

CALL NO. 102
CONTRACT ID. 255372
GRAVES COUNTY
FED/STATE PROJECT NUMBER STP BRZ 9030 (491)
DESCRIPTION CR 1170
WORK TYPE BRIDGE REPLACEMENT
PRIMARY COMPLETION DATE 12/1/2025

#### **LETTING DATE:** February 20,2025

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN STANDARD TIME February 20,2025. Bids will be publicly announced at 10:00 AM EASTERN STANDARD TIME.

PLANS AVAILABLE FOR THIS PROJECT.

**DBE CERTIFICATION REQUIRED - 7%** 

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

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## PART I SCOPE OF WORK

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#### **ADMINISTRATIVE DISTRICT - 01**

CONTRACT ID - 255372 STP BRZ 9030 (491) COUNTY - GRAVES

PCN - BR04211702500 STP BRZ 9030 (491)

CR 1170 (MP 2.82) ADDRESS DEFICIENCIES OF CR 1170 OVER MAYFIELD CREEK (042C00050n) (MP 2.95), A DISTANCE OF 0.13 MILES.BRIDGE REPLACEMENT SYP NO. 01-10224.00.

GEOGRAPHIC COORDINATES LATITUDE 36:37:20.00 LONGITUDE 88:30:20.00

ADT 180

#### **COMPLETION DATE(S):**

COMPLETED BY 12/01/2025

APPLIES TO ENTIRE CONTRACT

#### **CONTRACT NOTES**

#### **INSURANCE**

Refer to Kentucky Standard Specifications for Road and Bridge Construction, current edition.

#### **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 <u>KRS 14A.9-010</u>, the foreign entity should identify the applicable exception. Foreign entity is defined within <u>KRS 14A.1-070</u>.

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 <a href="https://secure.kentucky.gov/sos/ftbr/welcome.aspx">https://secure.kentucky.gov/sos/ftbr/welcome.aspx</a> .

#### 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 <a href="https://kytc.projectquestions@ky.gov">kytc.projectquestions@ky.gov</a>. 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 (<a href="www.transportation.ky.gov/construction-procurement">www.transportation.ky.gov/construction-procurement</a>). 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 state agency certifies that it is in compliance with the provisions of KRS 45A.150, "Access to contractor's books, documents, papers, records, or other evidence directly pertinent to the contract." The Contractor, as defined in KRS 45A.030, 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 agreement for the purpose of financial audit or program review. 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. Records and other prequalification information confidentially disclosed as part of the bid process shall not be deemed as directly pertinent to the agreement and shall be exempt from disclosure as provided in KRS 61.878(1)(c).

#### **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: 1/1/2025

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</u> Administration (dot.gov)

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.

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#### 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 2<sup>nd</sup> 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.

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#### **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 a fully executed DBE Subcontract, 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 Office for Civil Rights & Small Business Development. 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 *signed and notarized* Affidavit of Subcontractor Payment (TC 18-7) and copies of checks for any monies paid to each DBE subcontractor or supplier utilized to meet a DBE goal. These documents must be completed and signed within 7 days of being paid by the Cabinet.

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

\*\*\*\*\* IMPORTANT \*\*\*\*\*\*

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

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

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

#### DEFAULT OR DECERTIFICATION OF THE DBE

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

#### PROHIBITION ON TELECOMMUNICATIONS EQUIPMENT OR SERVICES

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

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

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.

GRAVES COUNTY STP BRZ 9030 (491)

#### Contract ID: 255372 Page 19 of 147

#### ASPHALT MIXTURE

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

#### **DGA BASE**

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

#### DGA BASE FOR SHOULDERS

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

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

#### INCIDENTAL SURFACING

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

#### **OPTION B**

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

#### SPECIAL NOTE FOR TRAFFIC CONTROL ON BRIDGE REPAIR CONTRACTS

#### 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.

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.

For projects where full closure of the roadway has been specified in the contract 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.

#### II. 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.

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.

#### III. 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.

#### IV. 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 KYTC District 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.

#### IV. PAYMENT

Unless otherwise noted in this Special Note and contract documents, payment for Maintenance and Control of Traffic during construction shall be in accordance with Section 112 of the Kentucky Transportation Cabinet, Department of Highways Standard Specifications for Road and Bridge Construction, (latest edition).

#### **SPECIAL NOTE**

#### FOR SEDIMENT PREVENTION AND EROSION CONTROL

#### FOR IMPACT REGARDLESS OF SIZE OF THE DISTRUBED 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 the KYTC Standard Specifications, prior to onsite activities a **site-specific** *Erosion Control Plan* **including BMPs** to ensure continuous erosion control throughout the construction and post construction period. The plan will identify individual Disturbed Drainage Areas (DDA) where storm water from the construction area will be discharged off site or into waters of the Commonwealth.

Should the Contractor fail to create a BMP 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.

The erosion prevention and sediment controls proposed are presented below.

- 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 IMPACT GREATER THAN 1.0 ACRE

When the total disturbed area for a project, including laydown and waste/borrow areas, is greater than 1.0 acre, the Contractor shall be responsible for filing the Kentucky Pollution discharge Elimination System (KPDES) KYR10 permit Notice of Intent (NOI) with the Kentucky Division of Water (DOW). 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. 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 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 perform all temporary erosion/sediment control functions 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.

They KYR10 web page, which includes the General Permit and eNOI application is here: <a href="https://eec.ky.gov/Environmental-">https://eec.ky.gov/Environmental-</a>
Protection/Water/PermitCert/KPDES/Documents/KYR10PermitPage.pdf

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.

ATTACH KPDES PERMIT

#### 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.

- 3. Prestressed Concrete I-Girders, Concrete Beams, and Spread Prestressed Concrete Box Beams: The underneath surfaces of slab overhangs outside of exterior concrete girders and to the exterior side and bottom of exterior concrete girders and beams.
- 4. Adjacent Prestressed Concrete Composite Box Beams: Full length of the exterior face of all exterior beams from the top of the box beam to 1'-0" underneath the beams.
- 5. Prestressed Non-Composite Box Beams: All faces of all beams, excluding surfaces to be covered with a waterproofing membrane. Take care to ensure that the grout pockets are not sealed.
- 6. If the contract documents include the Special Note for Concrete Coating, do not apply concrete sealer to the areas where Concrete Coating is specified.
- E. 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 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.

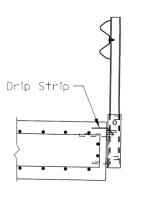
- **2.1 Drip Strip.** Drip strip shall be hot dipped galvanized steel with a minimum of 22 gage.
- **3.0 CONSTRUCTION.** The Contractor shall bear full responsibility and expense for any and all damage to the structure, should such damage result from the Contractor's actions.
  - **3.1 Installation of 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 butt the individual pieces together, do not lap.

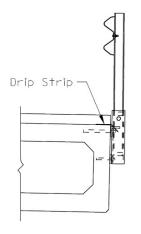
For concrete decks/slabs: Bend down strip at 90° against the inside face of the forms before concrete is placed. After the forms are removed, bend the drip strip into the final position of 45° as shown in the attached details. Use care when stripping formwork so as not to damage or wrinkle the drip strip.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

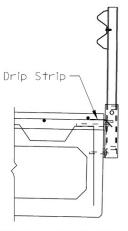
For asphalt overlays: Prior to placing the asphalt overlay, install the bent drip strips along the edge of the prestressed box beam as shown. Fasten the drip strips with (1½" length, 3/32" shank diameter) button head spikes with deformed shanks or expansion anchors at 1'-6" c/c max. All installation 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.



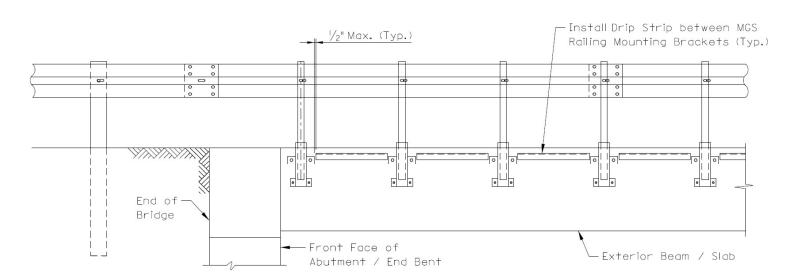




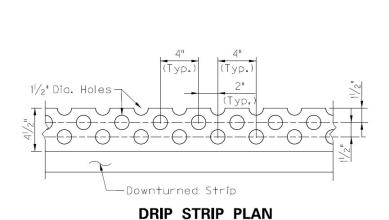
CONCRETE SLAB WITH MGS RAILING

ASPHALT OVERLAY WITH MGS RAILING

COMPOSITE BOX BEAM WITH MGS RAILING



#### **BRIDGE ELEVATION**



Formwork  $\frac{4 \frac{1}{2}}{4 \frac{5}{2}}$ (Prior to concrete placement) (After concrete placement)

DRIP STRIP ELEVATION

(For Concrete Decks)

#### 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, and traffic is on the diversion 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.

Maintenance of the diversion must be completed within 24 hours for items that do not adversely affect traffic. In the event of a washout, and access is no longer maintained, the contractor has 4 hours to reopen the roadway to traffic. Failure to meet either the 24-hour requirement or the 4hour requirement will result in Liquidated Damages being charged at a rate of \$750 per hour beyond the required time specified, once notified. Re-grading of the diversion will be incidental to maintain and control traffic, however additional material if deemed necessary by the Engineer will be paid as specified in the contract.

### **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

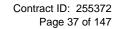
If the project includes any bridge demolition or renovation, the successful bidder is required to notify Kentucky Division for Air Quality (KDAQ) via filing of form (DEP 7036) a minimum of 10 working days prior to commencement of any bridge demolition or renovation work.

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.

# SPECIAL NOTE FOR STRUCTURE REMOVAL and RENOVATIONS

Notice of Intent (NOI) to Division of Air Quality

The roadway contractor is required to file a Notice of Intent (NOI) to the Division of Air Quality ten (10) business days (M-F) prior to the start of any demolition or rehabilitation work on the bridge superstructure (042C00050N). Please use the KY Environmental and Energy Cabinet eForm Portal (<a href="https://dep.gateway.ky.gov/eForms/Account/Home.aspx">https://dep.gateway.ky.gov/eForms/Account/Home.aspx</a>) to complete this task. It is also advised that copies of the submittal are to be sent to the Regional Office of the Kentucky Division of Air Quality <a href="https://ky DAQ Regional Offices">KY DAQ Regional Offices</a> to complete the notification process.





# **Asbestos Inspection Report**

To: Tom Springer, QK4, Inc.

Date: August 2, 2024

Conducted By: Russell H. Brooks, LFI, Inc.

Kentucky Accredited Asbestos Inspector #71841

# **Project and Structure Identification**

**Project: Graves County** 

Structure ID: #042C00050N

Structure Location: Beech Grove Road over Mayfield Creek, Graves County, Kentucky

Sample Description: Joint sealant material between the bridge deck and side wall

Inspection Date: July 26, 2024

# **Results and Recommendations**

The asbestos inspection was performed in accordance with current United States Environmental Protection Agency (US EPA) regulations, specifically 40 CFR Part 61, Asbestos National Emissions Standards for Hazardous Air Pollutants (NESHAP) revision, final rule effective November 20, 1990.

It is recommended that this report accompany the 10-Day Notice of Intent for Demolition (<u>DEP7036 Form</u>), which is to be submitted to the Kentucky Division of Air Quality prior to abatement, demolition, or renovation of any building or structure in the Commonwealth.

No asbestos-containing materials (ACM) were detected above regulatory screen limits of 1%.

GRAVES STROBRZ	
DEP 7	

# NOTIFICATION OF ASBESTOS

	COUNTY 2 9030 (491)
DEP 70	

No DATE  CATION #  Kentucky Division for Air Quality 300 Sower Boulevard, 2 <sup>or</sup> Floor Frankfort, KY 40601  State Zip  Contact Person  Contact Person  Location  State Zip  Asbestos detection technique  Amount of Cat. 1 & II nontriable Active  Category II  Category II  Category II  Category II  Category II  Contout Person  State Zip  Amount of Cat. 1 & II nontriable Active  Address  Category II  Category II	PAGE 1 OF INITIAL SUBMITTAL DATE	       	ABATEMENT/DEMOLITION/RENOVATION (Instructions for completing form on back)	(Instructions for completing form on back)
ctor  Solution  Contact Person  Location  Location  Contact Person  State Zip	REVISION DATE  NOTIFICATION #	***File	this form with Regional Office Kentucky Division	
State Zip  Contact Person  Contact Person  Location  Location  Contact Person  State Zip			300 Sower Bould Frankfort, I	syard, 2" Floor (Y 40601
State Zip Bescription of affected facility components Bescription of affected Bescription of affected Amount of Cat. 1 & II nontriable ACM involved but will not be removed:    Contact Person	Contractor			Description of planned renovation/demolition, including abatement
State Zip  Contact Person  Contact Person  State Zip  Contact Person  Contact Person  Contact Person  State Zip  State Zip  Amount of Cat. 1 & Il nonfriable ACM involved but will not be removed:  State Zip  Amount of Cat. 1 & Il nonfriable ACM involved but will not be removed:  Amount of Cat. 1 & Il nonfriable ACM involved but will not be removed:  Amount of Cat. 1 & Il nonfriable ACM involved but will not be removed:  Amount of Cat. 1 & Il nonfriable ACM involved but will not be removed:  Amount of Cat. 1 & Il nonfriable ACM involved but will not be removed:  Amount of Cat. 1 & Il nonfriable ACM involved but will not be removed:  Amount of Cat. 1 & Il nonfriable ACM involved but will not be removed:  Amount of Cat. 1 & Il nonfriable ACM involved but will not be removed:  Amount of Cat. 1 & Il nonfriable ACM involved but will not be removed:  Amount of Cat. 1 & Il nonfriable ACM involved but will not be removed:  Amount of Cat. 1 & Il nonfriable ACM involved but will not be removed:  Amount of Cat. 1 & Il nonfriable ACM involved but will not be removed:  Amount of Cat. 1 & Il nonfriable ACM involved but will not be removed:  Amount of Cat. 1 & Il nonfriable ACM involved but will not be removed:  Amount of Cat. 1 & Il nonfriable ACM involved but will not be removed:  Amount of Cat. 1 & Il nonfriable ACM involved but will not be removed:  Amount of Cat. 1 & Il nonfriable ACM involved but will not be removed:  Amount of Cat. 1 & Il nonfriable ACM involved but will not be removed:  Amount of Cat. 1 & Il nonfriable ACM involved but will not be removed:  Amount of Cat. 1 & Il nonfriable ACM involved but will not be removed:  Amount of Cat. 1 & Il nonfriable ACM involved but will not be removed:  Amount of Cat. 1 & Il nonfriable ACM involved but will not be removed:  Amount of Cat. 1 & Il nonfriable ACM involved but will not be removed:  Amount of Cat. 1 & Il nonfriable ACM involved but will not removed but will not be removed:  Amount of Cat. 2 in nonfriable ACM involved but will not removed but will not removed but	Address			& demo/reno methods.
Contact Person	City	State	diZ	
StateStateZip	Phone	Contact Person		
State Zip Amount of Cat. 1 & II nonfriable ACM involved but will not be removed:    Contact Person	Owner			Description of affected facility components
State   Zip   Asbestos detection technique	Address			
t Location  Location  Location  State Zip  Affected Total Size of Facility or Affected Part (sq.ft.)  Describe physical characteristics that make it nonfriable and metho to keep it nonfriable (optional):  Describe physical characteristics that make it nonfriable and metho to keep it nonfriable (optional):  Describe physical characteristics that make it nonfriable and metho to keep it nonfriable ACM become friable additional ACM be uncovered during renovation/ demolition:  CCT DATES:  End Removal  Regulated ACM  Category II  Address  City	City	State	diZ	Asbestos detection technique
est Location  essState	Phone	Contact Person		Amount of Cat. I & II nonfriable ACM involved but will not be remo
Pescribe physical characteristics that make it nonfriable and metho  ity Age (yrs.) Size of Facility or Affected Part (sq.ft.)  ors Affected Present and Prior Use of Facility Ordered Demolition Describe contingency plan should nonfriable ACM be uncovered during renovation/ demolition.  Transporter Address City Demolition Describe contingency plan should nonfriable ACM become friable additional ACM be uncovered during renovation/ demolition.  Transporter Address City Demolition Describe Contingency plan should nonfriable additional ACM be uncovered during renovation/ demolition.  Transporter Address City Demolition Describe Contingency plan should nonfriable additional ACM be uncovered during renovation/ demolition.  Transporter Address City Demolition Describe contingency plan should nonfriable additional ACM be uncovered during renovation/ demolition.  Transporter Address City Demolition Describe contingency plan should nonfriable additional ACM be uncovered during renovation/ demolition.  Transporter Address City Demolition Describe contingency plan should nonfriable additional ACM be uncovered during renovation/ demolition.  Transporter Address City Demolition Describe contingency plan should nonfriable additional ACM be uncovered during renovation/ demolition.  Transporter Address City Demolition Describe contingency plan should nonfriable additional ACM become friable additional ACM become friab	Project Location			
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ility Describe <b>contingency plan</b> should nonfriable ACM become friable additional ACM be uncovered during renovation/ demolition:	City	State	diZ	to keep it nonfriable (optional):
ility Describe contingency plan should nonfriable ACM become friable additional ACM be uncovered during renovation/ demolition:	Facility Age (yrs.)	Size of Facility or Affer	cted Part (sq.ft.)	
additional ACM be uncovered during renovation/ demolition:  Transporter  Address  City  Phone  Disposal Site  Address  City  City  City  Disposal Site  Address  City  C	#Floors Affected	Present and Prior L	Jse of Facility	Describe contingency plan should nonfriable ACM become frie
Long-term	PE OF PROJECT (CHECK	ONLY ONE):		additional ACM be uncovered during renovation/ demolition:
End Removal	enovation Demolition Or	Irdered Demolition		
End Removal         Address           End Renovation/Demolition         City           State         State           Phone         Disposal Site           Category II         Address           Category II         Address           City         City	PROJECT DATES:			Transporter
End Renovation/Demolition	Start Removal	End Remov	al	Address
Category II Category I Address Address City City State	Start Renovation/Demolition	End Renovat	ion/Demolition	State
Category II Category I Address AcM nonfriable ACM City State	mount of ACM to be Remov	ved:		Phone_
Category II Category I Address Address City State		_	_	Disposal Site
nontriable ACM nontriable ACM City State	Regulated ACM	Category II	Category I	Address
	(RACM)	nonfriable ACM	nonfriable ACM	State

# Contract ID: 255372 Page 38 of 147

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

Linear Feet Square Feet Cubic

for strictly non-friable work)

Company Name: Submitted by:

# 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**

Contract ID: 255372

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Rev. 01/2016 Page 1 of 1

$\boxtimes$	Original		Re-C	ertificatio	n	RIGHT O	F WAY CERTIFICATI	ON
	ITEM	#			COUNTY	PROJE	CT # (STATE)	PROJECT # (FEDERAL)
01-10224.00		Graves		1100 FD55 1	21 9414002R			
PROJECT DESCRIPTION								
	Kentucky Bridge Program - 042C00050N - Beech Grove Road over Mayfield Creek Bridge Replacement					ment		
Const	No Additional Right of Way Required  Construction will be within the limits of the existing right of way. The right of way was acquired in accordance to FHWA regulations							
unde	under the Uniform Relocation Assistance and Real Property Acquisitions Policy Act of 1970, as amended. No additional right of way or							
reloca	relocation assistance were required for this project.							
Condition # 1 (Additional Right of Way Required and Cleared)								
All necessary right of way, including control of access rights when applicable, have been acquired including legal and physical possession.								
			-	-			•	ne improvements remaining
	on the right-of-way, but all occupants have vacated the lands and improvements, and KYTC has physical possession and the rights to remove, salvage, or demolish all improvements and enter on all land. Just Compensation has been paid or deposited with the court. All							
	_			-			•	displaced persons adequate
					the provisions of the curre			asplaced persons adequate
亡					of Way Required with E			
The ri							-of-way required for t	he proper execution of the
proje	The right of way has not been fully acquired, the right to occupy and to use all rights-of-way required for the proper execution of the project has been acquired. Some parcels may be pending in court and on other parcels full legal possession has not been obtained, but							
right of entry has been obtained, the occupants of all lands and improvements have vacated, and KYTC has physical possession and right								
to remove, salvage, or demolish all improvements. Just Compensation has been paid or deposited with the court for most parcels. Just								
Compensation for all pending parcels will be paid or deposited with the court prior to AWARD of construction contract								
Condition # 3 (Additional Right of Way Required with Exception)  The acquisition or right of occupancy and use of a few remaining parcels are not complete and/or some parcels still have occupants. All								
	-	_		-	= :			-
				-	ent housing made available project for hids and to pro			
requesting authorization to advertise this project for bids and to proceed with bid letting even though the necessary right of way will not be fully acquired, and/or some occupants will not be relocated, and/or the just compensation will not be paid or deposited with the								
court for some parcels until after bid letting. KYTC will fully meet all the requirements outlined in 23 CFR 635.309(c)(3) and 49 CFR								
24.102(j) and will expedite completion of all acquisitions, relocations, and full payments after bid letting and prior to								
AWARD of the construction contract or force account construction.								
Total Number of Parcels on Project 3			EXCEPTION (S) Parcel #	ANTICI	PATED DATE OF POSSESSIO	N WITH EXPLANATION		
Number of Parcels That Have Been Acquir Signed Deed								
	Deed mnation			0				
Signed				0				
Notes/ Comments ( <u>Text is limited</u> . Use additional sheet if necessary.)								
· ·	LPA RW Project Manager Right of Way Supervisor							
	ed Name					Printed Name	Mark Mar	k C. Askin P.E.
Sig	nature					Signature	Askin, P.E. Date:	n=Mark Askin, P.E., c=US, mark.askin@strand.com
	Date					Date	ASKIII, F.L. Date:	12/20/24 12/20/24
	<u>.</u>	Righ	nt of W	Vay Direct	or		FHWA	
Print	ed Name			Dean N	1. Loy	Printed Name		
Sig	nature		$\Lambda\Lambda$		Digitally signed by DM Loy Date: 2024.12.20 11:01:52	Signature		
	Date			$\mathbf{L} \mathbf{V} \mathbf{V} \mathbf{V}$	-05'00'	Date		

# UTILITIES AND RAIL CERTIFICATION NOTE

Graves County FD55 042 (121) 94140 02U

Mile point: 2.870 TO 2.890

BRIDGE REPLACEMENT ON BEECH GROVE ROAD (CR-1170) OVER MAYFIELD CREEK IN

GRAVES COUNTY. 042C00050N ITEM NUMBER: 01-10224.00

## **PROJECT NOTES ON UTILITIES**

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)

# UTILITIES AND RAIL CERTIFICATION NOTE

Graves County FD55 042 (121) 94140 02U

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GRAVES COUNTY. 042C00050N ITEM NUMBER: 01-10224.00

have been determined using data garnered by varied means and with varying degrees of accuracy: from the facility owners, a result of S.U.E., field inspections, and/or reviews of record drawings. The facilities defined may not be inclusive of all utilities in the project scope and are not Level A quality, unless specified as such. It is the contractor's responsibility to verify all utilities and their respective locations before excavating.

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

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

# **UTILITIES AND RAIL CERTIFICATION NOTE**

Graves County FD55 042 (121) 94140 02U

Mile point: 2.870 TO 2.890

BRIDGE REPLACEMENT ON BEECH GROVE ROAD (CR-1170) OVER MAYFIELD CREEK IN

GRAVES COUNTY. 042C00050N ITEM NUMBER: 01-10224.00

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

West Kentucky & Tennessee Telecommunications Coop - Telephone

West Kentucky RECC - Electric

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

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

Not Applicable

# **UTILITIES AND RAIL CERTIFICATION NOTE**

Graves County FD55 042 (121) 94140 02U

Mile point: 2.870 TO 2.890

BRIDGE REPLACEMENT ON BEECH GROVE ROAD (CR-1170) OVER MAYFIELD CREEK IN

GRAVES COUNTY. 042C00050N ITEM NUMBER: 01-10224.00

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

Not Applicable

THE FOLLOWING FACILITY OWNERS HAVE FACILITIES TO BE RELOCATED/ADJUSTED

BY THE ROAD CONTRACTOR AS INCLUDED IN THIS CONTRACT

Not Applicable

RAIL COMPANIES HAVE FACILITIES IN CONJUNCTION WITH THIS PROJECT AS NOTED

☑ No Rail Involvement ☐ Rail Involved ☐ Rail Adjacent

# **UTILITIES AND RAIL CERTIFICATION NOTE**

Graves County FD55 042 (121) 94140 02U

Mile point: 2.870 TO 2.890

BRIDGE REPLACEMENT ON BEECH GROVE ROAD (CR-1170) OVER MAYFIELD CREEK IN

**GRAVES COUNTY. 042C00050N ITEM NUMBER: 01-10224.00** 

# **UTILITIES AND RAIL CERTIFICATION NOTE**

Graves County FD55 042 (121) 94140 02U

Mile point: 2.870 TO 2.890

BRIDGE REPLACEMENT ON BEECH GROVE ROAD (CR-1170) OVER MAYFIELD CREEK IN

GRAVES COUNTY. 042C00050N ITEM NUMBER: 01-10224.00

# **AREA FACILITY OWNER CONTACT LIST**

Facility Owner	Address	Contact	Phone	Email
		Name		
West Kentucky & Tennessee	100 WK&T	Tim	2708561878	tmerrick.wk@wk.net
Telecommunications Coop -	Technology Drive	Merrick		
Telephone	Hickory KY			
	42051			
West Kentucky RECC -	1218 West	Milton	2707051295	mjones@wkrecc.com
Electric	Broadway	Jones		
	Mayfield KY			
	42006			

# **SPECIAL NOTE**

# For Compliance with KDOW WQC

County: Graves

Item No: 1-102246

Bridge No: 042C00050N

Permit AI No: 183020

It is the responsibility of the contractor and KYTC to read and comply with all conditions the KDOW issued permit. The following are highlighted conditions unique to this bridge:

- Notify KYTC DEA with the attached form, so they can notify KDOW at least 2 weeks before start of construction (KDOW WQC Condition S-1)
- Notify KYTC DEA with the attached form, so they can notify KDOW no later than 2 weeks after substantial completion of construction (KDOW WQC Condition S-2)
- Submit as-built drawing to KYTC DEA within 90 days of substantial completion so they can submit them to KDOW (KDOW WQC Condition S-3)
- No instream construction during the fish spawning season of **April 1 June 30** (KDOW WQC Condition T-4)

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.

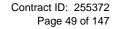
# CONSTRUCTION REPORT PER KDOW PERMIT

The Contactor will notify the Kentucky Transportation Cabinet Division of Environmental Analysis (KYTC DEA), twenty-eight (28) calendar days prior to mobilization to the site by sending the *Notice of Mobilization* (attached) to **David Harmon** Dave.Harmon@ky.gov (502) 782-5016, and **Andrew Logsdon** Andrew.Logsdon@ky.gov (502) 782-5021, with a copy to the project's Section Engineer.

CID Number:	DOW Al Number: <u>183020</u>
Bridge Number: <u>042C00050N</u>	KYTC Item Number: <u>1-10224</u>
Route: <u>Beech Grove Road</u>	County: <u>Graves</u>
Date:	Contractor:
This Form must be submitted at the Initial Mob check the appropriate submittal type:	ilization, and at the project completion. Please
Submittal Type:Notice of Mobilization	_Notice of Completion
1 - Sediment and erosion control measures utili streams/wetlands, and descriptions of in-stream	·
access in the stream, restoration of areas used tree planting, bank armoring and erosion contr	ies, i.e., restoration of work pads and construction for temporary diversions, bank restoration and ol measures implemented. Note if any sediment of pre- and post-construction with an emphasis on oject.):

3 - Attach As-Built Drawings, i.e., redline drawings, photos (complete at end of project), and

description of restoration work completed.





Andy Beshear GOVERNOR

# **ENERGY AND ENVIRONMENT CABINET**

# DEPARTMENT FOR ENVIRONMENTAL PROTECTION

300 Sower Boulevard Frankfort, Kentucky 40601 Phone: (502) 564-2150 Fax: 502-564-4245

August 21, 2024

Rebecca W. Goodman
SECRETARY

Anthony R. Hatton
COMMISSIONER

Danny Peake Kentucky Transportation Cabinet (KYTC) 200 Mero St Frankfort, KY 40622

Re: §401 Water Quality Certification

Beech Grove Road Bridge - Graves Co

Beech Grove Road Bridge Replacement Project

WOC No: WOC2024-135-1

AI No.: 183020; Activity ID: APE20240001

KYTC Item No.: 1-10224

Mayfield Creek

Graves County, Kentucky

Dear Mr. Peake:

Pursuant to Section 401 of the Clean Water Act (CWA) and 40 CFR 121.7(c), the Commonwealth of Kentucky certifies it has reasonable assurances that applicable water quality standards under Kentucky Administrative Regulations Title 401, Chapter 10, established pursuant to Sections 301, 302, 303, 304, 306, and 307 of the CWA, will not be violated by the above referenced project provided that the U.S. Army Corps of Engineers authorizes the activity under a federal license or permit, and the attached conditions are met.

Other permits from the Division of Water may be required for this activity. Projects that disturb one acre or more of land or is part of a larger common plan of development or sale that will ultimately disturb one acre or more of land require a Kentucky Pollution Discharge Elimination System (KPDES) Stormwater Permit; contact the Surface Water Permits Branch (502-564-3410 or SWPBSupport@ky.gov). A Groundwater Protection Plan is required if activities listed in Section 2(2) of 401 KAR 5:037 are conducted. A Water Withdrawal Application is required for activities proposing raw water withdrawals of 10,000 gallons per day or more; contact the Watershed Management Branch (502-564-3410).

All future correspondence on this project must reference AI No. 183020. The attached document is your official Water Quality Certification; please read it carefully. Please contact Bryan Killian by phone at 502-782-4695 or email at bryan.killian@ky.gov if you have any questions.



Sincerely,

Samantha Vogeler, Supervisor

Water Quality Certification Section Kentucky Division of Water

Samantha Vogeler

SV:BK

Attachment

cc: Emma Priger, KYTC: Frankfort (via email: emma.priger@ky.gov)

Andrew Logsdon, KYTC: Frankfort (via email: Andrew.Logsdon@ky.gov)

Dave Harmon, KYTC: Frankfort (via email: Dave.Harmon@ky.gov)

Memphis District: CEMVMRegulatory@usace.army.mil

Jana Day, RES: (via email: jday@res.us)

Richard Clausen, RES: (via email: rclausen@res.us) Tom Springer, QK4: (via email: tspringer@qk4.com)

Lee Andrews, USFWS: Frankfort (via email: kentuckyes@fws.gov)

Madeline Traylor, Paducah Regional Office (via email: madeline.traylor@ky.gov) Rhonda Lamb, Four Rivers Basin Coordinator (via email: rlamb@murraystate.edu)

# **KTC Water Quality Certification**

Beech Grove Road Bridge - Graves Co

Facility Requirements
Permit Number: WQC2024-135-1
Activity ID No.:APE20240001

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# ACTV000000001 (AI 183020 - Beech Grove Road Bridge) KYTC Bridge Replacement:

# **Submittal/Action Requirements:**

S-3	S-2	S-1	Condition No.
KYTC shall submit as-built drawings within 90 days after substantial completion of construction to the Water Quality Certification Section Project Manager or Supervisor. This condition is necessary to monitor the aquatic resources, minimize impact to aquatic resources, protect the use and designation of resources, allow more effective and efficient control practices, identify changes and conditions in ecological systems as a result of activities, and to warn of emergency conditions. [401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]	KYTC shall notify the Water Quality Certification Project Manager or Supervisor of substantial completion of construction no later than two weeks post-construction. This condition is necessary for the Division of Water to be informed of the ongoing activity for the purposes of site visits to ensure implementation of Kentucky Regulatory Statutes and Administrative Regulations; the Division will monitor the environment, minimize impact to aquatic resources, protect the use and designation of resources, allow more effective and efficient control practices, identify changes and conditions in ecological systems as a result of activities, and to warn of emergency conditions. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]	The Kentucky Transportation Cabinet shall notify the Water Quality Certification Project Manager or Supervisor of the scheduled start of construction activities at least two weeks before the start of construction. This condition is necessary for the Division of Water to be informed of the ongoing activity for the purposes of site visits to ensure implementation of Kentucky Regulatory Statutes and Administrative Regulations; the Division will monitor the environment, minimize impact to aquatic resources, protect the use and designation of resources, allow more effective and efficient control practices, identify changes and conditions in ecological systems as a result of activities, and to warn of emergency conditions. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]	Condition

# Narrative Requirements:

- Replacement of existing bridge over Mayfield Creek along Beech Grove Road (CR -1170) in Graves County  - The new bridge will be constructed in a similar location with current geometrics (bridge width, length, hydraulic opening, etc.)  - 40 linear feet of permanent impacts to perennial streams for banks stabilization  - 115 linear feet of temporary impacts to perennial streams for work had construction
1

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# **KTC Water Quality Certification**

Beech Grove Road Bridge - Graves Co **Facility Requirements** 

Permit Number: WQC2024-135-1 Activity ID No.:APE20240001

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# ACTV0000000001 (AI 183020 - Beech Grove Road Bridge) KYTC Bridge Replacement:

# **Narrative Requirements:**

Condition No.	Condition
T-2	All work performed under this certification shall adhere to the design and specifications set forth in the following document(s):  - Application for Permit to Construct Across or Along a Stream and/or Water Quality Certification received on 7/9/2024  - Pre-file Meeting Request received on 7/9/2024  - Certification Request received on 7/22/2024  - Beech Grove Rd Bridge Replacement.msg  - FINAL Request for IWQC 042C00050N_Graves_1-10224_20240709.pdf  - ky-bat-240711b01-ai183020.pdf  - NOD #1 Beech Grove Road Bridge.pdf  - Species List_Kentucky Ecological Services Field Office (14).pdf  - Response - NOD #1 Beech Grove Road Bridge.pdf  This condition is necessary to confirm activities approved by this certification. [401 KAR 10:030 Section 1, 401 KAR 9:010 Section 1(a)(2), KRS 224.10-100, KRS 224.70-110]
T-3	KYTC is responsible for preventing degradation of waters of the Commonwealth from soil erosion. An erosion and sediment control plan must be designed, implemented, and maintained in effective operating condition at all times during construction. This condition is necessary to prevent and minimize objectionable deposits and pollution and protect the use of the stream. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-4	No in-stream operations or activities shall be conducted during fish spawning season (April 1 through June 30), due to the potential impacts of increased sediment load and associated water quality and designated aquatic habitat impacts. This condition is necessary to monitor the aquatic resources, minimize impact to aquatic resources, protect the use and designation of resources, allow more effective and efficient control practices, identify changes and conditions in ecological systems as a result of activities, and to warn of emergency conditions. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 4(1)(c,h), KRS 224.10-100, KRS 224.70-110]
T-5	Heavy equipment (e.g. bulldozers, backhoes, draglines, etc.), if required for this project, should not be used or operated within the stream channel. In those instances where such instream work is unavoidable, then it shall be performed in such a manner and duration as to minimize re-suspension of sediments and disturbance to the channel, banks, or riparian vegetation. This condition is necessary to prevent and minimize objectionable deposits and pollution and protect the use of the stream. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
GRAVES COUNTY STP BRZ 9030 (491)	Erosion and sediment pollution control plans and Best Management Practices 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. This condition is necessary to prevent and minimize objectionable deposits and pollution and protect the use of the stream. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]

KTC Water Quality Certification
Beech Grove Road Bridge - Graves Co Permit Number: WQC2024-135-1 **Facility Requirements** 

Activity ID No.:APE20240001

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# ACTV000000001 (AI 183020 - Beech Grove Road Bridge) KYTC Bridge Replacement:

# **Narrative Requirements:**

Condition No.	Condition
T-7	Remove all sediment and erosion control measures after re-vegetation has become well-established. This condition is necessary to prevent and minimize objectionable deposits and pollution and protect the use of the stream. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-8	Any fill or riprap shall be of a composition that shall not cause violations of water quality standards by adversely affecting the biological, chemical, or physical properties of waters of the Commonwealth. If riprap is used, it shall be of a weight and size that bank stress or slump conditions shall not occur. This condition is necessary to prevent and minimize objectionable deposits and pollution and protect the use of the stream. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
Т-9	Sediment and erosion control measures (e.g., check-dams, silt fencing, or hay bales) shall not be placed within surface waters of the Commonwealth, 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, placement shall not be conducted in such a manner that may cause instability of streams that are adjacent to, upstream, or downstream of the structures. All sediment and erosion control measures shall be removed and the natural grade restored prior to withdrawal from the site. This condition is necessary to prevent and minimize objectionable deposits and pollution and protect the use of the stream. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-10	Measures shall be taken to prevent or control spills of fuels, lubricants, or other toxic materials used in construction from entering the watercourse. This condition is necessary to prevent water pollution as prohibited by statute. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-11	To the maximum extent practicable, all in-stream work under this certification shall be performed during low flow. This condition is necessary to prevent and minimize objectionable deposits and pollution and protect the use of the stream. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
T-12	Removal of existing riparian vegetation shall be restricted to the minimum necessary for project construction. This condition is necessary to minimize negative effects to the environment, protect the use of the stream, and protect aquatic resources. [401 KAR 10:030 Section 1, 401 KAR 10:031 Section 2(1)(a), KRS 224.10-100, KRS 224.70-110]
7-13	Should stream pollution, 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 800/564-2380. This condition is necessary to monitor the aquatic resources, minimize inspact to aquatic resources, protect the use and designation of resources, allow more effective and efficient control practices, identify changes and conditions in the fact that th
30 (4	KRS 224.70-110]

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KTC Water Quality Certification
Beech Grove Road Bridge - Graves Co **Facility Requirements** 

Permit Number: WQC2024-135-1 Activity ID No.:APE20240001

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# ACTV000000001 (AI 183020 - Beech Grove Road Bridge) KYTC Bridge Replacement:

# Narrative Requirements:

Condition No.
T-14
T-15
T-16

Kentucky Transportation Cabinet Project:

# NOTICE

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

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

PROJECT DESCRIPTION: Bridge Replacement

Beech Grove Road over Mayfield Creek

**Graves County, KY** 

**KYTC Item No.: 1-10224** 

The Sections 404 and 401 activities for this project have previously been permitted under the authority of the Department of the Army, Section 404 Nationwide Permit Number 3, *Maintenance Projects* (with additional *Kentucky Regional General Conditions*), and the Kentucky Division of Water, Section 401 General Water Quality Certification. For these authorized permits to be valid, the attached conditions must be followed. The contractor shall post a copy of this Nationwide Permit Number 3 and General Water Quality Certification in a conspicuous location at the project site, with unencumbered public access, for the duration of construction and comply with the general conditions required.

Kentucky Transportation Cabinet Project:

# **Locations Impacting Water Quality**

Station-Location	Description
Bridge ID:	The project will involve replacement of a previously authorized,
	currently serviceable structure. The project will entail rehabbing or
042C00050N	replacing the existing bridge and constructing a new bridge in the
	same general location and generally matching the current geometrics
	(bridges width, length, hydraulic openings, etc.). The project may
	involve the removal of debris and/or sediment.

This project involves work near and/or within Jurisdictional Waters of the United States as defined by the U. S. Army Corps of Engineers; therefore, requiring a Nationwide Number 3 General Section 404 permit. The Division of Water conditionally certified this General Permit. Importantly, one of those conditions regards the use of heavy equipment in any stream channel, or streambed. If there is need to cross the stream channel with heavy equipment, or conduct work within the stream channel, a work platform or temporary crossing, is authorized. This should be constructed with clean rock and sufficient pipe to allow stream flow to continue, unimpeded. Other conditions may be found under the heading, *General Certification—Nationwide Permit # 3 Maintenance Projects*.

In order for this authorization to be valid, the attached conditions must be followed. The contractor shall post a copy of this Nationwide Permit Number 3 Approval in a conspicuous location at the project site, for the duration of the construction, and comply with the general conditions as required.

To more readily 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. If such changes necessitate further permitting, then the contractor will be responsible for applying to the U. S. Army Corps of Engineers and the Kentucky Division of Water. A copy of any request to the Corps of Engineers or Division of Water to alter this proposal and subsequent responses shall be forwarded to the Division of Environmental Analysis, DA Permit Coordinator, for office records and for informational purposes.

 GRAVES COUNTY
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# 2021 Nationwide Permit Summary

US Army Corps of Engineers Louisville District ® Issued: February 25, 2022 Expires: March 14, 2026

## No. 3. Maintenance

(NWP Final Rule, 86 FR 73522)

(a) The repair, rehabilitation, or replacement of any previously authorized, currently serviceable structure or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3, provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification. Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, requirements regulatory agencies, or current construction codes or safety standards that are necessary to make the repair, rehabilitation, or replacement are authorized. This NWP also authorizes the removal of previously authorized structures or fills. Any stream channel modification is limited to the minimum necessary for the repair, rehabilitation, or replacement of the structure or fill; such modifications, including the removal of material from the stream channel, must be immediately adjacent to the project. This NWP also authorizes the removal of accumulated sediment and debris within, and in the immediate vicinity of, the structure or fill. This NWP also authorizes the repair, rehabilitation, or replacement of those structures or fills destroyed or damaged by storms, floods, fire or other discrete events, provided the repair, rehabilitation, or replacement is commenced, or is under contract to commence, within two years of the date of their destruction or damage. In cases of catastrophic events, such as hurricanes or tornadoes, this two-year limit may be waived by the district engineer, provided the permittee can demonstrate funding, contract, or other similar delays.

(b) This NWP also authorizes the

removal of accumulated sediments and debris outside the immediate vicinity of existing structures (e.g., bridges, culverted road crossings, water intake structures, etc.). The removal of sediment is limited to the minimum necessary to restore the waterway in the vicinity of the structure to the approximate dimensions that existed when the structure was built, but cannot extend farther than 200 feet in any direction from the structure. This 200 foot limit does not apply to maintenance dredging to remove accumulated sediments blocking or restricting outfall and intake structures or to maintenance dredging to remove accumulated sediments from canals associated with outfall intake structures. All dredged or excavated materials must be deposited and retained in an area that has no waters of the United States unless otherwise specifically approved by the district engineer under separate authorization.

(c) This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the maintenance activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum practicable, when temporary structures, work, and discharges of dredged or fill material, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. After conducting the maintenance activity, temporary fills must be removed in their entirety and the affected areas returned to pre- construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

(d) This NWP does not authorize

maintenance dredging for the primary purpose of navigation. This NWP does not authorize beach restoration. This NWP does not authorize new stream channelization or stream relocation projects.

Notification: For activities authorized by paragraph (b) of this NWP, the permittee must submit a preconstruction notification to the district engineer prior to commencing the activity (see general condition 32). The preconstruction notification must include information regarding the original design capacities and configurations of the outfalls, intakes, small impoundments, and canals. (Authorities: Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act (Sections 10 and 404)).

**Note:** This NWP authorizes the repair, rehabilitation, or replacement of any previously authorized structure or fill that does not qualify for the Clean Water Act Section 404(f) exemption for maintenance.

## **Nationwide Permit General Conditions**

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is

currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

- 1. <u>Navigation</u>. (a) No activity may cause more than a minimal adverse effect on navigation.
- (b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.
- (c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his or her authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
- 2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.
- 3. <u>Spawning Areas</u>. Activities in spawning areas during spawning seasons must be

avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

- 4. <u>Migratory Bird Breeding Areas</u>. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.
- 5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.
- 6. <u>Suitable Material</u>. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).
- 7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.
- 8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.
- 9. Management of Water Flows. To the maximum extent practicable, the preconstruction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high

flows. The activity may alter the preconstruction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

- 10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.
- 11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.
- 12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or noflow, or during low tides.
- 13. Removal of Temporary Structures and Fills. Temporary structures must be removed, to the maximum extent practicable, after their use has been discontinued. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.
- 14. <u>Proper Maintenance</u>. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.
- 15. <u>Single and Complete Project</u>. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.
- 16. <u>Wild and Scenic Rivers</u>. (a) No NWP activity may occur in a component of the National Wild and Scenic River System, or

in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal with direct management agency responsibility for such river, determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

- (b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. Permittees shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.
- (c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: http://www.rivers.gov/.
- 17. <u>Tribal Rights</u>. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.
- 18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify designated critical habitat or critical habitat proposed for such designation. No activity is authorized under

any NWP which "may affect" a listed species or critical habitat, unless ESA section 7 consultation addressing the consequences of the proposed activity on listed species or critical habitat has been completed. See 50 CFR 402.02 for the definition of "effects of the action" for the purposes of ESA section 7 consultation, as well as 50 CFR 402.17, which provides further explanation under ESA section 7 regarding "activities that are reasonably certain to occur" and "consequences caused by the proposed action."

- (b) Federal agencies should follow their own procedures for complying with the requirements of the ESA (see 33 CFR 330.4(f)(1)). If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.
- (c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat or critical habitat proposed for such designation, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation), the pre-construction notification must include the name(s) of the endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or that utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the

proposed activity. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. For activities where the non-Federal applicant has identified listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have "no effect" on listed species (or species proposed for listing or designated critical habitat (or critical habitat proposed for designation), or until ESA section 7 consultation or conference has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

- (d) As a result of formal or informal consultation or conference with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWPs.
- (e) Authorization of an activity by an NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the iurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

- (g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world wide web pages at http://www.fws.gov/ or http://www.fws.gov/ipac and http://www.nmfs.noaa.gov/pr/species/esa/respectively.
- 19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for ensuring that an action authorized by an NWP complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting the appropriate local office of the U.S. Fish and Wildlife Service to determine what measures, if any, are necessary or appropriate to reduce adverse effects to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and

Golden Eagle Protection Act for a particular activity.

- 20. <u>Historic Properties</u>. (a) No activity is authorized under any NWP which may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.
- (b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)(1)). If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.
- (c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing preconstruction notifications, district engineers will comply with the current

procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts commensurate with potential impacts, which may include background research, consultation, oral history interviews, sample field investigation, and/or field survev. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect.

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(d) Where the non-Federal applicant has identified historic properties on which the proposed NWP activity might have the potential to cause effects and has so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed. For nonfederal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete preconstruction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

- (e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has significantly intentionally adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.
- 21. Discovery of Previously Unknown Remains and Artifacts. Permittees that discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by an NWP, they must immediately notify the district engineer of what they have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
- 22. <u>Designated Critical Resource Waters</u>. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters

officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

- (a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, 52, 57 and 58 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.
- (b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed by permittees in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after she or he determines that the impacts to the critical resource waters will be no more than minimal.
- 23. <u>Mitigation</u>. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:
- (a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).
- (b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.
- (c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing

that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activityspecific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a caseby-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

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- (d) Compensatory mitigation at a minimum one-for-one ratio will be required for all losses of stream bed that exceed 3/100-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activityspecific waiver of this requirement. This compensatory mitigation requirement may be satisfied through the restoration or enhancement of riparian areas next to streams in accordance with paragraph (e) of this general condition. For losses of stream bed of 3/100-acre or less that require preconstruction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental Compensatory mitigation for effects. losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).
- (e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration maintenance/protection of riparian areas may be the only compensatory mitigation required. If restoring riparian areas involves planting vegetation, only native species should be planted. The width of the required riparian area will address

documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the provide wetland requirement to compensatory mitigation for wetland losses.

- (f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.
- (1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or inlieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.
- (2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f).)

- (3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permitteeresponsible mitigation.
- (4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)). If permittee-responsible mitigation is the proposed option, and the proposed compensatory mitigation site is located on land in which another federal agency holds an easement, the district engineer will coordinate with that federal agency to determine if proposed compensatory mitigation project is compatible with the terms of the easement.
- (5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan needs to address only the baseline conditions at the impact site and the number of credits to be provided (see 33 CFR 332.4(c)(1)(ii)).
- (6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).
- (g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any

- NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.
- (h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permitteeresponsible mitigation environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.
- (i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.
- 24. <u>Safety of Impoundment Structures</u>. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state or federal, dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly

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qualified persons, and appropriate modifications made to ensure safety.

- 25. Water Quality. (a) Where the certifying authority (state, authorized tribe, or EPA, as appropriate) has not previously certified compliance of an NWP with CWA section 401, a CWA section 401 water quality certification for the proposed discharge must be obtained or waived (see 33 CFR 330.4(c)). If the permittee cannot comply with all of the conditions of a water quality certification previously issued by certifying authority for the issuance of the NWP, then the permittee must obtain a water quality certification or waiver for the proposed discharge in order for the activity to be authorized by an NWP.
- (b) If the NWP activity requires preconstruction notification and the certifying authority has not previously certified compliance of an NWP with CWA section 401, the proposed discharge is not authorized by an NWP until water quality certification is obtained or waived. If the certifying authority issues a water quality certification for the proposed discharge, the permittee must submit a copy of the certification to the district engineer. The discharge is not authorized by an NWP until the district engineer has notified the permittee that the water quality certification requirement has been satisfied by the issuance of a water quality certification or a waiver.
- (c) The district engineer or certifying authority may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.
- 26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). If the permittee cannot comply with all of the conditions of a coastal zone management consistency concurrence previously issued by the state, then the permittee must obtain an individual coastal zone management consistency

- concurrence or presumption of concurrence in order for the activity to be authorized by an NWP. The district engineer or a state may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.
- 27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its CWA section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.
- 28. <u>Use of Multiple Nationwide Permits</u>. The use of more than one NWP for a single and complete project is authorized, subject to the following restrictions:
- (a) If only one of the NWPs used to authorize the single and complete project has a specified acreage limit, the acreage loss of waters of the United States cannot exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.
- (b) If one or more of the NWPs used to authorize the single and complete project has specified acreage limits, the acreage loss of waters of the United States authorized by those NWPs cannot exceed their respective specified acreage limits. For example, if a commercial development is constructed under NWP 39, and the single and complete project includes the filling of an upland ditch authorized by NWP 46, the maximum acreage loss of waters of the United States for the commercial development under NWP 39 cannot exceed 1/2-acre, and the total acreage loss of waters of United States due to the NWP 39 and 46 activities cannot exceed 1 acre.

- 29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:
- "When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

T. C.		
Transferee)		

- Compliance Certification. Each permittee who receives NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with NWP verification letter. The certification document will include:
- (a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

- (b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(1)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and
- (c) The signature of the permittee certifying the completion of the activity and mitigation.

The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

- 31. Activities Affecting Structures or Works Built by the United States. If an NWP activity also requires review by, or permission from, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a "USACE project"), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission and/or review is not authorized by an NWP until the appropriate Corps office issues the section 408 permission or completes its review to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.
- 32. <u>Pre-Construction Notification</u>. (a) *Timing*. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN

- complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:
- (1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or
- (2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

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- (1) Name, address and telephone numbers of the prospective permittee;
- (2) Location of the proposed activity;
- (3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;
- (4) (i) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures.
- (ii) For linear projects where one or more single and complete crossings require preconstruction notification, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters (including those single and complete crossings authorized by an NWP but do not require PCNs). This information will be used by the district engineer to evaluate the cumulative adverse environmental effects of the proposed linear project, and does not

change those non-PCN NWP activities into NWP PCNs.

- (iii) Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);
- (5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial and intermittent streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45-day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;
- (6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.
- (7) For non-federal permittees, if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat (or critical habitat proposed for such designation), the PCN must include the name(s) of those endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or utilize

- the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. For NWP activities that require preconstruction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;
- (8) For non-federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act;
- (9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the "study river" (see general condition 16); and
- (10) For an NWP activity that requires permission from, or review by, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from, or review by, the Corps office having jurisdiction over that USACE project.
- (c) Form of Pre-Construction Notification: The nationwide permit pre-construction notification form (Form ENG 6082) should be used for NWP PCNs. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

- (d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.
- (2) Agency coordination is required for: (i) all NWP activities that require preconstruction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iii) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.
- (3) When agency coordination is required, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or e-mail that they intend to substantive. site-specific provide comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure that the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided

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below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

- (4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.
- (5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

## D. District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the single and complete crossings of waters of the United States that require PCNs to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings of waters of the United States authorized by an NWP. If an applicant requests a waiver of an applicable limit, as provided for in NWPs 13, 36, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects.

- When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by an NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address sitespecific environmental concerns.
- 3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of
- waters. The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure that the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.
- 4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either: (a) that the activity does not qualify for authorization under the

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NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's submission of a mitigation plan would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

## E. Further Information

- 1. District engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
- 2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
- 3. NWPs do not grant any property rights or exclusive privileges.
- 4. NWPs do not authorize any injury to the property or rights of others.
- 5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).

## F. Nationwide Permit Definitions

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration (re-establishment rehabilitation), or establishment (creation), enhancement, and/or certain circumstances in preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate practicable avoidance minimization has been achieved.

<u>Currently serviceable</u>: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

<u>Direct effects</u>: Effects that are caused by the activity and occur at the same time and place.

<u>Discharge</u>: The term "discharge" means any discharge of dredged or fill material into waters of the United States.

Ecological reference: A model used to plan and design an aquatic habitat and riparian restoration, enhancement, establishment activity under NWP 27. An ecological reference may be based on the structure, functions, and dynamics of an aquatic habitat type or a riparian area type that currently exists in the region where the proposed NWP 27 activity is located. Alternatively, an ecological reference may be based on a conceptual model for the aquatic habitat type or riparian area type to be restored, enhanced, or established as a result of the proposed NWP 27 activity. An ecological reference takes into account the range of variation of the aquatic habitat type or riparian area type in the region.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource

function(s). Enhancement does not result in a gain in aquatic resource area.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

High Tide Line: The line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete non-linear project in the Corps Regulatory Program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other

phases were not built can be considered as separate single and complete projects with independent utility.

<u>Indirect effects</u>: Effects that are caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. The loss of stream bed includes the acres of stream bed that are permanently adversely affected by filling or excavation because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of United States is a threshold measurement of the impact to jurisdictional waters or wetlands for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to preconstruction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities that do not require Department of the Army authorization, such as activities eligible for exemptions under section 404(f) of the Clean Water Act, are not considered when calculating the loss of waters of the United States.

Navigable waters: Waters subject to section 10 of the Rivers and Harbors Act of 1899. These waters are defined at 33 CFR part 329.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of flowing or standing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of "open waters" include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: The term ordinary high water mark means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

<u>Perennial stream</u>: A perennial stream has surface water flowing continuously year-round during a typical year.

<u>Practicable</u>: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Preconstruction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A prenotification construction may voluntarily submitted in cases where preconstruction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

<u>Preservation</u>: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources

through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a course substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands next to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects riverine, lacustrine, estuarine, and marine waters with their adjacent wetlands, non-wetland waters, or uplands. Riparian areas provide a variety of

ecological functions and services and help improve or maintain local water quality. (See general condition 23.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete linear project: A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term "single and complete project" is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Single and complete non-linear project: For non-linear projects, the term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility (see definition of "independent utility"). Single and complete non-linear projects may not be "piecemealed" to avoid the limits in an NWP authorization.

<u>Stormwater management</u>: Stormwater management is the mechanism for controlling stormwater runoff for the

purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream's course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized jurisdictional stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

<u>Tidal wetland</u>: A tidal wetland is a jurisdictional wetland that is inundated by tidal waters. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line.

<u>Tribal lands</u>: Any lands title to which is either: 1) held in trust by the United States for the benefit of any Indian tribe or individual; or 2) held by any Indian tribe or individual subject to restrictions by the United States against alienation.

<u>Tribal rights</u>: Those rights legally accruing to a tribe or tribes by virtue of inherent sovereign authority, unextinguished aboriginal title, treaty, statute, judicial decisions, executive order or agreement, and that give rise to legally enforceable remedies.

<u>Vegetated shallows</u>: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWPs, a waterbody is a "water of the United States." If a wetland is adjacent to a waterbody determined to be a water of the United States, that waterbody and any adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)).



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



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# 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

- 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.



### Report of Geotechnical Exploration

Bridge ID: 042C00050N Beech Grove Road Over Mayfield Creek Graves County, Kentucky Item No. 1-10224

August 12, 2024

Prepared for:

Kentucky Transportation Cabinet Frankfort, Kentucky

Prepared by:

Stantec Consulting Services Lexington, Kentucky



Stantec Consulting Services Inc. 3052 Beaumont Centre Circle, Lexington KY 40513-1703

August 12, 2024

File: rpt\_001\_178568003\_042C00050N\_Updated

Attention: Ms. Catherine Dawahare, PE Stantec Consulting Services, Inc.

3052 Beaumont Centre Circle Lexington, Kentucky 40513-1703

Reference: Bridge ID: 042C00050N

Beech Grove Road Bridge over Mayfield Creek

**Graves County, Kentucky** 

Item No. 1-10224

Dear Catherine,

Stantec Consulting Services Inc. (Stantec) is submitting the geotechnical engineering report for the referenced structure with this letter.

This report presents results of the field exploration along with our recommendations for the design and construction for the referenced bridge replacement. As always, we enjoy collaborating with your staff and if we can be of further assistance, please contact our office.

Respectfully,

**Stantec Consulting Services Inc.** 

Darren Pleiman, PE Senior Project Engineer Phone: (513) 827-7837

Darren.Pleiman@stantec.com

Luis J. Arduz, PE Senior Associate

Phone: (859) 422-3051 Luis.Arduz@stantec.com

/lja

#### REPORT OF GEOTECHNICAL EXPLORATION

Introduction August 12, 2024

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#### REPORT OF GEOTECHNICAL EXPLORATION

Introduction August 12, 2024

#### 1.0 INTRODUCTION

The Kentucky Transportation Cabinet (KYTC) has initiated the Statewide Bridge Program Project Delivery (BPPD). The purpose of the program is to rehabilitate or replace bridges across the state. Bridges that have been identified as a part of the program are structures that are in a state of deterioration and have low load ratings that limit the movement of people and freight across the state.

This report addresses the geotechnical considerations for Bridge 042C00050N, Beech Grove Road (CR 1170) crossing Over Mayfield Creek, located in Graves County, Kentucky. The existing bridge is a 3-span structure supported by timber piles with an overall length of approximately 96 feet. The bridge location is presented in Figure 1 below.



Figure 1. Google Image showing Project Site.

Proposed bridge plans provided by the structural designer show the replacement bridge to consist of a new single span structure. The approximate overall length of the new bridge is approximately 84 feet. The plans also indicate that the new bridge will be located in the same place as the existing bridge. The foundations for the new approach spans are anticipated to consist of driven piles.



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#### REPORT OF GEOTECHNICAL EXPLORATION

Site Topography and Geologic Conditions August 12, 2024

#### 2.0 SITE TOPOGRAPHY AND GEOLOGIC CONDITIONS

The new bridge location is situated within the Jackson Purchase region of Kentucky that borders the Pennyroyal Region of Kentucky. The Jackson Purchase region has flat slopes mostly composed of alluvial flood plains and uplands. The windblown deposits from the Great Plains and local rivers created flood plains containing unconsolidated sediments that are vulnerable to erosion. The Beech Grove Road bridge over Mayfield Creek is located approximately 10 miles west of Murray and 11 miles southeast of Mayfield, Kentucky. Local relief in the area is less than 100 feet.

Available geologic mapping of the area is illustrated in the Geologic Map of the Kentucky Geological Survey, which indicates the bridge site is underlain by alluvial and continental deposits. In general, the alluvial soils consist of silt, clay, sand, and gravel while the continental soils consist of gravelly sand and sandy gravel.

Bedrock mapping suggests that the Clayton and McNairy Formations corresponding to the Cretaceous and Tertiary System underlies the alluvial and continental soil at depths in excess of 200 feet. The Clayton and McNairy Formations typically consists of fine white to moderate-reddish-brown quartz, clayey, micaceous, and iron stained.

Given the relative proximity of the site to the New Madrid Seismic area a Seismic Site Class evaluation was performed. No other detrimental geologic features are noted by the available mapping within the immediate vicinity of the proposed bridge replacement site.

#### 3.0 FIELD INVESTIGATION

A geotechnical exploration was conducted in March of 2024 which consisted of two subsurface borings, designated herein as 042C00050N-2001 and -2002, drilled near the ends of the existing bridge. The new bridge will replace the existing bridge along the existing alignment. The Bridging Kentucky TEAM obtained the boring locations and surface elevations. A site vicinity map showing the project location is presented in Appendix A. Table 1 provides a summary of the locations, elevations, and depths of the borings drilled for the proposed bridge replacement.

Table 1. Summary of Bridge Borings

					Conform	Bottor	n of Hole
Hole No.	Latitude	Longitude	Station	Offset	Surface Elevation (ft.) MSL	Depth (ft.)	Elevation (ft.) MSL
042C00050N- 2001	36.622463	-88.505608	5+00.8	1.1 ft, Rt	530.3	100	430.3
042C00050N- 2002	36.622060	-88.505614	3+53.9	0.6 ft, Lt	530.1	100	430.1



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#### REPORT OF GEOTECHNICAL EXPLORATION

Subsurface Conditions August 12, 2024

Note: Bedrock was not encountered in the borings.

The borings were performed with a track-mounted drill rig (CME-45C) equipped with hollow-stem augers, and an automatic hammer. The field personnel generally performed soil sampling at five-foot intervals to obtain in situ strength data and specimens for subsequent laboratory classification testing and natural moisture content determinations. Standard penetration testing (SPT) sampling was performed for this bridge replacement project.

#### 4.0 SUBSURFACE CONDITIONS

The borings were performed at the ends of the existing bridge. In general, the subsurface conditions consisted of low plasticity clays within the upper 15 to 20 feet of the profile. Below the overlying cohesive soils, varying deposits of silts and sands and gravels were encountered to the explored depth of 100 feet below the existing ground surface. Standard penetration tests (SPT) performed within the upper cohesive soil deposits resulted in N-values ranging from 10 to 13 blows per foot indicating stiff consistencies. A lone N-value of 0 was recorded in the overlying cohesive soils at a test interval from 10 feet to 11.5 feet below the ground surface in Hole No. 042C00050N-2002. SPT testing on granular soils resulted in N-values ranging from about 18 to over 50 blows per foot which suggests relative densities of medium dense to very dense. These soil deposits are consistent with the alluvial and continental deposits along the Mayfield Creek.

Based upon the site exploration and local geology, bedrock was not encountered in the borings to the depths explored.

Groundwater was encountered during drilling at a depth of about 45 feet below the existing ground surface (elevation 485). Groundwater can also be expected to be encountered near the level of Mayfield Creek. Groundwater levels and/or conditions may vary, with time, and according to the prevailing climate, rainfall, or other factors.

#### 5.0 LABORATORY TESTING AND RESULTS

Stantec performed laboratory testing on recovered soil samples from the borings. All laboratory tests were performed in accordance with the applicable American Association of State Highway and Transportation Officials (AASHTO) or Kentucky Methods for soil and rock testing specifications. Laboratory testing consisted of natural moisture content, grain size-sieve analyses (silt plus clay determinations), and soil classification index testing.

Within the upper 15 to 20 feet of the profile, soils classify as CL and CL-ML according to the Unified Soil Classification System and as A-4 based upon the AASHTO classification system. Soils tested below a depth of about 15 to 20 feet were typically classified as SM, SP-SM, SW-SM, GW,

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Engineering Analyses August 12, 2024

and GP-GC with a layer from about 50 to 60 feet of CL-ML and ML according to the Unified Soil Classification System and as A-4 based upon the AASHTO classification system.

Liquid limits of cohesive soils ranged from 17 to 26 percent. Moisture contents ranged from 4 to 26 percent. Specific results of the laboratory testing are also presented next to the graphical logs in Appendix B.

#### 6.0 ENGINEERING ANALYSES

#### 6.1 GENERAL

This project will consist of replacing the existing 3-span bridge with a new single span bridge on the existing alignment. Any grading requirements or material placement that may be needed should be placed at 2H:1V slopes or flatter. Foundation support for the new bridge is expected to consist of driven H-piles at the end bents. Deep foundations for this project will be designed using the Load and Resistance Factor Design (LRFD) methodology. LRFD is a design approach in which applicable failure and serviceability conditions can be evaluated considering the uncertainties associated with loads and materials resistances. Where applicable, the following engineering analyses followed the current KYTC and AASHTO LRFD guidelines.

#### 6.2 STEEL H-PILE ANALYSES

#### 6.2.1 Pile Capacity

Based upon geologic mapping the depth to bedrock in the area exceeds 200 feet. Therefore, friction piles consisting of driven steel H-piles could be used at the proposed end bent locations. As noted in Sections 3 and 4 of this report, foundation soils at the boring locations reached depths of 100 feet without encountering bedrock. It is anticipated that HP14x89 piles will be used to support the proposed structure. Due to the nature of the soil deposits and the subsurface conditions observed at the site, an axial structural resistance factor ( $\phi_c$ ) of 0.6 is recommended for good driving conditions as outlined in Section 6.5.4.2 of the current LRFD Design Specifications. Using  $\phi_c$  = 0.6, the estimated factored structural resistance for an HP14x89 is 783 kips. Based on discussions with the bridge designer, it is understood that the factored axial load per pile is 206 kips.

Stantec performed driven pile resistance calculations to estimate the nominal and factored resistances of piles that extend to a depth of approximately 90 feet below the provided bottom of cap elevations. The pile resistance calculations include the approximate lengths of piles that would be required to resist the provided loads at the end bents. The following table summarizes the estimated geotechnical resistances below the pile cap elevations provided.



#### REPORT OF GEOTECHNICAL EXPLORATION

Engineering Analyses August 12, 2024

Table 2. Summary of Driven Pile Resistances

Sub-Structure Location	Bottom of Cap Elevation (ft)	Depth (ft) <sup>a</sup>	Tip Elevation (ft)	Factored Geotechnical Axial Resistance (kips)	Total Factored Geotechnical Uplift Resistance (kips) <sup>b</sup>
End Bent 1	525.2	66.0	459.2	208.9	150.6
End Bent 2	525.2	66.0	459.2	207.6	154.2

 $<sup>^{</sup>f a}$  Depth as measured from the bottom of the pile cap.

The Designer should note that these estimates are for the factored geotechnical axial resistance for an HP114x89 at the respective substructure location. Resistances at higher elevations are also provided in the tables in Appendix D. Geotechnical axial resistances at depths deeper than 90 feet are not recommended without a deeper boring. Drivability limitations may dictate the final tip elevation and associated axial resistance. Additionally, should the elevation of the bottom of the pile cap change, pile lengths and elevations would no longer be valid and should be adjusted accordingly.

#### **6.2.2** Hammer Energy

Static pile analyses were conducted to estimate the nominal driving resistance that a 14-inch steel H-pile would experience during the installation process. Drivability analyses were performed at the bridge end bents. The analyses were performed using guidelines presented in the FHWA "Soils and Foundations Workshop Manual" and using the GRLWEAP (version 2014) computer program for driven steel H-piles.

The subsurface conditions at the end bents appear to be similar, consisting of low plasticity clays in the upper 15 feet to 20 feet and transitioning into coarse grained deposits with depth. The results of FHWA research and other literature regarding pile installation indicate that significant reductions in skin resistances occur during pile driving, primarily due to the dynamics of the installation process. Soils are remolded and pore water pressures apparently increase, causing reductions in shear strengths. The driving resistances were estimated under the condition that no interruptions, and therefore no pile "set" characteristics would be experienced during the driving process.

The drivability analyses were conducted using the GRLWEAP (Version 2014) computer program for steel H-piles driven to a depth of 66.0 feet below the bottom of pile cap elevation which corresponds to the Required Nominal Axial Resistance depth. To perform the drivability analyses, two situations were modeled. The first one involved determining the minimum hammer energy which would drive the H-piles to depth without excessive blows (<120 blow per foot). The second part of the analyses would determine what maximum hammer energy is needed to drive the piles to the required depths, with a minimum of about 30 blows per foot and without damage to the pile (compression stresses greater than 45 ksi). The 2016 FHWA publication titled "Design and Construction of Driven Pile Foundations – Volume I (FHWA-NHI-16-009)" defines a



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b Calculated uplift resistance for the corresponding pile length

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SEISMIC DESIGN CONSIDERATIONS August 12, 2024

reasonable range of hammer blows to be between 30 and 120 blows per foot for a steel H-pile. Where 120 blows per foot or 10 blows per inch is considered refusal driving conditions by many hammer manufacturers. The results of the drivability analyses indicate that a hammer with a minimum energy of about 40 foot-kips and a maximum energy of 85 foot-kips will be required to drive a 14x89 steel H-pile to the required depth without encountering excessive blow counts or damaging the pile.

#### 6.3 SCOUR CONSIDERATIONS AND ANALYSES

The soils encountered at the planned substructure element locations within the Mayfield Creek flood plain consist of shallow lean clays and silts with deeper deposits of silty sand and gravel. A soil's susceptibility to scour is commonly determined by analyzing its particles size distribution. A soil's " $D_{50}$ " and " $D_{95}$ " values, defined as the grain diameter (in millimeters) below which 50 percent and 95 percent of the sample is smaller, are used in analyses to predict the amount of scour that could occur in that soil for a given flow condition. Once the scour results have been completed, the pile cap, if applicable should be placed below the scour depth or the foundations should be designed to accommodate an unsupported length to the base of the scour zone. Values of  $D_{50}$  and  $D_{95}$  are presented adjacent to the boring logs on the Subsurface Data Sheets in Appendix B and may be used for applicable scour analyses to be performed by others.

#### 7.0 SEISMIC DESIGN CONSIDERATIONS

In accordance with guidelines provided by the KYTC Division of Structural Design manual, seismic design criteria were obtained from the Kentucky Transportation Center (KTC) Research Report KTC-07-07/SPR246-02-6F. This report contains ground-motion hazard maps from which seismic parameters for a maximum credible earthquake (MCE) can be estimated for bridge design. We understand that this bridge along Beech Grove Road is not considered to be a critical route and therefore a liquefaction analysis is not required.

Based on AASHTO Table 3.10.3.1-1 Site Class Definitions, Stantec conducted a review of the soil profile data for the borings completed for this exploration. In general, the soil profile over the explored depth of about 100 feet consists of a layer of cohesive soils (15 to 20 feet) overlying deep deposits of silt, sand, and gravel. The cohesive soils were typically soft to very stiff, while the granular soils were medium dense to very dense. Based on the analysis the bridge can be classified as **Site Class D**. Stantec used this site class designation to obtain the applicable site factors from the KTC report. Upon estimating the adjusted response parameters using the KTC seismic data, the resulting acceleration coefficient indicates that this bridge site may be designed (conservatively) within **Seismic Zone 4**.



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Foundation System Recommendations August 12, 2024

#### 8.0 FOUNDATION SYSTEM RECOMMENDATIONS

Stantec developed the following recommendations based upon reviews of available data, information obtained during the field exploration, results of laboratory testing and engineering analyses, and discussions with TEAM personnel.

#### 8.1 GENERAL

- 8.1.1 Foundation excavations should be properly braced/shored to provide adequate safety to people working in or around the excavations. Bracing should be performed in accordance with applicable federal, state, and local guidelines.
- 8.1.2 **A plan note should be included by the designer** that indicates that temporary shoring, sheeting, cofferdams, and/or dewatering methods may be required to facilitate foundation construction. It should be anticipated that groundwater will be encountered at foundation locations within the flood plain.

#### 8.2 STEEL H-PILE FOUNDATIONS

8.2.1 The following table provides recommended maximum pile lengths applicable at the referenced substructure element locations. It is estimated that 14x89 H-pile foundations are being planned for use in supporting the new bridge substructure elements. Bottom of pile cap elevations are at about 525.2.

Sub-Structure Location	Foundation Type	Factored Geotechnical Axial Resistance (kips)	Estimated Tip Elevation (ft) MSL	Approximate Maximum Pile Length <sup>a</sup> (ft)
End Bent 1	14x89 H-Piles	208.9	459.2	66
End Bent 2	14x89 H-Piles	207.2	459.2	66

Table 3. Summary of Pile Foundations

The Designer should note that these estimates are for the factored geotechnical axial resistance for an HP14x89 at the respective substructure locations. Resistances at higher elevations/lower resistances are also provided in the tables in Appendix D. Drivability limitations may dictate the final tip elevation and associated axial resistance.

8.2.2 **A plan note should be included by the designer** which states the following hammer criteria: A diesel pile driving hammer with a rated energy between 40 foot-kips and 85 foot-kips will be required to drive 14x89 steel H-piles to a depth of about 50 to 60 feet without encountering excessive blow counts or damaging the piles. The Contractor shall submit the proposed pile driving system to the Engineer for approval prior to the installation of the first pile.



a. Approximate Pile Length is from bottom of pile cap.

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Approval of the pile driving system by the Engineer will be subject to satisfactory field performance of the pile driving procedures.

- 8.2.3 The design and installation of the pile foundations should conform to current AASHTO LRFD Bridge Design Specifications, and Section 604 of the current edition of the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction.
- 8.2.4 The AASHTO LRFD Bridge Design Specifications recommend a resistance factor for horizontal geotechnical resistance of a single pile or pile group of 1.0 for lateral capacity analyses.
- 8.2.5 The 2020 AASHTO LRFD Bridge Design Specifications recommends axial resistance factors based on pile driving conditions (good or severe driving conditions). Based on the general subsurface conditions encountered across the project, it is anticipated that there will be good pile driving conditions.

Therefore, it is recommended that the axial resistance of piles in compression ( $\phi_c$ ) used in design be 0.60. Further, the combined axial and flexural resistance factors for design should be  $\phi_c$  = 0.70 and  $\phi_f$  = 1.00 as noted in Section 6.5.4.2 of the referenced AASHTO specifications.

8.2.6 It is recommended that a center-to-center pile spacing of no less than 2.5 pile diameters be used in the layout and design of the pile foundations.

#### 9.0 CLOSING

- 9.1 The conclusions and recommendations presented herein are based on data and subsurface conditions from the two borings performed for the geotechnical exploration using that degree of care and skill ordinarily exercised under similar circumstances by competent members of the engineering profession. No warranties can be made regarding the continuity of conditions between borings.
- 9.2 General soil descriptions and indicated boundaries are based on an engineering interpretation of all available subsurface information and may not necessarily reflect the actual variation in subsurface conditions between borings and samples.
- 9.3 The observed water levels and/or conditions indicated on the boring logs are as recorded at the time of exploration. These water levels and/or conditions may vary, with time, according to the prevailing climate, rainfall, tail water elevations or other factors and are otherwise dependent on the duration of and methods used in the exploration program.
- 9.4 Stantec exercised sound engineering judgment in preparing the subsurface information presented herein. This information has been prepared, is intended for design, and estimating purposes. Its presentation on the plans or elsewhere is for the purpose of providing intended users with access to the same information. This subsurface information interpretation is presented

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in good faith and is not intended as a substitute for independent interpretations or judgments of the Contractor.

9.5 All structure details shown herein are for illustrative purposes only and may not be indicative of the final design conditions shown in the contract plans.



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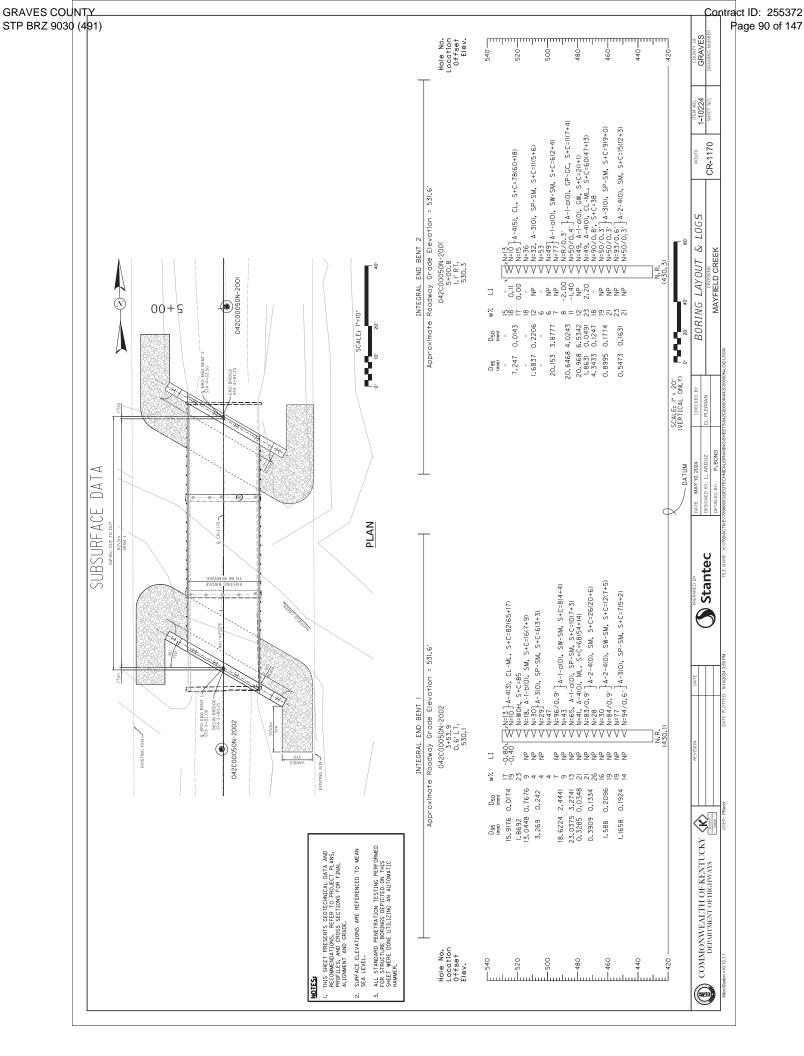
# APPENDIX A SITE MAP

Contract ID: 255372 Page 88 of 147 GRAVES COUNTY STP BRZ 9030 (491) CR-1170 LOCATION MAP CROSSING MAYFIELD CREEK DATA LOCATION MAP SUBSURFACE Stantec COMMONWEALTH OF KENTUCKY K
DEARTMENT OF HIGHWAYS

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## APPENDIX B SUBSURFACE DATA SHEETS



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# APPENDIX C COORDINATE SUBMISSION FORM

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

,	Claves	רמופ	1,20,402,0	
Road Number	Beech Grove Road over Mayfield Creek			
Survey Crew / Consultant	Stantec Consulting Services Inc.	Notes:		
Contact Person	Luis Arduz, PE			
Item #	1-10224			
Mars #				
Project #	178568003			
Elevation Datum	NAVD88			

HOLE	LATITUDE	LONGITUDE	HOLE	STATION	OFFSET	ELEVATION (ft)
NUMBER	(Decimal Degrees)	(Decimal Degrees)	NUMBER			
042C00050N- 2001	36.622463	-88.505608	042C00050N- 2001	5+00.8	1.1 ft, Rt	530.3
042C00050N- 2002	36.62206	-88.505614	042C00050N- 2002	3+53.9	0.6 ft, Lt	530.1

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# Appendix D DRIVEN PILES RESISTANCE TABLES

Steel H-Pile Capacities 042C00050N HP14x89 (50ksi steel)

۵	₩up Խn Total Factored	chnical	xtreme Uplift Resistance Static Analysis Method	(tons)	0.0	6.0	1.5	2:1	, 6 4	4.1	4.8	9.6 9.9	7.6	\ 6.6	11.2	12.6	15.7	17.4	21.1	23.1	25.2	29.7	32.2	34.8	40.3	43.2	46.2 49.3	52.5	55.8	53.2 62.6	66.1	69.7	7.6.7	80.3	87.3	90.9	97.9	101.5	108.5	112.1	119.1	122.7	129.7	133.3	140.3	143.9	150.9	158.0
•	Total F	Geotechnical	Extreme Upl Static Anal	(kips)	0.0	. 6.	3.0	2.4	ი. 4 დ	8.2	9.7	13.1	15.1	19.8	22.3	25.1	31.4	34.8	38.4 42.2	46.2	50.4	59.8 59.4	64.3	69.6	80.6	86.5	92.5 98.6	105.0	111.6	125.2	132.2	139.4	153.4	160.6	174.6	181.8	195.8	203.0	217.0	224.2	238.2	245.4	259.4	266.6	280.6	287.8	301.8	316.0
۵	thn ictored	hnical	esistance sis Method	(tons)	4.0	1.7	2.5	 	5.0	6.5	8.2	10.0 12.1	13.9	15.7 17.6	19.6	24.8	26.5	29.1	2. 8. 5. 7.	37.5	40.5	44.0 47.6	51.3	55.3	63.1	67.2	75.6	80.0	84.5	93.8	98.5	103.4	112.8	117.6	127.0	131.6	140.5	145.0	153.8	158.3	167.1	171.5	180.3	184.8	193.6	198.0	206.8	215.7
4	الاstat^n Total Factored	Geotechnical	Extreme Resistance Static Analysis Method	(kips)	0.7	. e.	5.0		- 6. 6 6	12.9	16.3	20.0 24.2	27.7	35.1	39.2	43.5 48.1	53.0	58.1	69.0	74.9	81.0	87.9 95.1	102.6	110.6	126.2	134.4	151.2	160.0	169.0	187.5	197.0	206.7	225.6	235.2 244 6	253.9	263.2	281.0	290.0	307.6	316.5	334.1	343.0 351.8	360.6	369.5	387.1	396.0 404.8	413.6	431.3
٥	Ψυριλη Total Factored	Geotechnical	Uplift Resistance Static Analysis Method	(tons)	0.0	0.3	0.5	0.7	. t.	1.3	7.5	2.5	3.3	ο <del>1</del> , ο ε.	6.4	5.5	6.9	7.6	9. 0.	10.1	11.0	13.0	14.1	15.2	17.6	18.9	20.2	23.0	24.4	27.4	28.9	30.5	33.6	35.1	38.2	39.8	42.8	44.4	47.5	49.0	52.1	53.7	56.8	58.3	61.4	62.9	66.0	69.1
€	Total F	Geote	Uplift Re Static Analy	(kips)	0.0	9.0	6.0	ر دن 1	2.1	2.6	3.0	5.7	9.9	8.6 8.6	9.8	11.0	13.7	15.2	1 6.6 4.8	20.2	22.1	24.0 26.0	28.1	30.5	35.3	37.8	40.5	46.0	48.8	54.8	67.9	61.0	67.1	70.2	76.4	79.5	85.7	88.8	95.0	98.1	104.2	107.3	113.5	116.6	122.8	125.9	132.1	138.3
۵	ification	sər	odified Gates)	(tons)	0.3	9:5	2.2	2.8	ა 4 ი დ	6.3	7.9	10.0	14.3	18.5	20.8	23.2	28.5	31.4	37.5	40.8	44.3	48.2 52.2	56.4	60.9	69.7	74.3	83.8	88.7	93.8	104.2	109.5	115.0	125.6	131.0	141.5	146.8	156.8	161.8	171.7	176.7	186.6	191.6	201.5	206.6	216.5	221.5	231.4	241.3
4	Field Verification	Values	(¢=0.4 FHWA Modified Gates)	(kips)	9.0	3.2	4.4	5.7	7: 6 8:6	12.6	15.8	19.9 24.6	28.6	32.6 36.9	41.5	46.4 51.5	57.0	62.8	75.0	81.7	88.5	96.3 104.4	112.8	121.8	139.4	148.6	158.0	177.4	187.5	208.4	219.0	230.0	251.2	262.0 272.6	283.1	293.5	313.5	323.7	343.5	353.5	373.3	383.3	403.1	413.1	423.0 432.9	442.9	462.7	472.7
	ctored	Geotechnical	sistance 0.45 in sand)	(tons)	0. c	0.6	6.0	<del>.</del> .	2.0	2.5	3.2	0.4 0.6	7.0	6.5 7.4	8.3	9.3	4.11	12.6	15.0	16.3	7.71	79.3 20.9	22.6	24.4	27.9	29.7	33.5	35.5	37.5	41.7	43.8	46.0 48.1	50.2	52.4 54.5	56.6	58.7	62.7	64.7	68.7	70.7	74.7	76.7	80.6	82.6	86.6 8.6	9.88	92.5	94.5 96.5
+	الابادية Total Factored	Static Geotechnica	Axial Resistance (¢=0.35 in clay; 0.45 in	(kips)	0.5		1.8	2.3	9 6. 6 6.	5.0	6.3	0 6 6	4.1.4	13.1	16.6	18.5 20.6	22.8	25.1	30.0	32.7	35.4	38.5 41.8	45.1	48.7	55.8 55.8	59.4	63.2 67.0	71.0	75.0	83.3	87.6	92.0 96.2	100.5	104.8	113.2	117.4	125.4	129.5	137.4	141.4	149.3	153.3	161.2	165.2	173.2	177.2	185.1	193.1
	ر ominal	hnical	istance	(tons)	4.0	7.1	2.5	3.3	5.0	6.5	8.2	10.0 12.1	13.9	15.7	19.6	21.8	26.5	29.1	34.5	37.5	40.5	44.0 47.6	51.3	55.3	63.1	67.2	75.6	80.0	84.5	- 83.69 03.8	98.5	103.4	112.8	117.6	127.0	131.6	140.5	145.0	153.8	158.3	167.1	171.5	180.3	184.8	193.6	198.0	206.8	215.7
	ר <sub>י</sub> ה Total Nominal	Geotechnica	Axial Resistance	(kips)	7.0	. e.	5.0	6.5	- o.	12.9	16.3	20.0 24.2	27.7	35.1	39.2	43.5	53.0	58.1	0.69 0.09	74.9	81.0	87.9 95.1	102.6	110.6	126.2	134.4	142.7	160.0	169.0	187.5	197.0	206.7	225.6	235.2	253.9	263.2	281.0	290.0	307.6	316.5	334.1	343.0 351.8	360.6	369.5	387.1	396.0 404.8	413.6	422.5
levation = 525.2 t		Nominal End	Bearing	(kips)	0.7	.0.	1.3	£. 4	ا ن 4	2.7	4.2	5.9	8.0	9.6 4.01	11.3	12.1	13.8	14.6	16.3 0.5	17.1	18.0	19.4 20.8	22.2	23.6	25.4	26.3	27.9	28.7	29.5	31.0	31.7	32.5	33.8	34.5	35.6	36.0	36.2	36.3	36.3	36.3	36.3	36.3	36.3	36.3	36.3	36.3	36.3	36.3
Estimated Base of Pile Cap Elevation = 525.2 II		Nominal Side	Kesistance	(kips)	0.0	2.3	3.7	5.2	ο ο ο τυ	10.2	12.1	14.1	18.9	24.7	27.9	31.4	39.2	43.5	48.0 52.7	57.8	63.0	74.3	80.4	87.0	100.8	108.1	175.6	131.3	139.5	156.5	165.3	174.2	191.8	200.7	218.3	227.2	244.8	253.7	271.3	280.2	297.8	306.7	324.3	333.2	350.8	359.7	377.3	395.0
Estimated Ba	Depth	Below	Pile Cap	(#)	0 7	- 2	ო	4 1	ဂ ဖ	7	∞ (	g 6	<del>=</del> 5	7 5	41	15 6	17	8 6	20 5	21	2 23	2 23	25	26	78 28	29	8 8	32	3 33	38	38	37	36	04 4	45	£ 4	42	46	48	49	8 15 8	22 22	3 %	55	200	82 65	9 2	- 29
		:	Sol	. ;	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
			Depth		0 +	- 2	3	4 4	ဂ ဖ	7	∞ (	ი 6	<del>=</del> 5	7 5	41	15 15	17	<del>6</del> 6	20 <u>-</u> 2	2	22 23	2 2	25	26	78	50 50	3 %	32	33	33.	36	38	36	4 4	45	44 44 44	45	46	48	49	57.83	25 25	3 22	55	57	20 28	90	62

φ <sub>up</sub> R <sub>n</sub> Total Factored Geotechnical	Extreme Uplift Resistance Static Analysis Method	(tons)	161.5	165.1	168.6	172.1	175.7	179.2	182.7	186.3	189.8	193.3	196.9	200.4	203.9	207.5	211.0	214.5	218.1	221.6	225.1	228.7	232.2	235.7	239.3	242.8	246.3	249.9	253.4	256.9
φ <sub>u</sub> Total F Geote	Extreme Upli Static Anal	(kips)	323.0	330.2	337.2	344.2	351.4	358.4	365.4	372.6	379.6	386.6	393.8	400.8	407.8	415.0	422.0	429.0	436.2	443.2	450.2	457.4	464.4	471.4	478.6	485.6	492.6	499.8	506.8	513.8
φ <sub>stat</sub> R <sub>n</sub> Total Factored Geotechnical	Extreme Resistance Static Analysis Method	(tons)	220.1	224.5	228.9	233.3	237.8	242.2	246.6	251.0	255.4	259.8	264.3	268.7	273.1	277.5	281.9	286.3	290.8	295.2	299.6	304.0	308.4	312.8	317.3	321.7	326.1	330.5	334.9	339.3
φ <sub>stat</sub> R <sub>n</sub> Total Factored Geotechnical	Extreme R Static Analy	(kips)	440.1	449.0	457.8	466.6	475.5	484.3	493.1	502.0	510.8	519.6	528.5	537.3	546.1	555.0	563.8	572.6	581.5	590.3	599.1	608.0	616.8	625.6	634.5	643.3	652.1	661.0	8.699	678.6
Rn stored inical	istance is Method	(tons)	7.07	72.2	73.8	75.3	6.97	78.4	79.9	81.5	83.0	84.6	86.1	87.7	89.2	8.06	92.3	93.9	95.4	97.0	98.2	100.0	101.6	103.1	104.7	106.2	107.8	109.3	110.9	112.4
φ <sub>up</sub> R <sub>n</sub> Total Factored Geotechnical	Uplift Resistance Static Analysis Method	(kips)	141.3	144.4	147.5	150.6	153.7	156.8	159.9	163.0	166.1	169.2	172.3	175.4	178.4	181.5	184.6	187.7	190.8	193.9	197.0	200.1	203.2	206.3	209.4	212.5	215.5	218.6	221.7	224.8
R <sub>n</sub> fication es	odified Gates)	(tons)	246.3	251.3	256.2	261.2	266.2	271.1	276.1	281.1	286.0	291.0	296.0	300.9	305.9	310.9	315.8	320.8	325.8	330.8	335.7	340.7	345.7	350.6	355.6	360.6	365.5	370.5	375.5	380.4
φ <sub>dyn</sub> R <sub>n</sub> Field Verification Values	(¢=0.4 FHWA Modified Gates)	(kips)	492.5	502.5	512.4	522.3	532.4	542.3	552.2	562.2	572.1	582.0	592.0	601.9	611.8	621.8	631.7	641.6	651.6	661.5	671.4	681.4	691.3	701.2	711.2	721.1	731.0	741.0	750.9	760.8
R <sub>n</sub> stored echnical	stance 0.45 in sand)	(tons)	98.5	100.5	102.5	104.5	106.5	108.5	110.4	112.4	114.4	116.4	118.4	120.4	122.4	124.4	126.3	128.3	130.3	132.3	134.3	136.3	138.3	140.2	142.2	144.2	146.2	148.2	150.2	152.2
φ <sub>stat</sub> R <sub>n</sub> Total Factored Static Geotechnical	Axial Resistance (¢=0.35 in clay; 0.45 in sand)	(kips) (tons)		•	•	·														264.6 132.3		272.6 136.3								304.3 152.2
		(tons) (kips) (tons)	197.0	201.0	205.0	208.9	212.9	216.9	220.9	224.9	228.8	232.8		240.8	244.7	248.7	252.7	256.6	260.6	264.6	268.6	272.6	276.5	280.5	284.5	288.5	292.4	296.4	300.4	•
	Axial Resistance Axial Resistance (\$\phi=0.35\$ in clay; 0.45 in sand)		220.1 <b>197.0</b>	224.5 201.0	205.0	233.3 208.9	237.8 212.9	242.2 216.9	246.6 220.9	251.0 224.9	255.4 228.8	259.8 232.8	236.8	268.7 240.8	273.1 244.7	277.5 248.7	281.9 252.7	286.3 256.6	290.8 260.6	295.2 264.6	299.6 268.6	304.0 272.6	308.4 276.5	312.8 280.5	317.3 284.5	321.7 288.5	326.1 292.4	330.5 296.4	334.9 300.4	304.3
R <sub>n</sub> Total Nominal Geotechnical		(tons)	440.1 220.1 197.0	449.0 224.5 <b>201.0</b>	228.9 205.0	466.6 233.3 208.9	<b>475.5</b> 237.8 <b>212.9</b>	484.3 242.2 216.9	493.1 246.6 220.9	502.0 251.0 <b>224.9</b>	510.8 255.4 <b>228.8</b>	519.6 259.8 232.8	528.5 264.3 236.8	537.3 268.7 240.8	546.1 273.1 <b>244.7</b>	555.0 277.5 <b>248.7</b>	563.8 281.9 <b>252.7</b>	572.6 286.3 <b>256.6</b>	581.5 290.8 <b>260.6</b>	590.3 295.2 <b>264.6</b>	599.1 299.6 268.6	304.0 272.6	616.8 308.4 276.5	625.6 312.8 280.5	634.5 317.3 284.5	643.3 321.7 288.5	326.1 292.4	330.5 296.4	334.9 300.4	339.3 304.3
R <sub>n</sub> Total Nominal Geotechnical	Axial Resistance	(kips) (tons)	36.3 440.1 220.1 <b>197.0</b>	449.0 224.5 <b>201.0</b>	36.3 457.8 228.9 <b>205.0</b>	36.3 466.6 233.3 <b>208.9</b>	36.3 475.5 237.8 <b>212.9</b>	36.3 484.3 242.2 <b>216.9</b>	36.3 493.1 246.6 <b>220.9</b>	36.3 502.0 251.0 <b>224.9</b>	36.3 510.8 255.4 <b>228.8</b>	36.3 519.6 259.8 <b>232.8</b>	528.5 264.3 236.8	36.3 537.3 268.7 <b>240.8</b>	36.3 546.1 273.1 <b>244.7</b>	36.3 555.0 277.5 <b>248.7</b>	36.3 563.8 281.9 <b>252.7</b>	36.3 572.6 286.3 <b>256.6</b>	36.3 581.5 290.8 <b>260.6</b>	36.3 590.3 295.2 <b>264.6</b>	36.3 599.1 299.6 <b>268.6</b>	608.0 304.0 <b>272.6</b>	36.3 616.8 308.4 <b>276.5</b>	36.3 625.6 312.8 <b>280.5</b>	36.3 634.5 317.3 <b>284.5</b>	36.3 643.3 321.7 <b>288.5</b>	652.1 326.1 292.4	661.0 330.5 296.4	669.8 334.9 300.4	678.6 339.3 304.3
Nominal Side Nominal End Geotechnical	Bearing Axial Resistance	(kips) (kips) (tons)	36.3 440.1 220.1 <b>197.0</b>	412.7 36.3 449.0 224.5 <b>201.0</b>	421.5 36.3 457.8 228.9 <b>205.0</b>	430.3 36.3 466.6 233.3 <b>208.9</b>	36.3 475.5 237.8 <b>212.9</b>	448.0 36.3 484.3 242.2 <b>216.9</b>	456.8 36.3 493.1 246.6 <b>220.9</b>	465.7 36.3 502.0 251.0 <b>224.9</b>	474.5 36.3 510.8 255.4 <b>228.8</b>	483.3 36.3 519.6 259.8 <b>232.8</b>	36.3 528.5 264.3 <b>236.8</b>	501.0         36.3         537.3         268.7         240.8	509.8 36.3 546.1 273.1 <b>244.7</b>	518.7 36.3 555.0 277.5 <b>248.7</b>	527.5 36.3 563.8 281.9 <b>252.7</b>	536.3 36.3 572.6 286.3 <b>256.6</b>	545.2 36.3 581.5 290.8 <b>260.6</b>	554.0 36.3 590.3 295.2 <b>264.6</b>	562.8         36.3         599.1         299.6         268.6	571.7 36.3 608.0 304.0 <b>272.6</b>	580.5 36.3 616.8 308.4 <b>276.5</b>	589.3 36.3 625.6 312.8 <b>280.5</b>	598.2 36.3 634.5 317.3 <b>284.5</b>	607.0 36.3 643.3 321.7 <b>288.5</b>	615.8 36.3 652.1 326.1 <b>292.4</b>	624.7 36.3 661.0 330.5 <b>296.4</b>	633.5 36.3 669.8 334.9 <b>300.4</b>	642.3 36.3 678.6 339.3 <b>304.3</b>
Depth Nominal Side Nominal End Geotechnical Geotechnical	Resistance Bearing Axial Resistance	(ft) (kips) (kips) (tons)	403.8 36.3 440.1 220.1 <b>197.0</b>	412.7 36.3 449.0 224.5 <b>201.0</b>	421.5 36.3 457.8 228.9 <b>205.0</b>	66 430.3 36.3 466.6 233.3 <b>208.9</b>	67 439.2 36.3 475.5 237.8 <b>212.9</b>	448.0 36.3 484.3 242.2 <b>216.9</b>	456.8 36.3 493.1 246.6 <b>220.9</b>	465.7 36.3 502.0 251.0 <b>224.9</b>	474.5 36.3 510.8 255.4 <b>228.8</b>	72 483.3 36.3 519.6 259.8 <b>232.8</b>	73 492.2 36.3 528.5 264.3 <b>236.8</b>	501.0         36.3         537.3         268.7         240.8	75 509.8 36.3 546.1 273.1 <b>244.7</b>	76 518.7 36.3 555.0 277.5 <b>248.7</b>	77 527.5 36.3 563.8 281.9 <b>252.7</b>	78         536.3         36.3         572.6         286.3         256.6	545.2 36.3 581.5 290.8 <b>260.6</b>	554.0 36.3 590.3 295.2 <b>264.6</b>	81 562.8 36.3 599.1 299.6 <b>268.6</b>	82 571.7 36.3 608.0 304.0 <b>272.6</b>	580.5 36.3 616.8 308.4 <b>276.5</b>	589.3 36.3 625.6 312.8 <b>280.5</b>	598.2 36.3 634.5 317.3 <b>284.5</b>	607.0 36.3 643.3 321.7 <b>288.5</b>	615.8 36.3 652.1 326.1 <b>292.4</b>	624.7 36.3 661.0 330.5 <b>296.4</b>	633.5 36.3 669.8 334.9 <b>300.4</b>	642.3 36.3 678.6 339.3 <b>304.3</b>

Steel H-Pile Capacities 042C00050N HP14x89 (50ksi steel)

Statistic color	End Gootschinder (Gootschinder) (Gootschinder) (Gootschinder) (Kips) (Kips) (1.0 2.5 2.5 4.6	R <sub>n</sub> Total Nominal
Octob   Color   Colo	Axial Resistance (♦= (10 0.5 0.5 0.5 0.3 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	Geotechnical
0.9         0.4         0.0         0.0         1.0         0.5         0.0         0.0         1.0         0.5         0.0         0.0         1.0         0.0 <th>1.0 0.5 2.5 1.3 4.6 2.3</th> <th>Axial Kesistance  (h==  (kips)  (tons)</th>	1.0 0.5 2.5 1.3 4.6 2.3	Axial Kesistance  (h==  (kips)  (tons)
2.5         1.3         0.4         0.2         2.5         1.3         1.2           6.2         3.1         1.3         0.4         0.5         2.5         1.3         1.2           6.2         3.1         1.3         0.6         7.1         3.6         4.1         4.1           6.0         4.0         1.2         1.2         1.2         1.3         4.1         4.1           1.2         6.0         2.9         1.2         1.2         1.3         6.7         7.4           1.2         6.0         2.9         1.1         1.2         1.3         6.7         7.4           1.2         1.2         1.2         1.1         1.2 <t< th=""><th>2.5 1.3 4.6 2.3</th><th>1.0 0.5</th></t<>	2.5 1.3 4.6 2.3	1.0 0.5
4.6         2.3         0.8         0.4         4.6         2.3         0.8         0.4         4.6         2.3         2.6         4.6         9.9         4.6         2.3         2.6         9.1         4.6         9.3         4.6         9.7         7.4         4.6         5.7         7.4 <td>4.6 2.3</td> <td>2.5 1.3</td>	4.6 2.3	2.5 1.3
8.6         4.9         1.3         0.0         6.7         4.6         5.7           8.9         4.9         2.3         1.2         11.3         5.7         7.4           1.6.         4.9         2.3         1.2         11.3         5.7         7.4           1.6.         4.9         2.3         1.2         11.3         5.7         7.4           1.6.         9.3         4.8         2.4         1.8         1.8         1.1         1.1           1.6.         9.3         4.8         2.4         1.8         1.1         1.1         1.1           1.6.         9.3         4.8         2.4         1.6         1.1	77	4.6
9.9         4.9         2.3         1.2         11.3         6.7         7.4           12.0         6.0         2.9         1.5         11.5         11.3         6.9         9.4           12.0         6.0         2.9         1.5         11.6         14.7         6.9         9.4           11.6         9.3         8.1         4.2         2.1         11.6         9.3         13.3           11.6         9.3         4.6         2.2         2.7         2.2         11.9         11.4         11.4         11.4           21.0         11.2         6.2         2.7         2.4         11.9         11.4 <td< td=""><td></td><td>0.7</td></td<>		0.7
2.4         12.0         6.0         2.9         1.5         16.7         6.9         9.4           2.5         14.1         7.0         2.9         1.5         1.6         1.7         6.9         1.7         1.8         9.3         1.6         1.1         1.1         1.1         1.2         1.8         1.8         1.1 <td>11.9</td> <td>11.9</td>	11.9	11.9
2.6         14.7         7.0         3.5         1.8         16.1         8.1         17.2           3.3         18.3         8.1         4.2         2.4         18.6         8.1         14.3           3.7         18.8         8.1         4.2         2.4         18.6         18.6         19.3         14.3           4.2         2.4         2.4         2.4         2.4         18.6         19.4         11.4<	2.5	2.5
3.3         16.3         8.7         4.3         2.1         16.1         8.3         11.3           4.2         2.1         16.1         8.3         4.8         2.4         2.1         16.1         16.1         16.4           4.2         2.1         16.2         2.1         16.2         2.1         16.2         16.2         16.4         16.2         16.2         16.4         16.2 <t< td=""><td>5.50</td><td>5.50</td></t<>	5.50	5.50
3.7         16.6         9.3         4.8         2.4         2.2         10.6         10.2           4.2         2.10         10.5         9.3         4.8         2.4         2.12         10.6         11.4	c	- ::: - ::: - :::
4.2         7.0         1.0.4         6.2         3.7         2.2.         1.0.7         1.0.7           6.1         2.0.7         1.2.9         6.2         3.1         2.2.         1.1.9         1.7.           6.1         2.0.7         1.2.9         6.2         3.1         2.2.         1.1.9         1.7.           6.1         2.0.7         1.2.9         6.2         3.1         2.2.         1.1.9         1.1.7           1.2         3.6         1.8.0         1.7.         3.8         1.1.9         1.1.7         2.2.           1.0         2.0.0         1.0.0         2.1.         1.1.9         6.0         3.1.         1.1.         2.1.         1.1.         2.2.         3.1.         1.1.         2.1.         1.1.         2.1.         1.1.         2.1.         1.1.         2.2.         3.1.         1.1.         2.1.         1.1.         2.1.         1.1.         2.1.         3.1.         1.1.         3.1.         1.1.         3.1.         1.1.         3.1.         1.1.         3.1.         1.1.         3.1.         1.1.         3.1.         1.1.         3.1.         1.1.         3.1.         1.1.         3.1.         3.1.         3.1.	27.5	27.5
6.1         27.0         10.3         6.3         2.7         10.3         6.2         3.7         22.8         11.4         11.7           6.1         30.7         15.4         6.9         3.5         3.5         31.4         16.4         16.7           7.2         30.7         15.4         6.9         3.5         33.4         16.7         22.1           10.2         30.7         16.4         7.7         3.8         33.4         16.7         22.1           11.6         6.0         4.5         2.8         3.7         2.2         2.7         2.7           11.6         6.0         4.5         2.8         3.4         16.7         2.2         3.7         2.2         3.7         2.2         3.7         3.7         3.0         3.7         3.0         3.7         3.0         3.7         3.0         3.0         3.7         3.0	23.0	23.0
61         307         164         6.9         3.5         3.2         16.2         2.7         3.6         4.6         3.6         4.6 <td>25.0</td> <td>26.8</td>	25.0	26.8
7.2         3.6         16.0         7.7         3.8         38.1         19.1         24.5           10.6         4.0.2         2.1.6         11.9         6.0         44.5         2.2.3         27.2           10.2         51.0         2.2.6         14.2         6.0         51.6         27.2         27.2           11.2         6.2         3.4         14.7         7.3         56.8         27.3         44.5         27.2           11.2         6.2         3.4         14.7         8.9         6.6         3.3         40.6         6.6         44.5         27.2         44.5         3.5         40.6         44.5         27.2         44.5         3.5         40.6         44.5         3.5         40.6         44.5         3.5         40.6         44.5         3.5         40.6         44.5         3.5         40.6         44.5         3.5         40.6 <td>32.4 16.2</td> <td>32.4 16.2</td>	32.4 16.2	32.4 16.2
8.6         412         216         119         6.0         445         22.3         27.2           11.4         57.0         26.5         11.2         6.0         44.5         22.3         27.2           11.4         57.0         26.5         11.2         6.0         41.5         26.8         37.0           11.2         65.2         3.4         17.8         8.9         6.0         28.4         37.0           15.1         75.5         37.8         19.5         8.7         77.3         36.7         44.5           17.5         85.5         44.3         27.1         10.6         77.3         36.7         44.5         37.0           20.9         10.4         52.4         17.5         8.7         42.5         37.0         44.5         44.5         44.5         44.5         44.5         44.7         44.5         44.5         44.7         44.5         44.5         44.5         44.7         44.5         44.5         44.5         44.5         44.5         44.5         44.5         44.5         44.5         44.5         44.5         44.5         44.5         44.5         44.5         44.5         44.5         44.5         44.5 <td>19.1</td> <td>38.1 19.1</td>	19.1	38.1 19.1
61.0         28.5         14.2         6.6         61.5         28.8         30.2           62.9         31.4         14.7         7.3         66.6         81.5         28.8         33.8         40.6         30.2         30.2         30.2         30.2         30.2         30.2         30.2         30.2         30.2         30.2         30.2         30.2         30.2         40.6         30.2         40.6         30.2         40.6         30.2         40.6         30.2         40.6	44.5 22.3	44.5 22.3
67.0         28.5         14.7         7.3         66.8         28.4         33.5           69.2         34.6         14.7         7.3         66.8         28.4         40.6           69.2         34.6         17.8         8.9         67.6         31.0         40.6           75.6         37.8         19.5         9.7         73.3         36.7         44.5           89.5         44.8         22.1         10.6         73.3         36.7         44.5           89.5         44.8         22.1         11.6         85.7         42.9         62.2           104.7         56.3         24.4         14.7         106.3         36.7         44.5         52.9           112.6         96.9         46.5         22.4         14.7         106.3         52.9         46.2         57.4           112.6         96.9         37.0         14.7         106.3         52.9         67.7         46.2         57.4         40.6         52.9         67.4         52.9         67.4         52.9         67.4         52.9         67.4         52.9         67.4         52.9         67.4         52.9         67.4         52.9         67.4 <td< td=""><td>51.5 25.8</td><td>51.5 25.8</td></td<>	51.5 25.8	51.5 25.8
62.9         31.4         16.2         8.1         62.0         31.0         37.0           756         37.8         14.5         8.9         67.6         31.0         37.0           756         37.8         14.5         9.7         73.3         33.8         40.6           756         37.8         14.5         17.3         35.2         48.6         52.9           96.5         44.8         27.2         11.6         85.7         42.9         52.9           104.7         55.4         45.5         27.2         13.6         99.2         48.6         62.2           104.7         56.3         25.4         14.7         106.3         53.2         67.1           112.7         56.3         34.0         17.0         121.3         60.7         77.6           112.9         64.8         34.0         17.0         121.3         60.7         77.6           112.9         64.8         34.0         17.0         121.3         60.7         77.6           118.6         33.0         38.4         118.2         14.7         60.7         77.6           118.7         44.3         22.1         12.3         64.7	56.8 28.4	56.8 28.4
692         346         17.8         8.9         67.6         33.8         406           82.5         44.8         21.3         10.6         73.3         36.7         44.5           82.5         44.8         23.1         11.6         92.3         46.2         52.9           96.9         44.8         22.1         12.6         92.3         46.2         57.4           104.7         52.4         27.2         13.6         16.2         92.3         46.2         57.4           112.7         56.3         22.4         14.7         106.3         36.4         57.4         44.5         57.4           112.7         56.3         26.4         17.0         171.3         60.7         77.2           112.6         66.8         34.0         17.0         171.3         60.7         77.2           112.7         66.8         34.0         17.0         171.3         60.7         77.2           113.8         66.3         36.4         17.0         171.3         60.7         77.2           147.8         7.8         44.3         22.1         145.5         77.3         101.2           166.3         3.0         4	62.0 31.0	62.0 31.0
82.5         37.8         19.5         9.7         73.3         38.7         44.5           82.5         44.8         23.1         11.6         73.3         38.7         44.5           96.9         44.8         23.1         11.6         85.7         42.9         62.2           96.9         44.8         23.1         11.6         85.7         42.9         62.2           104.7         56.3         29.4         14.7         106.3         55.2         67.4           117.0         60.5         31.6         17.0         17.3         66.9         72.2           121.0         60.5         34.0         17.0         17.3         66.9         72.2           138.6         69.3         34.0         19.5         17.3         66.8         89.0         72.2           147.8         73.9         39.4         18.2         173.3         66.8         89.0         72.2           147.8         73.9         39.4         18.2         173.3         66.8         89.0         72.2           147.2         78.6         41.6         20.8         14.5         77.3         101.2         101.2         102.2         102.2	67.6 33.8	67.6 33.8
82.5         441.3         27.3         10.6         79.5         39.8         48.6           96.5         48.6         25.1         11.6         92.3         46.2         52.9           96.9         48.6         25.1         12.6         92.3         46.2         57.4           104.7         56.3         29.4         14.7         106.3         53.2         67.1           112.0         60.6         31.6         17.2         13.6         99.2         48.6         57.2           12.0         60.8         34.0         17.0         107.3         60.7         77.2           12.6         9.3         3.6         18.2         17.3         60.7         77.2           147.8         73.9         3.6         18.2         17.3         60.7         77.2           147.8         73.9         44.3         22.1         145.9         77.0         98.0           146.9         88.5         47.1         22.5         145.9         77.3         107.6           146.9         88.5         47.1         22.1         145.9         77.7         107.6           147.9         147.9         22.1         145.9	73.3 36.7	73.3 36.7
96.3         48.5         25.1         11.0         90.2         46.2         57.4           104.7         52.4         27.2         13.6         99.2         46.6         67.4           112.7         56.3         29.4         14.7         106.3         53.2         67.1           112.0         60.5         34.6         17.0         121.3         60.7         77.2           129.6         64.8         34.0         17.0         121.3         60.7         77.2           138.6         64.8         34.0         17.0         121.3         60.7         77.2           147.8         77.3         106.3         56.9         17.2         60.7         77.2           147.8         77.3         107.6         12.2         60.7         77.3         107.6           147.8         83.5         44.3         22.1         15.4         77.3         107.6           147.9         88.5         47.1         23.5         163.4         81.7         107.6           146.9         88.5         47.1         22.5         118.4         114.2         128.0           197.7         98.9         53.0         26.5         118.9 <td>18.7 /9.5 39.8 33.0</td> <td>79.5</td>	18.7 /9.5 39.8 33.0	79.5
104.7         52.4         27.2         13.6         99.2         49.6         67.1           112.7         56.3         29.4         14.7         106.3         53.2         49.6         67.1           121.0         60.5         34.6         17.8         113.7         56.9         77.2           136.6         69.3         36.4         18.2         121.3         60.7         77.6           136.6         69.3         36.4         18.2         123.3         64.7         83.0           147.8         73.9         19.5         129.3         68.8         89.0         77.3         101.2           167.2         78.6         44.3         22.1         145.9         77.3         101.2	600.7 400.3 400.3	900.7 400.3 400.3
112.7         56.3         29.4         14.7         106.3         53.2         67.1           121.0         60.5         31.6         15.8         113.7         56.9         72.2           121.0         60.5         34.0         17.0         121.3         60.7         77.6           135.6         69.3         36.4         18.2         129.3         64.7         83.2           147.8         73.9         38.0         19.5         137.5         68.8         98.0           166.9         88.5         44.3         22.1         137.5         68.8         95.0           166.9         88.5         47.1         23.6         172.6         68.8         95.0           166.9         88.5         47.1         23.5         163.4         81.7         101.2           166.9         88.5         50.0         25.0         172.6         68.3         7.7           197.7         98.9         55.0         25.0         172.6         86.3         141.2           197.7         198.7         22.0         111.9         101.2         142.2           210.8         109.7         26.0         28.0         142.0         142	99.2	99.2
121.0         60.5         31.6         15.8         113.7         56.9         72.2           129.6         64.8         34.0         17.0         121.3         66.7         77.6           138.6         69.3         36.4         18.2         123.3         64.7         77.5           147.8         73.9         39.0         19.2         137.5         68.8         89.0           166.9         83.5         44.3         22.1         145.9         77.3         101.2           166.9         83.5         44.3         22.1         145.9         77.3         101.2           166.9         83.5         44.3         22.1         145.9         77.3         101.2           166.9         83.5         44.3         22.1         145.9         77.3         101.2           187.7         98.9         55.0         25.0         142.5         86.3         141.2           208.4         104.2         25.0         161.4         95.7         128.0           219.3         110.7         100.6         142.2         142.0         142.2           219.3         110.7         25.0         142.0         142.2         142.2 </td <td>106.3 53.2</td> <td>106.3 53.2</td>	106.3 53.2	106.3 53.2
129.6         64.8         34.0         17.0         121.3         60.7         77.6           138.6         69.3         36.4         18.2         123.3         64.7         83.2           147.8         73.9         38.0         19.5         145.3         64.7         83.2           147.8         73.9         38.0         19.5         145.5         73.0         95.0           166.9         83.5         44.3         22.1         144.5         77.3         101.2           177.9         88.5         47.1         23.5         163.4         81.7         107.6           187.3         93.6         50.0         25.0         173.6         86.3         114.2           208.4         109.7         53.0         26.5         181.9         91.0         121.0           210.3         104.2         28.0         201.1         100.6         135.1         128.0           210.3         115.1         62.2         21.1         100.6         142.2           220.1         115.1         62.2         31.1         100.6         142.2           240.8         12.4         74.5         32.9         149.7         149.2 </td <td>113.7 56.9</td> <td>113.7 56.9</td>	113.7 56.9	113.7 56.9
138.6         69.3         36.4         18.2         129.3         64.7         83.2           147.8         73.9         39.0         19.5         137.5         68.8         89.0           167.2         78.6         44.6         20.8         147.5         68.8         89.0           166.9         88.5         47.1         22.6         164.5         77.3         101.2           176.9         88.5         47.1         23.5         163.4         81.7         101.2           197.7         98.9         50.0         26.5         181.9         91.0         171.0           208.4         104.2         58.1         28.0         181.9         91.0         171.0           210.3         107.7         108.4         91.0         171.0         100.6         132.0           210.3         107.4         62.2         31.1         100.7         100.6         132.0           220.1         116.1         62.2         31.1         100.6         142.2           240.8         120.4         66.3         32.6         220.2         110.1         143.2           262.3         131.2         34.2         220.2         110.1	121.3 60.7	121.3 60.7
147.8         73.9         73.9         19.5         137.5         68.8         88.0           165.2         78.6         41.6         20.8         145.9         77.3         101.2           166.9         83.5         47.1         23.5         164.5         77.3         101.2           176.9         88.5         47.1         23.5         165.4         81.7         107.6           187.7         98.9         53.0         26.5         172.6         86.3         114.2           197.7         98.9         53.0         26.5         181.9         91.0         121.0           208.4         104.2         26.0         28.0         191.4         96.7         121.0           219.3         109.7         59.1         29.6         201.1         100.6         135.1           219.3         109.7         59.1         29.6         201.1         100.6         135.1           219.3         109.7         59.1         20.2         110.7         142.2           240.8         120.4         65.3         32.6         220.2         110.1         142.2           251.7         131.2         74.6         37.3         229.9	129.3 64.7	129.3 64.7
3.4         157.2         78.6         44.6         20.8         145.9         73.0         95.0           35.4         166.9         88.5         47.1         20.8         145.9         7.3         101.2           35.4         176.9         88.5         47.1         23.5         163.4         81.7         107.6           37.5         187.7         98.9         53.0         25.0         172.6         86.3         114.2           43.5         197.7         98.9         53.0         25.0         181.9         91.0         121.0           44.7         208.4         104.2         56.0         28.0         191.4         95.7         128.0           48.0         230.1         115.1         62.2         31.1         210.7         100.6         135.1           48.2         240.8         120.4         65.3         32.6         201.1         100.6         135.1           48.2         240.8         120.4         65.3         32.6         200.1         140.2         142.0           50.3         251.7         240.8         32.6         140.4         140.2         140.4         140.2         140.4         140.2         140.4 <td>137.5</td> <td>137.5 68.8</td>	137.5	137.5 68.8
35.4         176.9         88.5         47.1         23.5         154.9         17.5         101.2           37.5         187.3         98.6         50.0         25.0         172.6         86.3         147.2           39.5         197.7         98.9         53.0         26.5         181.9         91.0         121.0           41.7         208.4         104.2         56.0         28.0         191.4         95.7         121.0           43.9         219.3         109.7         59.1         29.6         191.4         95.7         121.0           46.0         220.1         116.1         105.7         106.4         142.2         142.2           48.2         240.8         120.4         66.3         32.6         220.2         110.1         149.2           50.3         251.7         125.9         68.4         34.2         220.2         110.1         149.2           50.5         262.3         131.2         71.5         35.7         220.2         110.1         149.2           50.5         262.3         131.2         71.5         35.7         220.9         115.0         163.4           50.6         283.2         220.2 </td <td>27.1 145.9 73.0 <b>62.9</b></td> <td>145.9 /3.0 164.6 77.9</td>	27.1 145.9 73.0 <b>62.9</b>	145.9 /3.0 164.6 77.9
37.5         187.3         93.6         50.0         25.0         172.6         86.3         144.2           39.5         197.7         98.9         53.0         26.5         187.4         96.3         144.2           44.7         208.4         109.7         59.1         29.6         187.4         96.7         121.0           43.9         219.3         109.7         59.1         29.6         191.4         96.7         121.0           46.0         219.3         109.7         59.1         29.6         191.4         96.7         121.0           48.2         240.8         109.7         62.2         31.1         210.7         105.4         128.0           50.3         251.7         125.9         68.4         34.2         229.9         115.0         142.2           50.5         26.5         136.4         74.6         37.3         248.7         142.4         170.4           56.6         283.2         141.6         77.7         38.8         257.9         119.7         163.4           56.6         283.2         141.6         80.7         40.4         266.9         133.5         144.6         142.4         194.6 <t< td=""><td>163.4 81.7</td><td>163.4 81.7</td></t<>	163.4 81.7	163.4 81.7
39.5         197.7         98.9         53.0         26.5         181.9         91.0         121.0           41.7         208.4         104.2         56.0         28.0         191.4         96.7         120.0           43.9         219.3         109.7         59.1         29.6         191.4         96.7         128.0           48.2         240.8         120.4         66.2         31.1         210.7         105.4         128.1           50.3         251.7         120.4         66.3         32.6         220.2         110.1         149.2           50.5         262.3         131.2         71.5         32.6         229.9         115.0         168.3           52.6         262.3         131.2         71.5         32.7         229.9         115.0         149.2           50.5         262.3         131.2         74.6         37.3         248.7         149.2         168.3           56.6         283.2         141.6         77.7         38.8         257.9         177.6         177.6           56.7         303.3         161.6         83.8         44.9         275.7         177.6         177.6           64.7         323.3	172.6 86.3	172.6 86.3
41.7         208.4         104.2         56.0         28.0         191.4         95.7         128.0           43.9         219.3         109.7         59.1         29.6         207.1         100.6         135.1           46.0         230.1         115.1         62.2         31.1         210.7         105.4         128.0           48.2         240.8         120.4         66.3         32.6         220.2         110.1         149.2           50.3         251.7         125.9         68.4         34.2         229.9         115.0         166.3           52.5         262.3         131.2         71.5         35.7         229.9         115.0         166.3           56.6         272.9         136.4         74.6         37.3         248.7         124.4         170.4           56.6         283.2         141.6         77.7         38.8         257.9         137.5         184.6           60.7         303.3         151.6         88.9         41.9         275.7         177.5         184.6           60.7         313.4         166.1         90.0         45.0         293.5         146.8         205.8           64.7         33	181.9 91.0	181.9 91.0
43.9         219.3         109.7         59.1         29.6         201.1         100.6         135.1           46.0         230.1         115.1         62.2         31.1         210.7         105.4         142.2           48.2         240.8         120.4         66.3         32.6         220.9         110.1         149.2           50.3         251.7         125.9         68.4         34.2         229.9         115.0         166.3           52.5         262.3         131.2         71.5         35.7         229.9         115.0         169.2           54.6         272.9         136.4         74.6         37.3         248.7         124.4         170.4           56.6         283.2         141.6         77.7         38.8         257.9         129.0         177.5           58.7         283.2         144.7         77.7         38.8         257.9         129.0         177.5           60.7         303.3         161.6         83.8         41.9         275.7         134.6         177.6           64.7         313.4         166.7         90.0         45.0         293.5         146.8         205.8           66.7         3	191.4 95.7	191.4 95.7
46.0         230.1         115.1         62.2         31.1         210.7         105.4         142.2           48.2         240.8         120.4         66.3         32.6         229.0         110.1         149.2           50.3         251.7         125.9         68.4         34.2         229.9         110.1         149.2           52.5         262.3         131.4         71.5         35.7         229.3         119.7         163.4           54.6         272.9         136.4         74.6         37.3         248.7         124.4         170.4           56.6         283.2         141.6         77.7         38.8         257.9         129.0         177.5           58.7         303.3         151.6         83.8         41.9         275.7         137.9         191.6           60.7         303.3         161.6         90.0         45.0         293.5         146.8         205.8           64.7         332.2         166.1         93.1         46.6         301.4         150.7         212.8           66.7         333.6         166.8         96.2         48.1         302.3         166.8         205.8           67.0         3	201.1 100.6	201.1 100.6
48.2         240.8         120.4         6b.3         32.b         220.2         110.1         149.2           60.3         251.7         125.9         68.4         32.b         220.2         110.1         149.2           62.5         262.3         131.2         71.5         35.7         239.3         119.7         165.3           64.6         272.9         136.4         77.7         38.8         257.9         124.4         170.4           56.6         283.2         141.6         77.7         38.8         257.9         129.0         177.5           60.7         303.3         151.6         83.8         41.9         256.9         177.5         186.6           60.7         303.3         161.6         80.7         40.4         266.9         177.5         186.6           64.7         313.4         166.7         86.9         43.5         224.7         142.4         199.7           66.4         332.2         166.1         93.1         46.6         301.4         150.7         212.8           66.7         333.6         166.8         96.2         48.1         302.9         162.0         219.9           67.2         3	210.7 105.4	210.7 105.4
52.5         23.1.7         120.3         77.1         34.2         23.3         119.0         150.0           56.6         283.2         136.4         74.6         37.3         248.7         124.4         177.4           56.6         283.2         141.6         77.7         38.8         257.9         129.0         177.5           56.7         293.4         146.7         80.7         40.4         266.9         133.5         184.6           60.7         303.3         151.6         86.9         43.5         226.9         137.9         177.5           62.7         313.4         156.7         86.9         43.5         226.9         144.6         197.6           64.7         323.3         161.6         90.0         45.0         293.5         146.8         205.8           66.7         332.6         166.1         93.1         46.6         301.4         150.7         212.8           66.7         335.0         166.8         96.2         48.1         302.7         151.4         219.9           67.0         335.0         167.9         77.3         36.5         16.8         240.5           67.2         336.4         16	53.7 ZZU.Z 110.1 <b>96.3</b>	220.2
54.6         272.9         136.4         77.7         38.8         26.9         135.1         170.4           56.6         283.2         141.6         77.7         38.8         257.9         129.0         177.5           56.7         293.4         146.7         80.7         40.4         266.9         133.5         184.6           60.7         303.3         151.6         83.8         41.9         275.7         137.9         191.6           62.7         313.4         156.7         86.9         43.5         224.7         142.4         198.7           64.7         323.3         161.6         90.0         45.0         239.5         146.8         205.8           66.7         335.0         166.1         99.3         46.6         301.4         150.7         212.8           67.0         335.0         167.5         99.3         49.6         303.9         152.0         271.0           67.2         335.8         167.9         77.3         38.6         165.0         247.2           67.3         343.7         171.9         77.3         38.6         165.0         247.2           71.5         357.7         178.9         79	239.3	239.3
56.6         283.2         141.6         77.7         38.8         257.9         129.0         177.5           58.7         293.4         146.7         80.7         40.4         266.9         133.5         184.6           60.7         303.3         151.6         83.8         41.9         275.7         137.9         191.6           62.7         313.4         156.7         86.9         43.5         284.7         142.4         198.7           64.7         323.3         161.6         90.0         45.0         293.5         146.8         205.8           66.7         33.6         166.1         99.3         46.6         301.4         150.7         212.8           67.0         335.0         167.5         99.3         49.6         303.9         152.0         271.0           67.2         336.4         168.2         75.2         37.6         306.5         152.4         233.8           68.7         343.7         171.9         77.3         38.6         313.9         165.0         247.2           71.5         357.7         178.9         79.4         39.7         329.9         165.0         247.2	248.7 124.4	248.7 124.4
58.7         293.4         146.7         80.7         40.4         266.9         133.5         184.6           60.7         303.3         151.6         83.8         41.9         275.7         137.9         191.6           62.7         313.4         156.7         86.9         43.5         284.7         142.4         191.6           64.7         323.3         161.6         90.0         45.0         283.5         146.8         205.8           66.7         332.2         166.1         90.0         45.0         283.5         146.8         212.8           67.0         335.0         167.8         96.2         48.1         307.4         167.4         219.9           67.0         335.0         167.5         99.2         48.1         303.9         162.0         227.0           67.2         335.8         167.9         73.1         36.5         304.8         162.4         237.8           67.3         336.4         168.2         75.2         37.6         305.5         165.0         247.2           77.5         357.7         178.9         79.4         39.7         329.9         165.0         253.9	257.9 129.0	257.9 129.0
60.7         303.3         151.6         83.8         41.9         275.7         137.9         191.6           62.7         313.4         156.7         86.9         43.5         284.7         142.4         198.7           64.7         323.3         161.6         90.0         45.0         293.5         146.8         205.8           66.7         332.2         166.1         93.1         46.6         301.4         150.7         212.8           66.7         335.6         166.8         96.2         48.1         303.9         152.0         227.0           67.0         335.8         167.9         73.1         36.5         304.8         152.4         233.8           67.3         336.4         168.2         75.2         37.6         305.5         152.0         247.2           68.7         343.7         171.9         77.3         38.6         313.9         165.0         247.2           71.5         357.7         178.9         79.4         39.7         329.9         165.0         253.9	266.9 133.5	266.9 133.5
62.7         313.4         156.7         86.9         43.5         283.7         142.4         193.7           64.7         323.3         161.6         90.0         45.0         293.5         146.8         205.8           66.4         332.2         166.1         93.1         46.6         301.4         150.7         212.8           66.7         333.6         166.8         96.2         48.1         302.7         161.4         219.9           67.0         335.0         167.5         99.3         49.6         302.7         162.0         227.0           67.2         336.4         167.9         75.2         37.6         306.5         162.8         240.5           68.7         343.7         171.9         77.3         38.6         313.9         167.0         247.2           71.5         357.7         178.9         79.4         39.7         329.9         165.0         253.9	275 7 137 9	275 7 137 9
323.3         161.6         90.0         45.0         293.5         146.8         205.8           332.2         166.1         93.1         46.6         301.4         150.7         212.8           333.6         166.8         96.2         48.1         302.7         151.4         219.9           335.0         167.5         73.1         36.5         303.9         152.0         227.0           336.4         167.9         77.3         38.6         313.9         152.8         240.5           343.7         171.9         77.3         38.6         313.9         165.0         247.2           357.7         178.9         78.4         39.7         329.9         165.0         253.9	284.7 142.4	284.7 142.4
332.2         166.1         93.1         46.6         301.4         160.7         212.8           333.6         166.8         96.2         48.1         302.7         151.4         219.9           335.0         167.5         99.3         49.6         303.9         162.0         227.0           335.8         167.9         73.1         36.5         304.8         162.4         233.8           336.4         168.2         75.2         37.6         305.5         152.8         240.5           343.7         171.9         77.3         38.6         313.9         165.0         247.2           357.7         178.9         78.4         39.7         329.9         165.0         253.9	293.5 146.8	293.5 146.8
66.7         333.6         166.8         96.2         48.1         302.7         151.4         219.9           67.0         335.0         167.5         99.3         49.6         302.9         152.0         227.0           67.2         335.8         167.9         73.1         36.5         304.8         162.4         233.8           67.3         336.4         168.2         75.2         37.6         305.5         152.8         240.5           68.7         343.7         171.9         77.3         38.6         313.9         167.0         247.2           71.5         357.7         178.9         79.4         39.7         329.9         165.0         253.9	301.4 150.7	301.4 150.7
67.0         335.0         167.5         99.3         49.6         303.9         152.0         227.0           67.2         335.8         167.9         73.1         36.5         304.8         162.4         233.8           67.3         336.4         168.2         75.2         37.6         305.5         152.8         240.5           68.7         343.7         171.9         77.3         38.6         313.9         167.0         247.2           71.5         357.7         178.9         79.4         39.7         329.9         165.0         253.9	302.7 151.4	302.7 151.4
67.2         335.8         167.9         73.1         36.5         304.8         162.4         233.8           67.3         336.4         168.2         75.2         37.6         305.5         162.8         240.5           68.7         343.7         171.9         77.3         38.6         313.9         167.0         247.2           71.5         357.7         178.9         79.4         39.7         329.9         165.0         253.9	303.9 152.0	303.9 152.0
67.3         336.4         168.2         75.2         37.6         305.5         152.8         240.5           68.7         343.7         171.9         77.3         38.6         313.9         167.0         247.2           71.5         357.7         178.9         79.4         39.7         329.9         165.0         253.9	304.8 152.4	304.8 152.4
68.7         343.7         171.9         77.3         38.6         313.9         157.0         247.2           71.5         357.7         178.9         79.4         39.7         329.9         165.0         253.9	305.5 152.8	305.5 152.8
71.5 357.7 178.9 79.4 39.7 329.9 165.0 253.9	313.9 157.0	313.9 157.0
The same of the sa	12.5 329.9 165.0 143.1	329.9 165.0

φ <sub>υp</sub> R <sub>n</sub> Total Factored	Geotechnical Extreme Uplift Resistance	Static Analysis Method (kips)	133.8	137.4	140.9	144.4	148.0	151.5	155.0	158.6	162.1	165.6	169.2	172.7	176.2	179.8	183.3	186.8	190.4	193.9	197.4	201.0	204.5	208.0	211.6	215.1	218.6	222.2	225.7	229.2	232.8	236.3	239.8	243.4	246.9	250.4	254.0	257.5	261.0
φ <sub>υ</sub> Total F	Geote Extreme Upli	Static Anal (kips)	267.6	274.7	281.8	288.8	295.9	303.0	310.0	317.1	324.2	331.2	338.3	345.4	352.4	359.5	366.6	373.6	380.7	387.8	394.8	401.9	409.0	416.0	423.1	430.2	437.2	444.3	451.4	458.4	465.5	472.6	479.6	486.7	493.8	500.8	507.9	515.0	522.0
R, ctored	hnical esistance	sis Method (tons)	181.2	189.4	194.3	198.7	203.1	207.5	211.9	216.4	220.8	225.2	229.6	234.0	238.4	242.9	247.3	251.7	256.1	260.5	264.9	269.4	273.8	278.2	282.6	287.0	291.4	295.9	300.3	304.7	309.1	313.5	317.9	322.4	326.8	331.2	335.6	340.0	344.4
φ <sub>stat</sub> R <sub>n</sub> Total Factored	Geotechnical Extreme Resistance	Static Analysis Method (kips)	362.3	378.8	388.5	397.3	406.2	415.0	423.8	432.7	441.5	450.3	459.2	468.0	476.8	485.7	494.5	503.3	512.2	521.0	529.8	538.7	547.5	556.3	565.2	574.0	582.8	591.7	600.5	609.3	618.2	627.0	635.8	644.7	653.5	662.3	671.2	680.0	688.8
R <sub>n</sub> ctored	hnical sistance	sis Method (tons)	58.5	60.1	61.6	63.2	64.7	66.3	67.8	69.4	70.9	72.5	74.0	75.5	77.1	78.6	80.2	81.7	83.3	84.8	86.4	87.9	89.5	91.0	92.6	94.1	92.6	97.2	98.7	100.3	101.8	103.4	104.9	106.5	108.0	109.6	111.1	112.6	114.2
φ <sub>υp</sub> R <sub>n</sub> Total Factored	Geotechnical Uplift Resistance	Static Analysis Method (kips)	117.1	120.2	123.3	126.4	129.5	132.5	135.6	138.7	141.8	144.9	148.0	151.1	154.2	157.3	160.4	163.5	166.6	169.6	172.7	175.8	178.9	182.0	185.1	188.2	191.3	194.4	197.5	200.6	203.7	206.7	209.8	212.9	216.0	219.1	222.2	225.3	228.4
R <sub>n</sub> fication	es	odified Gates) (tons)	195.1	204.4	209.8	214.8	219.8	224.7	229.7	234.7	239.6	244.6	249.6	254.5	259.5	264.5	269.4	274.4	279.4	284.3	289.3	294.3	299.2	304.2	309.2	314.2	319.1	324.1	329.1	334.0	339.0	344.0	348.9	353.9	358.9	363.8	368.8	373.8	378.7
φ <sub>dyn</sub> R <sub>n</sub> Field Verification	Values	(φ=0.4 FHWA Modified Gates) (kips) (tons)	390.1	408.7	419.6	429.5	439.5	449.4	459.3	469.3	479.2	489.1	499.2	509.1	519.0	529.0	538.9	548.8	558.8	568.7	578.6	588.6	598.5	608.4	618.4	628.3	638.2	648.2	658.1	0.899	678.0	687.9	8.769	707.8	7.17.7	727.6	737.7	747.6	757.5
		nd)			6	6	6	6.	6:	93.9	89.	97.8	8.66	101.8	103.8	105.8	107.8	109.8	111.8	113.7	115.7	117.7	119.7	121.7	123.7	125.7	127.6	129.6	131.6	133.6	135.6	9.	9.	9.	rč.	145.5	147.5	.5	151.5
rR <sub>n</sub> actored	rechnical sistance	; 0.45 in sar (tons)	78.0	81.7	83.9	85.9	87.9	89.9	91.9	93	95.8	97	66	10	5	9	10	9	7	11	Ξ	7	÷	÷	÷	÷	<del>;</del>	12	13	13	136	137.6	139.6	141.6	143.5	4	147	149.5	~
φ <sub>stat</sub> R <sub>n</sub> Total Factored	Static Geotechnical Axial Resistance	(φ=0.35 in clay; 0.45 in sand) (kips) (tons)		163.5 81.7	167.8 83.	171.8 85.	175.8 87.	179.8	183.7 91	187.7 93	191.7 95	195.7 97	199.7	203.6 10	207.6	211.6 10	215.5 10	219.5 10		227.5 11:			239.4					259.3 12		267.2 13	271.2 138	275.2 137	279.1 139	283.1 141	287.1 143	291.1	295.1 147	299.0 149	303.0
		(di				171.8													223.5	227.5	231.4	235.4	239.4	243.4	247.4	251.3	255.3		263.2				•						•
R <sub>n</sub> $\phi_{stat}R_n$ Total Nominal Total Factored	Geotechnical Static Geotechnical Axial Resistance Axial Resistance	(di	156.1	163.5	167.8	171.8	175.8	179.8	183.7	216.4 187.7	191.7	195.7	199.7	203.6	207.6	211.6	215.5	219.5	256.1 223.5	227.5	264.9 231.4	269.4 235.4	239.4	278.2 243.4	282.6 247.4	287.0 251.3	291.4 255.3	259.3	300.3 263.2	267.2	271.2	275.2	279.1	283.1	287.1	291.1	295.1	299.0	303.0
		(kips) (tons)	181.2 156.1	189.4 163.5	194.3 167.8	397.3 198.7 171.8	203.1 175.8	207.5 179.8	211.9 183.7	216.4 187.7	220.8	225.2 195.7	229.6 199.7	234.0 203.6	238.4 207.6	242.9 211.6	247.3 215.5	251.7 <b>219.5</b>	512.2 256.1 223.5	521.0 260.5 <b>227.5</b>	529.8 264.9 231.4	538.7 269.4 <b>235.4</b>	547.5 273.8 239.4	556.3 278.2 243.4	565.2 282.6 <b>247.4</b>	574.0 287.0 <b>251.3</b>	291.4 255.3	295.9 259.3	600.5 300.3 263.2	609.3 304.7 267.2	309.1	313.5 275.2	317.9 279.1	322.4 283.1	326.8 287.1	331.2 291.1	335.6 295.1	340.0 <b>299.0</b>	344.4 303.0
	Geotechnical Axial Resistance	(kips) (kips) (tons)	362.3 181.2 156.1	378.8 189.4 <b>163.5</b>	388.5 194.3 <b>167.8</b>	36.3 397.3 198.7 <b>171.8</b>	406.2 203.1 175.8	415.0 207.5 179.8	423.8 211.9 <b>183.7</b>	432.7 216.4 187.7	441.5 220.8 191.7	450.3 225.2 195.7	459.2 229.6 <b>199.7</b>	468.0 234.0 <b>203.6</b>	476.8 238.4 <b>207.6</b>	485.7 242.9 211.6	494.5 247.3 215.5	36.3 503.3 251.7 <b>219.5</b>	36.3 512.2 256.1 <b>223.5</b>	521.0 260.5 <b>227.5</b>	36.3 529.8 264.9 <b>231.4</b>	36.3 538.7 269.4 <b>235.4</b>	36.3 547.5 273.8 239.4	36.3 556.3 278.2 <b>243.4</b>	36.3 565.2 282.6 <b>247.4</b>	36.3 574.0 287.0 <b>251.3</b>	36.3 582.8 291.4 <b>255.3</b>	591.7 295.9 <b>259.3</b>	36.3 600.5 300.3 <b>263.2</b>	609.3 304.7 267.2	618.2 309.1 271.2	627.0 313.5 275.2	635.8 317.9 279.1	644.7 322.4 283.1	653.5 326.8 287.1	662.3 331.2 291.1	671.2 335.6 295.1	680.0 340.0 <b>299.0</b>	688.8 344.4 303.0
	Nominal Side Nominal End Geotechnical Axial Resistance Bearing Axial Resistance	(kips) (kips) (kips) (tons)	334.5 27.8 362.3 181.2 156.1	35.4 378.8 189.4 <b>163.5</b>	352.2 36.3 388.5 194.3 <b>167.8</b>	36.1 36.3 397.3 198.7 <b>171.8</b>	369.9 36.3 406.2 203.1 <b>175.8</b>	378.7 36.3 415.0 207.5 <b>179.8</b>	36.3 423.8 211.9 <b>183.7</b>	36.3 432.7 216.4 <b>187.7</b>	36.3 441.5 220.8 <b>191.7</b>	36.3 450.3 225.2 <b>195.7</b>	36.3 459.2 229.6 <b>199.7</b>	36.3 468.0 234.0 <b>203.6</b>	36.3 476.8 238.4 <b>207.6</b>	36.3 485.7 242.9 <b>211.6</b>	36.3 494.5 247.3 <b>215.5</b>	467.0 36.3 503.3 251.7 <b>219.5</b>	36.3 512.2 256.1 <b>223.5</b>	484.7 36.3 521.0 260.5 <b>227.5</b>	493.5 36.3 529.8 264.9 <b>231.4</b>	502.4 36.3 538.7 269.4 <b>235.4</b>	511.2 36.3 547.5 273.8 <b>239.4</b>	36.3 556.3 278.2 <b>243.4</b>	528.9 36.3 565.2 282.6 <b>247.4</b>	537.7 36.3 574.0 287.0 <b>251.3</b>	546.5 36.3 582.8 291.4 <b>255.3</b>	555.4 36.3 591.7 295.9 <b>259.3</b>	564.2 36.3 600.5 300.3 <b>263.2</b>	573.0         36.3         609.3         304.7         267.2	581.9 36.3 618.2 309.1 <b>271.2</b>	590.7 36.3 627.0 313.5 <b>275.2</b>	599.5 36.3 635.8 317.9 <b>279.1</b>	608.4 36.3 644.7 322.4 283.1	617.2 36.3 653.5 326.8 <b>287.1</b>	36.3 662.3 331.2 <b>291.1</b>	634.9 36.3 671.2 335.6 295.1	36.3 680.0 340.0 <b>299.0</b>	652.5 36.3 688.8 344.4 303.0
R <sub>1</sub> Total Nominal	Nominal Side Nominal End Geotechnical Resistance Bearing Axial Resistance	(f) (kips) (kips) (kips) (tons)	334.5 27.8 362.3 181.2 156.1	343.4 35.4 378.8 189.4 <b>163.5</b>	352.2 36.3 388.5 194.3 <b>167.8</b>	36.1 36.3 397.3 198.7 <b>171.8</b>	369.9 36.3 406.2 203.1 <b>175.8</b>	378.7 36.3 415.0 207.5 <b>179.8</b>	387.5 36.3 423.8 211.9 <b>183.7</b>	396.4 36.3 432.7 216.4 <b>187.7</b>	405.2 36.3 441.5 220.8 191.7	414.0 36.3 450.3 225.2 <b>195.7</b>	422.9 36.3 459.2 229.6 <b>199.7</b>	431.7 36.3 468.0 234.0 <b>203.6</b>	440.5 36.3 476.8 238.4 <b>207.6</b>	. 449.4 36.3 485.7 242.9 <b>211.6</b>	458.2 36.3 494.5 247.3 <b>215.5</b>	467.0 36.3 503.3 251.7 <b>219.5</b>	70 475.9 36.3 512.2 256.1 <b>223.5</b>	484.7 36.3 521.0 260.5 <b>227.5</b>	493.5 36.3 529.8 264.9 <b>231.4</b>	502.4 36.3 538.7 269.4 <b>235.4</b>	511.2 36.3 547.5 273.8 <b>239.4</b>	75 520.0 36.3 556.3 278.2 <b>243.4</b>	528.9 36.3 565.2 282.6 <b>247.4</b>	537.7 36.3 574.0 287.0 <b>251.3</b>	546.5 36.3 582.8 291.4 <b>255.3</b>	555.4 36.3 591.7 295.9 <b>259.3</b>	564.2 36.3 600.5 300.3 <b>263.2</b>	573.0         36.3         609.3         304.7         267.2	581.9 36.3 618.2 309.1 <b>271.2</b>	590.7 36.3 627.0 313.5 <b>275.2</b>	599.5 36.3 635.8 317.9 <b>279.1</b>	608.4 36.3 644.7 322.4 283.1	617.2 36.3 653.5 326.8 <b>287.1</b>	626.0 36.3 662.3 331.2 <b>291.1</b>	634.9 36.3 671.2 335.6 295.1	643.7 36.3 680.0 340.0 <b>299.0</b>	652.5 36.3 688.8 344.4 303.0

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# Appendix E IDEALIZED SOIL PROFILES

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#### **GENERAL SOIL AND BEDROCK PROFILE**

#### Beech Grove Road over Mayfield Creek End Bent 1 Based on Boring 042C00050N-2002

A	:		Description	
Approx			STRATA	
Elevation	Depth			
(ft)	(ft)	Description		ameters
		(USCS Classificatio	n)	
530.0	0.0		(11. 16.3)	
		Silty Clay w/Sand	$\gamma_{\rm t} ({\rm lb/ft}^3) = 120$	
		(CL)	$\gamma_{\rm e}$ (lb/ft <sup>3</sup> ) = 57.6	
			$C_u (psf) = 800$	
			$K_{S}$ (lb/in <sup>3</sup> ) = 395	
			$E_{50} = 0.013$	
517.0	13.0			
		Silty Sand	$\gamma_t (lb/ft^3) = 128$	
		(SM)	$\gamma_e (lb/ft^3) = 65.6$	
			φ (°) = 34	
			$K_S (lb/in^3) = 110$	(above water table)
			$K_S (lb/in^3) = 72$	(below water table)
501.0	29.0			
		Sand w/Silt and G	$\gamma_{\rm t} ({\rm lb/ft}^3) = 130$	
		(SP-SM)	$\gamma_{\rm e} ({\rm lb/ft}^3) = 67.6$	
			φ (°) = 35	
			$K_{\rm S}$ (lb/in <sup>3</sup> ) = 130	(above water table)
			$K_S (lb/in^3) = 82$	(below water table)
477.0	53.0			,
		Sand w/Silt	$\gamma_{\rm t} ({\rm lb/ft}^3) = 130$	
		(SW-SM)	$\gamma_{\rm e} ({\rm lb/ft}^3) = 67.6$	
			$\phi$ (°) = 35	
			$K_{\rm S}$ (lb/in <sup>3</sup> ) = 130	(above water table)
			$K_{\rm S}$ (lb/in <sup>3</sup> ) = 82	(below water table)
430.0	100.0	Bottom of Hole		

#### **GENERAL SOIL AND BEDROCK PROFILE**

#### Beech Grove Road over Mayfield Creek End Bent 2 Based on Boring 042C00050N-2001

			Description	
Approx	imate		STRATA	
Elevation	Depth			
(ft)	(ft)	Description	Para	ameters
		(USCS Classification)		
530.0	0.0			
		Lean Clay	$\gamma_t (lb/ft^3) = 128$	
		(CL)	$\gamma_{\rm e}  ({\rm lb/ft}^3) = 65.6$	
			$C_u$ (psf) = 1200	
			$K_S (lb/in^3) = 395$	
			$E_{50} = 0.013$	
512.0	18.0			
		Sand w/Silt	$\gamma_t (lb/ft^3) = 130$	
		(SP-SM)	$\gamma_{\rm e}  ({\rm lb/ft}^3) = 67.6$	
			φ (°) = 35	
			$K_{S} (lb/in^{3}) = 130$	(above water table)
			$K_S (lb/in^3) = 82$	(below water table)
497.0	33.0			
		Gravel w/Clay and Sa	$\gamma_t (lb/ft^3) = 130$	
		(GP-GC)	$\gamma_{e} (lb/ft^{3}) = 67.6$	
			φ (°) = 35	
			$K_{S} (lb/in^{3}) = 130$	(above water table)
			$K_S (lb/in^3) = 82$	(below water table)
477.0	53.0			
		Sandy Silty Clay	$\gamma_t (lb/ft^3) = 130$	
		(CL-ML)	$\gamma_{\rm e}  ({\rm lb/ft}^3) = 67.6$	
			$C_u (psf) = 2500$	
			$K_S (lb/in^3) = 780$	
			$E_{50} = 0.009$	
472.0	58.0			
		Silty Sand	$\gamma_t (lb/ft^3) = 130$	
		(SM)	$\gamma_{\rm e}  ({\rm lb/ft}^3)  =  67.6$	

φ (°)

 $K_S (lb/in^3) = 130$ 

 $K_S (lb/in^3) = 82$ 

= 35

(above water table)

(below water table)

100.0

Bottom of Hole

430.0

#### 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: <a href="http://transportation.ky.gov/Construction/Pages/Kentucky-Standard-Specifications.aspx">http://transportation.ky.gov/Construction/Pages/Kentucky-Standard-Specifications.aspx</a>

#### 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.
  - Readout that mimics the actual sign display. (When LCD or LCD type readout is used, include backlighting and heating or otherwise arrange for viewing in cold temperatures.)
  - c) Non-volatile memory or suitable memory with battery backup for storing pre-programmed messages.
  - d) Logic circuitry to control the sequence of messages and flash rate.
- 4) Provide a serial interface that is capable of supporting complete remote control ability through land line and cellular telephone operation. Include communication software capable of immediately updating the message, providing complete sign status, and allowing message library queries and updates.
- 5) Allow a single person easily to raise the sign to a satisfactory height above the pavement during use, and lower the sign during travel.
- 6) Be Highway Orange on all exterior surfaces of the trailer, supports, and controller cabinet.
- 7) Provide operation in ambient temperatures from -30 to + 120 degrees Fahrenheit during snow, rain and other inclement weather.
- 8) Provide the driver board as part of a module. All modules are interchangeable, and have plug and socket arrangements for disconnection and reconnection. Printed circuit boards associated with driver boards have a conformable coating to protect against moisture.
- 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.

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- 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

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the actual number of individual signs acceptably furnished and operated during the project. The Department will not measure signs replaced due to damage or rejection.

**5.0 PAYMENT.** The Department will pay for the Variable Message Signs at the unit price each. The Department will not pay for signs replaced due to damage or rejection. Payment is full compensation for furnishing all materials, labor, equipment, and service necessary to, operate, move, repair, and maintain or replace the variable message signs. The Department will make payment for the completed and accepted quantities under the following:

CodePay ItemPay Unit02671Portable Changeable Message SignEach

Effective June 15, 2012

#### SPECIAL PROVISION FOR EMBANKMENT AT BRIDGE END BENT STRUCTURES

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

**1.0 DESCRIPTION**. Construct a soil, granular, or rock embankment with soil, granular or cohesive pile core and place structure granular backfill, as the Plans require. Construct the embankment according to the requirements of this Special Provision, the Plans, Standard Drawing RGX 100 and 105, and the Standard Specifications, Current Edition.

#### 2.0 MATERIALS.

- **2.1 Granular Embankment.** Conform to Subsection 805.10. When Granular Embankment materials are erodible or unstable according to Subsection 805.03.04, use the Special Construction Methods found in 3.2 of the Special Provision.
- **2.2 Rock Embankment**. Provide durable rock from roadway excavation that consists principally of Unweathered Limestone, Durable Shale (SDI equal to or greater than 95 according to KM 64-513), or Durable Sandstone.
- **2.3 Pile Core.** Provide a pile core in the area of the embankments where deep foundations are to be installed unless otherwise specified. The Pile Core is the zone indicated on Standard Drawings RGX 100 and 105 designated as Pile Core. Material control of the pile core area during embankment construction is always required. Proper Pile Core construction is required for installation of foundation elements such as drilled or driven piles or drilled shafts. The type of material used to construct the pile core is as directed in the plans or below. Typically, the pile core area will be constructed from the same material used to construct the surrounding embankment. Pile Core can be classified as one of three types:
- **A) Pile Core** Conform to Section 206 of the Standard Specifications. Provide pile core material consisting of the same material as the adjacent embankment except the material in the pile core area shall be free of boulders or particle sizes larger than 4 inches in any dimension or any other obstructions that may hinder pile driving operations. If the pile core material hinders pile driving operations, take the appropriate means necessary to reach the required pile tip elevation, at no expense to the Department.
- **B) Granular Pile Core**. Granular pile core is required only when specified in the plans. Select a gradation of durable rock to facilitate pile driving that conforms to Subsection 805.11. If granular pile core material hinders pile driving operations, take appropriate means necessary to reach the required pile tip elevation, at no expense to the Department.
- **C)** Cohesive Pile Core. Cohesive Pile Core is required only when specified in the plans. Conform to Section 206 of the Standard Specifications and use soil with at least 50 percent passing a No. 4 sieve having a minimum Plasticity Index (PI) of 10. In addition, keep the cohesive pile core free of boulders, larger than 4 inches in any dimension, or any other obstructions, which would interfere with drilling operations. If cohesive pile core material interferes with drilling operations, take appropriate means necessary to maintain excavation stability, at no expense to the Department.
  - 2.4 Structure Granular Backfill. Conform to Subsection 805.11

2.5 Geotextile Fabric. Conform to Class 1 or Class 2 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, 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 a 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, 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 a geotextile fabric between the embankment and the specified slope protection.

#### 4.0 MEASUREMENT.

**4.1 Granular Embankment**. The Department will measure the quantity in cubic yards using the plan quantity, increased or decreased by authorized adjustments as specified in Section 204. The Department will not measure for payment any Granular Embankment that is not called for in the plans.

The Department will not measure for payment any special construction caused by using erodible or unstable materials and will consider it incidental to the Granular Embankment regardless of whether the erodible or unstable material was specified or permitted.

- **4.2 Rock Embankment.** The Department will not measure for payment any rock embankment and will consider it incidental to roadway excavation or embankment in place, as applicable. Rock embankments will be constructed using granular embankment on projects where there is no available rock present within the excavation limits of the project.
- **4.3 Pile Core.** Pile core will be measured and paid under roadway excavation or embankment in place, as applicable. The Department will not measure the pile core for separate payment. The Department will not measure for payment the 8-inch perforated underdrain pipe and will consider it incidental to the Pile Core.
- **4.4 Structure Granular Backfill**. The Department will measure the quantity in cubic yards using the plan quantity, increased or decreased by authorized adjustments as specified in Section 204. The

Department will not measure any additional material required for backfill outside the limits shown on the Plans and Standard Drawings for payment and will consider it incidental to the work.

The Department will not measure for payment the 4-inch perforated underdrain pipe and will consider it incidental to the Structure Granular Backfill.

**4.5 Geotextile Fabric.** The Department will not measure the quantity of fabric used for separating dissimilar materials when constructing the embankment and pile core and will consider it incidental to embankment construction.

The Department will not measure for payment the Geotextile Fabric used to separate the Structure Granular Backfill from the embankment and aggregate base course and will consider it incidental to Structure Granular Backfill.

The Department will not measure for payment the Geotextile Fabric required for construction with erodible or unstable materials and will consider it incidental to embankment construction.

- **4.6 End Bent**. The Department will measure the quantities according to the Contract. The Department will not measure furnishing and placing the 2-inch mortar or concrete bed for payment and will consider it incidental to the end bent construction.
- **4.7 Structure Excavation**. The Department will not measure structure excavation on new embankments for payment and will consider it incidental to the Structure Granular Backfill or Concrete as applicable.
- **5.0 PAYMENT.** The Department will make payment for the completed and accepted quantities under the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
02223	Granular Embankment	Cubic Yards
02231	Structure Granular Backfill	Cubic Yards

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

August 5, 2019

## **PART III**

# EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

FHWA-1273 - Revised October 23, 2023

# REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I General
- II. Nondiscrimination
- III. Non-segregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
- 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 <a href="Form FHWA-1391">Form FHWA-1391</a>. 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 <a href="mailto:DBAconformance@dol.gov">DBAconformance@dol.gov</a>. 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 <a href="mailto:DBAconformance@dol.gov">DBAconformance@dol.gov</a>, 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 (<a href="https://www.sam.gov/">https://www.sam.gov/</a>). 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.

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# 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.

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#### 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 (<a href="https://www.sam.gov/">https://www.sam.gov/</a>), 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.

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# 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.

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## 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:

- 1. Compliance with Regulations: The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
- 2. Non-discrimination: The contractor, with regard to the work performed by it during the contract, will\_not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
- 3. Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.
- [4. Information and Reports: The contractor will\_provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Federal Highway Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the Federal Highway Administration, as appropriate, and will set forth what efforts it has made to obtain the information.
- 5. Sanctions for Noncompliance: In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:
  - a. withholding payments to the contractor under the contract until the contractor complies; and/or
  - b. cancelling, terminating, or suspending a contract, in whole or in part.
- 6. Incorporation of Provisions: The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

#### Standard Title VI/Non-Discrimination Statutes and Authorities

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21;
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 -- 12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

#### **EXECUTIVE BRANCH CODE OF ETHICS**

In the 1992 regular legislative session, the General Assembly passed and Governor Brereton Jones signed Senate Bill 63 (codified as KRS 11A), the Executive Branch Code of Ethics, which states, in part:

#### KRS 11A.040 (7) provides:

No present or former public servant shall, within six (6) months following termination of his office or employment, accept employment, compensation, or other economic benefit from any person or business that contracts or does business with, or is regulated by, the state in matters in which he was directly involved during the last thirty-six (36) months of his tenure. This provision shall not prohibit an individual from returning to the same business, firm, occupation, or profession in which he was involved prior to taking office or beginning his term of employment, or for which he received, prior to his state employment, a professional degree or license, provided that, for a period of six (6) months, he personally refrains from working on any matter in which he was directly involved during the last thirty-six (36) months of his tenure in state government. This subsection shall not prohibit the performance of ministerial functions, including but not limited to filing tax returns, filing applications for permits or licenses, or filing incorporation papers, nor shall it prohibit the former officer or public servant from receiving public funds disbursed through entitlement programs.

#### KRS 11A.040 (9) states:

A former public servant shall not represent a person or business before a state agency in a matter in which the former public servant was directly involved during the last thirty-six (36) months of his tenure, for a period of one (1) year after the latter of:

- a) The date of leaving office or termination of employment; or
- b) The date the term of office expires to which the public servant was elected.

This law is intended to promote public confidence in the integrity of state government and to declare as public policy the idea that state employees should view their work as a public trust and not as a way to obtain private benefits.

If you have worked for the executive branch of state government within the past six months, you may be subject to the law's prohibitions. The law's applicability may be different if you hold elected office or are contemplating representation of another before a state agency.

Also, if you are affiliated with a firm which does business with the state and which employs former state executive-branch employees, you should be aware that the law may apply to them.

In case of doubt, the law permits you to request an advisory opinion from the Executive Branch Ethics Commission, 1025 Capital Center Drive, Suite 104, Frankfort, Kentucky 40601; telephone (502) 564-7954.

Revised: May 23, 2022

"General Decision Number: KY20250040 01/03/2025

Superseded General Decision Number: KY20240040

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 |. The contractor must pay option is exercised) on or after January 30, 2022:

- . Executive Order 14026 generally applies to the contract.
- all covered workers at least \$17.75 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 2025.

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 \$13.30 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 2025.

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 01/03/2025

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		
CountiesButler, Edmonson, Hopkins,	.\$ 34.17	19.60
Muhlenberg, and Ohio		
Counties	.\$ 32.28	15.95
Daviess, Hancock, Henderson, McLean, Union,		
and Webster Counties	.\$ 34.17	19.60
BRTN0004-005 06/01/2023		
ALLEN, CALLOWAY, CHRISTIAN, LOGAL WARREN COUNTIES	N, SIMPSON, TODD	, TRIGG, and
ALLEN, CALLOWAY, CHRISTIAN, LOGA	N, SIMPSON, TODD	, TRIGG, and

	Rates	Fringes	
BRICKLAYER	\$ 32.28	15.95	
CARROSET 003 06/01/2034			-

CARP0357-002 06/01/2024

Rates Fringes	
CARPENTER	

ELEC0369-006 05/29/2024

BUTLER, EDMONSON, LOGAN, TODD & WARREN COUNTIES:

	Rates	Fringes
ELECTRICIAN	\$ 37.88	21.38
ELECA20 001 06/01/2024		

ELEC0429-001 06/01/2024

ALLEN & SIMPSON COUNTIES:

Rates Fringes

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.....\$ 35.67 28%+8.60

Cable spicers receive \$.25 per hour additional.

ELEC1701-003 07/01/2024

ELEC1/01-003 0//01/2024

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

Rates Fringes

Patos

Eningoc

ELECTRICIAN.....\$ 37.10 8.60+30.8%

Cable spicers receive \$.25 per hour additional.

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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	
ELECTRICIAN	··\$ 2/.95	13.20	

ENGI0181-017 07/01/2024

	Races	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1	\$ 40.05	19.10
GROUP 2	\$ 37.19	19.10
GROUP 3	\$ 37.64	19.10
GROUP 4	\$ 36.87	19.10

#### 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.

IRON0070-005 06/01/2024

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......\$ 34.59 25.00

IRON0103-004 08/01/2024

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:.....\$ 35.34 26.4

IRON0492-003 05/01/2024

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:.....\$ 33.73 16.38

IRON0782-006 08/01/2024

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....\$ 35.75 26.34 All Other Work...... \$ 34.01 24.83

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BALLARD, CALLOWAY, CARLISLE, FULTON, GRAVES, HICKMAN, LIVINGSTON, LYON, MARSHALL & MCCRACKEN COUNTIES

	Rates	Fringes
Laborers:		
GROUP	1\$ 23.96	18.58
GROUP	2\$ 24.21	18.58
GROUP	3\$ 24.26	18.58
GROUP	4\$ 24.86	18.58

#### 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

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LABO0189-006 07/01/2024

ALLEN, BUTLER, CALDWELL, CHRISTIAN, DAVIESS, EDMONSON, HANCOCK, HOPKINS, LOGAN, MCLEAN, MUHLENBERG, OHIO, SIMPSON, TODD, TRIGG & WARREN COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	\$ 23.96	18.58

GROUP 2	\$ 24.26	18.58
GROUP 3	\$ 24.21	18.58
GROUP 4	\$ 24.86	18.58

#### 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 07/01/2024

#### CRITTENDEN, HENDERSON, UNION & WEBSTER COUNTIES

	Rates	Fringes
		G
Laborers:		
GROUP	1\$ 25.22	18.10
GROUP	2\$ 25.47	18.10
GROUP	3\$ 25.52	18.10
GROUP	4\$ 26.12	18.10

#### 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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PAIN0032-002 09/01/2024

BALLARD COUNTY

	Rates	Fringes
Painters: Bridges		21.77 21.77
Spray, Blast, Steam, High & Abatement) and All Epoxy -	& Hazardous (Inc	luding Lead
PAIN0118-003 06/01/2014		
FDMONSON COUNTY:		

EDMONSON COUNTY:

	Rates	Fringes
Painters:		
Brush & Roller	\$ 18.50	11.97
Spray, Sandblast, Power		
Tools, Waterblast & Steam		
Cleaning	\$ 19.50	11.97

PAIN0156-006 04/01/2024

DAVIESS, HANCOCK, HENDERSON, MCLEAN, OHIO, UNION & WEBSTER COUNTIES

		Rates	Fringes
Painters:			
BRIDGES	5		
GROUP	1\$	30.77	20.30
GROUP	3\$	31.77	20.30
GROUP	4\$	35.00	20.30
ALL OTH	HER WORK:		
GROUP	1\$	29.62	20.30
GROUP	2\$	30.37	20.30
GROUP	3\$	30.62	20.30
GROUP	4\$	31.77	20.30

#### PAINTER CLASSIFICATIONS

GROUP 1 - Brush & Roller

GROUP 2 - Plasterers

GROUP 3 - Spray; Sandblast; Power Tools; Waterblast; Steamcleaning; Brush & Roller of Mastics, Creosotes, Kwinch Koate & Coal Tar Epoxy

GROUP 4 - Spray of Mastics, Creosotes, Kwinch Koate & Coal Tar Epoxy

PAIN0500-002 06/01/2024

CALDWELL, CALLOWAY, CARLISLE, CHRISTIAN, CRITTENDEN, FULTON, GRAVES, HICKMAN, HOPKINS, LIVINGSTON, LYON, MARSHALL, MCCRACKEN & TRIGG COUNTIES:

F	Rates	Fringes
Painters:		
Bridges\$	30.75	15.50
All Other Work\$	24.50	15.50

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 07/01/2024

BALLARD, CALDWELL, CALLOWAY, CARLISLE, CHRISTIAN, CRITTENDEN, FULTON, GRAVES, HICKMAN, LIVINGSTON, LYON, MARSHALL, MCCRACKEN and TRIGG COUNTIES

	Rates	Fringes
Plumber; Steamfitter	\$ 41.01	20.28
PLUM0502-004 08/01/2024		

ALLEN, BUTLER, EDMONSON, SIMPSON & WARREN

	Rates	Fringes		
Plumber; Steamfitter	\$ 41.90	24.89		
DLUMO(33, 003, 07/01/3033			_	

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 03/31/2024

ALLEN, BUTLER, EDMONSON, LOGAN, SIMPSON & WARREN COUNTIES

	Rates	Fringes
Truck drive	rs:	
Zone 1	:	
Group	1\$ 23.53	27.39
	2\$ 23.70	27.39
Group	3\$ 23.78	27.39
•	4\$ 23.80	27.39

#### 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 03/31/2024

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

	Rates	Fringes
TRUCK DRIVER		
Group 1	.\$ 25.15	27.39
Group 2	.\$ 25.38	27.39
Group 3	.\$ 25.45	27.39
Group 4	.\$ 25.46	27.39

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

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TEAM0236-001 03/31/2024

BALLARD, CALDWELL, CALLOWAY, CARLISLE, CHRISTIAN, CRITTENDEN, FULTON, GRAVES, HICKMAN, LIVINGSTON, LYON, MARSHALL, MCCRACKEN, TODD & TRIGG COUNTIES

Rates	Fringes
TRUCK DRIVER	
Group 1\$ 23.52	27.39
Group 2\$ 23.70	27.39
Group 3\$ 23.70	27.39
Group 4\$ 23.78	27.39
Group 5\$ 23.80	27.39

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

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at

https://www.dol.gov/agencies/whd/government-contracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

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The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

#### Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate 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. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

#### Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

#### Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the 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. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

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#### WAGE DETERMINATION APPEALS PROCESS

- 1) Has there been an initial decision in the matter? This can be:
  - a) a survey underlying a wage determination
  - b) an existing published wage determination
- c) an initial WHD letter setting forth a position on a wage determination matter
- d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail 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 an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

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 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.

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END OF GENERAL DECISION"

Fringe benefit amounts are applicable for all hours worked except when otherwise noted.

No laborer, workman or mechanic shall be paid at a rate less than that of a Journeyman except those classified as bona fide apprentices.

Apprentices or trainees shall be permitted to work as such subject to Administrative Regulations adopted by the Commissioner of Workplace Standards. Copies of these regulations will be furnished upon request from any interested person.

Before using apprentices on the job the contractor shall present to the Contracting Officer written evidence of registration of such employees in a program of a State apprenticeship and training agency approved and recognized by the U. S. Bureau of Apprenticeship and Training. In the absence of such a State agency, the contractor shall submit evidence of approval and registration by the U. S. Bureau of Apprenticeship and Training.

The contractor shall submit to the Contracting Officer, written evidence of the established apprenticeship-journeyman ratios and wage rates in the project area, which will be the basis for establishing such ratios and rates for the project under the applicable contract provisions.

#### TO: EMPLOYERS/EMPLOYEES

#### PREVAILING WAGE SCHEDULE:

The wages indicated on this wage schedule are the least permitted to be paid for the occupations indicated. When an employee works in more than one classification, the employer must record the number of hours worked in each classification at the prescribed hourly base rate.

#### **OVERTIME:**

Overtime is to be paid to an employee at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty (40) hours in such workweek. Wage violations or questions should be directed to the designated Engineer or the undersigned.

Director Division of Construction Procurement Frankfort, Kentucky 40622 502-564-3500

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# NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY

(Executive Order 11246)

- 1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
- 2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

#### **GOALS FOR MINORITY** PARTICIPATION IN EACH TRADE

#### **GOALS FOR FEMALE** PARTICIPATION IN EACH TRADE

5.2% 6.9%

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

(Revised: 1/1/2023)

## **PART IV**

## **BID ITEMS**

255372

#### **PROPOSAL BID ITEMS**

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Report Date 1/23/25

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	<b>UNIT PRIC</b>	FP	AMOUNT
0010	00001		DGA BASE	658.00	TON		\$	
0020	00212		CL2 ASPH BASE 1.00D PG64-22	221.00	TON		\$	
0030	00301		CL2 ASPH SURF 0.38D PG64-22	9.00	TON		\$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT DESCRIPTION	QUANTITY	UNIT	<b>UNIT PRIC</b>	FP	<b>AMOUNT</b>
0040	01987	DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	10.00	EACH		\$	
0050	02230	EMBANKMENT IN PLACE	1,889.00	CUYD		\$	
0060	02351	<b>GUARDRAIL-STEEL W BEAM-S FACE</b>	1,012.50	LF		\$	
0070	02360	<b>GUARDRAIL TERMINAL SECTION NO 1</b>	2.00	EACH		\$	
0800	02371	<b>GUARDRAIL END TREATMENT TYPE 7</b>	4.00	EACH		\$	
0090	02483	CHANNEL LINING CLASS II	14.00	TON		\$	
0100	02545	CLEARING AND GRUBBING APPROX LESS THAN 1 ACRE	1.00	LS		\$	
0110	02585	EDGE KEY	36.00	LF		\$	
0120	02650	MAINTAIN & CONTROL TRAFFIC	1.00	LS		\$	
0130	02671	PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH		\$	
0140	02726	STAKING	1.00	LS		\$	
0150	02731	REMOVE STRUCTURE	1.00	LS		\$	
0160	05950	<b>EROSION CONTROL BLANKET</b>	386.00	SQYD		\$	
0170	06514	PAVE STRIPING-PERM PAINT-4 IN	624.00	LF		\$	
0180	08003	FOUNDATION PREPARATION	1.00	LS		\$	
0190	21415ND	EROSION CONTROL	1.00	LS		\$	

Section: 0003 - BRIDGE - 042C00050N

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	<b>UNIT PRIC</b>	FP	AMOUNT
0200	02231		STRUCTURE GRANULAR BACKFILL	125.00	CUYD		\$	
0210	03299		ARMORED EDGE FOR CONCRETE	56.00	LF		\$	
0220	08001		STRUCTURE EXCAVATION-COMMON	200.00	CUYD		\$	
0230	08019		CYCLOPEAN STONE RIP RAP	163.00	TON		\$	
0240	08033		TEST PILES	138.00	LF		\$	
0250	08051		PILES-STEEL HP14X89	640.00	LF		\$	
0260	08100		CONCRETE-CLASS A	55.80	CUYD		\$	
0270	08104		CONCRETE-CLASS AA	45.80	CUYD		\$	
0280	08151		STEEL REINFORCEMENT-EPOXY COATED	10,348.00	LB		\$	
0290	08665		PRECAST PC BOX BEAM CB33-48	504.00	LF		\$	
0300	23378EC		CONCRETE SEALING	3,200.00	SQFT		\$	
0310	25017ED		RAIL SYSTEM SIDE MOUNTED MGS	168.00	LF		\$	
0320	26233EC		MOBILIZATION FOR CONCRETE SURF TREATMENT	1.00	LS		\$	

**GRAVES COUNTY** STP BRZ 9030 (491)

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**PROPOSAL BID ITEMS** 255372

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Report Date 1/23/25

Section: 0004 - DEMOBILIZATION &/OR MOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP AMOUNT
0330	02569		DEMOBILIZATION	1.0	0 1	.S	\$