

Aesthetic Design Guide



Aesthetic Design Guide

Introduction

The Monroe Parkway Aesthetic Design Guide was produced for the North Carolina Turnpike Authority and is intended for use as a guide to the Design/Build process that will construct the Monroe Parkway. This document addresses only the aesthetic elements of the corridor. These elements include the following:

- Bridges, Abutments, and Piers
- Toll Gantries
- Sound Walls
- Sign Structures
- Coatings and Textures

A summary matrix of all roadway features, treatments, colors and textures can be found in the materials schedule at the end of the document. All proprietary names in the schedule indicate the basis of design only.

How to Use this Guide

This document is to be used as supplemental information to the Preliminary Engineering documents produced for the Design/Build bidding process. It is intended to provide the aesthetic treatment of the elements listed above which may not be shown in the Preliminary Engineering documents. These drawings are a guide to define the final design of the roadway elements. Final designs and structural requirements are the responsibility of the Design Builder.

Aesthetic Design Process

The design process involved in creating this document included an analysis of the corridor to gather design forms, themes, and patterns. Working with a team of corridor stakeholders and the North Carolina Turnpike Authority, a Regional Architecture theme was selected from a series of design alternatives. The Regional Architecture theme is incorporated in all elements that require aesthetic treatment.

How this Guide was created

This document was created in close coordination with the Preliminary Engineering documents and budget. A regional Constructability Team reviewed the preliminary aesthetic design document and provided suggestions which addressed the constructability, maintainability, and affordability of the aesthetic treatments. This final document incorporates the Constructability Team comments and suggestions as well as input from the North Carolina Turnpike Authority.

Table of Contents

1 BRIDGES AND RETAINING WALLS

Bridge Elements Table	1-2
Monroe Parkway Major Bridge (Local Road Over)	
Major Bridge - Elevation Rendering	1-3
Major Bridge - Perspective 1	1-4
Major Bridge - Perspective 2	1-5
Major Bridge - Plan View	1-6
Major Bridge - Elevation and Sections	1-7
Major Bridge - Details	1-8
Monroe Parkway Major Bridge over Stallings Road	
Major Bridge - Perspective	1-9
Monroe Parkway Intermediate Bridge (Local Road Under)	
Intermediate Bridge - Elevation Rendering	1-10
Intermediate Bridge - Plan View	1-11
Intermediate Bridge - Elevation and Section	1-12
Monroe Parkway Minor Bridge (Local Road Under)	
Minor Bridge - Elevation Rendering	1-13
Minor Bridge - Elevation and Section	1-14

2 TOLL GANTRIES

Monroe Parkway Gantries

Gantry Elevation Rendering	2-2
Gantry Axonometric View	2-3
Gantry Plan View	2-4
Gantry Elevation	2-5

3 SOUND WALLS

Sound Wall - Elevation Renderings	3-2
Sound Wall Axonometric Detail Views	3-3
Sound Wall Axonometric View	3-4
Plan View and Elevation (Corner End and 16' Flat Condition)	3-5
Plan View and Elevation (8',20' Flat and Stepped Condition)	3-6

4 SIGN STRUCTURES

Signage Elevations	4-2
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5 APPENDIX

Materials Schedule	5-2 to 5-3
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1	Monroe Parkway
	Bridges and Retaining Walls

Bridge Elements Table

Note: Bridge dimensions and over/under conditions are preliminary and subject to change

			Location	Type	Span Length*	Width*	Vertical Clearance	Structure Depth*	Major Rd	Intermediate Rd	Minor Rd	Ped. Fence	Free Standing Pylon	Decorative Pilaster	Bridge Abutment Type	Bridge Underside Treatment
Typical 1	US 74 EB	under	SRRT	Single Span	135'	75'	16'-6"	7'-3"			mi				Returned	Smooth Texture
	US 74 WB	under	SRRT	Single Span	50'	35'	16'-6"	4'-8"			mi				Returned	Smooth Texture
	Parkway	over	Willis Long Rd	Dual Bridges Single Span	33'	50'	15'	4'			mi				Returned	Smooth Texture
	Parkway	over	Roanoke Church Rd	Dual Bridges Single Span	35'	48'	15'	4'			mi				Returned	Smooth Texture
	Parkway	over	Olive Branch Rd	Dual Bridges Single Span	50'	55'	15'	4'-8"			mi				Returned	Smooth Texture
	Parkway	over	Monroe Ansonville Rd	Dual Bridges Single Span	45'	55'	15'	4'			mi				Returned	Smooth Texture
	Parkway	over	Faith Church Road	Dual Bridges Single Span	40'	48'	15'	4'			mi				Returned	Smooth Texture
	Parkway	over	Secrest Short Cut Road	Dual Bridges Single Span	50'	48'	15'	4'-8"			mi				Returned	Smooth Texture
Typical 2	Parkway	under	Stinson Hartis Rd	Single Bridge Double Spans	100' and 100'	38'	16'-6"	6'-3"			mi	Yes			Returned	Smooth Texture
	Parkway EB	over	Indian Trail Fairview Rd	Single Bridge Double Spans	45' and 45'	58'	15'	4'		Int		Yes		Yes	Returned	Smooth Texture
	Parkway WB	over	Indian Trail Fairview Rd	Single Bridge Double Spans	45' and 45'	50'	15'	4'		Int				Yes	Returned	Smooth Texture
	KLB	over	Indian Trail Fairview Rd	Single Bridge Double Spans	45' and 45'	28'	15'	4'		Int		Yes		Yes	Returned	Smooth Texture
	Parkway	under	Unionville-Indian Trail Rd	Single Bridge Double Spans	71' and 71'	85'	16'-6"	5'-5"	Ma			Yes	Yes		Returned	Brick Texture
	Parkway	under	Fowler Rd	Single Bridge Double Spans	115' and 115'	35'	16'-6"	6'-11"			mi				Returned	Smooth Texture
	Parkway	under	Deese Rd	Single Bridge Double Spans	75' and 75'	32'	16'-6"	5'-5"			mi				Returned	Smooth Texture
	Parkway	under	Old Williams Rd	Single Bridge Double Spans	90' and 90'	35'	16'-6"	5'-5"			mi				Returned	Smooth Texture
	Parkway	under	Rocky River Rd	Single Bridge Double Spans	70' and 70'	30'	16'-6"	5'-5"	Ma			Yes	Yes		Returned	Brick Texture
	Parkway	over	US 601	Dual Bridges Double Spans	52' and 65'	55'	16'-6"	4'-8"		Int		Yes		Yes	Returned	Smooth Texture
Parkway	under	Morgan Mill Rd	Dual Bridges Double Spans	75' and 85'	37'	16'-6"	5'-5"		Int		Yes		Yes	Returned	Smooth Texture	
Parkway	under	Ansonville Road	Single Bridge Double Spans	72' and 72'	30'	16'-6"	5'-5"			mi				Returned	Smooth Texture	
Typical 3	Parkway	under	Austin Chaney Rd	Single Bridge Triple Spans	102', 87' and 65'	60'	16'-6"	6'-3"	Ma			Yes	Yes		Returned	Brick Texture
	Parkway	under	Forest Hills School Rd	Single Bridge Triple Spans	72', 72', and 58'	50'	16'-6"	5'-5"			mi				Returned	Smooth Texture
Typical 4	Parkway	over	US 74 WB	Single Span	135'	115'	16'-6"	7'-3"			mi	Yes			Returned	Smooth Texture
Typical 5	Parkway	over	Stallings Rd (Texas U-Turn Rd)	Single Bridge Double Spans	75' and 120'	118'	15'	6'-11"	Ma			Yes	Yes		Returned	Brick Texture
Typical 6	Parkway	over	McKee Rd	Single Bridge Double Spans	55' and 85'	124'	15'	5'-5"			mi				Returned	Smooth Texture
Typical 7	Parkway	over	Railroad and US 74	Dual Bridges with Four Spans	100', 100', 100', 100'	55'	23'	6'-3"			mi	Yes			Returned	Smooth Texture
Typical 8	Parkway	over	McIntyre Road (and wetland)	Dual Bridges with Seven Spans	105' each	48' and 60'	15' (over road)	6'-3"			mi				Returned	Smooth Texture

- Notes:
1. SRRT = Service Road Right
 2. KLB = Interchange K Loop B
 3. * = These dimensions are preliminary and subject to change
 4. Verical Clearances shown are minimum.

Monroe Parkway Major Bridge (Local Road Over)



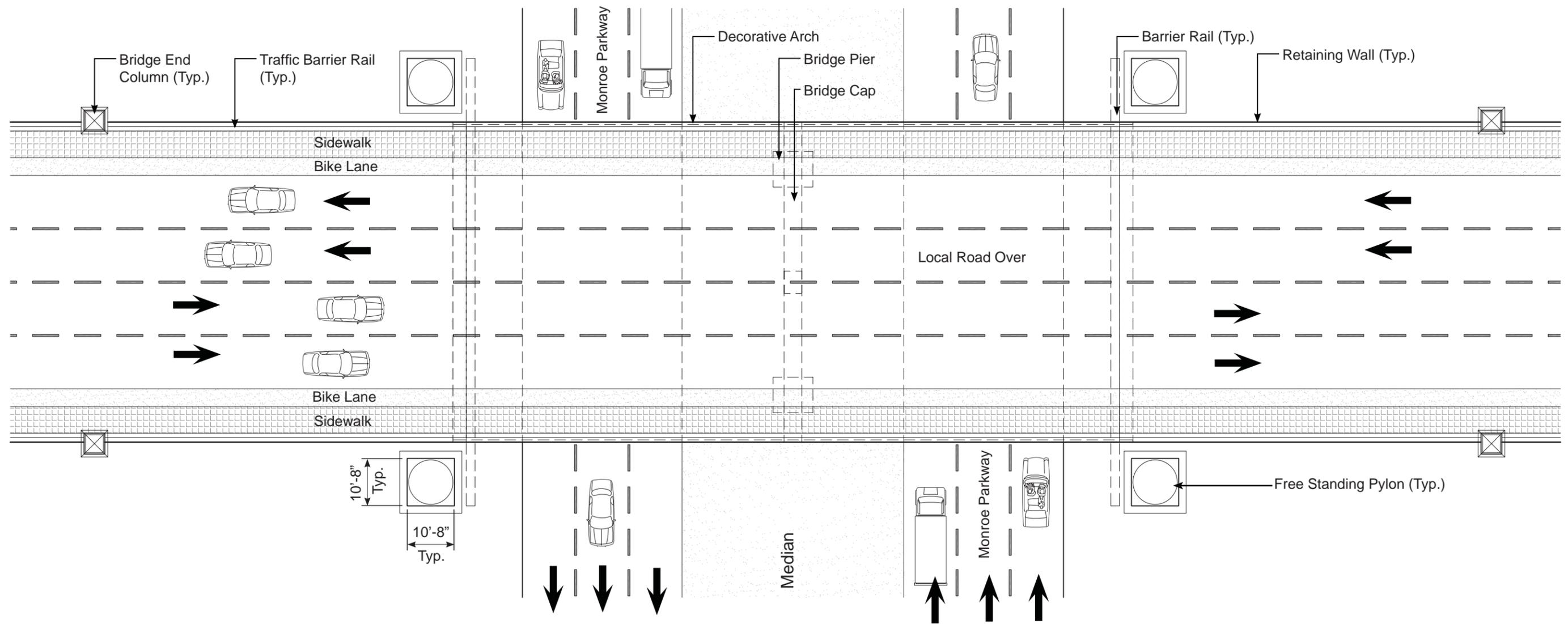
Monroe Parkway Major Bridge (Local Road Over)



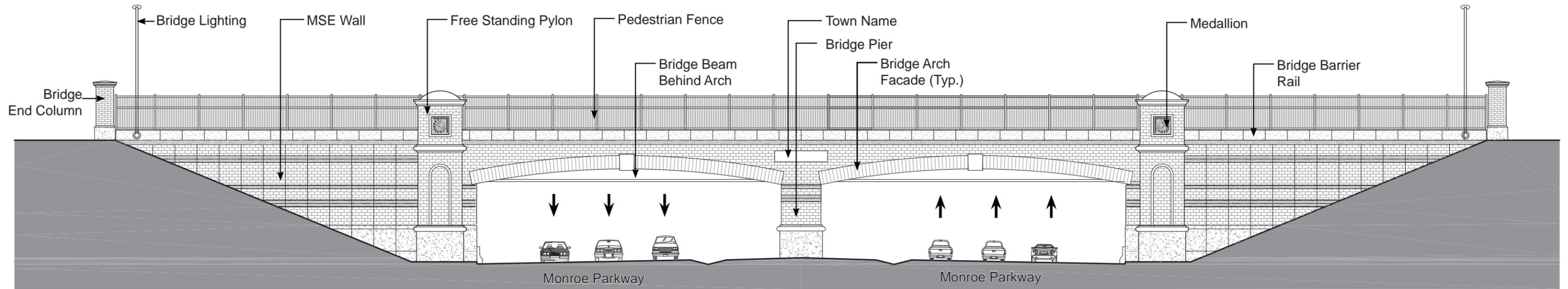
Monroe Parkway Major Bridge (Local Road Over)



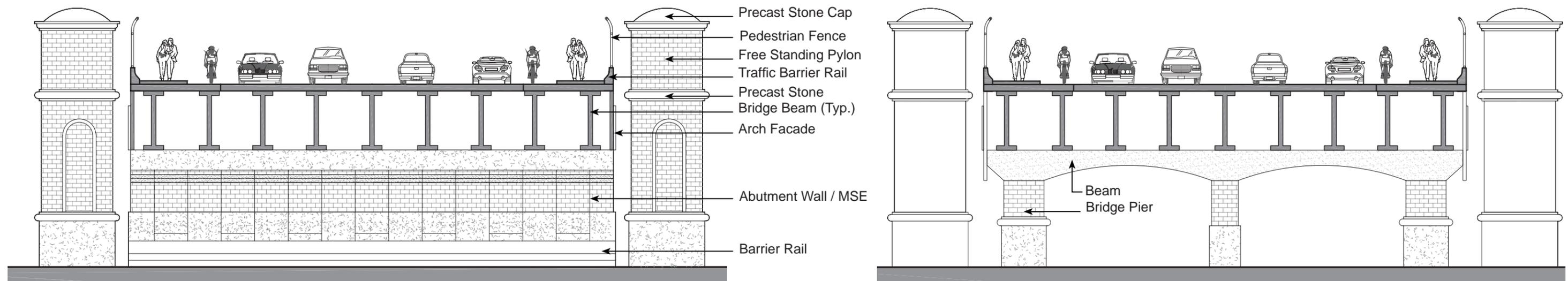
Monroe Parkway Major Bridge (Local Road Over) - Plan View



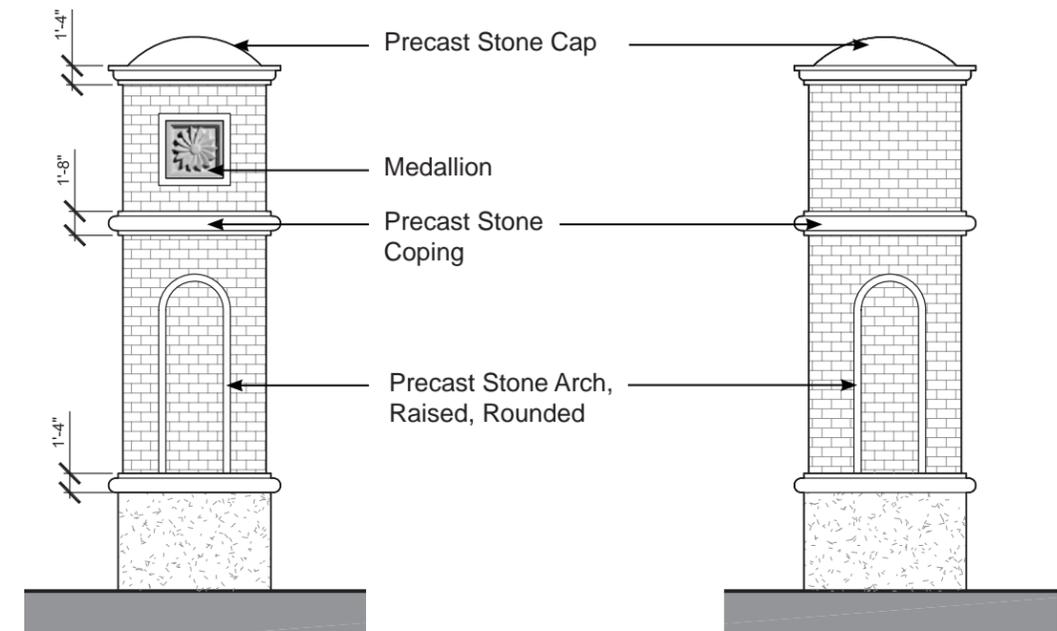
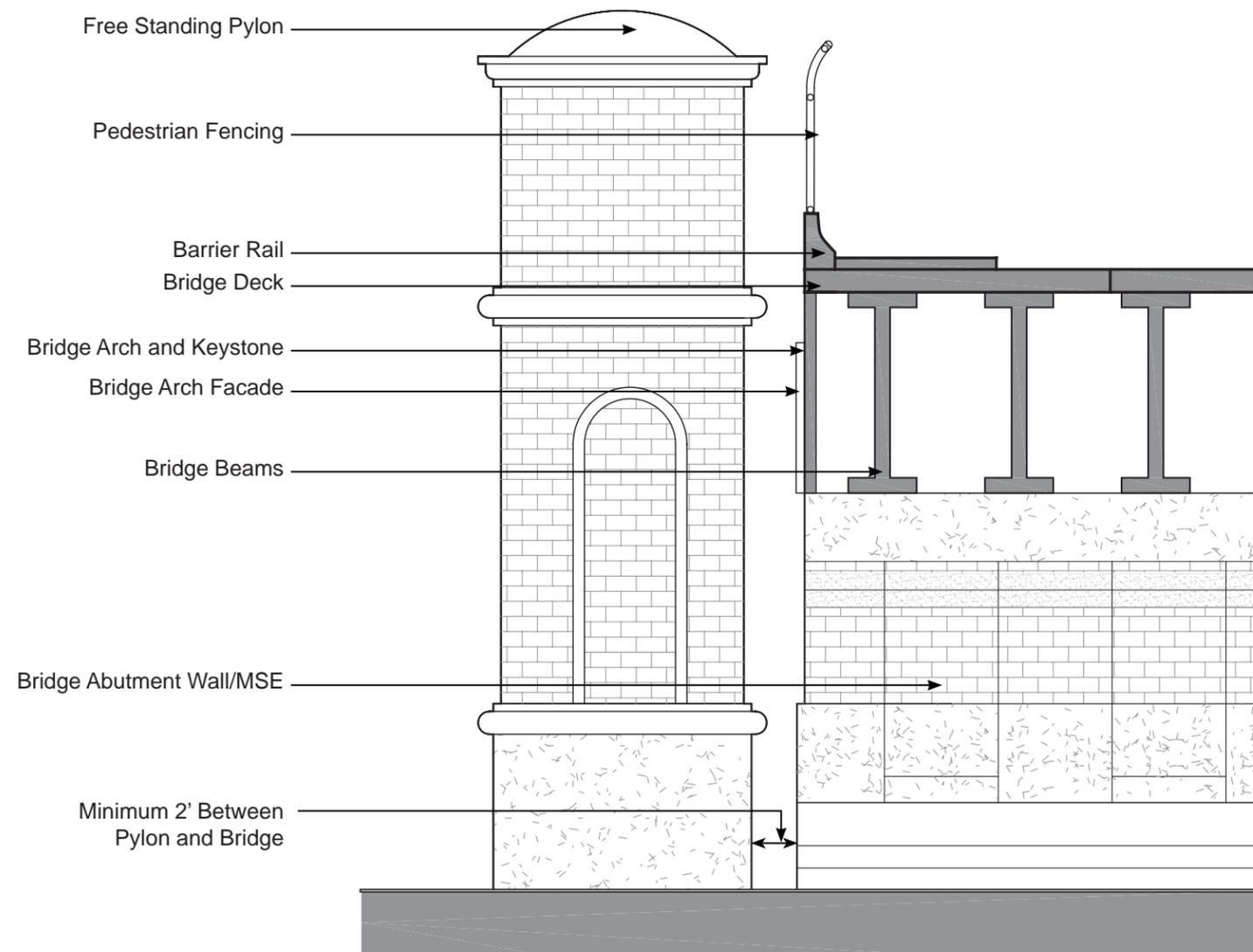
Monroe Parkway Major Bridge - Elevation



Monroe Parkway Major Bridge - Section

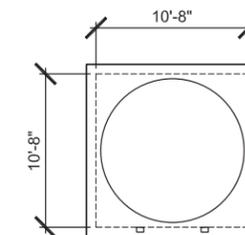


Monroe Parkway Major Bridge (Local Road Over) - Details



Pylon Front Elevation

Pylon Side Elevation



Pylon Plan View

Monroe Parkway Major Bridge (Monroe Parkway Over Stallings Road)

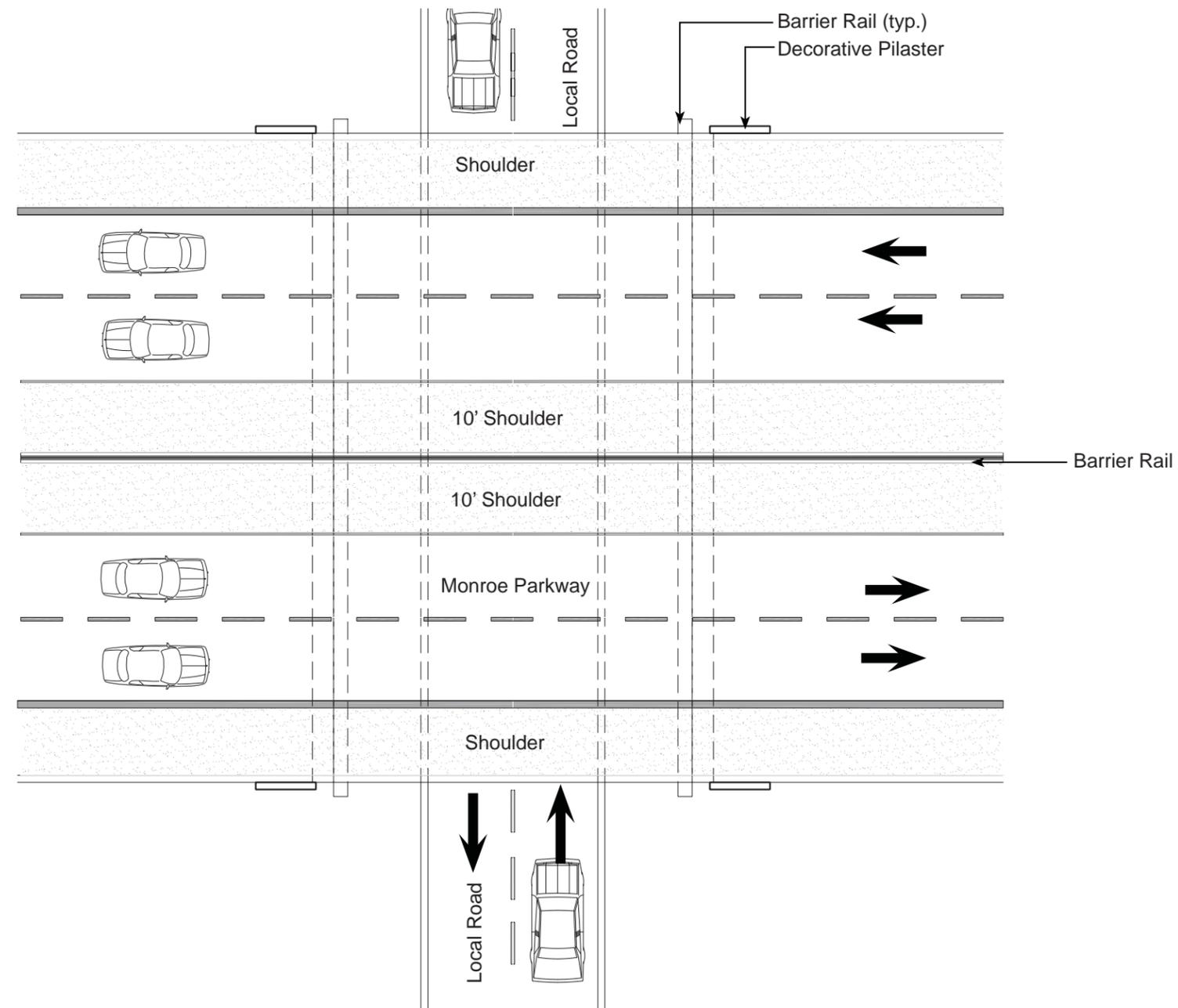
Note: Illustration shows a triple arch aesthetic applied to the proposed intersection design. Walls adjacent to Bus. 74 will have decorative pilasters at approximately 150' O.C.



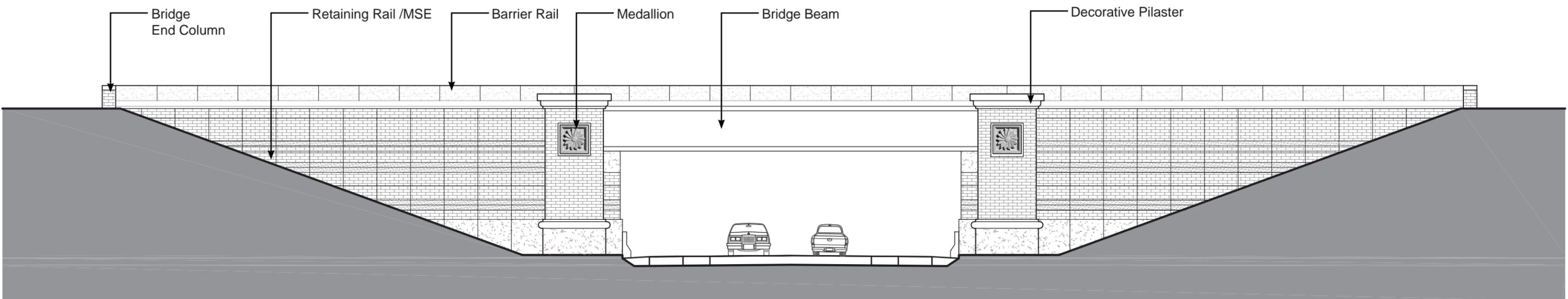
Monroe Parkway Intermediate Bridge (Local Road Under)



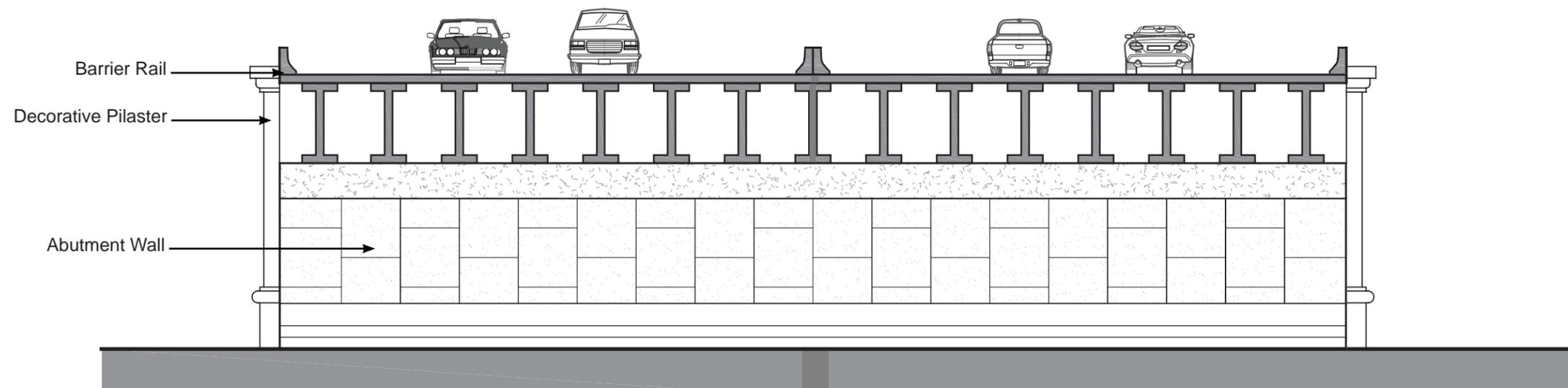
Monroe Parkway Intermediate Bridge - Plan View



Monroe Parkway Intermediate Bridge (Local Road Under) - Elevation



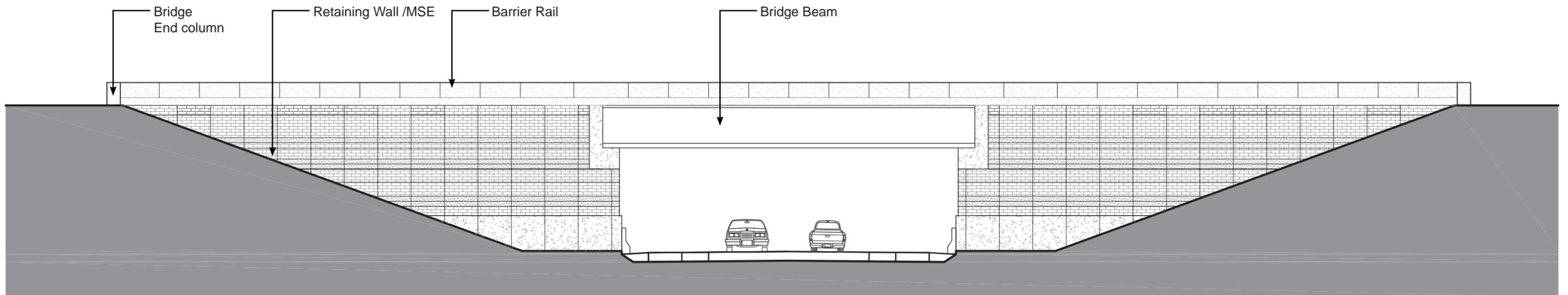
Monroe Parkway Intermediate Bridge (Local Road Under) - Section



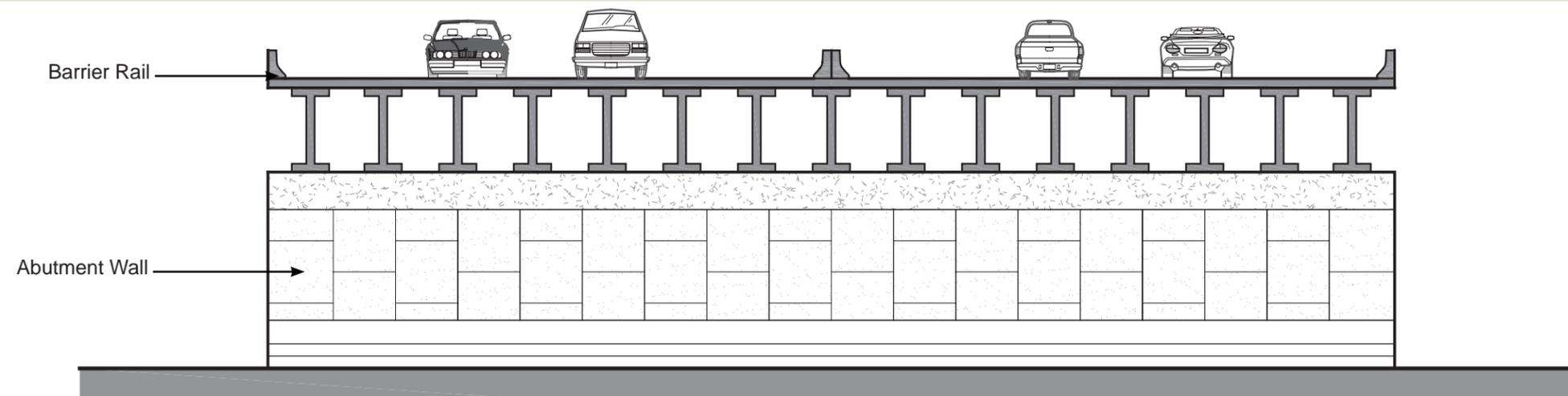
Monroe Parkway Minor Bridge (Local Road Under)



Monroe Parkway Minor Bridge (Local Road Under) - Elevation



Monroe Parkway Minor Bridge (Local Road Under) - Section

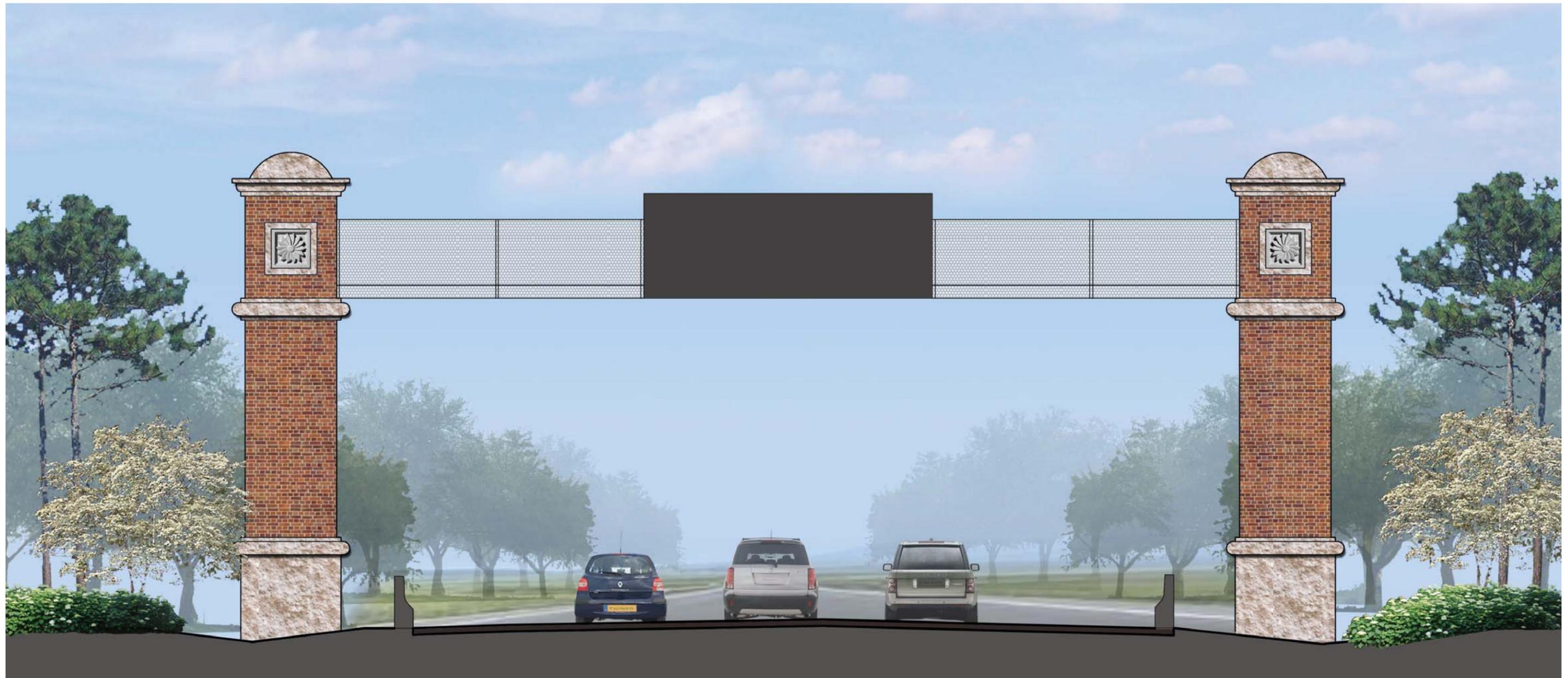


2

Monroe Parkway

Toll Gantries

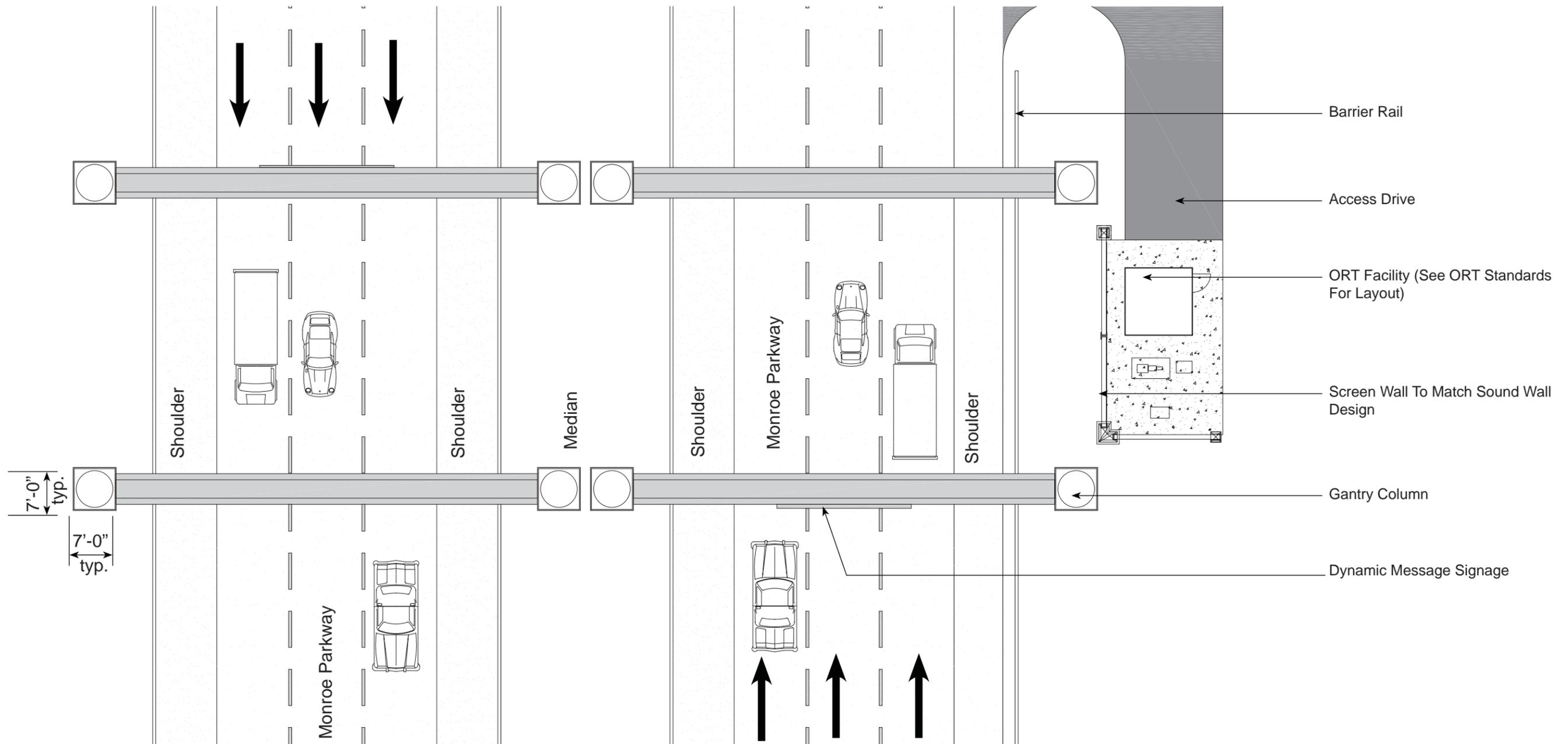
Monroe Parkway Gantry



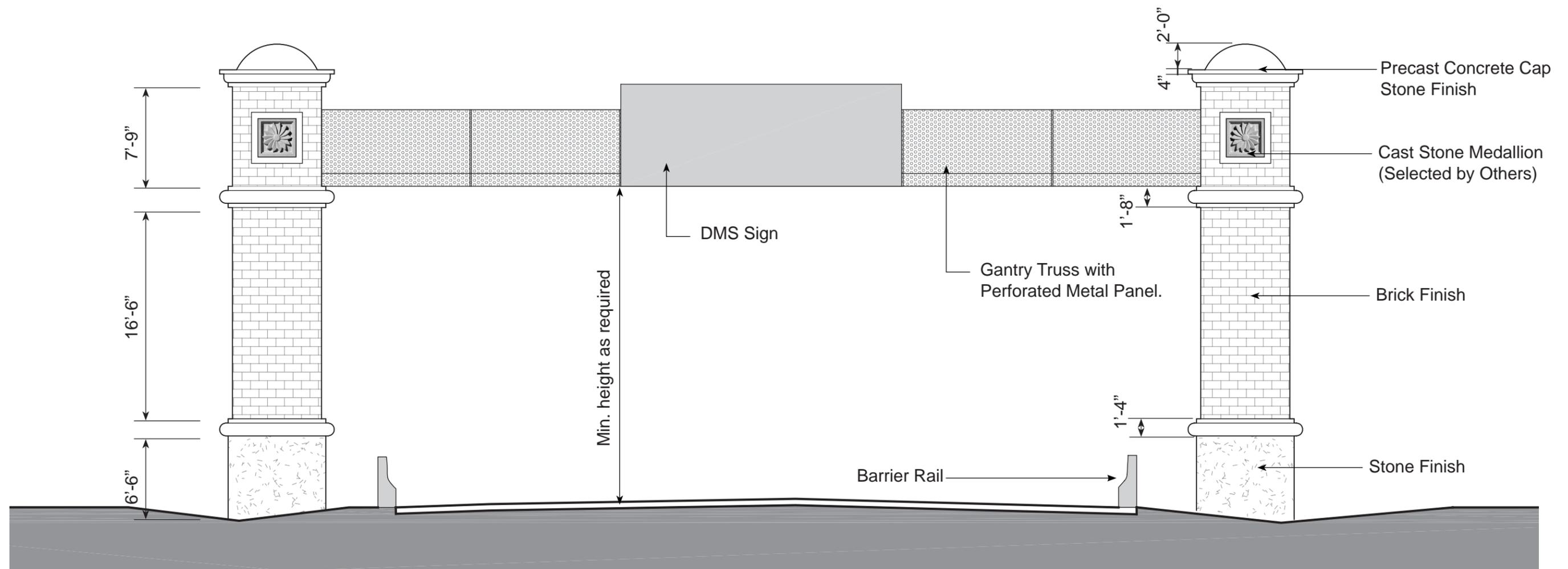
Monroe Parkway Gantry



Monroe Parkway Gantry - Plan View



Monroe Parkway Gantry - Elevation



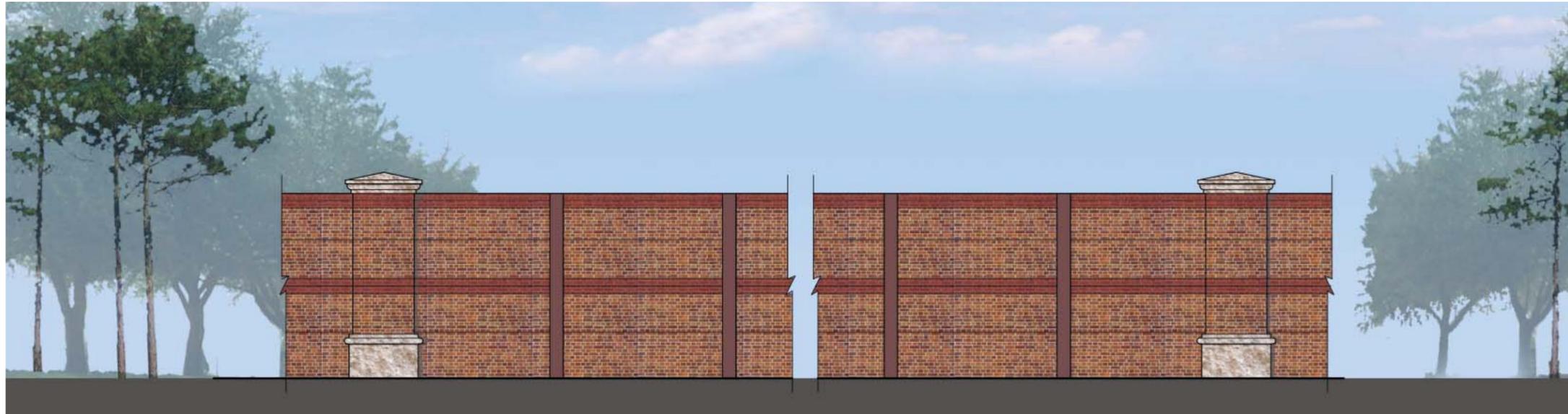


3

Monroe Parkway

Sound Walls

Monroe Parkway 16' Tall Sound Wall Elevation



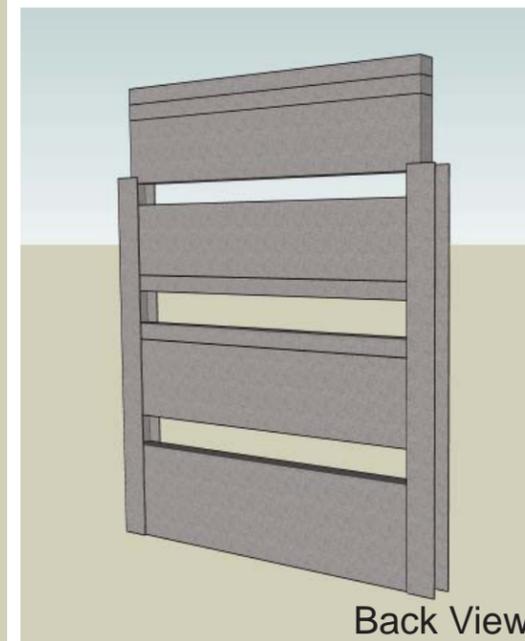
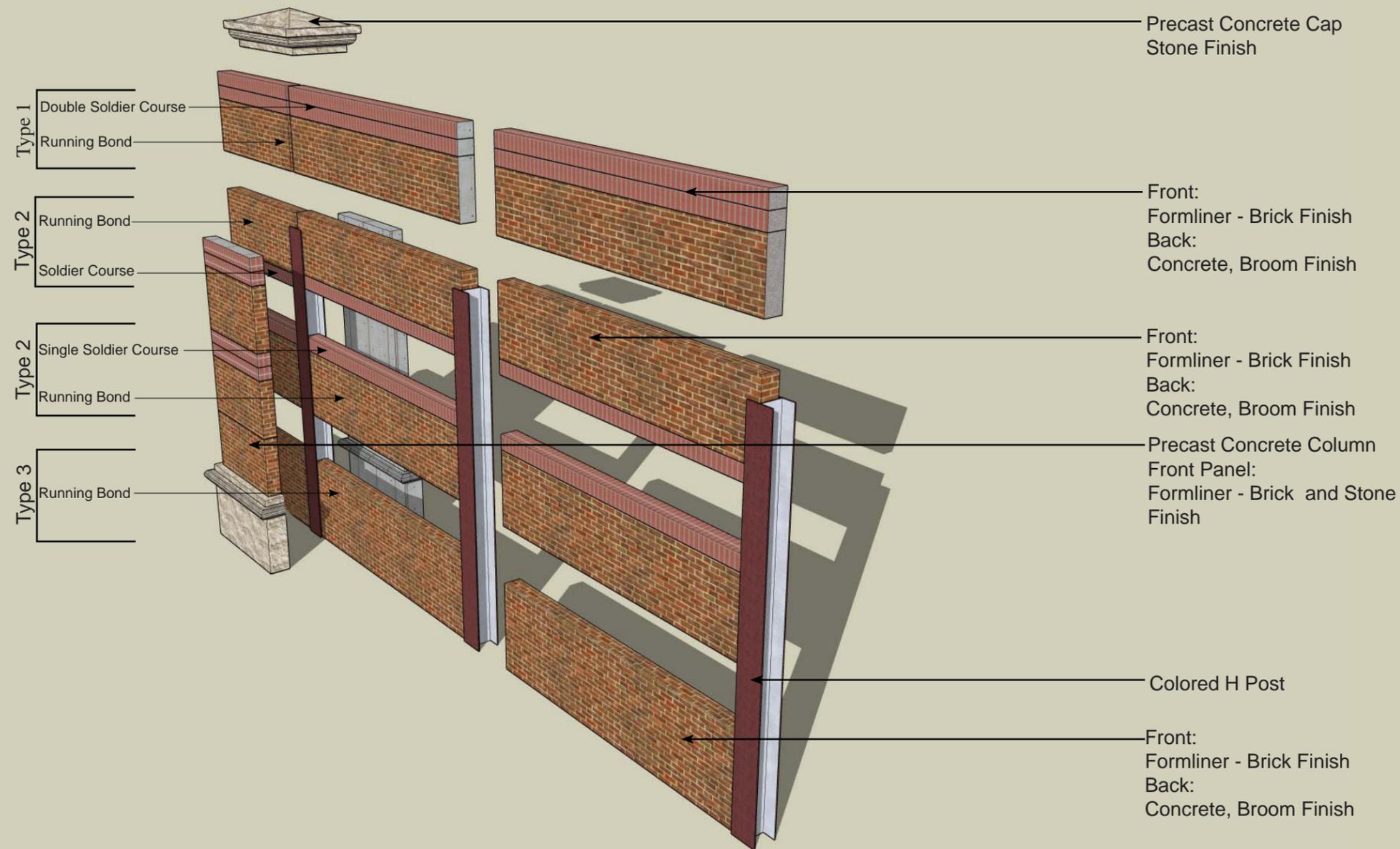
Monroe Parkway 20' Tall Sound Wall Elevation



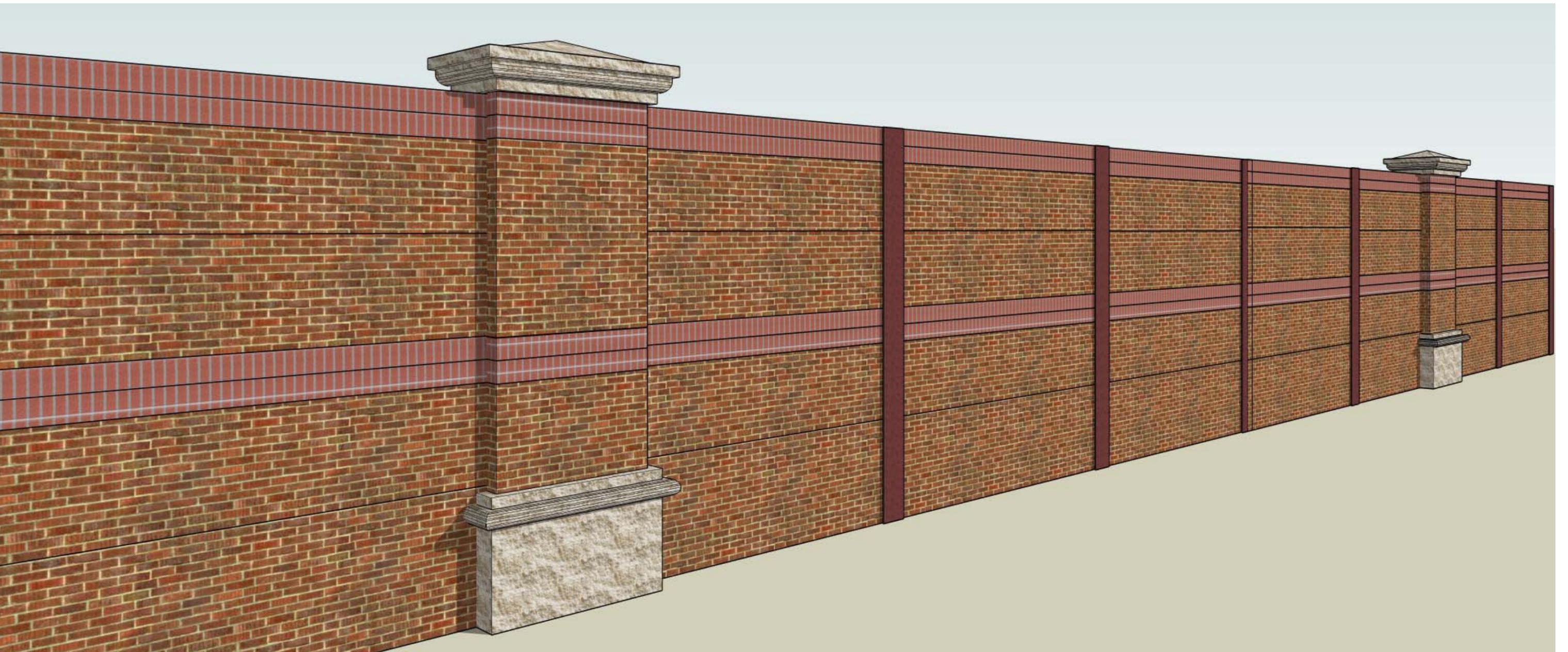
Monroe Parkway 8' Tall Sound Wall Elevation



Monroe Parkway Sound Wall - Axonometric Detail View

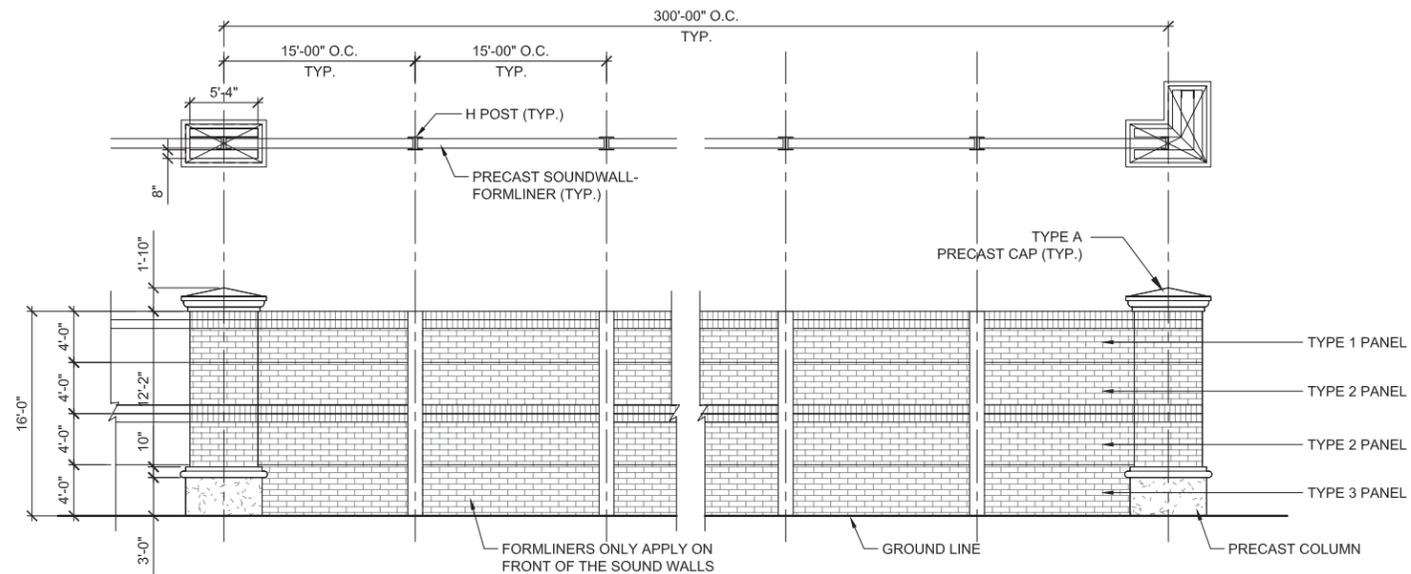


Monroe Parkway Sound Wall - Axonometric view

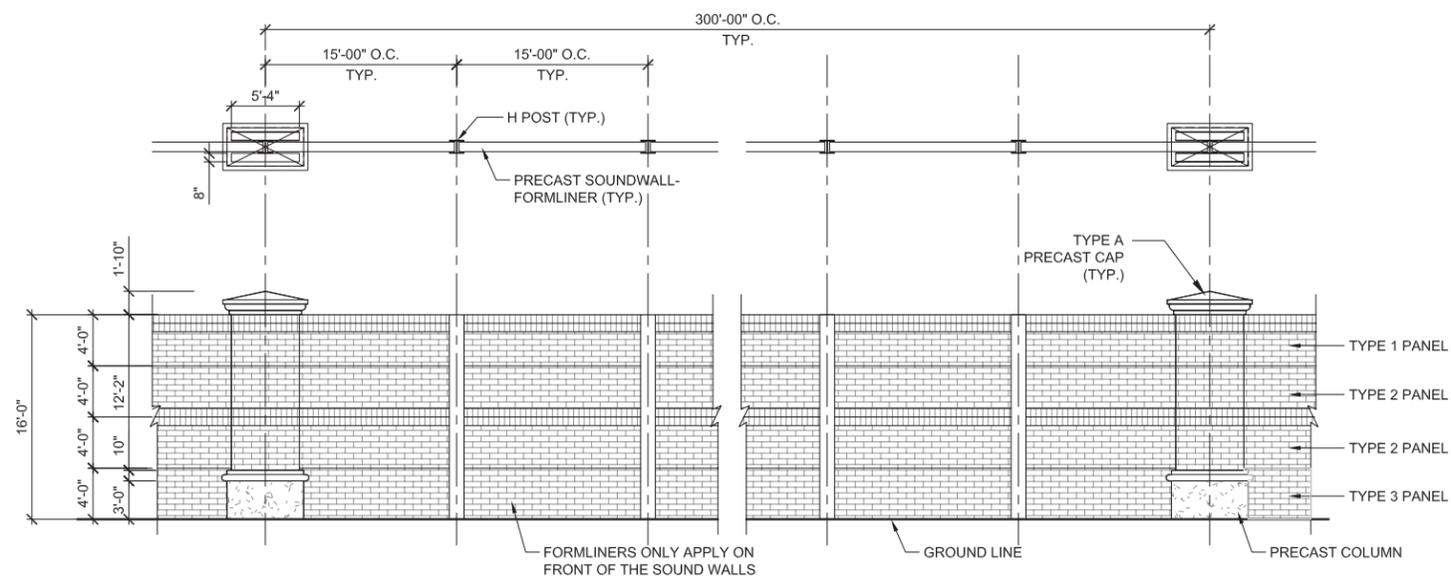


Note: Final Soundwall locations, lengths and heights shall be determined by the Design-Build Team.

Monroe Parkway Sound Wall - Corner End Treatment - Plan View and Elevation

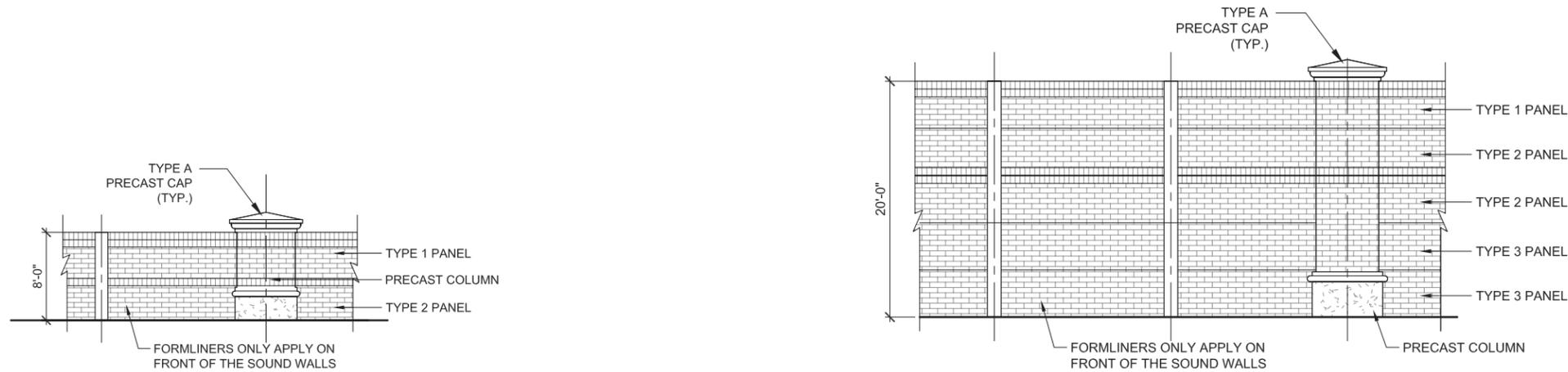


Monroe Parkway Sound Wall - Flat Condition - Plan View and Elevation

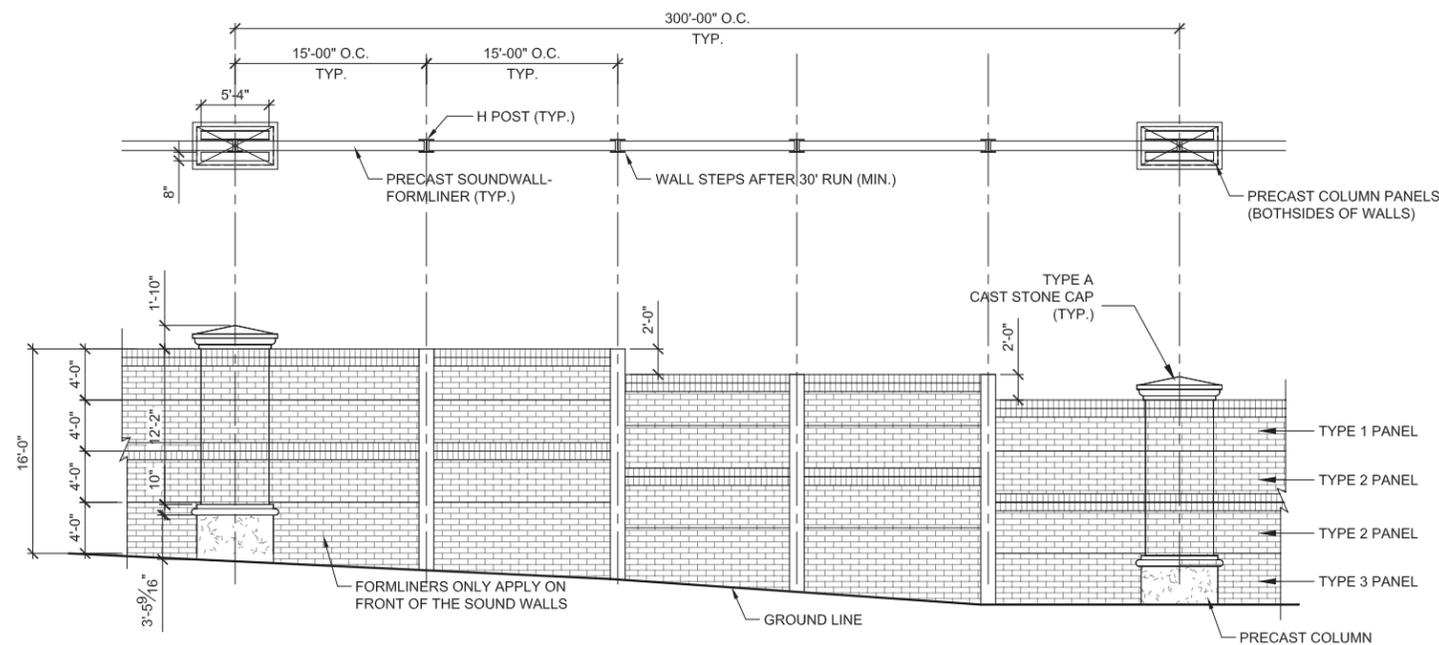


Note: Final Soundwall locations, lengths and heights shall be determined by the Design-Build Team.

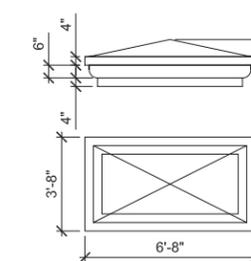
Monroe Parkway Sound Wall - Flat Condition - 8' and 20' Sound Wall Elevation



Monroe Parkway Sound Wall - Stepped Condition - Plan View and Elevation

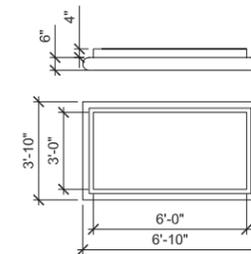


Precast Stone Cap and Base



Cap Section

Cap Plan View



Base Section

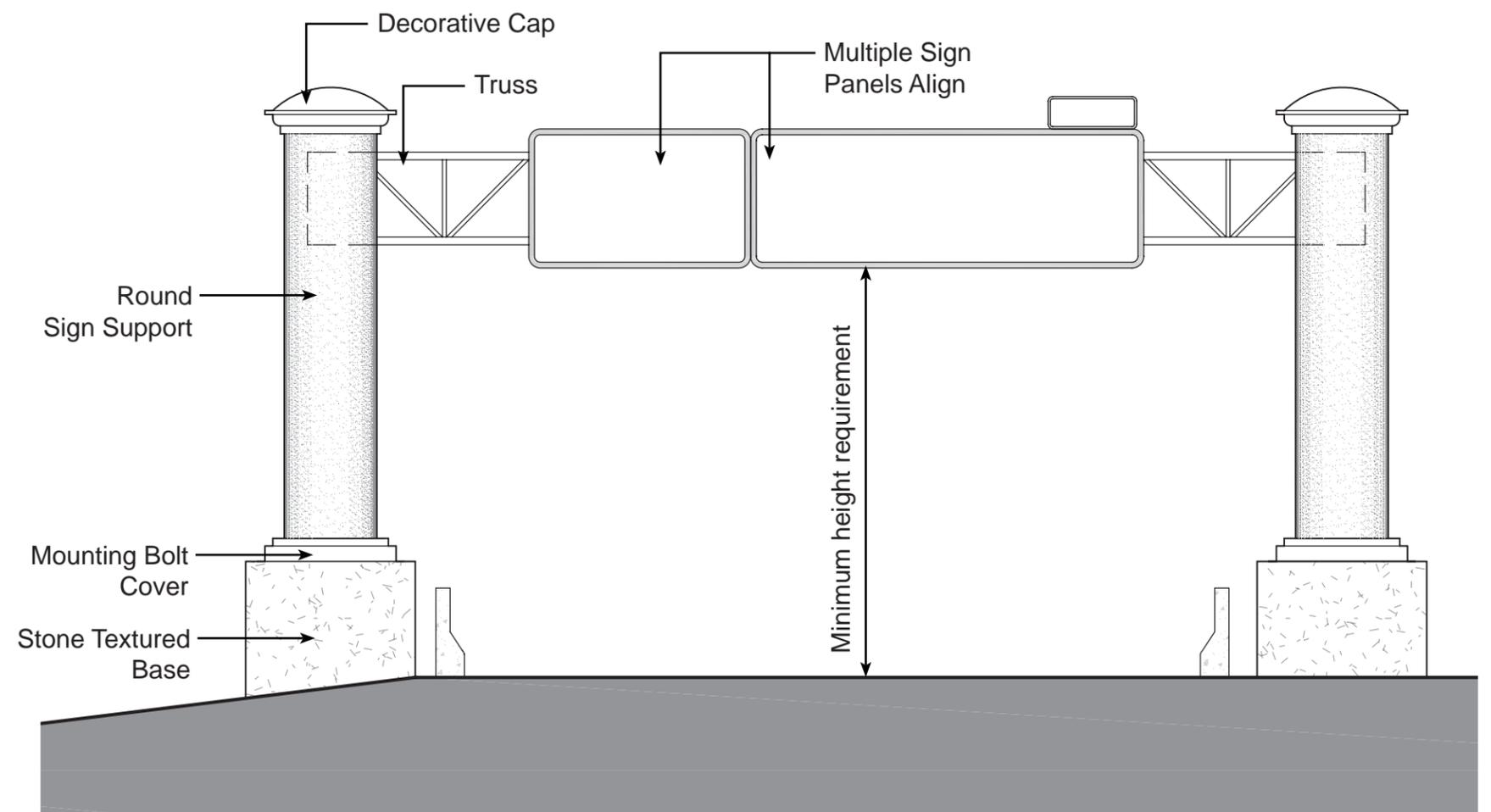
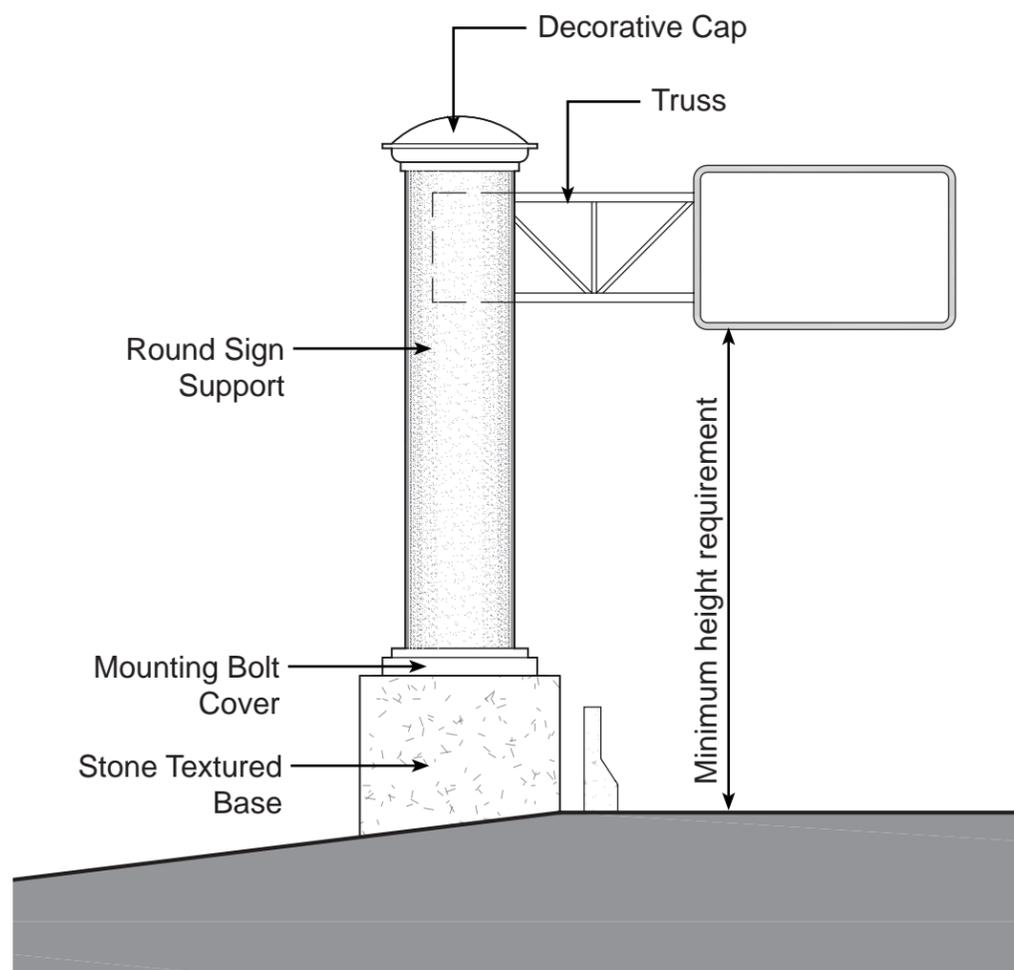
Base Plan View

4

Monroe Parkway

Sign Structures

Monroe Parkway Sign Structures



5

Monroe Parkway

Appendix

Material Schedule

Item	Feature	Type/Finish	Color	Federal Color (1994 palette)	Comments (Proprietary names given as basis of design only)
Bridge Beams					
Weathering steel	Color	Beam type by designer	Weathering steel	n/a	Prepare detail to prevent staining of bridge features
AASHTO girders	Color	Beam type by designer	Dark bronze coating	FC 20040	Tex Cote Bridge Cote 300
Steel beams	Color	Beam type by designer	Dark bronze paint system	FC 20040	2 or 3 coat system
Walls and End Bents					
MSE walls	Square or rectangular panels only, brick formliner, rough and smooth stone formliner, flat formliner	Rough (2/157 Fichtelberg) Brick (2/99 Salzach) Smooth (Modern Pre-cast)	Brick color staining to match Scott System 01024 Fredericktown, brick color bend staining to match LITHOCHROME® Chemstain® Classic CS-2; color stain coating to match Modern Pre-cast "Almond" for stone textures	n/a	NAWKAW NECT-90 masonry stain: www.nawkaw.com www.scottsystem.com www.scofield.com/concretestain_main.html www.modernprecast.com
Cast in place walls	Brick formliner	Brick (2/99 Salzach)	Color staining to match BrickSnap system, below	n/a	NAWKAW NECT-90 masonry stain: www.nawkaw.com
Wall caps/coping	Ccast in place or pre-cast; rough and smooth stone formliner	Rough (2/157 Fichtelberg), Smooth (match Modern Pre-cast)	Color stain coating to match Modern Pre-cast "Almond" for stone textures	n/a	www.nawkaw.com www.modernprecast.com
Bridge End Bents	cast in place or pre-cast; smooth stone formliner	Smooth (match Modern Pre-cast)	Color stain coating to match Modern Pre-cast "Almond" for stone texture	n/a	www.nawkaw.com www.modernprecast.com
Barrier rails	Stone texture on backside of rails	Rough (2/157 Fichtelberg)	Color stain coating to match Modern Pre-cast "Almond" for stone textures	n/a	Texture discontinues 100' from each end of bridge approach or at bridge end column. Color applies to traffic face as well. NAWKAW NECT-90 masonry stain: www.nawkaw.com
Soundwalls/Screenwall	Brick formliner	NCDOT standard system, heights by designer, Brick (2/99 Salzach)	Color staining to match Scott System 01024 Fredericktown BrickSnap system, below	n/a	NAWKAW NECT-90 masonry stain: www.nawkaw.com
Soundwall/Screenwall column feature	Architectural pre-cast brick and stone textures and cap	Rough (2/157 Fichtelberg), Smooth (Modern Pre-cast), Brick (2/99 Salzach)	Color stain coating to match Modern Pre-cast "Almond" for stone textures and backside of wall; color staining to match Scott System 01024 Fredericktown BrickSnap system	n/a	NAWKAW NECT-90 masonry stain: www.nawkaw.com www.modernprecast.com
Soundwall posts	Painted Galvanized steel or coated concrete posts	Heights by designer	Dark Bronze if steel, brick color stain to match BrickSnap system if concrete	FC 20040	Three Coat system if steel
Graffiti protection	Non sacrificial coating	GRAFFITI GARD III W	Clear coating		www.texcote.com ; to be applied to concrete finishes to heights determined by designer

Material Schedule (continued)

Item	Feature	Type/Finish	Color	Federal Color (1994 palette)	Comments (Proprietary names given as basis of design only)
Bridge Arch					
Brick texture	Architectural pre-cast brick textures	Metro Brick and Summitville Landmark	01024 Fredricktown with 458 Brownstone Flashed soldier course	n/a	www.Scottssystem.com
"Town Name" Stone	Architectural pre-cast stone textures	Pineapple Grove Designs, or equal	color to match stone textures	n/a	www.pineapplegrovedesigns.com
Smooth Stone Keystone	Architectural pre-cast stone textures	Pineapple Grove Designs, or equal	color to match stone textures	n/a	www.pineapplegrovedesigns.com
Bridge Pylons/Pilasters/Gantries					
Brick texture	Brick-Snaps or Rim Snaps technology	Metro Brick and Summitville Landmark	01024 Fredricktown with 458 Brownstone Flashed soldier course	n/a	www.Scottssystem.com www.modernprecast.com
Precast stone coping and arch	Smooth stone texture	Smooth (Modern Pre-cast)	Almond		www.modernprecast.com www.modernprecast.com
Precast cap Precast logo	Smooth stone texture Selected by local government, design by others	Smooth (Modern Pre-cast) Pineapple Grove Designs, or equal	Almond Color to match stone textures	n/a	www.modernprecast.com www.pineapplegrovedesigns.com
Base texture	Rough stone texture	Rough (2/157 Fichtelberg)	Color stain coating to match Modern Pre-cast "Almond" for stone textures	n/a	NAWKAW; www.nawkaw.com
Gantry Truss cover	Perforated sheeting	Zinc or aluminum	(2) Colors for mockup: Match "Almond and Dark Bronze.	n/a	Anodized or powder coat finish
Bridge Piers (major, intermediate and minor bridges)					
Brick texture	Brick-Snaps or Rim Snaps technology piers, major bridges only	Metro Brick and Summitville Landmark	01024 Fredricktown with 458 Brownstone Flashed soldier course	n/a	www.Scottssystem.com
Precast stone coping and arch	Smooth stone texture	Smooth (Modern Pre-cast)	Almond	n/a	www.modernprecast.com
Base texture	Rough stone texture	Rough (2/157 Fichtelberg)	Color stain coating to match Modern Pre-cast "Almond" for stone textures	n/a	NAWKAW; www.nawkaw.com
Bridge pier caps	Cast in place; smooth stone formliner; all bridge types	Smooth (match Modern Pre-cast)	Color stain coating to match Modern Pre-cast "Almond" for stone texture	n/a	www.nawkaw.com www.modernprecast.com
Piers	Smooth stone texture on intermediate and minor bridges	Smooth (match Modern Pre-cast)	Color stain coating to match Modern Pre-cast "Almond" for stone textures	n/a	NAWKAW; www.nawkaw.com

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