEHIND PORTABLE CONCRETE BARRIER IN THE LOCATIONS SHOWN ON SHEET TMP-5D.

STEP 3: USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 4 OF 15, REMOVE THE PORTABLE CONCRETE BARRIER AND LANE CLOSURE ON SOUTHBOUND I-85 AND RETURN I-85 TRAFFIC BACK TO THE EXISTING TRAFFIC PATTERN.

PLAN PREPARED IN THE OFFICE OF:  ENGINEERS • CONSULTANTS	APPROVED: <i>Tim Arey</i> DATE: 2/26/2020			TRANSPORTATION MANAGEMENT PLAN PROJECT PHASING
	SEAL			

PROJECT PHASING

PHASE II

- STEP 1: COMPLETE CONSTRUCTION ON THE PROPOSED RIGHT SIDE -L- BRIDGE WIDENING OVER -Y1- AND ALL ROADWAY WIDENING REQUIRED FOR THE TRAFFIC PATTERN SHOWN ON SHEETS TMP-6A AND TMP-6B UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE.
- REMOVE THE EXISTING ISLANDS ALONG -L- AND REPAIR ANY DAMAGED ROADWAY SURFACES AFTER REMOVAL.
- STEP 2: AWAY FROM EXISTING TRAFFIC PATTERNS, INSTALL AS MANY OF THE PROPOSED PAVEMENT MARKINGS AND MARKERS AS POSSIBLE FOR THE TRAFFIC PATTERN SHOWN ON SHEETS TMP-6A AND TMP-6B.
- STEP 3: USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEETS 3 AND 7 OF 15, PLACE THE REMAINING PAVEMENT MARKINGS AND MARKERS ALONG -L- AND THE AFFECTED SIDE STREETS FOR THE TRAFFIC PATTERN SHOWN ON SHEETS TMP-6A AND TMP-6B AND PLACE ALL TRAFFIC IN THE PATTERN SHOWN ON SHEETS TMP-6A AND TMP-6B.
- INSTALL ANCHORED PORTABLE CONCRETE BARRIER AND TEMPORARY CRASH CUSHIONS ALONG THE LEFT SIDE OF -L- IN THE LOCATIONS SHOWN ON SHEET TMP-6B.
- STEP 4: BEHIND PORTABLE CONCRETE BARRIER, BEGIN CONSTRUCTION ON THE PROPOSED LEFT SIDE -L- BRIDGE WIDENING OVER -Y1- (INCLUDING THE PPC OVERLAY FOR THE NEW BRIDGE WIDENING DECK) AND PROPOSED -L- (LEFT SIDE) ROADWAY WIDENING BETWEEN -RPAY1- AND -RPDY1- UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE IN THE LOCATIONS SHOWN ON SHEET TMP-6B. GIRDER HANGING OPERATIONS SHOULD TAKE PLACE ONLY WITHIN THE TIME RESTRICTIONS DICTATED ON GENERAL NOTE 'C', SHEET TMP-1B. UTILIZE THE -Y1- OFFSITE DETOUR ROUTE SHOWN ON SHEET TMP-2 WHEN HANGING -L- GIRDERS OVER -Y1-.

PHASE IIA


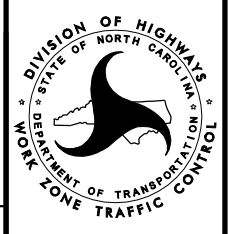
- STEP 1: COMPLETE CONSTRUCTION ON THE PROPOSED RIGHT SIDE -L- ROADWAY WIDENING REQUIRED FOR THE TRAFFIC PATTERN SHOWN ON SHEETS TMP-6C AND TMP-6D UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE.
- STEP 2: AWAY FROM EXISTING TRAFFIC PATTERNS, INSTALL AS MANY OF THE PROPOSED PAVEMENT MARKINGS AND MARKERS AS POSSIBLE FOR THE TRAFFIC PATTERN SHOWN ON SHEETS TMP-6C AND TMP-6D.
- STEP 3: USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEETS 3 AND 7 OF 15, PLACE THE REMAINING PAVEMENT MARKINGS AND MARKERS ALONG -L- AND THE AFFECTED SIDE STREETS FOR THE TRAFFIC PATTERN SHOWN ON SHEETS TMP-6C AND TMP-6D AND PLACE ALL TRAFFIC IN THE PATTERN SHOWN ON SHEETS TMP-6C AND TMP-6D.

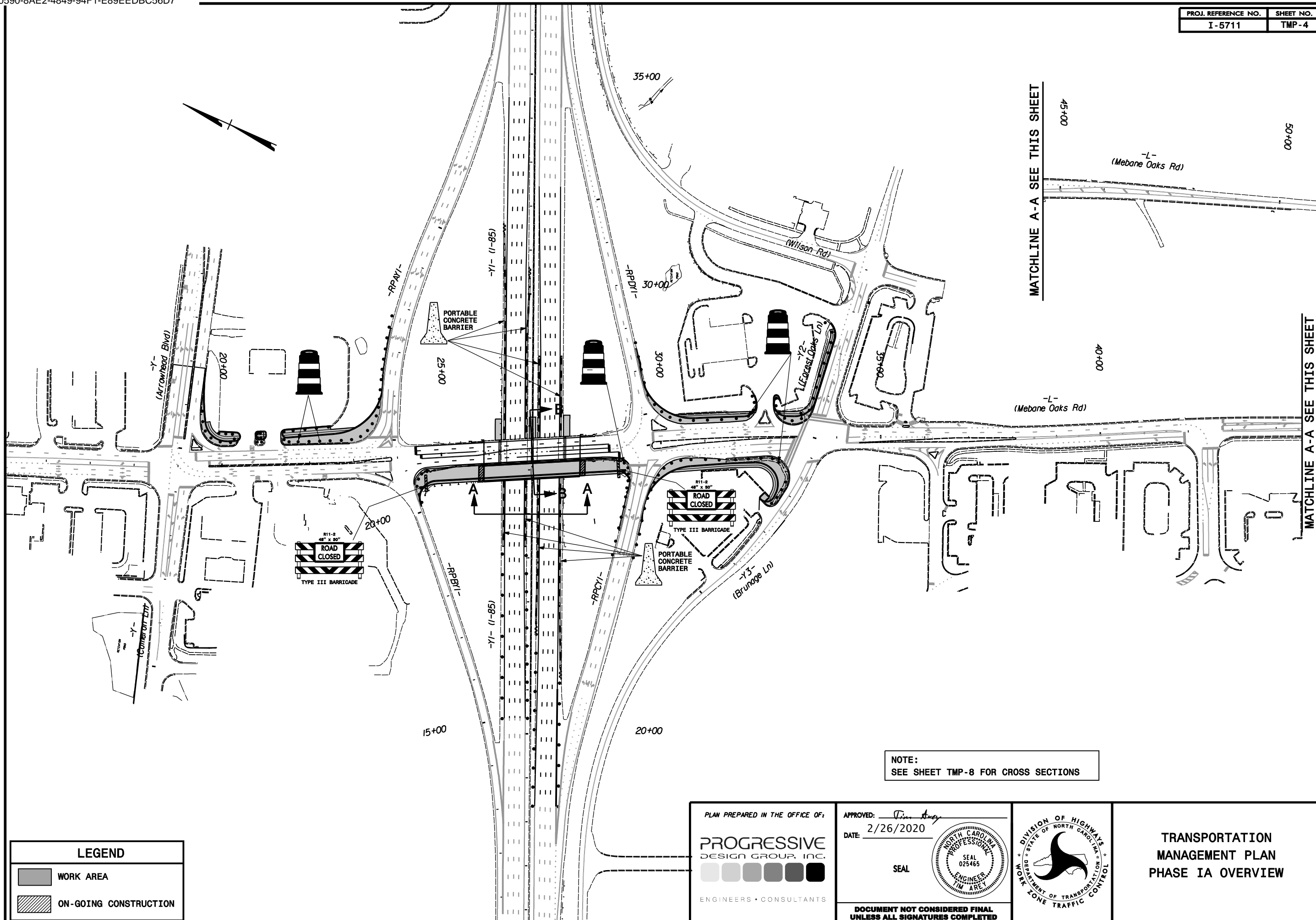
PHASE III

- STEP 1: COMPLETE CONSTRUCTION ON THE PROPOSED LEFT SIDE -L- BRIDGE WIDENING OVER -Y1- AND ALL ROADWAY WIDENING REQUIRED FOR THE TRAFFIC PATTERN SHOWN ON SHEETS TMP-7A AND TMP-7B UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE. REMOVE THE PORTABLE CONCRETE BARRIER FROM -L-.
- STEP 2: AWAY FROM EXISTING TRAFFIC PATTERNS, INSTALL AS MANY OF THE PROPOSED PAVEMENT MARKINGS AND MARKERS AS POSSIBLE FOR THE -L- NORTHBOUND TRAFFIC PATTERN SHOWN ON SHEETS TMP-7A AND TMP-7B.
- STEP 3: USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEETS 3 AND 7 OF 15, PLACE THE REMAINING PAVEMENT MARKINGS AND MARKERS ALONG -L- AND THE AFFECTED SIDE STREETS FOR THE -L- NORTHBOUND TRAFFIC PATTERN SHOWN ON SHEETS TMP-7A AND TMP-7B AND PLACE NORTHBOUND -L- TRAFFIC IN THE PATTERN SHOWN ON SHEETS TMP-7A AND TMP-7B.
- STEP 4: USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 7 OF 15, CONSTRUCT THE PROPOSED MEDIAN ISLANDS ALONG -L- IN THE LOCATIONS SHOWN ON SHEETS TMP-7A AND TMP-7B.
- INSTALL PROPOSED OVERHEAD SIGNING IN THE LOCATIONS SHOWN IN THE SIGNING PLANS. OVERHEAD SIGN INSTALLATIONS SHOULD TAKE PLACE ONLY WITHIN THE TIME RESTRICTIONS DICTATED ON GENERAL NOTE 'D', SHEET TMP-1B.

COMPLETE THE WORK REQUIRED OF PHASE III, STEPS 5 THRU 7 IN 58 CONSECUTIVE HOURS BEGINNING AT 8:00PM ON A FRIDAY AND COMPLETING BY 6:00AM THE FOLLOWING MONDAY. SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

- STEP 5: CLOSE THE INSIDE EXCLUSIVE LEFT TURN LANE ON -RPCY1- USING DRUMS AS SHOWN ON SHEET TMP-7D.
- STEP 6: CLOSE THE INSIDE THRU LANE ON NORTHBOUND AND SOUTHBOUND -L- IN THE LOCATIONS SHOWN ON SHEETS TMP-7C AND TMP-7D. USE LAW ENFORCEMENT TO CONTROL TRAFFIC AT THE RAMP TERMINALS.
- STEP 7: COMPLETE THE PPC OVERLAY ON THE EXISTING -L- BRIDGE OVER -Y1-, INSTALL TEMPORARY TAPE PAVEMENT MARKINGS ON THE -L- BRIDGE DECK BACK TO THE PREVIOUS PATTERN SHOWN ON SHEET TMP-7A AND REOPEN ALL LANES ON -L- AND -RPCY1- TO TRAFFIC.
- STEP 8: COMPLETE CONSTRUCTION ON ALL ROADWAYS UP THRU THE FINAL LAYER OF SURFACE COURSE, INSTALL FINAL PAVEMENT MARKINGS AND MARKERS AND OPEN ALL ROADWAYS TO THE FINAL TRAFFIC PATTERN.

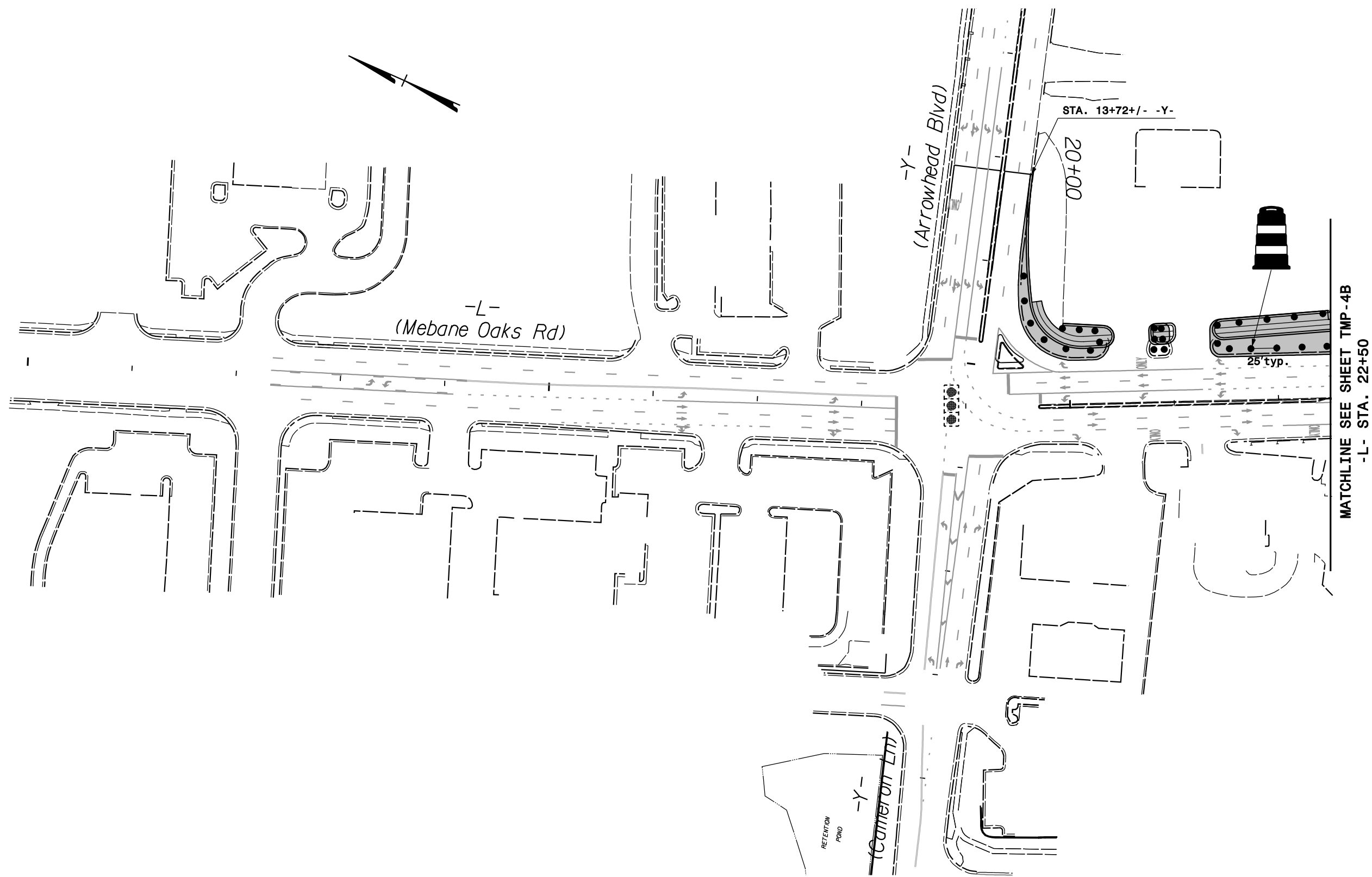
<p style="font-size: small;">PLAN PREPARED IN THE OFFICE OF:</p> <p style="text-align: center;">PROGRESSIVE DESIGN GROUP, INC.</p> <p style="text-align: center; font-size: x-small;">ENGINEERS • CONSULTANTS</p>	<p>APPROVED: <i>Tim Arey</i></p> <p>DATE: 2/26/2020</p> <p style="text-align: center;">SEAL</p> <div style="text-align: center;">  </div>	<div style="text-align: center;">  </div>	<p>TRANSPORTATION MANAGEMENT PLAN PROJECT PHASING</p>
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LEGEND	
	WORK AREA
	ON-GOING CONSTRUCTION

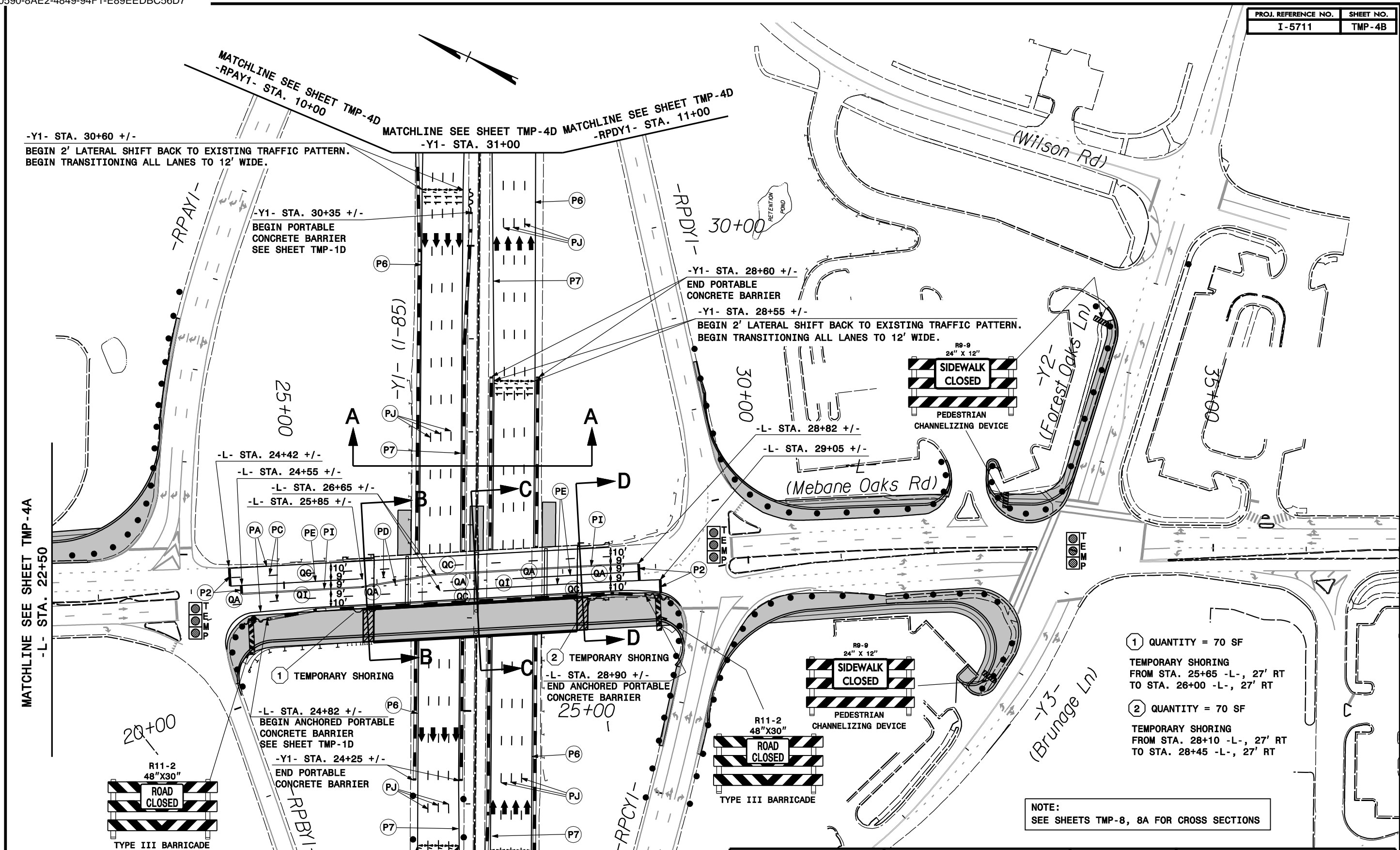
NOTE:
SEE SHEET TMP-8 FOR CROSS SECTIONS

PLAN PREPARED IN THE OFFICE OF: PROGRESSIVE DESIGN GROUP, INC. ENGINEERS • CONSULTANTS	APPROVED: <i>Tim Arey</i> DATE: 2/26/2020			TRANSPORTATION MANAGEMENT PLAN PHASE IA OVERVIEW
	SEAL			



LEGEND	
	WORK AREA
	ON-GOING CONSTRUCTION

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	SEAL			



LEGEND	
	WORK AREA
	ON-GOING CONSTRUCTION

- ① QUANTITY = 70 SF
TEMPORARY SHORING
FROM STA. 25+65 -L-, 27' RT
TO STA. 26+00 -L-, 27' RT
- ② QUANTITY = 70 SF
TEMPORARY SHORING
FROM STA. 28+10 -L-, 27' RT
TO STA. 28+45 -L-, 27' RT

NOTE:
SEE SHEETS TMP-8, 8A FOR CROSS SECTIONS

MATCHLINE SEE SHEET TMP-4A
-L- STA. 22+50

MATCHLINE SEE SHEET TMP-4D
-Y1- STA. 10+00

MATCHLINE SEE SHEET TMP-4D
-Y1- STA. 31+00

MATCHLINE SEE SHEET TMP-4D
-Y1- STA. 11+00

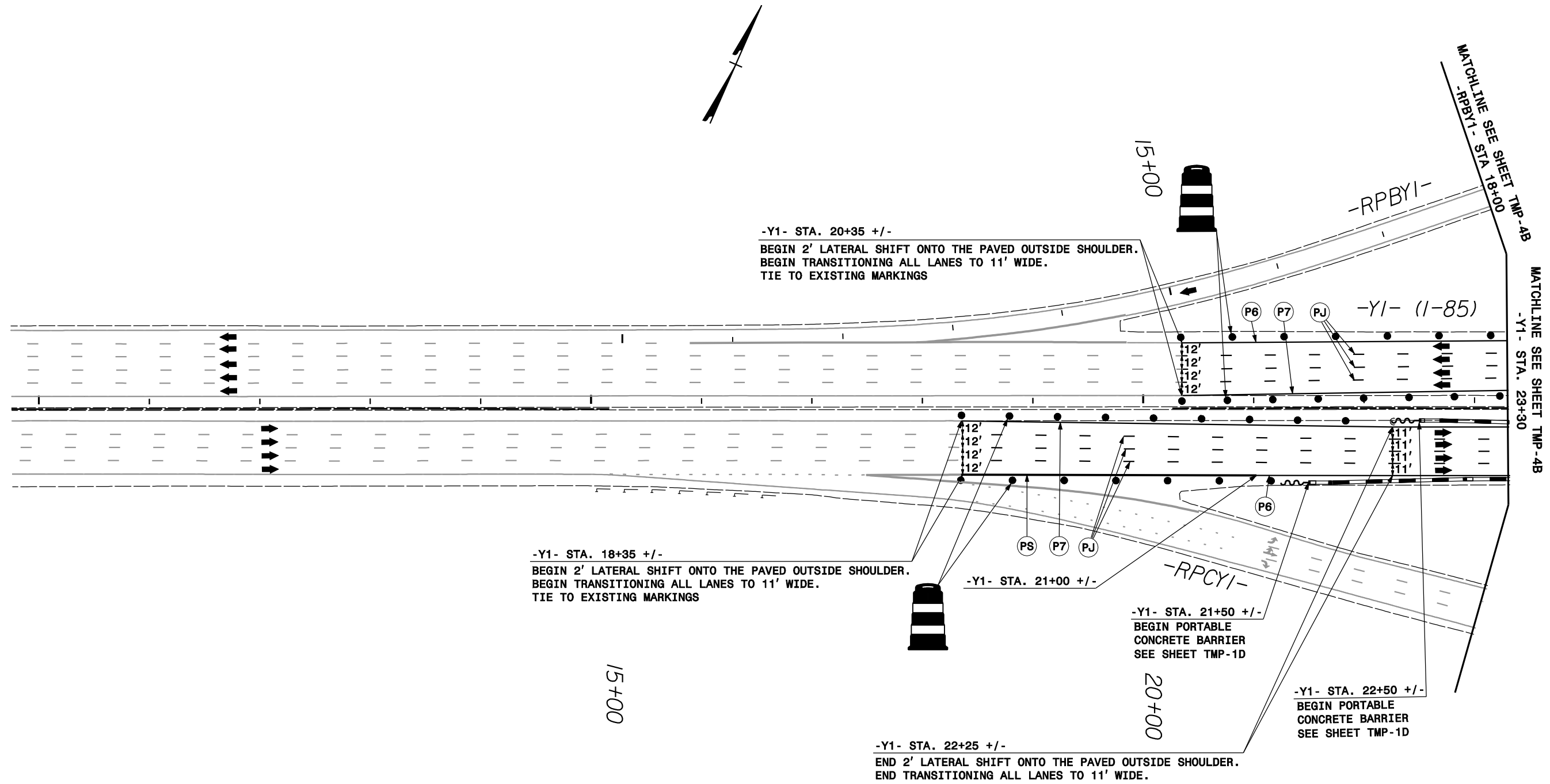
MATCHLINE SEE SHEET TMP-4C
-Y1- STA. 18+00

MATCHLINE SEE SHEET TMP-4C
-Y1- STA. 23+30

MATCHLINE SEE SHEET TMP-4C
-Y1- STA. 23+55 +/-

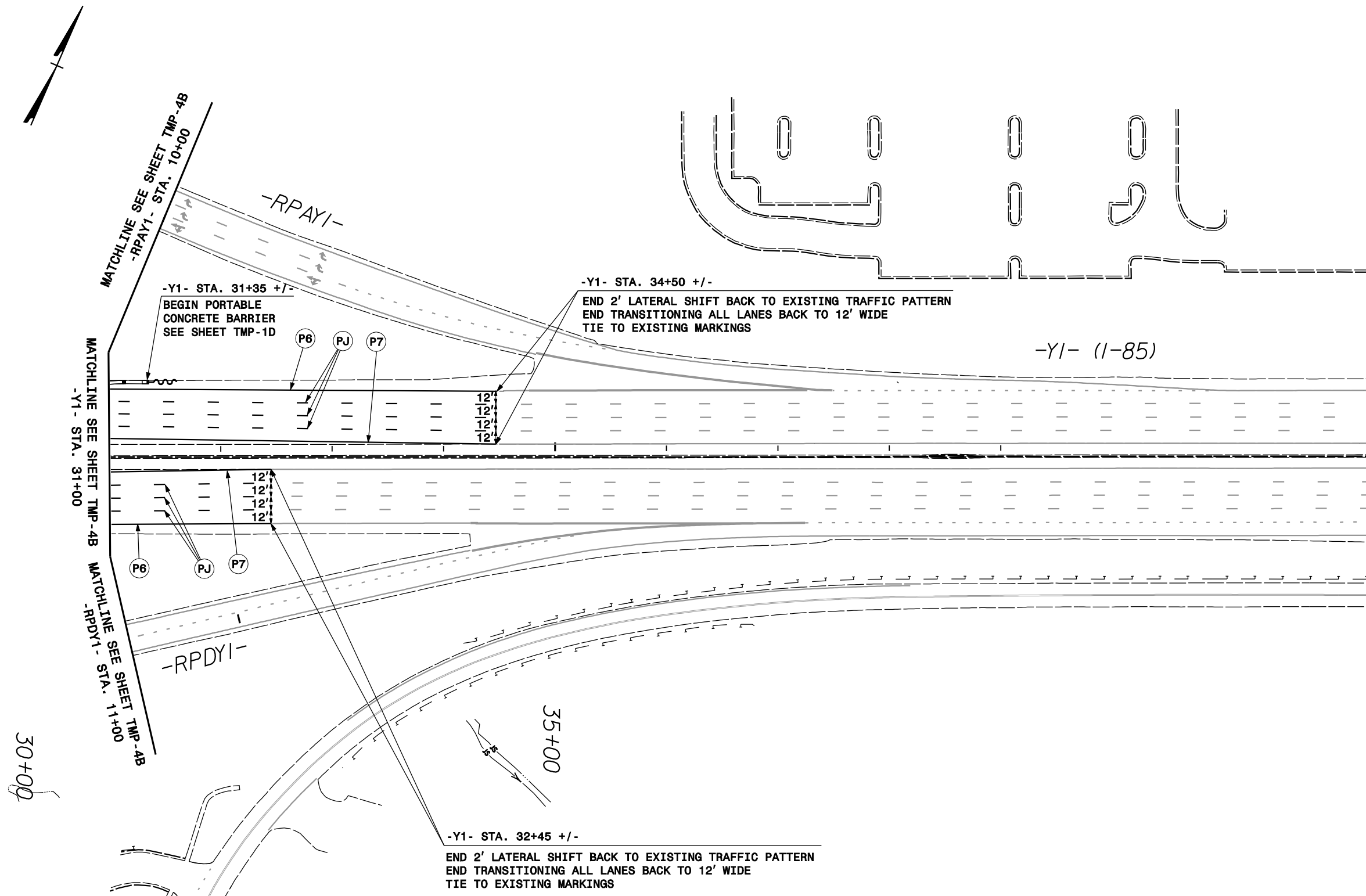
END 2' LATERAL SHIFT ONTO THE PAVED OUTSIDE SHOULDER.
END TRANSITIONING ALL LANES TO 11' WIDE.

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	SEAL			



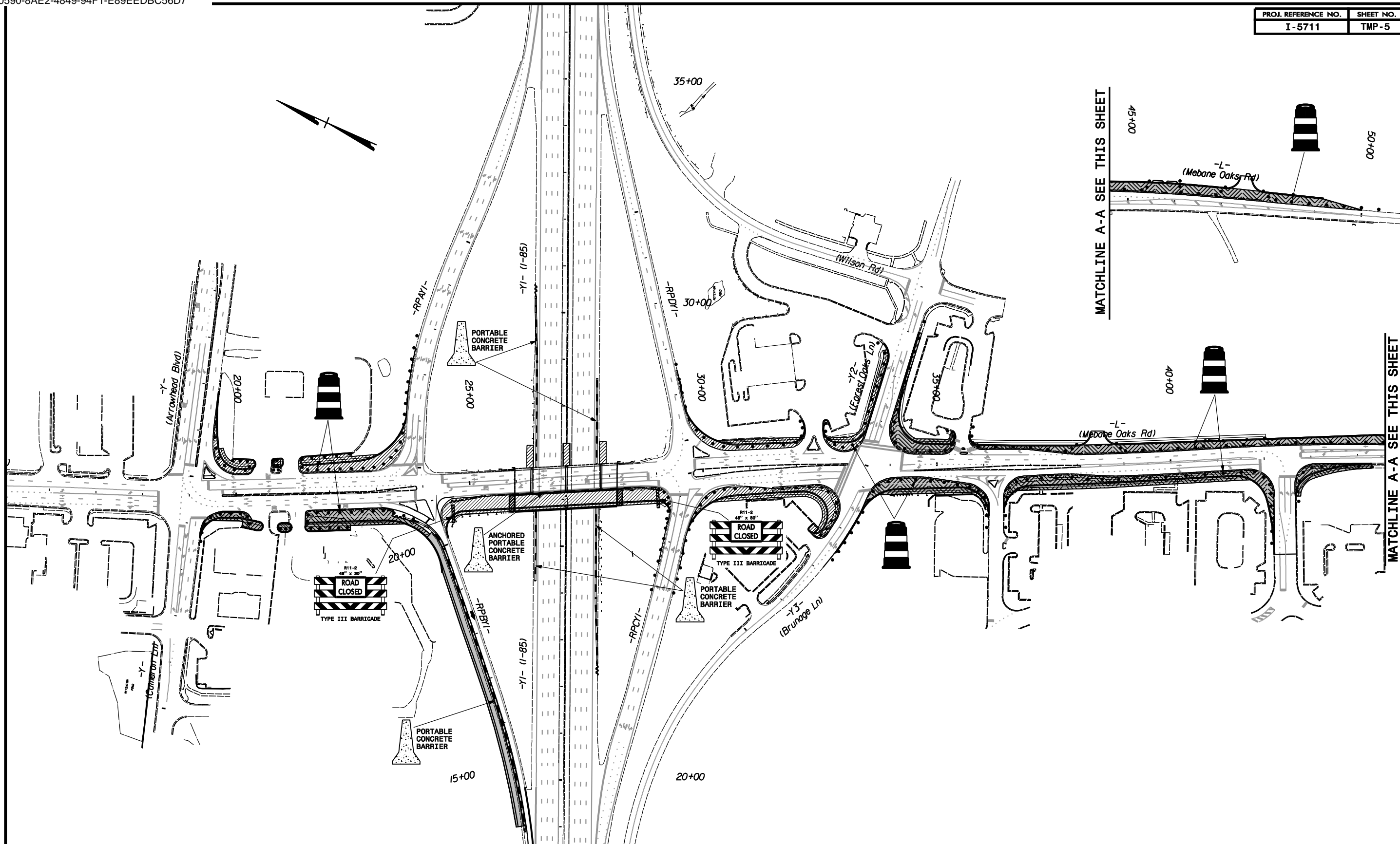
LEGEND	
	WORK AREA
	ON-GOING CONSTRUCTION

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	SEAL			



LEGEND	
	WORK AREA
	ON-GOING CONSTRUCTION

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	<p>SEAL</p>			



MATCHLINE A-A SEE THIS SHEET

MATCHLINE A-A SEE THIS SHEET

LEGEND	
	WORK AREA
	ON-GOING CONSTRUCTION
	WORK AREA WITH A DELAY OF ENTRY (SEE SPECIAL PROVISIONS)

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PROGRESSIVE DESIGN GROUP, INC.

ENGINEERS • CONSULTANTS

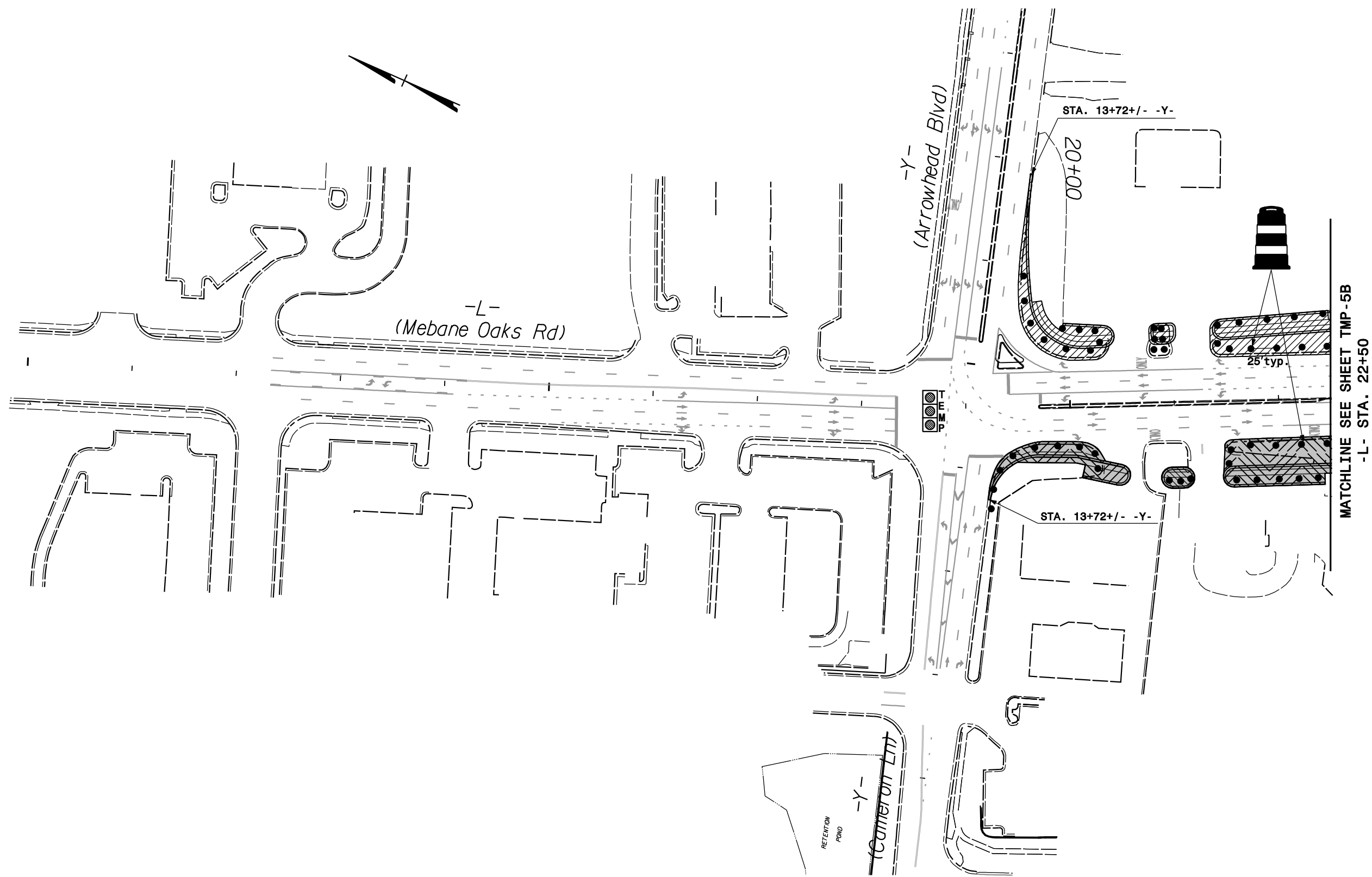
APPROVED: *Tim Arey*

DATE: 2/26/2020

SEAL

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

**TRANSPORTATION
MANAGEMENT PLAN
PHASE IB OVERVIEW**



LEGEND	
	WORK AREA
	ON-GOING CONSTRUCTION
	WORK AREA WITH A DELAY OF ENTRY (SEE SPECIAL PROVISIONS)

PLAN PREPARED IN THE OFFICE OF:

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ENGINEERS • CONSULTANTS

APPROVED: *Tim Arey*

DATE: 2/26/2020

SEAL

SEAL

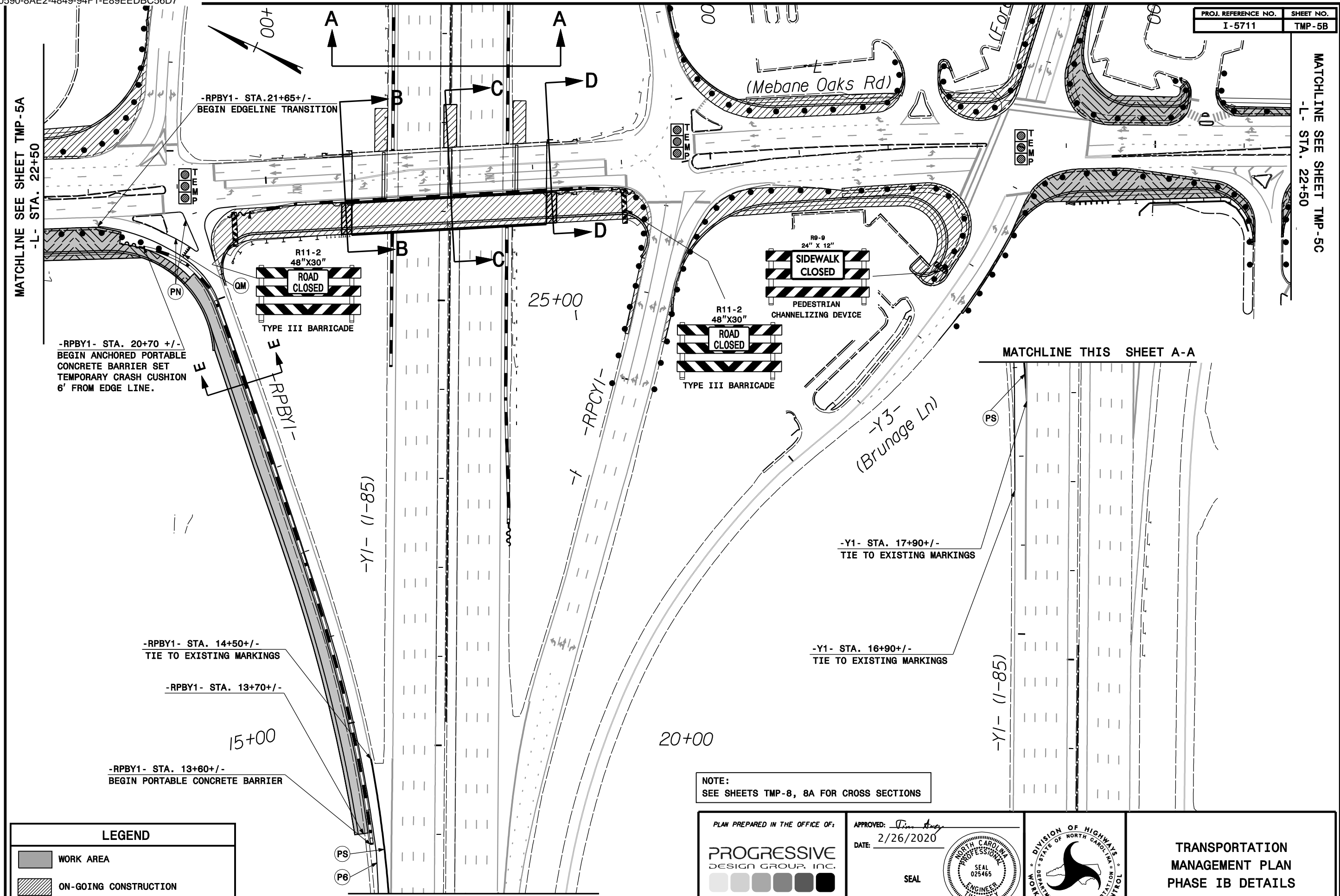
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TRANSPORTATION
MANAGEMENT PLAN
PHASE IB DETAILS

MATCHLINE SEE SHEET TMP-5C
-L- STA. 22+50

MATCHLINE SEE SHEET TMP-5A
-L- STA. 22+50



LEGEND	
	WORK AREA
	ON-GOING CONSTRUCTION
	WORK AREA WITH A DELAY OF ENTRY (SEE SPECIAL PROVISIONS)

NOTE:
SEE SHEETS TMP-8, 8A FOR CROSS SECTIONS

PLAN PREPARED IN THE OFFICE OF:

PROGRESSIVE DESIGN GROUP, INC.

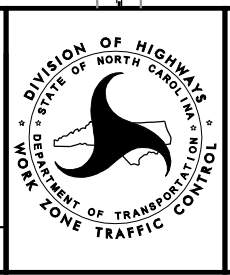
ENGINEERS • CONSULTANTS

APPROVED: *[Signature]*

DATE: 2/26/2020

SEAL

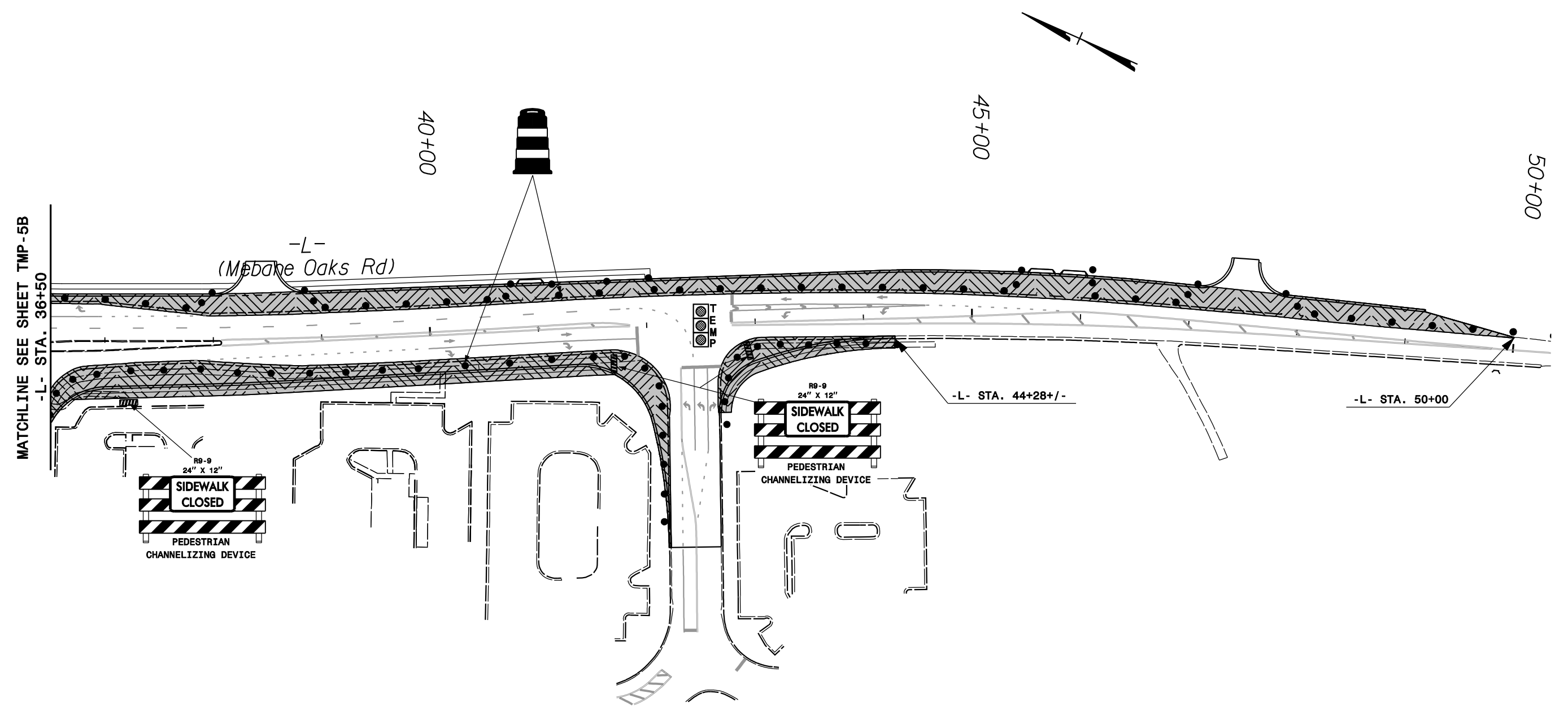
PROFESSIONAL ENGINEER
TIM AREY
SEAL 025465
NORTH CAROLINA



TRANSPORTATION MANAGEMENT PLAN
PHASE IB DETAILS

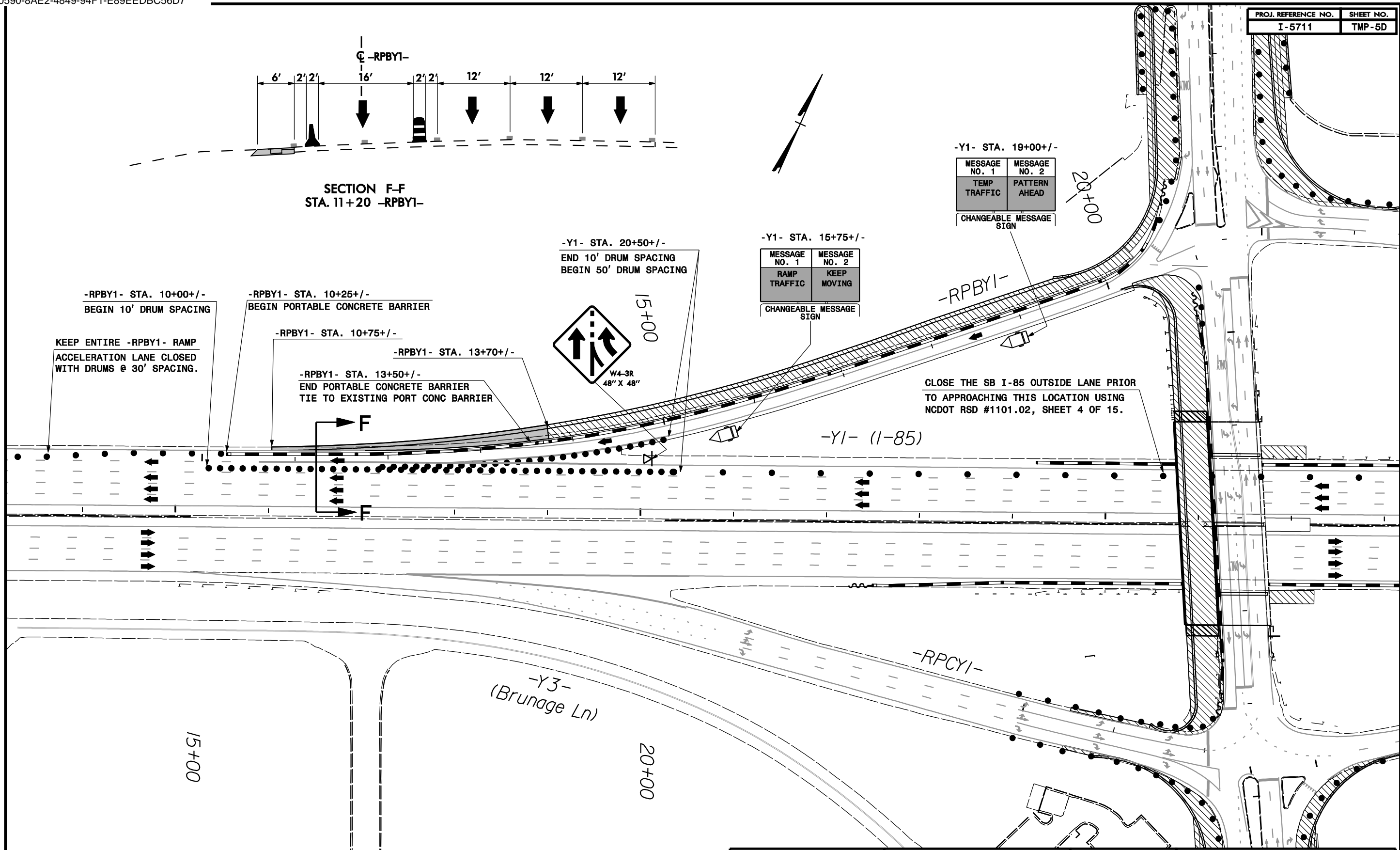
MATCHLINE THIS SHEET A-A

MATCHLINE THIS SHEET A-A



LEGEND	
	WORK AREA
	ON-GOING CONSTRUCTION
	WORK AREA WITH A DELAY OF ENTRY (SEE SPECIAL PROVISIONS)

<p>PLAN PREPARED IN THE OFFICE OF:</p> <p>PROGRESSIVE DESIGN GROUP, INC.</p> <p>ENGINEERS • CONSULTANTS</p>	<p>APPROVED: <i>Tim Arey</i></p> <p>DATE: 2/26/2020</p>			<p>TRANSPORTATION MANAGEMENT PLAN</p> <p>PHASE IB DETAILS</p>
	<p>SEAL</p>			



-RPBY1- STA. 10+00+/-
BEGIN 10' DRUM SPACING

KEEP ENTIRE -RPBY1- RAMP
ACCELERATION LANE CLOSED
WITH DRUMS @ 30' SPACING.

-RPBY1- STA. 10+25+/-
BEGIN PORTABLE CONCRETE BARRIER

-RPBY1- STA. 10+75+/-

-RPBY1- STA. 13+50+/-
END PORTABLE CONCRETE BARRIER
TIE TO EXISTING PORT CONC BARRIER

-RPBY1- STA. 13+70+/-

-Y1- STA. 20+50+/-
END 10' DRUM SPACING
BEGIN 50' DRUM SPACING

-Y1- STA. 15+75+/-

MESSAGE NO. 1	MESSAGE NO. 2
RAMP TRAFFIC	KEEP MOVING
CHANGEABLE MESSAGE SIGN	

-Y1- STA. 19+00+/-

MESSAGE NO. 1	MESSAGE NO. 2
TEMP TRAFFIC	PATTERN AHEAD
CHANGEABLE MESSAGE SIGN	

CLOSE THE SB I-85 OUTSIDE LANE PRIOR
TO APPROACHING THIS LOCATION USING
NCDOT RSD #1101.02, SHEET 4 OF 15.

LEGEND	
	WORK AREA
	ON-GOING CONSTRUCTION

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DATE: 2/26/2020

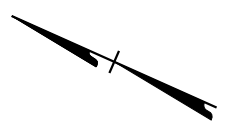
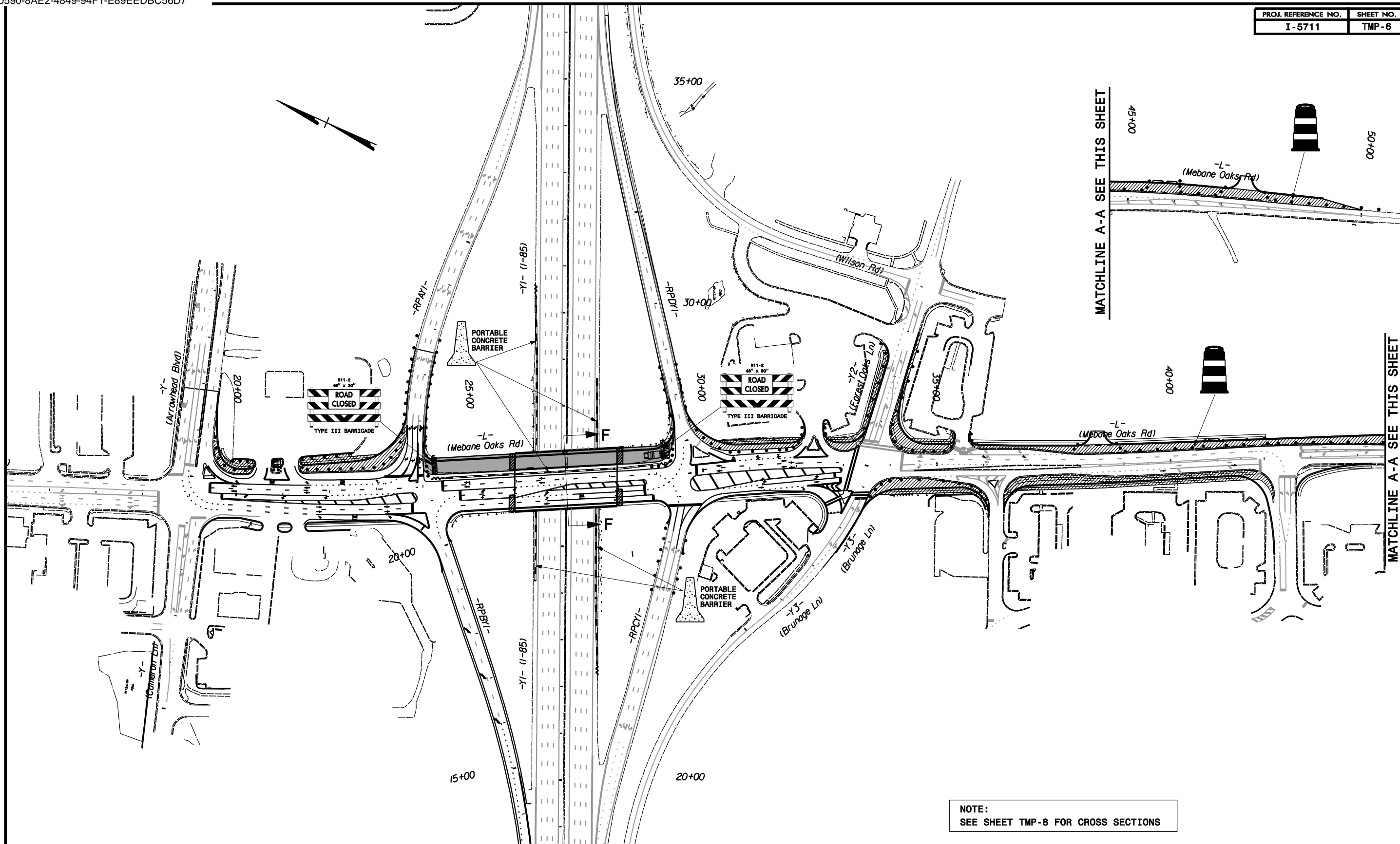
SEAL

PROFESSIONAL ENGINEER
SEAL 025465
TIM AREY

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

TRANSPORTATION
MANAGEMENT PLAN
PHASE IC DETAIL

DOCUMENT NOT CONSIDERED FINAL
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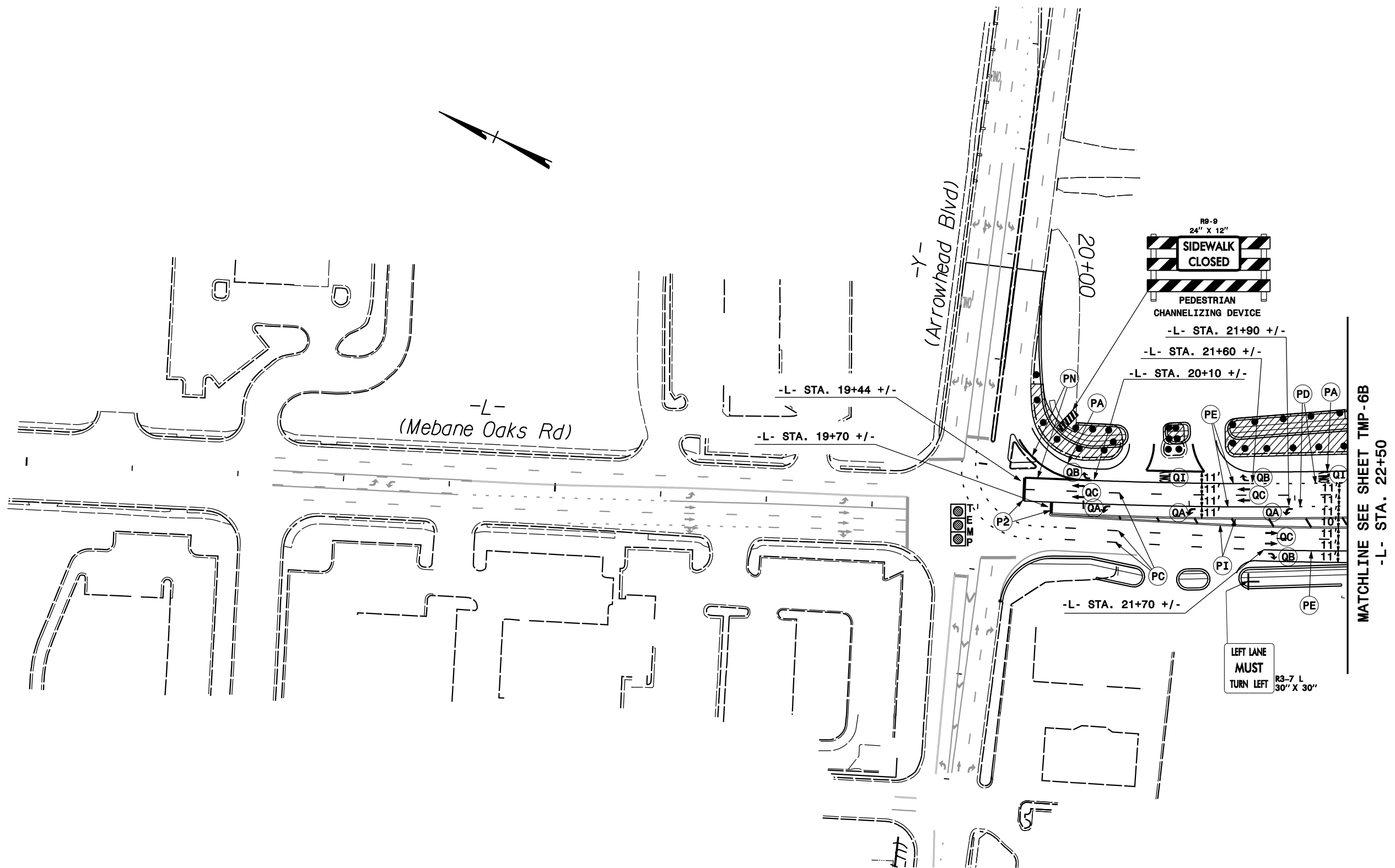
MATCHLINE A-A SEE THIS SHEET

MATCHLINE A-A SEE THIS SHEET

NOTE:
SEE SHEET TMP-8 FOR CROSS SECTIONS

LEGEND	
	WORK AREA
	ON-GOING CONSTRUCTION

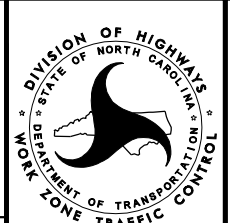
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	SEAL			



LEGEND	
	WORK AREA
	ON-GOING CONSTRUCTION

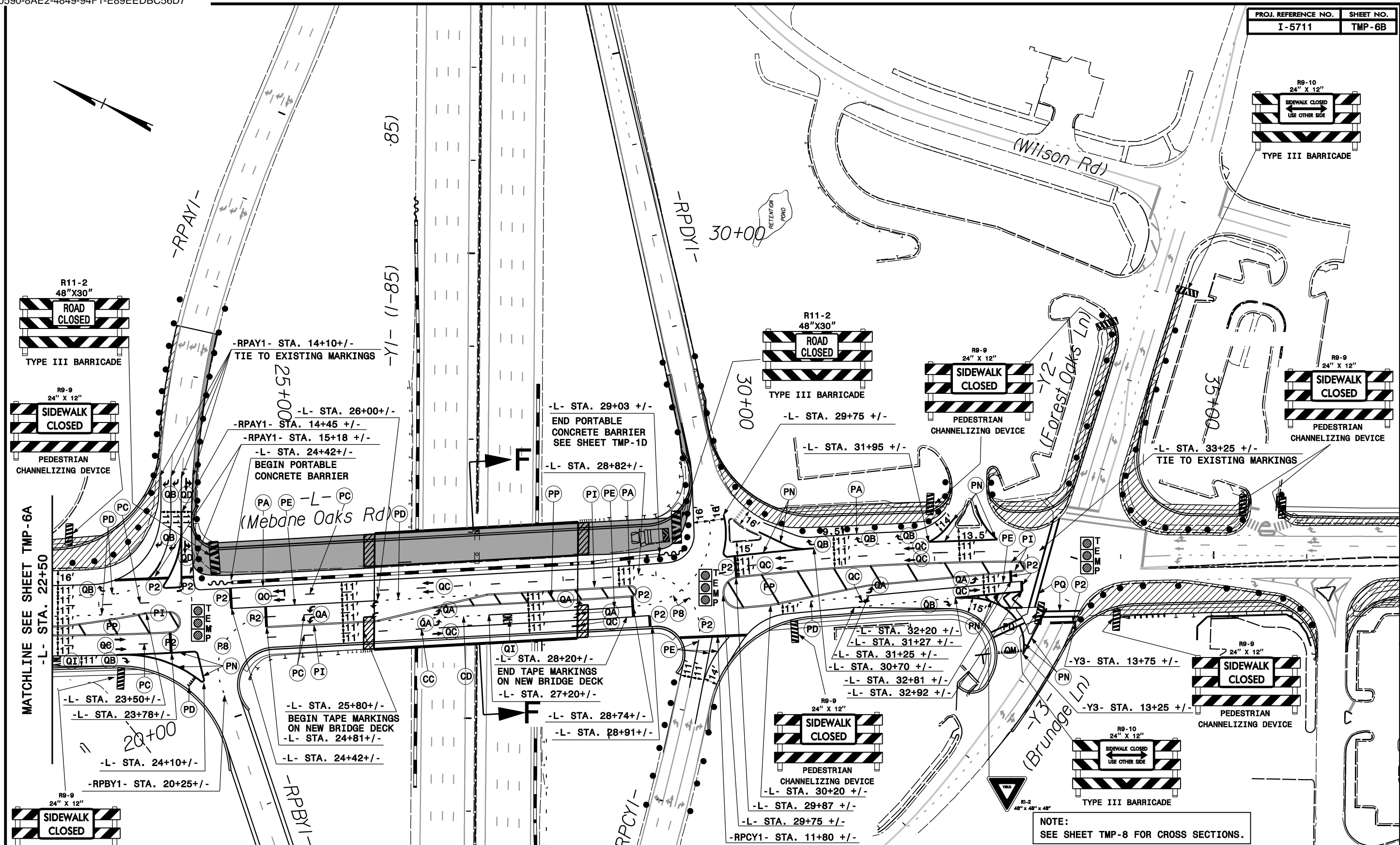
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TRANSPORTATION MANAGEMENT PLAN
PHASE II DETAILS

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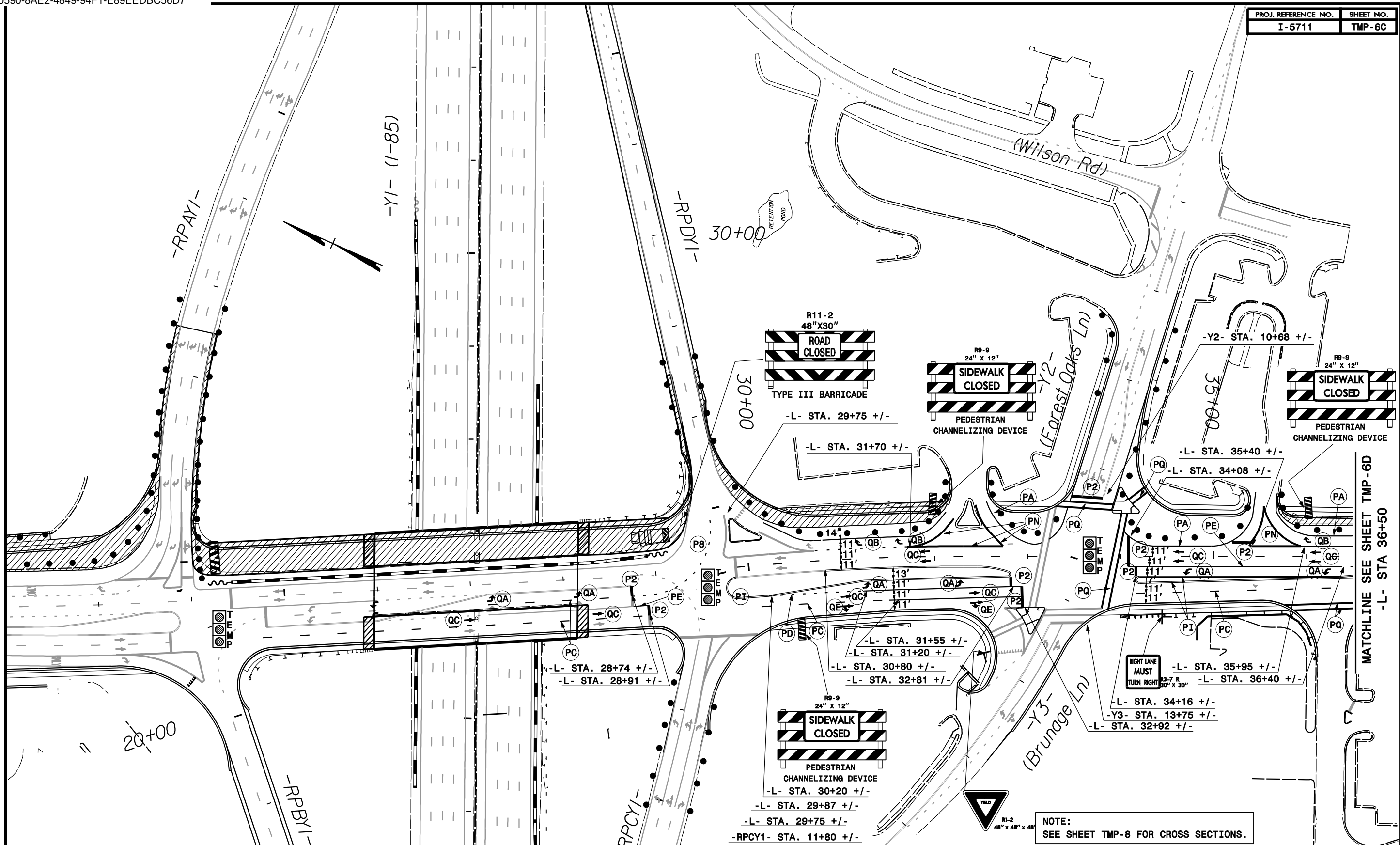


MATCHLINE SEE SHEET TMP-6A
-L- STA. 22+50

NOTE:
SEE SHEET TMP-8 FOR CROSS SECTIONS.

LEGEND	
	WORK AREA
	ON-GOING CONSTRUCTION

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	DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

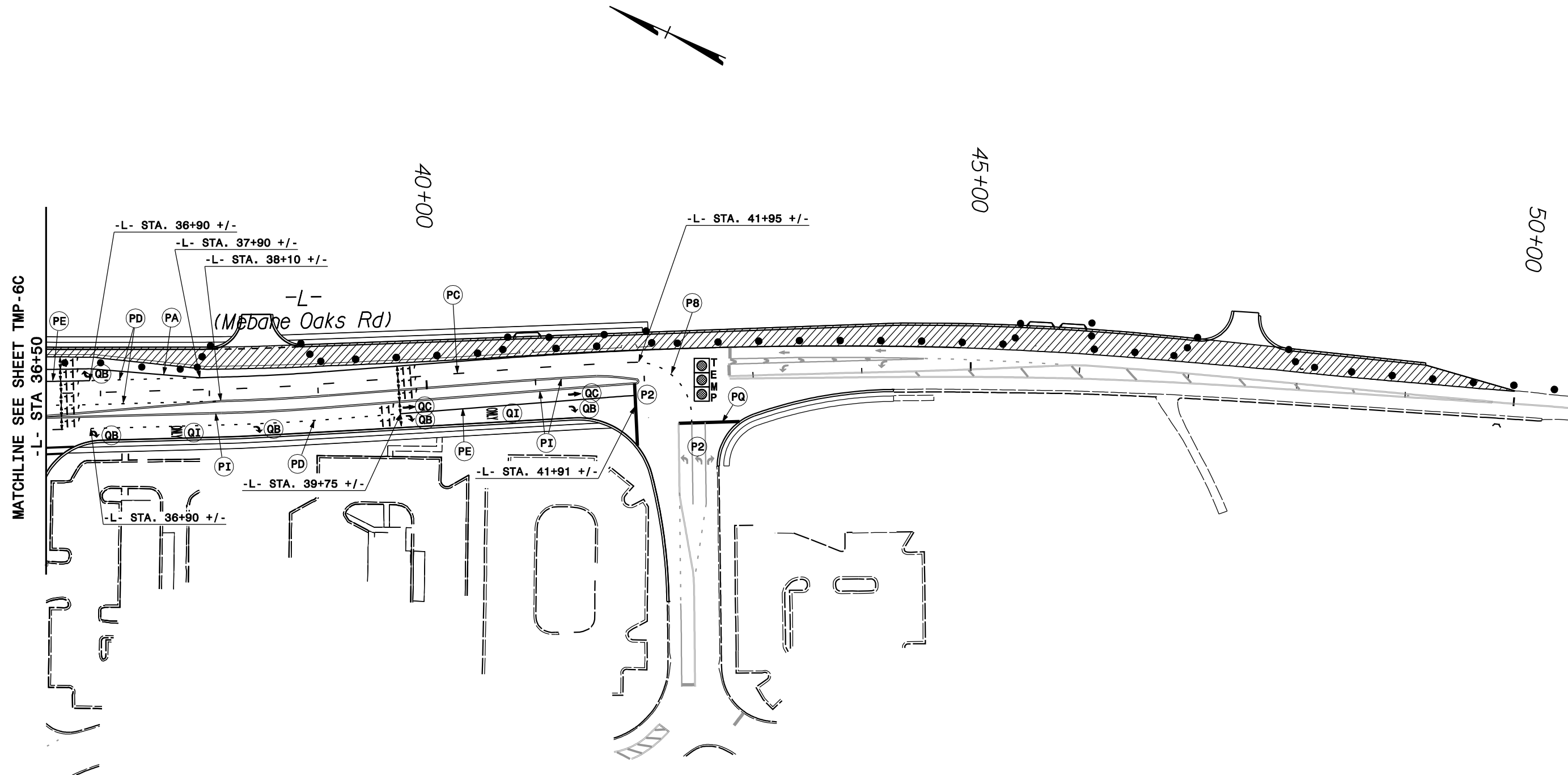


LEGEND	
	WORK AREA
	ON-GOING CONSTRUCTION

NOTE:
SEE SHEET TMP-8 FOR CROSS SECTIONS.

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	SEAL 		

MATCHLINE SEE SHEET TMP-6D
-L- STA 36+50



MATCHLINE SEE SHEET TMP-6C
-L- STA. 36+50

LEGEND	
	WORK AREA
	ON-GOING CONSTRUCTION

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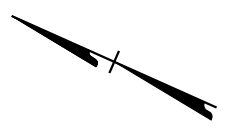
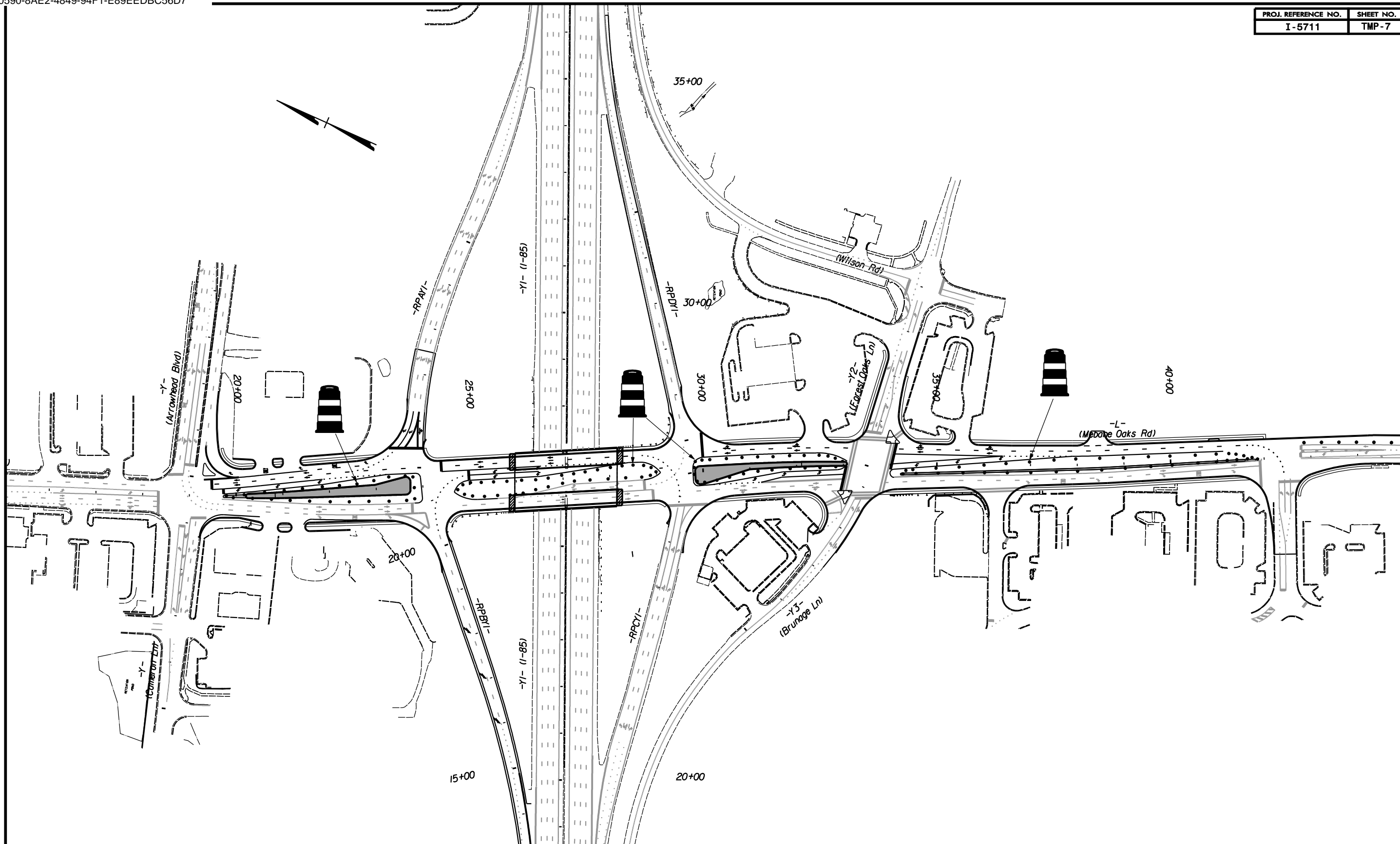
APPROVED: *Tim Arey*

DATE: 2/26/2020

SEAL

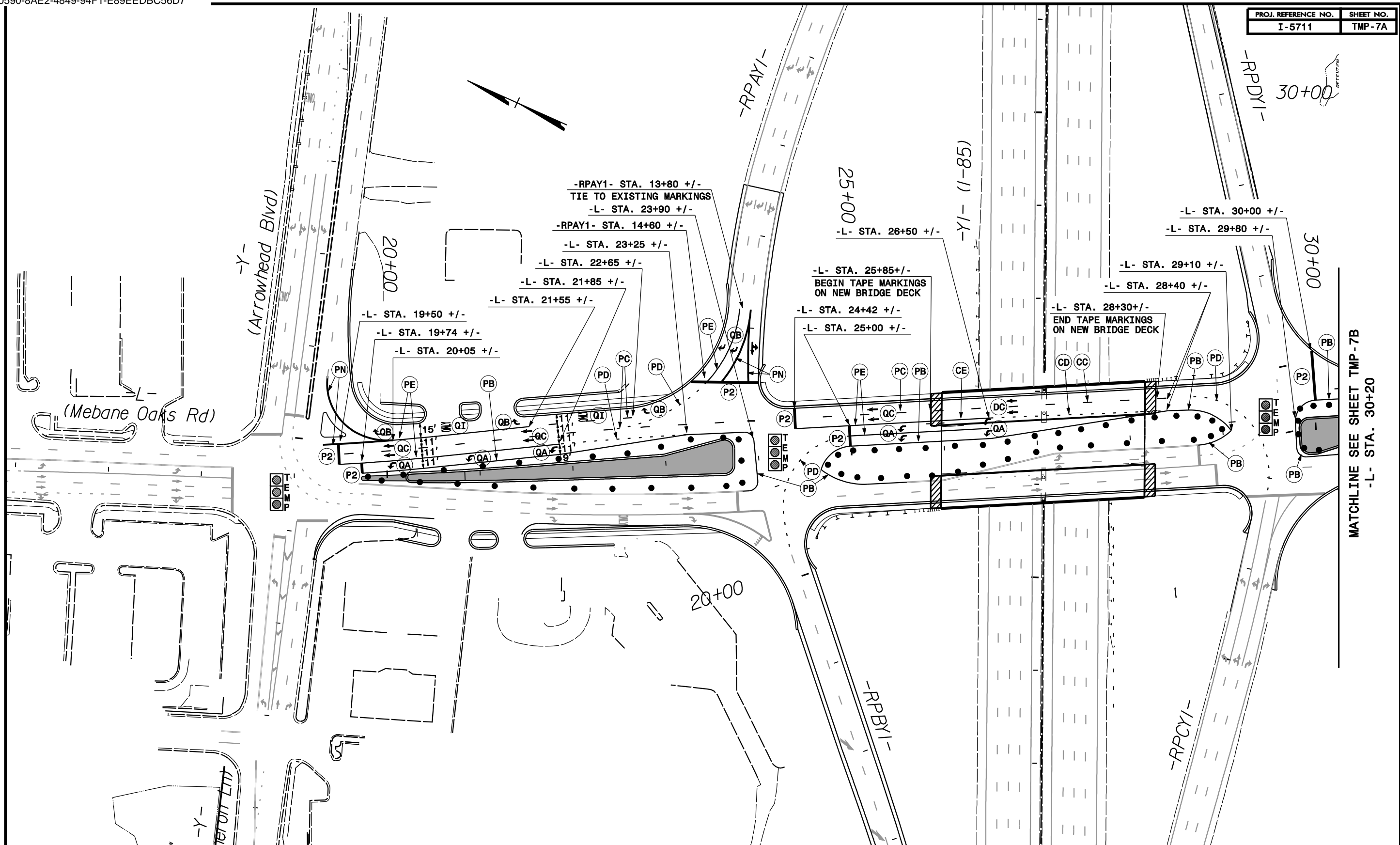
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

**TRANSPORTATION
MANAGEMENT PLAN
PHASE IIA DETAILS**



LEGEND	
	WORK AREA
	ON-GOING CONSTRUCTION

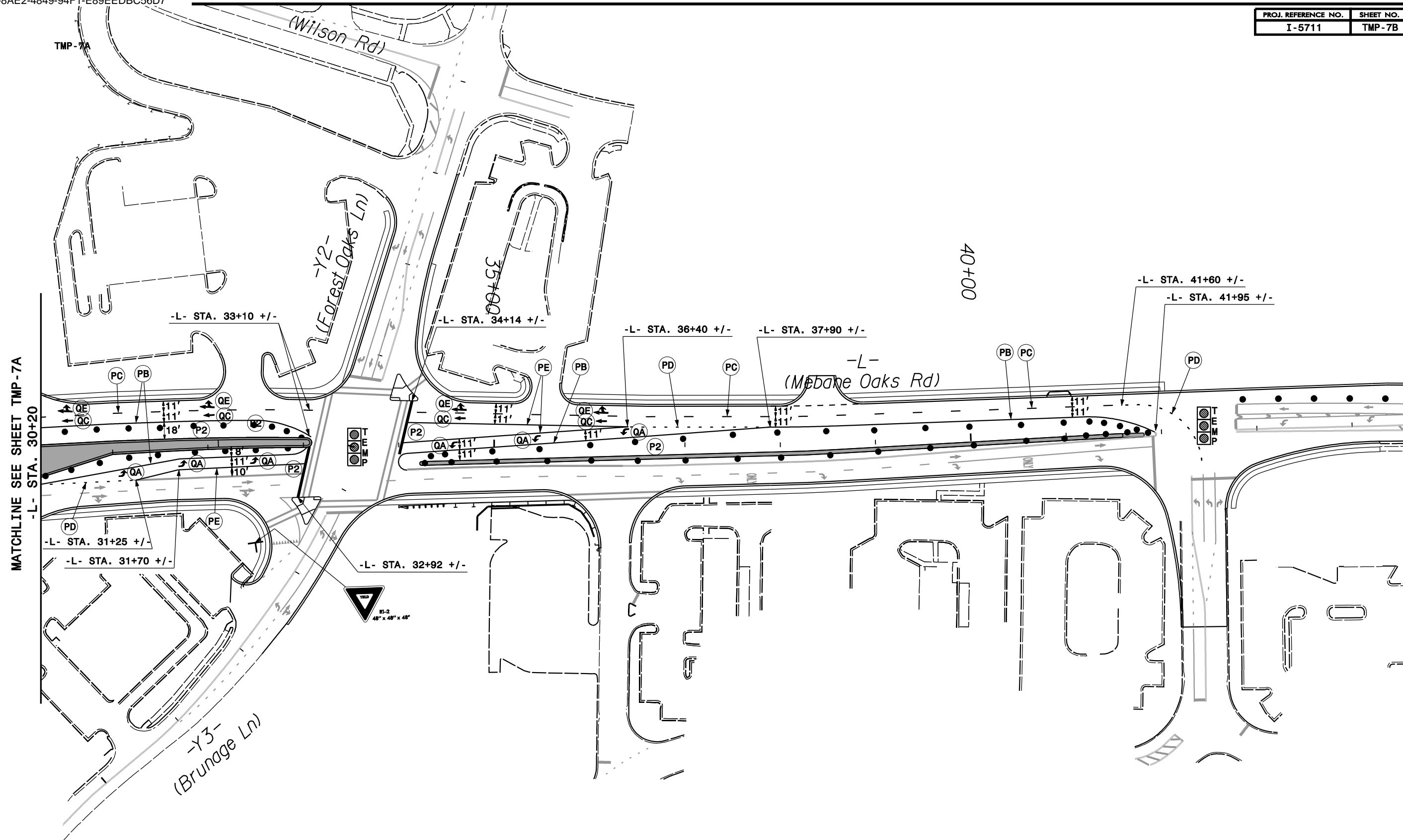
PLAN PREPARED IN THE OFFICE OF: PROGRESSIVE DESIGN GROUP, INC. ENGINEERS • CONSULTANTS	APPROVED: <i>Tim Arey</i> DATE: 2/26/2020			TRANSPORTATION MANAGEMENT PLAN PHASE III OVERVIEW
	SEAL			



LEGEND	
	WORK AREA
	ON-GOING CONSTRUCTION

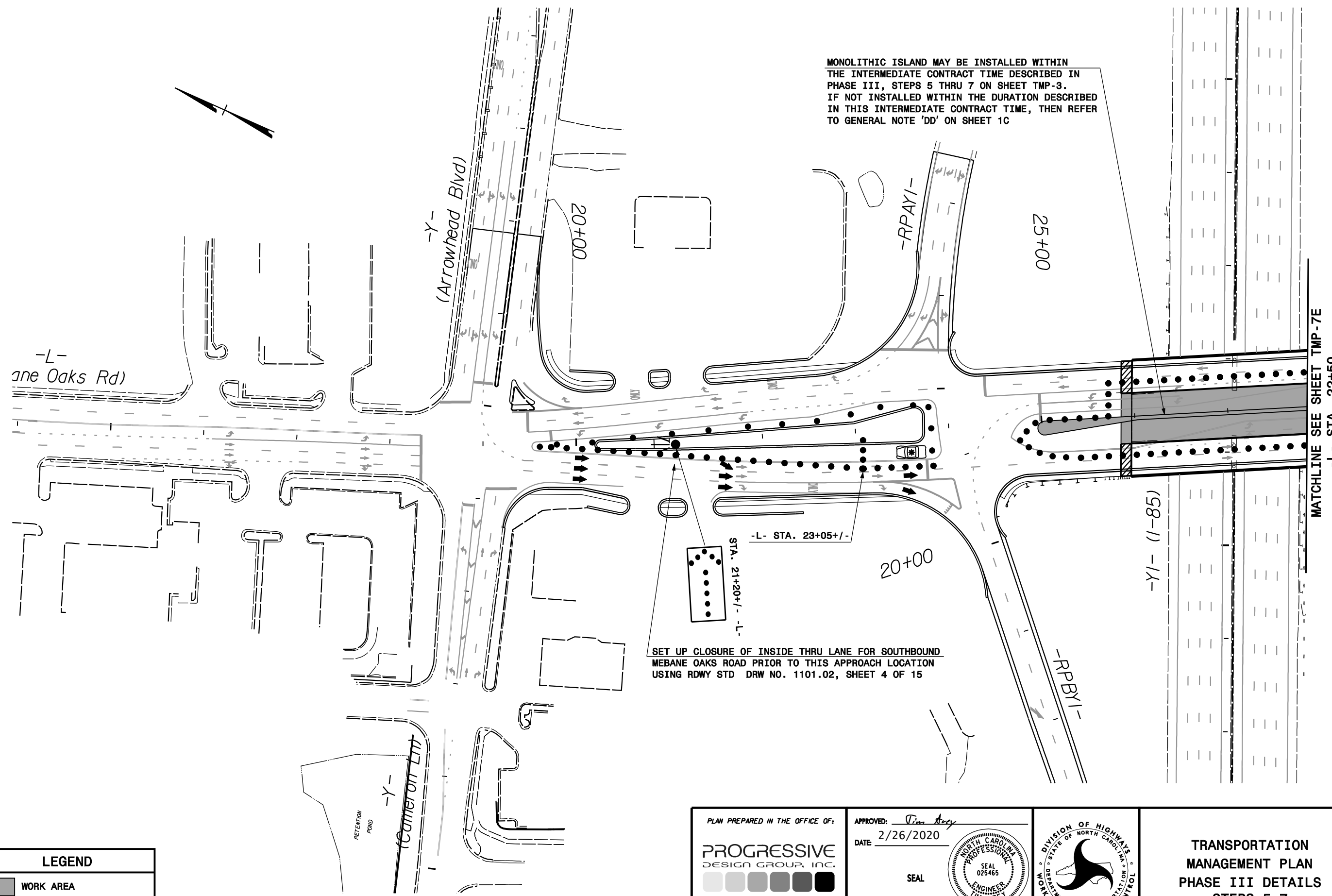
PLAN PREPARED IN THE OFFICE OF: PROGRESSIVE DESIGN GROUP, INC. ENGINEERS • CONSULTANTS	APPROVED: <i>Tim Arey</i> DATE: 2/26/2020			TRANSPORTATION MANAGEMENT PLAN PHASE III DETAILS
	SEAL			

MATCHLINE SEE SHEET TMP-7B
-L- STA. 30+20



LEGEND	
	WORK AREA
	ON-GOING CONSTRUCTION

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	SEAL			



LEGEND	
	WORK AREA
	ON-GOING CONSTRUCTION

PLAN PREPARED IN THE OFFICE OF:

PROGRESSIVE DESIGN GROUP, INC.

ENGINEERS • CONSULTANTS

APPROVED: *Tim Arrey*

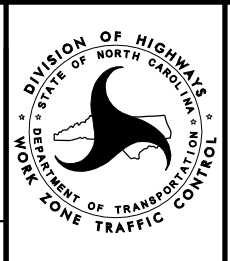
DATE: 2/26/2020

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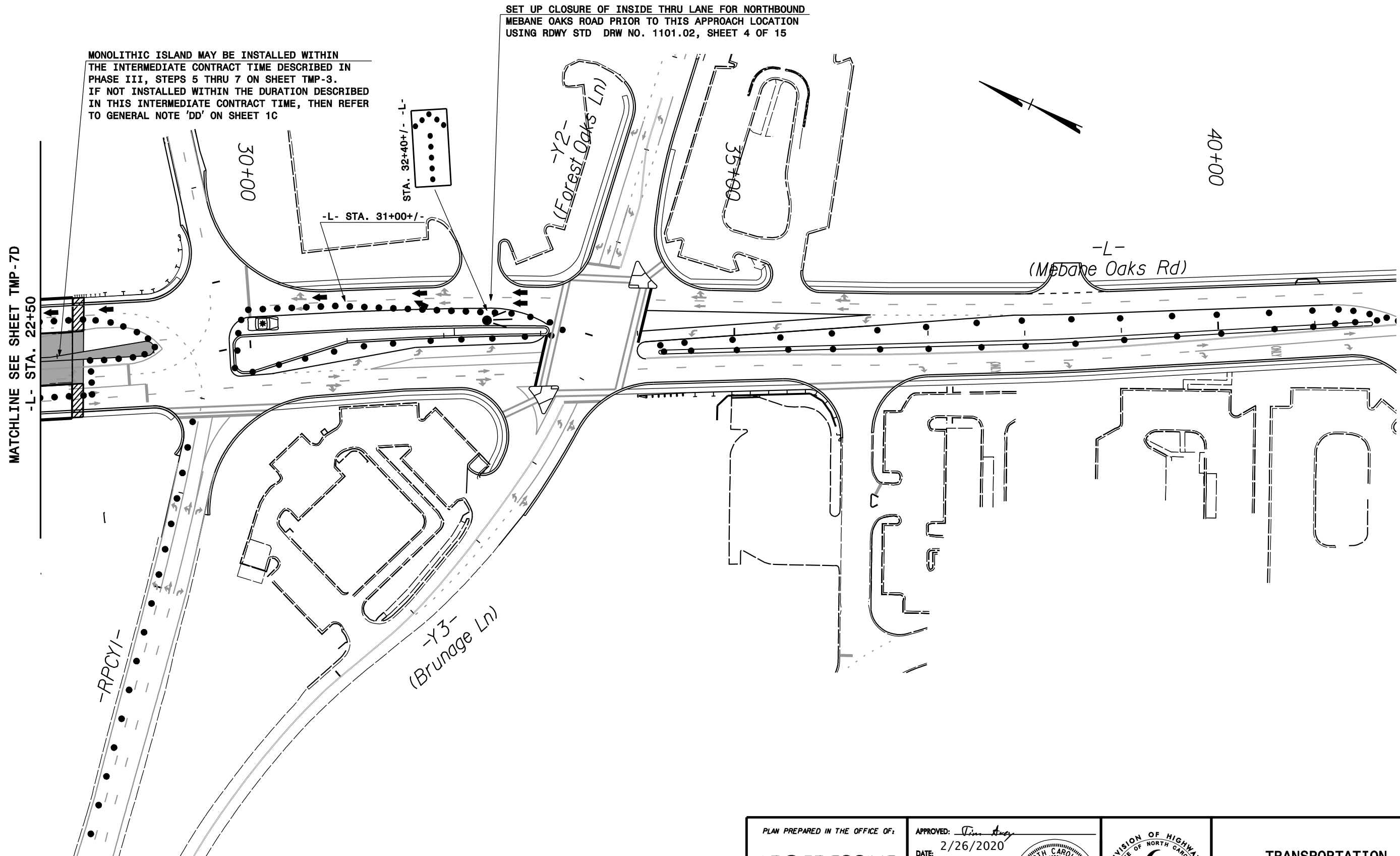
SEAL 025465

ENGINEER TIM ARREY

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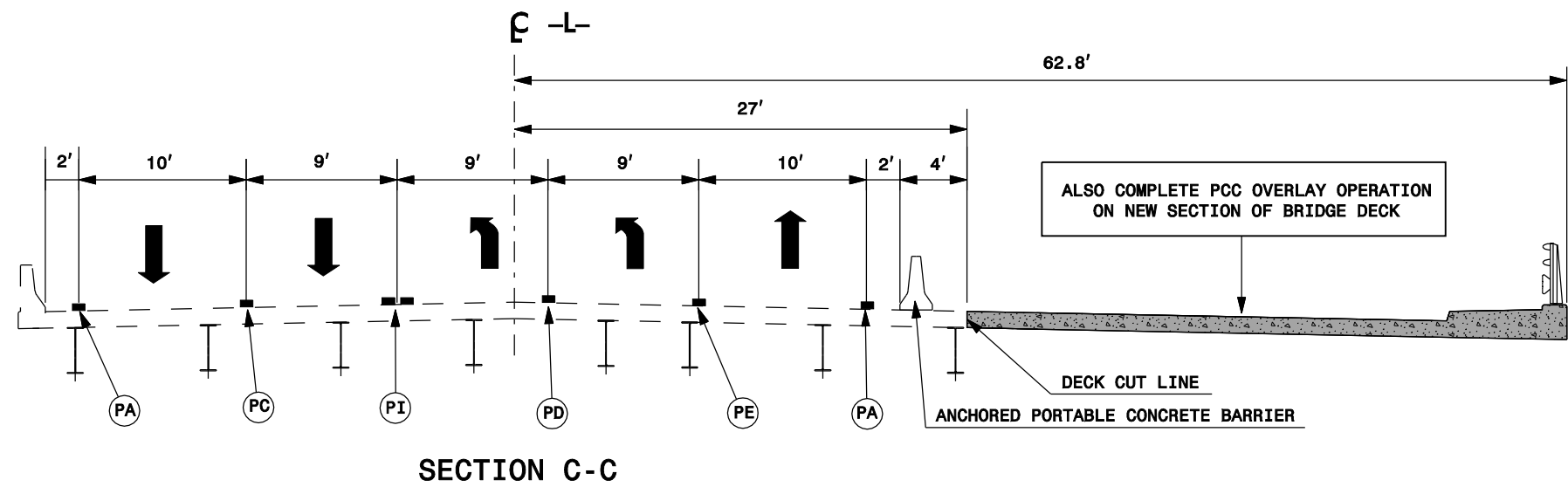
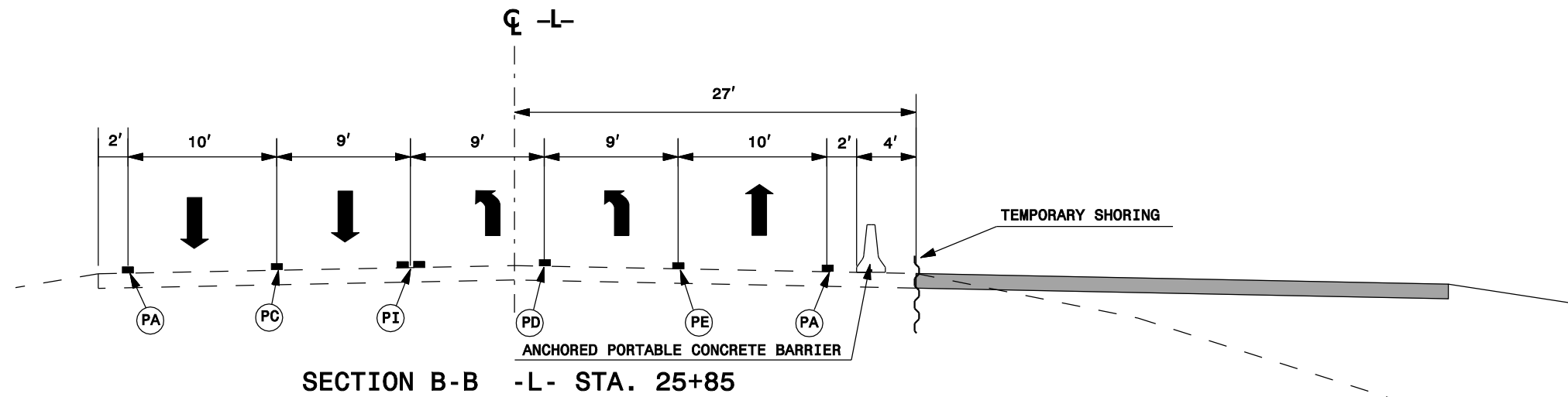
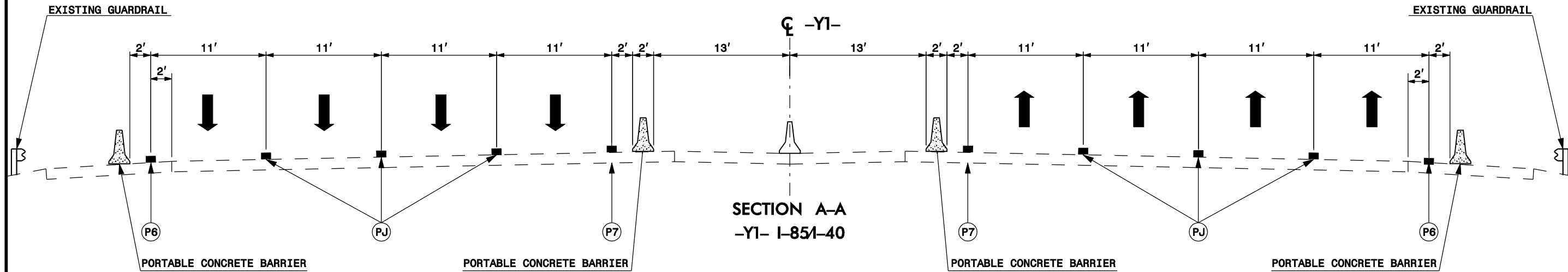


TRANSPORTATION MANAGEMENT PLAN
PHASE III DETAILS
STEPS 5-7

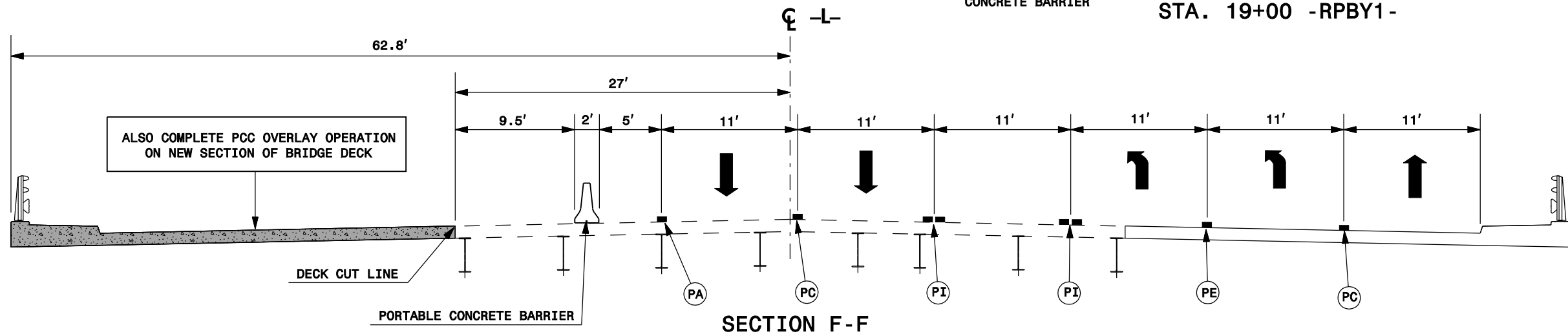
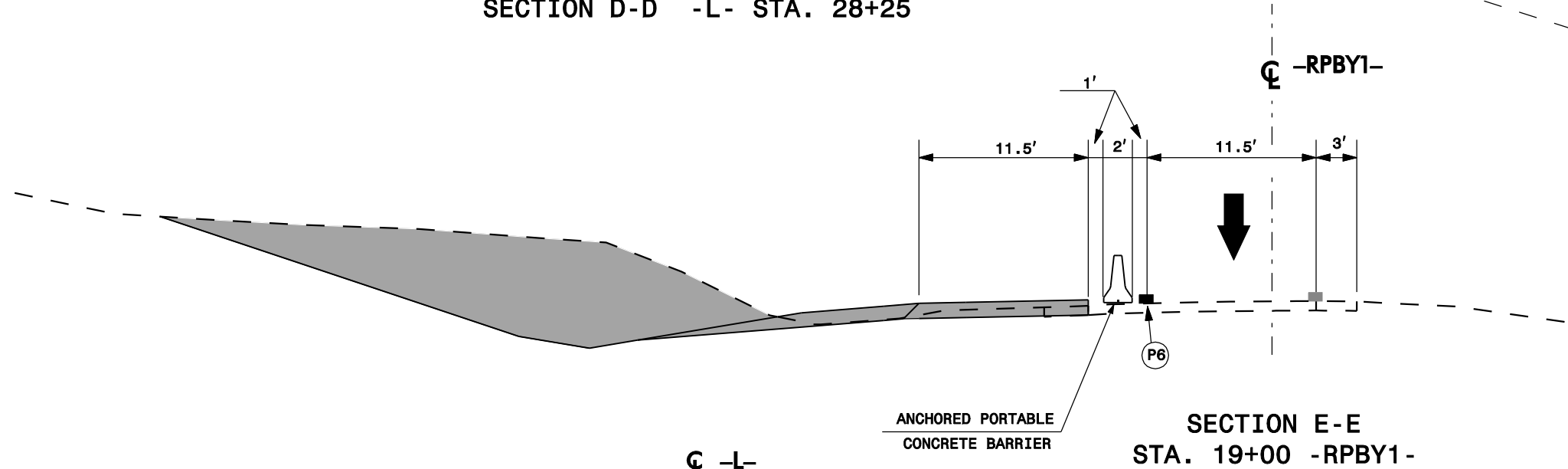
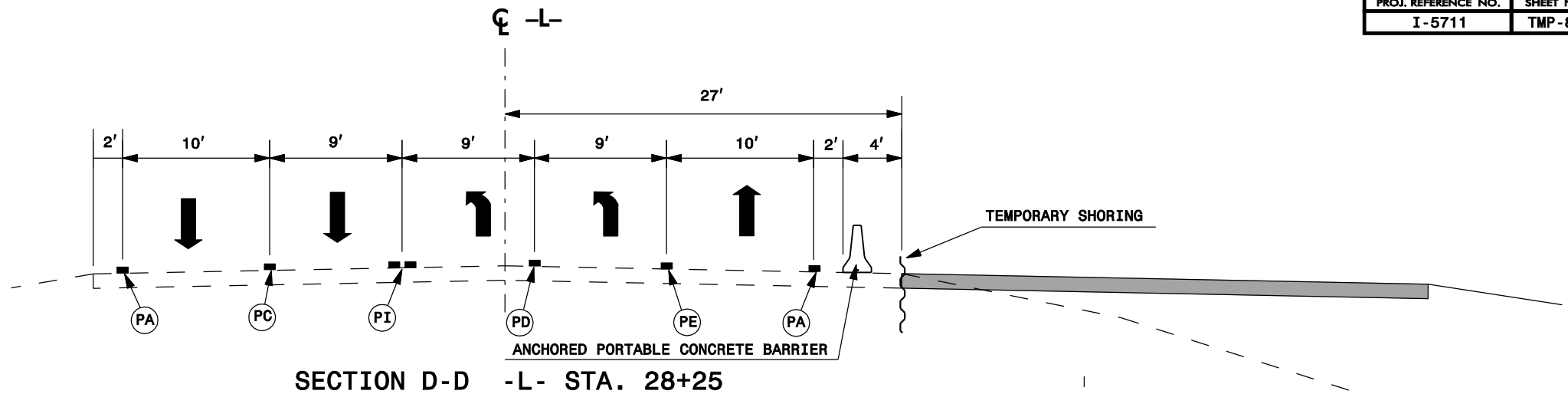


LEGEND	
	WORK AREA
	ON-GOING CONSTRUCTION

PLAN PREPARED IN THE OFFICE OF: PROGRESSIVE DESIGN GROUP, INC. ENGINEERS • CONSULTANTS	APPROVED: <i>Tim Arey</i> DATE: 2/26/2020			TRANSPORTATION MANAGEMENT PLAN PHASE III DETAILS STEPS 5-7
	SEAL			



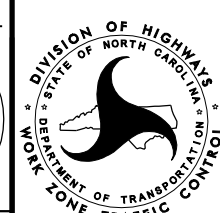
<p>PLAN PREPARED IN THE OFFICE OF:</p> <p>PROGRESSIVE DESIGN GROUP, INC.</p> <p>ENGINEERS • CONSULTANTS</p>	<p>APPROVED: <i>Tim Arey</i></p> <p>DATE: 2/26/2020</p>	<p>SEAL</p> <p>PROFESSIONAL ENGINEER</p> <p>TIM AREY</p> <p>SEAL 025465</p>	<p>DIVISION OF HIGHWAYS</p> <p>STATE OF NORTH CAROLINA</p> <p>DEPARTMENT OF TRANSPORTATION</p> <p>WORK ZONE TRAFFIC CONTROL</p>	<p>TRANSPORTATION MANAGEMENT PLAN</p> <p>CROSS SECTIONS</p>
	<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>			



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ENGINEERS • CONSULTANTS

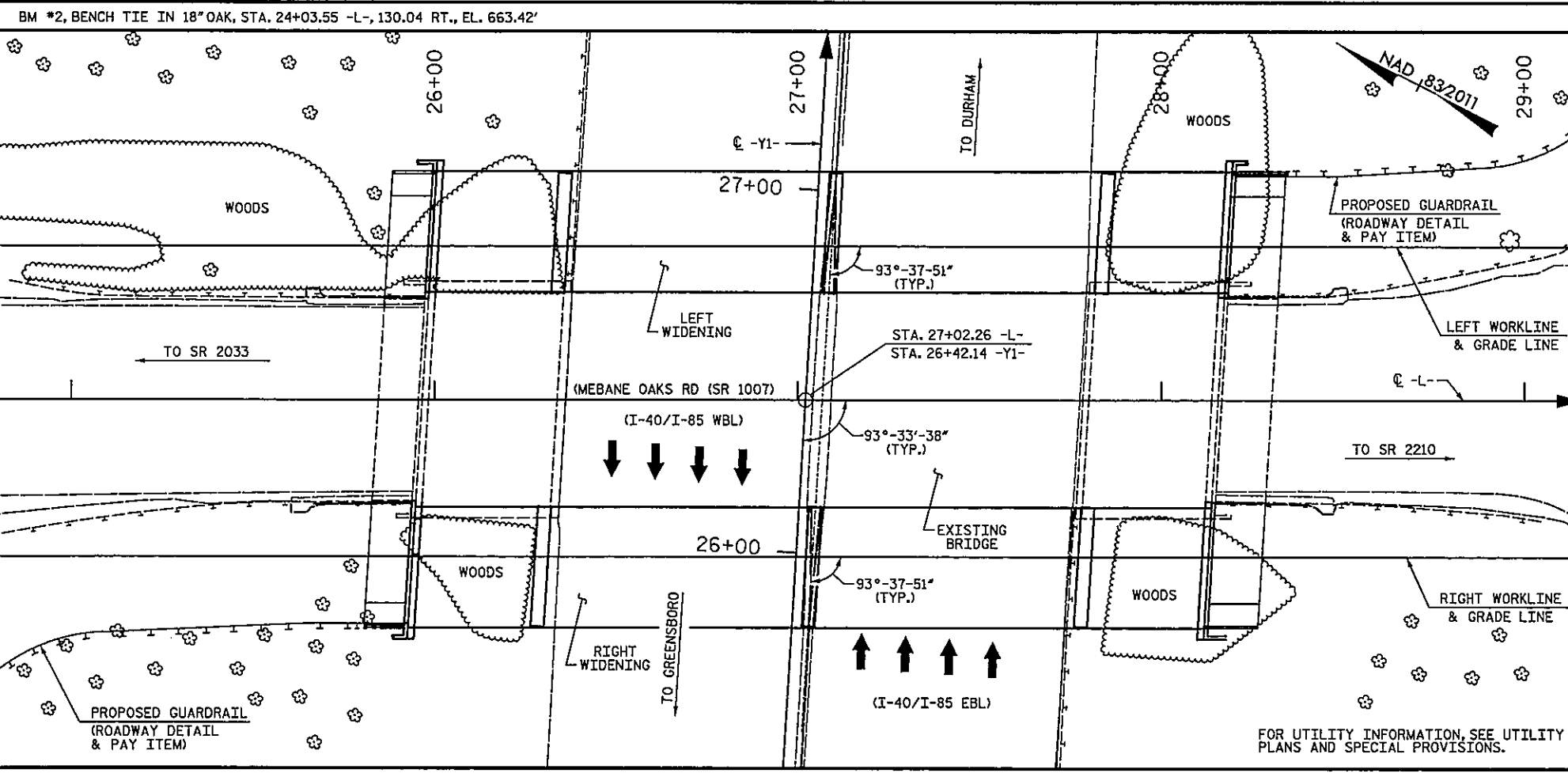
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SEAL



TRANSPORTATION
MANAGEMENT PLAN
CROSS SECTIONS

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LOCATION SKETCH

NOTES:

ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.

THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

THIS BRIDGE IS LOCATED IN SEISMIC ZONE 1.

FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 400 TONS OF REINFORCING STEEL, ONE 30 INCH SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 400 TONS OF REINFORCING STEEL, TWO 30 INCH SAMPLES OF EACH SIZE BAR USED. THE BARS FROM WHICH THE SAMPLES ARE TAKEN MUST THEN BE SPLICED WITH REPLACEMENT BARS OF THE SIZE AND LENGTH OF THE SAMPLE, PLUS A MINIMUM LAP SPLICE OF THIRTY BAR DIAMETERS. PAYMENT FOR THE SAMPLES OF REINFORCING STEEL SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

THE ELEVATIONS AND CLEARANCES SHOWN ON THE PLANS AT THE POINTS OF MINIMUM VERTICAL CLEARANCE ARE FROM THE BEST INFORMATION AVAILABLE. PRIOR TO BEGINNING BRIDGE CONSTRUCTION, VERIFY THE ELEVATIONS ON THE EXISTING PAVEMENT AND CHECK THE CLEARANCE. REPORT ANY VARIATIONS TO THE ENGINEER. ANY PLAN REVISIONS NECESSARY TO ACHIEVE THE REQUIRED MINIMUM VERTICAL CLEARANCE WILL BE PROVIDED BY THE DEPARTMENT.

FOR MAINTENANCE AND PROTECTION OF TRAFFIC BENEATH PROPOSED STRUCTURE, SEE SPECIAL PROVISIONS.

ALL PAVEMENT MARKING WILL BE IN ACCORDANCE WITH THE PAVEMENT MARKING PLANS AND SHALL PROVIDE FOR BICYCLES.

REMOVABLE FORMS MAY BE USED IN LIEU OF METAL STAY-IN-PLACE FORMS IN ACCORDANCE WITH ARTICLE 420-3 OF THE STANDARD SPECIFICATIONS.

NEEDLE BEAMS WILL NOT BE ALLOWED UNLESS OTHERWISE CALLED FOR ON THE PLANS OR APPROVED BY THE ENGINEER.

ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GRADE 50W AND PAINTED IN ACCORDANCE WITH SYSTEM 4 OF ARTICLE 442-8 OF THE STANDARD SPECIFICATIONS UNLESS OTHERWISE NOTED ON THE PLANS.

THE CLASS AA CONCRETE IN THE BRIDGE DECK SHALL CONTAIN FLY ASH OR GROUND GRANULATED BLAST FURNACE SLAG AT THE SUBSTITUTION RATE SPECIFIED IN ARTICLE 1024-1 AND IN ACCORDANCE WITH ARTICLES 1024-5 AND 1024-6 OF THE STANDARD SPECIFICATIONS. NO PAYMENT WILL BE MADE FOR THIS SUBSTITUTION AS IT IS CONSIDERED INCIDENTAL TO THE COST OF THE REINFORCED CONCRETE DECK SLAB.

THE LOCATION OF THE CONSTRUCTION JOINT IN THE DRILLED PIERS IS BASED ON AN APPROXIMATE PAVED SHOULDER ELEVATION. THE TOP OF DRILLED PIER SHALL BE ADJUSTED AS REQUIRED TO MAINTAIN THE TOP OF THE DRILLED PIER 1 FOOT BELOW THE PAVED SHOULDER ELEVATION.

TOTAL BILL OF MATERIAL

	3'-6" DIA. DRILLED PIERS IN SOIL	3'-6" DIA. DRILLED PIERS NOT IN SOIL	SID INSPECTIONS	SPT TESTING	CSL TESTING	REINFORCED CONCRETE DECK SLAB	GROOVING BRIDGE FLOORS	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	SPIRAL COLUMN REINFORCING STEEL	APPROX. 441,500 LBS STRUCTURAL STEEL	PILE DRIVING EQUIPMENT SETUP HP 12 X 53 STEEL PILES
	LF	LF	EA	EA	EA	SF	SF	CY	LS	LB	LB	LS	EA
SUPERSTRUCTURE						15,562	13,024		LS			LS	
END BENT 1								32.5		5,441			
BENT 1	38	36	1	2	1			55.5		13,045	2933		8
BENT 2	25	39	1	2	1			105.8		16,543	2267		
BENT 3	2	49	1	2	1			55.1		12,068	2430		
END BENT 2								32.3		5,439			8
TOTAL	65	124	3	6	3	15,562	13,024	281.2	LS	52,536	7630	LS	16

TOTAL BILL OF MATERIAL

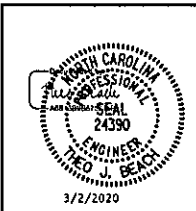
	HP 12x53 STEEL PILES	STEEL PILE POINTS	THREE BAR METAL RAIL	104" CHAIN LINK FENCE	4" SLOPE PROTECTION	ELASTOMERIC BEARINGS	FOAM JOINT SEALS	ELECTRICAL CONDUIT SYSTEM FOR SIGNALS	POLYESTER POLYMER CONCRETE OVERLAY MATERIALS	PLACING AND FINISHING FOR POLYESTER POLYMER CONCRETE OVERLAY	SHOTBLASTING BRIDGE DECK
	NO.	LF	EA	LF	LF	SY	LS	LS	CY	SY	SY
SUPERSTRUCTURE				422.50	427.83		LS <td>LS <td>21.4</td> <td>770.0</td> <td>770.0</td> </td>	LS <td>21.4</td> <td>770.0</td> <td>770.0</td>	21.4	770.0	770.0
END BENT 1	8	200	8			325					
BENT 1											
BENT 2											
BENT 3											
END BENT 2	8	160	8			310					
TOTAL	16	360	16	422.50	427.83	635	LS	LS	21.4	770.0	770.0

SAMPLE BAR REPLACEMENT

SIZE	LENGTH
*3	6'-2"
*4	7'-4"
*5	8'-6"
*6	9'-8"
*7	10'-10"
*8	12'-0"
*9	13'-2"
*10	14'-6"
*11	15'-10"

NOTE: SAMPLE BAR REPLACEMENT LENGTHS BASED ON 30" (SAMPLE LENGTH) PLUS TWO SPLICE LENGTHS AND Fy = 60ksi.

PLANS PREPARED BY:
SEA
 IMPSON ENGINEERS & ASSOCIATES
 5640 Dilford Drive
 Suite 200
 Cary, NC 27518
 (919) 852-0488
 (919) 852-0598 (Fax)
 www.impsonengr.com
 LICENSURE NO. C-2521



PROJECT NO. I-5711
 ALAMANCE COUNTY
 STATION: STA. 27+02.26 -L-

SHEET 4 OF 4
 STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 FOR BRIDGE ON MEBANE OAKS ROAD OVER I-40/I-85 BETWEEN SR 2033 AND SR 2210

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-4
1			3			TOTAL SHEETS 89
2			4			

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DRAWN BY: S.D. COOPER DATE: 1-20
 CHECKED BY: T. BEACH DATE: 1-20
 DESIGN ENGINEER OF RECORD: T. BEACH DATE: 1-20

NOTE: SEE SHEET S-76 FOR TOTAL BILL OF MATERIAL FOR PRESERVATION