



THE GOLD STAR
MEMORIAL HIGHWAY

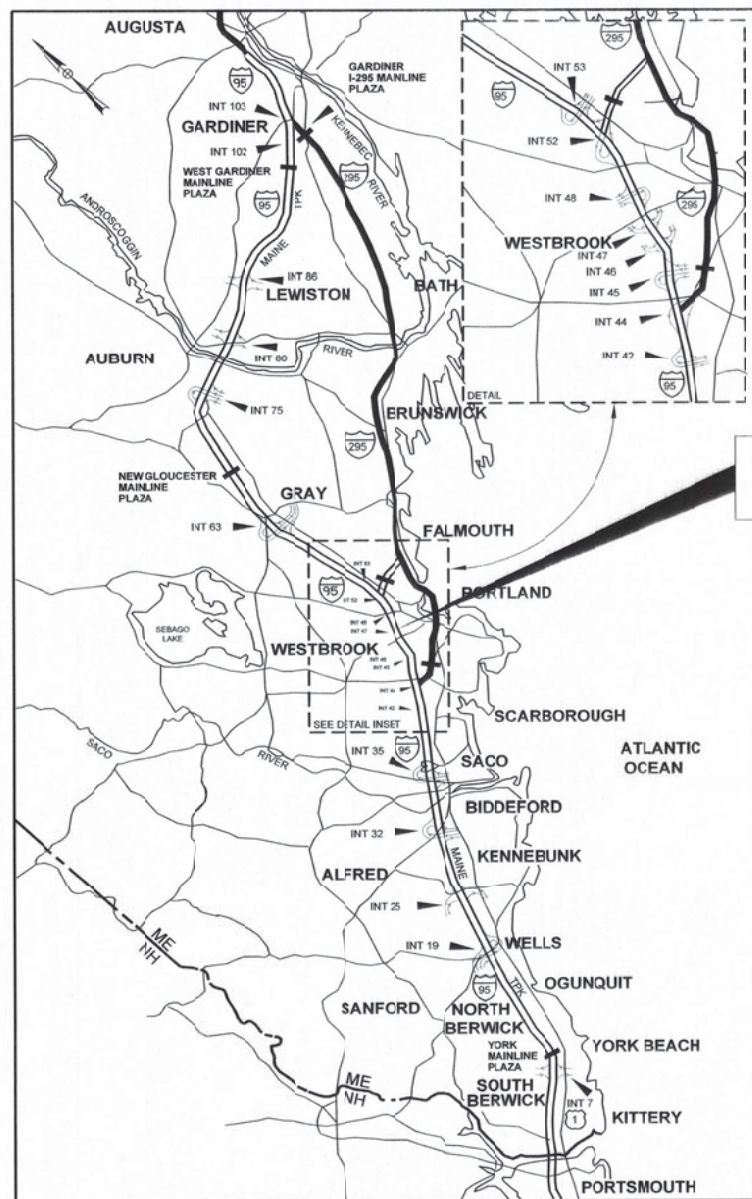
MAINE TURNPIKE AUTHORITY

DANIEL E. WATHEN, CHAIR
ROBERT D. STONE, VICE CHAIR
MICHAEL J. CIANCHETTE, MEMBER
JOHN E. DORITY, MEMBER
ANN R. ROBINSON, MEMBER
THOMAS J. ZUKE, MEMBER
KAREN S. DOYLE, MEMBER EX-OFFICIO

S. PETER MILLS, EXECUTIVE DIRECTOR

CONTRACT 2018.02 EXIT 47 INTERSECTION IMPROVEMENTS, PAVEMENT REHABILITATION, AND CLEAR ZONE IMPROVEMENTS MILE 47.3

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LOCATION MAP

APPROVED: MAINE TURNPIKE AUTHORITY

Peter S. Merfeld
PETER S. MERFELD, P.E. - CHIEF OPERATIONS OFFICER
DATE: 8/1/18

Stephen R. Tartre
STEPHEN R. TARTRE, P.E. - DIRECTOR OF ENGINEERING & BUILDING MAINTENANCE
DATE: 8/1/18



Roland A. Lavalley
ROLAND A. LAVALLEY P.E., PLS
VICE PRESIDENT
DIRECTOR OF OPERATIONS
DATE: 8/1/18

Date: 8/1/2018

Filename: 001_Title Sheet.dgn

CONTRACT 2018.02

Date: 8/6/2018

Filename: 002_Est_Qtys & EW Summary.dgn

Item No.	Item	Unit	Interchange Paving	Intersection Improvements	Total Quantity
202.202	Removing Pavement Surface	SY	28600		28600
202.2026	Removing Pavement Surface - Drainage Paths	SF	530		530
202.203	Pavement Butt Joint	SY	625		625
203.20	Common Excavation	CY		780	780
203.24	Common Borrow	CY		1836	1836
304.10	Aggregate Subbase Course - Gravel	CY		560	560
304.14	Aggregate Base Course - Type A	CY		190	190
403.207	Hot Mix Asphalt, 19.0 mm Nominal Maximum Size	TON		350	350
403.2081	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size, (Polymer Modified) RAP	TON	2450	180	2630
403.212	Hot Mix Asphalt, 4.75 mm Nominal Maximum Size (Shim)	TON	150		150
403.213	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (Base and Intermediate)	TON	2100	180	2280
409.15	Bituminous Tack Coat, Applied	GAL	2350	170	2520
419.30	Sawing Bituminous Pavement	LF		1200	1200
470.08	Berm Dropoff Correction - Grindings	TON	180		180
520.23	Asphaltic Plug Joint	LF	195		195
526.306	Temporary Concrete Barrier, Type I - Supplied by Authority (1020')	LS		1	1
527.341	Work Zone Crash Cushion TL-2	EA		3	3
603.175	18 inch Reinforced Concrete Pipe Class III	LF		8	8
603.209	30 inch Culvert Pipe Option III	LF		144	144
603.28	Concrete Collar	EA		1	1
604.18	Adjusting Manhole or Catch Basin to Grade	EA		4	4
604.184	Rebuild Catch Basin to Grade - Type II	EA		4	4
606.13	31" W-Beam Guardrail - Mid-Way Splice (7' Steel Post, 8" Offset Blocks, Single Faced)	LF		150	150
606.131	31" W-Beam Guardrail - Mid-Way Splice (8' Steel Post, 8" Offset Blocks, Single Faced)	LF		450	450
606.1723	Bridge Transition Type III	EA		1	1
606.178	Guardrail Beam	LF	200		200
606.352	Reflectorized Beam Guardrail Delineator	EA	220	10	230
606.3531	Permanent Flexible Delineator Post	EA		4	4
606.355	Delineator Post - Remove and Stack	EA		10	10
606.356	Underdrain Delineator Post	EA		3	3
606.3621	Guardrail Adjust - Single Rail	LF	3200		3200
606.3622	Guardrail Adjust - Double Rail	LF	2050		2050
606.471	Single Offset Block-W-Beam	EA	200		200
606.791	Guardrail - Flared Terminal - 31" W-Beam Guardrail	EA		1	1
610.08	Plain Riprap	CY		100	100
610.181	Temporary Stone Check Dam	CY		4	4
613.319	Erosion Control Blanket	SY		1900	1900
615.07	Loam	CY		420	420
618.14	Seeding Method Number 2	UNIT		34	34
619.1201	Mulch - Plan Quantity	UNIT		34	34
619.1202	Temporary Mulch	LS		1	1
620.58	Erosion Control Geotextile	SY		240	240
626.12	36" x 24" x 21" Quazite Junction Box	EA		4	4
626.21	Metallic Conduit	LF		50	50
626.22	Non-metallic Conduit	LF		3000	3000
626.223	Horizontal Directional Drilled Conduit	LF		600	600
626.332	30-inch Diameter, greater than 8-feet long, and all 36-inch and 42-inch Diameter Foundations	CY		4	4
626.35	Controller Cabinet Foundation	EA	1		1
627.712	White or Yellow Pavement Marking Line	LF	16825	2825	19650
627.75	White or Yellow Pavement and Curb Marking	SF		1500	1500
627.77	Remove Existing Pavement Markings	SF		1900	1900
627.78	Temporary Pavement Marking Line, White or Yellow	LF		8150	8150
627.812	Temporary Raised Pavement Marker	EA	1100		1100
627.9411	Pavement Marking Tape - Dotted White or Yellow Lane Line - 6" Width	LF	75	25	100
629.05	Hand Labor, Straight Time	HR		50	50
631.10	Air Compressor (Including Operator)	HR		40	40
631.11	Air Tool (Including Operator)	HR		40	40
631.12	All Purpose Excavator (including operator)	HR		50	50
631.17	Truck - Large (Including Operator)	HR		50	50
631.32	Culvert Cleaner (Including operator)	HR		8	8
631.36	Foreman	HR		50	50
634.175	Replacement LED Fixture, Installed	EA	1		1
643.72	Temporary Traffic Signal	LS	1		1
643.80	Traffic Signal Modifications at Exit 47 and Rand Road	LS	0.75	0.25	1
643.83	Video Detection System Supply and Install	LS	1		1
645.1061	Relocate Existing Sign Assembly and Post	EA		4	4
645.271	Regulatory, Warning, Confirmation and Route Assembly Sign, Type II	SF		72	72
652.30	Flashing Arrow Board	EA		1	1
652.33	Drum	EA		55	55
652.34	Cone	EA		55	55
652.35	Construction Signs	SF	2560	640	3200
652.361	Maintenance of Traffic Control Devices	LS	0.75	0.25	1
652.38	Flaggers	HR		240	240
652.381	Traffic Officers	HR		20	20
652.41	Portable-Changeable Message Sign	EA	2	2	4
652.45	Truck Mounted Attenuator	CD		10	10
655.16	Fiber Optic Cable	LF	650		650
655.165	Fiber Optic Splice Panel	EA	2		2
656.50	Baled Hay, in place	EA		15	15
656.60	Temporary Berms	LF		1100	1100
656.632	30" Temporary Silt Fence	LF		1150	1150
659.10	Mobilization	LS	0.75	0.25	1

EARTHWORK SUMMARY	
COMMON EXCAVATION FOR ESTIMATE	
COMMON EXCAVATION (FROM CROSS SECTIONS)	689
GRUBBING IN FILL	87
TOTAL COMMON EXCAVATION (for estimate)	776
FILL FOR BORROW CALCULATIONS	
COMMON FILL (FROM CROSS SECTIONS)	2,005
GRUBBING IN FILL	87
TOTAL FILL	2,092
AVAILABLE COMMON EXCAVATION FOR BORROW CALCULATIONS	
(1) TOTAL COMMON EXCAVATION	776
DEDUCTIONS:	
GRUBBING IN CUT	210
GRUBBING IN FILL	87
LOAM SALVAGE IN CUT	0
LOAM SALVAGE IN FILL	0
UNDERCUT	0
MUCK EXCAVATION	0
PAVEMENT SALVAGE (CUT & FILL)	230
(2) TOTAL DEDUCTIONS	527
TOTAL AVAILABLE COMMON EXCAVATION (1) MINUS (2)	249
TOTAL AVAILABLE STRUCT. EXCAVATIONS (USUALLY UNDERDRAIN ONLY)	0
RIPRAP EXCAVATION	35
TOTAL AVAILABLE NON-ROCK EXCAVATION	284
COMPUTATION FOR COMMON BORROW FOR ESTIMATE	
(3) TOTAL FILL	2,092
TOTAL AVAIL. NON-ROCK EXCAV.	284 x 0.90 = 256
TOTAL AVAIL. STR. ROCK EXCAV.	0 x 1.30 = 0
TOTAL WASTE MATERIAL TO BE UTILIZED	0 x 0.00 = 0
(4) TOTAL AVAILABLE EXCAVATION	256
BORROW NEEDED = TOTAL FILL MINUS TOTAL AVAILABLE EXCAVATION	1,836
IF NO BORROW IS NEEDED, SURPLUS MATERIAL = AVAILABLE EXCAVATION MINUS TOTAL FILL, PLUS TOTAL WASTE MATERIAL TO BE WASTED	
	-1,836
BORROW NEEDED MINUS REQUIRED GRANULAR BORROW WITHIN FILL	1,836
COMMON BORROW (FOR ESTIMATE) = 1,836 x 1.00 =	1,836

Scale: N/A

No.	Revision	By	Date


Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Tim R Cote, P.E.

	By	Date	By	Date	
Designed	AJS	07\18	Checked	RWH	07\18
Drawn	AJS	07\18	In Charge of	IRAL	07\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., PTOE

EXIT 47
 INTERSECTION IMPROVEMENTS
 ESTIMATED QUANTITIES
 & EARTHWORK SUMMARY

SHEET NUMBER: ES-1
 CONTRACT: 2018.02
 2 OF 38

Date: 8/6/2018

GENERAL

1. ALL WORK SHALL CONFORM TO THE MAINE DEPARTMENT OF TRANSPORTATION (MAINEDOT) STANDARD DETAILS FOR HIGHWAYS AND BRIDGES (LATEST REVISION), THE MAINEDOT BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL (LATEST REVISION) AND THE 2014 MAINEDOT STANDARD SPECIFICATIONS, EXCEPT AS MODIFIED BY THE MAINE TURNPIKE'S SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS UNLESS OTHERWISE INCLUDED IN THESE PLANS.
2. ALL EXISTING DELINEATOR AND MILE MARKER POSTS, WITHIN LIMITS OF DISTURBANCE, SHALL BE REMOVED AND RESET UPON COMPLETION OF THE CONTRACT. PAYMENT WILL BE MADE UNDER ITEM 606.3561, DELINEATOR POST - REMOVE AND RESET.
3. CLEARING LIMIT LINES ARE SHOWN ON THE PLANS AS A REFERENCE. CLEARING WILL BE PERFORMED BY OTHERS.

EARTHWORK

1. THE NORMAL GRUBBING WIDTH IN THE FILLS WHEN SUBGRADE IS LESS THAN 5' ABOVE OLD GROUND SHALL BE VARIABLE LEFT OR RIGHT. THE GRUBBING DEPTH HAS BEEN ESTIMATED AS 6" (12" IN WOODED AREAS).
2. WASTE MATERIALS SHALL BE DISPOSED OF OFF THE PROJECT SITE, IN ACCORDANCE WITH CHAPTER 404, DEPARTMENT OF ENVIRONMENTAL PROTECTION SOLID WASTE MANAGEMENT RULES.
3. EXCAVATIONS ACCOMPLISHED AS PART OF THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH OSHA SUBPART P OF 29 CFR PART 1926.650-652 (CONSTRUCTION STANDARDS FOR EXCAVATION).
4. COMMON BORROW SHALL BE COMPACTED TO 90% OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR, GRANULAR BORROW AND AGGREGATE SHALL BE COMPACTED TO 95% OF THEIR MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR.

GUARDRAIL

1. AT THE END OF EACH WORK DAY, THE CONTRACTOR IS REQUIRED TO HAVE AN APPROVED CRASHWORTHY END TREATMENT ON ALL GUARDRAIL WITHIN ALL WORK AREAS.
2. CONNECTIONS FOR PROPOSED GUARDRAIL TO EXISTING GUARDRAIL SHALL BE INCIDENTAL TO THE CONTRACT.
3. CONTRACTOR SHALL STOCKPILE ALL GUARDRAIL TO BE REMOVED AND RESET, AND REMOVED AND DISPOSED UNTIL GUARDRAIL INSTALLATION HAS BEEN COMPLETE.
4. POST HOLES FROM GUARDRAIL REMOVED OR RESET SHALL BE FILLED AND COMPACTED WITH GRANULAR BORROW AND PAVEMENT TO MATCH SURROUNDING PAVEMENT THICKNESS.

DRAINAGE

1. NO EXISTING DRAINAGE SHALL BE ABANDONED, REMOVED OR PLUGGED WITHOUT PRIOR APPROVAL OF THE RESIDENT.
2. INLETS AND OUTLETS OF ALL CULVERTS SHALL BE RIPRAPPED UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE RESIDENT.
3. ALL DITCH ELEVATIONS AND OFFSETS SHOWN ON THE CROSS SECTIONS ARE FOR THE FINISHED DITCH FLOW LINE.
4. IF FOUNDATION MATERIAL IS REQUIRED UNDER CULVERTS, IT SHALL MEET THE REQUIREMENTS FOR GRANULAR BORROW - UNDERWATER BACKFILL.


EROSION CONTROL

1. THE ANTICIPATED EROSION CONTROL DEVICES ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL PROPOSE ACTUAL TYPE AND LOCATION OF DEVICES FOR APPROVAL BY THE RESIDENT. ADDITIONAL MEASURES MAY BE PROPOSED BY THE CONTRACTOR DUE TO SITE OR WEATHER CONDITIONS. THE RESIDENT MAY DIRECT THE CONTRACTOR TO IMPLEMENT ADDITIONAL MEASURES. ANY ADDITIONAL MEASURES APPROVED BY THE RESIDENT WILL BE MEASURED FOR PAYMENT.
2. 4" LOAM HAS BEEN ESTIMATED FOR 100% OF THE DISTURBED SLOPE AREA. ACTUAL PLACEMENT OF THE LOAM SHALL BE AS DESIGNATED BY THE RESIDENT.
3. ALL SLOPES SHALL BE SEEDED WITH SEEDING METHOD NO. 2.
4. MULCH SHALL BE APPLIED IN AREAS SEEDED EXCEPT WHERE EROSION CONTROL BLANKET IS SPECIFIED.
5. ALL TEMPORARY AND PERMANENT EROSION CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE MAINE DEPARTMENT OF TRANSPORTATION BEST MANAGEMENT PRACTICES.
6. TEMPORARY STONE CHECK DAMS WILL BE INSTALLED IN ACCORDANCE WITH THE MAINEDOT BEST MANAGEMENT PRACTICES. STONE CHECK DAMS SHALL BE PLACED APPROXIMATELY 100 FEET FOR DITCH GRADES LESS THAN 3% AND SPACED APPROXIMATELY 50 FEET FOR DITCH GRADES STEEPER THAN 5%.
7. EROSION CONTROL BLANKET SHALL BE INSTALLED IN ALL DITCHES AND 2:1 SLOPES FROM TOP TO TOE OF SLOPE. LOAM AND SEED SHALL BE PLACED PRIOR TO THE INSTALLATION OF THE EROSION CONTROL BLANKET. THE EROSION CONTROL BLANKET IN DITCHES SHALL BE 6' WIDE OR AS DESIGNATED BY THE RESIDENT.
8. TEMPORARY SEED SHALL BE APPLIED TO ALL DISTURBED AREAS THAT WILL NOT BE SEEDED WITH FINAL SEED WITHIN 30 DAYS.
9. TEMPORARY BERMS SHALL BE INSTALLED ALONG THE PROPOSED EDGE OF PAVEMENT FOR RAND RD/WESTBROOK ARTERIAL ALONG THE WIDENED SHOULDER.

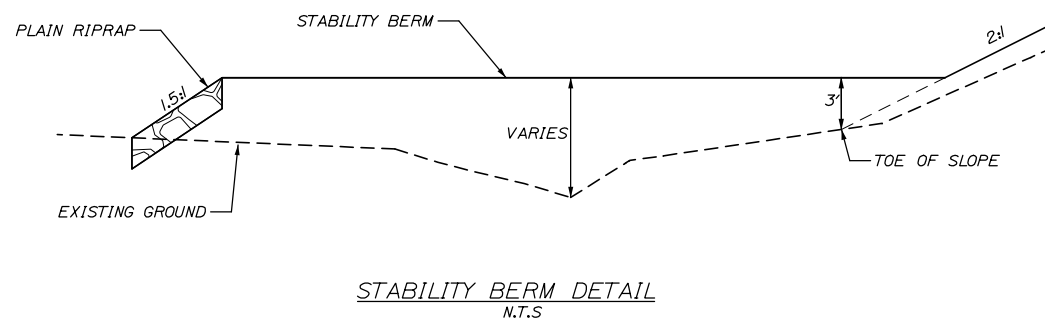
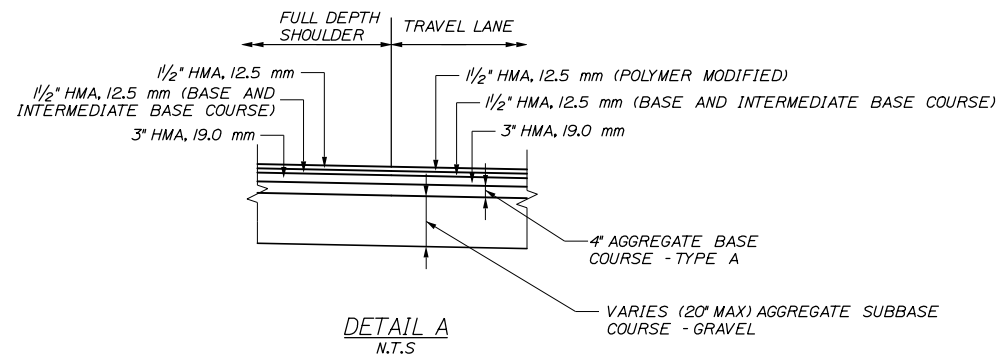
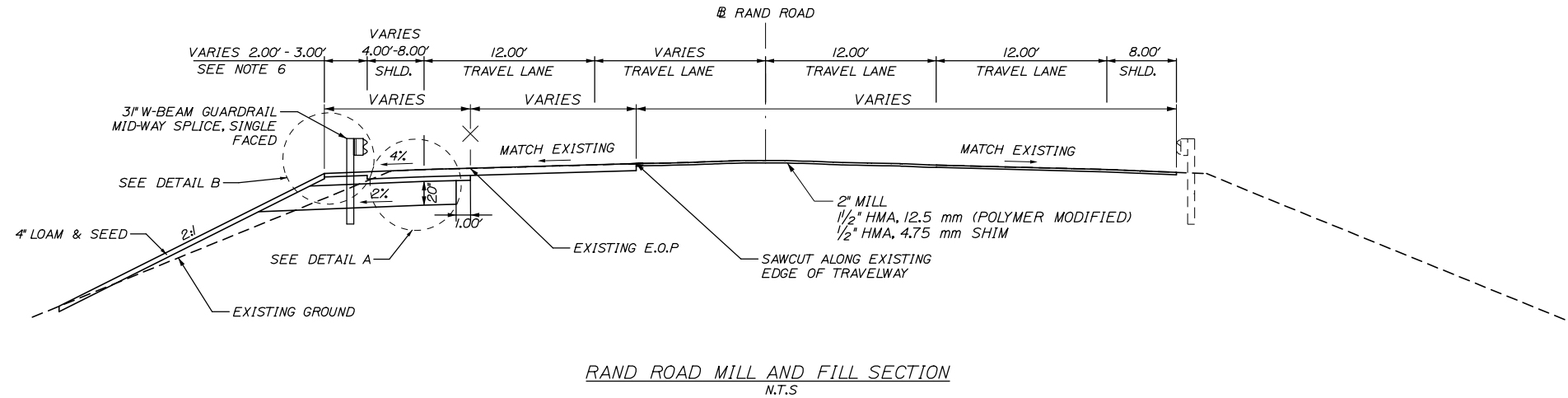
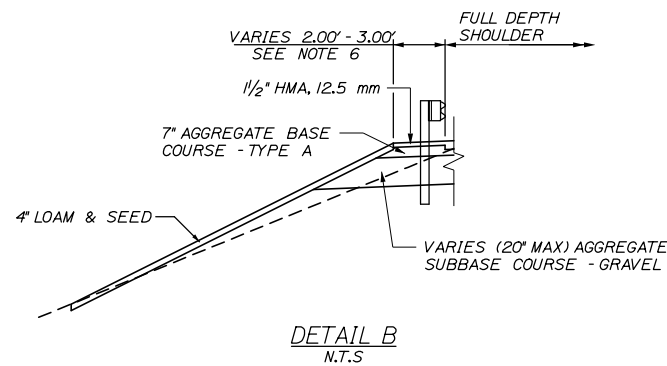
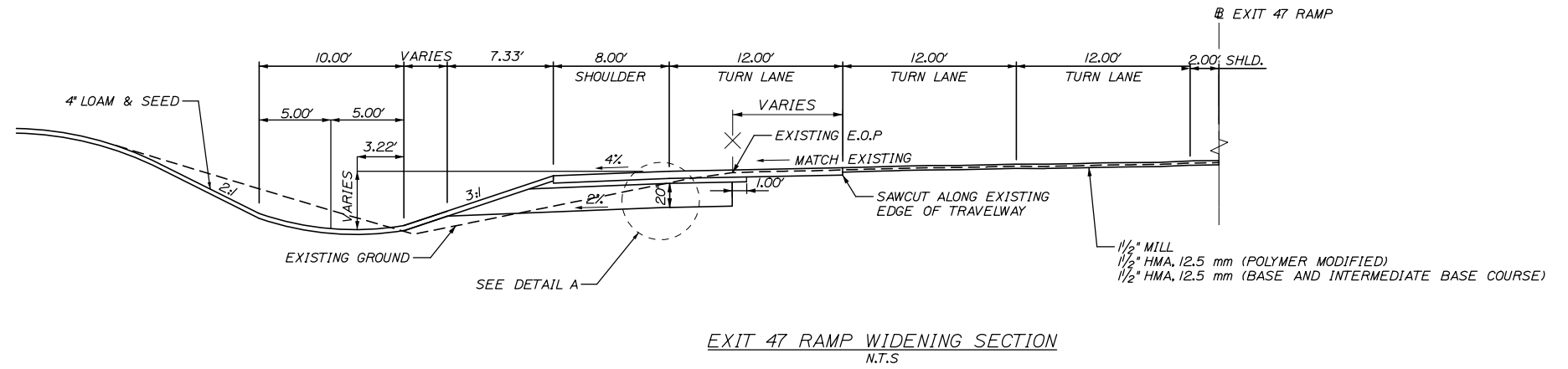
UTILITY

1. EXISTING UTILITIES ON THESE PLANS WERE COMPILED FROM FIELD SURVEY AND VARIOUS OTHER SOURCES. LOCATIONS ARE NOT GUARANTEED TO BE ACCURATE NOR IS IT GUARANTEED THAT ALL UTILITIES ARE SHOWN. NO SEPARATE OR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR DUE TO ANY VARIANCE BETWEEN THE DATA SHOWN ON THE PLANS AND THE ACTUAL FIELD CONDITIONS ENCOUNTERED. NO WORK SHALL BE STARTED UNTIL THE OWNERS OF THE VARIOUS UTILITIES ARE NOTIFIED BY THE CONTRACTOR OF THE PROPOSED CONSTRUCTION. THE CONTRACTOR IS ALSO REQUIRED TO CALL DIG SAFE AT 1-888-344-7233 PRIOR TO THE START OF THE WORK. THE CONTRACTOR SHALL NOTIFY THE RESIDENT 10 DAYS PRIOR TO CONSTRUCTION SO THE RESIDENT MAY COORDINATE WITH DIG SMART.
2. ALL UTILITY FACILITIES SHALL BE ADJUSTED BY THE RESPECTIVE UTILITIES UNLESS NOTED OTHERWISE.
3. THE UTILITIES INVOLVED IN THIS CONTRACT ARE:
 CENTRAL MAINE POWER
 CONSOLIDATED COMMUNICATIONS
 PORTLAND WATER DISTRICT
 MAINE TURNPIKE AUTHORITY
 MAINE DEPARTMENT OF TRANSPORTATION
 CITY OF PORTLAND
4. GRADING AROUND UTILITY POLES AND GUY WIRES, EXISTING OR PROPOSED SHALL BE DONE BY HAND.

Filename: 003_GenNotes.dgn

Scale: N/A		Designed by: HNTB		HNTB CORPORATION 340 County Road, Suite 6-C Westbrook, ME 04092 TEL (207) 774-5155 FAX (207) 228-0909		 THE GOLD STAR MEMORIAL HIGHWAY		EXIT 47 INTERSECTION IMPROVEMENTS GENERAL NOTES																																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">No.</th> <th style="width: 15%;">Revision</th> <th style="width: 5%;">By</th> <th style="width: 5%;">Date</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>		No.	Revision	By	Date													CONSULTANT PROJECT MANAGER: Tim R. Cote, P.E.		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th> </th> <th>By</th> <th>Date</th> <th> </th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>Designed</td> <td>AJS</td> <td>07\18</td> <td>Checked</td> <td>RWH</td> <td>07\18</td> </tr> <tr> <td>Drawn</td> <td>SLS</td> <td>07\18</td> <td>In Charge of</td> <td>RAL</td> <td>07\18</td> </tr> </tbody> </table>			By	Date		By	Date	Designed	AJS	07\18	Checked	RWH	07\18	Drawn	SLS	07\18	In Charge of	RAL	07\18	MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.		CONTRACT: 2018.02 SHEET NUMBER: GN-1 3 OF 38	
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Drawn	SLS	07\18	In Charge of	RAL	07\18																																						

Date: 8/6/2018




- NOTES:**
1. THE PAVEMENT, BASE AND SUBBASE DEPTHS AS SHOWN ON THE PLANS ARE INTENDED TO BE NOMINAL.
 2. ALL NECESSARY PAVEMENT CUTTING SHALL BE SAWCUT AND DONE IN SUCH A MANNER TO LEAVE A CLEAN, VERTICAL FACE.
 3. BITUMINOUS TACK COAT IS REQUIRED BETWEEN ALL LIFTS OF PAVEMENT, OR AS DIRECTED BY RESIDENT. BITUMINOUS TACK COAT IS REQUIRED ON ALL EXISTING PAVED OR MILLED SURFACES AND VERTICAL JOINTS PRIOR TO PLACING PROPOSED PAVEMENT.
 4. A COATING OF HOT RUBBERIZED ASPHALT SHALL BE APPLIED TO SURFACE LAYER OF ALL SAWCUT AND PAVEMENT JOINTS PRIOR TO PAVING.
 5. STABILITY BERM SHALL BE PLACED PRIOR TO PLACEMENT OF PROPOSED EMBANKMENT FILL.
 6. GUARDRAIL POSTS SHALL BE 7' WITH A 3' SHELF AND 8' WITH A 2' SHELF.

Filename: 004_Typical section.dgn

Scale:			
NOT TO SCALE			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Tim R Cote, P.E.					
	By	Date		By	Date
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**THE GOLD STAR
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MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.

EXIT 47
INTERSECTION IMPROVEMENTS
TYPICAL SECTIONS 1

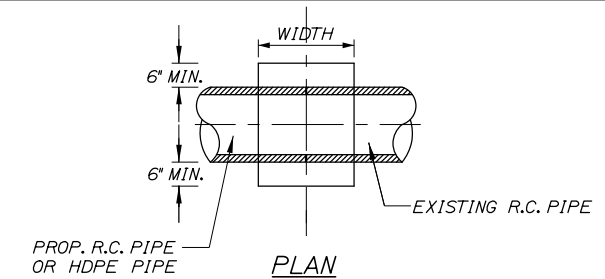
SHEET NUMBER: TYP-1
4 OF 38

CONTRACT: 2018.02

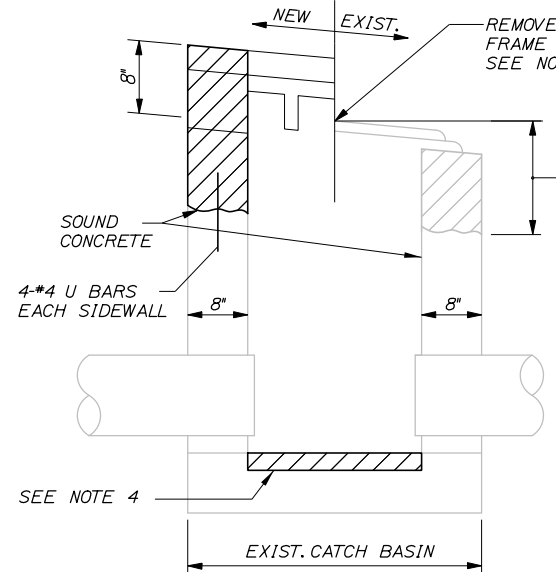
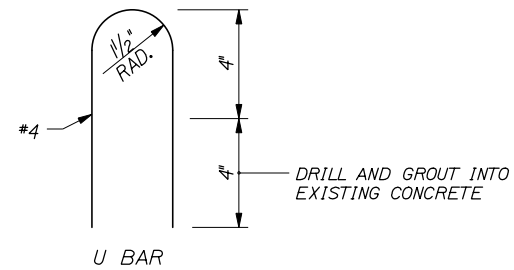
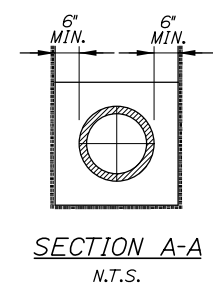
Date: 8/6/2018

Filename: 006_Drainage and Misc. Details.dgn

CONCRETE COLLAR WIDTH SCHEDULE	
PIPE DIA. (INCHES)	WIDTH OF CONC. (INCHES)
12	24
15	24
18	24
24	24
30	30
36	36
42	48
48	48

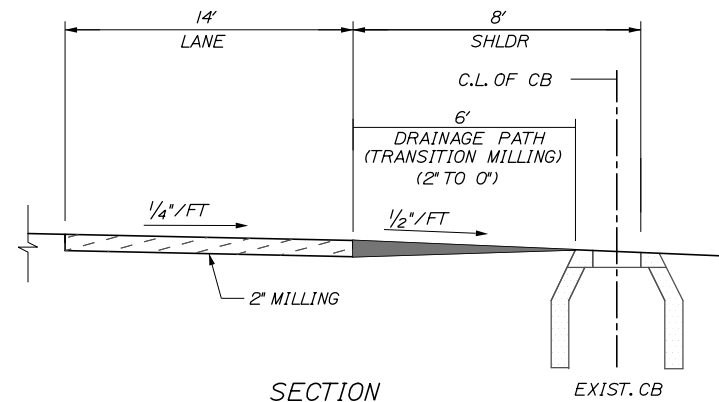


- NOTES:**
1. CONNECTION AND PIPE TO BE BACKFILLED PER ASTM D2321 (CRUSHED STONE).
 2. CONCRETE SHALL BE CLASS A FIBER REINFORCED.
 3. SEE CONCRETE COLLAR WIDTH SCHEDULE FOR DIMENSIONS.

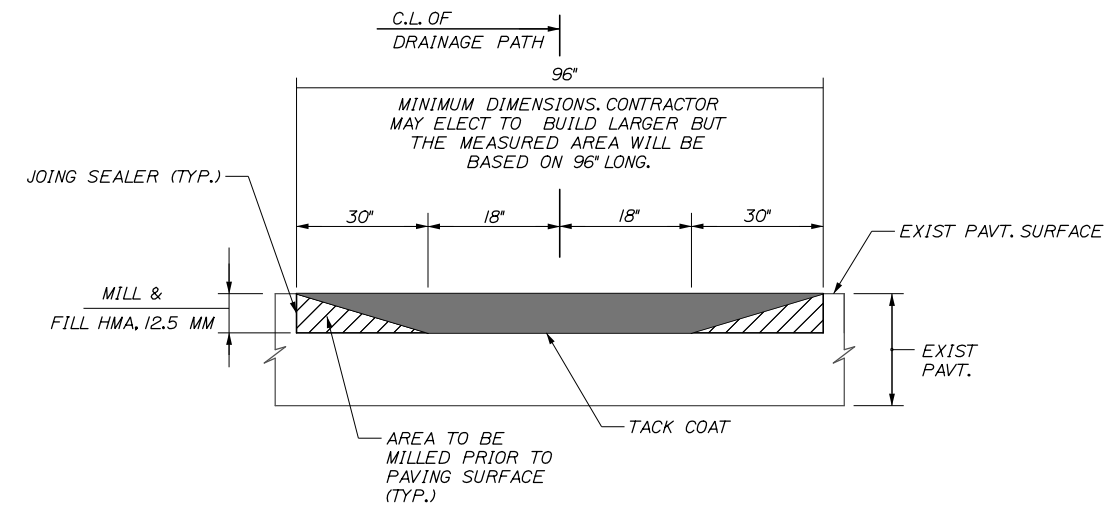


- REMOVE EXISTING FRAME, CONCRETE AND ANCHOR RODS TO SOUND CONCRETE. REFORM BASIN TO GRADE USING CLASS "AAA" CONCRETE. EXISTING FRAME MAY BE ENCASED IN CONCRETE.
- NOTES:**
1. ALL EXISTING CATCH BASINS SHALL BE REBUILT WITH THE FRAME AND GRATE SET, AND CONCRETE FINISHED, TO THE FINAL PAVEMENT GRADE.
 2. TYPE II CATCH BASINS - RESET EXISTING FRAME AND GRATE. IF ANY FRAMES OR GRATES ARE NOT USABLE MTA WILL SUPPLY.
 3. REMOVE UNSOUND CONCRETE (2" MIN.) AND REPLACE WITH NEW CONCRETE IF DIRECTED BY THE RESIDENT. WORK SHALL BE INCIDENTAL TO CATCH BASIN PAY ITEM.

REBUILD CATCH BASIN TO GRADE - TYPE II
N.T.S.



SECTION



SECTION
DRAINAGE PATH DETAILS
NOT TO SCALE

- LEGEND**
- = DRAINAGE PATH MILLING
- NOTES:**
1. RESIDENT TO DETERMINE LOCATIONS.
 2. DRAINAGE PATH REQUIRED AT ALL LOW POINTS.
 4. DRAINAGE PATHS SHALL BE PAVED BACK IN FLUSH WITH EXISTING PAVEMENT

Scale: NOT TO SCALE

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HNTB

CONSULTANT PROJECT MANAGER: Tim R Cote, P.E.

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.

EXIT 47 INTERSECTION IMPROVEMENTS

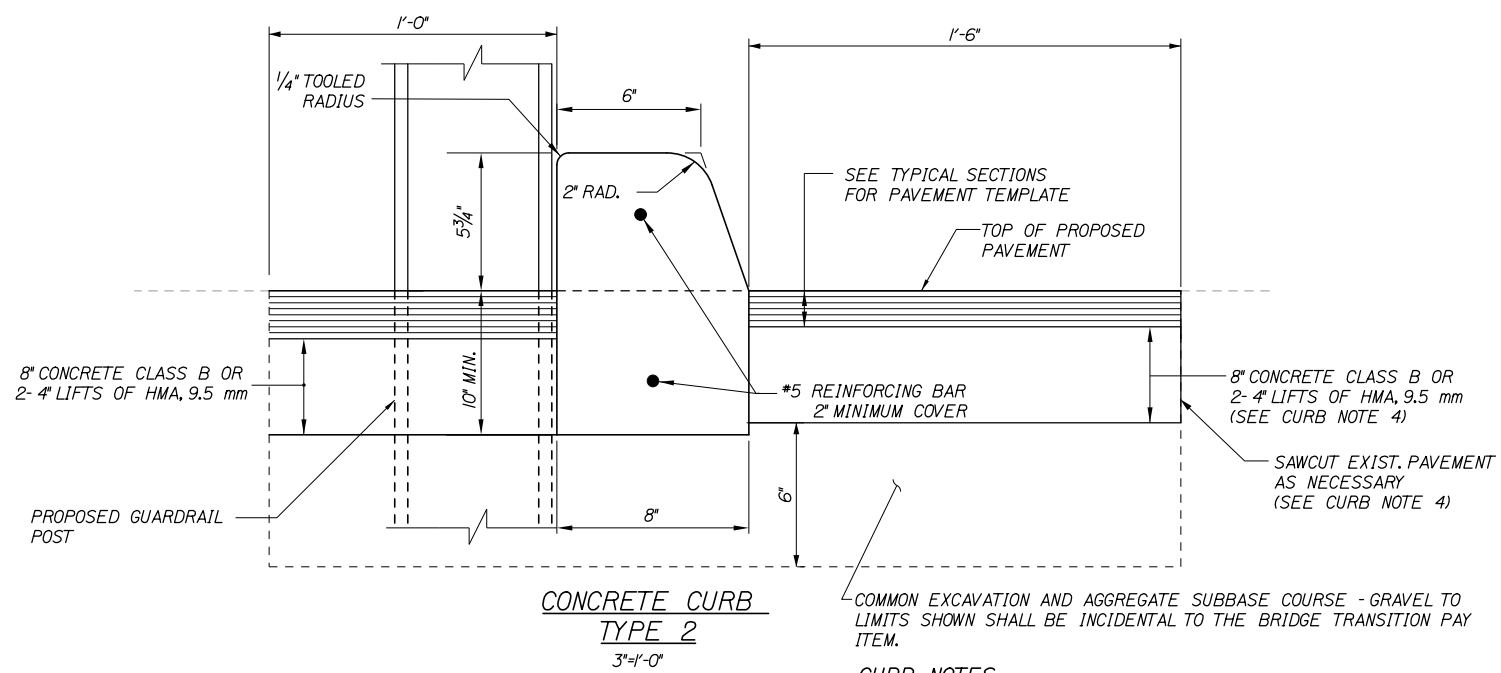
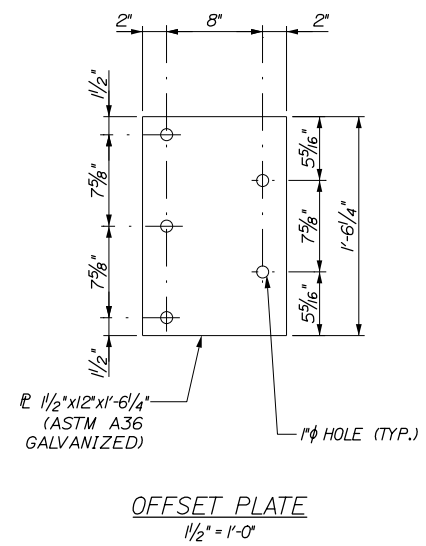
DRAINAGE AND MISCELLANEOUS DETAILS

SHEET NUMBER: MD-1

CONTRACT: 2018.02

6 OF 38

Date: 8/6/2018

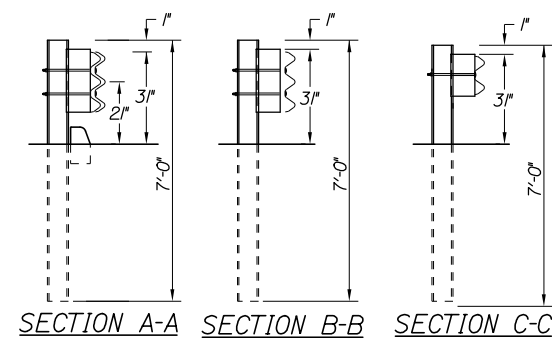
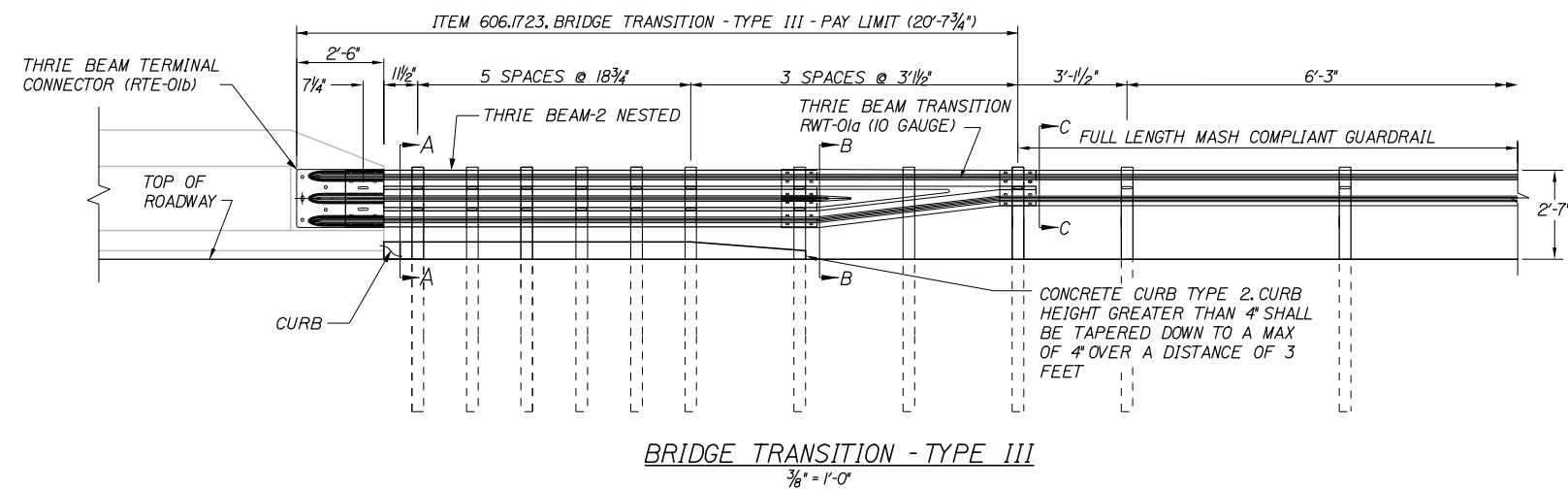
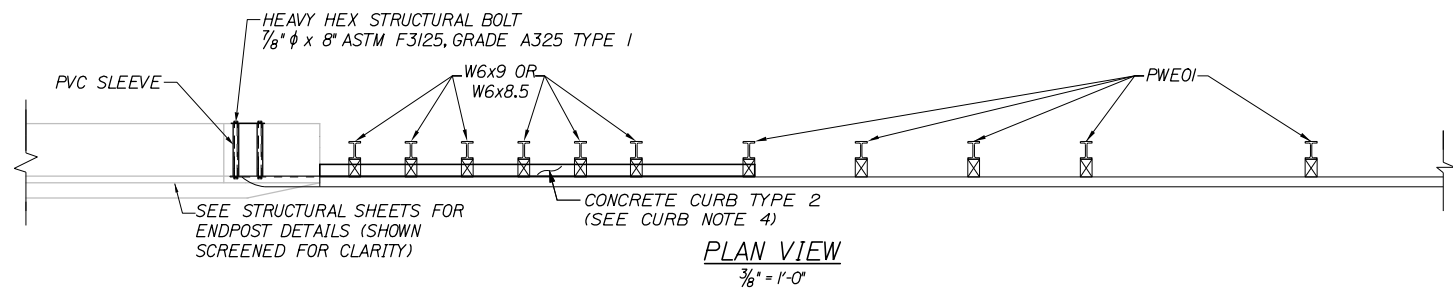


CURB NOTES:

- CURBING SHALL BE EITHER PRECAST CONCRETE, CAST-IN-PLACE CONCRETE, OR GRANITE TO MEET DIMENSIONS SHOWN ON THE PLANS.
- CONCRETE CURBS USED IN CONJUNCTION WITH THRIE-BEAM BRIDGE TRANSITION SHALL BE TYPE 2. SEE DETAILS THIS SHEET. CONCRETE CURBS SHALL BE SET TO FORM A CONTINUOUS GUTTERLINE WITHOUT ANY DRAINAGE OPENINGS.
- CURB TRANSITION SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCIDENTAL TO THE BRIDGE TRANSITION PAY ITEM.
- SAWCUTTING EXISTING PAVEMENT, CONCRETE FILL AND PAVEMENT TO LIMITS SHOWN SHALL BE INCIDENTAL TO THE BRIDGE TRANSITION PAY ITEM.

GENERAL NOTES:

- ADDITIONAL HOLES MAY BE MADE IN THE THRIE-BEAM PANELS BY DRILLING, PUNCHING, OR OTHER MEANS THAT PRODUCE A NEAT, CLEAN HOLE. BURNING HOLES WILL NOT BE ALLOWED.
- THRIE BEAM SHALL BE PLACED WITH THE COMPOSITE BLOCKOUT FACE IN FRONT OF OR DIRECTLY ABOVE THE CURB FACE.
- RAIL ELEMENT SHALL MEET ALL REQUIREMENTS OF AASHTO M-180 EXCEPT AS MODIFIED ON THE PLANS. THE THRIE BEAM TRANSITION TO W-BEAM SHALL BE OF THE SAME MATERIAL, BUT SHALL NOT BE LESS THAN 10 GAUGE.
- AFTER INSTALLATION IS COMPLETE, UPSET THE THREAD ON THE ANCHOR BOLTS IN THREE PLACES AROUND EACH BOLT, AT THE JUNCTION OF THE NUT AND THE EXPOSED THREAD, WITH A CENTER PUNCH OR SIMILAR TOOL.
- STANDARD BARRIER HARDWARE HAS BEEN USED TO DEVELOP THESE GUARDRAIL ATTACHMENTS. DESIGNATIONS PROVIDED IN PARENTHESES RELATE TO STANDARD ELEMENTS DETAILED IN "A GUIDE TO STANDARDIZED BARRIER RAIL HARDWARE," 1979. AASHTO-AGC-ARTBA JOINT COOPERATE COMMITTEE.
- 1" HOLE IN CONCRETE SHALL BE FORMED BY A 1" I.D. PVC SLEEVE AS APPROVED BY THE ENGINEER.
- GUARDRAIL HEIGHT SHALL BE ADJUSTED UNIFORMLY BETWEEN SECTION CALLOUTS.




Filename: 007_GR-Barrier TransitionDetails.dgn

Scale:			
NOT TO SCALE			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Tim R. Cote, P.E.					
	By	Date		By	Date
Designed	AJS	07\18	Checked	RWH	07\18
Drawn	AJS	07\18	In Charge of	RAL	07\18

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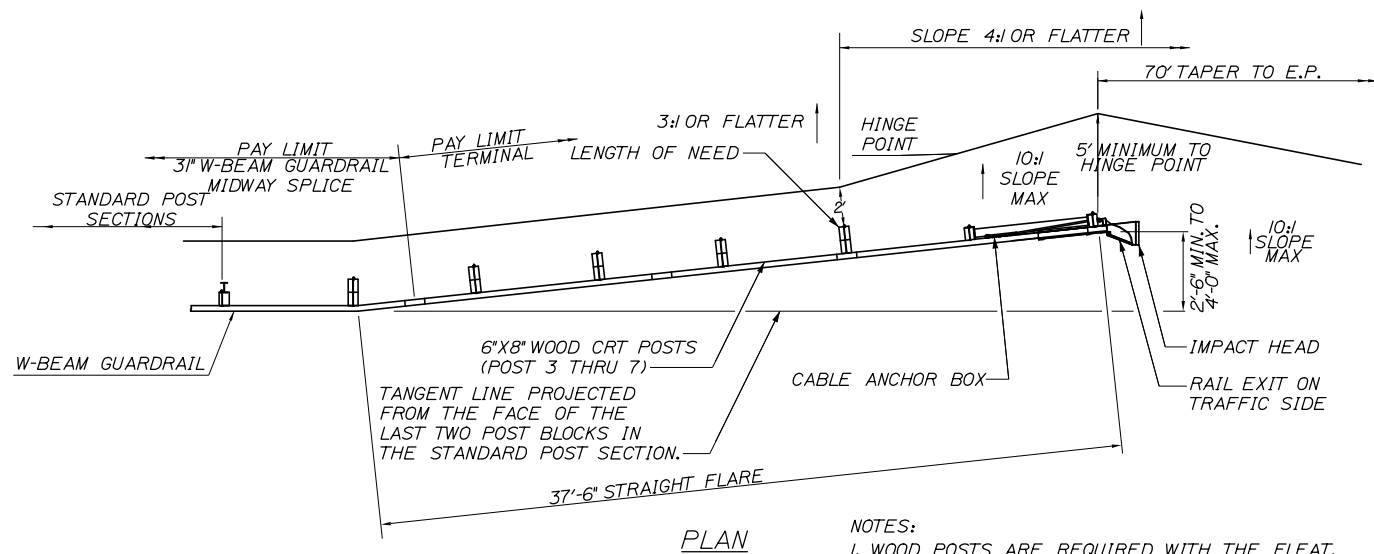
**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.

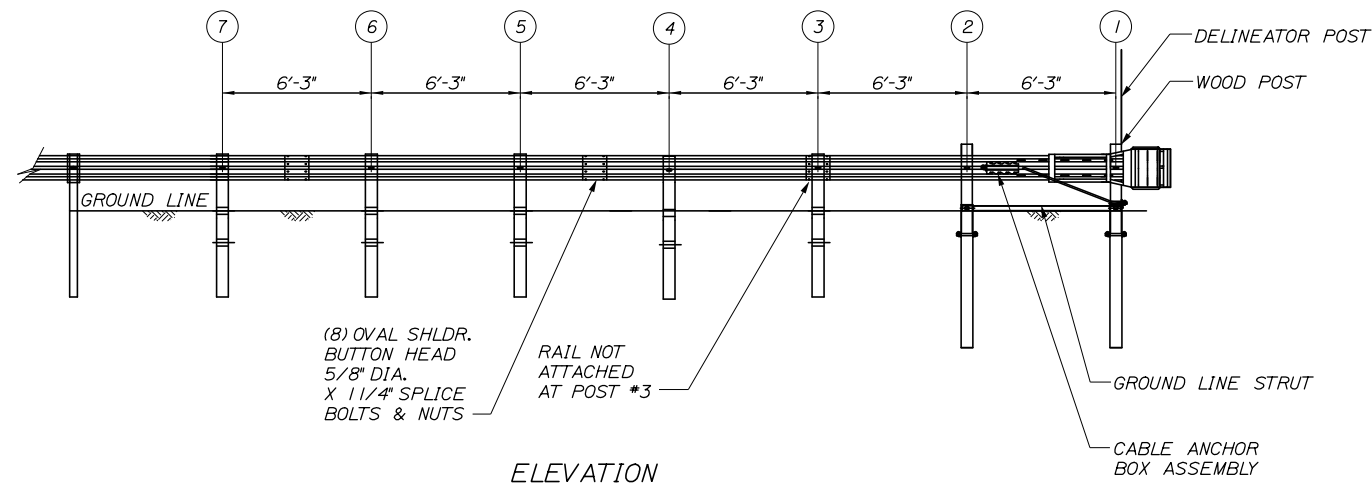
INTERSECTION IMPROVEMENTS
EXIT 47
BRIDGE TRANSITION DETAIL

SHEET NUMBER: MD-2
CONTRACT: 2018.02
7 OF 38

Date: 8/6/2018



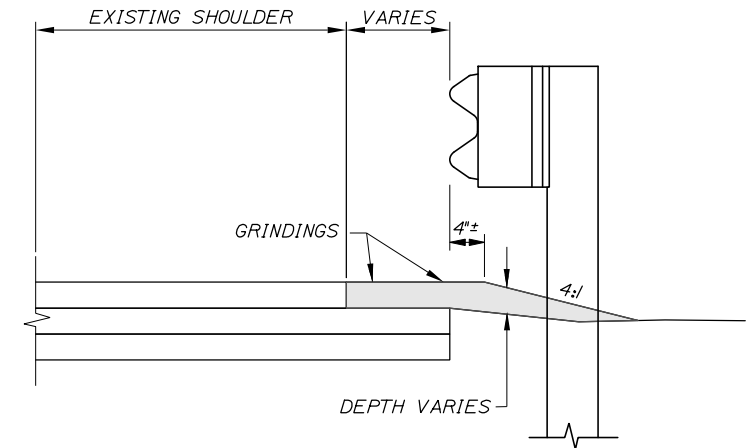
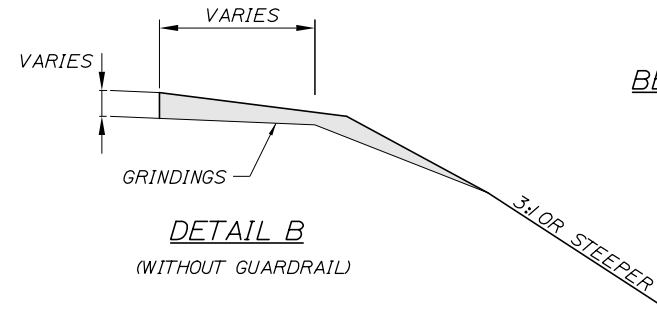
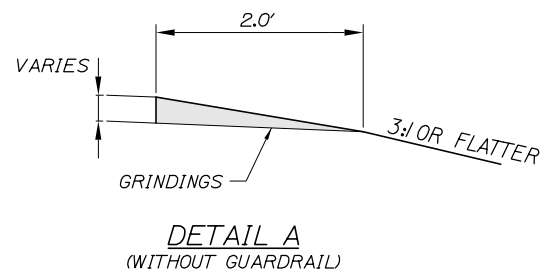
NOTES:
 1. WOOD POSTS ARE REQUIRED WITH THE FLEAT.
 2. SEE SPECIFICATIONS FOR REFLECTIVE SHEETING REQUIREMENTS.



GUARDRAIL 350 FLARED TERMINAL - 3" W-BEAM GUARDRAIL
 N.T.S.

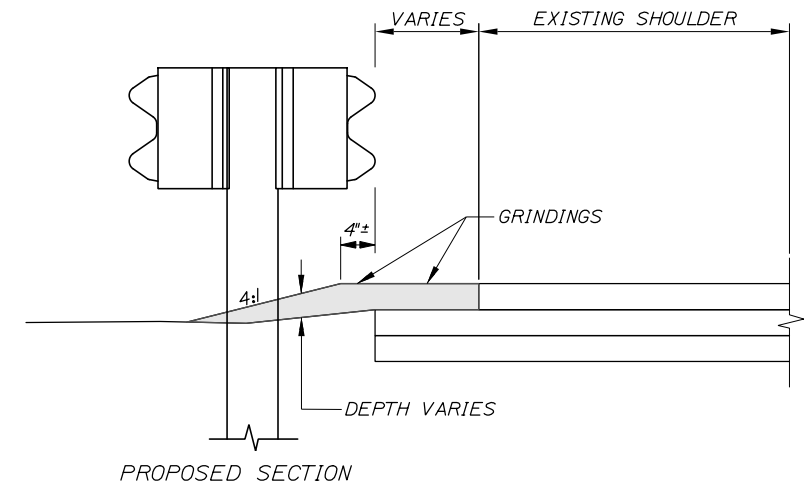
GENERAL GUARDRAIL INSTALLATION NOTE:

1. THE CONTRACTOR SHALL FOLLOW ALL MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR THE INSTALLATION OF ALL GUARDRAIL COMPONENTS TO BE INSTALLED. THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER OF ANY CONFLICTS OR IRREGULARITIES BETWEEN THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND THE CONTRACT DOCUMENTS.
2. THE CONTRACTOR IS REQUIRED TO HAVE AN APPROVED CRASH END TREATMENT ON ALL GUARDRAIL ENDS PRIOR TO THE REMOVAL OF ANY MOT FEATURES.
3. GUARDRAIL HEIGHT SHALL BE 31" ± 1/2". GUARDRAIL HEIGHT SHALL BE MEASURED FROM AT GROUND ELEVATION AT FACE OF RAIL.
4. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL CUT BOLTS, DISCARD PARTS, TRASH, PAVEMENT DEBRIS, ETC., AFTER COMPLETING THE GUARDRAIL INSTALLATION.
5. CONNECTION FOR PROPOSED RAIL TO EXISTING RAIL SHALL BE INCIDENTAL TO THE PROPOSED GUARDRAIL ITEMS.



BERM DROPOFF NOTE:

1. BERM DROPOFF CORRECTION TO BE PLACED AT ALL LOCATIONS.



BERM DROPOFF CORRECTION WITH GUARDRAIL MEDIAN GUARDRAIL
 N.T.S.

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Tim R Cote, P.E.

	By	Date		By	Date
Designed	AJS	07\18	Checked	RWH	07\18
Drawn	AJS	07\18	In Charge of	RAL	07\18

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MAINE TURNPIKE

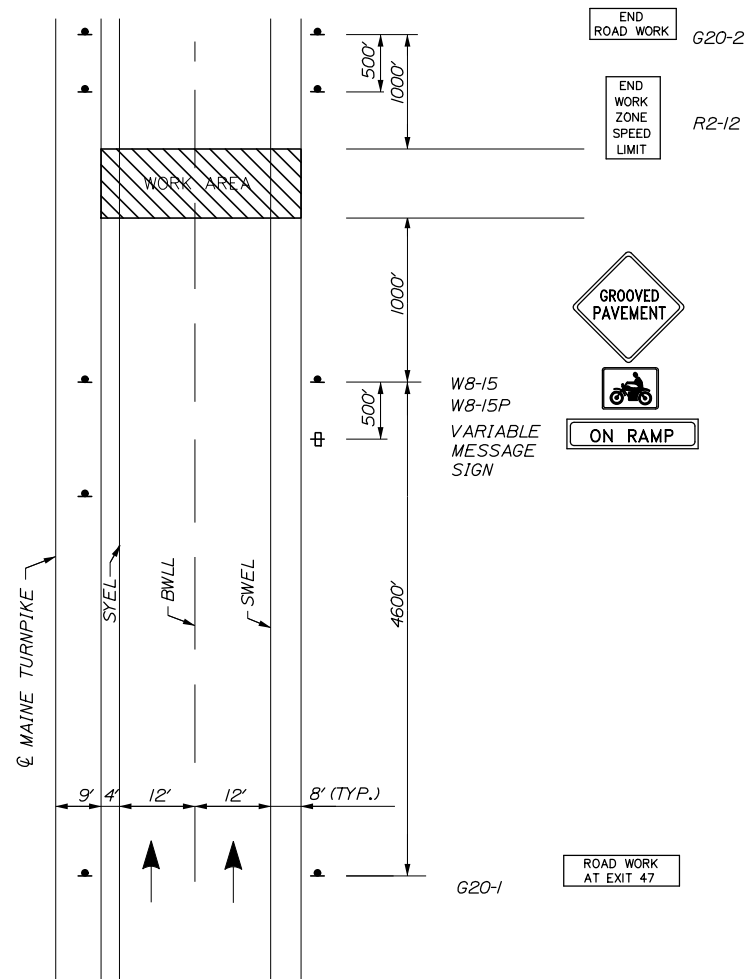
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.

EXIT 47
 INTERSECTION IMPROVEMENTS
 GUARDRAIL AND BERM DETAILS

SHEET NUMBER: MD-4
 CONTRACT: 2018.02
 9 OF 38

Date: 8/6/2018



**EXIT 47 PAVING
ADVANCED PROJECT SIGNING**

NOTES:


1. FOR SIGN DETAILS, SEE SIGN SUMMARY SHEETS.
2. ALL SIGNS ARE TO BE MOUNTED ON NCHRP 350 APPROVED POSTS.
3. UNCOVER W8-15 AND W8-15P SIGNS WHEN PAVEMENT IS MILLED OR AS DIRECTED BY THE RESIDENT.
4. PROVIDE W8-15 AND W8-15P AT ALL MILLED LOCATIONS.

Filename: 010_MOT_Details.dgn

Scale:			
<i>NOT TO SCALE</i>			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Tim R. Cote, P.E.					
	By	Date		By	Date
Designed	AJS	07\18	Checked	RWH	07\18
Drawn	SLS	07\18	In Charge of	RAL	07\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.

**EXIT 47
INTERSECTION IMPROVEMENTS
MAINTENANCE OF TRAFFIC
DETAILS 1**

SHEET NUMBER: MT-1
CONTRACT: 2018.02
10 OF 38

NOTES:

- REMOVE CONFLICTING PAVEMENT MARKINGS. TO BE PAID FOR UNDER ITEM 627.77 - REMOVE EXISTING PAVEMENT MARKINGS.
- MAST ARM AND CABINET RELOCATION MUST BE IN PLACE PRIOR TO WIDENING.
- EXISTING LOOP WILL BE USED DURING CONSTRUCTION. SUGGESTED CONSTRUCTION TIMING IS PROVIDED BELOW. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE RESIDENT ENGINEER OF SIGNIFICANT QUEUES AND DELAYS REQUIRING ADJUSTMENT TO THE INTERSECTION.
- ALL TEMPORARY WIRING IS TO REMAIN THE PROPERTY OF THE CONTRACTOR.

BWLL: BROKEN WHITE LANE LINE
 SWLL: SOLID WHITE LANE LINE
 SWEL: SOLID WHITE EDGE LINE
 SYEL: SOLID YELLOW EDGE LINE
 SYCL: SOLID YELLOW CENTER LINE

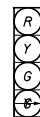
TEMPORARY SWLL
 TEMPORARY SYEL

INSTALL TEMPORARY 4-SECTION SIGNAL HEAD.

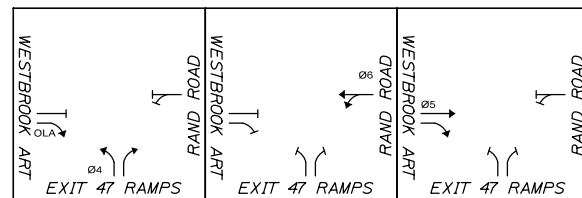
INSTALL NEW CONTROLLER CABINET FOUNDATION. RELOCATE EXISTING CONTROLLER CABINET TO THIS LOCATION.

INSTALL TEMPORARY WIRING AND CONDUIT (TYP.)

TEMPORARY SIGNAL



SIGNAL PHASING SEQUENCE



PROPOSED SIGNAL TIMING TABLE

LOCATION	TIME PERIOD								
	ROAD NAME DIR	ROAD NAME DIR	ROAD NAME DIR	EXIT 47 NB	WSTBRK ART EB	RAND ROAD WB	ROAD NAME DIR	ROAD NAME DIR	ROAD NAME DIR
PHASE	1	2	3	4	5	6	7	8	9
MINIMUM INITIAL	-	-	-	4.0	4.0	4.0	-	-	-
PASSAGE TIME	-	-	-	3.0	3.0	3.0	-	-	-
MAXIMUM 1	-	-	-	20	15	25	-	-	-
MAXIMUM 2	-	-	-	-	-	-	-	-	-
YELLOW	-	-	-	4.0	4.0	4.0	-	-	-
ALL RED	-	-	-	2.0	2.0	2.0	-	-	-
PED. WALK	-	-	-	-	-	-	-	-	-
PED. CLEARANCE (FDW)	-	-	-	-	-	-	-	-	-
PED. CLEARANCE (DW)	-	-	-	-	-	-	-	-	-
RECALL	-	-	-	S	NONE	NONE	-	-	-
DETECTOR OPERATION	-	-	-	PR	PR	PR	-	-	-
PREEMPTION PRIORITY	-	-	-	-	-	-	-	-	-
FLASH	-	-	-	R	R	R	-	-	-
DUAL ENTRY	-	-	-	-	-	-	-	-	-

NOTES:
 S = SOFT RECALL PR = PRESENCE Y = YELLOW FDW = FLASHING DON'T WALK
 MAX = MAX RECALL MAX1 = FREE OPERATION R = RED DW = DON'T WALK
 C-MAX = COORDINATED MAX MAX2 = UNDER COORDINATION D = DARK
 0 = RECALL OFF

LIST OF MAJOR TEMPORARY ITEMS

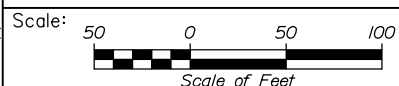
EQUIPMENT AND WORK ITEMS	QUANTITY
FURNISH AND INSTALL NON-METALLIC CONDUIT (ITEM 626.22)*	1500
FURNISH AND INSTALL NON-METALLIC CONDUIT, HORIZONTAL DIRECTIONAL DRILL (622.21)*	600
INSTALL WIRE AS INDICATED IN TEMPORARY SIGNAL (ITEM 643.72).	LS
FURNISH AND INSTALL QUARTZITE JUNCTION BOX (ITEM 626.12)*	4
FURNISH AND INSTALL 4-SECTION 12-INCH BLACK SIGNAL HEAD WITH LED MODULES WITH TUNNEL VISORS AND LOUVERED BACKPLATES MOUNTED ON PEDESTAL POLE. SIGNAL HEAD WIRING WILL BE CONTINUOUS WIRING FROM CABINET TO PEDESTAL POLE.	1
INSTALL 36" MAST ARM POLE FOUNDATION.*	1
INSTALL 24" X 4" TEMPORARY SIGNAL CABINET FOUNDATION.	LS
RELOCATE MAST ARM POLE, EXISTING SIGNAGE AND SIGNAL HEADS TO NEW MAST ARM FOUNDATION.	1
FURNISH AND INSTALL NEW LED LUMINAIRE PER STANDARD SPECIFICATION 634.22**	1

* THESE ITEMS SHALL REMAIN FOR THE PERMANENT CONDITION. ALL ADDITIONAL ITEMS ARE TEMPORARY AND ARE TO BE REMOVED AT THE CULMINATION OF THIS PROJECT AND ARE TO REMAIN THE PROPERTY OF THE CONTRACTOR.
 ** POWER FOR THE LUMINAIRE SHALL COME FROM SIGNAL CABINET.

INSTALL NEW MAST ARM FOUNDATION, RELOCATE EXISTING MAST ARM POLE, ARM, SIGNAGE, AND SIGNALS TO THIS LOCATION.

Date: 8/6/2018

Filename: 012_MOT-Toll Approach.dgn



Designed by:



CONSULTANT PROJECT MANAGER: Tim R. Cote, P.E.

	By	Date	By	Date	
Designed	AJS	07\18	Checked	RWH	07\18
Drawn	SLS	07\18	In Charge of	RAL	07\18

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**THE GOLD STAR
 MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.

**INTERSECTION IMPROVEMENTS
 EXIT 47
 MAINTENANCE OF TRAFFIC
 DETAILS 3**

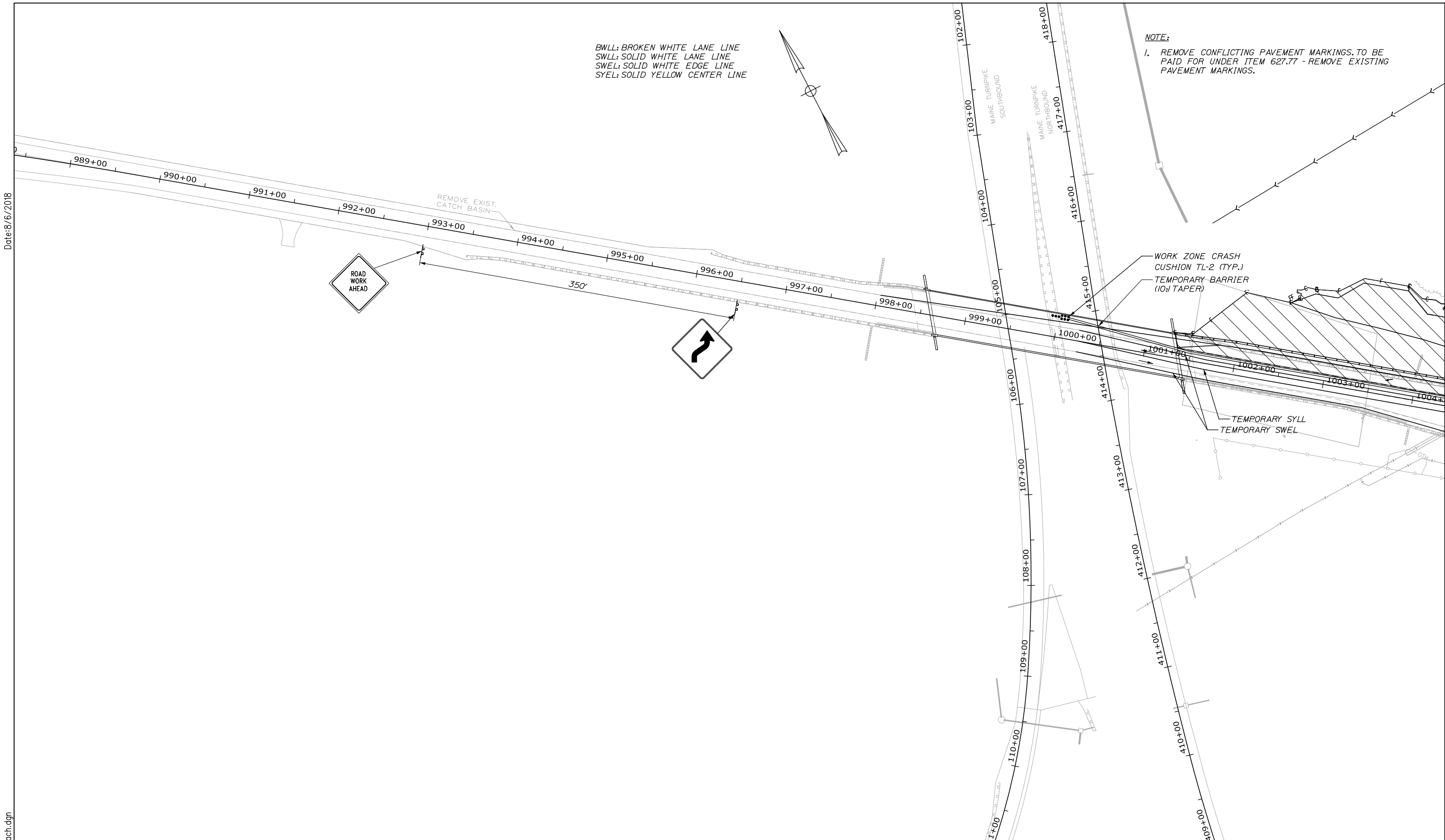
CONTRACT: 2018.02

SHEET NUMBER: MT-3

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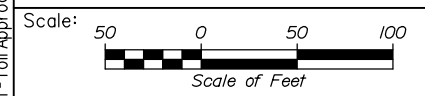
BWLL: BROKEN WHITE LANE LINE
 SWLL: SOLID WHITE LANE LINE
 SWEL: SOLID WHITE EDGE LINE
 SYEL: SOLID YELLOW CENTER LINE

NOTE:
 1. REMOVE CONFLICTING PAVEMENT MARKINGS. TO BE PAID FOR UNDER ITEM 627.77 - REMOVE EXISTING PAVEMENT MARKINGS.



Date: 8/6/2018

Filename: 013_M01 - Toll Approach.dgn



Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Tim R. Cote, P.E.

No.	Revision	By	Date

	By	Date		By	Date
Designed	AJS	07\18	Checked	RWH	07\18
Drawn	SLS	07\18	In Charge of	RAL	07\18

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**THE GOLD STAR
 MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.




INTERSECTION IMPROVEMENTS
 EXIT 47
 MAINTENANCE OF TRAFFIC
 DETAILS 4

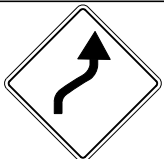



CONTRACT: 2018.02

SHEET NUMBER: MT-4

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Date: 8/6/2018

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		BORDER RADIUS	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND BORDER		
G20-1	48"	24"	ROAD WORK AT EXIT 47	TEXT DIMENSIONS SHALL CONFORM TO *2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT*			4	COLORS SHALL CONFORM TO *2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT*			8.00 (32)
G20-2	48"	24"	END ROAD WORK				6				8.00 (48)
G20-5aP	48"	24"	WORK ZONE				4				8.00 (32)
R2-1 (50)	48"	60"	SPEED LIMIT 50				4				20.00 (80)
R2-6aP	48"	24"	FINES DOUBLED	6"	4.5"		4				8.00 (32)
R2-12	36"	54"	END WORK ZONE SPEED LIMIT	6"	4.5"		12				13.50 (162)
W1-4L	48"	48"					1				16.00 (16)
CS-38	48"	48"	SINGLE LANE AHEAD				2	ORANGE	BLACK		16.00 (32)
W4-1	48"	48"					1	ORANGE	BLACK		16.00 (16)
M1-2	24"	24"					6	COLORS SHALL CONFORM TO *2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT*			4.00 (24)
R9-9	24"	12"	SIDEWALK CLOSED				1	COLORS SHALL CONFORM TO *2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT*			2.00 (2)

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		BORDER RADIUS	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND BORDER		
W1-4R	48"	48"					1	COLORS SHALL CONFORM TO *2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT*			16.00 (16)
W3-4	48"	48"	BE PREPARED TO STOP				8				16.00 (128)
W3-5 (50)	48"	48"					8				16.00 (128)
W4-2L	48"	48"					8				16.00 (128)
W4-2R	48"	48"					8				16.00 (128)
W5-4	48"	48"	LANES NARROW				6				16.00 (96)
W8-1	48"	48"	BUMP				8				16.00 (128)
W8-11	48"	48"	UNEVEN LANES				12				16.00 (192)

Filename: 014_MOT-SIGN SUMMARY 1.dgn

Scale: NOT TO SCALE

No.	Revision	By	Date


Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Tim R. Cote, P.E.

	By	Date		By	Date
Designed	AJS	07\18	Checked	RWH	07\18
Drawn	SLS	07\18	In Charge of	RAL	07\18

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 THE GOLD STAR MEMORIAL HIGHWAY











MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., PTOE



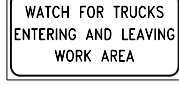
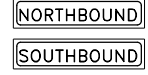



EXIT 47
 INTERSECTION IMPROVEMENTS
 MAINTENANCE OF TRAFFIC
 SIGN SUMMARY 1

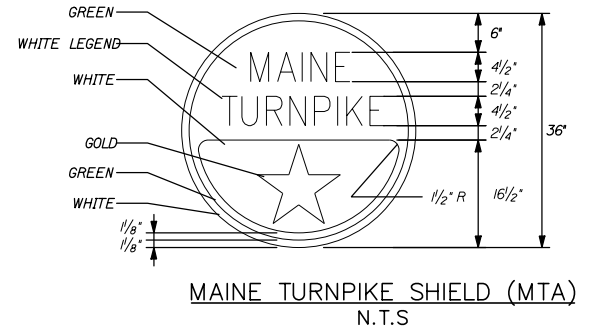
SHEET NUMBER: MT-4
 CONTRACT: 2018.02
 14 OF 38

Date: 8/6/2018

Filename: 015_MOT-SIGN_SUMMARY_2.dgn

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		BORDER RADIUS	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND BORDER		
W8-15	48"	48"		TEXT DIMENSIONS SHALL CONFORM TO '2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT'			16	COLORS SHALL CONFORM TO '2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT'			16.00 (256)
W8-15P	30"	24"					16				5.00 (80)
W20-1 (1 MILE) (AHEAD)	48"	48"					8 3				16.00 (128) (48)
W20-5L (1/2 MILE)	48"	48"					8				16.00 (128)
W20-5R (1/2 MILE)	48"	48"					8				16.00 (128)
W21-5aR	48"	48"					2				16.00 (32)
W21-5aL	48"	48"					2				16.00 (32)
W21-5bR (1000 FT)	48"	48"					2				16.00 (32)
W21-5bL (1000 FT)	48"	48"					2				16.00 (32)
W8-9	48"	48"					8				16.00 (128)

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		BORDER RADIUS	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND BORDER		
CS-3	48"	48"		6" 6" 6"	4" 4"		8	ORANGE	BLACK		16.00 (128)
CS-11	48"	48"		6" 6" 6"	4" 4"		5	ORANGE	BLACK		16.00 (80)
CS-33	96"	36"		6" 6" 6"	4" 4"		4	ORANGE	BLACK		24.00 (96)
CS-52	96"	18"					5 3	COLORS SHALL CONFORM TO '2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT'			12.00 (60) 12.00 (36)
CS-53R	48"	48"					6				16.00 (96)
CS4-9P	36"	48"					12	ORANGE	BLACK		12.00 (144)
LOGO S	24"	24"		SEE DETAILS RIGHT			6	SEE DETAILS RIGHT			4.00 (24)



NOTE: FOR 24" SHIELD REDUCE ALL MEASUREMENTS BY 1/3.

Scale: NOT TO SCALE

No.	Revision	By	Date


Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Tim R. Cote, P.E.

By	Date	By	Date
Designed	AJS 07\18	Checked	RWH 07\18
Drawn	SLS 07\18	In Charge of	RAL 07\18

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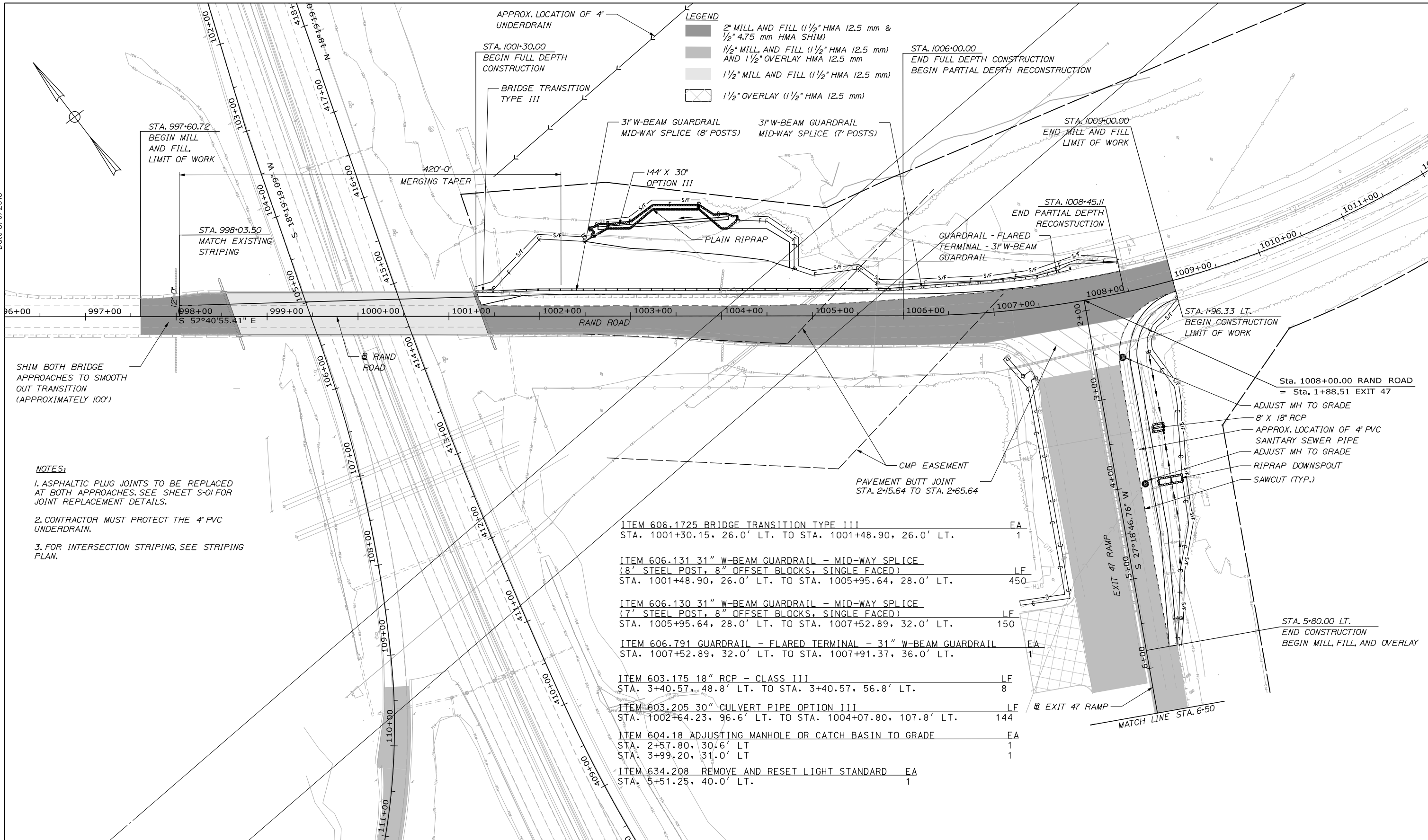
 **THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., PTOE

EXIT 47
 INTERSECTION IMPROVEMENTS
 MAINTENANCE OF TRAFFIC
 SIGN SUMMARY 2

SHEET NUMBER: MT-5
 CONTRACT: 2018.02
 15 OF 38

Date: 8/6/2018

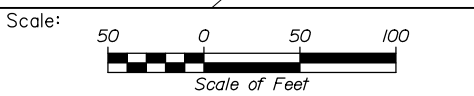


LEGEND

- 2" MILL AND FILL (1 1/2" HMA 12.5 mm & 1/2" 4.75 mm HMA SHIM)
- 1 1/2" MILL AND FILL (1 1/2" HMA 12.5 mm) AND 1 1/2" OVERLAY HMA 12.5 mm
- 1 1/2" MILL AND FILL (1 1/2" HMA 12.5 mm)
- 1 1/2" OVERLAY (1 1/2" HMA 12.5 mm)

- NOTES:**
1. ASPHALTIC PLUG JOINTS TO BE REPLACED AT BOTH APPROACHES. SEE SHEET S-OI FOR JOINT REPLACEMENT DETAILS.
 2. CONTRACTOR MUST PROTECT THE 4" PVC UNDERDRAIN.
 3. FOR INTERSECTION STRIPING, SEE STRIPING PLAN.

ITEM 606.1725 BRIDGE TRANSITION TYPE III STA. 1001+30.15, 26.0' LT. TO STA. 1001+48.90, 26.0' LT.	EA	1
ITEM 606.131 31" W-BEAM GUARDRAIL - MID-WAY SPLICE (8' STEEL POST, 8" OFFSET BLOCKS, SINGLE FACED) STA. 1001+48.90, 26.0' LT. TO STA. 1005+95.64, 28.0' LT.	LF	450
ITEM 606.130 31" W-BEAM GUARDRAIL - MID-WAY SPLICE (7' STEEL POST, 8" OFFSET BLOCKS, SINGLE FACED) STA. 1005+95.64, 28.0' LT. TO STA. 1007+52.89, 32.0' LT.	LF	150
ITEM 606.791 GUARDRAIL - FLARED TERMINAL - 31" W-BEAM GUARDRAIL STA. 1007+52.89, 32.0' LT. TO STA. 1007+91.37, 36.0' LT.	EA	1
ITEM 603.175 18" RCP - CLASS III STA. 3+40.57, 48.8' LT. TO STA. 3+40.57, 56.8' LT.	LF	8
ITEM 603.205 30" CULVERT PIPE OPTION III STA. 1002+64.23, 96.6' LT. TO STA. 1004+07.80, 107.8' LT.	LF	144
ITEM 604.18 ADJUSTING MANHOLE OR CATCH BASIN TO GRADE STA. 2+57.80, 30.6' LT STA. 3+99.20, 31.0' LT	EA	1 1
ITEM 634.208 REMOVE AND RESET LIGHT STANDARD STA. 5+51.25, 40.0' LT.	EA	1



Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Tim R Cote, P.E.

No.	Revision	By	Date

	By	Date		By	Date
Designed	AJS	07/18	Checked	RWH	07/18
Drawn	AJS	07/18	In Charge of	RAL	07/18

HNTB CORPORATION
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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.

INTERSECTION IMPROVEMENTS
EXIT 47
GENERAL PLAN

SHEET NUMBER: GP-1
CONTRACT: 2018.02
16 OF 38

Filename: 016_HDPLAN.dgn

ITEM 604.184 REBUILD CATCH
 BASIN TO GRADE - TYPE II EA
 STA. 21+00.00 1
 STA. 23.25+00 1

ITEM 606.3621 GUARDRAIL ADJUST - SINGLE RAIL LF
 STA. 17+20 TO STA. 202+50 RT 972
 STA. 17+20 TO STA. 110+25 LT 1335
 STA. 112+50 TO STA. 114+00 LT 152

ITEM 606.3621 GUARDRAIL ADJUST - DOUBLE RAIL LF
 STA. 17+20 TO STA. 114+00 889

LEGEND

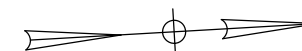
1 1/2" MILL AND FILL (1 1/2" HMA 12.5 mm)
 AND 1 1/2" OVERLAY HMA 12.5 mm

1 1/2" MILL AND FILL (1 1/2" HMA 12.5 mm)

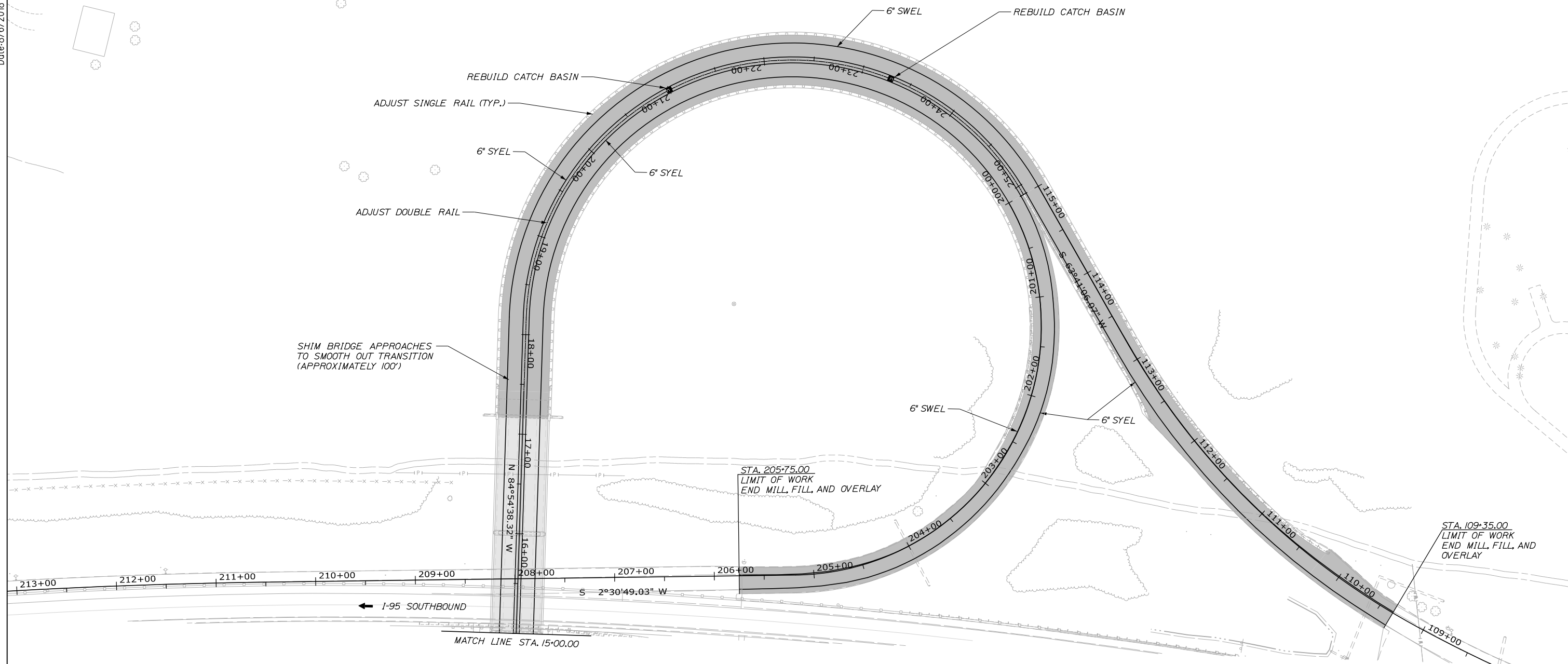
SWEL: SOLID WHITE EDGE LINE
 SYEL: SOLID YELLOW EDGE LINE

GENERAL NOTES:

1. PROVIDE 1 1/2" HMA 12.5mm (POLYMER MODIFIED) ON THE RAMPS AFTER COMPLETING THE SPECIFIED MILL.
2. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES DURING MILLING AND PAVING OPERATIONS TO PREVENT DAMAGE TO THE EXISTING TOLL PLAZA SLAB.
3. REMOVE EXISTING RIGID DELINEATORS AND INSTALL FLEXIBLE DELINEATOR POSTS ON ALL LEADING AND TRAILING GUARDRAIL ENDS.
4. ASPHALTIC PLUG JOINTS TO BE REPLACED AT BOTH THE APPROACHES. SEE SHEET S-01 FOR THE JOINT REPLACEMENT DETAILS.



Date: 8/6/2018



Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Tim R. Cote, P.E.

No.	Revision	By	Date

	By	Date		By	Date
Designed	AJS	07\18	Checked	RWH	07\18
Drawn	SLS	07\18	In Charge of	RAL	07\18

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**THE GOLD STAR
 MEMORIAL HIGHWAY**

INTERSECTION IMPROVEMENTS
 EXIT 47
 PAVING PLAN 1

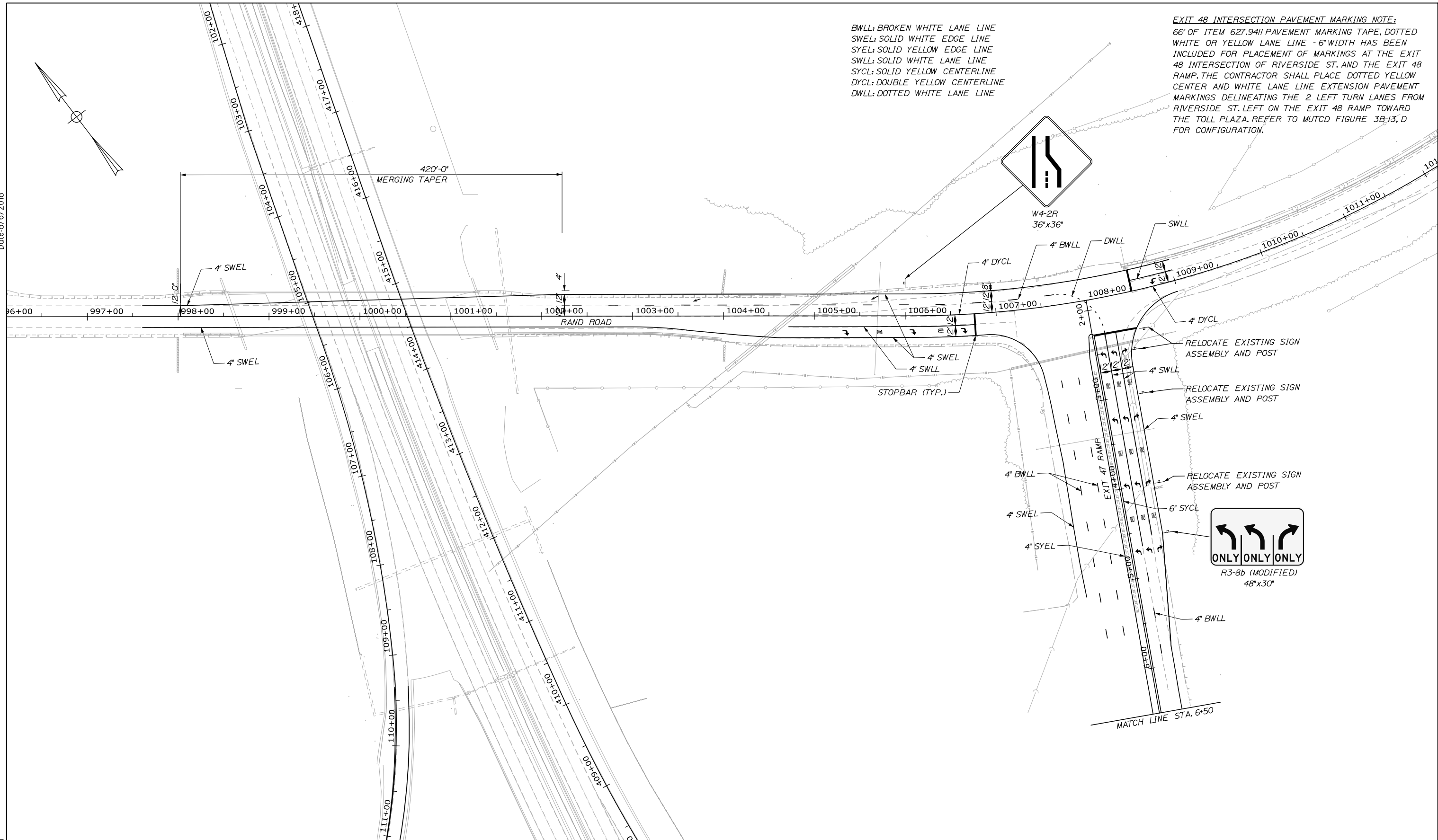
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MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.

CONTRACT: 2018.02

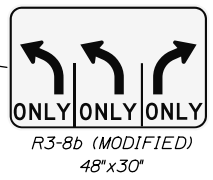
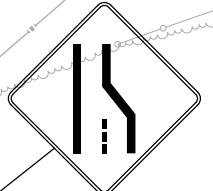
SHEET NUMBER: GP-2
 17 OF 38

Date: 8/6/2018



BWLL: BROKEN WHITE LANE LINE
 SWEL: SOLID WHITE EDGE LINE
 SYEL: SOLID YELLOW EDGE LINE
 SWLL: SOLID WHITE LANE LINE
 SYCL: SOLID YELLOW CENTERLINE
 DYCL: DOUBLE YELLOW CENTERLINE
 DWLL: DOTTED WHITE LANE LINE

EXIT 48 INTERSECTION PAVEMENT MARKING NOTE:
 66' OF ITEM 627.9411 PAVEMENT MARKING TAPE, DOTTED WHITE OR YELLOW LANE LINE - 6" WIDTH HAS BEEN INCLUDED FOR PLACEMENT OF MARKINGS AT THE EXIT 48 INTERSECTION OF RIVERSIDE ST. AND THE EXIT 48 RAMP. THE CONTRACTOR SHALL PLACE DOTTED YELLOW CENTER AND WHITE LANE LINE EXTENSION PAVEMENT MARKINGS DELINEATING THE 2 LEFT TURN LANES FROM RIVERSIDE ST. LEFT ON THE EXIT 48 RAMP TOWARD THE TOLL PLAZA. REFER TO MUTCD FIGURE 3B-13, D FOR CONFIGURATION.



Scale: 50 0 50 100
Scale of Feet

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Tim R Cote, P.E.

	By	Date	By	Date	
Designed	AJS	07/18	Checked	RWH	04/18
Drawn	AJS	07/18	In Charge of	RAL	04/18

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MAINE TURNPIKE

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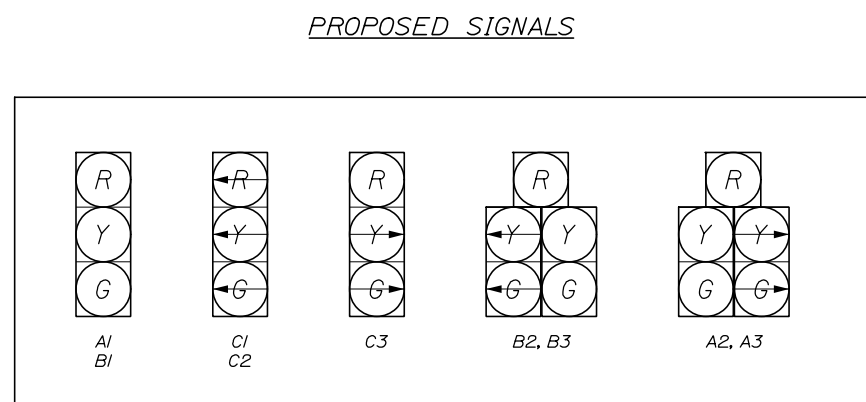
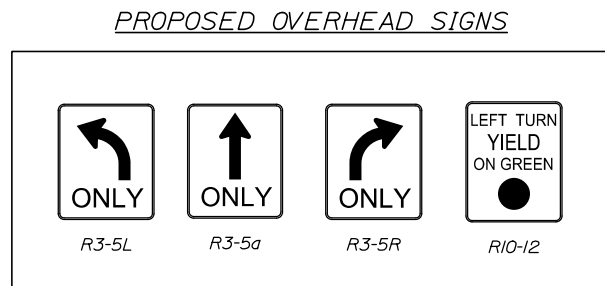
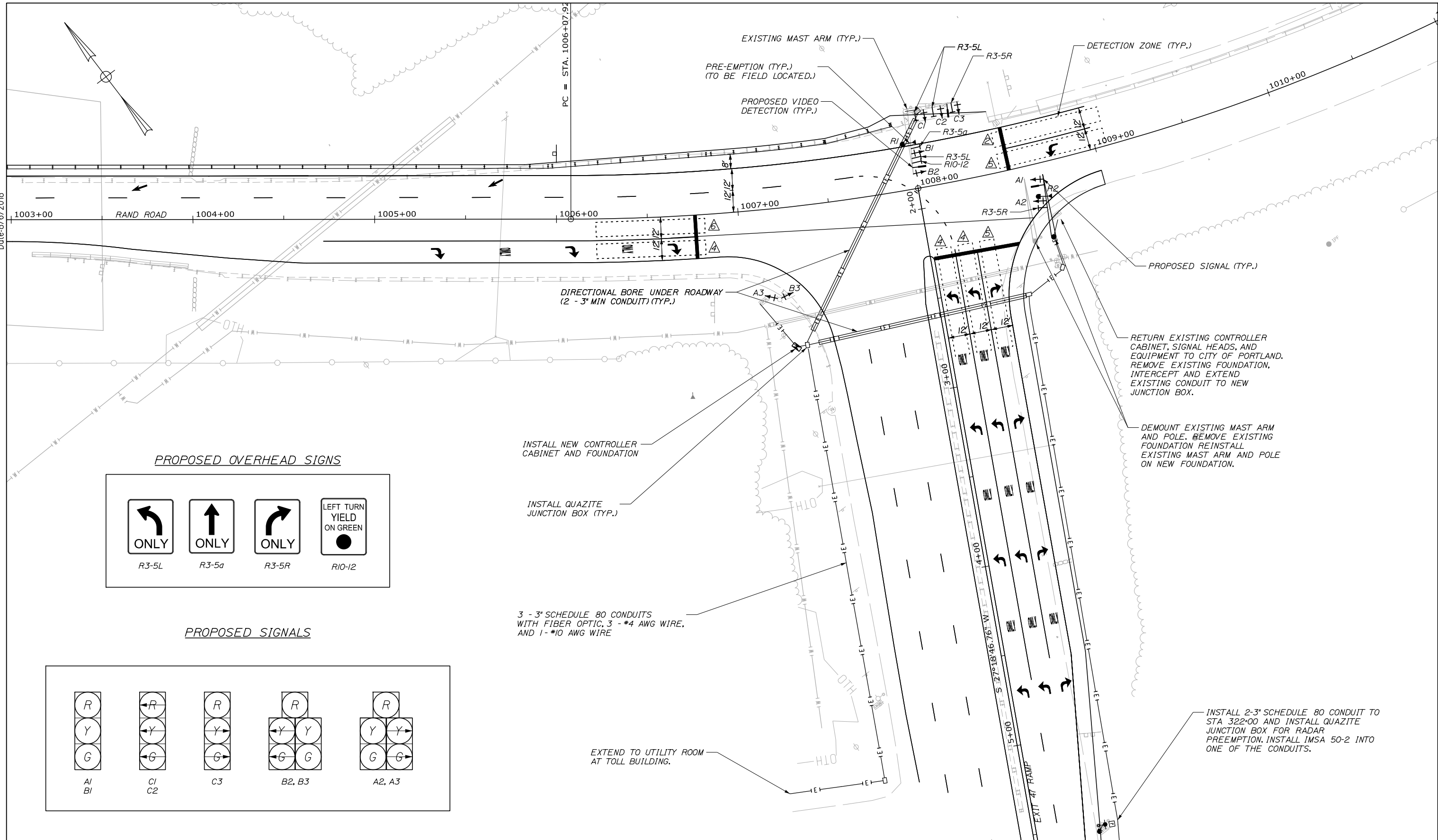
MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.

INTERSECTION IMPROVEMENTS
 EXIT 47
 STRIPING PLAN

SHEET NUMBER: SP-1
 19 OF 38

CONTRACT: 2018.02

Date: 8/6/2018



Scale: 25 0 25 50
Scale of Feet

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Tim R Cote, P.E.

	By	Date	By	Date	
Designed	CDH	07/18	Checked	RBM	07/18
Drawn	ARG	07/18	In Charge of	RAL	07/18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.

**INTERSECTION IMPROVEMENTS
EXIT 47
SIGNAL PLAN**

SHEET NUMBER: PL-4
CONTRACT: 2018.02
20 OF 38

Date: 8/6/2018

LIST OF MAJOR ITEMS

EQUIPMENT AND WORK ITEMS	QUANTITY
FURNISH AND INSTALL NEW 3501 OR 344LX ATC LOW VOLTAGE CONTROLLER CABINET AND ECONOLITE COBALT RACK MOUNTED ATC CONTROLLER WITH ALL ANCILLARY EQUIPMENT AND WIRING.	1
FURNISH AND INSTALL CMUip-22i2-LV 3.2 CHANNEL CABINET MONITOR UNIT	1
FURNISH AND INSTALL 3- AND 5-SECTION 12-INCH BLACK SIGNAL HEADS WITH LED MODULES WITH TUNNEL VISORS AND LOUVERED BACKPLATES MOUNTED ON MAST ARM WITH NEW ASTRO BRACKETS. SIGNAL HEAD WIRING WILL BE ALL NEW WIRING WITH CONTINUOUS WIRING FROM CABINET TO MAST ARM OR PEDESTAL POLE.	9
FURNISH AND INSTALL 12 POSITION FIBER OPTIC PATCH PANEL.	1
FURNISH AND INSTALL 3-#4 AWG CONDUCTOR CABLES FOR SIGNAL POWER AND GROUND.	1800 LF
FURNISH AND INSTALL NEW SIGNAL CABLE.	LS
FURNISH AND INSTALL NEW INPUT ASSEMBLIES - MODEL 22i8 SERIAL INTERFACE UNITS.	2
FURNISH AND INSTALL NEW OUTPUT TERMINATION ASSEMBLY MODEL 2202-LV UNIVERSAL HIGH-DENSITY SWITCH PACK/FLASHER UNITS.	1
FURNISH AND INSTALL NEW DC POWER BUS AND AC CLEAN POWER BUS.	1
FURNISH AND INSTALL VEHICLE DETECTOR TEST PANEL.	1
FURNISH AND INSTALL NEW VIDEO DETECTION SYSTEM WITH FOUR HIGH DEFINITION AUTOSCOPE CAMERAS, CONTROL UNIT WITH VIDEO PROCESSOR CARD AND ANCILLARY EQUIPMENT WITH CAPABILITIES FOR REMOTE CONTROL AND DATA COLLECTION (ITEM 626.22)	1
FURNISH AND INSTALL PREEMPTION CABLE TO CONNECT EXISTING RADAR UNIT FOR RAMP QUEUE DETECTION.	LS
FURNISH AND INSTALL OPTICOM PREEMPTION SYSTEM WITH 2-48V DC CONFIRMATION STROBES AND RECEIVERS.	1
FURNISH AND INSTALL 36"x24"x36" QUARTZITE JUNCTION BOX (ITEM 626.12)*	4
FURNISH AND INSTALL NON-METALLIC CONDUIT (ITEM 626.22)*	1500 LF
FURNISH AND INSTALL NON-METALLIC CONDUIT, HORIZONTAL DIRECTIONAL DRILL (626.21)*	600 LF
FURNISH AND INSTALL NEW LED LUMINAIRE PER STANDARD SPECIFICATION 634.22i	1

* WORK FOR THESE ITEMS SHALL OCCUR DURING MAINTENANCE OF TRAFFIC ACTIVITIES. (SEE SHEET 12.)
 ** POWER FOR THE LUMINAIRE SHALL COME FROM SIGNAL CABINET.

PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	ACTIVE PHASE
R1	3	Ø2 & Ø5
R2	4	Ø2 & Ø6
RADAR	10*	Ø4

* ASSIGNED THROUGH CONTROLLER LOGIC PROCESSING

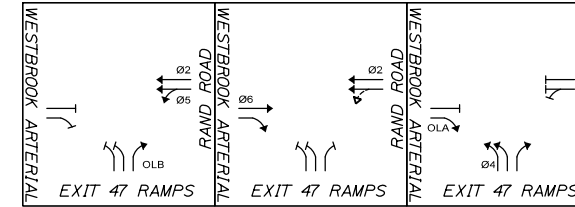
VEHICLE PREEMPTION NOTES:

- PREEMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1= HIGHEST, 4 = LOWEST).
- IN RESPONSE TO A PREEMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR, THE CONTROLLER SHALL HOLD OR ADVANCE TO AND HOLD THE EMERGENCY ACTIVE PHASE GREEN FOR A MINIMUM OF 10 SECONDS OR UNTIL THE PREEMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN TIME PREEMPTION PHASE CLEARANCE (4.0 SECONDS YELLOW AND 3.0 SECONDS ALL RED) AND SERVICE SUBSEQUENT EMERGENCY ACTIVE PHASES AS NECESSARY. AT THE COMPLETION OF THE PREEMPTION CYCLE, THE CONTROLLER SHALL TIME THE PREEMPTION CLEARANCE AND RESUME NORMAL SIGNAL OPERATION.
- MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PREEMPTION DEMAND.
- CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PREEMPTION GREEN IS ON. PREEMPT 10 SHALL BE A LOW PRIORITY PREEMPT AND SHALL NOT REQUIRE THE ILLUMINATION OF THE PREEMPTION STROBES.

AM AND PM SCHEDULE

	MON-FRI	SAT-SUN
MAX 1	12a-3p; 7p-12a	12a-12a
MAX 2	3p-7p	--

SIGNAL PHASING SEQUENCE



PROPOSED SIGNAL TIMING TABLE

LOCATION	TIME PERIOD								
	ROAD NAME DIR	RAND ROAD WB	ROAD NAME DIR	EXIT 47 NB	RAND ROAD WB	WSTBRK ART EB	ROAD NAME DIR	ROAD NAME DIR	ROAD NAME DIR
PHASE	1	2	3	4	5	6	7	8	9
MINIMUM INITIAL	-	4.0	-	4.0	4.0	4.0	-	-	-
PASSAGE TIME	-	3.0	-	3.0	3.0	3.0	-	-	-
MAXIMUM 1	-	30	-	20*	15	25	-	-	-
MAXIMUM 2	-	35	-	25*	15	20	-	-	-
YELLOW	-	4.0	-	4.0	4.0	4.0	-	-	-
ALL RED	-	2.0	-	3.0	3.0	2.0	-	-	-
PED. WALK	-	-	-	-	-	-	-	-	-
PED. CLEARANCE (FDW)	-	-	-	-	-	-	-	-	-
PED. CLEARANCE (DW)	-	-	-	-	-	-	-	-	-
RECALL	-	S	-	NONE	NONE	S	-	-	-
DETECTOR OPERATION	-	PR	-	PR	PR	PR	-	-	-
PREEMPTION PRIORITY	-	3	-	10	3	4	-	-	-
FLASH	-	Y	-	R	R	Y	-	-	-
DUAL ENTRY	-	-	-	-	-	-	-	-	-

* ADD 30 SEC TO MAX TIME IF PRE-EMPTION ON RAMP IS ACTIVATED.

NOTES:
 S = SOFT RECALL PR = PRESENCE Y = YELLOW FDW = FLASHING DON'T WALK
 MAX = MAX RECALL MAX1 = FREE OPERATION R = RED DW = DON'T WALK
 C-MAX = COORDINATED MAX MAX2 = UNDER COORDINATION D = DARK
 0 = RECALL OFF

DETECTOR SCHEDULE

PLAN ID	STREET	DIRECTION	LANE	PHASE
1				
2	EXIT 47/WESTBROOK ART	EB/NB	LT (47)/RT* (WA)	4
3	EXIT 47/RAND ROAD	NB/WB	RT* (47)/LT (RR)	5
4	WESTBROOK ART	EB	THROUGH	6
5				
6				
7				
8	RAND ROAD	WB	THROUGH	2

* INDICATE AN 8 SECOND DELAY FOR PHASE ACTIVATION DUE TO RIGHT TURNING VEHICLES.

Filename: 021_Signal Phasing.dgn

Scale: N/A		Designed by:	
		HNTB	
No.	Revision	By	Date
CONSULTANT PROJECT MANAGER: Tim R Cote, P.E.			
	By	Date	By
	CDH	07/18	Checked RBM 07/18
	By	Date	By
	ARG	07/18	In Charge of RAL 07/18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

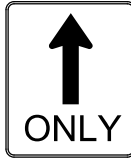
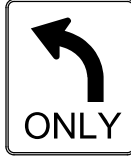
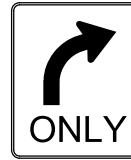
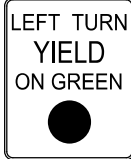
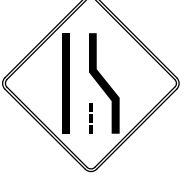
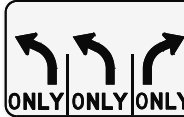
MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.

INTERSECTION IMPROVEMENTS
EXIT 47

SIGNAL PLAN

SHEET NUMBER: PL-2
CONTRACT: 2018.02
21 OF 38

Date: 8/6/2018

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		BORDER RADIUS	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND BORDER		
R3-5a	30"	36"		TEXT DIMENSIONS SHALL CONFORM TO '2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT'			2	COLORS SHALL CONFORM TO '2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT'			7.50 (15)
R3-5L	30"	36"					3				7.50 (22.50)
R3-5R	30"	36"					2				7.50 (15)
R10-12	30"	36"					1				7.50 (7.50)
W4-2R	36"	36"					1				9.00 (9)
R3-8b (MODIFIED)	48"	30"					1				10.00 (10)

Filename: 022_SignSummary.dgn

Scale: NOT TO SCALE

No.	Revision	By	Date


Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Tim R. Cote, P.E.

	By	Date		By	Date
Designed	AJS	07\18	Checked	RWH	07\18
Drawn	EPR	07\18	In Charge of	RAL	07\18

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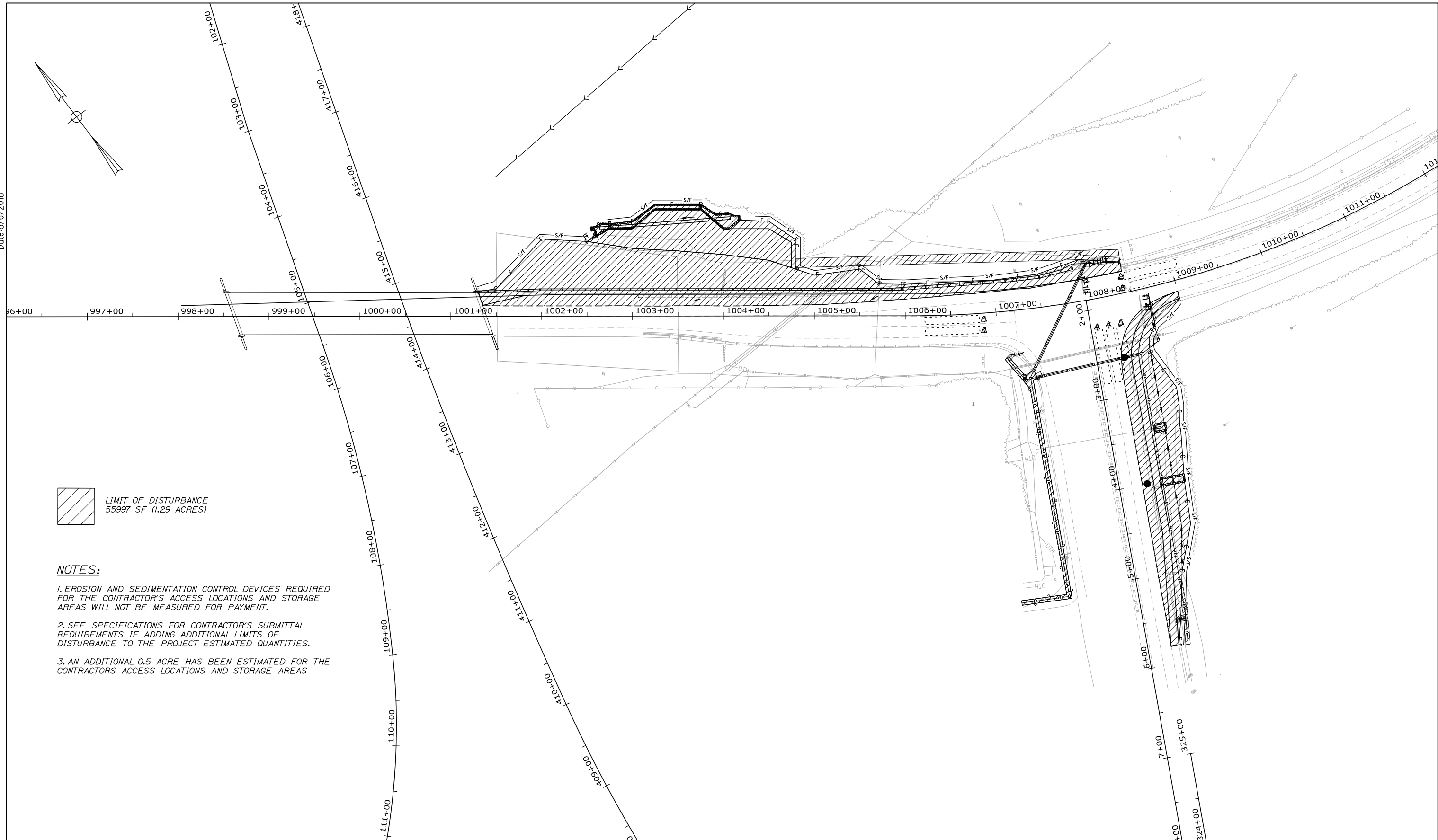
 **THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., PTOE

EXIT 47
 INTERSECTION IMPROVEMENTS
 SIGN SUMMARY

SHEET NUMBER: MT-5
 CONTRACT: 2018.02
 22 OF 38

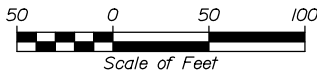
Date: 8/6/2018



 LIMIT OF DISTURBANCE
55997 SF (1.29 ACRES)

NOTES:

1. EROSION AND SEDIMENTATION CONTROL DEVICES REQUIRED FOR THE CONTRACTOR'S ACCESS LOCATIONS AND STORAGE AREAS WILL NOT BE MEASURED FOR PAYMENT.
2. SEE SPECIFICATIONS FOR CONTRACTOR'S SUBMITTAL REQUIREMENTS IF ADDING ADDITIONAL LIMITS OF DISTURBANCE TO THE PROJECT ESTIMATED QUANTITIES.
3. AN ADDITIONAL 0.5 ACRE HAS BEEN ESTIMATED FOR THE CONTRACTORS ACCESS LOCATIONS AND STORAGE AREAS

Scale:  Scale of Feet

No.	Revision	By	Date


Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Tim R Cote, P.E.

	By	Date	By	Date	
Designed	AJS	07/18	Checked	RWH	07/18
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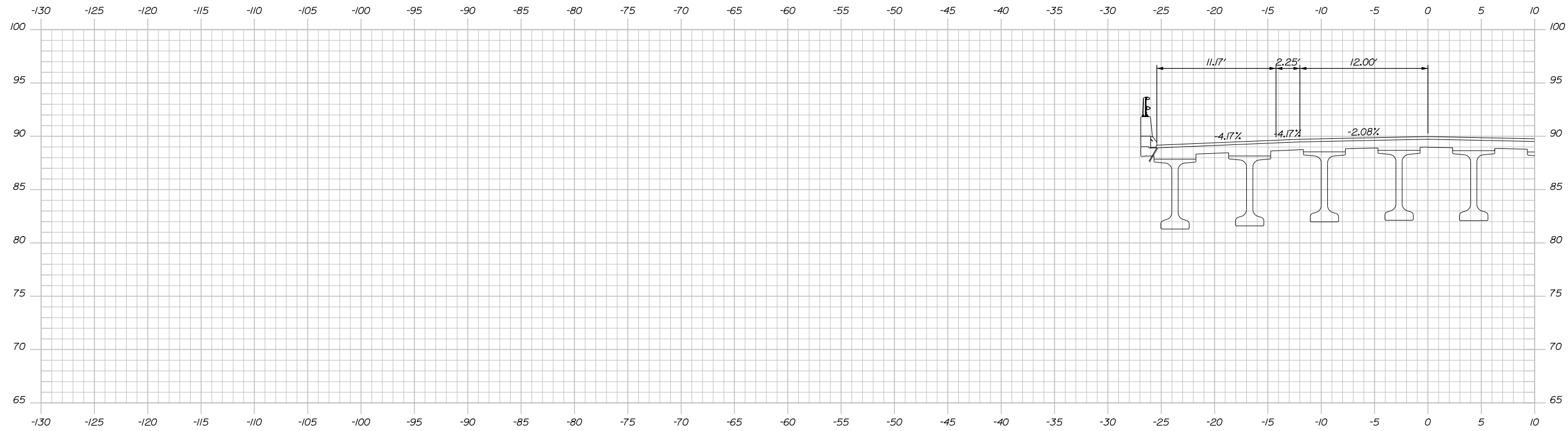
MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.

**EXIT 47
INTERSECTION IMPROVEMENTS
LIMIT OF DISTURBANCE
PLAN**

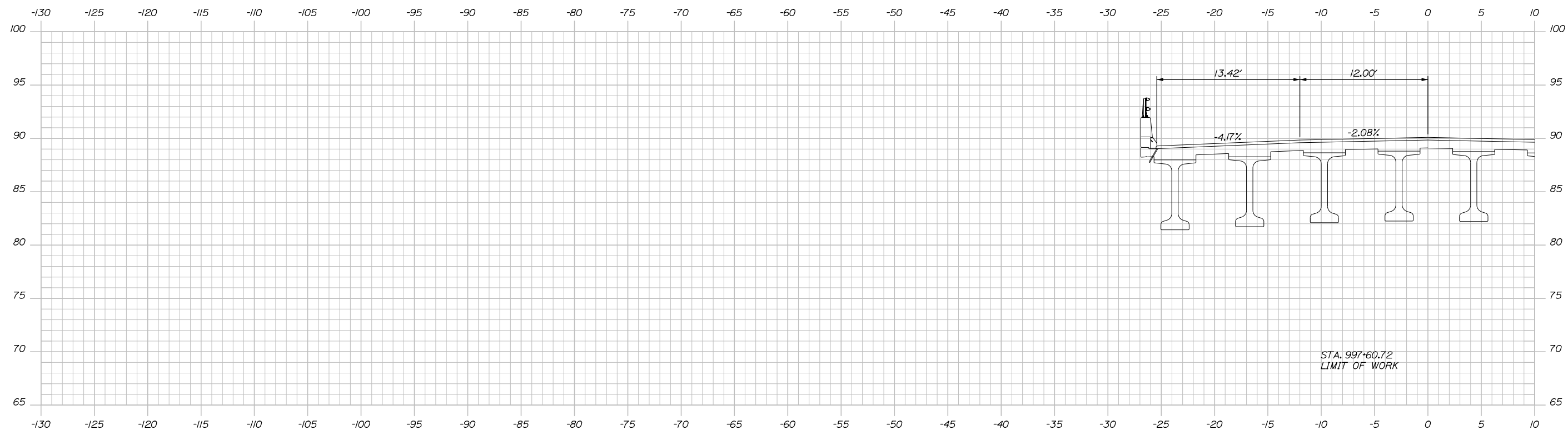
SHEET NUMBER: LD-1
CONTRACT: 2018.02
23 OF 38

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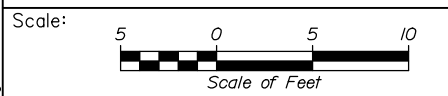
Date: 8/6/2018



1000+00.00



999+50.00



Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Tim R. Cote, P.E.

No.	Revision	By	Date

	By	Date		By	Date
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**THE GOLD STAR
 MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.

**EXIT 47
 INTERSECTION IMPROVEMENTS
 RAND ROAD CROSS SECTIONS
 STA. 999+50.00 TO STA. 1000+00.00**

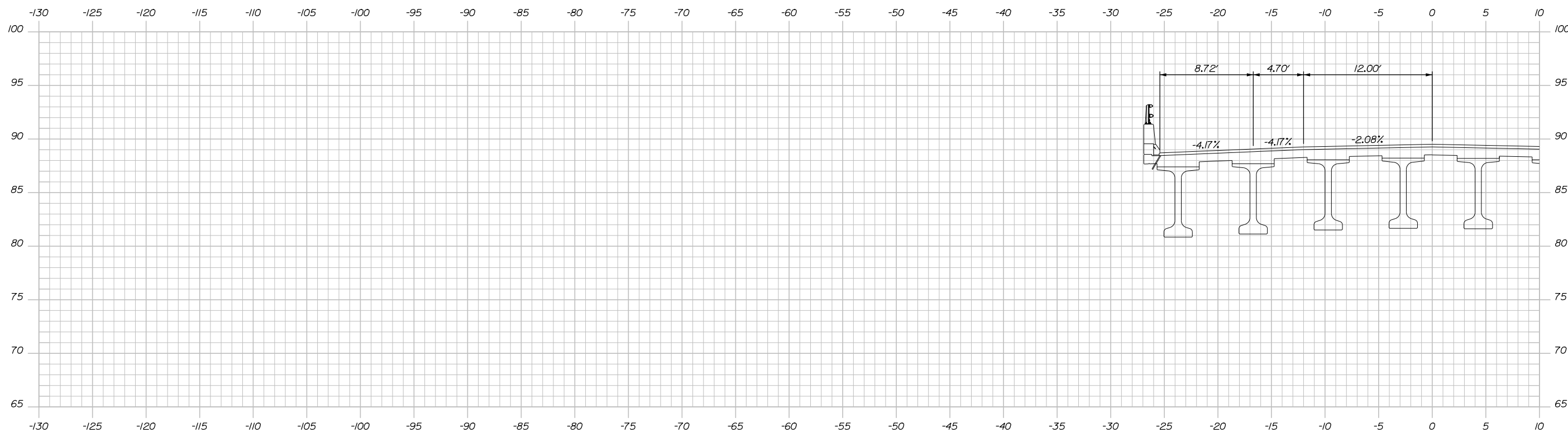
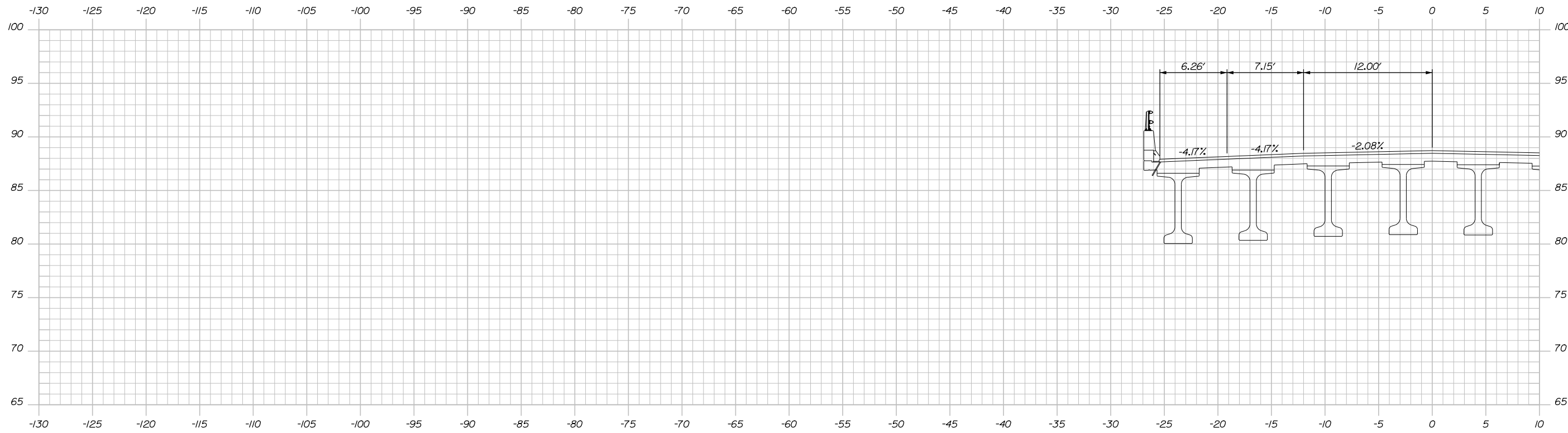
CONTRACT: 2018.02

SHEET NUMBER: XS-1

24 OF 38

Filename: XSECT.dgn

Date: 8/6/2018



Designed by:

HNTB

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Drawn	SLS	07\18	In Charge of	RAL	07\18

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**EXIT 47
 INTERSECTION IMPROVEMENTS
 RAND ROAD CROSS SECTIONS
 STA. 1000+50.00 TO STA. 1001+00.00**

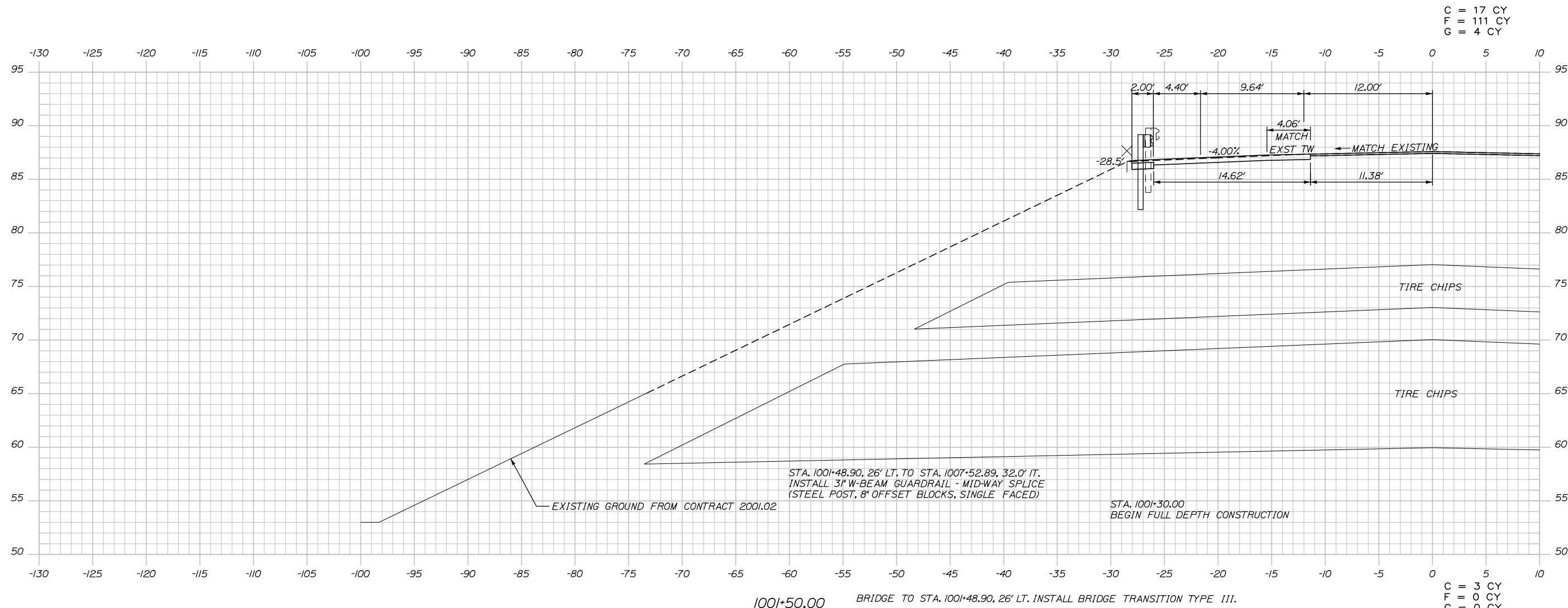
CONTRACT: 2018.02

SHEET NUMBER: XS-2

25 OF 38

Filename: XSECT.dgn

Date: 8/6/2018



Scale: Scale of Feet

No.	Revision	By	Date


Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Tim R. Cote, P.E.

	By	Date		By	Date
Designed	AJS	07\18	Checked	RWH	07\18
Drawn	SLS	07\18	In Charge of	RAL	07\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.

EXIT 47
INTERSECTION IMPROVEMENTS
RAND ROAD CROSS SECTIONS
STA. 1001+50.00 TO STA. 1001+50.00

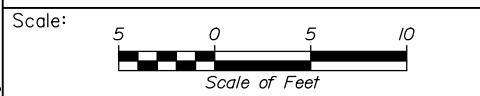
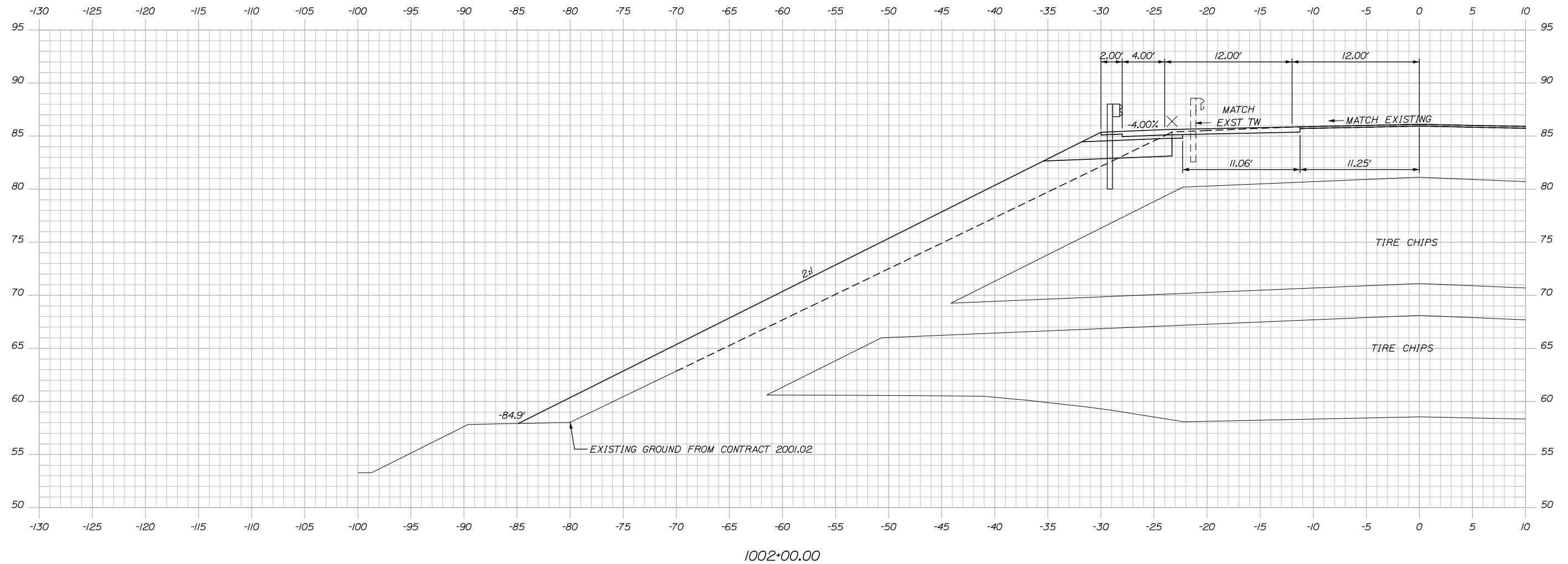
SHEET NUMBER: XS-3
26 OF 38

CONTRACT: 2018.02

Filename: XSECT.dgn

Date: 8/6/2018

C = 20 CY
 F = 222 CY
 G = 8 CY



Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Tim R. Cote, P.E.

No.	Revision	By	Date

	By	Date		By	Date
Designed	AJS	07\18	Checked	RWH	07\18
Drawn	SLS	07\18	In Charge of	RAL	07\18

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MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.

EXIT 47
 INTERSECTION IMPROVEMENTS
 RAND ROAD CROSS SECTIONS
 STA. 1002+00.00 TO STA. 1002+00.00

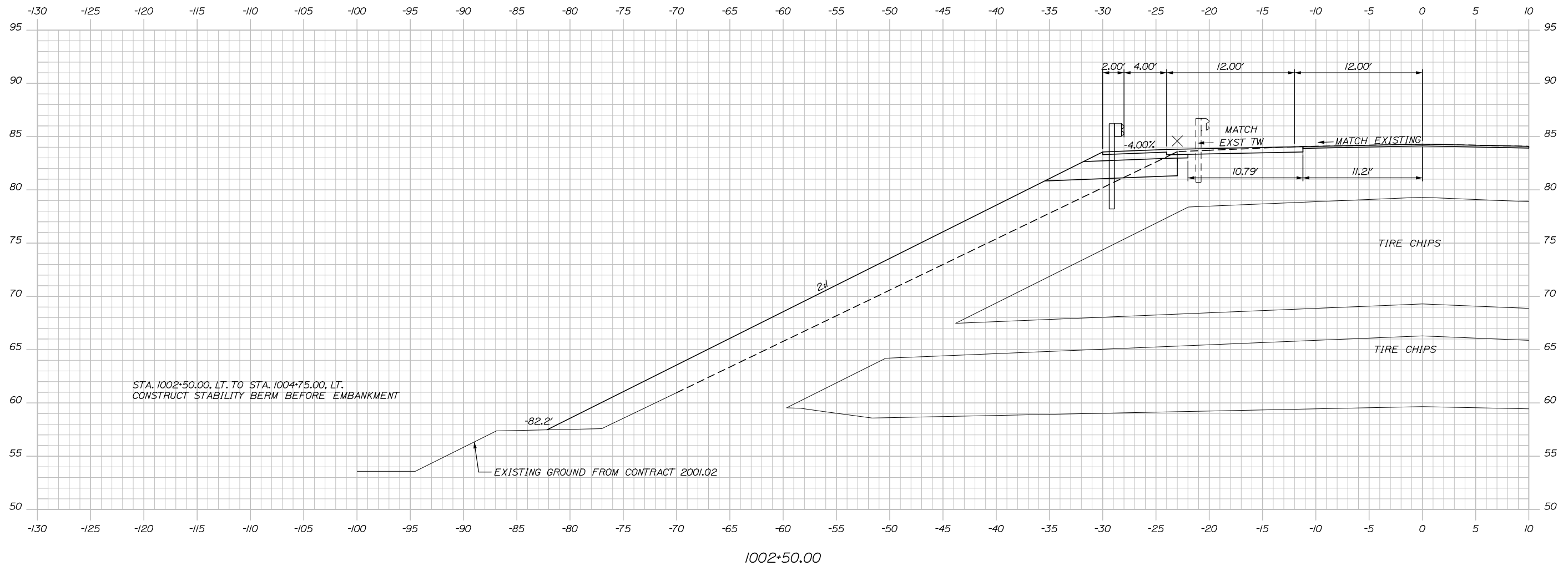
SHEET NUMBER: XS-4
 27 OF 38

CONTRACT: 2018.02

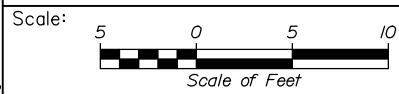
Filename: XSECT.dgn

Date: 8/6/2018

C = 20 CY
 F = 261CY
 G = 8 CY



1002+50.00



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EXIT 47
 INTERSECTION IMPROVEMENTS
 RAND ROAD CROSS SECTIONS
 STA. 1002+50.00 TO STA. 1002+50.00

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Tim R. Cote, P.E.					
Designed	By	Date	Checked	By	Date
Drawn	SLS	07\18	In Charge of	RAL	07\18

MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.

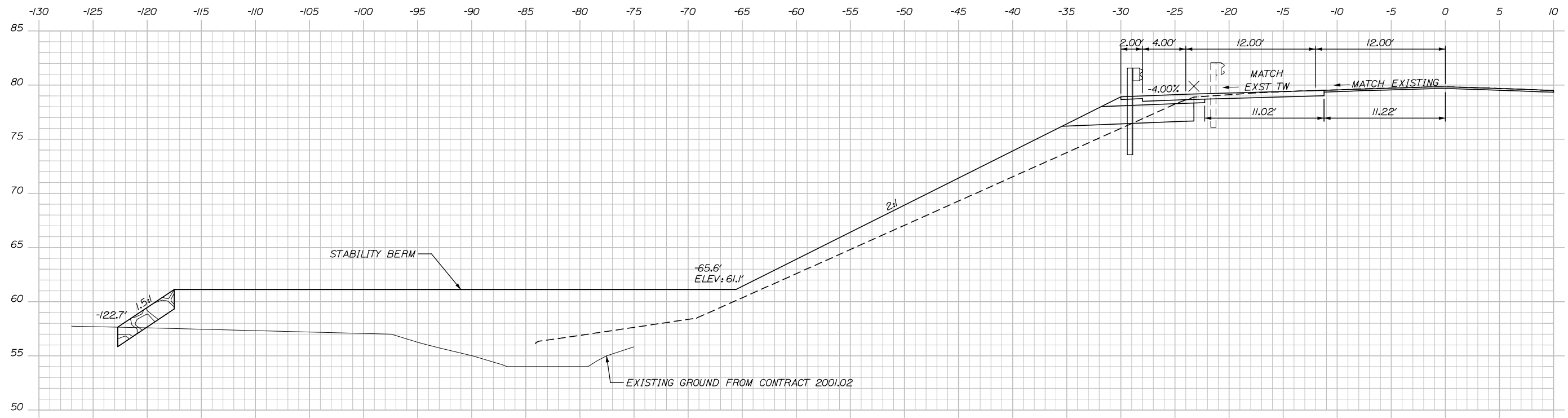
CONTRACT: 2018.02

SHEET NUMBER: XS-5

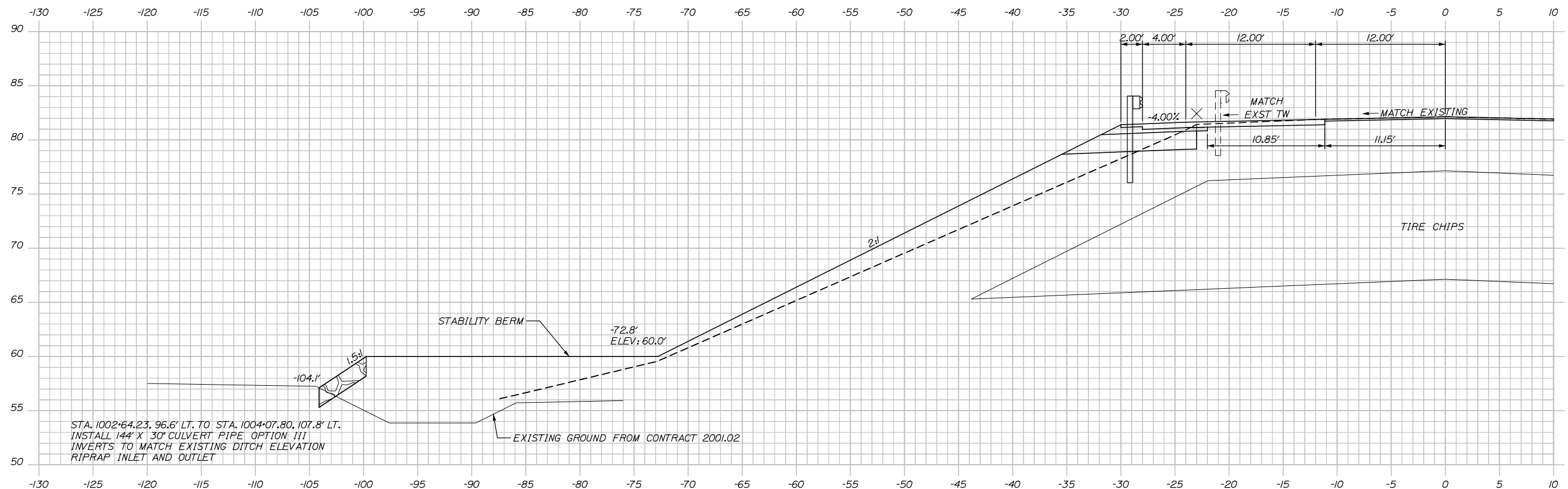
28 OF 38

Filename: XSECT.dgn

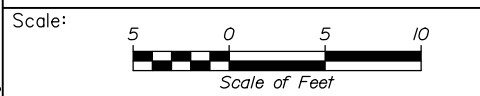
Date: 8/6/2018



1003+50.00



1003+00.00



Designed by:


HNTB

CONSULTANT PROJECT MANAGER: Tim R. Cote, P.E.

No.	Revision	By	Date

	By	Date		By	Date
Designed	AJS	07\18	Checked	RWH	07\18
Drawn	SLS	07\18	In Charge of	RAL	07\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.

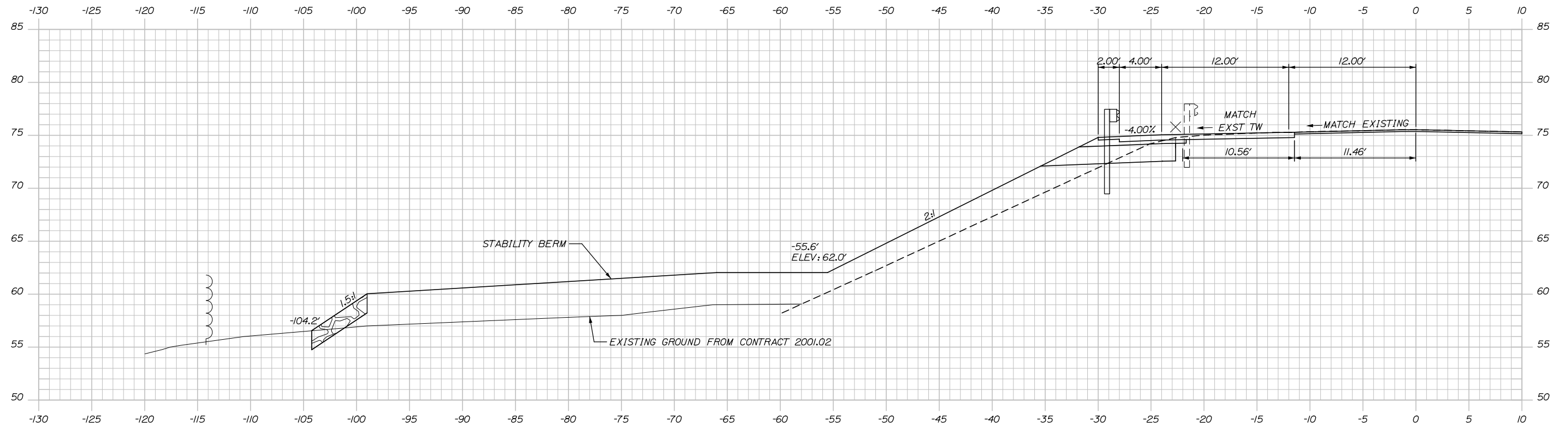
EXIT 47
 INTERSECTION IMPROVEMENTS
 RAND ROAD CROSS SECTIONS
 STA. 1003+00.00 TO STA. 1003+50.00

SHEET NUMBER: XS-6
 29 OF 38

CONTRACT: 2018.02

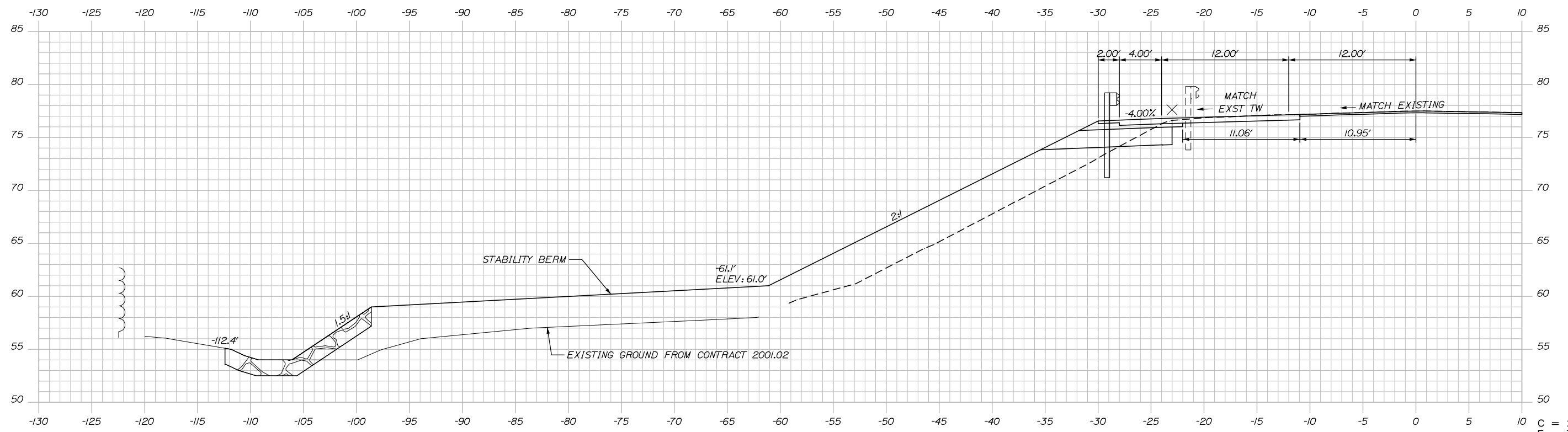
Filename: XSECT.dgn

Date: 8/6/2018



1004+50.00

C = 32 CY
F = 161 CY
G = 5 CY



1004+00.00

C = 23 CY
F = 348 CY
G = 8 CY



Designed by:



CONSULTANT PROJECT MANAGER: Tim R. Cote, P.E.

No.	Revision	By	Date	By	Date
Designed		AJS	07\18	Checked	RWH 07\18
Drawn		SLS	07\18	In Charge of	RAL 07\18

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THE GOLD STAR
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.

EXIT 47
INTERSECTION IMPROVEMENTS
RAND ROAD CROSS SECTIONS
STA. 1004+00.00 TO STA. 1004+50.00

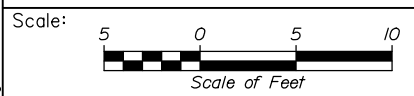
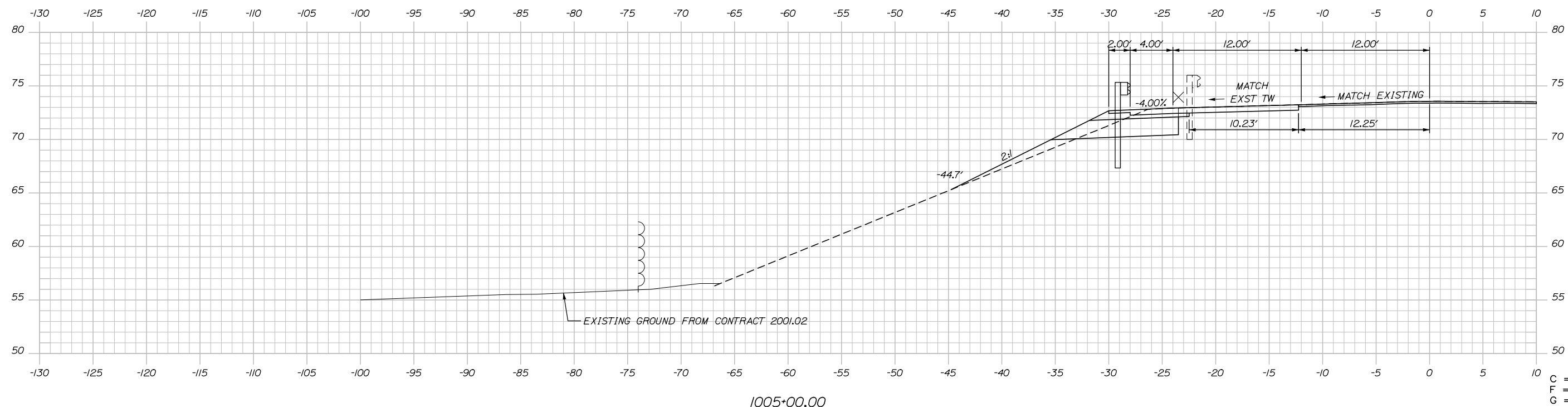
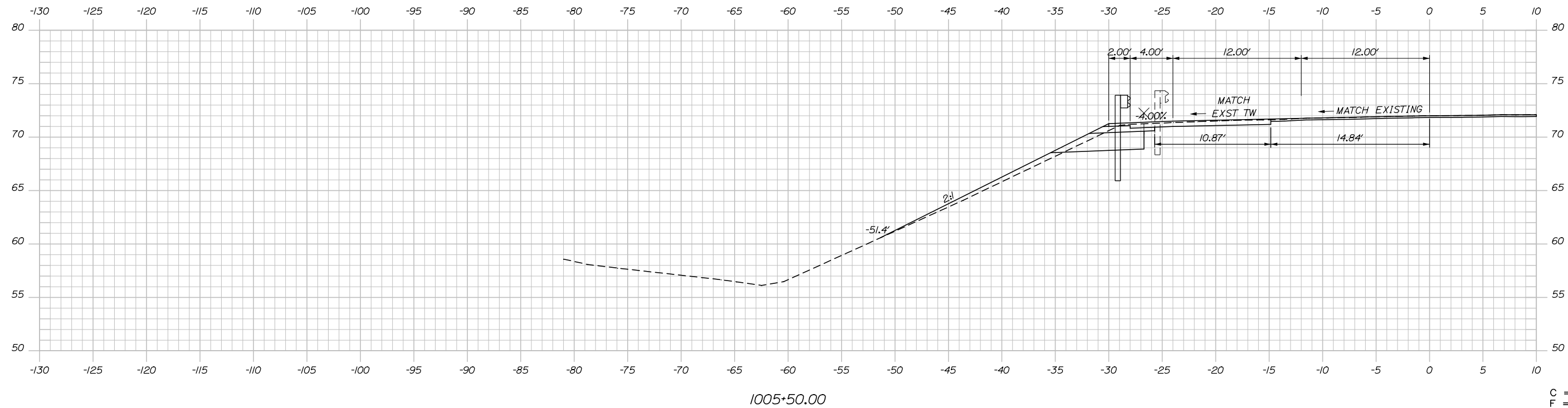
SHEET NUMBER: XS-7

CONTRACT: 2018.02

30 OF 38

Filename: XSECT.dgn

Date: 8/6/2018



Designed by:


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No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Tim R. Cote, P.E.

	By	Date	Checked	By	Date
Designed	AJS	07\18	Checked	RWH	07\18
Drawn	SLS	07\18	In Charge of	RAL	07\18

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MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.

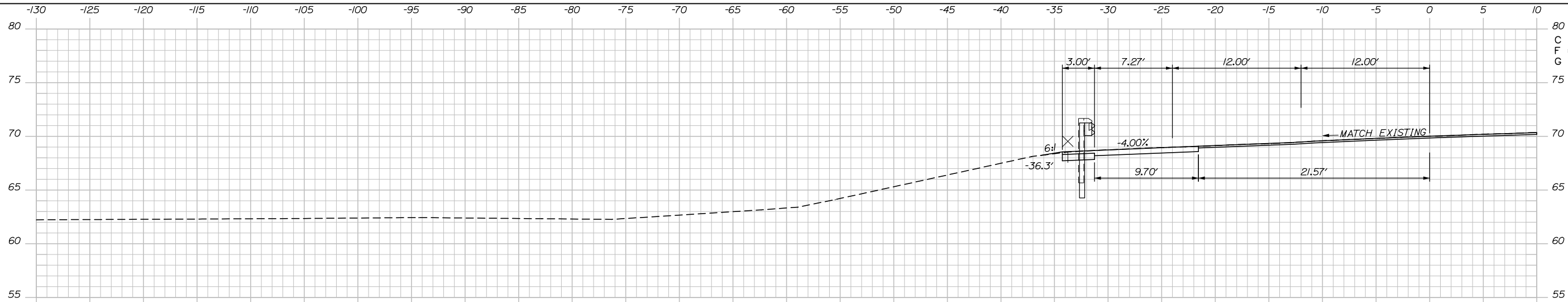
EXIT 47
 INTERSECTION IMPROVEMENTS
 RAND ROAD CROSS SECTIONS
 STA. 1005+00.00 TO STA. 1005+50.00

SHEET NUMBER: XS-8
 31 OF 38

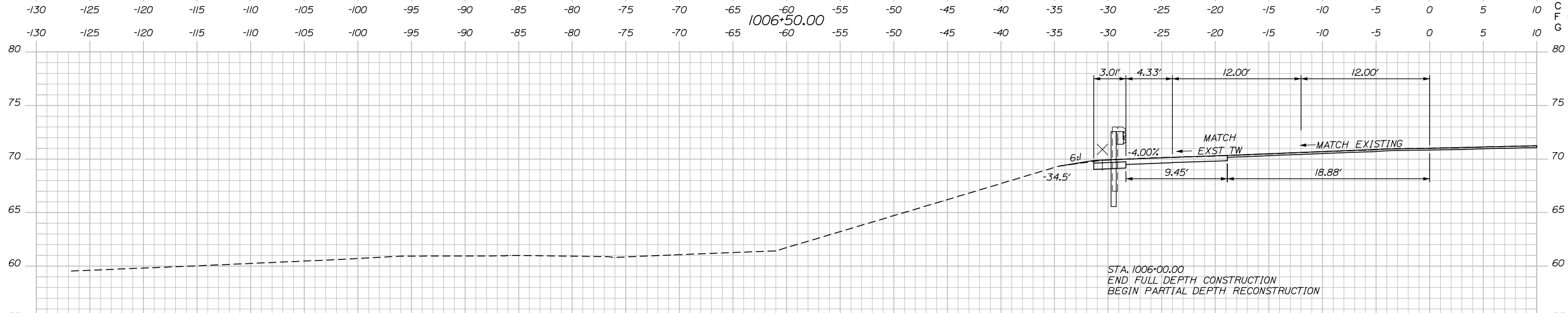
CONTRACT: 2018.02

Filename: XSECT.dgn

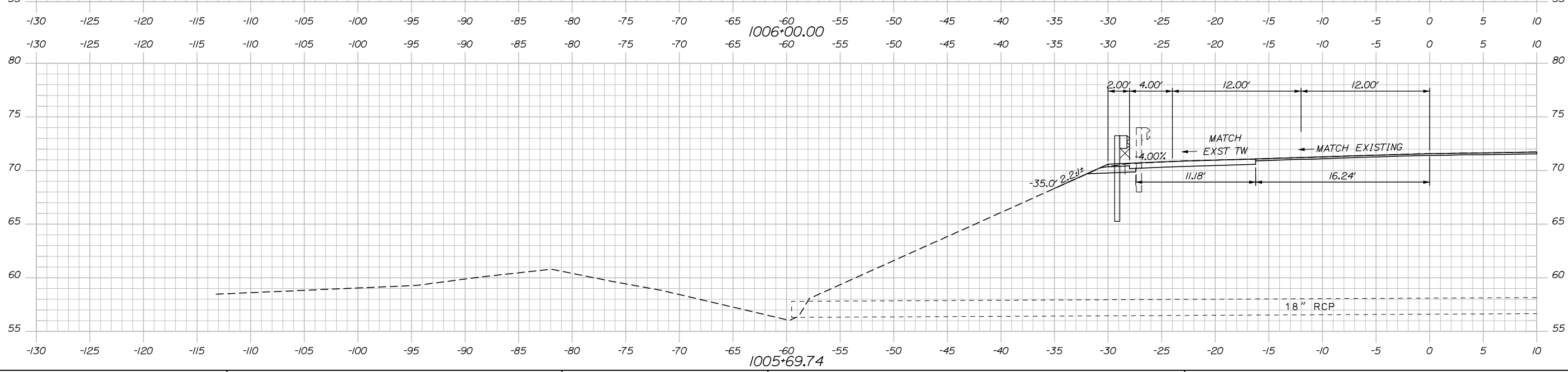
Date: 8/6/2018



C = 13 CY
F = 0 CY
G = 0 CY



C = 13 CY
F = 0 CY
G = 0 CY



C = 13 CY
F = 0 CY
G = 0 CY

Scale: Scale of Feet

No.	Revision	By	Date


Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Tim R. Cote, P.E.

	By	Date	Checked	By	Date
Designed	AJS	07\18	Checked	RWH	07\18
Drawn	SLS	07\18	In Charge of	RAL	07\18

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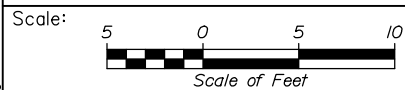
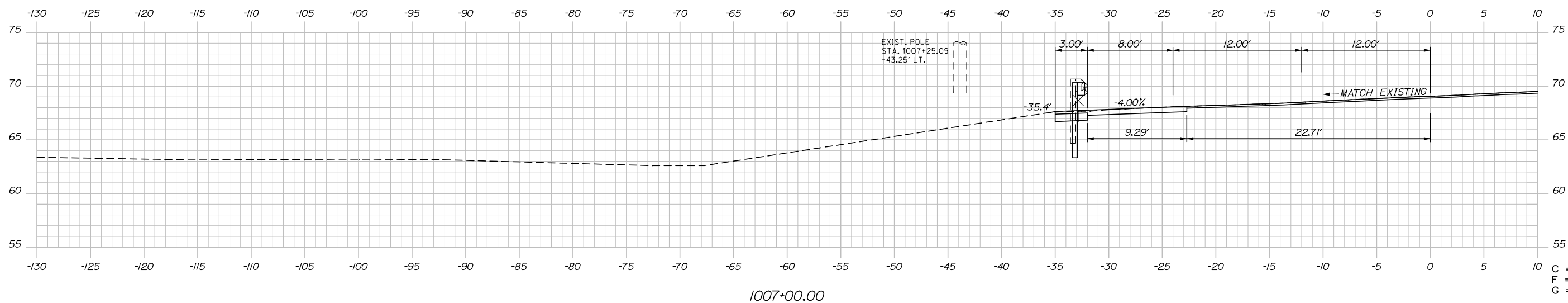
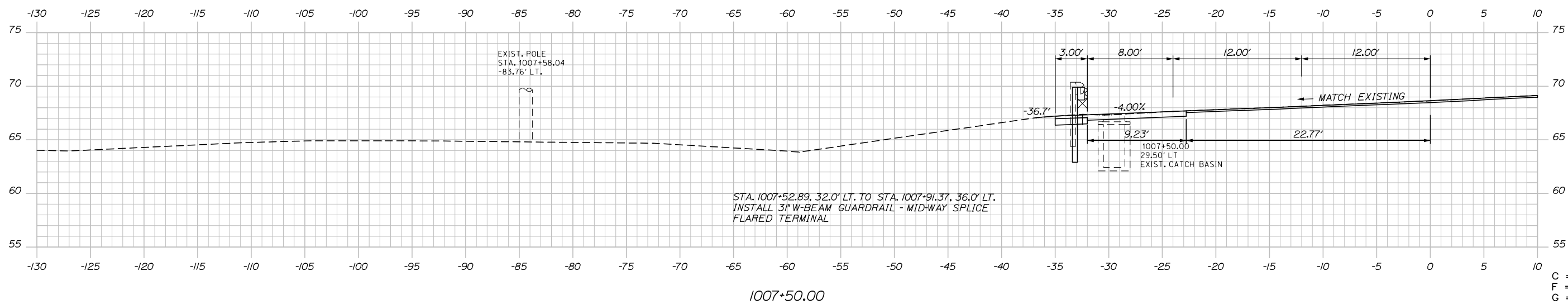
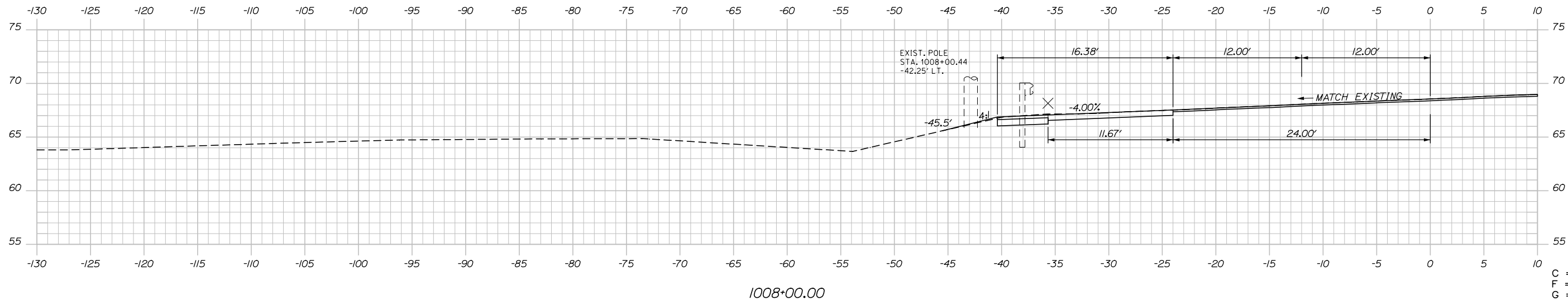
**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.

EXIT 47
INTERSECTION IMPROVEMENTS
RAND ROAD CROSS SECTIONS
STA. 1005+69.74 TO STA. 1007+00.00

SHEET NUMBER: XS-9
CONTRACT: 2018.02
32 OF 38

Date: 8/6/2018



Designed by:



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EXIT 47
 INTERSECTION IMPROVEMENTS
 RAND ROAD CROSS SECTIONS
 STA. 1007+50.00 TO STA. 1008+50.00

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Tim R. Cote, P.E.					
Designed	By	Date	Checked	By	Date
	AJS	07\18		RWH	07\18
Drawn	By	Date	In Charge of	By	Date
	SLS	07\18		RAL	07\18

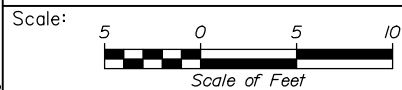
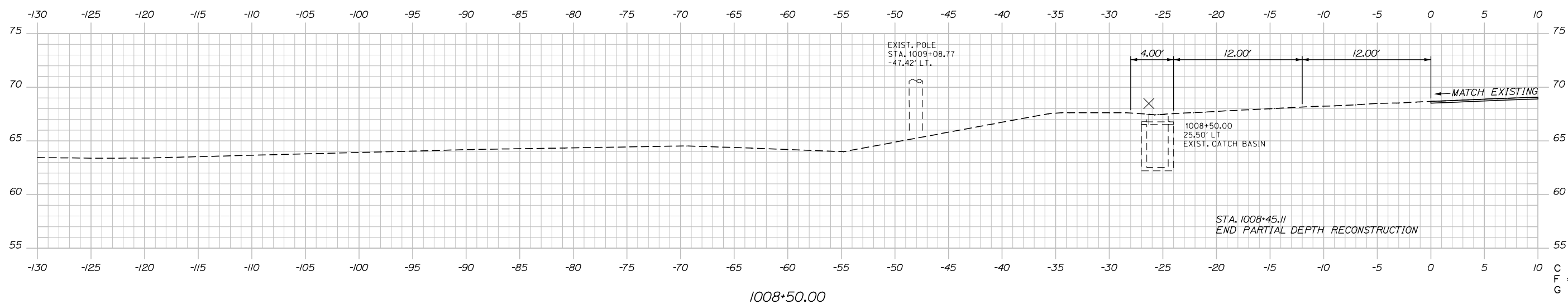
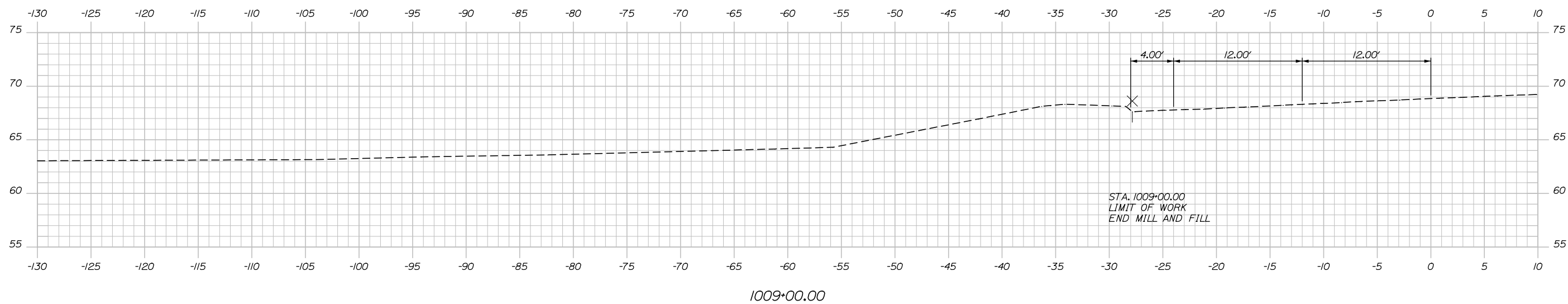
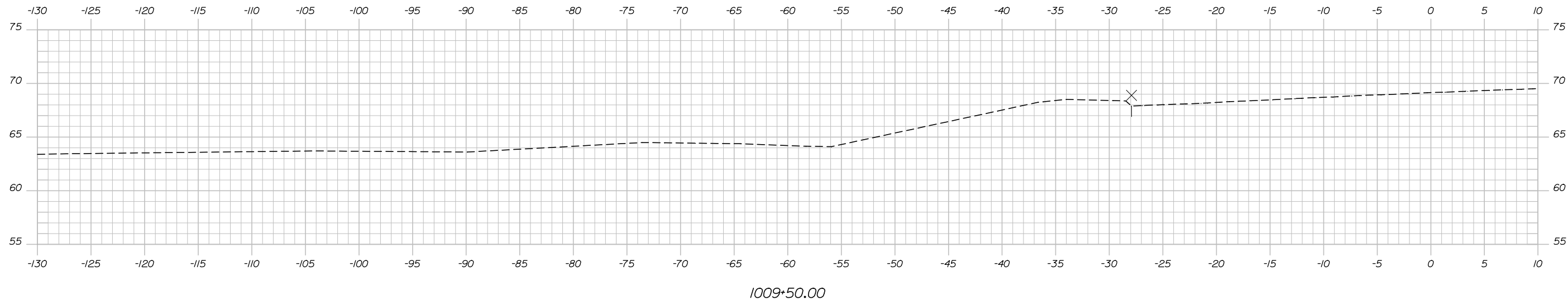
MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.

CONTRACT: 2018.02

SHEET NUMBER: XS-10

33 OF 38

Date: 8/6/2018



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**THE GOLD STAR
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**EXIT 47
 INTERSECTION IMPROVEMENTS
 RAND ROAD CROSS SECTIONS
 STA. 1009+00.00 TO STA. 1009+50.00**

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Tim R. Cote, P.E.					
Designed	AJS	07\18	Checked	RWH	07\18
Drawn	SLS	07\18	In Charge of	RAL	07\18

MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.

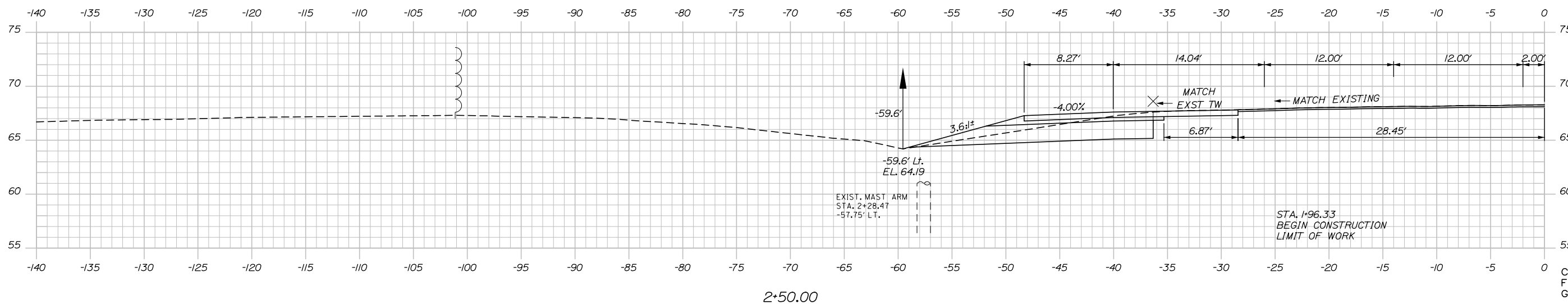
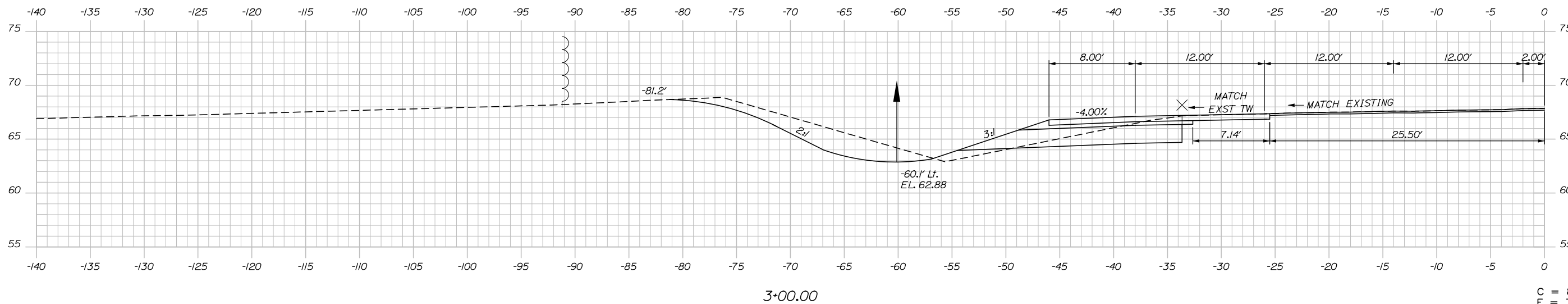
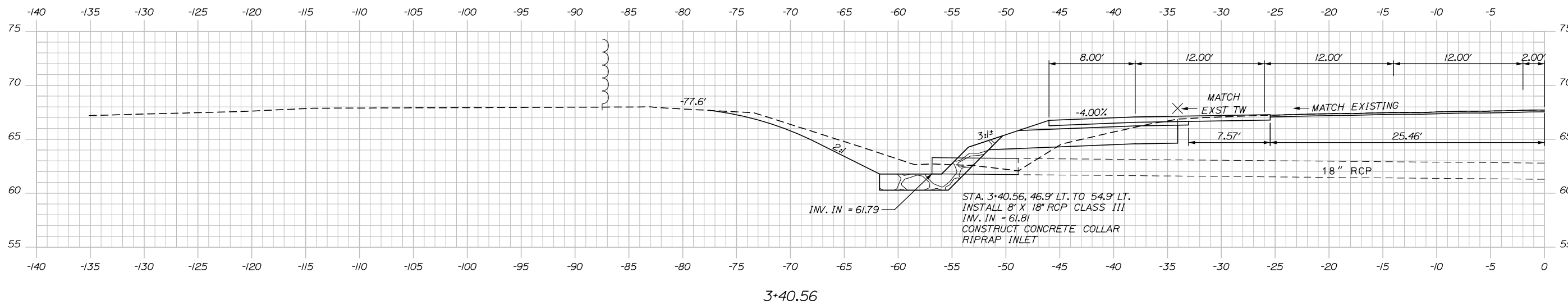
CONTRACT: 2018.02

SHEET NUMBER: XS-11

34 OF 38

Filename: XSECT.dgn

Date: 8/6/2018



C = 80 CY
F = 7 CY
G = 4 CY

C = 30 CY
F = 4 CY
G = 1 CY



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THE GOLD STAR
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EXIT 47
INTERSECTION IMPROVEMENTS
EXIT 47 RAMP CROSS SECTIONS
STA. 2+50.00 TO STA. 3+40.56

SHEET NUMBER: XS-12

35 OF 38

CONSULTANT PROJECT MANAGER: Tim R. Cote, P.E.

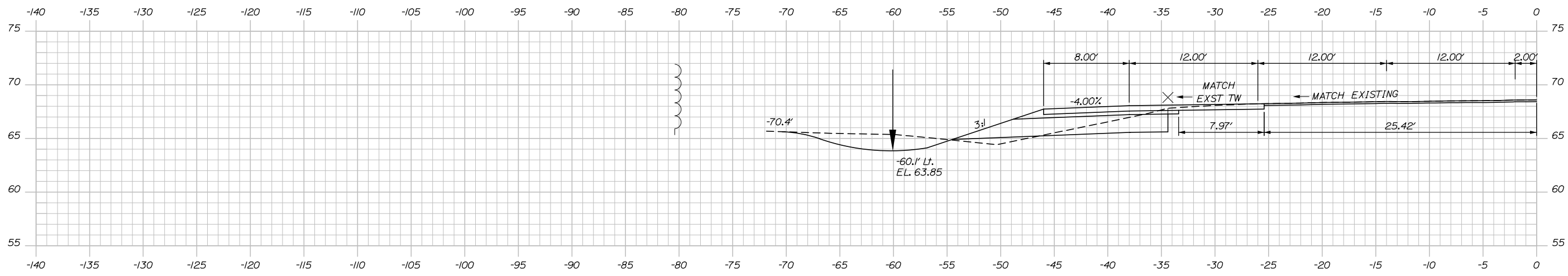
No.	Revision	By	Date	By	Date
Designed		AJS	07\18	Checked	RWH 07\18
Drawn		SLS	07\18	In Charge of	RAL 07\18

MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.

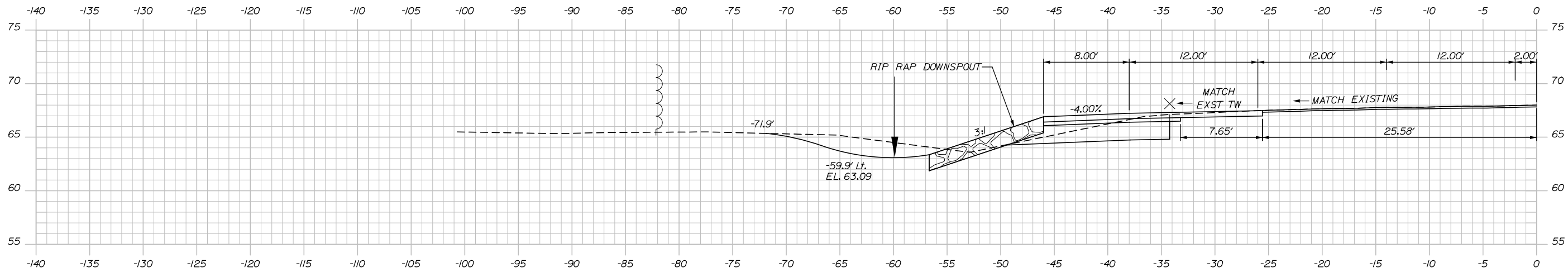
CONTRACT: 2018.02

Filename: Xsect_Toll_Road.dgn

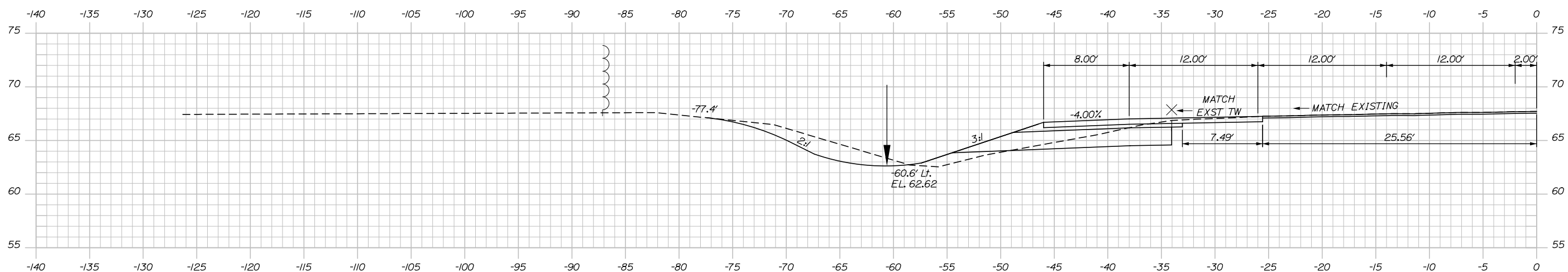
C = 44 CY
F = 4 CY
G = 7 CY



C = 65 CY
F = 4 CY
G = 6 CY



C = 71 CY
F = 4 CY
G = 6 CY



Date: 8/6/2018

Filename: Xsect_Toll_Road.dgn



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EXIT 47
INTERSECTION IMPROVEMENTS
EXIT 47 RAMP CROSS SECTIONS
STA. 3+50.00 TO STA. 4+50.00

SHEET NUMBER: XS-13

CONSULTANT PROJECT MANAGER: Tim R. Cote, P.E.

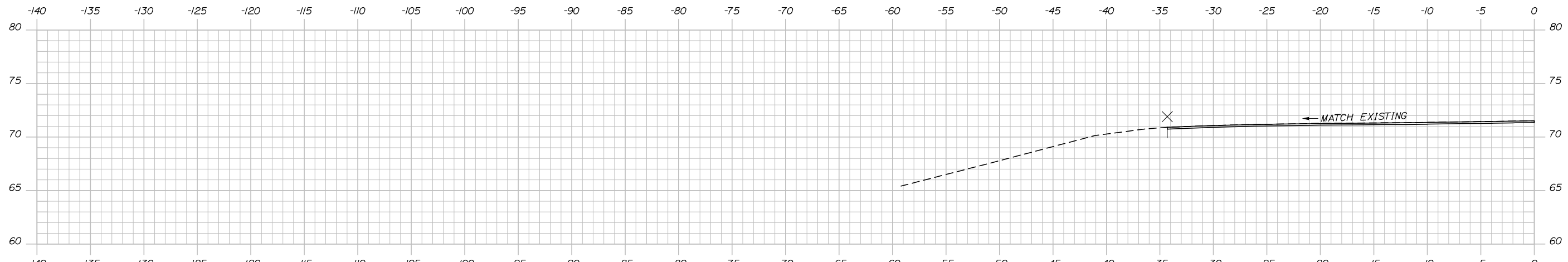
No.	Revision	By	Date	By	Date
Designed		AJS	07\18	Checked	RWH 07\18
Drawn		SLS	07\18	In Charge of	RAL 07\18

MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.

CONTRACT: 2018.02

36 OF 38

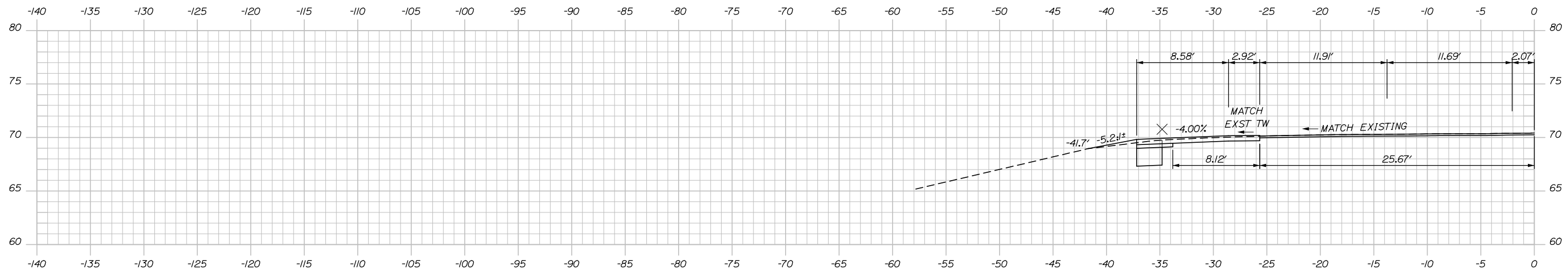
Date: 8/6/2018



6+00.00

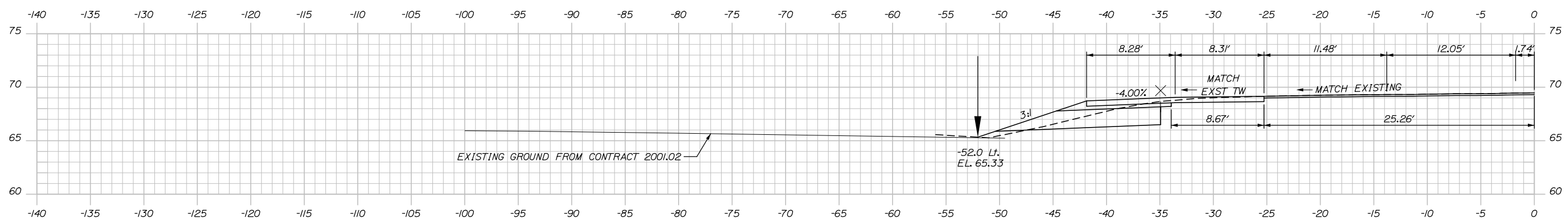
STA. 5+80.00
END CONSTRUCTION
LIMIT OF WORK

C = 8 CY
F = 1 CY
G = 0 CY



5+50.00

C = 24 CY
F = 2 CY
G = 2 CY



5+00.00



Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Tim R. Cote, P.E.

No.	Revision	By	Date

By	Date	By	Date
Designed	AJS 07\18	Checked	RWH 07\18
Drawn	SLS 07\18	In Charge of	RAL 07\18

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MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.

**EXIT 47
INTERSECTION IMPROVEMENTS**
EXIT 47 RAMP CROSS SECTIONS
STA. 5+00.00 TO STA. 6+00.00

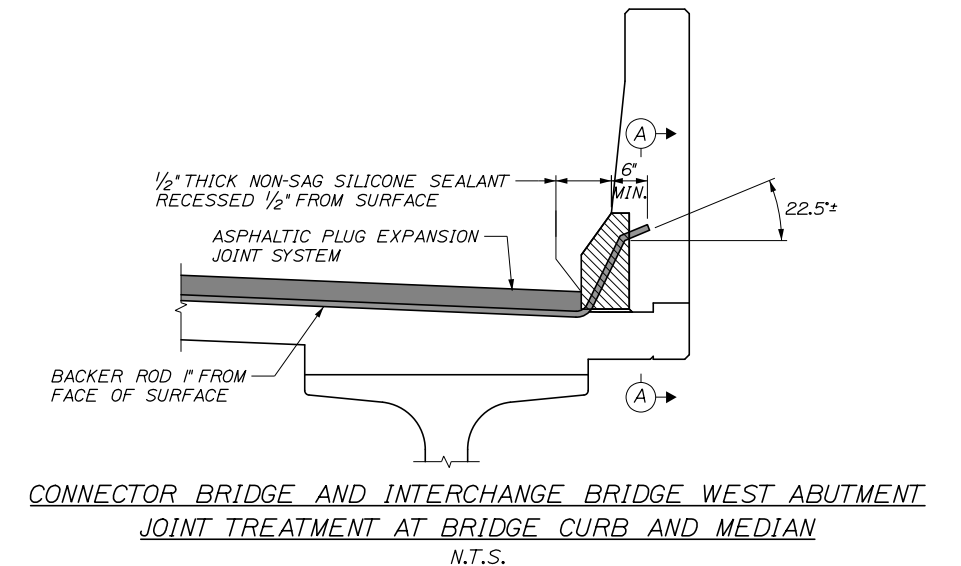
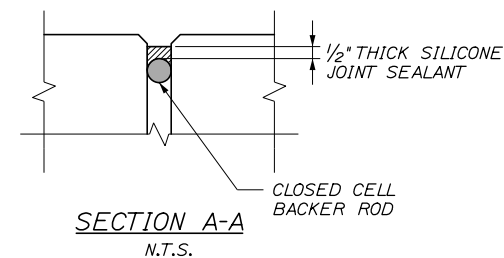
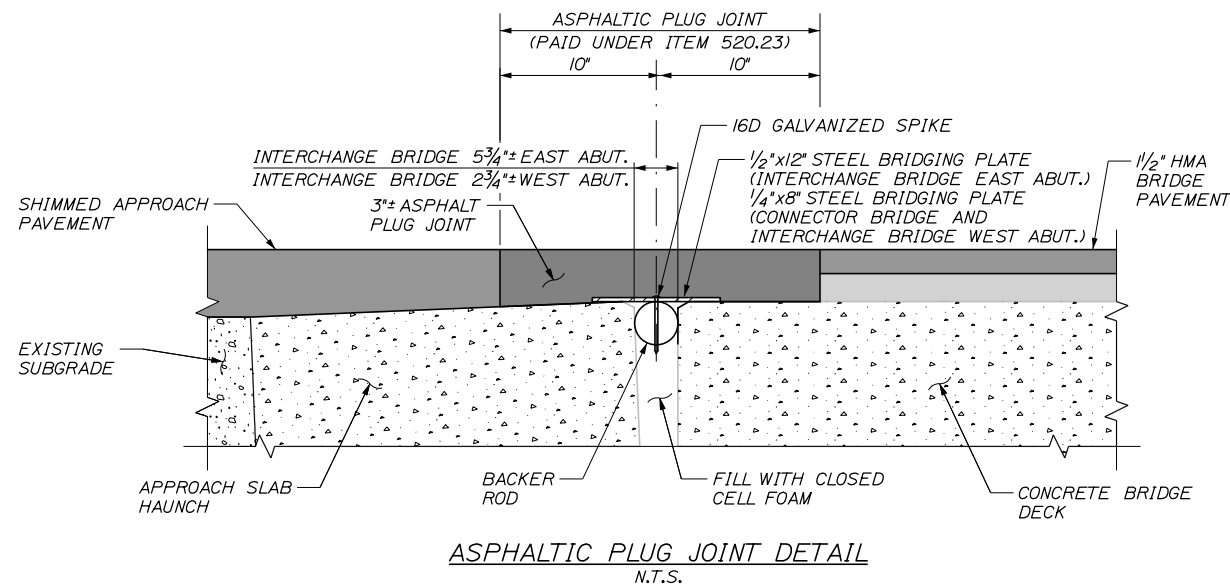
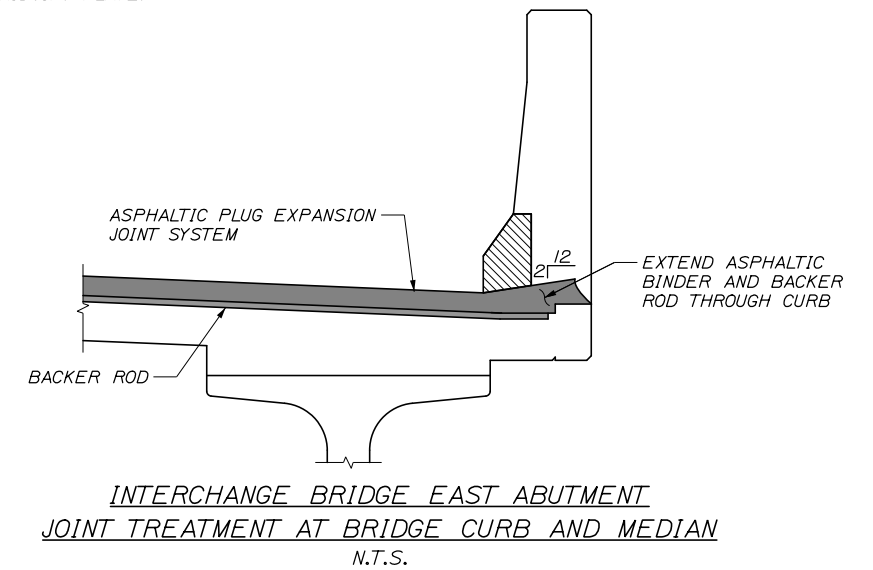
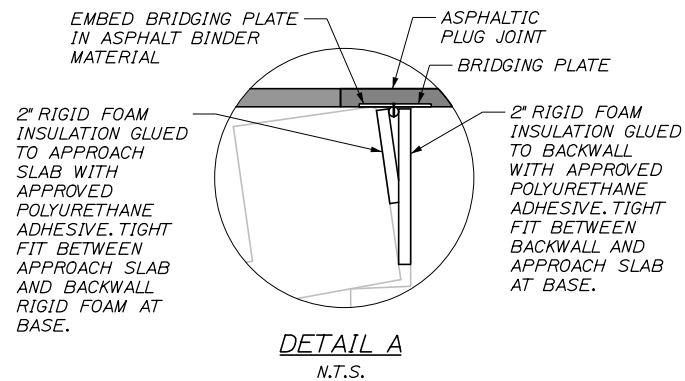
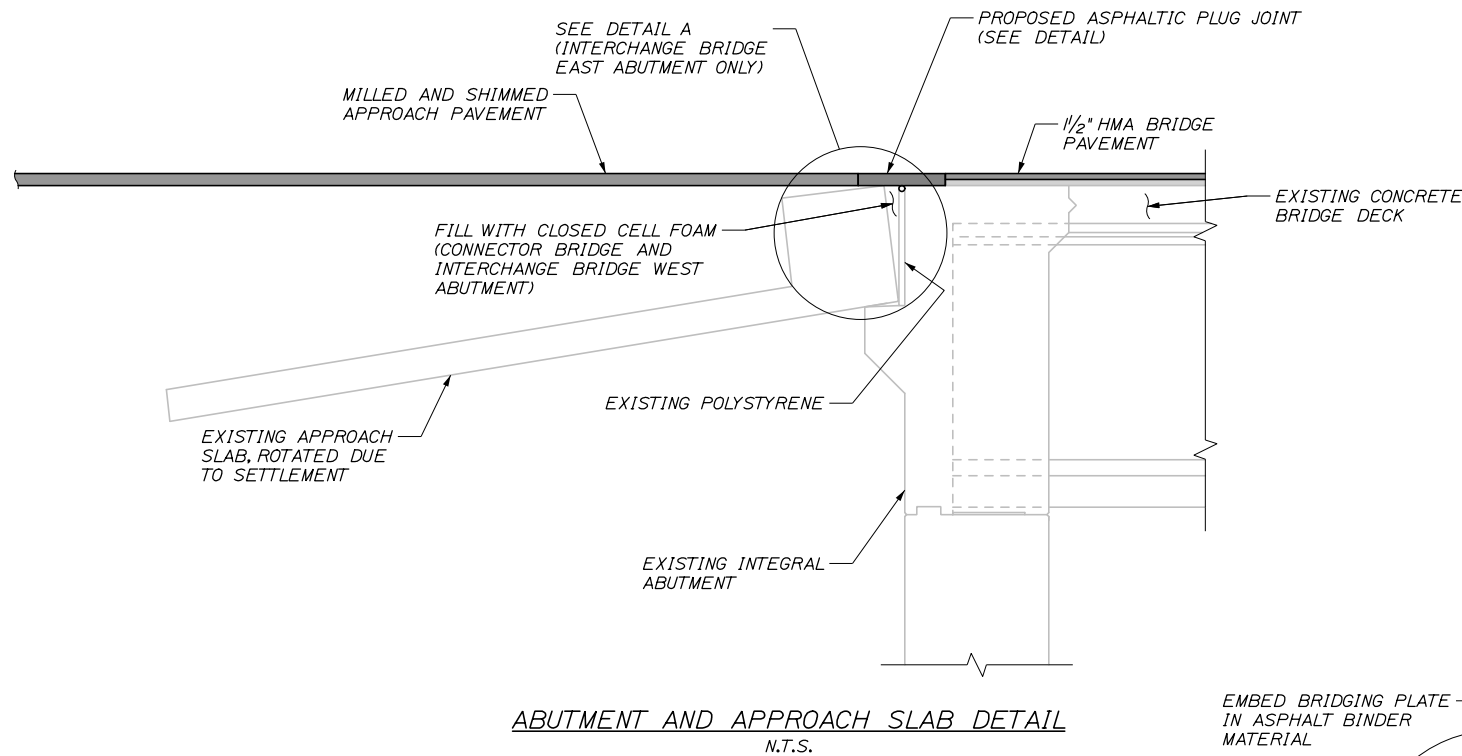
CONTRACT: 2018.02

SHEET NUMBER: XS-14

37 OF 38

Filename: Xsect_Toll_Road.dgn

Date: 8/6/2018



NOTES:

1. ASPHALTIC PLUG JOINTS SHALL BE INSTALLED AFTER THE SURFACE PAVEMENT ON THE BRIDGE AND THE APPROACHES IS COMPLETE.
2. THE ASPHALTIC PLUG JOINT SHALL BE INSTALLED AT AN AIR TEMPERATURE BETWEEN 40°F AND 60°F.
3. DECK AND BACKWALL REINFORCING NOT SHOWN FOR CLARITY.
4. THE DECK AREAS UNDER, AND ADJACENT TO, THE ASPHALTIC PLUG JOINT SHALL BE SOUNDED FOR AREAS OF DETERIORATION. IF AREAS OF DETERIORATION ARE FOUND THE RESIDENT SHALL BE NOTIFIED PRIOR TO BEGINNING THE WORK.
5. THE AREA UNDER THE ASPHALTIC PLUG JOINT SHALL BE SMOOTH AND PARALLEL TO THE PROPOSED ROADWAY SURFACE TO PERMIT THE ASPHALTIC PLUG JOINT TO BE INSTALLED AT A CONSISTENT THICKNESS. THE CONTRACTOR SHALL ADVISE THE RESIDENT IF THE EXISTING DECK SURFACES ARE NOT SMOOTH AND PARALLEL TO THE PROPOSED ROADWAY SURFACE.
6. THE ASPHALTIC PLUG JOINTS SHALL BE ONE OF THE SYSTEMS LISTED IN THE PROJECT SPECIFICATIONS AND SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. EQUIVALENT JOINT SYSTEMS MAY BE USED WITH APPROVAL OF THE ENGINEER.
7. ALL BACKER ROD SHALL BE CLOSED CELL FOAM IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND SHALL BE SIZED AS REQUIRED TO FILL THE OPENING.
8. CLOSED CELL FOAM SHALL NOT BE MEASURED FOR PAYMENT, BUT SHALL BE INCIDENTAL TO PAY ITEM 520.23, EXPANSION DEVICE - ASPHALTIC PLUG JOINT.
9. 16D GALVANIZED CENTERING NAILS SHALL BE SPACED AT 12" O.C. MAXIMUM AND PLACED 2" FROM JOINTS IN THE BRIDGING PLATE.

Filename: 038_AspalticJointDetails.dgn

Scale:			
NOT TO SCALE			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Tim R. Cote, P.E.					
	By	Date		By	Date
Designed	GLS	07\18	Checked	TRC	07\18
Drawn	PEB	07\18	In Charge of	RAL	07\18

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.

INTERSECTION IMPROVEMENTS
EXIT 47

BRIDGE JOINT DETAIL

SHEET NUMBER: S-01
CONTRACT: 2018.02
8 OF 38