

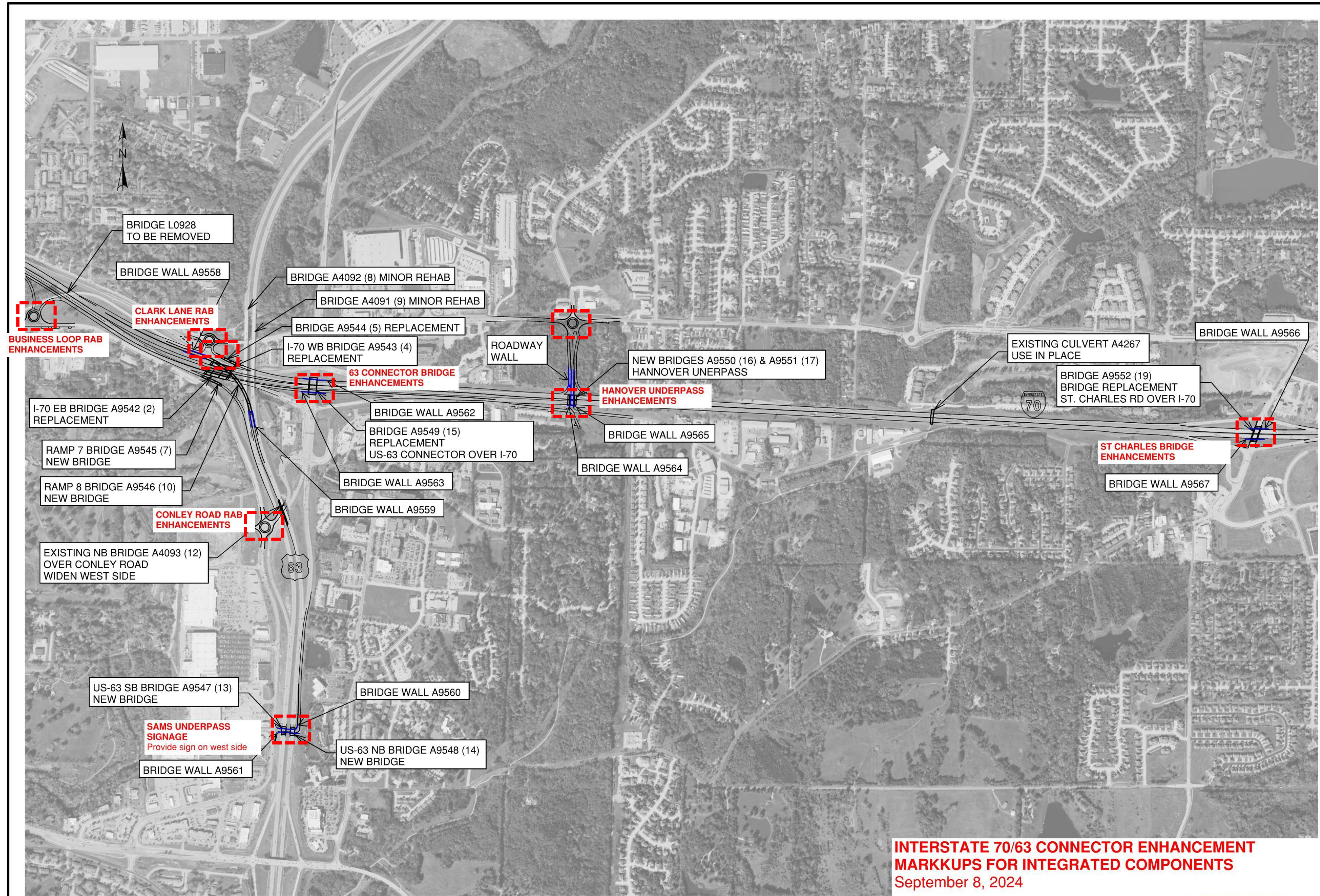
DESIGN NARRATIVE
Interstate 70/US 63 Enhancements
Integrated Components
Columbia, Missouri



September 10, 2024



ENHANCEMENT LOCATIONS



INTERSTATE 70/63 CONNECTOR ENHANCEMENT MARKUPS FOR INTEGRATED COMPONENTS
September 8, 2024

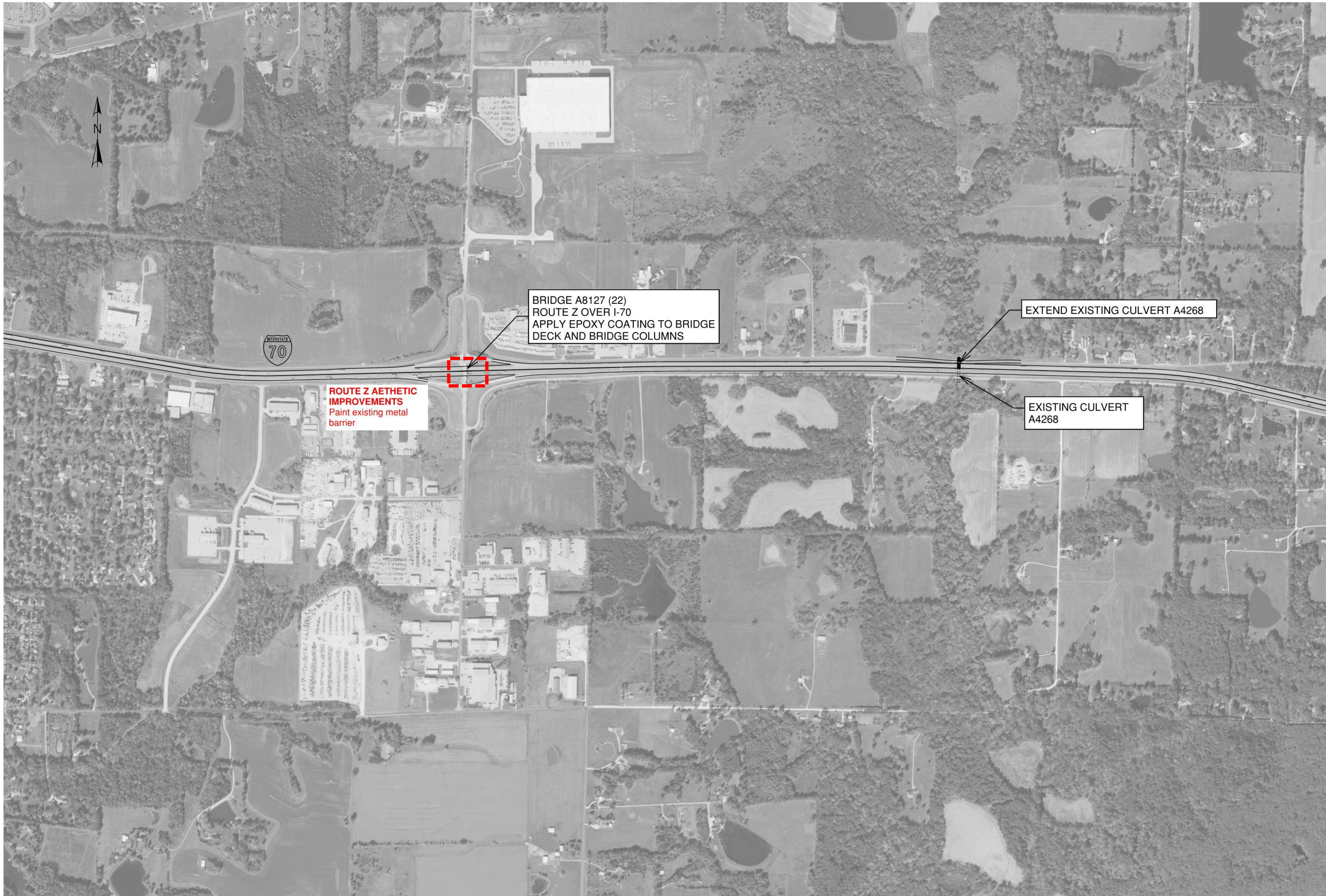
I - 70 DESIGN BUILD - BRIDGE KEY MAP

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DATE PREPARED 24 - JAN - 2024	
ROUTE I - 70	STATE MO
DISTRICT BR	SHEET NO. X
COUNTY BOONE	
JOB NO. JST0021	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	
DESCRIPTION	DATE
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION	105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)
JACOBS ENGINEERING GROUP 1001 HIGHLANDS PLAZA, DR. WEST, SUITE 400 ST. LOUIS, MISSOURI 63110 PHONE: (314) 935-4000 CERTIFICATE NO. AUTHORITY #60704	

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.


ENHANCEMENT LOCATIONS



I-70 DESIGN BUILD - BRIDGE KEY MAP

DATE PREPARED 24 - JAN - 2024	
ROUTE I -70	STATE MO
DISTRICT BR	SHEET NO. X
COUNTY BOONE	
JOB NO. JST0021	
CONTRACT ID.	
PROJECT NO.	
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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 	105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)
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Jacobs JACOBS ENGINEERING GROUP 1001 HIGHLANDS PLAZA DR. WEST, SUITE 400 ST. LOUIS, MISSOURI 63110 PROFESSIONAL ENGINEER CERTIFICATE OF AUTHORITY #00704	MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
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ENHANCEMENT COMPONENTS

Formliner MSE Retaining Wall –use the MoDOT standard ashlar cut stone pattern formliner for all retaining walls. Provide smooth-formed top caps and transitions. **REFERENCE:** current MoDOT projects. **MATERIALS:** MoDOT standard by DB team.

Formliner Bridge Column Wall – provide a formliner wall at the center column support for the bridge. Use the MoDOT standard ashlar cut stone pattern formliner for all retaining walls. Provide smooth-formed top caps and transitions. **REFERENCE:** I-70 and US 40/Wentzville Parkway interchange, Wentzville, MO. **MATERIALS:** MoDOT standards by DB team.

Formliner Vehicular Barriers/Bridge Facade – provide formliner concrete barriers per renderings. Panels to have inset panel design. Align the fence panel, post, and lighting pole spacing with the bridge façade panel design per renderings. **REFERENCE:** I-270 and Olive Boulevard interchange, Creve Coeur, MO. **MATERIALS:** Fast Formliners Co, Flexible Reveal Strips, <https://www.fastformliners.com/patterns/flexible-reveal-strips-1.html>, by DB team.

Concrete Solid Color Stain – coat all formliner concrete, caps, and exposed contiguous concrete surfaces. **REFERENCE:** I-70 and US 40/Wentzville Parkway interchange, Wentzville, MO. **MATERIALS:** H&C Solid Color Stains and Sealers, Color: Cemented Deal, <https://www.hcconcrete.com/products/>, by BD team.



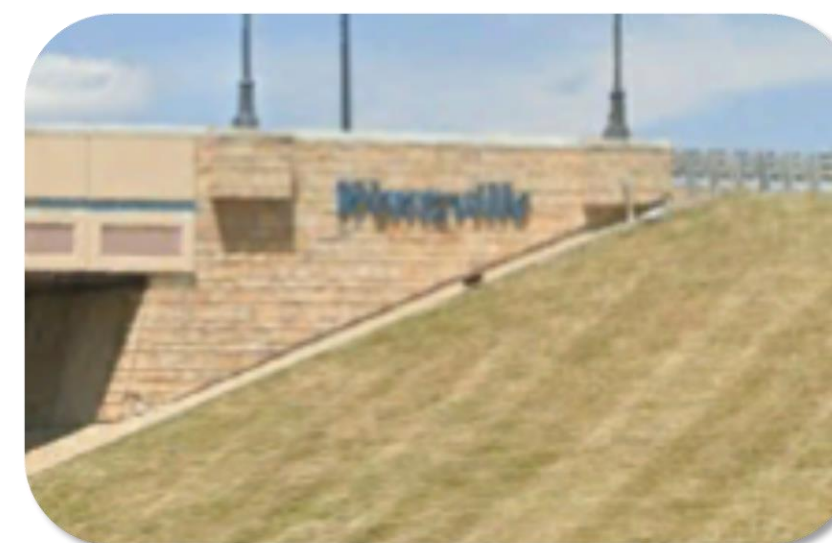
Example of ashlar formliner patterns and curved retaining walls



Formliner wall under the bridge



Example of formliner panels on the pedestrian side of the bridge (on this project, the panels will be on the outside of the bridge. Refer to image above for panel spacing with fence posts.



Example of buff colored coating on formliner walls and features

ENHANCEMENT COMPONENTS

Roadway Signage – provide roadway signage at the center and on both sides of the bridge to identify US 63 and 70 Connector . Signage to be dimensional and made up of overlapping multiple panels with raised lettering. Signage colors to be University of Missouri black and gold. Obtain exact colors from the University. **REFERENCE:** I-64 and Hanley Road bridge, Richmond Heights, MO. **MATERIALS:** custom signs by DB team or City consultant TBD.



Example of dimensional roadway signage

Decorative Fencing – provide semi-custom powder coated steel fencing for surface mounting on the concrete barrier. The fencing design will be standard rectangular or square grid fence panels with custom solid top and bottom rails and posts at the ends of each fence section. Coordinate the post locations with the light pole locations to have fence extensions to provide 4” of less gap between the fence post and light pole. Align the fence panel, post, and lighting pole spacing with the bridge façade panel design per renderings. Material to be USA steel, galvanized and powder coated. **REFERENCE:** US 67/N Lindbergh Boulevard and Olive Boulevard interchange, Creve Coeur, MO. **MATERIALS:** Ameristar Echelon II Majestic, or equal, color: black, <https://www.ameristarperimeter.com/us/en/products/ornamental-fence-gates/echelon/echelon-ii>, by DB team.

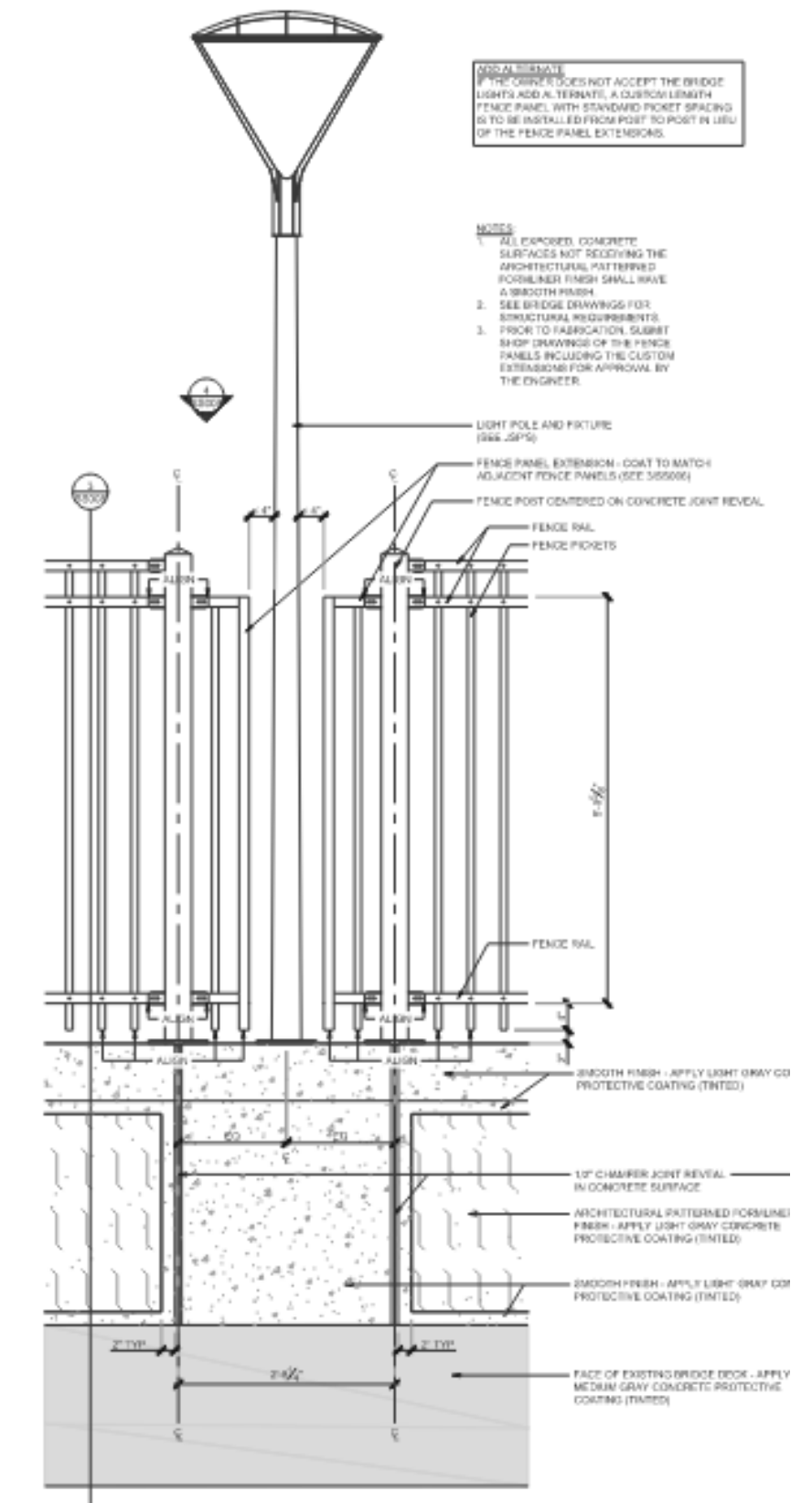
Light Poles – provide post top luminaire on a round straight pole. Luminaires to be LED, dark-sky compliant, and full cut off. **REFERENCE:** I-64 and Hanley Road bridge, Richmond Heights, MO. **MATERIALS:** Lumec, OmniScape with historical fitter, historical cage and transitional roof, or equal, color: black, https://www.signify.com/api/assets/v1/file/Signify/content/PLu-2305BR-OmniScape-Brochure_0424/PLu-2305BR-OmniScape-Brochure-0424.pdf, by DB team



Ornamental metal fence on bridge barrier



Lumec light and pole



Example of fence extensions at light pole

ENHANCEMENT COMPONENTS

End Piers – provide four (4) formliner end piers to receive formliner barrier/bridge façade and fencing and terminate each end of the bridge. These piers can be designed for areas at grade, beyond the bridge and abutment. They will be at a scale that is large enough to be in proportion with the interchange size and configuration. Each pier will hold a custom light box. Coordinate the pier cap with the design of the light box and lighting components. **REFERENCE:** Renderings. **MATERIALS:** Pier by BD team. Light box by City consultant TBD.

Light Box – provide a custom powder coated metal cube fabrication with a solid top and laser cut side panels for each pier. Fabricate the top to have a flat pyramidal roof and overhang lip for drainage management. Fabricate the side panels to have a frame and removable laser cut panels for maintenance access, cleaning, and to be replaced with different designs.

Provide an internal UL rated LED and color changing light source to provide backlighting of the laser cut panels. Design the light cube to be easily removed, cleaned and facilitate light source maintenance and replacement. Potential panel designs are to be determined (McBaine Burr Oak on the Lewis and Clark National Historic Trail is an example.) The final panel design will be reviewed and approved by the CITY. **REFERENCE:** Renderings. **MATERIALS:** Provided by City consultant TBD.

Powdercoating – provide powder coated signal poles per city standards. **REFERENCE:** Interstate 141 and Big Bend interchange, Ballwin, MO. **MATERIALS:** City standards, by DB team.

Roundabout Future Provisions – provide two (2) 2" PVC conduits from the perimeter of each roundabout to the center of the roundabout for future irrigation and electrical. Locate the conduits on the side of the roundabout where water and electrical are available. Mark the locations of the conduits. **REFERENCE:** Other City roundabouts. **MATERIALS:** City standards, by DB team.

Roundabout Truck Apron – provide stamped, color concrete at truck apron. **REFERENCE:** Bomanite project in Connecticut. **MATERIALS:** Bomanite Imprint Systems, Bomacron Ashlar Slate pattern, color to match reference project, <https://bomanite.com/connecticut-bomanite-brings-branford-beautiful-roundabout/>, by DB team.



End piers terminate the bridge façade, fencing and bridge



Pier and light box



Example images for the light box. McBaine Burr Oak at bottom right



Example images for stamped color concrete truck apron