



CALL NO. 202

CONTRACT ID. 245342

GRAVES - CARLISLE COUNTIES

FED/STATE PROJECT NUMBER 121GR24D042-STP BRZ

DESCRIPTION VARIOUS ROUTES IN DISTRICT 1

WORK TYPE BRIDGE REPLACEMENT

PRIMARY COMPLETION DATE 4/30/2026

LETTING DATE: March 21,2024

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN DAYLIGHT TIME March 21,2024. Bids will be publicly announced at 10:00 AM EASTERN DAYLIGHT TIME.

PLANS AVAILABLE FOR THIS PROJECT.

DBE CERTIFICATION REQUIRED - 5%

REQUIRED BID PROPOSAL GUARANTY: Not less than 5% of the total bid.

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PART I
SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 01

CONTRACT ID - 245342

121GR24D042-STP BRZ

COUNTY - CARLISLE

PCN - BR02000512400

STP BRZ 9030 (454)

US 51 (MP 4.31) ADDRESS DEFICIENCIES OF US 51 OVER LITTLE MAYFIELD CREEK (020B00004N) (MP 4.52), A DISTANCE OF 0.21 MILES.BRIDGE WITH GRADE & DRAIN SYP NO. 01-10105.00.

GEOGRAPHIC COORDINATES LATITUDE 36:49:58.00 LONGITUDE 89:00:31.00

ADT 1,997

PCN - BR02000512401

STP BRZ 9030 (456)

US 51 (MP 1.68) ADDRESS DEFICIENCIES OF US 51 OVER GADDIE CREEK (020B00002N) (MP 1.78), A DISTANCE OF 0.10 MILES.BRIDGE REPLACEMENT SYP NO. 01-10104.00.

GEOGRAPHIC COORDINATES LATITUDE 37:00:00.00 LONGITUDE 89:00:00.00

ADT 1,997

COUNTY - GRAVES

PCN - BR04200452400

STP BRZ 9030 (455)

US 45 (MP 1.76) ADDRESS DEFICIENCIES OF US 45 OVER JACKSON CREEK (042B000090N) (MP 1.84), A DISTANCE OF 0.08 MILES.BRIDGE REPLACEMENT SYP NO. 01-10128.00.

GEOGRAPHIC COORDINATES LATITUDE 36:34:53.00 LONGITUDE 88:48:05.00

ADT 1,211

COMPLETION DATE(S):

COMPLETED BY 04/30/2026

APPLIES TO ENTIRE CONTRACT

COMPLETED BY 03/31/2025

INTERMEDIATE COMPLETION - 1 BRIDGE COMPLETED

CONTRACT NOTES

PROPOSAL ADDENDA

All addenda to this proposal must be applied when calculating bid and certified in the bid packet submitted to the Kentucky Department of Highways. Failure to use the correct and most recent addenda may result in the bid being rejected.

BID SUBMITTAL

Bidder must use the Department's electronic bidding software. The Bidder must download the bid file located on the Bid Express website (www.bidx.com) to prepare a bid packet for submission to the Department. The bidder must submit electronically using Bid Express.

JOINT VENTURE BIDDING

Joint venture bidding is permissible. All companies in the joint venture must be prequalified in one of the work types in the Qualifications for Bidders for the project. The bidders must get a vendor ID for the joint venture from the Division of Construction Procurement and register the joint venture as a bidder on the project. Also, the joint venture must obtain a digital ID from Bid Express to submit a bid. A joint bid bond of 5% may be submitted for both companies or each company may submit a separate bond of 5%.

UNDERGROUND FACILITY DAMAGE PROTECTION

The contractor shall make every effort to protect underground facilities from damage as prescribed in the Underground Facility Damage Protection Act of 1994, Kentucky Revised Statute KRS 367.4901 to 367.4917. It is the contractor's responsibility to determine and take steps necessary to be in compliance with federal and state damage prevention directives. When prescribed in said directives, the contractor shall submit Excavation Locate Requests to the Kentucky Contact Center (KY811) via web ticket entry. The submission of this request does not relieve the contractor from the responsibility of contacting non-member facility owners, whom shall be contacted through their individual Protection Notification Center. Non-compliance with these directives can result in the enforcement of penalties.

REGISTRATION WITH THE SECRETARY OF STATE BY A FOREIGN ENTITY

Pursuant to KRS 176.085(1)(b), an agency, department, office, or political subdivision of the Commonwealth of Kentucky shall not award a state contract to a person that is a foreign entity required by [KRS 14A.9-010](#) to obtain a certificate of authority to transact business in the Commonwealth ("certificate") from the Secretary of State under [KRS 14A.9-030](#) unless the person produces the certificate within fourteen (14) days of the bid or proposal opening. If the foreign entity is not required to obtain a certificate as provided in [KRS 14A.9-010](#), the foreign entity should identify the applicable exception. Foreign entity is defined within [KRS 14A.1-070](#).

For all foreign entities required to obtain a certificate of authority to transact business in the Commonwealth, if a copy of the certificate is not received by the contracting agency within the time frame identified above, the foreign entity's solicitation response shall be deemed non-responsive or the awarded contract shall be cancelled.

Businesses can register with the Secretary of State at <https://secure.kentucky.gov/sos/ftbr/welcome.aspx>.

SPECIAL NOTE FOR PROJECT QUESTIONS DURING ADVERTISEMENT

Questions about projects during the advertisement should be submitted in writing to the Division of Construction Procurement. This may be done by email to kytc.projectquestions@ky.gov. The Department will attempt to answer all submitted questions. The Department reserves the right not to answer if the question is not pertinent or does not aid in clarifying the project intent.

The deadline for posting answers will be 3:00 pm Eastern Daylight Time, the day preceding the Letting. Questions may be submitted until this deadline with the understanding that the later a question is submitted, the less likely an answer will be able to be provided.

The questions and answers will be posted for each Letting under the heading "Questions & Answers" on the Construction Procurement website (www.transportation.ky.gov/construction-procurement). The answers provided shall be considered part of this Special Note and, in case of a discrepancy, will govern over all other bidding documents.

HARDWOOD REMOVAL RESTRICTIONS

The US Department of Agriculture has imposed a quarantine in Kentucky and several surrounding states, to prevent the spread of an invasive insect, the emerald ash borer. Hardwood cut in conjunction with the project may not be removed from the state. Chipping or burning on site is the preferred method of disposal.

INSTRUCTIONS FOR EXCESS MATERIAL SITES AND BORROW SITES

Identification of excess material sites and borrow sites shall be the responsibility of the Contractor. The Contractor shall be responsible for compliance with all applicable state and federal laws and may wish to consult with the US Fish and Wildlife Service to seek protection under Section 10 of the Endangered Species Act for these activities.

ACCESS TO RECORDS

The contractor, as defined in KRS 45A.030 (9) agrees that the contracting agency, the Finance and Administration Cabinet, the Auditor of Public Accounts, and the Legislative Research Commission, or their duly authorized representatives, shall have access to any books, documents, papers, records, or other evidence, which are directly pertinent to this contract for the purpose of financial audit or program review. Records and other prequalification information confidentially disclosed as part of the bid process shall not be deemed as directly pertinent to the contract and

shall be exempt from disclosure as provided in KRS 61.878(1)(c). The contractor also recognizes that any books, documents, papers, records, or other evidence, received during a financial audit or program review shall be subject to the Kentucky Open Records Act, KRS 61.870 to 61.884.

In the event of a dispute between the contractor and the contracting agency, Attorney General, or the Auditor of Public Accounts over documents that are eligible for production and review, the Finance and Administration Cabinet shall review the dispute and issue a determination, in accordance with Secretary's Order 11-004.

BOYCOTT PROVISIONS

If applicable, the contractor represents that, pursuant to [KRS 45A.607](#), they are not currently engaged in, and will not for the duration of the contract engage in, the boycott of a person or an entity based in or doing business with a jurisdiction with which Kentucky can enjoy open trade. **Note:** The term Boycott does not include actions taken for bona fide business or economic reasons, or actions specifically required by federal or state law.

If applicable, the contractor verifies that, pursuant to KRS 41.480, they do not engage in, and will not for the duration of the contract engage in, in energy company boycotts as defined by KRS 41.472.

LOBBYING PROHIBITIONS

The contractor represents that they, and any subcontractor performing work under the contract, have not violated the agency restrictions contained in [KRS 11A.236](#) during the previous ten (10) years, and pledges to abide by the restrictions set forth in such statute for the duration of the contract awarded.

The contractor further represents that, pursuant to [KRS 45A.328](#), they have not procured an original, subsequent, or similar contract while employing an executive agency lobbyist who was convicted of a crime related to the original, subsequent, or similar contract within five (5) years of the conviction of the lobbyist.

Revised: 2/29/2024

1.0 BUY AMERICA REQUIREMENT.

Follow the “Buy America” provisions as required by 23 U.S.C. § 313 and 23 C.F.R. § 635.410. Except as expressly provided herein all manufacturing processes of steel or iron materials including but not limited to structural steel, guardrail materials, corrugated steel, culvert pipe, structural plate, prestressing strands, and steel reinforcing bars shall occur in the United States of America, including the application of:

- Coating,
- Galvanizing,
- Painting, and
- Other coating that protects or enhances the value of steel or iron products.

The following are exempt, unless processed or refined to include substantial amounts of steel or iron material, and may be used regardless of source in the domestic manufacturing process for steel or iron material:

- Pig iron,
- Processed, pelletized, and reduced iron ore material, or
- Processed alloys.

The Contractor shall submit a certification stating that all manufacturing processes involved with the production of steel or iron materials occurred in the United States.

Produce, mill, fabricate, and manufacture in the United States of America all aluminum components of bridges, tunnels, and large sign support systems, for which either shop fabrication, shop inspection, or certified mill test reports are required as the basis of acceptance by the Department.

Use foreign materials only under the following conditions:

- 1) When the materials are not permanently incorporated into the project; or
- 2) When the delivered cost of such materials used does not exceed 0.1 percent of the total Contract amount or \$2,500.00, whichever is greater.

The Contractor shall submit to the Engineer the origin and value of any foreign material used.

2.0 – BUILD AMERICA, BUY AMERICA (BABA)

Contractor shall comply with the Federal Highway Administration (FHWA) Buy America Requirement in 23 C.F.R. § 635.410 and all relevant provisions of the Build America, Buy America Act (BABA), contained within the Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, §§ 70901-52 enacted November 15, 2021. The BABA requires iron, steel, manufactured products, and construction materials used in infrastructure projects funded by federal financial assistance to be produced in the United States. Comply with 2 C.F.R § 184.

BABA permits FHWA participation in the Contract only if domestic steel and iron will be used on the Project. To be considered domestic, all steel and iron used, and all products manufactured from steel and iron must be produced in the United States and all manufacturing processes, including application of a coating, for these materials must occur in the United States. Coating includes all processes that protect or enhance the value of the material to which the coating is applied. This requirement does not preclude a minimal use of foreign steel and iron materials, provided the cost of such materials does not exceed 0.1% of the total contract amount under the Contract or \$2,500.00 whichever is greater.

BABA permits FHWA participation in the Contract only if all “construction materials” as defined in the Act are made in the United States. The Buy America preference applies to the following construction materials

incorporated into infrastructure projects: non-ferrous metals; plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables); glass (including optic glass); Fiber optic cable; optical fiber; lumber; engineered wood; and drywall. Contractor will be required to use construction materials produced in the United States on this Project. The Contractor shall submit a certification stating that all construction materials are certified to be BABA compliant.

Finally, BABA permits the continuation of FHWA's current general applicability waivers for manufactured products, raw materials, and ferryboat parts, but these waivers are subject to reevaluation, specifically the general applicability waiver for manufactured products.

The Contractor has completed and submitted, or shall complete and submit, to the Cabinet a Buy America/Build America, Buy America Certificate prior to the Cabinet issuing the notice to proceed, in the format below. After submittal, the Contractor is bound by its original certification.

A false certification is a criminal act in violation of 18 U.S.C. § 1001. The Contractor has the burden of proof to establish that it is in compliance.

At the Contractor's request, the Cabinet may, but is not obligated to, seek a waiver of Buy America requirements if grounds for the waiver exist under 23 C.F.R. § 635.410(c) or will comply with the applicable Buy America requirements if a waiver of those requirements is not available or not pursued by the Cabinet.

Please refer to the Federal Highway Administration's Buy America webpage for more information.

[Buy America - Construction Program Guide - Contract Administration - Construction - Federal Highway Administration \(dot.gov\)](#)

October 26, 2023 Letting

SPECIAL NOTE – BUY AMERICA REQUIREMENTS AND BUILD AMERICA, BUY AMERICA (BABA) ACT

10/26/2023

BUY AMERICA / BUILD AMERICA, BUY AMERICA (ACT) MATERIALS CERTIFICATE OF COMPLIANCE

The Contractor hereby certifies that it will comply with all relevant provisions of the Build America, Buy America Act, contained within the Infrastructure Investment and Jobs Act, Pub. L. NO. 117-58, §§ 70901-52, the requirements of 23 U.S.C. § 313, 23 C.F.R. § 635.410 and 2 C.F.R § 184.

Date Submitted: _____

Contractor: _____

Signature: _____

Printed Name: _____

Title: _____

NOTE: THIS CERTIFICATION IS IN ADDITION TO ANY AND ALL REQUIREMENTS OUTLINED IN THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND/OR SPECIAL NOTES CONTAINED IN THE PROJECT PROPOSAL.

FEDERAL CONTRACT NOTES

The Kentucky Department of Highways, in accordance with the Regulations of the United States Department of Transportation 23 CFR 635.112 (h), hereby notifies all bidders that failure by a bidder to comply with all applicable sections of the current Kentucky Standard Specifications, including, but not limited to the following, may result in a bid not being considered responsive and thus not eligible to be considered for award:

- | | |
|--------------------------------|--|
| 102.02 Current Rating | 102.08 Preparation and Delivery of Proposals |
| 102.13 Irregular Bid Proposals | 102.14 Disqualification of Bidders |
| 102.09 Proposal Guaranty | |

CIVIL RIGHTS ACT OF 1964

The Kentucky Transportation Cabinet, Department of Highways, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin, sex, age (over 40), religion, sexual orientation, gender identity, veteran status, disability, income- level, or Limited English Proficiency (LEP) in consideration for an award.

NOTICE TO ALL BIDDERS

To report bid rigging activities call: 1-800-424-9071.

The U.S. Department of Transportation (DOT) operates the above toll-free “hotline” Monday through Friday, 8:00 a.m. to 5:00 p.m. eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the “hotline” to report such activities.

The “hotline” is part of the DOT’s continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

SECOND TIER SUBCONTRACTS

Second tier subcontracts are acceptable per Section 108.01 of the Standard Specifications for Road and Bridge Construction. Sub-Contractors fulfilling a disadvantaged business enterprise goal on a project may enter into a 2nd tier subcontract with a Non-DBE Subcontractor. However, in this instance, none of the work subcontracted to the Non-DBE Contractor will count toward fulfilling the established Disadvantaged Goal for the project.

DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

It is the policy of the Kentucky Transportation Cabinet (“the Cabinet”) that Disadvantaged Business Enterprises (“DBE”) shall have the opportunity to participate in the performance of highway construction projects financed in whole or in part by Federal Funds in order to create a level playing field for all businesses who wish to contract with the Cabinet. To that end, the Cabinet will comply with the regulations found in 49 CFR Part 26, and the definitions and requirements contained therein shall be adopted as if set out verbatim herein.

The Cabinet, contractors, subcontractors, and sub-recipients shall not discriminate on the basis of race, color, national origin, or sex in the performance of work performed pursuant to Cabinet contracts. The contractor shall carry out applicable requirements of 49 CFR 26 in the award and administration of federally assisted highway construction projects. The contractor will include this provision in all its subcontracts and supply agreements pertaining to contracts with the Cabinet.

Failure by the contractor to carry out these requirements is a material breach of its contract with the Cabinet, which may result in the termination of the contract or such other remedy as the Cabinet deems necessary.

DBE GOAL

The Disadvantaged Business Enterprise (DBE) goal established for this contract, as listed on the front page of the proposal, is the percentage of the total value of the contract.

The contractor shall exercise all necessary and reasonable steps to ensure that Disadvantaged Business Enterprises participate in a least the percent of the contract as set forth above as goals for this contract.

OBLIGATION OF CONTRACTORS

Each contractor prequalified to perform work on Cabinet projects shall designate and make known to the Cabinet a liaison officer who is assigned the responsibility of effectively administering and promoting an active program for utilization of DBEs.

If a formal goal has not been designated for the contract, all contractors are encouraged to consider DBEs for subcontract work as well as for the supply of material and services needed to perform this work.

Contractors are encouraged to use the services of banks owned and controlled by minorities and women.

CERTIFICATION OF CONTRACT GOAL

Contractors shall include the following certification in bids for projects for which a DBE goal has been established. BIDS SUBMITTED WHICH DO NOT INCLUDE CERTIFICATION OF DBE PARTICIPATION WILL NOT BE ACCEPTED. These bids will not be considered for award by the Cabinet and they will be returned to the bidder.

“The bidder certifies that it has secured participation by Disadvantaged Business Enterprises (“DBE”) in the amount of _____ percent of the total value of this contract and that the DBE participation is in compliance with the requirements of 49 CFR 26 and the policies of the Kentucky Transportation Cabinet pertaining to the DBE Program.”

The certification statement is located in the electronic bid file. All contractors must certify their DBE participation on that page. DBEs utilized in achieving the DBE goal must be certified and prequalified for the work items at the time the bid is submitted.

DBE PARTICIPATION PLAN

Lowest responsive bidders must submit the *DBE Plan/ Subcontractor Request*, form TC 14-35 DBE, within **5** days of the letting. This is necessary before the Awards Committee will review and make a recommendation. **The project will not be considered for award prior to submission and approval of the apparent low bidder’s DBE Plan/Subcontractor Request.**

The DBE Participation Plan shall include the following:

1. Name and address of DBE Subcontractor(s) and/or supplier(s) intended to be used in the proposed project;
2. Description of the work each is to perform including the work item, unit, quantity, unit price and total amount of the work to be performed by the individual DBE. The Proposal Line Number, Category Number, and the Project Line Number can be found in the “material listing” on the Construction Procurement website under the specific letting;
3. The dollar value of each proposed DBE subcontract and the percentage of total project contract value this represents. DBE participation may be counted as follows:
 - a) If DBE suppliers and manufactures assume actual and contractual responsibility, the dollar value of materials to be furnished will be counted toward the goal as follows:
 - The entire expenditure paid to a DBE manufacturer;
 - 60 percent of expenditures to DBE suppliers that are not manufacturers provided the supplier is a regular dealer in the product involved. A regular dealer must be engaged in, as its principal business and in its own name, the sale of products to the public, maintain an inventory and own and operate distribution equipment; and
 - The amount of fees or commissions charged by the DBE firms for a bona fide service, such as professional, technical, consultant, or managerial services and assistance in the procurement of essential personnel, facilities, equipment, materials, supplies, delivery of materials and supplies or for furnishing bonds, or insurance, providing such fees or commissions are determined to be reasonable and customary.
 - b) The dollar value of services provided by DBEs such as quality control testing, equipment repair and maintenance, engineering, staking, etc.;

- c) The dollar value of joint ventures. DBE credit for joint ventures will be limited to the dollar amount of the work actually performed by the DBE in the joint venture;
4. Written and signed documentation of the bidder's commitment to use a DBE contractor whose participation is being utilized to meet the DBE goal; and
5. Written and signed confirmation from the DBE that it is participating in the contract as provided in the prime contractor's commitment.

AFTER PROJECT AWARD AND BEFORE NOTICE TO PROCEED/WORK ORDER IS ISSUED (SEE SECTION 103.06, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION)

Prime Contractors awarded a federally funded project with a DBE Goal greater than zero will be required to submit DBE Subcontract Agreement Form, TC 14-36, along with the attached FHWA 1273 and Certificate of Liability Insurance for each DBE Firm submitted as part of the previously approved DBE Utilization Plan (TC 14-35). A signed quote or purchase order shall be attached when the DBE subcontractor is a material supplier or broker.

The Certificate of Liability Insurance submitted must meet the requirements outlined in Section 107.18 of the Standard Specifications for Road and Bridge Construction.

Changes to **APPROVED** DBE Participation Plans must be approved by the Cabinet. The Cabinet may consider extenuating circumstances including, but not limited to, changes in the nature or scope of the project, the inability or unwillingness of a DBE to perform the work in accordance with the bid, and/or other circumstances beyond the control of the prime contractor.

CONSIDERATION OF GOOD FAITH EFFORTS REQUESTS

If the DBE participation submitted in the bid by the apparent lowest responsive bidder does not meet or exceed the DBE contract goal, the apparent lowest responsive bidder must submit a Good Faith Effort Package to satisfy the Cabinet that sufficient good faith efforts were made to meet the contract goals prior to submission of the bid. Efforts to increase the goal after bid submission will not be considered in justifying the good faith effort, unless the contractor can show that the proposed DBE was solicited prior to the letting date. DBEs utilized in achieving the DBE goal must be certified and prequalified for the work items at the time the bid is submitted. One complete set (hard copy along with an electronic copy) of this information must be received in the Division of Contract Procurement no later than 12:00 noon of the tenth calendar day after receipt of notification that they are the apparent low bidder.

Where the information submitted includes repetitious solicitation letters it will be acceptable to submit a sample representative letter along with a distribution list of the firms solicited. Documentation of DBE quotations shall be a part of the good faith effort submittal as necessary to demonstrate compliance with the factors listed below which the Cabinet considers in judging good faith efforts. This documentation may include written subcontractors' quotations, telephone log notations of verbal quotations, or other types of quotation documentation.

The Good Faith Effort Package shall include, but may not be limited to information showing evidence of the following:

1. Whether the bidder attended any pre-bid meetings that were scheduled by the Cabinet to inform DBEs of subcontracting opportunities;
2. Whether the bidder provided solicitations through all reasonable and available means;
3. Whether the bidder provided written notice to all DBEs listed in the DBE directory at the time of the letting who are prequalified in the areas of work that the bidder will be subcontracting;
4. Whether the bidder followed up initial solicitations of interest by contacting DBEs to determine with certainty whether they were interested. If a reasonable amount of DBEs within the targeted districts do not provide an intent to quote or no DBEs are prequalified in the subcontracted areas, the bidder must notify the Disadvantaged Enterprise Business Liaison Officer (DEBLO) in the Office for Civil Rights and Small Business Development to give notification of the bidder's inability to get DBE quotes;
5. Whether the bidder selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the contract goals. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise perform these work items with its own forces;
6. Whether the bidder provided interested DBEs with adequate and timely information about the plans, specifications, and requirements of the contract;
7. Whether the bidder negotiated in good faith with interested DBEs not rejecting them as unqualified without sound reasons based on a thorough investigation of their capabilities. Any rejection should be so noted in writing with a description as to why an agreement could not be reached;
8. Whether quotations were received from interested DBE firms but were rejected as unacceptable without sound reasons why the quotations were considered unacceptable. The fact that the DBE firm's quotation for the work is not the lowest quotation received will not in itself be considered as a sound reason for rejecting the quotation as unacceptable. The fact that the bidder has the ability and/or desire to perform the contract work with its own forces will not be considered a sound reason for rejecting a DBE quote. Nothing in this provision shall be construed to require the bidder to accept unreasonable quotes in order to satisfy DBE goals;
9. Whether the bidder specifically negotiated with subcontractors to assume part of the responsibility to meet the contract DBE goal when the work to be subcontracted includes potential DBE participation;
10. Whether the bidder made any efforts and/or offered assistance to interested DBEs in obtaining the necessary equipment, supplies, materials, insurance and/or bonding to satisfy the work requirements of the bid proposal; and
11. Any other evidence that the bidder submits which may show that the bidder has made reasonable good faith efforts to include DBE participation.

FAILURE TO MEET GOOD FAITH REQUIREMENT

Where the apparent lowest responsive bidder fails to submit sufficient participation by DBE firms to meet the contract goal and upon a determination by the Good Faith Committee based upon the information submitted that the apparent lowest responsive bidder failed to make sufficient reasonable efforts to meet the contract goal, the bidder will be offered the opportunity to meet in person for administrative reconsideration. The bidder will be notified of the Committee's decision within 24 hours of its decision. The bidder will have 24 hours to request reconsideration of the Committee's decision. The reconsideration meeting will be held within two days of the receipt of a request by the bidder for reconsideration.

The request for reconsideration will be heard by the Office of the Secretary. The bidder will have the opportunity to present written documentation or argument concerning the issue of whether it met the goal or made an adequate good faith effort. The bidder will receive a written decision on the reconsideration explaining the basis for the finding that the bidder did or did not meet the goal or made adequate Good Faith efforts to do so.

The result of the reconsideration process is not administratively appealable to the Cabinet or to the United States Department of Transportation.

The Cabinet reserves the right to award the contract to the next lowest responsive bidder or to rebid the contract in the event that the contract is not awarded to the low bidder as the result of a failure to meet the good faith requirement.

SANCTIONS FOR FAILURE TO MEET DBE REQUIREMENTS OF THE PROJECT

Failure by the prime contractor to fulfill the DBE requirements of a project under contract or to demonstrate good faith efforts to meet the goal constitutes a breach of contract. When this occurs, the Cabinet will hold the prime contractor accountable, as would be the case with all other contract provisions. Therefore, the contractor's failure to carry out the DBE contract requirements shall constitute a breach of contract and as such the Cabinet reserves the right to exercise all administrative remedies at its disposal including, but not limited to the following:

- Suspension of Prequalification;
- Disallow credit toward the DBE goal;
- Withholding progress payments;
- Withholding payment to the prime in an amount equal to the unmet portion of the contract goal; and/or
- Termination of the contract.

PROMPT PAYMENT

The prime contractor will be required to pay the DBE and Non-DBE Subcontractors within seven (7) working days after he or she has received payment from the Kentucky Transportation Cabinet for work performed or materials furnished.

CONTRACTOR REPORTING

All contractors must keep detailed records and provide reports to the Cabinet on their progress in meeting the DBE requirement on any highway contract. These records may include, but shall not be limited to payroll, lease agreements, cancelled payroll checks, executed subcontracting agreements, etc. Prime contractors will be required to complete and submit a **signed and notarized** Affidavit of Subcontractor Payment (TC 18-7) and copies of checks for any monies paid to each DBE subcontractor or supplier utilized to meet a DBE goal. These documents must be completed and signed within 7 days of being paid by the Cabinet.

Payment information that needs to be reported includes date the payment is sent to the DBE, check number, Contract ID, amount of payment and the check date. Before Final Payment is made on this contract, the Prime Contractor will certify that all payments were made to the DBE subcontractor and/or DBE suppliers.

***** IMPORTANT *****

Please mail the original, signed and completed TC (18-7) Affidavit of Subcontractor Payment form and all copies of checks for payments listed above to the following address:

Office for Civil Rights and Small Business Development
6th Floor West 200 Mero Street
Frankfort, KY 40622

The prime contractor should notify the KYTC Office for Civil Rights and Small Business Development seven (7) days prior to DBE contractors commencing work on the project. The contact in this office is Mr. Tony Youssefi. Mr. Youssefi's current contact information is email address – tyousseffi@ky.gov and the telephone number is (502) 564-3601.

DEFAULT OR DECERTIFICATION OF THE DBE

If the DBE subcontractor or supplier is decertified or defaults in the performance of its work, and the overall goal cannot be credited for the uncompleted work, the prime contractor may utilize a substitute DBE or elect to fulfill the DBE goal with another DBE on a different work item. If after exerting good faith effort in accordance with the Cabinet's Good Faith Effort policies and procedures, the prime contractor is unable to replace the DBE, then the unmet portion of the goal may be waived at the discretion of the Cabinet.

PROHIBITION ON TELECOMMUNICATIONS EQUIPMENT OR SERVICES

In accordance with the FY 2019 National Defense Authorization Act (NDAA), 2 CFR 200.216, and 2 CFR 200.471, Federal agencies are prohibited, after August 13, 2020, from obligating or expending financial assistance to obtain certain telecommunications and video surveillance services and equipment from specific producers. As a result of these regulations, contractors and subcontractors are prohibited, on projects with federal funding participation, from providing telecommunication or video surveillance equipment, services, or systems produced by:

- Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities)
- Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities)

LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC – CARGO PREFERENCE ACT (CPA).

(REV 12-17-15) (1-16)

SECTION 7 is expanded by the following new Article:

102.10 **Cargo Preference Act – Use of United States-flag vessels.**

Pursuant to Title 46CFR Part 381, the Contractor agrees

- To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.
- To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph 1 of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.
- To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

ASPHALT MIXTURE

Unless otherwise noted, the Department estimates the rate of application for all asphalt mixtures to be 110 lbs/sy per inch of depth.

DGA BASE

Unless otherwise noted, the Department estimates the rate of application for DGA Base to be 115 lbs/sy per inch of depth.

DGA BASE FOR SHOULDERS

Unless otherwise noted, the Department estimates the rate of application for DGA Base for Shoulders to be 115 lbs/sy per inch of depth. The Department will not measure necessary grading and/or shaping of existing shoulders prior to placing of DGA Base, but shall be incidental to the Contract unit price per ton for DGA Base.

Accept payment at the Contract unit price per ton as full compensation for all labor, materials, equipment, and incidentals for grading and/or shaping of existing shoulders and furnishing, placing, and compacting the DGA Base.

INCIDENTAL SURFACING

The Department has included in the quantities of asphalt mixtures established in the proposal estimated quantities required for resurfacing or surfacing mailbox turnouts, farm field entrances, residential and commercial entrances, curve widening, ramp gores and tapers, and road and street approaches, as applicable. Pave these areas to the limits as shown on Standard Drawing RPM-110-06 or as directed by the Engineer. In the event signal detectors are present in the intersecting streets or roads, pave the crossroads to the right of way limit or back of the signal detector, whichever is the farthest back of the mainline. Surface or resurface these areas as directed by the Engineer. The Department will not measure placing and compacting for separate payment but shall be incidental to the Contract unit price for the asphalt mixtures.

OPTION B

Be advised that the Department will control and accept compaction of asphalt mixtures furnished on this project under OPTION B in accordance with Sections 402 and 403.

SPECIAL NOTE FOR TRAFFIC CONTROL ON BRIDGE REPAIR CONTRACTS

1-10104 Carlisle 020B00002N

1-10105 Carlisle 020B00004N

1-10128 Graves 042B00090N

I. TRAFFIC CONTROL GENERAL

Except as provided herein, traffic shall be maintained in accordance with the current standard specifications, section 112. The contractor will be responsible for developing and implementing the maintenance of traffic details with guidance through standard drawings and the MUTCD current editions. The developed traffic control plan must be approved by the Engineer prior to implementation. The contractor is expected to provide at a minimum the items listed in this note; however this note does not relieve the contractor of other items that may be necessary to comply with current standards. Except for the roadway and traffic control bid items listed, all items of work necessary to maintain and control traffic will be paid at the lump sum bid price to "Maintain and Control Traffic".

Contrary to section 106.01, traffic control devices used on this project may be new or used in new condition, at the beginning of the work and maintained in like new condition until completion of the work.

The contractor must notify the engineer and public information officer at least 14 calendar days prior to the beginning work. Please see the Special Note for Liquidated Damages for additional information.

II. TRAFFIC COORDINATOR

Furnish a traffic coordinator as per section 112. The traffic coordinator shall inspect the project maintenance of traffic, at least three times daily, or as directed by the engineer, during the contractor's operations and at any time a bi-directional lane closure or road closure is in place. The personnel shall have access on the project to a radio or telephone to be used in case of emergencies or accidents. The traffic coordinator shall report all incidents throughout the work zone to the engineer on the project. The contractor shall furnish the name and telephone number where the traffic coordinator can be always contacted.

III. SIGNS

The contractor is responsible for all signage during construction. The contractor shall adhere to the standard drawings and manual on uniform traffic control devices (MUTCD) for guidance. If, at any time, the engineer requests a change in the maintenance of traffic signage, the contractor shall implement the change within 8 hours. Failure to implement these changes within the required eight hours will result in liquidated damages of \$5,000 per day.

The contractor shall provide all detour signing needed for the bridge closure, if allowed in the contract documents. All signing required will be incidental to the lump sum bid item "Maintain and Control Traffic".

The department will not measure installation, maintenance, or removal for payment of any detour signage or standard construction signage, and will consider these incidental to “Maintain and Control Traffic”

Closure signs, detour signs, and bi-directional lane closure signs should be placed no sooner than two weeks prior to the closing of the bridge (when applicable) or placing lane closures.

Wayfinding detour signs should be placed a maximum of 2 miles apart unless specified by the engineer. Signs shall be covered or removed within 24 hours of opening the bridge to traffic.

Road closed signs (when applicable) should be double signed and placed a minimum of 1500’, 1000’, and 500’ in advance of the closure, in addition to signage required by the MUTCD and standard drawings.

IV. TEMPORARY PAVEMENT STRIPING

For projects where road closures are allowed in the contract documents, it is not anticipated that temporary pavement striping will be needed since the bridge will be closed. However, if the contractor’s means and methods allow for need for temporary striping, conflicting pavement marking will be covered with 6” black removable tape. However, for bi-directional lane closures or if the plans call for a diversion, temporary striping will be required per the plans and MUTCD. Contrary to the standard specifications, no direct payment will be made for any temporary striping, pavement striping removal, or any other temporary striping item. If temporary striping is used, the contractor shall replace any temporary striping that becomes damaged or fails to adhere to the pavement before dark on the day of the notification. Liquidated damages shall be assessed to the contractor at a rate of \$500 per day for failing to replace temporary striping within this time limit.

V. PROJECT PHASING & CONSTRUCTION PROCEDURES

Project phasing shall be as directed by the plans, special notes, and the approved Traffic Control Plan prepared by the contractor. Maintain traffic over the bridge as long as possible. Once work on the structure begins that impacts traffic, ensure work progresses to minimize the effected time to the public. All materials that must be made specific for the project should be ordered and made prior to closure of the bridge or implementation of bi-directional lane closures so that delivery does not delay progress of the work, unless approved by the Engineer. If the bridge is reopened prior to safety devices being in place, an approved protective barrier wall shall be placed in accordance with the standard drawings.

For projects which require an on-site diversion to be constructed to maintain traffic, the traffic control plan and project schedule prepared by the contractor shall include provisions such that traffic is not switched to the diversion until all materials that must be made specific for the project are ordered and made so that use of the diversion is minimized, unless approved by the Engineer.

VI. PAVEMENT DROP-OFF

Less than two inches - no protection required. Warning signs should be placed in advance and throughout the drop-off area.

Two to four inches - plastic drums, vertical panels or barricades every 100 feet on tangent sections for speeds of 50 mph or greater. Cones may be used in place of plastic drums, panels, and barricades during daylight hours. For tangent sections with speeds less than 50 mph and curves devices should be placed every 50 feet. Spacing of devices on tapered sections should be in accordance with the manual on uniform traffic control devices, current edition.

Greater than four inches - positive separation or wedge with 3:1 or flatter slope needed. If there is five feet or more distance between the edge of the pavement and the drop-off, then drums, panel, or barricades may be used. If the drop-off is greater than 12 inches, positive separation is strongly encouraged. If concrete barriers are used, special reflective devices or steady burn lights should be used for overnight installations.

For temporary conditions, drop-offs greater than four inches may be protected with plastic drums, vertical panels, or barricades for short distances during daylight hours while work is being done in the drop-off area.

VII. VARIABLE MESSAGE SIGNS AND TEMPORARY TRAFFIC SIGNALS

At the direction of the Engineer, the contractor is expected to provide up to four (4) message boards for use at locations determined by the Engineer. These message boards are expected to be in place one week prior to the closure of the roadway and remain in place for the duration of the closure. The message boards will be paid for as per the standard specifications.

For projects that involve the use of lane closures, all lane closures shall be bi-directional. The contractor shall provide temporary traffic signals and all labor, materials, and incidentals needed to maintain bi-directional traffic for the project. For short term bi-directional lane closures, the use of flaggers in lieu of temporary traffic signals may be acceptable if approved by the Engineer.

VIII. BARRICADES

For projects which allow full closure, ensure a minimum of (4) type III barricades are used at each end of the bridge for a total of (8) type III barricades. Contrary to the standard specifications, no direct payment will be made for barricades, but they will be included in the lump sum price for "Maintain and Control Traffic".

VIII. DETOUR AND ON-SITE DIVERSIONS

For projects which allow a full closure of the bridge, or if necessary to detour trucks, the traffic control plan proposed by the contractor shall include a signed detour route for the road closure. The traffic control plan along with the proposed detour plan will be delivered to the engineer 7

days prior to the pre-construction meeting. The proposed detour route shall meet the following requirements:

- 1) Detour routes must remain at minimum on the same classification of roadway (i.e. AA, AAA, state, county, etc.) Unless written approval is obtained through the owner of the facility.
- 2) The contractor must coordinate with other projects along the detour route to avoid ongoing construction projects along those routes.
- 3) It may be determined that two detour routes would be needed if the first selected route cannot accommodate truck traffic. If this occurs, the contractor is expected to sign both detours per the standard drawings and MUTCD. Additional clarification signage between the detours may be needed at points where they diverge.
- 4) For projects that involve the use of bi-directional lane closures and the temporary lane width per the plans or as proposed by the contractor is less than 10 feet, the contractor shall be required to provide a signed detour for oversized vehicles.

The traffic control plan must be submitted and approved to allow for coordination of the public information officer with the closure notification. The public must be notified of the proposed detour route when they are notified of the closure, 2 weeks before closure. All time and expenses necessary for the development of the detour plan(s) will be incidental to the lump sum bid item "Maintain and Control Traffic".

For projects with an on-site diversion included in the construction, the preparation of traffic control plans for a detour and implementation of a detour will not be required, unless specified in the plans.

IX. PAYMENT

Unless listed as a bid item in the contract documents, payment will only be made for the following items:

1. Maintain and Control Traffic - Lump Sum
2. Concrete Barrier Wall Type 9T – Linear Feet
3. Crash Cushions - Each
4. Portable Changeable Message Boards – Each

The quantities for barrier wall and crash cushions include initial placement only. Barrier wall will be paid per linear foot as detailed in the plans for wall placed up to the quantity specified in the plans. Any relocation or additional wall required will not be paid for directly but will be considered incidental to Maintain and Control Traffic.

All other items needed to maintain traffic in accordance with these contract documents and the approved traffic control plan shall be considered incidental to Maintain and Control Traffic. These items include but are not limited to traffic signals, signs, temporary guardrail, temporary pavement striping, barrier wall delineators, guardrail delineators, cones, barrels, flaggers, etc.

SPECIAL NOTE FOR CONCRETE SEALING

1-10104 Carlisle 020B00002N 1-10105 Carlisle 020B00004N 1-10128 Graves 042B00090N

These Notes or designated portions thereof, apply where so indicated on the plans, proposals or bidding instruction.

I. DESCRIPTION. Perform all work in accordance with the Department's current Standard Specifications, and applicable Supplemental Specifications, the attached sketches, and these Notes. Section references are to the Standard Specifications.

This work consists of:

1. Furnish all labor, materials, tools, equipment, and incidental items necessary to complete the work.
2. Provide safe access to the bridge, in accordance with Section 107.01.01, for the Engineer to sound possible repair areas and for workers to complete the construction.
3. Repair cracks as applicable in accordance with the Special Note for Epoxy Injection Crack Repair.
4. Repair delaminated or spalled areas as applicable in accordance with the Special Note for Concrete Patching.
5. Apply Ordinary Surface Finish
6. Prepare the surfaces to receive sealing.
7. Apply concrete sealing.
8. Any other work as specified as part of this contract.

II. MATERIALS.

A. Sealer. Use one of the following:

Product	Supplier
Protectosil BHN	Evonik Industries
Protectosil 300S	Evonik Industries
TK-590-40 Tri-Silane 40%	TK Products
SW-244-100	Chemical Products Industries, Inc.
TK-590-1 MS Tri-Silane	TK Products
MasterProtect H1000	BASF
Aquanil Plus 40	ChemMasters
SIL-ACT ATS-100	Advanced Chemical Technologies
Certivex Penseal BTS 100%	Vexcon
Pentreat 244-40	W.R. Meadows
Aquanil Plus 40A	ChemMasters

- B. Coverage Rate:** Follow all manufacturers recommendations for coverage rates except the application rate must not exceed the square footage coverage rate per gallon of sealer as given in the chart below. If the manufacturer recommends a coverage rate greater than given in the table below, apply sealer at the rate given in the table below for the chosen sealers silane percentage.

% Silane	Coverage rate (ft ² /gallon)
100	300
40	120
20	60

III. CONSTRUCTION.

- A. Perform Concrete Repairs.** Repair concrete surface in accordance with the Special Note for Epoxy Injection Crack Repair and/or the Special Note for Concrete Patching Repair if included in the contract documents.
- B. Curing Compound.** Contrary to Section 609.03.12 of the specifications, curing compound is not to be used on the deck due to potentially causing issues with the concrete sealer. During the deck pour, finishing, and tining operations the Class AA concrete shall be kept continuously moist with the use of a mister until burlap or curing blankets are applied to the surface. At no point should water be pooling or running off the surface or the surface of the concrete be allowed to become dry. After the burlap or curing blankets are installed, cure in accordance with the specifications. Include all costs in the unit price bid for Class AA concrete. Failure to properly cure the concrete in accordance with this note and the specifications may result in weakened or cracked concrete. If the concrete is weakened or cracked due to improper curing, the contractor will be responsible for providing alternates to fix the issues to the Engineer for review and the contractor will be solely responsible for all costs to do so, up to complete replacement. Do not begin any construction on fixing any issues without approval of the Engineer.
- C. Apply Ordinary Surface Finish.** In addition to new concrete, areas receiving epoxy injection, concrete patching, and other surface imperfections, including areas of minor cracking, should receive Ordinary Surface Finish in accordance with Section 601.03.18 of the Standard Specifications. Existing structural items not newly placed, patched, or repaired may be exempt from Ordinary Surface Finish. Use mortar of the same cement and fine aggregate as the concrete patching, or as directed by the Engineer. Payment will be incidental to Concrete Sealing. Finish surface of bridge decks in accordance with Section 609 of the Standard Specifications.
- D. Areas to Receive Concrete Sealing:**
 1. Every exposed surface above a point 6” below ground or fill line of abutments, wing walls, end bent and pier caps, pedestals, back walls, columns, and exposed footings.

2. All exposed surfaces of concrete deck, barrier walls, parapets, curbs, and plinths.
 3. Prestressed Concrete I-Girders, Concrete Beams, and Spread Prestressed Concrete Box Beams: The underneath surfaces of slab overhangs outside of exterior concrete girders and to the exterior side and bottom of exterior concrete girders and beams.
 4. Adjacent Prestressed Concrete Composite Box Beams: Full length of the exterior face of all exterior beams from the top of the box beam to 1'-0" underneath the beams.
 5. Prestressed Non-Composite Box Beams: All faces of all beams, excluding surfaces to be covered with a waterproofing membrane. Take care to ensure that the grout pockets are not sealed.
 6. If the contract documents include the Special Note for Concrete Coating, do not apply concrete sealer to the areas where Concrete Coating is specified.
- E. Cleaning the Concrete Surfaces to be sealed.** Dry clean the concrete to remove all loose debris. Remove all visible hydrocarbons from the surface with detergent approved by the manufacturer of the deck sealant. Pressure wash all surfaces to be sealed at 2000 to 3000 psi. Install pressure gauges at each wand to verify pressure. Use 30° fan tip or as recommended by the manufacturer of the sealant. Hold pressure washing wand a minimum of 45° from the surfaces with a maximum stand-off distance of 12 inches.
- F. Sealing the Concrete.** Allow new concrete to cure a minimum 28 days prior to application of sealer. Monitor weather conditions prior to sealer application. Refer to manufacturer's recommendations for proper ambient conditions. Do not apply sealer if precipitation is anticipated within the time stated by the manufacturer. Allow the concrete to dry 24 hours (after washing or rain event) before sealer application. The bridge deck can be reopened to traffic while drying. Sealer must be applied within 48 hours of washing or the concrete must be rewashed. Divide the concrete into predefined areas of specific square footage to aid in determining usage. Comply with manufacturer's usage recommendation. Using a low-pressure pump, apply sealer and spread evenly with broom or squeegee; do not allow pooling to remain. When each predefined area is complete, measure the amount of sealer used to verify proper usage. After sealing, follow manufacturer's recommended cure time before opening to traffic. On vertical surfaces, apply the sealer in a flooding application from the bottom up, so the material runs down 6 to 8 inches below the spray pattern.
- G. Inspection:** Monitor all aspects of the project to assure compliance to this specification. Observe and document general conditions during the entirety of the project. Verify that each phase of work has been satisfactorily completed prior to beginning the next phase. Phases are described as follows:
1. Dry cleaning to remove loose debris, verify and document:
 - a. All debris has been removed and disposed of properly.
 2. Removal of hydrocarbons, verify and document:

- a. The manufacturer's recommended detergent is used for removal.
- b. Hydrocarbons have been satisfactorily removed.
3. Pressure washing, verify and document:
 - a. Washing pressure at the wand.
 - b. Tip size used.
 - c. Wash angle and stand-off distance.
 - d. The concrete is satisfactorily cleaned.
4. Sealer application, verify and document:
 - a. Proper cure time for new concrete.
 - b. Concrete surface is dry.
 - c. Document time since washed.
 - d. Was the bridge deck opened to traffic after washing?
 - e. Document ambient temperature, surface temperature, relative humidity, and dew point.
 - f. Application and distribution method.
 - g. Coverage to be complete and even.
 - h. Material is not allowed to remain pooled.
 - i. Monitor material usage.
 - j. No traffic on the bridge decks until proper cure time is allowed.

IV. MEASUREMENT

- A. **Concrete Sealing.** The Department will measure the quantity per square feet of each area sealed.

V. PAYMENT

- A. **Concrete Sealing.** Payment at the contract unit price per square feet is full compensation for the following: (1) Furnish all labor, materials, tools, and equipment; (2) Cleaning; (3) Sealing; (4) Maintain & control traffic; and, (5) Any other work specified as part of this contract.

SPECIAL NOTE FOR FOUNDATION PREPARATION

1-10104 Carlisle 020B00002N 1-10105 Carlisle 020B00004N 1-10128 Graves 042B000090N
Foundation Preparation. For projects involving the removal and replacement of the asphalt and backfill behind the existing abutments and new abutments or end bents, the required common excavation, geotextile fabric Class 1, 4" perforated pipe, and new Structural Granular Backfill as shown in Figure 1 as well as any common excavation and grading needed to shape the bridge approaches to match the existing roadway template, will be paid for by the bid item for Foundation Preparation. See Special Provision 69 and the Standard Drawings regarding additional construction details as required.

Backfill material used behind newly constructed abutments on county routes may be constructed with Type III soil backfill. All existing abutments, abutments on state routes, and newly constructed or existing bents must be backfilled with material meeting Structural Granular Backfill specifications.

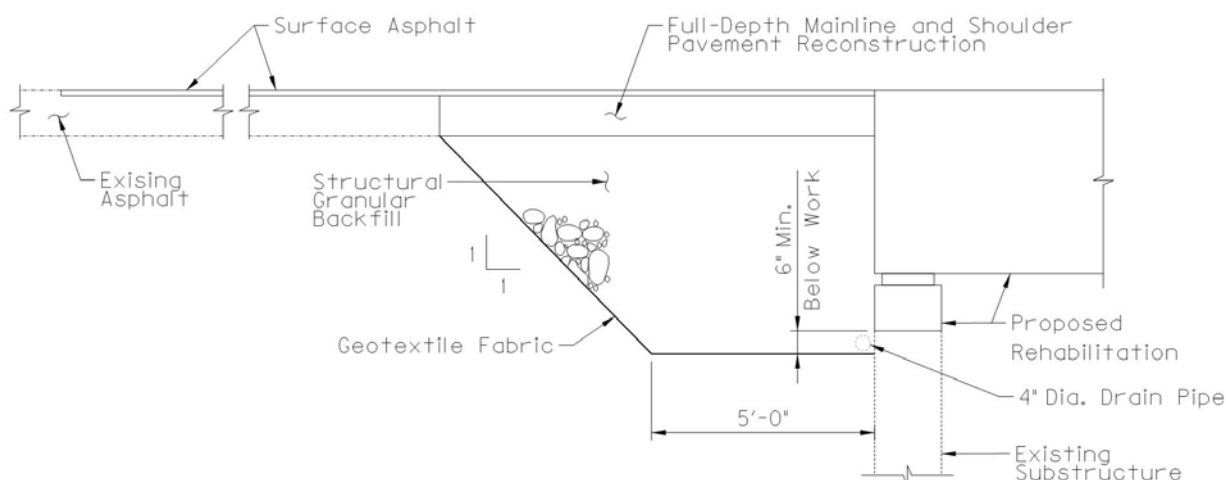


Figure 1: Detail showing proposed work for deck and superstructure replacements

I. MEASUREMENT

A. Foundation Preparation: See Section 603.

II. PAYMENT

A. Foundation Preparation: See Section 603. Payment for Structural Granular Backfill or Type III soil backfill to be incidental to Foundation Preparation.

SPECIAL NOTE FOR TRUSS SCREEDS ON CONCRETE OVERLAYS

1-10104 Carlisle 020B00002N 1-10105 Carlisle 020B00004N

This Special Note will apply where indicated on the plans or in the proposal. Section references herein are to the Department's Current Standard Specifications for Road and Bridge Construction.

1.0 DESCRIPTION. This specification covers the use of vibratory truss screed use on side-by-side composite box beams with designed slab thickness equal to a nominal five inches. Contrary to Kentucky Transportation Cabinet Department of Highways Standard Specifications for Road and Bridge Construction, latest edition, the use of a Vibratory Truss Screed in lieu of a self-propelled finishing machine equipped as detailed in Section 609.02.09 of the Specifications will be considered for use provided the following requirements of this Special Note are met:

2.0 EQUIPMENT AND QUALIFYING PROJECTS.

2.1 Vibratory Truss Screed. The contractor shall submit for approval, prior to use, the manufacturer's literature confirming that the vibratory truss screed proposed shall be able to meet the required cross slope of bridge and provide a minimum of 8,000 vibration cycle modes per minute (VPM). The Central Office Division of Construction will make the determination of use for each project.

2.2 Qualifying Structures. The vibratory truss screed can only be considered on structures meeting the following criteria:

- A. Bridge design consists of side-by-side composite box beams with concrete overlay.
- B. The design for the thickness of concrete for the bridge deck shall be 5-inch depth as detailed on the typical section of the bridge plans.
- C. The actual maximum nominal depth thickness must be less than 8" at any point on the deck.
- D. The side-by-side box beam bridge deck shall have only a single mat of reinforcement steel.

3.0 CONSTRUCTION.

3.1 Submittal. Submit, to the Central Office, Division of Construction, manufacturer's specifications of equipment proposed for use.

3.2 Sampling and Testing. If approved, the bridge deck may be cored to verify density and voids, at the discretion of the Director of the Division of Construction. Failure to meet proper density and consolidation will incur a penalty up to removal and replacement.

4.0 MEASUREMENT. The Department will not measure for the use of vibratory truss screeds and are incidental to the work being performed.

5.0 PAYMENT. The Department will not make payment for the use of the vibratory truss screed and shall be incidental to the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
08104	CONCRETE-CLASS AA	Cubic Yard

SPECIAL NOTE

COMPLIANCE WITH SECTION 7 OF THE ENDANGERED SPECIES ACT REGARDING THREATENED AQUATIC SPECIES

1-10128 Graves 042B00090N

Effective October 27, 2023, the US Fish and Wildlife Service reclassified the federally listed relict darter (*Etheostoma chienense*) from endangered to threatened and finalized a rule under section 4(d) of the Act that provides an exception for take incidental to an otherwise lawful activity caused by transportation projects provided the following conditions are met by the Contractor:

- ***Do not work in Jackson Creek during the species reproductive period between March 1 and June 30.***
- Do not block stream flow and provide for fish passage under a wide range of hydrologic conditions at stream crossing(s).
- Implement best management practices (BMPs) that eliminate sedimentation (*see* Sediment Prevention and Erosion Control Special Note) and adhere to Kentucky's *Standard Specifications for Roads and Bridges, Section 213 - Water Pollution Control and BMPs for Controlling Erosion, Sediment, and Pollutant Runoff from Construction Sites* for all construction activities through completion of construction except as follows:
 - Stabilize and protect disturbed areas within seven (7) days of cessation of land disturbing activities and prior to a forecasted rain event.
 - Perform verification inspections twice a week and per the standard post-rain event inspections.
 - Initiate corrective action to address deficiencies identified during the twice weekly and post-rain event inspections with 24 hours of receipt of the Engineer's documentation of deficiency and complete the corrective action within three (3) days.
 - Use spill containment areas where appropriate.

Questions regarding this note should be directed to Danny Peake, Director, KYTC Division of Environmental Analysis, 200 Mero Street, Frankfort, KY 40601, Phone (502) 564-7250.

SPECIAL NOTE

ADDITIONAL ENVIRONMENTAL COMMITMENTS

1-10104 Carlisle 020B00002N 1-10105 Carlisle 020B00004N 1-10128 Graves 042B00090N

In addition to the other environmental commitments listed in this contract, the following commitments also apply as this is a federally funded undertaking as defined in Section 106 of the National Historic Preservation Act.

1. KYTC has completed a Phase 1 archaeological survey for a site-specific area surrounding the bridge. The cleared area is illustrated on the construction plans and referred to herein and elsewhere in the bid documents as the “Environmentally Cleared Area (ECA).” Likewise, any areas that must be avoided have been labeled “Do Not Disturb.”

If the Contractor deems it necessary to use additional areas outside the ECA for any purpose, *e.g.*, laydown yards, vehicle parking, parking cranes, delivering beams, borrow areas, waste areas, *etc.*, the Contractor must first get a written agreement with the landowner (assuming the additional area is outside the right-of-way). Then the Contractor shall seek approval of the use of the site, whether within or outside the right-of-way, by both KYTC Division of Environmental Analysis (DEA) and the GEC Environmental Lead Tom Springer at tspringer@qk4.com.

The Contractor shall provide a map of the area(s) to be used, including access points, and property-owner agreements. The Environmental Team will complete initial field investigations for archaeological, historical, ecological, and other environmental clearances. If any potentially significant site or resources are found, KYTC has the right to deny the use of the proposed site. The maps and property owner agreements are to be submitted at least ten (10) business days prior to the Preconstruction Conference, or sixty (60) days prior to the Contractors access to the site, for coordination and review by KYTC DEA and the Project Team.

Liquidated Damages in the amount of \$50,000 will be assessed whenever the Contractor has used any restricted areas. The fee will be assessed on a per bridge basis, whether the contract involves bridge bundles or a single bridge. In addition, all fines, fees, penalties, remediation costs, and other damages related to breaches of Threatened and Endangered Species Act Section 7, National Historic Preservation Act Section 106, Clean Water Act Sections 401 and 404, Kentucky General Permit for Stormwater Discharges KYR10, Environmental Protection Agency requirements, State Historic Preservation Office requirements, and other related federal and state permitting agencies will be paid by the Contractor, including all associated costs and burdens placed upon KYTC.

2. If human remains are encountered during project activities, all work should be immediately stopped in the area. The area should be cordoned off, and, in accordance with KRS 72.020, the county coroner and local law enforcement must be contacted immediately. Upon confirmation that the human remains are not of forensic interest, the unanticipated discovery must be reported to the Kentucky Heritage Council at (502) 892-3614, the Office of State Archaeology at (859) 257-1944, and KYTC DEA (502) 564-7250.

For guidance regarding inadvertent discovery and treatment of human remains, refer to KYTC's Right of Way Guidance Manual (Section ROW-1202), and the Advisory Council on Historic Preservation's (ACHP) Policy Statement Regarding Treatment of Human Remains and Grave Goods (adopted by ACHP February 23, 2007).

3. If, during the implementation of the project, a previously unidentified historic/ archaeological property is discovered or a previously identified historic/archaeological property is affected in an unanticipated manner, the Contractor shall (1) call the Kentucky Heritage Council at (502) 892-3614 and KYTC DEA at (502) 564- 7250, then (2) ensure that all work within a reasonable area of the discovery shall cease until such time as a treatment plan can be developed and implemented.

Questions regarding this note should be directed to Danny Peake, Director, KYTC Division of Environmental Analysis, 200 Mero Street, Frankfort, KY 40601, Phone (502) 564-7250.

SPECIAL NOTE

SEDIMENT PREVENTION AND EROSION CONTROL

1-10104 Carlisle 020B00002N

1-10105 Carlisle 020B00004N

1-10128 Graves 042B00090N

For all impacts regardless of size of the disturbed area:

Potential impacts to gray bat foraging habitat and habitat for federally listed fish and mussel species will be minimized by implementing erosion prevention and sediment control measures. As required under Section 213 of KYTC Standard Specifications, prior to onsite activities the Contractor shall develop a site-specific **Erosion Control Plan** including **Best Management Practices (BMPs)** to ensure continuous erosion control throughout the construction and post-construction period. The plan will identify individual Disturbed Drainage Areas (DDA) where stormwater from the construction area will be discharged off site or into waters of the Commonwealth. A Draft BMP Plan is attached to this Special Note.

Should the Contractor fail to create an Erosion Control Plan or provide and maintain the necessary erosion control, Liquidated Damages will apply at the rate specified in the contract. If no rate is specified, Liquidated Damages will be applied at the rate specified in Section 108 of the Standard Specifications.

Proposed erosion prevention and sediment control measures are as follows:

- The location of the individual erosion prevention/sediment control measures will be identified by the Resident Engineer and Contractor. The Contractor will place erosion control devices as identified in the site-specific BMP Plan prior to beginning work.
- Mulch will be placed, during grade and drain activities, across all areas where no work will be conducted for a period of 14 consecutive days.
- Tree clearing within the riparian zone will be minimized. Trees to be removed will be determined by the Resident Engineer and the Contractor prior to disturbance. (*Note: Any "Special Note for Tree Clearing Restrictions" must be adhered to.*)
- Silt fence, or other approved method as appropriate, will be installed at the edge of waters within the project corridors to eliminate the deposition of rock and debris in the streams during construction activities. In the unforeseen event that unintended debris does enter the streams, the resident engineer will halt the contributing activity until appropriate remedial actions have been implemented.
- To the maximum extent plausible, construction activities will take place during low-flow periods.
- Equipment staging and cleaning areas will be located to eliminate direct inputs to waters of the Commonwealth. These areas will be located such that effluent will be filtered through vegetated areas and appropriate sediment controls prior to discharge offsite.
- Concrete will be poured in a manner to avoid spills into the streams. In the unforeseen event that a spill does occur, the USFWS will be notified, and the resident engineer will immediately halt the activity until remedial measures have been implemented.
- KYTC proposes to stabilize areas disturbed during construction activities through vegetation establishment and placement of riprap and geotextile fabric. Re-vegetation of the disturbed areas will allow thermoregulation of water within the streams, establish long-term, regenerative stabilization of the stream banks, and provide nutrients to the aquatic macroinvertebrate community through inputs of organic material.

- Areas disturbed during construction and not stabilized with rip rap and erosion blanket will be seeded using a standard seed mix. Depending on project slope and project location, application rates and seed mix types will vary. The Contractor shall perform all final seeding and protection, in accordance with the plans and Section 212 of KYTC Standard Specifications.
- Contrary to Section 213.03.03, paragraph 2, the Engineer shall conduct inspections as needed to verify compliance with Section 221 of KYTC Standard Specifications. The Engineer's inspections shall be performed a minimum of once per month and within seven (7) days after a storm of ½ inch or greater. Copies of the Engineer's inspections shall not be provided to the Contractor unless improvements to the BMPs are required.
- The Contractor shall initiate corrective action within 24 hours of any reported deficiency and complete the work within five (5) days. The Engineer shall use Form TC 63-61 A for this report. Inspections performed by the Engineer do not relieve the Contractor of any responsibility for compliance. If corrections are not made within the five (5) days specified, the liquidated damages will apply at the rate specified in the Liquidated Damages note in the contract.
- Contrary to Sections 212.05 and 213.05, unless listed in the proposal, bid items for temporary BMPs and items for permanent erosion control will not be measured for payment and will be replaced with one lump sum item for the services. Payment will be pro-rated based on the Project Schedule as submitted by the Contractor and as agreed to by the Engineer.
- The Contractor shall be responsible for applying "good engineering practices." The Contractor may use any temporary BMPs and permanent BMPs that fall within the guidance of the current Standard Specifications, KYTC's Best Management Practices manual, and with the approval of the KYTC Engineer.

For impacts greater than 1.0 acre:

When the total disturbed area for a project, including laydown and waste/borrow areas, is greater than 1.0 acre, the Contractor shall be responsible for obtaining coverage under Kentucky's General KDDES Permit for Stormwater Associated with Construction Activities (KYR10). Prior to initiating construction activity, the Contractor shall file **Notice of Intent (NOI)** with the Kentucky Division of Water naming the Contractor as the Facility Operator and including the KYTC Contract ID number (CID) for reference.

For grouped contracts with more than one structure, each structure will be treated independently in regard to disturbed area unless another structure is within 0.25 mile of the structure. For structures within 0.25 mile of each other, the total disturbed area will be the sum of the combined disturbed areas.

The Contractor will be responsible for following the KPDES requirements of local Municipal Separate Storm Sewer System (MS4) programs with jurisdiction. Required NOI shall name the Contractor as the Facility Operator and include the KYTC Contract ID Number (CID) for reference.

The Contractor shall be responsible for filing the KPDES permit **Notice of Termination (NOT)** with the Kentucky DOW and any local MS4 Program that has jurisdiction. The NOT shall be filed after the Engineer agrees the project is stabilized or the project has been formally accepted.

The Contractor shall implement all temporary erosion/sediment control measures including providing a **Best Management Practice (BMP) Plan**, conducting required inspections, modifying the BMP Plan documents as construction progresses, and documenting the installation and maintenance of BMPs in conformance with the KPDES KYR10 permit effective on August 1, 2009, or a permit re-issued to replace that KYR10 permit. This work shall be conducted in conformance with the requirements of Section 213 of the KYTC current Department of Highways, Standard Specifications for Road and Bridge Construction (Standard Specifications).

The Contractor shall be responsible for the examination of the soils to be encountered and make his own independent determination of the temporary BMPs that will be required to accomplish effective erosion prevention and sediment control. The Contractor shall provide the Engineer copies of all documents required by the KPDES permit at the time they are prepared.

A copy of the KYR10 General Permit and eNOI application are available here:

[https://eec.ky.gov/Environmental-Protection-
/Water/PermitCert/KPDES/Documents/KYR10PermitPage.pdf](https://eec.ky.gov/Environmental-Protection-/Water/PermitCert/KPDES/Documents/KYR10PermitPage.pdf)

Questions regarding this note should be directed to Danny Peake, Director, KYTC Division of Environmental Analysis, 200 Mero Street, Frankfort, KY 40601, Phone (502) 564-7250



Highway District I
and
_____ Construction

Kentucky Pollutant Discharge Elimination
System (KPDES) Permit KYR10

Best Management Practices (BMP) Plan
and Groundwater Protection Plan
for Highway Construction Activities

for

Project: CID ### - #####
US-51 over Caddle Creek
Bridge ID 020B00002N, Item I-10104
Carlisle County, Kentucky

June 2023



Note: ① Design ② Construction ③ Contractor

PROJECT INFORMATION

1. Owner: Kentucky Transportation Cabinet, District I ①
2. Resident Engineer: ②
3. Contractor Name: ②
 - Address: ②
 - Phone No.: ②
 - Point of Contact: ②
 - Agent Responsible for KPDES Requirements: ③
4. Project Control Number: ②
5. Route (Address): US 51 at MP 1.678 ①
6. Latitude / Longitude (Project Mid-Point): 36.795624, -89.013441 ①
7. County: Carlisle County ①
8. Project Start Date: ②
9. Projected Completion Date: ②



A. SITE DESCRIPTION

1. **Nature of Construction Activity:** Address deficiencies of Bridge on US-51 over Caddle (020B00002N) from MP 1.678 to MP 1.777, a distance of 0.246 mile. Bridge (Replacement) SYP No. 01-10104.00. ①
2. **Order of Major Soil Disturbing Activities:** ② and ③
3. **Projected Volume of Material to be Moved:** ③
4. **Estimate of Total Project Area (acres):** ③
5. **Estimate of Area to be Disturbed (acres):** ③
6. **Post Construction Runoff Coefficient:** will be included in the project drainage folder. Persons needing information pertaining to the runoff coefficient will contact the resident engineer to request this information.
7. **Soil Condition:** One soil complex (Convent-Adler) is mapped. The Adler series consists of very deep, moderately well drained soils that are formed from silty alluvium. These soils are found on floodplains.
8. **Discharge Water Quality Data (if any):** ②
9. **Receiving Water:** Caddle Creek
10. **TMDLs and Pollutants of Concern:** N/A ①
11. **Site Map:** Project layout sheet plus the erosion control sheets in the project plans that depict Disturbed Drainage Areas (DDAs) and related information. These sheets depict the existing project conditions with areas delineated by DDA (drainage area bounded by watershed breaks and right of way limits), the stormwater discharge locations (either as a point discharge or as overland flow) and the areas that drain to each discharge point. These plans define the limits of areas to be disturbed and the location of control measures. Controls will be either site specific as designated by the designer or will be annotated by the contractor and resident engineer before disturbance commences. The project layout sheet shows the surface waters and wetlands.
12. **Potential Sources of Pollutants:** The primary source of pollutants is solids that are mobilized during storm events. Other sources of pollutants include oil/fuel/grease from servicing and operating construction equipment, concrete washout water, sanitary wastes, and trash/debris. ③



B. SEDIMENT AND EROSION CONTROL MEASURES

1. Plans for highway construction projects will include erosion control sheets that depict Disturbed Drainage Areas (DDAs) and related information. These plan sheets will show the existing project conditions with areas delineated by DDA within the right of way limits, the discharge points and the areas that drain to each discharge point. Project managers and designers will analyze the DDAs and identify Best Management Practices (BMPs) that are site specific. The balance of the BMPs for the project will be listed in the bid documents for selection and use by the contractor on the project with approval by the resident engineer.

Projects that do not have DDAs annotated on the erosion control sheets will employ the same concepts for development and managing BMP plans.

2. Following award of the contract, the contractor and resident engineer will annotate the erosion control sheets showing location and type of BMPs for each of the DDAs that will be disturbed at the outset of the project. This annotation will be accompanied by an order of work that reflects the order or sequence of major soil moving activities. The remaining DDAs are to be designated as "Do Not Disturb" until the contractor and resident engineer prepare the plan for BMPs to be employed. The initial BMP's shall be for the first phase (generally Clearing and Grubbing) and shall be modified as needed as the project changes phases. The BMP Plan will be modified to reflect disturbance in additional DDA's as the work progresses. All DDA's will have adequate BMP's in place before being disturbed.
3. As DDAs are prepared for construction, the following will be addressed for the project as a whole or for each DDA as appropriate:
 - **Construction Access.** This is the first land-disturbing activity. As soon as construction begins, bare areas will be stabilized with gravel and temporary mulch and/or vegetation.
 - **Sources.** At the beginning of the project, all DDAs for the project will be inspected for areas that are a source of storm water pollutants. Areas that are a source of pollutants will receive appropriate cover or BMPs to arrest the introduction of pollutants into storm water. Areas that have not been opened by the contractor will be inspected periodically (once per month) to determine if there is a need to employ BMPs to keep pollutants from entering storm water.
 - **Clearing and Grubbing.** The following BMP's will be considered and used where appropriate.
 - Leaving areas undisturbed when possible.
 - Silt basins to provide silt volume for large areas.
 - Silt Traps Type A for small areas.
 - Silt Traps Type C in front of existing and drop inlets which are to be saved.
 - Diversion ditches to catch sheet runoff and carry it to basins or traps or to divert it around areas to be disturbed.
 - Brush and/or other barriers to slow and/or divert runoff.
 - Silt fences to catch sheet runoff on short slopes. For longer slopes, multiple rows of silt fence may be considered.



- Temporary mulch for areas which are not feasible for the fore mentioned types of protections.
 - Non-standard or innovative methods.
- **Cut and Fill and Placement of Drainage Structures.** The BMP Plan will be modified to show additional BMP's such as:
- Silt Traps Type B in ditches and/or drainways as they are completed.
 - Silt Traps Type C in front of pipes after they are placed.
 - Channel Lining.
 - Erosion Control Blanket.
 - Non-standard or innovative methods.
- **Profile and X-Section in Place.** The BMP Plan will be modified to show elimination of BMP's which had to be removed and the addition of new BMP's as the roadway was shaped. Probable changes include:
- Silt Trap Type A, Brush and/or other barriers, Temporary mulch, and any other BMP which had to be removed for final grading to take place.
 - Additional Silt Traps Type B and Type C to be placed as final drainage patterns are put in place.
 - Additional Channel Lining and/or Erosion Control Blanket.
 - Temporary mulch for areas where Permanent Seeding and Protection cannot be done within 21 days.
 - Special BMP's such as Karst Policy.
- **Finish Work (Paving, Seeding, Protect, etc.).** A final BMP Plan will result from modifications during this phase of construction. Probable changes include:
- Removal of Silt Traps Type B from ditches and drainways if they are protected with other BMP's which are sufficient to control erosion, i.e. Erosion Control Blanket, or Permanent Seeding and Protection on moderate grades.
 - Permanent Seeding and Protection.
 - Placing Sod.
 - Planting trees and/or shrubs where they are included in the project.
- BMP's, including Stormwater Management Devices such as velocity dissipation devices and Karst policy BMP's, to be installed during construction to control the pollutants in storm water discharges that will occur after construction has been completed are: ③



C. OTHER CONTROL MEASURES

1. **Solid Materials.** No solid materials, including building materials, shall be discharged to waters of the commonwealth, except as authorized by a Section 404 permit.
2. **Waste Materials.** All waste materials that may leach pollutants (paint and paint containers, caulk tubes, oil/grease containers, liquids of any kind, soluble materials, etc.) will be collected and stored in appropriate covered waste containers. Waste containers shall be removed from the project site on a sufficiently frequent basis as to not allow wastes to become a source of pollution. All personnel will be instructed regarding the correct procedure for waste disposal. Wastes will be disposed in accordance with appropriate regulations. Notices stating these practices will be posted in the office.
3. **Hazardous Waste.** All hazardous waste materials will be managed and disposed of in the manner specified by local or state regulation. The contractor shall notify the Section Engineer if there any hazardous wastes being generated at the project site and how these wastes are being managed. Site personnel will be instructed with regard to proper storage and handling of hazardous wastes when required. The Transportation Cabinet will file for generator, registration when appropriate, with the Division of Waste Management and advise the contractor regarding waste management requirements.
4. **Spill Prevention.** The following material management practices will be used to reduce the risk of spills or other exposure of materials and substances to the weather and/or runoff.
 - **Good Housekeeping.** The following good housekeeping practices will be followed onsite during the construction project.
 - An effort will be made to store only enough product required to do the job.
 - All materials stored onsite will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
 - Products will be kept in their original containers with the original manufacturer's label.
 - Substances will not be mixed with one another unless recommended by the manufacturer.
 - Whenever possible, all of the product will be used up before disposing of the container.
 - Manufacturers' recommendations for proper use and disposal will be followed.
 - The site contractor will inspect daily to ensure proper use and disposal of materials onsite.
 - **Hazardous Products.** These practices will be used to reduce the risks associated with any and all hazardous materials.
 - Products will be kept in original containers unless they are not resealable.
 - Original labels and material safety data sheets (MSDS) will be reviewed and retained.
 - Contractor will follow procedures recommended by the manufacturer when handling hazardous materials.
 - If surplus product must be disposed of, manufacturers' or state/local recommended methods for proper disposal will be followed.



➤ **Petroleum Products**

- Vehicles and equipment that are fueled and maintained on site will be monitored for leaks, and receive regular preventative maintenance to reduce the chance of leakage. Petroleum products onsite will be stored in tightly sealed containers, which are clearly labeled and will be protected from exposure to weather.
- The contractor shall prepare an Oil Pollution Spill Prevention Control and Countermeasure plan when the project that involves the storage of petroleum products in 55 gallon or larger containers with a total combined storage capacity of 1,320 gallons. This is a requirement of 40 CFR 112.
- This project (will / will not) ③ have over 1,320 gallons of petroleum products with a total capacity, sum of all containers 55 gallon capacity and larger.

- **Fertilizers.** Fertilizers will be applied at rates prescribed by the contract, standard specifications or as directed by the resident engineer. Once applied, fertilizer will be covered with mulch or blankets or worked into the soil to limit exposure to storm water. Storage will be in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

- **Paints.** All containers will be tightly sealed and stored indoors or under roof when not being used. Excess paint or paint wash water will not be discharged to the drainage or storm sewer system but will be properly disposed of according to manufacturers' instructions or state and local regulations.

- **Concrete Truck Washout.** Concrete truck mixers and chutes will not be washed on pavement, near storm drain inlets, or within 75 feet of any ditch, stream, wetland, lake, or sinkhole. Where possible, excess concrete and wash water will be discharged to areas prepared for pouring new concrete, flat areas to be paved that are away from ditches or drainage system features, or other locations that will not drain off site. Where this approach is not possible, a shallow earthen wash basin will be excavated away from ditches to receive the wash water.

- **Spill Control Practices.** In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup:

- Manufacturers' recommended methods for spill cleanup will be clearly posted. All personnel will be made aware of procedures and the location of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup will be kept in the material storage area. Equipment and materials will include as appropriate, brooms, dust pans, mops, rags, gloves, oil absorbents, sand, sawdust, and plastic and metal trash containers.
- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- Spills of toxic or hazardous material will be reported to the appropriate state/local agency as required by KRS 224 and applicable federal law.



- The spill prevention plan will be adjusted as needed to prevent spills from reoccurring and improve spill response and cleanup.
- Spills of products will be cleaned up promptly. Wastes from spill clean-up will be disposed in accordance with appropriate regulations.

D. OTHER STATE AND LOCAL PLANS

This BMP plan shall include any requirements specified in sediment and erosion control plans, stormwater management plans or permits that have been approved by other state or local officials. Upon submittal of the NOI, other requirements for surface water protection are incorporated by reference into and are enforceable under this permit (even if they are not specifically included in this BMP plan). This provision does not apply to master or comprehensive plans, non-enforceable guidelines or technical guidance documents that are not identified in a specific plan or permit issued for the construction site by state or local officials.

E. MAINTENANCE

1. The BMP plan shall include a clear description of the maintenance procedures necessary to keep the control measures in good and effective operating condition.
2. Maintenance of BMPs during construction shall be a result of weekly and post rain event inspections with action being taken by the contractor to correct deficiencies.
3. Post-Construction maintenance will be a function of normal highway maintenance operations. Following final project acceptance by the cabinet, district highway crews will be responsible for identification and correction of deficiencies regarding ground cover and cleaning of storm water BMPs. The project manager shall identify any BMPs that will be for the purpose of post construction stormwater management with specific guidance for any non-routine maintenance.

F. INSPECTIONS

All erosion prevention and sediment control measures will be inspected at least once each week and following any rain of one-half inch or more.

- Inspections will be conducted by individuals that have successfully completed KEPSC-RI course as required by Section 213.02.02 of the Standard Specifications for Road and Bridge Construction, current edition.
- Inspection reports will be written, signed, dated, and kept on file.
- Areas at final grade will be seeded and mulched within 14 days.
- Areas that are not at final grade where construction has ceased for a period of 21 days or longer and soil stock piles shall receive temporary mulch no later than 14 days from the last construction activity in that area.



- All measures will be maintained in good working order. If a repair is necessary, it will be initiated within 24 hours of being reported.
- Built-up sediment will be removed from behind the silt fence before it has reached halfway up the height of the fence.
- Silt fences will be inspected for bypassing, overtopping, undercutting, depth of sediment, tears, and to ensure attachment to secure posts.
- Sediment basins will be inspected for depth of sediment, and built-up sediment will be removed when it reaches 50 percent of the design capacity and at the end of the job.
- Diversion dikes and berms will be inspected and any breaches promptly repaired. Areas that are eroding or scouring will be repaired and re-seeded / mulched as needed.
- Temporary and permanent seeding and mulching will be inspected for bare spots, washouts, and healthy growth. Bare or eroded areas will be repaired as needed.
- All material storage and equipment servicing areas that involve the management of bulk liquids, fuels, and bulk solids will be inspected weekly for conditions that represent a release or possible release of pollutants to the environment.

G. NON-STORM WATER DISCHARGES

It is expected that non-storm water discharges may occur from the site during the construction period. Examples of non-storm water discharges include:

- Water from water line flushings.
- Water from cleaning concrete trucks and equipment.
- Pavement wash waters (where no spills or leaks of toxic or hazardous materials have occurred).
- Uncontaminated groundwater and rainwater (from dewatering during excavation).

All non-storm water discharges will be directed to the sediment basin or to a filter fence enclosure in a flat vegetated infiltration area or be filtered via another approved commercial product.



H. GROUNDWATER PROTECTION ③

This plan serves as the groundwater protection plan as required by 401 KAR 5:037.

Contractor’s Statement: ③

The following activities, as enumerated by 401 KAR 5:037 Section 2, require the preparation and implementation of a groundwater protection plan, and will or may be conducted as part of this construction project:

_____ 2(e) Land treatment or land disposal of a pollutant

_____ 2(f) Storing...or related handling of hazardous waste, solid waste or special waste...in tanks, drums, or other containers, or in piles (*does not include wastes managed in a container placed for collection and removal of municipal solid waste for disposal off site*)

_____ 2(g) handling of materials in bulk quantities (*equal or greater than 55 gallons or 100 pounds net dry weight transported held in an individual container*) that, if released to the environment, would be a pollutant

_____ 2(j) Storing or related handling of road oils, dust suppressants at a central location
Application or related handling of road oils, dust suppressants or deicing materials (*does not include use of chloride-based deicing materials applied to roads or parking lots*)

_____ 2(k) Installation, construction, operation, or abandonment of wells, bore holes, or core holes (*does not include bore holes for the purpose of explosive demolition*)

Or, check the following only if there are no qualifying activities

_____ There are no activities for this project as listed in 401 KAR 5:037 Section 2 that require the preparation and implementation of a groundwater protection plan.

The Contractor is responsible for the preparation of a plan that addresses the 401 KAR 5:037 Section 3. ③ Elements of site-specific groundwater protection plan:

- (a) General information about this project is covered in the Project information;
- (b) Activities that require a groundwater protection plan have been identified above;
- (c) Practices that will protect groundwater from pollution are addressed in *Section C: Other Control Measures*.
- (d) Implementation schedule. All practices required to prevent pollution of groundwater are to be in place prior to conducting the activity;



BMP and Groundwater Protection Plan
US 51 Bridge Replacement CID ##-####
Bridge ID 020B00002N, Item I-10104
Carlisle County, Kentucky

- (e) Training is required as a part of the ground water protection plan. All employees of the contractor, sub-contractor, and resident engineer personnel will be trained to understand the nature and requirements of this plan as they pertain to their job function(s). Training will be accomplished within one week of employment and annually thereafter. A record of training will be maintained by the contractor with a copy provided to the resident engineer.
- (f) Areas of the project and groundwater plan activities will be inspected as part of the weekly sediment and erosion control inspections.
- (g) Certification (See *signature page*).



CONTRACTOR AND RESIDENT ENGINEER CERTIFICATION

The contractor that is responsible for implementing this BMP plan is identified in the Project Information section of this plan. The following certification applies to all parties that are signatory to this BMP plan:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. Further, this plan complies with the requirements of 401 KAR 5:037. By this certification, the undersigned state that the individuals signing the plan have reviewed the terms of the plan and will implement its provisions as they pertain to ground water protection.

② Resident Engineer:

Typed or printed name ¹	Title	Signature

③ Contractor:

Typed or printed name ²	Title	Signature

¹ KYTC Note: to be signed by the Chief District Engineer or a person designated to have the authority to sign reports by such a person (usually the resident engineer) in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 14 Reilly Road, Frankfort, Kentucky 40601. Reference the Project Control Number (PCN) and KPDES number when one has been issued.

² Contractors Note: to be signed by a person who is the owner, a responsible corporate officer, a general partner or the proprietor or a person designated to have the authority to sign reports by such a person in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 14 Reilly Road, Frankfort, Kentucky 40601. Reference the Project Control Number (PCN) and KPDES number when one has been issued.



SUB-CONTRACTOR CERTIFICATION

The following sub-contractor shall be made aware of the BMP plan and responsible for implementation of BMPs identified in this plan as follows:

Subcontractor Name:

Address:

Phone:

The part of Plan this subcontractor is responsible to implement is:

I certify under penalty of law that I understand the terms and conditions of the general Kentucky Pollutant Discharge Elimination System permit that authorizes the storm water discharges, the BMP plan that has been developed to manage the quality of water to be discharged as a result of storm events associated with the construction site activity and management of non-storm water pollutant sources identified as part of this certification.

Subcontractor:

Typed or printed name ¹	Title	Signature

¹ Sub-Contractor Note: to be signed by a person who is the owner, a responsible corporate officer, a general partner or the proprietor or a person designated to have the authority to sign reports by such a person in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 14 Reilly Road, Frankfort, Kentucky 40601. Reference the Project Control Number (PCN) and KPDES number when one has been assigned.



Highway District I
and
_____ Construction

Kentucky Pollutant Discharge Elimination
System (KPDES) Permit KYR10

Best Management Practices (BMP) Plan
and Groundwater Protection Plan
for Highway Construction Activities

for

Project: CID ### - #####
US-51 Bridge Replacement
Bridge ID 020B00004N, Item I-10105
Carlisle County, Kentucky

June 2023



Note: ① Design ② Construction ③ Contractor

PROJECT INFORMATION

1. Owner: Kentucky Transportation Cabinet, District I ①
2. Resident Engineer: ②
3. Contractor Name: ②
 - Address: ②
 - Phone No.: ②
 - Point of Contact: ②
 - Agent Responsible for KPDES Requirements: ③
4. Project Control Number: ②
5. Route (Address): US-51 at MP 4.272 ①
6. Latitude / Longitude (Project Mid-Point): 36.832845, -89.008815 ①
7. County: Carlisle County ①
8. Project Start Date: ②
9. Projected Completion Date: ②



A. SITE DESCRIPTION

1. **Nature of Construction Activity:** Address deficiencies of Bridge on US-51 over Little Mayfield Creek (020B00004N) from MP 4.272 to MP 4.518, a distance of 0.099 mile. Bridge (Replacement) SYP No. 01-10105.00. ①
2. **Order of Major Soil Disturbing Activities:** ② and ③
3. **Projected Volume of Material to be Moved:** ③
4. **Estimate of Total Project Area (acres):** ③
5. **Estimate of Area to be Disturbed (acres):** ③
6. **Post Construction Runoff Coefficient:** will be included in the project drainage folder. Persons needing information pertaining to the runoff coefficient will contact the resident engineer to request this information.
7. **Soil Condition:** Two soil complexes (Convent-Adler and Loring-Memphis-Saffell) have been mapped. The Adler series consists of very deep, moderately well drained soils that are formed from silty alluvium. These soils are found on floodplains.
8. **Discharge Water Quality Data (if any):** ②
9. **Receiving Water:** Little Mayfield Creek
10. **TMDLs and Pollutants of Concern:** N/A ①
11. **Site Map:** Project layout sheet plus the erosion control sheets in the project plans that depict Disturbed Drainage Areas (DDAs) and related information. These sheets depict the existing project conditions with areas delineated by DDA (drainage area bounded by watershed breaks and right of way limits), the stormwater discharge locations (either as a point discharge or as overland flow) and the areas that drain to each discharge point. These plans define the limits of areas to be disturbed and the location of control measures. Controls will be either site specific as designated by the designer or will be annotated by the contractor and resident engineer before disturbance commences. The project layout sheet shows the surface waters and wetlands.
12. **Potential Sources of Pollutants:** The primary source of pollutants is solids that are mobilized during storm events. Other sources of pollutants include oil/fuel/grease from servicing and operating construction equipment, concrete washout water, sanitary wastes, and trash/debris. ③



B. SEDIMENT AND EROSION CONTROL MEASURES

1. Plans for highway construction projects will include erosion control sheets that depict Disturbed Drainage Areas (DDAs) and related information. These plan sheets will show the existing project conditions with areas delineated by DDA within the right of way limits, the discharge points and the areas that drain to each discharge point. Project managers and designers will analyze the DDAs and identify Best Management Practices (BMPs) that are site specific. The balance of the BMPs for the project will be listed in the bid documents for selection and use by the contractor on the project with approval by the resident engineer.

Projects that do not have DDAs annotated on the erosion control sheets will employ the same concepts for development and managing BMP plans.

2. Following award of the contract, the contractor and resident engineer will annotate the erosion control sheets showing location and type of BMPs for each of the DDAs that will be disturbed at the outset of the project. This annotation will be accompanied by an order of work that reflects the order or sequence of major soil moving activities. The remaining DDAs are to be designated as "Do Not Disturb" until the contractor and resident engineer prepare the plan for BMPs to be employed. The initial BMP's shall be for the first phase (generally Clearing and Grubbing) and shall be modified as needed as the project changes phases. The BMP Plan will be modified to reflect disturbance in additional DDA's as the work progresses. All DDA's will have adequate BMP's in place before being disturbed.
3. As DDAs are prepared for construction, the following will be addressed for the project as a whole or for each DDA as appropriate:
 - **Construction Access.** This is the first land-disturbing activity. As soon as construction begins, bare areas will be stabilized with gravel and temporary mulch and/or vegetation.
 - **Sources.** At the beginning of the project, all DDAs for the project will be inspected for areas that are a source of storm water pollutants. Areas that are a source of pollutants will receive appropriate cover or BMPs to arrest the introduction of pollutants into storm water. Areas that have not been opened by the contractor will be inspected periodically (once per month) to determine if there is a need to employ BMPs to keep pollutants from entering storm water.
 - **Clearing and Grubbing.** The following BMP's will be considered and used where appropriate.
 - Leaving areas undisturbed when possible.
 - Silt basins to provide silt volume for large areas.
 - Silt Traps Type A for small areas.
 - Silt Traps Type C in front of existing and drop inlets which are to be saved.
 - Diversion ditches to catch sheet runoff and carry it to basins or traps or to divert it around areas to be disturbed.
 - Brush and/or other barriers to slow and/or divert runoff.
 - Silt fences to catch sheet runoff on short slopes. For longer slopes, multiple rows of silt fence may be considered.



-
- Temporary mulch for areas which are not feasible for the fore mentioned types of protections.
 - Non-standard or innovative methods.
- **Cut and Fill and Placement of Drainage Structures.** The BMP Plan will be modified to show additional BMP's such as:
- Silt Traps Type B in ditches and/or drainways as they are completed.
 - Silt Traps Type C in front of pipes after they are placed.
 - Channel Lining.
 - Erosion Control Blanket.
 - Non-standard or innovative methods.
- **Profile and X-Section in Place.** The BMP Plan will be modified to show elimination of BMP's which had to be removed and the addition of new BMP's as the roadway was shaped. Probable changes include:
- Silt Trap Type A, Brush and/or other barriers, Temporary mulch, and any other BMP which had to be removed for final grading to take place.
 - Additional Silt Traps Type B and Type C to be placed as final drainage patterns are put in place.
 - Additional Channel Lining and/or Erosion Control Blanket.
 - Temporary mulch for areas where Permanent Seeding and Protection cannot be done within 21 days.
 - Special BMP's such as Karst Policy.
- **Finish Work (Paving, Seeding, Protect, etc.).** A final BMP Plan will result from modifications during this phase of construction. Probable changes include:
- Removal of Silt Traps Type B from ditches and drainways if they are protected with other BMP's which are sufficient to control erosion, i.e. Erosion Control Blanket, or Permanent Seeding and Protection on moderate grades.
 - Permanent Seeding and Protection.
 - Placing Sod.
 - Planting trees and/or shrubs where they are included in the project.
- BMP's, including Stormwater Management Devices such as velocity dissipation devices and Karst policy BMP's, to be installed during construction to control the pollutants in storm water discharges that will occur after construction has been completed are: ③



C. OTHER CONTROL MEASURES

1. **Solid Materials.** No solid materials, including building materials, shall be discharged to waters of the commonwealth, except as authorized by a Section 404 permit.
2. **Waste Materials.** All waste materials that may leach pollutants (paint and paint containers, caulk tubes, oil/grease containers, liquids of any kind, soluble materials, etc.) will be collected and stored in appropriate covered waste containers. Waste containers shall be removed from the project site on a sufficiently frequent basis as to not allow wastes to become a source of pollution. All personnel will be instructed regarding the correct procedure for waste disposal. Wastes will be disposed in accordance with appropriate regulations. Notices stating these practices will be posted in the office.
3. **Hazardous Waste.** All hazardous waste materials will be managed and disposed of in the manner specified by local or state regulation. The contractor shall notify the Section Engineer if there any hazardous wastes being generated at the project site and how these wastes are being managed. Site personnel will be instructed with regard to proper storage and handling of hazardous wastes when required. The Transportation Cabinet will file for generator, registration when appropriate, with the Division of Waste Management and advise the contractor regarding waste management requirements.
4. **Spill Prevention.** The following material management practices will be used to reduce the risk of spills or other exposure of materials and substances to the weather and/or runoff.
 - **Good Housekeeping.** The following good housekeeping practices will be followed onsite during the construction project.
 - An effort will be made to store only enough product required to do the job.
 - All materials stored onsite will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
 - Products will be kept in their original containers with the original manufacturer's label.
 - Substances will not be mixed with one another unless recommended by the manufacturer.
 - Whenever possible, all of the product will be used up before disposing of the container.
 - Manufacturers' recommendations for proper use and disposal will be followed.
 - The site contractor will inspect daily to ensure proper use and disposal of materials onsite.
 - **Hazardous Products.** These practices will be used to reduce the risks associated with any and all hazardous materials.
 - Products will be kept in original containers unless they are not resealable.
 - Original labels and material safety data sheets (MSDS) will be reviewed and retained.
 - Contractor will follow procedures recommended by the manufacturer when handling hazardous materials.
 - If surplus product must be disposed of, manufacturers' or state/local recommended methods for proper disposal will be followed.



➤ **Petroleum Products**

- Vehicles and equipment that are fueled and maintained on site will be monitored for leaks, and receive regular preventative maintenance to reduce the chance of leakage. Petroleum products onsite will be stored in tightly sealed containers, which are clearly labeled and will be protected from exposure to weather.
- The contractor shall prepare an Oil Pollution Spill Prevention Control and Countermeasure plan when the project that involves the storage of petroleum products in 55 gallon or larger containers with a total combined storage capacity of 1,320 gallons. This is a requirement of 40 CFR 112.
- This project (will / will not) ③ have over 1,320 gallons of petroleum products with a total capacity, sum of all containers 55 gallon capacity and larger.

- **Fertilizers.** Fertilizers will be applied at rates prescribed by the contract, standard specifications or as directed by the resident engineer. Once applied, fertilizer will be covered with mulch or blankets or worked into the soil to limit exposure to storm water. Storage will be in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

- **Paints.** All containers will be tightly sealed and stored indoors or under roof when not being used. Excess paint or paint wash water will not be discharged to the drainage or storm sewer system but will be properly disposed of according to manufacturers' instructions or state and local regulations.

- **Concrete Truck Washout.** Concrete truck mixers and chutes will not be washed on pavement, near storm drain inlets, or within 75 feet of any ditch, stream, wetland, lake, or sinkhole. Where possible, excess concrete and wash water will be discharged to areas prepared for pouring new concrete, flat areas to be paved that are away from ditches or drainage system features, or other locations that will not drain off site. Where this approach is not possible, a shallow earthen wash basin will be excavated away from ditches to receive the wash water.

- **Spill Control Practices.** In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup:

- Manufacturers' recommended methods for spill cleanup will be clearly posted. All personnel will be made aware of procedures and the location of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup will be kept in the material storage area. Equipment and materials will include as appropriate, brooms, dust pans, mops, rags, gloves, oil absorbents, sand, sawdust, and plastic and metal trash containers.
- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- Spills of toxic or hazardous material will be reported to the appropriate state/local agency as required by KRS 224 and applicable federal law.



- The spill prevention plan will be adjusted as needed to prevent spills from reoccurring and improve spill response and cleanup.
- Spills of products will be cleaned up promptly. Wastes from spill clean-up will be disposed in accordance with appropriate regulations.

D. OTHER STATE AND LOCAL PLANS

This BMP plan shall include any requirements specified in sediment and erosion control plans, stormwater management plans or permits that have been approved by other state or local officials. Upon submittal of the NOI, other requirements for surface water protection are incorporated by reference into and are enforceable under this permit (even if they are not specifically included in this BMP plan). This provision does not apply to master or comprehensive plans, non-enforceable guidelines or technical guidance documents that are not identified in a specific plan or permit issued for the construction site by state or local officials.

E. MAINTENANCE

1. The BMP plan shall include a clear description of the maintenance procedures necessary to keep the control measures in good and effective operating condition.
2. Maintenance of BMPs during construction shall be a result of weekly and post rain event inspections with action being taken by the contractor to correct deficiencies.
3. Post-Construction maintenance will be a function of normal highway maintenance operations. Following final project acceptance by the cabinet, district highway crews will be responsible for identification and correction of deficiencies regarding ground cover and cleaning of storm water BMPs. The project manager shall identify any BMPs that will be for the purpose of post construction stormwater management with specific guidance for any non-routine maintenance.

F. INSPECTIONS

All erosion prevention and sediment control measures will be inspected at least once each week and following any rain of one-half inch or more.

- Inspections will be conducted by individuals that have successfully completed KEPSC-RI course as required by Section 213.02.02 of the Standard Specifications for Road and Bridge Construction, current edition.
- Inspection reports will be written, signed, dated, and kept on file.
- Areas at final grade will be seeded and mulched within 14 days.
- Areas that are not at final grade where construction has ceased for a period of 21 days or longer and soil stock piles shall receive temporary mulch no later than 14 days from the last construction activity in that area.



- All measures will be maintained in good working order. If a repair is necessary, it will be initiated within 24 hours of being reported.
- Built-up sediment will be removed from behind the silt fence before it has reached halfway up the height of the fence.
- Silt fences will be inspected for bypassing, overtopping, undercutting, depth of sediment, tears, and to ensure attachment to secure posts.
- Sediment basins will be inspected for depth of sediment, and built-up sediment will be removed when it reaches 50 percent of the design capacity and at the end of the job.
- Diversion dikes and berms will be inspected and any breaches promptly repaired. Areas that are eroding or scouring will be repaired and re-seeded / mulched as needed.
- Temporary and permanent seeding and mulching will be inspected for bare spots, washouts, and healthy growth. Bare or eroded areas will be repaired as needed.
- All material storage and equipment servicing areas that involve the management of bulk liquids, fuels, and bulk solids will be inspected weekly for conditions that represent a release or possible release of pollutants to the environment.

G. NON-STORM WATER DISCHARGES

It is expected that non-storm water discharges may occur from the site during the construction period. Examples of non-storm water discharges include:

- Water from water line flushings.
- Water from cleaning concrete trucks and equipment.
- Pavement wash waters (where no spills or leaks of toxic or hazardous materials have occurred).
- Uncontaminated groundwater and rainwater (from dewatering during excavation).

All non-storm water discharges will be directed to the sediment basin or to a filter fence enclosure in a flat vegetated infiltration area or be filtered via another approved commercial product.



H. GROUNDWATER PROTECTION ③

This plan serves as the groundwater protection plan as required by 401 KAR 5:037.

Contractor's Statement: ③

The following activities, as enumerated by 401 KAR 5:037 Section 2, require the preparation and implementation of a groundwater protection plan, and will or may be conducted as part of this construction project:

_____ 2(e) Land treatment or land disposal of a pollutant

_____ 2(f) Storing...or related handling of hazardous waste, solid waste or special waste...in tanks, drums, or other containers, or in piles (*does not include wastes managed in a container placed for collection and removal of municipal solid waste for disposal off site*)

_____ 2(g) handling of materials in bulk quantities (*equal or greater than 55 gallons or 100 pounds net dry weight transported held in an individual container*) that, if released to the environment, would be a pollutant

_____ 2(j) Storing or related handling of road oils, dust suppressants at a central location
Application or related handling of road oils, dust suppressants or deicing materials (*does not include use of chloride-based deicing materials applied to roads or parking lots*)

_____ 2(k) Installation, construction, operation, or abandonment of wells, bore holes, or core holes (*does not include bore holes for the purpose of explosive demolition*)

Or, check the following only if there are no qualifying activities

_____ There are no activities for this project as listed in 401 KAR 5:037 Section 2 that require the preparation and implementation of a groundwater protection plan.

The Contractor is responsible for the preparation of a plan that addresses the 401 KAR 5:037 Section 3. ③ Elements of site-specific groundwater protection plan:

- (a) General information about this project is covered in the Project information;
- (b) Activities that require a groundwater protection plan have been identified above;
- (c) Practices that will protect groundwater from pollution are addressed in *Section C: Other Control Measures*.
- (d) Implementation schedule. All practices required to prevent pollution of groundwater are to be in place prior to conducting the activity;



BMP and Groundwater Protection Plan
US-51 Bridge Replacement CID ##-####
Bridge ID 002B00004N, Item I-10105
Carlisle County, Kentucky

- (e) Training is required as a part of the ground water protection plan. All employees of the contractor, sub-contractor, and resident engineer personnel will be trained to understand the nature and requirements of this plan as they pertain to their job function(s). Training will be accomplished within one week of employment and annually thereafter. A record of training will be maintained by the contractor with a copy provided to the resident engineer.
- (f) Areas of the project and groundwater plan activities will be inspected as part of the weekly sediment and erosion control inspections.
- (g) Certification (See *signature page*).



CONTRACTOR AND RESIDENT ENGINEER CERTIFICATION

The contractor that is responsible for implementing this BMP plan is identified in the Project Information section of this plan. The following certification applies to all parties that are signatory to this BMP plan:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. Further, this plan complies with the requirements of 401 KAR 5:037. By this certification, the undersigned state that the individuals signing the plan have reviewed the terms of the plan and will implement its provisions as they pertain to ground water protection.

② Resident Engineer:

Typed or printed name ¹	Title	Signature

③ Contractor:

Typed or printed name ²	Title	Signature

¹ KYTC Note: to be signed by the Chief District Engineer or a person designated to have the authority to sign reports by such a person (usually the resident engineer) in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 14 Reilly Road, Frankfort, Kentucky 40601. Reference the Project Control Number (PCN) and KPDES number when one has been issued.

² Contractors Note: to be signed by a person who is the owner, a responsible corporate officer, a general partner or the proprietor or a person designated to have the authority to sign reports by such a person in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 14 Reilly Road, Frankfort, Kentucky 40601. Reference the Project Control Number (PCN) and KPDES number when one has been issued.



SUB-CONTRACTOR CERTIFICATION

The following sub-contractor shall be made aware of the BMP plan and responsible for implementation of BMPs identified in this plan as follows:

Subcontractor Name:

Address:

Phone:

The part of Plan this subcontractor is responsible to implement is:

I certify under penalty of law that I understand the terms and conditions of the general Kentucky Pollutant Discharge Elimination System permit that authorizes the storm water discharges, the BMP plan that has been developed to manage the quality of water to be discharged as a result of storm events associated with the construction site activity and management of non-storm water pollutant sources identified as part of this certification.

Subcontractor:

Typed or printed name ¹	Title	Signature

¹ Sub-Contractor Note: to be signed by a person who is the owner, a responsible corporate officer, a general partner or the proprietor or a person designated to have the authority to sign reports by such a person in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 14 Reilly Road, Frankfort, Kentucky 40601. Reference the Project Control Number (PCN) and KPDES number when one has been assigned.



Highway District I
and
_____ Construction

Kentucky Pollutant Discharge Elimination
System (KPDES) Permit KYR10

Best Management Practices (BMP) Plan
and Groundwater Protection Plan
for Highway Construction Activities

for

Project: CID ### - #####
US-45 Bridge Replacement
Bridge ID 042B00090N, Item I-10128
Graves County, Kentucky

September 2023



Note: ① Design ② Construction ③ Contractor

PROJECT INFORMATION

1. Owner: Kentucky Transportation Cabinet, District I ①
2. Resident Engineer: ②
3. Contractor Name: ②
 - Address: ②
 - Phone No.: ②
 - Point of Contact: ②
 - Agent Responsible for KPDES Requirements: ③
4. Project Control Number: ②
5. Route (Address): US-45 at MP 2.9 ①
6. Latitude / Longitude (Project Mid-Point): 36.581573, -88.801427 ①
7. County: Graves County ①
8. Project Start Date: ②
9. Projected Completion Date: ②



A. SITE DESCRIPTION

1. **Nature of Construction Activity:** Address deficiencies of Bridge on US-45 over Jackson Creek (042B00090N) at MP 2.9. Bridge (Replacement) SYP No. I-10128. ①
2. **Order of Major Soil Disturbing Activities:** ② and ③
3. **Projected Volume of Material to be Moved:** ③
4. **Estimate of Total Project Area (acres):** ③
5. **Estimate of Area to be Disturbed (acres):** ③
6. **Post Construction Runoff Coefficient:** will be included in the project drainage folder. Persons needing information pertaining to the runoff coefficient will contact the resident engineer to request this information.
7. **Soil Condition:** Soils are comprised of Collins silt loam, 0 to 2 percent slopes, occasionally flooded for brief durations and Falaya silt loam, 0 to 2 percent slopes, occasionally flooded for brief durations. Collins silt loams are moderately well drained and Falaya silt loams are somewhat poorly drained.
8. **Discharge Water Quality Data (if any):** ②
9. **Receiving Water:** Jackson Creek, and Outstanding State Resource Water (OSRW).
10. **TMDLs and Pollutants of Concern:** N/A ①
11. **Site Map:** Project layout sheet plus the erosion control sheets in the project plans that depict Disturbed Drainage Areas (DDAs) and related information. These sheets depict the existing project conditions with areas delineated by DDA (drainage area bounded by watershed breaks and right of way limits), the stormwater discharge locations (either as a point discharge or as overland flow) and the areas that drain to each discharge point. These plans define the limits of areas to be disturbed and the location of control measures. Controls will be either site specific as designated by the designer or will be annotated by the contractor and resident engineer before disturbance commences. The project layout sheet shows the surface waters and wetlands.
12. **Potential Sources of Pollutants:** The primary source of pollutants is solids that are mobilized during storm events. Other sources of pollutants include oil/fuel/grease from servicing and operating construction equipment, concrete washout water, sanitary wastes, and trash/debris. ③



B. SEDIMENT AND EROSION CONTROL MEASURES

1. Plans for highway construction projects will include erosion control sheets that depict Disturbed Drainage Areas (DDAs) and related information. These plan sheets will show the existing project conditions with areas delineated by DDA within the right of way limits, the discharge points and the areas that drain to each discharge point. Project managers and designers will analyze the DDAs and identify Best Management Practices (BMPs) that are site specific. The balance of the BMPs for the project will be listed in the bid documents for selection and use by the contractor on the project with approval by the resident engineer.

Projects that do not have DDAs annotated on the erosion control sheets will employ the same concepts for development and managing BMP plans.

2. Following award of the contract, the contractor and resident engineer will annotate the erosion control sheets showing location and type of BMPs for each of the DDAs that will be disturbed at the outset of the project. This annotation will be accompanied by an order of work that reflects the order or sequence of major soil moving activities. The remaining DDAs are to be designated as "Do Not Disturb" until the contractor and resident engineer prepare the plan for BMPs to be employed. The initial BMP's shall be for the first phase (generally Clearing and Grubbing) and shall be modified as needed as the project changes phases. The BMP Plan will be modified to reflect disturbance in additional DDA's as the work progresses. All DDA's will have adequate BMP's in place before being disturbed.
3. As DDAs are prepared for construction, the following will be addressed for the project as a whole or for each DDA as appropriate:
 - **Construction Access.** This is the first land-disturbing activity. As soon as construction begins, bare areas will be stabilized with gravel and temporary mulch and/or vegetation.
 - **Sources.** At the beginning of the project, all DDAs for the project will be inspected for areas that are a source of storm water pollutants. Areas that are a source of pollutants will receive appropriate cover or BMPs to arrest the introduction of pollutants into storm water. Areas that have not been opened by the contractor will be inspected periodically (once per month) to determine if there is a need to employ BMPs to keep pollutants from entering storm water.
 - **Clearing and Grubbing.** The following BMP's will be considered and used where appropriate.
 - Leaving areas undisturbed when possible.
 - Silt basins to provide silt volume for large areas.
 - Silt Traps Type A for small areas.
 - Silt Traps Type C in front of existing and drop inlets which are to be saved.
 - Diversion ditches to catch sheet runoff and carry it to basins or traps or to divert it around areas to be disturbed.
 - Brush and/or other barriers to slow and/or divert runoff.
 - Silt fences to catch sheet runoff on short slopes. For longer slopes, multiple rows of silt fence may be considered.



- Temporary mulch for areas which are not feasible for the fore mentioned types of protections.
 - Non-standard or innovative methods.
- **Cut and Fill and Placement of Drainage Structures.** The BMP Plan will be modified to show additional BMP's such as:
- Silt Traps Type B in ditches and/or drainways as they are completed.
 - Silt Traps Type C in front of pipes after they are placed.
 - Channel Lining.
 - Erosion Control Blanket.
 - Non-standard or innovative methods.
- **Profile and X-Section in Place.** The BMP Plan will be modified to show elimination of BMP's which had to be removed and the addition of new BMP's as the roadway was shaped. Probable changes include:
- Silt Trap Type A, Brush and/or other barriers, Temporary mulch, and any other BMP which had to be removed for final grading to take place.
 - Additional Silt Traps Type B and Type C to be placed as final drainage patterns are put in place.
 - Additional Channel Lining and/or Erosion Control Blanket.
 - Temporary mulch for areas where Permanent Seeding and Protection cannot be done within 21 days.
 - Special BMP's such as Karst Policy.
- **Finish Work (Paving, Seeding, Protect, etc.).** A final BMP Plan will result from modifications during this phase of construction. Probable changes include:
- Removal of Silt Traps Type B from ditches and drainways if they are protected with other BMP's which are sufficient to control erosion, i.e. Erosion Control Blanket, or Permanent Seeding and Protection on moderate grades.
 - Permanent Seeding and Protection.
 - Placing Sod.
 - Planting trees and/or shrubs where they are included in the project.
- BMP's, including Stormwater Management Devices such as velocity dissipation devices and Karst policy BMP's, to be installed during construction to control the pollutants in storm water discharges that will occur after construction has been completed are: ③



C. OTHER CONTROL MEASURES

1. **Solid Materials.** No solid materials, including building materials, shall be discharged to waters of the commonwealth, except as authorized by a Section 404 permit.
2. **Waste Materials.** All waste materials that may leach pollutants (paint and paint containers, caulk tubes, oil/grease containers, liquids of any kind, soluble materials, etc.) will be collected and stored in appropriate covered waste containers. Waste containers shall be removed from the project site on a sufficiently frequent basis as to not allow wastes to become a source of pollution. All personnel will be instructed regarding the correct procedure for waste disposal. Wastes will be disposed in accordance with appropriate regulations. Notices stating these practices will be posted in the office.
3. **Hazardous Waste.** All hazardous waste materials will be managed and disposed of in the manner specified by local or state regulation. The contractor shall notify the Section Engineer if there any hazardous wastes being generated at the project site and how these wastes are being managed. Site personnel will be instructed with regard to proper storage and handling of hazardous wastes when required. The Transportation Cabinet will file for generator, registration when appropriate, with the Division of Waste Management and advise the contractor regarding waste management requirements.
4. **Spill Prevention.** The following material management practices will be used to reduce the risk of spills or other exposure of materials and substances to the weather and/or runoff.
 - **Good Housekeeping.** The following good housekeeping practices will be followed onsite during the construction project.
 - An effort will be made to store only enough product required to do the job.
 - All materials stored onsite will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
 - Products will be kept in their original containers with the original manufacturer's label.
 - Substances will not be mixed with one another unless recommended by the manufacturer.
 - Whenever possible, all of the product will be used up before disposing of the container.
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- The contractor shall prepare an Oil Pollution Spill Prevention Control and Countermeasure plan when the project that involves the storage of petroleum products in 55 gallon or larger containers with a total combined storage capacity of 1,320 gallons. This is a requirement of 40 CFR 112.
- This project (will / will not) ③ have over 1,320 gallons of petroleum products with a total capacity, sum of all containers 55 gallon capacity and larger.

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- **Spill Control Practices.** In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup:

- Manufacturers' recommended methods for spill cleanup will be clearly posted. All personnel will be made aware of procedures and the location of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup will be kept in the material storage area. Equipment and materials will include as appropriate, brooms, dust pans, mops, rags, gloves, oil absorbents, sand, sawdust, and plastic and metal trash containers.
- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- Spills of toxic or hazardous material will be reported to the appropriate state/local agency as required by KRS 224 and applicable federal law.



- The spill prevention plan will be adjusted as needed to prevent spills from reoccurring and improve spill response and cleanup.
- Spills of products will be cleaned up promptly. Wastes from spill clean-up will be disposed in accordance with appropriate regulations.

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This BMP plan shall include any requirements specified in sediment and erosion control plans, stormwater management plans or permits that have been approved by other state or local officials. Upon submittal of the NOI, other requirements for surface water protection are incorporated by reference into and are enforceable under this permit (even if they are not specifically included in this BMP plan). This provision does not apply to master or comprehensive plans, non-enforceable guidelines or technical guidance documents that are not identified in a specific plan or permit issued for the construction site by state or local officials.

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1. The BMP plan shall include a clear description of the maintenance procedures necessary to keep the control measures in good and effective operating condition.
2. Maintenance of BMPs during construction shall be a result of weekly and post rain event inspections with action being taken by the contractor to correct deficiencies.
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F. INSPECTIONS

All erosion prevention and sediment control measures will be inspected at least once each week and following any rain of one-half inch or more.

- Inspections will be conducted by individuals that have successfully completed KEPSC-RI course as required by Section 213.02.02 of the Standard Specifications for Road and Bridge Construction, current edition.
- Inspection reports will be written, signed, dated, and kept on file.
- Areas at final grade will be seeded and mulched within 14 days.
- Areas that are not at final grade where construction has ceased for a period of 21 days or longer and soil stock piles shall receive temporary mulch no later than 14 days from the last construction activity in that area.



- All measures will be maintained in good working order. If a repair is necessary, it will be initiated within 24 hours of being reported.
- Built-up sediment will be removed from behind the silt fence before it has reached halfway up the height of the fence.
- Silt fences will be inspected for bypassing, overtopping, undercutting, depth of sediment, tears, and to ensure attachment to secure posts.
- Sediment basins will be inspected for depth of sediment, and built-up sediment will be removed when it reaches 50 percent of the design capacity and at the end of the job.
- Diversion dikes and berms will be inspected and any breaches promptly repaired. Areas that are eroding or scouring will be repaired and re-seeded / mulched as needed.
- Temporary and permanent seeding and mulching will be inspected for bare spots, washouts, and healthy growth. Bare or eroded areas will be repaired as needed.
- All material storage and equipment servicing areas that involve the management of bulk liquids, fuels, and bulk solids will be inspected weekly for conditions that represent a release or possible release of pollutants to the environment.

G. NON-STORM WATER DISCHARGES

It is expected that non-storm water discharges may occur from the site during the construction period. Examples of non-storm water discharges include:

- Water from water line flushings.
- Water from cleaning concrete trucks and equipment.
- Pavement wash waters (where no spills or leaks of toxic or hazardous materials have occurred).
- Uncontaminated groundwater and rainwater (from dewatering during excavation).

All non-storm water discharges will be directed to the sediment basin or to a filter fence enclosure in a flat vegetated infiltration area or be filtered via another approved commercial product.



H. GROUNDWATER PROTECTION ③

This plan serves as the groundwater protection plan as required by 401 KAR 5:037.

Contractor’s Statement: ③

The following activities, as enumerated by 401 KAR 5:037 Section 2, require the preparation and implementation of a groundwater protection plan, and will or may be conducted as part of this construction project:

_____ 2(e) Land treatment or land disposal of a pollutant

_____ 2(f) Storing...or related handling of hazardous waste, solid waste or special waste...in tanks, drums, or other containers, or in piles (*does not include wastes managed in a container placed for collection and removal of municipal solid waste for disposal off site*)

_____ 2(g) handling of materials in bulk quantities (*equal or greater than 55 gallons or 100 pounds net dry weight transported held in an individual container*) that, if released to the environment, would be a pollutant

_____ 2(j) Storing or related handling of road oils, dust suppressants at a central location
Application or related handling of road oils, dust suppressants or deicing materials (*does not include use of chloride-based deicing materials applied to roads or parking lots*)

_____ 2(k) Installation, construction, operation, or abandonment of wells, bore holes, or core holes (*does not include bore holes for the purpose of explosive demolition*)

Or, check the following only if there are no qualifying activities

_____ There are no activities for this project as listed in 401 KAR 5:037 Section 2 that require the preparation and implementation of a groundwater protection plan.

The Contractor is responsible for the preparation of a plan that addresses the 401 KAR 5:037 Section 3. ③ Elements of site-specific groundwater protection plan:

- (a) General information about this project is covered in the Project information;
- (b) Activities that require a groundwater protection plan have been identified above;
- (c) Practices that will protect groundwater from pollution are addressed in *Section C: Other Control Measures*.
- (d) Implementation schedule. All practices required to prevent pollution of groundwater are to be in place prior to conducting the activity;



BMP and Groundwater Protection Plan
US-45 Bridge Replacement CID ##-####
Bridge ID 042B00090N, Item I-10128
Graves County, Kentucky

- (e) Training is required as a part of the ground water protection plan. All employees of the contractor, sub-contractor, and resident engineer personnel will be trained to understand the nature and requirements of this plan as they pertain to their job function(s). Training will be accomplished within one week of employment and annually thereafter. A record of training will be maintained by the contractor with a copy provided to the resident engineer.
- (f) Areas of the project and groundwater plan activities will be inspected as part of the weekly sediment and erosion control inspections.
- (g) Certification (See *signature page*).



CONTRACTOR AND RESIDENT ENGINEER CERTIFICATION

The contractor that is responsible for implementing this BMP plan is identified in the Project Information section of this plan. The following certification applies to all parties that are signatory to this BMP plan:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. Further, this plan complies with the requirements of 401 KAR 5:037. By this certification, the undersigned state that the individuals signing the plan have reviewed the terms of the plan and will implement its provisions as they pertain to ground water protection.

② Resident Engineer:

Typed or printed name ¹	Title	Signature

③ Contractor:

Typed or printed name ²	Title	Signature

¹ KYTC Note: to be signed by the Chief District Engineer or a person designated to have the authority to sign reports by such a person (usually the resident engineer) in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 14 Reilly Road, Frankfort, Kentucky 40601. Reference the Project Control Number (PCN) and KPDES number when one has been issued.

² Contractors Note: to be signed by a person who is the owner, a responsible corporate officer, a general partner or the proprietor or a person designated to have the authority to sign reports by such a person in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 14 Reilly Road, Frankfort, Kentucky 40601. Reference the Project Control Number (PCN) and KPDES number when one has been issued.



SUB-CONTRACTOR CERTIFICATION

The following sub-contractor shall be made aware of the BMP plan and responsible for implementation of BMPs identified in this plan as follows:

Subcontractor Name:

Address:

Phone:

The part of Plan this subcontractor is responsible to implement is:

I certify under penalty of law that I understand the terms and conditions of the general Kentucky Pollutant Discharge Elimination System permit that authorizes the storm water discharges, the BMP plan that has been developed to manage the quality of water to be discharged as a result of storm events associated with the construction site activity and management of non-storm water pollutant sources identified as part of this certification.

Subcontractor:

Typed or printed name ¹	Title	Signature

¹ Sub-Contractor Note: to be signed by a person who is the owner, a responsible corporate officer, a general partner or the proprietor or a person designated to have the authority to sign reports by such a person in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 14 Reilly Road, Frankfort, Kentucky 40601. Reference the Project Control Number (PCN) and KPDES number when one has been assigned.

SPECIAL NOTE FOR CONTRACT COMPLETION DATE AND LIQUIDATED DAMAGES ON BRIDGE REPAIR CONTRACTS

1-10104 Carlisle 020B00002N

I. COMPLETION DATE.

Upon Notice to Proceed, the Contractor has the option of selecting the Begin Work date. Once selected, notify the Department in writing of the date selected at least two weeks prior to beginning work and provide a proposed project schedule. All work is to be completed by the specified contract completion date. The Contractor is allotted 180 calendar days once work begins to complete all work to safely reopen the structure with no lane closures. At a minimum, prior to reopening the lane to traffic, all strength requirements and curing for materials used shall be completed per Division 600 of the Standard Specifications.

The Engineer will begin charging calendar days for a structure on the day the Contractor begins work, with the exception of placement of signs, regardless of holidays or seasonal weather limitations.

II. LIQUIDATED DAMAGES.

Liquidated damages will be assessed to the Contractor in accordance with the Transportation Cabinet, Department of Highway's current Standard Specifications for Road and Bridge Construction, Section 112.03.15A, when the lane closures are used -beyond the allotted number of calendar days. Liquidated Damages will be assessed per the Standard Specification Section 108.09 when the contract time extends beyond the contract date.

Contrary to the Standard Specifications, liquidated damages will be assessed to the Contractor during the months of December, January, February and March when the contract time has expired on any individual bridge. Contract time will be charged during these months. All construction must be completed in accordance with the weather limitations specified in Section 606 and/or Section 601 as applicable. No extension of Contract time will be granted due to inclement weather or temperature limitations that occur due to starting work on the Contract or a structure late in the construction season.

SPECIAL NOTE FOR CONTRACT COMPLETION DATE AND LIQUIDATED DAMAGES ON BRIDGE REPAIR CONTRACTS

1-10105 Carlisle 020B00004N

I. COMPLETION DATE.

Upon Notice to Proceed, the Contractor has the option of selecting the Begin Work date. Once selected, notify the Department in writing of the date selected at least two weeks prior to beginning work and provide a proposed project schedule. All work is to be completed by the specified contract completion date. The Contractor is allotted 180 calendar days once work begins to complete all work to safely reopen the structure with no lane closures. At a minimum, prior to reopening the lane to traffic, all strength requirements and curing for materials used shall be completed per Division 600 of the Standard Specifications.

The Engineer will begin charging calendar days for a structure on the day the Contractor begins work, with the exception of placement of signs, regardless of holidays or seasonal weather limitations.

II. LIQUIDATED DAMAGES.

Liquidated damages will be assessed to the Contractor in accordance with the Transportation Cabinet, Department of Highway's current Standard Specifications for Road and Bridge Construction, Section 112.03.15A, when the lane closures are used -beyond the allotted number of calendar days. Liquidated Damages will be assessed per the Standard Specification Section 108.09 when the contract time extends beyond the contract date.

Contrary to the Standard Specifications, liquidated damages will be assessed to the Contractor during the months of December, January, February and March when the contract time has expired on any individual bridge. Contract time will be charged during these months. All construction must be completed in accordance with the weather limitations specified in Section 606 and/or Section 601 as applicable. No extension of Contract time will be granted due to inclement weather or temperature limitations that occur due to starting work on the Contract or a structure late in the construction season.

SPECIAL NOTE FOR CONTRACT COMPLETION DATE AND LIQUIDATED DAMAGES ON BRIDGE REPAIR CONTRACTS

1-10128 Graves 042B00090N

I. COMPLETION DATE.

Upon Notice to Proceed, the Contractor has the option of selecting the Begin Work date. Once selected, notify the Department in writing of the date selected at least two weeks prior to beginning work and provide a proposed project schedule. All work is to be completed by the specified contract completion date. The Contractor is allotted 120 calendar days once the bridge is closed to complete all work to safely reopen the structure with no lane closures. At a minimum, prior to reopening the bridge to traffic, all strength requirements and curing for materials used shall be completed per Division 600 of the Standard Specifications. Guardrail shall be installed to the satisfaction of the Engineer prior to reopening the bridge to traffic unless prior approval is obtained from the engineer for use of temporary railing.

The Engineer will begin charging calendar days for a structure on the day the Contractor closes the structure to traffic, regardless of holidays or seasonal weather limitations.

II. LIQUIDATED DAMAGES.

Liquidated damages will be assessed to the Contractor in accordance with the Transportation Cabinet, Department of Highway's current Standard Specifications for Road and Bridge Construction, Section 108.09, when either the allotted number of calendar days or the specified completion date is exceeded.

Contrary to the Standard Specifications, liquidated damages will be assessed to the Contractor during the months of December, January, February and March when the contract time has expired on any individual bridge. Contract time will be charged during these months. All construction must be completed in accordance with the weather limitations specified in Section 606 and/or Section 601 as applicable. No extension of Contract time will be granted due to inclement weather or temperature limitations that occur due to starting work on the Contract or a structure late in the construction season.

Any approval of cold weather plans or allowance of construction operations to occur outside Section 606 and/or Section 601 does not alleviate the 120 day maximum bridge closure. In the event the closure lasts longer than 120 calendar days as specified, liquidated damages will apply to all excess days regardless of weather limitations.

SPECIAL NOTE

SEASONAL TREE CLEARING RESTRICTION

1-10104 Carlisle 020B00002N 1-10105 Carlisle 020B00004N 1-10128 Graves 042B00090N
No clearing of trees five (5) inches or greater dbh (diameter breast height) between June 1 and July 31.

Questions regarding this note should be directed to Danny Peake, Director, KYTC Division of Environmental Analysis, 200 Mero Street, Frankfort, KY 40601, Phone (502) 564-7250.

Special Note for Bridge Demolition, Renovation and Asbestos Abatement

If the project includes any bridge demolition or renovation, the successful bidder is required to notify Kentucky Division for Air Quality (KDAQ) via filing of form (DEP 7036) a minimum of 10 working days prior to commencement of any bridge demolition or renovation work.

Any available information regarding possible asbestos containing materials (ACM) on or within bridges to be affected by the project has been included in the bid documents. These are to be included with the Contractor's notification filed with the KDAQ. If not included in the bid documents, the Department will provide that information to the successful bidder for inclusion in the KDAQ notice as soon as possible. If there are no documents stating otherwise, the bidders should assume there are no asbestos containing materials that will in any way affect the work.

SPECIAL NOTE

BRIDGE DEMOLITION OR RENOVATION AND ASBESTOS

If the project includes bridge demolition or renovation, the Contractor is required to notify Kentucky Division for Air Quality (KDAQ) via filing of form DEP 7036 (attached) a minimum of 10 days prior to commencement of any bridge demolition or renovation work.

KYTC has completed a pre-demolition asbestos survey of the bridge, the results of which are attached to this note and should be included with the Contractor's notification filed with the KDAQ.

Survey results revealed no regulated asbestos containing material (RACM) present, therefore no asbestos-specific work practices are required.

Questions regarding this note should be directed to Danny Peake, Director, KYTC Division of Environmental Analysis, 200 Mero Street, Frankfort, KY 40601, Phone (502) 564-7250.

DEP 7036

**NOTIFICATION OF ASBESTOS
ABATEMENT/DEMOLITION/RENOVATION**
(Instructions for completing form on back)

PAGE 1 OF _____
INITIAL SUBMITTAL DATE _____
REVISION DATE _____
NOTIFICATION # _____

OFFICE USE ONLY
ID # _____
LOG # _____

File this form with Regional Office where project will be performed

Kentucky Division for Air Quality
300 Sower Boulevard, 2nd Floor
Frankfort, KY 40601

Contractor _____
Address _____
City _____ State _____ Zip _____
Phone _____ Contact Person _____
Owner _____
Address _____
City _____ State _____ Zip _____
Phone _____ Contact Person _____

Description of planned renovation/demolition, including abatement methods & demo/reno methods. _____

Description of affected facility components _____

Asbestos detection technique _____
Amount of Cat. I & II nonfriable ACM involved but will not be removed: _____

Describe **physical characteristics** that make it nonfriable and **methods** to keep it nonfriable (optional): _____

Describe **contingency plan** should nonfriable ACM become friable or additional ACM be uncovered during renovation/ demolition: _____

Transporter _____
Address _____
City _____ State _____ Zip _____
Phone _____

Disposal Site _____
Address _____
City _____ State _____ Zip _____

I hereby certify that at least one person trained as required by 40 CFR 61.145(c)(8) will supervise the abatement work described herein. (optional for strictly non-friable work)

Submitted by: _____
Company Name: _____

Project Location _____
Address _____
City _____ State _____ Zip _____
Facility Age (yrs.) _____ Size of Facility or Affected Part (sq. ft.) _____
#Floors Affected _____ Present and Prior Use of Facility _____

TYPE OF PROJECT (CHECK ONLY ONE):

Renovation Demolition Ordered Demolition Emergency Long-term

PROJECT DATES:

Start Removal _____ End Removal _____
Start Renovation/Demolition _____ End Renovation/Demolition _____

Amount of ACM to be Removed:

	Regulated ACM (FACM)	Category II nonfriable ACM (optional)	Category I nonfriable ACM (optional)
Linear Feet			
Square Feet			
Cubic Feet			

INSTRUCTIONS FOR COMPLETING FORM DEP7036: NOTIFICATION OF ASBESTOS ABATEMENT/DEMOLITION/RENOVATION

Filing Deadline: This form must be completed and filed with the Kentucky Division for Air Quality at least ten (10) working days before starting any asbestos removal, demolition, or other work which will disturb asbestos-containing material (ACM) in Kentucky facilities outside Jefferson County and in schools statewide, including Jefferson County. File with appropriate Regional Office.

Renotification: If developments occur that invalidate information on a notification (e.g., changes in dates, amounts, locations), file a revised form within the time frames specified in 401 KAR 58:025. Notifications may be numbered in the top-left corner (optional). First two digits are project year; remaining digits are project number (e.g., the first project in 1999 is 99-1).

Attachments: Attachments may be included to provide additional information, propose alternative procedures, declare nonfriable removal, identify secondary transporters, etc.

Line-by-Line Instructions:

Contractor/Owner: the contractor is the asbestos remover (or, for zero-asbestos demolitions, the demolition contractor). The owner is the entity having the work done.

Project Location: The location at the address given where the work is taking place (e.g., which building/floor/room?).

Present/Prior Use: Enter the present and prior use(s) of the facility.

Type of Project: Each choice shown in this category has a specific description under 401 KAR 58:025:

Emergency renovations result from a sudden, unexpected event. If the project is an emergency renovation, attach a detailed description of the sudden, unexpected event that necessitated removal. Include the exact date and hour the event occurred and explain how the event caused an unsafe condition, or would cause equipment damage or unreasonable financial burden.

Planned renovations are renovations that do not qualify as emergency renovations.

A long-term notification is a type of planned renovation which involves a number of nonscheduled small-scale removals whose annual total exceeds the NESHAP threshold amounts and can be estimated based on past years' experience. File yearly estimate at least 10 working days before the beginning of the calendar year for which a long-term notification is being given.

Demolitions involve the wrecking or taking out of a load-supporting structural member, such as a load-bearing beam or wall. Tearing down a structure, dismantling it piecemeal, and moving it from one place to another are all considered demolitions.

Ordered demolitions must result from a demolition order issued by a government agency because the building is structurally unsound and in danger of imminent collapse. For ordered demolitions, attach to the notification a signed, dated copy of order that includes demolition deadlines and name/title/authority of the government representative issuing the order.

Project Dates: Schedules must be precise and accurate. The "start removal" date is the date the removers arrive on-site and begin physically preparing the work area for removal. "End removal" is the date the removers dismantle the work area after cleaning and clearing it. If circumstances arise that invalidate previously submitted start dates, a revised notification must be submitted showing the updated, correct start date. If the start date has been moved up, submit written renotification at least ten working days before the new start date. If the start date has been moved back, telephone the Division as soon as possible before the original date and submit written renotification no later than the original start date.

Schedules for renovation and demolition (next line after removal schedule) are handled similarly, except that renotification is required only for schedule changes involving demolitions, not renovations.

Amount of ACM: In this table, enter the amount and type (FACM, Category I, and/or Category II) of asbestos that will be removed. Although the regulation does not require you to identify the amount of nonfriable ACM that will be removed, the table provides space for nonfriable ACM to accommodate those notifiers who choose to document these removals.

Description of project: Describe the demolition or renovation work to be performed and method(s) to be used, including work practices and engineering controls to be used.

Asbestos Detection Technique: Give a general description of the asbestos survey, for example, "AHERA-style survey by accredited inspector; samples analyzed by PLM."

Amount of nonfriable ...: If all nonfriable ACM will be properly removed, enter "NA."

Contingency Plans: If Category II nonfriable ACM becomes crumbled, pulverized, or reduced to powder, or if additional RACM is discovered, describe procedures to be followed. For example, "Move demolition activity away from ACM immediately; remove the ACM using regulation-required procedures." Even "Stop work, call Division for Air Quality" is OK.



ASBESTOS INSPECTION REPORT

Prepared for: Mike McGregor, PE
Bacon Farmer Workman Engineering & Testing, Inc.

Prepared by: Jared Looney, EIT
AI Number 175162
License Number 74088

Structure ID: 020B00002N, Item I-10104
US-51 over Caddle Creek
Carlisle County, Kentucky

Prepared: January 5, 2023

PROJECT DESCRIPTION

Third Rock Consultants, LLC (Third Rock) was retained to conduct a pre-demolition asbestos survey for the above-referenced project. Based on the Bridge Inspection Report from Kentucky Transportation Cabinet, the bridge appears to have been constructed in 1926.

INSPECTION METHODOLOGY

An inspection was conducted on December 19, 2022 in accordance with applicable National Emission Standards for Hazardous Air Pollutants (NESHAP) standards to determine if asbestos-suspect materials are present, including Category I non-friable, Category II non-friable, and friable materials. Upon inspection, asbestos-suspect material was observed in the abutment joint and joint at the pier cap. The joint material was black and brittle with approximately 150 square feet of material present.

One (1) sample was taken at a representative location the asbestos-suspect material and delivered under chain-of-custody (COC) as Sample I-10104-I. The COC and photo documentation of the sampling location are attached.

FINDINGS

Laboratory analysis revealed Sample I-10104-I contained less than 1% asbestos. Results are attached.

Note that the Kentucky Division for Air Quality (KDAQ) must be notified at least 10 working days prior to any demolition activities, even though no asbestos-containing material was identified. To notify KDAQ, Form ID 70 must be completed through the Kentucky Energy and Environment Cabinet's eForms website.



LIMITATIONS

The findings and conclusions of this report are based solely on the conditions present at the structure during the inspection date. Although great care has been taken by Third Rock to conduct a thorough, accurate inspection and report, Third Rock disclaims any and all liability for any errors, omissions, or inaccuracies in the information provided, whether due to inadvertence or otherwise, and for any consequence arising therefrom. The information provided hereunder neither claims to be nor constitutes legal or medical advice. Third Rock shall not be liable for any special, consequential, or exemplary damages resulting, in whole or in part, from the customer's use of the information. Liability on the part of Third Rock is limited to the monetary value paid for this report.

REFERENCES

Google Earth. [Accessed December 27, 2022]. <https://www.google.com/earth>.

Asbestos Inspection Photo Log
Bridge ID 020B00002N, Item No. I-10104
US-51, Carlisle County, Kentucky



1 - IMG_2749 Bridge Surface - Facing N.JPG



2 - IMG_2750 Bridge Below Deck - Facing N.JPG

Asbestos Inspection Photo Log
Bridge ID 020B00002N, Item No. I-10104
US-51, Carlisle County, Kentucky



3 - IMG_2751 Abutment Joint - Facing S - Sample I-10104-1.JPG

CHAIN OF CUSTODY RECORD

Number

Instructions on back
TO BE COMPLETED BY MICROBAC

Temperature Upon Receipt (°C) **18.3**
Therm ID
Holding Time **11**
Samples Received on Ice? Yes No N/A
Custody Seals Intact? Yes No N/A

Turnaround Time
 Routine (5 to 7 business days)
 RUSH* (notify lab)
Report Type (needed by)
 Results Only Level 1 Level 2 Level 3 Level 4 EDD
 Mail Fax e-mail (address) Agency/Program

Invoice Address
Client Name: Third Rock Consultants, LLC
Address: 2526 Regency Road, STE 180
City, State, Zip: Lexington, KY 40503
Contact: Becky Weatherford
Telephone No.: (859) 977-2000

Lab Report Address
Client Name: Third Rock Consultants, LLC
Address: 2526 Regency Road, STE 180
City, State, Zip: Lexington, KY 40503
Contact: Jared Looney
Telephone No.: (859) 977-2000

Send Report via: Mail Fax e-mail (address) e-mail (address) Agency/Program
Project: KY22-034
Location: Various
PO No.:
Compliance Monitoring? Yes No

Sampled by (PRINT): Jared Looney
Sampler Signature: *Jared Looney*
Sampler Phone No.: (859) 977-2000

* Matrix Types: Soil/Solid (S), Sludge, Oil, Wipe, Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WW), Other (specify)
** Preservative Types: (1) HNO3, (2) H2SO4, (3) HCl, (4) NaOH, (5) Zinc Acetate, (6) Methanol, (7) Sodium Bisulfate, (8) Hexane, (U) Unpreserved

REQUESTED ANALYSIS

Lab ID	Client Sample ID	Date Collected	Time Collected	No. of Containers	Matrix	Grab / Comp	Preservative Types **	Asbestos PLM	Lead Paint	Additional Notes
	1-10105-1	12/19/12	11:07	1	S	G	-	X		
	1-10104-1	12/19/12	11:30	1	S	G	-	X		
	1-10144-1	12/19/12	12:00	1	S	G	-	X		
	1-10116-1	12/19/12	1:00P	1	S	G	-	X		
	1-10116-2	12/19/12	1:00P	1	S	G	-	X		
	1-10116-3	12/19/12	1:00P	1	S	G	-	X		
	1-10115-1	12/19/12	2:00P	1	S	G	-	X		
	1-10115-2	12/19/12	2:00P	1	S	G	-	X		
	1-10146-1	12/19/12	2:30P	1	S	G	-	X		

Possible Hazard Identification
 Hazardous Non-Hazardous Radioactive
 Dispose as appropriate Return Archive

Relinquished By (signature) *Jared Looney* Date/Time **12/21/12 818**
 Relinquished By (signature) *Crystal Williams* Date/Time **12/19/12 818**
 Relinquished By (signature) _____ Date/Time _____
 Received By (signature) _____ Date/Time _____
 Received By (signature) _____ Date/Time _____



Microbac Laboratories, Inc., Louisville

CERTIFICATE OF ANALYSIS

L2L1039

Project Description

SOIL ANALYSIS

For:

Gerry Fister

Third Rock Consultants

2526 Regency Road, Suite 180; SUITE 104

Lexington, KY 40503

Customer Relationship Manager
David Lester

Thursday, January 5, 2023

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc., Louisville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

Microbac Laboratories, Inc.

3323 Gilmore Industrial Blvd | Louisville, KY 40213 | 502.962.6400 p | www.microbac.com



Microbac Laboratories, Inc., Louisville

CERTIFICATE OF ANALYSIS

L2L1039

Analytical Testing Parameters

Client Sample ID: 1-10105-1	Collected By: CUSTOMER
Sample Matrix: Solid	Collection Date: 12/19/2022 11:00
Lab Sample ID: L2L1039-01	

Analyses Performed by: MCCALL AND SPERO ENVIRONMENTAL

General Parameters	Result	Limit(s)	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA/600/M4-82-020									
Asbestos, Chrysotile	2		1	1	%		12/19/22 1100	01/03/23 0000	MCS
Asbestos, Amosite	<1		1	1	%		12/19/22 1100	01/03/23 0000	MCS
Asbestos, Crocidolite	<1		1	1	%		12/19/22 1100	01/03/23 0000	MCS
Asbestos, Other	<1		1	1	%		12/19/22 1100	01/03/23 0000	MCS
Cellulose	5		1	1	%		12/19/22 1100	01/03/23 0000	MCS
Fibrous Glass	<1		1	1	%		12/19/22 1100	01/03/23 0000	MCS
Mineral Wool	<1		1	1	%		12/19/22 1100	01/03/23 0000	MCS
Other Non-Asbestos Fibers	93		1	1	%		12/19/22 1100	01/03/23 0000	MCS
Other Matrix Materials	<1		1	1	%		12/19/22 1100	01/03/23 0000	MCS

Client Sample ID: 1-10104-1	Collected By: CUSTOMER
Sample Matrix: Solid	Collection Date: 12/19/2022 11:30
Lab Sample ID: L2L1039-02	

Analyses Performed by: MCCALL AND SPERO ENVIRONMENTAL

General Parameters	Result	Limit(s)	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA/600/M4-82-020									
Asbestos, Chrysotile	<1		1	1	%		12/19/22 1130	01/03/23 0000	MCS
Asbestos, Amosite	<1		1	1	%		12/19/22 1130	01/03/23 0000	MCS
Asbestos, Crocidolite	<1		1	1	%		12/19/22 1130	01/03/23 0000	MCS
Asbestos, Other	<1		1	1	%		12/19/22 1130	01/03/23 0000	MCS
Cellulose	5		1	1	%		12/19/22 1130	01/03/23 0000	MCS
Fibrous Glass	<1		1	1	%		12/19/22 1130	01/03/23 0000	MCS
Mineral Wool	<1		1	1	%		12/19/22 1130	01/03/23 0000	MCS
Other Non-Asbestos Fibers	85		1	1	%		12/19/22 1130	01/03/23 0000	MCS
Other Matrix Materials	10		1	1	%		12/19/22 1130	01/03/23 0000	MCS

SPECIAL NOTE

BRIDGE DEMOLITION OR RENOVATION AND ASBESTOS

If the project includes bridge demolition or renovation, the Contractor is required to notify Kentucky Division for Air Quality (KDAQ) via filing of form DEP 7036 (attached) a minimum of 10 days prior to commencement of any bridge demolition or renovation work.

KYTC has completed a pre-demolition asbestos survey of the bridge, the results of which are attached to this note and should be included with the Contractor's notification filed with the KDAQ.

Survey results revealed approximately 156 square feet of RACM present. KDAQ recommends the removal be performed by a KDAQ-certified abatement contractor prior to demolition. Any additional cost of the certified abatement contractor will be incidental to the structure removal.

Questions regarding this note should be directed to Danny Peake, Director, KYTC Division of Environmental Analysis, 200 Mero Street, Frankfort, KY 40601, Phone (502) 564-7250.

DEP 7036

**NOTIFICATION OF ASBESTOS
ABATEMENT/DEMOLITION/RENOVATION**
(Instructions for completing form on back)

PAGE 1 OF _____
INITIAL SUBMITTAL DATE _____
REVISION DATE _____
NOTIFICATION # _____

OFFICE USE ONLY
ID # _____
LOG # _____

File this form with Regional Office where project will be performed

Kentucky Division for Air Quality
300 Sower Boulevard, 2nd Floor
Frankfort, KY 40601

Contractor _____
Address _____
City _____ State _____ Zip _____
Phone _____ Contact Person _____
Owner _____
Address _____
City _____ State _____ Zip _____
Phone _____ Contact Person _____

Description of planned renovation/demolition, including abatement methods & demo/reno methods. _____

Description of affected facility components _____

Asbestos detection technique _____

Amount of Cat. I & II nonfriable ACM involved but will not be removed: _____

Describe **physical characteristics** that make it nonfriable and **methods** to keep it nonfriable (optional): _____

Describe **contingency plan** should nonfriable ACM become friable or additional ACM be uncovered during renovation/ demolition: _____

Transporter _____
Address _____
City _____ State _____ Zip _____
Phone _____

Disposal Site _____
Address _____
City _____ State _____ Zip _____

I hereby certify that at least one person trained as required by 40 CFR 61.145(c)(8) will supervise the abatement work described herein. (optional for strictly non-friable work)

Submitted by: _____
Company Name: _____

Project Location _____
Address _____
City _____ State _____ Zip _____
Facility Age (yrs.) _____ Size of Facility or Affected Part (sq. ft.) _____
#Floors Affected _____ Present and Prior Use of Facility _____

TYPE OF PROJECT (CHECK ONLY ONE):

Renovation Demolition Ordered Demolition Emergency Long-term

PROJECT DATES:

Start Removal _____ End Removal _____
Start Renovation/Demolition _____ End Renovation/Demolition _____

Amount of ACM to be Removed:

	Regulated ACM (FACM)	Category II nonfriable ACM (optional)	Category I nonfriable ACM (optional)
Linear Feet			
Square Feet			
Cubic Feet			

INSTRUCTIONS FOR COMPLETING FORM DEP7036: NOTIFICATION OF ASBESTOS ABATEMENT/DEMOLITION/RENOVATION

Filing Deadline: This form must be completed and filed with the Kentucky Division for Air Quality at least ten (10) working days before starting any asbestos removal, demolition, or other work which will disturb asbestos-containing material (ACM) in Kentucky facilities outside Jefferson County and in schools statewide, including Jefferson County. File with appropriate Regional Office.

Renotification: If developments occur that invalidate information on a notification (e.g., changes in dates, amounts, locations), file a revised form within the time frames specified in 401 KAR 58:025. Notifications may be numbered in the top-left corner (optional). First two digits are project year; remaining digits are project number (e.g., the first project in 1999 is 99-1).

Attachments: Attachments may be included to provide additional information, propose alternative procedures, declare nonfriable removal, identify secondary transporters, etc.

Line-by-Line Instructions:

Contractor/Owner: the contractor is the asbestos remover (or, for zero-asbestos demolitions, the demolition contractor). The owner is the entity having the work done.
Project Location: The location at the address given where the work is taking place (e.g., which building/floor/room?).

Present/Prior Use: Enter the present and prior use(s) of the facility.

Type of Project: Each choice shown in this category has a specific description under 401 KAR 58:025:

Emergency renovations result from a sudden, unexpected event. If the project is an emergency renovation, attach a detailed description of the sudden, unexpected event that necessitated removal. Include the exact date and hour the event occurred and explain how the event caused an unsafe condition, or would cause equipment damage or unreasonable financial burden.

Planned renovations are renovations that do not qualify as emergency renovations.

A long-term notification is a type of planned renovation which involves a number of nonscheduled small-scale removals whose annual total exceeds the NESHAP threshold amounts and can be estimated based on past years' experience. File yearly estimate at least 10 working days before the beginning of the calendar year for which a long-term notification is being given.

Demolitions involve the wrecking or taking out of a load-supporting structural member, such as a load-bearing beam or wall. Tearing down a structure, dismantling it piecemeal, and moving it from one place to another are all considered demolitions.

Ordered demolitions must result from a demolition order issued by a government agency because the building is structurally unsound and in danger of imminent collapse. For ordered demolitions, attach to the notification a signed, dated copy of order that includes demolition deadlines and name/title/authority of the government representative issuing the order.

Project Dates: Schedules must be precise and accurate. The "start removal" date is the date the removers arrive on-site and begin physically preparing the work area for removal. "End removal" is the date the removers dismantle the work area after cleaning and clearing it. If circumstances arise that invalidate previously submitted start dates, a revised notification must be submitted showing the updated, correct start date. If the start date has been moved up, submit written renotification at least ten working days before the new start date. If the start date has been moved back, telephone the Division as soon as possible before the original date and submit written renotification no later than the original start date.

Schedules for renovation and demolition (next line after removal schedule) are handled similarly, except that renotification is required only for schedule changes involving demolitions, not renovations.

Amount of ACM: In this table, enter the amount and type (RACM, Category I, and/or Category II) of asbestos that will be removed. Although the regulation does not require you to identify the amount of nonfriable ACM that will be removed, the table provides space for nonfriable ACM to accommodate those notifiers who choose to document these removals.

Description of project: Describe the demolition or renovation work to be performed and method(s) to be used, including work practices and engineering controls to be used.

Asbestos Detection Technique: Give a general description of the asbestos survey, for example, "AHERA-style survey by accredited inspector; samples analyzed by PLM."

Amount of nonfriable ...: If all nonfriable ACM will be properly removed, enter "NA."

Contingency Plans: If Category II nonfriable ACM becomes crumbled, pulverized, or reduced to powder, or if additional RACM is discovered, describe procedures to be followed. For example, "Move demolition activity away from ACM immediately; remove the ACM using regulation-required procedures." Even "Stop work, call Division for Air Quality" is OK.



ASBESTOS INSPECTION REPORT

Prepared for: Mike McGregor, PE
Bacon Farmer Workman Engineering & Testing, Inc.

Prepared by: Jared Looney, EIT
AI Number 175162
License Number 74088

Structure ID: 020B00004N, Item I-10105
US-51 over Little Mayfield Creek
Carlisle County, Kentucky

Prepared: January 5, 2023

PROJECT DESCRIPTION

Third Rock Consultants, LLC (Third Rock) was retained to conduct a pre-demolition asbestos survey for the above-referenced project. Based on the Bridge Inspection Report from Kentucky Transportation Cabinet, the bridge appears to have been constructed in 1920.

INSPECTION METHODOLOGY

An inspection was conducted on December 19, 2022 in accordance with applicable National Emission Standards for Hazardous Air Pollutants (NESHAP) standards to determine if asbestos-suspect materials are present, including Category I non-friable, Category II non-friable, and friable materials. Upon inspection, asbestos-suspect material was observed in the abutment joint of the bridge. The joint material was black, brittle tar paper with approximately 156 square feet of material present.

One (1) sample was taken at a representative location from the asbestos-suspect material and delivered under chain-of-custody (COC) as Sample I-10105-1. The COC and photo documentation of the sampling location are attached.

FINDINGS

Laboratory analysis revealed that Sample I-10105-1, which was friable material, contained 2% chrysotile asbestos. Results are attached.

Note that the Kentucky Division for Air Quality (KDAQ) must be notified at least 10 working days prior to any demolition activities. To notify KDAQ, Form ID 70 must be completed through the Kentucky Energy and Environment Cabinet's eForms website.



LIMITATIONS

The findings and conclusions of this report are based solely on the conditions present at the structure during the inspection date. Although great care has been taken by Third Rock to conduct a thorough, accurate inspection and report, Third Rock disclaims any and all liability for any errors, omissions, or inaccuracies in the information provided, whether due to inadvertence or otherwise, and for any consequence arising therefrom. The information provided hereunder neither claims to be nor constitutes legal or medical advice. Third Rock shall not be liable for any special, consequential, or exemplary damages resulting, in whole or in part, from the customer's use of the information. Liability on the part of Third Rock is limited to the monetary value paid for this report.

REFERENCES

Google Earth. [Accessed December 22, 2022]. <https://www.google.com/earth>.

Asbestos Inspection Photo Log
Bridge ID 020B00004N, Item No. I-10105
US-51, Carlisle County, Kentucky



1 - IMG_2745 Bridge Surface - Facing N.JPG



2 - IMG_2746 Bridge Below Deck - Facing W.JPG

Asbestos Inspection Photo Log
Bridge ID 020B00004N, Item No. I-10105
US-51, Carlisle County, Kentucky



3 - IMG_2747 Abutment Joint - Facing N - Sample I-10105-1.JPG

CHAIN OF CUSTODY RECORD

Number *18.3*

Instructions on back

TO BE COMPLETED BY MICROBAC

Temperature Upon Receipt (°C)

Therm ID

Holding Time *1.1*

Samples Received on Ice? Yes No N/A

Custody Seals Intact? Yes No N/A

Level 1 Level 2 Level 3 Level 4 EDD

Send Report via: Mail Fax e-mail (address) *bweatherford@ihirdrockconsultants.com*

Compliance Monitoring? Yes No

Agency/Program

Turnaround Time

Routine (5 to 7 business days)

RUSH* (notify lab)

(needed by)

Report Type

Results Only Level 1 Level 2 Level 3 Level 4 EDD

Send Invoice via: Mail Fax e-mail (address)

PO No.:

Sampler Phone No.: (859) 977-2000

Sampler Signature: *Jared Looney*

Matrix Types: Soil/Solid (S), Sludge, Oil, Wipe, Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WW), Other (specify)

** Preservative Types: (1) HNO3, (2) H2SO4, (3) HCl, (4) NaOH, (5) Zinc Acetate, (6) Methanol, (7) Sodium Bisulfate, (8) Sodium Thiosulfate, (9) Hexane, (U) Unpreserved

REQUESTED ANALYSIS

Lab ID	Client Sample ID	Date Collected	Time Collected	No. of Containers	Matrix	Grab / Comp	Preservative Types **	Asbestos PLM	Lead Paint	Additional Notes
	1-10105-1	12/19/12	11:07	1	S	G	-	X		
	1-10104-1	12/19/12	11:30	1	S	G	-	X		
	1-10144-1	12/19/12	12:00	1	S	G	-	X		
	1-10116-1	12/19/12	1:00P	1	S	G	-	X		
	1-10116-2	12/19/12	1:00P	1	S	G	-	X		
	1-10116-3	12/19/12	1:00P	1	S	G	-	X		
	1-10115-1	12/19/12	2:00P	1	S	G	-	X		
	1-10115-2	12/19/12	2:00P	1	S	G	-	X		
	1-10146-1	12/19/12	2:30P	1	S	G	-	X		

Possible Hazard Identification

Comments

Hazardous Non-Hazardous Radioactive

Sample Disposition

Dispose as appropriate Return Archive

Relinquished By (signature) *Jared Looney*

Date/Time *12/21/12*

Received By (signature) *Cynthia Williams*

Date/Time *12/19/12*

Relinquished By (signature)

Date/Time

Received By (signature)

Date/Time

Relinquished By (signature)

Date/Time

Received By (signature)

Date/Time





Microbac Laboratories, Inc., Louisville

CERTIFICATE OF ANALYSIS

L2L1039

Project Description

SOIL ANALYSIS

For:

Gerry Fister

Third Rock Consultants

2526 Regency Road, Suite 180; SUITE 104

Lexington, KY 40503

Customer Relationship Manager

David Lester

Thursday, January 5, 2023

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc., Louisville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

Microbac Laboratories, Inc.

3323 Gilmore Industrial Blvd | Louisville, KY 40213 | 502.962.6400 p | www.microbac.com



Microbac Laboratories, Inc., Louisville

CERTIFICATE OF ANALYSIS

L2L1039

Analytical Testing Parameters

Client Sample ID: 1-10105-1	Collected By: CUSTOMER
Sample Matrix: Solid	Collection Date: 12/19/2022 11:00
Lab Sample ID: L2L1039-01	

Analyses Performed by: MCCALL AND SPERO ENVIRONMENTAL

General Parameters	Result	Limit(s)	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA/600/M4-82-020									
Asbestos, Chrysotile	2		1	1	%		12/19/22 1100	01/03/23 0000	MCS
Asbestos, Amosite	<1		1	1	%		12/19/22 1100	01/03/23 0000	MCS
Asbestos, Crocidolite	<1		1	1	%		12/19/22 1100	01/03/23 0000	MCS
Asbestos, Other	<1		1	1	%		12/19/22 1100	01/03/23 0000	MCS
Cellulose	5		1	1	%		12/19/22 1100	01/03/23 0000	MCS
Fibrous Glass	<1		1	1	%		12/19/22 1100	01/03/23 0000	MCS
Mineral Wool	<1		1	1	%		12/19/22 1100	01/03/23 0000	MCS
Other Non-Asbestos Fibers	93		1	1	%		12/19/22 1100	01/03/23 0000	MCS
Other Matrix Materials	<1		1	1	%		12/19/22 1100	01/03/23 0000	MCS

Client Sample ID: 1-10104-1	Collected By: CUSTOMER
Sample Matrix: Solid	Collection Date: 12/19/2022 11:30
Lab Sample ID: L2L1039-02	

Analyses Performed by: MCCALL AND SPERO ENVIRONMENTAL

General Parameters	Result	Limit(s)	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA/600/M4-82-020									
Asbestos, Chrysotile	<1		1	1	%		12/19/22 1130	01/03/23 0000	MCS
Asbestos, Amosite	<1		1	1	%		12/19/22 1130	01/03/23 0000	MCS
Asbestos, Crocidolite	<1		1	1	%		12/19/22 1130	01/03/23 0000	MCS
Asbestos, Other	<1		1	1	%		12/19/22 1130	01/03/23 0000	MCS
Cellulose	5		1	1	%		12/19/22 1130	01/03/23 0000	MCS
Fibrous Glass	<1		1	1	%		12/19/22 1130	01/03/23 0000	MCS
Mineral Wool	<1		1	1	%		12/19/22 1130	01/03/23 0000	MCS
Other Non-Asbestos Fibers	85		1	1	%		12/19/22 1130	01/03/23 0000	MCS
Other Matrix Materials	10		1	1	%		12/19/22 1130	01/03/23 0000	MCS

SPECIAL NOTE

BRIDGE DEMOLITION OR RENOVATION AND ASBESTOS

If the project includes bridge demolition or renovation, the Contractor is required to notify Kentucky Division for Air Quality (KDAQ) via filing of form DEP 7036 (attached) a minimum of 10 days prior to commencement of any bridge demolition or renovation work.

KYTC has completed a pre-demolition asbestos survey of the bridge, the results of which are attached to this note and should be included with the Contractor's notification filed with the KDAQ.

Survey results revealed no regulated asbestos containing material (RACM) present, therefore no asbestos-specific work practices are required.

Questions regarding this note should be directed to Danny Peake, Director, KYTC Division of Environmental Analysis, 200 Mero Street, Frankfort, KY 40601, Phone (502) 564-7250.

DEP 7036

**NOTIFICATION OF ASBESTOS
 ABATEMENT/DEMOLITION/RENOVATION**
 (Instructions for completing form on back)

****File this form with Regional Office where project will be performed****

Kentucky Division for Air Quality
 300 Sower Boulevard, 2nd Floor
 Frankfort, KY 40601

PAGE 1 OF _____
 INITIAL SUBMITTAL DATE _____
 REVISION DATE _____
 NOTIFICATION # _____

OFFICE USE ONLY
 ID # _____
 LOG # _____

Contractor _____

Address _____

City _____ State _____ Zip _____

Phone _____ Contact Person _____

Owner _____

Address _____

City _____ State _____ Zip _____

Phone _____ Contact Person _____

Project Location _____

Address _____

City _____ State _____ Zip _____

Facility Age (yrs.) _____ Size of Facility or Affected Part (sq. ft.) _____

#Floors Affected _____ Present and Prior Use of Facility _____

TYPE OF PROJECT (CHECK ONLY ONE):

Renovation Demolition Ordered Demolition Emergency Long-term

PROJECT DATES:

Start Removal _____ End Removal _____

Start Renovation/Demolition _____ End Renovation/Demolition _____

Amount of ACM to be Removed:

	Regulated ACM (FACM)	Category II nonfriable ACM (optional)	Category I nonfriable ACM (optional)
Linear Feet			
Square Feet			
Cubic Feet			

Description of planned renovation/demolition, including abatement methods & demo/reno methods. _____

Description of affected facility components _____

Asbestos detection technique _____

Amount of Cat. I & II nonfriable ACM involved but will not be removed: _____

Describe **physical characteristics** that make it nonfriable and **methods** to keep it nonfriable (optional): _____

Describe **contingency plan** should nonfriable ACM become friable or additional ACM be uncovered during renovation/ demolition: _____

Transporter _____

Address _____

City _____ State _____ Zip _____

Phone _____

Disposal Site _____

Address _____

City _____ State _____ Zip _____

I hereby certify that at least one person trained as required by 40 CFR 61.145(c)(8) will supervise the abatement work described herein. (optional for strictly non-friable work)

Submitted by: _____

Company Name: _____

INSTRUCTIONS FOR COMPLETING FORM DEP7036: NOTIFICATION OF ASBESTOS ABATEMENT/DEMOLITION/RENOVATION

Filing Deadline: This form must be completed and filed with the Kentucky Division for Air Quality at least ten (10) working days before starting any asbestos removal, demolition, or other work which will disturb asbestos-containing material (ACM) in Kentucky facilities outside Jefferson County and in schools statewide, including Jefferson County. File with appropriate Regional Office.

Renotification: If developments occur that invalidate information on a notification (e.g., changes in dates, amounts, locations), file a revised form within the time frames specified in 401 KAR 58:025. Notifications may be numbered in the top-left corner (optional). First two digits are project year; remaining digits are project number (e.g., the first project in 1999 is 99-1).

Attachments: Attachments may be included to provide additional information, propose alternative procedures, declare nonfriable removal, identify secondary transporters, etc.

Line-by-Line Instructions:

Contractor/Owner: the contractor is the asbestos remover (or, for zero-asbestos demolitions, the demolition contractor). The owner is the entity having the work done.
Project Location: The location at the address given where the work is taking place (e.g., which building/floor/room?).

Present/Prior Use: Enter the present and prior use(s) of the facility.

Type of Project: Each choice shown in this category has a specific description under 401 KAR 58:025:

Emergency renovations result from a sudden, unexpected event. If the project is an emergency renovation, attach a detailed description of the sudden, unexpected event that necessitated removal. Include the exact date and hour the event occurred and explain how the event caused an unsafe condition, or would cause equipment damage or unreasonable financial burden.

Planned renovations are renovations that do not qualify as emergency renovations.

A long-term notification is a type of planned renovation which involves a number of nonscheduled small-scale removals whose annual total exceeds the NESHAP threshold amounts and can be estimated based on past years' experience. File yearly estimate at least 10 working days before the beginning of the calendar year for which a long-term notification is being given.

Demolitions involve the wrecking or taking out of a load-supporting structural member, such as a load-bearing beam or wall. Tearing down a structure, dismantling it piecemeal, and moving it from one place to another are all considered demolitions.

Ordered demolitions must result from a demolition order issued by a government agency because the building is structurally unsound and in danger of imminent collapse. For ordered demolitions, attach to the notification a signed, dated copy of order that includes demolition deadlines and name/title/authority of the government representative issuing the order.

Project Dates: Schedules must be precise and accurate. The "start removal" date is the date the removers arrive on-site and begin physically preparing the work area for removal. "End removal" is the date the removers dismantle the work area after cleaning and clearing it. If circumstances arise that invalidate previously submitted start dates, a revised notification must be submitted showing the updated, correct start date. If the start date has been moved up, submit written renotification at least ten working days before the new start date. If the start date has been moved back, telephone the Division as soon as possible before the original date and submit written renotification no later than the original start date.

Schedules for renovation and demolition (next line after removal schedule) are handled similarly, except that renotification is required only for schedule changes involving demolitions, not renovations.

Amount of ACM: In this table, enter the amount and type (FACM, Category I, and/or Category II) of asbestos that will be removed. Although the regulation does not require you to identify the amount of nonfriable ACM that will be removed, the table provides space for nonfriable ACM to accommodate those notifiers who choose to document these removals.

Description of project: Describe the demolition or renovation work to be performed and method(s) to be used, including work practices and engineering controls to be used.

Asbestos Detection Technique: Give a general description of the asbestos survey, for example, "AHERA-style survey by accredited inspector; samples analyzed by PLM."

Amount of nonfriable ...: If all nonfriable ACM will be properly removed, enter "NA."

Contingency Plans: If Category II nonfriable ACM becomes crumbled, pulverized, or reduced to powder, or if additional RACM is discovered, describe procedures to be followed. For example, "Move demolition activity away from ACM immediately; remove the ACM using regulation-required procedures." Even "Stop work, call Division for Air Quality" is OK.



ASBESTOS INSPECTION REPORT

Prepared for: Aaron Detjen, PE, RSPI
WSP USA, Inc.

Prepared by: Jared Looney, EIT
AI Number 175162
License Number 74088

Structure ID: 042B00090N, Item I-10128
US-45 over Jackson Creek
Graves County, Kentucky

Prepared: January 5, 2023

PROJECT DESCRIPTION

Third Rock Consultants, LLC (Third Rock) was retained to conduct a pre-demolition asbestos survey for the above-referenced project. Based on the Bridge Inspection Report from Kentucky Transportation Cabinet, the bridge appears to have been constructed in 1927.

INSPECTION METHODOLOGY

An inspection was conducted on December 19, 2022 in accordance with applicable National Emission Standards for Hazardous Air Pollutants (NESHAP) standards to determine if asbestos-suspect materials are present, including Category I non-friable, Category II non-friable, and friable materials. Upon inspection, the following asbestos-suspect material was observed and sampled:

- Black expansion joint material in horizontal abutment joints, approximately 75 square feet of material
- Black expansion joint material in vertical abutment joints, approximately 25 square feet of material

One (1) sample was taken at a representative location from each of the two (2) asbestos-suspect materials that were observed and delivered under chain-of-custody (COC) as Samples I-10128-1 and I-10128-2, respectively. The COC and photo documentation of each sampling location are attached.

FINDINGS

Laboratory analysis revealed all samples contained less than 1% asbestos. Results are attached.



Note that the Kentucky Division for Air Quality (KDAQ) must be notified at least 10 working days prior to any demolition activities, even though no asbestos-containing material was identified. To notify KDAQ, Form ID 70 must be completed through the Kentucky Energy and Environment Cabinet's eForms website.

LIMITATIONS

The findings and conclusions of this report are based solely on the conditions present at the structure during the inspection date. Although great care has been taken by Third Rock to conduct a thorough, accurate inspection and report, Third Rock disclaims any and all liability for any errors, omissions, or inaccuracies in the information provided, whether due to inadvertence or otherwise, and for any consequence arising therefrom. The information provided hereunder neither claims to be nor constitutes legal or medical advice. Third Rock shall not be liable for any special, consequential, or exemplary damages resulting, in whole or in part, from the customer's use of the information. Liability on the part of Third Rock is limited to the monetary value paid for this report.

REFERENCES

Google Earth. [Accessed December 27, 2022]. <https://www.google.com/earth>.

Asbestos Inspection Photo Log
Bridge ID 042B00090N, Item No. I-10128
US-45, Graves County, Kentucky



1 - IMG_2774 Bridge Surface - Facing NE.JPG



2 - IMG_2775 Bridge Below Deck - Facing N.JPG

Asbestos Inspection Photo Log
Bridge ID 042B00090N, Item No. I-10128
US-45, Graves County, Kentucky



3 - IMG_2776 Horizontal Abutment Joint - Facing NE - Sample I-10128-1.JPG



4 - IMG_2777 Vertical Abutment Joint - Facing NE - Sample I-10128-2.JPG

CHAIN OF CUSTODY RECORD

Number: **3323 Gilmore Industrial Blvd., Louisville, KY 40213 | 502.962.6400 p | 502.962.6411 f**

Instructions on back
TO BE COMPLETED BY MICROBAC

Lab Report Address: **Third Rock Consultants, LLC**
Address: **2526 Regency Road, STE 180**
City, State, Zip: **Lexington, KY 40503**
Contact: **Jared Looney**
Telephone No.: **(859) 977-2000**

Invoice Address: **Third Rock Consultants, LLC**
Address: **2526 Regency Road, STE 180**
City, State, Zip: **Lexington, KY 40503**
Contact: **Becky Weatherford**
Telephone No.: **(859) 977-2000**

Turnaround Time: Routine (5 to 7 business days)
 RUSH* (notify lab)

Temperature Upon Receipt (°C): **18.3**

Therm ID: **211**

Holding Time: **18.3**

Samples Received on Ice? Yes No N/A

Custody Seals Intact? Yes No N/A

Report Type: (needed by)

Results Only Level 1 Level 2 Level 3 Level 4 EDD

Send Report via: Mail Fax e-mail (address) e-mail (address) Mail Fax e-mail (address) e-mail (address)

Project: **KY22-034**

Location: **Various**

PO No.:

Compliance Monitoring? Yes No

Agency/Program:

Sampler Signature: **Jared Looney**

Sampler Phone No.: **(859) 977-2000**

Sampled by (PRINT): **Jared Looney**

* Matrix Types: Soil/Solid (S), Sludge, Oil, Wipe, Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WW), Other (specify)

** Preservative Types: (1) HNO3, (2) H2SO4, (3) HCl, (4) NaOH, (5) Zinc Acetate, (6) Methanol, (7) Sodium Bisulfate, (8) Sodium Sulfate, (9) Hexane, (U) Unpreserved

REQUESTED ANALYSIS

Lab ID	Client Sample ID	Date Collected	Time Collected	No. of Containers	Matrix	Grab / Comp	Preservative Types **	Asbestos PLM	Lead Paint	Additional Notes
	1-10128-1	12/19/22	3:00p	1	S	G	-	X		
	1-10128-2	12/19/22	3:00p	1	S	G	-	X		
	2-10061-1	12/19/22	4:00p	1	S	G	-	X		
	2-10061-2	12/19/22	4:00p	1	S	G	-	X		
	2-10061-3	12/19/22	4:00p	1	S	G	-	X		
	2-10061-4	12/19/22	4:00p	1	S	G	-	X		
	2-10061-5	12/19/22	4:00p	1	S	G	-	X		

Possible Hazard Identification: Hazardous Non-Hazardous Radioactive

Sample Disposition: Dispose as appropriate Return Archive

Relinquished By (signature): **Jared Looney** Date/Time: **12/22/22 8:18**

Relinquished By (signature): **Crystal Williams** Date/Time: **12/22/22 8:18**

Received By (signature): **Crystal Williams** Date/Time: **12/22/22 8:18**

Received By (signature): **Crystal Williams** Date/Time: **12/22/22 8:18**



Microbac Laboratories, Inc., Louisville

CERTIFICATE OF ANALYSIS

L2L1039

Project Description

SOIL ANALYSIS

For:

Gerry Fister

Third Rock Consultants

2526 Regency Road, Suite 180; SUITE 104

Lexington, KY 40503

Customer Relationship Manager
David Lester

Thursday, January 5, 2023

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc., Louisville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

Microbac Laboratories, Inc.

3323 Gilmore Industrial Blvd | Louisville, KY 40213 | 502.962.6400 p | www.microbac.com



Microbac Laboratories, Inc., Louisville

CERTIFICATE OF ANALYSIS

L2L1039

Client Sample ID: 1-10146-1	Collected By: CUSTOMER
Sample Matrix: Solid	Collection Date: 12/19/2022 14:30
Lab Sample ID: L2L1039-09	

Analyses Performed by: MCCALL AND SPERO ENVIRONMENTAL

General Parameters	Result	Limit(s)	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA/600/M4-82-020									
Asbestos, Chrysotile	<1		1	1	%		12/19/22 1430	01/03/23 0000	MCS
Asbestos, Amosite	<1		1	1	%		12/19/22 1430	01/03/23 0000	MCS
Asbestos, Crocidolite	<1		1	1	%		12/19/22 1430	01/03/23 0000	MCS
Asbestos, Other	<1		1	1	%		12/19/22 1430	01/03/23 0000	MCS
Cellulose	10		1	1	%		12/19/22 1430	01/03/23 0000	MCS
Fibrous Glass	<1		1	1	%		12/19/22 1430	01/03/23 0000	MCS
Mineral Wool	<1		1	1	%		12/19/22 1430	01/03/23 0000	MCS
Other Non-Asbestos Fibers	90		1	1	%		12/19/22 1430	01/03/23 0000	MCS
Other Matrix Materials	<1		1	1	%		12/19/22 1430	01/03/23 0000	MCS

Client Sample ID: 1-10128-1	Collected By: CUSTOMER
Sample Matrix: Solid	Collection Date: 12/19/2022 15:00
Lab Sample ID: L2L1039-10	

Analyses Performed by: MCCALL AND SPERO ENVIRONMENTAL

General Parameters	Result	Limit(s)	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA/600/M4-82-020									
Asbestos, Chrysotile	<1		1	1	%		12/19/22 1500	01/03/23 0000	MCS
Asbestos, Amosite	<1		1	1	%		12/19/22 1500	01/03/23 0000	MCS
Asbestos, Crocidolite	<1		1	1	%		12/19/22 1500	01/03/23 0000	MCS
Asbestos, Other	<1		1	1	%		12/19/22 1500	01/03/23 0000	MCS
Cellulose	5		1	1	%		12/19/22 1500	01/03/23 0000	MCS
Fibrous Glass	<1		1	1	%		12/19/22 1500	01/03/23 0000	MCS
Mineral Wool	<1		1	1	%		12/19/22 1500	01/03/23 0000	MCS
Other Non-Asbestos Fibers	85		1	1	%		12/19/22 1500	01/03/23 0000	MCS
Other Matrix Materials	10		1	1	%		12/19/22 1500	01/03/23 0000	MCS



Microbac Laboratories, Inc., Louisville

CERTIFICATE OF ANALYSIS

L2L1039

Client Sample ID: 1-10128-2	Collected By: CUSTOMER
Sample Matrix: Solid	Collection Date: 12/19/2022 15:00
Lab Sample ID: L2L1039-11	

Analyses Performed by: MCCALL AND SPERO ENVIRONMENTAL

General Parameters	Result	Limit(s)	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA/600/M4-82-020									
Asbestos, Chrysotile	<1		1	1	%		12/19/22 1500	01/03/23 0000	MCS
Asbestos, Amosite	<1		1	1	%		12/19/22 1500	01/03/23 0000	MCS
Asbestos, Crocidolite	<1		1	1	%		12/19/22 1500	01/03/23 0000	MCS
Asbestos, Other	<1		1	1	%		12/19/22 1500	01/03/23 0000	MCS
Cellulose	5		1	1	%		12/19/22 1500	01/03/23 0000	MCS
Fibrous Glass	<1		1	1	%		12/19/22 1500	01/03/23 0000	MCS
Mineral Wool	<1		1	1	%		12/19/22 1500	01/03/23 0000	MCS
Other Non-Asbestos Fibers	95		1	1	%		12/19/22 1500	01/03/23 0000	MCS
Other Matrix Materials	<1		1	1	%		12/19/22 1500	01/03/23 0000	MCS

Client Sample ID: 2-10061-1	Collected By: CUSTOMER
Sample Matrix: Solid	Collection Date: 12/19/2022 16:00
Lab Sample ID: L2L1039-12	

Analyses Performed by: MCCALL AND SPERO ENVIRONMENTAL

General Parameters	Result	Limit(s)	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA/600/M4-82-020									
Asbestos, Chrysotile	<1		1	1	%		12/19/22 1600	01/03/23 0000	MCS
Asbestos, Amosite	<1		1	1	%		12/19/22 1600	01/03/23 0000	MCS
Asbestos, Crocidolite	<1		1	1	%		12/19/22 1600	01/03/23 0000	MCS
Asbestos, Other	<1		1	1	%		12/19/22 1600	01/03/23 0000	MCS
Cellulose	10		1	1	%		12/19/22 1600	01/03/23 0000	MCS
Fibrous Glass	<1		1	1	%		12/19/22 1600	01/03/23 0000	MCS
Mineral Wool	<1		1	1	%		12/19/22 1600	01/03/23 0000	MCS
Other Non-Asbestos Fibers	90		1	1	%		12/19/22 1600	01/03/23 0000	MCS
Other Matrix Materials	<1		1	1	%		12/19/22 1600	01/03/23 0000	MCS



KENTUCKY TRANSPORTATION CABINET
Department of Highways
DIVISION OF RIGHT OF WAY & UTILITIES

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Rev. 01/2016
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RIGHT OF WAY CERTIFICATION

<input checked="" type="checkbox"/>	Original	<input type="checkbox"/>	Re-Certification	RIGHT OF WAY CERTIFICATION
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ITEM #	COUNTY	PROJECT # (STATE)	PROJECT # (FEDERAL)
01-10104.00	Carlisle	1100 FD55 121 9414002R	

PROJECT DESCRIPTION

Kentucky Bridge Program - 020B00002N - US 51 at Gaddie Creek Bridge Replacement

No Additional Right of Way Required

Construction will be within the limits of the existing right of way. The right of way was acquired in accordance to FHWA regulations under the Uniform Relocation Assistance and Real Property Acquisitions Policy Act of 1970, as amended. No additional right of way or relocation assistance were required for this project.

Condition # 1 (Additional Right of Way Required and Cleared)

All necessary right of way, including control of access rights when applicable, have been acquired including legal and physical possession. Trial or appeal of cases may be pending in court but legal possession has been obtained. There may be some improvements remaining on the right-of-way, but all occupants have vacated the lands and improvements, and KYTC has physical possession and the rights to remove, salvage, or demolish all improvements and enter on all land. Just Compensation has been paid or deposited with the court. All relocations have been relocated to decent, safe, and sanitary housing or that KYTC has made available to displaced persons adequate replacement housing in accordance with the provisions of the current FHWA directive.

Condition # 2 (Additional Right of Way Required with Exception)

The right of way has not been fully acquired, the right to occupy and to use all rights-of-way required for the proper execution of the project has been acquired. Some parcels may be pending in court and on other parcels full legal possession has not been obtained, but right of entry has been obtained, the occupants of all lands and improvements have vacated, and KYTC has physical possession and right to remove, salvage, or demolish all improvements. Just Compensation has been paid or deposited with the court for most parcels. Just Compensation for all pending parcels will be paid or deposited with the court prior to AWARD of construction contract

Condition # 3 (Additional Right of Way Required with Exception)

The acquisition or right of occupancy and use of a few remaining parcels are not complete and/or some parcels still have occupants. All remaining occupants have had replacement housing made available to them in accordance with 49 CFR 24.204. KYTC is hereby requesting authorization to advertise this project for bids and to proceed with bid letting even though the necessary right of way will not be fully acquired, and/or some occupants will not be relocated, and/or the just compensation will not be paid or deposited with the court for some parcels until after bid letting. KYTC will fully meet all the requirements outlined in 23 CFR 635.309(c)(3) and 49 CFR 24.102(j) and will expedite completion of all acquisitions, relocations, and full payments after bid letting and prior to AWARD of the construction contract or force account construction.

Total Number of Parcels on Project	2	EXCEPTION (S) Parcel #	ANTICIPATED DATE OF POSSESSION WITH EXPLANATION
Number of Parcels That Have Been Acquired			
Signed Deed	2		
Condemnation	0		
Signed ROE	0		

Notes/ Comments (Text is limited. Use additional sheet if necessary.)

LPA RW Project Manager		Right of Way Supervisor	
Printed Name		Printed Name	Mark C. Askin, P.E.
Signature		Signature	Mark C. Askin, P.E. <small>Digitally signed by Mark Askin, P.E. DN: cn=Mark Askin, P.E., c=US, email=mark.askin@strand.com Date: 2024.01.16 14:14:18 -0500</small>
Date		Date	01/16/24
Right of Way Director		FHWA	
Printed Name	Dean M. Loy	Printed Name	
Signature	DM Loy <small>Digitally signed by DM Loy Date: 2024.01.16 14:26:42 -0500</small>	Signature	
Date		Date	



KENTUCKY TRANSPORTATION CABINET
Department of Highways
DIVISION OF RIGHT OF WAY & UTILITIES

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RIGHT OF WAY CERTIFICATION

<input checked="" type="checkbox"/>	Original	<input type="checkbox"/>	Re-Certification	RIGHT OF WAY CERTIFICATION
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ITEM #	COUNTY	PROJECT # (STATE)	PROJECT # (FEDERAL)
01-10105.00	Carlisle	1100 FD55 121 9414002R	

PROJECT DESCRIPTION

Kentucky Bridge Program - 020B00004N - US 51 at Little Mayfield Creek Bridge Replacement

No Additional Right of Way Required

Construction will be within the limits of the existing right of way. The right of way was acquired in accordance to FHWA regulations under the Uniform Relocation Assistance and Real Property Acquisitions Policy Act of 1970, as amended. No additional right of way or relocation assistance were required for this project.

Condition # 1 (Additional Right of Way Required and Cleared)

All necessary right of way, including control of access rights when applicable, have been acquired including legal and physical possession. Trial or appeal of cases may be pending in court but legal possession has been obtained. There may be some improvements remaining on the right-of-way, but all occupants have vacated the lands and improvements, and KYTC has physical possession and the rights to remove, salvage, or demolish all improvements and enter on all land. Just Compensation has been paid or deposited with the court. All relocations have been relocated to decent, safe, and sanitary housing or that KYTC has made available to displaced persons adequate replacement housing in accordance with the provisions of the current FHWA directive.

Condition # 2 (Additional Right of Way Required with Exception)

The right of way has not been fully acquired, the right to occupy and to use all rights-of-way required for the proper execution of the project has been acquired. Some parcels may be pending in court and on other parcels full legal possession has not been obtained, but right of entry has been obtained, the occupants of all lands and improvements have vacated, and KYTC has physical possession and right to remove, salvage, or demolish all improvements. Just Compensation has been paid or deposited with the court for most parcels. Just Compensation for all pending parcels will be paid or deposited with the court prior to AWARD of construction contract

Condition # 3 (Additional Right of Way Required with Exception)

The acquisition or right of occupancy and use of a few remaining parcels are not complete and/or some parcels still have occupants. All remaining occupants have had replacement housing made available to them in accordance with 49 CFR 24.204. KYTC is hereby requesting authorization to advertise this project for bids and to proceed with bid letting even though the necessary right of way will not be fully acquired, and/or some occupants will not be relocated, and/or the just compensation will not be paid or deposited with the court for some parcels until after bid letting. KYTC will fully meet all the requirements outlined in 23 CFR 635.309(c)(3) and 49 CFR 24.102(j) and will expedite completion of all acquisitions, relocations, and full payments after bid letting and prior to AWARD of the construction contract or force account construction.

Total Number of Parcels on Project	4	EXCEPTION (S) Parcel #	ANTICIPATED DATE OF POSSESSION WITH EXPLANATION
Number of Parcels That Have Been Acquired			
Signed Deed	4		
Condemnation	0		
Signed ROE	0		

Notes/ Comments (Text is limited. Use additional sheet if necessary.)

LPA RW Project Manager		Right of Way Supervisor	
Printed Name		Printed Name	Mark C. Askin, P.E.
Signature		Signature	 <small>Digitally signed by Mark C. Askin, P.E. DN: cn=Mark Askin, P.E., c=US, email=mark.askin@strand.com</small>
Date		Date	01/16/24
Right of Way Director		FHWA	
Printed Name	Dean M. Loy	Printed Name	
Signature	 <small>Digitally signed by DM Loy Date: 2024.01.16 14:23:34 -05'00'</small>	Signature	
Date		Date	



KENTUCKY TRANSPORTATION CABINET
Department of Highways
DIVISION OF RIGHT OF WAY & UTILITIES

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RIGHT OF WAY CERTIFICATION

<input checked="" type="checkbox"/>	Original	<input type="checkbox"/>	Re-Certification	RIGHT OF WAY CERTIFICATION
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ITEM #	COUNTY	PROJECT # (STATE)	PROJECT # (FEDERAL)
01-10128.00	Graves	1100 FD55 121 9414002R	

PROJECT DESCRIPTION

Kentucky Bridge Program - 042B00090N - US 45 at Jackson Creek Bridge Replacement

No Additional Right of Way Required

Construction will be within the limits of the existing right of way. The right of way was acquired in accordance to FHWA regulations under the Uniform Relocation Assistance and Real Property Acquisitions Policy Act of 1970, as amended. No additional right of way or relocation assistance were required for this project.

Condition # 1 (Additional Right of Way Required and Cleared)

All necessary right of way, including control of access rights when applicable, have been acquired including legal and physical possession. Trial or appeal of cases may be pending in court but legal possession has been obtained. There may be some improvements remaining on the right-of-way, but all occupants have vacated the lands and improvements, and KYTC has physical possession and the rights to remove, salvage, or demolish all improvements and enter on all land. Just Compensation has been paid or deposited with the court. All relocations have been relocated to decent, safe, and sanitary housing or that KYTC has made available to displaced persons adequate replacement housing in accordance with the provisions of the current FHWA directive.

Condition # 2 (Additional Right of Way Required with Exception)

The right of way has not been fully acquired, the right to occupy and to use all rights-of-way required for the proper execution of the project has been acquired. Some parcels may be pending in court and on other parcels full legal possession has not been obtained, but right of entry has been obtained, the occupants of all lands and improvements have vacated, and KYTC has physical possession and right to remove, salvage, or demolish all improvements. Just Compensation has been paid or deposited with the court for most parcels. Just Compensation for all pending parcels will be paid or deposited with the court prior to AWARD of construction contract

Condition # 3 (Additional Right of Way Required with Exception)

The acquisition or right of occupancy and use of a few remaining parcels are not complete and/or some parcels still have occupants. All remaining occupants have had replacement housing made available to them in accordance with 49 CFR 24.204. KYTC is hereby requesting authorization to advertise this project for bids and to proceed with bid letting even though the necessary right of way will not be fully acquired, and/or some occupants will not be relocated, and/or the just compensation will not be paid or deposited with the court for some parcels until after bid letting. KYTC will fully meet all the requirements outlined in 23 CFR 635.309(c)(3) and 49 CFR 24.102(j) and will expedite completion of all acquisitions, relocations, and full payments after bid letting and prior to AWARD of the construction contract or force account construction.

Total Number of Parcels on Project	2	EXCEPTION (S) Parcel #	ANTICIPATED DATE OF POSSESSION WITH EXPLANATION
Number of Parcels That Have Been Acquired			
Signed Deed	2		
Condemnation	0		
Signed ROE	0		

Notes/ Comments (Text is limited. Use additional sheet if necessary.)

Right of Entry on Parcel 13 was granted with the executed construction agreement.

LPA RW Project Manager		Right of Way Supervisor	
Printed Name		Printed Name	Mark C. Askin, P.E.
Signature		Signature	Mark C. Askin, P.E. <small>Digitally signed by Mark C. Askin, P.E. DN: cn=Mark Askin, P.E., c=US, email=mark.askin@strand.com Date: 2024.01.30 14:16:32 -0500</small>
Date		Date	01/30/24
Right of Way Director		FHWA	
Printed Name	Dean M. Loy	Printed Name	
Signature	DM Loy <small>Digitally signed by DM Loy Date: 2024.01.30 14:24:27 -05'00'</small>	Signature	
Date		Date	

UTILITIES AND RAIL CERTIFICATION NOTE

Carlisle County
FD55 121 9414002U
Mile point: 1.713 TO 1.721
BRIDGE PROJECT IN CARLISLE COUNTY ON (020B00002N) US-51 AT GADDIE CREEK
ITEM NUMBER: 01-10104.00

PROJECT NOTES ON UTILITIES

Please Note: The information presented in this Utility Note is informational in nature and the information contained herein is not guaranteed.

The contractor will be responsible for contacting all utility facility owners on the subject project to coordinate his activities. The contractor will coordinate his activities to minimize and, where possible, avoid conflicts with utility facilities. Due to the nature of the work proposed, it is unlikely to conflict with the existing utilities beyond minor facility adjustments. Where conflicts with utility facilities are unavoidable, the contractor will coordinate any necessary relocation work with the facility owner and Resident Engineer. The Kentucky Transportation Cabinet maintains the right to remove or alter portions of this contract if a utility conflict occurs. The utility facilities as noted in the previous section(s) have been determined using data garnered by varied means and with varying degrees of accuracy: from the facility owners, a result of S.U.E., field inspections, and/or reviews of record drawings. The facilities defined may not be inclusive of all utilities in the project scope and are not Level A quality, unless specified as such. It is the contractor's responsibility to verify all utilities and their respective locations before excavating.

The contractor shall make every effort to protect underground facilities from damage as prescribed in the Underground Facility Damage Protection Act of 1994, Kentucky Revised Statute KRS 367.4901 to 367.4917. It is the contractor's responsibility to determine and take steps necessary to be in compliance with federal and state damage prevention directives. The contractor is instructed to contact KY 811 for the location of existing underground utilities. Contact shall be made a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor shall submit Excavation Locate Requests to the Kentucky Contact Center (KY 811) via web ticket entry. The submission of this request does not relieve the contractor from the responsibility of contacting non-member facility owners, whom are to be contacted through their individual Protection Notification Center. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area. Non-compliance with these directives can result in the enforcement of penalties.

Utility coordination efforts determined that no significant utility relocation work is required to complete the project. Any work pertaining to these utility facilities is defined in the bid package and is to be carried out as instructed by the Kentucky Transportation Cabinet. The contractor will be responsible for any coordination or adjustments that are discussed or quantified in the proposal.

UTILITIES AND RAIL CERTIFICATION NOTE

Carlisle County
FD55 121 9414002U
Mile point: 1.713 TO 1.721
BRIDGE PROJECT IN CARLISLE COUNTY ON (020B00002N) US-51 AT GADDIE CREEK
ITEM NUMBER: 01-10104.00

NOTE: DO NOT DISTURB THE FOLLOWING FACILITIES LOCATED WITHIN THE PROJECT DISTURB LIMITS

New Commonwealth Natural Gas - Natural Gas

West Kentucky RECC – Electric

- Contractor to coordinate with WKRECC engineering & safety personnel to have lines wrapped and review crane swing plan prior to construction.

The Contractor is fully responsible for protection of all utilities listed above

THE FOLLOWING FACILITY OWNERS ARE RELOCATING/ADJUSTING THEIR FACILITIES WITHIN THE PROJECT LIMITS AND WILL BE COMPLETE PRIOR TO CONSTRUCTION

Windstream Communications, LLC – Communications

- On the north side of the proposed bridge on US 51, one (1) 35-4 Pole will be removed and relocated approximately 20'-0" to the north along the existing overhead route.

THE FOLLOWING FACILITY OWNERS HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE OWNER OR THEIR SUBCONTRACTOR AND IS TO BE COORDINATED WITH THE ROAD CONTRACT

Not Applicable

THE FOLLOWING FACILITY OWNERS HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE ROAD CONTRACTOR AS INCLUDED IN THIS CONTRACT

Not Applicable

RAIL COMPANIES HAVE FACILITIES IN CONJUNCTION WITH THIS PROJECT AS NOTED

No Rail Involvement Rail Involved Rail Adjacent

*Please see attached Special Notes for Protection of Railroad Interest

UTILITIES AND RAIL CERTIFICATION NOTE

Carlisle County
FD55 121 9414002U
Mile point: 1.713 TO 1.721
BRIDGE PROJECT IN CARLISLE COUNTY ON (020B00002N) US-51 AT GADDIE CREEK
ITEM NUMBER: 01-10104.00

AREA FACILITY OWNER CONTACT LIST

Facility Owner	Address	Contact Name	Phone	Email
Illinois Central Railroad Company – Railroad	2151 N. Mill Street Jackson, MS 39202	Josh Gordon	601-914-2658	Preston.Gordon@CN.ca
New Commonwealth Natural Gas – Natural Gas	311 Court Street Wickliffe, KY 42087	Corey Damron	270-335-3116	newcommonwealthgas@brtc.net
West Kentucky RECC – Electric	1218 West Broadway Mayfield, KY 42006	Ricky Binkley	270-705-6334	rbinkley@wkrecc.com
Windstream Communications LLC – Telephone	932 Citation Blvd. Lexington, KY 40511	Steve Johnson	859-321-2035	Travis.Roberts@windstream.com



SPECIAL NOTES FOR PROTECTION OF RAILROAD INTEREST

Illinois Central Railroad Company

I. AUTHORITY OF RAILROAD ENGINEER AND STATE ENGINEER:

- A. *The authorized representative of the Railroad Company, hereinafter referred to as Railroad Engineer, shall have final authority in all matters affecting the safe maintenance of Railroad traffic of his Company including the adequacy of the foundations and structures supporting the Railroad tracks.*
- B. *The authorized representative of the State, hereinafter referred to as the Engineer, shall have authority over all other matters as prescribed herein and in the Project Specifications.*

II. NOTICE OF STARTING WORK:

- A. *The Contractor shall not commence any work on Railroad rights of way until he has complied with the following conditions:*
 - 1. Given the Railroad written notice, with copy to the Engineer who has been designated to be in charge of the work, **at least ten (10) days in advance** of the date he proposes to begin work on Railroad rights of way. **If flagging service is required, such notice shall be submitted at least thirty (30) days in advance** of the date scheduled to commence work. The Railroad's Contact information is on the Summary Sheet.
 - 2. Obtain written authorization from the Railroad to begin work on Railroad rights of way, such authorization to include an outline of specific conditions with which he must comply and execution of the Railroad's standard right of entry agreement.
 - 3. Obtain written approval from the Railroad of Railroad Protective Insurance Liability coverage as required by paragraph 14 herein.
 - 4. Furnish a schedule for all work within the Railroad rights of way as required by paragraph 7, B, 1.
- B. *The Railroad's written authorization to proceed with the work shall include the names, addresses, and telephone numbers of the Railroad's representatives who*

are to be notified as hereinafter required. Where more than one representative is designated, the area of responsibility of each representative shall be specified.

III. INTERFERENCE WITH RAILROAD OPERATIONS:

- A. *The Contractor shall so arrange and conduct his work that there will be no interference with Railroad operations, including train, signal, telephone and telegraphic services, or damage to the property of the Railroad Company or to poles, wires, and other facilities of tenants on the rights of way of the Railroad Company. Whenever work is liable to affect the operations or safety of trains, the method of doing such work shall first be submitted to the Railroad Engineer for approval, but such approval shall not relieve the Contractor from liability. Any work to be performed by the Contractor which requires flagging service or inspection service (watchman) shall be deferred by the Contractor until the flagging protection required by the Railroad is available at the job site.*
- B. *Whenever work within Railroad rights of way is of such a nature that impediment to Railroad operations such as use of runaround tracks or necessity for reduced speed is unavoidable, the Contractor shall schedule and conduct his operations so that such impediment is reduced to the absolute minimum.*
- C. *Should conditions arising from, or in connection with the work, require that immediate and unusual provisions be made to protect operations and property of the Railroad, the Contractor shall make such provisions. If in the judgment of the Railroad Engineer, or in his absence, the Engineer, such provisions are insufficient, either may require or provide such provisions, as he deems necessary. In any event, such unusual provisions shall be at the Contractor's expense and without cost to the Railroad or the State.*

IV. TRACK CLEARANCES

- A. *The minimum track clearances to be maintained by the Contractor during construction are shown on the Project Plans. However, before undertaking any work within Railroad rights of way, or before placing any obstruction over any track, the Contractor shall:*
 - 1. Notify the Railroad's representative **at least 72 hours in advance** of the work.
 - 2. Receive assurance from the Railroad's flagging representative that arrangements have been made for flagging service as necessary.
 - 3. Receive permission from the Railroad's representative to proceed with the work.
 - 4. Ascertain that the Engineer has received copies of notice to the Railroad and of the Railroad's response thereto.

V. CONSTRUCTION PROCEDURES

A. *General:*

1. Construction work on Railroad property shall be:
 - a) Subject to the inspection and approval of the Railroad.
 - b) In accord with the Railroad's written outline of specific conditions.
 - c) In accord with the Railroad's general rules, regulations and requirements including those relating to safety, fall protection and personal protective equipment.
 - d) In accord with all Special Notes, Summaries, and Addendums.
2. The Railroad requires a submission of construction procedure that meets the requirements of these Special Notes and attachments. The Railroad's **submittal review period is thirty (30) days. Resubmissions will be reviewed within 2 weeks.**

B. *Excavation and shoring:*

1. The sub grade of an operated track shall be **maintained with edge of berm at least 10'0" from centerline of track and not more than 18 inches below top of rail, and a 1 vertical to 1.5 horizontal slope from that point outwards.** Contractor will not be required to make existing section meet this specification if substandard, in which case the existing section will be maintained.
2. The Contractor will be required to take special precaution and care in connection with excavating and shoring pits, and in driving piles, or sheeting for footings adjacent to tracks to provide adequate lateral support for the tracks and the loads which they carry, without disturbance of track alignment and surface, and to avoid obstructing track clearances with working equipment, tools or other material. The procedure for doing such work, including need of and plans for shoring, shall first be approved by the Engineer and the Railroad Engineer, but such approval shall not relieve the Contractor from liability.
3. The Contractor shall submit a detailed procedure for the installing of sheeting/shoring adjacent to Railroad Tracks.
4. Shoring protection shall be provided when excavating adjacent to an active track or railroad facility or as determined by the Railroad. Shoring will be provided in accordance with AREMA *Manual for Railway Engineering* Chapter 8, part 28; except as noted below.

5. Shoring may not be required if all of the following conditions are satisfied:
 - a. Excavation does not encroach upon a 1½ horizontal: 1 vertical theoretical slope line starting 1'-0" below top of rail and at 12'-0" minimum from centerline of the track (live load influence zone).
 - b. Track is on level ground or in a cut section and on stable soil.
 - c. Excavation does not adversely impact the stability of a Railroad facility (i.e. signal bungalow, drainage facility, undergrade bridge, building, etc.)
 - d. Shoring is not required by any governing construction code.
6. When the track is on an embankment, excavating the toe of the embankment without shoring may affect the stability of the embankment. Therefore, excavation of the embankment toe without shoring will not be permitted.
7. Trench boxes are prohibited for use on Railroad property within the theoretical live load influence zone.
8. The required protection is the cofferdam type that completely encloses the excavation. Where dictated by conditions, partial cofferdams with opened sides away from the track may be used. Cofferdams shall be constructed using steel piling, or when approved by the engineer, steel soldier piles with timber lagging. Wales and struts shall be provided and designed as needed. The following shall be considered when designing cofferdams:
 - a. Shoring shall be designed to resist a vertical live load surcharge of 1,880 lbs. per square foot, in addition to active earth pressure. The surcharge shall be assumed to act on a continuous strip, 8'6" wide. Lateral pressures due to surcharge shall be computed using the strip load formula shown in AREMA *Manual for Railway Engineering*, Chapter 8, Part 20.
 - b. Allowable stresses in materials shall be in accordance with AREMA *Manual for Railway Engineering*, Chapter 7, 8, and 15.
 - c. A construction procedure for temporary shoring shall be shown on the drawing.
 - d. All shoring systems on or adjacent to Railroad right-of-way shall be equipped with railings or other approved fall protection.

- e. A minimum horizontal clearance of 10'-0" from centerline of the track to face of nearest point of shoring shall be maintained provided a 12'-0" roadbed is maintained with a temporary walkway and handrail system.
9. The Contractor shall submit the following drawings and calculations (all shall be signed/sealed by a Professional Engineer) for the Railroad's review and approval.
- a. Six (6) sets of detailed drawings of the shoring systems showing sizes of all structural members, details of connections, and distances from centerline of track to face of shoring. Drawing shall show a section showing height of shoring and track elevation in relation to bottom of excavation.
 - b. Six (6) sets of calculations of the shoring design. The drawings and calculations shall be prepared by a Licensed Professional Engineer and shall bear the Engineer's seal and signature. Shoring plans shall be approved by the Railroad's construction engineering and inspection representative.
 - c. For sheeting and shoring within 18'-0" of the centerline of the track, the live load influence zone, and in slopes, the Contractor shall use interlocked steel sheeting (sheet pile).
 - d. Sheet pile installed in slopes or within 18'-0" of the centerline shall not be removed.
 - e. Sheet pile shall be cut off a minimum of 3'-0" below the finished grade, ditch line invert, or as directed by the Engineer. The ground shall be backfilled and compacted immediately after sheet pile is cut off.
 - f. A procedure for cutting off the sheet pile and restoring the embankment shall be submitted to the Engineer for review and acceptance.

C. *Demolition Procedure:*

1. Railroad tracks and other railroad property, including signals, structures, and other facilities, must be protected from damage during the procedure. No crane or equipment may be set on the rails or track structure and no material may be dropped on Railroad property.
2. The Contractor is required to submit a plan showing the location of cranes, horizontally and vertically, operating radii, with delivery or disposal locations shown. The location of all tracks and other railroad facilities as well as all obstructions such as wire lines, poles, adjacent structures, etc. must also be shown.
3. Crane rating sheets showing cranes to be adequate for **150% of the actual weight of the pick.** A complete set of crane charts, including crane, counterweight, and boom nomenclature is to be submitted.
4. Plans and computations showing the weight of the pick must be submitted. Calculations shall be made from plans of the existing and/or proposed structure showing complete and sufficient details with supporting data for the demolition or erection of the structure. If plans do not exist, lifting weights must be calculated from field measurements. If possible, field measurements shall be taken with a Railroad representative present.
5. A data sheet must be submitted listing the types, size, and arrangements of all rigging and connection equipment. The safe working load capacity of all rigging and connecting equipment shall be 150% above the calculated weight of the pick.
6. A complete procedure is to be submitted, including the order of lifts, time required for each lift, and any repositioning or re-hitching of the crane or cranes.
7. All erection or demolition plans, procedures, data sheets, etc. submitted must be prepared, signed and sealed by a Registered Professional Engineer.
8. The Railroad's representative must be present at the site during the entire demolition and erection procedure period.
9. All procedures, plans and calculations shall first be approved by the Engineer and the Railroad Engineer, but such approval does not relieve the Contractor from liability.
10. Loads shall not be supported while any trains are passing if that piece of equipment has the capacity to foul a 50' envelope in the event of an equipment failure.

11. The names and experience of the key Contractor personnel involved in the operation shall be included in the Contractor's means and methods submission.
12. Existing, obsolete, bridge piers shall be removed to a minimum of 3'-0" below the finished grade, final ditch line invert, or as directed by the Engineer.
13. A minimum quantity of 25 tons of Railroad approved track ballast may be required to be furnished and stockpiled on site by the Contractor, or as directed by the Engineer.
14. On-track or ground debris shields such as crane mats are prohibited.
15. Overhead Demolition Debris Shield – Shall be installed prior to the demolition of a bridge deck or other relevant portions of the superstructure.
 - a. The demolition debris shield shall be erected from the underside of the bridge over the track area to catch all falling debris.
 - b. The Contractor shall include the demolition debris shield installation/removal means and methods as part of the proposed Controlled Demolition procedure submission.
 - c. The demolition debris shield shall provide 23'-0" minimum vertical clearance if the existing clearance is less than 23'-0" as approved by the Railroad. Horizontal clearance to the centerline of the track should not be reduced unless approved by the Engineer.
 - d. The vertical clearance ATR (above top of rail) is measured from the top of rail to the lowest point on the overhead shielding system measured within a distance of 8'-0" out from each side of the track centerline.
 - e. The demolition debris shield design and supporting calculations, all signed/sealed by a Professional Engineer, shall be submitted for review and acceptance.
 - f. The demolition debris shield shall have a **minimum** design load of 50 pounds per square foot **plus** the weight of the equipment, debris, personnel, and other loads to be carried.
 - g. The Contractor shall include the proposed bridge deck removal procedure in its demolition means and methods and shall verify that the size and quantity of the demolition debris generated by the procedure does not exceed the shield design loads.

D. Erection Procedure:

The Contractor shall submit a detailed procedure for performing erection on/about Railroad property.

1. The Contractor shall submit six (6) copies of the detailed procedure for erection of the proposed structures over or adjacent to the tracks or right-of-way. This procedure shall include a plan showing the locations of cranes, horizontally and vertically, operating radii, with staging locations shown, including beam placement on ground or truck unloading staging plan. Plan should also include the location of all tracks, other railroad facilities; wires, poles, adjacent structures, or buried utilities that could be affected, showing that the proposed lifts are clear of these obstructions should be shown. No crane or equipment may be set on the rails or track structure.
2. Also included with this submittal the following information:
 - a. As-Built Bridge Seat Elevations - All as-built bridge seats and top of rail elevations shall be furnished to the Engineer for review and verification at least 30 days in advance of construction or erection, to ensure that minimum vertical clearances as approved in the plans will be achieved.
 - b. Computations showing weight of picks must be submitted. Computations shall be made from plans of the structure beams being erected and those plans or sections thereof shall also be included in the submittal; the weight shall include the weight of concrete or other materials including lifting rigging.
 - c. Crane rating sheets showing cranes to be adequate for 150% of the actual weight of the pick. A complete set of crane charts, including crane, counterweight, maximum boom angle, and boom nomenclature is to be submitted. Safety factors that may have been "built in" to the crane charts are not to be considered when determining the 150% Factor of Safety.
 - d. A data sheet shall be prepared listing the type, size and arrangements of slings, shackles, or other connecting equipment. Include copies of a catalog or information sheets for specialized equipment. All specific components proposed for use shall be clearly identified and highlighted in the submitted documents. The safe working load capacity of the connecting equipment shall be 150% above the calculated weight of the pick.
 - e. A complete written procedure is to be included that describes the sequence of events, indicating the order of lifts and any repositioning or rehitching of the crane or cranes.

- f. A time schedule for each of the various stages must be shown as well as a schedule for the entire lifting procedure. The proposed time frames for all critical sub tasks (i.e., performing aerial splices, installing temporary bracing, etc.) shall be furnished so that the potential impact(s) to Railroad operations may be assessed and eliminated or minimized.
 - g. The names and experience of the key Contractor personnel involved in the operation shall be included in the Contractor's means and methods submission.
 - h. Design and supporting calculations prepared by the Professional Engineer for items including the temporary support of components or intermediate stages shall be submitted for review. A guardrail will be required to be installed in a track where a temporary bent is located within twelve (12) feet from the centerline of that track.
3. The proposed Erection procedure must be approved by the Engineer prior to undertaking work on the project.
4. The Contractor shall provide timely communication to the Engineer when scheduling the erection related work so that the Engineer may be present during the entire erection procedure.
5. At any time during construction activities, the Engineer may require revisions to the previously approved procedures to address weather, site conditions or other circumstances which may create a potential hazard to rail operations or Railroad facilities. Such revisions may require immediate interruption or termination of ongoing activities until such time the issue is resolved to the Engineer's satisfaction. The Railroad shall not be responsible for any additional costs or time claims associated with such revisions.

E. Blasting:

1. The Contractor shall obtain advance approval of the Railroad Engineer and the Engineer for use of explosive on or adjacent to Railroad property. The request for permission to use explosives shall include a detailed blasting plan. If permission for use of explosives is granted, the Contractor will be required to comply with the following:
 - a) Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of the Contractor and a licensed blaster.

- b) Electric detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way train radios.
- c) No blasting shall be done without the presence of an authorized representative of the Railroad. **At least 10 days advance notice** to the person designated in the Railroad's notice of authorization to proceed (see paragraph 2B above) will be required to arrange for the presence of an authorized Railroad representative and such flagging as the Railroad may require.
- d) Have at the job site adequate equipment, labor and materials and allow sufficient time to clean up debris resulting from the blasting without delay to trains, as well as correcting at his expense any track misalignment or other damage to Railroad property resulting from the blasting as directed by the Railway's authorized representative. If his actions result in delay of trains, the Contractor shall bear the entire cost thereof.
- e) Explosives shall not be stored on Railroad Property.
- f) At any time during the blasting activities, the Engineer may require revisions to the previously approved procedures to address weather, site conditions, or other circumstance which may create a potential hazard to rail operations or Railroad facilities. Such revisions may require immediate interruption or termination of ongoing activities until such time the issue is resolved to the Engineer's satisfaction. The Railroad shall not be responsible for any additional costs or time claims associated with such revisions.

2. The Railroad representative will:

- a) Determine the approximate location of trains and advise the Contractor the approximate amount of time available for the blasting operation and clean-up.
- b) Have the authority to order discontinuance of blasting if, in his opinion, blasting is too hazardous or is not in accord with these Special Notes.

F. Track Monitoring:

The Contractor shall submit for Railroad review and approval, a detailed track monitoring program to detect both horizontal and vertical movement of the track and roadbed, a minimum of 30-days in advance of start of work.

1. For the installation of temporary or permanent shoring systems, including but not limited to soldier piles and lagging, and interlocked steel sheeting on or adjacent to the Railroad's right-of-way, the contractor may be required to submit a detailed track monitoring program for the Railroad's approval prior to performing any work near the Railroad's right-of-way.
2. The program shall specify the survey locations, the distance between the location points, and frequency of monitoring before, during, and after construction. The Railroad reserves the right to modify the survey locations and monitoring frequency as necessary during the project.
3. The survey data shall be collected in accordance with the approved frequency and immediately furnished to the Engineer for analysis.
4. If any movement has occurred as determined by the Engineer, the Railroad will be immediately notified. The Railroad, at its sole discretion, shall have the right to immediately require all contractor operations to be ceased, have the excavated area immediately backfilled and/or determine what corrective action is required. Any corrective action required by the Railroad or performed by the Railroad including monitoring of corrective action of the contractor will be at project expense.

G. Maintenance of Railroad Facilities:

1. The Contractor will be required to maintain all ditches and drainage structures free of silt or other obstructions which may result from his operations and provide and maintain any erosion control measures as required. The Contractor shall provide erosion control measures during construction and use methods that accord with applicable state standard specifications for road and bridge construction, including either (1) silt fence; (2) hay or straw barrier; (3) berm or temporary ditches; (4) sediment basin; (5) aggregate checks; and (6) channel lining. The Contractor will promptly repair eroded areas with Railroad rights of way and to repair any other damage to the property of the Railroad or its tenants at the Contractor's expense.
2. All maintenance and repair of damages due to the Contractor's operations shall be done at the Contractor's expense.

H. Storage of Materials and Equipment:

1. Materials and equipment shall not be stored where they will interfere with Railroad operations, nor on the rights of way of the Railroad Company without first having obtained permission from the Railroad Engineer, and such permission will be with the understanding that the Railroad Company will not be liable for damage to such material and equipment from any cause and that the Railroad Engineer may move or require the Contractor to move, at the Contractor's expense, such material and equipment. In no instance shall material be stored closer than 25-feet to the nearest rail.
2. All grading or construction machinery that is left parked near the track unattended by a watchman shall be effectively immobilized so that it cannot be moved by unauthorized persons. The Contractor shall protect, defend, indemnify and save Railroad, and any associated, controlled or affiliated corporation, harmless from and against all losses, costs, expenses, claim or liability for loss or damage to property or the loss of life or personal injury, arising out of or incident to the Contractor's failure to immobilize grading or construction machinery.

I. Cleanup:

1. Upon completion of the work, the Contractor shall remove from within the limits of the Railroad rights of way, all machinery, equipment, surplus materials, falsework, rubbish or temporary buildings of the Contractor, and leave said rights of way in a neat condition satisfactory to the Chief Engineer of the Railroad or his authorized representative.

VI. DAMAGES:

- A. *The Contractor shall assume all liability for any and all damages to his work, employees, equipment and materials caused by Railroad traffic.*
- B. *Any cost incurred by the Railroad for repairing damages to its property or to property of its tenants, caused by or resulting from the operations of the Contractor, shall be paid directly to the Railroad by the Contractor.*

VII. FLAGGING SERVICES:

- A. *When Required:*
 - 1. Flagging services will not be provided until the contractor's insurance has been reviewed & approved by the Railroad.
 - 2. Under the terms of the agreement between the Department and the Railroad, the **Railroad has sole authority to determine the need for flagging** required to protect its operations. In general, the requirements of such services will be whenever the Contractor's personnel or equipment are likely to be, working on the Railroad's rights of way, or across, over, adjacent to, or under a track, or when such work has disturbed or is likely to disturb a railroad structure or the railroad roadbed or surface and alignment of any track to such extent that the movement of trains must be controlled by flagging. If any element (workers, equipment, tools, scaffolding, etc.) may exist or fall within 25-feet of the edge of track, a flagman is necessary.
 - 3. Normally, the Railroad will assign one flagman to a project; but in some cases, more than one may be necessary, such as yard limits where three- (3) flagmen may be required. However, if the Contractor works within distances that violate instructions given by the Railroad's authorized representative or performs work that has not been scheduled with the Railroad's authorized representative, a flagman or flagmen may be required until the project has been completed.
- B. *Scheduling and Notification:*
 - 1. Not later than the time that approval is initially requested to begin work on Railroad rights of way, Contractor shall furnish to the Railroad and the Department a schedule for all work required to complete the portion of the project within Railroad rights of way and arrange for a job site meeting between the Contractor, the Department, and the Railroad's authorized representative. Flagman or Flagmen may not be provided until the job site meeting has been conducted and the Contractor's work scheduled.

2. **The Cabinet's Engineer will be responsible for procuring flagmen, however, it is the Contractor's responsibility to notify the Engineer when they are needed.** The Contractor will be required to give the Engineer **at least 10 working days of advance written notice** of intent to begin work within Railroad rights of way. If it is necessary for the Railroad to advertise a flagging job for bid, it **may take up to 90-days to obtain service**. Once begun, when work is suspended at any time for any reason, the Contractor will be required to give the Engineer **at least 3 working days of notice** before resuming work on Railroad rights of way. Such notice shall include sufficient details of the proposed work to enable the Railroad representative to determine if flagging will be required. If such notice is in writing, the Contractor shall furnish the Engineer a copy; if notice is given verbally it shall be confirmed in writing with copy to the Engineer. If flagging is required, no work shall be undertaken until the flagman, or flagmen is present at the job site. It **may take up to 30 days to obtain flagging initially** from the Railroad. When flagging begins the flagman is usually assigned by the Railroad to work at the project site on a continual basis until no longer needed and cannot be called for on a spot basis. If flagging becomes unnecessary and is suspended, it **may take up to 10 days to again obtain flagging services** from the Railroad. Due to labor agreements, it is necessary to give **5 working days notice before flagging service may be discontinued** and responsibility for payment stopped.
3. If, after the flagman is assigned to the project site, emergencies arise which require the flagman's presence elsewhere, and then the Contractor shall delay work on Railroad rights of way until such time as the flagman is again available. Any additional costs resulting from such delay shall be borne by the Contractor and not the Department or Railroad.
4. When demobilizing, the Contractor shall contact the Engineer, who will in turn contact the flagman to avoid unnecessary flagging charges. This communication shall be documented.

C. *Payment:*

1. **The Cabinet will be responsible for paying the Railroad directly for any and all costs of flagging, which may be required to accomplish the construction.**
2. The estimated cost of flagging is listed on the Summary Sheet. The charge to the Cabinet by the Railroad will be the actual cost based on the rate of pay for the Railroad's employees, or it's contractor, who are available for flagging service at the time the service is required.
3. Railroad work involved in preparing and handling bills will also be charged

to the Cabinet. Charges to the Cabinet by the Railroad shall be in accordance with applicable provisions of 23 CRF 140, Subpart I and 23 CRF 646, Subpart B. Flagging costs are subject to change. The above estimates of flagging cost are provided for information only and are not binding in any way.

D. Verification:

1. The Department will review and sign the Railroad flagman's time sheet, attesting that the flagman was present during the time recorded. Flagman may be removed by Railroad if form is not signed. If flagman is removed, the Contractor will not be allowed to re-enter the Railroad rights of way until the issue is resolved. Any complaints concerning flagman or flagmen must be resolved in a timely manner. If need for flagman or flagmen is questioned, please contact the Railroad's Representative listed on the Project Summary Sheet. All verbal complaints must be confirmed in writing by the Contractor within 5 working days with copy to the Highway Engineer. All written correspondence should be addressed to the Railroad's Representative listed on the Project Summary Sheet.
2. The Railroad flagman assigned to the project will be responsible for notifying the Project Engineer upon arrival at the job site on the first day (or as soon thereafter as possible) that flagging services begin and on the last day that he performs such services for each separate period that services are provided. The Project Engineer will document such notification in the project records. When requested, the Project Engineer will also sign the flagman's diary showing daily time spent and activity at the project site.

VIII. HAUL ACROSS RAILROAD:

- A. Where the plans show or imply that materials of any nature must be hauled across a Railroad, unless the plans clearly show that the State has included arrangements for such haul in its agreement with the Railroad, the Contractor will be required to make all necessary arrangements with the Railroad regarding means of transporting such materials across the Railroad. The Contractor will be required to bear all costs incidental, including flagging, to such crossings whether services are performed by his own forces or by Railroad personnel.*
- B. No crossing may be established for use of the Contractor for transporting materials or equipment across the tracks of the Railroad Company unless specific authority for is installation, maintenance, necessary watching and flagging thereof and removal, all at the expense of the Contractor, is first obtained from the Railroad Engineer. **The approval process for an agreement normally takes 90-days.***

IX. WORK FOR THE BENEFIT OF THE CONTRACTOR:

- A. *All temporary or permanent changes in wire lines or other facilities which are considered necessary to the project are shown on the plans; included in the force account agreement between the State and the Railroad or will be covered by appropriate revisions to same which will be initiated and approved by the State and/or the Railroad.*
- B. *Should the Contractor desire any changes in addition to the above, then he shall make separate arrangements with the Railroad for same to be accomplished at the Contractor's expense.*

X. COOPERATION AND DELAYS:

- A. *It shall be the Contractor's responsibility to arrange a schedule with the Railroad for accomplishing stage construction involving work by the Railroad or tenants of the Railroad. In arranging his schedule he shall ascertain, from the Railroad, the lead time required for assembling crews and materials and shall make due allowance therefore.*
- B. *Train schedules cannot be provided to the Contractor. It is the Contractor's responsibility to contact the Railroad in order to arrange "Track Time." This "Track Time" will be an agreed upon prearranged time period that the Railroad will, without undue burden, schedule no train traffic to facilitate the Contractor's work on or near Railroad right-of-way. Due to track operations, there is no guarantee for track time. This track time must be arranged **at least 7 days prior to the date of need.***
- C. *No charge or claims of the Contractor against either the Department or the Railroad will be allowed for hindrance or delay on account of railroad traffic; any work done by the Railroad or other delay incident to or necessary for safe maintenance of Railroad traffic or for any delays due to compliance with these Special Notes.*
- D. *The Contractor shall cooperate with others participating in the construction of the Project to the end that all work may be carried on to the best advantage.*
- E. *The Railroad does not assume any responsibility for work performed by others in connection with the Project. No claims of the Contractor against the Railroad for any inconvenience, delay, or additional cost incurred by the Contractor on account of operations by others.*

XI. TRAINMAN'S WALKWAYS:

- A. *Along the outer side of each exterior track of multiple operated track, and on each side of single operated track, an unobstructed continuous space suitable for trainman's use in walking along trains, extending to a line not less than 10 feet from centerline of track, shall be maintained. Any temporary impediments to walkways and track drainage encroachments or obstructions allowed during work hours while Railroad's protective service is provided shall be removed before the close of each day. If there is any excavation near the walkway, a handrail, with 15'-0" minimum clearance from centerline of track, shall be placed.*

XII. GUIDELINES FOR PERSONNEL ON RAILROAD RIGHTS OF WAY:

- A. *All persons shall wear hard hats. Appropriate eye and hearing protection must be used. Working in shorts is prohibited. Shirts must cover shoulders, back and abdomen. Working in tennis or jogging shoes, sandals, boots with high heels, cowboy and other slip on type boots is prohibited. Hard-sole, lace-up footwear, zippered boots cinched with straps which fit snugly about the ankle are adequate. Safety boots are required.*
- B. *No one is allowed within 50' of the centerline of the track without specific authorization from the flagman.*
- C. *All persons working near track when train is passing are to look out for dragging bands, chains and protruding or shifting cargo.*
- D. *No one is allowed to cross tracks without specific authorization from the flagman.*
- E. *All welders and cutting torches working within 25' of track must stop when train is passing.*
- F. *No steel tape or chain will be allowed to cross or touch rails without permission.*

XIII. GUIDELINES FOR EQUIPMENT ON RAILROAD RIGHTS OF WAY:

- A. *No crane or boom equipment will be allowed to set up to work or park within boom distance plus 15' of centerline of track without specific permission from railroad official and flagman.*
- B. *No crane or boom equipment will be allowed to foul track or lift a load over the track without flag protection and track time.*
- C. *All employees will stay with their machines when crane or boom equipment is pointed toward track.*
- D. *All cranes and boom equipment under load will stop work while a train is passing (including pile driving).*

- E. *Swinging loads must be secured to prevent movement while train is passing.*
- F. *No loads will be suspended above a moving train.*
- G. *No equipment will be allowed within 50' of centerline of track without specific authorization of the flagman.*
- H. *Trucks, tractors or any equipment will not touch ballast line without specific permission from railroad official and flagman.*
- I. *No equipment or load movement within 50' or above a standing train or other equipment without specific authorization of the flagman.*
- J. *All operating equipment within 50' of track must halt operations when a train is passing. All other operating equipment may be halted by the flagman if the flagman views the operation to be dangerous to the passing train.*
- K. *All equipment, loads and cables are prohibited from touching rails.*
- L. *While clearing and grubbing, no vegetation will be removed from railroad embankment with heavy equipment without specific permission from the Railroad Engineer and flagman.*
- M. *No equipment or materials will be parked or stored on Railroad's property unless specific permission is granted from the Railroad Engineer.*
- N. *All unattended equipment that is left parked on Railroad property shall be effectively immobilized so that it can not be moved by unauthorized persons.*
- O. *All cranes and boom equipment will be turned away from track after each work day or whenever unattended by an operator.*

XIV. INSURANCE:

- A. *In addition to any other forms of insurance or bonds required under the terms of the contract and specifications, the Contractor will be required to carry insurance of the following kinds:*
 - 1. *Commercial General Liability coverage at their sole cost and expense with limits of not less than **\$5,000,000** in combined single limits for bodily injury and/or property damage per occurrence, and such policies shall name the Railroad as an additional insured. Contractor shall provide the Railroad with a complete waiver of subrogation, and remove any exclusion for coverage of work occurring within 50' of a railroad track pursuant to Endorsement CG 24.17.*
 - 2. *Statutory Worker's Compensation and Employers Liability Insurance with*

limits of not less than **\$1,000,000**, which insurance must contain a waiver of subrogation against the Railroad and its affiliates.

3. Commercial automobile liability insurance with limits of not less than **\$1,000,000** combined single limit for bodily injury and/or property damage per occurrence, and such policies shall name the Railroad as an additional insured.
4. Railroad protective liability insurance with limits of not less than **\$5,000,000** combined single limit for bodily injury and/or property damage per occurrence and an aggregate annual limit of **\$10,000,000**, which insurance shall satisfy the following additional requirements:
 - a. The Railroad Protective Insurance Policy must be on the ISO/RIMA Form of Railroad Protective Insurance – Insurance Services Office (ISO) Form CG 00 35.
 - b. The Railroad must be the named insured on the Railroad Protective Insurance Policy
 - c. Name and Address of the Contractor must be shown on the Declarations page.
 - d. Description of operations must appear on the Declarations page and must match the Project description, including project or contract identification numbers.
 - e. Authorized endorsements must include the Pollution Exclusion Amendment – CG 28 31, unless using form CG 00 35 version 96 and later.
 - f. Authorized endorsements may include:
 - (i). Broad form Nuclear Exclusion – IL 00 21
 - (ii). 30-day Advance Notices of Non-renewal or cancellation
 - (iii). Required State Cancellation Endorsement
 - (iv). Quick Reference or Index – CL/IL 240
 - g. Authorized endorsements may not include:
 - (i). A Pollution Exclusion Endorsement except CG 28 31
 - (ii). A Punitive or Exemplary Damages Exclusion
 - (iii). A “Common Policy Conditions” Endorsement
 - (iv). And endorsement that is not named in Section 4 (e) or (f) above.
 - (v). Policies that contain any type of deductible

5. All insurance companies must be A. M. Best rated A- and Class VII or better.
6. Such additional or different insurance as the Railroad may require.

B. Additional Terms:

1. Contractor must submit the original Railroad Protective Liability policy, Certificates of Insurance, and all notices and correspondence regarding the insurance policy to the contact listed on the Project Summary Sheet.
2. The Contractor may not begin work on the Project until it has received the Railroad's written approval or the required insurance.

C. Insurance policies shall follow the requirements of 23 CFR 646, Subpart A.

D. Evidence of insurance as required above shall be furnished to the address shown on the attached Summary Sheet for review by the Department and transmittal to the Railroad.

E. If any part of the work is sublet, similar insurance and evidence thereof in the same amounts as required of the Prime Contractor shall be provided by or in behalf of the subcontractor to cover his operations. Endorsements to the Prime Contractor's policies specifically naming subcontractors and describing their operations will be acceptable for this purpose.

*F. All insurance herein before specified shall be carried until all work required to be performed under the terms of the contract has been satisfactorily completed within the limits of the rights of way of the Railroad as evidenced by the formal acceptance by the Department. Insuring Companies may cancel insurance by permission of the Department and Railroad or on **thirty (30) days written notice** to the Department and Railroad Insurance Contacts as listed on the Project Summary Sheet.*

XV. FAILURE TO COMPLY:

- A. These Special Notes are supplemental and amendatory to the Kentucky Department of Highways' Standard Specifications for Road and Bridge Construction, Edition of 2008, and amendments thereof, and where in conflict therewith, these Special Notes shall govern.*
- B. In the event the Contractor violates or fails to comply with any of the requirements of these Special Notes:*
1. The Railroad Engineer may require that the Contractor vacate Railroad property.
 2. The Engineer may withhold all monies due the Contractor on monthly statements.
 3. Any such orders shall remain in effect until the Contractor has remedied the situation to the satisfaction of the Railroad Engineer and the Engineer.

XVI. PAYMENT FOR COST OF COMPLIANCE:

- A. No separate payment will be made for any extra cost incurred on account of compliance with these Special Notes. All such cost shall be included in prices bid for other items of the work as specified in the payment items.*

XVII. CONTRACTOR'S RIGHT OF ENTRY AGREEMENT

- A. Prior to entry onto Railroad right of way, the contractor will be required to enter into a Right of Entry Agreement with the railroad. The Contractor is responsible for garnering this agreement and executing any terms and conditions stated therein, including any and all fees associated with this agreement, which shall not exceed \$1,000.00. A blank agreement is provided in the bid package. When the contract is awarded, the Contractor shall sign the form and return it to the Cabinet with the contract before a work order is issued.*



Kentucky Transportation Cabinet
Division of Right of Way & Utilities

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08/2010
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SUMMARY FOR KYTC PROJECTS THAT INVOLVE A RAILROAD

Date: 3/28/2023 (enter using M/d/yyyy format)

This project actively involves the below listed railroad company. This Project Summary provides an abbreviated listing of project specific railroad data. The detailed needs of the specified railroad company are included in the Special Notes for Protection of Railroad Interest in the proposal package. By submitting a bid, the contractor attests that they have dutifully considered and accepted the provisions as defined in both documents.

GENERAL ROAD PROJECT INFORMATION (This section must be provided by KYTC)

County: Carlisle
Federal Number: N/A
State Number: FD55 121 94140 02U
Route: US 51
Project Description: Bridge replacement on (o20B00002N) US 51 at Gladdie Creek adjacent to IC RR
Item Number: 01-10104.00 **Highway Milepost:** 1.713-1.721

GENERAL RAIL INFORMATION (The below sections must be provided by Railroad Company)

Rail Company Name: Illinois Central Railroad
AAR-DOT# (if applicable): 299095N **Railroad Milepost:** Cairo 383.6
Freight: Train Count (6am to 6pm): 6 **Train Count (6pm to 6am):** 6 **Train Count (24 hr total):** 12 **Max Speed:** 79 mph
Passenger: Train Cnt. (6am to 6pm): 1 **Train Cnt. (6pm to 6am):** 1 **Train Cnt. (24 hr total):** 2 **Max Speed:** 79 mph
(This information is necessary to acquire the necessary insurances when working with Railroad Right of Way)

INSURANCE REQUIREMENTS

The named insured, description of the work and designation of the job site to be shown on the Policy are as follows:

- (a) Named Insured: Illinois Central Railroad
 - (b) The project description should be as indicated in the General Road Project Information section.
 - (c) The designation of the jobsite is the route, Milepost, and AAR-DOT# listed above.
-

FLAGGING INFORMATION

Flagging Estimate:

Flagging will be paid to the RR by KYTC. Contractor shall adhere to the Special Note for Railroad Flagging, if applicable.

Hourly Rate:

\$1300.00 per day based on a 8 hour day effective as of the date of this document.

Work by a flagman in excess of 8 hours per day or 40 hours per week, but not more than 12 hours a day will result in overtime pay at 1 1/2 times the appropriate rate. Work by a flagman in excess of 12 hours per day will result in overtime pay at 2 times the appropriate rate. If work is performed on a holiday, the flagging rate is 2 1/2 times the normal rate.

Forecasted Rate Increases:

Rates will increase to \$0.00 per hour based on a 0 hour day effective _____ (enter using M/d/yyyy format).

RAILROAD CONTACTS

(to be provided by Railroad Company)

General Railroad Contact:

Josh Gordon
Illinois Central Railroad
2151 North Mill Street
Jackson, MS 39202

(Phone) 601-914-2658

(Email) Josh.Gordon@cn.ca

Regional Representative (Roadmaster):

To be provided by RR upon insurance approval

(Phone) _____

(Email) _____

Insurance contact:

Josh Gordon
Illinois Central Railroad
2151 North Mill Street
Jackson, MS 39202

(Phone) 601-914-2658

(Email) Josh.Gordon@cn.ca

Railroad Designer Contact:

Contractor or In-House Employee? Consultant

Josh Gordon
Illinois Central Railroad
2151 North Mill Street
Jackson, MS 39202

(Phone) 601-914-2658

(Email) Josh.Gordon@cn.ca

Railroad Construction Contact:

Contractor or In-House Employee?

In-House Employee

Ashlie Lilies
CN Flagging Desk
Canadian National
17641 South Ashland Ave.

Homewood, IL 60430

(Phone) 248-914-9695

(Email) US_Flagging@cn.ca

KENTUCKY TRANSPORTATION CABINET CONTACTS

(to be provided by KYTC)

KYTC Railroad Coordinator:

Allen Rust, PE
Div. of Right of Way & Utilities
Kentucky Transportation Cabinet
200 Mero Street, 4th Floor East
Frankfort, Kentucky 40622

(Phone) 502-782-4950

(Email) allen.rust@ky.gov

KYTC Construction Procurement Director:

Rachel Mills, Director
Div. of Construction Procurement
Kentucky Transportation Cabinet
200 Mero Street, 3rd Floor West
Frankfort, Kentucky 40622

(Phone) 502-782-5152

(Email) Rachel.Mills@ky.gov

KYTC Construction Director:

Matt Simpson, Director
Division of Construction
Kentucky Transportation Cabinet
200 Mero Street, 3rd Floor West
Frankfort, Kentucky 40622

(Phone) 502-782-5127

(Email) Matt.Simpson@ky.gov



The project specific information provided herein is valid as of the date indicated. However, the specific information may be subject to change due to the normal business operations of all parties. The terms and conditions defined here, and in the bid proposal in its entirety, are inclusive and constant.

CN Request for Flagging Services and Cable Location

Project Information:	
Please fill in each cell for processing	
Is this a new project?	
List CN Project # (Example SO# 123456, Network# R1234, PSC-132):	
Contractor's Right of Entry (ROE), License, Permit #:	
Date of Agreement for ROE, License or Permit:	
Termination Date of Agreement for ROE, License or Permit (If Applicable):	
Does the scope of work include underground, piledriving, excavation or other activities which would require a Railroad Cable Locate? Note: railroad cables and fibers are not part of any state utility locate programs. <b style="color: red;">If a contractor shows up on site to perform work that requires a cable locate and it was not requested, the flagger will shut down the project	
Does your project require vehicular traffic to be shifted out of its intended lane against the current of traffic at a railroad grade crossing?	
Railroad Subsidiary (listed on your agreement):	
Licensee and/or their contractor shall request, prepay, and secure Railroad Company signal facility locates by written notice to Railroad Company along with submission of CN's "Request for Flagging Services" form at least, <b style="color: red;">10 business days in advance of proposed performance of any work or access to Railroad Company property. Notice to Railroad Company does not fulfill or satisfy any other notification requirements for utility locates for non-railroad facilities. <b style="color: red;">You must have an agreement with a CN railroad subsidiary, such as a Right of Entry, Permit, License or Formal Agreement in addition to any necessary flagging before you may enter CN property.	
Flagging Protection Schedule:	
Requested Dates for Flagger Protection: <b style="color: red;">Dates requested are subject to Flagging Co. availability and any project needing a cable locate will need 10 days minimum advance notice. This should be considered when requesting dates for flagging.	
Estimated Duration (in days) for Flagger:	
Estimated Work Schedule (example Mon. – Sat.)	
Daily Start Time / End Time (example 0700 to 1700 etc.): <b style="color: red;">(Flagger start and end time may vary based on type of protection required)	
Flagging Protection Location:	
Railroad Mile Post (MP):	
Railroad Subdivision:	
Project's Location (Street location/intersection):	
Project - City / State:	
Project Description (example HDD, Jack and Bore, Encroachment, Underground or Overhead Pipeline / Wireline crossing, etc.):	
Location for flagger to report:	
Field Contact Person(s):	1 st Alternate
Mobile Phone Number(s):	1 st Alternate
Email Address(s):	

CN REQUEST FOR FLAGGING SERVICES AND CABLE LOCATION

Billing Information:

Company Name:	
Contact Name:	
E-Mail:	
Billing Address:	
City/State:	
ZIP Code:	
Company Phone:	

Electronic Payment Instructions

Payment Information

Financial Institution	HARRIS TRUST AND SAVINGS BANK 311 WEST MONROE, CHICAGO, IL	Customer Number (if available)	
Account Name	Grand Trunk Western	CN Contact	
Account	274-733-5	Service Requested (Flagging MP, Request Date)	
US ROUTING (ABA)	071 000 288		
Remittance Details	nfcashmanagement@cn.ca	Prepayment Amount	

Please send payment remittance details and copy of this flagging request to nfcashmanagement@cn.ca

Before Flagging Service is provided:

CN required online training must be completed before Flagging Protection will be scheduled.
Prepayment must be received before Flagging Protection will be scheduled.
There is an 8-hour minimum per day. The base rate for Flagging Protection is \$1,300 for 10 hours: this includes 2 overtime hours for flagger to set up/take down protection if needed. Additional overtime hour must be prepaid at the rate of \$150.00 per hour. Weekends and Holidays must be prepaid at the overtime rate with a \$1,500.00 / 10 hour minimum. (Rates Effective January 1st, 2021.)
If additional days of flagging protection are required, they must be prepaid in advance.
Any prepayment not used can be refunded.
Railroad Cable Location must be prepaid, the cost is \$350.00 per locate.

This completed form must be sent with a map, confirmation of electronic prepayment, and proof of insurance to US_Flagging@cn.ca

CN Flagging Department

US Flagging
T: 248-914-9695
17641 South Ashland Ave.
Homewood, IL 60430
US_Flagging@cn.ca

I, _____, agree to pay for flagging and/or cable locate services as requested _____
Print Name
Signature

UTILITIES AND RAIL CERTIFICATION NOTE

Carlisle County
FD55 121 9414002U
Mile point: 4.438 TO 4.442
BRIDGE PROJECT IN CARLISLE COUNTY ON (020B00004N) US-51 AT LITTLE MAYFIELD CREEK
ITEM NUMBER: 01-10105.00

PROJECT NOTES ON UTILITIES

Please Note: The information presented in this Utility Note is informational in nature and the information contained herein is not guaranteed.

The contractor will be responsible for contacting all utility facility owners on the subject project to coordinate his activities. The contractor will coordinate his activities to minimize and, where possible, avoid conflicts with utility facilities. Due to the nature of the work proposed, it is unlikely to conflict with the existing utilities beyond minor facility adjustments. Where conflicts with utility facilities are unavoidable, the contractor will coordinate any necessary relocation work with the facility owner and Resident Engineer. The Kentucky Transportation Cabinet maintains the right to remove or alter portions of this contract if a utility conflict occurs. The utility facilities as noted in the previous section(s) have been determined using data garnered by varied means and with varying degrees of accuracy: from the facility owners, a result of S.U.E., field inspections, and/or reviews of record drawings. The facilities defined may not be inclusive of all utilities in the project scope and are not Level A quality, unless specified as such. It is the contractor's responsibility to verify all utilities and their respective locations before excavating.

The contractor shall make every effort to protect underground facilities from damage as prescribed in the Underground Facility Damage Protection Act of 1994, Kentucky Revised Statute KRS 367.4901 to 367.4917. It is the contractor's responsibility to determine and take steps necessary to be in compliance with federal and state damage prevention directives. The contractor is instructed to contact KY 811 for the location of existing underground utilities. Contact shall be made a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor shall submit Excavation Locate Requests to the Kentucky Contact Center (KY 811) via web ticket entry. The submission of this request does not relieve the contractor from the responsibility of contacting non-member facility owners, whom are to be contacted through their individual Protection Notification Center. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area. Non-compliance with these directives can result in the enforcement of penalties.

Utility coordination efforts determined that no significant utility relocation work is required to complete the project. Any work pertaining to these utility facilities is defined in the bid package and is to be carried out as instructed by the Kentucky Transportation Cabinet. The contractor will be responsible for any coordination or adjustments that are discussed or quantified in the proposal

UTILITIES AND RAIL CERTIFICATION NOTE

Carlisle County
FD55 121 9414002U
Mile point: 4.438 TO 4.442
BRIDGE PROJECT IN CARLISLE COUNTY ON (020B00004N) US-51 AT LITTLE MAYFIELD CREEK
ITEM NUMBER: 01-10105.00

NOTE: DO NOT DISTURB THE FOLLOWING FACILITIES LOCATED WITHIN THE PROJECT DISTURB LIMITS

West Kentucky RECC – Electric

- Contractor to coordinate with WKRECC engineering & safety personnel to have lines covered and review crane swing plans prior to construction.

New Commonwealth Natural Gas - Natural Gas

Windstream Communications, LLC - Communication

The Contractor is fully responsible for protection of all utilities listed above

THE FOLLOWING FACILITY OWNERS ARE RELOCATING/ADJUSTING THEIR FACILITIES WITHIN THE PROJECT LIMITS AND WILL BE COMPLETE PRIOR TO CONSTRUCTION

Not Applicable

THE FOLLOWING FACILITY OWNERS HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE OWNER OR THEIR SUBCONTRACTOR AND IS TO BE COORDINATED WITH THE ROAD CONTRACT

Not Applicable

THE FOLLOWING FACILITY OWNERS HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE ROAD CONTRACTOR AS INCLUDED IN THIS CONTRACT

Not Applicable

RAIL COMPANIES HAVE FACILITIES IN CONJUNCTION WITH THIS PROJECT AS NOTED

No Rail Involvement Rail Involved Rail Adjacent

UTILITIES AND RAIL CERTIFICATION NOTE

Carlisle County
FD55 121 9414002U
Mile point: 4.438 TO 4.442
BRIDGE PROJECT IN CARLISLE COUNTY ON (020B00004N) US-51 AT LITTLE MAYFIELD CREEK
ITEM NUMBER: 01-10105.00

AREA FACILITY OWNER CONTACT LIST

Facility Owner	Address	Contact Name	Phone	Email
New Commonwealth Natural Gas - Natural Gas	311 Court Street Wickliffe, KY 42087	Corey Damron	270-335-3116	newcommonwealthgas@brtc.net
West Kentucky RECC - Electric	1218 West Broadway Mayfield, KY 42006	Ricky Binkley	270-705-1295	rbinkley@wkrecc.com
Windstream Communications, LLC - Communication	932 Citation Blvd. Lexington, KY 40511	Steve Johnson	859-321-2035	steve.johnson@windstream.com

UTILITIES AND RAIL CERTIFICATION NOTE

<p style="text-align: center;">Graves County No federal number available FD55 121 9414002U Mile point: 1.796 TO 1.804 BRIDGE PROJECT IN GRAVES COUNTY ON (042B00090N) US-45 AT JACKSON CREEK ITEM NUMBER: 01-10128.00</p>

PROJECT NOTES ON UTILITIES

The contractor should be aware that there is UTILITY WORK INCLUDED IN THIS ROAD CONSTRUCTION CONTRACT. The Contractor shall review the GENERAL UTILITY NOTES AND INSTRUCTIONS which may include KYTC Utility Bid Item Descriptions, utility owner supplied specifications, plans, list of utility owner preapproved subcontractors, and other instructions. Utility contractors may be added via addendum if KYTC is instructed to do so by the utility owner. Potential contractors must seek prequalification from the utility owner. Any revisions must be sent from the utility owner to KYTC a minimum of one week prior to bid opening.

For all projects under 2000 Linear feet which require a normal excavation locate request pursuant to KRS 367.4901-4917, the awarded contractor shall field mark the proposed excavation or construction boundaries of the project (also called white lining) using the procedure set forth in KRS 367.4909(9)(k). For all projects over 2000 linear feet, which are defined as a "Large Project" in KRS 367.4903(18), the awarded contractor shall initially mark the first 2000 linear feet minimally of proposed excavation or construction boundaries of the project to be worked using the procedure set forth in KRS 367.4909(9)(k). This temporary field locating of the project excavation boundary shall take place prior to submitting an excavation location request to the underground utility protection Kentucky Contact Center. For large projects, the awarded contractor shall work with the impacted utilities to determine when additional white lining of the remainder of the project site will take place. This provision shall not alter or relieve the awarded contractor from complying with requirements of KRS 367.4905 to 367.4917 in their entirety.

Please Note: The information presented in this Utility Note is informational in nature and the information contained herein is not guaranteed.

The contractor will be responsible for contacting all utility facility owners on the subject project to coordinate his activities. The contractor will coordinate his activities to minimize and, where possible, avoid conflicts with utility facilities. Due to the nature of the work proposed, it is unlikely to conflict with the existing utilities beyond minor facility adjustments. Where conflicts with utility facilities are unavoidable, the contractor will coordinate any necessary relocation work with the facility owner and Resident Engineer. The Kentucky Transportation Cabinet maintains the right to remove or alter portions of this contract if a utility conflict occurs. The utility facilities as noted in the previous section(s) have been determined using data garnered by varied means and with varying degrees of accuracy: from the

UTILITIES AND RAIL CERTIFICATION NOTE

Graves County
No federal number available
FD55 121 9414002U
Mile point: 1.796 TO 1.804
BRIDGE PROJECT IN GRAVES COUNTY ON (042B00090N) US-45 AT JACKSON CREEK
ITEM NUMBER: 01-10128.00

facility owners, a result of S.U.E., field inspections, and/or reviews of record drawings. The facilities defined may not be inclusive of all utilities in the project scope and are not Level A quality, unless specified as such. It is the contractor's responsibility to verify all utilities and their respective locations before excavating.

The contractor shall make every effort to protect underground facilities from damage as prescribed in the Underground Facility Damage Protection Act of 1994, Kentucky Revised Statute KRS 367.4901 to 367.4917. It is the contractor's responsibility to determine and take steps necessary to be in compliance with federal and state damage prevention directives. The contractor is instructed to contact KY 811 for the location of existing underground utilities. Contact shall be made a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor shall submit Excavation Locate Requests to the Kentucky Contact Center (KY 811) via web ticket entry. The submission of this request does not relieve the contractor from the responsibility of contacting non-member facility owners, whom are to be contacted through their individual Protection Notification Center. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area. Non-compliance with these directives can result in the enforcement of penalties.

NOTE: DO NOT DISTURB THE FOLLOWING FACILITIES LOCATED WITHIN THE PROJECT DISTURB LIMITS

AT&T KY - Communication

Mayfield Electric and Water System - Water

The Contractor is fully responsible for protection of all utilities listed above

THE FOLLOWING FACILITY OWNERS ARE RELOCATING/ADJUSTING THEIR FACILITIES WITHIN THE PROJECT LIMITS AND WILL BE COMPLETE PRIOR TO CONSTRUCTION

Not Applicable

THE FOLLOWING FACILITY OWNERS HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE OWNER OR THEIR SUBCONTRACTOR AND IS TO BE COORDINATED WITH THE ROAD CONTRACT

UTILITIES AND RAIL CERTIFICATION NOTE

Graves County
No federal number available
FD55 121 9414002U
Mile point: 1.796 TO 1.804
BRIDGE PROJECT IN GRAVES COUNTY ON (042B00090N) US-45 AT JACKSON CREEK
ITEM NUMBER: 01-10128.00

Not Applicable

THE FOLLOWING FACILITY OWNERS HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE ROAD CONTRACTOR AS INCLUDED IN THIS CONTRACT

West Kentucky & Tennessee Telecommunications Coop – Telephone

- The proposed relocation will require the following:
 - o 440 LNFT of directional drilling
 - o Installation/pulling of 540 LNFT of fiber optic cable in the proposed innerduct placed via directional drilling.
 - o Drilling through pockets of heavy rock or gravel in bottom of creek
 - o Installation of two (2) each flush mount hand holes
 - o Splicing of proposed fiber optic line to existing fiber optic line

- WK&T has two (2) buried fiber optic lines running parallel to the existing roadway and bridge structure. The existing fiber optic line the furthest northeast of the proposed bridge and roadway shall not be disturbed under any circumstance.
- Roadway Contractor shall schedule and participate in an onsite pre-construction meeting with WK&T prior to the commencement of construction.
- Roadway Contractor shall locate and pothole the existing WK&T fiber optic lines prior to beginning of any excavation.
- WK&T will provide an onsite representative to be present during the excavation around their fiber lines upon request at least 2 days in advance from the Roadway Contractor.
- WK&T shall provide all materials for relocation to the selected subcontractor prior to the commencement of the relocation work. This material includes but is not limited to: Corning 96 Strand Fiber, Hubble 24x36x24 Vaults, PLP Coyote One Splice Closures, Duraline 1.25" Innerduct, and all other miscellaneous and necessary appurtenances.
- Roadway Contractor shall subcontract relocation work to one of the WK&T prequalified preferred contractors as shown below for the fiber optic relocation.

UTILITIES AND RAIL CERTIFICATION NOTE

<p style="text-align: center;">Graves County No federal number available FD55 121 9414002U Mile point: 1.796 TO 1.804 BRIDGE PROJECT IN GRAVES COUNTY ON (042B00090N) US-45 AT JACKSON CREEK ITEM NUMBER: 01-10128.00</p>

1. Fiberworks Installation and Repair
Contact Name: Adam Elliot
Email: Adam.fiberworks@gmail.com
Phone: (270) 970-0670
2424 County Road 1024
Cunningham, KY 42035-9300
2. OBT Construction
Contact Name: David Bell
Email: david.bell@frontiernet.net
Phone: (731) 431-9428
P.O. Box 908
Martin, TN 38237
3. Star Construction
Contact Name: Gerald Hedden
Email: Gerald.hedden@star-llc.net
Phone: (828) 557-6285
6621 Asheville Hwy
Knoxville, TN 37924

RAIL COMPANIES HAVE FACILITIES IN CONJUNCTION WITH THIS PROJECT AS NOTED

No Rail Involvement Rail Involved Rail Adjacent

UTILITIES AND RAIL CERTIFICATION NOTE

Graves County
No federal number available
FD55 121 9414002U
Mile point: 1.796 TO 1.804
BRIDGE PROJECT IN GRAVES COUNTY ON (042B00090N) US-45 AT JACKSON CREEK
ITEM NUMBER: 01-10128.00

AREA FACILITY OWNER CONTACT LIST

Facility Owner	Address	Contact Name	Phone	Email
AT&T KY - Communication	810 Kentucky Avenue Paducah, KY 42003	Alan Shelby	270-444-5048	as7168@att.com
Mayfield Electric and Water System - Water	301 East Broadway Mayfield, KY 42066	Brent Shultz	270-705-8661	kleonard@mewsbb.com
West Kentucky & Tennessee Telecommunications Coop - Telephone	100 WK&T Technology Drive Mayfield, KY 42066	Darren Duke	270-970-2307	dduke@mywkt.coop

NOTICE

**DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
NATIONWIDE SECTION 404 PERMIT AUTHORIZATION**

**DEPARTMENT FOR ENVIRONMENTAL PROTECTION
KENTUCKY DIVISION OF WATER
SECTION 401 GENERAL WATER QUALITY CERTIFICATION**

The replacement of US 51 over Caddle Creek (Bridge 020B00002N) will entail complete removal of the existing bridge and construction of a new bridge without load restrictions. The project will replace the bridge in the same location with generally the same current geometrics (bridge width, length, hydraulic opening, etc.) to avoid environmental impacts, utility impacts, and minimize the need for new right of way. Approach roadway pavement will be replaced in the direct vicinity of the bridge. The new structure will be wider to accommodate a 12-ft driving lane and a 4-ft shoulder in each direction. The new structure will be constructed part-width to accommodate existing traffic.

Location	Description of Project Impacts
US-51 Bridge over Caddle Creek from MP 1.678 to MP 1.777	The proposed project will impact approximately 83 ft (0.04 ac) of Caddle Creek, a perennial stream approximately 20 ft wide at US-51, and approximately 287 ft of four unnamed, ephemeral tributaries approximately 2 ft wide at US-51.

Impacts to jurisdictional Waters of the United States as defined by the US Army Corps of Engineers and surface waters of the Commonwealth defined pursuant to 401 KAR Chapter 10 are authorized under Section 404 Nationwide Permit (NWP) #3 for maintenance associated with the repair, rehabilitation, replacement or removal of any previously authorized, currently serviceable structure or fill.

The Kentucky Division of Water has conditionally certified the use of NWP #3 provided the conditions of the attached General Certification are met. One such condition limits the use or operation of heavy equipment within the stream channel. In those instances in which such in-stream work is unavoidable, a work platform or temporary crossing constructed with clean rock and sufficient pipe to allow stream flow to continue, unimpeded, shall be used.

To expedite construction, the Contractor may elect to alter the design, or perform the work in a manner different from what was originally proposed and specified. Prior to commencing such alternative work, the Contractor shall obtain written permission from the Division of Construction and the Kentucky Transportation Cabinet, Division of Environmental Analysis (DEA). If such changes result in additional impacts to jurisdictional Waters of the United States, the Contractor will be responsible for coordinating directly with the US Army Corps of Engineers and Kentucky Division of Water to secure the requisite authorization. Copies of all correspondence to or from either agency shall be forwarded to DEA Director Danny Peake at 200 Mero Street, Frankfort, KY 40601, Phone (502) 564-7250.

The Contractor shall post a copy of this Notice in a conspicuous location at the project site, with unencumbered public access for the duration of the construction.



ANDY BESHEAR
GOVERNOR

REBECCA W. GOODMAN
SECRETARY

**ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION**

ANTHONY R. HATTON
COMMISSIONER

300 SOWER BOULEVARD
FRANKFORT, KENTUCKY 40601

General Certification--Nationwide Permits (NWP)

NWP 3 – Maintenance
NWP 5 – Scientific Measurement Devices
NWP 7 – Outfall Structures and Associated Intake Structures
NWP 23 – Approved Categorical Exclusions
NWP 25 – Structural Discharges
NWP 30 – Moist Soil Management for Wildlife
NWP 31 – Maintenance of Existing Flood Control Facilities
NWP 45 – Repair of Uplands Damaged by Discrete Events
NWP 46 – Discharges in Ditches
NWP 59 – Water Reclamation and Reuse Facilities

This General Certification is issued **December 18, 2020**, in conformity with the requirements of Section 401 of the Clean Water Act of 1977, as amended (33 U.S.C. §1341), as well as Kentucky Statute KRS 224.16-050.

For this General Certification and all General Certifications of Nationwide Permits (NWP), the term 'surface water' is defined pursuant to 401 KAR Chapter 10, Section 1(72): Surface Waters means those waters having well-defined banks and beds, either constantly or intermittently flowing; lakes and impounded waters; marshes and wetlands; and any subterranean waters flowing in well-defined channels and having a demonstrable hydrologic connection with the surface. Lagoons used for waste treatment and effluent ditches that are situated on property owned, leased, or under valid easement by a permitted discharger are not considered to be surface waters of the Commonwealth.

As required by 40 CFR Part 121 – State Certification of Activities Requiring a Federal License or Permit, all conditions include a statement explaining why the condition is necessary to assure that any discharge authorized under the general permit will comply with water quality requirements and a citation to federal, state, or tribal law that authorizes the condition. The statements and citations are included with each condition. The

General Certification--Nationwide Permits 3, 5, 7, 23, 25, 30, 31, 45, 46, and 59.

Page 2

statements are written entirely at the end of the certification under the section *Statements of Necessity*.

The Commonwealth of Kentucky hereby certifies under Section 401 of the Clean Water Act (CWA) that it has reasonable assurances that applicable water quality standards under Kentucky Administrative Regulations Title 401, Chapter 10, established pursuant to Sections 301, 302, 303, 306 and 307 of the CWA, will not be violated for the activities covered by the above listed Nationwide Permits, provided that the conditions in this General Certification are met. Activities that do not meet the conditions of this General Certification require an Individual Section 401 Water Quality Certification.

1. Activities occurring within surface waters assessed by the Kentucky Division of Water as designated Outstanding State Resource Waters, National Resource Waters, Cold Water Aquatic Habitat, Exceptional Waters, or identified as candidate Outstanding State Resource Waters or candidate Exceptional Waters are not authorized under this General Certification and require an Individual Certification. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(1), Section 1(2), & Section 1(3); and 401 KAR 10:031, Section 4(2) & Section 8]
2. Activities impacting surface waters assessed by the Kentucky Division of Water as impaired for warm water or cold water aquatic habitat where the parameter or source is related to habitat* are not authorized under this General Certification and require an Individual Certification. [Statement B and citations KRS 224.70-110 and 401 KAR 10:031, Section 2 & Section 4]

*These include waters impaired by the parameter 'habitat assessment', 'combined biota/habitat bioassessment' or any parameter from the parameter group 'habitat alterations, and/or waters where the parameter identified as a cause of impairment has a source from the source group 'habitat impacts'.
3. Activities impacting surface waters assessed by the Kentucky Division of Water as full support for warm water or cold water aquatic habitat are not authorized under this General Certification and require an Individual Certification. [Statements A and B and citations KRS 224.70-110 and 401 KAR 10:031, Section 2 & Section 4]
4. The activity will not occur within surface waters identified as perpetually-protected mitigation sites (e.g., deed restriction or conservation easement). [Statement C and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3); and 40 C.F.R. 230.97]
5. Activities with cumulative temporary and permanent impacts greater than 1/2 acre of wetland or 300 linear feet of surface waters are not authorized under this General Certification and require an Individual Certification. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

General Certification--Nationwide Permits 3, 5, 7, 23, 25, 30, 31, 45, 46, and 59.
Page 3

6. Stream relocation, realignment, straightening, and/or widening are not authorized under this General Certification and require an Individual Certification. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
7. The use of creek rock for bank stabilization; grouted rip-rap; unformed, poured grout; unformed, poured concrete; poured asphalt; or asphalt pieces is not authorized under this General Certification and requires an Individual Certification. Poured concrete or grout will be authorized under this General Certification when contained by tightly sealed forms or cells. Equipment shall not discharge waste washwater into surface waters at any time without adequate wastewater treatments. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
8. New stormwater detention/ retention basins constructed in surface waters or modifications to stormwater detention/ retention basins resulting in the reduction in reach or that cause impairment of flow of surface waters are not authorized under this General Certification and require an Individual Certification. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
9. Erosion and sedimentation pollution control plans and Best Management Practices (BMPs) must be designed, installed, and maintained in effective operating condition at all times during construction activities so that violations of state water quality standards do not occur. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
10. Sediment and erosion control measures, such as check-dams constructed of any material, silt fencing, hay bales, etc., shall not be placed within surface waters, either temporarily or permanently, without prior approval by the Kentucky Division of Water's Water Quality Certification Section. If placement of sediment and erosion control measures in surface waters is unavoidable, design and placement of temporary erosion control measures shall not be conducted in such a manner that may result in instability of streams that are adjacent to, upstream, or downstream of the structures. All sediment and erosion control devices shall be removed and the natural grade restored within the completion timeline of the activities. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
11. Measures shall be taken to prevent or control spills of fuels, lubricants, or other toxic materials used in construction from entering surface waters. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

General Certification--Nationwide Permits 3, 5, 7, 23, 25, 30, 31, 45, 46, and 59.
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12. Removal of riparian vegetation shall be limited to that necessary for equipment access. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
13. To the maximum extent practicable, all in-stream work under this certification shall be performed under low-flow conditions. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
14. Heavy equipment (e.g., bulldozers, backhoes, and draglines), if required for this project, should not be used or operated within the stream channel. In those instances in which such in-stream work is unavoidable, then it shall be performed in such a manner and duration as to minimize turbidity and disturbance to substrates and bank or riparian vegetation. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
15. Any fill shall be of such composition that it will not adversely affect the biological, chemical, or physical properties of the receiving waters and/or cause violations of water quality standards. If rip-rap is utilized, it should be of such weight and size that bank stress or slump conditions will not be created because of its placement. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
16. If domestic water supply intakes are located downstream that may be affected by increased turbidity and suspended solids, the permittee shall notify the operator when such work will be done prior to construction. [Statement E and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
17. Should evidence of stream pollution or jurisdictional wetland impairment and/or violations of water quality standards occur as a result of this activity (either from a spill or other forms of water pollution), the Kentucky Division of Water shall be notified immediately by calling (800) 928-2380. [Statement A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
18. The Kentucky Division of Water requires submission of a formal application for any federal applicant that is not required to submit a Preconstruction Notification that would typically be required of any non-federal applicant. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
19. The Kentucky Division of Water may require submission of a formal application for an Individual Certification for any project that has been determined to likely have a significant adverse effect upon water quality or degrade surface waters so that

General Certification--Nationwide Permits 3, 5, 7, 23, 25, 30, 31, 45, 46, and 59.
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existing uses of the water body or downstream waters are precluded. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

20. If the final issued General Permit for Nationwide Permits 3, 5, 7, 23, 25, 29, 30, 31, 39, 42, 45, 46, 51, or E changes significantly, the Division of Water may opt to deny certification for this permit. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

Statements of Necessity:

- A. This condition is necessary to protect waters categorized under the anti-degradation policy to protect the designated and existing uses and to maintain the associated water quality criteria necessary to protect these water resources.
- B. This condition is necessary to protect existing uses and the level of water quality necessary to protect those existing uses shall be assured in impaired water.
- C. This condition is necessary for long-term protection of compensatory mitigation sites.
- D. This condition is necessary to provide for the prevention, abatement, and control of all water pollution and to conserve water resources for legitimate uses, safeguard from pollution the uncontaminated waters, prevent the creation of any new pollution, and abate any existing pollution.
- E. This condition is necessary to protect domestic water supply use.
- F. This condition is necessary to evaluate, develop, and improve best-management practices in conservation plans, compliance plans, and forest stewardship management plans; establish statewide and regional agriculture water quality plans; and otherwise promote soil and water conservation activities that protect surface waters from the adverse impacts of agriculture operations within the Commonwealth.

Violation of Kentucky state water quality standards may result in civil penalties and remediation actions.

For assistance contact the Kentucky Division of Water, Water Quality Certification Section by email (401WQC@ky.gov) or by phone (502)-564-3410.

NOTICE

**DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
NATIONWIDE SECTION 404 PERMIT AUTHORIZATION**

**DEPARTMENT FOR ENVIRONMENTAL PROTECTION
KENTUCKY DIVISION OF WATER
SECTION 401 GENERAL WATER QUALITY CERTIFICATION**

The replacement of US-51 over Little Mayfield Creek involves complete removal of the existing bridge 020B00004N and construction of a new bridge in the same location without load restrictions and a design life of at least 75 years. The new US-51 over Little Mayfield Creek Road structure will be similar to the existing structure and will be located within the existing alignments. The new structure will be wider to accommodate a 12-ft driving lane and a 4-ft shoulder in each direction. The new structure will be constructed part-width to accommodate existing traffic.

Location	Description of Project Impacts
US-51 Bridge over Little Mayfield Creek from MP 4.272 to MP 4.518	The proposed project will impact approximately 192 ft (0.05 ac) of Little Mayfield Creek, an intermittent stream approximately 12 ft wide at US-51.

Impacts to jurisdictional Waters of the United States as defined by the US Army Corps of Engineers and surface waters of the Commonwealth defined pursuant to 401 KAR Chapter 10 are authorized under Section 404 Nationwide Permit (NWP) #3 for maintenance associated with the repair, rehabilitation, replacement or removal of any previously authorized, currently serviceable structure or fill.

The Kentucky Division of Water has conditionally certified the use of NWP #3 provided the conditions of the attached General Certification are met. One such condition limits the use or operation of heavy equipment within the stream channel. In those instances in which such in-stream work is unavoidable, a work platform or temporary crossing constructed with clean rock and sufficient pipe to allow stream flow to continue, unimpeded, shall be used.

To expedite construction, the Contractor may elect to alter the design, or perform the work in a manner different from what was originally proposed and specified. Prior to commencing such alternative work, the Contractor shall obtain written permission from the Division of Construction and the Kentucky Transportation Cabinet, Division of Environmental Analysis (DEA). If such changes result in additional impacts to jurisdictional Waters of the United States, the Contractor will be responsible for coordinating directly with the US Army Corps of Engineers and Kentucky Division of Water to secure the requisite authorization. Copies of all correspondence to or from either agency shall be forwarded to DEA Director Danny Peake at 200 Mero Street, Frankfort, KY 40601, Phone (502) 564-7250.

The Contractor shall post a copy of this Notice in a conspicuous location at the project site, with unencumbered public access for the duration of the construction.



ANDY BESHEAR
GOVERNOR

REBECCA W. GOODMAN
SECRETARY

**ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION**

ANTHONY R. HATTON
COMMISSIONER

300 SOWER BOULEVARD
FRANKFORT, KENTUCKY 40601

General Certification--Nationwide Permits (NWP)

NWP 3 – Maintenance
NWP 5 – Scientific Measurement Devices
NWP 7 – Outfall Structures and Associated Intake Structures
NWP 23 – Approved Categorical Exclusions
NWP 25 – Structural Discharges
NWP 30 – Moist Soil Management for Wildlife
NWP 31 – Maintenance of Existing Flood Control Facilities
NWP 45 – Repair of Uplands Damaged by Discrete Events
NWP 46 – Discharges in Ditches
NWP 59 – Water Reclamation and Reuse Facilities

This General Certification is issued **December 18, 2020**, in conformity with the requirements of Section 401 of the Clean Water Act of 1977, as amended (33 U.S.C. §1341), as well as Kentucky Statute KRS 224.16-050.

For this General Certification and all General Certifications of Nationwide Permits (NWP), the term 'surface water' is defined pursuant to 401 KAR Chapter 10, Section 1(72): Surface Waters means those waters having well-defined banks and beds, either constantly or intermittently flowing; lakes and impounded waters; marshes and wetlands; and any subterranean waters flowing in well-defined channels and having a demonstrable hydrologic connection with the surface. Lagoons used for waste treatment and effluent ditches that are situated on property owned, leased, or under valid easement by a permitted discharger are not considered to be surface waters of the Commonwealth.

As required by 40 CFR Part 121 – State Certification of Activities Requiring a Federal License or Permit, all conditions include a statement explaining why the condition is necessary to assure that any discharge authorized under the general permit will comply with water quality requirements and a citation to federal, state, or tribal law that authorizes the condition. The statements and citations are included with each condition. The

General Certification--Nationwide Permits 3, 5, 7, 23, 25, 30, 31, 45, 46, and 59.

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statements are written entirely at the end of the certification under the section *Statements of Necessity*.

The Commonwealth of Kentucky hereby certifies under Section 401 of the Clean Water Act (CWA) that it has reasonable assurances that applicable water quality standards under Kentucky Administrative Regulations Title 401, Chapter 10, established pursuant to Sections 301, 302, 303, 306 and 307 of the CWA, will not be violated for the activities covered by the above listed Nationwide Permits, provided that the conditions in this General Certification are met. Activities that do not meet the conditions of this General Certification require an Individual Section 401 Water Quality Certification.

1. Activities occurring within surface waters assessed by the Kentucky Division of Water as designated Outstanding State Resource Waters, National Resource Waters, Cold Water Aquatic Habitat, Exceptional Waters, or identified as candidate Outstanding State Resource Waters or candidate Exceptional Waters are not authorized under this General Certification and require an Individual Certification. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(1), Section 1(2), & Section 1(3); and 401 KAR 10:031, Section 4(2) & Section 8]
2. Activities impacting surface waters assessed by the Kentucky Division of Water as impaired for warm water or cold water aquatic habitat where the parameter or source is related to habitat* are not authorized under this General Certification and require an Individual Certification. [Statement B and citations KRS 224.70-110 and 401 KAR 10:031, Section 2 & Section 4]

*These include waters impaired by the parameter 'habitat assessment', 'combined biota/habitat bioassessment' or any parameter from the parameter group 'habitat alterations, and/or waters where the parameter identified as a cause of impairment has a source from the source group 'habitat impacts'.
3. Activities impacting surface waters assessed by the Kentucky Division of Water as full support for warm water or cold water aquatic habitat are not authorized under this General Certification and require an Individual Certification. [Statements A and B and citations KRS 224.70-110 and 401 KAR 10:031, Section 2 & Section 4]
4. The activity will not occur within surface waters identified as perpetually-protected mitigation sites (e.g., deed restriction or conservation easement). [Statement C and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3); and 40 C.F.R. 230.97]
5. Activities with cumulative temporary and permanent impacts greater than 1/2 acre of wetland or 300 linear feet of surface waters are not authorized under this General Certification and require an Individual Certification. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

General Certification--Nationwide Permits 3, 5, 7, 23, 25, 30, 31, 45, 46, and 59.
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6. Stream relocation, realignment, straightening, and/or widening are not authorized under this General Certification and require an Individual Certification. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
7. The use of creek rock for bank stabilization; grouted rip-rap; unformed, poured grout; unformed, poured concrete; poured asphalt; or asphalt pieces is not authorized under this General Certification and requires an Individual Certification. Poured concrete or grout will be authorized under this General Certification when contained by tightly sealed forms or cells. Equipment shall not discharge waste washwater into surface waters at any time without adequate wastewater treatments. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
8. New stormwater detention/ retention basins constructed in surface waters or modifications to stormwater detention/ retention basins resulting in the reduction in reach or that cause impairment of flow of surface waters are not authorized under this General Certification and require an Individual Certification. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
9. Erosion and sedimentation pollution control plans and Best Management Practices (BMPs) must be designed, installed, and maintained in effective operating condition at all times during construction activities so that violations of state water quality standards do not occur. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
10. Sediment and erosion control measures, such as check-dams constructed of any material, silt fencing, hay bales, etc., shall not be placed within surface waters, either temporarily or permanently, without prior approval by the Kentucky Division of Water's Water Quality Certification Section. If placement of sediment and erosion control measures in surface waters is unavoidable, design and placement of temporary erosion control measures shall not be conducted in such a manner that may result in instability of streams that are adjacent to, upstream, or downstream of the structures. All sediment and erosion control devices shall be removed and the natural grade restored within the completion timeline of the activities. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
11. Measures shall be taken to prevent or control spills of fuels, lubricants, or other toxic materials used in construction from entering surface waters. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

General Certification--Nationwide Permits 3, 5, 7, 23, 25, 30, 31, 45, 46, and 59.
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12. Removal of riparian vegetation shall be limited to that necessary for equipment access. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
13. To the maximum extent practicable, all in-stream work under this certification shall be performed under low-flow conditions. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
14. Heavy equipment (e.g., bulldozers, backhoes, and draglines), if required for this project, should not be used or operated within the stream channel. In those instances in which such in-stream work is unavoidable, then it shall be performed in such a manner and duration as to minimize turbidity and disturbance to substrates and bank or riparian vegetation. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
15. Any fill shall be of such composition that it will not adversely affect the biological, chemical, or physical properties of the receiving waters and/or cause violations of water quality standards. If rip-rap is utilized, it should be of such weight and size that bank stress or slump conditions will not be created because of its placement. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
16. If domestic water supply intakes are located downstream that may be affected by increased turbidity and suspended solids, the permittee shall notify the operator when such work will be done prior to construction. [Statement E and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
17. Should evidence of stream pollution or jurisdictional wetland impairment and/or violations of water quality standards occur as a result of this activity (either from a spill or other forms of water pollution), the Kentucky Division of Water shall be notified immediately by calling (800) 928-2380. [Statement A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
18. The Kentucky Division of Water requires submission of a formal application for any federal applicant that is not required to submit a Preconstruction Notification that would typically be required of any non-federal applicant. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
19. The Kentucky Division of Water may require submission of a formal application for an Individual Certification for any project that has been determined to likely have a significant adverse effect upon water quality or degrade surface waters so that

General Certification--Nationwide Permits 3, 5, 7, 23, 25, 30, 31, 45, 46, and 59.
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existing uses of the water body or downstream waters are precluded. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

20. If the final issued General Permit for Nationwide Permits 3, 5, 7, 23, 25, 29, 30, 31, 39, 42, 45, 46, 51, or E changes significantly, the Division of Water may opt to deny certification for this permit. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

Statements of Necessity:

- A. This condition is necessary to protect waters categorized under the anti-degradation policy to protect the designated and existing uses and to maintain the associated water quality criteria necessary to protect these water resources.
- B. This condition is necessary to protect existing uses and the level of water quality necessary to protect those existing uses shall be assured in impaired water.
- C. This condition is necessary for long-term protection of compensatory mitigation sites.
- D. This condition is necessary to provide for the prevention, abatement, and control of all water pollution and to conserve water resources for legitimate uses, safeguard from pollution the uncontaminated waters, prevent the creation of any new pollution, and abate any existing pollution.
- E. This condition is necessary to protect domestic water supply use.
- F. This condition is necessary to evaluate, develop, and improve best-management practices in conservation plans, compliance plans, and forest stewardship management plans; establish statewide and regional agriculture water quality plans; and otherwise promote soil and water conservation activities that protect surface waters from the adverse impacts of agriculture operations within the Commonwealth.

Violation of Kentucky state water quality standards may result in civil penalties and remediation actions.

For assistance contact the Kentucky Division of Water, Water Quality Certification Section by email (401WQC@ky.gov) or by phone (502)-564-3410.

NOTICE

**DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
NATIONWIDE SECTION 404 PERMIT AUTHORIZATION**

**DEPARTMENT FOR ENVIRONMENTAL PROTECTION
KENTUCKY DIVISION OF WATER
SECTION 401 GENERAL WATER QUALITY CERTIFICATION**

The replacement of US 45 over Jackson Creek (Bridge 042B00090N) will entail complete removal of the existing bridge and construction of a new bridge without load restrictions. The project will replace the bridge in the same location with generally the same current geometrics (bridge width, length, hydraulic opening, etc.) to avoid environmental impacts, utility impacts, and minimize the need for new right of way. Approach roadway pavement will be replaced in the direct vicinity of the bridge. The bridge will be completely closed to through traffic during construction and existing traffic will be detoured on nearby roads. There will not be an on-site diversion. Right of way and temporary construction easements will be required.

Location	Description of Project Impacts
US 45 over Jackson Creek at MP 2.9	The project will impact approximately 33 ft (0.02 ac) of Jackson Creek, a perennial stream approximately 31 ft wide at the US 45 intersect.

Impacts to jurisdictional Waters of the United States as defined by the US Army Corps of Engineers and surface waters of the Commonwealth defined pursuant to 401 KAR Chapter 10 are authorized under Section 404 Nationwide Permit (NWP) #3 for maintenance associated with the repair, rehabilitation, replacement or removal of any previously authorized, currently serviceable structure or fill.

The Kentucky Division of Water has conditionally certified the use of NWP #3 provided the conditions of the attached General Certification are met. One such condition limits the use or operation of heavy equipment within the stream channel. In those instances in which such in-stream work is unavoidable, a work platform or temporary crossing constructed with clean rock and sufficient pipe to allow stream flow to continue, unimpeded, shall be used.

To expedite construction, the Contractor may elect to alter the design, or perform the work in a manner different from what was originally proposed and specified. Prior to commencing such alternative work, the Contractor shall obtain written permission from the Division of Construction and the Kentucky Transportation Cabinet, Division of Environmental Analysis (DEA). If such changes result in additional impacts to jurisdictional Waters of the United States, the Contractor will be responsible for coordinating directly with the US Army Corps of Engineers and Kentucky Division of Water to secure the requisite authorization. Copies of all correspondence to or from either agency shall be forwarded to DEA Director Danny Peake at 200 Mero Street, Frankfort, KY 40601, Phone (502) 564-7250.

The Contractor shall post a copy of this Notice in a conspicuous location at the project site, with unencumbered public access for the duration of the construction.



ANDY BESHEAR
GOVERNOR

REBECCA W. GOODMAN
SECRETARY

**ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION**

ANTHONY R. HATTON
COMMISSIONER

300 SOWER BOULEVARD
FRANKFORT, KENTUCKY 40601

General Certification--Nationwide Permits (NWP)

NWP 3 – Maintenance
NWP 5 – Scientific Measurement Devices
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NWP 31 – Maintenance of Existing Flood Control Facilities
NWP 45 – Repair of Uplands Damaged by Discrete Events
NWP 46 – Discharges in Ditches
NWP 59 – Water Reclamation and Reuse Facilities

This General Certification is issued **December 18, 2020**, in conformity with the requirements of Section 401 of the Clean Water Act of 1977, as amended (33 U.S.C. §1341), as well as Kentucky Statute KRS 224.16-050.

For this General Certification and all General Certifications of Nationwide Permits (NWP), the term 'surface water' is defined pursuant to 401 KAR Chapter 10, Section 1(72): Surface Waters means those waters having well-defined banks and beds, either constantly or intermittently flowing; lakes and impounded waters; marshes and wetlands; and any subterranean waters flowing in well-defined channels and having a demonstrable hydrologic connection with the surface. Lagoons used for waste treatment and effluent ditches that are situated on property owned, leased, or under valid easement by a permitted discharger are not considered to be surface waters of the Commonwealth.

As required by 40 CFR Part 121 – State Certification of Activities Requiring a Federal License or Permit, all conditions include a statement explaining why the condition is necessary to assure that any discharge authorized under the general permit will comply with water quality requirements and a citation to federal, state, or tribal law that authorizes the condition. The statements and citations are included with each condition. The

General Certification--Nationwide Permits 3, 5, 7, 23, 25, 30, 31, 45, 46, and 59.

Page 2

statements are written entirely at the end of the certification under the section *Statements of Necessity*.

The Commonwealth of Kentucky hereby certifies under Section 401 of the Clean Water Act (CWA) that it has reasonable assurances that applicable water quality standards under Kentucky Administrative Regulations Title 401, Chapter 10, established pursuant to Sections 301, 302, 303, 306 and 307 of the CWA, will not be violated for the activities covered by the above listed Nationwide Permits, provided that the conditions in this General Certification are met. Activities that do not meet the conditions of this General Certification require an Individual Section 401 Water Quality Certification.

1. Activities occurring within surface waters assessed by the Kentucky Division of Water as designated Outstanding State Resource Waters, National Resource Waters, Cold Water Aquatic Habitat, Exceptional Waters, or identified as candidate Outstanding State Resource Waters or candidate Exceptional Waters are not authorized under this General Certification and require an Individual Certification. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(1), Section 1(2), & Section 1(3); and 401 KAR 10:031, Section 4(2) & Section 8]
2. Activities impacting surface waters assessed by the Kentucky Division of Water as impaired for warm water or cold water aquatic habitat where the parameter or source is related to habitat* are not authorized under this General Certification and require an Individual Certification. [Statement B and citations KRS 224.70-110 and 401 KAR 10:031, Section 2 & Section 4]

*These include waters impaired by the parameter 'habitat assessment', 'combined biota/habitat bioassessment' or any parameter from the parameter group 'habitat alterations, and/or waters where the parameter identified as a cause of impairment has a source from the source group 'habitat impacts'.
3. Activities impacting surface waters assessed by the Kentucky Division of Water as full support for warm water or cold water aquatic habitat are not authorized under this General Certification and require an Individual Certification. [Statements A and B and citations KRS 224.70-110 and 401 KAR 10:031, Section 2 & Section 4]
4. The activity will not occur within surface waters identified as perpetually-protected mitigation sites (e.g., deed restriction or conservation easement). [Statement C and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3); and 40 C.F.R. 230.97]
5. Activities with cumulative temporary and permanent impacts greater than 1/2 acre of wetland or 300 linear feet of surface waters are not authorized under this General Certification and require an Individual Certification. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

General Certification--Nationwide Permits 3, 5, 7, 23, 25, 30, 31, 45, 46, and 59.
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6. Stream relocation, realignment, straightening, and/or widening are not authorized under this General Certification and require an Individual Certification. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
7. The use of creek rock for bank stabilization; grouted rip-rap; unformed, poured grout; unformed, poured concrete; poured asphalt; or asphalt pieces is not authorized under this General Certification and requires an Individual Certification. Poured concrete or grout will be authorized under this General Certification when contained by tightly sealed forms or cells. Equipment shall not discharge waste washwater into surface waters at any time without adequate wastewater treatments. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
8. New stormwater detention/ retention basins constructed in surface waters or modifications to stormwater detention/ retention basins resulting in the reduction in reach or that cause impairment of flow of surface waters are not authorized under this General Certification and require an Individual Certification. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
9. Erosion and sedimentation pollution control plans and Best Management Practices (BMPs) must be designed, installed, and maintained in effective operating condition at all times during construction activities so that violations of state water quality standards do not occur. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
10. Sediment and erosion control measures, such as check-dams constructed of any material, silt fencing, hay bales, etc., shall not be placed within surface waters, either temporarily or permanently, without prior approval by the Kentucky Division of Water's Water Quality Certification Section. If placement of sediment and erosion control measures in surface waters is unavoidable, design and placement of temporary erosion control measures shall not be conducted in such a manner that may result in instability of streams that are adjacent to, upstream, or downstream of the structures. All sediment and erosion control devices shall be removed and the natural grade restored within the completion timeline of the activities. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
11. Measures shall be taken to prevent or control spills of fuels, lubricants, or other toxic materials used in construction from entering surface waters. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

General Certification--Nationwide Permits 3, 5, 7, 23, 25, 30, 31, 45, 46, and 59.
Page 4

12. Removal of riparian vegetation shall be limited to that necessary for equipment access. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
13. To the maximum extent practicable, all in-stream work under this certification shall be performed under low-flow conditions. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
14. Heavy equipment (e.g., bulldozers, backhoes, and draglines), if required for this project, should not be used or operated within the stream channel. In those instances in which such in-stream work is unavoidable, then it shall be performed in such a manner and duration as to minimize turbidity and disturbance to substrates and bank or riparian vegetation. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
15. Any fill shall be of such composition that it will not adversely affect the biological, chemical, or physical properties of the receiving waters and/or cause violations of water quality standards. If rip-rap is utilized, it should be of such weight and size that bank stress or slump conditions will not be created because of its placement. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
16. If domestic water supply intakes are located downstream that may be affected by increased turbidity and suspended solids, the permittee shall notify the operator when such work will be done prior to construction. [Statement E and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
17. Should evidence of stream pollution or jurisdictional wetland impairment and/or violations of water quality standards occur as a result of this activity (either from a spill or other forms of water pollution), the Kentucky Division of Water shall be notified immediately by calling (800) 928-2380. [Statement A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
18. The Kentucky Division of Water requires submission of a formal application for any federal applicant that is not required to submit a Preconstruction Notification that would typically be required of any non-federal applicant. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]
19. The Kentucky Division of Water may require submission of a formal application for an Individual Certification for any project that has been determined to likely have a significant adverse effect upon water quality or degrade surface waters so that

General Certification--Nationwide Permits 3, 5, 7, 23, 25, 30, 31, 45, 46, and 59.
Page 5

existing uses of the water body or downstream waters are precluded. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

20. If the final issued General Permit for Nationwide Permits 3, 5, 7, 23, 25, 29, 30, 31, 39, 42, 45, 46, 51, or E changes significantly, the Division of Water may opt to deny certification for this permit. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

Statements of Necessity:

- A. This condition is necessary to protect waters categorized under the anti-degradation policy to protect the designated and existing uses and to maintain the associated water quality criteria necessary to protect these water resources.
- B. This condition is necessary to protect existing uses and the level of water quality necessary to protect those existing uses shall be assured in impaired water.
- C. This condition is necessary for long-term protection of compensatory mitigation sites.
- D. This condition is necessary to provide for the prevention, abatement, and control of all water pollution and to conserve water resources for legitimate uses, safeguard from pollution the uncontaminated waters, prevent the creation of any new pollution, and abate any existing pollution.
- E. This condition is necessary to protect domestic water supply use.
- F. This condition is necessary to evaluate, develop, and improve best-management practices in conservation plans, compliance plans, and forest stewardship management plans; establish statewide and regional agriculture water quality plans; and otherwise promote soil and water conservation activities that protect surface waters from the adverse impacts of agriculture operations within the Commonwealth.

Violation of Kentucky state water quality standards may result in civil penalties and remediation actions.

For assistance contact the Kentucky Division of Water, Water Quality Certification Section by email (401WQC@ky.gov) or by phone (502)-564-3410.

CAP NOTE

COUNTY: CARLISLE

US 51 (MP 1.72) ADDRESS DEFICIENCIES OF BRIDGE ON US 51 OVER GADDIE CREEK (020B00002N), FROM MP 1.68 TO MP 1.78, A DISTANCE OF 0.10 MILES. BRIDGE (REPLACEMENT) SYP NO. 01-10104.00.

****PRIOR TO ANY CONSTRUCTION ACTIVITIES OCCURRING, THE CONTRACTOR SHALL MEET WITH WKRECC AND PROVIDE AN ACCEPTABLE EQUIPMENT SWING PLAN TO ENSURE COMPLIANCE WITH WKRECC CLEARANCE REQUIREMENTS****

**West Kentucky RECC
1218 West Broadway
Mayfield, KY 42006**

**Ricky Binkley
270-705-1295
rbinkley@wkrecc.com**

CAP NOTE

COUNTY: CARLISLE

US 51 (MP 4.44) ADDRESS DEFICIENCIES OF BRIDGE ON US 51 OVER LITTLE MAYFIELD CREEK (020B00004N), FROM MP 4.31 TO MP 4.52, A DISTANCE OF 0.21 MILES. BRIDGE (REPLACEMENT) SYP NO. 01-10105.00.

****PRIOR TO ANY CONSTRUCTION ACTIVITIES OCCURRING, THE CONTRACTOR SHALL MEET WITH WKRECC AND PROVIDE AN ACCEPTABLE EQUIPMENT SWING PLAN TO ENSURE COMPLIANCE WITH WKRECC CLEARANCE REQUIREMENTS****

**West Kentucky RECC
1218 West Broadway
Mayfield, KY 42006**

**Ricky Binkley
270-705-1295
rbinkley@wkrecc.com**



BACON | FARMER | WORKMAN

ENGINEERING & TESTING, INC.

500 SOUTH 17TH STREET | PADUCAH, KY 42003

MEMORANDUM

TO: Michael Carpenter, P.E.
Director
Division of Structural Design / Geotechnical Branch
Kentucky Transportation Cabinet
1236 Wilkinson Boulevard
Frankfort, Kentucky 40601

FROM: Christopher N. Farmer, P.E. (Consultant)
Principal Geotechnical Engineer
Bacon Farmer Workman Engineering & Testing, Inc. (BFW)
500 South 17th Street
Paducah, Kentucky 42001

DATE: March 16, 2023

SUBJECT: **Carlisle County**
D1 020B00002N
Item No. 1-10104
US 51
Bridge Over Gaddie Creek
Geotechnical Engineering Structure Foundation Report

1.0 Location and Description

The project is located on US 51 over Gaddie Creek, approximately 0.25 miles north of Arlington, Carlisle County, Kentucky. The bridge is being replaced as part of the KYTC SW Bridge Delivery Program. The proposed bridge is a single-span structure constructed using PPC Spread Box Beams with a length of 73'-7¼" (out to out), a bridge width of 40'-0" (out to out) on a 20° skew left. The bridge will be supported by piles with two integral end bents.

2.0 Site Geologic Conditions

The bridge is located within the Arlington and Wickliffe SW Carlisle and Hickman Counties, KY Geologic and Topographic Quadrangles (GQ #1329). Geologic mapping of the bridge location shows the geologic strata composed of water deposited alluvium which consists of silts, clay, sands, and gravels. The Natural Resources Conservation Service (NRCS) Soil map classifies the surface soils at the bridge location as Convent-Adler Silt Loams.

3.0 Field Investigation

Subsurface drilling was conducted by Bacon Farmer Workman Engineering & Testing, Inc. (BFW) from February 13th and 14th, 2023. Two borings, B-1001 (Station 50+38.50, 7.85' RT) and B-1002 (Station 49+64.91, 6.70' LT) were advanced near the proposed Integral End Bent 2 and Integral End Bent 1, respectively. Two soil borings were advanced to a depth of 86.5 feet (Elevation

266.52) and 101.5 feet (Elevation 251.46) for B-1001 and B-1002, respectively. Soil samples were collected during the drilling activities and were delivered to and analyzed by BFW's in-house soil laboratory. No rock or outcroppings were observed within the creek bed or near the existing bridge location.

4.0 Laboratory Testing

Alluvial soils were encountered during drilling activities and consisted of layered and intermixed inorganic low plasticity clays, well to poorly graded sands with silts to silty sands, clayey sands and silty sands with gravel. Soil samples were collected during drilling activities and were taken to BFW's inhouse laboratory for classification.

Based on laboratory results, soils were classified as ML, CL, CL-ML, SM, SC, SP, SW, SP-SM, and SW-SM using the Unified Soil Classification System and A-1-b, A-2-4, A-2-6, A-3, A-4, and A-6 using the AASHTO Classification Method.

5.0 Subsurface Conditions,

Soil samples collected at each location were similar between the two borings. Below surface organics, silty, low plasticity clays and silty sands with some gravel were encountered at near surface. Below the near surface soils, the strata transitioned to silts, silts with sand and silty sands that extended to approximately 45 to 50 feet. Below this depth well to poorly graded sands and sands with silts were encountered and extended to boring termination depths of between 86.5 to 101.5 feet below ground surface.

The soil consistencies in the upper 15 feet ranged from weight of hammer (N=0), very soft in the near surface clays) to loose in the silts and silty sands. Soils consistencies ranged from loose to firm from depths of approximately 20 to 35 feet where consistencies started increasing with depth. Soil consistencies ranged from dense to very dense from depth of between 40 to boring termination depths with isolated lower blow counts and several splitspoon refusals (50/0.5).

Groundwater levels ranged from approximately 15 to 20 feet (Elev. 338 – 333) below ground surface.

6.0 ENGINEERING ANALYSIS AND RECOMMENDATIONS

6.1 Embankments and Settlement – Since little to no fill will be placed for the bridge replacement, slope stability and settlement are not of geotechnical concern. Embankment slopes are to be constructed at slopes the same as currently in existence or 2H:1V, whichever is flatter. If a slope steeper than 2H:1V is required, please contact BFW for further assistance and recommendations.

6.2 Integral End Bents 1 and 2 – The use of HP 12x53 are recommended as friction piles at the Integral End Bent locations. According to the **KYTC Bridge Program Project Delivery Manual** the use of H-piles is preferred over pipe piles. LRFD Factored Pile Capacities are shown on the pile capacity tables included in the attachments to this report. Capacities may be linearly interpolated between the five-foot intervals presented in the tables. If base of pile cap varies from the elevation used for the capacity tables base of pile cap by more than 5 feet, contact BFW Engineering for re-evaluation of the capacities. **H-piles used as friction piles should not**

include pile points as this will result in loss of side friction as the piles are being driven.

Piles should be installed with a center-to-center spacing of three (3) times the pile diameter or greater in order to optimize group resistance and minimize installation problems. If spacing less than three diameters are needed, please contact BFW Engineering for capacity reduction factors.

Please note that the Total Factored Geotechnical Axial Resistance from the charts may not exceed the Maximum Nominal Geotechnical Axial Capacity of the pile. We recommend using a resistance factor (Φ_c) of 0.6 to determine the Maximum Nominal Geotechnical Axial Capacity of the pile, which results in a maximum of 465 kips for 12x53 piles.

6.3 Scour – BFW conducted grain size analysis on samples collected during drilling activities. Grain size information was provided to WSP so that scour depths could be evaluated. The results of the scour analysis is presented in Table 1 below.

Local abutment scour is to be resisted by appropriate slope protection. According to KYTC Drainage Manual (DR 804-11), abutment scour can be mitigated by the use of countermeasures (Cyclopean Stone Rip Rap) for slope protection. According to the KYTC Geotechnical Manual (Section GT-606-1), deep foundation designs should be checked with no lateral support in the worst-case contraction scour condition.

To check for potential exposed lengths the following method should be used. 1) Construct a vertical line from the toe of the spill-through slope where the stone slope protection terminates, down to the contraction scour depth for the respective end bent. 2) Construct a 1H:1V (45°) line (from the above point) back toward the end bent until it intercepts the foundation element line.

The foundation can either be designed to withstand the potential unsupported length, the cap can be set down to that depth to avoid any unsupported length, or a combination of these measures can be employed.

Table 1

Scour Analysis Summary			
Substructure	Local (ft)	Contraction (ft)	Total (ft)
End Bent 1	3.31	0.77	4.08
End Bent 2	3.31	0.77	4.08

6.4 Slope Protection – Slope protection will be required at the bridge end bents meeting the requirements of Sections 703 & 805 of the Standard Specifications for Road and Bridge Construction, current edition. Place a Class 1, Geotextile Fabric, in accordance with Sections 214 & 843 of the Standard Specification for Road and Bridge Construction, current edition, between the embankment and the slope protections.

6.5 Wave Equation Analysis - Drivability analyses were performed for the piles at this locations assuming 12x53, 50-ksi steel H-piles. These analyses indicated that a sufficient range of single acting diesel hammers are available to install the piles to the required depth without excessive blow counts or overstressing the piles. Drivability studies were performed assuming continuous driving. If interruptions in driving individual piles should occur, difficulties in continuing the

installation process will likely occur due to pile “set-up” characteristics.

6.6 Verification of Piles Capacities – Based on the **KYTC Bridge Program Project Delivery Manual** the construction control of friction piles will use the FHWA Modified Gates Formula. Therefore, it is recommended that field verification of pile capacity should be performed using the FHWA Modified Gates Formula instead of the formulas provided in the Standard Specifications. The field verification values for End of Driving (EOD) using the Modified Gates Formula are provided under the Static Analysis Method columns of the LRFD Pile Capacity Tables for friction piles located in the attachments to this report.

6.7 Minimum Pile Lengths – It is recommended that the structural designer include minimum required pile lengths or tip elevations required to satisfy pile lateral stability on the project plans. It is also recommended that factored uplift design loads, if applicable, be included in the pile record table. Since final pile lengths or tip elevations will be adjusted in the field based on field verification of axial capacity, this information will be used during construction to help ensure that adequate pile embedment and capacities are obtained, and pile lengths are not based on compressive axial capacity alone.

7.0 Plan Notes

The following notes should be included at the appropriate locations in the plans.

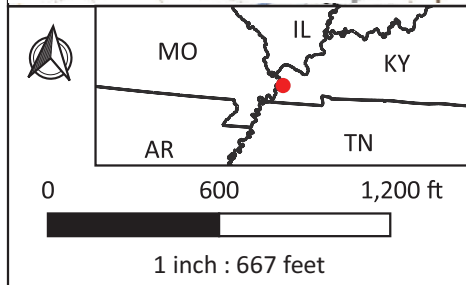
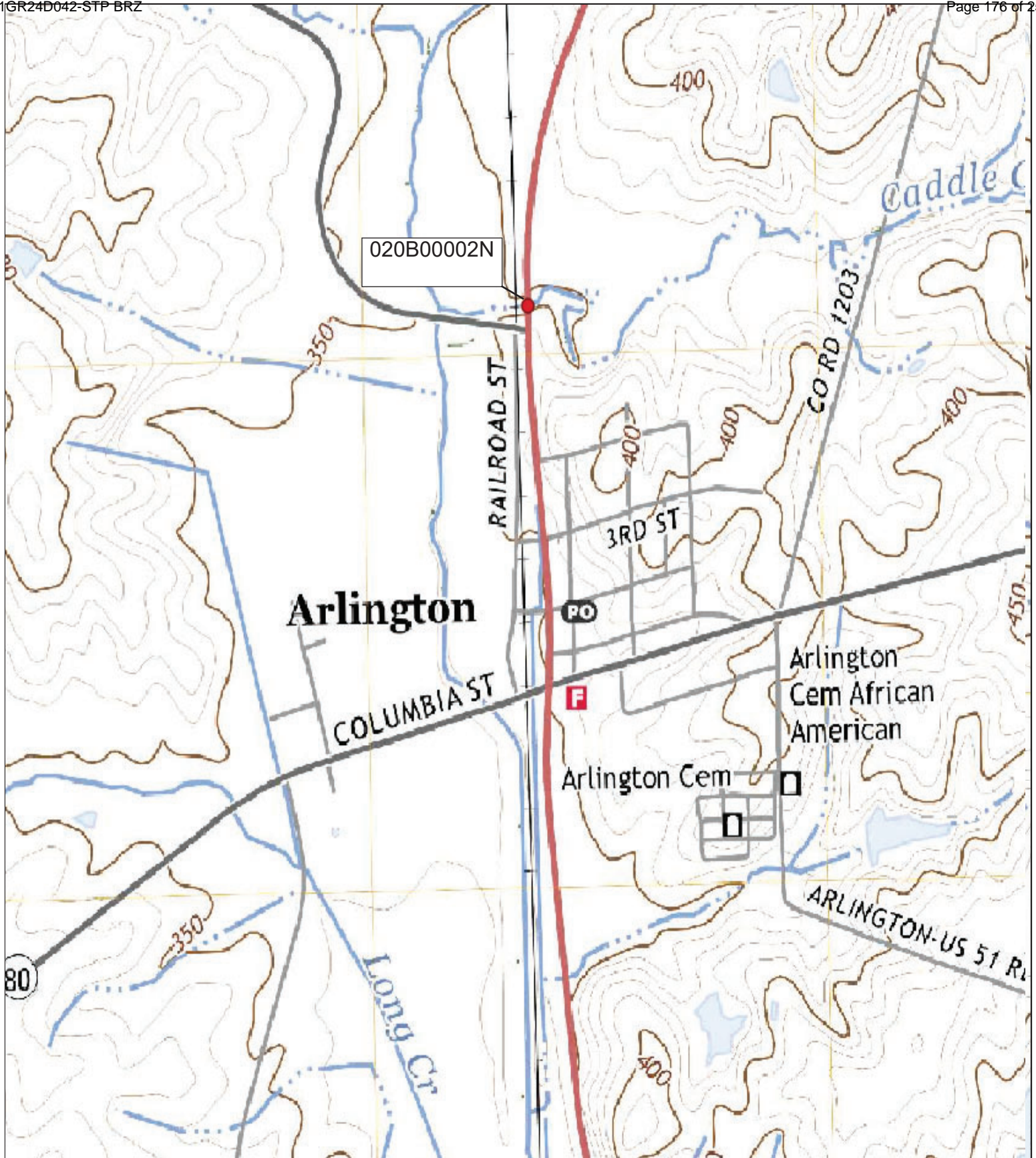
- 7.1** HAMMER CRITERIA: Single acting diesel hammers with rated energies of 33 kip-ft to 48 kips-ft is recommended for HP 12 x 53 to adequately drive the piles at End Bents without encountering excessive blow counts or overstressing the piles. The use of hammers other than single acting diesel may require different rated energies. The Contractor shall submit the proposed pile driving system to the Department for approval prior to the installation of the first pile. Approval of the pile driving system by the Engineer will be subject to satisfactory field performance of the pile driving procedures.
- 7.2** Embankments at the bridge end bent locations shall be constructed in accordance with Special Provision 69 Embankment at Bridge End Bent Structures.
- 7.3** Slope protection will be required at the bridge meeting the requirements of Sections 703 & 805 of the Standard Specifications for Road and Bridges Construction, current edition. Place Geotextile Fabric, in accordance with Section 843 of the Standard Specifications for Road and Bridge Construction, current edition, between the embankment and the slope protection.
- 7.4** Cofferdams and/or dewatering methods may be required to facilitate foundation construction.
- 7.5** Temporary shoring or sheeting may be required to facilitate construction.
- 7.6** Field verification of pile capacity shall be performed using the FHWA Modified Gates Formula instead of the formulas provided in the Standard Specifications for Road and Bridge Construction.

Carlisle County
US 51 Bridge Over Gaddie Creek
Item No. 01-10104

Should there be any questions, please contact BFW at (270) 443-1995 for further recommendations.

Attachments:

- **Project Location Map**
- **Boring Locations / Subsurface Data Sheet**
- **Pile Capacity Tables**
- **Coordinate Data Sheet**



US-51 Over Gaddie Creek		
36.7956244, -89.0134443 Carlisle County, KY		
Project Number: 22349 - 10104	Drafted/Checked: HK/CF	Date: 2023-02-14



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ENGINEERING & TESTING, INC.
500 SOUTH 17TH STREET
PADUCAH, KY 42003

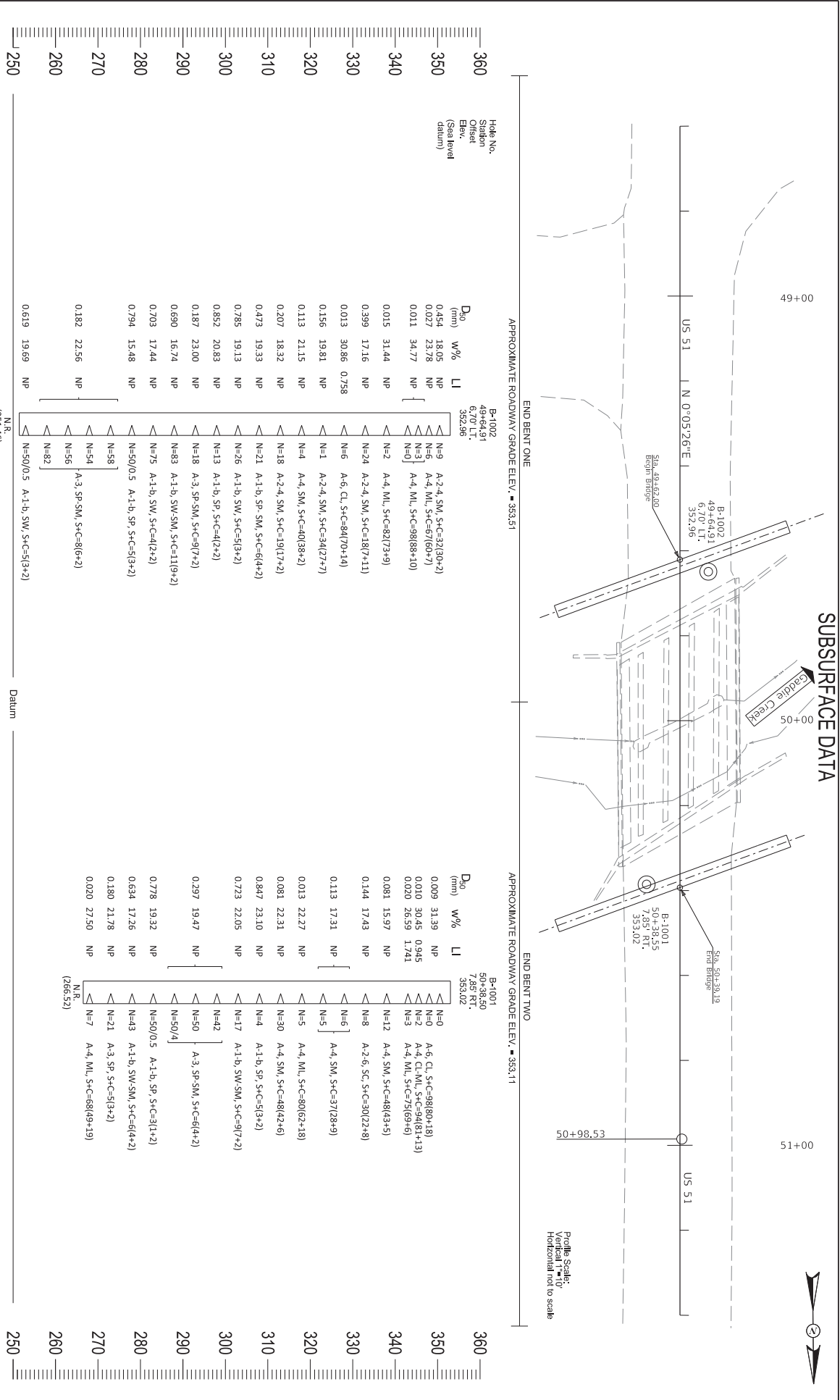
Commonwealth of Kentucky
Department of Highways
USEE: 10/16/2017



SUBSURFACE DATA FOR US 51 OVER GADDIE CREEK

HORIZONTAL SCALE
AS SHOWN

ITEM NO. 1-10104
SHEET NO. 17
COUNTY OF CARLISLE



Profile Scale:
Vertical 1"=10'
Horizontal not to scale

LRFD Pile Capacities (For Friction Piles) Integral End Bent 1

County: Carlisle
 Location: US - 51 Over Gaddie Creek
 Item #: 1-10104
 Date: 3/15/2023
 Pile Size: HP 12X 53 Steel Piles (Friction)

Base of Pile Cap Assumed to be at
 approximate elevation*: 347.2 ft
 Finished Grade Elevation: 353.5 ft
 Original Groundline Elevation: 353.0 ft

Depth Below Pile Cap (ft)	Approximate Elevation (ft)	Soil Type	Nominal Side Resistance		Nominal End Bearing		R _n		Static Analysis Method			Dynamic Testing Method			Uplift	
			Kips	Tons	Kips	Tons	Kips	Tons	Kips	Tons	φR _n for design:		Field Verification Values		Kips	Tons
											Total Factored	Geotechnical Axial Resistance (Static Analysis Method)	Field Verification Values:	(BOR)		
0	347	cohesive	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	322	cohesionless	29	14	3	1	31	15	7	35	17	23.0	11	32.0	16	10
30	317	cohesionless	41	20	3	1	44	22	10	50	24	33.6	16	44.7	22	14
35	312	cohesionless	56	27	3	1	58	29	13	66	32	45.5	22	59.0	29	19
40	307	cohesionless	74	36	8	3	82	40	19	92	45	65.8	32	82.3	41	26
45	302	cohesionless	97	48	8	3	105	52	24	119	59	85.6	42	106.0	53	34
50	297	cohesionless	124	61	8	3	131	65	30	148	73	107.3	53	132.1	66	43
55	298	cohesionless	151	75	5	2	156	78	35	176	87	127.7	63	157.1	79	53
60	287	cohesionless	179	89	5	2	185	92	42	208	103	151.4	75	185.5	93	63
65	282	cohesionless	215	107	19	9	234	116	53	263	131	194.4	97	234.4	117	75
70	277	cohesionless	260	129	19	9	279	139	63	314	156	231.9	115	279.4	140	91
75	272	cohesionless	308	153	19	9	327	163	74	368	183	272.0	135	327.5	164	108
80	267	cohesionless	358	178	16	8	374	187	84	421	210	311.0	155	374.8	187	125
85	262	cohesionless	409	204	16	8	426	212	96	479	239	353.8	176	426.2	213	143
90	257	cohesionless	463	231	16	8	480	239	108	540	269	399.0	199	480.5	240	162
95	252	cohesionless	521	260	16	8	537	268	121	604	302	446.6	223	537.6	269	182
100	247	cohesionless	581	290	16	8	597	298	135	672	335	496.6	248	597.6	299	203

How to use this table:

Choose the total factored geotechnical axial resistance that equals or exceeds the total factored loads at the strength limit state (φR_n => ΣQ_u) and use the corresponding depth below pile cap plus the required pile embedment into pile cap to estimate pile tip elevations and the lengths of pile required. The geotechnical report may recommend highest allowable pile tip elevations. Deeper pile tip elevations may be needed to address scour, lateral loads, seismic, and other loading conditions. If the total factored geotechnical axial resistance is chosen from the Static Analysis Method column, then field verification shall be conducted using the FHWA Modified Gates Formula. If the total factored geotechnical axial resistance is chosen from the Dynamic Testing Method column, then field verification by dynamic testing methods is required.

All Capacities are for a Single Pile

Static Analysis Method	Gates Method	Dynamic Analysis Method

Uplift Resistance

Clays, a-Method (Tomlinson/Skempton)	0.25
Sands, Nordlund Method	0.35

Driving Resistance Reductions

Cohesive Soils	0.5
Cohesionless Soils	0.25

Side Friction Through Embankment Layers (kips):

0

Note: Reported nominal capacities have been adjusted. They are reduced to account for the effects of scour and side friction accumulated through embankment layers has been neglected

* If base of pile cap varies from plain elevation by more than five feet contact the geotechnical engineer for re-evaluation of capacities

** Value calculated using static method

LRFD Pile Capacities (For Friction Piles) Integral End Bent 2

County: Carlisle Date: 3/15/2023
 Location: US - 51 Over Gaddie Creek Pile Size: HP 12X 53 Steel Piles (Friction)
 Item #: 1-10104

Base of Pile Cap Assumed to be at
 approximate elevation*: 346.8 ft
 Finished Grade Elevation: 353.1 ft
 Original Groundline Elevation: 353.0 ft

Depth Below Pile Cap (ft)	Approximate Elevation (ft)	Soil Type	Nominal Side Resistance		Nominal End Bearing		R _n		Static Analysis Method			Dynamic Testing Method			Uplift	
			Kips		Tons		Kips		Tons		φR _n for design:		Field Verification Values		φR _n for design:	
			Kips	Tons	Kips	Tons	Kips	Tons	Kips	Tons	Total Factored	Geotechnical	(EOD)	(BOR)	Total Factored	Geotechnical
0	347	cohesive	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0	0
25	322	cohesionless	30	14	1	0	31	15	7	14	24.0	12	33.8	17	10	5
30	317	cohesionless	40	20	1	0	42	20	19	10	31.3	15	44.7	22	14	7
35	312	cohesionless	53	26	1	0	54	27	24	12	39.6	19	57.1	29	18	9
40	307	cohesionless	68	34	4	1	72	35	32	16	52.0	26	74.6	37	24	12
45	302	cohesionless	87	43	2	1	90	44	40	20	64.6	32	92.3	46	31	16
50	297	cohesionless	107	53	2	1	109	54	49	25	81.2	40	112.3	56	38	19
55	298	cohesionless	135	67	19	9	154	76	69	35	120.9	60	156.5	78	47	24
60	287	cohesionless	173	86	19	9	192	96	86	43	153.0	76	195.0	97	61	31
65	282	cohesionless	215	107	19	9	234	116	105	53	187.5	93	236.5	118	75	38
70	277	cohesionless	259	129	19	9	278	139	125	63	224.6	112	281.0	140	91	46
75	272	cohesionless	307	153	19	9	326	162	147	74	264.2	132	328.5	164	107	54
80	267	cohesionless	352	175	5	2	357	178	161	81	288.0	144	359.8	180	123	62
85	262	cohesionless	391	195	5	2	396	198	178	89	320.5	160	398.8	199	137	69

How to use this table:

Choose the total factored geotechnical axial resistance that equals or exceeds the total factored loads at the strength limit state (φ_{tn} => 2.0*Q_u) and use the corresponding depth below pile cap plus the required pile embedment into pile cap to estimate pile tip elevations and the lengths of pile required. The geotechnical report may recommend highest allowable pile tip elevations. Deeper pile tip elevations may be needed to address scour, lateral loads, seismic, and other loading conditions, if the total factored geotechnical axial resistance is chosen from the Static Analysis Method column, then field verification shall be conducted using the FHWA Modified Gates Formula. If the total factored geotechnical axial resistance is chosen from the Dynamic Testing Method column, then field verification by dynamic testing methods is required.

All Capacities are for a Single Pile

Static		Gates		Dynamic	
Analysis Method	Value	Analysis Method	Value	Analysis Method	Value
Static Analysis Method	0.35	Gates Analysis Method	0.40	Dynamic Analysis Method	0.65
Static Analysis Method	0.45	Gates Analysis Method	0.40	Dynamic Analysis Method	0.65

Uplift Resistance

Clays, a-Method (Tomlinson/Skempton)	0.25
Sands, Nordlund Method	0.35

Driving Resistance Reductions

Cohesive Soils	0.5
Cohesionless Soils	0.25

Side Friction Through Embankment Layers (kips): 0

Note: Reported nominal capacities have been adjusted. They are reduced to account for the effects of scour and side friction accumulated through embankment layers has been neglected

* If base of pile cap varies from plan elevation by more than five feet contact the geotechnical engineer for re-evaluation of capacities

** Value calculated using static method



BACON | FARMER | WORKMAN

ENGINEERING & TESTING, INC.

500 SOUTH 17TH STREET | PADUCAH, KY 42003

MEMORANDUM

TO: Michael Carpenter, P.E.
Director
Division of Structural Design / Geotechnical Branch
Kentucky Transportation Cabinet
1236 Wilkinson Boulevard
Frankfort, Kentucky 40601

FROM: Christopher N. Farmer, P.E. (Consultant)
Principal Geotechnical Engineer
Bacon Farmer Workman Engineering & Testing, Inc. (BFW)
500 South 17th Street
Paducah, Kentucky 42001

DATE: March 15, 2023

SUBJECT: **Carlisle County**
D1 020B00004N
Item No. 1-10105
US 51
Bridge Over Little Mayfield Creek
Geotechnical Engineering Structure Foundation Report

1.0 Location and Description

The project is located on US 51 over Little Mayfield Creek, approximately 2.6 miles south of Bardwell, Hickman County, Kentucky. The bridge is being replaced as part of the KYTC SW Bridge Delivery Program. The proposed bridge is a single-span structure constructed using PPC Spread Box Beams with a length of 60'-3 ¾" (out to out), a bridge width of 34'-6½" on a 25° skew left. The bridge will be supported by piles with two integral end bents.

2.0 Site Geologic Conditions

The bridge is located within the Arlington and Wickliffe SW Carlisle and Hickman Counties, KY Geologic and Topographic Quadrangles (GQ #1329). Geologic mapping of the bridge location shows the geologic strata composed of water deposited alluvium which consists of silts and clay, sands, and gravels. The Natural Resources Conservation Service (NRCS) Soil map classifies the surface soils at the bridge location as Convent-Adler Silt Loams.

3.0 Field Investigation

Subsurface drilling was conducted by Bacon Farmer Workman Engineering & Testing, Inc. (BFW) from October 17 and 19th, 2022. Two borings, B-1001 (Station 100+59.70, 26.18' RT) and B-1002 (Station 99+88.01, 20.76' RT) were advanced near the proposed Integral End Bent 2 and Integral End Bent 1, respectively. Both borings were advanced to a depth of 101.5 feet to Elevation 295.11

Carlisle County
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and Elevation 299.05 for B-1001 and B-1002, respectively.

Soil samples were collected during the drilling activities and were delivered to and analyzed by BFW's in-house soil laboratory. No rock or outcroppings were observed within the creek bed or near the existing bridge location.

4.0 Laboratory Testing

Alluvial soils were encountered during drilling activities and consisted of layered and intermixed inorganic sandy silts, silts, low plasticity clays, well to poorly graded sands with silts to silty sands and well graded gravel with silt. Soil samples were collected during drilling activities and were taken to BFW's inhouse laboratory for classification.

Based on laboratory results, soils were classified as ML, CL, SM, SP, SW, SP-SM, SW-SM and GW-GM using the Unified Soil Classification System and A-1-b, A-2-4, A-3, and A-4 using the AASHTO Classification Method.

5.0 Subsurface Conditions

Soil samples collected at each location were similar between the two borings in type and consistency. Below surface organics, sandy silts with some gravel were encountered near surface. Below the upper sandy silts, a thin layer of low plasticity clay was encountered to about 10 feet but transitioned rapidly into intermixed layers of silty sands, some gravels and well to poorly graded sands with silt. The silty sands varied in gradation with depth and extended to boring termination depths of 101.5 feet below ground surface in both borings. The soil consistencies in the upper 15 feet ranged from loose to dense for the cohesionless soils and firm for the clay layer. The deeper soils increased in consistency and ranged from dense to very dense with multiple splitspoon refusals.

Groundwater levels ranged from approximately 20 to 25 feet (Elev. 376 – 380) below ground surface.

6.0 ENGINEERING ANALYSIS AND RECOMMENDATIONS

6.1 Embankments and Settlement – Since little to no fill will be placed for the bridge replacement, slope stability and settlement are not of geotechnical concern. Embankment slopes are to be constructed at slopes the same as currently in existence or 2H:1V, whichever is flatter. If a slope steeper than 2H:1V is required, please contact BFW for further assistance and recommendations.

6.2 Integral End Bents 1 and 2 – The use of HP 12x53 are recommended as friction piles at the Integral End Bent locations. According to the **KYTC Bridge Program Project Delivery Manual** the use of H-piles is preferred over pipe piles. LRFD Factored Pile Capacities are shown on the pile capacity tables included in the attachments to this report. Capacities may be linearly interpolated between the five-foot intervals presented in the tables. If base of pile cap varies from the elevation used for the capacity tables base of pile cap by more than 5 feet, contact BFW Engineering for re-evaluation of the capacities. **H-piles used as friction piles should not include pile points as this will result in loss of side friction as the piles are being driven.**

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Piles should be installed with a center-to-center spacing of three (3) times the pile diameter or greater in order to optimize group resistance and minimize installation problems. If spacing less than three diameters are needed, please contact BFW Engineering for capacity reduction factors.

Please note that the Total Factored Geotechnical Axial Resistance from the charts may not exceed the Maximum Nominal Geotechnical Axial Capacity of the pile. We recommend using a resistance factor (Φ_c) of 0.6 to determine the Maximum Nominal Geotechnical Axial Capacity of the pile, which results in a maximum of 465 kips for 12x53 piles.

6.3 Scour – BFW conducted grain size analysis on samples collected during drilling activities. Grain size information was provided to WSP so that scour depths could be evaluated. The results of the scour analysis is presented in Table 1 below.

Local abutment scour is to be resisted by appropriate slope protection. According to KYTC Drainage Manual (DR 804-11), abutment scour can be mitigated by the use of countermeasures (Cyclopean Stone Rip Rap) for slope protection. According to the KYTC Geotechnical Manual (Section GT-606-1), deep foundation designs should be checked with no lateral support in the worst-case contraction scour condition.

To check for potential exposed lengths the following method should be used. 1) Construct a vertical line from the toe of the spill-through slope where the stone slope protection terminates, down to the contraction scour depth for the respective end bent. 2) Construct a 1H:1V (45°) line (from the above point) back toward the end bent until it intercepts the foundation element line.

The foundation can either be designed to withstand the potential unsupported length, the cap can be set down to that depth to avoid any unsupported length, or a combination of these measures can be employed.

Table 1

Scour Analysis Summary			
Substructure	Local (ft)	Contraction (ft)	Total (ft)
End Bent 1	3.35	2.03	5.38
End Bent 2	3.35	2.03	5.38

6.4 Slope Protection – Slope protection will be required at the bridge end bents meeting the requirements of Sections 703 & 805 of the Standard Specifications for Road and Bridge Construction, current edition. Place a Class 1, Geotextile Fabric, in accordance with Sections 214 & 843 of the Standard Specification for Road and Bridge Construction, current edition, between the embankment and the slope protections.

6.5 Wave Equation Analysis - Drivability analyses were performed for the piles at this location assuming 12x53, 50-ksi steel H-piles. These analyses indicated that a sufficient range of single acting diesel hammers are available to install the piles to the required depth without excessive blow counts or overstressing the piles. Drivability studies were performed assuming continuous driving. If interruptions in driving individual piles should occur, difficulties in continuing the installation process will likely occur due to pile “set-up” characteristics.

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6.6 Verification of Piles Capacities – Based on the **KYTC Bridge Program Project Delivery Manual** the construction control of friction piles will use the FHWA Modified Gates Formula. Therefore, it is recommended that field verification of pile capacity should be performed using the FHWA Modified Gates Formula instead of the formulas provided in the Standard Specifications. The field verification values for End of Driving (EOD) using the Modified Gates Formula are provided under the Static Analysis Method columns of the LRFD Pile Capacity Tables for friction piles located in the attachments to this report.

6.7 Minimum Pile Lengths – It is recommended that the structural designer include minimum required pile lengths or tip elevations required to satisfy pile lateral stability on the project plans. It is also recommended that factored uplift design loads, if applicable, be included in the pile record table. Since final pile lengths or tip elevations will be adjusted in the field based on field verification of axial capacity, this information will be used during construction to help ensure that adequate pile embedment and capacities are obtained, and pile lengths are not based on compressive axial capacity alone.

7.0 Plan Notes

The following notes should be included at the appropriate locations in the plans.

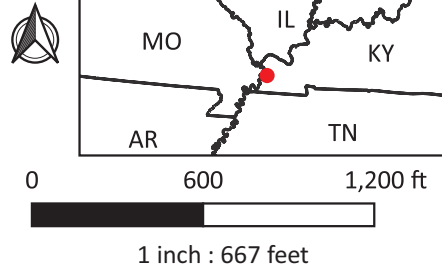
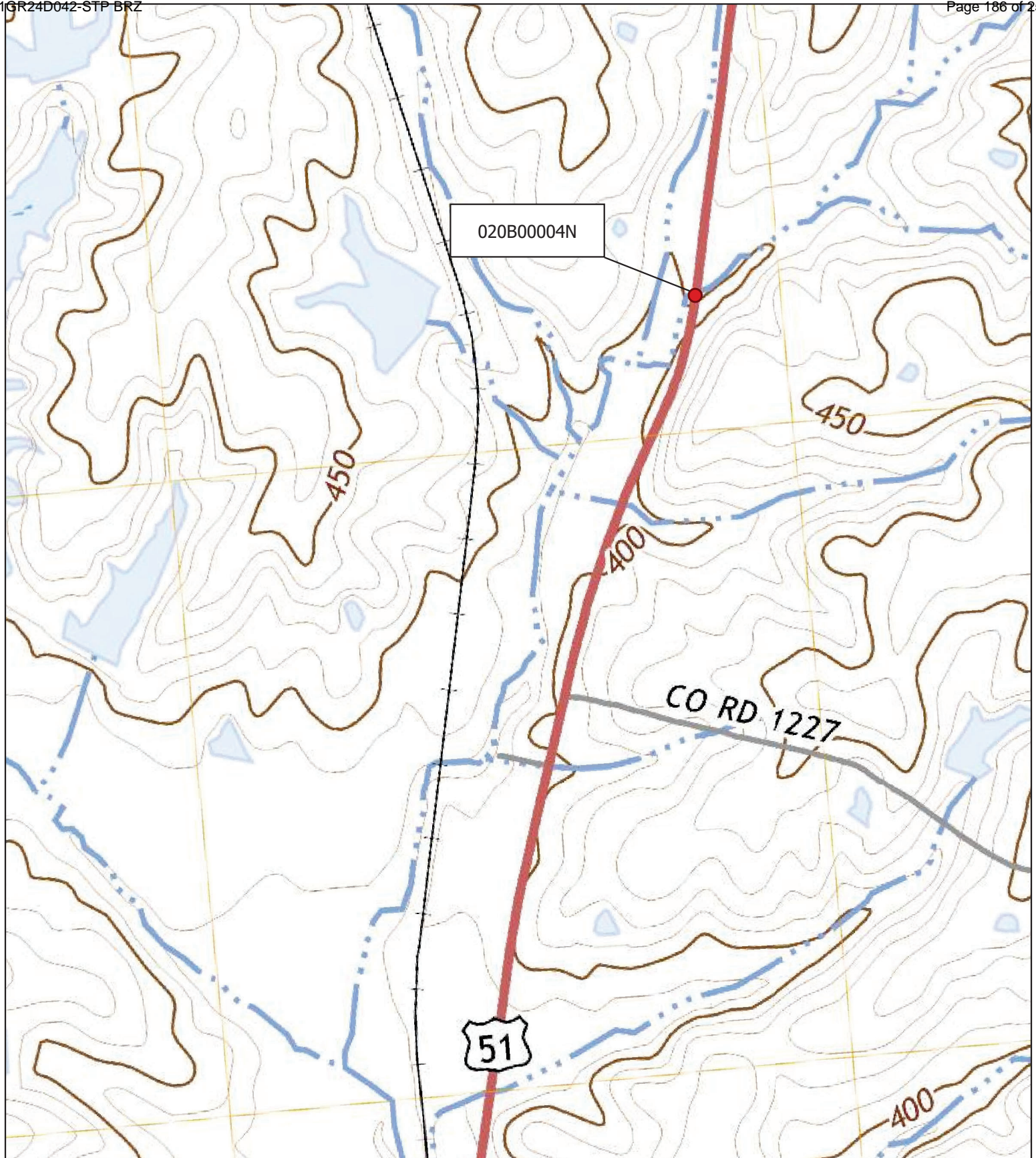
- 7.1** HAMMER CRITERIA: Single acting diesel hammers with rated energies of 33 kip-ft to 48 kips-ft is recommended for HP 12 x 53 to adequately drive the piles at End Bents without encountering excessive blow counts or overstressing the piles. The use of hammers other than single acting diesel may require different rated energies. The Contractor shall submit the proposed pile driving system to the Department for approval prior to the installation of the first pile. Approval of the pile driving system by the Engineer will be subject to satisfactory field performance of the pile driving procedures.
- 7.2** Embankments at the bridge end bent locations shall be constructed in accordance with Special Provision 69 Embankment at Bridge End Bent Structures.
- 7.3** Slope protection will be required at the bridge meeting the requirements of Sections 703 & 805 of the Standard Specifications for Road and Bridges Construction, current edition. Place Geotextile Fabric, in accordance with Section 843 of the Standard Specifications for Road and Bridge Construction, current edition, between the embankment and the slope protection.
- 7.4** Cofferdams and/or dewatering methods may be required to facilitate foundation construction.
- 7.5** Temporary shoring or sheeting may be required to facilitate construction.
- 7.6** Field verification of pile capacity shall be performed using the FHWA Modified Gates Formula instead of the formulas provided in the Standard Specifications for Road and Bridge Construction.

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Should there be any questions, please contact BFW at (270) 443-1995 for further recommendations.

Attachments:

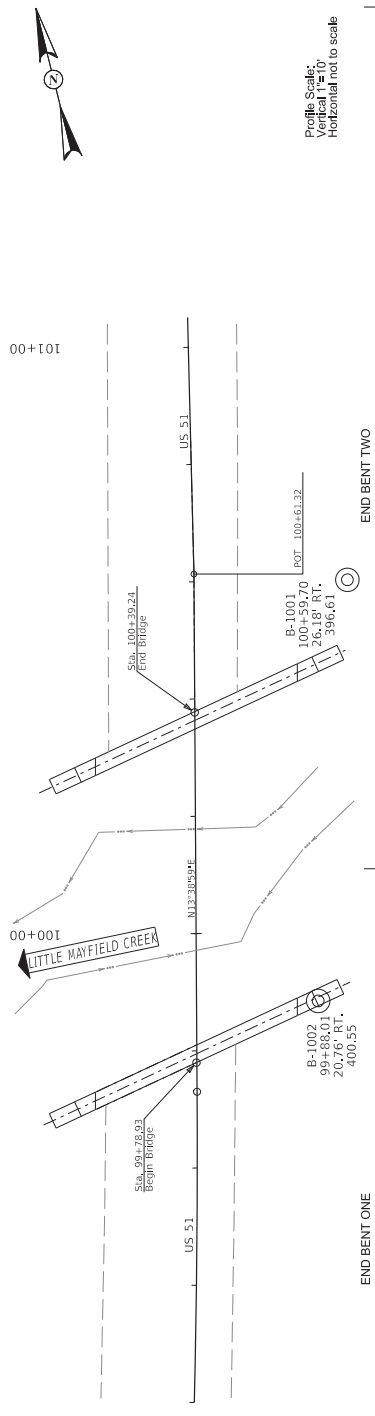
- **Project Location Map**
- **Boring Locations / Subsurface Data Sheet**
- **Pile Capacity Tables**
- **Coordinate Data Submission Form**



US-51 Over Little Mayfield Creek		
365 32, FP38-, 9500, , 1P0 /ftdisle /j mnty8HY		
Project Number 223F9 - 1010P	Contractor 4 HK/C	Effective Date 2023-01-30

BACON | FARMER | WORKMAN
ENGINEERING & TESTING, INC.
500 SOUTH 17TH STREET
PADUCAH, KY 42003

SUBSURFACE DATA



Profile Scale:
Vertical 1"=10'
Horizontal not to scale

END BENT ONE APPROXIMATE ROADWAY GRADE ELEV. = 401.85
END BENT TWO APPROXIMATE ROADWAY GRADE ELEV. = 401.72

Station	Soil No.	Soil Type	LI	W%	D ₅₀ (mm)	Notes
99+88.01	N=11	A-4, ML, S+C=56	NP	5.76	0.014	
99+88.01	N=8	A-4, CL, S+C=75	NP	26.0	0.279	
99+88.01	N=9	A-4, CL, S+C=75	NP	0.778	0.011	
100+59.70	N=18	A-4, ML, S+C=98	NP	21.39	0.011	
100+59.70	N=56	A-4, GW-GM, S+C=9	NP	14.2	0.244	
100+59.70	N=40	A-2-4, SM, S+C=13	NP	16.1	0.277	
100+59.70	N=57	A-3, SP-SM, S+C=11	NP	12.3	0.430	
100+59.70	N=50/0.5	A-3, SP-SM, S+C=11	NP	19.0	0.341	
100+59.70	N=600.5	A-2-4, SM, S+C=12	NP	11.6	0.591	
100+59.70	N=55	A-3, SP-SM, S+C=10	NP	14.9	0.146	
100+59.70	N=56	A-2-4, SM, S+C=13	NP	16.9	0.157	
100+59.70	N=55	A-1-b, SP-SM, S+C=10	NP	17.2	0.014	
100+59.70	N=50/0.5	A-3, SP-SM, S+C=11	NP	19.0	0.279	
100+59.70	N=50/0.5	A-3, SP-SM, S+C=11	NP	19.0	0.011	
100+59.70	N=68	A-2-4, SM, S+C=21	NP	33.6	0.014	
100+59.70	N=31	A-2-4, SM, S+C=21	NP	33.6	0.279	
100+59.70	N=29	A-2-4, SM, S+C=21	NP	33.6	0.011	
100+59.70	N=25	A-2-4, SM, S+C=21	NP	33.6	0.279	
100+59.70	N=34	A-2-4, SM, S+C=21	NP	33.6	0.011	
100+59.70	N=45	A-2-4, SM, S+C=21	NP	33.6	0.279	
100+59.70	N=50	A-2-4, SM, S+C=21	NP	33.6	0.011	

**Soil Gradation without Hydrometer was conducted in error.
D50 not available for this boring

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

USER: bvdhmer

FILE NAME: C:\BMS\WSP\SP\PA23\0361335\02B00004\SUBSURFACE_DATA.DWG

HORIZONTAL SCALE: N.T.S.
VERTICAL SCALE: N.T.S.

ITEM NO. B-10105
SHEET NO.

COUNTY OF CARLISLE



LRFD Pile Capacities (For Friction Piles) Integral End Bent 1

County: Carlisle Date: 3/15/2023
 Location: US - 51 Over Little Mayfield Creek Pile Size: HP 12X 53 Steel Piles (Friction)
 Item #: 1-10105

Base of Pile Cap Assumed to be at
 approximate elevation*: 395.3 ft
 Finished Grade Elevation: 401.7 ft
 Original Groundline Elevation: 400.6 ft

Depth Below Pile Cap (ft)	Approximate Elevation (ft)	Soil Type	Nominal Side Resistance		Nominal End Bearing		R _n		Static Analysis Method			Dynamic Testing Method			Uplift	
			Kips		Tons		Kips		Tons		φR _n for design:		Field Verification Values		φR _n for design:	
			Kips	Tons	Kips	Tons	Kips	Tons	Kips	Tons	Total Factored	Geotechnical	End of Driving	(EOD)	Total Factored	Geotechnical
0	395	cohesive	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0	0
25	370	cohesionless	49	24	9	4	58	26	13	66	32	18	57.5	28	73.2	37
30	365	cohesionless	68	34	10	5	79	35	18	88	44	25	74.5	37	93.3	47
35	360	cohesionless	90	44	12	5	101	45	23	114	56	32	93.5	46	115.9	58
40	355	cohesionless	113	56	12	5	125	56	28	141	70	40	113.4	56	139.8	70
45	350	cohesionless	140	69	12	5	151	75	68	170	85	49	135.3	67	166.1	83
50	345	cohesionless	168	84	12	5	180	90	81	203	101	58	159.3	79	194.9	97
55	338	cohesionless	201	100	16	8	218	108	98	245	122	70	191.4	95	232.5	116
60	335	cohesionless	239	119	16	8	256	127	115	287	143	83	223.0	111	270.4	135
65	330	cohesionless	280	140	16	8	296	148	133	333	166	96	257.1	128	311.2	156
70	325	cohesionless	322	160	12	5	333	166	150	375	187	108	287.2	143	348.4	174
75	320	cohesionless	364	181	12	5	375	187	169	422	210	124	321.9	160	390.0	195
80	315	cohesionless	408	203	12	5	419	209	189	472	235	136	358.7	179	434.1	217
85	310	cohesionless	454	227	12	5	466	232	210	524	262	151	397.6	198	480.8	240
90	305	cohesionless	504	251	12	5	515	257	232	579	289	167	438.6	219	530.0	265
95	300	cohesionless	555	277	12	5	567	283	255	638	318	184	481.6	240	581.7	291
100	295	cohesionless	609	304	12	5	621	310	279	699	349	201	526.8	263	635.9	318

Factors: **All Capacities are for a Single Pile**

Static Analysis Method	Gates Analysis Method	Dynamic Analysis Method
0.35	0.40	0.65

How to use this table:
 Choose the total factored geotechnical axial resistance that equals or exceeds the total factored loads at the strength limit state (φR_n => 2η₁Q_u) and use the corresponding depth below pile cap plus the required pile embedment into pile cap to estimate pile tip elevations and the lengths of pile required. The geotechnical report may recommend highest allowable pile tip elevations. Deeper pile tip elevations may be needed to address scour, lateral loads, seismic, and other loading conditions, if the total factored geotechnical axial resistance is chosen from the Static Analysis Method column, then field verification shall be conducted using the FHWA Modified Gates Formula. If the total factored geotechnical axial resistance is chosen from the Dynamic Testing Method column, then field verification by dynamic testing methods is required.

Uplift Resistance
 Clays, a-Method (Tomlinson/Skempton) 0.25
 Sands, Nordlund Method 0.35

Driving Resistance Reductions
 Cohesive Soils 0.5
 Cohesionless Soils 0.25

Side Friction Through Embankment Layers (kips): 0

* If base of pile cap varies from plan elevation by more than five feet contact the geotechnical engineer for re-evaluation of capacities
 ** Value calculated using static method
 Note: Reported nominal capacities have been adjusted. They are reduced to account for the effects of scour and side friction accumulated through embankment layers has been neglected

LRFD Pile Capacities (For Friction Piles) Integral End Bent 2

County: Carlisle
Location: US - 51 Over Little Mayfield Creek
Item #: 1-10105

Date: 3/15/2023
Pile Size: HP 12X 53 Steel Piles (Friction)

Base of Pile Cap Assumed to be at
approximate elevation*: 395.4 ft
Finished Grade Elevation: 401.7 ft
Original Groundline Elevation: 396.6 ft

Depth Below Pile Cap (ft)	Approximate Elevation (ft)	Soil Type	Nominal Side Resistance		Nominal End Bearing		R _n		Static Analysis Method			Dynamic Testing Method			Uplift	
			Kips		Tons		Kips		Tons		φR _n for design:		Field Verification Values		φR _n for design:	
			Kips	Tons	Kips	Tons	Kips	Tons	Kips	Tons	Total Factored	Geotechnical	(EOD)	(BOR)	Total Factored	Geotechnical
0	395	cohesive	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0	0
25	370	cohesionless	39	19	4	1	42	21	19	10	48	23	31.7	15	44.6	22
30	365	cohesionless	54	26	4	1	57	28	26	13	64	32	41.6	20	59.6	30
35	360	cohesionless	71	35	4	1	74	37	33	17	83	41	52.9	26	76.6	38
40	355	cohesionless	90	44	4	1	93	46	42	21	105	52	65.6	32	95.5	48
45	350	cohesionless	113	56	5	1	124	62	56	28	140	69	81	40	126.8	63
50	345	cohesionless	142	70	5	1	153	76	69	35	173	86	100	49	155.8	78
55	338	cohesionless	171	85	4	1	174	87	78	39	196	98	113	56	176.8	88
60	335	cohesionless	198	98	4	1	201	100	91	46	227	113	131	65	203.7	102
65	330	cohesionless	227	113	4	1	230	115	104	52	259	129	150	74	232.7	116
70	325	cohesionless	261	130	5	1	272	136	123	62	306	153	177	88	274.6	137
75	320	cohesionless	302	150	5	1	314	156	141	71	353	176	204	101	315.9	158
80	315	cohesionless	346	172	5	1	357	178	161	81	402	201	232	116	359.7	180
85	310	cohesionless	392	196	5	1	404	201	182	91	454	227	262	131	406.1	203
90	305	cohesionless	443	221	8	1	460	229	207	104	517	258	299	149	462.0	231
95	300	cohesionless	501	250	8	1	517	258	233	117	582	290	336	168	519.6	260
100	295	cohesionless	561	280	16	1	578	288	260	130	650	324	375	187	580.0	290

How to use this table:

Choose the total factored geotechnical axial resistance that equals or exceeds the total factored loads at the strength limit state (φ_{tn} => 2φ_{tn}) and use the corresponding depth below pile cap plus the required pile embedment into pile cap to estimate pile tip elevations and the lengths of pile required. The geotechnical report may recommend highest allowable pile tip elevations. Deeper pile tip elevations may be needed to address scour, lateral loads, seismic, and other loading conditions, if the total factored geotechnical axial resistance is chosen from the Static Analysis Method column, then field verification shall be conducted using the FHWA Modified Gates Formula. If the total factored geotechnical axial resistance is chosen from the Dynamic Testing Method column, then field verification by dynamic testing methods is required.

All Capacities are for a Single Pile

Static Analysis Method	Gates Analysis Method	Dynamic Analysis Method	φ _{tn} for design:	
			Kips	Tons
0.35	0.40	0.65	233	117
0.45	0.40	0.65	260	130

Factors:

Axial Capacity

Skin Friction and End Bearing in Clays, a-Method (Tomlinson/Skempton)
Skin Friction and End Bearing in Sands, Nordlund/Thurman Method

Uplift Resistance

Clays, a-Method (Tomlinson/Skempton)
Sands, Nordlund Method

Driving Resistance Reductions

Cohesive Soils: 0.5
Cohesionless Soils: 0.25

Side Friction Through Embankment Layers (kips): 0

Note: Reported nominal capacities have been adjusted. They are reduced to account for the effects of scour and side friction accumulated through embankment layers has been neglected

* If base of pile cap varies from plan elevation by more than five feet contact the geotechnical engineer for re-evaluation of capacities

** Value calculated using static method

COORDINATE DATA SUBMISSION FORM
KYTC DIVISION OF STRUCTURAL DESIGN - GEOTECHNICAL BRANCH

County Carlisle

Date 3/15/2023

Road Number US 51

Survey Crew / Consultant BFW

Contact Person Chris Farmer

Item # 01-10105

Mars# _____

Project # _____

Notes:

Elevation Datum (circle one)
NAVD88 Assumed

HOLE NUMBER	LATITUDE (Decimal Degrees)	LONGITUDE (Decimal Degrees)	HOLE NUMBER	STATION	OFFSET	ELEVATION (FT)
SINGLE SPAN BRIDGE - US 51 OVER LITTLE MAYFIELD CREEK						
1001	36.8329608°N	89.0086835°W	1001	100+59.70	26.18' RT.	396.61
1002	36.8327710°N	89.0087511° W	1002	99+88.01	20.76' RT.	400.55



MEMORANDUM

TO: Michael Carpenter, P.E.
Director
Division of Structural Design / Geotechnical Branch
Kentucky Transportation Cabinet
1236 Wilkinson Boulevard
Frankfort, Kentucky 40601

FROM: Christopher N. Farmer, P.E. (Consultant)
Principal Geotechnical Engineer
Bacon Farmer Workman Engineering & Testing, Inc. (BFW)
500 South 17th Street
Paducah, Kentucky 42001

DATE: September 28, 2023

SUBJECT: **Graves County**
D1 042B00090N
Item No. 1-10128
US 45
Bridge Over Jackson Creek
Geotechnical Engineering Structure Foundation Report

1.0 Location and Description

The project is located on US 45 over Jackson Creek, approximately 5.6 miles southwest of Wingo, Graves County, Kentucky. The bridge is being replaced as part of the KYTC SW Bridge Delivery Program. The proposed bridge is a single span structure constructed using PPC I-Beams with a length of 99'-5½" (out to out), a bridge width of 24'- 6½" on a 30° left skew. The bridge will be supported by two pile supported integral end bents.

2.0 Site Geologic Conditions

The bridge is located within the Water Valley, KY Geologic and Topographic Quadrangles (GQ #269). Geologic mapping of the bridge location shows the geologic strata composed of water deposited alluvium which consists of silts, sands, gravels, and silty clays which is underlain by Continental deposits. Continental deposits are comprised of sandstones, siltstones, shales, coal, and limestone. The McNairy and Clayton Formations are comprised of sandy clay, silts, clays, sands, and gravel. The Natural Resources Conservation Service (NRCS) Soil map classifies the surface soils at the bridge location as Collins and Falaya silt loams.

Graves County
US 45 Bridge Over Jackson Creek
Item No. 01-10128

3.0 Field Investigation

Subsurface drilling was conducted by Bacon Farmer Workman Engineering & Testing, Inc. (BFW) on August 23rd - 24th, 2023. Two borings, B-1001 (Station 102+40.04, 6.83' LT) and B-1002 (Station 103+17.91, 5.62' RT) were advanced near the western and eastern End Bents, respectively.

Boring B-1001 located near the proposed End Bent 1 and boring B-1002 located near the proposed End Bent 2 were both advanced to a depth of 101.5 feet below ground surface (bgs).

Soil samples were collected during the drilling activities and were delivered to and analyzed by BFW's in-house soil laboratory. No rock outcroppings were observed within the creek bed or near the existing bridge location.

4.0 Laboratory Testing

Alluvial soils were encountered during drilling activities and consisted of intermixed inorganic silty clays, silty clays with sand, silts, sandy silts, silty sands, silty sands with gravel, well to poorly graded sands and sands with silt. Soil samples were collected during drilling activities and were taken to BFW's in-house laboratory for classification.

Based on laboratory results, soils were classified as CL-ML, ML, SM, SP, SW, SP-SM, SW-SM and GM using the Unified Soil Classification System and A-1-a, A-1-b, A-2-4, A-3, and A-4 using the AASHTO Classification Method.

5.0 Subsurface Conditions

Soil samples collected at each location were roughly similar between the two borings. Below the surface stratum, silty clays and silty clays with sand were encountered to depths of approximately 7.5 to 15 feet bgs. The soil initially transitioned to silt, silty sands with gravel, poorly graded sands and sands with silt. With depth the silts were interbedded with layers of well-graded to poorly graded sands that continued to boring termination depths of 101.5 feet bgs in both borings.

Soil consistencies in the upper 20 to 25 feet of both borings ranged from very soft to firm in the silty clays and upper silty clays with sands. Soils consistencies generally increased below 25 feet and ranged from firm to dense until boring termination depth of 101.5 in boring, B-1001. In boring, B-1002, the soils continued with firm to dense consistencies until a depth of approximately 60 feet bgs where they increase to dense to very dense.

Groundwater levels were observed at approximately 20 feet bgs Elevation 355 at 1 day after drilling.

6.0 ENGINEERING ANALYSIS AND RECOMMENDATIONS

- 6.1 Embankments and Settlement** – Since little to no fill will be placed for the bridge replacement, slope stability and settlement are not of geotechnical concern. Embankment slopes are to be constructed at slopes the same as currently in existence or 2H:1V, whichever is flatter. If a slope steeper than 2H:1V is required, please contact BFW for further assistance and recommendations.

Graves County
US 45 Bridge Over Jackson Creek
Item No. 01-10128

6.2 Integral End Bents 1 and 2, – The use of either HP 12x53 or HP14x89 are recommended as friction piles at both end bents and all pile supported pier footing locations. According to the **KYTC Bridge Program Project Delivery Manual** the use of H-piles is preferred over pipe piles. LRFD Factored Pile Capacities are shown on the pile capacity tables included in the attachments to this report. Capacities may be linearly interpolated between the five-foot intervals presented in the tables. If the base of pile cap varies from the elevation used for the capacity tables base of pile cap by more than 5 feet, contact BFW Engineering for re-evaluation of the capacities. **H-piles used as friction piles should not include pile points as this will result in loss of side friction as the piles are being driven.**

Piles should be installed with a center-to-center spacing of three (3) times the pile diameter or greater in order to optimize group resistance and minimize installation problems. If spacing less than three diameters is needed, please contact BFW Engineering for capacity reduction factors.

Please note that the Total Factored Geotechnical Axial Resistance from the charts may not exceed the Maximum Nominal Geotechnical Axial Capacity of the pile. We recommend using a resistance factor (Φ_c) of 0.6 to determine the Maximum Nominal Geotechnical Axial Capacity of the pile, which results in a maximum of 465 kips and 783 kips for HP 12x53 and HP14x89 piles, respectively.

6.3 Scour – BFW conducted grain size analysis on samples collected during drilling activities. Grain size information was provided to WSP so that scour depths could be evaluated. The results of the scour analysis is presented in Table 1 below.

Local abutment scour is to be resisted by appropriate slope protection. According to KYTC Drainage Manual (DR 804-11), abutment scour can be mitigated by the use of countermeasures (Cyclopean Stone Rip Rap) for slope protection. According to the KYTC Geotechnical Manual (Section GT-606-1), deep foundation designs should be checked with no lateral support in the worst-case contraction scour condition.

To check for potential exposed lengths the following method should be used for end bents. 1) Construct a vertical line from the toe of the spill-through slope where the stone slope protection terminates, down to the contraction scour depth for the respective end bent. 2) Construct a 1H:1V (45°) line (from the above point) back toward the end bent until it intercepts the foundation element line.

The foundations can either be designed to withstand the potential unsupported length, the cap can be set down to that depth to avoid any unsupported length, or a combination of these measures can be employed.

Table 1

Scour Analysis Summary			
Substructure	Local (ft)	Contraction (ft)	Total (ft)
End Bent 1	2.76	5.42	8.18
End Bent 2	2.76	5.42	8.18

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- 6.4 Slope Protection** – Slope protection will be required at the bridge end bents meeting the requirements of Sections 703 & 805 of the Standard Specifications for Road and Bridge Construction, current edition. Place a Class 1, Geotextile Fabric, in accordance with Sections 214 & 843 of the Standard Specification for Road and Bridge Construction, current edition, between the embankment and the slope protections.
- 6.5 Wave Equation Analysis** – Drivability analyses were performed for the piles at this location assuming HP12 x 53 and HP14 x 89, 50-ksi steel H-piles. These analyses indicated that a sufficient range of single acting diesel hammers are available to install the piles to the required end bearing depths without excessive blow counts or overstressing the piles. Drivability studies were performed assuming continuous driving. If interruptions in driving individual piles should occur, difficulties in continuing the installation process will likely occur due to pile “set-up” characteristics.
- 6.6 Verification of Piles Capacities** – Based on the **KYTC Bridge Program Project Delivery Manual** the construction control of friction piles will use the FHWA Modified Gates Formula. Therefore, it is recommended that field verification of pile capacity should be performed using the FHWA Modified Gates Formula instead of the formulas provided in the Standard Specifications. The field verification values for End of Driving (EOD) using the Modified Gates Formula are provided under the Static Analysis Method columns of the LRFD Pile Capacity Tables for friction piles located in the attachments to this report.
- 6.7 Minimum Pile Lengths** – It is recommended that the structural designer include minimum required pile lengths or tip elevations required to satisfy pile lateral stability on the project plans. It is also recommended that factored uplift design loads, if applicable, be included in the pile record table. Since final pile lengths or tip elevations will be adjusted in the field based on field verification of axial capacity, this information will be used during construction to help ensure that adequate pile embedment and capacities are obtained, and pile lengths are not based on compressive axial capacity alone.
- 6.9 Plan Notes**

The following notes should be included at the appropriate locations in the plans.

- 7.1 HAMMER CRITERIA:** Single acting diesel hammers with rated energy of 33 kip-ft to 48 kip-ft is recommended for HP 12 x 53 and a rated energy between 66 kip-ft and 83 kip-ft is recommended for HP 14 x 89 piles to adequately drive the piles at the end bents without encountering excessive blow counts or overstressing the piles. The use of hammers other than single acting diesel may require different rated energies. The Contractor shall submit the proposed pile driving system to the Department for approval prior to the installation of the first pile. Approval of the pile driving system by the Engineer will be subject to satisfactory field performance of the pile driving procedures.
- 7.2** Embankments at the bridge end bent locations shall be constructed in accordance with Special Provision 69 Embankment at Bridge End Bent Structures.
- 7.3** Slope protection will be required at the bridge meeting the requirements of Sections 703 & 805 of the Standard Specifications for Road and Bridges Construction, current edition. Place Geotextile Fabric, in accordance with Section 843 of the Standard Specifications for

Graves County
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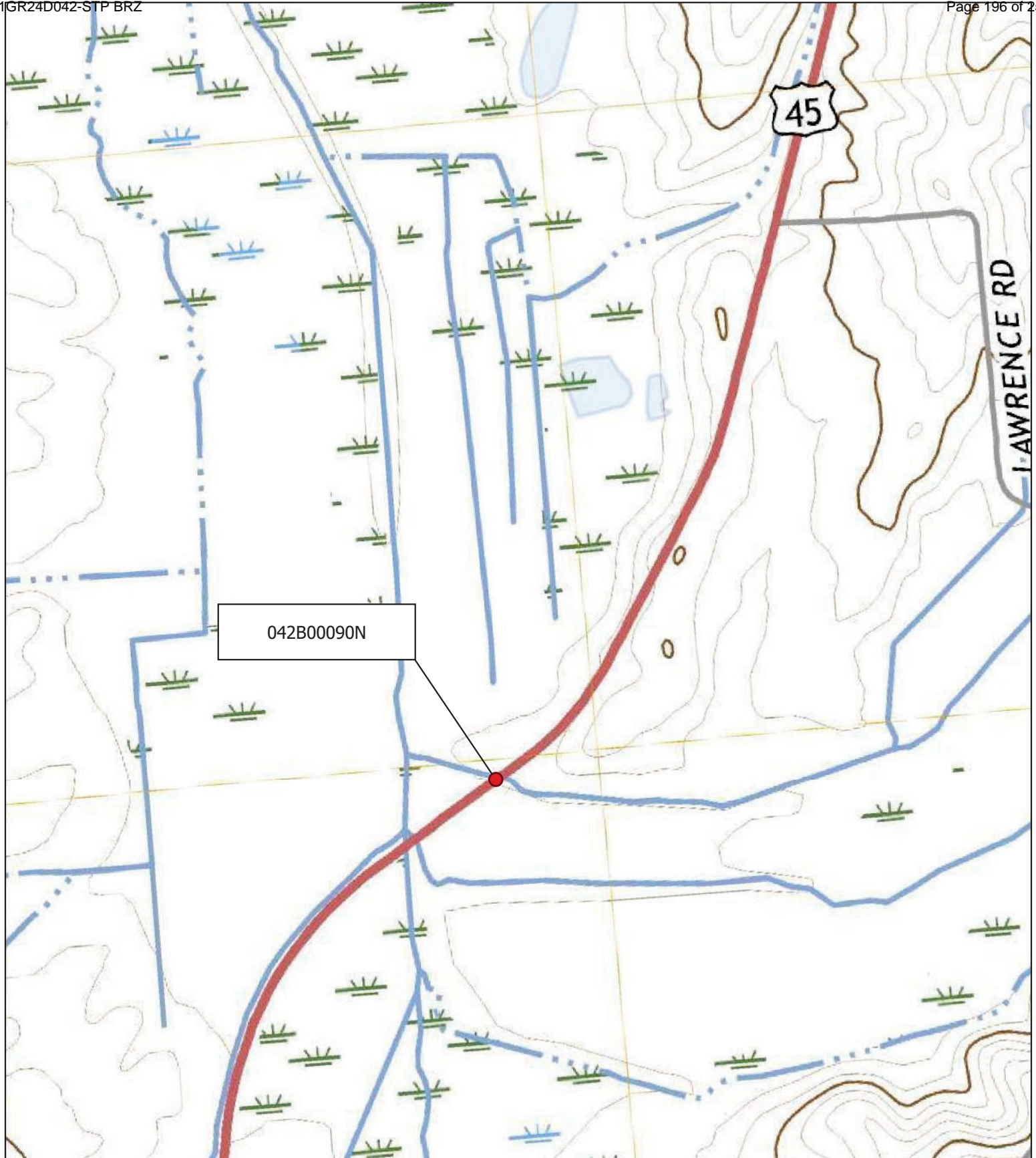
Road and Bridge Construction, current edition, between the embankment and the slope protection.

- 7.4** Cofferdams and/or dewatering methods may be required to facilitate foundation construction.
- 7.5** Temporary shoring or sheeting may be required to facilitate construction.
- 7.6** Field verification of pile capacity shall be performed using the FHWA Modified Gates Formula instead of the formulas provided in the Standard Specifications for Road and Bridge Construction.

Should there be any questions, please contact BFW at (270) 443-1995 for further recommendations.

Attachments:

- **Project Location Map**
- **Subsurface Data Sheet with Boring Locations**
- **Pile Capacity Tables**
- **Coordinate Data Sheet**



042B00090N



0 600 1,200 ft

1 inch : 667 feet

US-45 Over Jackson Creek

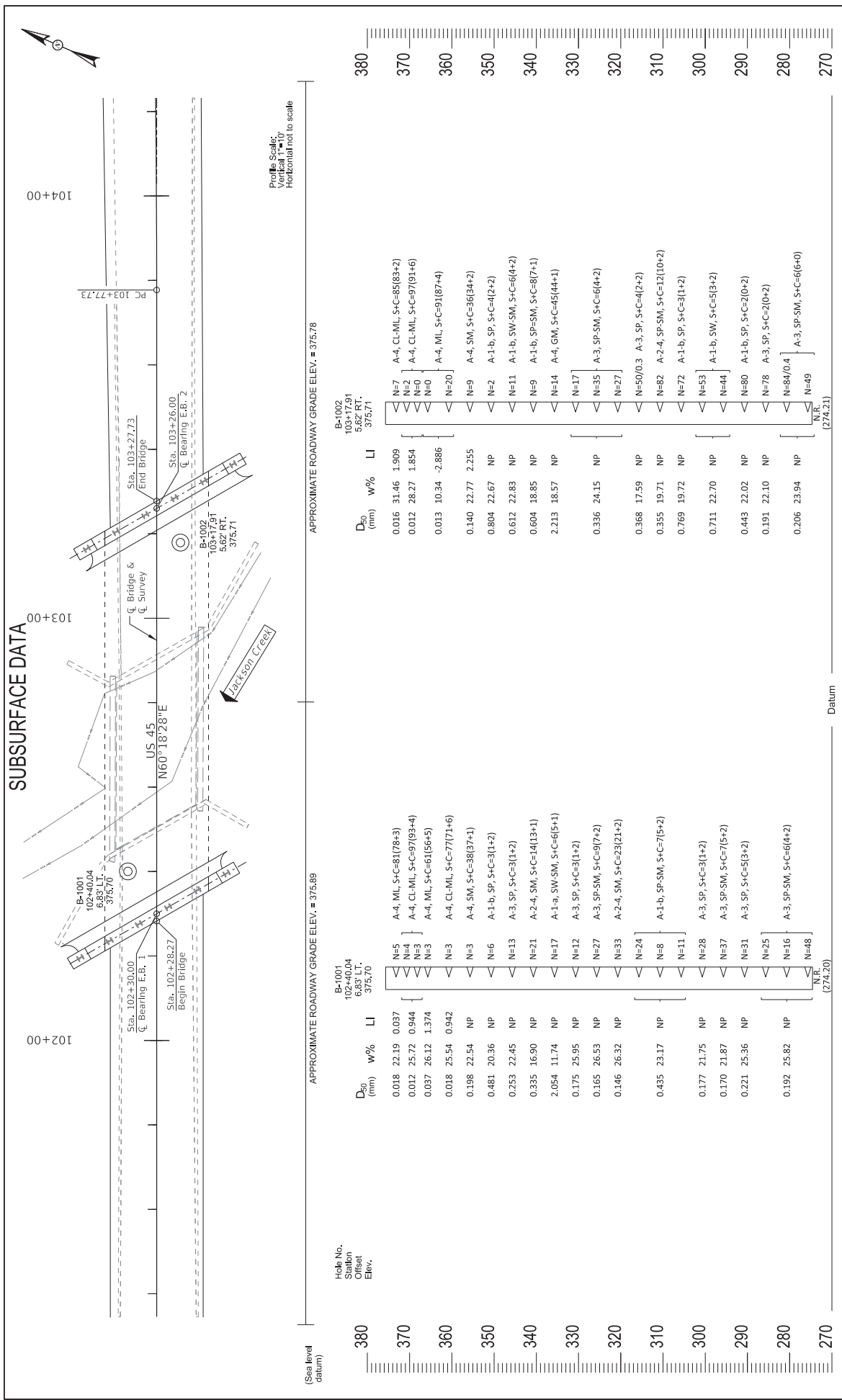
36.5815730, -88.8014274
Graves County, KY

Project Number: 22349 - 10128	Drafted/Checked: HK/CF	Date: 2023-07-11
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BACON | FARMER | WORKMAN

ENGINEERING & TESTING, INC.
500 SOUTH 17TH STREET
PADUCAH, KY 42003



SUBSURFACE DATA

APPROXIMATE ROADWAY GRADE ELEV. = 375.78

APPROXIMATE ROADWAY GRADE ELEV. = 375.89

Profile Scale:
Vertical 1"=10'
Horizontal not to scale

Hole No.	Station Offset	Elev.
B-1001	102+40.04	6.83' LT. 375.70
B-1002	103+17.91	5.62' RT. 375.71

Soil Depth (ft)	Soil Description	Soil Type	Soil Depth (ft)	Soil Description	Soil Type
0.018	A-4, ML, S+C=81(78+3)	N=5	0.016	A-4, CL-ML, S+C=85(83+2)	N=7
0.012	A-4, CL-ML, S+C=97(93+4)	N=4	0.012	A-4, CL-ML, S+C=97(91+6)	N=2
0.037	A-4, ML, S+C=61(56+5)	N=3	0.013	A-4, ML, S+C=91(87+4)	N=0
0.018	A-4, CL-ML, S+C=77(71+6)	N=3	0.140	A-4, SM, S+C=36(34+2)	N=20
0.198	A-4, SM, S+C=38(37+1)	N=3	0.804	A-1-b, SP, S+C=4(2+2)	N=9
0.481	A-1-b, SP, S+C=3(1+2)	N=6	0.612	A-1-b, SW-SM, S+C=6(4+2)	N=2
0.253	A-3, SP, S+C=3(1+2)	N=13	0.604	A-1-b, SP=SM, S+C=8(7+1)	N=11
0.335	A-2-4, SM, S+C=14(13+1)	N=21	2.213	A-4, GM, S+C=45(44+1)	N=9
2.054	A-1-a, SW-SM, S+C=6(5+1)	N=17	0.336	A-3, SP-SM, S+C=6(4+2)	N=14
0.175	A-3, SP, S+C=3(1+2)	N=12	0.368	A-3, SP, S+C=4(2+2)	N=17
0.165	A-3, SP-SM, S+C=3(7+2)	N=27	0.355	A-2-4, SP-SM, S+C=12(10+2)	N=35
0.146	A-2-4, SM, S+C=23(21+2)	N=33	0.769	A-1-b, SP, S+C=3(1+2)	N=27
0.435	A-1-b, SP-SM, S+C=7(5+2)	N=24	0.711	A-1-b, SW, S+C=5(3+2)	N=50/0.3
0.177	A-3, SP, S+C=3(1+2)	N=8	0.443	A-1-b, SP, S+C=2(0+2)	N=82
0.170	A-3, SP-SM, S+C=7(5+2)	N=11	0.191	A-3, SP, S+C=2(0+2)	N=72
0.221	A-3, SP, S+C=5(3+2)	N=28	0.206	A-3, SP-SM, S+C=6(6+0)	N=53
0.192	A-3, SP-SM, S+C=6(4+2)	N=37			N=44
		N=31			N=80
		N=25			N=78
		N=16			N=84/0.4
		N=48			N=49

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

DRAWING TITLE: SUBSURFACE DATA FOR US 45 OVER JACKSON CREEK

HORIZONTAL SCALE: 1"=10'

FILE NAME: C:\BMS\SPUR\121GR24D042\05610801042B06090A_SUBSURFACE_DATA.DWG

USER: twdghmr

ITEM NO. 1-10128
SHEET NO.

COUNTY OF GRAVES

LRFD Pile Capacities (For Friction Piles) End Bent 1

County: Graves Date: 9/28/2023
 Location: US-45 Over Jackson Creek Pile Size: HP 12X 53 Steel Piles (Friction)
 Item #: 1-10128

Base of Pile Cap Assumed to be at approximate elevation*: 368.2 ft
 Finished Grade Elevation: 375.9 ft
 Original Groundline Elevation: 375.7 ft

Depth Below Pile Cap (ft)	Approximate Elevation (ft)	Soil Type	Nominal Side Resistance		Nominal End Bearing		R _n		Static Analysis Method			Dynamic Testing Method			Uplift			
			Kips	Tons	Kips	Tons	Kips	Tons	φR _n for design:	Field Verification Values:	φR _n for design:	Field Verification Values	φR _n for design:	Field Verification Values	Total Factored	Geotechnical Uplift Resistance (Static Analysis Method)		
								Total Factored	Values:	Total Factored	(EOD)	End of Driving	Restrike	Beginning of				
								Geotechnical Axial Resistance (Static Analysis Method)	FWHA Modified Gates Formula Calculated Resistance	Geotechnical Axial Resistance Dynamic Testing Method	Kips	Tons	Kips	Tons	Kips	Tons	Kips	Tons
0	368	cohesive	0	0	0	0	0	0	0	0	0	1.3	0	0.6	0	0	0	0
25	343	cohesionless	27	13	1	0	29	14	32	16	19	31.2	15	52.2	26	10	5	5
30	338	cohesionless	38	19	2	1	40	20	45	22	26	41.7	20	63.7	32	13	7	7
35	333	cohesionless	53	26	4	2	57	28	64	32	37	57.4	28	80.4	40	19	10	10
40	328	cohesionless	71	35	4	2	75	37	84	42	49	72.4	36	98.4	49	25	13	13
45	323	cohesionless	89	44	2	0	91	45	102	51	59	86.4	43	114.3	57	31	16	16
50	318	cohesionless	110	54	5	2	115	57	129	64	75	108.8	54	138.3	69	38	19	19
55	338	cohesionless	135	67	5	2	140	70	158	78	91	129.9	64	163.7	82	47	24	24
60	308	cohesionless	162	81	5	2	168	83	189	94	109	152.8	76	191.1	96	57	29	29
65	303	cohesionless	189	94	1	0	190	95	214	106	124	170.7	85	213.4	107	66	33	33
70	298	cohesionless	212	105	1	0	213	106	240	119	138	189.8	94	236.4	118	74	37	37
75	293	cohesionless	241	120	8	3	249	124	280	140	162	223.3	111	272.3	136	84	42	42
80	288	cohesionless	280	140	8	3	288	143	324	161	187	262.4	131	311.3	156	98	49	49
85	283	cohesionless	321	160	8	3	329	164	370	185	214	303.7	151	352.7	176	112	56	56
90	278	cohesionless	365	182	8	3	373	186	420	209	242	347.5	173	396.4	198	128	64	64
95	273	cohesionless	408	204	4	1	412	205	463	231	268	383.7	191	435.3	218	143	72	72
100	268	cohesionless	457	228	16	8	473	236	532	265	307	436.6	218	496.2	248	160	80	80

Factors: **All Capacities are for a Single Pile**

Static Analysis Method	Gates Analysis Method	Dynamic Analysis Method
0.35	0.40	0.65
0.45	0.40	0.65

How to use this table:
 Choose the total factored geotechnical axial resistance that equals or exceeds the total factored loads at the strength limit state (φR_n ⇒ ΣT_i, Q_i) and use the corresponding depth below pile cap plus the required pile embedment into pile cap to estimate pile tip elevations and the lengths of pile required. The geotechnical report may recommend highest allowable pile tip elevations. Deeper pile tip elevations may be needed to address scour, lateral loads, seismic, and other loading conditions. If the total factored geotechnical axial resistance is chosen from the Static Analysis Method column, then field verification shall be conducted using the FHWA Modified Gates Formula. If the total factored geotechnical axial resistance is chosen from the Dynamic Testing Method column, then field verification by dynamic testing methods is required.

Uplift Resistance
 Clays, a-Method (Tomlinson/Skempton) 0.25
 Sands, Nordlund Method 0.35

Driving Resistance Reductions
 Cohesive Soils 0.5
 Cohesionless Soils 0.25

Side Friction Through Embankment Layers (kips): 0

Note: Reported nominal capacities have been adjusted. They are reduced to account for the effects of scour and side friction accumulated through embankment layers; has been neglected

* If base of pile cap varies from plan elevation by more than five feet contact the geotechnical engineer for re-evaluation of capacities

** Value calculated using static method

LRFD Pile Capacities (For Friction Piles) End Bent 2

County: Graves Date: 9/28/2023
 Location: US-45 Over Jackson Creek Pile Size: HP 12X 53 Steel Piles (Friction)
 Item #: 1-10128

Base of Pile Cap Assumed to be at approximate elevation*: 368.2 ft
 Finished Grade Elevation: 375.8 ft
 Original Groundline Elevation: 375.7 ft

Depth Below Pile Cap (ft)	Approximate Elevation (ft)	Soil Type	Nominal Side Resistance		Nominal End Bearing		R _n		Static Analysis Method			Dynamic Testing Method			Uplift	
			Kips	Tons	Kips	Tons	Kips	Tons	φR _n for design:	Field Verification Values:	φR _n for design:	Field Verification Values	φR _n for design:	Field Verification Values	Total Factored	Geotechnical Uplift Resistance (Static Analysis Method)
								Total Factored	Values:	Total Factored	(EOD)	End of Driving	Restrike Nominal	Total Factored	Geotechnical Uplift Resistance (Static Analysis Method)	
0	368	cohesive	0	0	0	0	0	0	0	0	1.3	0	0.6	0	0	
25	343	cohesionless	28	13	1	0	29	14	33	16	33.1	16	50.0	25	10	
30	338	cohesionless	38	19	2	0	40	20	45	22	43.5	21	61.1	31	13	
35	333	cohesionless	51	25	1	0	53	26	59	29	54.0	27	73.9	37	18	
40	328	cohesionless	67	33	4	1	71	35	79	39	70.4	35	91.7	46	23	
45	323	cohesionless	86	43	4	1	90	44	101	50	89.7	44	111.0	55	30	
50	318	cohesionless	109	54	8	3	117	58	132	65	115.2	57	138.2	69	38	
55	313	cohesionless	137	68	8	3	144	72	163	81	137.9	68	165.5	83	48	
60	308	cohesionless	168	83	14	6	182	90	205	102	172.4	86	202.9	101	59	
65	303	cohesionless	204	102	14	6	218	109	246	122	208.9	104	239.4	120	72	
70	298	cohesionless	244	121	14	6	257	128	290	144	248.0	124	278.5	139	85	
75	293	cohesionless	284	142	12	5	296	147	333	166	286.5	143	317.0	159	100	
80	288	cohesionless	326	163	12	5	338	168	380	190	328.5	164	359.0	180	114	
85	283	cohesionless	373	186	16	8	389	194	438	219	379.9	189	410.4	205	131	
90	278	cohesionless	426	212	16	8	442	220	497	248	432.5	216	463.0	231	149	
95	273	cohesionless	481	240	16	8	497	248	559	279	487.9	243	518.4	259	168	
100	268	cohesionless	539	269	16	8	556	277	625	312	546.1	273	576.6	288	189	

Factors: **All Capacities are for a Single Pile**

Axial Capacity	Static		Gates		Dynamic	
	Analysis	Method	Analysis	Method	Analysis	Method
Skin Friction and End Bearing in Clays, a-Method (Tomlinson/Skempton)	0.35	0.40	0.40	0.65	0.65	0.65
Skin Friction and End Bearing in Sands, Nordlund/Thurman Method	0.45	0.40	0.40	0.65	0.65	0.65

How to use this table:
 Choose the total factored geotechnical axial resistance that equals or exceeds the total factored loads at the strength limit state (φR_n ⇒ Σγ_iL_iQ) and use the corresponding depth below pile cap plus the required pile embedment into pile cap to estimate pile tip elevations and the lengths of pile required. The geotechnical report may recommend highest allowable pile tip elevations. Deeper pile tip elevations may be needed to address scour, lateral loads, seismic, and other loading conditions. If the total factored geotechnical axial resistance is chosen from the Static Analysis Method column, then field verification shall be conducted using the FHWA Modified Gates Formula. If the total factored geotechnical axial resistance is chosen from the Dynamic Testing Method column, then field verification by dynamic testing methods is required.

Uplift Resistance
 Clays, a-Method (Tomlinson/Skempton) 0.25
 Sands, Nordlund Method 0.35

Driving Resistance Reductions
 Cohesive Soils 0.5
 Cohesionless Soils 0.25

Side Friction Through Embankment Layers (kips): 0

Note: Reported nominal capacities have been adjusted. They are reduced to account for the effects of scour and side friction accumulated through embankment layers; has been neglected

* If base of pile cap varies from plan elevation by more than five feet contact the geotechnical engineer for re-evaluation of capacities

** Value calculated using static method

LRFD Pile Capacities (For Friction Piles) End Bent 1

County: Graves Date: 9/28/2023
 Location: US-45 Over Jackson Creek Pile Size: HP 14 X 89 Steel Piles (Friction)
 Item #: 1-10128

Base of Pile Cap Assumed to be at approximate elevation*: 368.2 ft
 Finished Grade Elevation: 375.9 ft
 Original Groundline Elevation: 375.7 ft

Depth Below Pile Cap (ft)	Approximate Elevation (ft)	Soil Type	Nominal Side Resistance		Nominal End Bearing		R _n		Static Analysis Method			Dynamic Testing Method			Uplift			
			Kips		Tons		Kips		Tons		Field Verification Values			Field Verification Values			φR _n for design:	
			Kips	Tons	Kips	Tons	Kips	Tons	Kips	Tons	Total Factored	Geotechnical	End of Driving	Restrike	Beginning of	Total Factored	Geotechnical	
0	368	cohesive	0	0	0	0	0	0	0	0	1.3	0	0.6	0	0	0	0	
25	343	cohesionless	36	17	2	1	38	19	17	9	43	21	40.5	20	12	6	6	
30	338	cohesionless	51	25	4	1	55	27	25	13	62	30	55.8	28	18	9	18	
35	333	cohesionless	73	36	7	3	80	39	36	18	90	44	79.1	40	25	13	13	
40	328	cohesionless	99	49	7	3	106	53	48	24	119	59	101.1	51	35	18	18	
45	323	cohesionless	126	63	3	1	129	64	58	29	145	72	121.0	60	44	22	22	
50	318	cohesionless	156	77	9	4	165	82	74	37	185	92	154.4	77	54	27	27	
55	313	cohesionless	193	96	9	4	202	101	91	46	227	113	185.6	93	68	34	34	
60	308	cohesionless	234	116	9	4	243	121	109	55	273	136	219.5	110	82	41	41	
65	303	cohesionless	272	135	2	1	274	137	123	62	309	154	244.8	122	95	48	48	
70	298	cohesionless	305	152	2	1	307	153	138	69	345	172	272.0	136	107	54	54	
75	293	cohesionless	348	173	13	6	361	180	162	81	406	203	322.5	161	122	61	61	
80	288	cohesionless	406	202	13	6	419	209	189	95	472	235	380.7	190	142	71	71	
85	283	cohesionless	467	233	13	6	481	240	216	108	541	270	442.3	221	164	82	82	
90	278	cohesionless	533	266	13	6	546	272	246	123	614	307	507.4	254	186	93	93	
95	273	cohesionless	597	298	6	2	603	301	271	136	678	339	560.3	280	209	105	105	
100	268	cohesionless	669	334	27	13	696	348	313	157	783	391	641.7	321	234	117	117	

Factors: **All Capacities are for a Single Pile**

Axial Capacity	Static Analysis		Gates		Dynamic Analysis	
	Method	Value	Method	Value	Method	Value
Skin Friction and End Bearing in Clays, a-Method (Tomlinson/Skempton)	0.35	0.40	0.40	0.65	0.65	0.65
Skin Friction and End Bearing in Sands, Nordlund/Thurman Method	0.45	0.40	0.40	0.65	0.65	0.65

How to use this table:
 Choose the total factored geotechnical axial resistance that equals or exceeds the total factored loads at the strength limit state (φR_n ⇒ ΣT_i, Q) and use the corresponding depth below pile cap plus the required pile embedment into pile cap to estimate pile tip elevations and the lengths of pile required. The geotechnical report may recommend highest allowable pile tip elevations. Deeper pile tip elevations may be needed to address scour, lateral loads, seismic, and other loading conditions. If the total factored geotechnical axial resistance is chosen from the Static Analysis Method column, then field verification shall be conducted using the FHWA Modified Gates Formula. If the total factored geotechnical axial resistance is chosen from the Dynamic Testing Method column, then field verification by dynamic testing methods is required.

Uplift Resistance
 Clays, a-Method (Tomlinson/Skempton) 0.25
 Sands, Nordlund Method 0.35

Driving Resistance Reductions
 Cohesive Soils 0.5
 Cohesionless Soils 0.25

Side Friction Through Embankment Layers (kips): 0

* If base of pile cap varies from plan elevation by more than five feet contact the geotechnical engineer for re-evaluation of capacities
 ** Value calculated using static method
 Note: Reported nominal capacities have been adjusted. They are reduced to account for the effects of scour and side friction accumulated through embankment layers has been neglected

LRFD Pile Capacities (For Friction Piles) End Bent 2

County: Graves Date: 9/28/2023
 Location: US-45 Over Jackson Creek Pile Size: HP 14 X 89 Steel Piles (Friction)
 Item #: 1-10128

Base of Pile Cap Assumed to be at approximate elevation*: 368.2 ft
 Finished Grade Elevation: 375.8 ft
 Original Groundline Elevation: 375.7 ft

Depth Below Pile Cap (ft)	Approximate Elevation (ft)	Soil Type	Nominal Side Resistance		Nominal End Bearing		R _n		Static Analysis Method			Dynamic Testing Method			Uplift	
			Kips	Tons	Kips	Tons	Total Factored Geotechnical Axial Resistance (Static Analysis Method)	Field Verification Values:	Field Verification Values (EOD)	Field Verification Values (BOR)	φR _n for design:	φR _n for design:	Total Factored Geotechnical Uplift Resistance (Static Analysis Method)			
0	368	cohesive	0	0	0	0	0	0	0	0	1.3	0	0.6	0	0	0
25	343	cohesionless	38	18	2	1	40	20	18	9	44.6	22	65.5	33	13	7
30	338	cohesionless	53	26	3	1	56	28	25	13	64	31	81.6	41	19	10
35	333	cohesionless	72	36	2	1	75	37	34	17	84	42	99.9	50	25	13
40	328	cohesionless	95	47	6	2	101	50	45	23	114	56	126.1	63	33	17
45	323	cohesionless	123	61	6	2	129	64	58	29	145	72	154.4	77	43	22
50	318	cohesionless	157	78	13	6	170	85	77	39	192	95	195.4	98	55	28
55	338	cohesionless	198	98	13	6	211	105	95	48	237	118	236.2	118	69	35
60	308	cohesionless	245	122	23	11	268	134	121	61	302	150	293.4	147	86	43
65	303	cohesionless	300	149	23	11	323	161	146	73	364	181	348.6	174	105	53
70	298	cohesionless	359	179	23	11	383	191	172	86	431	215	407.8	204	126	63
75	293	cohesionless	421	210	20	9	440	220	198	99	495	247	465.4	233	147	74
80	288	cohesionless	484	241	20	9	503	251	227	114	566	283	528.5	264	169	85
85	283	cohesionless	554	277	27	13	582	290	262	131	655	327	607.0	303	194	97
90	278	cohesionless	634	317	27	13	662	330	298	149	745	372	687.1	344	222	111
95	273	cohesionless	719	359	27	13	746	373	336	168	840	419	771.5	386	252	126
100	268	cohesionless	808	403	27	13	835	417	376	188	939	469	860.2	430	283	142

Factors: **All Capacities are for a Single Pile**

Static Analysis Method	Static Analysis Method	Dynamic Analysis Method	Dynamic Analysis Method
Gates	Gates	Gates	Gates
0.35	0.40	0.40	0.65
0.45	0.40	0.40	0.65

How to use this table:
 Choose the total factored geotechnical axial resistance that equals or exceeds the total factored loads at the strength limit state (φR_n ⇒ Σγ_iQ_i) and use the corresponding depth below pile cap plus the required pile embedment into pile cap to estimate pile tip elevations and the lengths of pile required. The geotechnical report may recommend highest allowable pile tip elevations. Deeper pile tip elevations may be needed to address scour, lateral loads, seismic, and other loading conditions. If the total factored geotechnical axial resistance is chosen from the Static Analysis Method column, then field verification shall be conducted using the FHWA Modified Gates Formula. If the total factored geotechnical axial resistance is chosen from the Dynamic Testing Method column, then field verification by dynamic testing methods is required.

Uplift Resistance
 Clays, a-Method (Tomlinson/Skempton) 0.25
 Sands, Nordlund Method 0.35

Driving Resistance Reductions
 Cohesive Soils 0.5
 Cohesionless Soils 0.25

Side Friction Through Embankment Layers (kips): 0

* If base of pile cap varies from plan elevation by more than five feet contact the geotechnical engineer for re-evaluation of capacities
 ** Value calculated using static method
 Note: Reported nominal capacities have been adjusted. They are reduced to account for the effects of scour and side friction accumulated through embankment layers; has been neglected

COORDINATE DATA SUBMISSION FORM
KYTC DIVISION OF STRUCTURAL DESIGN - GEOTECHNICAL BRANCH

County Graves

Road Number US- 45

Survey Crew / Consultant BFW

Contact Person Chris Farmer

Item # 01-10128

Mars# _____

Project # _____

Date 9/26/2023

Notes:

Elevation Datum (circle one) **NAVD88** Assumed

HOLE NUMBER	LATITUDE (Decimal Degrees)	LONGITUDE (Decimal Degrees)	HOLE NUMBER	STATION	OFFSET	ELEVATION (FT)
Single Span - US 45 OVER JACKSON CREEK						
1001	36.5815470°N	88.8015224°W	1001	102+40.04	6.83' LT	375.70
1002	36.5816299°N	88.8012742°W	1002	103+17.91	5.62' RT	375.71

MATERIAL SUMMARY

CONTRACT ID: 245342

121GR24D042-STP BRZ

BR02000512400

US 51 ADDRESS DEFICIENCIES OF US 51 OVER LITTLE MAYFIELD CREEK (020B00004N) BRIDGE WITH GRADE & DRAIN, A DISTANCE OF .21 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0005	00001	DGA BASE	1,144.00	TON
0010	00100	ASPHALT SEAL AGGREGATE	4.00	TON
0015	00103	ASPHALT SEAL COAT	2.00	TON
0020	00212	CL2 ASPH BASE 1.00D PG64-22	2,372.00	TON
0025	00301	CL2 ASPH SURF 0.38D PG64-22	255.00	TON
0030	00441	ENTRANCE PIPE-18 IN	69.00	LF
0035	00462	CULVERT PIPE-18 IN	60.00	LF
0040	01433	SLOPED BOX OUTLET TYPE 1-18 IN	3.00	EACH
0045	02200	ROADWAY EXCAVATION	2,618.00	CUYD
0050	02351	GUARDRAIL-STEEL W BEAM-S FACE	487.50	LF
0055	02360	GUARDRAIL TERMINAL SECTION NO 1	1.00	EACH
0060	02367	GUARDRAIL END TREATMENT TYPE 1	3.00	EACH
0065	02381	REMOVE GUARDRAIL	328.00	LF
0070	02399	EXTRA LENGTH GUARDRAIL POST	37.00	EACH
0075	02429	RIGHT-OF-WAY MONUMENT TYPE 1	11.00	EACH
0080	02432	WITNESS POST	11.00	EACH
0085	02483	CHANNEL LINING CLASS II	453.00	TON
0090	02484	CHANNEL LINING CLASS III	50.00	TON
0095	02545	CLEARING AND GRUBBING - APPROX LESS THAN 1 ACRE	1.00	LS
0100	02565	OBJECT MARKER TYPE 2	6.00	EACH
0105	02585	EDGE KEY	48.00	LF
0110	02650	MAINTAIN & CONTROL TRAFFIC	1.00	LS
0115	02726	STAKING	1.00	LS
0120	02731	REMOVE STRUCTURE	1.00	LS
0125	03171	CONCRETE BARRIER WALL TYPE 9T	1,000.00	LF
0130	03299	ARMORED EDGE FOR CONCRETE	73.80	LF
0135	06514	PAVE STRIPING-PERM PAINT-4 IN	1,698.00	LF
0140	08003	FOUNDATION PREPARATION	1.00	LS
0145	08019	CYCLOPEAN STONE RIP RAP	435.00	TON
0150	08033	TEST PILES	115.00	LF
0155	08046	PILES-STEEL HP12X53	735.00	LF
0160	08100	CONCRETE-CLASS A	45.00	CUYD
0165	08104	CONCRETE-CLASS AA	35.00	CUYD
0170	08140	MECHANICAL REINF COUPLER #5 EPOXY COATED	14.00	EACH
0175	08151	STEEL REINFORCEMENT-EPOXY COATED	9,202.00	LB
0180	08664	PRECAST PC BOX BEAM CB27-48	526.50	LF
0185	20191ED	OBJECT MARKER TY 3	3.00	EACH
0190	21415ND	EROSION CONTROL	1.00	LS
0195	22883EN	CONCRETE WEDGE CURB	558.00	LF
0200	23274EN11F	TURF REINFORCEMENT MAT 1	240.00	SQYD
0205	23378EC	CONCRETE SEALING	3,255.00	SQFT
0210	24405EC	MECHANICAL REINF COUPLER-#8 EPOXY COATED	18.00	EACH

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0215	25028ED	RAIL SYSTEM SINGLE SLOPE - 40 IN	117.00	LF
0220	25078ED	THRIE BEAM GUARDRAIL TRANSITION TL-3	4.00	EACH
0225	02568	MOBILIZATION	1.00	LS
0230	02569	DEMOBILIZATION	1.00	LS

CONTRACT ID: 245342

121GR24D042-STP BRZ

BR02000512401

US 51 ADDRESS DEFICIENCIES OF US 51 OVER GADDIE CREEK (020B00002N) BRIDGE REPLACEMENT, A DISTANCE OF .1 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0480	00001	DGA BASE	368.00	TON
0485	00100	ASPHALT SEAL AGGREGATE	1.50	TON
0490	00103	ASPHALT SEAL COAT	1.00	TON
0495	00212	CL2 ASPH BASE 1.00D PG64-22	326.00	TON
0500	00301	CL2 ASPH SURF 0.38D PG64-22	250.00	TON
0505	00521	STORM SEWER PIPE-15 IN	15.00	LF
0510	01643	JUNCTION BOX-24 IN	1.00	EACH
0515	02230	EMBANKMENT IN PLACE	443.00	CUYD
0520	02351	GUARDRAIL-STEEL W BEAM-S FACE	212.50	LF
0525	02360	GUARDRAIL TERMINAL SECTION NO 1	3.00	EACH
0530	02367	GUARDRAIL END TREATMENT TYPE 1	1.00	EACH
0535	02381	REMOVE GUARDRAIL	106.00	LF
0540	02399	EXTRA LENGTH GUARDRAIL POST	30.00	EACH
0545	02484	CHANNEL LINING CLASS III	16.00	TON
0550	02484	CHANNEL LINING CLASS III	200.00	TON
0555	02545	CLEARING AND GRUBBING - APPROX LESS THAN 1 ACRE	1.00	LS
0560	02565	OBJECT MARKER TYPE 2	4.00	EACH
0565	02585	EDGE KEY	48.00	LF
0570	02650	MAINTAIN & CONTROL TRAFFIC	1.00	LS
0575	02726	STAKING	1.00	LS
0580	02731	REMOVE STRUCTURE	1.00	LS
0585	03171	CONCRETE BARRIER WALL TYPE 9T	1,000.00	LF
0590	03299	ARMORED EDGE FOR CONCRETE	79.70	LF
0595	06514	PAVE STRIPING-PERM PAINT-4 IN	3,600.00	LF
0600	08003	FOUNDATION PREPARATION	1.00	LS
0605	08019	CYCLOPEAN STONE RIP RAP	547.00	TON
0610	08033	TEST PILES	170.00	LF
0615	08046	PILES-STEEL HP12X53	1,440.00	LF
0620	08100	CONCRETE-CLASS A	44.00	CUYD
0625	08104	CONCRETE-CLASS AA	49.00	CUYD
0630	08140	MECHANICAL REINF COUPLER #5 EPOXY COATED	8.00	EACH
0635	08151	STEEL REINFORCEMENT-EPOXY COATED	10,982.00	LB
0640	08664	PRECAST PC BOX BEAM CB27-48	735.00	LF
0645	20191ED	OBJECT MARKER TY 3	1.00	EACH
0650	20738NS112	TEMP CRASH CUSHION	1.00	EACH

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0655	21415ND	EROSION CONTROL	1.00	LS
0660	22883EN	CONCRETE WEDGE CURB	250.00	LF
0665	23378EC	CONCRETE SEALING	4,382.00	SQFT
0670	24405EC	MECHANICAL REINF COUPLER-#8 EPOXY COATED	18.00	EACH
0675	25028ED	RAIL SYSTEM SINGLE SLOPE - 40 IN	147.00	LF
0680	25078ED	THRIE BEAM GUARDRAIL TRANSITION TL-3	4.00	EACH
0685	02568	MOBILIZATION	1.00	LS
0690	02569	DEMOBILIZATION	1.00	LS

CONTRACT ID: 245342

121GR24D042-STP BRZ

BR04200452400

US 45 ADDRESS DEFICIENCIES OF US 45 OVER JACKSON CREEK (042B00090N) BRIDGE REPLACEMENT, A DISTANCE OF .08 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0235	00003	CRUSHED STONE BASE	246.95	TON
0240	00020	TRAFFIC BOUND BASE	60.00	TON
0245	00100	ASPHALT SEAL AGGREGATE	4.00	TON
0250	00103	ASPHALT SEAL COAT	1.00	TON
0255	00212	CL2 ASPH BASE 1.00D PG64-22	252.00	TON
0260	00301	CL2 ASPH SURF 0.38D PG64-22	46.00	TON
0265	00356	ASPHALT MATERIAL FOR TACK	1.00	TON
0270	01987	DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	5.00	EACH
0275	02200	ROADWAY EXCAVATION	200.00	CUYD
0280	02351	GUARDRAIL-STEEL W BEAM-S FACE	37.50	LF
0285	02360	GUARDRAIL TERMINAL SECTION NO 1	1.00	EACH
0290	02367	GUARDRAIL END TREATMENT TYPE 1	3.00	EACH
0295	02381	REMOVE GUARDRAIL	241.50	LF
0300	02429	RIGHT-OF-WAY MONUMENT TYPE 1	10.00	EACH
0305	02432	WITNESS POST	10.00	EACH
0310	02545	CLEARING AND GRUBBING - APPROX LESS THAN 1 ACRE	1.00	LS
0315	02650	MAINTAIN & CONTROL TRAFFIC	1.00	LS
0320	02671	PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH
0325	02676	MOBILIZATION FOR MILL & TEXT	1.00	LS
0330	02677	ASPHALT PAVE MILLING & TEXTURING	18.00	TON
0335	02726	STAKING	1.00	LS
0340	02731	REMOVE STRUCTURE	1.00	LS
0345	03299	ARMORED EDGE FOR CONCRETE	51.00	LF
0350	04820	TRENCHING AND BACKFILLING	205.00	LF
0355	06542	PAVE STRIPING-THERMO-6 IN W	623.00	LF
0360	06543	PAVE STRIPING-THERMO-6 IN Y	632.00	LF
0365	06556	PAVE STRIPING-DUR TY 1-6 IN W	199.00	LF
0370	06557	PAVE STRIPING-DUR TY 1-6 IN Y	199.00	LF
0375	08003	FOUNDATION PREPARATION - Approx. 1,450 CY of excavation required for foundation preparation	1.00	LS
0380	08019	CYCLOPEAN STONE RIP RAP	454.00	TON

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0385	08033	TEST PILES	175.00	LF
0390	08051	PILES-STEEL HP14X89	855.00	LF
0395	08100	CONCRETE-CLASS A	50.00	CUYD
0400	08104	CONCRETE-CLASS AA	66.00	CUYD
0405	08151	STEEL REINFORCEMENT-EPOXY COATED	28,297.00	LB
0410	20191ED	OBJECT MARKER TY 3	3.00	EACH
0415	20550ND	SAWCUT PAVEMENT	47.00	LF
0420	21077ED	FIBER OPTIC CABLE	550.00	LF
0425	21415ND	EROSION CONTROL	1.00	LS
0430	22668EN	DIRECTIONAL BORE	245.00	LF
0435	23378EC	CONCRETE SEALING	6,209.00	SQFT
0440	24601EC	INSTALL - INSTALL FIBER OPTIC MARKERS	4.00	EACH
0445	24601EC	INSTALL - INSTALL FIBER OPTIC SPLICE	2.00	EACH
0450	24601EC	INSTALL - INSTALL FIBER OPTIC VAULT	2.00	EACH
0455	24617EC	INSTALL - INSTALL DETECTABLE WARNING TAPE	205.00	LF
0460	25028ED	RAIL SYSTEM SINGLE SLOPE - 40 IN	202.00	LF
0465	26188ED	PPC I-BEAM HN 42-61	293.00	LF
0470	02568	MOBILIZATION	1.00	LS
0475	02569	DEMOBILIZATION	1.00	LS

PART II

SPECIFICATIONS AND STANDARD DRAWINGS

STANDARD SPECIFICATIONS

Any reference in the plans or proposal to previous editions of the *Standard Specifications for Road and Bridge Construction* and *Standard Drawings* are superseded by *Standard Specifications for Road and Bridge Construction, Edition of 2019* and *Standard Drawings, Edition of 2020*.

SUPPLEMENTAL SPECIFICATIONS

The contractor shall use the Supplemental Specifications that are effective at the time of letting. The Supplemental Specifications can be found at the following link:
<http://transportation.ky.gov/Construction/Pages/Kentucky-Standard-Specifications.aspx>

SPECIAL NOTE FOR PORTABLE CHANGEABLE MESSAGE SIGNS

This Special Note will apply when indicated on the plans or in the proposal.

1.0 DESCRIPTION. Furnish, install, operate, and maintain variable message signs at the locations shown on the plans or designated by the Engineer. Remove and retain possession of variable message signs when they are no longer needed on the project.

2.0 MATERIALS.

2.1 General. Use LED Variable Message Signs Class I, II, or III, as appropriate, from the Department's List of Approved Materials.

Unclassified signs may be submitted for approval by the Engineer. The Engineer may require a daytime and nighttime demonstration. The Engineer will make a final decision within 30 days after all required information is received.

2.2 Sign and Controls. All signs must:

- 1) Provide 3-line messages with each line being 8 characters long and at least 18 inches tall. Each character comprises 35 pixels.
- 2) Provide at least 40 preprogrammed messages available for use at any time. Provide for quick and easy change of the displayed message; editing of the message; and additions of new messages.
- 3) Provide a controller consisting of:
 - a) Keyboard or keypad.
 - b) Readout that mimics the actual sign display. (When LCD or LCD type readout is used, include backlighting and heating or otherwise arrange for viewing in cold temperatures.)
 - c) Non-volatile memory or suitable memory with battery backup for storing pre-programmed messages.
 - d) Logic circuitry to control the sequence of messages and flash rate.
- 4) Provide a serial interface that is capable of supporting complete remote control ability through land line and cellular telephone operation. Include communication software capable of immediately updating the message, providing complete sign status, and allowing message library queries and updates.
- 5) Allow a single person easily to raise the sign to a satisfactory height above the pavement during use, and lower the sign during travel.
- 6) Be Highway Orange on all exterior surfaces of the trailer, supports, and controller cabinet.
- 7) Provide operation in ambient temperatures from -30 to + 120 degrees Fahrenheit during snow, rain and other inclement weather.
- 8) Provide the driver board as part of a module. All modules are interchangeable, and have plug and socket arrangements for disconnection and reconnection. Printed circuit boards associated with driver boards have a conformable coating to protect against moisture.
- 9) Provide a sign case sealed against rain, snow, dust, insects, etc. The lens is UV stabilized clear plastic (polycarbonate, acrylic, or other approved material) angled to prevent glare.
- 10) Provide a flat black UV protected coating on the sign hardware, character PCB, and appropriate lens areas.
- 11) Provide a photocell control to provide automatic dimming.

- 12) Allow an on-off flashing sequence at an adjustable rate.
- 13) Provide a sight to aim the message.
- 14) Provide a LED display color of approximately 590 nm amber.
- 15) Provide a controller that is password protected.
- 16) Provide a security device that prevents unauthorized individuals from accessing the controller.
- 17) Provide the following 3-line messages preprogrammed and available for use when the sign unit begins operation:

/KEEP/RIGHT/=>=>=>/	/MIN/SPEED/**MPH/
/KEEP/LEFT/←←←/	/ICY/BRIDGE/AHEAD/ /ONE
/LOOSE/GRAVEL/AHEAD/	LANE/BRIDGE/AHEAD/
/RD WORK/NEXT/**MILES/	/ROUGH/ROAD/AHEAD/
/TWO WAY/TRAFFIC/AHEAD/	/MERGING/TRAFFIC/AHEAD/
/PAINT/CREW/AHEAD/	/NEXT/***/MILES/
/REDUCE/SPEED/**MPH/	/HEAVY/TRAFFIC/AHEAD/
/BRIDGE/WORK/**0 FT/	/SPEED/LIMIT/**MPH/
/MAX/SPEED/**MPH/	/BUMP/AHEAD/
/SURVEY/PARTY/AHEAD/	/TWO/WAY/TRAFFIC/

*Insert numerals as directed by the Engineer.
Add other messages during the project when required by the Engineer.

2.3 Power.

- 1) Design solar panels to yield 10 percent or greater additional charge than sign consumption. Provide direct wiring for operation of the sign or arrow board from an external power source to provide energy backup for 21 days without sunlight and an on-board system charger with the ability to recharge completely discharged batteries in 24 hours.

3.0 CONSTRUCTION. Furnish and operate the variable message signs as designated on the plans or by the Engineer. Ensure the bottom of the message panel is a minimum of 7 feet above the roadway in urban areas and 5 feet above in rural areas when operating. Use Class I, II, or III signs on roads with a speed limit less than 55 mph. Use Class I or II signs on roads with speed limits 55 mph or greater.

Maintain the sign in proper working order, including repair of any damage done by others, until completion of the project. When the sign becomes inoperative, immediately repair or replace the sign. Repetitive problems with the same unit will be cause for rejection and replacement.

Use only project related messages and messages directed by the Engineer, unnecessary messages lessen the impact of the sign. Ensure the message is displayed in either one or 2 phases with each phase having no more than 3 lines of text. When no message is needed, but it is necessary to know if the sign is operable, flash only a pixel.

When the sign is not needed, move it outside the clear zone or where the Engineer directs. Variable Message Signs are the property of the Contractor and shall be removed from the project when no longer needed. The Department will not assume ownership of these signs.

4.0 MEASUREMENT. The final quantity of Variable Message Sign will be

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the actual number of individual signs acceptably furnished and operated during the project. The Department will not measure signs replaced due to damage or rejection.

5.0 PAYMENT. The Department will pay for the Variable Message Signs at the unit price each. The Department will not pay for signs replaced due to damage or rejection. Payment is full compensation for furnishing all materials, labor, equipment, and service necessary to, operate, move, repair, and maintain or replace the variable message signs. The Department will make payment for the completed and accepted quantities under the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
02671	Portable Changeable Message Sign	Each

Effective June 15, 2012

SPECIAL PROVISION FOR EMBANKMENT AT BRIDGE END BENT STRUCTURES

This Special Provision will apply when indicated on the plans or in the proposal. Section references herein are to the Department's Standard Specifications for Road and Bridge Construction, Current Edition.

1.0 DESCRIPTION. Construct a soil, granular, or rock embankment with soil, granular or cohesive pile core and place structure granular backfill, as the Plans require. Construct the embankment according to the requirements of this Special Provision, the Plans, Standard Drawing RGX 100 and 105, and the Standard Specifications, Current Edition.

2.0 MATERIALS.

2.1 Granular Embankment. Conform to Subsection 805.10. When Granular Embankment materials are erodible or unstable according to Subsection 805.03.04, use the Special Construction Methods found in 3.2 of the Special Provision.

2.2 Rock Embankment. Provide durable rock from roadway excavation that consists principally of Unweathered Limestone, Durable Shale (SDI equal to or greater than 95 according to KM 64-513), or Durable Sandstone.

2.3 Pile Core. Provide a pile core in the area of the embankments where deep foundations are to be installed unless otherwise specified. The Pile Core is the zone indicated on Standard Drawings RGX 100 and 105 designated as Pile Core. Material control of the pile core area during embankment construction is always required. Proper Pile Core construction is required for installation of foundation elements such as drilled or driven piles or drilled shafts. The type of material used to construct the pile core is as directed in the plans or below. Typically, the pile core area will be constructed from the same material used to construct the surrounding embankment. Pile Core can be classified as one of three types:

A) Pile Core - Conform to Section 206 of the Standard Specifications. Provide pile core material consisting of the same material as the adjacent embankment except the material in the pile core area shall be free of boulders or particle sizes larger than 4 inches in any dimension or any other obstructions that may hinder pile driving operations. If the pile core material hinders pile driving operations, take the appropriate means necessary to reach the required pile tip elevation, at no expense to the Department.

B) Granular Pile Core. Granular pile core is required only when specified in the plans. Select a gradation of durable rock to facilitate pile driving that conforms to Subsection 805.11. If granular pile core material hinders pile driving operations, take appropriate means necessary to reach the required pile tip elevation, at no expense to the Department.

C) Cohesive Pile Core. Cohesive Pile Core is required only when specified in the plans. Conform to Section 206 of the Standard Specifications and use soil with at least 50 percent passing a No. 4 sieve having a minimum Plasticity Index (PI) of 10. In addition, keep the cohesive pile core free of boulders, larger than 4 inches in any dimension, or any other obstructions, which would interfere with drilling operations. If cohesive pile core material interferes with drilling operations, take appropriate means necessary to maintain

excavation stability, at no expense to the Department.

2.4 Structure Granular Backfill. Conform to Subsection 805.11

2.5 Geotextile Fabric. Conform to Type I or Type IV in Section 214 and 843.

3.0 CONSTRUCTION.

3.1 General. Construct roadway embankments at end bents according to Section 206 and in accordance with the Special Provision, the Plans, and Standard Drawings for the full embankment section. In some instances, granular or rock embankment will be required for embankment construction for stability purposes, but this special provision does not prevent the use of soil when appropriate. Refer to the plans for specific details regarding material requirements for embankment construction.

Place and compact the pile core and structure granular backfill according to the applicable density requirements for the project. If the embankment and pile core are dissimilar materials (i.e., a granular pile core is used with a soil embankment or a cohesive pile core is used with a granular embankment), a Geotextile Fabric, Type IV, will be required between the pile core and embankment in accordance with Sections 214 and 843 of the Standard Specifications.

When granular or rock embankment is required for embankment construction, conform to the general requirements of Subsection 206.03.02 B. In addition, place the material in no greater than 2-foot loose lifts and compact with a vibrating smooth wheel roller capable of producing a minimum centrifugal force of 15 tons. Apply these requirements to the full width of the embankment for a distance of half the embankment height or 50 feet, whichever is greater, as shown on Standard Drawing RGX-105.

When using granular pile core, install 8-inch perforated underdrain pipe at or near the elevation of the original ground in the approximate locations depicted on the standard drawing, and as the Engineer directs, to ensure positive drainage of the embankment. Wrap the perforated pipe with a fabric of a type recommended by the pipe manufacturer.

After constructing the embankment, excavate for the end bent cap, drive piling, install shafts or other foundation elements, place the mortar bed, construct the end bent, and complete the embankment to finish grade according to the construction sequence shown on the Plans or Standard Drawings and as specified hereinafter.

Certain projects may require widening of existing embankments and the removal of substructures. Construct embankment according to the plans. Substructure removal shall be completed according to the plans and Section 203. Excavation may be required at the existing embankment in order to place the structure granular backfill as shown in the Standard Drawings.

After piles are driven or shafts installed (see design drawings), slope the bottom of the excavation towards the ends of the trench as noted on the plans for drainage. Using a separate pour, place concrete mortar, or any class concrete, to provide a base for forming and placing the cap. Place side forms for the end bent after the mortar has set sufficiently to support workmen and forms without being disturbed.

Install 4-inch perforated pipe in accordance with the plans and Standard Drawings. In the event slope protection extends above the elevation of the perforated pipe, extend the pipe through the slope protection.

After placing the end bent cap and achieving required concrete cylinder strengths, remove adjacent forms and fill the excavation with compacted structure granular backfill material (maximum 1' loose lifts) to the level of the berm prior to placing beams for the bridge. Place Type IV geotextile fabric between embankment material and structure granular backfill. After completing the end bent backwall, or after completing the span end

wall, place the compacted structure granular backfill (maximum 1' loose lifts) to subgrade elevation. If the original excavation is enlarged, fill the entire volume with compacted structure granular backfill (maximum 1' loose lifts) at no expense to the Department. Do not place backfill before removing adjacent form work. Place structure granular backfill material in trench ditches at the ends of the excavation. Place Geotextile Fabric, Type IV over the surface of the compacted structure granular backfill prior to placing aggregate base course.

Tamp the backfill with hand tampers, pneumatic tampers, or other means approved by the Engineer. Thoroughly compact the backfill under the overhanging portions of the structure to ensure that the backfill is in intimate contact with the sides of the structure.

Do not apply seeding, sodding, or other vegetation to the exposed granular embankment.

3.2 Special Construction Methods. Erodible or unstable materials may erode even when protected by riprap or channel lining; use the special construction method described below when using these materials.

Use fine aggregates or friable sandstone granular embankment at "dry land" structures only. Do not use them at stream crossings or locations subject to flood waters.

For erodible or unstable materials having 50 percent or more passing the No. 4 sieve, protect with geotextile fabric. Extend the fabric from the original ground to the top of slope over the entire area of the embankment slopes on each side of, and in front of, the end bent. Cover the fabric with at least 12 inches of non-erodible material.

For erodible or unstable materials having less than 50 percent passing a No. 4 sieve, cover with at least 12 inches of non-erodible material.

Where erodible or unstable granular embankment will be protected by riprap or channel lining, place Type IV geotextile fabric between the embankment and the specified slope protection.

4.0 MEASUREMENT.

4.1 Granular Embankment. The Department will measure the quantity in cubic yards using the plan quantity, increased or decreased by authorized adjustments as specified in Section 204. The Department will not measure for payment any Granular Embankment that is not called for in the plans.

The Department will not measure for payment any special construction caused by using erodible or unstable materials and will consider it incidental to the Granular Embankment regardless of whether the erodible or unstable material was specified or permitted.

4.2 Rock Embankment. The Department will not measure for payment any rock embankment and will consider it incidental to roadway excavation or embankment in place, as applicable. Rock embankments will be constructed using granular embankment on projects where there is no available rock present within the excavation limits of the project.

4.3 Pile Core. Pile core will be measured and paid under roadway excavation or embankment in place, as applicable. The Department will not measure the pile core for separate payment. The Department will not measure for payment the 8-inch perforated underdrain pipe and will consider it incidental to the Pile Core.

4.4 Structure Granular Backfill. The Department will measure the quantity in cubic yards using the plan quantity, increased or decreased by authorized adjustments as specified in Section 204. The Department will not measure any additional material required for backfill outside the limits shown on the Plans and Standard Drawings for payment and will

consider it incidental to the work.

The Department will not measure for payment the 4-inch perforated underdrain pipe and will consider it incidental to the Structure Granular Backfill.

4.5 Geotextile Fabric. The Department will not measure the quantity of fabric used for separating dissimilar materials when constructing the embankment and pile core and will consider it incidental to embankment construction.

The Department will not measure for payment the Geotextile Fabric used to separate the Structure Granular Backfill from the embankment and aggregate base course and will consider it incidental to Structure Granular Backfill.

The Department will not measure for payment the Geotextile Fabric required for construction with erodible or unstable materials and will consider it incidental to embankment construction.

4.6 End Bent. The Department will measure the quantities according to the Contract. The Department will not measure furnishing and placing the 2-inch mortar or concrete bed for payment and will consider it incidental to the end bent construction.

4.7 Structure Excavation. The Department will not measure structure excavation on new embankments for payment and will consider it incidental to the Structure Granular Backfill or Concrete as applicable.

5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
02223	Granular Embankment	Cubic Yards
02231	Structure Granular Backfill	Cubic Yards

The Department will consider payment as full compensation for all work required in this provision.

September 16, 2016

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

FHWA-1273 – Revised October 23, 2023

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Non-segregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
- XI. Certification Regarding Use of Contract Funds for Lobbying
- XII. Use of United States-Flag Vessels:

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work

performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR Part 230, Subpart A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal Employment Opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (see 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action or are substantially involved in such action, will be made fully cognizant of and will implement the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide

sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

- (1) Withholding monthly progress payments;
- (2) Assessing sanctions;
- (3) Liquidated damages; and/or
- (4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than \$10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway

Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages (29 CFR 5.5)

a. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act ([29 CFR part 3](#))), the full amount of basic hourly wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act ([40 U.S.C. 3141\(2\)\(B\)](#)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph 4. of this section. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH-1321) must be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in [29 CFR part 1](#), a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

(ii) The classification is used in the area by the construction industry; and

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. *Conformance.* (1) The contracting officer must require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is used in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the contracting officer by email to DBAconformance@dol.gov. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer will, by email to DBAconformance@dol.gov, refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division

under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

d. *Fringe benefits not expressed as an hourly rate.* Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. *Unfunded plans.* If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the contractor, in accordance with the criteria set forth in § 5.28, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

f. *Interest.* In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. Withholding (29 CFR 5.5)

a. *Withholding requirements.* The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with paragraph

2.a. of this section or Section V, paragraph 3.a., or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its procurement costs;
- (3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901–3907](#).

3. Records and certified payrolls (29 CFR 5.5)

a. *Basic record requirements (1) Length of record retention.* All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(2) *Information required.* Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

(3) *Additional records relating to fringe benefits.* Whenever the Secretary of Labor has found under paragraph 1.e. of this section that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act, the contractor must maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

(4) *Additional records relating to apprenticeship.* Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

b. *Certified payroll requirements (1) Frequency and method of submission.* The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting

agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(2) *Information required.* The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (e.g., the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH-347 or in any other format desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division website at <https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/wh347.pdf> or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

(3) *Statement of Compliance.* Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

(ii) That each laborer or mechanic (including each helper and apprentice) working on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in [29 CFR part 3](#); and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

(4) *Use of Optional Form WH-347.* The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 will satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(3) of this section.

(5) *Signature.* The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification.* The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under [18 U.S.C. 1001](#) and [31 U.S.C. 3729](#).

(7) *Length of certified payroll retention.* The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents.* The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access (1) Required record disclosures and access to workers.* The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements.* If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under [29 CFR part 6](#) any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures.* Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address

of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity (29 CFR 5.5)

a. *Apprentices (1) Rate of pay.* Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits.* Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio.* The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates.* Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity.* The use of apprentices and journeyworkers under this part must be in conformity with

the equal employment opportunity requirements of Executive Order 11246, as amended, and [29 CFR part 30](#).

c. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeyworkers shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor must insert FHWA-1273 in any subcontracts, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility. a. By entering into this contract, the contractor certifies that neither it nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, [18 U.S.C. 1001](#).

11. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#); or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#).

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchpersons and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph 1. of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or

mechanic, including watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1. of this section.

* \$31 as of January 15, 2023 (See 88 FR 88 FR 2210) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section IV paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its procurement costs;
- (3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901](#)–3907.

4. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the

event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or

d. Informing any other person about their rights under CWHSSA or this part.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;

- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and

health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of \$150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>). 2 CFR 180.300, 180.320, and 180.325.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

3. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov>), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily

excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

4. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or

cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS
ROAD CONTRACTS** (23 CFR 633, Subpart B, Appendix B)

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

**KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS**

**EMPLOYMENT REQUIREMENTS
RELATING TO
NONDISCRIMINATION OF EMPLOYEES
(APPLICABLE TO FEDERAL-AID SYSTEM CONTRACTS)**

**AN ACT OF THE KENTUCKY GENERAL ASSEMBLY
TO PREVENT DISCRIMINATION IN EMPLOYMENT**

**KRS CHAPTER 344
EFFECTIVE JUNE 16, 1972**

The contract on this project, in accordance with KRS Chapter 344, provides that during the performance of this contract, the contractor agrees as follows:

1. The contractor shall not fail or refuse to hire, or shall not discharge any individual, or otherwise discriminate against an individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, national origin, sex, disability or age (forty and above); or limit, segregate, or classify his employees in any way which would deprive or tend to deprive an individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual's race, color, religion, national origin, sex, disability or age forty (40) and over. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2. The contractor shall not print or publish or cause to be printed or published a notice or advertisement relating to employment by such an employer or membership in or any classification or referral for employment by the employment agency, indicating any preference, limitation, specification, or discrimination, based on race, color, religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, except that such a notice or advertisement may indicate a preference, limitation, or specification based on religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, when religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, is a bona fide occupational qualification for employment.

3. If the contractor is in control of apprenticeship or other training or retraining, including on-the-job training programs, he shall not discriminate against an individual because of his race, color, religion, national origin, sex, disability or age forty (40) and over, in admission to, or employment in any program established to provide apprenticeship or other training.

4. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representative of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for non-compliance.

Revised: January 25, 2017

Standard Title VI/Non-Discrimination Assurances

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, **Federal Highway Administration**, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.
4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the **Federal Highway Administration** to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the **Federal Highway Administration**, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the **Federal Highway Administration** may determine to be appropriate, including, but not limited to:
 - a. withholding payments to the contractor under the contract until the contractor complies; and/or
 - b. cancelling, terminating, or suspending a contract, in whole or in part.
6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the **Federal Highway Administration** may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

Standard Title VI/Non-Discrimination Statutes and Authorities

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “contractor”) agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21;
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 *et seq.*), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 -- 12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration’s Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 *et seq.*)

EXECUTIVE BRANCH CODE OF ETHICS

In the 1992 regular legislative session, the General Assembly passed and Governor Brereton Jones signed Senate Bill 63 (codified as KRS 11A), the Executive Branch Code of Ethics, which states, in part:

KRS 11A.040 (7) provides:

No present or former public servant shall, within six (6) months following termination of his office or employment, accept employment, compensation, or other economic benefit from any person or business that contracts or does business with, or is regulated by, the state in matters in which he was directly involved during the last thirty-six (36) months of his tenure. This provision shall not prohibit an individual from returning to the same business, firm, occupation, or profession in which he was involved prior to taking office or beginning his term of employment, or for which he received, prior to his state employment, a professional degree or license, provided that, for a period of six (6) months, he personally refrains from working on any matter in which he was directly involved during the last thirty-six (36) months of his tenure in state government. This subsection shall not prohibit the performance of ministerial functions, including but not limited to filing tax returns, filing applications for permits or licenses, or filing incorporation papers, nor shall it prohibit the former officer or public servant from receiving public funds disbursed through entitlement programs.

KRS 11A.040 (9) states:

A former public servant shall not represent a person or business before a state agency in a matter in which the former public servant was directly involved during the last thirty-six (36) months of his tenure, for a period of one (1) year after the latter of:

- a) The date of leaving office or termination of employment; or
- b) The date the term of office expires to which the public servant was elected.

This law is intended to promote public confidence in the integrity of state government and to declare as public policy the idea that state employees should view their work as a public trust and not as a way to obtain private benefits.

If you have worked for the executive branch of state government within the past six months, you may be subject to the law's prohibitions. The law's applicability may be different if you hold elected office or are contemplating representation of another before a state agency.

Also, if you are affiliated with a firm which does business with the state and which employs former state executive-branch employees, you should be aware that the law may apply to them.

In case of doubt, the law permits you to request an advisory opinion from the Executive Branch Ethics Commission, 1025 Capital Center Drive, Suite 104, Frankfort, Kentucky 40601; telephone (502) 564-7954.

Revised: May 23, 2022

"General Decision Number: KY20240040 02/09/2024

Superseded General Decision Number: KY20230040

State: Kentucky

Construction Type: Highway

Counties: Allen, Ballard, Butler, Caldwell, Calloway, Carlisle, Christian, Crittenden, Daviess, Edmonson, Fulton, Graves, Hancock, Henderson, Hickman, Hopkins, Livingston, Logan, Lyon, Marshall, McCracken, McLean, Muhlenberg, Ohio, Simpson, Todd, Trigg, Union, Warren and Webster Counties in Kentucky.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

<p>If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:</p>	<ul style="list-style-type: none"> . Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$17.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2024.
<p>If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:</p>	<ul style="list-style-type: none"> . Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$12.90 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2024.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number	Publication Date
0	01/05/2024
1	02/09/2024

BRIN0004-002 06/01/2023

BALLARD, BUTLER, CALDWELL, CARLISLE, CRITTENDEN, DAVIESS, EDMONSON, FULTON, GRAVES, HANCOCK, HENDERSON, HICKMAN, HOPKINS, LIVINGSTON, LYON, MARSHALL, MCCRACKEN, MCLEAN, MUHLENBERG, OHIO, UNION, and WEBSTER COUNTIES

	Rates	Fringes
BRICKLAYER		
Ballard, Caldwell, Carlisle, Crittenden, Fulton, Graves, Hickman, Livingston, Lyon, Marshall, and McCracken Counties.....	\$ 34.17	19.60
Butler, Edmonson, Hopkins, Muhlenberg, and Ohio Counties.....	\$ 32.28	15.95
Daviess, Hancock, Henderson, McLean, Union, and Webster Counties.....	\$ 34.17	19.60

 BRTN0004-005 06/01/2023

ALLEN, CALLOWAY, CHRISTIAN, LOGAN, SIMPSON, TODD, TRIGG, and WARREN COUNTIES

	Rates	Fringes
BRICKLAYER.....	\$ 32.28	15.95

 CARP0357-002 04/01/2023

	Rates	Fringes
CARPENTER.....	\$ 31.81	22.86
DIVER.....	\$ 48.09	22.86
PILEDRIVERMAN.....	\$ 32.06	22.86

 ELEC0369-006 06/01/2022

BUTLER, EDMONSON, LOGAN, TODD & WARREN COUNTIES:

	Rates	Fringes
ELECTRICIAN.....	\$ 34.60	19.57

 ELEC0429-001 06/01/2022

ALLEN & SIMPSON COUNTIES:

	Rates	Fringes
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ELECTRICIAN.....\$ 31.55 14.08

 ELEC0816-002 07/01/2023

BALLARD, CALDWELL, CALLOWAY, CARLISLE, CHRISTIAN, CRITTENDEN,
 FULTON (Except a 5 mile radius of City Hall in Fulton), GRAVES,
 HICKMAN, LIVINGSTON, LYON, MARSHALL, MCCRACKEN & TRIGG COUNTIES:

Rates Fringes

ELECTRICIAN.....\$ 34.94 28%+8.35

Cable spicers receive \$.25 per hour additional.

 ELEC1701-003 07/01/2023

DAVISS, HANCOCK, HENDERSON, HOPKINS, MCLEAN, MUHLENBERG, OHIO,
 UNION & WEBSTER COUNTIES:

Rates Fringes

ELECTRICIAN.....\$ 35.60 8.35+30.8%

Cable spicers receive \$.25 per hour additional.

 * ELEC1925-002 01/01/2024

FULTON COUNTY (Up to a 5 mile radius of City Hall in Fulton):

Rates Fringes

CABLE SPLICER.....\$ 28.20 15.27
 ELECTRICIAN.....\$ 27.95 15.26

 ENGI0181-017 07/01/2023

Rates Fringes

POWER EQUIPMENT OPERATOR
 GROUP 1.....\$ 38.55 18.60
 GROUP 2.....\$ 35.69 18.60
 GROUP 3.....\$ 36.14 18.60
 GROUP 4.....\$ 35.37 18.60

OPERATING ENGINEER CLASSIFICATIONS

GROUP 1 - A-Frame Winch Truck; Auto Patrol; Backfiller;
 Batcher Plant; Bituminous Paver; Bituminous Transfer
 Machine; Boom Cat; Bulldozer; Mechanic; Cableway; Carry-All
 Scoop; Carry Deck Crane; Central Compressor Plant; Cherry
 Picker; Clamshell; Concrete Mixer (21 cu. ft. or Over);
 Concrete Paver; Truck-Mounted Concrete Pump; Core Drill;
 Crane; Crusher Plant; Derrick; Derrick Boat; Ditching &
 Trenching Machine; Dragline; Dredge Operator; Dredge
 Engineer; Elevating Grader & Loaders; Grade-All; Gurrries;
 Heavy Equipment Robotics Operator/Mechanic; High Lift;
 Hoe-Type Machine; Hoist (Two or More Drums); Hoisting
 Engine (Two or More Drums); Horizontal Directional Drill
 Operator; Hydrocrane; Hyster; KeCal Loader; LeTourneau;
 Locomotive; Mechanic; Mechanically Operated Laser Screed;
 Mechanic Welder; Mucking Machine; Motor Scraper; Orangepeel
 Bucket; Overhead Crane; Piledriver; Power Blade; Pumpcrete;

Push Dozer; Rock Spreader, attached to equipment; Rotary Drill; Roller (Bituminous); Rough Terrain Crane; Scarifier; Scoopmobile; Shovel; Side Boom; Subgrader; Tailboom; Telescoping Type Forklift; Tow or Push Boat; Tower Crane (French, German & other types); Tractor Shovel; Truck Crane; Tunnel Mining Machines, including Moles, Shields or similar types of Tunnel Mining Equipment

GROUP 2 - Air Compressor (Over 900 cu. ft. per min.); Bituminous Mixer; Boom Type Tamping Machine; Bull Float; Concrete Mixer (Under 21 cu. ft.); Dredge Engineer; Electric Vibrator; Compactor/Self-Propelled Compactor; Elevator (One Drum or Buck Hoist); Elevator (When used to Hoist Building Material); Finish Machine; Firemen & Hoist (One Drum); Flexplane; Forklift (Regardless of Lift Height); Form Grader; Joint Sealing Machine; Outboard Motor Boat; Power Sweeper (Riding Type); Roller (Rock); Ross Carrier; Skid Mounted or Trailer Mounted Concrete Pump; Skid Steer Machine with all Attachments; Switchman or Brakeman; Throttle Valve Person; Tractair & Road Widening Trencher; Tractor (50 H.P. or Over); Truck Crane Oiler; Tugger; Welding Machine; Well Points;& Whirley Oiler

GROUP 3 -All Off Road Material Handling Equipment, including Articulating Dump Trucks; Greaser on Grease Facilities servicing Heavy Equipment

GROUP 4 - Bituminous Distributor; Burlap & Curing Machine; Cement Gun; Concrete Saw; Conveyor; Deckhand Oiler; Grout Pump; Hydraulic Post Driver; Hydro Seeder; Mud Jack; Oiler; Paving Joint Machine; Power Form Handling Equipment; Pump; Roller (Earth); Steerman; Tamping Machine; Tractor (Under 50 H.P.); & Vibrator

CRANES - with booms 150 ft. & Over (Including JIB), and where the length of the boom in combination with the length of the piling equals or exceeds 150 ft. - \$1.00 above Group 1 rate

EMPLOYEES ASSIGNED TO WORK BELOW GROUND LEVEL ARE TO BE PAID 10% ABOVE BASIC WAGE RATE. THIS DOES NOT APPLY TO OPEN CUT WORK.

IRON0070-005 06/01/2023

BUTLER COUNTY (Eastern eighth, including the Townships of Decker, Lee & Tilford);
EDMONSON COUNTY (Northern three-fourths, including the Townships of Asphalt, Bee Spring, Brownsville, Grassland, Huff, Kyrock, Lindseyville, Mammoth Cave, Ollie, Prosperity, Rhoda, Sunfish & Sweden)

Rates Fringes

IRONWORKER

Structural; Ornamental;
Reinforcing; Precast
Concrete Erectors.....\$ 32.59 24.50

IRON0103-004 04/01/2023

DAVIESS, HANCOCK, HENDERSON, HOPKINS, MCLEAN, OHIO, UNION & WEBSTER COUNTIES

BUTLER COUNTY (Townships of Aberdeen, Bancock, Casey, Dexterville, Dunbar, Elfie, Gilstrap, Huntsville, Logansport, Monford, Morgantown, Provo, Rochester, South Hill & Welchs Creek);
 CALDWELL COUNTY (Northeastern third, including the Township of Creswell);
 CHRISTIAN COUNTY (Northern third, including the Townships of Apex, Crofton, Kelly, Mannington & Wynns);
 CRITTENDEN COUNTY (Northeastern half, including the Townships of Grove, Mattoon, Repton, Shady Grove & Tribune);
 MUHLENBERG COUNTY (Townships of Bavier, Beech Creek Junction, Benton, Brennen, Browder, Central City, Cleaton, Depoy, Drakesboro, Eunis, Graham, Hillside, Luzerne, Lynn City, Martwick, McNary, Millport, Moorman, Nelson, Paradise, Powderly, South Carrollton, Tarina & Weir)

	Rates	Fringes
Ironworkers:.....	\$ 31.99	26.20

IRON0492-003 05/01/2023		

ALLEN, LOGAN, SIMPSON, TODD & WARREN COUNTIES
 BUTLER COUNTY (Southern third, including the Townships of Boston, Berrys Lick, Dimple, Jetson, Quality, Sharer, Sugar Grove & Woodbury);
 CHRISTIAN COUNTY (Eastern two-thirds, including the Townships of Bennettstown, Casky, Herndon, Hopkinsville, Howell, Masonville, Pembroke & Thompsonville);
 EDMONSON COUNTY (Southern fourth, including the Townships of Chalybeate & Rocky Hill);
 MUHLENBERG COUNTY (Southern eighth, including the Townships of Dunnior, Penrod & Rosewood)

	Rates	Fringes
Ironworkers:.....	\$ 32.53	17.23

IRON0782-006 08/01/2023		

BALLARD, CALLOWAY, CARLISLE, FULTON, GRAVES, HICKMAN, LIVINGSTON, LYON, MARSHALL, MCCRACKEN & TRIGG COUNTIES
 CALDWELL COUNTY (Southwestern two-thirds, including the Townships of Cedar Bluff, Cider, Claxton, Cobb, Crowtown, Dulaney, Farmersville, Fredonia, McGowan, Otter Pond & Princeton);
 CHRISTIAN COUNTY (Western third, Excluding the Townships of Apex, Crofton, Kelly, Mannington, Wynns, Bennettstown, Casky, Herndon, Hopkinsville, Howell, Masonville, Pembroke & Thompsonville);
 CRITTENDEN COUNTY (Southwestern half, including the Townships of Crayne, Dycusburg, Frances, Marion, Mexico, Midway, Sheridan & Told)

	Rates	Fringes
Ironworkers:		
Projects with a total contract cost of \$20,000,000.00 or above.....	\$ 34.75	25.52
All Other Work.....	\$ 33.01	25.52

LAB00189-005 07/01/2023

BALLARD, CALLOWAY, CARLISLE, FULTON, GRAVES, HICKMAN,
LIVINGSTON, LYON, MARSHALL & MCCRACKEN COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1.....	\$ 23.96	17.57
GROUP 2.....	\$ 24.21	17.57
GROUP 3.....	\$ 24.26	17.57
GROUP 4.....	\$ 24.86	17.57

LABORER CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushhammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Blaster; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powdermen & Blasters; Troxler & Concrete Tester if Laborer is Utilized

LAB00189-006 07/01/2023

ALLEN, BUTLER, CALDWELL, CHRISTIAN, DAVIESS, EDMONSON, HANCOCK,
HOPKINS, LOGAN, MCLEAN, MUHLENBERG, OHIO, SIMPSON, TODD, TRIGG
& WARREN COUNTIES

	Rates	Fringes
Laborers:		

GROUP 1.....	\$ 23.96	17.57
GROUP 2.....	\$ 24.26	17.57
GROUP 3.....	\$ 24.21	17.57
GROUP 4.....	\$ 24.86	17.57

LABORER CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushhammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Blaster; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powdermen & Blasters; Troxler & Concrete Tester if Laborer is Utilized

 LAB00561-001 07/01/2023

CRITTENDEN, HENDERSON, UNION & WEBSTER COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1.....	\$ 24.81	17.60
GROUP 2.....	\$ 25.06	17.60
GROUP 3.....	\$ 25.11	17.60
GROUP 4.....	\$ 25.71	17.60

LABORER CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson;

Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushhammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Blaster; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powdermen & Blasters; Troxler & Concrete Tester if Laborer is Utilized

 PAIN0032-002 09/01/2023

BALLARD COUNTY

	Rates	Fringes
Painters:		
Bridges.....	\$ 36.12	20.97
All Other Work.....	\$ 33.82	20.97

Spray, Blast, Steam, High & Hazardous (Including Lead Abatement) and All Epoxy - \$1.00 Premium

 PAIN0118-003 06/01/2014

EDMONSON COUNTY:

	Rates	Fringes
Painters:		
Brush & Roller.....	\$ 18.50	11.97
Spray, Sandblast, Power Tools, Waterblast & Steam Cleaning.....	\$ 19.50	11.97

 PAIN0156-006 04/01/2023

DAVISS, HANCOCK, HENDERSON, MCLEAN, OHIO, UNION & WEBSTER COUNTIES

Rates Fringes

Painters:

BRIDGES		
GROUP 1.....	\$ 28.45	20.08
GROUP 3.....	\$ 29.45	20.08
GROUP 4.....	\$ 30.70	20.08
ALL OTHER WORK:		
GROUP 1.....	\$ 27.30	20.08
GROUP 2.....	\$ 27.55	20.08
GROUP 3.....	\$ 28.30	20.08
GROUP 4.....	\$ 29.55	20.08

PAINTER CLASSIFICATIONS

GROUP 1 - Brush & Roller

GROUP 2 - Plasterers

GROUP 3 - Spray; Sandblast; Power Tools; Waterblast;
 Steamcleaning; Brush & Roller of Mastics, Creosotes, Kwinch
 Koate & Coal Tar Epoxy

GROUP 4 - Spray of Mastics, Creosotes, Kwinch Koate & Coal
 Tar Epoxy

 PAIN0500-002 06/01/2023

CALDWELL, CALLOWAY, CARLISLE, CHRISTIAN, CRITTENDEN, FULTON,
 GRAVES, HICKMAN, HOPKINS, LIVINGSTON, LYON, MARSHALL, MCCRACKEN
 & TRIGG COUNTIES:

Rates Fringes

Painters:

Bridges.....	\$ 30.00	15.40
All Other Work.....	\$ 23.75	15.40

Waterblasting units with 3500 PSI and above - \$.50 premium
 Spraypainting and all abrasive blasting - \$1.00 premium
 Work 40 ft. and above ground level - \$1.00 premium

 PLUM0184-002 07/01/2023

BALLARD, CALDWELL, CALLOWAY, CARLISLE, CHRISTIAN, CRITTENDEN,
 FULTON, GRAVES, HICKMAN, LIVINGSTON, LYON, MARSHALL, MCCRACKEN
 and TRIGG COUNTIES

Rates Fringes

Plumber; Steamfitter.....	\$ 39.86	18.98
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 PLUM0502-004 08/01/2021

ALLEN, BUTLER, EDMONSON, SIMPSON & WARREN

Rates Fringes

Plumber; Steamfitter.....	\$ 38.07	20.78
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PLUM0633-002 07/01/2022

DAVISS, HANCOCK, HENDERSON, HOPKINS, LOGAN, MCLEAN,
MUHLENBERG, OHIO, TODD, UNION & WEBSTER COUNTIES:

	Rates	Fringes
PLUMBER/PIPEFITTER.....	\$ 33.97	19.30

TEAM0089-003 03/31/2023

ALLEN, BUTLER, EDMONSON, LOGAN, SIMPSON & WARREN COUNTIES

	Rates	Fringes
Truck drivers:		
Zone 1:		
Group 1.....	\$ 23.22	25.56
Group 2.....	\$ 23.40	25.56
Group 3.....	\$ 23.48	25.56
Group 4.....	\$ 23.50	25.56

GROUP 1 - Greaser; Tire Changer

GROUP 2 - Truck Mechanic; Single Axle Dump; Flat Bed; All Terrain Vehicles when used to haul materials; Semi Trailer or Pole Trailer when used to pull building materials and equipment; Tandem Axle Dump; Driver of Distributors

GROUP 3 - Mixer All Types

GROUP 4 - Winch and A-Frame when used in transporting materials; Ross Carrier; Fork Lift when used to transport building materials; Driver on Pavement Breaker; Euclid and Other Heavy Earth Moving Equipment; Low Boy; Articulator Cat; Five Axle Vehicle

TEAM0215-003 03/31/2023

DAVISS, HANCOCK, HENDERSON, HOPKINS, MCLEAN, MUHLENBERG, OHIO & WEBSTER COUNTIES

	Rates	Fringes
TRUCK DRIVER		
Group 1.....	\$ 24.85	25.56
Group 2.....	\$ 25.54	20.95
Group 3.....	\$ 25.15	25.56
Group 4.....	\$ 25.16	25.56

GROUP 1: Greaser, Tire Changer

GROUP 2: Truck Mechanic

GROUP 3: Single Axle Dump; Flat Bed; All Terrain Vehicle when used to haul materials; Semi Trailer or Pole Trailer when used to pull building materials and equipment; Tandem Axle Dump; Driver of Distributors; Mixer All Types

GROUP 4: Euclid and other heavy earth moving equipment; Low Boy; Articulator Cat; 5 Axle Vehicle; Winch and A- Frame when used in transporting materials; Ross Carrier; Fork

Lift when used to transport building materials; Driver on
Pavement Breaker

TEAM0236-001 03/31/2023

BALLARD, CALDWELL, CALLOWAY, CARLISLE, CHRISTIAN, CRITTENDEN,
FULTON, GRAVES, HICKMAN, LIVINGSTON, LYON, MARSHALL,
MCCRACKEN, TODD & TRIGG COUNTIES

	Rates	Fringes
TRUCK DRIVER		
Group 1.....	\$ 23.22	25.56
Group 2.....	\$ 23.40	25.56
Group 3.....	\$ 23.48	25.56
Group 4.....	\$ 23.50	25.56
Group 5.....	\$ 23.50	25.56

GROUP 1: Greaser, Tire Changer

GROUP 2: Truck Mechanic

GROUP 3: Single Axle Dump; Flat Bed; All Terrain Vehicle when
used to haul materials; Semi Trailer or Pole Trailer when
used to pull building materials and equipment; Tandem Axle
Dump; Drivers of Distributors

GROUP 4: Euclid and other heavy earth moving equipment; Low
Boy; Articulator Cat; Five Axle Vehicle; Winch and A-Frame
when used in transporting materials; Ross Carrier

GROUP 5: Mixer All Types

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave
for Federal Contractors applies to all contracts subject to the
Davis-Bacon Act for which the contract is awarded (and any
solicitation was issued) on or after January 1, 2017. If this
contract is covered by the EO, the contractor must provide
employees with 1 hour of paid sick leave for every 30 hours
they work, up to 56 hours of paid sick leave each year.
Employees must be permitted to use paid sick leave for their
own illness, injury or other health-related needs, including
preventive care; to assist a family member (or person who is
like family to the employee) who is ill, injured, or has other
health-related needs, including preventive care; or for reasons
resulting from, or to assist a family member (or person who is
like family to the employee) who is a victim of, domestic
violence, sexual assault, or stalking. Additional information
on contractor requirements and worker protections under the EO
is available at
<https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within
the scope of the classifications listed may be added after
award only as provided in the labor standards contract clauses
(29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

Fringe benefit amounts are applicable for all hours worked except when otherwise noted.

No laborer, workman or mechanic shall be paid at a rate less than that of a Journeyman except those classified as bona fide apprentices.

Apprentices or trainees shall be permitted to work as such subject to Administrative Regulations adopted by the Commissioner of Workplace Standards. Copies of these regulations will be furnished upon request from any interested person.

Before using apprentices on the job the contractor shall present to the Contracting Officer written evidence of registration of such employees in a program of a State apprenticeship and training agency approved and recognized by the U. S. Bureau of Apprenticeship and Training. In the absence of such a State agency, the contractor shall submit evidence of approval and registration by the U. S. Bureau of Apprenticeship and Training.

The contractor shall submit to the Contracting Officer, written evidence of the established apprenticeship-journeyman ratios and wage rates in the project area, which will be the basis for establishing such ratios and rates for the project under the applicable contract provisions.

TO: EMPLOYERS/EMPLOYEES

PREVAILING WAGE SCHEDULE:

The wages indicated on this wage schedule are the least permitted to be paid for the occupations indicated. When an employee works in more than one classification, the employer must record the number of hours worked in each classification at the prescribed hourly base rate.

OVERTIME:

Overtime is to be paid to an employee at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty (40) hours in such workweek. Wage violations or questions should be directed to the designated Engineer or the undersigned.

Director
Division of Construction Procurement
Frankfort, Kentucky 40622
502-564-3500

**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION
TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY
(Executive Order 11246)**

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

GOALS FOR MINORITY PARTICIPATION IN EACH TRADE	GOALS FOR FEMALE PARTICIPATION IN EACH TRADE
5.2%	6.9%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally-assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4, 3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Notification of Construction Contract Award Portal (NCAP) is OFCCP's preferred method for receiving construction contract award notifications. The NCAP can be found on OFCCP's website at <https://www.dol.gov/agencies/ofccp/ncap>. Users who prefer not to use the portal maintain the option to send their notifications via mail, email and facsimile to the OFCCP Regional office in which the work will be performed. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of \$10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification must include: Prime Contract Number (issued by the federal agency or applicant); Name of Awarding Federal Agency, Applicant or Contractor; Contracting Officer, Applicant Representative or Contractor Representative Submitting Notification with name, phone number, email address; Contractor Awarded Contract or Subcontract with name, address, phone number, email address, EIN, dollar amount of the contract, estimated start date of the contract, estimated completion date of the contract, geographical area in which the contract is to be performed (state, county's city (if applicable)).

The notification shall be mailed to:

Regional Director
Office of Federal Contract Compliance Programs
61 Forsyth Street, SW, Suite 7B75
Atlanta, Georgia 30303-8931
Main Number: 404-893-4545 Fax: 404-893-4546
Regional Director Contact: OFCCP-SE@dol.gov
Construction Award Email: OFCCP-SE-ConstructionAward@dol.gov

4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is Carlisle County.

**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION
TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY
(Executive Order 11246)**

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

GOALS FOR MINORITY PARTICIPATION IN EACH TRADE	GOALS FOR FEMALE PARTICIPATION IN EACH TRADE
5.2%	6.9%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally-assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4, 3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Notification of Construction Contract Award Portal (NCAP) is OFCCP's preferred method for receiving construction contract award notifications. The NCAP can be found on OFCCP's website at <https://www.dol.gov/agencies/ofccp/ncap>. Users who prefer not to use the portal maintain the option to send their notifications via mail, email and facsimile to the OFCCP Regional office in which the work will be performed. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of \$10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification must include: Prime Contract Number (issued by the federal agency or applicant); Name of Awarding Federal Agency, Applicant or Contractor; Contracting Officer, Applicant Representative or Contractor Representative Submitting Notification with name, phone number, email address; Contractor Awarded Contract or Subcontract with name, address, phone number, email address, EIN, dollar amount of the contract, estimated start date of the contract, estimated completion date of the contract, geographical area in which the contract is to be performed (state, county's city (if applicable)).

The notification shall be mailed to:

**Regional Director
Office of Federal Contract Compliance Programs
61 Forsyth Street, SW, Suite 7B75
Atlanta, Georgia 30303-8931
Main Number: 404-893-4545 Fax: 404-893-4546
Regional Director Contact: OFCCP-SE@dol.gov
Construction Award Email: OFCCP-SE-ConstructionAward@dol.gov**

4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is Graves County.

PART IV
INSURANCE

Refer to
Kentucky Standard Specifications for Road and Bridge Construction,
current edition

PART V
BID ITEMS

PROPOSAL BID ITEMS

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Report Date 2/21/24

Section: 0001 - BRIDGE - 020B00004N

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00001		DGA BASE	1,144.00	TON		\$	
0020	00100		ASPHALT SEAL AGGREGATE	4.00	TON		\$	
0030	00103		ASPHALT SEAL COAT	2.00	TON		\$	
0040	00212		CL2 ASPH BASE 1.00D PG64-22	2,372.00	TON		\$	
0050	00301		CL2 ASPH SURF 0.38D PG64-22	255.00	TON		\$	
0060	00441		ENTRANCE PIPE-18 IN	69.00	LF		\$	
0070	00462		CULVERT PIPE-18 IN	60.00	LF		\$	
0080	01433		SLOPED BOX OUTLET TYPE 1-18 IN	3.00	EACH		\$	
0090	02200		ROADWAY EXCAVATION	2,618.00	CUYD		\$	
0100	02351		GUARDRAIL-STEEL W BEAM-S FACE	487.50	LF		\$	
0110	02360		GUARDRAIL TERMINAL SECTION NO 1	1.00	EACH		\$	
0120	02367		GUARDRAIL END TREATMENT TYPE 1	3.00	EACH		\$	
0130	02381		REMOVE GUARDRAIL	328.00	LF		\$	
0140	02399		EXTRA LENGTH GUARDRAIL POST	37.00	EACH		\$	
0150	02429		RIGHT-OF-WAY MONUMENT TYPE 1	11.00	EACH		\$	
0160	02432		WITNESS POST	11.00	EACH		\$	
0170	02483		CHANNEL LINING CLASS II	453.00	TON		\$	
0180	02484		CHANNEL LINING CLASS III	50.00	TON		\$	
0190	02545		CLEARING AND GRUBBING APPROX LESS THAN 1 ACRE	1.00	LS		\$	
0200	02565		OBJECT MARKER TYPE 2	6.00	EACH		\$	
0210	02585		EDGE KEY	48.00	LF		\$	
0220	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		\$	
0230	02726		STAKING	1.00	LS		\$	
0240	02731		REMOVE STRUCTURE	1.00	LS		\$	
0250	03171		CONCRETE BARRIER WALL TYPE 9T	1,000.00	LF		\$	
0260	03299		ARMORED EDGE FOR CONCRETE	73.80	LF		\$	
0270	06514		PAVE STRIPING-PERM PAINT-4 IN	1,698.00	LF		\$	
0280	08003		FOUNDATION PREPARATION	1.00	LS		\$	
0290	08019		CYCLOPEAN STONE RIP RAP	435.00	TON		\$	
0300	08033		TEST PILES	115.00	LF		\$	
0310	08046		PILES-STEEL HP12X53	735.00	LF		\$	
0320	08100		CONCRETE-CLASS A	45.00	CUYD		\$	
0330	08104		CONCRETE-CLASS AA	35.00	CUYD		\$	
0340	08140		MECHANICAL REINF COUPLER #5 EPOXY COATED	14.00	EACH		\$	
0350	08151		STEEL REINFORCEMENT-EPOXY COATED	9,202.00	LB		\$	
0360	08664		PRECAST PC BOX BEAM CB27-48	526.50	LF		\$	
0370	20191ED		OBJECT MARKER TY 3	3.00	EACH		\$	
0380	21415ND		EROSION CONTROL	1.00	LS		\$	
0390	22883EN		CONCRETE WEDGE CURB	558.00	LF		\$	
0400	23274EN11F		TURF REINFORCEMENT MAT 1	240.00	SQYD		\$	
0410	23378EC		CONCRETE SEALING	3,255.00	SQFT		\$	
0420	24405EC		MECHANICAL REINF COUPLER-#8 EPOXY COATED	18.00	EACH		\$	
0430	25028ED		RAIL SYSTEM SINGLE SLOPE - 40 IN	117.00	LF		\$	
0440	25078ED		THRIE BEAM GUARDRAIL TRANSITION TL-3	4.00	EACH		\$	

PROPOSAL BID ITEMS

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Section: 0002 - BRIDGE - 020B00002N

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0450	00001		DGA BASE	368.00	TON		\$	
0460	00100		ASPHALT SEAL AGGREGATE	1.50	TON		\$	
0470	00103		ASPHALT SEAL COAT	1.00	TON		\$	
0480	00212		CL2 ASPH BASE 1.00D PG64-22	326.00	TON		\$	
0490	00301		CL2 ASPH SURF 0.38D PG64-22	250.00	TON		\$	
0500	00521		STORM SEWER PIPE-15 IN	15.00	LF		\$	
0510	01643		JUNCTION BOX-24 IN	1.00	EACH		\$	
0520	02230		EMBANKMENT IN PLACE	443.00	CUYD		\$	
0530	02351		GUARDRAIL-STEEL W BEAM-S FACE	212.50	LF		\$	
0540	02360		GUARDRAIL TERMINAL SECTION NO 1	3.00	EACH		\$	
0550	02367		GUARDRAIL END TREATMENT TYPE 1	1.00	EACH		\$	
0560	02381		REMOVE GUARDRAIL	106.00	LF		\$	
0570	02399		EXTRA LENGTH GUARDRAIL POST	30.00	EACH		\$	
0580	02484		CHANNEL LINING CLASS III	216.00	TON		\$	
0590	02545		CLEARING AND GRUBBING APPROX LESS THAN 1 ACRE	1.00	LS		\$	
0600	02565		OBJECT MARKER TYPE 2	4.00	EACH		\$	
0610	02585		EDGE KEY	48.00	LF		\$	
0620	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		\$	
0630	02726		STAKING	1.00	LS		\$	
0640	02731		REMOVE STRUCTURE	1.00	LS		\$	
0650	03171		CONCRETE BARRIER WALL TYPE 9T	1,000.00	LF		\$	
0660	03299		ARMORED EDGE FOR CONCRETE	79.70	LF		\$	
0670	06514		PAVE STRIPING-PERM PAINT-4 IN	3,600.00	LF		\$	
0680	08003		FOUNDATION PREPARATION	1.00	LS		\$	
0690	08019		CYCLOPEAN STONE RIP RAP	547.00	TON		\$	
0700	08033		TEST PILES	170.00	LF		\$	
0710	08046		PILES-STEEL HP12X53	1,440.00	LF		\$	
0720	08100		CONCRETE-CLASS A	44.00	CUYD		\$	
0730	08104		CONCRETE-CLASS AA	49.00	CUYD		\$	
0740	08140		MECHANICAL REINF COUPLER #5 EPOXY COATED	8.00	EACH		\$	
0750	08151		STEEL REINFORCEMENT-EPOXY COATED	10,982.00	LB		\$	
0760	08664		PRECAST PC BOX BEAM CB27-48	735.00	LF		\$	
0770	20191ED		OBJECT MARKER TY 3	1.00	EACH		\$	
0780	20738NS112		TEMP CRASH CUSHION	1.00	EACH		\$	
0790	21415ND		EROSION CONTROL	1.00	LS		\$	
0800	22883EN		CONCRETE WEDGE CURB	250.00	LF		\$	
0810	23378EC		CONCRETE SEALING	4,382.00	SQFT		\$	
0820	24405EC		MECHANICAL REINF COUPLER-#8 EPOXY COATED	18.00	EACH		\$	
0830	25028ED		RAIL SYSTEM SINGLE SLOPE - 40 IN	147.00	LF		\$	
0840	25078ED		THRIE BEAM GUARDRAIL TRANSITION TL-3	4.00	EACH		\$	

Section: 0003 - BRIDGE - 042B00090N

PROPOSAL BID ITEMS

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LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0850	00003		CRUSHED STONE BASE	246.95	TON		\$	
0860	00020		TRAFFIC BOUND BASE	60.00	TON		\$	
0870	00100		ASPHALT SEAL AGGREGATE	4.00	TON		\$	
0880	00103		ASPHALT SEAL COAT	1.00	TON		\$	
0890	00212		CL2 ASPH BASE 1.00D PG64-22	252.00	TON		\$	
0900	00301		CL2 ASPH SURF 0.38D PG64-22	46.00	TON		\$	
0910	00356		ASPHALT MATERIAL FOR TACK	1.00	TON		\$	
0920	01987		DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	5.00	EACH		\$	
0930	02200		ROADWAY EXCAVATION	200.00	CUYD		\$	
0940	02351		GUARDRAIL-STEEL W BEAM-S FACE	37.50	LF		\$	
0950	02360		GUARDRAIL TERMINAL SECTION NO 1	1.00	EACH		\$	
0960	02367		GUARDRAIL END TREATMENT TYPE 1	3.00	EACH		\$	
0970	02381		REMOVE GUARDRAIL	241.50	LF		\$	
0980	02429		RIGHT-OF-WAY MONUMENT TYPE 1	10.00	EACH		\$	
0990	02432		WITNESS POST	10.00	EACH		\$	
1000	02545		CLEARING AND GRUBBING APPROX LESS THAN 1 ACRE	1.00	LS		\$	
1010	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		\$	
1020	02671		PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH		\$	
1030	02676		MOBILIZATION FOR MILL & TEXT	1.00	LS		\$	
1040	02677		ASPHALT PAVE MILLING & TEXTURING	18.00	TON		\$	
1050	02726		STAKING	1.00	LS		\$	
1060	02731		REMOVE STRUCTURE	1.00	LS		\$	
1070	03299		ARMORED EDGE FOR CONCRETE	51.00	LF		\$	
1080	04820		TRENCHING AND BACKFILLING	205.00	LF		\$	
1090	06542		PAVE STRIPING-THERMO-6 IN W	623.00	LF		\$	
1100	06543		PAVE STRIPING-THERMO-6 IN Y	632.00	LF		\$	
1110	06556		PAVE STRIPING-DUR TY 1-6 IN W	199.00	LF		\$	
1120	06557		PAVE STRIPING-DUR TY 1-6 IN Y	199.00	LF		\$	
1130	08003		FOUNDATION PREPARATION Approx. 1,450 CY of excavation required for foundation preparation	1.00	LS		\$	
1140	08019		CYCLOPEAN STONE RIP RAP	454.00	TON		\$	
1150	08033		TEST PILES	175.00	LF		\$	
1160	08051		PILES-STEEL HP14X89	855.00	LF		\$	
1170	08100		CONCRETE-CLASS A	50.00	CUYD		\$	
1180	08104		CONCRETE-CLASS AA	66.00	CUYD		\$	
1190	08151		STEEL REINFORCEMENT-EPOXY COATED	28,297.00	LB		\$	
1200	20191ED		OBJECT MARKER TY 3	3.00	EACH		\$	
1210	20550ND		SAWCUT PAVEMENT	47.00	LF		\$	
1220	21077ED		FIBER OPTIC CABLE	550.00	LF		\$	
1230	21415ND		EROSION CONTROL	1.00	LS		\$	
1240	22668EN		DIRECTIONAL BORE	245.00	LF		\$	
1250	23378EC		CONCRETE SEALING	6,209.00	SQFT		\$	
1260	24601EC		INSTALL INSTALL FIBER OPTIC MARKERS	4.00	EACH		\$	
1270	24601EC		INSTALL INSTALL FIBER OPTIC SPLICE	2.00	EACH		\$	
1280	24601EC		INSTALL INSTALL FIBER OPTIC VAULT	2.00	EACH		\$	

PROPOSAL BID ITEMS

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Report Date 2/21/24

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1290	24617EC		INSTALL INSTALL DETECTABLE WARNING TAPE	205.00	LF		\$	
1300	25028ED		RAIL SYSTEM SINGLE SLOPE - 40 IN	202.00	LF		\$	
1310	26188ED		PPC I-BEAM HN 42-61	293.00	LF		\$	

Section: 0004 - DEMOBILIZATION &/OR MOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1320	02568		MOBILIZATION	1.00	LS		\$	
1330	02569		DEMOBILIZATION	1.00	LS		\$	