

HOWARD GEORGE DRIVE BRIDGE OVER GRAND GLAIZE CREEK – ADDENDUM #2
City of Manchester, MO
Federal Project STP-5504(602)
May 21, 2019

This addendum is hereby made part of the contract documents of the above referenced project. This addendum supplements and/or amends the originally issued documents and all related addenda.

Specification Revision:

- Invitation for Bids, page 4. Revise bid opening to ten o'clock (10:00) A.M. (prevailing local time) on the 13th day of June, 2019. Any bids already received will be mailed back to contractors unopened. All questions must be received by June 10, 2019.
- Invitation for Bids, page 4. Proposed Work – Delete “Lindy Boulevard Bridge – Use-in-place and rehabilitate existing adjacent box beam bridge.”
- Table of Contents, page 6. Delete “Lindy Boulevard Bridge Location Map.”
- Notice to Contractors, page 7. Revise bid opening to ten o'clock (10:00) A.M. (prevailing local time) on the 13th day of June, 2019.
- Notice to Contractors, page 7. (3) Period of Performance. Delete “Lindy Bridge Working Days: 20.”
- Notice to Contractors, page 7 (4) Liquidated Damages. Delete “Lindy Bridge Liquidated damages per day \$700.00.”
- Itemized Bid Form, pages 12-13. Replace Itemized Bid Form with new Itemized Bid Form.
- Job Special Provisions, pages 48-49. Replace JSP G with new JSP G.
- Job Special Provisions, pages 54 thru 58 and 61 thru 65. Delete JSP's L, M, N, and P.
- Job Special Provisions. Added JSP's Q and R.
- Page 66. Delete Lindy Boulevard Bridge Location Map.
- Applicable Environmental and Cultural Permits and Clearance, pages 91 thru 97. Replace Request for Environmental Review Form #2019-07-00007 with new Request for Environmental Review Form #2019-07-00007.
- Applicable Environmental and Cultural Permits and Clearance, page 99. Replace Nationwide 401/404 Letter with new Nationwide 401/404 Letter.

Plan Drawing Revision:

- Replace sheets 1, 2A, 3 and B18 with new sheets. Removed Lindy Bridge content.

ACKNOWLEDGEMENT OF ADDENDUM #2

The bidder will acknowledge receipt of this Addendum and acceptance of its conditions by signing this Addendum and including it with the bid.

SIGNATURE: _____

TITLE: _____

COMPANY: _____

DATE: _____

ITEMIZED BID. The bidder should complete the following section in accordance with Sec 102.7. The bidder proposes to furnish all labor, materials, equipment, services, etc. required for the performance and completion of the work, as follows:

BID ITEMS

Project: Howard George Drive Bridge over Grand Glaize Creek - Federal Project No. STP - 5504(602)

ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
	ROADWAY ITEMS:				
2013000	CLEARING AND GRUBBING	ACRE	0.1		
2022010	REMOVAL OF IMPROVEMENTS	L.S.	1		
3040504	TYPE 5 AGGREGATE FOR BASE (4 IN. THICK)	S.Y.	242		
5021108	CONCRETE PAVEMENT (8" NON-REINFORCED)	S.Y.	151		
6042010	ADJUSTING MANHOLE	EACH	1		
6092011	INTEGRAL CURB (6IN. HEIGHT AND UNDER) TYPE A	L.F.	89		
6113020	FURNISHING TYPE 2 ROCK BLANKET	C.Y.	3		
6113040	PLACING TYPE 2 ROCK BLANKET	C.Y.	3		
6161005	CONSTRUCTION SIGNS	S.F.	89		
6161031	TYPE III MOVEABLE BARRICADE WITH LIGHT	EACH	6		
6181000	MOBILIZATION	L.S.	1		
6274000	CONTRACTOR FURNISHED SURVEYING AND STAKING	L.S.	1		
8061007A	CURB INLET CHECK	EACH	2		
	ROADWAY ITEMS SUBTOTAL:				
	PEDESTRIAN FACILITIES:				
6086004	CONCRETE SIDEWALK (4" THICK)	S.Y.	81.4		
6089910	CONCRETE SIDEWALK, CURB RAMP (7" THICK)	EACH	1		
	PEDESTRIAN FACILITIES SUBTOTAL:				
	LANDSCAPE/STREETSCAPING ITEMS:				
8052000A	SEEDING - WARM SEASON MIXTURES	S.Y.	0.1		
	LANDSCAPE/STREETSCAPING ITEMS SUBTOTAL:				
	BRIDGE ITEMS:				
2162500	REMOVAL OF EXISTING BRIDGE DECKS	S.F.	2736		
2169902	REMOVAL OF EXISTING BEARING	EACH	4		
5031011A	BRIDGE APPROACH SLAB (MINOR ROAD)	S.Y.	93		
6079903	CHAIN LINK FENCE ON STRUCTURE	L.F.	94		
7034212	SLAB ON STEEL	S.Y.	304		
7034215	SAFETY BARRIER CURB	L.F.	170		
7039903	TRANSITION BARRIER CURB	L.F.	33		
7121000	SUBSTRUCTURE REPAIR (UNFORMED)	POUND	8		
7049901	GABION BASKET REPAIR	L.S.	1		
7121000	FABRICATED STRUCTURAL CARBON STEEL (MISC.)	POUND	450		
7121159	SHEAR CONNECTORS	EACH	560		
7125200	SURFACE PREPARATION FOR RECOATING STRUCTURAL STEEL	S.F.	400		
7125210	FIELD APPLICATION OF INORGANIC ZINC PRIMER	S.F.	400		
7125365A	INTERMEDIATE FIELD COAT (SYSTEM G)	S.F.	400		
7125370A	FINISH FIELD COAT (SYSTEM G)	S.F.	400		
7151001	VERTICAL DRAIN AT END BENTS	EACH	1		
7162000	LAMINATED NEOPRENE BEARING PAD ASSEMBLY	EACH	4		
	BRIDGE ITEMS SUBTOTAL:				
	TOTAL BID				

G. CONSTRUCTION REQUIREMENTS

1.0 Description. This provision contains general construction requirements for the Howard George Drive Bridge project.

2.0 Construction Requirements. Plans for the existing Howard George structure are not available.

2.1 Construction Specifications. Construction shall be in accordance with the 2018 Edition and Supplemental revisions of the "Missouri Standard Specifications for Highway Construction" and these special provisions.

2.1.1 All references to "Section" or "Sec" refer to the standard specifications.

2.2 The bridge shall be closed to traffic during construction.

2.2.1 In order to assure the least traffic interference, the work shall be scheduled so that a bridge closure is for the absolute minimum amount of time required to complete the work. The bridge shall not be closed until material is available for continuous construction and the contractor is prepared to diligently pursue the work until the closed bridge is opened to traffic.

2.3 The following bridge being re-decked, the slab was constructed as non-composite or composite which is mentioned in the following table.

Bridge No.	Type of deck
2630005	Unknown

2.4 Provisions shall be made to prevent any debris and materials from falling into the stream. Any debris and materials that falls below the bridge, if determined necessary by the engineer, shall be removed as approved by the engineer at the contractor's expense.

2.5 Any damage sustained to the remaining structure as a result of the contractor's operations shall be repaired or the material replaced as approved by the engineer at the contractor's expense.

2.5 Bridge Deck Removal.

2.5.1 Removal of the existing Howard George bridge deck, including wearing surface, shall be in accordance with Section 216.

2.5.2 All excavation and fill required in conjunction with the Howard George project shall be included in the cost for Removal of Existing Bridge Decks.

2.6 Provisions shall be made to prevent damage to any existing utilities. Any damage sustained to the utilities as a result of the contractor's operations shall be the responsibility

of the contractor. All costs of repair and disruption of service shall be as determined by the utility owners and as approved by the engineer.

3.0 Method of Measurement. No measurement will be made.

4.0 Basis of Payment. Payment for the above described work will be considered completely covered by the contract unit price for other items included in the contract.

Q. LPA Buy America Requirements

106.9 Buy America Requirement. On all federal-aid projects, the contractor's attention is directed to Title 23 CFR 635.410 Buy America Requirements. Where steel or iron products are to be permanently incorporated into the contract work, steel and iron material shall be manufactured in the USA except for "minor usage" as described herein. Furthermore, any coating process of the steel or iron shall be performed in the USA. The use of pig iron and processed, pelletized and reduced iron ore manufactured outside of the USA will be permitted in the domestic manufacturing process for steel or iron material.

106.9.1 Any sources other than the USA as defined will be considered foreign. The required domestic manufacturing process shall include formation of ingots and any subsequent process. Coatings shall include any surface finish that protects or adds value to the product.

106.9.2 "Minor usage" of foreign steel, iron or coating processes will be permitted, provided the cost of such products does not exceed 1/10 of one percent of the total contract cost or \$2,500.00, whichever is greater. If foreign steel, iron or coating processes are used, invoices to document the cost of the foreign portion, as delivered to the project, shall be provided and the engineer's written approval obtained prior to placing the material in any work.

106.9.3 Buy America requirements include a step certification for all fabrication processes of all steel or iron materials that are accepted per Sec 1000.

106.9.3.1 Items designated as Category 1 will consist of steel girders, piling, and reinforcing steel installed on site. Category 1 items require supporting documentation prior to incorporation into the project showing all steps of manufacturing, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410 Buy America Requirements. This includes the Mill Test Report from the original producing steel mill and certifications documenting the manufacturing process for all subsequent fabrication, including coatings. The certification shall include language that certifies the following. That all steel and iron materials permanently incorporated in this project was procured and processed domestically and all manufacturing processes, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410.

106.9.3.2 Items designated as Category 2 will include all other steel or iron products not in Category 1 and permanently incorporated in the project. Category 2 items shall consist of, but not be limited to items such as fencing, guardrail, signing, lighting and signal supports. The prime contractor is required to submit a material of origin form certification prior to incorporation into the project from the fabricator for each item that the product is domestic. The Certificate of Materials Origin form ([link to certificate form](#)) from the fabricator must show all steps of manufacturing, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410

Buy America Requirements and be signed by a fabricator representative. The Engineer reserves the right to request additional information and documentation to verify that all Buy America requirements have been satisfied. These documents shall be submitted upon request by the Engineer and retained for a period of 3 years after the last reimbursement of the material.

106.9.3.3 Any minor miscellaneous steel or iron items that are not included in the materials specifications shall be certified by the prime contractor as being procured domestically. Examples of these items would be bolts for sign posts, anchorage inserts, etc. The certification shall read "I certify that all steel and iron materials permanently incorporated in this project during all manufacturing processes, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410 Buy America Requirements procured and processed domestically in accordance with CFR Title 23 Section 635.410 Buy America Requirements. Any foreign steel used was submitted and accepted under minor usage". The certification shall be signed by an authorized representative of the prime contractor.

106.9.4 When permitted in the contract, alternate bids may be submitted for foreign steel and iron products. The award of the contract when alternate bids are permitted will be based on the lowest total bid of the contract based on furnishing domestic steel or iron products or 125 percent of the lowest total bid based on furnishing foreign steel or iron products. If foreign steel or iron products are awarded the contract, domestic steel or iron products may be used; however, payment will be at the contract unit price for foreign steel or iron products.

R. Demolition

1.0 Description. Demolition shall be per MoDOT Sect. 202.

2.0 Hazardous Materials. A Hazardous Materials inspection was performed for the existing structure. Approximately 5 linear-feet of caulk tested positive for asbestos. This material can be left in place during demolition or renovation provided it is not rendered friable during the demolition or renovation project, or can be removed in its entirety prior to demolition.

3.0 Notification of Demolition. The contractor shall provide proper notification to all appropriate federal, state and local agencies at least 10 working days prior to demolition. Notification is necessary for the demolition of the bridge deck. The notification procedures and forms are available from MDNR. The contractor shall provide copies of all completed and approved forms to the engineer prior to any demolition work.

4.0 Method of Measurement. No measurement will be made.

5.0 Basis of Payment. Payment for the above described work will be considered completely covered by the contract unit price for other items included in the contract.

This RER has been completed, only administrators may edit this document now, they will contact you if any information changes.

Date Completed: 05/17/2019

Completed By: Matthew Burcham

Request for Environmental Review Form#:2019-07-00007

Project Information

Prefix:	STP	Project Number:	5504602	Bridge Number:	2630005
District:	St. Louis	County:	St. Louis	Sponsor:	City of Manchester
TIP Number:	6734-18	Rte/Street:	HOWARD GEORGE DR null		
MoDOT Job Number:		TIGER Grant Funds:		Is this project on or adjacent to MoDOT Right of Way:	No
Location/Stream Crossing :	HOWARD GEORGE DR BRIDGE				
TMS Project Description - termini (no stations):	BRIDGE REHAB/ADA IMPROVEMENTS - HOWARD GEORGE DR BRIDGE - OVER GRAND GLAIZE CREEK				
Describe RER project improvements in full detail:					
District Liason:	Thomas McCloskey - 314-453-1831	Contact:	None selected		
Contact:	None selected	Contact:	None selected		
Date Desired:	08/09/2018	Submit Date:	07/11/2018		
Desired A-Date:					
Responsible Individual:	David Riechmann - (7/11/2018 1:35:53 PM) - 314-335-8665	Submitted By:	David Riechmann - (7/11/2018 12:00:00 AM) - 314-335-8665		
Existing Condition					
ADT:	3000	Speed Limit:	25		
Number of Travel Lanes:	2	Lane Width:	12		
Shoulder Width:	0	Curb and Gutter:	Yes		
Bridge width, measured from gutterline to gutterline:	0	Sidewalks:	Choose One...		
Proposed Design Improvement					
ADT:	3000	Speed Limit:	25	Design Speed:	25
Number of Travel Lanes:	2	Lane Width:	12		
Shoulder Width:	2	Curb and Gutter:	Yes		
Bridge width, measured from gutterline to gutterline:	28	Sidewalks:	Choose One...		
Bridge Length:	98	Roadway length:	0		
Railroad Crossing	No	Drainage District (If	Choose One...		

Applicable):

Program Year:

Preliminary Engineering: 2018

Right of Way: N/A

Construction: 2019

Has the district documented that the project has: 1. Independent utility, 2. Logical termini, and 3. Does not restrict consideration of alternatives for other reasonably foreseeable transportation improvements?:

☐ Yes ☒ No

☐ Project breakout from previous or larger project? *If checked explain:*

Acres - From all sources (e.g. donated from public or private entities):

Additional R/W: 0

Temp Easement: 0

Permanent Easement: 0

ROW may be needed, but, not yet determined? Not Specified

Is ANY Federally-owned land impacted by the project? ☐ Yes ☒ No

Land Disturbance:

Will project involve 1 acre but less than 5 acres of land disturbance: No

Will project involve 5 acres or more of land disturbance: No

Acres of Tree Clearing: 0 acres

Number of Displacements(do not include partial takes that do not displace):

Residential: ☐ Yes ☒ No

Commercial: ☐ Yes ☒ No

No. of People: Residences:

No. of Employees: Businesses:

Public Hearing/Meeting Information:

Average Daily Traffic:

ADT Construction Year: 3000

ADT Design Year: 3000

Traffic Impacts:

Road Closure Planned: ☐ Yes ☒ No

Bridge Closure Planned: ☐ Yes ☒ No

Detour Info:

Days/Months Closed:

Bicycle / Pedestrian Consideration

Pedestrian facilities considered: Yes

Bicycle facilities considered: No

National Flood Insurance Program (NFIP) and Hydraulic Design Data:

☒ Project is in a FEMA-identified zone "subject to 100-year flooding":

If so, what zone?:

Zone AE

Project is in a FEMA-defined "floodway"

Yes

If Yes, will work be done at or below the base flood elevation

Above Base Elevation ▼

☐ Project involves land purchased through FEMA Hazard Mitigation Grant Program (Flood buyout property)

If checked, give details:

Is ANY construction taking place on MoDOT owned property under this project?

☐ Yes ☒ No

☐ Is highway improvement located within 4 miles of an existing airport?

Known Concerns: Provide information you have about these resources that you have observed in the area.

Parkland:

N/A

Wetland/404 Permit:

Minimal to no work will be completed below the BFE

Stormwater/Water Quality:

Farmland:

N/A

Threatened & Endangered Species:

No trees are anticipated to be removed for project improvements, therefore no impacts to bat habitat is anticipated.

Migratory Birds: Are there birds nesting on the structure?

Unknown,

Hazardous Waste:

Cultural Resources:

LPA Comments:

Project Attachments:

****NOTE: If making updates to an attachment, please use a different filename than the original.**
****The combined size of attachments in one upload must be less than 100MB**

Attachments:

- ✖Section106-HowardGeorge.pdf
- ✖Clarification-TE_assessment_LPA_StLouis_STP-5504(602)_Grand_GlaizeCr.msg
- ✖USFW T&E Species List.pdf
- ✖MDC Project Report.pdf
- ✖T&E Memorandum - Howard George Drive Bridge.pdf
- ✖Howard George Drive_ACM and LBP Letter.pdf
- ✖STP-5504(602)_Howard GeorgeDR-Preliminary Plans.pdf

Required Information to be attached for each RER stage:

- **Loc/Concp.:** Location map (county map) & topographic map or aerial photo showing project limits – pre-plan sheets or other preliminary maps showing alternatives, if available
- **Prel. Plan:** Prel. Plan sheets
- **R/W:** R/W Plan sheets
- **Final Design:** Final Plans [Location map (county map) & topographic map or aerial photo showing project limits if this is first RER submittal]

RER Environmental Screenings

➤Farmland Impact

Status Information:

☒ N/A ☐ Pending ☐ Cleared

Clearance Date:

Environmental Response: The project is located in a designated urbanized area as indicated on the U.S. Census Bureau Urban Area Reference Map. Therefore, the project is not subject to the Farmland Protection Policy Act.

LPA Action: None

Attachments:

☒ Farmland Impact Submitted - Mark submitted when this review is ready to be sent to district staff.

Last Updated: Matthew Burcham - 8/9/2018 1:56:59 PM

➤Floodplain/Regulatory Floodway

Status Information:

☒ N/A ☐ Pending ☐ Cleared

Clearance Date:

Environmental Response: The project's improvements (The project scope includes a bridge re-deck with minimal improvements outside the limits of the bridge. The only work being completed under the bridge consists of a grouting a small section of existing gabion baskets. No re-grading of bridge fill slopes or grading within creek will be necessary).

LPA Action: No action required.

Attachments:

☒ Floodplain/Regulatory Floodway Submitted - Mark submitted when this review is ready to be sent to district staff.

Last Updated: Matthew Burcham - 11/12/2018 1:11:43 PM

Stormwater/Water Quality

Status Information:

☒ N/A ☐ Possible Issues Noted

Clearance Date:

Environmental Response: If the project is in a regulated MS4 area, you must adhere to the MS4 requirements as defined in the respective MS4 permit specific to that municipality. Stormwater routed into MoDOT's drainage system (e.g., ditches and stormwater conveyance systems) must be treated for water quality and/or quantity before entering the system.

LPA Action: Contact the MoDOT Environmental Office if any land disturbance on MoDOT property is 1 acre or more.

Attachments:

☒ Stormwater/Water Quality Submitted - *Mark submitted when this review is ready to be sent to district staff.*

Last Updated: Matthew Burcham - 8/9/2018 1:58:31 PM

FEMA/SEMA Buyout

Status Information:

☒ N/A ☐ Pending ☐ Cleared

Clearance Date:

Environmental Response: According to the TMS FEMA buyout layer, there are no FEMA/SEMA buyout sites in or near the project area.

LPA Action: None

Attachments:

☒ FEMA/SEMA Buyout Submitted - *Mark submitted when this review is ready to be sent to district staff.*

Last Updated: Matthew Burcham - 8/9/2018 1:58:43 PM

Socioeconomic Impact

Status Information:

☒ N/A ☐ Possible Issues Noted

Clearance Date:

Environmental Response: There will be no significant socioeconomic impacts associated with this project.

LPA Action: None

Attachments:

☒ Socioeconomic Impact Submitted - *Mark submitted when this review is ready to be sent to district staff.*

Last Updated: Matthew Burcham - 8/9/2018 1:59:20 PM

Threatened & Endangered Species

Status Information:

☐ No Effect ☐ Pending ☒ Cleared

Clearance Date:

10/02/2018

Environmental Response: Consultation code: 03E14000-2018-SLI-2421 Species listed: pink mucket, scaleshell, sheepsnose, snuffbox, spectaclecase, decurrent false aster, running buffalo clover, gray bat, Indiana bat, northern long-eared bat I have completed my review of all the T&E material submitted by Horner & Shifrin, consultant for the LPA sponsor-City of Manchester for this bridge rehab work over Grand Glaize Creek at Howard George Rd. The consultant provided the USFWS IPaC official species list, the MDC online Level 1 Natural Heritage Review (no known issues), project description, aerial imagery and project mapping (other NEPA resources in RER), photos of the existing structure, preliminary plans, and T&E species assessments. I also referenced the MDC Natural Heritage Database (v. July2018) and the MO Speleological Survey cave information (v.2018) for addition natural resources information near the project area. There are no federally designated critical habitat areas in or near the project limits. From the photos of the structure submitted and in the asbestos inspection report of the existing structure, there does not appear to be any evidence of birds nesting under the deck of the bridge. There should be no conflicts with the Migratory Bird Treaty Act. The consultant provided a comprehensive review of species habitats and possible impacts from construction activities (9/5/18 Memo and 10/1/18 follow-up, se RER attachments). In addition, MoDOT has this information to offer. Grand Glaize Cr is a tributary to the Meramec River, but the confluence is over 7.0 miles downstream of the project location. There are no records of listed mussels in Grand Glaize Cr and there will be no impacts to the Meramec River from this project. MoDOT agrees with the consultant that there will be no impact on any listed mussel species. There is no suitable habitat for either decurrent false aster or running buffalo clover in the project area and MoDOT agrees there will be no effects to either species. There are no known caves within 0.5 mile of the project area, no summer records for any listed bat species within 3.0 miles, and no suitable habitat in the project limits for gray, Indiana, or northern long-eared bats. There will be no clearing of trees 3-inches in diameter or larger. As the designated non-federal representative of FHWA for USFWS Section 7 Endangered Species Act requirements, MoDOT agrees with the consultant that there will be No Effect on any federally listed species. This concludes the T&E requirements for this project. The sponsor shall include a provision to leave all trees 3-inches in diameter and above undisturbed for all work elements. Bree K. McMurray Threatened and Endangered Species Specialist Missouri Dept. of Transportation

LPA Action: This concludes the T&E requirements for this project. The sponsor shall include a provision to leave all trees 3-inches in diameter and above undisturbed for all work elements.

Attachments:

☒ Threatened & Endangered Species Submitted - *Mark submitted when this review is ready to be sent to district staff.*

Last Updated: Matthew Burcham - 5/17/2019 9:55:06 AM

Migratory Birds

Status Information:

☐ N/A ☐ Pending ☒ Cleared

Clearance Date:

10/02/2018

Environmental Response: From the photos of the structure submitted and in the asbestos inspection report of the existing structure, there does not appear to be any evidence of birds nesting under the deck of the bridge. There should be no conflicts with the Migratory Bird Treaty Act.

LPA Action: No further action is required.

Attachments:

☒ Migratory Birds Submitted - *Mark submitted when this review is ready to be sent to district staff.*

Last Updated: Matthew Burcham - 10/2/2018 12:55:28 PM

Hazardous Waste Impact

Status Information:

☐ N/A ☐ Pending ☒ Cleared

Clearance Date:

05/16/2018

- Environmental Response: an asbestos inspection by a current DNR-certified asbestos inspector and a lead based paint inspection by a lead inspector currently licensed by the MO Department of Health and Senior Services was performed. CONCLUSIONS Approximately 5 linear-feet of caulk tested positive for asbestos. The ACM was in fair condition and should be considered non-friable asbestos-containing material. The ACM is not considered RACM if it is not made friable during demolition or renovation activities. This material can be left in place during demolition or renovation provided it is not rendered friable during the demolition or renovation project. The lead-based paint survey identified painted bridge components including longitudinal girders, cross girders, abutments, and foundations that tested negative for lead-based paint.
- LPA Action: submit demolition notice to DNR within 10 working days. Regarding demolition inspection, the LPA/consultant is required to notify DNR 10 days in advance of all bridge/building demolitions. It is required that Section 202.40.1.1 of the EPG - Notification of Demolition paragraph be included in contract documents to highlight this requirement.

Attachments:

☒ Hazardous Waste Impact Submitted - Mark submitted when this review is ready to be sent to district staff.

Last Updated: Matthew Burcham - 5/17/2019 9:56:18 AM

Wetland Impact (Section 404/401)

Status Information:

☐ N/A ☐ Pending ☒ Cleared

Clearance Date:

05/13/2019

- Environmental Response: May 13, 2019 Matthew Burcham MoDOT – Environmental Reviewer Subject: STP-5504(602) Howard George Drive Bridge over Grand Glaize Creek City of Manchester, MO Section 404 & 401 Review Dear Mr. Burcham: This letter is to document that this project falls under the Nationwide Permit Conditions for Linear Transportation Projects as outlined in MoDOT EPG 136.6.4.3. Temporary impacts to the stream/wetland are less than 0.5 acres. Permanent impacts to waters of the U.S. are less than 0.1 acre. Therefore, individual permits from the COE and DNR are not required for this project because they fall under the Nationwide Permit (NWP) criteria. This project consists primarily of a bridge redeck, bearing replacement, minor steel girder repair, and concrete substructure repair. The new slab will utilize precast panels which should minimize need to access the channel. Additionally, there is repair specified for a failing gabion basket near end bent 1 and addition of new riprap to fill a scour hole near end bent 2. Temporary access to the creek under the bridge will be required for jacking, removing, and replacing the bearings and substructure repair. The work will take place above ordinary high water elevation. Demolition of the slab should remain within the footprint of the existing bridge. Precast panel placement is anticipated to be by crane on the roadway. Permanent impact will be limited to repair of the rock blanket at end bent 2. All additional work will occur outside of the stream at the roadway level or outside of the creek area. Anticipated scope of work, construction methodology, and minimal impact to waters of the U.S. result in use of Nationwide 401/404 permits for this project. The project specifications will include the following provisions per the EPG: 1. The 32 NWP General Conditions. 2. The Regional Special Conditions for NWPs. 3. The State of Missouri Section 401 Water Quality Certification General & Specific Conditions for NWP. Very truly yours, Tom Lohman, PE, SE Sr. Project Manager Structural Engineering TPL/tpl Cc: Tom McCloskey, MoDOT
- LPA Action: Follow requirements and conditions of NWP #14. This project consists primarily of a bridge redeck, bearing replacement, minor steel girder repair, and concrete substructure repair. The new slab will utilize precast panels which should minimize need to access the channel. Additionally, there is repair specified for a failing gabion basket near end bent 1 and addition of new riprap to fill a scour hole near end bent 2. Temporary access to the creek under the bridge will be required for jacking, removing, and replacing the bearings and substructure repair. The work will take place above ordinary high water elevation. Demolition of the slab should remain within the footprint of the existing bridge. Precast panel placement is anticipated to be by crane on the roadway. Permanent impact will be limited to repair of the rock blanket at end bent 2. All additional work will occur outside of the stream at the roadway level or outside of the creek area. Anticipated scope of work, construction methodology, and minimal impact to waters of the U.S. result in use of Nationwide 401/404 permits for this project. The project specifications will include the following provisions per the EPG: 1. The 32 NWP General Conditions. 2. The Regional Special Conditions for NWPs. 3. The State of Missouri Section 401 Water Quality Certification General & Specific Conditions for NWP.

Wetland Permit Information:

404 Permit Number

Permit Submitted


Permit Received

Permit Expiration

Compliance Certification Sent

Compliance Certification Received

Attachments:

 [Howard George STP-5504\(602\) - 401 Letter.pdf](#)

☒ Wetland Impact Submitted - Mark submitted when this review is ready to be sent to district staff.

Last Updated: Matthew Burcham - 5/17/2019 10:05:34 AM

➤ Noise Impact

Status Information:

☒ N/A ☐ Pending ☐ Cleared

Clearance Date:

Environmental Response: Project improvements don't qualify as Type I. This is a Type III project and a noise analysis is not required.

LPA Action: None

Attachments:

☒ Noise Impact Submitted - *Mark submitted when this review is ready to be sent to district staff.*

Last Updated: Matthew Burcham - 10/15/2018 3:30:04 PM

➤ Cultural Resources Impact (Section 106)

Status Information:

☐ Pending ☒ Cleared

Clearance Date:

10/09/2018

Environmental Response: a Section 106 Review in consultation with the State Historic Preservation Office (SHPO) determination 200-SL-18 no historic properties affected.

LPA Action: No further action is required.

Attachments:

☒ Cultural Resources Impact Submitted - *Mark submitted when this review is ready to be sent to district staff.*

Last Updated: Matthew Burcham - 10/15/2018 3:31:48 PM

➤ Public Land Impact (Section 4f/6f)

Status Information:

☐ N/A ☐ Pending ☒ Cleared

Clearance Date:

08/09/2018

Environmental Response: According to Google Earth there are no Section 4(f) or Section 6(f) protected resources in or in the vicinity of the project area. The project will have no impact on Section 4(f) or 6(f) protected resources.

LPA Action: None

Attachments:

☒ Based on the review of the project location and description noted above, there are no identified 4(f) or 6(f) resources affected that would preclude the setting of an A-date.

Checked by: on

☒ Public Land Impact Submitted - *Mark submitted when this review is ready to be sent to district staff.*

Last Updated: Matthew Burcham - 8/9/2018 2:06:32 PM

►NEPA Classification

NEPA Right-Of-Way Permission:	Not Applicable	as determined or approved by:	MATTHEW.BURCHAM@MODOT.MO.GOV
NEPA Approval/Proceed to A-date Request:	10/15/2018		
NEPA Classification:	PCE		
This project qualifies for the programmatic categorical exclusion under Item#:	28	All Environmental Issues Cleared:	05/17/2019
Comments To District:	FINAL Environmental Review Completed See the attached environmental tracking form. Please note that if there are any changes in the scope of the project, the Environmental Section should review those changes. The sponsor is ultimately responsible for complying with all applicable state and federal laws. The environmental review is now complete.		

Attachments:

Last Submitted: 05/17/2019 by [Matthew Burcham](#)



THE POWER HOUSE AT UNION STATION • 401 S. 18th ST., STE. 400 • SAINT LOUIS, MISSOURI 63103-2296
314-531-4321 • FAX 844-339-2910 • www.HornorShifrin.com

May 13, 2019

Matthew Burcham
MoDOT – Environmental Reviewer

Subject: STP-5504(602)
Howard George Drive Bridge over Grand Glaize Creek
City of Manchester, MO
Section 404 & 401 Review

Dear Mr. Burcham:

This letter is to document that this project falls under the Nationwide Permit Conditions for Linear Transportation Projects as outlined in MoDOT EPG 136.6.4.3.

Temporary impacts to the stream/wetland are less than 0.5 acres. Permanent impacts to waters of the U.S. are less than 0.1 acre. Therefore, individual permits from the COE and DNR are not required for this project because they fall under the Nationwide Permit (NWP) criteria.

This project consists primarily of a bridge redeck, bearing replacement, minor steel girder repair, and concrete substructure repair. The new slab will utilize precast panels which should minimize need to access the channel. Additionally, there is repair specified for a failing gabion basket near end bent 1 and addition of new riprap to fill a scour hole near end bent 2.

Temporary access to the creek under the bridge will be required for jacking, removing, and replacing the bearings and substructure repair. The work will take place above ordinary high water elevation. Demolition of the slab should remain within the footprint of the existing bridge. Precast panel placement is anticipated to be by crane on the roadway.

Permanent impact will be limited to repair of the rock blanket at end bent 2. All additional work will occur outside of the stream at the roadway level or outside of the creek area. Anticipated scope of work, construction methodology, and minimal impact to waters of the U.S. result in use of Nationwide 401/404 permits for this project.

The project specifications will include the following provisions per the EPG:

1. The 32 NWP General Conditions.
2. The Regional Special Conditions for NWPs.
3. The State of Missouri Section 401 Water Quality Certification General & Specific Conditions for NWP.

Very truly yours,

A handwritten signature in blue ink, reading "Thomas P. Lohman".

Tom Lohman, PE, SE
Sr. Project Manager
Structural Engineering
TPL/tpl
Cc: Tom McCloskey, MoDOT

UTILITIES

SPIRE ENERGY
4118 SHREWSBURY AVENUE
ST. LOUIS, MO 63103
CONTACT: BRIAN LANGENBACHER
TELEPHONE: 314-768-7767

AT&T
12851 MANCHESTER RD
DES PERES, MO 63131
CONTACT: DREW BITTER
TELEPHONE: 636-402-7075

MISSOURI AMERICAN WATER COMPANY
727 CRAIG ROAD
ST. LOUIS, MO 63141
CONTACT: MONTE GRIFFITH
TELEPHONE: 314-996-2247

CHARTER COMMUNICATIONS
815 CHARTER COMMONS
TOWN & COUNTRY, MO 63017
CONTACT: RON WILLIAMS
TELEPHONE: 314-280-1622

AMEREN
1901 CHOUTEAU AVE.
ST. LOUIS, MO 63103
CONTACT: LES NOLAN
TELEPHONE: 314-992-8903

EXTENET SYSTEMS
CONTACT: ED HICKMAN
TELEPHONE: 812-236-8697

CONVENTIONAL SYMBOLS

(USED IN PLANS)

	EXISTING	NEW
BUILDINGS AND STRUCTURES		
CONCRETE RIGHT-OF-WAY MARKER		
STEEL RIGHT-OF-WAY MARKER		
LOCATION SURVEY MARKER		
UTILITIES		
SANITARY SEWER		
CABLE TV		
OVERHEAD TELEPHONE		
UNDERGROUND TELEPHONE		
OVERHEAD POWER		
UNDERGROUND POWER		
GAS		
WATER		
GUY WIRE		
MANHOLE		
FIRE HYDRANT		
WATER VALVE / WATER METER		
GAS VALVE		
DROP INLET		
LAND CORNER		
GROUND MOUNTED SIGN		
LIGHT POLE / POWER POLE		
TELEPHONE RISER / POWER RISER		
POWER AND CABLE POLE		
TREE		
TELEPHONE MANHOLE		
FENCE: CHAIN LINK		
WOVEN WIRE		
IRON PIPE		
MAILBOX		
BENCHMARK		
SPRINKLER HEAD		
STREET LIGHT		
STOP BOX		
TRUNCATED DOMES		
LANDSCAPE BOULDER		
TO BE REMOVED		
TO BE REMOVED AND RELOCATED		
TO BE REMOVED BY OTHERS		
TO BE REMOVED AND RELOCATED BY OTHERS		
TO BE ABANDONED AND FILLED		
TEMPORARY CONSTRUCTION EASEMENT		
PERMANENT DRAINAGE & UTILITY EASEMENT		
ADJUST TO GRADE		
ADJUST TO GRADE BY OTHERS		
USE IN PLACE		
TO BE REMOVED AND REPLACED		
TO BE REMOVED AND REPLACED BY OTHERS		
PERMANENT DRAINAGE EASEMENT		
	TBR	TBR
	TBR&REL	TBR&REL
	TBRBO	TBRBO
	TBR&RELBO	TBR&RELBO
	TBA&F	TBA&F
	TCE	TCE
	PDUE	PDUE
	ATG	ATG
	ATGBO	ATGBO
	UIP	UIP
	TBRR	TBRR
	TBRRBO	TBRRBO
	PDE	PDE

NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES

CITY OF MANCHESTER MISSOURI

HOWARD GEORGE DRIVE BRIDGE REHABILITATION

FEDERAL PROJECT NUMBER:
STP-5504(602)

CONSTRUCTION PLANS
ZIP CODE: 63021



CALL BEFORE
YOU DIG!
1-800-DIG-RITE

CALL "MISSOURI ONE CALL" TO HAVE LOCATIONS MARKED IN THE FIELD AND "MODOT" FOR UNDERGROUND LOCATES WITHIN THE RIGHT-OF-WAY. SUBSCRIBING UTILITIES REQUIRE 48 HOURS NOTICE PRIOR TO CONSTRUCTION. CALL MODOT CUSTOMER SERVICE AT 314-340-4100 TWO WORKING DAYS BEFORE YOU DIG

PRIOR TO OBTAINING A CONSTRUCTION PERMIT FROM THE METROPOLITAN ST. LOUIS SEWER DISTRICT, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE THE DISTRICT WITH A COPY OF AN EXECUTED CERTIFICATE OF INSURANCE INDICATING THAT THE PERMITTEE HAS OBTAINED AND WILL CONTINUE TO CARRY COMMERCIAL GENERAL LIABILITY AND COMPREHENSIVE AUTO LIABILITY INSURANCE. THE REQUIREMENTS AND LIMITS SHALL BE AS STATED IN THE RULES AND REGULATIONS AND ENGINEERING DESIGN REQUIREMENTS FOR SANITARY AND STORMWATER DRAINAGE FACILITIES, FEBRUARY 2006 SECTION 10.090.

SPECIAL NOTE TO CONTRACTOR(S):

EXISTING UNDERGROUND AND ABOVE-GRADE FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN PLOTTED ON THESE CONTRACT DOCUMENTS BASED ON THE INFORMATION AND SURVEYS AVAILABLE AT THE TIME OF DRAWING PREPARATION. THE LOCATIONS OF THESE FEATURES MUST, THEREFORE, BE CONSIDERED APPROXIMATE ONLY. IN ADDITION, THERE MAY BE OTHER FACILITIES, STRUCTURES, AND UTILITIES WHICH DID NOT EXIST (OR THE EXISTENCE OF WHICH WAS NOT KNOWN) AT THE TIME OF DRAWING PREPARATION. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR(S) TO HAVE ALL EXISTING FACILITIES, STRUCTURES, AND UTILITIES LOCATED IN THE FIELD PRIOR TO ANY EXCAVATION OR CONSTRUCTION ACTIVITY AND TO PROTECT ALL SUCH FEATURES (EXCEPT THOSE SPECIFICALLY NOTED FOR REMOVAL OR DEMOLITION) DURING CONSTRUCTION.



VICINITY MAP
NOT TO SCALE

PREPARED
MAY 17, 2019

CITY OF MANCHESTER
14318 MANCHESTER ROAD
MANCHESTER, MO 63011
(636) 227-1385

MSD P#
BASE MAP: 23Q

INDEX OF SHEETS

DESCRIPTION

SHEET

ROADWAY SHEETS

TITLE SHEET	1
TYPICAL SECTIONS	2
SUMMARY OF QUANTITIES	2A
SCHEDULE OF QUANTITIES	2B
PLAN SHEET	3
REFERENCE & COORDINATE POINTS	4
TRAFFIC CONTROL	5

BRIDGE SHEETS

TYPICAL SECTION, GENERAL NOTES AND QUANTITIES	B1
REHABILITATION DETAILS	B2
DETAILS OF END BENT NO. 1	B3
DETAILS OF END BENT NO. 2	B4-B5
VERTICAL DRAIN AT END BENT NO. 2	B6
DETAILS OF LAMINATED NEOPRENE BEARING PAD AT BENT NO. 2	B7
GIRDER DETAILS	B8
DETAILS OF PRESTRESSED PANELS	B9
SLAB PLAN AND SECTION	B10
CAST-IN-PLACE SAFETY BARRIER CURB DETAILS	B11
DETAILS OF LEFT SAFETY BARRIER CURB AT END BENTS	B12
OPTIONAL SLIP-FORMED SAFETY BARRIER CURB	B13
TRANSITION BARRIER CURB DETAILS AND FENCE LIMITS	B14
DETAILS OF APPROACH SLAB (MINOR ROAD)	B15
BILL OF REINFORCING STEEL	B16-B17
LINDY BOULEVARD - GENERAL NOTES, QUANTITIES, DETAILS	B18

DESIGN DESIGNATION

FUNCTIONAL CLASSIFICATION	LOCAL
CURRENT POSTED SPEED	25 MPH
DESIGN SPEED	25 MPH
CURRENT ADT (2013)	3000
FUTURE ADT (2033)	3315

LENGTH OF PROJECT:

BEGINNING STATION	11+11.82
ENDING STATION	13+23.79
APPARENT LENGTH	211.97 FEET
EQUATIONS AND EXCEPTIONS	11+45.88 TO 12+44.01
BRIDGE EXCEPTIONS	98.13 FEET
TOTAL CORRECTIONS	
NET LENGTH OF PROJECT	113.84 FEET 0.022 MILES

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

APPROVED BY:
MANCHESTER, MISSOURI

DIRECTOR OF PUBLIC WORKS

DATE

2/22/19



NAME: DAVID RIECHMANN
DISCIPLINE: ENGINEER
LICENSE NO.: PE-2011000948
EXPIRATION DATE: 12-31-19

DATE PREPARED

5/21/2019

ROUTE STATE
MO

DISTRICT SHEET NO.
SL 1

COUNTY

ST. LOUIS

JOB NO.

1803100

CONTRACT ID.

FEDERAL PROJECT NO.
STP-5504(602)

MSD P-NUMBER

SUMMARY OF QUANTITIES			
ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY
	ROADWAY ITEMS:		
2013000	CLEARING AND GRUBBING	ACRE	0.1
2022010	REMOVAL OF IMPROVEMENTS	L.S.	1
3040504	TYPE 5 AGGREGATE FOR BASE (4 IN. THICK)	S.Y.	242
5021108	CONCRETE PAVEMENT (8" NON-REINFORCED)	S.Y.	151
6042010	ADJUSTING MANHOLE	EACH	1
6092011	INTEGRAL CURB (6IN. HEIGHT AND UNDER) TYPE A	L.F.	89
6113020	FURNISHING TYPE 2 ROCK BLANKET	C.Y.	3
6113040	PLACING TYPE 2 ROCK BLANKET	C.Y.	3
6161005	CONSTRUCTION SIGNS	S.F.	89
6161031	TYPE III MOVEABLE BARRICADE WITH LIGHT	EACH	6
6181000	MOBILIZATION	L.S.	1
6274000	CONTRACTOR FURNISHED SURVEYING AND STAKING	L.S.	1
8061007A	CURB INLET CHECK	EACH	2
	PEDESTRIAN FACILITIES:		
6086004	CONCRETE SIDEWALK (4" THICK)	S.Y.	81.4
6089910	CONCRETE SIDEWALK, CURB RAMP (7" THICK)	EACH	1
	LANDSCAPE/STREETSCAPING ITEMS:		
8052000A	SEEDING - WARM SEASON MIXTURES	S.Y.	0.1
	BRIDGE ITEMS:		
2162500	REMOVAL OF EXISTING BRIDGE DECKS	S.F.	2736
2169902	REMOVAL OF EXISTING BEARING	EACH	4
5031011A	BRIDGE APPROACH SLAB (MINOR ROAD)	S.Y.	93
6079903	CHAIN LINK FENCE ON STRUCTURE	L.F.	94
7034212	SLAB ON STEEL	S.Y.	304
7034215	SAFETY BARRIER CURB	L.F.	170
7039903	TRANSITION BARRIER CURB	L.F.	33
7040102	SUBSTRUCTURE REPAIR (UNFORMED)	S.F.	8
7049901	GABION BASKET REPAIR	L.S.	1
7121000	FABRICATED STRUCTURAL CARBON STEEL (MISC.)	POUND	450
7121159	SHEAR CONNECTORS	EACH	560
7125200	SURFACE PREPARATION FOR RECOATING STRUCTURAL STEEL	S.F.	400
7125210	FIELD APPLICATION OF INORGANIC ZINC PRIMER	S.F.	400
7125365A	INTERMEDIATE FIELD COAT (SYSTEM G)	S.F.	400
7125370A	FINISH FIELD COAT (SYSTEM G)	S.F.	400
7151001	VERTICAL DRAIN AT END BENTS	EACH	1
7162000	LAMINATED NEOPRENE BEARING PAD ASSEMBLY	EACH	4



/21/2019

STATE	
-------	--

MO

	MO

SHEET NO. 22

2A

COUNTY

T. LOUIS

JOB NO.

1803100

CONTRACT ID

CONTRACT ID.

GENERAL PROJECT NO.

9-5504(602)

SD P-NUMBER

[illegible]

 **HORNIER
SHIFRIN**
THE POWER HOUSE at UNION STATION
401 S. 18th St., Ste. 400
ST. LOUIS, MO 63103-2296
314-531-4321 FAX: 314-531-6966
www.HornierShifrin.com
Certificate of Authority: 000159
Expiration Date: December 31, 2018

**HOWARD GEORGE
DRIVE**

**SUMMARY OF QUANTITIES
SHEET 1 OF 1**

REV.

NOTES:

- 1) ALL SAWCUTS SHALL BE INCIDENTAL TO REMOVAL OF IMPROVEMENTS. NO DIRECT PAY FOR SAWCUTS.
- 2) CURB RAMPS AND DETECTABLE WARNING PANELS SHALL BE CONSTRUCTED PER ST. LOUIS COUNTY STANDARD SPECIFICATIONS AND DETAILS.
- 3) ALL UTILITY APPURTENANCES LOCATED WITHIN SIDEWALKS SHALL BE ADJUSTED TO MEET ADA ACCESSIBILITY GUIDELINES.
- 4) ALL TREES 3" IN DIAMETER AND GREATER SHALL REMAIN IN PLACE DURING CONSTRUCTION.
- 5) NOMINAL GRADING IS ANTICIPATED TO CONSTRUCTION SIDEWALK. ANY GRADING REQUIRED SHALL BE CONSIDERED INCIDENTAL TO OTHER ITEMS.

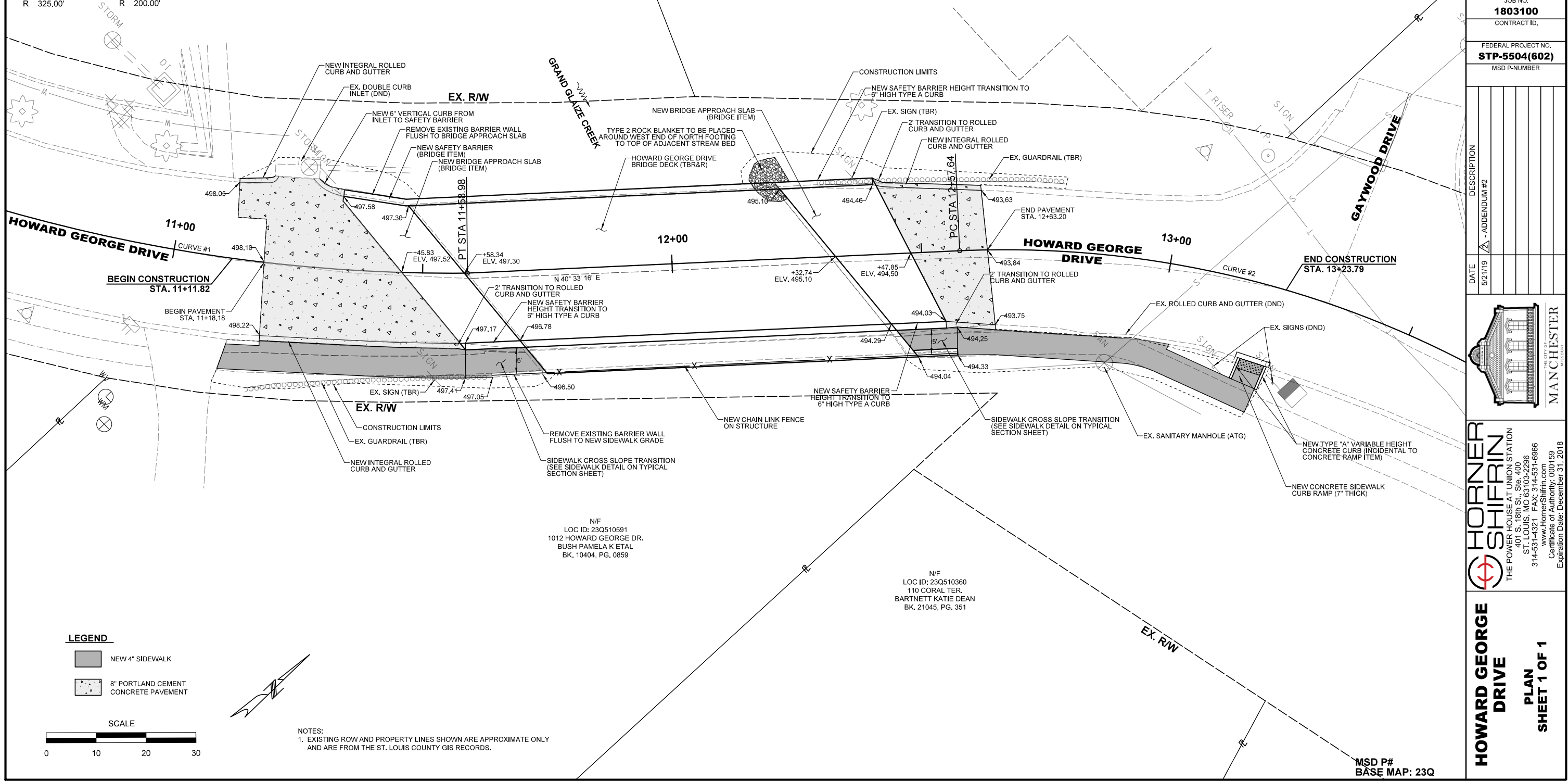
CURVE #1
PI 10+81.12
PC 10+00.00
PT 11+58.98
Δ 28° 01' 40.0" (LT)
D 17° 37' 46.1"
L 158.98'
T 81.12'
R 325.00'

CURVE #2
PI 13+24.53
PC 12+57.64
PT 13+86.74
Δ 36° 59' 01.8" (RT)
D 28° 38' 52.4"
L 129.10'
T 66.89'
R 200.00'

N/F
LOC ID: 23Q510517
1011 HOWARD GEORGE DR.
1011 BUILDING INC.
BK. 10343, PG. 0856

N/F
LOC ID: 23Q510508
179 GAYWOOD DR.
LAFAYETTE WORKCENTER INC.
BK. 12627, PG. 1618

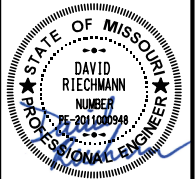
GRAND GLAZE CREEK



LEGEND

- NEW 4" SIDEWALK
- 8" PORTLAND CEMENT CONCRETE PAVEMENT

SCALE



NAME: DAVID RIECHMANN
DISCIPLINE: ENGINEER
LICENSE NO. PE-2011000948
EXPIRATION DATE: 12-31-19

DATE PREPARED
5/21/2019

ROUTE STATE
MO

DISTRICT SHEET NO.
SL 3

COUNTY
ST. LOUIS

JOB NO.
1803100

CONTRACT ID.

FEDERAL PROJECT NO.
STP-5504(602)

MSD P-NUMBER

DESCRIPTION	DATE	ADDENDUM #2
	5/21/19	



HORNER SHIFRIN
THE POWER HOUSE AT UNION STATION
401 S. 18th St., Ste. 400
ST. LOUIS, MO 63103-2296
314-531-4321 FAX: 314-531-8866
www.HornerShifrin.com
Certificate of Authority: 000159
Expiration Date: December 31, 2018

HOWARD GEORGE DRIVE
PLAN
SHEET 1 OF 1

MSD P#
BASE MAP: 23Q

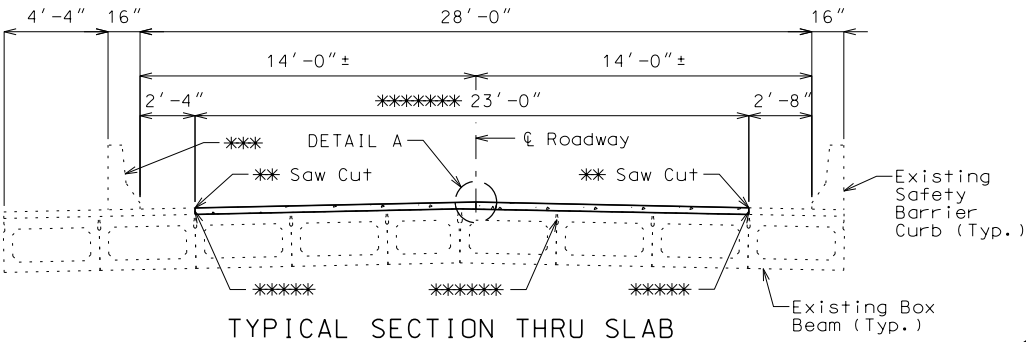
CITY OF MANCHESTER
U.I.P. AND REHAB EXISTING (61') ADJACENT BOX BEAM SPAN

Estimated Quantities		
Item		Total
Removal of Concrete Wearing Surface	sq. foot	1430
Fiber Reinforced Concrete Wearing Surface	sq. foot	1430
Substructure Repair (Unformed)	sq. foot	50
Shear Key Repair	linear foot	220
Approach Concrete Repair	sq. foot	30

Estimated Quantities for Fiber Reinforced Concrete Wearing Surface		
Item		Total
* Fiber Reinforced Class B-2 Concrete	cu. yard	17.7
Welded Wire Fabric (Epoxy Coated)	pound	590

The table of Estimated Quantities for Fiber Reinforced Concrete Wearing Surface represents the quantities used by the City in preparing the cost estimate for concrete slabs. The area of the concrete wearing surface will be measured to the nearest square yard longitudinally from end of slab to end of slab and transversely from saw cut to saw cut as shown in the Typical Section. Payment for all concrete and epoxy coated welded wire fabric will be considered completely covered by the contract unit price for Fiber Reinforced Concrete Wearing Surface. Variations may be encountered in the estimated quantities but the variations cannot be used for an adjustment in the contract unit price.

* Quantity is based on assuming 4" thick uniform potential wearing surface. No price adjustment will be made up to the quantity shown. Potential Monolithic Beam Repairs are included in this quantity. See Job Special Provisions.

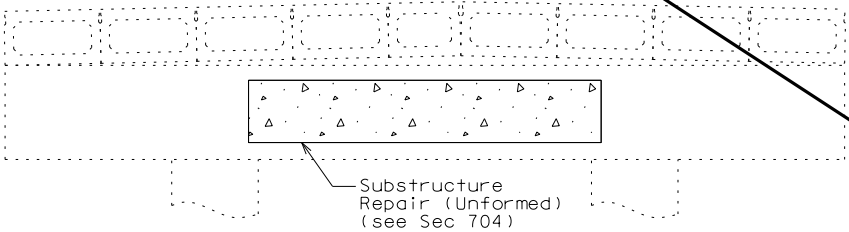


** Existing epoxy coated reinforcing steel exposed by sawcut and to remain in place shall be coated with epoxy paint in accordance with Sec 710 prior to placing new concrete. Cost of painting exposed epoxy reinforcing steel shall be considered incidental to other items.

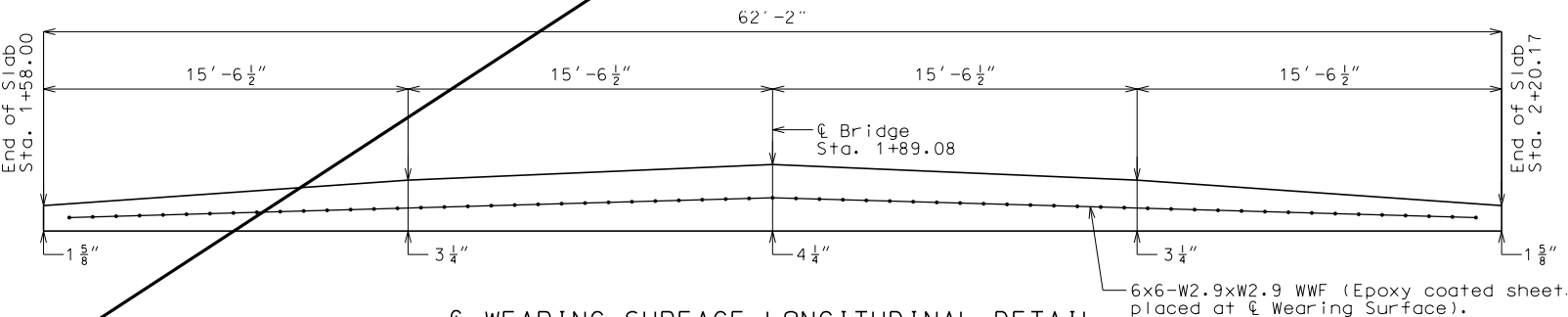
** Barrier curb shall be repaired as needed in accordance with Sec 704. Cost of repairing barrier curb shall be considered incidental to other items.

***** At the direction of the Engineer, the Contractor shall remove unsound grout between box beams and repair with epoxy mortar. See Shear Key Repair in Job Special Provisions.

***** Limits of wearing surface removal and replacement



SUBSTRUCTURE REPAIR @ END BENT NO. 1 & 2



WEARING SURFACE LONGITUDINAL DETAIL

Contractor shall adjust dimensions as necessary to tie into ends of bridge and wearing surface that is used-in-place.

Note: This drawing is not to scale. Follow dimensions.

General Notes:

Design Specifications:
2002 - AASHTO LFD 17th Edition
Seismic Performance Category A

Construction Specifications:

The 2018 Edition and Supplemental revisions of the Missouri Department of Transportation's "Missouri Standard Specifications for Highway Construction" and the Job Special Provisions shall govern, except as noted.

Standard Drawings:

Standard drawings shall be Missouri Department of Transportation's "2018 Missouri Standard Plans for Highway Construction", except as noted.

Design Loading:

HS20-44 (New Construction)
25#/sq. ft. Future Wearing Surface

Superstructure:

Non-composite, simply supported for dead load and live load.

Design Unit Stresses:

Class B-2 Concrete (Gradation E only) (Fiber Reinforced Concrete Wearing Surface and Approach Concrete Repair
Epoxy Coated Welded Wire Fabric (Grade 60) $f'c = 4,000$ psi
 $fy = 60,000$ psi

Joint Filler:

All joint filler shall be in accordance with Sec 1057 for preformed sponge rubber expansion and partition joint filler, except as noted.

Reinforcing Steel:

Minimum clearance to reinforcing steel shall be 1", unless otherwise shown.

Epoxy Coated Welded Wire Fabric shall be in accordance with Sec 1036.

Miscellaneous:

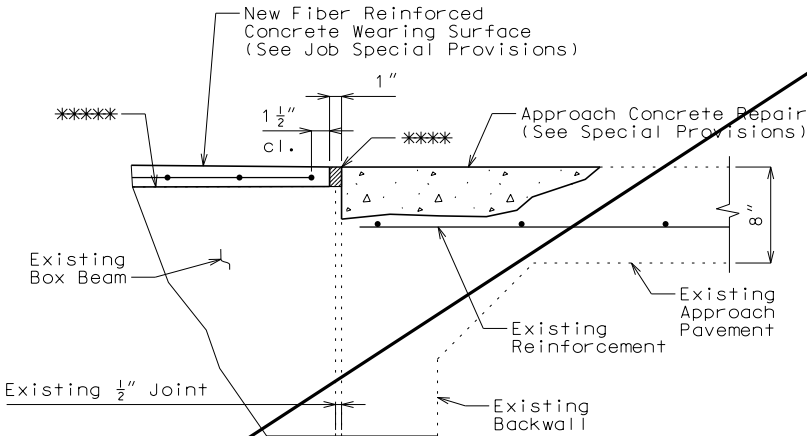
Outline of old work is indicated by light dashed lines. Heavy lines indicate new work.

Contractor shall verify all dimensions in field before ordering new material.

All dimensions are approximate and taken from the existing bridge plans dated 1987.

Traffic Handling:

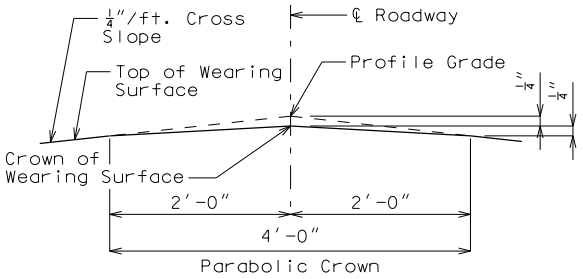
Structure to be closed during construction.



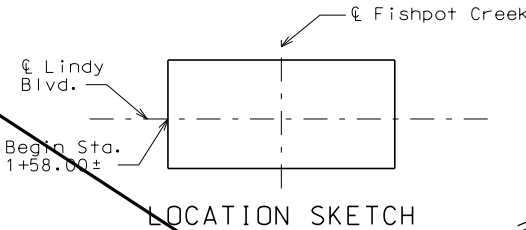
JOINT AND APPROACH PAVEMENT REPAIR DETAIL

*** Silicone Sealant in accordance with Sec. 717.30.

*** Concrete bonding compound shall be applied to top surface of Box Beams and at interface of old and new wearing surface prior to placement of Fiber Reinforced Concrete Wearing Surface. (See Job Special Provisions)



DETAIL A



LOCATION SKETCH

Notes:

Removal of existing Fiber Reinforced Concrete Wearing Surface shall be in accordance with Sec 216 and Job Special Provisions.

Fiber Reinforced Concrete Wearing Surface shall be sealed in accordance with Sec 703.

In order to maintain grade and a minimum thickness of overlay as shown on plans it may be necessary to use additional quantities of overlay at various locations throughout the structure. The cost of furnishing and installing the overlay will be considered completely covered in the contract unit price, including all additional labor, materials or equipment for variations in thickness of overlay.

2 Remove Sheet

Designed: MAC
Detailed: MAC
Checked: TPL

Sheet No. 1 of 1

NAME: MARTIN CHORNEY
DISCIPLINE: ENGINEER
LICENSE NO. PE-201300488
EXPIRATION DATE: 12-31-19

DATE PREPARED
5/21/2019

ROUTE BR STATE MO

DISTRICT SL SHEET NO. B18

COUNTY
ST. LOUIS

JOB NO.
1803100

CONTRACT ID.

FEDERAL PROJECT NO.
STP-5504(602)

BRIDGE NO.

DESCRIPTION
Addendum #2

DATE 5/21/19

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER