

CALL NO. 102
CONTRACT ID. 245353
HENDERSON COUNTY
FED/STATE PROJECT NUMBER STP BRZ 9030 (469)
DESCRIPTION KY 812
WORK TYPE BRIDGE REPLACEMENT
PRIMARY COMPLETION DATE 4/15/2025

LETTING DATE: June 20,2024

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN DAYLIGHT TIME June 20,2024. 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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ADMINISTRATIVE DISTRICT - 02

CONTRACT ID - 245353 STP BRZ 9030 (469)

COUNTY - HENDERSON

PCN - BR05108122400 STP BRZ 9030 (469)

KY 812 (MP 7.62) ADDRESS DEFICIENCIES OF KY 812 OVER NORTH FORK CANOE CREEK (051B00128N) (MP 7.71), A DISTANCE OF 0.09 MILES.BRIDGE REPLACEMENT SYP NO. 02-10092.00.

GEOGRAPHIC COORDINATES LATITUDE 37:49:20.00 LONGITUDE 87:34:23.00

ADT 5,779

COMPLETION DATE(S):

COMPLETED BY 11/26/2024 THE STRUCTURE MUST BE OPENED TO TRAFFC

COMPLETED BY 04/15/2025 APPLIES TO ENTIRE CONTRACT

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 <u>KRS 45A.607</u>, 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 <u>KRS 11A.236</u> 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 <u>KRS 45A.328</u>, 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

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

10/26/2023

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

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

10/26/2023

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.

<u>Buy America - Construction Program Guide - Contract Administration - Construction - Federal Highway Administration (dot.gov)</u>

October 26, 2023 Letting

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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.

HENDERSON COUNTY STP BRZ 9030 (469)

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 <u>APPROVED</u> 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 certainly 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 <u>signed and notarized</u> Affidavit of Subcontractor Payment (<u>TC 18-7</u>) 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 – <u>tyousseffi@ky.gov</u> 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)

Revised: 2/29/2024

<u>LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC – CARGO PREFERENCE ACT (CPA).</u>

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

SECTION 7 is expanded by the following new Article:

102.10 <u>Cargo Preference Act – Use of United States-flag vessels.</u>

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.

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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

OPENING TO TRAFFIC AND TEMPERATURE LIMITATIONS

KY 812 is currently closed at the North Fork of Canoe Creek due to structural concerns. It is the intent of the project to reopen KY 812 to traffic by November 26, 2024. A milestone completion date of November 26, 2024 has been set for this reopening. To achieve this milestone, the bridge must be opened in both directions with guardrail and safety devices installed. Traffic shall not be run on traffic bound base but on asphalt pavement to meet this milestone. If the contractor is unable to meet the milestone due to temperature limitations, the contractor shall place 8" of temporary pavement equal to CL2 1.0D PG 64-22 to allow the reopening of the structure. If needed, this temporary pavement will be paid for under "CL2 1.0D PG 64-22". If temporary pavement is placed, removal of the temporary placement to the elevation needed to provide the permanent asphalt typical will be paid as "Asphalt Milling and Texturing". Regardless of the number of times the contractor must mobilize the milling operation, only 1 LS will be paid for mobilization for "Asphalt Milling and Texturing".

If the contractor is able to place all asphalt base within specifications but cannot meet the temperature requirements of asphalt surface, the contractor can wedge the bridge through the winter and place the asphalt in the spring prior to the completion date. This asphalt would be paid per ton under the unit bid item set up in the contract.

Additional lane or road closures due to removal of temporary asphalt and placement of permanent will be allowed during non-peak hours and weekends only with approval from KYTC. Any additional closures and MOT needed for removal of temporary asphalt and placement of permanent asphalt will be considered incidental to "Maintain and Control Traffic".

If the Contractor is unable to meet the milestone completion date of November 26, 2024 Liquidated Damages will be applied as per the specification.

SPECIAL NOTE FOR TRAFFIC CONTROL ON BRIDGE REPAIR CONTRACTS

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

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. Maintain & control traffic.
- 9. 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.

	Coverage	
% Silane	rate	
	(ft²/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.

- 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. Contract Time. Concrete Sealing may need to be installed after contract time has elapsed in a separate mobilization and after the Engineer has declared the project otherwise complete. Liquidated damages shall not be charged provided Concrete Sealing is complete within 60 days after the last concrete pour on the structure. When the Contractor has not completed Concrete Sealing within the time frame allotted, Liquidated Damages shall be charged at 25 percent of the original contract daily charge from the expiration of the time allowed until the Contractor completes the work except the Department will not deduct liquated damages when weather limitations prohibit the Contractor from performing the work.
- F. 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.
- G. 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 lowpressure 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.

- **H. 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.
- **B. Mobilization For Concrete Surf Treatment.** The Department will pay the lump sum bid for an additional mobilization when Concrete Sealing must be performed after the Engineer has deemed the project complete except for Concrete Sealing and the structure is opened to traffic.

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.
- **B. Mobilization For Concrete Surf Treatment.** Payment at the contract lump sum price bid shall be full compensation for the Contractor to remobilize on the project to perform Concrete Sealing as detailed herein this special note.

SPECIAL NOTE FOR CONCRETE COATING

I. DESCRIPTION

Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highways current Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and the Contract Documents. Section references are to the Standard Specifications.

This work consists of the following:

- 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 coating.
- 7. Apply concrete coating.
- 8. Any other work as specified as part of this contract.

II. MATERIALS

Concrete Coatings

See The Division of Material's list of approved materials for concrete coatings and Section 821.

The finish product shall be opaque and satin or semi-gloss. The contractor must apply sufficient coats as required to achieve this goal. The finish coat shall be gray and will meet the following values:

Furnish to the Engineer copies of the manufacturer's technical data sheets, installation guidelines, material safety data sheets, and other pertinent data at least two (2) days prior to beginning the work.

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. 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. 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.

C. Areas to Receive Concrete Coating:

- 1. Substructure Units under open, closed, and/or sealed transverse deck joints: 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. Other areas of the bridge as specified in the drawings.
- **D. Prepare Concrete Surfaces for Repair.** All areas specified shall be pressure washed. Equip the pressure washers with calibrated gages and pressure regulators to ascertain and regulate water pressure. All equipment for pressure washing shall be operated at a minimum pressure of up 3,500 to 4,500 psi with 0-degree spinner tip and/or fan tips as determined by the engineer at the working location with a minimum flow rate of 3.5 gal/minute provided that these pressures do not damage any components of the structure. Pressure and flow rates shall be reduced to a level satisfactory to the Engineer should any damage occur due to power washing procedures. The washing wand must be approximately perpendicular to the washed surface and within a maximum of 12 inches of the surface. Wand extensions greater than 36 inches will be subject to Division of Construction approval. Pressure washing of any bridge element will proceed from top of wash area to bottom of wash area. Perform all pressure washing at temperatures above 40 degrees Fahrenheit.
- E. Apply Concrete Coating. All areas specified shall have concrete coating applied to as specified after debris removal and power washing. New concrete shall be allowed to properly cure in accordance with the manufacturer's recommendations prior to application. Use compressed air to remove any loose debris from the surfaces that are to be coated after power washing. All coatings shall be applied within manufacturers recommended dry film thickness range. Comply with KYTC "Standard Specifications for Road and Bridge Construction" Section 614.03.02 and coatings supplier recommended conditions for application. Allow the surfaces to be coated to dry a minimum of 24 hours before any coating is applied. The coating must be applied with 72 hours of pressure washing. The coating must be applied to a clean and dry surface. All coating application shall be executed using brushes, rollers, etc. No spray application will be permitted. The Department requires acceptance testing of samples obtained on a per-lot basis per-shipment. The Division of Materials shall perform acceptance testing. Test samples shall be taken at the Contractor's paint storage site. Department personnel shall perform sampling. Allow (10) working days for testing and approval of the sampled paint. It is the Contractor's responsibility to maintain an adequate inventory of approved paint. The Department shall assume no responsibility for lost work due to rejection of paint or approved paint subsequently found to be defective during the application process. Perform all concrete coating application at temperatures above 40 degrees Fahrenheit or in accordance with manufactures specifications.

IV. MEASUREMENT

The Department will measure the quantity per square feet of each area coated. The Department will not measure preparation of the site for the Engineer's access or removal and reapplication of coatings that do not satisfy the Engineer's approval for payment and will consider them incidental to "Concrete Coating".

V. PAYMENT.

The Department will make payment for the completed and accepted quantities of concrete coating under the following:

<u>Code</u>	Pay Item	Pay Unit
26232EC	Concrete Coating	SQ FT

The Department will consider payment as full compensation for all work required as described in this note.

SPECIAL NOTE FOR TRUSS SCREEDS ON CONCRETE OVERLAYS

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:

CodePay ItemPay Unit08104CONCRETE-CLASS AACubic Yard

SPECIAL NOTE FOR STRUCTURES WITH OVER THE SIDE DRAINAGE AND MGS RAILING

1.0 DESCRIPTION. Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's current Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and the attached detail drawings. Section references are to the Standard Specifications.

This note applies to structures with over the side drainage.

This work consists of: (1) Furnish all labor, materials, tools, and equipment; (2) Install the drip strip; (3) Maintain and control traffic as applicable; and (4) Any other work specified as part of this contract.

2.0 MATERIALS.

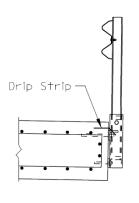
- **2.1 Drip Strip.** Drip strip shall be hot dipped galvanized steel with a minimum of 22 gage.
- **3.0 CONSTRUCTION.** The Contractor shall bear full responsibility and expense for any and all damage to the structure, should such damage result from the Contractor's actions.
 - **3.1 Installation of Drip Strip.** Install drip strip between railing mounting brackets, as detailed, along the full length of each side of the bridge. If splices are required in the lower drip strip, tightly but the individual pieces together, do not lap.

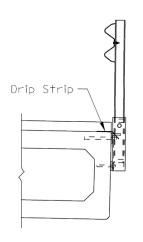
For concrete decks/slabs: Bend down strip at 90° against the inside face of the forms before concrete is placed. After the forms are removed, bend the drip strip into the final position of 45° as shown in the attached details. Use care when stripping formwork so as not to damage or wrinkle the drip strip. To further ensure that wrinkling of the strips does not occur, use an adequate length backup bar during the bending out operation.

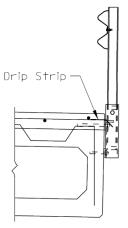
For asphalt overlays: Prior to placing the asphalt overlay, install the bent drip strips along the edge of the prestressed box beam as shown. Fasten the drip strips with (1½" length, 3/32" shank diameter) button head spikes with deformed shanks or expansion anchors at 1'-6" c/c max. All installation devices shall be galvanized or stainless steel. Other similar devices shall not be used unless approved by the Engineer.

4.0 PAYMENT.

4.1 Drip Strip. Cost of all work, including all materials, labor, equipment, tools, and incidentals necessary to complete the work as specified by this note, shall be considered incidental to the project.



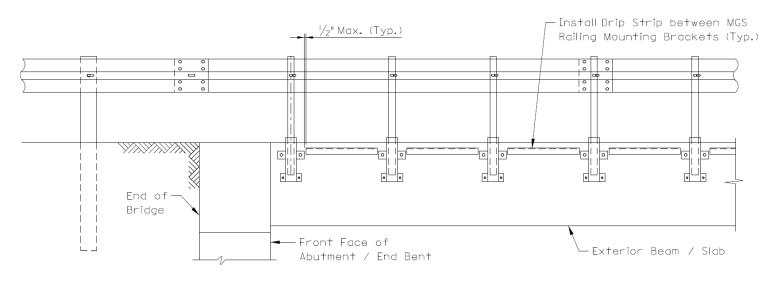




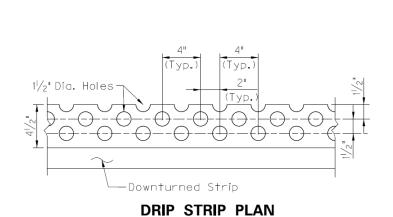
CONCRETE SLAB WITH MGS RAILING

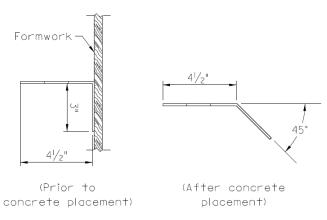
ASPHALT OVERLAY WITH MGS RAILING

COMPOSITE BOX BEAM WITH MGS RAILING



BRIDGE ELEVATION





DRIP STRIP ELEVATION

(For Concrete Decks)

SPECIAL NOTE

ADDITIONAL ENVIRONMENTAL COMMITMENTS

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

BRIDGE DEMOLITION OR RENOVATION AND LEAD-BASED PAINT

KYTC has completed a pre-demolition survey of the bridge that revealed the presence of lead-based paint (LBP) as defined by the Occupational Safety and Health Administration (OSHA). The results are attached to this note.

If the project includes bridge demolition or renovation, Contractor is required to implement the following measures during construction:

- Provide protection for workers exposed "lead or materials containing lead are present" as required by OSHA 29 CFR 1926.62(a).
- Place tarping / netting under the bridge to minimize debris deposition in the stream.
- Collect, store, and arrange for transportation of all hazardous waste material to an approved recycling facility in accordance with applicable local, State and Federal Regulations.
- Containerize paint waste generated in drums stored in a designated chain link fence containment that is inspected weekly by a representative of the generator.
- KYTC will be the Generator of Record for the recycling of the materials.

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.



LEAD PAINT INSPECTION REPORT

Prepared for: Mike McGregor, PE

Bacon Farmer Workman Engineering & Testing, Inc.

Prepared by: Jared Looney, EIT

Structure ID: 051B00128N, Item 2-10092

KY-812 over North Fork Canoe Creek

Henderson County, Kentucky

Prepared: December 27, 2022

PROJECT DESCRIPTION

Third Rock Consultants, LLC (Third Rock) was retained to conduct a pre-demolition lead paint survey for the above-referenced project. Based on the Bridge Inspection Report from Kentucky Transportation Cabinet, the bridge appears to have been constructed in 1983.

INSPECTION METHODOLOGY

A lead-based paint (LBP) inspection of the bridge was conducted on December 12, 2022. Grey paint with an orange layer underneath was observed on the metal piers. Each of the two (2) piers consisted of five (5) metal I-beams, all of which appeared to have the same paint history. The paint covered approximately 480 square feet, but about half the paint surface was severely deteriorated. One (1) paint chip sample (Sample ID: 2-10092-3) was collected from the southernmost beam of the westernmost pier, as documented in the attached Chain of Custody (COC) and photo log.

FINDINGS

Laboratory analysis of Sample ID 2-10092-3 revealed the paint contained 21% lead by weight. The Lead-Based Paint Poisoning Prevention Act defines LBP as paint or other surface coatings that contain equal to or greater than 1.0 milligram of lead per square centimeter by X-ray fluorescence (XRF) analysis or 0.5% (5,000 ppm) lead by weight. Additionally, the Occupational Safety and Health Administration (OSHA) regulates worker exposure to lead and requires worker protection "where lead is present" (29 CFR 1926.62).

CONCLUSIONS

Third Rock has performed a thorough inspection of the bridge expected to be affected by this project. During this inspection, LBP was observed on all metal piers. Refer to the Special Note for applicable precautionary measures.

HENDERSON COUNTY STP BRZ 9030 (469) Contract ID: 245353

Lead Paint Inspection Report age 39 of 205 05 1800 128N, Item 2-10092 KY-812 over North Fork Canoe Creek Henderson County, Kentucky Page 2 of 2 (Plus Attachments)



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 14, 2022]. https://www.google.com/earth.

Lead Paint Inspection Photo Log Bridge ID 051B00128N, Item No. 2-10092 KY-812, Henderson County, Kentucky



I - IMG_2681 Bridge Surface - Facing E.JPG

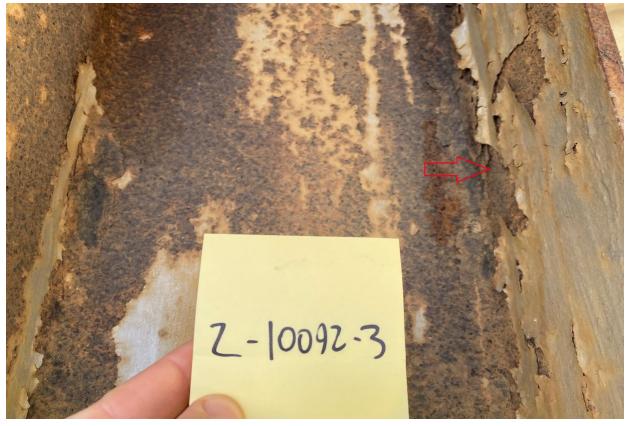


2 - IMG_2682 Bridge Below Deck - Facing E.JPG

Lead Paint Inspection Photo Log Bridge ID 051B00128N, Item No. 2-10092 KY-812, Henderson County, Kentucky



3 - IMG_2683 Date Stamp.JPG



4 - IMG_2686 Metal Pier - Facing S - Sample 2-10092-3.JPG

Page 20 of 21

Samples Received on Ice? 🖺 Yes 📋 No 📋 N/A Custody Seals Intact? Tyes No N/A Additional Notes CHAIN OF CUSTODY RECORD ŏ TO BE COMPLETED BY MICROBAC e-mail (address) bweatherford@thirdrockconsultants.com Temperature Upon Receipt (°C) Date/Time ☐ Level 4 Page ☐ Yes ☐ No Instructions on back Return Archive ** Preservative Types: (1) HNO3, (2) H2SO4, (3) HCI, (4) NaOH, (5) Zinc Acetate, (6) Methanol, (7) Sodium Bisulfate, (8) Sodium Thiosulfate, (9) Hexane, (U) Unpreserved Holding Time Results Only Level 1 Level 2 Level 3 Therm ID Compliance Monitoring? ☐ Agency/Program Sampler Phone No.: (859) 977-2000 * Matrix Types: Soil/Solid (S), Sludge, Oil, Wipe, Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WWV), Other (specify) Received By (signature) Received By (signature) Received By (signature REOUESTED ANALYSIS ⊠ Routine (5 to 7 business days)
 □ RUSH* (notify lab) Turnaround Time Fax (needed by) Report Type cop estilici Mail Lead Paint 9:03 3323 Gilmore Industrial Blvd., Louisville, KY 40213 | 502.962.6400 p | 502.962.6411 f Send Invoice via: PO No.: MJ9 sotsedaA 22/4/2 Date/Time Date/Time Client Name: Third Rock Consultants, LLC Address: 2526 Regency Road, STE 180 Preservative Sampler Signature: Durwk Loonary Types ** City, State, Zip: Lexington, KY 40503 Telephone No.: (859) 977-2000 Contact: Becky Weatherford Relinquished By (signature) Relinquished By (signature) Relinquished By (signature) 🖺 Mail 📋 Fax 🅫 e-mail (address) 🌣 jlooney@thirdrockconsultants.com Hazardous Non-Hazardous Radioactive vo. of Containers Location: Various Invoice Address 00:1 Collected 9130 A 4.82 12.18 22/21/21 17/11/1 2/11/2 12/12/22 1/11/11 21/11/21 2/11/12 C/AL/AL Client Name: Third Rock Consultants, LLC Address: 2526 Regency Road, STE 180 City, State, Zip: Lexington, KY 40503 Client Sample ID Sampled by (PRINT): Jared Looney 10001-- 76001-2 1200 -26001-2 Telephone No.: (859) 977-2000 21101--18001-2 100/8/ -- 10130-Possible Hazard Identification Contact: Jared Looney (A) MICROBAC Project: KY22-034 Lab Report Address Send Report via: rev. 7/18/18 Comments Lab ID



Microbac Laboratories, Inc., Louisville

CERTIFICATE OF ANALYSIS L2L0722

Project Description

SOIL ANALYSIS

For:

Gerry Fister

Third Rock Consultants

2526 Regency Road, Suite 180; SUITE 104

Lexington, KY 40503

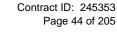
Customer Relationship Manager
David Lester

Friday, December 23, 2022

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.





Microbac Laboratories, Inc., Louisville CERTIFICATE OF ANALYSIS

L2L0722

Client Sample ID: 2-10092-1

Sample Matrix:SolidCollected By:CUSTOMERLab Sample ID:L2L0722-17Collection Date:12/12/2022 12:00

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	%		12/12/22 1200		MCS
Asbestos, Amosite	<1		1	1	%		12/12/22 1200		MCS
Asbestos, Crocidolite	<1		1	1	%		12/12/22 1200		MCS
Asbestos, Other	<1		1	1	%		12/12/22 1200		MCS
Cellulose	15		1	1	%		12/12/22 1200		MCS
Fibrous Glass	<1		1	1	%		12/12/22 1200		MCS
Mineral Wool	<1		1	1	%		12/12/22 1200		MCS
Other Non-Asbestos Fibers	85		1	1	%		12/12/22 1200		MCS
Other Matrix Materials	<1		1	1	%		12/12/22 1200		MCS

Client Sample ID: 2-10092-2

Sample Matrix:SolidCollected By:CUSTOMERLab Sample ID:L2L0722-18Collection Date:12/12/2022 12:00

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	%		12/12/22 1200		MCS
Asbestos, Amosite	<1		1	1	%		12/12/22 1200		MCS
Asbestos, Crocidolite	<1		1	1	%		12/12/22 1200		MCS
Asbestos, Other	<1		1	1	%		12/12/22 1200		MCS
Cellulose	20		1	1	%		12/12/22 1200		MCS
Fibrous Glass	<1		1	1	%		12/12/22 1200		MCS
Mineral Wool	<1		1	1	%		12/12/22 1200		MCS
Other Non-Asbestos Fibers	80		1	1	%		12/12/22 1200		MCS
Other Matrix Materials	<1		1	1	%		12/12/22 1200		MCS

Client Sample ID: 2-10092-3

Sample Matrix:SolidCollected By:CUSTOMERLab Sample ID:L2L0722-19Collection Date:12/12/2022 12:00

Analyses Performed by: Microbac Laboratories, Inc., Louisville

Metals Total by ICP	Result	Limit(s)	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
Method: ASTM E1645-01									
Lead	210000		1100	5400	mg/kg		12/19/22 1211	12/20/22 2012	2 SSL

SPECIAL NOTE

SEDIMENT PREVENTION AND EROSION CONTROL

For all Impacts Regardless of Size of 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 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, Contractor shall be responsible for obtaining coverage under Kentucky's General KDPES 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

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

 HENDERSON COUNTY
 Contract ID: 245353

 STP BRZ 9030 (469)
 Page 48 of 205



Highway District 2 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 ## - ####

KY-812 Bridge Replacement

Bridge ID 051B00128N, Item 2-10092

Henderson County, Kentucky

June 2023



Note: 1 Design 2 Construction 3 Contractor

PROJECT INFORMATION

١.	Owner:	Kentucky	Transportation	Cabinet,	District 2 (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): KY-812 at MP 7-624 (1)

6. Latitude / Longitude (Project Mid-Point): 37.82241, -87.573293 (1)

7. County: Henderson County (1)

8. Project Start Date: 2

9. Projected Completion Date: 2



KY-812 Bridge Replacement CID ##-#### Bridge ID 051B00128N, Item 2-10092 Henderson County, Kentucky

A. SITE DESCRIPTION

- 1. Nature of Construction Activity: Address deficiencies of Bridge on KY-812 over North Fork Canoe Creek (051B00128N) from MP 7.624 to MP 7.711, a distance of 0.087 mile. Bridge (Replacement) SYP No. 02-10092.00. (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 series (Rosebloom and Waverly) are mapped for the project area. The Rosebloom series consists of deep, poorly drained soils that are formed from silty alluvium. These soils are found on floodplains. The Waverly series consists of very deep, poorly drained soils that are formed from silt alluvium derived from loess. These soils are found on floodplains and alluvial fans.
- 8. Discharge Water Quality Data (if any): (2)
- 9. Receiving Water: North Fork Canoe 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)

Contract ID: 245353 Page 51 of 205

BMP and Groundwater Protection Plan KY-812 Bridge Replacement CID ##-### Bridge ID 051B00128N, Item 2-10092 Henderson County, Kentucky



B. SEDIMENT AND EROSION CONTROL MEASURES

I. 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.





BMP and Groundwater Protection Plan KY-812 Bridge Replacement CID ##-### Bridge ID 051B00128N, Item 2-10092 Henderson County, Kentucky

- 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)

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BMP and Groundwater Protection Plan KY-812 Bridge Replacement CID ##-#### Bridge ID 051B00128N, Item 2-10092 Henderson County, Kentucky



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.

KY-812 Bridge Replacement CID ##-#### Bridge ID 051B00128N, Item 2-10092 Henderson County, Kentucky

Petroleum Products

HENDERSON COUNTY

TEAM 🚄

KENTUCKY

TRANSPORTATION

CABINET

STP BRZ 9030 (469)

- 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 contract 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.

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BMP and Groundwater Protection Plan KY-812 Bridge Replacement CID ##-### Bridge ID 051B00128N, Item 2-10092 Henderson County, Kentucky



- 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.

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BMP and Groundwater Protection Plan KY-812 Bridge Replacement CID ##-#### Bridge ID 051B00128N, Item 2-10092 Henderson County, Kentucky



- 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 form 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.

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BMP and Groundwater Protection Plan KY-812 Bridge Replacement CID ##-### Bridge ID 051B00128N, Item 2-10092 Henderson County, Kentucky

H. **GROUNDWATER PROTECTION** (3)

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

Continue of State of the Continue of the Conti	Contractor's	Statement:	(3)
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imple	ollowing activities, as enumerated by 401 KAR 5:037 Section 2, require the preparation and mentation of a groundwater protection plan, and will or may be conducted as part of this cruction project:
	2(e) Land treatment or land disposal of a pollutant
	2(f) Storingor related handling of hazardous waste, solid waste or special wastein 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.
	Contractor is responsible for the preparation of a plan that addresses the 401 KAR 5:037 on 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.
(c	d) Implementation schedule. All practices required to prevent pollution of groundwater are to

be in place prior to conducting the activity;

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BMP and Groundwater Protection Plan KY-812 Bridge Replacement CID ##-### Bridge ID 051B00128N, Item 2-10092 Henderson 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).

HENDERSON COUNTY STP BRZ 9030 (469) Contract ID: 245353 Page 59 of 205

BMP and Groundwater Protection Plan KY-812 Bridge Replacement CID ##-### Bridge ID 051B00128N, Item 2-10092 Henderson County, Kentucky



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	

- 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.

HENDERSON COUNTY STP BRZ 9030 (469) Contract ID: 245353 Page 60 of 205

BMP and Groundwater Protection Plan KY-812 Bridge Replacement CID ##-### Bridge ID 051B00128N, Item 2-10092 Henderson County, Kentucky



SUB-CONTRACTOR CERTIFICATION

of BMPs identified in this plan as	s follows:							
Subcontractor Name:								
Address:								
Phone:	Phone:							
The part of Plan this subcontrac	ctor is responsible to i	mplement is:						
Discharge Elimination System peri developed to manage the quality of	mit that authorizes the s of water to be discharged	and conditions of the general Kentu torm water discharges, the BMP plo I as a result of storm events associo ater pollutant sources identified as p	an that has been ated with the					
Subcontractor:								
Typed or printed name ¹	Title	Signature						
a general partner or the prop such a person in accordance v Manager, KPDES Branch, Divi	rietor or a person desi with 401 KAR 5:060 Se ision of Water, 14 Reill	o is the owner, a responsible cor ignated to have the authority to ection 9. This delegation shall be by Road, Frankfort, Kentucky 406 wher when one has been assigne	sign reports by in writing to: 601. Reference					

The following sub-contractor shall be made aware of the BMP plan and responsible for implementation

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

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

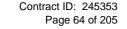
DUE TO THE RECOVERY PLAN FOR ENDANGERED BATS, NO TREE CLEARING IS PERMITTED FROM MAY 15 THROUGH JULY 31.

If there are any questions regarding this note, please contact Danny Peake, Director, 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.





ASBESTOS INSPECTION REPORT

Prepared for: Mike McGregor, PE

Bacon Farmer Workman Engineering & Testing, Inc.

Prepared by: Jared Looney, EIT

Al Number 175162 License Number 74088

Structure ID: 051B00128N, Item 2-10092

KY-812 over North Fork Canoe Creek

Henderson County, Kentucky

Prepared: December 23, 2022

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 1983.

INSPECTION METHODOLOGY

An inspection was conducted on December 12, 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 abutment joints, approximately 80 square feet of material
- Black expansion joint material in horizontal joints at pier bearings, approximately 105 square feet of material

One (I) 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 2-10092-1 and 2-10092-2, 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.

HENDERSON COUNTY STP BRZ 9030 (469) Contract ID: 245353

051B00128N, Item 2-10092 Asbestos Inspection Report 65 of 205 KY-812 over North Fork Canoe Creek
Henderson County, Kentucky
Page 2 of 2 (Plus Attachments)



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 (attached) 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 14, 2022]. https://www.google.com/earth.

Asbestos Inspection Photo Log Bridge ID 051B00128N, Item No. 2-10092 KY-812, Henderson County, Kentucky



I - IMG_2681 Bridge Surface - Facing E.JPG



2 - IMG_2682 Bridge Below Deck - Facing E.JPG

Asbestos Inspection Photo Log Bridge ID 051B00128N, Item No. 2-10092 KY-812, Henderson County, Kentucky



3 - IMG_2683 Date Stamp.JPG



4 - IMG_2684 Abutment Joint - Facing E - Sample 2-10092-1.JPG

Asbestos Inspection Photo Log Bridge ID 051B00128N, Item No. 2-10092 KY-812, Henderson County, Kentucky



5 - IMG_2685 Joint at Pier Bearing - Facing W - Sample 2-10092-2.JPG

CHAIN OF CUSTODY RECORD

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

(A) MICROBAC

Page 20 of 21

Samples Received on Ice? 🖺 Yes 📋 No 📋 N/A Custody Seals Intact? Tyes No N/A Additional Notes ŏ TO BE COMPLETED BY MICROBAC e-mail (address) bweatherford@thirdrockconsultants.com Temperature Upon Receipt (°C) Date/Time ☐ Level 4 Page ☐ Yes ☐ No Instructions on back Return Archive ** Preservative Types: (1) HNO3, (2) H2SO4, (3) HCI, (4) NaOH, (5) Zinc Acetate, (6) Methanol, (7) Sodium Bisulfate, (8) Sodium Thiosulfate, (9) Hexane, (U) Unpreserved Holding Time Results Only Level 1 Level 2 Level 3 Therm ID Compliance Monitoring? ☐ Agency/Program Sampler Phone No.: (859) 977-2000 * Matrix Types: Soil/Solid (S), Sludge, Oil, Wipe, Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WWV), Other (specify) Received By (signature) Received By (signature) Received By (signature REOUESTED ANALYSIS ⊠ Routine (5 to 7 business days)
 □ RUSH* (notify lab) Turnaround Time Fax (needed by) Report Type cop estilici Mail Lead Paint 9:03 Send Invoice via: PO No.: MJ9 sotsedaA 22/4/2 Date/Time Date/Time Client Name: Third Rock Consultants, LLC Address: 2526 Regency Road, STE 180 Preservative Sampler Signature: Durwk Loonary Types ** City, State, Zip: Lexington, KY 40503 Telephone No.: (859) 977-2000 Contact: Becky Weatherford Relinquished By (signature) Relinquished By (signature) Relinquished By (signature) 🖺 Mail 📋 Fax 🅫 e-mail (address) 🌣 jlooney@thirdrockconsultants.com Hazardous Non-Hazardous Radioactive vo. of Containers Location: Various Invoice Address 00:1 Collected 9130 A 4.82 12.18 22/21/21 17/11/25 2/11/2 12/12/22 1/11/11 21/11/21 2/11/12 C/AL/AL Client Name: Third Rock Consultants, LLC Address: 2526 Regency Road, STE 180 City, State, Zip: Lexington, KY 40503 Client Sample ID Sampled by (PRINT): Jared Looney 10001-- 76001-2 1200 -26001-2 Telephone No.: (859) 977-2000 21101--18001-2 100/8/ -- 10130-Possible Hazard Identification Contact: Jared Looney Project: KY22-034 Lab Report Address Send Report via: rev. 7/18/18 Comments Lab ID



Microbac Laboratories, Inc., Louisville

CERTIFICATE OF ANALYSIS L2L0722

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

Friday, December 23, 2022

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.



Microbac Laboratories, Inc., Louisville CERTIFICATE OF ANALYSIS

L2L0722

Client Sample ID: 2-10092-1

 Sample Matrix:
 Solid
 Collected By:
 CUSTOMER

 Lab Sample ID:
 L2L0722-17
 Collection Date:
 12/12/2022 12:00

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	%		12/12/22 1200		MCS
Asbestos, Amosite	<1		1	1	%		12/12/22 1200		MCS
Asbestos, Crocidolite	<1		1	1	%		12/12/22 1200		MCS
Asbestos, Other	<1		1	1	%		12/12/22 1200		MCS
Cellulose	15		1	1	%		12/12/22 1200		MCS
Fibrous Glass	<1		1	1	%		12/12/22 1200		MCS
Mineral Wool	<1		1	1	%		12/12/22 1200		MCS
Other Non-Asbestos Fibers	85		1	1	%		12/12/22 1200		MCS
Other Matrix Materials	<1		1	1	%		12/12/22 1200		MCS

Client Sample ID: 2-10092-2

Sample Matrix: Solid
Lab Sample ID: L2L0722-18

Collected By: CUSTOMER
Collection Date: 12/12/2022 12:00

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	%		12/12/22 1200		MCS
Asbestos, Amosite	<1		1	1	%		12/12/22 1200		MCS
Asbestos, Crocidolite	<1		1	1	%		12/12/22 1200		MCS
Asbestos, Other	<1		1	1	%		12/12/22 1200		MCS
Cellulose	20		1	1	%		12/12/22 1200		MCS
Fibrous Glass	<1		1	1	%		12/12/22 1200		MCS
Mineral Wool	<1		1	1	%		12/12/22 1200		MCS
Other Non-Asbestos Fibers	80		1	1	%		12/12/22 1200		MCS
Other Matrix Materials	<1		1	1	%		12/12/22 1200		MCS

Client Sample ID: 2-10092-3

Sample Matrix:SolidCollected By:CUSTOMERLab Sample ID:L2L0722-19Collection Date:12/12/2022 12:00

Analyses Performed by: Microbac Laboratories, Inc., Louisville

Metals Total by ICP	Result	Limit(s)	MDL	RL	Units	Note	Prepared	Analyzed	Analyst
Method: ASTM E1645-01									
Lead	210000		1100	5400	ma/ka		12/19/22 1211	12/20/22 2012	SSL

Contract ID: 245353

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	RSON COUNTY Z 9030 (469)
703	· · · · · · · · · · · · · · · · · · ·
DEP	

Contract ID: 245353

NOTIFICATION OF ASBESTOS ABATEMENT/DEMOLITION/BENOVATION

OFFICE USE ONLY	# QI	#5O7	
- 	- -		

PAGE 1 OF INITIAL SUBMITTAL DATE REVISION DATE NOTIFICATION #		ABATEMENT/DEMOI (Instructions for cor ***File this form with Regional Office Kentucky Division	ABATEMENT/DEMOLITION/RENOVATION (Instructions for completing form on back) ID # ID # In with Regional Office where project will be performed*** Kantucky Division for Air Ouality	Z 9030 (469)
		300 Sower Boulevard, 2nd Floor Frankfort, KY 40601	evard, 2nd Floor KY 40601	
Contractor			Description of planned renovation/demolition, including abatement methods	ent methods
Address			& demo/reno methods.	
City	State	eZip		
Phone_	Contact Person			
Owner			Description of affected facility components	
Address				
City	State	eZip	Asbestos detection technique	
Phone	Contact Person		Amount of Cat. I & II nonfriable ACM involved but will not be removed:	:moved:
Project Location				
Address			Describe physical characteristics that make it nonfriable and methods	methods
City	State	eZip	to keep it nonfriable (optional):	
Facility Age (yrs.)	Size of Facility or Affected Part (sq.ft.)	scted Part (sq.ft.)		
#Floors Affected	Present and Prior Use of Facility	Use of Facility	Describe contingency plan should nonfriable ACM become friable or	friable or
TYPE OF PROJECT (CHECK ONLY ONE):	(ONLY ONE):		additional ACM be uncovered during renovation/ demolition:	
Renovation Demolition C	Ordered Demolition	☐ Emergency ☐Long-term ☐		
PROJECT DATES:			Transporter	
Start Removal	End Removal	al	Address	
Start Renovation/Demolition_	End Renoval	End Renovation/Demolition	CityStateZip	
Amount of ACM to be Removed:	ved:		Phone	
_		_	Disposal Site	
Regulated ACM	Category II	Category I	Address	
(RACM)	nonfriable ACM (optional)	nonfriable ACM (optional)	City State Zip	
Linear Feet			I hereby certify that at least one person trained as required by 40 CFR	y 40 CFR
Square			61.145(c)(8) will supervise the abatement work described herein. (optional	ı. (optional
Feet			tor strictly non-triable work)	Рас
Feet			Submitted by:	ge 72
			Company Name:	2 of 2
				205

Contract ID: 245353 Page 73 of 205

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

Eiling 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 may be included to provide additional information, propose alternative procedures, declare nonfriable removal, identify secondary transporters,

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:

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 Emergency renovations result from a sudden, unexpected event. If the project is an emergency renovation, attach a detailed description of the sudden, equipment damage or unreasonable financial burden.

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

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 a type of planned renovation which involves a number of nonscheduled small-scale removals whose annual total exceeds the NESHAP 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 epresentative 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 emoval. "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 enotification 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.

equire 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 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 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

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

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.



KENTUCKY TRANSPORTATION CABINET Department of Highways

DIVISION OF RIGHT OF WAY & UTILITIES

RIGHT OF WAY CERTIFICATION

TC 62-226
Rev. 01/2016

Contract ID: 245353

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\boxtimes	Original		Re-C	Certificatio	n		RIGHT O	F WAY CERTIFICAT	ION
ITEM #			COUNTY		OUNTY	PROJE	CT # (STATE)	PROJECT # (FEDERAL)	
02-10092			Henders	on		1100 FD55 1	21 9414002R		
PROJ	ECT DESCI	RIPTIO	N						
Kentı	ucky Bridge	e Progr	am -	051B0012	8N - I	KY 812 at North For	k Canoe Creek	Bridge Replacemen	t
				f Way Red					
Const					_		e right of way w	as acquired in accord	ance to FHWA regulations
undei	the Unifor	m Relo	cation	Assistance	and F	Real Property Acquisit	ions Policy Act o	f 1970, as amended. I	No additional right of way or
reloca	ation assista	nce we	re req	uired for th	nis pro	oject.			
	Condition	# 1 (A	dditio	onal Right	of W	ay Required and Cl	eared)		
			-	_			-		g legal and physical possession.
									me improvements remaining
									ossession and the rights to
									deposited with the court. All
									displaced persons adequate
Геріа						rovisions of the curre ay Required with E		/e.	
The ri		-				-		-of-way required for t	he proper execution of the
							_		n has not been obtained, but
		-		-	-	-	-		s physical possession and right
_	-				-				e court for most parcels. Just
		-				•	•	o AWARD of construc	•
	Condition	# 3 (A	dditio	onal Right	of W	ay Required with E	xception)		
The a	cquisition o	r right	of occi	upancy and	use c	of a few remaining par	rcels are not con	nplete and/or some pa	arcels still have occupants. All
remai	ining occup	ants ha	ve had	l replaceme	nt ho	ousing made available	to them in acco	rdance with 49 CFR 24	4.204. KYTC is hereby
									necessary right of way will not
				-					paid or deposited with the
	-				_	•	•		535.309(c)(3) and 49 CFR
							s, and full payme	ents after bid letting a	nd prior to
						ccount construction.	ANITICII	PATED DATE OF POSSESSION	DAL WITH EVOLANIATION
	umber of Parcers The			3	EXCE	PTION (S) Parcel #	ANTICI	PATED DATE OF POSSESSIC	ON WITH EXPLANATION
Signed		iat nave	been A	3					
	nnation			0					
Signed	ROE			0					
Notes	/ Comments	(<u>Text is</u>	limited	<u>d</u> . Use additi	onal s	sheet if necessary.)			
		LPA R	W Pro	oject Mana	iger			Right of Way Su	pervisor
Print	ed Name						Printed Name	Mark Mark	k.C. Askin, P.E.
Sig	nature						Signature	Okio D E email=n	Mark Askin, P.E., c=US, nark.askin@strand.com
Date			Date	ONIII, I .L. Date: 20	01/23/24 01/23/24				
Right of Way Director					FHWA				
Printed Name			Dean M. Loy			Printed Name			
Sig	nature	Г	M	OV Dig		ned by DM Loy	Signature		
	Date		/ 	-05	'00'		Date		

UTILITIES AND RAIL CERTIFICATION NOTE

Henderson County FD55 121 9414002U Mile point: 7.652 TO 7.670

BRIDGE PROJECT IN HENDERSON COUNTY ON (051B00128N) KY-812 AT NORTH FORK CANOE CREEK

ITEM NUMBER: 02-10092.00

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 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

UTILITIES AND RAIL CERTIFICATION NOTE

Henderson County FD55 121 9414002U Mile point: 7.652 TO 7.670

BRIDGE PROJECT IN HENDERSON COUNTY ON (051B00128N) KY-812 AT NORTH FORK CANOE CREEK

ITEM NUMBER: 02-10092.00

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

City of Henderson/Gas - Natural Gas

Henderson Water Utility - Sewer

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

AT&T- KY - Communication

 On the southeast side of KY 812 Bridge: two (2) poles, anchors, and guys to be removed and relocated. A new electrical manhole and approximately 21' of buried four (4) inch PVC conduit will be placed, with approximately 70' of buried four (4) inch PVC conduit being abandoned. HENDERSON COUNTY STP BRZ 9030 (469)

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UTILITIES AND RAIL CERTIFICATION NOTE

Henderson County FD55 121 9414002U Mile point: 7.652 TO 7.670

BRIDGE PROJECT IN HENDERSON COUNTY ON (051B00128N) KY-812 AT NORTH FORK CANOE CREEK

ITEM NUMBER: 02-10092.00

Charter Communications Holdings, LLC dba Spectrum – CATV

- Charter Communications shares poles with AT&T in the area. The proposed route for AT&T relocation will be followed by Charter.

Henderson Municipal Power & Light – Communication

 HMP&L shares poles with AT&T in the area. The proposed route for AT&T relocation will be followed by HMP&L.

Kentucky Utilities - Electric Distribution

- KU shares poles with AT&T in the area. The proposed route for AT&T relocation will be followed by KU.

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

Henderson Water Utility - Water

 Roadway Contractor will select utility relocation sub-contractor from prequalified list of subcontractors selected by the Henderson Water Utility and included in the roadway contract documents.

RAIL COMPANIES HAV	E FACILITIES IN CONJUNCTION	ON WITH THIS PROJECT AS NOTED
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oxdot No Rail Involvement oxdot Rail Involved oxdot Rail Adjacent

UTILITIES AND RAIL CERTIFICATION NOTE

Henderson County FD55 121 9414002U Mile point: 7.652 TO 7.670

BRIDGE PROJECT IN HENDERSON COUNTY ON (051B00128N) KY-812 AT NORTH FORK CANOE CREEK

ITEM NUMBER: 02-10092.00

AREA FACILITY OWNER CONTACT LIST

Facility Owner	Address	Contact Name	Phone	Email
AT&T-KY –	120 Clark Street	Glenn Shane	270-831-3025	gs5572@att.com
Communication	Henderson, KY 42420			
Charter Communications	1900 N Fares	John Wade	812-253-2767	John.Wade@charter.com
Holdings, LLC dba Spectrum -	Evansville, IN			
CATV	47711			
City of Henderson/Gas –	222 First Street	Tim Clayton	270-831-1200	trclayton@hendersonky.
Natural Gas	Henderson, KY 42420			gov
Henderson Municipal Power &	100 5th Street	Chad Kietzman	270-631-0644	chad@hmpl.net
Light - Communication	Henderson, KY			
	42420			
Henderson Water Utility –	111 5th Street	Bart Boles	270-826-2421	bart.boles@hkywater.org
Water/Sewer	Henderson, KY 42420			
Kentucky Utilities -	820 W.	Caroline Justice	502-627-3708	Caroline.Justice@lge-
Electric Distribution	Broadway			ku.com
Electric Distribution	Louisville, KY			
	40202			

GENERAL UTILITY NOTES AND INSTRUCTIONS APPLICABLE TO ALL UTILITY WORK MADE A PART OF THE ROAD CONSTRUCTION CONTRACT

The contractor should be aware the following utility notes and KYTC Utility Bid Item Descriptions shall supersede, replace, and take precedence over any and all conflicting information that may be contained in utility owner supplied specifications contained in the contract, on plans supplied by the utility owner, or any utility owner specifications or information externally referenced in this contract.

Where information may have been omitted from these notes, bid item descriptions, utility owner supplied specifications or plans; the KYTC Standard Specifications for Road and Bridge Construction shall be referenced.

PROTECTION OF EXISTING UTILITIES

The existing utilities shown on the plans are shown as best known at the time the plans were developed and are to be used as a guide only by the Contractor. The Contractor shall use all means at his disposal to accurately locate all existing utilities, whether shown on the plans or not, prior to excavation. The contractor shall protect these utilities during construction. Any damage to existing utilities during construction that are shown or not shown on the plans shall be repaired at the Contractor's expense.

PREQUALIFIED UTILITY CONTRACTORS

Some utility owners may require contractors that perform relocation work on their respective facilities as a part of the road contract be prequalified or preapproved by the utility owner. 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. Those utility owners with a prequalification or preapproval requirement are as follows:

Henderson Water Utility – No prequalification requirement.

The bidding contractor needs to review the above list and choose from the list of approved subcontractors at the end of these general notes as identified above before bidding. When the list of approved subcontractors is provided, only subcontractors shown on the following list(s) will be allowed to work on that utility as a part of this contract.

When the list of approved subcontractors for the utility work is <u>not</u> provided in these general notes, the utility work can be completed by the prime contractor. If the prime contractor chooses to subcontract the

work, the subcontractor shall be prequalified with the KYTC Division of Construction Procurement in the work type of "Utilities" (I33). Those who would like to become prequalified may contact the Division of Construction Procurement at (502) 564-3500. Please note: it could take up to 30 calendar days for prequalification to be approved. The prequalification does not have to be approved prior to the bid but must be approved before the subcontract will be approved by KYTC and the work can be performed.

CONTRACT ADMINISTRATION RELATIVE TO UTILITY WORK

All utility work is being performed as a part of a contract administered by KYTC; there is not a direct contract between the utility contractor and utility owner. The KYTC Section Engineer is ultimately responsible for the administration of the road contract and any utility work included in the contract.

SUBMITTALS AND CORRESPONDENCE

All submittals and correspondence of any kind relative to utility work included in the road contract shall be directed to the KYTC Section Engineer, a copy of which may also be supplied to the utility owner by the contractor to expedite handling of items like material approvals and shop drawings. All approvals and correspondence generated by the utility owner shall be directed to the KYTC Section Engineer. The KYTC Section Engineer will relay any approvals or correspondence to the utility contractor as appropriate. At no time shall any direct communication between the utility owner and utility contractor without the communication flowing through the KYTC Section Engineer be considered official and binding under the contract.

ENGINEER

Where the word "Engineer" appears in any utility owner specifications included in this proposal, utility owner specifications included as a part of this contract by reference or on the utility relocation plans, it shall be understood the "Engineer" is the Kentucky Transportation Cabinet (KYTC) Section Engineer or designated representative and the utility owner engineer or designated representative jointly. Both engineers must mutually agree upon all decisions made regarding the utility construction. The Transportation Cabinet, Section Engineer shall make all final decisions in all disputes.

INSPECTOR OR RESIDENT PROJECT REPRESENTATIVE

Where the word "Inspector" or "Resident Project Representative" appears in the utility specifications included in this proposal, utility owner specifications included as a part of this contract by reference or on the utility relocation plans, it shall be understood the "Inspector" or "Resident Project Representative" is the utility owner inspector and KYTC inspector jointly. The Transportation Cabinet, Section Engineer shall make all final decisions in all disputes.

NOTICE TO UTILITY OWNERS OF THE START OF WORK

One month before construction is to start on a utility, the utility contractor shall make notice to the KYTC Section Engineer and the utility owner of when work on a utility is anticipated to start. The utility contractor shall again make confirmation notice to the KYTC Section Engineer and the utility owner one week before utility work is to start.

UTILITY SHUTDOWNS

The Contractor shall not shut down any active and in-service mains, utility lines or services for any reason unless specifically given permission to do so by the utility owner. The opening and closing of valves and operating of other active utility facilities for main, utility line or utility service shutdowns are to be performed by the utility owner unless specific permission is given to the contractor by the owner to make shutdowns. If and when the utility owner gives the contractor permission to shutdown mains, utility lines or utility services, the contractor shall do so following the rules, procedures and regulations of the utility owner. Any permission given by the utility owner to the contractor to shutdown active and in-service mains, utility lines or services shall be communicated to the KYTC Section Engineer by the utility owner that such permission has been given.

Notice to customers of utility shutdowns is sometimes required to be performed by the utility contractor. The contractor may be required; but, is not limited to, making notice to utility customers in a certain minimum amount of time in advance of the shut down and by whatever means of communication specified by the utility owner. The means of communication to the customer may be; but is not limited to, a door hanger, notice by newspaper ad, telephone contact, or any combination of communication methods deemed necessary, customary and appropriate by the utility owner. The contractor should refer to the utility owner specifications for requirements on customer notice.

Any procedure the utility owner may require the contractor to perform by specification or plan note and any expense the contractor may incur to comply with the utility owner's shut down procedure and notice to customers shall be considered an incidental expense to the utility construction.

CUSTOMER SERVICE AND LATERAL ABANDONMENTS When temporary or permanent abandonment of customer water, gas, or sewer services or laterals are necessary during relocation of utilities included in the contract, the utility contractor shall perform these abandonments as part of the contract as incidental work. No separate payment will be made for service line and lateral abandonments. The contractor shall provide all labor, equipment, and materials to accomplish the temporary or permanent abandonment in accordance with the plans, specifications and/or as directed by the engineer. Abandonment may include, but is not limited to, digging down on a water or gas main at the tap to turn off the tap valve or corporation stop and/or capping or plugging the tap, digging down on a sewer tap at the main and plugging or capping the tap, digging down on a service line or lateral at a location shown on the plans or agreeable to the engineer and capping or plugging, or performing any other work necessary to abandon the service or lateral to satisfactorily accomplish the final utility relocation.

STATIONS AND DISTANCES

All stations and distances, when indicated for utility placement in utility relocation plans or specifications, are approximate; therefore, some minor adjustment may have to be made during construction to fit actual field conditions. Any changes in excess of 6 inches of plan location shall be reviewed and approved jointly by the KYTC Section Engineer or designated representative and utility owner engineer or designated representative. Changes in location without prior approval shall be remedied by the contractor at his own expense if the unauthorized change creates an unacceptable conflict or condition.

RESTORATION

Temporary and permanent restoration of paved or stone areas due to utility construction shall be considered incidental to the utility work. No separate payment will be made for this work. Temporary restoration shall be as directed by the KYTC Section Engineer. Permanent restoration shall be "in-kind" as existing.

Restoration of seed and sod areas will be measured and paid under the appropriate seeding and sodding bid items established in the contract for roadway work.

BELOW ARE NOTES FOR WHEN "INST" ITEMS ARE IN THE CONTRACT MEANING THE UTILITY COMPANY IS PROVIDING CERTAIN MATERIALS FOR UTILITY RELOCATION

MATERIAL

Contrary to Utility Bid Item Descriptions, those bid items that have the text "Inst" at the end of the bid item will have the major components of the bid item provided by the utility owner. No direct payment will be made for the major material component(s) supplied by the utility company. All remaining materials required to construct the bid item as detailed in utility bid item descriptions, in utility specifications and utility plans that are made a part of this contract will be supplied by the contractor. The contractor's bid price should reflect the difference in cost due to the provided materials.

The following utility owners have elected to provide the following materials for work under this contract:

Henderson Water Utility-The contractor shall coordinate pickup of KUPFERLE 88-SS sampling stations with Sandy Overfield, Purchasing Aid with Henderson Water Utility. Her phone number is 270-869-6634.

SECURITY OF SUPPLIED MATERIALS

If any utility materials are to be supplied by the utility owner, it will be the responsibility of the utility contractor to secure all utility owner supplied materials after delivery to the project site. The utility contractor shall coordinate directly with the utility owner and their suppliers for delivery and security of the supplied materials. Any materials supplied by the utility owner and delivered to the construction site that are subsequently stolen, damaged or vandalized and deemed unusable shall be replaced with like materials at the contractor's expense.

Standard Water Bid Item Descriptions

THESE BID ITEM DESCRIPTIONS SHALL SUPERCEDE ANY BID ITEM DESCRIPTIONS CONTAINED IN UTILITY OWNER SUPPLIED SPECIFICATIONS PROVIDED ELSEWHERE IN THIS PROPOSAL.

W AIR RELEASE VALVE This bid item description shall apply to all air release valve installations of every size except those defined as "Special". This item shall include the air release valve, main to valve connecting line or piping, manhole, vault, structure, access casting or doors, tapping the main, labor, equipment, excavation, proper backfill, and restoration required to install the air release valve at the location shown on the plans or as directed, in accordance with the specifications and standard drawings, complete and ready-for-use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

BOLLARDS This item is for payment for furnishing and installing protective guard posts at above-ground utility installations. A bollard may consist of, but is not limited to, a steel post set in concrete or any other substantial post material. This item shall include all labor, equipment, and materials needed for complete installation of the bollard, as specified by the utility owner specifications and plans. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

NOTE: A bid code for this item has been established in standard roadway bid items and shall be used for payment of this item. The bid code is 21341ND.

W CAP EXISTING MAIN This item shall include the specified cap, concrete blocking and/or mechanical anchoring, labor, equipment, excavation, backfill, and restoration required to install the cap on an existing main to be left in service at the location shown on the plans or as directed, in accordance with the specifications. This item is not to be paid to cap new main installations or mains that are to be abandoned. This pay item is only to be paid to cap existing mains to be left in service. Caps on new mains are to be considered incidental to the new main, as are other fittings, and are not to be paid under this item. All caps on existing mains shall be paid under this one bid item included in the contract, regardless of size. No separate bid items will be established for size variations. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

Plugging of existing abandoned mains shall be performed and paid in accordance with Section 708.03.05 of KYTC Standard Specifications for Road and Bridge Construction, using Bid code 01314, Plug Pipe.

W CATHODIC PROTECTION This item is for providing and installing all cathodic protection materials to iron pipe and fittings, as specified in plans and specifications, complete and ready-for-use. Materials to be supplied and installed by the contractor shall include, but are not limited to, anodes, wire, fusion kits, test stations, and/or marker posts. All cathodic protection required for the entire project shall be paid under this one item. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LUMP SUM (LS) when complete.

W DIRECTIONAL BORE Payment under this item is made whenever the plans or specifications specifically show directional boring is to be utilized to minimize the impact of open-cut for the installation of water main under streets, creeks, etc. Payment under this item shall include the specified bore pipe, labor, and equipment. No separate payment shall be made for bore pipe installed in the bore, whether used as a carrier pipe or an encasement of a separate carrier pipe. This item shall also include pipe anchors at

each end of the bore, when specified, to prevent the creep or contraction of the bore pipe. Carrier pipe installed within a bore pipe shall be paid separately under pipe items. Payment under this item shall not be size specific and no separate bid items will be established for size variations. The bore pipe sizes to be included under this item shall be as shown on the plans and/or in the specifications. Any and all directional bores in each contract shall be paid under one directional bore bid item included in the contract, regardless of size. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LINEAR FEET (LF) when complete.

W ENCASEMENT CONCRETE This item shall include all labor, equipment, excavation, concrete, reinforcing steel, backfill, restoration, etc., to construct the concrete encasement of the water main as shown on the plans, and in accordance with the specifications and standard drawings. Payment under this item shall be in addition to the carrier pipe, as paid under separate bid items. Carrier pipe is not included in this bid item. Any and all concrete encasements shall be paid under one bid item included in the contract, regardless of the size of the carrier pipe or the volume of concrete or steel reinforcement, as specified in the plans and specifications. No separate bid items will be established for size variations. Measurement of pay quantity shall be from end of concrete to end of concrete. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LINEAR FEET (LF) when complete.

W ENCASEMENT STEEL BORED This item shall include the steel encasement pipe size as specified on the plans and in the specifications, casing spacers, end seals, labor, and equipment to bore and install the encasement in accordance with the plans and specifications, complete and ready-for-use. The size shall be the measured internal diameter of the encasement pipe. The sizes of encasement to be paid under the size ranges specified in the bid items shall be as follows:

Range 1 = All encasement sizes greater than 2 inches to and including 6 inches

Range 2 = All encasement sizes greater than 6 inches to and including 10 inches

Range 3 = All encasement sizes greater than 10 inches to and including 14 inches

Range 4 = All encasement sizes greater than 14 inches to and including 18 inches

Range 5 = All encasement sizes greater than 18 inches to and including 24 inches

Range 6 = All encasement sizes greater than 24 inches

(Encasement sizes of 2 inches internal diameter or less shall not be paid separately but shall be considered incidental to the carrier pipe.) Payment under this bid item shall not include the carrier pipe. Carrier pipe shall be paid under a separate bid item. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LINEAR FEET (LF) when complete.

W ENCASEMENT STEEL OPEN CUT This item shall include the steel encasement pipe size as specified on the plans and in the specifications, casing spacers, end seals, labor, and equipment to open-cut and install the encasement in accordance with the plans and specifications, complete and ready-for-use. The size shall be the measured internal diameter of the encasement pipe. The size encasement to be paid under the size ranges specified in the bid items shall be as follows:

Range 1 = All encasement sizes greater than 2 inches to and including 6 inches

Range 2 = All encasement sizes greater than 6 inches to and including 10 inches

Range 3 = All encasement sizes greater than 10 inches to and including 14 inches

Range 4 = All encasement sizes greater than 14 inches to and including 18 inches

Range 5 = All encasement sizes greater than 18 inches to and including 24 inches

Range 6 = All encasement sizes greater than 24 inches

(Encasement sizes of 2 inches internal diameter or less shall not be paid separately but shall be considered incidental to the carrier pipe.) Payment under this bid item shall not include the carrier pipe. Carrier pipe shall be paid under a separate bid item. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LINEAR FEET (LF) when complete.

W FIRE HYDRANT ADJUST This item includes all labor, equipment, excavation, materials, and backfill to adjust the existing fire hydrant using the fire hydrant manufacturer's extension kit for adjustments of 18" or less. Adjustments greater than 18" require anchoring couplings and vertical bends to adjust to grade. The Contractor will supply and install all anchor couplings, bends, fire hydrant extension, concrete blocking, restoration, granular drainage material, etc., needed to adjust the fire hydrant, complete and ready-for-use as shown on the plans, and in accordance with the specifications and standard drawings. This also includes allowing for the utility owner inspector to inspect the existing fire hydrant prior to adjusting, contractor returning unusable fire hydrants to the utility owner warehouse and picking up a replacement hydrant. No additional payment will be made for rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete and ready for use.

W FIRE HYDRANT ASSEMBLY This item includes all labor, equipment, new fire hydrant, isolating valve and valve box, concrete pad around valve box (when specified in specifications or plans), piping, anchoring tee, anchoring couplings, fire hydrant extension, excavation, concrete blocking, granular drainage material, backfill, and restoration, to install a new fire hydrant assembly as indicated on plans and standard drawings, compete and ready-for-use. No additional payment will be made for rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W FIRE HYDRANT RELOCATE This item includes all labor and equipment to remove the existing fire hydrant from its existing location and to reinstall at a new location. This item shall include a new isolating valve and valve box, concrete pad around valve box (when required in specifications or plans), new piping, new anchoring tee, anchoring couplings, fire hydrant extensions, concrete blocking, restoration, granular drainage material, excavation, and backfill as indicated on plans, specifications, and standard drawings, compete and ready-for-use. This item shall also include allowing for utility owner inspector to inspect the existing fire hydrant prior to reuse, contractor returning unusable fire hydrants to the utility owner warehouse and picking up a replacement hydrant for use if the existing fire hydrant is determined unfit for reuse. No additional payment will be made for rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W FIRE HYDRANT REMOVE This item includes removal of an abandoned fire hydrant, isolating valve, and valve box, to the satisfaction of the engineer. The removed fire hydrant, isolating valve, and valve box shall become the property of the contractor for his disposal as salvage or scrap. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W FLUSH HYDRANT ASSEMBLY This item shall include the flushing hydrant assembly, service line, tapping the main, labor, equipment, excavation, backfill, and restoration required to install the flush hydrant at the location shown on the plans and in accordance with the specifications and standard drawings, complete and ready-for-use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W FLUSHING ASSEMBLY This item shall include the flushing device assembly, service line, meter box and lid, tapping the main, labor, equipment, excavation, backfill, and restoration required to install the flushing device at the location shown on the plans and in accordance with the specifications and standard drawings, complete and ready-for-use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W LEAK DETECTION METER This item is for payment for installation of a water meter at main valve locations, as shown on the plans, for detection of water main leaks. The meter shall be of the size and type specified in the plans or specifications. This item shall include all labor, equipment, meter, meter box or vault, connecting pipes between main and meter, main taps, tapping saddles, casting, yoke, and any other associated material needed for installation of a functioning water meter in accordance with the plans and specifications, complete and ready-for-use. No separate payment will be made under any other contract item for connecting pipe or main taps. All leak detection meters shall be paid under one bid item included in the contract, regardless of size. No separate bid items will be established for size variations. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete and ready for use.

W LINE MARKER This item is for payment for furnishing and installing a water utility line marker as specified by the utility owner specifications and plans. A line marker may consist of a post or monument of whatever materials specified and shall include markings and/or signage on same as specified by plans or specifications. This item shall include all labor, equipment, and materials needed for complete installation of the marker. This item shall be paid EACH (EA) when complete.

W LINE STOP SIZE 1 OR 2 This item shall include the line stop saddle/sleeve, valve, completion plug and any other material, labor, and equipment necessary to complete the line stop as indicated in the plans and/or specifications. This installation shall allow the waterline system to operate as usual without any interruption of service. The size shall be the measured internal diameter of the live pipe to be tapped. The line stop size to be paid under sizes 1 or 2 shall be as follows:

Size 1 = All live tapped main sizes up to and including 8 inches

Size 2 = All live tapped main sizes greater than 8 inches

Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W MAIN POINT RELOCATE This item is intended for payment for horizontal and/or vertical relocation of a short length of an existing main at the location shown on the plans. This bid item is to be used to relocate an existing water main at point locations, such as to clear a conflict at a proposed drainage structure, pipe, or any other similar short relocation situation, and where the existing pipe material is to be reused. The contractor shall provide any additional pipe or fitting material needed to complete the work, as shown on the plans and specifications. The materials provided shall be of the same type and specifications as those that exist. Substitution of alternative materials shall be approved by the engineer in advance on a case-by-case basis. New polyethylene wrap is to be provided (if wrap exists or is specified in the specifications to be used). If it is necessary that the pipe be disassembled for relay, payment under this item shall also include replacement of joint gaskets as needed. Bedding and backfill shall be provided and performed the same as with any other pipe installation as detailed in the plans and specifications. Payment under this item shall be for each location requiring an existing main to be relocated horizontally or vertically, regardless of pipe size or relocation length. No separate pay items will be established for pipe size variations or relocation segment length variations. Water Main Relocate shall not be paid on a linear feet basis but shall be paid EACH (EA) at each location when complete and placed in service. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced.

W METER This item is for payment for installation of all standard water meters of all sizes 2 inches in diameter or less as specified on the plans. This item shall include all labor, equipment, meter, meter box, casting, yoke, and any other associated materials needed for installation of a functioning water meter, in accordance with the plans and specifications, complete and ready-for-use. This item shall include connections to the new or existing water service line. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W METER ADJUST This item includes all labor, equipment, excavation, materials, backfill, restoration, etc., to adjust the meter casting to finished grade (whatever size exists) at the location shown on the plans or as directed, in accordance with the specifications and standard drawings, complete and ready-for-use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W METER RELOCATE This item includes all labor, equipment, excavation, additional fittings, disinfection, testing, restoration, etc., to relocate the existing water meter (whatever size exists), meter yoke, meter box, casting, etc., from its old location to the location shown on the plans or as directed, in accordance with the specifications and standard drawings, complete and ready- f o r - use. The new service pipe (if required) will be paid under the short side or long side service bid item. Any and all meter relocations of 2 inches or less shall be paid under one bid item included in the contract, regardless of size. Each individual relocation shall be paid individually under this item; however, no separate bid items will be established for meter size variations of 2 inches in diameter or less. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W METER VAULT SIZE RANGE 1 OR 2 This item is for payment for installation of an underground structure for housing of a large water meter, fittings, and valves as required by the plans and specifications. This item shall include all labor, equipment, excavation, concrete, manhole castings or access doors, the specified meter(s) valve(s), all piping, and fitting materials associated with installing a functioning meter and vault in accordance with the plans, standard drawings, and specifications, complete and ready-for-use. The size shall be the measured internal diameter of the meter and piping to be installed. The size meter vault to be paid under size 1 or 2 shall be as follows:

Size Range 1 = All meter and piping sizes greater than 2 inches up to and including 6 inches Size Range 2 = All meter and piping sizes greater than 6 inches

This item shall be paid EACH (EA) when complete. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced.

W METER/FIRE SERVICE COMBO VAULT This item is for payment for installation of an underground structure for housing of a water meter and fire service piping, fittings, and valves as required by the plans and specifications. This item shall include all labor, equipment, excavation, concrete, manhole castings or access doors, the specified meter(s), valve(s), all piping, and fitting materials associated with installing a functioning meter and fire service vault, in accordance with the plans and specifications, complete and ready-for-use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W METER WITH PRESSURE REDUCING VALVE (PRV) This item is for payment for installation of all standard water meters with pressure reducing valves (PRV) of all sizes 2 inches in diameter or less,

as specified on the plans. This item shall include all labor, equipment, meter, PRV, meter box, casting, yoke, and any other associated materials needed for installation of a functioning water meter with PRV, in accordance with the plans and specifications, complete and ready-for-use. This item shall include connections to the new or existing water service line. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W PIPE This item shall apply to all pipe of every size and type material to be used as water main, except those bid items defined as "Special". This item includes the pipe specified by the plans and specifications, all fittings (including, but not limited to, bends, tees, reducers, plugs, and caps), tracing wire with test boxes (if required by specifications), polyethylene wrap (when specified), labor, equipment, excavation, bedding, backfill, restoration, testing, sanitizing, etc., required to install the specified new pipe and new fittings at the locations shown on the plans, or as directed, in accordance with the specifications and standard drawings, complete and ready-for-use. No additional payment will be made for rock excavation. includes material and placement of flowable fill under existing and proposed pavement, and wherever else specified on the plans or in the specifications. This item shall include all temporary and permanent materials, as well as equipment required to pressure test and sanitize mains including, but not limited to, pressurization pumps, hoses, tubing, gauges, main taps, saddles, temporary main end caps or plugs and blocking, main end taps for flushing, chlorine liquids or tablets for sanitizing, water for testing/sanitizing and flushing (when not supplied by the utility), chlorine neutralization equipment and materials, and any other items needed to accomplish pressure testing and sanitizing the main installation. This item shall also include pipe anchors at each end of polyethylene pipe runs, when specified to prevent the creep or contraction of the pipe. When owner specifications require, this bid item shall include contractor preparation of as-built drawings to be provided to the engineer and/or utility owner at the end of construction. Measurement of quantities under this item shall be through fittings, encasements, and directional bores (only when a separate carrier pipe is specified within the directional bore pipe). Measurements shall be further defined to be to the center of tie-in where new pipe contacts existing pipe at the center of connecting fittings, to the outside face of vault or structure walls, or to the point of main termination at dead ends. No separate payment will be made under pipe items when the directional bore pipe is the carrier pipe. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LINEAR FEET (LF) when complete.

W PLUG EXISTING MAIN This item shall include the specified plug, concrete blocking and/or mechanical anchoring, labor, equipment, excavation, backfill, and restoration required to install the plug on an existing main to be left in service at the location shown on the plans or as directed, in accordance with the specifications. This item is not to be paid to plug new main installations or mains that are to be abandoned. This pay item is only to be paid to plug existing mains that are to be left in service. Plugs on new mains are to be considered incidental to the new main, as are other fittings, and are not to be paid under this item. All plugs on existing mains left in service shall be paid under this one bid item included in the contract, regardless of size. No separate bid items will be established for size variations. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

Plugging of existing abandoned mains shall be performed and paid in accordance with Section 708.03.05 of KYTC Standard Specifications for Road and Bridge Construction, using Bid code 01314, Plug Pipe.

W PRESSURE REDUCING VALVE This item shall apply to all pressure reducing valves (PRV) of every size required in the plans and specifications, except those bid items defined as "Special". Payment under this description is to be for PRVs being installed with new main. This item includes the PRV as specified in the plans and specifications, polyethylene wrap (if required by specification), labor, equipment, excavation, anchoring (if any), pit or vault, backfill, restoration, testing, disinfection, etc., required to install the specified PRV at the location shown on the plans, in accordance with the specifications and standard

drawings, complete and ready-for-use. If required on the plans and/or proposed adjoining DIP is restrained, PRVs shall be restrained. PRV restraint shall be considered incidental to the PRV and adjoining pipe. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W PUMP STATION This item is for payment for installation of pumps and an above or below ground structure for housing of the pumps. This item shall include all pumps, piping, fittings, valves, electrical components, building materials, concrete, any other appurtenances, labor, equipment, excavation, and backfill, to complete the pump station installation as required by the plans, standard drawings, and specifications, complete and ready-for-use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LUMP SUM (LS) when complete.

W REMOVE TRANSITE (AC) PIPE This item shall include all labor, equipment, and materials needed for removal and disposal of the pipe as hazardous material. All work shall be performed by trained and certified personnel, in accordance with all environmental laws and regulations.

Any and all transite AC pipe removed shall be paid under one bid item included in the contract, regardless of size. No separate bid items will be established for size variations. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LINEAR FEET (LF) when complete.

W SERVICE LONG SIDE This item shall apply to all service line installations of every size bid up to and including 2-inch inside diameter, except those service bid items defined as "Special". This item includes the specified piping material, main tap, tapping saddle (if required), corporation stop materials, coupling for connecting the new piping to the surviving existing piping, encasement of 2 inches or less internal diameter (if required by plans or specifications), labor, equipment, excavation, backfill, testing, disinfection, and restoration, at the locations shown on the plans or as directed, in accordance with the specifications and standard drawings, complete and ready-for-use. This bid item is to pay for service installations where the ends of the service connection are on opposite sides of the public roadway and the service line crosses the centerline of the public roadway, as shown on the plans. The length of the service line is not to be specified. Payment under this item shall not be restricted by a minimum or maximum length. The contractor shall draw his own conclusions as to the length of piping that may be needed. Payment under this item shall include boring, jacking, or excavating across the public roadway for placement. Placement of a service across a private residential or commercial entrance alone shall not be reason to make payment under this item. Private or commercial entrances shall not be considered a public roadway in defining payment under this item. This pay item does not include installation or relocation of meters. Meters will be paid separately. No additional payment will be made for rock excavation or for special bedding required in rock Please refer to the Utility Company's Specifications. If the Company does not have excavation. specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W SERVICE SHORT SIDE This item shall apply to all service line installations of every size up to and including 2-inch internal diameter, except those service bid items defined as "Special". This item includes installation of the specified piping material of the size specified on plans, encasement of 2 inches or less internal diameter (if required by plans or specifications), main tap, tapping saddle (if required), corporation stop, coupling for connecting the new piping to the surviving existing piping, labor, equipment, excavation, backfill, testing, disinfection, and restoration at the locations shown on the plans or as directed, in accordance with the specifications and standard drawings, complete and ready-for-use. This bid item is to pay for service installations where both ends of the service connection are on the same side of the public roadway, or when an existing service crossing a public roadway will remain and is being extended, reconnected, or relocated, with all work on one side of the public roadway centerline as shown on the plans. The length of

the service line is not to be specified and shall not be restricted to any minimum or maximum length. Placement of a service lateral across a private residential or commercial entrance alone shall not be reason to make payment under this item. Private or commercial entrances shall not be considered a public roadway in defining payment under this item. The contractor shall draw his own conclusions as to the length of piping that may be needed. This pay item does not include installation or relocation of meters. Meters will be paid separately. No additional payment will be made for rock excavation or for bedding required in rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W SERVICE RELOCATE This item is for the relocation of an existing water service line where a meter is not involved, and where an existing service line can easily be adjusted by excavating alongside and moving the line horizontally and/or vertically a short distance without cutting the service line to avoid conflicts with road construction. This item shall include excavation, labor, equipment, bedding, and backfill to relocate the line, in accordance with the plans and specifications, complete and ready-for-use. Payment under this item shall be for each location requiring relocation. Payment shall be made under this item regardless of service size or relocation length. No separate pay items will be established for size or length variations. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W STRUCTURE ABANDONMENT This item is to be used to pay for abandonment of larger above or below ground water structures such as meter vaults, fire pits, pump stations, tanks, etc. Payment under this item shall not be limited to size or scope; however, structures with connecting pipes of 2 inches or less shall not be paid under this item but shall be considered incidental to water construction (i.e., abandonment of standard water meters up to and including 2 inches would not be paid under this item). Payment under this item shall include all labor, equipment, and compacted fill or flowable fill for abandonment of the structure in-place and complete restoration. No separate bid items will be established for size or structure variations. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W STRUCTURE REMOVAL This item is to be used to pay for removal of larger above or below ground water structures such as meter vaults, fire pits, pump stations, tanks, etc. Payment under this item shall not be limited to size or scope; however, structures with connecting pipes of 2 inches or less shall not be paid under this item but shall be considered incidental to water construction (i.e., removal of standard water meters up to and including 2 inches would not be paid under this item). Payment under this item shall include all labor, equipment, and compacted backfill for removal of the structure and complete restoration. No separate bid items will be established for size or structure variations. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W TAPPING SLEVE AND VALVE SIZE 1 OR 2 This item shall include the specified tapping sleeve, valve, valve box, concrete pad around valve box (when required in specifications or plans), labor, and equipment to install the specified tapping sleeve and valve, complete and ready-for-use, in accordance with the plans and specifications. The size shall be the measured internal diameter of the live pipe to be tapped. The size tapping sleeve and valve to be paid under sizes 1 or 2 shall be as follows:

Size 1 = All live tapped main sizes up to and including 8 inches

Size 2 = All live tapped main sizes greater than 8 inches

Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W TIE-IN This item shall be used for all main tie-in bid items of every size, except those defined as "Special". This item includes all labor, equipment, excavation, fittings, sleeves, reducers, couplings, blocking, anchoring, restoration, disinfection, testing, and backfill required to make the water main tie-in as shown on the plans and in accordance with the specifications, complete and ready-for-use. Pipe for tie-ins shall be paid under separate bid items. This item shall be paid EACH (EA) when complete.

Plugging of existing abandoned mains shall be performed and paid in accordance with Section 708.03.05 of KYTC Standard Specifications for Road and Bridge Construction, using Bid code 01314, Plug Pipe.

W VALVE This item shall apply to all valves of every size required in the plans and specifications, except those bid items defined as "Special". Payment under this description is to be for gate or butterfly valves being installed with new main. This item includes the valve as specified in the plans and specifications, polyethylene wrap (if required by specifications), labor, equipment, excavation, anchoring (if any), valve box and valve stem extensions, backfill, concrete pad around valve box (if required by specifications), restoration, testing, disinfection, etc., required to install the specified valve at the location shown on the plans, in accordance with the specifications and standard drawings, complete and ready-for-use. If required on plans and/or proposed adjoining DIP is restrained, valves shall be restrained. Valve restraint shall be considered incidental to the valve and adjoining pipe. This description does not apply to cut-in valves. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W VALVE ANCHOR EXISTING This item is intended to pay for installation of restraint hardware on an existing valve where no restraint exists, to hold the valve in place to facilitate tie-ins and other procedures where restraint is prudent. This work shall be performed in accordance with water specifications and plans. This bid item shall include all labor, equipment, excavation, materials, and backfill to complete restraint of the designated valve, regardless of size, at the location shown on the plans, complete and ready-for-use. Materials to be provided may include, but are not limited to, retainer glands, lugs, threaded rod, concrete, reinforcing steel, or any other material needed to complete the restraint. Should the associated valve box require removal to complete the restraint, the contractor shall reinstall the existing valve box, the cost of which shall be considered incidental to this bid item. No separate bid items are being provided for size variations. All sizes shall be paid under one bid item. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W VALVE BOX ADJUST This item include all labor, equipment, valve box and valve stem extensions (if required), excavation, backfill, concrete pad around valve box (when specified in specifications or plans), restoration, etc., to adjust the top of the box to finished grade, complete and readyfor-use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W VALVE BOX REMOVE This item is in payment for all labor, equipment, restoration materials, disposal, and any other effort for removal of a valve box, leaving the valve in place. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W VALVE CUT-IN This item is for new cut-in valve installations of all sizes, where installation is accomplished by cutting out a section of existing main. This item shall include cutting the existing pipe, supplying the specified valve, couplings or sleeves, valve box, concrete pad around valve box (when required in specifications or plans), labor, equipment, and materials to install the valve at the locations

shown on the plans, or as directed by the engineer, complete and ready-for-use. Any pipe required for installation shall be cut from that pipe removed or supplied new by the contractor. No separate payment will be made for pipe required for cut-in valve installation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W VALVE REMOVE This item is in payment for all labor, equipment, and restoration materials for cutting of existing pipe and any other effort necessary for total removal of an existing valve and valve box. This bid item shall include disposal of the valve and box, unless plans or specifications state the valve and box are to be salvaged and delivered to the utility owner for reuse. No separate pay items are to be established for size variations. All valve removals, regardless of size, shall be paid under this one pay item. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

If plugging of existing abandoned mains is needed after valve removal, the work shall be performed and paid in accordance with Section 708.03.05 of KYTC Standard Specifications for Road and Bridge Construction, using Bid code 01314, Plug Pipe.

W VALVE VAULT This item is for payment for installation of an underground structure for housing of specific valve(s), as required by the plans and specifications. This item shall include all labor, equipment, excavation, concrete, manhole castings or doors, the specified valve(s), all piping, and fitting materials associated with installing a functioning valve vault, in accordance with the plans, standard drawings, and specifications, complete and ready-for-use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

HENDERSON COUNTY STP BRZ 9030 (469)



Technical Manual

Requirements and Specifications For Potable Water Facilities

Henderson Water Utility Henderson, Kentucky

June 2016

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1. WATER TECHNICAL MANUAL

1.1 INTRODUCTION

This document contains technical guidance for the construction of potable water facilities to serve existing and new development. It establishes uniform policies and procedures for the construction and acceptance of potable water facilities to provide for efficient, reliable service.

HWU staff responsible for working with developers and others subject to the procedures and specifications contained herein may be contacted by telephone at (270) 826-2824, or may be visited at the System Operations Center, 230 N. Alvasia Street, Henderson, KY 42420.

1.2 PURPOSE

The purpose of this manual is to provide standards to assure consistent quality in the design and construction of potable water infrastructure that becomes a part of the HWU system. The manual establishes uniformity in design assumptions and general methods of design, and sets policy regarding design standards and specifications. Finally, the manual outlines the required calculations and design applicable to all potable water infrastructure.

Provision of Potable Water Facilities

HWU reserves the right to design and construct all improvements to the potable water system for existing and new developments. In certain instances, HWU may allow others to design and construct potable water facilities that are to become part of HWU's system. Construction by outside agents requires signing of an agreement; negotiation of possible future reimbursement of costs; and all required licenses, permits, easements and rights of way must be obtained and provided to HWU. In addition, HWU must inspect all elements of the construction, and witness and approve all testing prior to acceptance.

Water System Extensions

The procedures in this manual will apply to extensions to furnish water service to a prospective customer or customers, including new developments. The customer(s) being served are expected to pay the cost of the extension unless prior arrangements have been made to share the cost. HWU may require developers or others requesting line extensions to pay the full cost of off-site improvements necessary to serve a development.

Any additions to the public potable water system made as a result of an agreement with HWU shall become the property of HWU, which reserves the right to further extend the lines or provide other facilities deemed necessary without reimbursement to another party, unless specifically covered by a reimbursement agreement.

If a line extension is to be built on road frontage or vacant land, the extension will normally stop at the last point of service. To insure that right of way will be available for future use, HWU may require the granting of an easement across the entire frontage, or to the furthest property line.

1.3 GENERAL REQUIREMENTS

The following is a list of requirements to be followed by a developer or others who wish to design, finance, and construct potable water system facilities that will become a part of the HWU system. These requirements must be followed in order for the proposed potable water system facilities to be considered for acceptance and connection to the HWU system.

Where an industry or national standard (AWWA, ANSI, etc.) is referenced, the latest revision shall apply, unless noted otherwise.

The Great Lakes - Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers' "Recommended Standards for Water Works" (10-States Standards) shall control for any item of design or specification not covered by this Manual.

Design Criteria

The following is a list of minimum design criteria required for any water facility to be approved to connect to the HWU system. For all these requirements, deviation requires prior written approval.

- 1. Pipe size and material shall be as determined by HWU. PVC pipe C-900, C-905 or cement lined ductile iron pipe, Pressure Class 350, shall be a minimum and shall be manufactured and installed in accordance with the specifications contained herein. Higher-class pipe may be required. All water mains shall be a minimum of 8-inch diameter, unless otherwise approved in writing. Where a dead-end water main only serves one hydrant and is not likely to be extended in the future, the water main may be reduced to a 6-inch diameter. Where a water main dead ends at the end of a cul-de-sac and is deemed by HWU to not likely be extended in the future, the water main may be reduced to a 2-inch HDPE pipe around the head of the cul-de-sac, with a below-ground flush hydrant.
- 2. The pipeline shall be installed with holes for the bells cut at each joint and bedded with select material. Mechanical restraint retainer glands shall be used on all fittings.
- 3. Fire hydrants shall be installed not more than 600 feet apart. Fire hydrants shall be installed on all dead-end lines 6-inches or greater. In other situations, HWU may allow the installation of flush hydrants (minimum 2 ½ inch outlet with 3-inch D.I. barrel). Where an arterial street has four or more traffic lanes, hydrant spacing shall be 500 feet on each side of the street on an alternating basis (every 250 feet along the centerline dimension of the road, alternating sides).
- 4. Gate valves for lines smaller than 16" or butterfly valves for lines 16" and larger shall be spaced at a maximum of 600 feet. Gate or butterfly valves shall also be provided at all branch lines and at the tie-in to any existing line. At line tee connections, 3 valves shall be installed. A valve shall be installed at the end of every line followed by a full section of pipe and end cap. Hydrant valves shall be installed with a 6" tee installation and no other taps or services. The hydrant valve shall isolate the hydrant only. s.

- 5. Dead-end lines will not be allowed if HWU determines that connections should be made to loop the system.
- 6. The maximum working pressure shall not be more than two thirds of the pressure rating of the pipe.
- 7. Air release valves shall be located only where necessary as determined by HWU.
- 8. Casing pipes shall be sized to accommodate future growth as determined by HWU. The casing pipe shall be extended a minimum of five (5) feet past the ditch or toe-of-slope or as required by the owner of the right-of-way being crossed.
- 9. Water mains shall be laid at least 10 feet horizontally from any existing or proposed gravity sanitary or storm sewer, septic tank or subsoil treatment system. The distance shall be measured from the outside of each pipe wall. Water lines crossing sewer mains shall have a vertical distance of 18 inches between the outside of the water main and the outside of the sewer. If a water line is to be laid beneath a sewer main, the sewer main shall be constructed of ductile iron pipe or in a steel casing, with one full length of pipe centered on the water main. At all crossings, one full length of the water main pipe shall be located so both joints will be as far from the sewer as possible. Special structural support for the water and sewer pipes may be required.
- 10. Ductile iron pipe shall be required within 200-feet of oil or gasoline lines, underground storage tanks, petroleum storage tanks, or property known to be contaminated by petroleum products, and shall be constructed using pipe joint materials which are resistant to permeation of petroleum products.
- 11. Any over-excavation required for boring operations or any other reason shall be backfilled with #9M stone or other approved material up to and including bedding for pipe.
- 12. The results of water sample analyses from disinfection shall be distributed to Kentucky Division of Water and HWU.
- 13. The construction drawings shall include a profile of the water line.
- 14. Where facilities are being constructed to serve residential lots, a double meter box and hanger setting, placed on the property line between the two lots, shall be installed where possible. One-inch soft copper service line shall be installed for double meter settings and 3/4" soft copper service line shall be installed for single meter settings.
- 15. For ditch or waterway crossings 15 feet or greater in width (top of bank to top of bank), the following shall be provided as a minimum (each crossing shall be evaluated on a case by case basis):
 - a. The pipe shall be of special construction, having flexible, watertight joints, with restraint as required;
 - b. Valves shall be provided at both ends of water crossings so that the section can be isolated for testing or repair; the valves shall be easily accessible, and not subject to

flooding; and the valve closest to the supply source shall be supplied with a test point.

- 16. Water mains shall be designed and built so that they generally run adjacent to, but outside of road rights-of-way in dedicated utility easements. Easements for water lines shall be a minimum of 12 feet in width. Easements for water and sewer lines running parallel shall be of sufficient width to maintain a minimum of 10 feet of separation between the adjacent edges of the water and sewer lines The outer edge of the easement for single and parallel lines shall be a distance from the outside edge of the pipe(s) based on the formula (invert depth in feet/2) or 5 feet minimum.
- 17. Easements wider than those described herein may be required at HWU's discretion.
- 18. Water lines shall be designed so that an individual meter can be installed to serve each building, except for accessory structures.
- 19. Water lines installed at a slope greater than 20 percent (5:1) shall be approved on a case by case basis by HWU.

Other

- 1. <u>In no case</u> shall any existing valve be operated by other than HWU personnel.
- 2. Any new section of water line must be ready for use before disinfection.

MATERIALS CHECKLIST

DI PIPE	DI (DUCTILE IRON)
	Pressure Class 350; AWWA/ANSI C151/A21.51
	Cement Mortar Lined with Bituminous Seal Coat
	Clow, Griffen, US Pipe or approved equal
PVC PIPE	AWWA C900 and C905
	Pipe 4" thru 12" diameter 150psi Pressure Class; Dimension ratio DR 18
	Pipe larger than 12" diameter 165psi Pressure Class; Dimension ratio DR 25
	J-M Manufacturing Co. or approved equal
HDPE PIPE	ASTM D-3350
	Pipe small than 4" diameter 165psi Pressure Class; Dimension ratio DR 9
FITTING	DI (DUCTILE IRON)
	Class 350; Mechanical Joint
	AWWA/ANSI C153/A21.53
	Cement Mortar Lined with Bituminous Seal Coat
	Tyler, Clow, Griffen or approved equal
GATE VALVE	Resilient Seat
GATE VALVE	Rated Working Pressure – 200 psi
	Mechanical Joint; AWWA C509; NSF/ANSI 61-G
	Kennedy, Mueller or approved equal
AIR	ANSI/AWWA C512
RELEASE VALVE	Made from Non-Corrodible Materials
RELEASE VALVE	Stainless Steel Saddle, Corp Stop, and Globe Valve Required
	ARI Model S-014 or approved equal
TAPPING VALVE	Resilient Seat
TAPPING VALVE	
	AWWA C509; NSF/ANSI 61-G
	Rate Working Pressure – 200 psi
	Tapping Flange x Mechanical Joint
	AWWA C550 Fusion Bonded Epoxy Coating
TARRING CLEEVE	Kennedy, Mueller or approved equal
TAPPING SLEEVE	Stainless Steel Body
	SS Flanged
	Rated Working Pressure – 200 psi
	ASTM A126
	Kennedy, Ford or approved equal
CASING	Steel, Plain end, 35,000 psi yield point strength
	ASTM A252 Grade 2 or ASTM A139 Grade B
	Minimum Wall Thickness – Schedule 20; 0.375 for 24" and larger
VALVE BOVES	Un-Coated and Un-Wrapped
VALVE BOXES	Adjustable Cast Iron
	Covers Marked "Water"
	4 ½" Inside Diameter
	Screw Type
	Tyler/Union or approved equal
FIRE HYDRANTS	AWWA C502
	Kennedy Model K81D, AVK Model 2780-5" Storz, or approved equal
RETAINER GLANDS	Ductile Iron PVC
	Meg-a-lug (Ebaa Iron), Uniflange Wedge Action Retainer (Ford) or approved
	equal

1.4 GENERAL INFORMATION - PLAN AND PROFILE SHEETS

Title Sheet, General Notes, Legend, and Map Index

- 1. Name of development; name, address, and telephone number of developer in lower right-hand corner of plans.
- 2. Names of existing utilities, contact person, and telephone numbers.
- 3. Vicinity map (highlighting proposed extension).
- 4. Sheet index.
- 5. A legend that includes all items of work in the plan set.
- 6. General notes shall include the following as applicable:
 - a) The contractor is prohibited from excavating until existing underground utilities have been located through Kentucky 811. Utility locations are approximate. Phone numbers for known utilities in the area are shown on this sheet, however other utility companies may also have facilities in the project area. Contractor shall identify and contact all utilities, including those who do not subscribe to KY 811 (including Henderson Municipal Power and Light HMP&L).
 - b) Main line tie-ins and meter reconnections shall be coordinated with HWU.
 - c) Contractor shall perform required reconnection work on the customer's side of the meter under supervision of a licensed plumber. Obtaining plumbing permits shall be the responsibility of the contractor, and this work shall be coordinated with the property owner.
 - d) Contractor shall be responsible for maintenance of traffic in accordance with requirements of the Manual of Uniform Traffic Control Devices (MUTCD).
 - e) Driveways shall be bored without casing.
 - f) All meter locations registering over 85 psi shall have an individual pressure-reducing valve installed with tandem setter at the meter.
 - g) Contractor shall comply with all local, state, and federal regulations pertaining to existing asbestos cement pipe.
 - h) Water lines shall be pressure tested and disinfected in accordance with HWU specifications.

Content of Water Line Plan Sheets

- 1. Minimum 24" x 36" sheet size.
- 2. Title block
- 3. Name, address, and telephone number of developer
- 4. Name, address and telephone number of engineer
- 5. Professional engineer seal and signature
- 6. Sheet number

- 7. North arrow
- 8. Scale (minimum 1" = 100')
- 9. Date
- 10. Right of way
- 11. Show waterline easements
- 12. Property owners, PVA parcel number
- 13. Show all available information for existing and proposed utilities in project area, including:
 - a) Details of tie in to existing lines
 - b) Size of lines and class of pipe
 - c) Meter locations
 - d) Valves
 - e) Fire hydrants or flush hydrants
 - f) Length and size of steel casing pipe for road bores or open cut
 - g) Reference distances to waterline from centerline of road or other visible permanent topography

HWU001.DWG

- h) Detail information for all road, creek, and railroad crossings
- 14. Show match lines with station number reference

Fire Hydrant Assembly (profile view)

15. Cross-reference the plan sheets at road intersections

STANDARD DETAIL DRAWINGS

Standard details must be included in the drawings if any of the items listed below are used:

2.	Flush Hydrant Assembly (profile view)	HWU002.DWG
3.	Air Release Valve	HWU003.DWG
4.	Gate Valve and Box (in street)	HWU004.DWG
5.	Valve placement at tees (plan view)	HWU005.DWG
6.	Service tap	HWU006.DWG
7.	3/4" & 1" Single Meter Setting	HWU007.DWG
8.	3/4" Dual Meter Setting	HWU008.DWG
9.	Not use HWU009.DWG	
10.	Thrust blocking	HWU0010.DWG
11.	Water main: open cut Installation – Method A	HWU0011A.DWG
	Water Main: Open cut Installation – Method B	HWU0011B.DWG
	Water Main: Open cut Installation – Method C	HWU0011C.DWG
12.	Water main: ditch or Stream crossing	HWU0012.DWG
13.	Proposed water line under Proposed sewer line	HWU0013.DWG
14.	Cased water line crossing Under roadway	HWU0014.DWG
15.	Casing detail	HWU0015.DWG
16.	Joint Restraint Length Detail	HWU0016.DWG

POTABLE WATER SYSTEM SPECIFICATIONS

1.5 General

The work to be accomplished under these specifications is the furnishing of all labor, materials and equipment required for the construction of potable water mains and appurtenances as shown on the drawings and more fully described herein.

1.5.1 DEFINITIONS

Henderson Water Utility means the utility having jurisdiction and supplying water and/or sewer service and abbreviated herein as HWU.

Contractor means the party who has been retained by HWU or others to perform the construction work.

Engineer means the HWU General Manager, an Engineer in responsible charge working under contract to HWU or in the employ of HWU, or an Engineer in responsible charge working in the employ of a developer under an Infrastructure Development Agreement.

Owner means HWU or a developer working under an Infrastructure Development Agreement.

1.5.2 SAFETY

All work shall be carried out in accordance with all applicable rules and regulations of the Kentucky Labor Cabinet, Division of Occupational Safety and Health, and HWU Safety Policies.

1.5.3 PRODUCT DELIVERY, STORAGE AND HANDLING

Care shall be exercised in transporting and handling to avoid damage to pipe and fittings, and all appurtenances. Materials shall be stored in an enclosure or under protective coverings if required to prevent damage. Materials shall not be stored directly on the ground. The inside of pipes and fittings shall be kept free of dirt and debris.

Contractor shall inspect materials furnished by HWU at delivery. Contractor shall report to HWU immediately upon finding defects in any material supplied by HWU. Contractor shall furnish all materials and labor required for replacement of installed materials found to be defective or damaged after delivery.

HWU reserves the right to reject any materials that do not comply with these standards.

1.5.4 NOTIFICATION

The Contractor shall give the Owner or Owner's representative a minimum of 48 hours notice before starting construction. Where a public roadway must be closed, notify all safety agencies and the general public in accordance with local and state regulations. Where a private driveway

must be closed, provide the resident a minimum 48 hours advance notice. Maintain continuous access to non-residential private driveway crossings to the maximum extent possible.

1.5.5 INSPECTION

The Owner's Engineer shall make periodic observations during construction to provide final certification that the improvements were installed in conformance with HWU standards and the approved construction drawings. In addition to observation by the Engineer, a final inspection will be made prior to putting the facilities in service. Final inspection will be made prior to acceptance of any facilities and only after all construction is complete. The Contractor shall provide labor and materials as required to complete the punch list developed during final inspection. Access to the construction site and construction records shall be provided at all times to inspectors.

During construction, the Contractor shall notify the Owner upon installation of any fitting, valve, hydrant or other appurtenance, and shall not cover up such items until GPS coordinates are established for such items, either by Owner's personnel or by a Kentucky Registered Licensed Surveyor employed by the Contractor. Coordinates must be referenced to the Kentucky State Plane Coordinate System NAD 83. If items are covered before GPS coordinates are obtained, the Contractor may be required to excavate to allow coordinates to be obtained.

In lieu of GPS coordinates, the Contractor may choose to provide a complete set of "As-Built" plans including two copies of full-size (24" x 36") bound drawings for the entire completed facilities. Both plan and profile of the sewer lines and facilities shall be included on the as-built drawings. In addition, one copy of the final as-built drawings including, plan and profile, in digital *.DWG or *.DXF format shall be provided. These digital files must be readable and the coordinates of the file shall be referenced to the Kentucky State Plane Coordinate System NAD83.

1.5.6 MATERIALS OR EQUIPMENT TO BE FURNISHED ("OR-EQUAL" CLAUSES)

Where material or equipment is specified by a trade or brand name, it is not the intention of the Owner to discriminate against an equal product of another manufacturer, but rather to set a definite standard of quality or performance, and to establish an equal basis for the evaluation of products. Where the words "equivalent" or "equal to" are used, they shall be understood to mean that the article referred to shall be the equivalent of, or equal to some other things, in the opinion or judgment of the Engineer. The Engineer will consider other products on the basis of materials of construction, weight, function, size (it must fit the space provided), service history and electrical and mechanical characteristics.

Where these specifications state one or more model numbers and manufacturers followed by the words "or approved equal" the meaning is that the product(s) specified is acceptable and that while there may be other products that are acceptable the only way to be assured is to submit the desired substitution and receive an affirmative answer. The Engineer will consider the factors previously described in making the determination.

Unless otherwise specified, all materials shall be the best of their respective kinds and shall be in all cases fully equal to approved samples. The Engineer shall have the right to require the use of

such specifically designated material, article, or process. The Engineer, where practical, may require submission of actual samples of materials or products. If for lack of data only one name is shown, it shall be deemed as only establishing a standard of quality and/or performance.

1.5.7 SHOP DRAWINGS AND SUBMITTALS

Whenever materials are to be incorporated into the work, and are subsequently to be accepted by HWU, copies of information describing and depicting the details of all equipment, controls, materials and/or services to be provided, hereinafter referred to as "shop drawings", shall be submitted and approved as required in the applicable procurement documents, agreement or bid specifications.

Shop drawings for all equipment and materials must show the following information at a minimum:

- a) Manufacturer's cut sheets or other detailed product information.
- b) Detailed dimensional drawings of each valve and fitting.
- c) Detailed description of materials of construction and applicable standards.

1.5.8 PERMITS, EASEMENTS, AND RIGHTS-OF-WAY

Unless stated otherwise, the Owner shall make application for, obtain and pay fees for all licenses, permits, easements, and rights-of-way, including railroad permits (where applicable). The Owner shall be required to comply with all State and municipal ordinances, laws, and/or codes, which may apply to same.

1.5.9 CONTRACTOR'S CERTIFICATION

The Contractor shall certify, upon completion of project construction, that all work was completed in accordance with drawings and specification bearing Owner's approval. The certification must be signed, and dated by the Contractor.

2. MATERIALS

2.1 PIPE

2.1.1 PVC PIPE

PVC pipe 4" thru 12" diameter for potable water main shall conform to AWWA C900, 150 psi pressure class, DR 18.

Pipe larger than 12" diameter shall conform to AWWA C905, 165 psi pressure class, DR 25. Joints shall be of the push-on type as specified.

PVC pipe with rubber gaskets shall conform to dimensions and tolerances: ASTM D-2241, ASTM D-2122, and NSF International F-14

Materials: ASTM D-1784 and NSF International for potable water use. Pipe and couplings shall be made of virgin PVC compounds with a cell classification of 12454-A or 12454-B. The hydrostatic design basis rating shall be 4,000 psi for water at 73.4 degrees F (23 degrees C).

Joints and seals: ASTM D-3139 and ASTM F-477.

Lubricants: Compatible with PVC materials and approved for use in potable water line pipe.

Each piece of pipe shall bear the manufacturer's name or trademark, and NSF International (NSF) mark of approval.

2.1.2 DUCTILE IRON PIPE

Ductile iron pipe shall be designed and manufactured in accordance with the latest revision of ANSI/AWWA C150/A21.50 for a minimum 150 psi (or project requirements, whichever is greater) rated working pressure plus a 100 psi surge allowance (if anticipated surge pressures are other than 100 psi, the actual anticipated pressure should be used); and a 2 to 1 factor of safety on the sum of working pressure plus surge pressure.

Ductile iron pipe shall be manufactured in the U.S.A. in accordance with the latest revision of ANSI/AWWA C151/A21.51. Each pipe shall be subjected to a hydrostatic pressure test of at least 500 psi at the point of manufacture.

Ductile iron pipe shall have standard asphaltic coating on the exterior. Pipe shall also have a cement-mortar lining on the interior in accordance with ANSI/AWWA C104/A21.4.

The class or nominal thickness, net weight without lining, and casting period shall be clearly marked on each length of pipe. The manufacturer's mark, country where cast, year in which the pipe was produced, and the letters "DI" or "DUCTILE" shall be cast or stamped on the pipe.

Ductile iron pipe shall be furnished with Tyton® or Fastite® Push-on Type Joints, or approved equal. Joints shall be in accordance with ANSI/AWWA C111/A21.11, and be furnished complete with all necessary accessories.

Fittings shall be manufactured in the U.S.A. and be ductile iron. Fittings shall conform to ANSI/AWWA C153/A21.53. Fittings shall have a standard asphaltic coating on the exterior.

Fittings shall also have a cement-mortar lining on the interior in accordance with ANSI/AWWA C104/A21.4.

Fittings and accessories shall be furnished with Mechanical Type Joints in accordance with ANSI/AWWA C111/A21.11.

All pipe, fittings and accessories shall be installed and tested in accordance with ANSI/AWWA C600.

Polyethylene protection wrapping will be required for all ductile iron installations. Polyethylene shall be either 4 mil HDCL (high density cross laminated) or 8 mil LLD (linear low density) installed in accordance with AWWA C105.

Ductile iron pipe shall be manufactured by Clow Water Systems, US Pipe, or approved equal.

2.1.3 HIGH DENSITY POLYETHYLENE PIPE (HDPE)

High Density Polyethylene Pipe (HDPE) shall be 160 psi working pressure, dimensional ratio DR9, for 4" and smaller, and shall conform to ASTM D-3350.

Molded fittings shall be made from material meeting the same requirements as the pipe, shall be manufactured in accordance with ASTM D3261 and shall be so marked. Fittings shall meet the appropriate AWWA standard (C901 or C906) and shall be Pressure Class 160.

Mechanical connections, when used, shall be specifically designed for use with HDPE pipe.

Pipe and molded fittings shall be manufactured by JM Eagle, or approved equal.

2.2 FITTINGS & GASKETS

Fittings for water lines shall be ductile iron fittings in accordance with ANSI/AWWA C153/A21.53) and shall conform to the details and dimensions shown therein. Fittings shall have mechanical joints meeting the requirements of ANSI/AWWA C111/A21.11). Fittings shall have interior cement-mortar lining as specified for the pipe.

Mechanical joints shall be bolted and of the stuffing box type and shall consist of a bell, with exterior flange and interior recess for the sealing gasket, a pipe or fitting plain end, a sealing gasket, a follower gland, tee-head bolts and hexagon nuts.

All mechanical joint connections shall be made using restraining joint glands.

Use Meg-A-Lug type fittings specific to the pipe material. Other mechanical restraining system may be used if approved in writing by HWU.

All restraining joint glands to be installed according to manufacturer specifications concerning torque.

Ductile iron fittings shall be manufactured by Tyler Union or approved equal.

Field Lok gasket shall be a boltless, integral restraining system and shall have a pressure rating based on the performance requirements of ANSI/AWWA C111/A21.11, and shall be constructed

with stainless steel locking segments vulcanized into the gasket to grip the pipe to prevent joint separation.

Field Lok gasket shall be manufactured by US Pipe (Field Lok 350®).

Ductile iron pipe restraints three (3) through sixteen (16) inch shall have a working pressure rating of 350 psi. Ductile iron pipe restraints eighteen (18) inch and up shall have a working pressure rating of 250 psi. Ductile iron pipe restraints shall be manufactured in the USA, and shall be a wedge action restraining type with breakaway bolt design to ensure proper torque for installation. Ductile iron pipe restraints shall be for mechanical joint type, and shall have T-bolts, nuts, and gaskets that conform to AWWA C111, and a black e-coating to prevent corrosion. Ductile iron pipe restraints shall be Ebba Iron Sales, Inc. (1100 Megalug Series) or The FORD Meterbox Co., Inc. (UFR1400 Series) or approved equal.

2.3 VALVES

All valves shall conform to NSF/ANSI 61-G. Valves shall be manufactured by Kennedy Valve, American AVK Co., Mueller Co., M&H Valve Co., American, US Pipe, Clow Valve Co., or approved equal.

2.3.1 GATE VALVES

All gate valves shall conform to the latest revision of "AWWA C-509 Standard for Gate Valves - 3 inch through 48 inch - For Water and Other Liquid".

All gate valves shall be of the resilient seat type, ductile iron body, non-rising stem, fully bronze mounted and suitable for water working pressures of 150 psi, unless otherwise indicated in the drawings. Valves shall be of standard manufacturer and of the highest quality both as to materials and workmanship.

All gate valves shall be furnished with mechanical joint end connections, unless otherwise shown on the Drawings or specified hereinafter.

All gate valves shall have the name or monogram of the manufacturer, the year the valve casting was made, the size of the valve, and the working water pressure cast on the body of the valve.

Each gate valve installed in the ground shall be installed in a vertical position with a valve box. Gate valves set with valve boxes shall be provided with a 2-inch square operating nut and shall be opened by turning to the left (counterclockwise).

Gate valves shall be sized and installed at locations shown on the drawings.

2.3.2 BUTTERFLY VALVES

All butterfly valves shall be of the tight closing, with rubber seats which are recess mounted and securely fastened to the valve body or to the valve disc. Valves shall be rated for 150 psi pressure. Valve discs shall rotate 90 degrees from the full open position to the tight shut position. Valves

shall meet the full structural requirements of the application classes of AWWA C504, latest revision.

Valve bodies shall be constructed of ductile iron and shall have integrally cast mechanical joint ends. Two (2) trunnions for shaft bearings shall be integral with each valve body. Body thickness shall be in accordance with AWWA C504. Valves shafts shall be constructed of stainless steel or of other approved construction.

The disc may be constructed of any material described in AWWA C504, Section 3.4. All disc seating edges shall be smooth and polished. Valve shafts shall be a one-piece unit extending full size through the valve disc and bearings. Valve seats shall be a natural rubber to a synthetic compound and shall be mounted in body or on the disc. Disc mounted seats shall be mechanically retained; body mounted seats shall be bonded to the valve body. Bonded-in seats must be simultaneously molded in, vulcanized and bonded to the body and the seat bond must withstand 75 pounds pull under test procedure ASTM D429, Method B. Valves shall be fitted with sleeve type bearings. Bearing load shall not exceed 2,500 psi. Valves shall be as manufactured by Henry Pratt Company; Dresser; or American-Darling.

The operators shall be the traveling nut type, AWWA C504, Class 150B. All operators shall be fully gasketed and grease packed and designed to withstand submersion in water to 10 psi. The number of turns to move from fully open to fully closed shall closely resemble conventional distribution valve practice to minimize water hammer. The operator shall be equipped for buried service.

All surfaces of the valve shall be clean, dry, and free from grease before painting. The valve interior surfaces except seating surfaces shall be evenly coated with black asphalt varnish in accordance with Federal Specifications TT-C-494 B and AWWA C504.

Hydrostatic and leakage tests shall be conducted in accordance with AWWA C504, Section 5.

Butterfly valves installed in the ground shall have the operator nut in a vertical position for use in the valve box.

Butterfly valves shall be sized and installed at locations shown on the Drawings.

2.3.3 AIR RELEASE VALVES

Air release valves shall be installed at the high points in the lines as shown on the Drawings. Air valve stems shall be connected to the main by a corporation stop. Valves shall be suitable for average working water pressure of 300 psi, have a 2-inch large orifice and a 3/32-inch small orifice. Valves shall be equipped with cast iron body and cover, stainless steel float, Buna-N seat and bronze linkage. Bronze parts that meet potable water shall conform to NSF/ANSI 61-G. Air release valves shall be ARI Model S-014 or approved equal.

Air release valves shall be connected to the main by a corporation stop with inside I.P.S. threaded outlet. The inlet pipe to the valve shall be 304 stainless steel pipe with I.P.S. male threaded ends.

The air valve shall be contained in a straight section of 36" RCP with standard manhole frame and lid as per the standard drawings, and shall be set on a crushed stone or gravel base.

2.3.4 TAPPING SLEEVES AND VALVES

Tapping sleeves shall be suitable for working pressures of 150 psi.

Tapping sleeves for connections to existing water lines shall be two-piece fabricated saddles of all stainless steel construction with stainless steel flanges. Saddle bolts are to be stainless steel.

Tapping valves shall be of the mechanical joint type suitable for working pressures of 150 psi and shall be Mueller No. H-667, American Valve and Hydrant No. 565, M&H No. 751, Kennedy Figure 8950SS or approved equal.

Line tapping materials shall be supplied and installation performed by HWU personnel.

2.3.5 VALVE BOXES

Valve boxes shall be of 5-1/4 inch, standard cast iron, two or three piece, screw type valve box with drop cover marked "WATER". Valve boxes and covers shall be as manufactured by Tyler Corporation, Opelika Foundry, Bingham & Taylor, or approved equal.

2.4 FIRE HYDRANTS AND FLUSH HYDRANTS

2.4.1 FIRE HYDRANTS

Fire hydrants shall conform in all respects to the requirements of AWWA C502, latest revision. The hydrant barrel shall have a safety breakage feature above the ground line. All hydrants shall have 6-inch mechanical joint shoe connection; two 2-1/2-inch hose discharge nozzles and one 4-1/2-inch pumper nozzle. The nozzle connection threads shall be National Standard Hose Coupling Thread (N.S.T.). The pumper nozzle shall be furnished with a 5" quick connect nozzle, Storz or approved equal. The main valve shall have 5-1/4-inch full opening and be of the compression type, opening against water pressure so that the main valve remains closed should the barrel be broken off. Each nozzle is to be protected by nozzle caps. The caps shall be furnished with a 1-1/2-inch open-left pentagonal opening nut, gaskets and attachment chains.

Hydrants shall be furnished for a minimum 3'-6" bury depth. The Contractor is responsible to provide adequate hydrant barrel length for proper installation in accordance with the standard drawings and the manufacturer's recommendations.

The hydrants shall be fully bronze mounted. The main valves shall have a threaded bronze seat ring assembly of such design that is easily removable by unscrewing from a threaded bronze drain ring. Drainage waterways shall be completely bronze to prevent rust and corrosion. Bronze parts that meet potable water shall conform to NSF/ANSI 61-G.

The operating stem shall be equipped with anti-friction thrust bearing to reduce operating torque and assure easy opening. A stop shall be provided to limit stem travel. Stem threads shall be enclosed in a permanently sealed lubricant reservoir protected from weather and the waterway with O-ring seals.

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Fire hydrants are to be painted red or yellow on the upper barrel and bonnet.

Hydrants shall be Kennedy K81D, AVK Model 2780-5" Storz, or approved equal.

Quick-connect nozzles shall be "Storz" by Kochek Co., Inc., or approved equal, and shall have a 5" metal face, a 4 1/2" NH female face for connection to the hydrant, (3) set screws, hi-visibility reflective tape, low profile hydrant nut cap, and 3/32-inch stainless steel aircraft cable retainer. Color shall be dark grey.

2.4.2 FLUSH HYDRANTS

Flush Hydrants shall be Kupferle Eclipse 2 Post Hydrant (in pedestrian or vehicular traffic areas, M & H Flush Type Style 333 furnished with cast iron box and cover) or approved equal.

Flush hydrants shall be installed with a reducer, valve, and with the top flush with the ground or sidewalk. They shall not be installed on a tap off the water main. A thrust block is required for flush hydrants the same as for a fire hydrant. The flush hydrant shall be located on the easement with good access for use.

Bronze parts that meet potable water shall conform to NSF/ANSI 61-G.

2.5 CASING PIPE FOR BORE OR DITCH CROSSING

Casing pipe for water lines installed by road boring or in ditch crossings where required on the drawings or bid documents shall be steel, plain end, uncoated and unwrapped, have a minimum yield point strength of 35,000 psi and conform to ASTM A252 Grade 2 or ASTM A139 Grade B without hydrostatic tests. The steel pipe shall have welded joints and be in at least 18-foot lengths. Pipe shall be straight along the centerline axis within 1/50 of the outside diameter. Pipe shall also be free from dents or humps due to damage or variations in wall thickness.

For street and ditch crossings, casing pipe shall be a minimum of Schedule 20, with wall thickness of 0.375 for 24 inch and larger casings. For railroad crossings, casings shall have a minimum wall thickness as specified by the railroad company. For State or Federal highway crossings, Kentucky Transportation Cabinet standards will apply.

All encasement pipe and one pipe length outside the casing on both ends shall be restrained.

Pipes in casings shall be supported with stainless steel liner skids, as manufactured by Cascade Waterworks Manufacturing, CSS series, or approved equal. A minimum of two spacers shall be provided with each length of pipe. For PVC pipe, spacers shall be provided at six foot (6') intervals. For DI pipe, spacers shall be provided at ten foot (10') intervals.

Provide casing end seals model "AM", as manufactured by Advance Products and Systems, Inc., (www.apsonline.com), or approved equal.

2.6 WATER SERVICE LINE & METER ACCESSORIES

2.6.1 PRODUCTS

All ¾" and 1" service pipe shall be type K soft copper. All brass, copper and bronze fittings and accessories shall comply with NFS/ANSI 61 and NFS/ANSI 372 ("lead free" rules). Service pipe greater than 1" shall be PE Pipe, SDR 11.

2.6.2 METER SETTER KIT

¾ dual setter kit shall be CITCO #DH1434-2-COMP or ¾ WWSI Fab Meter Box or approved equal.

1" dual setter kit shall be CITCO CMU 1.0 or 1" WWSI Fab Meter Box or approved equal.

1 ½" dual setter kit shall be CITCO CMU 1.5 or 1 ½" WWSI Fab Meter Box or equal.

2" dual setter kit shall be CITCO CMU 2.0 or 2" WWSI Fab Meter Box or approved equal.

2.6.3 METER BOX TOPS AND LIDS

Dual meter box top and lid shall be Ford Model A53H-T or Vestal RMC-21L with small nut non-recessed CI meter box locking ring and cover 32-094 or approved equal.

Single meter box top and lid shall be Ford Model A52H-TT or Vestal RMC-18L meter box cover, 32-023 or approved equal.

Corporation stop shall be Ford Model F-600-3, F-600-4, FB400-6, FB400-7 or approved equal.

All soft copper connections shall be flare type connections.

Service saddles shall be Ford Model FS303 or approved equal.

Service saddles are required for PVC mains.

3. INSTALLATION

3.1 TRENCH EXCAVATION

Trenching shall be accomplished as described hereinafter. All excavation shall be "unclassified" and no additional payment will be made for rock excavation unless a separate bid item is provided for rock excavation. Rock is defined herein as hardpan or bedrock of such consistency as to not be breakable with standard excavating equipment, and excludes any rubble or boulders.

Unless otherwise directed by the Engineer, trenches in which pipes are to be laid shall be excavated in open cut to the depths shown on the plans. Excavation in earth shall undercut the pipe to a depth below the required invert elevation that will permit laying the pipe in a bed of granular material to provide continuous support for the bottom quadrant of the pipe. The bedding shall be as set out in hereinafter.

Trenches shall be of sufficient width to provide free working space on each side of the pipe and to permit backfilling around the pipe, but unless specifically authorized by the Engineer, trenches shall in no case be excavated or permitted to become wider than 2 feet 6 inches plus the nominal diameter of the pipe at the level of or below the top of the pipe. If the trench does become wider than 2 feet 6 inches at the level of or below the top of the pipe, special precautions may be necessary, such as providing compacted, granular fill up to top of the pipe or providing the pipe with additional crushing strength as determined by the Engineer after taking into account the actual trench loads that may result and the strength of the pipe being used. The Contractor shall bear the cost of such special precautions as are necessary.

Prior to excavating the trench, Contractor shall pothole far enough ahead to reveal obstructions that may necessitate changing the line or grade of the pipeline, in order to avoid delays or the addition of avoidable fittings. Before laying the pipe, the trench shall be opened far enough ahead to reveal obstructions that may necessitate changing the line or grade of the pipeline.

Unless specifically directed otherwise by the Engineer, not more than 100 feet of trench shall be opened ahead of pipe laying work of any one crew, and not more than 100 feet of open ditch shall be left behind the pipe laying work of any one crew. Watchman or barricades, lanterns and other such signs and signals as may be necessary to warn the public of the dangers in connection with open trenches, excavation and other obstructions, shall be provided by and at the expense of the Contractor. Conformance to all state highway requirements shall be the responsibility of the Contractor when encroachment on state right-of-way is necessary.

When directed by the Engineer, only one-half of street crossings and road crossing shall be excavated before placing temporary bridges over the side excavated for the convenience of the traveling public. All backfilled ditches shall be maintained in such a manner that they will offer no hazard to the passage of traffic. The convenience of the traveling public and property owners abutting shall be taken into consideration. All public or private drives shall be taken into consideration and shall be promptly backfilled or bridged at the direction of the Engineer. Disposal of excavated materials shall cause as little interference with the work as possible, and in every case the disposition of materials shall be satisfactory to the Engineer. Trenches in which pipes are to be

laid shall be excavated in open cut to the depths shown on the approved plans, cut sheets or as specified by the Engineer.

Where conditions exist that may be conductive to slides or cave-ins, proper and adequate sheeting, shoring and bracing shall be installed to provide safe working conditions and to prevent damage to work. Trenches shall be kept free of water during the laying of the pipe and until the pipeline has been backfilled. All excavation shall be in accordance with OSHA and/or KOSHA regulations. Where a trench box is used, the excavation shall be made such that the box rests on undisturbed soil fully above the top of the installed pipe to a maximum of two (2) feet or the maximum allowed by other regulation, whichever is less; to avoid disturbing the pipe bedding when the box is pulled forward. Where sheeting or shoring is used, it shall be fully removed with the completion of backfilling unless otherwise approved in writing by HWU.

Water line trenches shall be excavated to the depths shown on the plans or as directed by the Engineer. If depths are not shown on the plans, all water lines shall have 3'-6" to 4'-0" cover unless otherwise approved by the Engineer.

Dewatering of trenches shall be considered a part of trenching, at no extra cost to the Owner. Dewatering of trenches shall include ground water and storm or sanitary sewage. Suitable pumping and other dewatering equipment are to be provided by the Contractor, to insure the installation of the pipeline structure in a dewatered trench and under the proper conditions. Dewatering shall include all practical means available for prevention of surface runoff into trenches and scouring against newly laid pipe.

Wherever pipelines are in, or cross, driveways and streets, the Contractor shall be responsible for any trench settlement which occurs within these rights-of-way within one (1) year from the time of final acceptance of the work. If paving shall require replacement because of trench settlement within this time, it shall be removed and/or replaced by the Contractor at no extra cost to the Owner. Repair of settlement damage shall meet the approval of the Engineer, and the agency having jurisdiction over the roadway.

3.2 LAYING OF PIPE

3.2.1 Laying Requirements

Pressure pipe shall be installed in accordance with AWWA C600, latest revision, and laid to lines, cover or grades shown on the drawings. Water lines installed on a slope greater than 20 percent shall be approved on a case by case basis by HWU.

Each segment of pipe must be swabbed out before lowering into trench. All pipe shall be visually inspected for cleanliness and proper jointing.

All pipe shall be laid with: proper alignment; evenness of width and depth of joints; perfection in jointing; and care of the pipe in handling. Joint deflections shall not exceed one-half of the manufacturer's recommended maximum allowable.

Precautions must be taken to prevent flotation of the pipe should water enter the trench prior to putting the pipeline into operation.

In wet, yielding or mucky locations where pipe is in danger of sinking below grade or floating out of grade or alignment, or where the backfill materials are of such a fluid nature that such movements of the pipe might take place during the placing of the backfill, the pipe must be weighted or secured permanently in place by such means as will prove effective. If crushed rock fill beneath the pipe is necessary for stability, it will be paid for at the unit price bid per ton of such material in place except in cases where instability is caused by neglect of the Contractor.

Whenever pipe laying is stopped, the end of the pipe shall be securely plugged with a watertight plug.

Elbows, plugs, dead end valves, and tees shall be firmly blocked, as shown on the Drawings, to prevent internal pressure from springing the pipe from the intended alignment, with permanent materials solidly placed without covering pipe joints.

No pipe shall be laid resting on solid rock, blocking or other unyielding objects. Pipe shall not be belled prior to being lowered into the trench except as otherwise stated herein or pre-approved by HWU.

When locating near sewer lines, the horizontal separation between water and sewer lines should be at least 10 feet measured to the pipe wall exterior. Should conditions prevent a horizontal separation of 10 feet, HWU may allow a deviation on a case by case basis. Such deviation may be allowed if the sewer is laid in a separate trench or if it is laid in the same trench with the water main located at one side on a bench of undisturbed earth. In either case, the elevation of the crown of the sewer must be at least 18 inches below the invert of the water main.

Water mains crossing above sewer lines shall be waterworks grade ductile iron pipe. The crossing shall be at the midpoint of the section of sewer pipe. The ductile iron water pipe shall be laid with a 20-foot section of pipe centered at the sewer line to insure that joints are as far as possible from the crossing.

Water mains crossing sewers shall be laid to provide a minimum vertical distance of 18 inches between the outside of the water main and the outside of the sewer. Should conditions prevent the water main from being buried to meet the above requirements and maintain minimum cover, HWU may allow a deviation on a case by case basis, if supported by data from the Engineer. Such deviation may be allowed if the sanitary sewer line is constructed with ductile iron pipe with protective internal coating of "Protecto-401" or equivalent epoxy coating (RCP or cement lined DIP for storm sewer) for a distance of 10 feet on each side of the water line and one full length of water main is centered over the sewer so that both joints will be as far from the sewer as possible. As an alternative for existing sewers, the sewer line may be encased in a steel casing pipe with end seals for 10 feet on each side of the water line.

3.2.2 PIPE BEDDING

All water main pipe shall be bedded with select material. Where suitable soil conditions are encountered, the trench bottom may be shaped to cradle the bottom 60 degrees of the pipe.

All water main pipe shall be supported on a smoothly graded trench bottom. Holes in the trench bottom or bedding for pipe bells must be provided at each joint and should be no larger than necessary for proper joint assembly and assurance that pipe barrel will lie flat on trench bottom. The trench must supply true and even support for pipe.

In no case shall the pipe be supported directly on solid rock. When rock is encountered in the trench bottom, bedding shall consist of fine gravel or size #9 crushed stone only.

3.2.3 SPECIAL BACKFILL

Crushed stone for "Special Backfill" where required as set out in these specifications, shall be Kentucky Transportation Cabinet crushed stone, size #9. In locations that require "SPECIAL BACKFILL" the entire trench shall be filled with No. 9 crushed stone to a point 4" below the final subgrade. In most cases this will occur under road crossings. The top 6" of the trench shall be filled with DGA followed by the appropriate layer of surface material (asphalt, concrete, gravel, etc.) to bring the trench to final grade.

All bore pits and any over digging related to such will be stabilized with #3 stone and backfilled with #9 stone to sub-grade.

3.2.4 INSTALLATION AND JOINTING

Jointing of push-on type Ductile Iron Pipe with rubber gasket couplings shall be accomplished in accordance with the manufacturer's specifications.

Pipe shall not be laid in water or upon frozen sub grade at any time or condition when, in the opinion of the Engineer, conditions are unsuitable.

HDPE shall be installed either by Open Trench construction or Directional Bore method. HDPE pipe shall be joined by thermal butt fusion. HDPE joints shall be made in strict compliance with the manufacturer's recommendations.

Mechanical connections of HDPE pipe to valves, meters, etc. shall be through flanged connections which shall consist of the following: A polyethylene flange shall be thermally butt-fused to the stub end of the pipe; a 316 stainless steel back up ring shall mate with a 316 stainless steel flange; 316 stainless steel bolts and nuts shall be used.

3.2.5 BACKFILLING

Backfilling of pipeline trenches shall be accomplished in accordance with the details set forth hereinafter.

In all cases walking or working on the completed pipelines, except as may be necessary in tamping or backfilling, will not be permitted until the trench has been backfilled to a point one foot (1') above the top of the pipe. The filling of the trench and compaction of the backfill shall be carried on simultaneously on both sides of the pipe in such a manner that the completed pipeline will not be disturbed and injurious side pressures do not occur. The methods of backfilling shall be as follows:

Method "A" - Backfilling in Open Terrain:

The lower portion of the trench, from the pipe bedding to a point six (6) inches above the top outside surface of the pipe, shall be backfilled with previously excavated soil material which is free from rock and/or acceptable to the Engineer. This soil material shall be placed in a manner approved by the Engineer and shall be lightly compacted by walking in or hand tamping to avoid displacement of the pipe. Crushed stone or fine gravel may be used as backfill in lieu of the compacted soil materials. Tamping or compaction, or materials used in lieu of same, is not a separate pay item.

The upper portion of the trench above the compacted portion shall be backfilled with material which is free from large rock. Incorporation of rock with any individual piece having a volume exceeding eight (8) cubic inches is prohibited. Backfilling this portion of the trench may be accomplished by any means approved by the Engineer. The trench backfill shall be heaped over the top of the trench or leveled as directed by the Engineer. Material for backfilling the upper portion of the trench is not a separate pay item.

Method "B" - Backfilling Under Sidewalks and Unpaved Driveways:

The trench from the bottom of the trench to grade shall be backfilled with No. 9 crushed stone.

Method "C" - Backfilling Under Streets, Roads and Paved Driveways:

The lower portion of the trench to a point six inches (6") below the bottom of the pavement or concrete sub-slab shall be backfilled with No. 9 crushed stone or fine gravel. Backfill for the lower portion of the trench is not a separate pay item.

The upper portion of the trench, from the top of the #9 stone to grade, shall be backfilled with a base course of dense graded aggregate. At such time that pavement replacement is accomplished, the excess base course shall be removed as required. Material for backfilling the upper portion of the trench is not a separate pay item.

Before final acceptance, the Contractor will be required to level off all trenches or to bring the trench up to grade. The Contractor shall, at his expense, also remove and legally dispose of all excess earth or other materials from roadways, right-of-ways and/or private property. Hazardous materials shall be handled and disposed of in accordance with all local, State and Federal requirements.

In the event that pavement is not placed immediately following trench backfilling in streets and highways, the Contractor shall be responsible for maintaining the trench surface in a smooth and level condition at proper pavement grade at all times. The Contractor shall be liable for any damage to persons or property resulting from the Contractor's failure to maintain the trench surface.

Flowable fill shall be allowed as an alternate method for backfilling of utility cuts and trenches, with approval of the Engineer.

3.2.6 CONCRETE CRADLE, ANCHORS, THRUST BLOCKS OR ENCASEMENTS

Concrete anchors and thrust blocking of water mains and fittings shall be placed where shown on the Drawings, required by the Specifications, or as directed by the Engineer. Concrete shall be 2,500 psi and shall be mixed sufficiently wet to permit it to flow under the pipe to form a continuous bed. In tamping concrete, care shall be taken not to disturb the grade or line of the pipe or injure the joints.

All valves shall be anchored in accordance with the details on the project drawings.

No fitting shall be totally encased in concrete so as to prohibit future excavation or repairs.

Concrete cradles and/or encasement shall not be allowed except with express written permission by HWU. If concrete trench stabilization is necessary, excavate the trench and place the concrete to allow a minimum of four (4) inches of granular material between the concrete and the installed pipeline or structure. If concrete protection is required over the top of the pipeline, place a minimum of four (4) inches of granular material between the pipeline and the concrete. If flowable fill concrete is used to backfill the trench, bed the pipeline as indicated on the drawings to a point at least 6 inches above the top of the pipe prior to placement of the flowable fill.

3.2.7 DITCH OR WATERWAY CROSSINGS

For ditch or waterway crossings 15 feet or greater in width, unless the design plans indicate otherwise, the pipe shall be of special construction, having flexible watertight joints, and valves shall be provided at both ends of the crossing so that the section can be isolated for testing or repair. The valves shall be easily accessible, and not subject to flooding. The valve closest to the supply source shall be supplied with a test point.

For ditch or waterway crossings less than 15 feet in width, restrained joint gaskets shall be used on the ductile iron pipe.

The Contractor shall include allowance in his bid to divert water during creek crossing installation, dewatering and/or other steps necessary to accomplish the work. No extras will be allowed for this work unless clearly outside the scope of what normally should be expected and the Contractor immediately notifies the Owner if such a situation is encountered.

3.2.8 FIRE HYDRANT INSTALLATION

Hydrants shall be located as shown on the plans or as directed by the Engineer. The location shall provide complete accessibility and minimize the possibility of damage from vehicles or injury to pedestrians. When placed behind the curb or sidewalk, the hydrant barrel shall be set so that no portion of the pumper or hose nozzle cap will be less than 4'-0" from the gutter face of the curb, the edge of sidewalk, or a driveway. All hydrants shall stand plumb with the pumper nozzle facing the curb. Hydrants shall be set to the established grade, with nozzles at 18 inches above finished grade as shown on the drawings or as directed by the Engineer. Unless otherwise shown, each hydrant on the drawings shall be connected to the main with a 6-inch branch connection controlled by an independent 6-inch gate valve. Fine grade river gravel to be placed 6" from surface to 6" below waterline in a 2'-0" radius around hydrant barrel, for dissipation of weep hole

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drainage. No drainage sump shall be connected to a sanitary sewer. No hydrant shall be set over any other utility.

All hydrants shall be provided with a thrust block, minimum of two (2), 4" x 8" x 16" precast concrete blocks, set against undisturbed earth. The backing shall be placed between undisturbed ground and the fitting to be anchored. The backing shall be so placed that the pipe and fitting joints will be accessible for repair. If shown on the drawings or directed by the Engineer any movement shall be prevented by attaching suitable metal rods, clamps, or restrained fittings.

3.2.9 FITTING INSTALLATION

M.J. Fittings shall be installed with a restraining gland (Meg-a-Lug by Ebaa Iron, Uni-Flange Series 1400 by Ford Meter Box, or approved equal) or other mechanical restraining system approved in writing by HWU and torqued at the specified foot-pounds of the manufacturer. Additionally, joining restraint is required along the length of pipe as specified in the table below for the various type and size of fitting.

<u>Ductile Iron Pipe - Joint Restraint Length (ft.)</u>

		Horizo	ntal Bend		Vert	tical Bend	- Upper	Ver	tical Bend	- Lower		Tee		Red	ucer	Dead End
Pipe Size	90°	45°	22.5°	11.25°	45°	22.5°	11.25°	45°	22.5°	11.25°	Same Size	1 Size	2 Sizes	1 Size	2 Sizes	
6"	22	9	5	3	14	7	4	6	3	2	4					32
8"	28	12	6	3	18	9	5	7	4	2	14	1		18		42
10"	33	14	7	4	21	10	5	9	4	2	22	6	1	17	31	51
12"	39	16	8	4	25	12	6	10	5	3	31	16	1	18	32	60
18"	55	23	11	6	35	17	9	15	7	4	55	22	1	72	90	84

		Horizo	ntal Bend		Ver	tical Bend	- Upper	Ver	tical Bend	- Lower	Tee			Reducer		Dead End
Pipe Size	90°	45°	22.5°	11.25°	45°	22.5°	11.25°	45°	22.5°	11.25°	Same Size	1 Size	2 Sizes	1 Size	2 Sizes	
6"	28	12	6	3	21	10	5	7	4	2	6					50
8"	36	15	8	4	28	14	7	9	5	3	22	1		28		66
10"	43	18	9	5	33	16	8	11	6	3	34	10	1	27	49	79
12"	51	21	11	5	39	19	10	13	7	4	48	25	1	28	50	93
18"	71	30	15	7	55	27	14	19	9	5	86	22	1	72	90	133

<u>Parameters</u>

Soil Type: MH (silt/clay with granular backfill)

Safety Factor: 1.5 to 1

Trench Type: 3

Depth of Bury: 3.5 ft.

Test Pressure: 150 psi

Assumptions

- 1.) For Vertical Bend, the Low Side Depth is 6 ft.
- 2.) For Tee, Length Along Run is 18 inches.

All rubber gaskets in M.J. fittings shall be soaped as per manufacturer recommendations.

Mechanical joints shall be made in accordance with the recommendations of the manufacturer. Joint bolts shall be drawn up equally around the entire periphery maintaining equal spacing from the gland to the face of the flange at all points around the joint. All bolts shall be tightened to within the following torque range. Bolts may be snugged with an air wrench.

Final tightening shall be by hand-operated torque wrench with bolts torqued to the following specifications:

PIPE SIZE	BOLT SIZE	RANGE OF TORQUE				
(in.)	(in.)	(ftlb.)				
3	5/8	45-60				
4-24	3/4	75-90				
30-36	1	100-120				
42-48	1-1/4	120-150				

3.2.10 TERMINATION OF LINE

Lines shall be terminated for future use as shown on the drawings. If not shown on the drawings, termination shall be with a flushing hydrant.

3.2.11 LINE VALVES

Line valves shall be installed not more than 600 feet apart and where a main tees off to another line. A line valve shall be installed at each leg of a tee, for a total of 3 valves. Tees for hydrants shall include 2 line valves and one hydrant valve. A line valve shall be installed at the end of every line with full section of pipe and end cap. Line valves shall be placed outside roadways.

3.2.12 HYDRANT VALVES

Hydrant valves shall be installed on a single 6" tee line with no other taps or services. Hydrant valve must isolate the hydrant only.

Valve boxes for gate valves shall be two or three piece type. Valve boxes shall be accurately centered over valve operating nut, with backfill thoroughly tamped about them. Valve box bases shall not rest on the valves but shall be supported on crushed stone fill. They shall be set vertically and properly cut and/or adjusted so that the tops of boxes will be at grade in any paving, walk or road surface, and 2 to 3 inches above ground in grass plots, fields, woods, or other open terrain.

3.2.13 CASING PIPE FOR BORE OR DITCH CROSSING

Steel casing pipe for bore or ditch crossings shall be placed at the elevations shown on the Drawings. All joints between lengths shall be solidly welded with a smooth non-obstructing joint inside. The casing pipe shall be installed without bends. The pipelines shall be installed after the casing pipe is in place.

Provide and install stainless steel casing spacers and end seals.

3.3 LOCATOR WIRE AND TAPE

Tracer wire and locator tape shall be furnished and installed with all water mains. The tracer wire shall be taped or suitably held over the top center of the pipe and shall be #12 single strand copper wire with THW insulation or approved equal. All splices shall be made with the aid of DBR Direct Bury Splice Connectors as manufactured by 3M Electrical Products Division to insure continuity and insulation of the copper wire from the soil. Tracer wire shall be securely connected at flange bolts to all valves, fittings and hydrants to provide a suitable electrical connection. The electrical continuity of tracer wire between valves and fire hydrants shall be verified and defects found shall be corrected prior to acceptance by the Engineer. A metallic locator tape shall be buried in the trench a minimum of 12" over the top of the pipe and a minimum of 12" below the finished grade. The words "Caution Water Line Below" shall be repetitively printed along the length of the tape.

3.4 FIELD QUALITY CONTROL

3.4.1 TESTING PIPE

The Contractor will be required to test all pipelines and appurtenances with water. The maximum test pressure, measured at the lowest elevation of the pipeline being tested, shall be the pressure class of the pipe unless a specific test pressure is shown on the Drawings. The minimum test pressure shall be 1.5 times the design static pressure or 150 psi, whichever is greater.

When the line or section being tested is pumped up to the required pressure, it shall be valved off from the pump and a pressure gauge placed in the line. The pressure drop in the line, if any, shall be noted. If no pressure drop is noted in 4 hours, the HWU, at its discretion, may accept the line or section as being tested, or HWU may require the test run the full 24 hours.

At the end of the 24-hour test period, the pressure shall be recorded. If there is a drop in pressure, the Contractor shall be required to find and repair any leaks, and retest until there is no pressure drop over the test period.

Regardless of the testing, all leaks that are evident, in the opinion of the Engineer, due to water at the surface of the ground, or by listening, the leak can be heard underground with the geophone, or any other means of determining a leak, the Contractor shall be required to repair those leaks.

The Contractor shall furnish the meter or suction tank, pipe test plugs, and bypass piping, and make all connections for conducting the above tests. The pumping equipment used shall be centrifugal pump, or other pumping equipment, which will not place shock pressures on the pipeline. Power plunger or positive displacement pumps will not be permitted for use on closed pipe system for any purpose.

Inspection of pipe laying shall in no way relieve the Contractor of the responsibility for passing tests or correcting poor workmanship.

All testing will be observed by HWU or HWU's representative.

Test sections of water main shall not exceed 2500 feet in length. Valves are to be suitably located along the water main to accommodate this requirement.

3.4.2 DISINFECTION

The new section must be ready for use before disinfection is done and the new line placed into service.

Before any new section is put into service and prior to final acceptance, the Contractor shall disinfect all constructed water lines carrying treated water in accordance with AWWA C651-14, and local and state regulations.

Prior to starting disinfection, all water mains shall be filled with water, removing air pockets, then thoroughly flushed to remove debris. Flushing velocity in the main shall be not less than three feet per second (3.0 ft/second). For larger main, pigging is an option in place of high velocity flushing.

Disinfection will then be accomplished by the adding of the chlorine solution while filling the main to obtain the initial 50 ppm of chlorine. The Contractor shall supply all equipment, labor, etc. necessary for flushing and disinfecting the mains. The Contractor shall submit, in writing, to the Engineer, the method he proposes to use for adding the chlorine, including backflow/cross connection control, and dechlorination of highly chlorinated water used in disinfection (see section 3.4.3 below).

Disinfection shall be accomplished by filling the new and/or repaired portions of the system with water having a chlorine content of at least 50 parts per million and at the end of a 24 hour contact time a residual of at least 25 parts per million shall remain. During the 24-hour period, valves and hydrants shall be operated to insure disinfection of all appurtenances. At the end of the 24-hour contact period, all the sterilized surfaces and areas shall be thoroughly flushed from the water system.

For tie-ins to an existing system such as the use of tapping valves where keeping the main out of service would restrict service to existing customers, disinfection may consist of thoroughly cleaning the new part with a solution containing not less than 1 percent chlorine.

After initial disinfection and flushing, the Contractor will use a certified lab to collect water samples for bacteriological testing. For new water mains, sets of samples shall be collected for every 1,200 feet of the new main, plus one set from the end of the line, and at least one from each branch greater than one pipe length. A new or routine replacement main shall not be placed in service until negative laboratory results are obtained on the bacteriological analyses. Sample bottles shall be clearly identified as "special" construction tests. If any of the samples are found to be positive or contain confluent growth, the Contractor shall repeat the disinfection procedure until the required numbers of negative samples are obtained.

For new mains two options are available for bacteriological testing.

Option A: Take an initial set of samples, and then resample after a minimum of 16 hours. Both sets of samples must pass for the line to be put into service.

Option B: Before approving a main for use, let it sit for a minimum of 16 hours without any water use. Then collect two samples, without flushing the main, a minimum of 15 minutes apart while

the sampling taps are left running. Both sets of samples must pass for the line to be put into service.

Since new mains do not typically contain coliform bacteria but often contain HPC bacteria, a standard heterotrophic plate count (HPC) test may be required. If sample results show HPC greater than 500 CFU/ml, flushing should resume and another set of HPC and coliform samples collected until no coliform are present and the HPC is less than 500 CFU/ml.

Certified results shall be presented to HWU in writing before the new section is put in service. HWU personnel will then place the new section in service if usage connections are made and the section is ready for use. Under no circumstances are valves to be operated by anyone other than HWU personnel.

Water used for flushing shall be metered and charged to the Contractor.

3.4.3 DE-CHLORINATION

Chlorinated water shall be disposed of in accordance with 401 KAR 5:031 and 8:020 which state that the allowable in stream concentration of chlorine is 10 ug/l, which is equal to 0.01 mg/l. The Contractor shall submit, in writing to the Engineer, the method he proposes for dechlorinating. Recommended chemicals, per AWWA C655, are sulfur dioxide, sodium bisulfate, sodium sulfite, and sodium thiosulfate.

3.4.4 WATER FOR TESTING, FLUSHING, AND DISINFECTION

Water for filling the line, pressure testing, flushing, and disinfection will be supplied or paid for by the Contractor.

3.5 WATER SERVICE LINE & METER ACCESSORIES

3.5.1 EXECUTION

All new service lines, corporation stops and meter kits necessary for service up to and including the meter box shall be installed before water main is tested or put in service.

All new corporation stops are to be installed in the horizontal 3 o'clock or 9 o'clock positions in accordance with standard drawing.

All taps on the water main shall be made with an AWWA approved tapping machine (no manual taps will be allowed). Saddles are not required for taps of 1" or smaller on ductile iron pipe. All other taps require the use of a service saddle. Saddles are required on all PVC pipe.

A standard setter kit shall be installed at locations as shown on the construction drawings and as per standard drawings.

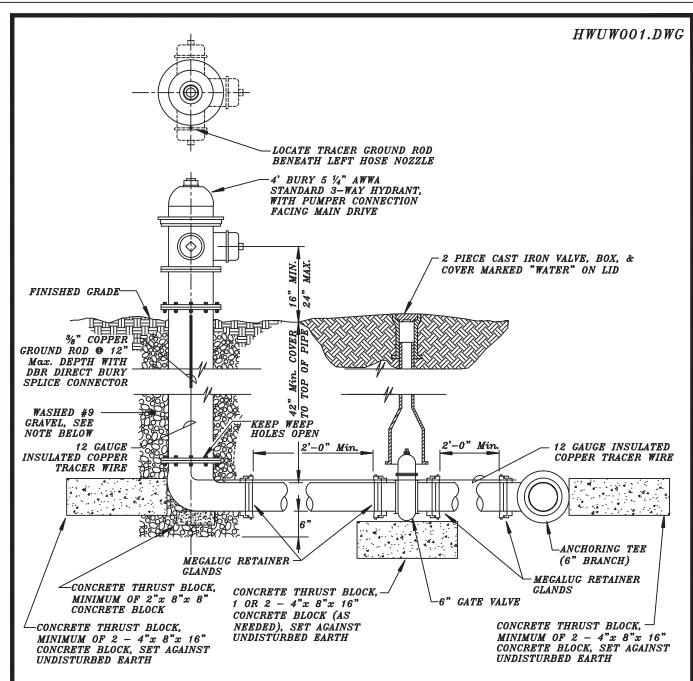
Backfill under sidewalk, curb and roadway shall be special backfill as per standard drawings.

Final finish elevation on meter kit assembly shall match final finish grade of lot.

For dual meter settings, the meter assembly shall be on the property line.

3.5.2 FIELD QUALITY CONTROL

All new service lines and accessories shall be tested to same standards and at the same time as the water main.



FIRE HYDRANT ASSEMBLY PROFILE

NOTES.

HYDRANTS SHALL BE KENNEDY K81A OR AVK 2780 WITH STORZ PUMPER CONNECTION.

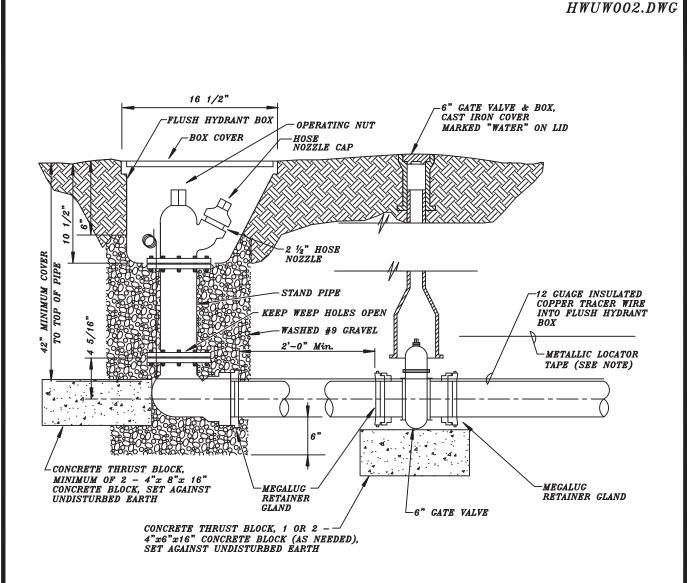
WASHED #9 GRAVEL TO BE PLACED 6" FROM SURFACE TO 6" BELOW WATER MAIN IN A 2'-0' RADIUS AROUND HYDRANT BARREL, FOR DISSIPATION OF WEEP HOLE DRAINAGE.

MAINTAIN CONTINUITY OF TRACER WIRE AT ALL TIMES.

SEE LATEST EDITION OF THE HWU "REQUIREMENTS AND SPECIFICATIONS FOR POTABLE WATER FACILITIES" FOR SPECIFIC PART NUMBERS OF ITEMS SHOWN IN DIAGRAM.

SEE STANDARD DRAWING HWU005 FOR PLAN VIEW OF VALVE PLACEMENT AT HYDRANT.





FLUSH HYDRANT ASSEMBLY PROFILE

NOTES:

2 1/4" HYDRANT BY M&H VALVE CO. OR APPROVED EQUAL.

WASHED #9 GRAVEL TO BE PLACED 6" FROM SURFACE TO 6" BELOW WATER LINE IN A 2'-0" RADIUS AROUND HYDRANT BARREL, FOR DISSIPATION OF WEEP HOLE DRAINAGE.

COIL SUFFICIENT TRACER WIRE INSIDE FLUSH HYDRANT BOX TO REACH ABOVE FINISH GRADE.

MAINTAIN CONTINUITY OF TRACER WIRE AT ALL TIMES.

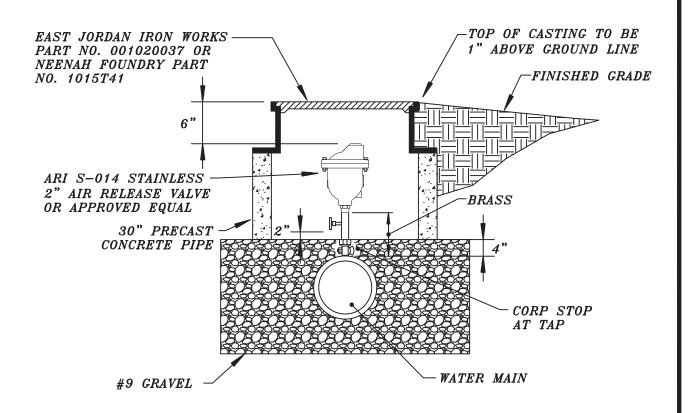
SEE LATEST EDITION OF THE HWU "REQUIREMENTS AND SPECIFICATIONS FOR POTABLE WATER FACILITIES" FOR SPECIFIC PART NUMBERS OF ITEMS SHOWN IN DIAGRAM.

PLACE BURIED METALLIC LOCATOR TAPE 18"-24" ABOVE TOP OF PIPE AS SHOWN. TAPE MUST CONTINUOUSLY READ "CAUTION: BURIED WATER LINE BELOW".



05/13/2016

HWUW003.DWG



AIR RELEASE VALVE

NOTES:

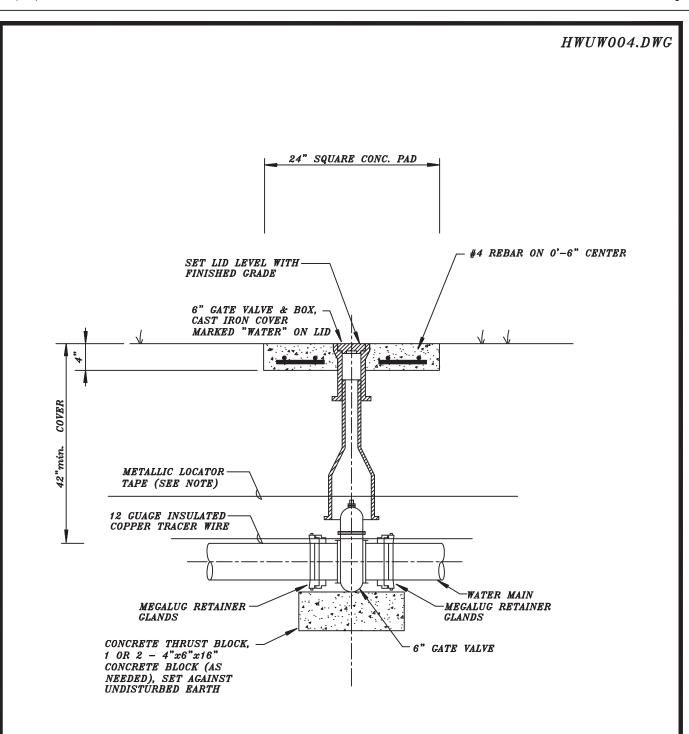
WASHED #9 GRAVEL TO BE PLACED TO 6" MIN. BELOW WATER MAIN AND A MIN. 4" BEYOND OUTSIDE STRUCTURE WALL FOR DRAINAGE AND FOUNDATION SUPPORT.

INSTALL AIR RELEASE VALVE A MIN. OF 1 FOOT AWAY FROM THE NEAREST PIPE JOINT.

MAINTAIN CONTINUITY OF TRACER WIRE THROUGH THE VAULT.

SEE LATEST EDITION OF HWU "REQUIREMENTS AND SPECIFICATIONS FOR POTABLE WATER FACILITIES" FOR SPECIFIC PART NUMBERS OF ITEMS SHOWN IN DIAGRAMS.





GATE VALVE & BOX (IN LAWN/LANDSCAPED AREAS)

NOTES:

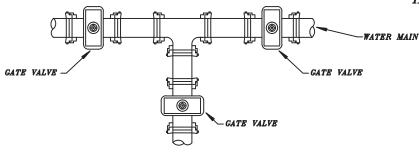
SPLICES MADE ON TRACER WIRE WILL BE MADE WITH THE AID OF DBR DIRECT BURY SPLICE CONNECTORS AS MANUFACTURED BY 3M ELECTRICAL PRODUCTS DIVISION.

MAINTAIN CONTINUITY OF TRACER WIRE AT ALL TIMES.

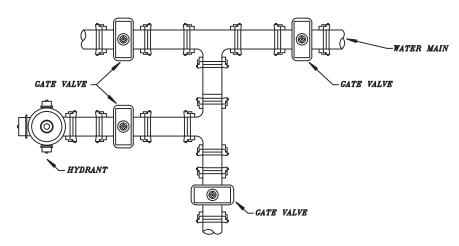
PLACE BURIED METALLIC LOCATOR TAPE 18"-24" ABOVE TOP OF PIPE AS SHOWN. TAPE MUST CONTINUOUSLY READ: "WARNING: BURIED WATER LINE BELOW".



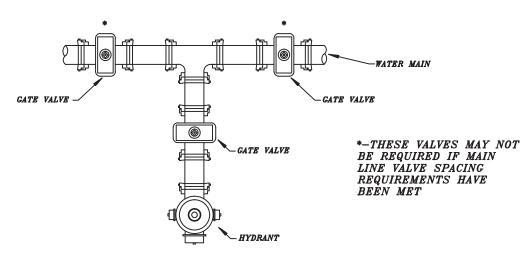
HWUW005.DWG



TYPICAL MAIN LINE TEE



HYDRANT IN CONJUNCTION WITH MAIN LINE TEE



TEE FOR HYDRANT OFF OF MAIN 6" & 8" WATER MAIN ONLY

VALVE PLACEMENT AT TEES PLAN VIEW

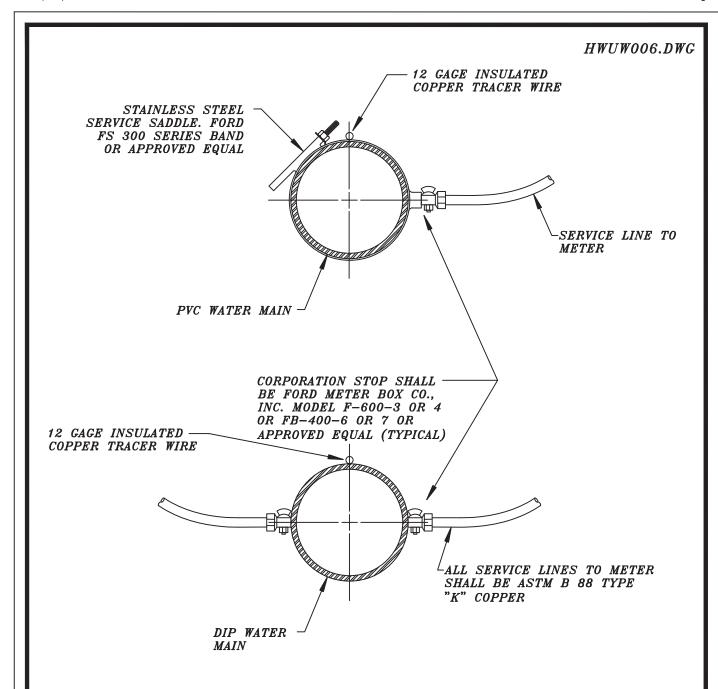
NOTES:

ALL FITTINGS TO BE DUCTILE IRON MECHANICAL JOINTS. GATE VALVE ON ALL BRANCHES OF THE TEE, UNLESS OTHERWISE INSTRUCTED BY HWU.

SEE LATEST EDITION OF THE HWU "REQUIREMENTS AND SPECIFICATIONS FOR POTABLE WATER FACILITIES" FOR SPECIFIC PART NUMBERS OF ITEMS SHOWN IN DIAGRAMS.

MINIMUM DISTANCE BETWEEN FITTING BELLS OF 2'-0".





SERVICE TAP

NOTES:

SERVICE LINE TO METER TO BE ¾" FOR SINGLE METER OR 1" FOR DUAL METER RESIDENTIAL SETTINGS.

ALL CORPORATION STOPS ARE TO BE INSTALLED IN THE HORIZONTAL 3 O'CLOCK OR 9 O'CLOCK POSITIONS.

DIRECT TAPS ALLOWED ONLY TO DIP. TAPS TO PVC PIPE ARE TO INCLUDE TAPPING SADDLE (FORD FS 300 SERIES OR APPROVED EQUAL)



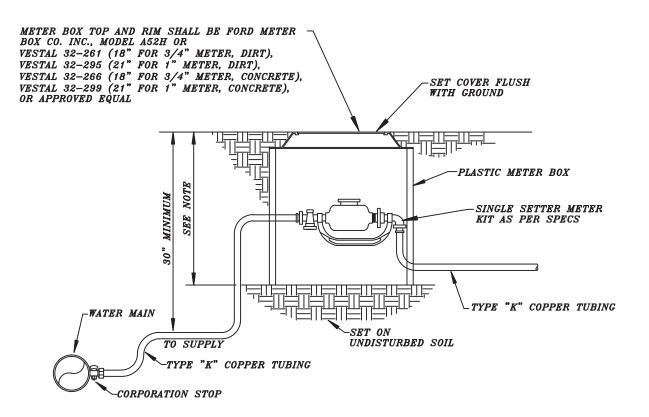
HENDERSON WATER UTILITY

111 FIFTH STREET HENDERSON, KENTUCKY

 SCALE:
 NONE
 DATE:
 05/27/2016

 REVISED BY:
 WFK
 FILE:
 HWUW006.DWG

HWUW007.DWG



3/4" & 1" SINGLE METER SETTING

NOTES:

MINIMUM BOX DEPTH 18" FOR 3/4" METER, 20" FOR 1" METER.

METER BOX TO BE 18" DIA. x 24" TALL FOR 3/4" METER AND 21" DIA. x 24" TALL FOR 1" METER.

METER TO BE SUPPLIED AND INSTALLED BY HWU ONLY.

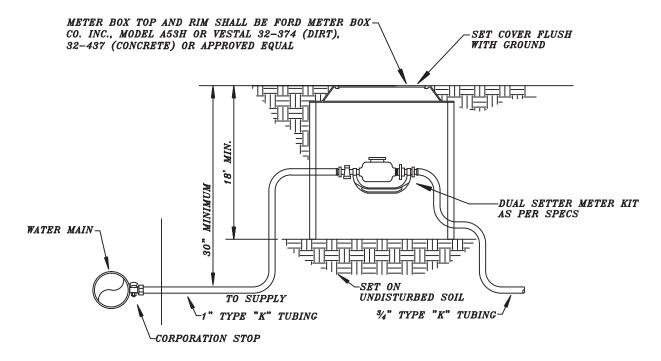
SEE LATEST EDITION OF THE HWU "REQUIREMENTS AND SPECIFICATIONS FOR POTABLE WATER FACILITIES" FOR SPECIFIC PART NUMBERS OF ITEMS SHOWN IN DIAGRAM.

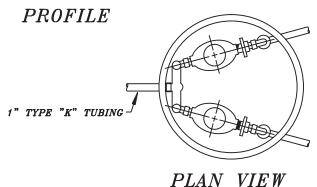


HENDERSON WATER UTILITY

111 FIFTH STREET HENDERSON, KENTUCKY

HWUW008.DWG





3/4" DUAL METER SETTING

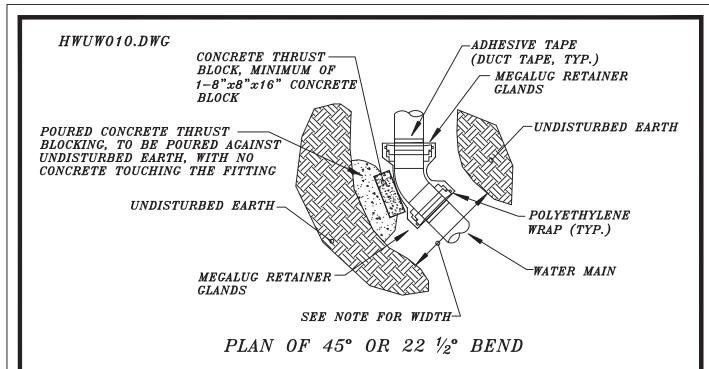
NOTES:

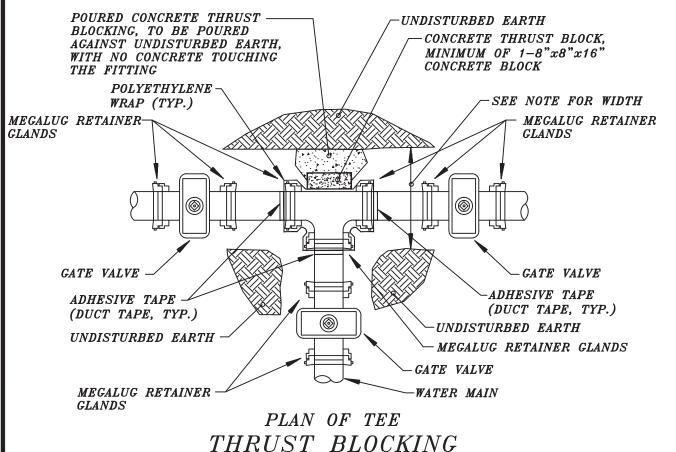
LOCATE NEAR COMMON PROPERTY LINE.

METERS TO BE SUPPLIED AND INSTALLED BY HWU ONLY.

SEE LATEST EDITION OF THE HWU "REQUIREMENTS AND SPECIFICATIONS FOR POTABLE WATER FACILITIES" FOR SPECIFIC PART NUMBERS OF ITEMS SHOWN IN DIAGRAM.







NOTES:

ALL FITTINGS TO BE DUCTILE IRON MECHANICAL JOINTS.
GATE VALVE ON ALL BRANCHES OF THE TEE, UNLESS
OTHERWISE INSTRUCTED BY HWU.

MAXIMUM WIDTH OF TRENCH TO BE 2' + PIPE DIAMETER.

SEE LATEST EDITION OF THE HWU "REQUIREMENTS AND SPECIFICATIONS FOR POTABLE WATER FACILITIES" FOR SPECIFIC PART NUMBERS OF ITEMS SHOWN IN DIAGRAMS.

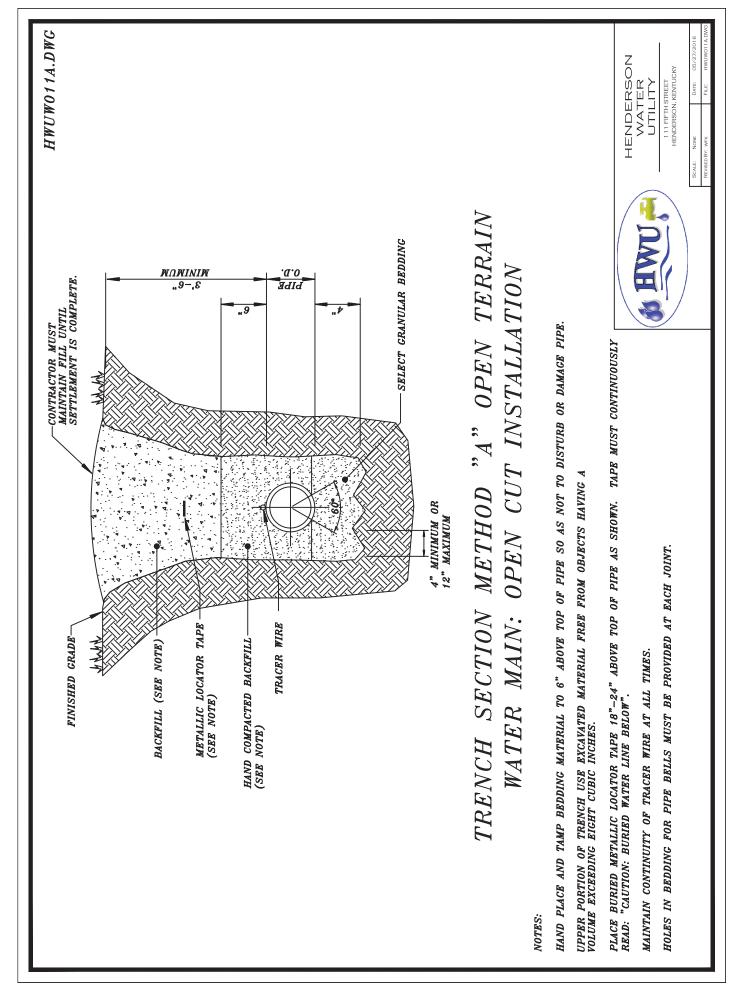


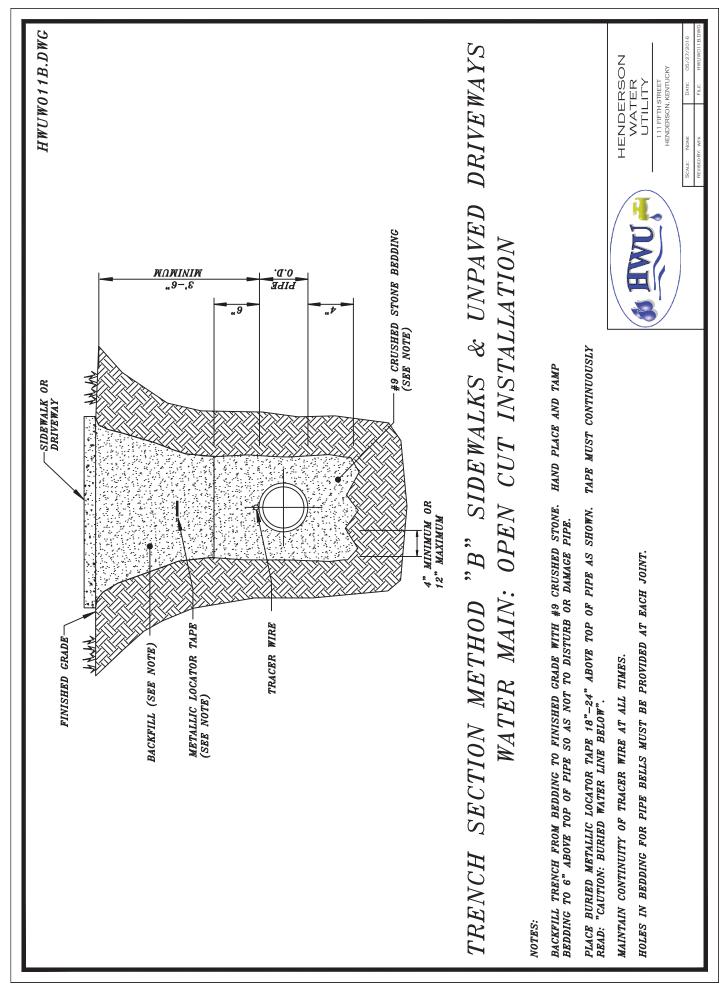
HENDERSON WATER UTILITY

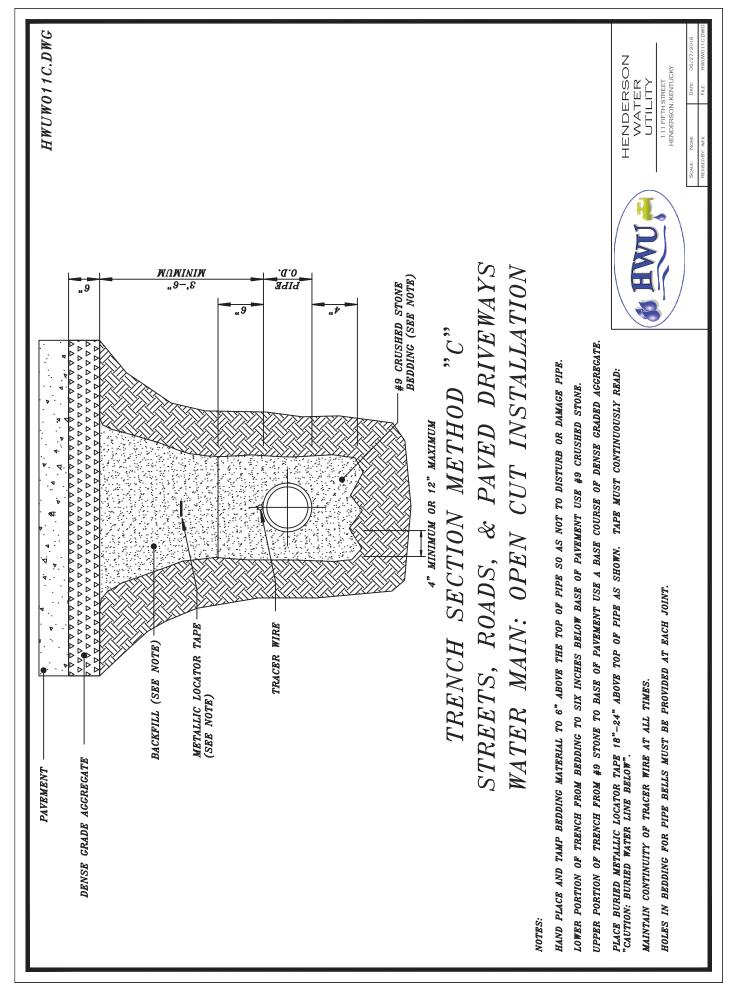
111 FIFTH STREET HENDERSON, KENTUCKY

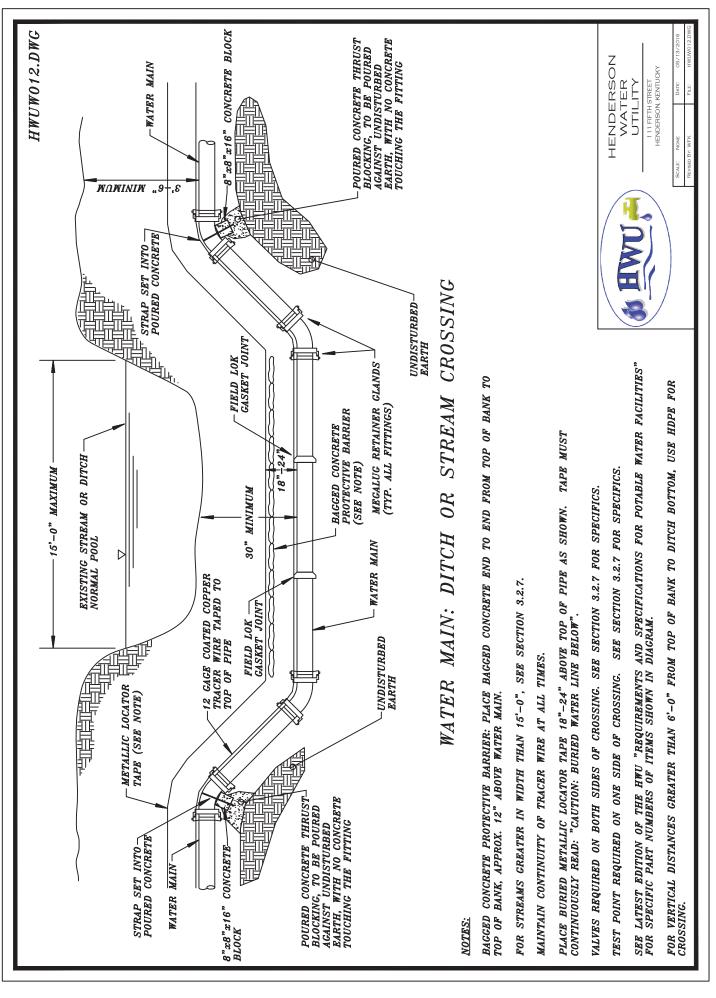
 SCALE:
 NONE
 DATE:
 05/13/2016

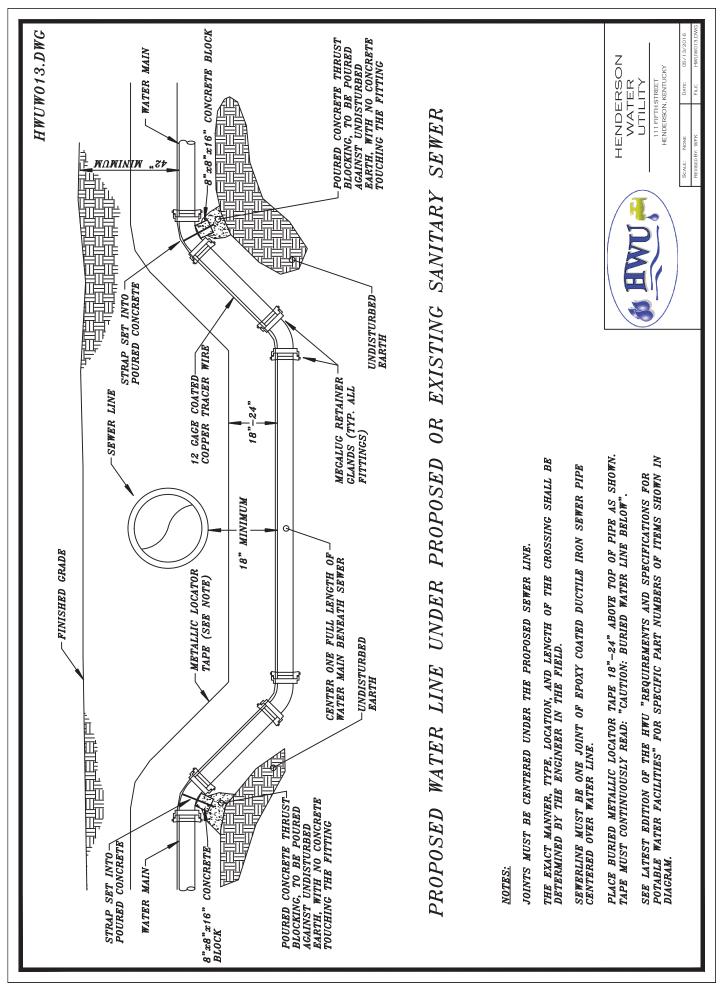
 REVISED BY:
 WFK
 FILE:
 HWUW010.DWG

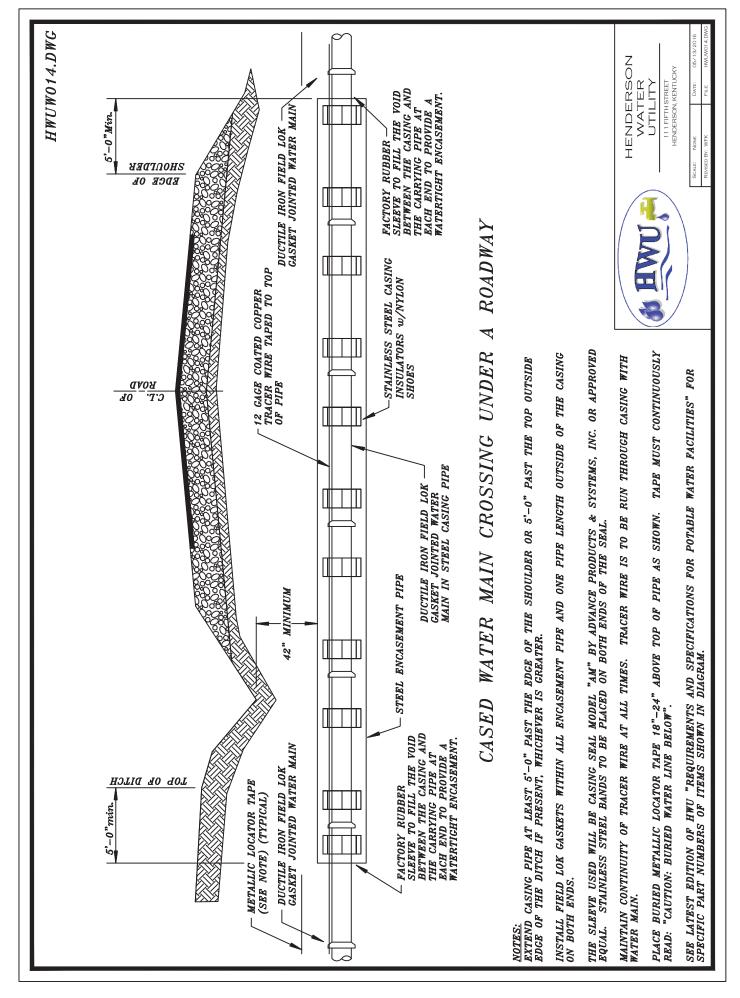


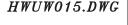


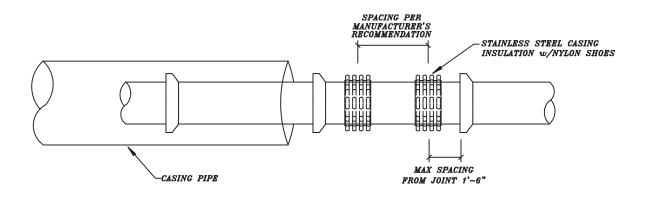












CASING DETAIL

NOTES:

SEE LATEST EDITION OF THE HWU "REQUIREMENTS AND SPECIFICATIONS FOR POTABLE WATER FACILITIES" FOR SPECIFIC PART NUMBERS OF ITEMS SHOWN IN DIAGRAMS.

INSTALL FIELD LOK GASKETS WITHIN ALL ENCASEMENT PIPE AND ONE PIPE LENGTH OUTSIDE OF THE CASING ON BOTH ENDS.

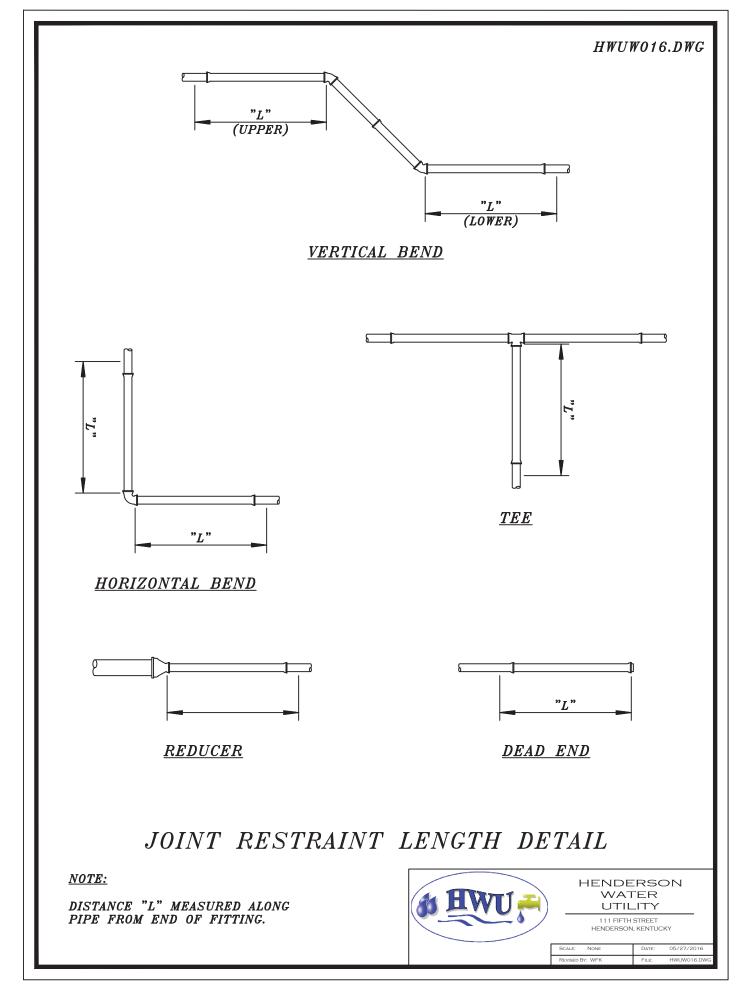
THE SLEEVE USED WILL BE CASING SEAL MODEL "AM" BY ADVANCE PRODUCTS & SYSTEMS, INC., OR APPROVED EQUAL. STAINLESS STEEL BANDS WILL BE PLACED ON BOTH ENDS OF THE SEAL.

MAINTAIN CONTINUITY OF TRACER WIRE AT ALL TIMES. TRACER WIRE IS TO BE RUN THROUGH THE CASING WITH THE WATER MAIN.

IN THE CASE OF A SLOPED BORING, CASING SHALL BE INSTALLED FROM THE DOWN-HILL SIDE WHERE POSSIBLE.

ALL BORE AND CASING MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS AND THE HWU "REQUIREMENTS AND SPECIFICATIONS FOR POTABLE WATER FACILITIES".





Contract ID: 245353 Page 142 of 205

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 KY 812 over North Fork Canoe Creek (Bridge 051B00128N) 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. A temporary construction easement will be required.

Location	Description of Project Impacts						
KY 812 over North Fork Canoe Creek at MP 12.33	The proposed project will impact approximately 13 ft (0.00 ac) of an intermittent, unnamed tributary approximately 1.5 ft wide at the KY 812 intersection.						

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

ANTHONY R. HATTON
COMMISSIONER

ENERGY AND ENVIRONMENT CABINET DEPARTMENT FOR ENVIRONMENTAL PROTECTION

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



HENDERSON COUNTY STP BRZ 9030 (469)

Contract ID: 245353 Page 144 of 205

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.

- 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]
- 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'.

- 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]
- 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]
- 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. 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.



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: May 7, 2023

SUBJECT: Henderson County

D2 051B00128N Item No. 2-10092

KY 812

Bridge Over North Fork Canoe Creek

Geotechnical Engineering Structure Foundation Report

1.0 Location and Description

The project is located on KY 812 (Clay Street) over North Fork Canoe Creek, within the city limits of Henderson, Henderson County, Kentucky approximately 0.27 miles northwest of the intersection of KY 2084. The bridge is being replaced as part of the KYTC SW Bridge Delivery Program. The proposed bridge is a three-span structure constructed using PPC Box Beams with a length of 101'-6" (out to out), a bridge width of 24'-0" on a 30° skew left. The bridge will be supported by two pile supported integral end bents and two intermediate pile bents.

2.0 Site Geologic Conditions

The bridge is located within the Henderson, KY Geologic and Topographic Quadrangles (GQ #1074). Geologic mapping of the bridge location shows the geologic strata composed of water deposited alluvium which consists of silts, sand, clays, and gravel and underlain by the Lisman Formation. The Lisman Formation is comprised of sandstones, shales, coal, limestone, and underclay. Sandstones are light gray, fine to coarse grained. Shales are medium to dark gray, clayey to sandy, locally calcareous, and micaceous. Shales are associated with the No. 13 coal zone. Upper coal beds as much as 3 feet thick and shaley. The Natural Resources Conservation Service (NRCS) Soil map classifies the surface soils at the bridge location as Haymond and Patton Silt Loams.

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Henderson County
KY 812 Bridge Over North Fork Canoe Creek
Item No. 02-10092

3.0 Field Investigation

Subsurface drilling was conducted by Bacon Farmer Workman Engineering & Testing, Inc. (BFW) on March 25th and April 10th,2023. One boring (B-1001, Station 49+29.48 21.00' RT) was advanced near the proposed western end bent (End Bent 1) and one boring (B-1002, Station 50+38.46 17.90' LT) was advanced near the proposed eastern end bent (End Bent 2).

In boring, B-1001, auger refusal was met on nondurable shale bedrock at a depth of 40.2 feet (Elevation 337.91) below ground surface (bgs). Coring activities were conducted within boring, B-1001 to a termination depth of 50.2 feet bgs (Elevation 327.91). Boring B-1002 was advanced to auger refusal depth of 40.3 feet bgs (Elevation 336.38) where coring activities were conducted to a termination depth of 60.3 feet (Elevation 316.38) bgs.

Soil and core 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 <u>Laboratory Testing</u>

Alluvial soils were encountered during drilling activities and consisted of layered inorganic low plasticity clays, silts, silty clays, and sandy silt with gravel. 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, CL-ML, and ML using the Unified Soil Classification System and A-4, A-7-5 and A-7-6 using the AASHTO Classification Method.

5.0 Subsurface Conditions

Below surface organics, intermixed silts, and silty clays were encountered to approximately 10 to 15 feet bgs. The soils in the upper soil zones were firm in consistency. Below the upper intermixed silts and clays the soils transitioned to more uniform silty clays that extended to depths of approximately 20 to 25 feet bgs. The silty clays were soft to firm in consistency. Below this depth the soil transitioned rapidly to silts and clayey silts which extended to auger refusal depths. The silts and clayey silts were firm to stiff in consistency.

Auger refusal was met on nondurable shale in boring, B-1001 at a depth of 40.2 feet bgs. Coring activities commenced in B-1001 and were terminated at a depth of 50.2 feet bgs. Auger refusal was met on nondurable shale in boring, B-1002 at a depth of 40.3 feet bgs. Coring activities commenced in B-1002 and encountered layers of nondurable shale and a coal seam approximately 1.8 feet in thickness at a depth of approximately 45 feet. Below the coal seam, nondurable shale was again encountered and extended to coring termination depth of 60.3 feet bgs.

Kentucky Rock Quality Designation (KYRQD) in boring, B-1001 ranged from 62 to 82 with recoveries ranging from 94 to 100 percent. KYRQD values in boring, B-1002 ranged from 0 to 90 percent with recoveries of 100 percent.

The groundwater level was approximately 15 feet bgs (Elevation 361 to 363) 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.
- 6.2 End Bent 1 and 2 and Intermediate Pile Bents 1 and 2 Both end and intermediate pile bents will use end bearing H-Pile foundations seated on bedrock for structural support. Piles at End Bent 1 and Intermediate Pile Bent 1 will be seated on bedrock with a tip elevation of approximately Elevation 337.9. In the area near End Bent 2, a coal seam was encountered in the upper elevation of the shale bedrock. A boring was not advanced in the area of the Intermediate Pile Bents; however, it is likely that the coal seam would extend laterally near the same elevation. It is not recommended that H-piles bear immediately above coal seams due to the potential for pile settlement. Therefore, due to the presence of a coal seam near the upper elevations of the bedrock, the use of predrilling will be required in the areas of End Bent 2 and Intermediate Pile Bent 2. Predrilling should be advanced to below the coal seam to a depth of approximately 53 feet (Elevation 323.6).

According to the **KYTC Bridge Program Project Delivery Manual** the use of H-piles is preferred over pipe piles.

The use of an axial resistance factor of 0.50 is recommended to be used to estimate the maximum nominal pile resistance (f_c) for severe driving conditions.

Pre-drilling pile locations should be noted on plans. In addition, the void between the ground and the H-piles shall be backfilled with sand or pea gravel once the H-piles have been placed vertically. The H-piles shall then be driven to refusal. A temporary casing may be required to prevent the collapse of the hole. If used, the casing shall be removed, as the hole is being backfilled. Piles shall then be driven to refusal. Include the cost of all materials, labor, and equipment needed to pre-drill, backfill the holes, and drive the piles to refusal in the price per linear foot for "Pre-drilling for Piles".

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. Intermediate piers should be analyzed for total scour (contraction + local scour) conditions.



Henderson County KY 812 Bridge Over North Fork Canoe Creek Item No. 02-10092

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	10.11	2.21	12.32	
Intermediate Pile Bent 1	2.91	2.21	5.12	
Intermediate Pile Bent 2	2.91	2.21	5.12	
End Bent 2	10.11	2.21	12.32	

- 6.4 <u>Slope Protection</u> Slope protection will be required at the bridge 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 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.
- **Verification of Piles Capacities** Drive point bearing piles to practical refusal with Case 2 being recommended. For this project minimum blow requirements are reached after total penetration becomes ½ inch or less for 10 consecutive blows, practical refusal is obtained after the pile is struck an additional 10 blows with total penetration of ½ inch or less.

Advance the production piling to the driving resistances specified above and to depths determined by test pile(s) and subsurface data sheet. Immediately cease driving operations if the pile visibly yields or becomes damaged during driving. If hard driving is encountered because of dense strata or an obstruction, such as a boulder before the pile is advanced to the depth anticipated, the Engineer will determine if more blows than the average driving resistance specified for practical refusal is required to further advanced the pile. Drive additional production and test piles if directed by the Engineer.

6.7 <u>Seismic Site Class Definition</u> – The seismic design procedures outlined in the current AASHTO LRFD Bridge Design Specification indicates that structural design loads are to be based on site class definitions developed from the subsurface condition encountered. Based on the results of the exploration and geology of the area, a site class of D, as per Table 3.10.3.1.1 – Site Class Definitions, should be used for design purposes.



- 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** <u>Lateral Loads</u> Perform lateral load analysis as needed using the geotechnical parameters provided in the attached Idealized Soil Profiles. These parameters may be used to perform analysis using LPILE or other similar software. Some of the parameters may not be required to input depending on the version of software used.

7.0 Plan Notes

The following notes should be included at the appropriate locations in the plans.

- 7.1 PRACTICAL REFUSAL (Case 2): Drive point bearing piles to practical refusal. For this project minimum blow requirements are reached after total penetration becomes ½ inch or less for 10 consecutive blows, practical refusal is obtained after the pile is struck an additional 10 blows with total penetration of ½ inch or less. Advance the production piling to the driving resistances specified above and to the depths determined by test pile(s) and subsurface data sheet(s). Immediately cease driving operations if the pile visibly yields or becomes damaged during driving. If hard driving is encountered because of dense strata or an obstruction, such as a boulder before the pile is advanced to the depth anticipated, the Engineer will determine if more blows than the average driving resistance specified for practical refusal is required to further advance the pile. Drive additional production and test piles if directed by the Engineer.
- **7.2** HAMMER CRITERIA: Single acting diesel hammers with rated energies of 27 kip-ft to 33 kips-ft is recommended for HP 12 x 53 piles 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.
- 7.3 Pre-drilling will be necessary for pile installation in locations noted on plans. The void between the ground and the H-piles shall be backfilled with sand or pea gravel once the H-piles have been placed vertically. The H-piles shall then be driven to refusal. A temporary casing may be required to prevent the collapse of the hole. If used, the casing shall be removed, as the hole is being backfilled. Piles shall then be driven to refusal. Include the cost of all materials, labor, and equipment needed to pre-drill, backfill the holes, and drive the piles to refusal in the price per linear foot for "Pre-drilling for Piles".
- **7.3** Embankments at the bridge end bent locations shall be constructed in accordance with Special Provision 69 Embankment at Bridge End Bent Structures.



Henderson County KY 812 Bridge Over North Fork Canoe Creek Item No. 02-10092

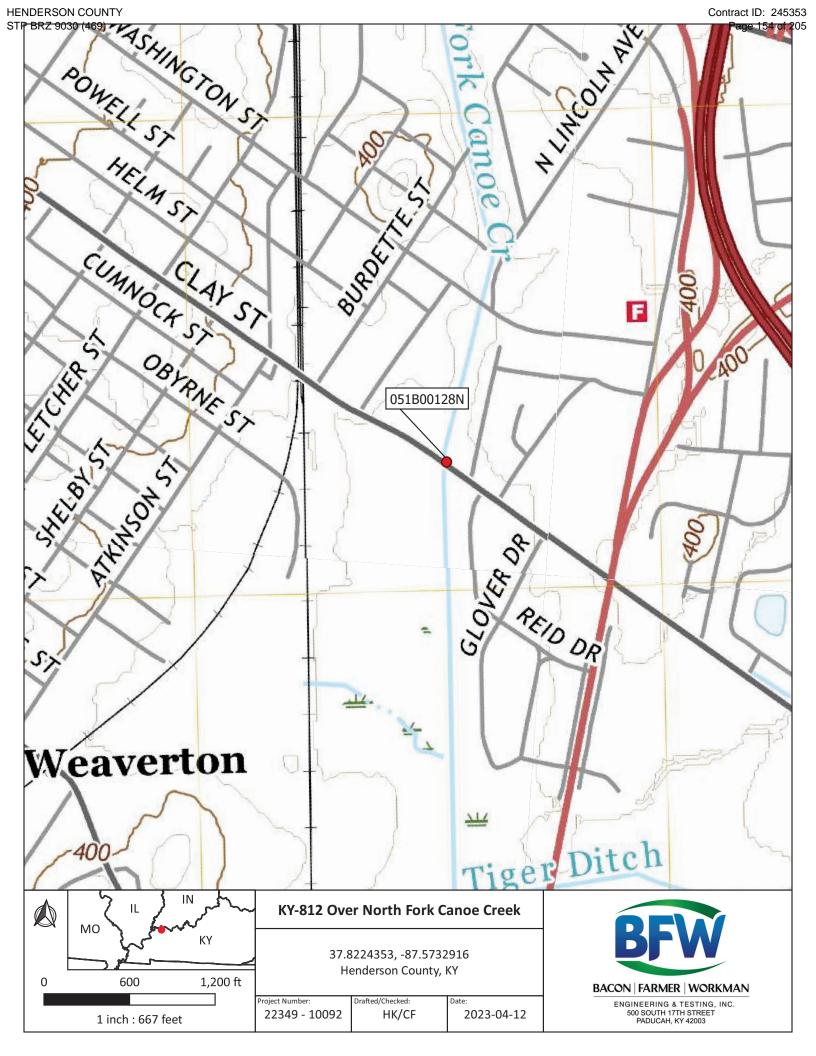
- 7.4 Slope protection will be required at the bridge meeting the requirements of Sections 703 & 805 of the Standard Specifications for Road and Bridges Construction, current edition. Place Geotextile Fabric, in accordance with Section 843 of the Standard Specifications for Road and Bridge Construction, current edition, between the embankment and the slope protection.
- **7.5** Cofferdams and/or dewatering methods may be required to facilitate foundation construction.
- **7.6** Temporary shoring or sheeting may be required to facilitate 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
- Idealized Soil Profile Sheets for Lateral Pile Analysis
- Coordinate Data Sheet





Idealized Soil Profile

Henderson County

Item No: 2-10092 **Bridge ID:** 051B00128N

KY-812 Over North Fork Creek

(End Bent 1 and Intermediate Pile Bent 1)

Elevation (approx.)	Strata	Parameters for Lateral Load Analysis (L-Pile)	
378 ft ————			
373 ft	Silt (Firm)	Unit Weight (pcf): 118.0 p-y Modulus, k, (pci): 300 Cohesive Strength, c (psf): 900 Friction Angle (deg): 32 Strain Factor E50: 0.010	
Water Flev. 363 (approx.)	Clay (Firm)	Unit Weight (pcf): 120 Effective Unit Weight (pcf): 57.6 Undrained cohesion, c (psf): 1000 Strain Factor E50: 0.010 Soil Modulus (static), k (pci): 100	
332 It —	Silt (Stiff)	Effective Unit Weight (pcf): 118.0 Effective Unit Weight (pcf): 55.6 p-y Modulus, k, (pci): 400 Cohesive Strength, c (psf): 950 Friction Angle (deg): 33 Strain Factor E50: 0.005	
337.8 ft		Strain Factor E50: 0.005	

Auger Refusal (40.2')
Elevations are approximate



Idealized Soil Profile

Henderson County

Item No: 2-10092 **Bridge ID:** 051B00128N

KY-812 Over North Fork Creek

(End Bent 2 and Intermediate Pile Bent 2)

Elevation (approx.)	Strata	Parameters for Lateral Load Analysis (L-Pile)
376 ft	Silt (Firm)	Unit Weight (pcf): 118.0 p-y Modulus, k, (pci): 200 Cohesive Strength, c (psf): 500 Friction Angle (deg): 32 Strain Factor E50: 0.010
Water Elev. 360 (approx.) 346 ft	Clay (Firm)	Unit Weight (pcf): 120 Effective Unit Weight (pcf): 57.6 Undrained cohesion, c (psf): 1000 Strain Factor E50: 0.010 Soil Modulus (static), k (pci): 100
336 4 ft	Silt (Stiff)	Effective Unit Weight (pcf): 118.0 Effective Unit Weight (pcf): 55.6 p-y Modulus, k, (pci): 500 Cohesive Strength, c (psf): 950 Friction Angle (deg): 33 Strain Factor E50: 0.005
Auger Refusal (40.3') 323.6 ft	Shale (Weak Rock)	Effective Unit Weight (pcf): 75.2 Uniaxial Comp. Strength (psi): 425 Youngs Modulus, E _r , (psi): 500,000 RQD (%): 40 K _{rm} : 0.0005
Elevations are approx	imate	



37.8224002°N

COORDINATE DATA SUBMISSION FORM KYTC DIVISION OF STRUCTURAL DESIGN - GEOTECHNICAL BRANCH

County			Henderson			Date	4/14/2023
Road Numb	er		KY 812		Notes:		
Survey Crev	v / Consultant		BFW				
Contact Per	son		Chris Farmer				
Item#			02-10092				
Mars#							
Project #							
Elevation D	atum	(circle on	e) Assumed				
HOLE	LATITUDE		LONGITUDE	HOLE	STATION	OFFSET	ELEVATION (FT)
NUMBER	(Decimal Degree		(Decimal Degrees)	NUMBER			
	IDGE - KY 812 OVER			1			
1001	37.8224859°	'N	87.5735272°W	1001	49+29.48	21.00' RT	378.11

1002

50+38.46

17.90' LT

376.68

87.5731384°W

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

1I

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:

- Provide 3-line messages with each line being 8 characters long and at least 18 inches tall. Each character comprises 35 pixels.
- 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.
- 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.
- 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.

1I

- 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:

 $/KEEP/RIGHT/\Rightarrow\Rightarrow\Rightarrow/$ /MIN/SPEED/**MPH/ /ICY/BRIDGE/AHEAD/ /ONE /KEEP/LEFT/< LANE/BRIDGE/AHEAD/ /LOOSE/GRAVEL/AHEAD/ /ROUGH/ROAD/AHEAD/ /RD WORK/NEXT/**MILES/ /MERGING/TRAFFIC/AHEAD/ /TWO WAY/TRAFFIC/AHEAD/ /NEXT/***/MILES/ /PAINT/CREW/AHEAD/ /HEAVY/TRAFFIC/AHEAD/ /REDUCE/SPEED/**MPH/ /SPEED/LIMIT/**MPH/ /BRIDGE/WORK/***0 FT/ /BUMP/AHEAD/ /MAX/SPEED/**MPH/ /TWO/WAY/TRAFFIC/ /SURVEY/PARTY/AHEAD/

*Insert numerals as directed by the Engineer.

Add other messages during the project when required by the Engineer.

2.3 Power.

- 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

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:

CodePay ItemPay Unit02671Portable Changeable Message SignEach

Effective June 15, 2012

1I

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

- 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:

Code	Pay Item	Pay Unit
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
- 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
- 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 designbuild 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 nonminority 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 <code>DBAconformance@dol.gov</code>, 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 reprocurement 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, <u>31</u> 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 <u>40 U.S.C. 3144(b)</u> 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, <u>18</u> 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 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 reprocurement 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, <u>31</u> 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)
- 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 administrating 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:

- 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 03/15/2024

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).

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:

- . Executive Order 14026 generally applies to the contract.
- 1. 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.

If the contract was awarded on . Executive Order 13658 or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:

- 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
2	03/15/2024

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
DDTN0004 00F 0C/01/2022		

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 05/28/2023

BUTLER, EDMONSON, LOGAN, TODD & WARREN COUNTIES:

	Rates	Fringes
ELECTRICIAN	\$ 35.39	20.45
ELEC0429-001 06/01/2022		

ALLEN & SIMPSON COUNTIES:

	Rates	Fringes
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

DAVIESS, HANCOCK, HENDERSON, HOPKINS, MCLEAN, MUHLENBERG, OHIO, UNION & WEBSTER COUNTIES:

	Rates	Fringes
ELECTRICIAN	.\$ 35.60	8.35+30.8%
Cable spicers receive \$ 25 per h	our additional	

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	· · · · •	15.27 15.26	
			-

ENGI0181-017 07/01/2023

	ŀ	Rates	Fringes
POWER EQUIP	MENT 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; Gurries; 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 Conrete 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.

TRONGO 70 00F 06 /01 / 2022

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\$ 23.90	6 17.57
GROUP	2\$ 24.22	1 17.57
GROUP	3\$ 24.20	6 17.57
GROUP	4\$ 24.80	6 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; Digging & Hand Back Filling; Highway Grade Checker; Hand 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; Bushammer; 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

LABO0189-006 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; Bushammer; 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

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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; Bushammer; 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 & H Abatement) and All Epoxy - \$1		ng Lead
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

DAVIESS, 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

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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
U-t	DCT and about	¢ 50

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
PLUM0502	2-004 08/01/2021		

ALLEN, BUTLER, EDMONSON, SIMPSON & WARREN

	F	Rates	Fringes
Plumber;	Steamfitter\$	38.07	20.78

PLUM0633-002 07/01/2022

DAVIESS, 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

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TEAM0215-003 03/31/2023

DAVIESS, 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.

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.

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

4.8% 6.9%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federallyassisted) 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 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 Henderson County.

(Revised: 1/1/2023)

PART IV

INSURANCE

Refer to *Kentucky Standard Specifications for Road and Bridge Construction*,

current edition

PART V

BID ITEMS

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245353

PROPOSAL BID ITEMS

Report Date 5/22/24

Section: 0001 - BRIDGE - 051B00128N

		RIDGE - 051B00128N				
LINE	BID CODE	ALT DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	AMOUNT
010	00001	DGA BASE	415.00			\$
020	00020	TRAFFIC BOUND BASE	72.00			\$
030	00100	ASPHALT SEAL AGGREGATE	6.00			\$
040	00103	ASPHALT SEAL COAT	1.00			\$
050	00212	CL2 ASPH BASE 1.00D PG64-22	987.00	TON		\$
060	00301	CL2 ASPH SURF 0.38D PG64-22	91.00	TON		\$
070	00445	ENTRANCE PIPE-30 IN	30.00	LF		\$
080	01791	ADJUST MANHOLE FRAME TO GRADE	1.00	EACH		\$
090	01810	STANDARD CURB AND GUTTER	60.00	LF		\$
100	02200	ROADWAY EXCAVATION		CUYD		\$
110	02231	STRUCTURE GRANULAR BACKFILL	61.00	CUYD		\$
120	02351	GUARDRAIL-STEEL W BEAM-S FACE	287.50	LF		\$
130	02360	GUARDRAIL TERMINAL SECTION NO 1	3.00	EACH		\$
140	02367	GUARDRAIL END TREATMENT TYPE 1	1.00	EACH		\$
150	02381	REMOVE GUARDRAIL	194.00	LF		\$
160	02429	RIGHT-OF-WAY MONUMENT TYPE 1	2.00	EACH		\$
170	02432	WITNESS POST	2.00	EACH		\$
180	02483	CHANNEL LINING CLASS II	13.00	TON		\$
		CLEARING AND GRUBBING				
190	02545	APPROX LESS THAN 1 ACRE	1.00	LS		\$
200	02565	OBJECT MARKER TYPE 2	4.00	EACH		\$
210	02585	EDGE KEY	40.00	LF		\$
220	02602	FABRIC-GEOTEXTILE CLASS 1	382.00	SQYD		\$
230	02650	MAINTAIN & CONTROL TRAFFIC	1.00	LS		\$
240	02676	MOBILIZATION FOR MILL & TEXT	1.00	LS		\$
250	02677	ASPHALT PAVE MILLING & TEXTURING	65.00	TON		\$
260	02720	SIDEWALK-4 IN CONCRETE	42.20	SQYD		\$
270	02726	STAKING	1.00	LS		\$
280	02731	REMOVE STRUCTURE	1.00	LS		\$
290	03299	ARMORED EDGE FOR CONCRETE	55.40	LF		\$
300	06514	PAVE STRIPING-PERM PAINT-4 IN	1,088.00	LF		\$
310	08003	FOUNDATION PREPARATION	1.00	LS		\$
320	08019	CYCLOPEAN STONE RIP RAP	396.00	TON		\$
330	08033	TEST PILES	210.00	LF		\$
340	08039	PRE-DRILLING FOR PILES	770.00	LF		\$
350	08046	PILES-STEEL HP12X53	1,140.00	LF		\$
360	08094	PILE POINTS-12 IN	28.00	EACH		\$
370	08100	CONCRETE-CLASS A		CUYD		\$
380	08104	CONCRETE-CLASS AA		CUYD		\$
390	08150	STEEL REINFORCEMENT	15,454.00			\$
400	08151	STEEL REINFORCEMENT-EPOXY COATED	7,386.00			\$
410	08661	PRECAST PC BOX BEAM CB12-48	368.50			\$
420	08662	PRECAST PC BOX BEAM CB17-48	239.50			\$
430	14003	W CAP EXISTING MAIN		EACH		\$
440	14019	W FIRE HYDRANT ASSEMBLY		EACH		\$
450	14062	W PIPE PVC 12 INCH	339.00			\$
460	14097	W TIE-IN 12 INCH		EACH		\$

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PROPOSAL BID ITEMS

Report Date 5/22/24

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LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0470	14108		W VALVE 12 INCH	1.00	EACH		\$	
0480	14120		W VALVE CUT-IN 12 INCH	1.00	EACH		\$	
0490	14152		W SERV COPPER SHORT SIDE 3/4 IN	1.00	EACH		\$	
0500	14636		W SPECIAL ITEM INST	2.00	EACH		\$	
0510	17046		EC POLE REMOVE	1.00	EACH		\$	
0520	20191ED		OBJECT MARKER TY 3	1.00	EACH		\$	
0530	21415ND		EROSION CONTROL	1.00	LS		\$	
0540	22883EN		CONCRETE WEDGE CURB	141.00	LF		\$	
0550	23158ES505		DETECTABLE WARNINGS	10.00	SQFT		\$	
0560	23378EC		CONCRETE SEALING	2,808.00	SQFT		\$	
0570	24970EC		ASPHALT MATERIAL FOR TACK NON- TRACKING	.50	TON		\$	
0580	25017ED		RAIL SYSTEM SIDE MOUNTED MGS	203.00	LF		\$	
0590	26233EC		MOBILIZATION FOR CONCRETE SURF TREATMENT	1.00	LS		\$	

Section: 0002 - DEMOBILIZATION &/OR MOBILIZATION

LINE	BID CODE	ALT DESCRIPTION	QUANTITY	UNIT	UNIT PRIC FP AMOU	JNT
0600	02569	DEMOBILIZATION	1.00	LS	\$	