

MAINE TURNPIKE AUTHORITY

ADDENDUM NO. 2

CONTRACT 2019.10

BRIDGE REPLACEMENT
WARREN AVENUE OVERPASS (MILE 49.0)

Make the following changes to the bid documents:

In the Contract Plans, **REMOVE** sheets 2, 3, 15, 58, 59, 63, 66-72, 74, 75, 77-79, 111, and 112 and **REPLACE** with the attached revised sheets 2, 3, 15, 58, 59, 63, 66-72, 74, 75, 77-79, 111, and 112.

In the Contract Plans, **ADD** the attached sheets 65A, 65B and 65C.

In the Contract Documents, Proposal, **REMOVE** pages P-13 and P-14 and **REPLACE** with the attached revised pages P-13 and P-14. *Note that the only changes to the Proposal pages is the addition of Item 652.391 – Temporary Highway Lighting and Item 652.47 – Sequential Flashing Warning Lights.*

In the Contract Documents, Part 2 – Special Provisions, **REMOVE** Special Provision Section 107.4.7 – Limitations of Operations and **REPLACE** with the attached revised Special Provision Section 107.4.7 – Limitations of Operations.

In the Contract Documents, Part 2 – Special Provisions, **ADD** the attached Special Provision Section 652 – Maintenance of Traffic (Temporary Highway Lighting).

In the Contract Documents, Part 2 – Special Provisions, **ADD** the attached Special Provision Section 652 – Maintenance of Traffic (Specific Project Maintenance of Traffic Control for Mill and Overlay).

In the Contract Documents, Part 2 – Special Provisions, **ADD** the attached Special Provision Section 652 – Maintenance of Traffic (Sequential Flashing Warning Lights).

In the Contract Documents, Part 2 – Special Provisions, **REMOVE** Special Provision Section 652 – Maintenance of Traffic (Specific Project Maintenance of Traffic Requirements) and **REPLACE** with the attached revised Special Provision Section 652 – Maintenance of Traffic (Specific Project Maintenance of Traffic Requirements).

Questions:

The following are questions submitted to the Maine Turnpike Authority in writing. Answers to the questions are noted. Bidders shall utilize this information in preparing their bid.

Question 1: There is conflicting information regarding the final markings. The proposal book references the use of permanent tape in a groove for the SYSL, SWBL, and DWLL

(SP-140). The plans contains notes on sheet 62 that the SYSL will be painted by the Authority in a groove provided by the Contractor for everything from 50 feet south of the bridge to the north end. These are in conflict with each other.

Response: *The special provision is a typical special provision for Pavement Marking Tape and the Dotted White Lane Line Tape. The language in 627.02 is intended for locations where the SWBL, SWSL, SYSL and DWLL are indicated to be installed with permanent tape. As noted in Note 1 on Plan Sheet 58 of 141, the Contractor shall provide final pavement markings from 50 feet south of the bridge to the south end of the project. The Contractor shall provide final pavement markings for the mill and overlay section north of the bridge in accordance with the revisions provided on Contract Plan sheet 61A in Addendum No. 1. For final pavement markings between 50 feet south of the bridge to the southern end of the mill and overlay section, the final pavement markings shall be yellow or white paint using Item 627.712 for the SYSL and SWBL lines and shall be white temporary pavement marking tape using item 627.73 for the TSWSLT lines.*

Question 2: Page 59 of the plans shows that all lines up to 50 feet south of the bridge shall be paint. This sections includes the only DWLL in the project for the acceleration lane of the on-ramp. This appears to be in conflict with the Contract Book.

Response: *The special provision is a typical special provision for Pavement Marking Tape and the Dotted White Lane Line Tape. Due to future planned work, all pavement markings south of 50 feet south of the bridge shall be white or yellow paint using Item 627.712, including the SWSL, SYSL, SWBL, and DWLL. Minor changes have been made to the attached Contact Plan sheets 58 and 59 to further clarify pavement markings.*

Question 3: For the SWEL, the plans list this as TSWELT, but the notes on page 62 note that it is to be a painted by the Authority in a groove provided by the Contractor. Is the intent to use the temporary tape in preparation of future projects?

Response: *The notes on Contract Plan sheet 61 are intended only for the pavement markings within the mill and overlay section, as defined by the typical section on Contract Plan sheet 7. This was further clarified by the addition of Contract Plan sheet 61A in Addendum #1.*

Question 4: For placing the closure pour in traffic control Phase 3; is Phase 3A traffic control allowing for required active traffic clearance for the closure pour or is 3B required during the closure pour?

Response: *If the Contractor elects to construct the closure pour during Phase 3, it may be constructed during Phase 3A, as noted in Note 2 on Contract Plan Sheet 73.*

Question 5: If not for closure pour, what is the purpose for Phase 3B traffic control?

Response: *Phase 3B is intended to provide more work area and access for paving. See the notes on Contract Plan Sheet 77 for additional information and requirements.*

- Question 6: Phase 3 traffic control doesn't appear to provide adequate space for paving on the inside lanes of Northbound and Southbound approaches respectively, how is traffic expected to be handled for this paving?
- Response: *As noted in the response to question 5 above, paving is anticipated to be completed during Phase 3B traffic control. The paving to be completed in Phase 3 includes paving from the crown line to the Phase 2 paving limits. All other paving shall be done in Phase 1 or Phase 2, as shown in the Contract Plans.*
- Question 7: It appears that all concrete is Class AAA per sheet 92; is that correct?
- Response: *Yes. As noted on Contract Plan sheet 92, concrete for the bridge decks shall be Class AAA-Deck and all other concrete shall be Class AAA.*
- Question 8: Are precast deck panels allowed?
- Response: *No, the bridge decks shall be constructed entirely of cast-in-place concrete, as currently show in the Contract Plans.*
- Question 9: Are stay-in-place deck forms allowed?
- Response: *No, stay-in-place deck forms may not be used.*
- Question 10: Is GRSS, if used on earthwork approaches, paid for under 511.091?
- Response: *Yes. Payment for all Temporary Structure Support Systems required, including but not limited to GRSS walls and sheet pile walls, shall be made under Item 511.091 as noted in Note 3 on Contract Plan sheet 108.*
- Question 11: Special Provision 508 (Membrane Waterproofing) indicates work to be as shown on the plans. The only apparent reference to "Membrane Waterproofing" on the plans is on Sheet 130 Note 8. The scope of this membrane installation is unclear. Where is it required?
- Response: *Membrane Waterproofing shall be placed over the median wall joint as shown in Detail A on Contract Plan sheet 119.*
- Question 12: Special Provision Section 652 (Temporary Portable Rumble Strips); these are not called for on the plans, is this spec section relevant to this project?
- Response: *As noted in Special Provision Section 652 (Temporary Portable Rumble Strips), if the pay item is not included in the contract quantities, then the Authority does not anticipate the use of this item on the contract. If contractor wishes to utilize temporary portable rumble strips and the item is not in the contract, then the contractor may propose use of them to the Authority for consideration.*
- Question 13: Drawing Sheet 15 Note 4 states that a 10 mil HDPE liner shall be used in the underdrain treatment swale and that the liner shall meet requirements of Special Provision 620.02. Special Provision 620.02 states the HDPE Geo-membrane shall be 40 mil HDPE. Please clarify.
- Response: *The HDPE Geomembrane shall be 40 mil. This has been clarified on the attached revised Contract Plan sheet 15.*

Question 14: Are As-built drawings available for the existing northbound and southbound structures?

Response: Existing plans are available at [http://www.maineturnpike.com/Projects/Construction-Contracts/Bridge-Replacement-Warren-Avenue-Overpass-\(MILE-49.aspx](http://www.maineturnpike.com/Projects/Construction-Contracts/Bridge-Replacement-Warren-Avenue-Overpass-(MILE-49.aspx). The completeness and accuracy of the existing plans is not guaranteed.

Question 15: Please reference Plan sheet 111 and 112 of 141. On sheet 111 the elevation of the top of the abutment stem is shown as 73.75. On plan sheet 122 the elevation of the top of the abutment stem is shown as 73.50. We do not see a step in the footing as drawn. Please advise.

Response: The elevations noted on the plans are correct. There was a minor discrepancy in the drawing. This has been clarified on the attached revised Contract Plan sheets 111 and 112.

Question 16: Pay Item 626.204 states 3” schedule 80 PVC conduit is to be used. On sheet # 3 general notes – lighting #10 – proposed non-metallic conduit shall be 2” schedule 40. Please advise what size conduit to use.

Response: All conduit shall be 3” schedule 80 PVC. This has been clarified on the attached revised Contract Plan sheet 3.

Question 17: Sheet 21A – Lighting details, section A-A, states that galvanized steel anchor bolts as recommended by pole manufacturer. Also on sheet 21A, breakaway couplings and skirt detail, show typical for the coupling. Could you please provide the name of the existing pole manufacturer so these can be sized accordingly?

Response: The manufacturer of the existing poles is unknown. The Contractor shall field verify all necessary existing configuration and details for the relocation of the existing light standards.

Attachments

- Contract Plan Sheets 2, 3, 15, 58, 59, 63, 65A, 65B, 65C, 66-72, 74, (23 pages)
75, 77-79, 111, and 112
- Proposal Pages P-13 and P-14 (2 pages)
- Special Provision Section 107.4.7 – Limitations of Operations (1 page)
- Special Provision Section 652 – Maintenance of Traffic – (2 pages)
(Temporary Highway Lighting)
- Special Provision Section 652 – Maintenance of Traffic – (3 pages)
(Specific Project Maintenance of Traffic Control for Mill and Overlay)
- Special Provision Section 652 – Maintenance of Traffic – (2 pages)
(Sequential Flashing Warning Lights)
- Special Provision Section 652 – Maintenance of Traffic – (8 pages)
(Specific Project Maintenance of Traffic Requirements)

Note: The above items shall be considered as part of the bid submittal.

The total number of pages included with this addendum is forty-six (46).

All bidders are requested to acknowledge the receipt of the Addendum No. 2 by signing below and faxing this sheet to Nate Carll, Purchasing Department, (207) 871-7739. Bidders are also required to acknowledge receipt of this Addendum No. 2 on Page P-15 of the bid package.

Business Name

Print Name and Title

Signature

Date

April 17, 2019

Very truly yours,

MAINE TURNPIKE AUTHORITY

Purchasing Manager
Maine Turnpike Authority

Date: 4/16/2019

Filename: ... \BRIDGE\MSTAV002_qnty_01.dgn

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.15	Removing Manhole or Catch Basin	2	EA
202.151	Abandoning Existing Manhole or Catch Basin	2	EA
202.16	Removing Existing Pipe	230	LF
202.161	Abandoning Existing Pipe	200	LF
202.19	Removing Existing Bridge	1	LS
202.202	Removing Pavement Surface - Mainline	61,500	SY
202.2026	Removing Pavement Surface - Drainage Paths	460	SF
202.203	Pavement Butt Joints	3,000	SY
202.205	Rumble Strips - Shoulder	19,400	LF
203.20	Common Excavation	19,050	CY
203.24	Common Borrow	9,950	CY
203.25	Granular Borrow	11,560	CY
203.33	Lightweight Fill	7,000	CY
304.10	Aggregate Subbase Course - Gravel	8,550	CY
304.14	Aggregate Base Course - Type A	4,450	CY
403.207	Hot Mix Asphalt - 19.0 mm	10,850	Ton
403.208	Hot Mix Asphalt - 12.5 mm	120	Ton
403.2081	Hot Mix Asphalt, 12.5 mm (Polymer Modified) - RAP	6,850	Ton
403.209	Hot Mix Asphalt - 9.5 mm (sidewalks, drives, & incidentals)	34	Ton
403.212	Hot Mix Asphalt - 4.75mm (Shim)	1,700	Ton
403.213	Hot Mix Asphalt - 12.5mm HMA (base and intermediate course)	2,500	Ton
409.15	Bituminous Tack Coat RS-1 or RS1h - Applied	8,950	Gallon
419.30	Sawing Bituminous Pavement	8,500	LF
461.131	Temporary Pavement	40	Ton
470.08	Berm Dropoff Correction - Grindings	660	Ton
470.081	Berm Correction	20,000	LF
501.231	Dynamic Loading Test	4	EA
501.50	Steel H-Beam Piles 89 lb/ft, delivered	2,400	LF
501.501	Steel H-Beam Piles 89 lb/ft, in place	2,400	LF
501.90	Pile Tips	40	EA
501.91	Pile Splices	40	EA
501.92	Pile Driving Equipment Mobilization	1	LS
502.21	Structural Concrete, Abutments and Retaining Walls	250	CY
502.26	Structural Concrete Roadway and Sidewalk Slab on Steel Bridges	(610 CY)*	1 LS
502.264	Structural Concrete Parapets	52	CY
502.31	Structural Concrete Approach Slab	(190 CY)*	1 LS
502.72	FRP Bridge Drain - Type F	12	EA
503.14	Epoxy-Coated Reinforcing Steel, Fabricated and Delivered	250,000	LB
503.15	Epoxy-Coated Reinforcing Steel, Placing	250,000	LB
503.17	Mechanical/Welded Splice	1,560	EA
503.26	Stainless Steel Reinforcement, Fabricated and Delivered	21,800	LB
503.27	Stainless Steel Reinforcement, Placing	21,800	LB
504.70	Structural Steel Fabricated and Delivered	(746,500 LB)*	1 LS
504.71	Structural Steel Erection	(746,500 LB)*	1 LS
505.08	Shear Connectors	(8,064 EA)*	1 LS
506.9104	Thermal Spray Coating (Shop Applied)	1	LS
507.091	Aluminum Bridge Railing, 1 Bar	(475 LF)*	1 LS
508.14	High Performance Waterproofing Membrane	(1550 SY)*	1 LS
508.15	Membrane Waterproofing	(5 SY)*	1 LS
511.091	Temporary Earth Support Systems	1	LS
514.06	Curing Box for Concrete Cylinders	1	EA
515.202	Clear Protective Coating for Concrete Surfaces	850	SY
520.23	Asphaltic Plug Joint	242	LF
524.40	Protective Shielding - Steel Girders	1,940	SY
526.304	Temporary Concrete Barrier, Anchored	(900 LF)*	1 LS
526.306	Temporary Concrete Barrier, Type I - Supplied by Authority	(7,800 LF)*	1 LS
526.35	Median Barrier	2,850	LF
526.361	Bridge Endpost Median Barrier Transition	2	EA
526.362	Guardrail Median Barrier Transition	2	EA
527.341	Work Zone Crash Cushions - TL-3	4	U
603.159	12 inch Culvert Pipe Option III	64	LF
603.28	Concrete Collar for Reinforcing Concrete Pipe	2	EA
603.431	36" RCP Class 5	40	LF
604.092	Catch Basin Type B1-C	7,375	EA
604.164	Rebuilding Catch Basin	1	EA
604.18	Adjusting Manhole or Catch Basin to Grade	2	EA
604.247	Catch Basin Type F5-C	5	EA
604.262	Catch Basin Type B5-C	9	EA
604.40	Secure Catch Basin Gate	1	EA
605.09	6 inch Underdrain Pipe Type B	600	LF
605.10	6 inch Underdrain Outlet	160	LF
605.11	12 inch Underdrain Pipe Type C	2,050	LF
605.12	15 inch Underdrain Pipe Type C	740	LF
606.1301	3" W-Beam Guardrail - Mid-way Splice (8' Steel Posts, 8' Offset Blocks, Single Faced)	1,537.5	LF
606.1306	3" W-Beam Guardrail - Mid-way Splice Tangent Terminal	2	EA
606.1351	Terminal End - Anchored End - 3" W-Beam Guardrail	2	EA
606.1723	Bridge Transition - Type III	4	EA
606.1725	Guardrail Transition Type III (Modified)	2	EA

Quantities are Estimated Only

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
606.352	ReflectORIZED Beam Guardrail Delineator	34	EA
606.356	Underdrain Delineator Post	36	EA
606.3561	Delineator Post - Remove and Reset	18	EA
606.3606	Guardrail Remove, Modify and Reset, Double Rail	175	LF
607.17	Chain Link Fence - 6 foot	280	LF
607.23	Chain Link Fence Gate	2	EA
607.32	Bracing Assembly Type I - Metal Posts	10	EA
607.33	Bracing Assembly Type II - Metal Posts	8	EA
609.11	Vertical Curb Type I	640	LF
609.12	Vertical Curb Type I - Circular	13	LF
609.15	Sloped Curb Type I	516	LF
609.191	Concrete Curb Type 2	88	LF
609.234	Terminal Curb Type I - 4 foot	1	EA
609.2341	Terminal Curb Type I - 4 ft - Circular	1	EA
609.238	Terminal Curb Type I - 8 foot	1	EA
610.08	Plain Riprap	1,050	CY
610.181	Temporary Stone Check Dam	10	CY
613.319	Erosion Control Blanket	700	SY
615.07	Loam	1,600	CY
618.14	Seeding Method Number 2	130	Unit
618.143	Special Seeding	40	Unit
619.1201	Mulch - Plan Quantity	170	Unit
619.1202	Temporary Mulch	1	LS
619.14	Erosion Control Mix	200	CY
620.58	Erosion Control Geotextile	1,200	SY
620.70	HDPE Geomembrane	600	SY
624.01	Stormwater Soil Filter Bed	140	CY
626.12	Quartzite Junction Box	11	EA
626.204	3" Schedule 80 PVC Conduit	2730	LF
626.341	Light Standard Foundation	11	EA
627.30	Grooving for Painted Pavement Markings	19,750	SF
627.712	White or Yellow Pavement Marking Line	23,165	LF
627.73	Temporary 6 Inch Pavement Marking Tape	25,000	LF
627.77	Removing Existing Pavement Marking	21,100	SF
627.78	Temporary Pavement Marking Type, White or Yellow	185,000	LF
627.812	Temporary Raised Pavement Markers	5,100	EA
627.94	Pavement Marking Tape	7,575	LF
629.05	Hand Labor, Straight Time	100	HR
631.10	Air Compressor (Including Operator)	40	HR
631.11	Air Tool (Including Operator)	80	HR
631.12	All Purpose Excavator (Including Operator)	30	HR
631.171	Truck - Small (Including Operator)	50	HR
631.18	Chain Saw Rental (Including Operator)	10	HR
631.22	Front End Loader (Including Operator)	70	HR
631.32	Culvert Cleaner (Including Operator)	10	HR
631.36	Foreperson	30	HR
634.208	Remove and Reset Light Standard	3	EA
639.18	Field Office, Type A	1	EA
645.105	Remove and Stack Sign	1	EA
645.106	Demount Regulatory, Warning, Confirmation and Route Marker Assembly Sign	7	EA
645.109	Remove and Reset Sign	4	EA
645.271	Regulatory, Warning, Confirmation and Route Assembly Sign, Type I	97.5	SF
645.272	Regulatory, Warning and Bridge Number Signs, Type I - Supplied by Authority	2	EA
645.511	LED Flashing Sign	2	EA
652.30	Flashing Arrow	2	EA
652.312	Type III Barricades	8	EA
652.33	Drum	425	EA
652.34	Cone	100	EA
652.35	Construction Signs	2,331	SF
652.361	Maintenance of Traffic Control Devices	1	LS
652.38	Flaggers	160	HR
652.381	Traffic Officers	160	HR
652.391	Temporary Highway Lighting	60	CD
652.41	Portable-Changeable Message Sign	5	EA
652.45	Truck Mounted Attenuator	60	CD
652.452	Automated Trailer Mounted Speed Limit Sign	2	EA
652.47	Sequential Flashing Warning Lights	50	EA
656.50	Baled Hay, In Place	50	EA
656.632	30 inch Temporary Silt Fence	6,150	LF
659.10	Mobilization	1	LS
802.182	20" Class 52 DI Restrained Joint Pipe	300	LF
802.32	Casing Spacers	21	EA
830.279	Horizontal Directional Drilling, 18-inch HDPE Culvert	140	LF

Scale:			
No.	Revision	By	Date
1	Addendum No. 1	GME	4/19
2	Addendum No. 2	GME	4/19

Designed by:			
			
CONSULTANT PROJECT MANAGER: T. Bryant			
Designed	By	Date	Checked
Drawn	By	Date	In Charge of
	MED	3/22/19	GME 3/22/19
	DPD	3/22/19	TSB 3/22/19

VANASSE HANGEN BRUSTLIN, INC.
 500 Southborough Dr.
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 South Portland, ME 04106
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THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph Norwood, IV

WARREN AVENUE OVERPASS BRIDGE REPLACEMENT

ESTIMATED QUANTITIES

VHB: 55191.01 SHEET NUMBER: 2
 CONTRACT: 2019.10 2 OF 141

GENERAL

1. All work shall be in conformance with Maine Department of Transportation (MaineDOT) 2014 Standard Specifications and Standard Details for Highways and Bridges with all updates, and MaineDOT Best Management Practices for Erosion and Sediment Control latest revision unless otherwise noted in these plans or project specifications.
2. For construction limits and right of way lines, refer to General Plans. There are no permanent or temporary easements associated with this project. All work must be completed within the existing Right of Way.
3. Chain link fence gates shall be 3 feet wide single gates. A gate shall be located on each side of the turnpike roadway. Exact location of the gate shall be determined in the field by the Resident.
4. Connections to existing fence shall be incidental to the proposed fence items.
5. Existing ROW fence within the limits of work, as shown on the plans or as directed by the Resident, shall be removed and disposed. This work shall be incidental to the proposed fence items.
6. The Contractor shall submit his proposed staging area(s) and field trailer location to the Resident for approval prior to starting work.
7. All portions of the existing bridge to be removed shall become the property of the Contractor.
8. Copies of the As-Built plans are Posted on the Maine Turnpike Authority website at www.mainturnpike.com/Projects/Construction-Contracts. The completeness and accuracy of these plans is not guaranteed.
9. Chamfer all exposed concrete edges $\frac{3}{4}$ " unless otherwise noted.
10. The proposed elevations are based on the NAVD 88 datum. The as-built plans are based on NGVD 29 datum.
11. The Contractor shall take all precautions necessary to avoid impacts to delineated wetland areas beyond what is shown in these plans.
12. Contractor shall to maintain access to all driveways and side roads during construction unless otherwise shown on the plans.
13. All existing roadways used in accessing the site shall remain clean in accordance with the MaineDOT Standard Specifications.
14. Access through areas beyond the limits of disturbance are to be approved by the Resident.
15. All existing delineator and mile marker posts shall be removed and reset upon completion of the contract. Payment for resetting delineator posts will be made under Item 606.354. Delineator Posts supplied by the Contractor shall be paid for under Item 606.353.
16. All bridge parapet, barrier, wingwall and endpost concrete, inside face and top face, shall have a rubbed finish prior to the application of the protective coating for concrete surface.
17. The Contractor shall profile the tops of girders before the deck formwork is started and shall submit to the resident the final blocking distances for review. Five (5) working days shall be allowed for the blocking point submittal review time.
18. Surface pavement south of the Warren Avenue overpass (Sta 2436+39) will be placed by others under a future contract. All elevations in this area are shown to future finish grade after surface pavement placement. The Contractor shall plan and conduct their work so final elevation for this contract is set to top of 1-1/2" HMA 12.5mm intermediate course.
19. All reinforcement shall be epoxy coated unless noted otherwise. The reinforcement in the parapets shall be stainless steel. All stainless steel reinforcement is noted with "-S" at the end of the bar mark throughout these plans.
20. Geotechnical information furnished or referred to in this plan set and the project's Geotechnical Report is for the Bidder's and Contractor's use. No assurance is given that the information or interpretations will be representative of actual subsurface conditions at the time of construction. The Authority shall not be responsible for Bidder's and Contractor's interpretations of or conclusions drawn from the geotechnical information. The boring logs contained in the plan set present factual and interpretive subsurface information collected at discrete locations. Data provided may not be representative of the subsurface conditions between boring locations.
21. The proposed elevations are based on the NAVD 88 datum.

ABUTMENT

1. Reinforcing steel shall have a minimum concrete cover of 2 inches in walls.
2. Cover joints where waterstops are not required in accordance with Standard Detail 502(OI).
3. Abutments and wingwalls shall be backfilled with Lightweight Fill as shown in the plans. See Special Provision 203 for additional requirements

GUARDRAIL NOTES

1. At the end of the workday, everyday, the Contractor is required to have an approved crashworthy end treatment on all guardrail and barrier within all work areas that are accessible to traffic.
2. Connections for proposed guardrail to existing guardrail shall be incidental to the proposed guardrail items.
3. All proposed guardrail and reset guardrail shall be installed in a manner to avoid all existing subsurface features.
4. One guardrail delineator post shall be installed at each guardrail terminal. Two guardrail delineator posts shall be installed at each end of the guardrail terminals.
5. In non-guardrail areas, delineators shall be spaced at 264' on the Maine Turnpike. Confirm layout with the Resident.
6. Guardrail which is removed and not reused on the project shall become the property of the contractor.
7. Damage to existing pavement or new pavement due to the installation of new or reset guardrail shall be repaired and payment shall be incidental to guardrail items.

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 shall contact Dig Safe (1-888-DIG-SAFE or 811) at least 72 hours prior to starting work.
2. The Contractor shall notify the Resident 10 days prior to construction so the Resident can arrange for Maine Turnpike underground utility location. All proposed sign locations and excavation locations shall be marked at the notification time. Excavating will not be permitted until the Authority has located and marked its underground utilities, or notified the Resident that there are no underground utilities in the marked areas.
3. The Authority has programmed two field visits for Maine Turnpike underground utility location on this project. Should the Contractor need additional excavation locations marked, or should the Contractor fail to maintain the Authority's previously established Dig Safe marks, the Authority shall deduct the added marking costs from the Contractor's payments.
4. See specifications for required utility coordination.
5. All utility facilities shall be adjusted by the respective utilities unless noted.
6. The utilities involved in this contract are:
 Central Maine Power (CMP)
 FirstLight
 Time Warner Cable
 Portland Water District
 City of Portland (Sewer)
 Utilil Gas

LIGHTING

1. Existing light standards shall be removed and reset to a new location shown on the plans. The Contractor shall maintain lighting equivalent to the existing lighting throughout the duration of the project. The Contractor shall provide temporary lighting as required. Temporary lighting shall be incidental to the 634 pay items.
2. If necessary, cut and splice existing wiring to new wiring indicated. All splices shall be made in accessible junction boxes. See notes and specifications. Payment shall be incidental to proposed wiring items.
3. Proposed conduit shall have a minimum 2' offset down slope of existing conduit. Approximate location of existing conduit is shown on the plans.
4. Contractor may encounter existing asbestos cement conduit and shall take extreme care not to damage it. All existing conduit that requires removal due to new construction shall be removed per the specifications, Special Provision 202 and as directed by the Resident.
5. All wire shall be copper, no aluminum wire is allowed.
6. All light standard foundations and conduit trenches shall be installed in a manner to avoid drainage structures and utilities.
7. Contractor shall only excavate an amount of utility trench that can be backfilled in the same day. Utility trenches shall not be left open overnight.
8. The Contractor shall verify the voltage to the highway lighting and shall note voltage in shop drawing submittals.
9. Existing light standard foundations shall be abandoned in place or removed as directed. Payment shall be incidental to the Common Excavation. See Specifications for additional information.
10. Proposed non-metallic conduit shall be 3" schedule 80 PVC and contain 2 #2 and 1 #6 (ground) wires.

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 devices may be proposed by the Contractor to implement additional measures. Any additional measures approved by the Resident will be measured for payment.
2. Temporary seed shall be applied to all disturbed areas that will not be completed within 30 days.
3. All temporary and permanent erosion control devices shall be installed in accordance with the MaineDOT Best Management Practices (BMPs).
4. Temporary stone check dams shall be installed in accordance with the MaineDOT BMPs.
5. Erosion Control Blanket, Item 613.319 shall be installed on 2:1 slopes from the top to toe of slope. Loam and seed shall be placed prior to the installation of the erosion control blanket.
6. Place loam 4 inches deep on all new or reconstructed side slopes or as directed by the Resident.
7. Newly disturbed earth shall be mulched in accordance with Supplemental Specification 656. This work shall be paid for under Item 619.1201 Temporary Mulch
8. All slopes shall be seeded with seeding method No. 2 unless otherwise noted.
9. Contractor shall be responsible for placement and maintenance of erosion control items around stockpiles, in accordance with "Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices". Payment for these items shall be incidental to the material stockpiled.

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 rippedrap 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. Any necessary cutting of existing pipes to fit in areas of proposed catch basins and manholes will not be paid for separately and shall be incidental to the proposed catch basin and manhole items.
5. Any necessary coring of existing catch basins to take a proposed pipe will not be paid for separately and shall be incidental to the proposed culvert items.
6. If foundation material is required under culverts, it shall meet the requirements for Granular Borrow - Underwater Backfill and shall be paid for as Granular Borrow.
7. Existing culverts to remain shall be inspected for separation. If reconnection is directed by the Resident, it shall not be paid for separately but will be incidental to the new catch basin, manhole or pipe being added to the existing culvert. If concrete collars are required as directed by the Resident, payment will be under Item 603.28, Concrete Collar.
8. When called for on the plans, existing headwalls and a portion of the existing pipe shall be removed and disposed of. This work shall be incidental to Common Excavation.
9. Connecting proposed drainage pipes to existing pipes shall be incidental to the proposed drainage pipe items unless a Concrete Collar is required. Concrete collars shall be paid for under Item 603.28.9.
10. Catch basins with Type C frame and grate shall have 2" thick, 2' minimum paved apron all sides, set flush with rim elevation. The apron shall drop in elevation to allow free flow of runoff into the open trough flange. Extend paved apron as necessary to maintain surrounding grades. Aprons shall be paid for under Item 403.209.
11. Catch basins shall be set to final grade utilizing concrete. Brick and mortar will not be allowed.
12. Existing median drainage shall be maintained until proposed drainage is in place. No separate payment will be made, and all work and materials required to maintain existing drainage shall be considered incidental to existing drainage items.

EARTHWORK

1. Do not excavate for Aggregate Subbase Course where existing material is suitable as determined by the Resident.
2. Existing pavement removal in fill areas will be paid for under Item 203.20, Common Excavation. Shim material required for these areas below the subbase will be paid under Item 304.10, Aggregate Subbase Course - Gravel or Item 203.24, Common Borrow as shown in the typical sections.
3. The Contractor shall minimize slope disturbances where possible, as directed by the Resident.
4. Waste materials shall be disposed of off the project site, in accordance with all environmental regulations.
5. Granular borrow shall be used to back fill muck/peat excavation or in low wet areas as directed by the resident to 1' above water level or old ground. Granular borrow shall meet the requirements of Granular Borrow - Underwater Backfill and will be paid for as Granular Borrow.
6. All ramp shoulders or surfaces carrying traffic during construction phasing shall be paved up to, but not including the surface course at a minimum.

Date: 4/12/2019

Filename: ...MSTA\003_gen_notes_01.dgn

Scale: AS NOTED

Designed by:



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**THE GOLD STAR
 MEMORIAL HIGHWAY**

**WARREN AVENUE OVERPASS
 BRIDGE REPLACEMENT
 GENERAL NOTES**

No.	Revision	By	Date
2	Addendum No. 2	ECF	4/19

CONSULTANT PROJECT MANAGER: T. Bryant					
	By	Date		By	Date
Designed	MED	3/22/19	Checked	GME	3/22/19
Drawn	DPD	3/22/19	In Charge of	TSB	3/22/19

MTA PROJECT MANAGER: Ralph Norwood, IV

VHB: 55191.01

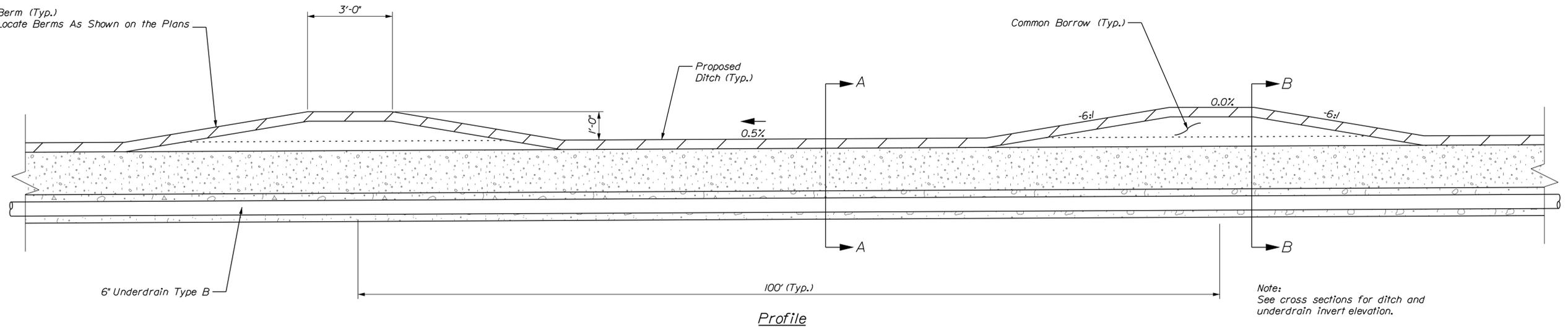
CONTRACT: 2019.10

SHEET NUMBER: 3

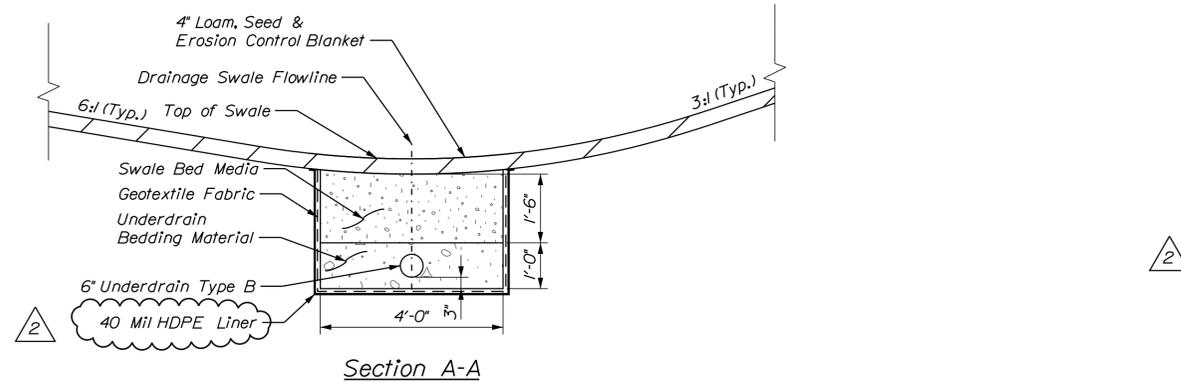
3 OF 141

Date: 4/16/2019

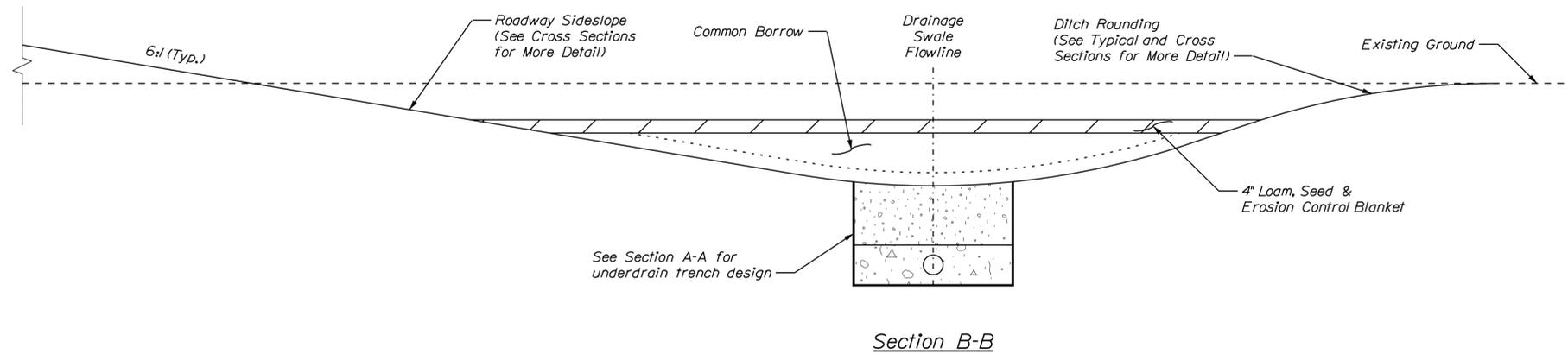
Berm (Typ.)
Locate Berms As Shown on the Plans



Note:
See cross sections for ditch and underdrain invert elevation.



Section A-A



Section B-B

Notes:

- The swale bed media shall meet Special Provisions 624.02, Swale Bed Media Filter Media, and shall be paid for under Item 624.01. The swale bed media shall be lightly compacted, thoroughly blended, mixture of the following:
 - Sand (50-55% by volume); MaineDOT Specification Section 703.01 - Fine Aggregate for Concrete.
 - Topsoil (20-30% by volume); loamy sand topsoil with minimal clay content and between 15-25% fines passing the #200 sieve.
 - Mulch (20-30% by volume); moderately fine shredded bark mulch or wood fiber mulch with less than 5% passing the #200 sieve.
- Underdrain bedding material shall consist of well-graded, clean, coarse gravel meeting MaineDOT specification Section 703.22 - Underdrain Backfill for Type B Underdrain. No more than 2% by weight shall pass the #200 sieve.
- Geotextile fabric shall conform to MaineDOT Specification 722.02 - Class A designation.
- A 40 mil HDPE liner shall be installed along the entire length of the underdrain treatment swale around the underdrain bedding and swale bed media as shown on the detail. The liner shall meet Special Provisions 620.02, HDPE Geomembrane, and shall be paid for under Item 620.70.
- Underdrain pipe shall be MaineDOT standard 6" Underdrain Type "B". Extend underdrain to connect to underdrain outlet pipe as shown on the plans.
- The surface of the swale bed shall be planted with wetland seed "New England Erosion Control/Restoration Mix" as supplied by New England Wetland Plants, Inc. or approved equal. Seed mix shall be applied at double the manufacturer's application rate. Surface shall be stabilized with an approved erosion control matting. Seed shall meet Special Provisions 618.02, Special Seeding, and shall be paid for under Item 618.143.
- Erosion control blankets conforming to the MaineDOT Standard Detail 802(02) shall be provided on the underdrain swale channel, all underdrain treatment swale sideslopes, and on all berm slopes.
- Swale bed shall be constructed to the limits and details shown on the plans and the above specifications unless otherwise approved by the Resident Engineer.
- Swale bed material shall not be placed until the tributary drainage area is permanently stabilized against erosion.

Scale: Not to Scale

No.	Revision	By	Date
2	Addendum No. 2	ECF	4/19

Designed by:



CONSULTANT PROJECT MANAGER: T. Bryant

	By	Date	By	Date
Designed	AGC	3/22/19	Checked	ECF 3/22/19
Drawn	BMD	3/22/19	In Charge of	AG 3/22/19

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph Norwood, IV

WARREN AVENUE OVERPASS
BRIDGE REPLACEMENT
STORMWATER UNDERDRAIN TREATMENT
SWALE DETAILS

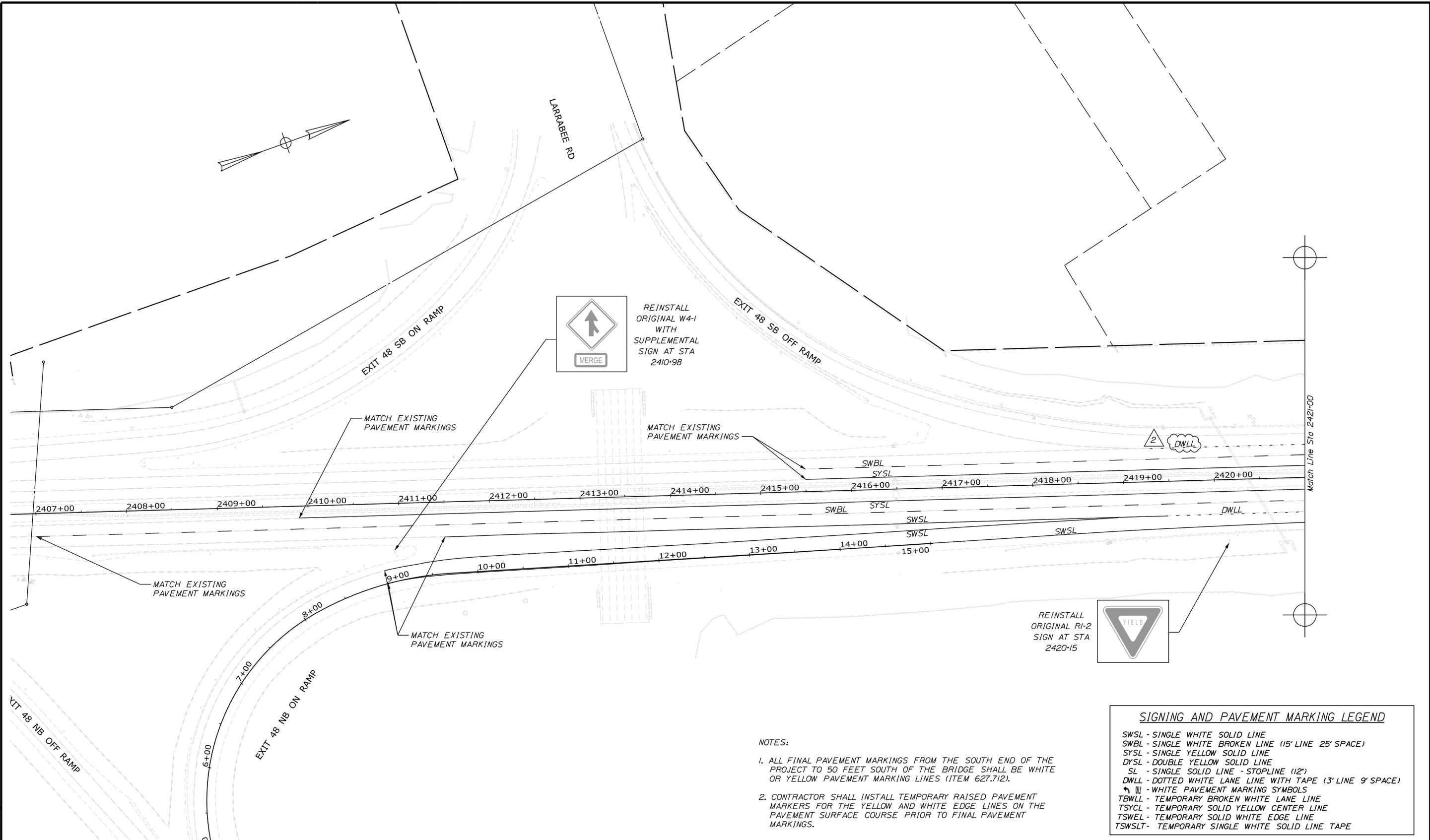
VHB: 55191.01
CONTRACT: 2019.10

SHEET NUMBER: 15
15 OF 141

Filename: ...MSTA\015_Details_BMP.dgn

Date: 4/16/2019

Filename: ...MSTA\058_SignStripes1.dgn



REINSTALL ORIGINAL W4-1 WITH SUPPLEMENTAL SIGN AT STA 2410+98

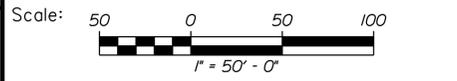


REINSTALL ORIGINAL R1-2 SIGN AT STA 2420+15

SIGNING AND PAVEMENT MARKING LEGEND

- SWSL - SINGLE WHITE SOLID LINE
- SWBL - SINGLE WHITE BROKEN LINE (15' LINE 25' SPACE)
- SYSL - SINGLE YELLOW SOLID LINE
- DYSL - DOUBLE YELLOW SOLID LINE
- SL - SINGLE SOLID LINE - STOPLINE (1/2")
- DWLL - DOTTED WHITE LANE LINE WITH TAPE (3' LINE 9' SPACE)
- ▲ - WHITE PAVEMENT MARKING SYMBOLS
- TBWL - TEMPORARY BROKEN WHITE LANE LINE
- TSYCL - TEMPORARY SOLID YELLOW CENTER LINE
- TSWEL - TEMPORARY SOLID WHITE EDGE LINE
- TSWSLT - TEMPORARY SINGLE WHITE SOLID LINE TAPE

- NOTES:**
- ALL FINAL PAVEMENT MARKINGS FROM THE SOUTH END OF THE PROJECT TO 50 FEET SOUTH OF THE BRIDGE SHALL BE WHITE OR YELLOW PAVEMENT MARKING LINES (ITEM 627.712).
 - CONTRACTOR SHALL INSTALL TEMPORARY RAISED PAVEMENT MARKERS FOR THE YELLOW AND WHITE EDGE LINES ON THE PAVEMENT SURFACE COURSE PRIOR TO FINAL PAVEMENT MARKINGS.



Designed by:



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**THE GOLD STAR
 MEMORIAL HIGHWAY**

**WARREN AVENUE OVERPASS
 BRIDGE REPLACEMENT
 SIGNING AND STRIPING PLANS (1 OF 4)**

No.	Revision	By	Date
2	Addendum No. 2	MDS	4/19

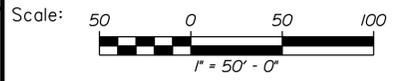
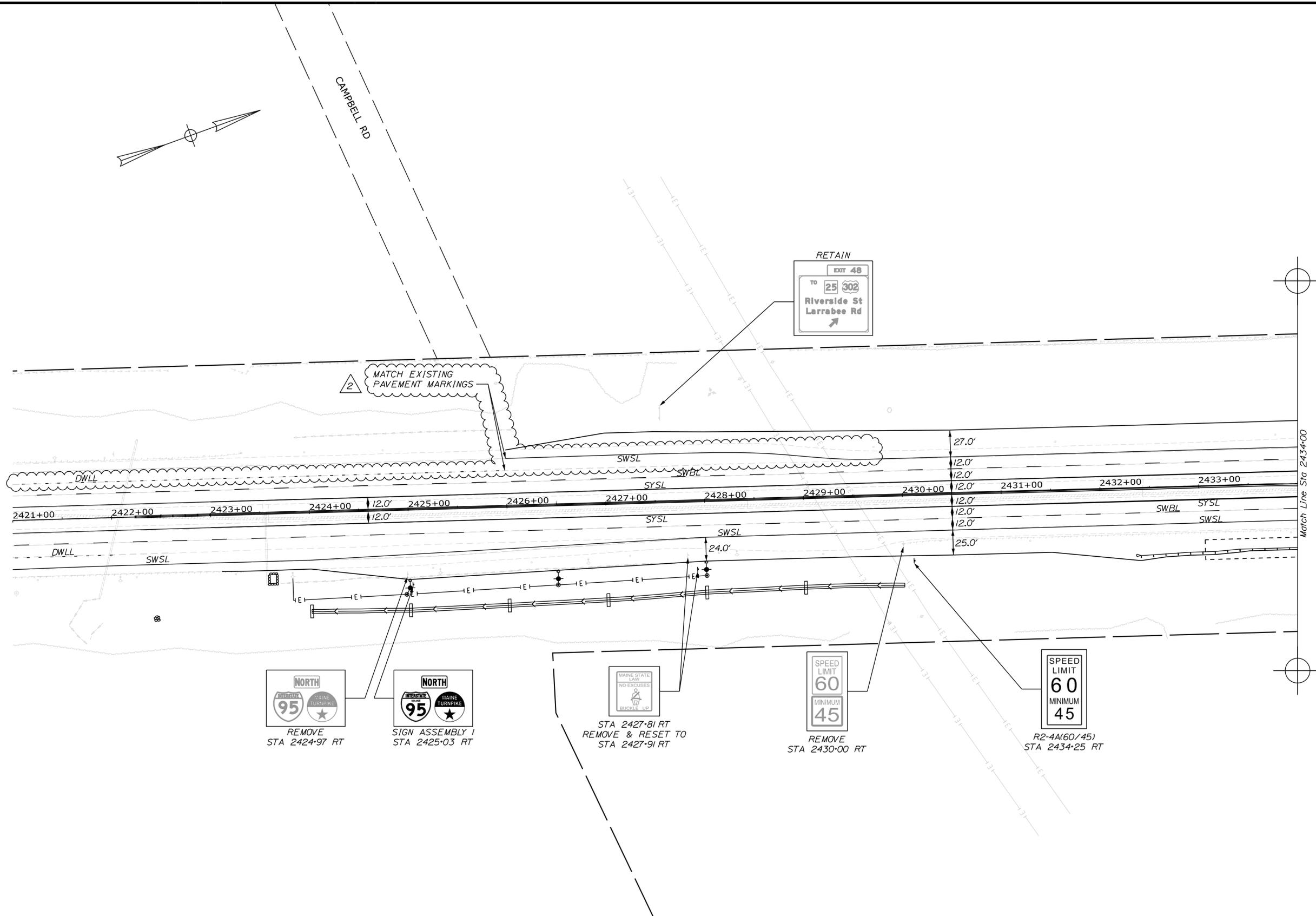
CONSULTANT PROJECT MANAGER: T. Bryant			
	By	Date	
Designed	MLG	3/22/19	Checked MDS 3/22/19
Drawn	JAR	3/22/19	In Charge of TSB 3/22/19

MTA PROJECT MANAGER: Ralph Norwood, IV

VHB: 55191.01 SHEET NUMBER: 58
 CONTRACT: 2019.10 58 OF 141

Date: 4/16/2019

Filename: ...MSTA\059_SignStripes2.dgn



Designed by:



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**THE GOLD STAR
 MEMORIAL HIGHWAY**

**WARREN AVENUE OVERPASS
 BRIDGE REPLACEMENT
 SIGNING AND STRIPING PLANS (2 OF 4)**

No.	Revision	By	Date
2	Addendum No. 2	MDS	4/19

CONSULTANT PROJECT MANAGER: T. Bryant			
	By	Date	
Designed	MLG	3/22/19	Checked MDS 3/22/19
Drawn	JAR	3/22/19	In Charge of TSB 3/22/19

MTA PROJECT MANAGER: Ralph Norwood, IV

VHB: 55191.01
 CONTRACT: 2019.10
 SHEET NUMBER: 59
 59 OF 141

MAINTENANCE OF TRAFFIC GENERAL NOTES

- All traffic control equipment and devices shall conform to the latest edition of the Maine Department of Transportation (MaineDOT) Standard Specifications, Maine Turnpike Authority (MTA) Supplemental Specifications, contract specifications and applicable traffic control standards and practices.
- All traffic control equipment and layouts shall conform to the 2009 edition of the Federal Highway Administration (FHWA) Manual on Uniform Traffic Control Devices (MUTCD), chapter 6. All traffic control signs, sign support structures, channelizing devices, flashing arrow panels (FAP), portable changeable message signs (PCMS), and other traffic control equipment along the roadside shall meet or exceed NCHRP 350 test level 3 (TL-3) requirements regardless of where implemented on the project.
- All temporary traffic control signs shall have ASTM D4956 Type VII, Type VIII, or Type IX super high intensity or prismatic fluorescent retroreflective sheeting and shall be maintained in like-new condition. All orange construction signs shall be fluorescent orange with Type IX sheeting. Placement of construction signs shall be adjusted to avoid obstructing existing signs and to ensure proper sight lines to the construction signs as determined by the Resident.
- Any signs, equipment, or devices found to be damaged or unserviceable shall be replaced at the Contractor's expense.
- During night operations, temporary work lighting shall be directed away from approaching lanes of traffic.
- Temporary lane closures will be required, with advanced approval, whenever work will occur within four feet of the I-95 traveled way. Temporary lane closures shall be removed if no work is occurring. See Special Provisions for more information.
- All lane closures shall require approval of the Resident a minimum of two working days in advance of the lane closure.
- Contractor shall provide advanced notice of all changes in traffic patterns, to include lane closures, with PCMS at least seven working days prior to the implementation of the traffic pattern change. PCMS for bridge work shall be placed within 500 feet of the bridges. PCMS for turnpike mainline road work shall be placed at least 500 feet in advance of the work site at a location approved by the Resident.
- In the event that lane closure(s) begin to cause back-ups in through traffic of more than five minutes, the Contractor shall deploy the additional signs as indicated in the single lane closure set-up details.
- Construction signs south of Exit 48 shall be coordinated with MTA Project 2019.09. Northbound work zone speed limit will be established by Project 2019.09.
- Signs with (FLASH) in the title shall be LED Flashing signs. See Special Provisions for details.

WARREN AVE LANE SHIFT & FLAGGING

Sign	Text Dimensions (Inches)		Size	Quantity and Color
	Letter Height	Vertical Spacing		
G20-2 	Text Dimensions Shall Conform to "Standard Highway Signs" - 2012		48"x24"	2 - Black on Orange
W20-1 			48"x48"	2 - Black on Orange
W20-4 			48"x48"	2 - Black on Orange
W20-7 			48"x48"	2 - Black on Orange (For Flagging)
W24-1L 			48"x48"	1 - Black on Orange

TURNPIKE LANE SHIFTS (PHASE 1A, 1B, 2)

Sign	Text Dimensions (Inches)		Size	Quantity and Color
	Letter Height	Vertical Spacing		
G20-1 (2) 	Text Dimensions Shall Conform to "Standard Highway Signs" - 2012		48"x24"	2 - Black on Orange
G20-2 			48"x24"	2 - Black on Orange
W1-4b(L) 			48"x48"	4 - Black on Orange
W1-4b(R) 			48"x48"	4 - Black on Orange
W20-1 			48"x48"	3 - Black on Orange
W3-2 			48"x48"	1 - Red and White and Black on Orange
W3-5(50) 			48"x48"	2 - Black on Orange
W4-5P 			24"x30"	2 - Black on Orange
W5-1(MOD) 			48"x48"	4 - Black on Orange
G20-5aP 			36"x24"	4 - Black on Orange
R2-1(50) 			48"x60"	4 - Black on White
R2-6aP 			36"x24"	4 - Black on White
R2-12 			36"x54"	2 - Black on White

TEMPORARY SINGLE LANE CLOSURES (PHASE 3B)

Sign	Text Dimensions (Inches)		Size	Quantity and Color
	Letter Height	Vertical Spacing		
CS-3 	7" 7" 7"	4" 4"	48"x48"	4 - Black on Orange
G20-2 	Text Dimensions Shall Conform to "Standard Highway Signs" - 2012		48"x24"	4 - Black on Orange
G20-5aP 			36"x24"	4 - Black on Orange
R2-1(50) 			48"x60"	4 - Black on White
R2-6aP 			36"x24"	4 - Black on White
R2-12 			36"x54"	4 - Black on White
W3-4 			48"x48"	4 - Black on Orange
W3-5(50) 			48"x48"	4 - Black on Orange
W4-2(L) 			48"x48"	4 - Black on Orange
W20-1 (1 MILE) 			48"x48"	4 - Black on Orange
W20-1 (AHEAD) 			48"x48"	1 - Black on Orange
W20-5L 			48"x48"	4 - Black on Orange

Date: 4/16/2019

Filename: ...MSTA\063_workzone_01.dgn

Scale: NOT TO SCALE

Designed by:



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THE GOLD STAR MEMORIAL HIGHWAY

**WARREN AVENUE OVERPASS
BRIDGE REPLACEMENT
MAINTENANCE OF TRAFFIC DETAILS
(1 OF 3)**

No.	Revision	By	Date
2	Addendum No. 2	MDS	4/19

CONSULTANT PROJECT MANAGER: T. Bryant					
	By	Date	By	Date	
Designed	MLG	3/22/19	Checked	MDS	3/22/19
Drawn	JAR	3/22/19	In Charge of	TSB	3/22/19

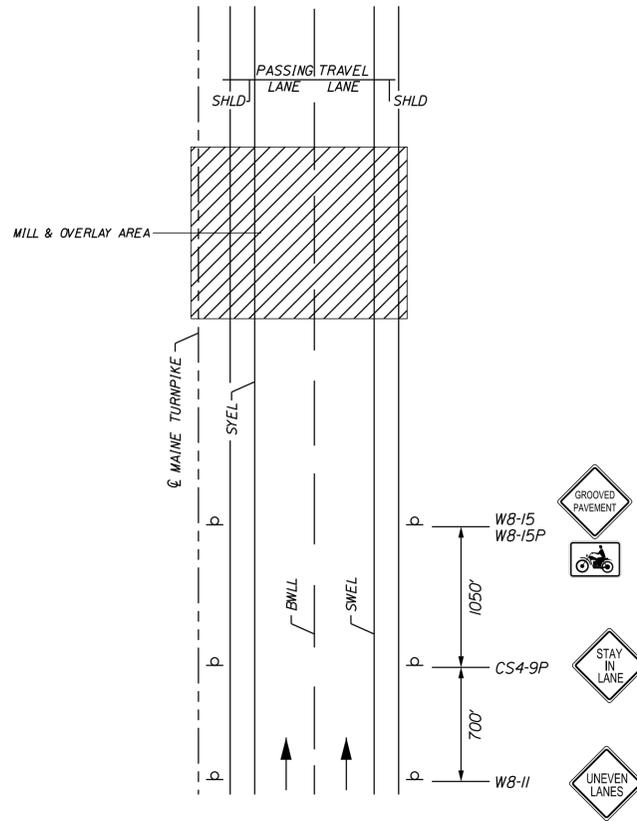
MTA PROJECT MANAGER: Ralph Norwood, IV

VHB: 55191.01
CONTRACT: 2019.10

SHEET NUMBER: 63

63 OF 141

TURNPIKE MILL & OVERLAY ADVANCED SIGNING



MILL & OVERLAY
ADVANCED PROJECT SIGNING

NOTES:

- SEE MILL & OVERLAY ADVANCE SIGNING PLAN FOR FURTHER PLACEMENT DETAILS.
- SIGNS SHALL BE IN PLACE FOR THE DURATION OF THE MILLING OR AS DIRECTED BY THE RESIDENT.
- IF A LANE CLOSURE IS ACTIVE SIGNS SHOULD BE COVERED.

CONSTRUCTION SIGN SUMMARY

Sign	Text Dimensions (Inches)		Size	Quantity and Color
	Letter Height	Vertical Spacing		
MI-1(95)		Text Dimensions Shall Conform to "Standard Highway Signs" - 2012	24"x24"	6 - White on Red/Blue
MI-1(MT)			24"x24"	6 - White/Gold on Green
M3-1			24"x12"	3 - White on Blue
M3-3			24"x12"	3 - White on Blue
W8-11			48"x48"	4 - Black on Orange
W8-15			48"x48"	10 - Black on Orange
W8-15P		30"x24"	10 - Black on Orange	
CS4-4P		48"x48"	4 - Black on Orange	

Date: 4/12/2019

Filename: ...MSTA\065a_workzone_03a.dgn

Scale:			
No.	Revision	By	Date
2	Addendum No. 2	MDS	4/19

Designed by:

CONSULTANT PROJECT MANAGER: T. Bryant

	By	Date	By	Date
Designed	MLG	3/22/19	Checked	MDS 3/22/19
Drawn	JAR	3/22/19	In Charge of	TSB 3/22/19

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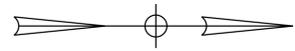
THE GOLD STAR
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph Norwood, IV

WARREN AVENUE OVERPASS
BRIDGE REPLACEMENT
MILL & OVERLAY
MAINTENANCE OF TRAFFIC DETAILS

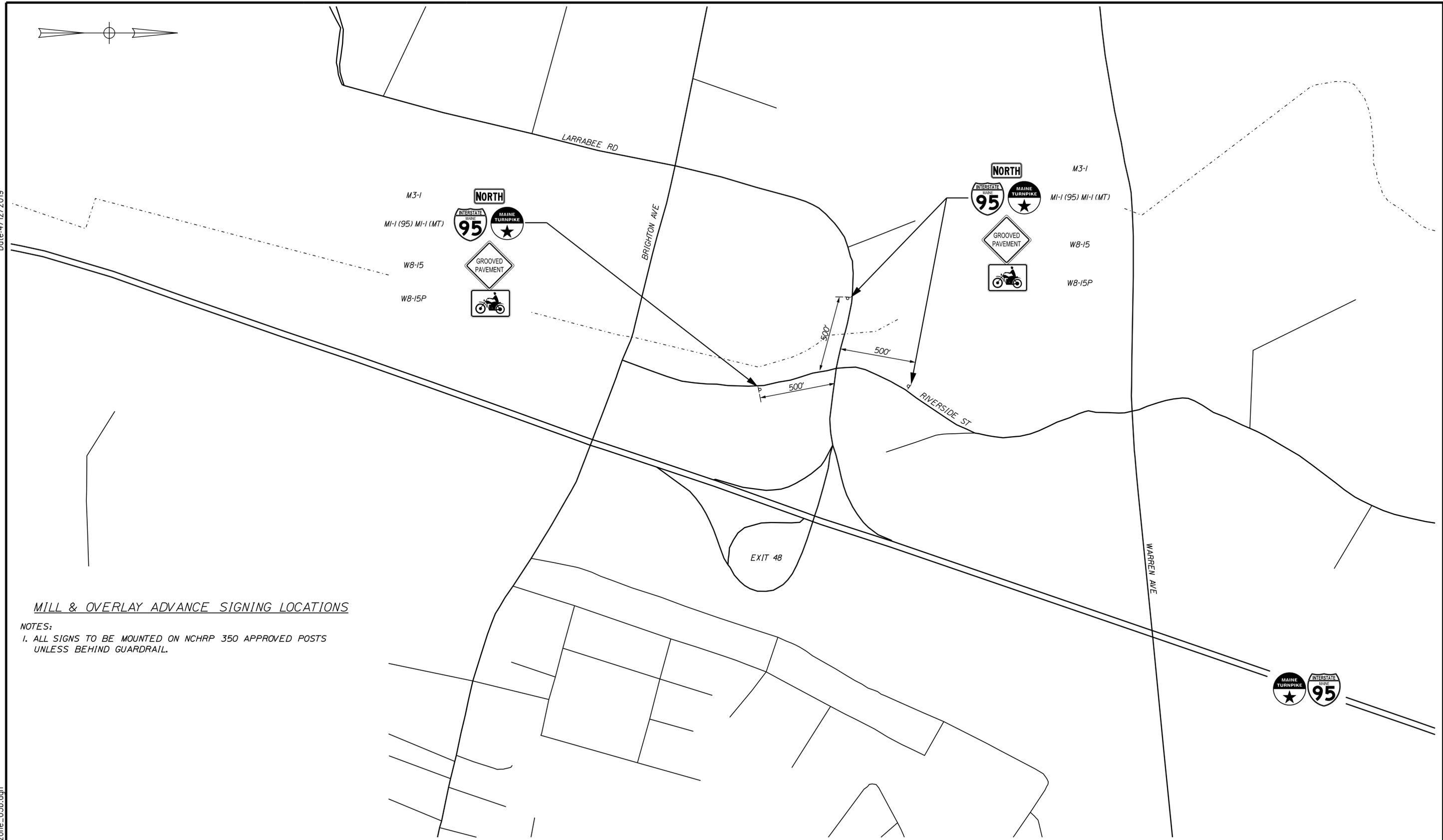
VHB: 55191.01
CONTRACT: 2019.10

SHEET NUMBER: 65A
65A OF 141



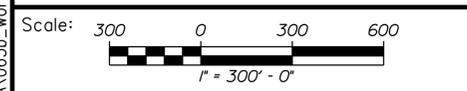
Date: 4/12/2019

Filename: ...MSTA\065b_workzone_03b.dgn



MILL & OVERLAY ADVANCE SIGNING LOCATIONS

- NOTES:
- ALL SIGNS TO BE MOUNTED ON NCHRP 350 APPROVED POSTS UNLESS BEHIND GUARDRAIL.



No.	Revision	By	Date
2	Addendum No. 2	MDS	4/19

Designed by:



CONSULTANT PROJECT MANAGER: T. Bryant

	By	Date	By	Date
Designed	MLG	3/22/19	Checked	MDS 3/22/19
Drawn	JAR	3/22/19	In Charge of	TSB 3/22/19

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**THE GOLD STAR
MEMORIAL HIGHWAY**

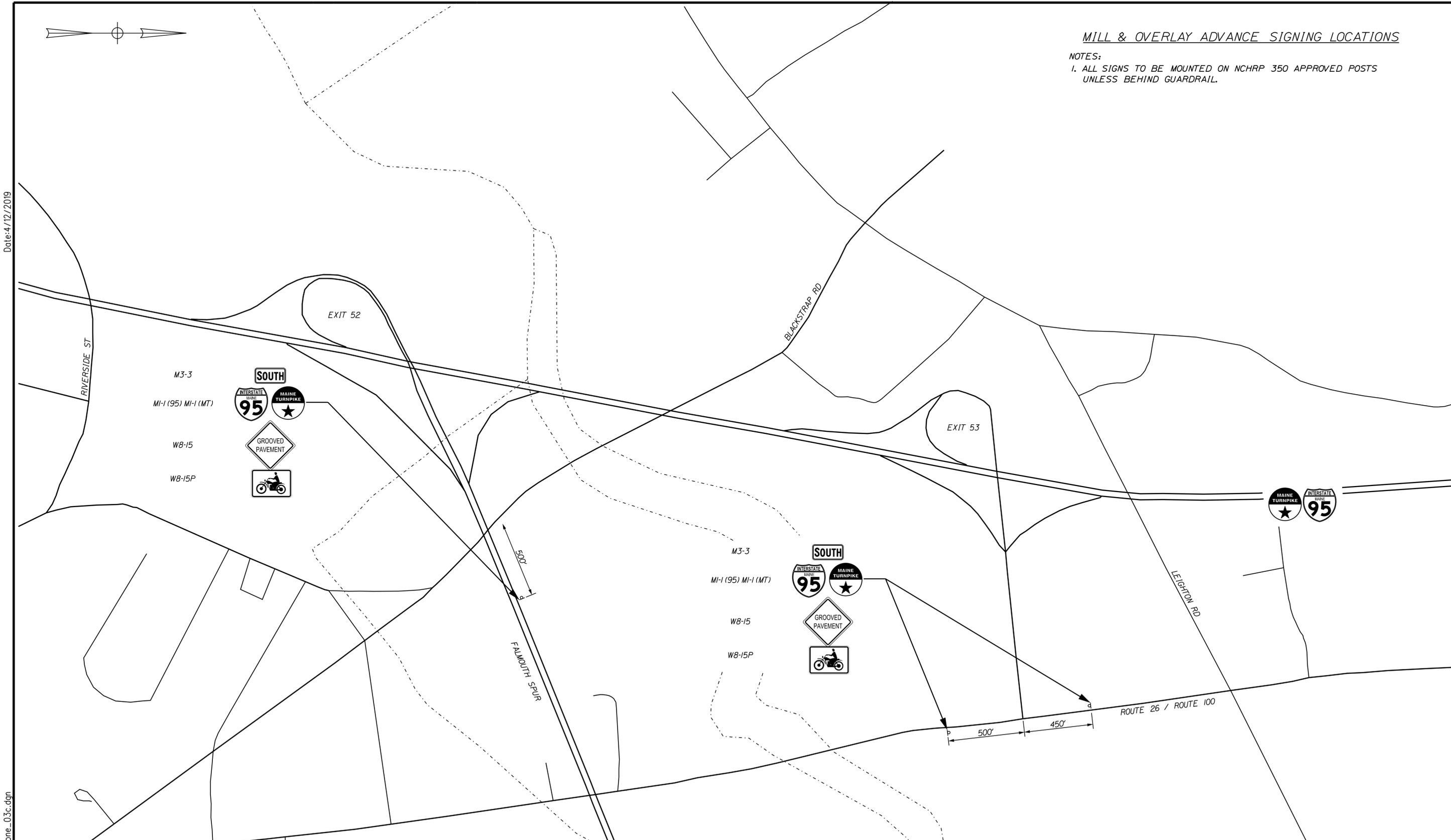
MTA PROJECT MANAGER: Ralph Norwood, IV

**WARREN AVENUE OVERPASS
BRIDGE REPLACEMENT
MILL & OVERLAY
INTERCHANGE DETAILS (1 OF 2)**

VHB: 55191.01 SHEET NUMBER: 65B
 CONTRACT: 2019.10 65B OF 141

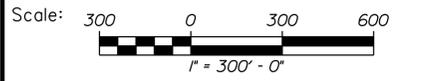
MILL & OVERLAY ADVANCE SIGNING LOCATIONS

NOTES:
 1. ALL SIGNS TO BE MOUNTED ON NCHRP 350 APPROVED POSTS
 UNLESS BEHIND GUARDRAIL.



Date: 4/12/2019

Filename: ...MSTA\065c_workzone_03c.dgn



Designed by:



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THE GOLD STAR
 MEMORIAL HIGHWAY

WARREN AVENUE OVERPASS
 BRIDGE REPLACEMENT
 MILL & OVERLAY
 INTERCHANGE DETAILS (2 OF 2)

No.	Revision	By	Date
2	Addendum No. 2	MDS	4/19

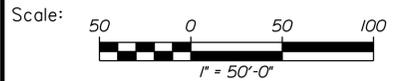
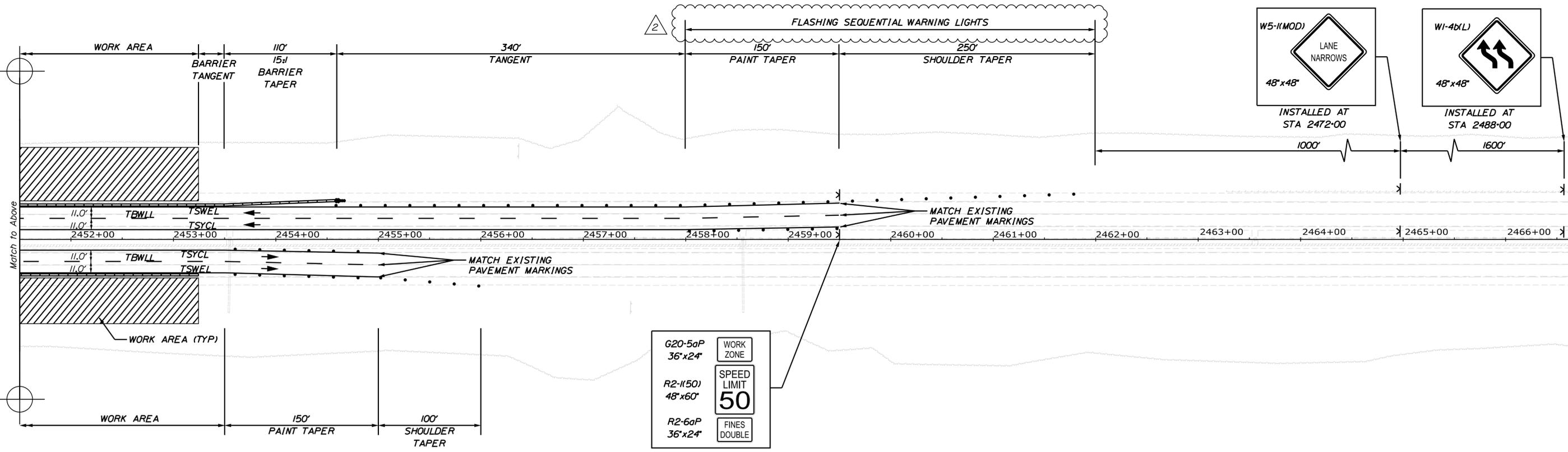
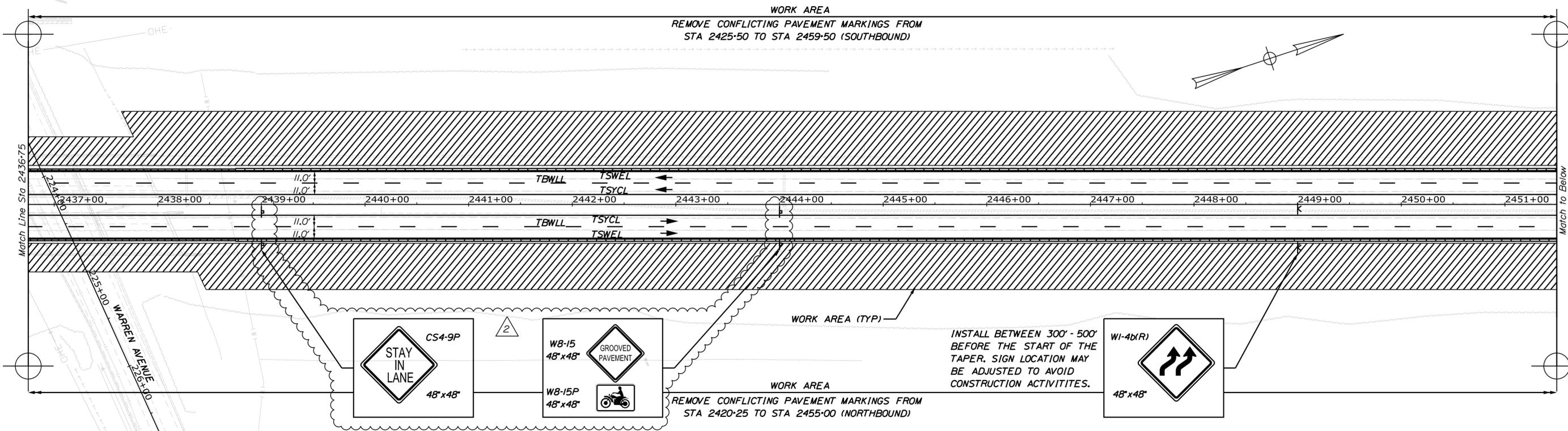
CONSULTANT PROJECT MANAGER: T. Bryant					
	By	Date	By	Date	
Designed	MLG	3/22/19	Checked	MDS	3/22/19
Drawn	JAR	3/22/19	In Charge of	TSB	3/22/19

MTA PROJECT MANAGER: Ralph Norwood, IV

VHB: 55191.01 SHEET NUMBER: 65C
 CONTRACT: 2019.10 65C OF 141

Date: 4/11/2019

Filename: ...MSTA\068_MainLine\CP_02.dgn



Designed by:

No.	Revision	By	Date
2	Addendum No. 2	MDS	4/19

CONSULTANT PROJECT MANAGER: T. Bryant

	By	Date	By	Date
Designed	MLG	3/22/19	Checked	MDS 3/22/19
Drawn	JAR	3/22/19	In Charge of	TSB 3/22/19

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THE GOLD STAR MEMORIAL HIGHWAY

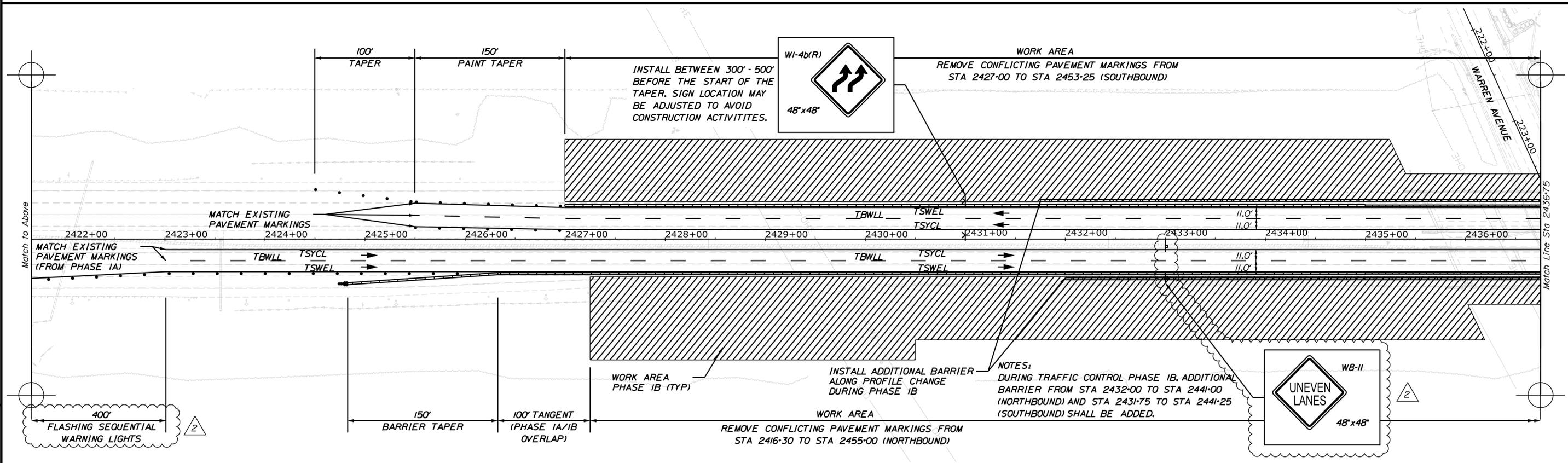
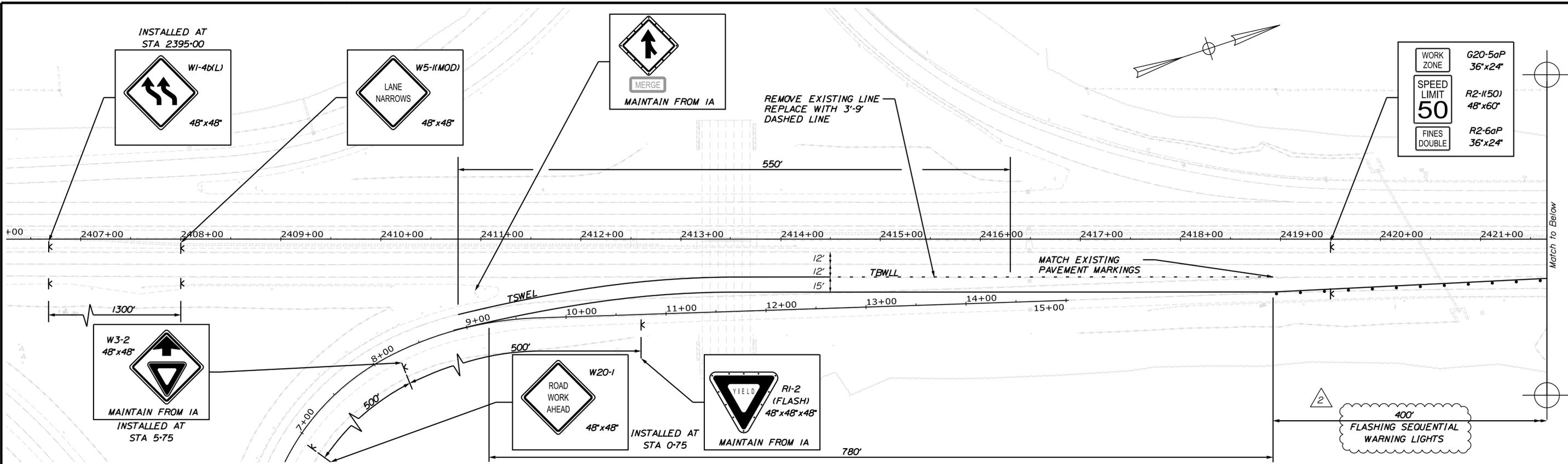
MTA PROJECT MANAGER: Ralph Norwood, IV

WARREN AVENUE OVERPASS
BRIDGE REPLACEMENT
MAINLINE
TRAFFIC CONTROL PLAN PHASE 1A (2 OF 2)

VHB: 55191.01
CONTRACT: 2019.10

SHEET NUMBER: 68
68 OF 141

Date: 4/11/2019



Designed by:

vhb

No.	Revision	By	Date
2	Addendum No. 2	MDS	4/19

CONSULTANT PROJECT MANAGER: T. Bryant

	By	Date	By	Date	
Designed	MLG	3/22/19	Checked	MDS	3/22/19
Drawn	JAR	3/22/19	In Charge of	TSB	3/22/19

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph Norwood, IV

WARREN AVENUE OVERPASS
BRIDGE REPLACEMENT
MAINLINE
TRAFFIC CONTROL PLAN PHASE 1B (1 OF 2)

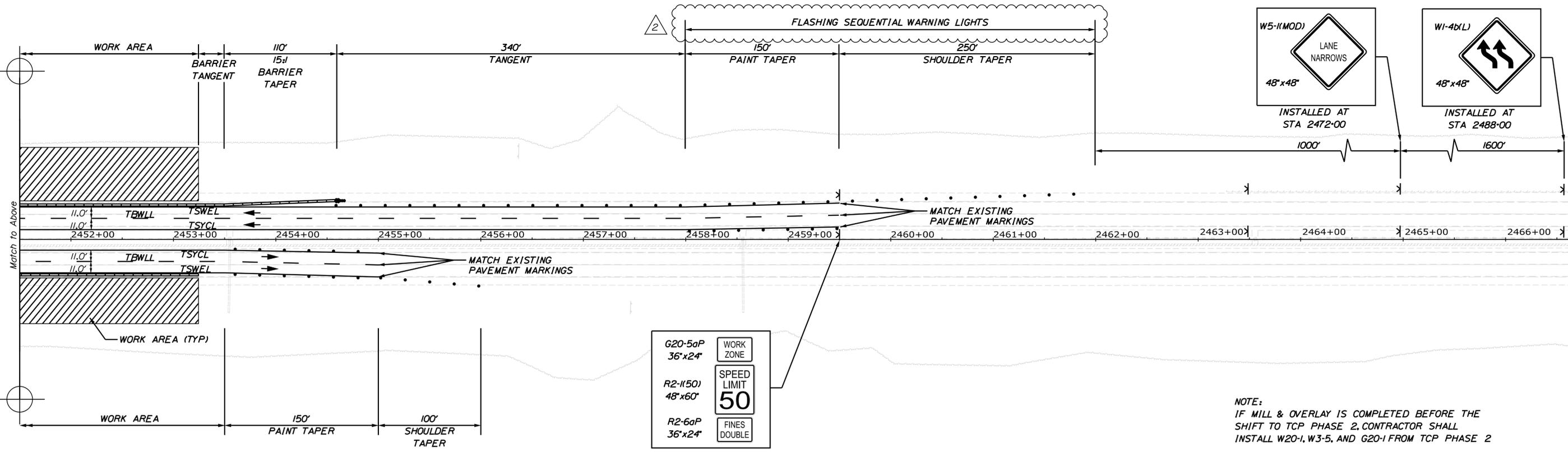
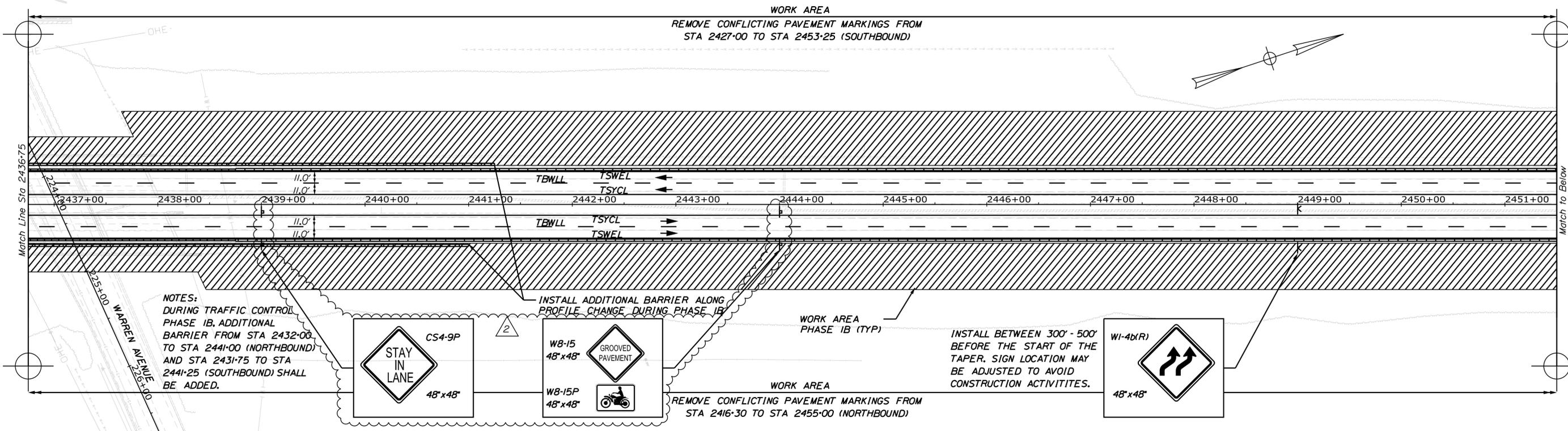
VHB: 55191.01
CONTRACT: 2019.10

SHEET NUMBER: 69
69 OF 141

Filename: ...MSTA\069_MainLine\TCP_03.dgn

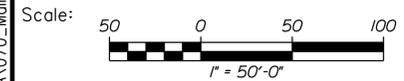
Date: 4/11/2019

Filename: ...MSTAV070_MainLineTCP_04.dgn



G20-5aP 36"x24"	WORK ZONE
R2-1(150) 48"x60"	SPEED LIMIT 50
R2-6aP 36"x24"	FINES DOUBLE

NOTE:
IF MILL & OVERLAY IS COMPLETED BEFORE THE SHIFT TO TCP PHASE 2, CONTRACTOR SHALL INSTALL W20-1, W3-5, AND G20-1 FROM TCP PHASE 2



Designed by:

No.	Revision	By	Date
2	Addendum No. 2	MDS	4/19

CONSULTANT PROJECT MANAGER: T. Bryant

By	Date	By	Date
Designed MLG	3/22/19	Checked MDS	3/22/19
Drawn JAR	3/22/19	In Charge of TSB	3/22/19

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THE GOLD STAR MEMORIAL HIGHWAY

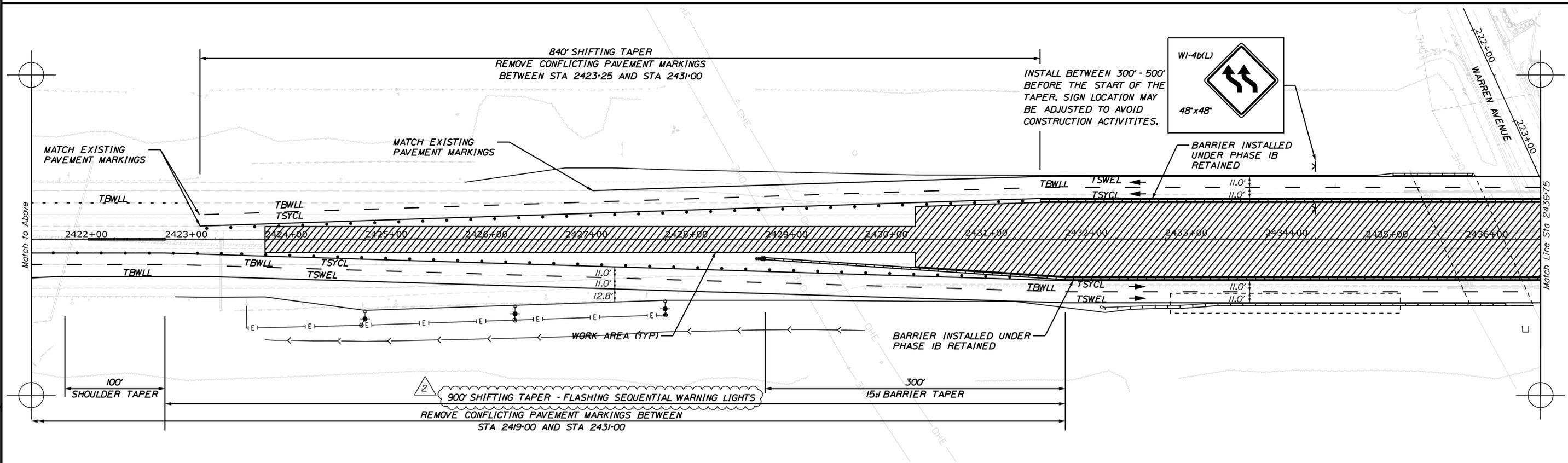
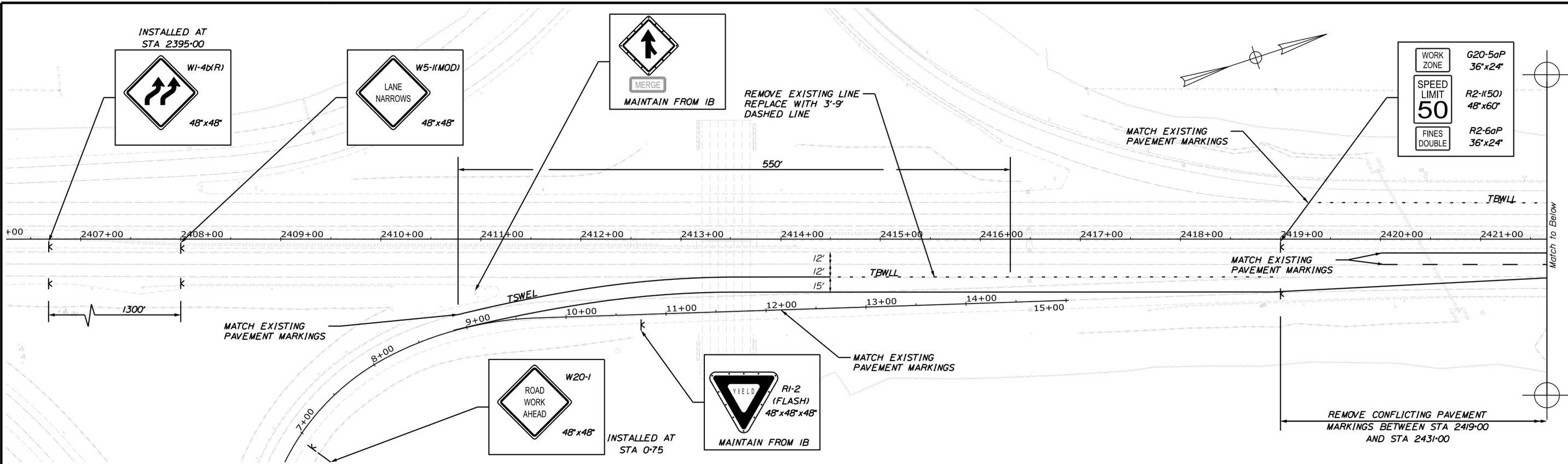
MTA PROJECT MANAGER: Ralph Norwood, IV

**WARREN AVENUE OVERPASS
BRIDGE REPLACEMENT
MAINLINE
TRAFFIC CONTROL PLAN PHASE 1B (2 OF 2)**

VHB: 55191.01
CONTRACT: 2019.10

SHEET NUMBER: 70
70 OF 141

Date: 4/11/2019



Scale: 1" = 50'-0"

No.	Revision	By	Date
2	Addendum No. 2	MDS	4/19

Designed by:

CONSULTANT PROJECT MANAGER: T. Bryant

	By	Date	By	Date	
Designed	MLG	3/22/19	Checked	MDS	3/22/19
Drawn	JAR	3/22/19	In Charge of	TSB	3/22/19

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THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph Norwood, IV

WARREN AVENUE OVERPASS
 BRIDGE REPLACEMENT
 MAINLINE
 TRAFFIC CONTROL PLAN PHASE 2 (1 OF 2)

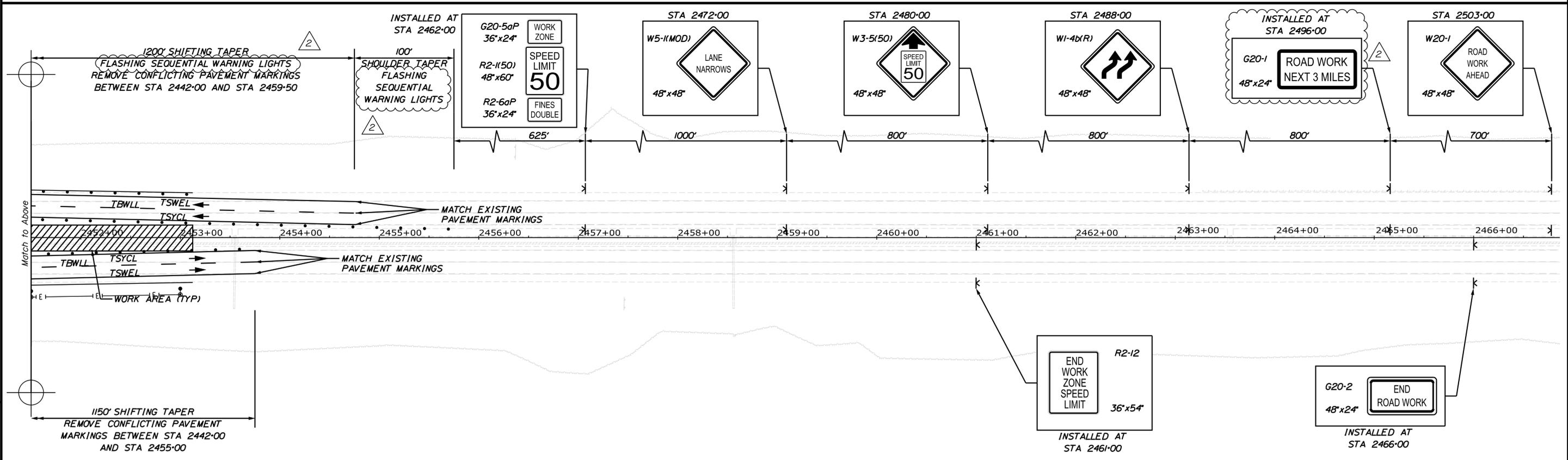
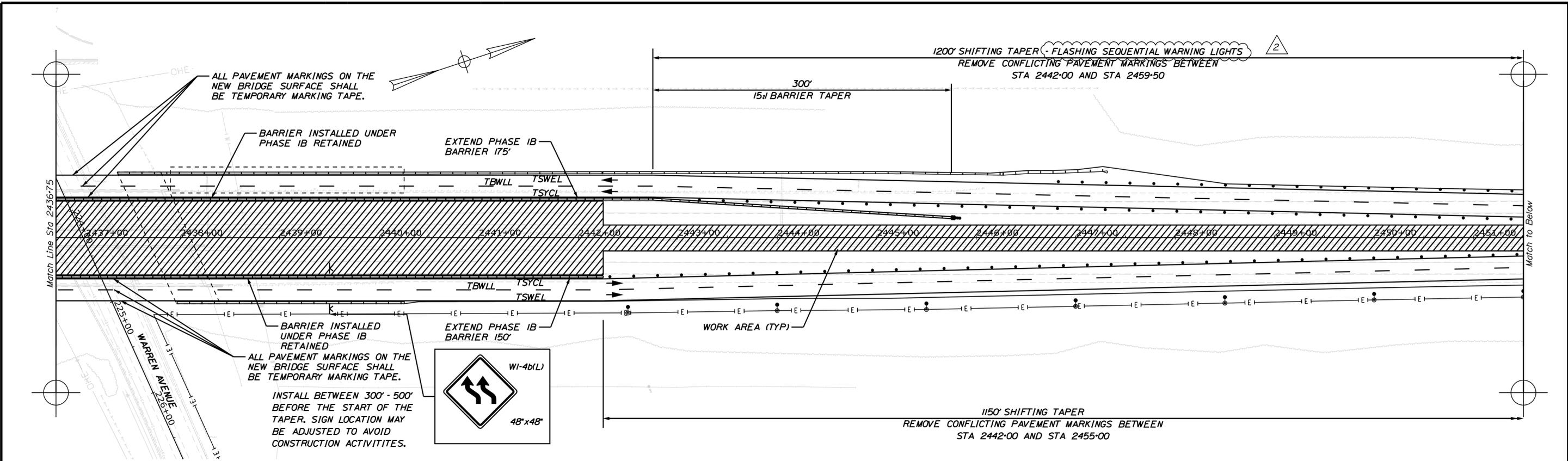
VHB: 55191.01
 CONTRACT: 2019.10

SHEET NUMBER: 71
 71 OF 141

Filename: ...MSTA071_MainLine.TCP_05.dgn

Date: 4/16/2019

Filename: ...MSTA072_MainLine1CP_06.dgn



Scale: 1" = 50'-0"

No.	Revision	By	Date
2	Addendum No. 2	MDS	4/19

Designed by:

CONSULTANT PROJECT MANAGER: T. Bryant			
	By	Date	
Designed	MLG	3/22/19	Checked
Drawn	JAR	3/22/19	In Charge of

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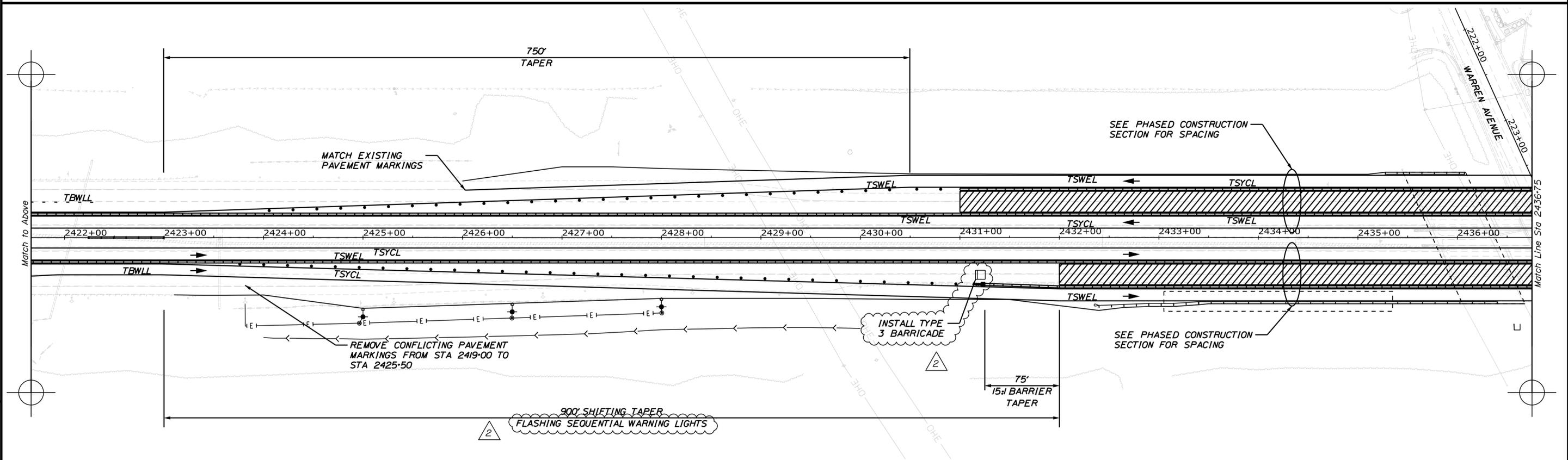
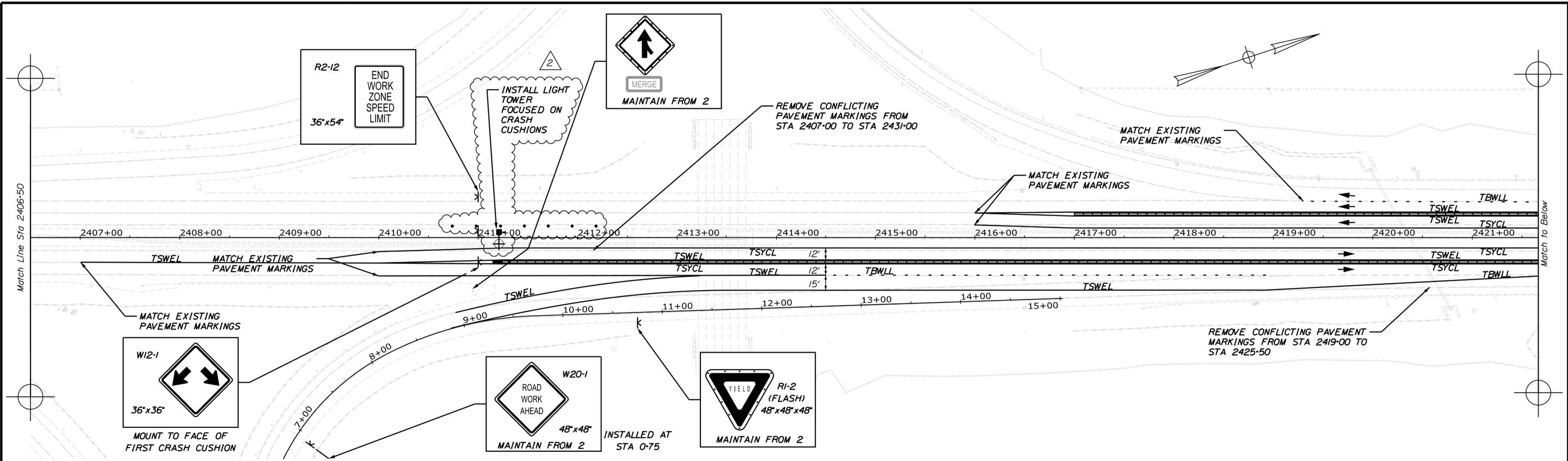
MTA PROJECT MANAGER: Ralph Norwood, IV

WARREN AVENUE OVERPASS
 BRIDGE REPLACEMENT
 MAINLINE
 TRAFFIC CONTROL PLAN PHASE 2 (2 OF 2)

VHB: 55191.01
 CONTRACT: 2019.10
 SHEET NUMBER: 72
 72 OF 141

Date: 4/12/2019

Filename: ...MSTA074_MainLineTCP_08.dgn



Scale: 1" = 50'-0"

No.	Revision	By	Date
2	Addendum No. 2	MDS	4/19

Designed by:

CONSULTANT PROJECT MANAGER: T. Bryant			
Designed	By	Date	Checked
Drawn	JAR	3/22/19	In Charge of
	MLG	3/22/19	MDS
	JAR	3/22/19	TSB

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THE GOLD STAR MEMORIAL HIGHWAY

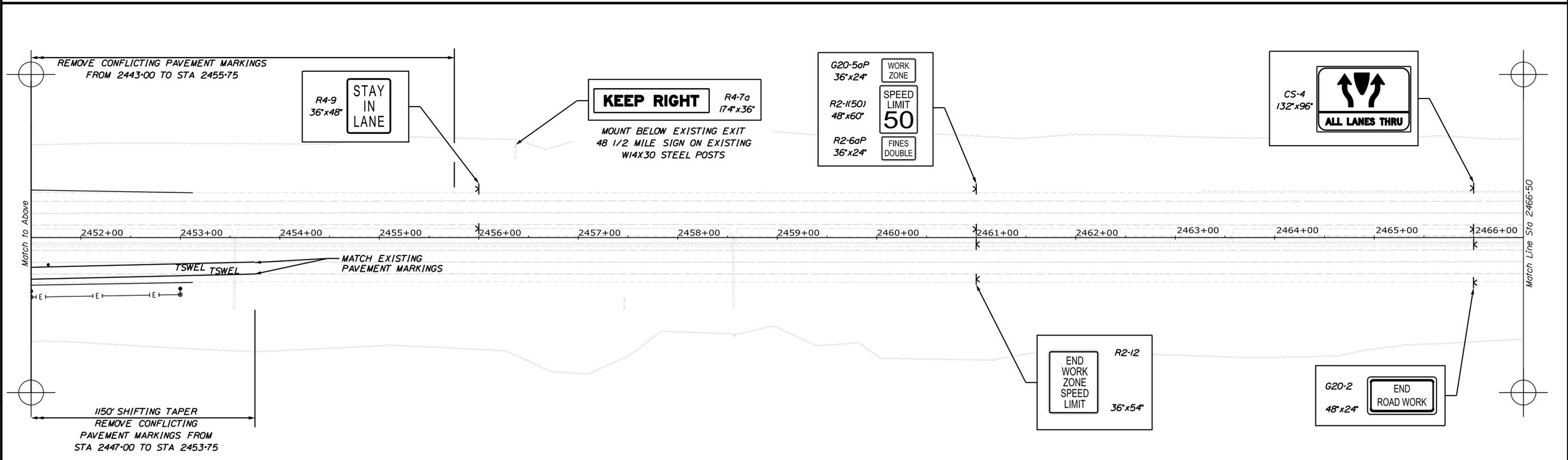
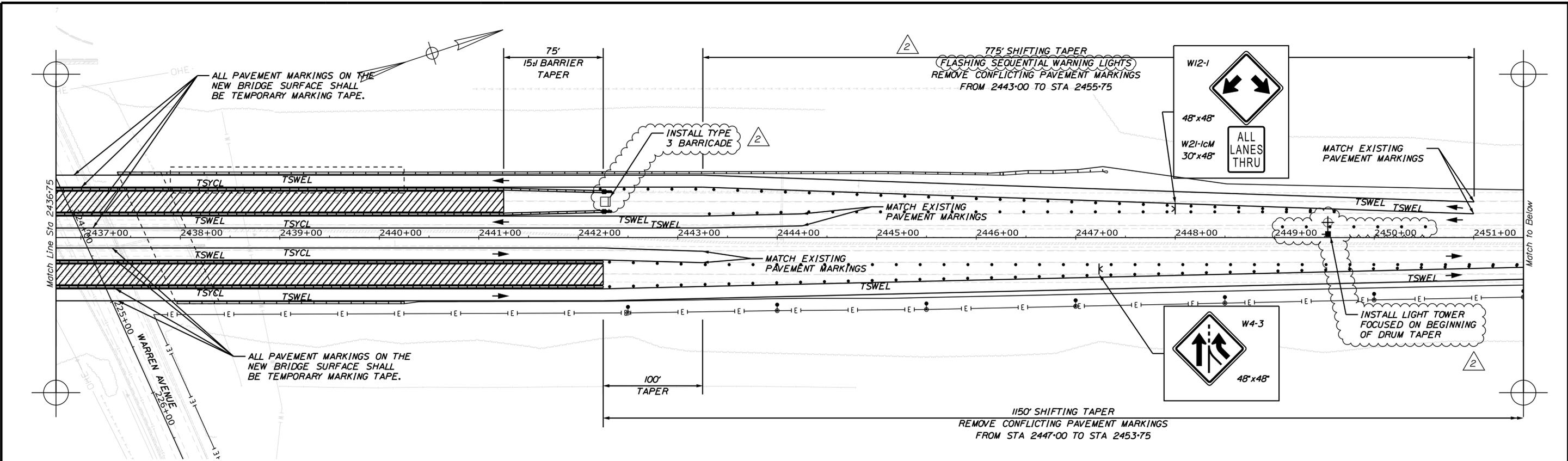
MTA PROJECT MANAGER: Ralph Norwood, IV

WARREN AVENUE OVERPASS
 BRIDGE REPLACEMENT
 MAINLINE
 TRAFFIC CONTROL PLAN PHASE 3A (2 OF 4)

VHB: 55191.01
 CONTRACT: 2019.10

SHEET NUMBER: 74
 74 OF 141

Date: 4/12/2019



Scale: 1" = 50'-0"

No.	Revision	By	Date
2	Addendum No. 2	MDS	4/19

Designed by:

CONSULTANT PROJECT MANAGER: T. Bryant			
	By	Date	
Designed	MLG	3/22/19	Checked
Drawn	JAR	3/22/19	In Charge of
			MDS
			TSB

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THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph Norwood, IV

WARREN AVENUE OVERPASS
 BRIDGE REPLACEMENT
 MAINLINE
 TRAFFIC CONTROL PLAN PHASE 3A (3 OF 4)

VHB: 55191.01
 CONTRACT: 2019.10

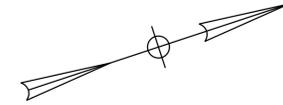
SHEET NUMBER: 75
 75 OF 141

Filename: ...MSTAD075_MainLine1CP_09.dgn

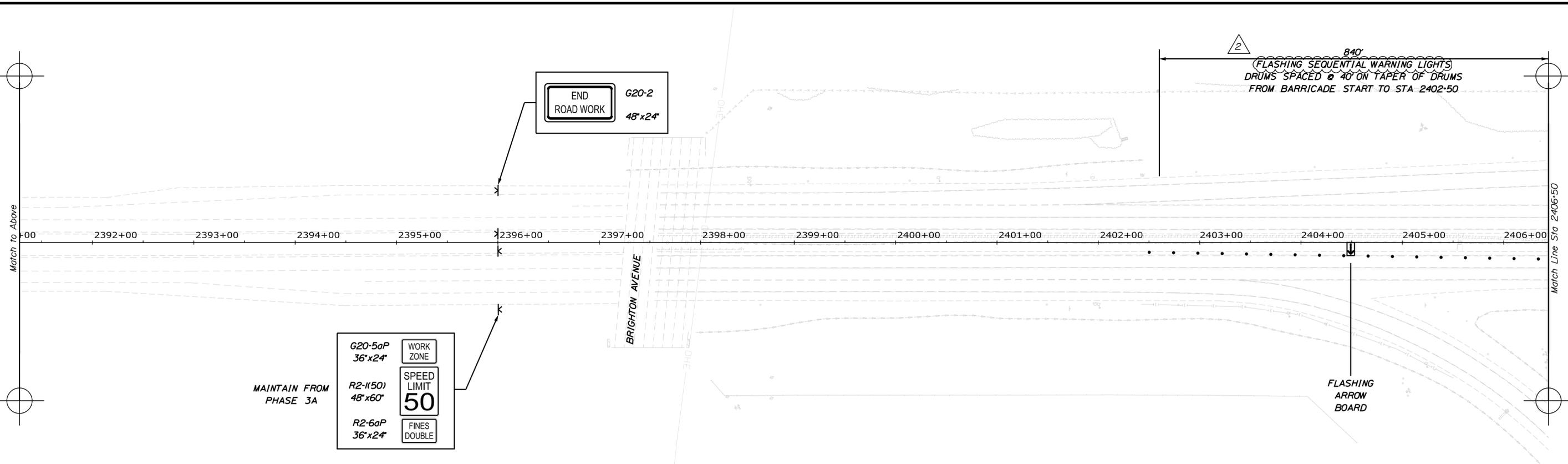
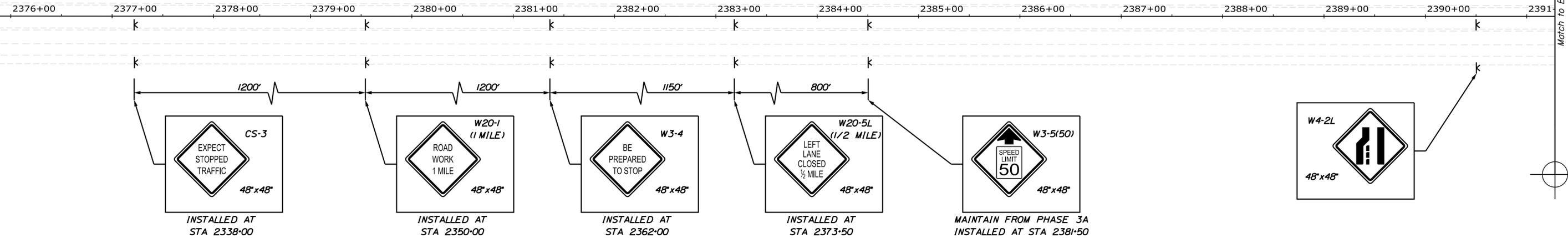
NOTE:

1. PHASE 3B HAS ONE OPEN LANE OF TRAVEL THAT MATCHES THE RIGHT LANE IN PHASE 3A.
2. PHASE 3B SHALL ONLY OCCUR AT NIGHT. SEE SPECIAL PROVISIONS FOR MORE DETAILS.
3. THE NORTH END OF THE NORTHBOUND APPROACH SHALL BE COMPLETED BEFORE THE SOUTH END OF THE NORTHBOUND BARREL TO ALLOW FOR THE REMOVAL OF BARRIER WITHOUT REPLACEMENT.
4. THE SOUTH END OF THE SOUTHBOUND APPROACH SHALL BE COMPLETED BEFORE THE NORTH END OF THE SOUTHBOUND BARREL TO ALLOW FOR THE REMOVAL OF BARRIER WITHOUT REPLACEMENT.
5. PHASE 3B SHALL OCCUR OVER ONE CONSECUTIVE WEEK.

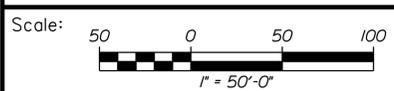
6. WORK TO OCCUR DURING PHASE 3B INCLUDES:
- ESTABLISH TEMPORARY TRAFFIC CONTROL FOR PHASE 3B
 - SAWCUT AND REMOVE PAVEMENT TO THE CROWN LINE
 - PAVE FROM CROWN LINE TO PHASE 2 PAVING LIMITS
 - RETURN TO TEMPORARY TRAFFIC CONTROL FOR PHASE 3A



Date: 4/11/2019



Filename: ...MSTA077_MainLineTCP_11.dgn



Designed by:

No.	Revision	By	Date
2	Addendum No. 2	MDS	4/19

CONSULTANT PROJECT MANAGER: T. Bryant			
	By	Date	
Designed	MLG	3/22/19	Checked
Drawn	JAR	3/22/19	In Charge of

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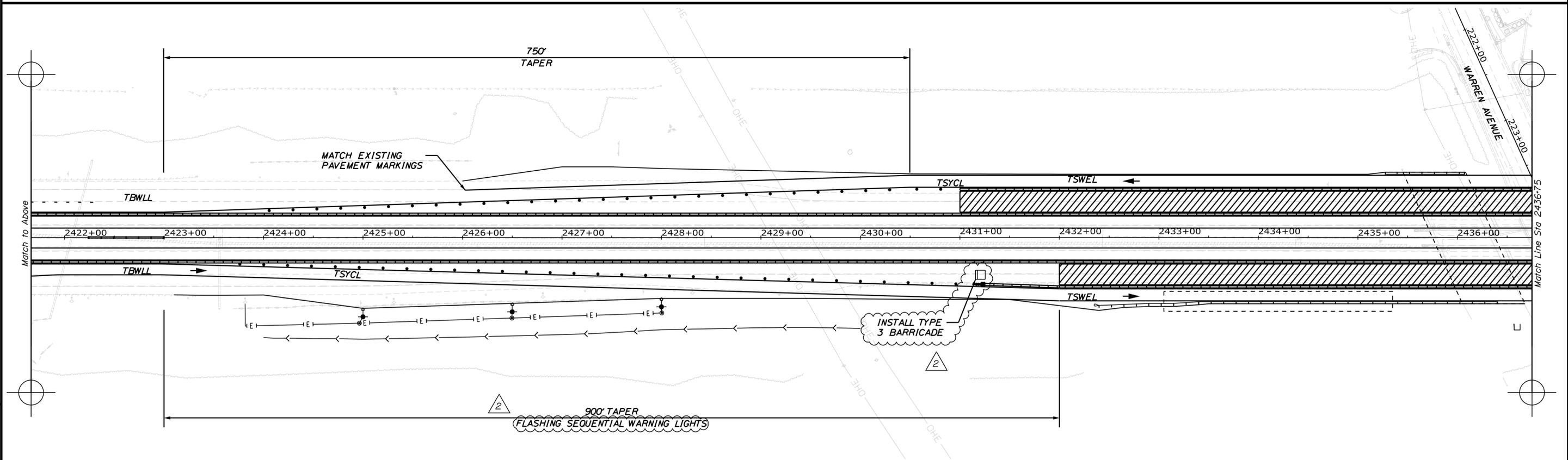
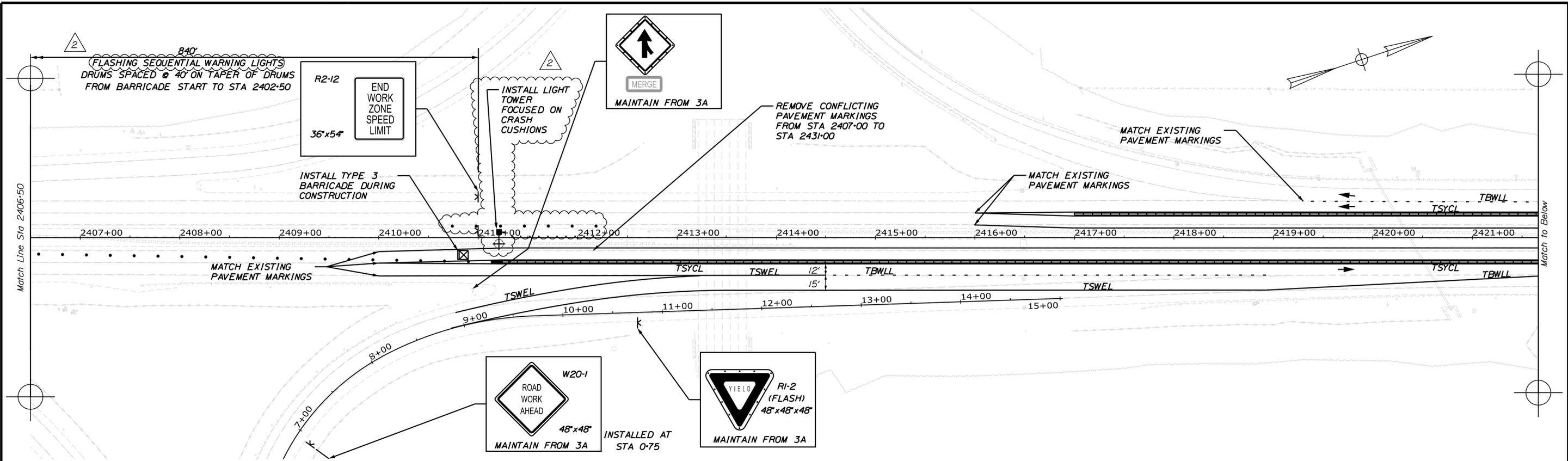
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph Norwood, IV

WARREN AVENUE OVERPASS
 BRIDGE REPLACEMENT
 MAINLINE
 TRAFFIC CONTROL PLAN PHASE 3B (1 OF 4)

VHB: 55191.01 SHEET NUMBER: 77
 CONTRACT: 2019.10 77 OF 141

Date: 4/12/2019



Scale: 1" = 50'-0"

No.	Revision	By	Date
2	Addendum No. 2	MDS	4/19

Designed by:



CONSULTANT PROJECT MANAGER: T. Bryant

	By	Date	Checked	By	Date
Designed	MLG	3/22/19		MDS	3/22/19
Drawn	JAR	3/22/19	In Charge of	TSB	3/22/19

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THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph Norwood, IV

WARREN AVENUE OVERPASS
 BRIDGE REPLACEMENT
 MAINLINE
 TRAFFIC CONTROL PLAN PHASE 3B (2 OF 4)

VHB: 55191.01
 CONTRACT: 2019.10

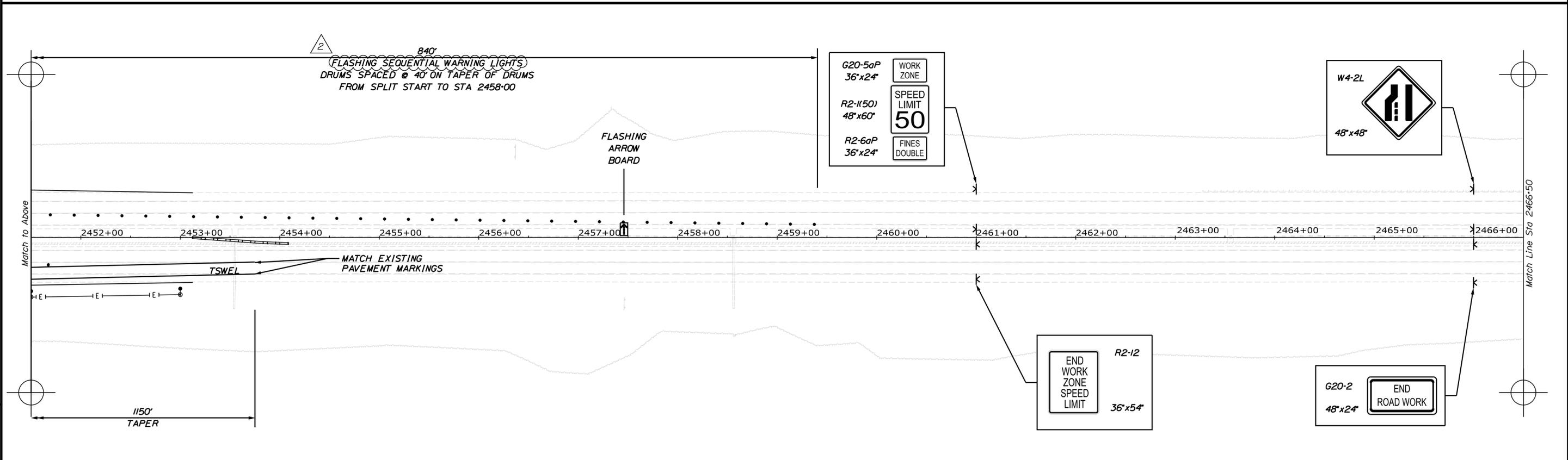
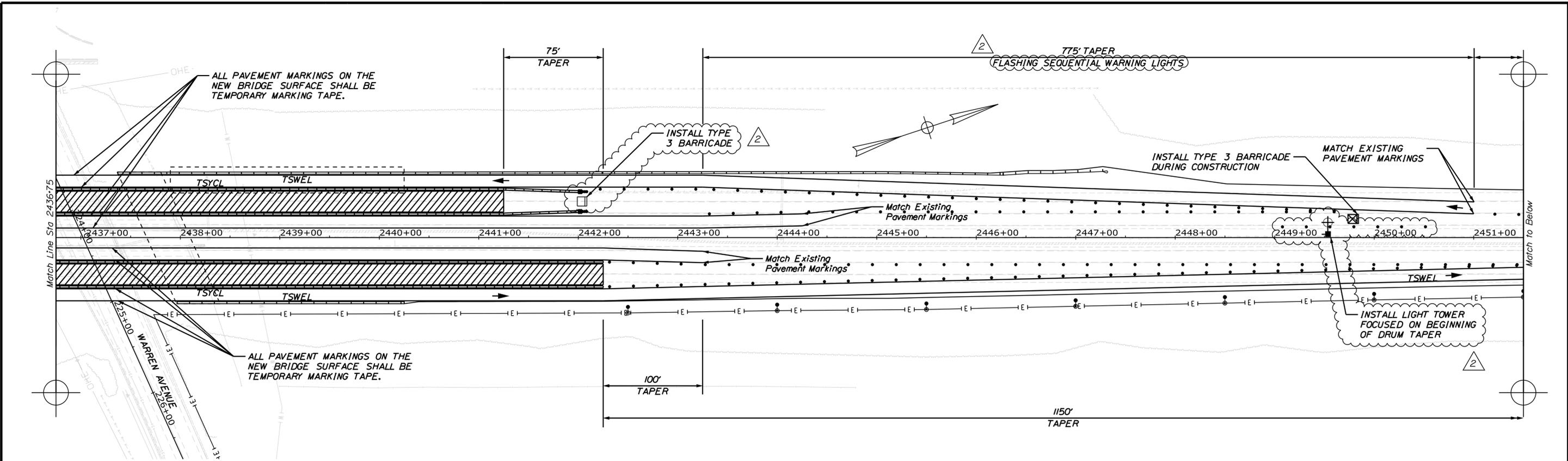
SHEET NUMBER: 78
 78 OF 141

Filename: ...MSTA078_MainLineTCP_12.dgn

Match to Below

Match to Above

Date: 4/12/2019



Filename: ...MSTA079_MainLine1CP_13.dgn

Scale: 1" = 50'-0"

No.	Revision	By	Date
2	Addendum No. 2	MDS	4/19

Designed by:



CONSULTANT PROJECT MANAGER: T. Bryant

	By	Date	Checked	By	Date
Designed	MLG	3/22/19		MDS	3/22/19
Drawn	JAR	3/22/19	In Charge of	TSB	3/22/19

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph Norwood, IV

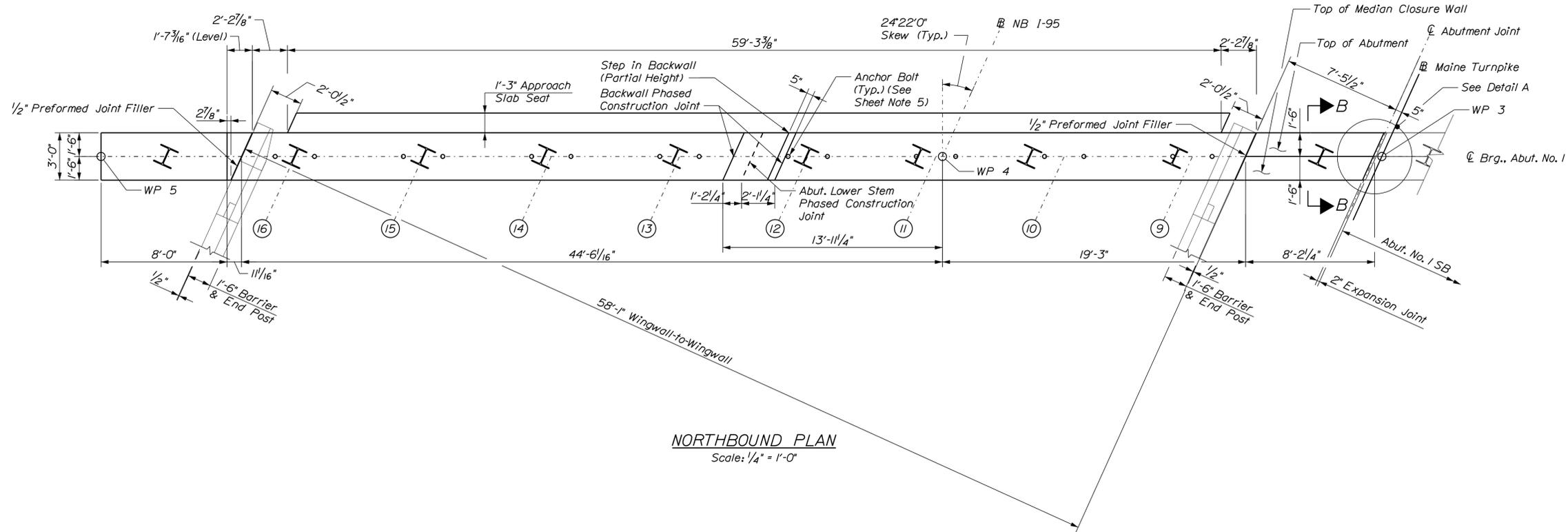
WARREN AVENUE OVERPASS
 BRIDGE REPLACEMENT
 MAINLINE
 TRAFFIC CONTROL PLAN PHASE 3B (3 OF 4)

VHB: 55191.01
 CONTRACT: 2019.10

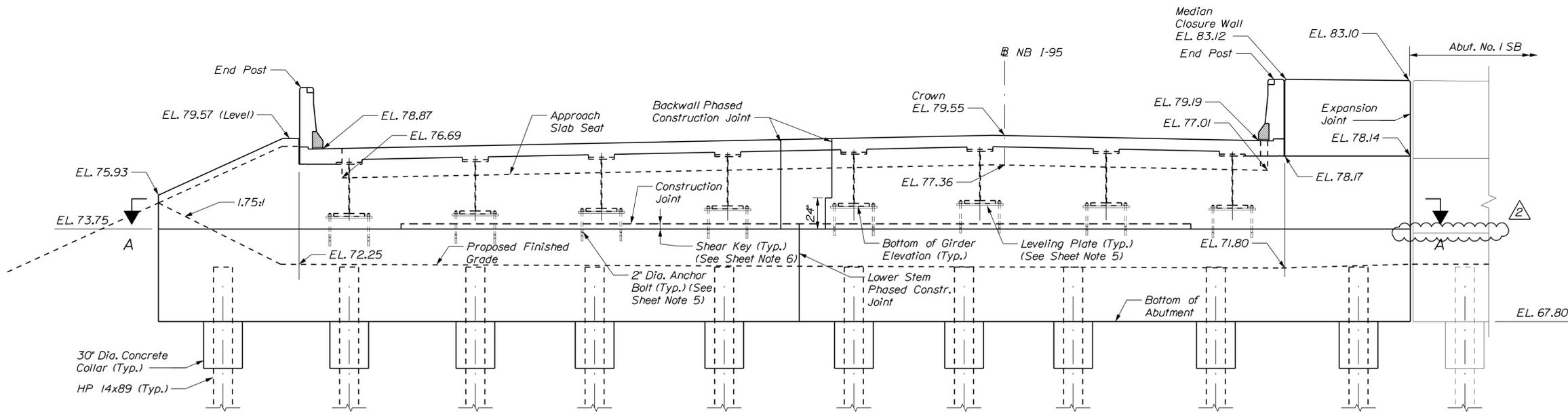
SHEET NUMBER: 79
 79 OF 141

Date: 4/16/2019

Filename: ... \BRIDGE\MST\111_NB-Abut_01.dgn



NORTHBOUND PLAN
Scale: 1/4" = 1'-0"



NORTHBOUND ELEVATION
(Pavement not shown for clarity)
Scale: 1/4" = 1'-0"

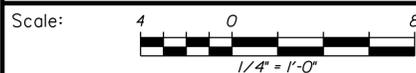
BOTTOM OF GIRDER ELEVATION @ CL BEARING							
G16	G15	G14	G13	G12	G11	G10	G9
74.52	74.65	74.78	75.91	75.03	75.18	75.01	74.84

NOTE

1. All abutment elevations are shown to near face of abutment except the top of approach slab seat and bottom of girder which are shown to far face of abutment and centerline of bearing respectively.

SHEET NOTES:

1. See Abutment Details (1 of 3) Sheet for Section A-A.
2. See Abutment Details (3 of 3) Sheet for Section B-B and Detail A.
3. See Survey Layout Sheet for Working Point (WP) Station and Coordinates.
4. See Foundation Plan Sheet for Pile Spacing.
5. See Girder Details (2 of 2) Sheet For Leveling Plate and Anchor Bolt Details.
6. See Abutment Details (1 of 3) Sheet for Shear Key Sections.



Designed by:



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**THE GOLD STAR
MEMORIAL HIGHWAY**

**WARREN AVENUE OVERPASS
BRIDGE REPLACEMENT
ABUTMENT NO. 1 PLAN
AND ELEVATION (1 OF 2)**

No.	Revision	By	Date
2	Addendum No. 2	GME	4/19

CONSULTANT PROJECT MANAGER: T. Bryant							
	By	Date	Checked	By	Date		
Designed	MED	3/22/19	In Charge of	GME	3/22/19		
Drawn	DPD	3/22/19		TSB	3/22/19		

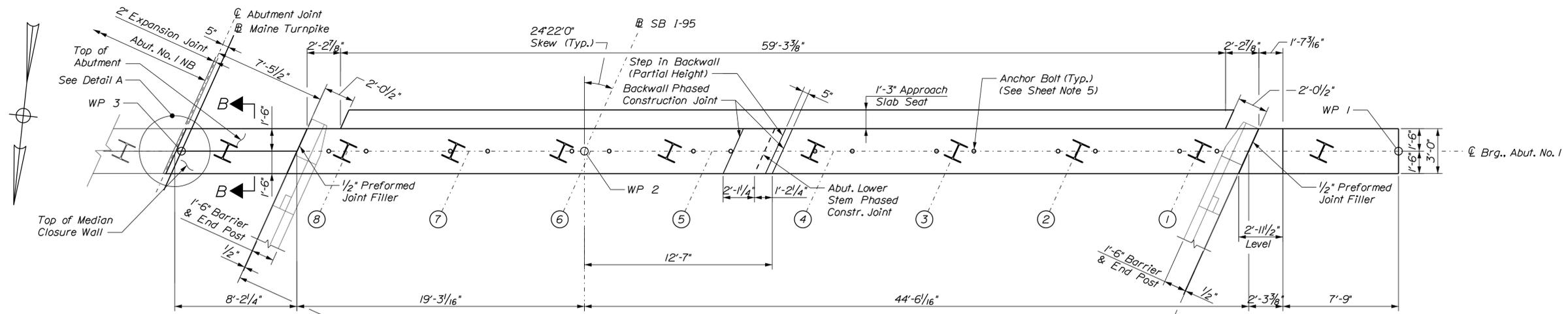
VHB: 55191.01
CONTRACT: 2019.10

SHEET NUMBER: 111

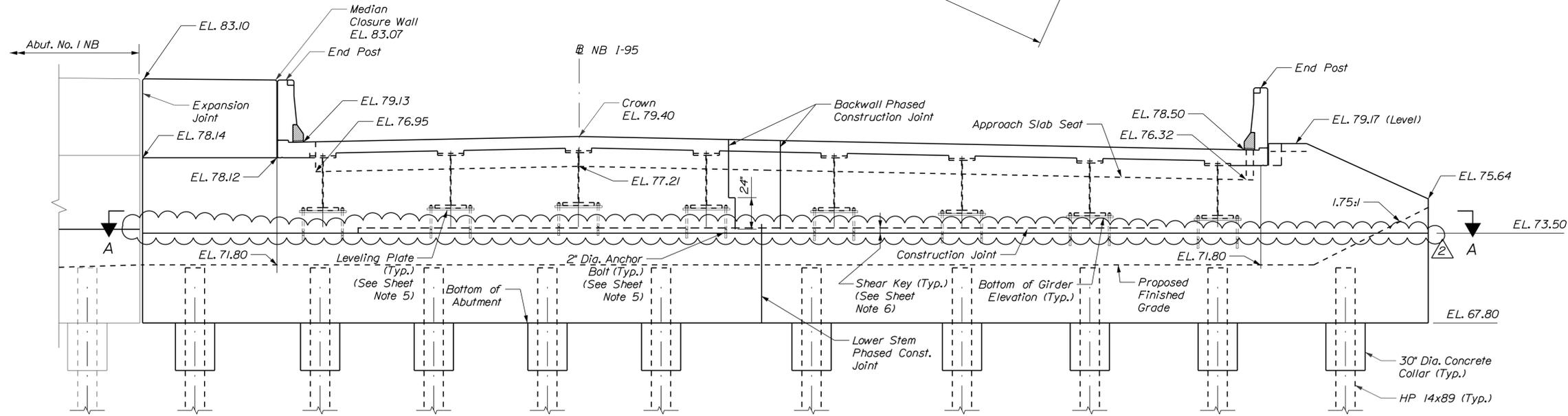
111 OF 141

Date: 4/16/2019

Filename: ... \BRIDGE\MSTAN112_SB-Abut_01.dgn



SOUTHBOUND PLAN
Scale: 1/4" = 1'-0"



SOUTHBOUND ELEVATION
(Pavement not shown for clarity)
Scale: 1/4" = 1'-0"

BOTTOM OF GIRDER ELEVATION @ CL BEARING							
G8	G7	G6	G5	G4	G3	G2	G1
74.78	74.90	75.01	74.84	74.67	74.50	74.32	74.15

NOTE
1. All abutment elevations are shown to near face of abutment except the top of approach slab seat and bottom of girder which are shown to far face of abutment and centerline of bearing respectively.

- SHEET NOTES:**
1. See Abutment Details (2 of 3) Sheet for Section A-A.
 2. See Abutment Details (3 of 3) Sheet for Section B-B and Detail A.
 3. See Survey Layout Sheet for Working Point (WP) Station and Coordinates.
 4. See Foundation Plan Sheet for Pile Spacing.
 5. See Girder Details (2 of 2) Sheet For Leveling Plate and Anchor Bolt Details.
 6. See Abutment Details (1 of 3) Sheet for Shear Key Section.



Designed by:



CONSULTANT PROJECT MANAGER: T. Bryant					
	By	Date	By	Date	
Designed	MED	3/22/19	Checked	GME	3/22/19
Drawn	DPD	3/22/19	In Charge of	TSB	3/22/19

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph Norwood, IV

**WARREN AVENUE OVERPASS
BRIDGE REPLACEMENT
ABUTMENT NO. 1 PLAN
AND ELEVATION (2 OF 2)**

VHB: 55191.01
CONTRACT: 2019.10

SHEET NUMBER: 112
112 OF 141

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
BROUGHT FORWARD:							
645.272	Regulatory, Warning and Bridge Number Signs, Type I - Supplied by Authority	Each	2				
645.511	LED Flashing Sign	Each	2				
652.30	Flashing Arrow	Each	2				
652.312	Type III Barricades	Each	8				
652.33	Drum	Each	425				
652.34	Cone	Each	100				
652.35	Construction Signs	Square Foot	2331				
652.361	Maintenance of Traffic Control Devices	Lump Sum	1				
652.38	Flaggers	Hour	160				
652.381	Traffic Officers	Hour	160				
652.391	Temporary Highway Lighting	Cal. Day	60				
652.41	Portable-Changeable Message Sign	Each	5				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
BROUGHT FORWARD:							
652.45	Truck Mounted Attenuator	Cal. Day	60				
652.452	Automated Trailer Mounted Speed Limit Sign	Each	2				
652.47	Sequential Flashing Warning Lights	Each	50				
656.50	Baled Hay, In Place	Each	50				
656.632	30 inch Temporary Silt Fence	Linear Foot	6150				
659.10	Mobilization	Lump Sum	1				
802.182	20" Class 52 DI Restrained Joint Pipe	Linear Foot	300				
802.32	Casing Spacers	Each	21				
830.279	Horizontal Directional Drilling, 18-inch HDPE Culvert	Linear Foot	140				

TOTAL:

107.4.7 Limitations of Operations

Pile driving will not be allowed within 10 feet of traffic. The two piles per abutment nearest to the phased construction joints may need to be driven at night with a temporary lane closure to meet this requirement. Other than the two piles per abutment that are nearest to the phased construction joints, there shall be no pile driving during non-daylight hours.

Traffic shall be maintained as described in Section 652.

The construction in each location shall proceed expeditiously. Once milling and/or paving operations commence, for every day/night not worked (milling or paving) when work is allowed by Contract and by weather, the Contractor will be charged a fee in the amount of \$1,000 per occurrence (excluding inclement weather days).

The Contractor will be allowed to work on both roadways at the same time. The Contractor shall complete his milling operation in one location prior to beginning his milling operation in the other location unless otherwise approved by the Resident. The paving operation shall begin within seven calendar days of all milling being complete per location. The Contractor shall complete the paving operations in one location prior to beginning his paving operation in the other location. The Contractor will not be allowed to work in two separate work areas on each roadway. The work areas are not required to be in the same lane.

The Contractor will not be permitted to place and remove temporary pavement markings on the final lift of surface pavement unless noted in the plans. The final surface lift of pavement shall be placed utilizing temporary lane closures once all concrete barrier has been removed.

The Contractor shall complete the work as shown on the phasing and maintenance of traffic plans. Modifications to the phasing or associated maintenance of traffic plans will not be permitted unless approved by the Resident.

SPECIAL PROVISION

SECTION 652

MAINTENANCE OF TRAFFIC

(Temporary Highway Lighting)

652.01 Description

This Subsection is amended by the addition of the following:

This work shall also consist of design, installation, maintenance and operation (including power), and removal of Temporary Highway Lighting in accordance with the plans and this specification. Temporary Highway Lighting shall be in place for the complete duration of Phase 3 traffic control for the through movement split at the locations shown on the Plans.

652.02 Materials

This Subsection is amended by the addition of the following:

The Temporary Highway Lighting shall consist of a temporary portable light tower, roadway luminaire mounted on temporary pole, or other system as approved by the Resident, at each location noted on the plans. If temporary portable light towers are used they shall have a minimum tower height of 30 feet. If roadway luminaires mounted on temporary poles are used they shall have a minimum mast arm mounting height of 30 feet.

If temporary poles are used, they shall be designed in accordance with the current AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals.

An independent power source shall be used for each Temporary Highway Lighting location.

652.3.4 General

This Subsection is amended by the addition of the following:

All Temporary Highway Lighting shall be in accordance with the current edition of the AASHTO Roadway Lighting Guide including, but not limited to, illumination level, brightness, and lighting orientation.

The Contractor shall insure that the Temporary Highway Lighting is installed as part of the temporary concrete barrier installation and is fully operational prior to dusk the first night that Phase 3 traffic control has been established.

The Temporary Highway Lighting shall be operational from dusk to dawn each day that Phase 3 traffic control is established. The Contractor shall insure the Temporary Highway Lighting is operating between dusk and dawn only and not operating during daylight hours.

652.7 Method of Measurement

This Subsection is amended by the addition of the following:

Temporary Highway Lighting shall be measured for payment by the calendar day for each calendar day that each location of Temporary Highway Lighting is operational in accordance with the plans and this specification. Only Temporary Highway Lighting for the Phase 3 through movement split, at the locations shown on the Plans, will be measured for payment. Any other temporary lighting for the relocation of the existing light standards or for the Contractor’s operations will not be paid for.

652.8.1 Basis of Payment

This Subsection is amended by the addition of the following:

Temporary Highway Lighting shall be measured for payment by the calendar day for each calendar day that each location of Temporary Highway Lighting is operational. This price shall include all costs associated with the Temporary Highway Lighting. Payment shall include design, installation, fuel, maintenance, operation, power, removal and all other incidentals necessary to provide Temporary Highway Lighting.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
652.391	Temporary Highway Lighting	Calendar Day

SPECIAL PROVISION

SECTION 652

MAINTENANCE OF TRAFFIC

(Specific Project Maintenance of Traffic Control for Mill and Overlay)

This Specification describes the specific project maintenance of traffic requirements for the mill and overlay sections of this Project.

The Contractor shall begin the paving operation in Lane 1 (inside passing lane), followed by Lane 2 (travel lane).

The Contractor shall secure all catch basin grates in accordance with Special Provision 604 before being allowed to shift traffic onto the outside shoulder.

The Contractor shall limit the milling operations such that temporary pavement markings or pavement markers are applied daily prior to the roadway being open to traffic.

The Contractor shall keep a 12-foot wide lane open for traffic during the milling and paving operations unless approved otherwise by the Resident.

Temporary bituminous ramps will be required at all butt joints.

Traffic will be allowed to traverse the longitudinal joint where the pavement is lower in one lane than the adjacent lane.

Section 652 – Maintenance of Traffic of the Maine Turnpike Authority 2016 Supplemental Specifications is modified as follows:

652.3.5 Installation of Traffic Control Devices

This Subsection is amended by the addition of the following after the first paragraph.

All signs shall be mounted on easels except the following which shall be mounted on NCHRP 350 approved posts, unless behind guardrail*.

- CS4-9P STAY IN LANE
- W8-11 UNEVEN LANES
- W8-15 GROOVED PAVEMENT
- W8-15P MOTORCYCLES (Graphic)

When all milled surfaces have been paved, the W8-11, W8-15, W8-15P, and CS4-9P signs shall be removed.

Drums shall not be placed in front of easel-mounted construction signs. Easel-mounted signs shall be placed adjacent to the drum line in the closed lane or shoulder, not off the edge of pavement.

652.3.6 Traffic Control

The following paragraph is added:

A Spotter shall be required at the front and rear of the paving operation on the mainline or as approved by the Resident and shall not be measured for payment. All Spotters shall be equipped with handheld radios and spare batteries. The Spotters will be required to move and maintain drums during the mobile paving operation.

The following Subsection is added:

652.62 Patrol Vehicle

The Contractor shall provide one traffic control vehicle(s) dedicated for traffic control only, with traffic coordinator(s) to be used for erecting, maintaining and dismantling lane closures as directed by the Resident. The traffic control vehicle(s) shall provide continuous patrolling (24-hours/seven days a week) when lane closures are installed (during non-work and work hours) to replace any and all damaged traffic control devices (arrow boards, variable message signs, drums, signs, etc.). The traffic coordinator(s) shall report any and all disabled motorists, accidents or other unusual occurrences to the Resident, his representative or the Turnpike Authority's communication dispatcher throughout the duration of any and all lane closures.

The traffic control vehicle shall meet the following requirements:

- a. In good mechanical condition, clean and presentable at all times.
- b. The driver of the patrol vehicle shall be equipped with a cellular phone capable of communicating with the Resident, his representative or the Turnpike Authority's communication dispatcher.
- c. The patrol vehicle shall be equipped with a mounted revolving amber light or amber strobe light capable of 360-degree visibility to meet all lighting requirements.

If the proper maintenance of traffic and proper provisions for traffic control are not being provided by the Contractor, the Authority reserves the right to assume maintenance of traffic control and deduct the cost from any money due or to become due under the Contract. The Authority also reserves the right to suspend all work until the Contractor provides the proper maintenance of traffic and provisions for traffic control to the satisfaction of the Resident.

652.7 Method of Measurement

The third paragraph is deleted and replaced with the following:

Spotters will not be measured separately for payment, but shall be incidental to Item 652.361, Maintenance of Traffic Control Devices.

The following sentences are added:

The patrol vehicle(s), driver(s), assistant(s) and cellular phone(s) will not be measured separately for payment, but shall be incidental to Item 652.361, Maintenance of Traffic Control Devices.

652.8.1 Basis of Payment

The following paragraph is added:

Maintenance of Traffic Control Devices will be paid for at the contract lump sum price. Such payment will be full compensation for all spotters and Patrol Vehicles with Drivers. Payment is full compensation for providing, relocating, maintaining or replacing, and removing temporary Traffic Control Devices.

SPECIAL PROVISION

SECTION 652

MAINTENANCE OF TRAFFIC

(Sequential Flashing Warning Lights)

652.1 Description

The following paragraphs are added:

This special provision provides for furnishing, installing, operating and maintaining Sequential Flashing Warning Lights on drums used for merging tapers and shifting tapers during night time operation for project use. The purpose of these lights is to assist the motorist in determining which direction to merge or shift and to reduce the number of late merges resulting in devices being struck and having to be reset to maintain positive guidance at the merge point. The successive flashing of the lights shall occur from the upstream end of the taper to the downstream end of the taper in order to identify the desired vehicle path.

652.1.1 Instruction and maintenance manuals shall be provided.

652.2 Materials

Sequential Flashing Warning Lights

The Sequential Flashing Warning Lights shall meet all of the requirements for warning lights within the current edition of the MUTCD.

Each light unit shall be capable of operating fully and continuously for a minimum of 500 hours when equipped with a standard battery set.

Each light in sequence shall be flashed at a rate of not less than 55 times per minutes and not more than 75 times per minute. The flash rate and flash duration shall be consistent throughout the sequence.

Sequential Flashing Warning Lights shall be “Pi-Lit” Sequential Barricade Warning Lamps or an approved equal.

652.3.2 Responsibility of the Contractor

The Contractor shall furnish the Sequential Flashing Warning Lights as described in this Special Provision for this project.

Sequential Flashing Warning lights are to be used for merging and shifting tapers that are in place during the night time hours (12-hours when ambient light is dimmed). These lights shall flash sequentially beginning with the first light and continuing until the final light at the beginning of a tangent section.

The Sequential Flashing Warning Lights shall automatically flash in sequence when placed on the drums that form the merging or shifting tapers.

The number of lights used in the drum taper shall equal one half the number of drums used in the taper.

Drums are the only channelizing device permitted for mounting the Sequential Flashing Warning Lights.

The Sequential Flashing Warning Lights shall be weather independent and visual obstruction shall not interfere with the operation of the lights.

The Sequential Flashing Warning Lights shall automatically sequence when placed in line in an open area with a distance between lights of 25 to 150 feet. A 10 foot stagger in the line of lights shall have no adverse effect on the operation of the lights.

If one light fails, the flashing sequence shall continue. Non-sequential flashing is prohibited.

652.7 Method of Measurement

Sequential Flashing Warning Lights shall be measured for payment by the maximum number of sequential flashing warning lights satisfactorily installed and properly functioning at any one time during the life of the project. Payment shall include all materials and labor to install, maintain and remove all Sequential Flashing Warning Lights.

652.8 Basis of Payment

The Sequential Flashing Warning Lights will be paid for at the Contract unit price per each. This price shall include all costs associated with furnishing, installing, operating, maintaining, relocating, and removing the Sequential Flashing Warning Lights.

<u>Pay Item</u>	<u>Pay Unit</u>
652.47 Sequential Flashing Warning Lights	Each

SPECIAL PROVISIONSECTION 652MAINTENANCE OF TRAFFIC

(Specific Project Maintenance of Traffic Requirements)

This Specification describes the specific project maintenance of traffic requirements for this Project.

The following minimum traffic requirements shall be maintained. These requirements may be adjusted based on the traffic volumes when authorized by the Authority.

Warren Avenue Traffic Control Requirements

Warren Avenue shall be maintained open with at least two lane, two-way traffic during daylight hours in accordance with the details shown on the Plans and as described in Special Provision 652, Table B. Flaggers may be used as indicated in the Special Provision 652, Flaggers. When Flaggers are present, the alternating two-way traffic shall be maintained on a single lane of at least 14 feet wide. For work that will be done below the bridge, specific traffic control plans have been developed to maintain traffic along Warren Avenue. The Contractor shall maintain full access to all existing driveways throughout construction.

For removal or installation of structural steel only, Warren Avenue in the vicinity of the bridges may be fully closed to all traffic between the hours of 10 p.m. and 5 a.m. Temporary road closures will be permitted upon submission of a written request to the Resident Engineer at least one week prior to the scheduled work. Before the roadway is reopened all materials shall be secured so they will not endanger the traffic passing underneath. A temporary detour shall be established and maintained during the Warren Avenue night time closures in accordance with the Warren Avenue Detour Plan. The detour route begins at the Warren Avenue bridge; following Warren Avenue to the Riverside Street intersection; continuing along Riverside Street to the Forest Avenue intersection; and continuing along Forest Avenue to Warren Avenue. Local (City of Portland) Traffic Officers shall be used along Warren Avenue during the roadway closures for the removal or installation of structural steel and paid for under Item 652.381. Traffic Officers along Warren Avenue used for any other purpose shall not be paid for but shall be incidental to the Maintenance of Traffic Control Devices item.

Maine Turnpike Traffic Control Requirements

This Section outlines the minimum requirements that shall be maintained for work on, over, or adjacent to the Maine Turnpike roadway. A multi-phased maintenance of traffic control plan has been developed to facilitate construction. This maintenance of traffic control maintains two lanes of travel in each direction, utilizing lane shifts with concrete barrier to isolate the work zone from the travel lanes. However, there is one sub-phase (Phase 3B) where lane closures will be required both northbound and southbound. This work may only occur at night. Turnpike lane closures shall be removed if construction is not ongoing. Unattended lane closures are not allowed.

Where traffic barrier is proposed in the maintenance of traffic control plans, the Contractor shall be responsible for snow plowing and snow removal within the work area as outlined in Section 105.4.3 of the Supplemental Specifications. The Contractor shall also be responsible for keeping the backside of the barriers clear of snow and ice to allow for drainage under the barriers away from the roadway. Winter snow removal within the contract shall be incidental to the Maintenance of Traffic Control Devices item. The Contractor shall provide, to the maximum extent possible, a minimum of six (6) feet of right-side shoulder between November 15th and April 1st during construction. Additional shoulder width shall be provided by relocating or removing concrete barrier when safe to do so as determined by the Resident Engineer. The additional relocating, resetting, and removal of concrete barrier shall be considered incidental to the applicable temporary concrete barrier item.

Loading/unloading trucks shall not be closer than six (6) feet from an open travel lane when being loaded or unloaded within the work zone. This restriction also applies to work that occurs adjacent to a concrete barrier.

Bridge work directly over traffic or within six feet of a travel lane as measured from the painted pavement marking line or traffic control device will require a lane closure. Loading/unloading trucks shall not be closer than six feet from an open travel lane when being loaded or unloaded within the work zone. This work includes but is not limited to the following:

1. Installing and removing shielding
2. Superstructure demolition
3. Unbolting structural steel
4. Removing structural steel
5. Erecting structural steel or concrete beams
6. Installing and removing deck and diaphragm forms
7. Erecting or moving sign panels on bridges
8. Bolting structural steel
9. Painting structural steel
10. Site work

When approved by the Resident, Items 3, 6 and 8 may be performed over traffic if a temporary floor is provided between the bottom flanges of the beams.

During the erection or removal of structural steel traffic shall be stopped and may be held for periods of up to 25 minutes during these operations. Before the roadway is reopened, all materials shall be secured so they will not endanger traffic passing underneath. The Contractor will reimburse the Authority at the rate of \$2,500.00 per five-minute period for each roadway not reopened (northbound and southbound), in excess of the 25 minute limit. Total penalty shall be deducted from the next pay estimate.

Night work is expected and will be permitted upon submission of a written request to the Resident Engineer at least one week prior to the scheduled work. Alternatively, the Contractor may submit a schedule for night work at least one week prior to the first night of work for review and approval by the Resident Engineer. Night work shall require a lighting plan submitted to the Resident Engineer for approval.

Shoulder Closures – General

The specific project maintenance of traffic control plans includes long-term shoulder closures with concrete barrier for the work that will occur on or adjacent to the Turnpike.

Temporary shoulder closures (without concrete barrier) shall maintain a minimum of four (4) feet of lateral buffer from an open travel lane when in place between 6:00 a.m. and 9:00 a.m. and between 3:00 p.m. and 6:00 p.m. During July and August, the four-foot minimum lateral buffer applies from 6:00 a.m. to 8:00 p.m.

Temporary lane closures are expected and will be permitted upon submission of a written request to the Resident Engineer at least one week prior to the scheduled lane closure. Temporary lane closures that would restrict travel to one lane in either direction shall be conducted at night in accordance with the limitations shown in Table A below. Travel lanes may not be impeded by traffic control devices until the time frames specified for each activity. Supplemental liquidated damages shall be assessed at \$1,000/minute for every minute that a temporary lane closure is in place outside of the times presented in Table A.

Construction vehicles that merge with Turnpike mainline traffic shall not impede the flow of traffic along the Turnpike. Construction vehicles are prohibited from merging with Turnpike mainline traffic during peak hours, to be defined as Monday through Friday between 7:30 a.m. and 8:30 a.m. in the southbound direction and between 4:00 p.m. and 6:00 p.m. in the northbound direction.

There shall be no temporary lane or shoulder closures permitted along the Turnpike over the following dates:

- May 24-28, 2019
- July 3-8, 2019
- August 30-September 3, 2019
- October 11-15, 2019
- November 27-December 2, 2019
- May 29-June 1, 2020
- July 3-6, 2020
- September 4-8, 2020
- October 10-14, 2020

TABLE A: WARREN AVENUE OVERPASS (MM 49.00)

Turnpike Mainline Northbound April 15, 2019 to May 23, 2019 September 3, 2019 to May 28, 2020 September 8, 2020 to November 20, 2020			
		Turnpike Single Lane Closures	Removing / Erecting Structural Steel
Days of Week:	Sunday p.m. through Friday a.m.		
Time of Day:	7:30 p.m. to 6:00 a.m. next day	Allowed	
Time of Day:	10:00 p.m. to 5:00 a.m. next day	Allowed	Allowed
Days of Week:	Friday p.m. through Saturday a.m.		
Time of Day:	9:00 p.m. to 8:00 a.m. next day	Allowed	
Time of Day:	10:00 p.m. to 5:00 a.m. next day	Allowed	Allowed
Days of Week:	Saturday p.m. through Sunday a.m.		
Time of Day:	6:30 p.m. to 11:00 a.m. next day	Allowed	
Time of Day:	10:00 p.m. to 5:00 a.m. next day	Allowed	Allowed

Turnpike Mainline Southbound April 15, 2019 to May 23, 2019 September 3, 2019 to May 28, 2020 September 8, 2020 to November 20, 2020			
		Turnpike Single Lane Closures	Removing / Erecting Structural Steel
Days of Week:	Sunday p.m. through Friday a.m.		
Time of Day:	7:30 p.m. to 6:00 a.m. next day	Allowed	
Time of Day:	10:00 p.m. to 5:00 a.m. next day	Allowed	Allowed
Days of Week:	Friday p.m. through Saturday a.m.		
Time of Day:	7:00 p.m. to 8:00 a.m. next day	Allowed	
Time of Day:	10:00 p.m. to 5:00 a.m. next day	Allowed	Allowed
Days of Week:	Saturday p.m. through Sunday a.m.		
Time of Day:	6:30 p.m. to 9:00 a.m. next day	Allowed	
Time of Day:	10:00 p.m. to 5:00 a.m. next day	Allowed	Allowed

Turnpike Mainline, Northbound and Southbound May 24, 2019 to July 2, 2019 May 29, 2020 to July 2, 2020			
		Turnpike Single Lane Closures	Removing / Erecting Structural Steel
Days of Week:	Sunday p.m. through Friday a.m.		
Time of Day:	7:30 p.m. to 6:00 a.m. next day	Allowed	
Time of Day:	10:00 p.m. to 5:00 a.m. next day	Allowed	Allowed
Days of Week:	Friday p.m. through Saturday a.m.		
Time of Day:	8:00 p.m. to 8:00 a.m. next day	Allowed	
Time of Day:	10 p.m. to 5:00 a.m. next day	Allowed	Allowed
Days of Week:	Saturday p.m. through Sunday a.m.		
Time of Day:	8:30 p.m. to 9:00 a.m. next day	Allowed	
Time of Day:	10:00 p.m. to 5:00 a.m. next day	Allowed	Allowed

Turnpike Mainline, Northbound and Southbound July 3, 2019 to September 2, 2019 July 3, 2020 to September 7, 2020			
		Turnpike Single Lane Closures	Removing / Erecting Structural Steel
Days of Week:	Sunday p.m. through Friday a.m.		
Time of Day:	10:00 p.m. to 6:00 a.m. next day	Allowed	
Time of Day:	10:00 p.m. to 5:00 a.m. next day	Allowed	Allowed
Days of Week:	Friday p.m. through Saturday a.m.		
Time of Day:	10:00 p.m. to 8:00 a.m. next day	Allowed	
Time of Day:	10:00 p.m. to 5:00 a.m. next day	Allowed	Allowed
Days of Week:	Saturday p.m. through Sunday a.m.		
Time of Day:	8:30 p.m. to 9:00 a.m. next day	Allowed	
Time of Day:	10:00 p.m. to 5:00 a.m. next day	Allowed	Allowed

TABLE B: WARREN AVENUE - FLAGGING

Warren Avenue March 11, 2019 to November 15, 2020		
		Reduce Traffic to Single Lane using Flaggers
Days of Week:	Sunday p.m. through Friday a.m.	
Time of Day:	7:00 p.m. to 6:00 a.m. next day	Allowed
Days of Week:	Monday through Friday (daytime)	
Time of Day:	9:00 a.m. to 3:30 p.m.	Allowed

652.7 Method of Measurement

The following paragraph is added:

Traffic control devices required to complete the work will be measured for payment under their respective pay items. Installation, maintenance, and removal of traffic setups, the Contractor's dedicated traffic employee, the use of Flaggers for the Contractor's convenience, and the winter maintenance of the traffic control through the concrete barrier sections will not be measured separately for payment, but shall be incidental to Item 652.361, Maintenance of Traffic Control Devices.