

CALL NO. 111
CONTRACT ID. 244300

FAYETTE COUNTY

FED/STATE PROJECT NUMBER HSIP 4181(034)

DESCRIPTION ATHENS BOONESBORO ROAD (KY 418)

WORK TYPE ASPHALT SURFACE WITH GRADE & DRAIN

PRIMARY COMPLETION DATE 12/15/2024

LETTING DATE: March 21,2024

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

NO PLANS ASSOCIATED WITH THIS PROJECT.

DBE CERTIFICATION REQUIRED - 6%

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

TABLE OF CONTENTS

PART I SCOPE OF WORK

- PROJECT(S), COMPLETION DATE(S), & LIQUIDATED DAMAGES
- CONTRACT NOTES
- FEDERAL CONTRACT NOTES
- NATIONAL HIGHWAY
- ASPHALT MIXTURE
- DGA BASE
- FUEL AND ASPHALT PAY ADJUSTMENT
- COMPACTION OPTION A
- SPECIAL NOTE(S) APPLICABLE TO PROJECT
- LIQUIDATED DAMAGES
- WASTE AND BORROW SITES
- COORDINATION OF WORK WITH OTHER CONTRACTS
- GUARDRAIL
- ASPHALT MILLING AND TEXTURING
- TYPICAL SECTION DIMENSIONS
- SIDEWALK RAMPS & DETECTABLE WARNINGS
- TRAFFIC CONTROL PLAN
- DURABLE PAVEMENT EDGE DETAILS
- SPRAY APPLIED THERMOPLASTIC PAVEMENT MARKING MATERIALS
- RIGHT OF WAY CERTIFICATION
- UTILITY IMPACT & RAIL CERTIFICATION NOTES
- GENERAL UTILITY NOTES
- SEWER STANDARD UTILITY BID ITEMS
- SEWERLINE SPECS
- KPDES STORM WATER PERMIT, BMP AND ENOI
- COMMUNICATING ALL PROMISES
- SUMMARY SHEET(S)
- DETAIL SHEET(S)
- GUARDRAIL DELIVERY VERIFICATION SHEET

PART II SPECIFICATIONS AND STANDARD DRAWINGS

- STANDARD AND SUPPLEMENTAL SPECIFICATIONS
- [SN-1I] PORTABLE CHANGEABLE SIGNS
- [SN-11M] BARCODE LABEL ON PERMANENT SIGNS
- 2020 STANDARD DRAWINGS THAT APPLY
- INLAID PAVEMENT MARKER ARRANGEMENTS MULTI-LANE ROADWAYS
- INLAID PAVEMENT MARKER ARRANGEMENTS MULTI-LANE ROADWAYS
- INLAID PAVEMENT MARKER ARRANGEMENTS MULTI-LANE ROADWAYS
- INLAID PAVEMENT MARKER ARRANGEMENTS TWO-WAY, LEFT-TURN LANE
- INLAID PAVEMENT MARKER ARRANGEMENT CHANNELIZED INTERSECTION

PART III EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

- FEDERAL-AID CONSTRUCTION CONTRACTS FHWA 1273
- NONDISCRIMINATION OF EMPLOYEES

FAYETTE COUNTY HSIP 4181(034) Contract ID: 244300 Page 3 of 314

- EXECUTIVE BRANCH CODE OF ETHICS
- PROJECT WAGE RATES LOCALITY 3 / FEDERAL
- NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EEO FAYETTE

PART IV INSURANCE

PART V BID ITEMS

PART I SCOPE OF WORK

Contract ID: 244300 Page 5 of 314

ADMINISTRATIVE DISTRICT - 07

CONTRACT ID - 244300 HSIP 4181(034) COUNTY - FAYETTE

PCN - 0703404182401 HSIP 4181(034)

ATHENS BOONESBORO ROAD (KY 418) (MP 1.80) FROM ASHLEY WOODS ROAD EXTENDING SOUTHEAST TO I-75 (MP 2.60), A DISTANCE OF 0.80 MILES.ASPHALT SURFACE WITH GRADE & DRAIN SYP NO. 07-09012.51. GEOGRAPHIC COORDINATES LATITUDE 37:57:55.24 LONGITUDE 84:23:36.15 ADT 20,384

COMPLETION DATE(S):

COMPLETED BY 12/15/2024 APPLIES TO ENTIRE CONTRACT

COMPLETED BY 08/01/2024 MILESTONE COMPLETION DATE (SEE SN FOR COMPLETION DATES)

CONTRACT NOTES

PROPOSAL ADDENDA

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

BID SUBMITTAL

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

JOINT VENTURE BIDDING

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

UNDERGROUND FACILITY DAMAGE PROTECTION

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

REGISTRATION WITH THE SECRETARY OF STATE BY A FOREIGN ENTITY

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

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

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

SPECIAL NOTE FOR PROJECT QUESTIONS DURING ADVERTISEMENT

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

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

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

HARDWOOD REMOVAL RESTRICTIONS

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

INSTRUCTIONS FOR EXCESS MATERIAL SITES AND BORROW SITES

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

ACCESS TO RECORDS

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

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

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

BOYCOTT PROVISIONS

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

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

LOBBYING PROHIBITIONS

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

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

Revised: 2/29/2024

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

10/26/2023

1.0 BUY AMERICA REQUIREMENT.

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

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

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

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

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

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

Use foreign materials only under the following conditions:

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

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

2.0 – BUILD AMERICA, BUY AMERICA (BABA)

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

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

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

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

10/26/2023

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

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

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

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

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

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

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

October 26, 2023 Letting

Contract ID: 244300 Page 11 of 314

SPECIAL NOTE – BUY AMERICA REQUIREMENTS AND BUILD

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.

FAYETTE COUNTY HSIP 4181(034)

FEDERAL CONTRACT NOTES

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

102.02 Current Rating 102.08 Preparation and Delivery of Proposals

102.13 Irregular Bid Proposals 102.14 Disqualification of Bidders

102.09 Proposal Guaranty

CIVIL RIGHTS ACT OF 1964

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

NOTICE TO ALL BIDDERS

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

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

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

SECOND TIER SUBCONTRACTS

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

DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

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

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

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

DBE GOAL

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

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

OBLIGATION OF CONTRACTORS

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

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

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

FAYETTE COUNTY HSIP 4181(034)

Contract ID: 244300 Page 14 of 314

CERTIFICATION OF CONTRACT GOAL

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

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

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

DBE PARTICIPATION PLAN

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

The DBE Participation Plan shall include the following:

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

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

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

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

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

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

CONSIDERATION OF GOOD FAITH EFFORTS REQUESTS

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

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

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

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

FAILURE TO MEET GOOD FAITH REQUIREMENT

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

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

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

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

SANCTIONS FOR FAILURE TO MEET DBE REQUIREMENTS OF THE PROJECT

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

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

PROMPT PAYMENT

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

CONTRACTOR REPORTING

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

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

***** IMPORTANT ******

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

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

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

DEFAULT OR DECERTIFICATION OF THE DBE

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

PROHIBITION ON TELECOMMUNICATIONS EQUIPMENT OR SERVICES

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

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

Revised: 2/29/2024

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

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

SECTION 7 is expanded by the following new Article:

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

Pursuant to Title 46CFR Part 381, the Contractor agrees

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

FAYETTE COUNTY HSIP 4181(034)

Contract ID: 244300 Page 20 of 314

NATIONAL HIGHWAY

Be advised this project is on the NATIONAL HIGHWAY SYSTEM.

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.

FUEL AND ASPHALT PAY ADJUSTMENT

The Department has included the Contract items Asphalt Adjustment and Fuel Adjustment for possible future payments at an established Contract unit price of \$1.00. The Department will calculate actual adjustment quantities after work is completed. If existing Contract amount is insufficient to pay all items on the contract with the adjustments, the Department will establish additional monies with a change order.

OPTION A

Be advised that the Department will accept compaction of asphalt mixtures furnished for driving lanes and ramps, at 1 inch (25mm) or greater, on this project according to OPTION A in accordance with Section 402 and Section 403 of the current Standard Specifications. The Department will require joint cores as described in Section 402.03.02 for surface mixtures only. The Department will accept compaction of all other asphalt mixtures according to OPTION B.

Special Notes Applicable to Project General Notes & Description of Work

Except as specified herein, perform all work in accordance with the Department's Standard Specifications, Supplemental Specifications, applicable Special Notes and Special Provisions, and applicable Standard and Sepia Drawings, current editions. Section references are to the Standard Specifications.

CAUTION – PROPOSAL INFORMATION IS APPROXIMATE – PERFORM AN ON-SITE INSPECTION

Potential bidders are cautioned that the information within this proposal is approximate only and is not to be taken as an exact evaluation of the bid quantities, nor the materials and conditions that may be encountered during construction. As such, before submitting a bid, potential bidders shall make a thorough inspection of the site to examine the conditions to be encountered per Section 102.07. Furthermore, during the execution of the work, the Engineer reserves the right to make changes to the bid item quantities and/or alterations in the work when necessary to complete the project satisfactorily per Section 104.02.

<u>NOTE</u>: The Department will pay for bid item quantity overruns, but only if pre-approved by the Engineer.

STATIONING

The contractor is advised that the planned locations of work were established from a beginning station number, which is STA 99+00 and corresponds to Milepoint 1.875 along KY 418. **NOTE**: The existing mile marker signs may not correspond to the proposed work locations.

LIDAR

All survey information was obtained from available KYTC Aerial LIDAR data and should be field verified as appropriate during construction and prior to incorporating the various project work items. Refer to the Special Note for Staking concerning staking operations required to control and construct the work.

ON-SITE INSPECTION

Before submitting a bid for the work, make a thorough inspection of the site and determine existing conditions so that the work can be expeditiously performed after a contract is awarded. The Department will consider submission of a bid to be evidence of this inspection having been made. The Department will not honor any claims for money or time extension resulting from site conditions.

RIGHT OF WAY LIMITS

The Department has not established the exact limits of the Right-of-Way. Unless a consent and release form is obtained from the adjoining property owner, limit work activities to the obvious Right-of-Way and staging areas secured and environmentally cleared by the Contractor at no additional cost to the Department. In the event that private improvements (i.e., fences, buildings, etc.) encroach upon the Right-of-Way, the contractor shall notify the Engineer and limit work activities in order to NOT disturb the improvements. If they become necessary, the Department will secure consent and releases from property owners through the Engineer. Be responsible for all encroachments onto private lands.

CONTROL

Perform all work under the absolute control of the Department of Highways. Obtain the Engineer's approval of all designs required to be furnished by the Contractor prior to incorporation into the work. The Department reserves the right to have other work performed by other contractors and its own forces and to permit public utility companies and others to do work during the construction within the limits of, or adjacent to, the project. Conduct operations and cooperate with such other parties so that interference with such other work will be reduced to a minimum. The Department will not honor any claims for money or time extension created by the

General Notes & Description of Work Page 2 of 3

operations of such other parties. Should a difference of opinion arise as to the rights of the Contractor and others working within the limits of, or adjacent to, the project, the Engineer will decide as to the respective rights of the various parties involved in order to assure the completion of the Department's work in general harmony and in a satisfactory manner, and his/her decision shall be final and binding upon the Contractor.

DESCRIPTION OF WORK SUMMARY

The following is a summarized description of the primary work operations pertaining to the proposed work. Many of the descriptions below reference where additional information can be found for each work operation.

Construction of RCUT (Restricted Crossing U-Turn) Intersections. The intent of this project is to construct an RCUT intersection at Competition Drive along KY 418 (Athens Boonesboro Road). Additional access management improvements are also proposed at the intersection with Doe Run Trail (also referred to as Recreation Drive).

This will be accomplished by constructing a Standard Barrier Median in the median of the two intersections with KY 418, left and right-turn storage lanes, and U-Turn crossovers/loons (a short distance upstream and downstream from the main Competition Drive intersection).

Standard Barrier Median. The Standard Barrier Median has been designed to prevent the left-turn and through movements from the side roads onto KY 418, while allowing turning movements from KY 418 onto the side roads. Details within the Proposal show the design and layout for the Standard Barrier Median.

Turn Lanes and U-Turn Crossovers/Loons. Since the thru and left turning movements from the side roads onto KY 418 are prohibited in this design, storage lanes for U-turn movements are being provided a short distance from the main intersection. To accommodate vehicles that require a large turning radius at the U-turns, loons are to be constructed along KY 418 at/near the U-Turn locations. Details within the Proposal show the design, layout and widening for the turn lanes and U-turn crossovers/loons.

Asphalt Pavement and Roadway Widening. Portions of the existing roadway are to be widened for turn lanes. Additionally, the roadway will be resurfaced (with milling and texturing and placement of asphalt surface course) within the project limits. The roadway widening work will include: removal of existing pavement by milling and texturing, earthwork, longitudinal edge keys, placement of crushed stone base, placement of asphalt base, placement of an asphalt surface course, installation of edge line rumble strips, and the application/installation of pavement markings.

Drainage. There are locations throughout the project where culvert pipes and storm sewer pipes are being installed and/or extended with associated ditch construction. Locations are noted on the Plan Sheets. Refer to the Special Note for Pipe Replacements / Extensions for more information on this item of work.

Guardrail. Locations of the existing guardrail and end treatments within the project will either be eliminated or replaced. Refer to the Plan Sheet for the approximate locations for guardrail replacement. See Special Note for Guardrail for more information on this work.

General Notes & Description of Work Page 3 of 3

Striping and Pavement Marking. Install the proposed Striping and Pavement Markings, as detailed on the Striping Plans. The Contractor shall coordinate with the District Traffic Engineer to ensure that the District Traffic Engineer approves of the final layout.

Signing. Install the proposed signing, as detailed on the Signing Plans. The Contractor shall coordinate with the District Traffic Engineer to ensure that the District Traffic Engineer approves of the final sign locations.

Signalization. Install the proposed traffic signal system (temporary and permanent signals), as detailed on the Signalization Plans. This work will include installation of mast arm poles with signal heads, pedestrian signals, base-mounted signal controllers, radar presence detectors and fiber optic interconnection.

Sanitary Sewer Force Main Relocation. A section of existing 10" sanitary sewer force main will be relocated from under the proposed U-turn loon, as detailed on the Utility Plans.

Install Qwick Kurb Model L125 Big Bollard System. A lane separator curb is to be added at certain locations along the edgelines of KY 418 as detailed on the plans.

Special Note for Staking

Perform Contractor Staking according to Section 201; except, in addition to the requirements of Section 201, perform the following:

- 1. Contrary to Section 201.03.01, perform items 1 & 2 usually performed by the Engineer.
- 2. Verify the dimensions, type, and quantities of the culvert pipes, entrance pipes, and/or box culverts as listed and detailed in the proposal and determine flow line elevations and slopes necessary to provide positive drainage. Revise as necessary to accommodate the existing site conditions; to provide proper alignment of the drainage structures with existing and/or proposed ditches, stream channels, swales, and the roadway lines and grades; and to ensure positive drainage upon completion of the work.
- 3. Ensure positive drainage along KY 418 with standard median barriers. Where necessary, curb cuts and/or leveling and wedging should be utilized to promote positive drainage. Approximate locations are shown on the plans but should be field verified for the length of the corridor. An approximate quantity for leveling and wedging has been included in the Proposal.
- 4. Using stakes, paint marks on the pavement, mag nails, and/or any other means approved by the Engineer, the Contractor shall mark and/or stake the proposed sign locations in the field. NOTE: The proposed signs are listed in the proposal by approximate location and are NOT to be taken as the exact location for the signs. During staking operations, the Contractor shall review the signing layout and existing field conditions and look for potential conflicts, including but not limited to utilities, driveways, visual obstructions, etc. When conflicts are found, adjust the staked location of signs to mitigate conflicts. Because the sign locations in the proposal are approximate and the location of some signs may need to be adjusted due to conflicts, during staking operations the Contractor shall refer to and utilize the information in the Manual on Uniform on Traffic Control Devices (MUTCD), current edition. The MUTCD cover items such as: appropriate sign location, advance placement distances, and spacing requirements for signing. The intent is for the proposed signs to be consistent with, and meet the requirements of, the MUTCD. Once the proposed sign locations have been staked, notify and coordinate with the District Traffic Engineer, and perform a review of the staked locations. Adjust the staked locations, as directed by the District Traffic Engineer, and obtain approval of the final staked locations. This review will also be used to determine if there are any existing signs that require removal and/or relocation. Provide the District Traffic Engineer with 2 weeks of notice when a route will be ready for a review of the staked locations. NOTE: The District Traffic Engineer may determine that the proposed signing, including sign types and messages, needs to be adjusted and/or modified from what is shown in the proposal. Therefore, the Contractor shall not order any sign material for a route until the route has been staked and final sign location approval has been given by the District Traffic Engineer.
- 5. Using paint marks on the pavement, and/or any other means approved by the Engineer, the Contractor shall layout and pre-mark the proposed striping, pavement markings, etc. Adjust as necessary to accommodate the existing site conditions and to provide proper alignment of the proposed thru and turning lanes. Obtain approval of the pre-marked layout from the Engineer and/or District Traffic Engineer prior to installing the striping and/or pavement markings.
- 6. Prior to incorporating into the work, obtain the Engineers approval of all revisions determined by the Contractor.
- 7. Perform any and all other staking operations required to control and construct the work.

Special Note for Erosion Control

I. DESCRIPTION

Perform all erosion and water pollution control work in accordance with any other notes in the Proposal, the Department's Standard and Interim Supplemental Specifications, the Special Provisions and Special Notes, and the Standard and Sepia Drawings, current editions, or as directed by the Engineer. Section references are to the Standard Specifications. This work shall consist of:

(1) Developing and preparing a Best Management Practices Plan (BMP) tailored to suit the specific construction phasing for each site within the project; (2) Preparing the project site for construction, including locating, furnishing, installing, and maintaining temporary and/or permanent erosion and water pollution control measures as required by the BMP prior to beginning any earth disturbing activity on the project site; (3) Clearing and grubbing and removal of all obstructions as required for construction; (4) Removing all erosion control devices when no longer needed; (5) Restoring all disturbed areas as nearly as possible to their original condition; (6) Preparing seedbeds and permanently seeding all disturbed areas; (7) Providing a Kentucky Erosion Prevention and Sediment Control Program (KEPSC) qualified inspector; and (8) Performing any other work to prevent erosion and/or water pollution as specified by this contract, required by the BMP, or as directed by the Engineer.

II. MATERIALS

Furnish materials in accordance with these notes, the Standard Specifications and Interim Supplemental Specifications, applicable Special Provisions and Special Notes, and the Standard and Sepia Drawings, current editions. Provide for all materials to be sampled and tested in accordance with the Department's Sampling Manual. Unless directed otherwise by the Engineer, make the materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing.

III. CONSTRUCTION

Be advised, these Erosion Control Notes do not constitute a BMP plan for the project. Jointly with the Engineer, prepare a site-specific BMP plan for each drainage area within the project in accordance with Section 213. Provide a unique BMP at each project site using good engineering practices taking into account existing site conditions, the type of work to be performed, the construction phasing, methods, and the techniques to be utilized to complete the work. Be responsible for all erosion prevention, sediment control, and water pollution prevention measures required by the BMP for each site. Represent and warrant compliance with the Clean Water Act (33 USC Section 1251 et seq.), the 404 Permit, the 401 Water Quality Certification, and applicable state and local government agency laws, regulations, rules, specifications, and permits. Contrary to Section 105.05, in case of discrepancy between these notes, the Standard Specifications, Interim Supplemental Specifications, Special Provisions and Special Notes, Standard and Sepia Drawings, and such state and local government agency requirements, adhere to the most restrictive requirement.

Conduct operations in such a manner as to minimize the amount of disturbed ground during each phase of the construction and limit the haul roads to the minimum required to perform the work. Preserve existing

Erosion Control Page 2 of 3

vegetation not required to be removed by the work or the contract. Seed and/or mulch disturbed areas at the earliest opportunity. Use silt fence, silt traps, temporary ditches, brush barriers, erosion control blankets, sodding, channel lining, and other erosion control measures in a timely manner as required by the BMP and as directed or approved by the Engineer. Prevent sediment laden water from leaving the project, entering an existing drainage structure, or entering a steam.

Provide for erosion control measures to be in place and functioning prior to any earth disturbance within a drainage area. Compute the volume and size of silt control devices necessary to control sediment during each phase of construction. All silt control devices shall be sized to retain a volume of 3,600 cubic feet per disturbed contributing acre. Remove sediment from silt traps before they become a maximum of ½ full. Maintain silt fence by removing accumulated trappings and/or replacing the geotextile fabric when it becomes clogged, damaged, or deteriorated, or when directed by the Engineer. Properly dispose of all materials trapped by erosion control devices at approved sites off the right of way obtained by the Contractor at no additional cost to the Department. See the Special Provision for Waste and Borrow Sites.

As work progresses, add or remove erosion control measures as required by the BMP, applicable to the Contractor's project phasing, construction methods, and techniques. Update the volume calculations and modify the BMP as necessary throughout the duration of the project. Ensure that an updated BMP is kept on site and available for public inspection throughout the life of the project.

The required volume at each Silt Trap shall be computed based on the Up Gradient Contributing Areas that are disturbed and/or stabilized to the satisfaction of the Engineer. The required volume calculation for each Silt Trap shall be determined by the Contractor and verified by the Engineer. The required volume at each Silt Trap may be reduced by the following amounts:

- Up Gradient Areas not disturbed (acres)
- Up Gradient Areas that have been reclaimed and protected by Erosion Control Blanket or other ground protection material such as Temporary Mulch (acres)
- Up Gradient Areas that have been protected by Silt Fence (acres) Areas protected by Silt Fence shall be computed at a maximum rate of 100 square feet per linear foot of Silt Fence
- Up Gradient Areas that have been protected by Silt Traps (acres)

The use of Temporary Mulch is encouraged.

Silt Trap Type B shall always be placed at the collection point prior to discharging into a Blue Line Stream or onto an adjacent Property Owner. Where overland flow exists, a Silt Fence or other filter devices may be used.

After all construction is complete, restore all disturbed areas in accordance with Section 212. Completely remove all temporary erosion control devices not required as part of the permanent erosion control from the construction site. Prior to removal, obtain the Engineer's concurrence of items to be removed. Grade the remaining exposed earth (both on and off the Right of-Way) as nearly as possible to its original condition, or as directed by the Engineer. Prepare the seed bed areas and sow all exposed earthen areas with the applicable seed mixture(s) according to Section 212.03.03.

FAYETTE COUNTY HSIP 4181(034) Contract ID: 244300 Page 27 of 314

Erosion Control Page 3 of 3

IV. MEASUREMENT

The Department will measure the various erosion control items according to Section 212.04 and Section 213.04, as applicable.

V. Basis of Payment

The Department will make payment for the various erosion control items according to Section 212.04 and Section 213.04, as applicable.

Special Note for Pipe Replacements and Extensions

I. DESCRIPTION

Except as provided herein, perform all work in accordance with the Department's Standard Specifications, interim Supplemental Specifications, Standard and Sepia Drawings, and Special Notes and Special Provisions, current editions. Article references are to the Standard Specifications. This project shall consist of furnishing all labor, equipment, materials, and incidentals for the following:

(1) Maintaining and Controlling Traffic; (2) Constructing pipe replacements and/or pipe extensions; (3) Embankment and/or Excavation; (4) Erosion Control; and (6) Any other work as specified by this contract.

II. MATERIALS

Provide for sampling and testing of all materials in accordance with the Department's Sampling Manual. Make materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing unless otherwise specified in these notes.

- A. Maintain and Control Traffic. See Traffic Control Plan.
- **B.** Culvert Pipe. Furnish pipe meeting the requirements of Section 810. Select pipe for pH range Medium and minimum fill cover height according to the applicable Standard or Sepia Drawings, current editions. Verify maximum and minimum fill cover height required for new pipe prior to construction and obtain the Engineer's approval of the class or gauge of pipe and type of coating prior to delivering pipe to project. Furnish approved connecting bands or pipe anchors and toe walls.
- **C. Flowable Fill.** Furnish Flowable Fill for Pipe Backfill per Section 601.03.03(B).
- **D. Erosion Control.** See Special Note for Erosion Control.

III. CONSTRUCTION METHODS

- A. Maintain and Control Traffic. See Traffic Control Plan.
- **B.** Erosion Control. See Special Note for Erosion Control.
- C. Site Preparation. Be responsible for all site preparation including, but not limited to, saw cutting and removing existing pavement; clearing and grubbing; staking; incidental excavation and backfilling; common and solid rock excavation; embankment in place; removal of obstructions, or any other items; restoration of pavements, slopes, and all disturbed areas; final dressing and cleanup; and disposal of materials. Limit clearing and grubbing to the absolute minimum required to construct the drainage features. Perform all site preparation only as approved or directed by the Engineer.
- D. Removing Headwalls, Pipe, and Excavation. Remove existing headwalls and lengths of culvert

Pipe Replacements/Extensions
Page 2 of 4

and/or entrance pipes at the approximate locations noted on the summary. The Engineer will determine the exact locations and lengths of pipe to be removed at the time of construction. When any portion of pipe under the roadway, saw cut the existing asphalt pavement and base to a neat edge prior to excavation and removal of the existing pipe. NOTE: Saw cutting the pavement shall be incidental. Obtain the Engineer's approval of trench width and/or saw cutting limits prior to saw cutting the pavement. Excavate the trench and remove the pipe as directed, or approved, by the Engineer without disturbing existing underground utilities.

- E. Constructing Pipe, Headwalls, and Drainage Boxes. Construct culvert and/or entrance pipes, pipe extensions, headwalls, drainage boxes, and other drainage structures at the locations shown in the proposal or as designated by the Engineer. The Contractor will establish, with the approval of the Engineer, the final centerlines, flow lines, and skews to obtain the best fit with the existing and/or proposed ditches and other proposed improvements. (See the Special Note for Staking.) Construct pipe bedding according to Section 701 and the applicable Standard or Sepia Drawings, current editions. Use approved connecting bands or concrete anchors as required. Prior to backfilling pipe, obtain the Engineer's approval of the pipe installation. Provide positive drainage upon completion of pipe installation.
- **F. Pipe Backfill.** Backfill entrance pipes according to Section 701.03.06. Contrary to Section 701.03.06, regardless of cover height, backfill culvert pipes with flowable fill as shown on the Culvert Pipe Replacement Detail from the outside edge of shoulder or back of curb to outside edge of shoulder or back of curb. Steel plates will likely be required to maintain traffic while the flowable fill cures. Once the flowable fill has sufficiently cured, place the Asphalt Base in lifts with thicknesses of 3-4 inches, up to the surface of the existing pavement. Seal with Leveling & Wedging. Allow the asphalt base and leveling & wedging to be exposed to traffic for a minimum of 14 days to allow for settlement. During the waiting period, level & wedge any settlement as directed by the Engineer. After the waiting period has been met for the last pipe replacement constructed, the final milling and/or surfacing operations can begin, unless directed otherwise by the Engineer. For culvert pipe beyond the outside edge of shoulder or back of curb, backfill according to Section 701.03.06.
- **G. Embankments.** Backfill pipe and culvert extensions, and construct shoulder embankments as directed by the Engineer. The Contractor shall bench into the existing slope and apply proper compaction according to Section 206. For more information and details on benching, refer to Note 2 on the detail sheet titled: ROADSIDE REGRADING AND EMBANKMENT BENCHING DETAILS, found elsewhere in the Proposal. Provide positive drainage of ditches, shoulders, and slopes at all times during and upon completion of construction.
- H. Property Damage. Be responsible for all damage to public and/or private property resulting from the work. Repair or replace damaged roadway features in like kind materials and design, as directed by the Engineer at no additional cost to the Department. Repair or replace damaged private property in like kind materials and design to the satisfaction of the owner and the Engineer at no additional cost to the Department.
- I. Coordination with Utility Companies. Locate all underground, above ground, and overhead utilities prior to beginning construction. Be responsible for contacting and maintaining liaison with all utility companies that have utilities located within the project limits. Do not disturb existing overhead or

Pipe Replacements/Extensions
Page 3 of 4

underground utilities. It is not anticipated that any utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require that utilities be relocated and/or adjusted, the utility companies will work concurrently with the Contractor while relocating their facilities. Be responsible for repairing all utility damage that occurs as a result of pipe replacement and pipe extension operations at no additional cost to the Department. NOTIFY THE
ENGINEER AND THE UTILITY OWNER(S) IMMEDIATELY WHEN IT IS DISCOVERED OR ANTICIPATED THAT ANY UTILITY CONFLICT COULD DELAY THE CONTRACTOR'S OPERATIONS. If the total delay exceeds ten working days, an extension of the specified completion date will be negotiated with the Contractor for delay to the Contractor's work; however, no extension will be granted for any delay caused by the Contractor's failure to notify the Engineer and/or the utility company as specified above when a conflict is discovered or anticipated as specified.">
If the total delay caused by the Contractor's failure to notify the Engineer and/or the utility company as specified above when a conflict is discovered or anticipated as specified.

- J. Right-of-Way Limits. The Department has not established exact limits of the Right-of-Way. Unless a consent and release form is obtained from the adjoining property owner, limit work activities to the obvious Right-of-Way and staging areas secured by the Contractor at no additional cost to the Department. In the event that private improvements (i.e. fences, buildings, etc.) encroach upon the Right-of-Way, the Contractor shall notify the Engineer and limit work activities in order to NOT disturb the improvements. If they become necessary, the Department will secure consent and releases from property owners through the Engineer. Be responsible for all encroachments onto private lands.
- K. Clean Up, Disposal of Waste. Clean up the project area as work progresses. Dispose of all removed concrete, pipe, pavement, debris, excess and unsuitable excavation, and all other waste at approved sites off the Right of Way obtained by the Contractor at no additional cost to the Department. See the Special Provision for Waste and Borrow Sites.
- L. Final Dressing, Seeding and Protection. Grade all disturbed areas to blend with the adjacent roadways features and to provide a suitable seed bed. Apply Class A Final Dressing to all disturbed areas, both on and off the Right-of-Way. Sow all disturbed earthen areas with the applicable seed mixture(s) according to Section 212.03.03.
- M. Erosion Control. See the Special Note for Erosion Control.

IV. METHOD OF MEASUREMENT

- A. Maintain and Control Traffic. See the Traffic Control Plan.
- **B. Site Preparation.** Other than the bid items listed, site preparation will NOT be measured for payment, but shall be incidental to culvert and/or entrance pipe bid items, as applicable.
- **C. Remove Headwall.** The Department will measure the removal of existing headwalls as Each. Any excavation, including rock excavation, necessary to remove existing headwalls will NOT be measured for payment, but shall be incidental to the bid item "Remove Headwall".
- **D.** Remove Pipe. Removal of existing culvert and entrance pipe shall be measured according to Section

Pipe Replacements/Extensions
Page 4 of 4

701.04.14. Any excavation, including rock excavation, necessary to remove existing pipe will NOT be measured for payment, but shall be incidental to the bid item "Remove Pipe".

- **E. Culvert and Entrance Pipe.** The Department will measure the quantities according to Section 701.04. Any excavation, including rock excavation, necessary to install culvert or entrance pipe shall be incidental to the corresponding pipe bid items.
- **F. Headwalls, Drainage Boxes.** The Department will measure according to Section 710. Any excavation, including rock excavation, necessary to construct headwalls and/or drainage boxes will NOT be measured for payment, but shall be incidental to the applicable bid item.
- **G.** Excavation, Pipe Backfill, Embankments. The Department will NOT measure for payment the following items: any excavation, including rock excavation, necessary to remove the existing pipe and/or install the proposed culvert or entrance pipe, pipe backfill material, geotextile fabric, flowable fill, and re-constructing shoulder embankments, but shall considered these items incidental to the bid items for culvert and entrance pipe.
- H. Clean Up, Disposal of Waste, Final Dressing, Seeding and Protection. The Department will NOT measure for payment the following activities: Clean Up, Disposal of Waste, and Final Dressing. These activities shall be incidental to the project bid items. Seeding and Protection shall be measured according to Section 212.
- **I. Erosion Control.** See the Special Note for Erosion Control.

V. BASIS OF PAYMENT

- A. Maintain and Control Traffic. See the Traffic Control Plan.
- **B.** Remove Headwall. The Department will make payment for the completed and accepted quantities of Each headwall removed. Payment at the Contract unit price per Each shall be full compensation for furnishing all labor, materials, equipment, and incidentals for removing the existing headwall.
- **C. Remove Pipe.** The Department will make payment according to Section 701.05. Payment at the Contract unit price per linear foot shall be full compensation for furnishing all labor, materials, equipment, and incidentals for removing the existing pipe.
- **D. Culvert and Entrance Pipe.** The Department will make payment according to Section 701.05. Payment at the Contract unit price per linear foot shall be full compensation for furnishing all labor, materials, equipment, and incidentals necessary for installing and backfilling new culvert and entrance pipe.
- E. Headwalls, Drainage Boxes. The Department will make payment according to Section 710.
- **F. Erosion Control.** See the Special Note for Erosion Control.

Special Note for Signage

All sign sheeting shall be from the Cabinet's List of Approved Materials.

All permanent signs and sign components shall be fabricated using Type XI sheeting.

The following signs and sign components shall be fabricated using Type XI fluorescent yellow sheeting:

- o Horizontal Alignment Signs and Plaques, including signs shown in Figure 2C-1 of the MUTCD
- All Advisory Speed (W13-1P) plaques

The following signs shall be fabricated using Type XI fluorescent yellow-green sheeting:

- School and school bus warning signs, including the fluorescent yellow-green signs shown in Figures 7B-1 and 7B-6 of the MUTCD and other school-related warning signs that are not included in the MUTCD.
- Bicycle Warning (W11-1) signs and SHARE THE ROAD (W16-1P) plaques or diagonal downward pointing arrow (W16-7P) plaques that supplement Bicycle Warning signs.
- Pedestrian Warning signs and diagonal downward pointing arrow plaques that supplement Pedestrian Warning signs.
- o In-Street Pedestrian Crossing (R1-6) signs and Overhead pedestrian Crossing (R1-9) signs
- Supplemental plaques to any of the previously listed signs

Special Note for Signing

I. DESCRIPTION

Except as provided herein, this work shall be performed in accordance with the current edition of the Manual on Uniform Traffic Control Devices (MUTCD), the Department's current Standard Specifications and Interim Supplemental Specifications, applicable Standard and Sepia Drawings, and applicable Special Provisions. Article references are to the Standard Specifications. This project shall consist of furnishing all labor, equipment, materials, and incidentals for the following:

(1) Maintaining and Controlling Traffic; (2) Furnish, Fabricate, and Erect Signs; and (3) All other work specified in the Contract.

II. MATERIALS

All materials shall be sampled and tested in accordance with the Department's Sampling Manual and the materials shall be available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing unless otherwise specified in these Notes.

- A. Maintain and Control Traffic. See Traffic Control Plan.
- **B.** Erosion Control. See Special Note for Erosion Control.

III. CONSTRUCTION METHODS

- A. Maintain and Control Traffic. See Traffic Control Plan.
- **B. Site Preparation.** Be responsible for all site preparation including, but not limited to: clearing and grubbing, staking, excavation, backfill, and removal of obstructions or any other material not covered by other items. Perform all site preparation only as approved or directed by the Engineer.
- **C. Staking.** See Special Note for Staking.
- **D. Signs and Posts.** Before beginning installation, the Contractor shall furnish to the Engineer drawings, descriptions, manufacturer's cuts, etc. describing and/or detailing all material to be used. Mill test reports for beams, steel panels, and each different gauge of aluminum or steel sheeting used must be submitted to the Division of Construction and approved prior to erection.

Fabricate sheet signs from .080 or .125 gauge aluminum alloy 5052-H38 or 6061-T6, in accordance with ASTM B-209, and to the size and shape specified. Prepare the side of the aluminum sheet to receive the retroreflective background material according to the recommendations of the sheeting and retroreflective material manufacturer(s). Sheeting used as background material for sign faces is to be the color specified and visually in accordance with the standard requirements of ASTM D-4956 and meet the requirements of Section 830 of the Standard Specifications. Contrary to Section 830.02.06, only the types and colors of sheeting as specified in the proposal will be accepted. All

FAYETTE COUNTY HSIP 4181(034) Contract ID: 244300 Page 34 of 314

Signing Page 2 of 8

retroreflective material shall be fabricated and assembled in accordance with the specifications and/or recommendations of the manufacturer(s).

All hardware for the erection of sheeting signs shall be rust resistant: stainless steel, zinc coated, aluminum, or an Engineer approved material. All beams and sign posts shall be of sufficient lengths so that a single, continuous length of sign post extends from the top of the sign to the required embedment in the anchor. Splicing of the sign post shall NOT be allowed. For installations in soil, Type I steel posts shall be mounted on either a standard anchor, with soil stabilizer plate, or on a Type D breakaway sign support. Refer to Sheeting Sign Detail Sheet 1 of 2 for installation details for a standard anchor with soil stabilizer plate. When installing a standard anchor with soil stabilizer plate, if solid rock is encountered, the Contractor shall drill a hole to the required depth into the rock, install the anchor into the hole, and backfill the anchor post with concrete, or other method approved by the Engineer. The cost shall be incidental to Type I steel post, and a soil stabilizer plate will not be required. Refer to Standard Drawing RGX-065, current edition, for installation details of Type D breakaway sign supports. Approved manufacturers for Type D breakaway sign supports have been placed on the list of approved materials. For installations to be installed on sufficiently cured existing concrete, such as a sidewalk, concrete median, etc., Type I steel posts shall be mounted on a Type D Surface Mount. For Type D Surface Mounts use only Redi-Torque Model 280 Surface Mount Slip Base Assembly (part number SMSB) by Xcessories Squared of Auburn, IL. Prior to installation, the Contractor shall submit to the Engineer shop drawings of the Type D Surface Mount. Install the Type D Surface Mount according to all the applicable requirements of the manufacturer (see shop drawings). During installation of the Type D Surface Mount, if the existing concrete surface is not flat (i.e. has a slope), galvanized metal shims may be required to ensure the surface mount base is level and plumb. If a Type D breakaway sign support is specified for a location that has an asphalt surface, the Contractor shall install the Type D breakaway sign support detailed on Standard Drawing RGX-065, current edition. All steel post shall meet the requirements of Section 832. All hardware including, but not limited to, sign post anchors, soil stabilizer plates, nuts, bolts, washers, fasteners, fittings, shims, and bracing, or any other incidentals necessary to erect the signs shall be furnished by the Contractor and will be incidental to the work.

New concrete bases, posts, support anchors, signs, etc. are to be installed prior to dismantling any existing sign(s). The removal of existing signs, posts, and support anchors is to be performed concurrently with the installation of new signs, posts, and support anchors, under the same lane closure during the same work shift. Completely remove existing sign support anchors or remove them to a minimum depth of six (6) inches below existing ground line and backfill the disturbed area to the existing ground line.

When listed on the plans and/or summaries, fabricate Reflective Sign Post Panels from .080 gauge aluminum alloy 5052-H38 or 6061-T6, in accordance with ASTM B-209 and to the size(s) specified. Prepare the side of the aluminum sheet to receive the retroreflective background material according to the recommendations of the sheeting and retroreflective material manufacturer(s). Sheeting for the Reflective Sign Post Panels shall be the same Type and color as the sign installed on the post. Examples include:

- Red, fluorescent yellow, and fluorescent yellow-green (Type XI Sheeting)
- White and yellow (Type XI Sheeting)

Signing Page 3 of 8

Reflective Sign Post Panels shall be 2 inches wide and will typically have a height of 60 inches for rural installations and typically have a height of 84 inches for urban installations. There will be certain instances where a proposed Reflective Sign Post Panel will have a height dimension less than 60 inches; typically, this will be when the bottom of the bottom-most sign is mounted lower than the standard 5 ft minimum mounting height (e.g. 3 ft or 4 ft mount heights). In those cases, the height of the Reflective Sign Post Panel is expected to closely match (within 1-2 inches) the distance between the top of the anchor or support to the bottom edge of the bottom-most sign. Reflective Sign Post Panels shall have three 3/8" holes (one hole in the top 3", one hole near the center, and one hole in the bottom 3") that align with the holes on the Type I steel post.

All manufactured sheeting signs shall be free of visual defects including, but not limited to: cracks, tears, ridges, humps, discoloration, etc., and defective signs shall be replaced at no additional cost to the Department.

All sign blanks shall be hole punched by the manufacturer for either horizontal or vertical installation. Attach all aluminum sheeting signs to square post with 3/8" all steel rivets and nylon washers. Use bracing as indicated on the plans, summaries, and/or standard signing detail sheets, and/or when directed by the Engineer and/or District Traffic Engineer.

All sign posts shall be attached to anchors with 5/16" corner bolts and 5/16" flanged nuts, and all post and anchor cuts shall be treated with a Cold Galvanizing Compound spray.

Sign posts shall be erected vertically by using a bubble level. The tolerance shall be a two (2) degree angle in any direction. For locations where more than one sign is mounted beside each other, the posts shall be spaced to provide approximately six inches (6") of spacing between signs.

E. Remove & Relocate Sheet Signs. When listed on the plans and/or summaries, and/or as directed by the Engineer and/or District Traffic Engineer, remove the specified existing sheet sign(s) from the existing post(s) and reinstall on a new sign post. Once the specified existing sheet sign(s) have been removed and relocated, and if the existing sign post(s) are no longer needed to support other existing signs, removal of the existing sign post(s) will be paid under the bid item REMOVE SIGN. If any of the existing hardware components (bracing, brackets, bolts, rivets, etc.) are found to have pre-existing damage or are damaged during the Contractor's removal and reinstallation efforts, the Contractor shall provide the necessary replacement hardware for proper re-installation of the sheet sign. These components shall be incidental to the bid item REMOVE AND RELOCATE SHEET SIGNS.

Prior to removing and reinstalling a sheet sign, the Contractor shall first review the existing sheet sign for damage. It is the Contractor's responsibility to notify the Engineer of any existing sheet sign damage prior to removal and relocation of the sheet sign, so that it can be documented that the existing sheet sign had pre-existing damage. If the Contractor does not make the Engineer aware of pre-existing damage prior to detaching the sheet sign from its existing post, the Department will assume the damage was the result of the Contractor's removal and reinstallation efforts. The Contractor shall replace any sheet signs that are damaged during the removal and reinstallation efforts. Replacement of sheet signs damaged by the Contractor shall be incidental to the bid item REMOVE AND RELOCATE SHEET SIGNS.

Signing Page 4 of 8

If the existing sheet sign is found to have pre-existing damage, the Department will provide the Contractor with a new sheet sign to replace the sheet sign with pre-existing damage. Detaching the existing, damaged sheet sign from the existing post and attaching the new, Department-provided sheet sign to the new sign post shall be incidental the bid item REMOVE AND RELOCATE SHEET SIGNS.

F. Remove & Relocate Sign Assemblies. When listed on the plans and/or summaries, and/or as directed by the Engineer and/or District Traffic Engineer, remove the specified existing sign assemblies from the existing location and reinstall in a new location. The Department will consider all signs attached to one or more connected posts as a single sign assembly, no matter how many signs are attached to the existing sign assembly. If any of the existing hardware components (bracing, brackets, bolts, rivets, etc.) are found to have pre-existing damage or are damaged during the Contractor's removal and reinstallation efforts, the Contractor shall provide the necessary replacement hardware for proper re-installation of the sign assembly. These components shall be incidental to the bid item REMOVE AND RELOCATE SIGN ASSEMBLY.

Prior to removing and relocating a sign assembly, the Contractor shall review the existing sign(s) and sign post(s) for damage. It is the Contractor's responsibility to notify the Engineer of any sign or sign post damage prior to removal and relocation of the sign assembly, so that it can be documented that the existing sign and/or sign post had pre-existing damage. If the Contractor does not make the Department aware of pre-existing damage prior to removing a sign assembly from its existing location, the Department will assume the damage was the result of the Contractor's removal and reinstallation efforts. The Contractor shall replace any components of a sign assembly that are damaged during removal and relocation. Replacement of any components damaged by the Contractor shall be incidental to the bid item REMOVE AND RELOCATE SIGN ASSEMBLY.

If an existing sign that is part of a sign assembly to be removed and relocated is found to have preexisting damage, the Department will provide the Contractor with a new sign to replace the sign with pre-existing damage. Detaching the existing, damaged sign from the existing post and attaching the new, Department-provided sign to the relocated existing post shall be incidental to the bid item REMOVE AND RELOCATE SIGN ASSEMBLY.

If an existing sign assembly that is to be removed and relocated is found to not have an existing soil stabilizer plate, or if the soil stabilizer plate and/or anchor is damaged during removal, then a new soil stabilizer plate and/or anchor shall be provided by the Contractor and shall be incidental to the bid item REMOVE AND RELOCATE SIGN ASSEMBLY.

If an existing sign assembly that is being relocated is not currently mounted on a Type D breakaway sign support, but the plans and/or summaries indicate, or wind load standards dictate, a Type D breakaway sign support or a Type D Surface Mount is required, provide and install the specified Type D support as part of the removal and reinstallation efforts. Type D breakaway sign supports shall be paid under the bid item GMSS TYPE D and Type D Surface Mount supports shall be paid under the bid item GMSS TYPE D (SURFACE MOUNT).

If an existing sign that is being relocated is found to have pre-existing damage to one or more of the sign post, the Department will <u>NOT</u> utilize the bid item REMOVE AND RELOCATE SIGN ASSEMBLY for removing and relocating such a sign assembly. Instead, the Department will require the Contractor

Signing Page 5 of 8

to install a new sign post(s) at the new location, and pay for the new post(s) under the bid item STEEL POST TYPE I. Detaching the existing sign(s) from the existing, damaged post(s) and attaching the existing sign(s) to the new sign post(s) shall be incidental to the bid item STEEL POST TYPE I. Any hardware that is needed to complete the installation shall also be incidental to the bid item STEEL POST TYPE I. Removal of the existing damaged post(s) and any other sign components not needed will be paid under the bid item REMOVE SIGN.

- **G. Property Damage.** The Contractor shall be responsible for all damage to public and/or private property resulting from the Contractor's activities. Repair or replace damaged roadway features in like kind materials and design as directed by the Engineer at no additional cost to the Department. Repair or replace damaged private property in like kind materials and design to the satisfaction of the owner and the Engineer at no additional cost to the Department.
- H. Coordination with Utility Companies. Locate all underground, above ground, and overhead utilities prior to beginning construction. Be responsible for contacting and maintaining liaison with all utility companies that have utilities located within the project limits. Do not disturb existing overhead or underground utilities. It is not anticipated that any utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require that utilities be relocated and/or adjusted, the utility companies will work concurrently with the Contractor while relocating their facilities. Be responsible for repairing all utility damage that occurs due to the Contractor's operations at no additional cost to the Department. NOTIFY THE ENGINEER AND THE UTILITY OWNER(S) IMMEDIATELY WHEN IT IS DISCOVERED OR ANTICIPATED THAT ANY UTILITY CONFLICT COULD DELAY THE CONTRACTOR'S OPERATIONS. If the total delay exceeds ten working days, an extension of the specified completion date will be negotiated with the Contractor for delay to the Contractor's work; however, no extension will be granted for any delay caused by the Contractor's failure to notify the Engineer and/or the utility company as specified above when a conflict is discovered or anticipated as specified.
- Caution. The information in this proposal and the type of work listed herein are approximate only and are not to be taken as an exact evaluation of the materials and conditions to be encountered during construction; the bidder must draw his/her own conclusions when developing the Unit Bid Prices for each bid item. As such, if the conditions encountered are not in accordance with the information shown, the Department does not guarantee any changes to the Unit Bid Prices nor extension of the contract will be considered. The Department will pay for bid item quantity overruns, but only if pre-approved by the Engineer.
- J. Control. Perform all work under the absolute control of the Department. Obtain the Engineer's approval of all designs required to be furnished by the Contractor prior to incorporation into the work. The Department reserves the right to have other work performed by other contractors and its own forces, and to permit public utility companies and others to do work during the construction within the limits of, or adjacent to, the project. Conduct operations and cooperate with such other parties so that interference with such other work will be reduced to a minimum. The Department will not honor any claims for money or time extension created by the operations of such other parties.

Signing Page 6 of 8

Should a difference of opinion arise as to the rights of the Contractor and others working within the limits of, or adjacent to, the project, the Engineer will decide as to the respective rights of the various parties involved in order to assure the completion of the Department's work in general harmony and in a satisfactory manner, and the Engineer's decision shall be final and binding upon the Contractor.

- K. Clean Up, Disposal of Waste. Clean up the project area as work progresses. Dispose of all removed concrete, debris, and other waste as per Section 204.03.08. The Department will incur no cost to obtain the disposal sites. The Department will NOT make direct payment for disposal of waste and debris from the project. Existing anchors, signs, posts, and any other hardware or material removed from the site are to become the property of the Contractor. See Special Provision for Waste and Borrow Sites.
- L. Final Dressing, Seeding and Protection. Grade all disturbed areas to blend with the adjacent roadways features and to provide a suitable seed bed. Apply Class A Final Dressing to all disturbed areas, both on and off the Right-of-Way. Sow all disturbed earthen areas with the applicable seed mixture(s) according to Section 212.03.03.
- M. Erosion Control. See Special Note for Erosion Control.

IV. METHOD OF MEASUREMENT

- A. Maintain and Control Traffic. See Traffic Control Plan.
- **B. Site Preparation.** Other than the bid items listed, the Department will NOT measure Site Preparation for payment, but shall be incidental to the project bid items.
- **C. Signs and Reflective Sign Post Panels.** The Department will measure the finished in-place area of signs in Square Feet.
- **D. Sign Posts.** The Department will measure the finished in-place length of sign posts in Linear Feet, from the top of the anchor, or top of the sign support, to the top of the sign post. Laps, cutoffs, excess, and waste will NOT be measured for payment.
- **E.** Type D Breakaway Sign Supports. The Department will measure Type D breakaway sign supports as Each support installed.
- **F. Type D Surface Mounts.** The Department will measure Type D Surface Mounts as Each surface mount installed.
- **G. Class A Concrete for Signs.** The Department will measure the Class A Concrete used in conjunction with Type D breakaway sign support installations in Cubic Yards. Any concrete that is required as backfill due to hitting rock during a standard installation shall be incidental to the bid item STEEL POST TYPE I, and soil stabilizers will not be required.

Signing Page 7 of 8

- **H.** Clean Up, Disposal of Waste, Final Dressing, Seeding and Protection. The Department will NOT measure for payment the following activities: Clean Up, Disposal of Waste, and Final Dressing. These activities shall be incidental. Seeding and Protection shall be measured according to Section 212.
- **I. Erosion Control.** See Special Note for Erosion Control.
- J. Remove Sign. The Department will consider all signs attached to one or more connected posts as a single sign. The Department will measure as Each sign assembly removed and NOT each individual sign removed.
- **K. Remove & Relocate Sheet Signs.** The Department will measure sheet signs removed from an existing sign post and reinstalled on a new sign post as Each sheet sign removed and reinstalled. as indicated in the contract documents, or as directed by the Engineer. The new sign post shall be measured as indicated in paragraph D. of this section.
- L. Remove & Relocate Sign Assemblies. The Department will consider all signs attached to one or more connected posts as a single sign assembly. When the contract documents indicate that an existing sign assembly is to be removed from its existing location and reinstalled in a new location, the Department will measure and pay for "Remove and Relocate Sign Assembly" as each sign assembly removed and relocated; NOT each individual sign removed and relocated.
- M. Items Provided by KYTC. The Department will NOT measure for payment the installation of signs and/or surface mounts provided by KYTC. These activities shall be incidental to the bid item STEEL POST TYPE I.

V. BASIS OF PAYMENT

- A. Maintain and Control Traffic. See Traffic Control Plan.
- **B.** Signs and Reflective Sign Post Panels. The Department will make payment for the completed and accepted quantities under the bid item SBM ALUM SHEET SIGNS .125 IN or .080 IN. The Department will consider payment full compensation for all work and incidentals necessary to install the signs, as required by these notes and the details found elsewhere in the plans/proposal, at the locations indicated on the summary sheets, plans, and/or as directed by the Engineer.
- **C. Sign Posts.** The Department will make payment for the completed and accepted quantities under the bid item STEEL POST TYPE I. The Department will consider payment full compensation for all work and incidentals necessary to install the sign posts as required by these notes and the details found elsewhere in the plans/proposal.
- **D.** Type D Breakaway Sign Supports. The Department will make payment for the completed and accepted quantities under the bid item GMSS TYPE D. The Department will consider payment full compensation for all work and incidentals necessary to install the Type D breakaway sign supports as required by Standard Drawing RGX-065, current edition.

Signing Page 8 of 8

- E. Type D Surface Mounts. The Department will make payment for the completed and accepted quantities under the bid item GMSS TYPE D (SURFACE MOUNT). The Department will consider payment full compensation for all work and incidentals necessary to install the Type D surface mounts according to all applicable manufacturer requirements.

 NOTE: The permissible Type D Surface Mount alternative is: Redi-Torque Model 280 Surface Mount Slip Base Assembly (part number SMSB) by Xcessories Squared of Auburn, IL.
- **F.** Class A Concrete for Signs. The Department will make payment for the completed and accepted quantities, used in conjunction with Type D breakaway sign support installations, under the bid item CLASS A CONCRETE FOR SIGNS. The Department will consider payment full compensation for all work and incidentals necessary to install the concrete as required by Standard Drawing RGX-065, current edition.
- **G. Remove Sign.** The Department will make payment for the completed and accepted quantities under the bid item REMOVE SIGN. The Department will consider payment full compensation for all work and incidentals necessary to remove the existing signs, posts, anchors, and any other sign material or hardware, from the locations indicated on the summary sheets, plans, and/or as directed by the Engineer.
- **H. Remove & Relocate Sheet Signs.** The Department will make payment for the completed and accepted quantities under the bid item REMOVE AND RELOCATE SHEET SIGNS. Any hardware that is needed to complete the removal and reinstallation shall be incidental. The Department will consider payment full compensation for all work and incidentals necessary to remove and reinstall the existing sheet signs as indicated on the plans, summaries, and/or as directed by the Engineer.
- I. Remove & Relocate Sign Assemblies. The Department will make payment for the completed and accepted quantities under the bid item REMOVE AND RELOCATE SIGN ASSEMBLY. Any hardware that is needed to complete the removal and reinstallation shall be incidental. The Department will consider payment full compensation for all work and incidentals necessary to remove and reinstall the existing sign assembly as indicated on the plans, summaries, and/or as directed by the Engineer
- J. Erosion Control. See Special Note for Erosion Control.

Special Note for Qwick Curb Median Separator

I. DESCRIPTION

Except as provided herein, perform all work in accordance with the Department's Standard Specifications, interim Supplemental Specifications, Standard and Sepia Drawings, and Special Notes and Special Provisions, current editions. Article references are to the Standard Specifications. This project shall consist of furnishing all labor, equipment, materials, and incidentals for the following:

- (1) Maintaining and Controlling Traffic; (2) Installing Qwick Kurb® brand lane separator curb; and
- (3) All other work specified in the Contract.

II. MATERIALS

All materials shall be sampled and tested in accordance with the Department's Sampling Manual and the materials shall be available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing unless otherwise specified in these Notes.

- A. Maintain and Control Traffic. See Traffic Control Plan.
- **B.** Lane Separator Curb. Furnish Qwick Kurb® brand lane separator curb guidance system that includes modular longitudinal curb sections, transition end sections, and upright delineator posts/panels. The longitudinal units of the system shall interface with each other to form a continuous longitudinal channelizing system. The design of the system shall allow a radius or curve as needed by roadway geometry. The complete system shall be compliant with NCHRP 350 or MASH. Manufacturer's documentation validating this compliance shall be provided to the Engineer prior to installation. System color shall match the adjacent pavement marking color.
 - 1. Longitudinal Units. The longitudinal units shall have a mountable design to allow for emergency vehicle crossovers. The longitudinal units shall be designed to allow for cross drainage under the units. Individual units of the system shall have a minimum length of 40 inches, maximum height of 4 inches and maximum width of 12 inches. The longitudinal base shall include retroreflective markings to match the system color. At least one upright post is required for each longitudinal curb unit.
 - 2. Upright Posts. Upright posts shall be a minimum of 26 inches in height and a minimum of 2 inches in width. Upright posts are to be uniformly spaced at intervals no greater than 44 inches along the system. Post color should match the longitudinal curb unit and adjacent pavement marking color. Each post shall have retroreflective markings of color matching the post, longitudinal system, and adjacent pavement marking. Upright posts should be easily replaceable under traffic conditions and shall be fabricated to withstand repeated impacts and return to a complete upright position with minimal maintenance to the unit.

Qwick Curb Median Separator Page 2 of 2

III. CONSTRUCTION METHODS

- A. Maintain and Control Traffic. See Traffic Control Plan.
- **B. Site Preparation.** Be responsible for all site preparation including, but not limited to: clearing and grubbing, staking, excavation, backfill, and removal of obstructions or any other material not covered by other items. Perform site preparation only as approved or directed by the Engineer.
- **C.** Lane Separator Curb. Assemble and fasten the lane separator curb system to the underlying pavement or bridge deck according to the manufacturer's recommendations.
- D. Property Damage. The Contractor shall be responsible for all damage to public and/or private property resulting from the Contractor's activities. Repair or replace damaged roadway features in like kind materials and design as directed by the Engineer at no additional cost to the Department. Repair or replace damaged private property in like kind materials and design to the satisfaction of the owner and the Engineer at no additional cost to the Department.
- **E. Caution.** The information in this proposal and the type of work listed herein are approximate only and are not to be taken as an exact evaluation of the materials and conditions to be encountered during construction; the bidder must draw his/her own conclusions when developing the Unit Bid Prices for each bid item. As such, if the conditions encountered are not in accordance with the information shown, the Department does not guarantee any changes to the Unit Bid Prices nor extension of the contract will be considered. The Department will pay for bid item quantity overruns, but only if pre-approved by the Engineer.

IV. METHOD OF MEASUREMENT

- A. Maintain and Control Traffic. See Traffic Control Plan.
- **B. Site Preparation.** Other than the bid items listed, the Department will NOT measure Site Preparation for payment, but shall be incidental to the project bid items.
- **C.** Lane Separator Curb. The Department will measure Qwick Kurb® brand lane separator curb in Linear Feet.

V. BASIS OF PAYMENT

- A. Maintain and Control Traffic. See Traffic Control Plan.
- **B.** Lane Separator Curb. The Department will make payment for the completed and accepted quantities under the bid item "Qwick Curb Median Separator." Payment at the Contract unit price per linear foot shall be full compensation for furnishing all materials, equipment, tools, hardware, labor, and incidentals necessary to properly install the Qwick Kurb® brand lane separator curb according to the manufacturer's installation instructions, these notes, and/or as directed by the Engineer.

Special Note for Completion Dates & Liquidated Damages

I. COMPLETION DATE

There is a fixed milestone completion date of August 1, 2024, in which all work, except installation of the proposed mast arm signals, must be complete. The proposed temporary signals will be utilized until the proposed mast arm poles can be acquired and the proposed mast arm signals installed. The ultimate fixed completion date to have all work completed, including the installation of the mast arm signals shall be December 15, 2024. Liquidated Damages for failure to complete the project on time will be assessed following Section 108.09.

II. LIQUIDATED DAMAGES

In addition to the requirements of Section 108.09, the Department will assess Liquidated Damages in the amount of **\$1,000** per hour for each hour, or fraction of an hour, for the selected weekend closure that is in place beyond the time frame(s) noted in the Traffic Control Plan and approved by the Engineer.

Contrary to Section 108.09, Liquidated Damages will be assessed regardless of whether seasonal limitations prohibit the Contractor from performing work on the controlling operation.

Contrary to Section 108.09, Liquidated Damages will be assessed for the months of December through March.

All liquidated damages will be applied accumulatively.

All other applicable portions of Section 108 apply.

Contract ID: 244300 Page 44 of 314

SPECIAL PROVISION FOR WASTE AND BORROW SITES

Obtain U.S. Army Corps of Engineer's approval before utilizing a waste or borrow site that involves "Waters of the United States". The Corps of Engineers defines "Waters of the United States" as perennial or intermittent streams, ponds or wetlands. The Corps of Engineers also considers ephemeral streams, typically dry except during rainfall but having a defined drainage channel, to be jurisdictional waters. Direct questions concerning any potential impacts to "Waters of the United States" to the attention of the appropriate District Office for the Corps of Engineers for a determination prior to disturbance. Be responsible for any fees associated with obtaining approval for waste and borrow sites from the U.S. Army Corps of Engineer or other appropriate regulatory agencies.

1-296 Waste & Borrow Sites 01/02/2012

COORDINATION OF WORK WITH OTHER CONTRACTS

Be advised, there is an active project(s) adjacent to or within this project, including but not limited to site development, construction of Competition Drive, and various utility work. The Engineer will coordinate the work of the Contractors. See Section 105.06.

Special Note for Guardrail

I. DESCRIPTION

Except as specified herein, perform all work in accordance with the Department's Standard and Supplemental Specifications, Special Notes and Special Provisions, and the Standard and Sepia Drawings, current editions. Article references are to the Standard Specifications. Furnish all equipment, labor, materials, and incidentals for the following work items:

(1) Site preparation; (2) Remove existing guardrail systems; (3) Construct Guardrail, End Treatments, Bridge End Connectors, and Terminal Sections, as applicable; (4) Delineators for guardrail; (5) Maintain and Control Traffic; and (6) all other work specified as part of this contract.

II. MATERIALS

Except as specified herein, provide for all materials to be sampled and tested in accordance with the Department's Sampling Manual and make the materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing.

- A. Maintain and Control Traffic. See Traffic Control Plan.
- **B. Guardrail.** Furnish guardrail system components according to Section 814 and the Standard and Sepia Drawings; except use steel posts only, no alternates.
- **C. Delineators for Guardrail.** Furnish white and/or yellow Delineators for Guardrail according to Standard Drawing RBR-055 Delineators for Guardrail, current edition.
- **D. DGA.** Furnish Dense Graded Aggregate as per Section 805.
- **E. Erosion Control.** See the Special Note for Erosion Control.

III. CONSTRUCTION METHODS

- A. Maintain and Control Traffic. See Traffic Control Plan.
- **B. Site Preparation.** Remove existing guardrail system, including the guardrail end treatments, Bridge End connectors and all other elements of the existing guardrail system as per Section 719, except that the Contractor will take possession of all concrete posts and all concrete associated with the existing bridge and/or guardrail end treatments. Locate all disposal areas off the Right of Way. Be responsible for all site preparation, including but not limited to, clearing and grubbing, excavation, embankment, and removal of all obstructions or any other items; regrading, reshaping, and adding and compacting suitable materials on the existing shoulders to provide proper template or foundation for the guardrail; filling voids left as the result of removing existing guardrail and guard

Guardrail Page 2 of 3

posts with dry sand; temporary pollution and erosion control; disposal of excess, waste materials, and debris; and final dressing, cleanup, and seeding and protection. Perform all site preparation as approved or directed by the engineer.

C. Guardrail. Except as specified herein, construct guardrail system according to Section 719 and the Standard and Sepia Drawings, current editions. Locations listed on the summary and/or shown on the drawings are approximate only. The Engineer will determine the exact termini for individual guardrail installations at the time of construction. Unless directed otherwise by the Engineer, provide a minimum two (2) foot shoulder width. Construct radii at entrances and road intersections as directed by the Engineer.

Erect guardrail to the lines and grades shown on the current Standard and Sepia Drawings, or as directed by the Engineer by any method approved by the Engineer which allows construction of the guardrail to the true grade without apparent sags.

When removing existing guardrail and installing new guardrail, do not leave the blunt end exposed where it would be hazardous to the public. When it is not practical to complete the construction of the guardrail and the permanent end treatments and terminal sections first, provide a temporary end by connecting at least 25 feet of rail to the last post, and by slightly flaring, and burying the end of the rail completely into the existing shoulder. If left overnight, place a drum with bridge panel in advance of the guardrail end and maintain during use.

- **D. DGA.** Place and compact DGA along and under the guardrail as shown on the Typical Section(s) or as directed by the Engineer. Place a Double Asphalt Seal Coat over the entire width of the DGA along and under the guardrail. See the Special Note for Double Asphalt Seal Coat.
- **E. Delineators for Guardrail.** Construct Delineators for Guardrail according to Standard Drawing RBR-055 Delineators for Guardrail, current edition.
- **F. Property Damage.** Be responsible for all damage to public and/or private property resulting from the work. Restore damaged roadway features and private property at no additional cost to the Department.
- **G.** Coordination with Utility Companies. Locate all underground, above ground, and overhead utilities prior to beginning construction. Be responsible for contacting and maintaining liaison with all utility companies that have utilities located within the project limits. Do not disturb existing overhead or underground utilities. It is not anticipated that any utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require utilities to be relocated and/or adjusted, the utility companies will work concurrently with the Contractor while relocating their facilities. Be responsible for repairing all utility damage that occurs as a result of guardrail operations at no additional cost to the Department.
- **H. Right of Way Limits**. The Department has not established the exact limits of the Right-of-Way. Limit work activities to obvious Right-of-Way, permanent or temporary easements, and work areas secured by the Department through consent and release of the adjacent property owners. Be responsible for all encroachments onto private lands.

Guardrail Page 3 of 3

- Clean Up, Disposal of Waste. Dispose of all removed concrete, debris, and other waste and debris off the Right-of-Way at sites obtained by the Contractor at no additional cost to the Department. See the Special Provision for Waste and Borrow Sites.
- J. Final Dressing, Seeding and Protection. Apply Class A Final Dressing to all disturbed areas, both on and off the Right-of-Way. Sow all disturbed earthen areas with the applicable seed mixture(s) according to Section 212.03.03.
- **K. Erosion Control.** See the Special Note for Erosion Control.

IV. METHOD OF MEASUREMENT

- A. Maintain and Control Traffic. See Traffic Control Plan.
- **B. Site preparation.** Other than the bid items listed, the Department will not measure Site Preparation for separate payment but shall be incidental to the Guardrail, End Treatments, Bridge End Connectors, and Terminal Sections, as applicable.
- **C. Guardrail, End Treatments, Bridge End Connectors, Terminal Sections, and Remove Guardrail.** The Department will measure according to Section 719.04.
- **D. DGA.** The Department will measure according to Section 302.04.
- E. Delineators for Guardrail. See Standard Drawing RBR-055 Delineators for Guardrail.
- **F.** Clean Up, Disposal of Waste, Final Dressing, and Seeding and Protection. The Department will NOT measure for payment the operations of: Clean Up, Disposal of Waste, and Final Dressing. These activities shall be incidental. Seeding and Protection will be measured according to Section 212.
- **G. Erosion Control.** See the Special Note for Erosion Control.

V. BASIS OF PAYMENT

- A. Maintain and Control Traffic. See Traffic Control Plan.
- **B.** Guardrail, End Treatments, Bridge End Connectors, Terminal Sections, and Remove Guardrail. The Department will make payment according to Section 719.05.
- **C. DGA.** The Department will make payment according to Section 302.05.
- D. Delineators for Guardrail. See Standard Drawing RBR-055 Delineators for Guardrail.
- **E. Erosion Control.** See the Special Note for Erosion Control.

SPECIAL NOTE FOR ASPHALT MILLING AND TEXTURING

Begin paving operations within <u>48 hours</u> of commencement of the milling operation. Continue paving operations continuously until completed. If paving operations are not begun within this time period, the Department will assess liquidated damages at the rate prescribed by Section 108.09 until such time as paving operations are begun.

Take possession of the millings and recycle the millings or dispose of the millings off the Right-of-Way at sites obtained by the Contractor at no additional cost to the Department.

1-3520 48 hours Contractor keeps millings 01/2/2012

Contract ID: 244300 Page 50 of 314

SPECIAL NOTE FOR TYPICAL SECTION DIMENSIONS

Consider the dimensions shown on the typical sections for pavement and shoulder widths and thickness' to be nominal or typical dimensions. The Engineer may direct or approve varying the actual dimensions to be constructed to fit existing conditions. Do not widen existing pavement or shoulders unless specified elsewhere in this proposal or directed by the engineer.

1-3725 Typical Section Dimensions 01/02/2012

SPECIAL NOTE FOR SIDEWALK RAMPS & DETECTABLE WARNINGS

GENERAL

Unless otherwise stated in the contract, or as directed by or with prior approval from the Engineer, construct Sidewalk Ramps and Detectable Warnings in accordance with Sections 505 and 720; Supplemental Specifications; Standard Drawings RGX-040-03, RPM-150-08, RPM-152-08, RPM-170-09, and RPM-172-07; current editions, as applicable. In lieu of the Detectable Warnings shown on Standard Drawing RGX-040-03, the Department will also allow the use of any Detectable Kentucky Product Warnings listed Phase XI on the Evaluation (http://www.ktc.uky.edu/kytc/kypel/allevaluations.php). For Detectable Warnings as shown on Standard Drawing RGX-040-03, saw cut existing sidewalks, curb and gutter, and pavement, if present, as shown on the detail and reconstruct sidewalk ramps with detectable warnings as directed or approved by the Engineer. For Detectable Warnings from the Kentucky Product Evaluation List, install according to the manufacturer's recommendations. Unless specified otherwise in the Contract, construct sidewalk with 4" nominal minimum required thickness; however, if the existing sidewalk thickness is found to be greater or less than the thickness specified, transition the thickness as directed by the Engineer.

Except as required by the work, do not disturb drainage pipe, catch basins, and other roadway features, appurtenances and installations. Restore any roadway features, appurtenances, and installations damaged by the work in like kind materials and design at no additional cost to the Department. Dispose of all waste off the right of way at sites obtained by the Contractor at no additional cost to the Department (see Special Note for Waste and Borrow).

MEASUREMENT & PAYMENT

SIDEWALK RAMPS – The Department will measure Sidewalk Ramps in accordance with Section 505.04.01 and Standard Drawing RPM-170-09, current editions; however, contrary to Sections 505.04.05 and 505.04.06, the Department will not measure Roadway Excavation or Embankment in Place, but shall be incidental to the Sidewalk. Accept payment at the Contract unit price per square yard as full compensation for all labor, materials, equipment, and incidentals required for removal and disposal of existing sidewalk and curb and gutter, excavation and embankment, construction of the sidewalk ramps, reconstruction of the adjacent curb and/or sidewalk as necessary to install the sidewalk ramps, and restoration of disturbed features in accordance with these notes or as directed by the Engineer.

DETECTABLE WARNINGS – The Department will measure Detectable Warnings in accordance with Section 505.04.04 and Standard Drawings RGX-040-03 and RPM-170-09, current editions. The Department will make payment according to Section 505.05.

HANDRAIL – The Department will measure and make payment for Handrail in accordance with Section 720.05 and Standard Drawing RPM-172-07, current editions.

TRAFFIC CONTROL PLAN

TRAFFIC CONTROL GENERAL

Except as provided herein, traffic shall be maintained in accordance with the current editions of the Manual on Uniform Traffic Control Devices (MUTCD), Standard Specifications, Supplemental Specifications, and the Standard and Sepia Drawings. Except for the roadway and traffic control bid items listed, all items of work necessary to maintain and control traffic shall be paid at the lump sum bid price to "Maintain and Control Traffic".

Contrary to Section 106.01, traffic control devices used on this project may be new, or used in like new condition, at the beginning of the work and maintained in like new condition until completion of the work. Any temporary traffic control items, devices, materials, and incidentals shall remain the property of the contractor unless otherwise addressed, when no longer needed.

PROJECT PHASING & CONSTRUCTION PROCEDURES

The Department will allow night work on this project. Obtain the Engineer's approval of the method of lighting prior to performing night work.

Take these restrictions into account in submitting bid. The Department will not consider any claims for money or grant contract time extensions for any delays to the Contractor as a result of these restrictions.

The following is a description of the Construction Phasing for KY 418 between Sta. 99+00 to Sta. 131+84.7 (approx. MP 1.875 – 2.497). See the Maintenance of Traffic Plan Sheets for additional information:

<u>Phase 1</u>: Construction of the outside full depth lanes and shoulders along KY 418 up to the final base course. The Contractor shall maintain 2 lanes of traffic in each direction at all times during Phase 1, with a temporary exception as shown in the plans and as follows:

Between approximate Sta. 125+23 and 130+96, during full depth shoulder replacement operations the northbound KY 418 slow lane needs to be closed to provide a greater than 8 foot offset between traffic and the pavement edge drop off that will be created by the shoulder trenching. In coordination with the Engineer, the full depth shoulder replacement work in the Sta. 125+23 to 130+96 section will need to be completed on a single weekend between 10 PM Friday and 5 AM Monday. The contractor will use this selected weekend to close the northbound KY 418 slow lane from Canebrake Drive to just north of Sta. 125+23. Once the shoulder is backfilled with full depth asphalt the contractor will remove the northbound KY 418 slow lane closure, restoring 2 lanes of traffic in each direction, and continue with any remaining Phase 1 work. During this selected weekend lane closure, a lane closure along the northbound I-75 off ramp will also be needed as shown on the plans.

For the weekend lane closure, the contractor may select any weekend, except for the following dates and times:

Easter Weekend 3 pm Friday, March 29, 2024 – 8 pm Sunday, March 31, 2024
Memorial Day Weekend 3 pm Friday, May 24, 2024 – 8 pm Monday, May 27, 2024
Independence Day Holiday 7 am Thursday, July 4, 2024 – 8 pm Sunday, July 7, 2024

Contract ID: 244300 Page 53 of 314

Traffic Control Plan Page 2 of 10

<u>Phase 2</u>: Construction in the median of KY 418 – Construct the concrete median islands in the area of proposed U-turn crossovers and KY 418 left turn lanes. The proposed U-turns will need to be operational prior to Phase 3, since the U-turns will be utilized during Phase 3. The Maintenance of Traffic Plan Sheets denote which concrete median islands are to be constructed during Phase 2. Maintain 2 lanes of traffic in each direction at all times during Phase 2.

<u>Phase 3</u>: Construction in the median of KY 418 – Construct the concrete median islands in the area of the main intersections of KY 418 & Competition Drive and KY 418 & Doe Run Trail. The Maintenance of Traffic Plan Sheets denote which concrete median islands are to be constructed during Phase 3. Maintain 2 lanes of traffic in each direction of KY 418 at all times during Phase 3. Completely close the median area along KY 418 at the intersections of KY 418 & Competition Drive and KY 418 & Doe Run Trail. The complete median closure at these two intersections will require all side street motorists from Competition Drive and Doe Run Trail to turn right onto KY 418 and, if needed, utilize a U-Turn to complete their desired movement. The complete median closure at these two intersections will also restrict left turns from KY 418 onto Competition Drive and Doe Run Trail shall be restricted. Any KY 418 motorists wishing to turn left onto Competition Drive or Doe Run Trail will be required to drive past the intersection, utilize a U-Turn, and make their way back to complete their desired movement via a right turn. The KY 418 median closures required for the work in Phase 3 shall be limited to 14 consecutive calendar days.

<u>Phase 4</u>: Construct the final surface course for the entire project from Station 99+00 to 131+84.7 under traffic.

During final surface paving operations, do not erect any lane closures along KY 418 during the following days/times:

Normal Workday Rush Hours

Monday thru Friday 6:00 AM – 8:30 AM, and 4:00 PM – 6:00 PM, daily

Side Roads: The Contractor is encouraged to minimize lane closures on side roads as much as possible. For any side road work that requires a lane closure on a side road, the Contractor and Engineer shall work together to determine the best phasing and timelines. General guidance is as follows: At locations with two or more lanes (through lanes and/or turn lanes) in the same direction of travel, the Contractor may close one or more lanes of traffic as long as at least one lane of traffic is provided in each direction of the side road and as long as a minimum clear lane width of at least 10 feet is maintained. At locations with two lanes (one lane in each direction), the Contractor may close one lane and maintain alternating one-way traffic along the side road as long as a minimum clear lane width of 10 feet is maintained. NOTE: During any side road lane closure, make provisions for the passage of vehicles of up to 16 feet in width. If traffic should be stopped due to construction operations, and a school bus or emergency vehicle on an official run arrives on the scene, make provisions for the passage of the school bus or emergency vehicle as quickly as possible.

Refer to the CAP notes for other construction requirements.

At the discretion of the Engineer, additional days and hours may be permitted for short term lane closures during any phase of work. General guidance is that any such short term lane closures would not be allowed during the rush hour periods and holiday dates listed above.

Contract ID: 244300 Page 54 of 314

Traffic Control Plan Page 3 of 10

The Department will provide public notification regarding lane closures and MOT phase changes. The Contractor shall submit MOT phase changes and proposed lane closure days and times to the Engineer at least 7 calendar days in advance for review and approval. Liquidated Damages will be assessed for each hour or fraction of an hour that a lane closure is in place outside of an approved time period. See the Special Notes for Completion Dates & Liquidated Damages for details on the Liquidated Damages amount.

LANE CLOSURES

Long term lane closures shall not be allowed; therefore, lane closures will not be measured for payment. Do not leave lane closures in place during non-working hours and prohibited periods.

TEMPORARY SIGNS

Temporary signposts and splices shall be compliant with NCHRP 350 or MASH. Manufacturer's documentation validating this compliance shall be provided to the Engineer prior to installation. Temporary signs, including any splices, shall be installed according to manufacturer's specifications and installation recommendations. Contrary to section 112.04.02, only long-term temporary signs (temporary signs intended to be continuously in place for more than 3 days) will be measured for payment. Short-term temporary signs (temporary signs intended to be left in place for 3 days or less) will not be measured for payment but will be incidental to Maintain and Control Traffic.

CHANGEABLE MESSAGE SIGNS

Provide changeable message signs in advance of and within the project at locations determined by the Engineer. If work is in progress concurrently in both directions or if more than one lane closure is in place in the same direction of travel, provide additional changeable message signs as directed by the Engineer. Place changeable message signs approximately one mile in advance of the anticipated queue at each lane closure. As the actual queue lengthens and/or shortens, relocate or provide additional changeable message signs so that traffic has warning of slowed or stopped traffic at least one mile but not more than two miles before reaching the end of the actual queue. The Engineer may vary the designated locations as the work progresses. The Engineer will determine the messages to be displayed. In the event of damage or mechanical/electrical failure, repair or replace the Changeable Message Sign. If the damage or mechanical/electrical failure is identified during active work operations, repair or replace the Changeable Message Sign within 6 hours. If the damage or mechanical/electrical failure is identified when there are no active work operations on the project, repair or replace the Changeable Message Sign within 12 hours. The Department will measure for payment the maximum number of Changeable Message Signs in concurrent use at the same time on a single day on all sections of the contract. The Department will measure individual Changeable Message Signs only once for payment, regardless of how many times they are set, reset, removed, and/or relocated during the duration of the project. The Department will not measure for payment any replacements for damaged Changeable Message Signs or any changeable message signs the Engineer directs to be replaced due to poor condition or readability. Retain possession of the Changeable Message Signs upon completion of the work.

Traffic Control Plan Page 4 of 10

ARROW PANELS

Use arrow panels as shown on the Standard Drawings or as directed by the Engineer. The Department will measure for payment the maximum number of arrow panels in concurrent use at the same time on a single day on all sections of the contract. The Department will measure individual Arrow Panels only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. The Department will not measure replacements for damaged Arrow Panels or for panels signs the Engineer directs be replaced due to poor condition or readability for payment. Retain possession of the Arrow Panels upon completion of the work.

BARRICADES

The Department will measure barricades used for road closures and to protect pavement removal areas in individual units Each. The Department will measure for payment the maximum number of barricades in concurrent use at the same time on a single day on all sections of the contract. The Department will measure individual barricades only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. The Department will not measure for payment any replacements for damaged barricades, or any barricades the Engineer directs to be replaced due to poor condition or reflectivity. Retain possession of the Barricades upon completion of construction.

TEMPORARY ENTRANCES

Except as allowed by the Phasing, maintain direct access to all side streets, roads, and entrances at all times. Access to fire hydrants must also be maintained at all times.

THERMOPLASTIC INTERSECTION MARKINGS

Consider the locations listed on the summary and/or shown on the plan sheets as approximate only. Prior to milling and/or resurfacing, locate and document the locations of the existing markings. After final surfacing operations, replace the markings at their approximate existing locations, as shown on the plan sheets, or as directed by the Engineer. Place markings not existing prior to resurfacing as shown on the plan sheets or as directed by the Engineer.

PAVEMENT MARKINGS

If there is to be a deviation from the existing striping plan, the Engineer will furnish the Contractor a striping plan prior to placement of the final surface course. Install Temporary Striping according to Section 112 with the following exception:

Contract ID: 244300 Page 56 of 314

Traffic Control Plan Page 5 of 10

If the Contractor's operations or phasing requires temporary markings that must subsequently be removed from the final surface course, use an approved removable lane tape; however, the Department will not measure removable lane tape for separate payment, but will measure and pay for removable lane tape as temporary striping.

UNEVEN LANES AND PAVEMENT EDGE DROP-OFFS

Do not allow a pavement edge between opposing directions of traffic or lanes that traffic is expected to cross in a lane change situation with an elevation difference greater than $1\frac{1}{2}$ ". In areas with an elevation difference in adjacent travel lanes, UNEVEN LANES (W8-11) signs should be placed in advance of and at 1500 foot intervals throughout the area with uneven lanes. Post signs on the right-hand side of the roadway for relevant directions of travel. For multi-lane divided highways, dual mount signs when the median width is sufficient to maintain the recommended lateral offsets. For all transverse transitions between resurfaced and un-resurfaced areas which traffic may cross, wedge these areas with asphalt mixture for leveling and wedging. Remove the wedges prior to placement of the final surface course.

Protect pavement edge drop-offs, as follows:

Less than 2" - No protection required.

2" to 3" - Place plastic drums, vertical panels, or barricades every 50 feet. During daylight working hours only, the Engineer will allow the Contractor to use cones in lieu of plastic drums, vertical panels, or barricades.

Greater than 3" – Place Type III Barricades directly in front of the drop-off facing oncoming traffic in both directions of travel. Maintain an 8-foot minimum offset between the pavement edge drop-off and the adjacent traffic lane. Place plastic drums, vertical panels, or barricades every 25 feet between the adjacent traffic lane and pavement edge drop-off. The Engineer will not allow the use of cones in lieu of drums, vertical panels, or barricades. Install Shoulder Drop Off (W8-17) signs in advance of and at 1500 foot intervals throughout the drop-off area or as directed by the Engineer.

Pedestrians & Bicycles - Protect pedestrian and bicycle traffic as directed by the Engineer.

Traffic Control Plan Page 6 of 10

USE AND PLACEMENT OF CHANGEABLE MESSAGE SIGNS

The following policy is based upon current Changeable Message Signs (CMS) standards and practice from many sources, including the Federal Highway Administration (FHWA), other State Departments of Transportation, and Traffic Safety Associations. It is understood that each CMS installation or use requires individual consideration due to the specific location or purpose. However, there will be elements that are constant in nearly all applications. Accordingly, these recommended guidelines bring a level of uniformity, while still being open to regional experience and engineering judgment.

Application

The primary purpose of CMS is to advise the driver of unexpected traffic and routing situations. Examples of applications where CMS can be effective include:

- Closures (road, lane, bridge, ramp, shoulder, interstate)
- Changes in alignment or surface conditions
- Significant delays, congestion
- Construction/maintenance activities (delays, future activities)
- Detours/alternative routes
- Special events with traffic and safety implications
- Crash/incidents
- Vehicle restrictions (width, height, weight, flammable)
- Advance notice of new traffic control devices
- Real-time traffic conditions (must be kept up to date)
- Weather /driving conditions, environmental conditions, Roadway Weather Information Systems
- Emergency Situations
- Referral to Highway Advisory Radio (if available)
- Messages as approved by the County Engineer's Office

CMS should not be used for:

- Replacement of static signs (e.g. ROAD WORK AHEAD), regulatory signage (e.g. speed limits), pavement markings, standard traffic control devices, conventional warning or guide signs.
- Replacement of lighted arrow board
- Advertising (Don't advertise the event unless clarifying "action" to be taken by driver e.g. Speedway traffic next exit)
- Generic messages
- Test messages (portable signs only)
- Describe recurrent congestion (e.g. rush hour)
- Public service announcements (not traffic related)

Traffic Control Plan Page 7 of 10

Messages

Basic principles that are important to providing proper messages and ensuring the proper operation of a CMS are:

- Visible for at least ½ mile under ideal daytime and nighttime conditions
- Legible from all lanes a minimum of 650 feet
- Entire message readable twice while traveling at the posted speed
- No more than two message panels should be used (three panels may be used on roadways where vehicles are traveling less than 45 mph). A panel is the message that fits on the face of the sign without flipping or scrolling.
- Each panel should convey a single thought; short and concise
- Do not use two unrelated panels on a sign
- Do not use the sign for two unrelated messages
- Should not scroll text horizontally or vertically
- Should not contain both the words left and right
- Use standardized abbreviations and messages
- Should be accurate and timely
- Avoid filler/unnecessary words and periods (hazardous, a, an, the)
- Avoid use of speed limits
- Use words (not numbers) for dates

Placement

Placement of the CMS is important to ensure that the sign is visible to the driver and provides ample time to take any necessary action. Some of the following principles may only be applicable to controlled access roadways. The basic principles of placement for a CMS are:

- When 2 signs are needed, place on same side of roadway and at least 1,000 feet apart
- Place behind semi-rigid/rigid protection (guardrail, barrier) or outside of the clear zone
- Place 1,000 feet in advance of work zone; at least one mile ahead of decision point
- Normally place on right side of roadway; but should be placed closest to the affected lane so that either side is acceptable
- Signs should not be dual mounted (one on each side of roadway facing same direction)
- Point trailer hitch downstream
- Secure to immovable object to prevent theft (if necessary)
- Do not place in sags or just beyond crest
- Check for reflection of sun to prevent the blinding of motorist
- Should be turned ~3 degrees outward from perpendicular to the edge of pavement
- Bottom of sign should be 7 feet above the elevation of edge of roadway
- Should be removed when not in use

Traffic Control Plan Page 8 of 10

Standard Abbreviations

The following is a list of standard abbreviations to be used on CMS:

| Word | Abbrev | <u>Example</u> |
|---------------------|------------|-------------------------------------|
| Access | ACCS | CRASH AHEAD/ USE ACCS RD NEXT RIGHT |
| Alternate | ALT | CRASH AHEAD/ USE ALT RTE NEXT RIGHT |
| Avenue | AVE | FIFTH AVE CLOSED/ DETOUR NEXT LEFT |
| Blocked | BLKD | FIFTH AVE BLKD/ MERGE LEFT |
| Boulevard | BLVD | MAIN BLVD CLOSED/ USE ALT RTE |
| Bridge | BRDG | SMITH BRDG CLOSED/ USE ALT RTE |
| Cardinal Directions | N, S, E, W | N 175 CLOSED/ DETOUR EXIT 30 |
| Center | CNTR | CNTR LANE CLOSED/ MERGE LEFT |
| Commercial | COMM | OVRSZ COMM VEH/ USE 1275 |
| Condition | COND | ICY COND POSSIBLE |
| Congested | CONG | HVY CONG NEXT 3 MI |
| Construction | CONST | CONST WORK AHEAD/ EXPECT DELAYS |
| Downtown | DWNTN | DWNTN TRAF USE EX 40 |
| Eastbound | E-BND | E-BND 164 CLOSED/ DETOUR EXIT 20 |
| Emergency | EMER | EMER VEH AHEAD/ PREPARE TO STOP |
| Entrance, Enter | EX, EXT | DWNTN TRAF USE EX 40 |
| Expressway | EXPWY | WTRSN EXPWY CLOSED/ DETOUR EXIT 10 |
| Freeway | FRWY, FWY | GN SYNDR FWY CLOSED/ DETOUR EXIT 15 |
| Hazardous Materials | HAZMAT | HAZMAT IN ROADWAY/ ALL TRAF EXIT 25 |
| Highway | HWY | CRASH ON AA HWY/ EXPECT DELAYS |
| Hour | HR | CRASH ON AA HWY/ 2 HR DELAY |
| Information | INFO | TRAF INFO TUNE TO 1240 AM |
| Interstate | I | E-BND 164 CLOSED/ DETOUR EXIT 20 |
| Lane | LN | LN CLOSED MERGE LEFT |
| Left | LFT | LANE CLOSED MERGE LFT |
| Local | LOC | LOC TRAF USE ALT RTE |
| Maintenance | MAINT | MAINT WRK ON BRDG/ SLOW |
| Major | MAJ | MAJ DELAYS 175/ USE ALT RTE |
| Mile | MI | CRASH 3 MI AHEAD/ USE ALT RTE |
| Minor | MNR | CRASH 3 MI MNR DELAY |
| Minutes | MIN | CRASH 3 MI/ 30 MIN DELAY |
| Northbound | N-BND | N-BND 175 CLOSED/ DETOUR EXIT 50 |
| Oversized | OVRSZ | OVRSZ COMM VEH/ USE 1275 NEXT RIGHT |
| Parking | PKING | EVENT PKING NEXT RGT |
| Parkway | PKWY | CUM PKWAY TRAF/ DETOUR EXIT 60 |
| Prepare | PREP | CRASH 3 MI/ PREP TO STOP |
| Right | RGT | EVENT PKING NEXT RGT |
| Road | RD | HAZMAT IN RD/ ALL TRAF EXIT 25 |
| Roadwork | RDWK | RDWK NEXT 4 MI/ POSSIBLE DELAYS |
| Route | RTE | MAJ DELAYS 175/ USE ALT RTE |
| Shoulder | SHLDR | SHLDR CLOSED NEXT 5 MI |
| Slippery | SLIP | SLIP COND POSSIBLE/ SLOW SPD |
| Southbound | S-BND | S-BND 175 CLOSED/ DETOUR EXIT 50 |
| Speed | SPD | SLIP COND POSSIBLE/ SLOW SPD |
| | | |

Traffic Control Plan Page 9 of 10

Standard Abbreviations (cont.)

| <u>Word</u> | <u>Abbrev</u> | <u>Example</u> |
|-------------|---------------|-------------------------------------|
| Street | ST | MAIN ST CLOSED/ USE ALT RTE |
| Traffic | TRAF | CUM PKWAY TRAF/ DETOUR EXIT 60 |
| Vehicle | VEH | OVRSZ COMM VEH/ USE 1275 NEXT RIGHT |
| Westbound | W-BND | W-BND 164 CLOSED/ DETOUR EXIT 50 |
| Work | WRK | CONST WRK 2MI/ POSSIBLE DELAYS |

Certain abbreviations are prone to inviting confusion because another word is abbreviated or could be abbreviated in the same way. DO NOT USE THESE ABBREVIATIONS:

| <u>Abbrev</u> | Intended Word | Word Erroneously Given |
|---------------|-------------------|-------------------------------|
| ACC | Accident | Access (Road) |
| CLRS | Clears | Colors |
| DLY | Delay | Daily |
| FDR | Feeder | Federal |
| L | Left | Lane (merge) |
| LOC | Local | Location |
| LT | Light (traffic) | Left |
| PARK | Parking | Park |
| POLL | Pollution (index) | Poll |
| RED | Reduce | Red |
| STAD | Stadium | Standard |
| TEMP | Temporary | Temperature |
| WRNG | Warning | Wrong |

Typical Messages

The following is a list of typical messages used on CMS. The list consists of the reason or problem that you want the driver to be aware of and the action that you want the driver to take.

| Reason/Problem | <u>Action</u> |
|------------------------------|---------------------|
| CRASH AHEAD | ALL TRAFFIC EXIT RT |
| CRASH/XX MILES | AVOID DELAY USE XX |
| XX ROAD CLOSED | CONSIDER ALT ROUTE |
| XX EXIT CLOSED | DETOUR |
| BRIDGE CLOSED | DETOUR XX MILES |
| BRIDGE/(SLIPPERY, ICE, ETC.) | DO NOT PASS |
| CENTER/LANE/CLOSED | EXPECT DELAYS |
| DELAY(S), MAJOR/DELAYS | FOLLOW ALT ROUTE |
| DEBRIS AHEAD | KEEP LEFT |
| DENSE FOG | KEEP RIGHT |
| DISABLED/VEHICLE | MERGE XX MILES |
| EMER/VEHICLES/ONLY | MERGE LEFT |
| EVENT PARKING | MERGE RIGHT |
| EXIT XX CLOSED | ONE-WAY TRAFFIC |
| FLAGGER XX MILES | PASS TO LEFT |
| | |

Traffic Control Plan Page 10 of 10

Typical Messages (cont.)

Reason/Problem FOG XX MILES FREEWAY CLOSED FRESH OIL **HAZMAT SPILL**

ICE

INCIDENT AHEAD

LANES (NARROW, SHIFT, MERGE, ETC.)

LEFT LANE CLOSED **LEFT LANE NARROWS LEFT 2 LANES CLOSED** LEFT SHOULDER CLOSED

LOOSE GRAVEL

MEDIAN WORK XX MILES

MOVING WORK ZONE, WORKERS IN ROADWAY

NEXT EXIT CLOSED NO OVERSIZED LOADS

NO PASSING NO SHOULDER ONE LANE BRIDGE PEOPLE CROSSING RAMP CLOSED

RAMP (SLIPPERY, ICE, ETC.) **RIGHT LANE CLOSED** RIGHT LANE NARROWS RIGHT SHOULDER CLOSED

ROAD CLOSED

ROAD CLOSED XX MILES ROAD (SLIPPERY, ICE, ETC.)

ROAD WORK

ROAD WORK (OR CONSTRUCTION) (TONIGHT, TODAY, TOMORROW, DATE)

ROAD WORK XX MILES

SHOULDER (SLIPPERY, ICE, SOFT, BLOCKED, ETC.)

NEW SIGNAL XX MILES

SLOW 1 (OR 2) - WAY TRAFFIC

SOFT SHOULDER

STALLED VEHICLES AHEAD

TRAFFIC BACKUP TRAFFIC SLOWS TRUCK CROSSING TRUCKS ENTERING **TOW TRUCK AHEAD UNEVEN LANES**

WATER ON ROAD **WET PAINT**

WORK ZONE XX MILES

WORKERS AHEAD

Action

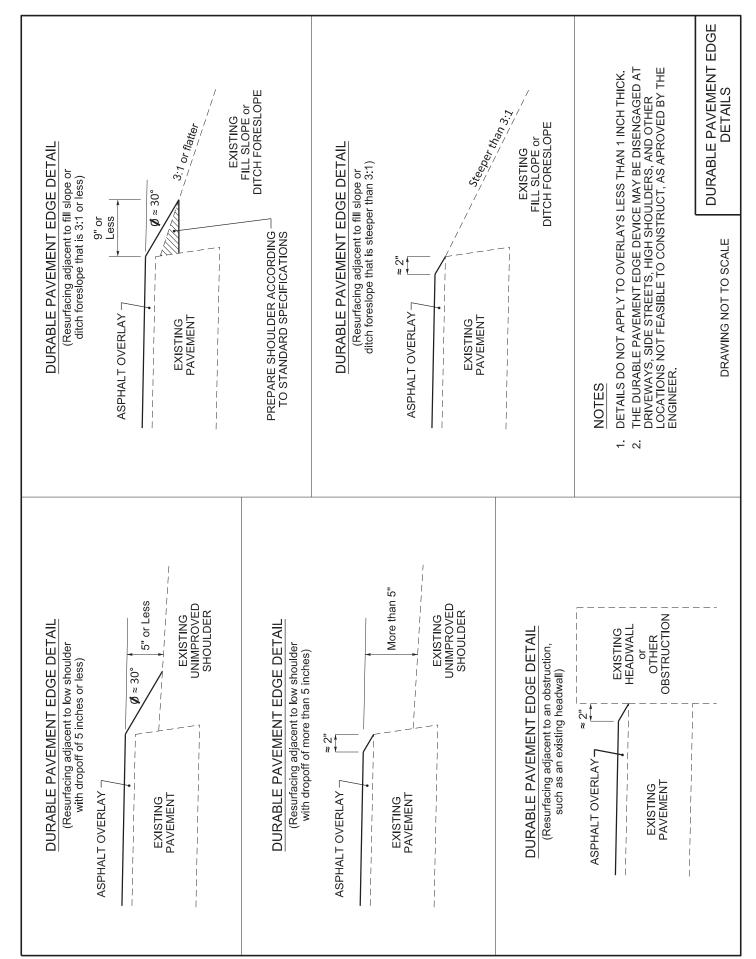
PASS TO RIGHT PREPARE TO STOP **REDUCE SPEED**

SLOW

SLOW DOWN STAY IN LANE STOP AHEAD STOP XX MILES

TUNE RADIO 1610 AM

USE NN ROAD USE CENTER LANE USE DETOUR ROUTE USE LEFT TURN LANE USE NEXT EXIT USE RIGHT LANE WATCH FOR FLAGGER



SPECIAL NOTE FOR SPRAY APPLIED THERMOPLASTIC PAVEMENT MARKING MATERIALS

I. DESCRIPTION

Except as provided herein, all work shall be performed in accordance with the Department's Standard Specifications, Interim Supplemental Specifications, applicable Standard and Sepia Drawings, applicable Special Provisions and Special Notes, current editions. Article references are to the Standard Specifications. This project shall consist of furnishing all labor, equipment, materials and incidentals for the following:

(1) Spray applied thermoplastic pavement marking materials with reflectorized glass beads for permanent applications

II. MATERIALS

- A. DROP ON BEADS. Use beads that will ensure the pavement marking material will meet retroreflectivity requirements. The Department will evaluate the beads as part of the marking system through retroreflectivity readings.
- **B.** APPROVAL. Select materials that conform to the composition and physical characteristic requirements below when evaluated in accordance with AASHTO T-250 or other test methods as cited. The Department will sample and evaluate for approval each lot of thermoplastic material delivered for use per contract prior to installation of the thermoplastic material. Do not allow the installation of thermoplastic material until it has been approved by the Division of Materials. Allow the Department a minimum of 10 working days to evaluate and approve thermoplastic material from the date sampled.
- C. Composition. Use a maleic-modified glycerol ester resin (alkyd binder) to formulate the thermoplastic material. Ensure the pigment, pre-mix beads, and filler are uniformly dispersed in the resin. Use material that is free from all dirt and foreign material. Provide independent analysis data and certification for each formulation stating the total concentration of each heavy metal present, the test method used for each determination, and compliance to 40 CFR 261 for leachable heavy metals content.

| COMPOSITION (Percentage by Weight) | | |
|---------------------------------------|------------------------|------------------------|
| Component | White | Yellow |
| Binder, (1) | 26.0 min. | 26.0 min. |
| Glass Beads (Premixed) | 30 - 40 | 30 - 40 |
| Titanium Dioxide (Rutile, Type II) | 10.0 min. | _ |
| Calcium Carbonate & Inert Fillers (2) | 42.0 max. | 50.0 max. |
| Heavy Metals Content | Comply with 40 CFR 261 | Comply with 40 CFR 261 |

⁽¹⁾ Use a binder that consists of a mixture of synthetic resins, at least one being solid at room temperature, and high boiling point plasticizers. Ensure that at least one-third of the binder composition is solid maleic-modified glycerol ester resin and is not less than 8 percent by weight of the entire material formulation. Do not use alkyd binder that contains petroleum based hydrocarbon resins.

⁽²⁾ The manufacturer may choose the amount of calcium carbonate and inert fillers, providing all other requirements of this section are met.

Spray Applied Thermoplastic Page 2 of 3

- **D.** Physical Characteristics. For thermoplastic material heated for 4 hours at 425°F under agitation, conform to the following requirements.
 - a) Color. As determined with a spectrophotometer using D65 illuminant with a 45 degree entrance angle and 0 degree observation angle geometry.

| CIELAB Color Coordinates | | | |
|-----------------------------|-------------------|-------------------|--|
| | Yellow | White | |
| Daytime Color (CIELAB) | L* 81.76 | L* 93.51 | |
| Spectrophotometer using | a* 19.79 | a* -1.01 | |
| illuminant D65 at 45° | b* 89.89 | b* 0.70 | |
| illumination and 0° viewing | Maximum allowable | Maximum allowable | |
| with a 2° observer | variation 6.0ΔE* | variation 6.0ΔE* | |
| Nighttime Color (CIELAB) | L* 86.90 | L* 93.45 | |
| Spectrophotometer using | a* 24.80 | a* -0.79 | |
| illuminant A at 45° | b* 95.45 | b* 0.43 | |
| illumination and 0° viewing | Maximum allowable | Maximum allowable | |
| with a 2° observer | variation 6.0∆E* | variation 6.0∆E* | |

- b) Set Time. Use material that, when applied at a temperature range of 375 ± 25 °F and thickness of 60 ± 10 mils, sets to bear traffic in not more than 2 minutes when the air and road surface temperature is approximately $\geq 50 \pm 3$ °F, and not more than 10 minutes when the air and road surface temperature is approximately $\leq 50 \pm 3$ °F.
- c) Softening Point. Ensure that the thermoplastic material has a softening point of 180 ± 15 °F.
- **d) Bond Strength.** Ensure that the bond strength of the thermoplastic material to concrete exceeds 180 psi.
- e) Cracking Resistance at Low Temperature. Ensure that the thermoplastic material shows no cracks when observed from a distance exceeding one foot.
- f) Impact Resistance. Ensure the impact resistance of the thermoplastic material is a minimum of 50 inch-pounds.
- g) Flash Point. Use thermoplastic material that has a flash point not less than 475 °F.
- **E. PACKAGING.** Package thermoplastic material in suitable 50 pound containers to which the material shall not adhere during shipment or storage. Include a label stating that the thermoplastic material is to be maintained with a temperature range of 350 400°F during application. Provide the thermoplastic material in granular form.
- **F. SHELF LIFE.** Ensure that the thermoplastic material conforms to this section for a period of one year. Replace any thermoplastic material not conforming to the above requirements.
- **G. MANUFACTURER'S TESTING.** Perform testing in accordance with AASHTO T-250 on a minimum of one composite sample per 10,000 pounds, or portion thereof, per lot of thermoplastic produced.
- H. CERTIFICATION. Submit manufacturer's certification stating conformance to the requirements of this section for each lot of extruded thermoplastic delivered for use on projects. Clearly state the manufacture, formulation identification, product name, color, date of manufacturer, total quantity of lot produced, actual quantity of thermoplastic material represented, sampling method utilized to obtain the samples, and required manufacturer's testing data for each composite sample tested to represent each lot produced.

Spray Applied Thermoplastic Page 3 of 3

III. CONSTRUCTION METHODS

- A. SURFACE PREPARATION. The contractor will be required to sweep all pavement surfaces prior to striping and maintain the cleaning operation far enough in advance of the striping operation to prevent any dust from the cleaning operation from mixing with the paint. The sweeper must maintain contact with the roadway. When the Engineer determines abnormal amounts of debris or other material have accumulated beyond the capability of the required sweeping unit which will require shoveling or other means to remove, the Engineer will make arrangements, prior to painting, to have the material removed by the Department.
- **B. INSTALLATION.** Install thermoplastic materials in accordance with Section 714, Durable Pavement Striping, and the following exceptions:
 - Install the thermoplastic materials at a minimum thickness of 60 mils.
 - Ensure the material temperature is maintained between 350 and 400 °F.
 - Do not allow the material temperature to exceed 400°F.
 - Removal of existing stripe on asphalt surfaces is not required.
- **C. RETROREFLECTIVITY.** The Department will evaluate installed markings in accordance with Section 714.03.06, Proving Period for Durable Markings.

IV. METHOD OF MEASUREMENT

A. ACCEPTANCE AND PAYMENT. The Department will accept spray applied thermoplastic materials based on compliance of the manufacturer's certification and conformance of test results obtained by the Department to the requirements of this special note.

Contrary to Section 714.03.08, Acceptance of Non-Specification Thermoplastic Markings, the Department will not accept non-specification compliant markings. Remove non-specification compliant markings by water blasting. The Department will perform random thickness tests on applied markings to determine compliance to thickness requirements

IV. BASIS OF PAYMENT

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

| Code | Pay Item | Pay Unit |
|---------|-----------------------------------|----------|
| 24995EC | PAVE STRIPING-SPRAY THERMO-6 IN W | LF |
| 24996EC | PAVE STRIPING-SPRAY THERMO-6 IN Y | LF |

The Department will consider payment as full compensation for furnishing all labor, materials, equipment, and incidentals required to construct spray applied thermoplastic payment markings.

Revised: 1/14/2021

Contract ID: 244300 Page 66 of 314



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

TC 62-226 Rev. 01/2016 Page 1 of 1

RIGHT OF WAY CERTIFICATION

| TIEM# COUNTY PROJECT # (STATE) PROJECT # (FEDERAL) | | | |
|--|--|--|--|
| Intersection and Corridor Improvements to Reduce Conflict Points and Enhance Safety along Athens Boonesboro Road from just northwest of Competition Drive to just southeast of I-75 (breakout from Item 7-9012.50) No Additional Right of Way Required Construction will be within the limits of the existing right of way. The right of way was acquired in accordance to FHWA regulations under the Uniform Relocation Assistance and Real Property Acquisitions Policy Act of 1970, as amended. No additional right of way or relocation assistance were required for this project. Condition #1 (Additional Right of Way Required and Cleared) All necessary right of way, including control of access rights when applicable, have been acquired including legal and physical possession. Trial or appeal of cases may be pending in court but legal possession has been obtained. There may be some improvements remaining on the right-of-way, but all occupants have vacated the lands and improvements, and KYTC has physical possession and the rights to remove, salvage, or demolish all improvements and enter on all land. Just Compensation has been paid or deposited with the court. All relocations have been relocated to decent, safe, and sanitary housing or that KYTC has made available to displaced persons adequate replacement housing in accordance with the provisions of the current FHWA directive. Condition #2 (Additional Right of Way Required with Exception) The right of way has not been fully acquired, the right to occupy and to use all rights-of-way required for the proper execution of the project has been acquired. Some parcels may be pending in court and on other parcels full legal possession has not been obtained, but right of entry has been obtained, the occupants of all lands and improvements have vacated, and KYTC has physical possession and right to remove, salvage, or demolish all improvements. Just Compensation has been paid or deposited with the court for most parcels. Just Compensation for all pending parcels will be paid or deposit | | | |
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| Number of Develor That Have Deep Assuring | | | |
| Number of Parcels That Have Been Acquired | | | |
| Signed Deed 2 | | | |
| Condemnation Signed ROE | | | |
| Notes/ Comments (Use Additional Sheet if necessary) | | | |
| Parcels 6 & 7 were originally acquired under the parent project and is a breakout portion of 07-9012.50 for construction. | | | |
| | | | |
| | | | |
| LPA RW Project Manager Right of Way Supervisor | | | |
| Printed Name Printed Name Digitally signed by Cecil D. | | | |
| Signature Signature Signature Signature | | | |
| Date Date -05'00' | | | |
| Right of Way Director FHWA | | | |
| Printed Name Printed Name | | | |
| Signature Signat | | | |
| Date Date Current Stewardship Agreement | | | |

UTILITIES AND RAIL CERTIFICATION NOTE

Fayette County - HSIP 4181(034)

FD52 034 0418 001-003

RCUT Intersection at KY 418 & Competition Drive (MP 1.8 to MP 2.6)

Item No. 7-9012.51

GENERAL PROJECT NOTES ON UTILITIES

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.

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

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

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

Contract ID: 244300 Page 68 of 314

UTILITIES AND RAIL CERTIFICATION NOTE

Fayette County - HSIP 4181(034)

FD52 034 0418 001-003

RCUT Intersection at KY 418 & Competition Drive (MP 1.8 to MP 2.6)

Item No. 7-9012.51

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

Kentucky Utility Overhead lines run left of the road and cross KY 418 prior to Competition Drive.

If an unknown utility is encountered, the contractor will be responsible for arranging an on-site meeting with utility representatives and the Engineer to discuss possible impacts and solutions to either avoid the utility or relocate the utility.

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

THE FOLLOWING COMPANIES ARE RELOCATING/ADJUSTING THEIR UTILITIES WITHIN THE PROJECT LIMITS

AND WILL BE COMPLETE PRIOR TO CONSTRUCTION

N/A

THE FOLLOWING COMPANIES HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE COMPANY OR THE COMPANY'S SUBCONTRACTOR AND IS TO BE COORDINATED WITH THE ROAD CONTRACT

KY American Water – 6 IN Water Line – Contractor shall coordinate with KAW to adjust the water valve to be at grade near Sta. 116+77.

The Department will consider submission of a bid as the Contractor's agreement to not make any claims for additional compensation due to delays or other conditions created by the operations of (Utility Company(s) Name). Working days will not be charged for those days on which work on (Utility Company(s) Name) facilities is delayed, as provided in the current edition of the KY Standard Specifications for Road and Bridge Construction. Should a difference of opinion arise as to the rights of the Contractor and others working within the limits of, or adjacent to the project, the KYTC Engineer will decide as to the respective rights of the various parties involved in order to assure the completion of the Department's work in general harmony and in a satisfactory manner, and his/her decision shall be final and binding upon the Contractor.

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

LFUCG Sanitary Sewer -10 " Force Main - To be relocated per the plans included in the proposal between Sta. 117+16 and 118+60

RAIL COMPANIES HAVE FACILITIES IN CONJUNCTION WITH THIS PROJECT AS NOTED

☑ No Rail Involvement ☐ Rail Involved ☐ Rail Adjacent

UTILITIES AND RAIL CERTIFICATION NOTE

Fayette County - HSIP 4181(034)

FD52 034 0418 001-003

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AREA UTILITIES CONTACT LIST

| <u>Util</u> | ity Company/Agency | Contact Name | Contact Information |
|-------------|--------------------|---------------|--|
| 1. | Columbia Gas | David Lemons | 859-288-0249 dnlemons@nisource.com |
| 2. | Kentucky Utilities | Rodney Brock | 859-367-4304 Rodney.Brock@lge-ku.com |
| 3. | KY American Water | John Magner | 859-268-6349 John.Magner@amwater.com |
| 4. | AT&T | Frank Ambrose | 502-867-8240 fa2207@att.com |
| 5. | Windstream | Steve Johnson | 859-357-6209 steve.johnson@windstream.com |
| 6. | LFUCG Traffic | Jeffery Neal | 859-258-3830 jneal@lexingtonky.gov |
| 7. | LFUCG Sanitary | Chris Dent | 859.425.2454 cdent@ lexingtonky.gov |

NOTE: The Utilities Contact List is provided as informational only, and may not be a complete list of all Utility Companies with facilities in the project area.

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

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

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

PROTECTION OF EXISTING UTILITIES

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

PREQUALIFIED UTILITY CONTRACTORS

Some utility owners may require contractors that perform relocation work on their respective facilities as a part of the road contract be prequalified or preapproved by the utility owner. Utility contractors may be added via addendum if KYTC is instructed to do so by the utility owner. Potential contractors must seek prequalification from the utility owner. Any revisions must be sent from the utility owner to KYTC a minimum of one week prior to bid opening. Those utility owners with a prequalification or preapproval requirement are as follows:

Bidders and DBE subcontractors must be prequalified with the Kentucky Transportation Cabinet and possess a Certificate of Eligibility at the time of the bid opening. All other subcontractors must be prequalified when accepting subcontracts.

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

When the list of approved subcontractors for the utility work is <u>not</u> provided in these general notes, the utility work can be completed by the prime contractor. If the prime contractor chooses to subcontract the work, the subcontractor shall be prequalified with the KYTC Division of Construction Procurement in the work type of "Utilities" (I33). Those who would like to become prequalified may contact the Division of Construction Procurement at (502) 564-3500. Please Note: it could take up to 30 calendar days for prequalification to be approved. The prequalification does not have to be approved prior to the bid but must be approved before the subcontract will be approved by KYTC and the work can be performed.

CONTRACT ADMINISTRATION RELATIVE TO UTILITY WORK

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

SUBMITTALS AND CORRESPONDENCE

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

ENGINEER

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

INSPECTOR OR RESIDENT PROJECT REPRESENTATIVE

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

NOTICE TO UTILITY OWNERS OF THE START OF WORK

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

UTILITY SHUTDOWNS

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

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

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

CUSTOMER SERVICE AND LATERAL ABANDONMENTS

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

FAYETTE COUNTY HSIP 4181(034)

STATIONS AND DISTANCES

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

RESTORATION

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

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

FAYETTE COUNTY HSIP 4181(034)

Standard Sanitary Sewer Bid Item Descriptions

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

S BYPASS PUMPING This item shall include all labor, equipment, and materials needed to complete a bypass pumping and/or hauling operation for diversion of sewage during sanitary sewer construction. Examples of such operations when bypass pumping and/or hauling may be necessary during force main tieins, manhole invert reconstruction, insertion of new manholes into existing mains, or other similar There may be more than one bypass pumping/hauling operation on a project. This item shall be paid for each separate bypass pumping/hauling operation occurrence as called out on the plans or directed by the engineer and actually performed. There will be no separate bid items defined for length, duration, or volume of sewage pumped or hauled in each occurrence. If a bypass pumping/hauling operation is called out on the plans, but conditions are such that the bypass pumping/hauling operation is not needed or utilized, no payment will be made under this item. The contractor shall draw his own conclusions as to what labor, equipment, and materials may be needed for each bypass pumping/hauling occurrence. The contractor should be prepared to handle the maximum volume of the sewer being bypassed, even during This item shall not be paid separately, but shall be considered incidental, when bypass pumping and/or hauling is needed during cast-in-place-pipe (CIPP) and/or point repair operations. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA).

S CIPP LATERAL SERVICE INVESTIGATION This item shall include all equipment, materials, labor, and incidentals necessary to enter the sewer, in compliance with all safety/confided space requirements to perform the identification, assessment, and pre-measurement of all existing and abandoned laterals for the placement of Cured-In-Place-Pipe lining. This item shall be payment for all lateral service investigation for all sewer segments to be lined as a part of this contract. This bid item shall include bypass pumping when required. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Payment for this item shall be LUMP SUM (LS).

S CIPP LATERAL REINSTATEMENT This item is to pay for installing a Cured-In-Place-Pipe liner in service laterals and service/mainline connections to stabilize structural defects and construction inadequacies. This bid item shall include all labor, equipment, materials and incidentals necessary to perform the service lateral reinstatement, in accordance with the plans and specifications. Work under this item shall include bypass pumping, sewer flow control, pre-installation cleaning, sealing connections to existing sewer main, pre- and post- construction CCTV inspection, and final testing of the CIPP system. This item shall also include the "top hat" required by the specifications. All CIPP lateral reinstatements shall be paid under this item, regardless of the size or length of reinstatement. No separate bid items of varying sizes or length of CIPP lateral reinstatement will be provided in the contract. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Payment for this item shall be EACH (EA) for each CIPP lateral reinstatement, complete and ready-for-use.

S CIPP LINER This item is to pay for rehabilitation of existing sanitary sewers using the Cured-In-Place-Pipe method. This bid item description applies to all CIPP sizes included in the contract. All CIPP Liner items, of all varying sizes, shall include all labor, materials, customer notification, testing, necessary permits,

ingress and egress procedures, bypass pumping, pre-construction video, sediment and root removal, dewatering, traffic control, erosion and sediment control, excavation pits, removal and replacement of manhole frames and covers as necessary to facilitate the lining work, sealing at manholes and service connections, clearing and grubbing, pipeline cleaning, re-cleaning, video inspection as many times as necessary, debris collection and disposal, root removal, pre- and post-construction video inspection, all digital inspection footage, final report preparation and approval, the cost of potable water from the Owner, required compliance tests, site restoration, site cleanup, sealing of liner at manholes, acceptance testing, and all other rehabilitation work and incidentals not included under other pay items, necessary to complete the rehabilitation per the plans and specifications. There will be no separate payment for acceptance testing of the lined pipe but shall be considered incidental to this item. Pay under this item shall be by each size bid in the contract. Pay measurement shall be from center of manhole to center of manhole. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LINEAR FEET (LF).

S CIPP PROTRUDING LATERAL REMOVAL This item includes all equipment, materials, labor, and incidentals necessary to enter the sewer in compliance with all safety/confined space requirements, remove a sufficient amount of the protruding tap to insure a proper and safe Cured-In-Place-Pipe lining insertion, and perform pre-installation CCTV. This bid item shall include bypass pumping when required. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Payment for this item shall be EACH (EA) for each protruding lateral removed.

S CONCRETE PIPE ANCHOR This item shall be constructed on the sewer pipe at the locations shown on the plans, in accordance with sanitary sewer specifications and standard drawings. Payment for concrete anchors will be made at the contract unit price each, in place, complete and ready-for-use. Each concrete anchor of sewer pipe or force main shall be paid under one bid item per contract regardless of the sizes of carrier pipe being anchored in the contract. No separate bid items will be established for size variations. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

S DIRECTIONAL BORE Payment under this item is made whenever the plans or specifications specifically show directional boring is to be utilized in order to minimize the impact of open-cut for the installation of force main or gravity sewer under streets, creeks, and etc. Payment under this item shall include the specified bore pipe, labor, and equipment. No separate payment shall be made for bore pipe installed in the bore, whether used as a carrier pipe or an encasement of a separate carrier pipe. This item shall also include pipe anchors at each end of the bore, when specified, to prevent the creep or contraction of the bore pipe. Carrier pipe installed within a bore pipe shall be paid separately under pipe items. Payment under this item shall not be size specific and no separate bid items will be established for size variations. The bore pipe sizes to be included under this item shall be as shown on the plans and/or in the specifications. Any and all directional bores in each contract shall be paid under one directional bore bid item included in the contract, regardless of size. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LINEAR FEET (LF).

S ENCASEMENT CONCRETE This item includes all labor, equipment, excavation, concrete, reinforcing steel, backfill, restoration, etc. to construct the concrete encasement of the sewer or force main, as shown on the plans and in accordance with the specifications and standard drawings. Payment under this item shall be in addition to the carrier pipe, as paid under separate bid items. Carrier pipe is not included in this bid item. Any and all concrete encasements shall be paid under one bid item, included in the contract, regardless of the size of the carrier pipe or the volume of concrete or steel reinforcement as-specified in the plans and specifications. No separate bid items will be established for size variations. Measurement of

pay quantity shall be from end of concrete to end of concrete. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LINEAR FEET (LF) when complete.

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

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

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

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

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

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

Range 6 = All encasement sizes greater than 24 inches

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

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

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

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

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

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

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

Range 6 = All encasement sizes greater than 24 inches

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

S FORCE MAIN This item description shall apply to all PVC, ductile iron, and polyethylene/plastic pipe bid items of every size and type, except those bid items defined as "Special". This item includes the pipe specified by the plans and specifications, all fittings (including, but not limited to, bends, tees, reducers, plugs, and caps), tracing wire with test stations (if required by specifications), polyethylene wrap (when specified), labor, equipment, excavation, bedding, restoration, testing, backfill, etc., required to install the specified new pipe and new fittings at the locations shown on the plans, or as directed, in accordance with the specifications and standard drawings, complete and ready-for-use. No additional payment will be made for rock excavation. This bid item includes material and placement of flowable fill under existing and

proposed pavement, and wherever else specified on the plans or in the specifications. This item shall also include pipe anchors on polyethylene pipe runs, as shown on the plans or required by the specifications, to prevent the creep or contraction of the pipe. Measurement of quantities under this item shall be through fittings, encasements, and directional bores (only when a separate carrier pipe is specified within the directional bore pipe). No separate payment will be made under pipe items when the directional bore pipe is the carrier pipe. Measurements shall be further defined to be to the center of tie-in where new pipe contacts existing pipe at the center of connecting fittings, to the outside face of vault or structure walls, or to the point of main termination at dead ends. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LINEAR FEET (LF).

S FORCE MAIN AIR RLS/VAC VLV This item description shall apply to all force main air release/vacuum valve installations of every size, except those defined as "Special".

This item shall include the air release/vacuum valve, main to valve connecting line or piping, manhole/vault/structure, access casting or doors, tapping the main, labor, equipment, excavation, proper backfill, and restoration required to install the air release/vacuum valve at the location shown on the plans or as directed, in accordance with the specifications and standard drawings, complete and ready-for-use. All air release/vacuum valves on a project shall be paid under one bid item, regardless of size. No separate pay items will be established for size variations. Only in the case of the uniqueness of a particular air release/vacuum valve would a separate bid item be established. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

S FORCE MAIN DIRECTIONAL BORE Payment under this item is made whenever the plans or specifications specifically show directional boring is to be utilized in order to minimize the impact of opencut for the installation of sewer or force main under streets, buildings, creeks, etc. Payment under this item shall include the specified bore pipe, labor, and equipment. No separate payment shall be made for bore pipe installed in the bore, whether used as a carrier pipe or an encasement of a separate carrier pipe. This item shall also include pipe anchors at each end of the bore, when specified, to prevent the creep or contraction of the bore pipe. Carrier pipe installed within a bore pipe shall be paid separately under pipe items. Payment under this item shall not be size specific and no separate bid items will be established for size variations. The bore pipe sizes to be included under this item shall be as shown on the plans and/or in the specifications. Any and all directional bores in each contract shall be paid under one directional bore bid item included in the contract, regardless of size. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LINEAR FEET (LF).

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

basis, but shall be paid EACH (EA) at each location when complete and placed in service. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced.

S FORCE MAIN TAP SLEVE/VALVE RANGE 1 OR 2 This item shall include

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

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

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

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

S FORCE MAIN TIE-IN This item description shall be used for all force main tie-in bid items of every size, except those defined as "Special". This item includes all labor, equipment, excavation, fittings, sleeves, reducers, couplings, blocking, anchoring, restoration, testing, and backfill required to make the force main tie-in as shown on the plans and in accordance with the specifications, complete and ready-foruse. This bid item shall include purge and sanitary disposal of any sewage from any abandoned segments of force main. Pipe for tie-ins shall be paid under separate bid items. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

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

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

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

S LAMPHOLE Payment under this item is for the installation of a lamphole along or at the end of a gravity sewer pipe for inspection and cleaning of a sewer pipe. Lampholes shall include, but are not limited

to bends, tees, vertical pipe, casting, any other materials specified, excavation, backfilling, air testing, restoration, and cleanup in accordance with the plans, specifications, and standard drawings, complete and ready-for-use. Payment shall be made under this bid item regardless of lamphole size. No separate pay items will be established for size variations. All materials shall be new and unused. No additional compensation will be paid for lamphole height variations. All vertical pipe required to construct the lamphole, regardless of height, shall be considered incidental to this item. No additional payment will be made for rock excavation. Cleanouts on pipes 6 inches or less are not considered lampholes and are not to be paid under this item. Only lampholes on pipes 8 inches or larger are to be paid under this item. Cleanouts on pipes 6 inches or less are to be paid under pay item S LATERAL CLEANOUT. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

S LATERAL CLEANOUT This item shall be for payment for installation of a cleanout in a service lateral line. This item shall include furnishing and installation of a tee, vertical pipe of whatever length required, and threaded cap. The cleanout shall extend from the lateral to final grade elevation. The size of the cleanout shall be equivalent to the size of the lateral. The cleanout materials shall meet the same specification as those for the lateral. The cleanout shall be installed at the locations shown on the plans or as directed by the engineer. Only one pay item shall be established for cleanout installation. No separate pay items shall be established for size or height variations. Payment under this item is for cleanouts on pipe of 6 inches or less. Cleanouts on pipes of 8 inches or greater are considered lampholes and shall be paid under the S LAMPHOLE bid item. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

S LATERAL LOCATE This item description is to pay for all labor, equipment, and materials needed in locating an existing sanitary sewer service lateral for tie-in of the lateral to new mainline sewers and/or for the relocation of a lateral. This bid item shall be inclusive of all methods and efforts required to locate the lateral for tie-in or relocation of the lateral. Locating methods to be included under this item shall include, but are not limited to those efforts employing the use of video cameras from within an existing sanitary sewer main or lateral, electronic locating beacons and/or tracers inserted into the sanitary sewer main or lateral, careful excavation as a separate operation from mainline sewer or lateral excavation, the use of dyes to trace the flow of a lateral, or any combination of methods required to accurately locate the lateral. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA).

S LATERAL LONG SIDE This item description shall apply to all service lateral installations of every size up to and including 6-inch internal diameter, except those lateral bid items defined as "Special". This item includes the specified piping material, main tap, bends, clean outs, labor, equipment, excavation, backfill, testing, and restoration, at the locations shown on the plans or as directed, in accordance with the specifications and standard drawings, complete and ready-for- use. This bid item is to pay for service lateral installations where the ends of the lateral connection are on opposite sides of the public roadway. The new lateral must cross the centerline of the public roadway to qualify for payment as a long side lateral. The length of the service lateral is not to be specified. Payment under this item shall not be restricted by a minimum or maximum length. The contractor shall draw his own conclusions as to the length of piping that may be needed. Payment under this item shall include boring, jacking, or excavating across the public roadway for placement. Placement of a service lateral across a private residential or commercial entrance alone shall not be reason to make payment under this item. Private or commercial entrances shall not be considered a public roadway in defining payment under this item. No additional payment will be made for rock excavation or for bedding required in rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

S LATERAL SHORT SIDE This item description shall apply to all service lateral installations of every size up to and including 6-inch internal diameter, except those lateral bid items defined as "Special". This item includes the specified piping material, main tap tee, bends, clean outs, labor, equipment, excavation, backfill, testing, and restoration, at the locations shown on the plans or as directed, in accordance with the specifications and standard drawings, complete and ready- for-use. This bid item is to pay for lateral installations where both ends of the lateral connection are on the same side of the public roadway, or when an existing lateral crossing a public roadway will remain and is being extended, reconnected, or relocated, with all work on one side of the public roadway centerline as shown on the plans. The length of the service lateral is not to be specified and shall not be restricted to any minimum or maximum length. Placement of a service lateral across a private residential or commercial entrance along shall not be reason to make payment under this item Private or commercial entrances shall not be considered a public roadway in defining payment under this item. The contractor shall draw his own conclusions as to the length of piping that may be needed. No additional payment will be made for rock excavation or for bedding required in rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

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

S MANHOLE Payment under this item is for the installation of new 4-foot interior diameter sanitary sewer manhole. Payment for manholes will be at the contract unit price, in-place, complete and ready-for-use at the locations shown on plans, in accordance with specifications and standard drawings. Manholes shall include concrete base, barrel sections, cone section or slab top, steps, excavation, backfilling, air testing, restoration, and cleanup, in accordance with the specifications and standard drawings. Payment shall be made under this item regardless of whether the base is to be precast or cast-in-place (doghouse). All materials, except casting, shall be new and unused. An existing casting from an existing abandoned or removed manhole is to be reused when available and shall be considered incidental to this item. When an existing casting is unavailable or a new casting is specified on plans or elsewhere in the contract, a new casting shall be paid as a separate bid item. Anchoring of a casting, new or used, shall be considered incidental to this bid item. No additional compensation will be paid for manhole height variations. No additional payment will be made for rock excavation. In cases where a manhole is to be located within a grade-sensitive area such as roadway pavement, sidewalks, shared-use-paths, etc., the final casting grade given on plans shall be considered approximate. Any readjustment of a manhole casting to meet field conditions shall be incidental to this item. No additional payment shall be made for casting adjustments on new manholes. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

S MANHOLE ABANDON/REMOVE Payment under this item is for the full or partial removal, disposal, and/or filling of any sanitary sewer manhole, regardless of size or depth, that no longer serves any purpose. All manholes partially removed shall be removed to a point at least 12 inches below final grade, 12 inches below roadway subgrade, or 12 inches clear of any other underground infrastructure, whichever is lowest. If partial removal of an abandoned manhole is elected, the remaining manhole structure shall be filled with flowable fill. Flowable fill shall be considered incidental to this bid item. Plugging of pipes entering and exiting within an abandoned manhole that is left in place partially or in whole shall be considered incidental to this item. All sanitary sewer castings shall be salvaged and securely stockpiled for reuse on new sanitary sewer manholes. Salvage of manhole castings for reuse on the project shall be considered incidental to this

bid item. Any casting that is not needed for reuse, is not reusable, or is directed by the engineer not to be reused shall be disposed of by the contractor. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

Plugging or safeloading of pipes required at locations <u>outside of manholes</u> when manholes are removed in total shall be performed and paid in accordance with Section 708.03.05 of KYTC Standard Specifications for Road and Bridge Construction, using Bid code 01314, Plug Pipe.

S MANHOLE ADJUST TO GRADE Payment under this item is for the adjustment of sanitary sewer casting elevation on all sizes of existing sanitary manholes. This work shall be performed in accordance with the sanitary sewer specifications. Payment shall be made under this bid item regardless of the amount of adjustment necessary to a sanitary sewer manhole casting or diameter of the manhole. Work under this pay item may be as simple as placing a bed of mortar under a casting, but shall also be inclusive of installation of adjusting rings, and /or addition, removal, or replacement of barrel sections. The existing casting is to be reused unless a new casting is specified on the plans. New casting, when specified, shall be paid as a separate bid item. Anchoring of the casting shall be incidental to this item. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

S MANHOLE CASTING STANDARD Payment under this item is for the furnishing of a new, standard, traffic-bearing casting for sanitary manholes that meets the requirements of the sanitary sewer specifications and standard drawings. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when installed.

S MANHOLE CASTING WATERTIGHT Payment under this item is for the furnishing of a new, watertight, traffic-bearing casting for sanitary manholes that meets the requirements of the sanitary sewer specifications and standard drawings. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when installed.

S MANHOLE OVERSIZED Payment under this item is for the installation of a new manhole greater than the standard 4-foot interior diameter. Payment for oversized manholes will be made at the contract unit price in-place, complete and ready-for-use at the locations shown on plans, in accordance with specifications and standard drawings. Manholes shall include concrete base, barrel sections, cone section or slab top, steps, excavation, backfilling, air testing, restoration, and cleanup, in accordance with the specifications and standard drawings. Payment shall be made under this item regardless of whether the base is to be precast or cast-in-place (doghouse). All materials, except casting, shall be new and unused. An existing casting from an existing abandoned or removed manhole is to be reused when available and shall be considered incidental to this item. When an existing casting is unavailable or a new casting is specified on plans or elsewhere in the contract, a new casting shall be paid as a separate bid item. Anchoring of casting, new or used, shall be considered incidental to this bid item. No additional compensation will be paid for manhole height variations. No additional payment will be made for rock excavation. In cases where a manhole is to be located within a grade-sensitive area such as roadway pavement, sidewalks, shared-use-paths, etc., the final casting grade given on plans shall be considered approximate. Any readjustment of a manhole casting to meet field conditions shall be incidental to this item. No additional payment shall be made for casting adjustments on new manholes. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

S MANHOLE RECONSTRUCT INVERT This item is to pay for all labor, equipment, and material for

the rework of an existing manhole bench to redirect or eliminate flow, such as when the flow of a pipe or pipes are being removed or redirected. This work will be as specified in the plans, specifications, or directed by the engineer. This work may consist of, but is not limited to, removal of concrete and/or placement of concrete in elimination or redirect of flow. This item shall also include providing and placement of a rubber seal or boot, as required by utility specifications, standard drawings, or plans. The contractor shall draw his own conclusions as to the effort and scope of work needed to comply with the specifications, standard drawings, and plans. No payment shall be made under this bid when MANHOLE TAP EXISTING or MANHOLE TAP EXISTING ADD DROP are being paid at the same location, as this type of work is included in those items. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

S MANHOLE TAP EXISTING This item is to pay for all labor, equipment, and material for coring one opening in an existing manhole base, addition of a rubber seal as specified, and rework of the manhole bench to direct the additional pipe flow. The bid item shall be paid for each core opening added to a single manhole. This bid item shall also include any rework of the existing manhole bench due to the elimination of other existing pipes and flow. This work will be as specified in the plans, specifications, or directed by the engineer. This work may consist of, but is not limited to, removal of concrete and/or placement of concrete in the addition, elimination, or redirect of flow. The contractor shall draw his own conclusions as to the effort and scope of work needed to comply with the specifications, standard drawings, and plans. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

S MANHOLE TAP EXISTING ADD DROP This item is to pay for all labor, equipment, and material for coring one opening in an existing manhole base and one opening in a manhole wall for cleanout, addition of rubber seals as specified, addition of a vertical drop pipe to the outside of the manhole, placement of reinforcing steel and concrete to encase vertical pipe, and rework of the manhole bench to direct the additional pipe flow. This bid item shall be paid for each drop added to a single manhole. This bid item shall also include any rework of the existing manhole bench due to the elimination of other existing pipes and flow. This work will be as specified in the plans, standard drawings, specifications, or directed by the engineer. This work may consist of, but is not limited to, removal of concrete and/or placement of concrete in the addition, elimination, or redirect of flow. The contractor shall draw his own conclusions as to the effort and scope of work needed to comply with the specifications, standard drawings, and plans. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

S MANHOLE WITH DROP Payment under this item is for the installation of new 4-foot interior diameter sanitary sewer manhole with drop. Payment for drop manholes will be made at the contract unit price, inplace, complete and ready-for-use at the locations shown on plans, in accordance with specifications, and standard drawings. Drop manholes shall include concrete base, barrel sections, drop materials, cone section or slab top, steps, excavation, backfilling, air testing, restoration, and cleanup. Payment shall be made under this item regardless of whether the base is to be precast or cast-in-place (doghouse). All materials, except casting, shall be new and unused. An existing casting salvaged from an existing abandoned or removed manhole is to be reused and shall be considered incidental to this item. When a new casting is specified, or an existing casting is unavailable, it shall be paid as a separate bid item. Anchoring of casting, new or used, shall be considered incidental to this bid item. No additional compensation will be paid for manhole height variations. No additional payment will be made for rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

S MANHOLE WITH LINING Payment under this item is for the installation of a new 4-foot interior

diameter sanitary sewer manhole with corrosion-resistant lining. Payment for manholes with lining will be made at the contract unit price, in-place, complete and ready-for-use at the locations shown on plans, in accordance with specifications, and standard drawings. Manholes shall include concrete base, barrel sections, cone section or slab top, steps, lining, excavation, backfilling, air testing, restoration, and cleanup. Payment shall be made under this item regardless of whether the base is to be precast or cast-in-place (doghouse). All materials, except casting, shall be new and unused. An existing casting from an existing abandoned or removed manhole is to be reused and shall be considered incidental to this item. When a new casting is specified, or an existing casting is unavailable, it shall be paid as a separate bid item. Anchoring of casting, new or used, shall be considered incidental to this bid item. No additional compensation will be paid for manhole height variations. No additional payment will be made for rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

S MANHOLE WITH TRAP Payment under this item is for the installation of a new manhole with trap. Payment for trap manholes will be made at the contract unit price each, in-place, complete and ready-foruse at the locations shown on plans, in accordance with specifications, and standard drawings. Trap manholes shall include concrete base, manhole structure and trap materials, cone section or slab top, steps, excavation, backfilling, air testing, restoration, and cleanup. All materials, except casting, shall be new and unused. Payment shall be made under this item regardless of whether the base is to be precast or cast-in-place (doghouse). An existing casting from an existing abandoned or removed manhole is to be reused and shall be considered incidental to this item. When a new casting is specified, or an existing casting is unavailable, it shall be paid as a separate bid item. Anchoring of casting, new or used, shall be considered incidental to this bid item. No additional compensation will be made for manhole height variations. No additional payment will be made for rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

S PIPE This item description shall apply to all gravity and force-main sewer pipe bid items, of every size and type of material 8 inches internal diameter and larger, except those bid items defined as "Special". This item includes the pipe specified by the plans and specifications, all fittings (including, but not limited to, tap tees and couplings for joining to existing similar or dissimilar pipes), polyethylene wrap (if required by specification), labor, equipment, excavation, bedding, backfill, restoration, pressure or vacuum testing, temporary testing materials, video inspection, etc., required to install the specified new pipe and new fittings at the locations shown on the plans, or as directed, in accordance with the specifications and standard drawings, complete and ready-for-use. This bid item shall include material and placement of flowable fill under existing and proposed pavement, and wherever specified on the plans or in the specifications. No additional payment will be made for rock excavation. Measurement of quantities under this item shall be through fittings and encasements to a point at the outside face of manhole barrels, or to the point of main termination at dead ends or lampholes. Carrier pipe placed within an encasement shall be paid under this item and shall include casing spacers and end seals. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LINEAR FEET (LF).

S PIPE POINT REPAIR This item is to be used to pay for repair of short lengths of existing sanitary sewer pipe that, through prior video inspection or other means, are known to have pre-existing failure. Pipe Point Repair may be needed in preparation for installation of cured-in-place-pipe (CIPP) lining, or other instances where failure is known and repair is prudent. The size of pipe shall not be defined in separate bid items. All diameter sizes of point repair shall be paid under this one item. The materials to be used to make the repair shall be as defined on the plans or in the specifications. This bid item shall include all excavation, pipe materials, joining materials to connect old and new pipe, bedding, and backfill to complete the repair at the locations shown on the plans or as directed by the engineer, complete and ready-for-use.

This bid item shall include bypass pumping when required. Measurement shall be from contact point to contact point of old and new pipe. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LINEAR FEET (LF).

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

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

Manhole abandonment shall not be paid under this item but shall be paid under the bid item S MANHOLE ABANDON/REMOVE.

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

Manhole removal shall not be paid under this item but shall be paid under the bid item S MANHOLE ABANDON/REMOVE.



Fayette County - HSIP

LEXINGTON, KENTUCKY

KY418 RCUT at Competition Dr. (MP 1.875 to MP 2.6)

Construction Documents Project Manual

February 2024

Table of Contents

DIVISION 03 - CONCRETE

03 09 00 CONCRETE

DIVISION 31 – EARTHWORK

31 23 33 TRENCHING, BACKFILLING, AND COMPACTING FOR UTILITIES

DIVISION 32 - EXTERIOR IMPROVEMENTS

32 92 00 SEEDING, SODDING AND LANDSCAPING

DIVISION 33 - UTILITIES

| 33 05 15 | PRECAST CONCRETE UTILITY STRUCTURES |
|----------|-------------------------------------|
| 33 05 23 | PIPELINE UNDERCROSSINGS |

DIVISION 40 - PROCESS INTERCONNECTIONS

| 40 05 00 | PIPE AND PIPE FITTINGS: BASIC REQUIREMENTS |
|----------|--|
| 40 05 31 | PIPE: PLASTIC |
| 40 05 51 | VALVES: BASIC REQUIREMENTS |
| 40 05 61 | KNIFE GATE VALVES |

SECTION 03 09 00

CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Cast-in-place concrete and grout.

1.2 QUALITY ASSURANCE

- A. Referenced Standards:
 - 1. American Concrete Institute (ACI):
 - a. 117, Specification for Tolerances for Concrete Construction and Materials.
 - b. 211.1, Standard Practice for Selecting Proportions for Normal, Heavyweight and Mass Concrete.
 - c. 212.3R, Chemical Admixtures for Concrete.
 - d. 304R, Guide for Measuring, Mixing, Transporting, and Placing Concrete.
 - e. 304.2R, Placing Concrete by Pumping Methods.
 - f. 305.1, Hot Weather Concreting.
 - g. 306.1, Cold Weather Concreting.
 - h. 318, Building Code Requirements for Structural Concrete.
 - i. 347, Guide to Formwork for Concrete.
 - j. CT-13, Concrete Terminology.
 - 2. ASTM International (ASTM):
 - a. A82, Standard Specification for Steel Wire, Plain, for Concrete Reinforcement.
 - A185, Standard Specification for Steel Welded Wire Reinforcement, Plain, for Concrete.
 - A615, Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement.
 - d. A1064, Standard Specification for Steel Wire and Welded Wire Replacement, Plain and Deformed, for Concrete.
 - e. C31, Standard Practice for Making and Curing Concrete Test Specimens in the Field.
 - f. C33, Standard Specification for Concrete Aggregates.
 - g. C39, Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
 - h. C94/C94M, Standard Specification for Ready-Mixed Concrete.
 - i. C138, Standard Method of Test for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete.
 - j. C143, Standard Test Method for Slump of Hydraulic Cement Concrete.
 - k. C150, Standard Specification for Portland Cement.
 - l. C172, Standard Practice for Sampling Freshly Mixed Concrete.
 - m. C173, Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method.
 - n. C231, Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.
 - o. C260, Standard Specification for Air-Entraining Admixtures for Concrete.
 - p. C289, Standard Test Method for Potential Alkali-Silica Reactivity of Aggregates (Chemical Method).
 - q. C309, Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete.
 - r. C494, Standard Specification for Chemical Admixtures for Concrete.
 - s. C618, Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete.

- t. C1315, Standard Specification for Liquid Membrane-Forming Compounds Having Special Properties for Curing and Sealing Concrete.
- u. D882, Standard Test Method for Tensile Properties of Thin Plastic Sheeting.
- v. D994, Standard Specification for Preformed Expansion Joint Filler for Concrete (Bituminous Type).
- w. D1056, Standard Specification for Flexible Cellular Materials-Sponge or Expanded Rubber.
- x. D1709, Standard Test Methods for Impact Resistance of Plastic Film by the Free-Falling Dart Method.
- y. D1751, Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types).
- z. E96, Standard Test Methods for Water Vapor Transmission of Materials.
- aa. E329, Standard Specification for Agencies Engaged in Construction Inspection and/or Testing.
- 3. Corps of Engineers (COE):
 - a. CRD-C621, Standard Specification for Packaged, Dry, Hydraulic-Cement Grout (Nonshrink).
- 4. National Ready Mixed Concrete Association (NRMCA).

B. Quality Control:

- 1. Concrete testing agency:
 - a. Contractor to employ and pay for services of a testing laboratory to:
 - 1) Perform materials evaluation.
 - 2) Design concrete mixes.
 - b. Concrete testing agency to meet requirements of ASTM E329.
- Do not begin concrete production until proposed concrete mix design has been approved by Engineer.
 - a. Approval of concrete mix design by Engineer does not relieve Contractor of his responsibility to provide concrete that meets the requirements of this Specification.
- 3. Adjust concrete mix designs when material characteristics, job conditions, weather, strength test results or other circumstances warrant.
 - a. Do not use revised concrete mixes until submitted to and approved by Engineer.
- 4. Perform structural calculations as required to prove that all portions of the structure in combination with remaining forming and shoring system has sufficient strength to safely support its own weight plus the loads placed thereon.

C. Qualifications:

- 1. Ready mixed concrete batch plant certified by NRMCA.
- 2. Formwork, shoring and reshoring for slabs and beams except where cast on ground to be designed by a professional engineer currently registered in the state where the Project is located.

1.3 **DEFINITIONS**

- A. Per ACI CT-13 except as modified herein:
 - 1. Concrete fill: Non-structural concrete.
 - 2. Concrete Testing Agency: Testing agency employed to perform materials evaluation, design of concrete mixes or testing of concrete placed during construction.
 - 3. Exposed concrete: Exposed to view after construction is complete.
 - 4. Indicated: Indicated by Contract Documents.
 - 5. Nonexposed concrete: Not exposed to view after construction is complete.
 - 6. Required: Required by Contract Documents.
 - 7. Specified strength: Specified compressive strength at 28 days.
 - 8. Submitted: Submitted to Engineer.

1.4 SUBMITTALS

A. Shop Drawings:

- 1. See Specification Section 01 33 00 for requirements for the mechanics and administration of the submittal process.
- 2. Concrete mix designs proposed for use.
 - a. Concrete mix design submittal to include the following information:
 - 1) Sieve analysis and source of fine and coarse aggregates.
 - 2) Test for aggregate organic impurities.
 - 3) Test for deleterious aggregate per ASTM C289.
 - 4) Proportioning of all materials.
 - 5) Type of cement with mill certificate for cement.
 - 6) Type of fly ash with certificate of conformance to specification requirements.
 - 7) Slump.
 - 8) Air content.
 - 9) Brand, type, ASTM designation, and quantity of each admixture proposed for use.
 - 28-day cylinder compressive test results of trial mixes per ACI 318 and as indicated herein.
- 3. Product technical data including:
 - a. Acknowledgement that products submitted meet requirements of standards referenced.
 - b. Manufacturer's installation instructions.
 - c. Manufacturers and types:
 - 1) Joint fillers.
 - 2) Curing agents.
 - 3) Chemical sealer.
 - 4) Bonding and patching mortar.
 - 5) Construction joint bonding adhesive.
 - 6) Nonshrink grout with cure/seal compound.
- 4. Reinforcing steel:
 - a. Show grade, sizes, number, configuration, spacing, location and all fabrication and placement details.
 - b. In sufficient detail to permit installation of reinforcing without having to make reference to Contract Drawings.
 - c. Obtain approval of Shop Drawings by Engineer before fabrication.
 - d. Mill certificates.
- 5. Scaled (minimum 1/8 IN per foot) drawings showing proposed locations of construction joints, control joints, expansion joints (as applicable) and joint dimensions.
- 6. Strength test results of in place concrete including slump, air content and concrete temperature.
- 7. Certifications:
 - a. Certification of standard deviation value in psi for ready mix plant supplying the concrete.
 - b. Certification that the material and sources submitted in the mix design will be used in the concrete for this project.
- 8. Test reports:
 - a. Cement mill reports for all cement to be supplied.

1.5 STORAGE AND HANDLING

- A. Storage of Material:
 - 1. Cement and pozzolan:
 - a. Store in moisture proof, weathertight enclosures.
 - b. Do not use if caked or lumpy.
 - 2. Aggregate:
 - a. Store to prevent segregation and contamination with other sizes or foreign materials.
 - b. Obtain samples for testing from aggregates at point of batching.
 - c. Do not use frozen or partially frozen aggregates.
 - d. Do not use bottom 6 IN of stockpiles in contact with ground.
 - e. Allow sand to drain until moisture content is uniform prior to use.
 - 3. Admixtures:

- a. Protect from contamination, evaporation, freezing, or damage.
- b. Maintain within temperature range recommended by manufacturer.
- c. Completely mix solutions and suspensions prior to use.
- 4. Reinforcing steel: Support and store all rebars above ground.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Portland Cement: Conform to ASTM C150 Type I or II.
- B. Admixtures:
 - 1. Air entraining admixtures: ASTM C260.
 - 2. Water reducing, retarding, and accelerating admixtures:
 - a. ASTM C494 Type A through E.
 - b. Conform to provisions of ACI 212.3R.
 - c. Do not use retarding or accelerating admixtures unless specifically approved in writing by Engineer and at no cost to Owner.
 - d. Follow manufacturer's instructions.
 - e. Use chloride free admixtures only.
 - 3. Maximum total water soluble chloride ion content contributed from all ingredients of concrete including water, aggregates, cementitious materials and admixtures by weight percent of cement:
 - a. 0.10 all concrete.
 - 4. Do not use calcium chloride.
 - 5. Pozzolanic admixtures: ASTM C618.
 - 6. Provide admixtures of same type, manufacturer and quantity as used in establishing required concrete proportions in the mix design.
- C. Water: Potable, clean, free of oils, acids and organic matter.
- D. Aggregates:
 - 1. Normal weight concrete: ASTM C33, except as modified below.
 - 2. Fine aggregate:
 - a. Clean natural sand.
 - b. No manufactured or artificial sand.
 - 3. Coarse aggregate:
 - a. Crushed rock, natural gravel, or other inert granular material.
 - b. Maximum amount of clay or shale particles: 1 PCT.
 - 4. Gradation of coarse aggregate:
 - a. Lean concrete and concrete topping: Size #7.
 - b. All other concrete: Size #57 or #67.

E. Concrete Grout:

- 1. Nonshrink, nonmetallic grout:
 - a. Nonmetallic, noncorrosive, nonstaining, premixed with only water to be added.
 - b. Grout to produce a positive but controlled expansion.
 - c. Mass expansion not to be created by gas liberation.
 - d. Minimum compressive strength of nonshrink grout at 28 days: 6500 PSI.
 - e. In accordance with COE CRD-C621.
- 2. Epoxy grout:
 - a. 3-component epoxy resin system.
 - 1) Two liquid epoxy components.
 - 2) One inert aggregate filler component.
 - b. Each component packaged separately for mixing at jobsite.
- F. Reinforcing Steel:
 - 1. Reinforcing bars: ASTM A615, Grade 60.
 - 2. Welded wire reinforcement:

- a. ASTM A185 or ASTM A1064.
- b. Minimum yield strength: 60,000 PSI.

G. Forms:

- 1. Prefabricated or job built.
- 2. Wood forms:
 - a. 5/8 or 3/4 IN 5-ply structural plywood of concrete form grade.
 - b. Built-in-place or prefabricated type panel.
- 3. Metal forms:
 - a. Metal forms may be used except for aluminum in contact with concrete.
 - b. Forms to be tight to prevent leakage, free of rust and straight without dents to provide members of uniform thickness.
- 4. Chamfer strips: Clear white pine, surface against concrete planed.

H. Form Ties:

- 1. Commercially fabricated for use in form construction.
 - a. Field fabricated ties are unacceptable.
- 2. Constructed so that ends or end fasteners can be removed without causing spalling at surfaces of the concrete.
- 3. 3/4 IN minimum diameter cones on both ends.
- 4. Embedded portion of ties to be not less than 1 IN from face of concrete after ends have been removed.
- 5. Cone size:
 - a. 3/4 IN minimum diameter cones on both ends.
 - b. Depth of cone not to exceed the concrete reinforcing cover.
- 6. Form release: Nonstaining and shall not prevent bonding of future finishes to concrete surface.

I. Membrane Curing Compound:

- 1. ASTM C309, Type II-B.
- 2. Resin based, dissipates upon exposure to UV light.
- 3. Curing compound shall not prevent bonding of any future coverings, coatings or finishes.

J. Expansion Joint Filler:

- 1. In contact with water or sewage:
 - a. Closed cell neoprene.
 - b. ASTM D1056, Class SC (oil resistant and medium swell) of 2 to 5 PSI compression deflection (Grade SCE41).
- 2. Exterior driveways, curbs and sidewalks:
 - a. Asphalt expansion joint filler.
 - b. ASTM D994.
- 3. Other use:
 - a. Fiber expansion joint filler.
 - b. ASTM D1751.

2.2 CONCRETE MIXES

A. General:

- 1. All concrete to be ready mixed concrete conforming to ASTM C94/C94M.
- 2. Provide concrete of specified quality capable of being placed without segregation and, when cured, of developing all properties required.
- 3. All concrete to be normal weight concrete.
- 4. Provide pozzolan content for all cast-in-place construction.

B. Strength:

1. Provide specified strength and type of concrete for each use in structure(s) as follows:

| TYPE | WEIGHT | SPECIFIED STRENGTH* |
|--------------------------------|---------------|------------------------|
| Precast | Normal weight | 4500PSI |
| Concrete Fill / Lean Concrete | Normal Weight | 3000 PSI |
| All other general use concrete | Normal weight | 4500PSI |

^{*} Minimum 28-day compressive strength.

C. Air Entrainment:

1. Provide air entrainment in all concrete resulting in a total air content percent by volume as follows:

| MAX AGGREGATE SIZE | TOTAL AIR CONTENT PERCENT |
|--------------------|---------------------------|
| 1 IN or 3/4 IN | 6 ±1-1/2 |
| <3/4 IN | 6-1/2 ±1-1/2 |

2. Air content to be measured in accordance with ASTM C231, ASTM C173, or ASTM C138.

D. Slump - 4 IN maximum, 1 IN minimum:

- 1. Measured at point of discharge of the concrete into the concrete construction member.
- 2. 8 IN maximum after addition of superplasticizer (if used).
- Concrete of lower than minimum slump may be used provided it can be properly placed and consolidated.
- 4. Pumped concrete:
 - a. Provide additional water at batch plant to allow for slump loss due to pumping.
 - Provide only enough additional water so that slump of concrete at discharge end of pump hose does not exceed maximum slump specified above.
- 5. Determine slump per ASTM C143.

E. Selection of Proportions:

- 1. General:
 - a. Proportion ingredients to:
 - 1) Produce proper workability, durability, strength, and other required properties.
 - 2) Prevent segregation and collection of excessive free water on surface.
- 2. Minimum cement contents and maximum water cement ratios for concrete to be as follows:

| SPECIFIED | MINIMUM CEMENT, MAXIMUM AGGREGATE SIZE | | | MAXIMUM WATER CEMENT RATIO BY |
|-----------|---|--------|------|----------------------------------|
| STRENGTH | 1/2 IN | 3/4 IN | 1 IN | WEIGHT |
| 3000 | | 517 | 517 | 0.45 |
| 4000 | 564 | 564 | 564 | 0.45 |
| 4500 | 611 | 611 | | 0.42 |

- 3. Concrete mix proportioning methods for normal weight concrete:
 - a. Proportion mixture to provide desired characteristics using one of methods described below:
 - 1) Method 1 (Trial Mix):
 - a) Per ACI 318, Chapter 5, except as modified herein.
 - b) Air content within range specified above.
 - c) Record and report temperature of trial mixes.
 - d) Proportion trial mixes per ACI 211.1.
 - 2) Method 2 (Field Experience):
 - a) Per ACI 318, Chapter 5, except as modified herein:

- b) Field test records must be acceptable to Engineer to use this method.
- Test records shall represent materials, proportions and conditions similar to those specified.
- 4. Required average strength to exceed the specified 28-day compressive strength by the amount determined or calculated in accordance with the requirements of Chapter 5 of ACI 318 using the standard deviation of the proposed concrete production facility.

PART 3 - EXECUTION

3.1 FORMING AND PLACING CONCRETE

A. Formwork:

- 1. Contractor is responsible for design and erection of formwork.
- 2. Construct formwork so that concrete members and structures are of correct size, shape, alignment, elevation and position.
 - a. Allowable tolerances: As recommended in ACI 347.
- 3. Provide slabs and beams of minimum indicated depth when sloping foundation base slabs or elevated floor slabs to drains.
 - a. For slabs on grade, slope top of subgrade to provide floor slabs of minimum uniform indicated depth.
 - b. Do not place floor drains through beams.
- 4. Openings:
 - a. Provide openings in formwork to accommodate work of other trades.
 - b. Accurately place and securely support items built into forms.
- 5. Chamfer strips: Place 3/4 IN chamfer strips in forms to produce 3/4 IN wide beveled edges on permanently exposed corners of members.
- 6. Clean and adjust forms prior to concrete placement.
- 7. Tighten forms to prevent mortar leakage.
- 8. Coat form surfaces with form release agents prior to placing reinforcing bars in forms.

B. Reinforcement:

- 1. Position, support and secure reinforcement against displacement.
- 2. Locate and support with chairs, runners, bolsters, spacers and hangers, as required.
- 3. Set wire ties so ends do not touch forms and are directed into concrete, not toward exposed concrete surfaces.
- 4. Lap splice lengths: ACI 318 Class B top bar tension splices unless indicated otherwise on the Drawings.
- 5. Extend reinforcement to within 2 IN of concrete perimeter edges.
 - a. If perimeter edge is earth formed, extend reinforcement to within 3 IN of the edge.
- 6. Minimum concrete protective covering for reinforcement: As shown on Drawings.
- 7. Unless otherwise indicated, provide minimum concrete cover as follows:
 - a. Concrete deposited against earth: 3 IN.
 - b. Formed surfaces exposed to weather or in contact with earth: 2 IN for reinforcing bars #6 or larger; 1-1/2 IN for reinforcing bars less than #6.
 - c. Formed surfaces exposed to or located above any liquid: 2 IN.
- 8. Do not weld reinforcing bars.
- 9. Welded wire reinforcement:
 - a. Install welded wire reinforcement in maximum practical sizes.
 - b. Splice sides and ends with a splice lap length measured between outermost cross wires of each fabric sheet not less than:
 - 1) One spacing of cross wires plus 2 IN.
 - 2) 1.5 x development length.
 - 6 IN.
 - Development length: ACI 318 basic development length for the specified fabric yield strength.
- C. Construction, Expansion, and Contraction Joints:

- 1. Locate joints as indicated on Contract Drawings or as shown on approved Shop Drawings.
 - a. Where construction joint spacing shown on Drawings exceeds the joint spacing indicated in Paragraph below, submit proposed construction joint location in conformance with this Specification Section.
- 2. Unplanned construction joints will not be allowed.
- 3. Locate wall vertical construction joints at 30 FT maximum.
- 4. Locate construction joints in floor slabs and foundation base slabs so that concrete placements are approximately square and do not exceed 2500 SF.
- 5. Locate construction joints in columns and walls:
 - At the underside of beams, girders, haunches, drop panels, column capitals, and at floor panels.
 - b. Haunches, drop panels, and column capitals are considered part of the supported floor or roof and shall be placed monolithically therewith.
 - c. Column based need not be placed monolithically with the floor below.
- 6. Install construction joints perpendicular to main reinforcement with all reinforcement continued across construction joints.
- 7. At least 48 HRS shall elapse between placing of adjoining concrete construction.
- 8. Thoroughly clean and remove all laitance and loose and foreign particles from construction joints.
- 9. Before new concrete is placed, dampen concrete surfaces.

D. Placing Concrete:

- 1. Place concrete in compliance with ACI 304R and ACI 304.2R.
- 2. Place in a continuous operation within planned joints or sections.
- 3. Begin placement when work of other trades affecting concrete is completed.
- 4. Place concrete by methods which prevent aggregate segregation.
- 5. Do not allow concrete to free fall more than 4 FT.
- Where free fall of concrete will exceed 4 FT, place concrete by means of tremie pipe or chute.
- E. Consolidation: Consolidate all concrete using mechanical vibrators supplemented with hand rodding and tamping, so that concrete is worked around reinforcement and embedded items into all parts of forms.

F. Protection:

- 1. Protect concrete from physical damage or reduced strength due to weather extremes.
- 2. In cold weather comply with ACI 306.1 except as modified herein.
 - a. Do not place concrete on frozen ground or in contact with forms or reinforcing bars coated with frost, ice or snow.
 - b. Minimum concrete temperature at the time of mixing:

| OUTDOOR TEMPERATURE | CONCRETE TEMPERATURE |
|-------------------------|----------------------|
| AT PLACEMENT (IN SHADE) | AT MIXING |
| Below 30 DEGF | 70 DEGF |
| Between 30-45 DEGF | 60 DEGF |
| Above 45 DEGF | 50 DEGF |

- c. Do not place heated concrete that is warmer than 80 DEGF.
- d. If freezing temperatures are expected during curing, maintain the concrete temperature at or above 50 DEGF for 7 days or 70 DEGF for 3 days.
- e. Do not allow concrete to cool suddenly.
- 3. In hot weather comply with ACI 305.1 except as modified herein.
 - a. At air temperature of 90 DEGF and above, keep concrete as cool as possible during placement and curing.
 - b. Do not allow concrete temperature to exceed 90 DEGF at placement.
 - c. Prevent plastic shrinkage cracking due to rapid evaporation of moisture.

d. Do not place concrete when the actual or anticipated evaporation rate equals or exceeds 0.2 LBS/SF/HR as determined from ACI 305.1, Figure 2.1.5.

G. Curing:

- 1. Begin curing concrete as soon as free water has disappeared from exposed surfaces.
- Cure concrete by use of moisture retaining cover, burlap kept continuously wet or by membrane curing compound.
- 3. Provide protection as required to prevent damage to concrete and to prevent moisture loss from concrete during curing period.
- 4. Provide curing for minimum of 7 days.
- 5. Form materials left in place may be considered as curing materials for surfaces in contact with the form materials except in periods of hot weather.
- 6. In hot weather follow curing procedures outlined in ACI 305.1.
- 7. In cold weather follow curing procedures outlined in ACI 306.1.
- 8. Curing vertical surfaces with a curing compound:
 - a. Cover vertical surfaces with a minimum of two coats of the curing compound.
 - b. Allow the preceding coat to completely dry prior to applying the next coat.
 - c. Apply the first coat of curing compound immediately after form removal.
 - d. Vertical surface at the time of receiving the first coat shall be damp with no free water on the surface.
 - e. A vertical surface is defined as any surface steeper than 1 vertical to 4 horizontal.

H. Form Removal:

1. Remove forms after concrete has hardened sufficiently to resist damage from removal operations or lack of support.

3.2 CONCRETE FINISHES

- A. Tolerances:
 - 1. Class A: 1/8 IN in 10 FT.
 - 2. Class B: 1/4 IN in 10 FT.
- B. Surfaces Exposed to View:
 - 1. Provide a smooth finish for exposed concrete surfaces and surfaces that are:
 - a. To be covered with a coating or covering material applied directly to concrete.
 - b. Scheduled for grout cleaned finish.
 - 2. Remove fins and projections, and patch voids, air pockets, and honeycomb areas with cement grout.
 - 3. Fill tie holes with nonshrink, nonmetallic grout.
- C. Surfaces Not Exposed to View:
 - 1. Patch voids, air pockets and honeycomb areas with cement grout.
 - 2. Fill tie holes with nonshrink, nonmetallic grout.

3.3 GROUT

- A. Preparation:
 - 1. Nonshrinking, nonmetallic grout:
 - a. Clean concrete surface to receive grout.
 - b. Saturate concrete with water for 24 HRS prior to grouting.
- B. Application:
 - 1. Nonshrinking, nonmetallic grout:
 - a. Mix in a mechanical mixer.
 - b. Use no more water than necessary to produce flowable grout.
 - c. Place in accordance with manufacturer's instructions.
 - d. Completely fill all spaces and cavities below the bottom of baseplates.
 - e. Provide forms where baseplates and bedplates do not confine grout.
 - f. Where exposed to view, finish grout edges smooth.

- g. Except where a slope is indicated on Drawings, finish edges flush at the baseplate, bedplate, member, or piece of equipment.
- h. Protect against rapid moisture loss by covering with wet rags or polyethylene sheets.
- i. Wet cure grout for seven (7) days, minimum.

3.4 FIELD QUALITY CONTROL

- A. Employ and pay for services of a concrete testing laboratory to perform testing of concrete placed during construction.
- B. Concrete Quality Control During Construction:
 - 1. Strength tests:
 - a. Secure concrete samples in accordance with ASTM C172.
 - b. Obtain each sample from a different batch of concrete on a random basis.
 - c. For each strength test mold and cure three cylinders from each sample in accordance with ASTM C31.
 - 1) Record any deviations from requirements on test report.
 - d. Test cylinders in accordance with ASTM C39.
 - e. Test one (1) cylinder at seven (7) days.
 - f. Test two (2) cylinders at 28 days.
 - 2. Provide strength tests as follows:
 - a. One strength test consisting of 6 IN DIA x 12 IN high cylinders shall be taken:
 - 1) Not less than one (1) test each day concrete placed.
 - 2) Not less than one (1) test for each 50 CY or fraction thereof placed in 1 day.
 - 3) Not less than one (1) test for each type of concrete poured.
 - 4) Not less than one (1) test for each concrete structure exceeding 2 CY in volume.
 - 3. Determine slump of concrete sample for each strength test.
 - a. Additional slump tests shall be taken if consistency of concrete appears to vary.
 - b. Determine slump in accordance with ASTM C143.
 - 4. Determine air content of concrete sample for each strength test in accordance with either ASTM C231, ASTM C173, or ASTM C138.
 - 5. Determine temperature of concrete sample for each strength test.
 - 6. Determine unit weight (LB/CF) of fresh lightweight concrete at point of discharge into construction member for each strength test.
 - 7. Submit results of all concrete strength tests to Engineer in writing as soon as tests are completed.
- C. Evaluation of Tests:
 - 1. Strength test results:
 - a. Average of 28-day strength of two cylinders from each sample.
 - 1) If one cylinder manifests evidence of improper sampling, molding, handling, curing or testing, strength of remaining cylinder will be test result.
 - 2) If both cylinders show any of above defects, test will be discarded.
- D. Acceptance of Concrete:
 - 1. Strength level of each type of concrete shall be considered satisfactory if both of the following requirements are met:
 - a. Average of all sets of three consecutive strength tests equals or exceeds the required specified 28-day compressive strength.
 - b. No individual strength test falls below the required specified 28-day compressive strength by more than 500 PSI.
 - 2. If tests fail to indicate satisfactory strength level, perform additional tests and/or corrective measures as directed by Engineer.
 - a. Perform additional tests and/or corrective measures at no additional cost to Owner.
- E. Concrete tolerances per ACI 117.

END OF SECTION

SECTION 31 23 33

TRENCHING, BACKFILLING, AND COMPACTING FOR UTILITIES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Excavation, trenching, backfilling and compacting for all underground utilities.
- B. Related Specification Sections include but are not necessarily limited to:
 - Section 33 05 23 Pipeline Undercrossings.

1.2 QUALITY ASSURANCE

- A. Referenced Standards:
 - 1. ASTM International (ASTM):
 - a. C33, Standard Specification for Concrete Aggregates.
 - b. D698, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 FT-lbf/ft³ (600 kN-m/m³)).
 - c. D2321, Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications.
 - d. D4253, Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table.
 - e. D4254, Standard Test Methods for Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density.
- B. Qualifications: Hire an independent soils laboratory to conduct in-place moisture-density tests for backfilling to assure that all work complies with this Specification Section.

1.3 DEFINITIONS

A. Excavation: All excavation will be defined as unclassified.

1.4 SUBMITTALS

- A. Shop Drawings:
 - 1. See Specification Section 01 33 00 for requirements for the mechanics and administration of the submittal process.
 - 2. Product technical data including:
 - a. Acknowledgement that products submitted meet requirements of standards referenced.
 - b. Manufacturer's installation instructions.
 - 3. Submit respective pipe or conduit manufacturer's data regarding bedding methods of installation and general recommendations.

1.5 SITE CONDITIONS

- A. Avoid overloading or surcharge a sufficient distance back from edge of excavation to prevent slides or caving.
 - 1. Maintain and trim excavated materials in such manner to be as little inconvenience as possible to public and adjoining property owners.
- B. Provide full access to public and private premises and fire hydrants, at street crossings, sidewalks and other points as designated by Owner to prevent serious interruption of travel.
- C. Protect and maintain bench marks, monuments or other established points and reference points and if disturbed or destroyed, replace items to full satisfaction of Owner and controlling agency.
- D. Verify location of existing underground utilities.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Backfill Material:
 - 1. As approved by Engineer.
 - a. Free of rock cobbles, roots, sod or other organic matter, and frozen material.
 - b. Moisture content at time of placement: 3 PCT plus/minus of optimum moisture content as specified in accordance with ASTM D698.
 - 2. Gravel trench backfill materials:
 - a. Uniformly graded aggregate –No. 9 Aggregate.
 - b. Pit Run Sand (Natural), Manufactured Sand.
 - c. Flowable Fill.

B. Bedding Materials:

- 1. As approved by the Engineer.
- 2. Granular bedding materials:
 - a. No. 9 Aggregate Areas not subject to vehicular traffic.
 - b. Dense Graded Aggregate (DGA) Paved aeras including streets, drives, parking areas, and walks.
- 3. Flowable fill:
 - a. Description: Flowable fill shall be a mixture of cement, fly ash, fine sand, water, and air having a consistency which will flow under a very low head.
 - b. Material characteristics:
 - The approximate quantities of each component per cubic yard of mixed material shall be as follows:
 - a) Cement (Type I or II): 50 LBS.
 - b) Fly ash: 200 LBS.
 - c) Fine sand: 2,700 LBS.
 - d) Water: 420 LBS.
 - e) Air content: 10 PCT.
 - Actual quantities shall be adjusted to provide a yield of 1 cubic yard with the materials used.
 - 3) Approximate compressive strength should be 85 to 175 PSI.
 - 4) Fine sand shall be an evenly graded material having not less than 95 PCT passing the No. 4 sieve and not more than 5 PCT passing the No. 200 sieve.
 - 5) Mixing and handling of the material shall be in accordance with Specification Section 03 09 00.

PART 3 - EXECUTION

3.1 GENERAL

A. Remove and dispose of unsuitable materials as directed by Engineer to site provided by Contractor.

3.2 EXCAVATION

- A. Unclassified Excavation: Remove rock excavation, clay, silt, gravel, hard pan, loose shale, and loose stone as directed by Engineer.
- B. Excavation for Appurtenances:
 - 1. 12 IN (minimum) clear distance between outer surface and embankment.
- C. Groundwater Dewatering:
 - 1. Where groundwater is, or is expected to be, encountered during excavation, install a dewatering system to prevent softening and disturbance of subgrade to allow subgrade stabilization, pipe, bedding and backfill material to be placed in the dry, and to maintain a stable trench wall or side slope.

- 2. Groundwater shall be drawn down and maintained at least 3 FT below the bottom of any trench or manhole excavation prior to excavation.
- 3. Review soils investigation before beginning excavation and determine where groundwater is likely to be encountered during excavation.
 - a. Employ dewatering specialist for selecting and operating dewatering system.
- 4. Keep dewatering system in operation until dead load of pipe, structure and backfill exceeds possible buoyant uplift force on pipe or structure.
- 5. Dispose of groundwater to an area which will not interfere with construction operations or damage existing construction.
- 6. Install groundwater monitoring wells as necessary.
- 7. Shut off dewatering system at such a rate to prevent a quick upsurge of water that might weaken the subgrade.
- 8. Cost of groundwater dewatering, if any, shall be the responsibility of the contractor.

D. Trench Excavation:

- 1. Excavate trenches by open cut method to depth shown on Drawings and necessary to accommodate work.
 - a. Support existing utility lines where proposed work crosses at a lower elevation.
 - 1) Stabilize excavation to prevent undermining of existing utility.
- 2. Open trench outside buildings, units, and structures:
 - No more than the distance between two manholes, structures, units, or 300 LF, whichever is less.
 - b. Field adjust limitations as weather conditions dictate.
- 3. Trenching within buildings, units, or structures:
 - a. No more than 100 LF at any one time.
- 4. Any trench or portion of trench, which is opened and remains idle for seven (7) calendar days, or longer, as determined by the Owner, may be directed to be immediately refilled, without completion of work, at no additional cost to Owner.
 - a. Said trench may not be reopened until Owner is satisfied that work associated with trench will be prosecuted with dispatch.
- 5. Observe following trenching criteria:
 - a. Trench size:
 - 1) Excavate width to accommodate free working space.
 - 2) Maximum trench width at top of pipe or conduit may not exceed outside diameter of utility service by more than the following dimensions:

| OVERALL DIAMETER OF UTILITY SERVICE | EXCESS DIMENSION |
|-------------------------------------|------------------|
| 33 IN and less | 18 IN |
| more than 33 IN | 24 IN |

- 3) Cut trench walls vertically from bottom of trench to 1 FT above top of pipe, conduit, or utility service.
- 4) Keep trenches free of surface water runoff.
 - a) Include cost in Bid.
 - b) No separate payment for surface water runoff pumping will be made.

E. Flowable Fill:

- 1. Flowable fill shall be:
 - a. Discharged from a mixer by any means acceptable to the Engineer into the area to be filled
 - b. Placed in 4 FT maximum lifts to the elevations indicated.
 - 1) Allow 12 HR set-up time before placing next lift or as approved by the Engineer.

- 2) Contractor shall place flowable fill lifts in such a manner as to prevent flotation of the pipe.
- 2. Flowable fill shall not be placed on frozen ground.
- 3. Subgrade on which flowable fill is placed shall be free of disturbed or softened material and water.
- 4. Flowable fill batching, mixing, and placing may be started if weather conditions are favorable, and the air temperature is 34 DEGF and rising.
- 5. At the time of placement, flowable fill must have a temperature of at least 40 DEGF.
- 6. Mixing and placing shall stop when the air temperature is 38 DEGF or less and falling.
- 7. Each filling stage shall be as continuous an operation as is practicable.
- 8. Contractor shall prevent traffic contact with flowable fill for at least 24 HRS after placement or until flowable fill is hard enough to prevent rutting by construction equipment.
- 9. Flowable fill shall not be placed until water has been controlled or groundwater level has been lowered in conformance with the requirements of the preceding Groundwater Dewatering paragraph in PART 3 of this Specification Section.

3.3 PREPARATION OF FOUNDATION FOR PIPE LAYING

- A. Over-Excavation:
 - 1. Backfill and compact to 90 PCT of maximum dry density per ASTM D698.
 - 2. Backfill with granular bedding material as option.
- B. Rock Excavation:
 - 1. Excavate minimum of 4 IN below bottom exterior surface of the pipe or conduit.
 - 2. Backfill to grade with suitable earth or granular material.
 - 3. Form bell holes in trench bottom.
- C. Subgrade Stabilization:
 - 1. Stabilize the subgrade when directed by the Owner.
 - 2. Observe the following requirements when unstable trench bottom materials are encountered.
 - a. Notify Owner when unstable materials are encountered.
 - 1) Define by drawing station locations and limits.
 - b. Remove unstable trench bottom caused by Contractor failure to dewater, rainfall, or Contractor operations.
 - 1) Replace with subgrade stabilization with no additional compensation.

3.4 BACKFILLING METHODS

- A. Do not backfill until tests to be performed on system show system is in full compliance with specified requirements.
- B. Carefully Compacted Backfill:
 - 1. Furnish where indicated on Drawings, specified for trench embedment conditions and for compacted backfill conditions up to 12 IN above top of pipe or conduit.
 - 2. Comply with the following:
 - a. Place backfill in lifts not exceeding 8 IN (loose thickness).
 - b. Hand place, shovel slice, and pneumatically tamp all carefully compacted backfill.
 - c. Observe specific manufacturer's recommendations regarding backfilling and compaction.
 - d. Compact each lift to specified requirements.
- C. Common Trench Backfill:
 - 1. Perform in accordance with the following:
 - a. Place backfill in lift thicknesses capable of being compacted to densities specified.
 - b. Observe specific manufacturer's recommendations regarding backfilling and compaction.
 - c. Avoid displacing joints and appurtenances or causing any horizontal or vertical misalignment, separation, or distortion.
- D. Water flushing for consolidation is not permitted.

Contract ID: 244300 Page 101 of 314

3.5 COMPACTION

A. General:

- 1. Place and assure bedding, backfill, and fill materials achieve an equal or higher degree of compaction than undisturbed materials adjacent to the work.
- 2. In no case shall degree of compaction below minimum compactions specified be accepted.

B. Compaction Requirements:

- 1. Unless noted otherwise on Drawings or more stringently by other Specification Sections, comply with following minimum trench compaction criteria.
 - a. Bedding material:

| LOCATION | SOIL TYPE | COMPACTION DENSITY |
|---------------|--------------------|--|
| All locations | Cohesionless soils | 75 percent relative density by ASTM D4253 and ASTM D4254 |

b. Carefully compacted backfill:

| LOCATION | SOIL TYPE | COMPACTION DENSITY |
|----------------------|--------------------|--|
| All applicable areas | Cohesive soils | 95 PCT of maximum dry density by ASTM D698 |
| | Cohesionless soils | 75 percent relative density by ASTM D4253 and ASTM D4254 |

c. Toe drain bedding and backfill:

| LOCATION | SOIL TYPE | COMPACTION DENSITY |
|---------------|--------------------|--|
| All locations | Cohesionless soils | 60 PCT relative density by ASTM D4253 and ASTM D4254 |

d. Common trench backfill:

| LOCATION | SOIL TYPE | COMPACTION DENSITY |
|--|--------------------|--|
| Under pavements, roadways, surfaces within highway right-of- | Cohesive soils | 95 PCT of maximum dry density by ASTM D698 |
| ways | Cohesionless soils | 60 percent of relative density by ASTM D4253 and ASTM D4254 |
| Under turfed, sodded, plant seeded, nontraffic areas | Cohesive soils | 85 PCT of maximum dry density by ATM D698 |
| | Cohesionless soils | 40 percent of relative density by ASTM D4253 and ASTM D4254 |

3.6 FIELD QUALITY CONTROL

A. Testing:

- 1. Perform in-place moisture-density tests as directed by the Owner.
- 2. Perform tests through recognized testing laboratory approved by Owner.
- 3. Costs of tests paid by Contractor.
- 4. Perform additional tests as directed until compaction meets or exceeds requirements.
- Reference to Engineer in this Specification Section will imply Geotechnical Engineer when employed by Owner and directed by Engineer to undertake necessary inspections as approvals as necessary.
- 6. Assure Owner has immediate access for testing of all soils related work.

Item No. 7-9012.51

KY 418 RCUT at Competition Dr (MP 1.875 to MP 2.6)TRENCHING, BACKFILLING, AND

Contract ID: 244300 Page 102 of 314

7. Ensure excavations are safe for testing personnel.

END OF SECTION

SECTION 32 92 00

SEEDING, SODDING AND LANDSCAPING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Seeding, sodding and landscape planting:
 - a. Soil preparation.
 - b. Lawn-type seeding.

1.2 QUALITY ASSURANCE

- A. Referenced Standards:
 - American Nursery and Landscape Association/American National Standards Institute (ANLA/ANSI):
 - a. Z60.1, American Standard for Nursery Stock.
 - 2. AOAC International (AOAC).
 - 3. ASTM International (ASTM):
 - a. D2028, Standard Specification for Cutback Asphalt (Rapid-Curing Type).
 - b. D5276, Standard Test Method for Drop Test of Loaded Containers by Free Fall.

1.3 SUBMITTALS

- A. Shop Drawings:
 - See Specification Section 01 33 00 for requirements for the mechanics and administration of the submittal process.
 - 2. Product technical data including:
 - a. Acknowledgement that products submitted meet requirements of standards referenced.
 - b. Manufacturer's installation instructions.
 - c. Signed copies of vendor's statement for seed mixture required, stating botanical and common name, place of origin, strain, percentage of purity, percentage of germination, and amount of Pure Live Seed (PLS) per bag.
 - d. Source and location of sod, plants, and plant material, as per Paragraph 3.3A.
 - 3. Certification that each container of seed delivered will be labeled in accordance with Federal and State Seed Laws and equals or exceeds Specification requirements.

PART 2 - PRODUCTS

2.1 MANUFACTURERS AND SUPPLIERS

A. Subject to compliance with the Contract Documents, the manufacturers and suppliers listed in the applicable Articles below are acceptable.

2.2 MATERIALS

- A. Seed Quality:
 - 1. Fresh, clean, new-crop seed labeled in accordance with USDA Rules and Regulations under the Federal Seed Act in effect on date of bidding.
 - 2. Provide seed of species, proportions, and minimum percentages of purity, germination and maximum percentage of weed seed as specified.
- B. Lawn-Type Seed Mixture:

| | | MINIMUM | |
|------------------------------|--------------|-------------|----------------|
| BOTANICAL AND | PERCENT BY | PERCENT | MINIMUM |
| COMMON NAME | WEIGHT (PLS) | GERMINATION | PERCENT PURITY |
| Kentucky Bluegrass (Poa | 60 | 85 | 95 |
| pratensis) | | | |
| Fescue, Tall, KY 31 (Festura | 30 | 85 | 98 |
| arundiancea 'KY 31 FT) | | | |
| Ryegrass, Perennial (Lolium | 10 | 90 | 95 |
| perenne) | | | |

C. Pasture Seeding:

| | MINIMUM | | |
|-----------------------------|-------------|----------------|------------------|
| BOTANICAL AND | PERCENT | MINIMUM | |
| COMMON NAME | GERMINATION | PERCENT PURITY | LBS PLS PER ACRE |
| Smooth Brome Grass | 80 | 90 | 14 |
| (Bromus inermis 'Leyss') | | | |
| Fescue, Tall, KY 31(Festura | 90 | 98 | 2.5 |
| arundiancea 'KY 31 FT) | | | |
| Switchgrass (Panicum | 90 | 95 | 3.5 |
| virgatum) | | | |

- D. Native Grass Seeding: Certified seed of locally adapted strains.
- E. Water:
 - 1. Water free from substances harmful to grass or sod growth.
 - 2. Provide water from source approved prior to use.

PART 3 - EXECUTION

3.1 SOIL PREPARATION

- A. General:
 - 1. Limit preparation to areas which will be planted soon after.
 - 2. Provide facilities to protect and safeguard all persons on or about premises.
 - 3. Protect existing trees designated to remain.
 - 4. Verify location and existence of all underground utilities.
 - Take necessary precaution to protect existing utilities from damage due to construction activity.
 - b. Repair all damages to utility items at sole expense.
 - 5. Contractor to be responsible for vandalism until acceptance of work in whole or in part.
- B. Preparation for Lawn-Type Seeding, Sprigging, Plugging or Sodding:
 - 1. Loosen surface to minimum depth of 4 IN.
 - 2. Remove stones over 1 IN in any dimension and sticks, roots, rubbish, and other extraneous matter.
 - 3. Prior to applying fertilizer, loosen areas to be seeded with a double disc or other suitable device if the soil has become hard or compacted.
 - 4. Correct any surface irregularities in order to prevent pocket or low areas which will allow water to stand.
 - 5. Distribute fertilizer uniformly over areas to be seeded:
 - a. For lawn-type seeding: 30 LBS per 1000 SQFT.
 - b. For pasture seeding: 200 LBS per acre.
 - 6. Incorporate fertilizer into soil to a depth of at least 2 IN by disking, harrowing, or other approved methods.
 - 7. Remove stones or other substances from surface which will interfere with turf development or subsequent mowing operations.
 - 8. Grade lawn areas to a smooth, even surface with a loose, uniformly fine texture.

- a. Roll and rake, remove ridges and fill depressions, as required to meet finish grades.
- b. Limit fine grading to areas which can be planted soon after preparation.
- 9. Restore lawn areas to specified condition if eroded or otherwise disturbed after fine grading and before planting.

3.2 INSTALLATION

- A. Lawn-Type and Pasture Seeding:
 - 1. Do not use seed which is wet, moldy, or otherwise damaged.
 - 2. Perform seeding work from April 20 to May 15 for spring planting, and August 1 to September 15 for fall planting, unless otherwise approved by Engineer.
 - 3. Employ satisfactory methods of sowing using mechanical power-driven drills or seeders, or mechanical hand seeders, or other approved equipment.
 - 4. Distribute seed evenly over entire area at rate of application not less than 4 LBS (PLS) of seed per 1000 SQFT, 50 PCT sown in one direction, remainder at right angles to first sowing.
 - 5. Stop work when work extends beyond most favorable planting season for species designated, or when satisfactory results cannot be obtained because of drought, high winds excessive moisture, or other factors.
 - a. Resume work only when favorable conditions develop.
 - 6. Lightly rake seed into soil followed by light rolling or cultipacking.
 - 7. Immediately protect seeded areas against erosion by mulching.
 - a. Spread mulch in continuous blanket using 1-1/2 tons per acre to a depth of 4 or 5 straws.
 - 8. Protect seeded slopes against erosion with erosion netting or other methods approved by Engineer.
 - a. Protect seeded areas against traffic or other use by erecting barricades and placing warning signs.
 - 9. Immediately following spreading mulch, anchor mulch using an approved method.

3.3 MAINTENANCE AND REPLACEMENT

A. General:

- 1. Begin maintenance of planted areas immediately after each portion is planted and continue until final acceptance or for a specific time period as stated below, whichever is the longer.
- 2. Provide and maintain temporary piping, hoses, and watering equipment as required to convey water from water sources and to keep planted areas uniformly moist as required for proper growth.
- 3. Protection of new materials:
 - a. Provide barricades, coverings or other types of protection necessary to prevent damage to existing improvements indicated to remain.
 - b. Repair and pay for all damaged items.
- 4. Replace unacceptable materials with materials and methods identical to the original specifications unless otherwise approved by the Engineer.

B. Seeded or Sodded Lawns:

- 1. Maintain seeded lawns: 90 days, minimum, after installation and review of entire project area to be planted.
- 2. Maintenance period begins at completion of planting or installation of entire area to be seeded or sodded.
- 3. Engineer will review seeded or sodded lawn area after installation for initial acceptance.
- 4. Maintain lawns by watering, fertilizing, weeding, mowing, trimming, and other operations such as rolling, regrading, and replanting as required to establish a smooth, uniform lawn, free of weeds and eroded or bare areas.
- 5. Lay out temporary lawn watering system and arrange watering schedule to avoid walking over muddy and newly seeded areas.
 - a. Use equipment and water to prevent puddling and water erosion and displacement of seed or mulch.

- 6. Remulch with new mulch in areas where mulch has been disturbed by wind or maintenance operations sufficiently to nullify its purpose.
 - a. Anchor as required to prevent displacement.
- 7. Unacceptable plantings are those areas that do not meet the quality of the specified material, produce the specified results, or were not installed to the specified methods.
- 8. Replant bare areas using same materials specified.
- 9. Engineer will review final acceptability of installed areas at end of maintenance period.
- 10. Maintain repaired areas until remainder of maintenance period or approved by Engineer, whichever is the longer period.

END OF SECTION

SECTION 33 05 15

PRECAST CONCRETE UTILITY STRUCTURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Precast concrete utility structures and appurtenant items.
 - a. Air release valve vaults.
 - 2. Design and fabrication of precast concrete utility structures.
- B. Related Specification Sections include but are not necessarily limited to:
 - 1. Section 03 09 00 Concrete.

1.2 **QUALITY ASSURANCE**

- A. Referenced Standards:
 - 1. ASTM International (ASTM):
 - a. C857, Standard Practice for Minimum Design Loading for Underground Precast Concrete Utility Structures.
 - b. C858, Standard Specification for Underground Precast Concrete Utility Structures.
 - C890, Standard Practice for Minimum Structural Design Loading for Monolithic or Sectional Precast Concrete Water and Wastewater Structures.
 - d. C990, Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants.
 - e. D1227, Standard Specification for Emulsified Asphalt Used as a Protective Coating for Roofing.

1.3 SUBMITTALS

- A. Shop Drawings:
 - 1. See Specification Section 01 33 00 for requirements for the mechanics and administration of the submittal process.
 - 2. Product technical data including:
 - a. Acknowledgement that products submitted meet requirements of standards referenced.
 - b. Manufacturer's installation instructions.
 - 3. Concrete mix design(s):
 - a. Include submittal information defined in Specification Section 03 09 00.
 - b. Certification in accordance with ASTM C858, Section 12.
 - 4. Fabrication and/or layout drawings:
 - Include detailed diagrams of utility structures showing typical components and dimensions, reinforcement, and other details.
 - b. Itemize, on separate schedule, elevations or sectional breakdown of each utility structure with all components and refer to drawing identification number or notation.
 - c. Indicate required penetration details for all piping entering each structure.

1.4 SITE CONDITIONS

- A. Design groundwater elevation for precast structure design shall be the 100-year flood elevation shown on the Contract Documents.
 - 1. If the 100-year flood elevation is not shown on the Contract Documents, the design groundwater elevation shall be equal to the ground surface elevation at the structure.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Subject to compliance with the Contract Documents, the following manufacturers are acceptable:
 - 1. Concrete Valve Vault
 - a. Valve vaults shall conform, in shape, size, dimensions, materials, and other respects, to the details indicated on the drawings.
 - b. Oldcastle Infrastructure
 - c. Or approved equivalent.
 - 2. Manhole rings, covers and frames:
 - a. Manhole rings, covers and frames shall conform, in shape, size, dimensions, materials, and other respects, to the details indicated on the drawings.
 - b. Neenah Foundry.
 - c. Deeter Foundry.
 - d. J.R. Hoe.
 - 3. Manhole steps:
 - a. M. A. Industries.
 - b. Neenah Foundry.
 - c. Deeter Foundry.
 - 4. Black mastic joint compound:
 - a. Kalktite 340.
 - b. Tufflex.
 - c. Plastico.
 - 5. Premolded joint sealant:
 - a. NPC Bidco, Inc., C-56.
 - b. Ram-Nek, Henry Co.
 - c. EZ-Stik, Press-Seal Gasket Corp.
 - d. CS-102, Conseal.
 - 6. Elastomeric joint seals:
 - a. Kent Seal.
 - 7. Emulsified fibrated asphalt compound:
 - a. Sonneborn Hydrocide 700B Semi-Mastic.

2.2 PRECAST UTILITY STRUCTURE COMPONENTS

- A. Provide utility structures with interior dimensions as shown on the Drawings.
- B. Provide the following components for each utility structure:
 - 1. Precast base section with integral or cast in place base slab.
 - 2. Precast wall section(s).
 - 3. Precast flat top.
 - a. Where reinforcement is shown for top slab, furnish slab with reinforcing as designed, but not less than reinforcing shown on Drawings.
- C. Provide openings and appurtenances as shown on Drawings.
 - 1. Manhole frames and covers:
 - a. Cast frames into top slab.
- D. Concrete:
 - 1. Conform to requirements of Specification Section 03 09 00.
 - Conform to requirements of ASTM C858, where stricter than Specification Section 03 09 00.fc
 - a. Minimum 28-day compressive strength 4500 PSI.
 - b. All portions of precast utility structure are considered to be exposed to freeze-thaw cycles.

E. Joints:

- 1. Joints of precast riser and top sections:
 - a. Preformed flexible joint sealants: ASTM C990.
- 2. Pipe and conduit entry for utility structures.

F. Coatings:

- 1. Vertical wall surfaces:
 - Emulsified fibrated asphalt compound meeting ASTM D1227 Type I for all vertical wall exterior surfaces.

2.3 DESIGN

- A. General Design Requirements:
 - 1. Design precast units and appurtenances in accordance with ASTM C858.
 - a. Notify Engineer and furnish cast-in-place structures if sizes of precast utility structures shown on Drawings can not be designed or fabricated.

B. Design loads:

- 1. Design precast units for all loads and load cases described in ASTM C857, with the following values and selections:
 - a. Minimum uniform live load for exposed roof slabs shall be 150 psf.
 - b. Wheel loads shall be considered.
 - 1) Use wheel load designation A-16 (HS20-44) as shown in ASTM C857, Table 1.
 - 2) Wheel loads and uniform live load do not act concurrently.
 - c. Unit weight of soil W shall be taken as no less than 100 LB/CU FT.
 - d. Minimum lateral soil pressure coefficient (K_0) : 0.50.

C. Specific Design Requirements:

- 1. Out-of-plane shear:
 - a. Out-of-plane shear shall be shown in the calculations.
 - b. Wall thickness shall be determined based on meeting design requirements for out-ofplane shear resulting from soil and groundwater loads.
 - c. Wall sections shall be designed as one-way spans between corners for calculation of out-of-plane shear. Transfer of shear or bending load shall not be considered to be transferred across joints between precast units or between walls and slabs, unless unit as integrally cast together.
 - Use of shear steel reinforcement to increase out-of-plane shear capacity shall be prohibited.
- 2. Design precast units taking into account reduced cross section at openings and penetrations.
- 3. Structure shall be checked for buoyancy.
 - a. The minimum factor of safety for uplift with the design groundwater elevation shall be 1.25, unless a larger factor of safety is required by the local governing body or Building Code.
 - b. The minimum factor of safety for uplift at the fully submerged condition shall be no less than 1.0
 - c. If the buoyant weight of soil above base slab extensions beyond the external dimensions of the structure is used to resist uplift, the volume of soil considered to resist uplift shall be limited to soil within the vertical projection of the edge of the base slab extensions.

PART 3 - EXECUTION

3.1 PRECAST UTILITY STRUCTURE CONSTRUCTION

A. Build each structure to dimensions shown on plans and at such elevation that pipe sections built into wall of structure will be true line of pipe extensions.

- Contract ID: 244300 Page 110 of 314
- B. For all horizontal mating surfaces between precast concrete units, apply premolded flexible joint sealant to clean mating surfaces in accordance with sealant manufacturer's written instructions. Apply sufficient pressure to each concrete unit to seat unit in sealant.
- C. Seal all pipe penetrations in manhole.
 - 1. Where post-installed seals are permitted, form pipe openings smooth and well-shaped.
 - 2. After installation, seal exterior of penetration with non-shrink grout.
 - 3. After grout cures, wire brush smooth and apply two coats emulsified fibrated asphalt compound to minimum wet thickness of 1/8 IN to ensure complete seal.
- D. Set top slab level to elevation shown on Drawings.

3.2 FIELD QUALITY CONTROL

- A. Any proposed repairs of precast components or structures shall be submitted to Engineer for approval.
- B. No leakage that includes visible flow through joints between precast concrete sections or through pipe penetrations shall be permitted.
- C. Damp spots on interior wall surfaces shall be considered leakage and shall not be permitted.
 - 1. Damp spots shall be defined as spots where moisture from a source outside the structure can be picked up on a dry hand.
 - 2. Locate the source of water movement through the wall and permanently seal.

END OF SECTION

Contract ID: 244300 Page 111 of 314

SECTION 33 05 23

PIPELINE UNDERCROSSINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Construction of pipe undercrossings.
 - 2. Requirements for work on and affecting the railroad right-of-way (if applicable).

1.2 SUBMITTALS

- A. Shop Drawings:
 - 1. Product technical data including:
 - a. Acknowledgement that products submitted meet requirements of standards referenced.
 - b. Manufacturer's installation instructions.
 - Compliance with submittal requirements of railroad having jurisdiction over undercrossing.
 - d. Track Monitoring Plan, as applicable (See Subpart 3.3)
 - e. Ground Monitoring and Contingency Plans, as applicable (see Subpart 3.3)
 - f. Shoring Plans and Calculations (See Subpart 3.11)

1.3 QUALITY ASSURANCE

- A. Referenced Standards:
 - 1. Norfolk Southern Railroad (NS) Specifications for Pipeline Occupancy of Norfolk Southern Corporation Property, NSCE-8.
 - 2. ASTM International (ASTM), A139 Standard Specification for Electric-Fusion (ARC) welded steel pipe.
 - 3. AREMA, American Railway Engineering and Maintenance Right-of-Way Association, publications and recommended practices.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Casing Pipe:
 - 1. Structural grade steel: New Grade B Steel Pipe, meeting the ASTM A139 standard, minimum yield strength of 35,000 PSI or greater as required by the permits.
 - 2. Wall thickness: Minimum 0.375 IN or greater as required by the permits. For railroad crossing, minimum wall thickness of 0.532 IN.
 - 3. Diameter: Minimum of 4 IN larger than outside diameter of carrier pipe's jointing system.
 - 4. Joints between sections of pipe shall be fully welded around the complete circumference of the pipe.
 - B. Casing Spacers:
 - 1. Polyethylene, Raci Spacers or equivalent.
 - 2. Seal both ends of casing pipe to outside of carrier pipe to prevent entrance of foreign material but allow leakage to pass in the event of a carrier break.
 - C. End Seals:
 - 1. Link-Seal or equivalent.
 - D. Marker Posts or Signs:

- 1. All crossings shall be prominently marked at right-of-way lines (or both sides of crossing) by durable, weatherproof marker posts or signs located over the centerline of the pipe. Signs shall show the following:
 - a. Name and address of applicant
 - b. Contents of pipe
 - c. Pressure in pipe
 - d. Emergency telephone number

PART 3 - EXECUTION

3.1 GENERAL REQUIREMENTS

- A. Casing pipe shall be so constructed as to prevent leakage of any substance from the casing throughout its length. For railroad crossings, casing shall be installed so as to prevent the formation of a waterway under the railroad, and with an even bearing throughout its length, and shall slope to one end.
- B. The inside diameter of the casing pipe shall be such as to allow the carrier pipe to be removed subsequently without disturbing the casing or the roadbed. For steel pipe casings, the inside diameter of the casing pipe shall be at least 4 inches greater than the largest outside diameter of the carrier pipe joints or couplings.
- C. A maximum vertical deflection of the casing pipe of 3 percent of its diameter, plus ½ inch clearance shall be provided so that no loads from the roadbed, track, traffic or casing pipe itself are transmitted to the carrier pipe. When insulators are used on the carrier pipe, the inside diameter of the flexible casing pipe shall be at least 4½ inches greater than the outside of the carrier pipe.

3.2 INSTALLATION

- A. General:
 - 1. Install undercrossing to meet requirements of authority or agency having jurisdiction over undercrossing.
 - 2. Observe work requirements stipulated in any permit condition.
 - 3. Consult Contract Drawings for limitation of construction right-of-way.
- B. If installation of crossing is by jacking or dry boring, the following will be required unless more rigid requirements are specified by the authority or agency having jurisdiction over the crossing:
 - 1. Pressure grout all voids outside of casing, including abandoned or misaligned holes.
 - 2. Undercrossing casing:
 - a. Full lengths.
 - b. Weld pressure tight.
 - 3. After casing is installed, use casing spacers with each length of carrier pipe to prevent displacement and pull pipe into place. Refer to drawings for maximum spacing.
 - a. Pipe must be straight and centered in casing when in place.
 - Coordinate connections to system with authority or agency having jurisdiction over the crossing.

3.3 TRACK AND GROUND MONITORING - RAILROAD CROSSINGS (IF APPLICABLE)

- A. General track and ground monitoring requirements:
 - 1. General requirements:
 - a. Temporary lighting may be required by the railroad to identify tripping hazards to train crewmen and other railroad personnel.
 - Any excavation, holes or trenches on the railroad property shall be covered, guarded and/or protected. Handrails, fence, or other barrier methods must meet OSHA and FRA

requirements.

- 2. Track and ground monitoring are required as follows:
 - a. For crossings up to 25 feet below base of rail for 36-inch encasement pipe.
 - b. For shoring within theoretical embankment line (Zone 1) of any track.
 - c. Additional monitoring may be required by the railroad on a case by case basis.
- 3. Monitoring schedule
 - a. Monitoring shall commence once any construction activity is begun within Zone 1. Refer to railroad requirements.
 - b. Monitoring shall continue through completion of installation and may be required after completion for a period of time determined by NS or its representative.

B. Track Monitoring

- 1. Track Deflection Limits
- 2. Targets
 - Track monitoring shall not require track access other than to place the track monitoring targets.
 - b. Monitoring targets should be placed such that monitoring is possible when a train is present. However, monitoring during the passing of a train is not required as the train will temporarily deflect the track.
 - c. Adhesive backed reflective targets may be attached to the side of the rail temporarily. Targets should be removed once monitoring phase is complete.
- 3. Monitoring Plan
- 4. If the top of rail does deflect more than values listed below, all operations shall stop until the matter is resolved.
 - a. Track monitoring values for Class 3 through Class 4:
 - 1. Threshold value = 1/8 inch permanent vertical or horizontal deflection
 - 2. Installation Shutdown value = ½ inch permanent vertical or horizontal deflection
 - b. Track monitoring values for Class 1 through Class 2:
 - 1. Threshold value = $\frac{1}{4}$ inch permanent vertical or horizontal deflection
 - 2. Installation Shutdown value = ½ inch permanent vertical or horizontal deflection
 - c. Provide established contingency plan, per railroad requirements, in the event of ground loss and/or the rail deviates ½ inch vertical or horizontal
 - d. Establish a benchmark in the vicinity of the construction. Establish locations for shooting elevations on the top of rail at each area of construction.
 - 1. Example locations for shooting rail elevation would be at:
 - * At the centerline of an under track crossing.
 - * At both outside edges of the crossing i.e. for a wide excavation.
 - * At multiple locations from the crossing/excavation edge but not less than 10, 20, 30, 40 and 50 feet from the crossing.
 - e. Monitoring shall be continuous and recorded in a field logbook dedicated for this purpose. Copies of these field log entries can be made available to all concerned parties upon request at any time during construction.

C. Ground Monitoring

- 1. Provide means for monitoring ground settlement. Submit monitoring plan for railroad review.
- 2. Ground monitoring points should be in alignment above the proposed construction activities.

D. Contingency Plans

- 1. The Contractor shall supply Contingency Plan(s), which anticipate reaching the Threshold and Installation Shutdown values, for all construction activities which may result in horizontal and/or vertical track deflection.
 - a. Track monitoring values for Class 3 through Class 4:
 - 1. Threshold value = 1/8 inch permanent vertical or horizontal deflection
 - 2. Installation Shutdown value = 1/4 inch permanent vertical or horizontal deflection
 - b. Track monitoring values for Class 1 through Class 2:

- 1. Threshold value = 1/4 inch permanent vertical or horizontal deflection
- 2. Installation Shutdown value = ½ inch permanent vertical or horizontal deflection
- 2. The Contingency Plans shall provide means and methods, with options if necessary.
- 3. The Contractor should anticipate the need to implement each Contingency Plan with required materials, equipment and personnel.
 - a. Once the Threshold value is met, the contractor shall determine the appropriate Contingency Plan(s) and immediately discuss this plan with, and receive approval confirmation from, the railroad.
 - b. Once the Installation Shutdown value is exceeded all project work shall stop and the chosen Contingency Plan shall commence.
 - 1. The railroad may choose to allow and/or require the immediate implementation of specific approved Contingency Plans, submitted by the contractor, once the Installation Shutdown value is exceeded.

3.4 BORE AND JACK INSTALLATION (STEEL PIPE) – RAILROAD CROSSING (IF APPLICABLE)

- A. This method consists of pushing the pipe into the earth with a boring auger rotating within the pipe to remove the spoil.
- B. The boring operation shall be progressed on a 24-hour basis without stoppage in Zone 1, 2, and 3 as indicated in Norfolk Southern (NS) Plate VIII (except for adding lengths of pipe) until the leading edge of the pipe has reached the receiving pit.
- C. The front of the pipe shall be provided with mechanical arrangements or devices that will positively prevent the auger from leading the pipe so that no unsupported excavation is ahead of the pipe.
- D. The auger and cutting head arrangement shall be removable from within the pipe in the event an obstruction is encountered. If the obstruction cannot be removed without excavation in advance of the pipe, the pipe shall be abandoned in place and immediately filled with grout. A new installation procedure and revised plans must be approved by NS before work can resume.
- E. The over-cut by the cutting head shall not exceed the outside diameter of the pipe by more than ½ inch. If voids should develop or if the bored hole diameter is greater than the outside diameter of the pipe (plus coating) by more than approximately 1 inch, grouting or other methods approved by NS, shall be employed to fill such voids.
- F. The face of the cutting head shall be arranged to provide a reasonable obstruction to the free flow of soft or poor material.
- G. Plans and description of the arrangement to be used shall be submitted to NS for approval and no work shall proceed until such approval is obtained.
- H. Any method that employs simultaneous boring and jacking for pipes over 8 inches in diameter that does not have the above approved arrangement <u>will not be permitted.</u>

3.5 GROUTING – RAILROAD CROSSING (IF APPLICABLE)

- A. For jacked and tunneled installations, a uniform mixture of 1:6 (cement: sand) cement grout shall be placed under pressure through the grout holes to fill any voids which exist between the pipe or liner plate and the undisturbed earth.
- B. Grouting shall start at the lowest hole in each grout panel and proceed upwards simultaneously on both side of the pipe.
- C. A threaded plug shall be installed in each grout hole as the grouting is completed at that hole.

3.6 SOIL STABILIZATION – RAILROAD CROSSING (IF APPLICABLE)

- A. Pressure grouting of the soils or freezing of the soils before jacking, boring, or tunneling may be required at the direction of the railroad to stabilize the soils, control water, prevent loss of material and prevent settlement or displacement of embankment. Grout shall be cement, chemical or other special injection material selected to accomplish the necessary stabilization.
- B. The materials to be used and the method of injection shall be prepared by a Registered Professional Soils Engineer or by an experienced and qualified company specializing in this work and submitted for approval to the railroad before the start of work. Proof of experience and competency shall accompany the submission.

3.7 DEWATERING – RAILROAD CROSSING (IF APPLICABLE)

A. When water is known or expected to be encountered, pumps of sufficient capacity to handle the flow shall be maintained at the site, provided the contractor has received approval from the railroad to operate them. Pumps in operation shall be constantly attended on a 24-hour basis until, in the sole judgement of the railroad, the operation can be safely halted. When dewatering, close observation shall be maintained to detect any settlement or displacement of railroad embankment, tracks, and facilities.

3.8 SAFETY REQUIREMENTS – RAILROAD CROSSING (IF APPLICABLE)

- A. All operations shall be conducted so as not to interfere with, interrupt, or endanger the operation of trains nor damage, destroy, or endanger the integrity of railroad facilities. All work on or near the railroad property shall be conducted in accordance with the railroad safety rules and regulations. The contractor shall secure and comply with the railroad safety rules and shall give written acknowledgement to the railroad that they have been received, read, and understood by the contractor and its employees. Operations will be subject to the railroad monitoring at any and all times.
- B. All cranes, lifts, or other equipment that will be operated in the vicinity of the railroad's electrification and power transmission facilities shall be electrically grounded as directed by the railroad.
- C. At all times when the work is being progressed, a field supervisor for the work with no less than twelve (12) months experience in the operation of the equipment being used shall be present. If boring equipment or similar machines are being use, the machine operator also shall have no less than twelve (12) months experience in the operation of the equipment being used.
- D. Whenever equipment or personnel are working closer than 15 feet from the centerline of an adjacent track, that track shall be considered as being obstructed. Insofar as possible, all operations shall be conducted no less than this distance. Operations closer than 15 feet from the centerline of a track shall be conducted only with the permission of, and as directed by, a duly qualified railroad employee or an authorized railroad representative present at the site of the work.
- E. Construction near switching areas may require lighting.
- F. Crossing of tracks at grade by equipment and personnel is prohibited except by prior arrangement with and as directed by the railroad.

3.9 BLASTING

A. Blasting will not be permitted.

3.10 PROTECTION OF DRAINAGE FACILITIES – RAILROAD CROSSING (IF APPLICABLE)

A. If, in the course of construction, it may be necessary to block a ditch, pipe or other drainage facility, temporary pipes, ditches or other drainage facilities shall be installed to maintain adequate drainage, as approved by the railroad. Upon completion of the work, the temporary facilities shall be removed, and the permanent facilities restored.

B. Soil erosion methods shall be used to protect railroad ditches and other drainage facilities during construction on and adjacent to the railroad right-of-way.

3.11 SUPPORT OF EXCAVATION ADJACENT TO TRACK – RAILROAD CROSSING (IF APPLICABLE)

- A. Launching and Receiving Pits
 - 1. The face of all pits shall be located a minimum of 25 feet from centerline of adjacent track, measured at right angles to track unless otherwise approved by the railroad.
 - 2. The railroad Typical Drawing No. 4 Shoring Requirements shall govern the limits and type of required excavation support.
 - 3. All plans and calculations for shoring shall be prepared, signed and sealed by a Registered Professional Engineer licensed in the state of the project. The Engineer will be responsible for the accuracy for all controlling dimensions as well as the selection of soil design values which will accurately reflect the actual field conditions.
 - 4. The plans shall contain details of the shoring system showing sizes of all structural members, details of connection, and embedment depth. The plans shall include a plan view showing all the proposed excavations and distances from centerline of track to face of excavation. Plans shall show a section normal to the track showing the shoring location relative to the centerline of track and showing the height of sheeting and track elevation in relation to the bottom of excavation. The plans must be complete and accurately describe the nature of the work.
 - 5. Shoring in Zone 1 or 2, AREMA recommended practice is to be used for design. No increase in temporary stresses is permitted. Refer to AREMA Load Section.
 - 6. Design shall include 2 feet of spoils adjacent to the shoring and the first 1 foot below the dredge line is to be neglected for passive resistance.
 - 7. Shoring location in Zone 2 as shown on the railroad Typical Drawing No. 4 Shoring Requirements shall be designed using interlocking sheeting. Soldier piles and lagging will be considered only when its use is specifically approved by the railroad. Consideration for the use of soldier piles and lagging will only be made if the required penetration of steel sheet piling cannot be obtained and when dry, stable material will be encountered.
 - 8. All excavations with the limits shown on railroad Typical Drawing No. 4 Shoring Requirements shall be designed for railroad live load surcharge. All shoring designed for railroad live load surcharge shall be based on Cooper's E-80 live load. AREMA Chapter 8, Part 20, Section 3, Paragraph 2(b), refers to the Boussinesq equation as a method to determine lateral pressure values for railroad surcharge loading. The railroad Typical Drawing No. 5 Shoring Design Guide Lateral Pressures from Train Loads indicates the lateral pressures associated with various depths of excavation and distances from centerline of track as determined by the Boussinesq equation.
 - 9. Calculations for the proposed shoring shall include deflection calculations. The maximum deflection for excavations within 18'-0" of the centerline of the nearest tack shall be 3/8". For all other cases, the max deflections shall not exceed ½".
 - 10. Railings shall be constructed around all excavations on railroad property. Walkways with railings shall be constructed over open excavations adjacent to the tracks located within the normal walkway. Refer to AREAMA Section 15 for walkway and railing design criteria. Railings shall not be closer than 10'-0" horizontally from centerline of track. Railing shall be indicated on plans submitted for railroad acceptance.
 - 11. Railroad approval is required prior to beginning any excavation.

END OF SECTION

Contract ID: 244300 Page 117 of 314

SECTION 40 05 00

PIPE AND PIPE FITTINGS: BASIC REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Utility piping systems.
- B. Related Specification Sections include but are not necessarily limited to:
 - 1. Division 00 Procurement and Contracting Requirements.
 - 2. Division 01 General Requirements.
 - 3. Section 31 23 33 Trenching, Backfilling, and Compacting for Utilities.
 - 4. Section 40 05 51 Valves: Basic Requirements.

1.2 QUALITY ASSURANCE

- A. Referenced Standards:
 - 1. ASTM International (ASTM):
 - 2. American Water Works Association (AWWA):
 - 3. American Water Works Association/American National Standards Institute (AWWA/ANSI):
 - 4. International Plumbing Code (IPC).
 - 5. Underwriters Laboratories, Inc. (UL).

1.3 SYSTEM DESCRIPTION

- A. Piping Systems Organization and Definition:
 - Piping services are grouped into designated systems according to the chemical and physical
 properties of the fluid conveyed, system pressure, piping size and system materials of
 construction.
 - 2. See PIPING SPECIFICATION SCHEDULES in PART 3.

1.4 SUBMITTALS

- A. Shop Drawings:
 - 1. See Specification Section 01 33 00 for requirements for the mechanics and administration of the submittal process.
 - 2. Product technical data including:
 - a. Acknowledgement that products submitted meet requirements of standards referenced.
 - b. Copies of manufacturer's written directions regarding material handling, delivery, storage and installation.
 - c. Separate schedule sheet for each piping system scheduled in this Specification Section showing compliance of all system components.
 - 1) Attach technical product data on gaskets, pipe, fittings, and other components.
- B. Informational Submittals:
 - 1. Test reports:
 - a. Copies of pressure test results on all piping systems.
 - b. Reports defining results of dielectric testing and corrective action taken.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Protect pipe coating during handling using methods recommended by manufacturer.
 - 1. Use of bare cables, chains, hooks, metal bars or narrow skids in contact with coated pipe is not permitted.
- B. Prevent damage to pipe during transit.
 - 1. Repair abrasions, scars, and blemishes.

Item No. 7-9012.51

Contract ID: 244300 Page 118 of 314

2. If repair of satisfactory quality cannot be achieved, replace damaged material immediately.

PART 2 - PRODUCTS

2.1 PIPING SPECIFICATION SCHEDULES

A. Piping system materials, fittings and appurtenances are subject to requirements of specific piping specification schedules located at the end of PART 3 of this Specification Section.

2.2 COMPONENTS AND ACCESSORIES

A. Reducers:

- 1. Furnish appropriate size reducers and reducing fittings to mate pipe to equipment connections.
- Connection size requirements may change from those shown on Drawings depending on equipment furnished.

B. Protective Coating and Lining:

- Include pipe, fittings, and appurtenances where coatings, linings, coating, tests and other items are specified.
- 2. Field coating pipe in accordance with Specification Section 09 96 00.

C. Underground Warning Tape:

- 1. Materials: Polyethylene
- 2. Size: 6 IN wide (minimum)
- 3. Thickness: 3.5 MILS
- 4. Fabrication: Preprinted and permanently imbedded legend, message continuously printed, tensile strength 1750 PSI

D. Valves:

- 1. See schematics and details for definition of manual valves used in each system under 4 IN in size.
 - a. See Specification Section 40 05 51 schedule for valve types 4 IN and above and for automatic valves used in each system.
- 2. See Specification Section 40 05 51.

PART 3 - EXECUTION

3.1 EXTERIOR BURIED PIPING INSTALLATION

- A. Enter and exit through structure walls, floors, and ceilings by using penetrations and seals specified and as shown on Drawings.
- B. When entering or leaving structures with buried mechanical joint piping, install joint within 2 FT of point where pipe enters or leaves structure.
 - 1. Install second joint not more than 6 FT nor less than 4 FT from first joint.
- C. Install expansion devices as necessary to allow expansion and contraction movement.
- D. Laying Pipe In Trench:
 - 1. Excavate and backfill trench in accordance with Specification Section 31 23 33.
 - 2. Clean each pipe length thoroughly and inspect for compliance to specifications.
 - 3. Grade trench bottom and excavate for pipe bell and lay pipe on trench bottom.
 - 4. Install gasket or joint material according to manufacturer's directions after joints have been thoroughly cleaned and examined.
 - 5. Except for first two (2) joints, before making final connections of joints, install two (2) full sections of pipe with earth tamped along-side of pipe or final with bedding material placed.
 - 6. Lay pipe in only suitable weather with good trench conditions.
 - a. Never lay pipe in water except where approved by Engineer.
 - 7. Seal open end of line with watertight plug if pipe laying stopped.

Item No. 7-9012.51

- 8. Remove water in trench before removal of plug.
- E. Lining Up Push-On Joint Piping:
 - 1. Lay piping on route lines shown on Drawings.
 - 2. Deflect from straight alignments or grades by vertical or horizontal curves or offsets.
 - 3. Observe maximum deflection values stated in manufacturer's written literature.
 - 4. Provide special bends when specified or where required alignment exceeds allowable deflections stipulated.
 - 5. Install shorter lengths of pipe in such length and number that angular deflection of any joint, as represented by specified maximum deflection, is not exceeded.

F. Anchorage and Blocking:

- 1. Provide reaction blocking, anchors, joint harnesses, or other acceptable means for preventing movement of piping caused by forces in or on buried piping tees, wye branches, plugs, or bends.
- 2. Place concrete blocking so that it extends from fitting into solid undisturbed earth wall.
 - a. Concrete blocks shall not cover pipe joints.
- 3. Provide bearing area of concrete in accordance with drawing detail.

G. Underground Warning Tape

- 1. The tape shall be the last equipment installed in the trench so as to be first out.
- 2. The tape shall be buried 4 to 6 inches below top of grade.
- 3. After trench backfilling, the tape shall be placed in the backfill and allowed to settle into place with the backfill.
- 4. The tape may be plowed in after final settlement, installed with a tool during the trench backfilling process, unrolled before final restoration or installed in any other way acceptable to the Owner or Engineer.

3.2 CONNECTIONS WITH EXISTING PIPING

- A. Where connection between new work and existing work is made, use suitable and proper fittings to suit conditions encountered.
- B. Perform connections with existing piping at time and under conditions which will least interfere with service to customers affected by such operation.
- C. Undertake connections in fashion which will disturb system as little as possible.
- D. Provide suitable equipment and facilities to dewater, drain, and dispose of liquid removed without damage to adjacent property.
- E. Where connections to existing systems necessitate employment of past installation methods not currently part of trade practice, utilize necessary special piping components.
- F. Where connection involves potable water systems, provide disinfection methods as prescribed in this Specification Section.
- G. Once tie-in to each existing system is initiated, continue work continuously until tie-in is made and tested.

3.3 FIELD QUALITY CONTROL

- A. Pipe Testing General:
 - 1. Test piping systems as follows:
 - a. Test exposed, non-insulated piping systems upon completion of system.
 - b. Test exposed, insulated piping systems upon completion of system but prior to application of insulation.
 - c. Test concealed interior piping systems prior to concealment and, if system is insulated, prior to application of insulation.
 - d. Test buried piping after backfilling has been complete.
 - Utilize pressures, media and pressure test durations as specified in the PIPING SPECIFICATION SCHEDULES.

- 3. Isolate equipment which may be damaged by the specified pressure test conditions.
- 4. Perform pressure test using calibrated pressure gages and calibrated volumetric measuring equipment to determine leakage rates.
 - a. Select each gage so that the specified test pressure falls within the upper half of the gage's range.
 - b. Notify the Engineer 24 HRS prior to each test.
- 5. Completely assemble and test new piping systems prior to connection to existing pipe systems.
- 6. Acknowledge satisfactory performance of tests and inspections in writing to Engineer prior to final acceptance.
- 7. Bear the cost of all testing and inspecting, locating and remedying of leaks and any necessary retesting and re-examination.

B. Pressure Testing:

- 1. Testing medium: Unless otherwise specified in the PIPING SPECIFICATION SCHEDULES, utilize the following test media.
 - a. Liquid systems:

| PIPE LINE SIZE (DIA) | GRAVITY OR | SPECIFIED TEST | TESTING | |
|----------------------|------------|------------------|---------|--|
| | PUMPED | PRESSURE | MEDIUM | |
| All sizes | Pumped | 250 PSIG or less | Water | |

- 2. Before the hydrostatic test is begun, the Contractor shall: backfill all pipe; provide all temporary and permanent thrust anchor blocking; and install taps for releasing air at all points of highest elevation where no fire hydrant or flushing connection has been installed. All valves within the test area shall be fully open including valves on fire hydrant supply pipes.
- 3. It shall be the Contractor's responsibility to locate and repair any and all leaks that may develop.
- 4. The water main (ductile iron and PVC) and appurtances shall be discharged of hyperchlorinated water, flushed and filled with potable water prior to performing the pressure and leakage test.
- 5. Water piping shall be pressure tested to 250 percent of the normal system operating pressure or to 100 percent if the rated pressure of the pipe, whichever is less. At no time shall the test pressure exceed 100 percent of the pipe's rated working pressure. A pipe shall be accepted if the test pressure dies nit fall more than 5 psi during the minimum 2-hour test period. The pipe shall be tested for allowable leakage according to AWWA C-600 or C-605, as applicable, concurrently with the pressure test.
- 6. In conjunction with the hydrostatic test, a leakage test shall be conducted at the same pressure and for the same period of time.
- 7. The Contractor may furnish a test pump if approved by the Inspector or Engineer. The test pump must be equipped with a quick-connect coupling to allow the connection of the Company Inspector's pressure gauge.
- 8. All piping shall be tested for leakage at a pressure no less than that specified for the pressure test. The leakage shall be defined as the quantity of water that must be supplied to the tested section to maintain pressure within 5 psi of the specified test pressure after the air in the pipeline has been expelled and the pipe has been filled with water. The leakage shall be less than an allowable amount determined by the following equation.

$$L = \frac{\text{SD (P)}^{1/2}}{133,200}$$

Where: L = allowable leakage (gallons/hour)

S = length of pipe tested (feet)

D = nominal diameter of pipe (inches)

P = test pressure (psig)

Item No. 7-9012.51

- 9. All pipe, fittings, and other materials found to be defective under test shall be removed and replaced. These tests shall be repeated until satisfactory to the Engineer and Inspector. All visible leaks shall be repaired regardless of the amount of leakage.
- 10. The required testing apparatus, consisting of a gasoline motor driven pump, valves, pressure gauge, meter, test pump hose, and connections, shall be picked up and returned to the Company yard, the day the test is to be run.
- 11. The Contractor shall be responsible for all phases of testing the water main.

C. Dielectric Testing Methods and Criteria:

- 1. Provide electrical check between metallic non-ferrous pipe or appurtenances and ferrous elements of construction to assure discontinuity has been maintained.
- 2. Wherever electrical contact is demonstrated by such test, locate the point or points of continuity and correct the condition.

3.4 CLEANING, DISINFECTION AND PURGING

A. Cleaning:

- 1. Clean interior of piping systems thoroughly before installing.
- 2. Maintain pipe in clean condition during installation.
- 3. Before jointing piping, thoroughly clean and wipe joint contact surfaces and then properly dress and make joint.
- 4. Immideatly prior to pressure testing, clean and remove grease, metal cutting, dirt, or other foreign materials which may have entered the system.
- At completion of work and prior to Final Acceptance, thoroughly clean work installed under these Specifications.
 - Clean equipment, fixtures, pipe, valves, and fittings of grease, metal cuttings, and sludge which may have accumulated by operation of system, from testing, or from other causes
 - b. Repair any stoppage or discoloration or other damage to parts of building, its finish, or furnishings, due to failure to properly clean piping system, without cost to Owner.
- 6. Clean chlorine piping in accordance with CI Pamphlet 6.

B. Disinfection of Potable Water Systems:

- 1. After favorable performance of pressure test and prior to Final Acceptance, thoroughly flush entire potable water piping system including supply, source and any appurtenant devices and perform disinfection as prescribed.
- Perform work, including preventative measures during construction, in full compliance with AWWA C651.
- 3. Perform disinfection using sodium hypochlorite complying with AWWA B300.
- 4. Flush each segment of system to provide flushing velocity of not less than 2.5 FT per second.
- 5. Drain flushing water to sanitary sewer.
 - a. Do not drain flushing water to receiving stream.
- 6. Use continuous feed method of application.
 - a. Tag system during disinfection procedure to prevent use.
- 7. After required contact period, flush system to remove traces of heavily chlorinated water.
- 8. After final flushing and before placing water in service, obtain an independent laboratory approved by the Owner to collect samples and test for bacteriological quality.
 - a. Repeat entire disinfection procedures until satisfactory results are obtained.
- 9. Secure and deliver to Owner, satisfactory bacteriological reports on samples taken from system.
 - a. Ensure sampling and testing procedures are in full compliance to AWWA C651, local water purveyor and applicable requirements of State of Kentucky.

3.5 LOCATION OF BURIED OBSTACLES

A. Furnish exact location and description of buried utilities encountered and thrust block placement.

Item No. 7-9012.51

- B. Reference items to definitive reference point locations such as found property corners, entrances to buildings, existing structure lines, fire hydrants and related fixed structures.
- C. Include such information as location, elevation, coverage, supports and additional pertinent information.
- D. Incorporate information on "As-Recorded" Drawings.

3.6 PIPING SYSTEM SCHEDULES

- A. SPECIFICATION SCHEDULE -
 - 1. General:
 - a. Piping symbol and service:
 - 1) FM Sanitary Force Main
 - b. Test requirements:
 - 1) Test medium: Water.
 - 2) Pressure: 125 PSIG.
 - 3) Duration: 6 HRS.
 - c. Gaskets and O-rings:
 - 1) O-rings: Neoprene or rubber.
 - 2) Gasket: ASTM F477
 - 2. System components:
 - a. Pipe size to 3 IN through 12 IN:
 - 1) Buried service:
 - a) Materials: Polyvinyl Chloride (PVC), C900 (DR 21).
 - b) Reference: AWWA/ANSI C900.
 - c) Pipe Compound: ASTM D1784 Cells Class 12454.
 - d) Integral Bell Joint: ASTM D3139.
 - e) Linning: None
 - f) Coating: None
 - g) Fittings:
 - h) Joints: Push-on with mechanical joints at fittings and valves.

END OF SECTION

SECTION 40 05 31

PIPE: PLASTIC

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Plastic pipe.
- B. Related Specification Sections include but are not necessarily limited to:
 - 1. Division 00 Procurement and Contracting Requirements.
 - 2. Division 01 General Requirements.
 - 3. Section 40 05 00 Pipe and Pipe Fittings: Basic Requirements.

1.2 QUALITY ASSURANCE

- A. See Specification Section 40 05 00.
- B. Referenced Standards:
 - 1. ASTM International (ASTM):
 - a. PVC (polyvinyl chloride) materials:
 - 1) D1784, Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds.
 - D3034, Standard Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
 - D3139, Standard Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals.
 - D3212, Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals.
 - 5) F593, Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs.
 - b. Installation:
 - D2321, Standard Practice for Underground Installation of Thermosplastic Pipe for Sewers and Other Gravity-Flow Applications.
 - 2. NSF International (NSF).

1.3 SUBMITTALS

A. See Specification Section 40 05 00.

PART 2 - PRODUCTS

2.1 PRESSURE PIPING (UNDERGROUND)

- A. Materials: Furnish materials in full compliance with following requirements:
 - 1. 4-12 IN: AWWA C900 PVC with Pressure Class of 235 PSI (DR18)
 - 2. Joints for PVC pipe shall be the elastomeric-gasket type with a pressure rating not less than pipe pressure rating meeting performance requirements of ASTM D3139.

PART 3 - EXECUTION

3.1 IDENTIFICATION

- A. Identify each length of pipe clearly at intervals of 5 FT or less.
 - 1. Include manufacturer's name and trademark.
 - Nominal size of pipe, appurtenant information regarding polymer cell classification and critical identifications regarding performance specifications and NSF approvals when applicable.

Item No. 7-9012.51

Contract ID: 244300 Page 124 of 314

3.2 PRESSURE PIPING (UNDERGROUND)

- A. Installation:
 - 1. Field threading of PVC pipe will not be permitted.
 - 2. Perform installation procedures, handling, thrust blocking, connections, and other appurtenant operations in full compliance to the manufacturer's printed recommendations and in conformance to plan details.

END OF SECTION

Item No. 7-9012.51

SECTION 40 05 51

VALVES: BASIC REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Valving and valving appurtenances.
 - 2. Sewage Combination Air Valve
- B. Related Sections include but are not necessarily limited to:
 - 1. Section 40 05 00 Pipe and Pipe Fittings: Basic Requirements.

1.2 QUALITY ASSURANCE

- A. Referenced Standards:
 - 1. American Society of Mechanical Engineers (ASME):
 - 1. B1.20.1, Pipe Threads, General Purpose.
 - 2. B16.1, Gray Iron Pipe Flanges and Flanged Fittings: Classes 25, 125, and 250.
 - 3. B16.18, Cast Copper Alloy Solder Joint Pressure Fittings.
 - 2. ASTM International (ASTM):
 - A126, Standard Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings.
 - D256, Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics.
 - 3. D638, Standard Test Method for Tensile Properties of Plastics.
 - 4. D648, Standard Test Method for Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position.
 - 5. D695, Standard Test Method for Compressive Properties of Rigid Plastics.
 - 6. D2240, Standard Test Method for Rubber Property-Durometer Hardness.
 - 3. American Water Works Association (AWWA):
 - C207, Standard for Steel Pipe Flanges for Waterworks Service Sizes 4 IN through 144 IN.
 - 2. C500, Standard for Metal-Seated Gate Valves for Water Supply Service.
 - 3. C504, Standard for Rubber-Seated Butterfly Valves.
 - 4. C507, Standard for Ball Valves, 6 IN through 48 IN (150 MM through 1200 MM).
 - 5. C509, Standard for Resilient-Seated Gate Valves for Water Supply Service.
 - 6. C550, Standard for Protective Coatings for Valves and Hydrants.
 - 7. C606, Standard for Grooved and Shouldered Joints.
 - 4. American Water Works Association/American National Standards Institute (AWWA/ANSI):
 - C111/A21.11, Standard for Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.
 - 5. National Electrical Manufacturers Association (NEMA):
 - 1. 250, Enclosures for Electrical Equipment (1000 Volts Maximum).
 - 2. MG 1, Motors and Generators.
 - 6. National Fire Protection Association (NFPA):
 - 1. 70, National Electrical Code (NEC).

1.3 SUBMITTALS

- A. Shop Drawings:
 - 1. Product technical data including:
 - 1. Acknowledgement that products submitted meet requirements of standards referenced.
 - 2. Manufacturer's installation instructions.
 - 3. Valve pressure and temperature rating.

- 4. Valve material of construction.
- 5. Special linings.
- 6. Valve dimensions and weight.
- 7. Valve flow coefficient.
- 2. Test reports.
- B. Closeout Contract Information:
 - 1. Operation and Maintenance Data:

PART 2 - PRODUCTS

2.1 COMBINATION AIR VALVE

A. ARI USA or quivalent.

2.2 FABRICATION

- A. End Connections:
 - 1. Provide the type of end connections for valves as required in the Piping Schedules presented in Section 40 05 00 or as shown on the Drawings.
 - 2. Comply with the following standards:
 - 1. Threaded: ASME B1.20.1.
 - 2. Flanged: ASME B16.1, Class 125 unless otherwise noted or AWWA C207.
 - 3. Bell and spigot or mechanical (gland) type: AWWA/ANSI C111/A21.11.
 - 4. Soldered: ASME B16.18.
 - 5. Grooved: Rigid joints per Table 5 of AWWA C606.
- B. Nuts, Bolts, and Washers:
 - 1. Wetted or internal to be bronze or stainless steel.
 - 1. Exposed to be zinc or cadmium plated.
- C. On Insulated Piping: Provide valves with extended stems to permit proper insulation application without interference from handle.
- D. Epoxy Interior Coating: Provide epoxy interior coating for all ferrous surfaces in accordance with AWWA C550.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Painting Requirements: All fire hydrants shall be fully coated, inside and out, with fusion bonded epoxy coating in accordance with AWWA C550 Standard and color shall be selected by the Owner.
- C. Setting Buried Valves:
 - 1. Locate valves installed in pipe trenches where buried pipe indicated on Drawings.
 - 2. Set valves and valve boxes plumb.
 - 3. Place valve boxes directly over valves with top of box being brought to surface of finished grade.
 - 4. Install in closed position.
 - 5. Place valve on firm footing in trench to prevent settling and excessive strain on connection to pine.
 - 6. After installation, backfill up to top of box for a minimum distance of 4 FT on each side of box.
- D. Support exposed valves and piping adjacent to valves independently to eliminate pipe loads being transferred to valve and valve loads being transferred to the piping.

FAYETTE COUNTY HSIP 4181(034) Contract ID: 244300 Page 127 of 314

E. For grooved coupling valves, install rigid type couplings.

END OF SECTION

SECTION 40 05 61

GATE VALVES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Gate valves.
- B. Related Specification Sections include but are not necessarily limited to:
 - 1. Section 40 05 51 Valves: Basic Requirements.

1.2 QUALITY ASSURANCE

- A. Referenced Standards:
 - 1. American Society of Mechanical Engineers (ASME)

1.3 SUBMITTALS

- A. Shop Drawings:
 - 1. See Specification Section 01 33 00 for requirements for the mechanics and administration of the submittal process.
- B. Operation and Maintenance Manuals:
 - 1. See Specification Section 01 33 04 for requirements for:
 - a. The mechanics and administration of the submittal process.
 - b. The content of Operation and Maintenance Manuals.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Acceptable Manufacturers:
 - 1. ARI USA.
 - 2. Or approved equal.
- B. Materials:
 - 1. Body: One piece casting of type 304 stainless steel.
 - 2. Seat: Seat shall be resilient seated. Resilient seated valves shall have the resilient seat material molded on three sides of the stainless steel seat ring.

2.2 DESIGN REQUIREMENTS

A. Gate Valves, (Water, Wastewater Application):

PART 3 - EXECUTION

3.1 INSTALLATION

A. See Specification Section 40 05 51.

END OF SECTION



Kentucky Transportation Cabinet Highway District 7

And

| (2) . | Construction |
|-------------------|--------------|
| \ <i>-,</i> , | |

Kentucky Pollutant Discharge Elimination System Permit KYR10 Best Management Practices (BMP) plan

Groundwater protection plan

For Highway Construction Activities

For

Highway Safety Improvement Project along KY 418 from MP 1.8-2.6 in Fayette County

Project: Item # 7-9012.51

KPDES BMP Plan Page 1 of 14

Project information

Note -(1) = Design (2) = Construction (3) = Contractor

- 1. Owner Kentucky Transportation Cabinet, District 7
- 2. Resident Engineer: (2)
- 3. Contractor name: (2)
 Address: (2)

Phone number: (2) Contact: (2)

Contractor's agent responsible for compliance with the KPDES permit requirements (3):

- 4. Project Control Number: (2)
- 5. Route (Address): KY 418
- 6. Latitude/Longitude (project mid-point): 37° 57' 55.24", -84° 23' 36.15"
- 7. County (project mid-point): Fayette
- 8. Project start date (date work will begin): (2)
- 9. Projected completion date: (2)

A. Site description:

- 1. Nature of Construction Activity (from letting project description): Asphalt Surface with Grade & Drain.
- 2. Order of major soil disturbing activities: (2) and (3)
- 3. Projected volume of material to be moved: 5929 CY (Cut) & 699 CY (Fill)
- 4. Estimate of total project area (acres): 8.4
- 5. Estimate of area to be disturbed (acres): 1.4
- Post construction runoff coefficient will be included in the project drainage folder. Persons needing information pertaining to the runoff coefficient will contact the resident engineer to request this information.
- 7. Data describing existing soil condition: (1) & (2)
- 8. Data describing existing discharge water quality (if any): (1) & (2)
- 9. Receiving water name: Baughman Fork
- 10. TMDLs and Pollutants of Concern in Receiving Waters: *No TDML's were involved on this project.*
- 11. Site map Project layout sheet plus the erosion control sheets in the project plans that depict Disturbed Drainage Areas (DDAs) and related information. These sheets depict the existing project conditions with areas delineated by DDA (drainage area bounded by watershed breaks and right of way limits), the storm water discharge locations (either as a point discharge or as overland flow) and the areas that drain to each discharge point. These plans define the limits of areas to be disturbed and the location of control measures. Controls will be either site specific as designated by the designer or will be annotated by the contractor and resident engineer before disturbance commences. The project layout sheet shows the surface waters and wetlands.
- 12. Potential sources of pollutants:
 - The primary source of pollutants is solids that are mobilized during storm events. Other sources of pollutants include oil/fuel/grease from servicing and operating construction equipment, concrete washout water, sanitary wastes and trash/debris. (3)

B. Sediment and Erosion Control Measures:

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

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

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

KPDES BMP Plan Page 4 of 14

- Silt Traps Type C in front of existing pipes and drop inlets which are to be saved
- Diversion ditches to catch sheet runoff and carry it to basins or traps or to divert it around areas to be disturbed.
- Brush and/or other barriers to slow and/or divert runoff.
- Silt fences to catch sheet runoff on short slopes. For longer slopes, multiple rows of silt fence may be considered.
- Temporary Mulch for areas which are not feasible for the fore mentioned types of protections.
- Non-standard or innovative methods.
- Cut & Fill and placement of drainage structures The BMP Plan will be modified to show additional BMP's such as:
 - Silt Traps Type B in ditches and/or drainways as they are completed
 - Silt Traps Type C in front of pipes and drop inlets after they are placed
 - Channel Lining
 - Erosion Control Blanket
 - Temporary mulch and/or seeding for areas where construction activities will be ceased for 21 days or more.
 - Non-standard or innovative methods
- Profile and X-Section in place The BMP Plan will be modified to show elimination of BMP's which had to be removed and the addition of new BMP's as the roadway was shaped. Probably changes include:
 - Silt Trap Type A, Brush and/or other barriers, Temporary Mulch, and any other BMP which had to be removed for final grading to take place.
 - Additional Silt Traps Type B and Type C to be placed as final drainage patterns are put in place.
 - Additional Channel Lining and/or Erosion Control Blanket.
 - Temporary Mulch for areas where Permanent Seeding and Protection cannot be done within 21 days.
 - Special BMP's such as Karst Policy
- ➤ Finish Work (Paving, Seeding, Protect, etc.) A final BMP Plan will result from modifications during this phase of construction. Probable changes include:
 - Removal of Silt Traps Type B from ditches and drainways if they are protected with other BMP's which are sufficient to control erosion, i.e. Erosion Control Blanket or Permanent Seeding and Protection on moderate grades.
 - Permanent Seeding and Protection
 - Placing Sod

KPDES BMP Plan Page 5 of 14

- Planting trees and/or shrubs where they are included in the project
- BMP's including Storm Water Management Devices such as velocity dissipation devices and Karst policy BMP's to be installed during construction to control the pollutants in storm water discharges that will occur after construction has been completed are: This project does not include storm water BMPs or flow controls for postconstruction use.

C. Other Control Measures

1. No solid materials, including building materials, shall be discharged to waters of the commonwealth, except as authorized by a Section 404 permit.

2. Waste Materials

All waste materials that may leach pollutants (paint and paint containers, caulk tubes, oil/grease containers, liquids of any kind, soluble materials, etc.) will be collected and stored in appropriate covered waste containers. Waste containers shall be removed from the project site on a sufficiently frequent basis as to not allow wastes to become a source of pollution. All personnel will be instructed regarding the correct procedure for waste disposal. Wastes will be disposed in accordance with appropriate regulations. Notices stating these practices will be posted in the office.

3. Hazardous Waste

All hazardous waste materials will be managed and disposed of in the manner specified by local or state regulation. The contractor shall notify the Section Engineer if there any hazardous wastes being generated at the project site and how these wastes are being managed. Site personnel will be instructed with regard to proper storage and handling of hazardous wastes when required. The Transportation Cabinet will file for generator, registration when appropriate, with the Division of Waste Management and advise the contractor regarding waste management requirements.

4. Spill Prevention

The following material management practices will be used to reduce the risk of spills or other exposure of materials and substances to the weather and/or runoff.

Good Housekeeping:

KPDES BMP Plan Page 6 of 14

The following good housekeeping practices will be followed onsite during the construction project.

- An effort will be made to store only enough product required to do the job
- All materials stored onsite will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure
- Products will be kept in their original containers with the original manufacturer's label
- Substances will not be mixed with one another unless recommended by the manufacturer
- Whenever possible, all of the product will be used up before disposing of the container
- Manufacturers' recommendations for proper use and disposal will be followed
- The site contractor will inspect daily to ensure proper use and disposal of materials onsite

Hazardous Products:

These practices will be used to reduce the risks associated with any and all hazardous materials.

- Products will be kept in original containers unless they are not resealable
- Original labels and material safety data sheets (MSDS) will be reviewed and retained
- Contractor will follow procedures recommended by the manufacturer when handling hazardous materials
- If surplus product must be disposed of, manufacturers' or state/local recommended methods for proper disposal will be followed

The following product-specific practices will be followed onsite:

Petroleum Products:

Vehicles and equipment that are fueled and maintained on site will be monitored for leaks, and receive regular preventative maintenance to reduce the chance of leakage. Petroleum products onsite will be stored in tightly sealed containers, which are clearly labeled and will be protected from exposure to weather.

The contractor shall prepare an Oil Pollution Spill Prevention Control and Countermeasure plan when the project that involves the storage of petroleum

products in 55 gallon or larger containers with a total combined storage capacity of 1,320 gallons. This is a requirement of 40 CFR 112.

This project (will / will not) (3) have over 1,320 gallons of petroleum products with a total capacity, sum of all containers 55 gallon capacity and larger.

> Fertilizers:

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

> Paints:

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

Concrete Truck Washout:

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

Spill Control Practices

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

- Manufacturers' recommended methods for spill cleanup will be clearly posted. All personnel will be made aware of procedures and the location of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup will be kept in the material storage area. Equipment and materials will include as appropriate, brooms, dust pans, mops, rags, gloves, oil absorbents, sand, sawdust, and plastic and metal trash containers.
- All spills will be cleaned up immediately after discovery.

KPDES BMP Plan Page 8 of 14

- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contract with a hazardous substance.
- Spills of toxic or hazardous material will be reported to the appropriate state/local agency as required by KRS 224 and applicable federal law.
- The spill prevention plan will be adjusted as needed to prevent spills from reoccurring and improve spill response and cleanup.
- Spills of products will be cleaned up promptly. Wastes from spill cleanup will be disposed in accordance with appropriate regulations.

D. Other State and Local Plans

This BMP plan shall include any requirements specified in sediment and erosion control plans, storm water management plans or permits that have been approved by other state or local officials. Upon submittal of the NOI, other requirements for surface water protection are incorporated by reference into and are enforceable under this permit (even if they are not specifically included in this BMP plan). This provision does not apply to master or comprehensive plans, non-enforceable guidelines, or technical guidance documents that are not identified in a specific plan or permit issued for the construction site by state or local officials. There are no other local (MS4) requirements that are expected to be necessary for this project.

E. Maintenance

- 1. The BMP plan shall include a clear description of the maintenance procedures necessary to keep the control measures in good and effective operating condition.
 - Maintenance of BMPs during construction shall be a result of weekly and post rain event inspections with action being taken by the contractor to correct deficiencies.
 - Post Construction maintenance will be a function of normal highway maintenance operations. Following final project acceptance by the cabinet, district highway crews will be responsible for identification and correction of deficiencies regarding ground cover and cleaning of storm water BMPs. The project manager shall identify any BMPs that will be for the purpose of post construction storm water management with specific guidance for any non-routine maintenance. There are no such BMP's for this project.

F. Inspections

Inspection and maintenance practices that will be used to maintain erosion and sediment controls:

- All erosion prevention and sediment control measures will be inspected at least once each week and following any rain of one-half inch or more.
- ➤ Inspections will be conducted by individuals that have successfully completed the KEPSC-RI course as required by Section 213.02.02 of the Standard Specifications for Road and Bridge Construction, current edition.
- Inspection reports will be written, signed, dated, and kept on file.
- > Areas at final grade will be seeded and mulched within 14 days.
- Areas that are not at final grade where construction has ceased for a period of 21 days or longer and soil stock piles shall receive temporary mulch no later than 14 days from the last construction activity in that area.
- All measures will be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours of being reported.
- ➤ Built-up sediment will be removed from behind the silt fence before it has reached halfway up the height of the fence.
- ➤ Silt fences will be inspected for bypassing, overtopping, undercutting, depth of sediment, tears, and to ensure attachment to secure posts.
- Sediment basins will be inspected for depth of sediment, and built-up sediment will be removed when it reaches 50 percent of the design capacity and at the end of the job.
- Diversion dikes and berms will be inspected and any breaches promptly repaired. Areas that are eroding or scouring will be repaired and reseeded / mulched as needed.
- ➤ Temporary and permanent seeding and mulching will be inspected for bare spots, washouts, and healthy growth. Bare or eroded areas will be repaired as needed.
- All material storage and equipment servicing areas that involve the management of bulk liquids, fuels, and bulk solids will be inspected weekly for conditions that represent a release or possible release of pollutants to the environment.

G. Non – Storm Water Discharges

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

- Water from water line flushings.
- Water form cleaning concrete trucks and equipment.

KPDES BMP Plan Page 10 of 14

- Pavement wash waters (where no spills or leaks of toxic or hazardous materials have occurred).
- Uncontaminated groundwater and rain water (from dewatering during excavation).

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

H. Groundwater Protection Plan (3)

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

Contractors statement: (3)

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

| 2. (e) land treatment or land disposal of a pollutant; |
|--|
| 2. (f) Storing,, or related handling of hazardous waste, solid waste or special waste,, in tanks, drums, or other containers, or in piles, (This does not include wastes managed in a container placed for collection and removal of municipal solid waste for disposal off site); |
| 2. (g) Handling of materials in bulk quantities (equal or greater than 55 gallons or 100 pounds net dry weight transported held in an individual container) that, if released to the environment, would be a pollutant; |
| 2. (j) Storing or related handling of road oils, dust suppressants,, at a central location; |
| 2. (k) Application or related handling of road oils, dust suppressants or deicing materials, (does not include use of chloride-based deicing materials applied to roads or parking lots); |
| 2. (m) Installation, construction, operation, or abandonment of wells, bore holes, or core holes, (this does not include bore holes for the purpose of explosive demolition); |

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

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

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

- (a) General information about this project is covered in the Project information;
- (b) Activities that require a groundwater protection plan have been identified above;
- (c) Practices that will protect groundwater from pollution are addressed in section C. Other control measures.
- (d) Implementation schedule all practices required to prevent pollution of groundwater are to be in place prior to conducting the activity;
- (e) Training is required as a part of the ground water protection plan. All employees of the contractor, sub-contractor, and resident engineer personnel will be trained to understand the nature and requirements of this plan as they pertain to their job function(s). Training will be accomplished within one week of employment and annually thereafter. A record of training will be maintained by the contractor with a copy provide to the resident engineer.
- (f) Areas of the project and groundwater plan activities will be inspected as part of the weekly sediment and erosion control inspections
- (g) Certification (see signature page.)

Contractor and Resident Engineer Plan certification

The contractor that is responsible for implementing this BMP plan is identified in the Project Information section of this plan.

The following certification applies to all parties that are signatory to this BMP plan:

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

Resident Engineer and Contractor Certification:

| (2) Resident Engineer signature | | | |
|------------------------------------|-----------------|-----------|--|
| Signed | _title | | |
| Typed or printed name ² | | signature | |
| (3) Signed | title | ,, | |
| Typed or printed nam | ie ¹ | signature | |

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

Contract ID: 244300 Page 142 of 314

KYTC BMP Plan for Project Item # 7-9012.51

Sub-Contractor Certification

Subcontractor

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

| A | lame: Address: Address: | | |
|---------------------------------|--|--|--|
| F | Phone: | | |
| The part | of BMP plan this subcor | ntractor is responsible to | implement is: |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| Kentuck discharg discharg | y Pollutant Discharge Eli les, the BMP plan that ha led as a result of storm e | imination System permit in as been developed to madevents associated with the events associated with the second to the contract of the contr | s and conditions of the general that authorizes the storm water anage the quality of water to be ne construction site activity and ed as part of this certification. |
| Signed _ | Typed or printed name | title, | aignaturo |
| | Typed of printed name. | | Signature |
| 4 6 | | | |

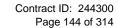
1. Sub-Contractor Note: to be signed by a person who is the owner, a responsible corporate officer, a general partner, or the proprietor or a person designated to have the authority to sign reports by such a person in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager,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

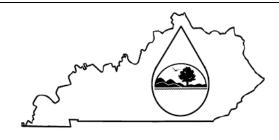
Item No.: 7-9012.51 Fayette County Highway Safety Improvement Project along KY 418 from MP 1.80 – 2.60

An electronic Notice of Intent (eNOI) for obtaining coverage under the Kentucky Pollutant Discharge Elimination System (KPDES) General Permit for Stormwater Discharges Associated with Construction Activities (KYR10) has been drafted, a copy of which is attached. Upon award, the Contractor will be identified in Section III of the form as the "Building Contractor" and the eNOI will be submitted for approval to the Kentucky Division of Water. The Contractor shall be responsible for advancing the work within this contract in a manner that is compliant with all applicable and appropriate KYTC specifications for sediment and erosion control, as well as meeting the requirements of the KYR10 permit and the KDOW.

eForm Submittal ID: 413807

eForm Transaction ID: 41c04f82-6977-4bf4-8fcc-9b8f29d15547





KENTUCKY POLLUTION DISCHARGE

ELIMINATION SYSTEM (KPDES)

Notice of Intent (NOI) for coverage of Storm Water Discharge Associated with Construction Activities Under the KPDES Storm Water General Permit KYR100000

Click here for Instructions (Controls/KPDES_FormKYR10_Instructions.htm)

Click here to obtain information and a copy of the KPDES General Permit. (http://dep.ky.gov/formslibrary/Documents/KYR10PermitPage.pdf)

(*) indicates a required field; (✓) indicates a field may be required based on user input or is an optionally required field

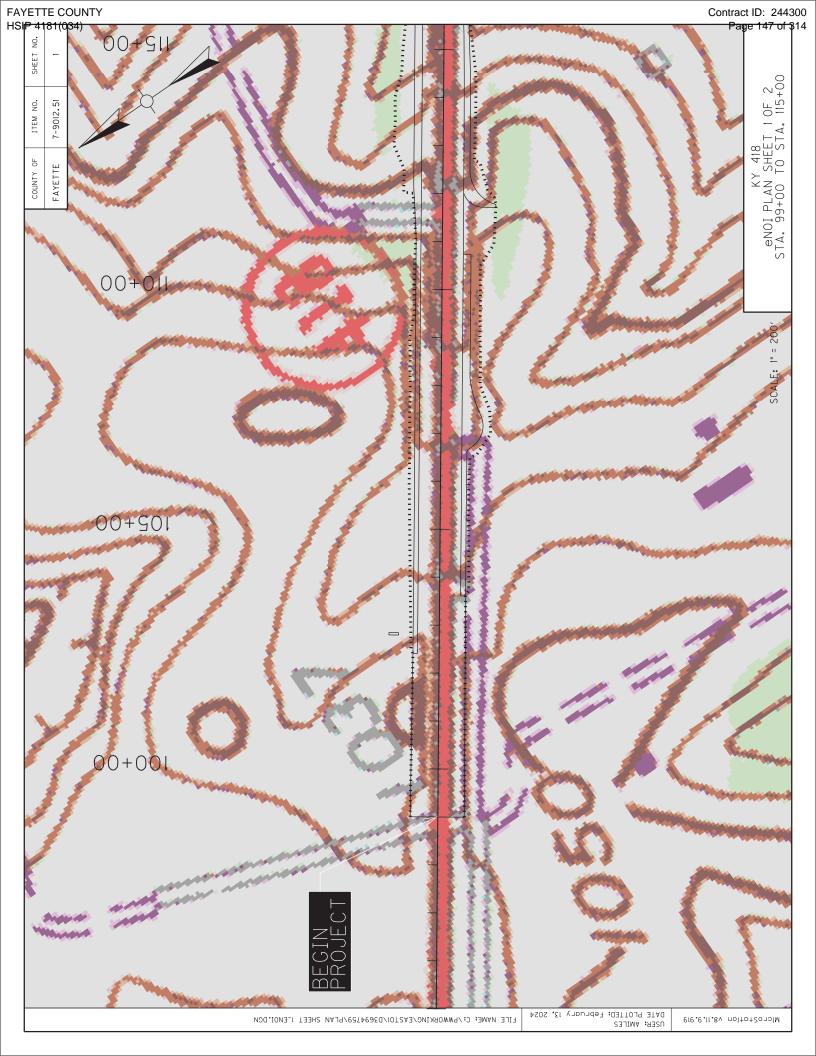
| Reason for Submittal:(*) | Agency Interest ID: | | | | Permit Number:(√) | | | |
|--|--|----------------|--------------------|-----------------------------|-------------------|--------------------------------|----|--|
| , , | Agency Interest ID: | | | | | | | |
| Application for New Fermit Coverage | Application for New Permit Coverage Agency Interest ID KPDES Permit Number | | | | | | | |
| If change to existing permit coverage is requested, descr | ribe the change | s for which mo | dification of c | overage is bein | g sought:(√) | | | |
| | | | | | | | | |
| ELIGIBILITY: Stormwater discharges associated with construction activities disturbing individually one (1) acre or more, including, in the case of a common plan of development, contiguous construction activities that cumulatively equal one (1) acre or more of disturbance. | | | | | | | | |
| EXCLUSIONS: The following are excluded from coverage under this general permit: 1) Are conducted at or on properties that have obtained an individual KPDES permit for the discharge of other wastewaters which requires the development and implementation of a Best Management Practices (BMP) plan; 2) Any operation that the DOW determines an individual permit would better address the discharges from that operation; 3) Any project that discharges to an Impaired Water listed in the most recent Integrated Report, §305(b) as impaired for sediment and for which an approved TMDL has been developed. | | | | | | | | |
| SECTION I FACILITY OPERATOR INFORMATION (P | ERMITTEE) | | | | | | | |
| Company Name:(√) | | First Name:(| √) | | M.I.: | Last Name:(| √) | |
| Kentucky Transportation Cabinet, District 7 | | Kelly | | | MI | Baker | | |
| Mailing Address:(*) | City:(*) | | | State:(*) | | Zip:(*) | | |
| 800 Newtown Court, PO Box 11127 | Lexington | | Kentucky | | ~ | 40512-1127 | | |
| eMail Address:(*) | | | Business Phone:(*) | | Alternate Phone: | | | |
| KellyA.Baker@ky.gov | | | 859-246-2355 | | | Phone | | |
| SECTION II GENERAL SITE LOCATION INFORMATION | ON | | | | | | | |
| Project Name:(*) | | | Status of O | wner/Operator | (*) | SIC Code(*) | | |
| KYTC Project: Item # 7-9012.51 | | | State Government 🗸 | | • | 1611 Highway and Street Cons ✓ | | |
| Company Name:(√) First Name | | First Name:(| √) M.I.: | | M.I.: | Last Name:(√) | | |
| Company Name | | First Name | First Name | | MI | Last Name | | |
| Site Physical Address:(*) | | | | | | | | |
| KY 418 | | | | | | | | |
| City:(*) | | | State:(*) | | Zip:(*) | | | |
| Lexington | | | Kentucky ∨ | | ~ | 40509 | | |
| unty:(*) Latitude(decimal degrees)(*)DMS | | | | | | | | |
| Fayette | (https://www.fcc.gov/media/radio/dms 37.965345 | | /radio/dms-de | adio/dms-decimal) -84.39337 | | ⁷ 6 | | |
| SECTION III SPECIFIC SITE ACTIVITY INFORMATION ? | | | | | | | | |
| Project Description:(*) | | | | | | | | |
| Highway Safety Improvement Project consisting of roadway excavation, placement of fill material, installation of entrance pipes, placement of concrete islands, asphalt | | | | | | | | |
| | | | | | | | | |

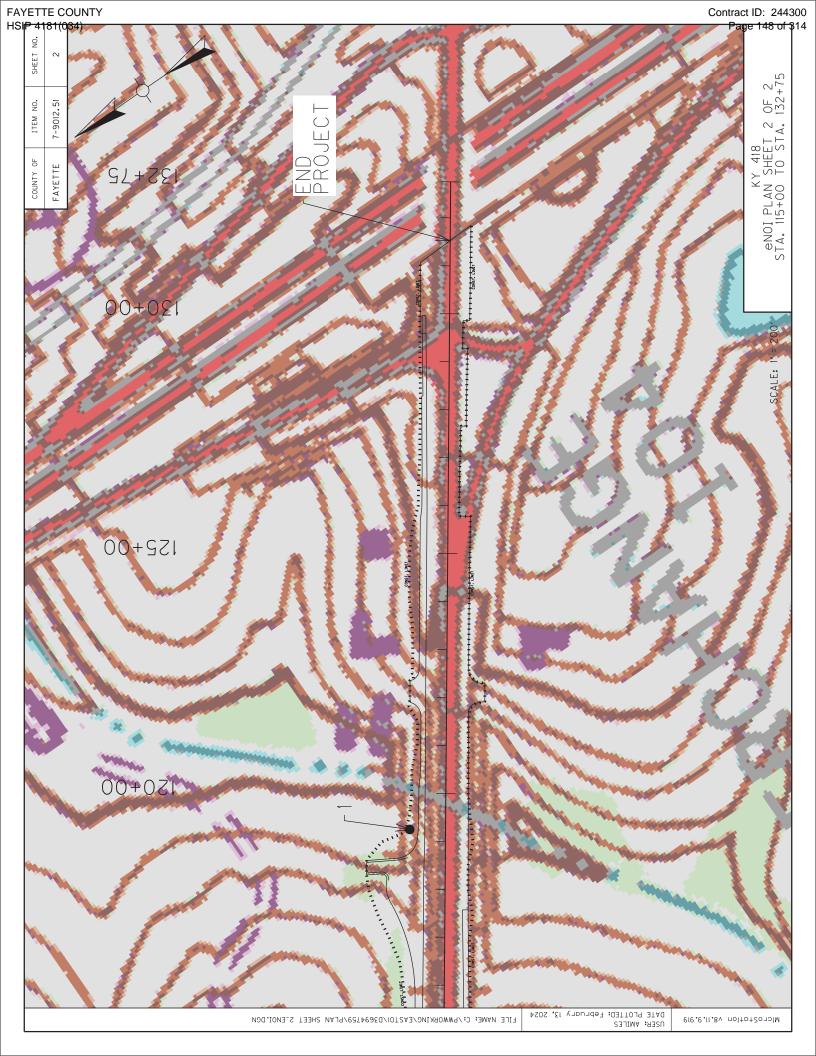
Contract ID: 244300 Page 145 of 314

| Total Number of Arms Disturbed (2) B. Admisipated Start Date(-1) D. For common plans of development provide the following information Total Number of Arces in Project; (-1) # Acmisipated Start Date(-1) # Acmisipated Start Date(-1) # Acmisipated Start Date(-1) # Acmisipated Completion Date(-1) # Acmisipated Start Date(-1) # Acmisipated Completion Date(-1) # Acmisipated Completion Date(-1) # Acmisipated Start Date | a. For single projects provide the | following informatio | on | | | | | |
|--|-------------------------------------|------------------------|-----------------------|------------|----------------------|----------------------------|------------------|---|
| Anticipated Start Date(*/) b. For common plans of development provide the Solivoing Information Total Number of Acres in Project (*/) # Acre(*) **RATO(*) **Number of Acres in Project (*/) # Acre(*) **Number of Individual Icid in development. If applicables (*/) # Acre(*) **Number of Individual Icid in development. If applicables (*/) # Acre(*) **Number of Individual Icid in development. If applicables (*/) # Acre(*) **Number of Individual Icid in development. If applicables (*/) **Project Acres intercoded to be discussed at any one simplify: **Project Acres intercoded to be discussed at any one simplify: **Disturbed Acres intercoded to be discussed at any one simplify: **Disturbed Acres intercoded to Dedictive at any one simplify: **Disturbed Acres intercoded to Dedictive at any one simplify: **Disturbed Acres intercoded to Dedictive at any one simplify: **Disturbed Acres intercoded to Dedictive at any one simplify: **Disturbed Acres intercoded to Dedictive at any one simplify: **Disturbed Acres intercoded to Dedictive at any one simplify: **Disturbed Acres intercoded to Dedictive at any one simplify: **Disturbed Acres intercoded to Dedictive at any one simplify: **Disturbed Acres intercoded to Dedictive at any one simplify: **Disturbed Acres intercoded to Dedictive at any one simplify: **Disturbed Acres intercoded to Dedictive at any one simplify: **Disturbed Acres intercoded to Dedictive at any one simplify: **Disturbed Acres intercoded to Dedictive at any one simplify: **Disturbed Acres intercoded to Dedictive at any one simplify: **Disturbed Acres intercoded to Dedictive at any one simplify: **Disturbed Acres intercoded to Dedictive at any one simplify: **Disturbed Acres intercoded to Dedictive at any one simplify: **Disturbed Acres intercoded to Dedictive at any one simplify: **Disturbed Acres intercoded to Dedictive at any one simplify: **Disturbed Acres intercoded Completion Disturbed Acres intercoded Completion Disturbed Acres intercoded Completion Disturbed Acres int | Total Number of Acres in Project:(√ |) | | | Total Number of Acre | es Disturbed:(√) | | |
| D. For cummon planes of development growide the following information Total Number of Acres in Project (*) # Acres in Project (*) # Acres in Project (*) # Sol(s) Number of Individual total in development, if applicables (*) # Sol(s) Number of Individual total in development, if applicables (*) # Sol(s) Number of Individual total in development, if applicables (*) # Sol(s) Number of Individual total in development (*) # Sol(s) Number of Individual total in development (*) # Sol(s) Number of Individual total in development (*) # Sol(s) Number of Individual total in development (*) # Sol(s) * | 8.4 | | | | 1.4 | | | |
| Total Number of Acres in Project (1) # Acro(s) Number of Individual lots in development, if applicables (1/) # Acro(s) Number of Individual lots in development if applicables (1/) # Acro(s) Number of Individual lots in development if applicables (1/) # Bod(s) # Acro(s) | Anticipated Start Date:(√) | | | | Anticipated Complet | ion Date:(√) | | |
| # Acro(s) Number of Individual lobs in development, if applicable (-/-) # lot(s) # lot(s) # lot(s) # lot(s) Project Across Number of loss in development (-/-) # lot(s) Project Across Number of across indevelopment (-/-) # lot(s) Project Across Anticipated Start Date (-/-) Project Across Anticipated Start Date (-/-) List Building Contractor(s) at the time of Applications(*) Company Name | b. For common plans of develop | ment provide the foll | lowing information | | | | | |
| Number of Individual lots in development, if applicable (/) # lot(s) Total accessor of lots intended to be developed (/) Project Acres | Total Number of Acres in Project:(√ |) | | | Total Number of Acre | es Disturbed:(√) | | |
| # fol(s) Total acreage of fots intended to be developed; (/) Project Acres Anticipated Start Date; (/) List Building Contractor(a) at the time of Application (*) Company Name | # Acre(s) | | | | # Acre(s) | | | |
| Project Acres Anticipated Start Date:(/) List Building Contractor(s) at the time of Application (*) [Company Name Company Name Compan | | ment, if applicable:(\ | √) | | | velopment:(√) | | |
| List Building Contractor(s) at the time of Application (*) Company Name | | developed:(√) | | | | ended to be disturbed at a | any one time:(√) | |
| SECTION IV — IF THE PERMITTED SITE DISCHARGES TO A WATER BODY THE FOLLOWING INFORMATION IS REQUIRED Discharge Point(s): Unnamed Tributary? 1 Yes 37,965913 -B4,392387 -Baughman Fork Delete SECTION V — IF THE PERMITTED SITE DISCHARGES TO A MS4 THE FOLLOWING INFORMATION IS REQUIRED Name of MS4: V Date of application/notification to the MS4 for construction site permit coverage: Discharge Point(s)(*) Latitude Longitude * Discharge Point(s)(*) Latitude Longitude * SECTION VI — WILL THE PROJECT REQUIRE CONSTRUCTION ACTIVITIES IN A WATER BODY OR THE RIPARIAN ZONE? Will the project require construction activities in a water body or the riparian zone?: | Anticipated Start Date:(√) | | | | Anticipated Complet | ion Date:(√) | | |
| Discharge Point(s): Unnamed Tributary? Latitude Josephara Fork Section V – IF THE PERMITTED SITE DISCHARGES TO A MS4 THE FOLLOWING INFORMATION IS REQUIRED Name of MS4: Date of application/notification to the MS4 for construction site permit coverage: Date Date of application/notification to the MS4 for construction site permit coverage: Date Section VI – WILL THE PROJECT REQUIRE CONSTRUCTION ACTIVITIES IN A WATER BODY OR THE RIPARIAN ZONE? Will the project require construction activities in a water body or the riparian zone?: No | Company Name | e of Application:(*) | | | | | | , |
| SECTION V IF THE PERMITTED SITE DISCHARGES TO A MS4 THE FOLLOWING INFORMATION IS REQUIRED Name of MS4: Date of application/notification to the MS4 for construction site permit coverage: Date Discharge Point(s):(*) Latitude Longitude SECTION VI WILL THE PROJECT REQUIRE CONSTRUCTION ACTIVITIES IN A WATER BODY OR THE RIPARIAN ZONE? Will the project require construction activities in a water body or the riparian zone?: | |) SITE DISCHARGE | S TO A WATER BOI | DY THE F | OLLOWING INFORMA | ATION IS REQUIRED 👰 | | |
| Name of MS4: Date of application/notification to the MS4 for construction site permit coverage: Date Discharge Point(s):(*) Latitude Longitude Longitude SECTION VI WILL THE PROJECT REQUIRE CONSTRUCTION ACTIVITIES IN A WATER BODY OR THE RIPARIAN ZONE? Will the project require construction activities in a water body or the riparian zone?: | 1 Yes | • | | ī | | Delete | | |
| Date of application/notification to the MS4 for construction site permit coverage: Date Discharge Point(s):(*) Latitude Longitude Longitude SECTION VI WILL THE PROJECT REQUIRE CONSTRUCTION ACTIVITIES IN A WATER BODY OR THE RIPARIAN ZONE? Will the project require construction activities in a water body or the riparian zone?: No | | SITE DISCHARGES | S TO A MS4 THE FC | OLLOWING | INFORMATION IS R | EQUIRED [7] | | |
| SECTION VI WILL THE PROJECT REQUIRE CONSTRUCTION ACTIVITIES IN A WATER BODY OR THE RIPARIAN ZONE? Will the project require construction activities in a water body or the riparian zone?: No | | | | | | | | • |
| Will the project require construction activities in a water body or the riparian zone?: | | e MS4 for construction | on site permit covera | ge: | Latitude | | | |
| Will the project require construction activities in a water body or the riparian zone?: | SECTION VI WILL THE PROJECT | T REQUIRE CONST | TRUCTION ACTIVITI | IES IN A V | ATER RODY OR THE | RIPARIAN ZONE? | | |
| (*) | | | | I | | - FOLDINATION ZOINE! | | |

Contract ID: 244300 Page 146 of 314

| If Yes, describe scope of activity: (✓) | | describe s | scope of activity | | |
|--|---|--|--|----------------|---------------------|
| Is a Clean Water Act 404 permit required?:(*) | | No | | | • |
| Is a Clean Water Act 401 Water Quality Certification rec | uired?:(*) | No | | | • |
| SECTION VII NOI PREPARER INFORMATION | | | | | |
| First Name:(*) M.I.: | Last Name:(*) | | Company Name:(*) | | |
| First Name MI | Last Name | | Company Name | | |
| Mailing Address:(*) | City:(*) | | State:(*) | | Zip:(*) |
| Mailing Address | City | | | ~ | Zip |
| eMail Address:(*) | 1 | Business Ph | none:(*) | Alternate Ph | none: |
| eMail Address | | Phone | | Phone | |
| SECTION VIII ATTACHMENTS | | | | | |
| Facility Location Map:(*) | | Upload file | | | |
| Supplemental Information: | | Upload file | | | |
| SECTION IX CERTIFICATION | | | | | |
| I certify under penalty of law that this document and all qualified personnel properly gather and evaluate the inf directly responsible for gathering the information submit penalties for submitting false information, including the | ormation submitted. Base ted is, to the best of my k | d on my inquiry of t nowledge and belie | he person or persons who ma f, true, accurate, and complete | nage the syste | m, or those persons |
| Signature:(*) | | | Title:(*) | | |
| Signature | | | Title | | |
| First Name:(*) | M.I.: | | Last Name:(*) | | |
| First Name | MI | | Last Name | | |
| eMail Address:(*) | Business Phone:(*) | | Alternate Phone: | | Signature Date:(*) |
| eMail Address | Phone | | Phone | | Date |
| Click to Save Values for Future Retrieval Click to | o Submit to EEC | | | | |





Communicating All Promises (CAP)

Item No. 7-9012.51 County: Fayette Route: KY 418

| CAP# | Promise made to: | Location of Promise: | CAP Description: |
|------|------------------|----------------------|---|
| 1 | IVCP Athens, LLC | Parcel 7 | During construction, KYTC will keep Competition Drive and Doe Run Trail open and accessible for use by Property Owner and its invitees during the hours of 4PM to 10 PM on weekdays and 8AM to 10PM on weekend days. In the event short closures of such roads are necessary, KYTC will coordinate such closures with Property Owner in advance and provide detours to accommodate the usual and expected traffic during the closure period. |
| 2 | IVCP Athens, LLC | Parcels 6 & 7 | KYTC will work diligently to complete the installation of the RCUT Intersection as soon as reasonably possible with a goal to have it open and operational by August 1, 2024. |
| 3 | IVCP Athens, LLC | Parcels 6 & 7 | As part of the RCUT Intersection project, KYTC will remove and dispose of the existing temporary signal at the intersection of KY 418 & Competition Drive. |
| 4 | IVCP Athens, LLC | Parcels 6 & 7 | KYTC is aware that the Property Owner will need to utilize land within the Area Acquired in connection with the installation of sanitary sewer improvements, including the placement of infrastructure and jack and boring operations related to extending the sanitary sewer line under Athens-Boonesboro Road, which work will be done in accordance with permits obtained from the applicable governmental authorities. The conveyance by Property Owner is made with the understanding the Property Owner will be allowed to continue such work. KYTC and the Property Owner will work in good faith to coordinate all sanitary sewer work in the Area Acquired and the area of the RCUT Intersection, including the installation by Property Owner of its gravity sanitary sewer line prior to the relocation of the existing force main that will be part of the RCUT Intersection project. |
| 5 | IVCP Athens, LLC | Parcel 7 | The Property Owner will be permitted to install signage in the median of Competition Drive within the Temporary Easement area. The Property Owner will be permitted to continue its construction and development activities in the Temporary Easement area, including without limitation, the construction of Competition Drive, utilities, and site development work related to the remainder of Property Owner's land. |
| 6 | IVCP Athens, LLC | Parcels 7 | KYTC will be responsible for any and all damage caused by the proposed RCUT Intersection work in or about the Temporary Easement area, including without limitation, damage to utilities, pavement, curbs, sidewalks, landscaping, signage, or other property or persons, and will repair any such damage at no cost to the Property Owner. KYTC will coordinate the RCUT Intersection project work within the Temporary Easement area with the Property Owner. |

| Item No: 7-9012.51 County: Fayette Route: KY 418 GENERAL SUMMARY ITEM NO ITEM UNIT QTY PAVING TON 6568 O0100 ASPHALT SEAL AGGREGATE TON 35 O0103 ASPHALT SEAL COAT TON 5 O0190 LEVELING & WEDGING PG64-22 TON 70 O0217 CL4 ASPH BASE 1.0D PG 64-22 TON 2869 O0219 CL4 ASPH BASE 1.0D PG 76-22 TON 1144 O0342 CL4 ASPH SURF 0.38A PG 76-22 TON 3139 O0356 ASPH MATERIAL FOR TACK TON 22 |
|--|
| County: Fayette Route: KY 418 September Route: KY 418 September Route: KY 418 September Route: KY 418 September Rout |
| GENERAL SUMMARY ITEM NO ITEM UNIT QTY PAVING 00003 CSB ① TON 6568 00100 ASPHALT SEAL AGGREGATE TON 35 00103 ASPHALT SEAL COAT TON 5 00190 LEVELING & WEDGING PG64-22 ② TON 70 00217 CL4 ASPH BASE 1.0D PG 64-22 TON 2869 00219 CL4 ASPH BASE 1.0D PG 76-22 TON 1144 00342 CL4 ASPH SURF 0.38A PG 76-22 TON 3139 |
| ITEM NO ITEM UNIT QTY PAVING 00003 CSB ① TON 6568 00100 ASPHALT SEAL AGGREGATE TON 35 00103 ASPHALT SEAL COAT TON 5 00190 LEVELING & WEDGING PG64-22 ② TON 70 00217 CL4 ASPH BASE 1.0D PG 64-22 TON 2869 00219 CL4 ASPH BASE 1.0D PG 76-22 TON 1144 00342 CL4 ASPH SURF 0.38A PG 76-22 TON 3139 |
| PAVING 00003 CSB ① TON 6568 00100 ASPHALT SEAL AGGREGATE TON 35 00103 ASPHALT SEAL COAT TON 5 00190 LEVELING & WEDGING PG64-22 ② TON 70 00217 CL4 ASPH BASE 1.0D PG 64-22 TON 2869 00219 CL4 ASPH BASE 1.0D PG 76-22 TON 1144 00342 CL4 ASPH SURF 0.38A PG 76-22 TON 3139 |
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| 00100 ASPHALT SEAL AGGREGATE TON 35 00103 ASPHALT SEAL COAT TON 5 00190 LEVELING & WEDGING PG64-22 TON 70 00217 CL4 ASPH BASE 1.0D PG 64-22 TON 2869 00219 CL4 ASPH BASE 1.0D PG 76-22 TON 1144 00342 CL4 ASPH SURF 0.38A PG 76-22 TON 3139 |
| 00103 ASPHALT SEAL COAT TON 5 00190 LEVELING & WEDGING PG64-22 ② TON 70 00217 CL4 ASPH BASE 1.0D PG 64-22 TON 2869 00219 CL4 ASPH BASE 1.0D PG 76-22 TON 1144 00342 CL4 ASPH SURF 0.38A PG 76-22 TON 3139 |
| 00190 LEVELING & WEDGING PG64-22 2 TON 70 00217 CL4 ASPH BASE 1.0D PG 64-22 TON 2869 00219 CL4 ASPH BASE 1.0D PG 76-22 TON 1144 00342 CL4 ASPH SURF 0.38A PG 76-22 TON 3139 |
| 00217 CL4 ASPH BASE 1.0D PG 64-22 TON 2869 00219 CL4 ASPH BASE 1.0D PG 76-22 TON 1144 00342 CL4 ASPH SURF 0.38A PG 76-22 TON 3139 |
| 00219 CL4 ASPH BASE 1.0D PG 76-22 TON 1144 00342 CL4 ASPH SURF 0.38A PG 76-22 TON 3139 |
| 00342 CL4 ASPH SURF 0.38A PG 76-22 TON 3139 |
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| |
| 02677 ASPH PAVE MILL & TEXTURING (3) TON 3964 |
| 02696 SHOULDER RUMBLE STRIPS LF 5759 |
| ROADWAY |
| 01921 STANDARD BARRIER MEDIAN TYPE 4 SQYD 2536 |
| 02014 BARRICADE-TYPE III EACH 4 |
| 02159 TEMP DITCH LF 1084 |
| 02200 ROADWAY EXCAVATION CUYD 5929 |
| 02429 R/W MONUMENT TYPE 1 EA 6 |
| 02432 WITNESS POST EA 6 |
| 02483 CHANNEL LINING CLASS II TON 803 |
| 02545 CLEARING AND GRUBBING LS 1 |
| 02650 MAINTAIN & CONTROL TRAFFIC LS 1 |
| 02671 PORTABLE CHANGEABLE MESSAGE SIGN EACH 3 |
| 02701 TEMP SILT FENCE LF 1084 |
| 02704 SILT TRAP TYPE B EACH 1 |
| 02705 SILT TRAP TYPE C EACH 1 |
| 02707 CLEAN SILT TRAP TYPE B EACH 1 |
| 02708 CLEAN SILT TRAP TYPE C EACH 1 |
| 02720 SIDEWALK-4 IN CONCRETE SQYD 72 |
| 02726 STAKING LS 1 |
| 02775 ARROW PANEL EACH 4 |
| 05953TEMP SEEDING AND PROTECTIONSQYD34005963INITIAL FERTILIZERTON0.3 |
| 05963INITIAL FERTILIZERTON0.305964MAINTENANCE FERTILIZERTON0.4 |
| 05985 SEEDING AND PROTECTION SQYD 6776 |
| 05992 AGRICULTURAL LIMESTONE TON 4.2 |
| 06510 PAVE STRIPING-TEMP PAINT-4 IN LF 3526 |
| 06542 PAVEMENT STRIPING - THERMO 6" W LF 12180 |
| 06543 PAVEMENT STRIPING - THERMO 6" Y LF 5380 |
| 06546 PAVEMENT STRIPING - THERMO 12" W LF 107 |
| 06568 PAVE MARKING-THERMO STOP BAR-24IN LF 311 |
| 06569 PAVE MARKING-THERMO CROSS-HATCH SQFT 3256 |

| | Highway Safety Improvement Program | | |
|------------------------|---|--------|--------|
| TEAM KENTUCKY | | | כר |
| TRANSPORTATION CAGINET | County: Fayette | | 7 |
| | Route: KY 418 | | |
| | GENERAL SUMMARY | | |
| ITEM NO | ITEM | UNIT | QTY |
| 06574 | PAVE MARKING-THERMO CURVE ARROW | EA | 47 |
| 06575 | PAVE MARKING-THERMO COMB ARROW | EA | 5 |
| 06576 | PAVE MARKING-THERMO ONLY | EACH | 6 |
| 06610 | INLAID PAVEMENT MARKER-MW | EA | 154 |
| 06611 | INLAID PAVEMENT MARKER-MY | EA | 59 |
| 06612 | INLAID PAVEMENT MARKER-BY | EA | 19 |
| 10020NS | FUEL ADJUSTMENT | DOLL | 13902 |
| 10030NS | ASPHALT ADJUSTMENT | DOLL | 28982 |
| 20550ND | SAWCUT | LF | 3939 |
| 21417ES717 | PAVE MARK THERMO CONE CAP-SOLID YELLOW | SQFT | 1300 |
| 22680EN | QWICK CURB MEDIAN SEPARATOR | LF | 220 |
| 22692NS714 | PAVEMENT MARKING-THERMO LETTERS | EA | 4 |
| 23158ES505 | DETECTABLE WARNINGS | SQFT | 47 |
| 23261EC | PAVE MARK-THERMO-X-WALK-24 IN | SF | 236 |
| 24679ED | PAVE MARK THERMO CHEVRON | SQFT | 210 |
| 24683ED | PAVE MARKING - THERMO DOTTED LANE EXTEN | LF | 472 |
| 24889EC | PAVE MARKING-THERMO U-TURN | EACH | 14 |
| DRAINAGE | | | |
| 00441 | ENTRANCE PIPE-18 IN | LF | 38 |
| 00445 | ENTRANCE PIPE-30 IN | LF | 78 |
| 01310 | REMOVE PIPE | LF | 4 |
| SANITARY SE | WER | | |
| 15062 | S FORCE MAIN PVC 10 INCH | LF | 180 |
| 15076 | S FORCE MAIN TIE-IN 10 IN | EA | 2 |
| SIGNING | | | |
| 02562 | TEMPORARY SIGNS | SQFT | 250 |
| 06406 | SBM ALUM SHEET SIGNS .080 IN | SQFT | 477.77 |
| 06407 | SBM ALUM SHEET SIGNS .125 IN | SQFT | 255.25 |
| 06410 | STEEL POST TYPE 1 | LF | 857 |
| 06490 | CLASS A CONCRETE FOR SIGNS | CUYD | 2 |
| 21596ND | GMSS TYPE D | EACH | 8 |
| 21596ND | GMSS TYPE D (Surface Mount) | EACH | 23 |
| 24631EC | BARCODE SIGN INVENTORY | EACH | 107 |
| SIGNALIZATI | ON | _ | |
| 4740 | POLE BASE | EACH | 2 |
| 4780 | FUSED CONNECTOR KIT | EACH | 21 |
| 4820 | TRENCHING AND BACKFILLING | LIN FT | 2348 |
| 4821 | OPEN CUT ROADWAY | LIN FT | 1858 |
| 4841 | CABLE-NO. 14/2C | LIN FT | 680 |
| 4845 | CABLE-NO. 14/7C | LIN FT | 2755 |
| 4881 | MAST ARM POLE | EACH | 4 |

| TEAM KENTUCKY. TRANSPORTATION GARDIET | Highway Safety Improvement Program Item No: 7-9012.51 County: Fayette | H | 55 |
|---------------------------------------|---|--------|------|
| | Route: KY 418 | | |
| | GENERAL SUMMARY | | |
| ITEM NO | ITEM | UNIT | QTY |
| 4927 | COORDINATING UNIT | EACH | 1 |
| 4933 | TEMP SIGNAL 2 PHASE | EACH | 2 |
| 4953 | TEMPORARY RELOCATION OF SIGNAL HEAD | EACH | 30 |
| 20093NS835 | INSTALL PEDESTRIAN HEAD LED | EACH | 2 |
| 20188NS835 | INSTALL SIGNAL-3 SECTION LED | EACH | 17 |
| 20391NS835 | ELECTRICAL JUNCTION BOX TYPE A | EACH | 5 |
| 20392NS835 | ELECTRICAL JUNCTION BOX TYPE C | EACH | 20 |
| 20457NS835 | INSTALL PED DETECTOR AUDIBLE | EACH | 2 |
| 21077ED | FIBER OPTIC | LIN FT | 5093 |
| 21543EN | BORE AND JACK CONDUIT | LIN FT | 3702 |
| 22403NN | WEB CAMERA ASSEMBLY | EACH | 1 |
| 22939ND | INSTALL LUMINAIRE POLE | EACH | 2 |
| 23157EN | TRAFFIC SIGNAL POLE BASE | CU YD | 14.2 |
| 23222EC | INSTALL SIGNAL PEDESTAL | EACH | 1 |
| 24901EC | HDPE CONDUIT - 2 INCH - SCHEDULE 80 | LIN FT | 6242 |
| 24908EC | INSTALL SIGNAL CONTROLLER-TY ATC | EACH | 3 |
| 24923EC | CABINET FIBER TERMINATION PANEL | EACH | 5 |
| 24955ED | REMOVE SIGNAL EQUIPMENT | EACH | 2 |
| 26119EC | INSTALL RADAR PRESENCE DETECTOR TYPE A | EACH | 9 |
| 26120EC | INSTALL RADAR ADVANCE DETECTOR TYPE B | EACH | 5 |
| 26169EC | INSTALL MAST ARM DAMPENER | EACH | 6 |
| GUARDRAIL | | | |
| 01987 | DELINEATOR FOR GUARDRAIL B/W | EA | 8 |
| 02351 | GUARDRAIL-STEEL W BEAM-S FACE | LF | 400 |
| 02360 | GUARDRAIL TERMINAL SECTION NO 1 | EA | 2 |
| 02381 | REMOVE GUARDRAIL | LF | 1052 |
| DEMOBILIZA [*] | TION & MOBILIZATION | • | |
| 02568 | MOBILIZATION | LS | 1 |
| 02569 | DEMOBILIZATION | LS | 1 |

Notes:

- 1 2958 Tons of CSB has been added to this quantity to account for daylighted CSB shoulders.
- \bigodot An additional 10% has been added to this quantity to use at the discretion of the engineer.
- 3 Longitudinal Edge Key is paid by the TON under this bid item.

| KENTUCKY. TRANSPORTATION CASHET | Highway Safety Improvement Program Item No: 7-9012.51 County: Fayette Route: KY 418 | | FDS |
|---------------------------------|--|------|----------|
| | PAVING AREAS | | |
| ITEM NO | ITEM | UNIT | QUANTITY |
| | FULL DEPTH ASPHALT | | |
| 00342 | CL4 ASPH SURF 0.38A PG 76-22 (1.5 INCH) | SY | 6927 |
| 00219 | CL4 ASPH BASE 1.0D PG 76-22 (TOP LIFT) (3.00 INCH) | SY | 6933 |
| 00217 | CL4 ASPH BASE 1.0D PG 64-22 (MIDDLE LIFT) (3.75 INCH) | SY | 6945 |
| 00217 | CL4 ASPH BASE 1.0D PG 64-22 (BOTTOM LIFT) (3.75 INCH) | SY | 6960 |
| 00003 | CSB | SY | 6975 |
| 00100 | ASPHALT SEAL AGGREGATE ② | SY | 1746 |
| 00103 | ASPHALT SEAL COAT ① | SY | 1746 |
| 00356 | ASPHALT MATERIAL FOR TACK | SY | 51908 |
| | ASPHALT OVERLAY | | |
| 00190 | LEVELING & WEDGING PG64-22 | SY | 228 |
| 00342 | CL4 ASPH SURF 0.38A PG 76-22 | SY | 31104 |
| 02677 | ASPH PAVE MILL & TEXTURING (1.5 INCH) | SY | 33636 |
| 02677 | ASPH PAVE MILL & TEXTURING (4.5 INCH) | SY | 4800 |

Application rate of 2.4 lbs/sqyd. Apply two coats.
 Application rate of 20 lbs/sqyd. Apply two coats.

| | Barcode | Sign Inv. (EACH) | 1 | 1 | 1 | 1 | | | 1 1 | 1 1 | H | 1 | 1 | 1 | 1 | | | | -1 - | 1 1 | 1 | н | 1 | 1 | 1 | | ٠ ٠ | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | 1 |
|----------------|---------------------------|--------------------------------|-----------------------|-------------------------|--------------------|----------------------|-----------------------|----------------------|--------------------|--------------------|----------------------------|--------------------|----------------------------|----------------------|--------------|----------------------------------|--------------------------|----------------------|--------------------|--------|--------|---------------------------------|-----------|--------------------------|--------|------------|---------------------------|-----------|-----------------------|---------------------------|----------------------|---------------------------------|-------------------------------|---------------------------------------|--------------------------|----------------------|--------------------------|------------------|--------------------|----------------------|----------------------|-------------|--------------------|---------------------------------|----------------------------|
| - | TOTAL Ba | | 32 | | 24 | 12 | 1,2 | 12 | 22 | 24 | | 26 | | 15 | H | \dagger | | 11 | 12 | 16 | H | | | \dagger | | 15 | CT | | 10 | | 15 | | | 12 | 12 | 15 | | \perp | 24 | 13 | 15 | 7 | 13 | 12 | |
| - | | | | | H | + | + | + | + | H | | H | | | H | + | | + | + | - | H | | | + | | \dashv | + | 1 | + | | | | | | | H | \vdash | + | H | \dashv | + | H | + | + | |
| - | ed 2-1/4" of Stiffener | | | | | | - | 1 | 1 | \Box | | | | | | + | | | - | | | | | - | | | + | | | | | | | | | | \vdash | + | | dash | \downarrow | \coprod | + | + | |
| | | 2-1/2" Post (ft) | | | | 12 | , | 17 | | | | | | 15 | | | | 11 | 12 | 16 | | | | | | 7 | CT | | 10 | | 15 | | | 12 | 12 | 15 | | \downarrow | | 13 | 7, | 1 | 12 | 12 | |
| | Estimated | Length of 2" Post (ft) | 16 | | 12 | | | 13 | 11 | 12 | | 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | 12 | | | | 13 | | |
| | | Sign | 2 | | 2 | 1 | - | ٦, | 7 | 2 | | 2 | | 1 | | | | 1 | - | 1 1 | | | | | | - | 7 | | 1 | | 1 | | | 1 | 1 | 1 | | | 2 | 1 | - | 1 | - 1 | - | |
| | | Bracing Req'd | | | | Yes | 202 | Yes | S L | | | | | Yes | Yes | Yes | | Yes | γ | Yes | | | | | | y y | SE . | | Yes | | Yes | | | Yes | Yes | Yes | L | L | | Yes | Yes | Yes | Yes | | |
| | | Installation Type | Stnd w/ Soil Plate | | Stnd w/ Soil Plate | Type D Surface Mount | Tom P. Crufaco Manuat | Type D Surface Mount | Stnd w/ Soil Plate | Stnd w/ Soil Plate | | Stnd w/ Soil Plate | | Type D Surface Mount | | | On Existing Sign Post(s) | Type D Surface Mount | Stnd w/ Soil Plate | ` | | | | | | Town | l ype D | | Stnd w/ Soil Plate | On Existing Sign Post(s) | Type D Surface Mount | | | Type D Surface Mount | Type D Surface Mount | Type D Surface Mount | | | Stnd w/ Soil Plate | Type D Surface Mount | Type D Surface Mount | | Stnd w/ Soil Plate | Type D Surrace Mount | |
| 418 | SBM Alum Sheet | Signs 0.125 IN (SQ FT) | 16.00 | 00.9 | | 12.00 | | | 6.75 | | | | | 6.75 | | | | | 12.00 | | | | | | | | | | 6.75 | | | 11.25 | | 12.25 | 12.25 | | 11.25 | | | 6.75 | | | | | |
| | SBM Alum Sheet | Signs 0.080 IN (SQ FT) | | | 00.9 | 1 | 2.25 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | | 9.00 | 9.00 | 1.50 | 9.00 | T.50 | 2.00 | 2.00 | 5.00 | 3.00 | 2.00 | 2.00 | 3.00 | 2.00 | 4.00 | 3.00 | 1.50 | 4.50 | | 4.38 | | | 4.50 | | 4.38 | 00.9 | 6 | 9.00 | 9.00 | 9.00 | 7.00 | 0 |
| <u></u> | | Sheeting Type | × | × | × | ₹ : | ₹ 5 | ₹ 5 | ₹ ₹ | × | ₹ | ₹ | × | × | × | ₹ : | × | ₹ ₹ | ₹ ₹ | = = | × | ₹ | × | × | ΙX | × × | ₹ 5 | ₹ : | × × | ₹ | × | × | × | ₹ | ₹ | × | ₹ | × | × | ₹ : | × × | = = | ₹ ₹ | ₹ : | > |
| ounty | SHEETING | Background | Yellow | Yellow | Red | White | Yellow | wnite | White | Red | White | Red | White | White | Red | White | White | Red | White | White | White | White | White | White | White | White | ania a | ine & ked | Blue | White | White | White | White | White | White | White | White | White | Red | White | Red | White | Red | Blue | Rine & Red |
| rayette County | | Text/ Ba | Red, Green & Black | Black | White | Black | n/a | Ked & Black | Black | White | Black | White | Black | Black | White | Red & Black | Black | White | wnite | Black | Black | Black | Black | Black | Black | Black | \dagger | 7 | White Black | Black | Black | Black | Black | Black | Black | Black | Black | Black | White | Black | White | Red & Black | White | \dagger | White D |
| - | | Dimensions (in x in) | x 48 Re | × 18 | Н | 48 | 18 | 36 | x 30 | 24 | x 36 | x 36 | x 36 | x 18 | 36 | 36 | 18 | + | 48 | x 12 | 12 | × 24 | Н | + | × 24 | 18 | 77 | t-7 | × 18 × 18 | | x 18 | x 36 | x 21 | x 42 | X 42 | x 18 | 36 | - | 24 | 18 | 98 98 | T | 36 | 12 | ١ / ٢ / |
| | .5 | Dime. | 48 | Dr 48 | | 36 | | 36 | 54 | | 36 | 36 | 36 | 54 | 36 | 36 | | | | 24 | | 30 | | | | 24 | | - 1 | 24 | 12 | 36 | 45 | 30 | 42 | 42 ; | 36 | | | | 54 | 36 | 36 | 36 | 747 | 24 |
| sign summary | | Sign Text / Remarks | | Competition D | | | | | | | | | | | | | | | | | | 418 | | | 418 | | ŀ | (2) | | | | 418 | | | | | 418 | | | | | | | | 75 |
| Ĭĸ - | | Sign Description | Signal Ahead | Advance Street Name (1- | Wrong Way | Keep Right | Object Marker Type 1 | No Left Turn | One Way | Wrong Way | Right Lane Must Turn Right | Do Not Enter | Right Lane Must Turn Right | One Way | Do Not Enter | No U-Turn CROSS ONLY AT CROSS | WALKS | Do Not Enter | Keen Right | To | West | State Route Sign (3 or 4 digit) | Left Lane | State Boute Sign (2 or 4 | digit) | Right Lane | Interstate Route Sign (2- | digit) | Right Lane One Way | CROSS ONLY AT CROSS WALKS | West | State Route Sign (3 or 4 digit) | Upward Left Diagonal Arrow | TRUCKS BUSES USE RIGHT U TURN LANE | TRUCKS BUSES USE RIGHT U | West | State Route Sign (3 or 4 | urgit) U-Turn | Wrong Way | One Way | Do Not Enter | No U-Turn | Do Not Enter | To Interstate Route Sign (2- | Illeratate Noute algii (z- |
| | | MUTCD | W3-3 | W16-8P | R5-1a | R4-7 | OM1-3 | K3-2 | R6-11 | R5-1a | R3-7R | R5-1 | R3-7R | R6-1R | R5-1 | R3-4 | R9-2 | R5-1 | R9-34 | M4-5 | M3-4 | M1-5a | M5-4 | M3-2 | M1-5a | M5-6 | N14-5 | T-TIM | M5-6 R6-1R | R9-2 | M3-4 | M1-5a | M6-2L | CUST | CUST | M3-4 | M1-5a | CUST | R5-1a | R6-1R | R5-1 | R3-4 | R5-1 | NI4-5 | M1-1 |
| | | Facing Traffic Traveling | EB | EB | WB | EB | 99 8 | EB. | SB | WB | EB | WB | EB | SB | SB | 8 | WB | NB G | S S | NB | NB | NB | NB | NB | NB | NB | QN G | 92 | NB NB | EB | EB | EB | EB | EB | EB | EB | EB | EB | WB | SB | SS AS | EB | WB | SR : | NB |
| | | Approx. Mile Point | 1.975 | | 1.980 | 1.999 | 0100 | 2.018 | 2.010 | 2.058 | 0.000 | 2.096 | 0.000 | 2.101 | | | | \dagger | 2 111 | 2.118 | | | | | | | t | 1 | 2.120 | | 2.139 | | | 2.166 | 2.200 | 2.230 | | 1 | 2.266 | 2.299 | 2 308 | 2222 | 2.304 | 2.510 | _ |
| | SIGN LOCATION | Approx Station | 104+27 | | 104+56 | 105+53 | 106,156 | 106-56 | 106+76 | | | 110+65 | | 110+92 | | t | | 111+38 | 111+44 | 111+83 | H | | | 1 | | | | | 111+92 | | 112+95 | | | 114+39 | 116+14 | 117+77 | | T | 1 1 | ш | 121+86 | 22.44 | | 122+30 | _ |
| | SIGN LC | Approx Offset (ft) | | | | | Ť | Ť | | | | | | | | Ť | | 1 | | | | | | 1 | | | | | | | | | | | | | | | П | П | 1 | \prod | 1 | 1 | _ |
| | _ | Side of Road | ж | œ | Я | Σ | ≥ ≥ | ≥ 0 | ۷ م | . ~ | ~ | R | æ | Σ | Σ | Σ | ~ | Σ | ΣΣ | ~ | ۳ | ~ | Я | + | В | ж a | × (| ¥ | ~ ~ | ď | Σ | Σ | Σ | Σ | Σ | Σ | Σ | Σ | ٣ | ≥ 2 | ≥≥ | Σ | <u>ح</u> ک | ≥ : | Σ |
| | | Assembly ID | S-1a | S-1b | S-2 | S-3a | S-3b | S-4 | S-6 | S-7a | S-7b | S-8a | q8-S | S-9a | q6-S | S-9c | S-10 | S-11a | S-11D | S-13aA | S-13aB | S-13aC | S-13aD | S-13bA | S-13bB | S-13bC | 3-13CA | S-13CB | S-13cC S-14 | S-15 | S-16a | S-16b | S-16c | S-17 | S-18 | S-19a | S-19b | S-19c | S-20 | S-21a | S-21b | S-228 | S-23 | S-24a | S-24h |

| | Barcode | Sign Inv. (EACH) | - | 1 1 | 1 | | ٠, | 1 | н, | | | 1 | 1 | 1 | 1 | 1 | τΙ, | | | 1 | 1 | 1 | 1 | | 1 4 | 1 | , | -1 - | | 1 | 1 | 1 | 1 | | 1 1 | 1 | | ٠, | П | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | Н | 1 | | 1 [|
|----------------|---------------|----------------------------------|--------------------|-------------------|----------------------|--------------------|--------------------------|--------|-----------|-------------------------|--------------------|----------------------|-------------|----------------------|-------------------------------------|-------------|--------------------|--------------------|----------------------|--------------------|--------------------|---------|----------------------|----------------------|--------|--------------------------|---------|-----------|--------|---------------------------|--------------------------|----------------------|--------------|--------------------|--------------|-----------------|--------------------|--------------------------|---------|-------------------------------|---------|-------------------------------------|----------------------|---------|--------------------------|------------------|--------|-------------------------------------|---------|--------------------|----------------------|
| | TOTAL | Estimated Sign Post Length | (1) | 11 | 24 | 28 | 07 | | ć | 13 | 13 | 15 | | 12 | | | 13 | 7.0 | 11 | 13 | 22 | | 13 | 13 | 13 | | | | 16 | | | 15 | | 11 | 11 | | 10 | 15 | | | 15 | | | 15 | | | 15 | | | 24 | 13 |
| | 2-1/4" | Stiffener Req'd (incdntl | to post) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Ī | Ī |
| | Estimated | | E) | | 12 | | | | ć | 13 | | 15 | | 12 | | | | | 11 | | | | | , | 10 | | | | 16 | | | 15 | | | 11 | | 10 | T | | | 15 | | | 15 | | | 15 | | | T | T |
| | Estimated | | 11 | 1 | | 7 | ‡- | | | | 13 | | | | | | 13 | 13 | 77 | 13 | 11 | | | | | | | | | | | | | - | 1 | | 1 | | | | | | | | | | | | | 12 | T |
| | | # of Le Sign Posts | - | 4 | 2 | , | 7 | | , | | 1 | 1 | | 1 | | | 1 | 2 | 7 [| 1 | 2 | | 1 | | - | | | | 1 | | | 1 | | - | 1 1 | | τ, | - | | | 1 | | | - | | | 1 | | | 2 | |
| | | Bracing Req'd | | | | | | | , | Yes | Yes | Yes | Yes | | | | | | Yes | Yes | | | Yes | Yes | Yes | Yes | 20% | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | | Yes | , ves | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | | Yes |
| | | Installation Type | Stud w/ Soil Dista | ould wy obliniate | Type D Surface Mount | Stad w/ Soil Dista | orlid W/ Soil Flate | | ŀ | lype D Surface Mount | Stnd w/ Soil Plate | Type D Surface Mount | | Type D Surface Mount | | | Stnd w/ Soil Plate | Stud w/ Soil Dista | Type D Surface Mount | Stnd w/ Soil Plate | Stnd w/ Soil Plate | | Type D Surface Mount | Type D Surface Mount | o adá | | | | Type D | | | Type D Surface Mount | | Stud w/ Soil Plate | face | | Stnd w/ Soil Plate | Iype D | | | Type D | | | Type D | | | Type D | | | Stnd w/ Soil Plate | Type D Surface Mount |
| 418 | SBM Alum | Sheet Signs 0.125 IN | (3Q F1) | | 16.00 | 12.00 | ; | 11.25 | i. | 6.75 | | | | | | | | | | | 6.75 | 12.00 | | | | 11.25 | | | | | | 6.75 | | | | | 6.75 | | 11.25 | | | | | | 11.25 | | | | | | |
| Route: KY 418 | SBM Alum | Sheet Signs 0.080 IN | 300 | 9.00 | | 0 F D | t. | | 00.9 | 9.00 | 9.00 | 9.00 | 9.00 | 2.00 | 4.00 | 2.00 | 3.00 | 9.00 | 00.0 | 9.00 | | | 9.00 | 9.00 | 4.50 | | 00.7 | 6.00 | 4.50 | 9.00 | 4.38 | | 9.00 | 00.6 | 9.00 | 1.50 | 4 | 4.50 | | 4.38 | 4.50 | 9.00 | 4.38 | 4.50 | | 4.38 | 4.50 | 9.00 | 4.38 | 6.00 | 9.00 |
| | | Sheeting Type | X | ₹ ₹ | × | × × | ₹ : | × | ₹ 5 | × × | × | × | × | ₹ | ₹ | × | ₹ ; | × × | ₹ × | × | IX | IX | × | × × | < × | × | 5 | < × | = = | × | × | × | īx : | × × | × | × | × × | ₹ ; | × | ₹ | × | ₹ | × | × | × | × | × | ₹ | × : | × 5 | ₹ ₹ |
| ounty | SHEETING | Background Color | White | Red | White | White | NA III C | White | Red | White | Red | Red | White | Blue | Blue & Red | Blue | White | Red | White | Red | White | White | Red | Red | White | White | Mileito | Wnite | Blue | Blue & Red | Blue | White | Red | White | Red | Black | White | wnite | White | White | Blue | Blue & Red | Blue | White | White | White | Blue | Blue & Red | Blue | Red | Red |
| Fayette County | 5 | Text/ Symbol Color | Apela | White | Red & Black | Black | . Dack | Black | White | Black | White | White | Red & Black | White | White | White | Black | White | Red & Black | White | Black | Black | White | White | Black | Black | Joseph | White | White | White | White | Black | White | ed & Black | White | White | Black | Black | Black | Black | White | White | White | Black | Black | Black | White | White | White | White | White |
| | <u> </u> | Sign Dimensions (in x in) | 36 v 12 | 36 | × 48 | 36 × 48 | < | × | × | 36 x 36 | × | × | x 36 | 24 × 12 | 24 × 24 | × | 36 × 12 | × > | 36 x 36 R | 36 | × | | × | 36 x 36 | × × | 45 x 36 | : : | 30 × 21 | × | 36 x 36 | 30 × 21 | × | × 36 | 十 | × | × | × | × | 45 X 36 | 30 × 21 | 36 x 18 | 36 x 36 | 30 × 21 | 36 x 18 | × | × | × | 36 x 36 | 30 × 21 | × | 36 x 36 |
| ımary | | | | 2 6 | 4 | e e | | 418 4 | e r | 2 6 | n m | c | 3 | 2 | 75 2 | 2 | C (| 70 0 | 0 0 | 3 8 | 2 | 3 | 9 | C C | n m | 418 4 | | n r | n | 75 3 | e | 2 | 3 | m r | | 1 | 2 0 | | 418 4 | en | 3 | 75 3 | 3 | 8 | 418 4 | | 3 | 75 3 | 8 | m |) [6 |
| Sign Summa | | Sign Text / Remarks | | | | | ľ | 4] | | | | | | | 7 | | | | | | | | | | | 4 | | | | 7 | | | | | | | | , | 4 | | | 7 | | | 4 | | | 7 | | 1 | |
| | | Sign Description | WeW and | Stop | No Left/U-Turn | Keep Right | State Route Sign (3 or 4 | digit) | Wrong Way | One Way Do Not Enter | Do Not Enter | Do Not Enter | No U-Turn | To | Interstate Route Sign (2- digit) | Right Arrow | One Way | Stop Wew Way | No Left/U-Turn | Do Not Enter | One Way | One Way | Do Not Enter | Do Not Enter | East | State Route Sign (3 or 4 | digit) | Mrong Way | To | Interstate Route Sign (2- | digit) Straight Arrow | One Way | Do Not Enter | No Left Turn | Do Not Enter | No Ped Crossing | One Way | State Route Sign (3 or 4 | digit) | Upward Left Diagonal Arrow | To | Interstate Route Sign (2- digit) | Upward Left Diagonal | To | State Route Sign (3 or 4 | digit) U-Turn | To | Interstate Route Sign (2- digit) | U-Turn | Wrong Way | Do Not Enter |
| | | MUTCD | P.5-1P | R1-1 | R3-18 | R4-7 | 100 | M1-5a | R5-1a | R5-1 | R5-1 | R5-1 | R3-4 | M4-5 | M1-1 | M6-1R | R6-1R | K1-1 | R3-18 | R5-1 | R6-1L | R6-2R | R5-1 | R5-1 | M3-2 | M1-5a | 0.000 | NI0-3 | M4-5 | M1-1 | M6-3 | R6-1R | R5-1 | R3-2 | R5-1 | R9-3a | R6-1R | N14-5 | M1-5a | M6-2L | M4-5 | M1-1 | M6-2L | M4-5 | M1-5a | CUST | M4-5 | M1-1 | CUST | R5-1a | R5-1 |
| | | Facing Traffic Traveling | aN | NB NB | EB | WB | 2 : | WB | 8 8 | NB | EB | NB | WB | SB | SB | SB | NB : | NB FB | WB | EB | NB | WB | SB | SB | WB | WB | O.A. | W R | WB E | WB | WB | NB | NB | WB | SB | SB | NB | WB | | | | | | | | | | | | EB | NB NB |
| | | Approx. Mile Point | 2 3 1 0 | 2.2.2 | 2.444 | 2 359 | 6.5.3 | | 000 | 7.326 | 2.321 | 2.319 | | 2.312 | | | 2.306 | 2 201 | 2.253 | 2.259 | 2.238 | | 2.253 | 2.232 | 7.101 | | | \dagger | | | | 2.125 | | 2 1 2 4 | 2.112 | | 2.101 | 7.088 | | | | | | 2.037 | | \dagger | Ħ | | | 2.037 | 2.032 |
| | SIGN LOCATION | Approx Station | 122±45 | + | 129+04 | 124+54 | +0+421 | | 0.00 | 177+/9 | 122+54 | ╙ | ш | 122+06 | | | 121+76 | 120407 | 118+98 | 119+30 | 118+16 | ш | _ | 117+85 | 11410 | | | \dagger | | | | 112+22 | | 112+15 | 111+50 | | | 110+72 | | | | | | 107+54 | | | | | | | 106+63 |
| | SIGN LC | Approx Offset (ft) | ╅ | | | | | | 1 | \dagger | | | | İ | | | 1 | T | T | İ | | | | 1 | Ī | | T | | | | | | | | | | T | | 1 | | | | | Ī | | T | Ħ | | \prod | 1 | T |
| | | Side of Road | ۵ | + | H | Σ - | ╁ | _ | _ ; | ΣΣ | | Σ | H | Σ | Σ | Σ | + | + | ۷ Σ | _ | ٦ | H | \dashv | ∑ - | _ | _ | + | - | + | _ | 7 | Σ | H | ≥ - | + | Σ | + | + | Σ | Σ | Σ | Σ | Σ | Σ | | + | Н | Σ | H | - 2 | Σ |
| | | Assembly ID | C-253 | S-25b | S-26a | S-26b | 3-270 | S-27b | S-27c | S-28a | 5-29 | S-30a | S-30b | S-31a | S-31b | S-31c | S-32a | S-32 | 5-33 | S-35 | S-36a | S-36b | S-37 | S-38 | S-39aB | S-39aC | 0.00 | S-39aD | S-39bA | S-39bB | S-39bC | S-40a | S-40b | S-40c | S-42a | S-42b | 5-43 | S-44aA | S-44aB | S-44aC | S-44bA | S-44bB | S-44bC | S-45aA | S-45aB | S-45aC | S-45bA | S-45bB | S-45bC | S-46 | S-4 <i>y</i> |

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|-----------------------|-------------------|---|--------------------|-----------------------|--------------------|---------------------------------|--------------------|
| | Barrada | Sign Inv. (EACH) | 1 | 1 | 1 | 1 | 1 |
| | TOTAL | Sign Post Length (LF) | 13 | | 24 | | 28 |
| | Estimated 2-1/4" | Stiffene Req'd (incdnt) to post) | | | | | |
| | Estimated | Length of 2-1/2" Post (ft) | | | | | |
| | Cetimotod | Length of 2" Post (ft) | 13 | | 12 | | 14 |
| | | # of Sign Posts | 1 | | 2 | | 2 |
| | | Bracing Req'd | Yes | | | | |
| | | Installation Type | Stnd w/ Soil Plate | | Stnd w/ Soil Plate | Stnd w/ Soil Plate | Stnd w/ Soil Plate |
| 418 | SBM Alum SBM Alum | Sheet Signs 0.125 IN (SQ FT) | | | | 11.25 | 12.00 |
| Route: KY 418 | SBM Alum | Sheet Signs 0.080 IN (SQ FT) | 9.00 | 2.00 | 4.50 | | |
| | | Sheeting Type | × | × | × | × | × |
| County | SHEETING | Background Sheeting Color Type | Red | Green | White | White | White |
| Fayette County | | Text/ Symbol Color | White | White | Black | Black | Black |
| | | Sign Dimensions (in x in) | 36 x 36 | 12 × 24 | 36 x 18 | 45 x 36 | 36 x 48 |
| Sign Summary | | Sign Text / Remarks | | 2 | | 418 | 55 |
| šš | | Sign Description | Do Not Enter | Mile Marker (1 digit) | West | State Route Sign (3 or 4 digit) | Speed Limit XX |
| | | MUTCD | R5-1 | D10-1 | M3-4 | M1-5a | R2-1 |
| | | Approx. Facing Mile Traffic Point Traveling | EB | WB | WB | | WB |
| | | Approx. Mile Point | 1.999 | | 1.928 | | 1.890 |
| | SIGN LOCATION | Approx Station | 105+53 | | 101+81 | | 18+66 |
| | SIGN L | Assembly of Offset Station Point Road (ft) | | | | | |
| | | Side of Road | _ | 7 | 7 | ٦ | ٦ |
| | | sembly ID | S-49a | S-49b | S-50a | S-50b | S-51 |

| | Summary of Items | us | |
|--|-----------------------------|-----|-------|
| | Steel Post - Type 1 | 857 | -F |
| | GMSS Type D | 8 | EACH |
| | GMSS Type D (Surface Mount) | 23 | EACH |
| | Class A Concrete for Signs | 2 | CU YD |

| Summary of Items | | | |
|-----------------------------------|--------|-------|------|
| SBM Alum Sheet Signs 0.080 INCH | 477.77 | SQ FT | |
| SBM Alum Sheet Signs 0.125 INCH | 255.25 | SQFT | |
| Barcode Sign Inventory | 107 | EACH | GMSS |
| Remove & Relocate Sheet Signs | | EACH | 0 |
| Remove & Relocate Sign Assemblies | | EACH | |

07-9012.51 ITEM NO.

FAYETTE COUNTY

SHEET NO. Ξ

LAYOUT SHEET

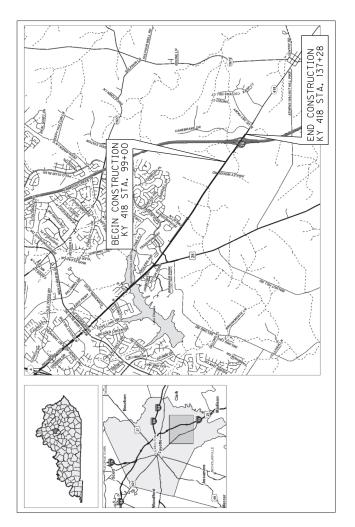
Page 157 of \$14

DEPARTMENT OF HIGHWAYS Commonwealth of Kentucky

FAYETTE

ITEM NO. 07–9012.51 KY 418 R-CUT





DESIGN CRITERIA

CLASS OF HIGHWAY TYPE OF TERRAIN DESIGN SPEED ADT PRESENT (_SECONDS NORTH SECONDS WEST MINUTES -

GEOGRAPHIC

LATITUDE _ LONGITUDE _

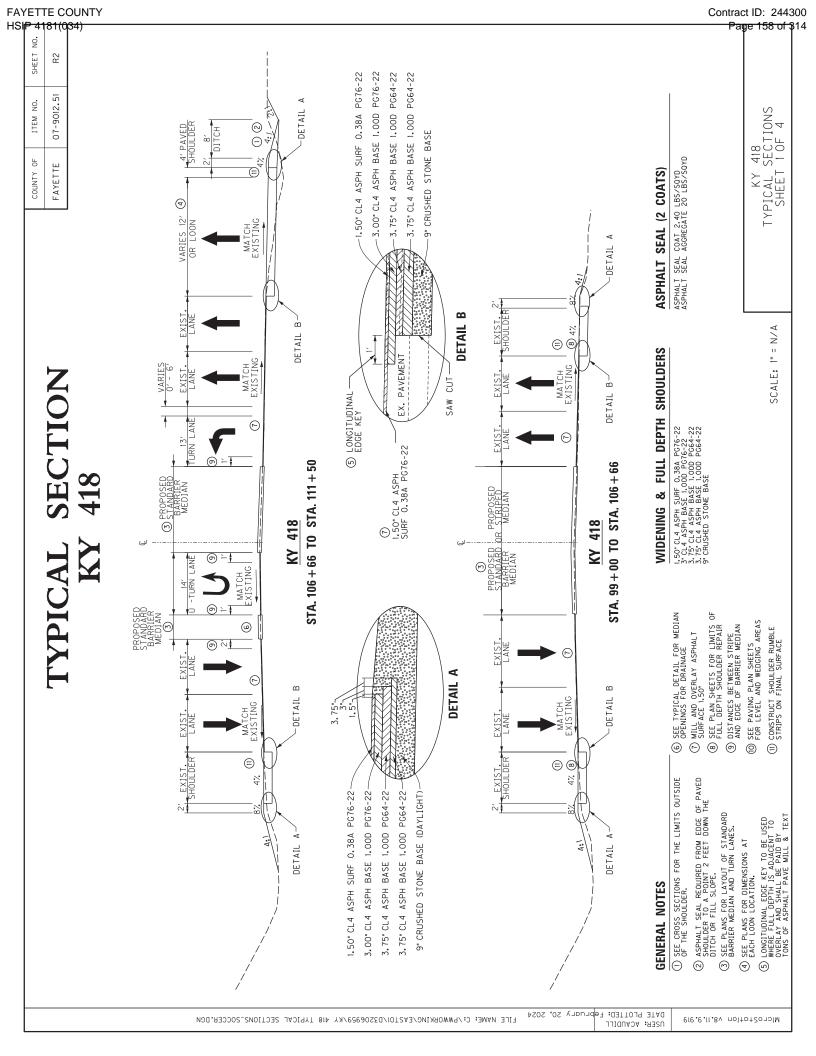
BEFORE YOU DIG

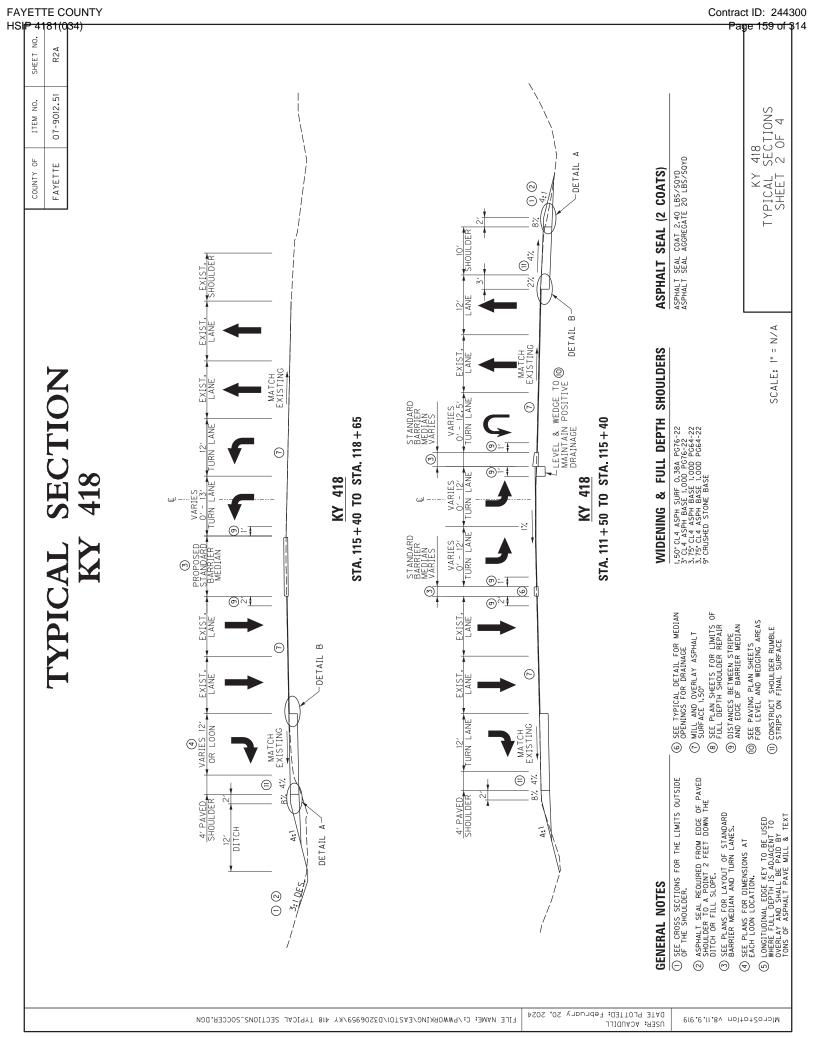
COORDINATES

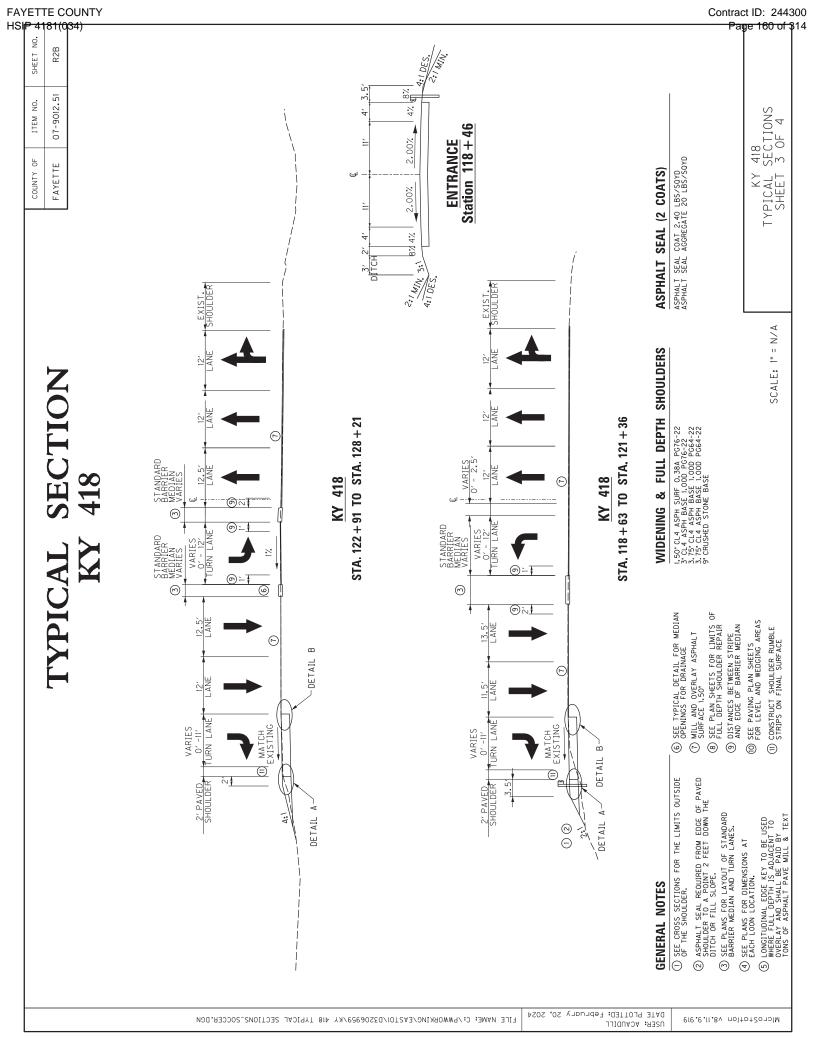
The contractor is instructed to call 1-800-752-6007 to reach KV 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than the n(10) business days prior to excavation. The contractor should be aware that owners of underground facilities are not required to be members of the KY 811 one-call Before-U-Dig (BUD) service. The contractor must coordina excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area.

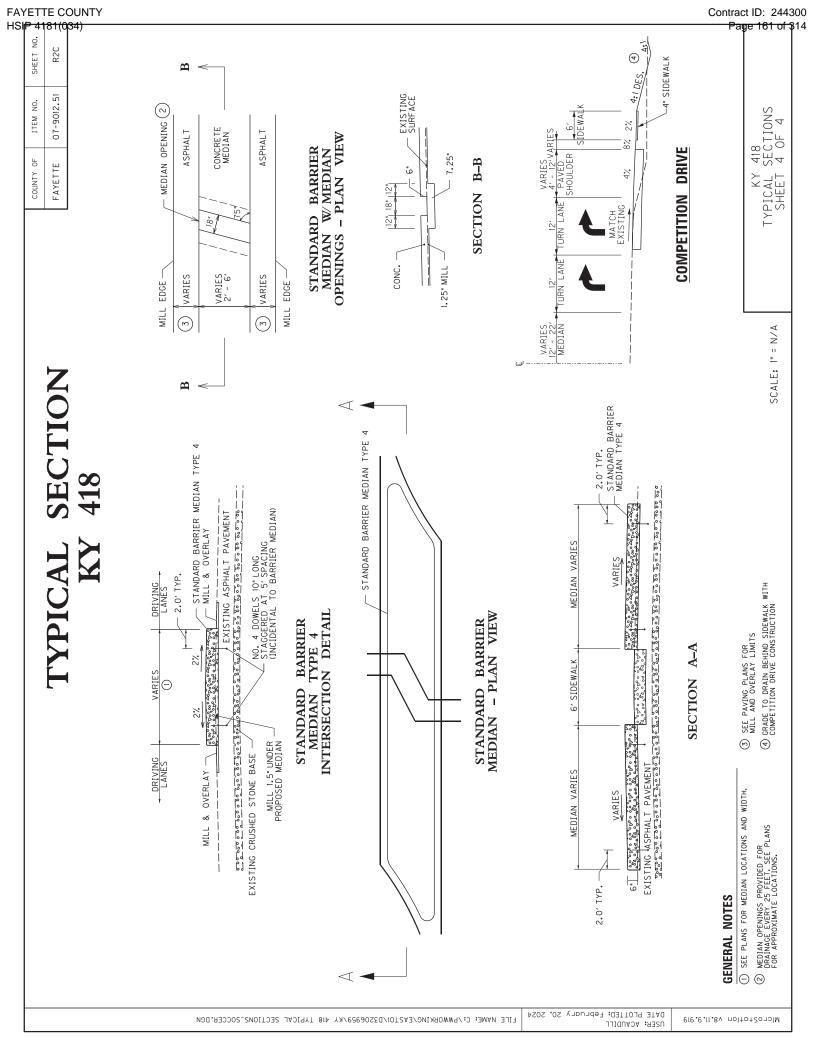
DEGREES _

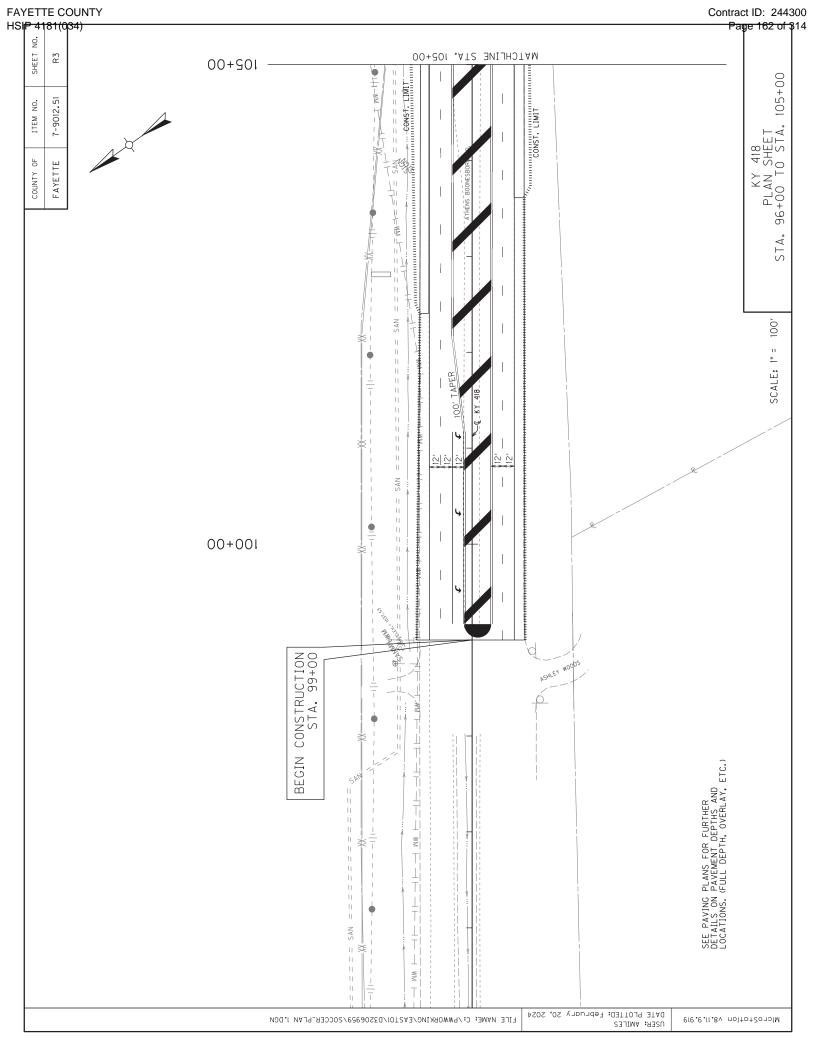
DATE PLOTTED: February 20, 2024

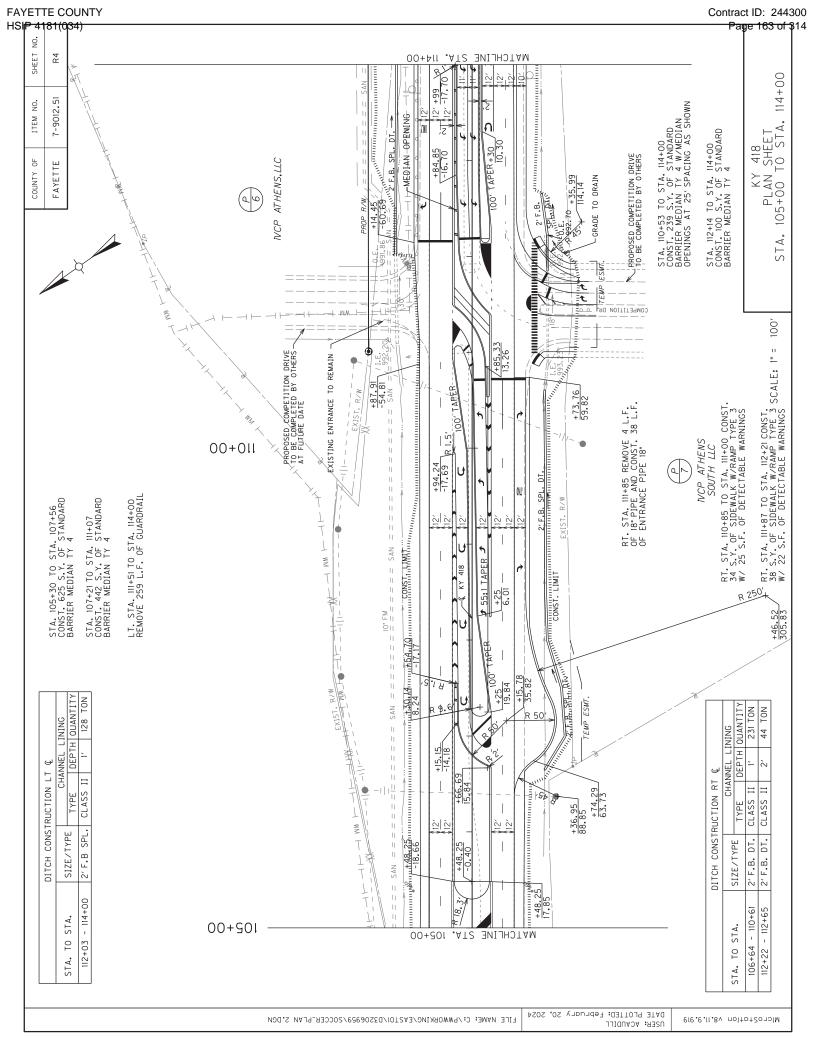


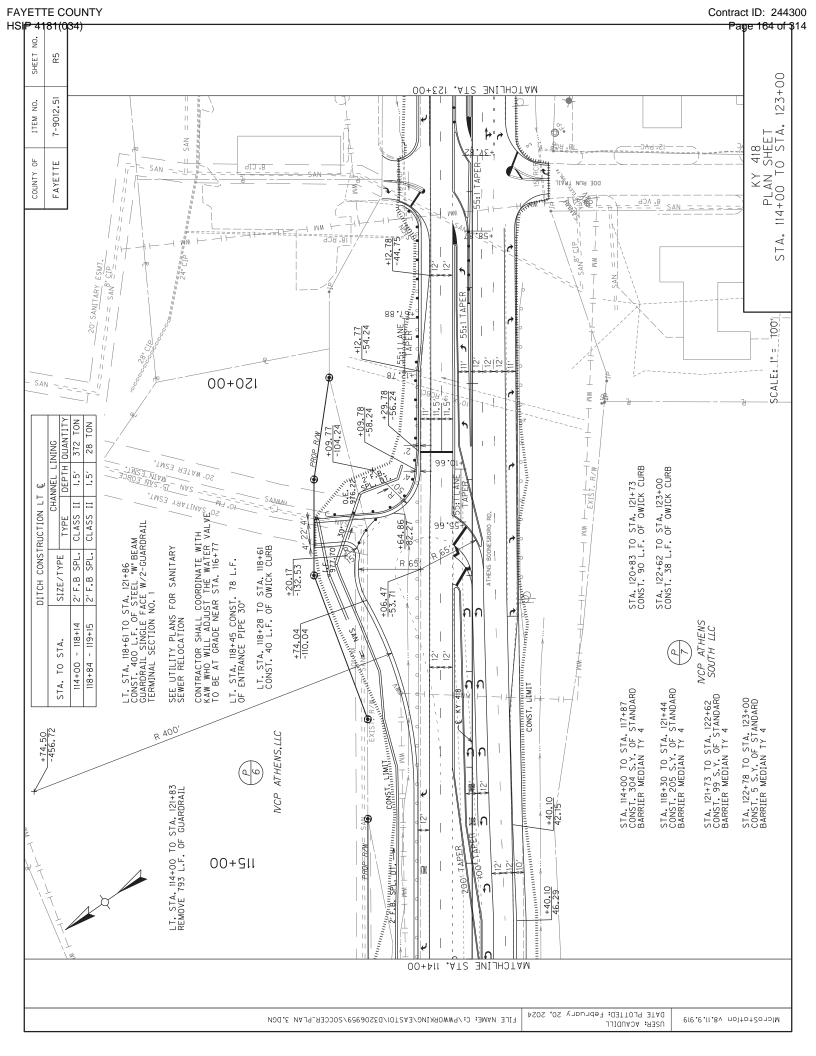


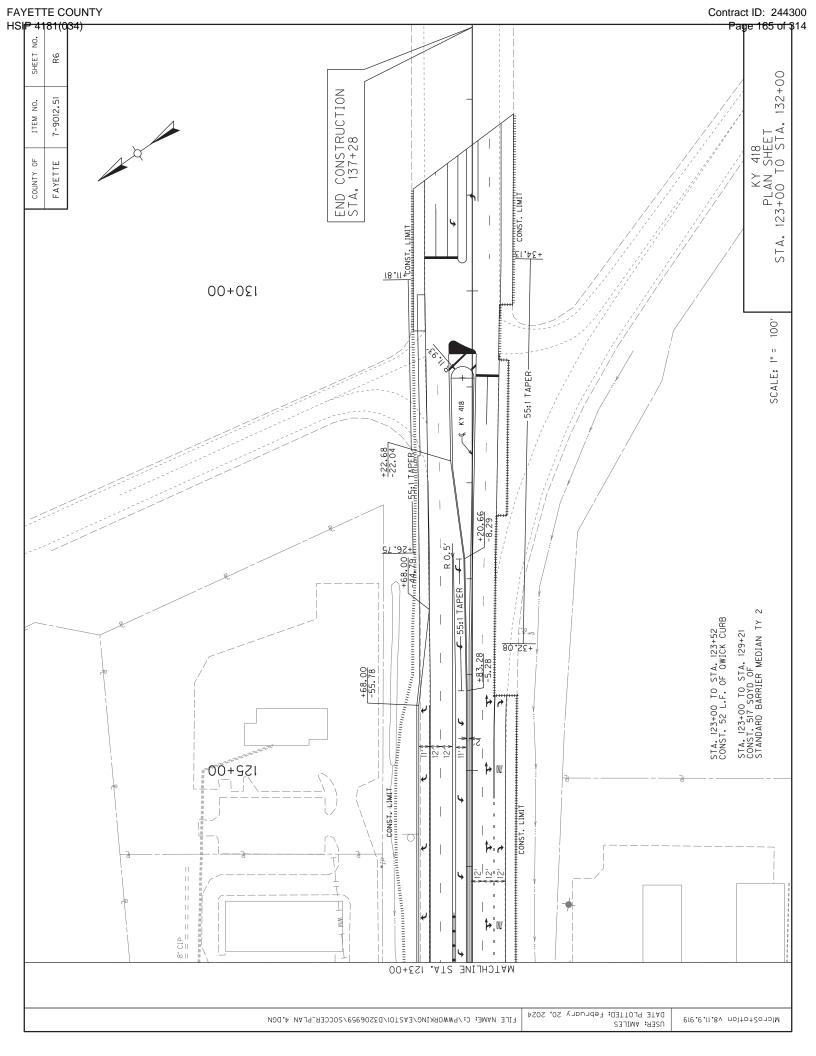


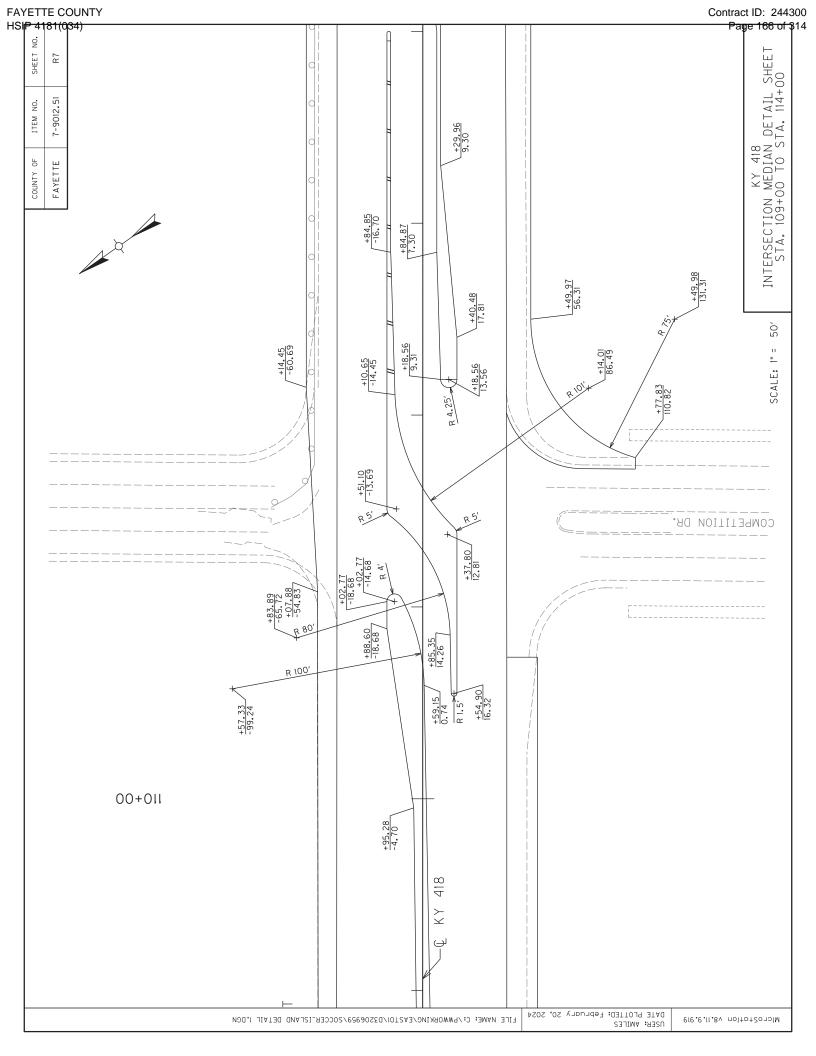


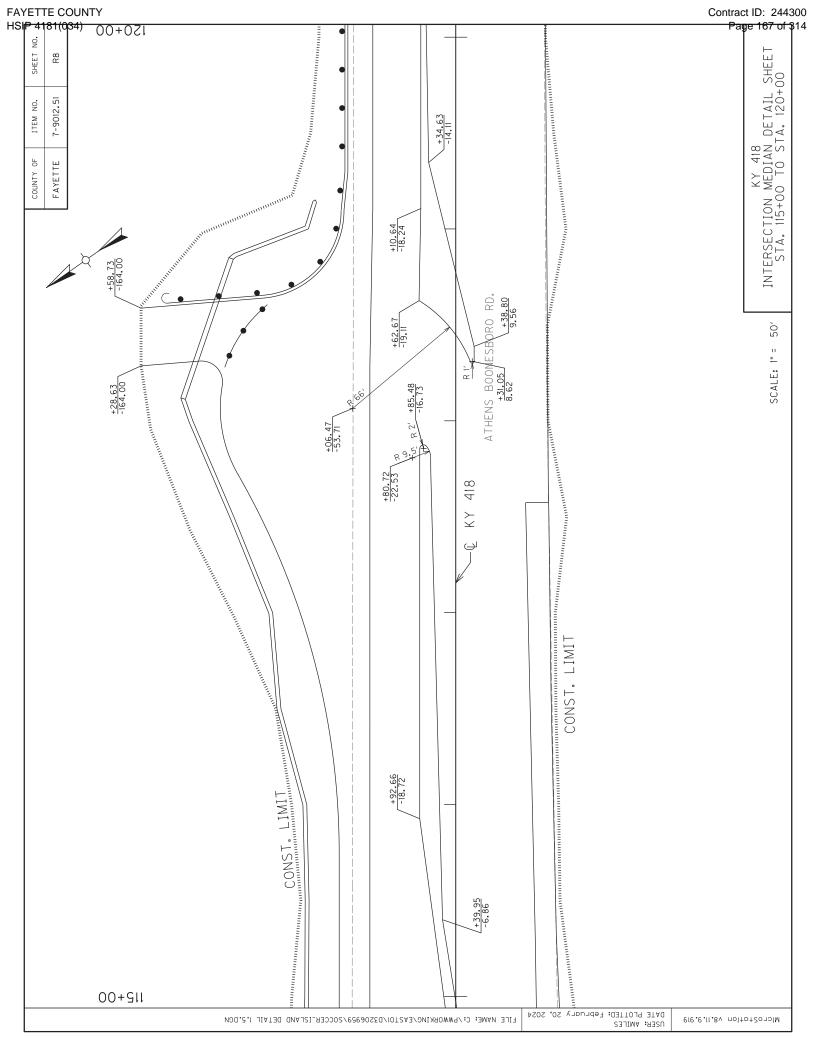


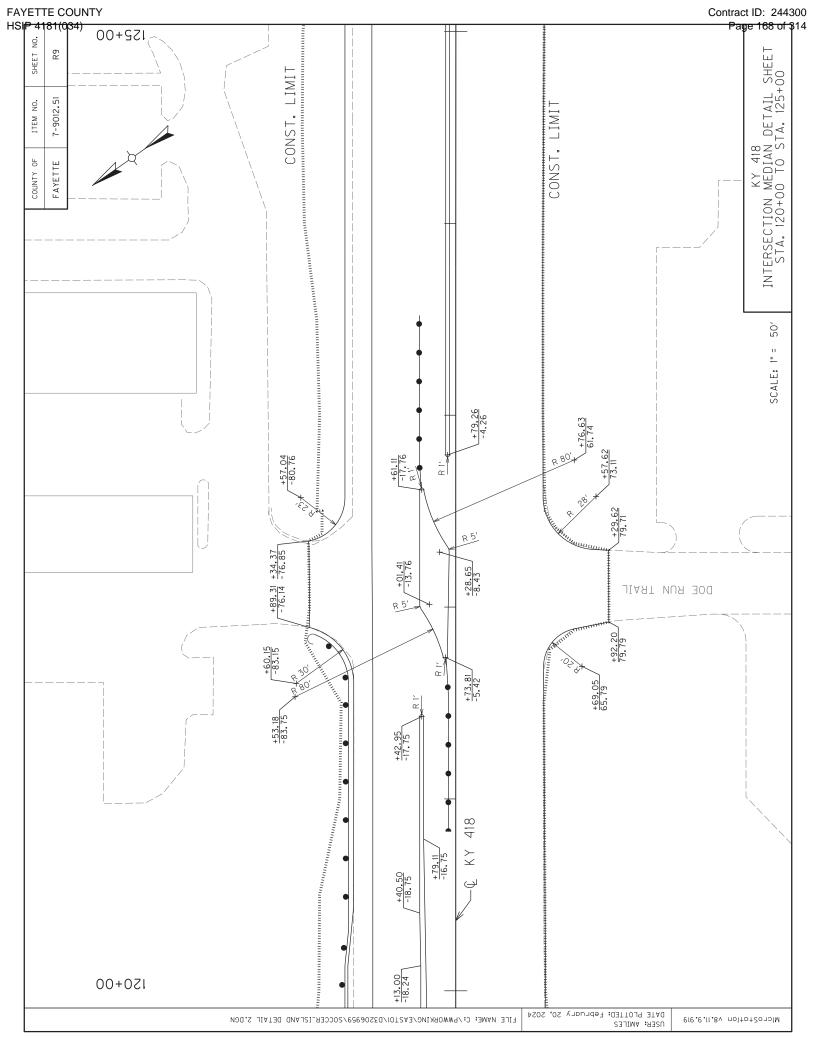


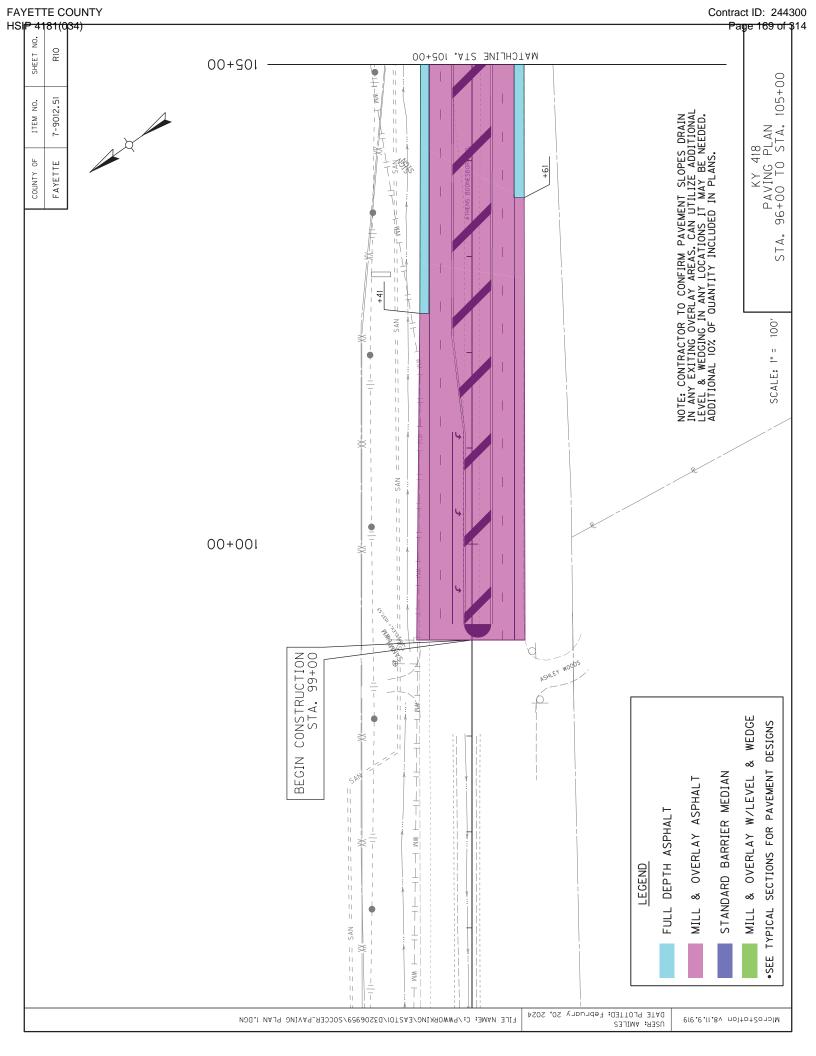


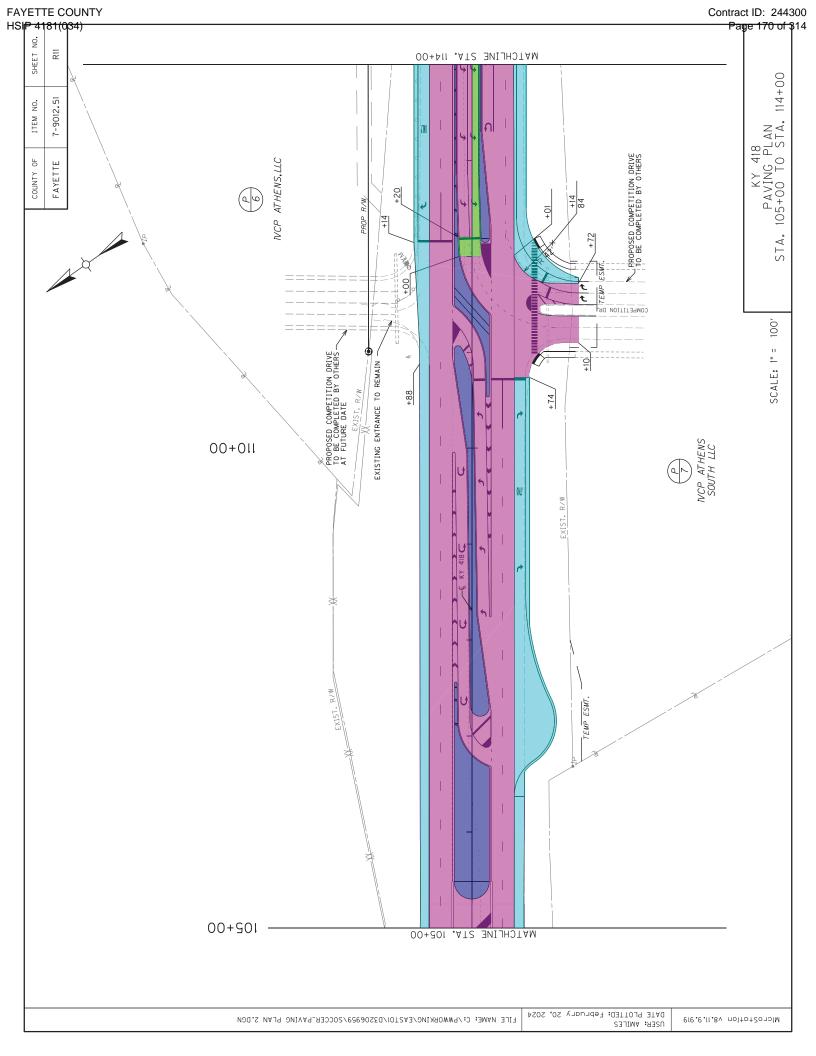


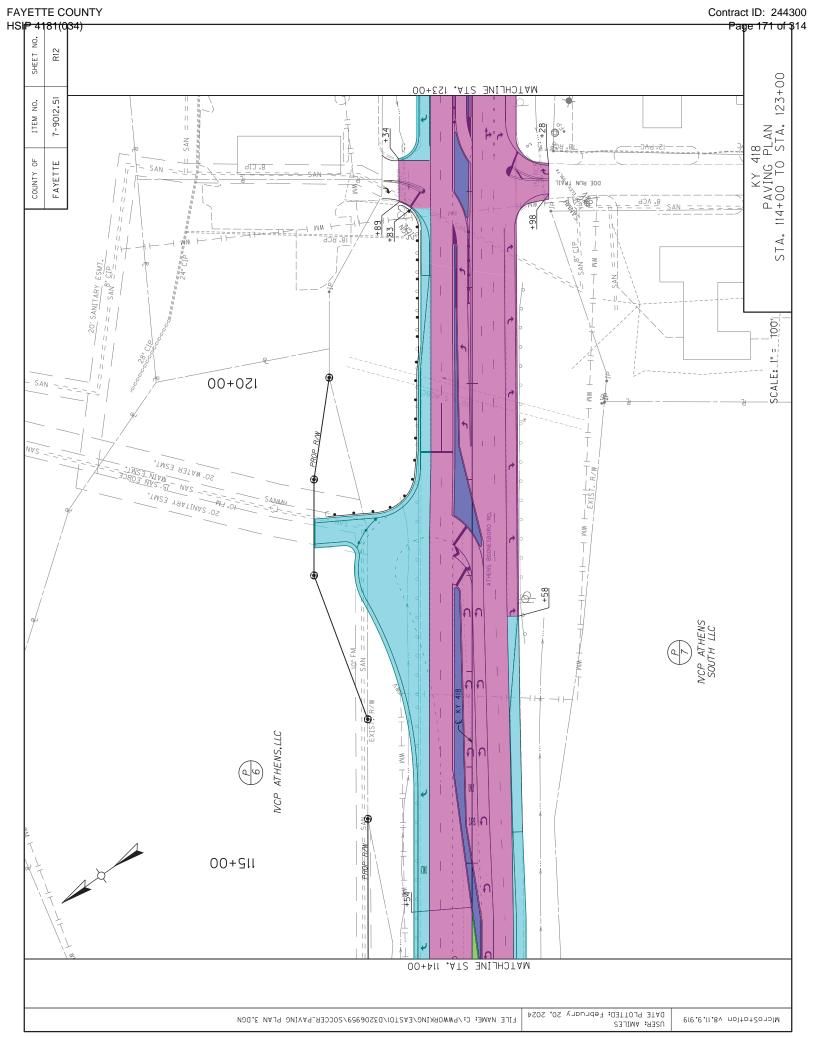


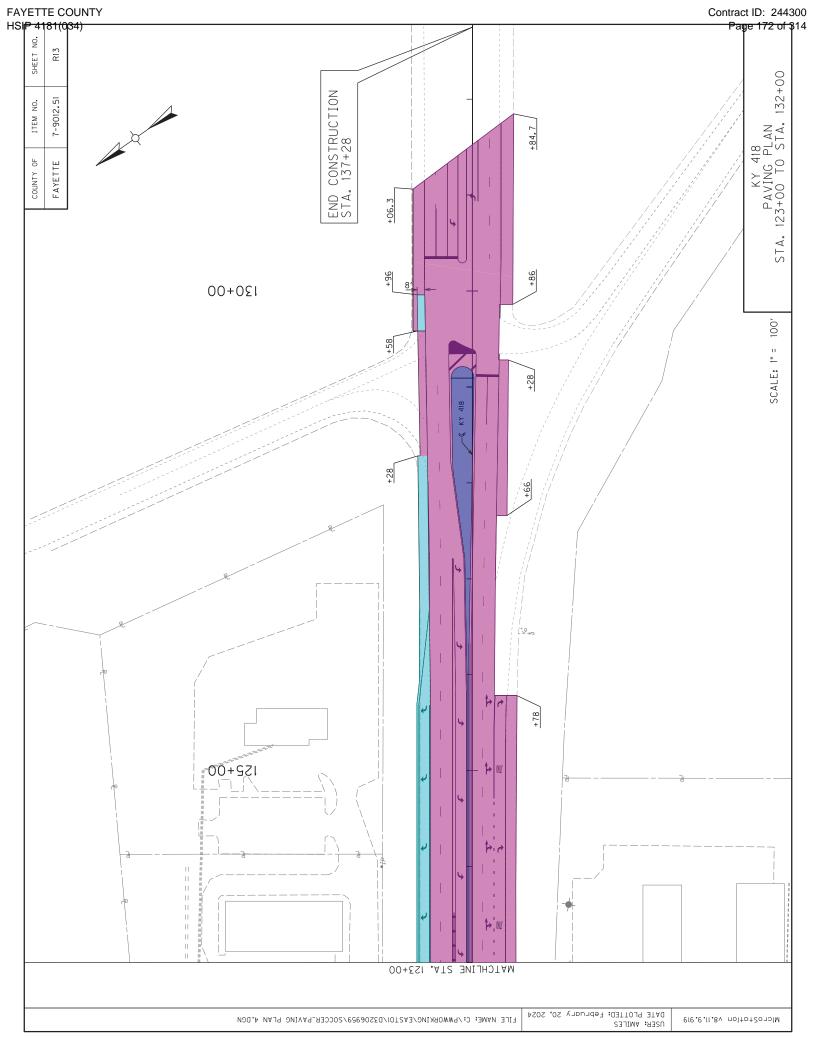


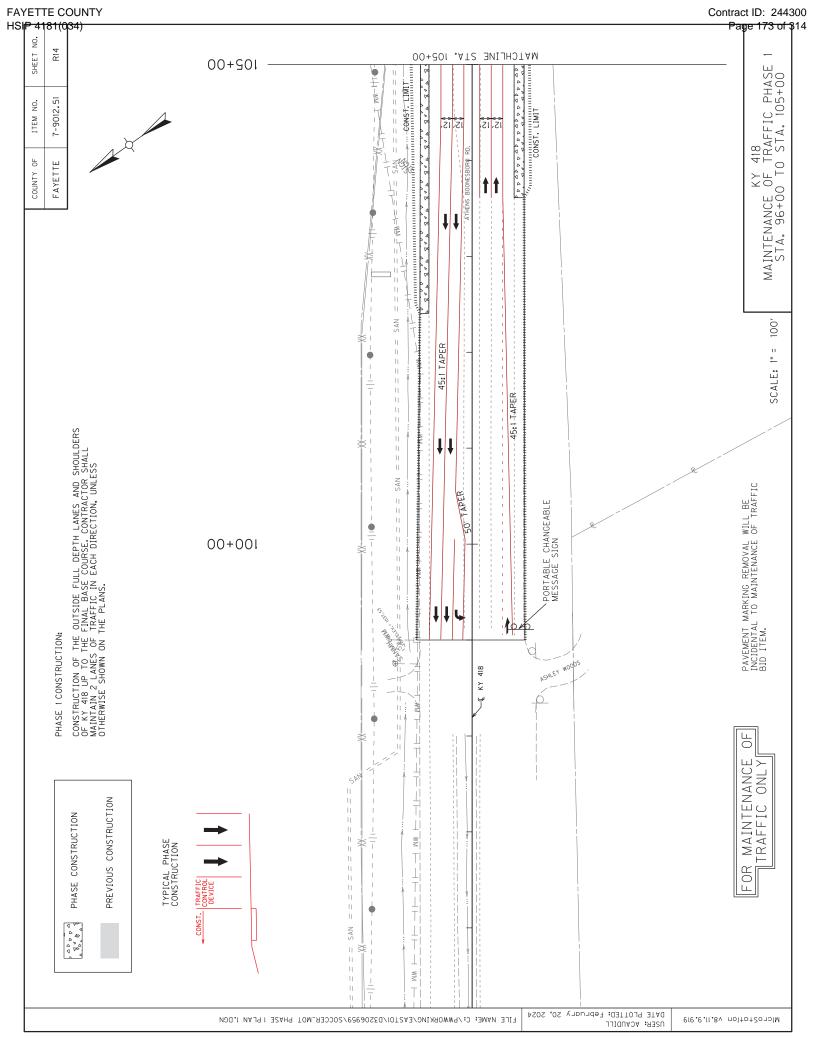


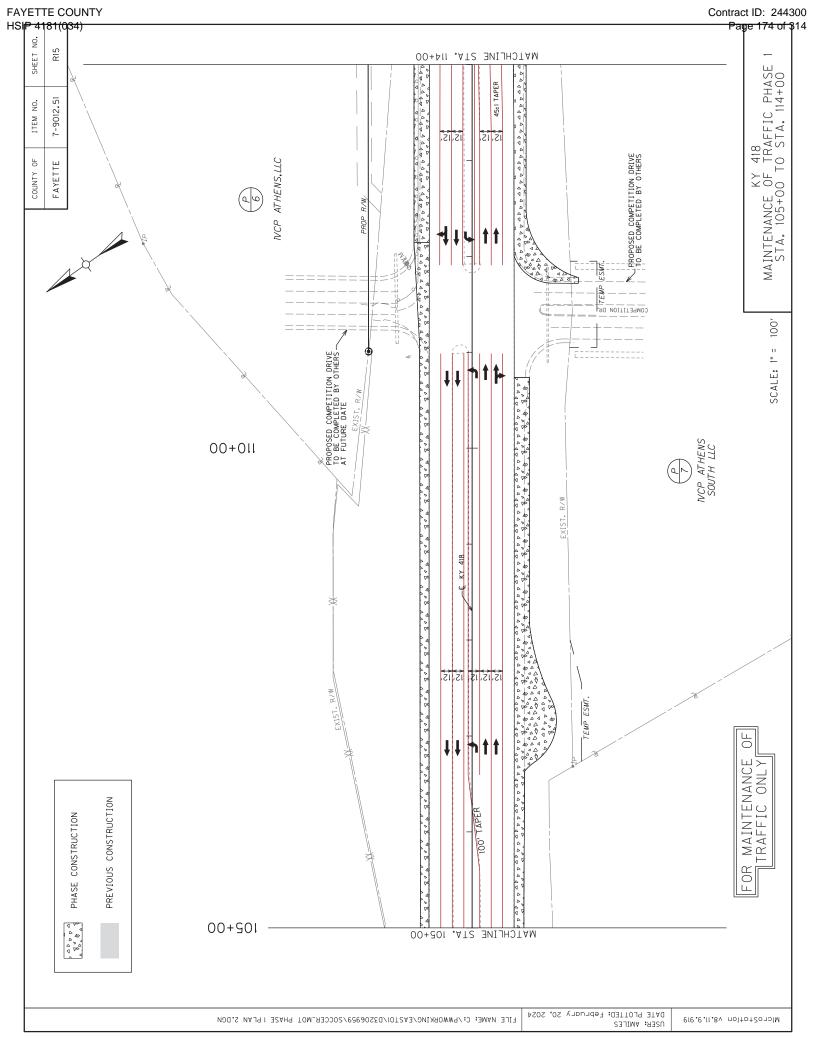


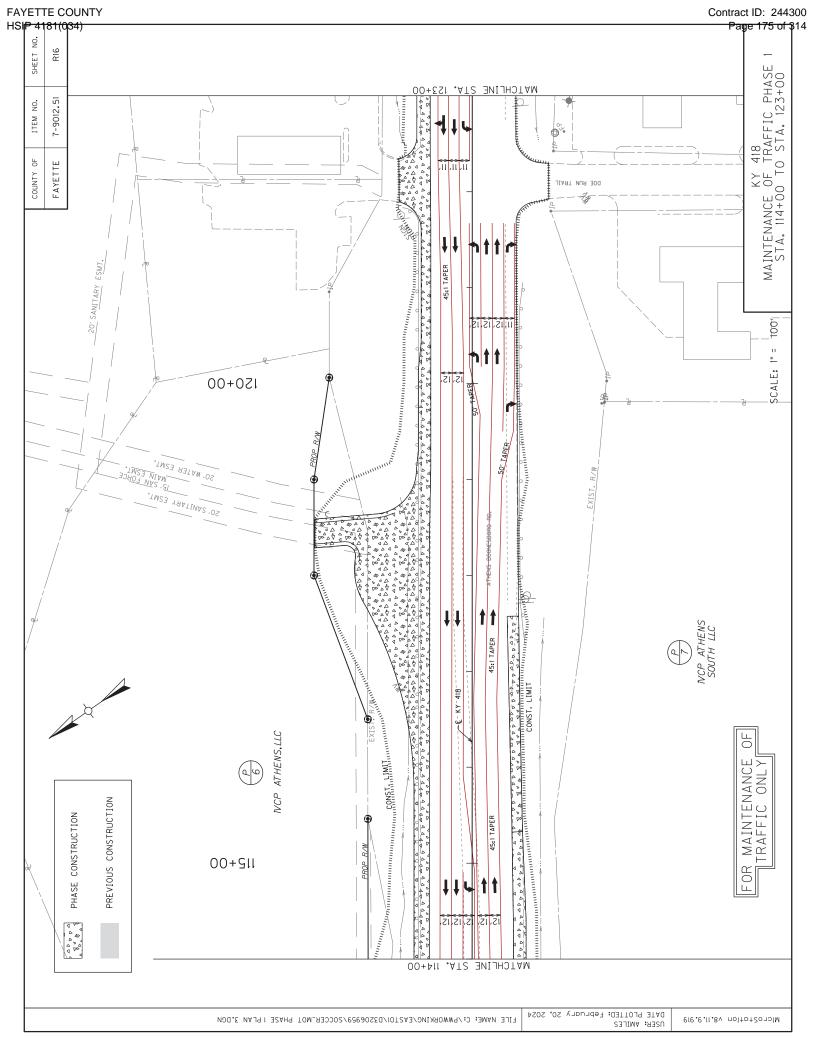


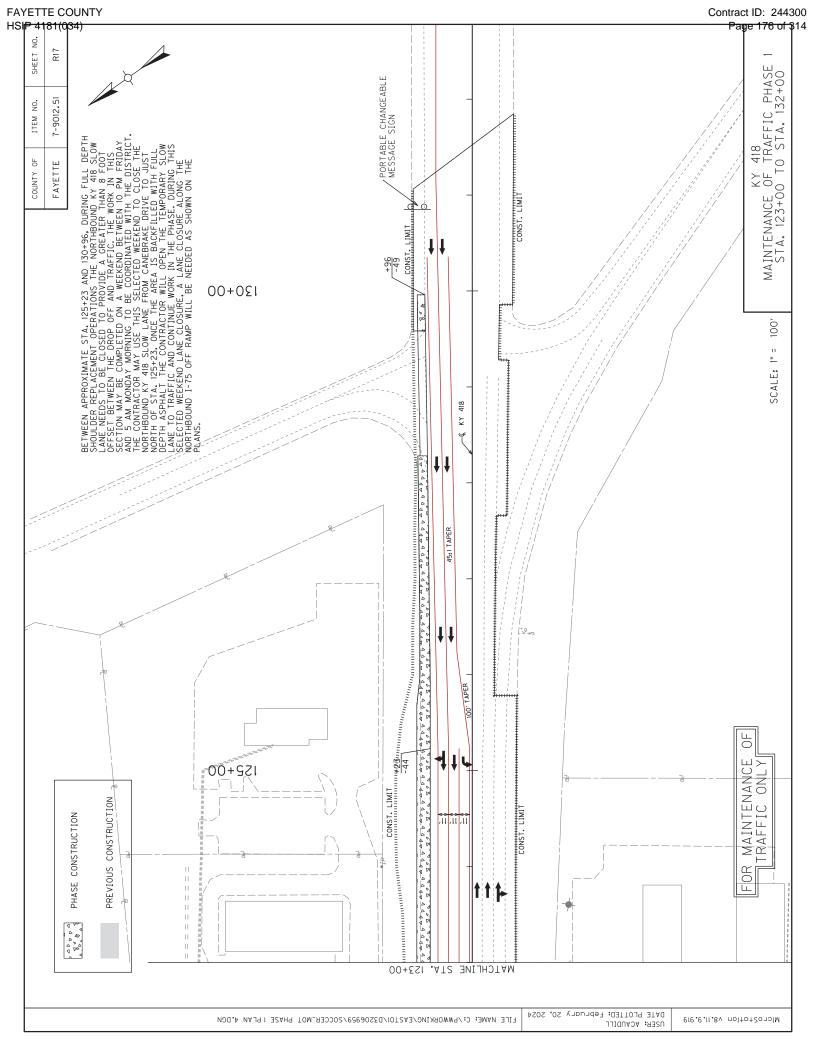


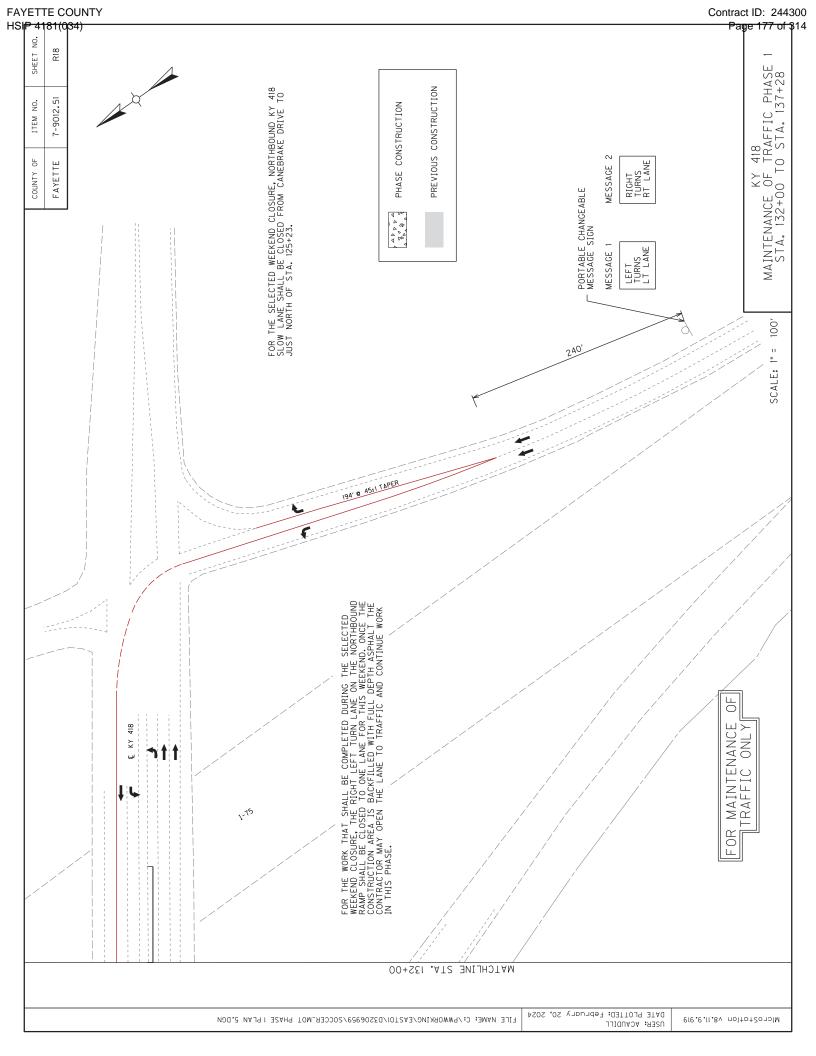


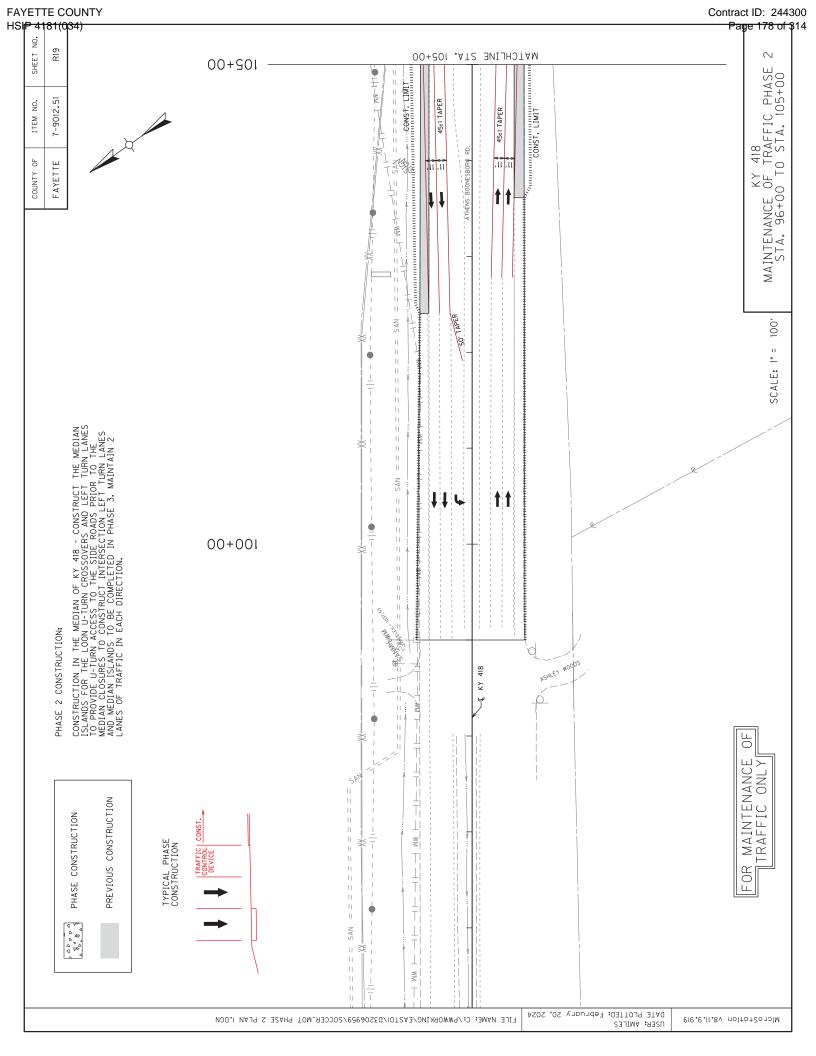


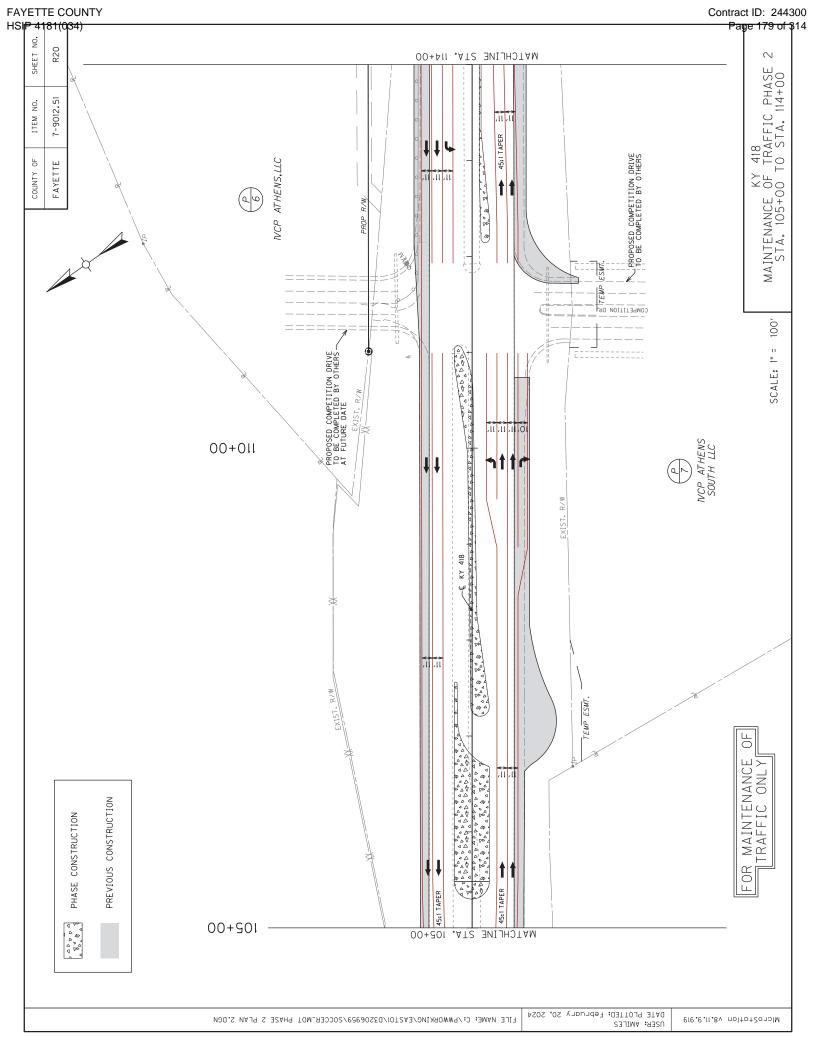


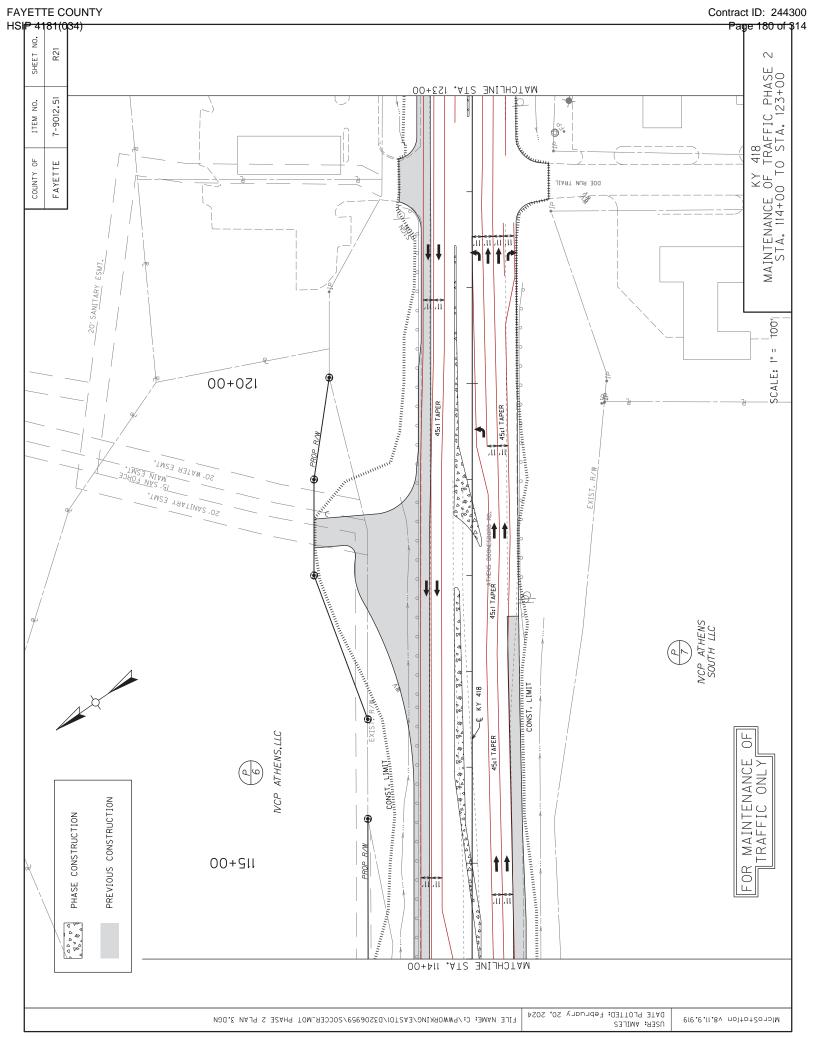


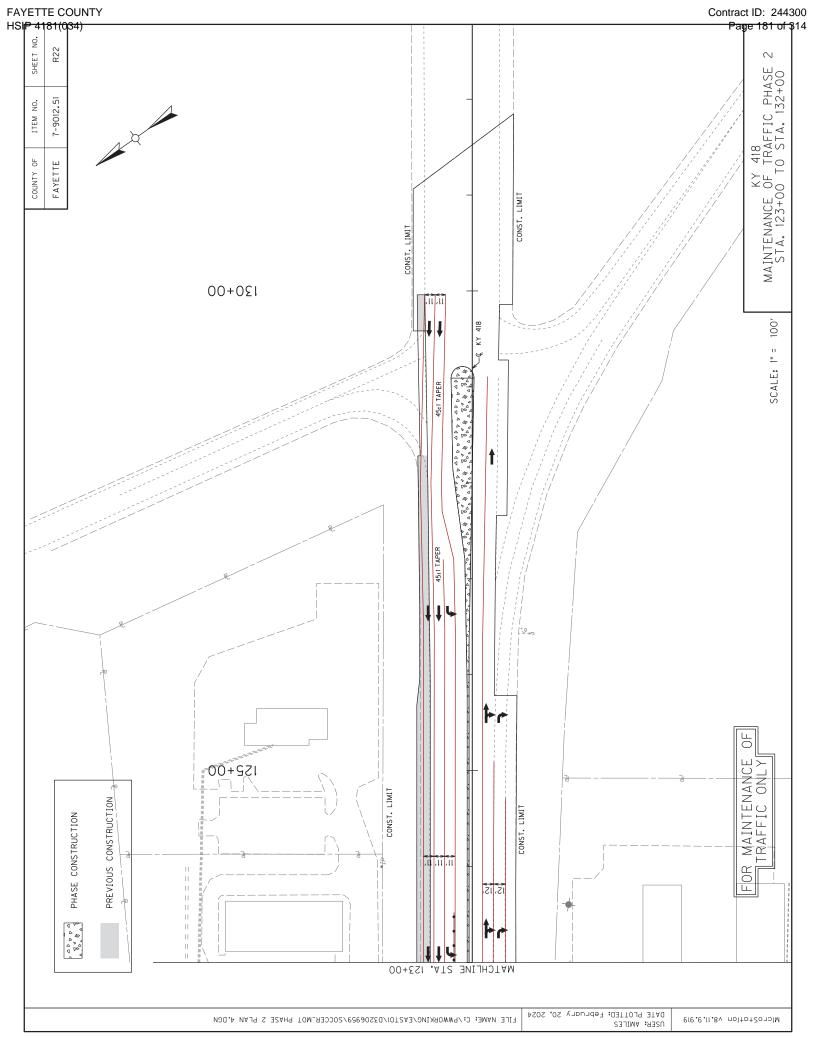


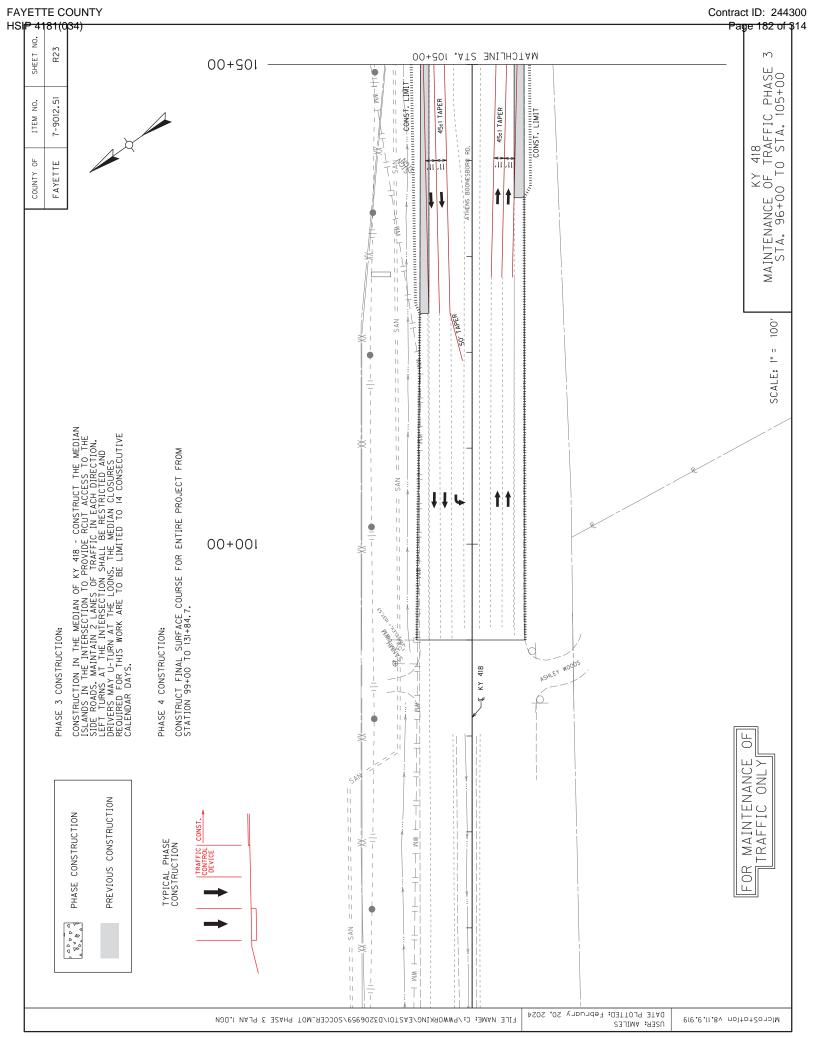


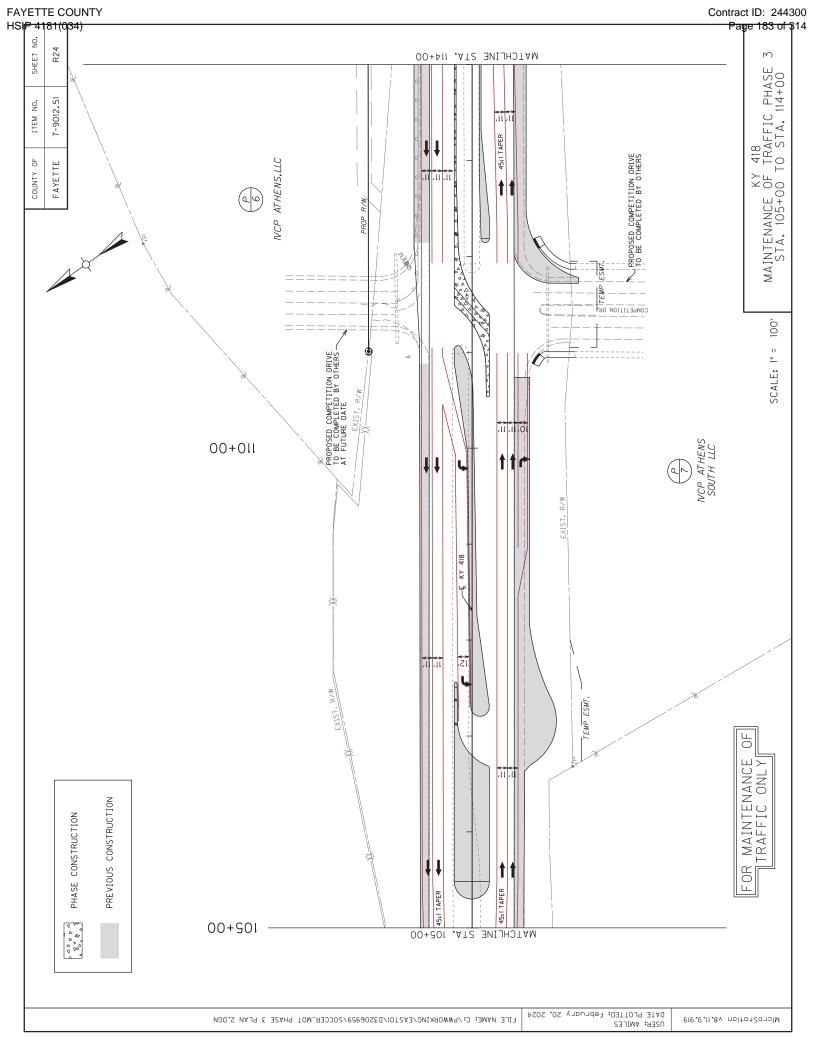


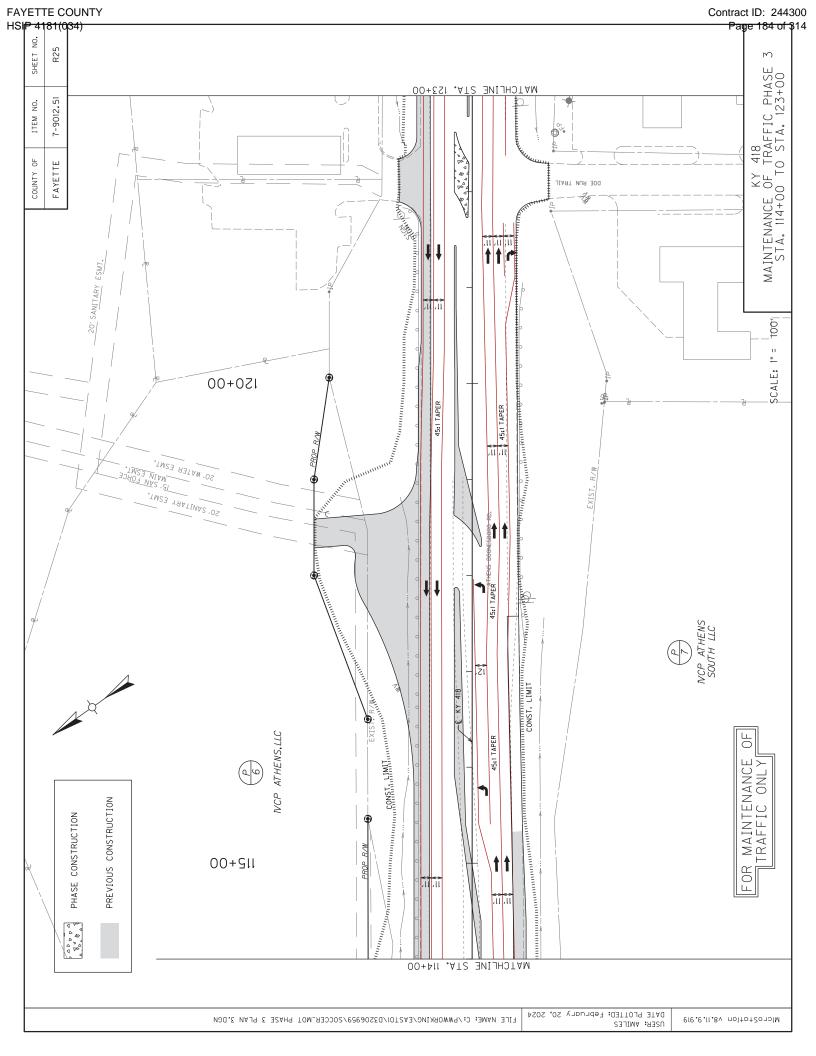


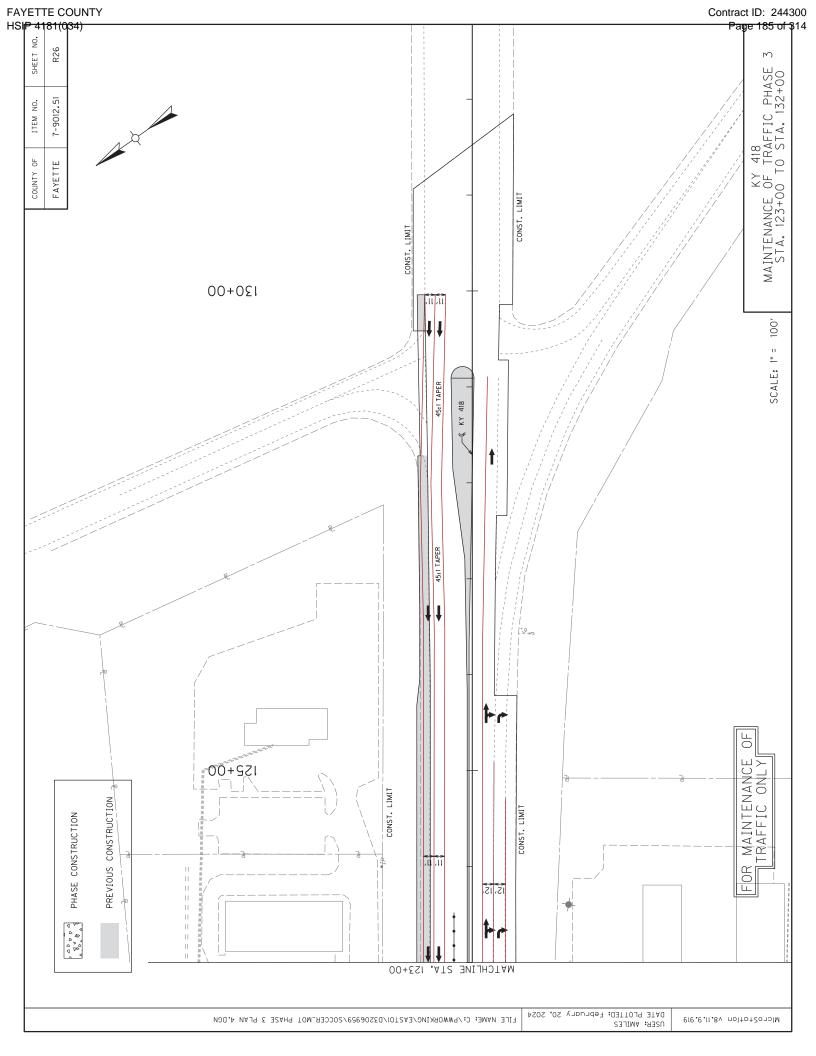


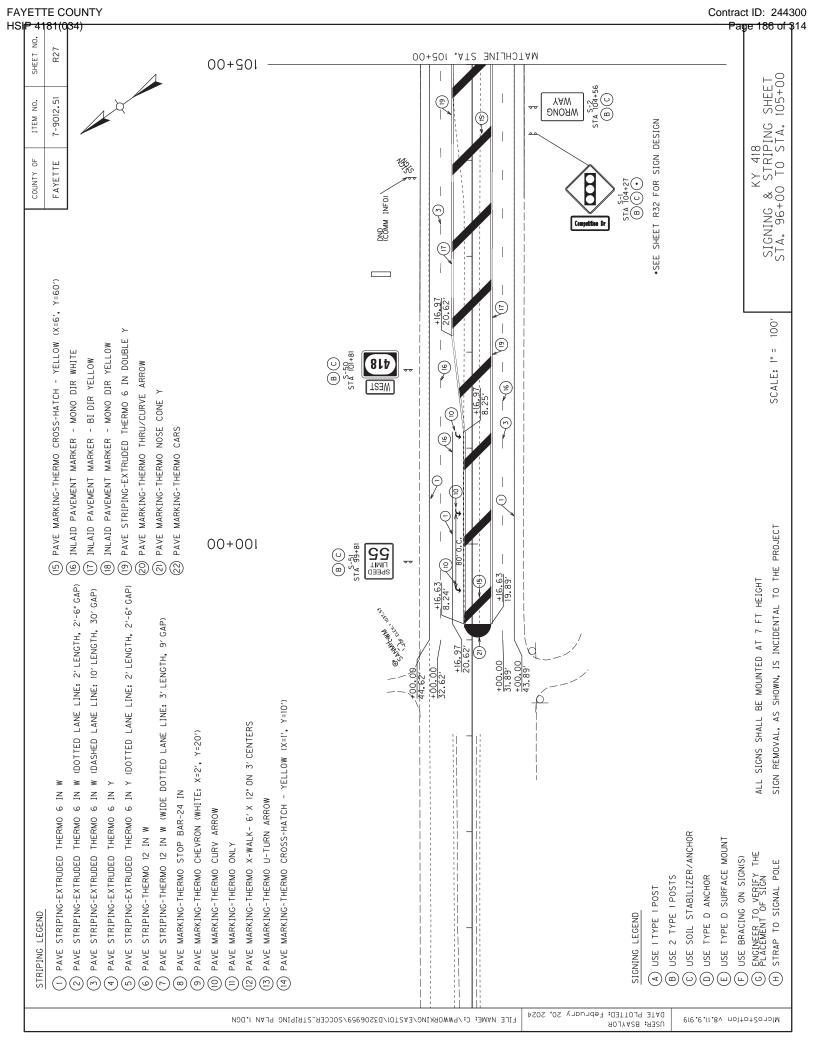


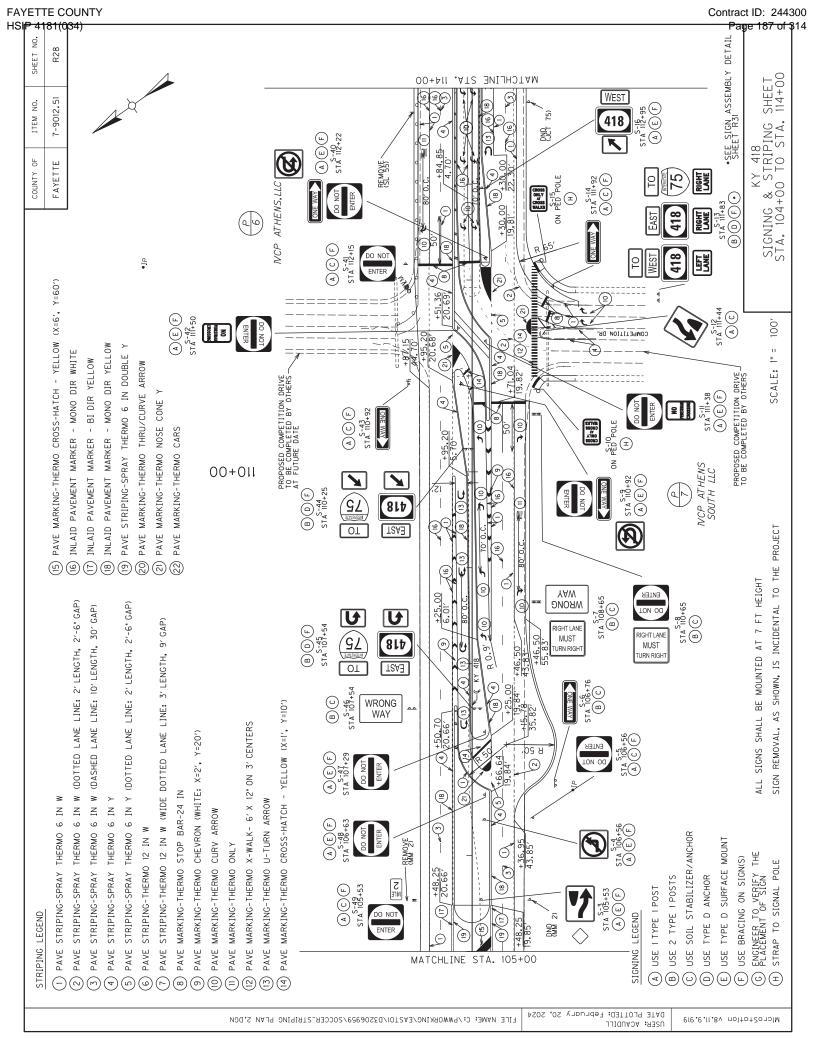


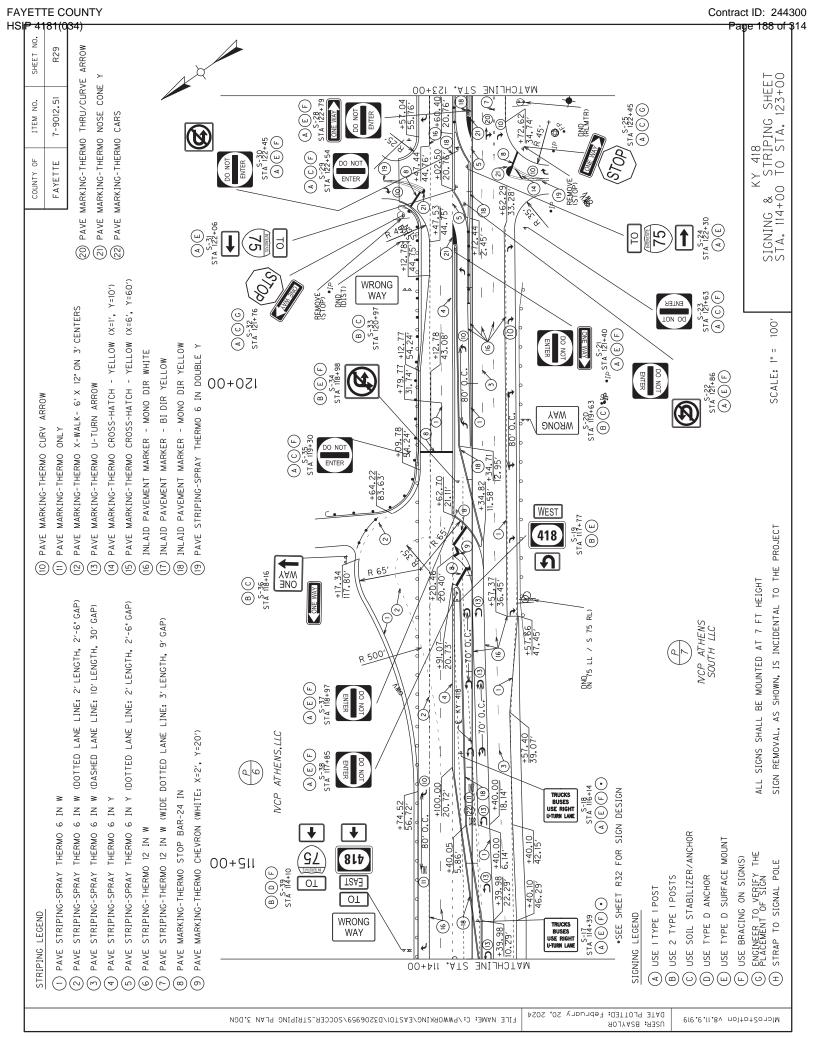


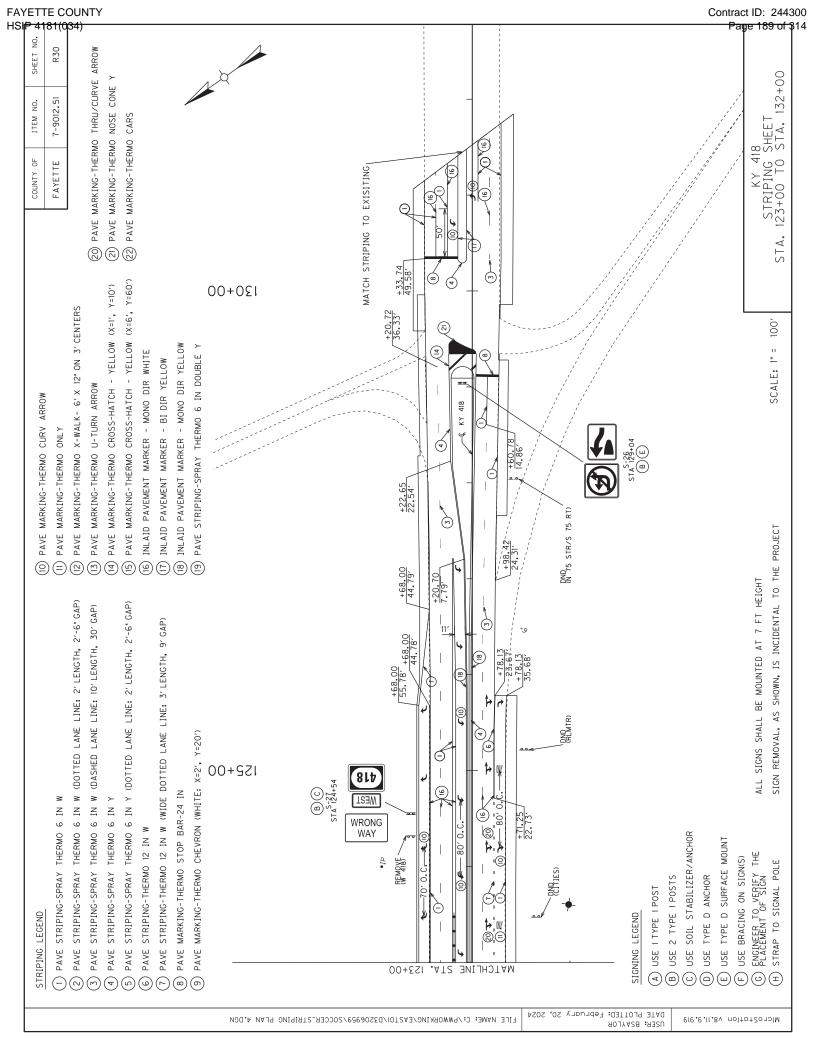


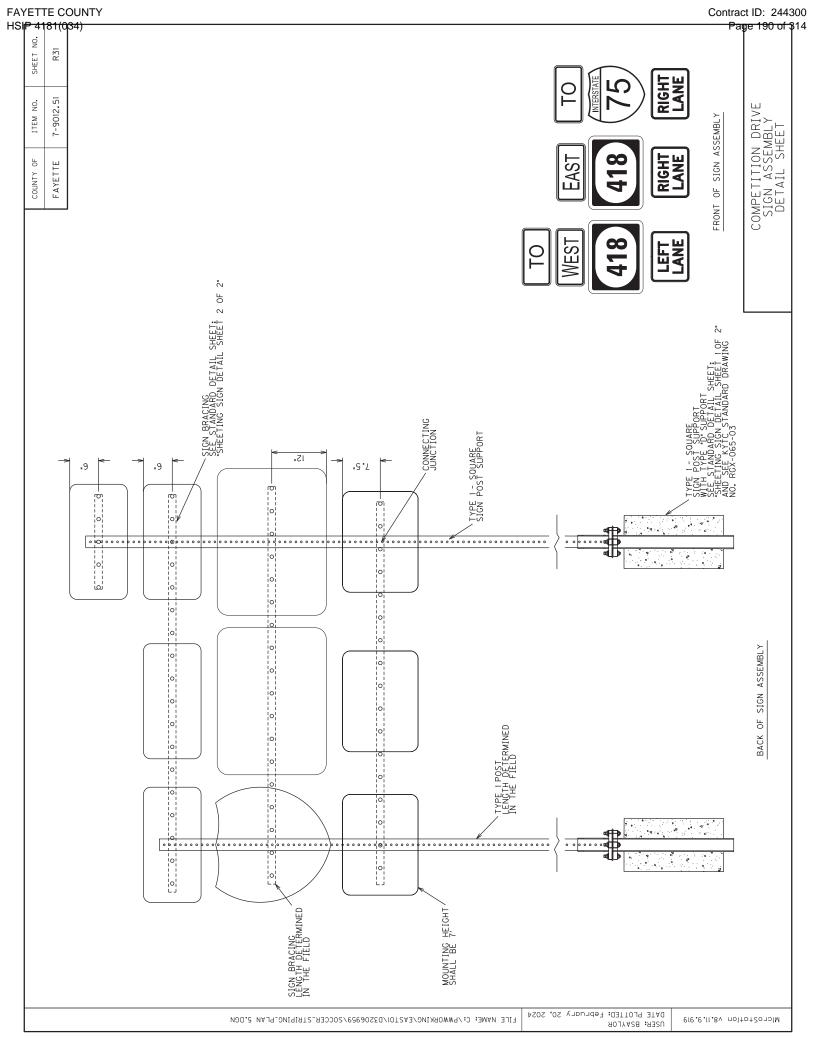












FAYETTE COUNTY

7-9012,51 ITEM NO.

Contract ID: 244300

CUSTOM SIGNS

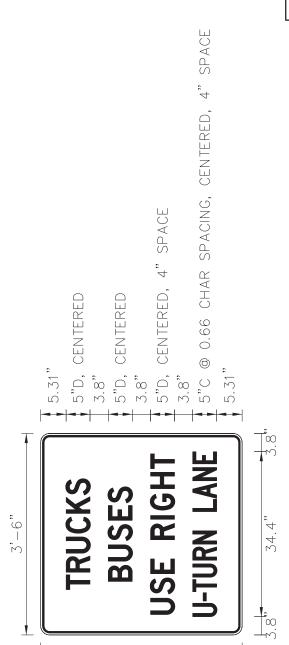
DETAIL

Page 191 of \$14

HSIP 4181(034) SHEET NO. R32

| SIGN INFORMATION | 1ATION |
|---------------------|--------|
| SIGN NUMBER | S-1 |
| QUANITY | 1 |
| WIDTH | 48" |
| HEIGHT | 18" |
| AREA (Sq. Ft.) | 6.0 |
| BORDER WIDTH | 0.75" |
| BORDER RADII | 1,375" |
| PANEL COLOR | YELLOW |
| LEGEND/BORDER COLOR | BLACK |
| STATIONS(S) | 104+27 |
| PANEL MATERIAL | ΙX |
| LEGEND MATERIAL | IX |

| RMATION | S-17, S-18 | 2 | 42" | 42" | 12,25 | Ø.375" | 1.5" | WHITE | BLACK | 114+39, 116+14 | IX | IX |
|------------------|-------------|---------|-------|--------|----------------|--------------|--------------|-------------|---------------------------|----------------|----------------|-----------------|
| SIGN INFORMATION | SIGN NUMBER | QUANITY | WIDTH | HEIGHT | AREA (Sq. Ft.) | BORDER WIDTH | BORDER RADII | PANEL COLOR | LEGEND/BORDER COLOR BLACK | STATIONS(S) | PANEL MATERIAL | LEGEND MATERIAL |



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LAYOUT SHEET

Page 192 of \$14

| ПСІ | ь 4 | 94/0 | 94 |
|-----|-----------|-----------|-----|
| поі | F 41 | 81(0 | D4) |
| | 0 | | |
| | SHEET NO. | | |
| | ITEM NO. | 7-9012,50 | |
| | | | |

COUNTY OF FAYETTE

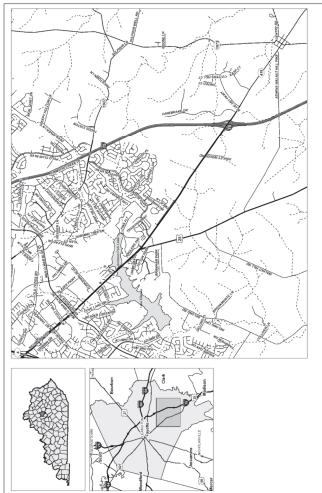


DEPARTMENT OF HIGHWAYS Commonwealth of Kentucky

FAYETTE

ITEM NO. 07–9012.50 KY 418 R-CUT RIGHT OF WAY PLANS





RIGHT OF WAY



DESIGN CRITERIA

The contractor is instructed to call 1-800-752-6007 to reach KY 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that cownes of underground facilities are not required to be members of the KY 811 to ne-call Before-U-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area.

_SECONDS NORTH SECONDS WEST

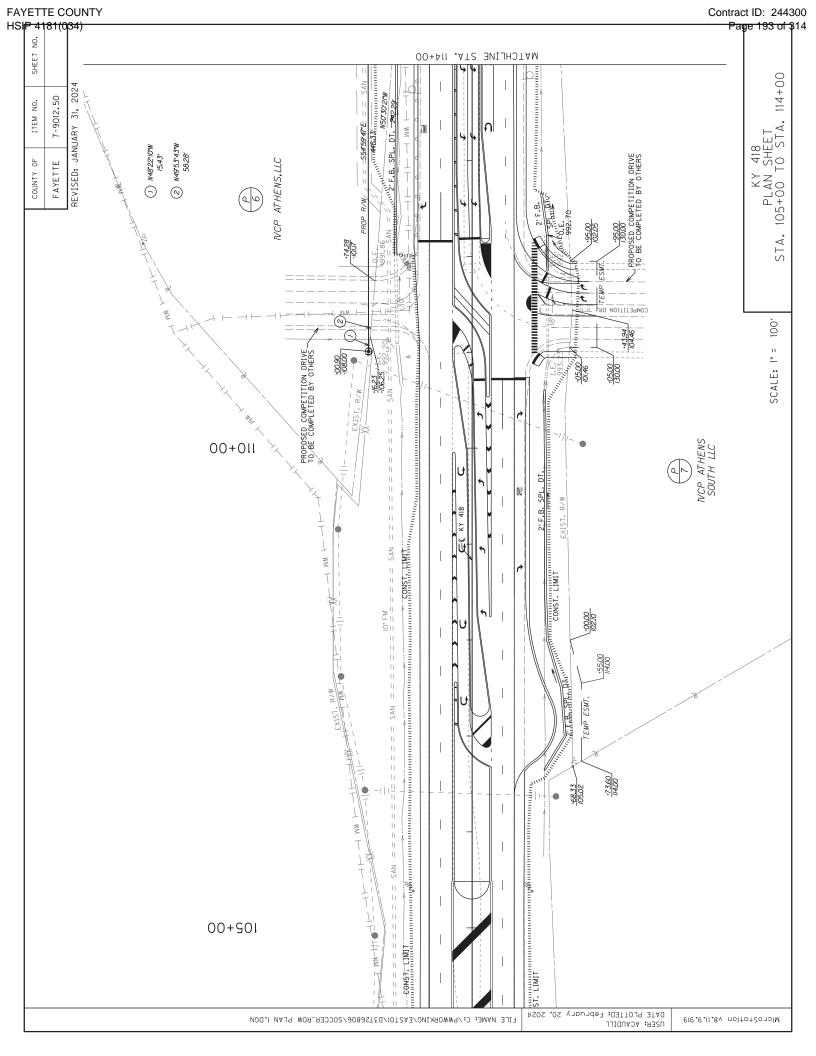
MINUTES -

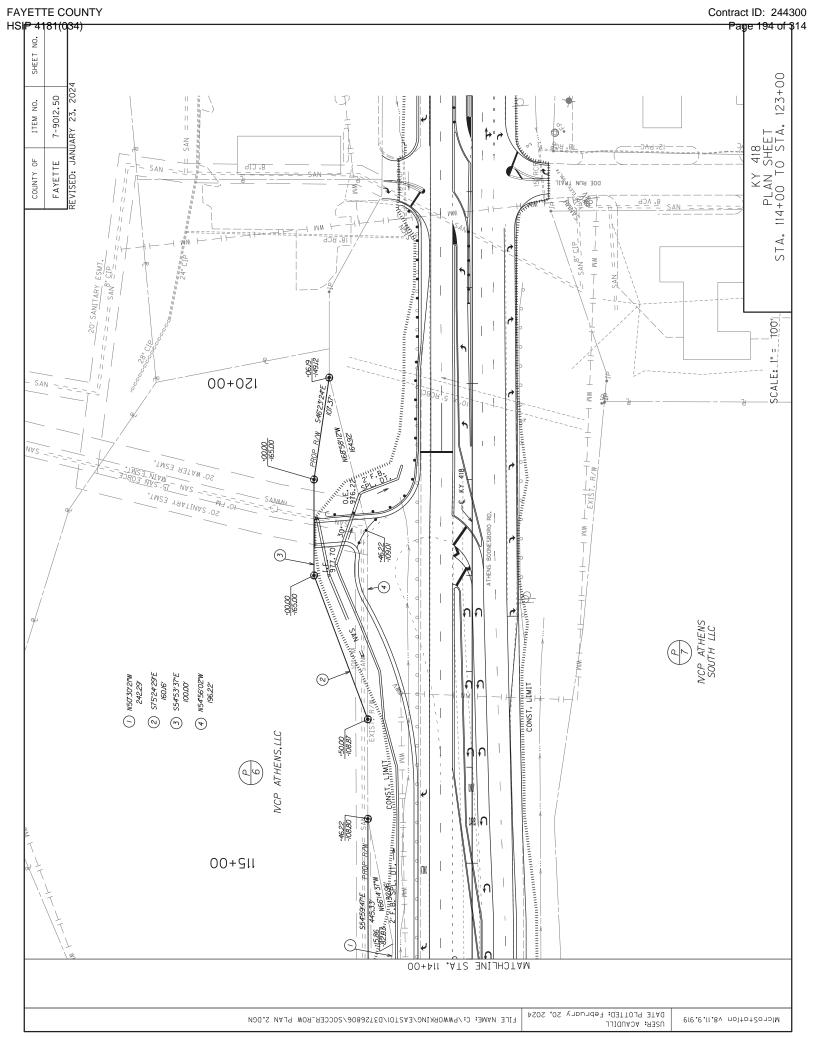
DEGREES -

LATITUDE _ LONGITUDE _

GEOGRAPHIC COORDINATES

CLASS OF HIGHWAY TYPE OF TERRAIN DESIGN SPEED ADT PRESENT (





FAYETTE COUNTY Contract ID: 244300 HSIP 4181(034) Page 195 of \$14 ġ "INCLUDES HAZARDOUS WASTE (UST - UNDERGROUND STORAGE TANKS) SHEET SHEET REMARKS* REVISED: JANUARY 23, 2024 7-9012,50 Š. 0.B. 3611, P. 252 P.C. R, SL. 522 0.B. 3935, P. 337 OF WAY SUMMARY TITLE ITEM SOURCE OF OF. SEWER SYSTEM BUILDINGS ACOUIRED AFFECTED NUMBER YES TO C R F S RIGHT SEWER SYSTEM TYPE 2,247,708 PORTION REMAINING SO. FT. E SEWER SYSTEM
1. PRIVATE - INDIVIDUAL
2. PRIVATE - MULTI PARTY
3. PUBLIC
4. NONE
5. NOT APPLICABLE 6.296 ACRES SO. FT. EXCESS PURCHASED ACRES RIGHT OF WAY SUMMARY SO. FT. ACRES S0. FT. 274,069 LEFT ACRES 6,296 PERMANENT TEMPORARY
SO. FT. SO. FT. 3,501 PERMANENT R/W ACOUIRED SO. FT. 17,626 0.404 291,695 2,247,708 SO. FT. TOTAL AREA OF TRACT ACRES 6.70 51.60 PERMANENT R/W ACQUIRED + AREA SEVERED = TOTAL AREA OF TRACT. IVCP ATHENS SOUTH LLC IVCP ATHENS, LLC NOT USED

6 7.5

PARCEL NO. FAYETTE COUNTY

Contract ID: 244300

Page 196 of \$14

SHEET

COORDINATE CONTROL

ġ SHEET 7-9012,50 ġ ITEM Ы FAYETTE COUNTY

HSIP 4181(034)

REVISED: JANUARY 23, 2024

| POINTS | |
|----------------------|---------------|
| GEOMETRIC COORDINATE | US 25 /KY 418 |

| | | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
|-------------|-----------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | EAST (X) | 5297056.0114 | 5297566.2991 | 5297752.6600 | 5297949.3383 | 5300094.1088 | 5300330.7186 | 5300559.9287 | 5302244.5661 | 5302645.9612 | 5302770.9593 | 5302770.9593 | 5303129.7786 | 5306961.4515 | 5307432.4805 | 5307935.5145 | 5308634.9818 | 5308854.4220 | 5309061.7989 | 5313656.0928 |
| 014 IVI | NORTH (Y) | 3890639.9589 | 3890055.6659 | 3889842.2778 | 3889638.3598 | 3887414.6410 | 3887169.3217 | 3886917.0749 | 3885063.1228 | 3884621.3855 | 3884553.4798 | 3884553.4798 | 3884271.8566 | 3881503.7041 | 3881163.4140 | 3880872.5148 | 3880468.0203 | 3880341.1203 | 3880195.3383 | 3876965.6381 |
| 1VI / C7 CO | NAME | 347+12.11 | 354+87.86 | 357 + 71.17 | 360+54.37 | 391+43.86 | 394 + 84.69 | 398 + 25.47 | 423 + 30.50 | 429 + 27.36 | 430+63.68 | 00.00 + 0 | 4+56.26 | 51+83.24 | 57 + 64.33 | 63 + 44.43 | 71+52.43 | 74+05.92 | 76 + 59.09 | 132+75.00 |
| | POINT | POB | PC | ΡΙ | PT | PC | PI | PT | PC | PI | EQNBK | EQNAHD | PT | PC | PI | PT | PC | PI | PT | POE |

| ROA KY 418 | DWAY | 111011 | OTATO TATA | T 1 T | 2 |
|---------------|------|-------------------------|------------|--------------|--------------|
| KY 418 | | ROADWAY STATION | OFFSET | NORTH (Y) | EAST (X) |
| | STA. | KY 418 STA. 106+73.60 | 114.00' RT | 3878368.4384 | 5311462.3626 |
| KY 418 | STA. | KY 418 STA. 107 + 55.00 | 114.00' RT | 3878321.6229 | 5311528.9582 |
| KY 418 | STA. | KY 418 STA. 108 + 00.00 | 102.10' RT | 3878305.4792 | 5311572.6161 |
| KY 418 | STA. | KY 418 STA. 111+00.90 | 108.00' LT | 3878304.3129 | 5311939.6033 |
| KY 418 | STA. | KY 418 STA. 111+05.00 | 101.46' RT | 3878130.5982 | 5311822.5001 |
| KY 418 | STA. | KY 418 STA. 111+05.00 | 130.00' RT | 3878107.2493 | 5311806.0863 |
| KY 418 | STA. | KY 418 STA. 111+95.00 | 102.05' RT | 3878078.3563 | 5311895.7882 |
| KY 418 | STA. | KY 418 STA. 111+95.00 | 130.00' RT | 3878055.4905 | 5311879.7139 |
| KY 418 | STA. | KY 418 STA. 115+46.22 | 108.80' LT | 3878048.8623 | 5312304.3772 |
| KY 418 | STA. | KY 418 STA. 116+50.00 | 108.87' LT | 3877989.2399 | 5312389.3181 |
| KY 418 | STA. | KY 418 STA. 118+00.00 | 165.00' LT | 3877948.8913 | 5312544.3090 |
| KY 418 | STA. | KY 418 STA. 119+00.00 | 165.00' LT | 3877891.3816 | 5312626.1175 |
| KY 418 | STA. | KY 418 STA. 120+06.19 | 149.12' LT | 3877817.3240 | 5312703.8585 |

COORDINATE SYSTEM

Coordinates for horizontal control were obtained from GPS methods and adjusted to the National NAD83/FBN System.

Coordinates are based on State Plane Coordinate System Kentucky Single Zone and in U.S. Survey Feet.

BEFORE YOU DIG

Contract ID: 244300 Page 197 of 314

Tim Tharpe - Director Phone (502) 564-3020 FAX (502) 564-7759

DIVISION OF TRAFFIC OPERATIONS

PROJECT MATERIALS RELEASE FORM FOR SIGNAL AND LIGHTING

Note: Email form with signatures to KYTC's warehouse (kim.stamper@ky.gov) at least two (2) days prior to arrival for pickup. Ensure Contractor's delivery driver has a copy of form with signatures. Failure to do either may result in long delays or refusal to distribute materials upon arrival.

| Item Number: | 7-9012.51 |
|--------------|-----------|
| County: | Fayette |
| | |

Description: KY 418 @ Competition Drive

| Cabinets | Master code | |
|----------|-------------|--|
| 2 | T-01-0010 | Pole Mounted 336 Cabinet |
| 3 | T-01-0020 | Base Mounted 332 Cabinet |
| 5 | T-01-0105 | ATC Controller |
| 5 | T-01-0106 | 1C w/Maxtime (this should go with item ATC controller) |
| 5 | T-01-0501 | Conflict Monitor, Model 2018 |
| 1 | T-01-0510 | Isolator, Model 242 (1 for 2070, plus for ped detector and railroad) |
| 11 | T-01-0700 | Load Switches |

| Signals | | |
|---------|-----------|---------------------------------|
| 30 | T-02-0009 | Siemens 3 Section Signal |
| 30 | T-02-0032 | Siemen 3 section backplate |
| 2 | T-02-0090 | Pedestrian signal housing |
| 2 | T-02-0099 | Audible pedestrian detector |
| 10 | T-02-0300 | LED Module 12" red arrow |
| 20 | T-02-0310 | LED Module 12" yellow arrow |
| 20 | T-02-0320 | LED Module 12" green arrow |
| 18 | T-02-0330 | LED Module 12" red ball |
| 8 | T-02-0340 | LED Module 12" yellow ball |
| 8 | T-02-0350 | LED Module 12" green ball |
| 2 | T-02-0391 | LED Module 12" Red U-Turn |
| 2 | T-02-0392 | LED Module 12" Yellow U-Turn |
| 2 | T-02-0393 | LED Module 12" Green U-Turn |
| 2 | T-02-0365 | LED Countdown Pedestrian Module |

| Special items | S | | |
|---------------|-----------|--|-----------------------------|
| 1 | T-02-0650 | Pedstl.top mntg.bkt One-way | |
| 1 | T-02-0670 | Pedestal | |
| 17 | T-02-0640 | Mast arm mount signal bracket (3 section) | |
| 6 | T-02-0646 | Mast Arm Dampers | |
| 2 | T-04-0150 | Lighting Pole 30' w/no arm mongoose luminaire | |
| 2 | T-06-0600 | Transformer Base for Luminaire Poles w/o anchor bolts (See | T-06-0601 for anchor bolts) |
| 2 | T-06-0601 | Anchor Bolts for Luminaire Poles | |
| 1 | | Radar (pickup from District Traffic Engineer) | Special Order |

| Poles | |
|-------|--|
| | |

Electrical Contractor Name Electrical Contractor Supervisor Project Engineer Contact number for Project Engineer

Project Engineer attests that the mentioned contractor is the actual electrical contractor on this project

Signature of Project Engineer or Designee

ct ID: 244300 age 198 of 314

WEASUREMENT, CONST, AND MISC NOTE.

WEASUREMENT, CONST, AND MISC NOTE. FAYETTE COUNTY HSIP 4181(034) SHEET NO. DEPARTMENT OF HIGHWAYS COUNTY OF Commonwealth of Kentucky JTEM NO. 7-9012.51 **FAYETTE** COUNTY OF FAYETTE

| ITEM DESCRIPTION | TRENCHING AND BACKFILLING | OPEN CUT ROADWAY | CABLE-NO. 14/2C | CABLE-NO. 14/7C | MAST ARM POLE | REMOVE SIGNAL EQUIPMENT | INSTALL PEDESTRIAN HEAD LED | TEMPORARY RELOCATION OF SIGNAL HEAD | INSTALL SIGNAL-3 SECTION LED | COORDINATING UNIT | ELECTRICAL JUNCTION BOX TYPE A | ELECTRICAL JUNCTION BOX TYPE C | BORE AND JACK CONDUIT | INSTALL PED DETECTOR AUDIBLE | INSTALL LUMINAIRE POLE | TRAFFIC SIGNAL POLE BASE | INSTALL SIGNAL PEDESTAL | HDPE CONDUIT - 2 INCH - SCHEDULE 80 | INSTALL SIGNAL CONTROLLER-TY ATC | INSTALL RADAR PRESENCE DETECTOR TYPE A | INSTALL RADAR ADVANCE DETECTOR TYPE B | INSTALL MAST ARM DAMPENER | POLE BASE | FUSED CONNECTOR KIT | FIBER OPTIC | CABINET FIBER TERMINATION PANEL | WEB CAMERA ASSEMBLY | TEMP SIGNAL 2 PHASE |
|--|---------------------------|------------------|-----------------|-----------------|---------------|-------------------------|-----------------------------|-------------------------------------|------------------------------|-------------------|--------------------------------|--------------------------------|-----------------------|------------------------------|------------------------|--------------------------|-------------------------|-------------------------------------|----------------------------------|--|---------------------------------------|---------------------------|-----------|---------------------|-------------|---------------------------------|---------------------|---------------------|
| CODE | 4820 | 4821 | 4841 | 4845 | 4881 | 24955ed | 20093NS835 | 4953 | 20188NS835 | 4927 | 2039INS835 | 20392NS835 | 21543EN | 20457NS835 | 22939ND | 23157EN | 23222EC | 24901EC | 24908EC | 26119EC | 26120EC | 26169EC | 4740 | 4780 | 21077ED | 24923EC | 22403NN | 4933 |
| UNITS | LIN FT | LIN FT | LIN FT | LIN FT | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | LIN FT | EACH | EACH | CU YD | EACH | LIN FT | EACH | EACH | EACH | EACH | EACH | EACH | LIN FT | EACH | EACH | EACH |
| TOTAL UNITS | 2,348 | 1,858 | 680 | 2, 755 | 4 | 2 | 2 | 30 | 17 | _ | 2 | 50 | 3,702 | 2 | 2 | 14.2 | _ | 6,242 | 3 | 6 | 2 | 9 | 2 | 21 | 5,093 | 2 | _ | 2 |
| E FIBER | 2050 | 1235 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 2470 | 0 | 0 | 0 | 0 | 4520 | 0 | 0 | 0 | 0 | 0 | 0 | 5093 | 0 | 0 | 0 |
| T INTERSTAT SIGNALS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ъ | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| DR.TEMP MO SIGNALS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| COMPETITION EB LOON | 30 | 156 | 0 | 241 | - | - | 0 | 0 | 2 | 0 | ٣ | 0 | 226 | 0 | - | 4.2 | 0 | 533 | - | 2 | - | 2 | - | 4 | 0 | - | 0 | 0 |
| OMPETITION DR. KY 418 COMPETITION DR.TEMP MOT INTERSTATE FIBER SIGNALS SIGNALS | 268 | 407 | 089 | 2514 | 3 | - | 2 | 20 | 12 | - | 0 | 9 | 894 | 2 | - | 01 | - | 1311 | 2 | 4 | 2 | 4 | - | 17 | 0 | 2 | _ | 0 |
| COMPETITIO WB LOON | 0 | 09 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 112 | 0 | 0 | 0 | 0 | 112 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

TRAFFIC SIGNAL ESTIMATE OF QUANTITIES

REMOVE SIGNAL EOUIPWENT BID ITEM WILL BE USED FOR THE REWOVAL OF THE TEMP TEMP SIGNAL 2 PHASE INCLUDES THE DIFFERENT MOT PHASES FOR EACH SIGNAL.

NOTE FOR COORDINATING UNIT: THE UNIT SHALL BE A CRADLEPOINT RI900 AND OUTDOOR AND REAL BILLS. PLAN. WHEN ESSENTIALS PLAN. WHEN EQUIPMENT IS A MATLOOD MOBILE PERFORMANCE ESSENTIALS PLAN. WHEN CONFIGURATION SALLABLE. THE CONTRACTION FULL CONTRACT THE LFUCCE COORDINATOR FOR COORDINATOR PARTIES BEFORE THE INSTALLATION. EMAIL: NIKALABLEXINGTONIX. COV. NOTE FOR WEB CAMERA, SHALL INCLUDE ASTREARS AND SHOWN SALL INCLUDE ASTREARS AND SHOWN SALL INCLUDE ASTREARS. PARTIES AND SHAPPENDE SHOWN THE COMPONENTS WIRING FOR THE WEB CAMERA SHOT THE WEB CAMERA SHOT THE WEB CAMERA SHOT THE WEB CAMERA SHOT THE RESPONDENT OF THE WEB CAMERA SHOT THE NOWING ALL THE COMPONENTS WIRING FOR THE WEB CAMERA SHOT THE NOWING BOUNTING POLE RE BENT FOR THE WEB CAMERA SHOT THE NOWING A CAMERA MOUNTING POLE.

NOTE FOR CABINET FIBER TERMINATON PANEL: CONTRACTOR SHALL PROVIDE AND INSTALL ISM 16802 COMPLIAN FURTHORS SHITCHES, WITH BEGOT POWER SUPPLY, AND DIN RAIL. HE METWORK SHITCHES, WITH BEGOT POWER SUPPLY, AND DIN RAIL. HOUSING-SPH-OIP. CORNING SAN LC PRAIL. CCH-CHOG-GA AND DIN RAIL. HE THEN PROVING-SPH-OIP. CORNING SM. LC PRAIL. CCH-CHOG-GA AND DIN RAIL. HE TERMINATIONS SHALL BE ACTIONY POLISHED UP LC PIGTALIS FUSION SPLICED TO ARMORED FIBER IN THE CONNECTOR HOUSINGS. CONTRACTOR SHALL PROVIDE MRITTER PEDIGS TO PROJECT ENGINEER PROPER PROPERTY OF PROJECT SHALL BE INSTALL PROVIDED WITH THE PROJECT PRECEDING SHALL BE INSTALLED INSTALL FROM SHALL PROVIDED WITH PROJECT PRECEDING SHALL BE INSTALLED INSTALLED SHALL BE INSTALLED INSTALLED SHALL BE INSTALLED INSTALLED SHALL BE INSTALLED WITH PROJECT AREA. LOCATION OF SWITCH INSTALLED SHALL BE COORDINATED WITH PROJECT ENGINEER PRIOR TO

PROJECT NUMBERS:

NOTE FOR FIBER. ALL CONDUIT SHALL BE INSTALLED AND SHALL INCLUDE 1/2" PULL
ROPE WITH DEFECTABLE FRAGER WIRE. THIS SHALL BE WIGHDAN CONDUIT BID ITEM
AND NO PAYMENT SHALL BE WARRED WITH ALLED WITHOUT REQUIRED PULL ROPE.
SHALL 72-STRAND SINGLE MADE FIBER. ALLE EXISTING INE WORK AND NO
CREATER TRAND BEEFER PRODUCT MATCHES IN ERE ASSISTING NE WORK AND NO
CABLEN STAND BEEFER PRODUCT MATCHES IN ERE ASSISTING NE WORK AND NO
CABLEN STAND BEEFER PRODUCT MATCHES IN ERE AND THE PROJUCT MATCHES IN ERE AND CENNING FREEDM. ARRONDED
CABLEN STAND BEEFER PROJUCT MATCHES IN ERE AND THE MADE CABLEN STAND BEEFER PROJUCT OF THE CABLE THAN SHALL DOCUMENT FIBER-OFFIC CABLE FOOTAGE LOCATED ON THE
AND CABLES ARE CONTRECT. CONTRACTOR SHALL HAVE SLACK LOOPS INSIDE JUNCTION BOXES
SHELE STALL CONSIST OF SPILCING EXISTING EVENTY-TWO (72) STRAND FIBER OPTIC
CABLE WITH PROPOSED SEVENTY-TWO (72) STRAND FIBER-OPTIC CABLE.

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CABLE WITH PROPOSED SEVENTY-TWO (72) STRAND FIBER OPTIC
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AND CABLE SHALL CONDINI OF FIBER-OPTIC CABLE.

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OWER INROADS V8.11.9.912 E-SHEET NAME: TODIOOSU DATE PLOTTED: FEBRUARY 20, 2024

NOT

TRAFFIC SIGNAL ESTIMATE OF QUANTITIES MEASUREMENT, CONST, AND MISC

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| 7-9012.51 | |
| FAYETTE | |

| FAYETTE |
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THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT DELICINA, AND OHER SPECIAL NOTIES AND SPECIFICATIONS WILL APPLY ON THIS PROJECT. SEE SECTION 706, 723, AND 112 FOR MEASUREMENT AND OTHER DETAILS. SEE SECTION 602 FOR SPIRAL REINFORCEMENT SPLICING.

THE CONTRACTOR SHALL MAKE AN INSPECTION OF THE PROJECT SITE PRIOR TO SUBMITTING A BID AND SHALL BE THOROUGHLY FAMILIARIZED WITH EXISTING CONDITIONS, SUBMISSIONS OF A BID WILL BE CONSIDERED AN AFFIRMATION OF THIS INSPECTION HAVING BEEN COMPLETED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PICKING UP MATTERIALS FOR INSTALL ITEMS AT KYTCZ DIVISION OF EQUIPMENT WAREHOUSE (1259 WILKINSON BOULEVARD, FRAMKFORT, KY 40622). THE FOLLOWING PROCEDURES SHALL BE FOLLOWING FOR MATTERIAL RELEASE. FALLOWED FOR PROCEDURES SHALL BE FOLLOWED FOR MATTERIAL RELEASE. FOLLOWED SHALLS BE PROCEDURES MAY RESULT IN LONG DELAYS OR REFUSAL TO DISTRIBUTE MATERIALS UPON ARRIVAL.

I. CONTRACTOR SHALL SECURE THE SIGNATURES OF KYTC'S PROJECT ENGINEER AND THE ELECTRICAL CONTRACTOR'S FORMAN ON THE PROJECT MATRIFALS RELEASE FORM, IF THE RELEASE FORM IS NOT IN THE PROPOSAL, CONTACT KIN STAMPER OR KERRY DECKER WITH THE DUISION OF TRAFFIC OPERATIONS BY PHONE (502-782-8994/502-782-5536) OR EMAIL KIN, STAMPERBRY, COOW, VERRY, DECKERBRANCE PLOY, UP OF MATERIALS. C. CONTRACTOR SHALL EMAIL THE MATERIALS SELESSE FORM WITH REQUIRED SIGNATURES TO THE WAREHOUSE OF PROJECT WATERIALS. CONTRACTOR SHALL EMAIL THE PROJECT WATERIALS RELEASE FORM WITH REQUIRED SIGNATURES TO THE WAREHOUSE AT KIN, STAMPERRY, COV AND SHALL NOTIFY THE WAREHOUSE BY PROME (502-782-994)-602-350 683) OR EMAIL KIN, STAMPERBY, COV AT LEAST TWO CONTRACTOR SHALL LASO CONTRACTOR STALL AS CONTRACTOR STALL

ADD SENTENCE TO SECTION 835.17 ALL WIRE SHALL HAVE WORDING ADDED TO THE OUTER ADACKET THAT STATES : 'PROPERTY OF KENTUCKY TRANSPORTATION CABINET 502 564 5601.

CONSTRUCTION AND MEASUREMENT NOTES THAT ARE CONTRARY TO SECTION 723

SUBSECTION: 03.02 POLES AND BASES INSTALLATION. B) REVISION: REPLACE ENTIRE TABLE WITH THE FOLLOWING:

| | TIES OR SPIRAL | SPACING OR PITCH (IN.) | | <u> </u> |
|---------------------------|----------------------------|---------------------------|-----------|---|
| | TIES | BAR | SIZE | 777777777777777 ====================== |
| | | VERTICAL BARS | TOTAL | 00000000000000000000000000000000000000 |
| | | VERTIC | SIZE | <u>യയാപപപപപപപപപപപപപ</u> |
| | ОЕРТН (FEET) | SROUND SLOPE" | ROCK | പ-പ്രത്യത്തെത്തെത്ത |
| DRILLED SHAFT DATA | | | SOIL | 00000000000000000000000000000000000000 |
| | | JND SLOPE | ROCK | |
| | | < 2:1 GROL | SOIL | ი⊢∞იღ <u>ი - თა</u> და ი⊢∞ი - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ია</u> - <u>ი</u> - <u>.</u> - <u> </u> |
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| FORCE | | | (FT-K | |

03.12 WIRING INSTALLATION. SEE TRAFFIC OPERATIONS WEBSITE FOR WORD DOCUMENT TO REPLACE CHARTS FOR WIRING TO SHOW CHANGES FOR EQUIPMENT GROUNDING. SUBSECTION: REVISION:

ALL

SUBSECTION: REVISION:

04.22 REMOVE SIGNAL EQUIPMENT. (CONSTRUCTION ONLY)
REPLACE THE PARAGRAPH WITH THE FOLLOWING.
THE DEPARTMENT WILL MEASURE THE OUANTITY BY
NOT MEASURE RACKITION AND THE DISPOSAL OF TRANSPORTATION OF EQUIPMENT
NOT MASSINGLALLO AND THE DISPOSAL OF TRANSPORTATION OF EQUIPMENT
AMERIKALS. ASSOCIATED WITH ANY STRUCTURAL OR ELECTRICAL COMPONENT OF
SIGNAL SYSTEM INCLUDING, BUT NOT LIMITED TO POLE BASES, POLES, JUNCTION
BOXES, CABINETS, AND WOOD POLES FOR PAYMENT AND WILL CONSIDER THEM
INCLIDENTAL OF THE THEM

AND

MATERIAL NOTES THAT ARE CONTRARY TO SECTION 835

SUBSECTION: REVISION:

OT, 22 MAST ARM POLES
REPLACE ENTIRE SNOTE FOR THE DETAIL ANALYSIS SHALL INCLUDE.
BUT NOT BE LIMITED TO, THE FOLLOWING CALCULATIONS: WITH THE
FOLLOWINGE
LIMIT VERTICAL DEFLECTION TO 8 INCHES FOR CALLOPING FOR ALL ARWS.

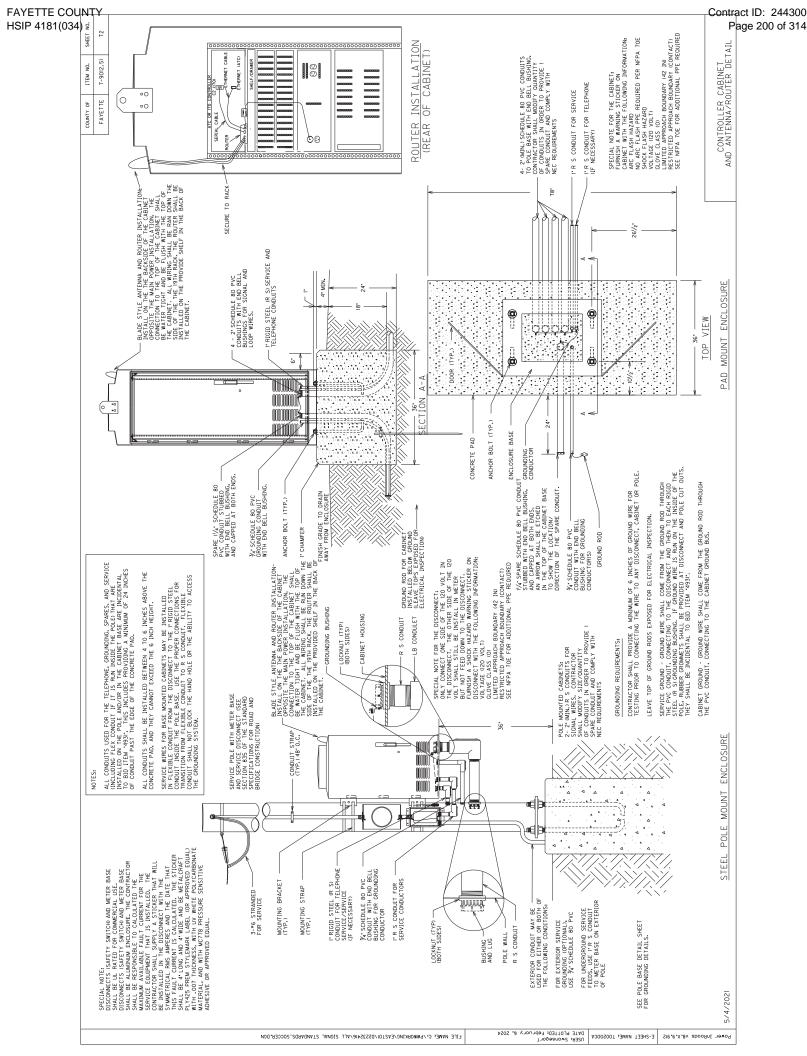
SUBSECTION: REVISION:

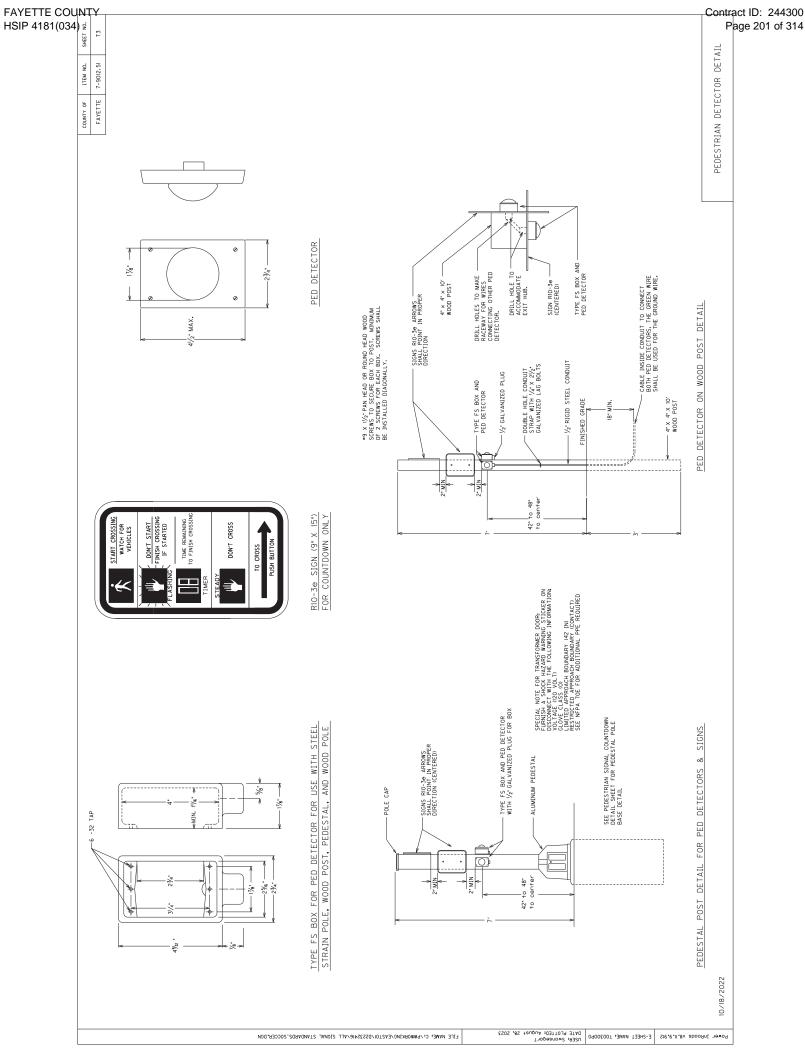
.2! WARNING TAPE. REPLACE FIRST SENTENCE WITH THE FOLLOWING IN 834.33; PROVIDE DETECTABLE TYPE TAPE THAT IS 6 INCHES WIDE AND 7.0 MILS INOMINALITHICK.

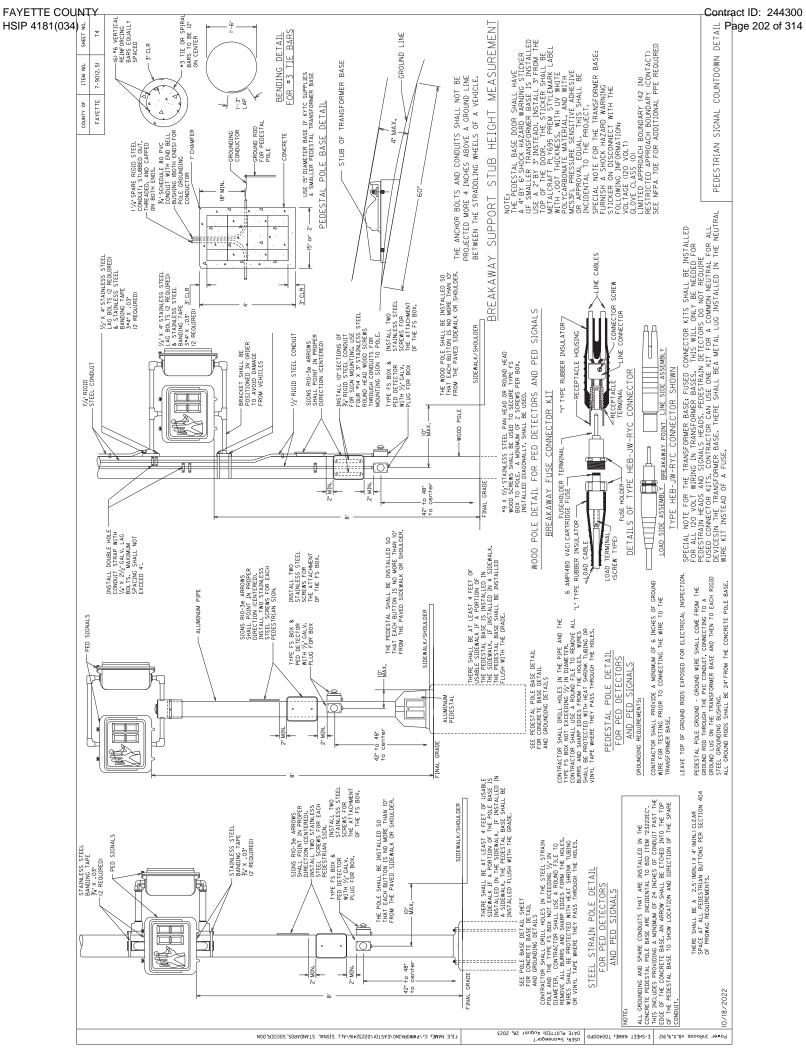
MEASUREMENT NOTES THAT ARE IN ADDITION TO SECTION 723

INSTALL SIGNAL CONTROLLER TYPE ATC. THE DEPARTMENT WILL MEASURE
THE QUANTITY AS EACH INDIVIDUAL UNIT INSTALLED. THE DEPARTMENT WILL NOT
MEASURE THE CONCRETE BASE, MOUNTING THE CABINET, CONNECTING THE SIGNAL
AND DETECTORS, EXCAVATION, BACKFILLING, RESTORATION, ANY MECESSARY POLE
MOUNTING HARDWARE, ELECTRICS SPREVICE, LECTRICAL INSECTION ETERS, AND
REQUIRED BUILDING FEES INVOLVING UTILITY SECONDARY/PRIMARY SERVICE FOR
PAYMENT AND WILL CANSIDER THEN INCIDENTAL TO THIS TIEM OF WORK, THE
DEPARTMENT WILL ALSO NOT MEASURE CONNECTING THE INDUCTION LODP
AMPLIFIERS, PEDESTRIAN ISOLATORS, LOAD SWITCHES, MODEL 400 MODEM CARD
FOR PAYMENT AND WILL CONSIDER THEM INCIDENTAL IN THIS TIEM OF
WORK, THE DEPARTMENT WILL ALSO NOT MEASURE FURNISHING AND INSTALLING
ELECTRICAL SERVICE CONDUCTORS, CONDUITS, ANDHORS, MACHORS, MITER BASE, FUSED
CUTOUT, FUSES, GROUND RODS, GROUND, LUCS, AND GROUND WIRES FOR PAYMENT
AND WILL CONSIDER THEM INCIDENTAL TO THIS TIEM OF WORK,

INSTALL RADAR PRESENCE DETECTOR TYPE A SHALL CONSIST OF INSTALLATION OF A POLICE WOUNTED RADAR PRESENCE SENSOR, SENSOR MOUNTURB BRACKET, SENSOR GABLES, INTERFACE MOUNTED RADAR PRESENCE SENSOR, SENSOR MOUNTURB BACKET, SENSOR GABLES, INTERFACE MOSSING AGE SENSOR, SENSOR MOUNTURB BACKET, LEAD-THE MASSING MOUNTED BY SENSOR GETCOR TYPE A BID ITEM SHALL RIGHT MAD BETWEEN DETECTION SYSTEM, RADAR PRESENCE DETECTOR TYPE A SHALL BE INSTALLED AND MEED IN ACCORDANCE WITH THE MANNEACTHERYS INSTRUCTIONS. AFTER THE DETECTOR IS INSTALLED AND SEFORE THE DETECTOR SENTOR. SETUP. THE CONTRACTOR SHALL DOUBLE CHECK TO VERIFY THAT ALL WIRNOR DETECTOR SETUP. HE CONTRACTOR SHALL DOUBLE CHECK TO VERIFY THAT ALL WIRNOR TO CONCIDE BEFORE SCHEDULE AND WORK. PREPEXENTATIVES FROM KYTC AND/OR THE MANIFACTURER OR SALES REPRESENTATIVE WILL ASSIST WITH SETUP AND CALBRATION. THE CONTRACTOR SHALL POWDING A BUCKET TRUCK SHALL POWDING THE SENSORS. THE CONTRACTOR SHALL POWDING A BUCKET TRUCK SHALL PROVIDE AUGUST OF THE WINN OF THE SENSORS. THE CONTRACTOR SHALL PROVIDE A BUCKET TRUCK SHALL PROVIDE INDIVIDUALS CAPABLE OF OPERATING THE SETUP SOFTWARE AND LEARNING THE SETUP PROCESS.



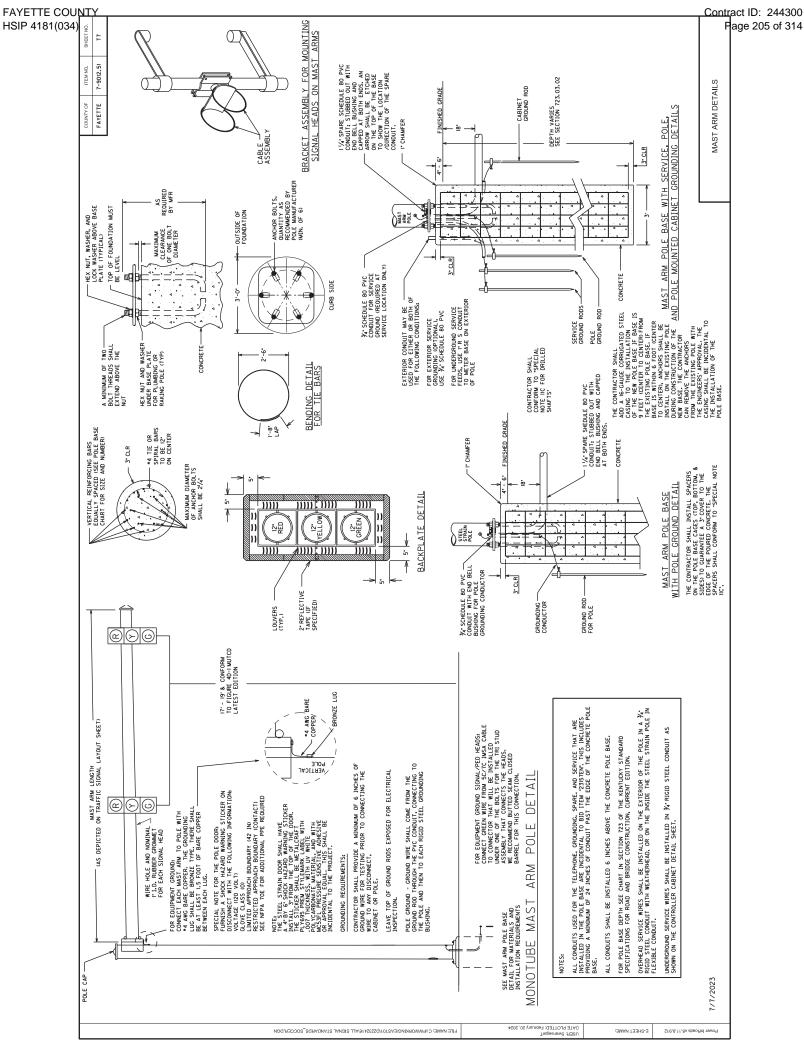


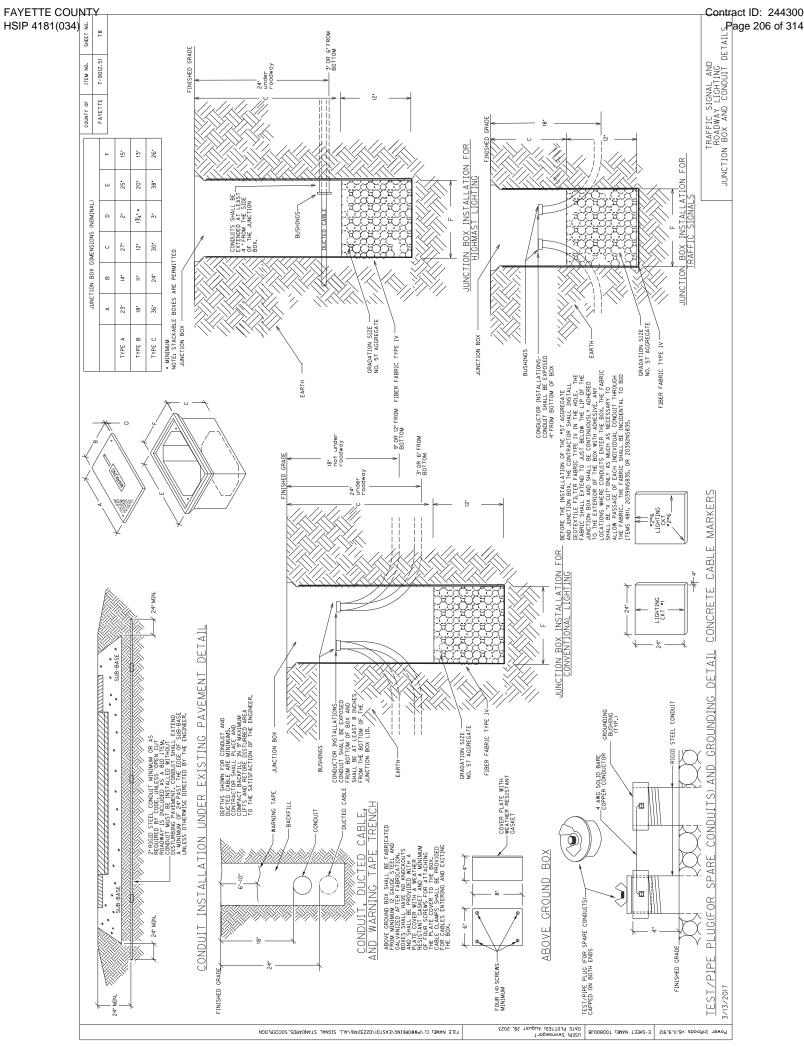


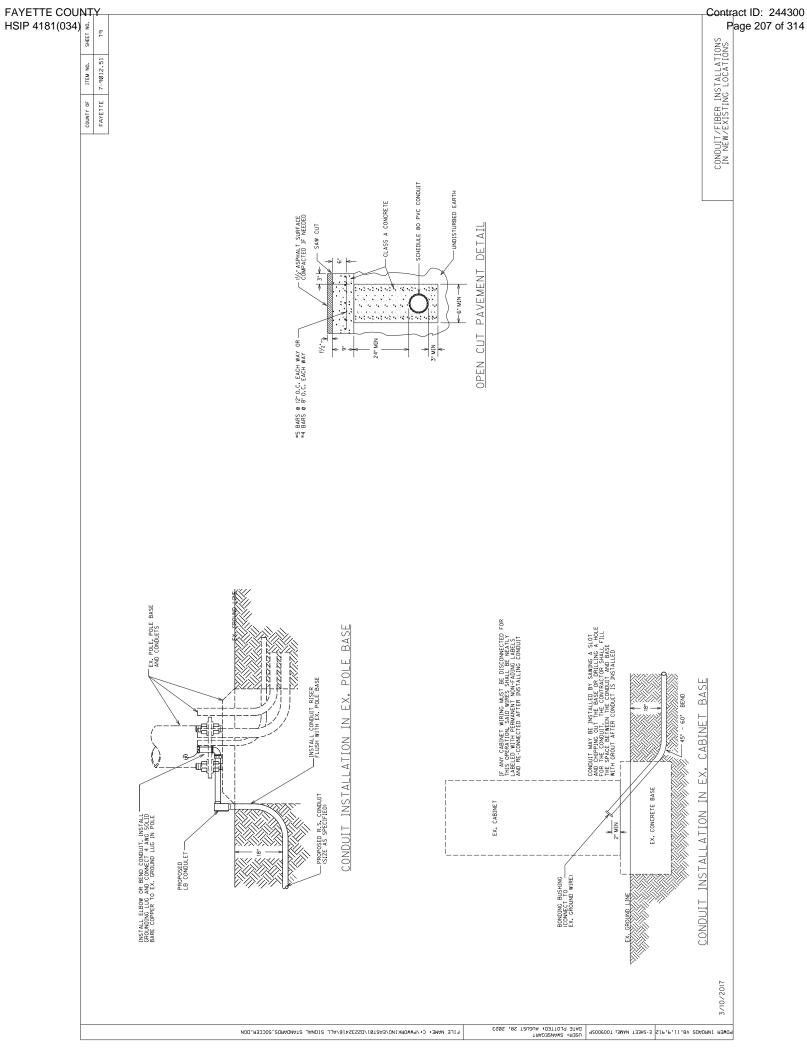
FAYETTE COUNTY HSIP 4181(034) Contract ID: 244300 Page 204 of 314 11/4 SPARE SCHEDULE BO PVC
CONDULI STUDBED OUT WITH
END BELL BUSHING AND
ACRED AT BOTH ENGS. AN
ARROW SHALL BE ETCHED
TO SHOW THE TOP OF THE BASE
TO SHOW THE LOCATION OF
CONDULIT.

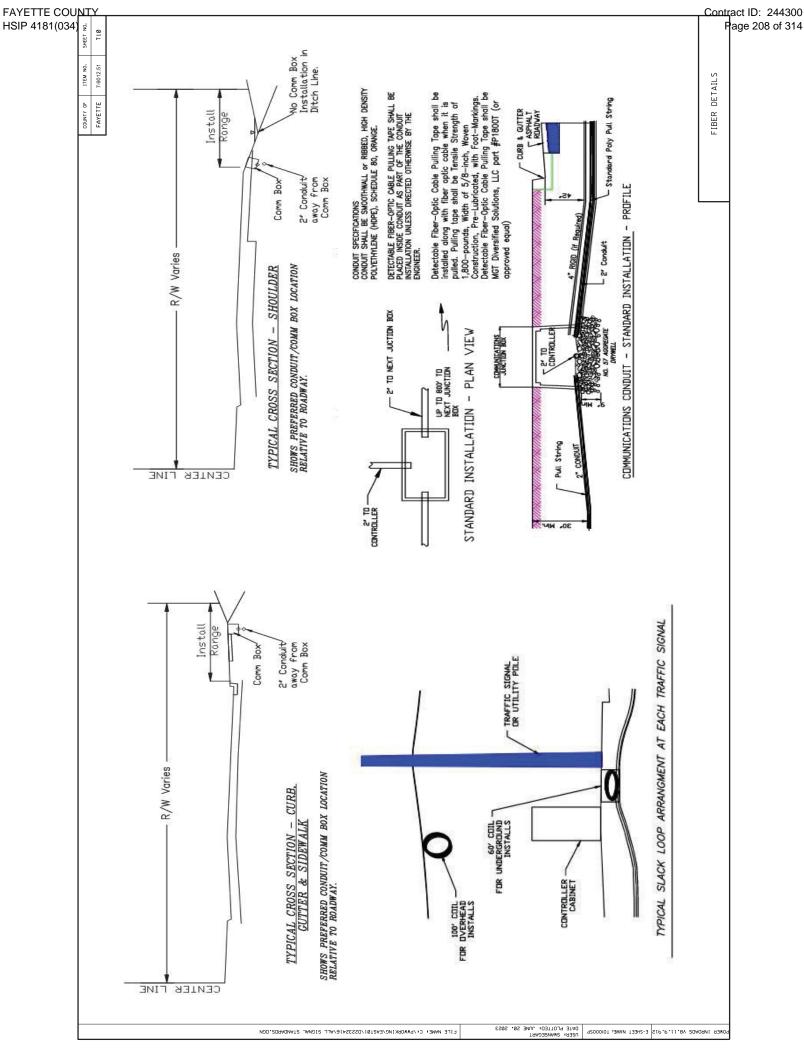
1 CHAMPER
1 CHAMPER SHEET NO. 72" REFLECTIVE TAPE (IF SPECIFIED). **1**6 LOUVERS (TYP.) CABINET
CROUND ROD
DEPTH VARIES
SEE SECTION 723.03.02 POLE BASE/SIGNAL HEAD DETAILS FOR EQUIPMENT GROUND SIGNAL/PED HEADS, CONNECT OREN WIR FROM SCATC MAS CABLE TO CONNECTOR THAT WILL BE INSTALLED MORE ONE OF THE ONLY STORE ASSEMBLY THAT CONNECTS THE MEADS. WE RECOMMEND STORE THE CABLE OF THIS CONNECTION. FINISHED GRADE ITH SERVICE, POLE, GROUNDING DETAILS 7-9012,51 ITEM NO. BACKPLATE DETAIL :s 1 YELLOW. GREEN FAYETTE 12" RED COUNTY OF LE BASE WITH S D CABINET GROU E CONTRACTOR SHALL
CONFORM TO "SPECIAL
NOTE IIC FOR DRILLED
SHAFTS" FOR EQUIPMENT GROUND:
CONNECT PSAN BINES
**4 AND BARE COPPER AT BULL RING.
**1 AND BARE COPPER AT BULL RING.
**1 TPE.
RESSENCE CABLE
**TTP: STRAND VISE (TYP.) BULL Anches Boults.

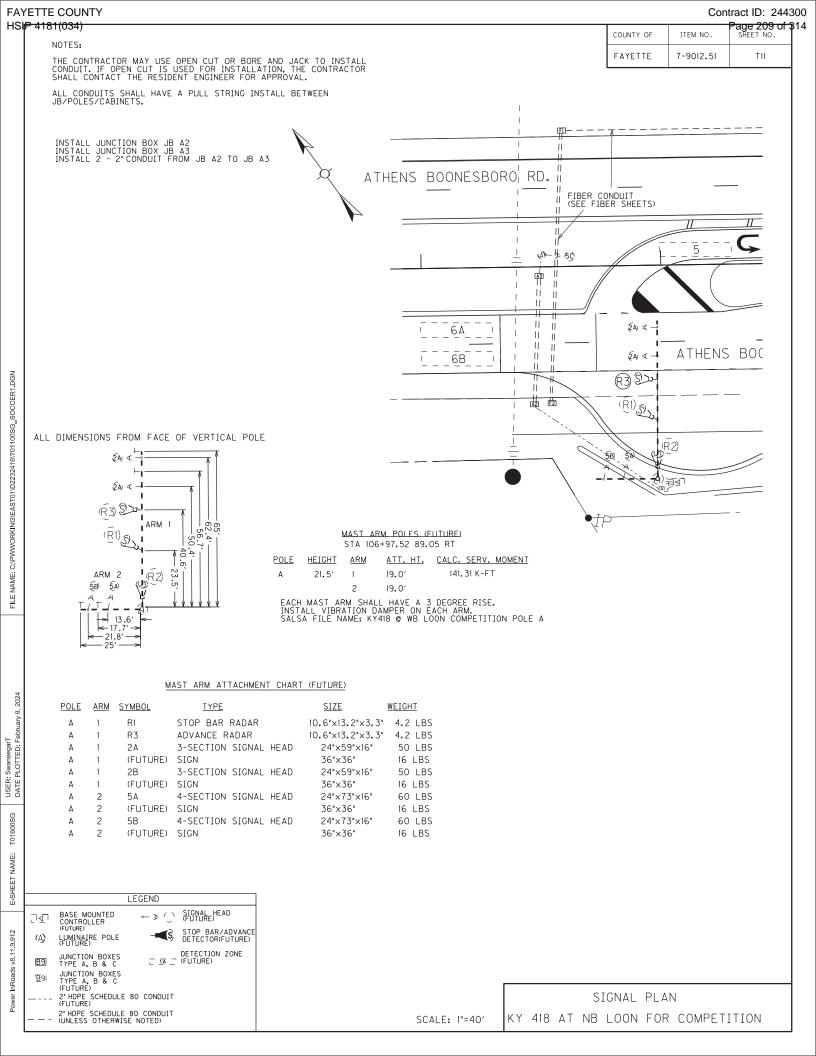
QUANTITY AS
RECOMMENDED BY
POLE MANUFACTURER AND POLE MOUNTED
MIN. 0F 4) THE CONTRACTOR SHALL INSPECTES
ON THE POLE BASE CACES TOP, BOTTOR, A
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SER POLE
COLLAR
FOR EQUIPMENT GROUND:
CONCETT SPAN WIRE TO POLE WITH
"4 A ME BARE COPPER. THE GROUNDING
LUG SHALL BE BRONZE TYPE. THERE SHALL
BETWEEN FACH LUG. AERIAL CORNER DETAIL 3° CLR VISE JOHNNYBALLS OR STRAIN ISOLATORS SHALL NOT BE USED ON THE ATTACHMENT OF THE SPAN WIRE TO THE POLE. INSTALL MESSENGER THROUGH STRAND AND BEND MESSENGER AT EXIT POINT. THERE SHALL BE A SEPARATE COLLAR USED FOR EACH SPAN. INSTALL MESSENGER THROUGH STRAND VISE AND BEND MESSENGER AT EXIT POINT. MESSENGER SHALL EXTEND 8" TO 10" BEYOND THE STRAND VISE YOKE. FOR UNDERGROUND SERVICE FEEDS, USE 1'RIGID STEEL CONDUIT TO METER BASE ON EXTERIOR OF POLE DROP BOX MESSENGER SHALL EXTEND 8" TO BEYOND THE STRAND VISE YOKE. CONNECT EACH STRAND VISE T BULL RING AT AERIAL CORNER, AS EXTERIOR CONDUIT MAY BE — REQUIRED USED FOR EITHER OR BOTH OF BY MFR THE FOLLOWING CONDITIONS: SERVICE GROUND RODS -FOR EXTERIOR SERVICE GROUNDING (OPTIONAL), USE ¾" SCHEDULE 80 PVC ROD VERTICAL REINFORCING BARS EQUALLY SPACED (SIZE AND NUMBER VARY *4 TIE OR SPIRAL BARS TO BE 12" ON CENTER - NOTE: INSTALL TWO BOLTS TOWARD CURB SIDE. 24/2" MAX. DIAMETER BOLT CIRCLE POLE GROUND F - OUTSIDE OF FOUNDATION 3" CLR MAXIMUM DIAMETER OF ANCHOR BOLTS SHALL BE 2¹/4* IF ANCHOR BOLTS ARE STRAIGHT NOT BEND, THE METAL TEMPLATE SHALL BE INSTALLED FOR STRUCTURAL INTEGRITY. POLE HEX NUT, WASHER, AND LOCK WASHER ABOVE BASE PLATE (TYPICAL) TOP OF FOUNDATION MUST BE LEVEL CARVED LOCATION J /DIRECTION OF SPARE CURB SIDE CONDUIT. CLEARANCE CLEARANCE OF ONE BOLT DIAMETER 3,-0. -MESSENGER CABLE TRAND VISE DETAIL CONTRACTOR SHALL PROVIDE A MINIMUM OF 6 INVERS OF RODUND WIRE FOR TESTING PRIOR TO CONNECTING THE WIRE TO ANY DISCONNECT CABINET OR POLE. LEAVE TOP OF GROUND RODS EXPOSED FOR ELECTRICAL INSPECTION. ALL GROUND RODS SHALL BE 24' FROM THE CONCRETE POLE BASE. POLE GROUND - GROUND WIRE SHALL COME FROM THE GROUND ROD THROUGH THE PVC CONDUIT, CONNECTING TO THE POLE AND THEN TO EACH RIGID STEEL GROUNDING BUSHING. PROVIDE SAG IN WIRES TO PREVENT WATER IN WEATHERHEAD SPECIAL WOTE FOR PORE DOOR TERROIS A STOCK HZÄÄD WARNING STICKER ON DISCONNECT WITH THE FOLLOWING INFORMATION; QUEC LASS (O) VOLTACE (120 VOLTA) ENTERTED APPROACH BOUNDARY (42 IN) RESTRICTED APPROACH BOUNDARY (60 NACT) SEE WEA 70E FOR ADDITIONAL PEF REQUIRED SPAN WIRE 门 刀 BENDING DETAIL FOR TIE BARS CONCRETE GROUNDING REQUIREMENTS: 1/4' SPARE SHEDULE 80 PVC CONDUIT; STUBBED OUT WITH END BELL BUSHING AND CAPPED AT BOTH ENDS. HEX NUT AND WASHER— UNDER BASE PLATE FOR PLUMBING OR RAKING POLE (TYP) A MINIMUM OF TWO—BOLT THREADS SHALL EXTEND ABOVE THE NUT 3. GALVANIZED CABLE RINGS - 18. MAX. SPACING. THE CABLE RINGS SHALL BE INSTALLED ACROSS THE WHOLE LENGTH OF THE SPAN. CONCRETE 1'-8" LAP CLAMP ASSEMBLY SPECIFCATIONS
CLAMP ASSEMBLIS MATS REDISTANCE IN ACCORDANCE
TO THE ASSENT STANDARD SPECIFICATIONS FOR
TOTAL ASSENT STANDARD SPECIFICATIONS FOR
AND TRAFFIC SIGNALS, SIXTH EDITION 2013.
AND TRAFFIC SIGNALS, SIXTH EDITION 2013.
AND TRAFFIC SIGNALS, SIXTH EDITION 2013.
AND TRAFFIC SIGNALS, SIXTH EDITINGS FOR HIGHAN
ASSENTINGS COURSES, CLAMP ASSEMBLIES SHALL COMPONE
TO SECTION 855, OLAND THE DRAWINGS SHOWN
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THE STANDARD SHO SHED GRADE NOTE.
THE STEEL STRAIN DOOR SHALL HAVE
NOTE 11 FOR STOCK HAZARO MARNING STICKER
NOTE 11 FOR STOCK HAZARO WARNING STICKER
NOTE 11 FOR STALL BE THE THE TOOR.
P. 459 FREM STATELLARK LABEL RITH
POLY CARBONIE LANGELS HITH WAS L STRAIN FOLE BASE POLE GROUND DETAIL CLAMP/CLEVIS- ASTM A36 GRADE 361/ASTM A572 (GRADE 50) BOLTS (EXCEPT U- BOLTS)- HIGH STRENGTH ASTM A325, ASTM A449, OR ASTM A490 BOLTS- MINIMUM ASTM A36 GALVANIZING- ASTM A153 Detail 3 -(Typical) 34: SCHEDULE 80 PVC-CONDUIT WITH END BELL BUSHING FOR POLE GROUNDING CONDUCTOR STEEL WITH ' Clamp Assembly Alt. GROUND ROD FOR POLE GROUNDING -CONDUCTOR Threaded Bolt-Cotter Pin-Nut-Lock Washer-Detail 3 ALL CONDUITS USED FOR THE TELEPHONE, GROUNDING, SPARE, AND SERVICE THAT ARE INSTALLED IN THE POLE BASE ARE INCIDENTAL TO BID ITEM "2355TW". THIS INCLUDES PROVIDING A MINIMUM OF 24 INCHES OF CONDUIT PAST THE EDGE OF THE CONCRETE POLE BASE. OVERHEAD SERVICE WIRES SHALL BE INSTALLED ON THE EXTERIOR OF THE POLE IN A I'RIGID STEEL CONDUIT WITH WEATHERHEAD, OR ON THE INSIDE THE STEEL STRAIN POLE IN FLEXIBLE COMDUIT. Threaded Bol+ Cotter Pin Nut Lock Washer Detail 1 UNDERGROUND SERVICE WIRES SHALL BE INSTALLED IN PRIGID STEEL CONDUIT AS SHOWN ON THE CONTROLLER CABINET DETAIL SHEET. FOR POLE BASE DEPTH SEE CHART IN SECTION 723 OF THE KENTUCKY STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION. PROVIDE 2 FOOT COIL IN SIGNAL CABLES TO PREVENT WATER ACCESS TO WEATHERHEADS FOR EACH SIGNAL HEAD. Detail 2 ALL CONDUITS SHALL BE INSTALLED BETWEEN 4 TO 6 INCHES ABOVE THE CONCRETE PAD, AND THEY CANNOT EXCEED THE 6 INCH HEIGHT. Wosher Lock Wosher Nut Cotter Pin Threaded Bolt 0000 17' - 19' & CONFORM TO FIGURE 4D-1 MUTCD LATEST EDITION SPAN DETAIL Clamp Assembly Alt. ۲ ۲ Clamp Assembly 5% MIN. SAG FOR ALL SPANS OR OTHERWISE NOTED 6/21/2023 (Typical USER: SwansegarT DATE PLOTTED: February SO, 2024 FILE NAME: C:\PWWORKING\EASTO!\D2232416\ALL SIGNAL STANDARDS_SOCCER.DCN E-SHEET NAME: T00600P0 Power inRoads v8.11.9.912

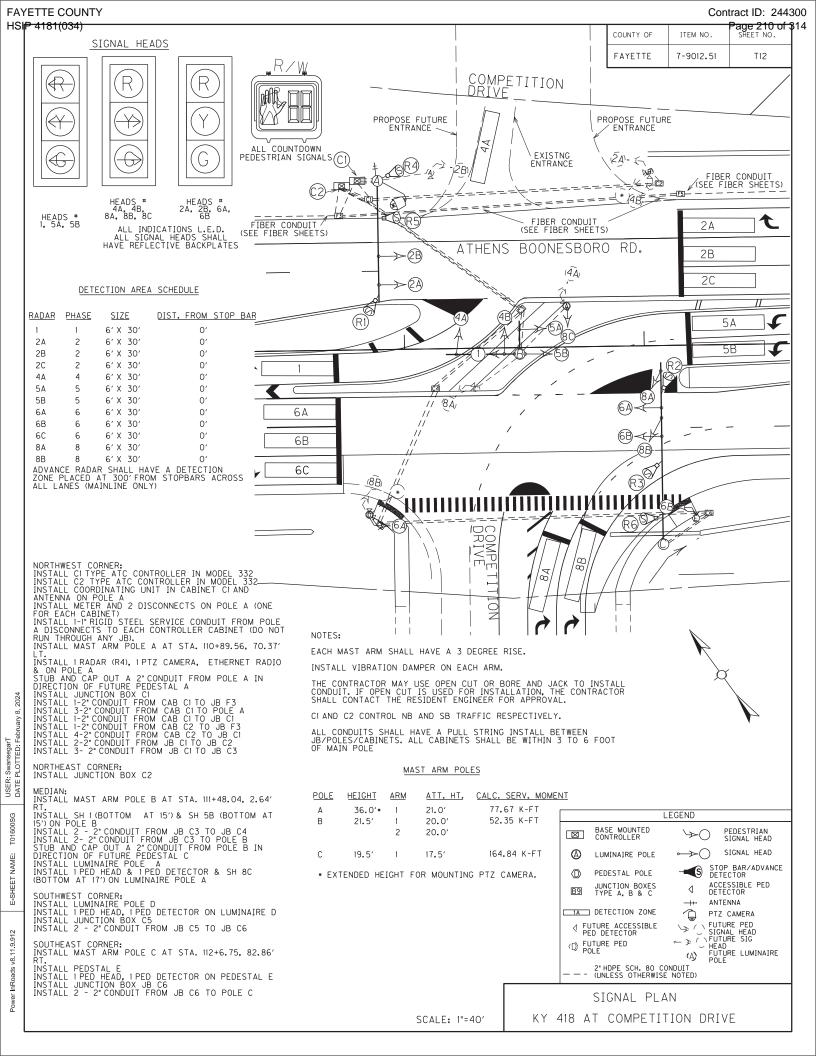












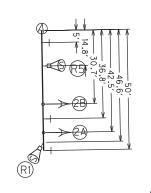
T13

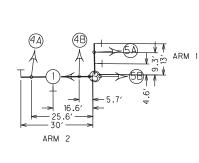
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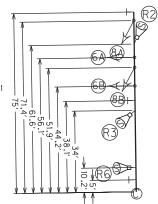
FAYETTE

ITEM NO.

7-9012.51







ALL DIMENSIONS FROM FACE OF VERTICAL POLE

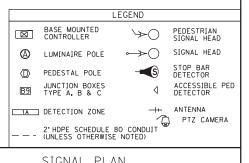
MAST ARM ATTACHMENT CHART

| | | | MAST ARM ATTACHMENT CHAP | <u> </u> | | | | = | |
|----------------------|----------|----------|--------------------------|------------------|------------|--------------------|---------------------|----------------|------------|
| POL | E ARM | SYMBOL | TYPE | SIZE | WEIGHT | <u>W</u> | <u>'IRING SCHEI</u> | <u>)ULE</u> | |
| | <u> </u> | (FUTURE) | SIGN | | | <u>CABLE</u> | ORIGIN | ENDING | CONNECTING |
| l A | | | | 72"×24"X18" | 100 LBS | 1 - #14/7C | CONTROLLER CI | SH 1 | SH 1 |
| A | 1 | R5 | ADVANCE RADAR | 10.6"×13.2"×3.8" | 3.8 LBS | 1 - #14/7C | CONTROLLER C1 | SH 2A | SH 2A & 2B |
| I A | | 2B | 3-SECTION SIGNAL HEAD | 24"×59"×16" | 50 LBS | 1 - #14/7C | CONTROLLER C1 | SH 4A | SH 4A & 4B |
| A | | (FUTURE) | SIGN | 36"×36" | 16 LBS | 1 - #14/7C | CONTROLLER CI | SH 4C | SH 4C |
| A | | 2A | 3-SECTION SIGNAL HEAD | 24"×59"×16" | 50 LBS | 1 - #14/7C | CONTROLLER C2 | SH 5A | SH 5A |
| A | ! | RI | STOP BAR RADAR | 10.6"×13.2"×3.3" | 4.2 LBS | 1 - #14/7C | CONTROLLER C2 | SH 5B | SH 5B |
| I A | 1 | (FUTURE) | SIGN | 36"×36" | 16 LBS | 1 - #14/7C | CONTROLLER C2 | SH 6A | SH 6A & 6B |
| В | ! | (FUTURE) | SIGN | 36"×36" | 16 LBS | 1 - #14/7C | CONTROLLER C2 | SH 8B | SH 8A & 8B |
| B | 1 | 5A | 4-SECTION SIGNAL HEAD* | 24"×73"×16" | 50 LBS | 1 - #14/7C | CONTROLLER C2 | SH 8C | SH 8C |
| В | ı | (FUTURE) | SIGN | 36"×36" | 16 LBS | 1 - #14/7C | CONTROLLER CI | PEDESTAL A | PH 2B |
| B | 2 | 4B | 3-SECTION SIGNAL HEAD | 24"×59"×16" | 50 LBS | 1 - #14/7C | CONTROLLER CI | LUMINAIRE POLE | A PH 4A |
| В | 2 | (FUTURE) | SIGN | 36"×36" | 16 LBS | 1 - #14/7C | CONTROLLER C2 | PEDESTAL D | PH 6A |
| В | 2 | 44 | 3-SECTION SIGNAL HEAD | 24"×59"×16" | 50 LBS | 1 - #14/7C | CONTROLLER C2 | PEDESTAL E | PH 6B |
| В | 2 | (FUTURE) | SIGN | 36"×36" | 16 LBS | 1 - RADAR CABLE | CONTROLLER C1 | POLE A-ARM | RADAR - R1 |
| C | 1 | (FUTURE) | SIGN | 72"×24"X18" | 100 LBS | 1 - RADAR CABLE | CONTROLLER C1 | POLE C-ARM | RADAR - R2 |
| C | 1 | R6 | ADVANCE RADAR | 10.6"×13.2"×3.8" | 3.8 LBS | 1 - RADAR CABLE | CONTROLLER C2 | POLE C-ARM | RADAR - R3 |
| C | 1 | R3 | STOP BAR RADAR | 10.6"×13.2"×3.3" | 4.2 LBS | 1 - RADAR CABLE | CONTROLLER C2 | POLE A | RADAR - R4 |
| C | 1 | (FUTURE) | SIGN | 36"×36" | 16 LBS | 1 - RADAR CABLE | CONTROLLER C1 | POLE A-ARM | RADAR - R5 |
| C | 1 | 6B | 3-SECTION SIGNAL HEAD | 24"×59"×16" | 50 LBS | 1 - RADAR CABLE | CONTROLLER C2 | POLE C-ARM | RADAR - R6 |
| C | 1 | 8B | 3-SECTION SIGNAL HEAD | 24"×59"×16" | 50 LBS | 1 - PTZ CABLE | CONTROLLER C1 | POLE A | PTZ |
| C | 1 | 6A | 3-SECTION SIGNAL HEAD | 24"×59"×16" | 50 LBS | 1 - ETHERNET CABLE | CONTROLLER CI | POLE A | ETHERNET |
| C | 1 | R2 | STOP BAR RADAR | 10.6"×13.2"×3.3" | 4.2 LBS | 1 - #14/2C | CONTROLLER C1 | PEDESTAL A | PB 2B |
| C | 1 | 8A | 3-SECTION SIGNAL HEAD | 24"×59"×16" | 50 LBS | 1 - #14/2C | CONTROLLER C1 | PEDESTAL B | PB 2A |
| C | 1 | (FUTURE) | SIGN | 36"×36" | 16 LBS | 1 - #14/2C | CONTROLLER C1 | PEDESTAL B | PB 4B |
| * DESIGN FOR FITTING | | | | | 1 - #14/2C | CONTROLLER C1 | LUMINAIRE POLE | | |
| | | | <u>-</u> | | | 1 - #14/2C | CONTROLLER C2 | PEDESTAL C | PB 8A |
| | | | | | | 1 - #14/2C | CONTROLLER C2 | PEDESTAL D | PB 8B |
| | | | | | | 1 - #14/2C | CONTROLLER C2 | PEDESTAL D | PB 6A |
| | | | | | | 1 - #14/2C | CONTROLLER C2 | PEDESTAL E | PB 6B |

WIRE ROUTING PER CONDUIT
CAB CI TO POLE A:
CONDUIT 1: 3 RADAR, I PTZ, & I ETHERNET
CONDUIT 2: 2-7C & 1-2C
CONDUIT 3: SPARE
CAB 1 TO JBC1:
CONDUIT 1: 5-7C & 3-2C
JBC1 TO JBC2
CONDUIT 1: (FUTURE 2-7C & 2-2C)
CONDUIT 2: SPARE
CAB C2 TO JBC1
CONDUIT 1: 5-7C & 2-2C
CONDUIT 2: 4-7C & 2-2C
CONDUIT 3: 3 RADAR
CONDUIT 1: 5-7C & 2-2C
CONDUIT 4: SPARE
JBC1 TO JBC3
CONDUIT 4: SPARE
JBC1 TO JBC3
CONDUIT 4: SPARE
JBC1 TO JBC3
CONDUIT 1: 3-RADAR
CONDUIT 3: 5-7C & 2-2C
CONDUIT 3: 5-7C & 2-2C
CONDUIT 3: 5-7C & 2-2C
CONDUIT 1: 3-7C & 1-2C
CONDUIT 2: SPARE
JBC3 TO JBC6
CONDUIT 1: 3-7C & 1-2C
CONDUIT 2: SPARE
JBC5 TO JBC6
CONDUIT 1: 3-7C & 1-2C
CONDUIT 1: 5-7C & 3 RADAR
CONDUIT 1: 5-7C & 3 RADAR
CONDUIT 1: 2-7C & 3 RADAR
CONDUIT 1: 2-7C & 3 RADAR
CONDUIT 1: 2-7C & 3 RADAR
CONDUIT 1: 5-7C & 3 RADAR
CONDUIT 2: SPARE

BREAKAWAY BASES SHALL HAYE FUSE WECTOR KITS INSTALL FOR ALL WIRING PEDESTRIAN HEADS AND SIGNAL HEADS. NEUTRALS IN A POLE CAN BE IN SAME KIT, NEEDS A METAL LUG INSTALLED. PEDESTAL AND LUMINAIRE POLES WITH ESTRIAN BUTTONS SHALL BE PLACE ORDING THE STANDARD DRAWING TO T ADA REQUIREMENTS.

ALL LUMINAIRE POLES SHALL HAVE AN ALUMINUM CAP WITH SET SCREWS INSTALL ON TOP OF POLE THIS WILL BE INCIDENTAL TO THE INSTALLATION OF THE POLE.



SIGNAL PLAN KY 418 AT COMPETITION DRIVE

Power InRoads v8.11.9.912

USER: SwansegarT DATE PLOTTED: February 8, 2024

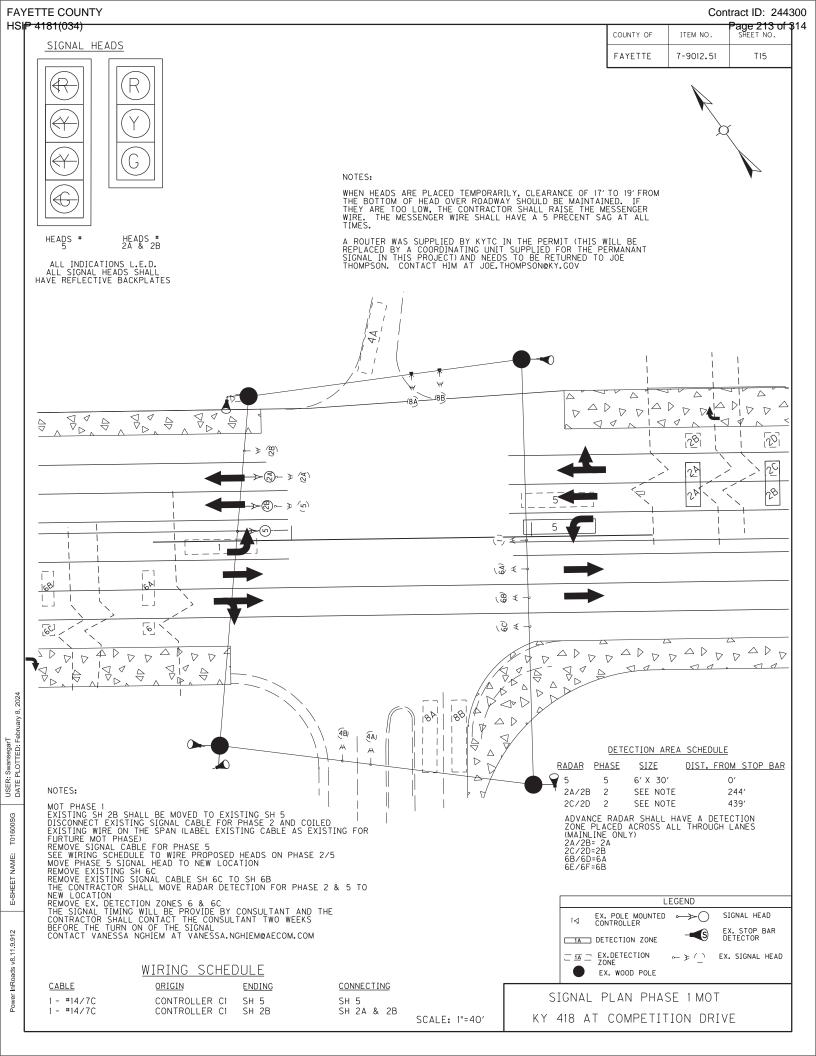
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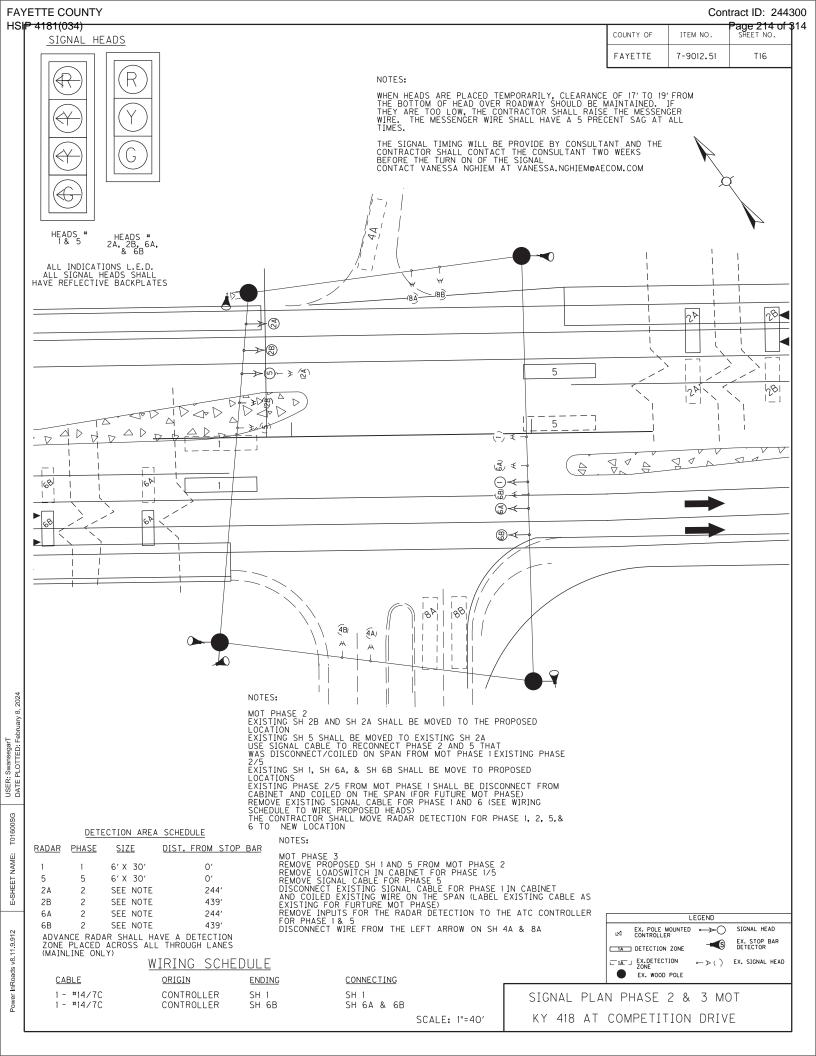
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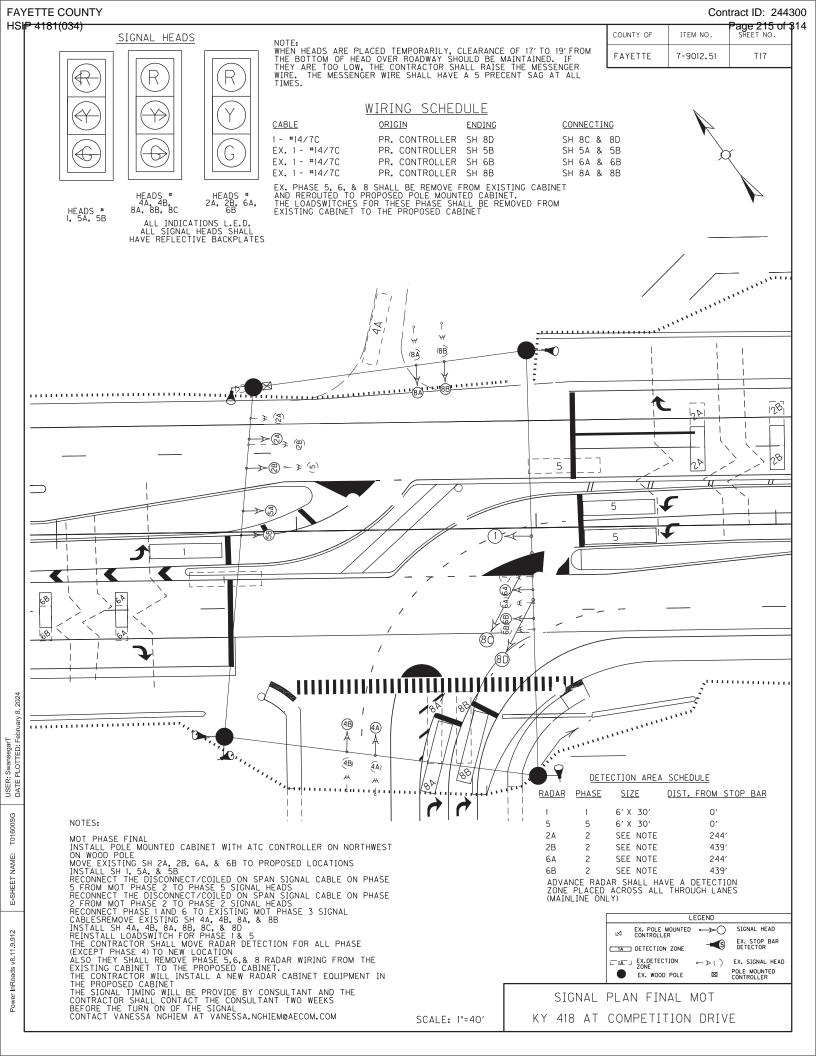
SCALE: 1"=40'

SCALE: 1"=40'

KY 418 AT EB LOON FOR COMPETITION







HEADS #

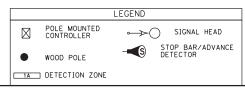
HEADS # 2A & 2B HEAD # ALL INDICATIONS L.E.D. ALL SIGNAL HEADS SHALL HAVE REFLECTIVE BACKPLATES

DETECTION AREA SCHEDULE

| RADAR | <u>PHASE</u> | SIZE | DIST. FROM STOP BAR | | |
|---|--------------|----------|---------------------|--|--|
| 1A | 1 | 6' X 30' | 0′ | | |
| 1B | 1 | 6' X 30' | 0′ | | |
| 2A | 2 | 6′ X 30′ | 0′ | | |
| 2B | 2 | 6′ X 30′ | 0′ | | |
| 2C | 2 | 6' X 30' | 0′ | | |
| ADVANCE RADAR SHALL HAVE A DETECTION | | | | | |
| ZONE PLACED AT 300'FROM STOPBARS ACROSS | | | | | |
| ALL LANES (MAINLIE ONLY) | | | | | |
| | | | | | |

FÜRNISH AND INSTALL 45 FOOT POLE B AT STA 118+90.25 68.74 FURNISH AND INSTALL 45 FOOT POLE B AT STA 18490.25 68.74 LT.
FURNISH AND INSTALL 45 FOOT POLE C AT STA 116497.84.52 LT.
ALL SPAN MOUNTED SIGNAL HEADS SHALL BE AT LEAST 17' FROM THE GROUND
ALL WOOD POLES SHALL HAVE ANCHORS FURNISH AND INSTALLED (POLE B SHALL HAVE TWO ANCHORS)
SIGNAL HEADS 1B & 1C SHALL BE INSTALL ON WOOD POLES AT 17.5' FROM GROUND
THE CABIENT WILL SUPPLY THE THE TYPE ATC CONTROLLER/CABINET AND INSTALL IT RADAR WILL BE SUPPLY BY THE CABIENT AND INSTALL BY THE CONTRACTOR
RADAR WILL BE SUPPLY BY THE CABINET AND INSTALL BY THE CONTRACTOR
RADAR & SIGNAL HEADS WILL BE TRANSFER FROM TEMP SIGNAL TO PROPOSED SIGNAL WHEN THE TEMP IS REMOVED
THE SIGNAL TIMING WILL BE PROVIDE BY CONSULTANT AND THE CONTRACTOR SHALL CONTACT THE CONSULTANT TWO WEEKS BEFORE THE TURN ON OF THE SIGNAL
CONTACT VANESSA NGHIEM AT VANESSA.NGHIEM@AECOM.COM

SH 2A & 2B SHALL HAVE THE MAXIMUM BOTTOM HEIGHT OF 17.2'



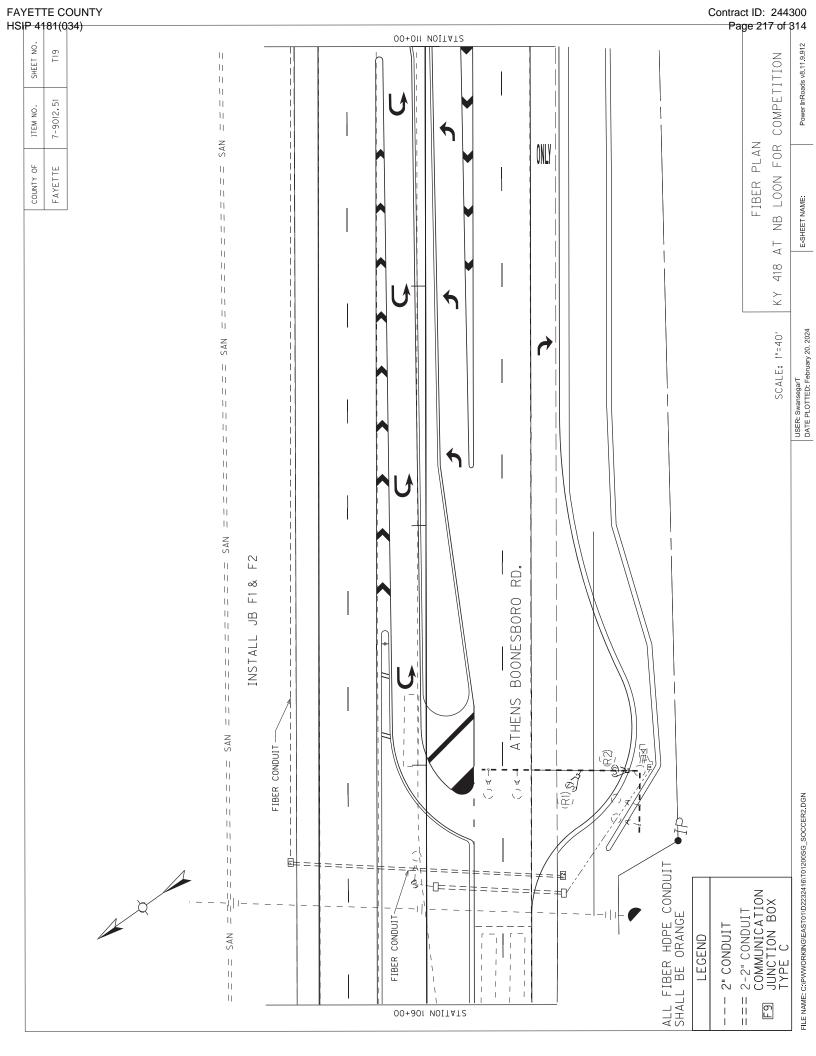
SIGNAL PLAN PHASE 3 MOT KY 418 AT EB LOON FOR COMPETITION

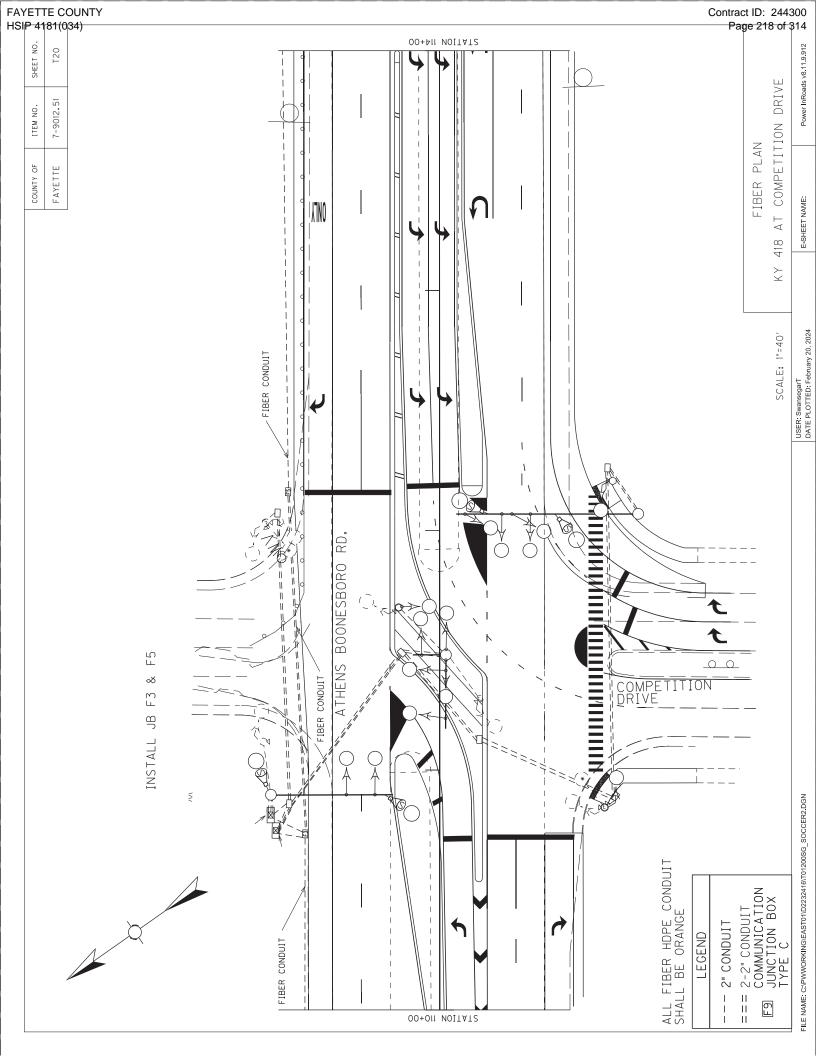
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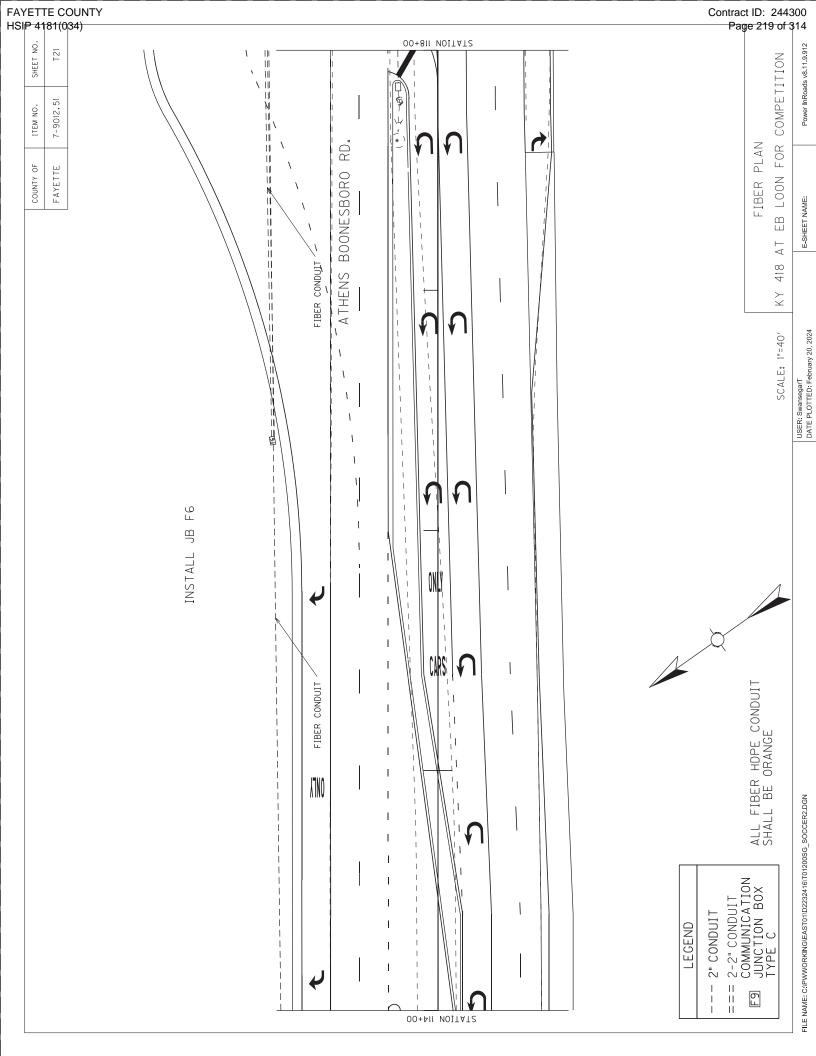
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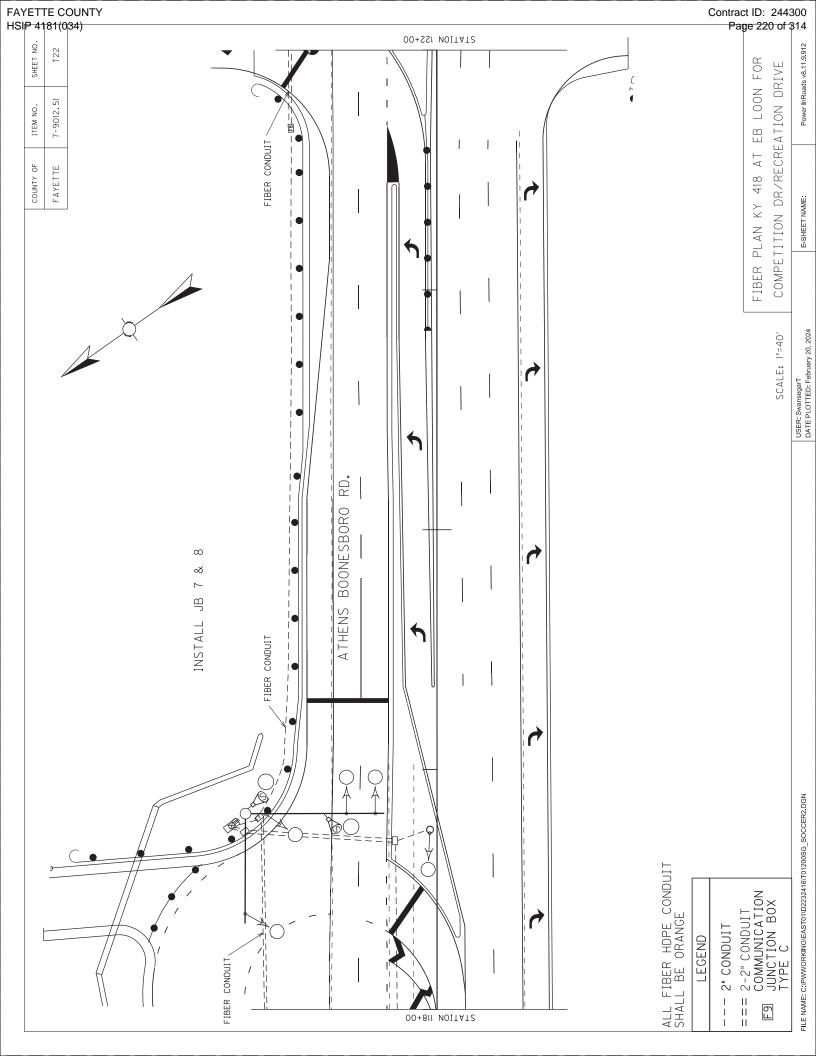
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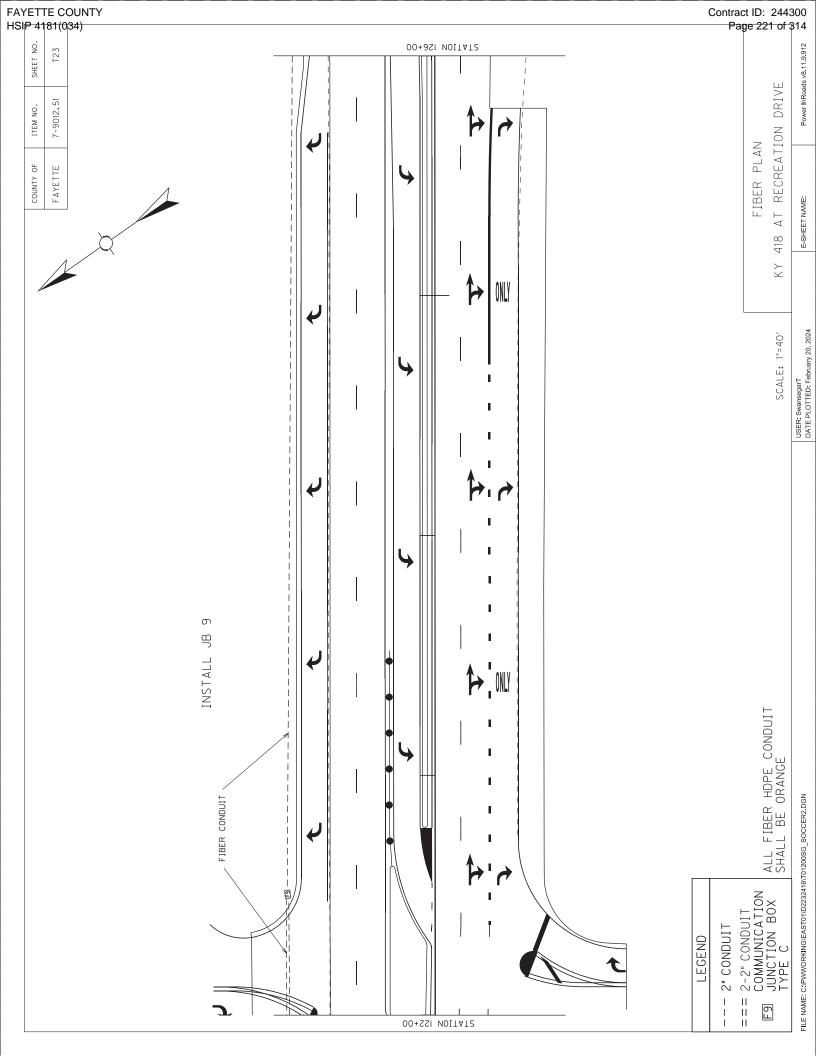
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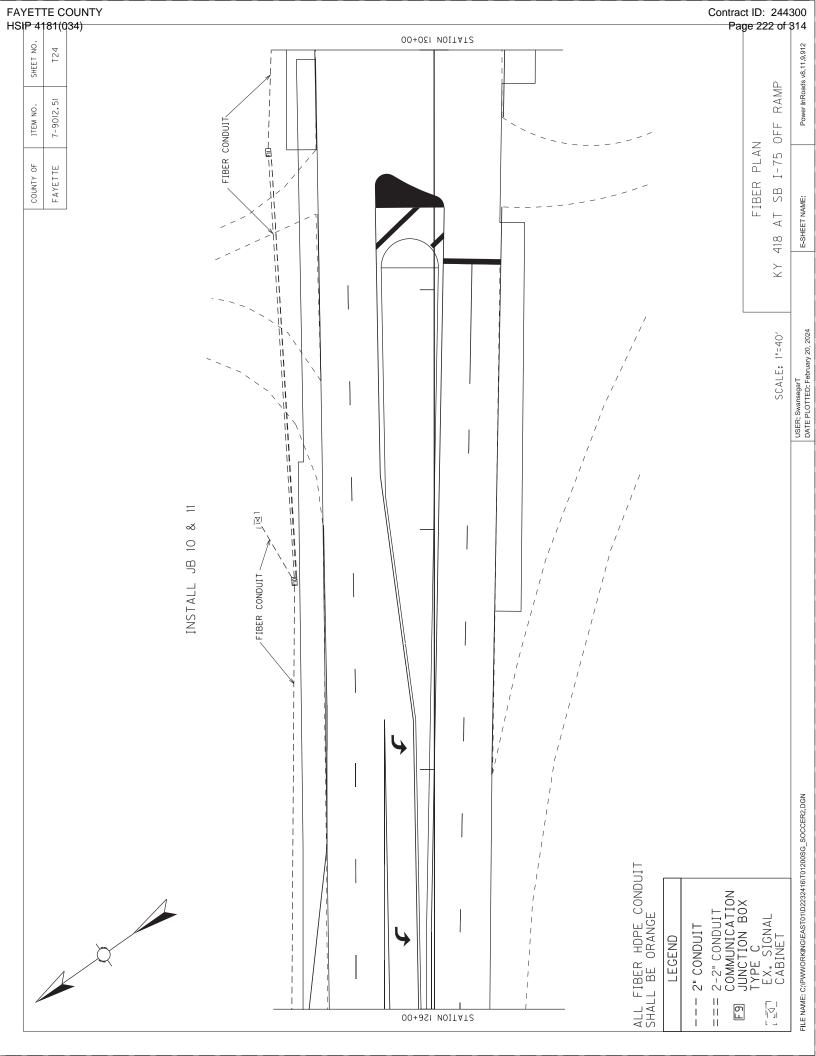


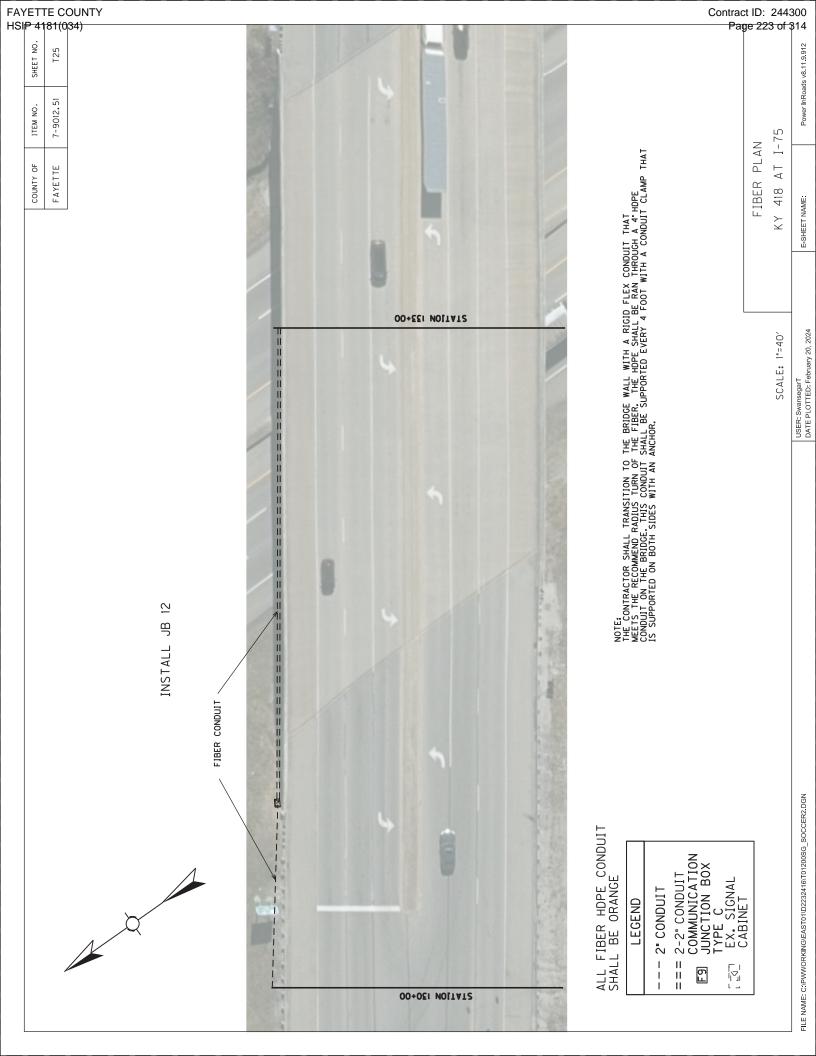


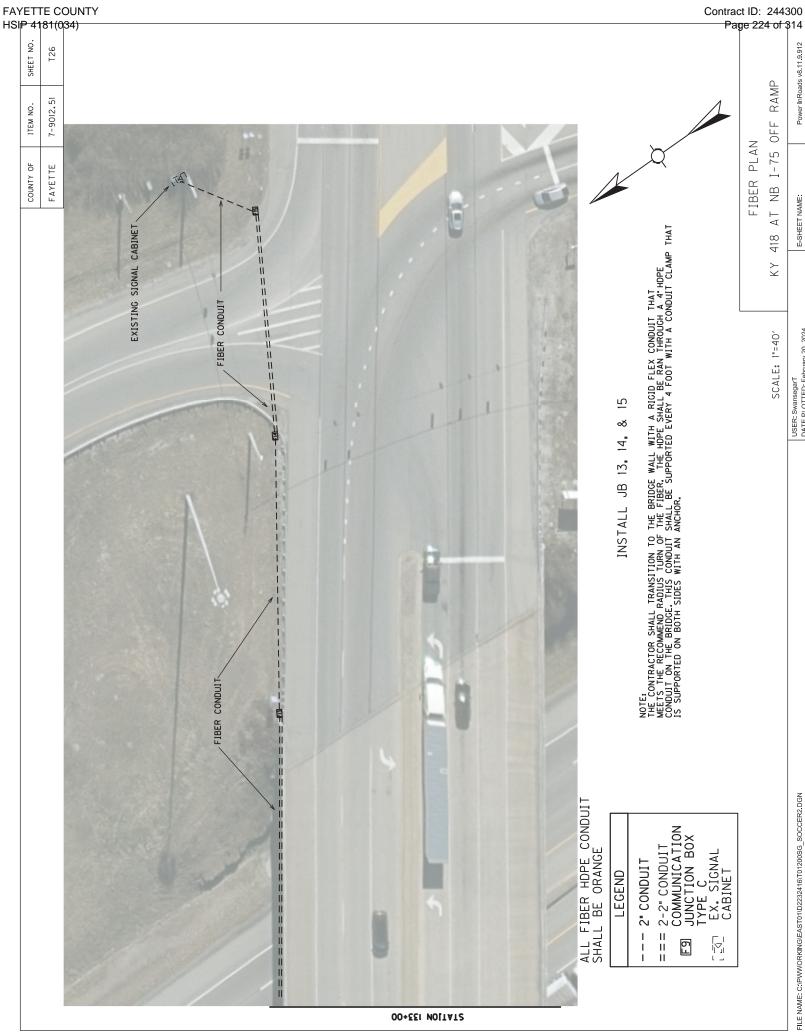






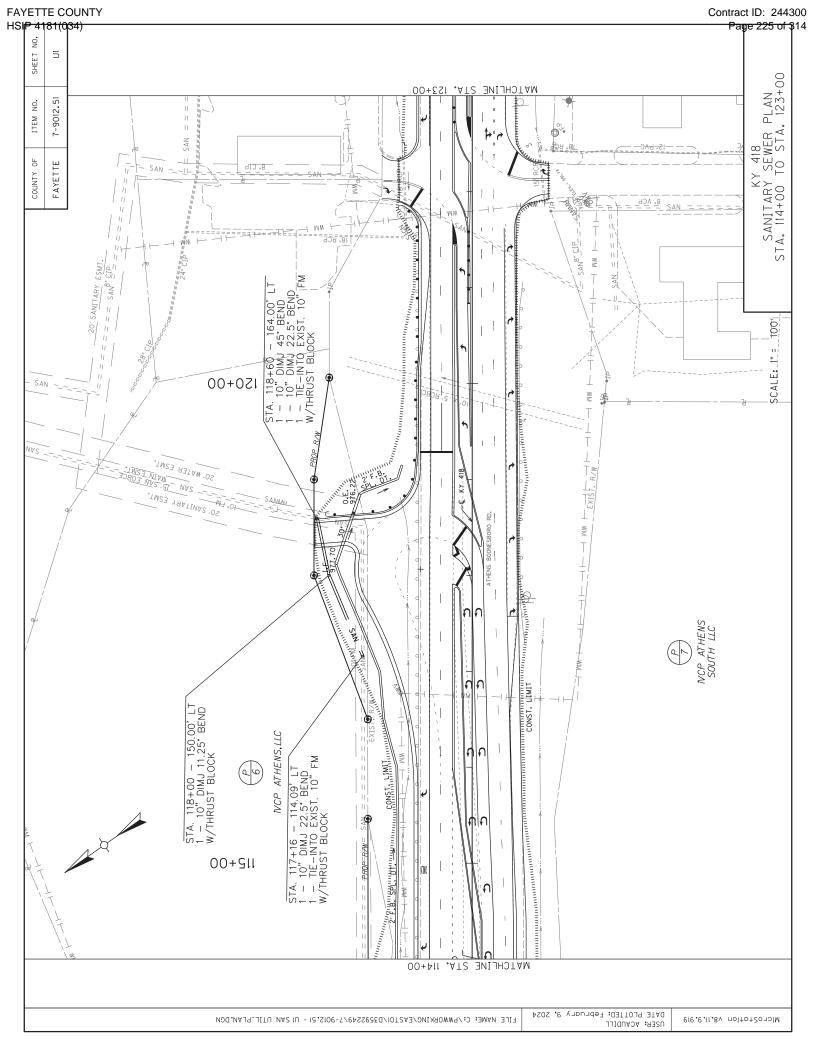


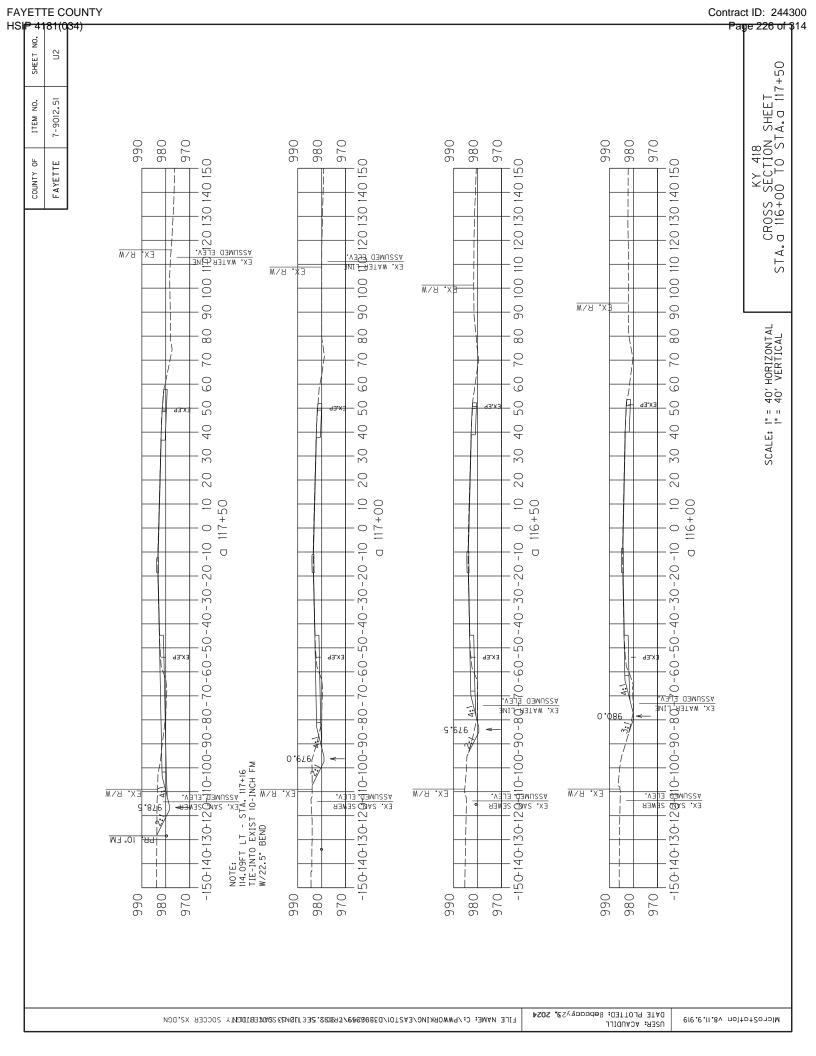


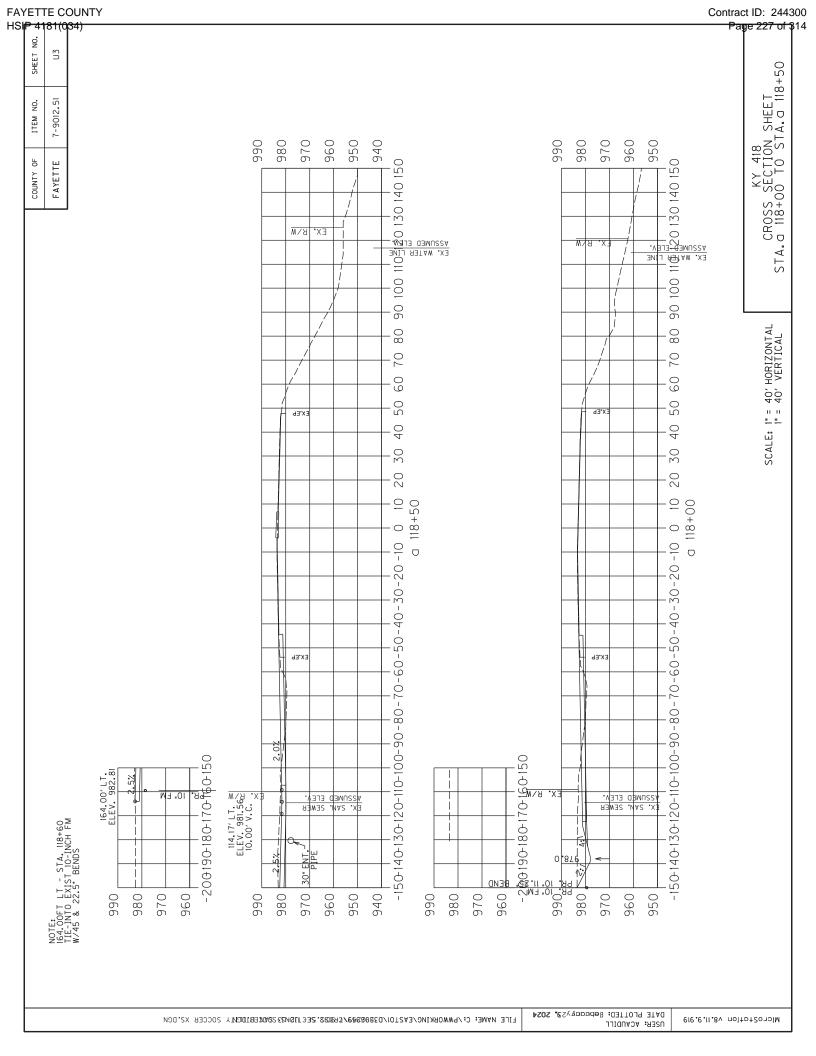


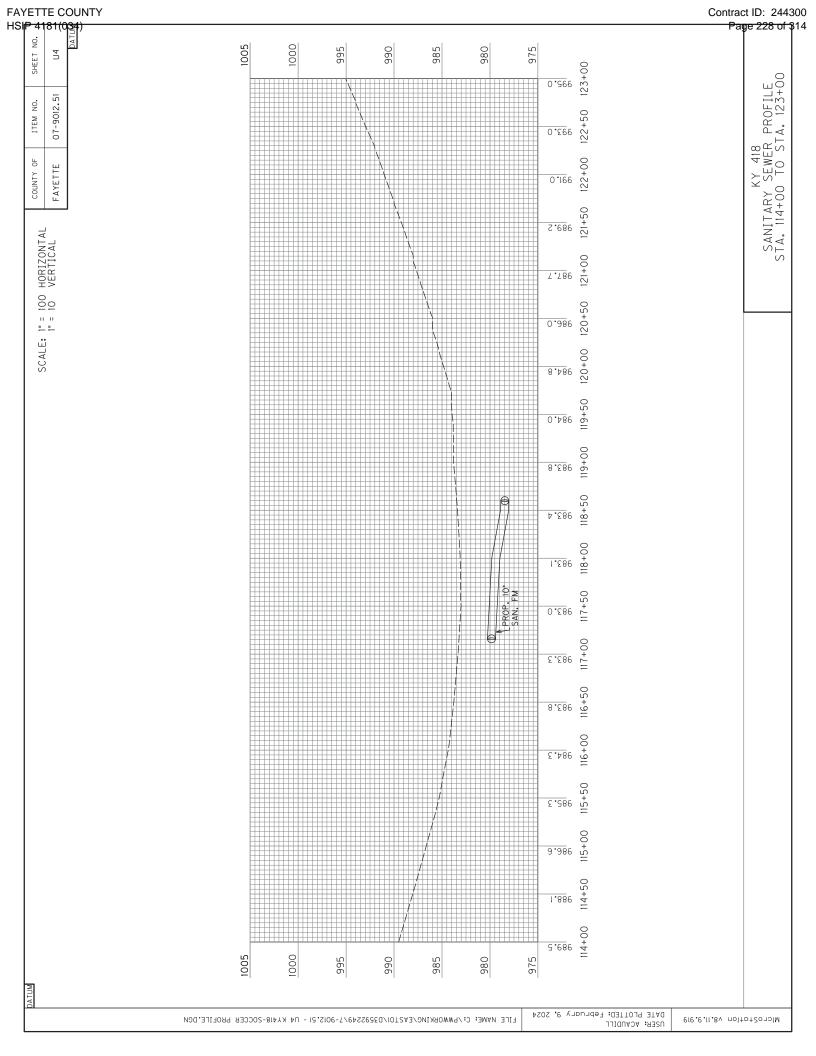
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USER: SwansegarT DATE PLOTTED: February 20, 2024









FAYETTE COUNTY Contract ID: 244300 HSIP 4181(034) Page 229 of 314

SHEET NO. U5 7-9012,51 ITEM NO. COUNTY OF FAYETTE

NOTE: ANY FITTINGS (INCLUDING BENDS) NECESSARY ARE INCIDENTAL TO PIPE

100, SCALE: 1" =

KY 418 SANITARY SEWER GENERAL SUMMARY

"FOR FORCE MAIN RECONSTRUCTION ONLY"

| IU | 180 |
|------|--|
| LI Z | EA |
| ITEM | S FORCE MAIN PVC 10 INCH S FORCE MAIN TIE-IN 10 INCH |
| ITEM | 15076 |

FAYETTE COUNTY HSIP 4181(034)

Contract ID: 244300

Page 230 of \$14

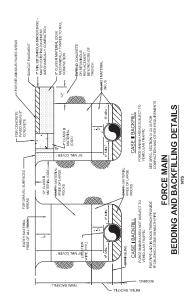
418 SANITARY SEWER DETAIL SHEET

SCALE: N/A

SHEET NO. 90

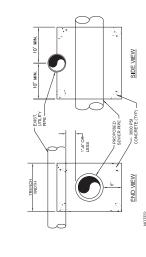
7-9012.51





BEDDING UNDER THE SEWER AT THE BELL SHALL BE A MIN. OF 4 SEE SPEC SECTION 31 23 33 FOR COMPACTION AND C REQUIREMENTS.

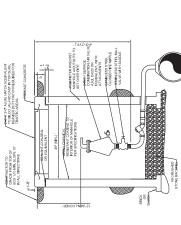
FOR PIPE LAID IN ROCK TRENCH PROVIDE 6" CLASS STONE BENEATH PIPE.

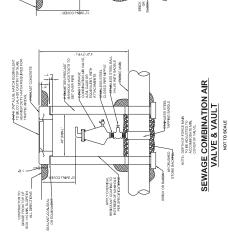


3. PROPOSED SEWER TO BE FULLY ENCASED WHETHER ABOVE OR BELOW EXISTING UTILITY PIPE, IF ABOVE EXISTING UTILITY PIPE, PROTECT UTILITY PIPE WITH PIPE SADDLE BEFORE PLACING CONCR. "UTILITY PIPE" INCLUDES UNDERGROUND WATER NATURAL GAS, TELEPHONE, ELECTRICAL CONE STORM SEWER OR TYPICALLY NON-CONTAMINATING FACILITIES.

UTILITY CROSSING FOR SEWER INSTALLATION CONCRETE ENCASEMENT

OFFSET SEWAGE COMBINATION
AIR VALVE & VAULT





FAYETTE COUNTY

Contract ID: 244300

Page 231 of \$14

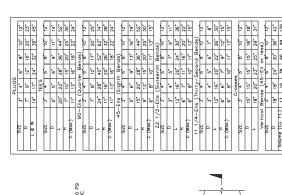
418 SANITARY SEWER DETAIL SHEET

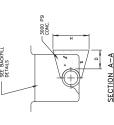
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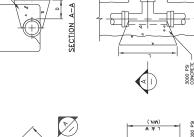
HSIP 4181(034) ġ 70 SHEET

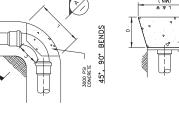
7-9012.51 ġ ITEM

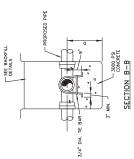




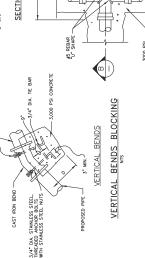








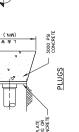
1/4" x 3" STEEL STRAP DRILLED
TO ACCOMODATE ANCHOR BOLTS

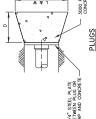


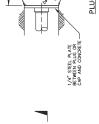


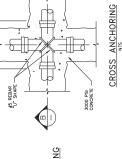
CHARLE OF SECULO

THRUST BLOCK SCHEDULE

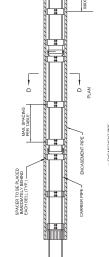












TYPICAL ENCASEMENT PIPE INSTALLATION

FAYETTE COUNTY Contract ID: 244300 HSIP 4181(034) Page 232 of \$14 ġ SHEET $\bar{\times}$ CROSS SECTION SHEET a 106+00 T0 STA.a 107+00 ġ 7-9012. ITEM 050 030 1020 030 030 1020 040 1010 1020 1010 1010 100 110 120 130 140 150 110 120 130 140 150 100 110 120 130 140 150 Ы COUNTY å 100 M/A 1013, 42 90 90 90 80 40' HORIZONTAL 40' VERTICAL 80 80 M/A EX. M/A ₹X∃ 70 2 70 09 09 09 20°= 50 20 0.040 40 40 SCALE: 30 30 20 20 20 0 9 0 d 107+00 106+50 d 106+00 0 0 EX. SAN. SEPTEL 60.10 WORK AT COMPETITION DRIVE SHOULD BE COORDINATED TO TIE IN TO THE WORK COMPLETED BY OTHERS FOR THAT ROADWAY. WAY 43.X3 ELEVATIONS ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD. GRADE DITCHES TO DRAIN. OF. ALL WORK IS TO BE DONE WITHIN EXISTING RIGHT UNLESS DIRECTED BY THE ENGINEER.
SEE SPECIAL NOTES APPLICABLE TO THE PROJECT. M/A EA. EX, R/W M/A •X3 LINE #∃TAW 1030 1050 1040 030 1020 040 1030 1020 1020 1010 1010 040 1010 NOTES: Š DATE PLOTTED: January 23, 2024 EIFE NAME: C:/PWWORKING/EASTO1/D3206959/CROSS SECTIONS-SOCCER.DGN MicroStation v8.11.9.919

FAYETTE COUNTY Contract ID: 244300 HSIP 4181(034) Page 233 of \$14 ġ SHEET X2 CROSS SECTION SHEET a 107+50 T0 STA.a 108+00 7-9012,51 Š. ITEM 1000 1030 1020 1040 1030 1020 1010 1010 100 110 120 130 140 150 90 100 110 120 130 140 150 Ы COUNTY ď 94.0161 06 80 80 40' HORIZONTAL 40' VERTICAL 89.8001 2 .0 09 09 чэ.х 20 40 40 SCALE: 30 20 50 -10 0 10 0 108+00 ASSUMED ELEV. M/A M/A 1050 1040 000 1040 1020 000 030 1020 1050 030 1010 1010 DATE PLOTTED: January 23, 2024 LIFE NAME: C:/PWWORKING/EASTOI/D3206959/CR055 SECTIONS-SOCCER.DGN MicroStation v8.11,9,919

FAYETTE COUNTY Contract ID: 244300 HSIP 4181(034) Page 234 of \$14 ġ SHEET ×3 CROSS SECTION SHEET a 108+50 T0 STA.a 109+00 7-9012,51 Š. ITEM 1000 1020 1000 030 1020 1040 1030 1010 1010 100 110 120 130 140 150 90 100 110 120 130 140 150 Ы COUNTY ď M78 EX* B\W FX* -06 80 80 40' HORIZONTAL 40' VERTICAL 09.4001 59.9001 20 70 09 09 20 EXEP 20 40 40 SCALE: 30 20 50 -10 0 10 a 109+00 0 10 10 108+50 EX. WATER CINE EX. R/W M/A 000 1050 1040 1040 1030 1020 1030 1010 DATE PLOTTED: January 23, 2024 LIFE NAME: C:/PWWORKING/EASTOI/D3206959/CR055 SECTIONS-SOCCER.DGN MicroStation v8.11,9,919

FAYETTE COUNTY Contract ID: 244300 HSIP 4181(034) Page 235 of \$14 ġ SHEET × 4 KY 418 CROSS SECTION SHEET STA. 0 109+50 TO STA. 0 110+00 7-9012,51 Š. ITEM 1000 1000 020 1030 1020 1010 1010 990 990 100 110 120 130 140 150 90 100 110 120 130 140 150 Ы COUNTY W\P .X3 06 80 80 40' HORIZONTAL 40' VERTICAL 92.0001 72,5001 2 70 4:1 09 09 **чэ.**хэ 3.X3 20 50 40 40 SCALE: 30 20 50 -10 0 10 0 110+00 150-140-130-120-110-100-940-80-70-60-50-40-30-20-10 SEWER EX. R/W M/A 000 1030 1000 1020 1040 020 1010 1030 1010 990 990 DATE PLOTTED: January 23, 2024 LIFE NAME: C:/PWWORKING/EASTOI/D3206959/CR055 SECTIONS-SOCCER.DGN MicroStation v8.11,9,919

FAYETTE COUNTY Contract ID: 244300 HSIP 4181(034) Page 236 of \$14 ġ SHEET X 1+50 KY 418 CROSS SECTION SHEET a 110+50 TO STA.a 111 ġ 7-9012. ITEM 1000 0001 000 020 020 020 1010 1010 1010 990 990 990 130 140 150 100 110 120 130 140 150 120 130 140 150 Ы COUNTY 1201 Š 0 100 110 100 M/8 M/8 W/A .× 90 96 90 80 40' HORIZONTAL 40' VERTICAL 80 80 EN RANCE BY OTHERS 85.866 70 70 70 4 09 09 09 20 EX 43.X 20 20 11 11 40 40 40 SCALE: 30 30 20 20 20 9 9 0 111+50 111+00 0 0 EX. SAN. ELEV. 43' 80-7 EX. SAN. SEMER 50-140-130-120-110-100-50-140-130-120-110-100-EX. R/W <u>₩\8 .×</u>3 EX. R/W 000 000 000 1020 020 1020 1010 1010 030 1010 990 990 990 DATE PLOTTED: January 23, 2024 LIFE NAME: C:/PWWORKING/EASTO1/D3206959/CROSS SECTIONS-SOCCER, DGN MicroStation v8.11.9.919

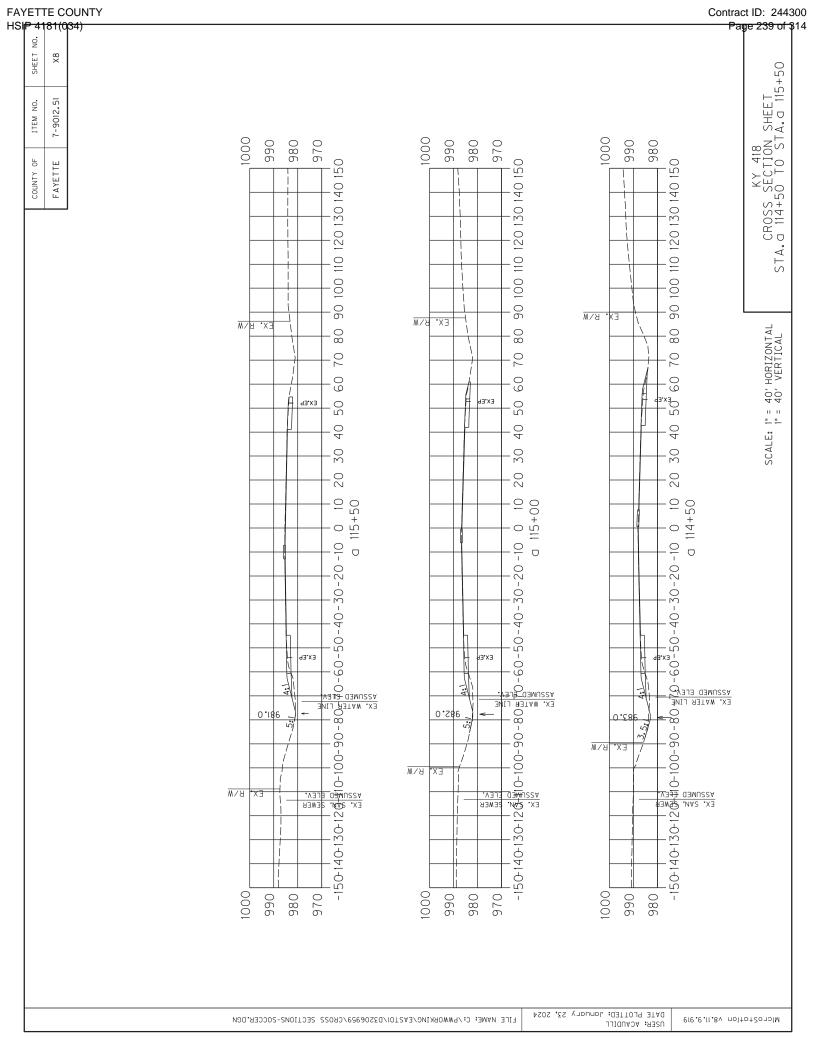
FAYETTE COUNTY Contract ID: 244300 HSIP 4181(034) Page 237 of \$14 ġ SHEET 9X CROSS SECTION SHEET O 112+00 TO STA. 0 112+50 ġ 7-9012. ITEM 1000 1000 020 1010 GRADE DITCH TO DRAIN.
TIE INTO PROP. ENTRANCE
BY OTHERS 1010 990 980 100 110 120 130 140 150 100 110 120 130 140 150 Ы COUNTY STA. W\A .X∃ M/4 90 96 80 80 40' HORIZONTAL 40' VERTICAL 18" ENT. 70 70 09 09 43.X3 20 20 11 11 40 40 SCALE: 30 20 20 0 10 112+00 9 0 EX. WA (C) = 10 (C) = 10 60-50-40-30-20-10 **чэ.**хэ EX. WATER LIN - 150-140-130-120-110-100-9 SEWERF

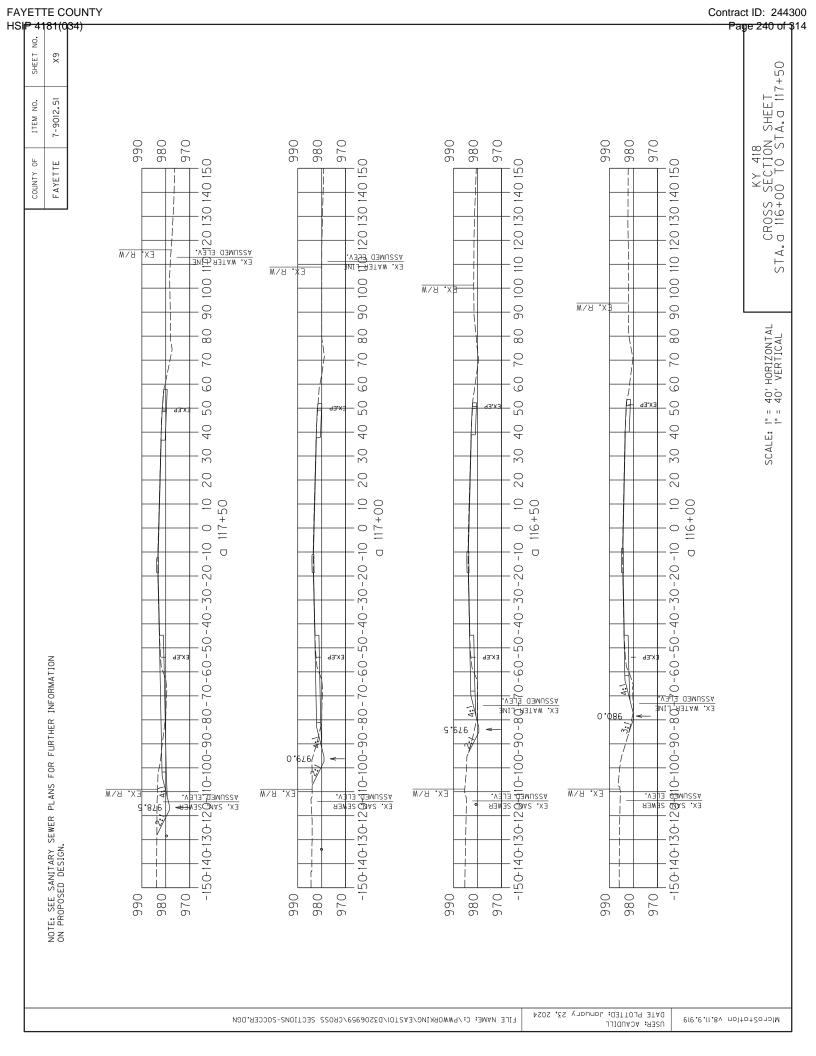
EX. 542 SEWERF

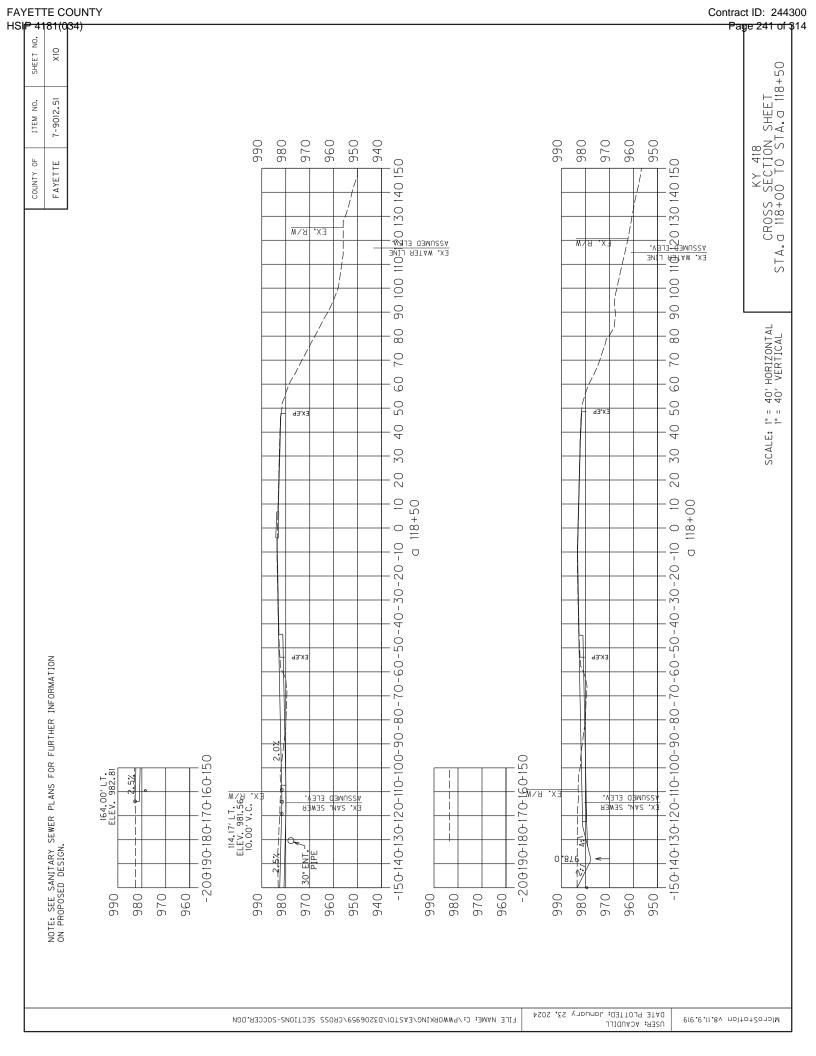
ASSUMED BLEV:

/A EX BVM 000 000 1020 1010 1020 1010 990 980 990 980 DATE PLOTTED: January 23, 2024 MicroStation v8.11.9.919 LIFE NAME: C:/PWWORKING/EASTO1/D3206959/CROSS SECTIONS-SOCCER, DGN

FAYETTE COUNTY Contract ID: 244300 HSIP 4181(034) Page 238 of \$14 ġ SHEET × SHEET FA. a 114+00 ġ 7-9012. ITEM CROSS SECTION S C 113+00 TO STA 1000 000 000 020 010 1010 990 1010 990 980 990 100 110 120 130 140 150 100 110 120 130 140 150 120 130 140 150 Ы COUNTY Š 0 S 100 EK. R/W 90 90 90 M/A EX, M/H *X 80 80 40' HORIZONTAL 40' VERTICAL 80 2 70 70 09 09 09 20 EXEB d3" чэ.х 20 20 0.040 40 40 بْنا SCALI 30 30 20 20 20 0 10 0 d 114+00 0 .00% 700. .00% 0 60-50-40-30-20-10 60-50-40-30-20-10 50-40-30-20-10 60-EX. WATER-UINE EX. WATER LIVE ASSUMED ELEDY. EX. WATER LINE ASSUMED ELE -08-06 .986 M/A EX° EX. SAN. GEWER м я .x NEB 150-140-130-12 1000 000 000 1010 020 1010 990 980 990 980 990 980 DATE PLOTTED: January 23, 2024 LIFE NAME: C:/PWWORKING/EASTO1/D3206959/CROSS SECTIONS-SOCCER, DGN MicroStation v8.11.9.919



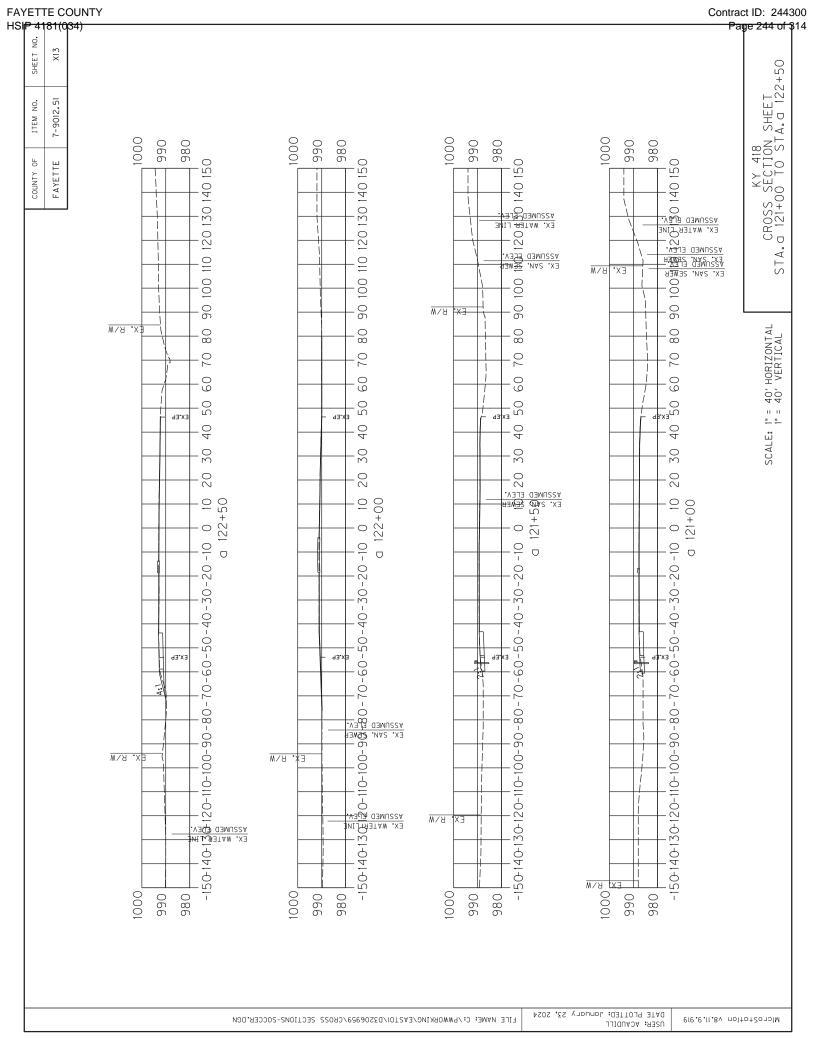


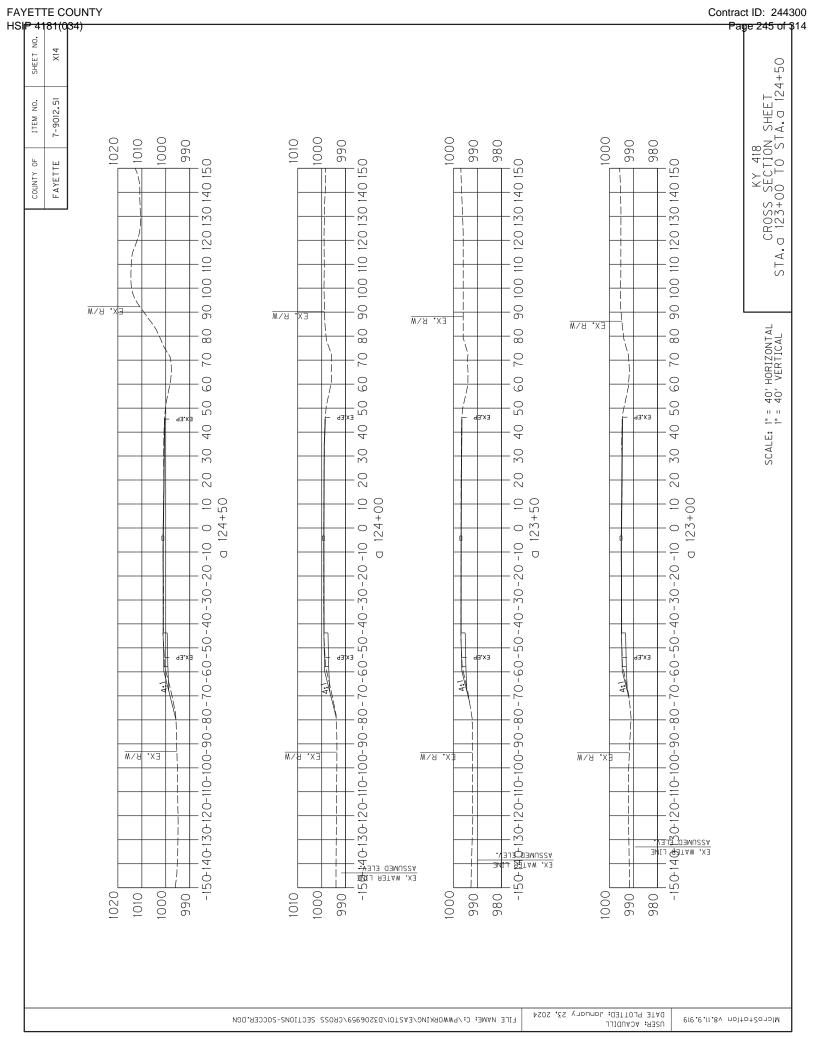


FAYETTE COUNTY Contract ID: 244300 HSIP 4181(034) Page 242 of \$14 ġ $\stackrel{\scriptstyle >}{\scriptscriptstyle =}$ SHEET KY 418 CROSS SECTION SHEET STA. O 119+00 TO STA. O 119+50 7-9012.51 Š. ITEM 970 960 990 960 950 990 950 130 140 150 130 140 150 Ы COUNTY EX. R/W M/A EX. EX. WATER LADE EX. WATER-LIN 0= - 2 100 100 90 - 06 80 80 40' HORIZONTAL 40' VERTICAL 2 .0 09 09 50 50 43,X3 чэ.хэ 40 40 SCALE: 30 20 20 0 10 10 119+50 0 10 (19+00) 50-140-130-120-110-100-90-80-70-60-50-40-30-20-10 50-140-130-120-110-100-90-80-70-60-50-40-30-20-10 чэ.хэ 43.X3 00,976 EX. R/W M & X 990 980 096 950 980 960 USER: ACAUDILL

DATE PLOTTED: January 23, 2024 LIFE NAME: C:/PWWORKING/EASTOI/D3206959/CR055 SECTIONS-SOCCER.DGN MicroStation v8.11,9,919

FAYETTE COUNTY Contract ID: 244300 HSIP 4181(034) Page 243 of \$14 ġ X12 SHEET KY 418 CROSS SECTION SHEET STA. a 120+00 TO STA. a 120+50 7-9012,51 Š. ITEM 990 980 970 096 990 960 950 90 100 110 120 130 140 150 100 110 120 130 140 150 Ы EX. WATER LINE ASSUMED ELEV. EX* B/W SSUMED ELEY -06 80 80 40' HORIZONTAL 40' VERTICAL 2 .0 09 09 20 50 яэ.хэ 43.X3 40 40 SCALE: 30 50 20 -10 0 10 a 120+50 -10 0 10 a 120+00 150-140-130-120-110-100-90-80-70-60-50-40-30-20-10 50-140-130-120-110-100-90-80-70-60-50-40-30-20-10 чэ.хэ э.хэ 980W 970× 000 960 990 990 980 096 DATE PLOTTED: January 23, 2024 LIFE NAME: C:/PWWORKING/EASTOI/D3206959/CR055 SECTIONS-SOCCER.DGN MicroStation v8.11,9,919





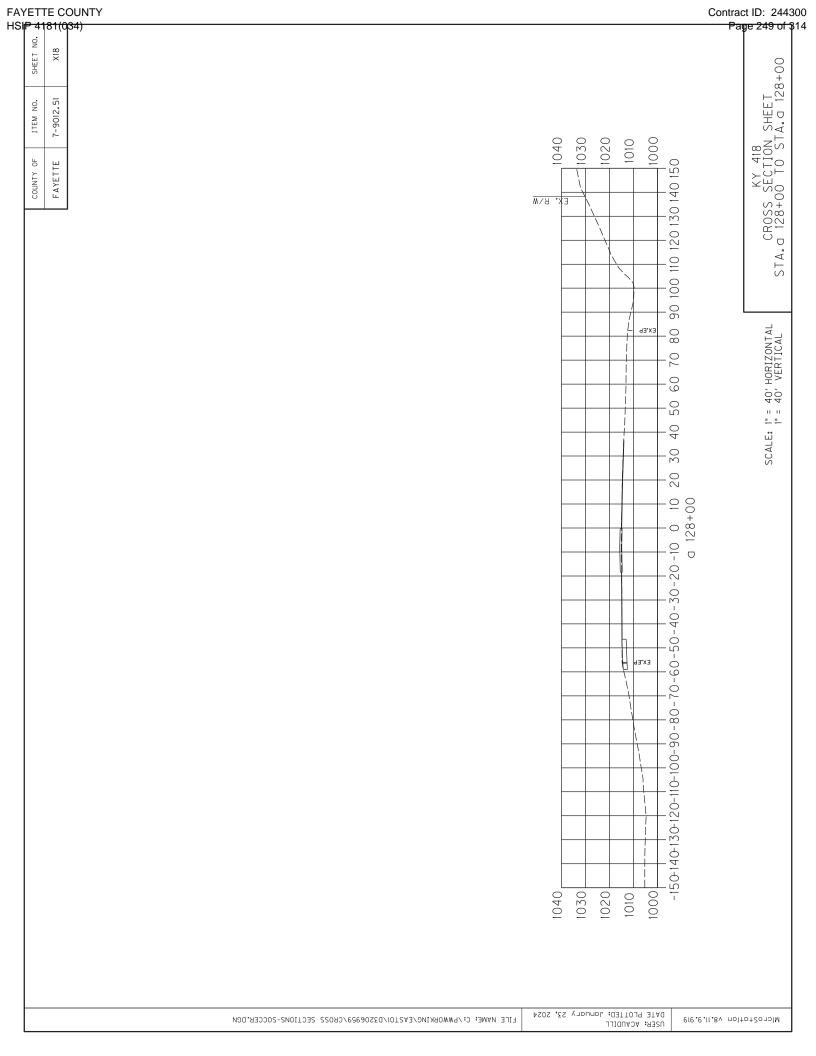
FAYETTE COUNTY Contract ID: 244300 HSIP 4181(034) Page 246 of \$14 Š. XI5 SHEET KY 418 CROSS SECTION SHEET STA. 0 125+00 TO STA. 0 125+50 7-9012,51 Š. ITEM 1000 1000 1020 1020 1010 1010 990 990 90 100 110 120 130 140 150 90 100 110 120 130 140 150 Ы M 8 .X EX. R/W 80 80 40' HORIZONTAL 40' VERTICAL 20 -2 09 43.X3 43.X 40 40 SCALE: 30 20 50 -10 0 10 a 125+50 -10 0 10 a 125+00 -150-140-130-120-110-100-90-80-70-60-50-40-30-20-10 -150-140-130-120-110-100-90-80-70-60-50-40-30-20-10 4:1 43.X3 43.X3 = M/A EХ EX. R/W 000 1020 1000 1030 1020 1010 1040 1010 1030 990 DATE PLOTTED: January 23, 2024 LIFE NAME: C:/PWWORKING/EASTOI/D3206959/CR055 SECTIONS-SOCCER.DGN MicroStation v8.11,9,919

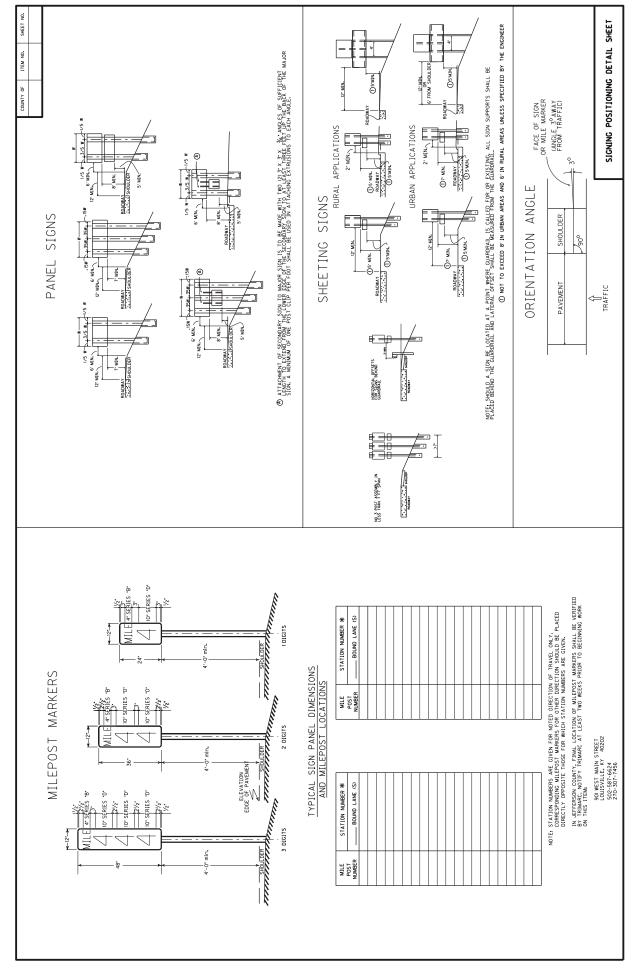
FAYETTE COUNTY Contract ID: 244300 HSIP 4181(034) Page 247 of \$14 Š. X16 SHEET KY 418 CROSS SECTION SHEET STA. 0 126+00 TO STA. 0 126+50 7-9012.51 Š. ITEM 1000 1000 1030 1020 1020 1010 1010 990 990 90 100 110 120 130 140 150 90 100 110 120 130 140 150 Ы EX. R/W 80 80 40' HORIZONTAL 40' VERTICAL 2 -2 09 20 43.X3 40 - 9 SCALE: 30 20 50 -10 0 10 a 126+50 -10 0 10 d 126+00 -150-140-130-120-110-100-90-80-70-60-50-40-30-20-10 -150-140-130-120-110-100-90-80-70-60-50-40-30-20-10 аз хэ м В . х. EK. R/W 1000 1030 1000 1040 1030 020 1020 1010 1010 1040 990 990 USER: ACAUDILL

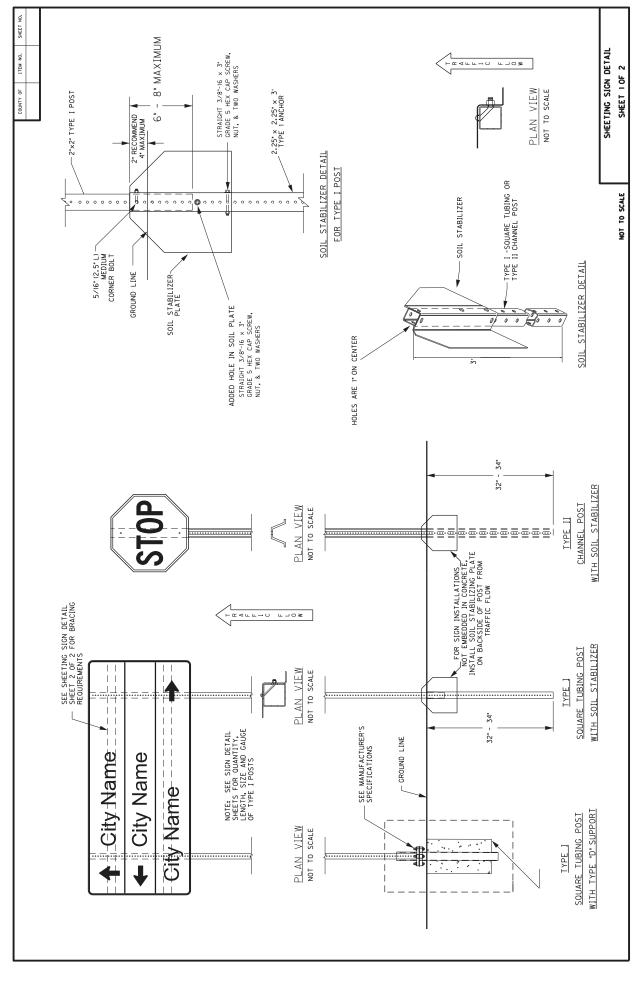
DATE PLOTTED: January 23, 2024 LIFE NAME: C:/PWWORKING/EASTOI/D3206959/CR055 SECTIONS-SOCCER.DGN MicroStation v8.11,9,919

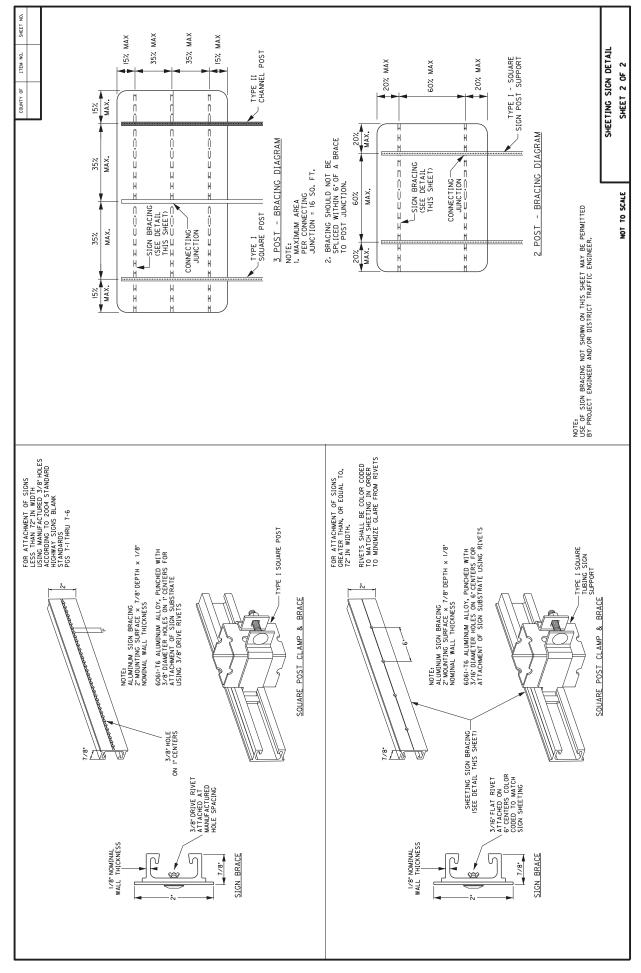
FAYETTE COUNTY Contract ID: 244300 HSIP 4181(034) Page 248 of \$14 Š. XI7 SHEET KY 418 CROSS SECTION SHEET STA.O 127+00 TO STA.O 127+50 7-9012.51 Š. ITEM 1000 1040 1000 1020 1050 1030 1020 1010 1010 990 90 100 110 120 130 140 150 90 100 110 120 130 140 150 Ы COUNTY W/A M/8 EX. 80 80 40' HORIZONTAL 40' VERTICAL 2 -2 09 09 20 20 40 - 9 SCALE: 30 20 50 -10 0 10 a 127+50 -10 0 10 a 127+00 -150-140-130-120-110-100-90-80-70-60-50-40-30-20-10 -150-140-130-120-110-100-90-80-70-60-50-40-30-20-10 43.X ех, ЕР EX. R/W EX. R/W 1000 1000 1040 1030 1020 1050 1040 1030 1020 1010 1010 990 990 USER: ACAUDILL

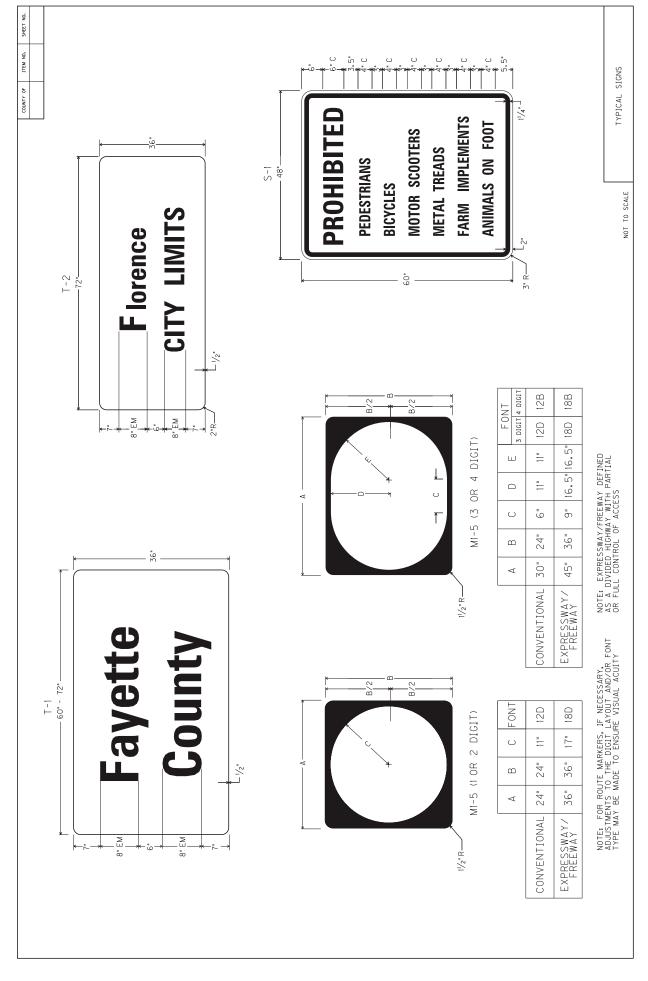
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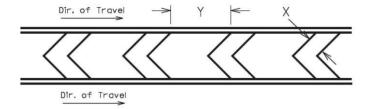


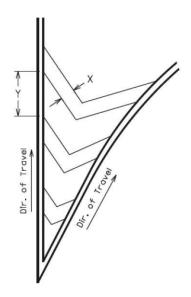




CHEVRON PAVEMENT MARKINGS DETAIL

TYPICAL CHEVRON MARKINGS





The chevron pavement marking width (X) and spacing (Y) will usually be specified in the plans. The width to spacing values usually have a ratio of 1:10. If the plans do not specify the width (X) and spacing (Y) the Engineer will provide the contractor with the X and Y values for each chevron installation. If necessary, the Engineer may obtain guidance from the District Traffic Engineer and/or the Division of Traffic Operations.

NOTE: Adjust the width and spacing of the chevron pavement markings as necessary so that a minimum of three (3) chevron markings are placed within the area being marked. The 1:10 ratio between width and spacing values should be maintained as much as possible.

Refer to Section 717 of the Standard Specifications for Road and Bridge Construction, current edition, for more information concerning Material and Construction specifications.

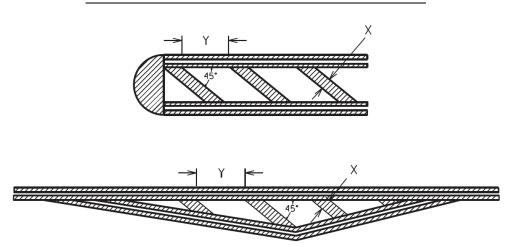
The Department will measure the finished in-place area of Chevron Pavement Markings in Square Feet. The Department will NOT measure overlaps or the void space between the chevrons. See Section 717.04 for additional measurement information.

When listed as a bid item, the Department will make payment for the completed and accepted quantities of Chevron Pavement Markings under the following:

| <u>Code</u> | Pay Item | <u>Pay Unit</u> |
|-------------|-----------------------------|-----------------|
| 24679ED | Pave Mark Thermo Chevron | Square Foot |
| 26166ES717 | Pave Mark TY 1 Tape Chevron | Square Foot |

CROSS-HATCH PAVEMENT MARKINGS DETAIL

TYPICAL CROSS-HATCH MARKINGS



The cross-hatch pavement marking width (X) and spacing (Y) will usually be specified in the plans. The width to spacing values usually have a ratio of 1:10. If the plans do not specify the width (X) and spacing (Y) the Engineer will provide the contractor with the X and Y values for each cross-hatch installation. If necessary, the Engineer may obtain guidance from the District Traffic Engineer and/or the Division of Traffic Operations.

NOTE: Adjust the width and spacing of the cross-hatch pavement markings as necessary so that a minimum of three (3) cross-hatch markings are placed within the area being marked. The 1:10 ratio between width and spacing values should be maintained as much as possible.

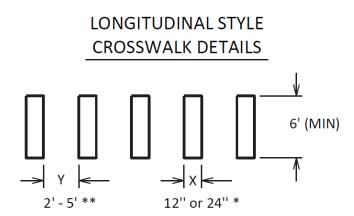
Refer to Section 717 of the Standard Specifications for Road and Bridge Construction, current edition, for more information concerning Material and Construction specifications.

The Department will measure the finished in-place area of Cross-Hatch Pavement Markings in Square Feet. The Department will NOT measure overlaps or the void space between cross-hatching. See Section 717.04 for additional measurement information.

When listed in the bid items, the Department will make payment for the completed and accepted quantities of Cross-Hatch Pavement Markings under the following:

| <u>Code</u> | Pay Item | Pay Unit |
|-------------|---------------------------------|-------------|
| 06569 | Pave Marking-Thermo Cross-Hatch | Square Foot |
| 23253ES717 | Pave Mark TY 1 Tape Cross Hatch | Square Foot |

LONGITUDINAL STYLE CROSSWALK DETAIL



*BARS WILL BE SPECIFIED AS 12" OR 24"

*THE SPACE BETWEEN BARS IS TYPICALLY TWICE THE WIDTH OF THE BAR. ADJUST LAYOUT OF BARS AND/OR SPACING SO AS TO AVOID THE WHEEL PATHS OF APPROACHING VEHICLES.

The longitudinal crosswalk bar width (X) will be specified in the bid item descriptions, summary sheets, and/or plans. The spacing (Y) between the longitudinal cross walk bars should be twice the bar width, unless otherwise specified, or otherwise directed by the Engineer:

Refer to Section 717 of the Standard Specifications for Road and Bridge Construction, current edition, for more information concerning Material and Construction specifications.

The Department will measure the sum of the lengths of all the longitudinal crosswalk bars in Linear Feet. See Section 717.04 for additional measurement information.

When listed in the bid items, the Department will make payment for the completed and accepted quantities of longitudinal style crosswalks under the following:

| <u>Code</u> | Pay Item | Pay Unit |
|-------------|------------------------------------|-------------|
| 06566 | Pave Marking-Thermo X-Walk-12 Inch | Linear Foot |
| 23261EC | Pave Mark-Thermo-X-Walk-24 Inch | Linear Foot |
| 23264ES717 | Pave Mark TY 1 Tape X-Walk-12 Inch | Linear Foot |
| 26164ES717 | Pave Mark TY 1 Tape X-Walk-24 Inch | Linear Foot |

FAYETTE COUNTY HSIP 4181(034)

GUARDRAIL DELIVERY VERIFICATION SHEET

Contract ID: 244300 Page 257 of 314

| Contract Id: | | Contractor: | |
|--|-------------------------|-------------------------------|---|
| Section Engineer: | | _ District & County: | |
| <u>DESCRIPTION</u> | <u>UNIT</u> | QTY LEAVING PROJECT | QTY RECEIVED@BB YARD |
| GUARDRAIL (Includes End treatments & crash cushions) STEEL POSTS | LF EACH | | |
| STEEL BLOCKS | EACH | | |
| WOOD OFFSET BLOCKS | EACH | | |
| BACK UP PLATES | EACH | | |
| CRASH CUSHION | EACH | | |
| NUTS, BOLTS, WASHERS | BAG/BCKT | | |
| DAMAGED RAIL TO MAINT. FACILI | TY LF | | |
| DAMAGED POSTS TO MAINT. FACI | LITY EACH | | |
| * <u>Required Signatures before</u> | : Leaving Proje | <u>ct Site</u> | |
| Printed Section Engineer's Re | epresentative_ | | & Date |
| Signature Section Engineer's | Representativo | e | _& Date |
| Printed Contractor's Represe | entative | | _& Date |
| Signature Contractor's Repre | esentative | | _& Date |
| *Required Signatures after A | <u>Arrival at Baile</u> | y Bridge Yard (All material d | on truck must be counted & the |
| <u>quantity received column co</u> | | | |
| Printed Bailey Bridge Yard Re | epresentative_ | | & Date |
| Signature Bailey Bridge Yard | Representative | <u></u> | _& Date |
| Printed Contractor's Represe | entative | | _& Date |
| Signature Contractor's Repre | esentative | | _& Date |
| • | ent will not be | made for guardrail removal | uantities shown in the Bailey Bridge until the guardrail verification sheets e Yard Representative. |

Completed Form Submitted to Section Engineer

Date: _____ By: ____

PART II

SPECIFICATIONS AND STANDARD DRAWINGS

STANDARD SPECIFICATIONS

Any reference in the plans or proposal to previous editions of the Standard Specifications for Road and Bridge Construction and Standard Drawings are superseded by Standard Specifications for Road and Bridge Construction, Edition of 2019 and Standard Drawings, Edition of 2020.

SUPPLEMENTAL SPECIFICATIONS

The contractor shall use the Supplemental Specifications that are effective at the time of letting. The Supplemental Specifications can be found at the following link: http://transportation.ky.gov/Construction/Pages/Kentucky-Standard-Specifications.aspx

1I

SPECIAL NOTE FOR PORTABLE CHANGEABLE MESSAGE SIGNS

This Special Note will apply when indicated on the plans or in the proposal.

1.0 DESCRIPTION. Furnish, install, operate, and maintain variable message signs at the locations shown on the plans or designated by the Engineer. Remove and retain possession of variable message signs when they are no longer needed on the project.

2.0 MATERIALS.

2.1 General. Use LED Variable Message Signs Class I, II, or III, as appropriate, from the Department's List of Approved Materials.

Unclassified signs may be submitted for approval by the Engineer. The Engineer may require a daytime and nighttime demonstration. The Engineer will make a final decision within 30 days after all required information is received.

2.2 Sign and Controls. All signs must:

- Provide 3-line messages with each line being 8 characters long and at least 18 inches tall. Each character comprises 35 pixels.
- Provide at least 40 preprogrammed messages available for use at any time.
 Provide for quick and easy change of the displayed message; editing of the message; and additions of new messages.
- 3) Provide a controller consisting of:
 - a) Keyboard or keypad.
 - Readout that mimics the actual sign display. (When LCD or LCD type readout is used, include backlighting and heating or otherwise arrange for viewing in cold temperatures.)
 - c) Non-volatile memory or suitable memory with battery backup for storing pre-programmed messages.
 - d) Logic circuitry to control the sequence of messages and flash rate.
- 4) Provide a serial interface that is capable of supporting complete remote control ability through land line and cellular telephone operation. Include communication software capable of immediately updating the message, providing complete sign status, and allowing message library queries and updates.
- 5) Allow a single person easily to raise the sign to a satisfactory height above the pavement during use, and lower the sign during travel.
- 6) Be Highway Orange on all exterior surfaces of the trailer, supports, and controller cabinet.
- 7) Provide operation in ambient temperatures from -30 to + 120 degrees Fahrenheit during snow, rain and other inclement weather.
- 8) Provide the driver board as part of a module. All modules are interchangeable, and have plug and socket arrangements for disconnection and reconnection. Printed circuit boards associated with driver boards have a conformable coating to protect against moisture.
- 9) Provide a sign case sealed against rain, snow, dust, insects, etc. The lens is UV stabilized clear plastic (polycarbonate, acrylic, or other approved material) angled to prevent glare.
- 10) Provide a flat black UV protected coating on the sign hardware, character PCB, and appropriate lens areas.
- 11) Provide a photocell control to provide automatic dimming.

1**I**

- 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 NOTE FOR BARCODE LABEL ON PERMANENT SIGNS

- **1.0 DESCRIPTION.** Install barcode label on sheeting signs. Section references herein are to the Department's Standard Specifications for Road and Bridge Construction, current edition.
- **2.0 MATERIALS.** The Department will provide the Contractor with a 2 inch x 1 inch foil barcode label for each permanent sheeting sign. A unique number will be assigned to each barcode label.

The Contractor shall contact the Operations and Pavement Management Branch in the Division of Maintenance at (502) 564-4556 to obtain the barcode labels.

3.0 CONSTRUCTION. Apply foil barcode label in the lower right quadrant of the sign back. Signs where the bottom edge is not parallel to the ground, the lowest corner of the sign shall serve as the location to place the barcode label. The barcode label shall be placed no less than one-inch and no more than three inches from any edge of the sign. The barcode must be placed so that the sign post does not cover the barcode label.

Barcodes shall be applied in an indoor setting with a minimum air temperature of 50°F or higher. Prior to application of the barcode label, the back of the sign must be clean and free of dust, oil, etc. If the sign is not clean, an alcohol swab shall be used to clean the area. The area must be allowed to dry prior to placement of the barcode label.

Data for each sign shall include the barcode number, MUTCD reference number, sheeting manufacturer, sheeting type, manufacture date, color of primary reflective surface, installation date, latitude and longitude using the North American Datum of 1983 (NAD83) or the State Plane Coordinates using an x and y ordinate of the installed location.

Data should be provided electronically on the TC 71-229 Sign Details Information and TC 71-230 Sign Assembly Information forms. The Contractor may choose to present the data in a different format provided that the information submitted to the Department is equivalent to the information required on the Department TC forms. The forms must be submitted in electronic format regardless of which type of form is used. The Department will not accept PDF or handwritten forms. These completed forms must be submitted to the Department prior to final inspection of the signs. The Department will not issue formal acceptance for the project until the TC 71-229 and TC-230 electronic forms are completed for all signs and sign assemblies on the project.

4.0 MEASUREMENT. The Department will measure all work required for the installation of the barcode label and all work associated with completion and submission of the sign inventory data (TC 71-229 and TC 71-230).

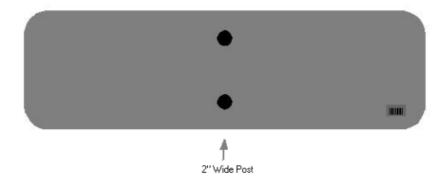
The installation of the permanent sign will be measured in accordance to Section 715.

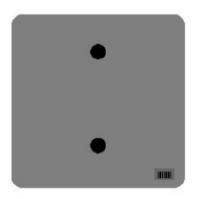
5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

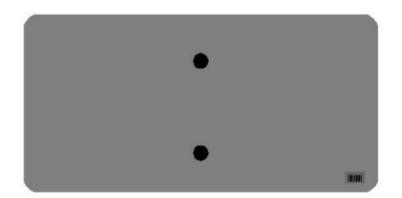
CodePay ItemPay Unit24631ECBarcode Sign InventoryEach

The Department will not make payment for this item until all barcodes are installed and sign inventory is complete on every permanent sign installed on the project. The Department will make payment for installation of the permanent sign in accordance to Section 715. The Department will consider payment as full compensation for all work required under this special note.

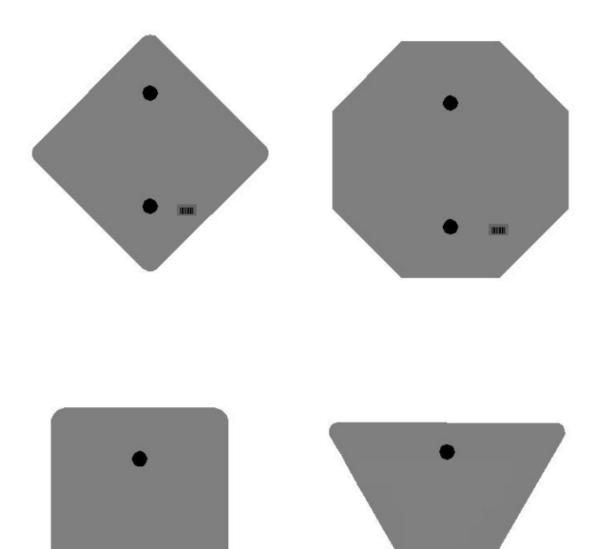
One Sign Post





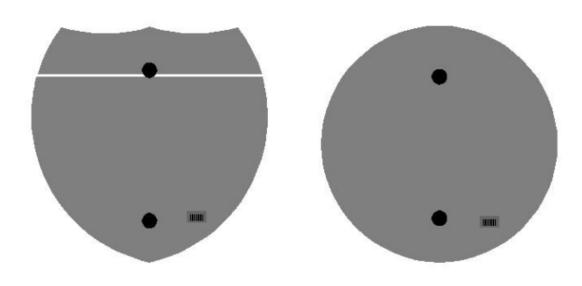


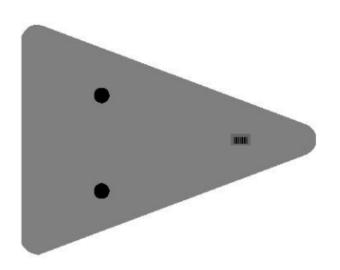
One Sign Post



FAYETTE COUNTY HSIP 4181(034)

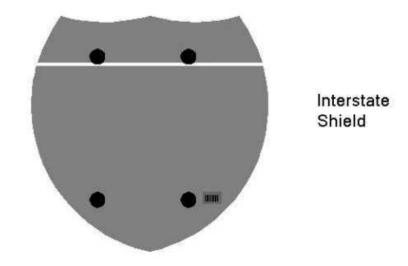
One Sign Post

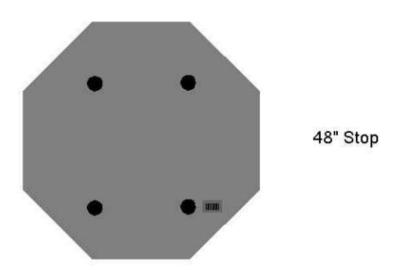




FAYETTE COUNTY HSIP 4181(034)

Double Sign Post

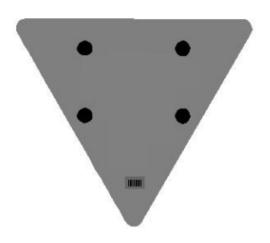




2 Post Signs







2020 STANDARD DRAWINGS THAT APPLY

| ROADWAY | |
|--|--------------|
| ~ BARRIERS ~ | |
| TYPICAL BARRIER INSTALLATIONS | |
| TYPICAL GUARDRAIL INSTALLATIONS | |
| TYPICAL GUARDRAIL INSTALLATIONS | RBI-002-07 |
| GUARDRAIL HARDWARE | |
| STEEL BEAM GUARDRAIL (W-BEAM) | RBR-001-13 |
| GUARDRAIL COMPONENTS | |
| GUARDRAIL TERMINAL SECTIONS | |
| STEEL GUARDRAIL POSTS | |
| DELINEATORS FOR GUARDRAIL | |
| | |
| ~ DRAINAGE ~ | |
| PAVED DITCHES, FLUME INLETS AND CHANNEL LININGS CHANNEL LINING CLASS II AND III | DDD 040 0E |
| CHANNEL LINING CLASS II AND III | KDD-040-05 |
| TYPICAL DRAINAGE INSTALLATIONS | |
| CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS (12" – 24" PIPE) | RDI-001-10 |
| CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS (27" – 42" PIPE) | |
| PIPE BEDDING FOR CULVERTS, ENTRANCE, AND STORM SEWER PIPE | RDI-020-10 |
| PIPE BEDDING FOR CULVERTS, ENTRANCE, AND STORM SEWER, REINFORCED CONC. PIPE | RDI-021-01 |
| PIPE BEDDING, TRENCH CONDITION | RDI-025-06 |
| PIPE BEDDING, TRENCH CONDITION, REINFORCED CONC. PIPE | RDI-026-01 |
| MICCELL ANEQUE DRAINIAGE | |
| MISCELLANEOUS DRAINAGE TEMPORARY SILT FENCE | DDV 240 02 |
| SILT TRAP - TYPE B | |
| | |
| SILT TRAP - TYPE C | RDX-230-01 |
| ~ GENERAL ~ | |
| CURVE WIDENING AND SUPERELEVATION | |
| CURVE WIDENING AND SUPERELEVATION TRANSITIONS | |
| SUPERELEVATION FOR MULTILANE PAVEMENTS | RGS-002-06 |
| MISCELLANEOUS STANDARDS | |
| MISCELLANEOUS STANDARDS | PGY_001_06 |
| RIGHT OF WAY MONUMENTS | |
| DETECTABLE WARNINGS | |
| TYPE D BREAKAWAY SIGN SUPPORT | |
| | |
| ~ PAVEMENT ~ | |
| MEDIANS, CURBS, APPROACHES, ENTRANCES, ETC. | DD14 040 00 |
| STANDARD BARRIER MEDIAN | |
| CONCRETE ENTRANCE PAVEMENT AND SIDEWALK | |
| CONCRETE ENTRANCE PAVEMENT AND SIDEWALK | |
| SIDEWALK RAMPS | KPIVI-1/U-U9 |

Standard Drawings That Apply Page 2 of 2

TRAFFIC ~ PERMANENT ~

MARKERS

| <u> </u> | |
|---|------------|
| INLAID PAVEMENT MARKER ARRANGEMENTS MULTI-LANE ROADWAYS | Sepia 006 |
| INLAID PAVEMENT MARKER ARRANGEMENTS MULTI-LANE ROADWAYS | Sepia 007 |
| INLAID PAVEMENT MARKER ARRANGEMENTS MULTI-LANE ROADWAYS | Sepia 008 |
| INLAID PAVEMENT MARKER ARRANGEMENTS TWO-WAY LEFT TURN LANE | Sepia 015 |
| INLAID PAVEMENT MARKER ARRANGEMENT CHANNELIZED INTERSECTION | Sepia 016 |
| TYPICAL MARKINGS AT SIGNALIZED INTERSECTIONS | |
| TYPICAL MARKINGS FOR ISLANDS AND MEDIANS | TPM-205 |
| TYPICAL MARKINGS FOR TURN LANES PAGE 1 | TPM-206 |
| TYPICAL MARKINGS FOR TURN LANES PAGE 2 | TPM-207 |
| RUMBLE STRIPS | |
| SHOULDER & EDGELINE RUMBLE STRIPS PLACEMENT DETAILS | TPR-115 |
| RUMBLE STRIP DETAILS MULTI-LANE ROADWAYS AND RAMPS | |
| ~ TEMPORARY ~ | |
| TRAFFIC CONTROL | |
| LANE CLOSURE MULTI-LANE HIGHWAY CASE I | TTC-115-04 |
| LANE CLOSURE MULTI-LANE HIGHWAY CASE II | TTC-120-04 |
| SHOULDER CLOSURE | |
| DEVICES | |
| DOUBLE FINES ZONE SIGNS | TTD-120-03 |
| PAVEMENT CONDITION WARNING SIGNS | |
| SPEED ZONE SIGNING FOR WORK ZONES | |
| STRIPING OPERATIONS | |
| MOBILE OPERATION FOR DURABLE STRIPING CASE I | TTS-120-02 |
| | |

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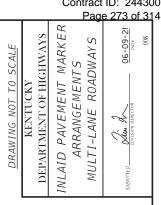
S.S. SVCURBSP

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80,

OF DRIVING LANE

ARRANGEMENT "E" (DIVIDED HIGHWAY WITH CURB WITHIN 8'



MONO-DIRECTIONAL PAVEMENT MARKER (YELLOW, MONO-DIRECTIONAL PAVEMENT MARKER (WHITE) LEGEND MARKINGS (YELLOW) MARKINGS (WHITE)

MARKERS INSTALLED ALONG LANE LINES SHALL BE PLACED BETWEEN AND IN LINE NOTES

MARKERS INSTALLED ALONG EDGE LINES SHALL BE PLACED SO THAT THE NEAR EDGE OF THE GROOVE IS NO MORE THAN 1" FROM THE NEAR EDGE OF THE LINE. WITH THE SKIPS

(7)

MARKERS SHALL NOT BE INSTALLED ON TOP OF THE PAVEMENT JOINT. OFFSET MARKERS A MINIMUM OF 2" FROM THE PAVEMENT JOINT. ENSURE THAT THE FINISHED LINE OF MARKERS IS STRAIGHT WITH MINIMAL LATERAL DEVIATION. MARKERS MAY BE ELIMINATED OR PLACEMENT ADJUSTED AT THE DISCRETION OF THE ENGINEER.

MARKERS SHALL BE INSTALLED AT 40' SPACING ALONG SOLID WHITE AUXILIARY LANES. MARKER COLOR SHALL MATCH THE MARKERS INSTALLED ALONG THE WHITE LANE LINES. 4

UNIT TO BID

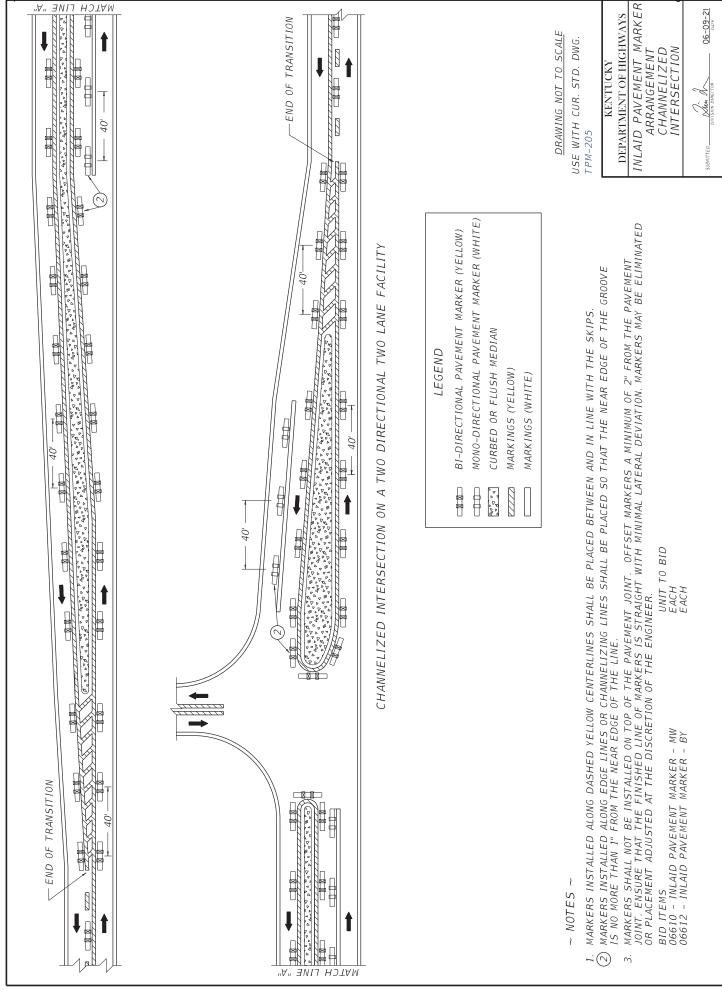
BID ITEMS 06610 - INLAID PAVEMENT MARKER - MW 06611 - INLAID PAVEMENT MARKER - MY

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FAYETTE COUNTY HSIP 4181(03<u>4)</u>



Contract ID: 244300

Page 275 of 314

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 Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than \$10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway

Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages (29 CFR 5.5)

- a. Wage rates and fringe benefits. All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of basic hourly wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act (40 U.S.C. 3141(2)(B)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph 4. of this section. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH-1321) must be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.
- b. Frequently recurring classifications. (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in 29 CFR part 1, a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:
 - (i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

- (ii) The classification is used in the area by the construction industry; and
- (iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.
- (2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.
- c. Conformance. (1) The contracting officer must require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:
 - (i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
 - (ii) The classification is used in the area by the construction industry; and
 - (iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (2) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.
- (3) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the contracting officer by email to DBAconformance@dol.gov. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30–day period that additional time is necessary.
- (4) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer will, by email to DBAconformance@dol.gov, refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- (5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division

- under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.
- d. Fringe benefits not expressed as an hourly rate. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.
- e. Unfunded plans. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, in accordance with the criteria set forth in § 5.28, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.
- f. Interest. In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. Withholding (29 CFR 5.5)

- a. Withholding requirements. The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and after written notice to the contractor. take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.
- b. Priority to withheld funds. The Department has priority to funds withheld or to be withheld in accordance with paragraph

- 2.a. of this section or Section V, paragraph 3.a., or both, over claims to those funds by:
- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
 - (2) A contracting agency for its 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 $\underline{40}$ $\underline{\text{U.S.C. }3144(b)}$ or \S 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)
- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
 - (2) the prime contractor remains responsible for the quality of the work of the leased employees;

- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.
- b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.
- 2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.
- 3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.
- 4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).
- 5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

- 1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.
- 2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and

health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of \$150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1. Instructions for Certification – First Tier Participants:

- a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.
- b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.
- c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.
- d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

- e. The terms "covered transaction," "debarred,"
 "suspended," "ineligible," "participant," "person," "principal,"
 and "voluntarily excluded," as used in this clause, are defined
 in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200.
 "First Tier Covered Transactions" refers to any covered
 transaction between a recipient or subrecipient of Federal
 funds and a participant (such as the prime or general contract).
 "Lower Tier Covered Transactions" refers to any covered
 transaction under a First Tier Covered Transaction (such as
 subcontracts). "First Tier Participant" refers to the participant
 who has entered into a covered transaction with a recipient or
 subrecipient of Federal funds (such as the prime or general
 contractor). "Lower Tier Participant" refers any participant who
 has entered into a covered transaction with a First Tier
 Participant or other Lower Tier Participants (such as
 subcontractors and suppliers).
- f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.
- g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 180.300.
- h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/). 2 CFR 180.300, 180.320, and 180.325.
- i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

- a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:
- (1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;.
- (2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;
- (3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800: and
- (4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).
- (5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and
- (6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).
- b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

* * * * *

3. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

- a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.
- b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

- c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.
- d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).
- e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.
- f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 1200.220.
- g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.
- h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily

excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

* * * * *

4. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

- a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:
- (1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;
- (2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and
- (3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)
- b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000. 49 CFR Part 20, App. A.

- 1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:
- a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or

cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

- 2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.
- 3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

- 1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.
- 2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B) This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

- 1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:
- a. To the extent that qualified persons regularly residing in the area are not available.
- b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.
- c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.
- 2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.
- 3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.
- 4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above
- 5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.
- 6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

KENTUCKY TRANSPORTATION CABINET DEPARTMENT OF HIGHWAYS

EMPLOYMENT REQUIREMENTS RELATING TO NONDISCRIMINATION OF EMPLOYEES (APPLICABLE TO FEDERAL-AID SYSTEM CONTRACTS)

AN ACT OF THE KENTUCKY GENERAL ASSEMBLY TO PREVENT DISCRIMINATION IN EMPLOYMENT

KRS CHAPTER 344 EFFECTIVE JUNE 16, 1972

The contract on this project, in accordance with KRS Chapter 344, provides that during the performance of this contract, the contractor agrees as follows:

- 1. The contractor shall not fail or refuse to hire, or shall not discharge any individual, or otherwise discriminate against an individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, national origin, sex, disability or age (forty and above); or limit, segregate, or classify his employees in any way which would deprive or tend to deprive an individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual's race, color, religion, national origin, sex, disability or age forty (40) and over. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
- 2. The contractor shall not print or publish or cause to be printed or published a notice or advertisement relating to employment by such an employer or membership in or any classification or referral for employment by the employment agency, indicating any preference, limitation, specification, or discrimination, based on race, color, religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, except that such a notice or advertisement may indicate a preference, limitation, or specification based on religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, when religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, is a bona fide occupational qualification for employment.
- 3. If the contractor is in control of apprenticeship or other training or retraining, including on-the-job training programs, he shall not discriminate against an individual because of his race, color, religion, national origin, sex, disability or age forty (40) and over, in admission to, or employment in any program established to provide apprenticeship or other training.

4. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representative of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment. The contractor will take such action with respect to any subcontract or purchase order as the administrating agency may direct as a means of enforcing such provisions, including sanctions for non-compliance.

Revised: January 25, 2017

Standard Title VI/Non-Discrimination Assurances

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

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

Standard Title VI/Non-Discrimination Statutes and Authorities

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

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

EXECUTIVE BRANCH CODE OF ETHICS

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

KRS 11A.040 (7) provides:

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

KRS 11A.040 (9) states:

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

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

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

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

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

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

Revised: May 23, 2022

"General Decision Number: KY20240038 02/09/2024

Superseded General Decision Number: KY20230038

State: Kentucky

Construction Type: Highway

Counties: Anderson, Bath, Bourbon, Boyd, Boyle, Bracken, Breckinridge, Bullitt, Carroll, Carter, Clark, Elliott, Fayette, Fleming, Franklin, Gallatin, Grant, Grayson, Greenup, Hardin, Harrison, Henry, Jefferson, Jessamine, Larue, Lewis, Madison, Marion, Mason, Meade, Mercer, Montgomery, Nelson, Nicholas, Oldham, Owen, Robertson, Rowan, Scott, Shelby, Spencer, Trimble, Washington and Woodford 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 \$17.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2024.

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

- generally applies to the contract.
- . The contractor must pay all covered workers at least \$12.90 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2024.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a

conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

Modification Number

Publication Date

0 1 01/05/2024

02/09/2024

BRIN0004-003 06/01/2023

BRECKENRIDGE COUNTY

| | Rates | Fringes | |
|--------------------------|----------|---------|---|
| BRICKLAYER | \$ 34.17 | 19.60 | |
| DDI//0001 005 06/01/2022 | | | - |

BRKY0001-005 06/01/2023

BULLITT, CARROLL, GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, & TRIMBLE COUNTIES:

| | Rates | Fringes | |
|-------------------------|----------|---------|---|
| BRICKLAYER | \$ 33.48 | 15.92 | |
| PRVV0002 006 06/01/2022 | | | - |

BRKY0002-006 06/01/2023

BRACKEN, GALLATIN, GRANT, MASON & ROBERTSON COUNTIES:

| | Rates | Fringes |
|-------------------------|----------|---------|
| BRICKLAYER | \$ 33.48 | 15.92 |
| BRKY0007-004 06/01/2023 | | |

BOYD, CARTER, ELLIOT, FLEMING, GREENUP, LEWIS & ROWAN COUNTIES:

| | Rates | Fringes |
|-------------------------|----------|---------|
| BRICKLAYER | \$ 39.46 | 20.14 |
| BRKY0017-004 06/01/2023 | | |

ANDERSON, BATH, BOURBON, BOYLE, CLARK, FAYETTE, FRANKLIN, HARRISON, JESSAMINE, MADISON, MERCER, MONTGOMERY, NICHOLAS, OWEN, SCOTT, WASHINGTON & WOODFORD COUNTIES:

| | Rates | Fringes |
|-------------------------|----------|---------|
| BRICKLAYER | \$ 33.48 | 15.92 |
| CARP0064-001 04/01/2023 | | |
| | Rates | Fringes |
| CARPENTER | \$ 31.81 | 22.86 |

 ELEC0212-008 06/07/2022

BRACKEN, GALLATIN and GRANT COUNTIES

| | Rates | Fringes |
|-------------|----------|---------|
| ELECTRICIAN | \$ 33.29 | 20.05 |
| | | |

ELEC0212-014 11/28/2022

BRACKEN, GALLATIN & GRANT COUNTIES:

| | Rates | Fringes |
|----------------------------------|----------|---------|
| Sound & Communication Technician | \$ 26.70 | 13.41 |
| ELEC0317-012 05/29/2023 | | |

BOYD, CARTER, ELLIOT & ROWAN COUNTIES:

| | Rates | Fringes | |
|-------------------------|----------|---------|---|
| ELECTRICIAN (Wiremen) | \$ 37.15 | 22.73 | |
| FLFC0369-007 06/01/2022 | | | _ |

ANDERSON, BATH, BOURBON, BOYLE, BRECKINRIDGE, BULLITT, CARROLL, CLARK, FAYETTE, FRAONKLIN, GRAYSON, HARDIN, HARRISON, HENRY, JEFFERSON, JESSAMINE, LARUE, MADISON, MARION, MEADE, MERCER, MONTGOMERY, NELSON, NICHOLAS, OLDHAM, OWEN, ROBERTSON, SCOTT, SHELBY, SPENCER, TRIMBLE, WASHINGTON, & WOODFORD COUNTIES:

| | Rates | Fringes |
|---------------------------------|-------------|---------|
| ELECTRICIAN | \$ 34.60 | 19.57 |
| ELEC0575-002 05/29/2023 | | |
| FLEMING, GREENUP, LEWIS & MASON | I COUNTIES: | |

Fringes Rates ELECTRICIAN.....\$ 36.50 21.76

ENGI0181-018 07/01/2023

| | Rates | Fringes |
|--------------------------|----------|---------|
| POWER EQUIPMENT OPERATOR | | |
| GROUP 1 | \$ 38.55 | 18.60 |
| GROUP 2 | \$ 35.69 | 18.60 |
| GROUP 3 | \$ 36.14 | 18.60 |
| GROUP 4 | \$ 35.37 | 18.60 |

OPERATING ENGINEER CLASSIFICATIONS

GROUP 1 - A-Frame Winch Truck; Auto Patrol; Backfiller; Batcher Plant; Bituminous Paver; Bituminous Transfer Machine; Boom Cat; Bulldozer; Mechanic; Cableway; Carry-All Scoop; Carry Deck Crane; Central Compressor Plant; Cherry Picker; Clamshell; Concrete Mixer (21 cu. ft. or Over); Concrete Paver; Truck-Mounted Concrete Pump; Core Drill; Crane; Crusher Plant; Derrick; Derrick Boat; Ditching &

Trenching Machine; Dragline; Dredge Operator; Dredge Engineer; Elevating Grader & Loaders; Grade-All; 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 leads equals or exceeds 150 ft. - \$1.00 over 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.

IRON0044-009 06/01/2023

BRACKEN, GALLATIN, GRANT, HARRISON, ROBERTSON,
BOURBON (Northern third, including Townships of Jackson,
Millersburg, Ruddel Mills & Shawhan);
CARROLL (Eastern third, including the Township of Ghent);
FLEMING (Western part, excluding Townships of Beechburg, Colfax,
Elizaville, Flemingsburg, Flemingsburg Junction, Foxport,
Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills,
Nepton, Pecksridge, Plummers Landing, Plummers Mill, Poplar
Plains, Ringos Mills, Tilton & Wallingford);
MASON (Western two-thirds, including Townships of Dover,

Lewisburg, Mays Lick, Maysville, Minerva, Moranburg, Murphysville, Ripley, Sardis, Shannon, South Ripley & Washington);

NICHOLAS (Townships of Barefoot, Barterville, Carlisle, Ellisville, Headquarters, Henryville, Morningglory, Myers & Oakland Mills);

OWEN (Townships of Beechwood, Bromley, Fairbanks, Holbrook, Jonesville, Long Ridge, Lusby's Mill, New, New Columbus, New Liberty, Owenton, Poplar Grove, Rockdale, Sanders, Teresita & Wheatley);

SCOTT (Northern two-thirds, including Townships of Biddle, Davis, Delaplain, Elmville, Longlick, Muddy Ford, Oxford, Rogers Gap, Sadieville, Skinnersburg & Stonewall)

| | Rates | Fringes | |
|---------------|----------|---------|--|
| IRONWORKER | | | |
| Fence Erector | \$ 30.75 | 22.70 | |
| Structural | \$ 32.37 | 22.70 | |
| | | | |

IRON0070-006 06/01/2023

ANDERSON, BOYLE, BRECKINRIDGE, BULLITT, FAYETTE, FRANKLIN, GRAYSON, HARDIN, HENRY, JEFFERSON, JESSAMINE, LARUE, MADISON, MARION, MEADE, MERCER, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE, WASHINGTON & WOODFORD BOURBON (Southern two-thirds, including Townships of Austerlity, Centerville, Clintonville, Elizabeth, Hutchison, Littlerock, North Middletown & Paris); CARROLL (Western two-thirds, including Townships of Carrollton, Easterday, English, Locust, Louis, Prestonville & Worthville); CLARK (Western two-thirds, including Townships of Becknerville, Flanagan, Ford, Pine Grove, Winchester & Wyandotte); OWEN (Eastern eighth, including Townships of Glenmary, Gratz, Monterey, Perry Park & Tacketts Mill); SCOTT (Southern third, including Townships of Georgetown, Great Crossing, Newtown, Stampling Ground & Woodlake);

| | Rates | Fringes |
|------------|----------|---------|
| IRONWORKER | \$ 32.59 | 24.50 |
| | | |

IRON0769-007 06/01/2023

BATH, BOYD, CARTER, ELLIOTT, GREENUP, LEWIS, MONTGOMERY & ROWAN CLARK (Eastern third, including townships of Bloomingdale, Hunt, Indian Fields, Kiddville, Loglick, Rightangele & Thomson); FLEMING (Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksridge, Plummers Landing, Plummers Mill, Poplar Plains, Ringos Mills, Tilton & Wallingford); MASON (Eastern third, including Townships of Helena, Marshall, Orangeburg, Plumville & Springdale); NICHOLAS (Eastern eighth, including the Township of Moorefield Sprout)

| | Rates | Fringes |
|------------|----------|---------|
| IRONWORKER | | |
| ZONE 1 | \$ 36.16 | 28.34 |
| ZONE 2 | \$ 36.56 | 28.34 |

ZONE 3......\$ 38.16 28.34

- ZONE 1 (no base rate increase) Up to 10 mile radius of Union Hall, 1643 Greenup Ave, Ashland, KY.
- ZONE 2 (add \$0.40 per hour to base rate) 10 to 50 mile radius of Union Hall, 1643 Greenup Ave, Ashland, KY.
- ZONE 3 (add \$2.00 per hour to base rate) 50 mile radius & over of Union Hall, 1643 Greenup Ave, Ashland, KY.

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LAB00189-003 07/01/2023

BATH, BOURBON, BOYD, BOYLE, BRACKEN, CARTER, CLARK, ELLIOTT, FAYETTE, FLEMING, FRANKLIN, GALLATIN, GRANT, GREENUP, HARRISON, JESSAMINE, LEWIS, MADISON, MASON, MERCER, MONTGOMERY, NICHOLAS, OWEN, ROBERTSON, ROWAN, SCOTT, & WOOLFORD COUNTIES

| | Rates | Fringes |
|-----------|-----------|---------|
| | | - |
| Laborers: | | |
| GROUP | 1\$ 23.96 | 17.57 |
| GROUP | 2\$ 24.21 | 17.57 |
| GROUP | 3\$ 24.26 | 17.57 |
| GROUP | 4\$ 24.86 | 17.57 |

LABORERS 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; 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

LARON100 000 07/01/2022

LAB00189-008 07/01/2023

ANDERSON, BULLITT, CARROLL, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES

| | F | Rates | Fringes |
|-----------|-----|-------|---------|
| Laborers: | | | |
| GROUP | 1\$ | 23.96 | 17.57 |
| GROUP | 2\$ | 24.21 | 17.57 |
| GROUP | 3\$ | 24.26 | 17.57 |
| GROUP | 4\$ | 24.86 | 17.57 |

LABORERS 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; 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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LAB00189-009 07/01/2023

BRECKINRIDGE & GRAYSON COUNTIES

Rates Fringes

Laborers:

| GROUP 1 | \$ 23.96 | 17.57 |
|---------|----------|-------|
| GROUP 2 | \$ 24.21 | 17.57 |
| GROUP 3 | \$ 24.26 | 17.57 |
| GROUP 4 | \$ 24.86 | 17.57 |

LABORERS 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; 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

PAIN0012-005 06/11/2005

BATH, BOURBON, BOYLE, CLARK, FAYETTE, FLEMING, FRANKLIN, HARRISON, JESSAMINE, MADISON, MERCER, MONTGOMERY, NICHOLAS, ROBERTSON, SCOTT & WOODFORD COUNTIES:

| | Rates | Fringes |
|----------------------------|----------|---------|
| PAINTER | | |
| Bridge/Equipment Tender | | |
| and/or Containment Builder | \$ 18.90 | 5.90 |
| Brush & Roller | \$ 21.30 | 5.90 |
| Elevated Tanks; | | |
| Steeplejack Work; Bridge & | | |
| Lead Abatement | | 5.90 |
| Sandblasting & | • | |

| Waterblasting | \$ 22.05 | 5.90 |
|---------------|----------|------|
| Spray | \$ 21.80 | 5.90 |
| | | |

PAIN0012-017 05/01/2015

BRACKEN, GALLATIN, GRANT, MASON & OWEN COUNTIES:

| | Rates | Fringes |
|----------------------------|-------|---------|
| PAINTER (Heavy & Highway | | |
| Bridges - Guardrails - | | |
| Lightpoles - Striping) | | |
| Bridge Equipment Tender | | |
| and Containment Builder\$ | 20.73 | 9.06 |
| Brush & Roller\$ | 23.39 | 9.06 |
| Elevated Tanks; | | |
| Steeplejack Work; Bridge & | | |
| Lead Abatement\$ | 24.39 | 9.06 |
| Sandblasting & Water | | |
| Blasting\$ | 24.14 | 9.06 |
| Spray\$ | | 9.06 |
| | | |

PAIN0118-004 06/01/2018

ANDERSON, BRECKINRIDGE, BULLITT, CARROLL, GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES:

| | Rates | Fringes |
|---------------------------|-------|---------|
| PAINTER | | |
| Brush & Roller | 22.00 | 12.52 |
| Spray, Sandblast, Power | | |
| Tools, Waterblast & Steam | | |
| Cleaning | 23.00 | 12.52 |
| | | |

^{*} PAIN1072-003 12/01/2023

BOYD, CARTER, ELLIOTT, GREENUP, LEWIS and ROWAN COUNTIES

| Painters: | |
|--------------------------------------|-------|
| Bridges; Locks; Dams; | |
| Tension Towers & Energized | |
| Substations\$ 35.64 | 23.69 |
| Power Generating Facilities.\$ 32.40 | 23.69 |
| | |
| PLUM0248-003 06/01/2023 | |

Rates

Fringes

BOYD, CARTER, ELLIOTT, GREENUP, LEWIS & ROWAN COUNTIES:

| | Rates | Fringes |
|-------------------------|-----------|---------|
| Plumber and Steamfitter | .\$ 41.00 | 22.95 |
| PLUM0392-007 06/01/2023 | | |

BRACKEN, CARROLL (Eastern Half), GALLATIN, GRANT, MASON, OWEN & ROBERTSON COUNTIES:

Rates Fringes

Plumbers and Pipefitters......\$ 38.62 25.73 PLUM0502-003 08/01/2021

BRECKINRIDGE, BULLITT, CARROLL (Western Half), FRANKLIN (Western three-fourths), GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES

| | Rates | Fringes |
|---------|-----------|---------|
| PLUMBER | .\$ 38.07 | 20.78 |
| | | |

* SUKY2010-160 10/08/2001

| | ŀ | kates | Fringes |
|---------------|----|----------|---------|
| | | | |
| Truck drivers | S: | | |
| GROUP 1 | \$ | 16.57 ** | 7.34 |
| GROUP 2 | \$ | 16.68 ** | 7.34 |
| GROUP 3 | \$ | 16.86 ** | 7.34 |
| GROUP 4 | \$ | 16.96 ** | 7.34 |

TRUCK DRIVER CLASSIFICATIONS

GROUP 1 - Mobile Batch Truck Tender

GROUP 2 - Greaser; Tire Changer; & Mechanic Tender

GROUP 3 - Single Axle Dump; Flatbed; Semi-trailer or Pole Trailer when used to pull building materials and equipment; Tandem Axle Dump; Distributor; Mixer; & Truck Mechanic

GROUP 4 - Euclid & Other Heavy Earthmoving Equipment & Lowboy; Articulator Cat; 5-Axle Vehicle; Winch & A-Frame when used in transporting materials; Ross Carrier; Forklift when used to transport building materials; & Pavement Breaker

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

** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$17.20) or 13658 (\$12.90). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including

preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

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

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

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

- 1.) Has there been an initial decision in the matter? This can be:
- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

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

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

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

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material,

etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board U.S. Department of Labor 200 Constitution Avenue, N.W. Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION"

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

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

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

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

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

TO: EMPLOYERS/EMPLOYEES

PREVAILING WAGE SCHEDULE:

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

OVERTIME:

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

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

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (Executive Order 11246)

(Breedille Studi 11210)

- 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

10.8%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally-assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4, 3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Notification of Construction Contract Award Portal (NCAP) is OFCCP's preferred method for receiving construction contract award notifications. The NCAP can be found on OFCCP's website at https://www.dol.gov/agencies/ofccp/ncap. Users who prefer not to use the portal maintain the option to send their notifications via mail, email and facsimile to the OFCCP Regional office in which the work will be performed. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of \$10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification must include: Prime Contract Number (issued by the federal agency or applicant); Name of Awarding Federal Agency, Applicant or Contractor; Contracting Officer, Applicant Representative or Contractor Representative Submitting Notification with name, phone number, email address; Contractor Awarded Contract or Subcontract with name, address, phone number, email address, EIN, dollar amount of the contract, estimated start date of the contract, estimated completion date of the contract, geographical area in which the contract is to be performed (state, county's city (if applicable)).

The notification shall be mailed to:

Regional Director

Office of Federal Contract Compliance Programs 61 Forsyth Street, SW, Suite 7B75 Atlanta, Georgia 30303-8931

Main Number: 404-893-4545 Fax: 404-893-4546 Regional Director Contact: OFCCP-SE@dol.gov

Construction Award Email: OFCCP-SE-ConstructionAward@dol.gov

4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is Fayette County.

(Revised: 1/1/2023)

PART IV

INSURANCE

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

current edition

PART V

BID ITEMS

Contract ID: 244300

Page 1 of 3

PROPOSAL BID ITEMS

244300

Report Date 2/26/24

Section: 0001 - PAVING

| LINE | BID CODE | ALT | DESCRIPTION | QUANTITY | UNIT | UNIT PRIC | FP | AMOUNT |
|------|----------|-----|----------------------------------|----------|------|------------------|----|--------|
| 0010 | 00003 | | CRUSHED STONE BASE | 6,568.00 | TON | | \$ | |
| 0020 | 00100 | | ASPHALT SEAL AGGREGATE | 35.00 | TON | | \$ | |
| 0030 | 00103 | | ASPHALT SEAL COAT | 5.00 | TON | | \$ | |
| 0040 | 00190 | | LEVELING & WEDGING PG64-22 | 70.00 | TON | | \$ | |
| 0050 | 00217 | | CL4 ASPH BASE 1.00D PG64-22 | 2,869.00 | TON | | \$ | |
| 0060 | 00219 | | CL4 ASPH BASE 1.00D PG76-22 | 1,144.00 | TON | | \$ | |
| 0070 | 00342 | | CL4 ASPH SURF 0.38A PG76-22 | 3,139.00 | TON | | \$ | |
| 0800 | 00356 | | ASPHALT MATERIAL FOR TACK | 22.00 | TON | | \$ | |
| 0090 | 02677 | | ASPHALT PAVE MILLING & TEXTURING | 3,964.00 | TON | | \$ | |
| 0100 | 02696 | | SHOULDER RUMBLE STRIPS | 5,759.00 | LF | | \$ | |

Section: 0002 - ROADWAY

| | | ALT DESCRIPTION | QUANTITY | OIVII | ONIT PRIC | 77 | AMOUNT |
|------|-------|---|-----------|-------|-----------|----|--------|
| 0110 | 01921 | STANDARD BARRIER MEDIAN TYPE 4 | 2,536.00 | SQYD | | \$ | |
| 0120 | 02014 | BARRICADE-TYPE III | 4.00 | EACH | | \$ | |
| 0130 | 02159 | TEMP DITCH | 1,084.00 | LF | | \$ | |
| 0140 | 02200 | ROADWAY EXCAVATION | 5,929.00 | CUYD | | \$ | |
| 0150 | 02429 | RIGHT-OF-WAY MONUMENT TYPE 1 | 6.00 | EACH | | \$ | |
| 0160 | 02432 | WITNESS POST | 6.00 | EACH | | \$ | |
| 0170 | 02483 | CHANNEL LINING CLASS II | 803.00 | TON | | \$ | |
| 0180 | 02545 | CLEARING AND GRUBBING (APPROX. 1.4 ACRES) | 1.00 | LS | | \$ | |
| 0190 | 02650 | MAINTAIN & CONTROL TRAFFIC (FAYETTE KY 418) | 1.00 | LS | | \$ | |
| 0200 | 02671 | PORTABLE CHANGEABLE MESSAGE SIGN | 3.00 | EACH | | \$ | |
| 0210 | 02701 | TEMP SILT FENCE | 1,084.00 | LF | | \$ | |
| 0220 | 02704 | SILT TRAP TYPE B | 1.00 | EACH | | \$ | |
| 0230 | 02705 | SILT TRAP TYPE C | 1.00 | EACH | | \$ | |
| 0240 | 02707 | CLEAN SILT TRAP TYPE B | 1.00 | EACH | | \$ | |
| 0250 | 02708 | CLEAN SILT TRAP TYPE C | 1.00 | EACH | | \$ | |
| 0260 | 02720 | SIDEWALK-4 IN CONCRETE | 72.00 | SQYD | | \$ | |
| 0270 | 02726 | STAKING (FAYETTE KY 418) | 1.00 | LS | | \$ | |
| 0280 | 02775 | ARROW PANEL | 4.00 | EACH | | \$ | |
| 0290 | 05953 | TEMP SEEDING AND PROTECTION | 340.00 | SQYD | | \$ | |
| 0300 | 05963 | INITIAL FERTILIZER | .30 | TON | | \$ | |
| 0310 | 05964 | MAINTENANCE FERTILIZER | .40 | TON | | \$ | |
| 0320 | 05985 | SEEDING AND PROTECTION | 6,776.00 | SQYD | | \$ | |
| 0330 | 05992 | AGRICULTURAL LIMESTONE | 4.20 | TON | | \$ | |
| 0340 | 06510 | PAVE STRIPING-TEMP PAINT-4 IN | 35,267.00 | LF | | \$ | |
| 0350 | 06542 | PAVE STRIPING-THERMO-6 IN W | 12,180.00 | LF | | \$ | |
| 0360 | 06543 | PAVE STRIPING-THERMO-6 IN Y | 5,380.00 | LF | | \$ | |
| 0370 | 06546 | PAVE STRIPING-THERMO-12 IN W | 107.00 | LF | | \$ | |
| 0380 | 06568 | PAVE MARKING-THERMO STOP BAR-24IN | 311.00 | LF | | \$ | |
| 0390 | 06569 | PAVE MARKING-THERMO CROSS-HATCH | 3,256.00 | SQFT | | \$ | |
| 0400 | 06574 | PAVE MARKING-THERMO CURV ARROW | 47.00 | EACH | | \$ | |

Page 312 of 314

Contract ID: 244300 Page 313 of 314

244300

PROPOSAL BID ITEMS

Report Date 2/26/24

Page 2 of 3

| LINE | BID CODE | ALT | DESCRIPTION | QUANTITY | UNIT | UNIT PRIC | FP | AMOUNT |
|------|------------|-----|--|-----------|------|------------------|----|-------------|
| 0410 | 06575 | | PAVE MARKING-THERMO COMB ARROW | 5.00 | EACH | | \$ | |
| 0420 | 06576 | | PAVE MARKING-THERMO ONLY | 6.00 | EACH | | \$ | |
| 0430 | 06610 | | INLAID PAVEMENT MARKER-MW | 154.00 | EACH | | \$ | |
| 0440 | 06611 | | INLAID PAVEMENT MARKER-MY | 59.00 | EACH | | \$ | |
| 0450 | 06612 | | INLAID PAVEMENT MARKER-BY | 19.00 | EACH | | \$ | |
| 0460 | 10020NS | | FUEL ADJUSTMENT | 13,902.00 | DOLL | \$1.00 | \$ | \$13,902.00 |
| 0470 | 10030NS | | ASPHALT ADJUSTMENT | 28,982.00 | DOLL | \$1.00 | \$ | \$28,982.00 |
| 0480 | 20550ND | | SAWCUT PAVEMENT | 3,939.00 | LF | | \$ | |
| 0490 | 21417ES717 | | PAVE MARK THERMO CONE CAP-SOLID YELLOW | 1,300.00 | SQFT | | \$ | |
| 0500 | 22680EN | | QWICK CURB MEDIAN SEPARATOR | 220.00 | LF | | \$ | |
| 0510 | 22692NS714 | | PAVEMENT MARKING-THERMO LETTERS | 4.00 | EACH | | \$ | |
| 0520 | 23158ES505 | | DETECTABLE WARNINGS | 47.00 | SQFT | | \$ | |
| 0530 | 23261EC | | PAVE MARK-THERMO-X-WALK-24 IN | 236.00 | LF | | \$ | |
| 0540 | 24679ED | | PAVE MARK THERMO CHEVRON | 210.00 | SQFT | | \$ | |
| 0550 | 24683ED | | PAVE MARKING-THERMO DOTTED LANE EXTEN | 472.00 | LF | | \$ | |
| 0560 | 24889EC | | PAVE MARKING-THERMO U-TURN | 14.00 | EACH | | \$ | |

Section: 0003 - DRAINAGE

| LINE | BID CODE | ALT | DESCRIPTION | QUANTITY | UNIT | UNIT PRIC | FP | AMOUNT |
|------|----------|-----|---------------------|----------|------|------------------|----|--------|
| 0570 | 00441 | | ENTRANCE PIPE-18 IN | 38.00 | LF | | \$ | |
| 0580 | 00445 | | ENTRANCE PIPE-30 IN | 78.00 | LF | | \$ | |
| 0590 | 01310 | | REMOVE PIPE | 4.00 | LF | | \$ | |

Section: 0004 - SANITARY SEWER

| LINE | BID CODE | ALT | DESCRIPTION | QUANTITY | UNIT | UNIT PRIC | FΡ | AMOUNT |
|------|----------|-----|-----------------------------|----------|------|------------------|----|--------|
| 0600 | 15062 | | S FORCE MAIN PVC 10 INCH | 180.00 | LF | | \$ | |
| 0610 | 15076 | | S FORCE MAIN TIE-IN 10 INCH | 2.00 | EACH | | \$ | |

Section: 0005 - SIGNING

| LINE | BID CODE | ALT | DESCRIPTION | QUANTITY | UNIT | UNIT PRIC | FP | AMOUNT |
|------|----------|-----|--------------------------------|----------|------|------------------|----|--------|
| 0620 | 02562 | | TEMPORARY SIGNS | 250.00 | SQFT | | \$ | |
| 0630 | 06406 | | SBM ALUM SHEET SIGNS .080 IN | 477.77 | SQFT | | \$ | |
| 0640 | 06407 | | SBM ALUM SHEET SIGNS .125 IN | 255.25 | SQFT | | \$ | |
| 0650 | 06410 | | STEEL POST TYPE 1 | 857.00 | LF | | \$ | |
| 0660 | 06490 | | CLASS A CONCRETE FOR SIGNS | 2.00 | CUYD | | \$ | |
| 0670 | 21596ND | | GMSS TYPE D | 8.00 | EACH | | \$ | |
| 0680 | 21596ND | | GMSS TYPE D (SURFACE MOUNT) | 23.00 | EACH | | \$ | |
| 0690 | 24631EC | | BARCODE SIGN INVENTORY | 107.00 | EACH | | \$ | |

244300

PPOPOSAL BID ITEM

PROPOSAL BID ITEMS

Report Date 2/26/24

Section: UUU6 - SIGNALIZATION

| LINE | BID CODE | ALT DESCRIP | PTION | QUANTITY | UNIT | UNIT PRIC | FP | AMOUNT |
|------|------------|-------------------|--------------------------|----------|------|-----------|----|---------------|
| 0700 | 04740 | POLE BA | ASE | 2.00 | EACH | | \$ | |
| 0710 | 04780 | FUSED C | CONNECTOR KIT | 21.00 | EACH | | \$ | |
| 0720 | 04820 | TRENCH | ING AND BACKFILLING | 2,348.00 | LF | | \$ | |
| 0730 | 04821 | OPEN CU | JT ROADWAY | 1,858.00 | LF | | \$ | |
| 0740 | 04841 | CABLE-N | NO. 14/2C | 680.00 | LF | | \$ | |
| 0750 | 04845 | CABLE-N | NO. 14/7C | 2,755.00 | LF | | \$ | |
| 0760 | 04881 | MAST AF | RM POLE | 4.00 | EACH | | \$ | |
| 0770 | 04927 | COORDI | NATING UNIT | 1.00 | EACH | | \$ | |
| 0780 | 04933 | TEMP SI | GNAL 2 PHASE | 2.00 | EACH | | \$ | |
| 0790 | 04953 | TEMP RE | ELOCATION OF SIGNAL HEAD | 30.00 | EACH | | \$ | |
| 0800 | 20093NS835 | INSTALL | PEDESTRIAN HEAD-LED | 2.00 | EACH | | \$ | |
| 0810 | 20188NS835 | INSTALL | LED SIGNAL-3 SECTION | 17.00 | EACH | | \$ | |
| 0820 | 20391NS835 | ELECTR | ICAL JUNCTION BOX TYPE A | 5.00 | EACH | | \$ | |
| 0830 | 20392NS835 | ELECTR | ICAL JUNCTION BOX TYPE C | 20.00 | EACH | | \$ | |
| 0840 | 20457NS835 | INSTALL | PED DETECTOR-AUDIBLE | 2.00 | EACH | | \$ | |
| 0850 | 21077ED | FIBER O | PTIC CABLE | 5,093.00 | LF | | \$ | |
| 0860 | 21543EN | BORE A | ND JACK CONDUIT | 3,702.00 | LF | | \$ | |
| 0870 | 22403NN | WEB CA | MERA ASSEMBLY | 1.00 | EACH | | \$ | |
| 0880 | 22939ND | INSTALL | LUMINAIRE POLE | 2.00 | EACH | | \$ | |
| 0890 | 23157EN | TRAFFIC | SIGNAL POLE BASE | 14.20 | CUYD | | \$ | |
| 0900 | 23222EC | INSTALL | SIGNAL PEDESTAL | 1.00 | EACH | | \$ | |
| 0910 | 24901EC | PVC CON | NDUIT-2 IN-SCHEDULE 80 | 6,242.00 | LF | | \$ | |
| 0920 | 24908EC | INSTALL | SIGNAL CONTROLLER-TY ATC | 3.00 | EACH | | \$ | |
| 0930 | 24923EC | CABINET | FIBER TERMINATION PANEL | 5.00 | EACH | | \$ | |
| 0940 | 24955ED | REMOVE | SIGNAL EQUIPMENT | 2.00 | EACH | | \$ | |
| 0950 | 26119EC | INSTALL TYPE A | RADAR PRESENCE DETECTOR | 9.00 | EACH | | \$ | |
| 0960 | 26120EC | INSTALL TYPE B | RADAR ADVANCE DETECTOR | 5.00 | EACH | | \$ | |
| 0970 | 26169EC | INSTALL | . MAST ARM DAMPENER | 6.00 | EACH | | \$ | |

Section: 0007 - GUARDRAIL

| LINE | BID CODE | ALT | DESCRIPTION | QUANTITY | UNIT | UNIT PRIC | FP | AMOUNT |
|------|-----------------|-----|--|----------|------|------------------|----|---------------|
| 0980 | 01987 | | DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE | 8.00 | EACH | | \$ | |
| 0990 | 02351 | | GUARDRAIL-STEEL W BEAM-S FACE | 400.00 | LF | | \$ | |
| 1000 | 02360 | | GUARDRAIL TERMINAL SECTION NO 1 | 2.00 | EACH | | \$ | |
| 1010 | 02381 | | REMOVE GUARDRAIL | 1,052.00 | LF | | \$ | |

Section: 0008 - DEMOBILIZATION AND MOBILIZATION

| LINE | BID CODE | ALT | DESCRIPTION | QUANTITY | UNIT | UNIT PRIC | FP | AMOUNT |
|------|----------|-----|----------------|----------|------|------------------|----|--------|
| 1020 | 02568 | | MOBILIZATION | 1.00 | LS | | \$ | |
| 1030 | 02569 | | DEMOBILIZATION | 1.00 | LS | | \$ | |

Page 3 of 3